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DRIVE BELT

APPLICATION CHART

MODEL	PART NUMBER	WIDTH (new) ± 0.25 mm (.010 in)	MINIMUM WIDTH (wear limit)
Tundra R	414 827 600	33.33 mm (1.312 in)	30.00 mm (1.181 in)
Skandic LT/LT E/WT/SWT/ WT LC/SUV	414 633 800	34.60 mm (1.362 in)	32.00 mm (1.260 in)

CHECKING NEUTRAL FUNCTION

⚠ WARNING

Always check neutral function when servicing.

Apply parking brake. Vehicle must be on the ground and on a plane level surface. No one should be in front of vehicle.

Attach vehicle tether cord to your clothing. Stand aside of vehicle then, start engine.

⚠ WARNING

Do not sit on vehicle.

Release parking brake. Vehicle must not creep when engine is idling. Otherwise, make sure that:

– idle speed is as specified
– proper belt is installed
– pulley center-to-center is as specified
– belt deflection is as specified.

CLEANING

Before drive belt installation, clean drive and driven pulley sheaves with Pulley flange cleaner (P/N 413 711 809).

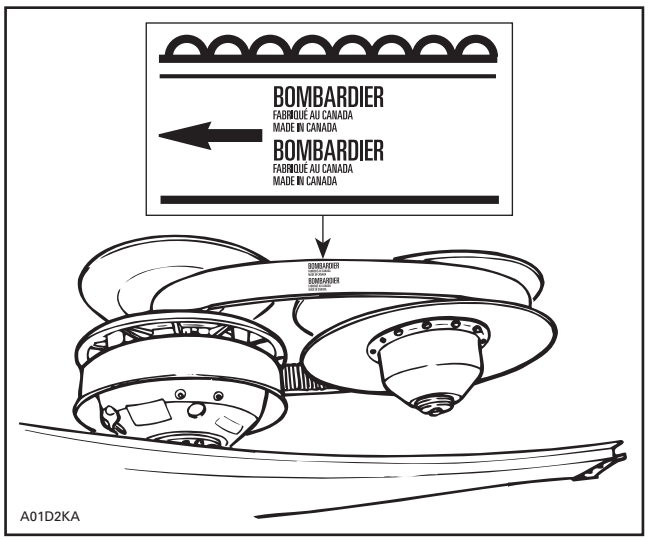
INSPECTION

Inspect belt for cracks, fraying or abnormal wear (uneven wear, wear on one side, missing cogs, cracked fabric). If abnormal wear is noted, probable cause could be pulley misalignment, excessive RPM with frozen track, fast starts without warm-up period, burred or rusty sheave, oil on belt or distorted spare belt.

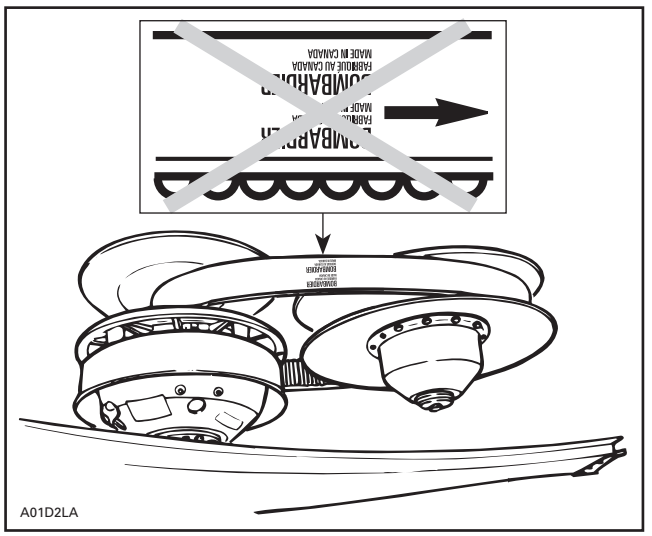
Check the drive belt width. Replace the drive belt if width is less than the minimum width recommended (see table above).

ROTATION DIRECTION

The maximum drive belt life span is obtained when the drive belt is installed as shown. This will ensure that correct direction of rotation is respected.



CORRECT



INCORRECT

NOTE: For used drive belt, mark and reinstall in the same position.

DRIVE BELT HEIGHT MEASUREMENT AND ADJUSTMENT

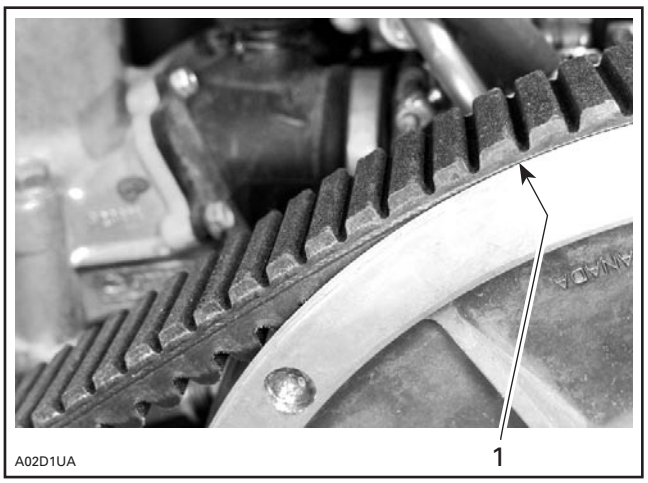
Measurement

Before checking the belt height, ensure that a good-condition proper belt (refer to the APPLICATION CHART) is installed.

Adjust pulley distance and alignment. Refer to PULLEY DISTANCE AND ALIGNMENT.

To obtain maximum vehicle performance, the belt height must be adjusted according to specifications shown in the accompanying chart.

MODEL	BELT HEIGHT mm (in)
All models	Top edge of drive belt cord should be flush with driven pulley edge



1. Flush

Adjustment

Before adjusting the belt height, ensure that a good-condition proper belt (refer to the APPLICATION CHART) is installed.

Adjust pulley distance and alignment. Refer to PULLEY DISTANCE AND ALIGNMENT.

All Models

Vary pulley distance — within tolerances — to obtain proper drive belt height.

DRIVE BELT DEFLECTION MEASUREMENT (reference only)

IMPORTANT: The drive belt deflection will be automatically set after performing the pulley distance and belt height adjustments. The following procedure will confirm proper pulley distance and belt height adjustment.

NOTE: To obtain an accurate drive belt deflection measurement, it is suggested to allow a break-in period of 50 km (30 m.).

Before checking the belt deflection, ensure that a good-condition proper belt (Refer to the APPLICATION CHART) is installed.

Adjust pulley distance and alignment. Refer to PULLEY DISTANCE AND ALIGNMENT.

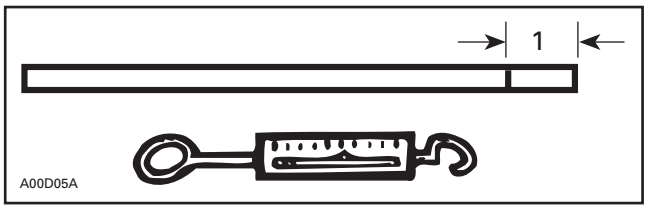
MODEL	DEFLECTION† mm (in)	FORCE kg (lb)
Tundra R	32 ± 5 (1-1/4 ± 13/64)	6.8 (15)
All Skandic	32 ± 5 (1-1/4 ± 13/64)	11.3 (25)

† FOR REFERENCE ONLY

To Check Deflection

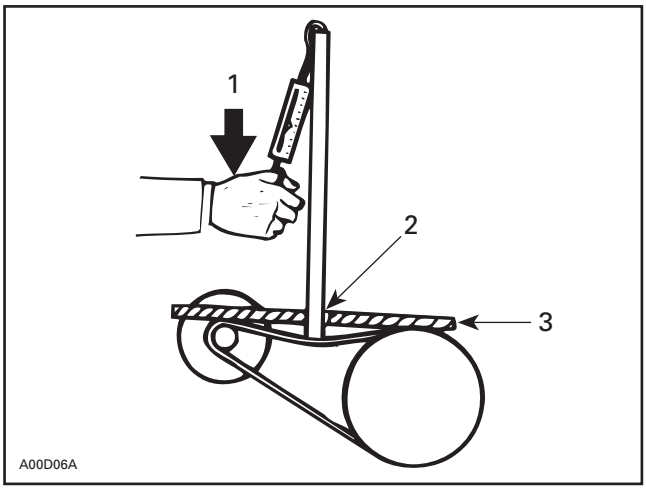
Position a reference rule on drive belt.

Wooden Stick and Spring Scale Method



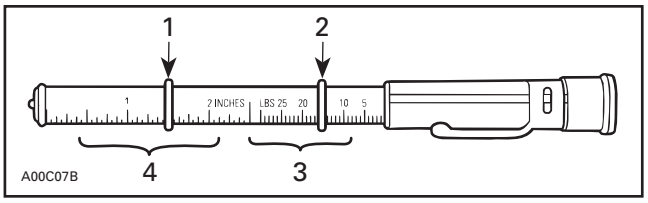
1. Mark specified deflection

Using spring scale and stick, apply specified force on drive belt halfway between pulleys as shown.



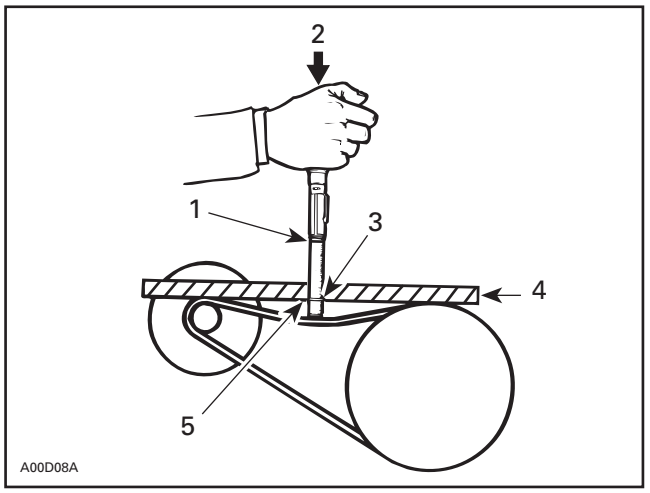
1. Force
2. Read deflection here
3. Reference rule

Or use the belt tension tester (P/N 414 348 200).



1. Lower O-ring
2. Upper O-ring
3. Force (read down)
4. Deflection (read up)

1. Slide lower O-ring of tester to specified deflection.
2. Slide upper O-ring of tester until reaching mark 0 (zero).
3. Apply pressure until lower O-ring is flush with edge of rule and read force on the upper scale at top edge of O-ring.



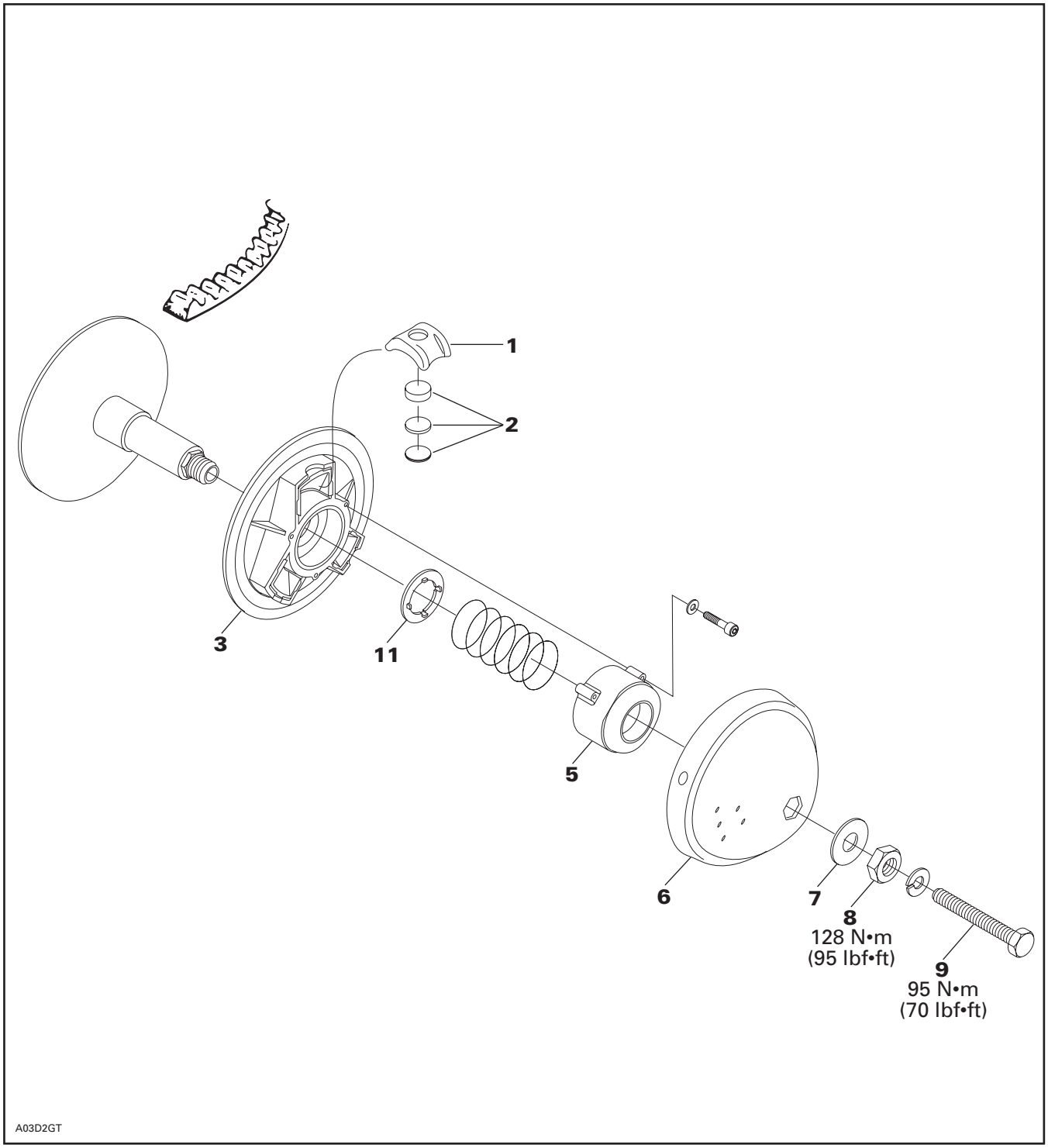
1. Upper O-ring — force
2. Force applied
3. Lower O-ring — deflection
4. Reference rule
5. Deflection

DRIVE PULLEY

BOMBARDIER LITE

NOTE: This is a lubrication free drive pulley.

Tundra R



GENERAL

Some drive pulley components (return spring, calibration disk) can be changed to improve vehicle performance in high altitude regions. A service bulletin will give information about calibration according to altitude.

CAUTION: Such modifications should only be performed by experienced mechanics since they can greatly affect vehicle performance.

⚠ WARNING

Any drive pulley repairs must be performed by an authorized Bombardier snowmobile dealer. Sub-component installation and assembly tolerances require strict adherence to procedures detailed.

REMOVAL

NOTE: If disassembling drive pulley, first straighten tab washer no. 7 then untighten nut no. 8.

⚠ WARNING

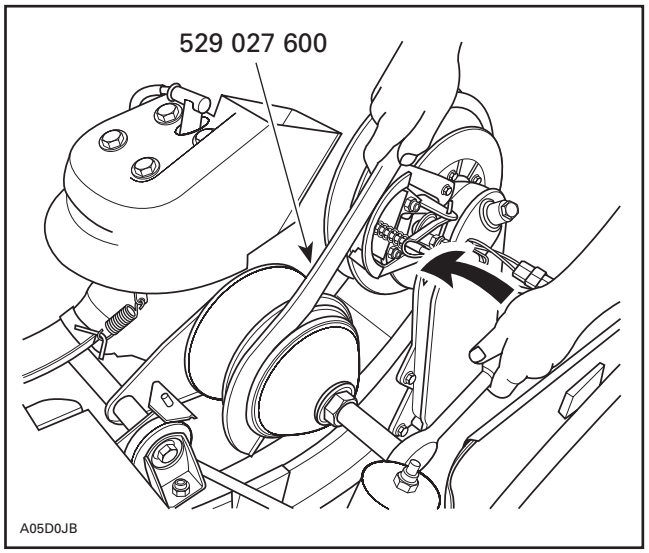
Never use an impact wrench to remove or install the drive pulley.

⚠ WARNING

The drive pulley assembly is a precisely balanced unit. Never replace parts with used parts from another drive pulley assembly.

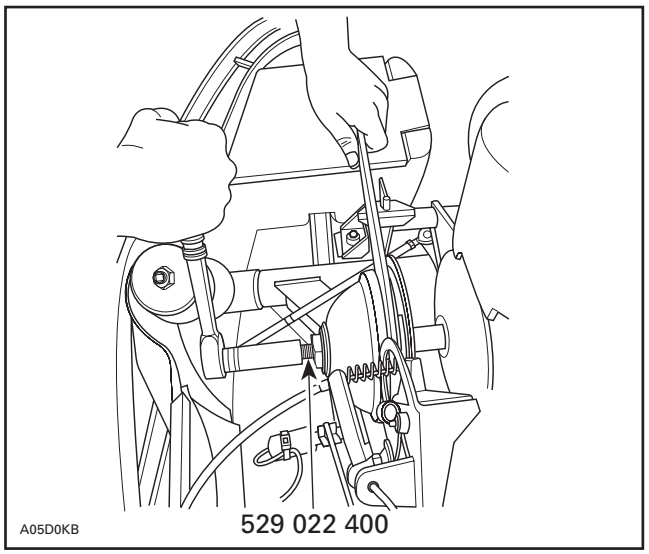
Use holder (P/N 529 027 600).

Remove retaining screw no. 9.



TYPICAL

Insert drive pulley puller (P/N 529 022 400) then remove drive pulley.

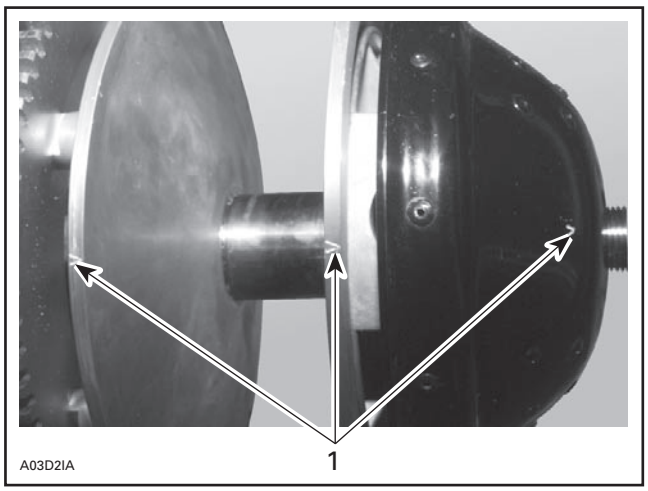


TYPICAL

DISASSEMBLY

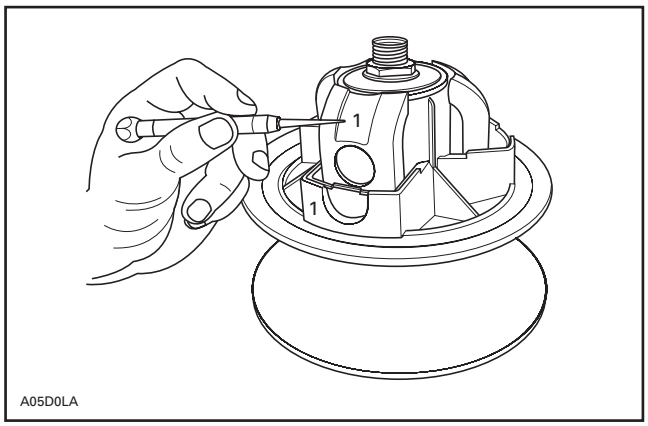
Unscrew nut. Remove tab washer.

Check for alignment marks for proper indexing at reassembly.



1. Alignment marks

Identify blocks **no. 1** and their respective positive positions for reassembly.

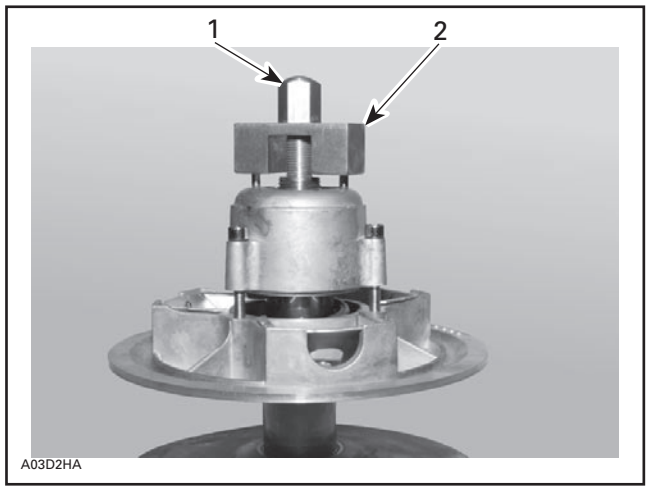


1. Identify

2, Cap, Washer and Disk

These are calibration parts. Refer to TECHNICAL DATA.

Install spring cover tool (P/N 529 027 300) with puller (P/N 529 022 400) on spring cover.



1. Puller tool
2. Spring cover tool

Screw puller (hand tight) to hold spring cover and remove screws holding spring cover.

Slowly unscrew puller to release spring pressure.

Remove spring cover **no. 5**, spring and spring seat**no. 11**.

CLEANING

Clean pulley faces and shaft with fine steel wool and clean dry cloth. Clean sliding half bushing with clean dry cloth.

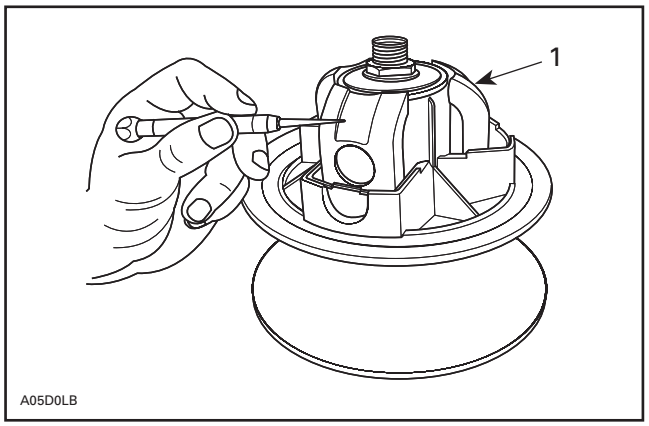
INSPECTION

Check sliding half for excessive lateral play and fixed half shaft for scratches. Replace as required.

ASSEMBLY

Install spring seat no. 11 then the spring and its cover no. 5.

Make sure to install blocks at their original position and with their curved end toward governor cup. See following illustration.



1. Curved end

Tighten nut no. 8 to 128 N•m (95 lbf•ft).

INSTALLATION

Torque screw to 80 to 100 N•m (59 to 74 lbf•ft).

Install drive belt and belt guard.

Raise and block the rear of the vehicle and support it with a mechanical stand.

⚠ WARNING

Ensure that the track is free of particles which could be thrown out while track is rotating. Keep hands, tools, feet and clothing clear of track. Ensure nobody is standing near the vehicle.

