YAMAHA

XT550J

Service Manual

J

LIT-11616-03-00

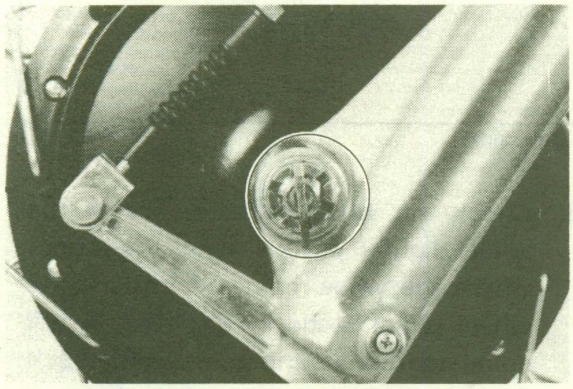
5Y1-28197-10

CHASSIS

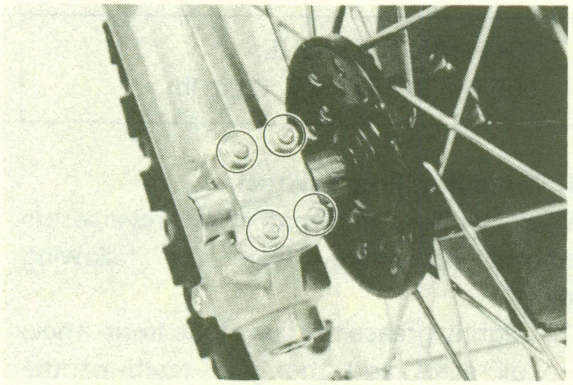
FRONT WHEEL

A. Removal

1. Remove the axle nut cotter pin and the axle nut.



2. Place the motorcycle on a suitable stand.
3. Remove speedometer cable from front brake shoe plate: First remove clip and then pull cable out.
4. Remove brake cable; loosen all cable adjuster screws and remove cable from handle lever holder. Then remove cable from cam lever at front brake shoe plate.
5. Remove the axle holder nuts at the right side of the axle.

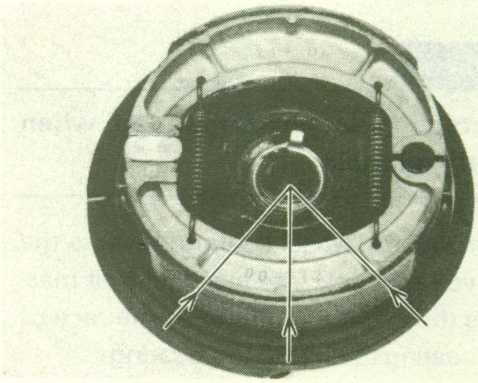


6. Turn the wheel forward and remove the wheel with the axle.

B. Checking Brake Shoe Wear

1. Measure the outside diameter at the brake shoes with slide calipers.

Brake shoe diameter: 150 mm (5.91 in) Replacement limit: 146 mm (5.75 in)



2. Remove any glazing from the brake shoes with coarse sandpaper.

C. Brake Drum

Oil or scratches on the inner surface of the brake drum will impair braking performance or result in abnormal noises.
Remove oil by wiping with a rag soaked in lacquer thinner or solvent.
Remove scratches by lightly and evenly polishing with emery cloth.

D. Brake Shoe Plate

1. Remove the camshaft and grease. If the cam face is worn, replace.

NOTE:

Before removing the cam lever, put a match mark (punches) on the cam lever and camshaft to indicate their positions for easy assembly.

E. Front Axle Inspection

Remove any corrosion from the axle with fine emery cloth. Place the axle on a surface plate, and check for bends. If bent, replace the axle. Do not attempt to straighten a bent axle.

F. Replacing Wheel Bearings

If the bearings allow play in the wheel hub or if the wheel does not turn smoothly, replace the bearings as follows:

1. Clean the outside of the wheel hub.
2. Drive the bearing out by pushing the spacer aside and tapping around the perimeter of the bearing inner race with a soft metal drift punch and hammer. The spacer "floats" between the bearings. Both bearings can be removed in this manner.

WARNING:

Eye protection is recommended when using striking tools.

3. To install the wheel bearing, reverse the above sequence. Use a socket that matches the outside diameter of the race of the bearing to drive in the bearing.

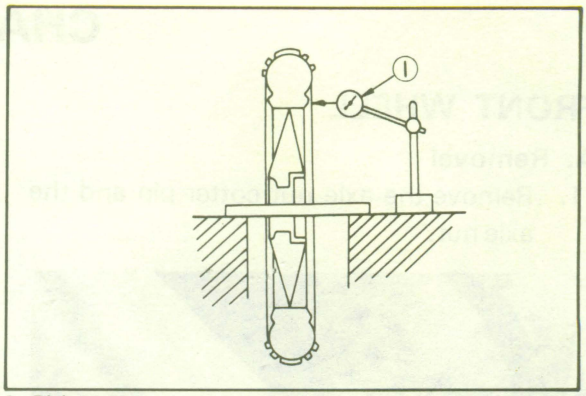
CAUTION:

Do not strike the center race or balls of the bearing. Contact should be made only with the outer race.

G. Front Wheel Inspection

1. Check for cracks, bends, or warpage of the wheels. If a wheel is deformed or cracked, it must be replaced.
2. Check wheel run-out. If the deflection exceeds the tolerance below, check the spoke-tension, rim deformation, and wheel bearings. Replace the wheel as required.

Rim run-out limits:
Vertical: 2 mm (0.079 in)
Lateral: 2 mm (0.079 in)



1. Dial gauge

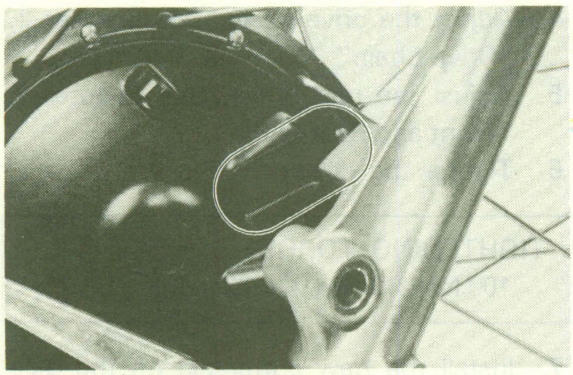
3. Check the wheel balance. Rotate the wheel lightly several times and note where the wheel comes to rest. If the wheel is not statically balanced, it will come to rest at the same point each time. Install an appropriate balance weight at the lightest point (at top).
4. After installing a tire, ride conservatively to allow the tire to seat itself properly on the rim. Failure to allow proper seating may cause tire failure resulting in damage to the motorcycle and injury to the rider.
5. After repairing or replacing a tire, check to be sure the valve-stem locknut is securely fastened. If not, torque it as specified.

TIGHTENING TORQUE:
1.5 Nm (0.15 m·kg, 1.1 ft·lb)

H. Installing Front Wheel

When installing the front wheel, reverse the removal procedure. Note the following points:

1. Lightly grease the lips of the front wheel oil seals and the gear teeth of the speedometer drive and driven gears. Use lightweight lithium-base grease.
2. Make sure the projecting portion (torque stopper) of the front fork is positioned correctly.

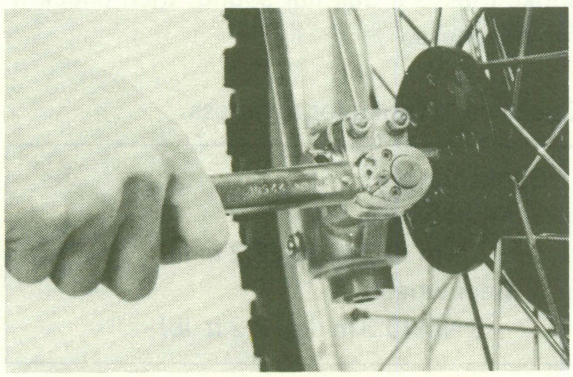


3. Tighten the axle nut and install a new cotter pin.

TIGHTENING TORQUE:
100 Nm (10.0 m·kg, 72.3 ft·lb)

4. Before tightening the axle holder nuts, compress the front forks several times to check for proper fork operation.
5. Tighten the axle holder nuts.

TIGHTENING TORQUE:
10 Nm (1.0 m·kg, 7.2 ft·lb)



NOTE:

Always perform the following procedures when installing the front wheel shaft.

1. Finger-tighten the axle holder nuts.
2. Tighten the front wheel shaft.
3. Lock the motorcycle by the front brake and push/pull the front forks several times by the handlebars, so that the forks will move smoothly.
4. Tighten the axle holder nuts.

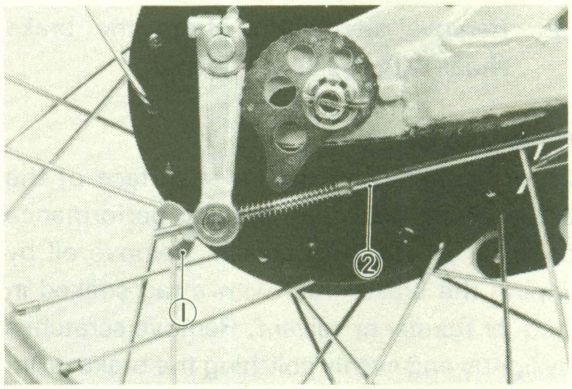
CAUTION:

First tighten the nuts on the upper end of the axle holder, then tighten the nuts on the bottom.

REAR WHEEL

A. Removal

1. Remove the axle nut cotter pin and the axle nut.
2. Place the motorcycle on a suitable stand.
3. Remove the brake rod from the brake shoe plate.
   The brake rod can be removed by removing the adjuster.



1. Adjuster 2. Brake rod

4. Remove the drive chain from the driven sprocket while moving the rear wheel forward.
   The other recommendable procedure is cutting the drive chain joint with the drive chain cutter.
   See Chapter 3, "Engine Overhaul".

NOTE:

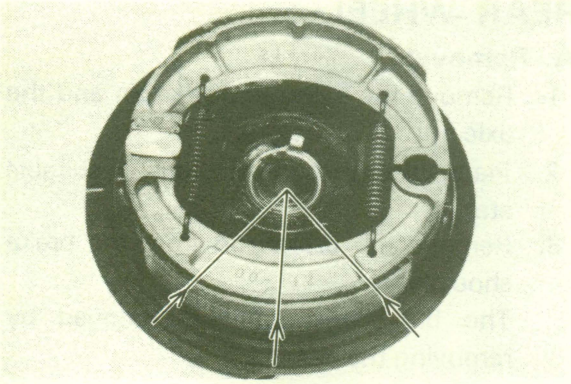
The chain joint must be replaced each time the chain is cut.

5. Pull out the rear axle.

B. Checking Brake Shoe Wear

1. Measure the outside diameter at the brake shoes with slide calipers.

Brake shoe diameter:
150 mm (5.91 in)
Replacement limit:
146 mm (5.75 in)



2. Remove any glazing from the brake shoes with coarse sandpaper.

C. Brake Drum

Oil or scratches on the inner surface of the brake drum will impair braking performance or result in abnormal noises. Remove oil by wiping the brake drum with a rag soaked in lacquer thinner or solvent. Remove scratches by lightly and evenly polishing the brake drum with emery cloth.

D. Brake Shoe Plate

Remove the camshaft, and grease it. If the cam face is worn, replace the camshaft.

NOTE:

Before removing the cam lever, put alignment marks on the cam lever and camshaft to indicate their relative positions for easy assembly.

E. Rear Axle Inspection

Refer to "Front Axle Inspection".

F. Replacing Wheel Bearings

Rear wheel bearing replacement is similar to the procedure for the front wheel bearings.

G. Rear Wheel Inspection

See "Front Wheel Inspection".

H. Installing Rear Wheel

1. Lightly grease the lips of the rear wheel *oil seals.*
2. Install the wheel and the axle and the axle nut.
3. Connect the drive chain, the brake rod, and the adjuster.
4. Adjust the drive chain. See Chapter 2, "Drive Chain".
5. Adjust the rear brake. See Chapter 2, "Front and Rear Brake".
6. Tighten the axle nut.

TIGHTENING TORQUE:
100 Nm (10.0 m·kg, 72 ft·lb)

7. Install the new cotter pin on the axle nut.

RIMS AND SPOKES

A. Checking for Loose Spokes

Loose spokes can be checked by bracing the machine off the ground so that the wheel can spin freely.

Slowly rotate the wheel and at the same time let the metal shaft of a fairly heavy screwdriver bounce off each spoke. If all the spokes are tightened approximately the same, then the sound given off by the screwdriver hitting the spokes should sound the same. If one spoke makes a dull flat sound, then check it for looseness.

Check each spoke for tightness.

Spoke torque
Front wheel:
3 Nm (0.3 m·kg, 2.2 ft·lb)
Rear wheel:
3 Nm (0.3 m·kg, 2.2 ft·lb)

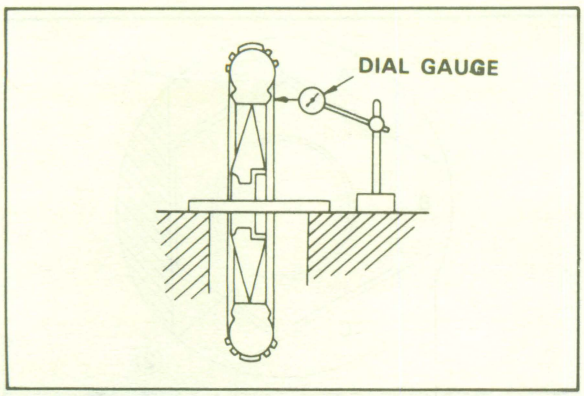
B. Checking Rim "Run-Out"

Raise the wheel off the ground.

Spin wheel.

Check rim run-out as shown in illustration.

Rim run-out limits
Vertical: 2 mm (0.08 in)
Lateral: 2 mm (0.08 in)



TIRES AND TUBES

A. Removal

1. Remove valve cap, valve core, and valve stem locknut. Loosen bead spacer(s), (rim locks).
2. When all air is out of tube, separate tire bead from rim (both sides) by stepping on tire with your foot.
3. Use two tire removal irons (with rounded edges) to work the tire bead over the edge of the rim, starting 180° opposite the tube stem. Take care to avoid pinching the tube as you do this.
4. After you have worked one side of the tire completely off the rim, then you can slip the tube out. Be very careful not to damage the stem while pushing it back out of the rim hole.

NOTE:

If you are changing the tire itself, then finish the removal by working the second bead off the rim.

B. Installation

Reinstalling the tire and tube can be accomplished by reversing the disassembly procecdure. The only difference in procedure would be right after the tube has been installed. Before the tire has been completely slipped onto the rim, momentarily inflate the tube. This removes any creases that might exist. Release the air and continue with reassembly. Also, right after the tire has been completely slipped onto the rim, check to make sure that the stem comes out of the hole in the rim at a right angle to the rim.
Finally, inflate the tire.

Front Tire Pressure:

Off-Road Riding	98.1 kPa (1.0 kg/cm², 14 psi)
Normal Riding	147.1 kPa (1.5 kg/cm², 21 psi)
High Speed Riding	147.1 kPa (1.5 kg/cm², 21 psi)

Rear Tire Pressure:

Off-Road Riding	98.1 kPa (1.0 kg/cm², 14 psi)
Normal Riding	147.1 kPa (1.5 kg/cm², 21 psi)
High Speed Riding	147.1 kPa (1.5 kg/cm², 21 psi)

DRIVE CHAIN AND SPROCKETS

NOTE:

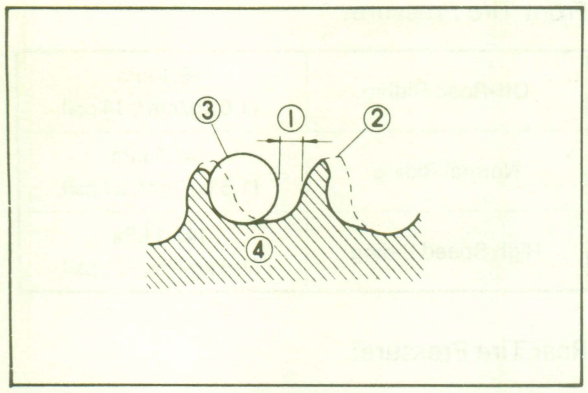
Please refer to Maintenance Interval and Lubrication Interval charts for additional information.

A. Drive Sprocket

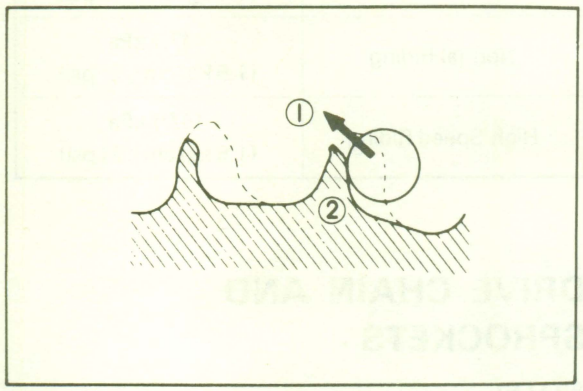
With the left crankcase cover removed proceed as follows:

1. With the drive chain in place and transmission in gear, firmly apply the rear brake. Remove the sprocket securing bolts. Remove the sprocket.
2. Check sprocket wear. Replace if wear decreases tooth width as shown.
3. Replace if tooth wear shows a pattern such as that in the illustration, or as precaution and common sense dictate.
4. Tighten the securing bolts.

Drive Sprocket Securing Bolt Torque:
10 Nm (1.0 m · kg, 7.2 ft · lb)



1. 1/4 tooth
2. Correct
3. Roller
4. Sprocket



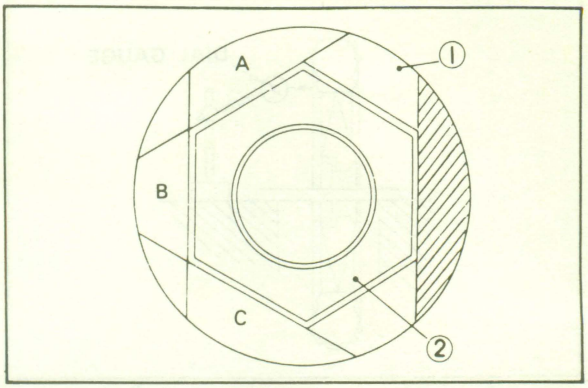
1. Slip off
2. Bent teeth

B. Driven Sprocket

With the rear wheel removed, proceed as follows:

1. Using a blunt chisel, flatten the securing nuts lock-washer tabs.
   Remove the securing nuts. Remove the lock washers and sprocket.
2. Check the sprocket wear using procedures for the drive sprocket.
3. Check the sprocket to see that it runs true. If bent, replace.
4. During reassembly, make sure that sprocket and sprocket seat are clean.
   Tighten the securing nuts in a crisscross pattern.
   Bend the tabs of the lock washers fully against the securing nut flats.

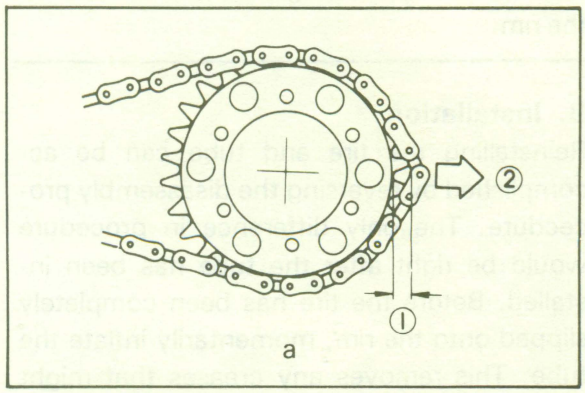
Driven Sprocket Securing Nut Torque:
30 Nm (3.0 m·kg, 21.7 ft·lb)



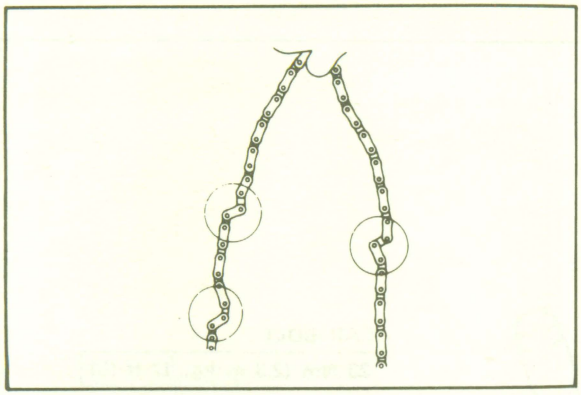
1. Lock washer
2. Nut

C. Chain Inspection

1. With the chain installed on the machine, excessive wear may be roughly determined by attempting to pull the chain away from the rear sprocket. If the chain will lift away more than one-half the length of the sprocket teeth, remove and inspect.
   If any portion of the chain shows signs of damage or if either sprocket shows signs of excessive wear, remove and inspect.
2. Check the chain for stiffness. Hold as illustrated. If stiff, soak in solvent solution, clean with wire brush and dry with high pressure air. Oil chain thoroughly and attempt to work out kinks. If still stiff, replace.
3. Check the side plate for damage. Check to see if excessive play exists in pins and rollers. Check for damaged rollers. Replace as required.



a. Checking for excessively worn chain
1. 1/2 tooth
2. Pull



D. Chain Maintenance

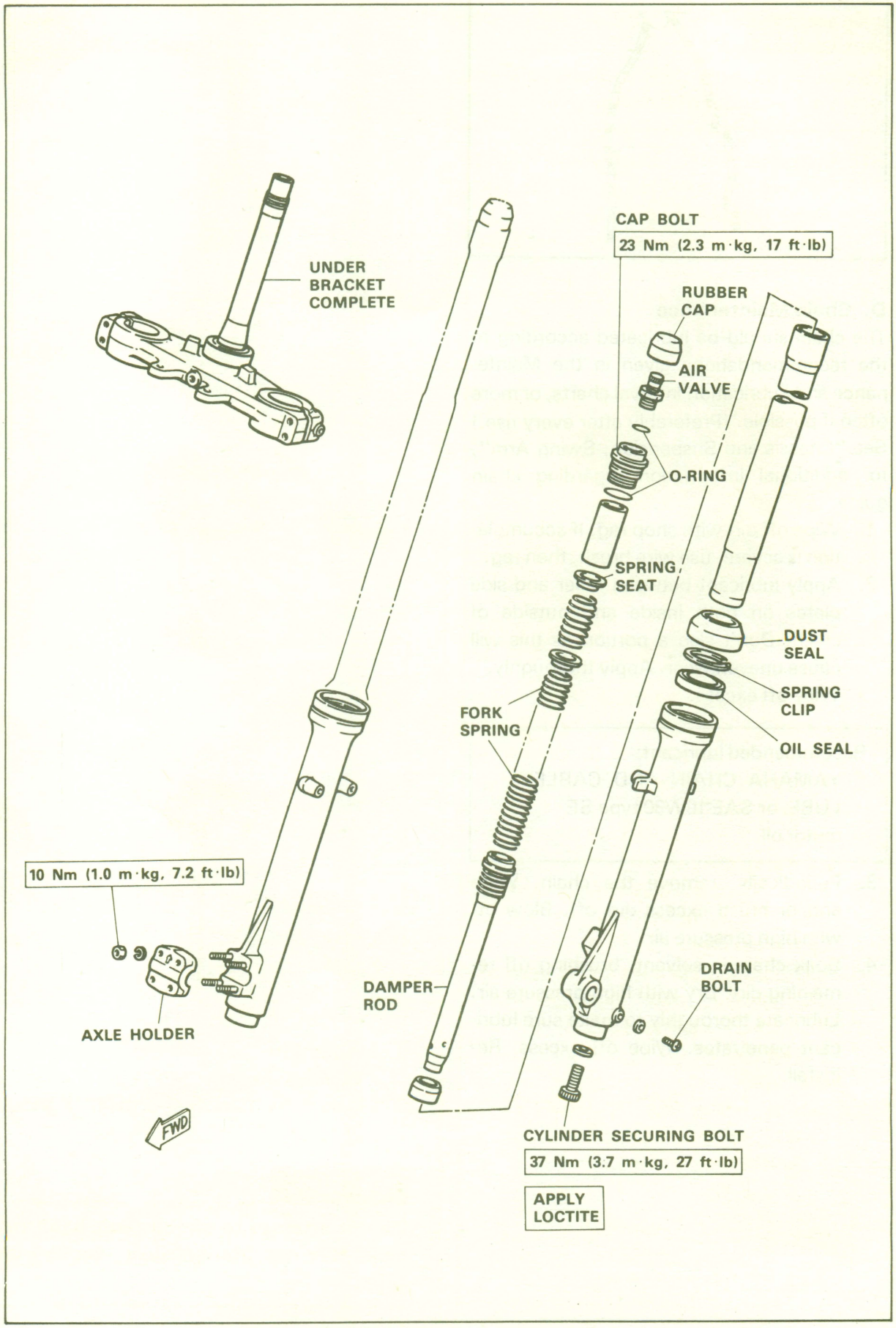
The chain should be lubricated according to the recommendations given in the Maintenance and Lubrication Interval charts, or more often if possible. (Preferably after every use.) See "Chassis and Suspension, Swing Arm", for additional information regarding chain guide.

1. Wipe off dirt with shop rag. If accumulation is severe, use wire brush, then rag.
2. Apply lubricant between roller and side plates on both inside and outside of chain. Don't skip a portion as this will cause uneven wear. Apply thoroughly. Wipe off excess.

Recommended lubricant:
YAMAHA CHAIN AND CABLE LUBE, or SAE 10W30 type SE motor oil

3. Periodically remove the chain. Wipe and/or brush excess dirt off. Blow off with high pressure air.
4. Soak chain in solvent, brushing off remaining dirt. Dry with high pressure air. Lubricate thoroughly to make sure lubricant penetrates. Wipe off excess. Reinstall.

FRONT FORK

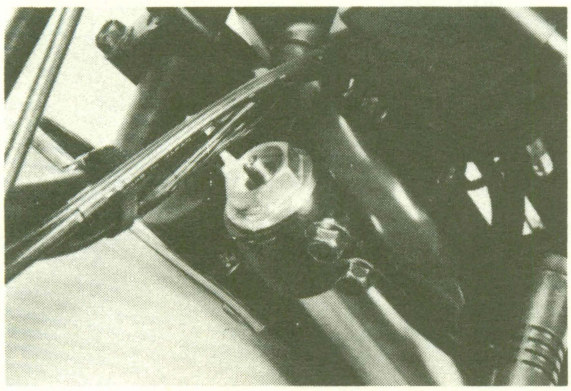

UNDER BRACKET COMPLETE
CAP BOLT
23 Nm (2.3 m·kg, 17 ft·lb)
RUBBER CAP
AIR VALVE
O-RING
SPRING SEAT
DUST SEAL
SPRING CLIP
OIL SEAL
FORK SPRING
10 Nm (1.0 m·kg, 7.2 ft·lb)
AXLE HOLDER
DAMPER ROD
DRAIN BOLT
FWD
CYLINDER SECURING BOLT
37 Nm (3.7 m·kg, 27 ft·lb)
APPLY LOCTITE

A. Removal and Disassembly

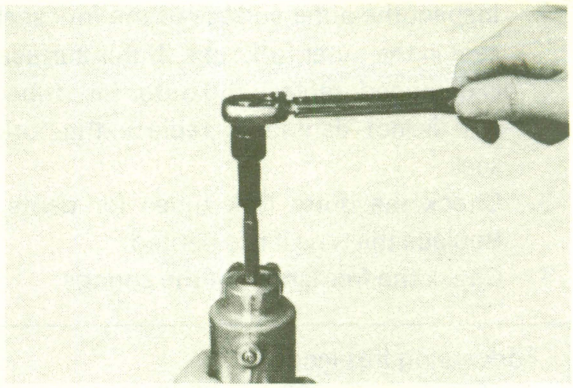
WARNING:

Securely support the motorcycle so there is no danger of it falling over.

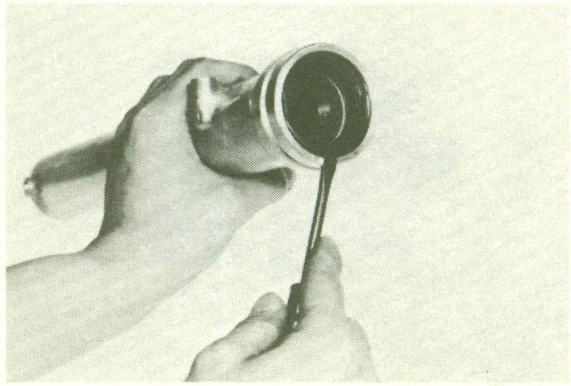
1. Disconnect the speedometer cable. Remove the brake drum and the front wheel. Remove the front fender.
2. Remove the rubber cap from the top of each fork.
3. Keep the air valve open by pressing it for several seconds so that the air can be let out of the inner fork tube.

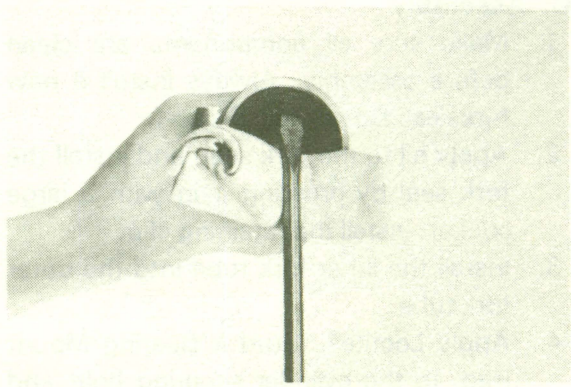


4. The spring seat and fork spring are retained by a stopper ring (spring cable circlip). It is necessary to depress the spring seat and fork spring to remove the stopper ring. Remove the stopper ring by carefully prying out one end with a small screwdriver.
5. Place an open container under each drain hole. Remove the drain screw from each outer tube.
6. Loosen the pinch bolts on the upper and lower brackets, and remove the forks.
7. Remove the cylinder securing bolt from the bottom of the fork assembly. Hold the inner tube with the front-fork-cylinder holder (special tool P/N. YM-01327). Pull the inner fork tube from the outer fork tube.



8. Remove the retaining clip from the outer fork tube, and pry out the fork seal. Be careful not to damage the fork tube surface.





B. Inspection

1. Examine the inner fork tube. If the tube is severely scratched or bent, it should be replaced.

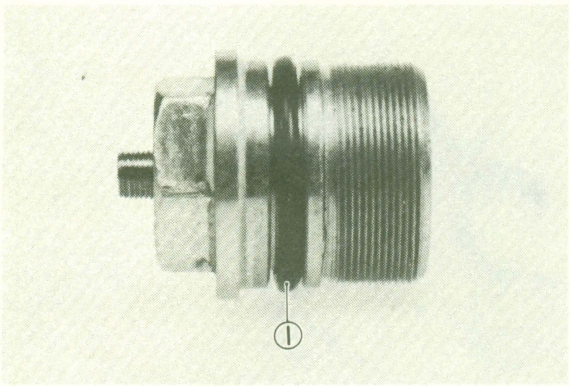
WARNING:

Do not attempt to straighten a bent fork tube; this may dangerously weaken the tube.

