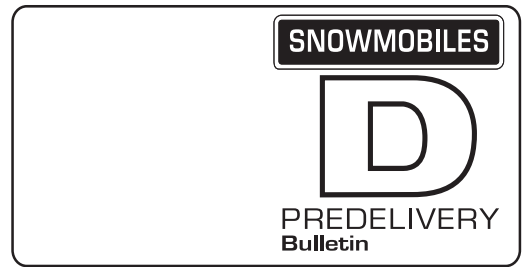


Please route to:

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **98-1**

Date: April 22, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1997	Canada and United states: Touring E/LE Skandic 380/500 Formula S/S Electric	1234, 1232 and 1233 1240, 1241, 1237 and 1238 1226 and 1228	ALL
1997	Sweden: Touring E Skandic 380/500 Formula S	1236 1242 and 1239 1227	ALL

This bulletin must be used in conjunction with the check list enclosed in *Operator's Guide* bag. Make sure that *Predelivery Check List* is completed and signed.

◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

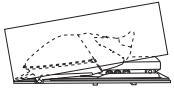
NOTE: The Information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, it may have some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

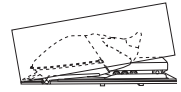
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections.

Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and video.

There is a tag attached to the ignition key, only the customer must removed it. This label will remind the customer to ask the dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

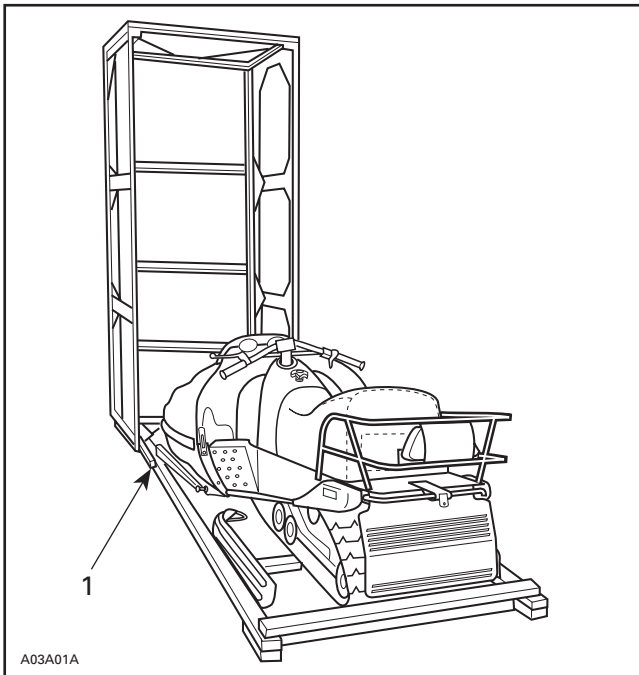
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Unscrew all screws retaining cover to vehicle base. Tip cover over front of vehicle. There is a notch in crate base at front.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

▼ CAUTION

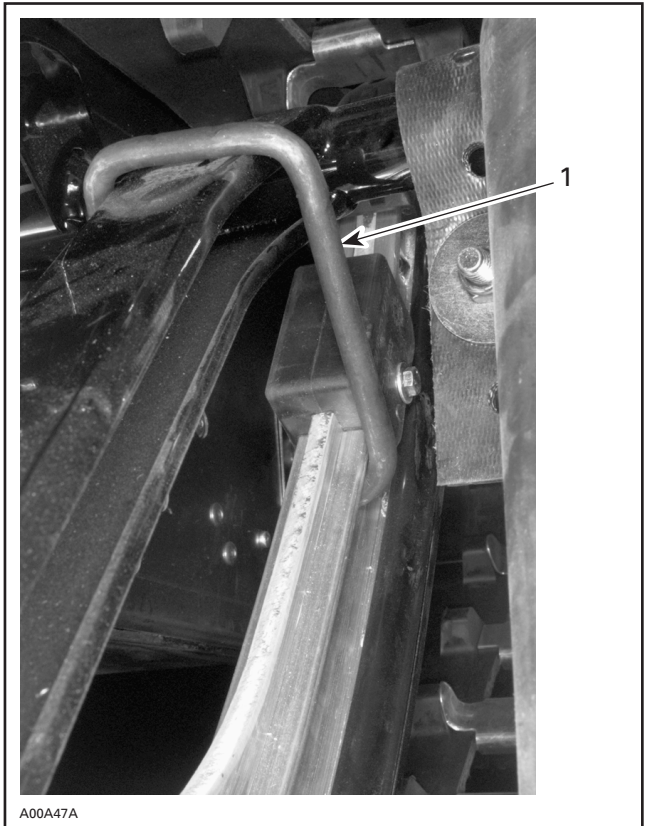
Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

FRONT HOOK REMOVAL



TYPICAL

1. Hook to be removed

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.

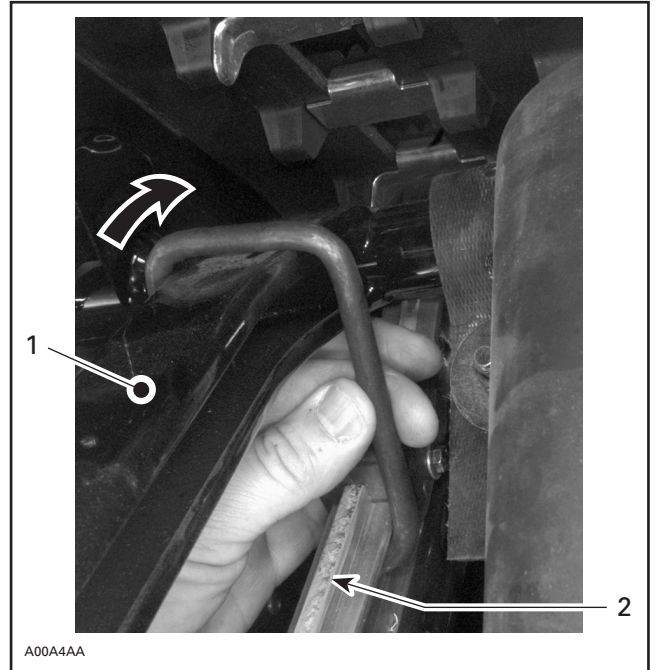


TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

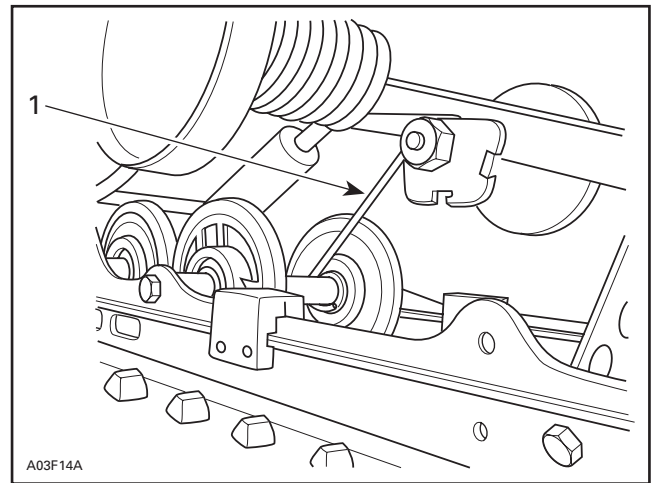
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



TYPICAL

1. Front arm
2. Runner

REAR HOOK REMOVAL



1. Hook to be removed

Procedure

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



A01F2FA

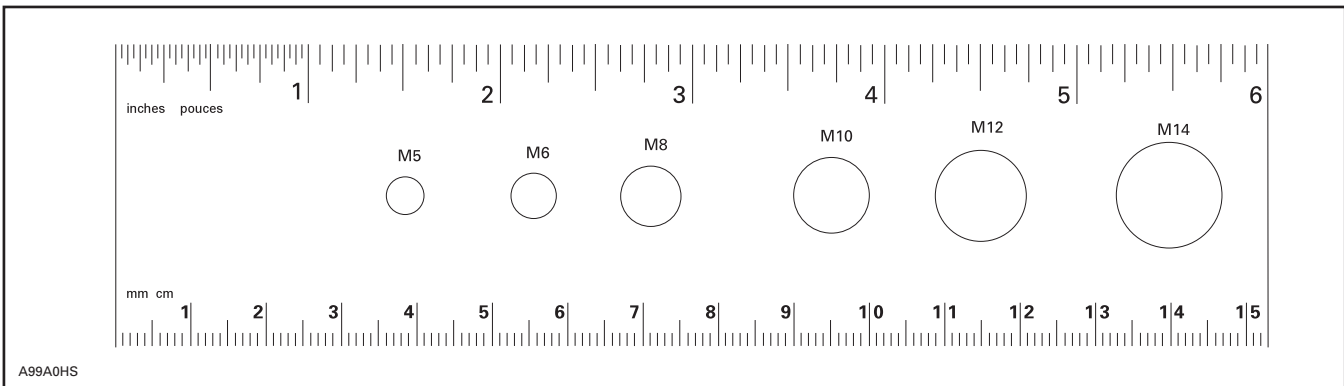
Remove hook on the rear portion of the suspension

◆ WARNING

Both hooks must be removed to have snowmobile suspension operational.

PREDELIVERY KIT P/N	MODELS
580 6529 00	TOURING E/LE
580 6533 00	SKANDIC 380/500
580 6388 00	FORMULA S/S Electric

NOTE: This rule can be helpful to identify fastener length or size.

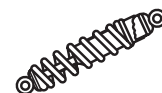


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PARTS INSTALLATION

FRONT SUSPENSION



Except Skandic 380/500

Cut locking tie retaining exhaust spring to exhaust support.

Lift front of vehicle and block safely.

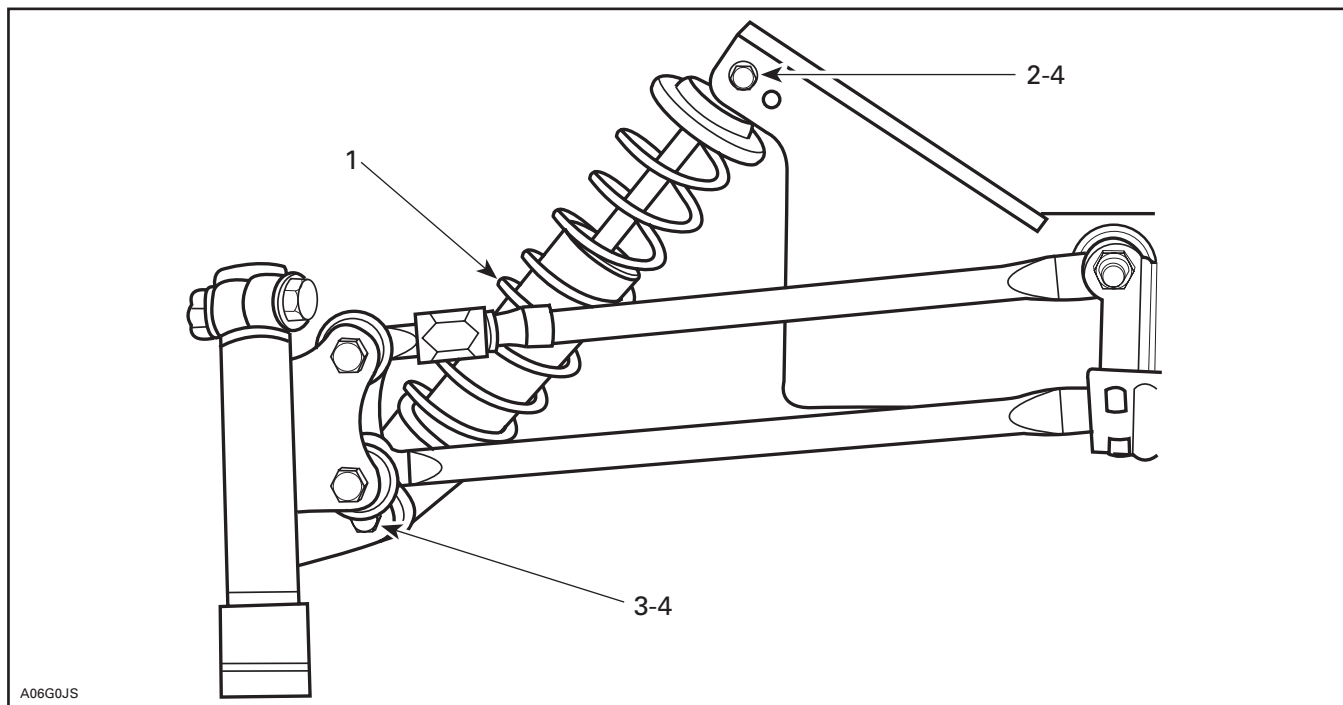
Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring, if equipped, at bottom.

NOTE: On Touring LE, position top and bottom screw heads toward front. On all other models, position top screw head toward front and bottom screw head facing back.

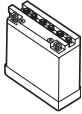
Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.

1. Lug in recess
2. Locking tie



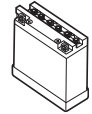
TYPICAL—RIGHT SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 0060 65) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 0055 65) (on suspension)
4. Flanged elastic nut (4) (P/N 228 5010 45) (section no.1 or 5) torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION

BATTERY



Touring Models and Formula S Electric

During vehicle preparation, the battery can be activated as described in *Shop Manual*.

▼ CAUTION

Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage.

Battery Removal

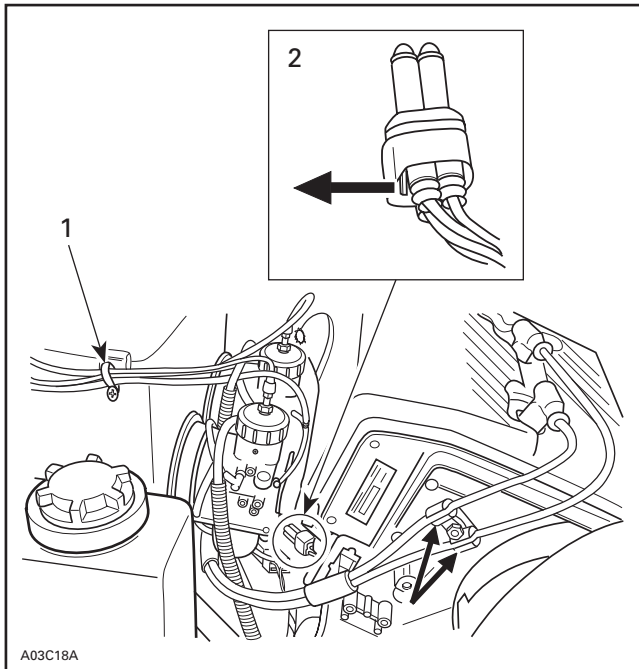
Remove belt guard.

Unfasten spark plug cables from fan housing. Unplug spark plug caps.

Remove throttle cable and primer hose plastic clip from air silencer.

Unplug CDI box harness connector.

Loosen collar on carburetor adaptors. Remove air silencer. CDI box will come along with.



- 1. Plastic clip
- 2. CDI box harness connector

Remove battery.

Battery Installation

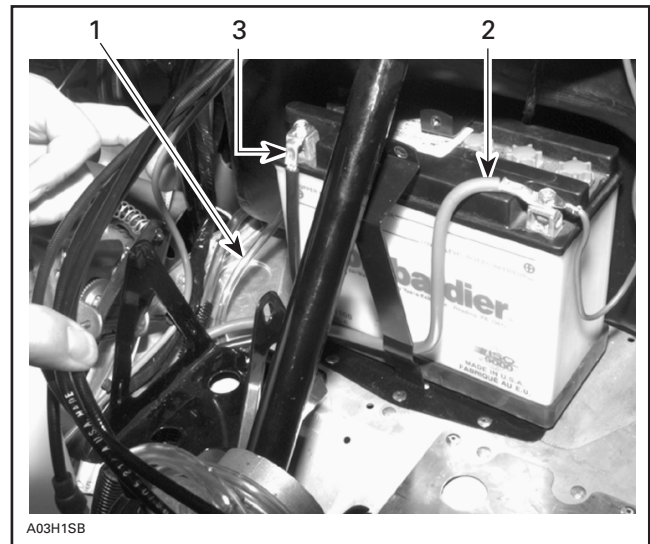
Install vent tube on battery.

Connect RED positive cable and RED wire to positive battery terminal.

Connect BLACK negative cable LAST.

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.



BATTERY CONNECTION

- 1. Vent tube on battery elbow and vehicle fitting
- 2. RED positive cable
- 3. BLACK negative cable

Apply silicone dielectric grease (P/N 413 7017 00) on battery posts and connectors.

Ensure vent tube is properly installed on battery elbow and vehicle fitting, then install protective boot over battery.

Close and fasten retaining strips as shown on the next photo.



A03H1WA

BATTERY PROTECTIVE BOOT INSTALLED

Ensure that vent tube is not kinked or blocked.

Reinstall air silencer and ignition module.

Reinstall throttle cable and primer hose plastic clip to air silencer. Fasten spark plug cables.

Reinstall belt guard.



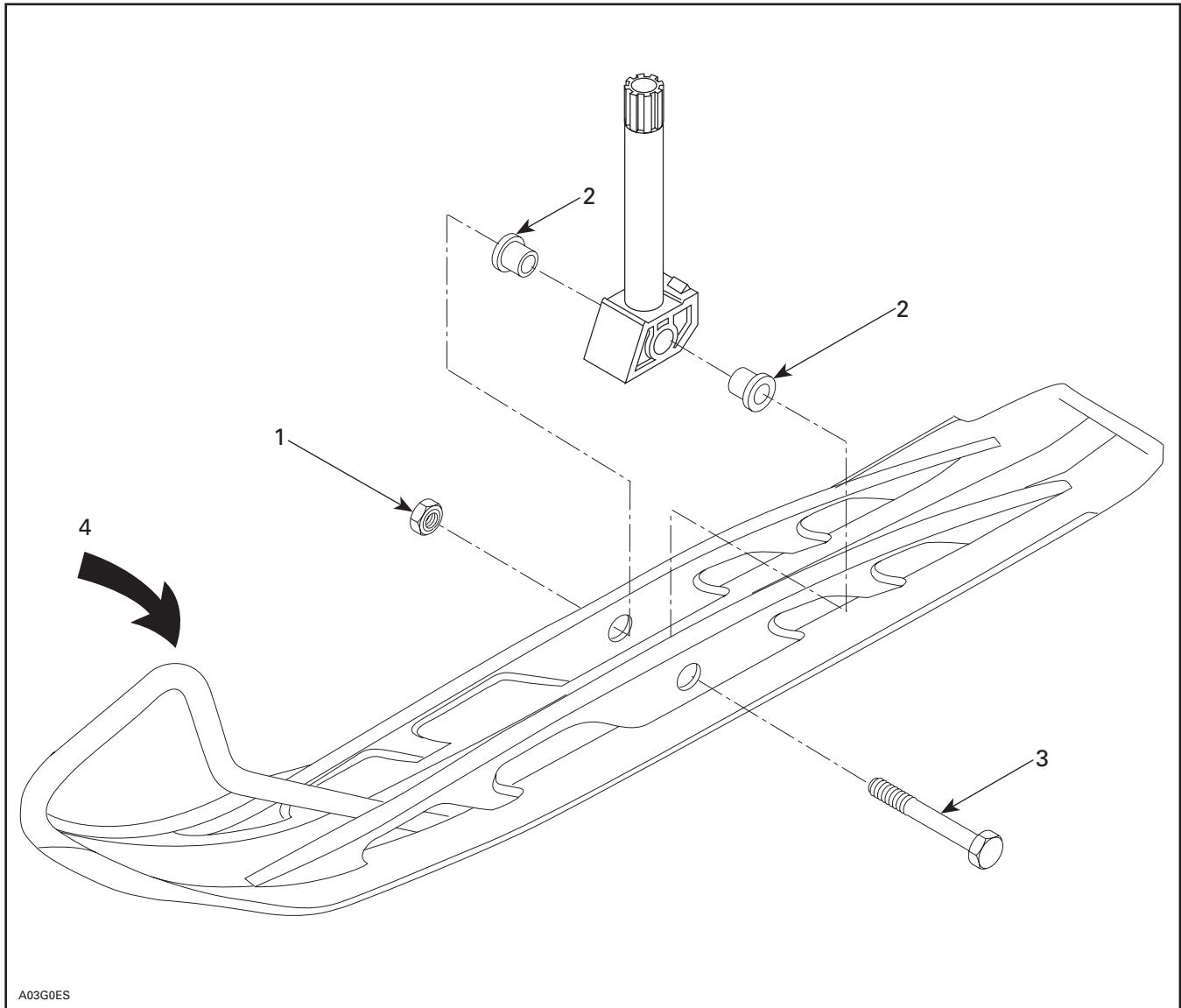
PARTS INSTALLATION SKIS



Install skis on vehicle.

NOTE: Make sure that slider cushions are still in ski leg.

Replace vehicle on ground.



TYPICAL—RIGHT SIDE SHOWN

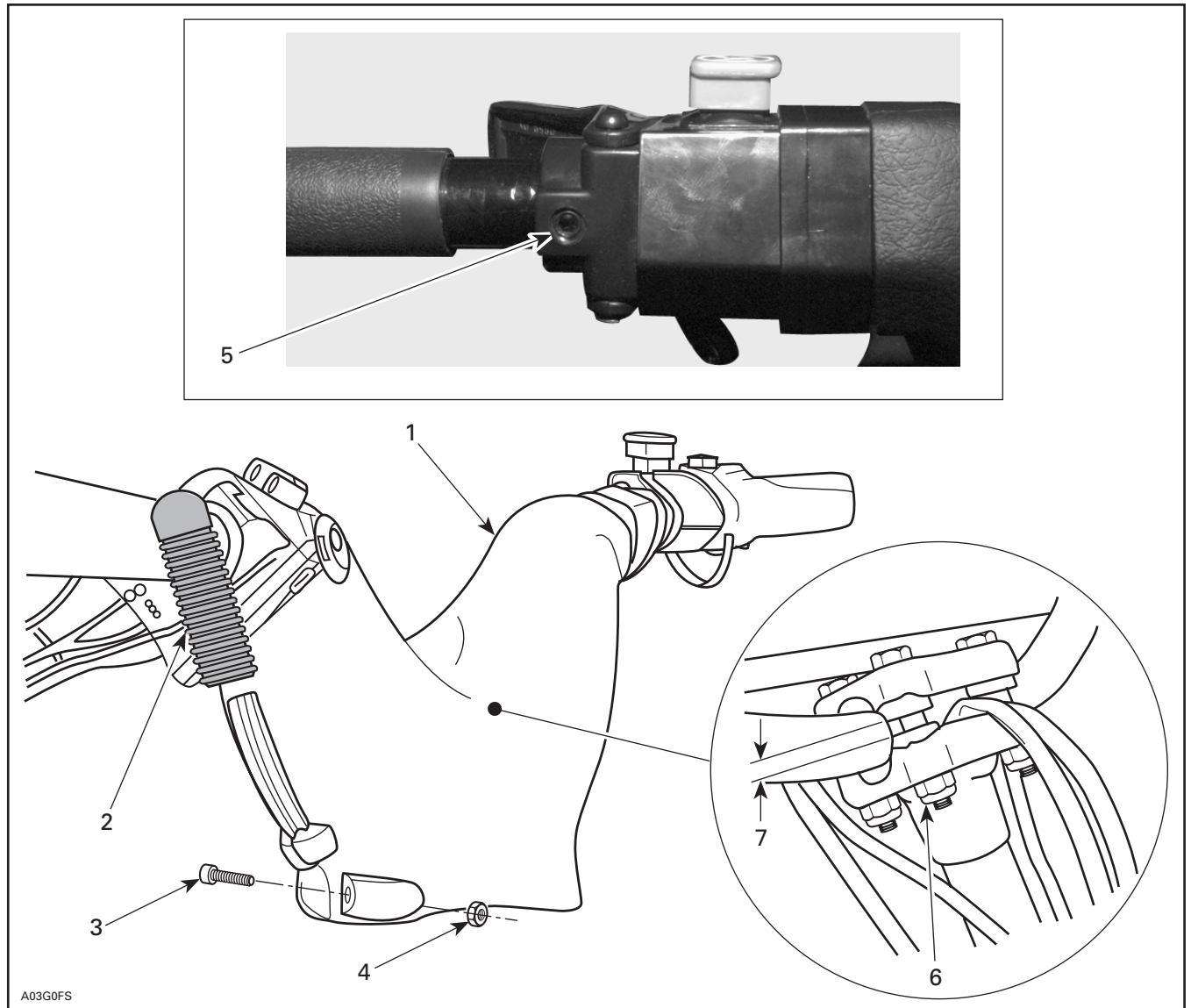
1. Elastic Nut M12 x 1.75 (2) (section no. 1 or 3) torque to 40 N•m (30 lbf•ft)
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD



Align handlebar with steering column axis and tighten nuts loosely for now.
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporary, and adjust for proper fit with console.
Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.

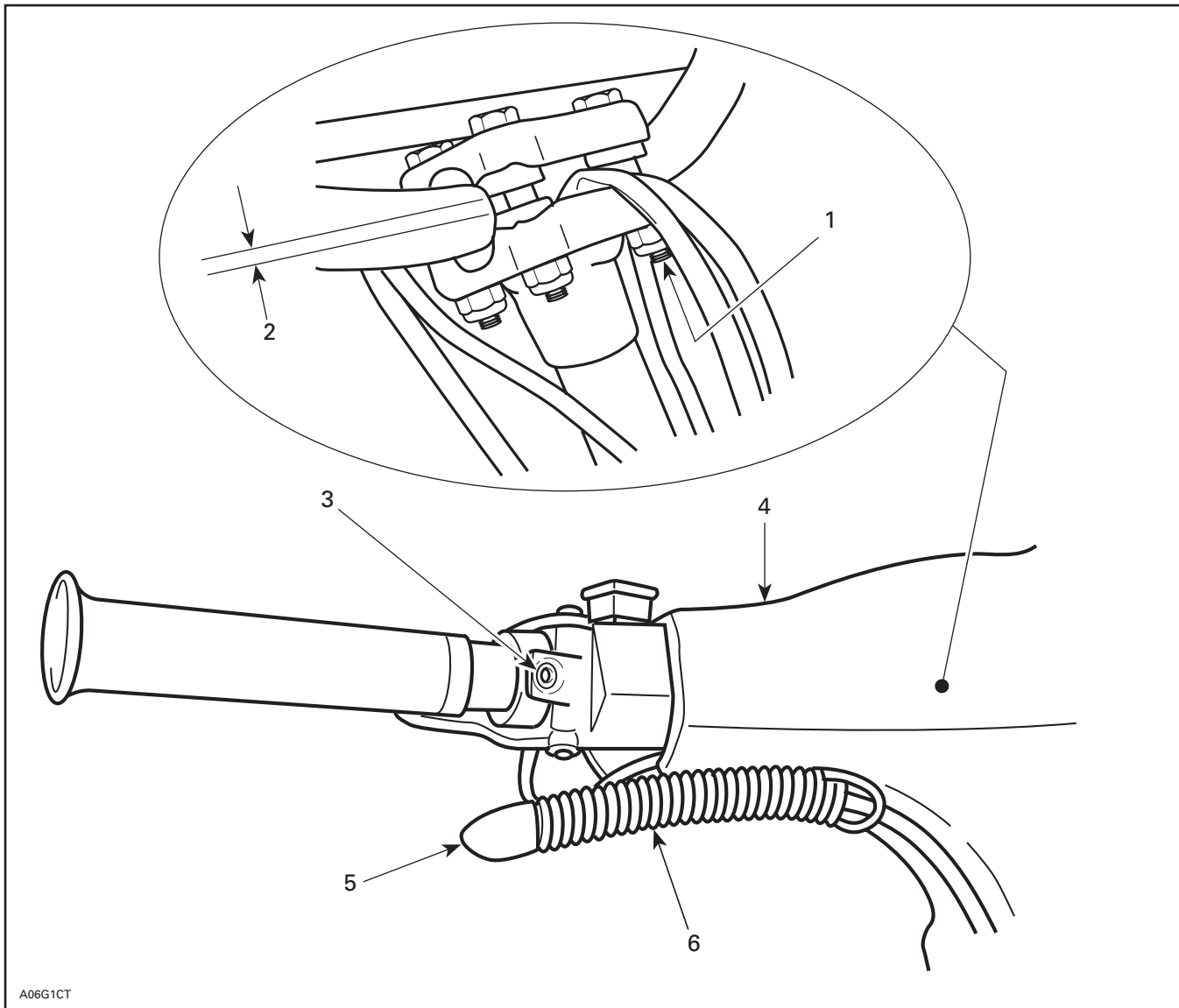


1. Steering pad (P/N 572 0238 00) (engine compartment)
2. Keyway (2) (P/N 572 0239 00) (section no. 4) use liquid soap to ease installation
3. Screw M5 x 20 (2) (P/N 222 8520 65) (section no. 4)
4. Nut M5 (2) (P/N 228 7510 45) (section no. 4) seat tighten only, no deformation of rubber
5. Loosen allen screw
6. Torque nuts to 26 N•m (19 lbf•ft)
7. Equal gap each side

Formula S/S Electric

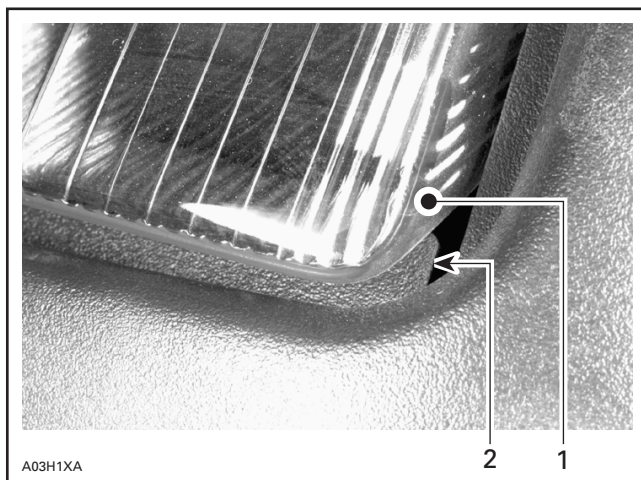
Adjust handlebar temporary and tighten nuts loosely for now.

Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporary, and adjust for proper fit with console.
Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



- A06G1CT
1. Torque to 26 N•m (19 lbf•ft)
 2. Equal gap each side
 3. Loosen allen screw
 4. Steering pad (P/N 572 0840 00 and 572 0841 00) (engine compartment)
 5. Use liquid soap to ease installation
 6. Keyway (2) (P/N 572 0724 00) (section no. 3)

When reinstalling headlamp molding make sure lip is behind headlamp.



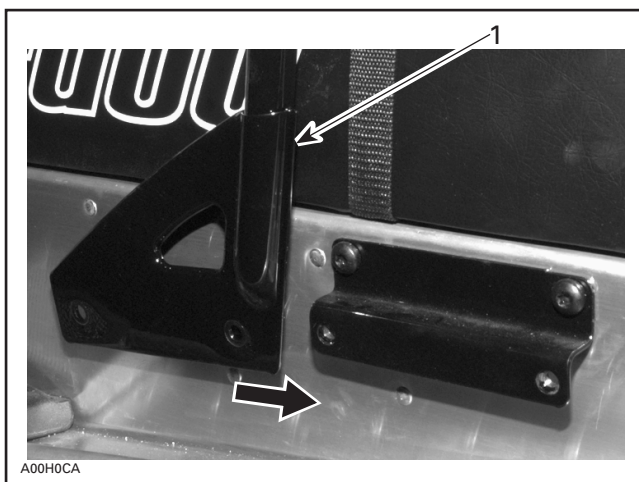
1. Headlamp
2. Lip of headlamp molding behind headlamp



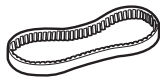
PARTS INSTALLATION BACKREST



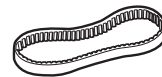
Except Formula S/ S Electric



1. Slide backrest on mounting bracket and install with screws.
Torque to 26 N•m (19 lbf•ft).



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.

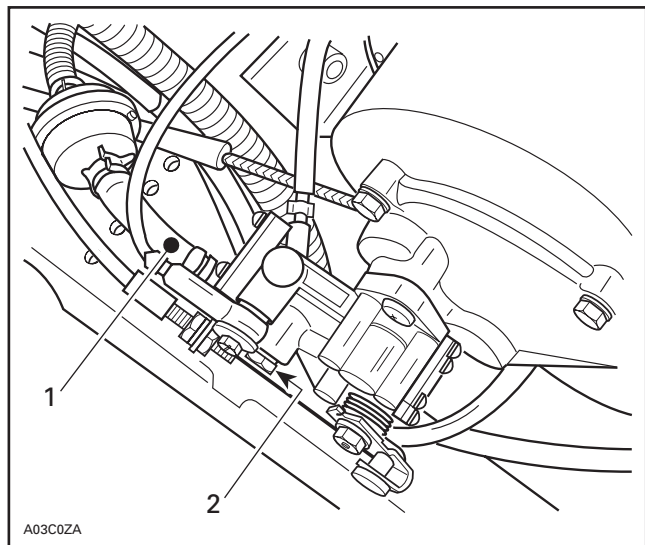


LIQUIDS OIL INJECTION PUMP BLEEDING



To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 8029 00 - 12 x 1L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

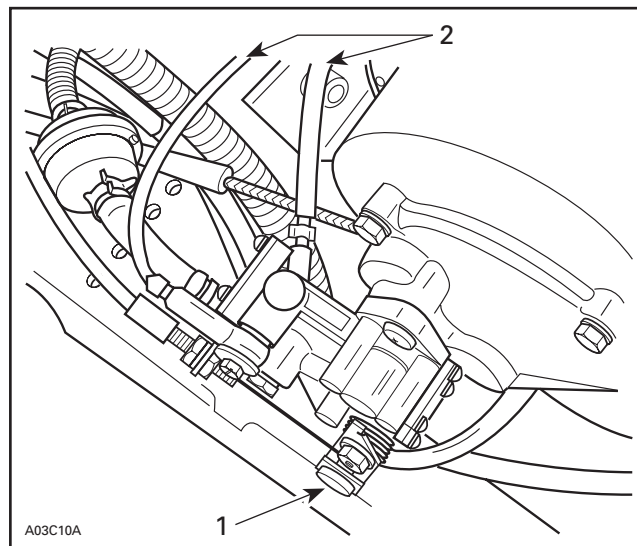
Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.



TYPICAL

1. Main oil line
2. Bleeder screw

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.



TYPICAL

1. Fully open position
2. Small lines



LIQUIDS BRAKE FLUID LEVEL



Touring LE and Skandic 500 only

Check brake fluid in reservoir for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.

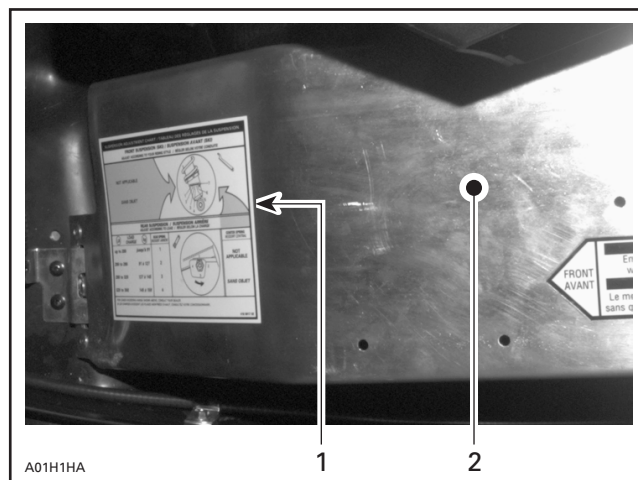


ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.

Refer to *Service Bulletin 97-16 Spring Reference*.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See Technical Data section at the end of this bulletin.





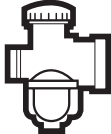


ADJUSTMENTS

DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in Technical Data are applicable after break-in period (about 10 hours of use).

TECHNICAL DATA

	MODELS	TOURING E FORMULA S SKANDIC 380	TOURING LE	
	Engine Type	377	443	
	Maximum HP RPM ①	± 100 RPM 6900	7000	
	Rotary Valve	P/N Opening(BTDC)/ Closing (ATDC) N.A.	N.A.	
	Carburetor Type	PTO VM 30 - 193 MAG VM 30 - 193	PTO VM 34 - 511 MAG VM 34 - 512	
	Main Jet	PTO 140 MAG 140	PTO 200 MAG 190	
	Needle Jet	P-0 (159)	P-0 (159)	
	Pilot Jet	40	35	
	Needle Identification– clip position	6DP9-3	6DH2-3	
	Slide Cut-away	2.5	2.5	
	Float Adjustment	± 1 mm (± .040 in) 23.9 (.94)	23.9 (.94)	
	Air Screw Adjustment	± 1/16 turn 1-1/4	1-1/2	
	Idle Speed RPM	± 200 RPM 1650	1650	
	Gas Grade/Octane Number	(R + M)/2 Regular Unleaded/87	Regular Unleaded/87	
Gas/Oil Ratio	Oil Injection	Oil Injection		
	Ignition Timing BTDC ②	mm (in) 1.68 (.066)	1.38 (.054)	
	Trigger Coil Air-Gap	mm (in) 0.45 - 0.55 (.018 - .022)	0.45 - 0.55 (.018 - .022)	
	Gear Ratio	teeth Formula S: 21/44 Touring E: 18/44 Skandic 380: 21/44	21/44	
	Engagement Speed	± 100 RPM Formula S: 3500 Touring E: 2500 Skandic 380: 2500	2900	
	Drive Pulley Calibration Screw Position	N.A.	4	
	Pulley Distance	Z (+ 0, - 1) mm (+ 0, - 1/32 in) 25.5 (1)	16.5 (21/32)	
	Offset	X	± 0.5 mm (± .020 in) 33.4 (1-5/16)	35.0 (1-3/8)
		Y	Dimension Y must exceed from 0.5 mm (.020 in) to 1.5 mm (.059 in)	Dimension Y must exceed from 1 mm (.039 in) to 2 mm (.079 in)
	Drive Belt Adjustment	Deflection	± 5 mm (± .197 in) 32 (1-1/4)	32 (1-1/4)
		Force ③	kg (lbf) 11.34 (25)	11.34 (25)
	Driven Pulley Preload	kg (lbf) 4.8 (10.582)	4.8 (10.582)	
	Drive Chain Tension	④	④	
Track Adjustment	Deflection ⑤ mm (in) 35 to 40 (1-3/8 to 1-9/16)	35 to 40 (1-3/8 to 1-9/16)		

① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.



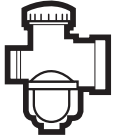


④ Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation.

⑤ Deflection with a 7.3 kg (16 lb) downward pull.

BTDC: Before Top Dead Center

ATDC: After Top Dead Center

N.A.: Not Applicable

	MODELS	SKANDIC 500
	Engine Type	503
	Maximum HP RPM ①	± 100 RPM 7000
	Rotary Valve	P/N Opening(BTDC)/ Closing (ATDC) N.A.
	Carburetor Type	PTO VM 34-513 MAG VM 34-514
	Main Jet	PTO 180 MAG 170
	Needle Jet	P-0 (159)
	Pilot Jet	40
	Needle Identification– clip position	6DH2-3
	Slide Cut-away	2.5
	Float Adjustment	± 1 mm (± .040 in) 23.9 (.94)
	Air Screw Adjustment	± 1/16 turn 1-7/8
	Idle Speed RPM	± 200 RPM 1650
	Gas Grade/Octane Number	(R + M)/2 Regular Unleaded/87
	Gas/Oil Ratio	Oil Injection
	Ignition Timing BTDC ②	mm (in) 1.66 (.065)
	Trigger Coil Air-Gap	mm (in) 0.45 - 0.55 (.018 -.022)
	Gear Ratio	teeth 21/44
	Engagement Speed	± 100 RPM 2900
	Drive Pulley Calibration Screw Position	3
	Pulley Distance	Z (+ 0, - 1) mm (+ 0, - 1/32 in) 16.5 (21/32)
	Offset	X ± 0.5 mm (± .020 in) 35.0 (1-3/8)
		Y Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
	Drive Belt Adjustment	Deflection ± 5 mm (± .197 in) 32 (1-1/4)
		Force ③ kg (lbf) 11.34 (25)
	Driven Pulley Preload	kg (lbf) 4.8 (10.582)
	Drive Chain Tension	④
Track Adjustment	Deflection ⑤ mm (in) 35 to 40 (1-3/8 to 1-9/16)	

- ① Engine speed at which maximum power is achieved.
- ② At 6000 RPM (engine cold) with headlamp turned on.
- ③ Force applied midway between pulleys to obtain specified deflection.
- ④ Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation.
- ⑤ Deflection with a 7.3 kg (16 lb) downward pull.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 MAG: Magneto side
 N.A.: Not applicable

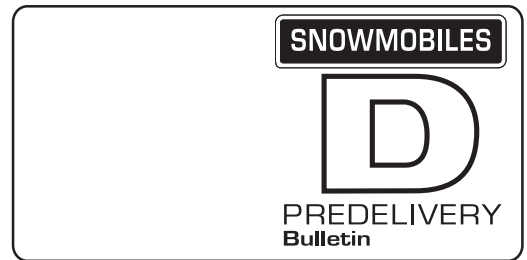
Please route to :

Init.

Service

Sales

Parts



No. **98-2**

Date: May 2, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1998	Tundra II LT (Canada and United States)	3270/3271	All

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◆ WARNING

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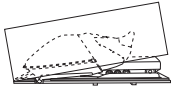
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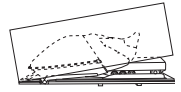
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Please complete the Predelivery Check List for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and video.

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UNCRATING



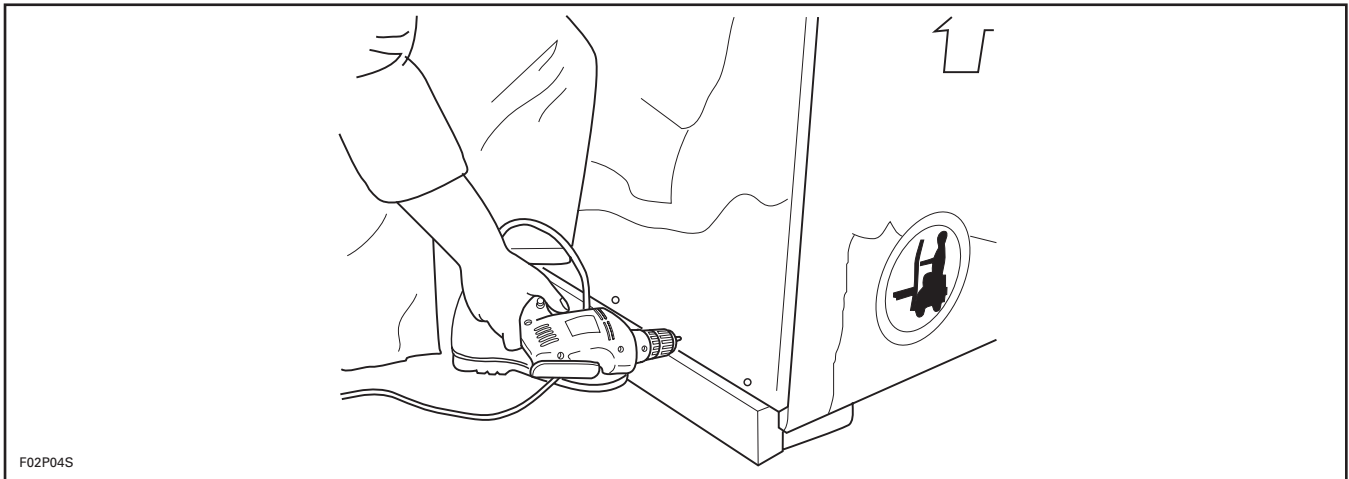
◆ WARNING

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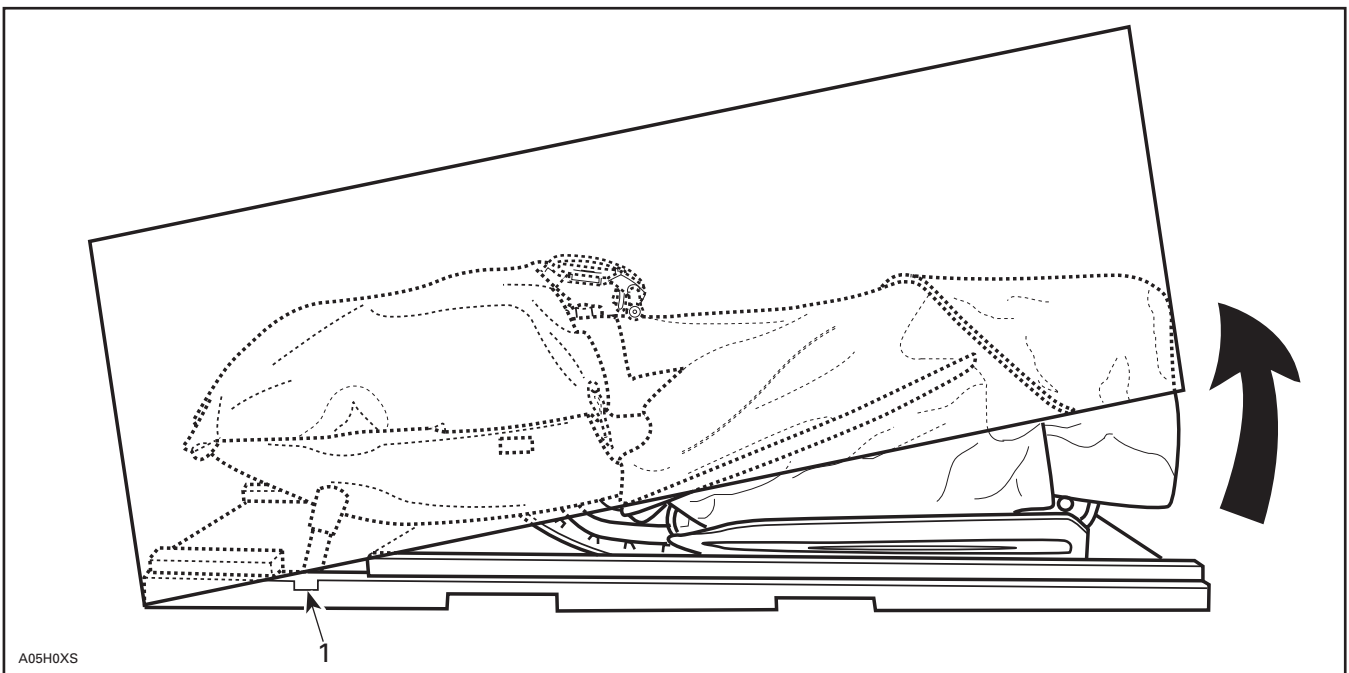
▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Using a drill or screwdriver remove all screws retaining crate cover to base.



Tip cover towards front of vehicle. There is a notch in crate base at front.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

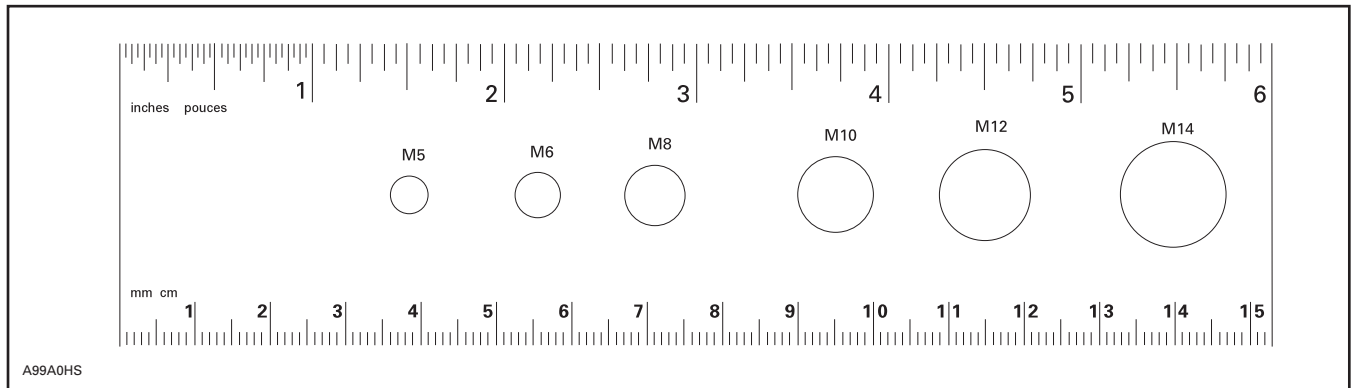
Detach ski legs from crate. Keep ski leg bolts to bolt skis to ski legs. Discard nuts.

Remove vehicle from base.

Remove predelivery kit from engine compartment.

PREDELIVERY KIT P/N	MODELS
580 6032 00	All Tundra II LT

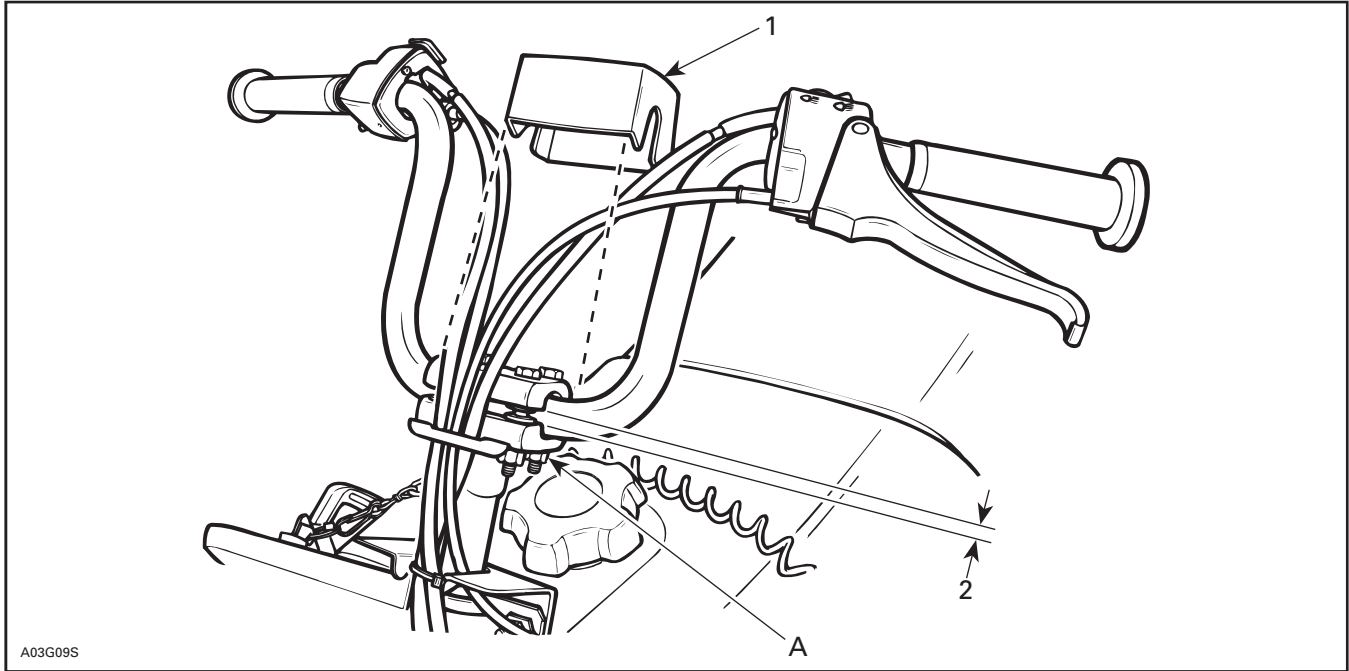
NOTE: This ruler can be helpful to identify fastener length/size.



A99A0HS



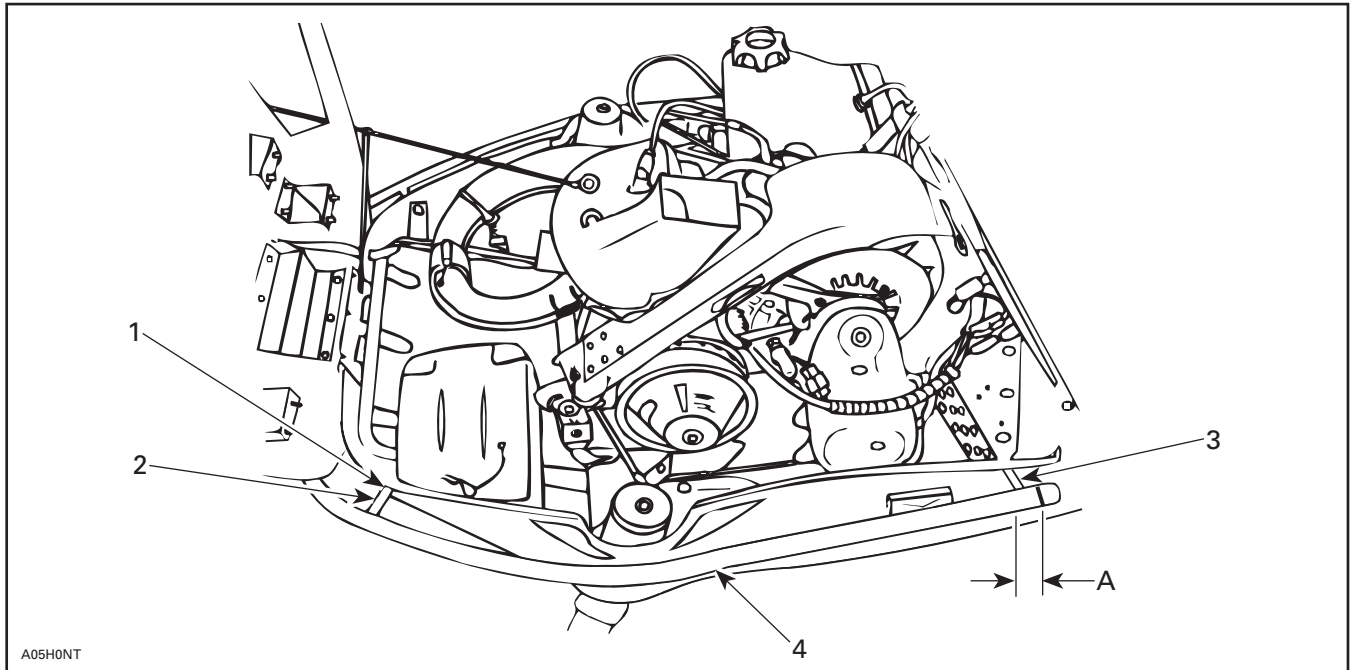
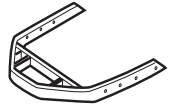
PARTS INSTALLATION STEERING PAD



1. Steering cover (P/N 572 0669 00) (on handlebar)
2. Equal gap all around
- A. 26 N•m (19 lbf•ft)



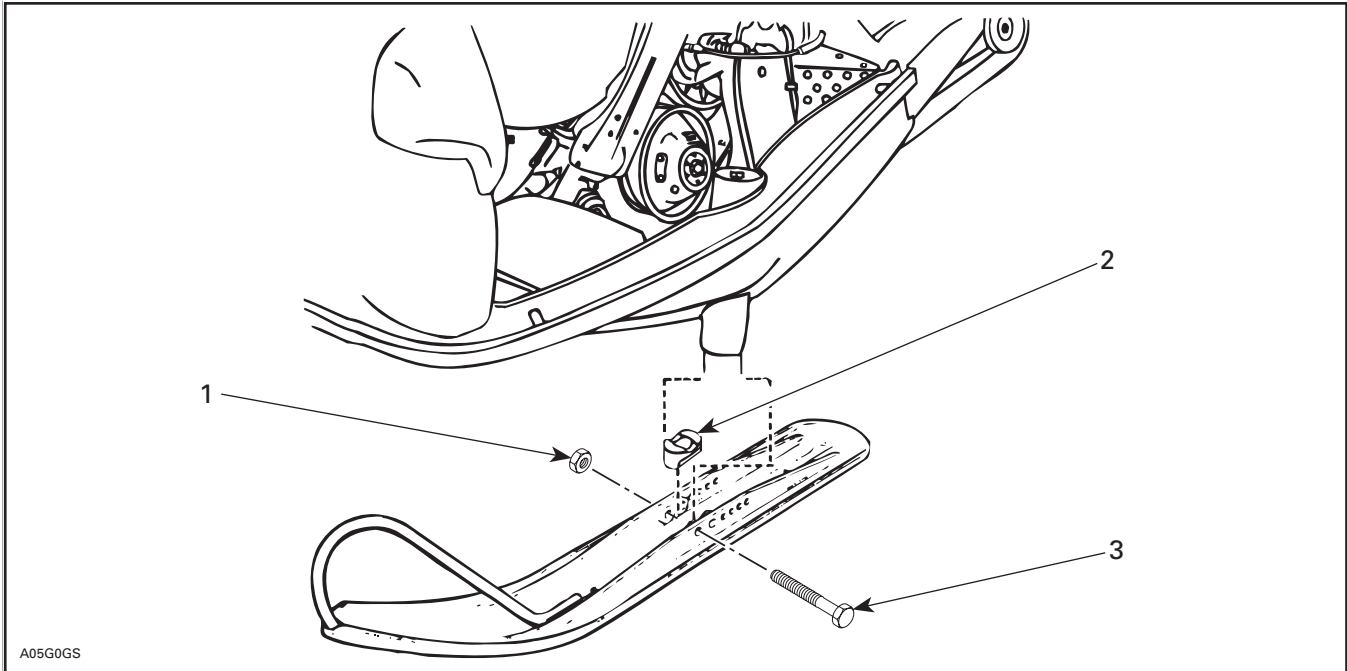
PARTS INSTALLATION FRONT BUMPER



1. Elastic nut M8 x 1.25 (4) (P/N 228 5810 45) (Section no. 2). Torque to 15 N•m (133 lb•in)
2. Bushing (long) (2) (P/N 517 2506 00) (Section no. 3)
3. Bushing (short) (2) (P/N 517 2507 00) (Section no. 3)
4. Groove on top
- A. 55 mm (2-1/8 in)



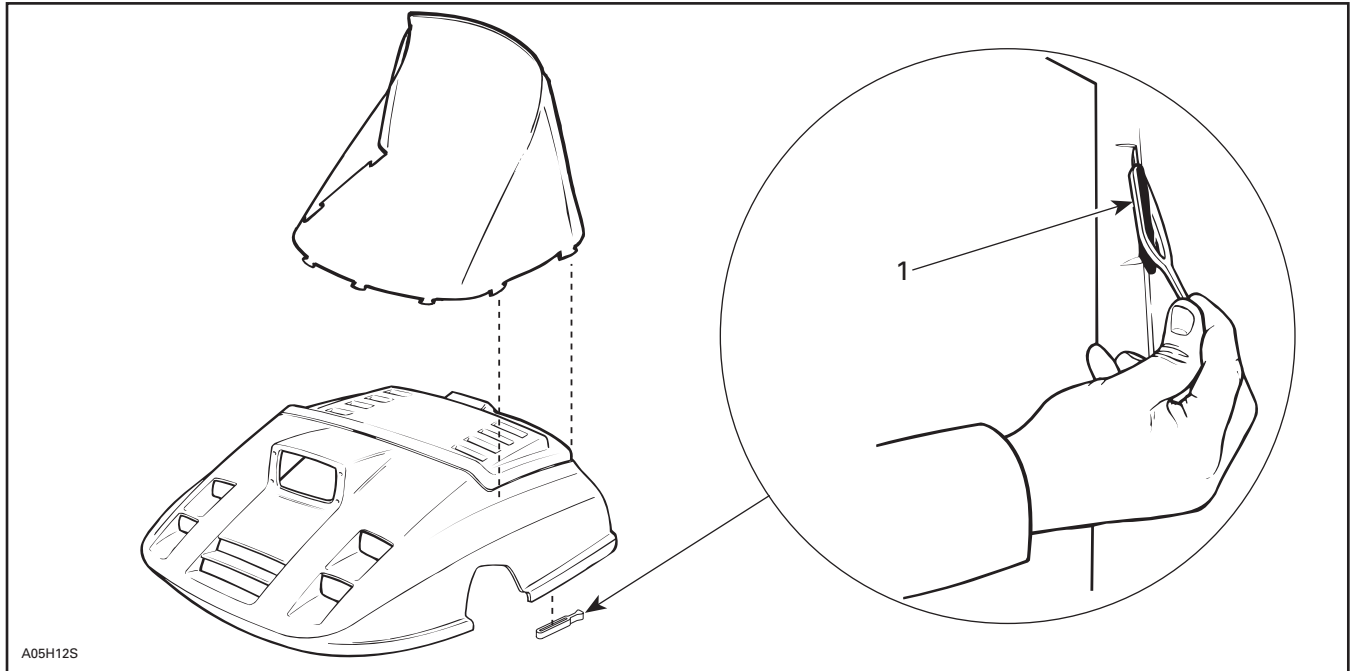
PARTS INSTALLATION SKIS



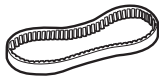
1. Elastic nut (2) M10 x 1.5 (P/N 228 5010 45) (Section no. 1). Torque to 29 N•m (21 lbf•ft)
2. Stopper (2) (P/N 570 0270 00) (Section no. 4). Thicker side toward front
3. Bolt (2) M10 x 1.5 x 90 (P/N 222 0090 65) (on crate)



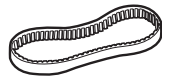
PARTS INSTALLATION WINDSHIELD



1. Latch (9) (P/N 570 0238 00) (Section no. 3)



PARTS INSTALLATION DRIVE BELT



At factory a protective coating for the shipping is applied on pulleys and disc brake. This protective coating must be removed at predelivery.

Clean pulleys and brake disc with a suitable cleaner such as Loctite Safety Solvent (P/N 413 7082 00) before installing drive belt.

Make sure the entire surface of the drive belt travel is clean; open the driven pulley as required for cleaning.

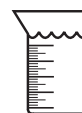
▼ CAUTION

Do not install a new drive belt without properly cleaning the pulleys.



LIQUIDS

OIL INJECTION PUMP BLEEDING

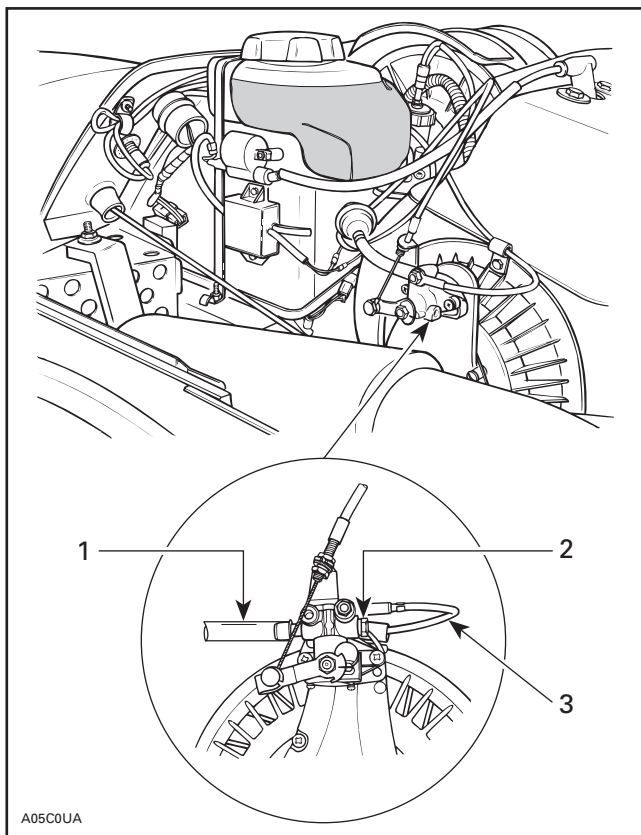


OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 8029 00 - 12 x 1L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

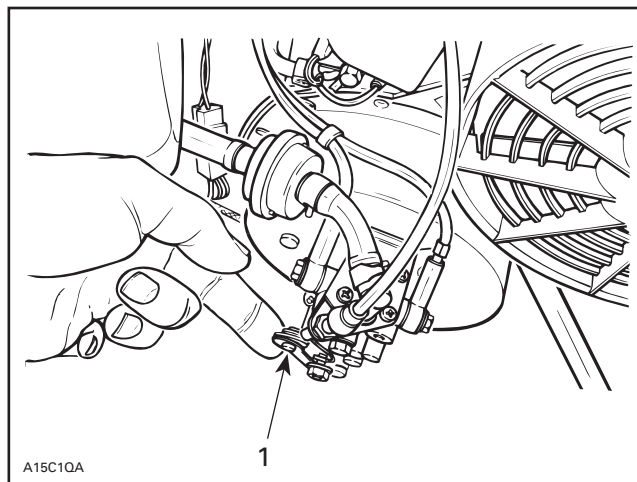
BLEEDING PROCEDURE

Bleed main oil line (between tank and pump) by loosening the bleeder screw until all air has escaped from the line.



1. Main oil line
2. Bleeder screw
3. Small line

Bleed the small line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.





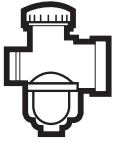


TYPICAL — ENGINE AT IDLE

1. Fully open position



TECHNICAL DATA



	MODEL	TUNDRA II LT	
	Engine Type	277	
	Maximum HP RPM ① ± 100 RPM	6900	
	Carburetor Type	VM 34 - 443	
	Main Jet	190	
	Needle Jet	O-8 (159)	
	Pilot Jet	40	
	Needle Identification — Clip Position	6DH4-2	
	Slide Cutaway	2.5	
	Float Adjustment ± 1 mm (± .04 in)	23.9 (.94)	
	Air Screw Adjustment ± 1/16 turn	1	
	Idle Speed ± 200 RPM	1200	
	Gas Grade/Octane Number ② (R + M)/2	Regular Unleaded/87	
	Gas/Oil Ratio	Oil injection	
	Ignition Timing BTDC ③ mm (in)	2.52 (.099)	
	Engagement Speed ± 100 RPM	3100	
	Pulley Distance	Z (+ 0, - 1) mm (+ 0, - 1/32 in)	
	Offset	X ± 0.4 mm (± 1/64 in)	36.0 (1-27/64)
		Y	Dimension Y must exceed X by up to 1.5 mm (1/16 in)
	Drive Belt Adjustment	Deflection ± 5 mm (± 13/64 in)	32 (1-1/4)
		Force ④ kg (lbf)	6.8 (15)
	Driven Pulley Preload ± 0.7 kg (± 1.5 lbf)	3.6 (8)	
	Drive Chain Tension	Automatic (Spring Loaded)	
Track Adjustment	Deflection ⑤ mm (in)	35 to 45 (1-3/8 - 1-3/4)	

① Engine speed at which maximum power is achieved.

② In most service station pump octane number corresponds to (R + M)/2 octane number.

③ At 6000 RPM (engine cold) with headlamp turned on.

④ Force applied midway between pulleys to obtain specified deflection.

⑤ Deflection with a 7.3 kg (16 lb) downward pull.

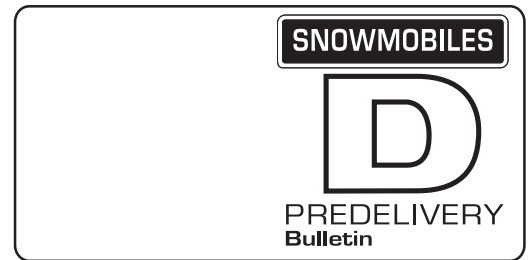
Please route to :

Init.

Service

Sales

Parts



No. **98-3**

Date: June 25, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1998	Canada and United States: Grand Touring 500 Grand Touring 583	1218 and 1219 1221 and 1222	ALL
1998	Sweden: Grand Touring 500 Grand Touring 583	1220 1223	ALL

This bulletin must be used in conjunction with the check list enclosed in *Operator's Guide* bag. Make sure that predelivery check list is completed and signed.

◆ WARNING

To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.

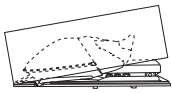
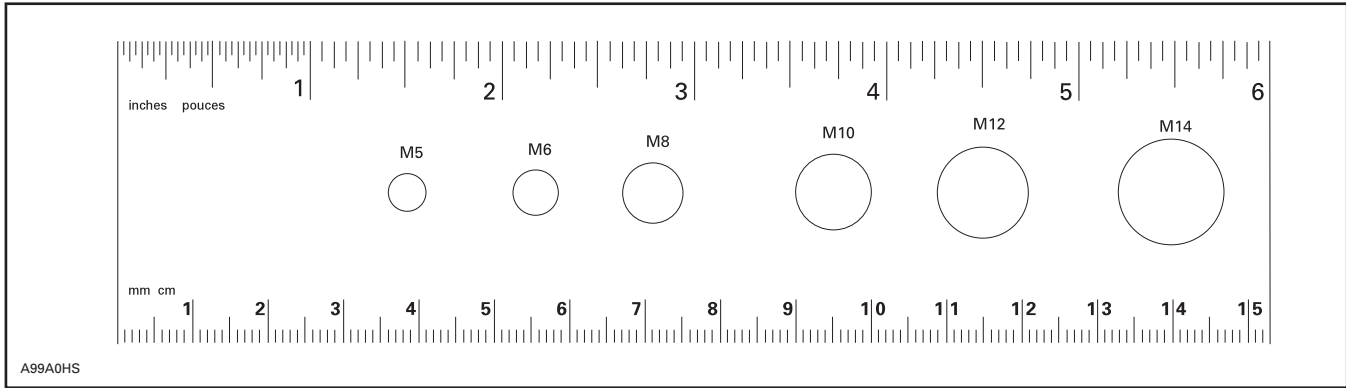
NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

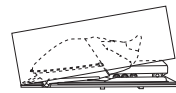
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquires should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and video.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.

NOTE: This ruler can be helpful to identify fastener length or size.



UNCRATING



PREDELIVERY KIT P/N	MODELS
580 6541 00	GT 500/583

◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

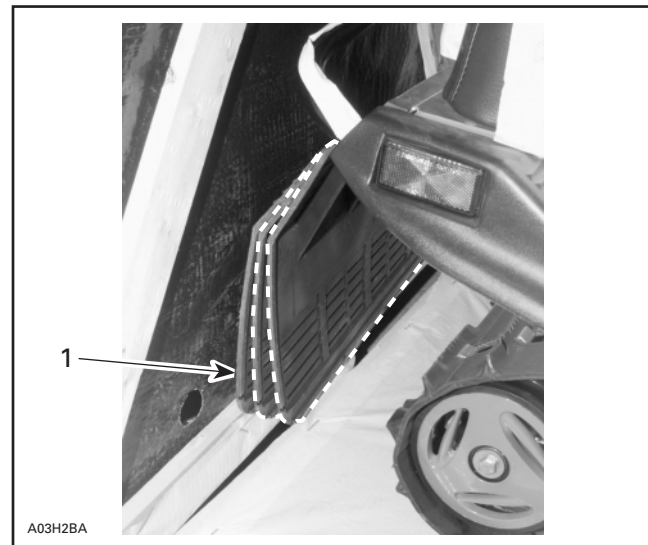
Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

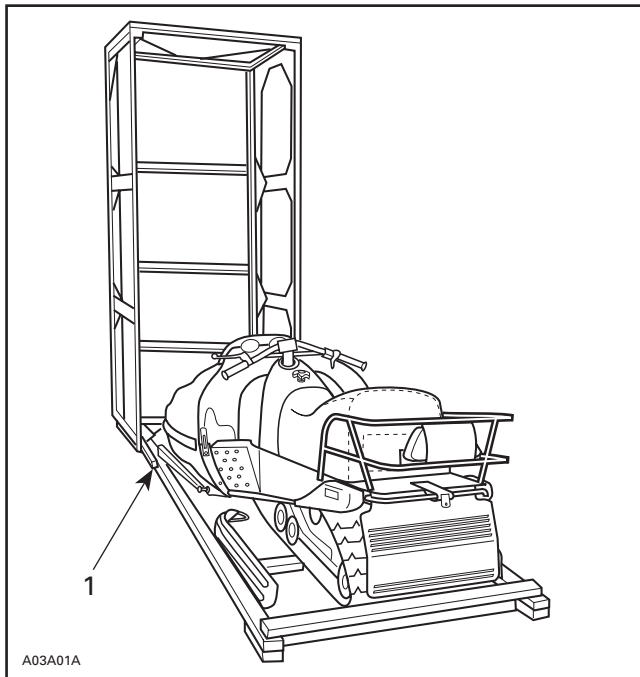
Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.

NOTE: On some models, snow guard may interfere with crate cover, as shown in the following photo. Push on snow guard when lifting cover.



FROM OUTSIDE CRATE PUSH ON SNOW GUARD TO ALLOW COVER TO LIFT WITHOUT DAMAGING SNOW GUARD

1. Snow guard interfering with crate cover



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip retaining windshield, if equipped.

When this metal strip is under the seat loosen 2 or 4 nuts retaining the seat before pulling out the metal strip.

▼ CAUTION

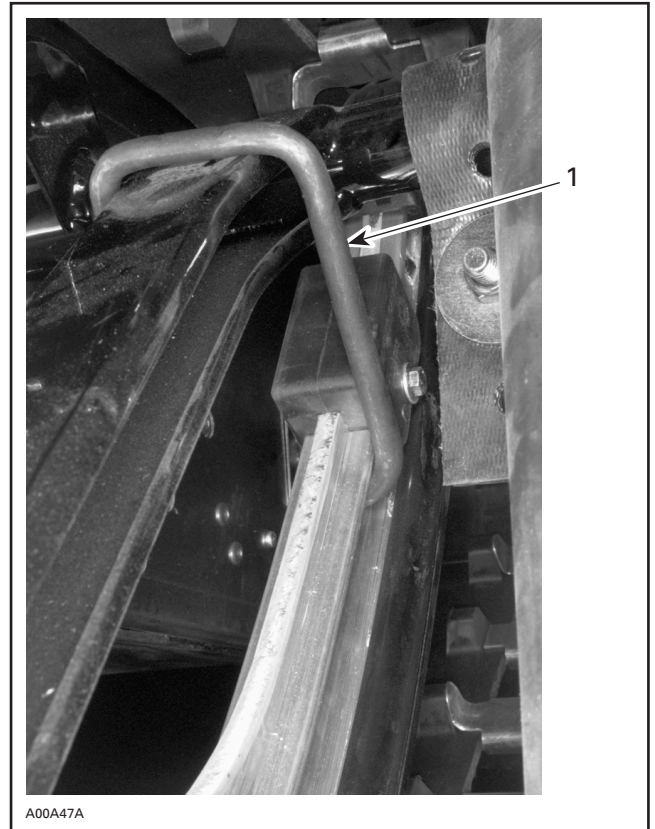
Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove parts to be installed and predelivery kit from engine compartment. Detach shock absorbers from engine compartment.

FRONT HOOK REMOVAL



TYPICAL

1. Hook to be removed

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.

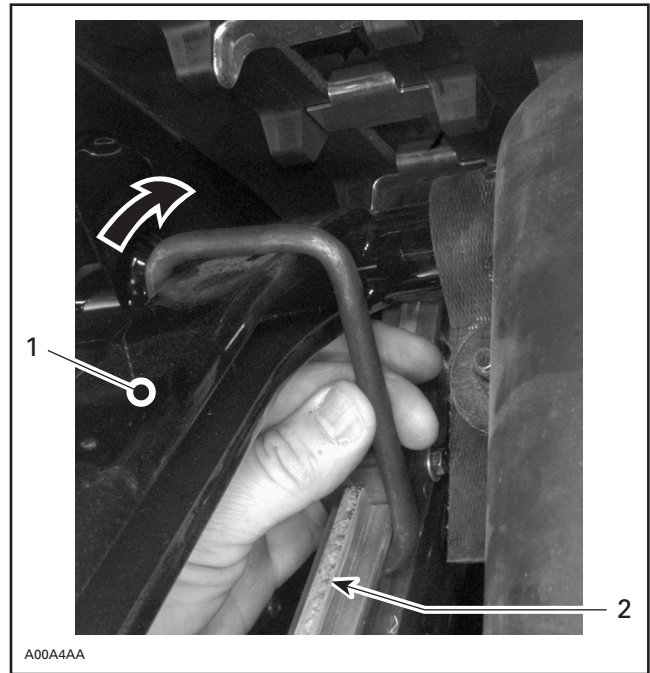


TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

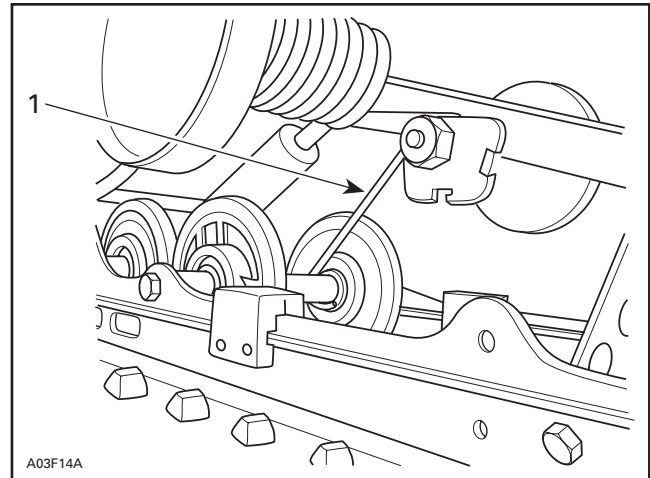
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



TYPICAL

1. Front arm
2. Runner

REAR HOOK REMOVAL



1. Hook to be removed

Procedure

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



A01F2FA

1. Remove hook on the rear portion of the suspension

◆ WARNING

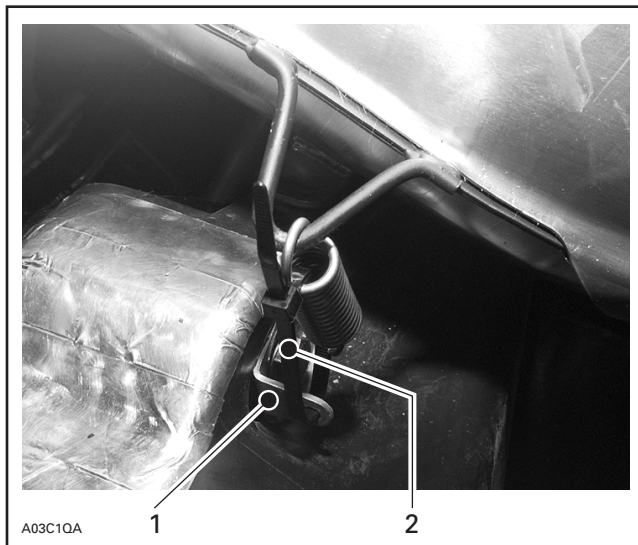
Both hooks must be removed to have snowmobile suspension operational.



PARTS INSTALLATION FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.



A03C1QA

GT 583 SHOWN

1. Lug in recess
2. Locking tie

All Models

Lift front of vehicle and block safely.

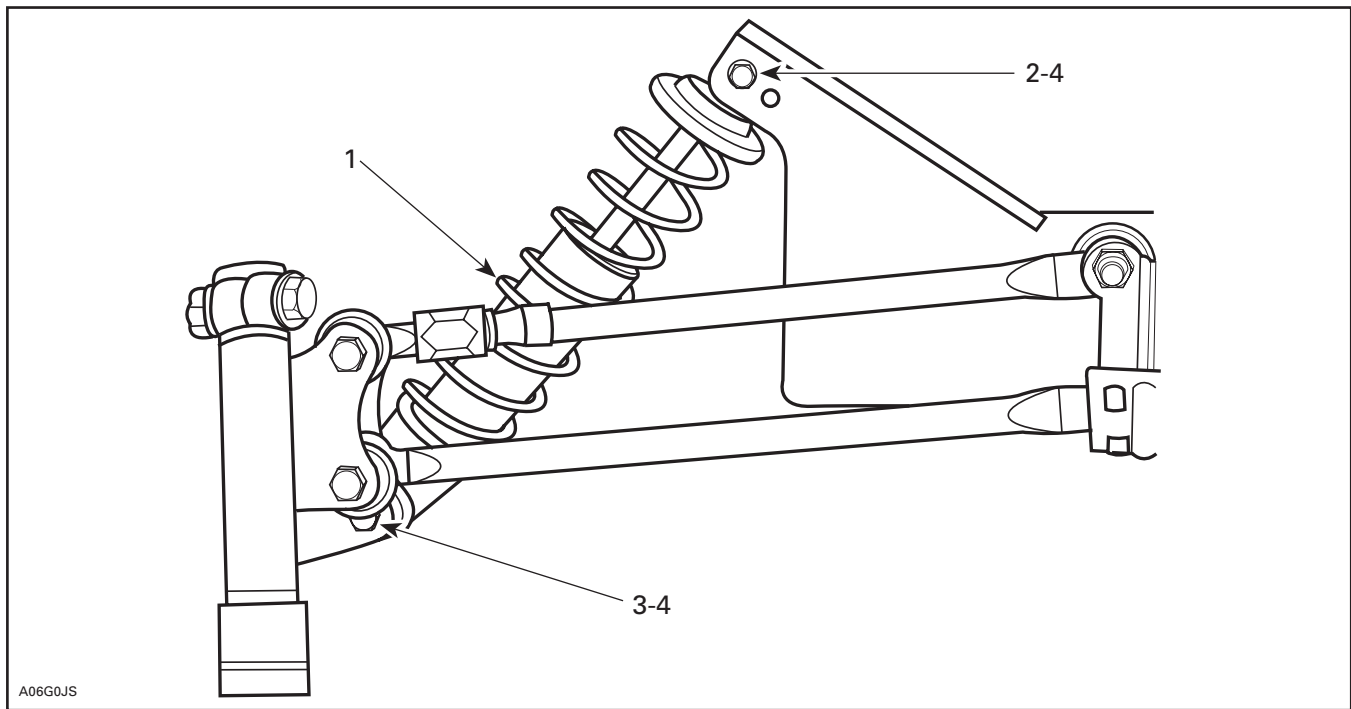
Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position screw heads toward front.

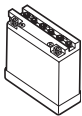
Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.

NOTE: On GT 500 model, hook up exhaust spring on mid-hole.

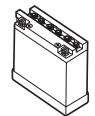


TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (engine compartment)
2. Screw M10 x 1.5 x 60 (2) (P/N 222 0060 65) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 0055 65) (on suspension)
4. Nut M10 x 1.5 (2) (P/N 228 5010 45) (section no. 3). Torque to 48 N•m (35 lbf•ft)



**PARTS INSTALLATION
BATTERY**



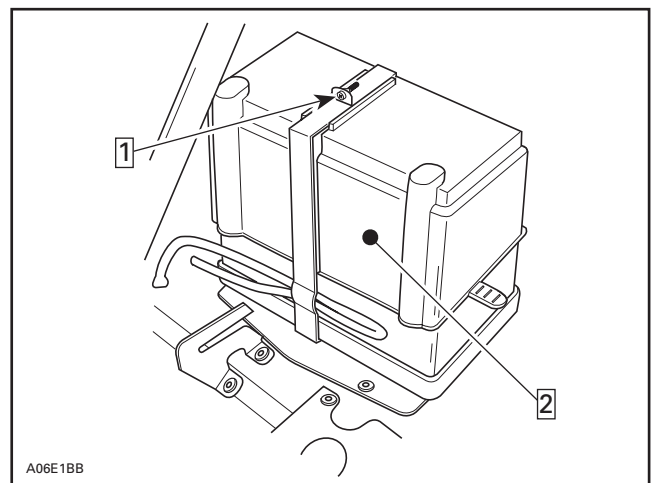
During vehicle preparation, the battery can be activated as described in *Shop Manual*.

▼ CAUTION

Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage. Do not charge an installed battery.

Battery Removal

- Remove belt guard.
- Remove air intake silencer.
- Unfasten battery retaining strips.
- Open strips and lift battery protective boot.



- Step **1** : Unfasten and open
 Step **2** : Lift protective boot

Withdraw battery from vehicle.

Battery Installation

NOTE: Before reinstalling battery and air silencer check oil pump lever adjustment.

Install vent tube on battery.

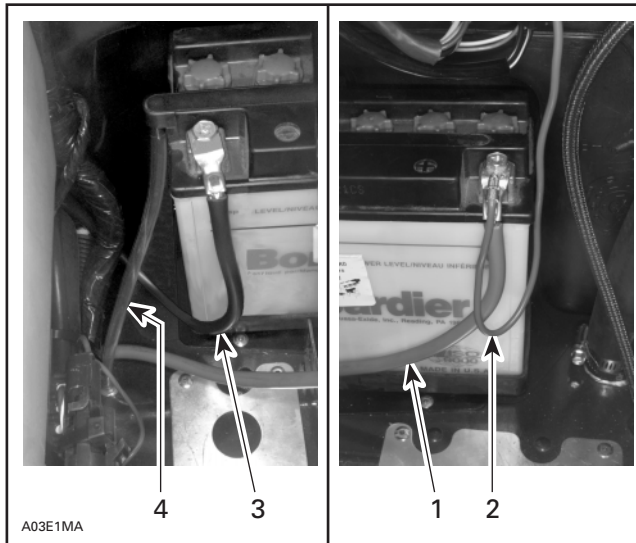
Connect RED positive cable and RED wire to positive battery terminal.

Connect BLACK negative cable LAST.

Ensure that vent tube is properly connected to vehicle fitting on front frame.

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.



BATTERY CONNECTION

1. RED positive cable
2. RED positive wire
3. BLACK negative cable
4. Vent tube

Apply silicone dielectric grease (P/N 413 7017 00) on battery posts and connectors.

Ensure vent tube is properly installed on battery elbow, then install protective boot over battery.

Close and fasten retaining strips as shown on the next photo.

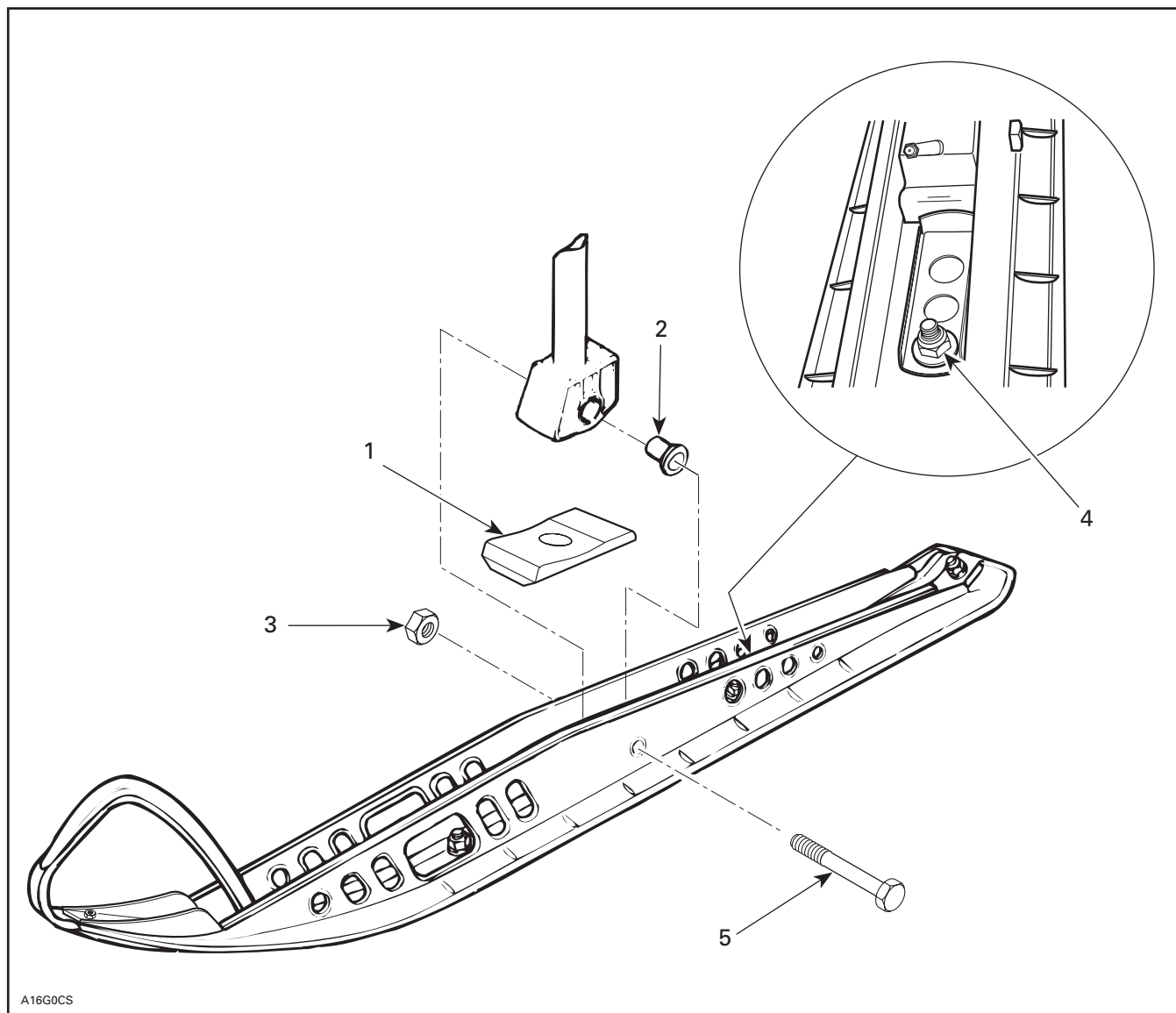


BATTERY PROTECTIVE BOOT INSTALLED

Ensure that vent tube is not kinked or blocked.
Reinstall air silencer.



PARTS INSTALLATION SKIS



LEFT SIDE SHOWN

1. Stop bounding (2) (P/N 570 0468 00) (section no. 4)
2. Slider cushion (4) (ski leg)
3. Nut M12 (2) (ski leg). Torque to 40 N•m (30 lbf•ft)
4. Loosen then adjust against stop bounding. Torque to 14 N•m (124 lbf•in)
5. Bolt M12 (2) (ski leg)

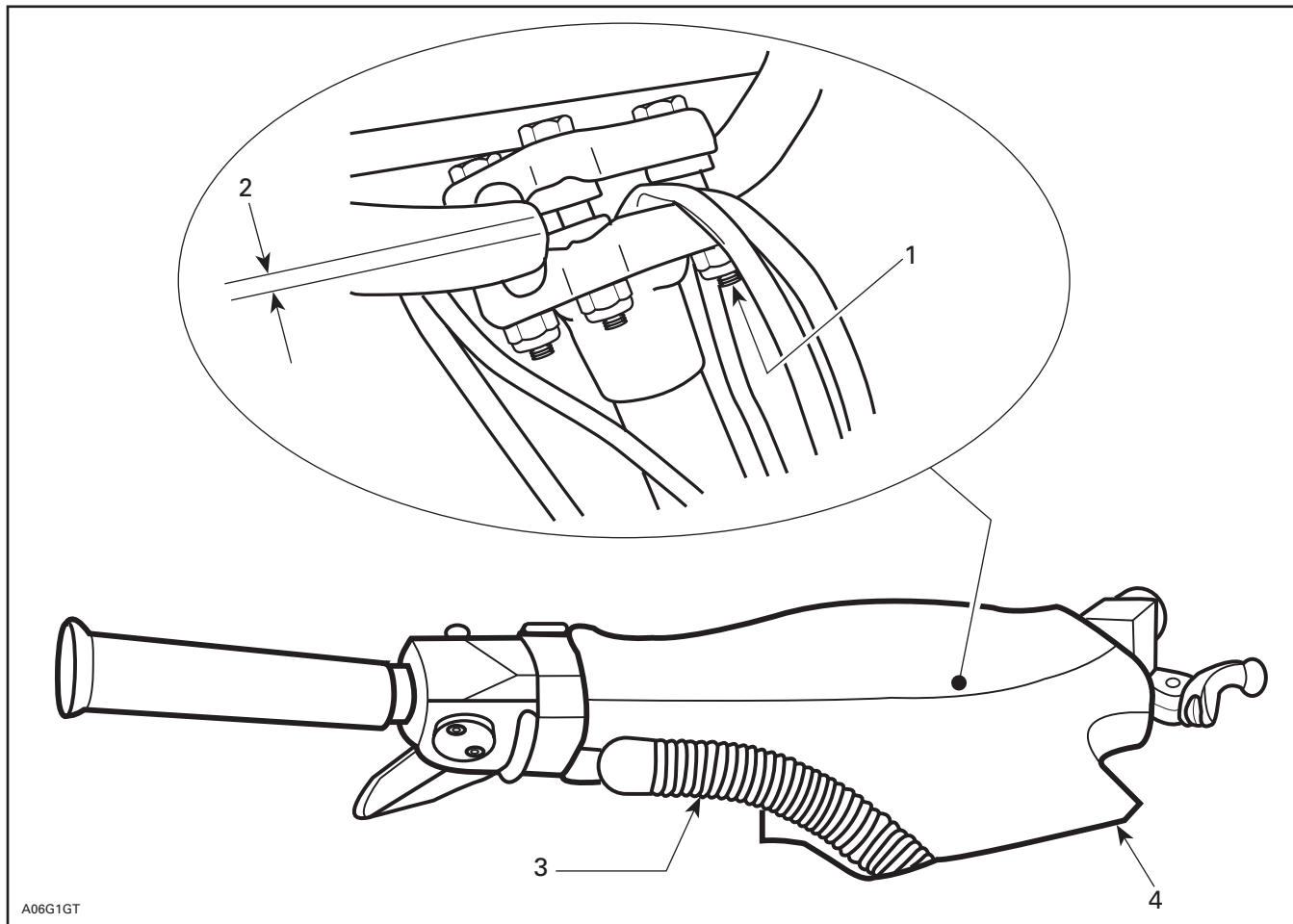
After ski installation, adjust stopper against stop bounding then tighten nut to 14 N•m (124 lbf•in). More preload on stop bounding will result in a more aggressive steering. Adjust according to driver preferences.



PARTS INSTALLATION STEERING PAD

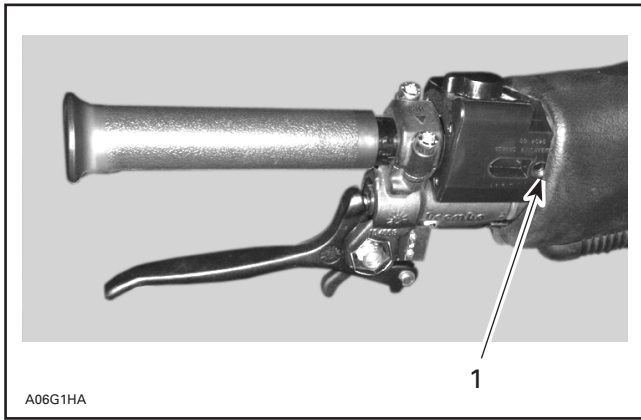


Adjust handlebar temporarily and tighten nuts loosely for now.
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporarily, and adjust for proper fit with console.
Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



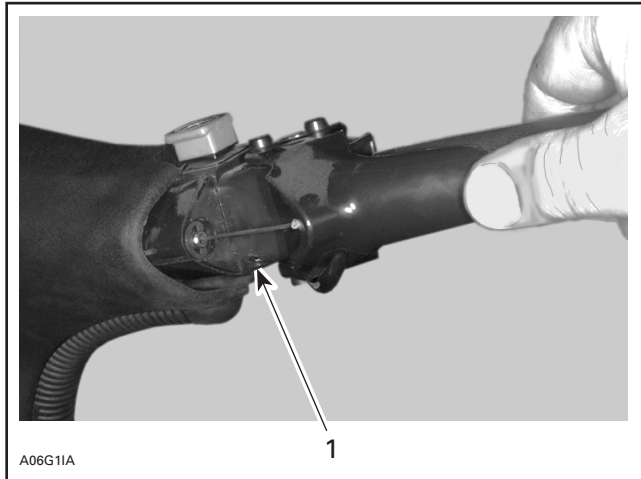
A06G1GT

1. Torque to 26 N•m (19 lbf•ft)
2. Equal gap each side (both clamps)
3. Keyway (2) (section no. 3)
4. Steering pad (engine compartment)



BRAKE HANDLE HOUSING

1. Tighten set screw to 2 N•m (18 lbf•in)



THROTTLE HANDLE HOUSING

1. Tighten set screw to 2 N•m (18 lbf•in)

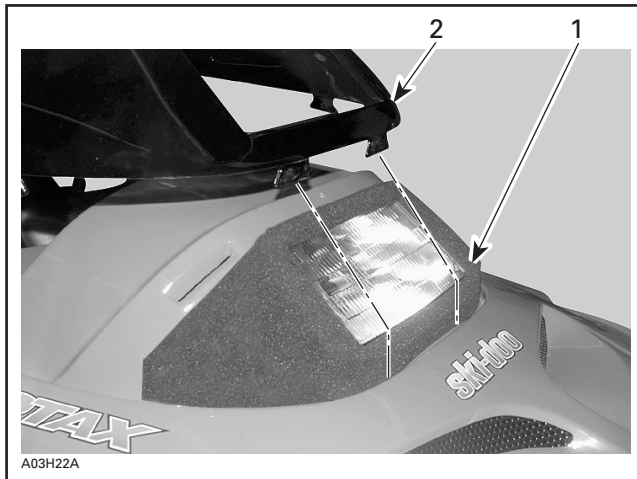


PARTS INSTALLATION WINDSHIELD



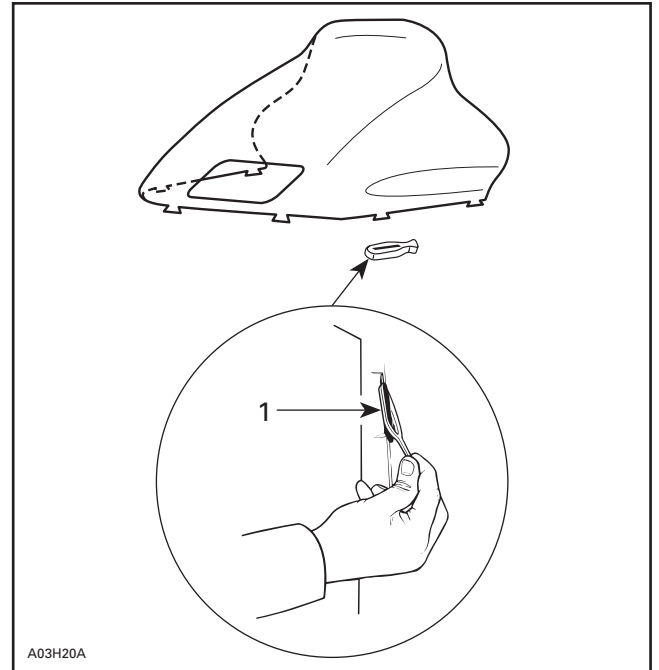
Install windshield on dashboard.