Accelerate the vehicle at low speed (maximum 30 km/h (20 MPH)) and apply the brake, repeat 5 times.

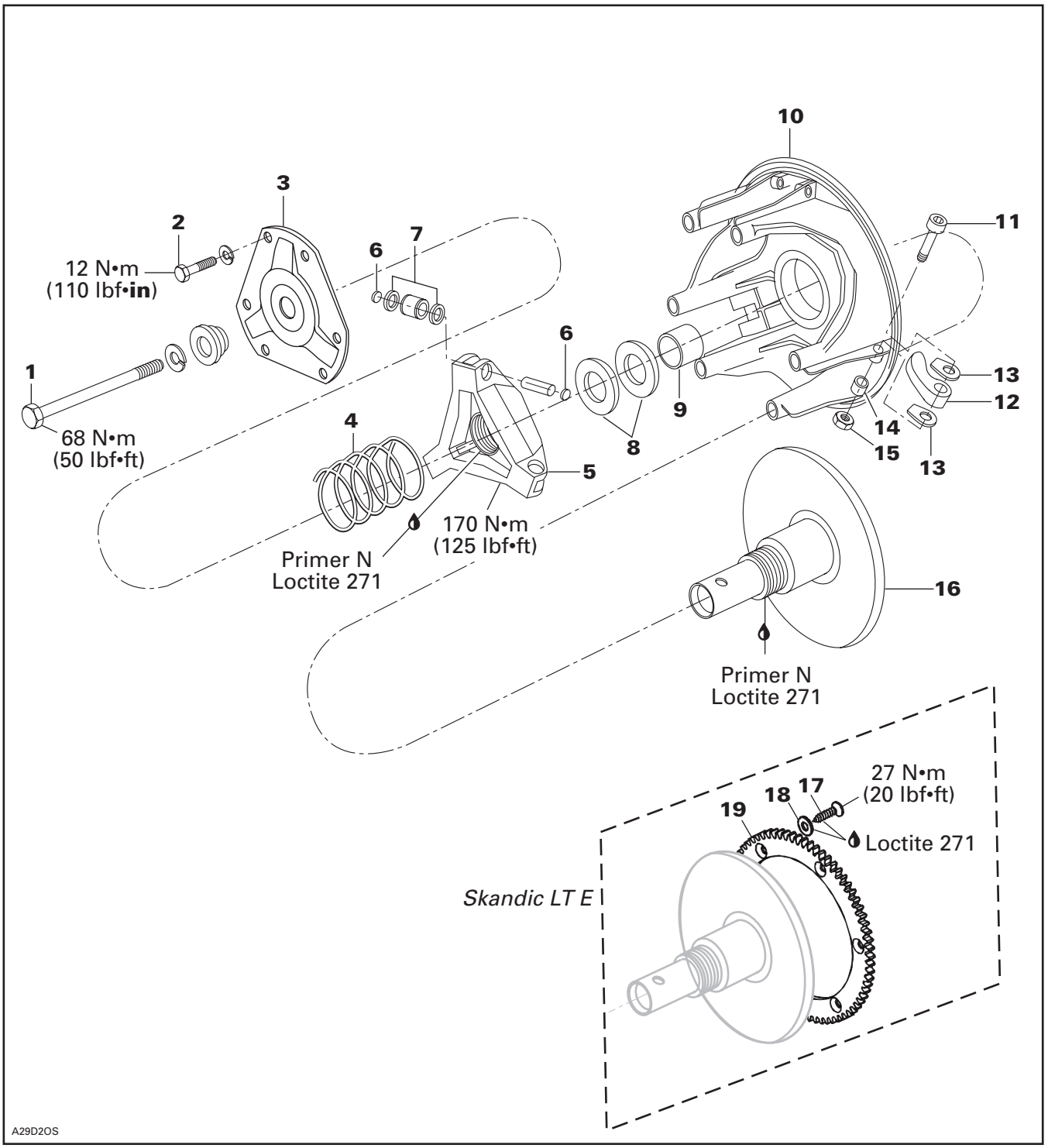
Retorque screw to 90 to 100 N•m (66 to 74 lbf•ft).

⚠ WARNING

After 10 hours of operation the transmission system of the vehicle must be inspected to ensure the retaining screw is properly torqued.

COMET® 102C

Skandic LT/LT E



GENERAL

Some drive pulley components can be changed to improve vehicle performance in high altitude regions. A Service Bulletin will give information about calibration according to altitude.

CAUTION: Such modifications should only be performed by experience mechanics since they can greatly affect vehicle performance.

⚠ WARNING

Any drive pulley repairs must be performed by an authorized Bombardier snowmobile dealer. Sub-component installation and assembly tolerances require strict adherence to procedures detailed.

MAINTENANCE

Cam Arm Pivot Nut

At first 10-hour (500 km) cam arm pivot nuts **no. 15** have to be retighten.

To do so, loosen one turn all cover screws **no. 2**.

Retighten to 5.6 N•m (50 lbf•**in**) maximum all three pivot nuts **no. 15**. Make sure cam arms **no. 12** can still move on their pivot bolts **no. 11**.

Retighten cover screws **no. 2** to 12 N•m (110 lbf•**in**). Proceed with one screw per tower in a criss-cross sequence then, remaining three screws.

Cam Arm Bushing

Cam arm bushings **no. 14** have to be replaced every 3000 km (2000 m.).

With drive pulley still installed on crankshaft, remove one cam arm **no. 12** at a time. Install parts included in Cam Arm Kit. Proceed with remaining cam arms.

Loosen one turn all cover screws **no. 2**.

Retighten to 5.6 N•m (50 lbf•**in**) maximum all three pivot nuts **no. 15**. Make sure cam arms **no. 12** can still move on their pivot bolts **no. 11**.

Retighten cover screws **no. 2** to 12 N•m (110 lbf•**in**). Proceed with one screw per tower in a criss-cross sequence then, remaining three screws.

REMOVAL

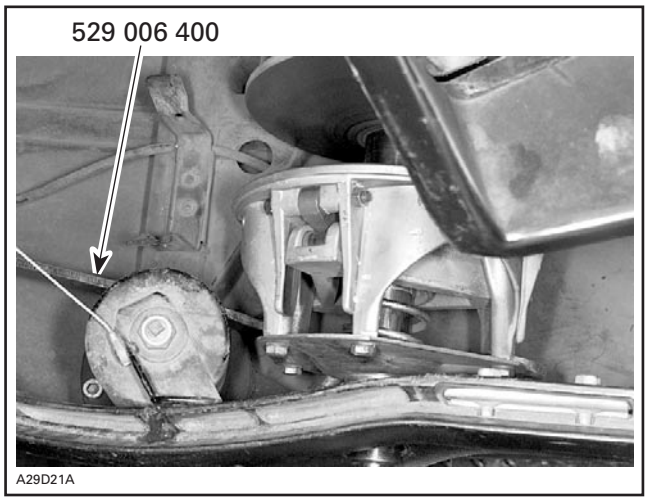
⚠ WARNING

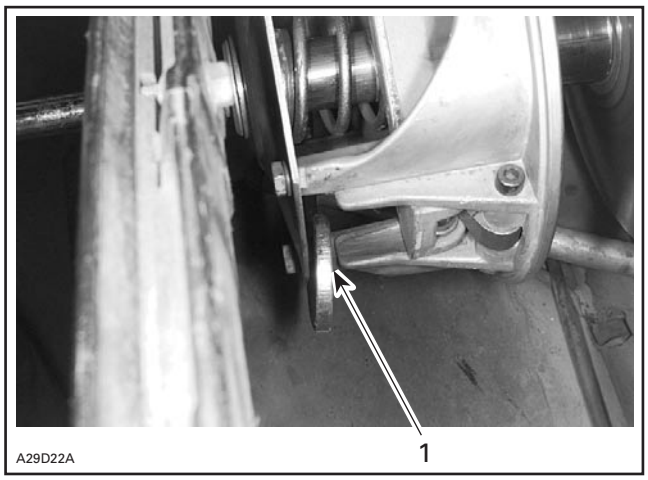
Never use an impact wrench to remove or install the drive pulley.

Unfasten center and rear bottom pan attachments on left hand side. Remove belt guard.

Open driven pulley using driven pulley opening tool (P/N 529 017 200). Remove drive belt.

Use holder (P/N 529 006 400). Make sure holder hook is positioned on top of tower.



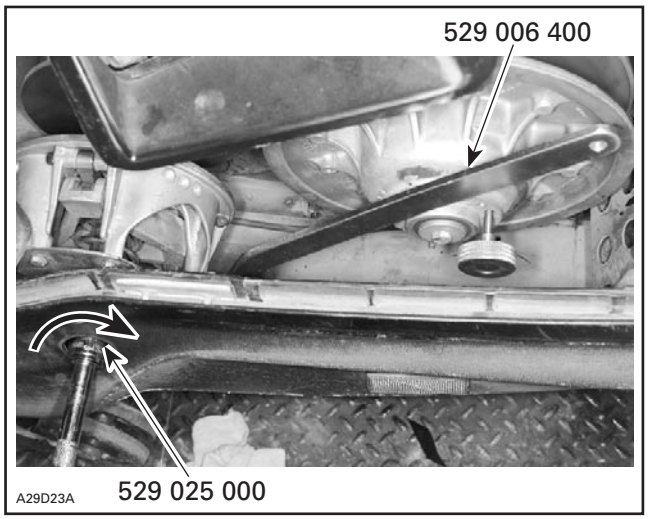


1. Holder hook on top of tower

Remove retaining screw **no. 1**.

Install holder (P/N 529 006 400) in a way to limit pulley clockwise rotation.

Insert drive pulley puller (P/N 529 025 000) then turn puller clockwise to free drive pulley from crankshaft taper.



Remove driven pulley to make room for drive pulley removal.

Remove drive pulley.

DISASSEMBLY

Skandic LT E Only

Remove retaining screws **no. 17** and washers **no. 18** from ring gear **no. 19.**

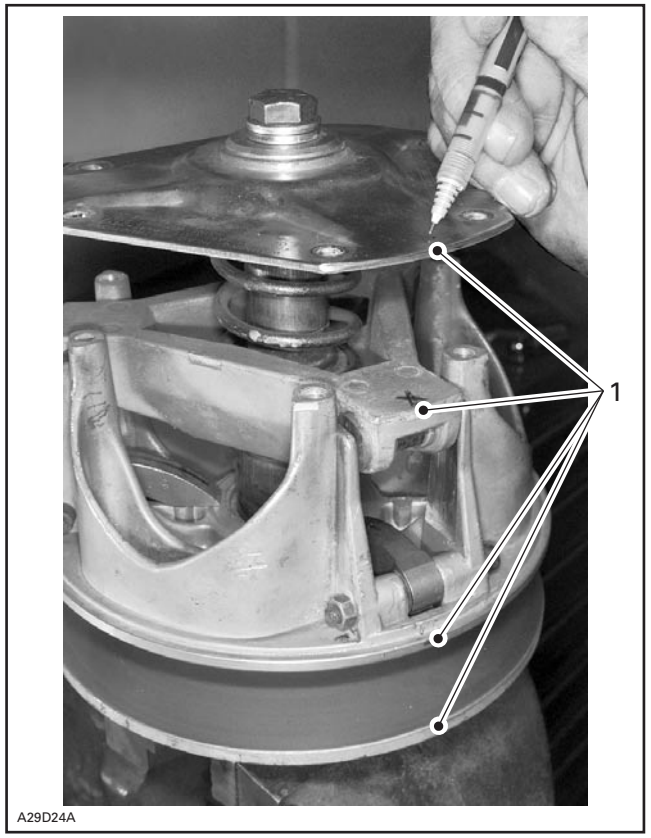
CAUTION: Retaining screws must be heated before disassembly. Heating temperature must not exceed 150°C (300°F).

Skandic LT and Skandic LT E

Mount tapered tool (P/N 529 035 826) in a vise.

Install drive pulley over retainer then, fasten retaining screw **no. 1** and torque to 68 N•m (50 lbf•ft). Now drive pulley is locked on retainer.

Scribe pen marks on fixed half **no. 16**, sliding half **no. 10**, spider **no. 5** and cover **no. 3** for proper indexing at reassembly.



1. Scribe marks

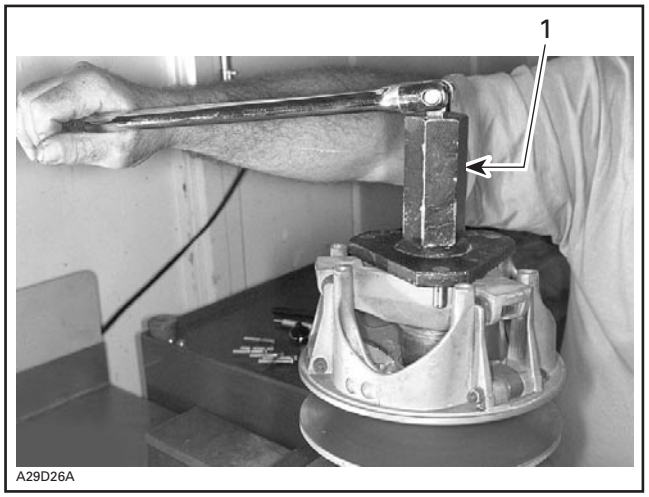
Remove cover screws **no. 2**.

Hold cover **no. 3** by hand then, unscrew retaining screw **no. 1**.

Remove cover **no. 3**.

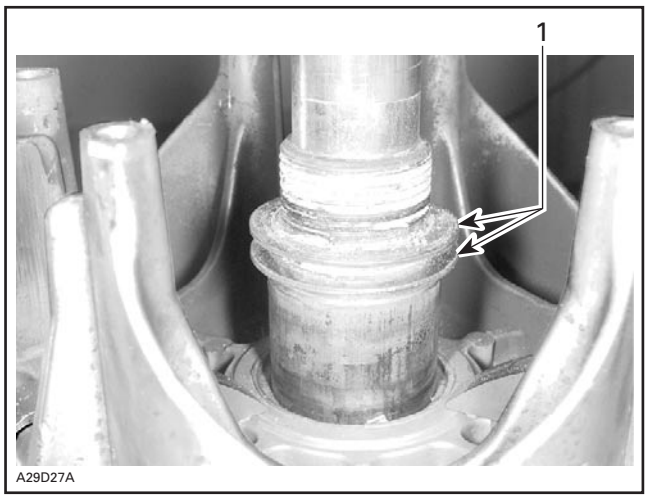
Heat spider **no. 5** to melt threadlocker.

Install spider tool (P/N 529 025 200) then, unscrew spider **no. 5**.



1. Spider wrench

Note shim **no. 8** quantity.



1. Shims

Remove cam arms **no. 12**.

CLEANING

Clean pulley faces and shaft with fine steel wool and clean dry cloth. Clean sliding half bushing **no. 9** and cover bushing with clean dry cloth.

Thoroughly clean spider threads and fixed half post threads.

INSPECTION

Check sliding half for excessive lateral play and fixed half post for scratches. Replace as required.

Check cover bushing interior. Replace cover if bushing is completely bronze instead of the original teflon coating.

Check spider thrust buttons **no. 6** for proper sliding action. Replace as required.

Check rollers **no. 7** for free action. Replace as required.

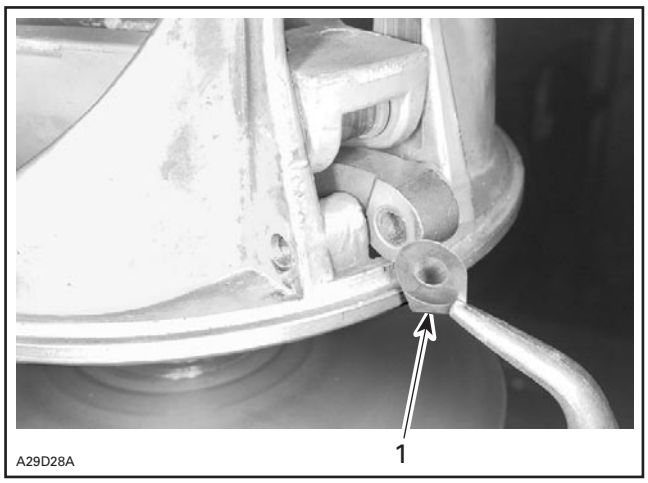
ASSEMBLY

Install shims **no. 8** on fixed half post.

Apply Primer N (P/N 293 800 041) to both post and spider threads, allow to dry for 10 minutes. Apply Loctite 271 (P/N 293 800 005) to threads.

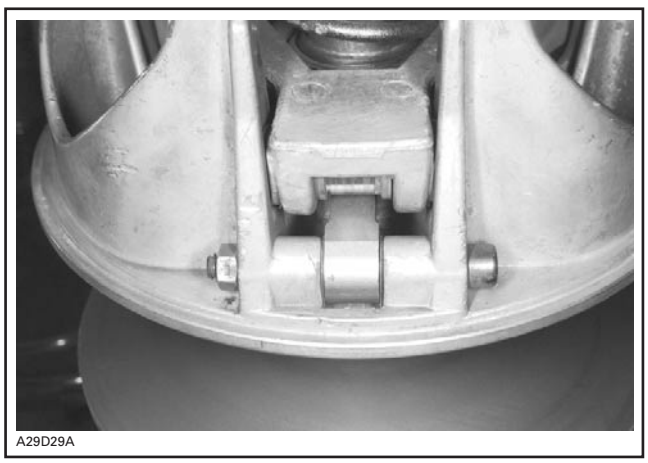
Using spider wrench from tool kit (P/N 529 025 400) torque spider **no. 5** to 170 N•m (125 lbf•ft).

With square end facing sliding half, install a washer **no. 13** on each side of cam arm **no. 12**.



1. Square end facing sliding half

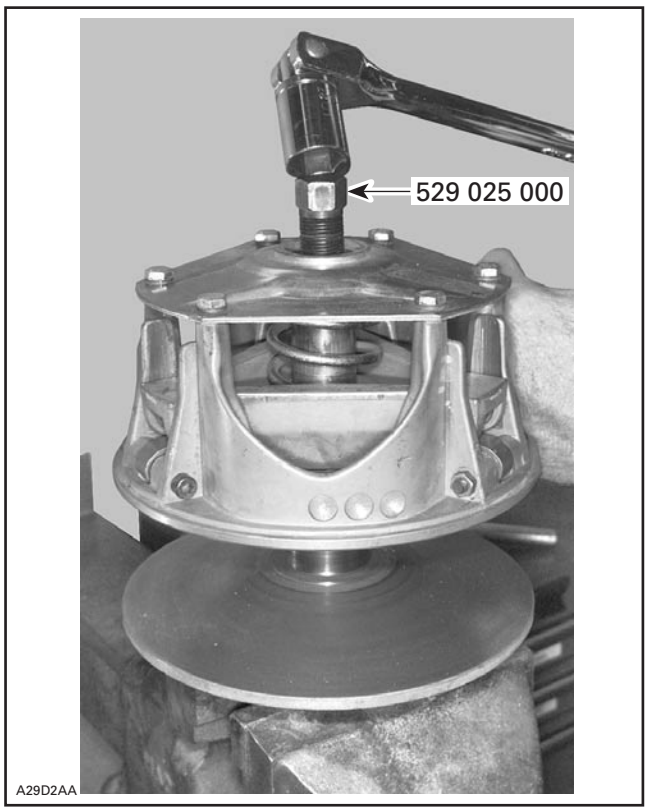
Tighten to 5.6 N•m (50 lbf•**in**) maximum all three pivot nuts **no. 15**. Make sure cam arms **no. 12** can still move on their pivot bolts **no. 11**.



Install spring no. 4, cover no. 3.

Tighten cover screws no. 2 to 12 N•m (110 lbf•**in**). Proceed with one screw per tower in a criss-cross sequence then, remaining three screws.

Use puller (P/N 529 025 000) to unlock drive pulley from retainer.



Skandic LT E Only

Secure ring gear no. 19 on inner fixed half using self-tapping screws no. 17 and **thick M8 flat washers** no. 18. Apply Loctite 271 (red) (P/N 293 800 005) on screw threads and between screw heads and thick flat washers.

NOTE: It is of the utmost importance to use thick flat washers no. 18 with self-tapping screws no. 17 in order not to pierce inner fixed half with the screws.

CAUTION: Loctite 271 (red) (P/N 293 800 005) must be applied to safely assemble ring gear.

Torque screws in a criss-cross sequence to 27 N•m (20 lbf•ft).

INSTALLATION

Install drive pulley on crankshaft.

Install a new lock washer.

Torque retaining screw to 68 N•m (50 lbf•ft).

Reinstall driven pulley, drive belt and belt guard. Refasten bottom pan center and rear attachments on left hand side.

Raise the rear of the vehicle and support it with a mechanical stand.

⚠ WARNING

Ensure that the track is free of particles which could be thrown out while track is rotating. Keep hands, tools, feet and clothing clear of track. Ensure nobody is standing near the vehicle.

Accelerate the vehicle at low speed (maximum 30 km/h (20 MPH)) and apply the brake, repeat 5 times.

Recheck the torque of 68 N•m (50 lbf•ft).

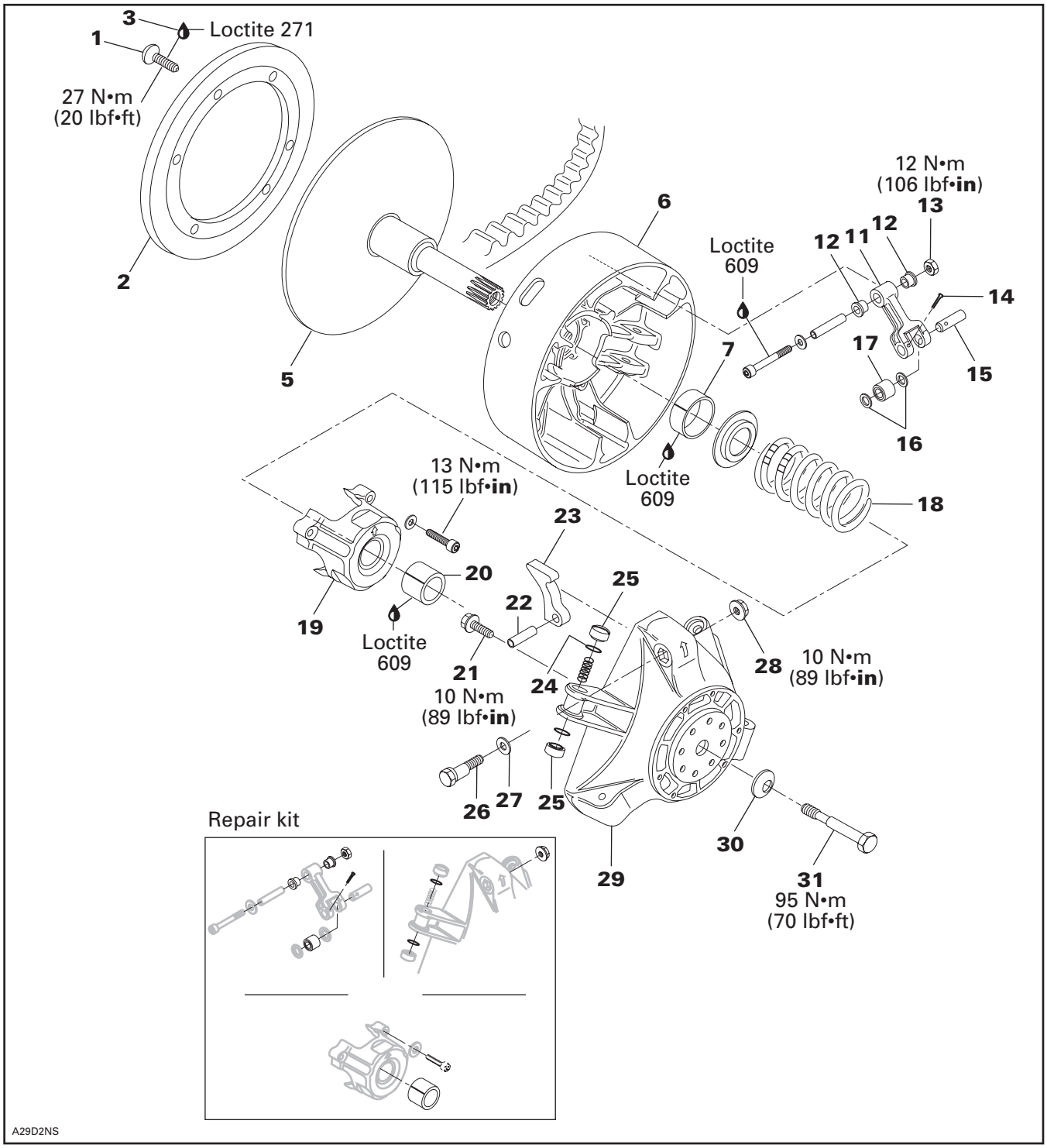
⚠ WARNING

After 10 hours of operation the transmission system of the vehicle must be inspected to ensure the retaining screw is properly torqued.

