

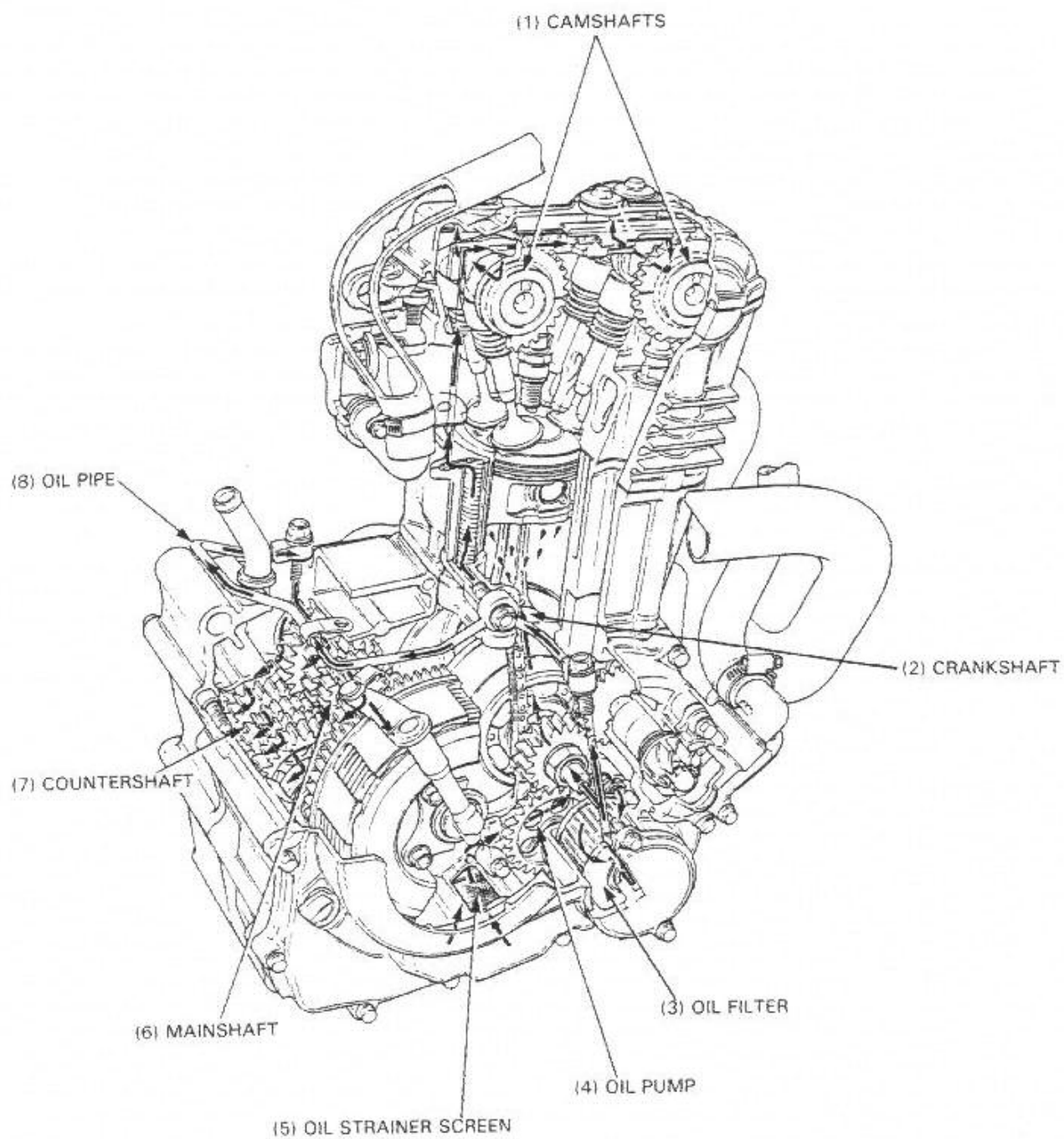
LUBRICATION

LUBRIFICATION

SCHMIERUNG

- (1) ARBRES A CAMES
- (2) VILEBREQUIN
- (3) FILTRE A HUILE
- (4) POMPE A HUILE
- (5) ECRAN DE CREPINE A HUILE
- (6) ARBRE PRIMAIRE
- (7) ARBRE DE RENVOI
- (8) TUYAU A HUILE