NOTE: Make sure that protective foam is properly positioned around headlamp before installing windshield.



A03H22A

1. Protective foam
2. Install windshield on dashboard



A03H20A

1. Latch (6) (P/N 570 0238 00) (section no. 4 or 6)



A03H23A

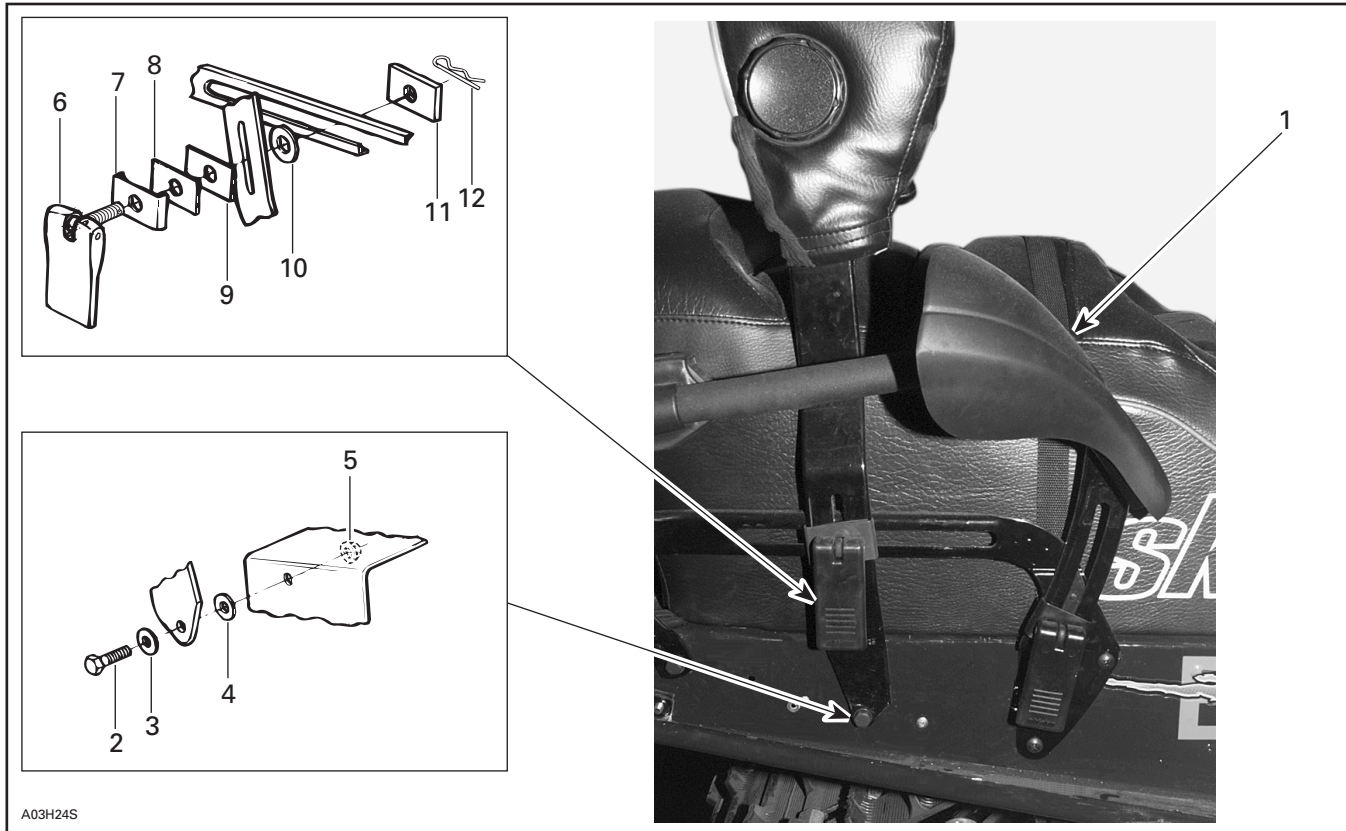
WINDSHIELD INSTALLED ON DASHBOARD



PARTS INSTALLATION BACKREST



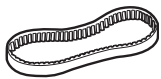
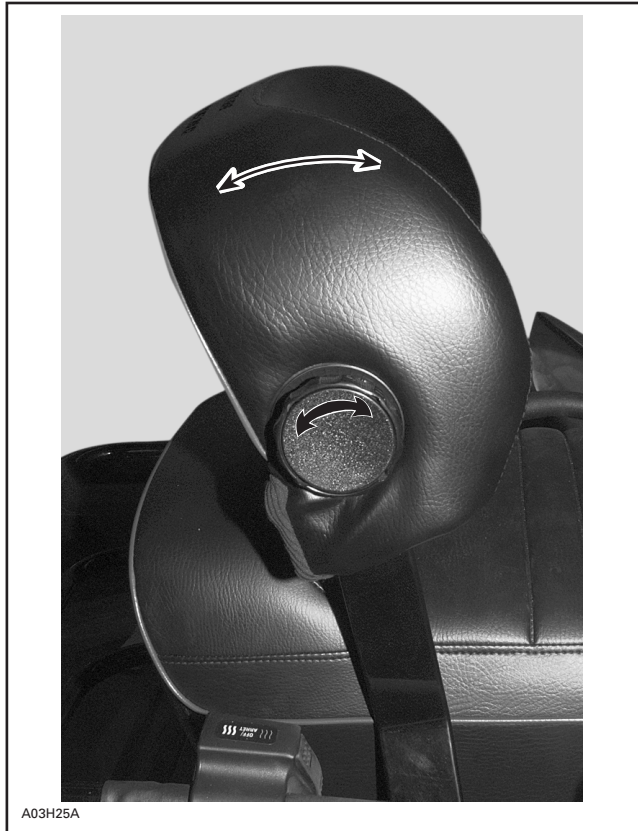
Secure backrest frame on tunnel then install lever assembly onto luggage rack rail.
Install hand protectors with rivets onto luggage rack handle.



A03H24S

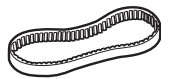
1. Handle protector (2) (seat storage compartment). Secure with rivets
2. Screw (2) (P/N 732 6011 75) (section no. 6)
3. Washer (2) (P/N 732 9000 30) (section no. 6)
4. Plastic washer (2) (P/N 414 8196 00) (section no. 6)
5. Elastic nut (2) (P/N 228 5810 45) (section no. 6). Torque to 8 N•m (73 lbf•in)
6. Lever assembly (2) (P/N 580 6110 00) (section no. 2)
7. Guide (2) (P/N 517 2573 00) (section no. 2)
8. Rubber shim (2) (P/N 570 0274 00) (section no. 6)
9. Spacer (2) (P/N 517 2513 00) (section no. 2)
10. Flanged washer (2) (P/N 414 8195 00) (section no. 6)
11. Threaded plate (2) (P/N 517 2500 00) (section no. 6)
12. Hair pin (2) (P/N 414 1083 00) (section no. 6)

Turn adjustment knob left or right to adjust back-rest cushion position.



PARTS INSTALLATION

DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.



LIQUIDS

OIL INJECTION PUMP BLEEDING



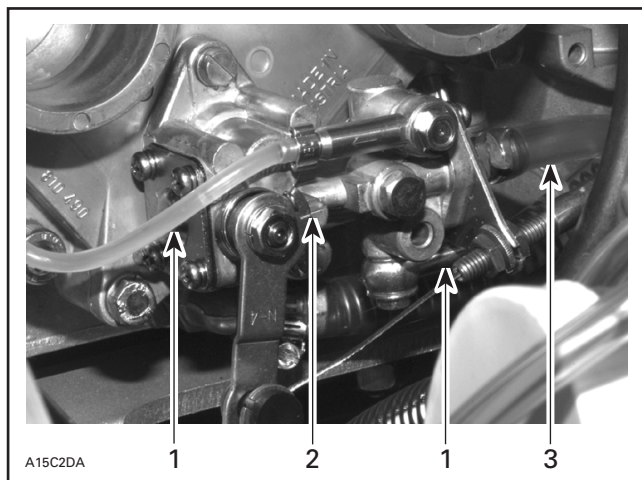
SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 8029 00 — 12 x 1L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Remove air silencer and move carburetors aside. Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

Check also for proper oil lever adjustment. Marks must aligned when throttle lever is activated just enough to take all cable play.

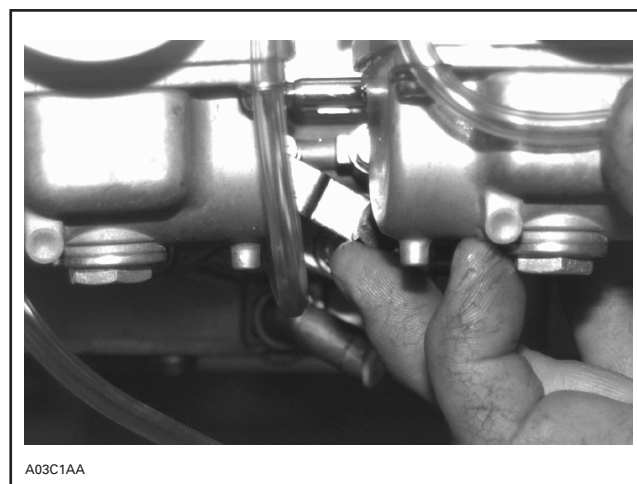


1. Small oil line
2. Marks aligned
3. Main oil line

Reinstall all parts except air silencer.

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

NOTE: If the air silencer has been reinstalled, make a J hook out of mechanical wire to lift the lever.



TYPICAL — ENGINE AT IDLE

Reinstall air silencer.



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir for proper level. Add fluid (DOT) as required.

▼ CAUTION

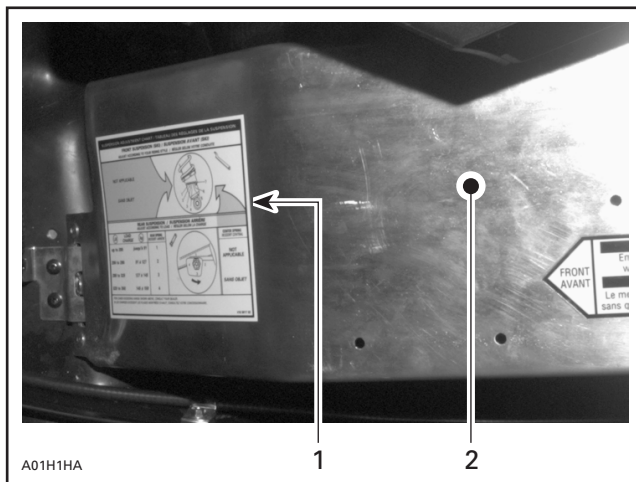
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See *Technical Data* section at the end of this bulletin.

On models equipped with a idler wheel cap, remove cap to loosen retaining screws. Refer to the following photo.



A03F2WA

INSERT A SMALL SCREWDRIVER INTO RECESS THEN REMOVE IDLER WHEEL CAP



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).



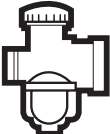




TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquires should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1997 model.

	MODELS	GRAND TOURING 500	GRAND TOURING 583	
	Engine Type	494	583	
	Maximum HP RPM ① ± 100 RPM	7800	7900	
	Rotary valve P/N Opening (BTDC)/ Closing (ATDC)	420 9245 09 135°/64°	420 9245 02 140°/71°	
	Carburetor Type	PTO VM 38 - 382 • MAG VM 38 - 383 •	PTO VM 38 - 386 • MAG VM 38 - 387 •	
	Main Jet	PTO 320 • MAG 290 •	PTO 270 • MAG 260 •	
	Needle Jet	Q-3 480 •	P-7 480 •	
	Pilot Jet	50	50	
	Needle Identification — Clip Position	6DHY48 •	6DEY4 •	
	Slide Cutaway	2.5	2.5	
	Float Adjustment ±1 mm (in)	18.1 (.71) •	18.1 (.71)	
	Air Screw Adjustment ± 1/16 Turn	1-1/4 •	2 •	
	Idle Speed RPM ± 200 RPM	1800	1800	
	Gas Grade/ Octane Number (R + M)/2	Regular Unleaded/87	Regular Unleaded/87	
Gas/Oil Ratio	Oil Injection	Oil Injection		
	Ignition Timing BTDC ② mm (in)	1.81 (.071)	1.75 (.069)	
	Trigger Coil Air Gap mm (in)	0.55 - 1.45 (.022 - .057)	0.55 - 1.45 (.022 - .057)	
	Gear Ratio Teeth	23/44	23/44	
	Engagement Speed ± 100 RPM	3600 •	3100 •	
	Drive Pulley Calibration Screw Position	3	3	
	Pulley Distance Z (+ 0, - 1) mm (+ 0, - 1/32) in		16.5 (21/32)	
	Offset X ± 0.4 mm (± 1/64 in)		35.0 (1-3/8)	
		Y	Dimension Y must exceed X from 1 mm (1/32in) to 2 mm (5/64 in)	
	Drive Belt Adjustment Deflection mm (in)		32 (1-1/4)	
		Force ③ kg (lbf)	11.34 (25)	
	Driven Pulley Preload ± 0.7 kg (lbf)	7.0 (15.43)	7.0 (15.43) •	
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation		
Track Adjustment Deflection mm (in)	35 to 40 (1.378 to 1.575) with a M7.3 kg (16 lb) downward pull •			

- ① Engine speed at which maximum power is achieved
- ② At 6000 RPM (engine cold) with headlamp turned on
- ③ Force applied midway between pulleys to obtain specified deflection

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 MAG: Magneto side

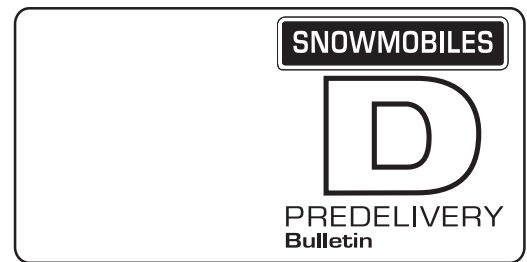
Please route to :

Init.

Service

Sales

Parts



No. **98-4**

Date: July 18, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1998	Canada and United States: Formula* 500 Formula* 500 De Luxe Formula* 583 De Luxe Formula* Z 583	1243 and 1244 1246 and 1247 1249 and 1250 1251 and 1252	ALL
1998	Sweden: Formula* 500 Formula* 500 De Luxe	1245 1248	ALL

This bulletin must be used in conjunction with the check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

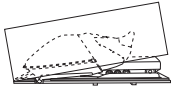
◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, it may have some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

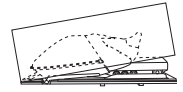
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquires should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and video.

There is a tag attached to the ignition key, only the customer must removed it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

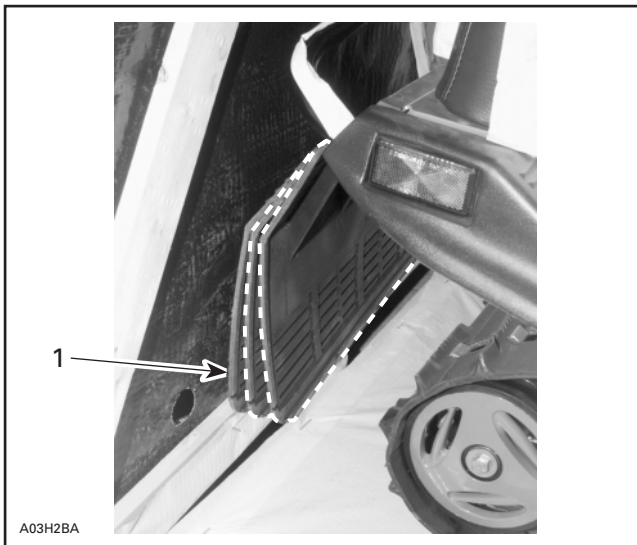
Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

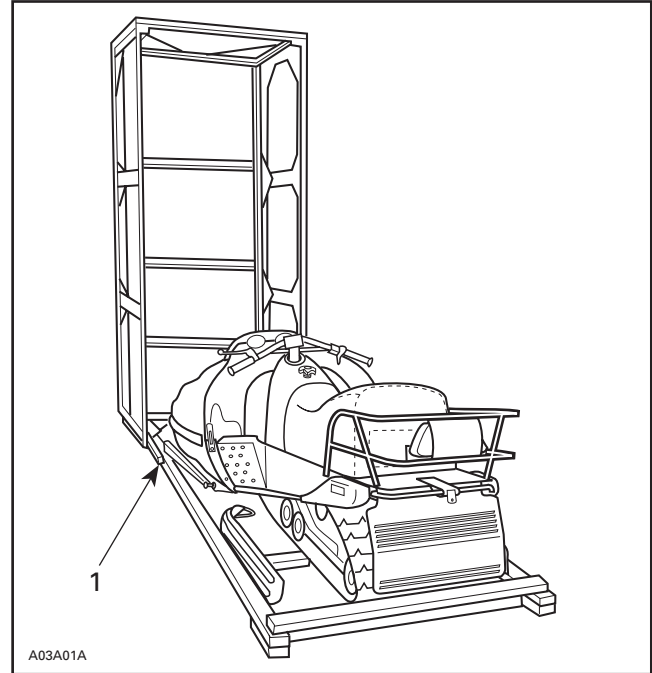
Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.

NOTE: On some models, snow guard may interfere with crate cover, as shown in the following photo. Push on snow guard when lifting cover.



FROM OUTSIDE CRATE PUSH ON SNOW GUARD TO ALLOW COVER TO LIFT WITHOUT DAMAGING SNOW GUARD

1. Snow guard interfering with crate cover.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

When this metal strip is under the seat loosen 2 or 4 nuts retaining the seat before pulling out the metal strip.

▼ CAUTION

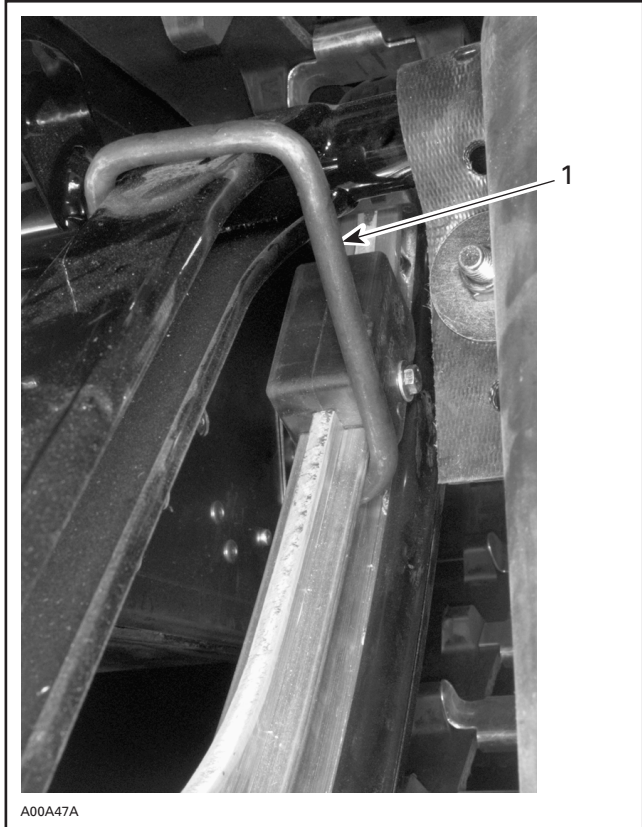
Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

FRONT HOOK REMOVAL



A00A47A

TYPICAL

1. Hook to be removed

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



A00A48A

EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.



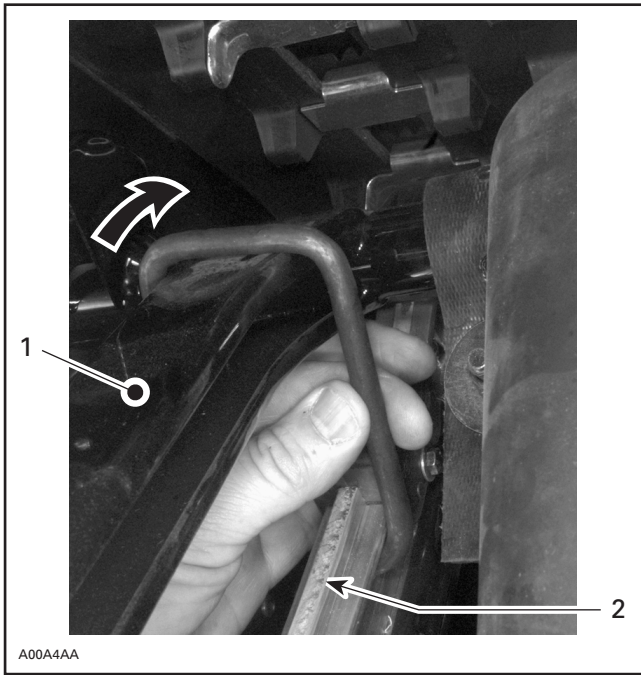
A00A49A

TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

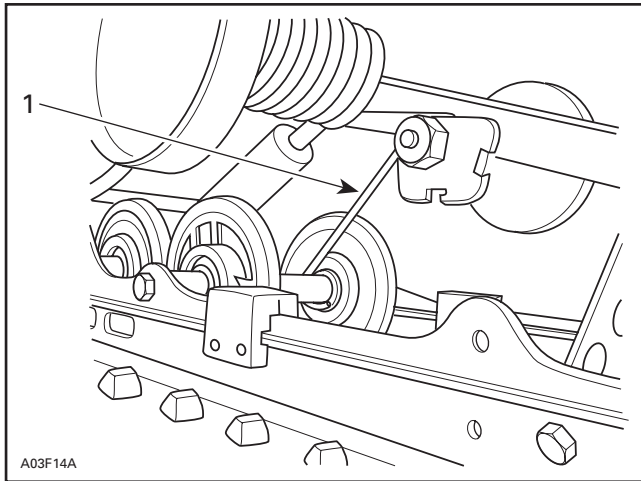
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



TYPICAL — REMOVE HOOK

1. Front arm
2. Runner

REAR HOOK REMOVAL



1. Hook to be removed

Procedure

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.

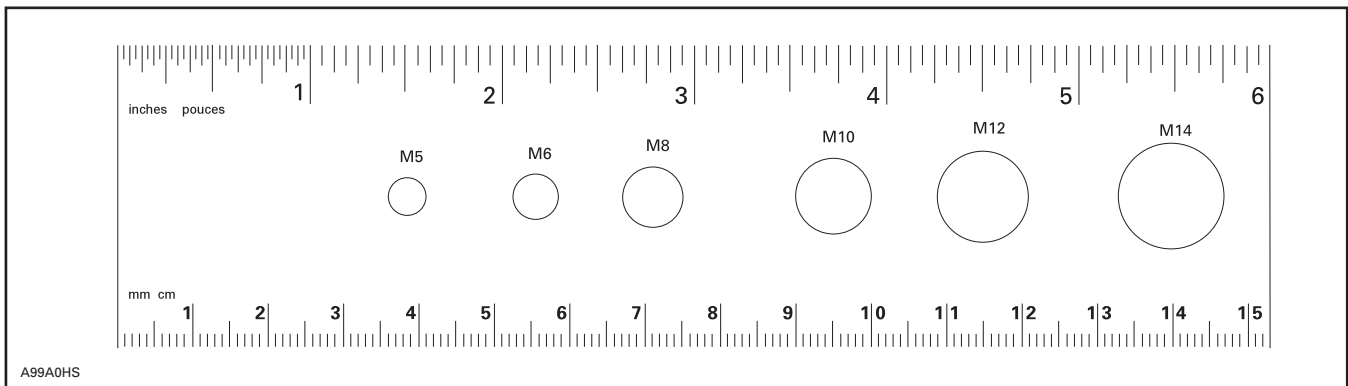


Remove hook on the rear portion of the suspension

◆ WARNING

Both hooks must be removed to have snowmobile suspension operational.

PREDELIVERY KIT P/N	MODELS
580 6540 00	FORMULA Z 583 FORMULA 500 DE LUXE FORMULA 583 DE LUXE
580 6543 00	FORMULA 500

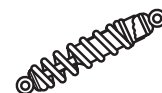


NOTE: This ruler can be helpful to identify fastener length or size.



PARTS INSTALLATION

FRONT SUSPENSION



Formula 500/500 De Luxe/583 De Luxe and Formula Z 583

Cut locking tie retaining exhaust spring to exhaust support.

All Models

Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

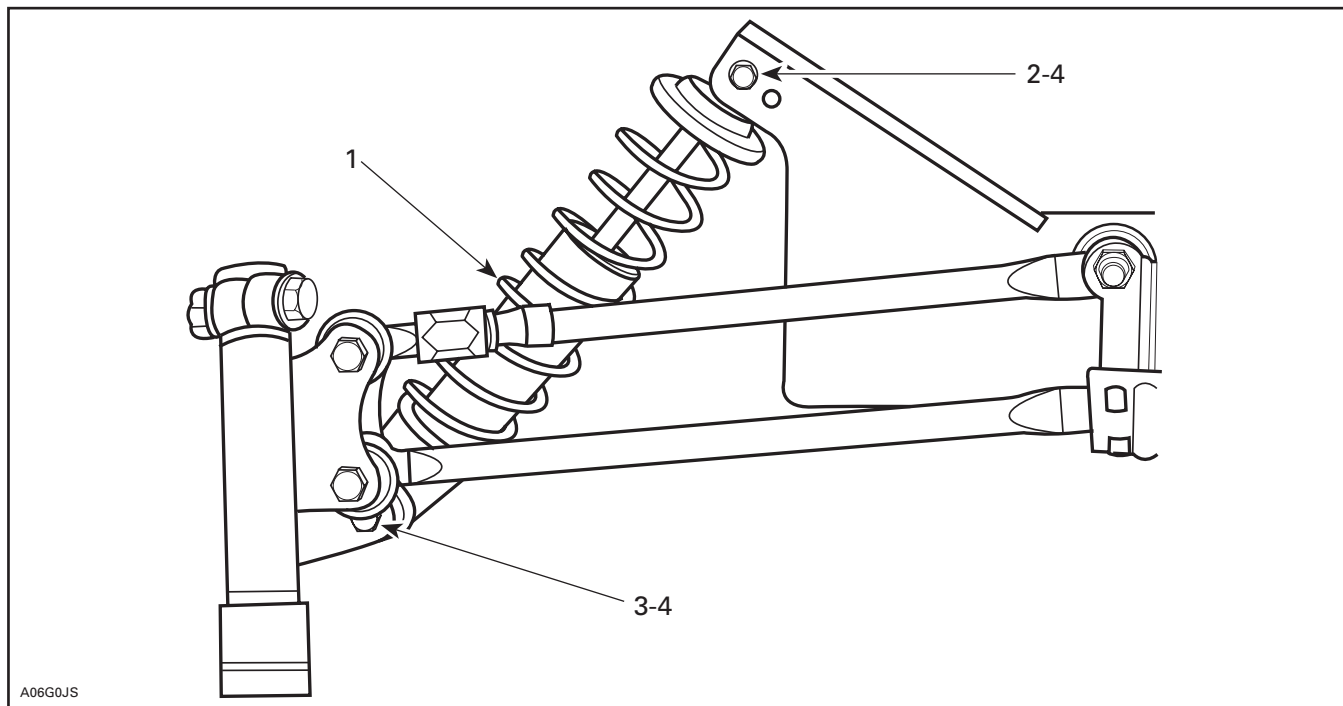
Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position bottom and top screw heads toward front.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.

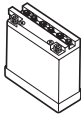
NOTE: On models equipped with a 5 holes exhaust support, hook up exhaust spring on mid-hole.

1. Lug in recess
2. Locking tie

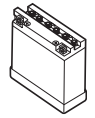


TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 0060 65) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 0055 65) (on suspension)
4. Elastic flanged nut M10 x 1.5 (2) (P/N 228 5010 45) (section no. 4). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION BATTERY



Formula 500 De Luxe and 583 De Luxe

During vehicle preparation, the battery can be activated as described in *Shop Manual*.

▼ CAUTION

Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage. Do not charge an installed battery.

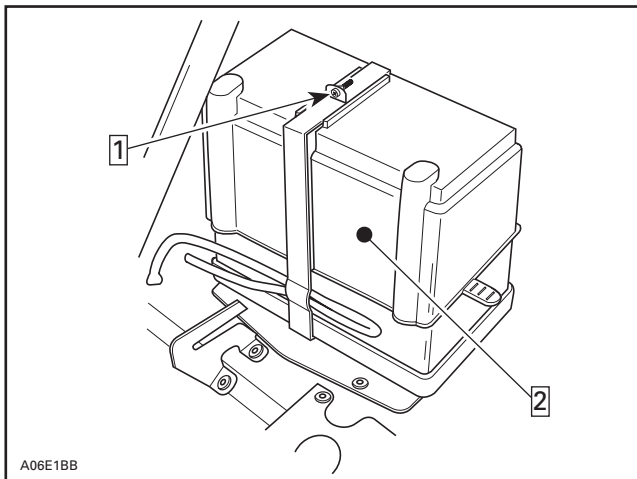
Battery Removal

Remove belt guard.

Remove air intake silencer.

Unfasten battery retaining strips.

Open strips and lift battery protective boot.



Step 1 : Detach and open
Step 2 : Lift battery protective boot

Withdraw battery from vehicle.

Battery Installation

NOTE: Before reinstalling battery and air silencer check oil pump lever adjustment.

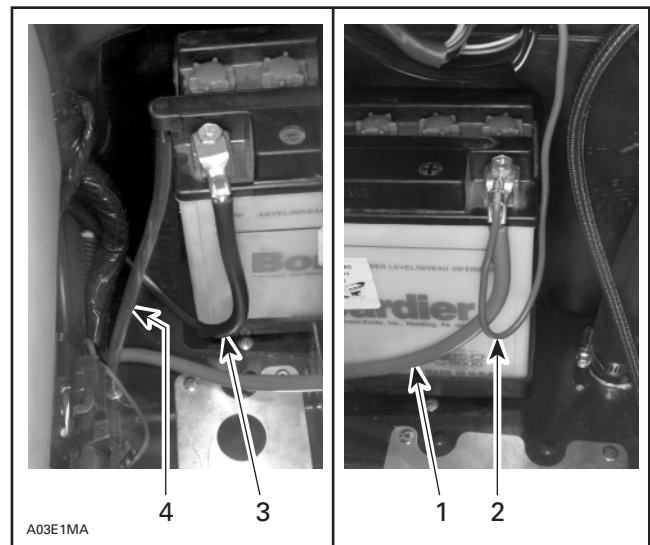
Install vent tube on battery.

Connect RED positive cable and RED wire to positive battery terminal.

Connect BLACK negative cable LAST.

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.



BATTERY CONNECTION

1. RED positive cable
2. RED positive wire
3. BLACK negative cable
4. Ensure that vent tube is properly connected

Ensure that vent tube is properly connected to vehicle fitting on front frame.

Apply silicone dielectric grease (P/N 413 7017 00) on battery posts and connectors.

Ensure vent tube is properly installed on battery elbow, then install protective boot over battery.

Close and fasten retaining strips as shown on the next photo.



BATTERY PROTECTIVE BOOT INSTALLED

Ensure that vent tube is not kinked or blocked.
Reinstall air silencer.



PARTS INSTALLATION SKIS

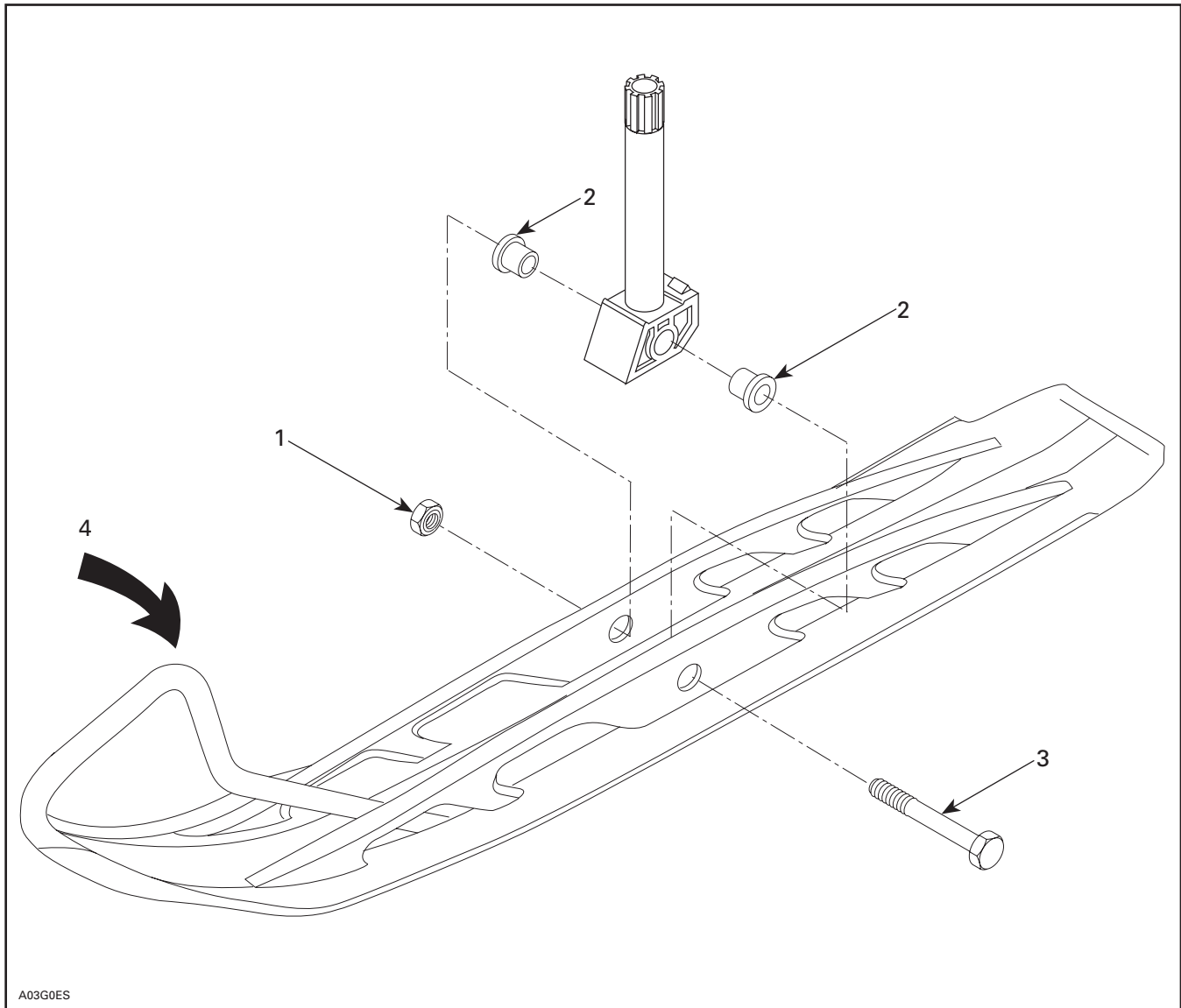


Formula 500

Install skis on vehicle.

NOTE: Make sure that slider cushions are still in ski leg.

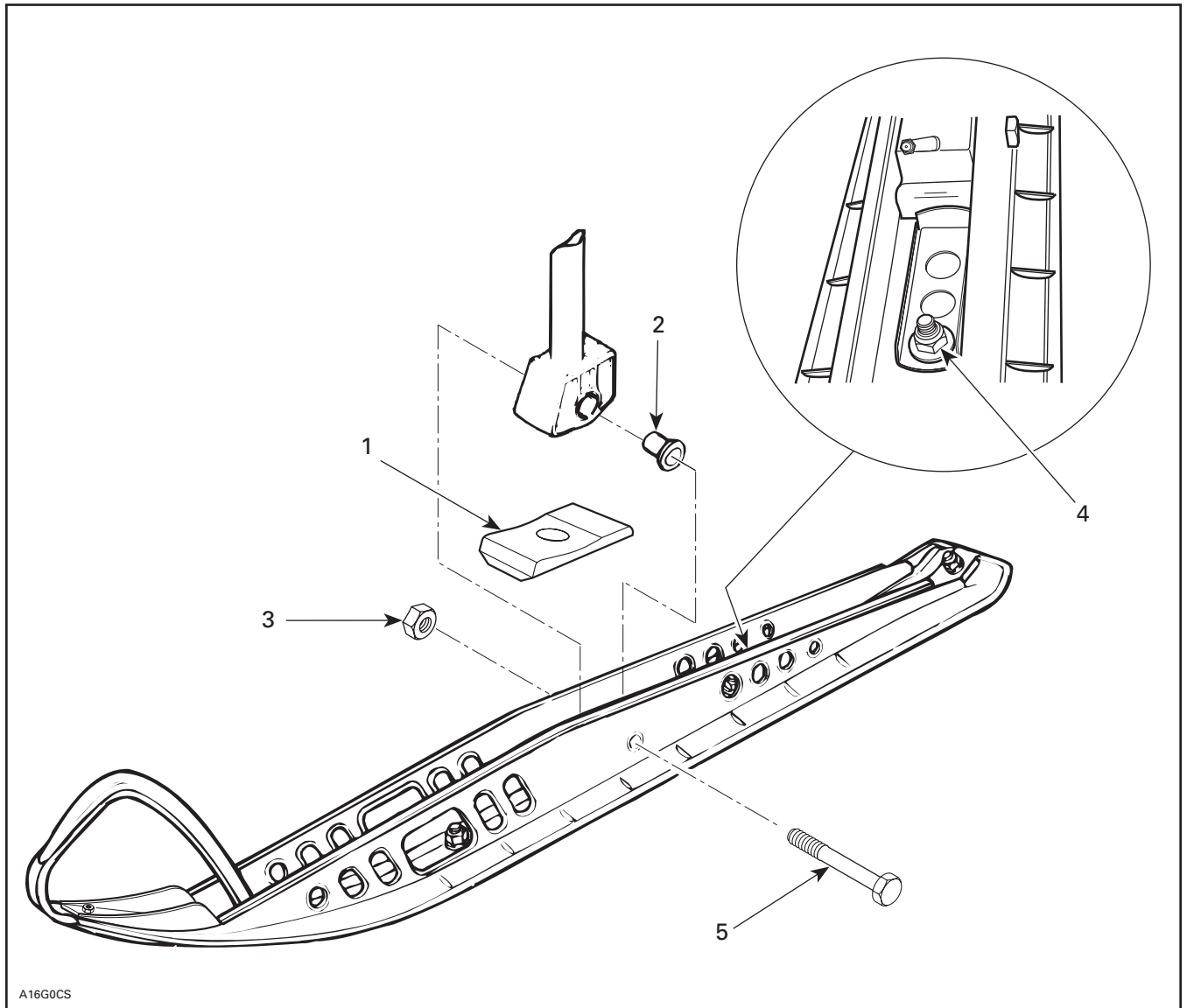
Replace vehicle on ground.



LEFT SIDE SHOWN

1. Elastic flanged nut M12 x 1.75 (2) (P/N 228 5210 45) (section no. 1). Torque to 40 N•m (30 lbf•ft)
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Twist ski to ease bolt installation

Formula 500 De Luxe, Formula 583 De Luxe and Formula Z 583



LEFT SIDE SHOWN

1. Stop bounding (2) (P/N 570 0468 00) (section no. 8)
2. Slider cushion (4) (ski leg)
3. Elastic flanged nut M12 (2) (ski leg). Torque to 40 N•m (30 lbf•ft)
4. Loosen then adjust against stop bounding. Torque to 14 N•m (124 lbf•in)
5. Bolt M12 (2) (ski leg)

After ski installation, adjust stopper against stop bounding then tighten nut to 14 N•m (124 lbf•in). More preload on stop bounding will result in a more aggressive steering. Adjust according to driver preferences.



PARTS INSTALLATION STEERING PAD



All Models

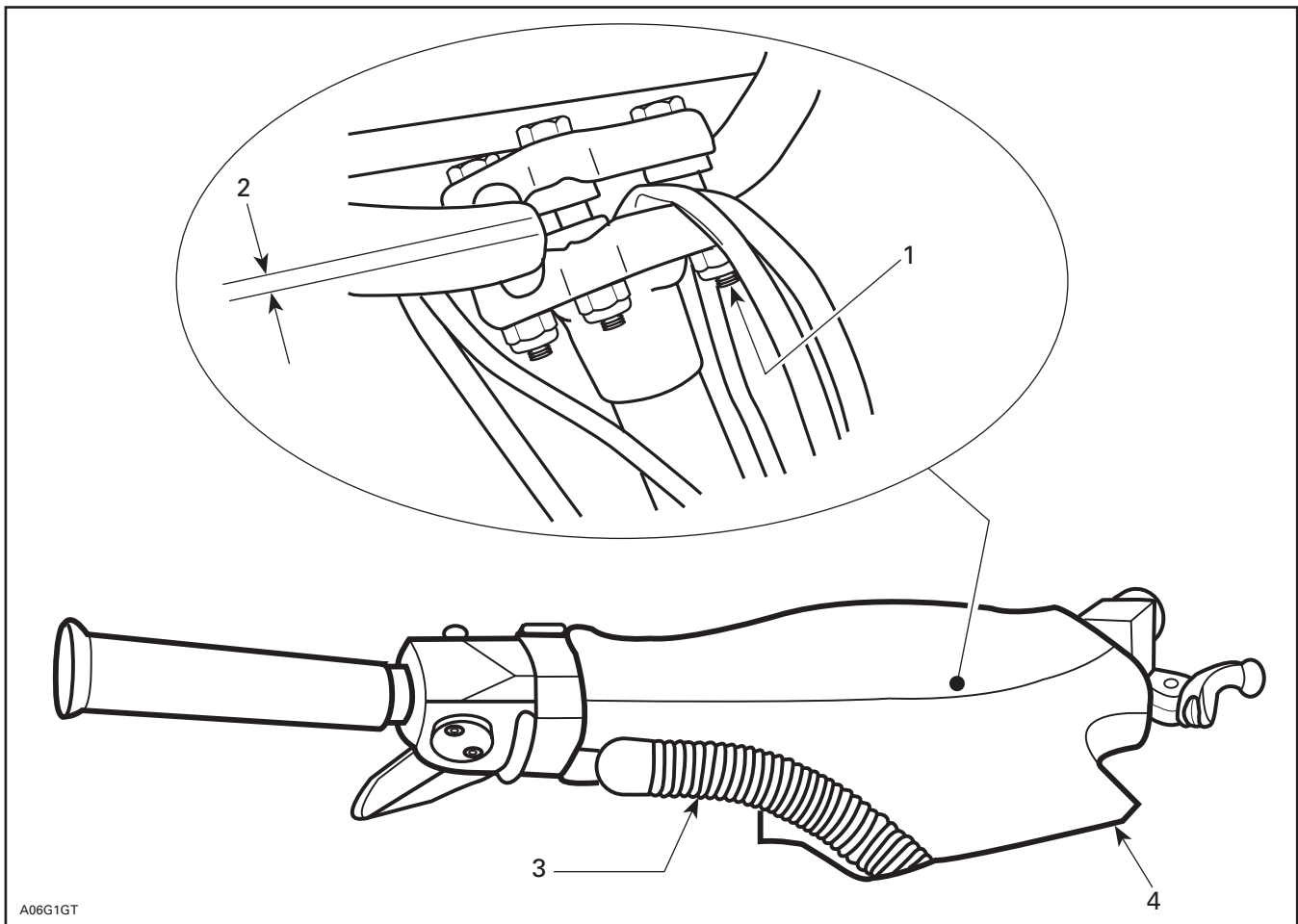
Adjust handlebar temporary and tighten nuts loosely for now.

Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.

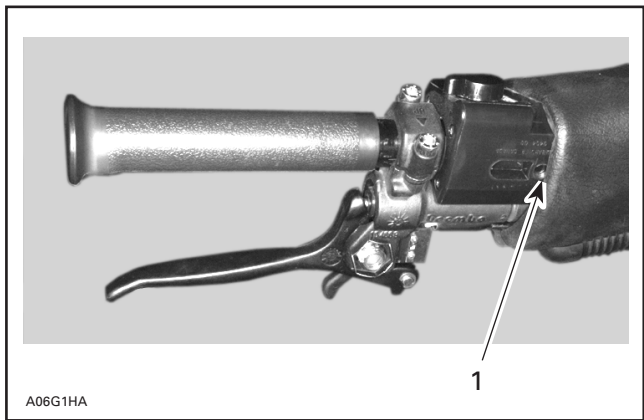
Install steering pad temporary, and adjust for proper fit with console.

Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).

Reinstall steering pad, adjust and tighten throttle and brake handle housings.

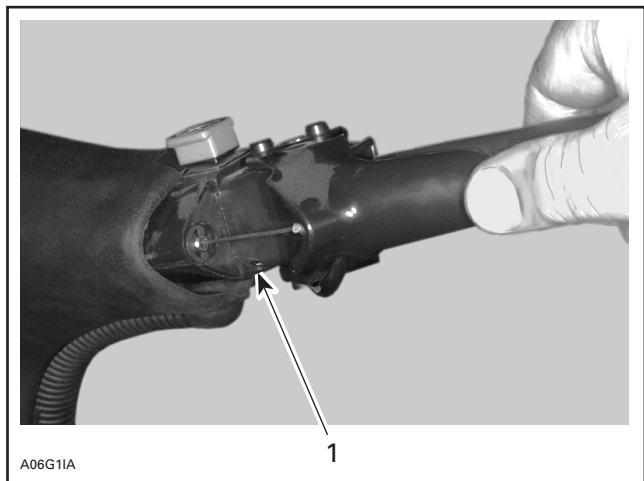


1. Torque to 26 N•m (19 lbf•ft)
2. Equal gap each side (both clamps)
3. Keyway (2) (P/N 572 0724 00) (section no. 3 or 5)
4. Steering pad (engine compartment)



BRAKE HANDLE HOUSING

1. Tighten set screw to $2\text{ N}\cdot\text{m}$ ($18\text{ lbf}\cdot\text{in}$)



THROTTLE HANDLE HOUSING

1. Tighten set screw to $2\text{ N}\cdot\text{m}$ ($18\text{ lbf}\cdot\text{in}$)



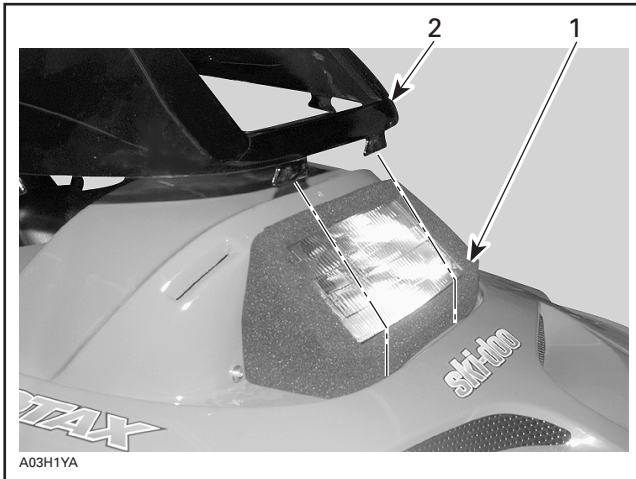
PARTS INSTALLATION WINDSHIELD



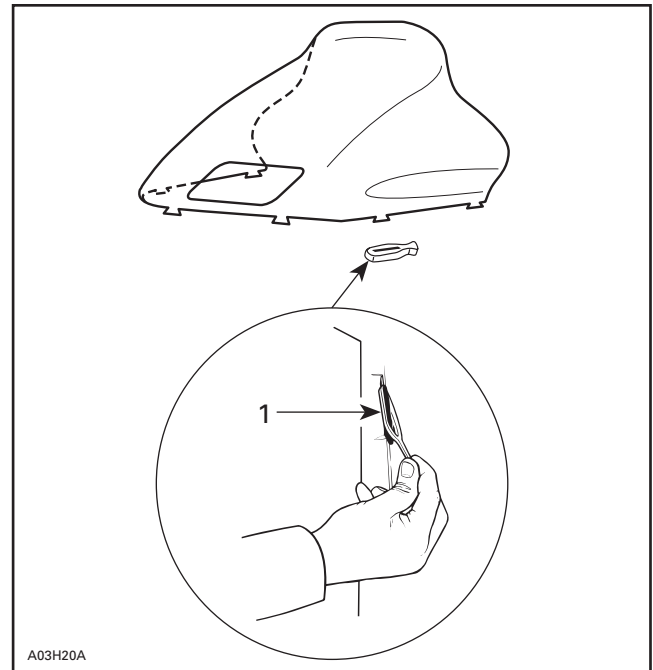
All Models

Install windshield on dashboard.

NOTE: Make sure that protective foam is properly positioned around headlamp before installing windshield.



1. Protective foam
2. Install windshield on dashboard



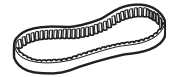
1. Latch (6) (P/N 570 0238 00) (section no. 4 or 6)



WINDSHIELD INSTALLED ON DASHBOARD



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.



LIQUIDS OIL INJECTION PUMP BLEEDING



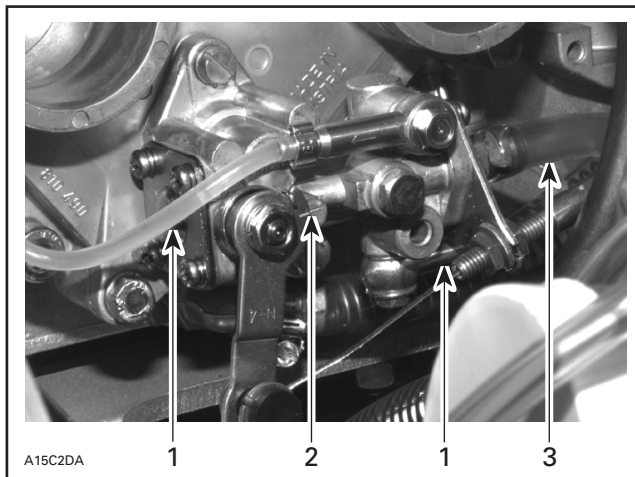
BREAK-IN PERIOD SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 8029 00 - 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Remove air silencer and move carburetors aside. Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

Check also for proper oil lever adjustment. Marks must align when throttle lever is activated just enough to take all cable play.

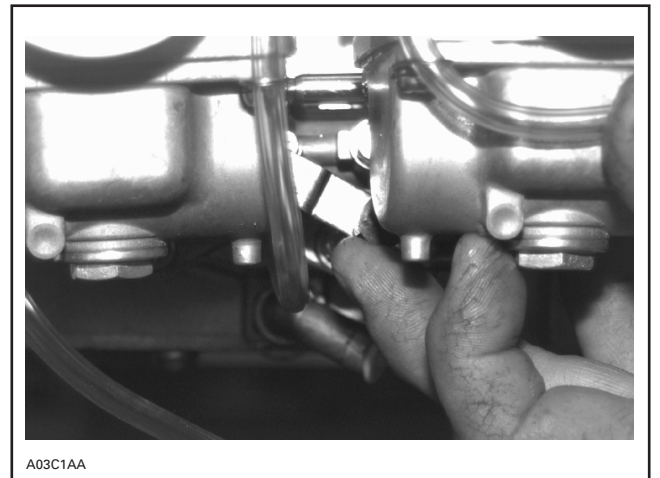


1. Small oil line
2. Marks aligned
3. Main oil line

Reinstall all parts except air silencer.

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

NOTE: If the air silencer has been reinstalled, make a J hook out of mechanical wire to lift the lever.



TYPICAL — ENGINE AT IDLE

Reinstall air silencer.



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir for proper level. Add fluid (DOT) as required.

▼ CAUTION

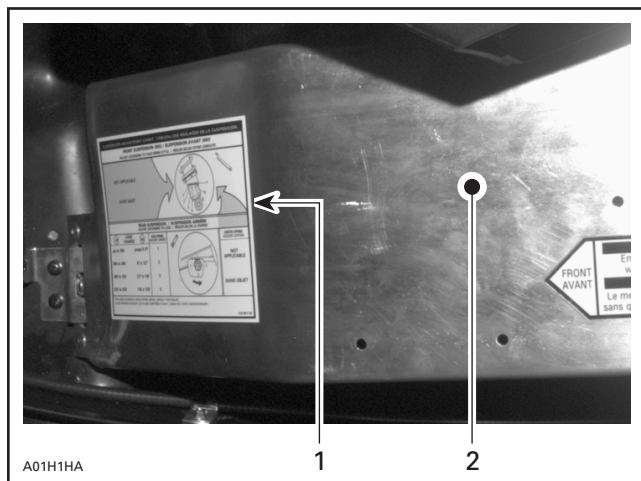
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS SUSPENSION



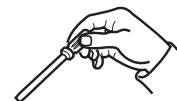
Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard

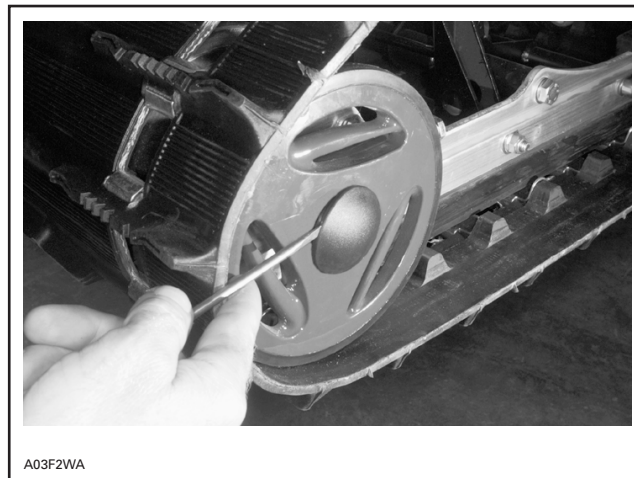


ADJUSTMENT TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.

On models equipped with an idler wheel cap, remove cap to loosen retaining screws. Refer to the following photo.



A03F2WA

1. Insert a small screwdriver into recess then remove idler wheel cap



ADJUSTMENT DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).



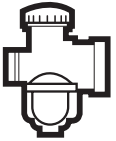




TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1997 model.

	MODELS	FORMULA 500/ 500 DE LUXE	FORMULA 583 DE LUXE	
	Engine Type	494	583	
	Maximum HP RPM ①	± 100 RPM 7800	• 7900	
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	420 9245 09 135°/ 64°	420 9245 02 140°/ 71°
	Carburetor Type	PTO VM 38 - 378 MAG VM 38 - 379	• PTO VM 38 - 386 • MAG VM 38 - 387	
	Main Jet	PTO 330/MAG 300	• PTO 270/MAG 260	
	Needle Jet	Q-3 (480)	• P-7 (480)	
	Pilot Jet	50	50	
	Needle Identification — clip Position	6DHY48 - 3	• 6DEY4 - 2	
	Slide Cutaway	2.5	2.5	
	Float Adjustment	± 1 mm (± 0.039 in)	18.1 (.71)	18.1 (.71)
	Air Screw Adjustment	± 1/16 turn	1-1/2	• 2
	Idle Speed RPM	± 200 RPM	1800	1800
	Gas Grade Octane Number	(R + M)/2	Regular Unleaded 87	Regular Unleaded 87
	Gas/Oil Ratio		Oil Injection	Oil Injection
	Ignition Timing BTDC ②	mm (in)	1.81 (.071)	1.75 (.069)
	Trigger Coil Air-Gap	mm (in)	0.55 - 1.45 (.022 - .057)	0.55 - 1.45 (.022 - .057)
	Gear Ratio	teeth	Formula 500: 23/43 Formula 500 DL: 23/44	• 25/44
	Engagement Speed	± 100 RPM	3800	• 4100
	Drive Pulley Calibration Screw Position		3	3
	Pulley Distance	Z	(+ 0, - 1) mm ((+ 0, - 1/32) in)	16.5 (21/32)
	Offset	X	± 0.4 mm (± 1/64 in)	35.0 (1-3/8)
		Y		Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
	Drive Belt Adjustment	Deflection	mm (in)	32 (1-1/4)
		Force ③	kg (lbf)	11.34 (25)
	Driven Pulley Preload	± 0.7 kg (± 1.5 lbf)		7.0 (15.43)
	Drive Chain Tension		Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation	
Track Adjustment	Deflection	35 to 40 mm (1-3/8 to 1-9/16 in) with a 7.3 kg (16 lb) downward pull	• 35 to 40 mm (1-3/8 to 1-9/16 in) with a 7.3 kg (16 lb) downward pull	

① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.



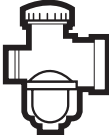


BTDC: Before Top Dead Center

ATDC: After Top Dead Center

PTO: Power Take OFF side

MAG: Magneto side

A dot (•) on right indicates changes from 1997 model.

	MODEL	FORMULA Z 583		
	Engine Type	583		
	Maximum HP RPM ①	± 100 RPM 7900		
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	420 9245 02 140°/ 71°	
	Carburetor Type	PTO VM 40 - 99	MAG VM 40 - 100 •	
	Main Jet	PTO 280	MAG 260	
	Needle Jet	AA-2 (224)		
	Pilot Jet	60		
	Needle Identification — clip Position	7ECY1		
	Slide Cutaway	2.5		
	Float Adjustment	± 1 mm (± 0.039 in)	18.1 (.71)	
	Air Screw Adjustment	± 1/16 turn	2	
	Idle Speed RPM	± 200 RPM	1800	
	Gas Grade	Regular Unleaded		
	Pump Octane Number	(R + M)/2	87	
	Ignition Timing BTDC ②	mm (in)	1.75 .069)	
	Trigger Coil Air-Gap	mm (in)	0.55 - 1.45 .022 - .057)	
	Gear Ratio	teeth	25/43 •	
	Engagement Speed	± 100 RPM	4100	
	Drive Pulley Calibration Screw Position	3		
	Pulley Distance	Z	(+ 0, - 1) mm ((+ 0, - 1/32) in)	16.5 (21/32)
	Offset	X	± 0.4 mm (± 1/64 in)	35.0 (1-3/8)
		Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)	
	Drive Belt Adjustment	Deflection	± .5 mm (± .020 in)	32 (1-1/4)
		Force ③	kg (lbf)	11.34 (25)
	Driven Pulley Preload	± 0.7 kg (± 1.5 lbf)	7.0 (15.43)	
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation		
	Track Adjustment	Deflection	30 to 40 mm (1-3/16 - 1-9/16 in) with a 7.3 kg (16 lb) downward pull	

- ① Engine speed at which maximum power is achieved.
- ② At 6000 RPM (engine cold) with headlamp turned on.
- ③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 MAG: Magneto side

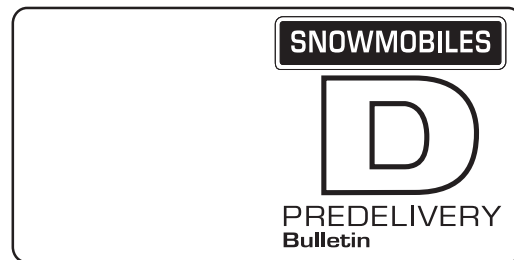
Please route to:

Init.

Service

Sales

Parts



No. **98-5**

Date: September 4, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1998	Canada: MX Z 440 MX Z 500 MX Z 583	1264 1272 1275	ALL
1998	United States: MX Z 440 MX Z 500 MX Z 583	1265 1273 1276	ALL
1998	Sweden: MX Z 440 MX Z 500 MX Z 583	1266 1274 1277	ALL

This bulletin must be used in conjunction with the check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

◆ WARNING

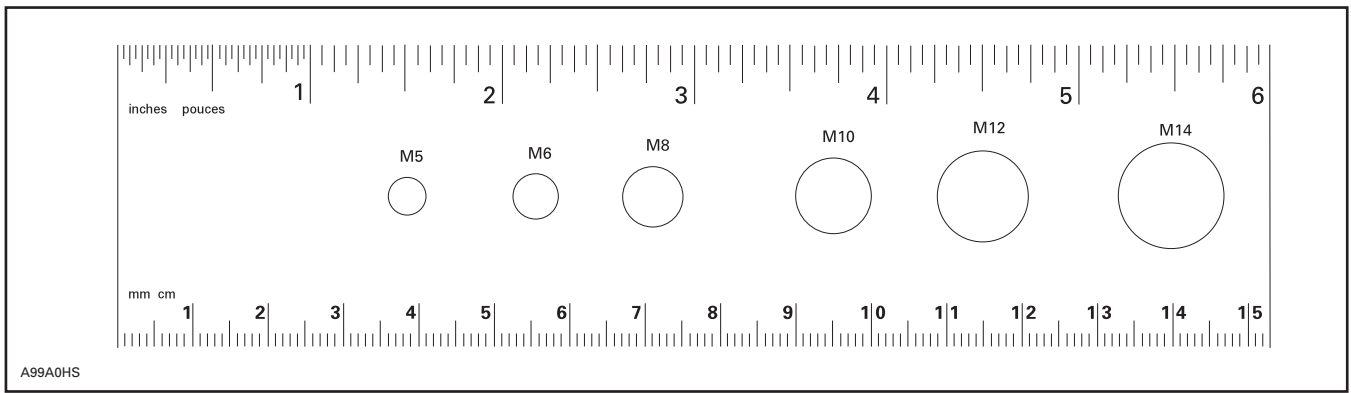
To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, it may have some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

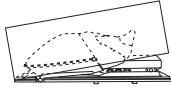
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and *Video*.

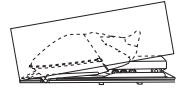
There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



NOTE: This ruler can be helpful to identify fastener length or size.



UNCRATING



PREDELIVERY KIT P/N	MODELS
580 6683 00	MX Z 500/583
580 6543 00	MX Z 440

◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

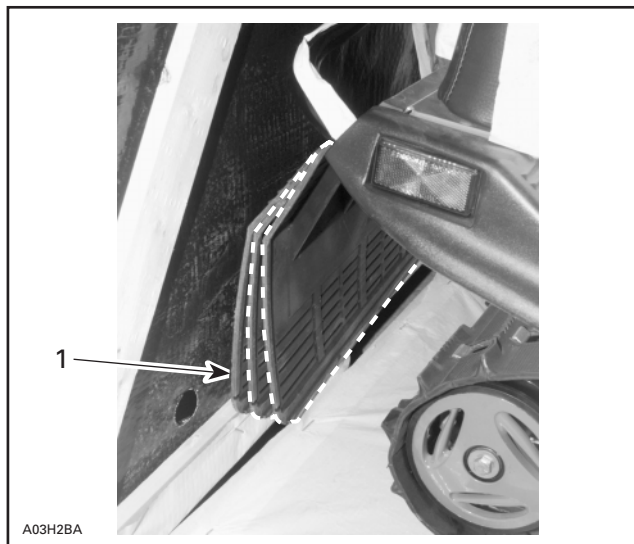
Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

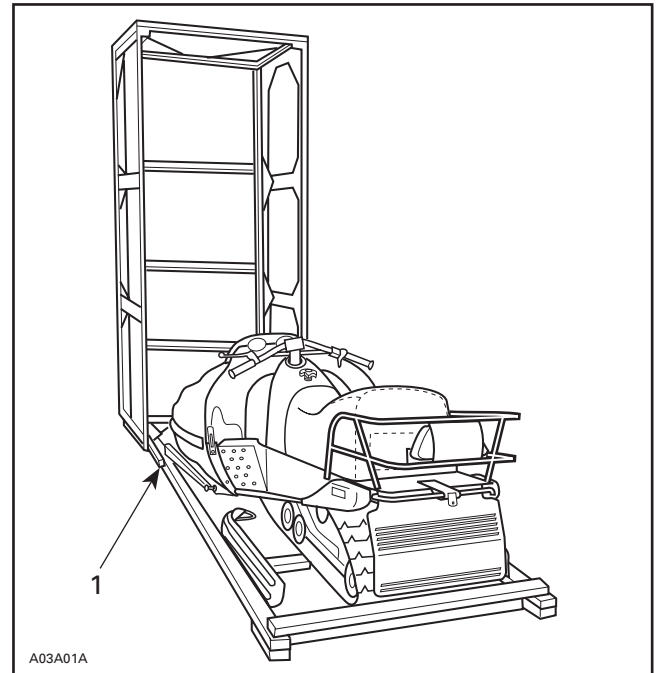
Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.

NOTE: On some models, snow guard may interfere with crate cover, as shown in the following photo. Push on snow guard when lifting cover.



FROM OUTSIDE CRATE PUSH ON SNOW GUARD TO ALLOW COVER TO LIFT WITHOUT DAMAGING SNOW GUARD

1. Snow guard interfering with crate cover



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

When this metal strip is under the seat loosen 2 or 4 nuts retaining the seat before pulling out the metal strip.

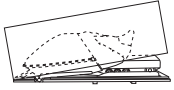
▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

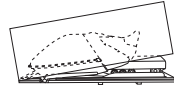
Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

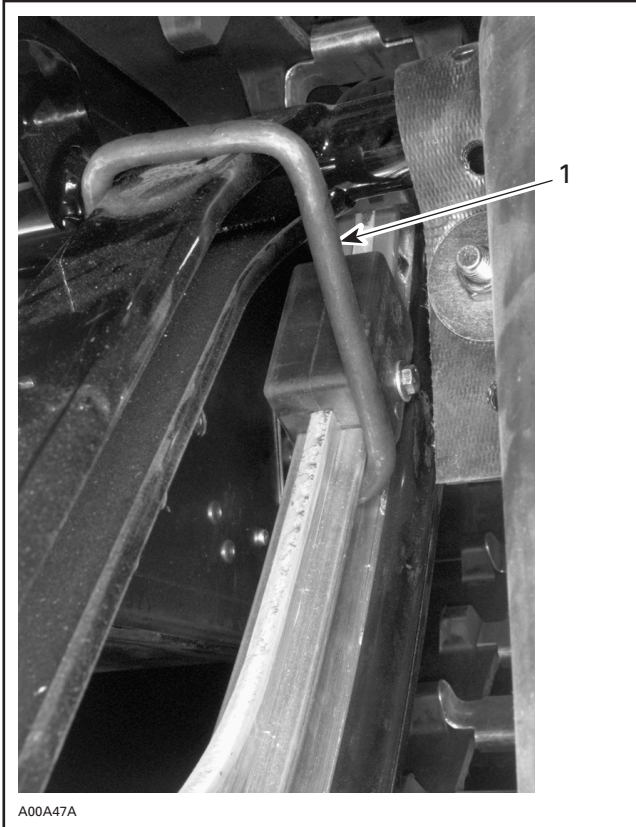
Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.



UNCRATING



FRONT HOOK REMOVAL



TYPICAL

1. Hook to be removed

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.

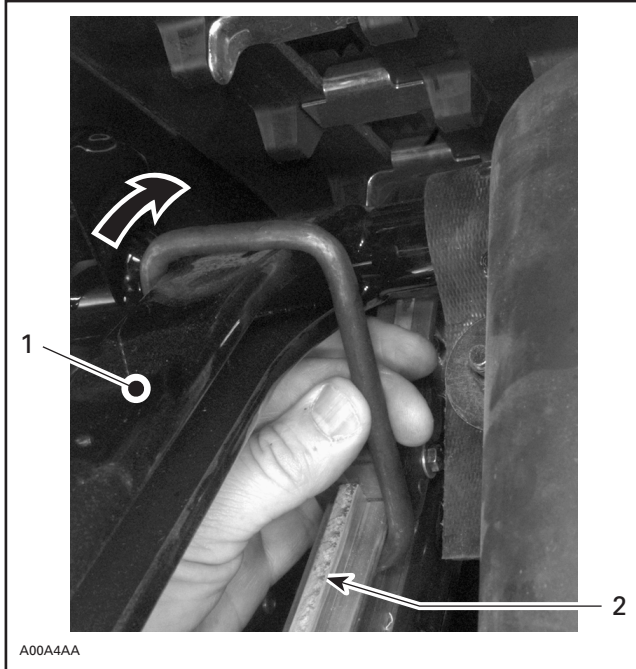


TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

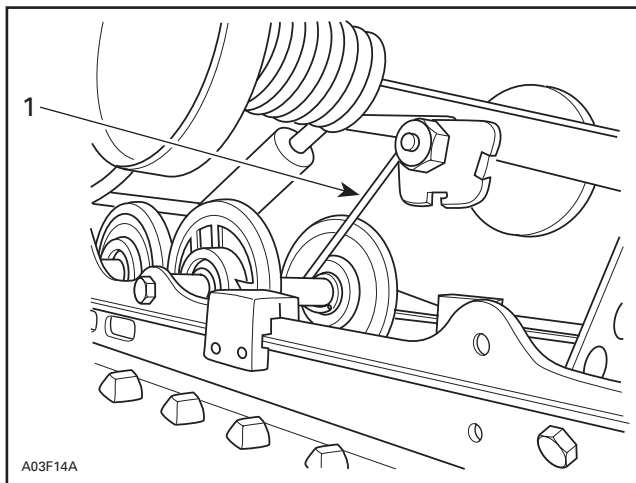
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



TYPICAL — REMOVE HOOK

1. Front arm
2. Runner

REAR HOOK REMOVAL



1. Hook to be removed

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



1. Remove hook on the rear portion of the suspension

Remove hook on the rear portion of the suspension.

◆ WARNING

Both hooks must be removed to have snowmobile suspension operational.



PARTS INSTALLATION FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.

Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Except for MX Z 440 bottom screw heads, position screw heads toward front.

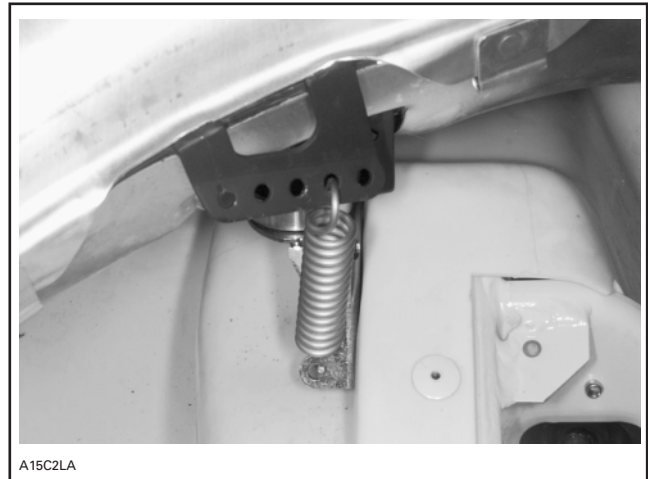
Properly position exhaust support on chassis making sure that its lug rests in chassis recess, as shown in the following photo.



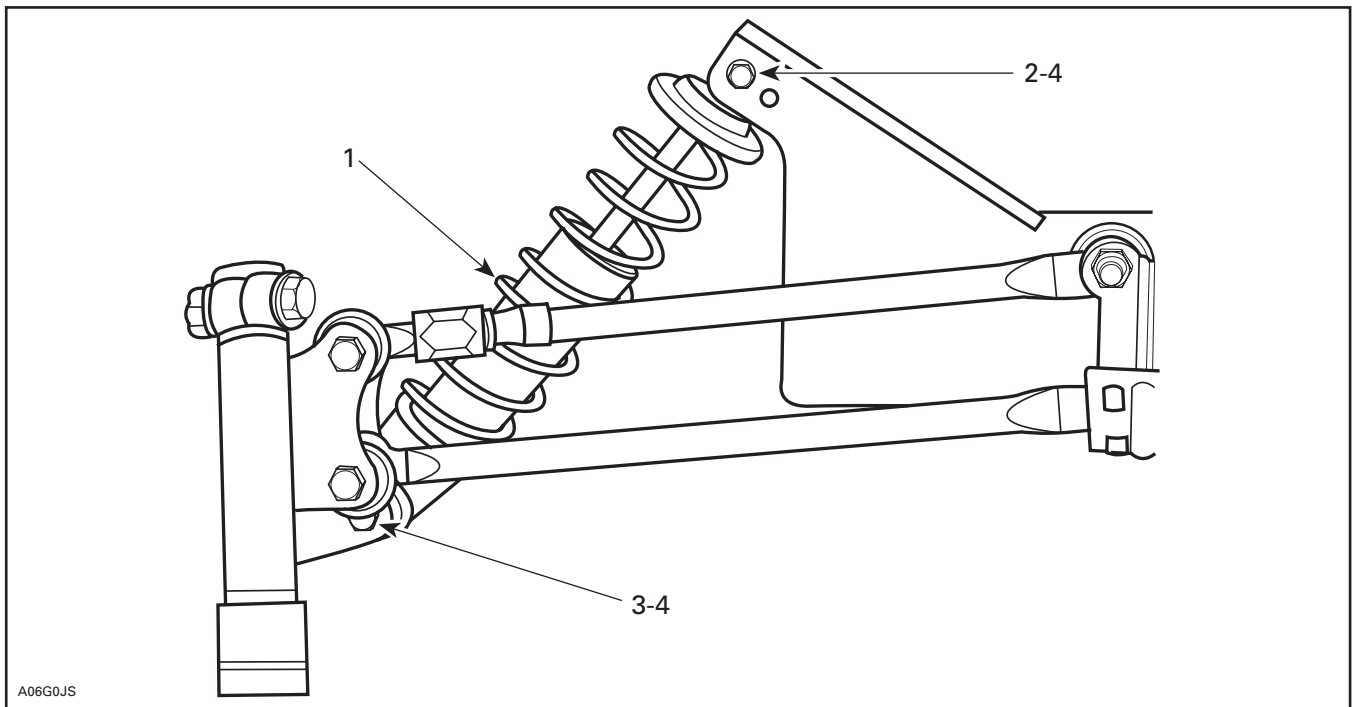
POSITION EXHAUST SUPPORT AS SHOWN

Hook up exhaust spring.

NOTE: For vehicle equipped with multi-hole exhaust bracket, hook up exhaust spring as shown in the next photo.



HOOK UP EXHAUST SPRING



TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (Engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 0060 65) (On suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 0055 65) (On suspension)
4. Elastic nut M10 x 1.5 (2) (P/N 228 5010 45) (Section no. 4). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION SKIS

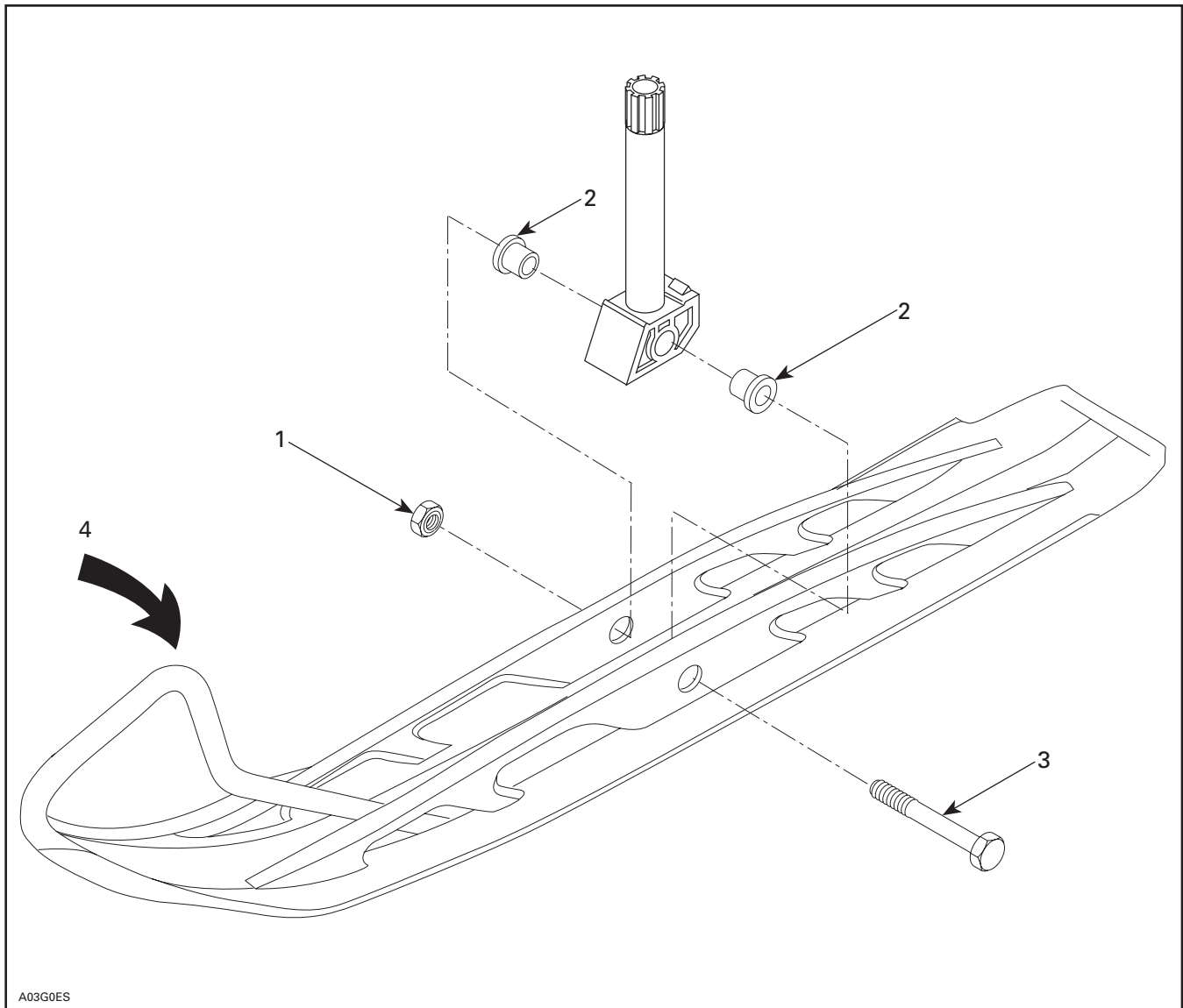


MX Z 440 Only

Install skis on vehicle.

NOTE: Make sure that slider cushions are still in ski leg.

Replace vehicle on ground.



LEFT SIDE SHOWN

1. Elastic flanged nut M12 x 1.75 (2) (P/N 228 5210 45) (Section no. 1). Torque to 40 N•m (30 lbf•ft)
2. Slider cushion (4) (Ski leg)
3. Bolt M12 (2) (Ski leg)
4. Twist ski to ease bolt installation



PARTS INSTALLATION SKIS



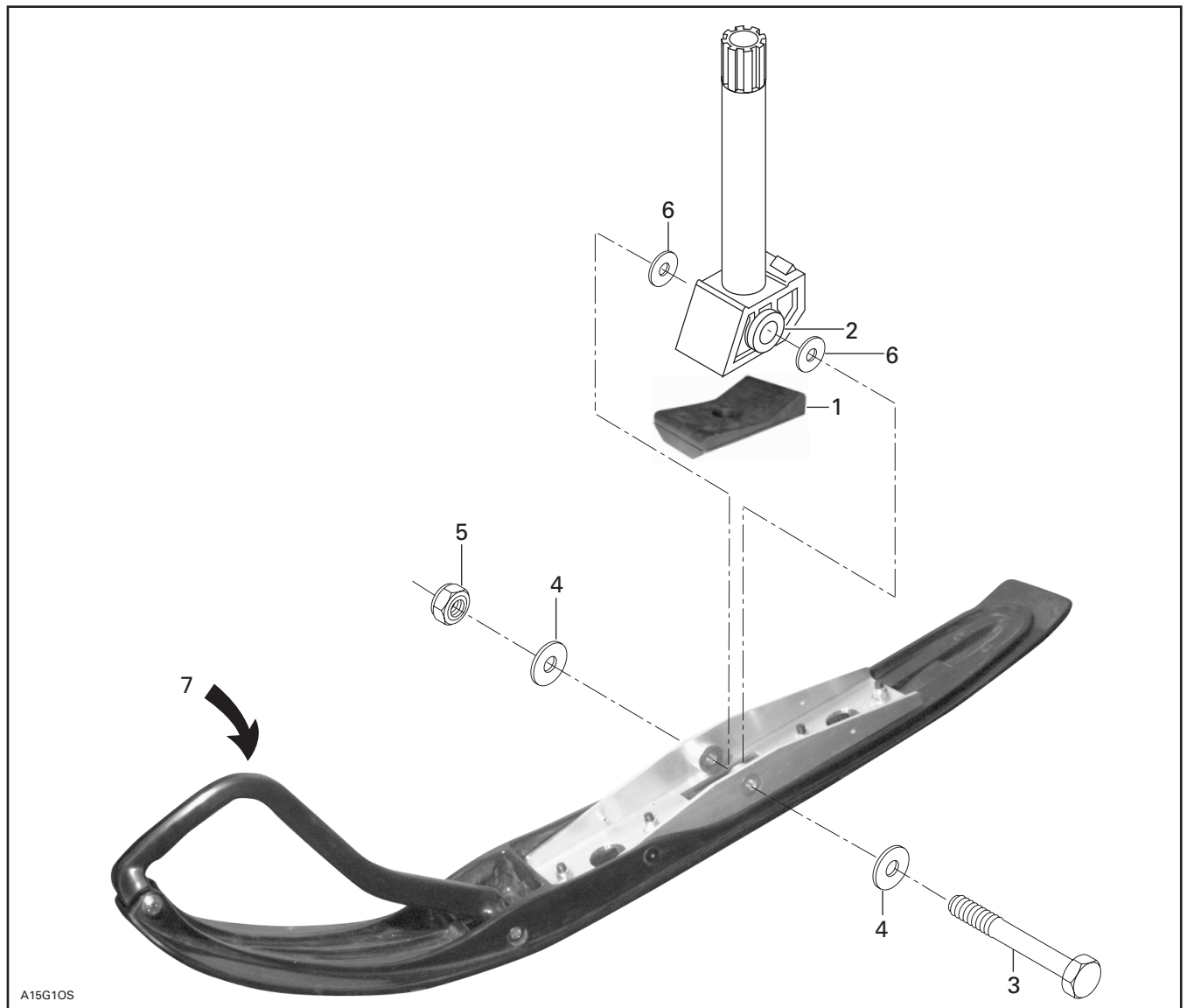
MX Z 500 and 583

Ensure ski leg slider cushions are still in ski leg.

Install skis on vehicle.

NOTE: Use small washers (P/N 732 9000 48) to fill gap between ski leg slider cushions and ski. If both washers are required install washer on each side of ski leg. If only one washer is required, install washer from inside snowmobile.

Replace vehicle on ground.



LEFT SIDE SHOWN

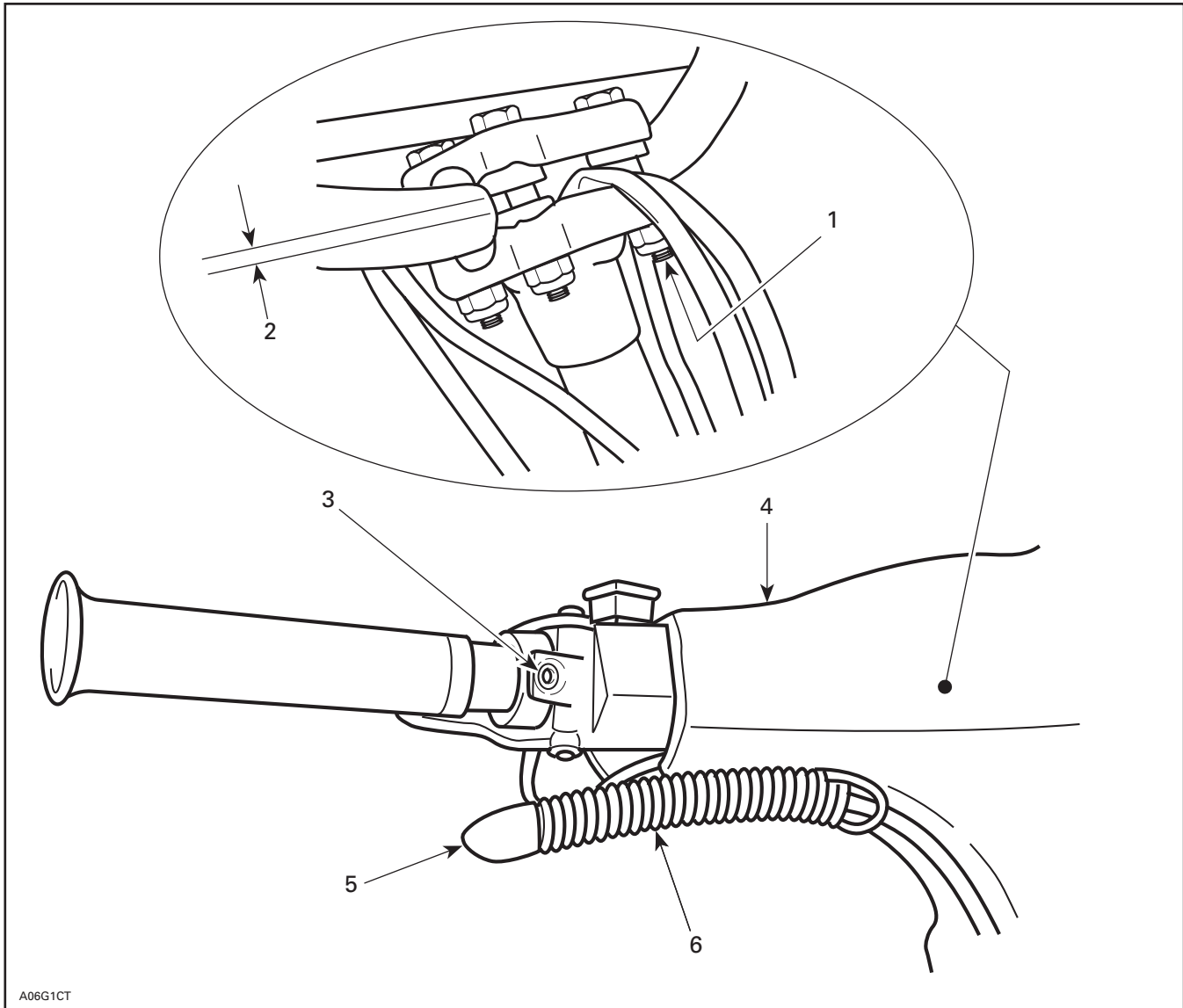
1. Ski stopper (2) (section no. 8) "AVANT" toward front
2. Slider cushion (4) (Ski leg)
3. Bolt M12 (2) (Ski leg)
4. Washer (4) (P/N 506 1364 00) (section no. 8). Install large washer
5. Elastic flanged nut M12 x 1.75 (2) (P/N 228 5210 45) (Section no. 8). Torque to 40 N•m (30 lbf•ft)
6. Washer (4) (P/N 732 9000 48) (section no. 8). Insert small washer, as needed, to fill gap between ski leg slider cushions and ski
7. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD

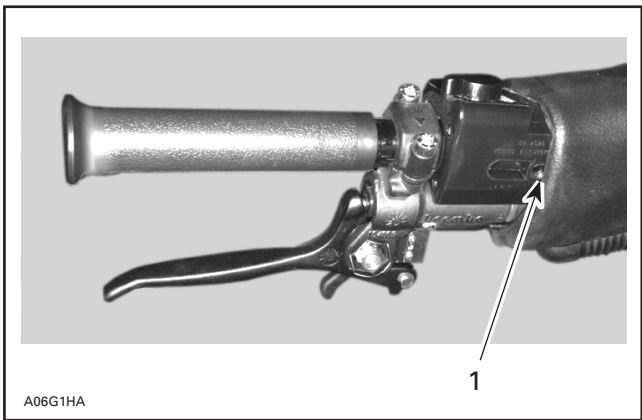


Adjust handlebar temporarily and tighten nuts loosely for now.
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporarily, and adjust for proper fit with console.
Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



A06G1CT

1. Torque to 26 N•m (19 lbf•ft)
2. Equal gap each side (Both clamps)
3. Loosen Allen screw
4. Steering pad (Engine compartment)
5. Use liquid soap to ease installation
6. Keyway (2) (P/N 572 0724 00) (Section no. 5)



BRAKE HANDLE HOUSING

1. Tighten set screw to **2 N•m (18 lbf•in)**

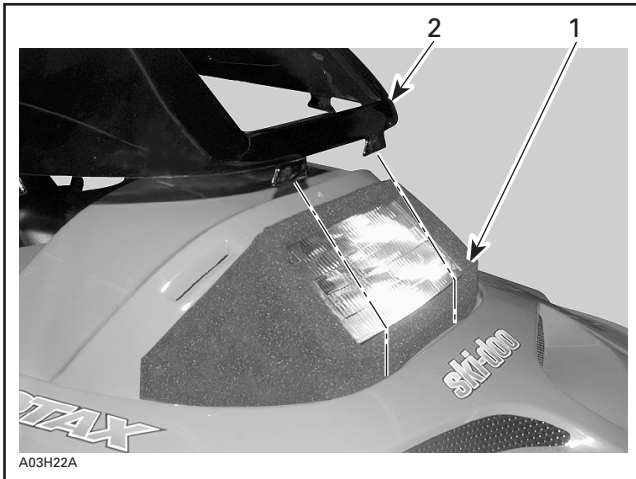


PARTS INSTALLATION WINDSHIELD

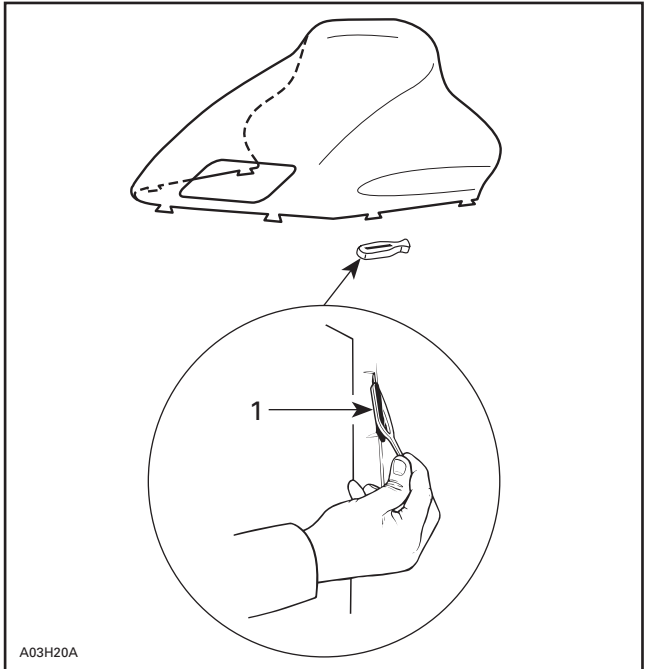


Install windshield on dashboard.

NOTE: Make sure that protective foam is properly positioned around headlamp before installing windshield.



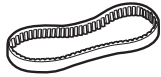
1. Protective foam
2. Install windshield on dashboard



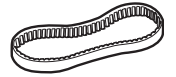
1. Latch (6) (P/N 570 0238 00) (section no. 6)



WINDSHIELD INSTALLED ON DASHBOARD



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.



LIQUIDS OIL INJECTION PUMP BLEEDING



All Models Except MX Z 440

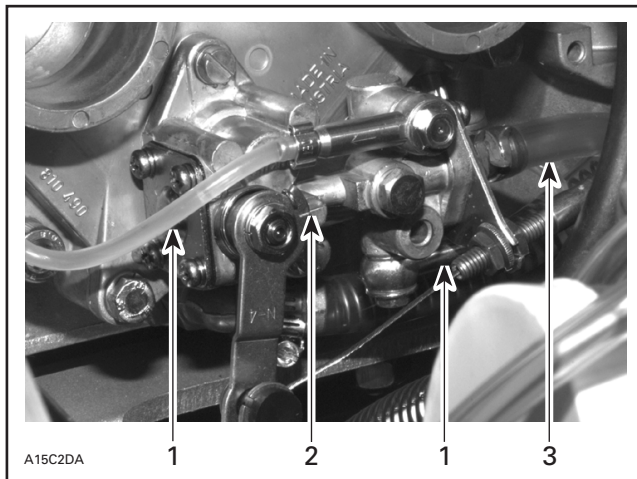
BREAK-IN PERIOD SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER ROTAX Injection Oil (P/N 413 8029 00 - 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Remove air silencer and move carburetors aside. Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

Check also for proper oil level adjustment. Marks must align when throttle lever is activated just enough to take all cable play.

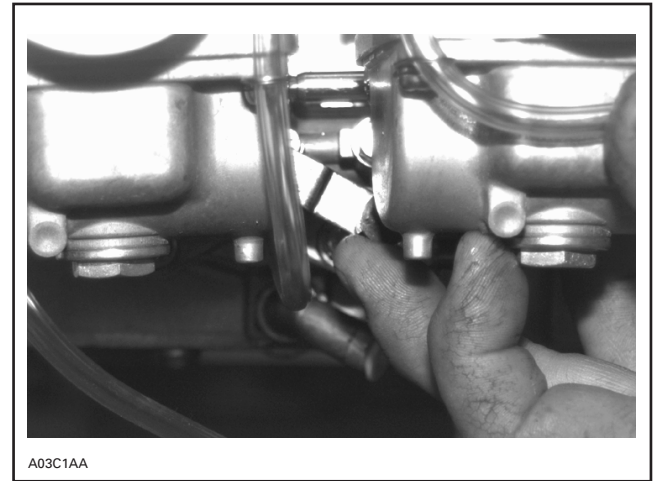


1. Small oil line
2. Marks aligned
3. Main oil line

Reinstall all parts except air silencer.

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

NOTE: If the air silencer has been reinstalled, make a J hook out of mechanical wire to lift the lever.



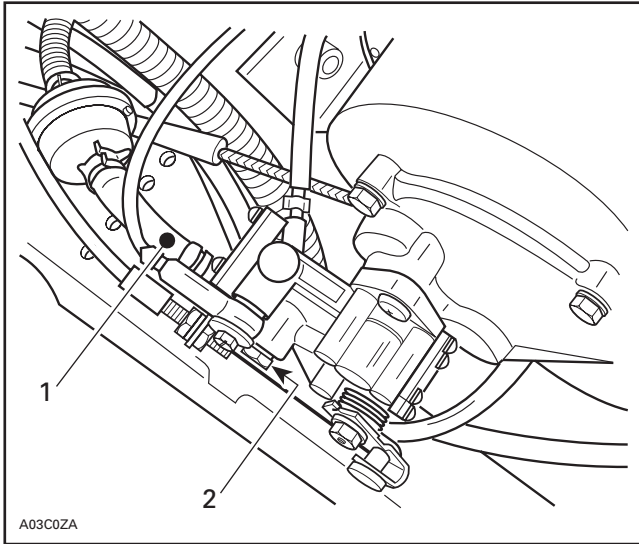
TYPICAL — ENGINE AT IDLE

Reinstall air silencer.

MX Z 440 Only

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER Injection Oil (P/N 413 8029 00 - 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

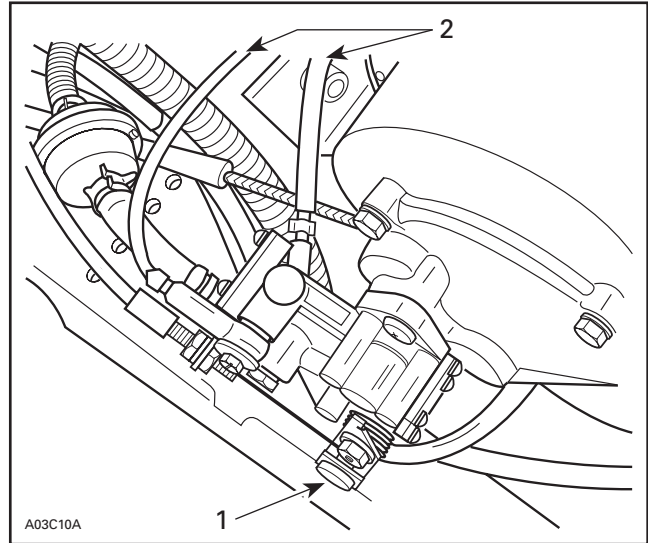
Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.



TYPICAL

1. Main oil line
2. Bleeder screw

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.



TYPICAL

1. Fully open position
2. Small lines



LIQUIDS

BRAKE FLUID LEVEL



Check brake fluid in reservoir for proper level. Add fluid (DOT) as required

▼ CAUTION

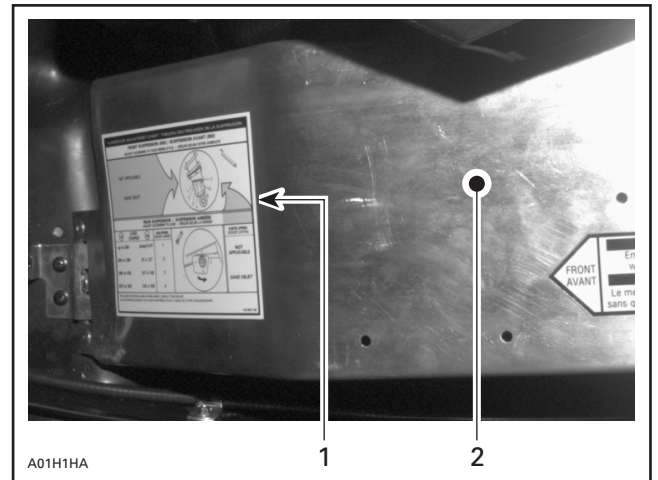
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard

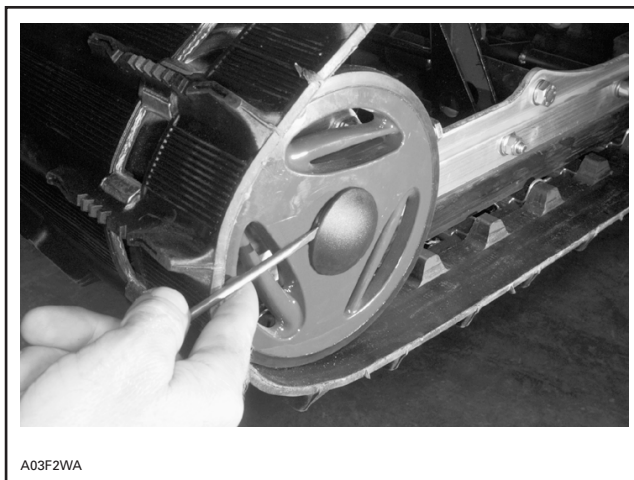


ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.

