CHAPTER 1
GENERAL INFORMATION

TORQUE CONVERSIONS

Newton Metre to Pound Foot and Pound Inch

Nm	lb ft
145	106.95
146	107.69
147	108.43
148	109.16
149	109.90
150	110.64
151	111.38
152	112.12
153	112.85
154	113.59
155	114.33
156	115.07
157	115.80
158	116.54
159	117.28
160	118.02
161	118.75
162	119.49
163	120.23
164	120.97
165	121.70
166	122.44
167	123.18
168	123.92
169	124.65
170	125.39
171	126.13
172	126.87
173	127.60
174	128.34
175	129.08
176	129.82
177	130.56
178	131.29
179	132.03
180	132.77
181	133.51
182	134.24
183	134.98
184	135.72
185	136.46
186	137.19
187	137.93
188	138.67
189	139.41

Nm	lb ft
190	140.14
191	140.88
192	141.62
193	142.36
194	143.09
195	143.83
196	144.57
197	145.31
198	146.04
199	146.78
200	147.52
201	148.26
202	149.00
203	149.73
204	150.47
205	151.21
206	151.95
207	152.68
208	153.42
209	154.16
210	154.90
211	155.63
212	156.37
213	157.11
214	157.85
215	158.58
216	159.32
217	160.06
218	160.80
219	161.53
220	162.27
221	163.01
222	163.75
223	164.48
224	165.22
225	165.96
226	166.70
227	167.44
228	168.17
229	168.91
230	169.65
231	170.39
232	171.12
233	171.86
234	172.60

Nm	lb ft
235	173.34
236	174.07
237	174.81
238	175.55
239	176.29
240	177.02
241	177.76
242	178.50
243	179.24
244	179.97
245	180.71
246	181.45
247	182.19
248	182.92
249	183.66
250	184.40
251	185.14
252	185.88
253	186.61
254	187.35
255	188.09
256	188.83
257	189.56
258	190.30
259	191.04
260	191.78
261	192.51
262	193.25
263	193.99
264	194.73
265	195.46
266	196.20
267	196.94
268	197.68
269	198.41
270	199.15
271	199.89
272	200.63

RECOMMENDED LUBRICANTS – QUICK REFERENCE

Item	Type	Notes	See Page
Engine Oil	Polaris Premium 4 Synthetic, 0W–40	Add to proper level on dipstick.	2.18
Transmission	Polaris Synthetic Gear Case Lubricant	Refer to procedures outlined later in this chapter.	2.7
Brake Fluid	Polaris DOT 3 Brake Fluid	Fill to indicated level inside reservoir.	2.26

COLD WEATHER KITS FOR 4 STROKE ATVS

Engine Heater – (**PN 2871507**)

POLARIS PREMIUM LUBRICANT AND MAINTENANCE PRODUCT PART NUMBERS

Part No.	Description
Engine Lubricant	
2870791	Fogging Oil
2871281	Engine Oil (Quart) Premium 4 Synthetic 0W–40 (4-Cycle)
2871567	Engine Oil (16 Gallon) Premium 4 Synthetic 0W–40 (4-Cycle)
Gearcase / Transmission Lubricants	
2871477	Premium Synthetic Gearcase Lubricant (1 Gal.)
2871478	Premium Synthetic Gearcase Lubricant (12 oz. bottle)
2870465	Oil Pump for Gearcase Oil
Grease / Specialized Lubricants	
2871322	Premium All Season Grease (3 oz. cartridge)
2871423	Premium All Season Grease (14 oz. cartridge)
2871460	Starter Drive Grease
2871312	Grease Gun Kit
2871329	Dielectric Grease (Nyogel™)
Additives / Sealants / Thread Locking Agents / Misc.	
2870585	Loctite™ Primer N, Aerosol, 25g
2871949	Loctite™ Threadlock 242 (50ml.)
2871950	Loctite™ Threadlock 242 (6ml.)
2871951	Loctite™ Threadlock 262 (50ml.)
2871952	Loctite™ Threadlock 262 (6ml.)
2871953	Loctite™ Threadlock 271 (6ml.)
2871954	Loctite™ Threadlock 271 (36ml.)
2870584	Loctite™ RC 680-Retaining Compound (10ml.)
2870587	Loctite™ 518 Gasket Eliminator / Flange Sealant (50ml.)
2872113	Disk Brake Quiet 12 oz.
2871326	Premium Carbon Clean 12 oz.
2870652	Fuel Stabilizer 16 oz.
2871957	Black RTV Silicone Sealer (3 oz.tube)
2871958	Black RTV Silicone Sealer (11 oz. cartridge)
8560054	Marine Grade Silicone Sealer (14 oz. cartridge)
2870990	DOT3 Brake Fluid
2872113	Disc Brake Quiet, Aerosol, (9 oz.)
2871557	Crankcase Sealant, 3-Bond 1215

COMPRESSION TEST

NOTE: 4-Stroke engines are equipped with an automatic decompressor. Compression readings will vary in proportion to cranking speed during the test. Average compression for the 325 (measured) is about 140–160 psi during a compression test.

Smooth idle generally indicates good compression. Low engine compression is rarely a factor in running condition problems above idle speed. Abnormally high compression can be caused by a decompressor malfunction, or worn or damaged exhaust cam lobes. Inspect camshaft and automatic decompression mechanism if compression is abnormally high.

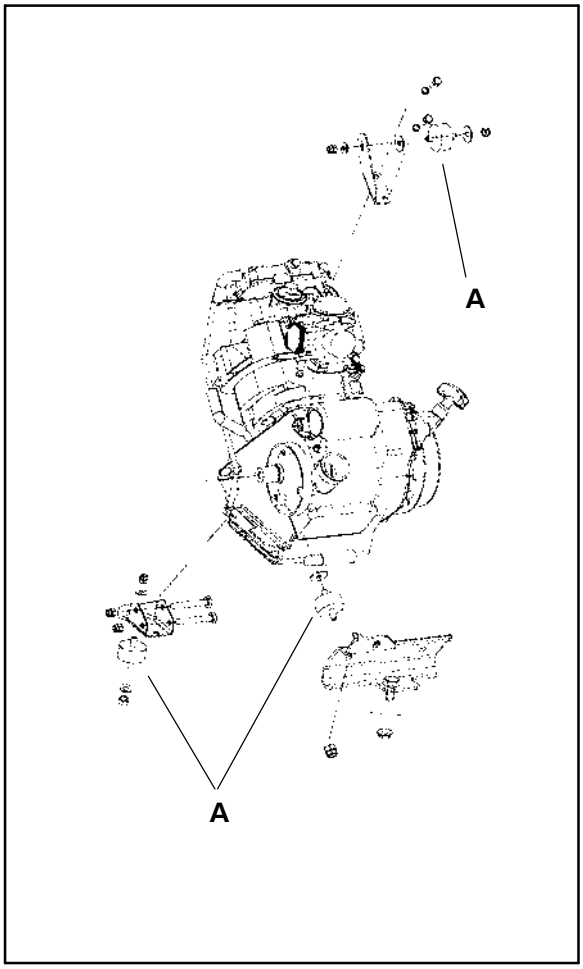
A cylinder leakage test is the best indication of engine condition on models with automatic decompression. Follow manufacturer's instructions to perform a cylinder leakage test. (Never use high pressure leak tester as crankshaft seals may dislodge and leak).

Cylinder Leakage

Service Limit: 10 %
(Inspect for cause if leakage exceeds 10%)

ENGINE MOUNTS

Inspect rubber engine mounts (A) for cracks or damage.