TRA

Skandic WT/SWT/WT LC/SUV

NOTE: This is a lubrication free drive pulley.



GENERAL

Some drive pulley components (return spring, ramp) can be changed to improve vehicle performance in high altitude regions. A Service Bulletin will give information about calibration according to altitude.

CAUTION: Such modifications should only be performed by experienced mechanics since they can greatly affect vehicle performance. Verify spring specifications before installation. Do not only refer to the spring color code.

NOTE: TRA drive pulley stands for Total Range Adjustable drive pulley.

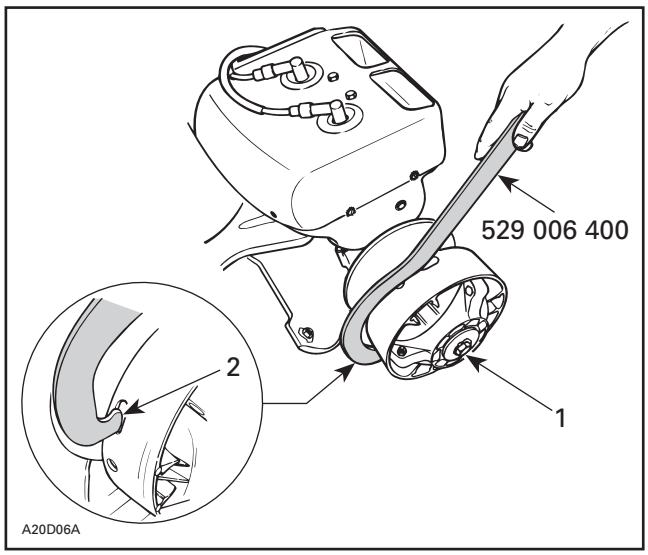
⚠ WARNING

Any drive pulley repairs must be performed by an authorized Bombardier snowmobile dealer. Sub-component installation and assembly tolerances require strict adherence to procedures detailed.

REMOVAL

30,31, Conical Spring Washer and Screw

Use holder (P/N 529 006 400).



TYPICAL

1. *Retaining screw*
2. *Insert in any slot*

⚠ WARNING

Never use any type of impact wrench at drive pulley removal and installation.

⚠ WARNING

The drive pulley assembly is a precisely balanced unit. Never replace parts with used parts from another drive pulley assembly.

Remove retaining screw. Discard conical spring washer.

To remove drive pulley ass'y and/or fixed half from engine, use puller (P/N 529 007 900) for 503 engine equipped models and puller (P/N 529 022 400) for 593 engine equipped models.

CAUTION: These pulleys have metric threads. Do not use imperial threads puller. Always tighten puller by hand to ensure that the drive pulley has the same type of threads (metric vs imperial) prior to fully tightening.

To Remove Drive Pulley Ass'y

Retain drive pulley with clutch holder.

Install puller in pulley shaft then tighten.

DISASSEMBLY

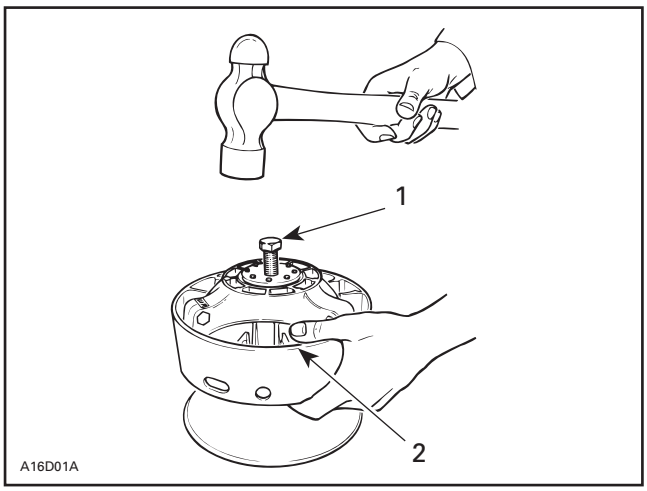
1,2, Screw and Ring Gear

CAUTION: Retaining screws must be heated before disassembly. Heating temperature must not exceed 150°C (300°F).

5,6, Fixed and Sliding Half

CAUTION: Do not tap on governor cup.

Screw puller into fixed half shaft about 13 mm (1/2 in). Raise drive pulley and hold it by the sliding half while knocking on puller head to disengage fixed half.



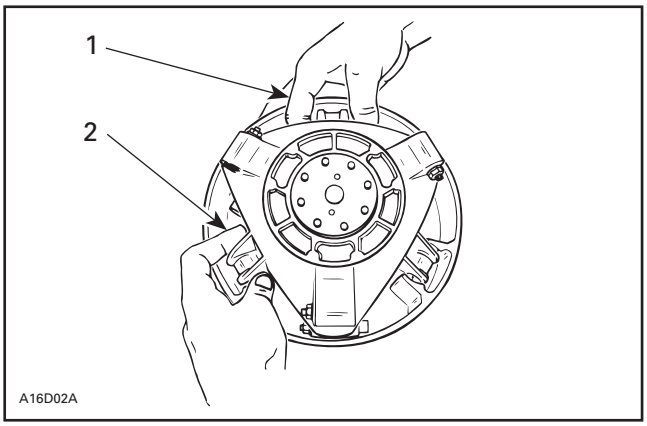
1. Puller
2. Holding sliding half

NOTE: No components marking is required before disassembling this drive pulley since it has factory mark and arrows as indexing reference.

25,29, Slider Shoe and Governor Cup

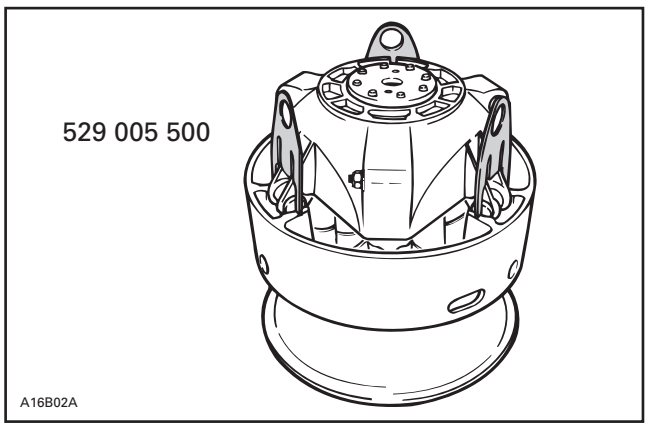
Carefully lift governor cup until slider shoes come at their highest position into guides.

Hold a slider shoe set then carefully lift its housing and remove slider shoes. Proceed the same way for other housings lifting one at a time.



1. Hold slider shoes
2. Lift one housing at a time

NOTE: To ease disassembly, forks (P/N 529 005 500) should be used to hold slider shoes prior to removing governor cup.



19, Spring Cover Ass'y

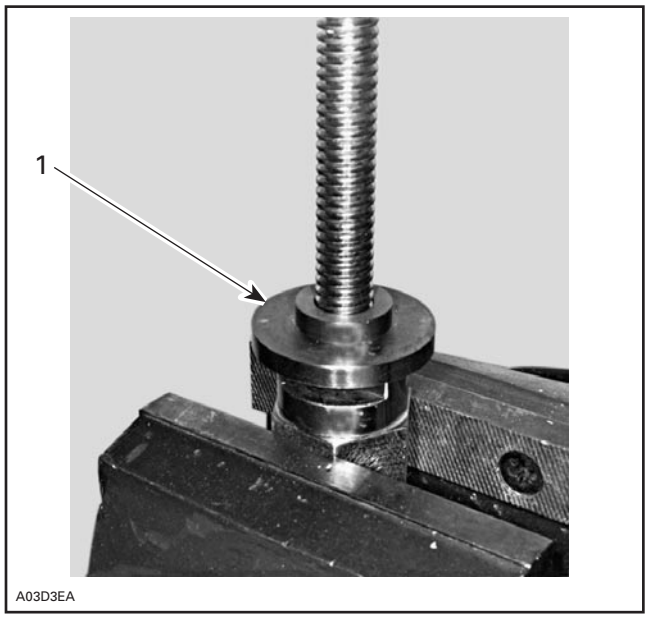
It is pushed by clutch spring pressure.

⚠ WARNING

Clutch spring is very strong. Never attempt to remove spring cover without the recommended tools.

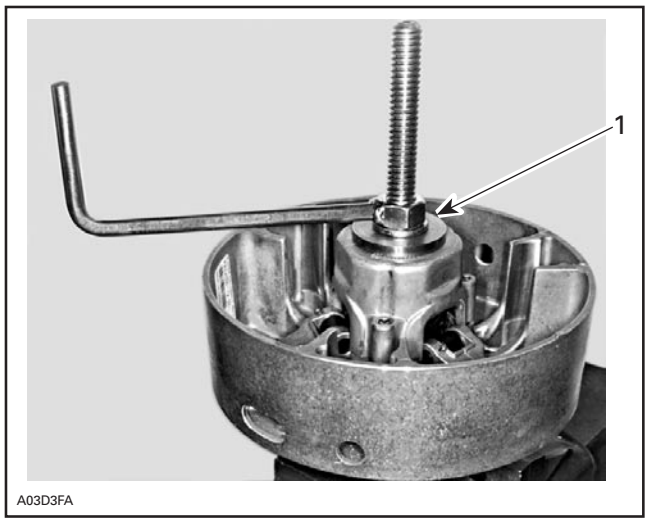
Use spring compressor (P/N 529 035 524).

Install support guide.



1. Support guide

Install sliding half then a second support guide. These support guides will prevent bushing damages.



1. Support guide

Remove 3 Allen screws retaining spring cover then unscrew compressor.

CLEANING

5,6, Fixed and Sliding Half

Clean pulley faces and shaft with fine steel wool and dry cloth.

5, Fixed Half and Crankshaft End

Parts must be at room temperature before cleaning.

Using a paper towel with cleaning solvent, clean crankshaft tapered end and the taper inside the fixed half of the drive pulley, crankshaft threads and retaining screw threads.

⚠ WARNING

This procedure must be performed in a well-ventilated area.

CAUTION: Avoid contact between cleaner and crankshaft seal because damage may occur.

Remove all hardened oil deposits that have baked on crankshaft and pulley tapered surfaces with coarse or medium steel wool and/or sand paper no. 600.

CAUTION: Do not use any other type of abrasive.

Reclean mounting surfaces with paper towel and cleaning solvent.

Wipe off the mounting surfaces with a clean and dry paper towel.

CAUTION: Mounting surfaces must be free of any oil, cleaner or towel residue.

7,20, Bushing

Only use petrol base cleaner when cleaning bushings.

CAUTION: Do not use acetone to clean bushing.

INSPECTION

Drive pulley should be inspected annually.

16,17, Thrust Washer and Roller

Check roller for roundness of external diameter. Check thrust washer for thickness wear. Replace as required.

CAUTION: Ensure rollers are in good condition. Replace as required.

9,12, Fitting Bolt Ass'y and Flanged Bushing

Check for wear, replace as required.

24,25, O-Ring and Slider Shoe

Check if O-rings are cracked, cut or crushed. Replace as required.

Check slider shoes for wear. Replace if groove is not apparent on top.

5,29, Fixed Half and Governor Cup

Inspect splines and free play between both parts. Maximum free play is 0.5 mm (.020 in) measured at calibration screw radius. Replace if required.

7,20, Sliding Half and Spring Cover Bushing

Visually inspect coating. Replace if worn.

Sliding Half Bushing Replacement

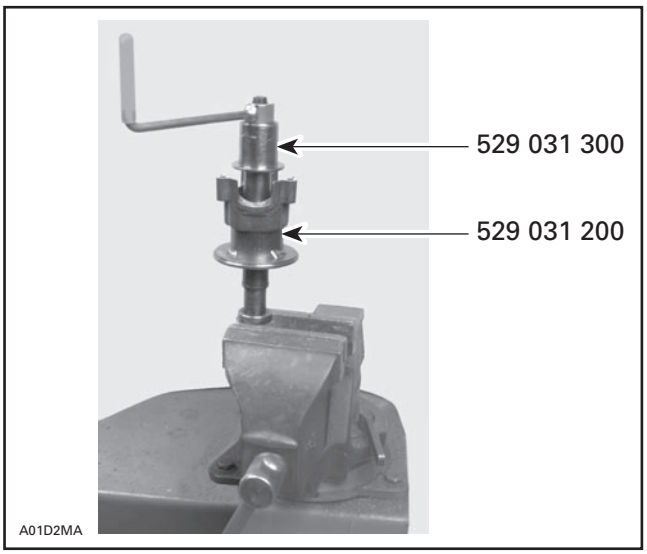
This bushing is not replacable. If worn out, replace sliding half ass'y.

Spring Cover Bushing Replacement

Under normal use there is no need to replace this bushing.

Mount compressor (P/N 529 035 524) in a vise.

Use tools (P/N 529 031 300 and 529 031 200) to remove old bushing.



CAUTION: Bushing must be bonded with retaining compound.

Apply retaining compound Loctite 609 outside of bushing then press it down to counterbore from outside end.

CAUTION: Insert bushing from sliding half side (inner side) of spring cover.

ASSEMBLY

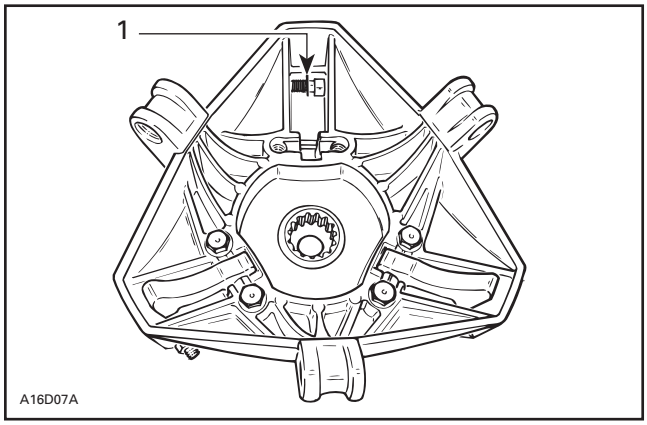
NOTE: This drive pulley is lubrication free. **Do not lubricate** any component.

1,2,3, Screw, Ring Gear and Loctite 271

Apply Loctite 271 (P/N 413 702 900) on threads and then torque to 27 N•m (20 lbf•ft).

26,27,28, Calibration Screw, Washer and Locking Nut

When installing calibration screw, make sure to install washer as shown.



1. Washer

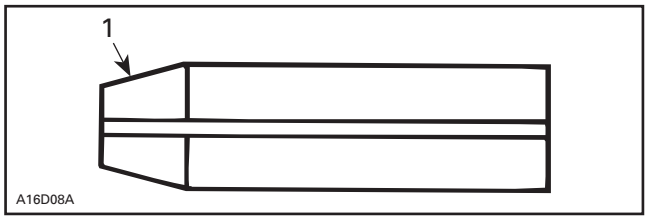
Torque locking nut to 10 N•m (89 lbf•**in**).

15, Pin

Always use the same type of pin as originally installed when servicing. Different types have different weights for calibration purpose. Refer to TECHNICAL DATA.

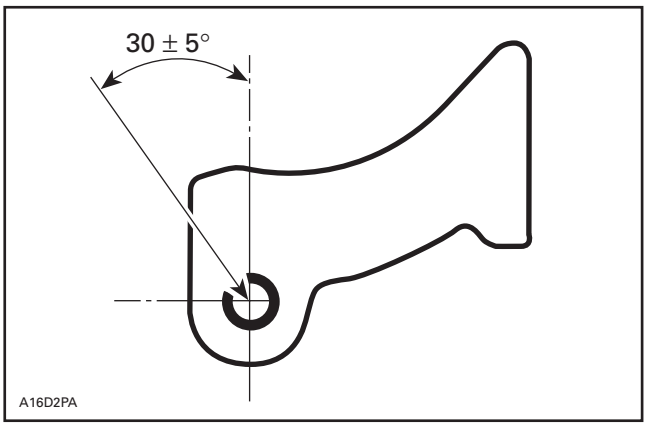
21,22,23, Screw, Dowel Tube and Ramp

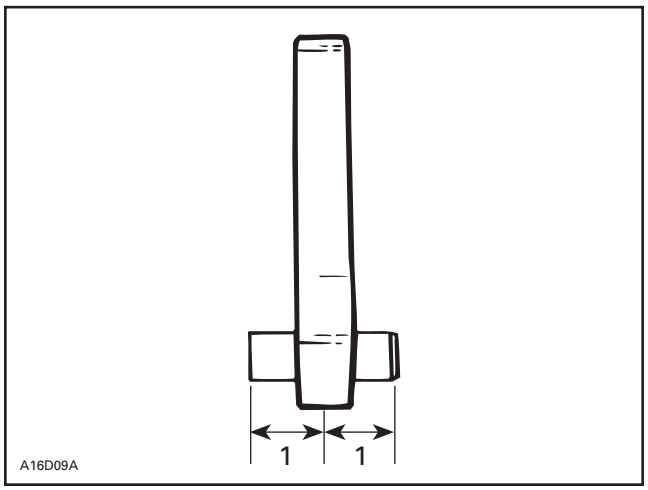
Insert dowel tube from chamfered side. Make sure ramp is centered on dowel tube.



1. Chamfered side

Position dowel tube split at the illustrated angle.





1. Equal distance

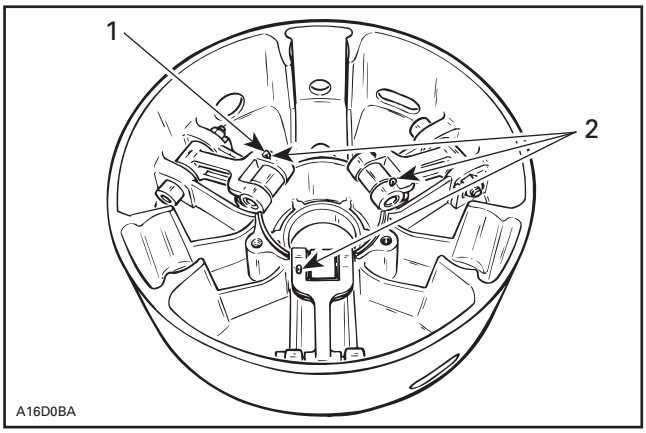
Torque screws to 10 N•m (89 lbf•**in**).

9,11,13,14, Screw, Lever Ass'y, Nut and Cotter Pin

Always install lever assemblies so that cotter pins are on the shown side. Install cotter pin head on top when lever is sat at bottom of sliding half. Bend cotter pin ends to sit perfectly against lever.

⚠ WARNING

Whenever replacing centrifugal levers, always replace all 3 at the same time. Otherwise, drive pulley misbalancing will occur because of levers difference.



1. Head on top
2. All on the same side

CAUTION: Lever assemblies must be installed so that cotter pins are on the same side.

Torque nuts to 12 N•m (106 lbf•**in**).

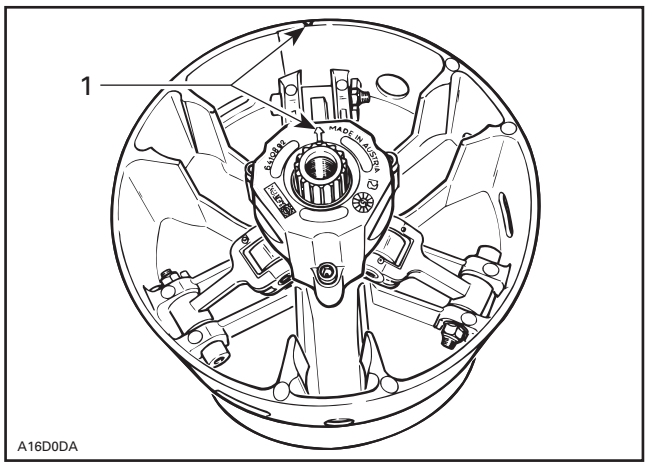
CAUTION: Lever ass'y and rollers must move easily after installation.

5,6,18,19, Fixed Half, Sliding Half, Spring, Spring Cover and Screw

To install spring cover, use spring compressor (P/N 529 035 524).

Assemble fixed and sliding halves. Note that fixed halves have different cone angle. Match cone angle with crankshaft.

Lift sliding half against spring cover and align spring cover arrow with sliding half mark.

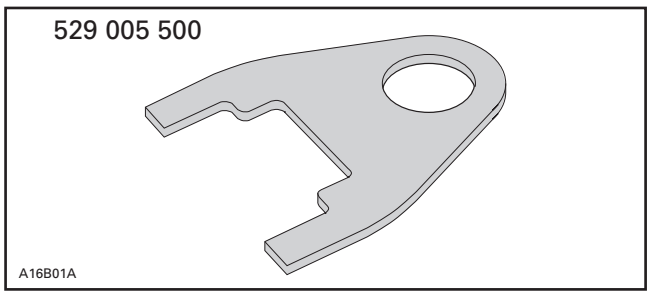


1. Align

Install and torque screws to 13 N•m (115 lbf•**in**).

6,25,29, Sliding Half, Slider Shoe and Governor Cup

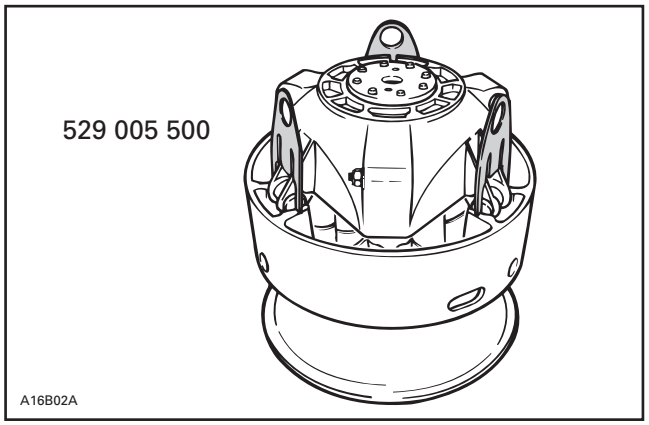
To install governor cup, use following tool:



Insert spring and slider shoes into governor cup so that groove in each slider shoe is vertical to properly slide in guides.