- (11) NOCKENWELLEN
- (2) KURBELWELLE
- (3) ÖLFILTER
- (4) ÖLPUMPE
- (5) ÖLSIEB
- (6) HAUPTWELLE
- (7) VORGELEGEWELLE
- (8) ÖLLEITUNG



LUBRICATION

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SERVICE INFORMATION

GENERAL

▲ WARNING

- If the engine must be running to do some work, make sure the area is well ventilated. Never run the engine in an enclosed area. The exhaust contains poisonous carbon monoxide gas that may cause loss of consciousness and lead to death.

CAUTION

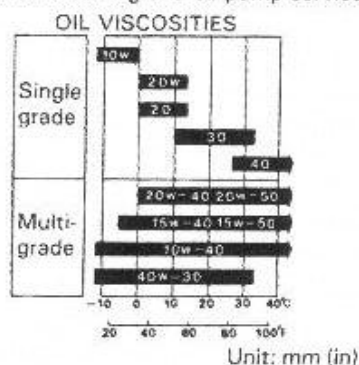
- Used engine oil may cause skin cancer if repeatedly left in contact with the skin for prolonged periods. Although this is unlikely unless you handle used oil on a daily basis, it is still advisable to thoroughly wash your hands with soap and water as soon as possible after handling used oil.

- This section describes inspection and replacement of engine oil and oil filter, oil strainer cleaning and oil pump service.

SPECIFICATIONS

Oil capacity 1.6 lit (1.69 U.S. qt., 1.41 Imp qt) at engine assembly
 1.3 lit (1.37 U.S. qt., 1.14 Imp qt) after draining
 1.32 lit (1.39 U.S. qt., 1.16 Imp qt) at oil and oil filter change

Recommended oil Use Honda 4-Stroke Oil or equivalent.
 API Service Classification: SE or SF
 VISCOSITY: SAE 10W-40
 Other viscosities shown in the chart may be used when the average temperature in your riding area is within the indicated range.



ITEM	STANDARD	SERVICE LIMIT
Oil pump body clearance	0.10-0.21 (0.004-0.008)	0.25 (0.010)
Oil pump tip clearance	0.15 (0.006)	0.20 (0.008)
Oil pump end clearance	0.02-0.09 (0.001-0.004)	0.12 (0.005)
Oil pump delivery	4 lit (4.2 US qt., 3.5 Imp qt)/min at 5,000 min ⁻¹ (rpm)	—

TORQUE VALUE

Oil drain bolt 25 N·m (2.5 kg·m, 18 ft·lb)

TROUBLESHOOTING

Oil level too low

- Normal oil consumption
- External oil leaks
- Worn piston rings

Oil contamination

- Oil or filter not changed often enough
- Faulty head gasket
- Internal coolant leaks
- Faulty water pump mechanical seal