On models equipped with idler wheel cap, remove cap to loosen retaining screws. Refer to the following photo.



Insert a small screwdriver into recess then remove idler wheel cap



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).








TECHNICAL DATA








The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquires should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1997 model.






	MODELS	MX Z 583
	Engine Type	583
	Maximum HP RPM ①	±100 RPM 7900
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC) 420 9245 02 140°/71°
	Carburetor Type	PTO VM 40 - 99 • MAG VM 40 - 100 •
	Main Jet	PTO 280/MAG 260
	Needle Jet	AA-2 (224)
	Pilot Jet	60
	Needle Identification — Clip Position	7ECY1
	Slide Cut-away	2.5
	Float Adjustment	±1 mm (in) 18.1 (.71)
	Air Screw Adjustment	±1/16 turn 2
	Idle Speed RPM	±200 RPM 1800
	Gas Grade/Octane Number	(R + M)/2 Regular Unleaded/87
	Gas/Oil Ratio	Oil Injection
	Ignition Timing BTDC ②	mm (in) 1.75 (.069)
	Trigger Coil Air Gap	mm (in) 0.55 - 1.45 (.022 - .057)
	Gear Ratio	teeth 25/43 •
	Engagement Speed	±100 RPM 4400
	Drive Pulley Calibration Screw Position	3
	Pulley Distance	Z (+0, -1) mm (+0, -1/32) in 16.5 (21/32)
	Offset	X ±0.4 mm (±1/64 in) 35.0 (1-3/8) Y Dimension Y must exceed X from 1 mm (1/32in) to 2 mm (5/64 in)
	Drive Belt Adjustment	Deflection mm (in) 32 (1-1/4) Force ③ kg (lbf) 11.34 (25)
	Driven Pulley Preload	±0.7 kg (±1.5 lbf) 7.0 (15.43)
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation
	Track Adjustment	Deflection mm (in) 35 to 40 (1-3/8 to 1-9/16) with a 7.3 kg (16 lb) downward pull •

NOTE: See end of specifications for foot notes.

	MODEL	MX Z 500
	Engine Type	494
	Maximum HP RPM ①	±100 RPM 7800
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC) 420 924 502 140°/71°
	Carburetor Type	PTO VM 38 - 380 MAG VM 38 - 381
	Main Jet	PTO 330 MAG 300
	Needle Jet	Q-4 (480)
	Pilot Jet	50
	Needle Identification — Clip Position	6DHY48
	Slide Cut-away	2.5
	Float Adjustment	±1 mm (in) 18.1 (.71)
	Air Screw Adjustment	±1/16 turn 1.5
	Idle Speed RPM	±200 RPM 1800
	Gas Grade/Pump Octane Number	(R + M)/2 Regular Unleaded/87
	Gas/Oil Ratio	Oil Injection
	Ignition Timing BTDC ②	mm (in) 1.81 (.071)
	Trigger Coil Air Gap	mm (in) 0.55 - 1.45 (.022 - .057)
	Gear Ratio	teeth 23/43
	Engagement Speed	±100 RPM 4100
	Drive Pulley Calibration Screw Position	3
	Pulley Distance	Z (+0, -1) mm (+0, -1/32) in 16.5 (21/32)
	Offset	X ±0.4 mm (±1/64 in) 35.0 (1-3/8)
		Y Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
	Drive Belt Adjustment	Deflection ±.5 mm (in) 32 (1-1/4)
		Force ③ kg (lbf) 11.34 (25)
	Driven Pulley Preload	±0.7 kg (lbf) 7.0 (15.43)
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation
Track Adjustment	Deflection mm (in) 35 to 40 (1-3/8 - 1-9/16) with a 7.3 kg (16 lb) downward pull	

NOTE: See end of specifications for foot notes.

A dot (•) on right indicates changes from 1997 model.

	MODEL	MX Z 440
	Engine Type	443
	Maximum HP RPM ①	7000
	Rotary Valve P/N Opening (BTDC)/ Closing (ATDC)	N.A. N.A.
	Carburetor Type	PTO VM 34 - 509 MAG VM 34 - 510 •
	Main Jet	PTO 205 MAG 195
	Needle Jet	P-O (159)
	Pilot Jet	35
	Needle Identification — Clip Position	6DH2
	Slide Cut-away	2.5
	Float Adjustment	±1 mm (in) 23.9 (.94)
	Air Screw Adjustment	±1/16 turn 1-1/2
	Idle Speed RPM	±200 RPM 1650
	Gas Grade/Pump Octane Number	(R + M)/2 Regular Unleaded/87
	Gas/Oil Ratio	Oil Injection
	Ignition Timing BTDC ②	mm (in) 1.38 (.054) •
	Trigger Coil Air Gap	mm (in) 0.45 - 0.55 (.018 - .022)
	Gear Ratio	teeth 22/44
	Engagement Speed	±100 RPM 3700 •
	Drive Pulley Calibration Screw Position	3
	Pulley Distance	Z (+0, -1) mm (+0, -1/32) in 16.5 (21/32)
	Offset	X ±0.4 mm (±1/64 in) 35.0 (1-3/8)
	Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
	Drive Belt Adjustment	Deflection ±.5 mm (in) 32 (1-1/4)
	Force ③	kg (lbf) 11.34 (25)
	Driven Pulley Preload	±0.7 kg (lbf) 6.1 (13.45)
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation
Track Adjustment	Deflection mm (in) 35 to 40 (1-3/8 - 1-9/16) with a 7.3 kg (16 lb) downward pull •	

① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center

ATDC: After Top Dead Center

PTO: Power Take OFF side

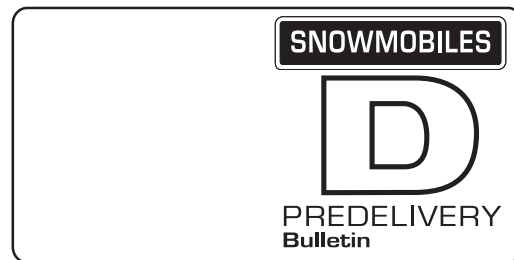
MAG: Magneto side

CRT: Center

N.A.: Not Applicable

Please route to:

<input type="checkbox"/> Service	<input type="checkbox"/> Init.
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **98-6**

Date: September 12, 1997

SUBJECT: Predelivery Procedure

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1998	Canada: Mach* Z Mach* Z (R) Mach* Z LT Mach* Z LT (R)	1200 1294 1302 1304	ALL
1998	United States: Mach Z Mach Z (R) Mach Z LT Mach Z LT (R)	1312 1313 1315 1317	ALL
1998	Sweden: Mach Z Mach Z LT	1290 1308	ALL

This bulletin must be used in conjunction with the check list enclosed in *Operator's Guide bag*. Make sure that predelivery check list is completed and signed.

◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

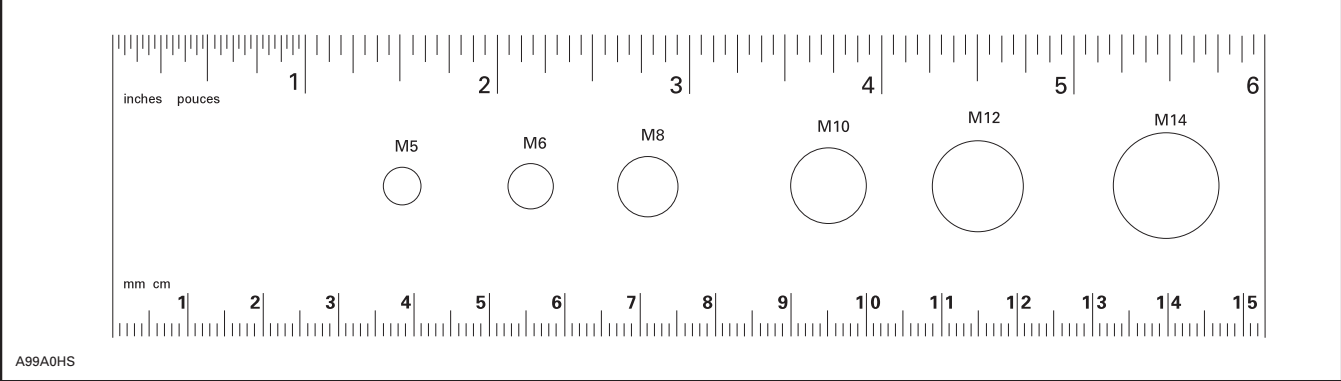
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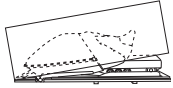
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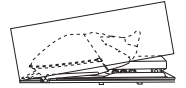
There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.

NOTE: This ruler can be helpful to identify fastener length or size.





UNCRATING



PREDELIVERY KIT P/N	MODELS
580 6605 00	MACH Z MACH Z (R) MACH Z LT MACH Z LT (R)

◆ WARNING

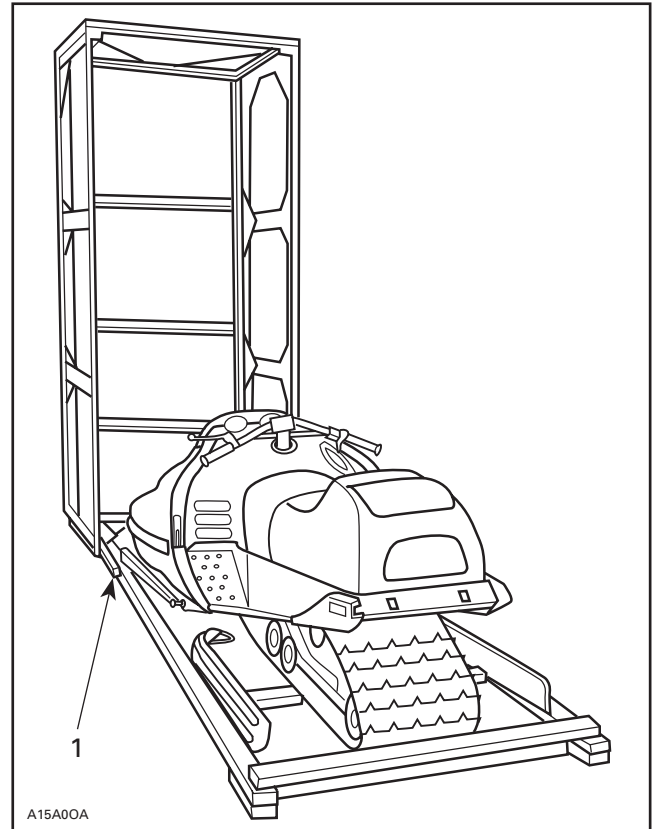
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties and ropes retaining windshield.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Take out parts to be installed and predelivery kit from box.

Take out drive belt from engine compartment.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



A00A48A

EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.

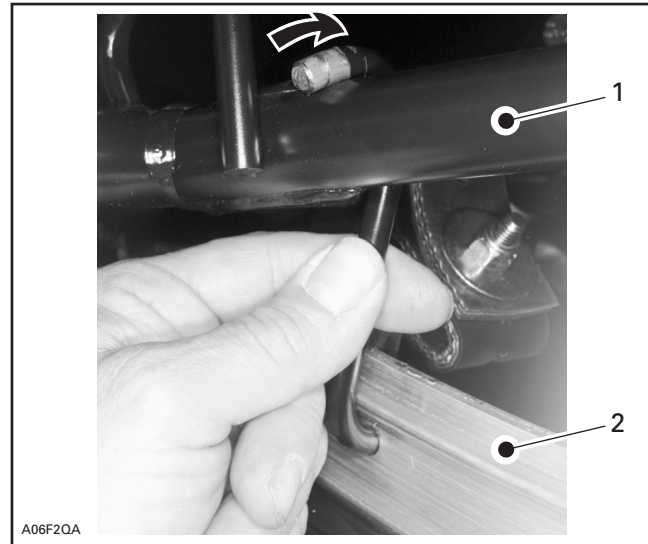


A00A49A

TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

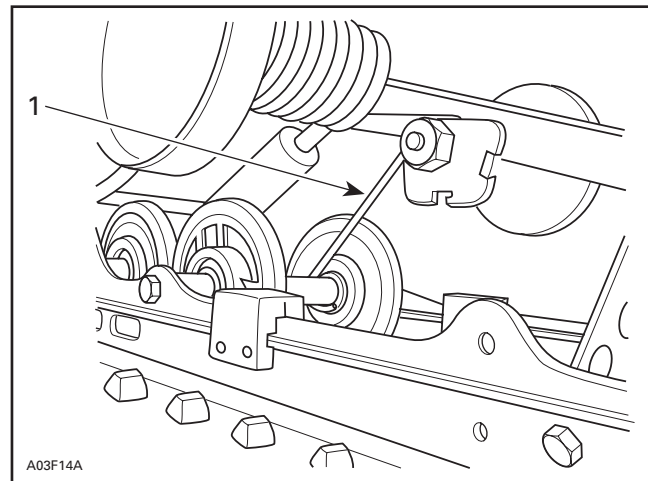
◆ WARNING
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



TYPICAL — REMOVE HOOK

- 1. Front arm
- 2. Runner

REAR HOOK REMOVAL



- 1. Hook to be removed

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



1. Remove hook on the rear portion of the suspension

▼ CAUTION

Both hooks must be removed to have snowmobile suspension operational.

DIGITAL ENCODED SECURITY SYSTEM (DESS)

The DESS is a deterrent against theft. **Once programmed**, the tether cord provided with snowmobile is the only one that allows engine to turn more than 2500 RPM. If a wrong tether cord is installed the engine will start but will not reach engagement speed required to move vehicle.

The snowmobile MPEM can be programmed to allow the use of up to 8 tether cords. When 8 tether cords have been programmed all cords must be deleted from MPEM memory before others can be added.

Each tether cord has a small magnet as well as a small micro chip molded into the rubber cap. The magnet will close a primary circuit in the electrical system. This completes the circuit and allows the MPEM to read the electronic number in the tether cord when engine is started.

NOTE: We do not program the tether cord! we record the tether cord electronic number into the MPEM memory.

The MPEM also handles data input such as; customer name, delivery date and it record the hours of operation.

After engine is started 2 beeps confirm that the MPEM has recognized the tether cord (if applicable). If the pilot lamp does not blink, all is O.K. The vehicle can then be driven normally.

A beep every 3 seconds (if applicable) and DESS pilot lamp blinking as same rate means that a bad connection has been detected. Vehicle can not be driven.

To program tether cord refer to *SKI-DOO MPEM Programmer Guide* (P/N 480 1436 01).

NOTE: All snowmobiles must be started before programming tether cord. Engine will automatically stop on snowmobiles equipped with a battery. Engine will keep running on snowmobiles without battery.



PARTS INSTALLATION FRONT SUSPENSION

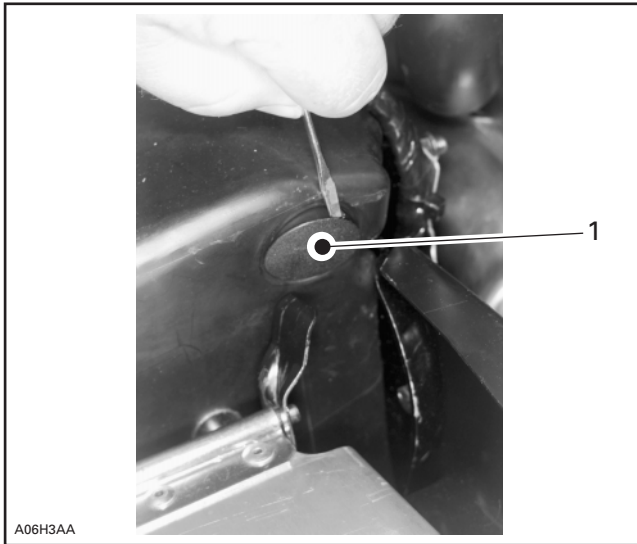


Lift front of vehicle and block safely.
From inside engine compartment, remove caps
as shown in the next photo.

Remove and discard shipping brackets from sus-
pension. Discard spring clips, keep bolts.

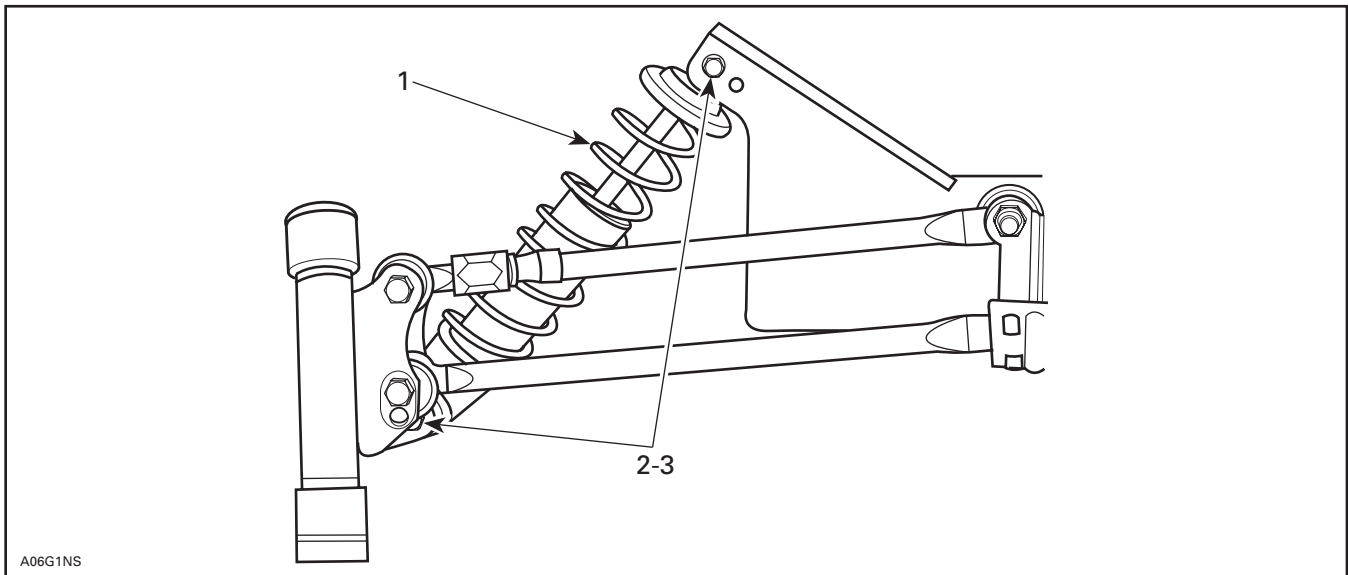
Secure shock absorbers to suspension with their
adjusting ring at bottom.

NOTE: Position bolt heads toward front.



INSIDE ENGINE COMPARTMENT

1. Using flat screwdriver, remove cap

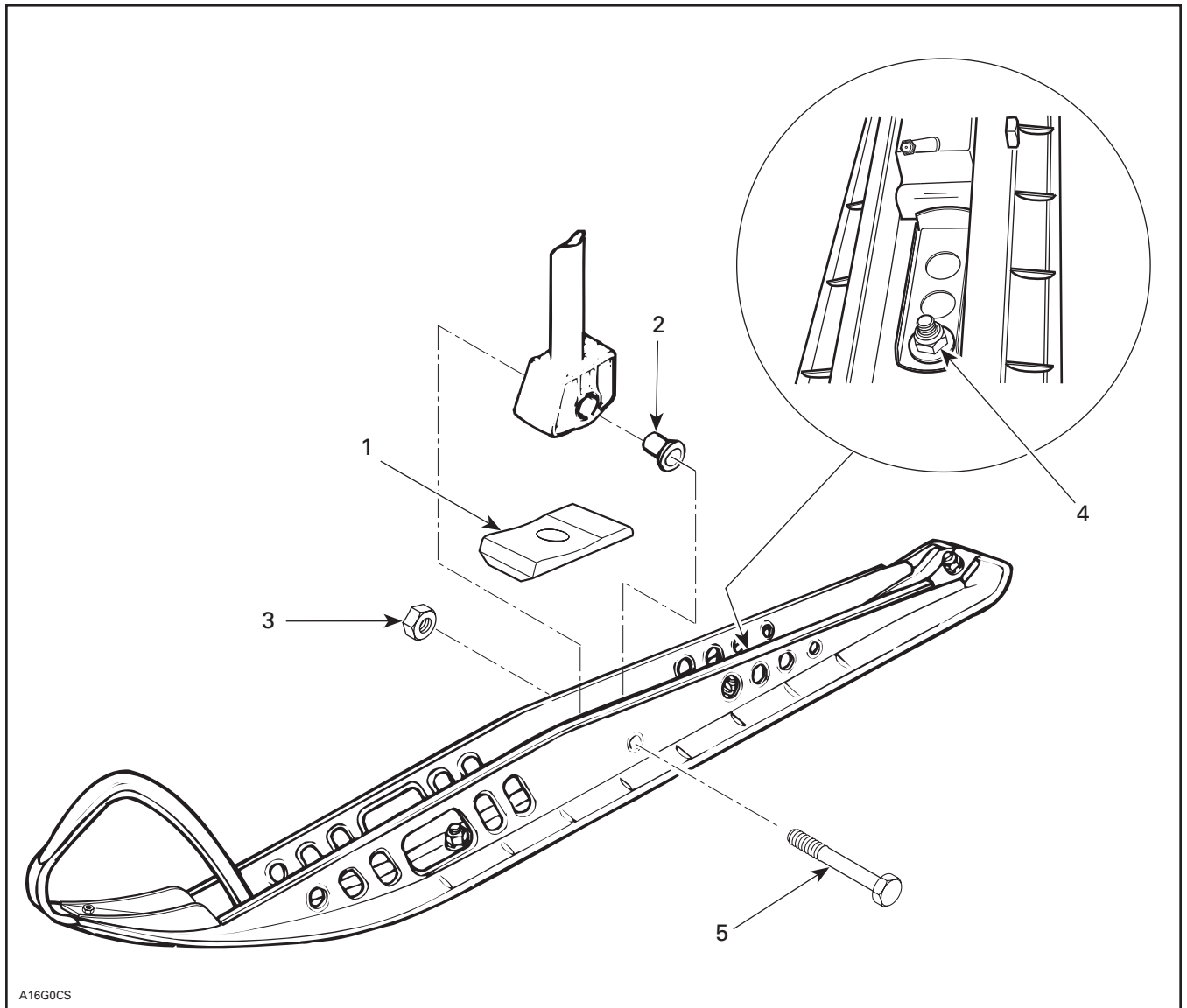


TYPICAL — RIGHT SIDE SHOWN

1. Shock absorber (2) (engine compartment)
2. M10 x 1.5 x 55 bolt (on suspension)
3. M10 x 1.5 nut (section 4). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION SKIS



LEFT SIDE SHOWN

1. Ski stopper (2) (Section no. 8), "AVANT" toward front
2. Slider cushion (4)
3. Nut M12 (2) (Section no. 8). Torque to 40 N•m (30 lbf•ft)
4. Loosen then adjust against ski stopper 14 N•m (124 lbf•in)
5. Bolt M12 (2)

After ski installation, adjust stopper against stop bounding then tighten nut to 14 N•m (124 lbf•in). More preload on stop bounding will result in a more aggressive steering. Adjust according to driver preferences.



PARTS INSTALLATION STEERING PAD



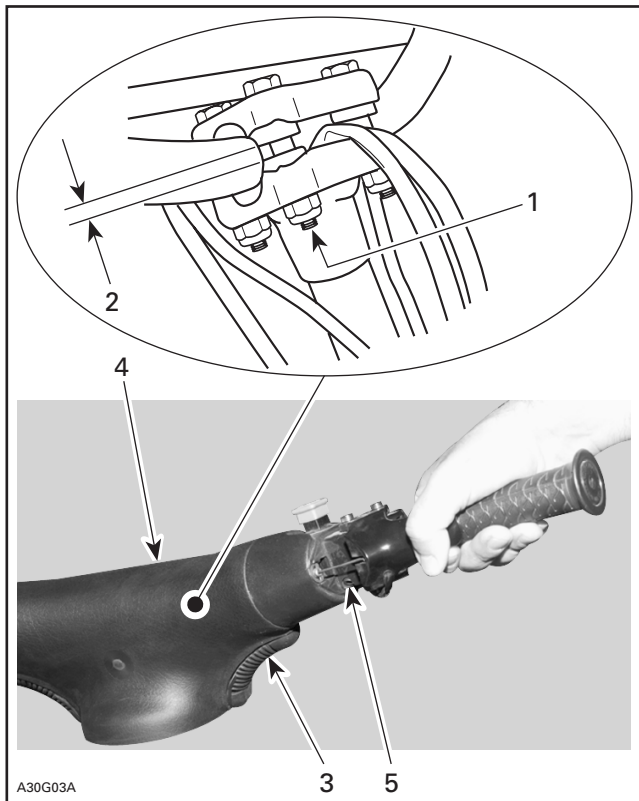
Adjust handlebar temporarily and tighten nuts loosely for now.

Loosen Allen screw of throttle and brake handle housings, at least 3 turns.

Install steering pad temporarily, and adjust for proper fit with console.

Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).

Reinstall steering pad, adjust and tighten throttle and brake handle housings.



1. Torque nuts to 26 N•m (19 lbf•ft)
2. Equal gap each side (both clamps)
3. Keyway (2) (section 5)
4. Steering pad (box)
5. Loosen Allen screw (if needed)



PARTS INSTALLATION WINDSHIELD

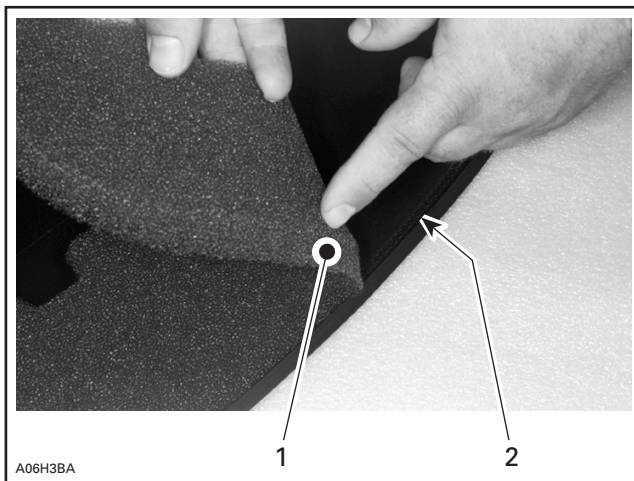


NOTE: Air deflector with foam must be installed before windshield.

AIR DEFLECTOR

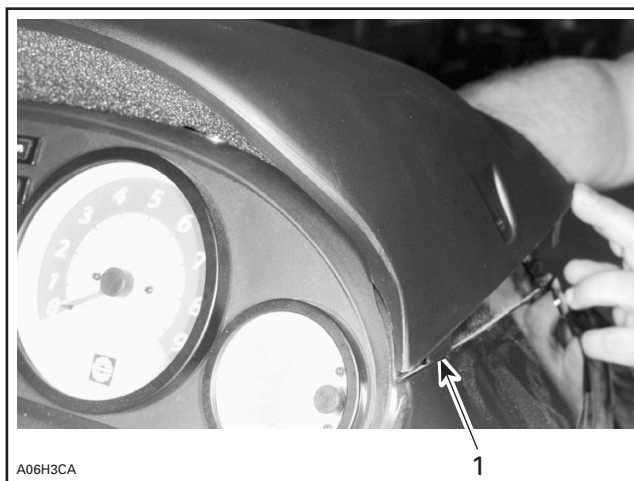
Preparation

Install air intake foam onto air deflector. Beveled surface must be facing Velcro, as shown in the next photo.



1. Beveled surface on air intake foam
2. Velcro on air deflector

Position air intake deflector rear tabs (left and right side) into hood slots, as shown in the next photo.



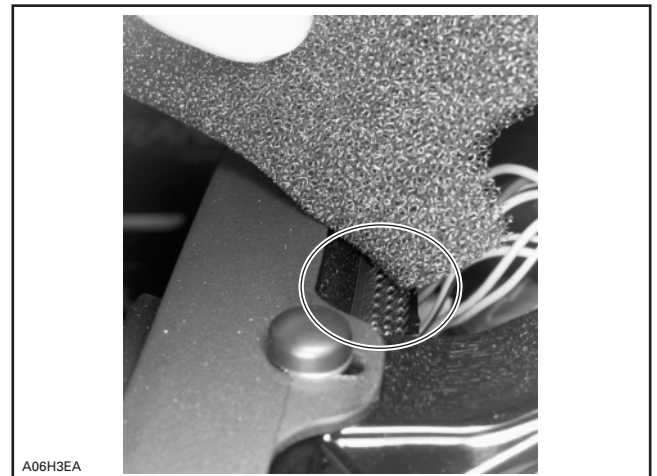
1. Air intake deflector rear tab (right side)

Holding air intake deflector, insert one hand underneath deflector, as shown in the next photo. Attach air intake foam to hood Velcro.



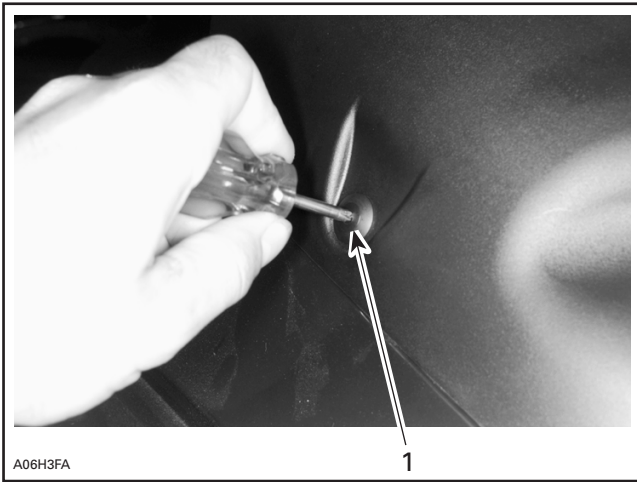
FROM UNDERNEATH DEFLECTOR, ATTACH FOAM TO VELCRO

NOTE: Ensure that air intake foam is properly attached to Velcro. See next photo.



AIR INTAKE DEFLECTOR HAS BEEN REMOVED TO SHOW WHERE AND HOW TO ATTACH AIR INTAKE FOAM TO HOOD

Secure air intake deflector using dart, as shown in the next photo.

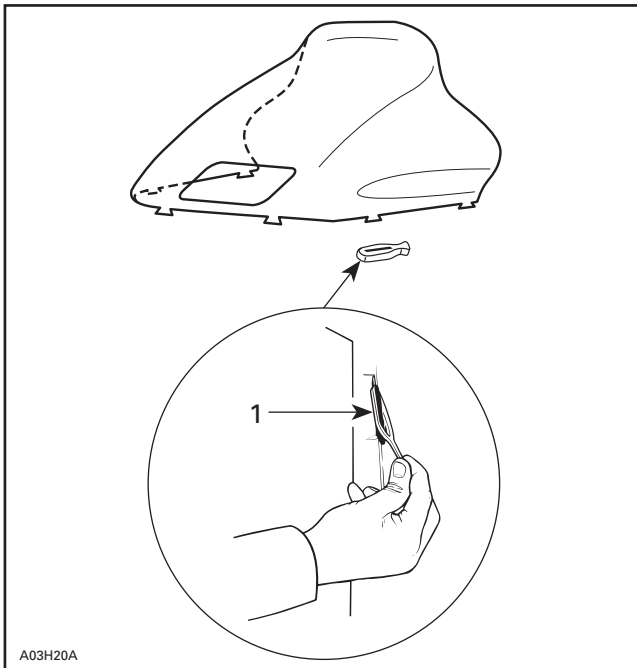


1. Dart (2) (section no. 6)

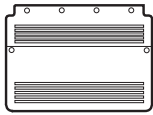
Install windshield on hood dashboard and secure with latches.



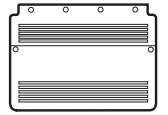
WINDSHIELD INSTALLED ON DASHBOARD



1. Latch (6) (P/N 570 0238 00) (section no. 6)

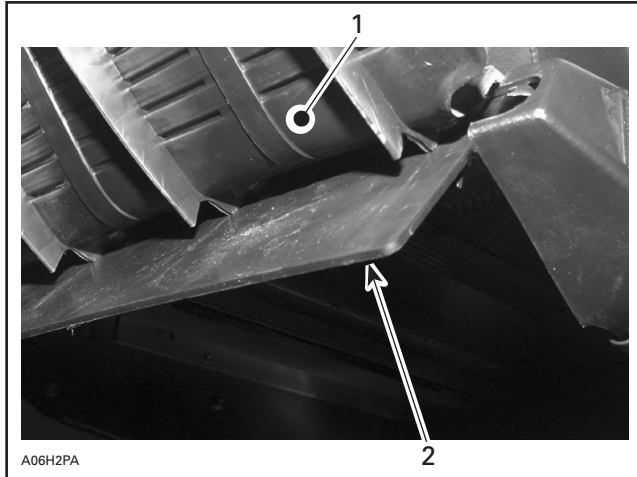


PARTS INSTALLATION SNOW GUARD



Position snow guard protector pad onto chassis.
Install snow guard over protector pad, as shown
in the next photo.

Finalize snow guard installation with caps, as
shown in the next photo.



TYPICAL — VIEW FROM UNDER SNOW GUARD

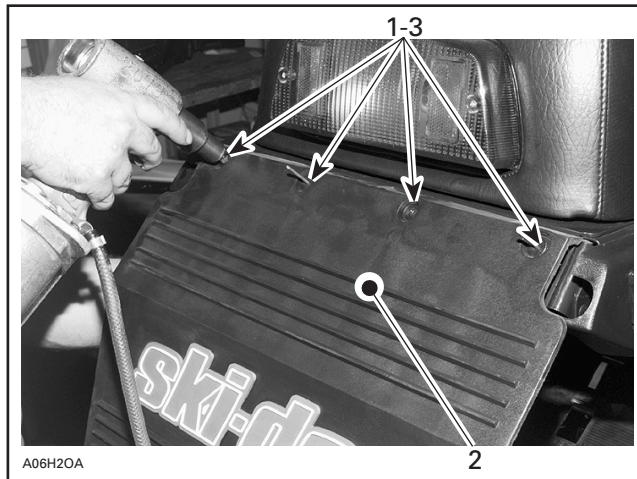
1. Snow guard (box)
2. Snow guard protector pad (box)



1. Cap (4) (section no. 9)

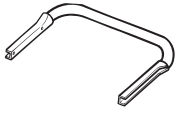
Secure the 2 parts with rivets.

NOTE: Place washers inside tunnel.

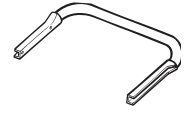


TYPICAL

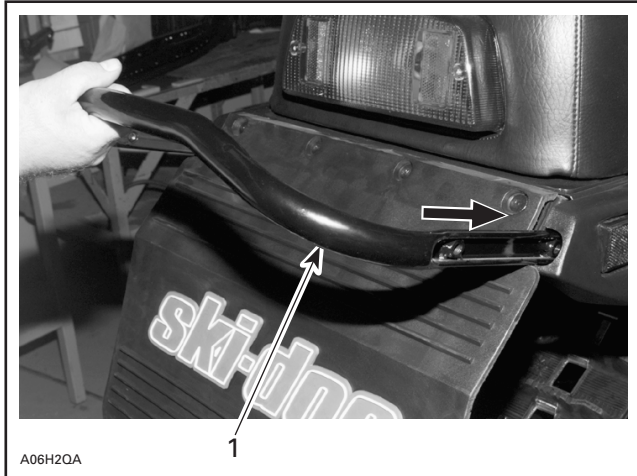
1. Rivet (4) (section no. 2)
2. Snow guard
3. Washer (4) (section no. 2). Position washer inside tunnel



PARTS INSTALLATION REAR BUMPER



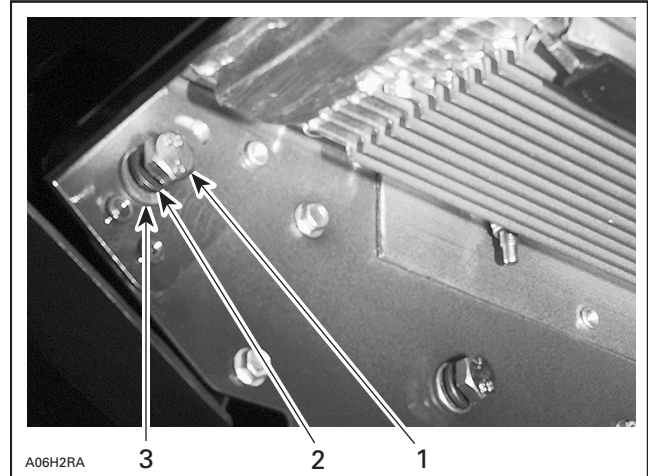
Install rear bumper to chassis.



SLIDE BUMPER INSIDE REAR MOLDINGS

1. Rear bumper

Secure bumper from inside of tunnel.



TYPICAL — VIEW FROM INSIDE OF TUNNEL

1. Bolt M8 (4) (section no. 1). Torque to 24 N•m (18 lbf•ft)
2. Lock washer (4) (section no. 1)
3. Washer (4) (section no. 1)



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.



LIQUIDS

OIL INJECTION PUMP BLEEDING

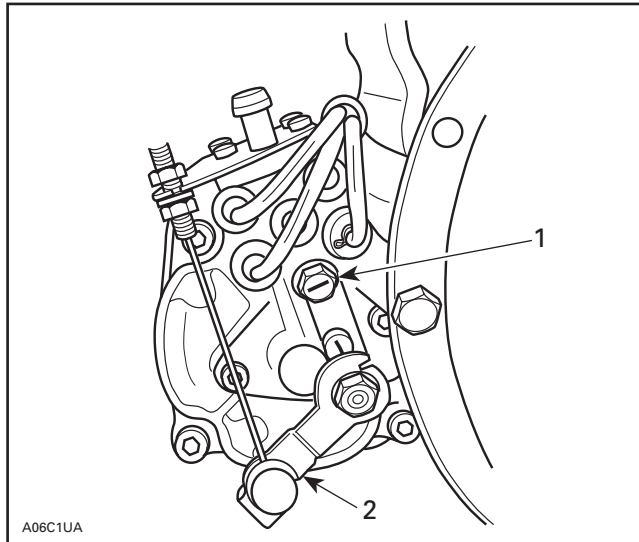


BREAK-IN PERIOD SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 8029 00 - 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

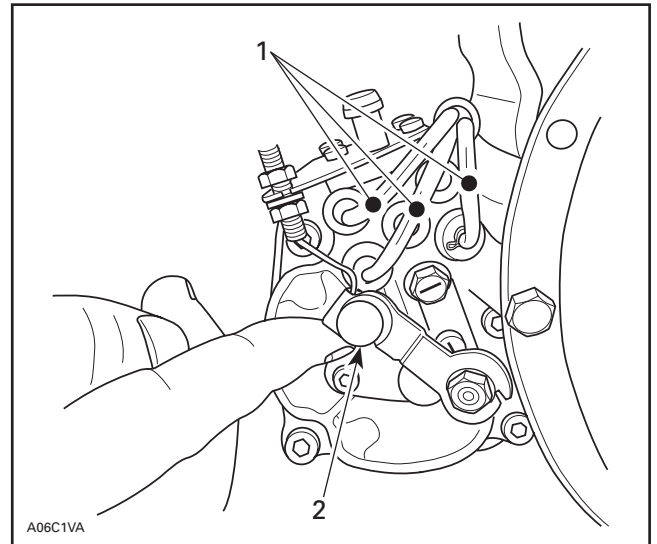
BLEEDING PROCEDURE

Bleed main oil line (between tank and pump) by loosening the bleeder screw until all air has escaped from the line. Add injection oil as required.



1. Bleeder screw
2. Oil pump lever

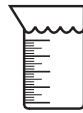
Bleed the small oil lines between pump and engine crankcase by running engine at idle while holding the pump lever in fully open position.



1. Small oil lines
2. Engine at idle (fully open position)



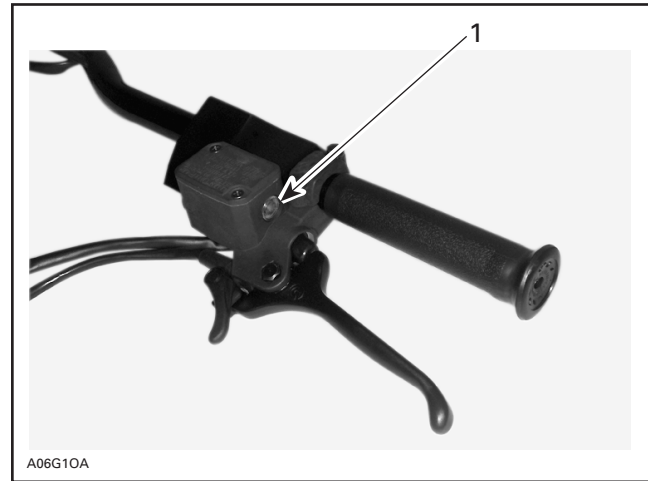
LIQUIDS BRAKE FLUID LEVEL



Check brake fluid (DOT 4) in reservoir for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



A06G10A

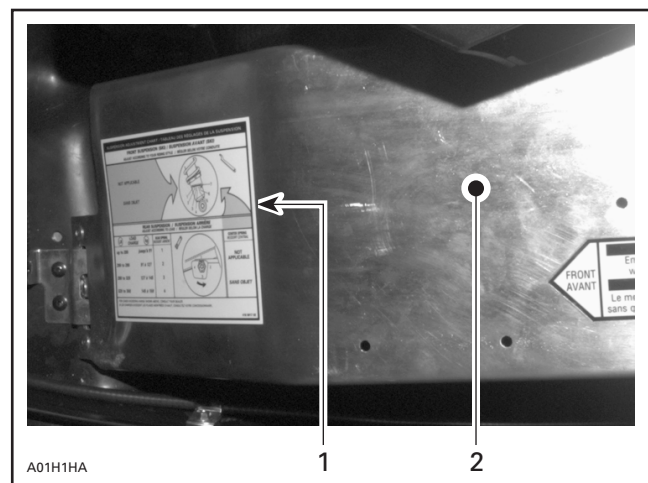
TYPICAL
1. Minimum



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



A01H1HA

1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See Technical Data section at the end of this bulletin.



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).








TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquires should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1997 model.

	MODEL	MACH Z LT/MACH Z LT (R)			
	Engine Type	809			
	Maximum HP RPM ①	±100 RPM 8300 •			
	Rotary Valve P/N Opening (BTDC)/ Closing (ATDC)	N.A.			
	Carburetor Type	PTO VM 38-C195	CTR VM 38-C195	MAG VM 38-C195 •	
	Main Jet	PTO 330	CTR 340	MAG 330 •	
	Needle Jet	Q-3 (327) •			
	Pilot Jet	PTO 50	CTR 50	MAG 50	
	Needle Identification — Clip Position	8ABY1-40 •			
	Slide Cut-away	2.0			
	Float Adjustment	±1 mm (in) 20.0 (.787)			
	Air Screw Adjustment	PTO 4	CTR 4	MAG 4	
	Idle Speed RPM	±200 RPM 1800			
	Gas Grade/Octane Number	(R + M)/2 Super Unleaded/91 •			
Gas/Oil Ratio	Oil Injection				
	Ignition Timing BTDC ②	mm (in) 2.11 (.083)			
	Trigger Coil Air Gap	mm (in) 0.55 - 1.45 (.022 - .057)			
	Gear Ratio	Teeth 25/43 •			
	Engagement Speed	±100 RPM 3900 •			
	Drive Pulley Calibration Screw Position	2 •			
	Pulley Distance	Z	(+ 0, - 1) mm (4-23/32) 120.0 •		
		Offset	X	± 0.4 mm (1-13/32) 35.5 •	
	Y		Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)		
	Drive Belt Adjustment	Deflection	± 5 mm (in) 32 (1-1/4)		
		Force ③	kg (lbf) 11.34 (25)		
	Driven Pulley Preload	± 0.7 kg (± 1.5 lbf) 7.0 (15.43)			
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation			
Track Adjustment	Deflection	mm (in) 35 to 40 (1-3/8 to 1-9/16) with a 7.3 kg (16 lb) downward pull			

① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center



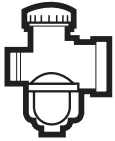


ATDC: After Top Dead Center

PTO: Power Take Off side

CTR: Center

MAG: Magneto side

A dot (•) on right indicates changes from 1997 model.

	MODEL	MACH Z/MACH Z (R)			
	Engine Type	809			
	Maximum HP RPM ①	± 100 RPM 8300 •			
	Rotary Valve P/N Opening (BTDC)/ Closing (ATDC)	N.A.			
	Carburetor Type	PTO TM 38 C195	CRT TM 38 C195	MAG TM 38 C195 •	
	Main Jet	PTO 330	CRT VM 340	MAG 330 •	
	Needle Jet	O- 3 (327) •			
	Pilot Jet	PTO 50	CRT 50	MAG 50	
	Needle Identification — Clip Position	8ABY1-40 •			
	Slide Cut-away	2.0 •			
	Float Adjustment	± 1 mm (in) 20.0 (.79) •			
	Air Screw Adjustment	± 1/16 turn PTO 4 CRT 4 MAG 4			
	Idle Speed	± 200 RPM 1800			
	Gas Grade/Octane Number	(R + M)/2 Super Unleaded/91			
	Gas/Oil Ratio	Oil Injection			
	Ignition Timing BTDC ②	mm (in) 2.11 (.083)			
	Trigger Coil Air Gap	mm (in) 0.55 - 1.45 (.022 - .057)			
	Gear Ratio	Teeth 27/43 •			
	Engagement Speed	± 100 RPM 3900 •			
	Drive Pulley Calibration Screw Position	2 •			
	Pulley Distance	Z (+ 0, - 1) mm (+ 0, - 1/32) in	120.0 (4-23/32) •		
	Offset	X ± 0.4 mm (± 1/64 in)	35.5 (1-13/32) •		
	Offset	Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)		
	Drive Belt Adjustment	Deflection ± 5 mm (in)	32 (1-1/4)		
	Drive Belt Adjustment	Force ③ kg (lbf)	11.34 (25)		
	Driven Pulley Preload	± 0.7 kg (± 1.5 lbf) 7.0 (15.43)			
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation			
Track Adjustment	Deflection	mm (in) 35 to 40(1-3/8 to 1-9/16) with a 7.3 kg (16 lb) downward pull			

- ① Engine speed at which maximum power is achieved.
- ② At 6000 RPM (engine cold) with headlamp turned on.
- ③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take Off side
 CTR: Center
 MAG: Magneto side

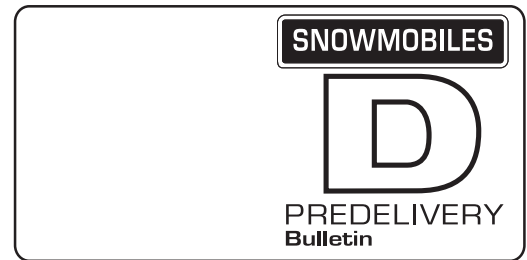
Please route to :

Init.

Service

Sales

Parts



No. **98-7**

Date: September 8, 1997

SUBJECT: Predelivery Procedure

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1998	Canada: Mach*1 Mach 1 (R)	1202 1295	ALL
1998	United States: Mach 1 Mach 1 (R)	1311 1314	ALL
1998	Sweden: Mach 1	1203	ALL

This bulletin must be used in conjunction with the check list enclosed in *Operator's Guide* bag. Make sure that *Predelivery Check List* is completed and signed.

◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

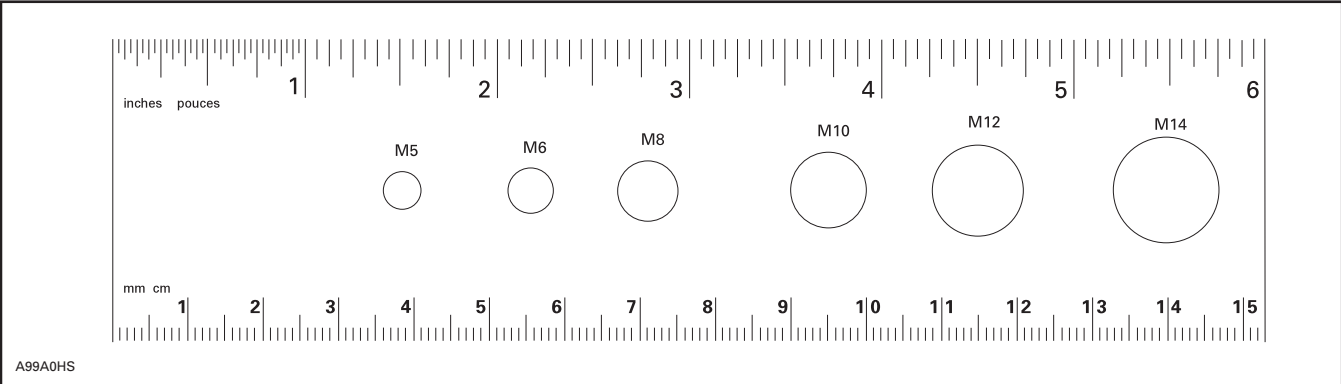
NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, it may have some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

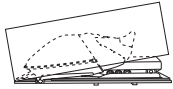
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquires should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and video.

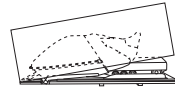
There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask the dealer to perform suspension adjustments according to riding style and vehicle load.

NOTE: This ruler can be helpful to identify fastener length or size.





UNCRATING



PREDELIVERY KIT P/N	MODELS
580 6605 00	Mach 1 and Mach 1 (R)

◆ WARNING

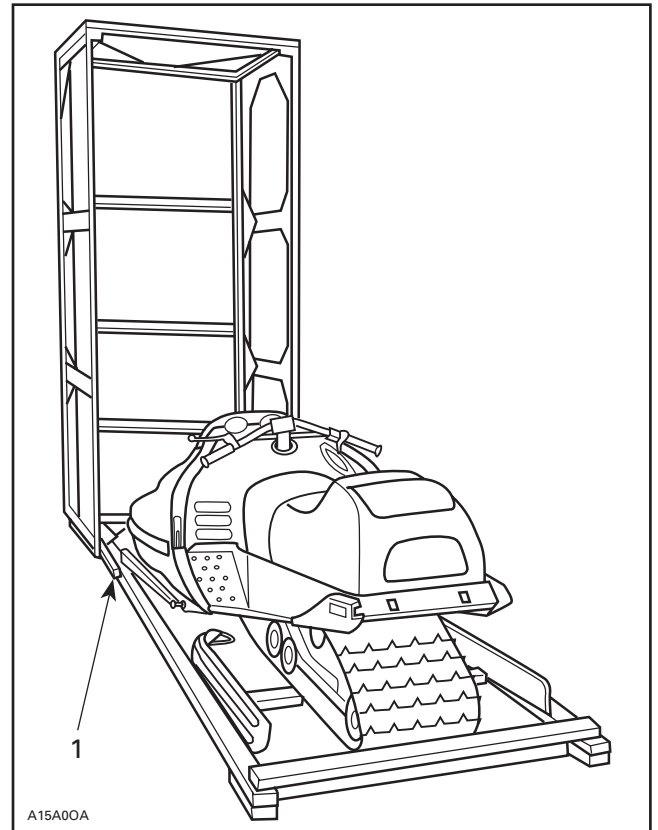
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Unscrew all screws retaining cover to crate base.
Notch in crate base is at front.
Tip cover over front of vehicle.



A15A00A

1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and elastic stop nuts.

Remove vehicle from base.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



A00A48A

EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.



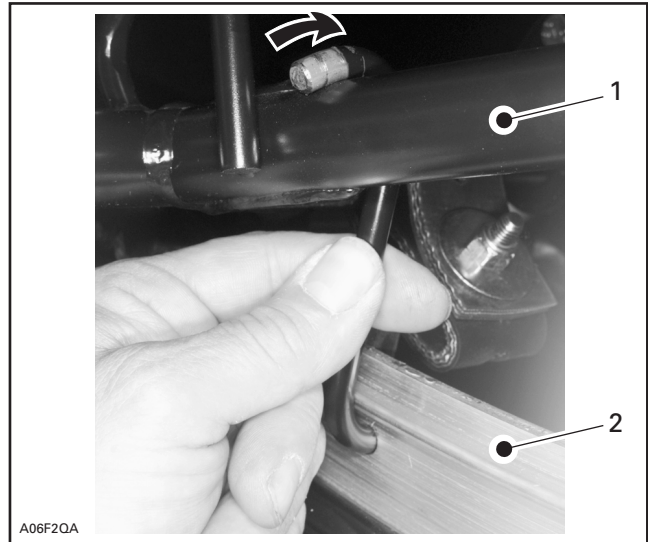
A00A49A

TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

Before removing hook always verify that vehicle is properly supported and that parking brake is applied.

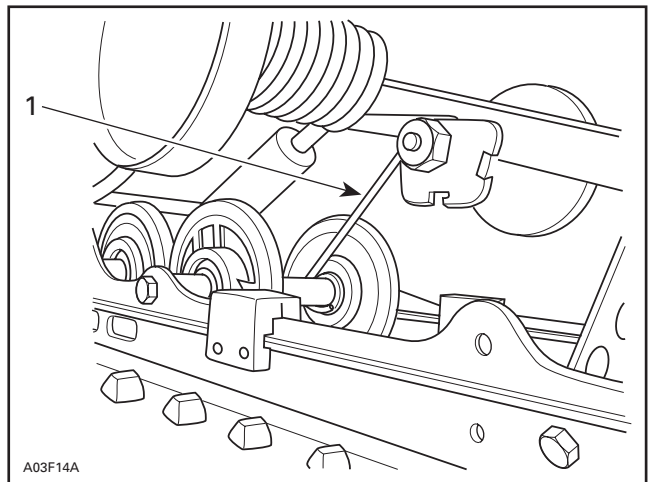


A06F20A

TYPICAL — REMOVE HOOK

- 1. Front arm
- 2. Runner

REAR HOOK REMOVAL

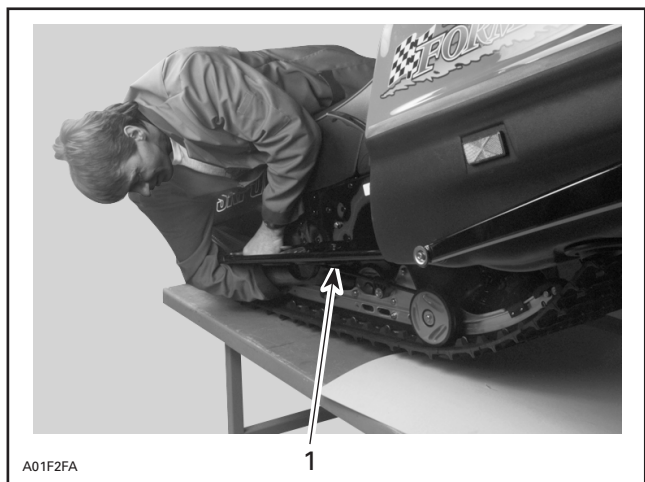


A03F14A

- 1. Hook to be removed

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



1. Remove hook on the rear portion of the suspension

Remove hook on the rear portion of the suspension

▼ **CAUTION**

Both hooks must be removed to have snowmobile suspension operational.

DIGITAL ENCODED SECURITY SYSTEM (DESS)

The DESS is a deterrent against theft. **Once programmed**, the tether cord provided with snowmobile is the only one that allows engine to turn more than 2500 RPM. If a wrong tether cord is installed the engine will start but will not reach engagement speed required to move vehicle.

The snowmobile MPEM can be programmed to allow the use of up to 8 tether cords. When 8 tether cords have been programmed all cords must be deleted from MPEM memory before others can be added.

Each tether cord has a small magnet as well as a small micro chip molded into the rubber cap. The magnet will close a primary circuit in the electrical system. This completes the circuit and allows the MPEM to read the electronic number in the tether cord when engine is started.

NOTE: We do not program the tether cord! We record the tether cord electronic number into the MPEM memory.

The MPEM also handles data input such as; customer name, delivery date and it record the hours of operation.

After engine is started 2 beeps confirm that the MPEM has recognized the tether cord (if applicable). If the pilot lamp does not blink, all is O.K. The vehicle can then be driven normally.

A beep every 3 seconds (if applicable) and DESS pilot lamp blinking at the same rate means that a bad connection has been detected. Vehicle can not be driven.

To program tether cord refer to *SKI-DOO MPEM Programmer Guide* (P/N 480 1436 01).

NOTE: All snowmobiles must be started before programming tether cord. Engine will automatically stop on snowmobiles equipped with a battery. Engine will keep running on snowmobiles without battery.

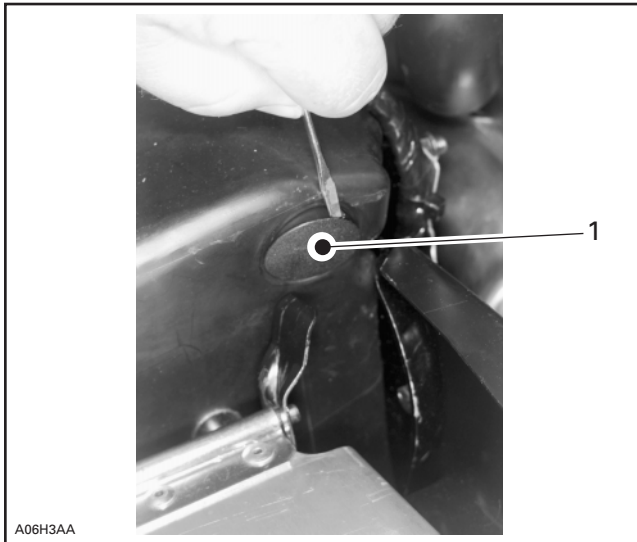


PARTS INSTALLATION FRONT SUSPENSION



Lift front of vehicle and block safely.

From inside engine compartment, remove caps as shown in the next photo.



A06H3AA

INSIDE ENGINE COMPARTMENT

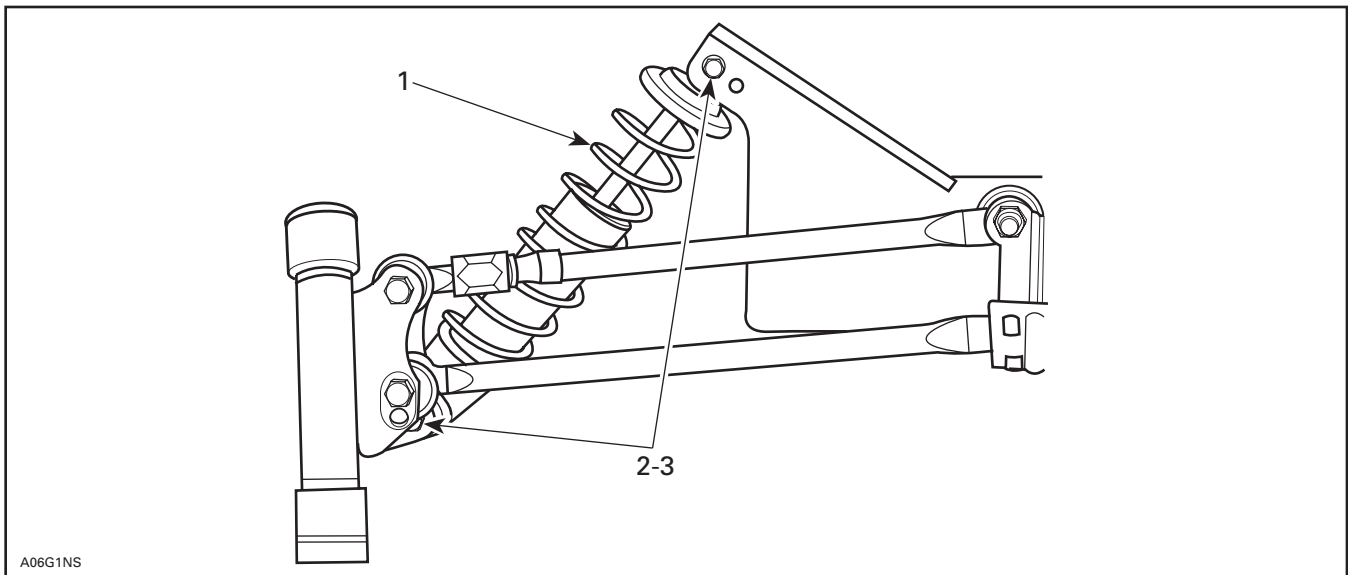
1. Using flat screwdriver, remove cap

Remove and discard shipping brackets from suspension. Discard spring clips, keep bolts.

Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position bolt heads toward front.

Reinstall caps.



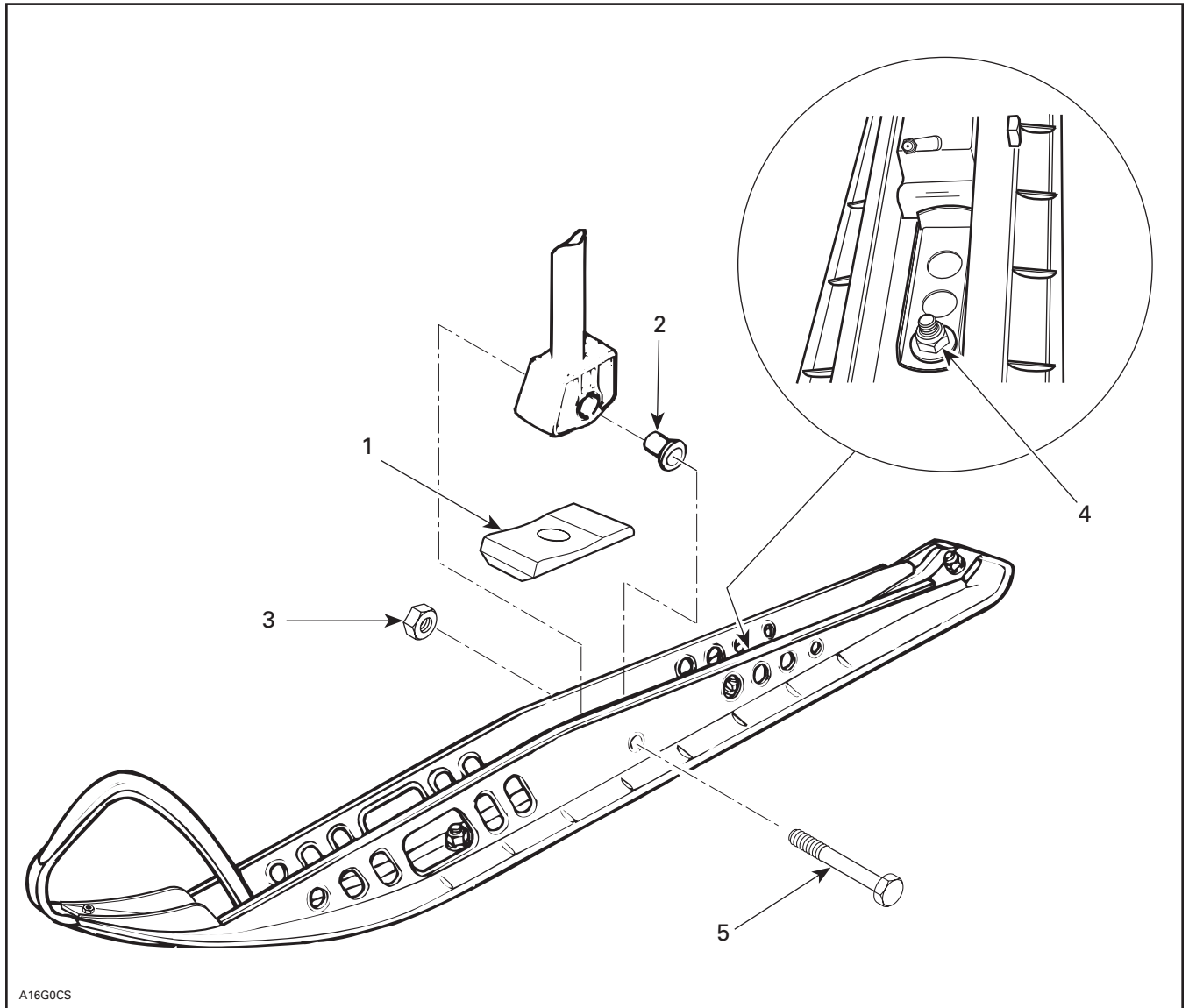
A06G1NS

TYPICAL — RIGHT SIDE SHOWN

1. Shock absorber (2) (box)
2. M10 x 1.5 x 55 bolt (on suspension)
3. M10 x 1.5 nut (section no. 4). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION SKIS



A16G0CS

LEFT SIDE SHOWN

1. Ski stopper (2) (section no. 8) "AVANT" toward front
2. Slider cushion (4)
3. Elastic nut M12 (2) (section no. 8). Torque to 40 N•m (30 lbf•ft)
4. Loosen then adjust against ski stopper 14 N•m (124 lbf•in)
5. Bolt M12 (2) (ski leg)

After ski installation, adjust stopper against stop bounding then tighten nut to 14 N•m (124 lbf•in). More pre-load on stop bounding will result in a more aggressive steering. Adjust according to driver preferences.



PARTS INSTALLATION STEERING PAD



Adjust handlebar temporarily and tighten nuts loosely for now.

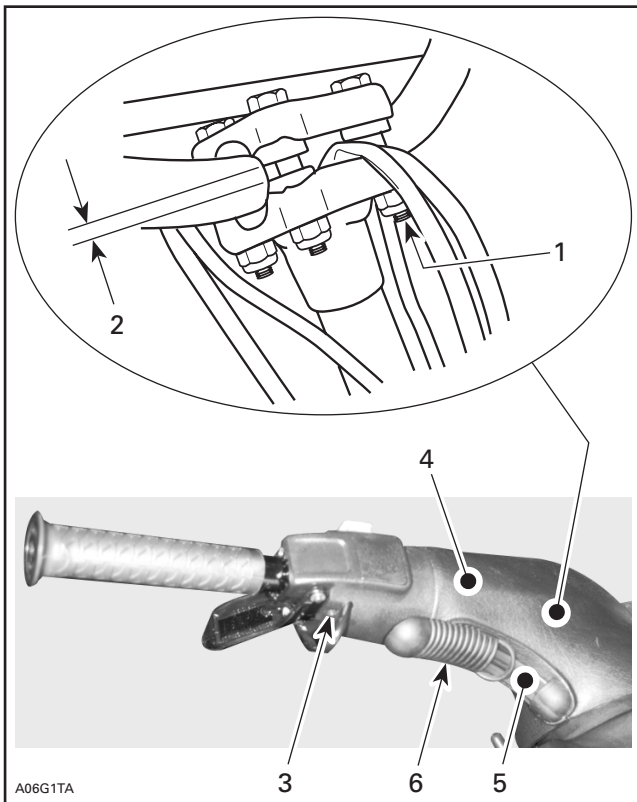
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.

Install steering pad temporarily, and adjust for proper fit with console.

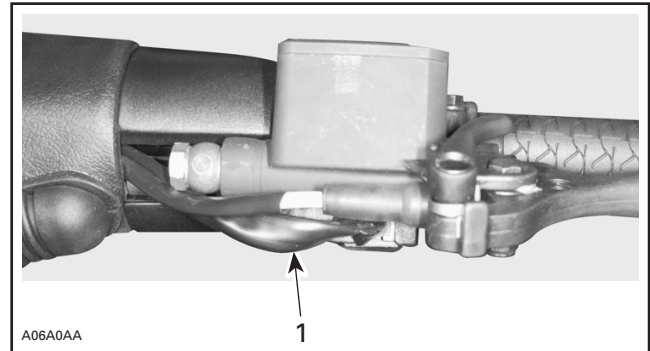
Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).

Reinstall steering pad, adjust and tighten throttle and brake handle housings.

Adjust then tighten throttle and brake handle housings.

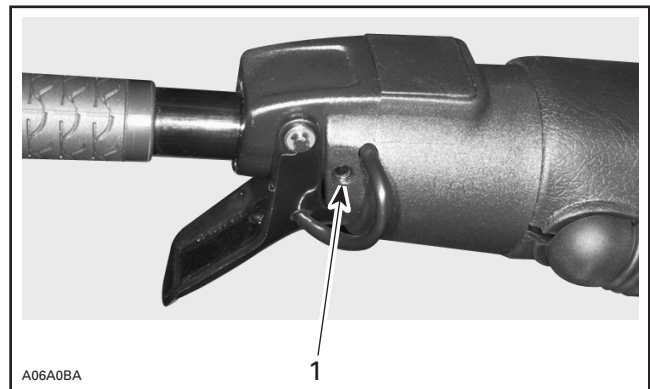


1. Torque to 26 N•m (19 lbf•ft)
2. Equal gap each side (both clamps)
3. Loosen Allen screw
4. Steering pad (box)
5. Use liquid soap to ease installation
6. Keyway (2) (P/N 572 0724 00) (section no. 5)



BRAKE HANDLE HOUSING

1. Tighten set screw to 2 N•m (18 lbf•in)



THROTTLE HANDLE HOUSING

1. Tighten set screw to 2 N•m (18 lbf•in)



PARTS INSTALLATION WINDSHIELD

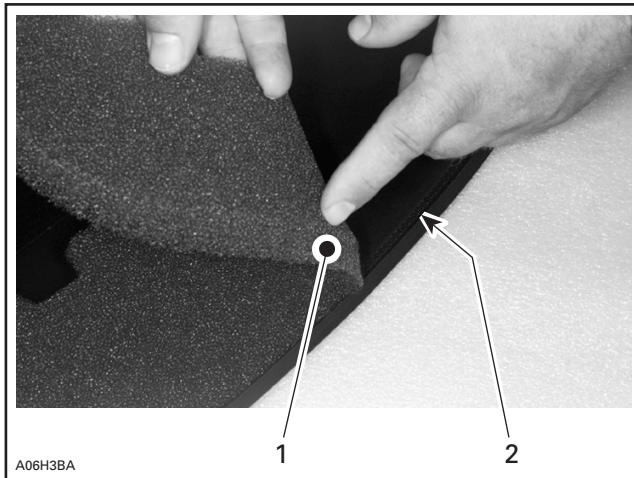


NOTE: Air deflector with foam must be installed before windshield.

AIR DEFLECTOR

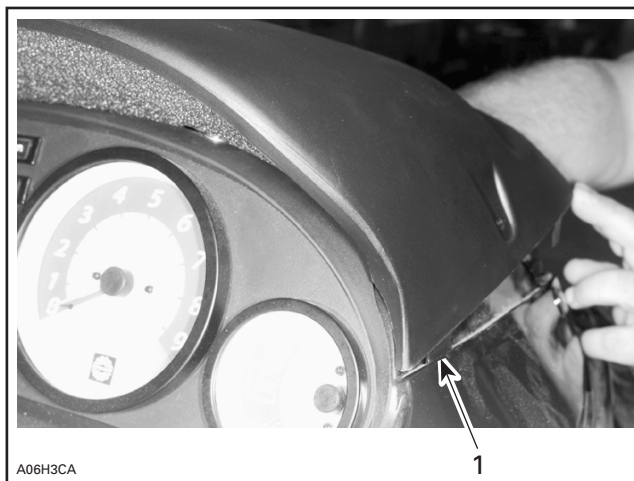
Preparation

Install air intake foam onto air deflector. Beveled surface must be facing Velcro, as shown in the next photo.



1. Beveled surface on air intake foam
2. Velcro on air deflector

Position air intake deflector rear tabs (left and right side) into hood slots, as shown in the next photo.



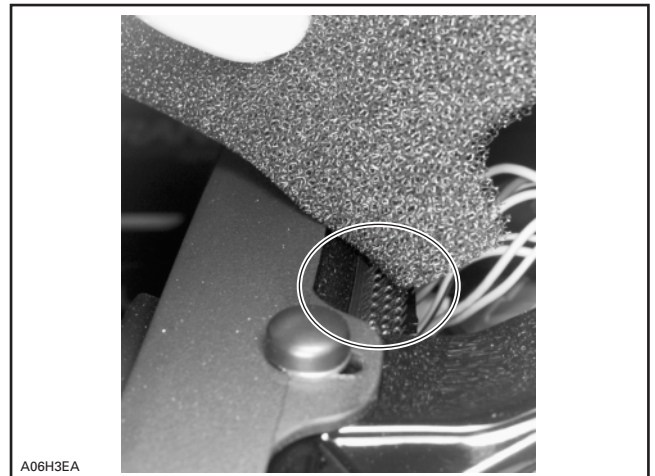
1. Air intake deflector rear tab (right side)

Holding air intake deflector, insert one hand underneath deflector, as shown in the next photo. Attach air intake foam to hood Velcro.



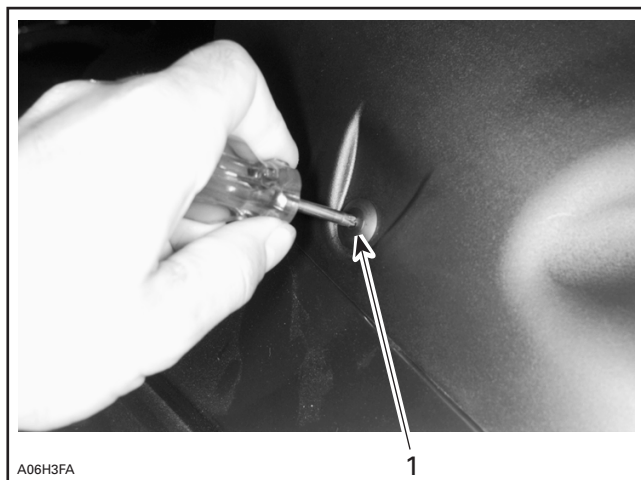
FROM UNDERNEATH DEFLECTOR, ATTACH FOAM TO VELCRO

NOTE: Ensure that air intake foam is properly attached to Velcro. See next photo.



AIR INTAKE DEFLECTOR HAS BEEN REMOVED TO SHOW WHERE AND HOW TO ATTACH AIR INTAKE FOAM TO HOOD

Secure air intake deflector using dart, as shown in the next photo.

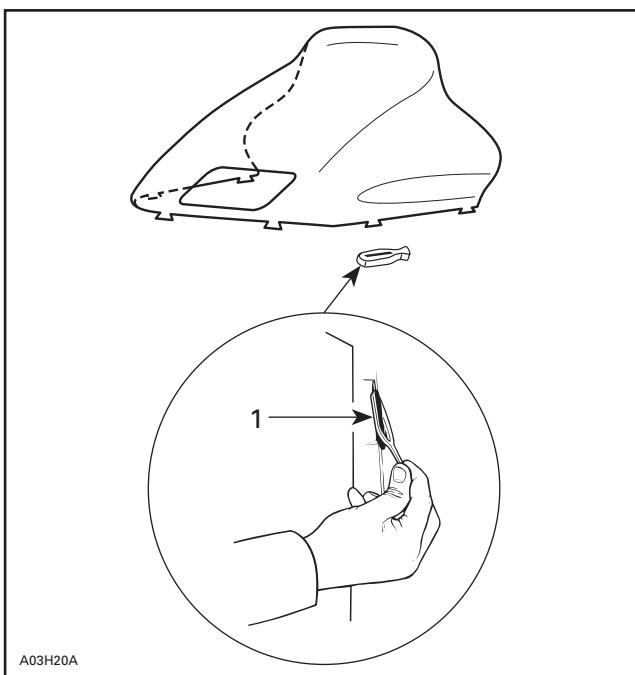


1. Dart (section no. 6)

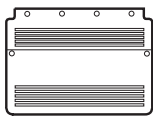
Install windshield on dashboard and secure with latches.



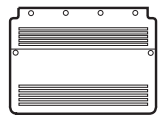
WINDSHIELD INSTALLED ON DASHBOARD



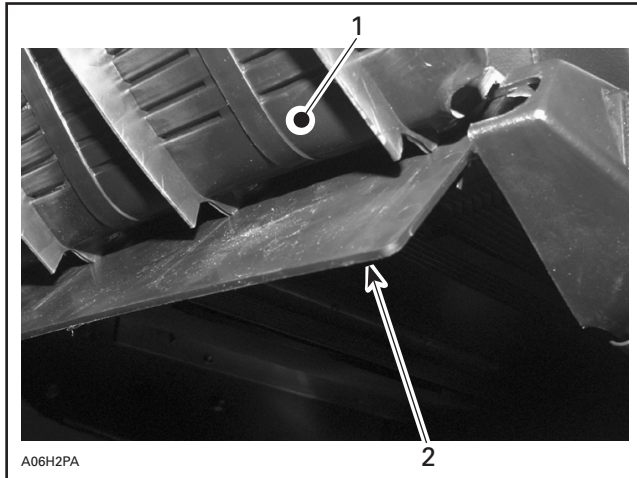
1. Latch (6) (P/N 570 0238 00) (section no. 6)



PARTS INSTALLATION SNOW GUARD



Position snow guard protector pad onto chassis.
Install snow guard over protector pad, as shown
in the next photo.

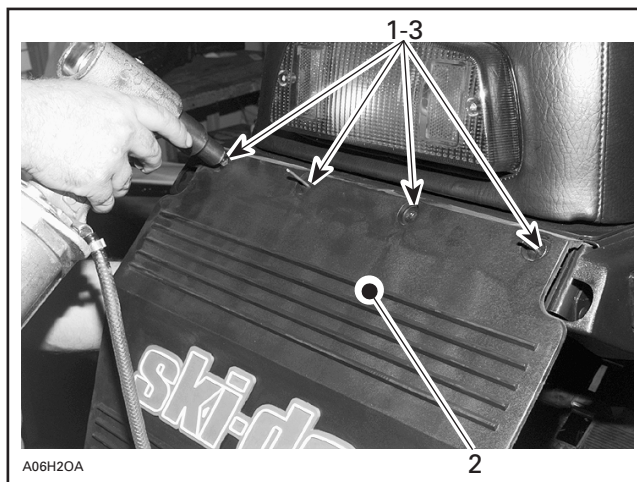


TYPICAL — VIEW FROM UNDER SNOW GUARD

1. Snow guard (box)
2. Snow guard protector pad (box)

Secure the two parts with rivets.

NOTE: Place washers inside tunnel.



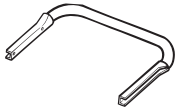
TYPICAL

1. Rivet (4) (section no. 2)
2. Snow guard
3. Washer (4) (section no. 2). Position washer inside tunnel

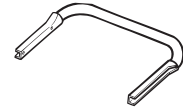
Finalize snow guard installation with caps, as
shown in the next photo.



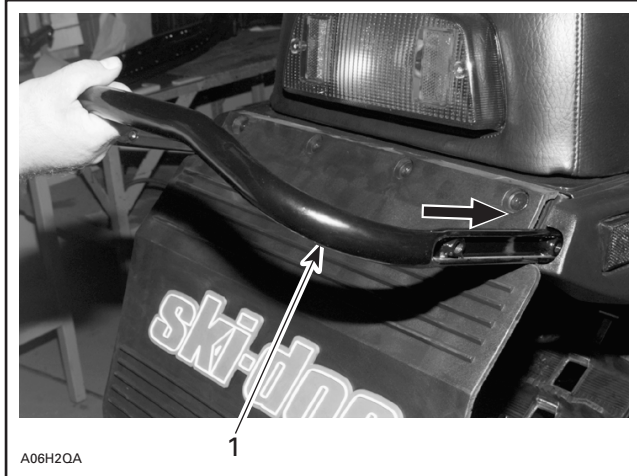
1. Caps (4) (section no. 9)



PARTS INSTALLATION REAR BUMPER



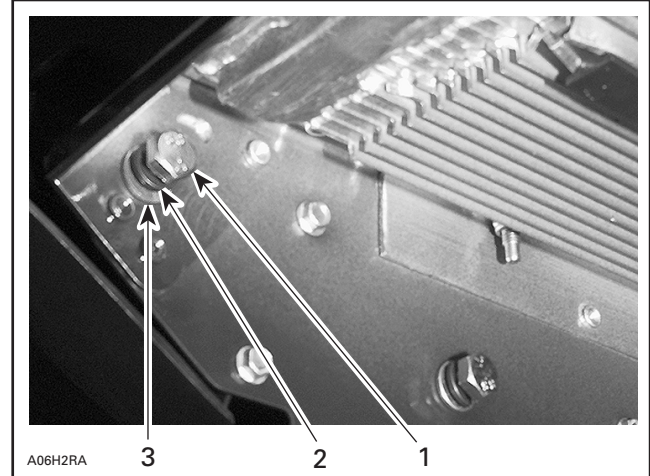
Install rear bumper to chassis.



SLIDE BUMPER INSIDE REAR MOLDINGS

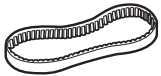
1. Rear bumper

Secure bumper from inside of tunnel.

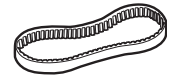


TYPICAL — VIEW FROM INSIDE OF TUNNEL

1. Bolt M8 (4) (section no. 1). Torque to 24 N•m (18 lbf•ft)
2. Lock washer (4) (section no. 1)
3. Washer (4) (section no. 1)



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.



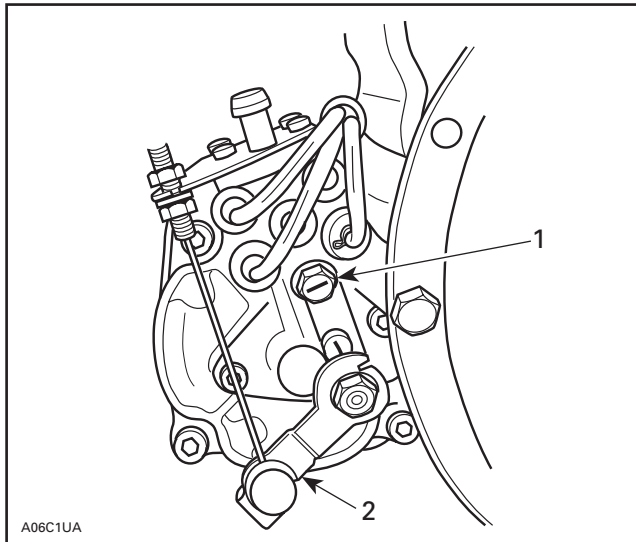
LIQUIDS

OIL INJECTION PUMP BLEEDING



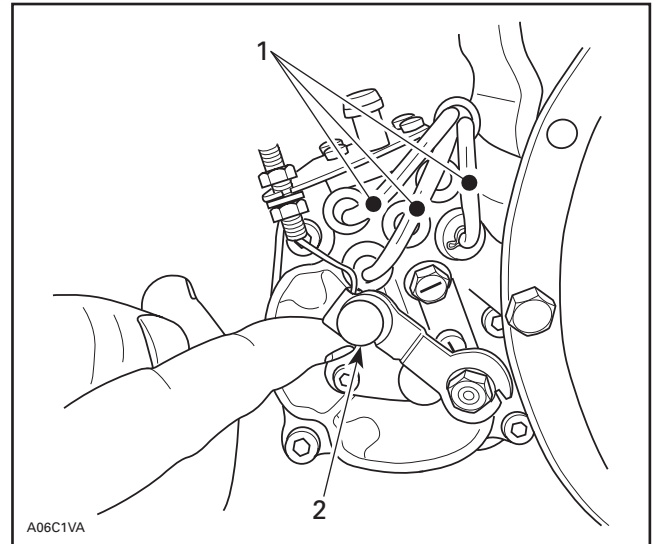
To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 8029 00 — 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

Bleed main oil line (between tank and pump) by loosening the bleeder screw until all air has escaped from the line. Add injection oil as required.



1. Bleeder screw
2. Oil pump lever

Bleed the small oil lines between pump and engine crankcase by running engine at idle while holding the pump lever in fully open position.



1. Small oil lines
2. Engine at idle (fully open position)



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid (DOT 4) in reservoir for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



A06G10A

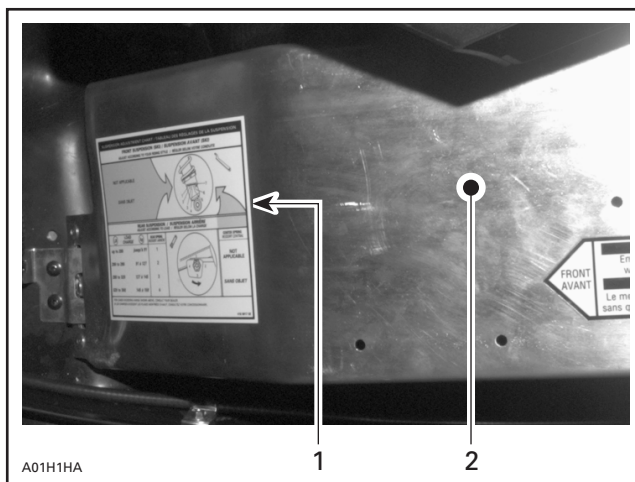
TYPICAL
1. Minimum



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



A01H1HA

1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See Technical Data section at the end of this bulletin.

On models equipped with idler wheel cap, remove cap to loosen retaining screws. Refer to the following photo.



A03F2WA

Insert a small screwdriver into recess then remove idler wheel cap



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).








TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquires should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1997 model.

	MODEL	MACH 1/MACH 1 (R)			
	Engine Type	699			
	Maximum HP RPM ①	± 100 RPM 8300 •			
	Rotary Valve P/N Opening (BTDC)/ Closing (ATDC)	Not Applicable			
	Carburetor Type	PTO VM 38-393	CTR VM 38-393	MAG VM 38-393 •	
	Main Jet	PTO 300	CTR VM 300	MAG 300 •	
	Needle Jet	P-9 (480) •			
	Pilot Jet	PTO 50	CTR 50	MAG 50	
	Needle Identification — Clip Position	6DEY2			
	Slide Cut-away	2.5			
	Float Adjustment	± 1 mm (in) 18.1 (.71)			
	Air Screw Adjustment	± 1/16 turn PTO 2.0 CTR 2.0 MAG 2.0 •			
	Idle Speed	± 200 RPM 1800			
	Gas Grade Octane Number	Super Unleaded 91			
Gas/Oil Ratio	Oil Injection				
	Ignition Timing BTDC ②	mm (in) 2.18 (.086)			
	Trigger Coil Air Gap	mm (in) 0.55 - 1.45 (.022 - .057)			
	Gear Ratio	Teeth 26/43 •			
	Engagement Speed	± 100 RPM 4200 •			
	Drive Pulley Calibration Screw Position	2 •			
	Pulley Distance	Z (+ 0, - 1) mm (+ 0, - 1/32) in	120.0 (4-23/32) •		
	Offset	X ± 0.4 mm (± 1/64) in	35.5 (1-7/16) •		
		Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)		
	Drive Belt Adjustment	Deflection	± 5 mm (in) 32 (1-1/4)		
		Force ③	kg (lbf) 11.34 (25)		
	Driven Pulley Preload	± 0.7 kg (± 1.5 lbf) 7.0 (15.43)			
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation			
Track Adjustment	Deflection	mm (in) 35 to 40 (1-3/8 to 1-3/4) with a 7.3 kg (16 lb) downward pull •			

① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center

ATDC: After Top Dead Center

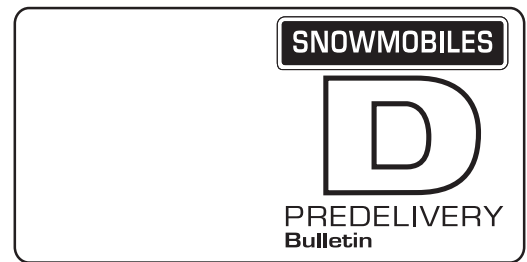
PTO: Power Take Off Side

CTR: Center

MAG: Magneto Side

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **98-8**

Date: September 16, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1998	Canada: Summit* 500 Summit* 583	1256 1259	ALL
1998	United States: Summit 500 Summit 583	1257 1260	ALL
1998	Sweden: Summit 500	1258	ALL

This bulletin must be used in conjunction with the check list enclosed in the bag with the *Operator's Guide*. Make sure that *Predelivery Check List* is completed and signed.

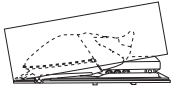
◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

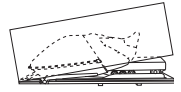
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and video.

There is a tag attached to the ignition key, only the customer should remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

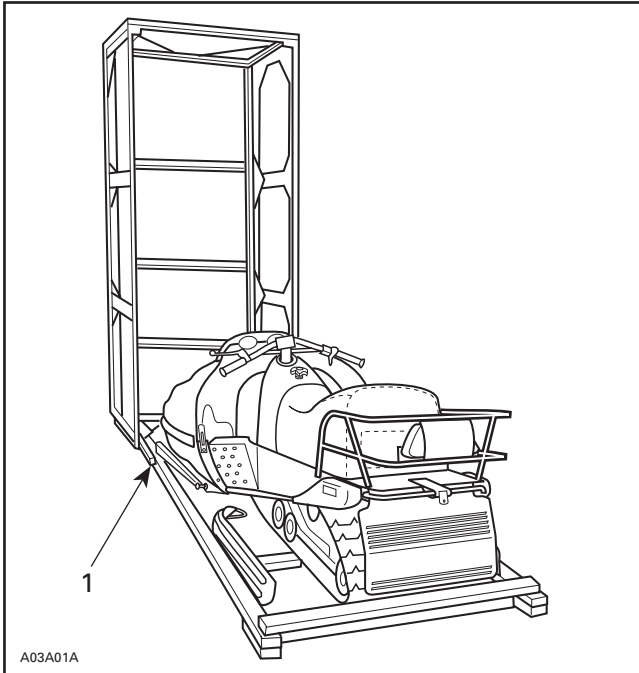
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to crate base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.



TYPICAL
1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and crate base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

When this metal strip is under the seat loosen 2 or 4 nuts retaining the seat before pulling out the metal strip.

▼ CAUTION

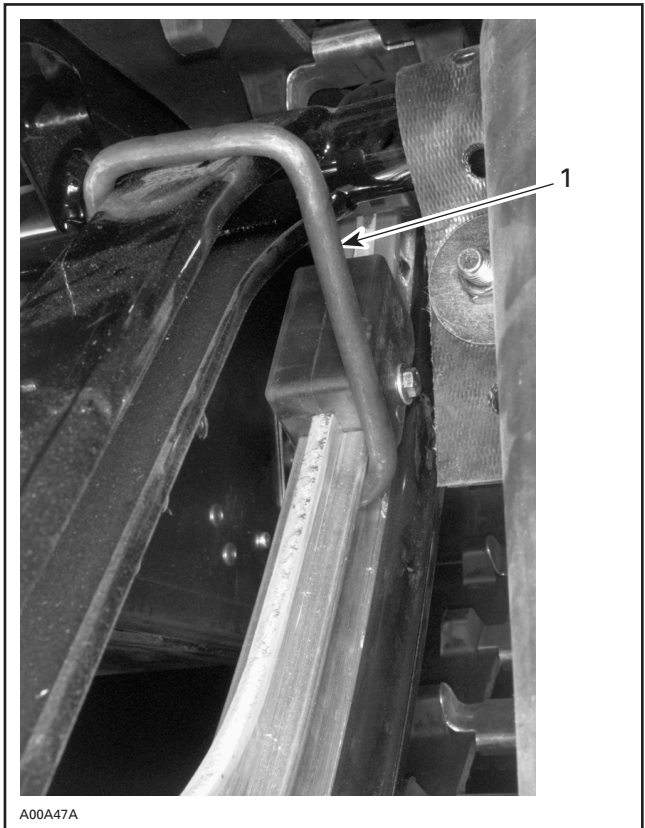
Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

FRONT HOOK REMOVAL



TYPICAL
1. Hook to be removed

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.

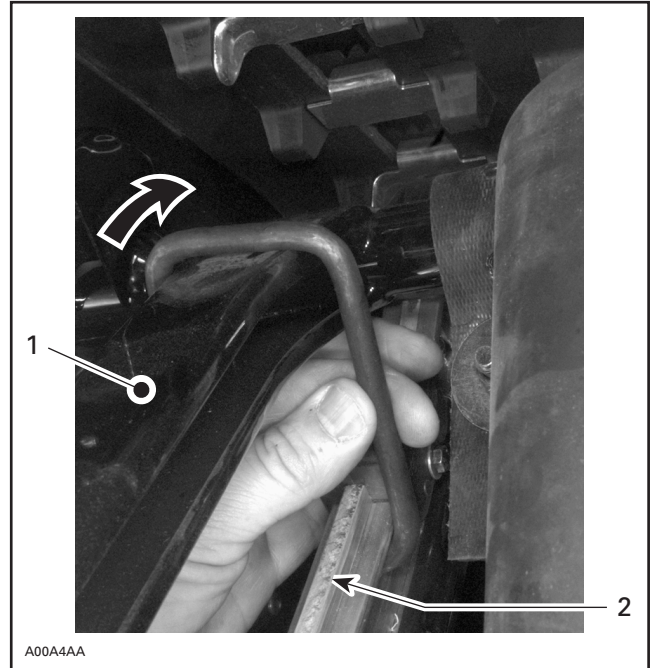


TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



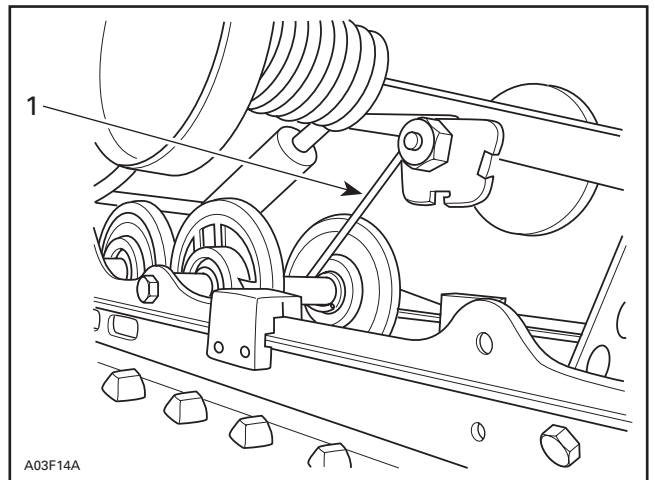
TYPICAL — REMOVE HOOK

1. Front arm
2. Runner

REAR HOOK REMOVAL

Lift front of vehicle to position bumper 35 to 40 inches upward.

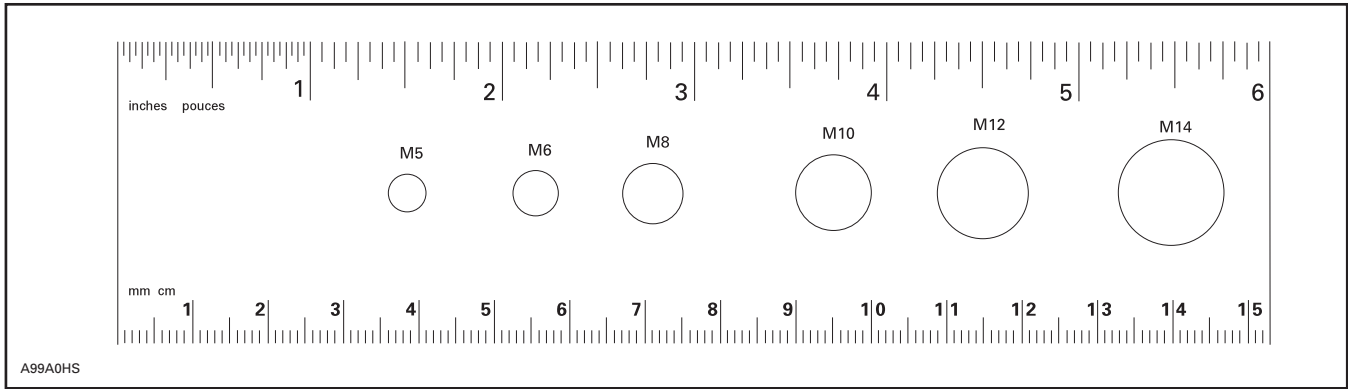
Apply pressure on rear suspension and remove hook from rear portion of suspension, as illustrated.



1. Remove hook

◆ WARNING
 Both hooks must be removed to have snowmobile suspension operational.

PREDELIVERY KIT P/N	MODELS
580 6683 00 580 6684 00	SUMMIT 500 SUMMIT 583

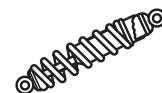


NOTE: This ruler can be helpful to identify fastener length or size.



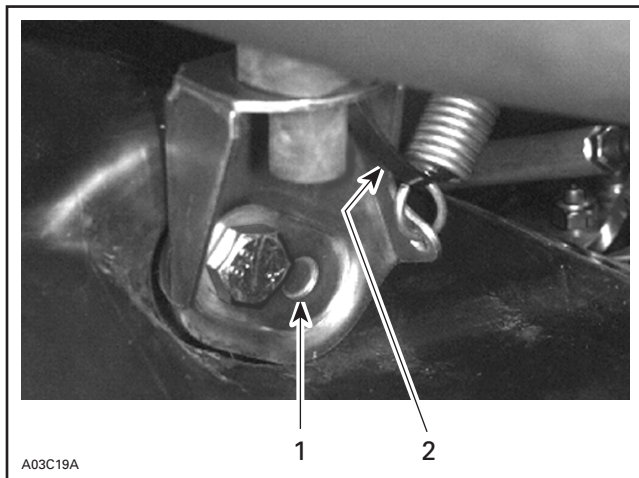
PARTS INSTALLATION

FRONT SUSPENSION



Summit 583

Cut locking tie retaining exhaust spring to exhaust support.



