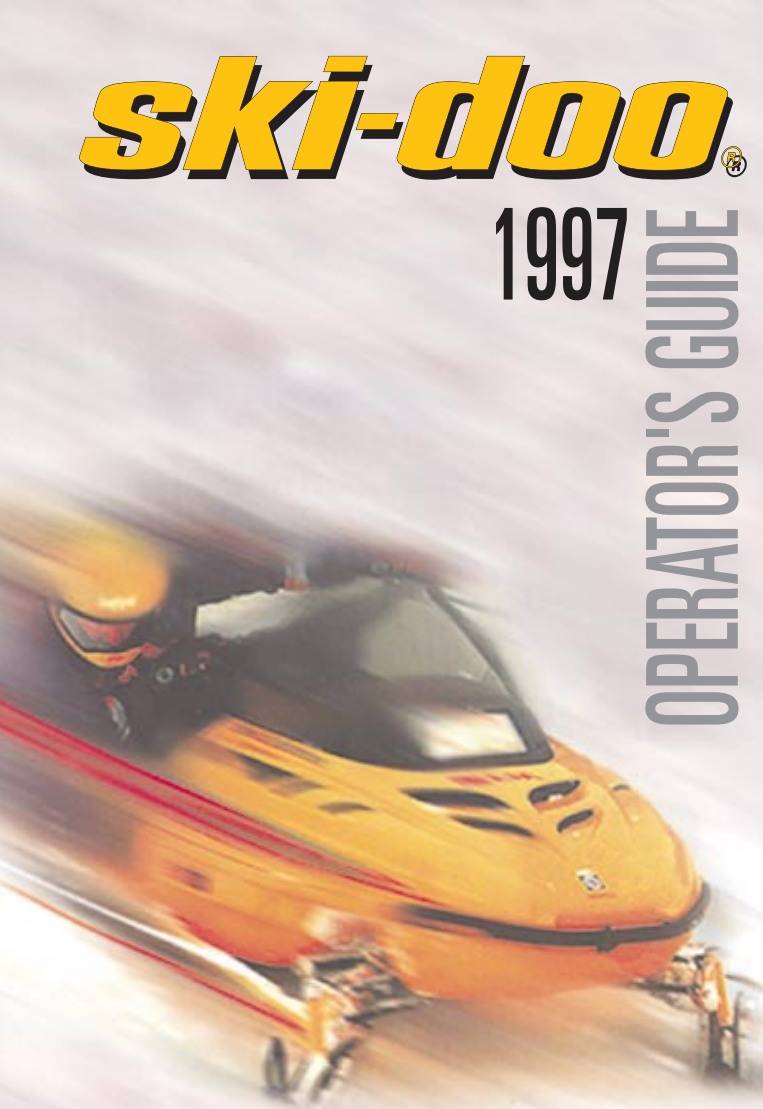
ski-doo

1997

OPERATOR'S GUIDE



SKANDIC WT LC

SUPPLEMENT

THIS SUPPLEMENT MUST BE USED IN CONJONCTION WITH 1997 OPERATOR'S GUIDE (P/N 415 0326 00)

415 0326 01

FOREWORD

Congratulations on your purchase of a new SKI-DOO snowmobile. Your Skandic WT LC is backed by the Bombardier warranty and a network of authorized Ski-Doo snowmobile dealers ready to provide the parts, service or accessories you may require.

Your dealer is committed to your satisfaction. He has taken training to perform the initial set-up and inspection of your snowmobile as well as completed the final adjustment required to suit your specific weight and riding environment before you took possession. At delivery, your dealer would have explained the snowmobile controls and provided you with a brief explanation of the various suspension adjustments. We trust you have taken full advantage of this! If you need more complete servicing information, please ask your dealer about the proper model-year Ski-Doo *Shop Manual*.

At delivery, you were also informed of the warranty coverage and completed the Warranty Registration Form which is to be sent to us for processing. In the near future you should be receiving a warranty card which will confirm our receipt of the registration as well as be used for warranty or recall purposes.

You are invited to contact our customer service staff should you experience problems which cannot be resolved by your dealer.

It is understood that this guide may be translated into another language. In the event of any discrepancy, the English version shall prevail.

NOTICE

The *Operator's Guide* and the *Snowmobiler's Safety Handbook* have been prepared to acquaint the owner/operator or passenger of a new snowmobile with the various snowmobile controls, maintenance and safe operating instructions. **Each is indispensable for the proper use of the product**.

These guides use the following symbols.

◆ WARNING

Identifies an instruction which, if not followed, could cause serious personal injuries including possibility of death.

▼ CAUTION

Denotes an instruction which, if not followed, could severely damage snowmobile components.

NOTE : Indicates supplementary information needed to fully complete an instruction.

Although the mere reading of such information does not eliminate the hazard, your understanding of the information will promote its correct use.

The information and components/system descriptions contained in this guide are correct at time of publication.

We also reserve the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations show the typical construction of the different assemblies and, in all cases, may not reproduce the full detail or exact shape of the parts shown, however, they represent parts which have the same or a similar function.

