

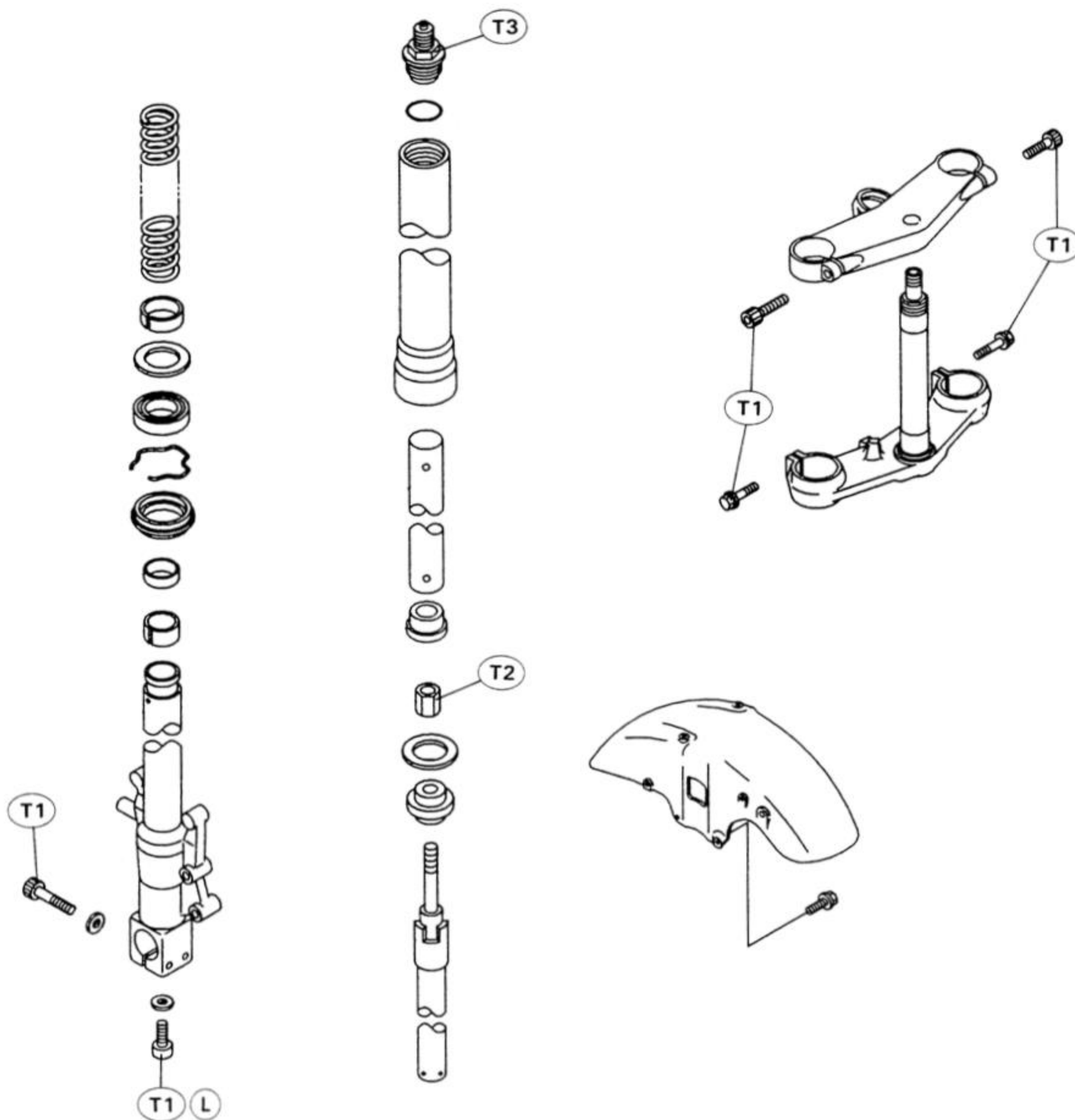
Suspension

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12-2 SUSPENSION

Exploded View

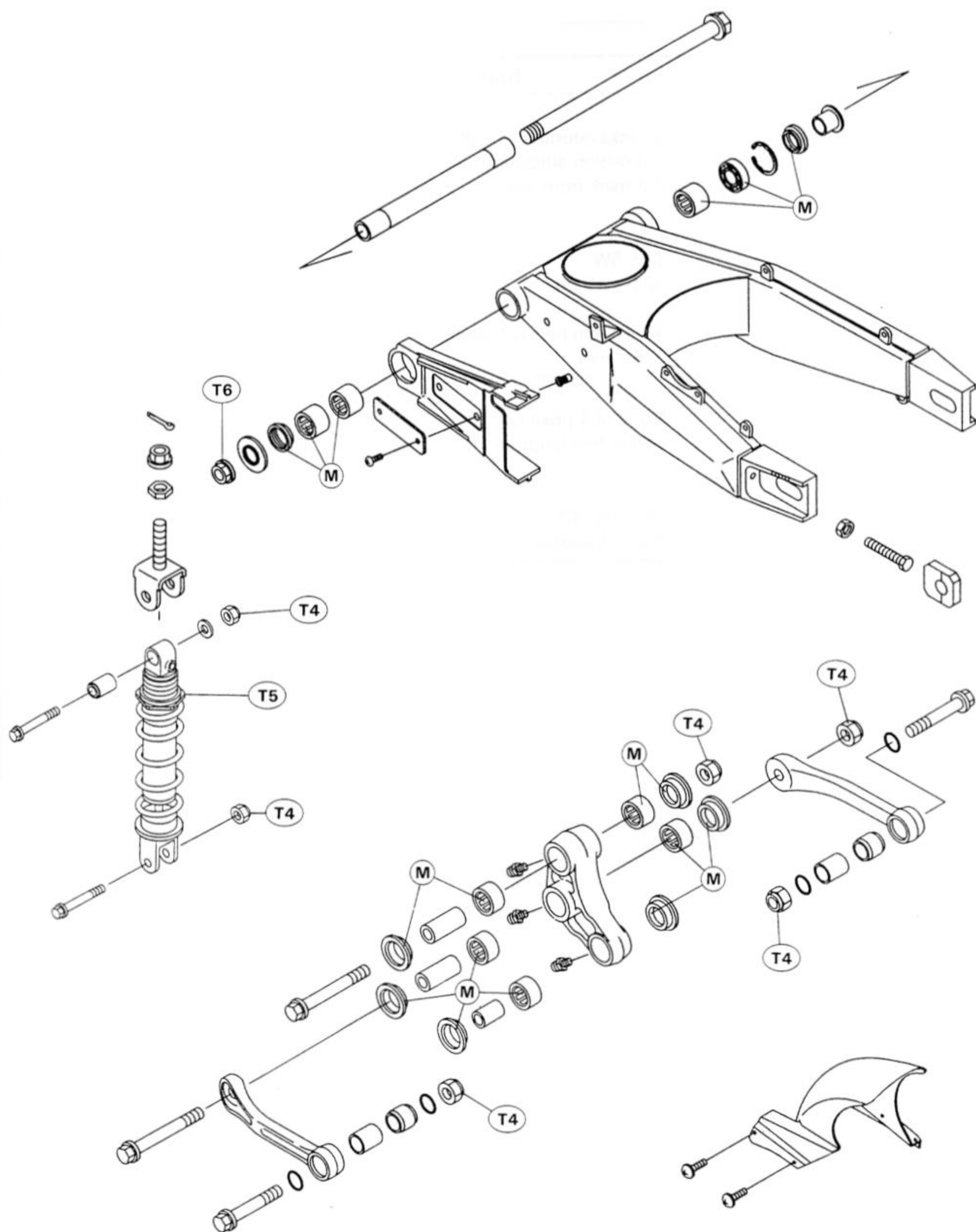


- T1 : 20 N-m (2.0 kg-m, 14.5 ft-lb)
T2 : 25 N-m (2.5 kg-m, 18 ft-lb)
T3 : 34 N-m (3.5 kg-m, 25 ft-lb)
T4 : 49 N-m (5.0 kg-m, 36 ft-lb)
T5 : 88 N-m (9.0 kg-m, 65 ft-lb)
T6 : 110 N-m (11.0 kg-m, 80 ft-lb)