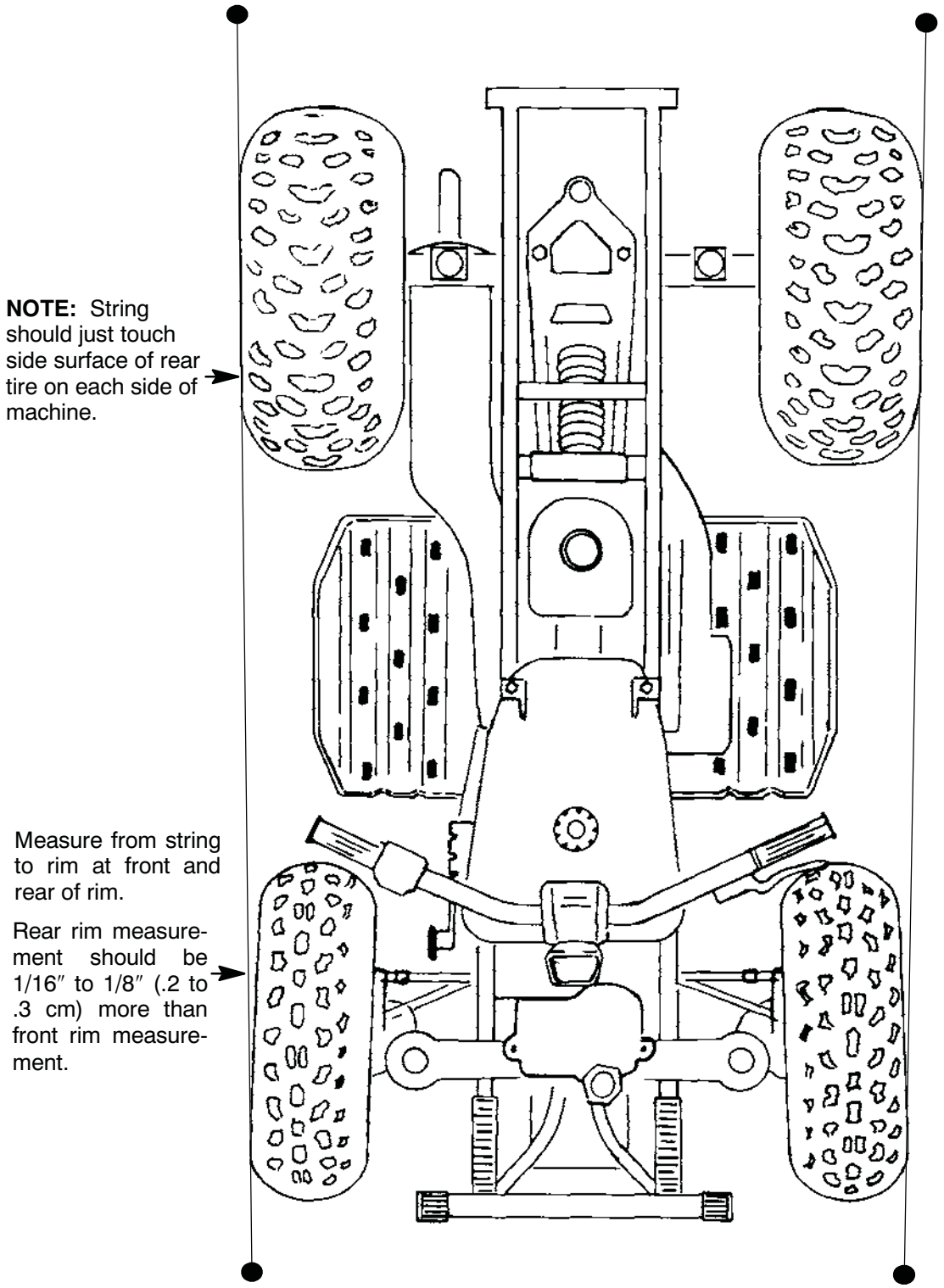


FASTENER TORQUE - ENGINE

Check engine fasteners and ensure they are tight.

TOE ALIGNMENT - METHOD 1: STRAIGHTEDGE OR STRING

Be sure to keep handlebars centered. See note below.



NOTE: The steering post arm (frog) can be used as an indicator of whether the handlebars are straight. The frog should always point straight back from the steering post.

WHEELS

Inspect all wheels for runout or damage. Check wheel nuts and ensure they are tight. Do not over tighten the wheel nuts.

WHEEL, HUB, AND SPINDLE TORQUE TABLE

Item	Specification
Front Wheel Nuts	20 Ft. Lbs. (27 Nm)
Rear Wheel Nuts	50 Ft. Lbs. (68 Nm)
Front Spindle Nut	40 Ft. Lbs. (54 Nm)
Rear Hub Retaining Nut	80 Ft. Lbs. (108 Nm)

WHEEL REMOVAL

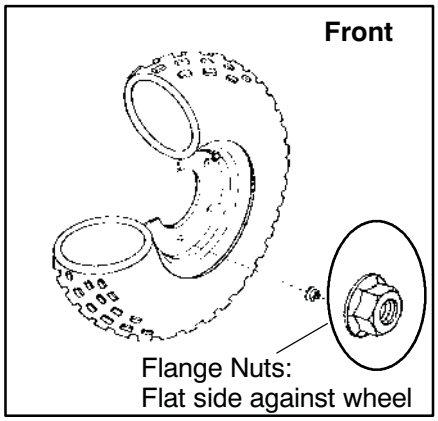
1. Stop the engine, place the transmission in gear and lock the parking brake.
2. Loosen the wheel nuts slightly.
3. Elevate the side of the vehicle by placing a suitable stand under the footrest frame.
4. Remove the wheel nuts and remove the wheel.

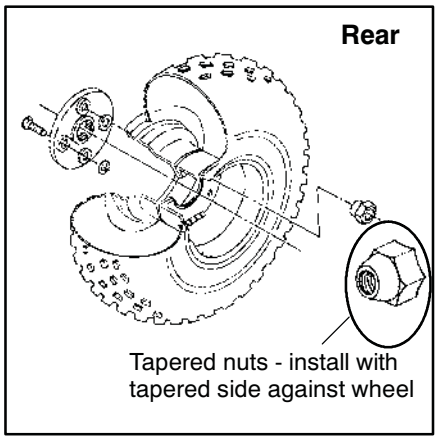
WHEEL INSTALLATION

1. With the transmission in gear and the parking brake locked, place the wheel in the correct position on the wheel hub. Be sure the valve stem is toward the outside and rotation arrows on the tire point toward forward rotation.
2. Attach the wheel nuts and finger tighten them. Install as shown at right for front or rear wheels.
3. Lower the vehicle to the ground.
4. Securely tighten the wheel nuts to the proper torque listed in the table above.

CAUTION:

If wheels are improperly installed it could affect vehicle handling and tire wear. On rear wheel nuts, make sure tapered end of nut goes into taper on wheel.





CYLINDER HONE SELECTION/HONING PROCEDURE

Selecting a hone which will straighten as well as remove material from the cylinder is very important. Using a common spring loaded finger type glaze breaker for honing is never advised. Polaris recommends using a rigid hone or arbor honing machine which also has the capability of oversizing.

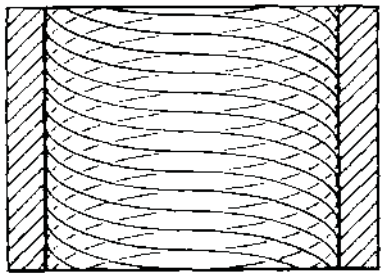
Cylinders may be wet or dry honed depending upon the hone manufacturer's recommendations. Wet honing removes more material faster and leaves a more distinct pattern in the bore.

CAUTION:

HONING TO OVERSIZE

If cylinder wear or damage is excessive, it will be necessary to oversize the cylinder using a new oversize piston and rings. This may be accomplished by either boring the cylinder and then finish honing to the final bore size, or by rough honing followed by finish honing.

For oversize honing always wet hone using honing oil and a coarse roughing stone. Measure the piston (see piston measurement) and rough hone to the size of the piston. Always leave .002 - .003″ (.05 - .07 mm) for finish honing. Refer to piston-to-cylinder clearance specifications on Page 3.4 before honing. Complete the sizing with fine grit stones to provide the proper cross-hatch finish and required piston clearance.



EXAMPLE OF CROSS HATCH PATTERN

A finished cylinder should have a cross-hatch pattern to ensure piston ring seating and to aid in the retention of oil during initial break in. Hone cylinder according to hone manufacturer's instructions, or these guidelines:

- Use a motor speed of approximately 300-500 RPM, run the hone in and out of the cylinder rapidly until cutting tension decreases. Remember to keep the hone drive shaft centered (or cylinder centered on arbor) and to bring the stone approximately 1/2″ (1.3 cm) beyond the bore at the end of each stroke.
- Release the hone at regular intervals and inspect the bore to determine if it has been cleared, and to check piston fit.

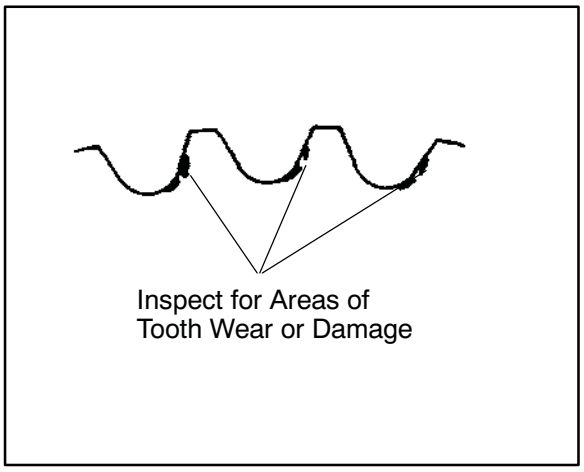
IMPORTANT:

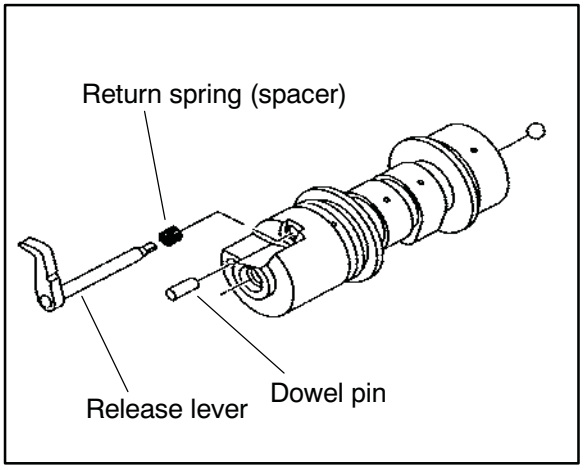
CLEANING THE CYLINDER AFTER HONING

It is very important that the cylinder be thoroughly cleaned after honing to remove all grit material. Wash the cylinder in a solvent, then in hot, soapy water. Pay close attention to areas where the cylinder sleeve meets the aluminum casting. Use electrical contact cleaner if necessary to clean these areas. Rinse thoroughly, dry with compressed air, and oil the bore immediately with Polaris Premium 4 Synthetic 0W–40 Lubricant (**PN 2871281**).

