HOW TO USE THIS MANUAL

Follow the Maintenance Schedule (Section 3) recommendations to ensure that the vehicle is in peak operating condition.
Performing the first scheduled maintenance is very important. It compensates for the initial wear that occurs during the break-in period.

Sections 1 and 3 apply to the whole motorcycle. Section 2 illustrates procedures for removal/installation of components that may be required to perform service described in the following sections. Sections 4 through 17 describe parts of the motorcycle, grouped according to location.

Find the section you want on this page, then turn to the table of contents on the first page of the section.

Most sections start with an assembly or system illustration, service information and troubleshooting for the section.
The subsequent pages give detailed procedure.

If you don't know the source of the trouble, go to section 19, Troubleshooting.

HONDA MOTOR CO., LTD.
SERVICE PUBLICATION OFFICE

CONTENTS

	GENERAL INFORMATION	1
	FRAME/BODY PANELS/EXHAUST SYSTEM	2
	MAINTENANCE	3
ENGINE AND DRIVE TRAIN	LUBRICATION SYSTEM	4
	FUEL SYSTEM	5
	COOLING SYSTEM	6
	ENGINE REMOVAL/INSTALLATION	7
	CYLINDER HEAD/VALVES	8
	CYLINDER/PISTON	9
	CLUTCH/KICKSTARTER/ GEARSHIFT LINKAGE	10
	ALTERNATOR	11
	CRANKCASE/CRANKSHAFT/ BALANCER	12
	TRANSMISSION	13
CHASSIS	FRONT WHEEL/SUSPENSION/ STEERING	14
	REAR WHEEL/SUSPENSION	15
	HYDRAULIC BRAKE	16
ELECTRICAL	ELECTRICAL SYSTEM	17
	WIRING DIAGRAMS	18
	TROUBLESHOOTING	19

Date of Issue: February, 2000

CYLINDER/PISTON

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Cylinder	I.D.		100.000 – 100.015 (3.9370 – 3.9376)	100.05 (3.939)
	Taper		———	0.05 (0.002)
	Out of round		———	0.05 (0.002)
	Warpage		———	0.05 (0.002)
Piston, pistonrings	Piston mark direction		"IN" mark facing toward the intake side	———
	Piston O.D.		99.96 – 99.99 (3.935 – 3.937)	99.86 (3.931)
	Piston O.D. measurement point		20 mm (0.8 in) from bottom of skirt	———
	Piston pin bore I.D.		23.002 – 23.008 (0.9056 – 0.9058)	23.03 (0.907)
	Piston pin O.D.		22.994 – 23.000 (0.9053 – 0.9055)	22.98 (0.905)
	Piston-to-piston pin clearance		0.002 – 0.014 (0.0001 – 0.0006)	0.04 (0.002)
	Piston ring-to-ring groove clearance	Top	0.045 – 0.080 (0.0018 – 0.0031)	0.095 (0.0037)
		Second	0.025 – 0.060 (0.0010 – 0.0024)	0.075 (0.0030)
	Piston ring end gap	Top	0.25 – 0.40 (0.010 – 0.016)	0.55 (0.022)
		Second	0.40 – 0.55 (0.016 – 0.022)	0.70 (0.028)
		Oil (side rail)	0.20 – 0.70 (0.008 – 0.028)	0.90 (0.035)
	Piston ring mark	Top	"R" mark	———
		Second	"RN" mark	———
Cylinder-to-piston clearance			0.010 – 0.055 (0.0004 – 0.0022)	0.19 (0.007)
Connecting rod small end I.D.			23.020 – 23.041 (0.9063 – 0.9071)	23.05 (0.907)
Connecting rod-to-piston pin clearance			0.020 – 0.047 (0.0008 – 0.0019)	0.067 (0.0026)

CLUTCH/KICKSTARTER/GEARSHIFT LINKAGE

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Clutch	Clutch lever free play		10 – 20 (3/8 – 13/16)	———
	Spring free length		49.0 (1.93)	46.0 (1.81)
	Disc thickness	A (6 discs)	3.22 – 3.38 (0.127 – 0.133)	3.00 (0.118)
		B (1 disc)	2.92 – 3.08 (0.115 – 0.121)	2.69 (0.106)
	Plate warpage		———	0.30 (0.012)
	Clutch outer I.D.		29.000 – 29.021 (1.1417 – 1.1426)	29.05 (1.144)
	Outer guide	I.D.	21.990 – 22.035 (0.8657 – 0.8675)	22.05 (0.868)
		O.D.	28.959 – 28.980 (1.1401 – 1.1409)	28.91 (1.138)
	Mainshaft O.D. at clutch outer guide		21.967 – 21.980 (0.8648 – 0.8654)	21.94 (0.864)
Kickstarter	Starter idle gear I.D.		23.000 – 23.021 (0.9055 – 0.9063)	23.11 (0.910)
	Starter idle gear bushing	I.D.	20.013 – 20.031 (0.7879 – 0.7886)	20.05 (0.789)
		O.D.	22.959 – 22.980 (0.9039 – 0.9047)	22.90 (0.902)
	Kickstarter pinion gear I.D.		22.020 – 22.041 (0.8669 – 0.8678)	22.09 (0.870)
	Kickstarter spindle O.D.		21.959 – 21.980 (0.8645 – 0.8654)	21.91 (0.863)
	Countershaft O.D. at starter idle gear		19.980 – 19.993 (0.7866 – 0.7871)	19.94 (0.785)

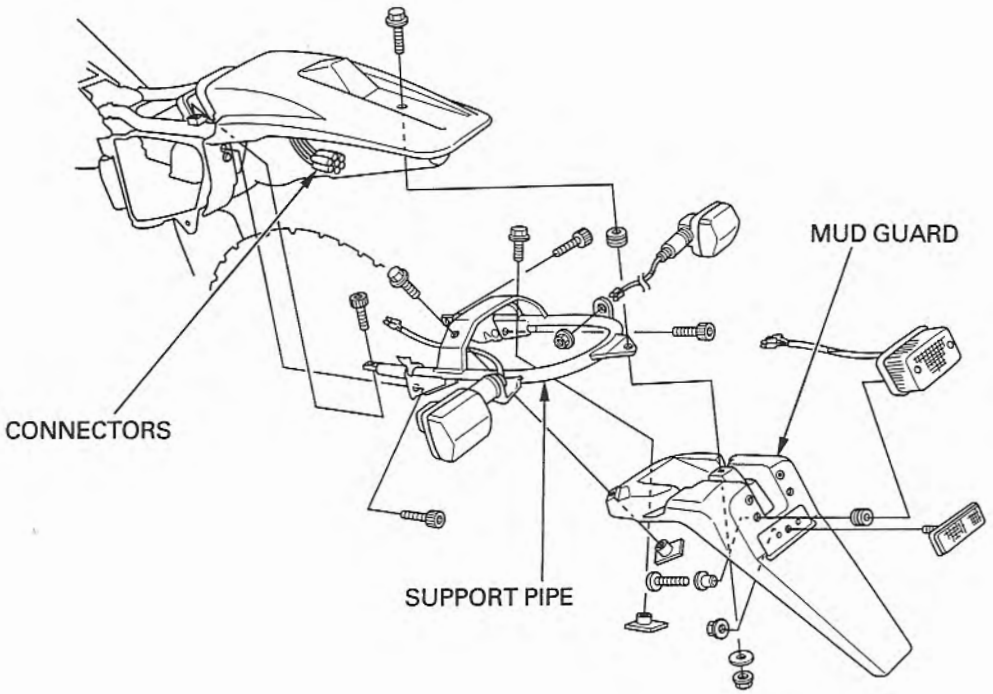
LUBRICATION & SEAL POINTS

ENGINE

LOCATION	MATERIAL	REMARKS
Cylinder head nut threads and seating surface Piston outer surface and piston pin hole Piston pin outer surface Piston ring whole surface Crankshaft big end Valve adjust screw lock nut threads Oil pump rotor sliding area Clutch disc lining surface Clutch center lock nut threads and seating surface Primary drive gear nut threads and seating surface Kickstarter bearing rolling area (right crankcase cover side) Flywheel bolt threads and seating surface Bearing rolling area O-rings	Engine oil	
Connecting rod small end inner surface Camshaft lobes and journals Rocker arm sliding area and inner surface Valve stem sliding surface and stem end Clutch outer and outer guide sliding surface Each gear rolling and sliding area Other rotating or sliding area Kickstarter spindle spline and pinion sliding surface Mainshaft/countershaft spline and gear rolling area Gearshift spindle spline Gearshift drum guide groove Shift fork claw Shift fork shaft outer surface	Use molybdenum solution (mixture of the engine oil and molybdenum grease with the ratio 100 g: 70 cc)	
Timing hole cap threads O-rings Oil seal lips Water seal lips	Multi-purpose grease	
Right and left crankcase mating surface Crankcase breather joint area Cylinder head-to-head cover mating surface	Liquid sealant	
Cam sprocket bolt threads Cam chain tensioner bolt threads Mainshaft bearing set plate bolt threads Gearshift cam bolt threads Valve lifter lever stopper bolt threads	Locking agent	6.5 ± 1 mm (0.26 ± 0.04 in) from tip 13.0 ± 1 mm (0.51 ± 0.04 in) from tip 6.5 ± 1 mm (0.26 ± 0.04 in) from tip 6.5 ± 1 mm (0.26 ± 0.04 in) from tip

REAR FENDER/MUD GUARD

REMOVAL/INSTALLATION

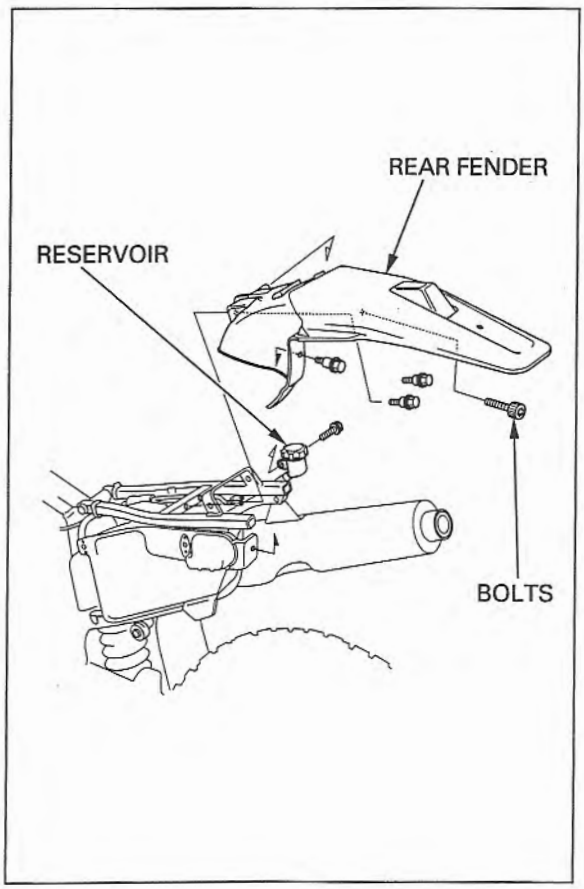


Remove the seat and side covers (page 2-2).
Disconnect the turn signal light and tail/brake light connectors.

Remove the bolts and sub-frame support pipe with the mud guard.
Remove the bolts/collars and mud guard from the support pipe.

Remove the bolt and rear brake reservoir from the bracket.
Remove the bolts and rear fender.

Installation is in the reverse order of removal.



SPECIFICATIONS

ITEM			SPECIFICATIONS	SERVICE LIMIT
Throttle grip free play			2.0–6.0 mm (1/16–1/4 in)	———
Spark plug	Standard		BKR7E-11 (NGK)	———
			K22PR-U11 (DENSO)	———
	Optional		BKR8E-11 (NGK)	———
			K24PR-U11 (DENSO)	———
Spark plug gap			1.00–1.10 mm (0.039–0.043 in)	———
Valve clearance	IN		0.15 ± 0.02 mm (0.006 ± 0.001 in)	———
	EX		0.20 ± 0.02 mm (0.008 ± 0.001 in)	———
Engine oil capacity	At draining		1.56 ℓ (1.65 US qt , 1.37 Imp qt)	———
	At oil filter change		1.6 ℓ (1.7 US qt , 1.4 Imp qt)	———
	At disassembly		2.0 ℓ (2.1 US qt , 1.8 Imp qt)	———
Recommended engine oil			HONDA 4-stroke oil or equivalent motor oil API service classification: SE, SF or SG	———
Decompressor lever free play			5.0–8.0 mm (3/16–5/16 in)	———
Engine idle speed			1,400 ± 100 min^{-1} (rpm)	———
Drive chain slack			20–30 mm (13/16–1 3/16 in)	———
Drive chain length (at 41 pins/40 links)			———	638 mm (25.1 in)
Recommended drive chain		(ED, DK types)	DID520VM-110LE or RK520KZO-110LE	———
		(U type)	DID520VM-108LE or RK520KZO-108LE	———
Drive chain guide slider thickness			———	To the indicator
Drive chain slider thickness			———	To the indicator
Recommended brake fluid			DOT 4	———
Brake pedal height			68 mm (2.7 in)	———
Clutch lever free play			10–20 mm (3/8–13/16 in)	———
Tire size		Front	3.00–21 51P	———
		Rear	4.50–18 70P	———
Tire brand (Front/Rear)			TR8/TR8 (IRC)	———
Cold tire pressure		Front	175 kPa (1.75 kgf/cm^2 , 25 psi)	———
		Rear	125 kPa (1.25 kgf/cm^2 , 18 psi)	———
Minimum tire tread depth			———	3 mm (1/8 in)

TORQUE VALUES

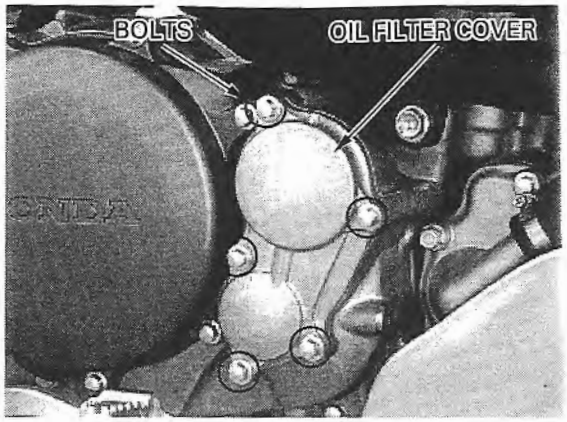
Fuel valve mounting bolt	9 N·m (0.9 kgf·m , 6.5 lbf·ft)
Spark plug	18 N·m (1.8 kgf·m , 13 lbf·ft)
Valve adjust screw lock nut	25 N·m (2.5 kgf·m , 18 lbf·ft)
Valve adjust hole cover bolt	12 N·m (1.2 kgf·m , 9 lbf·ft)
Crankcase oil drain bolt	25 N·m (2.5 kgf·m , 18 lbf·ft)
Down tube oil drain bolt	39 N·m (4.0 kgf·m , 29 lbf·ft)
Oil filter cover bolt	12 N·m (1.2 kgf·m , 9 lbf·ft)
Rear axle nut	93 N·m (9.5 kgf·m , 69 lbf·ft)
Front master cylinder reservoir cover screw	2 N·m (0.2 kgf·m , 1.4 lbf·ft)
Front brake lever adjuster lock nut	6 N·m (0.6 kgf·m , 4.3 lbf·ft)
Rear brake pedal adjuster lock nut	18 N·m (1.8 kgf·m , 13 lbf·ft)
Side stand pivot bolt	see page 3-22
Side stand pivot nut	39 N·m (4.0 kgf·m , 29 lbf·ft)
Spark arrester bolt	12 N·m (1.2 kgf·m , 9 lbf·ft)
Spoke	4 N·m (0.4 kgf·m , 2.9 lbf·ft)
Rim lock	13 N·m (1.3 kgf·m , 9 lbf·ft)

TOOLS

Drive chain tool set	07HMH-MR10103
Spoke wrench	07701-0020300

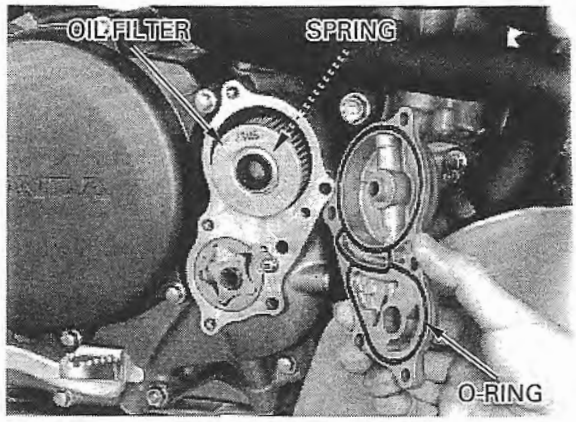
ENGINE OIL FILTER

Drain the engine oil (page 3-10).
Remove the bolts and oil filter cover.