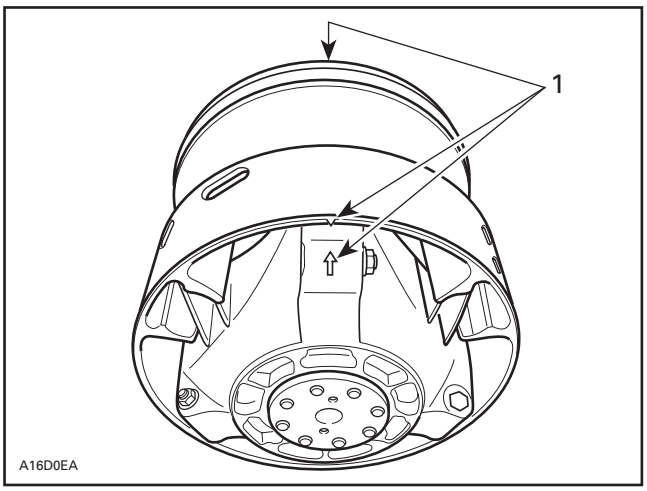
CAUTION: Make sure O-rings are installed on slider shoes and that grooves are positioned vertically.

Install fork (P/N 529 005 500) into slider shoe grooves to maintain them for governor cup installation. Proceed on 3 set of slider shoes.



Make sure to align governor cup arrow with sliding half and fixed half mark.

NOTE: If fixed half has no mark, align governor cup mark with segment no. 1 of inner half. Segments are identified on engine side.



1. Align

Carefully slide governor cup into sliding half. Align mark of governor cup with mark of fixed half.

Remove forks and push governor cup so that its splines engage with fixed half shaft splines.

CAUTION: Make sure splines of both parts are fully engaged.

INSTALLATION

⚠ WARNING

Do not apply anti-seize or any lubricant on crankshaft and drive pulley tapers.

⚠ WARNING

Never use any type of impact wrench at drive pulley removal and installation.

Clean mounting surfaces as described in CLEANING above.

Drive Pulley Ass'y

The following installation procedure must be strictly adhered to.

Install drive pulley on crankshaft extension.

Install a new conical spring washer with its concave side towards drive pulley then install screw.

⚠ WARNING

Never substitute conical spring washer and/or screw with jobber ones. Always use Bombardier genuine parts for this particular case.

Use holder. See removal procedure.

Torque screw to 90 to 100 N•m (66 to 74 lbf•ft).

Install drive belt and guard.

Raise the rear of the vehicle and support it with a mechanical stand.

⚠ WARNING

Ensure that the track is free of particles which could be thrown out while track is rotating. Keep hands, tools, feet and clothing clear of track. Ensure nobody is standing near the vehicle.

Accelerate the vehicle at low speed (maximum 30 km/h (20 MPH) and apply the brake, repeat 5 times.

Recheck the torque of 90 to 100 N•m (66 to 74 lbf•ft).

⚠ WARNING

After 10 hours of operation the transmission system of the vehicle must be inspected to ensure the retaining screw is properly torqued.

DRIVE PULLEY ADJUSTMENT

The drive pulley is factory calibrated to transmit maximum engine power at a predefined RPM. Factors such as ambient temperature, altitude or surface condition may vary this critical engine RPM thus affecting snowmobile efficiency.

This adjustable drive pulley allows setting maximum engine RPM in the vehicle to maintain maximum power.

Calibration screws should be adjusted so that actual maximum engine RPM in vehicle matches with the maximum horsepower RPM given in TECHNICAL DATA.

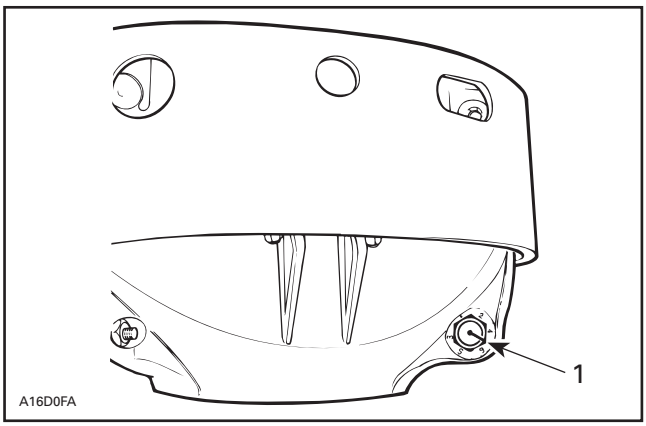
NOTE: Use precision digital tachometer for engine RPM adjustment.

NOTE: The adjustment has an effect on high RPM only.

To adjust, modify ramp end position by turning calibration screws.

26,28,29, Calibration Screw, Locking Nut and Governor Cup

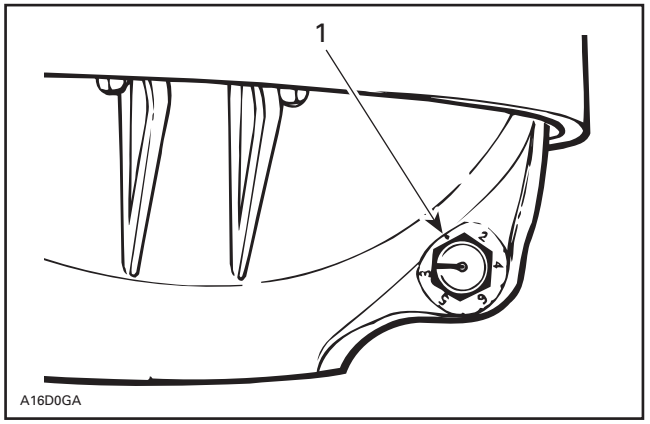
Calibration screw has a notch on top of its head.



1. Notch

Governor cup has 6 positions numbered 2 to 6. Note that in position 1 there is no stamped number (due to its location on casting).

See TECHNICAL DATA for original setting.



1. Position 1 (not numbered)

Each number modifies maximum engine RPM by about 200 RPM.

Lower numbers decrease engine RPM in steps of 200 RPM and higher numbers increase it in steps of 200 RPM.

Example:

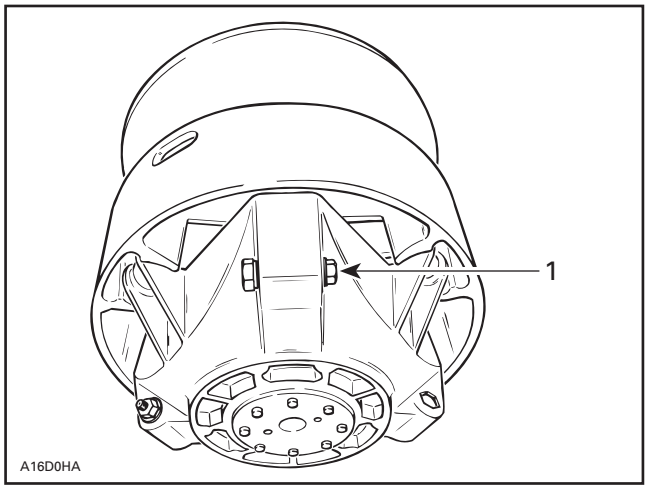
Calibration screw is set at position 3 and is changed to position 5. So maximum engine RPM is increased by about 400 RPM.

To Adjust:

Just loosen locking nut enough to pull calibration screw **partially** out and adjust to desired position. Do not completely remove the locking nut. Torque locking nuts to 10 N•m (89 lbf•**in**).

CAUTION: Do not completely remove calibration screw otherwise its inside washer will fall off.

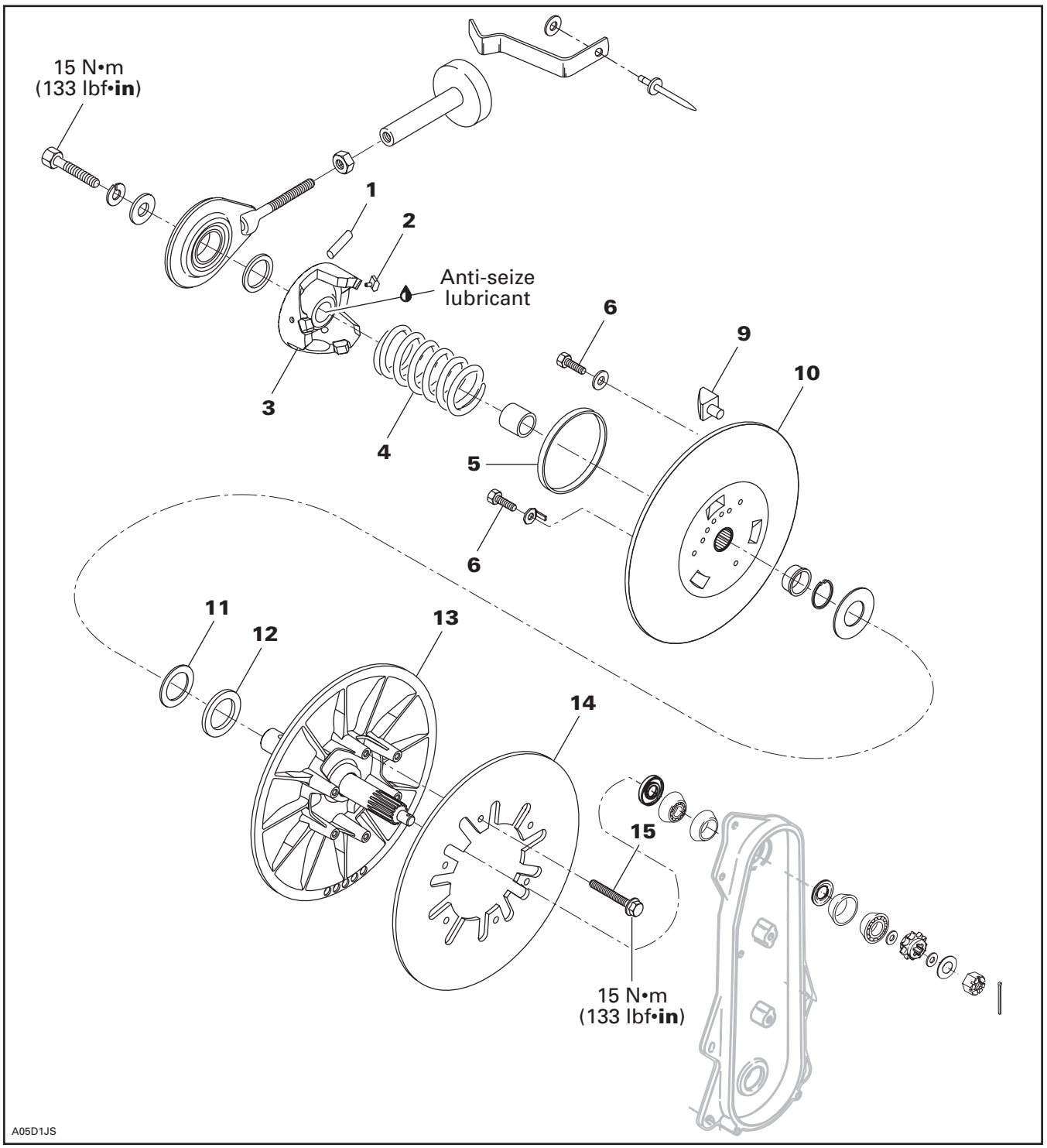
CAUTION: Always adjust all 3 calibration screws and make sure they are all set at the same number.



1. Loosen just enough to permit rotating of calibration screw

DRIVEN PULLEY

Tundra R



NOTE: Driven pulley components (support, cam, shoes, etc.) can be serviced without removing the whole driven pulley from chaincase. Refer to the following procedures but neither remove brake caliper nor open chaincase for those cases.

REMOVAL

To remove driven pulley from chaincase, follow this procedure.

Remove guard and drive belt from vehicle.

Remove brake support from chaincase with brake ass'y.

Free countershaft support from support clamp.

Chaincase

Open chaincase and drain oil. Unlock and remove upper sprocket.

The following is required to have enough space to remove driven pulley from chaincase:

Loosen steering column upper retaining screws.

Disconnect carburetor boots from intake manifold and air intake silencer.

Disconnect impulse hose from engine.

Disconnect oil injection supply line at injection pump and plug line to prevent draining.

Remove screws retaining rear engine support to chassis.

Tip engine forward just enough to allow driven pulley removal from chaincase. Block in this position.

NOTE: In some cases, chaincase retaining screws might have to be loosened to allow pivoting of chaincase. In this case, note position of alignment shims. In addition, air intake silencer and oil injection reservoir might have to be slightly moved to get enough space to pull driven pulley.

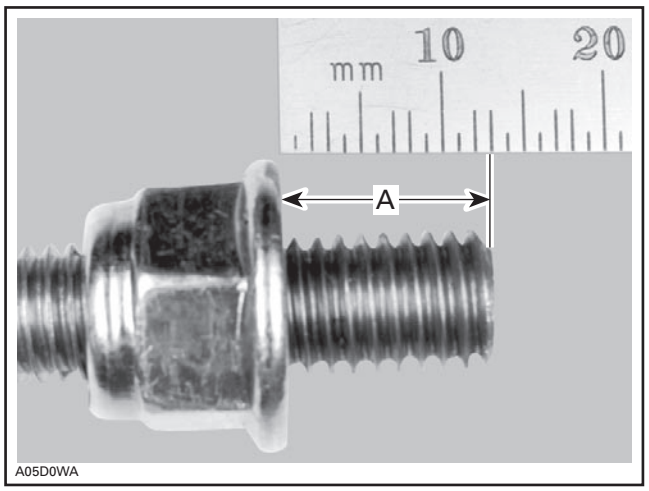
Remove bearing cone.

Knock driven pulley shaft with a plastic hammer and pull driven pulley out.

DISASSEMBLY

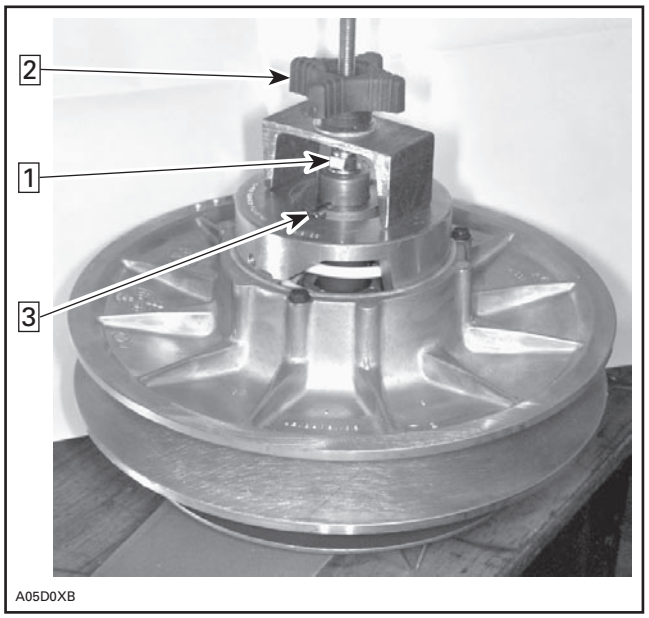
To disassemble driven pulley, driven pulley spring compressor (P/N 529 035 300) must be used. See following procedure.

Position stop nut 13 mm (1/2 in) from threaded rod end, as shown in the next photo.



A. 13 mm (1/2 in)

Install driven pulley spring compressor (P/N 529 035 300). Fully tighten the 13 mm (1/2 in) exposed threads in driven pulley. Tighten stop nut. Tighten tool knob to compress spring then remove roll pin no. 2.

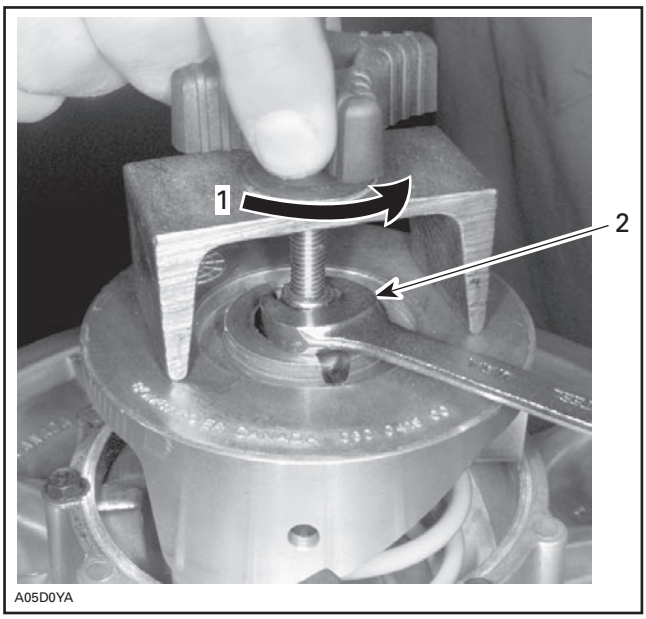


Step 1: Tighten stop nut
Step 2: Tighten knob to compress spring
Step 3: Remove roll pin

Once roll pin has been removed, loosen knob until spring pressure is completely released.

⚠ WARNING

To avoid injuries always hold stop nut with a key when loosening knob, as shown in the next photo.



1. When loosening knob
2. Hold stop nut with a key

Remove tool and cam **no. 3**. Remove spring **no. 4** and sliding half **no. 10**.

5, Large Bushing

Remove 3 screws **no. 6** with washers and pry bushing **no. 5** out.

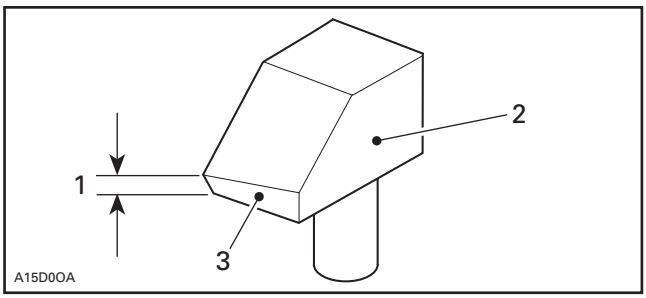
INSPECTION

2,9, Slider Shoe

Black slider shoe = forward

Red slider shoe = reverse

Check cam slider shoes for wear. Replace when inside edge thickness of cam slider shoe slope base is 1 mm (.039 in) or less.



1. Measure thickness of slope base here
2. Sliding pulley side
3. Slop base

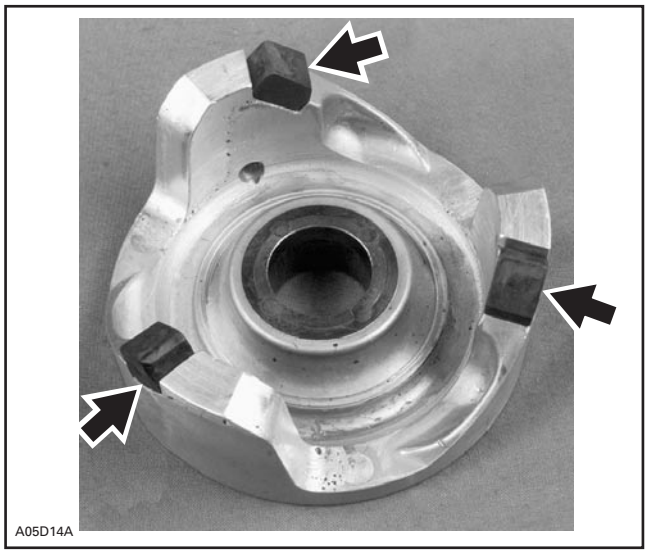
ASSEMBLY

Assemble driven pulley components by reversing the disassembly procedure except for the following.

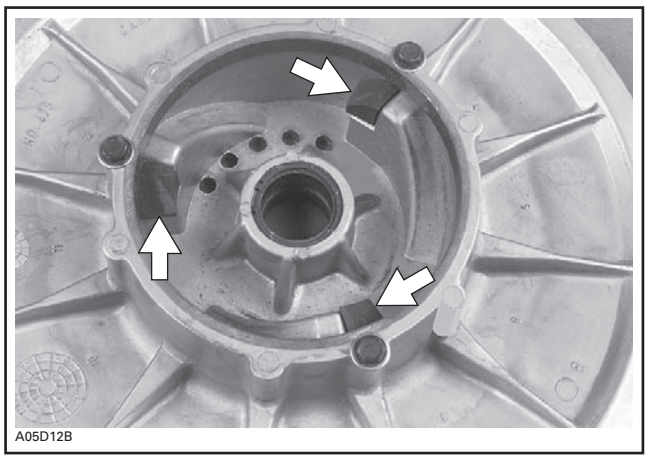
2,9, Slider Shoe

When replacing slider shoes, always install a new set (3 shoes) to maintain equal pressure on the cam.

Install slider shoes as per following photo. Red slider shoes are being used for reverse and black ones for forward.



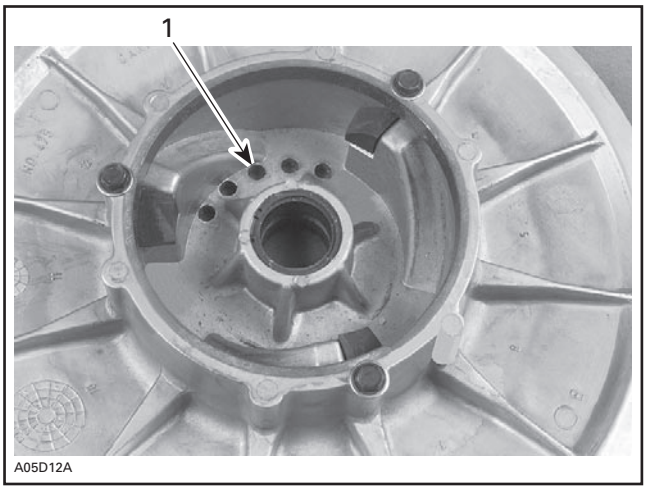
BLACK SLIDER SHOES ON CAM



RED SLIDER SHOES ON PULLEY HALF

2,4,5, Roller Pin, Outer Cam and Spring

Insert spring in adjusting hole no. 3 into sliding half, as illustrated.



1. Adjusting hole no. 3

Insert other spring end in cam. Mount driven pulley spring compressor (P/N 529 035 300) as in DISASSEMBLY procedure.

Push cam all the way in then install roll pin coated with anti-seize lubricant (P/N 413 701 000).

13,14,15, Fixed Pulley Half, Brake Disc and Screw

Install brake disc on fixed pulley half and torque screws to 15 N•m (115 lbf•**in**).

INSTALLATION

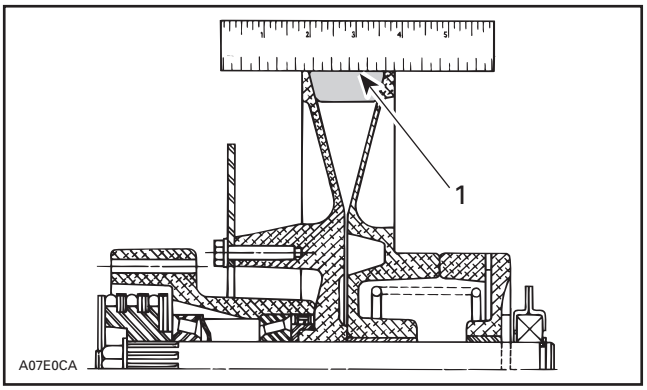
Follow installation procedure for Tundra driven pulley at beginning of this subsection.