2. Inspect the outer surface of the fork seal seat in the outer fork tube. If this surface is damaged, replace the outer fork tube. If it is not damaged, replace the fork seal.
3. Check the outer fork tubes for dents. Replace the tube if it is dented.
4. Check the free length of the springs.

Fork spring free length:	
Upper	88 mm (3.46 in)
Lower	348.5 mm (13.7 in)

5. Check the O-ring on the spring seat. If it is damaged, replace it.



1. O-ring

C. Assembly

1. Make sure all components are clean before assembly. Always install a new fork seal. Do not reuse a seal.
2. Apply oil to the fork seal, and install the fork seal by pressing it in with a large socket. Install the retaining clip.
3. Install the inner fork tube into the outer fork tube.
4. Apply Loctite® Stud N'Bearing Mount (red) to the cylinder securing bolt, and install the bolt and a copper washer into the outer fork tube. Torque the bolt to specification.

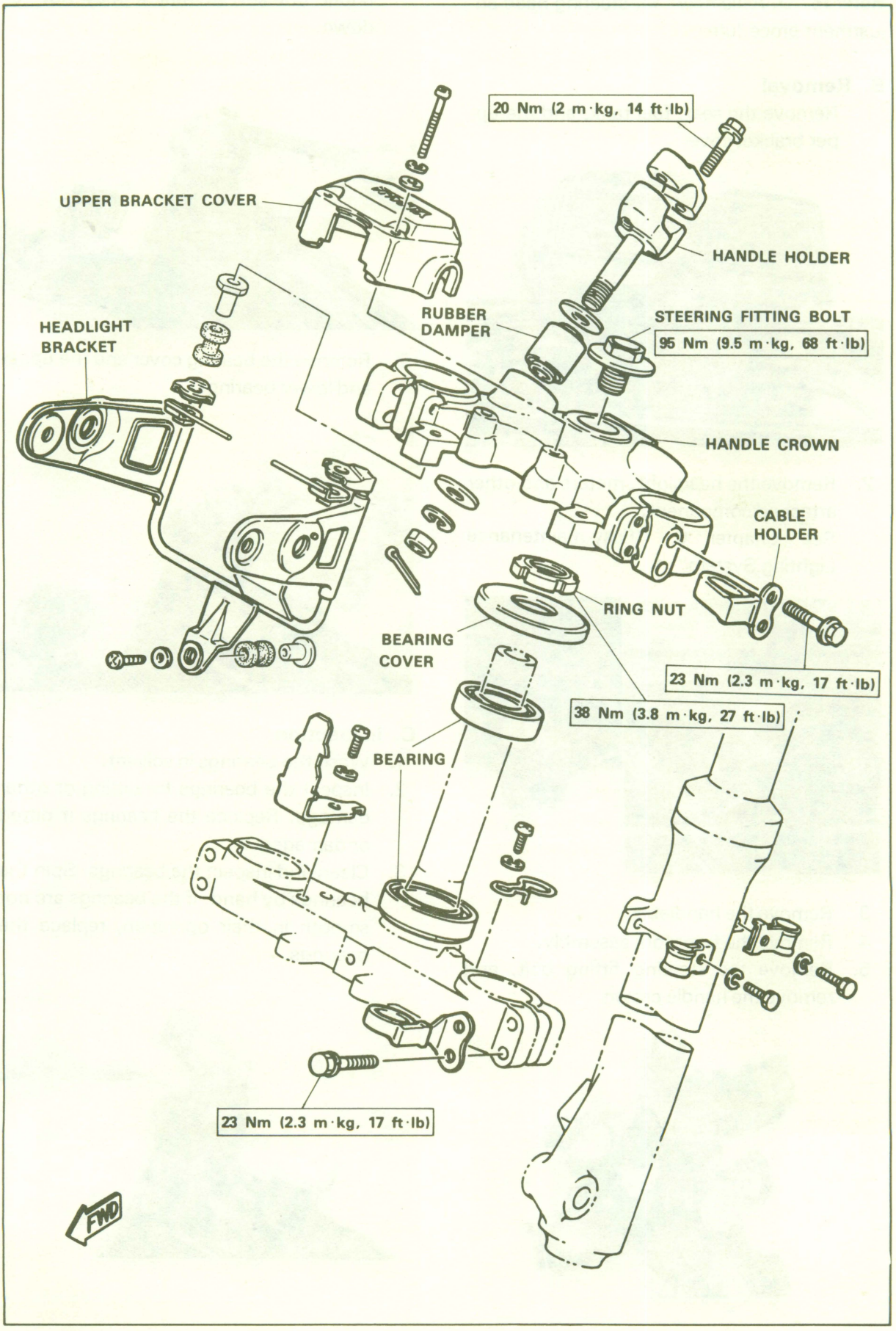
TIGHTENING TORQUE:
37 Nm (3.7 m·kg, 27 ft·lb)

5. Reinstall the spring seat and fill the fork with air using a manual air pump or a pressurized air supply. Refer to "Front fork and rear shock absorber adjustment" on page 2-13 for proper air pressure adjusting.

Maximum air pressure:
117.7 kPa (1.2 kg/cm², 17.1 psi)
Do not exceed this amount.

6. Check all suspension components for proper operation.
7. Check all suspension fittings for proper tightness.

STEERING HEAD

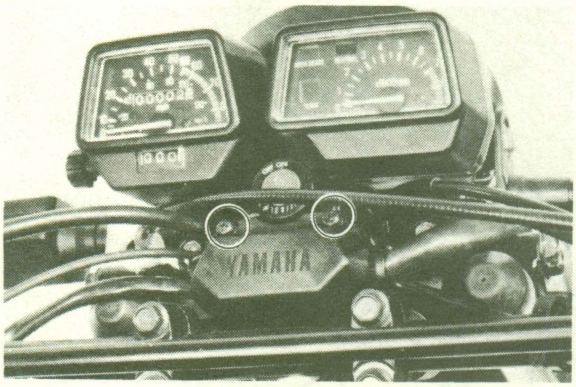


A. Adjustment

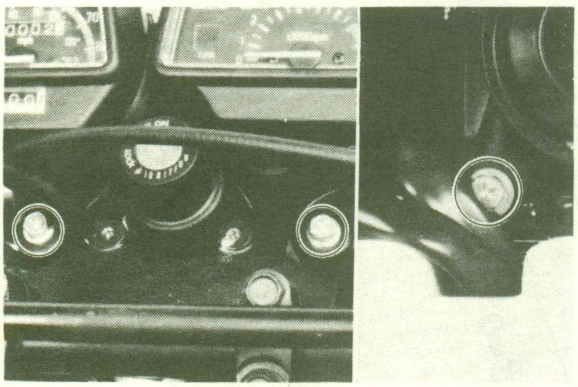
Refer to "D. Assembly" for steering head adjustment procedures.

B. Removal

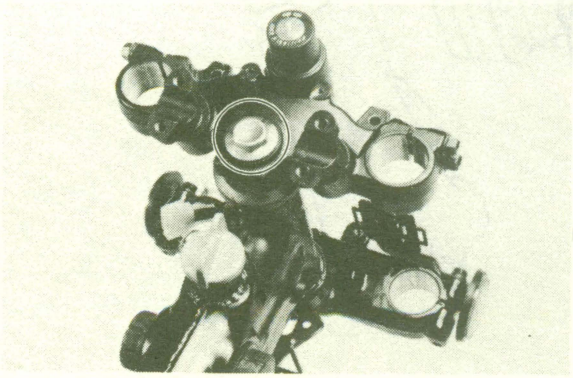
1. Remove the seat, fuel tank, and the upper bracket cover.



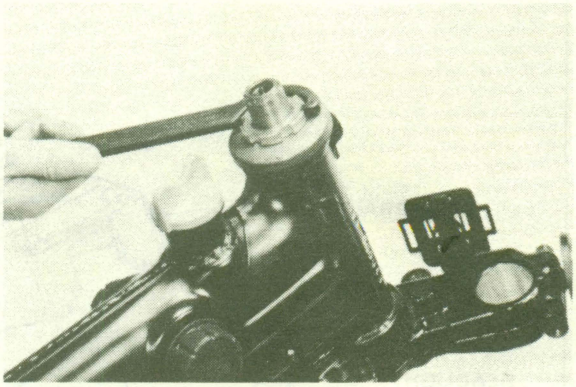
2. Remove the headlight, meters and other attached component.
   See Chapter 6, "Easy-maintenance Lighting System".



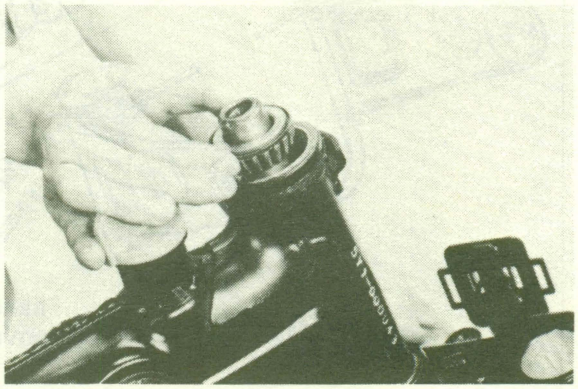
3. Remove the handlebar.
4. Remove the front fork assembly.
5. Remove the steering fitting bolt, and remove the handle crown.



6. Remove the ring nut supporting the under bracket so that it may not fall down.

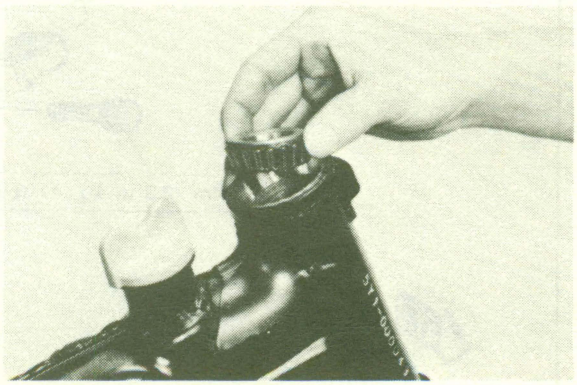


7. Remove the bearing cover and the upper and lower bearings.



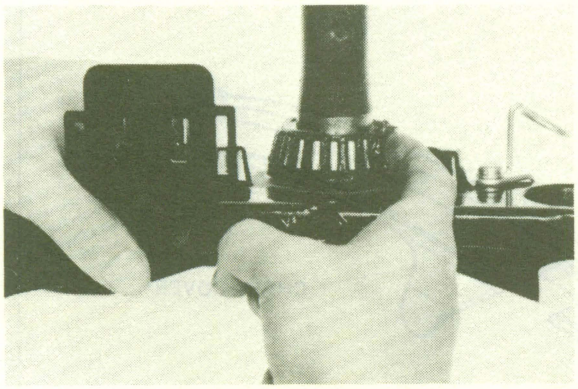
C. Inspection

1. Wash the bearings in solvent.
2. Inspect the bearings for pitting or other damage. Replace the bearings if pitted or damaged.
3. Clean and inspect the bearings. Spin the bearings by hand. If the bearings are not smooth in their operation, replace the bearings.



D. Assembly

1. Grease the bearings and races with wheel bearing grease.



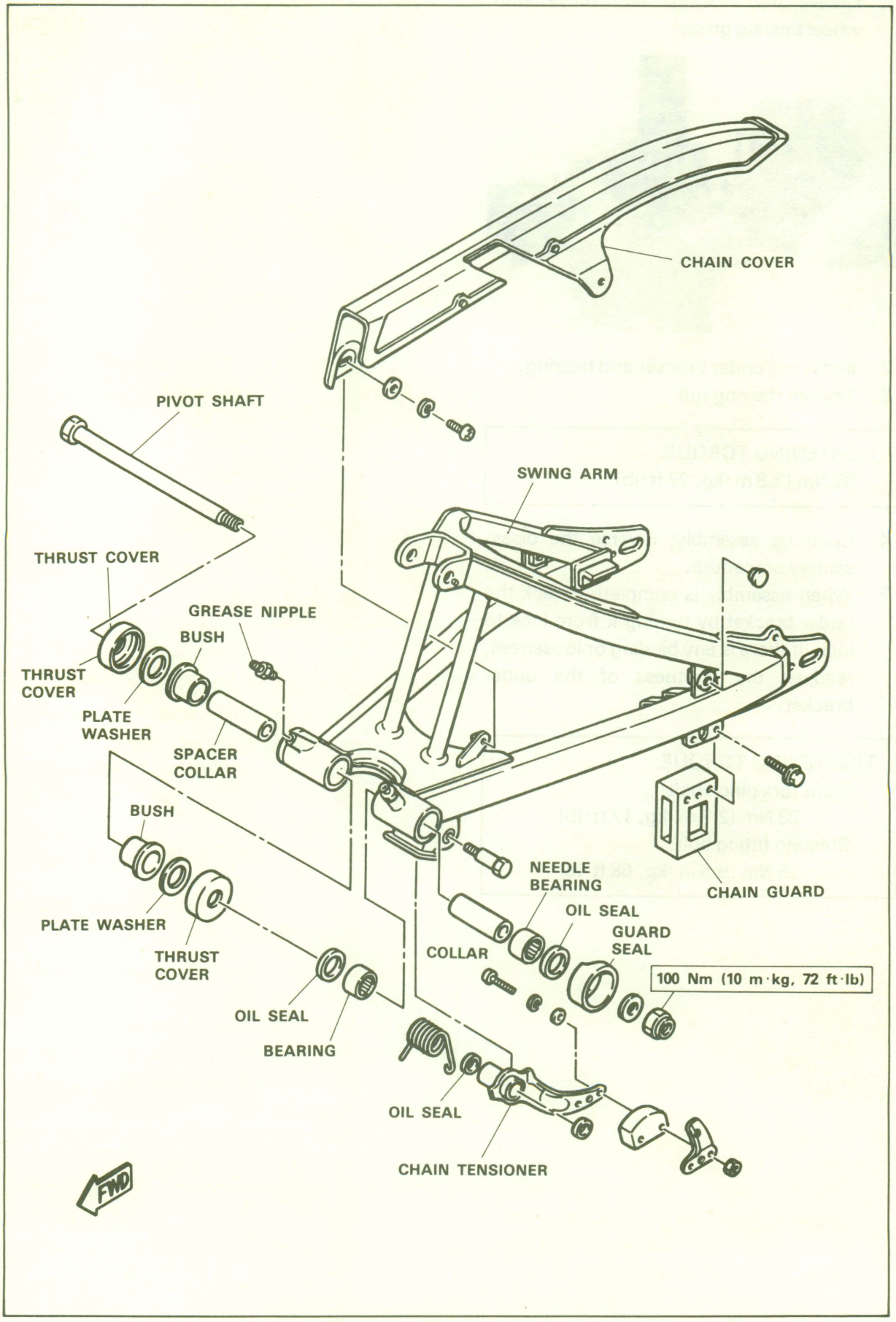
2. Install the under bracket and bearing.
3. Tighten the ring nut.

TIGHTENING TORQUE:
38 Nm (3.8 m · kg, 27 ft · lb)

4. Continue assembly; reverse the disassembly procedure.
5. When assembly is complete, check the under bracket by turning it from lock to lock. If there is any binding or looseness, readjust the tightness of the under bracket.

TIGHTENING TORQUE:
Front fork pinch bolt:
23 Nm (2.3 m · kg, 17 ft · lb)
Steering fitting bolt:
95 Nm (9.5 m · kg, 68 ft · lb)

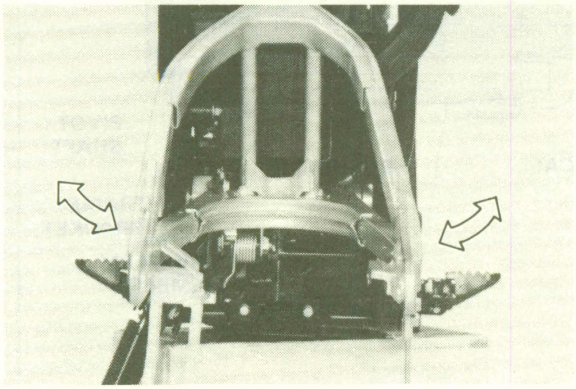
SWINGARM


CHAIN COVER
PIVOT SHAFT
SWING ARM
THRUST COVER
GREASE NIPPLE
BUSH
THRUST COVER
PLATE WASHER
SPACER COLLAR
BUSH
PLATE WASHER
THRUST COVER
OIL SEAL
BEARING
NEEDLE BEARING
OIL SEAL
GUARD SEAL
COLLAR
100 Nm (10 m·kg, 72 ft·lb)
CHAIN GUARD
OIL SEAL
CHAIN TENSIONER
FWD

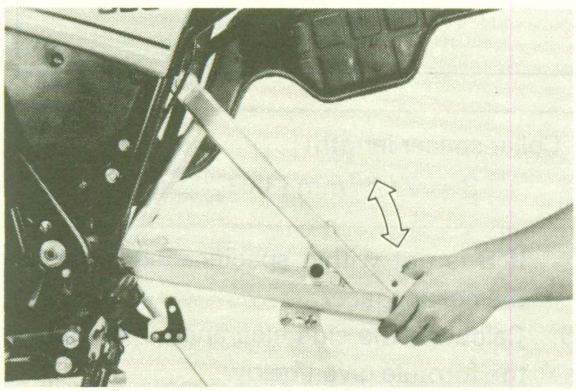
A. Free Play Inspection

1. Remove the rear wheel and the shock absorber. Grasp the swingarm and try to move it from side to side as shown. Check for free play.

Swingarm free play:	1.0 mm (0.04 in) at end of swing arm

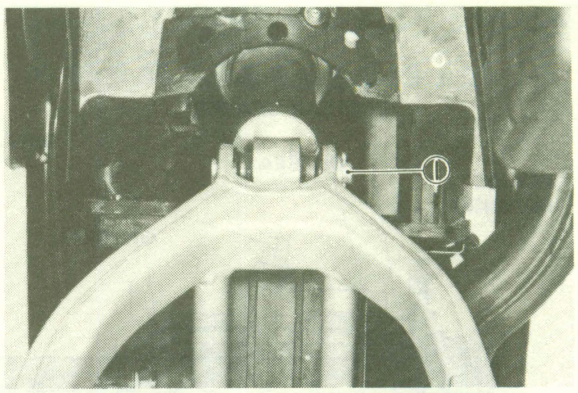


2. If free play is excessive, remove the swingarm and replace the bushings or bearings. Replace the thrust cover or oil seals if necessary.
3. The swingarm is mounted on needle bearings and bushings. Move the swingarm up and down as shown. The swingarm should move smoothly, without tightness, binding, or rough spots that could indicate damaged bearings.



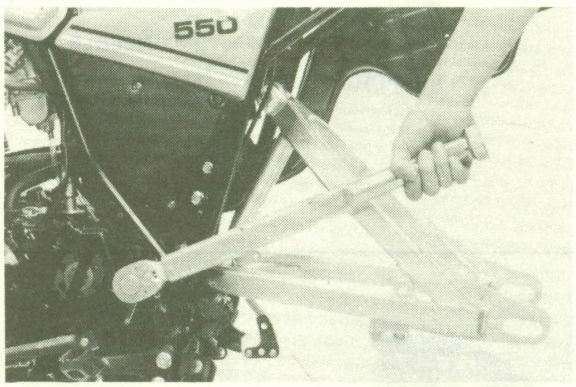
B. Removal

1. Remove the seat and the rear wheel.
2. Remove the cotter pin from the swingarm, drive out the shock absorber pivot shaft, and disconnect the shock absorber from the swingarm.



1. Pivot shaft

3. Remove the swingarm pivot bolt, and remove the swingarm.



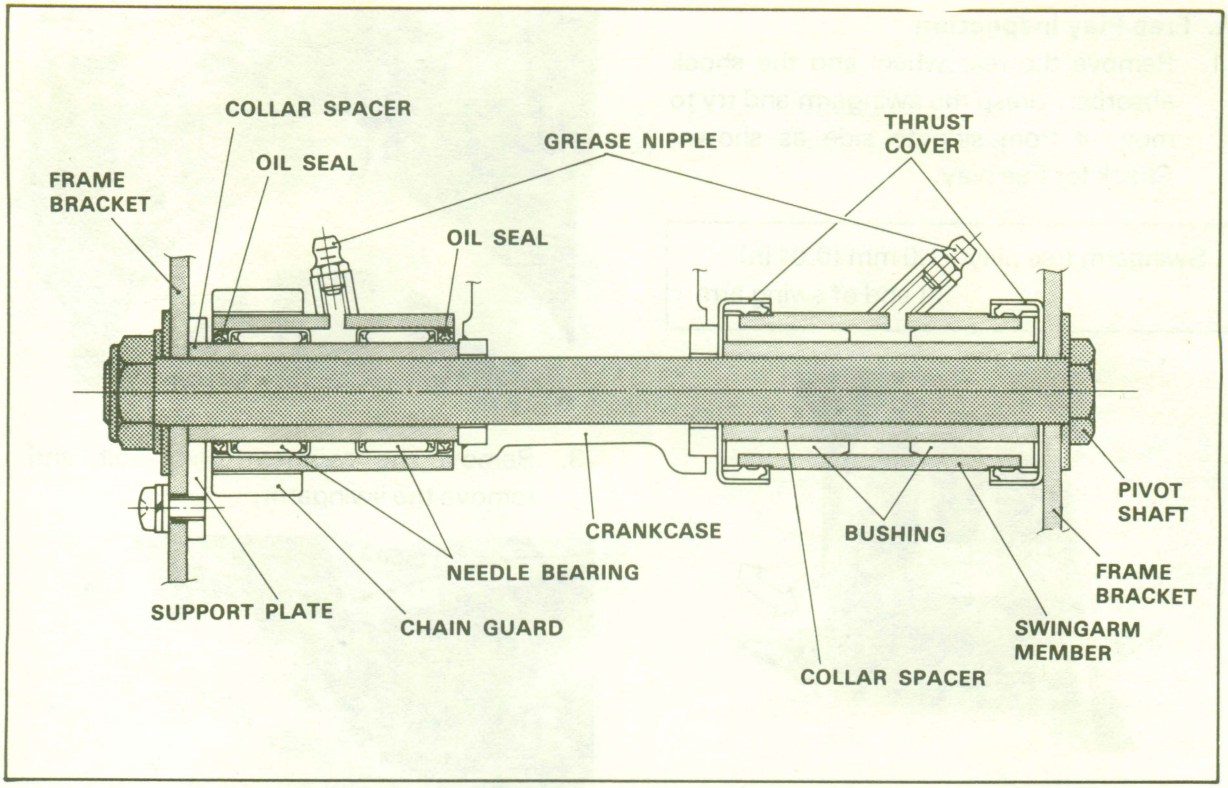
C. Inspection and Lubrication

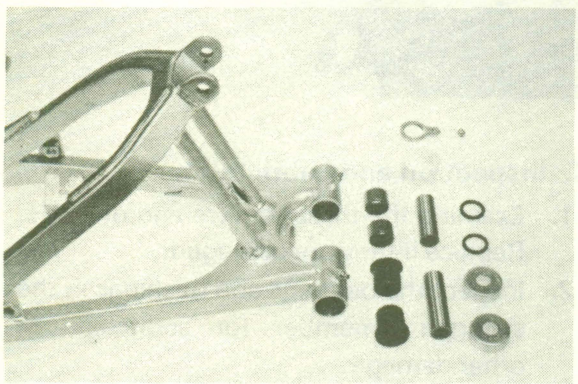
1. Examine the thrust covers and oil seals. Replace if they are damaged.
2. Inspect the bearings and bushings in the swingarm member for scratches on other damage.
   Make sure that the needle bearing rolls freely.
   If the bearings or bushings are damaged, they should be replaced.

NOTE:

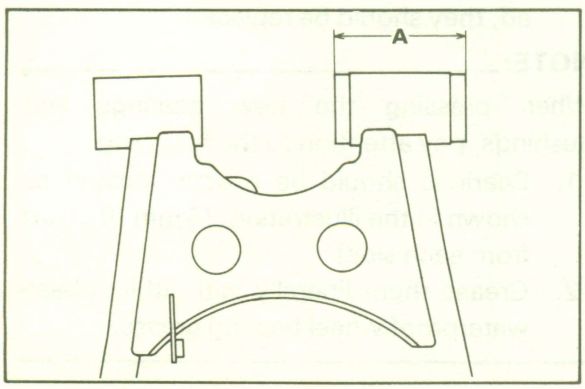
When pressing the new bearings and bushings, pay attention to the following:

1. Bearings should be exactly located as shown in the illustration. [4 mm (0.16 in) from each side]
2. Grease them liberally with lithium-base waterproof wheel bearing grease.

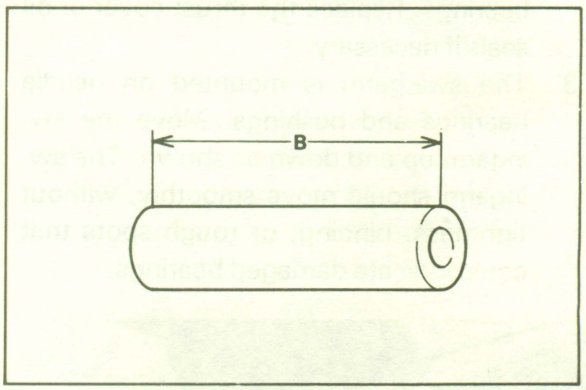




3. Measure the length A.
(Swingarm right-side member)



4. Check the collar spacer length B.



Collar spacer length:
$B = 77^{+0.3}_{+0.2}$ mm ($3.03^{+0.012}_{+0.008}$ in)

If B is not within specification, replace the collar spacer.

5. Calculate the side clearance C by using the formula given below.

$C = B - A$

Swingarm side clearance:
C = 0.1 ~ 0.3 mm
(0.004 ~ 0.012 in)

NOTE:

Make sure the bushings are securely pressed into the swingarm member.

If the side clearance is not within specification, adjust it by means of shims.

If only one shim is used, install it on the right side. Two shims must be installed on both sides.

Swingarm side clearance:
0.1 ~ 0.3 mm (0.004 ~ 0.012 in)

7. Grease the swingarm periodically.

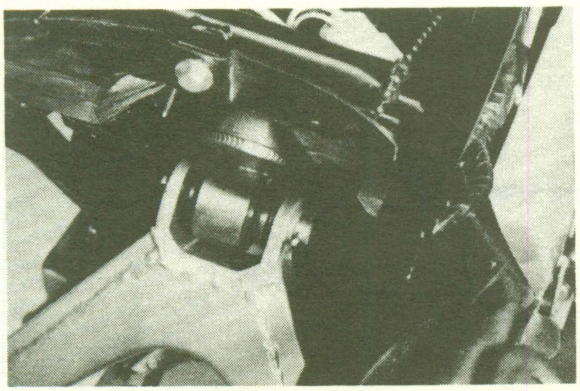
D. Assembly

1. Assemble the swingarm by reversing the removal procedures. Use a new lock plate, and torque the swingarm pivot bolt to specification.

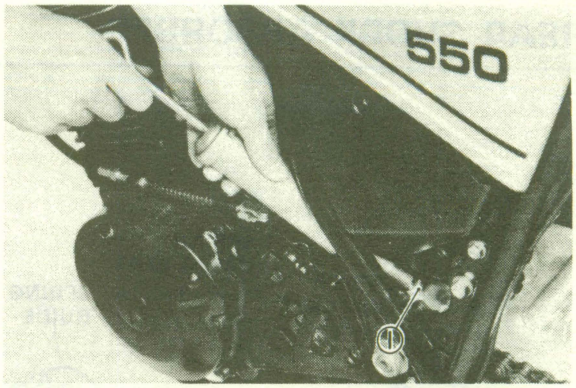
TIGHTENING TORQUE:
100 Nm (10 m · kg, 72 ft · lb)

CAUTION:

Use a new cotter pin when installing the shock absorber pivot shaft. Bend the cotter pin as shown in the photo.

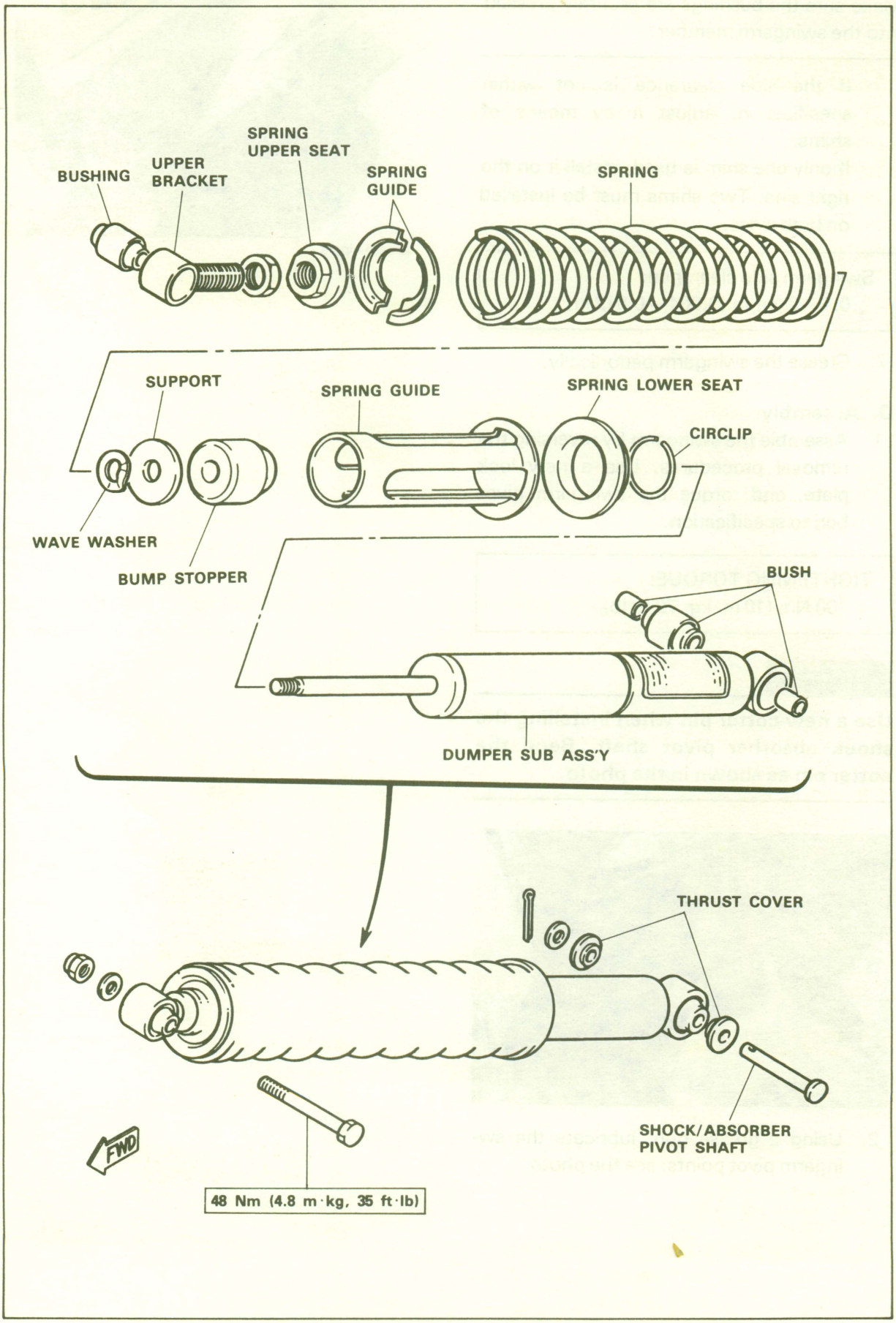


2. Using a grease gun, lubricate the swingarm pivot points; see the photo.



1. Grease nipple

REAR SHOCK ABSORBER



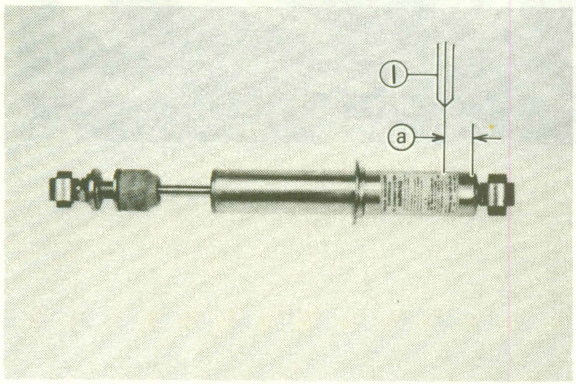
A. Removal

Rear Shock Absorber

WARNING:

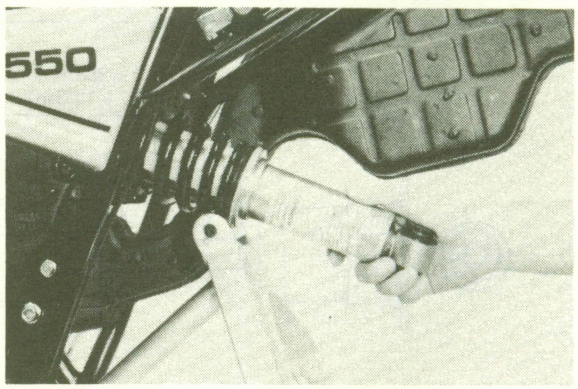
This shock absorber contains highly pressurized nitrogen gas. Read and understand the following information before handling the shock absorber. The manufacturer cannot be held responsible for property damage or personal injury that may result from improper handling.