1. Lug in recess
2. Locking tie

Summit 500/583

Lift front of vehicle and block safely.

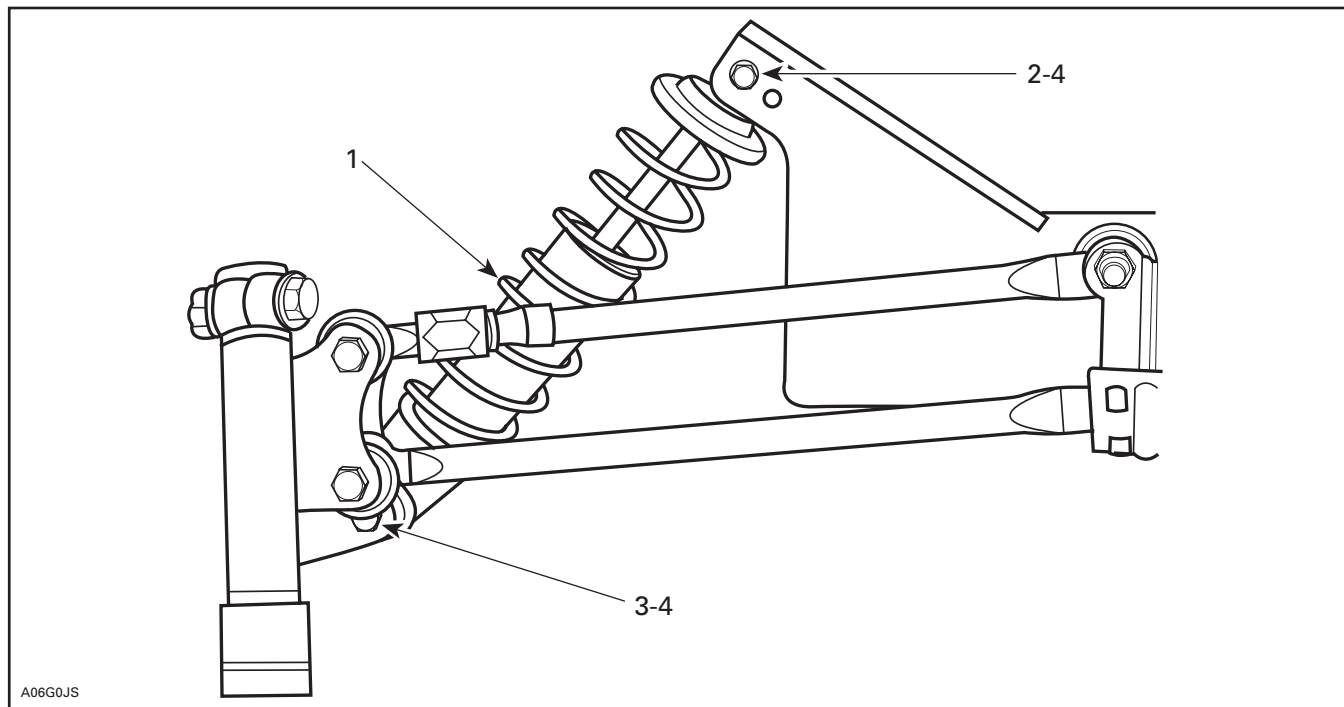
Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position bottom screw heads toward rear.

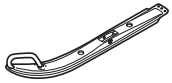
Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.

NOTE: On models equipped with a 5 hole exhaust support, hook up exhaust spring in middle hole.



TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (Engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 0060 65) (On suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 0055 65) (On suspension)
4. Elastic nut M10 x 1.5 (2) (P/N 228 5010 45) (Section no. 4 or 5). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION SKIS

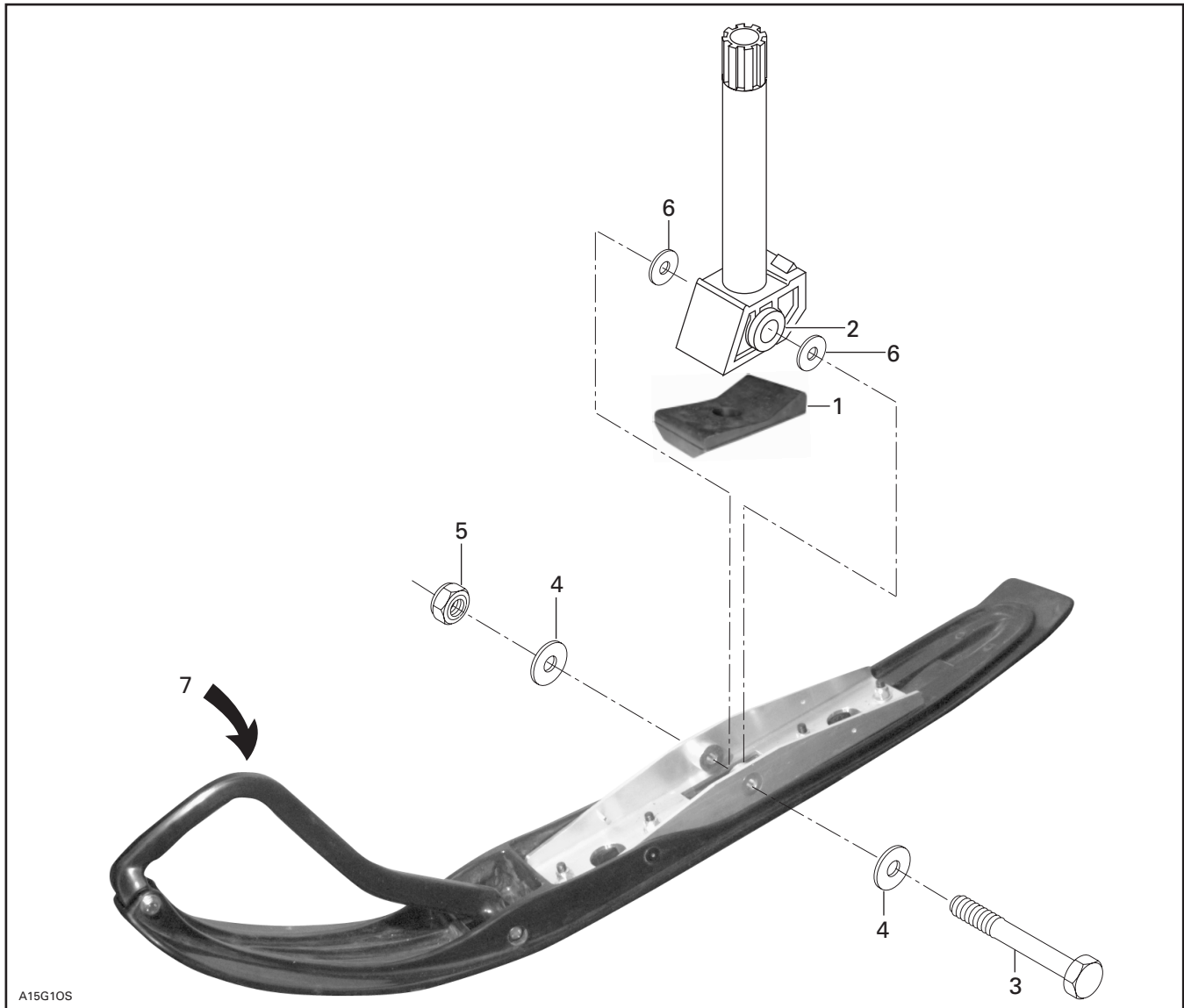


Ensure ski leg slider cushions are still in ski leg.

Install skis on vehicle.

NOTE: Use small washers (P/N 732 9000 48) to fill gap between ski leg slider cushions and ski. If both washers are required, install washer on each side of ski leg. If only one washer is required, install washer from inside snowmobile.

Replace vehicle on ground.



LEFT SIDE SHOWN

1. Ski stopper (2) (section no. 8) "AVANT" toward front
2. Slider cushion (4) (Ski leg)
3. Bolt M12 (2) (Ski leg)
4. Washer (4) (P/N 506 1364 00) (section no. 8). Install large washer
5. Elastic flanged nut M12 x 1.75 (2) (P/N 228 5210 45) (Section no. 8). Torque to 40 N•m (30 lbf•ft)
6. Washer (4) (P/N 732 9000 48) (section no. 8). Insert small washer, as needed, to fill gap between ski leg slider cushions and ski
7. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD



Summit 500

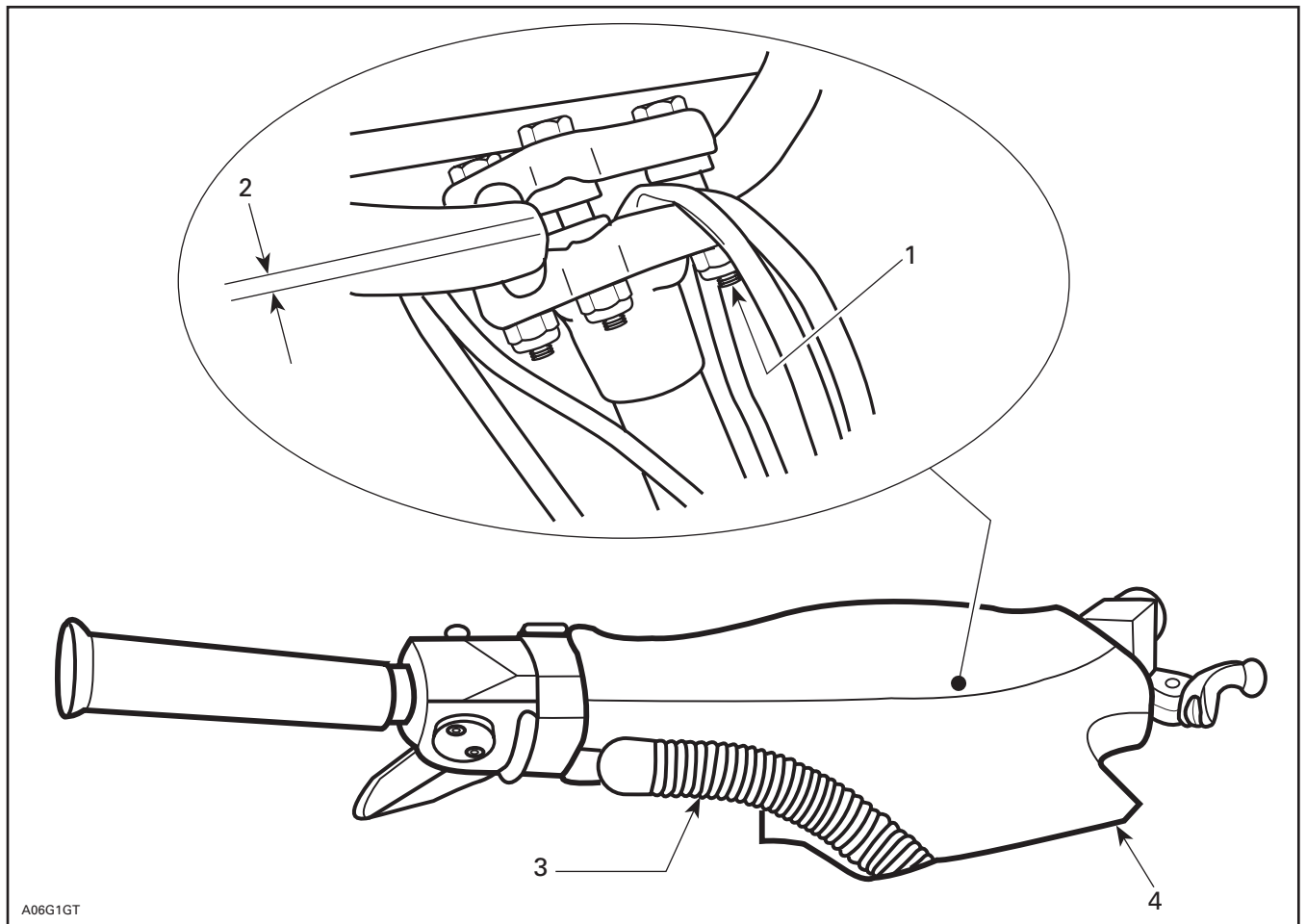
Adjust handlebar temporarily and tighten nuts loosely for now.

Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.

Install steering pad temporarily, and adjust for proper fit with console.

Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).

Reinstall steering pad, adjust and tighten throttle and brake handle housings.



A06G1GT

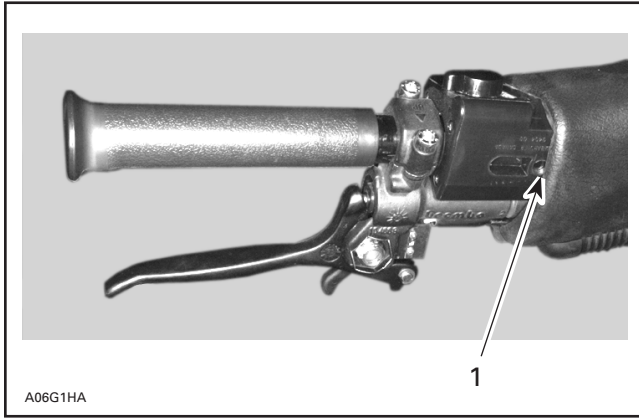
1. Torque to 26 N•m (19 lbf•ft)
2. Equal gap each side (Both clamps)
3. Keyway (2) (P/N 572 0724 00) (Section no. 3 or 5)
4. Steering pad (engine compartment)

Summit 583 Model

Repeat previous procedure but with a zip type envelope.

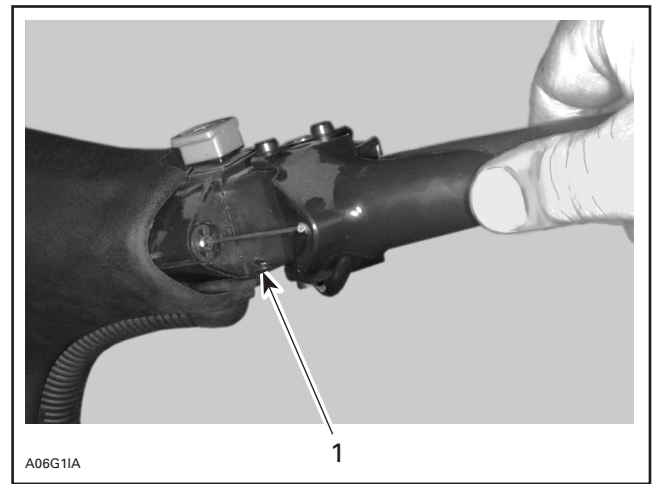
Ensure that inner foam pads are properly positioned and envelope properly aligned.

Close both side zippers.



BRAKE HANDLE HOUSING

1. Tighten set screw to $2\text{ N}\cdot\text{m}$ ($18\text{ lbf}\cdot\text{in}$)



THROTTLE HANDLE HOUSING

1. Tighten set screw to $2\text{ N}\cdot\text{m}$ ($18\text{ lbf}\cdot\text{in}$)

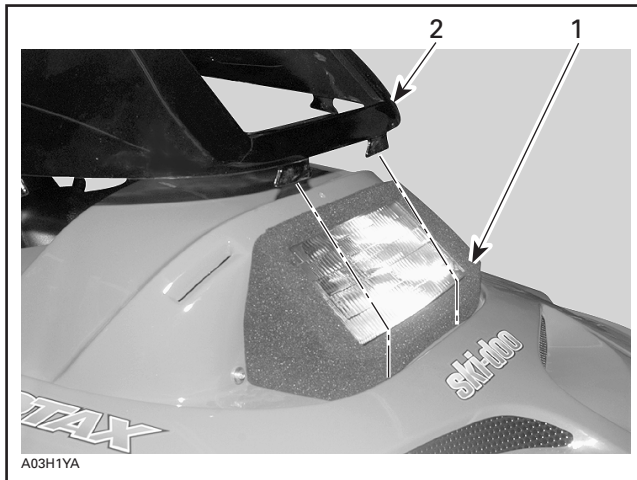


PARTS INSTALLATION WINDSHIELD



Install windshield on dashboard.

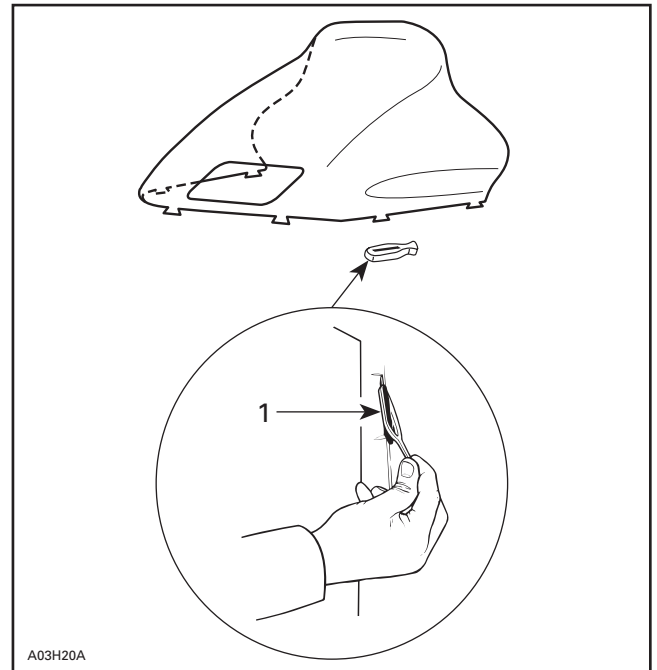
NOTE: Make sure that protective foam is properly positioned around headlamp before installing windshield.



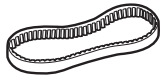
1. Protective foam
2. Install windshield on dashboard



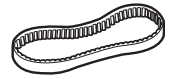
WINDSHIELD INSTALLED ON DASHBOARD



1. Latch (6) (P/N 570 0238 00) (section no. 4 or 6)



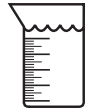
PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.



LIQUIDS OIL INJECTION PUMP BLEEDING



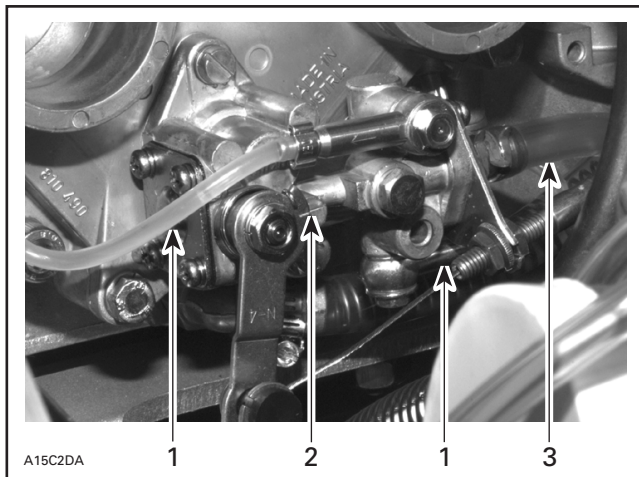
BREAK-IN PERIOD SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX injection oil (P/N 413 8029 00 — 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Remove air silencer and move carburetors aside. Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

Check also for proper oil level adjustment. Marks must be aligned when throttle lever is activated just enough to take all cable play.

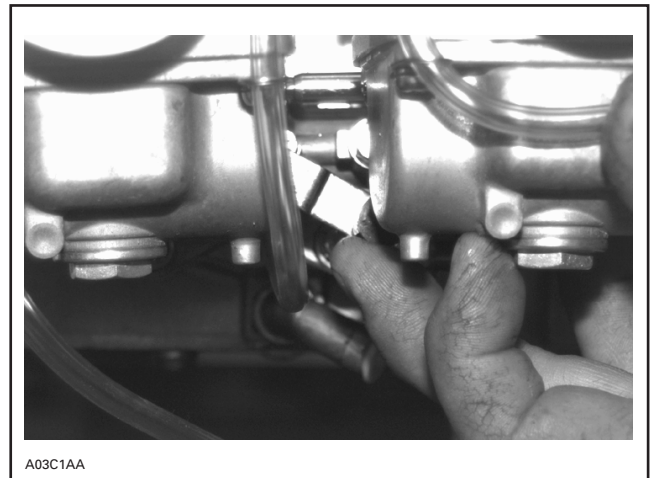


1. Small oil line
2. Marks aligned
3. Main oil line

Reinstall all parts except air silencer.

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

NOTE: If the air silencer has been reinstalled, make a J hook out of mechanical wire to lift the lever.



TYPICAL — ENGINE AT IDLE

Reinstall air silencer.



ADJUSTMENTS DRIVE PULLEY



Summit 500 and 583

Adjust TRA drive pulley screw according to decal on belt guard.

NOTE: Lifting the belt guard requires a little care to avoid rear latch from rubbing against inner console padding.



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

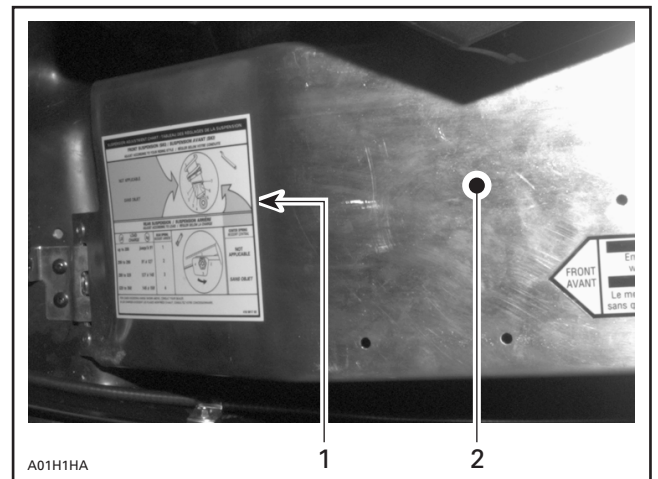
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).



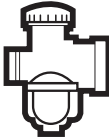




TECHNICAL DATA








The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Further inquires should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1997 model.

	MODEL	SUMMIT 500		
	Engine Type	494		
	Maximum HP RPM ①	±100 RPM	7800 •	
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	420 9245 09 135°/64°	
	Carburetor Type	PTO VM 38 - 384	MAG VM 38 - 385 •	
	Main Jet	PTO 350	MAG 330 •	
	Needle Jet	Q - 6 (480) •		
	Pilot Jet	75		
	Needle Identification — Clip Position	6DHY48 •		
	Slide Cut-away	2.5		
	Float Adjustment	±1 mm (in)	18.1 (.71)	
	Air Screw Adjustment	± 1/16 turn	2	
	Idle Speed RPM	±200 RPM	1800	
	Gas Grade/Pump Octane Number	(R + M)/2	Regular Unleaded/87	
	Gas/Oil Ratio	Oil Injection		
	Ignition Timing BTDC ②	mm (in)	1.81 (.071)	
	Trigger Coil Air Gap	mm (in)	0.55 - 1.45 .022 - .057	
	Gear Ratio	teeth	22/43 •	
	Engagement Speed	±100 RPM	4500 •	
	Drive Pulley Calibration Screw Position	5		
	Pulley Distance	Z (+ 0, - 1) mm (+ 0, - 1/32) in	16.5 (21/32)	
	Offset	X ± 0.4 mm (± 1/64 in)	35.0 (1-3/8)	
		Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)	
	Drive Belt Adjustment	Deflection	±.5 mm (in)	32 (1-1/4)
		Force ③	kg (lbf)	11.34 (25)
	Driven Pulley Preload	±0.7 kg (lbf)	7.0 (15.43)	
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation		
Track Adjustment	Deflection	mm (in)	35 to 40 (1.378 -1.575) with a 7.3 kg (16 lb) downward pull •	

NOTE: See end of specifications for foot notes.

A dot (•) on right indicates changes from 1997 model.

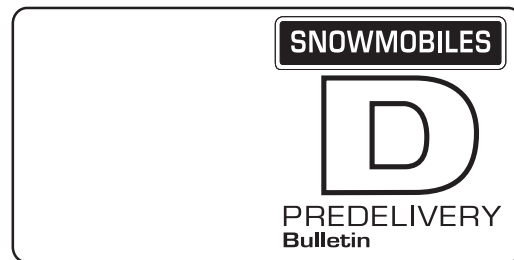
	MODEL	SUMMIT 583		
	Engine Type	583		
	Maximum HP RPM ①	±100 RPM	7900 •	
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	420 9245 09 135°/64°	
	Carburetor Type	PTO VM 38 - 388	MAG VM 38 - 389 •	
	Main Jet	PTO 330	MAG 320 •	
	Needle Jet	P-8 (480) •		
	Pilot Jet	75		
	Needle Identification — Clip Position	6FEY1 •		
	Slide Cut-away	2.5		
	Float Adjustment	±1 mm (in)	18.1 (.71)	
	Air Screw Adjustment	± 1/16 turn	2-1/4	
	Idle Speed RPM	±200 RPM	1800 •	
	Gas Grade/Pump Octane Number	(R + M)/2	Regular Unleaded/87	
	Ignition Timing BTDC ②	mm (in)	1.75 (.069)	
	Trigger Coil Air Gap	mm (in)	0.55 - 1.45 (.022 - .057)	
	Gear Ratio	teeth	22/43 •	
	Engagement Speed	±100 RPM	4400 •	
	Drive Pulley Calibration Screw Position	5		
	Pulley Distance	Z	(+ 0, - 1) mm (+ 0, - 1/32) in	16.5 (21/32)
		Offset	X	± 0.4 mm (± 1/64 in)
	Drive Belt Adjustment	Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)	
		Deflection	±.5 mm (in)	32 (1-1/4)
	Force ③	kg (lbf)	11.34 (25)	
	Driven Pulley Preload	±0.7 kg (lbf)	7.0 (15.43)	
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation		
Track Adjustment	Deflection	mm (in)	35 to 40 (1.378 - 1.575) with a 7.3 kg (16 lb) downward pull •	

- ① Engine speed at which maximum power is achieved.
- ② At 6000 RPM (engine cold) with headlamp turned on.
- ③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 MAG: Magneto side

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **98-9**

Date: September 15, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1998	Canada and United States: Mini Z*	1213	ALL

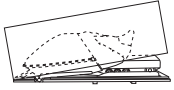
This bulletin must be used in conjunction with the check list enclosed in the bag with the *Operator's Guide*. Make sure that *Predelivery Check List* is completed and signed.

◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

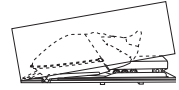
NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Predelivery Check List* signed copy and *Video*.



UNCRATING



◆ WARNING

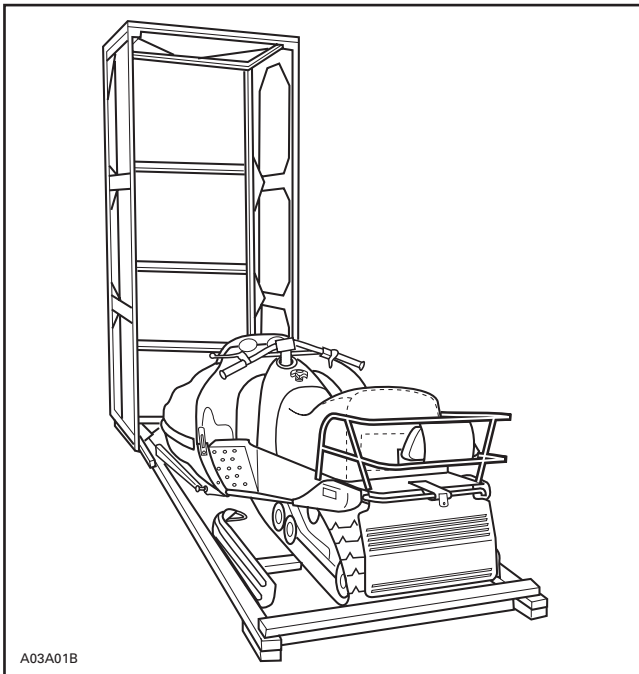
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

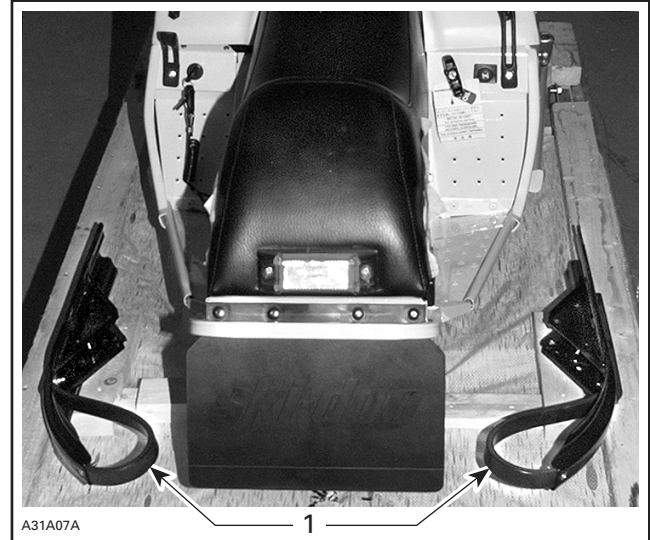
Remove all screws retaining cover to crate base. Tip cover toward front of vehicle. Lift cover slowly to avoid damaging the snow guard or taillight.



A03A01B

TYPICAL

Detach skis from the crate base.



A31A07A

1. Detach skis from crate

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and washers. Discard nuts.



A31A08A

1. Remove bolt, keep it

Remove vehicle from base.

Remove predelivery bag from engine compartment.



PARTS INSTALLATION

SKIS



Lift front of vehicle to install skis.
 Make sure that ski leg spacers are still on ski legs.
 Slide ski on ski leg as shown in the next photo.

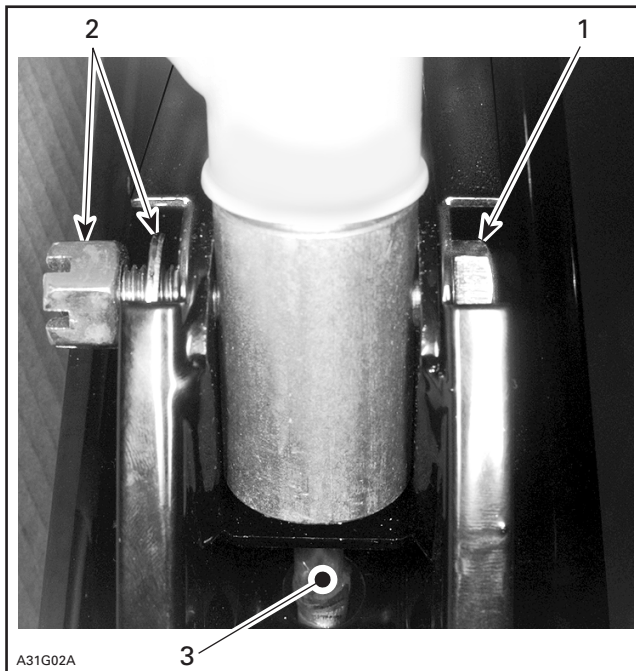


A31G01A

SLIDE SKI

1. Ski leg spacer

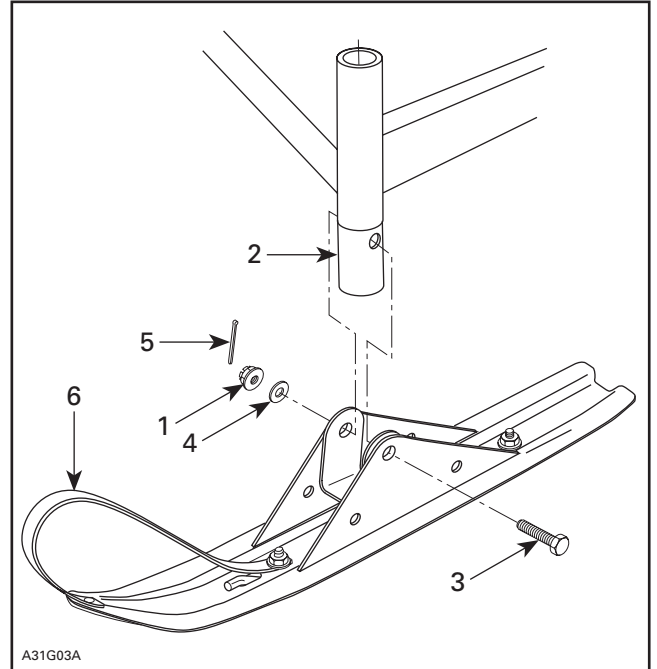
Secure ski with bolt, washer, nut and cotter pin, then ensure that ski pin is properly centered into ski leg, as shown in the following photo.



A31G02A

1. Bolt head toward **OUTSIDE** of vehicle
2. Washer, nut and cotter pin (not shown) toward **inside** of vehicle
3. Ski pin centered into ski leg

Replace vehicle on ground.



A31G03A

LEFT SIDE SHOWN

1. Nut M10 (2) (predelivery bag). Torque to 3 N•m (27 lbf•in)
2. Spacer (2) (Ski leg)
3. Bolt M10 (2) (predelivery bag). Bolt head from outside vehicle
4. Washer (4) (ski leg)
5. Cotter pin (2) (predelivery bag)
6. Twist ski to ease bolt installation



PARTS INSTALLATION WINDSHIELD



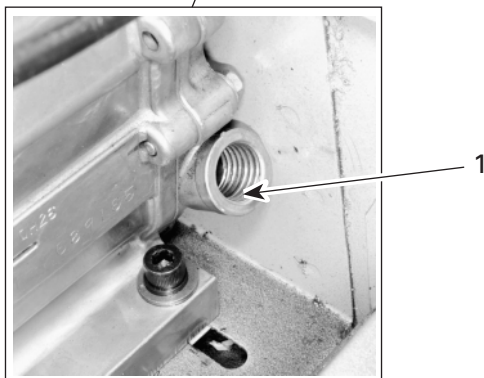
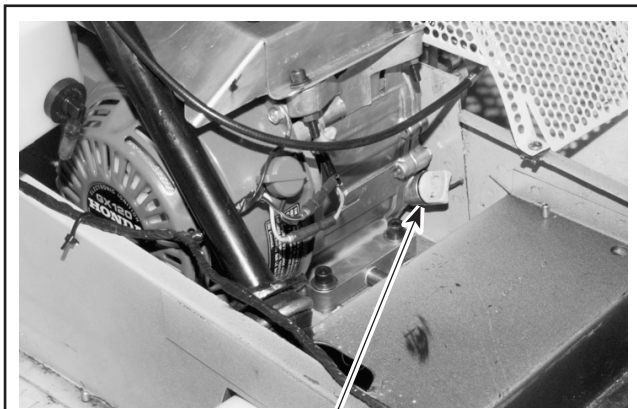
Peel off protective film from windshield.



LIQUIDS ENGINE OIL LEVEL

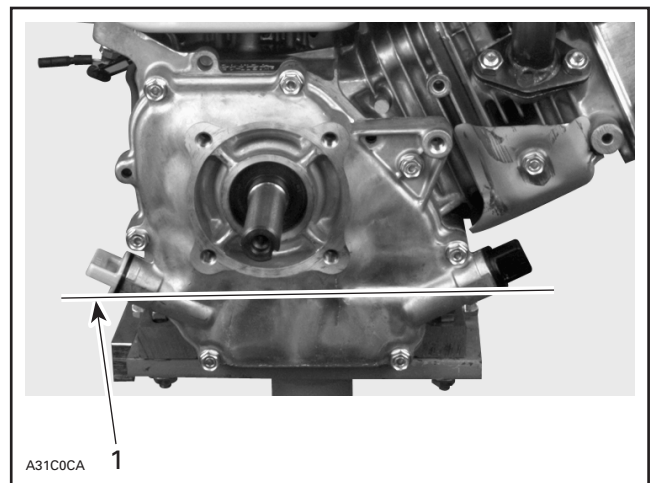


Check engine oil level. Add SAE 5W/30 recommended oil as required. Refer to the following photos.



ADD OIL UNTIL IT REACHES THE TOP OF THE OIL FILLER NECK

1. Top of the oil filler neck



1. Proper oil level



ADJUSTMENTS

TRACK



Refer to *Operator's Guide (Shop Manual unavailable at time of printing of this bulletin)* to adjust track tension and alignment. Also, see TECHNICAL DATA section at the end of this bulletin.



TECHNICAL DATA








The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Further inquires should be directed to your dealer distributor service representative.



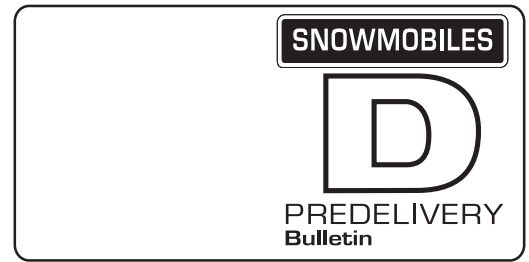
TECHNICAL DATA



	MODEL	MINI Z
	Engine Type	4-stroke, overhead valves single cylinder, inclined at 25°, QB26, Model GX120K1 by Honda
	Maximum HP/RPM (Engine speed at which maximum power is achieved)	4.0 HP at 4000 RPM
	Lubricating System/Oil Capacity	Splash Type (Oil Bath)/0.6 liter
	Carburetor Type	Horizontal Type, Butterfly valve
	Main Jet	#60 (Externally vented carb. bowl) #62 (Internally vented carb. bowl)
	Float height	13.7 mm (.539 in)
	Pilot Screw Opening	2 turns out (Externally vented carb. bowl) 2-3/8 turns out (Internally vented carb. bowl)
	Idle Speed RPM ± 150 RPM	1400 (RPM)
	Gas Grade/Pump Octane Number (R + M)/2	Regular Unleaded/87
	Ignition Timing	25° (Fixed)
	Spark Plug Type/Gap	NGK BPR6 ES/ 0.7-0.8 mm .028-.031 (in)
	Drive Sprocket/Driven Sprocket teeth	10/48
	Drive Sprocket Diameter mm/in	101.6/4.0
	Clutch Type	Automatic Centrifugal
	Chain Type	Standard Rollers Type 40/78
	Chain Pitch mm/in	12.7/0.5
	Track Alignment	Equal distance between edges of track guides and slider shoes
	Track Deflection	35 mm 1-3/8 (in) Measure gap between slider shoe and bottom inside of track when exerting a downward pull of 7.3 kg (16 lb) to the track

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **98-10**

Date: September 12, 1997

SUBJECT: Predelivery Procedure

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1998	Canada: Formula Z* 670	1253	ALL
1998	United States: Formula Z* 670	1254	ALL
1998	Sweden: Formula Z* 670	1306	ALL

This bulletin must be used in conjunction with the check list enclosed in *Operator's Guide* bag. Make sure that predelivery check list is completed and signed.

◆ WARNING

To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.

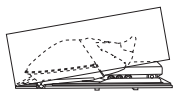
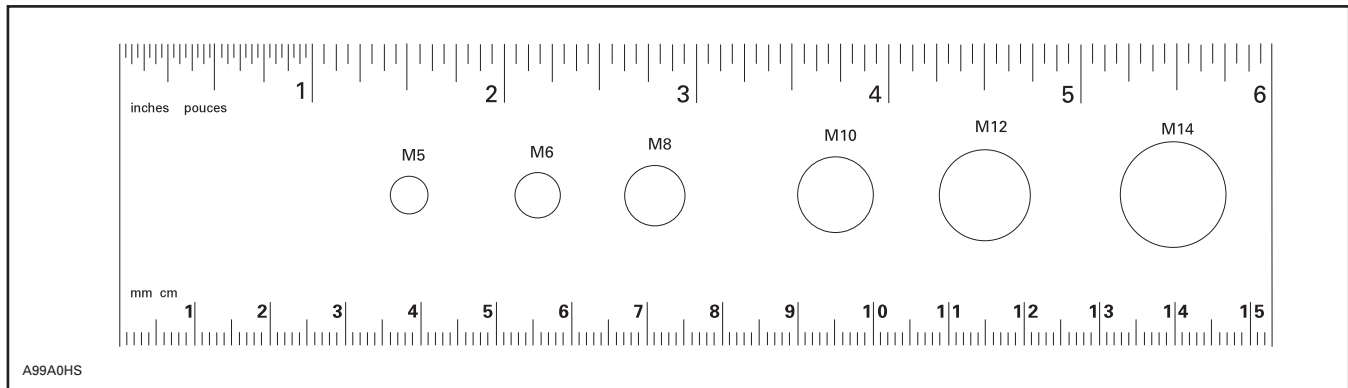
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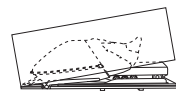
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquires should be directed to your distributor service representative and/or specific Shop Manual sections. Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and *video*.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask the dealer to perform suspension adjustments according to riding style and vehicle load.

NOTE: This ruler can be helpful to identify fastener length or size.



UNCRATING



PREDELIVERY KIT P/N	MODELS
580 6540 00	Formula Z 670

◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

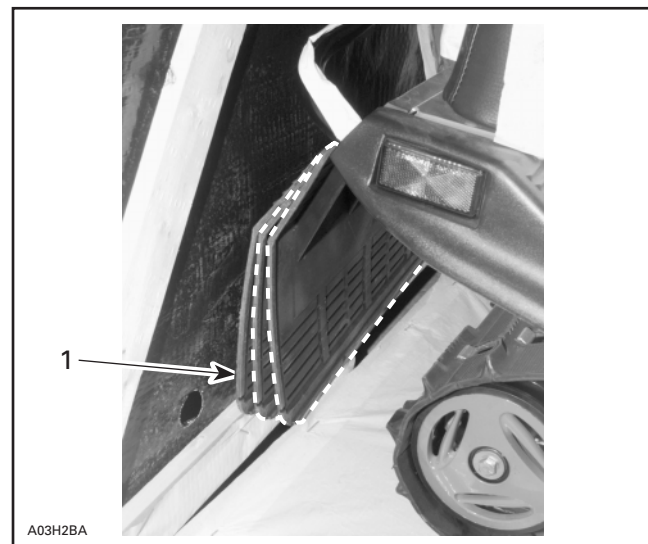
Allowing the crate to drop may cause serious damage to the vehicle.

Unscrew all screws retaining cover to crate base.

Notch in crate base is at front.

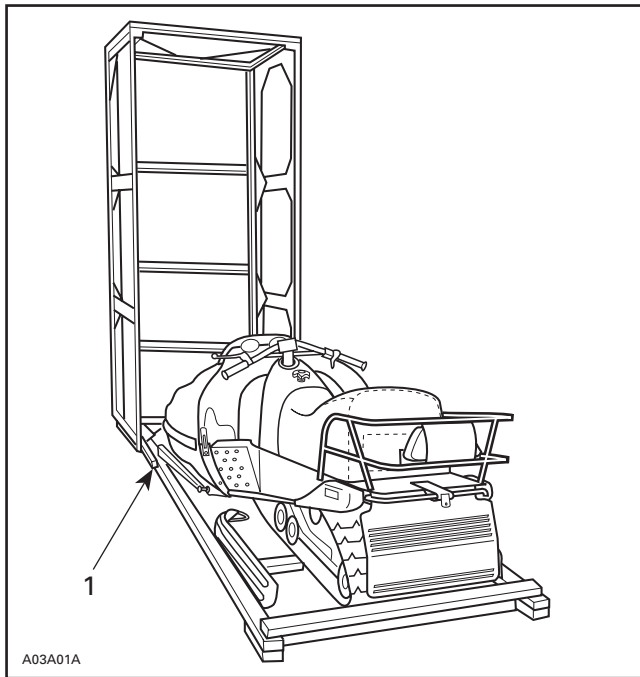
Tip cover over front of vehicle.

Snow guard may interfere with crate cover, as shown in the following photo. Push on snow guard when lifting cover.



FROM OUTSIDE CRATE PUSH ON SNOW GUARD TO ALLOW COVER TO LIFT WITHOUT DAMAGING SNOW GUARD

1. Snow guard interfering with crate cover



TYPICAL
1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield.

From underneath tunnel, loosen 4 nuts retaining seat then slowly pull out metal strip retaining windshield. Tighten nuts.

▼ CAUTION

Failure to lift seat might result in leatherette damage.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and elastic stop nuts.

Remove vehicle from base.

Remove steering pad, shock absorbers, snow guard, drive belt and predelivery kit from engine compartment.

REAR SUSPENSION HOOKS REMOVAL

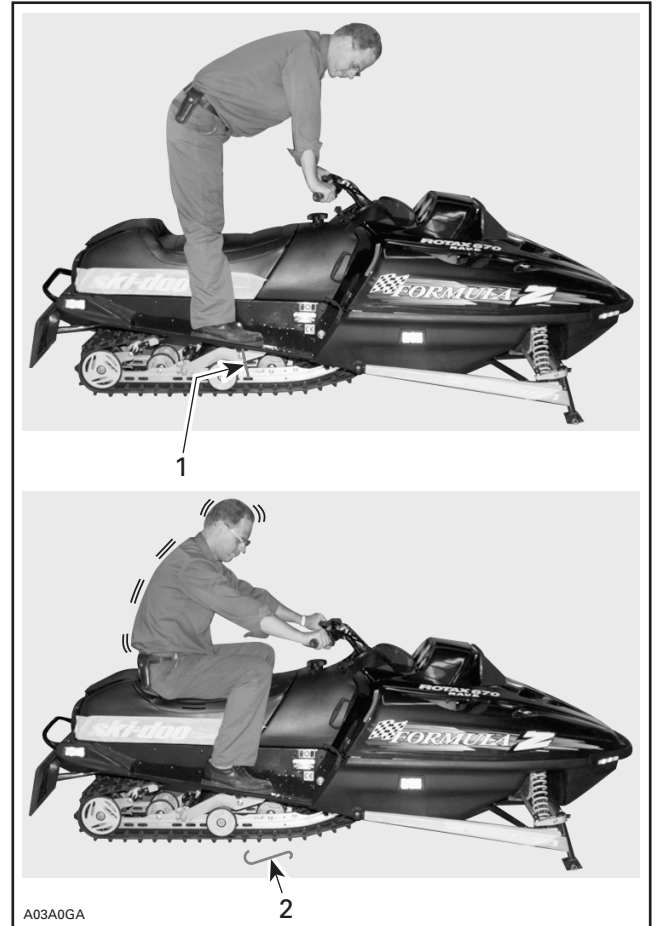
Both hooks to be removed are located on each side of rear suspension.

To remove hooks, stand on running boards.

Using a fast and strong movement, sit down on snowmobile seat. This will allow suspension to compress and hooks to detach. See the next photo.

▼ CAUTION

To avoid damaging seat storage compartment and cover, always sit on seating surface.



STAND ON RUNNING BOARDS THEN SIT DOWN ON SEAT

1. Hook to be removed (both sides)
2. Hook removed

NOTE: Hook may detach from top only. In that case remove hook from runner, by hand.

▼ CAUTION

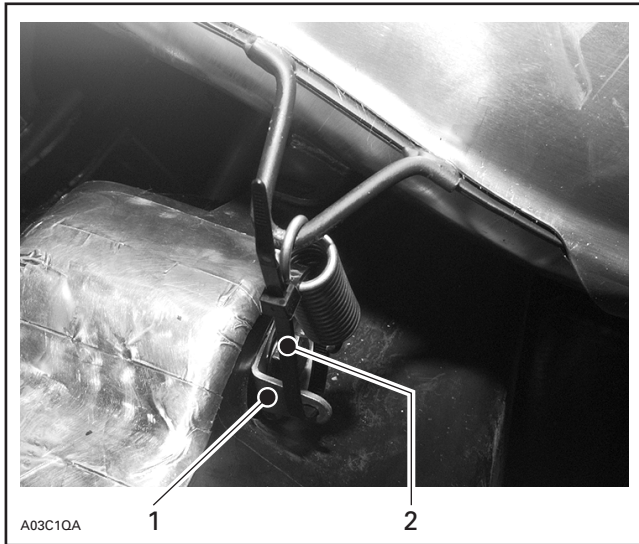
Both hooks must be removed to have snowmobile suspension operational.



PARTS INSTALLATION FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.



1. Lug in recess
2. Locking tie

Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep bolts.

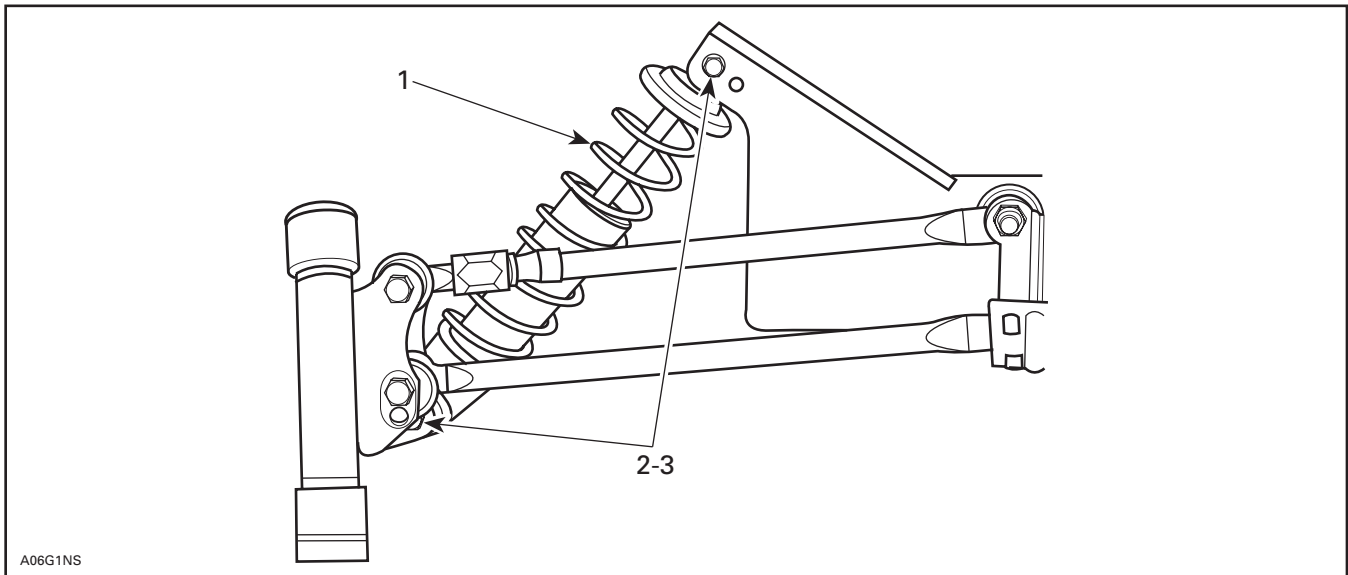
Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position bolt heads toward front.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring. See next photo.

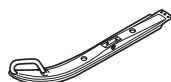


EXHAUST SUPPORT PROPERLY INSTALLED

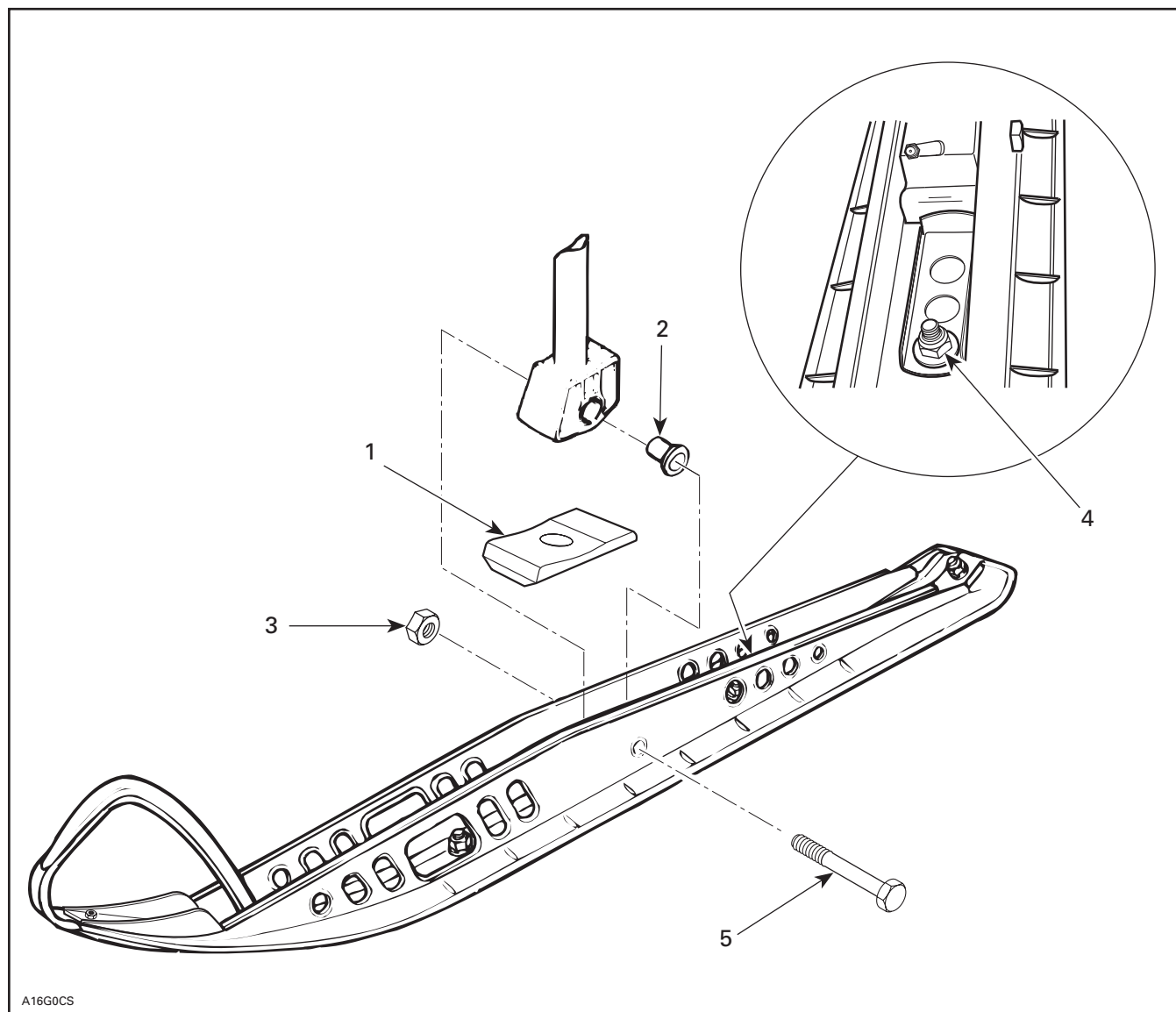


TYPICAL — RIGHT SIDE SHOWN

1. Shock absorber (2) (engine compartment)
2. M10 x 1.5 x 55 bolt (on suspension)
3. M10 x 1.5 nut (section no. 4). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION SKIS



A16G0CS

LEFT SIDE SHOWN

1. Ski stopper (2) (section no. 8) "AVANT" toward front
2. Slider cushion (4)
3. Elastic nut M12 (2) (section no. 8). Torque to 40 N•m (30 lbf•ft)
4. Loosen then adjust against ski stopper 14 N•m (124 lbf•in)
5. Bolt M12 (2) (ski leg)

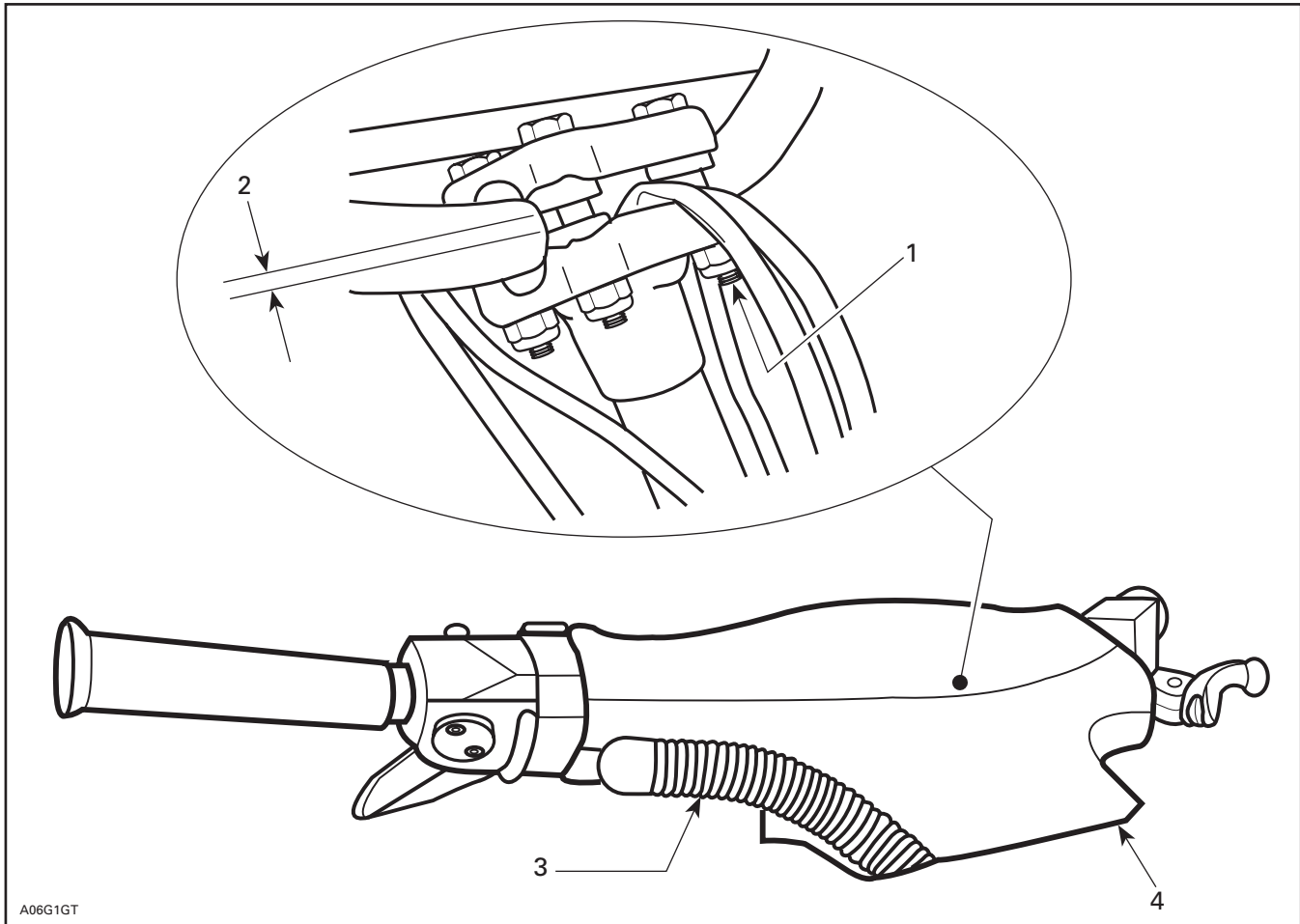
After ski installation, adjust stopper against stop bounding then tighten nut to 14 N•m (124 lbf•in). More preload on stop bounding will result in a more aggressive steering. Adjust according to driver preferences.



PARTS INSTALLATION STEERING PAD

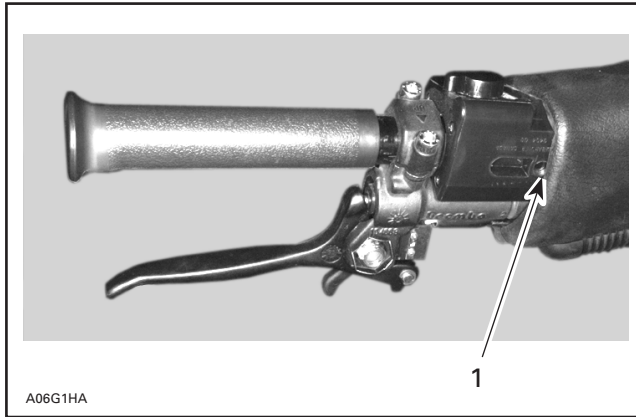


Adjust handlebar temporarily and tighten nuts loosely for now.
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporarily, and adjust for proper fit with console.
Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



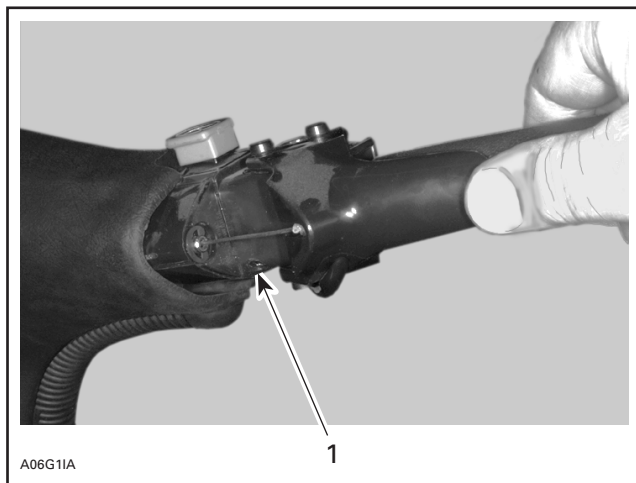
- A06G1GT
1. Torque to 26 N•m (19 lbf•ft)
 2. Equal gap each side (both clamps)
 3. Keyway (2) (P/N 572 0724 00) (section no. 5)
 4. Steering pad (engine compartment)

Adjust then tighten throttle and brake handle housings.



BRAKE HANDLE HOUSING

1. Tighten set screw to $2\text{ N}\cdot\text{m}$ ($18\text{ lbf}\cdot\text{in}$)



THROTTLE HANDLE HOUSING

1. Tighten set screw to $2\text{ N}\cdot\text{m}$ ($18\text{ lbf}\cdot\text{in}$)

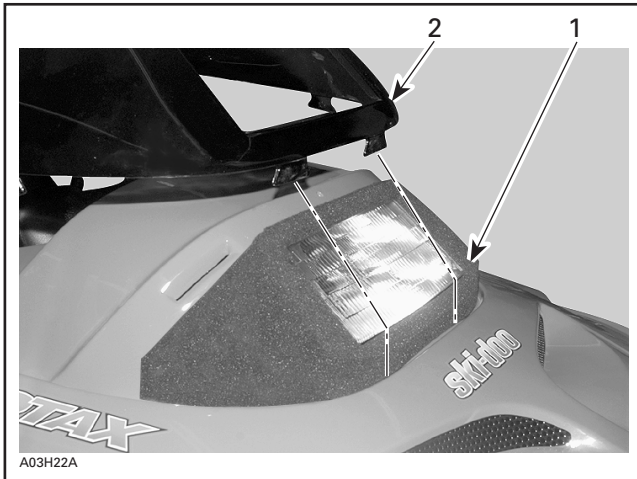


PARTS INSTALLATION WINDSHIELD

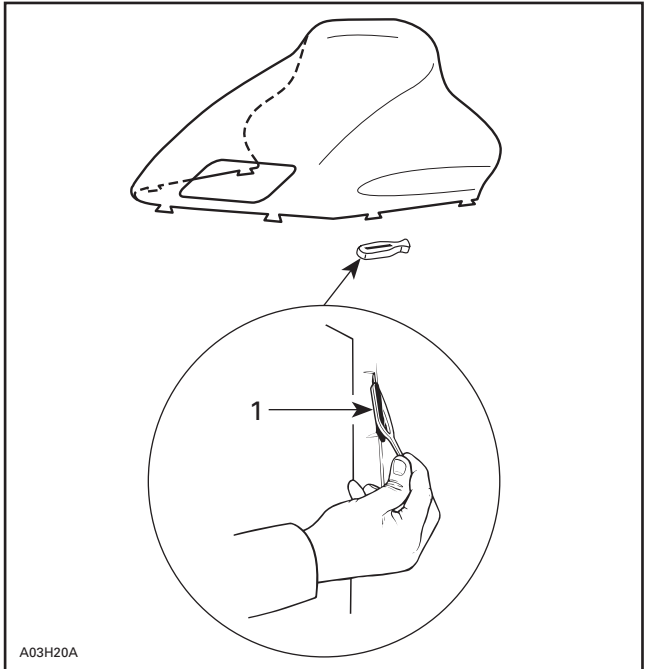


Install windshield on hood.

NOTE: Make sure that protective foam is properly positioned around headlamp before installing windshield.



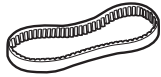
1. Protective foam
2. Install windshield on dashboard



1. Latch (6) (P/N 570 0238 00) (section no. 6)

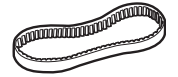


WINDSHIELD INSTALLED ON DASHBOARD



PARTS INSTALLATION

DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.



LIQUIDS

OIL INJECTION PUMP BLEEDING



BREAK-IN PERIOD SUPPLEMENTAL OIL

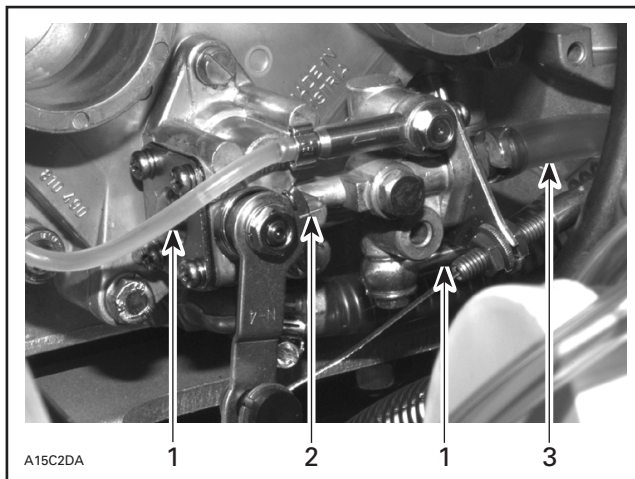
To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX injection oil (P/N 413 8029 00 — 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Remove air silencer and move carburetors aside.

Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

Check also for proper oil level adjustment. Marks must align when throttle lever is activated just enough to take all cable play.

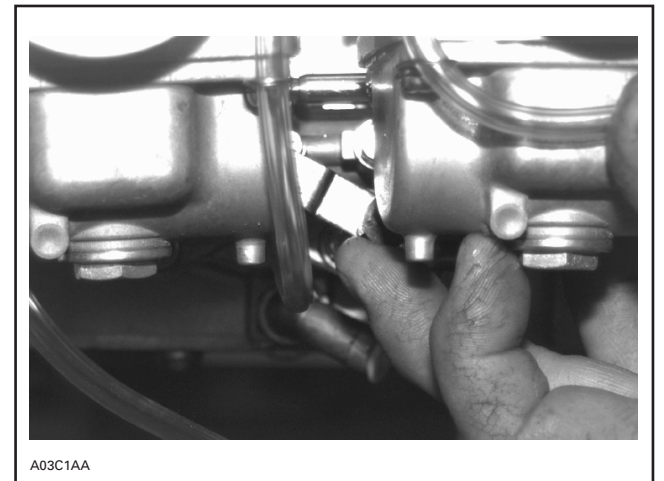


1. Small oil line
2. Marks aligned
3. Main oil line

Reinstall all parts except air silencer.

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

NOTE: If the air silencer has been reinstalled, make a J hook out of mechanical wire to lift the lever.



TYPICAL — ENGINE AT IDLE

Reinstall air silencer.



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid (DOT 4) in reservoir for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



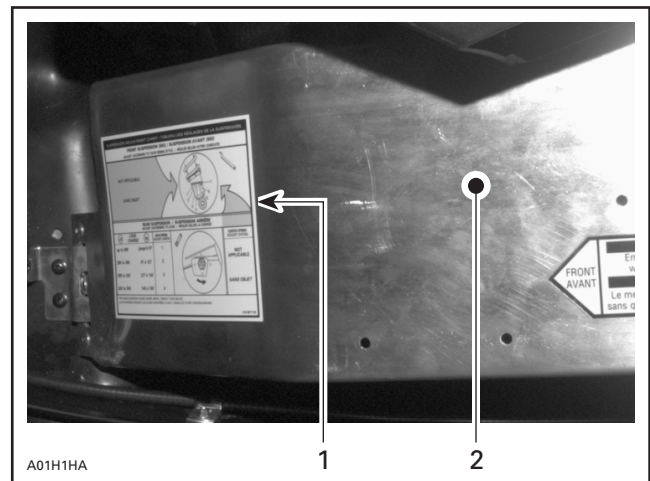
1. Minimum



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See Technical Data section at the end of this bulletin.



ADJUSTMENTS DRIVEN PULLEY








It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).



TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquires should be directed to your distributor service representative.

	MODEL	FORMULA Z 670
	Engine Type	670
	Maximum HP RPM ①	± 100 RPM 7700
	Rotary Valve P/N Opening (BTDC)/ Closing (ATDC)	420 924 500 144° 72°
	Carburetor Type	PTO VM 40-102, MAG VM 40-102
	Main Jet	PTO 290, MAG 290
	Needle Jet	AA-3 (224)
	Pilot Jet	PTO 60, MAG 60
	Needle Identification — Clip Position	7EDY1
	Slide Cut-away	2.5
	Float Adjustment	± 1 mm (in) 18.1 (.71)
	Air Screw Adjustment	± 1/16 turn PTO 2-1/4, MAG 2-1/4
	Idle Speed	± 200 RPM 1700
	Gas Grade/Octane Number	(R + M)/2 Regular Unleaded/87
Gas/Oil Ratio	Oil Injection	
	Ignition Timing BTDC ②	mm (in) 1.93 (.076)
	Trigger Coil Air Gap	mm (in) 0.55 - 1.45 (.022 - .057)
	Gear Ratio	Teeth 26/43
	Engagement Speed	± 100 RPM 3800
	Drive Pulley Calibration Screw Position	3
	Pulley Distance	Z (+ 0, - 1) mm (+ 0, - 1/32) in 16.5 (21/32)
	Offset	X ± 0.4 mm (± 1/64 in) 35.0 (1-3/8)
	Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
	Drive Belt Adjustment	Deflection ± 5 mm (in) 32 (1-1/4)
	Force ③	kg (lbf) 11.34 (25)
	Driven Pulley Preload	± 0.7 kg (± 1.5 lbf) 7.0 (15.43)
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation
Track Adjustment	Deflection mm (in) 35 to 40 (1-3/8 to 1-9/16) with a 7.3 kg (16 lb) downward pull	

① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center

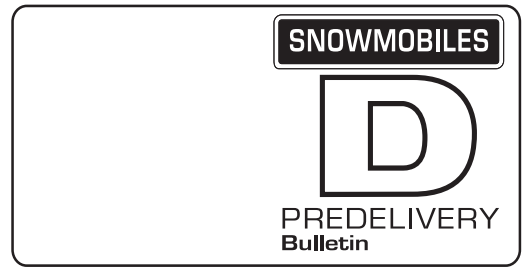
ATDC: After Top Dead Center

PTO: Power Take Off Side

MAG: Magneto Side

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **98-11**

Date: September 15, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1998	Canada and United States: Formula SL	1224, 1225	ALL

This bulletin must be used in conjunction with the check list enclosed in *Operator's Guide* bag. Make sure that *Predelivery Check List* is completed and signed.

◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

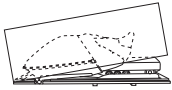
NOTE: The Information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

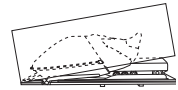
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further informations or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections.

Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and *video*.

There is a tag attached to the ignition key, only the customer must removed it. This label will remind the customer to ask the dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

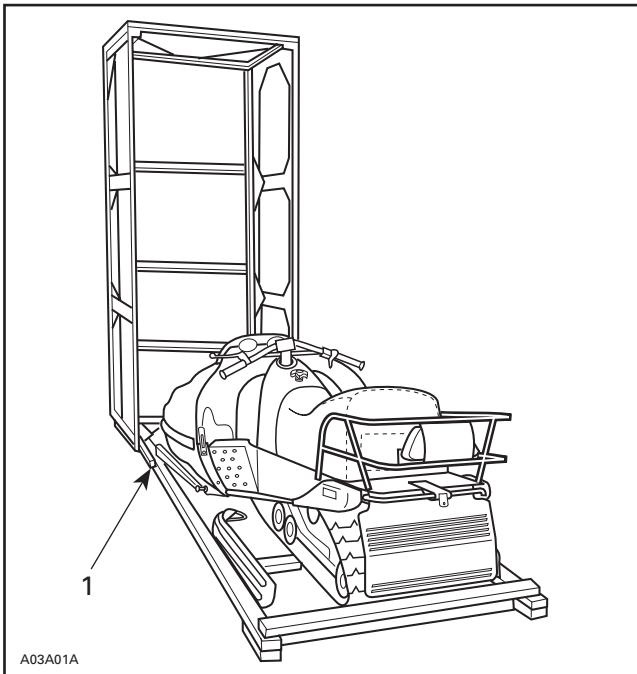
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. locking tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Unscrew all screws retaining cover to crate base. Tip cover over front of vehicle. There is a notch in crate base at front.

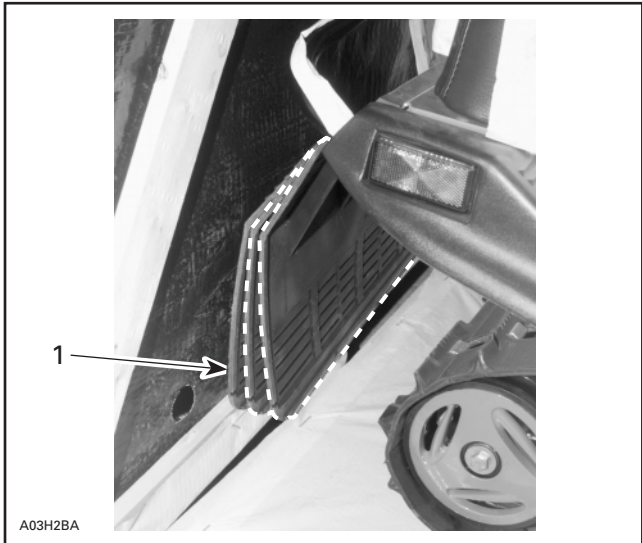


TYPICAL

1. Notch

Lift cover slowly to avoid damaging the snow guard or taillight.

NOTE: On some models, snow guard may interfere with crate cover, as shown in the following photo. Push on snow guard when lifting cover.



Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

▼ CAUTION

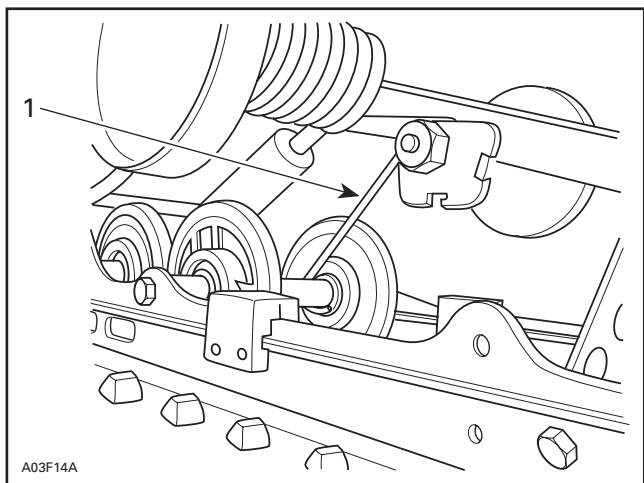
Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

Apply pressure on rear suspension and remove hook from rear portion of suspension as illustrated.



A03F14A

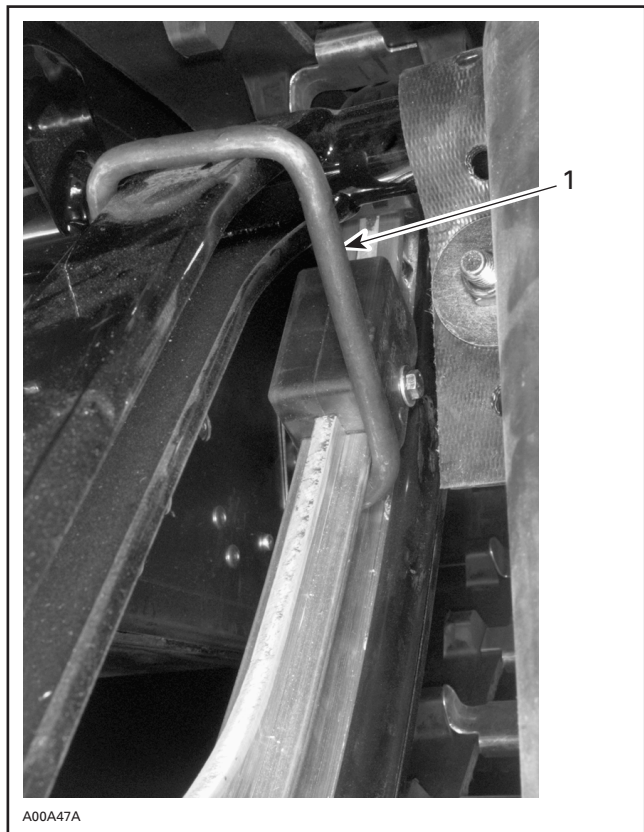
1. Remove hook

PREDELIVERY KIT P/N	MODELS
580 6388 00	FORMULA SL

◆ WARNING

Shipping hooks must be removed to have snowmobile suspension operational.

FRONT HOOK REMOVAL



A00A47A

TYPICAL

1. Hook to be removed

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



A00A48A

EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.



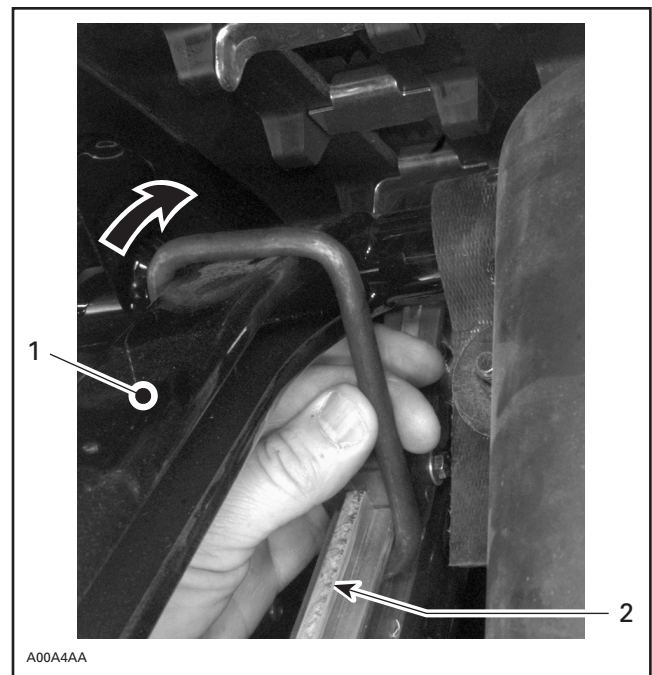
A00A49A

TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

WARNING

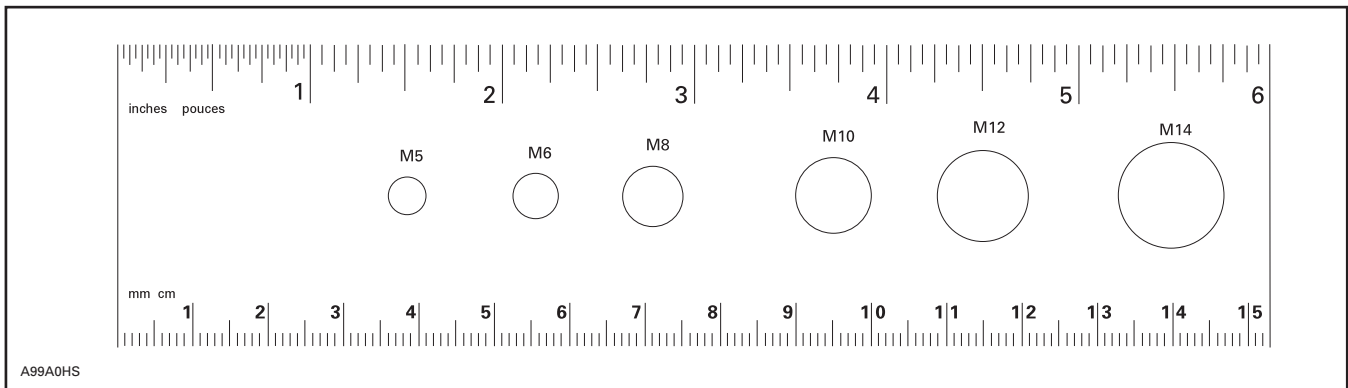
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



TYPICAL

- 1. Front arm
- 2. Runner

NOTE: This rule can be helpful to identify fastener length or size.

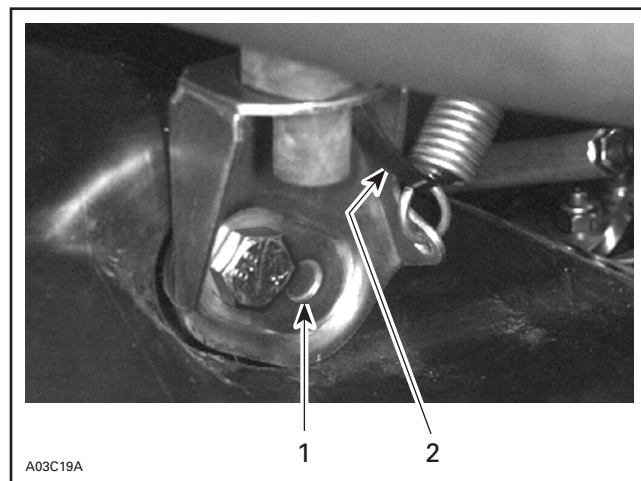




PARTS INSTALLATION FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.



1. Lug in recess
2. Locking tie

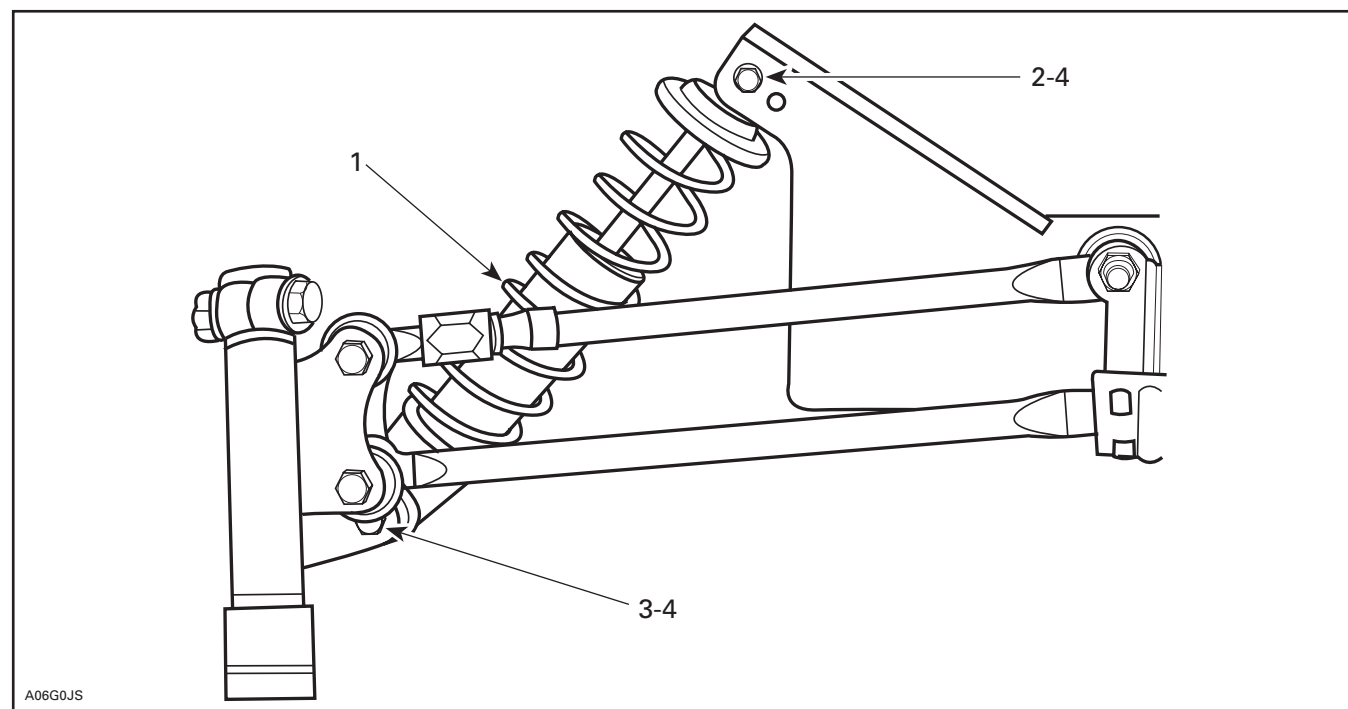
Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring, if equipped, at bottom.

NOTE: Position screw heads toward front.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.



TYPICAL — RIGHT SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 0060 65) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 0055 65)(on suspension)
4. Flanged elastic nut (4) (P/N 228 5010 45) (section no. 1 or 5) torque to 48 N•m (35 lbf•ft)



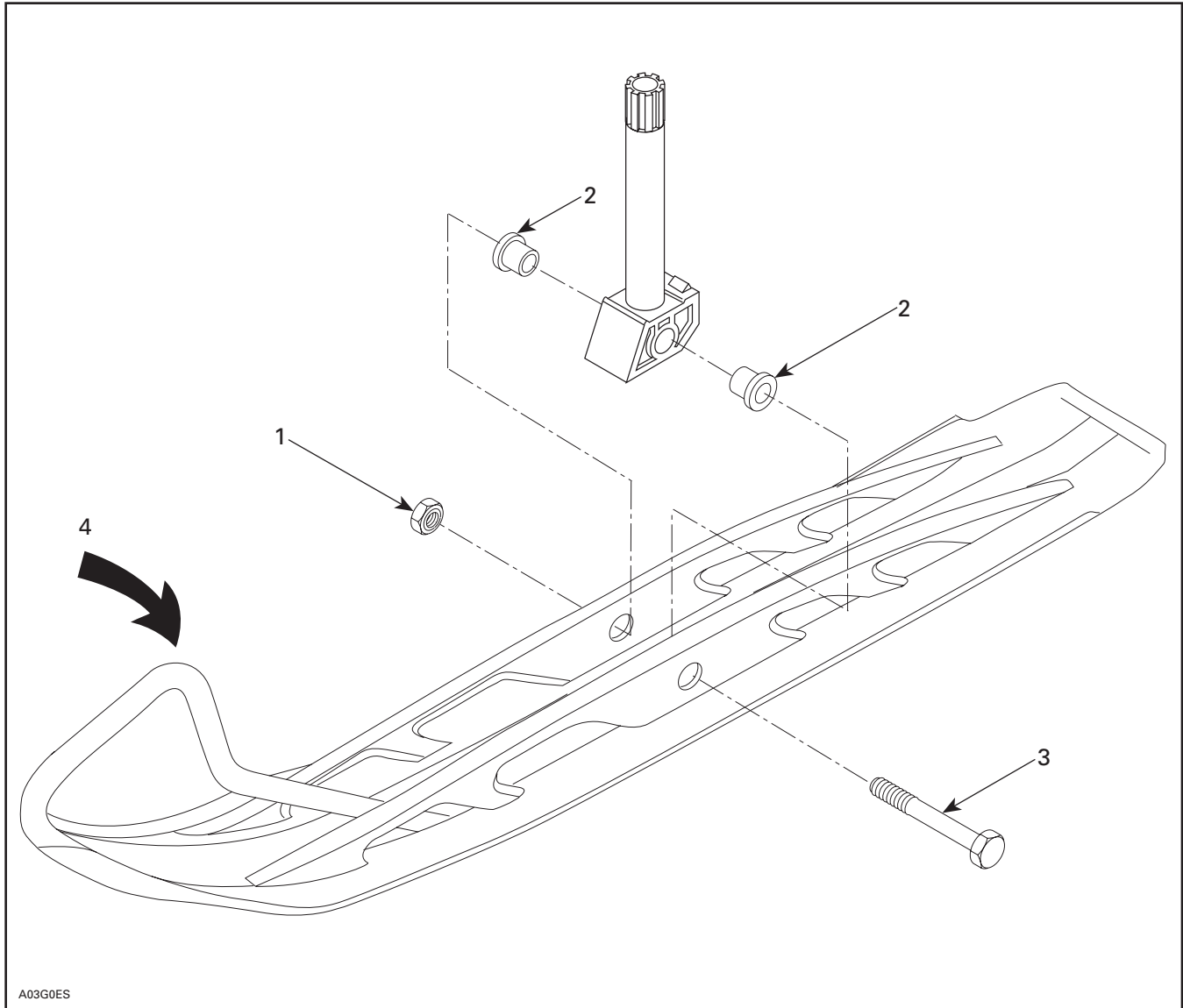
PARTS INSTALLATION SKIS



Install skis on vehicle.

NOTE: Make sure that slider cushions are still in ski leg.

Replace vehicle on ground.



TYPICAL — LEFT SIDE SHOWN

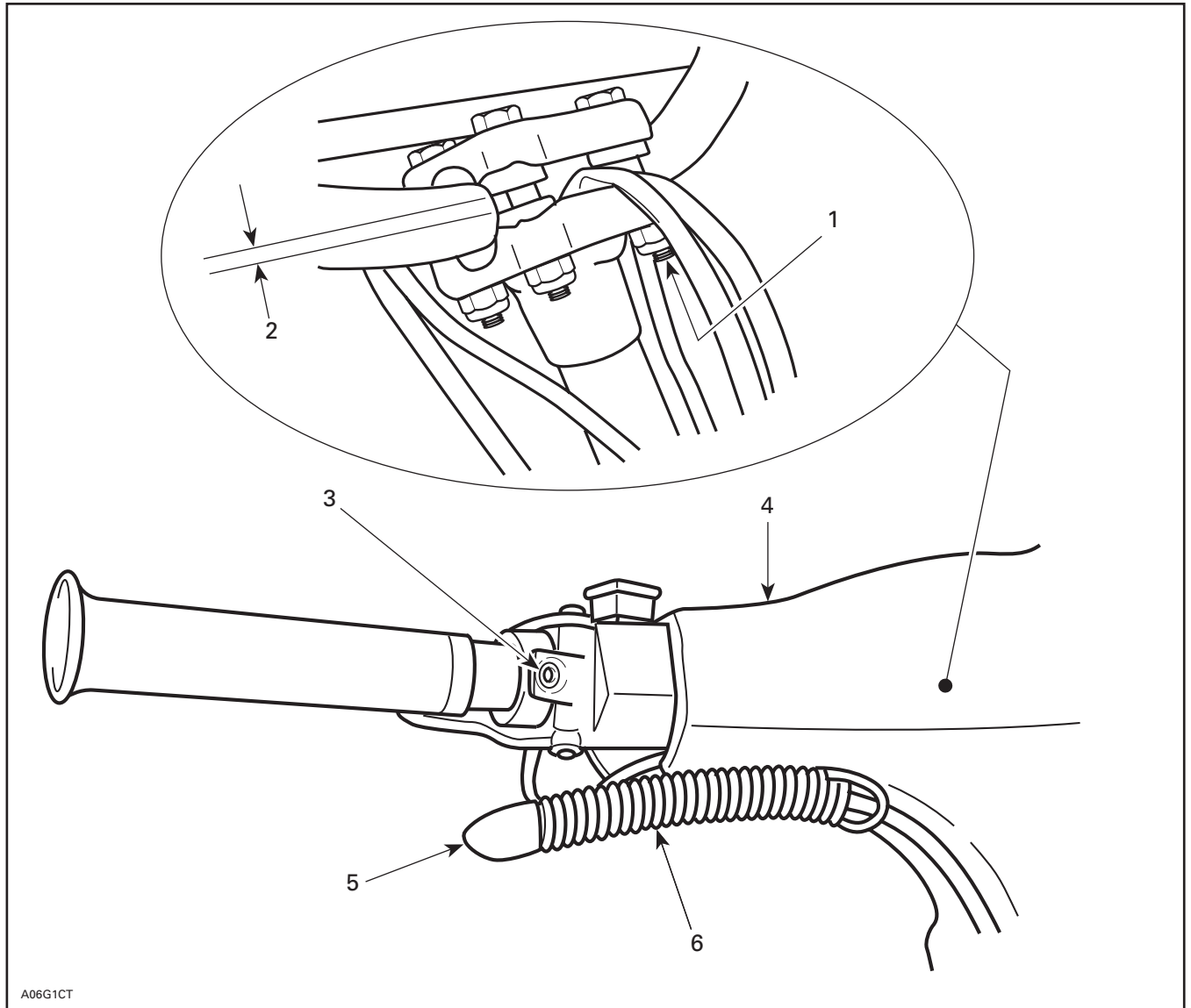
1. Nut M12 x 1.75 (2) (section no. 1 or 3) torque to 40 N•m (30 lbf•ft)
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD



Adjust handlebar temporarily and tighten nuts loosely for now.
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporarily, and adjust for proper fit with console.
Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



A06G1CT

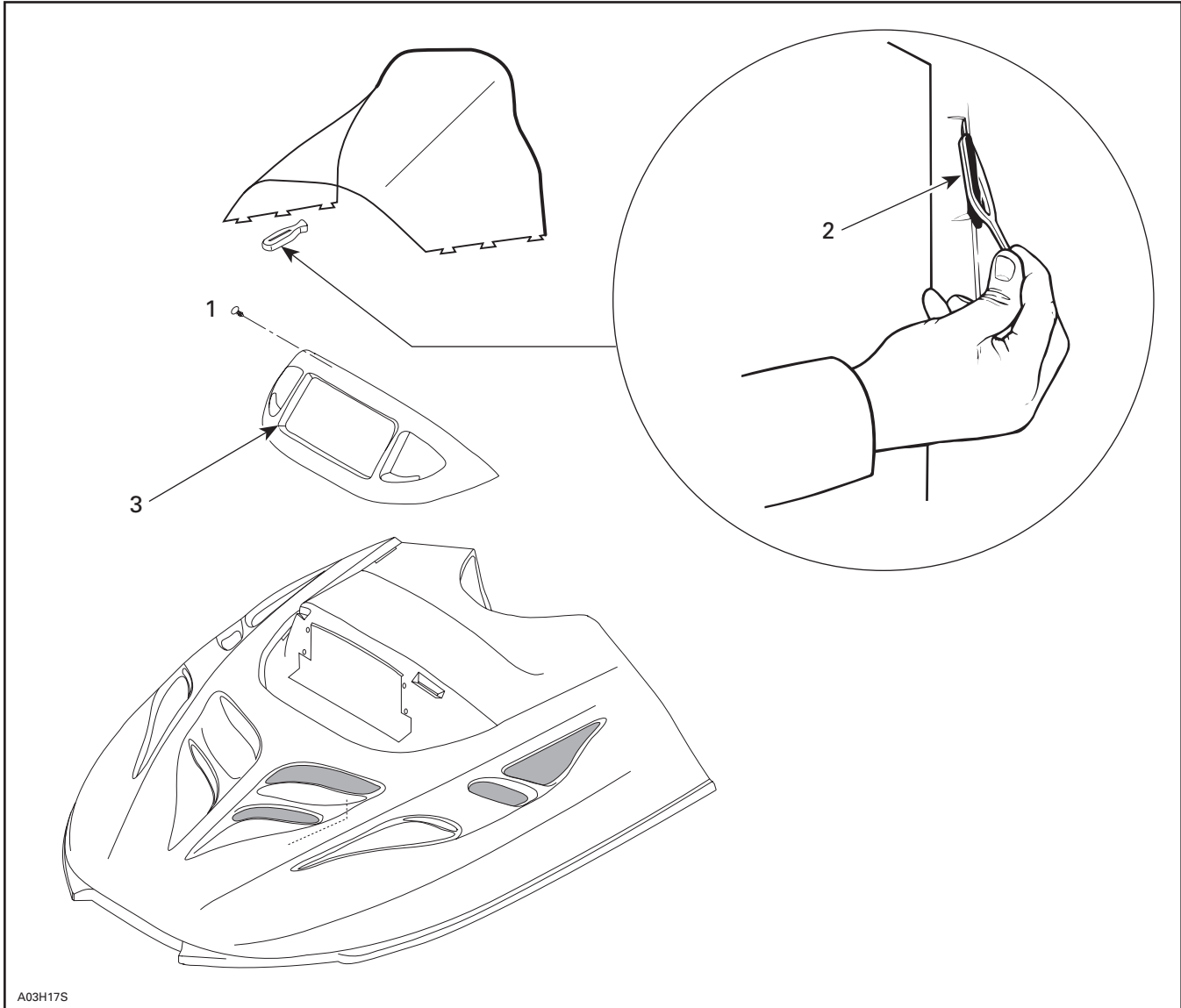
1. Torque to 26 N•m (19 lbf•ft)
2. Equal gap each side
3. Loosen Allen screw
4. Steering pad (P/N 572 0840 00 and 572 0841 00) (engine compartment)
5. Use liquid soap to ease installation
6. Keyway (2) (P/N 572 0724 00) (section no. 3)



PARTS INSTALLATION WINDSHIELD



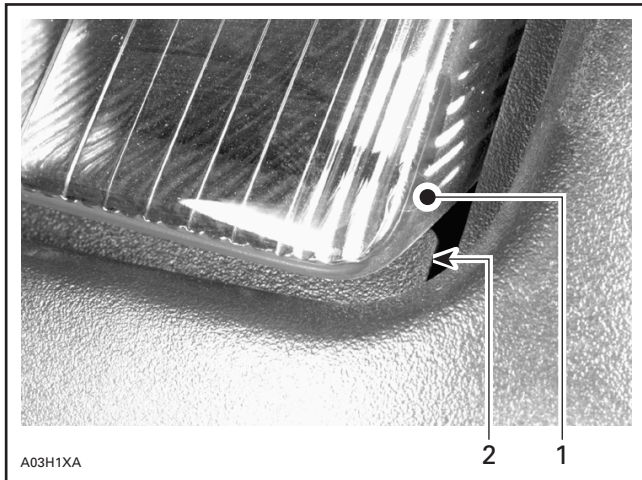
Install windshield on dashboard.