Low oil pressure

- Faulty oil pump
- Oil pump drive gear broken

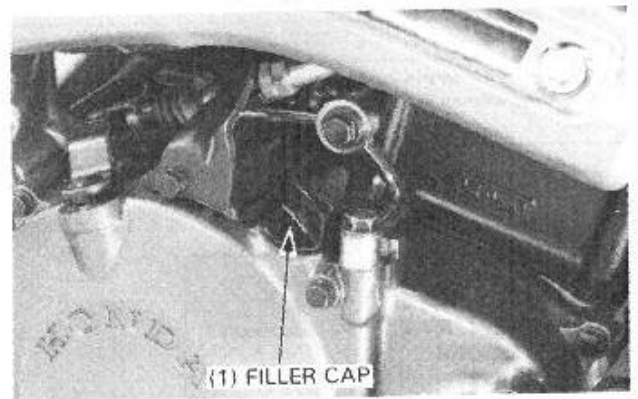
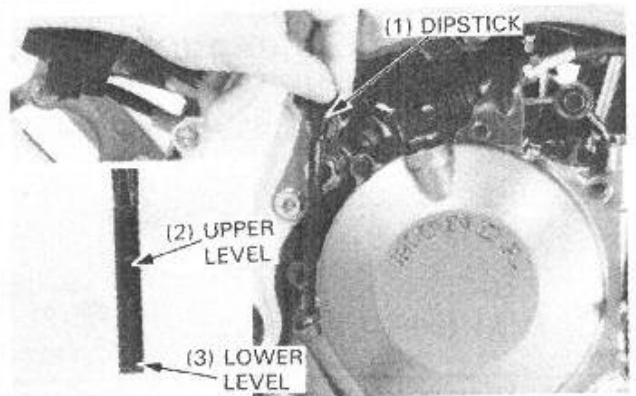
LUBRICATION

ENGINE OIL LEVEL CHECK

Support the motorcycle upright on level ground.
Start the engine and let it idle for a few minutes.

Stop the engine. Check the oil level with the dipstick by inserting it in until the threads touch the hole.
Do not screw the dipstick in when making this check.

If the oil level is below the lower mark on the dipstick, fill to the upper level mark with the recommended oil through the filler cap hole.

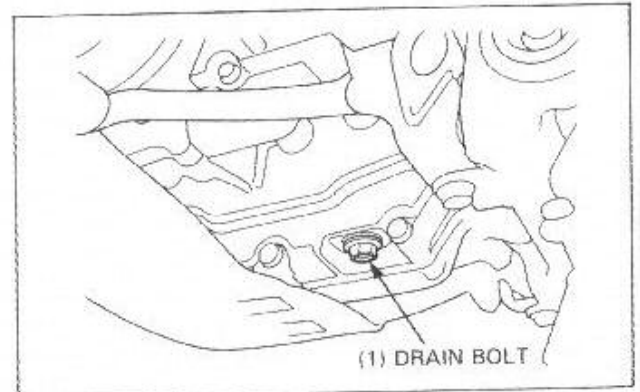


ENGINE OIL & FILTER CHANGE

NOTE

- Change engine oil with the engine warm and the motorcycle on its side stand to assure complete and rapid draining.

Remove the oil filler-cap and drain bolt.
Drain the oil.



Remove the following:

- oil filter cover.
- oil filter.
- spring.

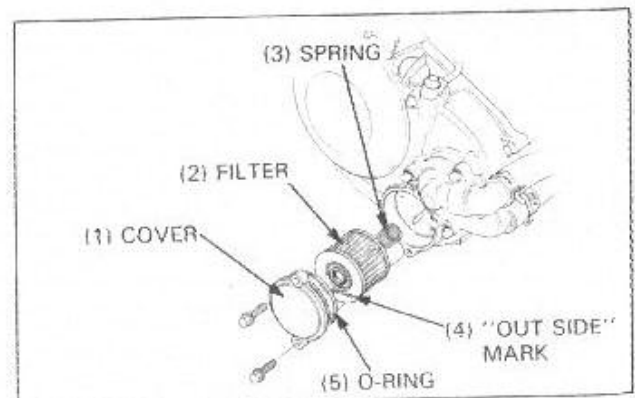
Discard the oil filter.

Install the following:

- spring.
- new oil filter.
- cover with a new O-ring.

NOTE

- Install the oil filter with the OUT SIDE mark facing out.



LUBRICATION

After the oil has drained, check that the drain bolt sealing washer is in good condition, and install the drain bolt.

TORQUE: 25 N·m (2.5 kg·m, 18 ft·lb)

NOTE

- Clean the engine oil strainer, if required, before filling the crankcase.