CAMSHAFT REMOVAL, CONT.

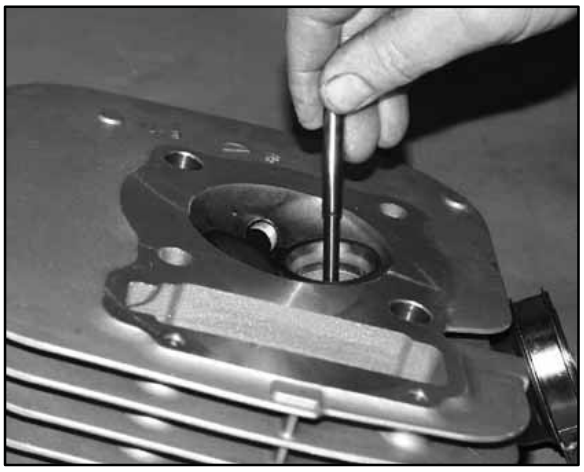
6. Inspect cam sprocket teeth for wear or damage. Replace if necessary.
7. Remove camshaft.





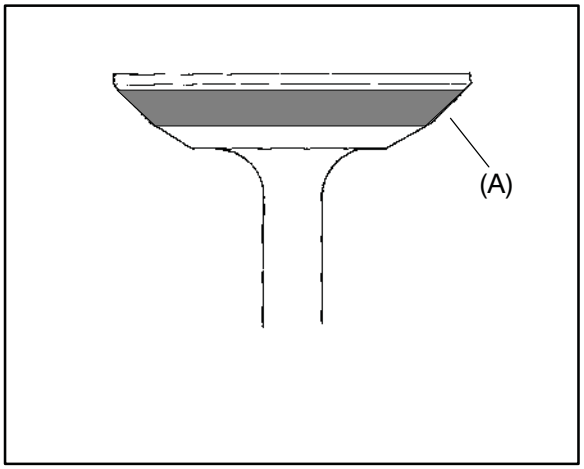
VALVE SEAT RECONDITIONING, CONT.

1. Install pilot into valve guide.
2. Apply cutting oil to valve seat and cutter.



3. Place 46° cutter on the pilot and make a light cut.
4. Inspect the cut area of the seat.
   - •If the contact area is less than 75% of the circumference of the seat, rotate the pilot 180° and make another light cut.
   - •If the cutter now contacts the uncut portion of the seat, check the pilot. Look for burrs, nicks, or runout. If the pilot is bent it must be replaced.
   - •If the contact area of the cutter is in the same place, the valve guide is distorted from improper installation and must be replaced. Be sure the cylinder head is at the proper temperature and replace the guide.
   - •If the contact area of the initial cut is greater than 75%, continue to cut the seat until all pits are removed and a new seat surface is evident. **NOTE:** Remove only the amount of material necessary to repair the seat surface.

5. To check the contact area of the seat on the valve face, apply a thin coating of Prussian Blue™ paste to the valve seat. If using an interference angle (46°) apply black permanent marker to the entire valve face (A).
6. Insert valve into guide and tap valve lightly into place a few times.

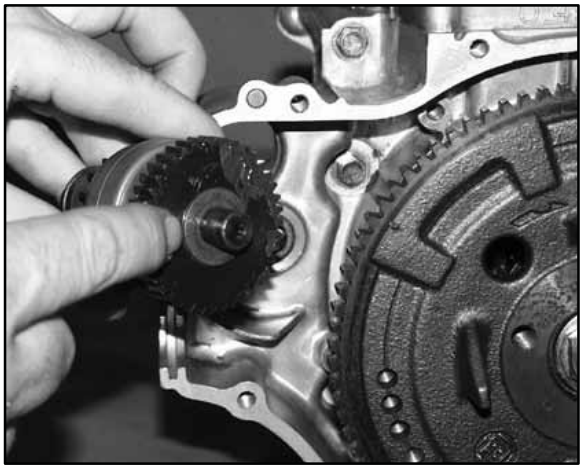


CRANKCASE DISASSEMBLY

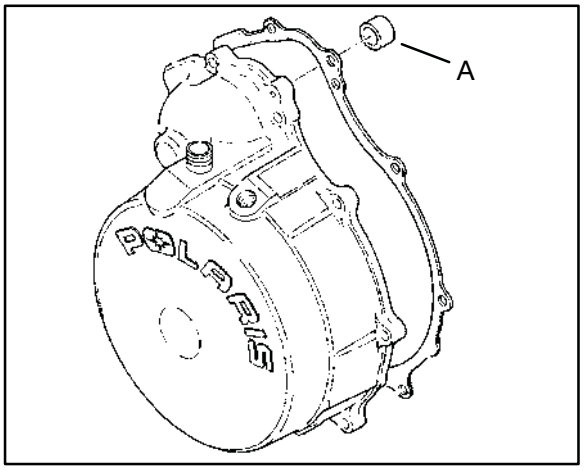
NOTE: The recoil starter, starter motor, starter drive, flywheel, stator, cam chain and sprockets can be serviced with the engine in the frame.

STARTER DRIVE REMOVAL/INSPECTION

1. Remove recoil housing bolts and remove housing.
2. Remove starter drive assembly. Note the thrust washer located at the rear of the drive mechanism.
3. Inspect the thrust washer for wear or damage and replace if necessary.



4. Measure the OD of the starter drive shaft on both ends and record.
5. Measure the ID of the bushing in the recoil housing (A) and in the crankcase and record. Measure in two directions 90° apart to determine if bushing is out of round. Calculate bushing clearance. Replace bushing if clearance exceeds the service limit.



Std. Bushing ID:
.4735″-.4740″ (11.11-12.04 mm)

Std. Shaft OD:
.470″-.472″ (11.93-11.99 mm)

Starter Drive Bushing Clearance:
Std: .0015″-.004″ (.038-.102 mm)

Service Limit:
.008″ (.203 mm)

6. Inspect gear teeth on starter drive. Replace starter drive if gear teeth are cracked, worn, or broken.

CRANKCASE INSPECTION

1. Remove all traces of gasket sealer from the crankcase mating surfaces. Inspect the surfaces closely for nicks, burrs or damage.

BEARING INSTALLATION

NOTE: To ease crankshaft bearing installation, warm the crankcase until hot to the touch. Place the bearing in a freezer.

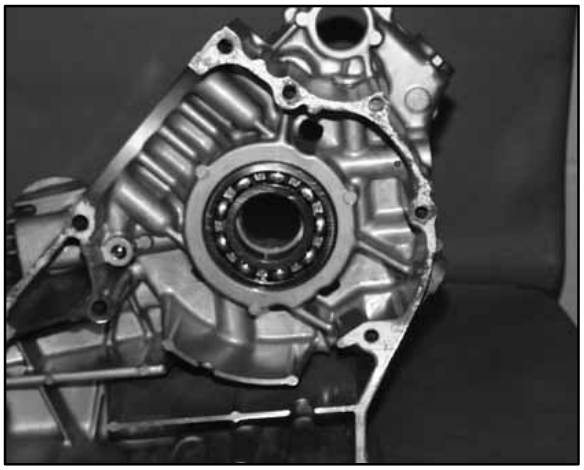
1. Install the crankshaft bearing so the numbers are visible.
2. Drive or press the new bearing into the crankcase, using the proper driver. **CAUTION:** Press only on outer race of bearing to prevent bearing damage.
   - 70mm (2.755″) driver- For crankshaft main bearings.

END PLAY INSPECTION/ADJUSTMENT

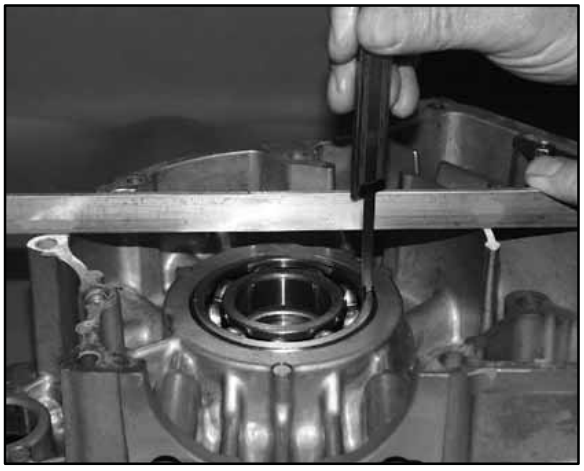
Before reassembling the crankcase,the following steps should be performed to determine the amount of crankshaft end play. Excessive end play may cause engine noise at idle and slow speeds. Too little play will side load the bearings which may lead to premature bearing failure.