Remove the oil filter and spring.
Remove the O-ring from the oil filter cover.

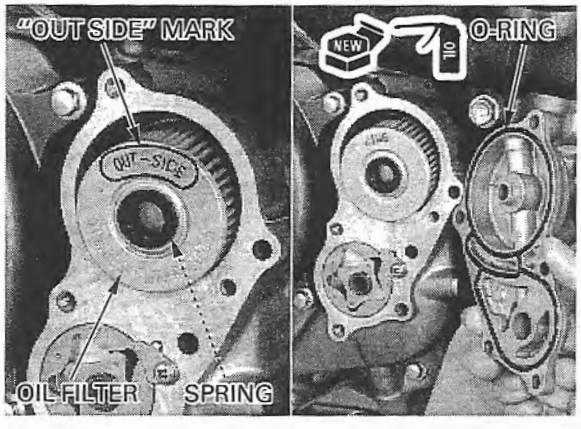
Check the oil filter is in good condition, replace it if necessary.



Apply engine oil to a new O-ring and install it to the oil filter cover.
Install the spring.
Install the oil filter with its "OUT SIDE" mark facing out.

CAUTION:

Installing the oil filter backwards will result in severe engine damage.

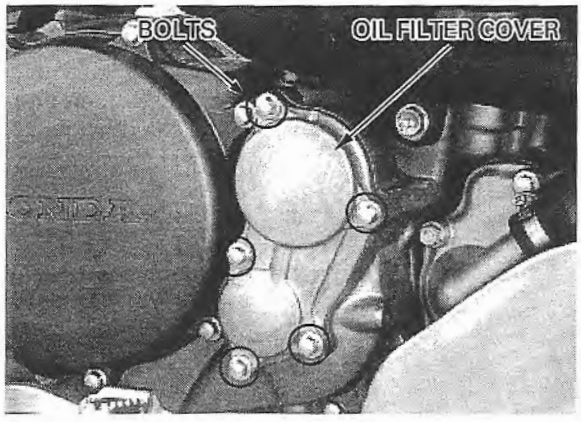


Install the oil filter cover and tighten the bolts to the specified torque.

TORQUE: 12 N·m (1.2 kgf·m , 9 lbf·ft)

Fill to the filler neck with the correct quantity of the recommended engine oil.

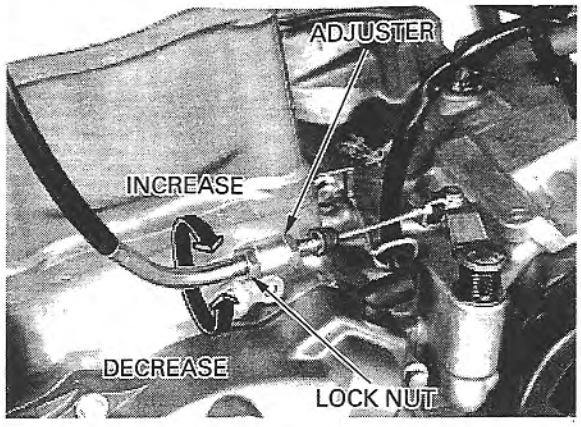
Start the engine and check that there are no oil leaks.
Stop the engine and check the oil level (page 3-10).



Major adjustments are made with the in line cable adjuster located behind the number plate.

Loosen the lock nut and turn the adjuster.
Tighten the lock nut.

If proper free play cannot be obtained using both procedures or the clutch slips during the test ride, disassemble and inspect the clutch (See section 10).



SIDE STAND

Check the side stand spring for damage and/or loss of tension.
Check that the side stand assembly is not bent and that it moves freely.
Lubricate the side stand pivot.

Check that the side stand pivot bolt and nut are tightened to their correct torque values.

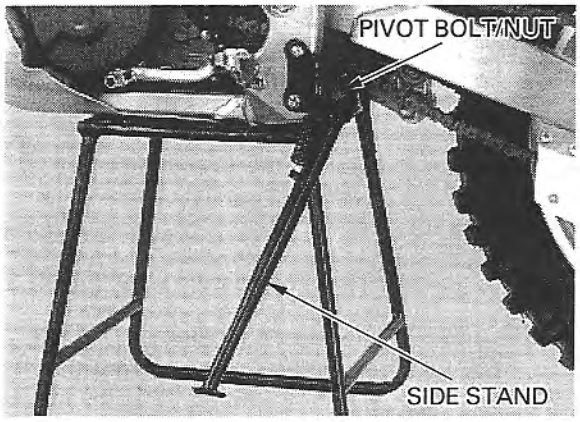
Tighten the pivot bolt to the specified torque.

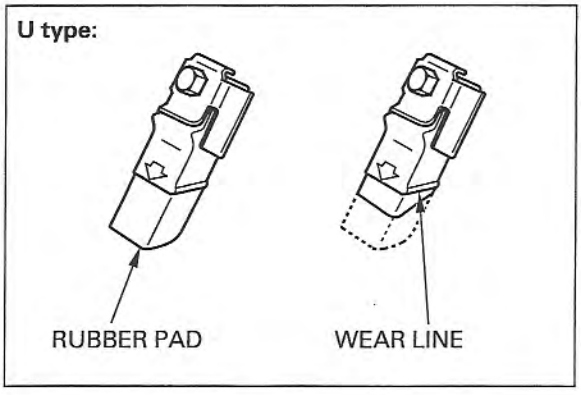
TORQUE: 10 N·m (1.0 kgf·m, 7 lbf·ft)

Then back it off 45° to 90° (1/8 to 1/4) turn.
Tighten the pivot nut to the specified torque.

TORQUE: 39 N·m (4.0 kgf·m , 29 lbf·ft)

U type:
Check the rubber pad for deterioration on wear.
Replace if wear extends to the wear line.



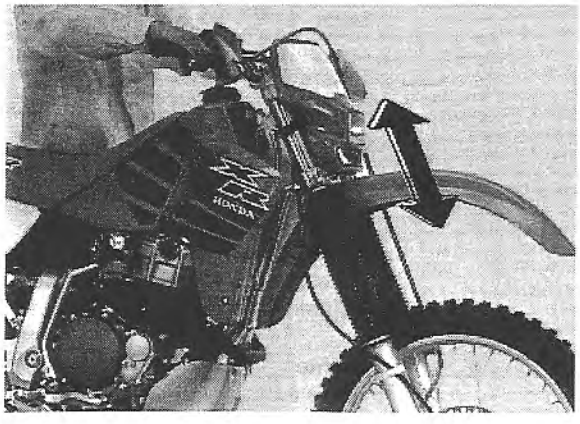


SUSPENSION

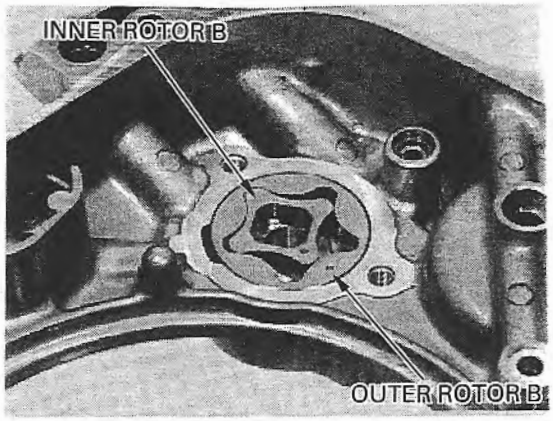
FRONT SUSPENSION INSPECTION

Check the action of the fork by operating the front brakes and compressing the front suspension several times.
Check the entire assembly for signs of leaks, damage or loose fasteners.
Make sure that the dust seals are clean and not packed with mud and dirt.
Remove any dirt that has accumulated on the fork seals.
Replace damaged components which cannot be repaired.
Tighten all nuts and bolts.

Refer to section 14 for fork service.

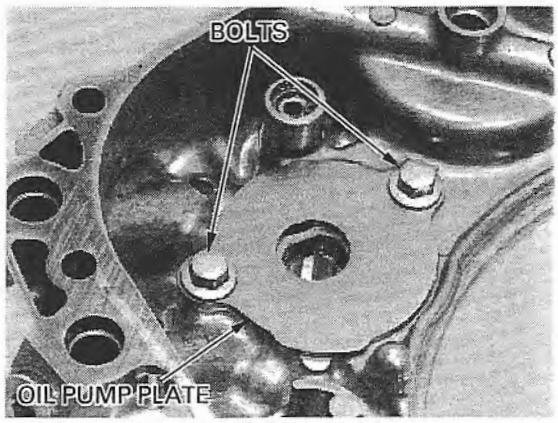


Install the outer rotor B and inner rotor B into the right crankcase cover.



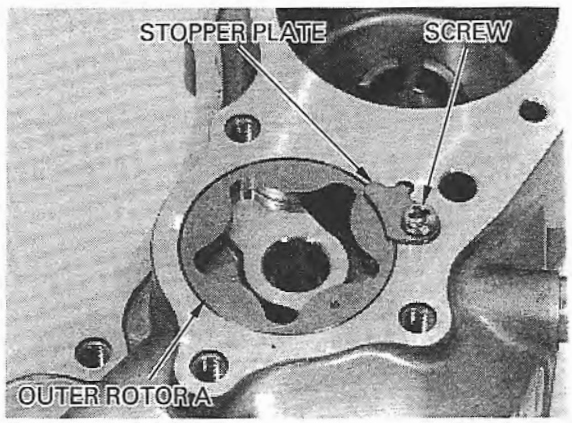
Install the oil pump plate.
Install and tighten the bolts to the specified torque.

TORQUE: 12 N·m (1.2 kgf·m , 9 lbf·ft)



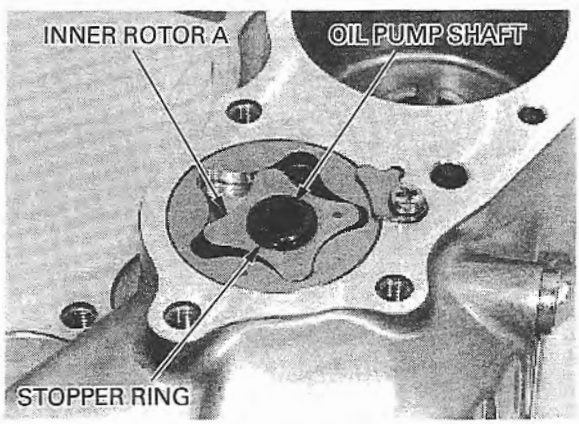
Install the outer rotor A into the right crankcase cover.
Install the outer rotor stopper plate and screw.
Tighten the screw to the specified torque.

TORQUE: 2 N·m (0.2 kgf·m , 1.4 lbf·ft)



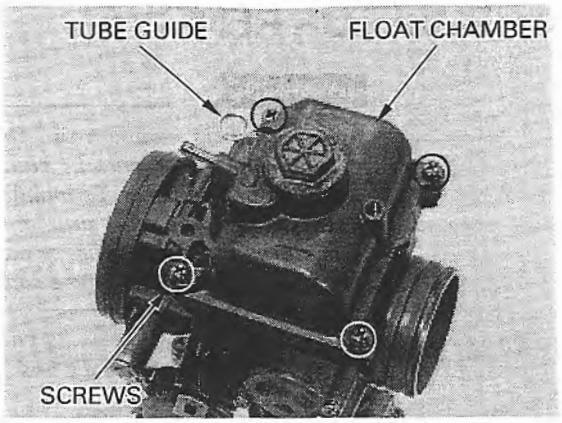
Install the inner rotor A into the outer rotor A.
Install the oil pump shaft through the inside of the right crankcase cover.
Install the stopper ring securely.

Install the oil filter cover (page 3-12).
Install the right crankcase cover (page 10-20).

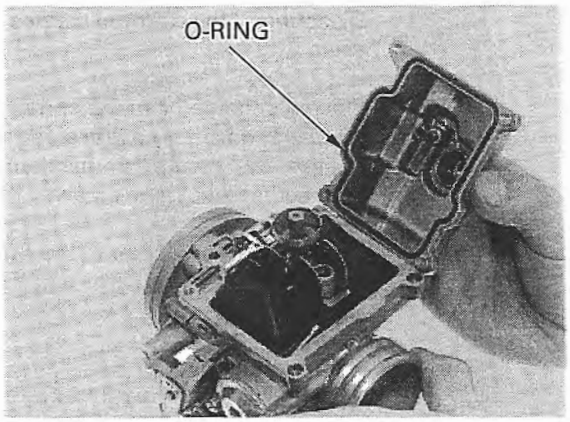


FLOAT AND JETS

Remove the screws, tube guide and float chamber.