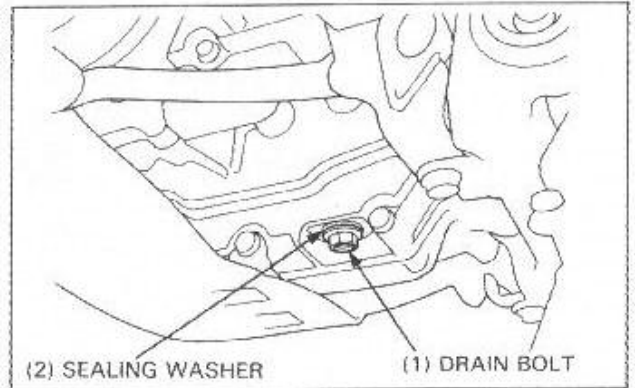
Fill the crankcase with the correct quantity of the recommended oil.

OIL CAPACITY: 1.32 lit (1.39 U.S. qt, 1.16 Imp qt)
at oil and oil filter change

RECOMMENDED OIL: Honda 4-stroke Oil or equivalent
API service classification: SE or SF
VISCOSITY: SAE 10W-40

Install the oil filler cap.
Start the engine and let it idle for 2-3 minutes.

Stop the engine and wait a few minutes then check that the oil level is at the upper level mark with the motorcycle upright. Check that there are no oil leaks.



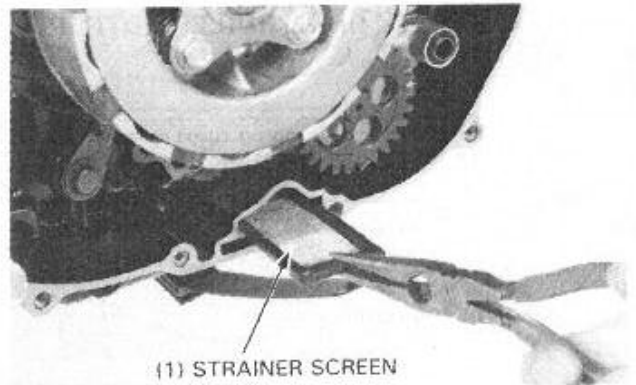
ENGINE OIL STRAINER CLEANING

NOTE

- Perform this maintenance before filling the engine with oil.

Remove the right crankcase cover (page 7-3).
Remove the oil strainer and clean it.
Install the oil strainer.
Install the right crankcase cover (page 7-10).

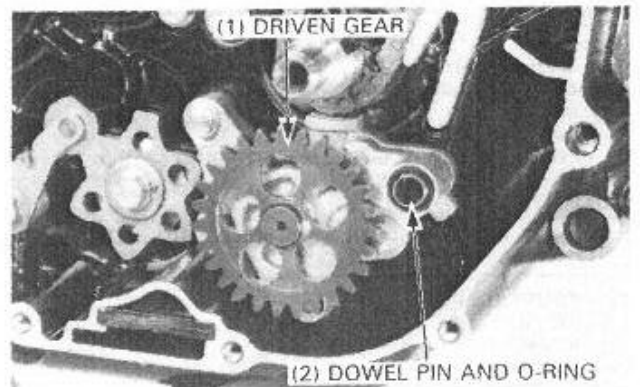
Fill the crankcase with recommended oil.



OIL PUMP

REMOVAL

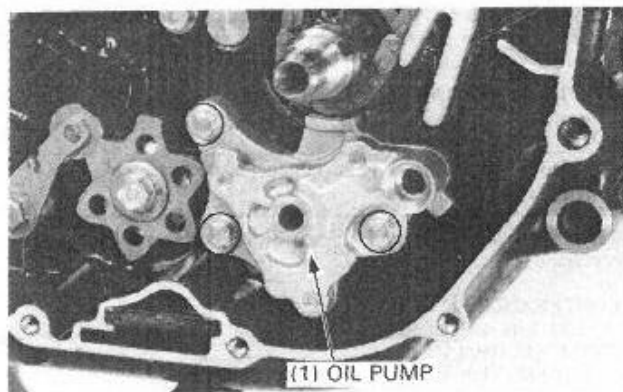
- Remove the following:
- right crankcase cover (page 7-3).
 - clutch (page 7-4).
 - primary drive gear (page 7-8).
 - dowel pin with and O-ring.
 - oil pump driven gear.