ADJUSTMENT

11,12, Shim

NOTE: The following adjustment must be performed with a new drive belt.

For best performance, particularly at starting, top of drive belt should be flush with top of driven pulley halves.



TYPICAL

1. Belt flush with the top of the pulley halves

Shim(s) **no. 11** and **no. 12** provide belt height adjustment between pulley halves. Adding shims will lower the belt in driven pulley, while removing shims will raise the belt. Adjust properly.

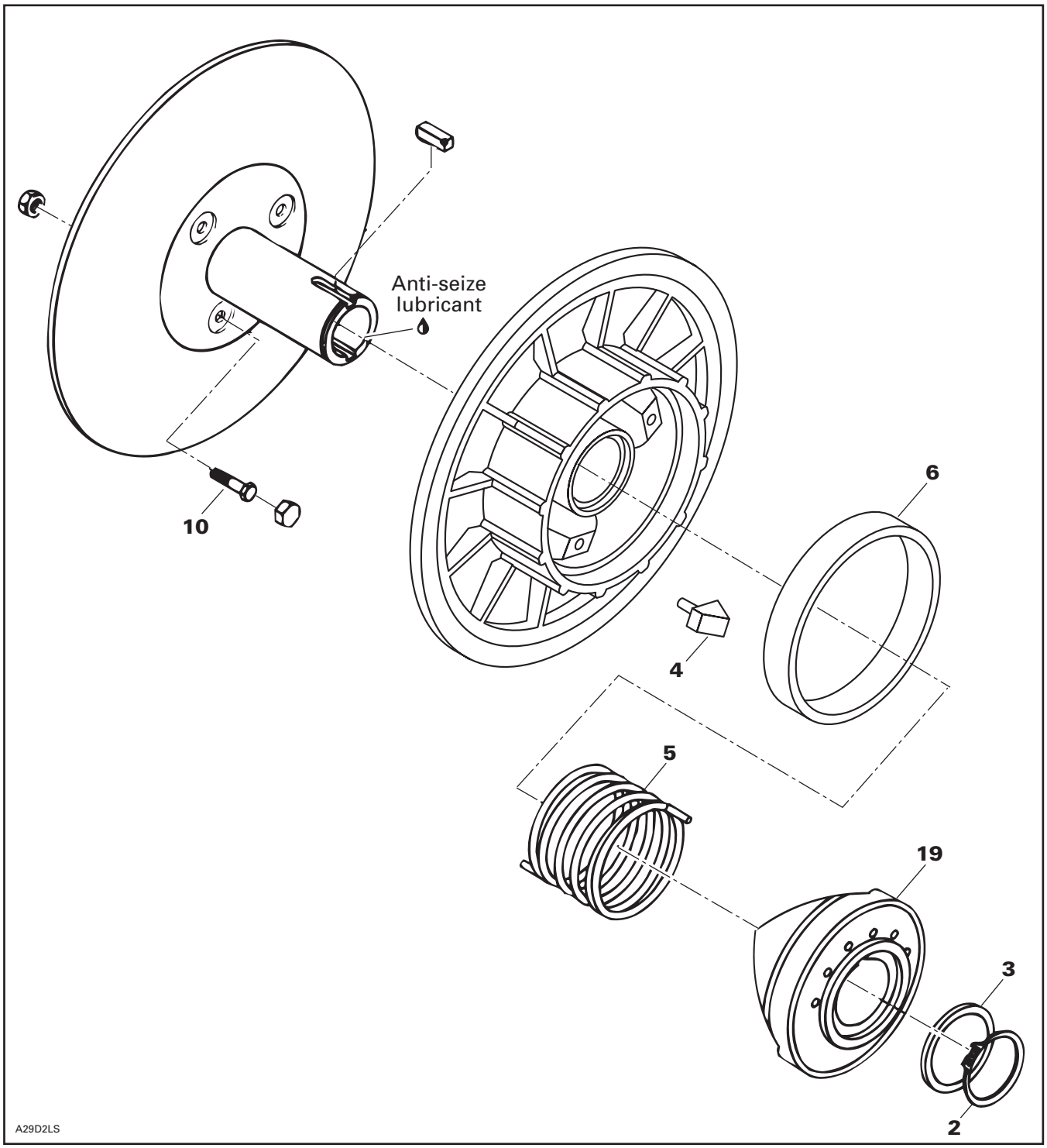
Pulley Alignment and Drive Belt Deflection

Refer to PULLEY DISTANCE AND ALIGNMENT and DRIVE BELT to perform adjustments.

CAUTION: Drive belt and pulley adjustments must always be checked whenever pulleys have been removed, replaced or disassembled.

THRUST BUSHING

Skandic WT/SWT/WT LC/SUV



REMOVAL

Remove guard and drive belt from vehicle.

Remove the screw, and washer then pull the driven pulley from the shaft.

DISASSEMBLY

Use spring compressor (P/N 529 035 524).

Remove snap ring **no. 2** and washer **no. 3** to disassemble the outer cam and the 2 pulley halves.

⚠ WARNING

Driven pulley cam is spring loaded, use above-mentioned tool.

CLEANING

6, Bushing

During break-in period (about 10 hours of use), teflon from bushing moves to cam or shaft surface. A teflon over teflon running condition occurs, leading to low friction. So it is normal to see gray teflon deposit on cam or shaft. Do not remove that deposit, it is not dust.

When a dust deposit has to be removed from the cam or the shaft, use dry cloth to avoid removing transferred teflon.

Pulley Half Cleaning

Use Pulley flange cleaner (P/N 413 711 809).

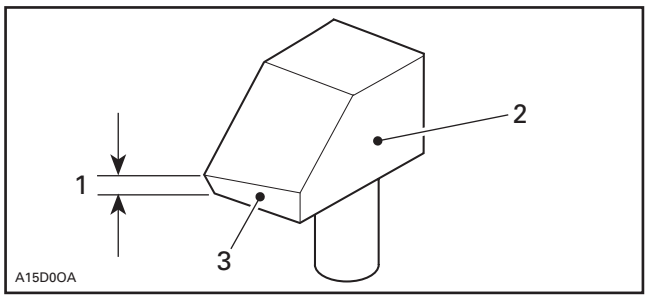
INSPECTION

6, Bushing

Check for cracks, scratch and for free movement when assembled to fixed half.

4, Slider Shoe

Check cam slider shoes for wear. Replace when inside edge of cam slider shoe slope base is worn to 1 mm (.039 in) or less.



1. Measure thickness of slope base here
2. Sliding pulley side
3. Slope base

ASSEMBLY

4, Cam Slider Shoe

When replacing slider shoes, always install a new set (3 shoes) to maintain equal pressure on the cam.

Assemble driven pulley components by reversing the disassembly procedure.

19, Cam

Coat cam interior with anti-seize lubricant.

INSTALLATION

CAUTION: Always apply anti-seize lubricant (P/N 413 701 000) on the shaft before final pulley installation.

ADJUSTMENT

Refer to PULLEY DISTANCE AND ALIGNMENT 05-05 to adjust pulley distance. Adjust drive belt height in driven pulley. Turn screws **no. 10** equally accordingly.

5, Spring

General

It is usual to experience spring setting during breaking period of a new spring. The factory spring preload is slightly higher (about 1 kg (2 lb)) to compensate for spring setting. Specifications in TECHNICAL DATA 10 are applicable after break-in period (about 10 hours of use).

Spring Torsional Pre-Load

To check spring pre-load adjustment, use spring scale hook (P/N 529 006 500) and a spring scale.

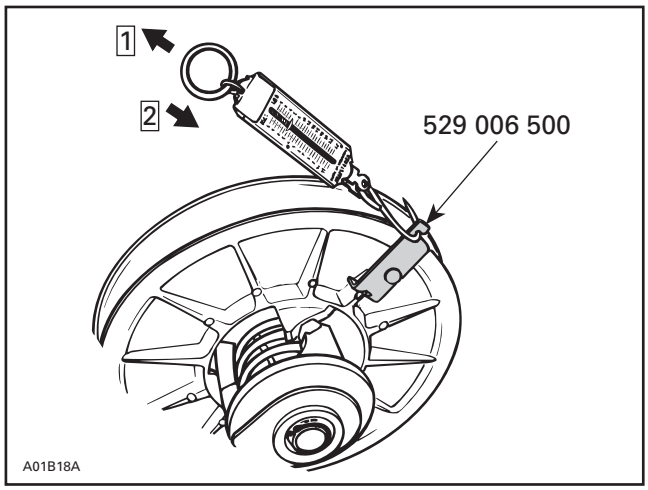
Remove drive belt.

Install the hook on the sliding half. Preventing fixed half from turning, pull sliding half with the spring scale perpendicularly with pulley axle.

Take 1st measurement when sliding half begins to turn. Rotate sliding half to 10 mm (3/8 in) of rotation. Hold fish scale at this position. Slowly release tension from fish scale and take 2nd measurement when sliding half begins to return. Spring pre-load is the average measurement between these 2.

$$\frac{\text{1st measurement (when opening)} + \text{2nd measurement (when closing)}}{2} = \text{Spring pre-load}$$

$$\text{Example: } \frac{\text{3.8 kg (8.4 lb) (when opening)} + \text{3.4 kg (7.5 lb) (when closing)}}{2} = \text{3.6 kg (8 lb) Actual spring pre-load}$$



TYPICAL

Step 1: 1st measurement
Step 2: 2nd measurement

To adjust spring pre-load, relocate spring end in cam, moving it clockwise to increase the pre-load and counterclockwise to decrease it. Refer to TECHNICAL DATA 10.

NOTE: Always recheck torsional pre-load after adjusting.

Pulley Alignment and Drive Belt Deflection

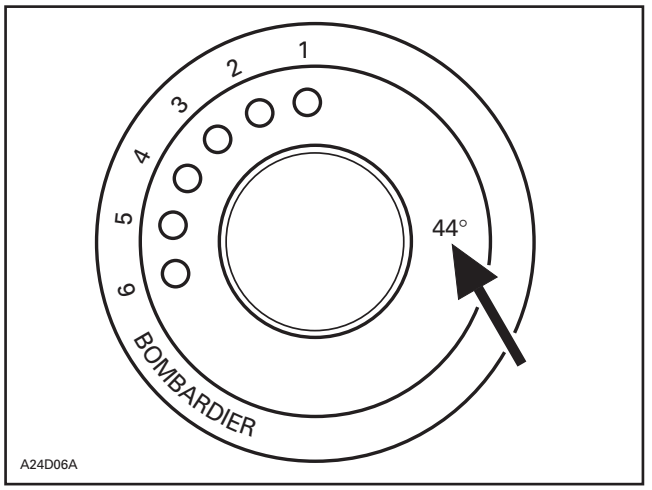
Refer to PULLEY DISTANCE AND ALIGNMENT 05-05 and DRIVE BELT 05-02 to perform adjustments.

CAUTION: Drive belt and pulley adjustments must always be checked whenever pulleys have been removed, replaced or disassembled.

19, Cam

Make sure to install proper cam. Refer to TECHNICAL DATA 10.

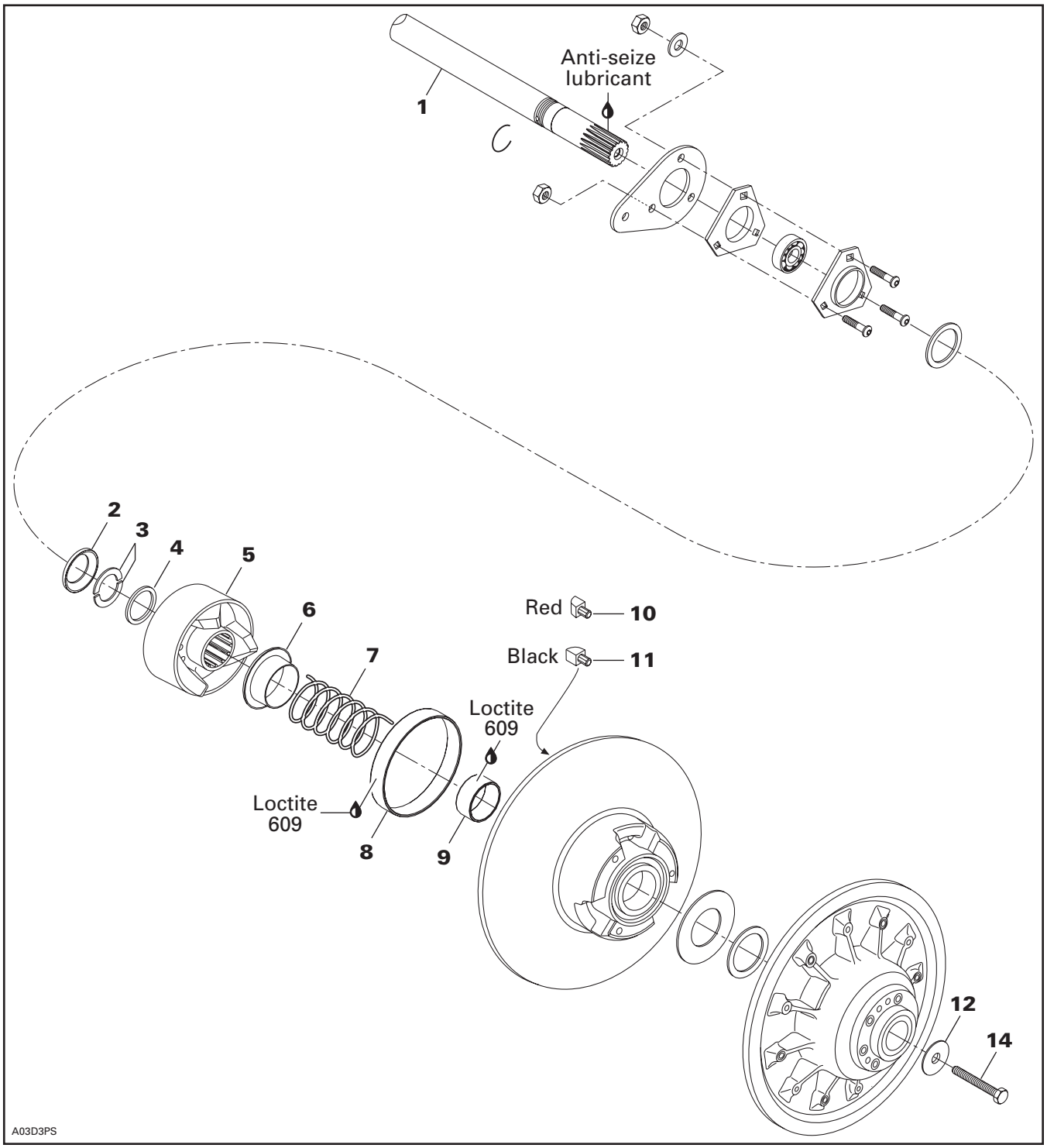
Cam angle is identified on cam.



NOTE: For high altitude regions, a service bulletin will give information about calibration according to altitude.

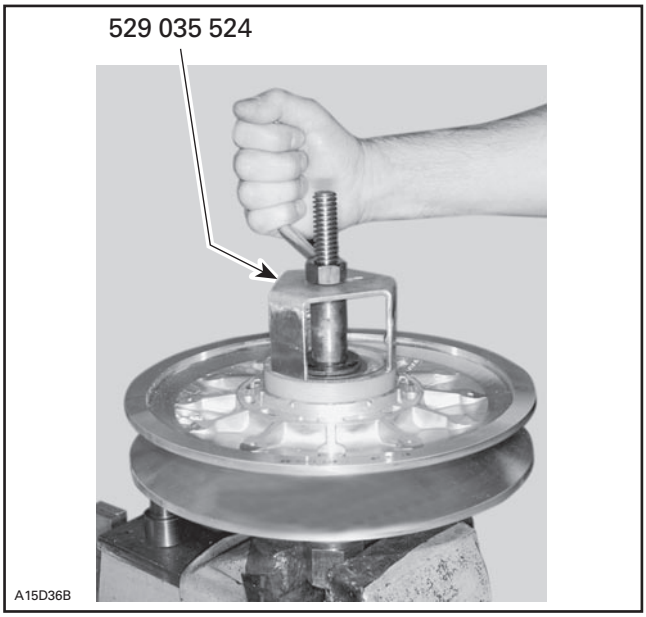
LPV 27

Skandic LT/LT E



DISASSEMBLY

Use spring compressor (P/N 529 035 524).



TYPICAL

Remove half keys **no. 3** and spacer **no. 4** to disassemble the outer cam and the 2 pulley halves.

⚠ WARNING

Driven pulley cam is spring loaded, use above mentioned tool.

INSPECTION

Replace bushing(s) if worn more than specified.

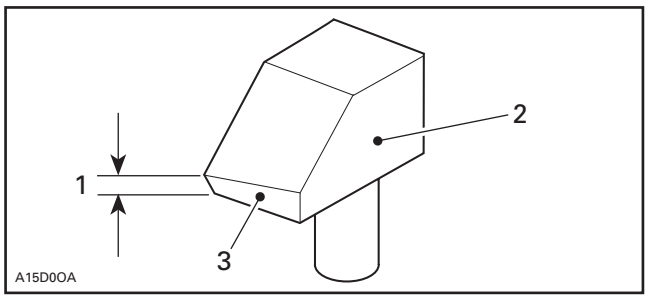
DRIVEN PULLEY BUSHING WEAR LIMIT mm (in)	
Small bushing	38.30 (1.508)
Large bushing	108.2 (4.260)

10,11, Slider Shoe

Black slider shoe = forward

Red slider shoe = reverse

Check cam slider shoes for wear. Replace when inside edge thickness of cam slider shoe slope base is 1 mm (.039 in) or less.



1. *Measure thickness of slope base here*
2. *Sliding pulley side*
3. *Slope base*

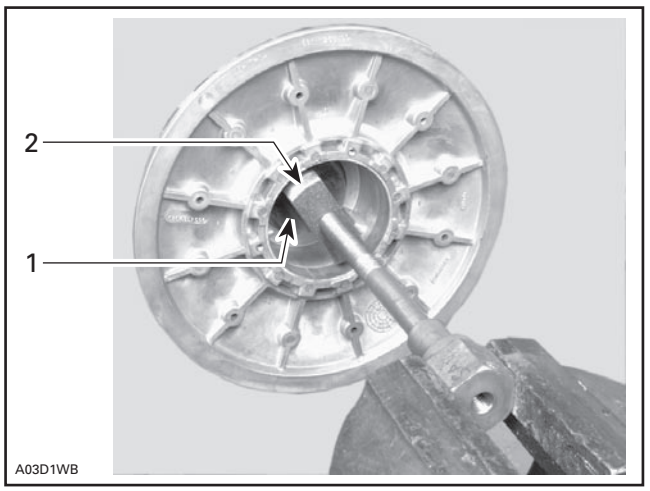
Bushing Replacement

Large Bushing

Remove Allen screws if applicable. Heat to break Loctite bond.

Install support plate included in tool (P/N 529 031 100) inside sliding half.

Place extractor (P/N 529 035 575) below bushing.



TYPICAL

1. *Support plate*
2. *Extractor*

Mount screw head of new puller (P/N 529 035 524) in a vise.

Turn pulley half by hand to extract old bushing.

Before bushing installation, file sliding half bore to remove burrs from crimping areas.

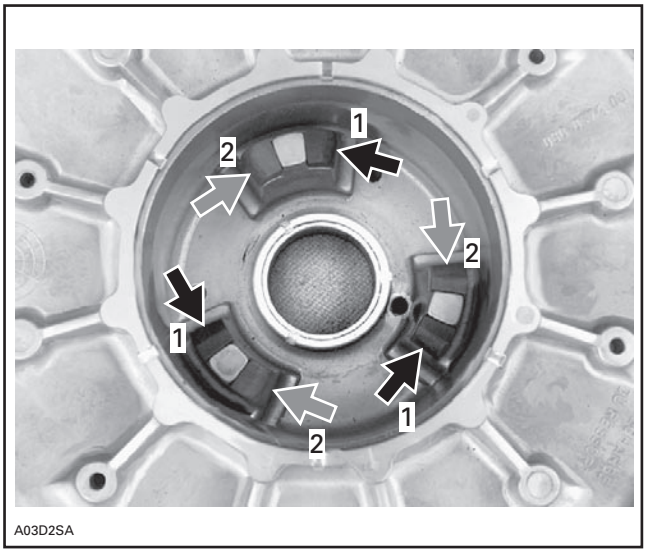
Coat bushing outside diameter with Loctite 609 (P/N 413 703 100). Place new bushing on sliding half and slightly tap to engage squarely the bushing in the sliding.

ASSEMBLY

10,11, Cam Slider Shoe

When replacing slider shoes, always install a new set (3 shoes) to maintain equal pressure on the cam.

Install slider shoes as per following photo. Red slider shoes are being used for reverse and black ones for forward.



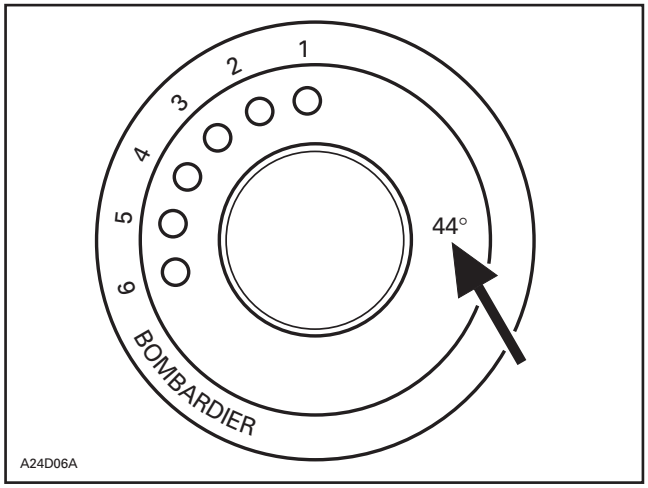
1. BLACK slider shoe
2. RED slider shoe

Assemble driven pulley components by reversing the disassembly procedure.

5,6,7, Cam, Guard and Spring

Make sure to install proper cam. Refer to TECHNICAL DATA.

Cam angle is identified on cam.

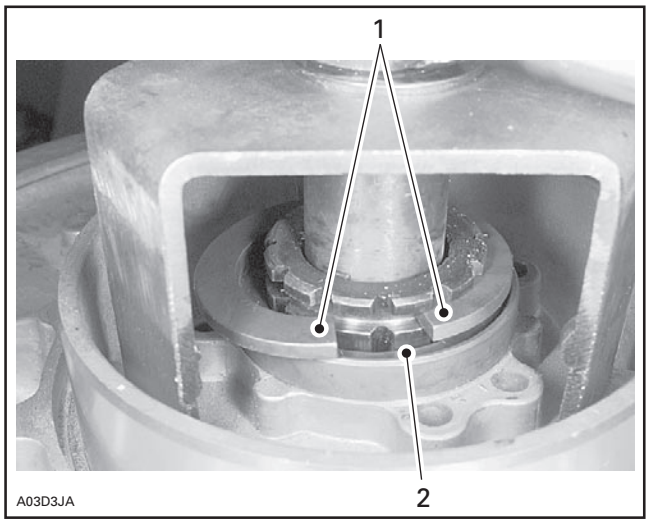


Position guard **no. 6** in cam **no. 5** then insert spring in adjusting hole **no. 3** (mid-hole) into outer cam.