M : Apply molybdenum disulfide grease.

L : Apply a non-permanent locking agent to the threads.

SUSPENSION 12-3



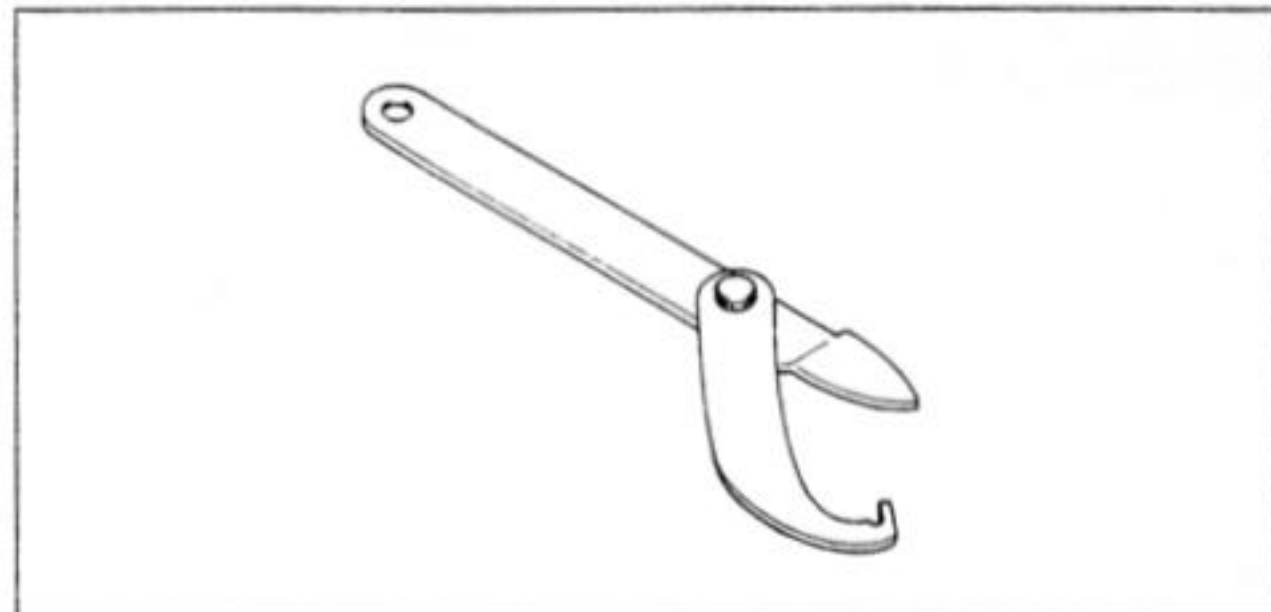
12-4 SUSPENSION

Specifications

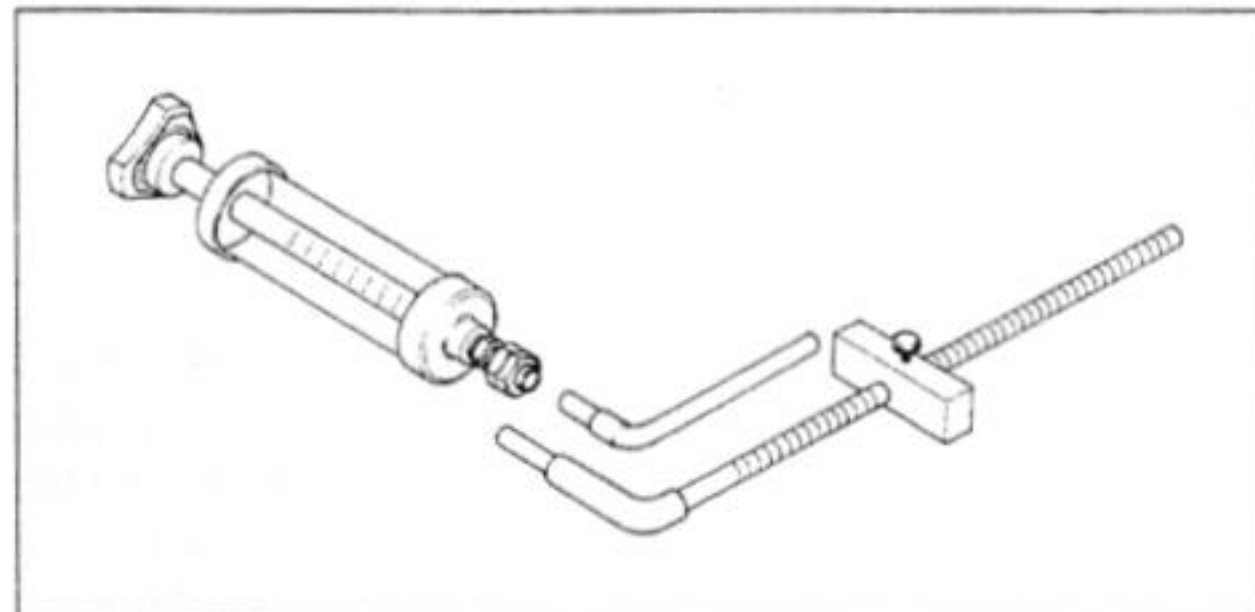
Item	Standard	Service Limit
Front Fork:		
Rebound damping setting	6 clicks counterclockwise (from the seated position adjuster turned fully clockwise)	(adjustable range) 12 clicks
Spring preload setting	6th mark from the top	(adjustable range) 7 marks
Fork oil:		
Viscosity	SAE 5W	— — —
Amount (per side)	424 ±2.5 mL	— — —
Oil level (fully compressed, with spring)	85 ±8 mm below from top of outer tube	— — —
Fork spring free length	325.1 mm	319 mm
Rear Shock Absorber:		
Rebound damping setting	No. 2 of 4 position	— — —
Spring preload setting	Spring free length minus 6.5 mm	Spring free length minus 6.5 mm to 24.5 mm
Gas pressure	980 kPa (10 kg/cm ² , 142 psi) Non-adjustable	— — —