CRANKSHAFT END PLAY ADJUSTMENT

1. Make sure crankshaft bearing is firmly seated in the MAG side crankcase.

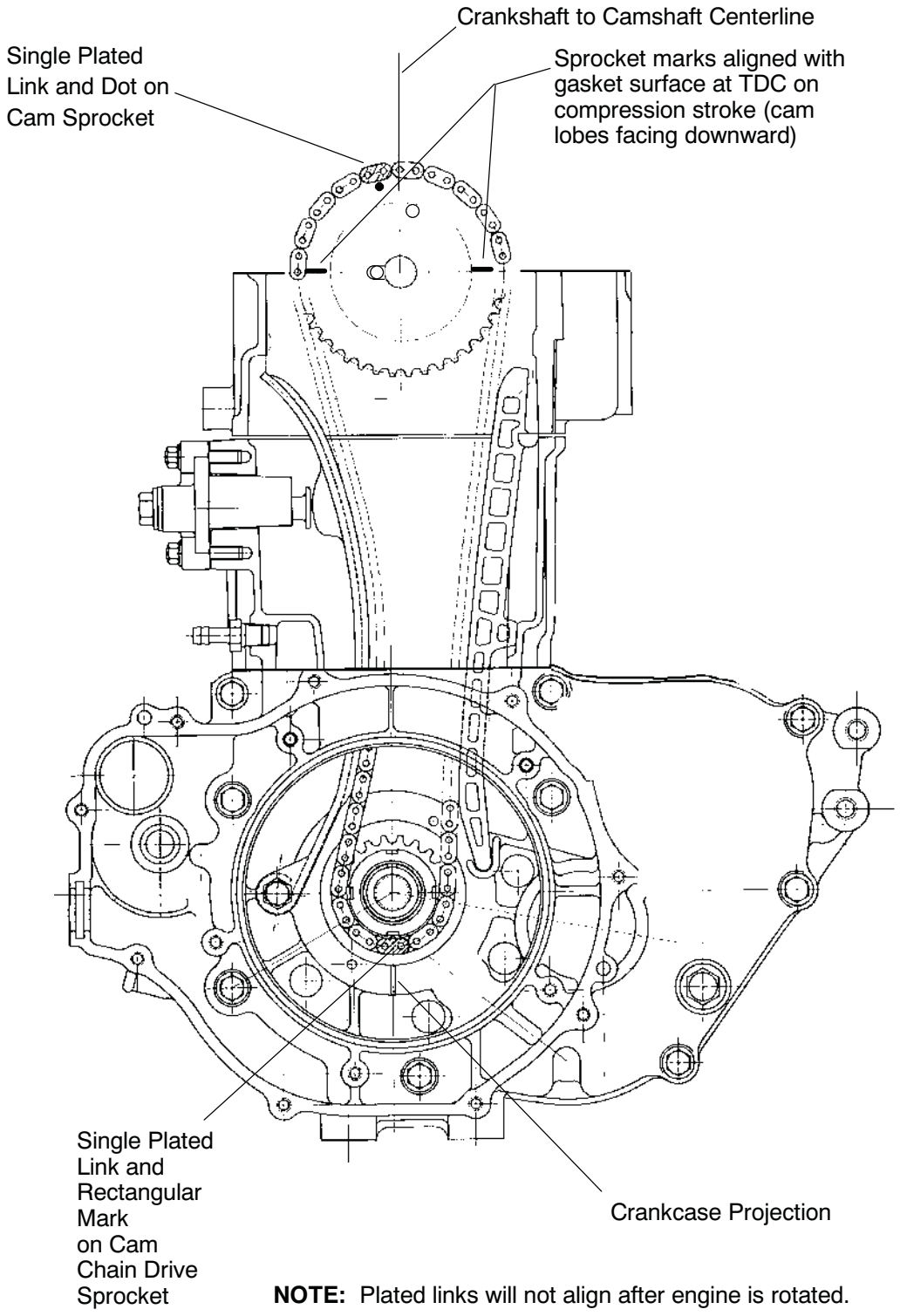


2. Measure the distance from the MAG side crankcase mating surface to the main bearing using a dial caliper and a straight edge.



CAMSHAFT TIMING - METHOD 1

Method 1 - Camshaft Timing with Stator Removed



NOTE: Plated links will not align after engine is rotated.

TROUBLESHOOTING

Engine Turns Over But Fails to Start

- •No fuel
- •Dirt in fuel line or filter
- •Fuel will not pass through fuel valve
- •Fuel pump inoperative/restricted
- •Tank vent plugged
- •Carb starter circuit
- •Engine flooded
- •Low compression (high cylinder leakage)
- •No spark (Spark plug fouled)

Engine Does Not Turn Over

- •Dead battery
- •Starter motor does not turn
- •Engine seized, rusted, or mechanical failure

Engine Runs But Will Not Idle

- •Restricted carburetor pilot system
- •Carburetor misadjusted
- •Choke not adjusted properly
- •Low compression
- •Crankcase breather restricted

Engine Idles But Will Not Rev Up

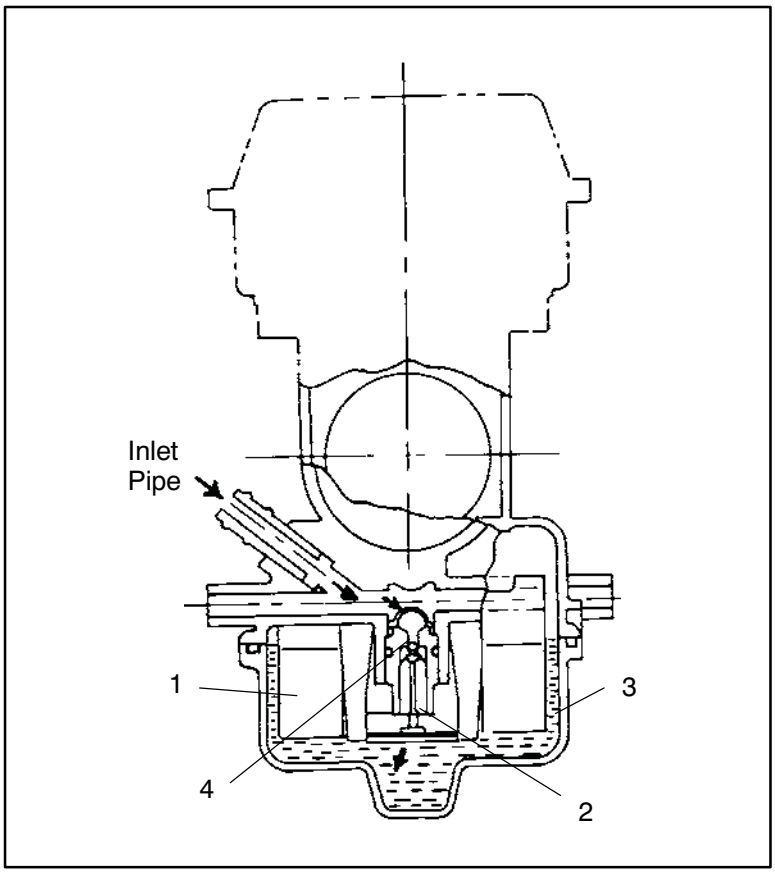
- •Spark plug fouled/weak spark
- •Broken throttle cable
- •Obstruction in air intake
- •Air box removed (reinstall all intake components)
- •Incorrect or restricted carburetor jetting
- •ETC switch limiting speed
- •Reverse speed limiter limiting speed
- •Carburetor vacuum slide sticking/diaphragm damaged
- •Incorrect ignition timing
- •Restricted exhaust system

Engine Has Low Power

- •Spark plug fouled
- •Cylinder, piston, ring, or valve wear or damage (check compression)
- •PVT not operating properly
- •Restricted exhaust muffler
- •Carburetor vacuum slide sticking/diaphragm damaged
- •Dirty carburetor

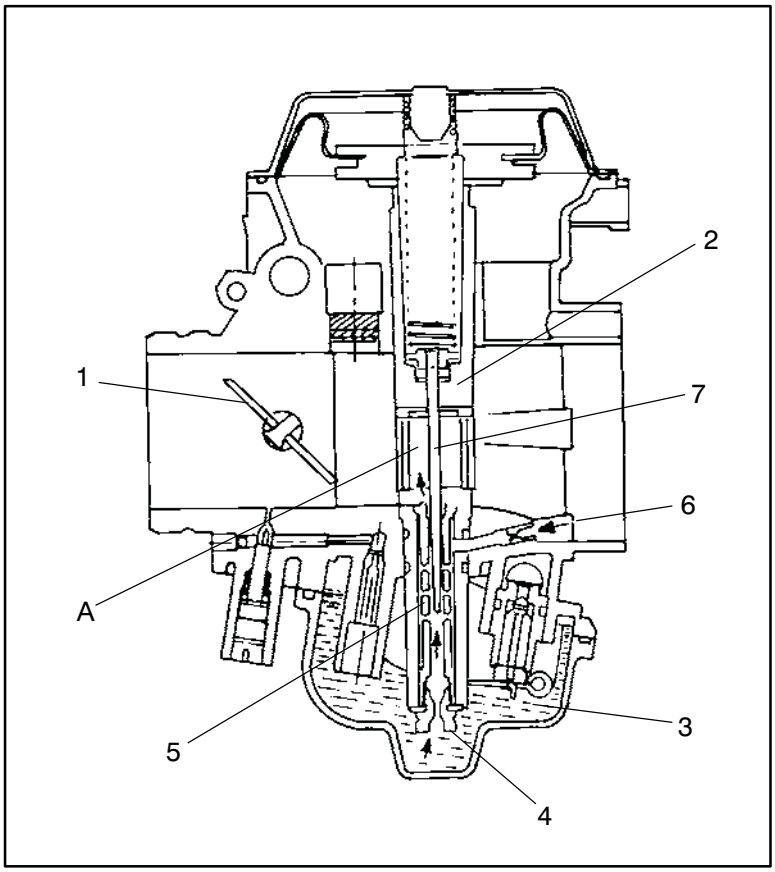
FLOAT SYSTEM

Fuel enters the float chamber (3) by means of the inlet pipe and passage, through a screen on the back of the inlet needle seat (4), and around the inlet needle (2). As the fuel fills the float chamber, the float (1) rises and forces the inlet needle against the seat, shutting off the orifice in the seat. When fuel level is up in float chamber, floats are up and needle valve remains pushed up against valve seat. Under this condition, no fuel enters the float chamber. As the fuel level falls, floats go down and needle valve unseats itself to admit fuel into the chamber. In this manner, the needle valve admits and shuts off fuel alternately to maintain a practically constant fuel level inside the float chamber.