LUBRICATION

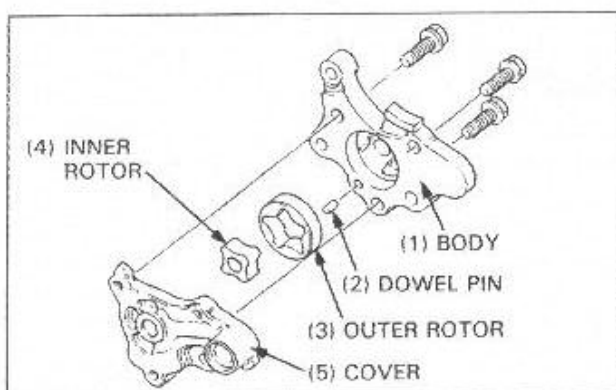
Remove the following:

- oil pump mounting bolts.
- oil pump.
- dowel pins.
- gasket.



Disassemble the oil pump.

Clean disassembled parts with non-flammable or high flash point solvent.

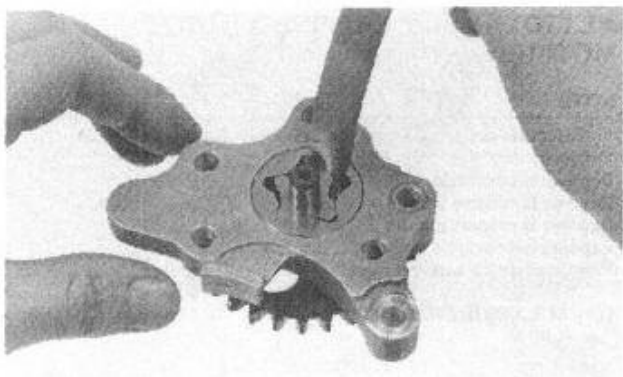


INSPECTION

Tip Clearance

Install the inner rotor and outer rotor in the oil pump body. Temporarily install the pump shaft to the pump body and measure the tip clearance.

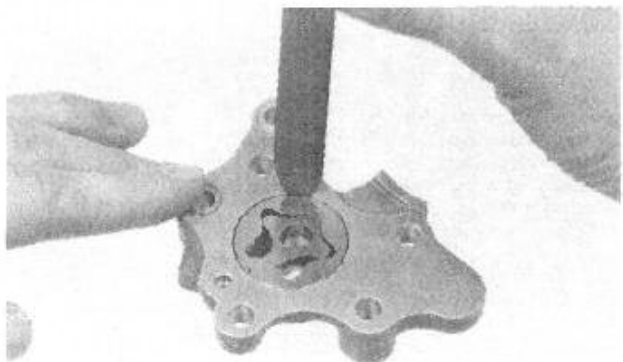
SERVICE LIMIT: 0.20 mm (0.008 in)



Body Clearance

Remove the pump shaft.
Measure the body clearance.

SERVICE LIMIT: 0.25 mm (0.010 in)

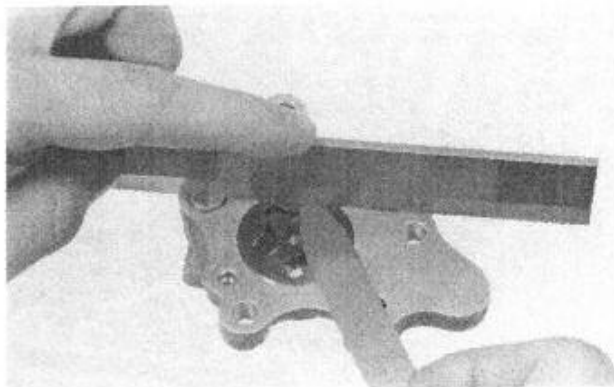


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End Clearance

Measure the end clearance.