Special Tools

Steering Stem Nut Wrench: 57001-1100



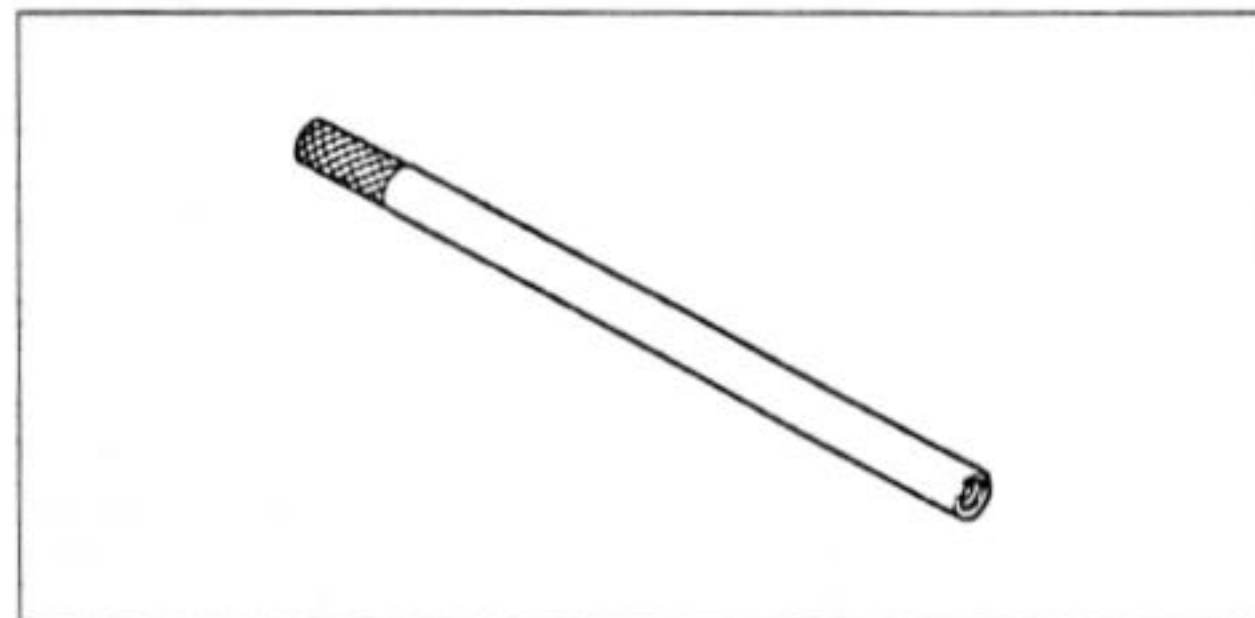
Fork Oil Level Gauge: 57001-1290



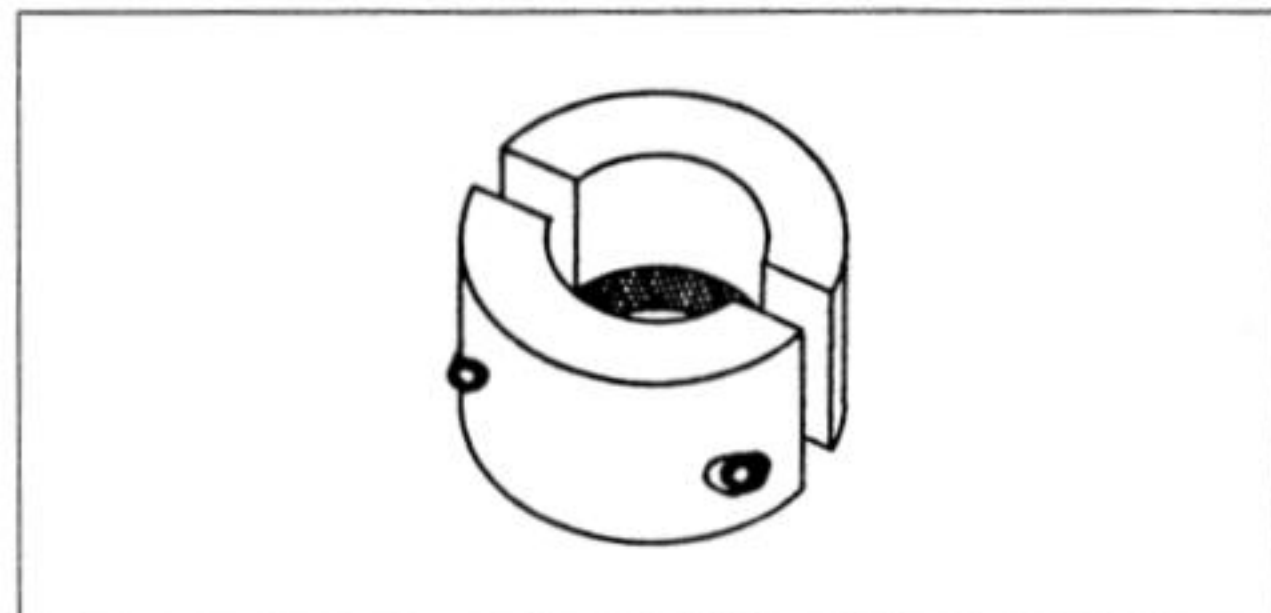
Bearing Driver Set: 57001-1129



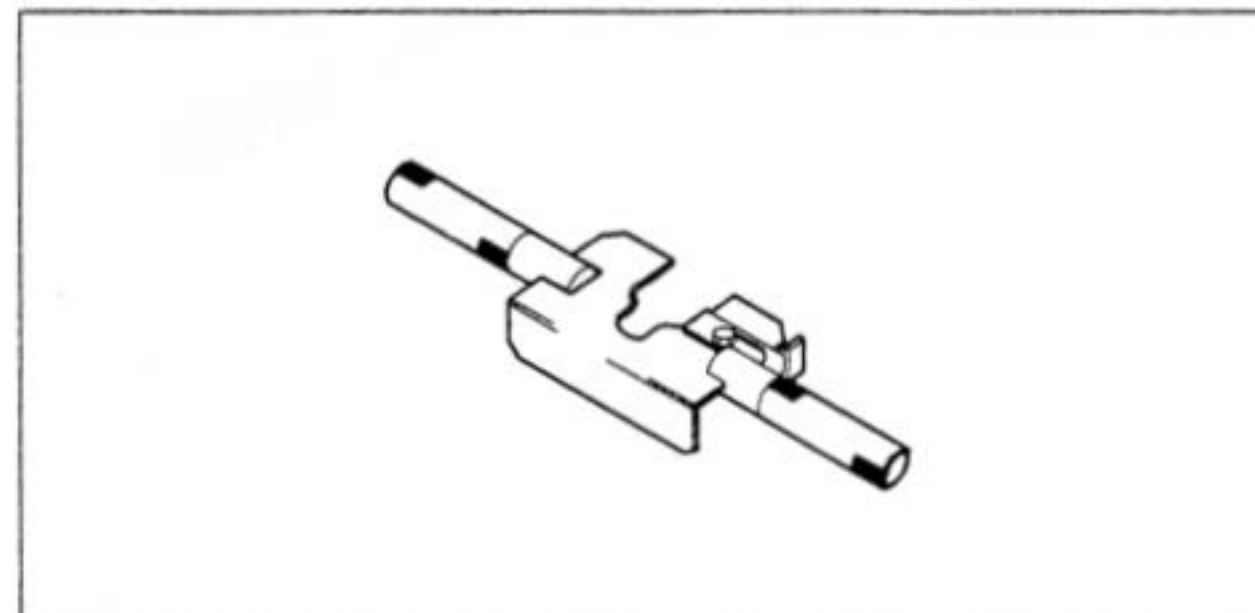
Fork Piston Rod Puller, M10 x 1.0: 57001-1298