TABLE OF CONTENTS

* *Refer to 1997 Operator's Guide (P/N 415 0326 00)*

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SAFETY MEASURES

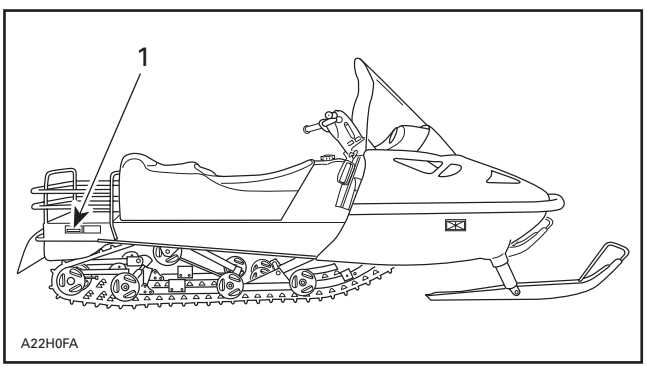
Observe the Following Warnings:

- Always engage brake when vehicle is not in use.
- Throttle mechanism should be checked for free movement **before** starting engine.
- The snowmobile engine can be stopped by activating the emergency cut-out button, pulling the tether cord or turning off the key.
- Engine should be running only when belt guard and/or pulley guard is secured in place. Never run the engine without drive belt installed. Running an unloaded engine can prove to be dangerous.
- Never run the engine when the track is raised off the ground or with the hood opened or removed.
- Maintain your snowmobile in top mechanical condition at all times.
- Your snowmobile is not designed to be operated on public streets, roads or highways. In most States and Provinces, it is considered an illegal operation.
- Never charge or boost a battery while installed on snowmobile.
- Do not lubricate throttle and/or brake cables and housings.
- Only perform procedures as detailed in this guide. Unless otherwise specified, engine should be turned OFF and cold for all lubrication and maintenance procedures.
- The performance of some snowmobiles may significantly exceed that of other snowmobiles you have operated. Therefore, use by novice or inexperienced operators is not recommended.
- The engine and components used in a particular model should not be used on other models. Use of Rotax® snowmobile engines in other than Ski-Doo snowmobiles is not recommended or authorized by Bombardier Inc.
- Most components of this snowmobile are built with parts dimensioned in the metric system. Most fasteners are metric and must not be replaced by customary fasteners or vice versa.

HOW TO IDENTIFY YOUR SNOWMOBILE

The main components of your snowmobile (engine and frame) are identified by different serial numbers. It may sometimes become necessary to locate these numbers for warranty purposes or to trace your snowmobile in the event of loss. These numbers are required by the dealer to complete warranty claims properly. No warranty will be allowed by Bombardier Inc. if the engine serial number or VIN (Vehicle Serial Number) is removed or mutilated in any way. We strongly recommend that you take note of all the serial numbers on your snowmobile and supply them to your insurance company.

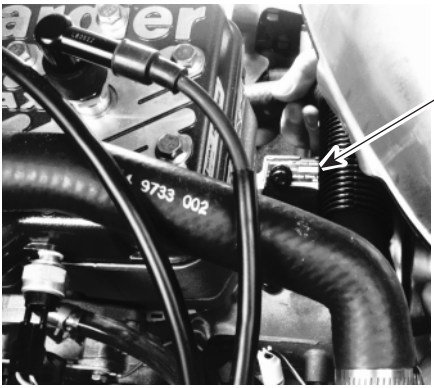
Vehicle Serial Number Location



TYPICAL

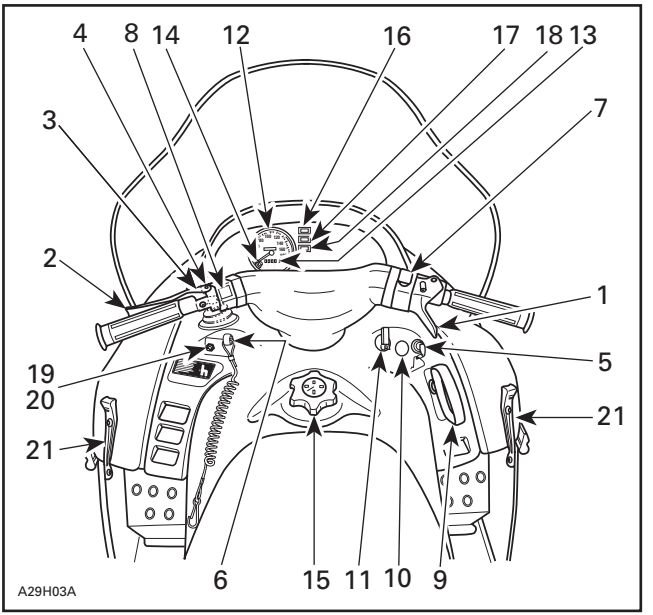
1. Serial number

Engine Serial Number Location



TYPICAL

1. Serial number



TYPICAL

1) Throttle Lever

Located on the right side of handlebar. When compressed, it controls the engine speed and the engagement of the transmission. When released, engine speed returns automatically to idle.