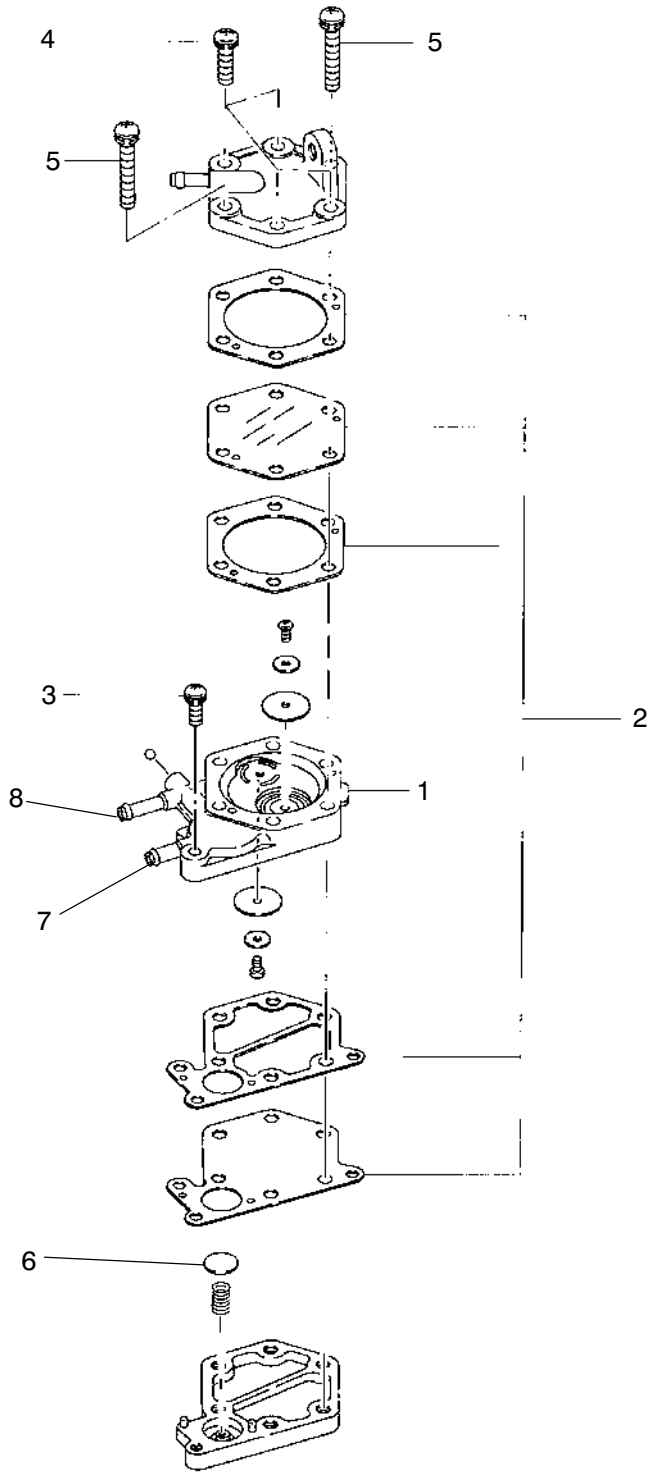


MAIN SYSTEM

As throttle valve (1) is opened, engine speed rises, and this increases negative pressure in the venturi. Consequently the vacuum slide (2) moves upward. The fuel in float chamber (3) is metered by main jet (4), and the metered fuel enters needle jet (5), in which it mixes with the air admitted through main air jet (6) to form an emulsion. The emulsified fuel then passes through the clearance between needle jet (5) and jet needle (7), and is discharged into the venturi (A). Mixture proportioning is accomplished in needle jet (5); the clearance through which the emulsified fuel must flow is determined ultimately by throttle position and vacuum slide height.



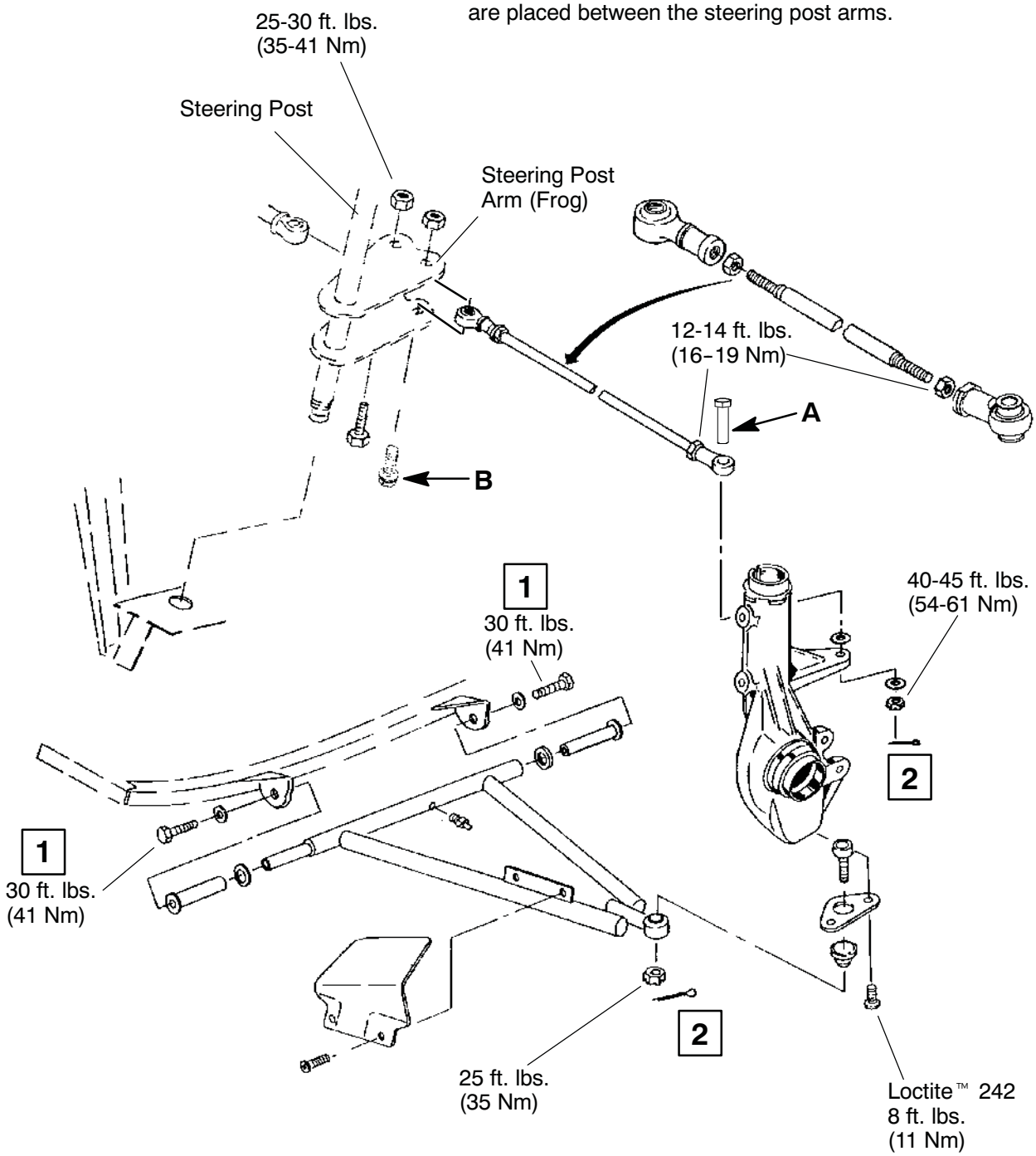
FUEL PUMP EXPLODED VIEW



1. Fuel Pump Assembly
2. Diaphragm, Gasket Set
3. Screw and Washer Assembly
4. Screw and Washer Assembly
5. Screw and Washer Assembly
6. Pressure Regulator
7. Fuel Inlet
8. Fuel Outlet

STEERING ASSEMBLY, EXPLODED VIEW

NOTE:
To avoid damage to tie rods and other steering components, be sure to install tie rod end bolts in the proper direction. The steering post arm bolt (B) points up; the rod end bolts (A) point down. Be sure inner rod ends are placed between the steering post arms.