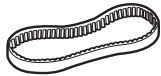
A03H17S

1. Dart (1) (P/N 414 6443 00) (section no. 2 or 5)
2. Latch (6) (P/N 570 0238 00) (section no. 4 or 6)
3. Temporarily remove headlamp molding for windshield installation

When reinstalling headlamp molding make sure lip is behind headlamp.

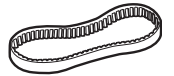


1. Headlamp
2. Lip of headlamp molding behind headlamp



PARTS INSTALLATION

DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.



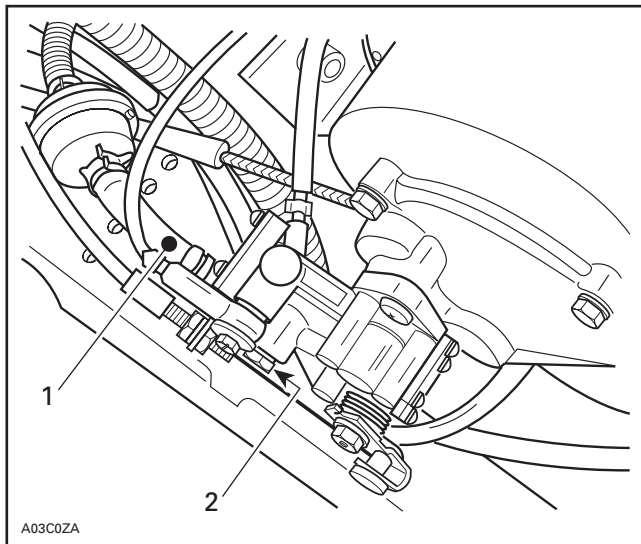
LIQUIDS

OIL INJECTION PUMP BLEEDING



To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER Injection Oil (P/N 496 0133 00) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

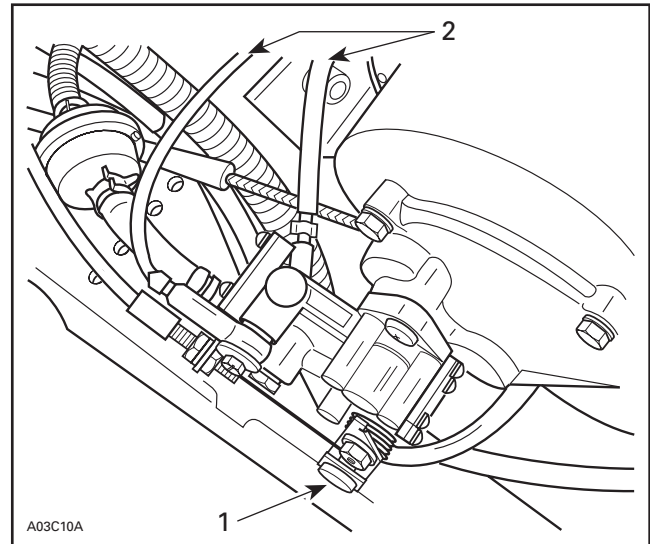
Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.



TYPICAL

1. Main oil line
2. Bleeder screw

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.



TYPICAL

1. Fully open position
2. Small lines



LIQUIDS

BRAKE FLUID LEVEL



Check brake fluid in reservoir for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

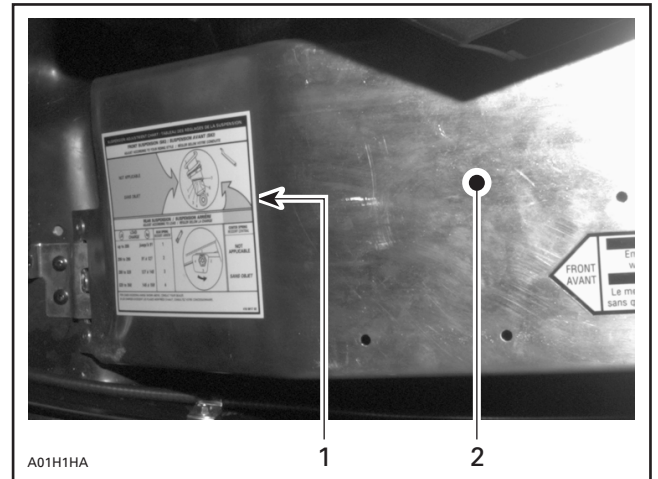
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENT SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENT TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See Technical Data section at the end of this bulletin.



ADJUSTMENT DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in Technical Data are applicable after break-in period (about 10 hours of use).








TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1997 model.

	MODEL	FORMULA SL			
	Engine Type	503			
	Maximum HP RPM ①	± 100 RPM	7000	•	
	Rotary Valve	P/N Opening(BTDC)/ Closing (ATDC)	N.A.		
	Carburetor Type	PTO VM 34- 513	MAG VM 34- 514	•	
	Main Jet	PTO 180 MAG 170			
	Needle Jet	P-0 (159)			
	Pilot Jet	40			
	Needle Identification — Clip Position	6DH2			
	Slide Cut-away	2.5			
	Float Adjustment	± 1 mm (± .040 in)	23.9 (.94)		
	Air Screw Adjustment	± 1/32 turn	1- 7/8		•
	Idle Speed RPM	± 200 RPM	1650		
	Gas Grade/Octane Number	(R + M)/2	Regular Unleaded/87		
	Gas/Oil Ratio	Oil Injection			
	Ignition Timing BTDC ②	mm (in)	1.66 (.065)		
	Trigger Coil Air Gap	mm (in)	0.45 - 0.55 (.018 -.022)		
	Gear Ratio	teeth	22/44		
	Engagement Speed	± 100 RPM	3300		•
	Drive Pulley Calibration Screw Position			3	
	Pulley Distance	Z	(+ 0, - 1) mm (+ 0, - 1/32 in)	16.5 (21/32)	
	Offset	X	± 0.4 mm (± 1/64 in)	35.0 (1-3/8)	
		Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)		
	Drive Belt Adjustment	Deflection	mm (in)	32 (1-1/4)	
		Force ③	kg (lbf)	11.34 (25)	
	Driven Pulley Preload	kg (lbf)		4.8 (10.582)	
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation			
Track Adjustment	Deflection	mm (in)	40 to 55 (1-9/16 to 2-5/32) Deflection with a 7.3 kg (16 lb) downward pull		

- ① Engine speed at which maximum power is achieved.
- ② At 6000 RPM (engine cold) with headlamp turned on.
- ③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 MAG: Magneto side
 N.A.: Not applicable

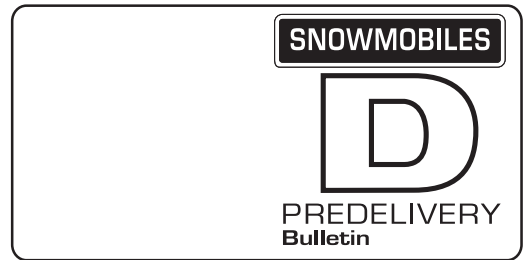
Please route to :

Init.

Service

Sales

Parts



No. **98-12**

Date: September 19, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1998	Canada: Grand Touring SE Grand Touring 700	1210 1211	ALL
1998	United States: Grand Touring SE Grand Touring 700	1319 1318	ALL
1998	Sweden: Grand Touring SE Grand Touring 700	1217 1212	ALL

This bulletin must be used in conjunction with the *Predelivery Check List* enclosed in *Operator's Guide* bag. Make sure that *Predelivery Check List* is completed and signed.

◆ WARNING

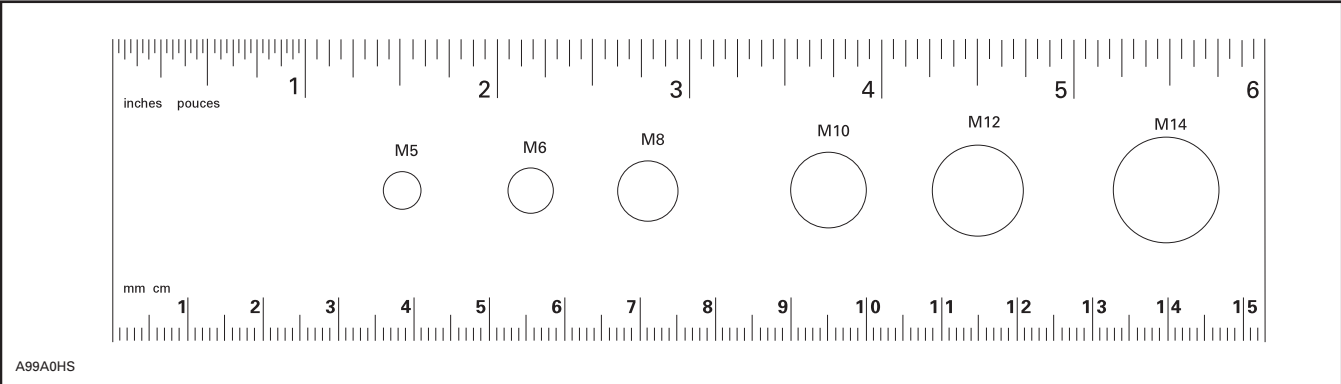
To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.

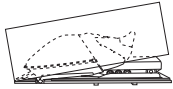
NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and *Video*.

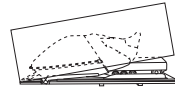
There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.

NOTE: This ruler can be helpful to identify fastener length or size.





UNCRATING



PREDELIVERY KIT P/N	MODEL
580 6609 00	GRAND TOURING SE GRAND TOURING 700

◆ WARNING

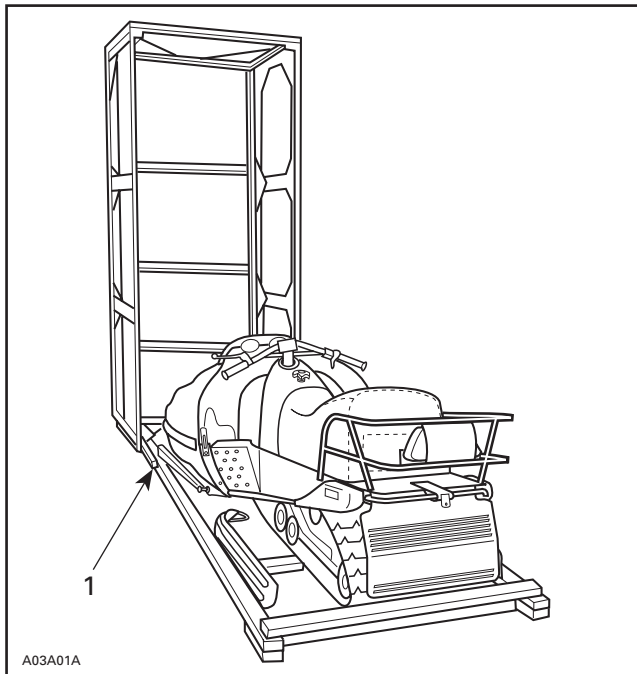
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties and ropes retaining windshield.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove parts to be installed and predelivery kit from box.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.



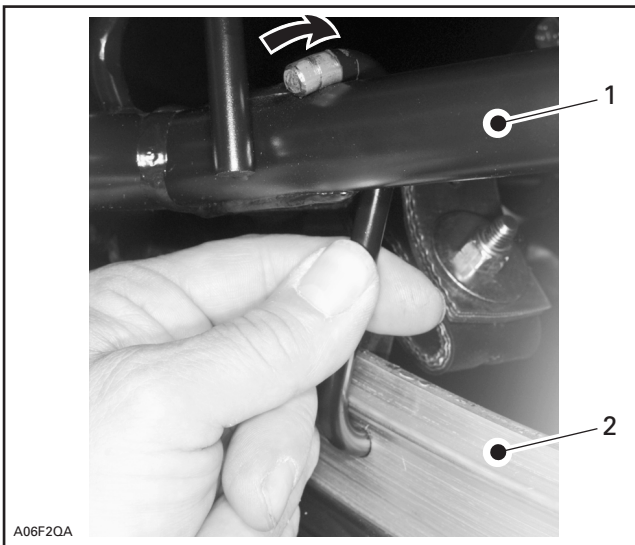
A00A49A

TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

Before removing hook always verify that vehicle is properly supported and that parking brake is applied.

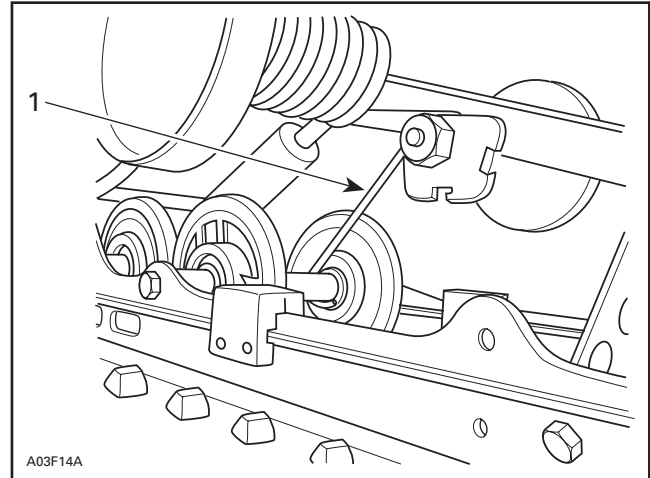


A06F20A

TYPICAL — REMOVE HOOK

- 1. Front arm
- 2. Runner

REAR HOOK REMOVAL



A03F14A

- 1. Hook to be removed

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



A01F2FA

- 1. Remove hook on the rear portion of the suspension

▼ CAUTION

Both hooks must be removed to have snowmobile suspension operational.

DIGITAL ENCODED SECURITY SYSTEM (DESS)

The DESS is a deterrent against theft. **Once programmed**, the tether cord provided with snowmobile is the only one that allows engine to turn more than 2500 RPM. If a wrong tether cord is installed the engine will start but will not reach engagement speed required to move vehicle.

The snowmobile MPEM can be programmed to allow the use of up to 8 tether cords. When 8 tether cords have been programmed all cords must be deleted from MPEM memory before others can be added.

Each tether cord has a small magnet as well as a small micro chip molded into the rubber cap. The magnet will close a primary circuit in the electrical system. This completes the circuit and allows the MPEM to read the electronic number in the tether cord when engine is started.

NOTE: We do not program the tether cord! We record the tether cord electronic number into the MPEM memory.

The MPEM also handles data input such as; customer name, delivery date and it records the hours of operation.

After engine is started 2 beeps confirm that the MPEM has recognized the tether cord (if applicable). If the pilot lamp does not blink, all is O.K. The vehicle can then be driven normally.

A beep every 3 seconds (if applicable) and DESS pilot lamp blinking at the same rate means that a bad connection has been detected. Vehicle can not be driven.

To program tether cord refer to *SKI-DOO MPEM Programmer Guide* (P/N 480 1436 01).

NOTE: All snowmobiles must be started before programming tether cord. Engine will automatically stop on snowmobiles equipped with a battery. Engine will keep running on snowmobiles without battery.



PARTS INSTALLATION FRONT SUSPENSION



All Models

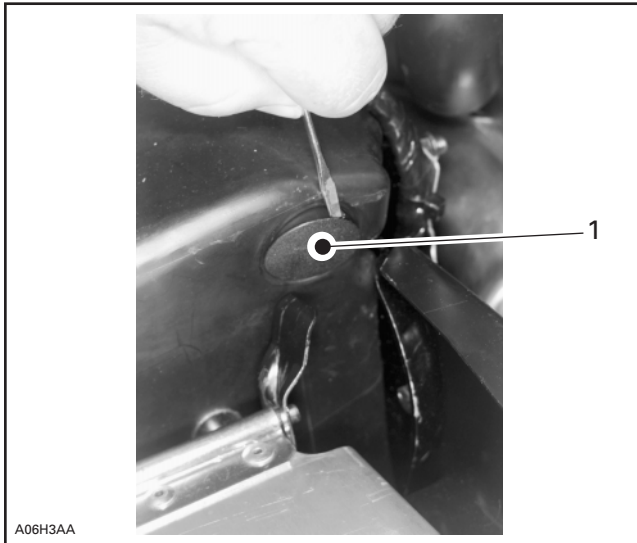
Lift front of vehicle and block safely.

From inside engine compartment, remove caps as shown in the next photo.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

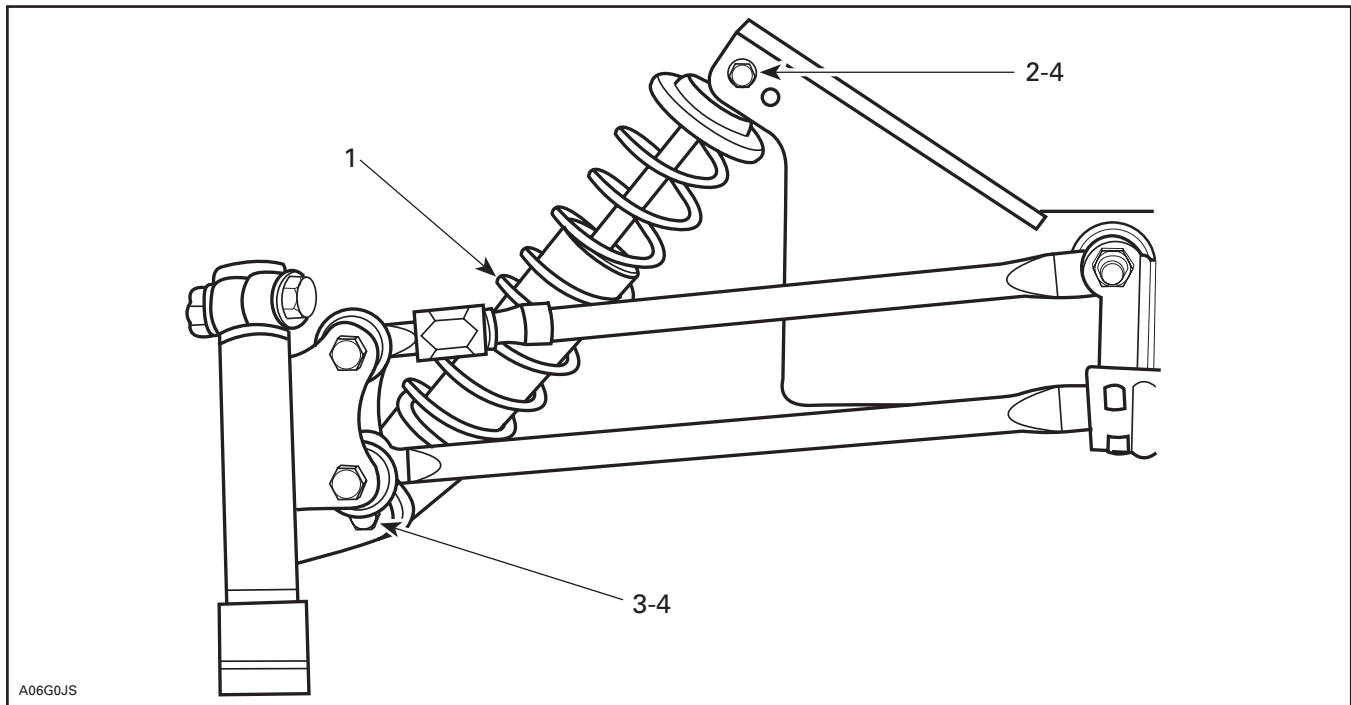
Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position screw heads toward front.



INSIDE ENGINE COMPARTMENT

1. Using flat screwdriver, remove cap

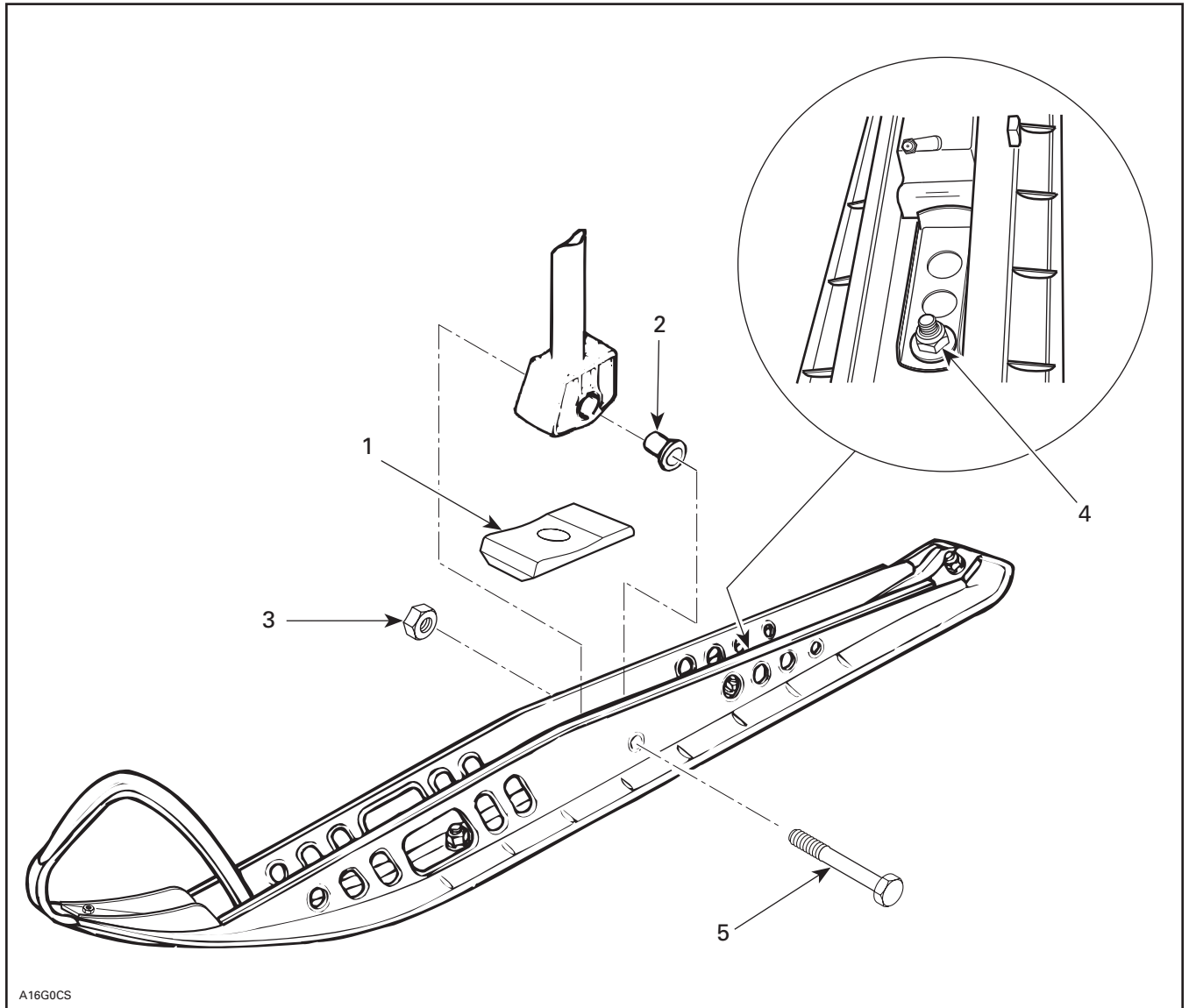


TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (box)
2. Screw M10 x 1.5 x 60 (2) (P/N 222 0060 65) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 0055 65) (on suspension)
4. Nut M10 x 1.5 (2) (P/N 228 5010 45) (section no. 4). Torque to 48 N•m (35 lbf•ft)



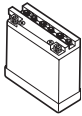
PARTS INSTALLATION SKIS



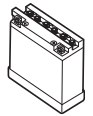
LEFT SIDE SHOWN

1. Stop bounding (2) (P/N 570 0468 00) (section no. 4)
2. Slider cushion (4) (ski leg)
3. Nut M12 (2) (section no. 4). Torque to 40 N•m (30 lbf•ft)
4. Loosen then adjust against stop bounding. Torque to 14 N•m (124 lbf•in)
5. Bolt M12 (2) (ski leg)

After ski installation, adjust stopper against stop bounding then tighten nut to 14 N•m (124 lbf•in). More pre-load on stop bounding will result in a more aggressive steering. Adjust according to driver's preferences.



PARTS INSTALLATION BATTERY



During vehicle preparation, the battery can be activated as described in *Shop Manual*.

▼ CAUTION

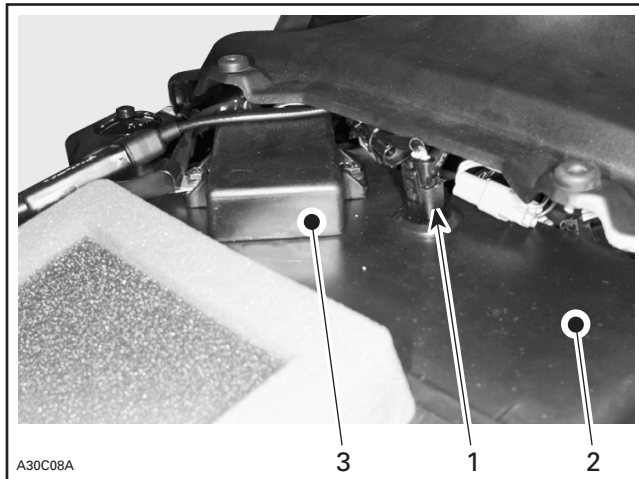
Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage. Do not charge an installed battery.

BATTERY REMOVAL

Remove belt guard.

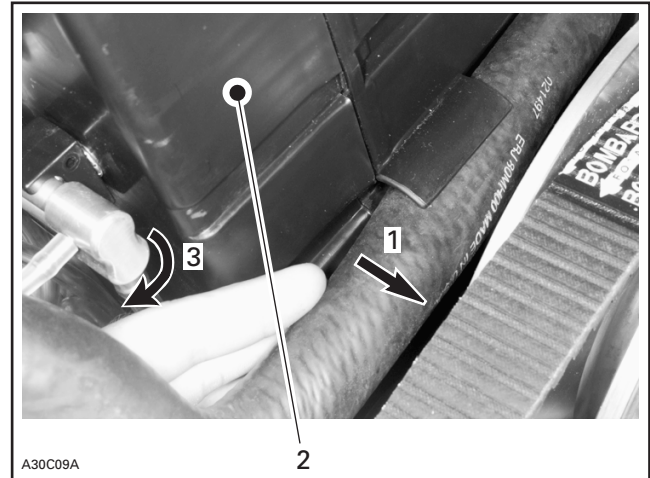
Air Intake Silencer Removal

Unplug air temperature sensor connector from air intake silencer and remove DPM module, as shown in the next photo.



1. Air temperature sensor
2. Air intake silencer
3. DPM module

Detach hose from air intake silencer, as shown in the next photo. Then twist DPM manifold and detach from air intake silencer.

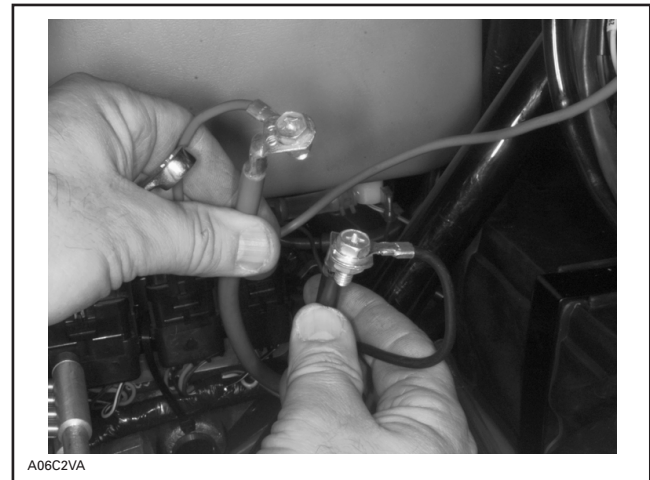


1. Detach hose
2. Air intake silencer
3. Detach DPM manifold

Remove air intake silencer.

Unfasten battery retaining strips.

Open strips and withdraw battery from vehicle.



BATTERY INSTALLATION

Position battery onto battery support on vehicle.

NOTE: To ease battery insertion, use soap with water.

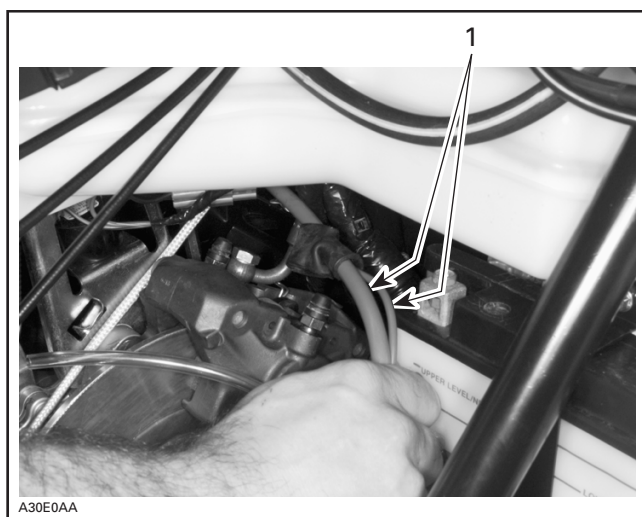
Ensure that vent tube is properly connected to vehicle fitting on front frame.

Install vent tube on battery.

NOTE: Ensure that vent tube is not kinked or blocked. Cut vent tube if necessary.

Red Positive Cable and Wire

Move red positive cable and wire from right side of engine compartment to battery positive post, as shown in the next photo.



1. Move red positive cable and wire

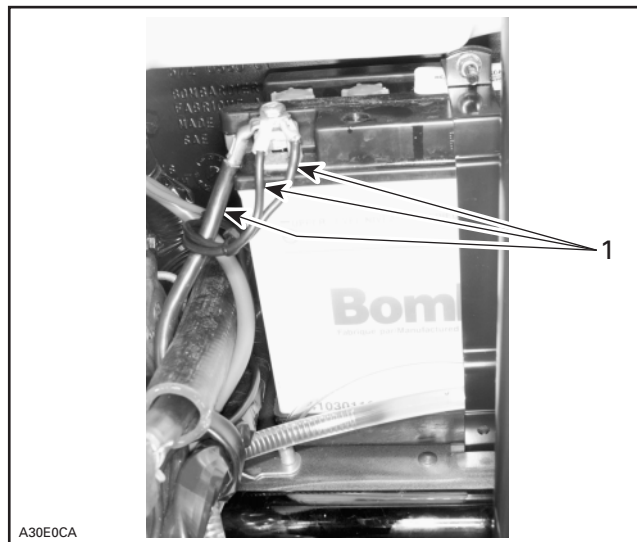
Connect RED positive cable and RED wire to positive battery terminal. Refer to the following photo for proper cable positioning.



RED POSITIVE (+) BATTERY CABLE AND WIRE POSITIONING

Black Negative Cable and Wires

Connect BLACK negative cable and BLACK wires LAST. Refer to the following photo for proper cable positioning.



1. Black negative (-) battery cable and wires positioning

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.

Apply silicone dielectric grease (P/N 413 7017 00) on battery posts and connectors.

Ensure vent tube is properly installed on battery elbow.

Close and fasten retaining strips and ensure that RED positive battery cable is routed into front retaining strip recess.

Reinstall air intake silencer with hose, DPM manifold, DPM module and air temperature sensor.





PARTS INSTALLATION STEERING PAD

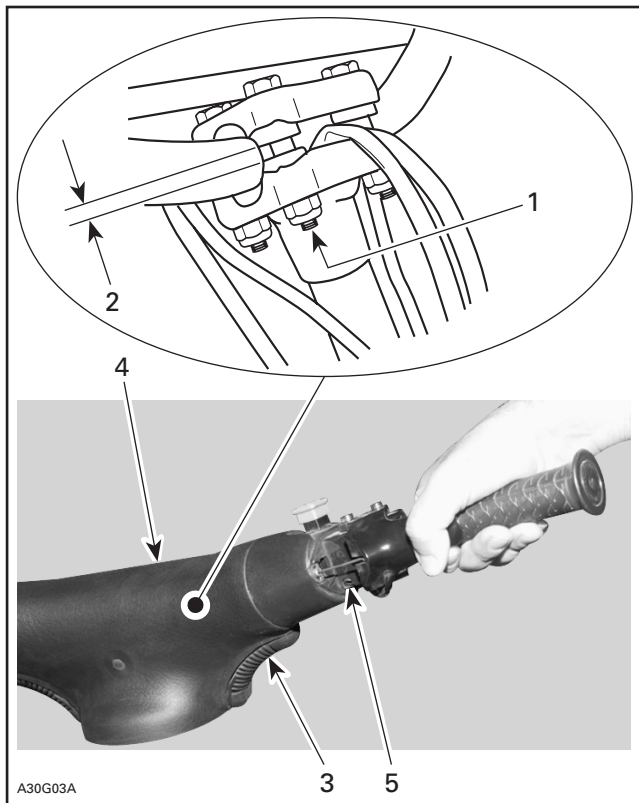


Adjust handlebar temporarily and tighten nuts loosely for now.

Install steering pad temporarily, and adjust for proper fit with console.

Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).

Reinstall steering pad, adjust and tighten throttle and brake handle housings (if needed).



1. Torque to 26 N•m (19 lbf•ft)
2. Equal gap each side (both clamps)
3. Keyway (2) (section no. 3)
4. Steering pad (box)
5. Loosen Allen screw (if needed)



PARTS INSTALLATION WINDSHIELD

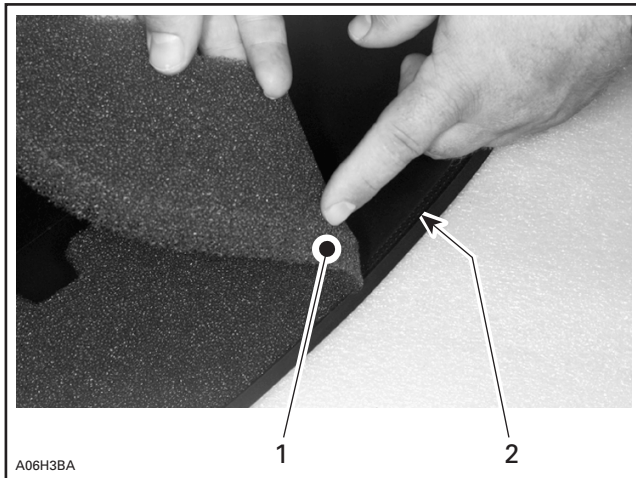


NOTE: Air deflector with foam must be installed before windshield.

AIR DEFLECTOR

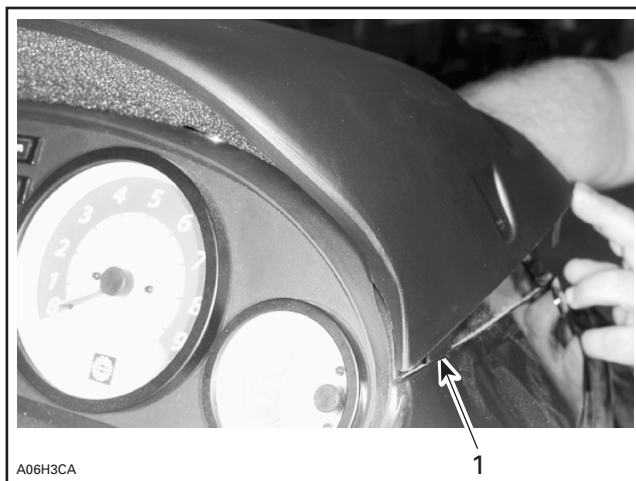
Preparation

Install air intake foam onto air deflector. Beveled surface must be facing Velcro, as shown in the next photo.



1. Beveled surface on air intake foam
2. Velcro on air deflector

Position air intake deflector rear tabs (left and right side) into hood slots, as shown in the next photo.



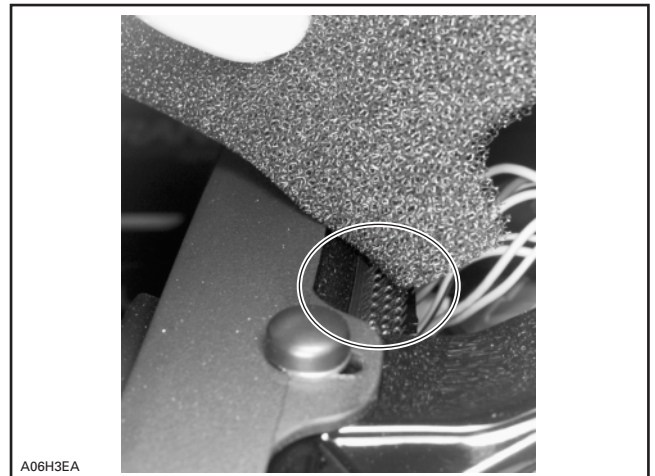
1. Air intake deflector rear tab (right side)

Holding air intake deflector, insert one hand underneath deflector, as shown in the next photo. Attach air intake foam to hood Velcro.



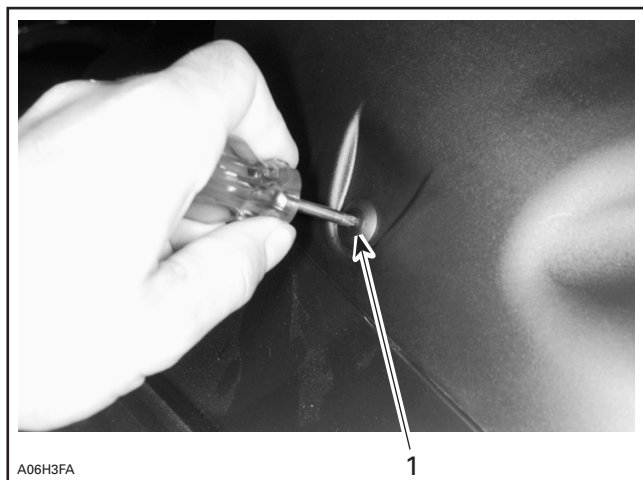
FROM UNDERNEATH DEFLECTOR, ATTACH FOAM TO VELCRO

NOTE: Ensure that air intake foam is properly attached to Velcro. See next photo.



AIR INTAKE DEFLECTOR HAS BEEN REMOVED TO SHOW WHERE AND HOW TO ATTACH AIR INTAKE FOAM TO HOOD

Secure air intake deflector using a dart, as shown in the next photo.

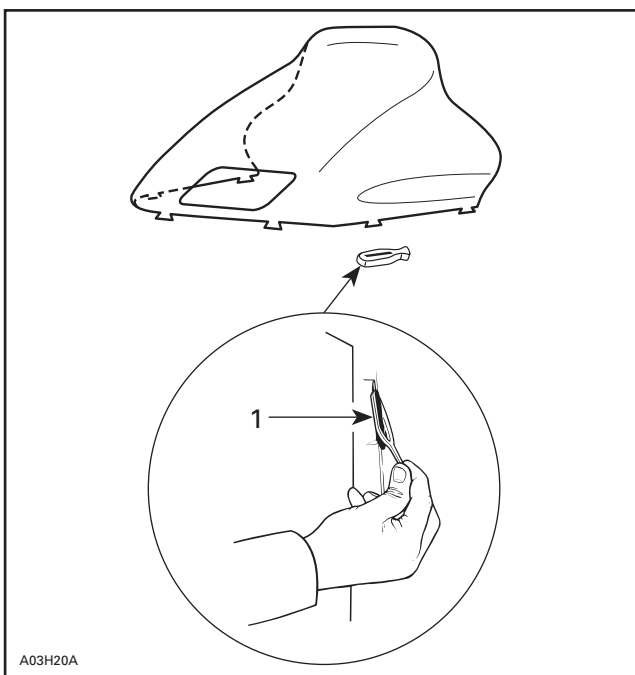


1. Dart (section no. 6)

Install windshield on dashboard and secure with latches.



WINDSHIELD INSTALLED ON DASHBOARD



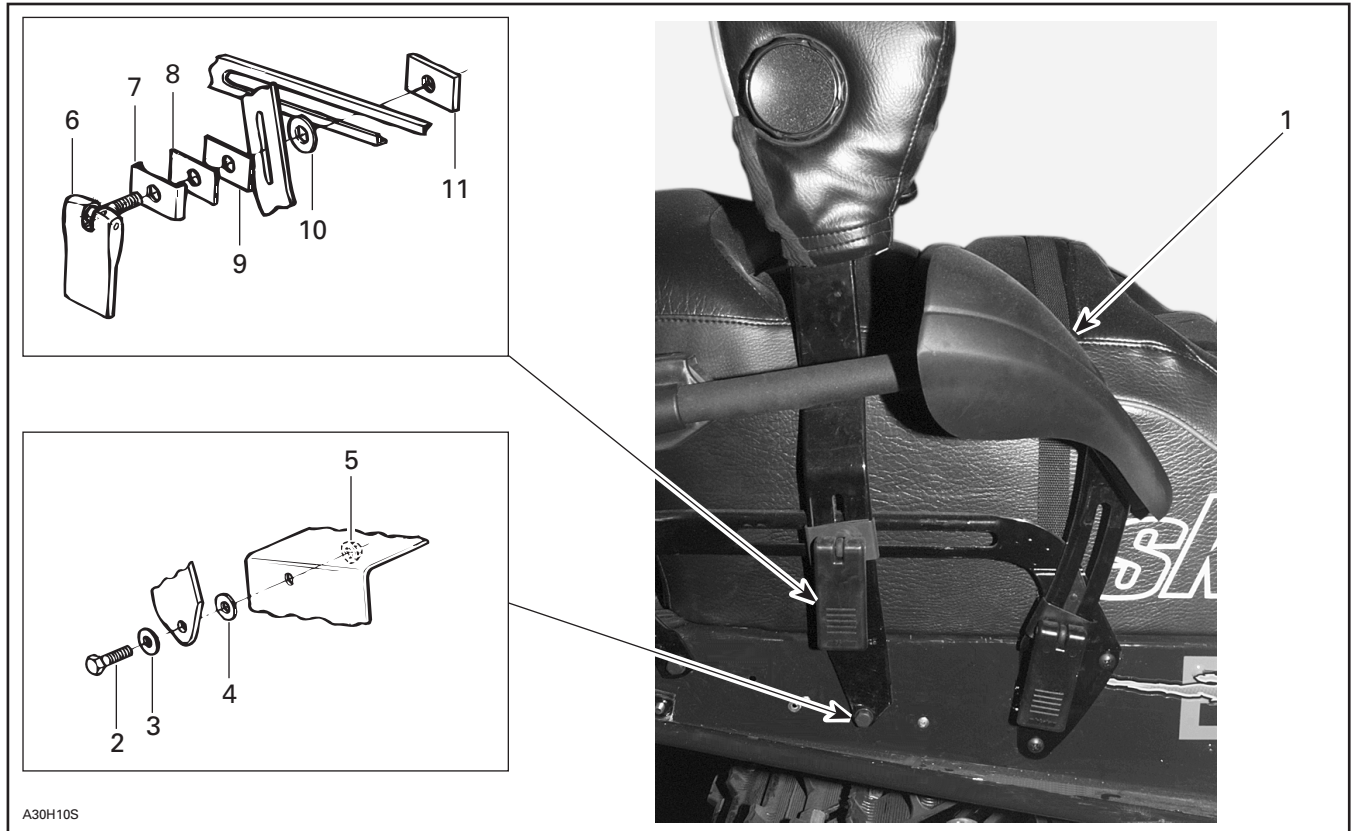
Latch (6) (P/N 570 0238 00) (section no. 6)



PARTS INSTALLATION BACKREST



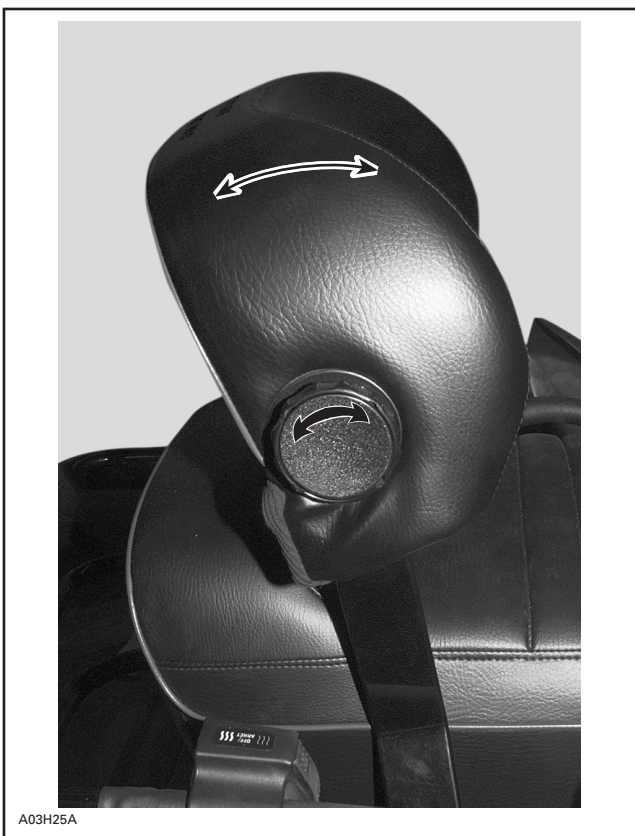
Secure backrest frame on tunnel then install lever assembly onto luggage rack rail.
Install hand protectors with rivets onto luggage rack handle.



A30H10S

1. Handle protector (2). Secure with rivets
2. Screw (2) (P/N 732 6011 75) (section no. 6)
3. Washer (2) (P/N 732 9000 30) (section no. 6)
4. Plastic washer (2) (P/N 414 8196 00) (section no. 6)
5. Elastic nut (2) (P/N 228 5810 45) (section no. 6). Torque to 8 N•m (73 lbf•in)
6. Lever assembly (2) (P/N 580 6110 00) (section no. 2)
7. Guide (2) (P/N 517 2573 00) (section no. 2)
8. Rubber shim (2) (P/N 570 0274 00) (section no. 6)
9. Spacer (2) (P/N 517 2513 00) (section no. 2)
10. Flanged washer (2) (P/N 414 8195 00) (section no. 6)
11. Threaded plate (2) (P/N 517 2500 00) (section no. 6)

Turn adjustment knob left or right to adjust back-rest cushion position.



PARTS INSTALLATION

DRIVE BELT

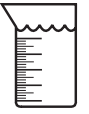


Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.



LIQUIDS

OIL INJECTION PUMP BLEEDING



BREAK-IN PERIOD

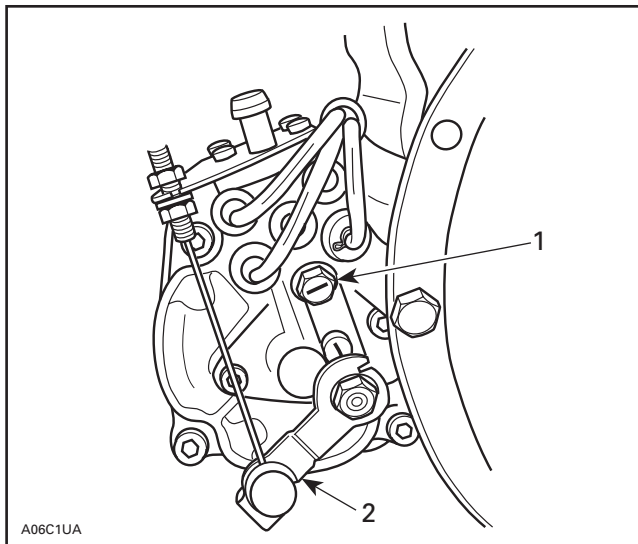
Supplemental Oil

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 8029 00 — 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

Bleeding Procedure

NOTE: To ease access to oil pump, remove muffler.

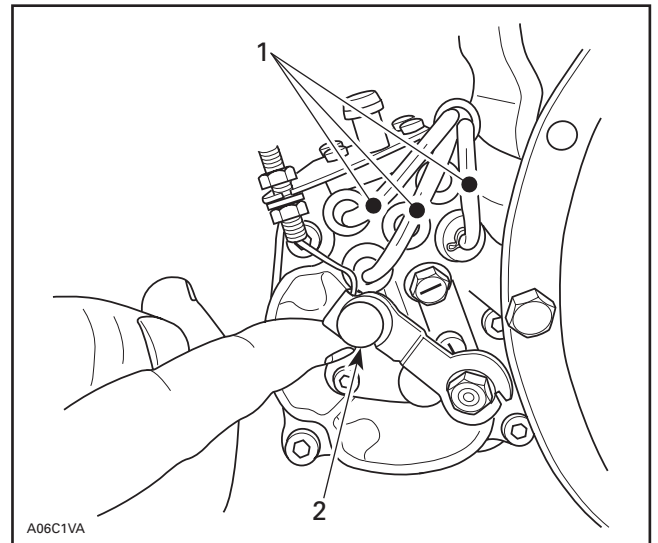
Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.



1. Bleeder screw
2. Oil pump lever

Bleed the small oil lines between pump and engine crankcase by running engine at idle while holding the pump lever in fully open position.

NOTE: To ease pump lever holding, make a J hook out of mechanical wire to lift the lever.



1. Small oil line
2. Engine at idle (fully open position)



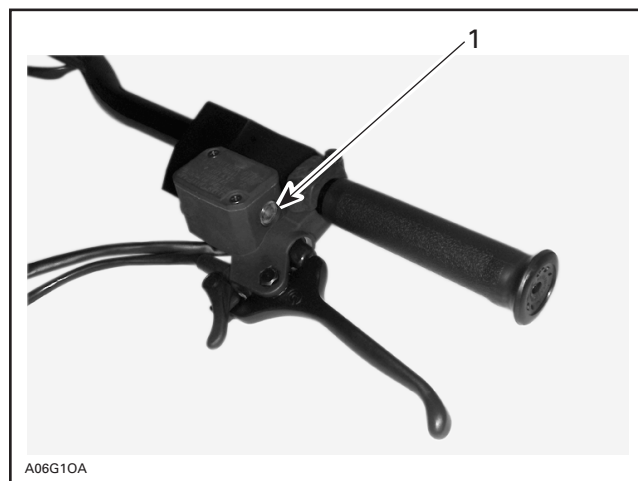
LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir for proper level. Add fluid (DOT) as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



A06G10A

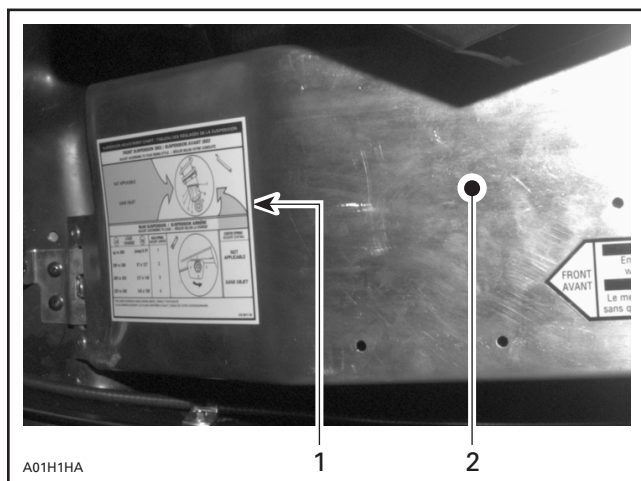
1. Minimum



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



A01H1HA

1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).








TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1997 model.

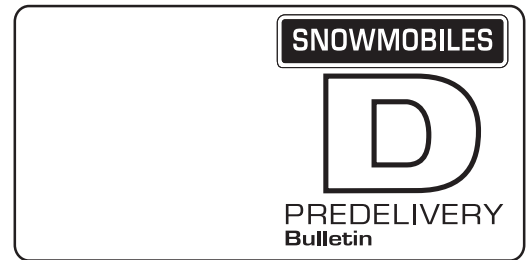
	MODELS	GRAND TOURING SE	GRAND TOURING 700	
	Engine Type	699	699	
	Maximum HP RPM ① ± 100 RPM	8500	7900	
	Rotary valve P/N Opening (BTDC)/ Closing (ATDC)	Not Applicable	Not Applicable	
	Carburetor Type	PTO VM 38 - 390 CTR VM 38 - 391 MAG VM 38 - 392	PTO VM 38 - 396 CTR VM 38 - 397 MAG VM 38 - 396	
	Main Jet	PTO 300 CTR 300 MAG 300	PTO 310 CTR 300 MAG 310	
	Needle Jet	P-9 (480)	P-1 (480)	
	Pilot Jet	50	50	
	Needle Identification — Clip Position	6DEY2	6DEH5	
	Slide Cut-away	2.5	2.5	
	Float Adjustment ± 1 mm (in)	18.1 (.71)	18.1 (.71)	
	Air Screw Adjustment ± 1/16 turn	2.00	2.50	
	Idle Speed RPM ± 200 RPM	1800	1800	
	Gas Grade Octane Number (R + M)/2	Super Unleaded 91	Super Unleaded 91	
	Gas/Oil Ratio	Mineral Oil Injection	Mineral Oil Injection	
	Ignition Timing BTDC ② mm (in)	2.18 (.086)	2.18 (.086)	
	Trigger Coil Air Gap mm (in)	0.55 - 1.45 (.022 - .057)	0.55 - 1.45 (.022 - .057)	
	Gear Ratio Teeth	24/44	24/44	
	Engagement Speed ± 100 RPM	3600	3600	
	Drive Pulley Calibration Screw Position	2	3	
	Pulley Distance Z (+ 0, - 1) mm ((+ 0, - 1/32) in)	120.0 (4-23/32)	120.0 (4-23/32)	
		Offset X ± 0.4 mm (± 1/64 in)	35.5 (1-13/32)	35.5 (1-13/32)
	Y		Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
	Drive Belt Adjustment	Deflection mm (in)	32 (1-1/4)	32 (1-1/4)
		Force ③ kg (lbf)	11.34 (25)	11.34 (25)
	Driven Pulley Preload ± 0.7 kg (lbf)	7.0 (15.43)	7.0 (15.43)	
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation	
Track Adjustment Deflection	35 to 40 mm (1-3/8 to 1-9/16 in) with a 7.3 kg (16 lb) downward pull	35 to 40 mm (1-3/8 to 1-9/16 in) with a 7.3 kg (16 lb) downward pull		

- ① Engine speed at which maximum power is achieved
- ② At 6000 RPM (engine cold) with headlamp turned on
- ③ Force applied midway between pulleys to obtain specified deflection

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 CTR: Center
 MAG: Magneto side

Please route to:

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **98-13**

Date: September 25, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1998	Canada and United States: MX Z* 670	1278, 1279	ALL
1998	Sweden: MX Z 670	1280	ALL

This bulletin must be used in conjunction with the predelivery check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

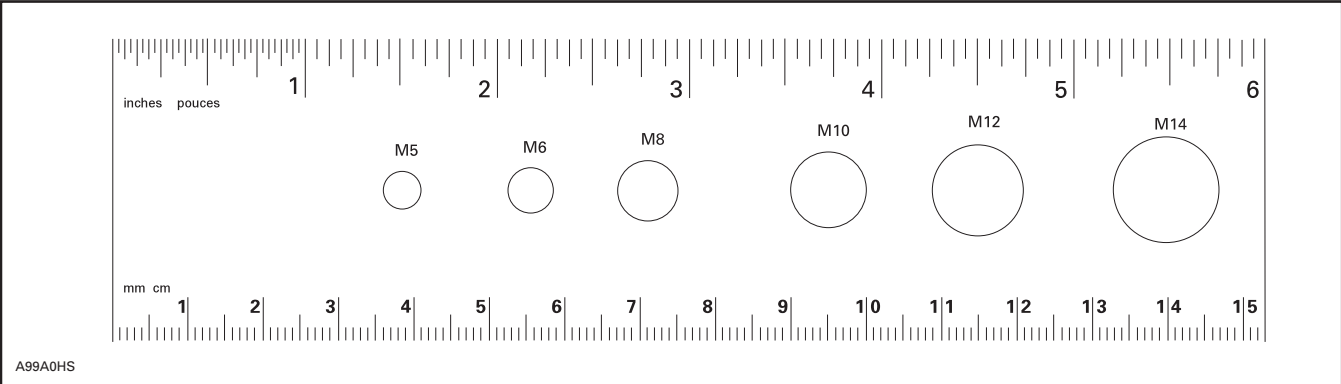
NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

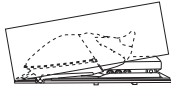
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and video.

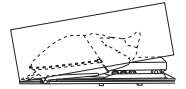
There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.

NOTE: This ruler can be helpful to identify fastener length or size.





UNCRATING



PREDELIVERY KIT P/N	MODELS
580 6683 00	MX Z 670

◆ WARNING

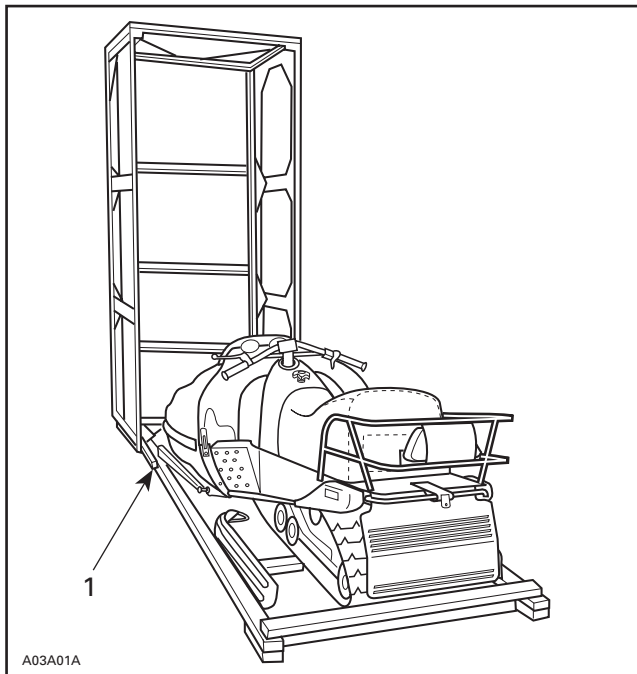
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to crate base. Tip cover toward front of vehicle. There is a notch at front of the crate. Lift cover slowly to avoid damaging the snow guard or taillight.



A03A01A

1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

When this metal strip is under the seat loosen 2 or 4 nuts retaining the seat before pulling out the metal strip.

▼ CAUTION

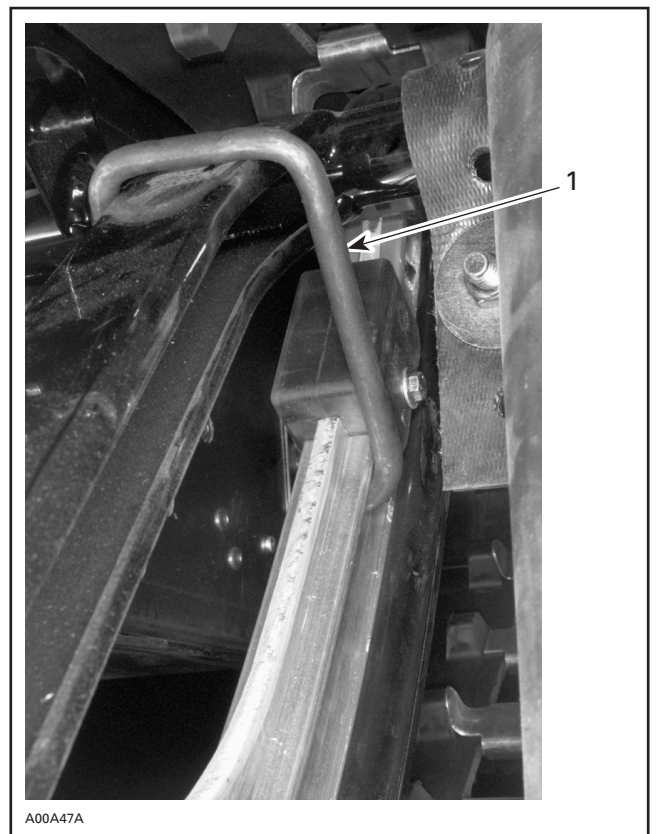
Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

FRONT HOOK REMOVAL



A00A47A

TYPICAL

1. Hook to be removed

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

NOTE: To avoid unhooking during transportation front hook could be held in place with a locking tie; make sure this locking tie is cut before trying to remove hook.

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.

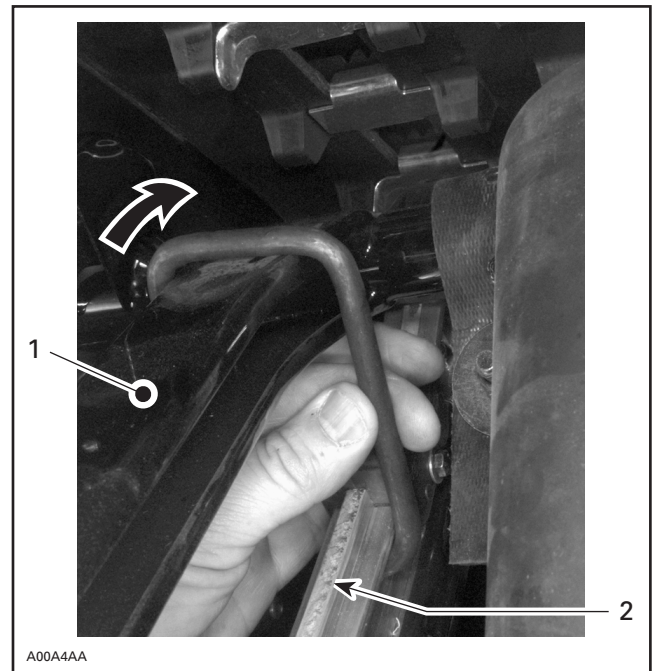


TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

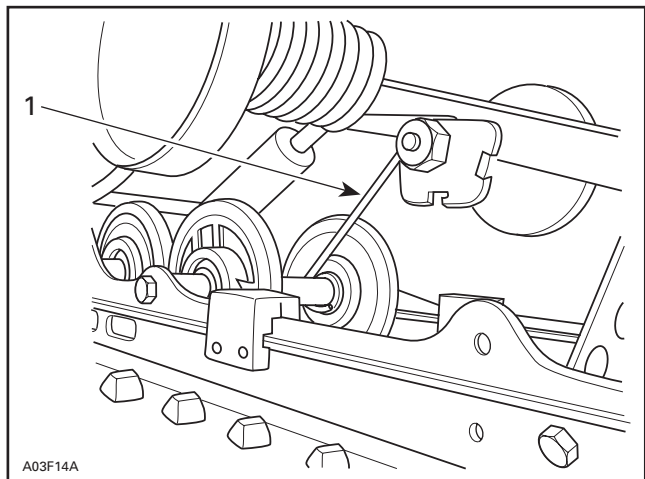
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



TYPICAL

1. Front arm
2. Runner

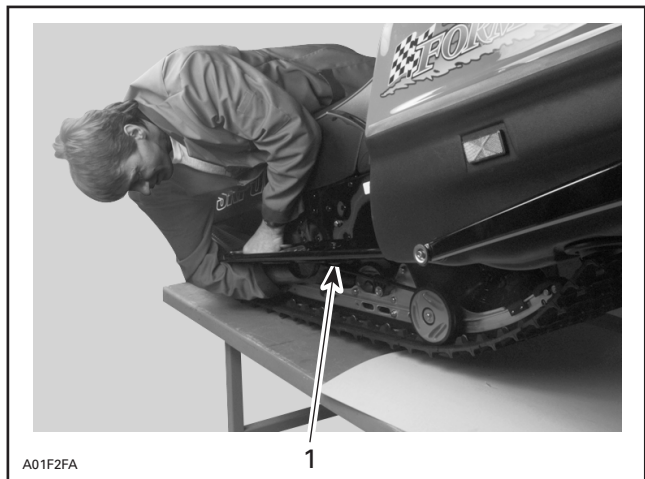
REAR HOOK REMOVAL



1. Hook to be removed

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



1. Remove hook on the rear portion of the suspension

◆ **WARNING**

Hooks must be removed to have snowmobile suspension operational.

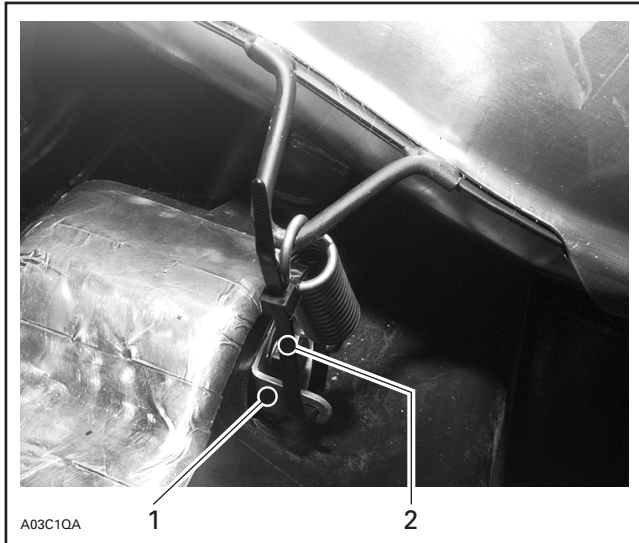


PARTS INSTALLATION

FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.



1. Lug in recess
2. Locking tie

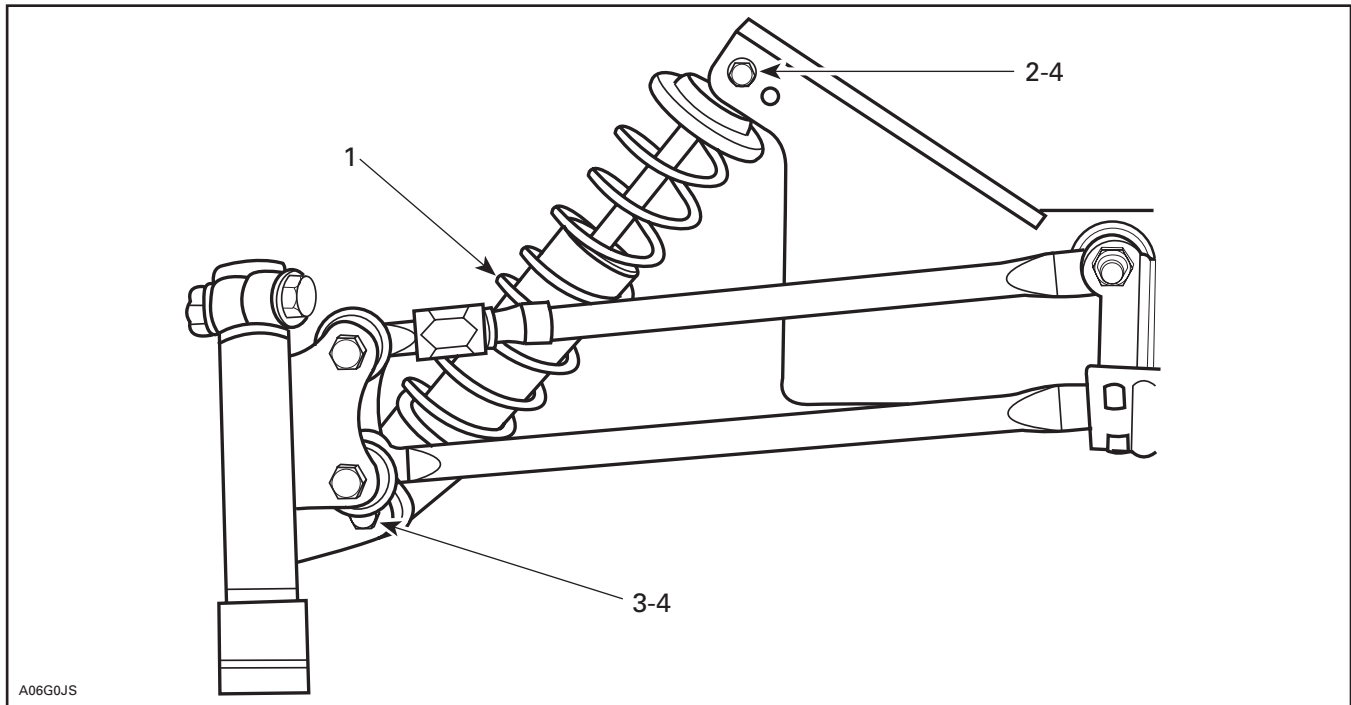
Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position bottom screw heads toward front.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.



TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 0060 65) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 0055 65) (on suspension)
4. Elastic flanged nut M10 x 1.5 (2) (P/N 228 5010 45) (section no. 5). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION SKIS

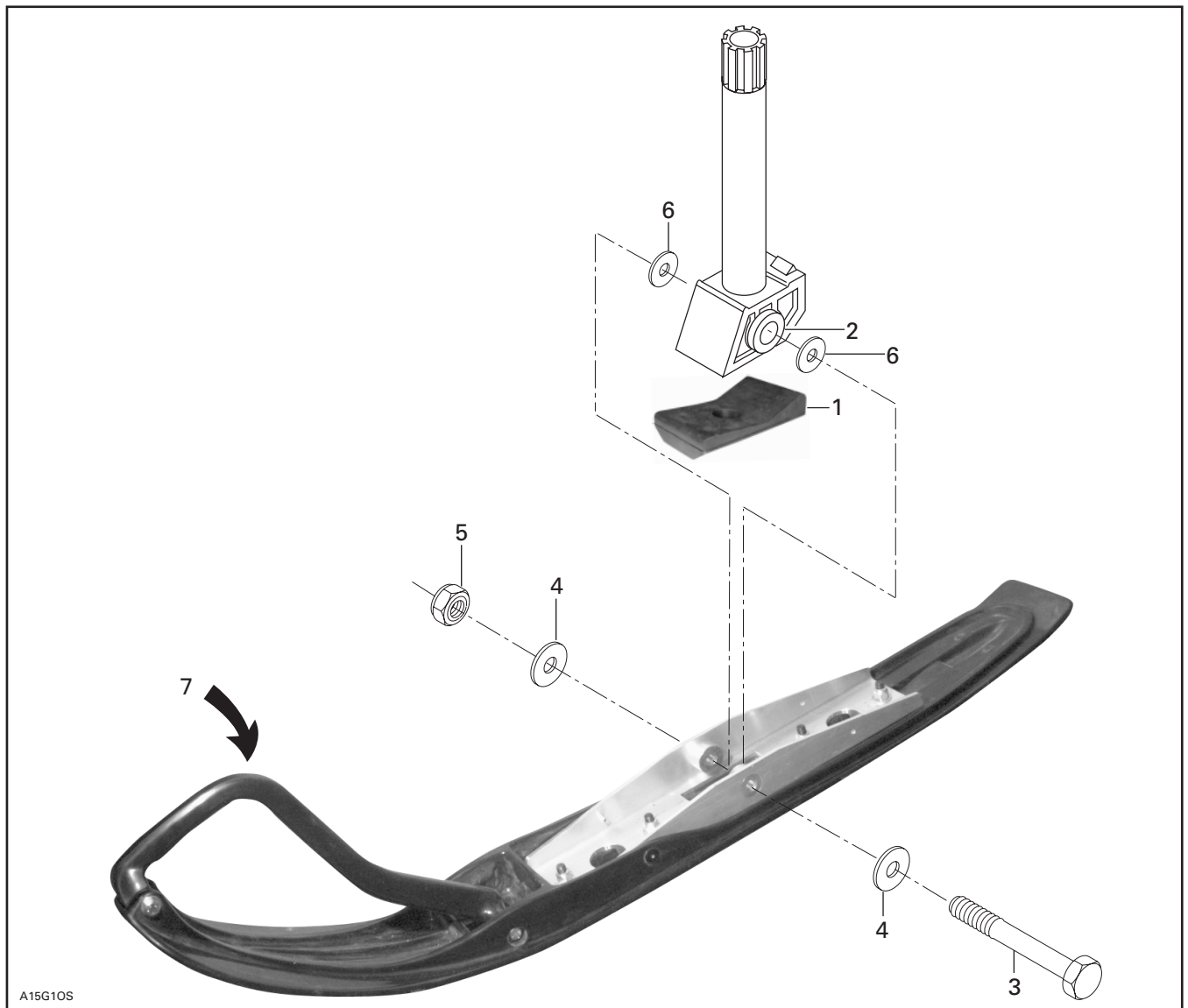


Ensure ski leg slider cushions are still in ski leg.

Install skis on vehicle.

NOTE: Use small washers (P/N 732 9000 48) to fill gap between ski leg slider cushions and ski. If both washers are required install washer on each side of ski leg. If only one washer is required, install washer from inside snowmobile.

Replace vehicle on ground.



A15G10S

LEFT SIDE SHOWN

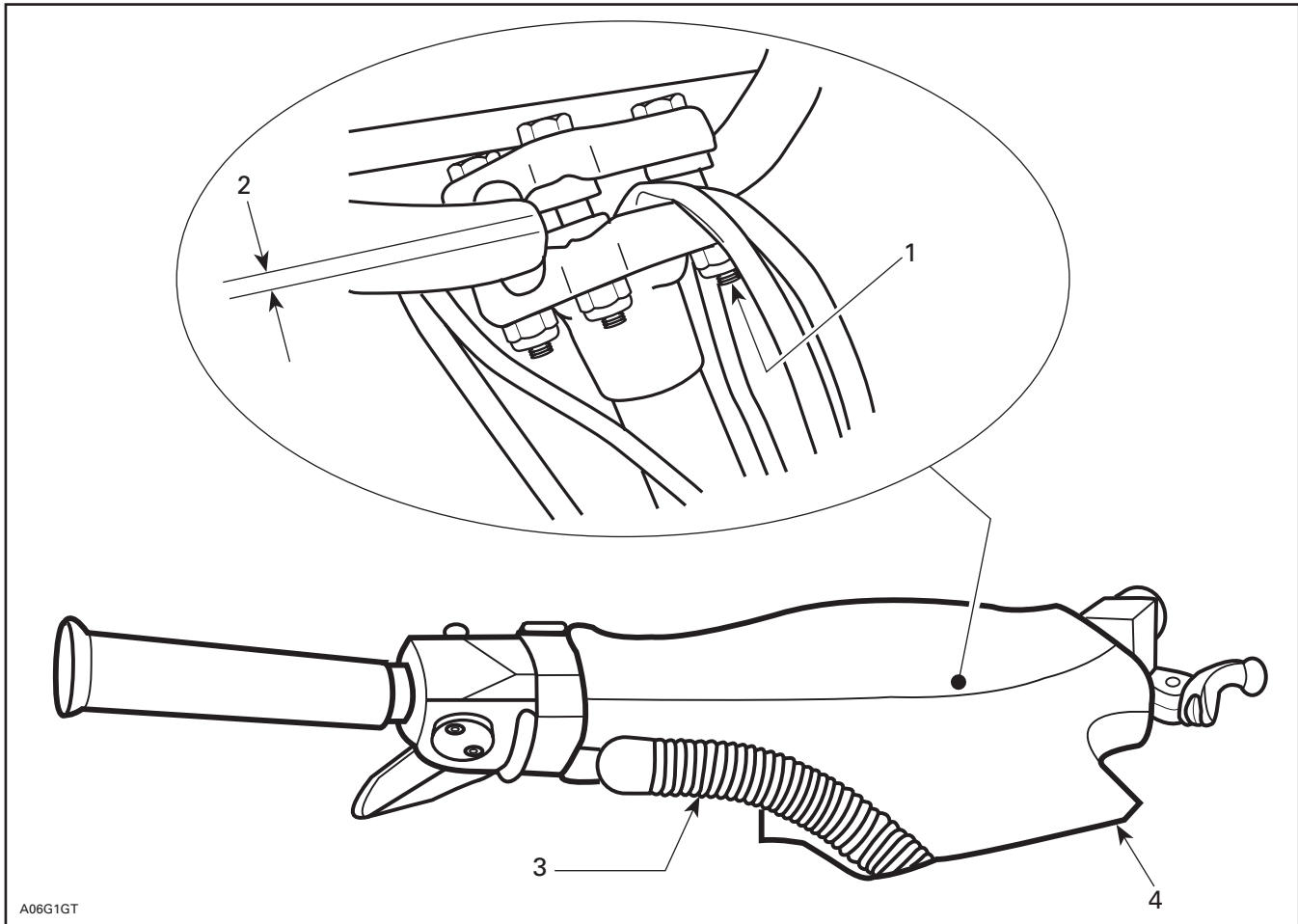
1. Ski stopper (2) (section no. 8) "AVANT" toward front
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Washer (4) (P/N 506 1364 00) (section no. 8). Install large washer
5. Elastic flanged nut M12 x 1.75 (2) (P/N 228 5210 45) (section no. 8). Torque to 40 N•m (30 lbf•ft)
6. Washer (4) (P/N 732 9000 48) (section no. 8). Insert small washer, as needed, to fill gap between ski leg slider cushions and ski
7. Twist ski to ease bolt installation



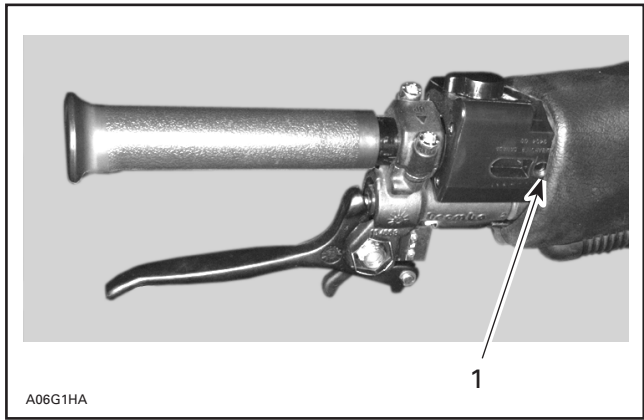
PARTS INSTALLATION STEERING PAD



Adjust handlebar temporarily and tighten nuts loosely for now.
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporarily, and adjust for proper fit with console.
Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



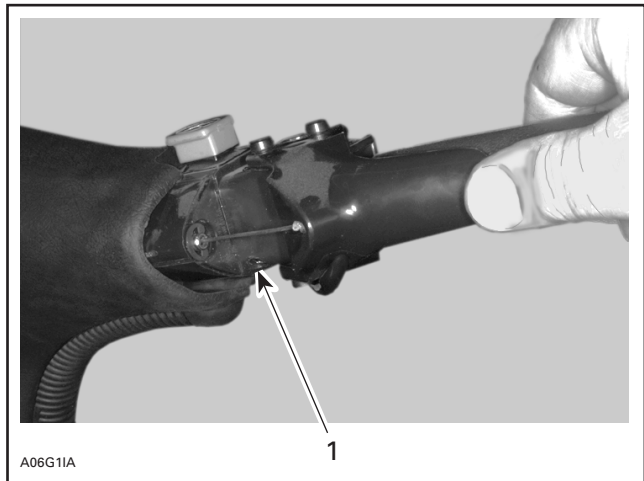
- A06G1GT
1. Torque to 26 N•m (19 lbf•ft)
 2. Equal gap each side (both clamps)
 3. Keyway (2) (P/N 572 0724 00) (section no. 3)
 4. Steering pad (engine compartment)



A06G1HA

BRAKE HANDLE HOUSING

1. Tighten set screw to $2\text{ N}\cdot\text{m}$ ($18\text{ lbf}\cdot\text{in}$)



A06G1IA

THROTTLE HANDLE HOUSING

1. Tighten set screw to $2\text{ N}\cdot\text{m}$ ($18\text{ lbf}\cdot\text{in}$)

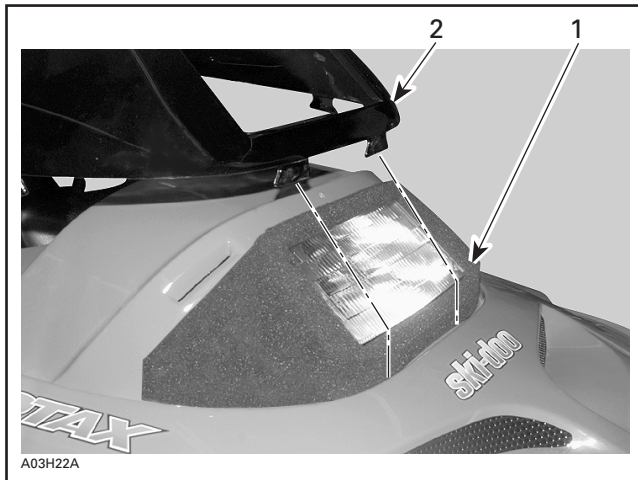


PARTS INSTALLATION WINDSHIELD



Install windshield on dashboard.

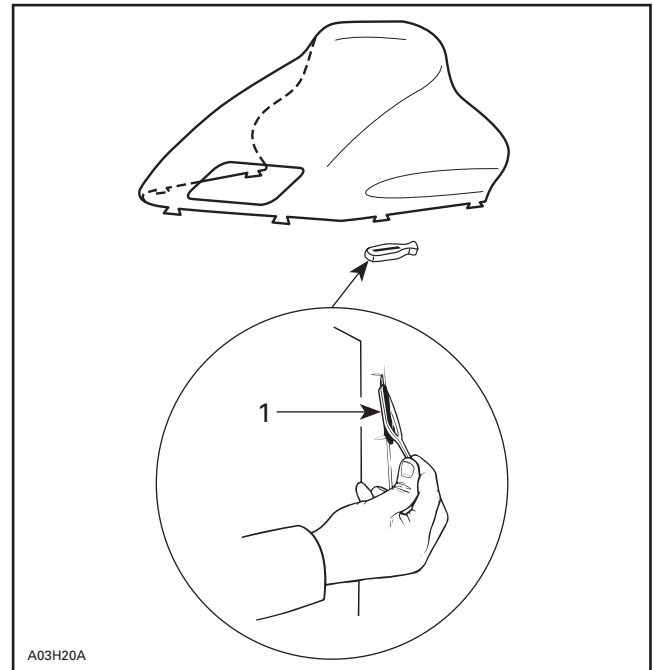
NOTE: Make sure that protective foam is properly positioned around headlamp before installing windshield.



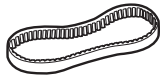
1. Protective foam
2. Install windshield on dashboard



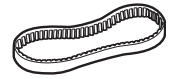
WINDSHIELD INSTALLED ON DASHBOARD



1. Latch (6) (P/N 570 0238 00) (section no. 4 or 6)



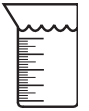
PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.



LIQUIDS OIL INJECTION PUMP BLEEDING



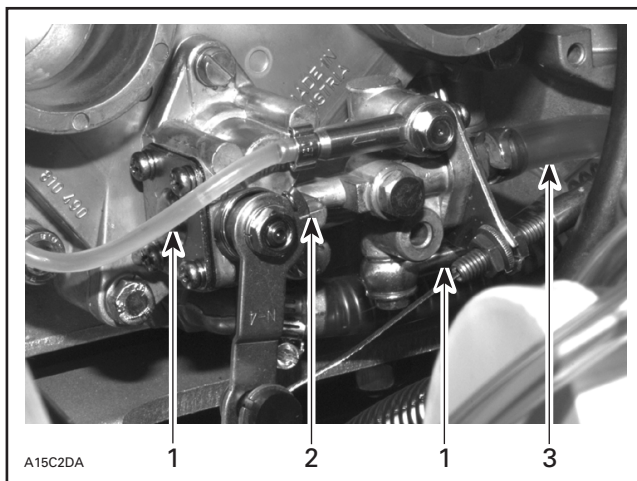
SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 8030 00) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Remove air silencer and move carburetors aside. Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

Check also for proper oil lever adjustment. Marks must align when throttle lever is activated just enough to take all cable play.

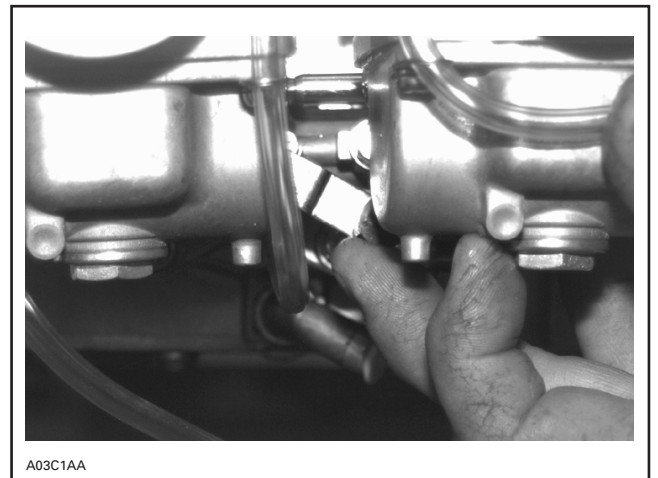


1. Small oil line
2. Marks aligned
3. Main oil line

Reinstall all parts except air silencer.

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

NOTE: If the air silencer has been reinstalled, make a J hook out of mechanical wire to lift the lever.



TYPICAL — ENGINE AT IDLE

Reinstall air silencer.



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir for proper level. Add fluid (DOT) as required.

▼ CAUTION

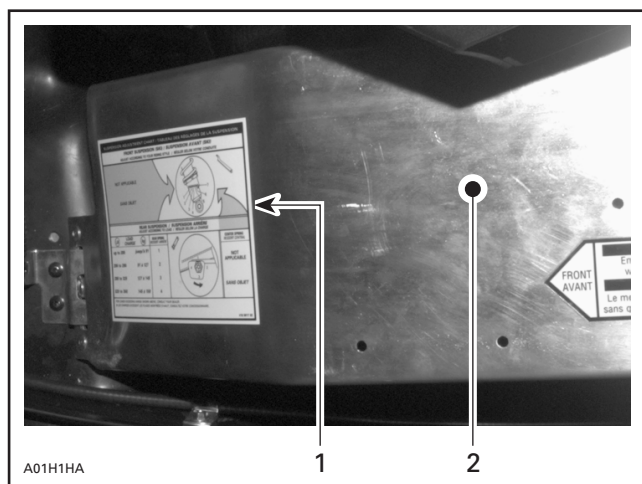
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partially filled bottle of brake fluid.



ADJUSTMENT SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENT TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.



ADJUSTMENT DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).


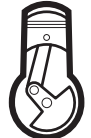





TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1997 model.

	MODEL	MX Z 670
	Engine Type	670
	Maximum HP RPM ① ±100 RPM	7700
	Rotary Valve P/N Opening (BTDC)/ Closing (ATDC)	420 9245 00 144° 72° •
	Carburetor Type	PTO VM 40 - 101 MAG VM 40 - 101 •
	Main Jet	PTO 310 MAG 310 •
	Needle Jet	AA-3 (224) •
	Pilot Jet	60
	Needle Identification — Clip Position	7EDY1
	Slide Cut-away	2.5
	Float Adjustment ± 1 mm (in)	18.1 (.71)
	Air Screw Adjustment ± 1/16 turn	2-1/4
	Idle Speed RPM ± 200 RPM	1700
	Gas Grade/Pump Octane Number (R + M)/2	Regular Unleaded/87
	Gas/Oil Ratio	Oil Injection
	Ignition Timing BTDC ② mm (in)	1.93 (.076) •
	Trigger Coil Air Gap mm (in)	0.55 - 1.45 (.022 - .057)
	Gear Ratio teeth	26/43 •
	Engagement Speed ± 100 RPM	3800
	Drive Pulley Calibration Screw Position	3
	Pulley Distance Z (+ 0, - 1) mm (+ 0, - 1/32) in	16.5 (21/32)
	Offset X ± 0.4 mm (± 1/64 in)	35.0 (1-3/8)
	Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
	Drive Belt Adjustment Deflection ± .5 mm (in)	32 (1-1/4)
	Force ③ kg (lbf)	11.34 (25)
	Driven Pulley Preload ±0.7 kg (lbf)	7.0 (15.43)
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation
Track Adjustment Deflection mm (in)	35 to 40 (1-3/8 - 1-9/16) with a 7.3 kg (16 lb) downward pull •	

① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center

ATDC: After Top Dead Center

PTO: Power Take OFF side

MAG: Magneto side

CRT: Center

N.A.: Not Applicable

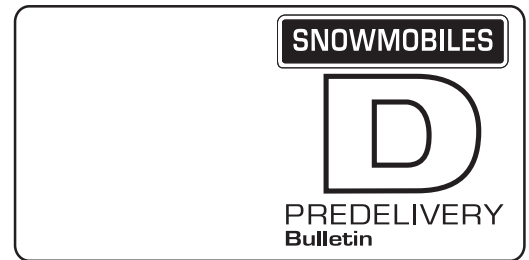
Please route to :

Init.

Service

Sales

Parts



No. **98-14**

Date: September 24, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1998	Skandic* SWT (Canada and United States)	1288, 1289	ALL

This bulletin must be used in conjunction with the *Predelivery Check List* enclosed in the *Operator's Guide* bag. Make sure that *Predelivery Check List* is completed and signed.

◆ WARNING

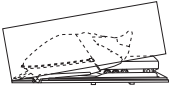
To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.

NOTE: The information and components/system descriptions in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

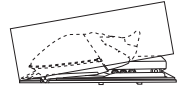
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The contents of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative or specific *Shop Manual* sections.

Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and *video*.



UNCRATING



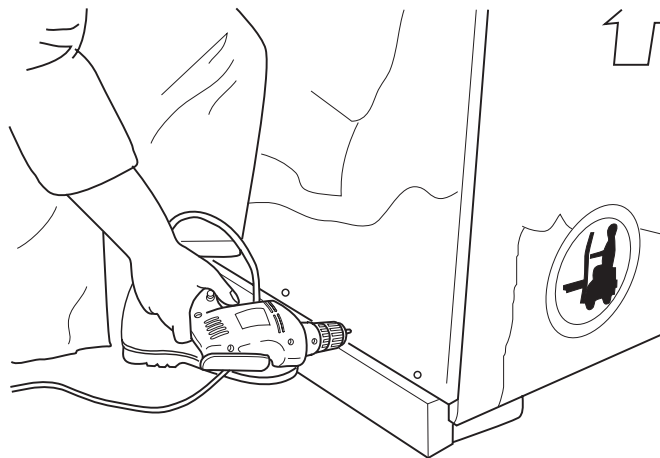
◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, nylon stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

▼ CAUTION

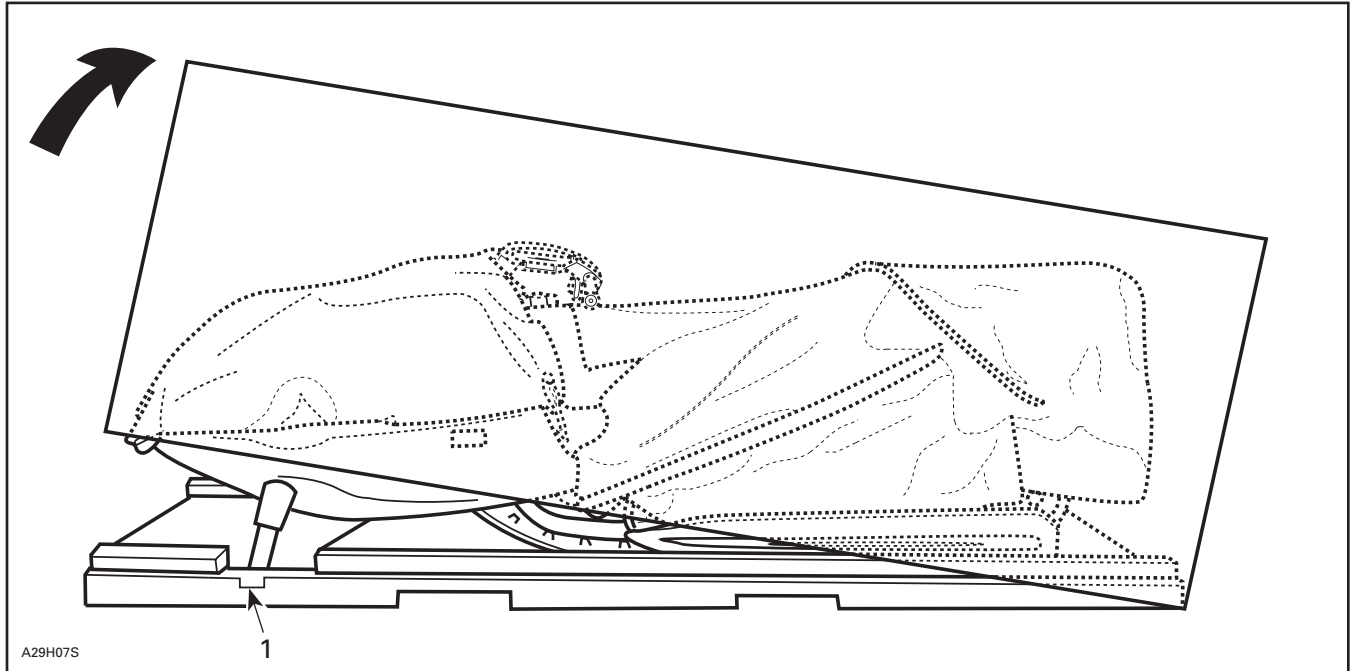
Allowing the crate to drop may cause serious damage to the vehicle.

Using a drill or a screwdriver, remove all screws retaining crate to base.



F02P04S

Tip cover towards rear of vehicle. There is a notch in crate base at front.



1. Notch

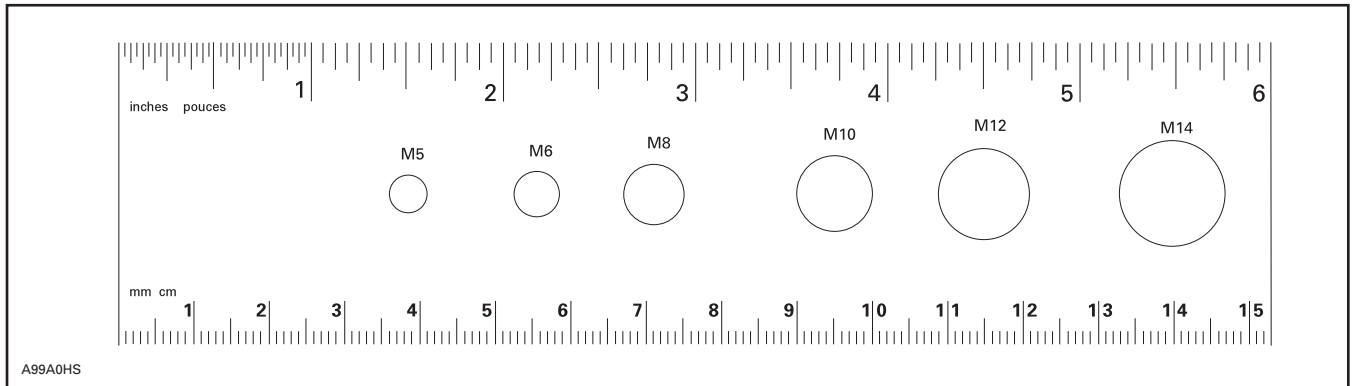
Detach parts to be installed (e.g. skis, windshield), from the vehicle and its base.

▼ **CAUTION**

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Remove predelivery kit and parts to be installed from under seat compartment.

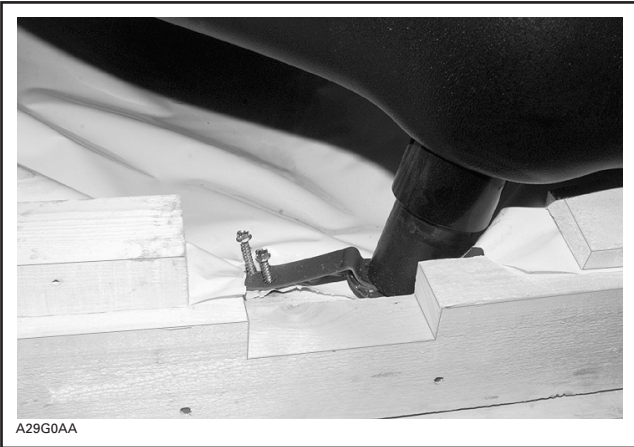
NOTE: This rule can be helpful to identify fastener length/size.



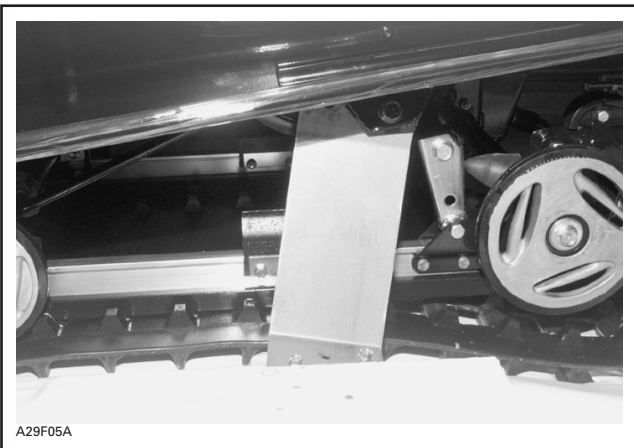
▼ CAUTION

Make sure vehicle is properly supported.

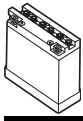
Detach ski legs from crate. Discard nuts and bolts.



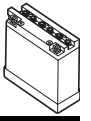
Remove the rear retaining brackets from both sides of vehicle and retain bolts holding brackets to body.



Remove vehicle from base.



PARTS INSTALLATION BATTERY

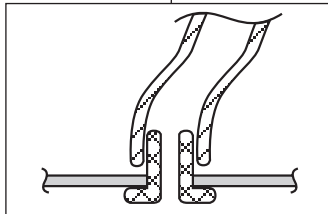
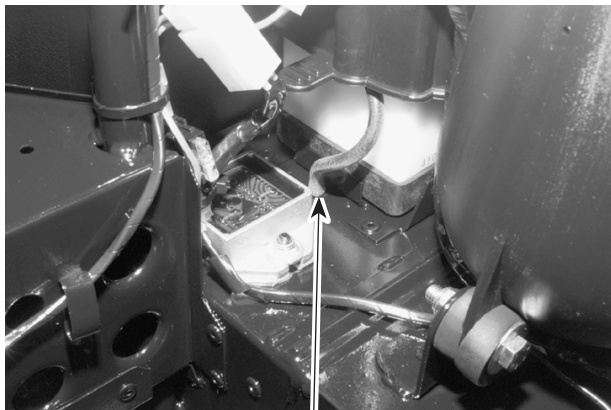


During preparation, the battery can be activated as described in 1998 *Ski-Doo Shop Manual*.