2) Brake Lever

Located on the left side of handlebar. When compressed, the brake is applied. When released, it automatically returns to its original position. Braking effect is proportional to the pressure applied on the lever and to the type of terrain and its snow coverage.

◆ WARNING

Excessive or repetitive use of brakes for high speed stops will cause an overheated brake system. This overheated condition could cause sudden loss of brakes and/or fire.

3) Parking Brake Button

Located on left side of handlebar. Parking brake should be used whenever snowmobile is parked.

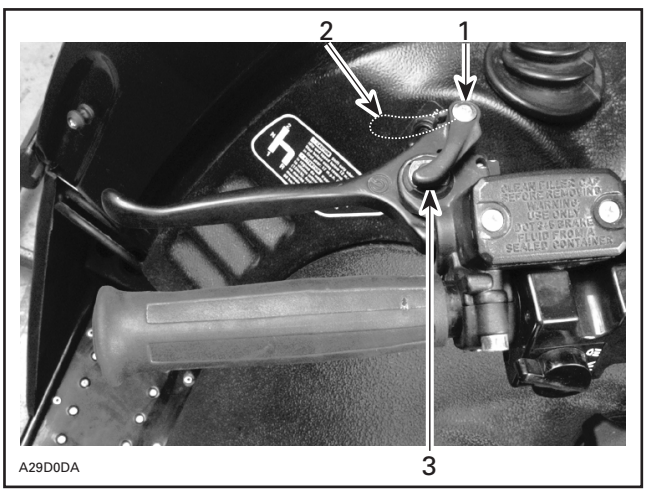
Whenever parking brake is applied and engine is running, injection oil level pilot lamp lights up to remind you that it is engaged.

▼ CAUTION

Make sure parking brake is fully disengaged before operating the snowmobile.

To engage mechanism, squeeze brake lever and maintain while pulling locking lever with a finger. Brake lever is now compressed halfway applying brakes.

To release mechanism, squeeze brake lever. Locking lever will automatically return to its original position. Brake lever now returns to rest position. Always release parking brake before riding.



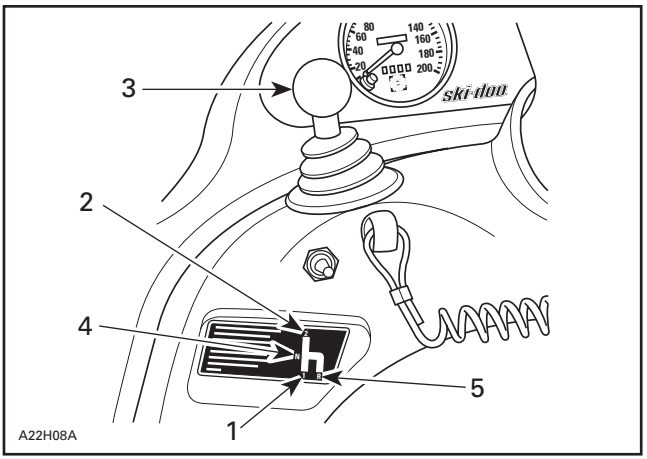
1. Locking lever
2. OFF
3. ON

4) Gear Shift Lever

NOTE : A warning buzzer will sound when the shift lever is in reverse gear position.

Skandic WT

A 4-position lever:



1. 1st gear
2. 2nd gear
3. Gear shift lever
4. Neutral
5. Reverse

Shifting Procedure

CAUTION

Bring snowmobile to a complete stop before changing from forward to reverse or vice-versa.

Do not force lever. If unable to shift, apply throttle to move snowmobile and try again.

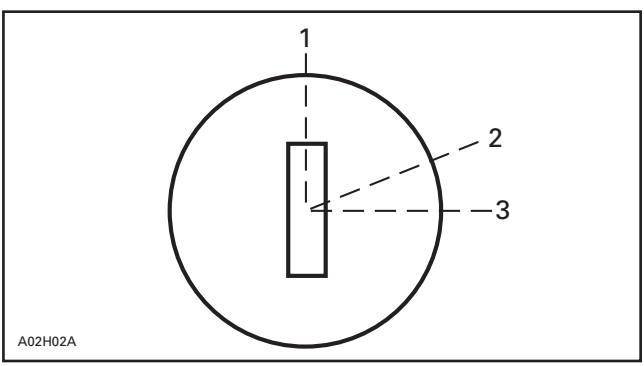
WARNING

These snowmobiles are capable of a fast reverse. Always remain seated and apply the brake before shifting. Come to a complete stop then change gear. Ensure the path behind is clear of obstacles or bystanders. Turning while going fast in reverse could result in loss of stability.

When shifting from 1st gear to 2nd gear vehicle may be in motion (below 20 km/h (12 MPH) but engine must be at idle. Maximum speed in first gear: 60 km/h (37 MPH).