Compress outer cam using spring compressor (P/N 529 035 524).

Install spacer **no. 4** then secure outer cam with half keys **no. 3**, as shown in the next photo.

CAUTION: Ensure that half keys are properly inserted into shaft groove and that spacer recess is facing half keys.



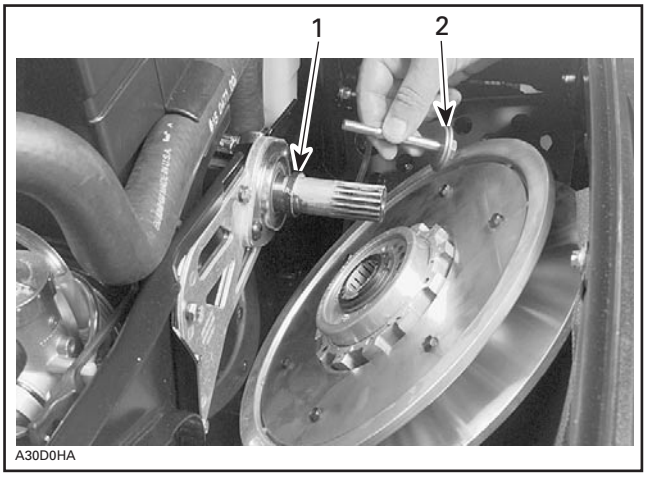
1. Half keys inserted into shaft groove
2. Spacer recess facing half keys

INSTALLATION

1, Countershaft

CAUTION: Always apply anti-seize lubricant (P/N 413 701 000) on the countershaft before final pulley installation.

Make sure that spacer no. 2 is on countershaft before installing driven pulley. Note also that washer shoulder is facing driven pulley.



TYPICAL

1. *Spacer*
2. *Shoulder on this side*

Should installation procedure be required, refer to BRAKE then look for BRAKE DISC and COUNTERSHAFT BEARING ADJUSTMENT.

Reinstall the pulley on the countershaft by reversing the removal procedure.

14, Pulley Retaining Screw

Torque to 25 N•m (18 lbf•ft).

ADJUSTMENT

Pulley Alignment and Drive Belt Deflection

Refer to PULLEY DISTANCE AND ALIGNMENT and DRIVE BELT to perform adjustments.

CAUTION: Drive belt and pulley adjustments must always be checked whenever pulleys have been removed, replaced or disassembled.

PULLEY DISTANCE AND ALIGNMENT

GENERAL

The pulley distance we will refer to in this section, is the space separating the drive and driven pulley outside diameters (Z measurement).

This basic distance is provided as an assembly guide and indicates the dimensions between which satisfactory belt deflection will be obtained.

Both pulley distance adjustment and pulley alignment must be carried out to ensure the highest efficiency of the transmission system. Furthermore, optimum drive belt operation and minimal wear will be obtained only with proper pulley alignment.

CAUTION: Before checking pulley adjustment, the rear suspension must be mounted on the vehicle and track tension/alignment must be done. Always check pulley adjustment after suspension is adjusted.

⚠ WARNING

Failure to correctly perform pulley alignment may cause the vehicle to creep forward at idle.

All pulley alignment specifications refer to:

X = Distance between straight bar and drive pulley fixed half edge, **measured between pulleys**.

Y = Distance between straight bar and drive pulley fixed half edge, **measured at the end of straight bar**.

Z = Distance between outside diameter of pulleys.

GENERAL PROCEDURE

Remove guard.

Tundra R

Use driven pulley opening tool (P/N 529 034 200).

Skandic LT/LT E

Use driven pulley opening tool (P/N 529 035 501).

All Models

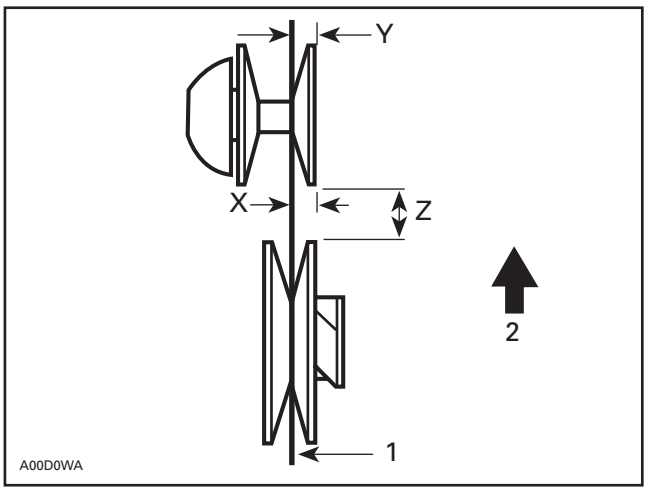
Remove drive belt.

Insert a straight bar 9.5 mm (.375 in) square, 48 cm (19 in) long or the proper alignment bar into the opened driven pulley.

Measuring Procedure

Using Straight Bar

Always measure distances X and Y from the farther straight bar side (including its thickness to the fixed half edge).



1. Straight bar
2. Front of vehicle

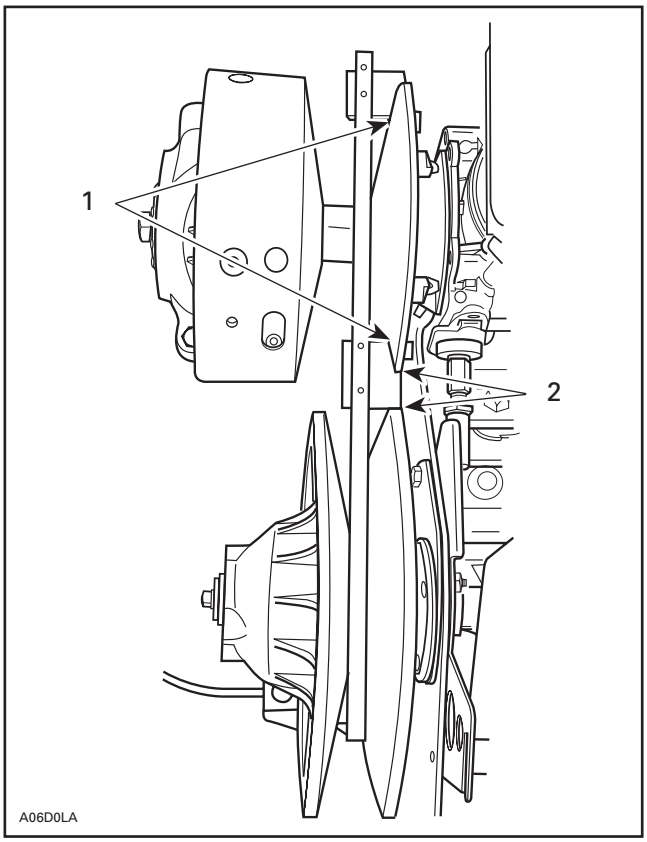
The distance Y **must** exceed distance X to compensate for the twist due to the engine torque.

Mean Value Procedure and Quick Alignment and Distance Check

Alignment bar tabs must fully contact fixed half of drive pulley.

Pulley distance is correct when tab contacts both pulley halves.

Refer to chart on next page for proper alignment bar.

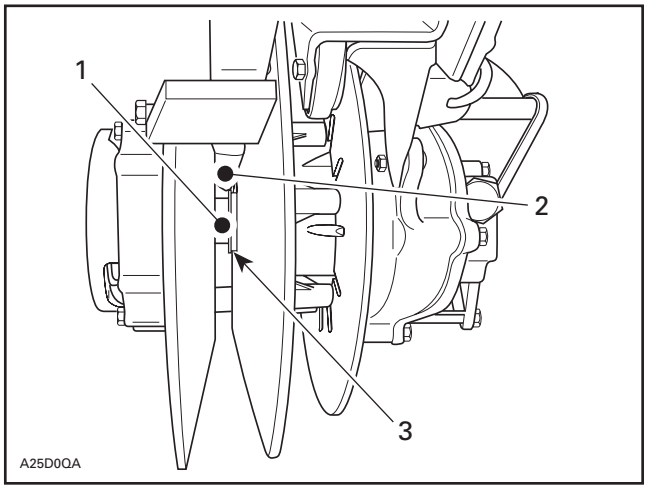


TYPICAL

1. *Contact (alignment)*
2. *Contact (distance)*

Tundra R Only

Bottom of alignment bar must not seat on shaft nor fixed half shoulder and shim(s).



TYPICAL

1. *Shaft*
2. *Alignment bar*
3. *Fixed half shoulder and shim(s)*

Drive Belt Height

NOTE: When pulley distance and alignment are adjusted to specifications, refer to DRIVE BELT to adjust drive belt height.

CAUTION: This section deals mainly with adjustment procedures. For complete assembly requirements, refer to the proper ENGINE or TRANSMISSION installation section.

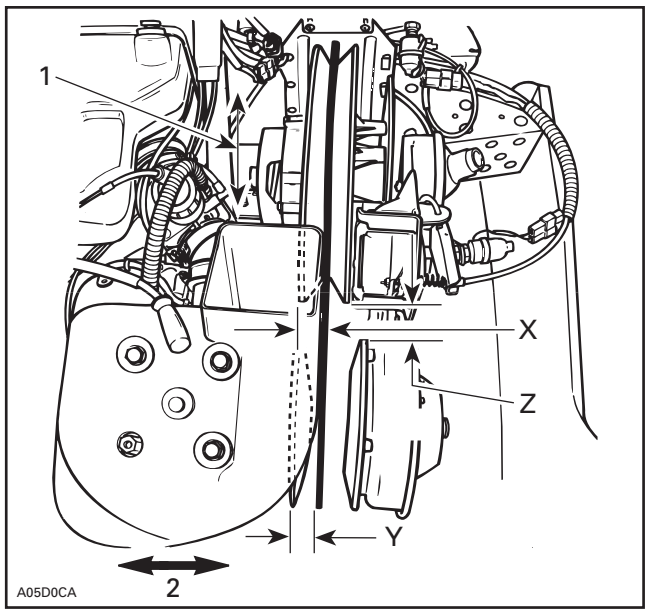
PULLEY ALIGNMENT AND DISTANCE SPECIFICATIONS CHART

MODELS	PULLEY DISTANCE	OFFSET		ALIGNMENT BAR ① P/N
	Z	X	Y-X	
TUNDRA R	37.0 ± 0.50 mm (1.457 ± .020 in)	36.0 ± 0.50 mm (1.417 ± .020 in)	0 to 1.5 mm (0 to .060 in)	529 026 900
SKANDIC LT/LT E	39.0 + 0 - 1.0 mm (1.535 + 0 - .039 in)	37.0 ± 0.75 mm (1.457 ± .030 in)	0.75 to 2.25 mm (.030 to .086 in)	529 035 808
SKANDIC WT/SWT/ WT LC/SUV	32.3 + 0 - 1.0 mm (1.272 + 0 - .039 in)	35.0 ± 0.75 mm (1.380 ± .030 in)	0.75 to 2.25 mm (.030 to .086 in)	529 035 545

① Alignment bars have been made according to pulley alignment mean values. However, they do not take into account allowed tolerances for alignment specifications. They are used as GO/NOGO gauges for quick alignment and pulley distance check and as reference to reach alignment nominal values.

Pulley Distance Adjustment Method

Tundra R

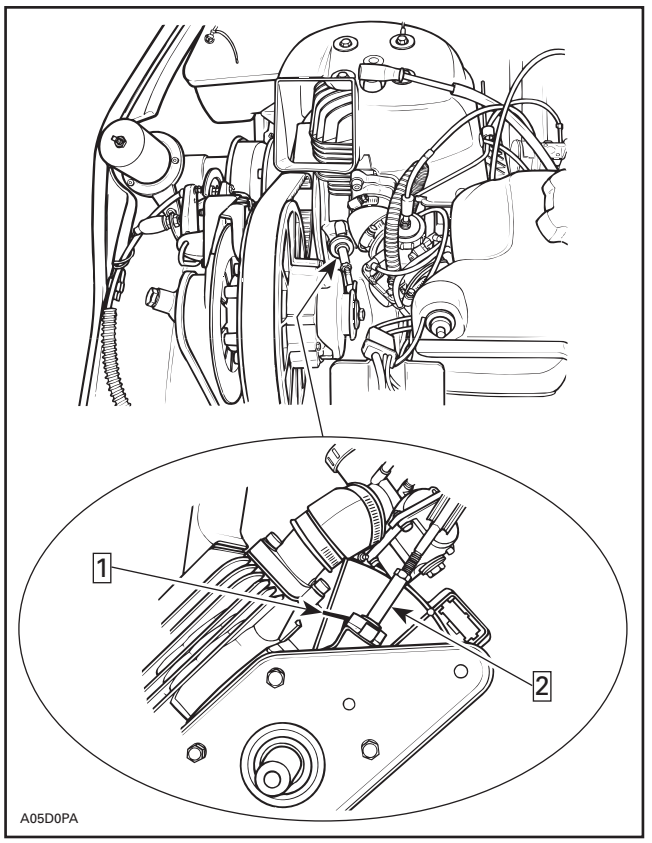


1. Driven pulley movement
2. Engine movement

CAUTION: The rear suspension must be mounted on the vehicle and track tension and alignment must be done to provide the right frame width.

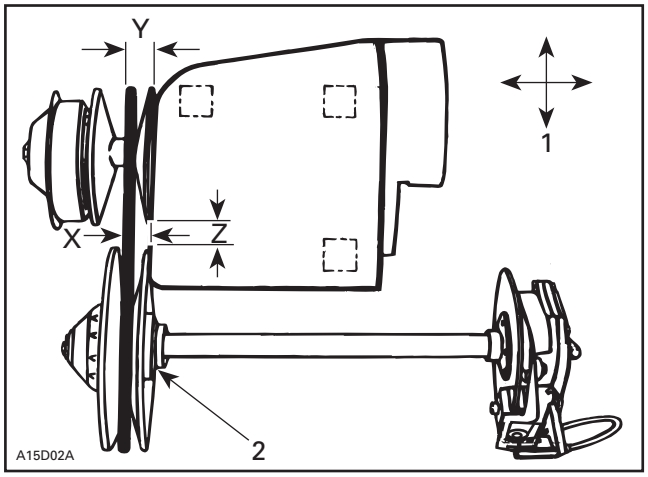
Loosen the 4 chaincase retaining bolts, unlock and raise pulley support.

Move chaincase to obtain specific adjustment and adjust driven pulley support length accordingly (light contact).



Step 1: Push and hold
Step 2: Raise support

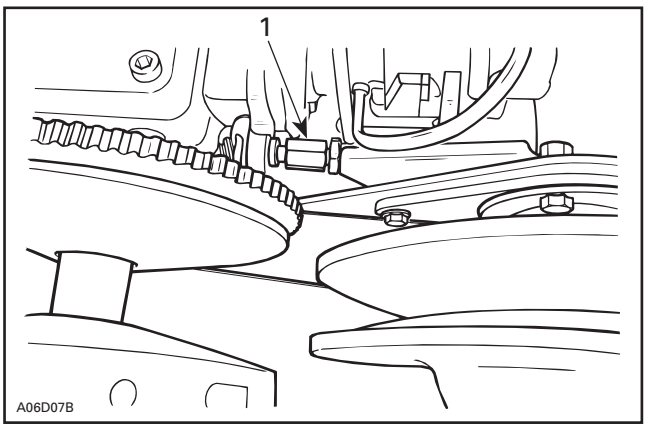
Skandic LT/LT E



TYPICAL

1. Engine movement
2. Contact

NOTE: Prior to performing pulley adjustment, loosen torque rod nut to allow engine movement. Engine supports have tendency to stick to frame, work engine loose prior to aligning.



1. Loosen

Engine Movement

The engine support has slotted mounting holes. Move engine to obtain specified distance between pulleys.

Skandic WT/SWT/WT LC/SUV

Driven Pulley Movement

Loosen gearbox retaining screws and move gearbox accordingly.

Retighten screws.

Pulley Alignment Method

Tundra R

Engine Movement

Loosen the support retaining bolts.

Move the engine to obtain specified pulley alignment, torque engine support bolts to 55 N•m (41 lbf•ft) and remove engine support positioner.

Driven Pulley Movement

Shims can be mounted between chaincase and frame. Use shim (P/N 504 039 800), 0.53 mm (.021 in) thick.

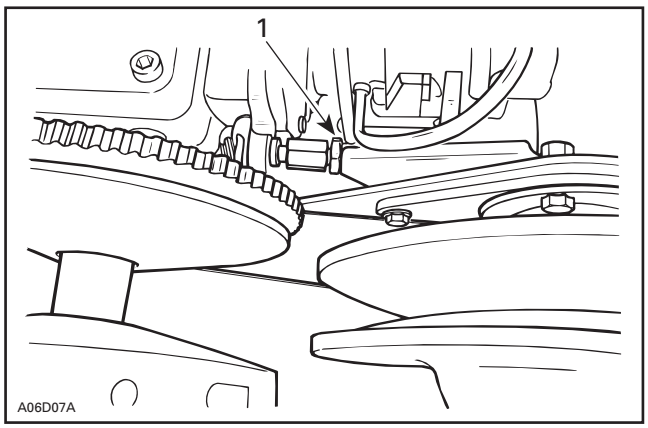
Skandic LT/LT E

When engine slotted mounting holes do not allow to set proper pulley offset X, adjust with shims (P/N 504 108 200) between pulley and countershaft bearing support (pulley pushed toward brake disc).

Engine Movement

Loosen the 4 bolts retaining engine support to the frame. Position engine to obtain the specified alignment.

NOTE: After alignment, adjust torque rod so it slightly contacts stopper plate. Do not over tighten, it will disalign pulleys.



1. Retighten

Skandic WT/SWT/WT LC/SUV

Driven Pulley Movement

Loosen gearbox retaining screws.

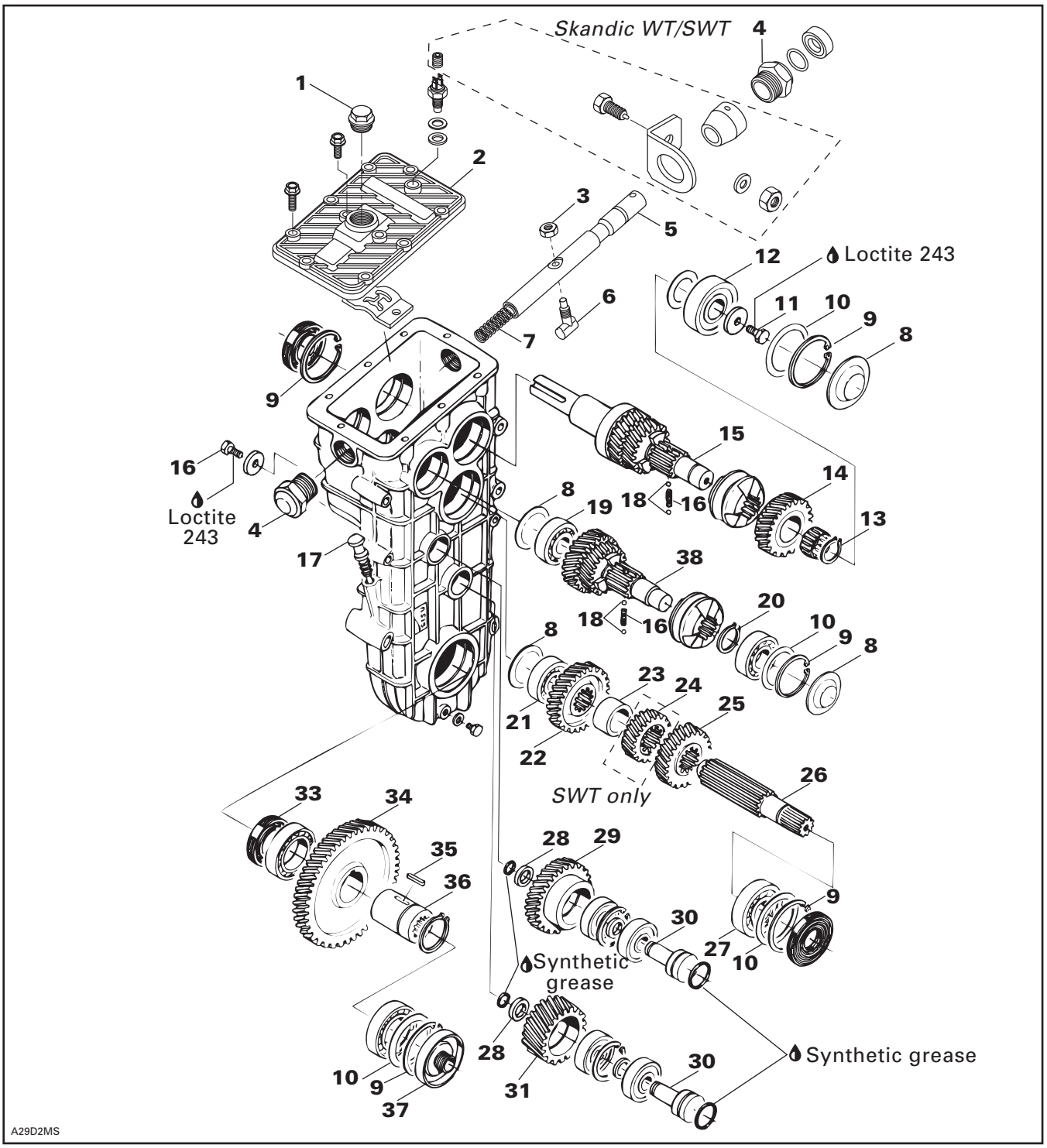
Install or remove shims accordingly.

Retighten screws.

GEARBOX

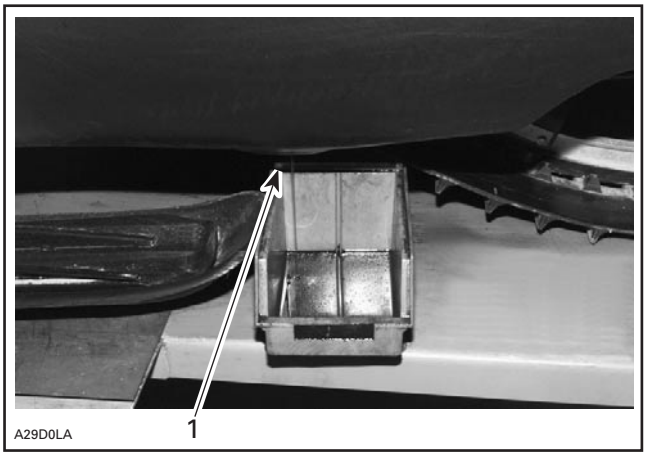
3-SPEED GEARBOX

Skandic WT/SWT/WT LC/SUV



REMOVAL

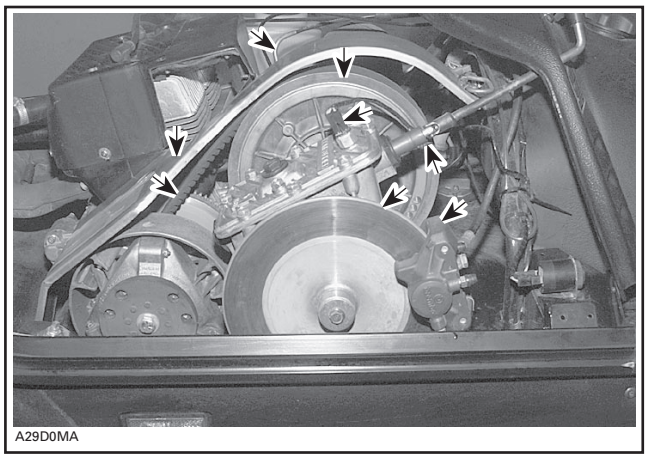
Drain gearbox oil.