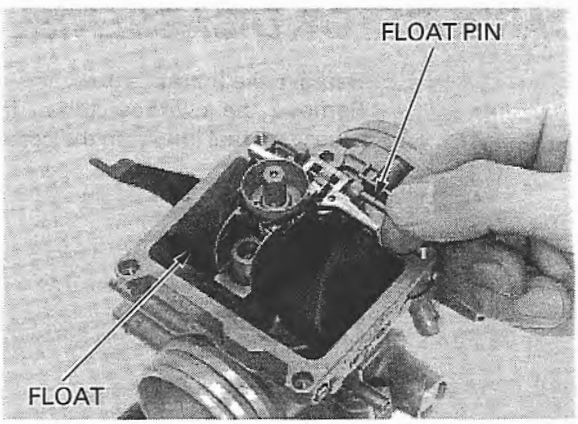


Remove the O-ring from the float chamber.

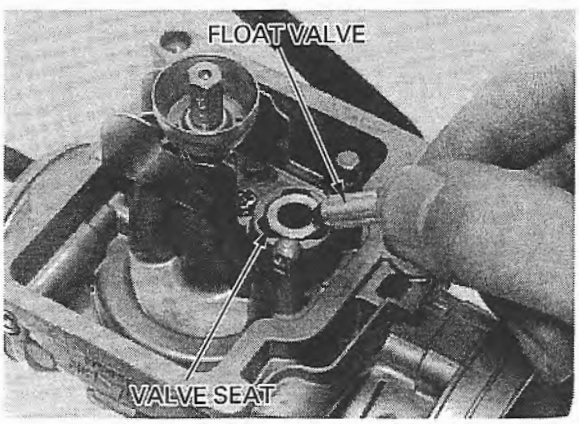


Remove the float pin, float and float valve.

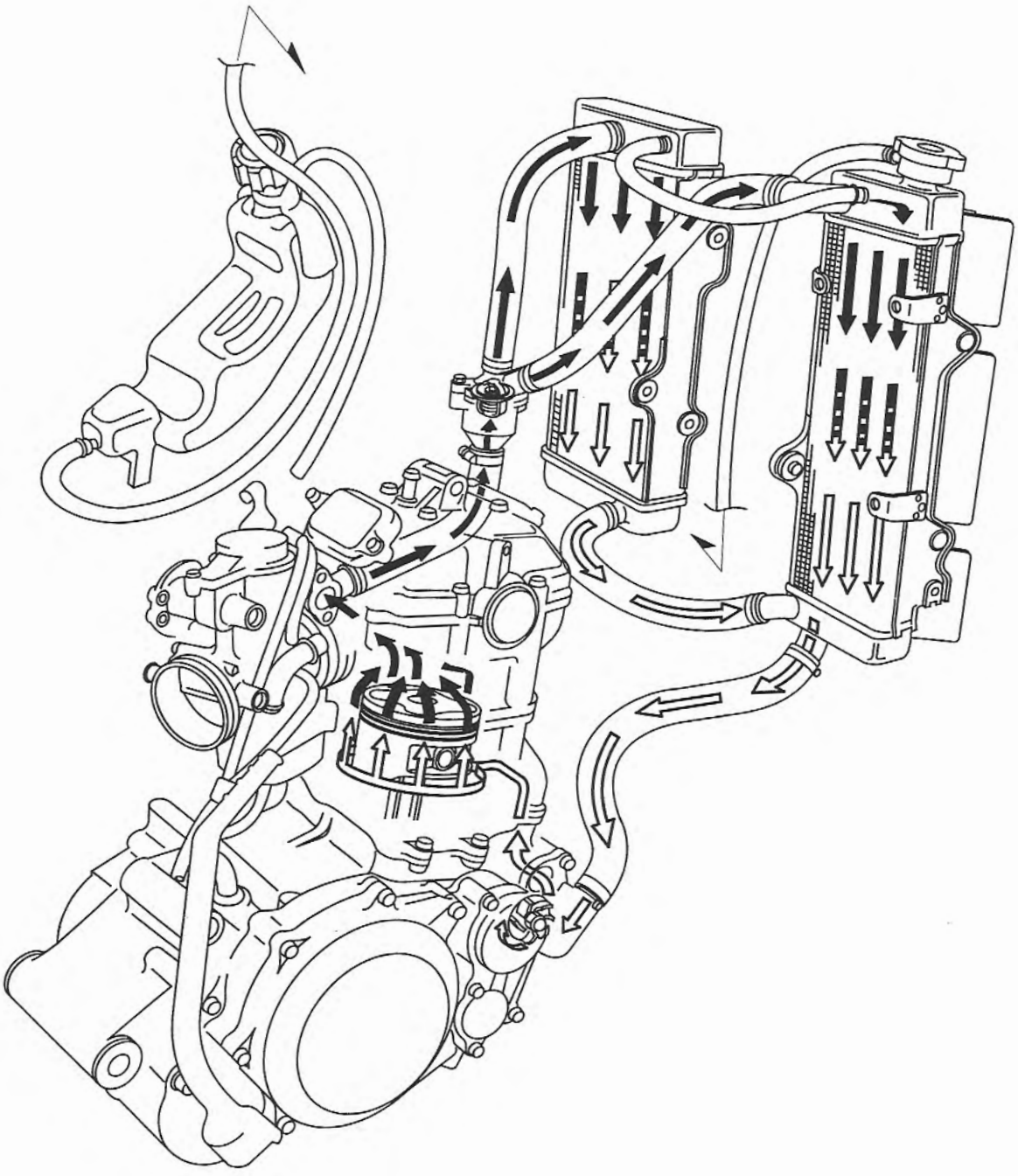
Check the float for damage.



Check the float valve and its seat for grooves, nicks, or contamination.
Check the operation of the float valve.



SYSTEM FLOW PATTERN



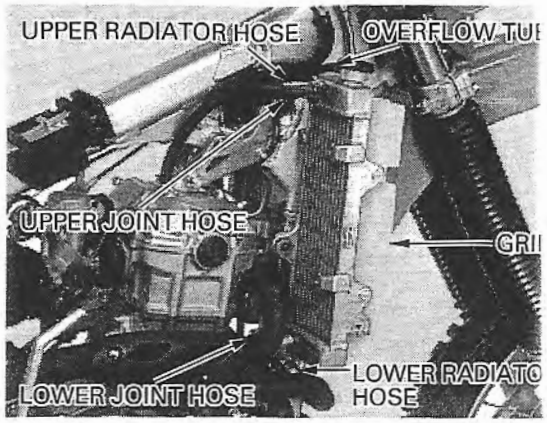
Be careful not to damage the radiator fins.

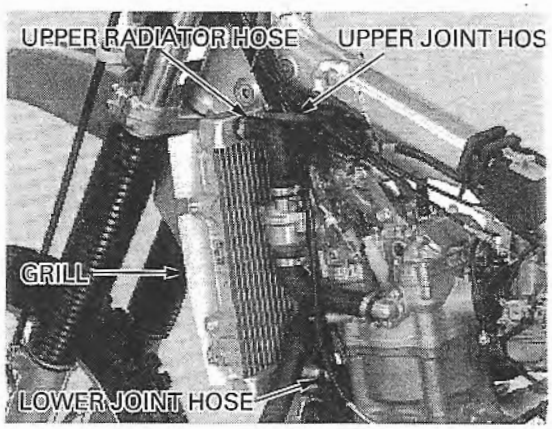
Installation is essentially the reverse order of removal.

Add the recommended coolant mixture up to the filler neck and bleed the air (page 6-5).

After installation, check the radiator and radiator hoses for leaks.

Install the fuel tank (page 2-5).

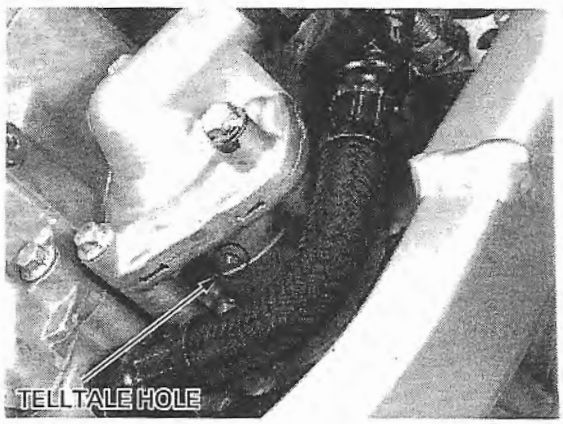




WATER PUMP

MECHANICAL SEAL INSPECTION

Inspect the telltale hole for signs of coolant leakage. If there is leakage, the mechanical seal is defective and replace the water pump as an assembly.

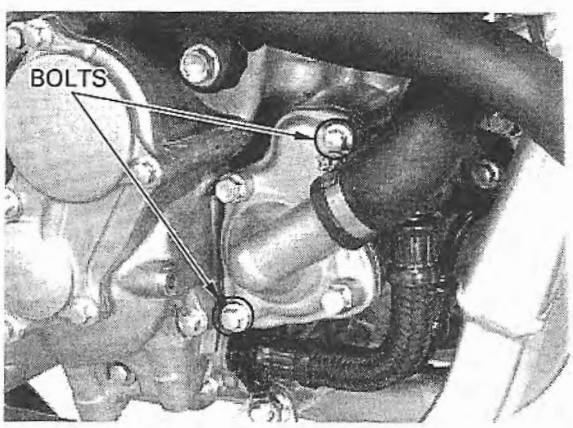


REMOVAL

Drain the coolant (page 6-5).

Do not disassemble the water pump. Replace the pump as an assembly if it is damaged.

Remove the bolts and water pump assembly from the crankcase.

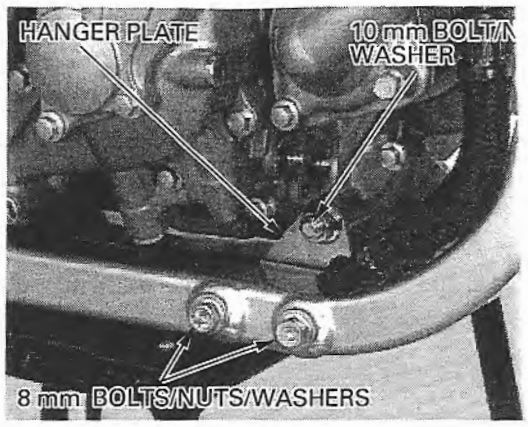


Tighten the lower hanger plate 8 mm nuts to the specified torque.

TORQUE: 26 N·m (2.7 kgf·m , 20 lbf·ft)

Tighten the lower hanger plate 10 mm nut to the specified torque.

TORQUE: 54 N·m (5.5 kgf·m , 40 lbf·ft)

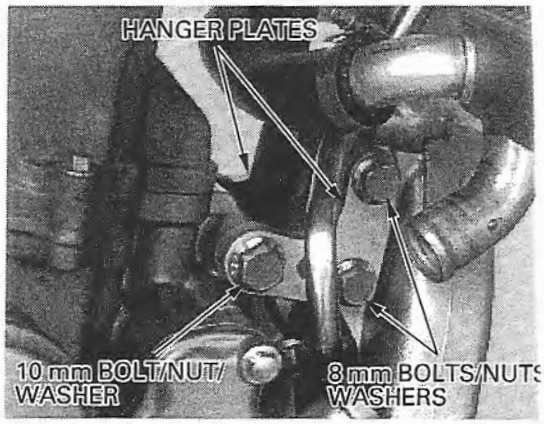


Tighten the front hanger plate 8 mm nuts to the specified torque.

TORQUE: 26 N·m (2.7 kgf·m , 20 lbf·ft)

Tighten the front hanger plate 10 mm nut to the specified torque.

TORQUE: 54 N·m (5.5 kgf·m , 40 lbf·ft)

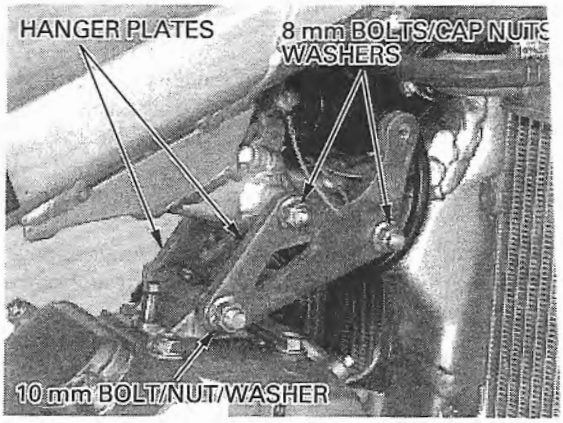


Tighten the upper hanger plate 8 mm cap nuts to the specified torque.

TORQUE: 26 N·m (2.7 kgf·m , 20 lbf·ft)

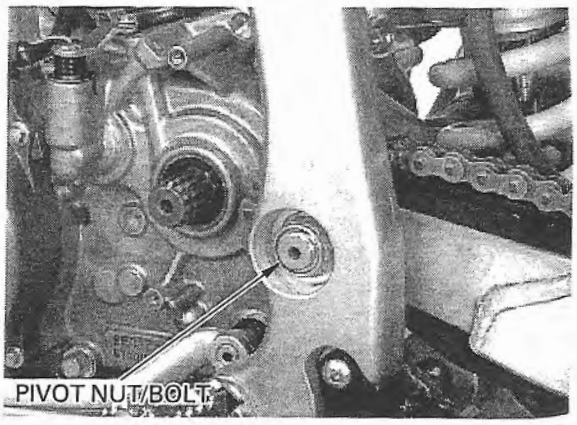
Tighten the upper hanger plate 10 mm nut to the specified torque.

TORQUE: 54 N·m (5.5 kgf·m , 40 lbf·ft)



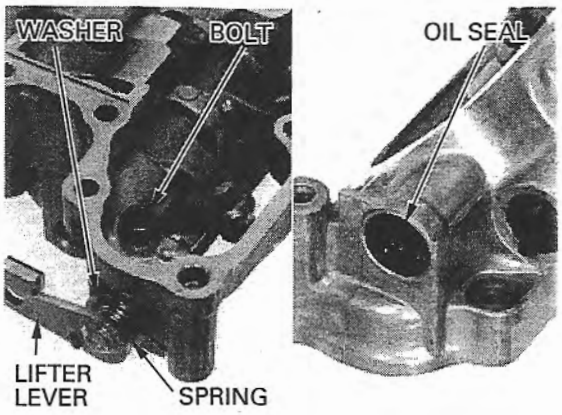
Tighten the swingarm pivot nut to the specified torque.