5) Ignition Switch

The lights are automatically ON whenever the engine is running.



1. OFF
2. ON
3. START

Electric Starting

Key operated, 3-position switch. To start engine, turn key to START position and hold. See illustration above.

▼ CAUTION

Do not hold key at START position more than 30 seconds. A rest period should be observed between the cranking cycles to let starter cool down. Holding key in START position when engine has started could damage starter mechanism.

Release key immediately when engine has started. Key returns to ON position as soon as it is released.

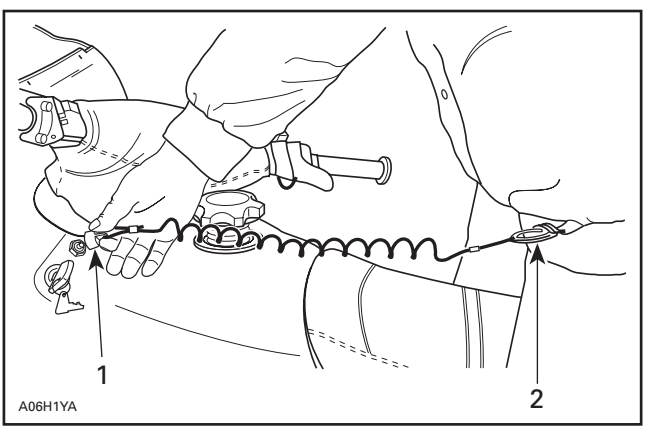
If engine does not start on first try, turn key back to OFF position each time. To stop engine, turn key to OFF position.

NOTE: Engine may be manually started with rewind starter if necessary.

If starter does not operate, check starting system fuse condition. Refer to starting system fuse below.

6) Tether Cut-Out Switch

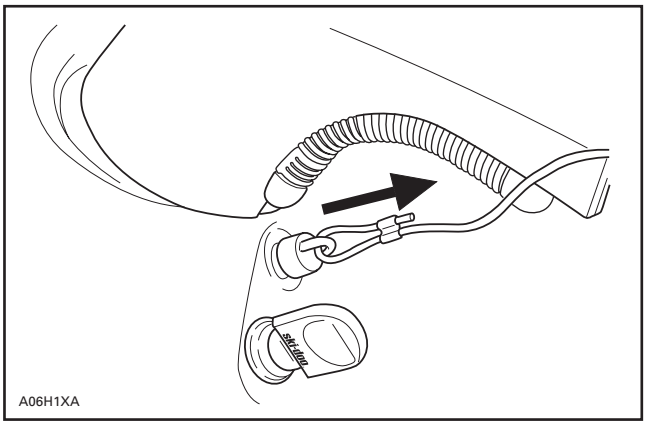
Attach tether cord to clothing then snap tether cut-out cap over receptacle before starting engine.



TYPICAL

1. Snap over receptacle
2. Attach to eyelet

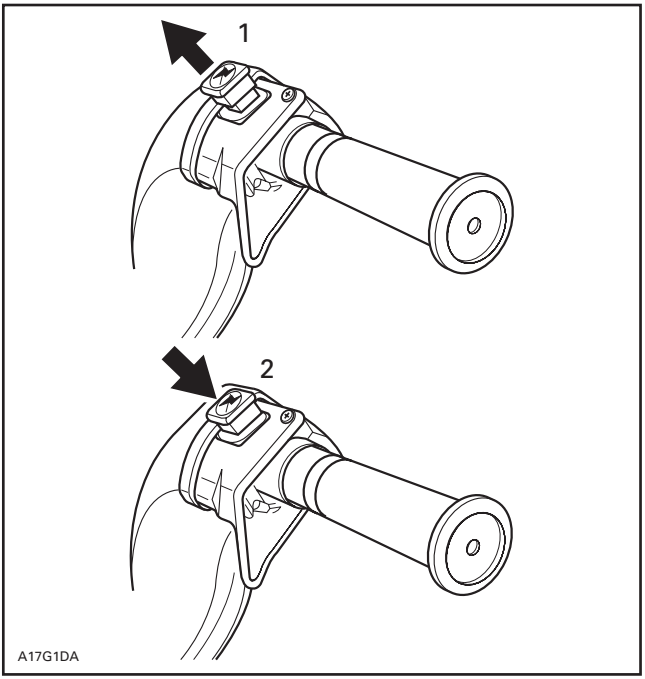
If emergency engine **shut off** is required, completely pull cap from safety switch.



TYPICAL

7) Emergency Cut-Out Switch

A push-pull type switch located on the right side of the handlebar. To stop the engine in an emergency, push the button to the lower OFF position and simultaneously apply the brake. To restart, button must be at the upper ON position.