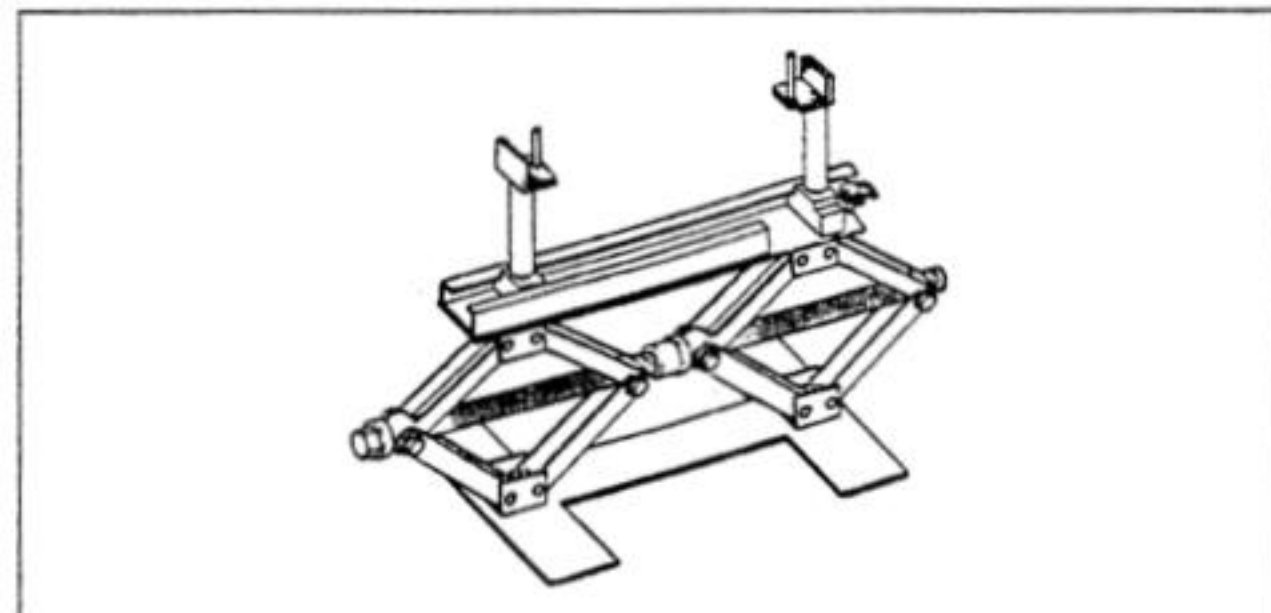
Fork Outer Tube Weight: 57001-1218



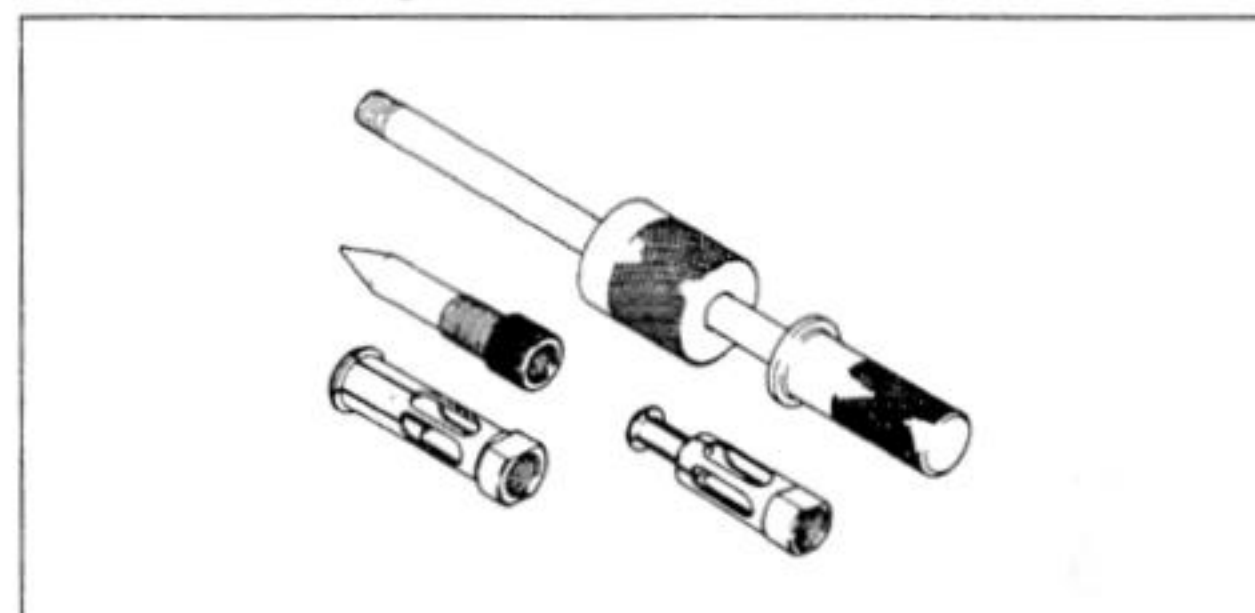
Fork Spring Compressor: 57001-1338



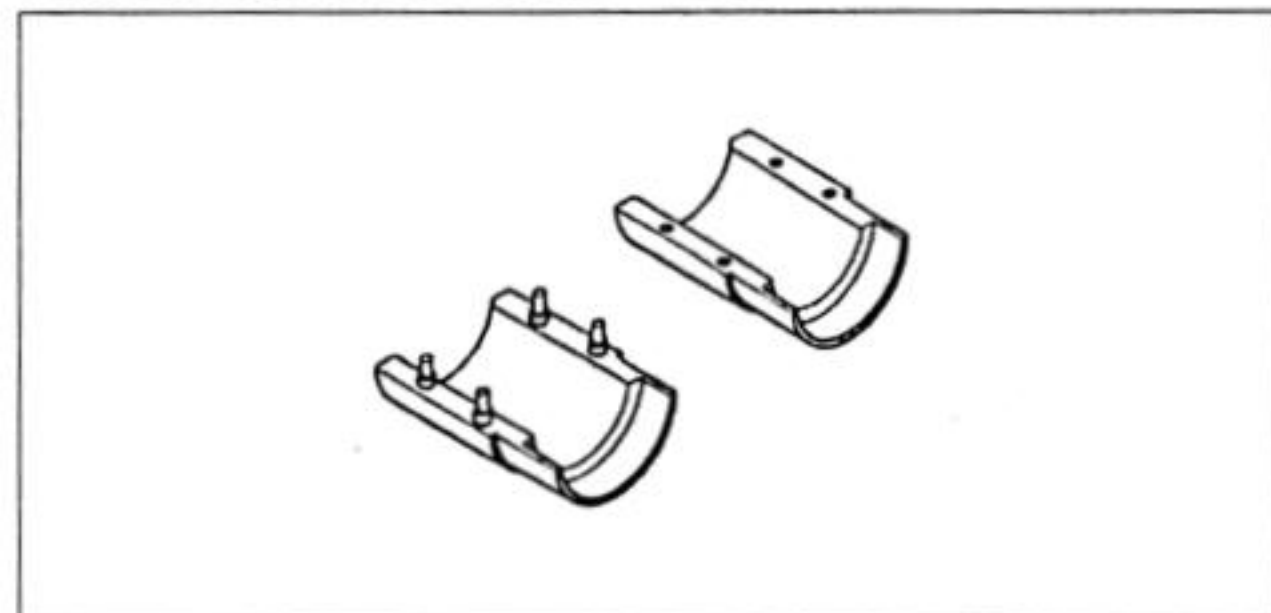
Jack: 57001-1238



Oil Seal & Bearing Remover: 57001-1058



Fork Oil Seal Driver: 57001-1288

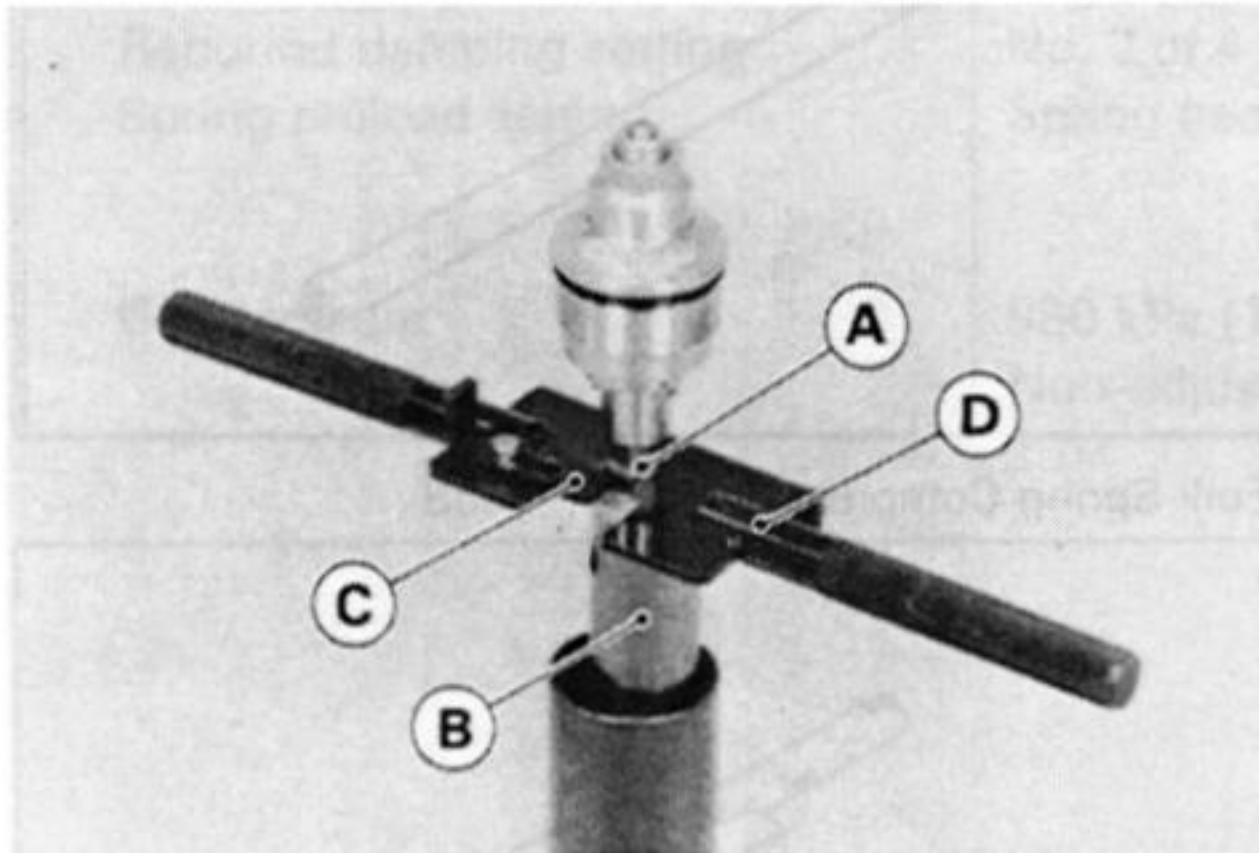


12-6 SUSPENSION

Front Fork

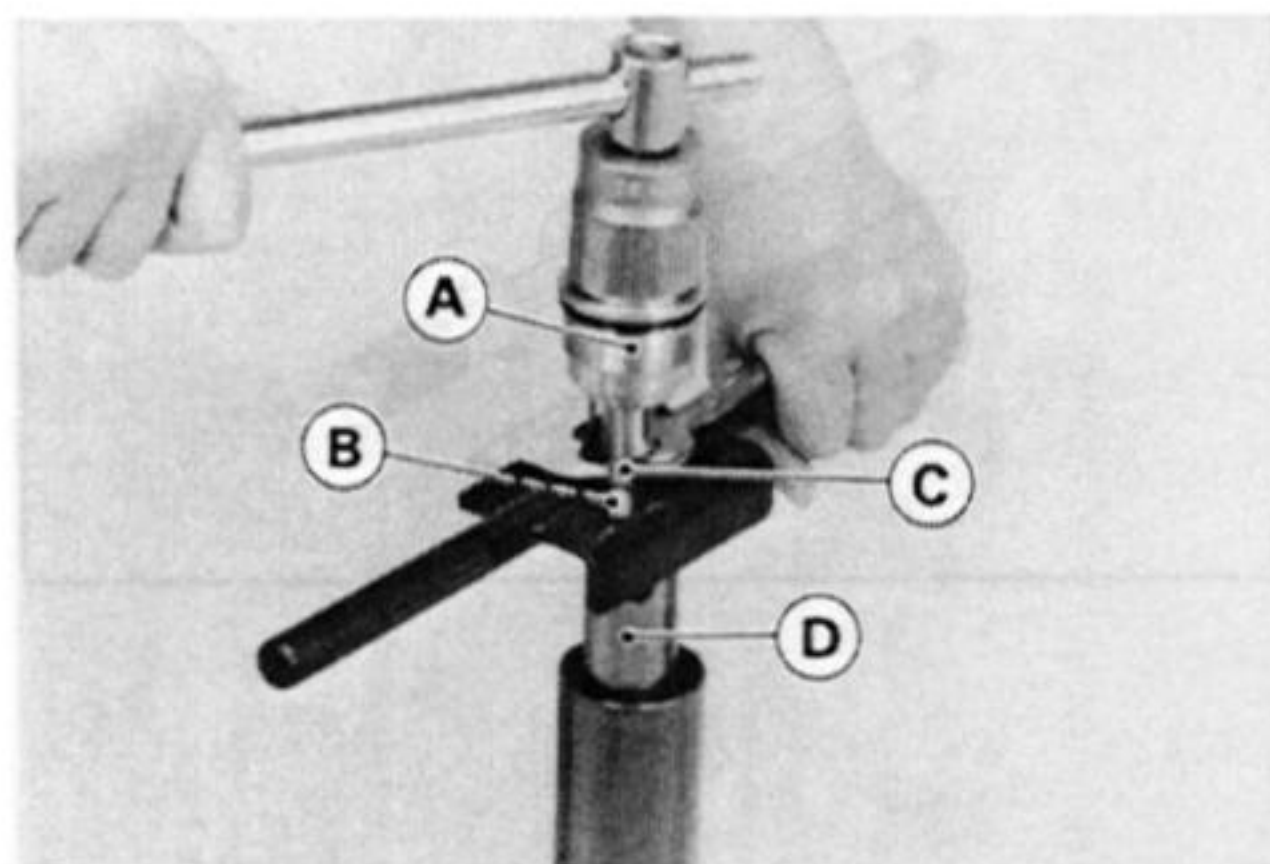
Fork Oil Change

- Loosen the fork top plug temporarily.
- Remove the front fork.
- Hold the fork tube vertically in a vise.