TORQUE: 108 N·m (11.0 kgf·m , 80 lbf·ft)



CYLINDER HEAD COVER DISASSEMBLY

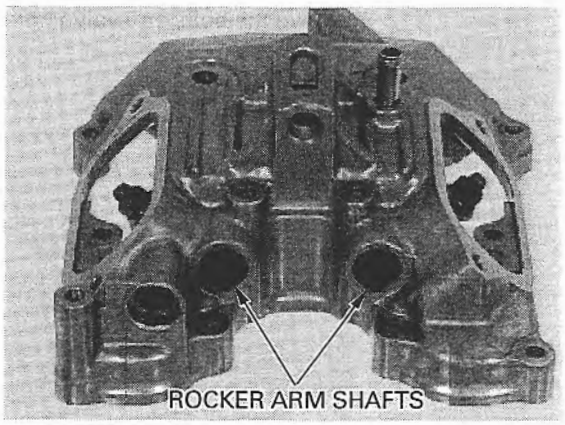
Remove the following:
- Valve lifter lever bolt
- Valve lifter lever
- Spring
- Washer
- Oil seal



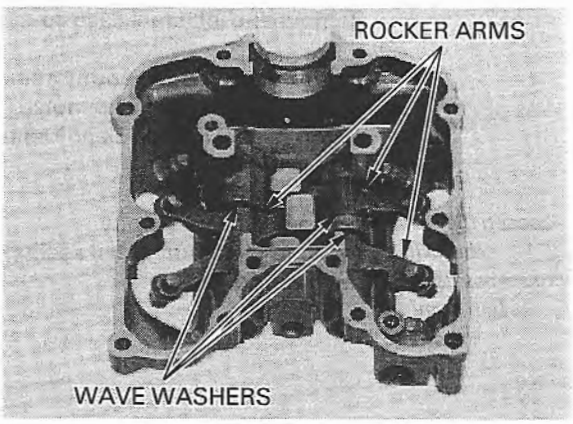
NOTE:

Note the location of all parts during disassembly so you can reinstall the parts in their same positions.

Remove the rocker arm shafts.



Remove the rocker arms and wave washers.



ROCKER ARM INSPECTION

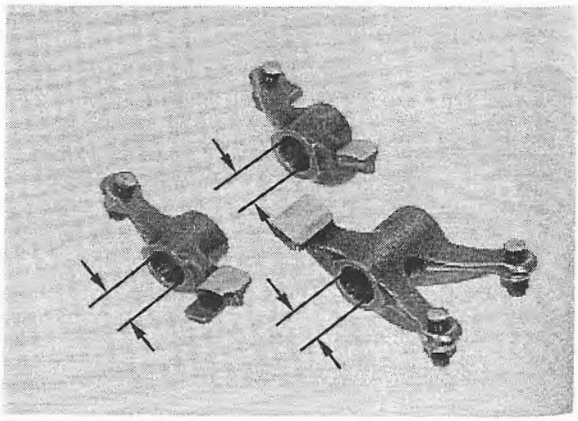
Inspect the rocker arms for wear or damage.

NOTE:

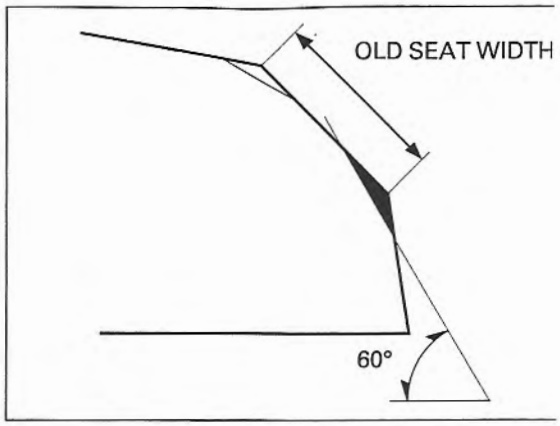
Inspect the cam lobe if the rocker arm sliding surface is worn or damaged.

Measure the I.D. of the rocker arms.

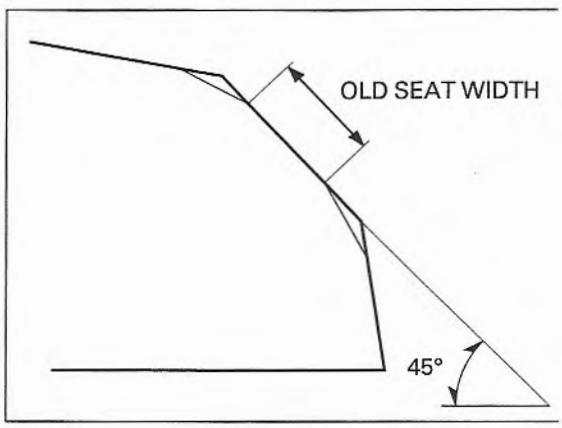
SERVICE LIMIT: 14.05 mm (0.553 in)



Use a 60 degree cutter to remove the bottom 1/4 of the old seat.
Remove the cutter and inspect the area you have refaced.



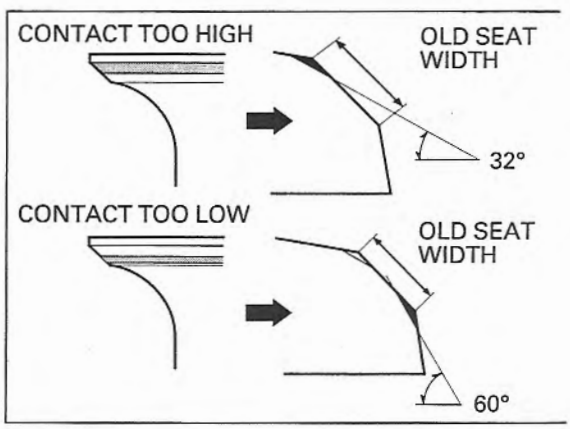
Install a 45 degree finish cutter and cut the seat to the proper width.
Make sure that all pitting and irregularities are removed.
Refinish if necessary.



Apply a thin coat of Prussian Blue to the valve seat.
Press the valve through the valve guide and onto the seat to make a clear pattern.

NOTE:

The location of the valve seat in relation to the valve face is very important for good sealing.



If the contact area is too high on the valve, the seat must be lowered using a 32 degree flat cutter.

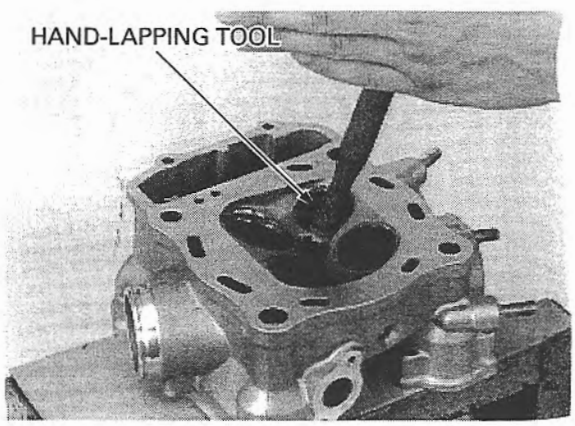
If the contact area is too low on the valve, the seat must be raised using a 60 degree inner cutter.

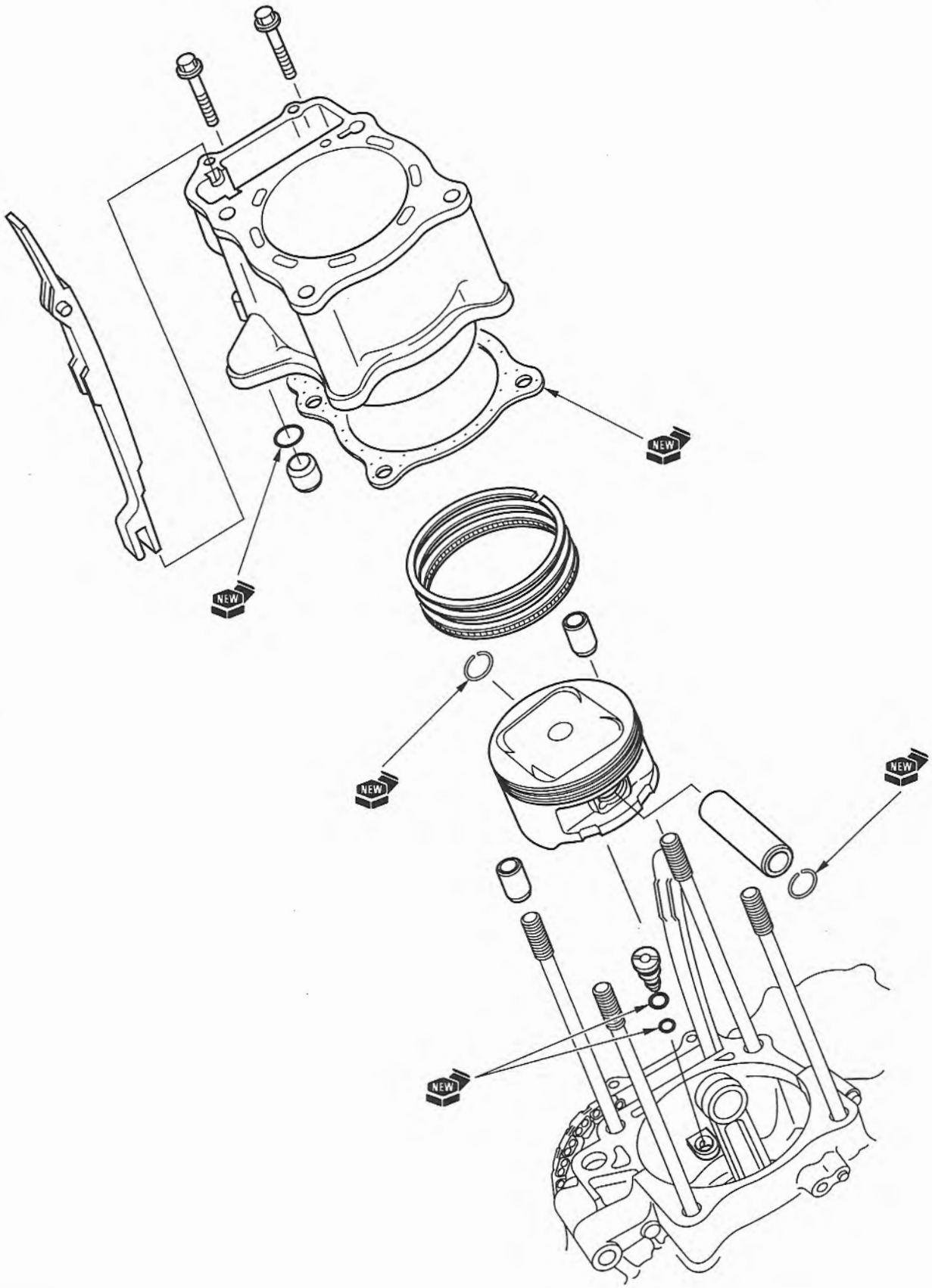
Refinish the seat specifications, using a 45 degree finish cutter.

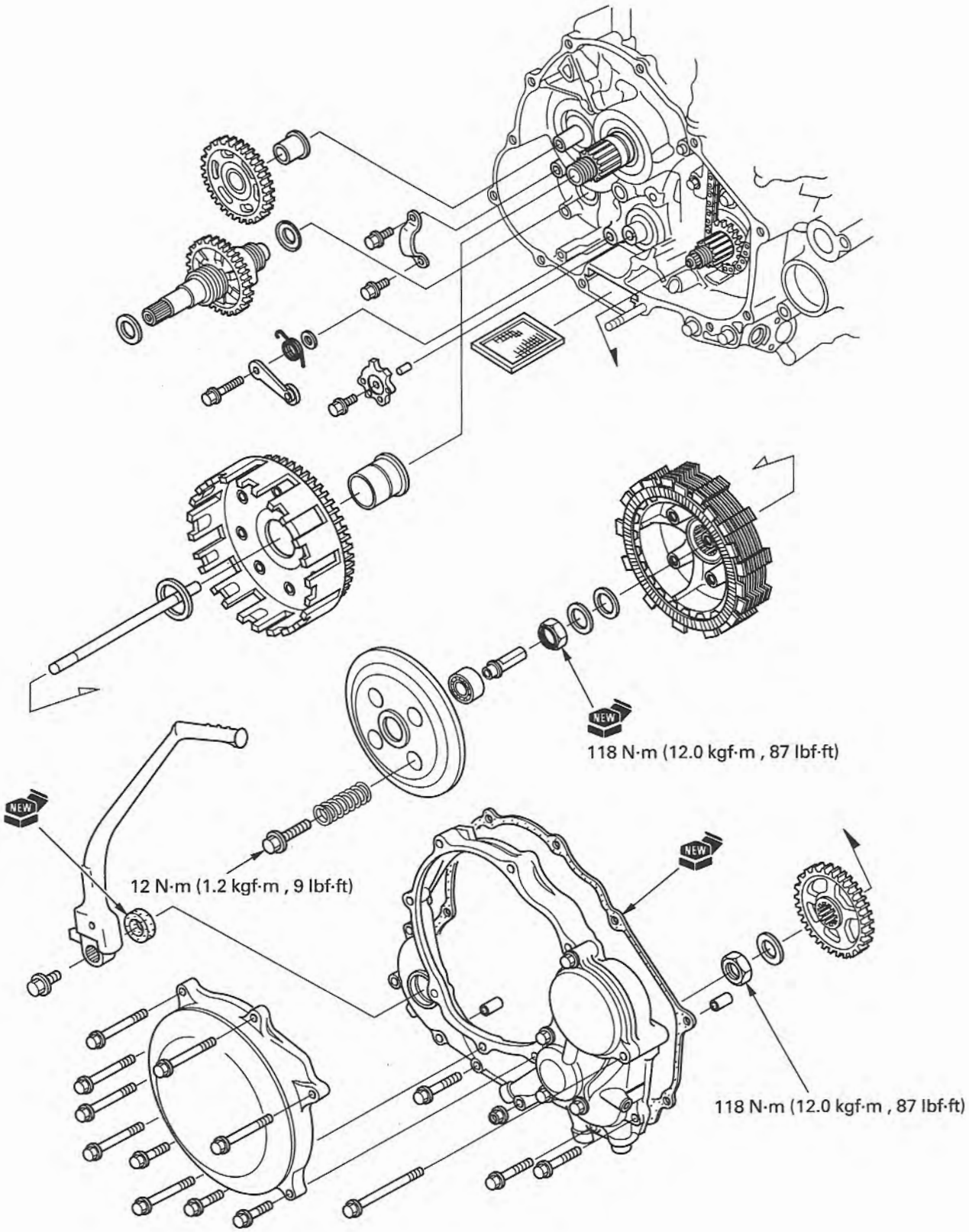
Do not allow lapping compound to enter the guides.

After cutting the seat apply lapping compound to the valve face, and lap the valve using light pressure.