TYPICAL

1. ON
2. OFF

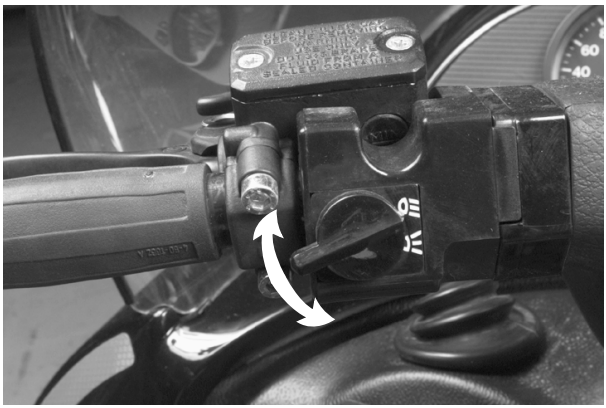
All drivers of the snowmobile should familiarize themselves with the function of this device by using it several times on first outing and to stop the engine there after. Thereby being mentally prepared for emergency situations requiring its use.

◆ WARNING

If the switch has been used in a mechanical malfunction, the source of malfunction should be determined and corrected before restarting engine.

8) Headlamp Dimmer Switch

Located on left side of handlebar, allows selection of headlamp beam.



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9) Rewind Starter Handle

Auto-rewind type located on right hand side of snowmobile. To engage mechanism, pull handle slowly until a resistance is felt then pull vigorously. Slowly release handle.

10) Primer Button

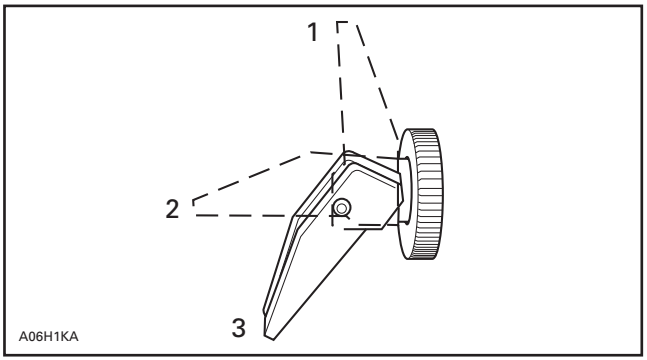
Pull and push button. It is not necessary when engine is warm.

To prime, activate button until a pumping resistance is felt. From this point, pump 2 or 3 times to inject fuel in intake manifold. After priming, ensure that primer button is pushed back.

NOTE : In very cold temperature, it is recommended to rotate primer button 3-4 turns prior to pull it. This will eliminate the possibility of sticking.

11) Choke lever

This device features a 3-position lever to facilitate cold start.



1. OFF
2. Position 1
3. Position 2

Initial Cold Starting

NOTE : Do not operate the throttle lever with the choke lever on.

Move the choke lever to position 2 and start the engine. As soon as the engine starts move the lever to position 1. After a few seconds (10 seconds maximum) move the choke lever to OFF.

NOTE : In severe cold weather, colder than -20°C (-4°F) you may need to turn the choke on and off a couple of times to position 1 once engine is started.

Warm Engine Starting

Start the engine without any choke. If the engine will not start after two pulls of the rope or two 5 second attempts with the electric starter move choke lever to position 1. Start the engine without activating the throttle lever. As soon as the engine starts move the choke lever to OFF.

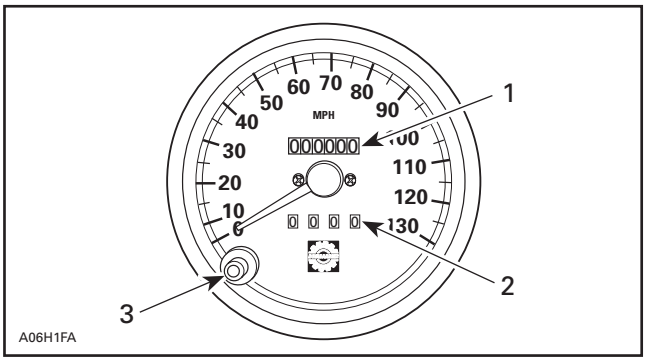
12) Speedometer/Odometer

These vehicles are equipped with a speedometer graduated in km or miles according to country of use.

Direct-reading dial indicates the speed of the snowmobile in kilometers or miles per hour. Odometer records the total distance travelled in kilometers or miles.

13) Trip Meter

Records distance travelled in kilometers or miles until it is reset. It can be used to record a fuel tank range or distance between 2 relays for instance.



TYPICAL

1. *Odometer*
2. *Trip meter*
3. *Reset button*

14) Trip Meter Reset Button

To reset, push on button until all numbers read zero.

15) Fuel Tank Cap/Gauge

Unscrew to fill up tank then fully tighten.

Cap features a mechanical gauge.

◆ WARNING
Never use an open flame to check fuel level.

16) High Beam Pilot Lamp (Blue)

Lights when headlamp is on HIGH beam.

17) Injection Oil Level Pilot Lamp (Red)

Lights when injection oil level is low. Check oil level and replenish as soon as possible. Also lights when parking brake is applied (with engine running).

▼ CAUTION

Do not run engine out of oil. Serious engine damage will occur.