- Remove the fork top plug from the outer tube.
- Compress the fork.
- To loosen the piston rod nut, fit the fork spring compressor (special tool) between the fork top plug and the spring seat, then press the collar down until the compressor has just gone past the piston rod nut.
- At this point push the compressor further toward the rod to fit it fully on the rod nut bottom.
- Slide in the stopper of the compressor as far as it goes to secure the compressor.



A. Piston Rod Nut
B. Collar
C. Stopper
D. Fork Spring Compressor: 57001-1338

- Use wrenches on the piston rod nut and the top plug to loosen the piston rod nut.



A. Top Plug
B. Spring Seat
C. Piston Rod Nut
D. Collar

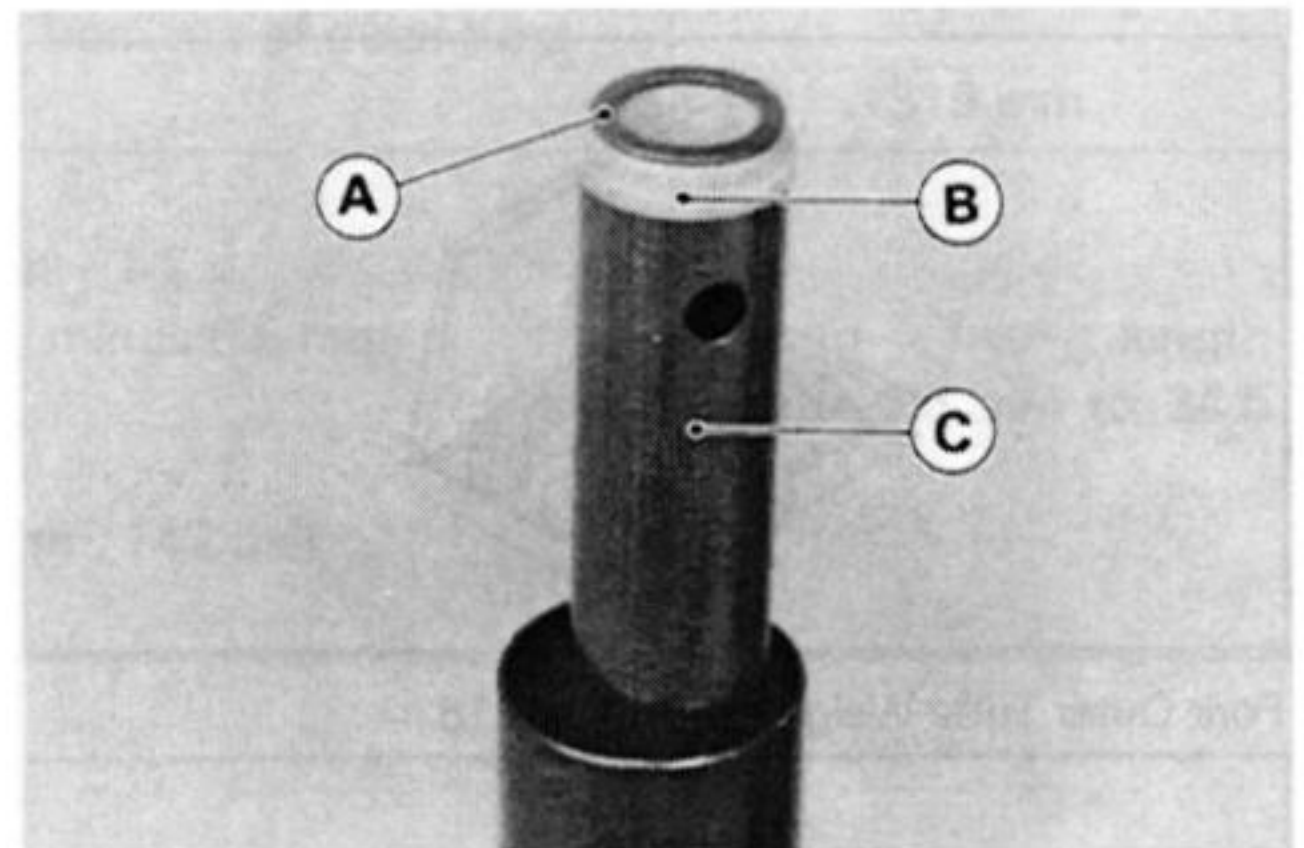
- Remove the top plug from the piston rod.
- Slide out the stopper of the compressor.
- Remove the compressor from the piston rod with the following procedures.

- To make free the piston rod nut from the compressor, push back the compressor until the nut positions in the wide slot of the compressor.