1. Bottom pan drain hole nearby gearbox drain plug

Remove belt guard, drive belt. Remove air silencer and carburetor(s); then remove driven pulley.

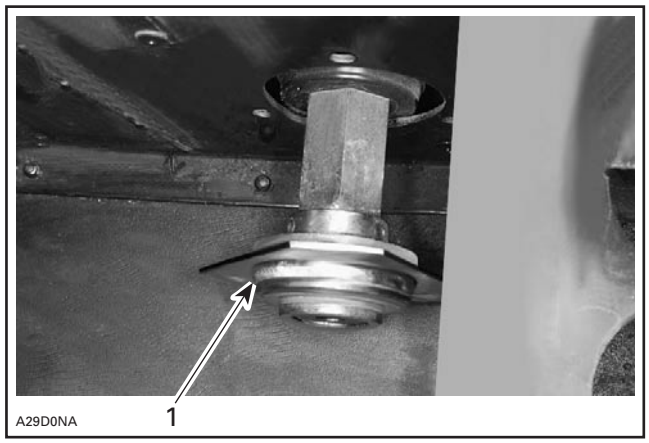
Remove brake caliper, brake disc. Unfasten shifting rod and unplug reverse switch.



Remove rear suspension.

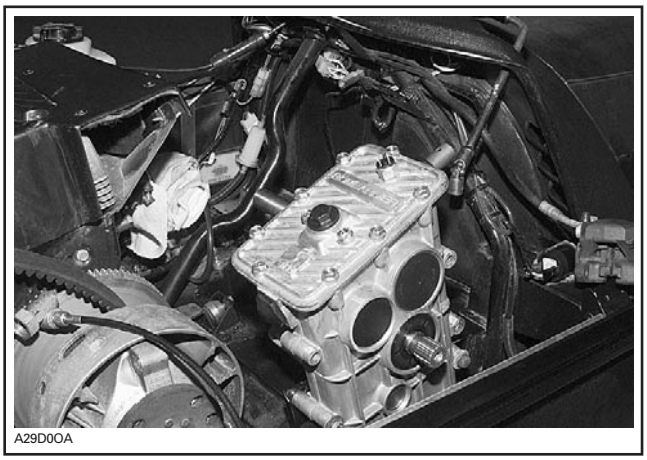
Remove angle drive and square pin from bottom of gearbox.

Remove muffler. Unbolt RH end bearing then pull drive axle toward right side.



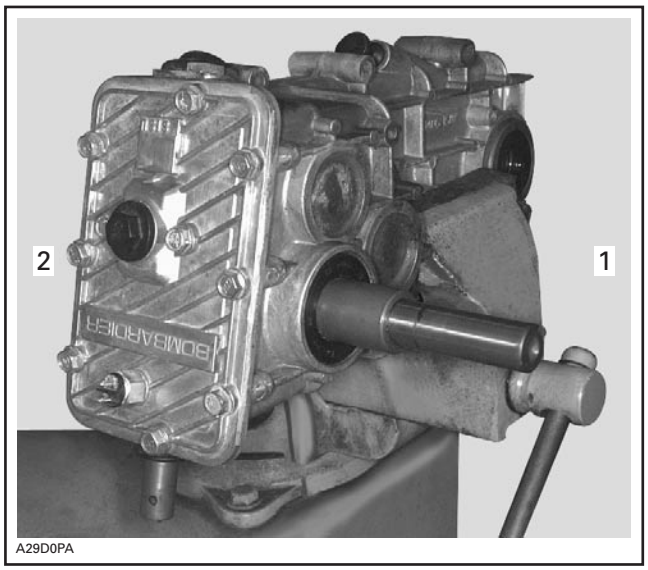
1. RH end bearing

Unbolt gearbox from chassis.



DISASSEMBLY

For the following procedure, right hand side refers to driven pulley side and left hand side to brake disc side.



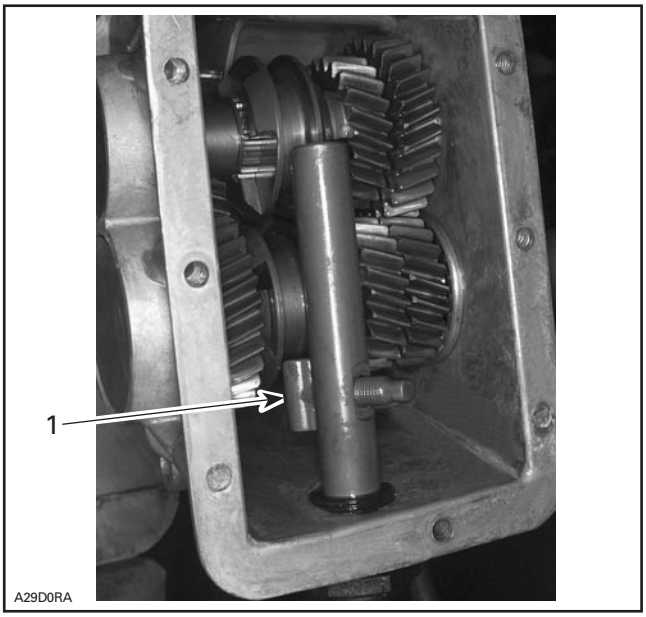
1. RH side driven pulley side
2. LH side brake disc side

Remove dipstick **no. 17**. Unfasten cover **no. 2** from gearbox housing.

Remove nut **no. 3** retaining pin **no. 6**.

1. Cover
2. Nut

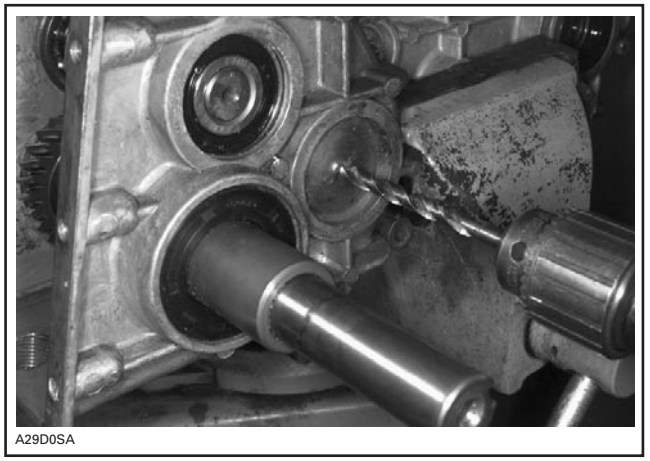
Unfasten sleeve nuts **no. 4**, remove spring **no. 7** then, partially pull shaft **no. 5** and remove pin **no. 6**.



1. Pin

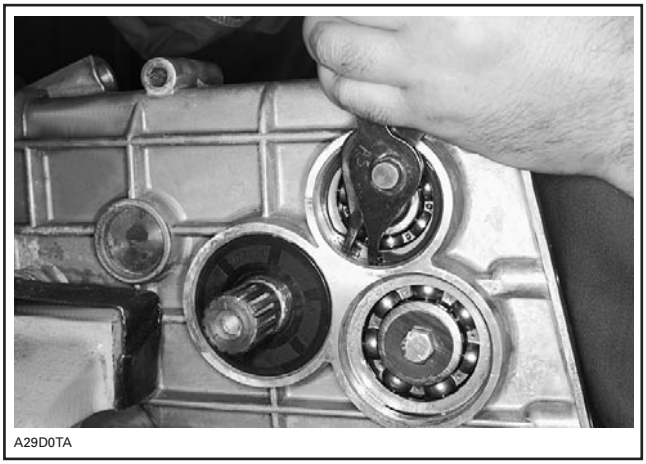
Completely remove shaft **no. 5**.

Drill a 10 mm (3/8 in) diameter hole through all plugs **no. 8**.



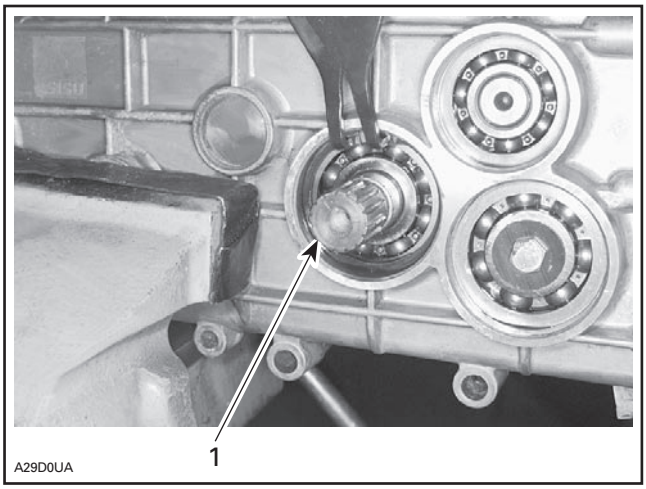
Remove all plugs **no. 8** from gearbox.

Remove all circlips **no. 9**.


A29D0TA

IMPORTANT: Note all shims quantity and location.

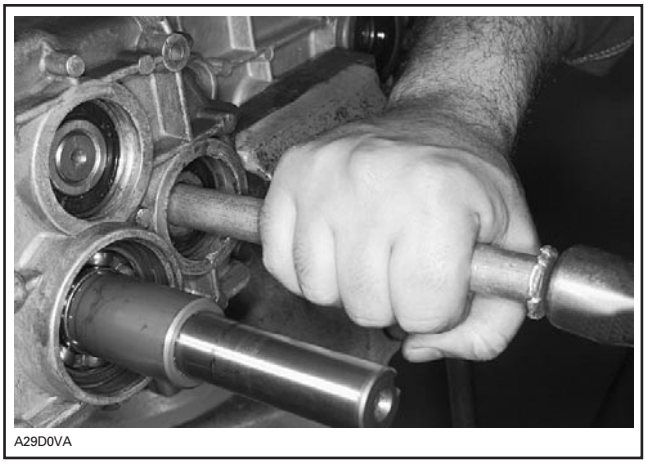
Remove brake shaft oil seal and then circlip.

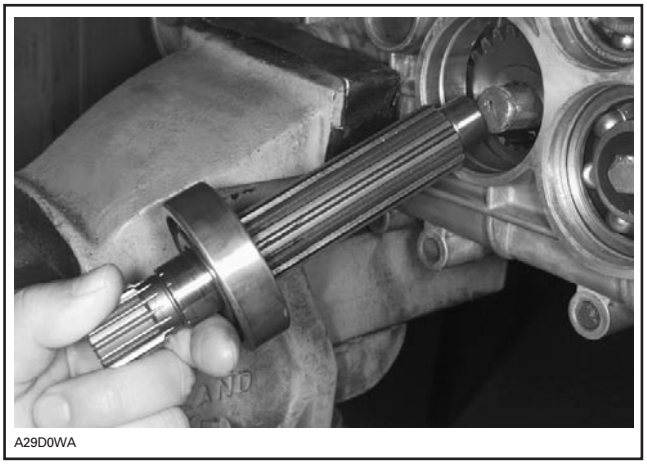


A29D0UA

1. Brake shaft

Proceeding from right side, drive brake shaft out of gearbox housing.


A29D0VA


A29D0WA

Remove sleeve **no. 23**.

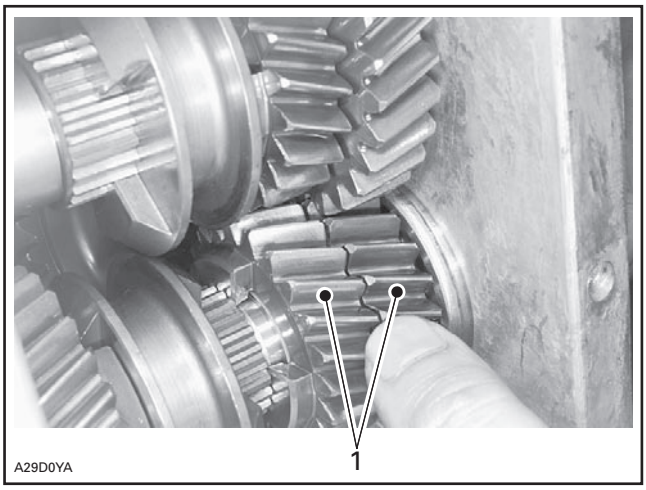
NOTE: Brake shaft gears remain in gearbox housing.

Remove bearing **no. 27** from brake shaft **no. 26** using a press.


A29D0XA

Drive reverse shaft **no. 38** out until its LH side bearing is free.

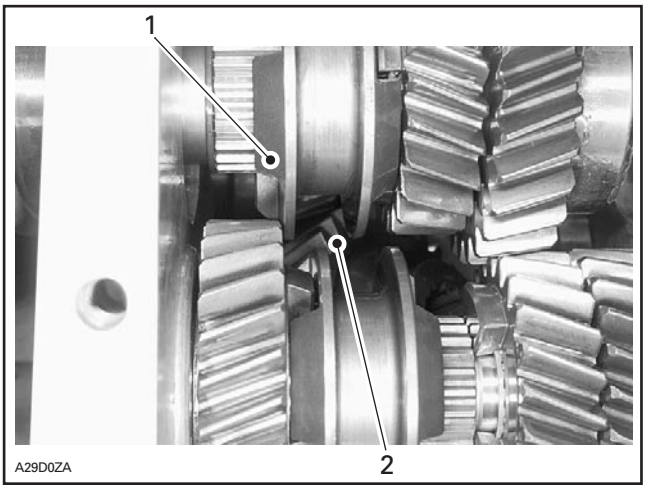
Make sure gears mesh.



1. These gears must mesh as reverse shaft is driven out

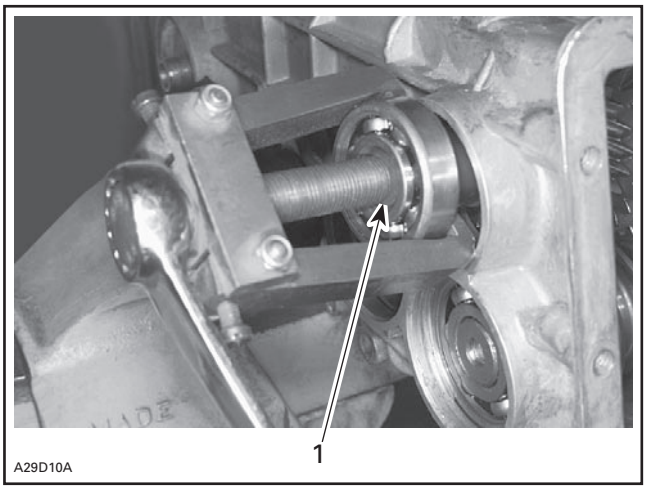
Shift in reverse gear.

Turn reverse shaft so its sliding sleeve dog will not touch the RH gear of driven pulley shaft **no. 15**. This will allow the driven pulley shaft to be pushed out enough for bearing removal.



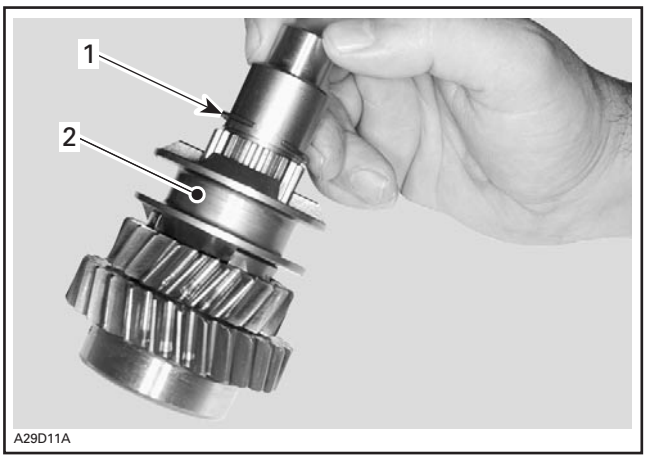
1. Sleeve dog not touching right gear
2. Brake shaft gears are still in gearbox

Use a puller to extract LH reverse shaft bearing.



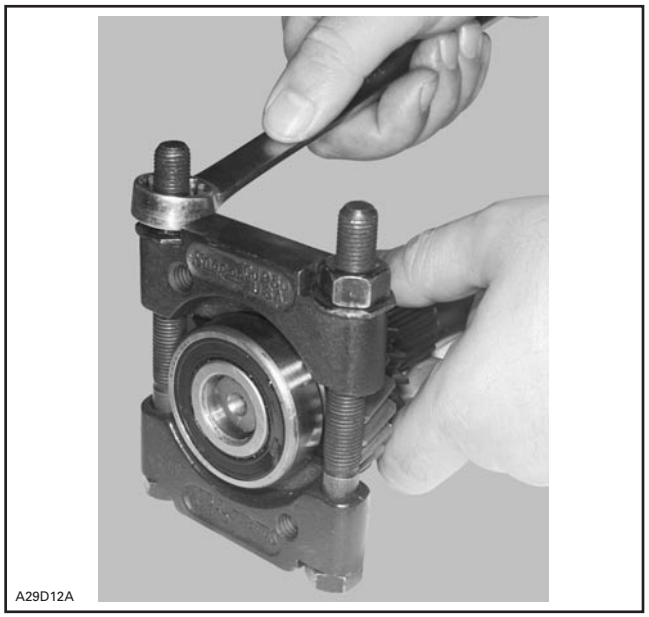
1. Extract reverse shaft LH side bearing

To remove sliding sleeve from reverse shaft, first remove circlip.



1. Circlip
2. Sliding sleeve

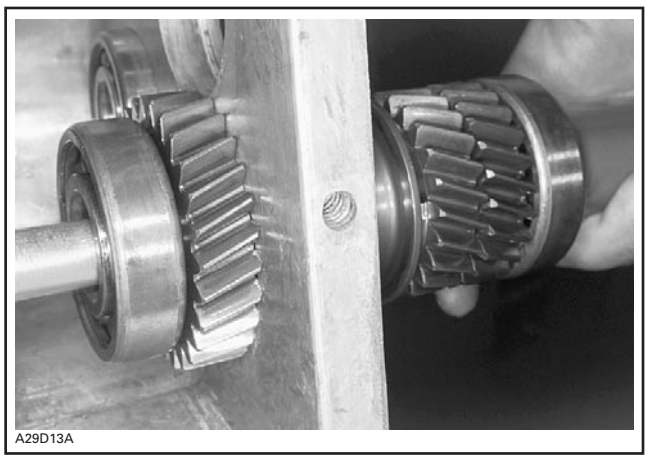
Use a puller to extract bearing **no. 19**.



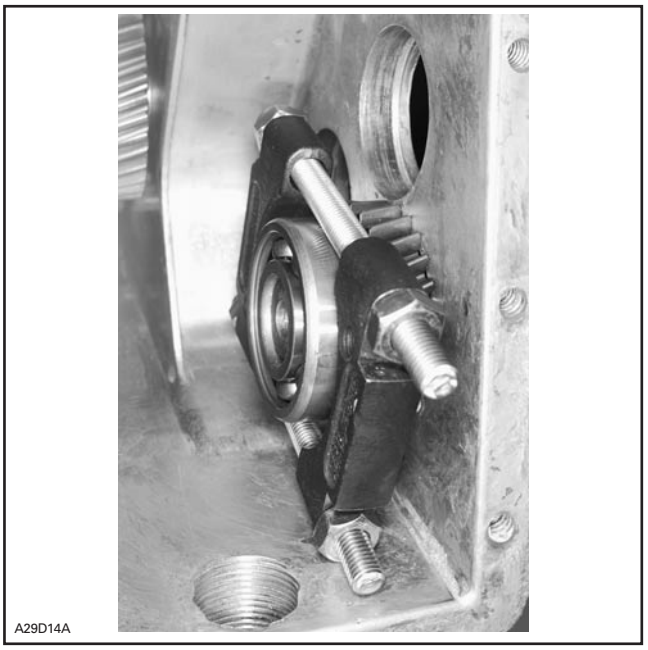
Remove brake shaft gears.

Unbolt driven pulley shaft screw **no. 11** and remove washer.

Push driven pulley shaft **no. 15** out of gearbox until its LH gear **no. 14** is against gearbox inner wall.

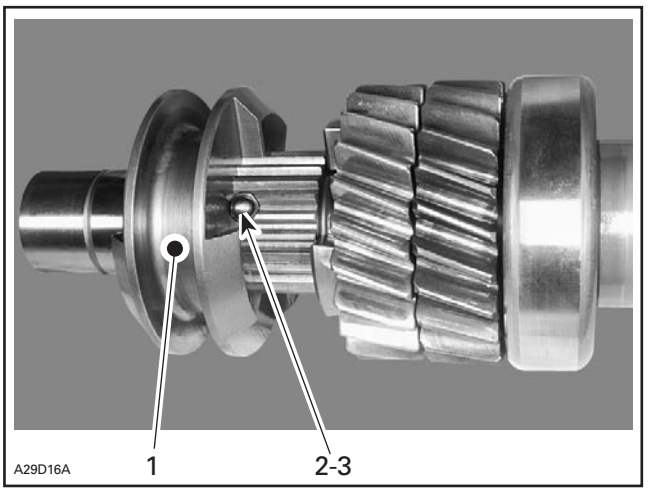


Use a puller to extract bearing **no. 12**.

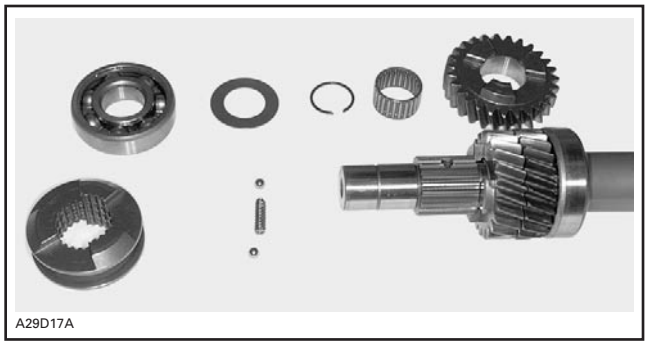


Remove circlip then, gear **no. 14**. Now driven pulley shaft can be pulled out from gearbox.

Remove sliding sleeve taking care not to lose balls **no. 18** and spring **no. 16**.