1. **Do not tamper with or attempt to remove the snap ring or bearing at the top of the cylinder.**
2. **Do not subject shock absorber to an open flame or other high heat. This may cause the unit to explode due to excessive gas pressure.**
3. **Do not deform or damage the cylinder in any way.**
   Cylinder damage will result in poor damping performance.
4. **Gas pressure must be released before disposing of the shock absorber. To do so, drill a 2 ~ 3 mm (0.08 ~ 0.12 in) hole through the cylinder wall at a point 10 ~ 15 mm (0.39 ~ 0.59 in) above the bottom of the cylinder.**
5. **Wear eye protection to prevent eye damage from escaping gas and/or metal chips.**



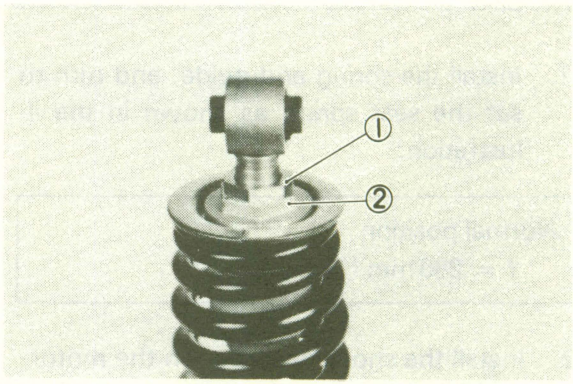
1. Drill 2 ~ 3 mmø (0.08 ~ 0.12 inø)
a. 10 ~ 15 mm (0.39 ~ 0.59 in)

1. Remove the seat and the fuel tank.
2. Remove the rear wheel. Refer to page 5-3.
3. Remove the cotter pin from the swingarm, drive out the shock absorber pivot shaft, and disconnect the shock absorber from the swingarm.
4. Remove the shock absorber mounting bolt, and remove the shock from the frame by carefully pulling it towards the rear of the motorcycle.



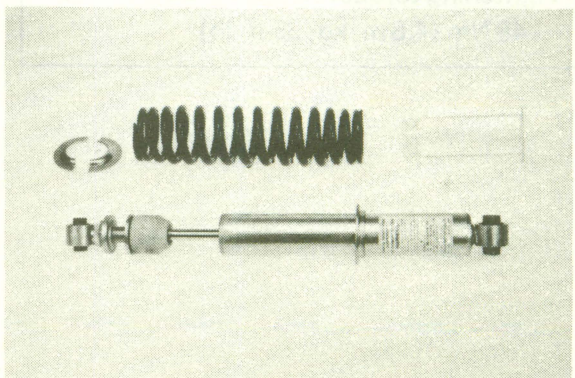
B. Inspection

1. Remove the rear shock absorber from the motorcycle.
2. Loosen the locknut and loosen the spring seat. This will make it easy to remove the spring.



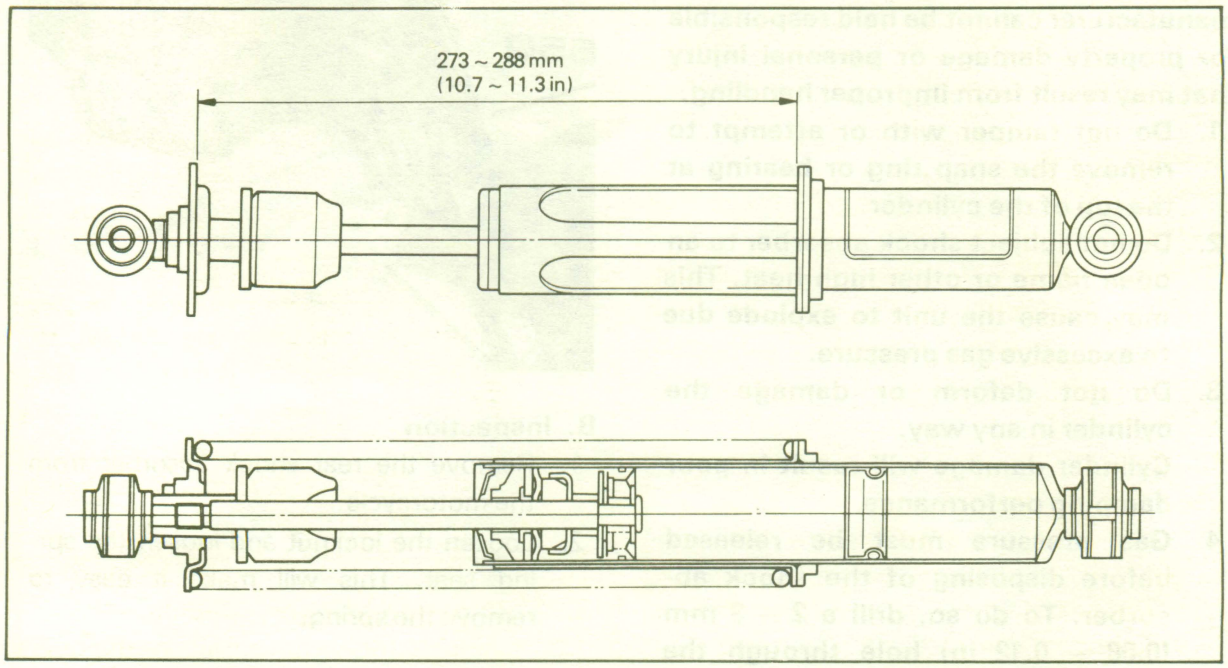
1. Locknut 2. Spring seat

3. Push down the spring, remove the spring retainer, and remove the spring.



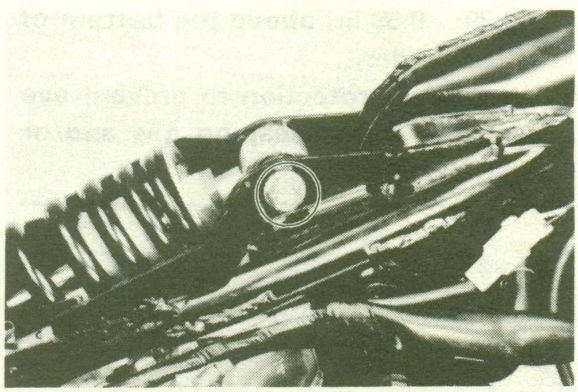
4. Check the rod, and if it is bent or damaged, replace the shock absorber.
5. Check for oil leakage. If oil leakage is evident, replace the shock absorber.
6. By moving the rod, check to see if it has proper damping effect. Slight resistance should be felt on the compression (down) stroke and considerable resistance should be felt on the return (up) stroke.

C. Installation and Adjustment



1. Install the spring and guide, and turn to set the seat spring as shown in the illustration.

Normal position ℓ = 286 mm (11.3 in)



2. Install the shock absorber on the motorcycle.

Rear shock absorber Tightening torque: 48 Nm (4.8 m · kg, 35 ft · lb)

CABLES AND FITTINGS

A. Cable Maintenance

NOTE:

See "Maintenance and Lubrication" interval charts. Cable maintenance is primarily concerned with preventing deterioration and providing proper lubrication to allow the cable to move freely within its housing. Cable removal is straightforward and uncomplicated. Removal is not discussed within this section.

WARNING:

Cable routing is very important. For details of cable routing, see the cable routing diagrams at the end of this manual. Improperly routed or adjusted cables may make the motorcycle unsafe for operation.

1. Remove the cable.
2. Check for free movement of the cable within its housing. If movement is obstructed, check for frayed strands or kinking of the cable. If damage is evident, replace the cable.
3. To lubricate the cable, hold it in a vertical position. Apply lubricant to the uppermost end of the cable. Leave it in the vertical position until the lubricant appears at the bottom. Allow any excess to drain, and reinstall the cable.

NOTE:

Choice of a lubricant depends upon conditions and preferences. However, a Yamaha chain and cable lubricant or its equivalent will perform adequately under most conditions.

B. Throttle Maintenance

1. Remove the Phillips head screws from the throttle housing assembly and separate the two halves of the housing.
2. Disconnect the cable end from the throttle grip assembly, and remove the grip assembly.
3. Wash all parts in a mild solvent, and check all contact surfaces for burrs or other damage. (Also clean and inspect the right-hand end of the handlebar.)
4. Lubricate all contact surfaces with a light coat of lithium-base grease and reassemble.

NOTE:

Tighten the housing screws evenly to maintain an even gap between the two halves.

5. Check for smooth throttle operation and quick spring return. Make certain that the housing does not rotate on the handlebar.

NOTE:

The starter lever has been installed on the lever holder with Loctite. When reinstalling the starter lever screw, always use a new screw.
Remove the old Loctite in the lever holder screw hole by using a 6 mm screw tap.

C. Lubrication of levers, pedals, etc.

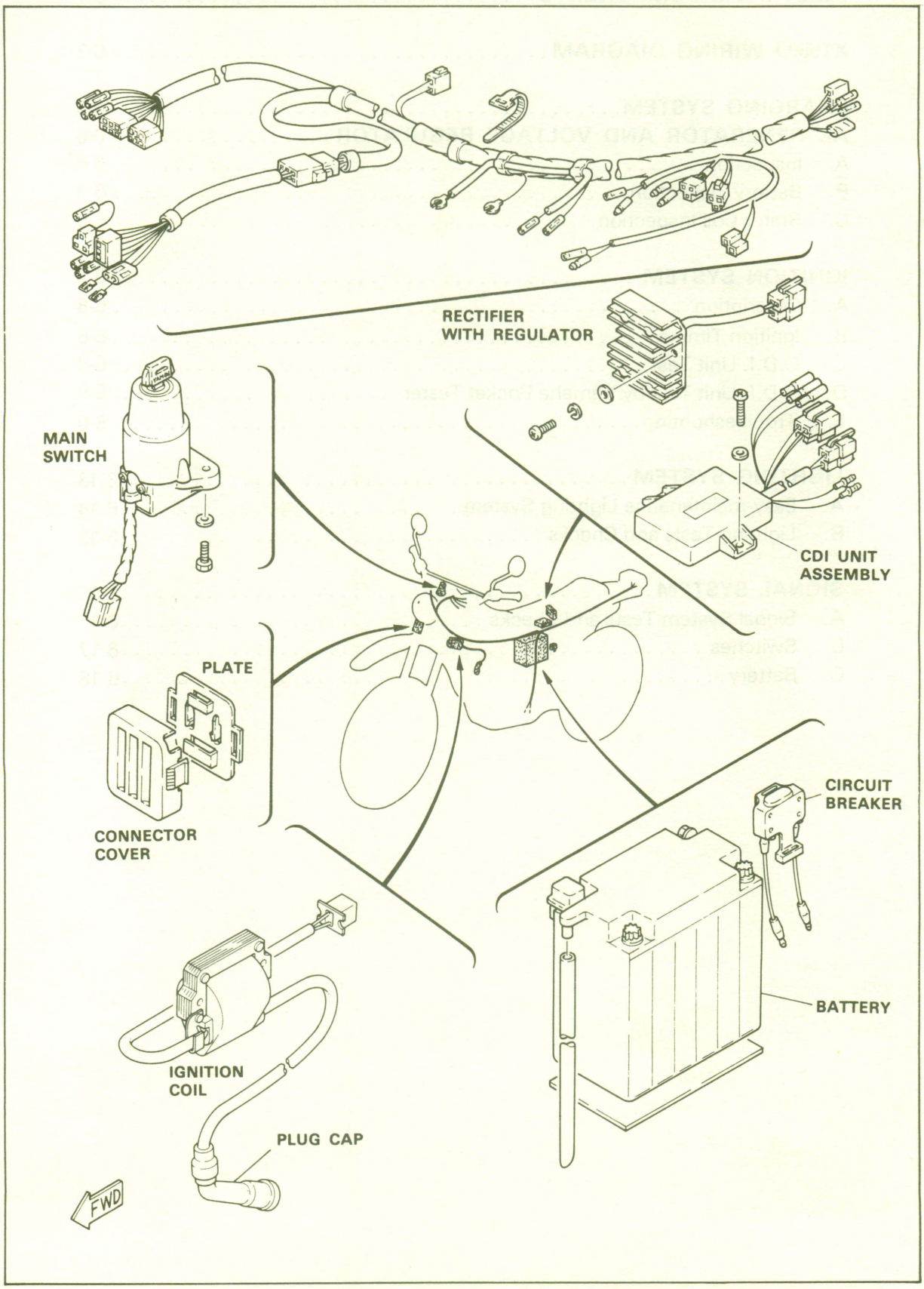
1. Lubricate the pivoting parts of the brake and clutch levers with motor oil (10W/30).
2. Lubricate the shaft of the brake pedal with lithium grease.

CHAPTER 6. ELECTRICAL

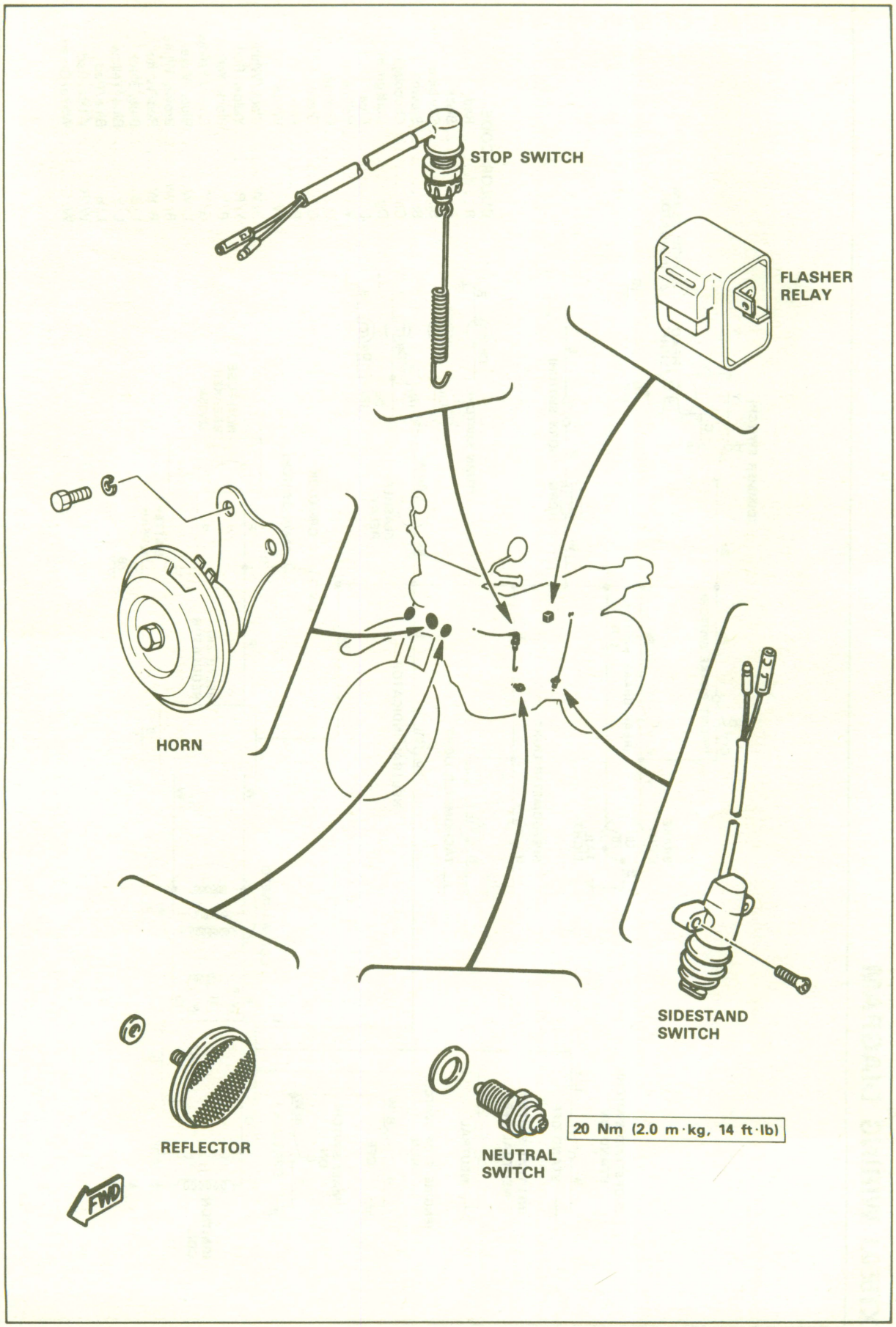
ELECTRICAL

ELECTRICAL COMPONENTS

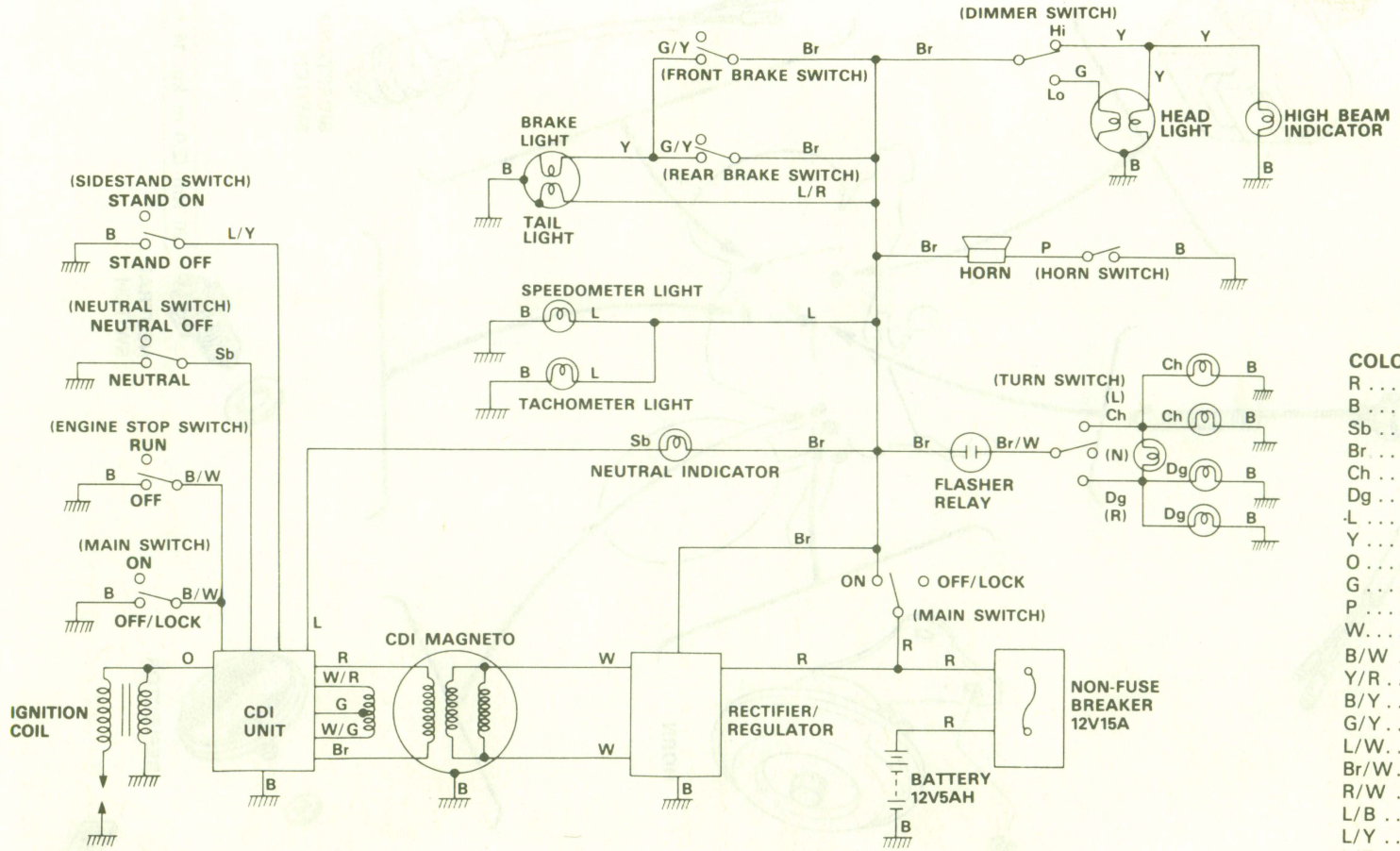
ELECTRICAL COMPONENT (1)



ELECTRICAL COMPONENT (2)



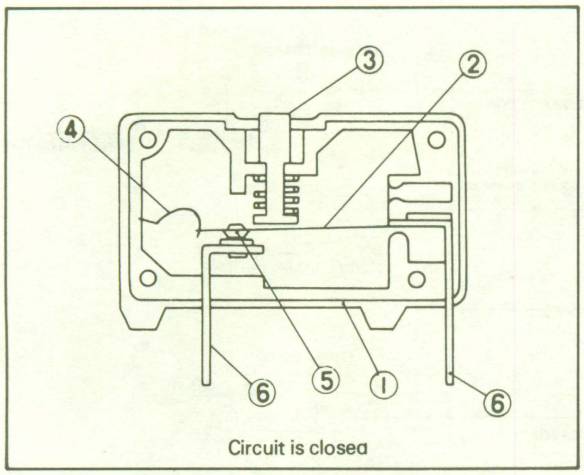
XT550J WIRING DIAGRAM



COLOR CODE

R	Red
B	Black
Sb	Sky blue
Br	Brown
Ch	Chocolate
Dg	Dark green
L	Blue
Y	Yellow
O	Orange
G	Green
P	Pink
W	White
B/W	Black/White
Y/R	Yellow/Red
B/Y	Black/Yellow
G/Y	Green/Yellow
L/W	Blue/White
Br/W	Brown/White
R/W	Red/White
L/B	Blue/Black
L/Y	Blue/Yellow
L/R	Blue/Red
W/R	White/Red
W/G	White/Green

Non-fuse breaker



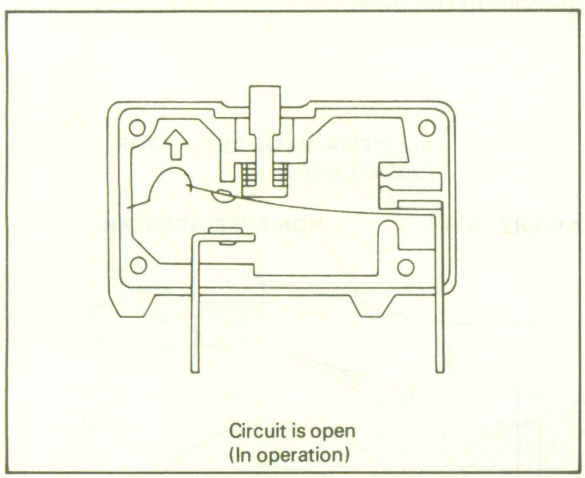
Circuit is closed

1. Case
2. Moveable spring (bimetal)
3. Knob
4. Semielliptic spring
5. Contact point
6. Terminal

Operation

If an excess current should flow through the above-shown circuit, the bimetal will heat up and deform. When its deformation exceeds a certain amount, the bimetal forces the knob out. The bimetal is kept warped by the semielliptic spring.

In this manner, the circuit is left open. The circuit can be closed by simply pushing the knob down. By repeating this operation, the same circuit breaker can be used repeatedly.

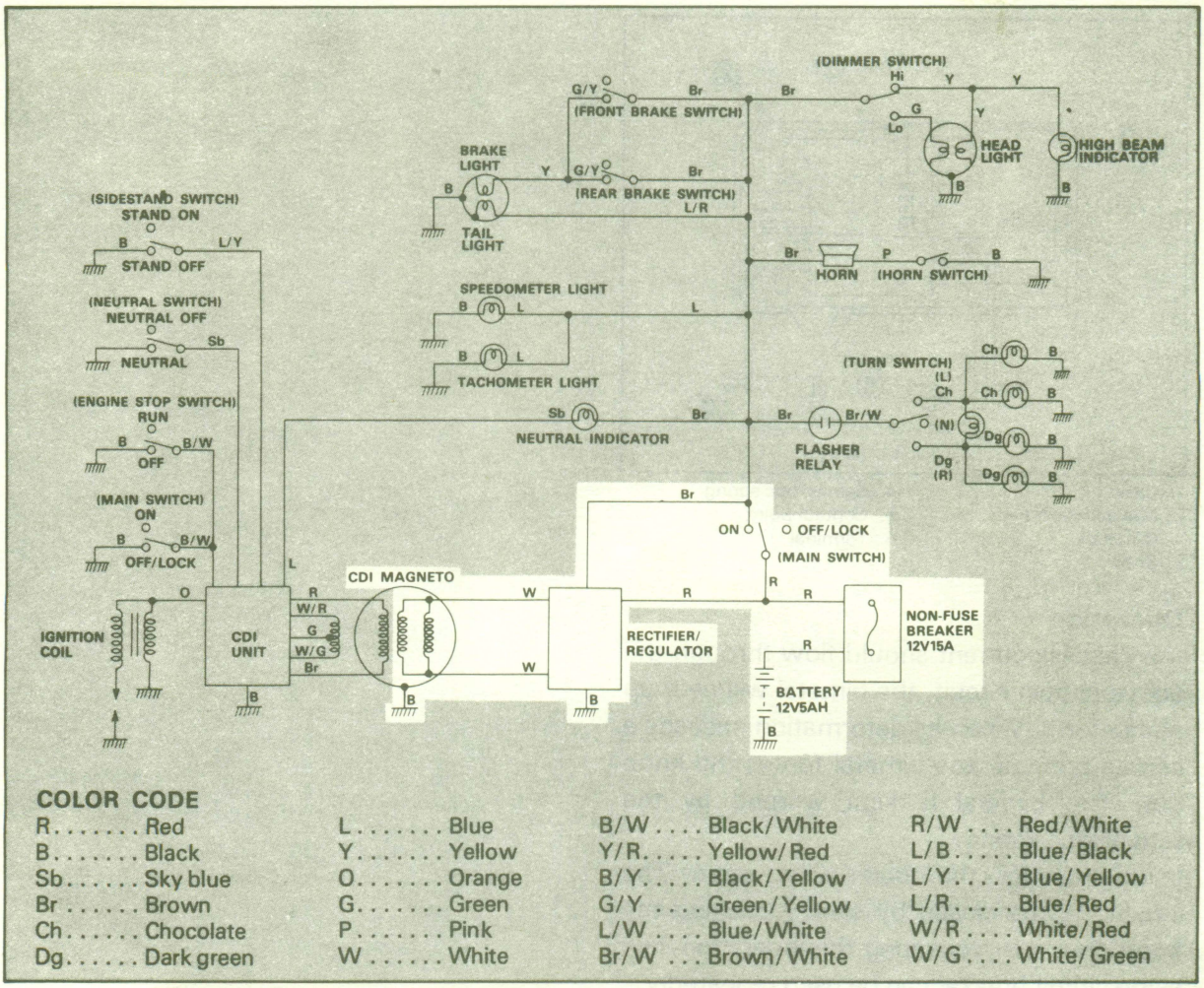


Circuit is open
(In operation)

CAUTION:

Wait 30 seconds before resetting the circuit breaker.

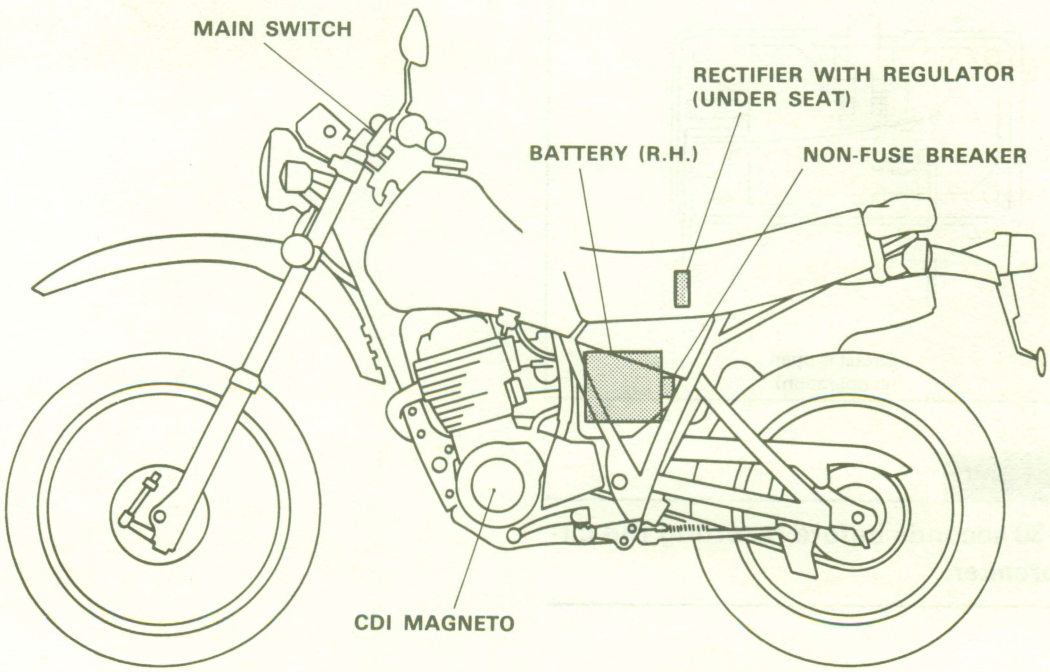
CHARGING SYSTEM



COLOR CODE

R . . . . . Red	L . . . . . Blue	B/W . . . . Black/White	R/W . . . . Red/White
B . . . . . Black	Y . . . . . Yellow	Y/R . . . . . Yellow/Red	L/B . . . . . Blue/Black
Sb . . . . . Sky blue	O . . . . . Orange	B/Y . . . . . Black/Yellow	L/Y . . . . . Blue/Yellow
Br . . . . . Brown	G . . . . . Green	G/Y . . . . Green/Yellow	L/R . . . . . Blue/Red
Ch . . . . . Chocolate	P . . . . . Pink	L/W . . . . Blue/White	W/R . . . . White/Red
Dg . . . . . Dark green	W . . . . . White	Br/W . . . Brown/White	W/G . . . . White/Green

This circuit diagram shows the charging circuit in the wiring diagram.