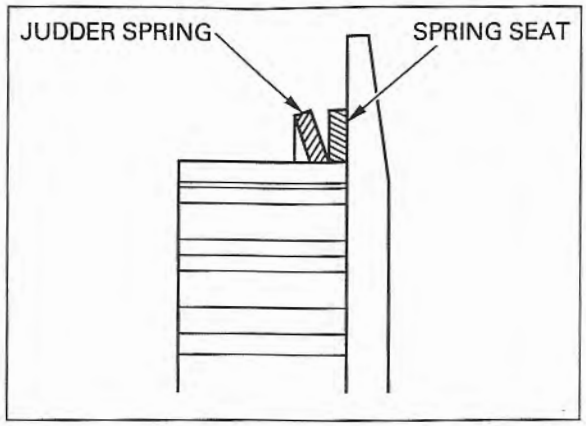
After lapping, wash all residual compound off the cylinder head and valve.




NEW
NEW
NEW
NEW
NEW

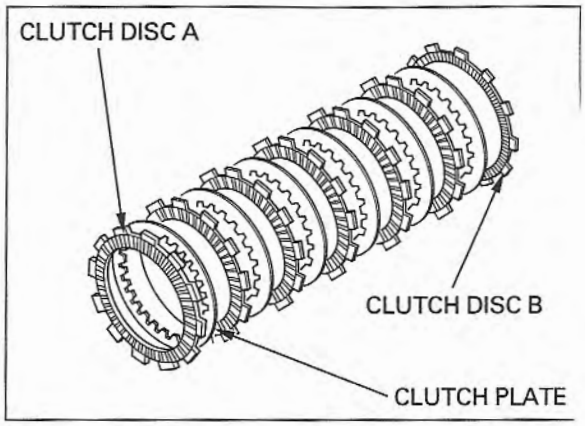

NEW
118 N·m (12.0 kgf·m , 87 lbf·ft)
NEW
12 N·m (1.2 kgf·m , 9 lbf·ft)
NEW
118 N·m (12.0 kgf·m , 87 lbf·ft)

Install the spring seat and judder spring on the clutch center as shown.

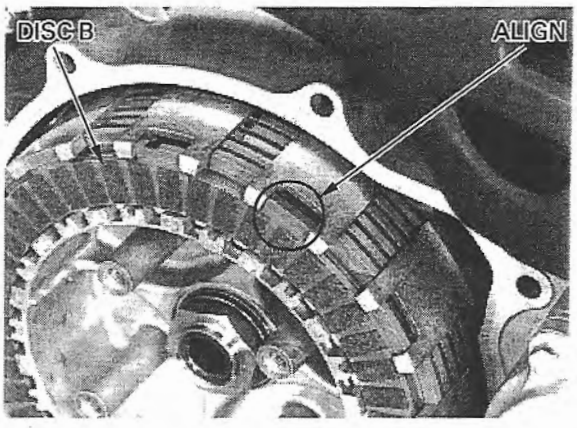


Coat the clutch plates and discs with clean engine oil.

Install the seven friction discs and six clutch plates alternately, starting with the large I.D. disc B.

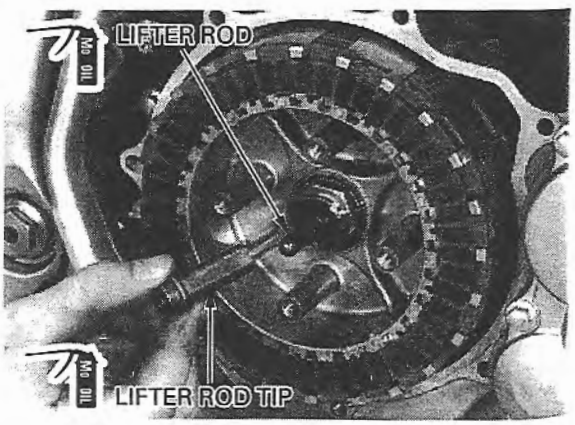


When installing the outside clutch disc A only, align the end grooves in the clutch outer with the tabs of the disc.



Apply molybdenum solution to the clutch lifter rod and lifter rod tip.

Insert the clutch lifter rod and lifter rod tip into the mainshaft.

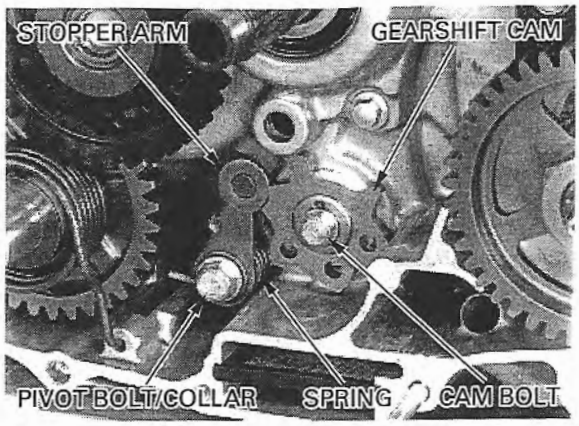


GEARSHIFT CAM

REMOVAL

Remove the right crankcase cover (page 10-11).
Remove the clutch (page 10-3).

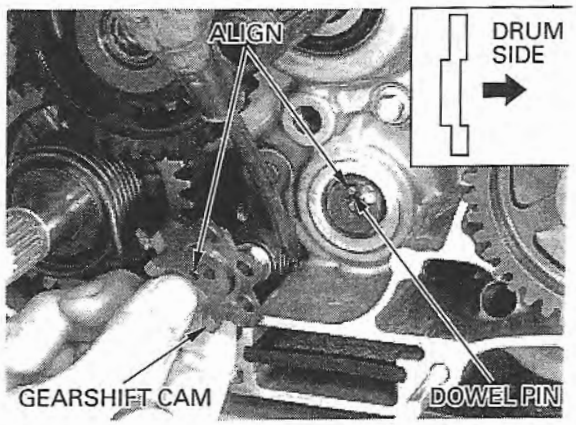
Remove the stopper arm pivot bolt, stopper arm, collar and return spring.
Remove the gearshift cam bolt and gearshift cam.



Remove the dowel pin.

INSTALLATION

Install the dowel pin into the gearshift drum.
Align the hole in the gearshift cam with the dowel pin on the gearshift drum and install the cam plate.



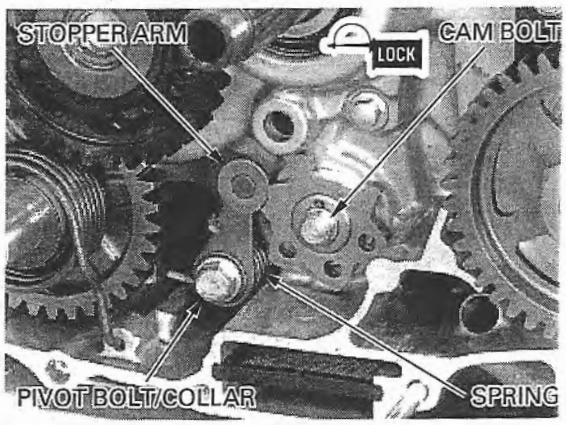
Apply a locking agent on the gearshift cam bolt threads, 6.5±1.0 mm (0.26±0.04 in) from the tip.
Install and tighten the gearshift cam bolt to the specified torque.

TORQUE: 12 N·m (1.2 kgf·m , 9 lbf·ft)

Install the spring, collar, stopper arm and pivot bolt.
Tighten the pivot bolt to the specified torque.

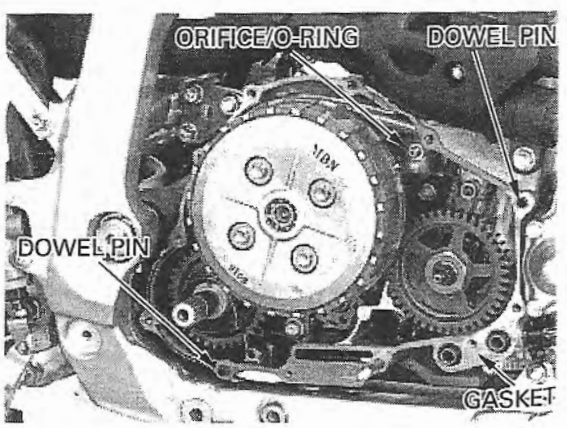
TORQUE: 12 N·m (1.2 kgf·m , 9 lbf·ft)

Install the clutch (page 10-8).
Install the right crankcase cover (see below).



RIGHT CRANKCASE COVER INSTALLATION

Install the dowel pins, new gasket and orifice with new O-ring.



TOOLS

Remover weight	07741-0010201
Attachment, 37 × 40 mm	07746-0010200
Attachment, 42 × 47 mm	07746-0010300
Attachment, 52 × 55 mm	07746-0010400
Attachment, 62 × 68 mm	07746-0010500
Pilot, 20 mm	07746-0040500
Pilot, 25 mm	07746-0040600
Pilot, 40 mm	07746-0040900
Pilot, 16 mm	07746-0041300
Driver	07749-0010000
Assembly collar	07931-KF00100
Thread adapter	07931-KF00200
Shaft puller	07931-ME40000
Bearing remover assembly	07936-KC10500
Bearing remover collets	07936-MK50100
Bearing driver attachment	07GAD-SD40101

TROUBLESHOOTING

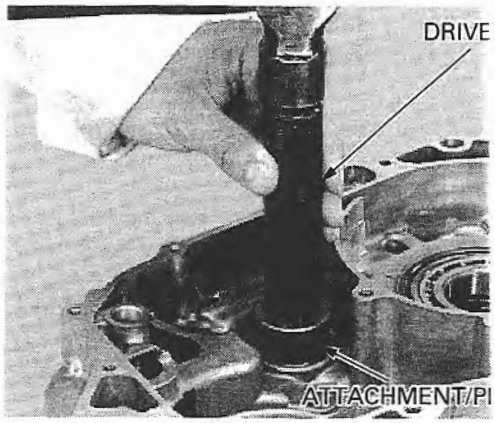
EXCESSIVE NOISE
- Worn connecting bearings
- Bent connecting rod
- Worn crankshaft bearings
- Improper balancer installation

ENGINE VIBRATION
- Improper balancer timing
- Excessive crankshaft runout

Install a new shift drum bearing using the special tools.

TOOLS:

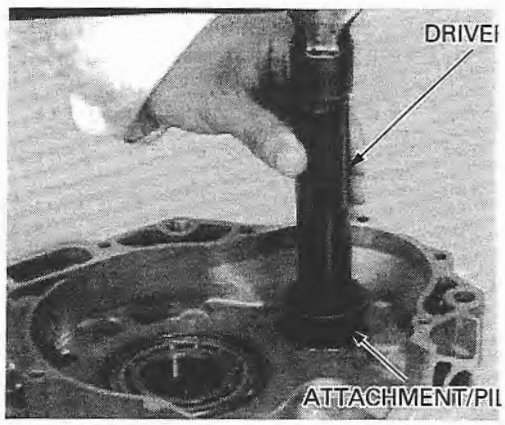
Driver	07749-0010000
Attachment, 37 × 40 mm	07746-0010200
Pilot, 20 mm	07746-0040500



Install a new right balancer bearing using the special tools.

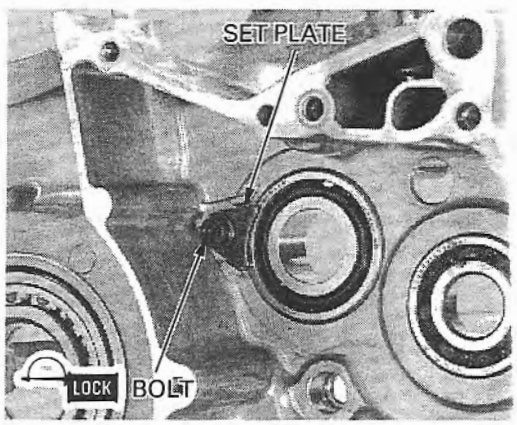
TOOLS:

Driver	07749-0010000
Attachment, 42 × 47 mm	07746-0010300
Pilot, 16 mm	07746-0041300



Clean and apply a locking agent to the mainshaft bearing set plate bolt threads.
Install and tighten the bolt to the specified torque.

TORQUE: 12 N·m (1.2 kgf·m , 9 lbf·ft)

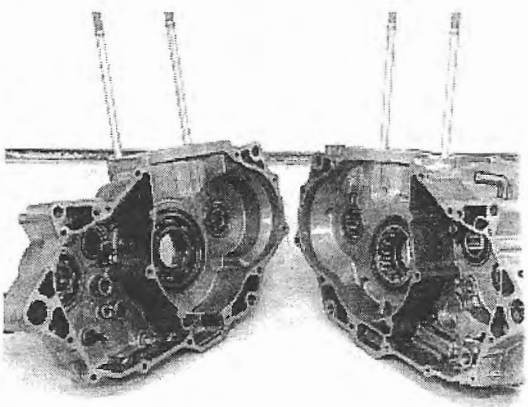


CRANKSHAFT/BALANCER INSTALLATION

Clean both crankcase mating surfaces before assembling and check for wear or damage.

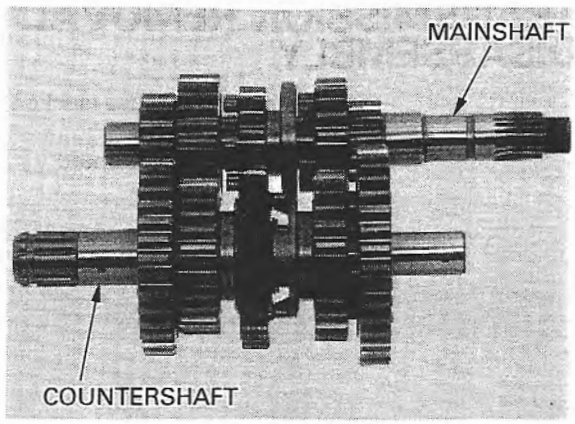
NOTE:

- If there is minor roughness or irregularities on the crankcase mating surfaces, dress them with an oil stone.
- After cleaning, lubricate the crankshaft bearings, balancer bearings and connecting rod big end with clean engine oil.



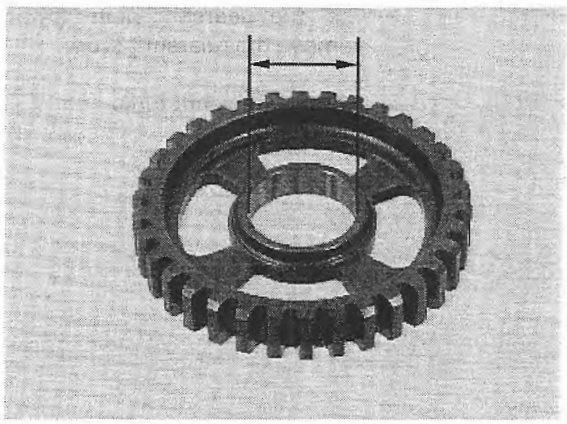
TRANSMISSION INSPECTION

Disassembled the mainshaft and countershaft. Inspect each gear for wear or damage and replace if necessary. Check the gear teeth and engagement dogs for wear or damage. Check the mainshaft and countershaft splines and sliding surfaces for wear or damage.