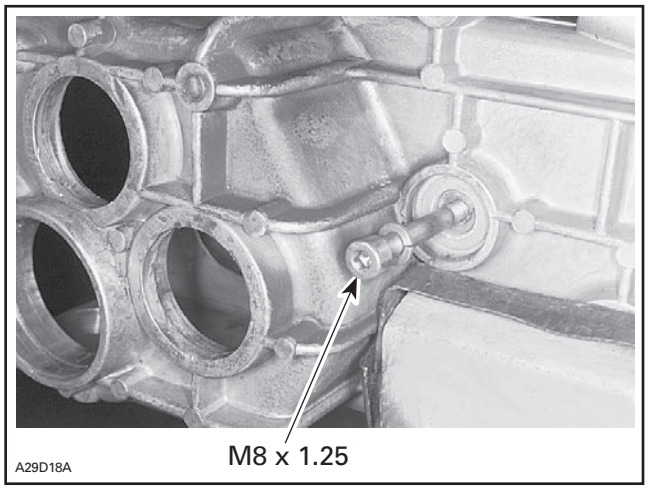
1. Sliding sleeve
2. Spring
3. Balls


A29D17A

DRIVEN PULLEY SHAFT COMPONENTS

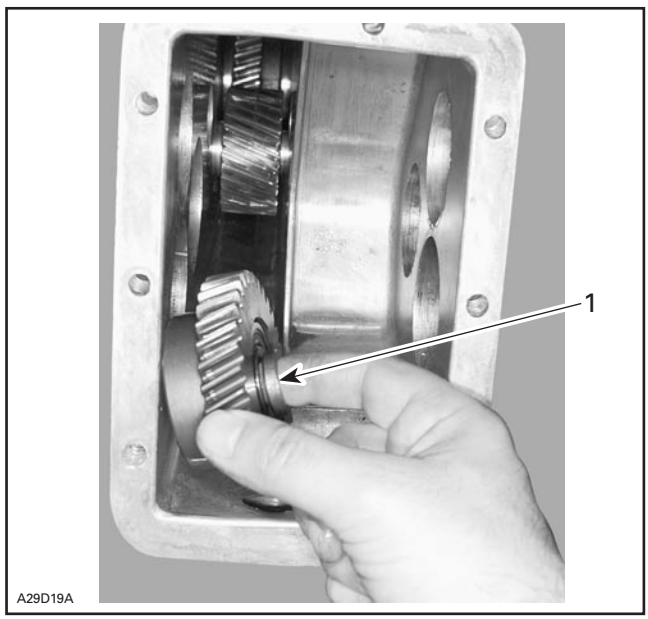
Remove screws **no. 16** from intermediate shafts **no. 30**.

Fasten a long M8 x 1.25 screw in axle end then drive it out, beginning with top one.



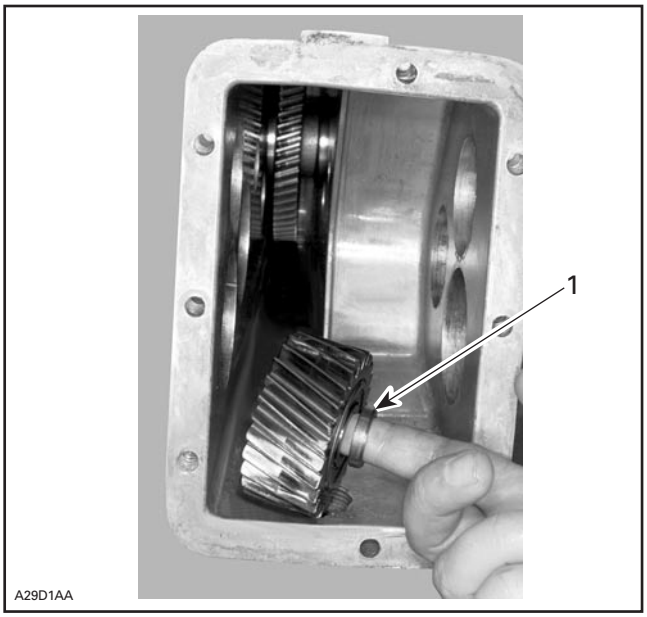
A29D18A

Remove intermediate gears and spacers.



A29D19A

1. Spacer

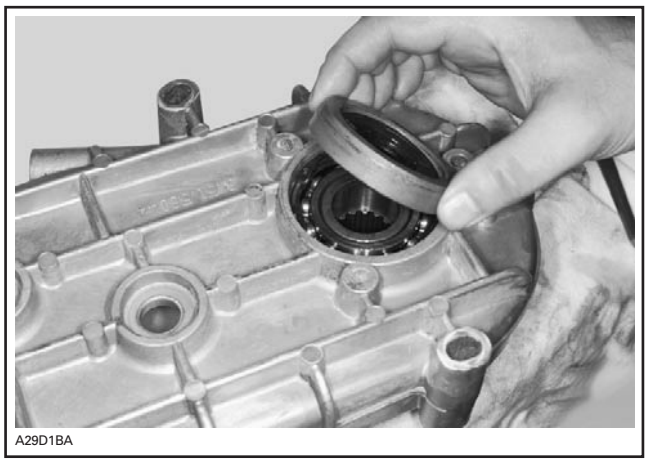


A29D1AA

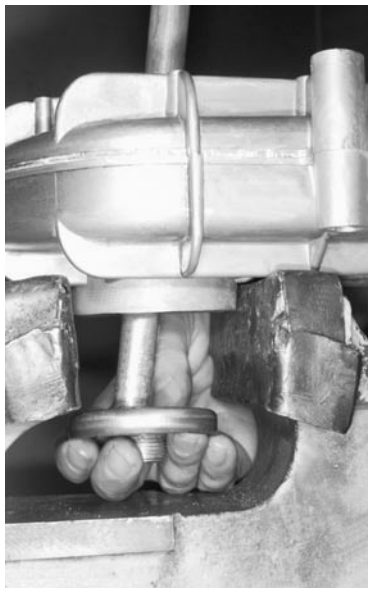
1. Spacer

Do not disassemble bearings of intermediate gears needlessly.

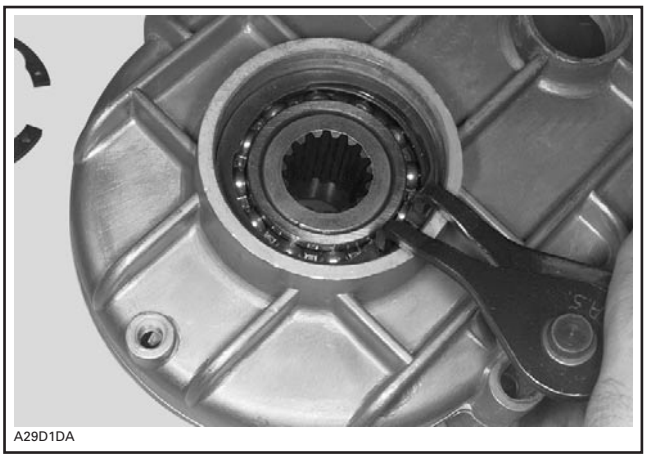
Pry out bottom seal **no. 33** from gearbox housing. Remove circlip **no. 9**.


A29D1BA

Drive out plug **no. 37**.

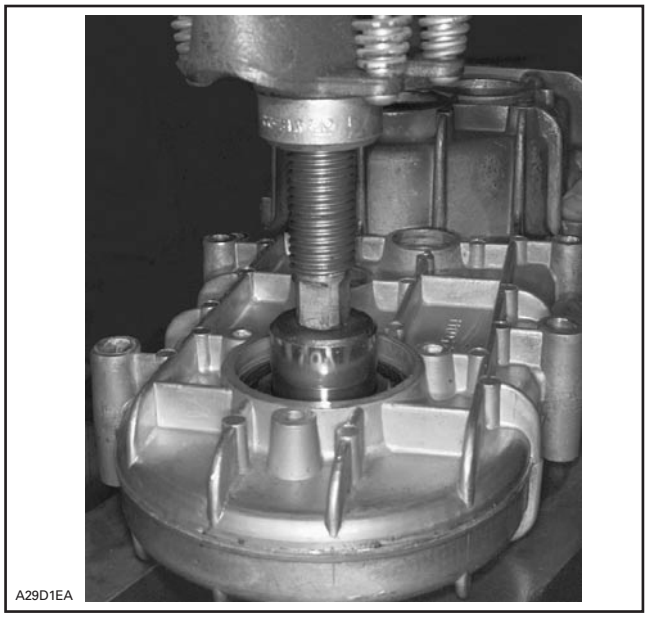

A29D1CA

Remove circlip **no. 9** from LH side.


A29D1DA

Using a press, drive out lower shaft **no. 36** from RH side.

CAUTION: Do not push against inner bearing race.


A29D1EA

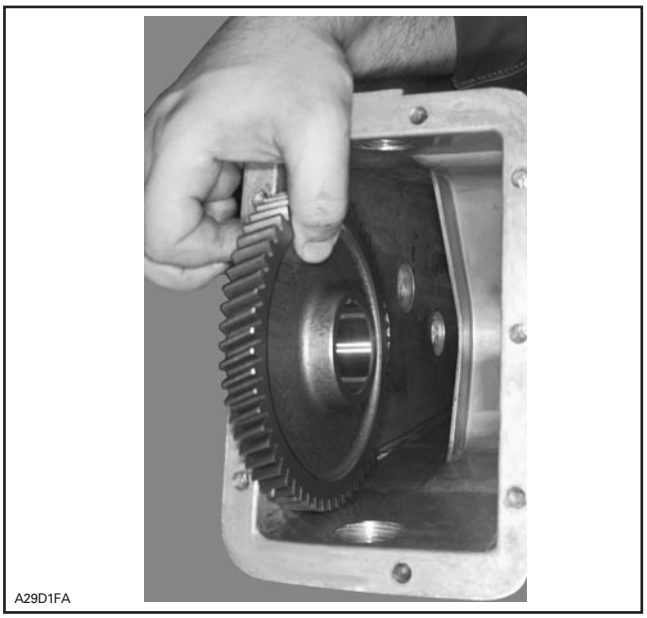
INSPECTION

Check bearing condition. There must be no discoloration, missing rollers or balls, broken cages, etc.

Check sprocket teeth.

ASSEMBLY

Install lower gear **no. 34** with its shoulder facing RH side.

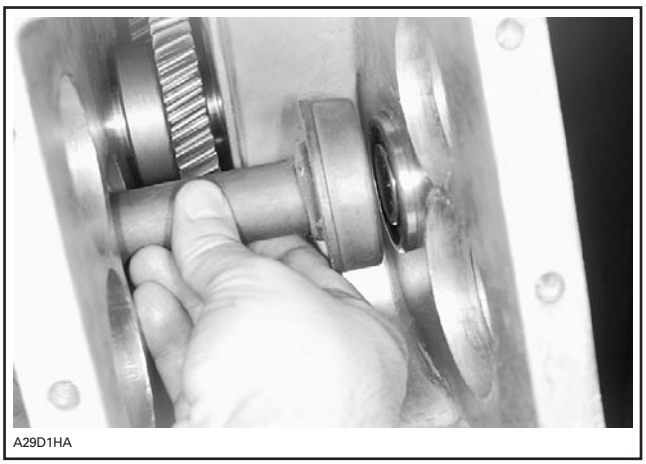

A29D1FA

Install lower shaft **no. 36** with its hollow side (no splines) on RH side. Align key with lower gear **no. 34** keyway.

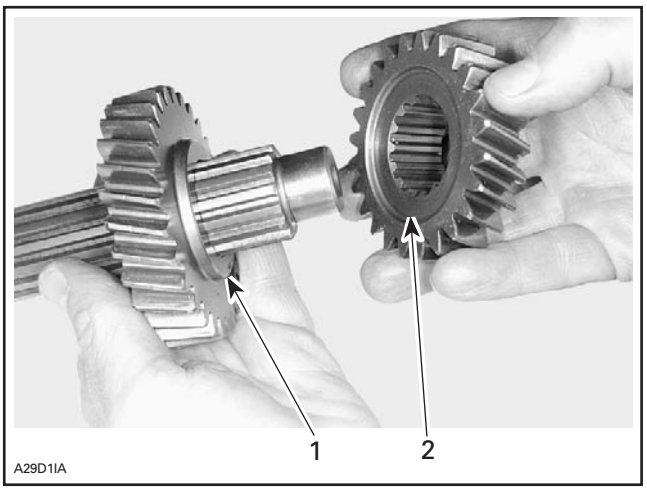
Apply synthetic grease (P/N 413 711 500) on intermediate shaft O-rings.

Install intermediate gears **no. 29** with their shoulder towards LH side. Position spacers **no. 28** as illustrated in removal procedure. Beveled side of spacers goes against gearbox wall.

Install RH side bearing of brake and reverse shafts.

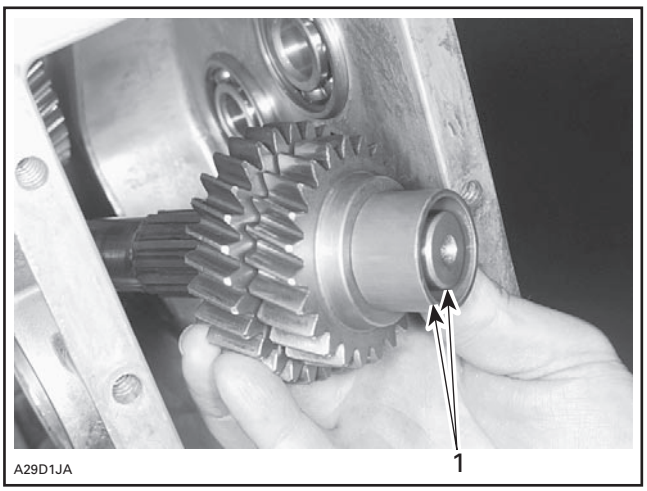


Partially assemble brake shaft gears **nos. 24** and **25** with shoulder facing recess.



1. Shoulder
2. Recess

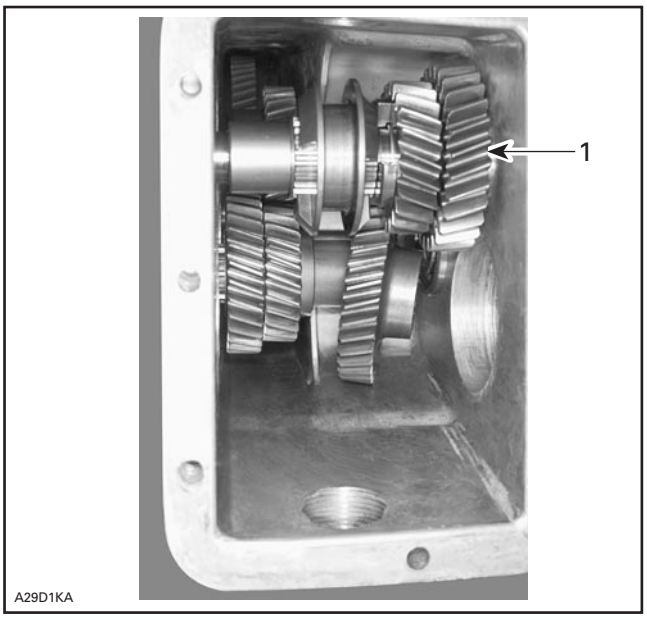
Install sleeve **no. 23** on brake shaft **no. 26** then, slide gears and sleeve until end of sleeve is flush with shaft end.



1. Flush

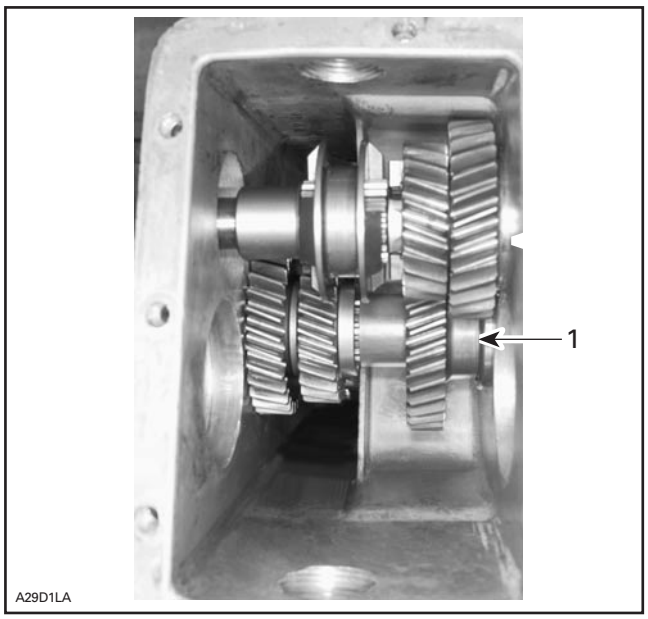
Install brake shaft **no. 26** into gearbox then, loosely install gear **no. 22** with its shoulder facing bearing **no. 21**. Do not push brake shaft into bearing **no. 21** at this time.

Install reverse shaft ass'y **no. 38** into its RH side bearing **no. 19**.



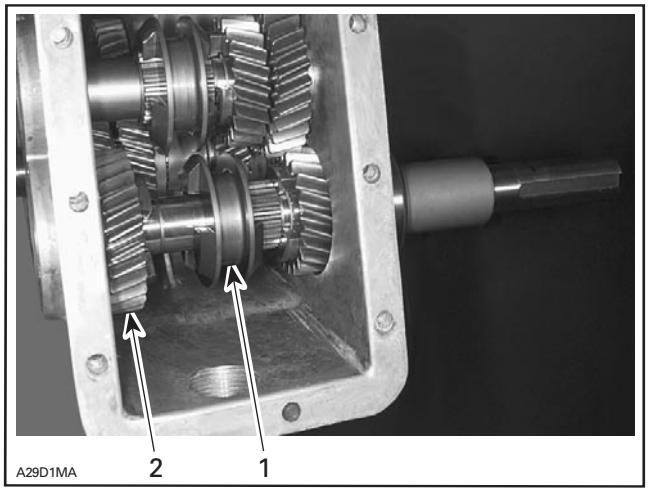
1. Reverse shaft installed in its RH bearing

Position gear **no. 22** against RH side bearing **no. 19** then, finalize brake shaft **no. 26** insertion.



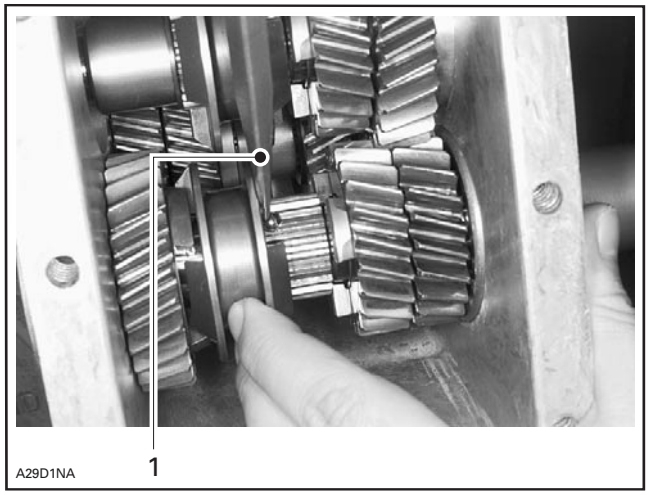
1. Finalizing brake shaft insertion

Install driven pulley shaft **no. 15** with the sliding sleeve loosely inserted. Gear **no. 14** must be at its place.



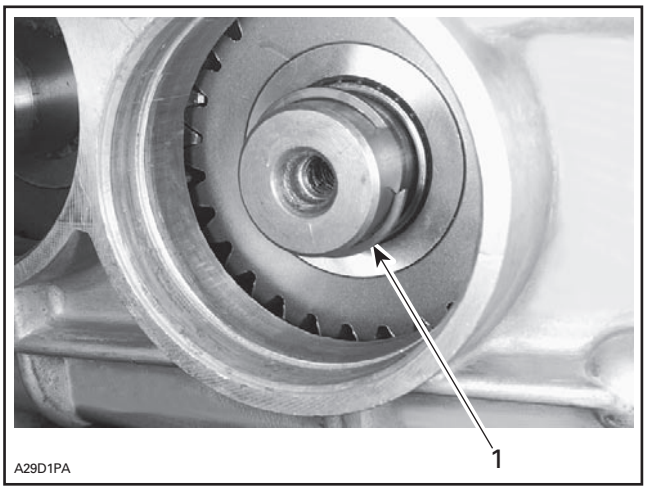
1. Sliding sleeve loosely inserted
*2. Gear **no. 14** in place*

Install balls **no. 18** and spring **no. 16** into driven pulley shaft.



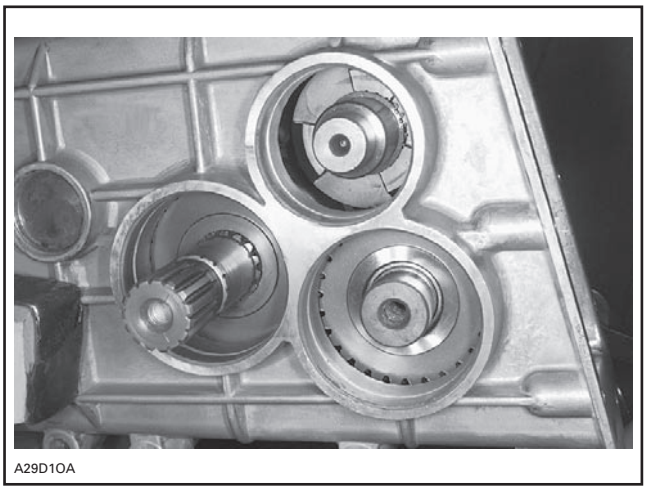
1. Push on ball with a screwdriver then move sliding sleeve to the right

Finalize driven pulley shaft insertion. Make sure that gears mesh during insertion. Install circlip **no. 20**.



1. Circlip

Install LH side bearings **nos. 12, 19** and **21**, shims **no. 8**, circlip **no. 9** then, plugs **no. 8**.



READY TO INSTALL BEARINGS, SHIMS, CIRCLIPS AND PLUGS

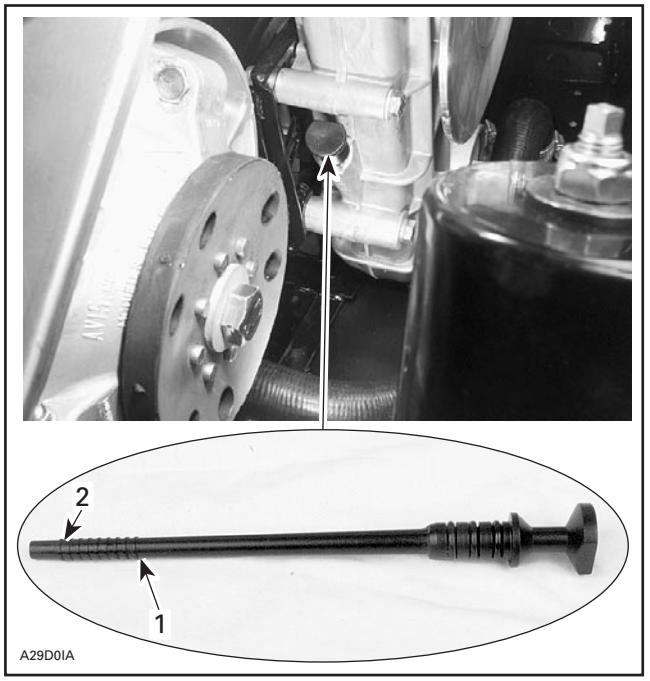
INSTALLATION

Reverse removal procedure. Check pulley alignment.

OIL LEVEL

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

NOTE: After first outing, oil level will decrease as the upper oil cavity fills with oil. Recheck oil level and refill as required.



1. Full level mark
2. Lower level mark

To fill, remove filler plug from top of transmission. Refill as required using Bombardier synthetic chaincase oil (P/N 413 802 800 — 12 x 250 mL).