▼ CAUTION

Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage.

On SWT model, a special vented rivet is fixed to the chassis in order to plug the vent tube from the battery.



A29E0FA

Skandic SWT

Battery removal

Remove battery bracket and remove battery from vehicle.



A29E0DA

Battery installation

Install battery in vehicle.

Connect battery cables.

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.

Apply silicone dielectric grease (P/N 413 7017 00) on battery posts and connectors.

Install battery cover.

Secure battery with bracket and tighten wing screw.

Ensure vent tube is properly installed from battery to the plug provided on the frame.

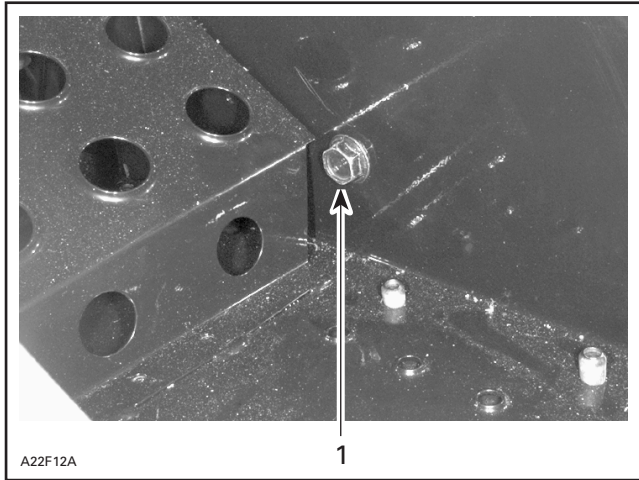


PARTS INSTALLATION REAR SUSPENSION



Secure front arm upper axle of rear suspension using 2 M10 x 30 screws in plastic bag under the seat.

Apply Loctite 242 on threads and torque screws to 58 N•m (43 lbf•ft).



1. Torque screw on each side to 58 N•m (43 lbf•ft)

Secure rear arm using previously removed screws.

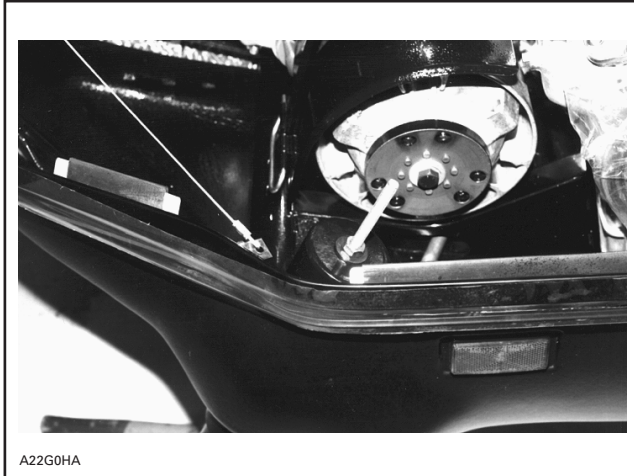
Apply Loctite 242 on threads and torque screws to 58 N•m (43 lbf•ft).



PARTS INSTALLATION FRONT SUSPENSION



Remove long bolts that compresses front suspension on both sides.

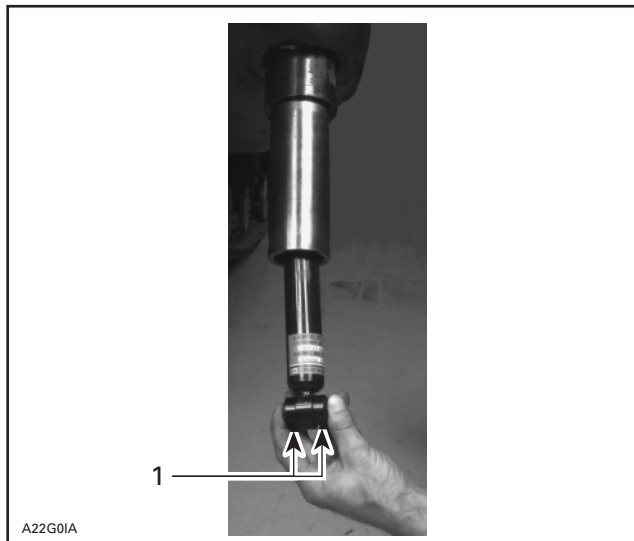


Install 2 plastic bushings into shock absorber eyelets.

Stretch shock to its maximum.

Slide shock absorber onto bottom of ski leg until shock rod goes through cap hole.

Loosely install washer and nut on shock rods, keeping at least 1/4 in (5mm) of free play.



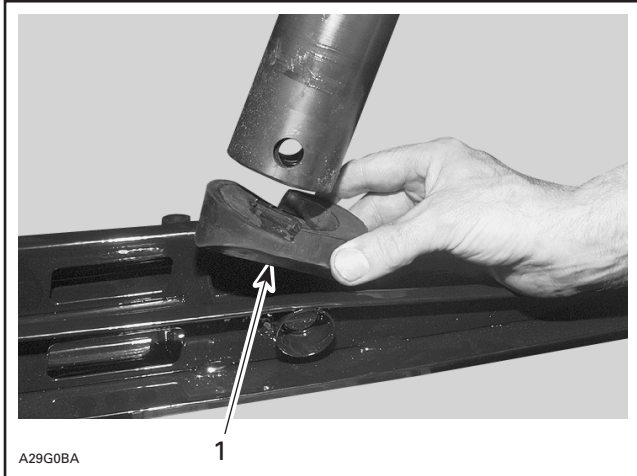
1. Plastic Bushings



PARTS INSTALLATION SKIS

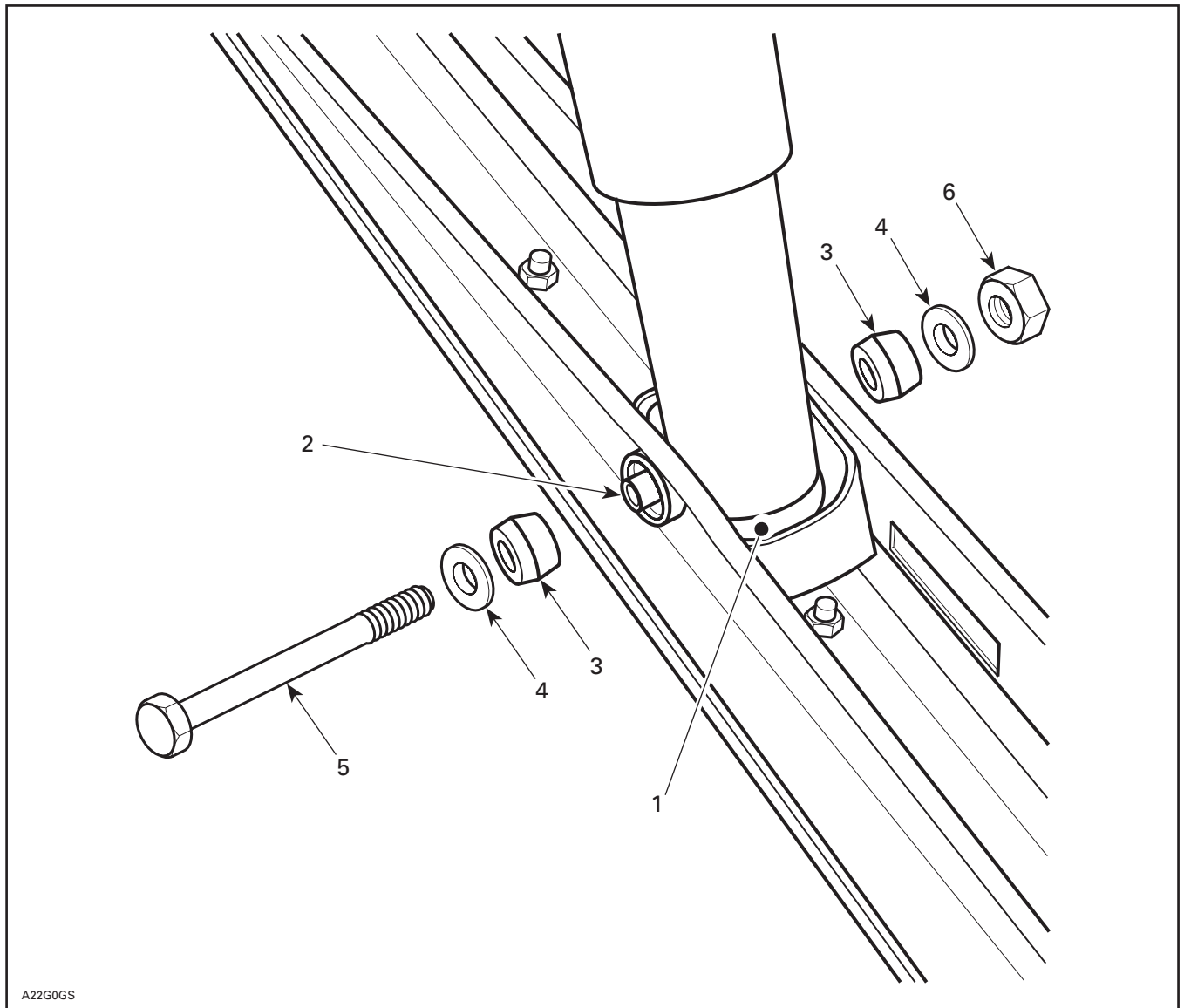


Install stop bounding on skis with its highest portion toward front.



1. *Stop bounding*

Instal skis on vehicle using bolts, nuts, washers and rubber bushings supplied in the predelivery kit.



A22G0GS

1. Stop bounding
2. Sleeve
3. Rubber bushing (2)
4. Flat washer (2)
5. Bolt M10 x 125
6. M10 lock nut, tighten to 48 N•m (35 lbf•ft)

Tighten shock rod top nuts to 30 N•m (22 lbf•ft).



PARTS INSTALLATION STEERING PAD

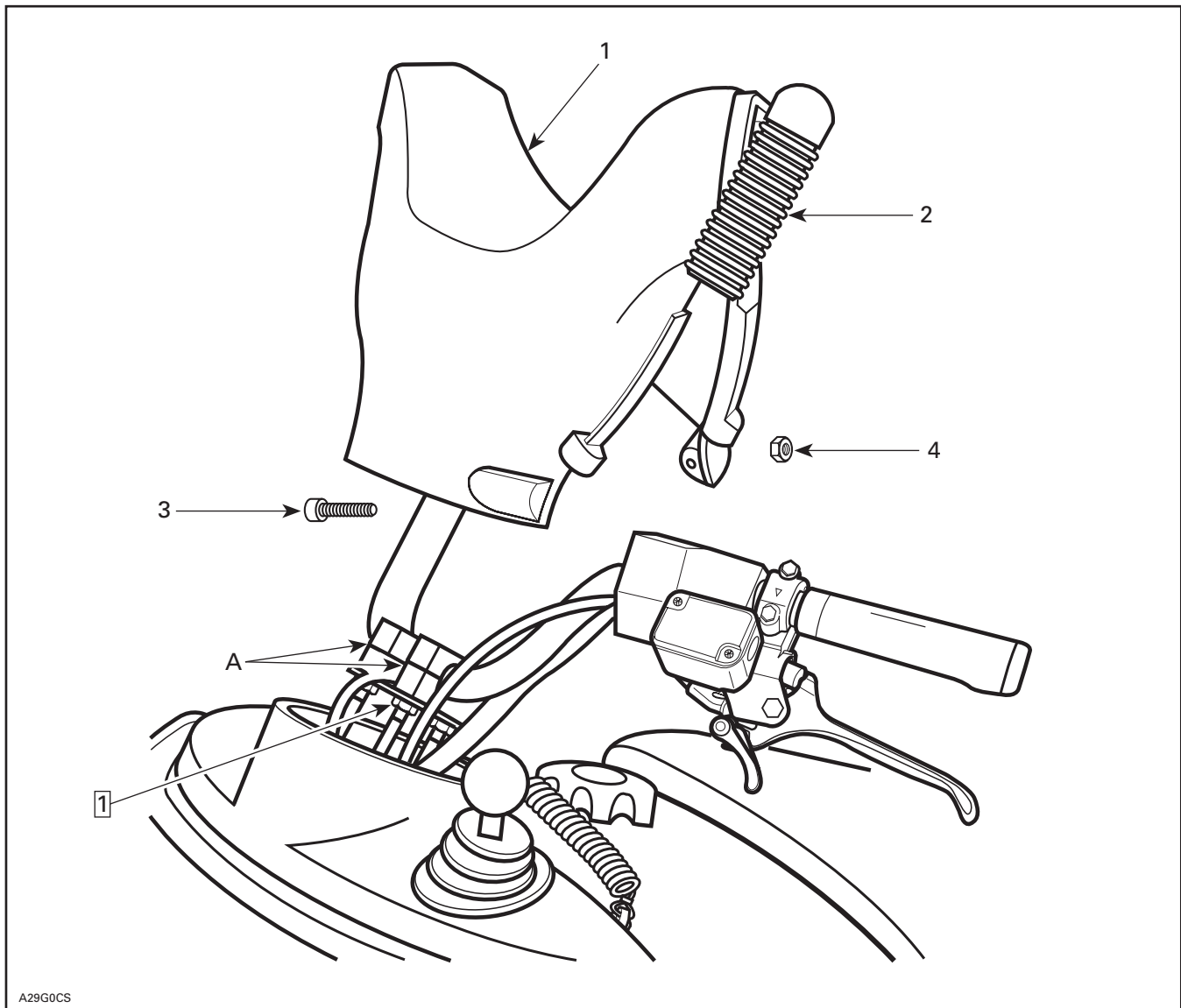


Adjust handle bar and set both clamps to have equal gap on each side. Torque nuts to 26 N•m (19 lbf•ft).
Loosen throttle and brake handle housings.

Install steering pad.

NOTE: On Skandic SWT, make sure to secure steering column cover with steering pad before tightening bolts.

Adjust both throttle and brake handle housings to match steering pad.



A29G0CS

TYPICAL

Step 1: Torque to 26 N•m (19 lbf•ft)

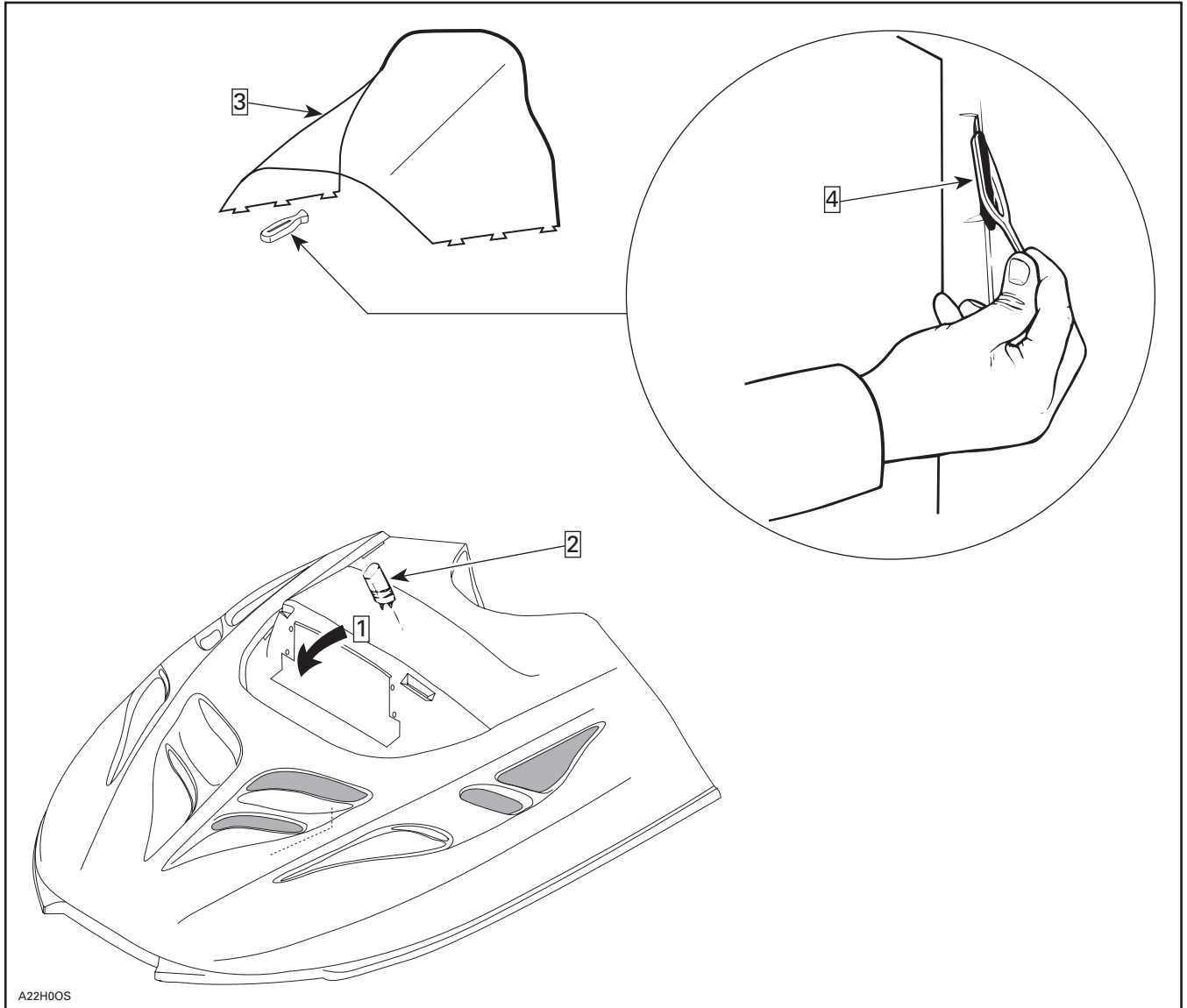
1. Steering pad
2. Keyway. Use liquid soap to ease installation
3. Screw M5 x 0.80 x 20 (2)
4. Nut M5 x 0.80 x 20 (2). Seat tighten only, no deformation of rubber
- A. Equal gap on each side (Both clamps)



PARTS INSTALLATION WINDSHIELD



Remove headlamp molding.
Install rubber support in predrilled holes on the hood.



- Step **1**: Pry out headlamp molding
Step **2**: Install support. Apply soap on tips to ease installation
Step **3**: Install windshield
Step **4**: Install latches (10)

Install windshield and secure with latches inside hood.

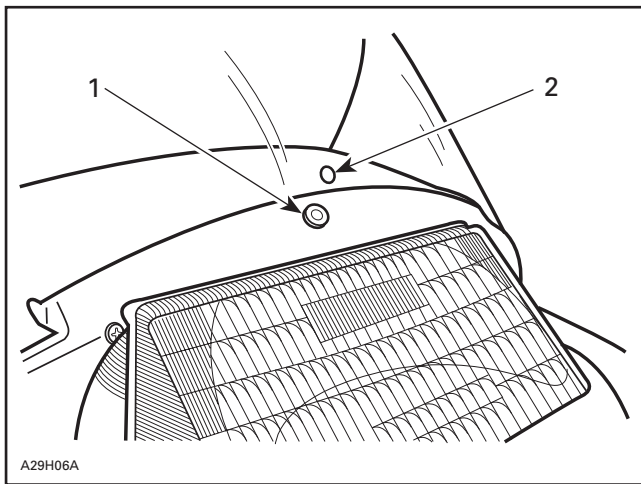
Install rubber expansion nut in hole above head light.

Line up hole in windshield with rubber expansion nut and install screw with cup.

Tighten slightly so that rubber expands inside hood.

Install rubber cap on screw and reinstall headlamp molding.

Make sure to properly position lower edge of plastic molding under head lamp.

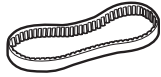


1. Rubber Expansion Nut
2. Hole in windshield

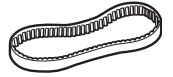
SNOW GUARD INSTALLATION

Install snow guard with extra plastic support.

Use rivets (6 pcs) from shrink bag.



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disk brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.



LIQUIDS OIL INJECTION PUMP BLEEDING

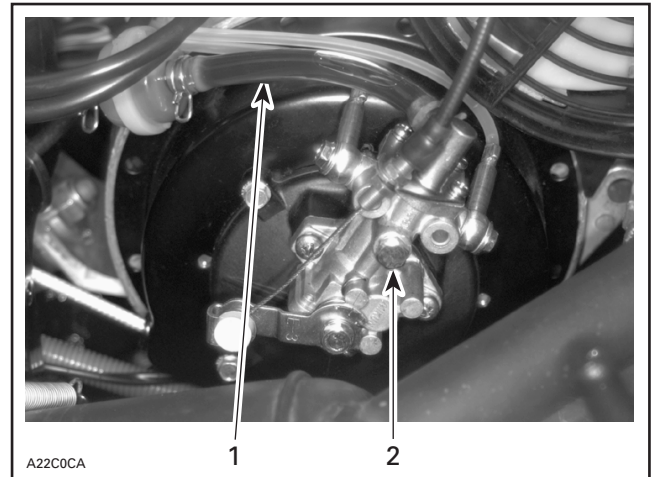


All models

To assure additional protection during the initial engine break-in, 500 ml (18 imp. oz.) of BOMBARDIER ROTAX injection oil (P/N 413 8029 00) should be added to fuel for the first full filling of fuel tank.

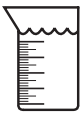
Skandic SWT

Bleed main oil line (between tank and pump) by loosening the bleeder screw until all air has escaped from the line. Add injection oil as required.



1. No air in main line
2. Bleeder screw

Bleed the small oil lines between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.



LIQUIDS BRAKE FLUID LEVEL



All Models

Check brake fluid in reservoir for proper level.
Add recommended brake fluid as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partially filled bottle of brake fluid.



1. Fluid level window



ADJUSTMENTS TRACK








Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.



TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicle used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquires should be directed to your distributor service representative.

	MODELS	SKANDIC SWT	
	Engine Type	ROTAX 503	
	Maximum HP RPM ① ± 100 RPM	6500	
	Rotary Valve P/N Opening (BTDC)/ Closing (ATDC)	Not Applicable	
	Carburetor Type	VM 32	
	Main Jet	230	
	Needle Jet	159 O-0	
	Pilot Jet	25	
	Needle Identification – Clip Position	6DH8-4	
	Slide Cut-away	3.0	
	Float Adjustment mm (in)	23.9 (.94)	
	Air Screw Adjustment ± 1/32 turn	1.5	
	Idle Speed RPM	1650 ± 200	
	Gas Grade	Regular Unleaded	
	Pump Octane Number (R + M)/2	87	
	Ignition Timing BTDC ② mm (in)	1.66 (.065)	
	Trigger Coil Air-Gap mm (in)	0.45 - 0.55 (.018 - .022)	
	Gear Ratio	1 st gear 1:3.80 2 nd gear 1:2.64	
	Engagement Speed ± 100 RPM	2300	
	Drive Pulley Calibration Screw Position	4	
	Pulley Distance Z (+ 0, - 1) mm ((+ 0, - 1/32) in)	32.75 (1-9/32)	
	Offset X ± 0.4 mm (± 1/64 in)	36.50 (1- 7/16)	
		Y Dimension Y must exceed X from .75 mm (.03 in) to 2.25 mm (.09 in)	
	Drive Belt Adjustment	Deflection mm (in)	32 (1-1/4)
		Force ③ kg (lbf)	11.34 (25)
	Driven Pulley Preload kg (lbf)	6.0 ± 0.7 (13.228 ± 1.5)	
	Drive Chain Tension	Not Applicable	
	Track Adjustment	Deflection mm (in)	40 to 50 (1.5 to 1.9)
Force Kg (lbf)		7.3 (16.1)	

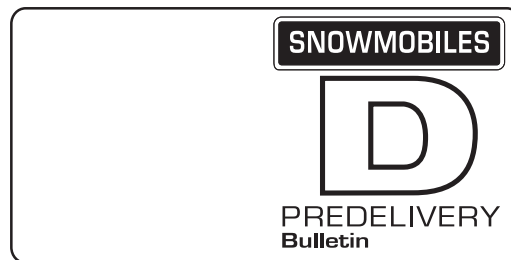
① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **98-15**

Date: October 2, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1998	Skandic* WT/WT LC (Canada)	1286/1284	ALL
1998	Skandic* WT/WT LC (United States)	1287/1285	ALL

This bulletin must be used in conjunction with the Predelivery Check List enclosed in the *Operator's Guide* bag. Make sure that Predelivery Check List is completed and signed.

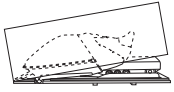
◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

NOTE: The information and components/system descriptions in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

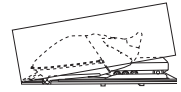
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The contents of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative or specific *Shop Manual* sections.

Please complete the Predelivery Check List for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and *video*.



UNCRATING



All Models

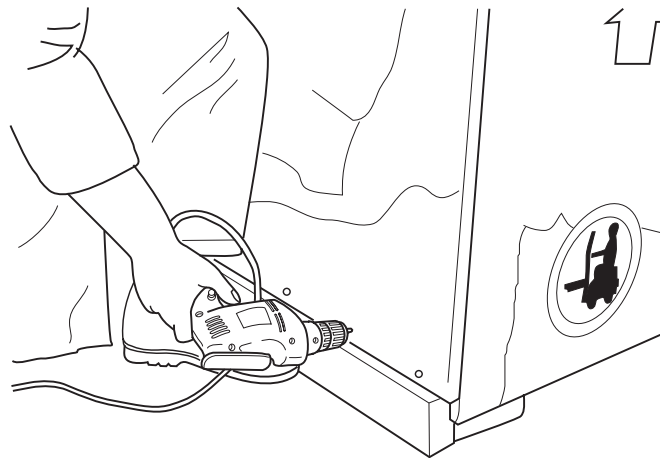
◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, nylon stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

▼ CAUTION

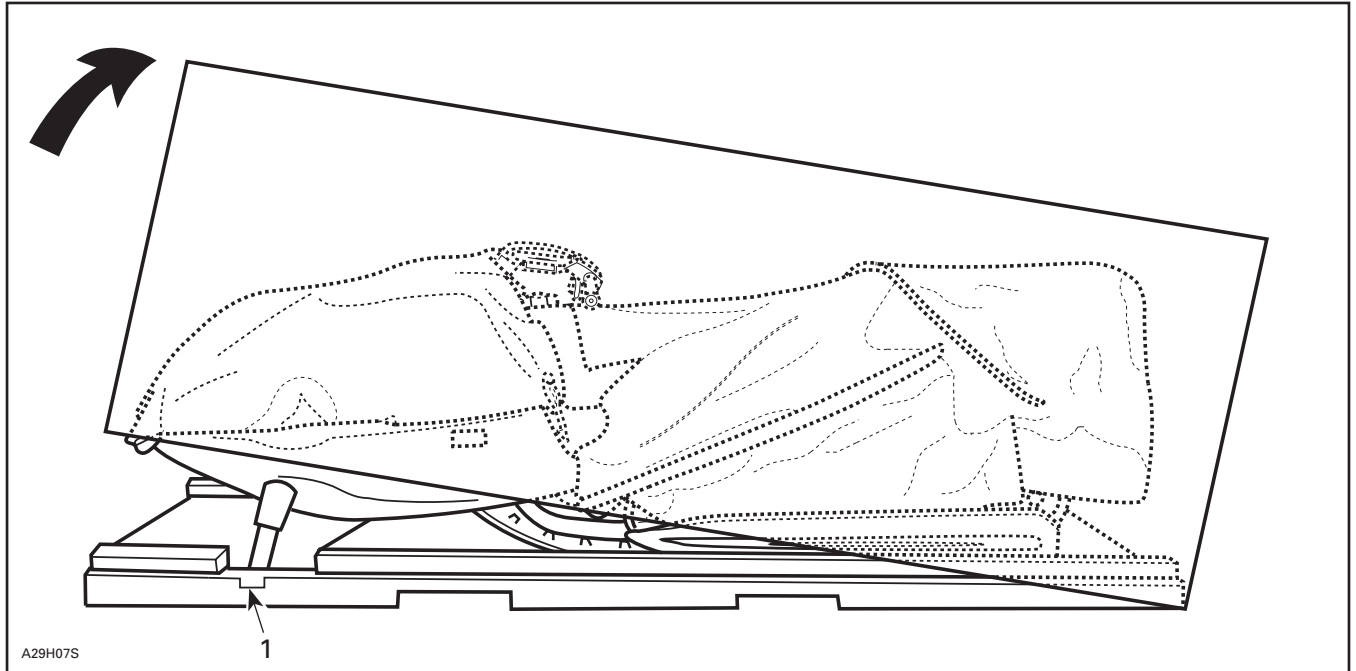
Allowing the crate to drop may cause serious damages to the vehicle.

Using a screwdriver or a drill, remove all screws retaining crate to base.



F02P04S

Tip cover towards rear of vehicle. There is a notch in crate base at front.



1. Notch

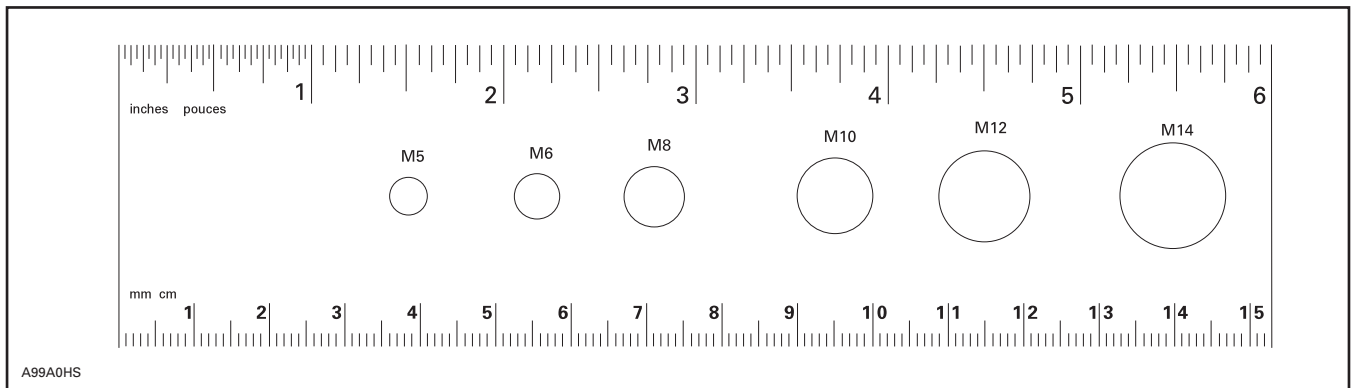
Detach parts to be installed (e.g. skis, windshield), from the vehicle and its base.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Remove predelivery kit and parts to be installed from under seat compartment.

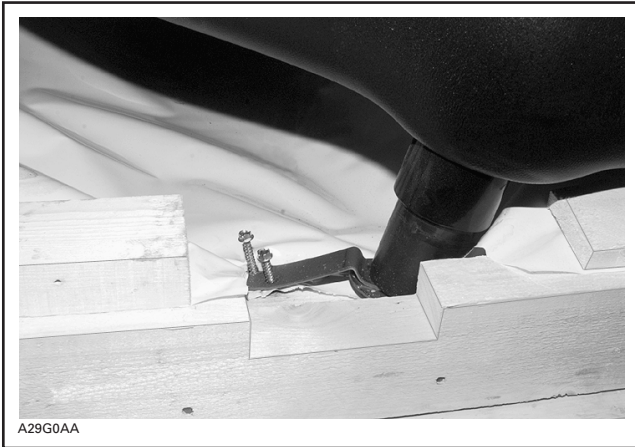
NOTE: This rule can be helpful to identify fastener length/size.



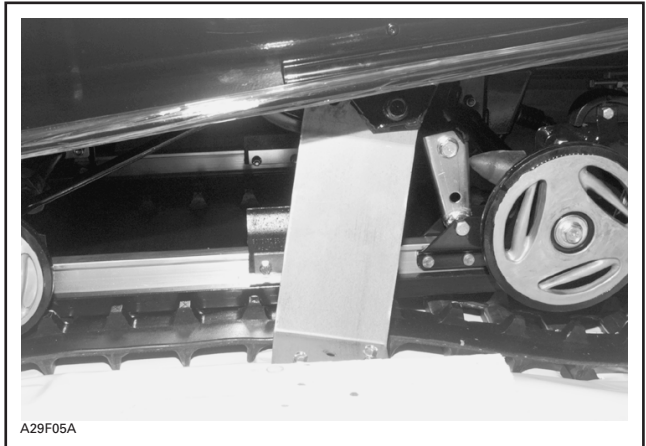
▼ CAUTION

Make sure vehicle is properly supported.

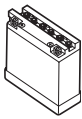
Detach ski legs from crate. Discard nuts and bolts.



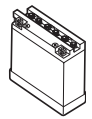
Remove the rear retaining brackets from both sides of vehicle and retain bolts holding brackets to body.



Remove vehicle from base.



PARTS INSTALLATION
BATTERY



All Models

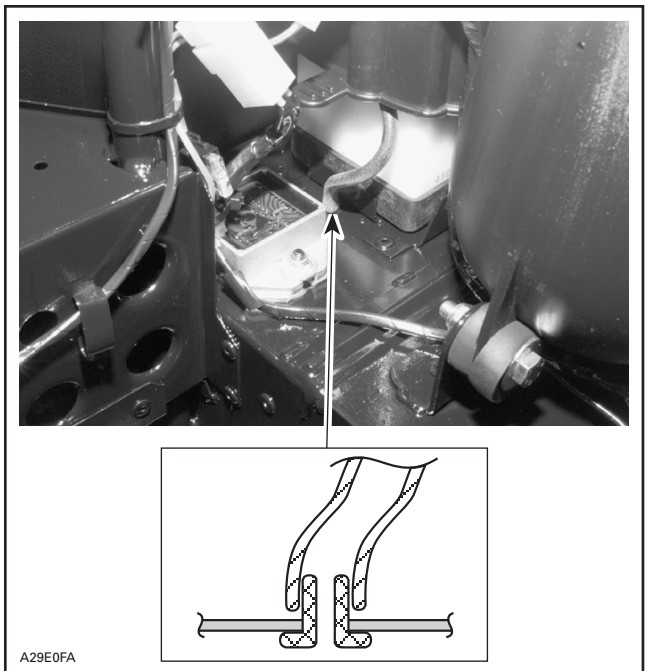
During preparation, the battery can be activated as described in 1998 *Ski-Doo Shop Manual*.

▼ CAUTION

Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage.

On WT model, a special vented rivet is fixed to the chassis in order to plug the vent tube from the battery.

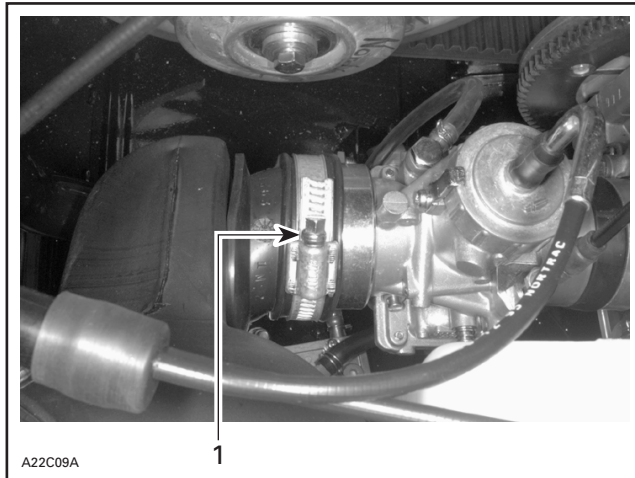
On WT LC, vent tube is connected to a special plastic reservoir.



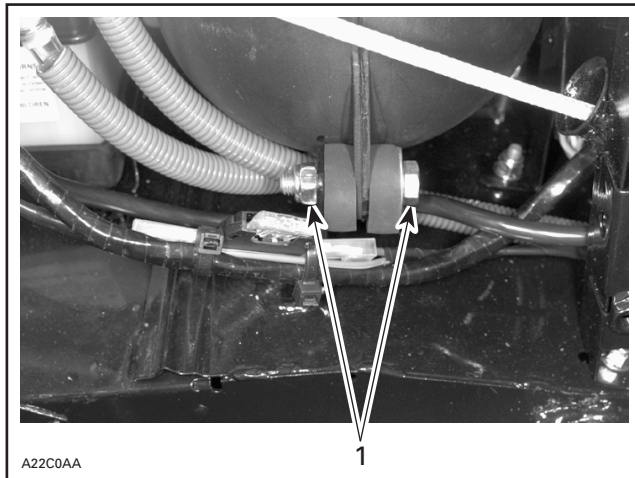
Skandic WT

Battery Removal

Remove air intake silencer.

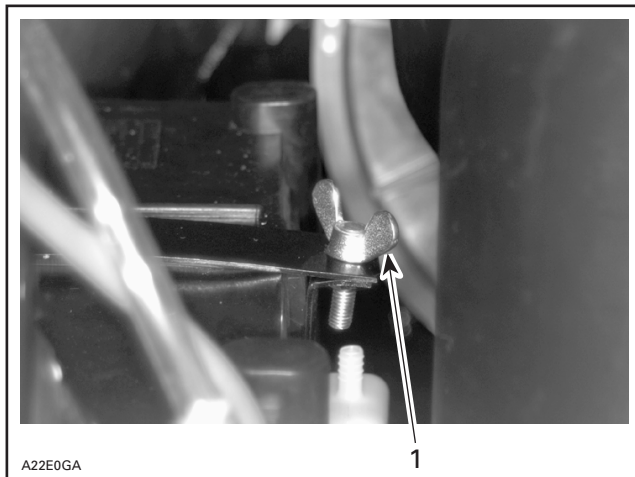


1. Loosen clamp



1. Remove bolt and lock nut

Unfasten battery brackets and remove battery.



1. Wing screw

Battery Installation

Secure battery brackets.

Connect battery cables.

◆ WARNING

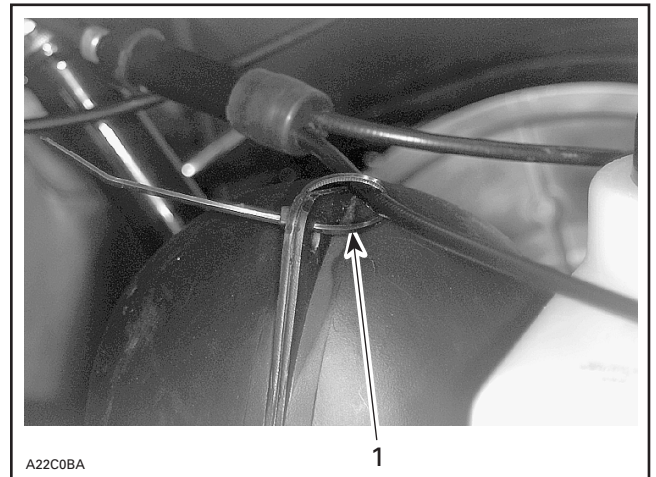
Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.

Apply silicone dielectric grease (P/N 413 7017 00) on battery posts and connectors.

Ensure that battery vent tube is properly installed from battery to the plug provided on the frame.

Reinstall air intake silencer.

Secure oil injection pump cable to air intake silencer using a locking tie. Install locking tie loosely as per following illustration.



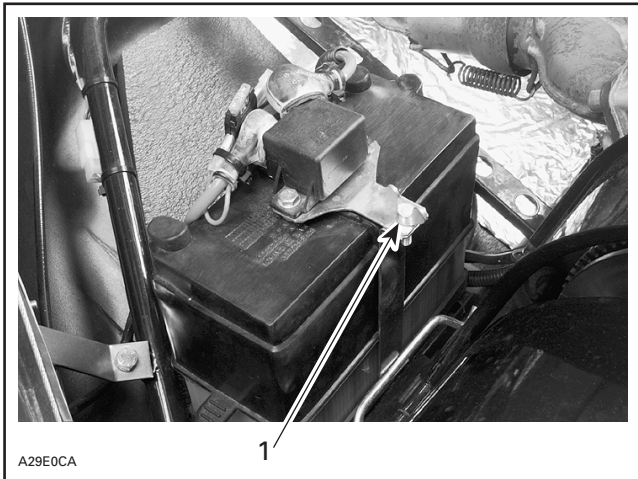
1. Locking tie

Skandic WT LC

Battery Removal

Unscrew wing screw and remove bracket with solenoid.

Remove battery cover and remove battery from vehicle.



1. Wing screw

Battery Installation

Install battery in vehicle.

Connect battery cables.

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.

Apply silicone dielectric grease (P/N 413 7017 00) on battery posts and connectors.

Install battery cover.

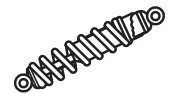
Install battery bracket with solenoid and secure with wing screw.

Ensure vent tube is properly installed from battery to the special reservoir provided.



PARTS INSTALLATION

REAR SUSPENSION

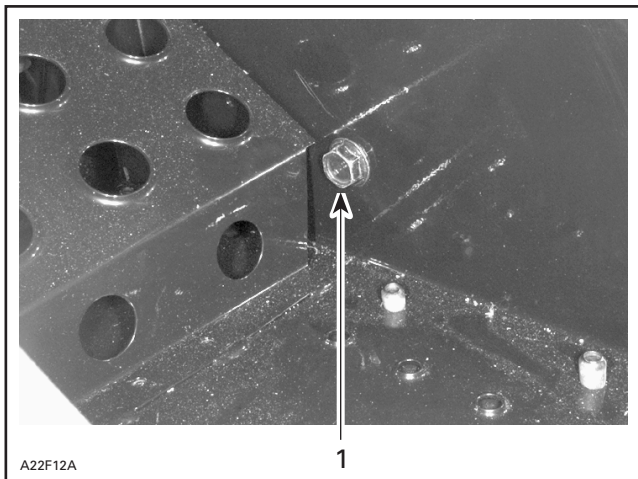


Secure front arm upper axle of rear suspension using 2 M10 x 30 screws in plastic bag under the seat.

Apply Loctite 242 on threads and torque screws to 58 N•m (43 lbf•ft).

Secure rear arm using previously removed screws.

Apply Loctite 242 on threads and torque screws to 58 N•m (43 lbf•ft).



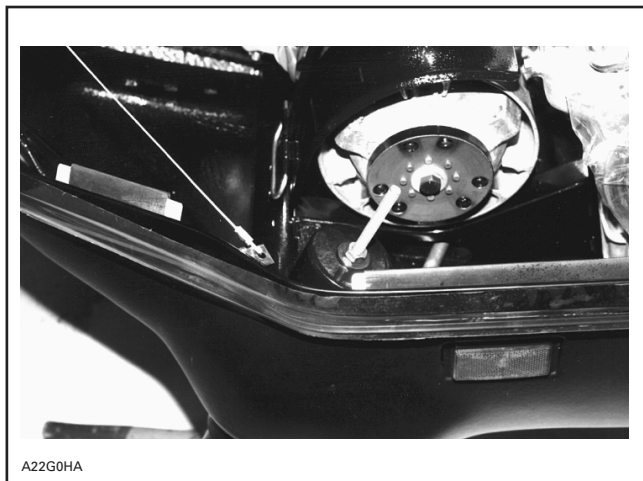
1. Torque screw on each side to 58 N•m (43 lbf•ft)



PARTS INSTALLATION FRONT SUSPENSION



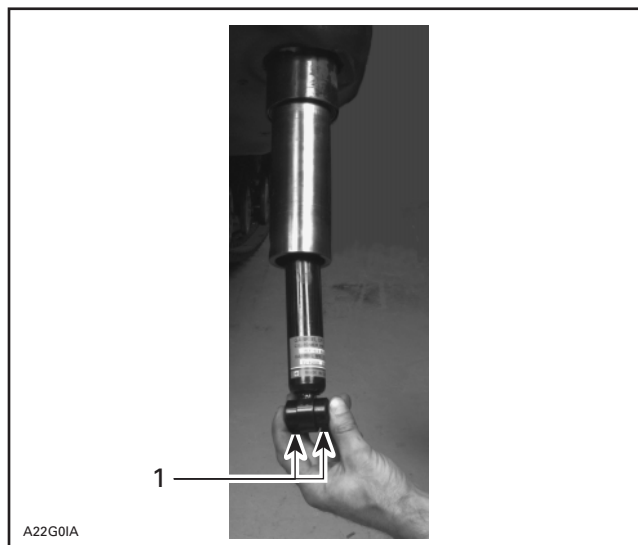
Remove long bolts that compress front suspension on both sides.



Install 2 plastic bushings into shock absorber eyelets.
Stretch shock to its maximum.

Slide shock absorber onto bottom of ski leg until shock rod goes through cap hole.

Loosely install washer and nut on shock rods, keeping at least 1/4 in (5mm) of free play.



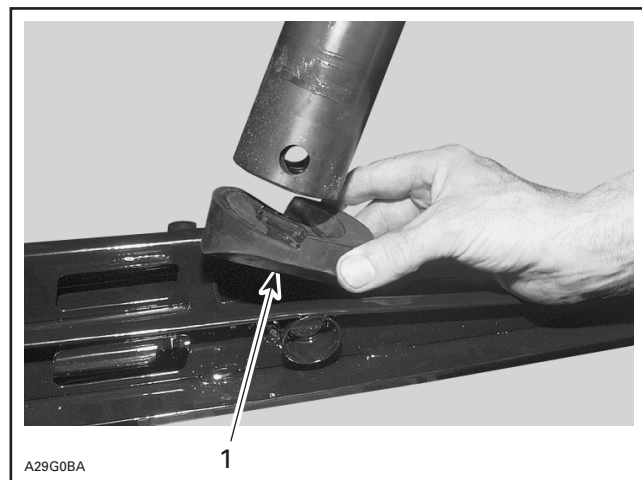
1. Plastic bushings



PARTS INSTALLATION SKIS

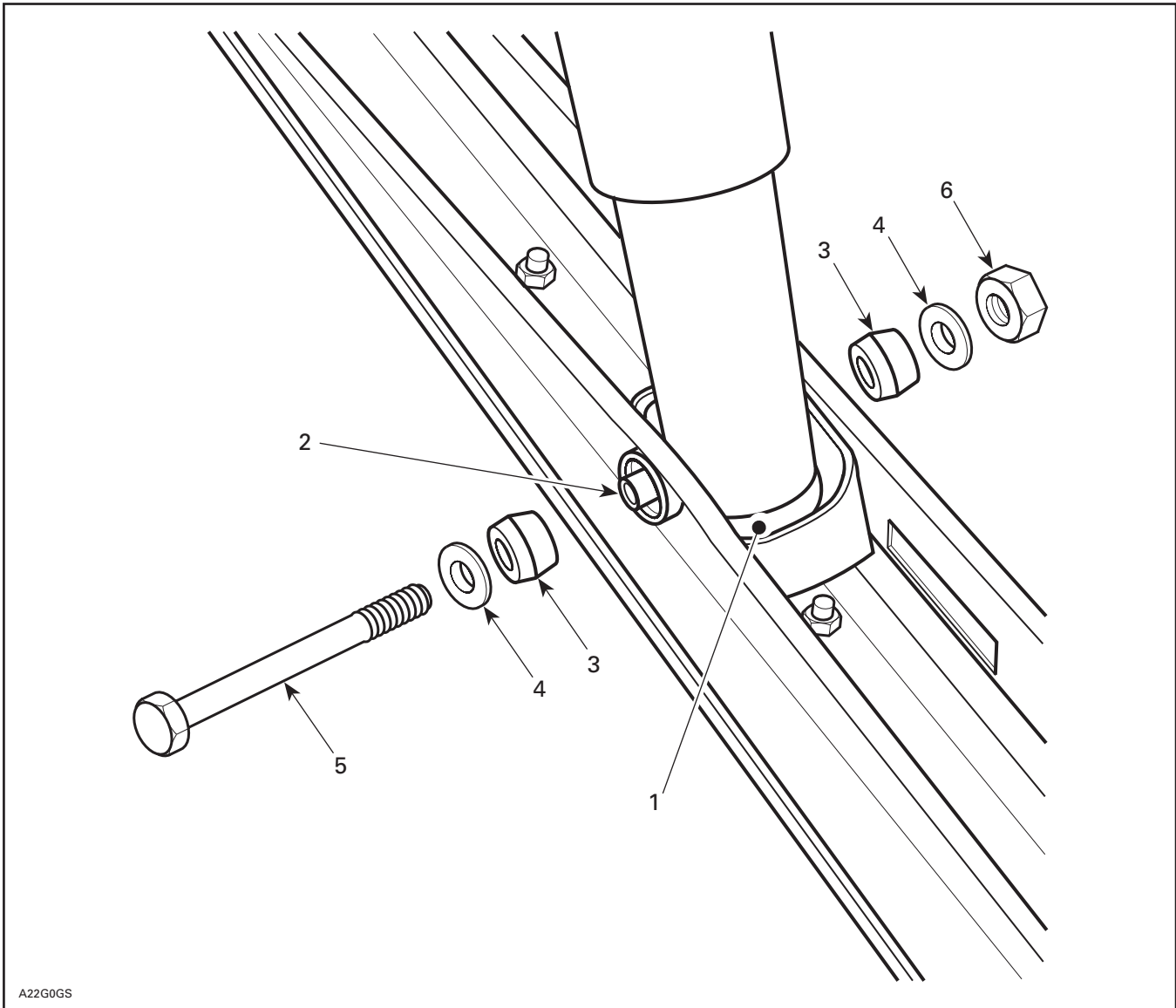


Install stop bounding on skis with its highest portion toward front.



1. Stop bounding

Install skis on vehicle using bolts, nuts, washers and rubber bushings supplied in the predelivery kit.



- 1. Stop bounding
- 2. Sleeve
- 3. Rubber bushing (2)
- 4. Flat washer (2)
- 5. Bolt M10 x 120
- 6. M10 lock nut, tighten to 48 N•m (35 lbf•ft)

Tighten shock rod top nuts to 30 N•m (22 lbf•ft).



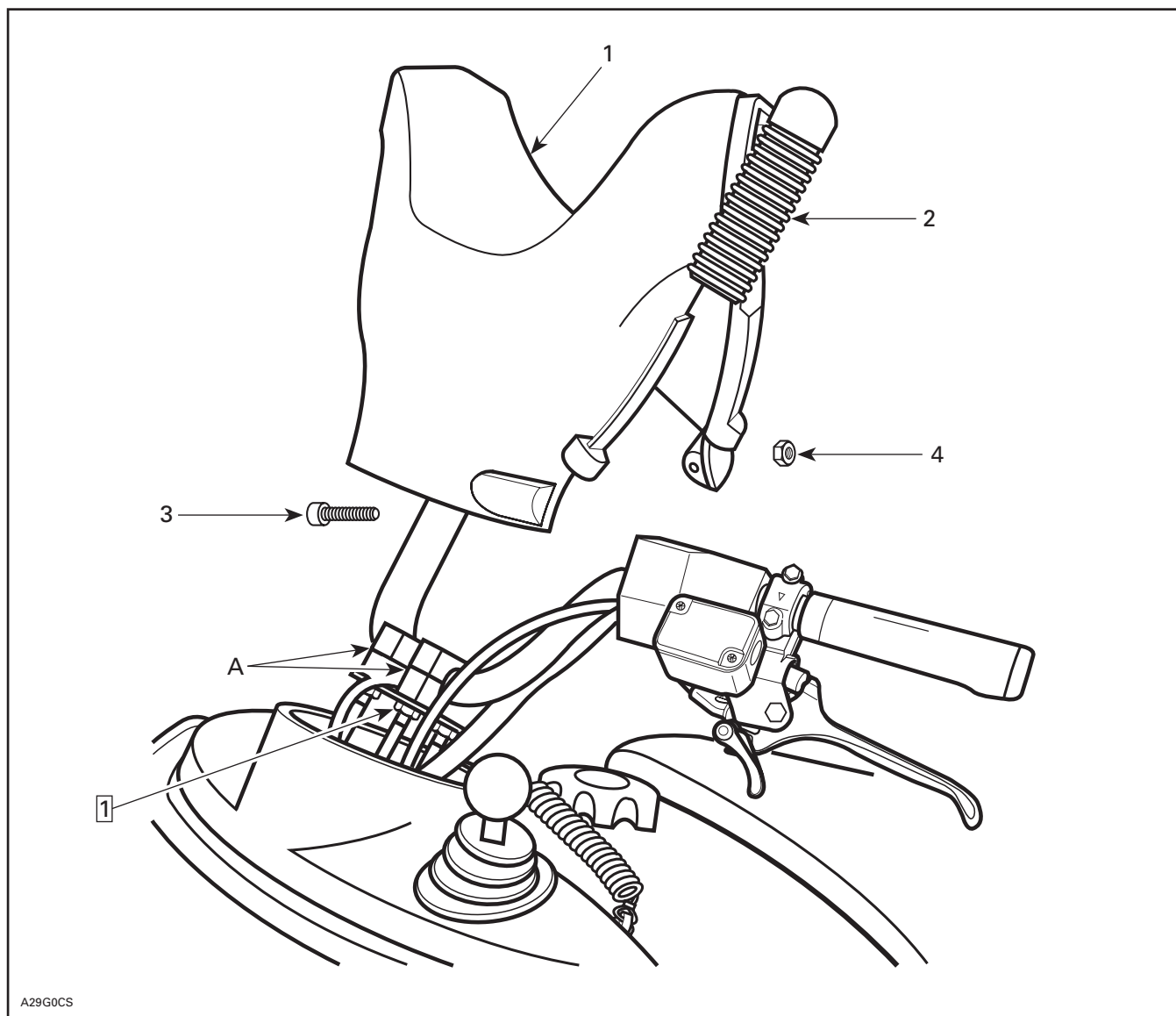
PARTS INSTALLATION STEERING PAD



Adjust handle bar and set both clamps to have equal gap on each side. Torque nuts to 26 N•m (19 lbf•ft).
Loosen throttle and brake handle housings.

Install steering pad.

Adjust both throttle and brake handle housings to match steering pad.



TYPICAL

Step 1: Torque to 26 N•m (19 lbf•ft)

1. Steering pad
2. Keyway. Use liquid soap to ease installation
3. Screw M5 x 0.80 x 20 (2)
4. Nut M5 x 0.80 x 20 (2). Seat tighten only, no deformation of rubber
- A. Equal gap on each side (Both clamps)

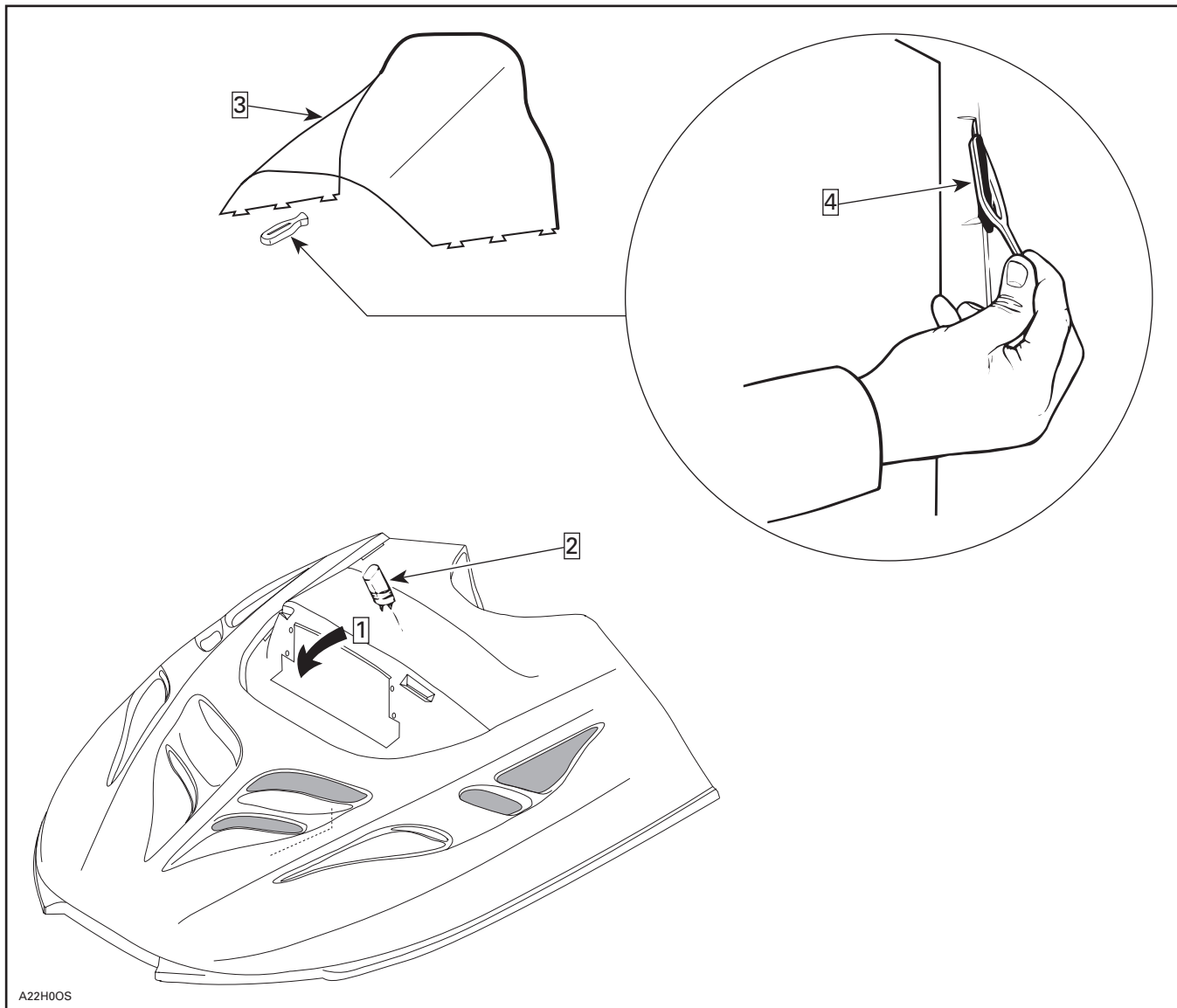


PARTS INSTALLATION WINDSHIELD



Remove headlamp molding.

Install rubber support in predrilled holes on the hood.



Step **1** : Pry out headlamp molding

Step **2** : Install support. Apply soap on tips to ease installation

Step **3** : Install windshield

Step **4** : Install latches (10)

Install windshield and secure with latches inside hood.

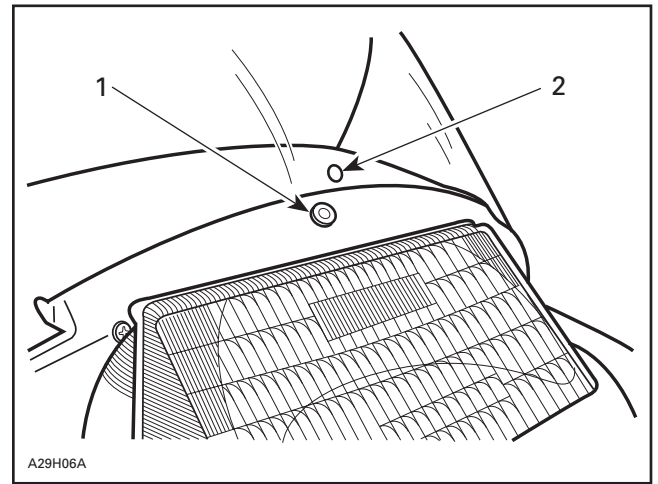
Install rubber expansion nut in hole above head light.

Line up hole in windshield with rubber expansion nut and install screw with cup.

Tighten slightly so that rubber expands inside hood.

Install rubber cap on screw and reinstall headlamp molding.

Make sure to properly position lower edge of plastic molding under head lamp.



1. Rubber expansion nut
2. hole in windshield



PARTS INSTALLATION BACKREST AND SEAT STRAP

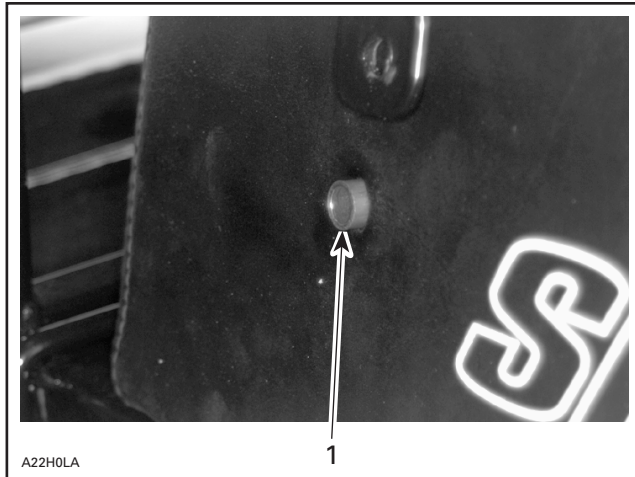


WT and WT LC

Remove screws retaining backrest to seat.

Remove backrest.

Install spacers (included in shrink kit) in rear seat holes of backrest.

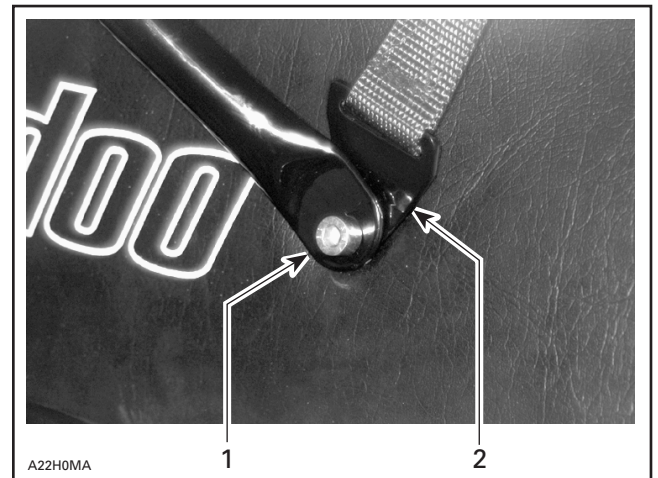


1. Spacer

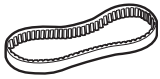
Reinstall backrest in its proper position.

Secure rear arm backrest using 2 M8 x 30 screws previously retaining backrest to seat.

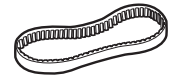
Install seat strap with front arm of backrest and secure with M8 X 20 screws included in the shrink pack.



1. Front arm of backrest
2. Seat strap



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disk brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.



LIQUIDS OIL INJECTION PUMP BLEEDING

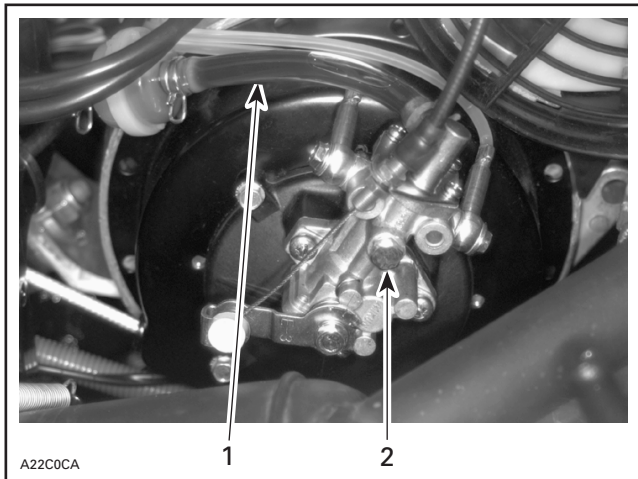


All Models

To assure additional protection during the initial engine break-in, 500 ml (18 imp. oz.) of BOMBARDIER-ROTAX injection oil (P/N 413 8029 00) should be added to fuel for the first full filling of fuel tank.

Skandic WT

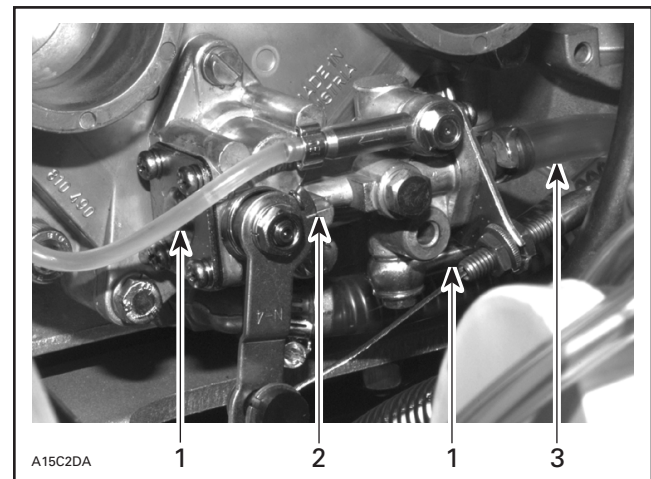
Bleed main oil line (between tank and pump) by loosening the bleeder screw until all air has escaped from the line. Add injection oil as required.



1. No air in main line
2. Bleeder screw

Bleed the small oil lines between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

Skandic WT LC



1. Small oil line
2. Marks aligned
3. Main oil line

Remove air silencer and move carburetors aside.

Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

Check also for proper oil lever adjustment. Marks must align when throttle lever is activated just enough to take all cable free-play.

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

Reinstall air silencer.



LIQUIDS

BRAKE FLUID LEVEL



All Models

Check brake fluid in reservoir for proper level.
Add recommended brake fluid as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partially filled bottle of brake fluid.



1. Fluid level window



LIQUIDS

ENGINE COOLANT LEVEL



Skandic WT LC Only

With vehicle on a flat surface and engine cold, remove pressure cap and check coolant level. Add coolant as needed.

▼ CAUTION

To prevent rust formation or freezing conditions, always use ethylene-glycol antifreeze containing corrosion inhibitors specially recommended for aluminum engines. Always use 60% antifreeze and 40% water.

Reinstall pressure cap.

Run engine until thermostat opens then stop engine.

Check hoses for leaks.

When engine has completely cooled down, recheck coolant level and top up if necessary.



ADJUSTMENTS

TRACK





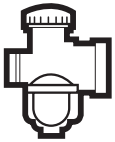


Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.








TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicle used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

	MODELS	SKANDIC WT	
	Engine Type	ROTAX 503	
	Maximum HP RPM ①	± 100 RPM 6800	
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC) Not Applicable	
	Carburetor Type	VM 34-515	
	Main Jet	210	
	Needle Jet	P-4 (159)	
	Pilot Jet	40	
	Needle Identification — Clip Position	6DH2-3	
	Slide Cut-away	2.5	
	Float Adjustment	mm (in) 36.5 (1.44)	
	Air Screw Adjustment	± 1/32 turn 1.5	
	Idle Speed	RPM 1650	
	Gas Grade/Pump Octane Number	(R + M)/2 Regular Unleaded/87	
	Gas/Oil Ratio	Oil Injection	
	Ignition Timing BTDC ②	mm (in) 1.66 (.065)	
	Trigger Coil Air Gap	mm (in) 0.45 - 0.55 (.018 - .022)	
	Gear Ratio	1 st gear 1:3.27 3.38 2 nd gear 1:2.07	
	Engagement Speed	± 100 RPM 2800	
	Drive Pulley Calibration Screw Position	4	
	Pulley Distance	Z (+ 0, - 1) mm (+ 0, - 1/32) in 32.75 (1-9/32)	
	Offset	X	± 0.4 mm (± 1/64 in) 36.50 (1-7/16)
		Y	Dimension Y must exceed X from 0.75 mm (.03 in) to 2.25 mm (.09 in)
	Drive Belt Adjustment	Deflection	mm (in) 32 (1-1/4)
		Force ③	kg (lbf) 11.34 (25)
	Driven Pulley Preload	kg (lbf) 7.0 ± 0.7 (15.43)	
	Drive Chain Tension	Not Applicable	
Track Adjustment	Deflection	mm (in) 40 to 50 (1.5 to 1.9)	
	Force	Kg (lbf) 7.3 (16.1)	

NOTE: See end of specifications for foot notes.

	MODELS	SKANDIC WT LC
	Engine Type	494
	Maximum HP RPM ① RPM	7000
	Rotary Valve P/N Opening (BTDC)/ Closing (ATDC)	420 9245 09 148° 52°
	Carburetor Type	PTO VM 34-519 MAG VM 34-520
	Main Jet	PTO 250 MAG 220
	Needle Jet	PTO 159 P-2 MAG 159 P-2
	Pilot Jet	PTO 30 MAG 30
	Needle Identification — Clip Position	PTO 6DH4-2 MAG 6DH4-2
	Slide Cut-away	PTO 2.5 MAG 2.5
	Float Adjustment ± 1 mm (± .040 in)	36.5 (1.437)
	Air Screw Adjustment ± 1/16 turn	PTO 1.0 MAG 1.0
	Idle Speed RPM RPM	1900
	Gas Grade/Octane Number (R + M)/2	Regular Unleaded/87
	Gas/Oil Ratio	Oil Injection
	Ignition Timing BTDC ② mm (in)	1.81 (.071)
	Trigger Coil Air Gap mm (in)	0.55-1.45 (.022 - .057)
	Gear Ratio	Low 1:3.38 High 1:1.86
	Engagement Speed RPM	2700
	Drive Pulley Calibration Screw Position	4
	Pulley Distance Z (+ 0, - 1) mm (+ 0, - 1/32) in	32.75 (1-9/32)
	Offset X ± 0.4 mm (± 1/64) in	36.50 (1-7/16)
	Y	Dimension Y must exceed X from .75 mm (.03 in) to 2.25 mm (.09 in)
	Drive Belt Adjustment Deflection mm (in)	32 (1-1/4)
	Force ③ kg (lbf)	11.34 (25)
	Driven Pulley Preload kg (lbf)	7.0 ± 0.7 (15.5 ± 1.5)
	Drive Chain Tension	Not Applicable
Track Adjustment Deflection mm (in)	40 to 50 (1.5 to 1.9) with a 7.3 kg (16 lb) downward pull	

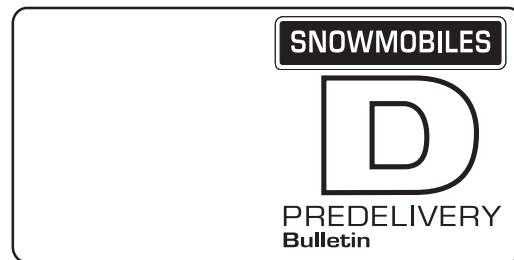
① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **98-16**

Date: September 29, 1997

SUBJECT: Predelivery Procedure

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1998	Canada: Formula* III 700 Formula* III 700 (R)	1208 1296	ALL
1998	United States: Formula* III 700 Formula* III 700 (R)	1209 1297	ALL

This bulletin must be used in conjunction with the check list enclosed in *Operator's Guide bag*. Make sure that predelivery check list is completed and signed.

◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

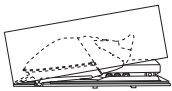
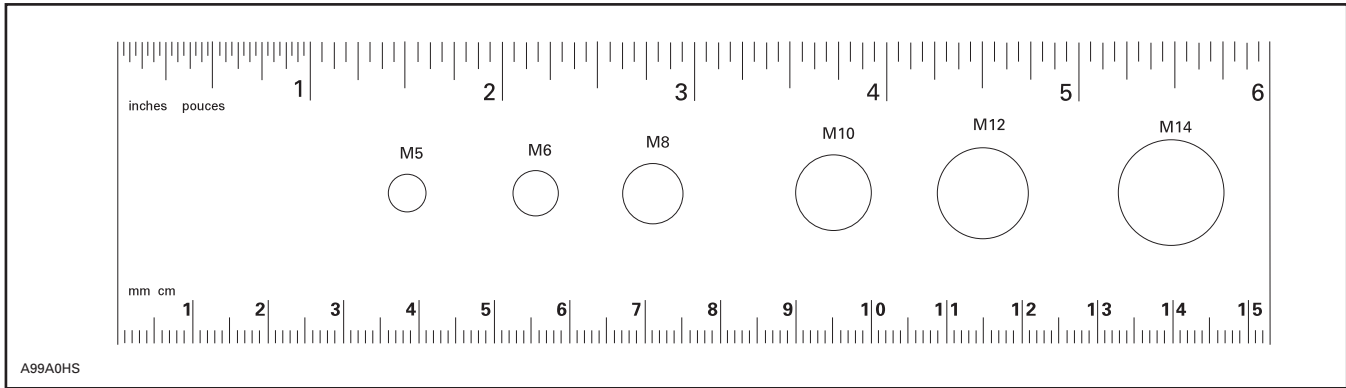
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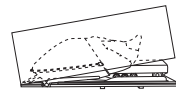
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquires should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and *video*.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.

NOTE: This ruler can be helpful to identify fastener length or size.



UNCRATING



PREDELIVERY KIT P/N	MODELS
580 6605 00	FORMULA III 700 FORMULA III 700 (R)

◆ WARNING

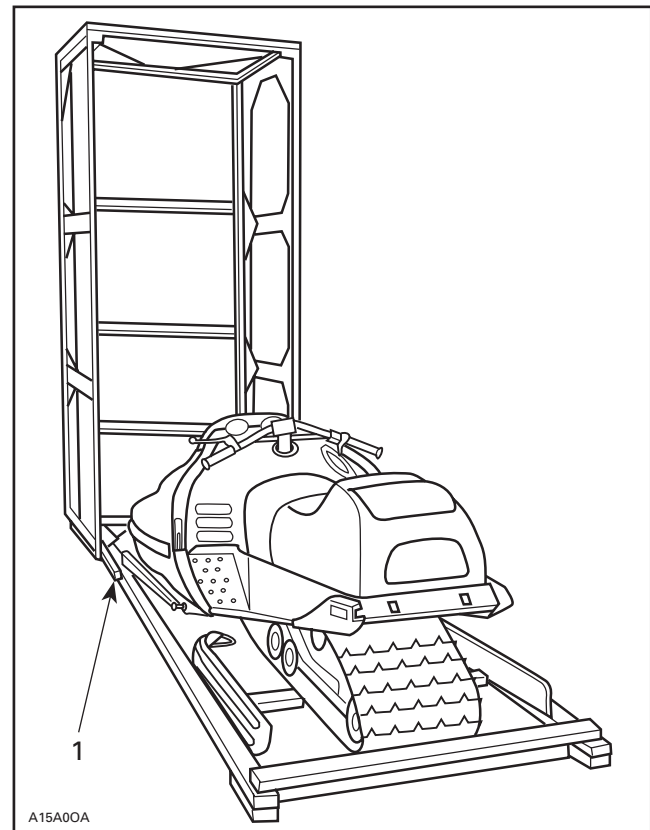
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties and rope retaining windshield.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts, slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, predelivery kit, shock absorbers and other parts to be installed from box.

Remove drive belt from engine compartment.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



A00A48A

EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.



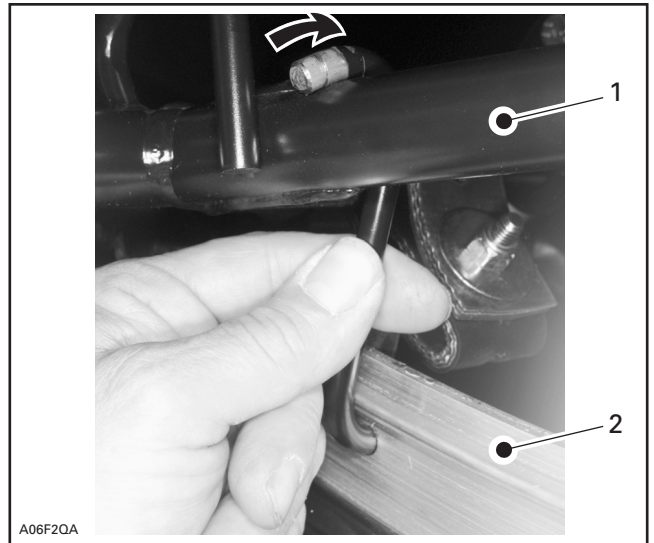
A00A49A

TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

Before removing hook always verify that vehicle is properly supported and that parking brake is applied.

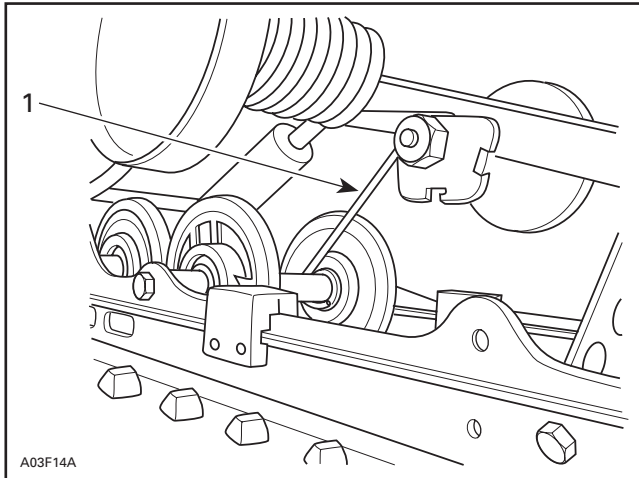


A06F20A

TYPICAL — REMOVE HOOK

1. Front arm
2. Runner

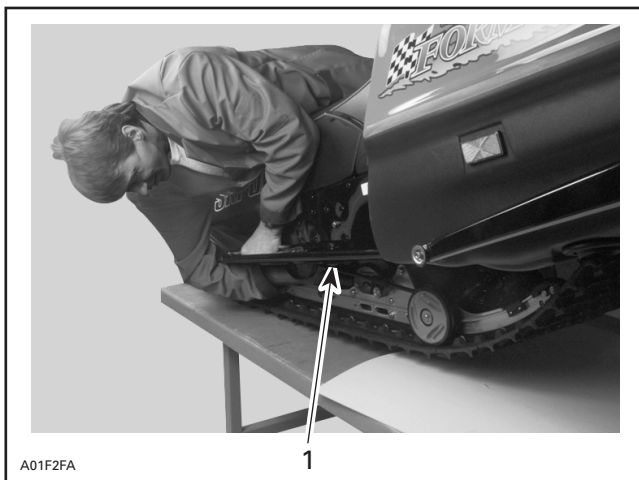
REAR HOOK REMOVAL



1. Hook to be removed

Lift front of vehicle to position bumper 35 to 40 in upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



1. Remove hook on the rear portion of the suspension

▼ CAUTION

Both hooks must be removed to have snowmobile suspension operational.

DIGITAL ENCODED SECURITY SYSTEM (DESS)

The DESS is a deterrent against theft. **Once programmed**, the tether cord provided with snowmobile is the only one that allows engine to turn more than 2500 RPM. If a wrong tether cord is installed the engine will start but will not reach engagement speed required to move vehicle.

The snowmobile MPEM can be programmed to allow the use of up to 8 tether cords. When 8 tether cords have been programmed all cords must be deleted from MPEM memory before others can be added.

Each tether cord has a small magnet as well as a small micro chip molded into the rubber cap. The magnet will close a primary circuit in the electrical system. This completes the circuit and allows the MPEM to read the electronic number in the tether cord when engine is started.

NOTE: We do not program the tether cord. We record the tether cord electronic number into the MPEM memory.

The MPEM also handles data input such as; customer name, delivery date and it records the hours of operation.

After engine is started 2 beeps confirm that the MPEM has recognized the tether cord (if applicable). If the pilot lamp does not blink, all is O.K. The vehicle can then be driven normally.

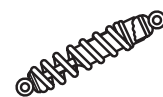
A beep every 3 seconds (if applicable) and DESS pilot lamp blinking at the same rate means that a bad connection has been detected. Vehicle can not be driven.

To program tether cord refer to *SKI-DOO MPEM Programmer Guide* (P/N 480 1436 01).

NOTE: All snowmobiles must be started before programming tether cord. Engine will automatically stop on snowmobiles equipped with a battery. Engine will keep running on snowmobiles without battery.

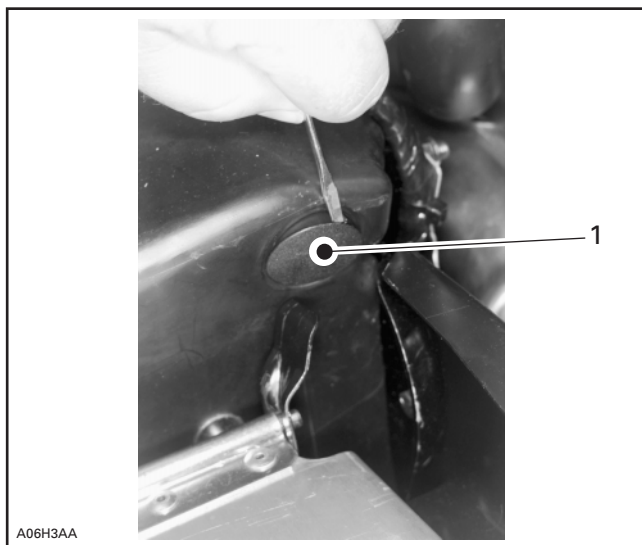


PARTS INSTALLATION FRONT SUSPENSION



Lift front of vehicle and block safely.

From inside engine compartment, remove caps as shown in the next photo.

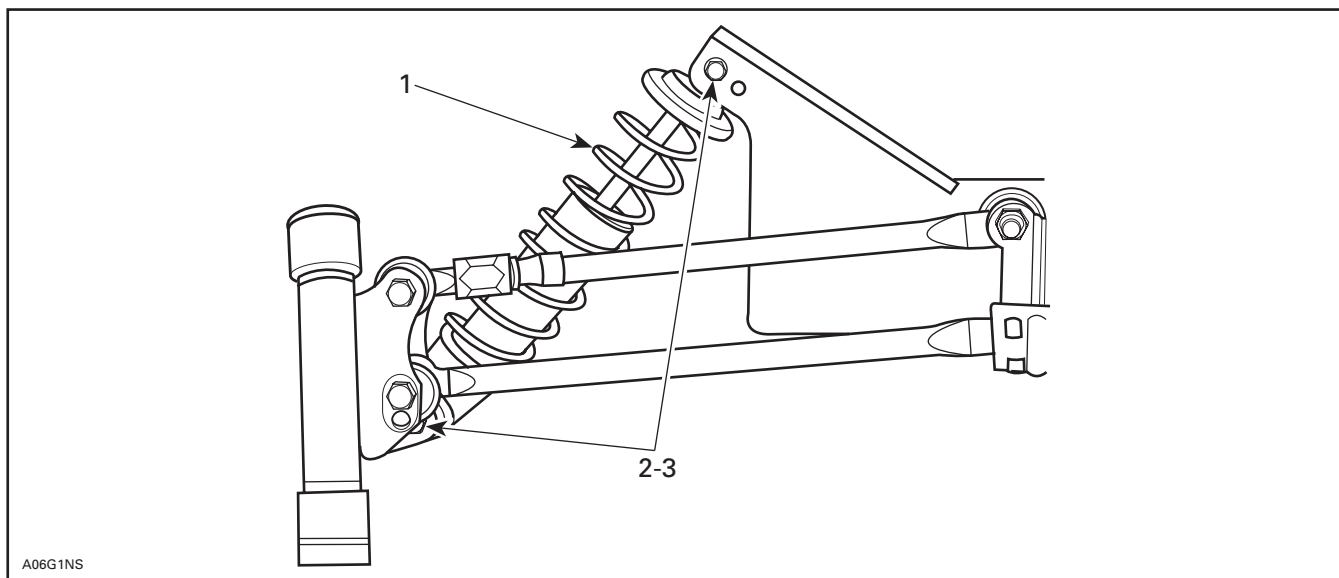


INSIDE ENGINE COMPARTMENT

1. Using flat screwdriver, remove cap

Remove and discard shipping brackets from suspension. Discard spring clips, keep bolts. Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position bolt heads toward front.

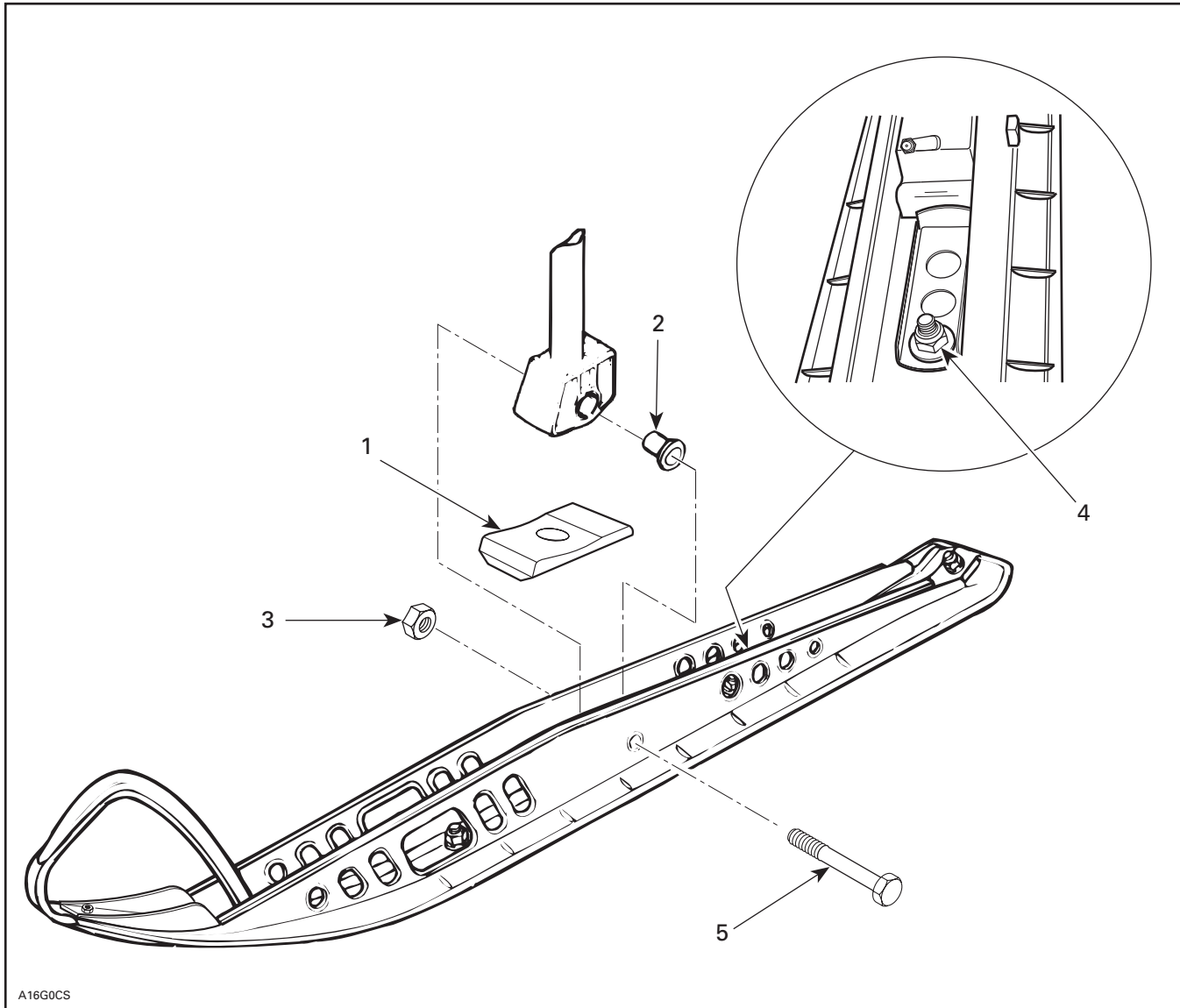


TYPICAL — RIGHT SIDE SHOWN

1. Shock absorber (2) (box)
2. M10 x 1.5 x 55 bolt (on suspension)
3. M10 x 1.5 nut (section 4). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION SKIS



A16G0CS

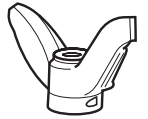
LEFT SIDE SHOWN

1. Ski stopper (2) (section no. 8), "AVANT" toward front
2. Slider cushion (4)
3. Nut M12 (2) (section no. 8). Torque to 40 N•m (30 lbf•ft)
4. Loosen then adjust against ski stopper 14 N•m (124 lbf•in)
5. Bolt M12 (2)

After ski installation, adjust stopper against stop bounding then tighten nut to 14 N•m (124 lbf•in). More preload on stop bounding will result in a more aggressive steering. Adjust according to driver preferences.



PARTS INSTALLATION STEERING PAD



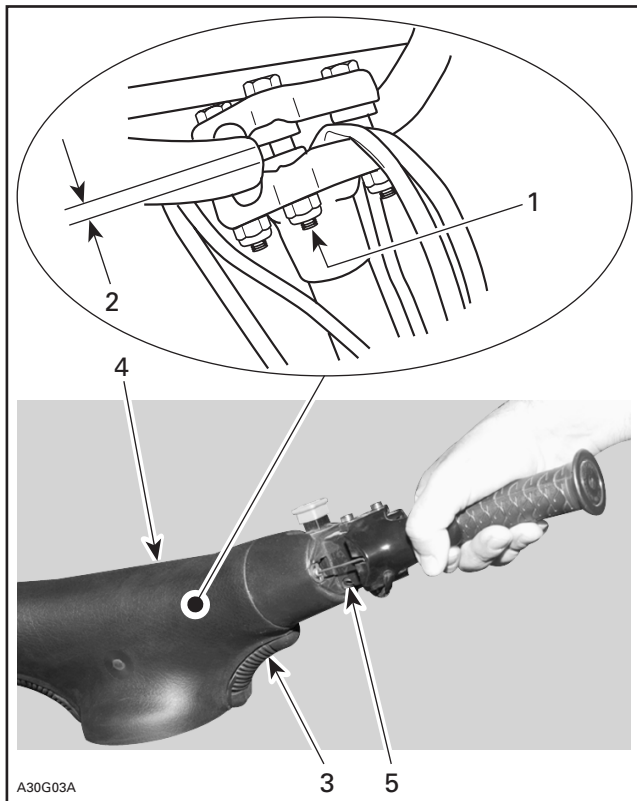
Adjust handlebar temporarily and tighten nuts loosely for now.

Loosen Allen screw of throttle and brake handle housings, at least 3 turns.

Install steering pad temporarily, and adjust for proper fit with console.

Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).

Reinstall steering pad, adjust and tighten throttle and brake handle housing.



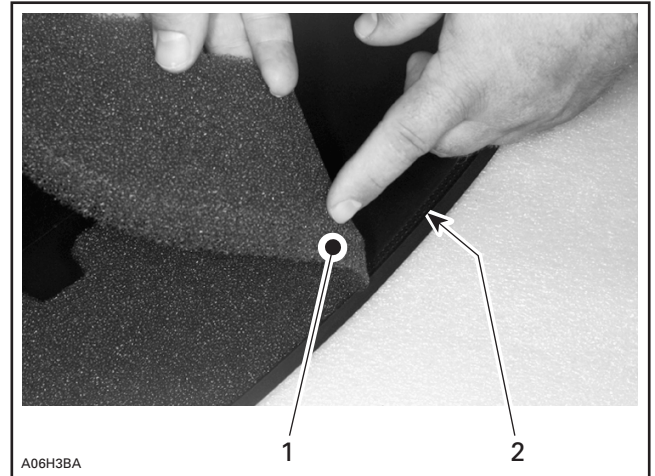
1. Torque nuts to 26 N•m (19 lbf•ft)
2. Equal gap each side (both clamps)
3. Keyway (2) (section 5)
4. Steering pad (box)
5. Loosen Allen screw (if needed)

NOTE: Air deflector with foam must be installed before windshield.

AIR DEFLECTOR

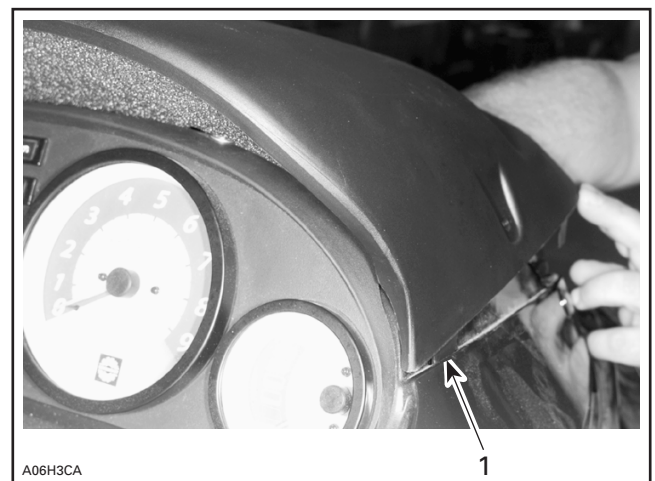
Preparation

Install air intake foam onto air deflector. Beveled surface must be facing Velcro, as shown in the next photo.



1. Beveled surface on air intake foam
2. Velcro on air deflector

Position air intake deflector rear tabs (left and right side) into hood slots, as shown in the next photo.



1. Air intake deflector rear tab (right side)

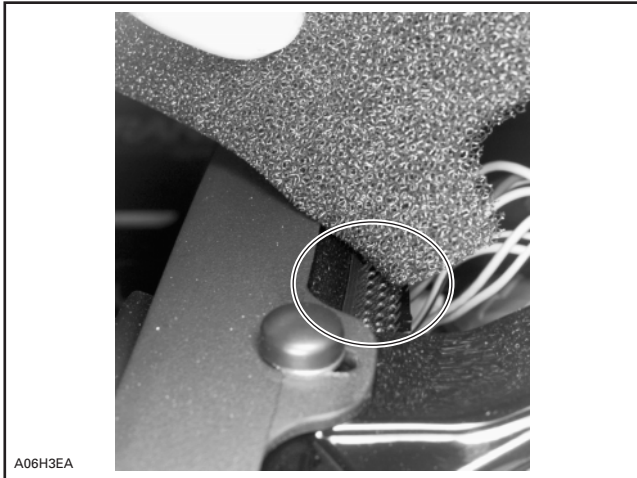
Holding air intake deflector, insert one hand underneath deflector, as shown in the next photo. Attach air intake foam to hood Velcro.



A06H3DA

FROM UNDERNEATH DEFLECTOR, ATTACH FOAM TO VELCRO

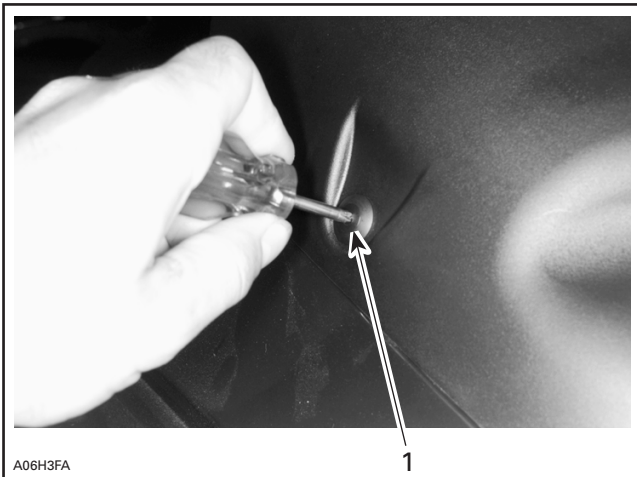
NOTE: Ensure that air intake foam is properly attached to Velcro. See next photo.



A06H3EA

AIR INTAKE DEFLECTOR HAS BEEN REMOVED TO SHOW WHERE AND HOW TO ATTACH AIR INTAKE FOAM TO HOOD

Secure air intake deflector using dart, as shown in the next photo.



A06H3FA

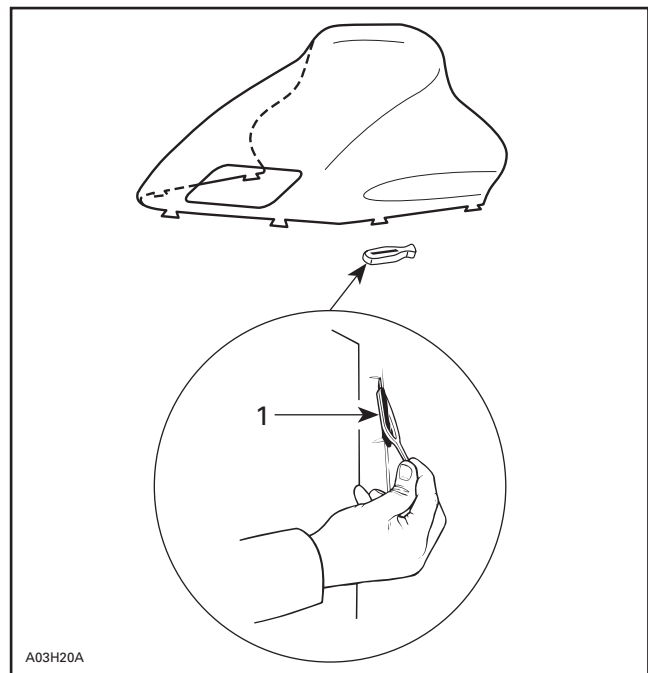
1. Dart (2) (section no. 6)

Install windshield on hood dashboard and secure with latches.



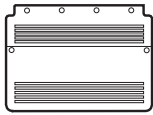
A06H3GA

WINDSHIELD INSTALLED ON DASHBOARD

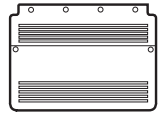


A03H20A

1. Latch (6) (P/N 570 0238 00) (section no. 6)

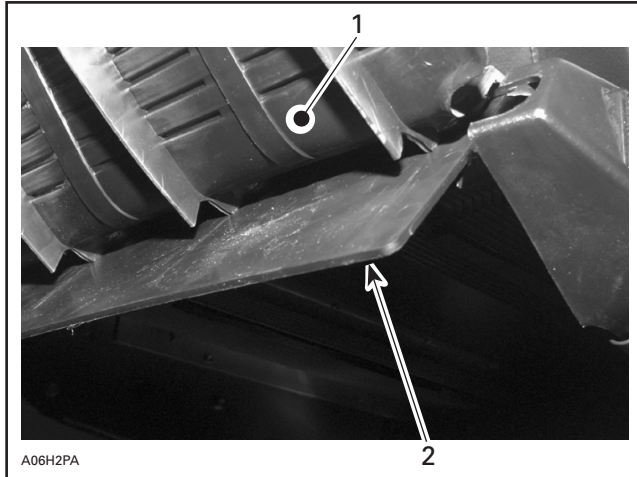


PARTS INSTALLATION SNOW GUARD



Position snow guard protector pad onto chassis.
Install snow guard over protector pad, as shown
in the next photo.