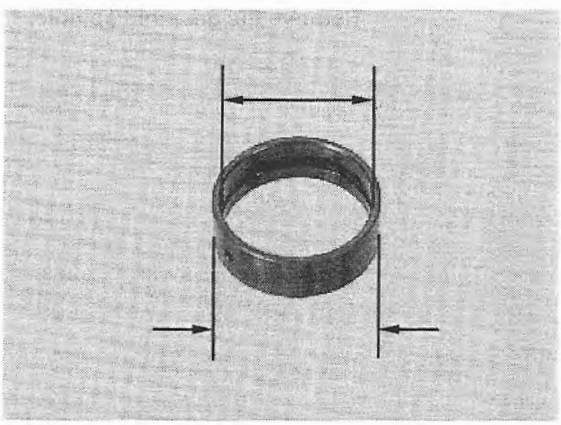
Measure the I.D. of each spinning gear.

SERVICE LIMITS:
M4: 28.04 mm (1.104 in)
M5: 28.04 mm (1.104 in)
C1: 23.04 mm (0.907 in)
C2: 28.04 mm (1.104 in)
C3: 31.05 mm (1.222 in)



Measure the I.D. and O.D. of the gear bushings.

SERVICE LIMITS:
I.D. : M4: 25.02 mm (0.985 in)
C1: 20.04 mm (0.789 in)
C2: 25.04 mm (0.986 in)
C3: 28.04 mm (1.104 in)
O.D. : M4: 27.93 mm (1.100 in)
M5: 27.93 mm (1.100 in)
C1: 22.93 mm (0.903 in)
C2: 27.93 mm (1.100 in)
C3: 30.92 mm (1.217 in)

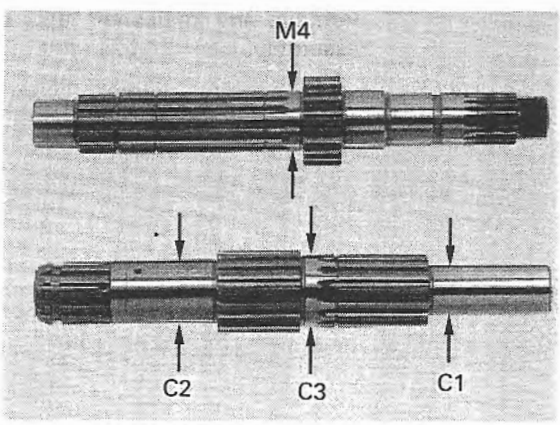


Calculate the clearances between the gears and bushings.

SERVICE LIMITS:
M4: 0.10 mm (0.004 in)
M5: 0.10 mm (0.004 in)
C1: 0.10 mm (0.004 in)
C2: 0.10 mm (0.004 in)
C3: 0.13 mm (0.005 in)

Measure the O.D. of the mainshaft and countershaft in the locations shown.

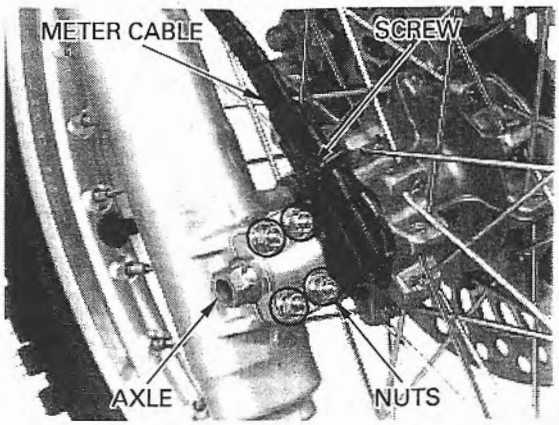
SERVICE LIMITS:
M4 bushing: 24.94 mm (0.982 in)
C1 bushing: 19.94 mm (0.785 in)
C2 bushing: 24.95 mm (0.982 in)
C3 bushing: 27.93 mm (1.100 in)



Calculate the clearances between the shafts and bushings.

SERVICE LIMITS:
M4 bushing: 0.06 mm (0.002 in)
C1 bushing: 0.06 mm (0.002 in)
C2 bushing: 0.06 mm (0.002 in)
C3 bushing: 0.06 mm (0.002 in)

FRONT WHEEL



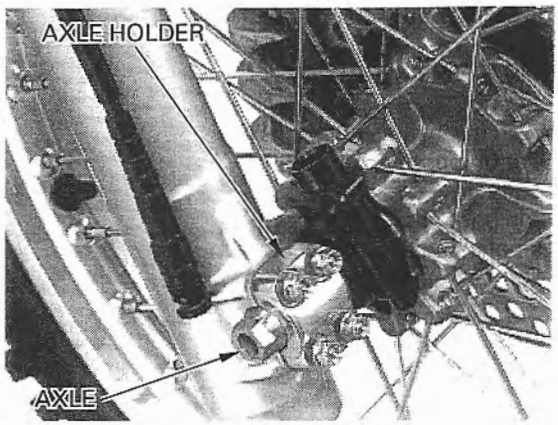
⚠WARNING

A contaminated brake disc or pad reduces stopping power. Discard contaminated pads and clean a contaminated disc with a high quality brake degreasing agent.

REMOVAL

Raise the front wheel off the ground by placing a work stand under the engine.

Remove the screw and disconnect the speedometer cable from the speedometer gear box.
Loosen the front axle holder nuts.

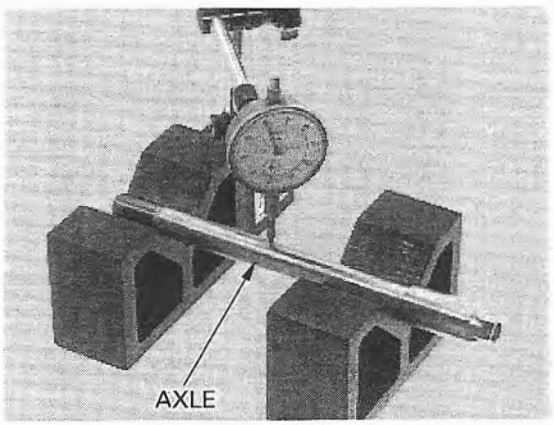


Remove the front axle and front wheel.

NOTE:

Do not depress the brake lever after the front wheel is removed. The caliper piston will move out and make reassembly difficult.

INSPECTION

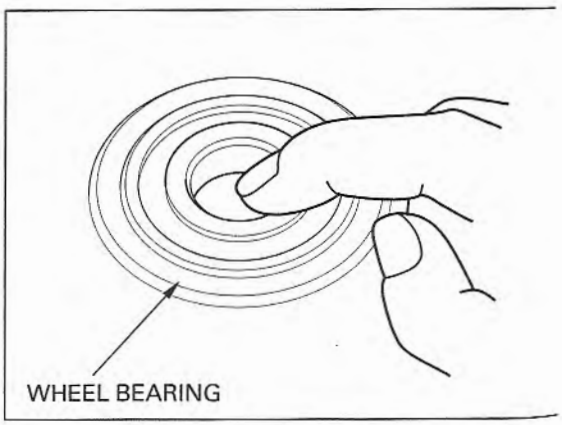


AXLE
Set the axle in V-blocks and measure the runout.
Turn the axle and measure the runout using a dial indicator.
Actual runout is 1/2 the total indicator reading.

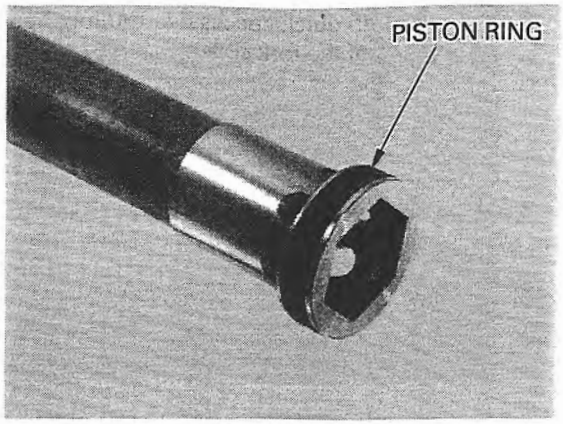
SERVICE LIMIT: 0.2 mm (0.01 in)

WHEEL BEARING
Turn the inner race of each bearing with your finger.
The bearings should turn smoothly and quietly.
Also check that the bearing outer race fits tightly in the hub.

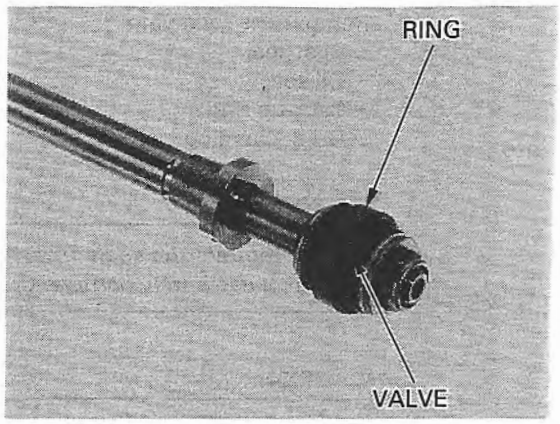
Remove and discard the bearings if the races do not turn smoothly and quietly, or if they fit loosely in the hub.



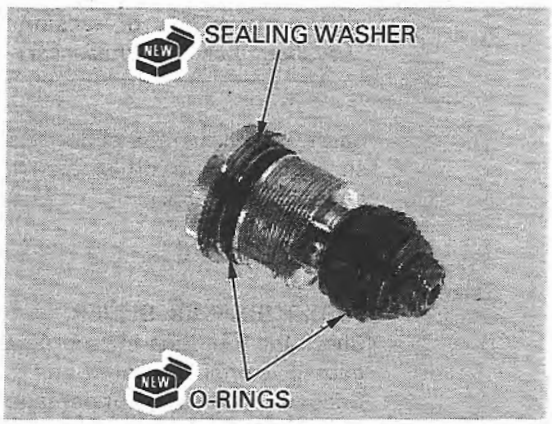
FORK DAMPER
Check the piston ring for wear or damage.



PISTON ROD
Check the ring and valve of the piston rod for damage.
Replace the piston rod assembly if there is abnormal wear or damage.

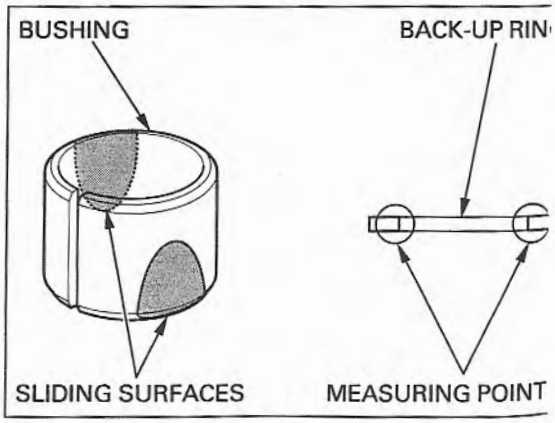


FORK CENTER BOLT
Check the fork center bolt for damage.
Replace the O-rings and sealing washer with new ones.



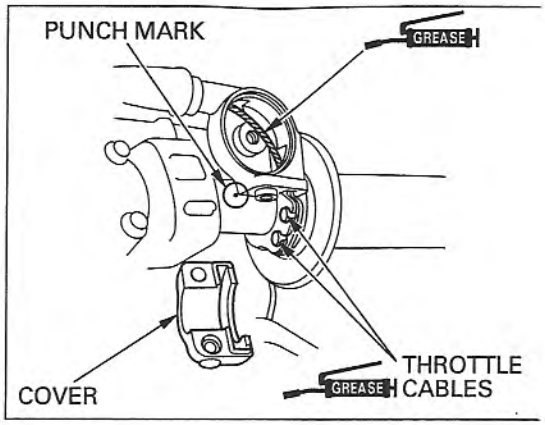
SLIDER BUSHING/GUIDE BUSHING/BACK-UP RING
Check the bushings for excessive wear or scratches. If the coating worn away so that copper appears from edge to edge, replace the slider bushing.
Replace the back-up ring if there is distortion at the points shown.

Remove any metal powder from the slider and guide bushings with a nylon brush and fork oil.



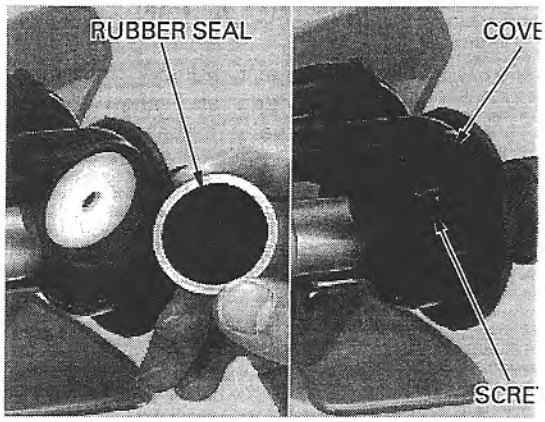
Apply grease to the sliding area of the throttle cable end and cable roller sliding area.
Connect the throttle cable to the throttle grip.

Install the throttle housing cover.
Align the sprit line of the throttle housing with the punch mark on the handlebar.
Tighten the forward screw first, then tighten the rear screw.



Apply grease to the sliding area of the cable roller and insert it into the throttle housing.

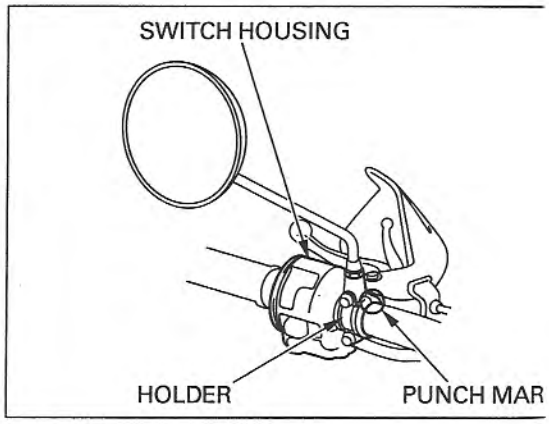
Check the rubber seal for fatigue or damage.
Install the throttle cable roller cover and tighten the screw.



Install the left handlebar switch housing onto the handlebar, aligning the locating pin with the hole in the handlebar.
Install the screws and tighten the forward screw first, then tighten the rear screw.