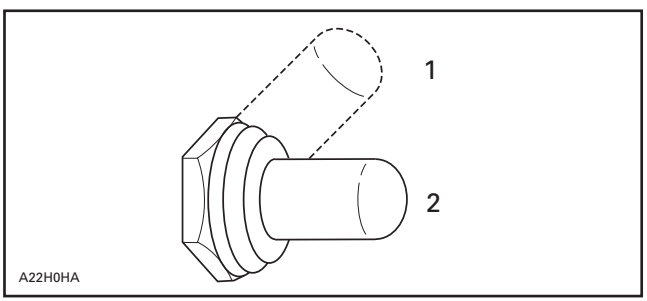
NOTE : Whenever brake lever is actuated, oil injection level pilot lamp should light up when engine is running. If not replace lamp.

18) Engine Overheat Warning Lamp (Red)

If this lamp glows, reduce snowmobile speed and run snowmobile in loose snow or stop engine immediately.

19) and 20) Heated Grip and Throttle Lever

Two-position toggle switch. Select the desired position to keep your hands and right thumb at a comfortable temperature.



TYPICAL

1. HOT
2. OFF

21) Hood Latches

Unhook the latches to unlock the hood from its anchors.

Always lift hood gently until stopped by retaining device.

◆ WARNING

It is dangerous to run an engine with the hood opened, unfastened or removed.

Fuses

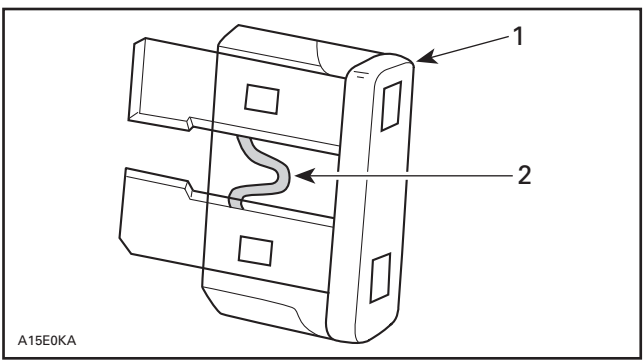
▼ CAUTION

Do not use a higher rated fuse as this can cause severe damage to electric components.

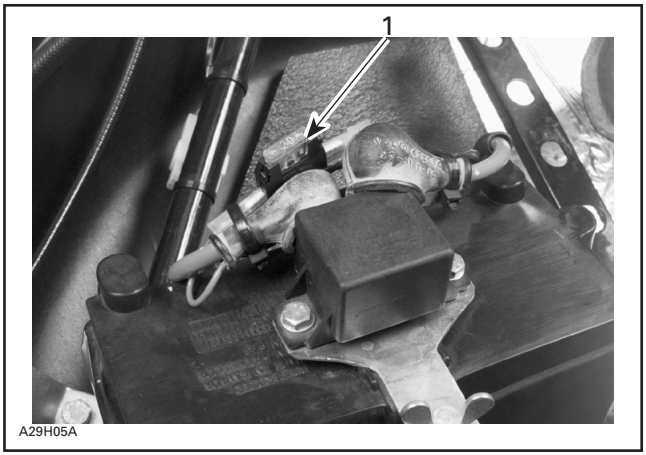
Starting System Fuse

Starting system is protected with a 30 ampere rated fuse. See following illustration for fuse holder location. If starter does not operate, check fuse condition and replace if necessary.

To remove fuse from holder, pull fuse out. Check if filament is melted.



1. Fuse
2. Check if melted



1. Fuse holder

Front Bumper

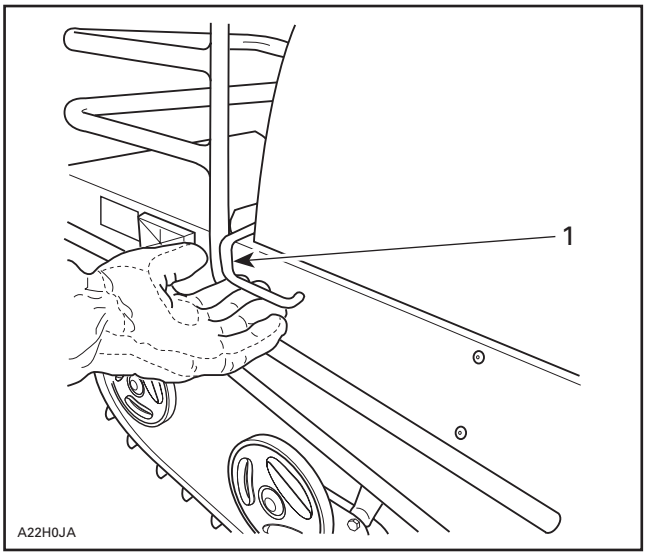
To be used whenever front of snowmobile requires lifting.

▼ CAUTION

Do not use skis to pull or lift snowmobile. Do not tow vehicle using front bumper.