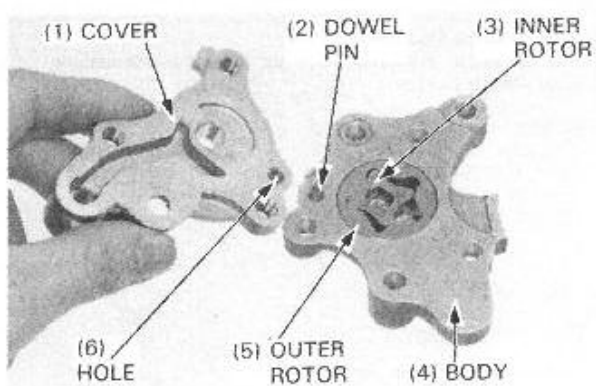
SERVICE LIMIT: 0.12 mm (0.005 in)



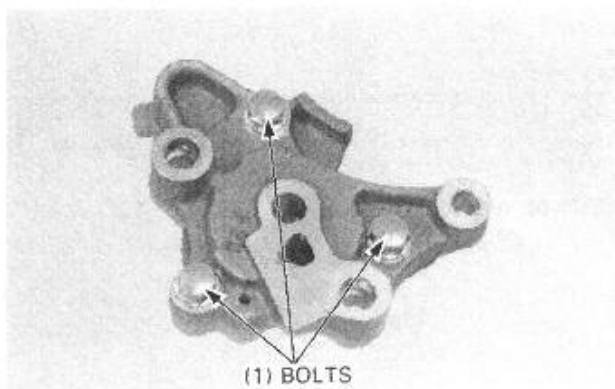
ASSEMBLY

Install the inner and outer rotors and the dowel pin in the pump body.

Install the pump cover on the body, aligning the cover hole with the dowel pin.

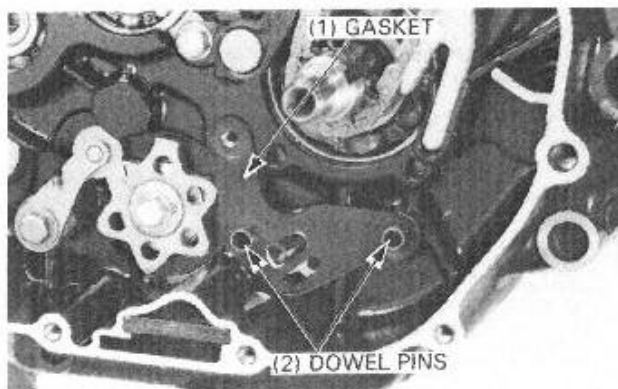


Tighten the bolts securely.



INSTALLATION

Install the dowel pins and a new gasket.



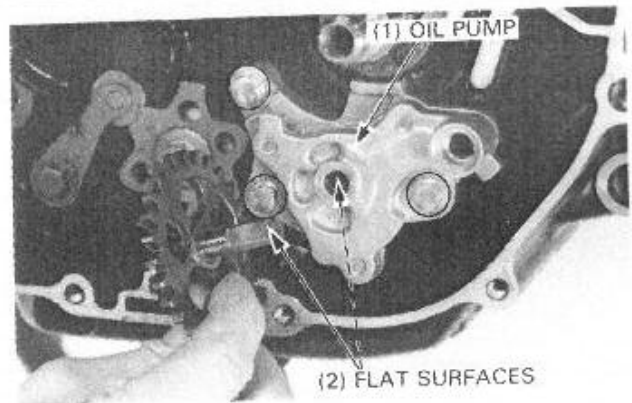
LUBRICATION

Install the oil pump and tighten the bolts securely.

Install the pump driven gear on the rotor by aligning their flat surfaces.

Install the following:

- primary drive gear (page 7-9).
- clutch (page 7-6).
- right crankcase cover (page 7-10).



LUBRICATION

LUBRICATION POINTS

Use general purpose grease when not otherwise specified here.

Apply oil or grease to sliding surfaces and cables not shown here.

CONTROL CABLE LUBRICATION

Periodically disconnect the throttle and clutch cables at their upper ends. Clean the cable end mount in the throttle and clutch lever, then oil the cable ends and reinstall. It is not necessary to oil the cables: if a cable begins to bind, it must be replaced.