1 Always use new bolts upon reassembly

2 Always use new cotter pins upon reassembly. Install with open end toward rear of machine.

SPECIAL TOOLS AND SUPPLIES

PART NUMBER	TOOL DESCRIPTION
2870506	Clutch Puller
9314177	Clutch Holding Wrench
2871358	Clutch Holding Fixture
2870341	Drive Clutch Spider Removal and Install Tool
2870654	Clutch Offset Alignment Tool
2870913	Driven Clutch Puller
2870910	Roller Pin Tool
2871226	Clutch Bushing Replacement Tool Kit
2870386	Piston Pin Puller
8700220	Clutch Compression Tool
2871025	Clutch Bushing Replacement Tool Kit

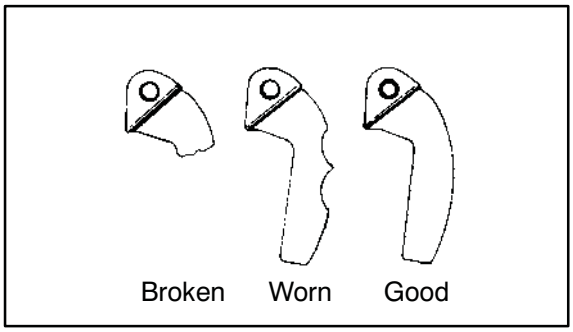
SPECIAL SUPPLIES	PART NUMBER
Loctite™ 680	**2870584**
RTV Silicone Sealer	**2870661**
Loctite™ Gasket Remover	**2870601**

PVT SYSTEM FASTENER TORQUES

Drive Clutch Retaining Bolt	40 ft. lbs. (54 Nm)
Driven Clutch Retaining Bolt	17 ft. lbs. (23 Nm)
PVT Inner Cover Bolts	12 ft. lbs. (16 Nm)
Drive Clutch Spider (Standard Clutch)	200 ft. lbs. (271 Nm)
Drive Clutch Cover Plate	90 in. lbs. (10 Nm)

SHIFT WEIGHT INSPECTION

1. Remove shift weight bolts and weights. Inspect as shown. The contact surface of the weight should be smooth and free of dents or gall marks. Inspect the weight pivot bore and pivot bolts for wear or galling. If weights or bolts are worn or broken, replace in sets of three with new bolts. **NOTE:** A damaged shift weight is usually caused by a damaged or stuck roller in the spider assembly. See roller inspection, Page 6.15.



BUTTON TO TOWER CLEARANCE INSPECTION

1. Inspect for any clearance between spider button to tower. If clearance exists, replace all buttons and inspect surface of towers. See spider removal Page 6.14.

Button to Tower Clearance:
.000 - .001″

2. Inspect sheave surfaces. Replace the *entire service clutch* if worn, damaged or cracked.

⚠ WARNING

The clutch assembly is a precisely balanced unit. Never replace parts with used parts from another clutch assembly!

All PVT system maintenance repairs must be performed only by an authorized Polaris service technician who has attended a Polaris sponsored service training seminar and understands the proper procedures as outlined in this manual. **Because of the critical nature and precision balance incorporated into the PVT system, it is absolutely essential that no attempt at disassembly or repair be made without factory authorized special tools and service procedures.**

DRIVE CLUTCH BUSHING SERVICE

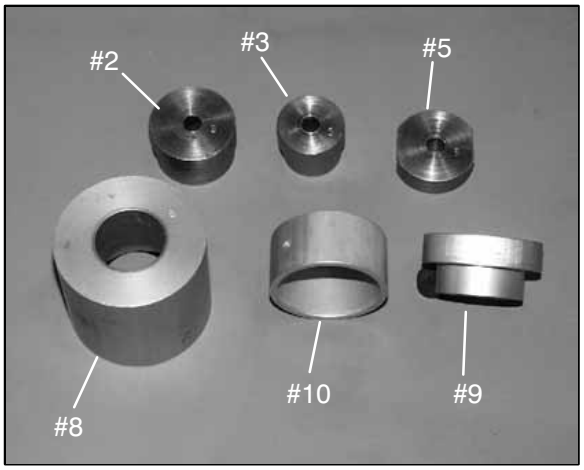
Clutch Bushing Replacement Tool Kit (PN 2871226)

Stamp	Qty.	Part Description	Part No.
#2	1	P-90 Drive Clutch and Driven Clutch Bushing Installation Tool	**5020628**
#3	1	Drive Clutch Cover Bushing Removal and Installation Tool (for all drive clutches)	**5020629**
#5	1	P-90 Driven Clutch Bushing Removal Tool	**5020631**
#8	1	Main Puller Adapter	**5020632**
#9	1	Adapter Reducer	**5010279**
#10	1	Number Two Puller Adapter	**5020633**

DRIVE CLUTCH MOVEABLE SHEAVE - BUSHING REMOVAL

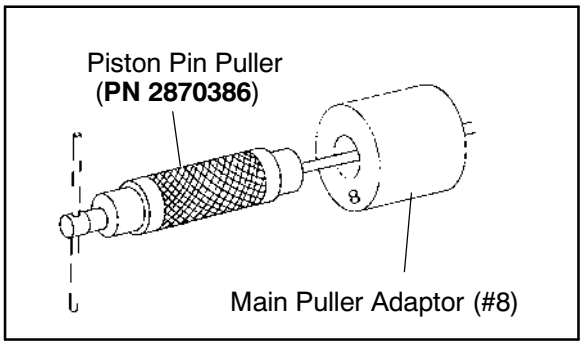
1. Install handle end of the Piston Pin Puller (**PN 2870386**) securely into bench vise and lightly grease puller threads.

Piston Pin Puller (PN 2870386)



2. Remove nut from puller rod and set aside.

3. Install the Main Puller Adapter (#8) (**PN 5020632**) onto the Piston Pin Puller (**PN 2870386**).



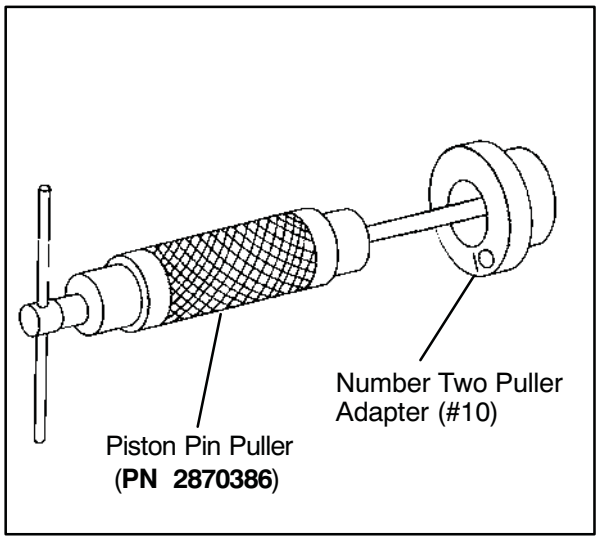
4. Insert the Number Two Adapter (#10) (**PN 5020633**) into the bushing from belt side as shown. With towers pointing toward vise, slide sheave and bushing onto puller rod.

5. Install the nut removed in Step 2 onto end of puller rod and hand tighten. Turn puller barrel to increase tension on sheave if needed. Nut is left hand thread.