Storage Compartment/Tool Kit

A storage compartment is provided under seat. A tool kit containing tools for basic maintenance can be found there. To open storage compartment, lift seat latch then tip seat over.



1. Lift seat latch

LUBRICATION AND MAINTENANCE CHART

Refer to LUBRICATION and MAINTENANCE section of *Shop Manual* for more details.

① 10-HOUR OR 500 km (300 mi) INSPECTION (To be performed by dealer)
② WEEKLY OR EVERY 240 km (150 mi)
③ MONTHLY OR EVERY 800 km (500 mi)
④ ONCE A YEAR OR EVERY 3200 km (2000 mi)
⑤ STORAGE (To be performed by dealer)
⑥ PRE-SEASON PREPARATION (To be performed by dealer)

LUBRIFICATION AND MAINTENANCE CHART		①	②	③	④	⑤	⑥
	Starting Rope Condition						✓
	Engine Head Nuts	✓			✓		
	Engine Mount Nuts	✓			✓		
	Exhaust System	✓		✓			
	Engine Lubrication					✓	
	Cooling System Condition	✓			✓		
	Coolant Replacement						✓
	Condition of Seals						✓
	Injection Oil Filter Condition			✓			
	Injection Oil Filter Replacement						✓
	Oil Injection Pump Adjustment	✓			✓		
	Fuel Stabilizer					✓	
	Fuel Filter Replacement						✓
	Fuel Lines and Connections	✓					✓
	Carburetor Adjustment	✓			✓		
	Throttle Cable Inspection	✓			✓		✓
	Air Filter Cleaning			✓			
	Drive Belt Condition	✓	✓				
	Condition of Drive and Driven Pulleys	✓		✓		✓	
	Cleaning of Drive and Driven Pulleys						✓
	Retorquing of Drive Pulleys Screw	✓					
	Driven Pulley Preload	✓			✓		
	Brake condition	✓	✓				
	Brake Adjustment			✓			
	Brake Fluid (change once a year)	✓	✓				✓

LUBRICATION AND MAINTENANCE CHART		①	②	③	④	⑤	⑥
	Gearbox Oil Change	✓			✓		
	Chaincase/Gearbox Oil Level	✓		✓		✓	
	Lubrication of Drive Axle and Bearing			✓		✓	
	Handlebar Bolts, Retorque to 26 N•m (19 lbf•ft)	✓					
	Steering and Front Suspension Mechanism	✓		✓		✓	
	Wear and Condition of Skis and Runners	✓	✓				
	Steering Adjustment	✓		✓			
	Suspension Adjustments	AS REQUIRED					
	Suspension Lubrication			✓		✓	
	Suspension Condition	✓			✓		
	Suspension Stopper Strap Condition				✓		
	Track Condition	✓		✓			
	Track Tension and Alignment	✓	AS REQUIRED				
	Spark Plugs*	✓		✓			
	Engine Timing	✓					✓
	Battery Condition	✓		✓		✓	
	Headlight Beam Aiming				✓		
	Wiring Harnesses, Cables and Lines	✓		✓			
	Operation of Lighting System (HI/LO Beam, Brake Light, etc.), Test Operation of Emergency Cut-out Switch and Tether Cut-out Switch	✓	✓			✓	
	Rags in Air Intake and Exhaust System					✓	✓
	Engine Compartment	✓		✓			
	General Inspection	✓		✓		✓	

*Before installing new spark plugs at pre-season preparation, it is suggested to burn excess storage oil by starting the engine with the old spark plugs. Only perform this operation in a well ventilated area.

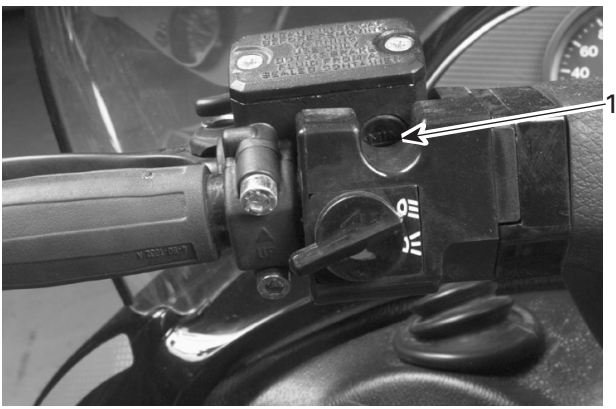
FLUID LEVELS

Brake System

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.