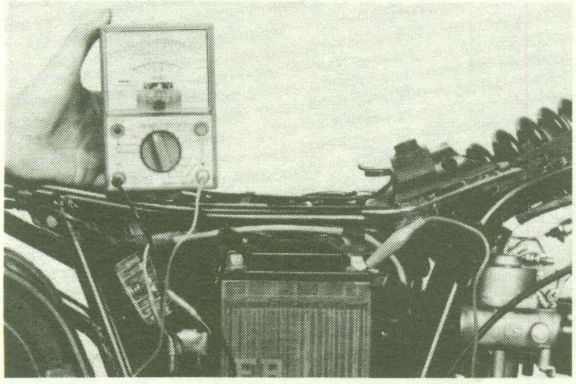


AC GENERATOR AND VOLTAGE REGULATOR

A. Inspection

1. Connect the pocket tester to the battery terminals.
2. Start the engine.
3. Accelerate the engine to approximately 2,000 r/min or more, and check the generator voltage.

Generator voltage: 14.5 ± 0.5V



4. If the indicated voltage cannot be reached, check all connections. If the connections are all good, check the battery, stator coil, and the regulator/rectifier. If both the battery and stator coil are in working order, the regulator is defective and should be replaced.

CAUTION:

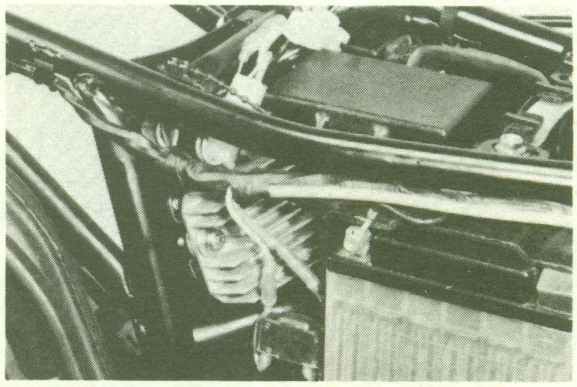
Never disconnect the cables from the battery while the generator is operating. If the battery is disconnected, the voltage across the generator terminals will increase and you may be shocked.

B. Battery Inspection

1. Check the battery terminals and couplers. They should be tight.
2. Measure the specific gravity of the battery. If it is less than 1.260, remove and charge the battery until the specific gravity is greater than 1.260.

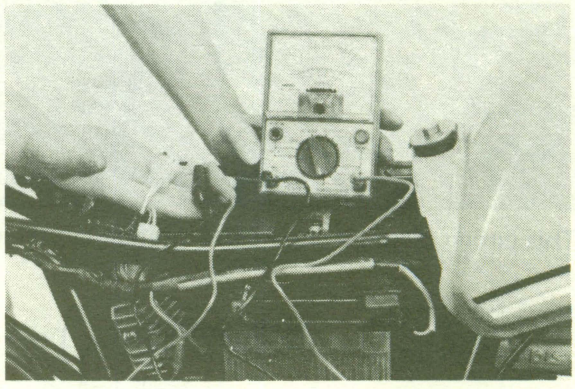
C. Stator Coil Inspection

1. Remove the seat.

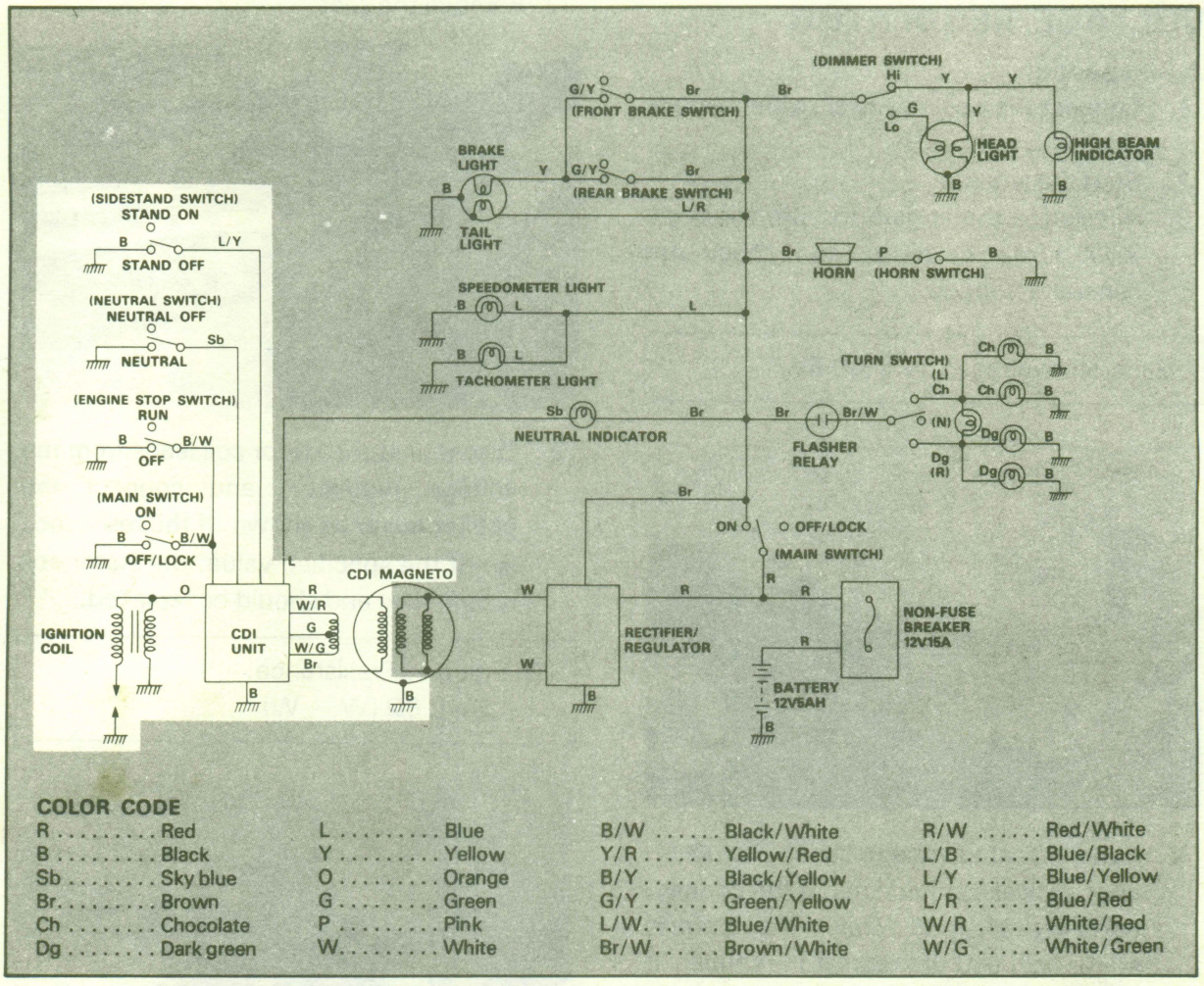


2. Disconnect the stator coil leads from the voltage regulator, and connect the pocket tester as shown. If the resistance is not the specified value, the stator coil is defective and should be replaced.

Charging coil resistance: 0.2 ~ 0.6Ω (W — W)



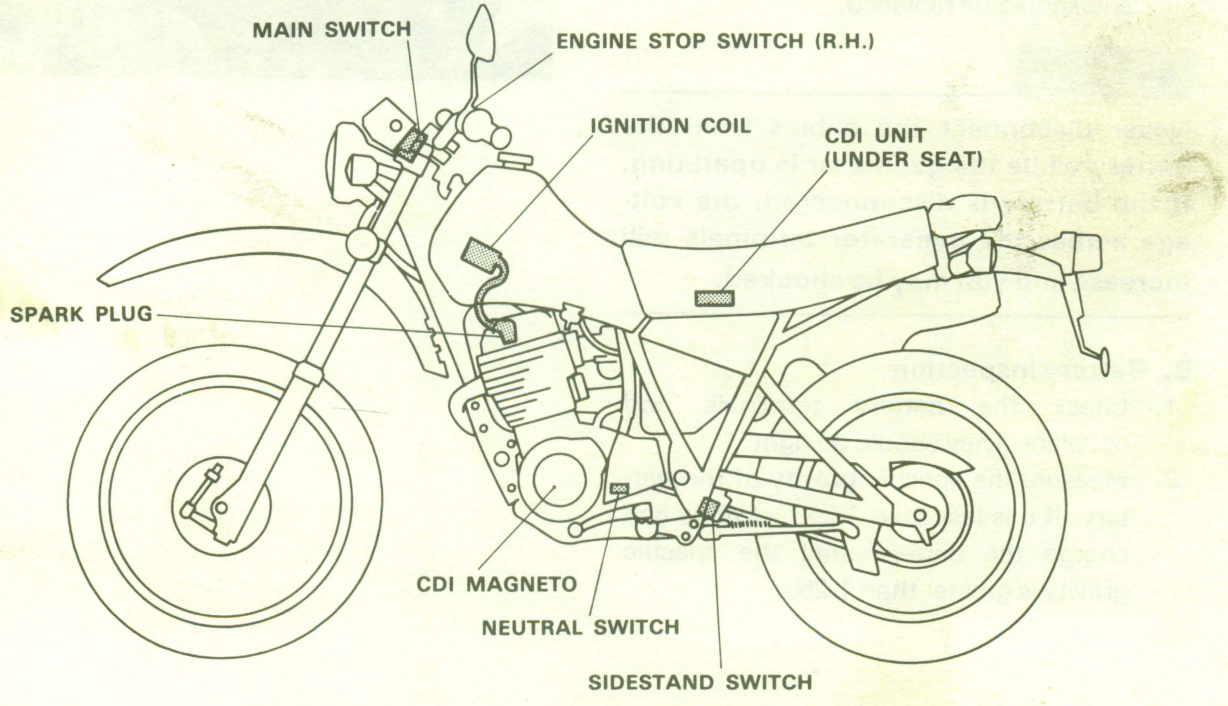
IGNITION SYSTEM



COLOR CODE

R . . . . . Red	L . . . . . Blue	B/W . . . . . Black/White	R/W . . . . . Red/White
B . . . . . Black	Y . . . . . Yellow	Y/R . . . . . Yellow/Red	L/B . . . . . Blue/Black
Sb . . . . . Sky blue	O . . . . . Orange	B/Y . . . . . Black/Yellow	L/Y . . . . . Blue/Yellow
Br. . . . . Brown	G . . . . . Green	G/Y . . . . . Green/Yellow	L/R . . . . . Blue/Red
Ch . . . . . Chocolate	P . . . . . Pink	L/W. . . . . Blue/White	W/R . . . . . White/Red
Dg . . . . . Dark green	W. . . . . White	Br/W . . . . . Brown/White	W/G . . . . . White/Green

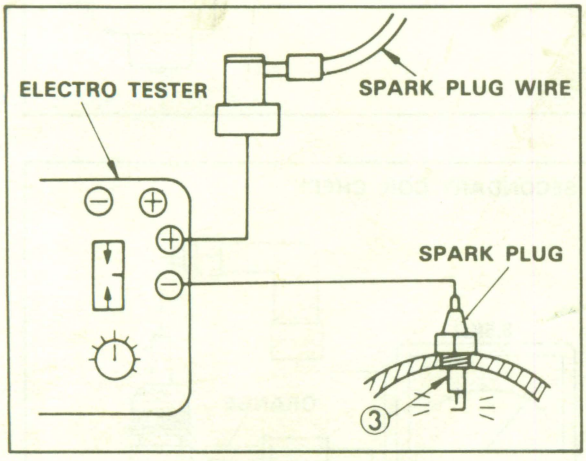
This circuit diagram shows the ignition circuit in the wiring diagram.



E. Troubleshooting

The entire ignition system can be checked for misfire and weak spark by using the Electro Tester. If the ignition system will fire across a specified gap, the entire ignition system is good. If it will not fire across the gap, proceed with the individual component tests until the source of the problem is located.

1. Warm up the engine thoroughly so all electrical components are at operating temperature.
2. Stop the engine, and connect the tester as shown.



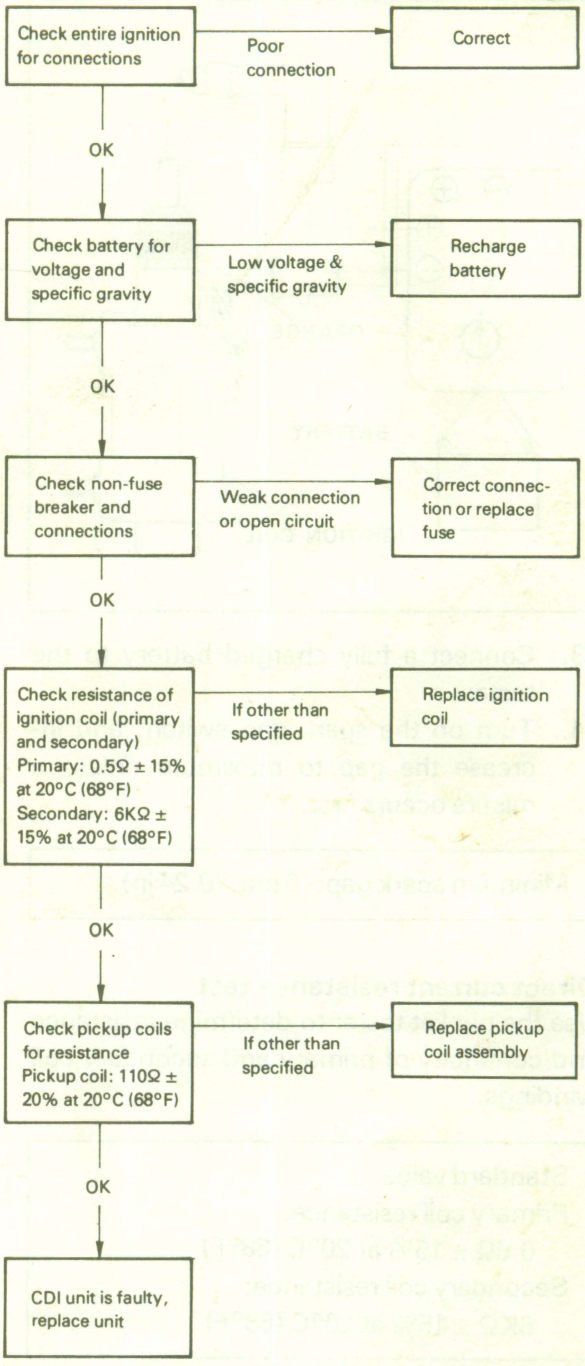
3. Start the engine, and increase the spark gap until a misfire occurs. (Test at various rpm between idle and red line.)

Minimum spark gap: 6 mm (0.24 in)

CAUTION

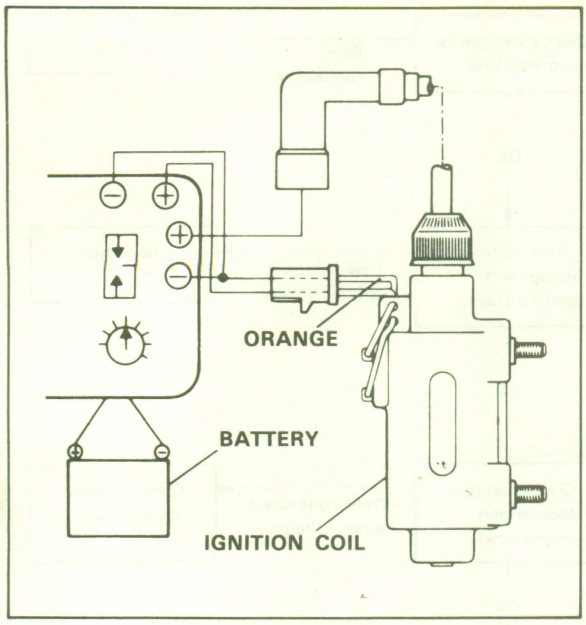
Do not run the engine in neutral above 6,000 r/min for more than 1 or 2 seconds.

If the ignition system becomes inoperative or if the engine misfires at the minimum spark gap or at a smaller gap, there is a problem in the ignition system. Follow the troubleshooting chart until the source of the problem is located.



Ignition spark gap test

1. Disconnect the ignition coil wires from the wiring harness and from the spark plug.
2. Connect the Electro Tester as shown.



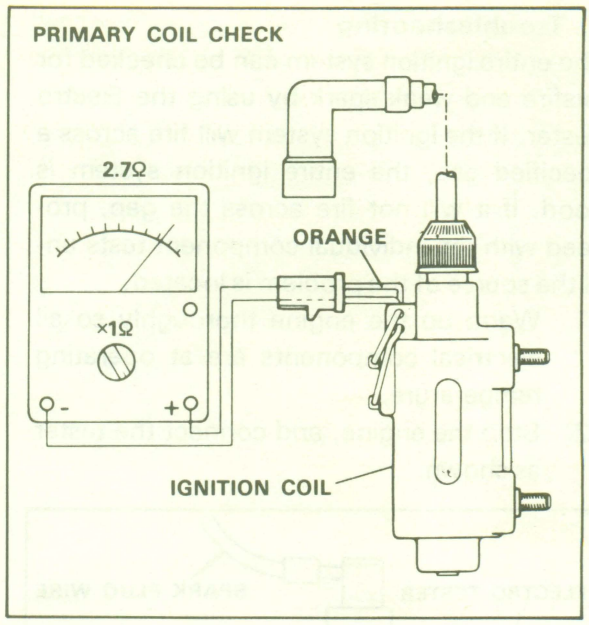
3. Connect a fully charged battery to the tester.
4. Turn on the spark gap switch, and increase the gap to maximum unless a misfire occurs first.

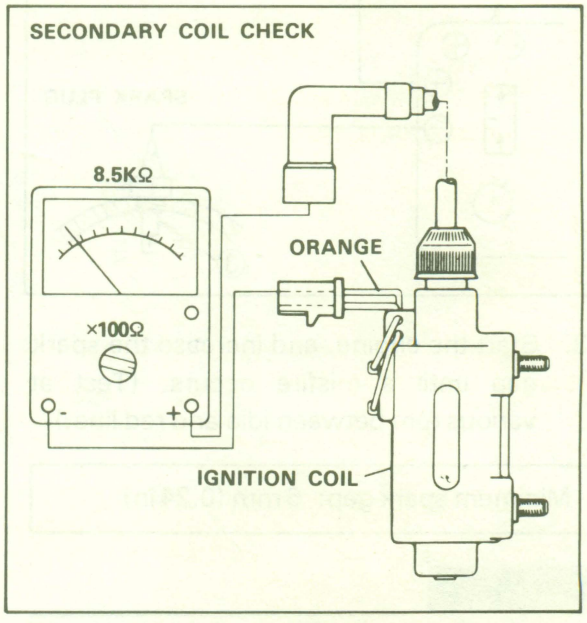
Minimum spark gap: 6 mm (0.24 in)

Direct current resistance test

Use the pocket tester to determine resistance and continuity of primary and secondary coil windings.

Standard value: Primary coil resistance: 0.5Ω ± 15% at 20°C (68°F) Secondary coil resistance: 6KΩ ± 15% at 20°C (68°F)





Spark plug

The life of a spark plug and its discoloring vary according to the habits of the rider. At each periodic inspection, replace burned or fouled plugs with new ones of the specified type. It is actually economical to install new plugs often since it will tend to keep the engine in good condition and prevent excessive fuel consumption.

1. Inspect and clean the spark plug every 4,000 km (2,500 mi), and replace after initial 13,000 km (8,000 mi).

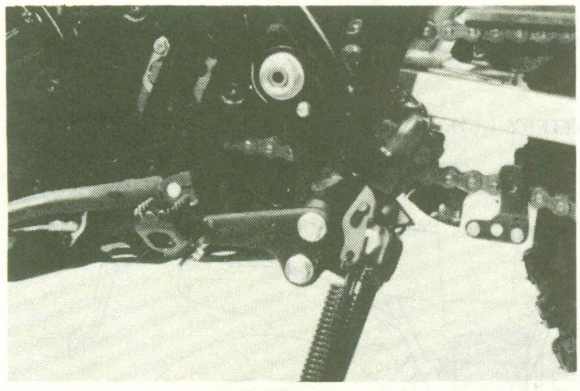
2. Clean the electrodes of carbon, and adjust the electrode gap to the specification. Be sure to use a spark plug with the correct reach, electrode gap, and heat range to avoid overheating, fouling, or piston damage.

Type: D7EA (NGK)
Electrode gap:
0.6 ~ 0.7 mm (0.024 ~ 0.028 in)
Tightening torque:
20 Nm (2.0 m · kg, 14 ft · lb)

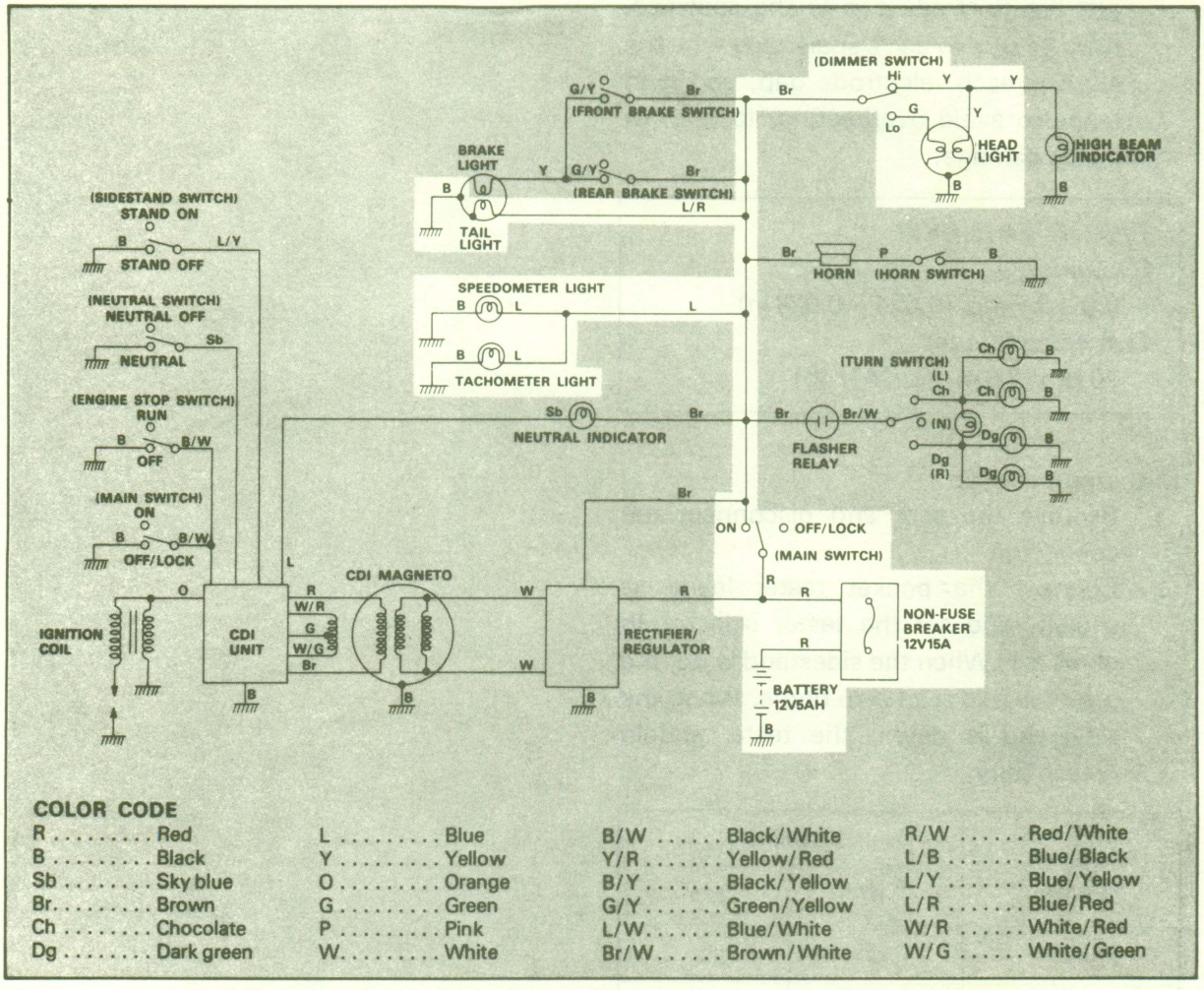
Sidestand switch

1. Remove the seat and disconnect the connector.
2. Connect the pocket tester leads as shown, and set the tester selector to ohms × 1. When the sidestand is up, the tester should read zero ohms. When the sidestand is down, the tester should read infinity.

Switch position	Wire color	
	B	L/Y
FREE	O	O
PUSH		



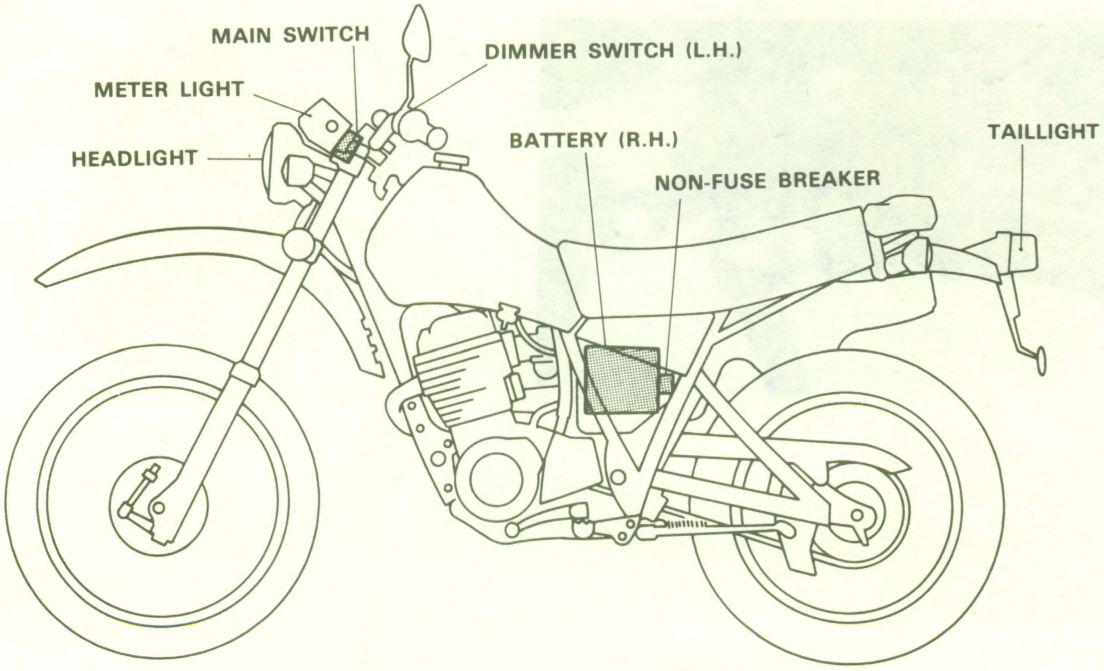
LIGHTING SYSTEM



COLOR CODE

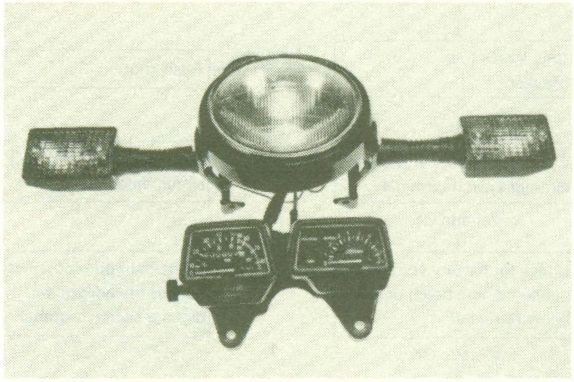
R . . . . . Red	L . . . . . Blue	B/W . . . . . Black/White	R/W . . . . . Red/White
B . . . . . Black	Y . . . . . Yellow	Y/R . . . . . Yellow/Red	L/B . . . . . Blue/Black
Sb . . . . . Sky blue	O . . . . . Orange	B/Y . . . . . Black/Yellow	L/Y . . . . . Blue/Yellow
Br. . . . . Brown	G . . . . . Green	G/Y . . . . . Green/Yellow	L/R . . . . . Blue/Red
Ch . . . . . Chocolate	P . . . . . Pink	L/W. . . . . Blue/White	W/R . . . . . White/Red
Dg . . . . . Dark green	W. . . . . White	Br/W . . . . . Brown/White	W/G . . . . . White/Green

This circuit diagram shows only the lighting circuit in the wiring diagram.



A. Easy-maintenance Lighting System

The headlight, meters, horn, and front flasher lights can be removed easily for off-road use.

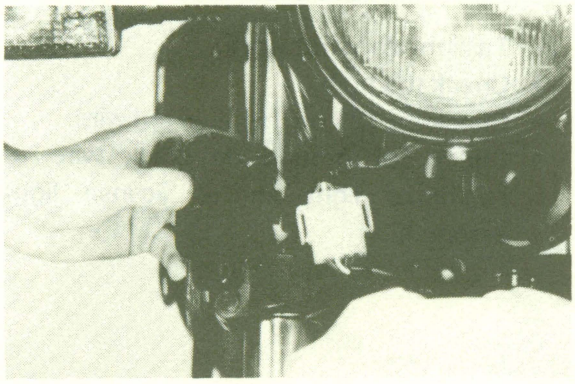


CAUTION:

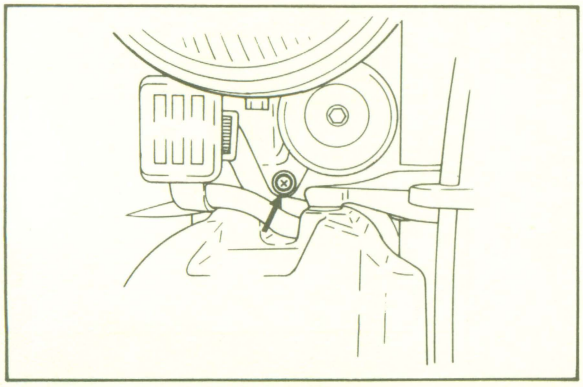
This detachable system has the added advantage of easy parts replacement and repair.
Be sure to put the removed items back on the motorcycle correctly.