DRIVEN CLUTCH MOVEABLE SHEAVE - BUSHING INSTALLATION

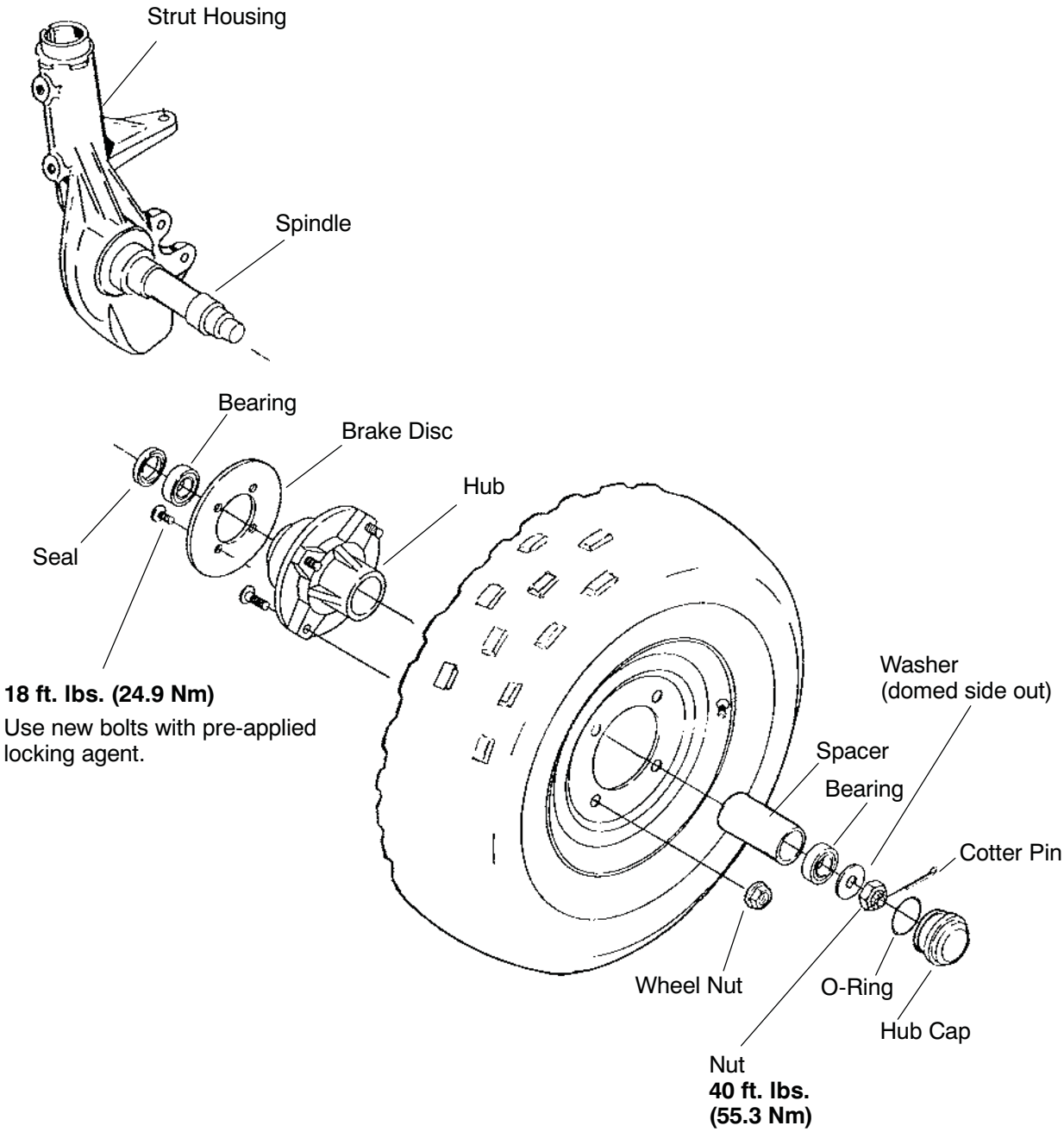
1. Working from the top, insert Number Two Puller Adapter (#10) (**PN 5020633**) onto the puller. See illustration at right.

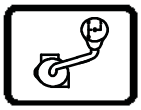
2. Start new bushing evenly in moveable sheave. Apply Loctite™ 680 retaining compound to the back side of new bushing.



3. Install sheave onto puller with new bushing upward as shown. Install the Number Two Puller Adapter (#10) (**PN 5020633**).

FRONT HUB EXPLODED VIEW

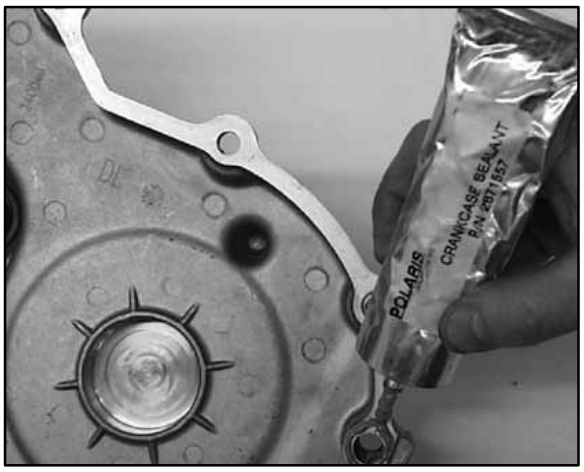




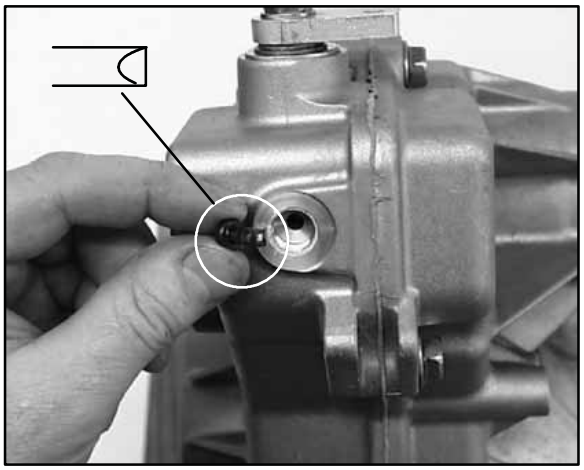
CHAPTER 8
TRANSMISSION SERVICE

TRANSMISSION ASSEMBLY, CONT.

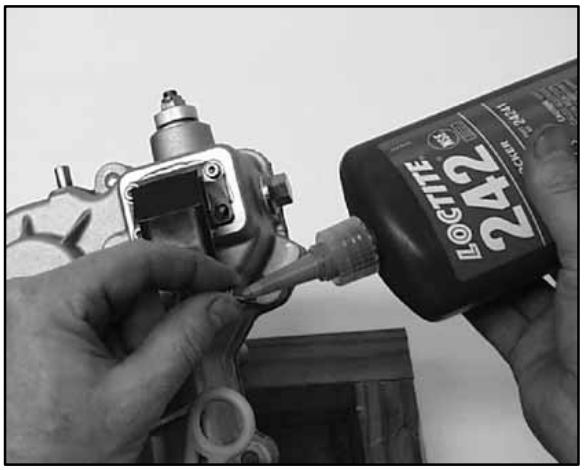
7. Prior to reinstalling the cover make sure the mating cover surfaces are clean and dry. Apply 3 Bond 1215 (**PN 2871557**) to the mating surfaces.
8. Reinstall cover and torque bolts in a cross pattern in 3 steps to 12 ft. lbs. (16.6 Nm).
9. Install drain plug with a new sealing washer. Torque drain plug to 14 ft. lbs. (19 Nm).



10. Insert shifting bullet with tip in position as shown. Insert spring and plug. Torque plug to 14 ft. lbs. (19 Nm).
11. Install transmission and add Polaris Premium Synthetic Gear Case Lubricant in the recommended amount. Refer to Maintenance Chapter 2 for torque stop adjustment and fluid capacity.



12. Install gear indicator switch. Apply Loctite™ 242 (blue) to threads of switch screws and torque to 13-16 in. lbs. (1.5-1.9 Nm).



FLUID REPLACEMENT/BLEEDING PROCEDURE

NOTE: When bleeding the brakes or replacing the fluid always start with the caliper farthest from the master cylinder.

CAUTION:

Always wear safety glasses.

CAUTION:

Brake fluid will damage finished surfaces. Do not allow brake fluid to come in contact with finished surfaces.

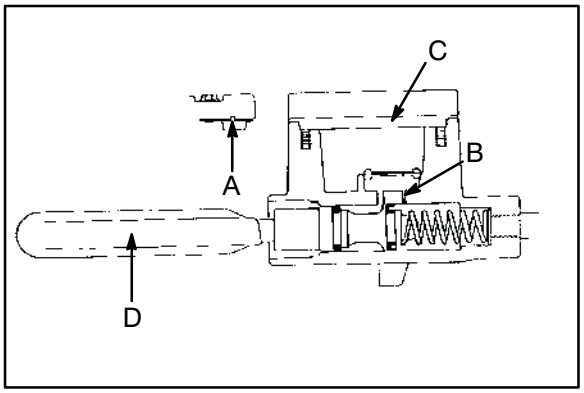
BRAKE BLEEDING - FLUID CHANGE

This procedure should be used to change fluid or bleed brakes during regular maintenance.

1. Clean reservoir cover thoroughly.
2. Remove screws, cover, and diaphragm (C) from reservoir.
3. Inspect vent slots (A) in cover and remove any debris or blockage.
4. If changing fluid, remove old fluid from reservoir with a Mity Vac™ pump or similar tool.

NOTE: Do not remove brake lever when reservoir fluid level is low.

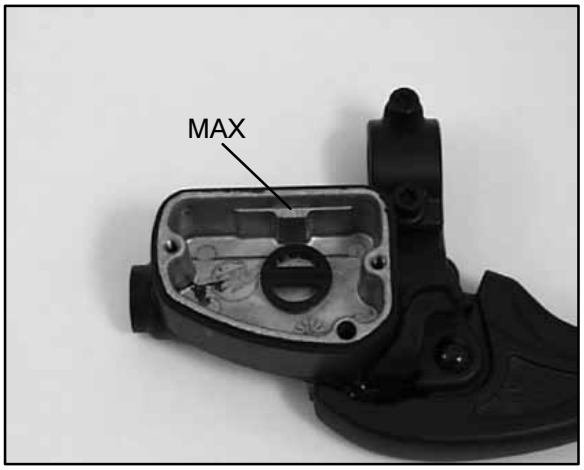
Mity Vac™ (PN 2870975)



5. Add brake fluid to the indicated MAX level inside reservoir.

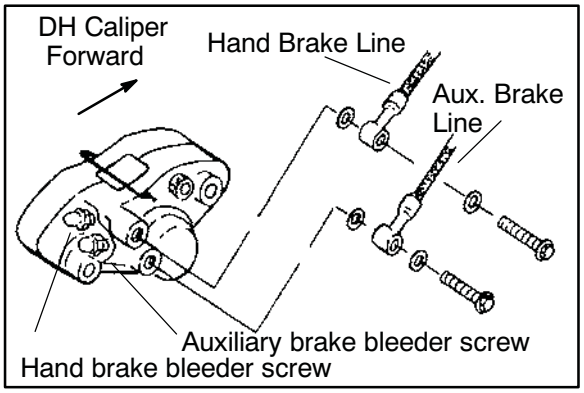
Polaris DOT 3 Brake Fluid

(PN 2870990)



6. Begin bleeding procedure with the caliper that is farthest from the master cylinder. Install a box end wrench on caliper bleeder screw. Attach a clean, clear hose to fitting and place the other end in a clean container. Be sure the hose fits tightly on fitting.