Finalize snow guard installation with caps, as
shown in the next photo.



TYPICAL — VIEW FROM UNDER SNOW GUARD

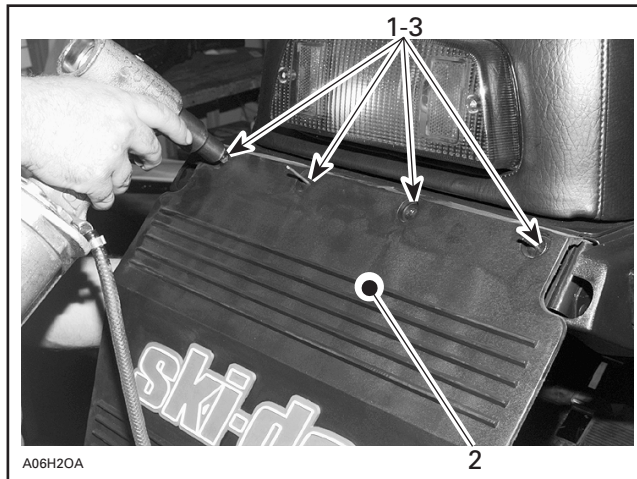
1. Snow guard (box)
2. Snow guard protector pad (box)



1. Cap (4) (section no. 9)

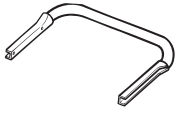
Secure the 2 parts with rivets.

NOTE: Place washers inside tunnel.

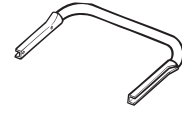


TYPICAL

1. Rivet (4) (section no. 2)
2. Snow guard
3. Washer (4) (section no. 2). Position washer inside tunnel

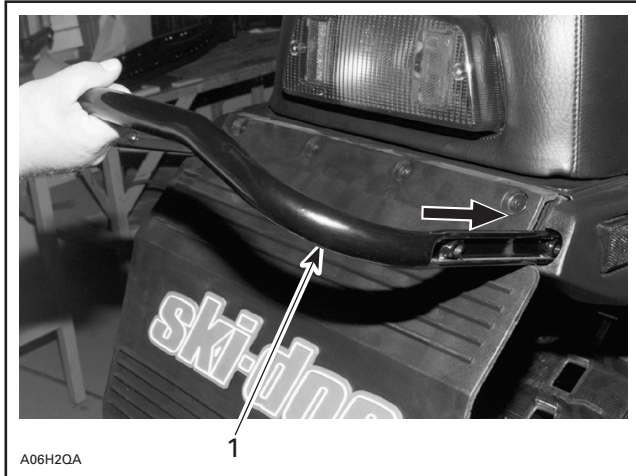


PARTS INSTALLATION REAR BUMPER



Install rear bumper to chassis.

Secure bumper from inside of tunnel.

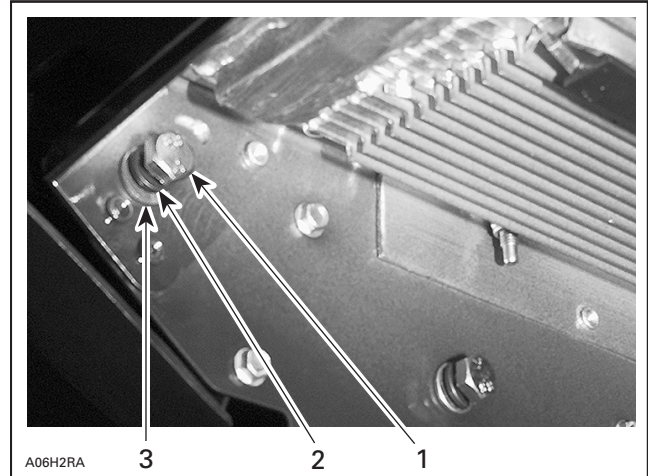


A06H2QA

1

SLIDE BUMPER INSIDE REAR MOLDINGS

1. Rear bumper



A06H2RA

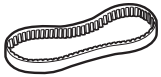
3

2

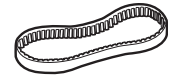
1

TYPICAL — VIEW FROM INSIDE OF TUNNEL

1. Bolt M8 (4) (section no. 1). Torque to 24 N•m (18 lbf•ft)
2. Lock washer (4) (section no. 1)
3. Washer (4) (section no. 1)



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.



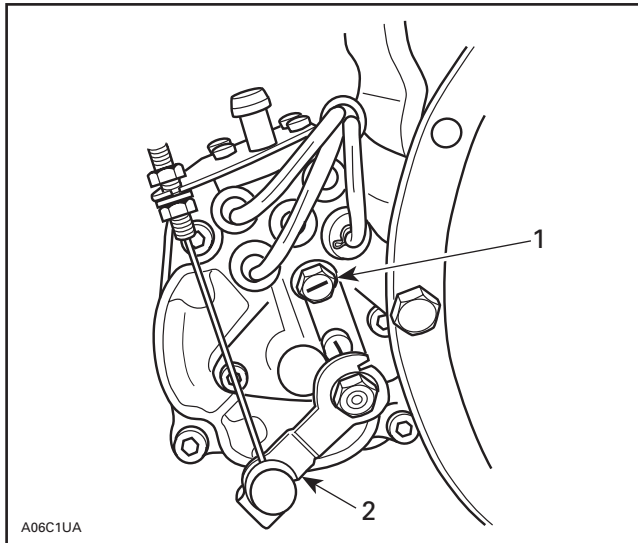
LIQUIDS

OIL INJECTION PUMP BLEEDING



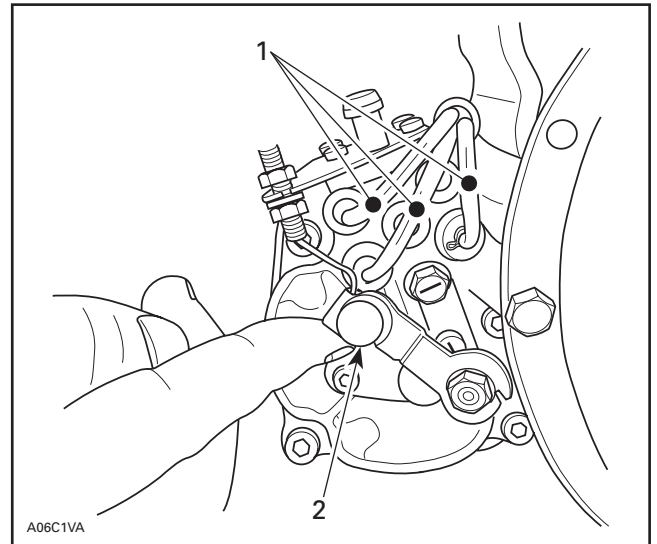
To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 8029 00 — 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

Bleed main oil line (between tank and pump) by loosening the bleeder screw until all air has escaped from the line. Add injection oil as required.



1. Bleeder screw
2. Oil pump lever

Bleed the small oil lines between pump and engine crankcase by running engine at idle while holding the pump lever in fully open position.



1. Small oil lines
2. Engine at idle (fully open position)



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid (DOT 4) in reservoir for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



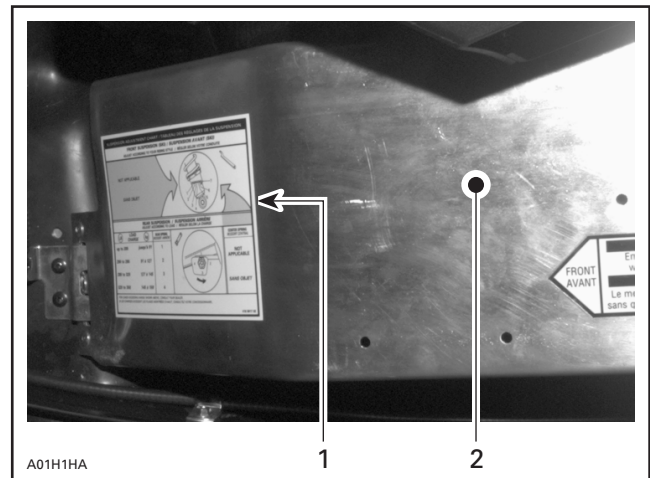
1. Minimum



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See Technical Data section at the end of this bulletin.



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).



TECHNICAL DATA








The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquires should be directed to your distributor service representative.



TECHNICAL DATA



	MODEL	FORMULA III 700/700 (R)			
	Engine Type	699			
	Maximum HP RPM ①	± 100 RPM 7900			
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC) N.A.			
	Carburetor Type	PTO VM 38-396	CTR VM 38-397	MAG VM 38-396	
	Main Jet	PTO 310	CTR VM 300	MAG 310	
	Needle Jet	P-1 (480)			
	Pilot Jet	PTO 50	CTR 50	MAG 50	
	Needle Identification — Clip Position	6DEH5			
	Slide Cutaway	2.5			
	Float Adjustment	± 1 mm (in) 18.1 (.71)			
	Air Screw Adjustment	± 1/16 turn PTO 2.5 CTR 2.5 MAG 2.5			
	Idle Speed RPM	± 200 RPM 1800			
	Gas Grade/Octane Number	(R + M)/2 Super Unleaded/91			
Gas/Oil Ratio	Oil Injection				
	Ignition Timing BTDC ②	mm (in) 2.18 (.086)			
	Trigger Coil Air Gap	mm (in) 0.55 - 1.45 (.022 - .057)			
	Gear Ratio	Teeth 26/43			
	Engagement Speed	± 100 RPM 4200			
	Drive Pulley Calibration Screw Position	3			
	Pulley Distance	Z	(+ 0, - 1) mm (+ 0, - 1/32) in 120 (4-3/4)		
		X	± 0.4 mm (± 1/64 in) 35.5 (1-25/64)		
	Offset	Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)		
		Deflection	mm (in) 32 (1-1/4)		
	Drive Belt Adjustment	Force ③	kg (lbf) 11.34 (25.00)		
		Driven Pulley Preload	± 0.7 kg (± 1.5 lbf) 7.00 (15.43)		
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation			
Track Adjustment	Deflection	mm (in) 35 to 40 (1-3/8 to 1-9/16) with a 7.3 kg (16 lb) downward pull			

① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center

ATDC: After Top Dead Center

PTO: Power Take Off side

CTR: Center

Please route to :

<input type="checkbox"/> Service	<input type="checkbox"/> Init.
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



SNOWMOBILES



PREDELIVERY
Bulletin

No. **98-17**

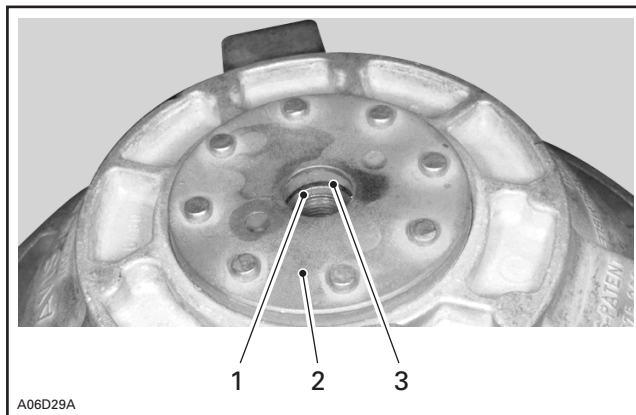
Date: October 3, 1997

SUBJECT: TRA Drive Pulley

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1998	ALL MODELS EQUIPPED WITH A TRA DRIVE PULLEY	ALL	ALL

Verify fit between inner shaft end and governor cup damper by simply removing retaining bolt.

A visual inspection will tell if a gap is existing. Refer to following illustration.



1. Inner shaft
2. Governor cup
3. Check gap here

If gap is existing, replace inner half and verify pulley alignment.

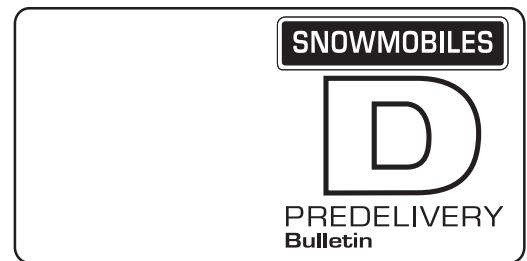
On vehicles equipped with an electric starter, removal and reinstallation of ring gear will be required.

For complete procedure, refer to appropriate *Shop Manual*.

Normal warranty applies.

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **98-19**

Date: October 8, 1997

SUBJECT: Predelivery Procedure

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1998	Canada: Formula* III 600 Formula* III 600 LT	1204 1206	ALL
1998	United States: Formula* III 600 Formula* III 600 LT	1205 1207	ALL
1998	Sweden: Formula* III 600	1255	ALL

This bulletin must be used in conjunction with the *Predelivery Check List* enclosed in *Operator's Guide* bag. Make sure that predelivery check list is completed and signed.

◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

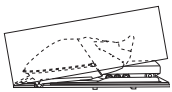
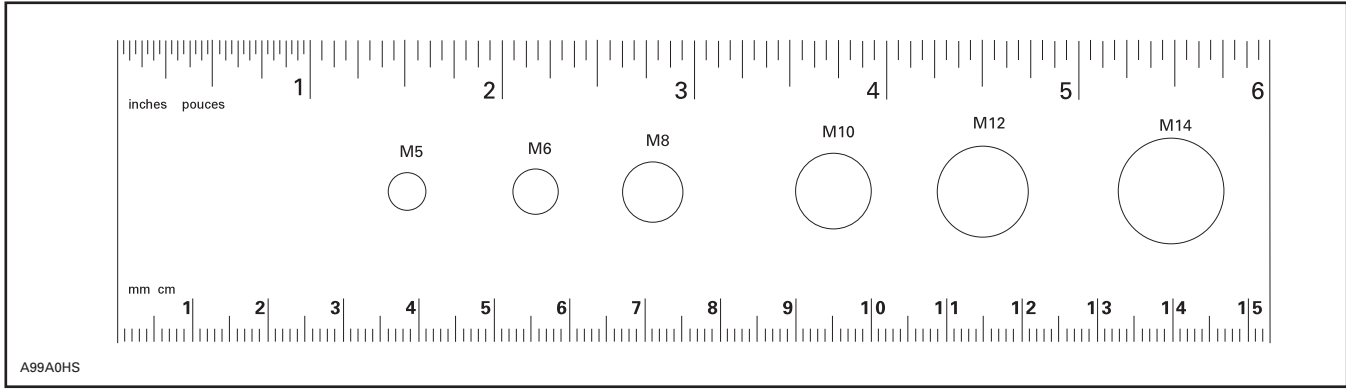
NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

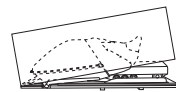
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and *video*.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.

NOTE: This ruler can be helpful to identify fastener length or size.



UNCRATING



PREDELIVERY KIT P/N	MODELS
580 6605 00	FORMULA III 600 FORMULA III 600 LT

◆ WARNING

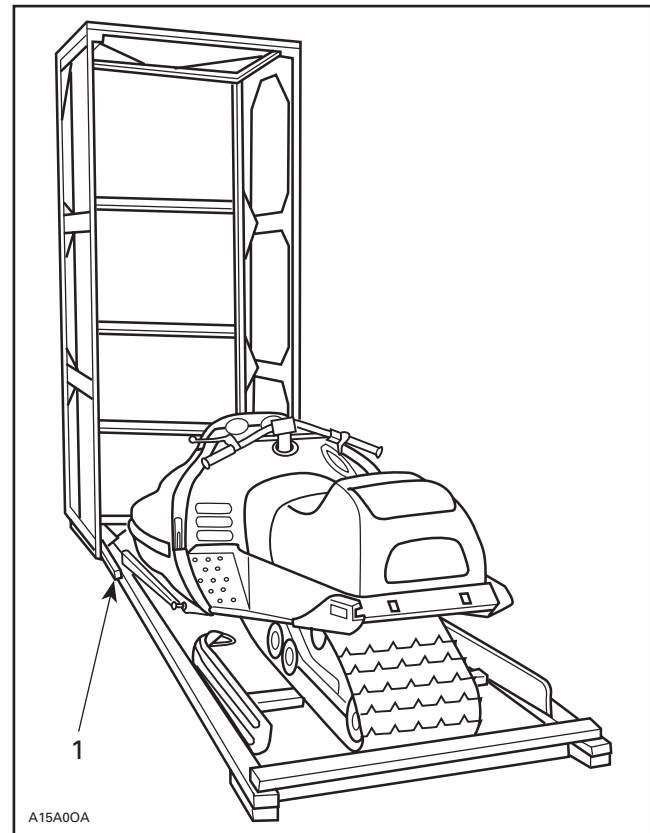
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties and rope retaining windshield.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts, slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, predelivery kit, shock absorbers and other parts to be installed from box.

Remove drive belt from engine compartment.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



A00A48A

EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.



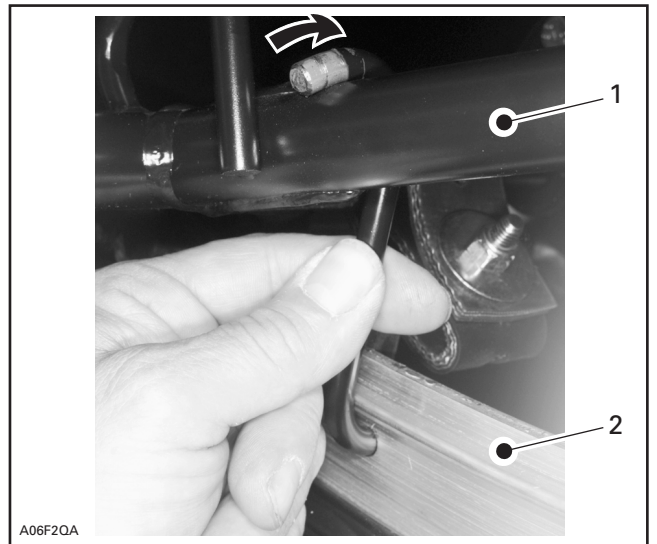
A00A49A

TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

Before removing hook always verify that vehicle is properly supported and that parking brake is applied.

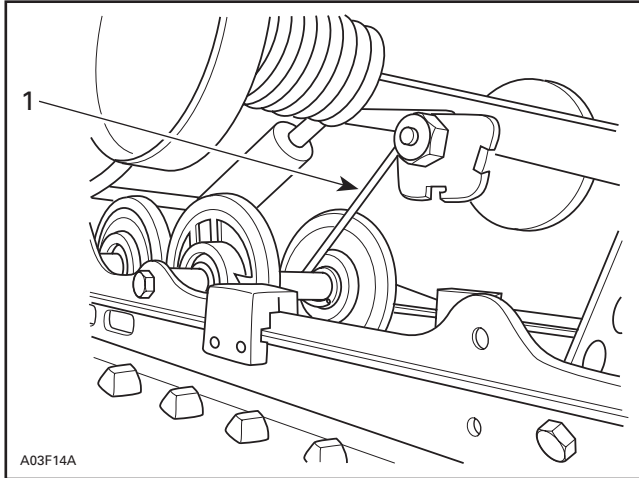


A06F20A

TYPICAL — REMOVE HOOK

- 1. Front arm
- 2. Runner

REAR HOOK REMOVAL



1. Hook to be removed

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



1. Remove hook on the rear portion of the suspension

▼ CAUTION

Both hooks must be removed to have snowmobile suspension operational.

DIGITAL ENCODED SECURITY SYSTEM (DESS)

The DESS is a deterrent against theft. **Once programmed**, the tether cord provided with snowmobile is the only one that allows engine to turn more than 2500 RPM. If a wrong tether cord is installed the engine will start but will not reach engagement speed required to move vehicle.

The snowmobile MPEM can be programmed to allow the use of up to 8 tether cords. When 8 tether cords have been programmed all cords must be deleted from MPEM memory before others can be added.

Each tether cord has a small magnet as well as a small micro chip molded into the rubber cap. The magnet will close a primary circuit in the electrical system. This completes the circuit and allows the MPEM to read the electronic number in the tether cord when engine is started.

NOTE: We do not program the tether cord. We record the tether cord electronic number into the MPEM memory.

The MPEM also handles data input such as; customer's name, delivery date and it records the hours of operation.

After engine is started 2 beeps confirm that the MPEM has recognized the tether cord (if applicable). If the pilot lamp does not blink, all is O.K. The vehicle can then be driven normally.

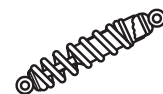
A beep every 3 seconds (if applicable) and DESS pilot lamp blinking at the same rate means that a bad connection has been detected. Vehicle can not be driven.

To program tether cord refer to *SKI-DOO MPEM Programmer Guide* (P/N 480 1436 01).

NOTE: All snowmobiles must be started before programming tether cord. Engine will automatically stop on snowmobiles equipped with a battery. Engine will keep running on snowmobiles without battery.

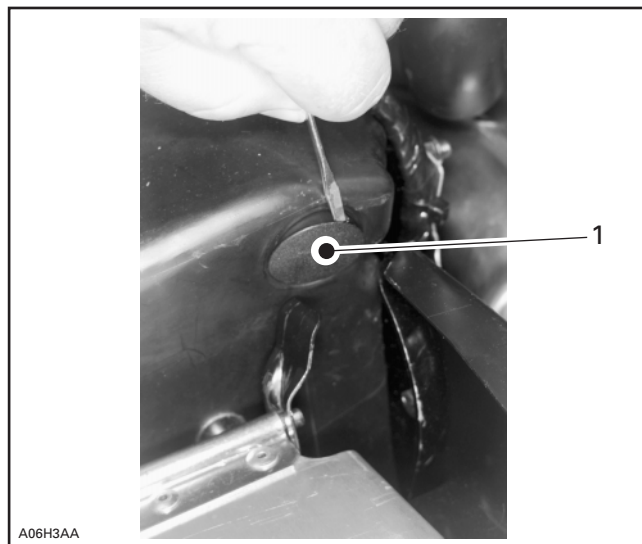


PARTS INSTALLATION FRONT SUSPENSION



Lift front of vehicle and block safely.

From inside engine compartment, remove caps as shown in the next photo.



A06H3AA

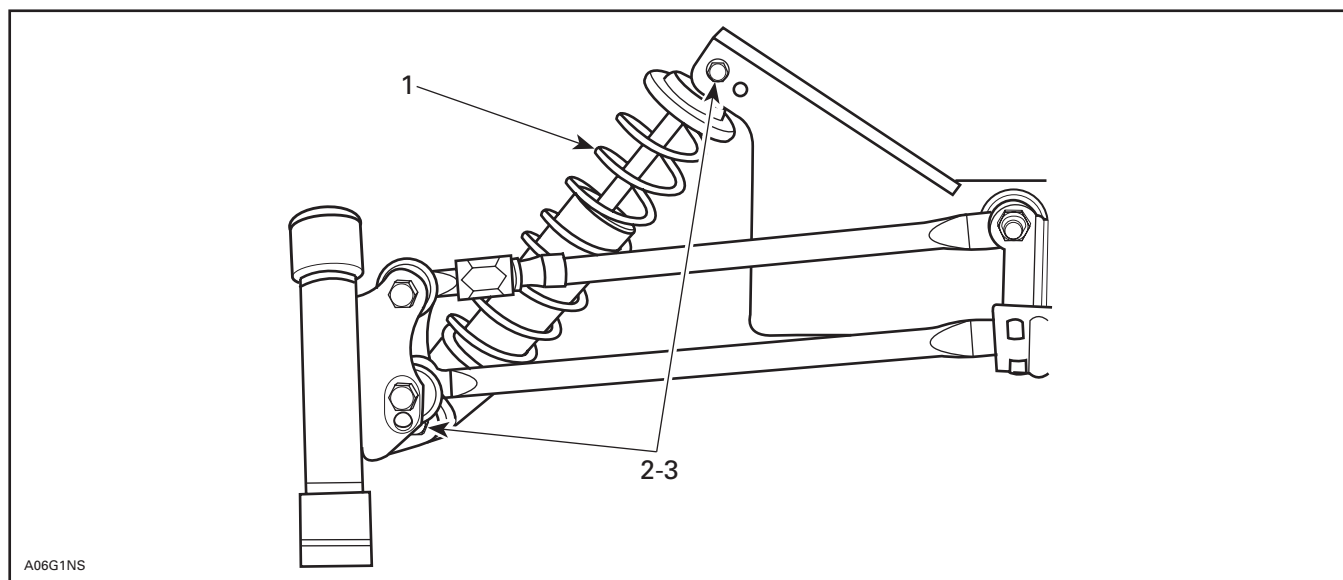
INSIDE ENGINE COMPARTMENT

1. Using flat screwdriver, remove cap

Remove and discard shipping brackets from suspension. Discard spring clips, keep bolts they will be used to secure shock absorbers.

Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position bolt heads toward front.



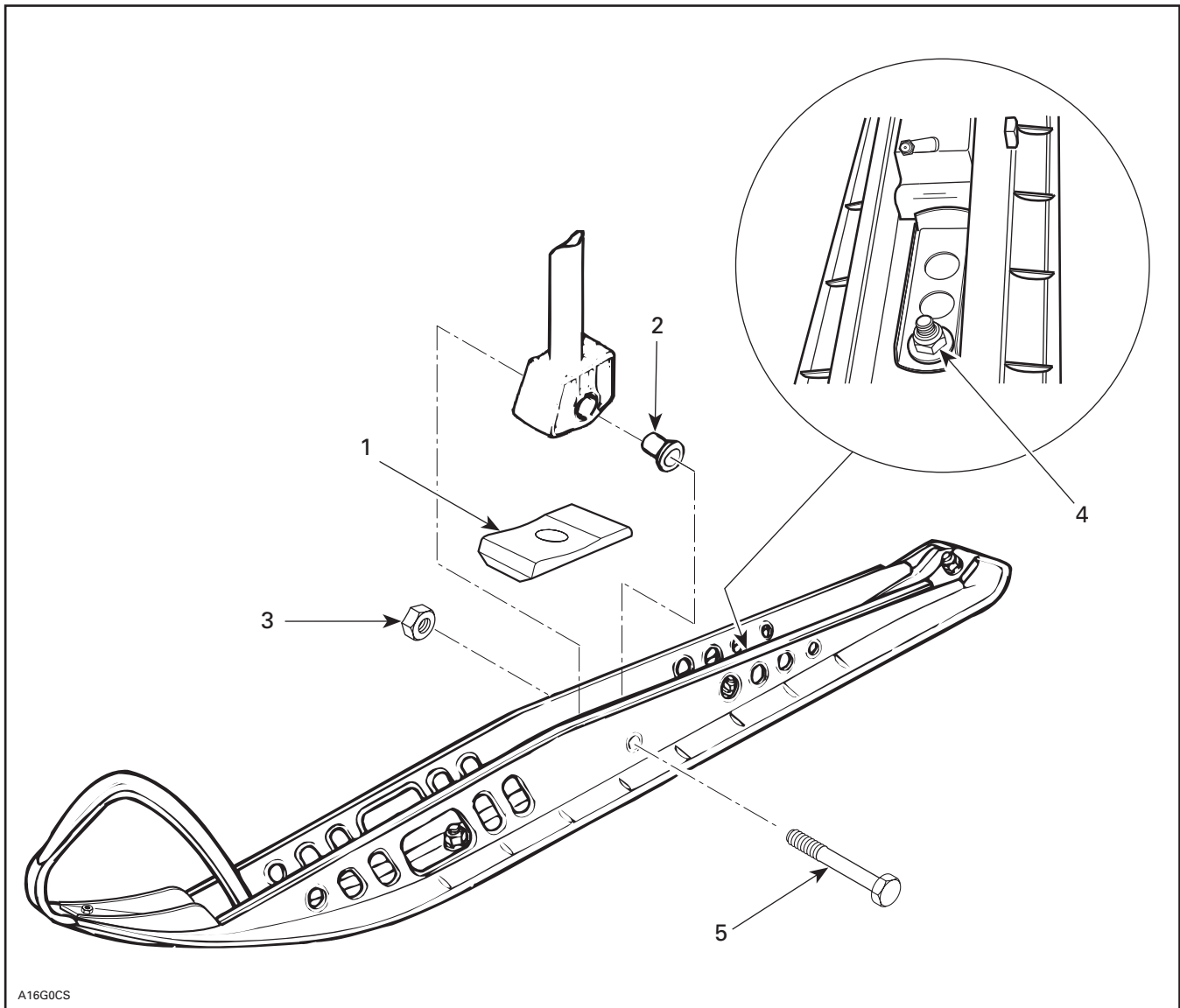
A06G1NS

TYPICAL — RIGHT SIDE SHOWN

1. Shock absorber (2) (box)
2. M10 x 1.5 x 55 bolt (on suspension)
3. M10 x 1.5 nut (section 4). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION SKIS



A16G0CS

LEFT SIDE SHOWN

1. Ski stopper (2) (section no. 8), "AVANT" toward front
2. Slider cushion (4)
3. Nut M12 (2) (section no. 8). Torque to 40 N•m (30 lbf•ft)
4. Loosen then adjust against ski stopper 14 N•m (124 lbf•in)
5. Bolt M12 (2)

After ski installation, adjust stopper against stop bounding then tighten nut to 14 N•m (124 lbf•in). More preload on stop bounding will result in a more aggressive steering. Adjust according to driver's preferences.



PARTS INSTALLATION STEERING PAD



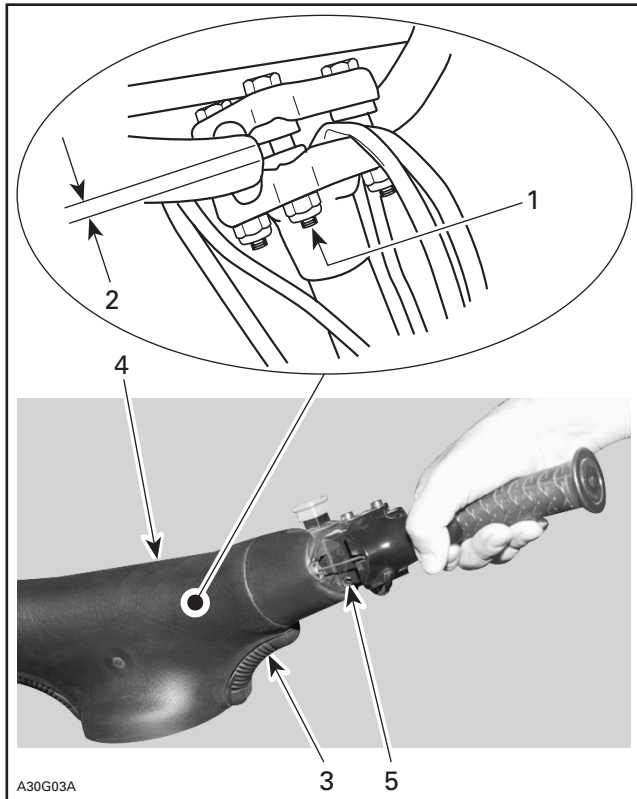
Adjust handlebar temporarily and tighten nuts loosely for now.

Loosen Allen screw of throttle and brake handle housings, at least 3 turns.

Install steering pad temporarily, and adjust for proper fit with console.

Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).

Reinstall steering pad, adjust and tighten throttle and brake handle housing Allen screw.



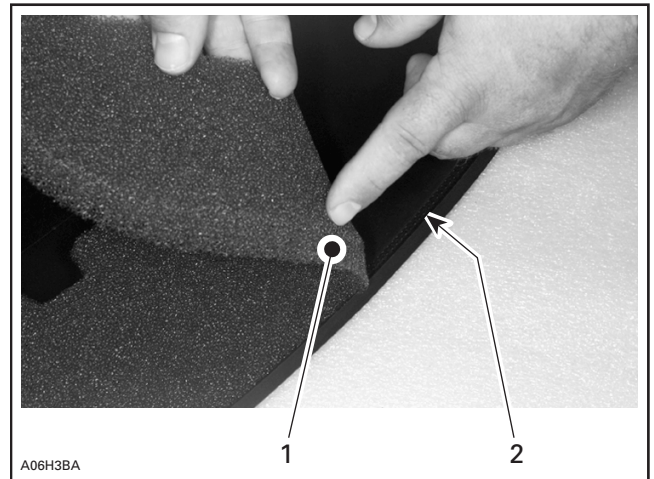
1. Torque nuts to 26 N•m (19 lbf•ft)
2. Equal gap each side (both clamps)
3. Keyway (2) (section 5)
4. Steering pad (box)
5. Loosen Allen screw (if needed)

AIR DEFLECTOR

Preparation

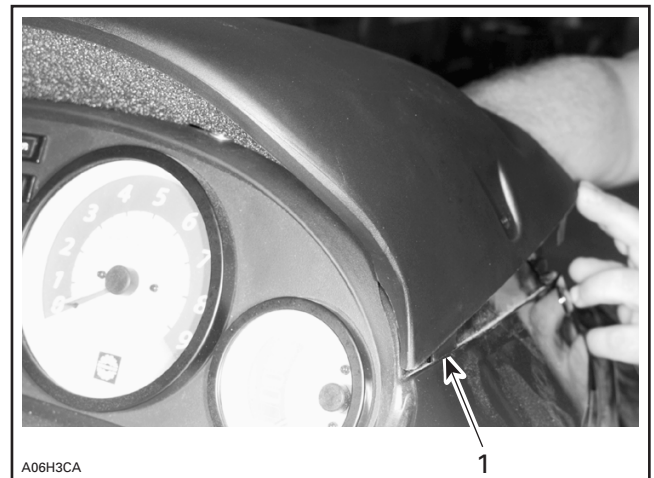
NOTE: Air deflector with foam must be installed before windshield.

Install air intake foam onto air deflector. Beveled surface must be facing Velcro, as shown in the next photo.



1. Beveled surface on air intake foam
2. Velcro on air deflector

Position air intake deflector rear tabs (left and right side) into hood slots, as shown in the next photo.



1. Air intake deflector rear tab (right side)

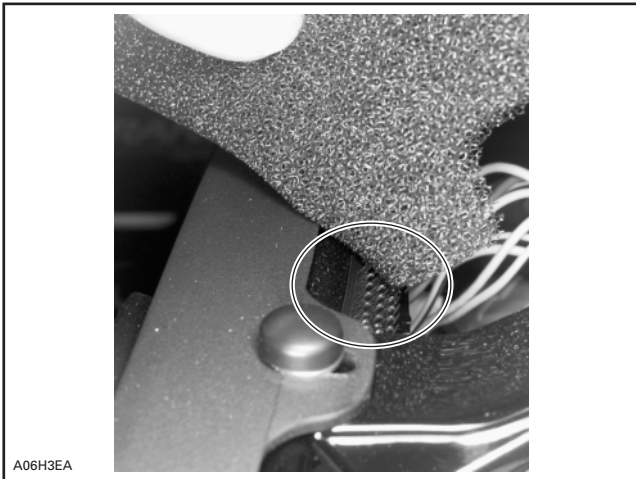
Holding air intake deflector, insert one hand underneath deflector, as shown in the next photo. Attach air intake foam to hood Velcro.



A06H3DA

FROM UNDERNEATH DEFLECTOR, ATTACH FOAM TO VELCRO

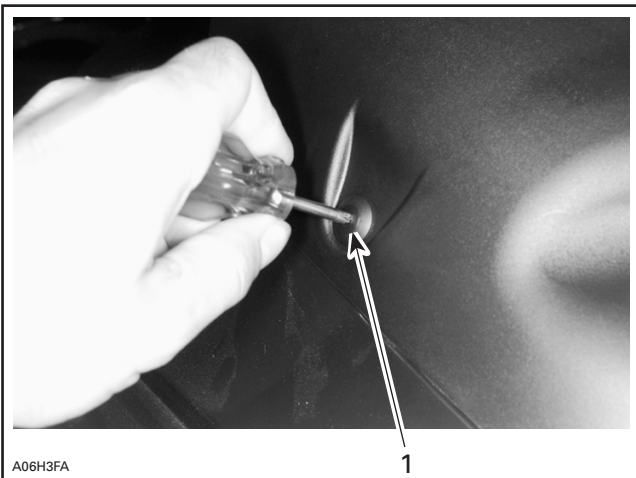
NOTE: Ensure that air intake foam is properly attached to Velcro. See next photo.



A06H3EA

AIR INTAKE DEFLECTOR HAS BEEN REMOVED TO SHOW WHERE AND HOW TO ATTACH AIR INTAKE FOAM TO HOOD

Secure air intake deflector using dart, as shown in the next photo.



A06H3FA

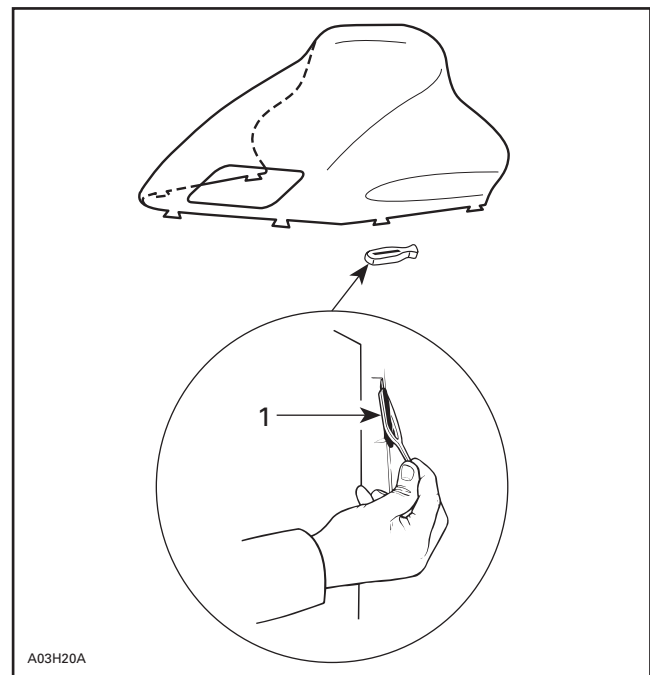
1. Dart (2) (section no. 6)

Install windshield on hood dashboard and secure with latches.



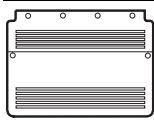
A06H3GA

WINDSHIELD INSTALLED ON DASHBOARD

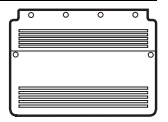


A03H20A

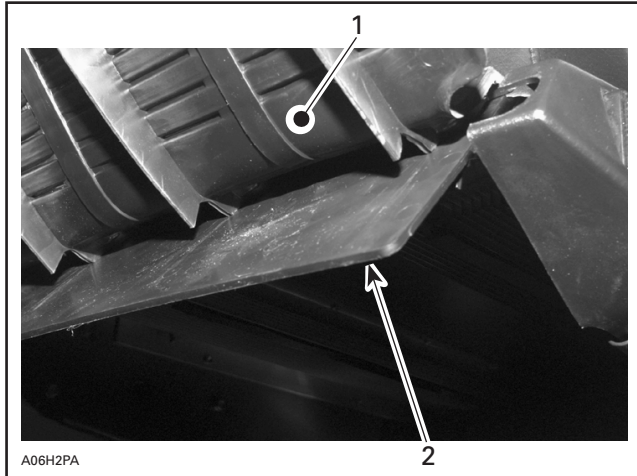
1. Latch (6) (P/N 570 0238 00) (section no. 6)



PARTS INSTALLATION SNOW GUARD



Position snow guard protector pad onto chassis.
Install snow guard over protector pad, as shown
in the next photo.



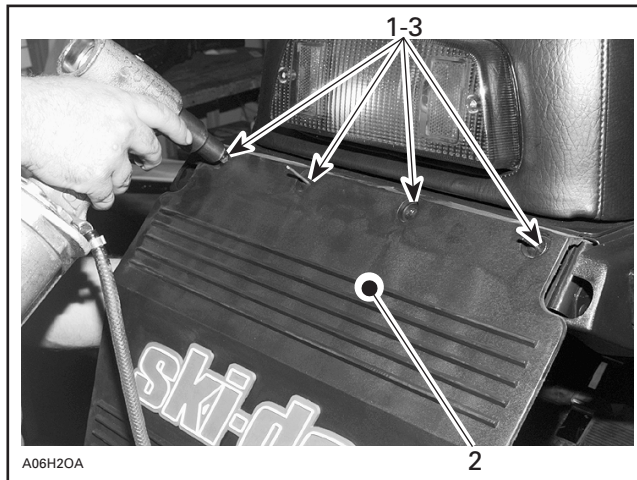
A06H2PA

TYPICAL — VIEW FROM UNDER SNOW GUARD

1. Snow guard (box)
2. Snow guard protector pad (box)

Secure both parts with rivets.

NOTE: Place washers inside tunnel.



A06H2OA

TYPICAL

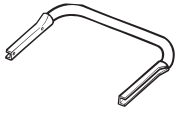
1. Rivet (4) (section no. 2)
2. Snow guard
3. Washer (4) (section no. 2). Position washer inside tunnel

Finalize snow guard installation with caps, as
shown in the next photo.



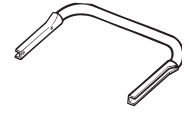
A06H3HA

1. Cap (4) (section no. 9)

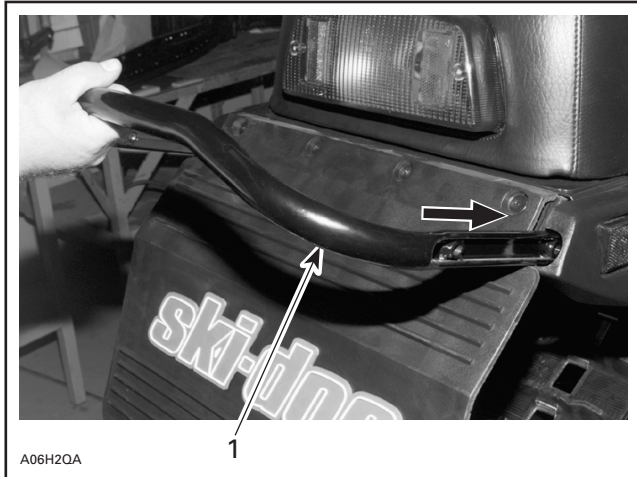


PARTS INSTALLATION

REAR BUMPER



Install rear bumper to chassis.



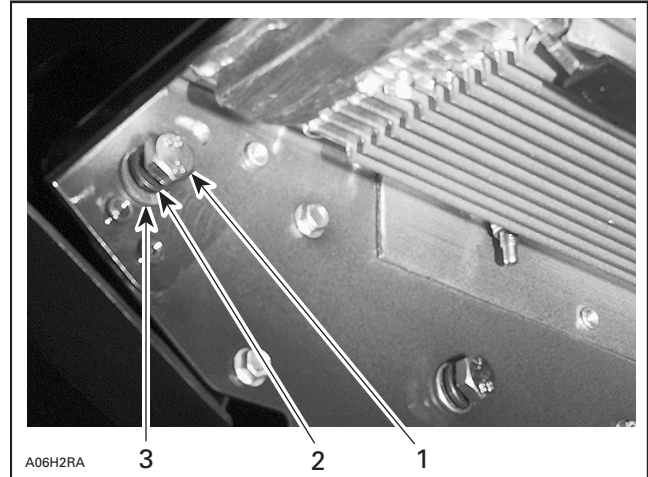
A06H2QA

1

SLIDE BUMPER INSIDE REAR MOLDINGS

1. Rear bumper

Secure bumper from inside of tunnel.



A06H2RA

3

2

1

TYPICAL — VIEW FROM INSIDE OF TUNNEL

1. Bolt M8 (4) (section no. 1). Torque to 24 N•m (18 lbf•ft)
2. Lock washer (4) (section no. 1)
3. Washer (4) (section no. 1)



PARTS INSTALLATION

DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner before installing drive belt.



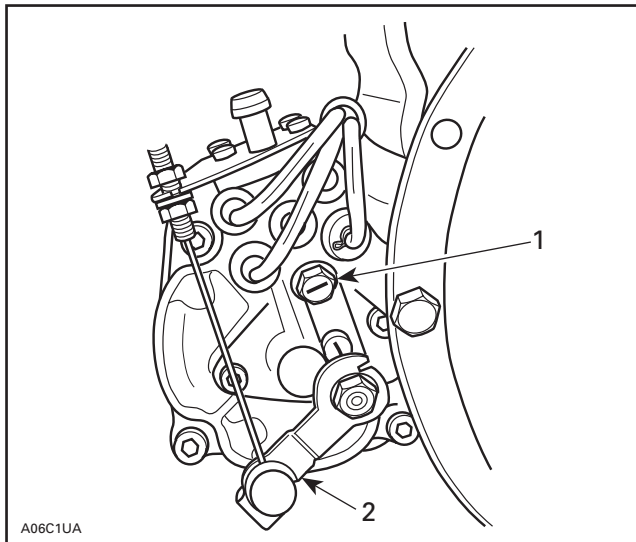
LIQUIDS

OIL INJECTION PUMP BLEEDING



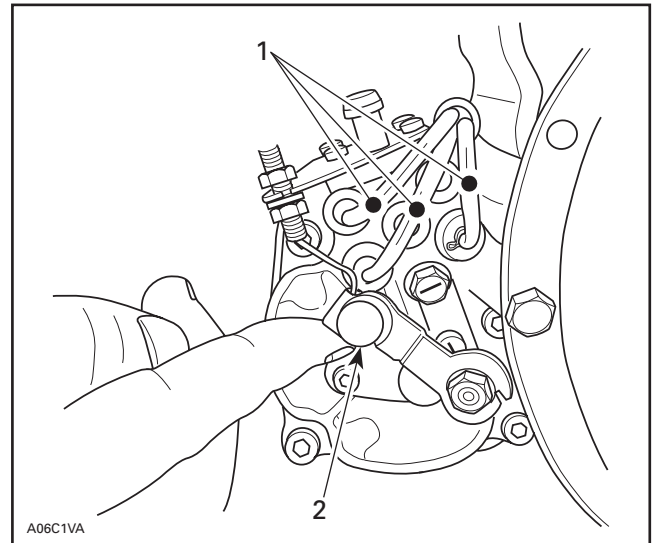
To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 8029 00 — 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

Bleed main oil line (between tank and pump) by loosening the bleeder screw until all air has escaped from the line. Add injection oil as required.



1. Bleeder screw
2. Oil pump lever

Bleed the small oil lines between pump and engine crankcase by running engine at idle while holding the pump lever in fully open position.



1. Small oil lines
2. Engine at idle (fully open position)



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid (DOT 4) in reservoir for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partially filled bottle of brake fluid.

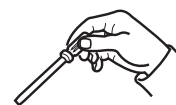


A06G10A

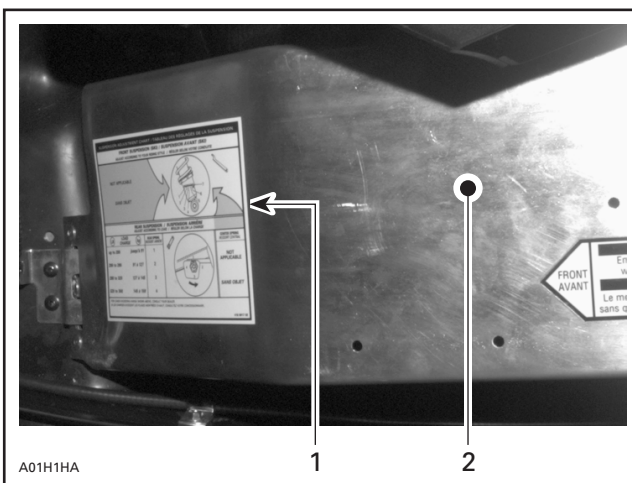
1. Minimum



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



A01H1HA

1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.



ADJUSTMENTS DRIVEN PULLEY








It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).



TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

	MODEL	FORMULA III 600/600 LT			
	Engine Type	599			
	Maximum HP RPM ①	± 100 RPM 8500			
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	Not Applicable		
	Carburetor Type	PTO VM 36-184	CTR VM 36-184	MAG VM 36-184	
	Main Jet	PTO 290 CTR 290 MAG 290			
	Needle Jet	P-0 (286)			
	Pilot Jet	PTO 50	CTR 50	MAG 50	
	Needle Identification — Clip Position	6DEY4-3			
	Slide Cut-away	2.5			
	Float Adjustment	± 1 mm (in) 18.1 (.71)			
	Air Screw Adjustment	± 1/16 turn PTO 2.0 CTR 2.0 MAG 2.0			
	Idle Speed RPM	± 200 RPM 1800			
	Gas Grade	Super Unleaded			
	Octane Number	(R + M)/2 91			
Gas/Oil Ratio	Oil Injection				
	Ignition Timing BTDC ②	mm (in)	2.18 (.086)		
	Trigger Coil Air Gap	mm (in)	0.55 - 1.45 (.022 - .057)		
	Gear Ratio	Teeth	Formula III 600: 25/43 Formula III 600 LT: 23/43		
	Engagement Speed	± 100 RPM 3800			
	Drive Pulley Calibration Screw Position	4			
	Pulley Distance	Z	(+ 0, - 1) mm (+ 0, - 1/32) in	120 (4-3/4)	
	Offset	X	± 0.4 mm (± 1/64) in	35.5 (1-25/64)	
		Y		Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)	
	Drive Belt Adjustment	Deflection	mm (in)	32 (1-1/4)	
		Force ③	kg (lbf)	11.34 (25.00)	
	Driven Pulley Preload	± 0.7 kg (± 1.5 lbf)		7.00 (15.43)	
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation			
Track Adjustment	Deflection	35 to 40 mm (1-3/8 to 1-9/16 in) with a 7.3 kg (16 lb) downward pull			

① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center

ATDC: After Top Dead Center

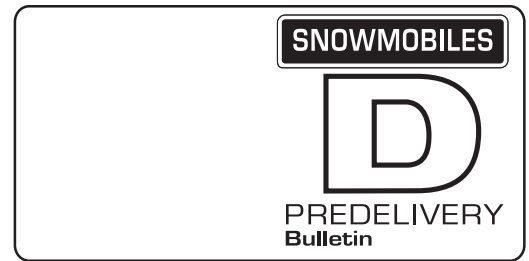
PTO: Power Take Off side

CTR: Center

MAG: Magneto

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **98-20**

Date: October 7, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1998	Tundra R (Canada and United States)	3268	ALL
1998	Tundra R (Sweden)	3269	ALL

This bulletin must be used in conjunction with the *Predelivery Check List* enclosed in *Operator's Guide* bag. Make sure that *Predelivery Check List* is completed and signed.

◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

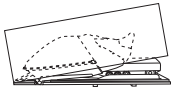
NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

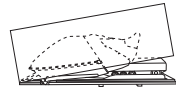
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your dealer or distributor service representative and/or specific *Shop Manual* sections.

Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and *video*.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask the dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



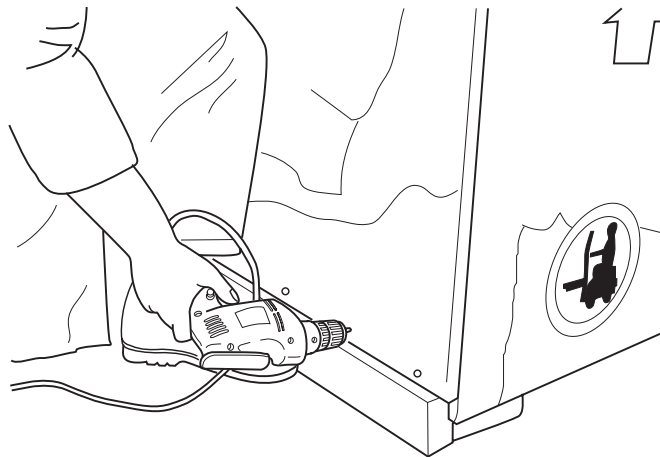
◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

▼ CAUTION

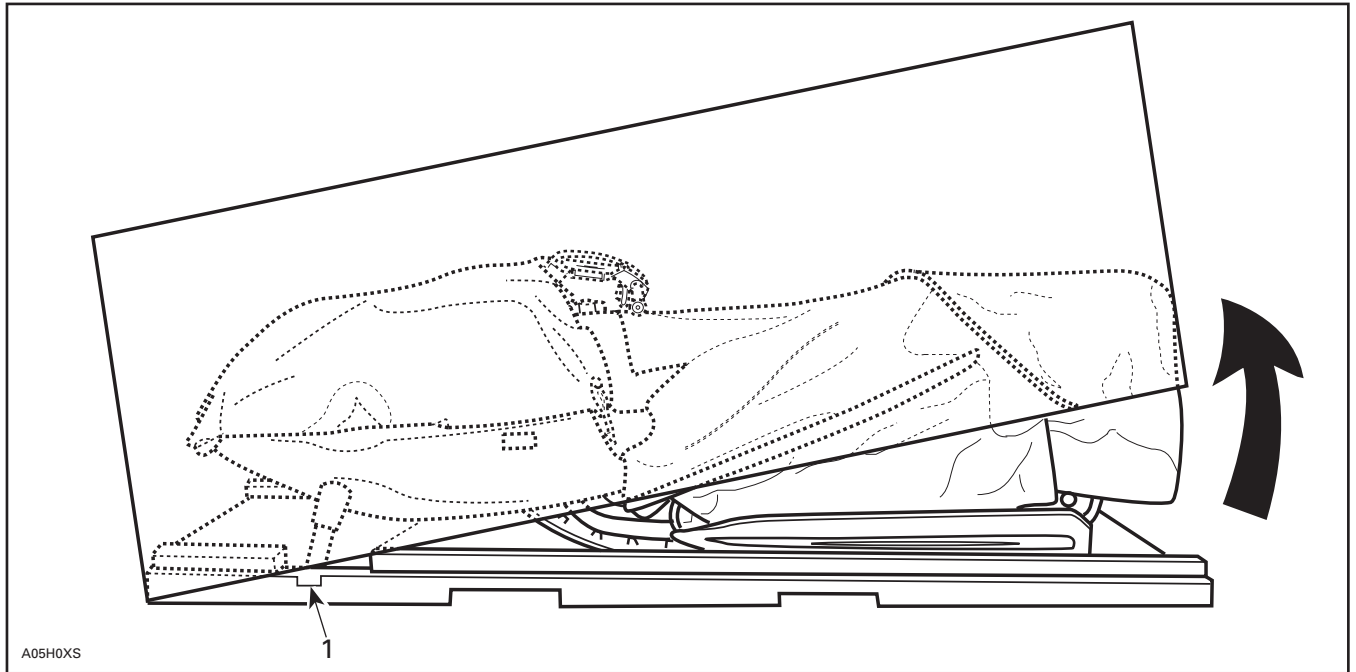
Allowing the crate to drop may cause serious damage to the vehicle.

Using a drill or screwdriver remove all screws retaining crate cover to base.



F02P04S

Tip cover towards front of vehicle. There is a notch in crate base at front.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

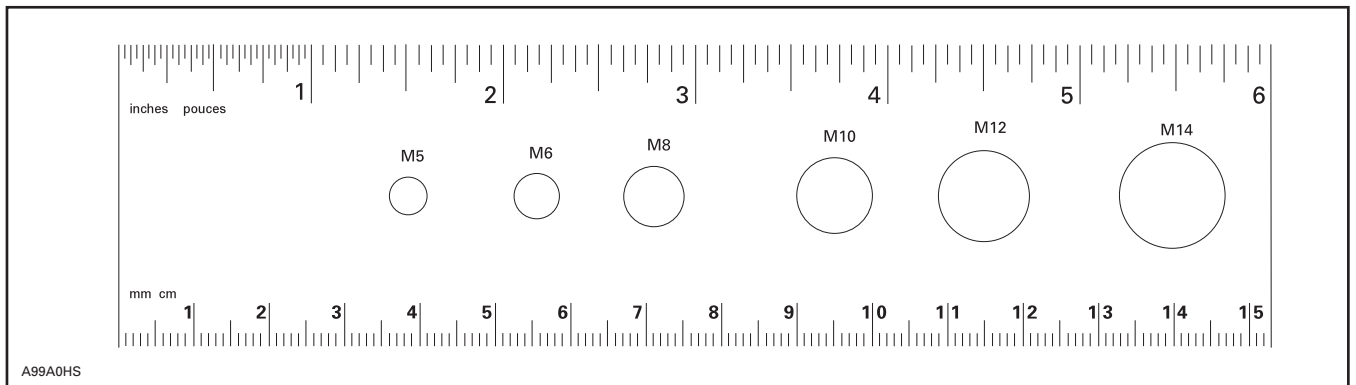
Detach ski legs from crate. Keep ski leg bolts to bolt skis to ski legs. Discard nuts.

Remove vehicle from base.

Remove predelivery kit from engine compartment.

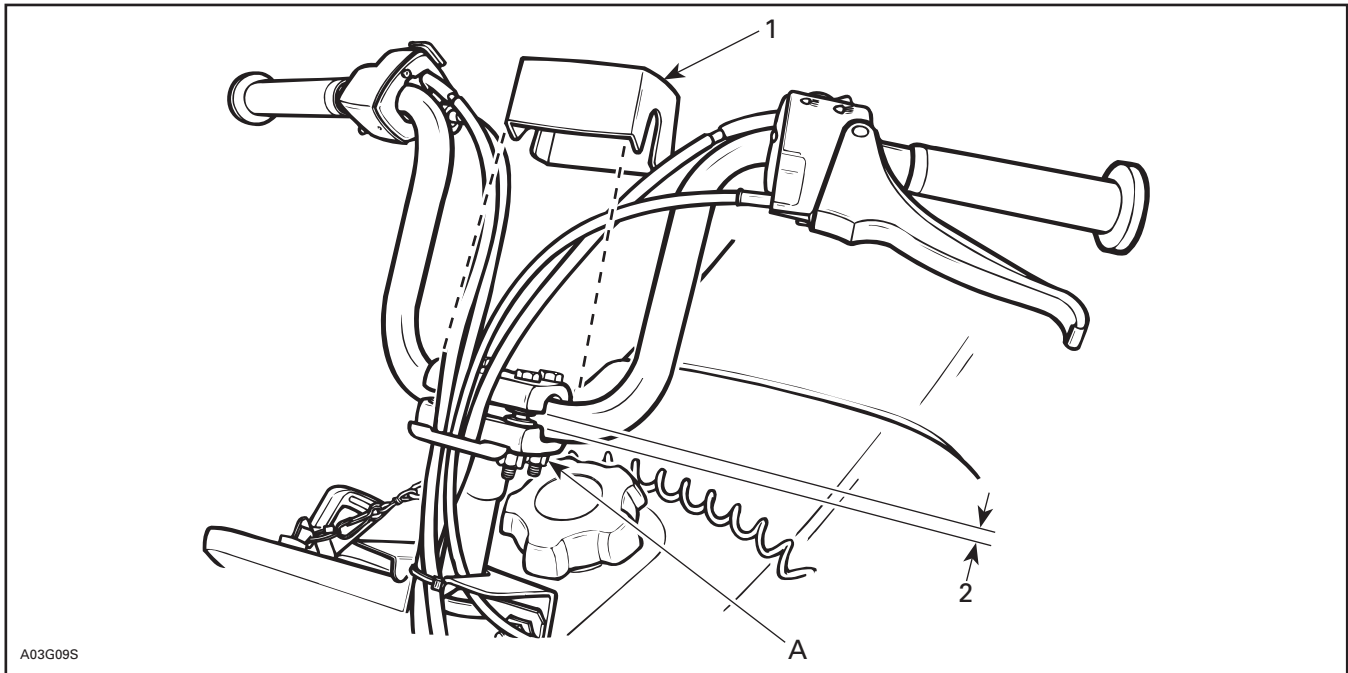
PREDELIVERY KIT P/N	MODELS
549 0107 01	All Tundra R

NOTE: This ruler can be helpful to identify fastener length/size.





PARTS INSTALLATION STEERING PAD

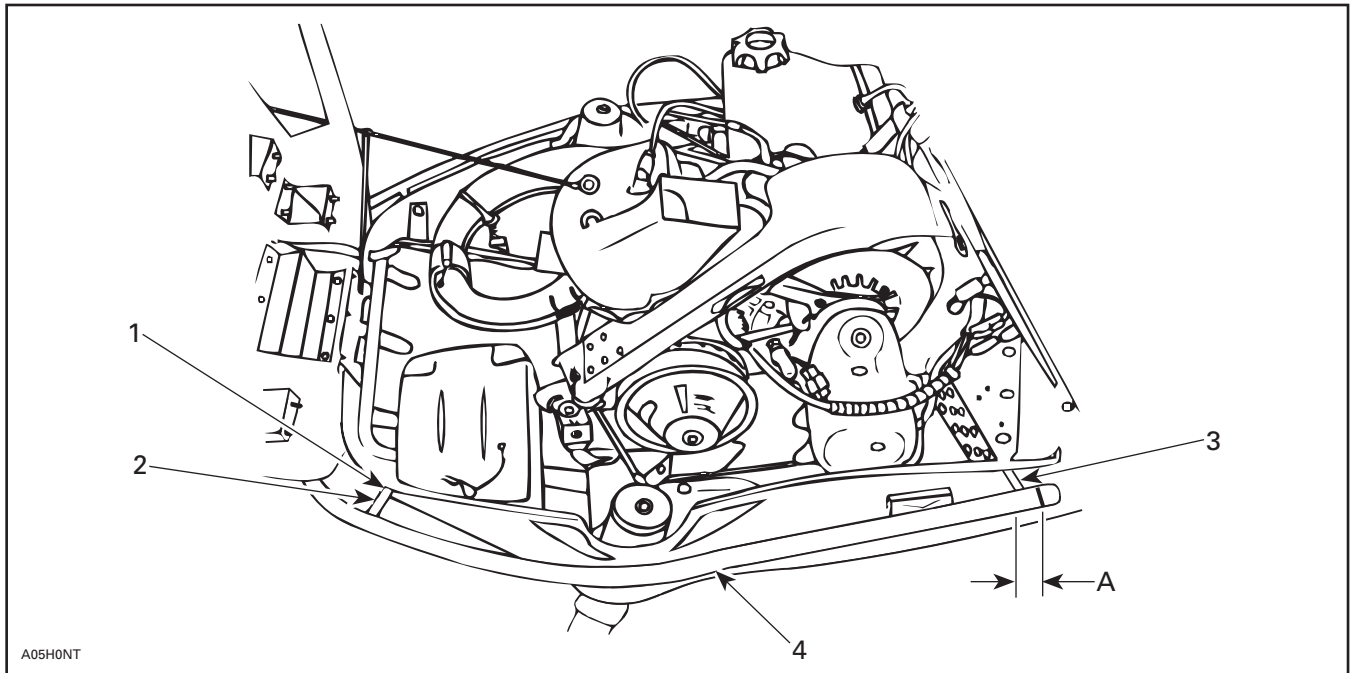


A03G09S

1. Steering cover (P/N 572 0669 00) (on handlebar)
2. Equal gap all around
- A. 26 N•m (19 lbf•ft)



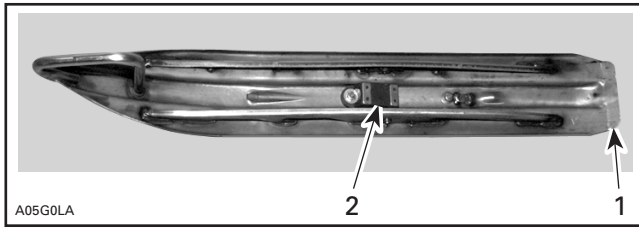
PARTS INSTALLATION FRONT BUMPER



- A05H0NT
1. Elastic nut M8 x 1.25 (4) (P/N 228 5810 45) (Section no. 2). Torque to 15 N•m (133 lbf•in)
 2. Bushing (long) (2) (P/N 517 2506 00) (Section no. 3)
 3. Bushing (short) (2) (P/N 517 2507 00) (Section no. 3)
 4. Groove on top
 - A. 55 mm (2-1/8 in)

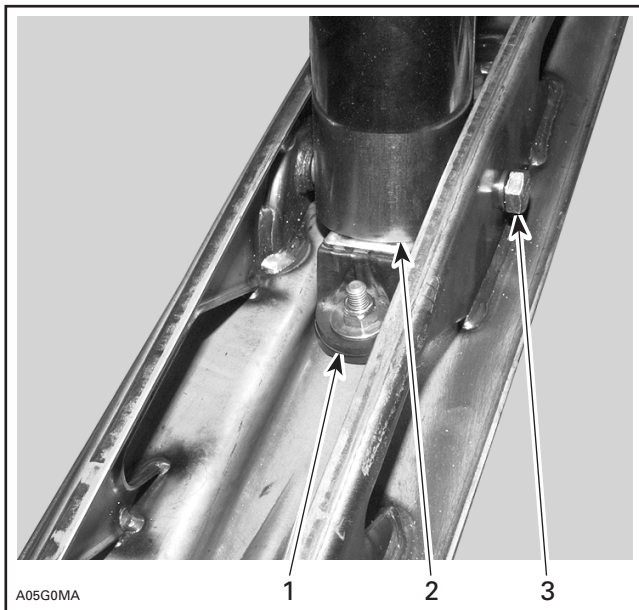


PARTS INSTALLATION SKIS



NEW TYPE OF SKI

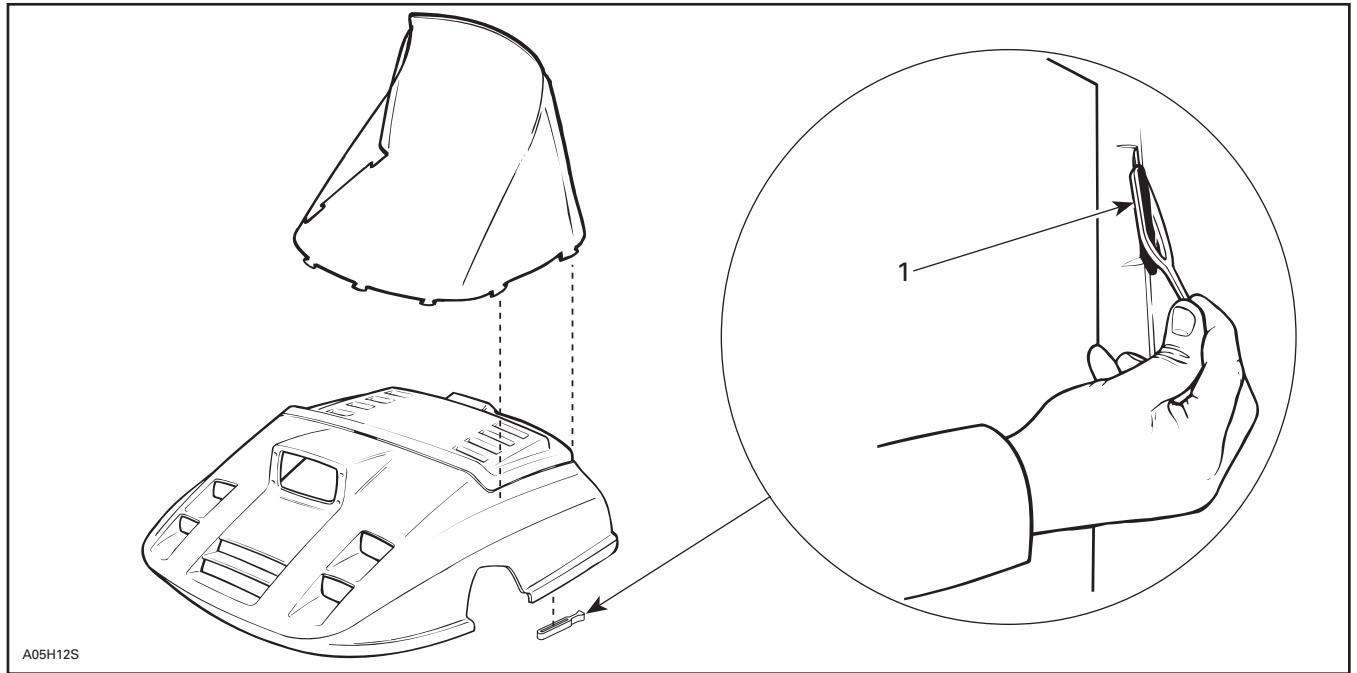
1. Upward Curve at rear
2. Stopper already installed



1. Stopper already installed
2. Align on stopper
3. Secure with bolt



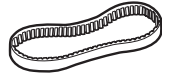
PARTS INSTALLATION WINDSHIELD



1. Latch (9) (P/N 570 0238 00) (Section no. 3)



PARTS INSTALLATION DRIVE BELT



At factory a protective coating for the shipping is applied on pulleys and disc brake. This protective coating must be removed at predelivery.

Clean pulleys and brake disc with a suitable cleaner before installing drive belt.

Make sure the entire surface of the drive belt travel is clean; open the driven pulley as required for cleaning.

▼ CAUTION

Do not install a new drive belt without properly cleaning the pulleys.



LIQUIDS

OIL INJECTION PUMP BLEEDING

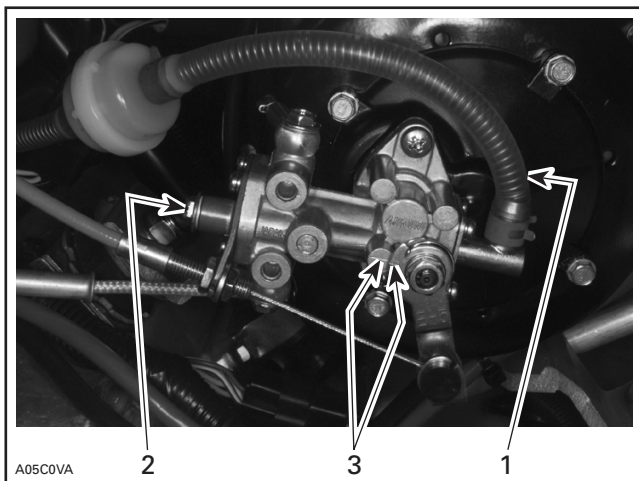


OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 8029 00 — 12 x 1L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

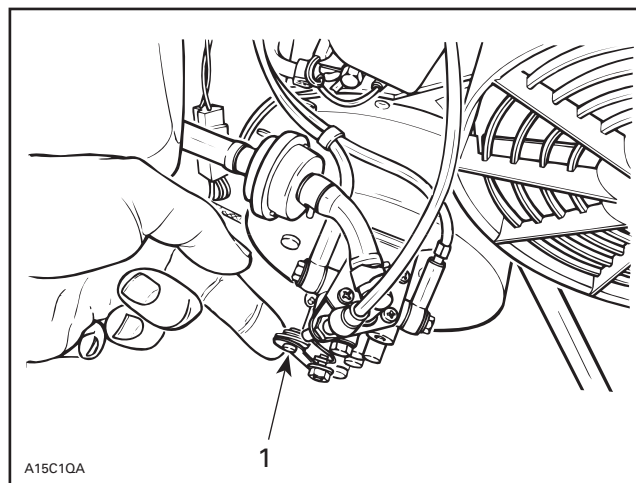
Bleed main oil line (between tank and pump) by loosening the bleeder screw until all air has escaped from the line.



NEW TYPE OF PUMP (WITH ELECTRONIC REVERSE)

1. Main oil line
2. Bleeder screw
3. Alignment marks

Bleed the small line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.



TYPICAL — ENGINE AT IDLE

1. Fully open position

ABOUT THE ELECTRONIC REVERSE

Driving in reverse is obtained by changing the direction of rotation of the engine.

Shifting in reverse is an electronic operation consisting of a control module that will modify the ignition timing of the engine.

When depressing the reverse button, a signal will slow down the engine RPM enough to modify the ignition timing advance in order to reverse the rotation of the crankshaft.

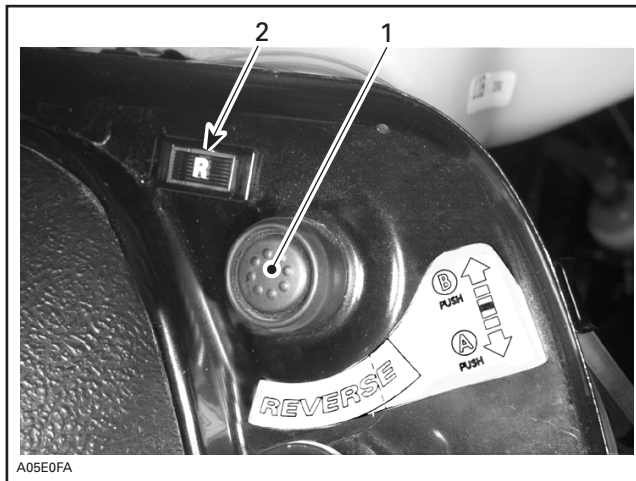
No mechanical action and gear change is involved.

No adjustment is needed.

Shifting Procedure

With the snowmobile completely stopped and engine running at idle, press and release the electronic reverse button. The engine RPM will decrease for a few seconds then the engine will start rotating in the opposite direction and return to its normal idle speed.

NOTE: A reverse indicator lamp will illuminate and a warning buzzer will sound when the snowmobile is engaged in reverse.



TUNDRA R

1. Reverse button
2. Reverse indicator lamp

◆ WARNING

Always remain seated and apply the brake before shifting. Come to a complete stop before pressing the reverse button. Ensure the path behind is clear of obstacles or bystanders. Fast reverse while turning could result in loss of stability.

Apply throttle slowly and evenly. Allow drive pulley to engage then accelerate carefully.

▼ CAUTION



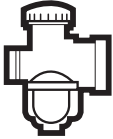


Do not rev the engine when driving in reverse. This may cause the clutch system to operate erratically.

It is recommended to warm up the engine to its normal operating temperature before shifting.

Shifting procedure will take place only when the engine is running.

Engine will automatically shift into forward when starting after stopping or stalling.

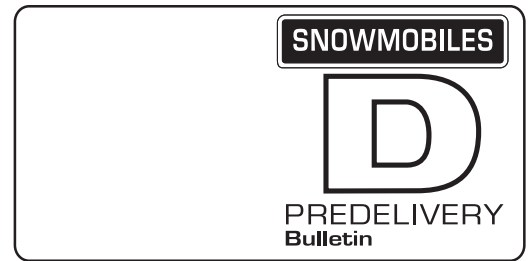
TECHNICAL DATA

	MODEL	TUNDRA R	
	Engine Type	277	
	Maximum HP RPM ①	± 100 RPM 6900	
	Carburetor Type	VM 34 - 508	
	Main Jet	190	
	Needle Jet	O-8 (159)	
	Pilot Jet	40	
	Needle Identification — Clip Position	6DH4-2	
	Slide Cut-away	2.5	
	Float Adjustment	± 1 mm (± .04 in) 23.9 (.94)	
	Air Screw Adjustment	± 1/16 turn 1	
	Idle Speed	± 200 RPM 1200	
	Gas Grade Octane Number ②	Regular Unleaded (R + M)/2 87	
	Gas/Oil Ratio	Oil injection	
	Ignition Timing BTDC ③	mm (in) 3.04 (.12)	
	Engagement Speed	± 100 RPM 3100	
	Pulley Distance	Z (+ 0, - 1) mm ((+ 0, - 1/32) in) 37.0 (1-29/64)	
	Offset	X	± 0.4 mm (± 1/64 in) 36.0 (1-27/64)
		Y	Dimension Y must exceed X by up to 1.5 mm (1/16 in)
	Drive Belt Adjustment	Deflection	± 5 mm (± 13/64 in) 32 (1-1/4)
		Force ④	kg (lbf) 6.8 (15)
	Driven Pulley Preload	± 0.7 kg (± 1.5 lbf) 0.00	
	Drive Chain Tension	Automatic (Spring Loaded)	
Track Adjustment	Deflection ⑤ mm (in) 35 to 45 (1-3/8 - 1-3/4)		

- ① Engine speed at which maximum power is achieved.
- ② In most service station pump octane number corresponds to (R + M)/2 octane number.
- ③ At 6000 RPM (engine cold) with headlamp turned on.
- ④ Force applied midway between pulleys to obtain specified deflection.
- ⑤ Deflection with a 7.3 kg (16 lb) downward pull.

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **98-21**

Date: October 20, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1998	Canada and United States: Touring SLE	1229/1230	ALL
1998	Europe: Touring SLE	1231	ALL

This bulletin must be used in conjunction with the *Predelivery Check List* enclosed in *Operator's Guide* bag. Make sure that *Predelivery Check List* is completed and signed.

◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

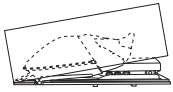
NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

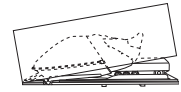
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections.

Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and *video*.

There is a tag attached to the ignition key, only the customer must removed it. This label will remind the customer to ask the dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

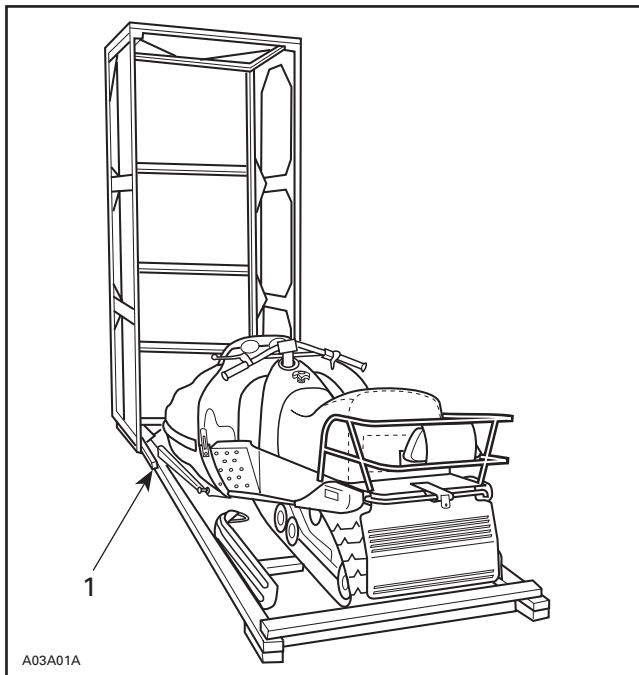
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Unscrew all screws retaining cover to crate base. Tip cover over front of vehicle. There is a notch in crate base at front.



A03A01A

1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

▼ CAUTION

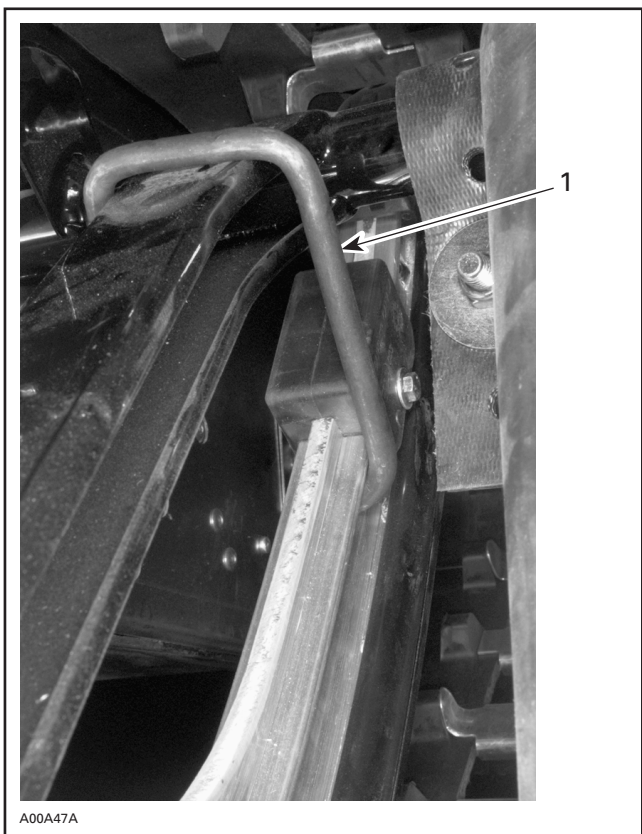
Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

FRONT HOOK REMOVAL



A00A47A

TYPICAL

1. Hook to be removed

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

NOTE: To avoid unhooking during transportation front hook could be held in place with a locking tie; make sure this locking tie is cut before trying to remove hook.

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.

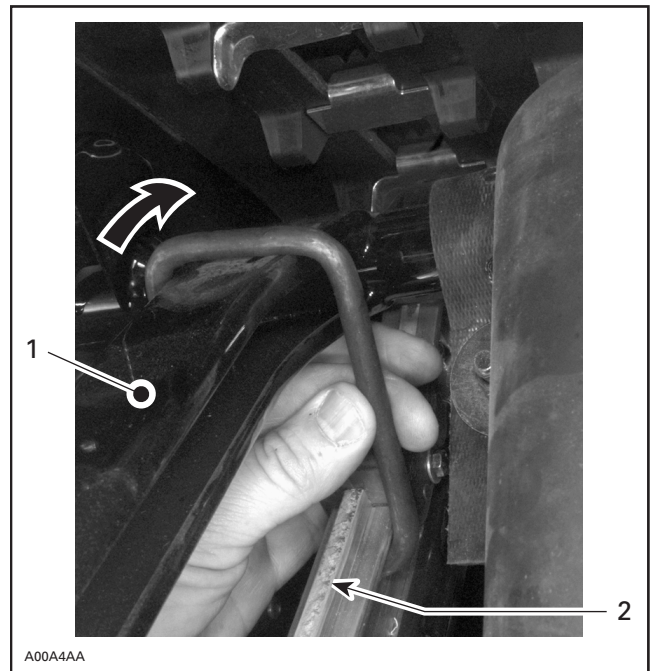


TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ **WARNING**

Before removing hook always verify that vehicle is properly supported and that parking brake is applied.

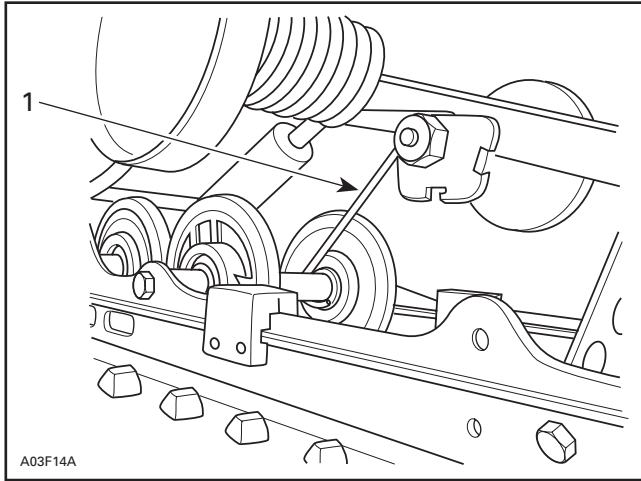


TYPICAL

1. Front arm
2. Runner

REAR HOOK REMOVAL

Apply pressure on rear suspension and remove hook from rear portion of suspension as illustrated.

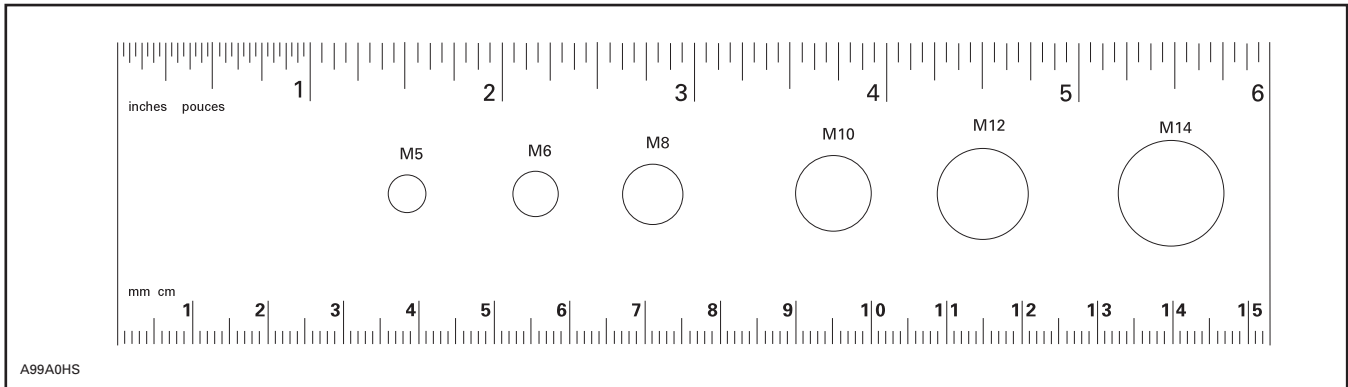


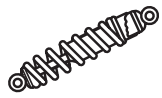
1. Remove hook

◆ WARNING
Shipping hooks must be removed to have snowmobile suspension operational.

PREDELIVERY KIT P/N	MODEL
580 6668 00	TOURING SLE

NOTE: This rule can be helpful to identify fastener length or size.

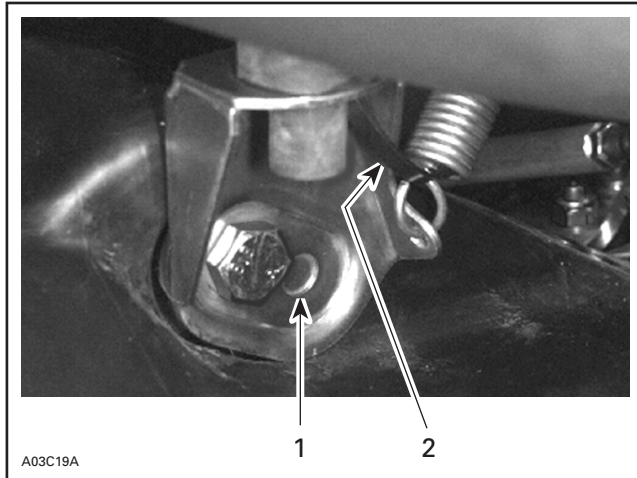




PARTS INSTALLATION FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.



1. Lug in recess
2. Locking tie

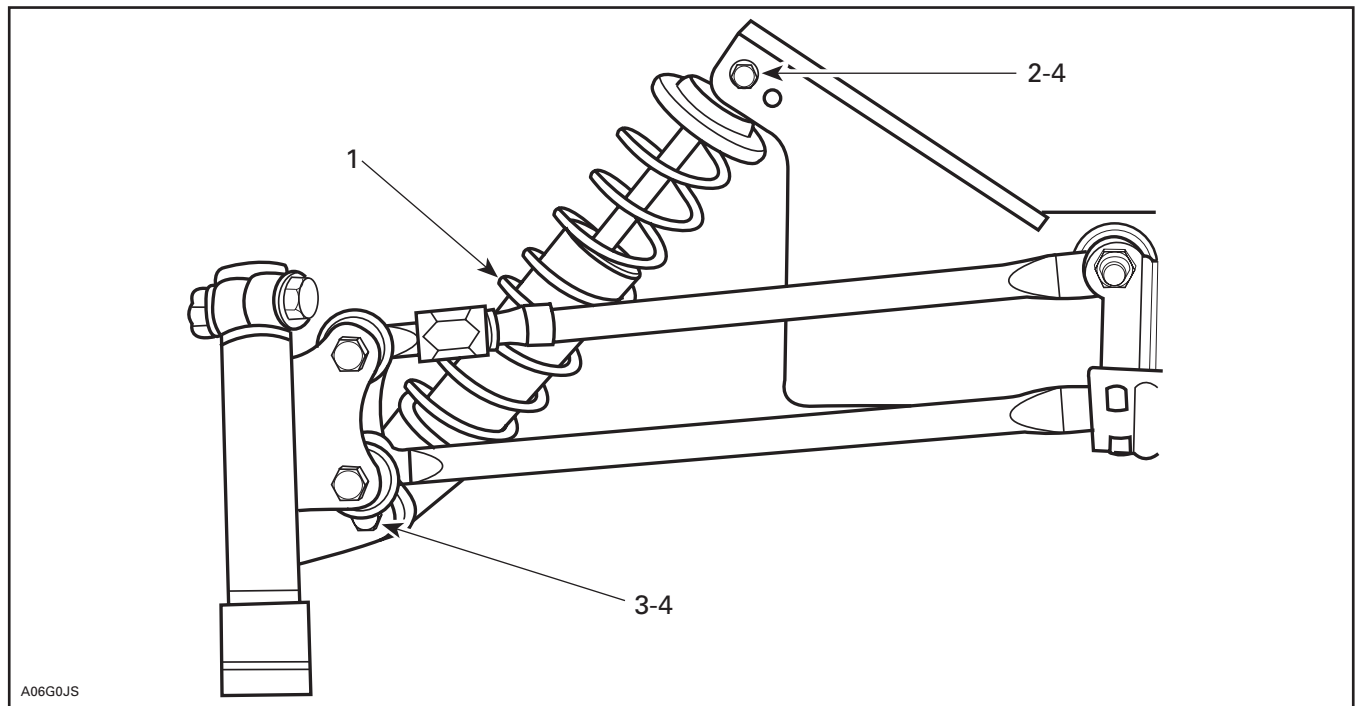
Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring, if equipped, at bottom.

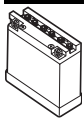
NOTE: Position screw heads toward front.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.



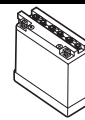
TYPICAL — RIGHT SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 0060 65) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 0055 65)(on suspension)
4. Flanged elastic nut (4) (P/N 228 5010 45) (section no.1) torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION

BATTERY



During vehicle preparation, the battery can be activated as described in *Shop Manual*.

▼ CAUTION

Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage.

Battery Removal

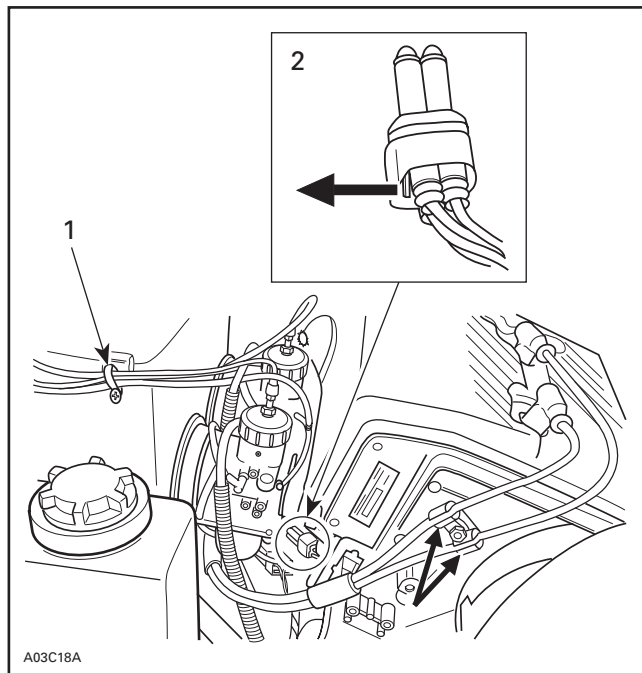
Remove belt guard.

Unfasten spark plug cables from fan housing. Unplug spark plug caps.

Remove throttle cable and primer hose plastic clip from air silencer.

Unplug CDI box harness connector.

Loosen collar on carburetor adaptors. Remove air silencer. CDI box will come along with it.



- 1. Plastic clip
- 2. CDI box harness connector

Remove battery.

Battery Installation

Install vent tube on battery.

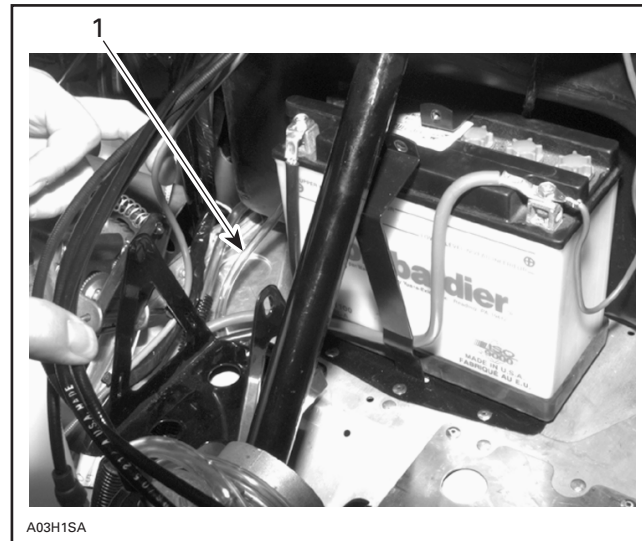
Connect RED positive cable and RED wire to positive battery terminal.

Connect BLACK negative cable LAST.

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.

Connect vent tube to vehicle fitting on front frame as shown.



BATTERY CONNECTION

- 1. Vent tube on fitting

Apply silicone dielectric grease (P/N 413 7017 00) on battery posts and connectors.

Ensure vent tube is properly installed on battery elbow, then install protective boot over battery.

Close and fasten retaining strips as shown on the next photo.



BATTERY PROTECTIVE BOOT INSTALLED

Ensure that vent tube is not kinked or blocked.

Reinstall air silencer and ignition module.

Reinstall throttle cable and primer hose plastic clip to air silencer. Fasten spark plug cables.



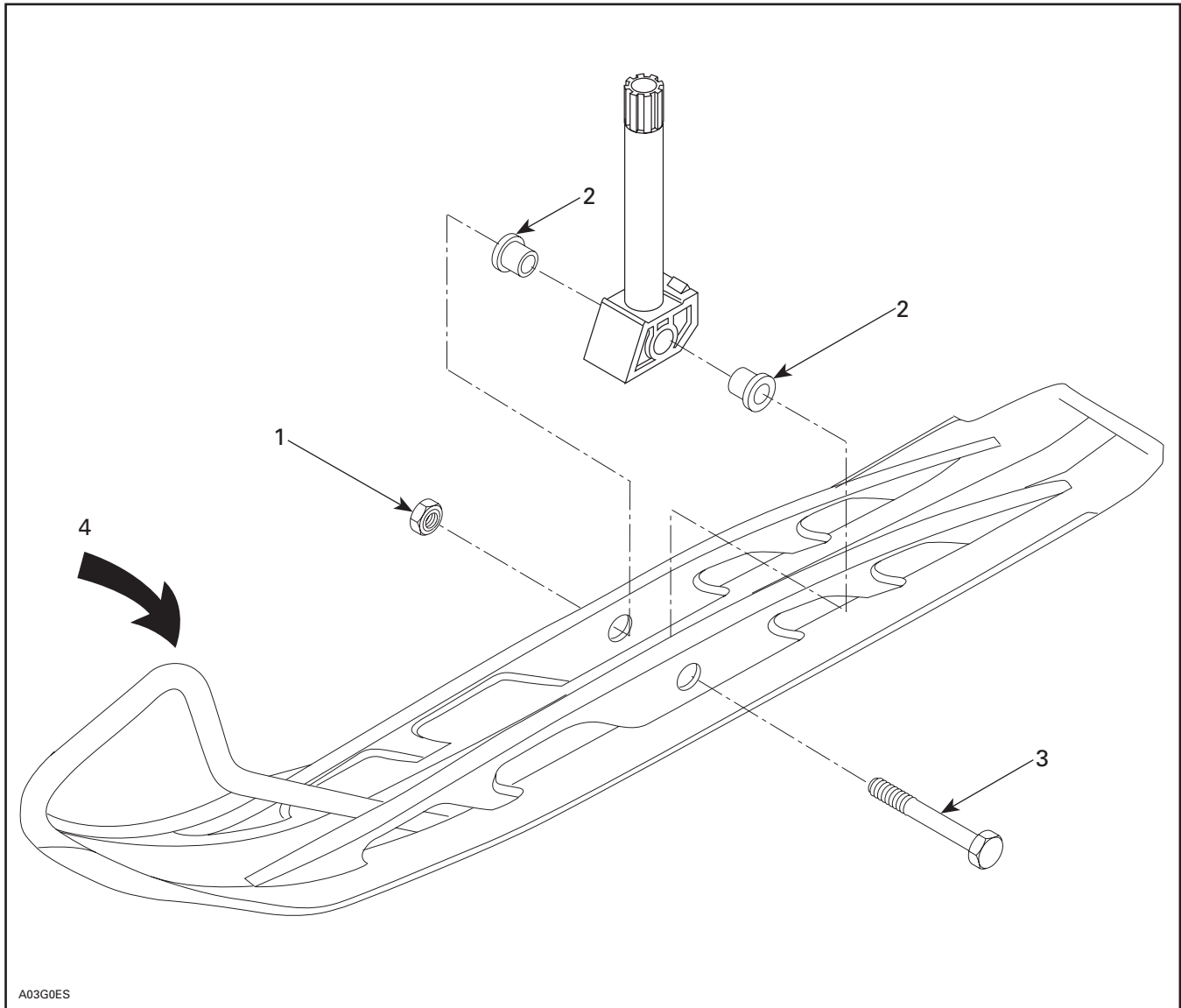
PARTS INSTALLATION SKIS



Install skis on vehicle.

NOTE: Make sure that slider cushions are still in ski leg.

Replace vehicle on ground.