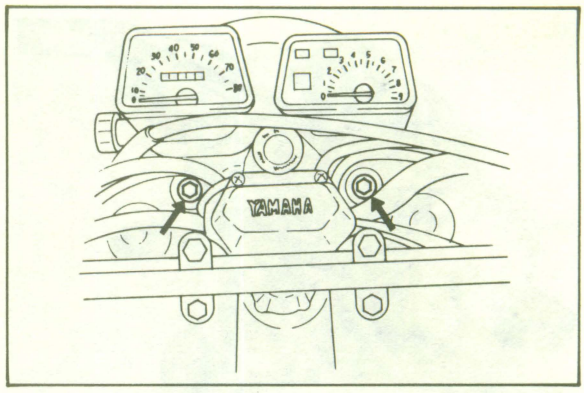
Removal

1. Remove the connector cover and disconnect the wiring connector. Put the main harness connector back in its place.



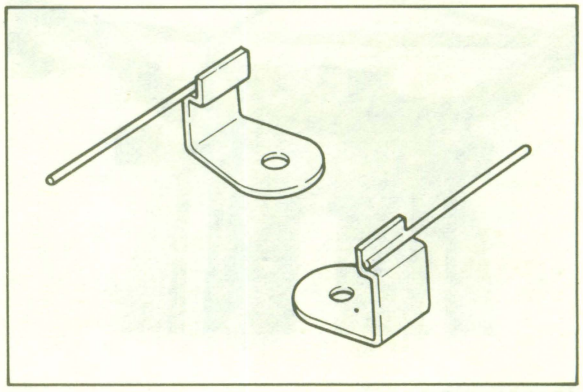
2. Remove the three headlight bracket securing bolts.



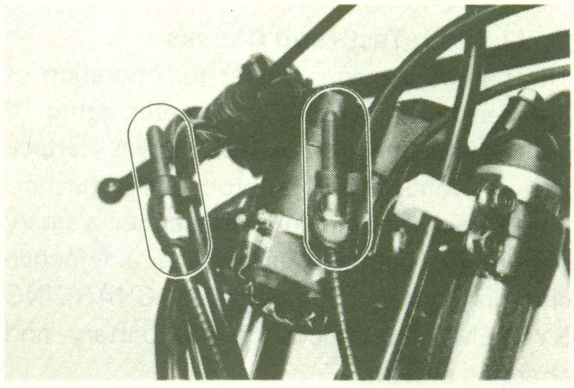


NOTE:

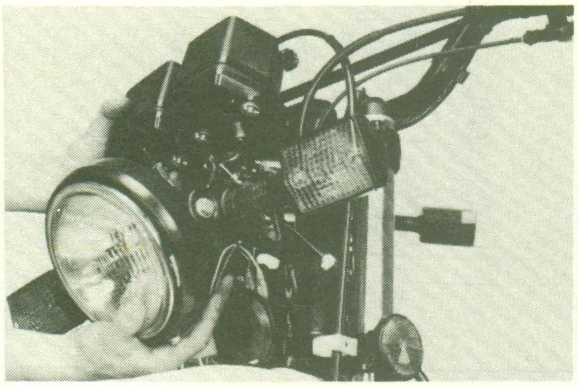
When loosening the bolts, take care not to lose the underside clamp nuts.



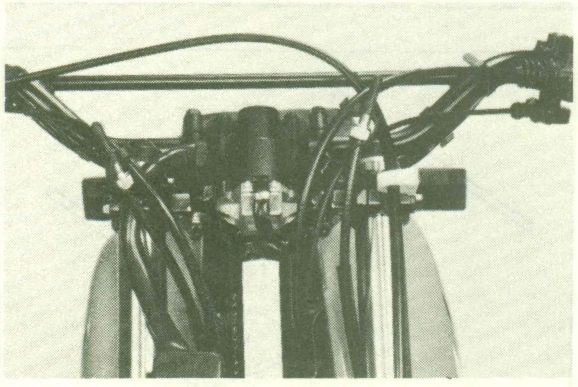
3. Remove the cables from the speedo- and tachometer. Install the rubber caps.



4. Remove the headlight with the speedo- meter and tachometer mounted to it.



5. Put the clamp nuts and bolts back in place while holding the meter cables and throttle and clutch wires inside.

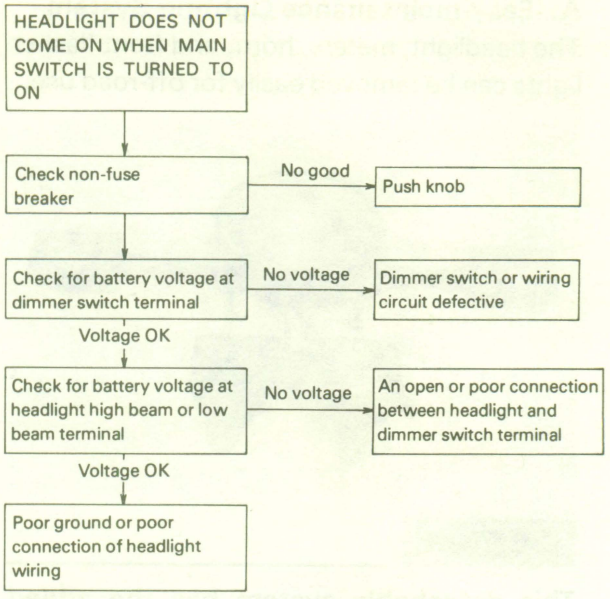


Installation

Reverse the removal procedure. Make sure the removed parts are put back correctly.

B. Lighting Tests and Checks

The battery provides power for operation of the headlight, taillight, and meter lights. If none of the above operates, always check battery voltage before proceeding further. Low battery voltage indicates either a faulty battery, low battery electrolyte, or a defective charging system. See page 6-5 "CHARGING SYSTEM" for checks of the battery and charging system.



NOTE:

Check the headlight bulb filament first before performing the following check.

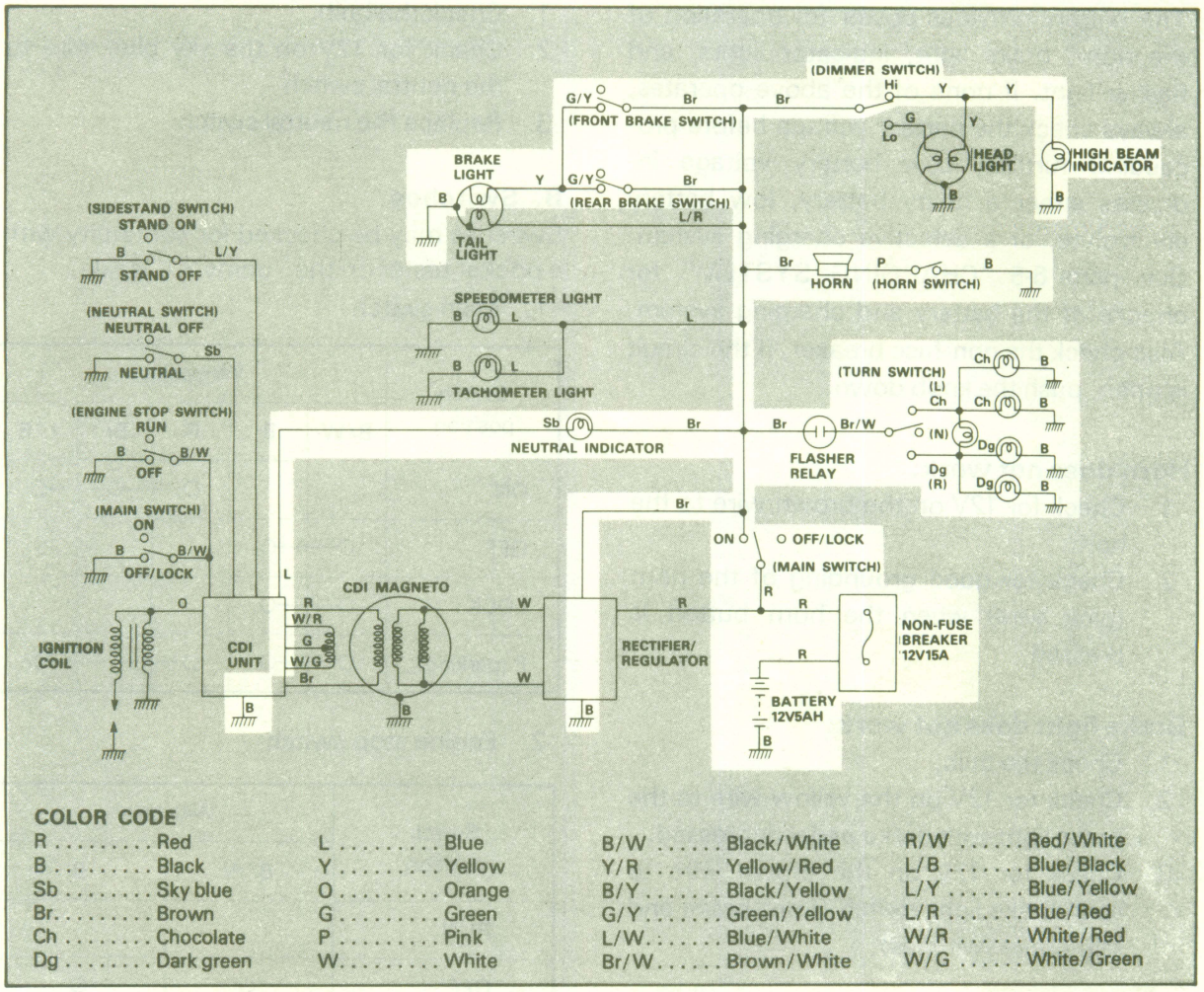
1. Headlight check.

NOTE:

When the main switch is turned to ON, the headlight, meter lights, and taillight come on. The main switch should be turned off.

2. Taillight does not work:
   - Check the bulb.
   - Check for 12V on the blue/red wire.
   - Check for ground on black wire to tail/brake light and/or license light assembly.

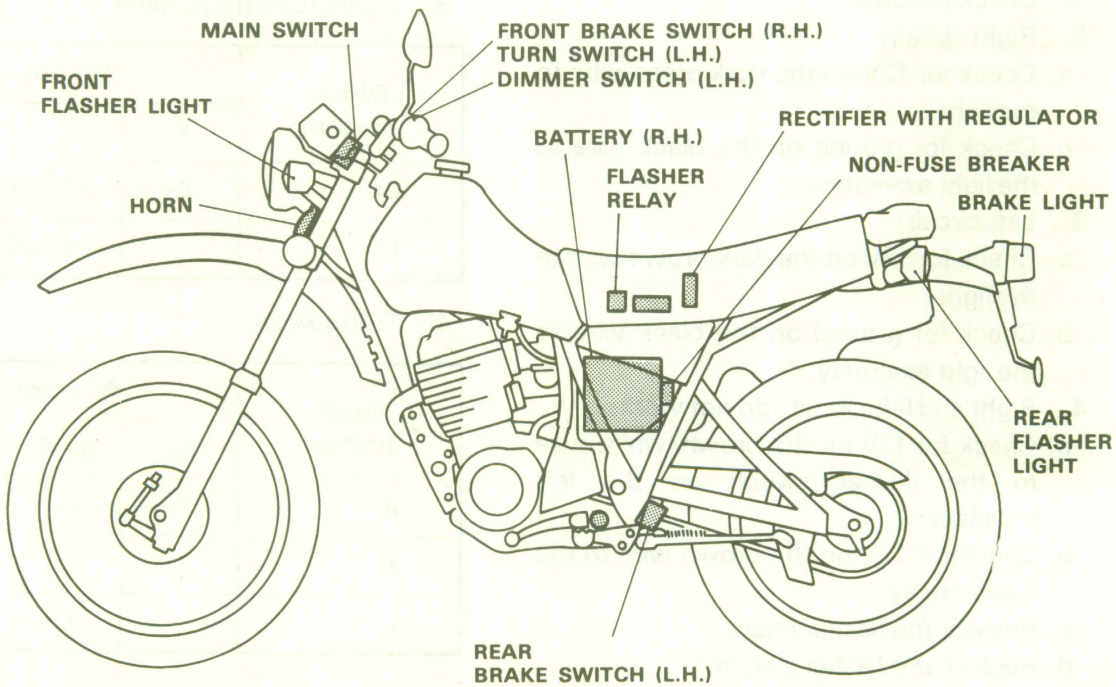
SIGNAL SYSTEM



COLOR CODE

R . . . . . Red	L . . . . . Blue	B/W . . . . . Black/White	R/W . . . . . Red/White
B . . . . . Black	Y . . . . . Yellow	Y/R . . . . . Yellow/Red	L/B . . . . . Blue/Black
Sb . . . . . Sky blue	O . . . . . Orange	B/Y . . . . . Black/Yellow	L/Y . . . . . Blue/Yellow
Br. . . . . Brown	G . . . . . Green	G/Y . . . . . Green/Yellow	L/R . . . . . Blue/Red
Ch . . . . . Chocolate	P . . . . . Pink	L/W. . . . . Blue/White	W/R . . . . . White/Red
Dg . . . . . Dark green	W. . . . . White	Br/W . . . . . Brown/White	W/G . . . . . White/Green

This circuit diagram shows only the signal circuit in the wiring diagram.



A. Signal System Tests and Checks

The battery provides power for operation of the horn, brake light, indicator lights, and flasher light. If none of the above operates, always check the battery voltage before proceeding further. Low battery voltage indicates either a faulty battery, low battery electrolyte, or a defective charging system. See page 6-5 "CHARGING SYSTEM" for checks of the battery and charging system. Also check the non-fuse breaker. If the circuit is open, push the knob down.

Horn does not work:

1. Check for 12V on the brown wire to the horn.
2. Check for good grounding of the horn (pink wire) when the horn button is pressed.

Brake light does not work:

1. Check the bulb.
2. Check for 12V on the yellow wire to the brake light with brake pedal depressed.
3. Check for 12V on the brown wire to each brake light switch (front brake and rear brake switches).

Flasher light(s) do not work:

1. Check the bulb.
2. Right circuit:
   a. Check for 12V on the dark green wire to the light.
   b. Check for ground on the black wire to the light assembly.
3. Left circuit:
   a. Check for 12V on the dark brown wire to the light.
   b. Check for ground on the black wire to the light assembly.
4. Right and left circuits do not work:
   a. Check for 12V on the brown/white wire to the flasher switch on the left handlebar.
   b. Check for 12V on the brown wire to the flasher relay.
   c. Replace the flasher relay.
   d. Replace the flasher switch.

Neutral light does not work:

1. Check the bulb.
2. Check for 12V on the sky blue wire to the neutral switch.
3. Replace the neutral switch.

B. Switches

Switches may be checked for continuity with a pocket tester on the "ohms × 1" scale.

1. Main switch.

Switch position	Wire color				
	B/W	B	R	Br	L/R
ON			○	○	○
OFF	○	○			
LOCK	○	○			
P (parking)	○	○	○		○

2. Engine stop switch

Switch position	Wire color	
	B/W	B
RUN		
OFF	○	○

3. Lights (dimmer) switch

Switch position	Wire color		
	Y	L	G
HI	○	○	
LO		○	○

4. Turn switch

Switch position	Wire color		
	Dg	Br/W	Ch
R	○	○	
N			
L		○	○

5. Horn switch

Switch position	Wire color	
	P	B
PUSH	○———	———○
OFF		

C. Battery

If the battery shows the following defects, it should be replaced:

1. The battery voltage will not rise to a specific value nor will bubbles rise in any cell even after many hours of charging.
2. Sulfation of one or more cells is indicated by the plates turning white or an accumulation of material in the bottom of the cell.
3. Specific gravity readings after a long, slow charge indicate a cell to be lower than any others.
4. Warpage or buckling of plates or insulators is evident.

WARNING:

Battery fluid is poisonous and dangerous, causing severe burns, etc. It contains sulfuric acid. Avoid contact with the skin, eyes, or clothing.
Antidote: EXTERNAL—Flush with water. INTERNAL—Drink large quantities of water or milk. Follow with milk of magnesia, beaten eggs, or vegetable oil. Call physician immediately.
Eyes: Flush with water for 15 minutes, and get prompt medical attention. Batteries produce explosive gases. Keep sparks, flame, cigarettes, etc. away. Ventilate when charging or using in an enclosed space. Always shield your eyes when working near batteries.
KEEP OUT OF REACH OF CHILDREN.

The service life of a battery is usually two to three years. Lack of care, as described below, will shorten the life of the battery:

- Negligence in keeping battery topped off with distilled water.
- Battery left discharged.
- Over-charging with heavy charge.
- Freezing.
- Filling with tap water or sulfuric acid containing impurities.
- Improper charging voltage or current on new battery.

If the motorcycle is not to be used for a long time, remove the battery and have it stored. The following instructions should be observed:

1. Recharge the battery periodically.
2. Store the battery in a cool, dry place.
3. Recharge the battery before reinstallation.

Battery	YB16AL
Electrolyte	Specific gravity: 1.280
Initial charging current	1.6 amp for 10 hours (new battery)
Recharging current	10 hours (or until specific gravity reaches 1.280)
Refill fluid	Distilled water (to maximum level line)
Refill period	Check once per month (or more often, as required)

CHAPTER 7. APPENDICES

APPENDICES

SPECIFICATIONS

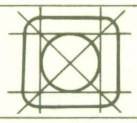
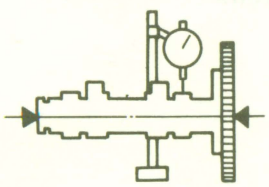
I. GENERAL SPECIFICATIONS

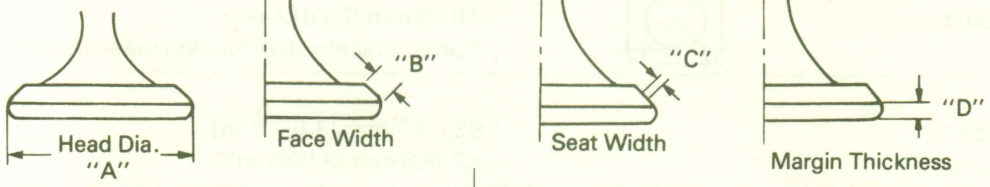
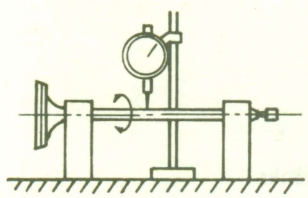
Model	XT550J
Model Code Number	5Y1
Federal V.I.N. Number	JYA5Y100 *DA100101 (*Check digit)
Frame Starting Number	5Y1-100101
Engine Starting Number	5Y1-100101
Dimensions:	
Overall Length	2,210 mm (87.0 in)
Overall Width	865 mm (34.1 in)
Overall Height	1,180 mm (46.5 in)
Seat Height	860 mm (33.9 in)
Wheelbase	1,405 mm (55.3 in)
Minimum Ground Clearance	250 mm (9.8 in)
Basic Weight:	
With Oil and Full Fuel Tank	143 kg (315 lb)
Minimum Turning Radius	2,300 mm (90.6 in)
Engine:	
Engine Type	4-stroke, gasoline, SOHC, 4-valve
Cylinder Arrangement	Single cylinder
Displacement	558 cm^3 (34.1 cu. in)
Bore × Stroke	92 × 84 mm (3.622 × 3.307 in)
Compression Ratio	8.5 : 1
Compression Pressure	1,079 kPa (11 kg/cm^2, 156 psi)
Starting System	Kick starter
Lubrication System	Dry sump
Oil Type or Grade	
Engine Oil	SAE 20W40 type SE motor oil
Oil Capacity	
Engine Oil	
Periodic Oil Change	1.8 L (1.6 Imp qt, 1.9 US qt)
With Oil Filter Replacement	1.9 L (1.7 Imp qt, 2.0 US qt)
Total Amount	2.2 L (1.9 Imp qt, 2.3 US qt)
Air Filter	Wet type element
Fuel	
Type	Regular gasoline
Tank Capacity	11.4 L (2.5 Imp gal, 3.0 US gal)
Reserve Amount	2 L (0.4 Imp gal, 0.5 US gal)
Carburetor	
Type/Manufacturer	Y26PV/TK-KIKAKI
Spark Plug	
Type/Manufacturer	D7EA/NGK
Gap	0.6 ~ 0.7 mm (0.024 ~ 0.028 in)
Clutch Type	Wet, multiple-disc
Transmission:	
Primary Reduction System	Helical gear
Primary Reduction Ratio	76/30 (2.533)

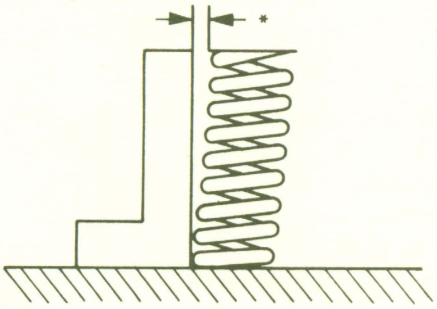
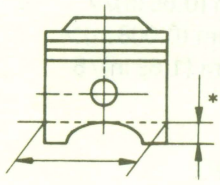
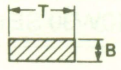
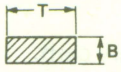
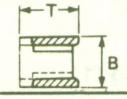
Model	XT550J					
Secondary Reduction System	Chain drive					
Secondary Reduction Ratio	42/15 (2.800)					
Transmission Type	Constant mesh, 5-speed, Dog type					
Operation	Left foot operation					
Gear Ratio						
1st	30/13 (2.307)					
2nd	27/17 (1.588)					
3rd	24/20 (1.200)					
4th	21/22 (0.954)					
5th	21/27 (0.777)					
Chassis:						
Frame Type	Diamond					
Caster Angle	28° 10′					
Trail	115 mm (4.53 in)					
Tire						
Type	With tube					
Size (F)	3.00S21 - 4PR					
Size (R)	4.60S18 - 4PR					
Tire Pressure (Cold tire)	Front Tire			Rear Tire		
	kPa	kg/cm²	psi	kPa	kg/cm²	psi
One Rider	147	1.5	21	147	1.5	21
Off-Road Riding	98.1	1.0	14	98.1	1.0	14
High-Speed Riding	147	1.5	21	147	1.5	21
Brake						
Front Brake Type	Drum brake					
Operation	Right hand operation					
Rear Brake Type	Drum brake					
Operation	Right foot operation					
Suspension						
Front Suspension	Telescopic fork (Pneumo-mechanical)					
Rear Suspension	Unit swing, (Monocross suspension)					
Shock Absorber						
Front Shock Absorber	Air & Coil spring, Oil damper					
Rear Shock Absorber	Gas & Coil spring, Oil damper					
Wheel Travel						
Front Wheel Travel	205 mm (8.1 in)					
Rear Wheel Travel	190 mm (7.5 in)					
Electrical:						
Ignition System	C.D.I. Magneto					
Generator System	Flywheel magneto, A.C. generator					
Battery Type or Model	12N5-3B					
Battery Capacity	12V 5AH					
Headlight Type	Sealed beam					

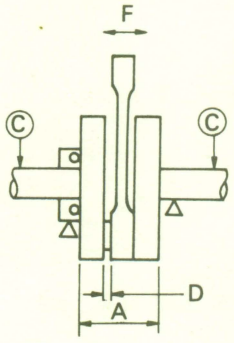
Model	XT550J
Bulb Wattage/Quantity	
Headlight	45W/40W
Tail/Brake Light	8W/27W
Flasher Light	27W×4
Indicator light Wattage/Quantity	12V 3.4W×3
"METER LIGHT"	3.4W×2
"NEUTRAL"	3.4W
"HIGH BEAM"	3.4W
"TURN"	3.4W

II. MAINTENANCE SPECIFICATIONS (4 Cycle Engine)
A. ENGINE

Model	XT550J
Cylinder Head Warp Limit 	<0.03 mm (0.0012 in)> *Lines indicate straightedge measurement.
Cylinder: Bore Size Taper Limit	$92.0^{+0.02}_{0}$ mm ($3.6^{+0.007}_{0}$ in) <0.005 mm (0.0002 in)>
Camshaft Drive Method Cam Cap Inside Diameter Camshaft Outside Diameter <Cap Clearance Limit> Cam Dimensions	Chain (Left) $\phi 23^{+0.021}_{0}$ mm ($\phi 0.91 + 0.0008$ in) $\phi 23^{-0.020}_{-0.033}$ mm ($\phi 0.91^{-0.0008}_{-0.0013}$ in) <0.020 ~ 0.054 mm (0.0008 ~ 0.002 in)>
Intake "A" <Limit> "B" <Limit> "C"	36.55 ± 0.05 mm (1.44 ± 0.002 in) <36.40 mm (1.4331 in)> 30.12 ± 0.05 mm (1.19 ± 0.002 in) <28.97 mm (1.1405 in)> 6.55 mm (0.26 in)
Exhaust "A" <Limit> "B" <Limit> "C"	36.72 ± 0.05 mm (1.45 ± 0.002 in) <36.57 mm (1.4398 in)> 30.14 ± 0.05 mm (1.19 ± 0.002 in) <28.99 mm (1.1413 in)> 6.72 mm (0.26 in)
Camshaft Runout Limit 	<0.03 mm (0.001 in)>
Cam Chain Type/Number of Links Cam Chain Adjustment Method	75-010/126 Links Automatic
Rocker Arm/Rocker Arm Shaft Bearing Inside Diameter <Limit> Shaft Outside Diameter <Limit> Arm-to-shaft Clearance	$12^{+0.018}_{0}$ mm ($0.47^{+0.0007}_{0}$ in) <12.05 mm (0.47 in)> $12^{-0.009}_{-0.024}$ mm ($0.47^{-0.0004}_{-0.009}$ in) <11.95 mm (0.47 in)> 0.009 ~ 0.042 mm (0.0004 ~ 0.002 in)
Valve, Valve Seat, Valve Guide Valve Clearance (Cold) IN. EX.	 0.05 ~ 0.10 mm (0.002 ~ 0.004 in) 0.12 ~ 0.17 mm (0.005 ~ 0.007 in)

Model		XT550J
Valve Dimensions		
		
"A" Head Dia.	IN.	36 ± 0.1 mm (1.42 ± 0.004 in)
	EX.	30 ± 0.1 mm (1.18 ± 0.004 in)
"B" Face Width	IN.	2.26 mm (0.09 in)
	EX.	2.26 mm (0.09 in)
"C" Seat Limit Width	IN.	1.1 ± 0.1 mm (0.04 ± 0.004 in)
	EX.	1.1 ± 0.1 mm (0.04 ± 0.004 in)
"D" Margin Thickness Limit		
	IN.	1.2 ± 0.2 mm (0.05 ± 0.008 in)
	EX.	1 ± 0.2 mm (0.04 ± 0.008 in)
Stem Outside Diameter		
	IN.	$7^{-0.010}_{-0.025}$ mm ($0.28^{-0.0004}_{-0.001}$ in)
	EX.	$7^{-0.030}_{-0.045}$ mm ($0.28^{-0.001}_{-0.002}$ in)
Guide Inside Diameter		
	IN.	$7^{+0.012}_{0}$ mm ($0.276^{+0.0005}_{0}$ in)
<Limit>		<7.10 mm (0.280 in)>
	EX.	$7^{+0.012}_{0}$ mm ($0.276^{+0.0005}_{0}$ in)
		<7.10 mm (0.280 in)>
Stem-to-guide Clearance		
	IN.	0.010 ~ 0.037 mm (0.0004 ~ 0.0015 in)
	EX.	0.030 ~ 0.057 mm (0.001 ~ 0.002 in)
Stem Runout Limit		<0.01 mm (0.0004 in)>
		
Valve Seat Width Standard		1.3 ± 0.1 mm (0.051 ± 0.004 in)
Valve Spring		
Free Length		
Inner Spring	IN.	40.1 mm (1.58 in)
	EX.	40.1 mm (1.58 in)
Outer Spring	IN.	43.8 mm (1.72 in)
	EX.	43.8 mm (1.72 in)

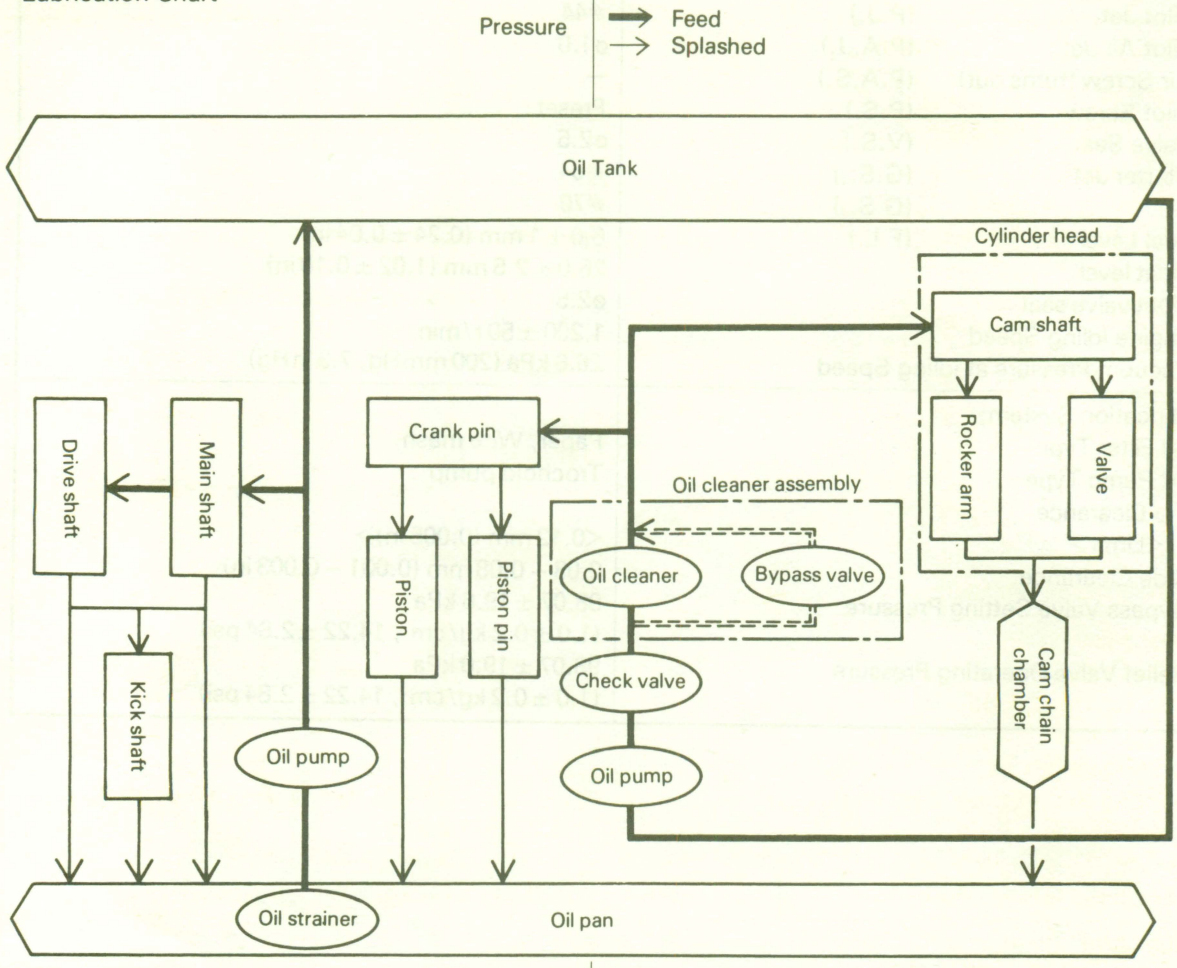
Model		XT550J
Compressed Length (Valve Closed)		
Inner Spring	IN.	22.7 mm (0.89 in)
	EX.	22.7 mm (0.89 in)
Outer Spring	IN.	25.7 mm (1.01 in)
	EX.	25.7 mm (1.01 in)
Tilt Limit*		
Inner Spring	IN. & EX.	2.5° or 1.7 mm (0.067 in)
Outer Spring	IN. & EX.	2.5° or 1.9 mm (0.074 in)
		