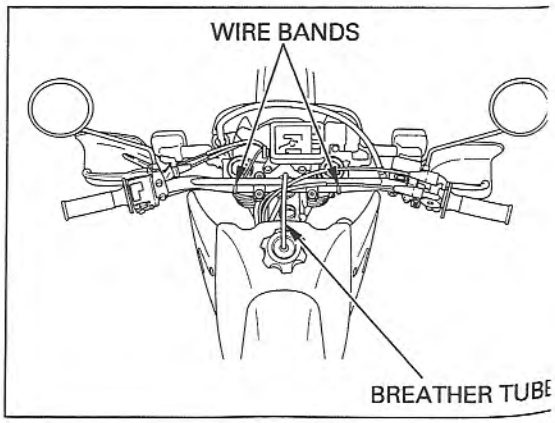
Install the clutch lever bracket and holder.
Align its slit with the punch mark on the handlebar and tighten the upper bolt first, the tighten the lower bolt.

TORQUE: 10 N·m (1.0 kgf·m , 7 lbf·ft)



Secure the wires with the wire bands.
Install the fuel tank breather tube into the steering stem.

Adjust the throttle grip free play (page 3-5).



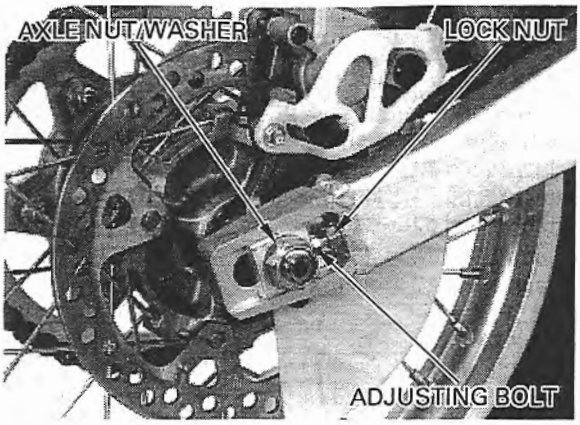
REAR WHEEL

REMOVAL

Raise the rear wheel off the ground by placing a work-stand under the engine.

Remove the axle nut and washer.

Loosen the drive chain adjuster lock nut and turn the adjusting bolt counterclockwise fully.
Push the rear wheel forward to derail the drive chain from the driven sprocket.

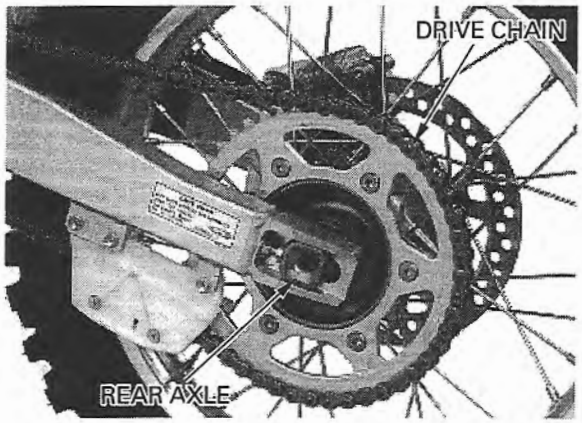


Be careful not to damage the brake pads with the disc.

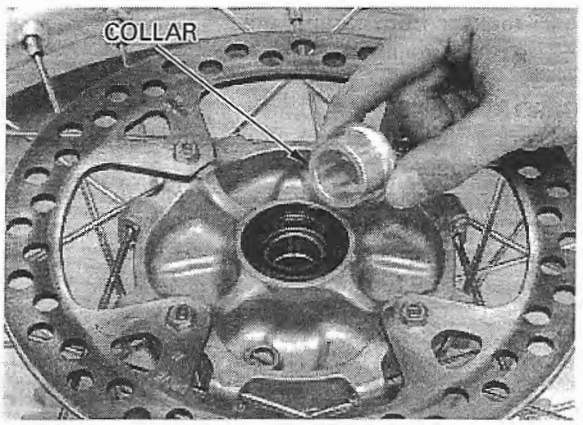
Remove the axle from the left side and remove the rear wheel.

NOTE:

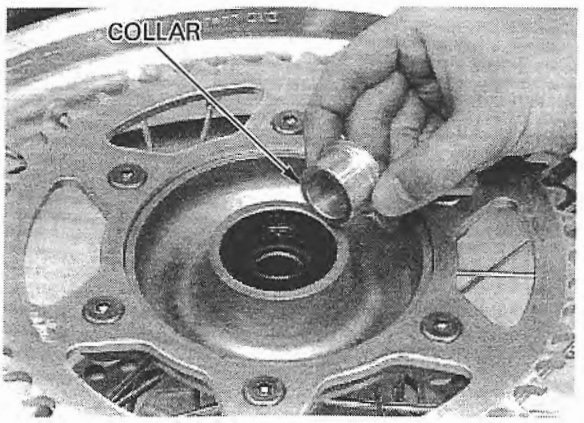
Do not depress the brake pedal after the rear wheel is removed. The caliper piston will move out and make reassembly difficult.



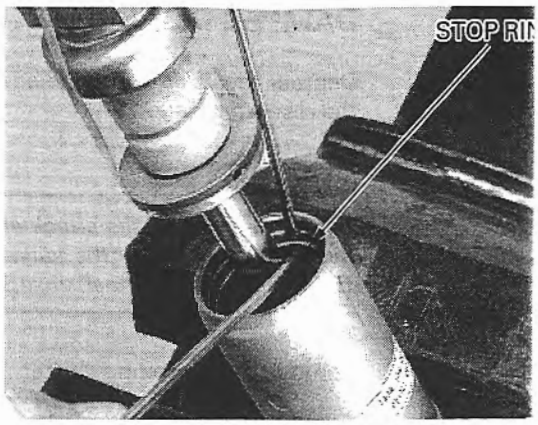
Remove the right side collar.



Remove the left side collar.



To remove the stop ring, first push one end of the stop ring out of its groove, then slip the second screwdriver between the stop ring and the damper case to act as a ramp.
Now, use the other screwdriver to pull the stop ring completely out.



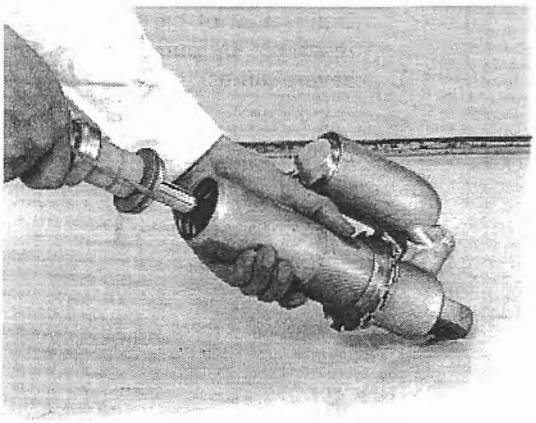
NOTE:

Check the stop ring groove for burrs.
Remove any burrs with fine emery cloth before pulling the damper rod out of the case.

CAUTION:

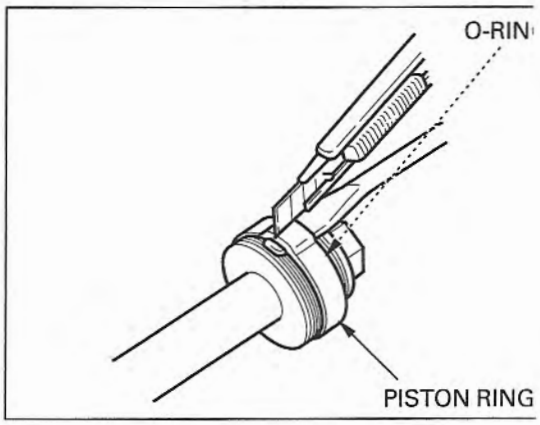
Burrs will damage the damper rod piston ring.

Carefully pull the damper rod assembly out of the damper case.



PISTON RING REPLACEMENT

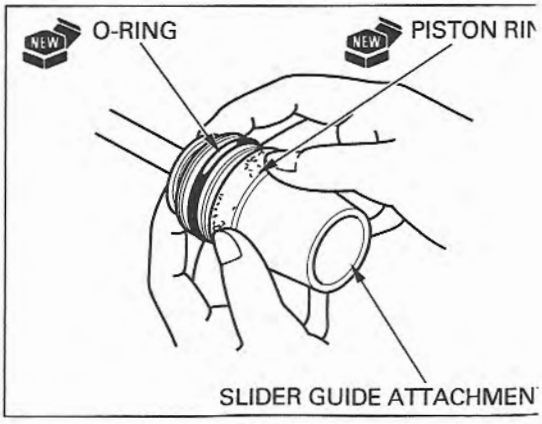
Inspect the piston ring.
If the piston ring is damaged, cut the piston ring and replace the piston ring and O-ring under the piston ring with a new one.



Place the slider guide attachment over the piston and install a new O-ring and piston ring onto place with your finger.

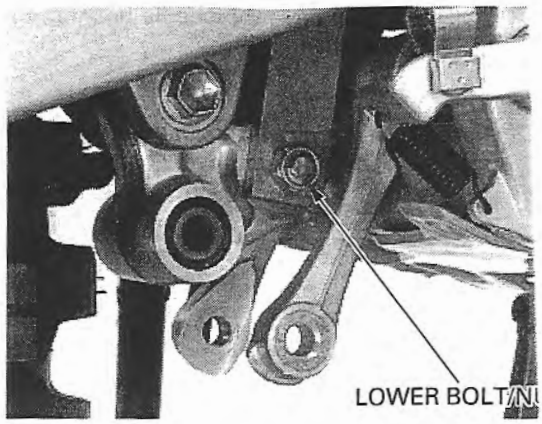
TOOL:
Slider guide attachment 07974-KA50102

Compress the piston ring against the ring groove, and seat the piston ring into the ring groove.



Install the lower mounting bolt aligning the cut out of the bolt with the stopper on the shock absorber lower mount.
Install and tighten the lower mounting nut.

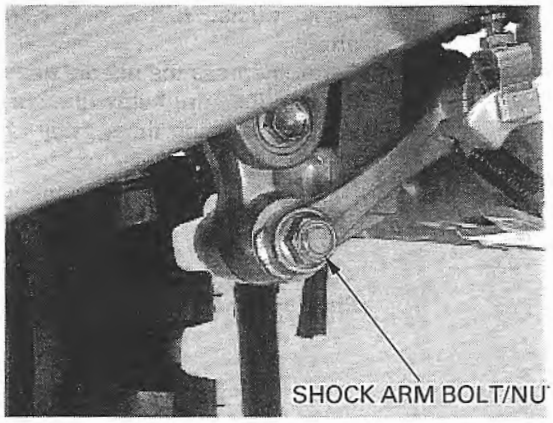
TORQUE: 44 N·m (4.5 kgf·m , 33 lbf·ft)



Install and tighten the shock link-to-shock arm bolt/nut.

TORQUE: 69 N·m (7.0 kgf·m , 51 lbf·ft)

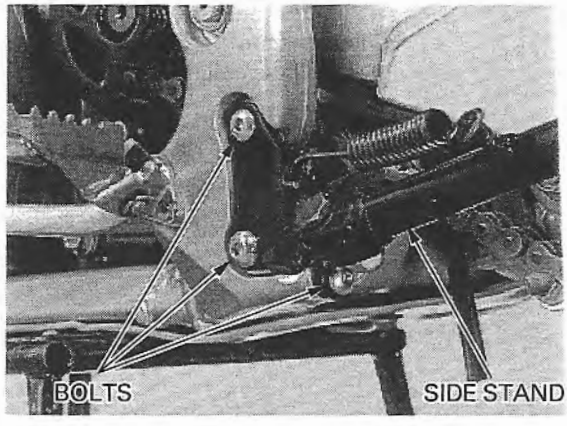
Install the sub-frame (page 2-7).
Install the seat (page 2-2).



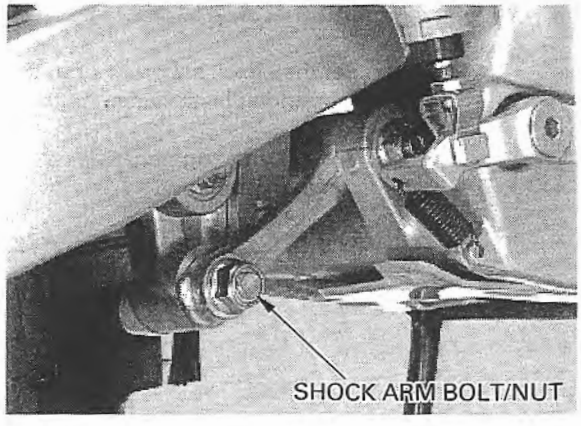
SHOCK LINKAGE

REMOVAL

Remove the side stand mounting bolts and side stand.



Remove the shock arm bolt/nut (shock link side).

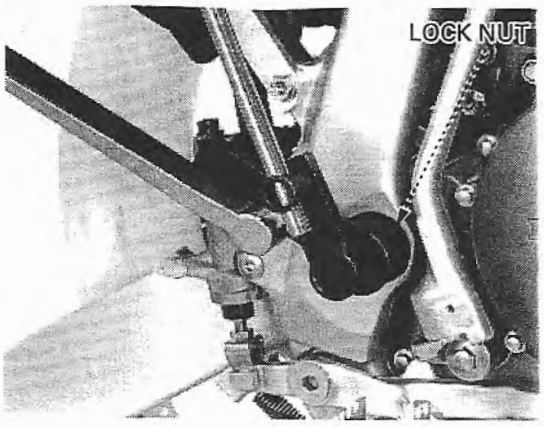


Install and tighten the lock nut to the specified torque.

TOOL:
Lock nut wrench 07KMA-KAB0100

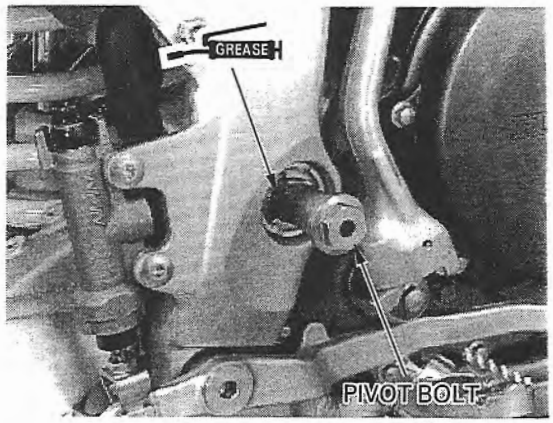
TORQUE: 64 N·m (6.5 kgf·m , 47 lbf·ft)

Remove the swingarm pivot shaft.