TYPICAL

1. Min.

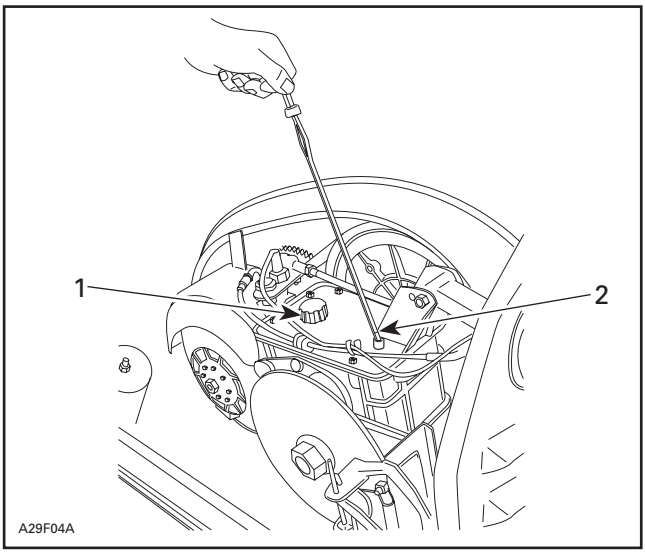
Gearbox Oil Level

To check, pull dipstick. Oil should reach level mark.

To fill, remove fillet plug from top of transmission. Refill as required using Bombardier synthetic chaincase oil (P/N 413 8033 00 - 250 mL).

▼ CAUTION

Do not use other types of oil when servicing. Do not mix this synthetic oil with other types of oil.



TYPICAL

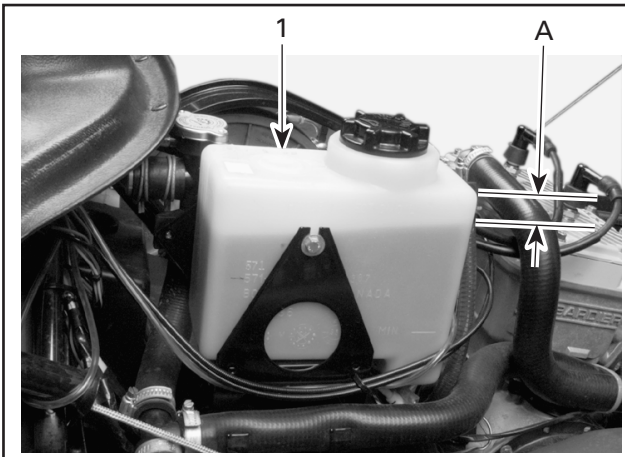
1. Filter plug
2. Level mark

Oil Injection System

Always maintain a sufficient amount of BOMBARDIER Snowmobile Injection Oil in the injection oil reservoir.

▼ CAUTION

Never allow oil level to drop more than 2/3. Check level and refill every time you refuel. Do not overfill. Wipe off any spillage. Oil is highly flammable.



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1. Injection oil reservoir
a. Maximum level: 13 mm (1/2 in) from top

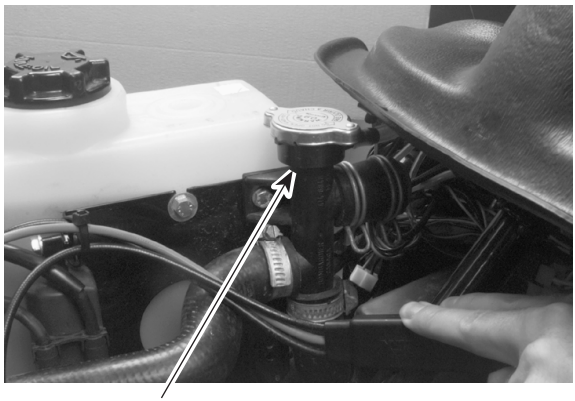
Cooling System

Liquid Cooled Models Only

Check coolant level. At room temperature, liquid should be up to filler neck.

NOTE : When checking level at low temperature it may be slight lower than mark.

If additional coolant is necessary or if entire system has to be refilled, refer to an authorized dealer.



1. COLD LEVEL

Battery Electrolyte

See your dealer.

SPECIFICATIONS

GENERAL		SKANDIC WT LC
Engine		
– Maximum power engine speed	RPM	6800
Drive belt		
– Number		414 6338 00
– New belt width	mm (in)	34.5 (1-3/8)
– Wear limit width	mm (in)	32.0 (1-1/4)
Spark plug		
– Type		NGK BR 9 ES
– Gap	mm (in)	0.45 (.018)
Track		
– Tension	mm (in)	50 (1-31/32) ①
– Alignment		②
FLUIDS		
Fuel		
– Type		③
– Tank capacity	L (US gal)	40 (10.6)
Oil (engine)		
– Type		④
– Tank capacity	L (US oz)	2.50 (86)
Chaincase/Transmission Oil		
– Type		⑤
– Capacity	mL (US oz)	500 (17)
Cooling System		
– Type		⑥
– Capacity	L (US oz)	4 (135)
Brake System Fluid		
– Type		DOT 4

① Measure gap between slider shoe and bottom inside of track when exerting a downward pull of 7.3 kg (16 lb) to the track.
② Equal distance between edges of track guides and slider shoes.
③ Regular unleaded gasoline with a minimum octane number of 87 (R + M)/2.
④ Bombardier Injection Oil (P/N 496 0133 00 – 1 L).
⑤ Bombardier Synthetic Chaincase Oil (P/N 413 8033 00).
⑥ Ethylene-glycol antifreeze for aluminum engines mixed with water (3 parts of antifreeze for 2 parts of water).