Direction of Winding (Top view)		Inner Spring: Left; Outer Spring: Right
 		
Piston		
Piston Size/ Measuring Point*		$92^{-0.035}_{-0.055}$ mm ($3.62^{-0.001}_{-0.002}$ in)/ *6 mm (0.24 in) (From bottom line of piston skirt)
Piston Clearance		0.045 ~ 0.065 mm (0.0018 ~ 0.0026 in)
Oversize	1st	0.25 mm (0.01 in)
	2nd	0.50 mm (0.02 in)
	3rd	0.75 mm (0.03 in)
	4th	1.00 mm (0.04 in)
Piston Ring		
Sectional Sketch		
Top Ring		Plain B = $1.2^{-0.01}_{-0.03}$ mm ($0.05^{-0.0004}_{-0.001}$ in) T = 3.8 ± 0.1 mm (0.15 ± 0.004 in)
2nd Ring		Plain B = $1.5^{-0.01}_{-0.03}$ mm ($0.06^{-0.0004}_{-0.001}$ in) T = 4 ± 0.1 mm (0.16 ± 0.004 in)
Oil Ring		Expender

Model	XT550J
End Gap (Installed)	
Top Ring	0.2 ~ 0.4 mm (0.008 ~ 0.016 in)
2nd Ring	0.2 ~ 0.4 mm (0.008 ~ 0.016 in)
Oil Ring	0.3 ~ 0.9 mm (0.01 ~ 0.035 in)
Side Clearance	
Top Ring	0.04 ~ 0.08 mm (0.0016 ~ 0.0031 in)
2nd Ring	0.03 ~ 0.07 mm (0.001 ~ 0.003 in)
Oil Ring	0.02 ~ 0.06 mm (0.0008 ~ 0.002 in)
Crankshaft	
	
Crank Width "A"	$75^{0}_{-0.05}$ mm ($2.95^{0}_{-0.002}$ in)
Assembly Width "B"	74.95 ~ 75.00 mm (2.951 ~ 2.953 in)
Runout Limit "C"	<0.03 mm (0.001 in)>
Small End Free Play "F"	0.8 mm (0.031 in)
Balancer Drive Method	Gear
Clutch	
Friction Plate Thickness/Quantity	3.0 ± 0.1 mm (0.12 ± 0.004 in)/1
	2.8 ± 0.08 mm (0.11 ± 0.003 in)/7
Wear Limit	<2.8 mm (0.11 in)>
	<2.6 mm (0.10 in)>
Clutch Plate Thickness/Quantity	1.2 mm (0.05 in)/7
Warp Limit	<0.2 mm (0.008 in)>
Clutch Spring Free Length/Quantity	42.8 mm (1.69 in)/5
Clutch Spring Minimum Length	
Primary Reduction Gear	
Backlash Tolerance	7 ~ 71 μ
Clutch Release Method	Inner push (Cam push)
Push Rod Bending Limit	<0.5 mm (0.02 in)>
Kick Starter	
Kick Starter Type	Ratchet
Decompression Device	
Type	Kick synchronous
Cable Free Play	0.5 mm (0.02 in)
Air Filter Oil Grade (Oiled Filter)	SAE 10W30 SE motor oil
Carburetor	
Type/Manufacturer/Quantity	
I.D. Mark	Primary carb. Secondary carb.
Main Jet (M.J.)	#130 #125
Main Air Jet (M.A.J.)	ø1.0 ø1.2
Jet Needle-clip Position (J.N.)	5C30-1/1 4A70-1/1
Needle Jet (N.J.)	V00 00

Model		XT550J
Cutaway	(C.A.)	#4.5
Pilot Jet	(P.J.)	#44
Pilot Air Jet	(P.A.J.)	ø1.0
Air Screw (turns out)	(P.A.S.)	—
Pilot Screw	(P.S.)	Preset
Valve Seat	(V.S.)	ø2.5
Starter Jet	($G.S._1$)	#64
	($G.S._2$)	#70
Fuel Level	(F.L.)	6.0 ± 1 mm (0.24 ± 0.04 in)
Float level		26.0 ± 2.5 mm (1.02 ± 0.10 in)
Float valve seat		ø2.5
Engine Idling Speed		1,200 ± 50 r/min
Vacuum Pressure at Idling Speed		26.6 kPa (200 mmHg, 7.9 inHg)
Lubrication System:		
Oil Filter Type		Paper, Wire mesh
Oil Pump Type		Trochoid pump
Tip Clearance		
<Limit>		<0.12 mm (0.005 in)>
Side Clearance		0.03 ~ 0.08 mm (0.001 ~ 0.003 in)
Bypass Valve Setting Pressure		98.07 ± 19.6 kPa (1.0 ± 0.2 kg/cm², 14.22 ± 2.84 psi)
Relief Valve Operating Pressure		98.07 ± 19.6 kPa (1.0 ± 0.2 kg/cm², 14.22 ± 2.84 psi)

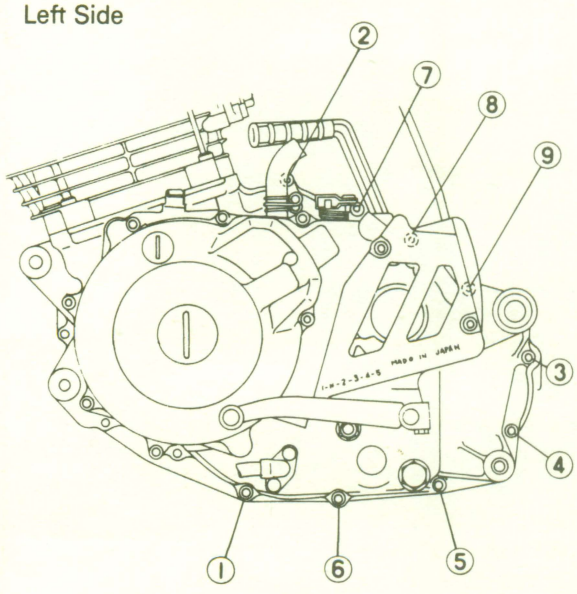
Model	XT550J

Lubrication Chart

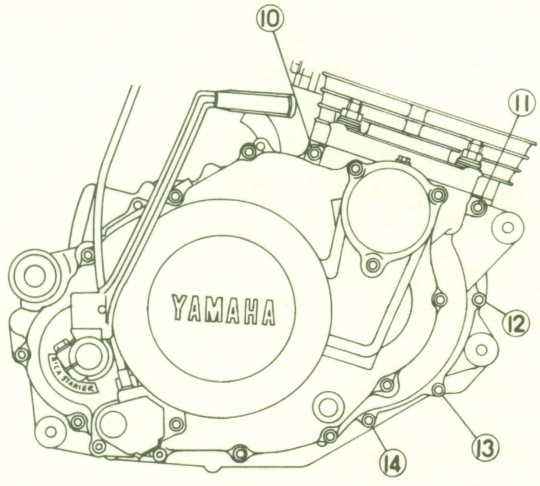


Crankcase Tightening Sequence

Left Side



Right Side



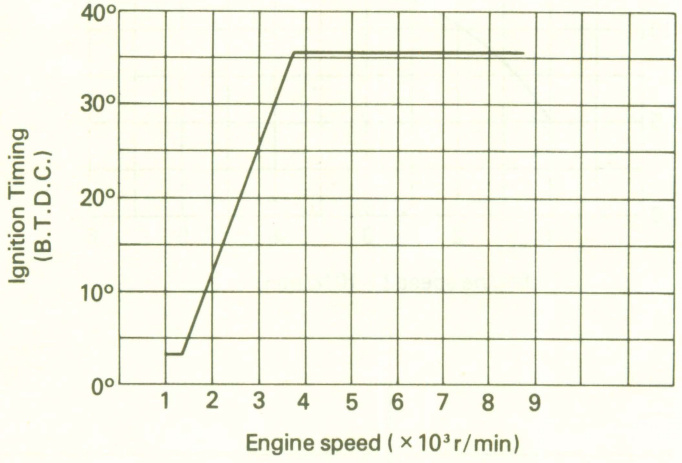
II. MAINTENANCE SPECIFICATIONS
B. CHASSIS

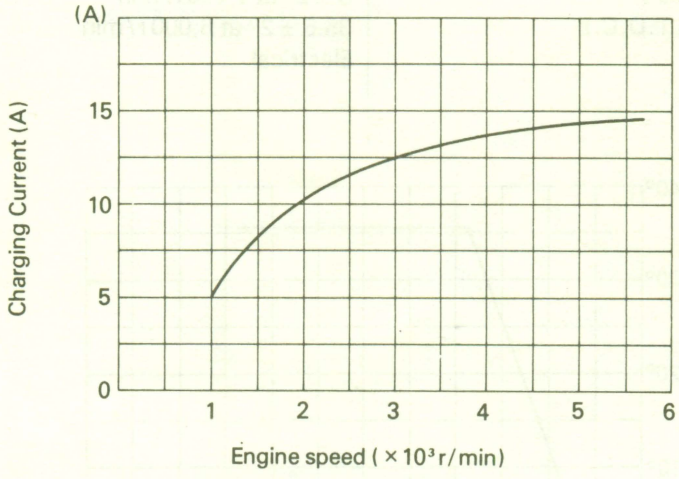
Model	XT550J
Steering System	
Steering Bearing Type	Taper roller bearing
Front Suspension	
Front Fork Travel	205 mm (8.1 in)
Fork Spring Free Length	ℓ_1 = 88 mm (ℓ_1 = 3.5 in), ℓ_2 = 348.5 mm (ℓ_2 = 13.7 in)
Spring Rate/Stroke	K_1 = 3.4 N/mm (0.35 kg/mm, 19.6 lb/in) 0 ~ 115 mm (0 ~ 4.5 in) K_2 = 5.5 N/mm (0.56 kg/mm, 31.3 lb/in) 115 ~ 205 mm (4.5 ~ 8.1 in)
Oil Capacity or	369 cm^3 (12.5 Imp oz, 13.0 US oz)
Oil Level	158 mm (6.2 in) (From top of inner tube fully compressed without spring.)
Oil Grade	KAYABA G-10
Enclosed Air Pressure	39.2 kPa (0.4 kg/cm^2, 5.7 psi)
Rear Suspension	
Shock Absorber Travel	100 mm (3.9 in)
Spring Free Length	293 mm (11.5 in)
<Limit>	
Fitting length	
Spring Rate/Stroke taper coil	K_1 = 39.7 ~ 93.2 N/mm (4.05 ~ 9.5 kg/mm, 226.7 ~ 531.8 lb/in) 0 ~ 120 mm (0 ~ 4.7 in)
Enclosed Gas Pressure	1,176.8 kPa (12 kg/cm^2, 170.6 psi)
Rear Arm	
Swing Arm Free Play Limit	
End	<1.0 mm (0.04 in)>
Side	<1.0 mm (0.04 in)>
Wheel	
Front Wheel Type	Spoke Wheel
Rear Wheel Type	Spoke Wheel
Front Rim Size/Material	1.60 × 21/Aluminum
Rear Rim Size/Material	2.15 × 18/Aluminum
Rim Runout Limit	
Vertical	<1.0 mm (0.04 in)>
Lateral	<0.5 mm (0.02 in)>
Drive Chain	
Type/Manufacturer	520DS/
Number of Links	97 links + Joint
Chain Free Play	60 ~ 70 mm (2.4 ~ 2.8 in)
Drum Brake	
Type Front	Leading and trailing
Rear	Leading and trailing
Drum Inside Dia	
<Limit> Front	150 mm (5.91 in) <151 mm (5.94 in)>
Rear	150 mm (5.91 in) <151 mm (5.94 in)>

Model	XT550J
Brake Lever & Brake Pedal	
Brake Lever Free Play/position	10 ~ 20 mm (0.39 ~ 0.79 in)/ at lever pivot
Brake Pedal Position	20 ~ 30 mm (0.79 ~ 1.18 in)
Brake Pedal Free Play	20 mm (0.79 in) (Vertical height below footrest top.)
Clutch Lever Free Play/position	2 ~ 3 mm (0.08 ~ 0.12 in)/ at lever pivot

II. MAINTENANCE SPECIFICATIONS
C. ELECTRICAL

Model	XT550J
Voltage	12V
Ignition System Ignition Timing (B.T.D.C.) Advanced Timing (B.T.D.C.) Advancer Type	 3 ± 2° at 1,200 r/min 35.5 ± 2° at 6,000 r/min Electrical
C.D.I. Magneto-Model/Manufacture Pickup Coil Resistance (Color) Charging Coil Resistance (Color) C.D.I. Unit-Model/Manufacturer	 5Y1-81400-51/NIPPONDENSO 90 ~ 130Ω at 20°C (68°F) (G — W/R) (G — W/G) 160 ~ 240Ω at 20°C (68°F) (Br — R) 5Y1-85540-51/NIPPONDENSO
Ignition Coil -Model/Manufacturer Minimum Spark Gap Primary Winding Resistance Secondary Winding Resistance	 5Y1-82310-50/NIPPONDENSO 17 kV or more at 300 r/min 25 kV or more at 1,000 ~ 2,500 r/min 17 kV or more at 6,500 r/min 0.5Ω ± 20% at 20°C (68°F) 6KΩ ± 20% at 20°C (68°F)
Charging System/Type	A.C. Magneto Generator
F.W. Magneto Charging Coil Resistance (Color) Lighting Voltage -DC lighting	6.3A or more at 1,500 r/min 10A or less at 5,000 r/min 160 ~ 240Ω at 20°C (68°F) (Br — R) 12.6V or more at 1,500 r/min 13.6V or less at 7,000 r/min



Model	XT550J
Lighting Coil Resistance (Color)	0.2 ~ 0.6Ω at 20°C (68°F) (W — W)
	
Voltage Regulator -Type -Model/ Manufacture -No Load Regulated Voltage	 Point or Semi Conductor, I.C. Type, A.C. Regulator Short or Field Control, Tillil type SH222-12C/ SHINDENGEN 14.5V
Rectifier -Model/ Manufacturer	 SH222-12C/ SHINDENGEN
Battery Capacity Specific Gravity	 12V 5AH 1.260
Horn Type/ Quantity Model/ Manufacturer Maximum Amperage	 Plain type × 1 MF-12/ NIKKO 1.5A
Flasher Relay Type Model/ Manufacturer Flasher Frequency Wattage	 Condenser type FU257SD/ NIPPONDENSO 85 ± 10 cycle/ min 27W × 2 + 3.4W
Circuit Breaker Type Amperage for Individual Circuit/ Quantity Main	 Non fuse breaker 15A × 1

TIGHTENING TORQUE

ENGINE

Tightening torque	Thread Size	Q'ty	Nm	m·kg	ft·lb
Cylinder head: flange bolt	M8	2	22	2.2	16
: flange bolt	M6	1	10	1.0	7.2
Spark plug	M12	1	17.5	1.75	12
Cylinder head cover: Internal hex. bolt	M6	2	10	1.0	7.2
: Internal hex. bolt	M6	4	10	1.0	7.2
: Internal hex. bolt	M6	3	10	1.0	7.2
: Internal hex. bolt	M6	7	10	1.0	7.2
Cylinder head side cover: Internal hex. bolt	M6	2	10	1.0	7.2
Gear unit assembly: Internal hex. bolt	M6	1	10	1.0	7.2
Tachometer cable: stopper flat head Internal hex. screw	M6	1	7	0.7	5.1
Cylinder body: nut	M8	2	20	2.0	14
: nut	M10	2	37.5	3.75	27
: nut	M10	2	37.5	3.75	27
: Internal hex. bolt	M6	2	10	1.0	7.2
Gear balance weight: nut	M16	1	60	6.0	43
A.C.G. Rotar: nut	M14	1	90	9.0	65
Valve clearance: nut	M6	4	13.5	1.35	9.4
Stopper guide 2: hex. bolt	M6	2	8	0.8	5.8
Cam sprocket	M7	2	20	2.0	14
Tensioner assembly: Internal hex. bolt	M6	2	10	1.0	7.2
Tensioner spring retainer: plug	M16	1	20	2.0	14
Decompression cam: bolt	M6	1	8	0.8	5.8
Rocker shaft stopper bolt	M6	2	10	1.0	7.2
Oil pump assembly: Internal hex. bolt	M6	3	10	1.0	7.2
Cover 2: panhead screw	M6	1	7	0.7	5.1
Strainer housing: panhead screw	M6	2	7	0.7	5.1
Drain plug: straight screw plug	M14	1	30	3.0	22
Element cover: Internal hex. bolt	M6	1	10	1.0	7.2
: Internal hex. bolt	M6	2	10	1.0	7.2
Element cover stud bolt: bind screw	M5	1	5	0.5	3.6
Oil hose 1: Internal hex. bolt	M6	2	10	1.0	7.2
: union nut	M16	1	50	5.0	36
Oil hose 2: Internal hex. bolt	M6	2	10	1.0	7.2
: union nut	M16	1	50	5.0	36
Caburetor joint: Internal hex. bolt	M6	4	10	1.0	7.2

Tightening torque	Thread Size	Q'ty	Nm	m·kg	ft·lb
Caburetor assembly: hose clamp	M4	2	2	0.2	1.4
Exhaust pipe: nut	M6	4	10	1.0	7.2
Exhaust pipe protector: bind screw	M6	2	7	0.7	5.1
Muffler protector 1: bind screw	M6	4	7	0.7	5.1
Outlet pipe: panhead W/W screw	M6	1	7	0.7	5.1
Exhaust pipe muffler joint: hex. bolt	M8	2	20	2.0	14
Muffler mounting: flange bolt	M8	2	20	2.0	14
Case 1 and 2: Internal hex. bolt	M6	9	10	1.0	7.2
: Internal hex. bolt	M6	4	10	1.0	7.2
: Internal hex. bolt	M6	1	10	1.0	7.2
Crank case 1	M10	2	20	2.0	14
Clamp (lead): panhead screw	M6	1	7	0.7	5.1
Crank case 2	M10	2	20	2.0	14
Crank case cover 1: Internal hex. bolt	M6	6	10	1.0	7.2
: Internal hex. bolt	M6	1	10	1.0	7.2
: Internal hex. bolt	M6	1	10	1.0	7.2
: Internal hex. bolt	M6	1	10	1.0	7.2
Crank case cover 2: Internal hex. bolt	M6	2	10	1.0	7.2
: bolt	M6	1	10	1.0	7.2
Crank case cover 3: Internal hex. bolt	M6	7	10	1.0	7.2
: Internal hex. bolt	M6	1	10	1.0	7.2
: Internal hex. bolt	M6	2	10	1.0	7.2
Cover 1: Internal hex. bolt	M6	2	10	1.0	7.2
Plate bridge cover: flat head screw	M6	3	7	0.7	5.1
Ratchet wheel guide: hex. bolt	M6	2	10	1.0	7.2
Cable lever: hex. nut	M6	1	8	0.8	5.8
Kick crank boss: hex. bolt	M8	1	20	2.0	14
Clutch spring: W/W screw	M6	5	8	0.8	5.8
Clutch boss: nut	M20	1	70	7.0	50
Primary drive gear: nut	M20	1	110	11.0	80
Push lever assembly: stopper screw	M8	1	12	1.2	8.7
Push lever positioning: nut	M6	1	8	0.8	5.8
Drive sprocket: hex. bolt	M6	2	10	1.0	7.2
Oil seal cover: hex. bolt	M6	2	10	1.0	7.2
Stopper lever: W/W screw	M6	1	10	1.0	7.2
Shift pedal: bolt	M6	1	10	1.0	7.2
Coil: panhead W/W screw	M6	4	7	0.7	5.1

Tightening torque	Thread Size	Q'ty	Nm	m·kg	ft·lb
Pulser: panhead W/W screw	M6	2	7	0.7	5.1
Neutral switch: neutral switch assembly	M10	1	20	2.0	14
Cylinder head side cover 1	M32	2	12	1.2	8.7
Kick crank: screw	M6	1	7	0.7	5.1

CHASSIS

Tightening torque	Thread Size	Nm	m·kg	ft·lb
Front wheel shaft and nut	M14	100	10.0	72
Outer tube and cover	M6	10	1.0	7.2
Handle crown and inner tube	M8	23	2.3	17
Handle crown and steering shaft	M14	95	9.5	68
Under handle holder and Upper handle holder	M8	20	2.0	14
Front engine stay and engine	M10	58	5.8	42
Front engine stay and frame	M10	58	5.8	42
Engine top stay and engine	M10	58	5.8	42
Engine top stay and frame	M10	58	5.8	42
Rear engine and frame	M10	58	5.8	42
Nipple hose and frame	M22	90	9.0	65
Oil tank drain plug	M8	18	1.8	13
Pivot shaft and nut	M16	100	10.0	72
Rear wheel shaft and nut	M16	100	10.0	72
Rear cushion and frame	M10	48	4.8	35
Lever cam shaft and cam shaft (Front, Rear)	M6	10	1.0	7.2
Sprocket wheel holder	M10	62	6.2	45
Steering shaft and ring nut	M25	38	3.8	27
Under bracket and Inner tube	M8	23	2.3	17
Inner tube cap	M34	23	2.3	17
Front fork cylinder compressor and outer tube	M12	37	3.7	27
Foot rest and frame	M10	45	4.5	32
Bead stopper and rim	M8	100	10.0	72
Steering lock and handle crown	M6	7	0.7	5.1
Spoke		2	0.2	1.4
Seat bracket securing bolt	M6	7	0.7	5.1

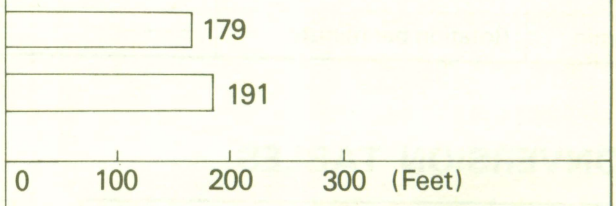
CONSUMER INFORMATION

Stopping Distance

This figure indicates braking performance that can be met or exceeded by the vehicles to which they apply, without locking the wheels, under different conditions of loading and with partial failures of the braking system. The information presented represents results obtained by skilled drivers under controlled road and vehicle conditions and the information may not be correct under other conditions.

Description of vehicles to which this table applies: Yamaha motorcycle XT550J.

A. Fully Operational Service Brake



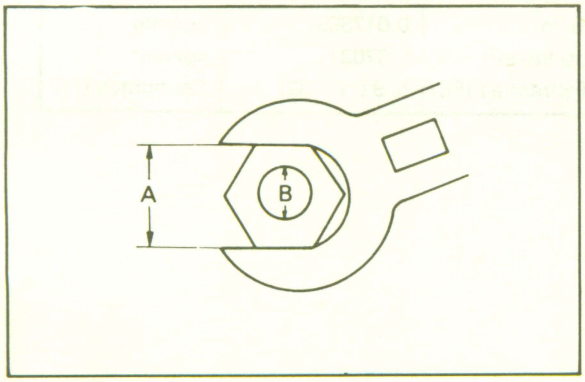
NOTE:
The statement above is required by U.S. Federal law. "Partial failures" of the braking system do not apply to this chart.

Stopping distance in feet from 60 mi/h

GENERAL TORQUE SPECIFICATIONS

This chart specifies torque for standard fasteners with standard I.S.O. pitch threads. Torque specifications for special components or assemblies are included in the applicable sections of this book. To avoid warpage, tighten multi-fastener assemblies in a crisscross fashion, in progressive stages, until full torque is reached. Unless otherwise specified, torque specifications call for clean, dry threads. Components should be at room temperature.

A (Nut)	B (Bolt)	General torque specifications		
		Nm	m·kg	ft·lb
10 mm	6 mm	6	0.6	4.3
12 mm	8 mm	15	1.5	11
14 mm	10 mm	30	3.0	22
17 mm	12 mm	55	5.5	40
19 mm	14 mm	85	8.5	61
22 mm	16 mm	130	13.0	94



COLOR CODE

R . . . . . Red	B/W . . . . . Black/White
B . . . . . Black	Y/R . . . . . Yellow/Red
Sb . . . . . Sky blue	B/Y . . . . . Black/Yellow
Br. . . . . Brown	G/Y . . . . . Green/Yellow
Ch . . . . . Chocolate	L/W. . . . . Blue/White
Dg . . . . . Dark green	Br/W . . . . . Brown/White
L . . . . . Blue	R/W . . . . . Red/White
Y . . . . . Yellow	L/B . . . . . Blue/Black
O . . . . . Orange	L/Y . . . . . Blue/Yellow
G . . . . . Green	L/R . . . . . Blue/Red
P . . . . . Pink	W/R . . . . . White/Red
W. . . . . White	W/G . . . . . White/Green

DEFINITION OF UNITS

Unit	Read	Definition	Measure
mm	millimeter	10^{-3} meter	Length
cm	centimeter	10^{-2} meter	Length
kg	kilogram	10^{3} gram	Weight
N	Newton	1 kg × m/sec^2	Force
Nm	Newton meter	N × m	Torque
m·kg	Meter kilogram	m × kg	Torque
Pa	Pascal	N/m^2	Pressure
N/mm	Newton per millimeter	N/mm	Spring rate
L	Liter	———	Volume
cm^3	Cubic centimeter		or Capacity
r/min	Rotation per minute	———	Engine Speed

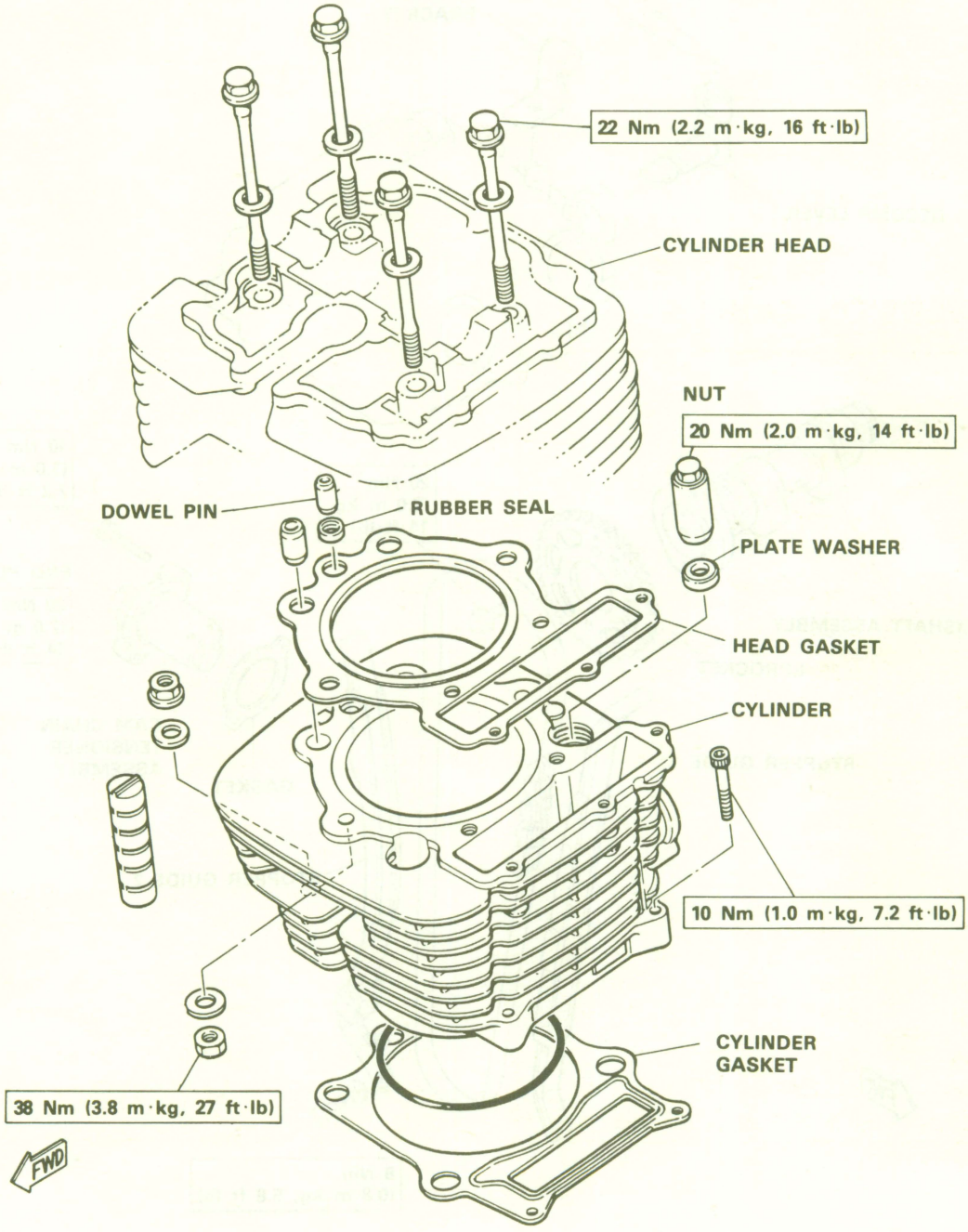
CONVERSION TABLES

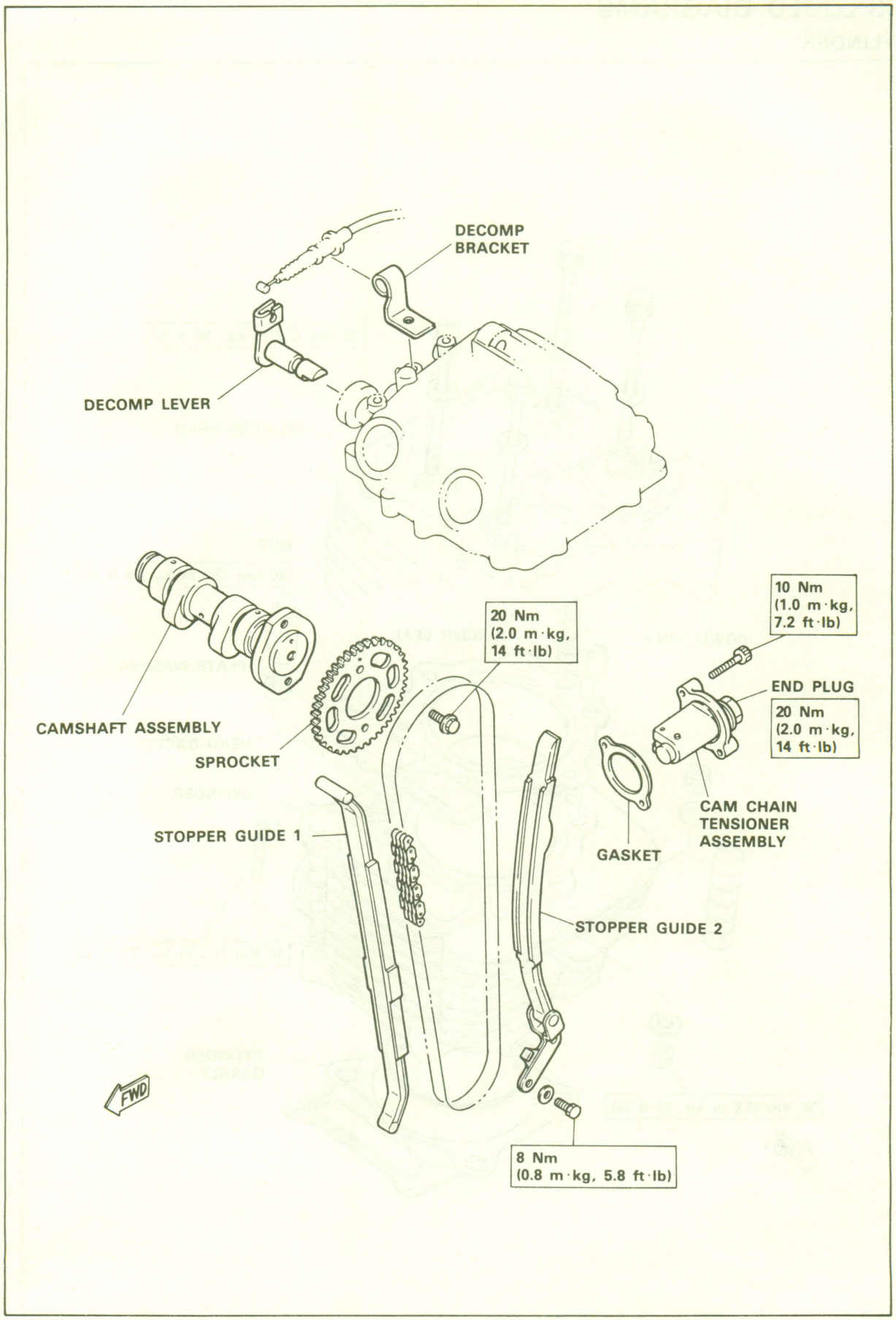
Metric to inch system		
Known	Multiplier	Result
m·kg	7.233	ft·lb
m·kg	86.80	in·lb
cm·kg	0.0723	ft·lb
cm·kg	0.8680	in·lb
kg	2.205	lb
g	0.03527	oz
km/lit	2.352	mpg
km/hr	0.6214	mph
km	0.6214	mi
m	3.281	ft
m	1.094	yd
cm	0.3937	in
mm	0.03937	in
cc (cm^3)	0.03382	oz (US liq)
cc (cm^3)	0.06102	cu in
lit (liter)	2.1134	pt (US liq)
lit (liter)	1.057	qt (US liq)
lit (liter)	0.2642	gal (US liq)
kg/mm	56.007	lb/in
kg/cm^2	14.2234.	psi (lb/in^2)
Centigrade (°C)	9/5 (°C) + 32	Fahrenheit (°F)