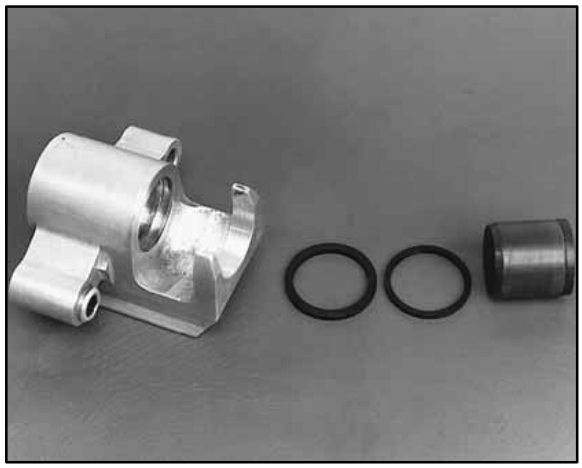
NOTE: Fluid may be forced from compensation port (B) when brake lever is pumped. Place diaphragm (C) in reservoir to prevent spills. Do not install cover.



FRONT CALIPER ASSEMBLY

1. Install new O-rings in the caliper body. Be sure groove is clean and free of residue or brakes may drag.

2. Coat piston with clean DOT 3 Brake Fluid. Install piston with a twisting motion while pushing inward. Piston should slide in and out of bore smoothly, with light resistance.

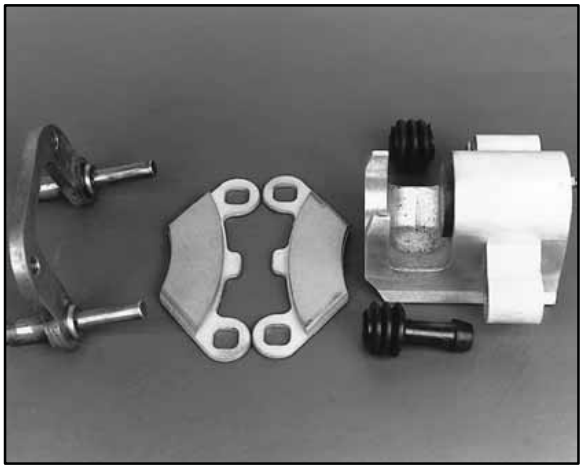


3. Lubricate the mounting bracket pins with Polaris Premium All Season Grease, and install the rubber dust seal boots.

Polaris Premium All Season Grease

(PN 2871423)

4. Compress the mounting bracket and make sure the dust seals are fully seated. Install the pads as shown on Page 9.10–9.11. Clean the disc and pads with brake parts cleaner or denatured alcohol to remove any dirt, oil or grease.



TROUBLESHOOTING

Brakes Squeal

- Dirty/contaminated friction pads
- Improper alignment
- Worn disc
- Worn disc splines

Poor Brake Performance

- Air in system
- Water in system (brake fluid contaminated)
- Caliper/disc misaligned
- Caliper dirty or damaged
- Brake line damaged or lining ruptured
- Worn disc and/or friction pads
- Incorrectly adjusted lever
- Incorrectly adjusted stationary pad
- Worn or damaged master cylinder or components
- Improper clearance between lever and switch

Lever Vibration

- Disc damaged
- Disc worn (runout or thickness variance exceeds service limit)

Caliper Overheats (Brakes Drag)

- Compensating port plugged
- Pad clearance set incorrectly
- Auxiliary brake pedal incorrectly adjusted
- Brake lever or pedal binding or unable to return fully
- Parking brake left on
- Residue build up under caliper seals
- Operator riding brakes

Brakes Lock

- Alignment of caliper to disc.

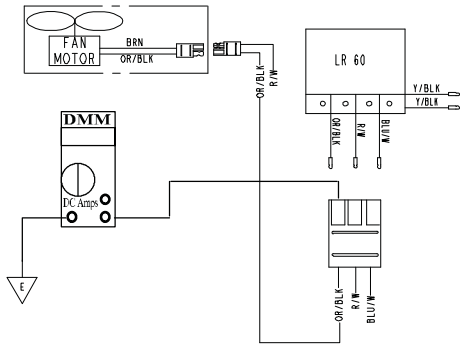
FAN MOTOR CURRENT DRAW

A current draw test will provide a good indication of fan motor condition. A worn or damaged fan motor will draw more current, which causes a reduction in blade speed and reduced cooling.

1. Turn key to off.
2. Disconnect connector at LR 60 and place a DC ammeter in series between the fan motor and ground as shown at right. Use the Red/White wire in the wiring harness as the power supply.
3. Be sure fan blade is free to rotate.
4. Turn ignition key and engine stop switch to “ON” position. Read the current draw on ammeter with fan running.
5. If the fan motor draws more than 6.5 Amps, replace the motor.

Fan Motor Current Draw:

Less Than 6.5 Amps

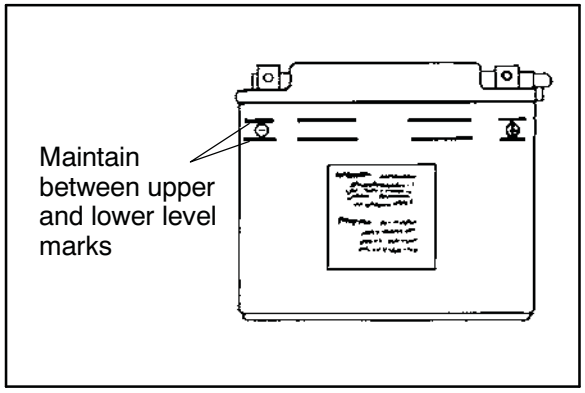


Connect ammeter lead to Or/Blk connector on LR 60 and the other lead to ground.

BATTERY INSPECTION/REMOVAL

The battery is located under the left rear fender.

Inspect the battery fluid level. When the battery fluid nears the lower level, the battery should be removed and distilled water should be added to the upper level line. To remove the battery:



1. Disconnect holder strap and remove cover.
2. Disconnect battery negative (-) (black) cable first, followed by the positive (+) (red) cable.

⚠ CAUTION

Whenever removing or reinstalling the battery, disconnect the negative (black) cable first and reinstall the negative cable last!

3. Disconnect the vent hose.
4. Remove the battery.
5. Remove the filler caps and add *distilled water only* as needed to bring each cell to the proper level. Do not overfill the battery.

⚠ To refill use only distilled water. Tap water contains minerals which are harmful to a battery.

⚠ Do not allow cleaning solution or tap water to enter the battery. It will shorten the life of the battery.

6. Reinstall the battery caps.

BATTERY INSTALLATION

1. Clean battery cables and terminals with a stiff wire brush. Corrosion can be removed using a solution of one cup water and one tablespoon baking soda. Rinse will with clean water and dry thoroughly.
2. Reinstall battery, attaching positive (+) (red) cable first and then the negative (-) (black) cable. Coat terminals and bolt threads with Nyogel™ Grease (**PN 2871329**).
3. Install clear battery vent tube from vehicle to battery vent. **WARNING:** Vent tube must be free from obstructions and kinks and securely installed. If not, battery gases could accumulate and cause an explosion. Vent should be routed away from frame and body to prevent contact with electrolyte. Avoid skin contact with battery electrolyte, severe burns could result. If electrolyte contacts the vehicle frame, corrosion will occur.
4. Route cables so they are tucked away in front and behind battery.
5. Reinstall battery cover and holder strap.

⚠ Do not start the engine with the battery disconnected. Vehicle lamps will burn out if battery is disconnected during vehicle operation. Also, the reverse speed limiter can be damaged.

BATTERY TESTING

Whenever a service complaint is related to either the starting or charging systems, the battery should be checked first.

Following are three tests which can easily be made on a battery to determine its condition: OCV Test, Specific Gravity Test and Load Test.

OCV - OPEN CIRCUIT VOLTAGE TEST

Battery voltage should be checked with a digital multitester. Readings of 12.6 or less require further battery testing and charging. See charts and Load Test on Page 10.18.

NOTE: Lead-acid batteries should be kept at or near a full charge as possible. Electrolyte level should be kept between the low and full marks. If the battery is stored or used in a partially charged condition, or with low electrolyte levels, hard crystal sulfation will form on the plates, reducing the efficiency and service life of the battery.