⚠ WARNING

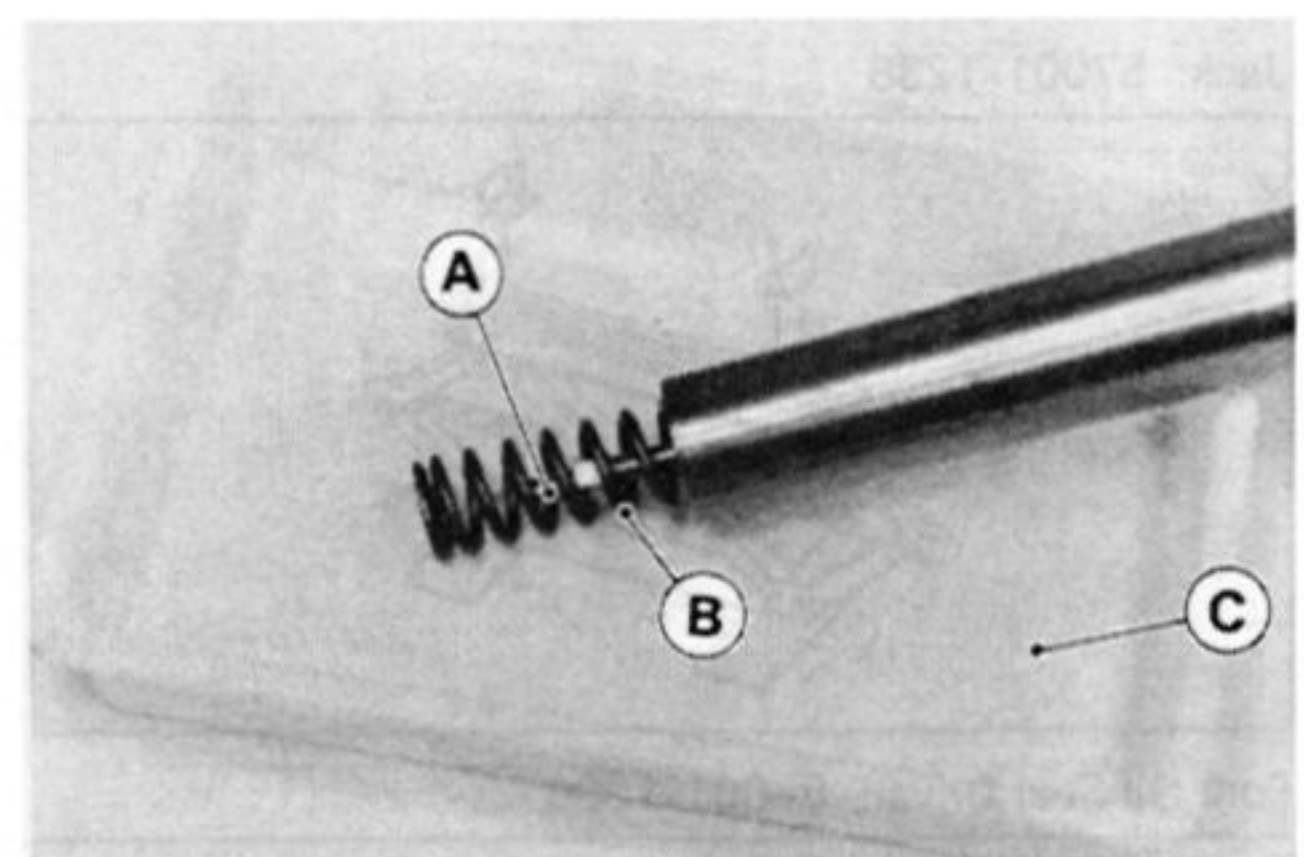
To avoid serious injury, never take out the compressor from the fork tube or at one procedure, the spring seat and spring guide will jump out of the piston rod causing crush your face or body.

- Lift up the compressor slowly on the piston rod and take it out from the fork tube.
- Remove the spring seat, spring guide and collar.



A. Spring Seat
B. Spring Guide
C. Collar

- Hold the fork tube upside down over a clean container and pump it to drain the oil.
- The main spring will come out at this time.
- Remove the main spring.

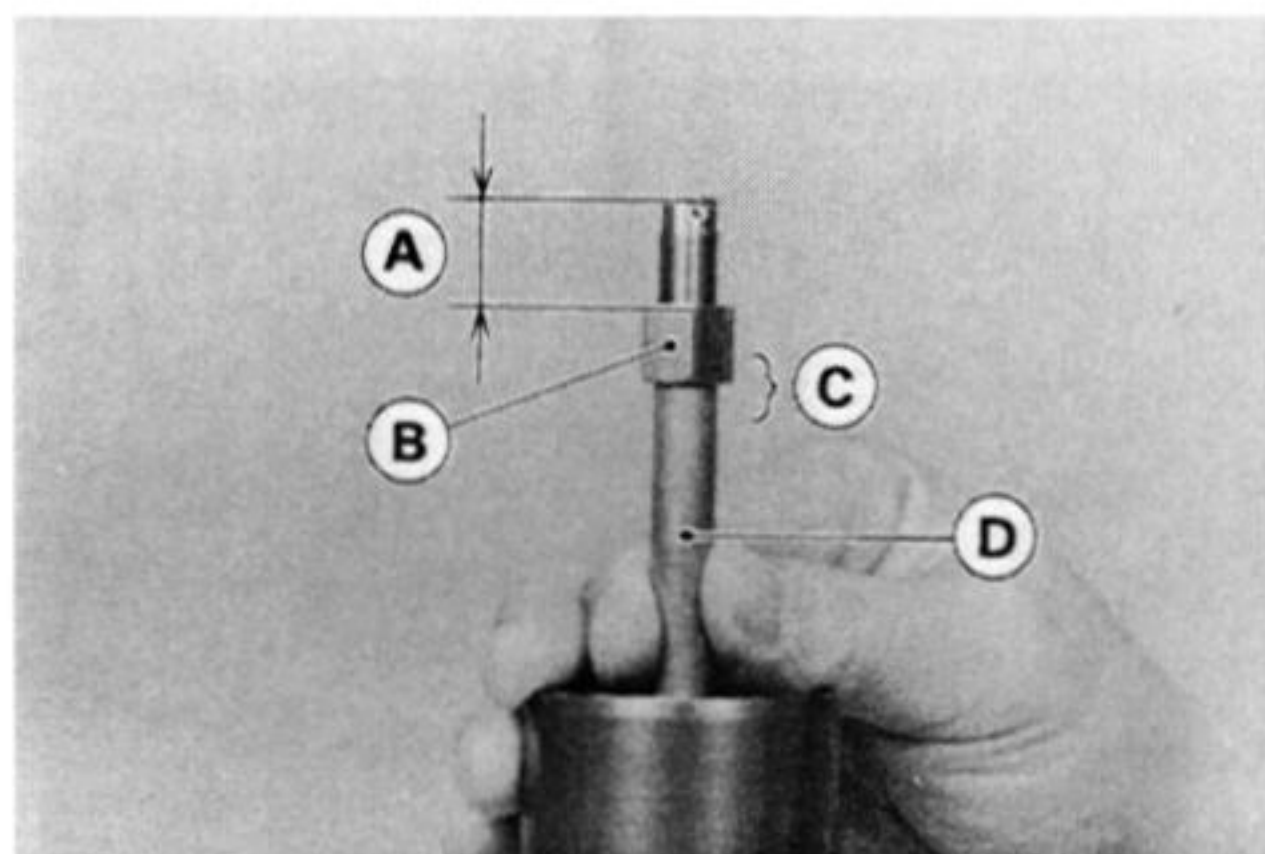


A. Push Rod
B. Main Spring
C. Container

NOTE

- To discharge the fork oil, pump the piston rod up and down at least ten times.
- Pull the piston rod up above the outer tube top.
- Tighten the piston rod nut finger-tight.

- Check that the visible thread length is at least 16 mm, and the chamfered side is down.