Inch to metric system		
Known	Multiplier	Result
ft·lb	0.13826	m·kg
in·lb	0.01152	m·kg
ft·lb	13.831	cm·kg
in·lb	1.1521	cm·kg
lb	0.4535	kg
oz	28.352	g
mpg	0.4252	km/lit
mph	1.609	km/hr
mi	1.609	km
ft	0.3048	m
yd	0.9141	m
in	2.54	cm
in	25.4	mm
oz (US liq)	29.57	cc (cm^3)
cu in	16.387	cc (cm^3)
pt (US liq)	0.4732	lit (liter)
qt (US liq)	0.9461	lit (liter)
gal (US liq)	3.785	lit (liter)
lb/in	0.017855	kg/mm
psi (lb/in^2)	0.07031	kg/cm^2
Fahrenheit (°C)	5/9 (°F − 32)	Centigrade (°F)

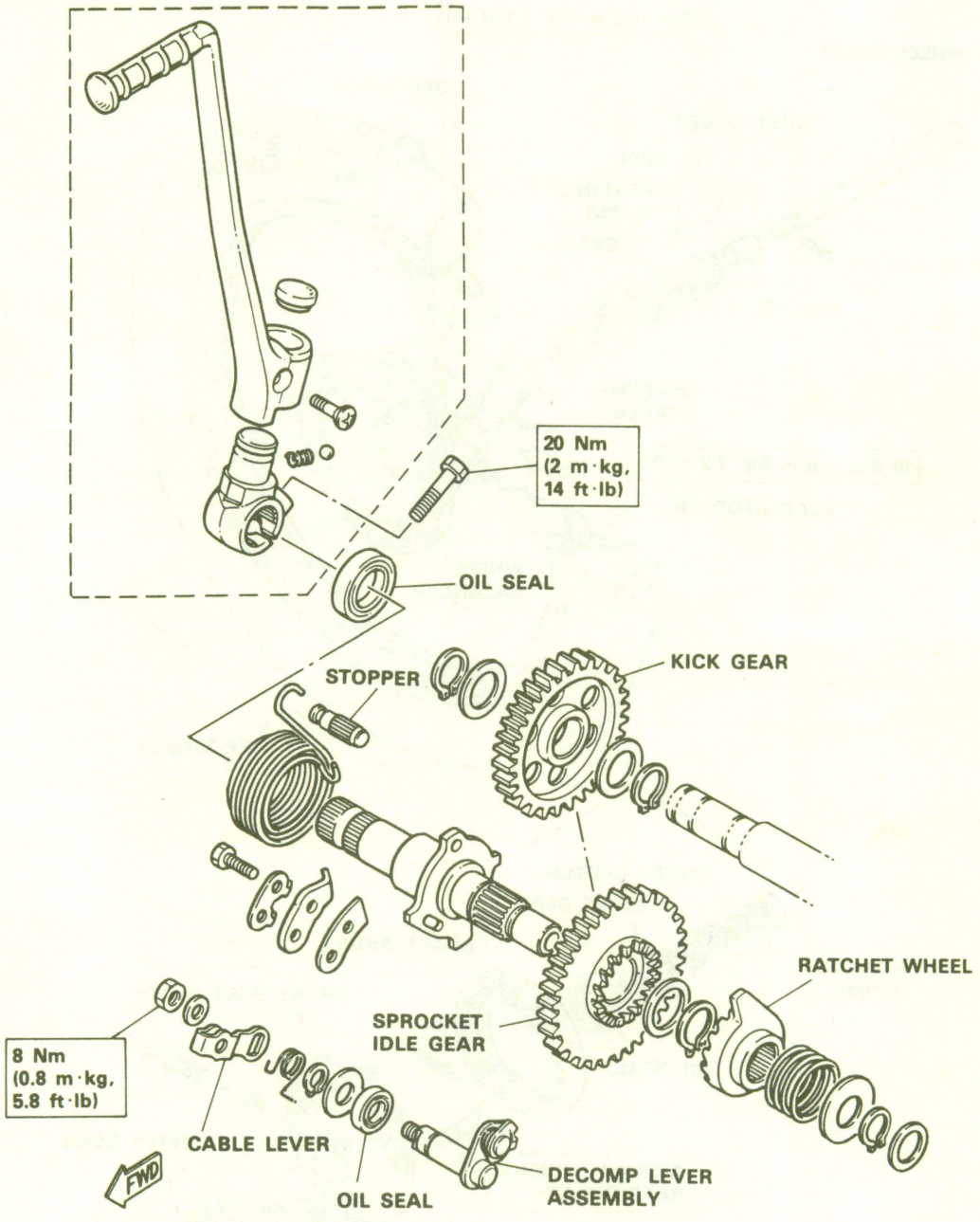
EXPLODED DIAGRAMS

CYLINDER

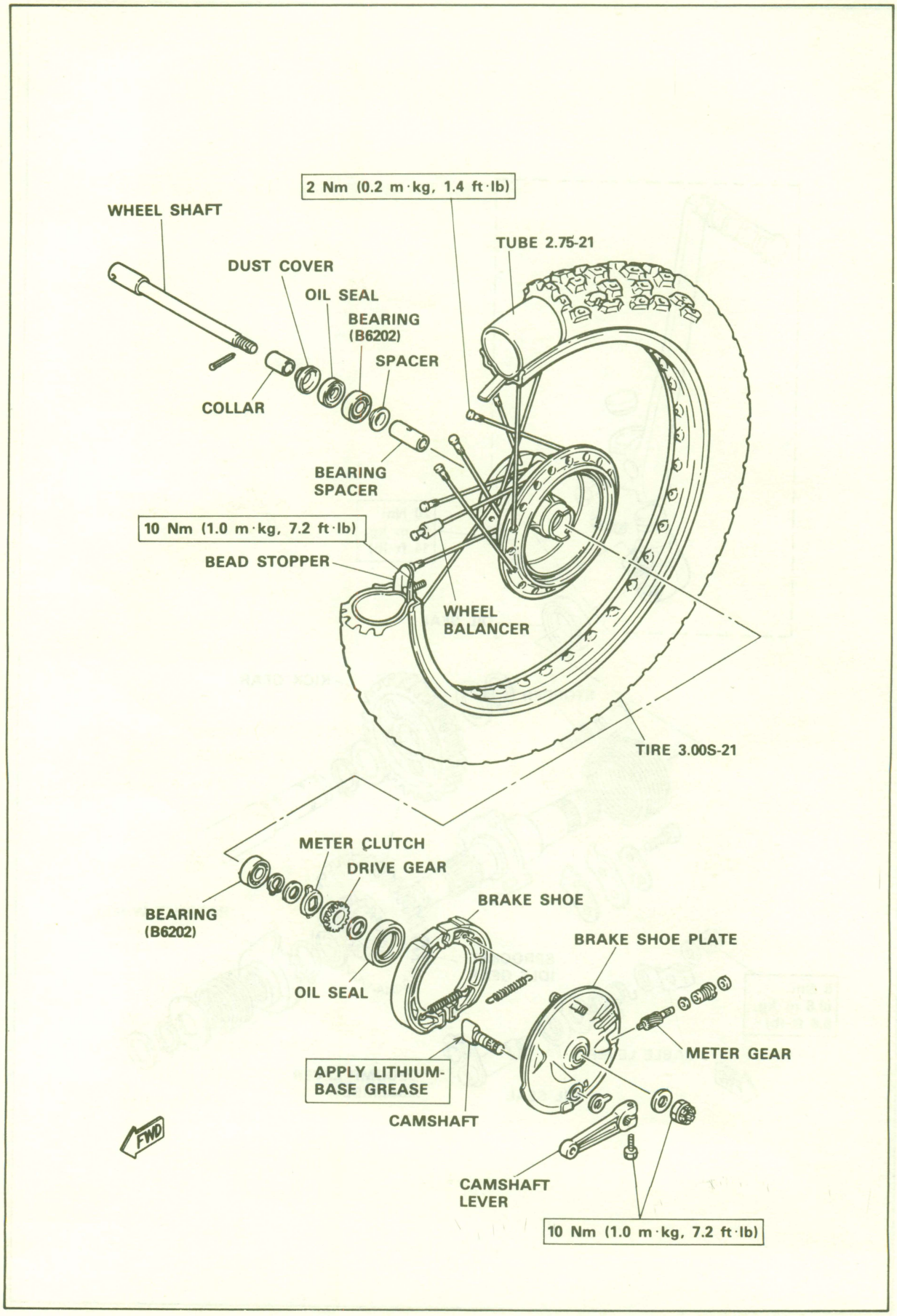



DECOMP BRACKET
DECOMP LEVER
CAMSHAFT ASSEMBLY
SPROCKET
20 Nm (2.0 m·kg, 14 ft·lb)
10 Nm (1.0 m·kg, 7.2 ft·lb)
END PLUG
20 Nm (2.0 m·kg, 14 ft·lb)
CAM CHAIN TENSIONER ASSEMBLY
GASKET
STOPPER GUIDE 1
STOPPER GUIDE 2
FWD
8 Nm (0.8 m·kg, 5.8 ft·lb)

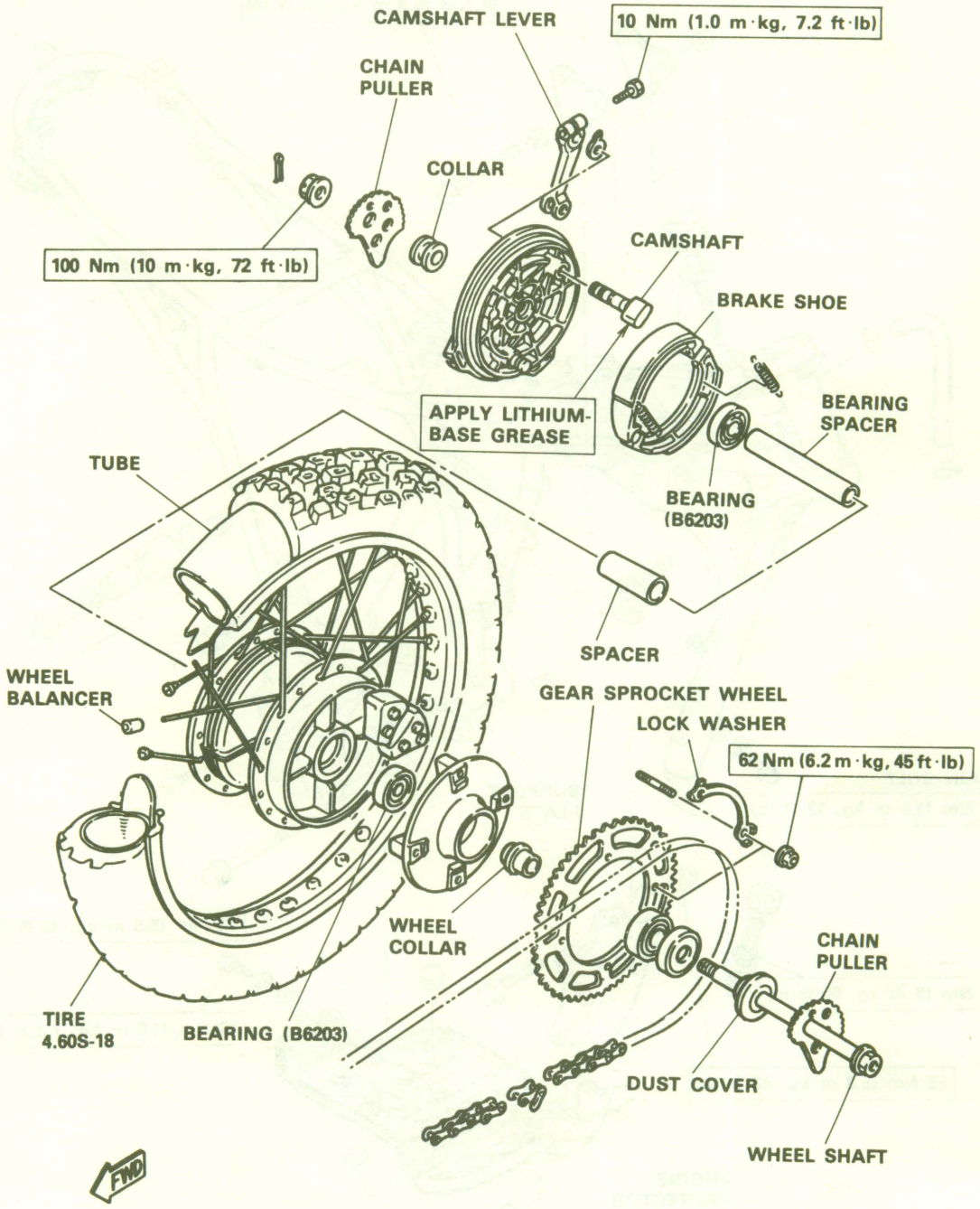
KICK STARTER

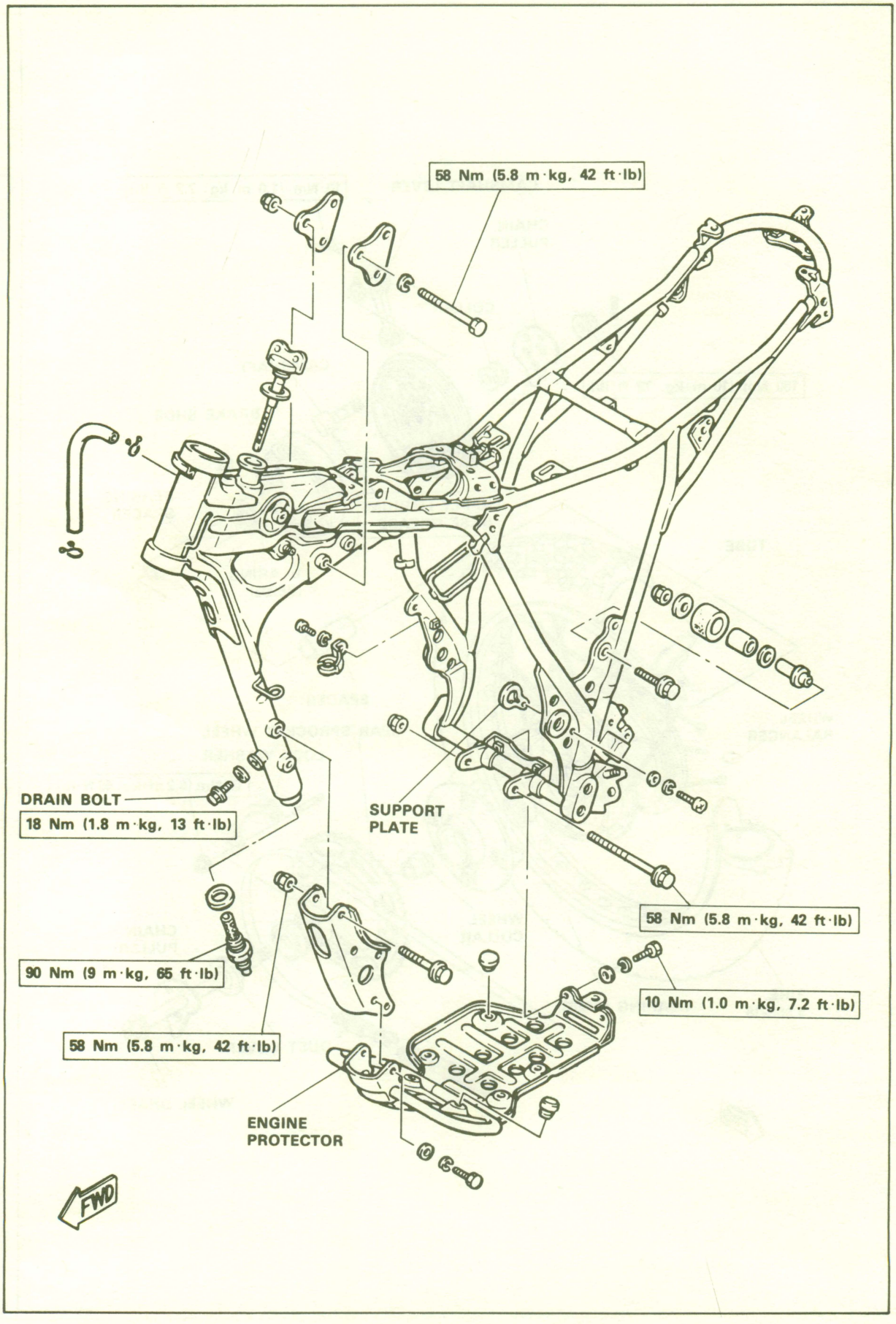


FRONT WHEEL

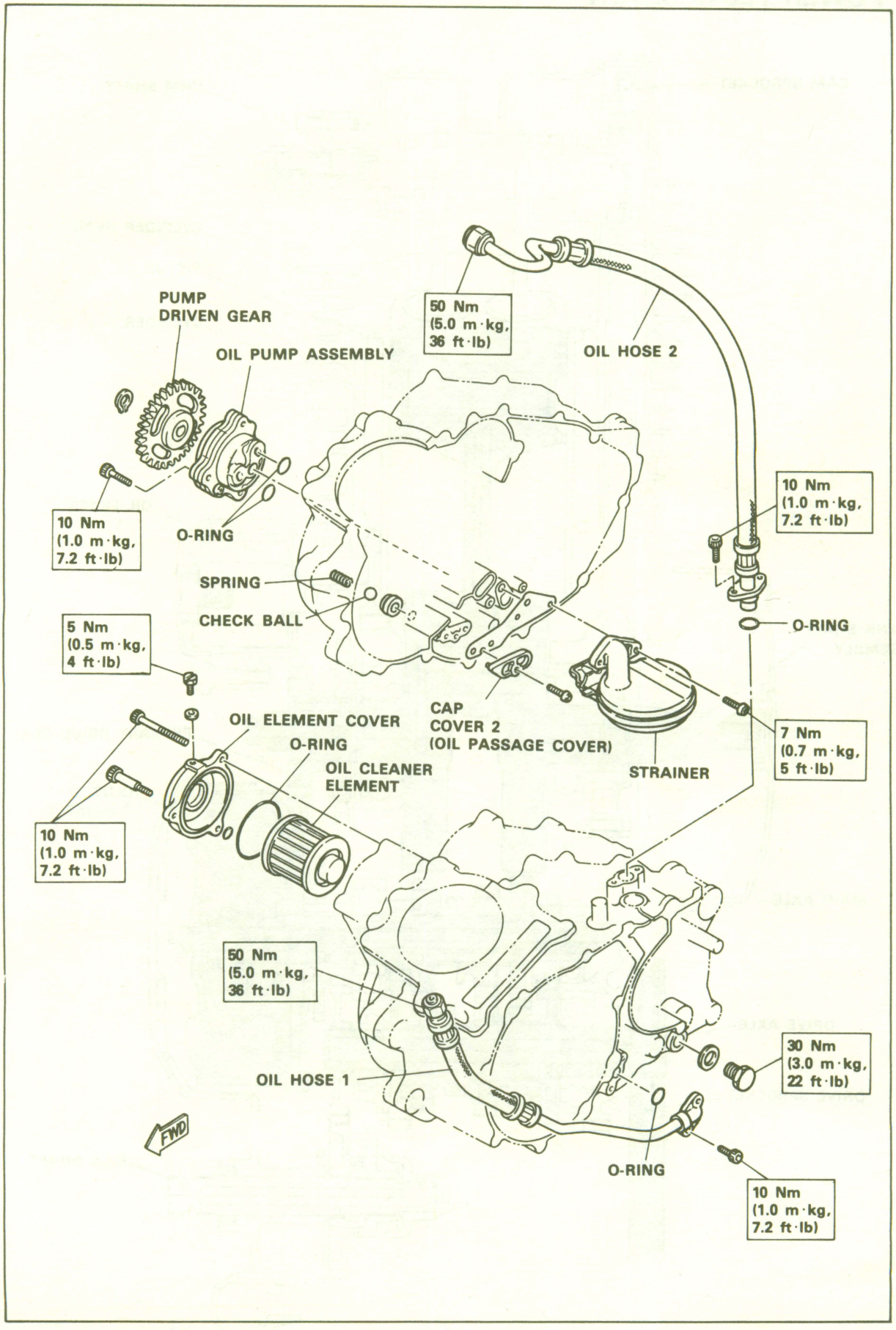

2 Nm (0.2 m·kg, 1.4 ft·lb)
WHEEL SHAFT
TUBE 2.75-21
DUST COVER
OIL SEAL
BEARING (B6202)
SPACER
COLLAR
BEARING SPACER
10 Nm (1.0 m·kg, 7.2 ft·lb)
BEAD STOPPER
WHEEL BALANCER
TIRE 3.00S-21
METER CLUTCH
DRIVE GEAR
BEARING (B6202)
BRAKE SHOE
BRAKE SHOE PLATE
OIL SEAL
METER GEAR
APPLY LITHIUM-BASE GREASE
CAMSHAFT
FWD
CAMSHAFT LEVER
10 Nm (1.0 m·kg, 7.2 ft·lb)

REAR WHEEL

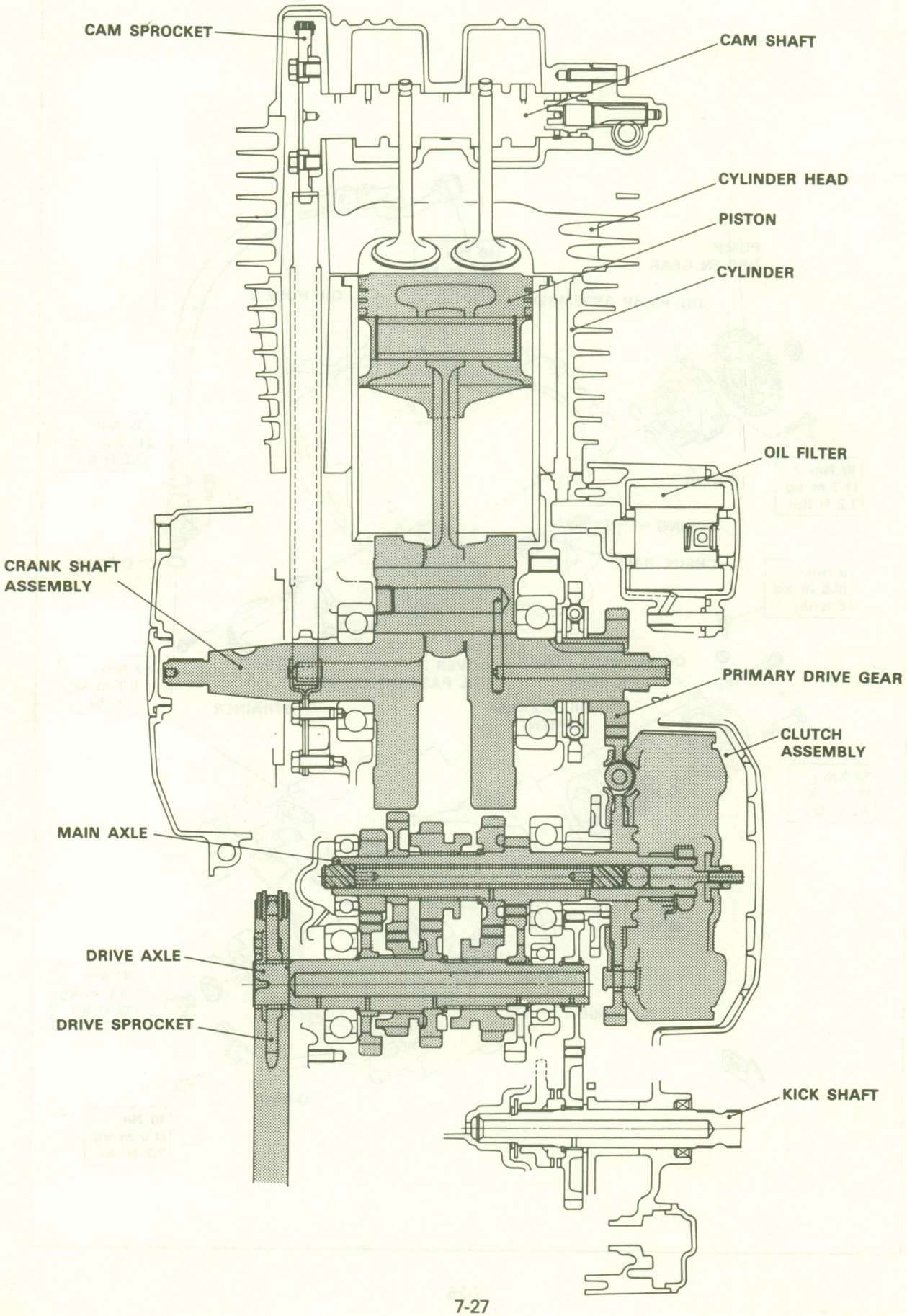

CAMSHAFT LEVER
10 Nm (1.0 m·kg, 7.2 ft·lb)
CHAIN PULLER
COLLAR
100 Nm (10 m·kg, 72 ft·lb)
CAMSHAFT
BRAKE SHOE
APPLY LITHIUM-BASE GREASE
BEARING SPACER
TUBE
BEARING (B6203)
SPACER
WHEEL BALANCER
GEAR SPROCKET WHEEL
LOCK WASHER
62 Nm (6.2 m·kg, 45 ft·lb)
WHEEL COLLAR
CHAIN PULLER
TIRE 4.60S-18
BEARING (B6203)
DUST COVER
WHEEL SHAFT
FWD


58 Nm (5.8 m·kg, 42 ft·lb)
DRAIN BOLT
18 Nm (1.8 m·kg, 13 ft·lb)
SUPPORT PLATE
58 Nm (5.8 m·kg, 42 ft·lb)
90 Nm (9 m·kg, 65 ft·lb)
10 Nm (1.0 m·kg, 7.2 ft·lb)
58 Nm (5.8 m·kg, 42 ft·lb)
ENGINE PROTECTOR
FWD