A03G0ES

TYPICAL — LEFT SIDE SHOWN

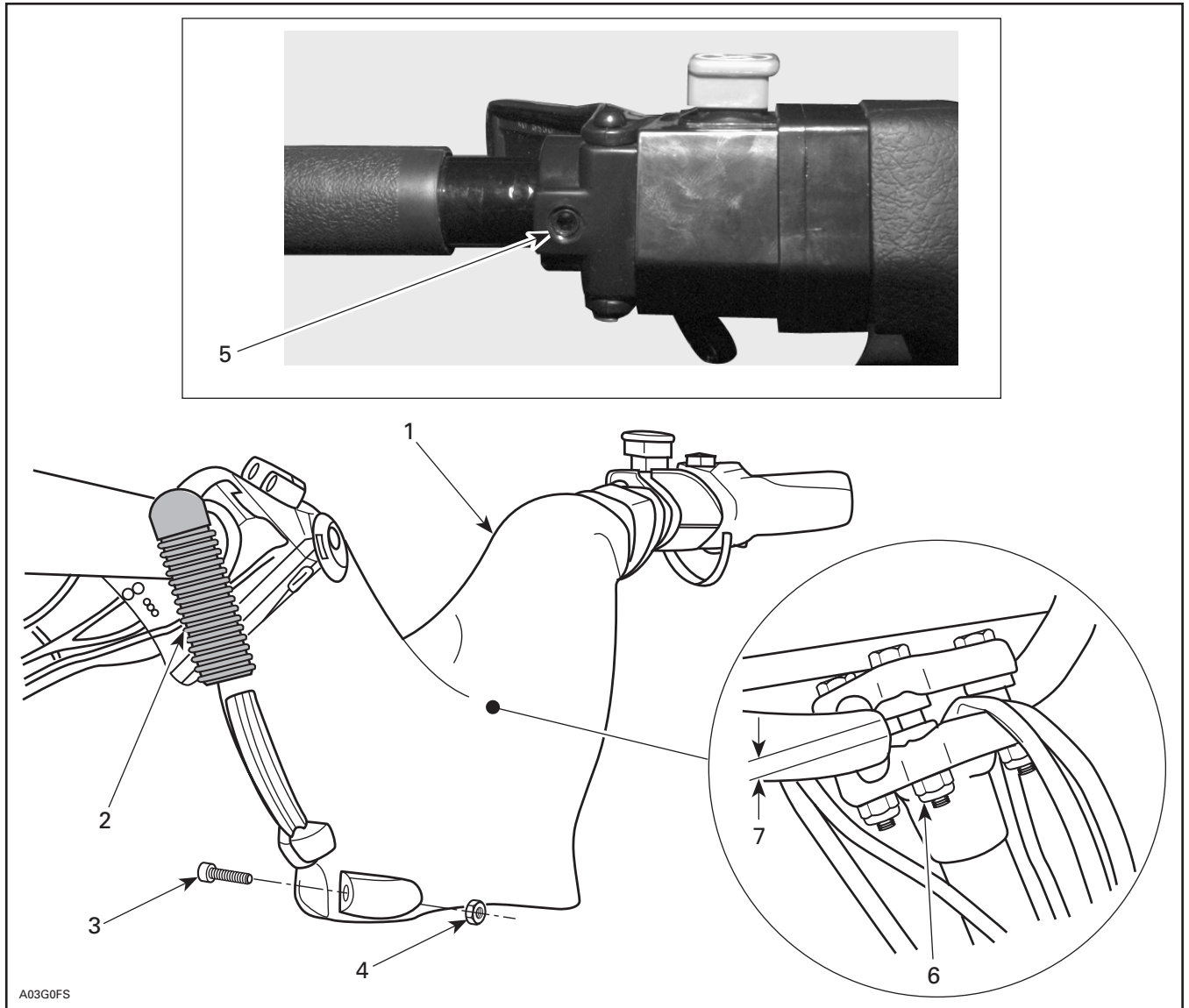
1. Nut M12 x 1.75 (2) (section no. 1 or 3) torque to 40 N•m (30 lbf•ft)
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD



Align handlebar with steering column axis and tighten nuts loosely for now.
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporarily, and adjust for proper fit with console.
Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



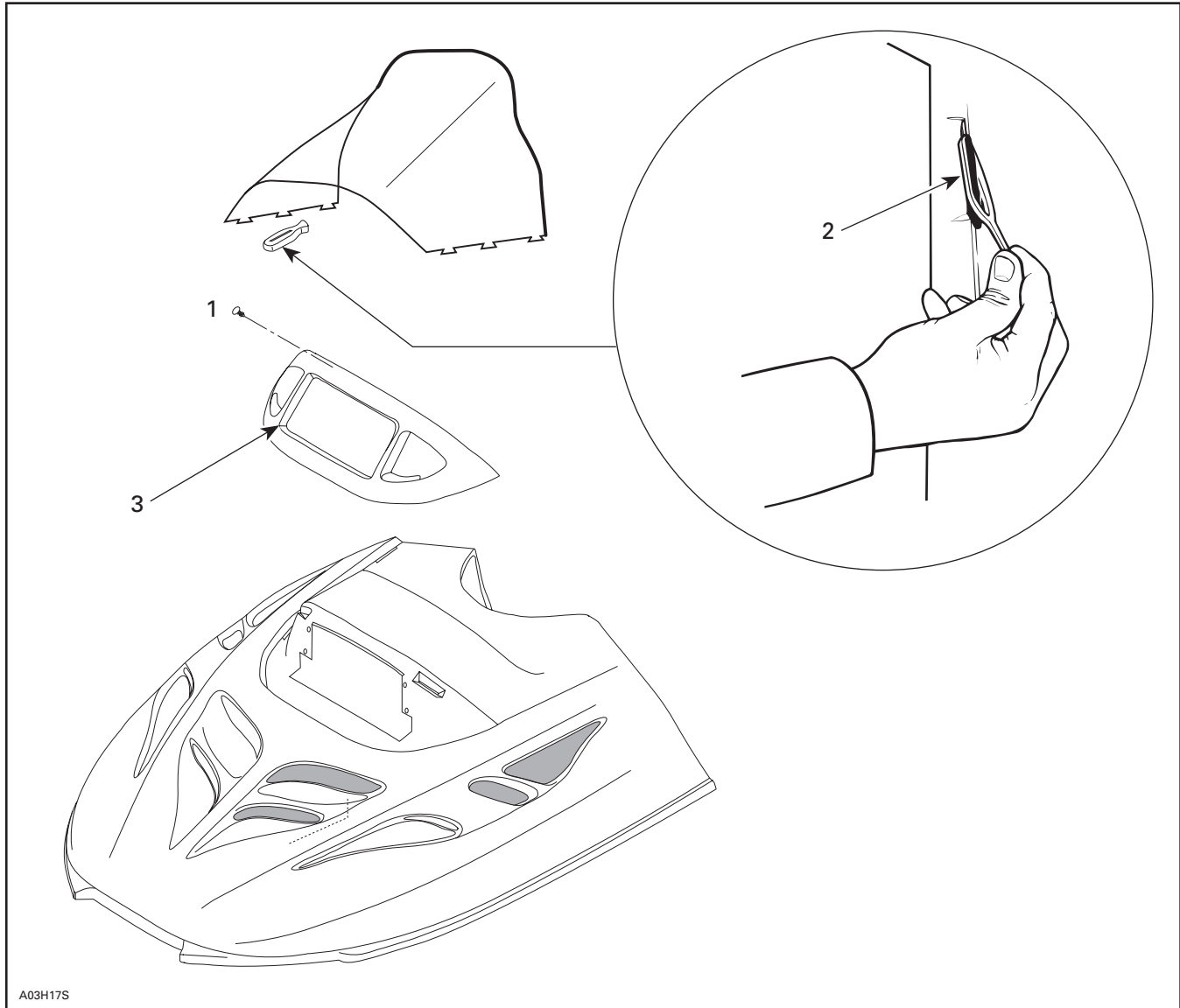
1. Steering pad (P/N 572 0238 00) (engine compartment)
2. Keyway (2) (P/N 572 0239 00) (section no. 4) use liquid soap to ease installation
3. Screw M5 x 20 (2) (P/N 222 8520 65) (section no. 4)
4. Nut M5 (2) (P/N 228 7510 45) (section no. 4) seat tighten only, no deformation of rubber
5. Loosen allen screw
6. Torque nuts to 26 N•m (19 lbf•ft)
7. Equal gap each side



PARTS INSTALLATION WINDSHIELD

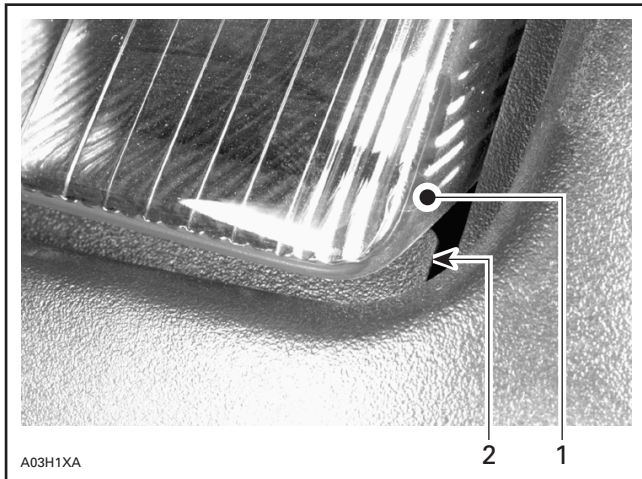


Install windshield on dashboard.



1. Dart (1) (P/N 414 6443 00) (section no. 2 or 5)
2. Latch (6) (P/N 570 0238 00) (section no. 4 or 6)
3. Temporarily remove headlamp molding for windshield installation

When reinstalling headlamp molding make sure lip is behind headlamp.

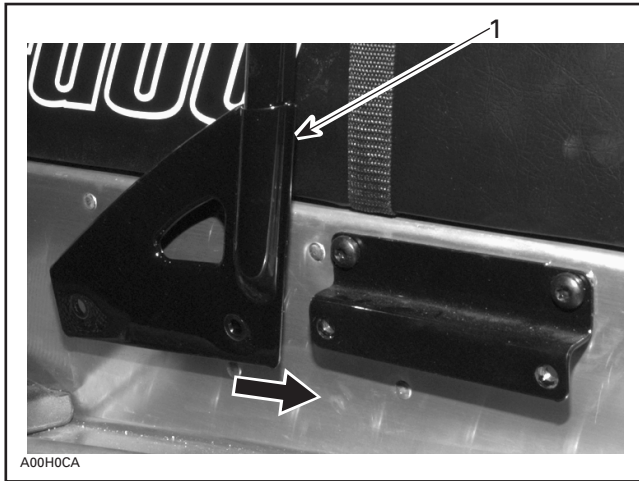


A03H1XA

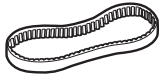
1. Headlamp
2. Lip of headlamp molding behind headlamp



PARTS INSTALLATION BACKREST



1. Slide backrest on mounting bracket and install with screws



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner before installing drive belt.



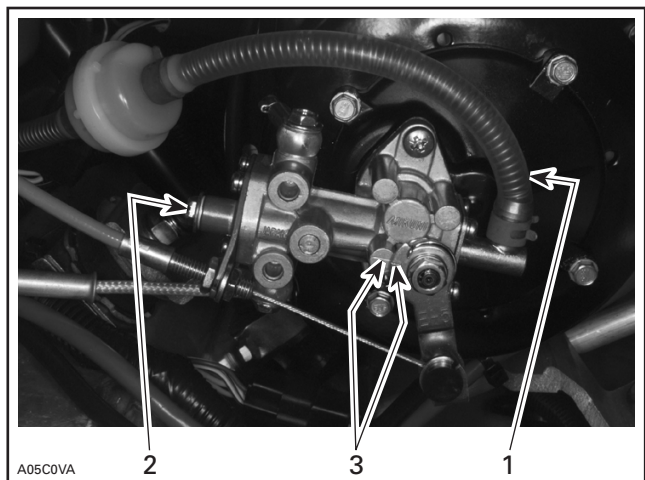
LIQUIDS

OIL INJECTION PUMP BLEEDING



To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER Injection Oil (P/N 496 0133 00) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.



NEW TYPE OF PUMP (WITH ELECTRONIC REVERSE)

1. Main oil line
2. Bleeder screw
3. Alignment marks

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

About the Electronic Reverse

Driving in reverse is obtained by changing the direction of rotation of the engine.

Shifting in reverse is an electronic operation consisting of a control module that will modify the ignition timing of the engine.

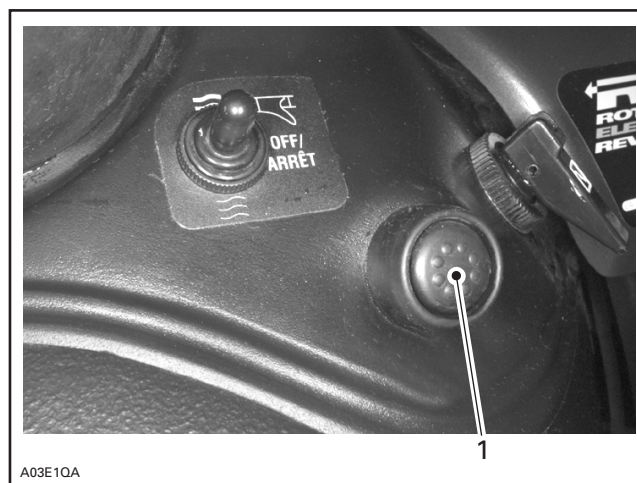
When depressing the reverse button, a signal will slow down the engine RPM enough to modify the ignition timing advance in order to reverse the rotation of the crankshaft.

No mechanical action and gear change is involved.

No adjustment is needed.

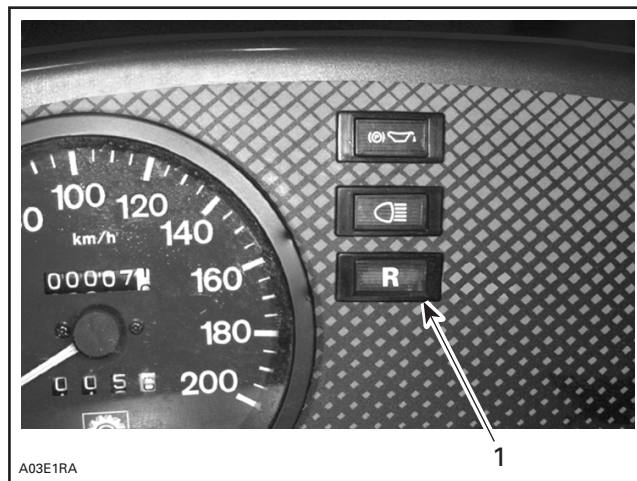
Shifting Procedure

With the snowmobile completely stopped and engine running at idle, press and release the electronic reverse button.



TOURING SLE

1. Reverse button



TOURING SLE

1. Reverse indicator lamp

The engine RPM will decrease for a few seconds then the engine will start rotating in the opposite direction and return to its normal idle speed.

NOTE: A reverse indicator lamp will illuminate and a warning buzzer will sound when the snowmobile is engaged in reverse

◆ WARNING

Always remain seated and apply the brake before shifting. Come to a complete stop before pressing the reverse button. Ensure the path behind is clear of obstacles or bystanders. Fast reverse while turning could result in loss of stability.

Apply throttle slowly and evenly. Allow drive pulley to engage then accelerate carefully.

▼ CAUTION

Do not rev the engine when driving in reverse. This may cause the clutch system to operate erratically.

It is recommended to warm up the engine to its normal operating temperature before shifting.

Shifting procedure will take place only when the engine is running.

Engine will automatically shift into forward when starting after stopping or stalling



**LIQUIDS
BRAKE FLUID LEVEL**



Check brake fluid in reservoir for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

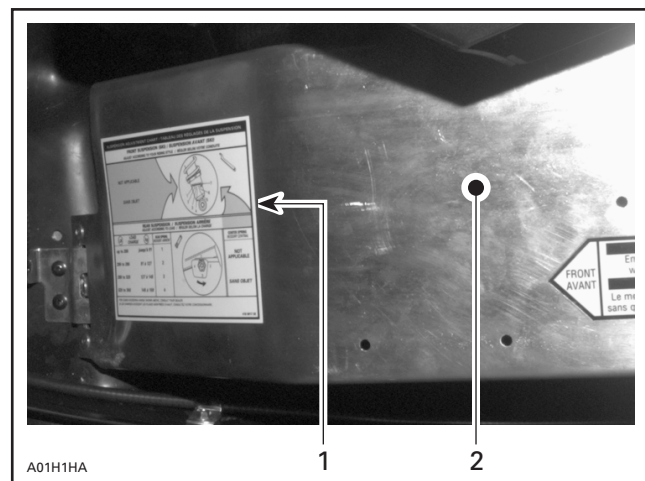
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partially filled bottle of brake fluid.



**ADJUSTMENTS
SUSPENSION**



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See Technical Data section at the end of this bulletin.



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for spring settings. Specifications in Technical Data are applicable after break-in period (about 10 hours of use).








TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

The dot (•) indicates changes from 1997 model.

		MODELS	TOURING SLE	
	Engine Type		503	
	Maximum HP RPM ①	± 100 RPM	7000 •	
	Rotary Valve	P/N Opening(BTDC)/ Closing (ATDC)	Not Applicable	
	Carburetor Type		PTO VM 34-513 • MAG VM 34-514 •	
	Main Jet		PTO 180 MAG 170	
	Needle Jet		P-0 (159)	
	Pilot Jet		40	
	Needle Identification — Clip Position		6DH2-3	
	Slide Cut-away		2.5	
	Float Adjustment	± 1 mm (± .040 in)	23.9 (.94)	
	Air Screw Adjustment	± 1/32 turn	1.875 •	
	Idle Speed RPM	± 200 RPM	1650	
	Gas Grade Octane Number	(R + M)/2	Regular Unleaded 87	
	Gas/Oil Ratio		Oil Injection	
	Ignition Timing BTDC ②	mm (in)	To be defined •	
	Trigger Coil Air-Gap	mm (in)	0.45 - 0.55 (.018 - .022)	
	Gear Ratio		teeth 21/44	
	Engagement Speed		± 100 RPM 2900 •	
	Drive Pulley Calibration Screw Position		3 •	
	Pulley Distance	Z	(+ 0, - 1) mm ((+ 0, - 1/32) in)	16.5 (21/32)
		X	± 0.4 mm (± 1/64 in)	35.0 (1-3/8)
	Offset	Y		Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
		Drive Belt Adjustment	Deflection	mm (in)
	Force ③		kg (lbf)	11.34 (25)
	Driven Pulley Preload		kg (lbf)	To be defined •
Drive Chain Tension			Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation	
Track Adjustment	Deflection		35 to 40 mm (1-3/8 to 1-9/16 in) with a 7.3 kg (16 lb) downward pull •	

① Engine speed at which maximum power is achieved.
 ② At 6000 RPM (engine cold) with headlamp turned on.
 ③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 MAG: Magneto side

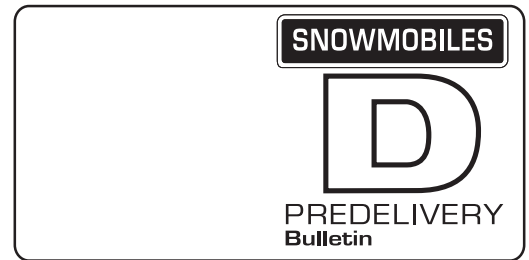
Please route to :

Init.

Service

Sales

Parts



No. **98-22**

Date: October 27, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1998	Canada MX Zx* 440 LC	1269	ALL
1998	United States: MX Zx* 440 LC	1270	ALL
1998	Europe MX Zx* 440 LC	1271	ALL

This bulletin must be used in conjunction with the check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

◆ WARNING

To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.

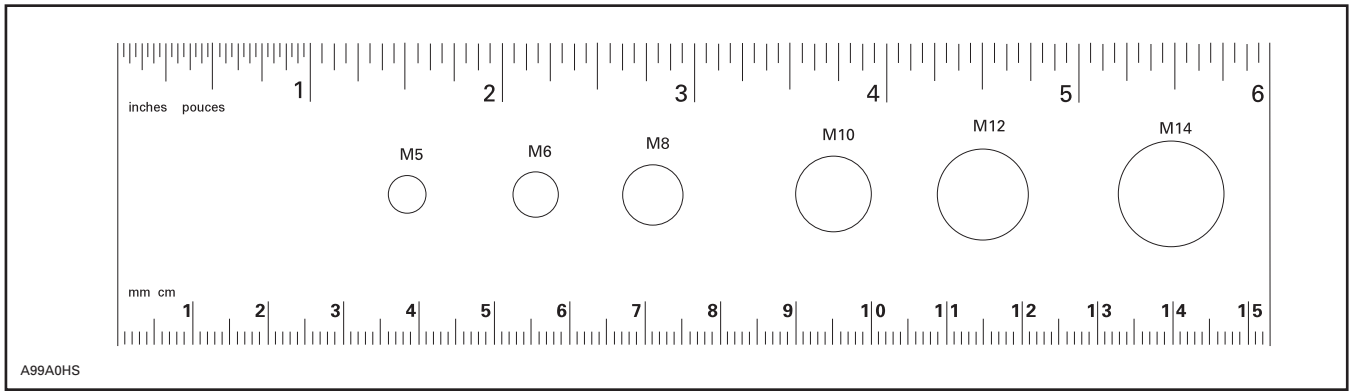
▼ CAUTION

When fuelling snowmobile, always premix fuel with BOMBARDIER-ROTAX synthetic injection oil using a ratio of 40:1.

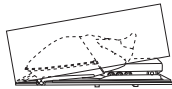
NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, it may have some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

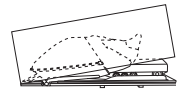
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and *Video*.



NOTE: This ruler can be helpful to identify fastener length or size.



UNCRATING



PREDELIVERY KIT P/N	MODELS
580 6564 00	MX Zx 440 LC

◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

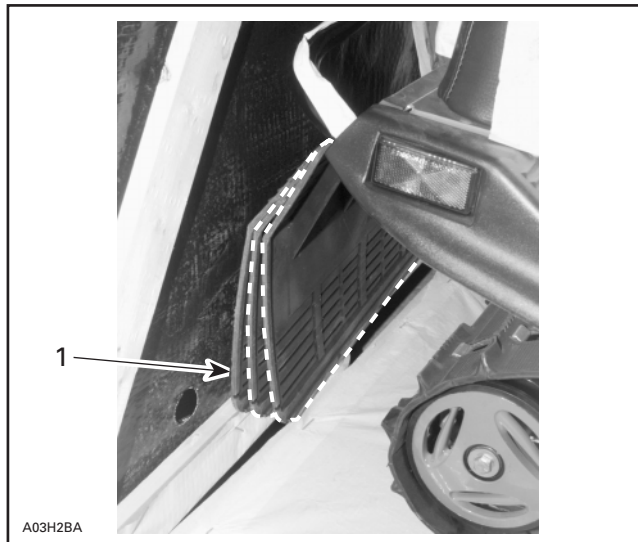
Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

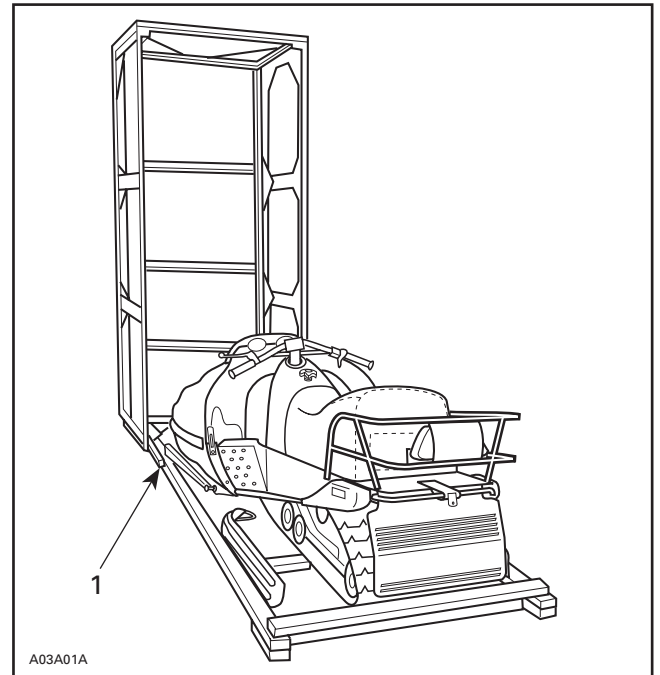
Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.

NOTE: On some models, snow guard may interfere with crate cover, as shown in the following photo. Push on snow guard when lifting cover.



FROM OUTSIDE CRATE PUSH ON SNOW GUARD TO ALLOW COVER TO LIFT WITHOUT DAMAGING SNOW GUARD

1. Snow guard interfering with crate cover



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts for reinstallation. Discard crating spacers and nuts.

Remove vehicle from base.

Remove drive belt and predelivery kit from engine compartment.



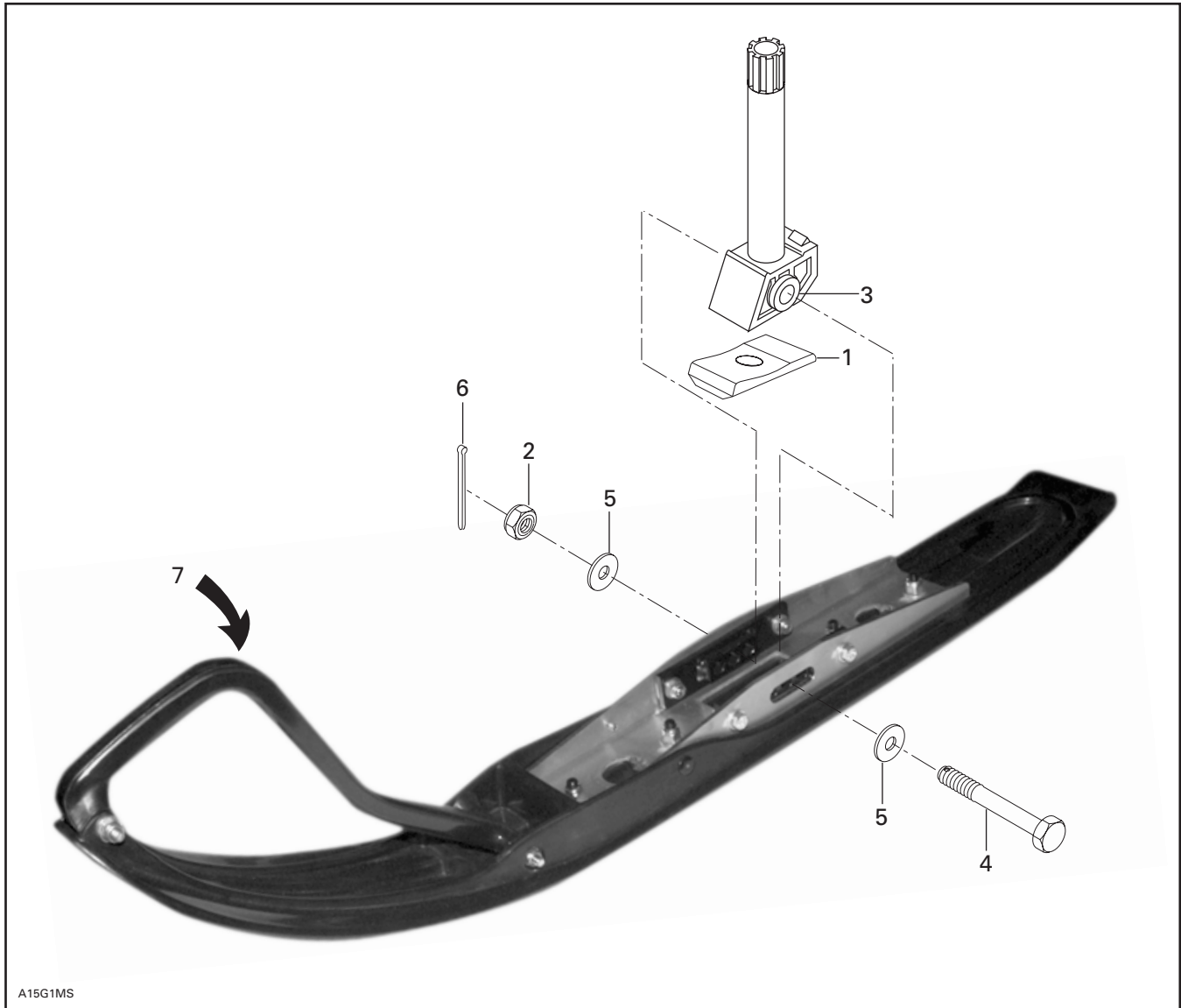
PARTS INSTALLATION SKIS



Install skis on vehicle.

NOTE: Make sure that slider cushions are still in ski leg.

Replace vehicle on ground.



LEFT SIDE SHOWN

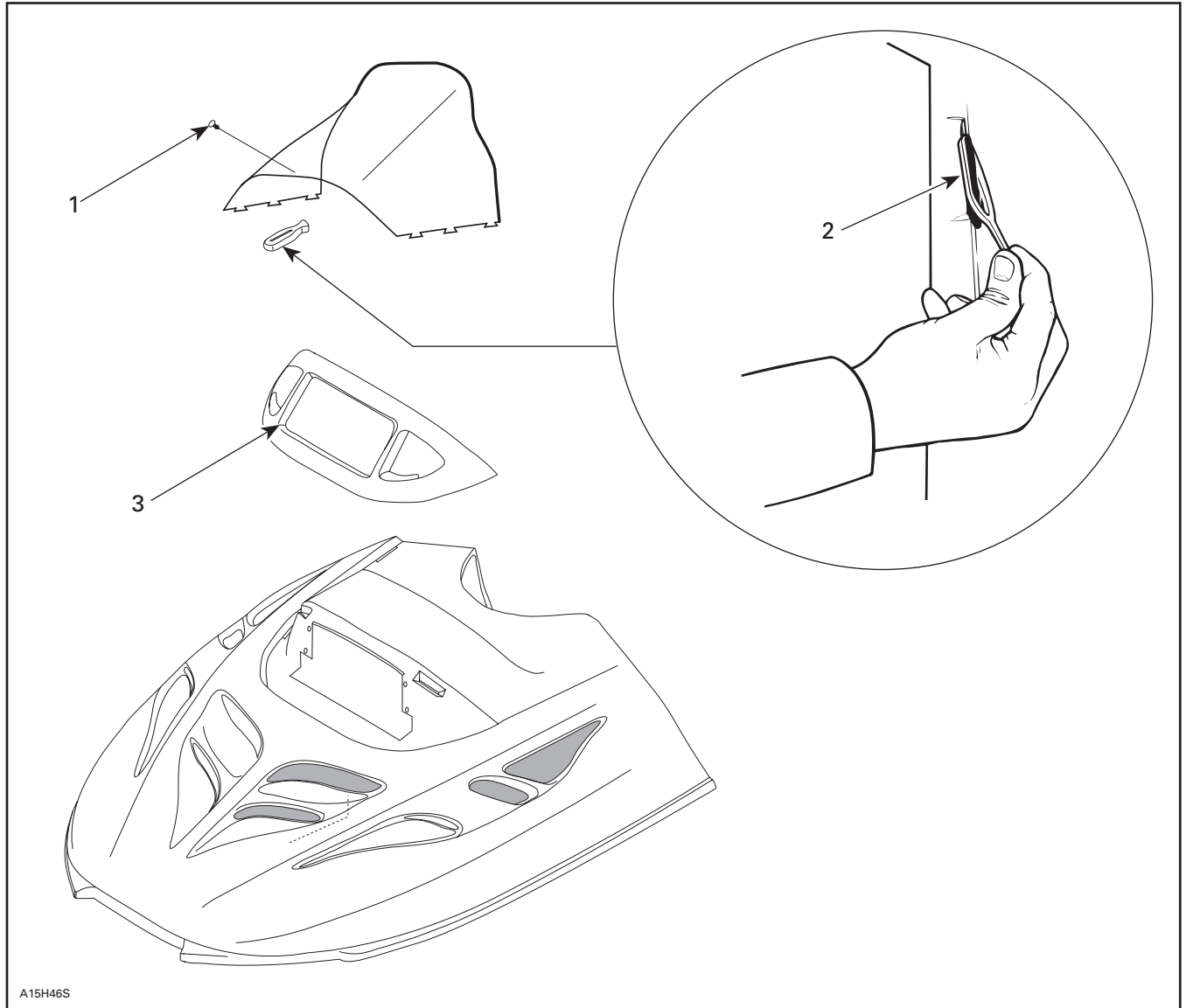
1. Ski stopper (2) "AVANT" toward front
2. Self-locking nut M12 x 1.75 (2). Torque to 24 N•m (18 lbf•ft)
3. Slider cushion (4) (ski leg)
4. Bolt M12 (2). Install bolt into mid-hole
5. Washer (4)
6. Cotter pin (2)
7. Twist ski to ease bolt installation



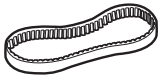
PARTS INSTALLATION WINDSHIELD



Install windshield on dashboard.

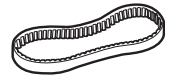


1. Dart (1) (P/N 414 6443 00)
2. Latch (6) (P/N 570 0238 00)
3. Temporary remove headlamp molding for windshield installation



PARTS INSTALLATION

DRIVE BELT

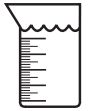


Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.

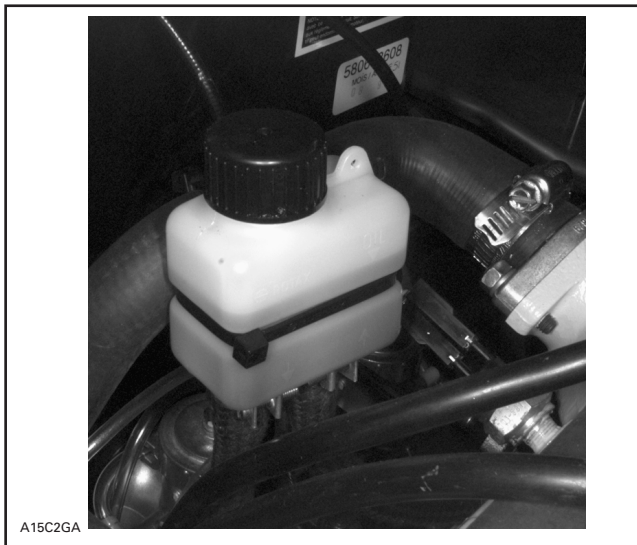


LIQUIDS

ROTARY VALVE OIL RESERVOIR LEVEL



Check oil level in the rotary valve reservoir. Add oil as required. Refer to the following photo.



A15C2GA
ROTARY VALVE OIL RESERVOIR

▼ CAUTION

Use only BOMBARDIER-ROTAX synthetic injection oil (P/N 413 7105 00) (12 x 1L).



LIQUIDS

BRAKE FLUID LEVEL



Check brake fluid in reservoir for proper level. Add fluid (DOT) as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.





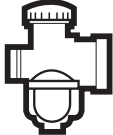


ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).

TECHNICAL DATA

The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

	MODEL	MX Zx 440 LC	
	Engine Type	454	
	Maximum HP RPM ① ± 100 RPM	8500	
	Rotary Valve P/N Opening (BTDC)/ Closing (ATDC)	420 924 502 146° 65°	
	Carburetor Type	2 x VM 34 mm	
	Main Jet	PTO 260 MAG 250	
	Needle Jet	Q-0 (159)	
	Pilot Jet	50	
	Needle Identification — Clip Position	6FJ43	
	Slide Cut-away	2.5	
	Float Adjustment ± 1 mm (in)	23.9 (.941)	
	Air Screw Adjustment ± 1/16 turn	1	
	Idle Speed RPM ± 200 RPM	1700	
	Gas Grade/Pump Octane Number (R + M)/2	Regular Unleaded/87	
	Gas/Oil Ratio	Premix 40:1 with BOMBARDIER-ROTAX synthetic injection oil	
	Ignition Timing BTDC ② mm (in)	1.48 (.058)	
	Trigger Coil Air Gap mm (in)	0.55 - 1.45 (.022 - .057)	
	Gear Ratio teeth	21/43	
	Engagement Speed ± 100 RPM	5400	
	Drive Pulley Calibration Screw Position	5	
	Pulley Distance	Z (+0, -1) mm (+0, -1/32) in	16.5 (21/32)
	Offset	X ± 0.4 mm (± 1/64 in)	35.0 (1-3/8)
		Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
	Drive Belt Adjustment	Deflection ± .5 mm (in)	32 (1-1/4)
		Force ③ kg (lbf)	11.34 (25)
	Driven Pulley Preload ± 0.7 kg (lbf)	7.0 (15.43)	
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation	
Track Adjustment	Deflection mm (in)	35 to 40 (1-3/8- 1-9/16) with a 7.3 kg (16 lb) downward pull	

- ① Engine speed at which maximum power is achieved.
- ② At 6000 RPM (engine cold) with headlamp turned on.
- ③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
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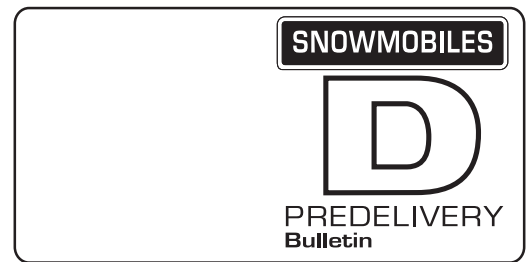
Please route to :

Init.

Service

Sales

Parts



No. **98-23**

Date: October 24, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1998	Canada and United States: Summit* 670	1261/1262	ALL
1998	Europe Summit 670	1263	ALL

This bulletin must be used in conjunction with the predelivery check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

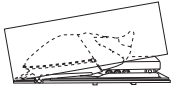
◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

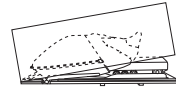
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The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and video.

There is a tag attached to the ignition key, only the customer must removed it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

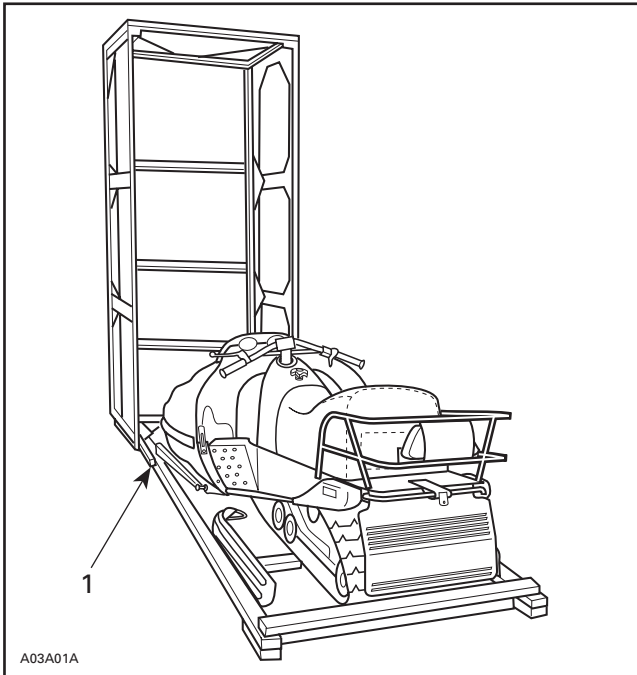
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to crate base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.



A03A01A

1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

When this metal strip is under the seat loosen 2 or 4 nuts retaining the seat before pulling out the metal strip.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



A00A48A

EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.



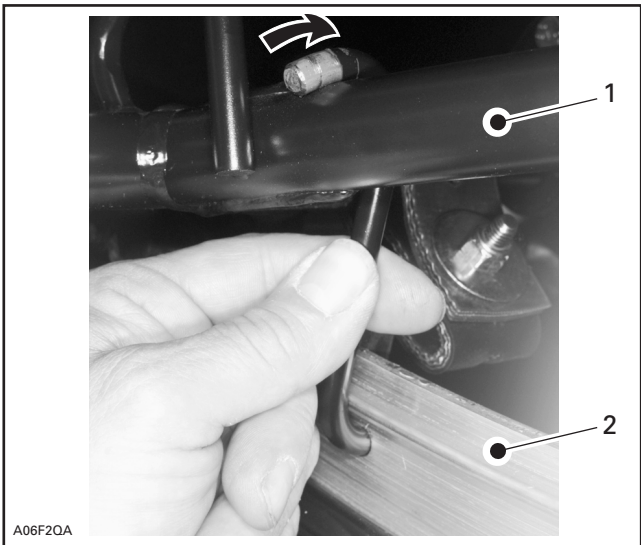
A00A49A

TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



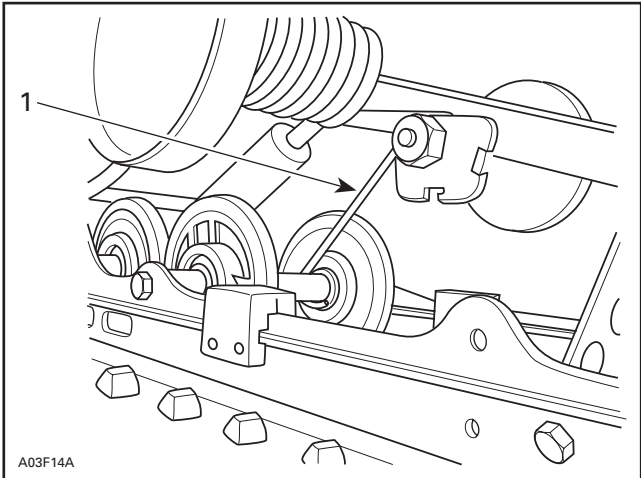
A06F20A

TYPICAL — REMOVE HOOK

1. Front arm
2. Runner

REAR HOOK REMOVAL

Apply pressure on rear suspension and remove hook from rear portion of suspension, as illustrated.



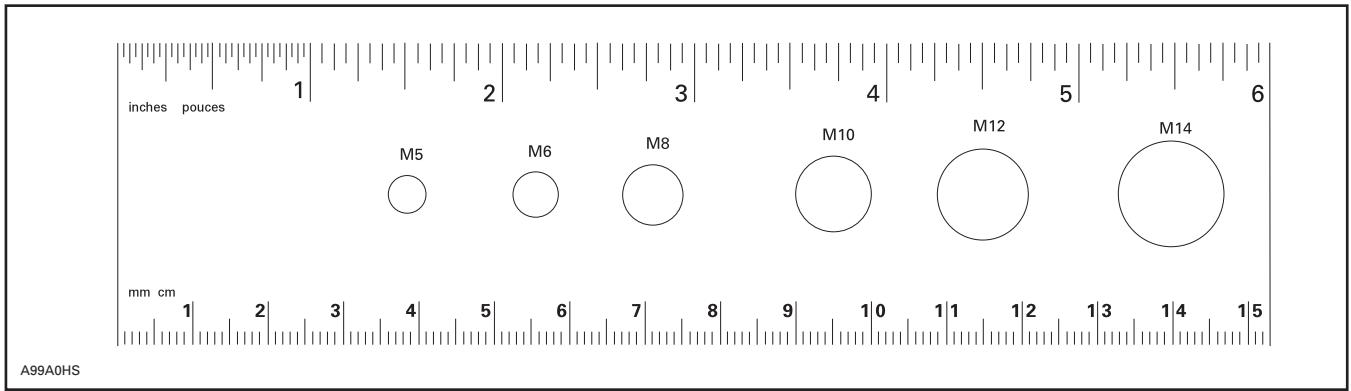
A03F14A

1. Remove hook

◆ WARNING

Shipping hooks must be removed to have snowmobile suspension operational.

PREDELIVERY KIT P/N	MODELS
580 6699 00	SUMMIT 670

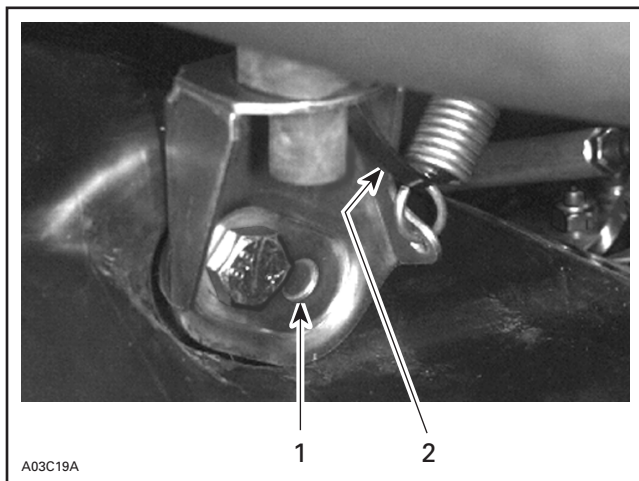
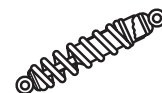


NOTE: This ruler can be helpful to identify fastener length or size.



PARTS INSTALLATION

FRONT SUSPENSION



1. Lug in recess
2. Locking tie

Lift front of vehicle and block safely.

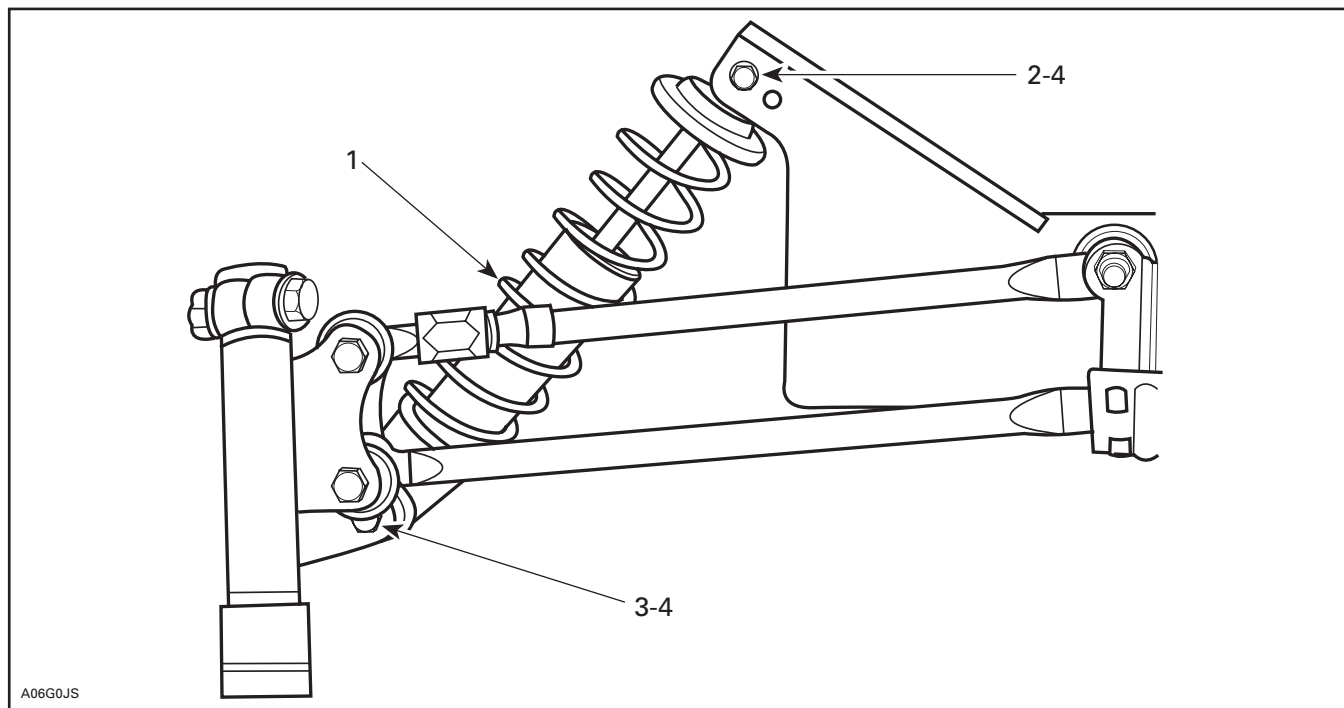
Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position screw heads toward rear.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.

NOTE: On models equipped with a 5 holes exhaust support, hook up exhaust spring on mid-hole.



TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 0060 65) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 0055 65) (on suspension)
4. Elastic flanged nut M10 x 1.5 (2) (P/N 228 5010 45) (section no. 4 or 5). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION SKIS



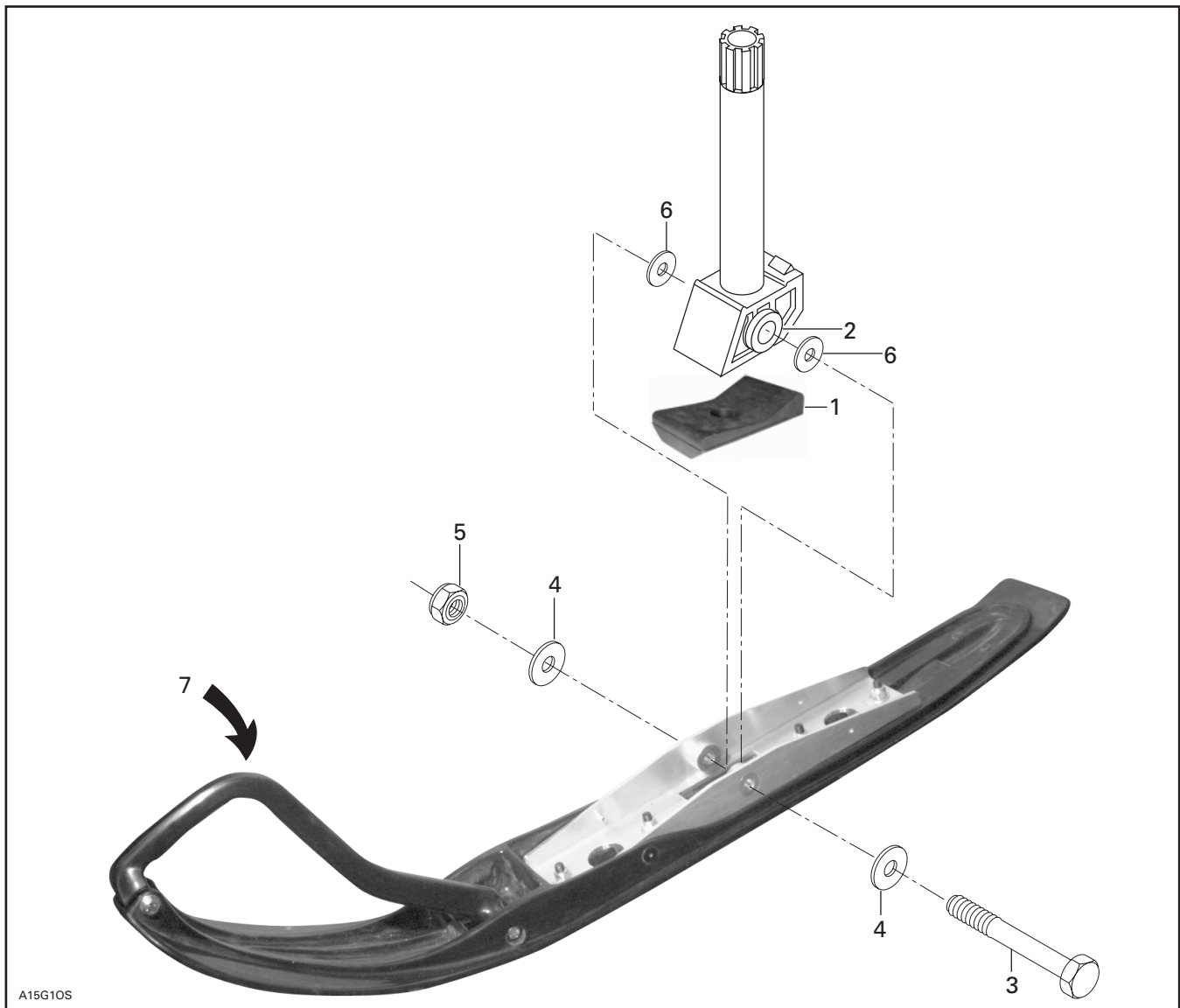
Summit 670

Ensure ski leg slider cushions are still in ski leg.

Install skis on vehicle.

NOTE: Use small washers (P/N 732 9000 48) to fill gap between ski leg slider cushions and ski. If both washers are required install washer on each side of ski leg. If only one washer is required, install washer from inside snowmobile.

Replace vehicle on ground.



LEFT SIDE SHOWN

1. Ski stopper (2) (section no. 8) "AVANT" toward front
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Washer (4) (P/N 506 1364 00) (section no. 8). Install large washer
5. Elastic flanged nut M12 x 1.75 (2) (P/N 228 5210 45) (section no. 8). Torque to 40 N•m (30 lbf•ft)
6. Washer (4) (P/N 732 9000 48) (section no. 8). Insert small washer, as needed, to fill gap between ski leg slider cushions and ski
7. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD



Adjust handlebar and torque nuts to 26 N•m (19 lbf•ft).

Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.

NOTE: A steering holding strap, held on to the handlebar, is included with a new zip type padding cover.

Start by inserting strap, from outside, through holes provided in steering pad cover.

Insert strap ends in retaining clips.

NOTE: Left side clip tightening bolt and nut should be toward rear and right side toward front.

Align both clips at equal distance on both sides and tighten firmly.

Install padding taking care in positioning foam properly, leaning against steering column.

Pull down cover onto padding and complete installation by properly zipping both sides.

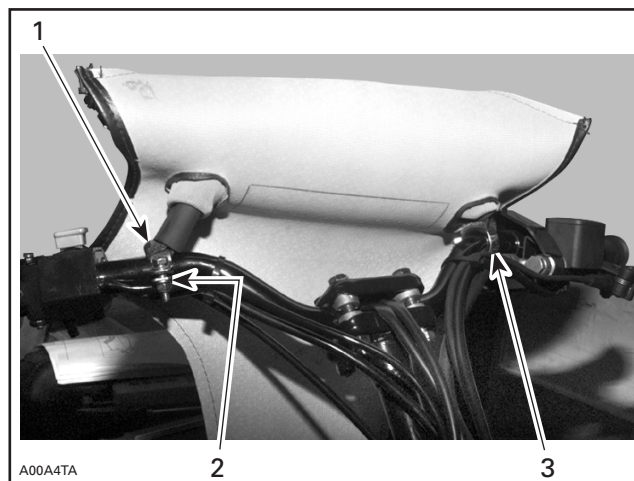
Align steering pad with both side handle housings. Refer to photos below.

Adjust and tighten throttle and brake handle housings.



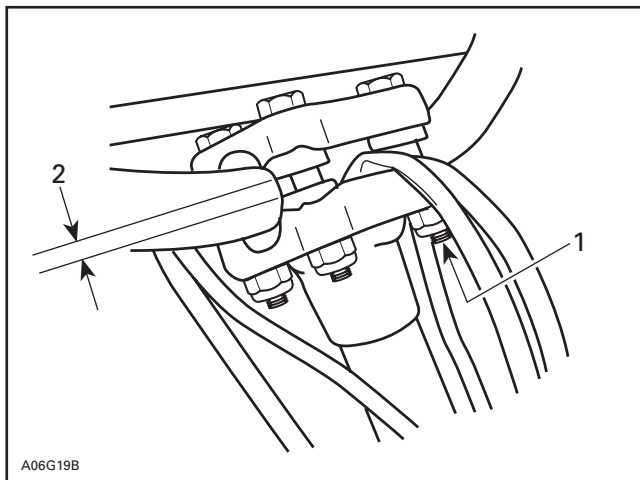
A00A4SA

INSERT HOLDING STRAP THROUGH COVER FROM OUTSIDE



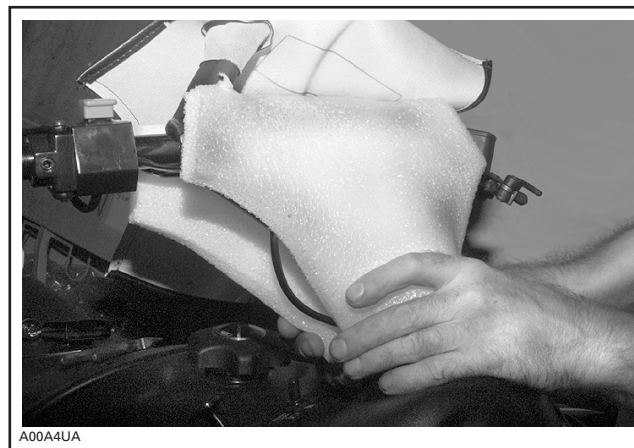
A00A4TA

1. Strap inserted in clip
2. Right side clip toward front
3. Left side clip toward rear



A06G19B

1. Torque to 26 N•m (19 lbf•ft)
2. Equal gap each side (both clamps)

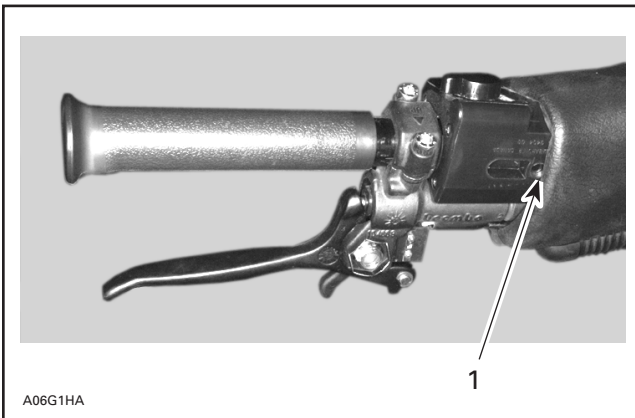


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POSITION PADDING PROPERLY

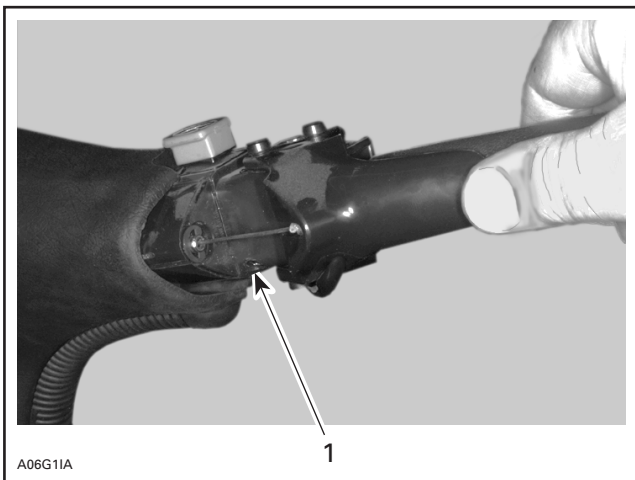


FINAL LOOK



BRAKE HANDLE HOUSING

1. Tighten set screw to **2 N•m (18 lbf•in)**



THROTTLE HANDLE HOUSING

1. Tighten set screw to **2 N•m (18 lbf•in)**



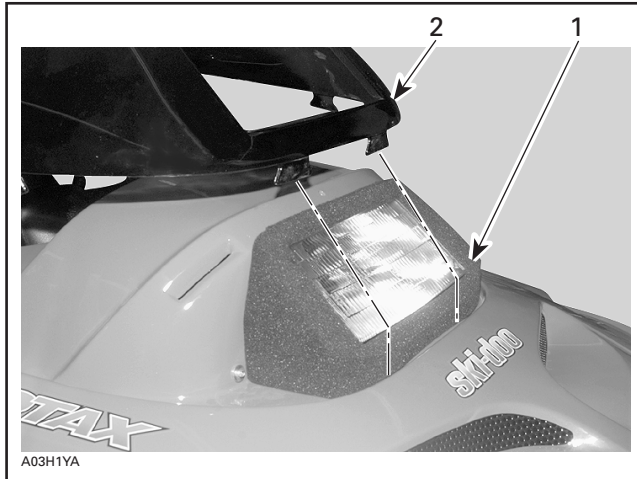
PARTS INSTALLATION WINDSHIELD



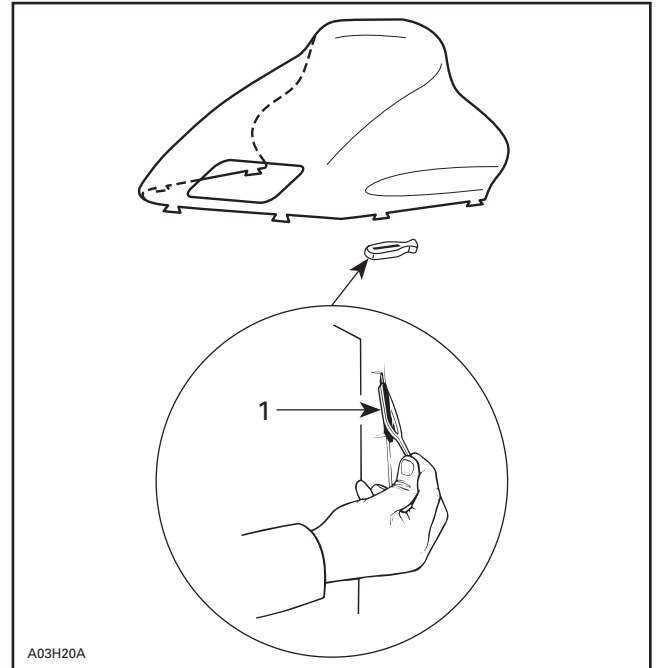
All Models

Install windshield on dashboard.

NOTE: Make sure that protective foam is properly positioned around headlamp before installing windshield.



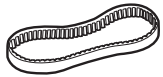
1. Protective foam
2. Install windshield on dashboard



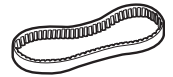
1. Latch (6) (P/N 570 0238 00) (section no. 4 or 6)



WINDSHIELD INSTALLED ON DASHBOARD



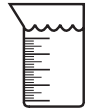
PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner before installing drive belt.



LIQUIDS OIL INJECTION PUMP BLEEDING

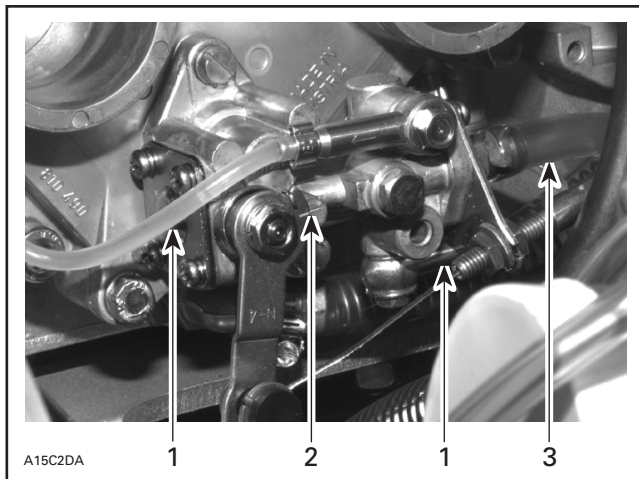


SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX injection oil (P/N 413 8030 00) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Remove air silencer and move carburetors aside. Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required. Check also for proper oil lever adjustment. Marks must align when throttle lever is activated just enough to take all cable play.

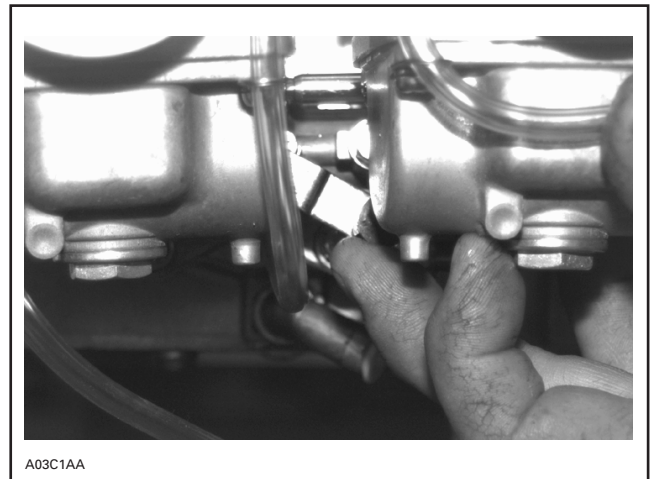


1. Small oil line
2. Marks aligned
3. Main oil line

Reinstall all parts except air silencer.

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

NOTE: If the air silencer has been reinstalled, make a J hook out of mechanical wire to lift the lever.



TYPICAL — ENGINE AT IDLE
Reinstall air silencer.



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir for proper level. Add fluid (DOT) as required.

▼ CAUTION

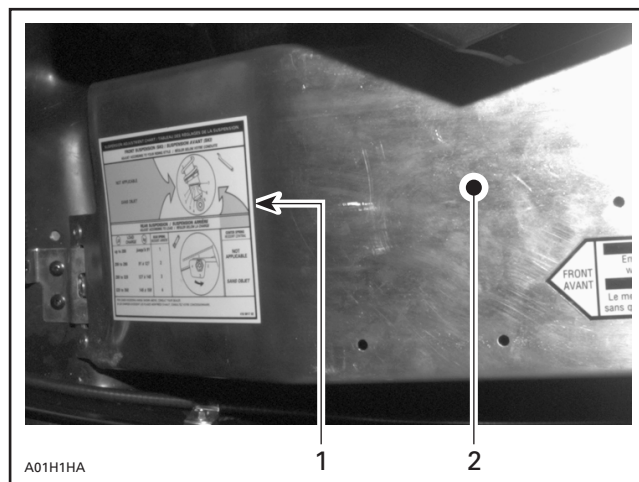
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partially filled bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).



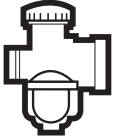




TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1997 model.

	MODEL	SUMMIT 670		
	Engine Type	670		
	Maximum HP RPM ①	± 100 RPM 7700		
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	420 9245 00 144° 72° •	
	Carburetor Type	PTO VM 40 - 103	MAG VM 40 - 104 •	
	Main Jet	PTO 380	MAG 370	
	Needle Jet	AA-2 (224)		
	Pilot Jet	75		
	Needle Identification — clip Position	7DPI1		
	Slide Cut-away	2.5		
	Float Adjustment	± 1 mm (in)	18.1 (.71)	
	Air Screw Adjustment	± 1/16 turn	2-1/4	
	Idle Speed RPM	± 200 RPM	1900	
	Gas Grade/Pump Octane Number	(R + M)/2	Regular Unleaded/87	
	Gas/Oil Ratio	Oil Injection		
	Ignition Timing BTDC ②	mm (in)	1.93 (.076)	
	Trigger Coil Air-Gap	mm (in)	0.55 - 1.45 (.022 - .057)	
	Gear Ratio	teeth	23/43 •	
	Engagement Speed	± 100 RPM	4100	
	Drive Pulley Calibration Screw Position	5		
	Pulley Distance	Z (+ 0, - 1) mm (+ 0, - 1/32) in	16.5 (21/32)	
	Offset	X ± 0.4 mm (± 1/64 in)	35.0 (1-3/8)	
		Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)	
	Drive Belt Adjustment	Deflection	± .5 mm (in)	32 (1-1/4)
		Force ③	kg (lbf)	11.34 (25)
	Driven Pulley Preload	± 0.7 kg (lbf)	7.0 (15.43)	
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation		
Track Adjustment	Deflection	mm (in)	35 to 40 (1-3/8 - 1-9/16) with a 7.3 kg (16 lb) downward pull •	

- ① Engine speed at which maximum power is achieved.
- ② At 6000 RPM (engine cold) with headlamp turned on.
- ③ Force applied midway between pulleys to obtain specified deflection.
- ④ High Altitude Compensator.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 MAG: Magneto side
 CRT: Center
 N.A.: Not applicable

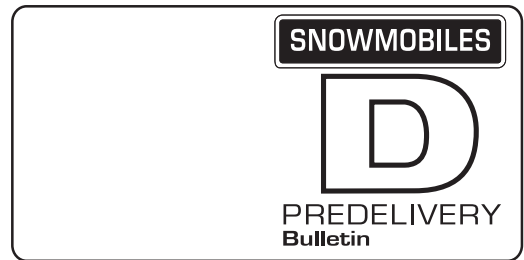
Please route to :

Init.

Service

Sales

Parts



No. **98-24**

Date: November 6, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1998	Canada: Summit x* 670	1307	ALL
1998	United States: Summit x* 670	1310	ALL

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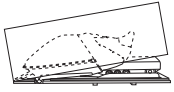
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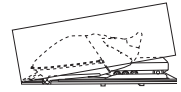
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There is a tag attached to the ignition key, only the customer must removed it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

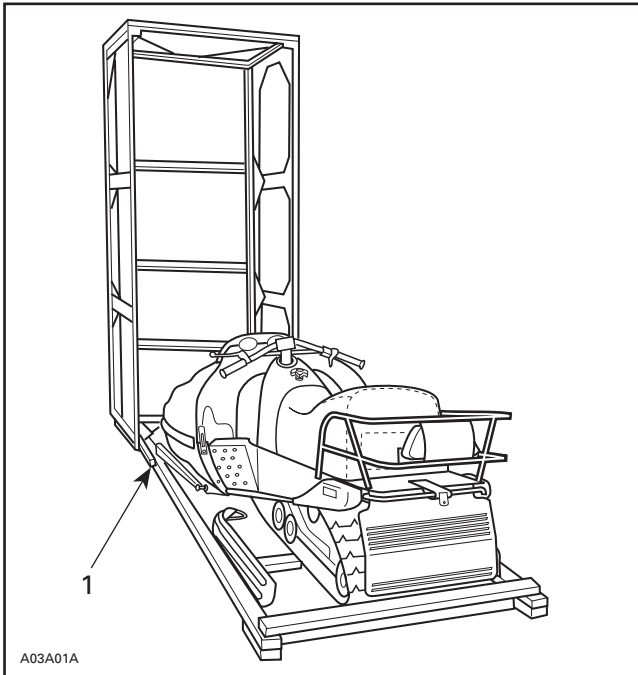
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Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to crate base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.



A03A01A

TYPICAL
1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

When this metal strip is under the seat loosen 2 or 4 nuts retaining the seat before pulling out the metal strip.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



A00A48A

EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.

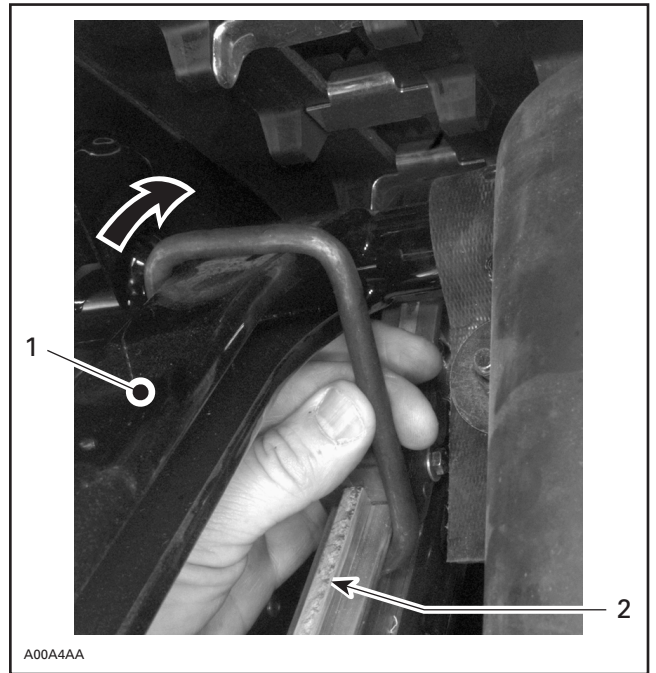


A00A49A

TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



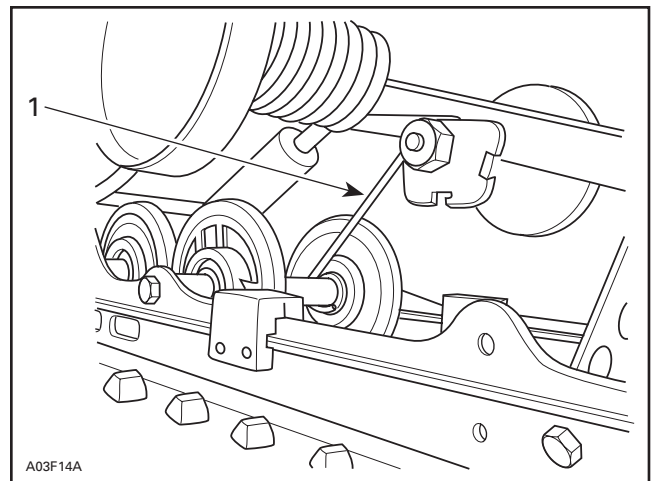
A00A4AA

TYPICAL — REMOVE HOOK

1. Front arm
2. Runner

REAR HOOK REMOVAL

Apply pressure on rear suspension and remove hook from rear portion of suspension, as illustrated.

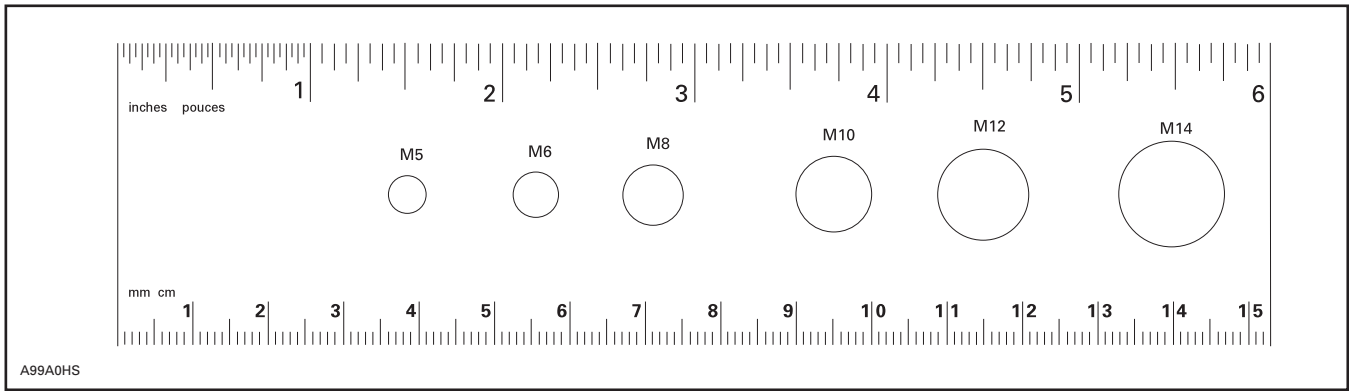


A03F14A

1. Remove hook

◆ WARNING
Shipping hooks must be removed to have snowmobile suspension operational.

PREDELIVERY KIT P/N	MODELS
580 6699 00	SUMMIT x 670



NOTE: This ruler can be helpful to identify fastener length or size.

DIGITAL ENCODED SECURITY SYSTEM (DESS)

NOTE: Key has been programmed at factory. To program additional keys on model Summit x 670, programmer must be updated with latest 2.5 version.

The DESS is a deterrent against theft. **Once programmed**, the tether cord provided with snowmobile is the only one that allows engine to turn more than 2500 RPM. If a wrong tether cord is installed the engine will start but will not reach engagement speed required to move vehicle.

The snowmobile MPEM can be programmed to allow the use of up to 8 tether cords. When 8 tether cords have been programmed all cords must be deleted from MPEM memory before others can be added.

Each tether cord has a small magnet as well as a small micro chip molded into the rubber cap. The magnet will close a primary circuit in the electrical system. This completes the circuit and allows the MPEM to read the electronic number in the tether cord when engine is started.

NOTE: We do not program the tether cord. We record the tether cord electronic number into the MPEM memory.

The MPEM also handles data input such as; customer name, delivery date and it records the hours of operation.

After engine is started DESS pilot lamp blinking means that a bad connection has been detected. Vehicle can not be driven.

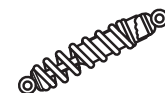
If the pilot lamp does not blink, all is O.K. The vehicle can then be driven normally.

To program tether cord refer to *SKI-DOO MPEM Programmer Guide* (P/N 480 1436 01).

NOTE: All snowmobiles must be started before programming tether cord. Engine will automatically stop on snowmobiles equipped with a battery. Engine will keep running on snowmobiles without battery.



PARTS INSTALLATION FRONT SUSPENSION



Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at bottom.

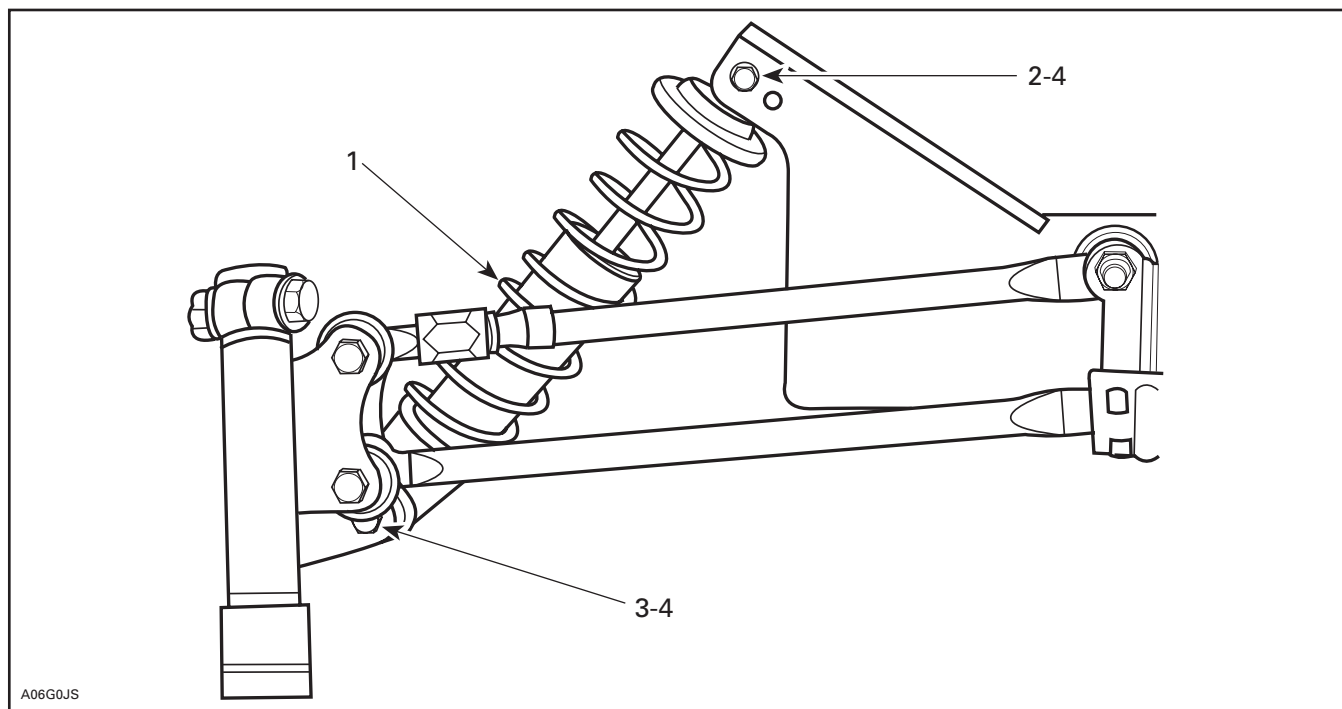
NOTE: Position top screw heads toward front and bottom screw heads toward front.

Cut locking tie retaining exhaust spring to exhaust support.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess, as shown in the next photo.



Hook up exhaust spring.

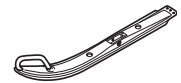


TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 0060 65) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 0055 65) (on suspension)
4. Elastic flanged nut M10 x 1.5 (2) (P/N 228 5010 45) (section no. 4). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION SKIS

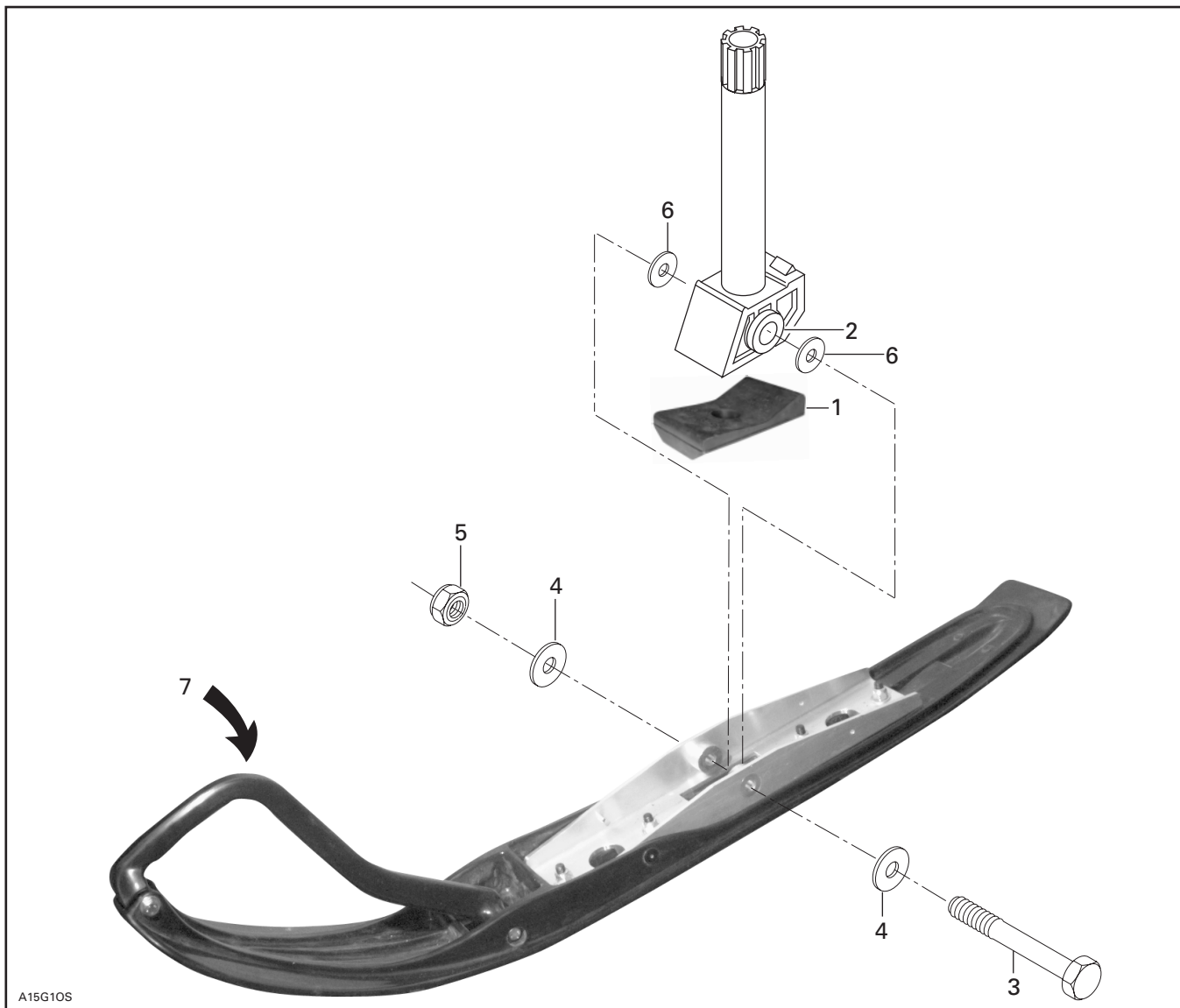


Ensure ski leg slider cushions are still in ski leg.

Install skis on vehicle.

NOTE: Use small washers (P/N 732 9000 48) to fill gap between ski leg slider cushions and ski. If both washers are required install washer on each side of ski leg. If only one washer is required, install washer from inside snowmobile.

Replace vehicle on ground.



LEFT SIDE SHOWN

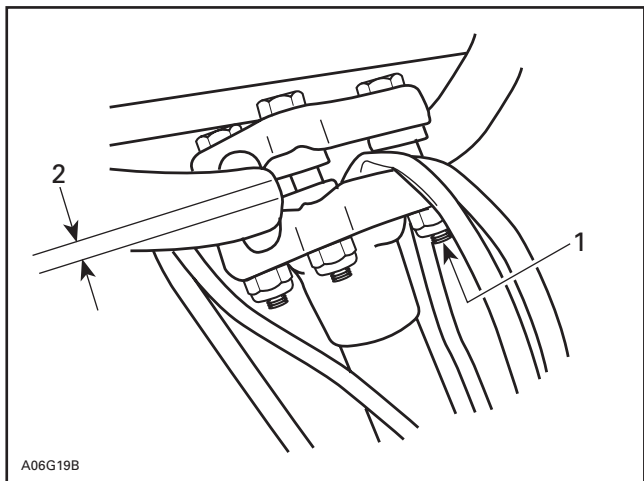
1. Ski stopper (2) (section no. 8) "AVANT" toward front
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Washer (4) (P/N 506 1364 00) (section no. 8). Install large washer
5. Elastic flanged nut M12 x 1.75 (2) (P/N 228 5210 45) (section no. 8). Torque to 40 N•m (30 lbf•ft)
6. Washer (4) (P/N 732 9000 48) (section no. 8). Insert small washer, as needed, to fill gap between ski leg slider cushions and ski
7. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD



Adjust handlebar and torque nuts to 26 N•m (19 lbf•ft).



1. Torque to 26 N•m (19 lbf•ft)
2. Equal gap each side (both clamps)

Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.

STEERING HOLDING STRAP

Start by cutting locking tie retaining right side strap end.

Insert strap through holes provided in steering pad cover, as shown in the next photo.



1. Strap inserted through both steering pad cover holes

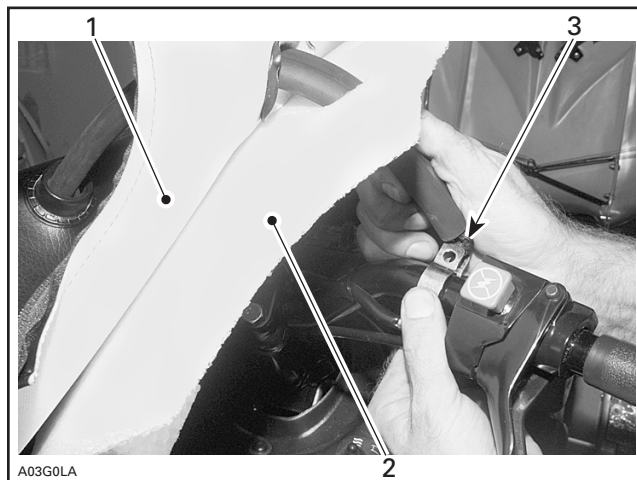
Properly position padding, as shown in the next photo, then insert padding under cover.



NOTE PADDING HOLE POSITION

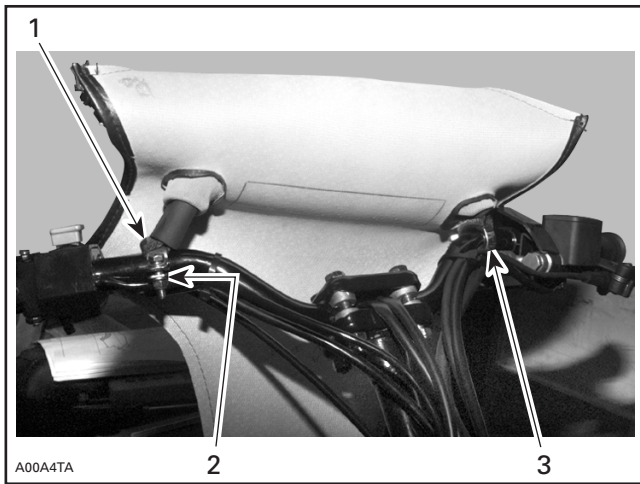
Once padding is positioned under steering pad cover, insert right side strap end through padding hole.

Secure right side strap end with retaining clip and tighten firmly.



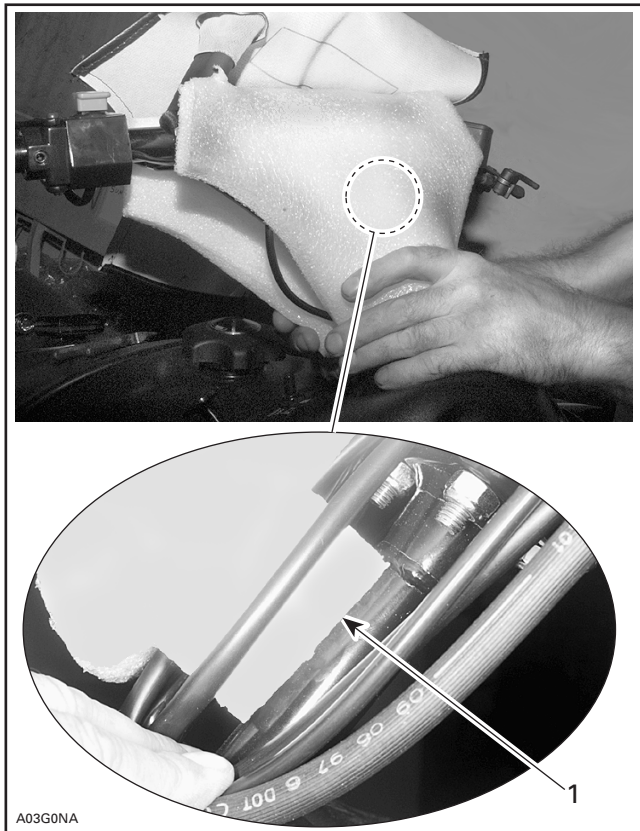
1. Steering pad cover
2. Padding
3. Secure right side strap end using clip, washers, screw and nut, (section no. 5)

NOTE: Left side clip tightening bolt and nut should be toward rear and right side toward front, as shown in the next photo.



1. Strap inserted in clip
2. Right side clip toward front
3. Left side clip toward rear

Install padding taking care in positioning foam properly, leaning against steering column, as shown in the next photo.



PROPERLY POSITION PADDING

1. Foam properly leaning on steering column

Pull down cover onto padding and complete installation by zipping both sides.

Align steering pad with both side handle housings.



FINAL INSTALLATION

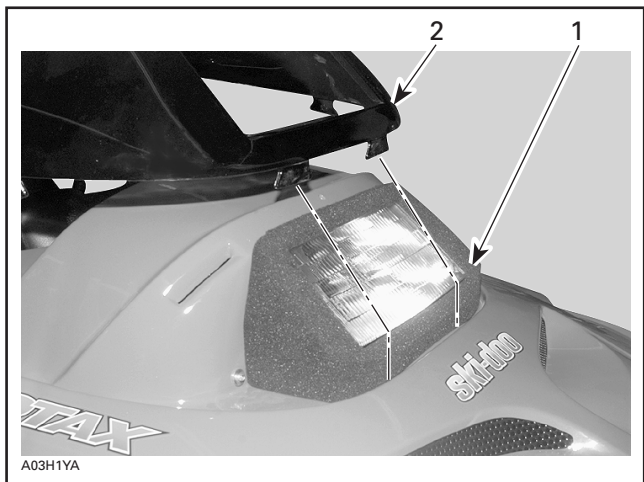


PARTS INSTALLATION WINDSHIELD



Install windshield on dashboard.

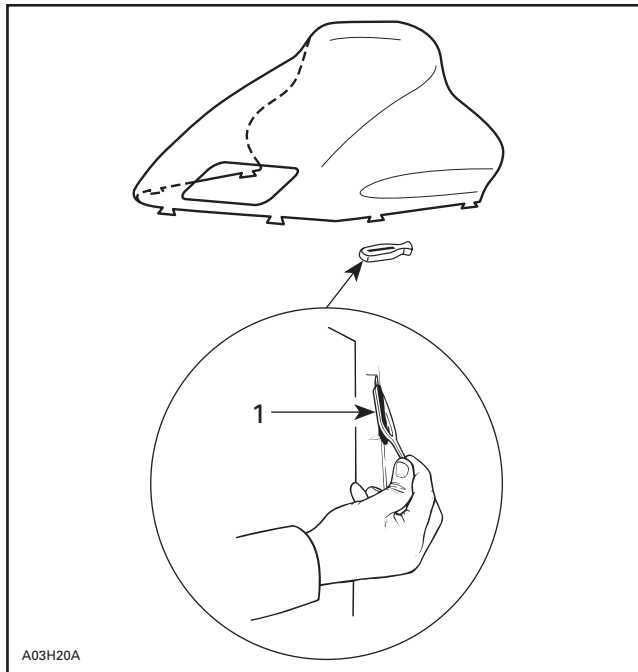
NOTE: Make sure that protective foam is properly positioned around headlamp before installing windshield.



1. Protective foam
2. Install windshield on dashboard



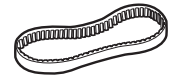
WINDSHIELD INSTALLED ON DASHBOARD



1. Latch (6) (P/N 570 0238 00) (section no. 6)



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner before installing drive belt.



LIQUIDS OIL INJECTION PUMP BLEEDING



SUPPLEMENTAL OIL

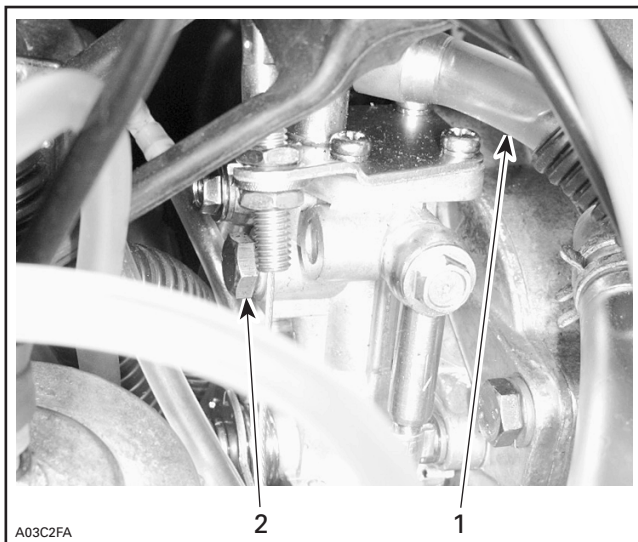
To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX injection oil (P/N 413 8030 00) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

NOTE: On Summit x 670, oil pump has been located above carburetors. Bleeding procedure remains the same.

Remove air silencer.

Bleed main oil line by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

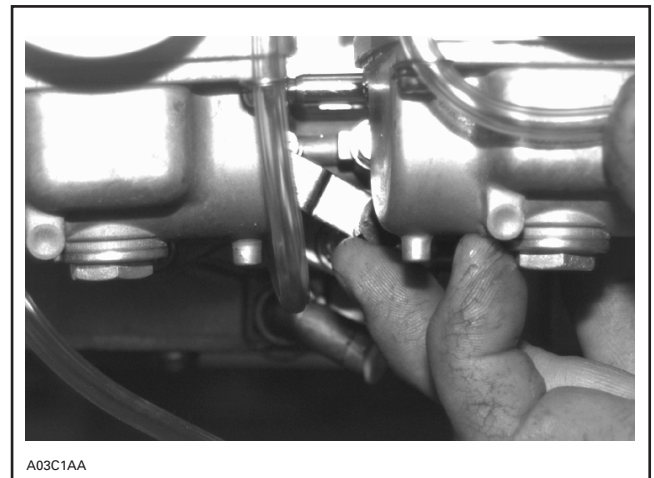


1. Main oil line
2. Bleeder screw

Check also for proper oil lever adjustment. Marks must align when throttle lever is activated just enough to take all cable play.

Bleed the small oil line by running engine at idle while holding the pump lever in fully open position.

NOTE: If the air silencer has been reinstalled, make a J hook out of mechanical wire to lift the lever.



TYPICAL — ENGINE AT IDLE

Reinstall air silencer.



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir for proper level. Add fluid (DOT) as required.

▼ CAUTION

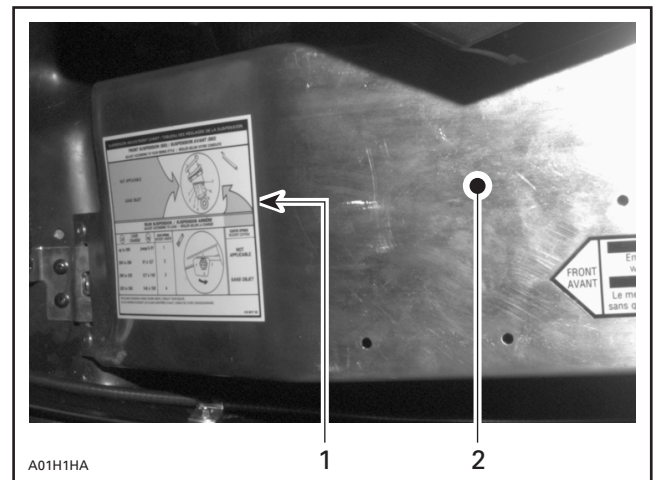
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partially filled bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.



ADJUSTMENTS DRIVEN PULLEY








It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).



TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

	MODEL	SUMMIT x 670		
	Engine Type	670		
	Maximum HP RPM ① ± 100 RPM	8100		
	Rotary Valve P/N Opening (BTDC)/ Closing (ATDC)	420 9245 00 144° 72°		
	Carburetor Type	PTO VM 44 - 34	MAG VM 44 - 35	
	Main Jet	PTO 290	MAG 270	
	Needle Jet	AA-2 (224)		
	Pilot Jet	55		
	Needle Identification — clip Position	7EDY1 -- 3		
	Slide Cut-away	2.5		
	Float Adjustment ± 1 mm (in)	18.1 (.71)		
	Air Screw Adjustment ± 1/16 turn	2-1/4		
	Idle Speed RPM ± 200 RPM	1700		
	Gas Grade/Pump Octane Number (R + M)/2	Super Unleaded/91		
	Gas/Oil Ratio	Oil Injection		
	Ignition Timing BTDC ② mm (in)	1.93 (.076)		
	Trigger Coil Air-Gap mm (in)	0.55 - 1.45 (.022 - .057)		
	Gear Ratio teeth	21/43		
	Engagement Speed ± 100 RPM	4100		
	Drive Pulley Calibration Screw Position	5		
	Pulley Distance	Z (+ 0, - 1) mm (+ 0, - 1/32) in	16.5 (21/32)	
		Offset X ± 0.4 mm (± 1/64 in)	35.0 (1-3/8)	
	Drive Belt Adjustment	Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)	
		Deflection ± .5 mm (in)	32 (1-1/4)	
	Force ③ kg (lbf)		11.34 (25)	
		Driven Pulley Preload ± 0.7 kg (lbf)	7.0 (15.43)	
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation		
Track Adjustment	Deflection mm (in)	35 to 40 (1-3/8 - 1-9/16) with a 7.3 kg (16 lb) downward pull		

- ① Engine speed at which maximum power is achieved.
- ② At 6000 RPM (engine cold) with headlamp turned on.
- ③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 MAG: Magneto side
 CRT: Center
 N.A.: Not applicable