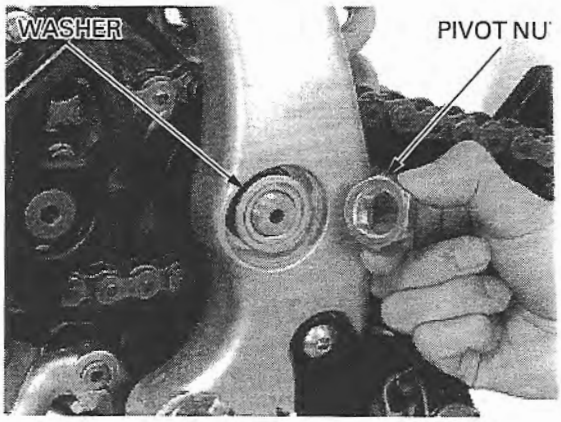
Apply thin coat of grease to the swingarm pivot bolt sliding surface.

Install the swingarm pivot bolt from the right side.

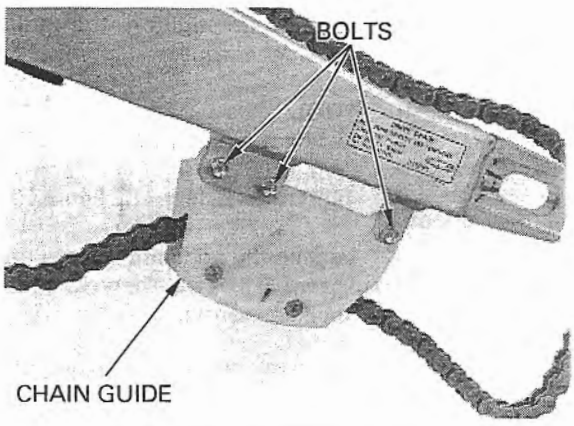


Install the washer and tighten the swingarm pivot nut to the specified torque.

TORQUE: 108 N·m (11.0 kgf·m , 80 lbf·ft)



Install the drive chain guide.
Install and tighten the bolts securely.



DISASSEMBLY

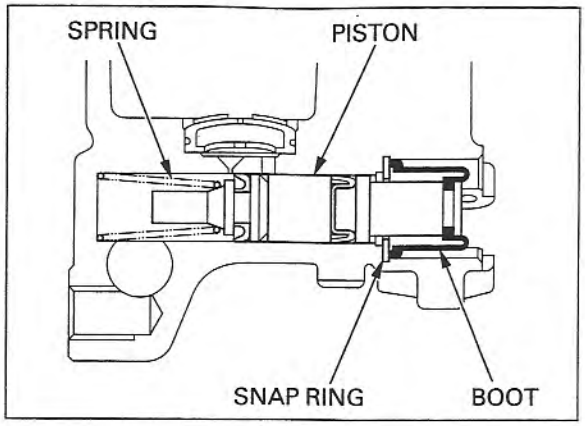
Remove the piston boot from the master piston and cylinder.

Remove the snap ring from the master cylinder body using a special tool as shown.

TOOL:
Snap ring pliers 07914-SA50001

Remove the master piston and spring.

Clean the inside of the cylinder and reservoir with clean brake fluid.



INSPECTION

Check the piston cups for wear, deterioration or damage.

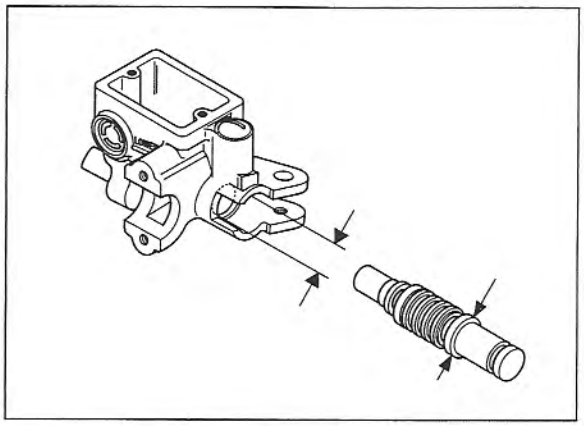
Check the master cylinder and piston for scoring or damage.

Measure the master cylinder I.D.

SERVICE LIMIT: 12.76 mm (0.502 in)

Measure the master piston O.D.

SERVICE LIMIT: 12.64 mm (0.498 in)



ASSEMBLY

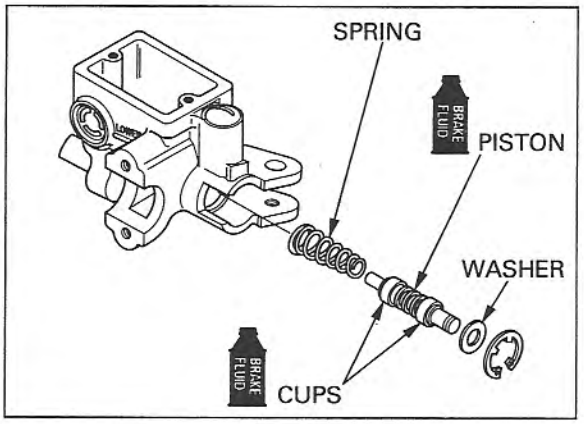
CAUTION:

Keep the piston, cups, spring, snap ring and boot as a set; do not substitute individual parts.

Coat all parts with clean brake fluid before assembly.
Dip the piston in brake fluid.
Install the spring to the piston.
Install the piston assembly into the master cylinder.

CAUTION:

When installing the cups, do not allow the lips to turn inside out.



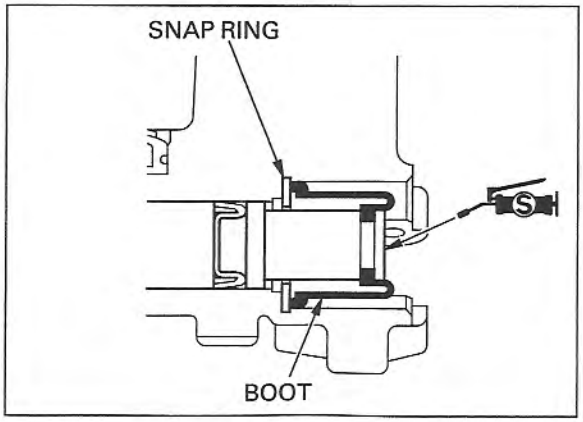
Install the snap ring using a special tool.

CAUTION:

Be certain the snap ring is firmly seated in the groove.

TOOL:
Snap ring pliers 07914-SA50001

Apply silicone grease to the inside of the boot.
Install the boot to the master cylinder.



Install the brake pad retainer onto the caliper bracket.

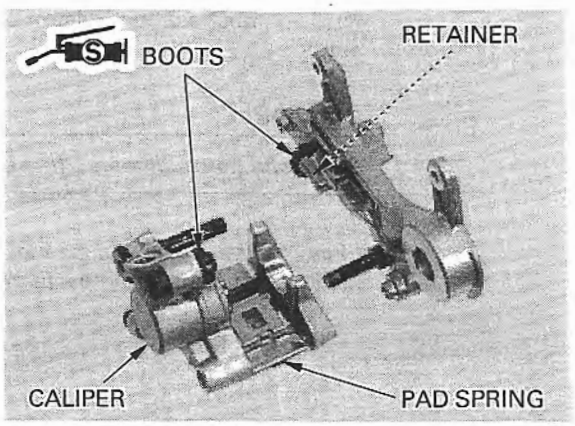
Note the installation direction of the pad spring.

Install the pad spring into the caliper body.

Replace the caliper and bracket pin boots if it is wear, deterioration or damage.
Apply silicone grease to the boot inside then install them.

When assembling the caliper and bracket, set the boot into the slide pin groove.

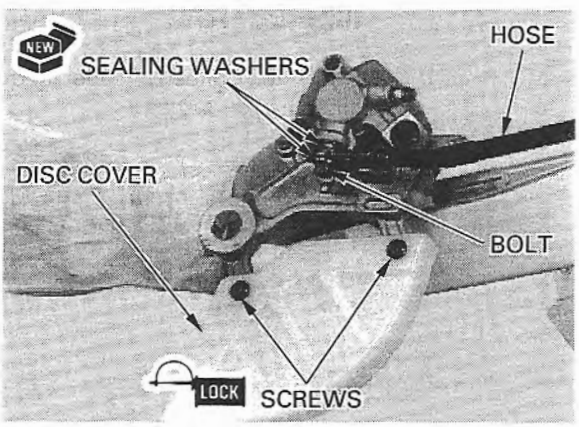
Assemble the caliper and bracket.



Clean the disc cover screw threads and apply a locking agent.
Install the brake disc cover and tighten the screw to the specified torque.

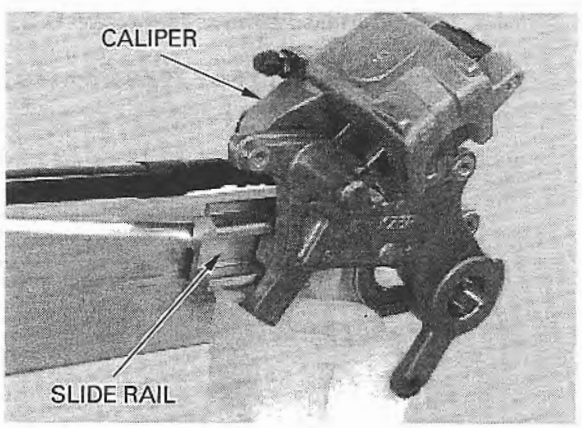
TORQUE: 7 N·m (0.7 kgf·m , 5.1 lbf·ft)

Temporarily install the brake hose eyelet to the caliper body with new sealing washers and oil bolt.



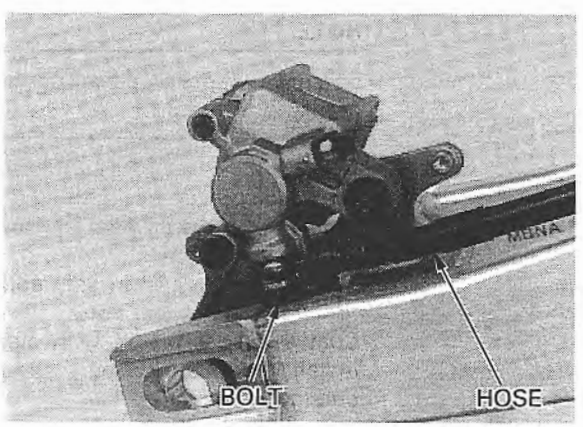
INSTALLATION

Install the caliper/bracket assembly onto the swingarm by aligning the bracket tab with the slide rail on the swingarm.



Push the brake hose eyelet to the stopper on the caliper, then tighten the oil bolt to the specified torque.

TORQUE: 34 N·m (3.5 kgf·m , 25 lbf·ft)



Remove the fuel tank (page 2-5).

With the ignition coil primary wire connected, connect the peak voltage adapter to the ignition coil.

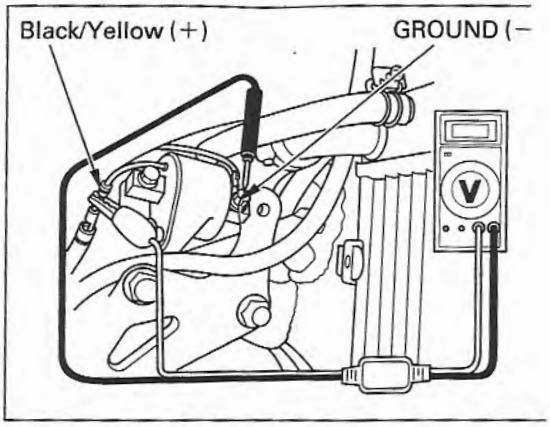
TOOLS:
Peak voltage adaptor 07HGJ-0020100
with Commercially available digital multimeter (impedance 10 MΩ/DCV minimum)

CONNECTION:
Black/Yellow (+) — Body ground (—)

Crank the engine with the kickstarter and read ignition coil primary peak voltage.

PEAK VOLTAGE: 100 V minimum

If the peak voltage is abnormal, check for an open circuit or poor connection in Black/Yellow wires.
If not defects are found in the harness, refer to the troubleshooting chart on page 17-3.



EXCITER COIL PEAK VOLTAGE

⚠WARNING

Avoid touching the tester probes to prevent electric shock.

Check cylinder compression and check that the spark plug is installed correctly.

Remove the seat (page 2-2).

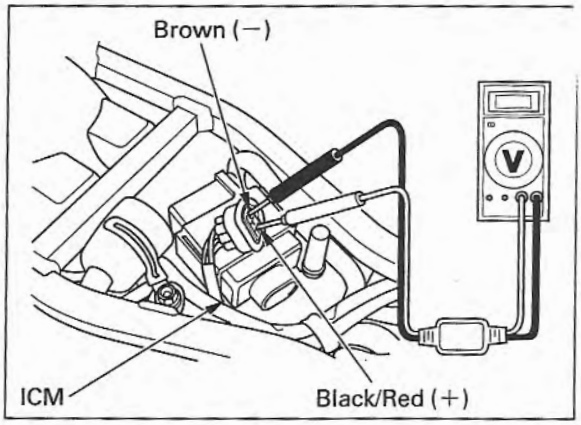
Disconnect the ICM connector.
Connect the peak voltage adaptor probe to the connector terminal of the wire harness side and body ground.

TOOLS:
Peak voltage adaptor 07HGJ-0020100
with Commercially available digital multimeter (impedance 10 MΩ/DCV minimum)

CONNECTION: Black/Red (+) —Brown (—)

Crank the engine with the kickstarter and read the peak voltage.

PEAK VOLTAGE: 100 V minimum



TURN SIGNAL RELAY

PERFORMANCE TEST

Remove the front visor (page 2-2).

Disconnect the turn signal connector.

1. Short the black and gray terminals of the turn signal relay connector with a jumper wire. Start the engine and check the turn signal light by turning the switch ON.

↓ Light comes on

- 2. Check for continuity between the green terminal of the relay connector and ground.

↓ Continuity

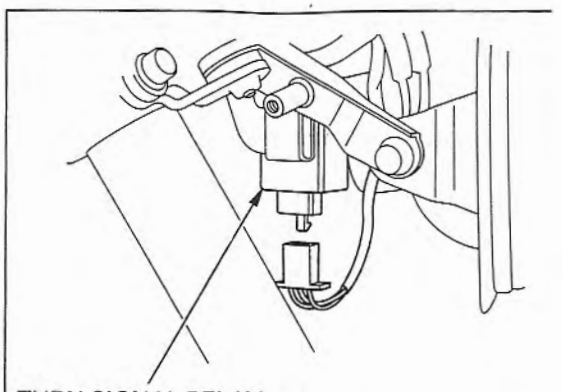
- Faulty turn signal relay.
- Poor connection of the connector.

↓ No continuity

- Broken ground wire

↓ Light does not come on

- Broken wire harness



TURN SIGNAL RELAY