OIL PUMP/OIL CLEANER



POWER FLOW CHART

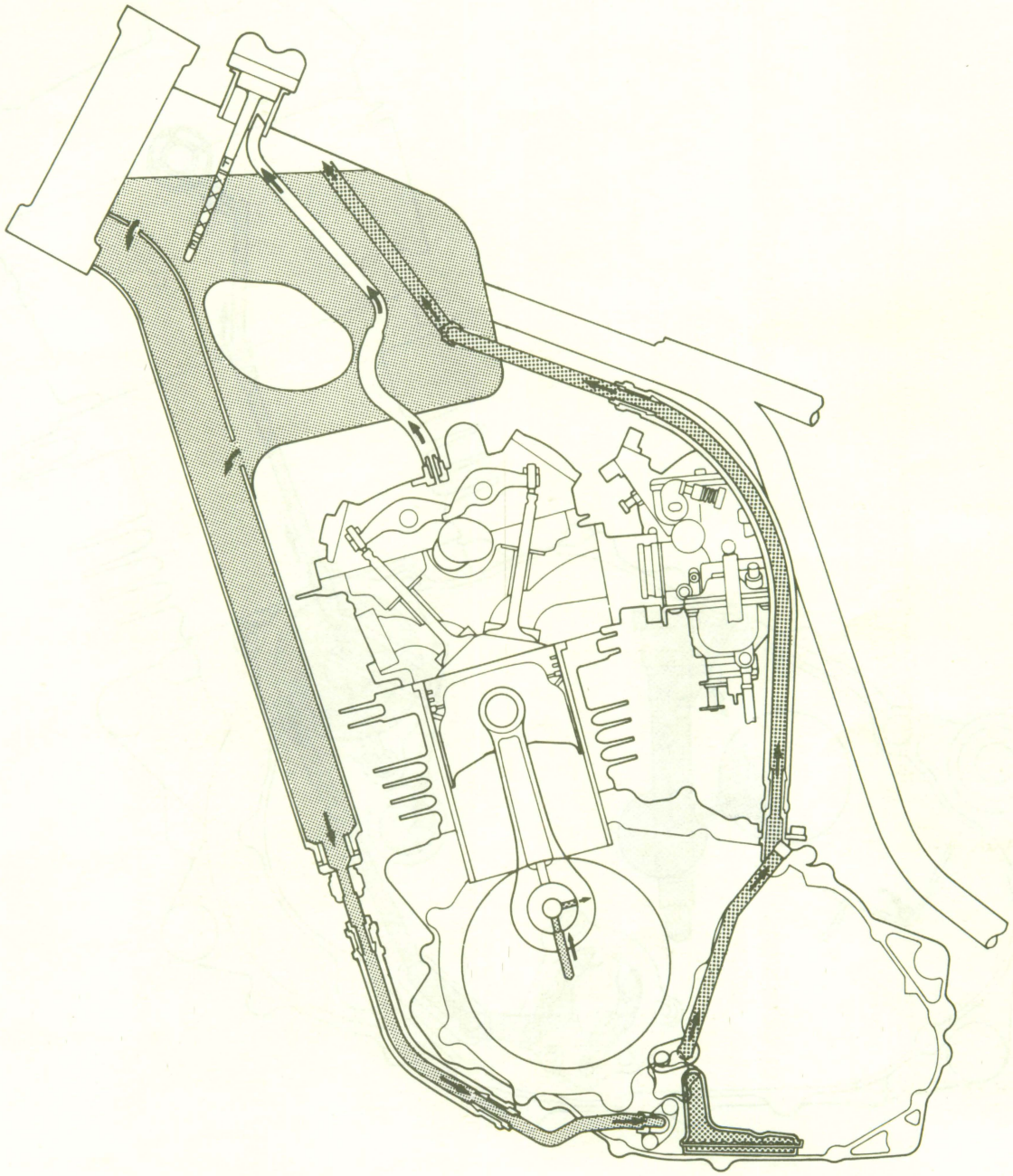


LUBRICATION CHARTS

LUBRICATION CHART (1)

FEED OIL

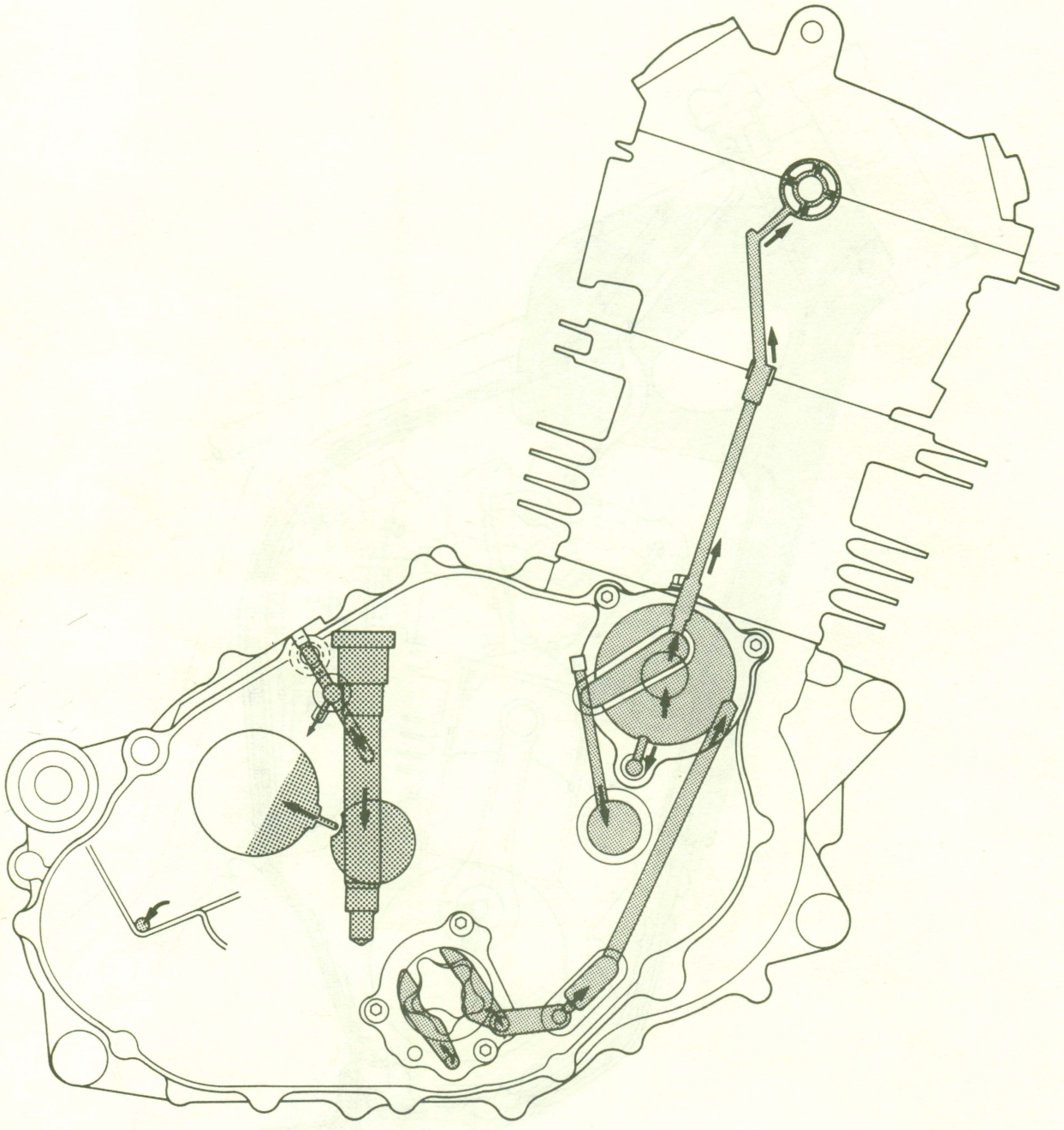
SCAVENGE OIL



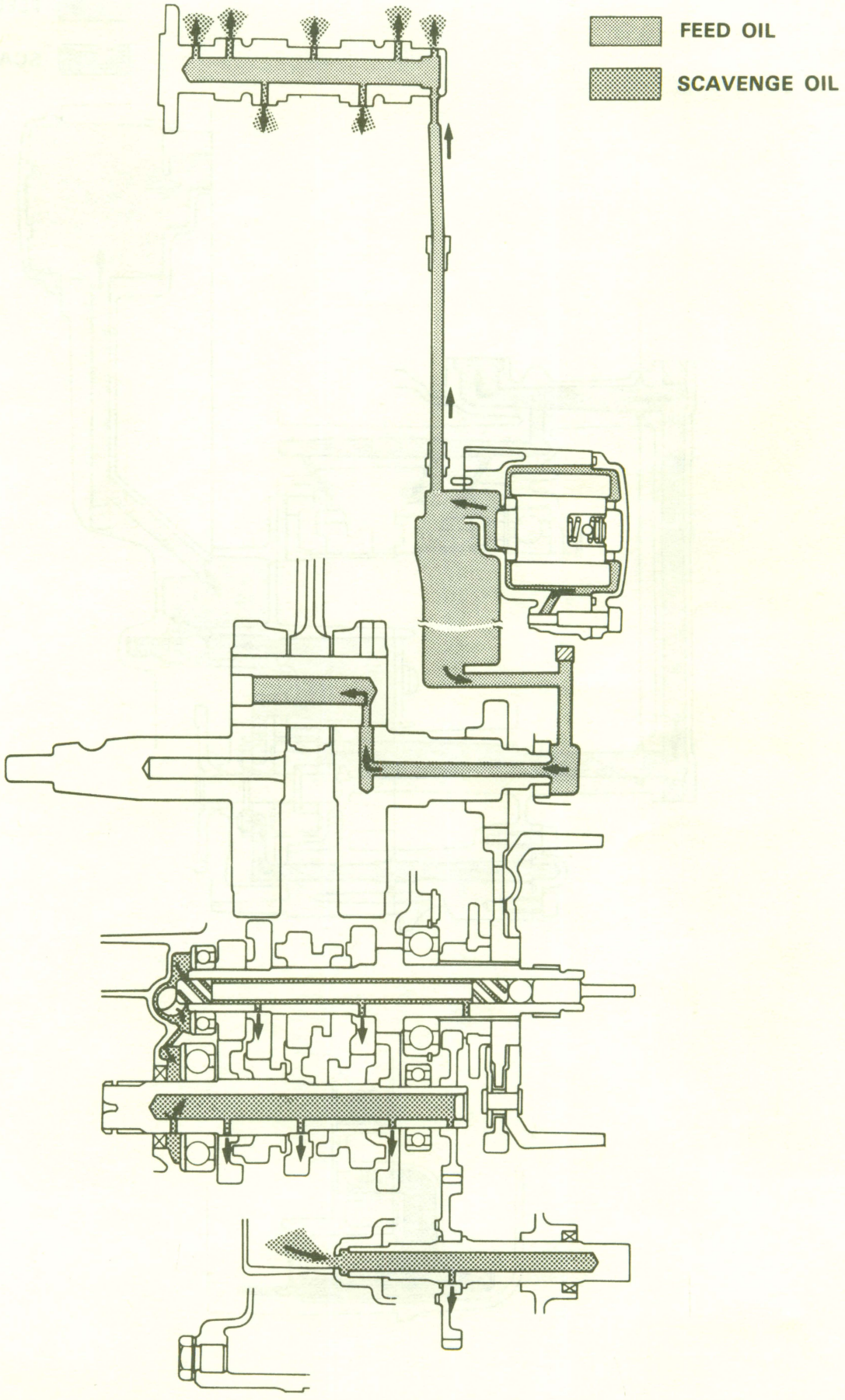
LUBRICATION CHART (2)

FEED OIL

SCAVENGE OIL



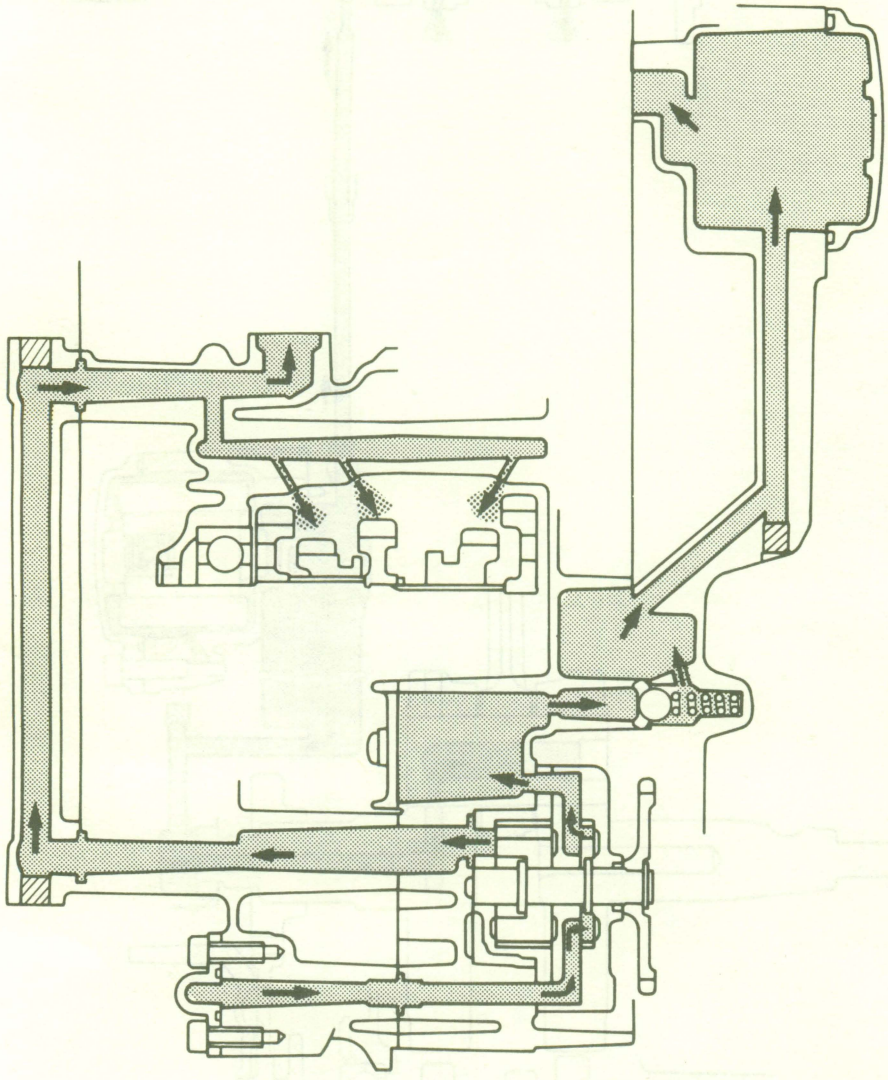
LUBRICATION CHART (3)

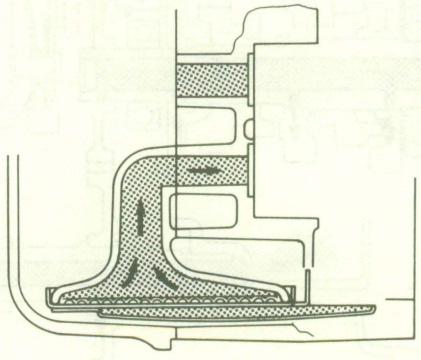


LUBRICATION CHART (4)

FEED OIL

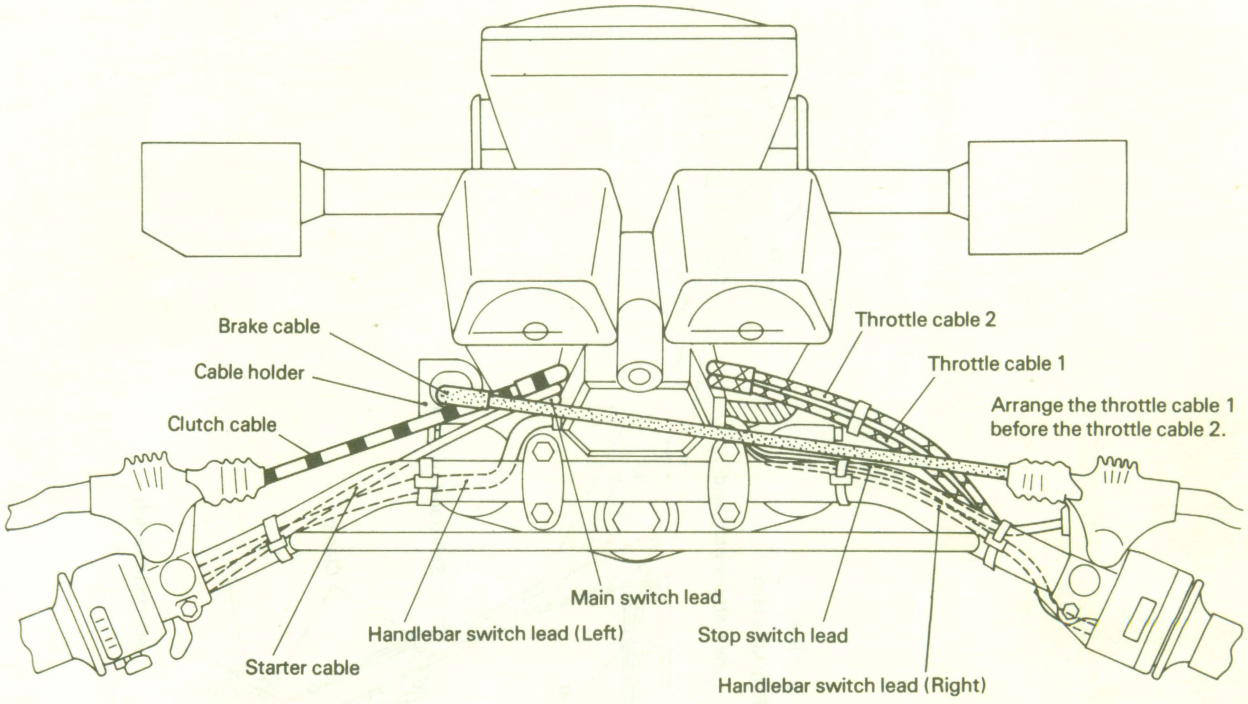
SCAVENGE OIL

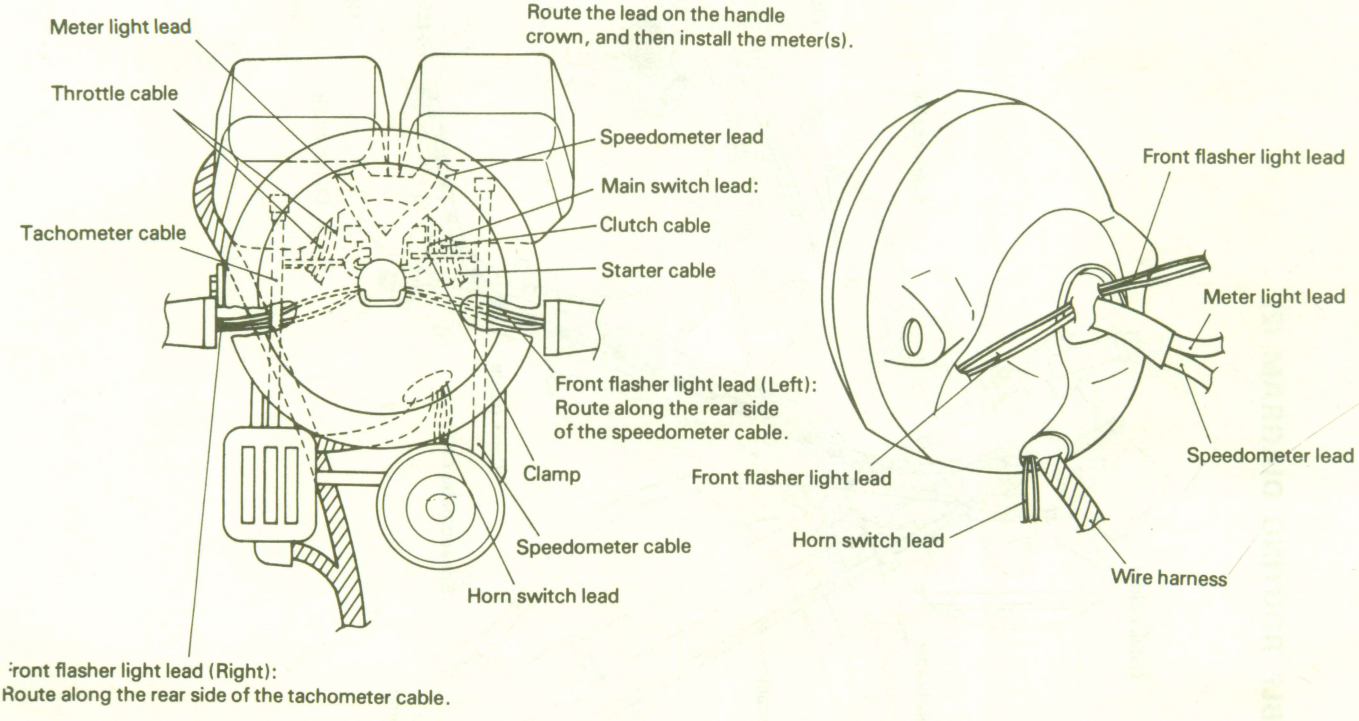




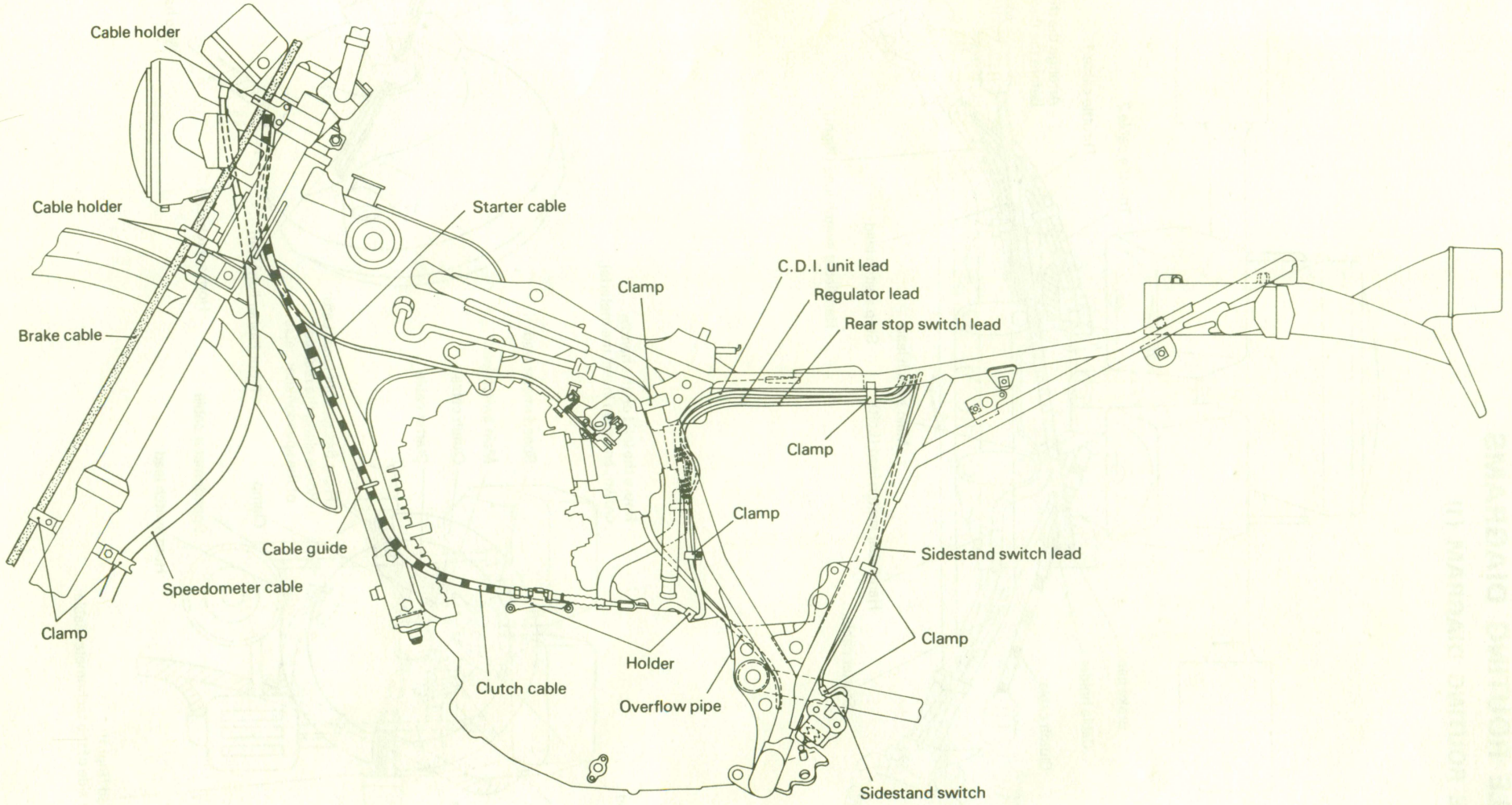
CABLE ROUTING DIAGRAMS

CABLE ROUTING DIAGRAM (1)

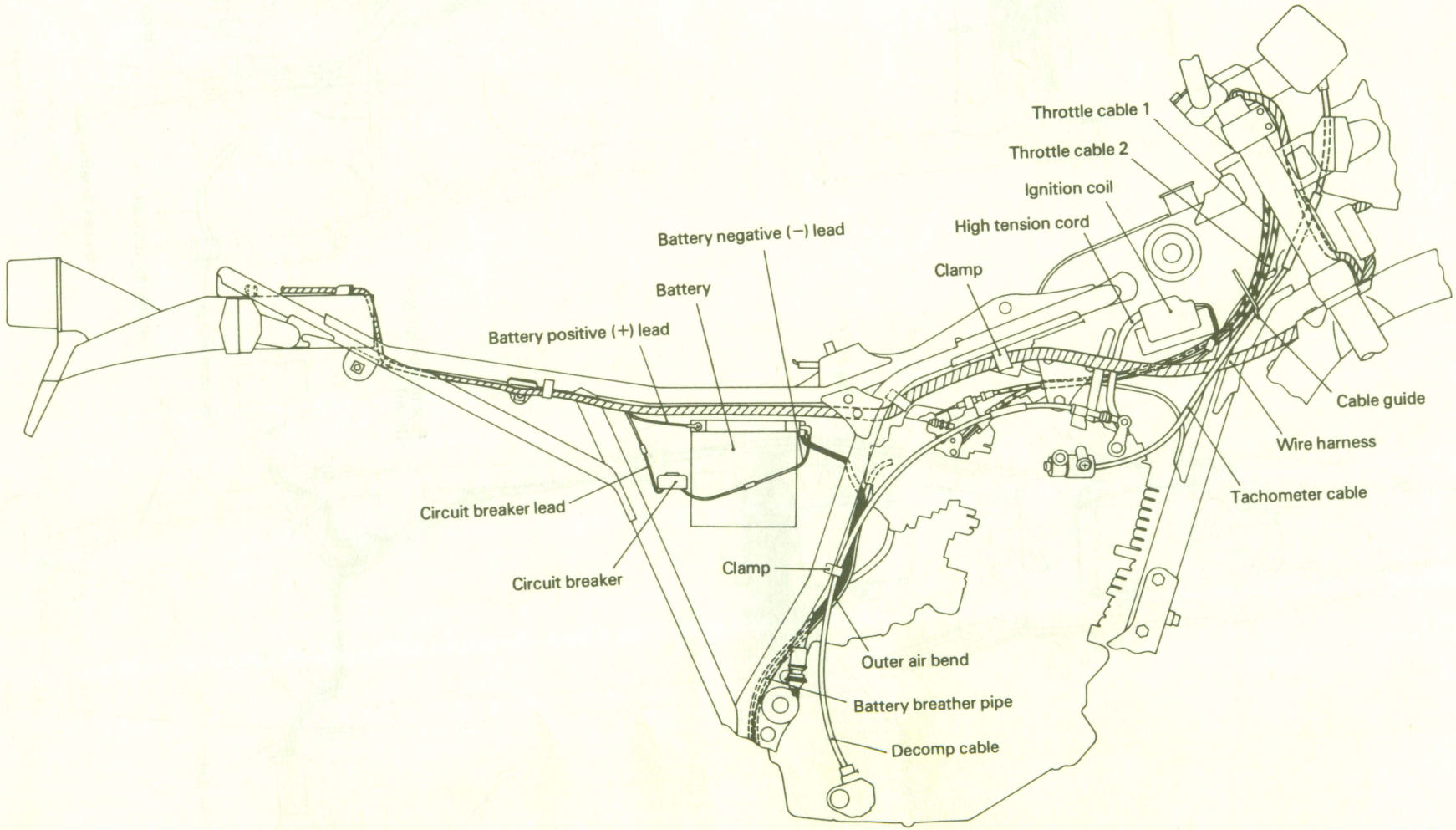




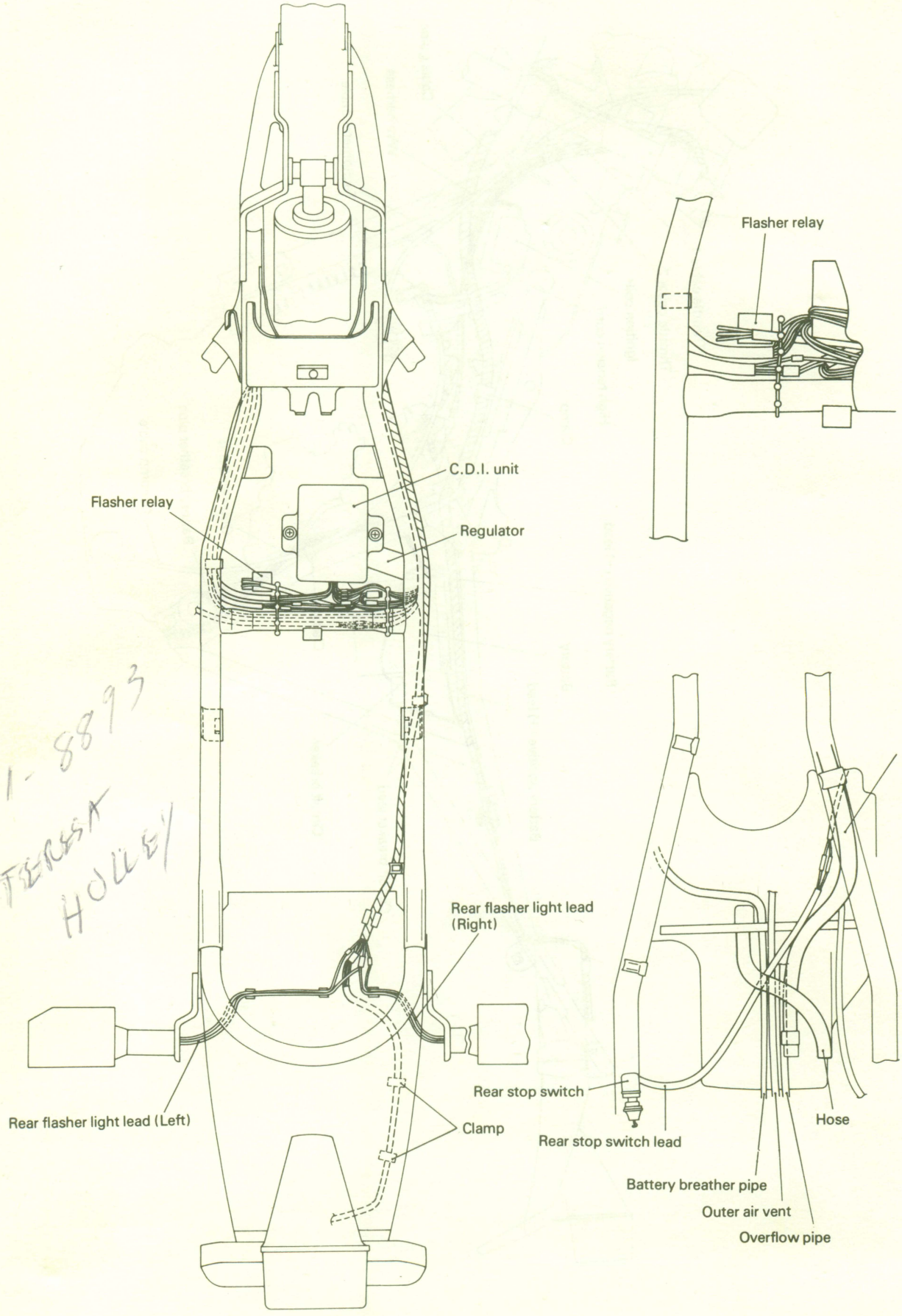
CABLE ROUTING DIAGRAM (2)



CABLE ROUTING DIAGRAM (3)



CABLE ROUTING DIAGRAM (4)



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