- A. 16 mm or more
- B. Piston Rod Nut
- C. Chamfered Side
- D. Piston Rod

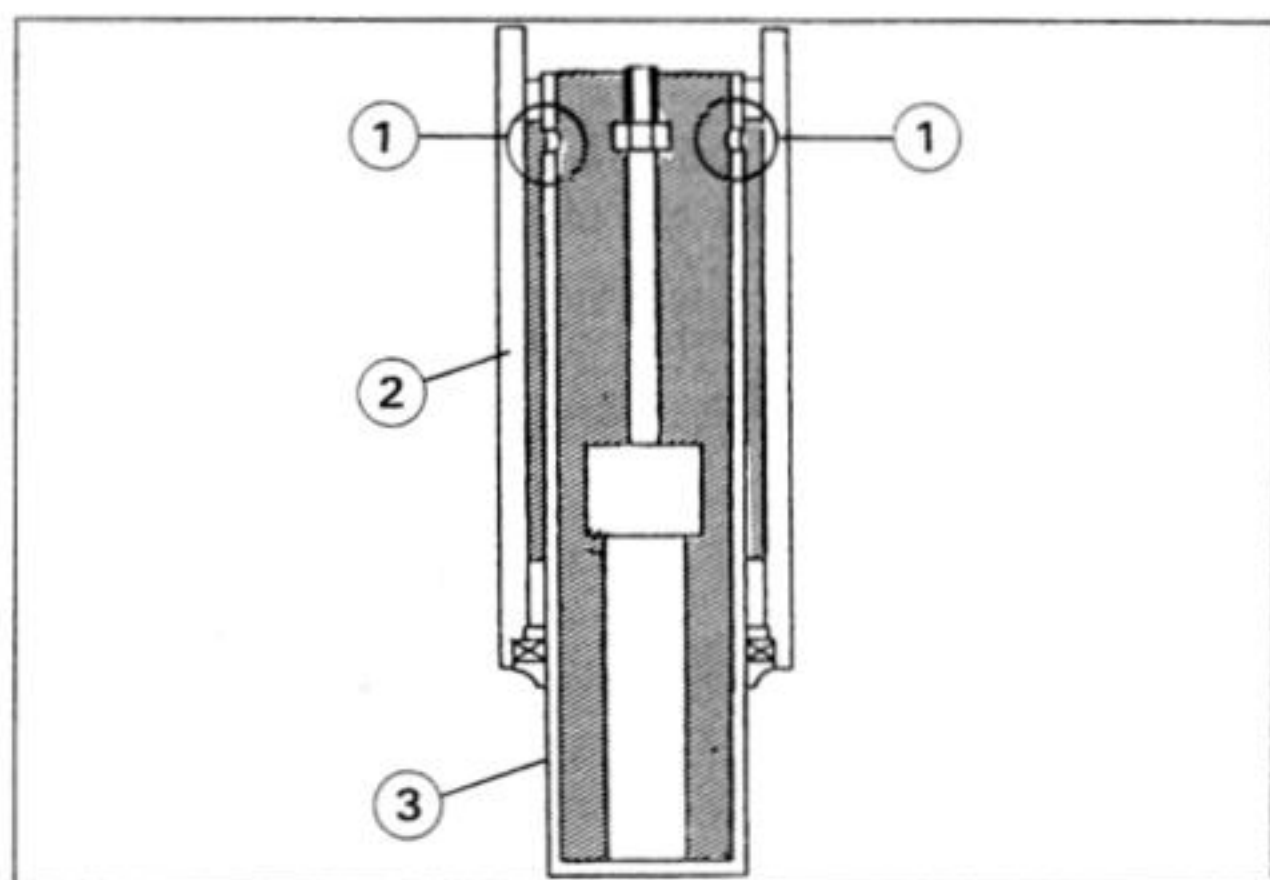
- Install the main spring.
- Hold the fork tube upright, press the outer tube and the piston rod all the way down.
- Fill the front fork to the top with the specified oil which is more than the specified amount.

Front Fork Oil

Viscosity : SAE 5W
Amount (per side) : 424 ±4 mL

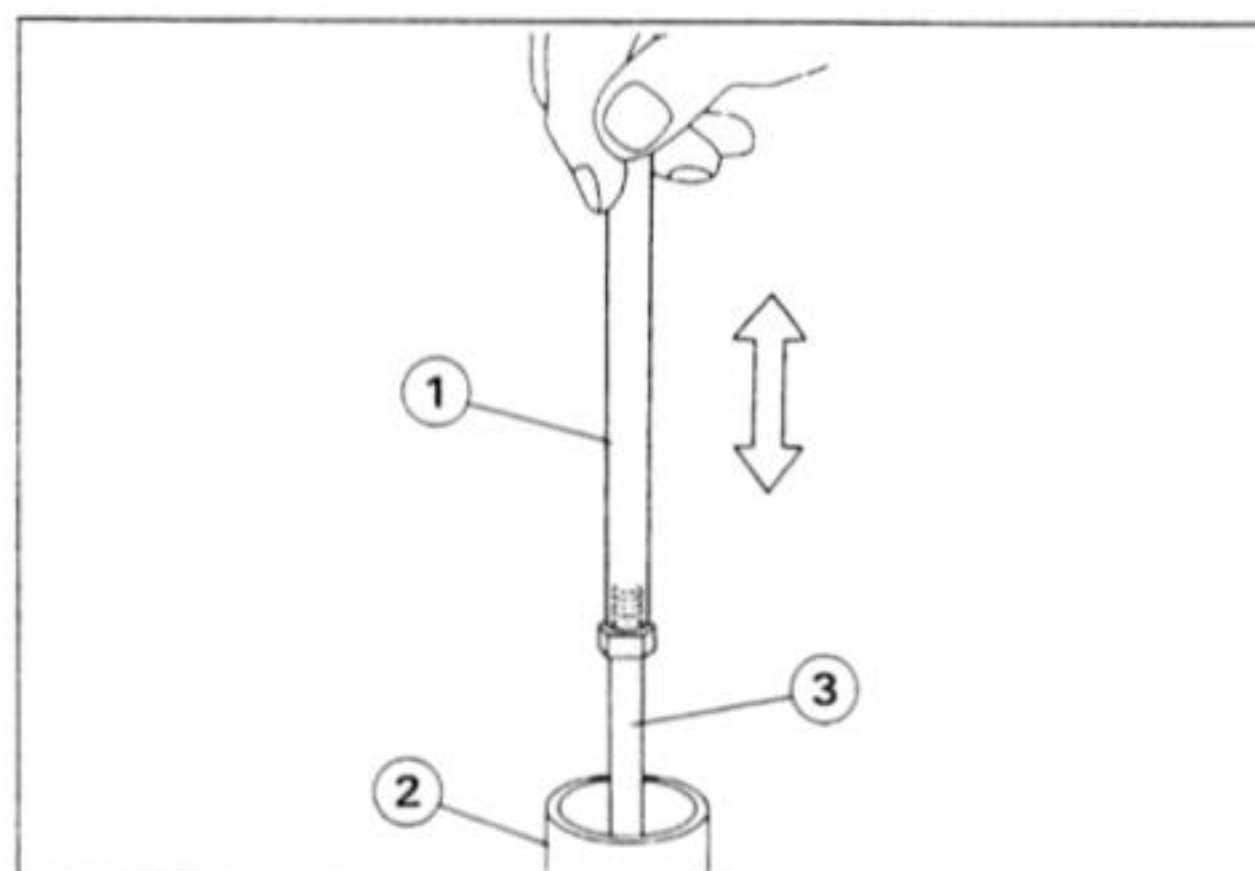
NOTE

- While doing this, take care to keep the oil level topped off so that it stays above the four holes near the top of the inner tube.



- 1. Holes
- 2. Outer Tube
- 3. Inner Tube

- Purge the air from the inner tube by gently moving the rod puller (special tool) up and down five times.

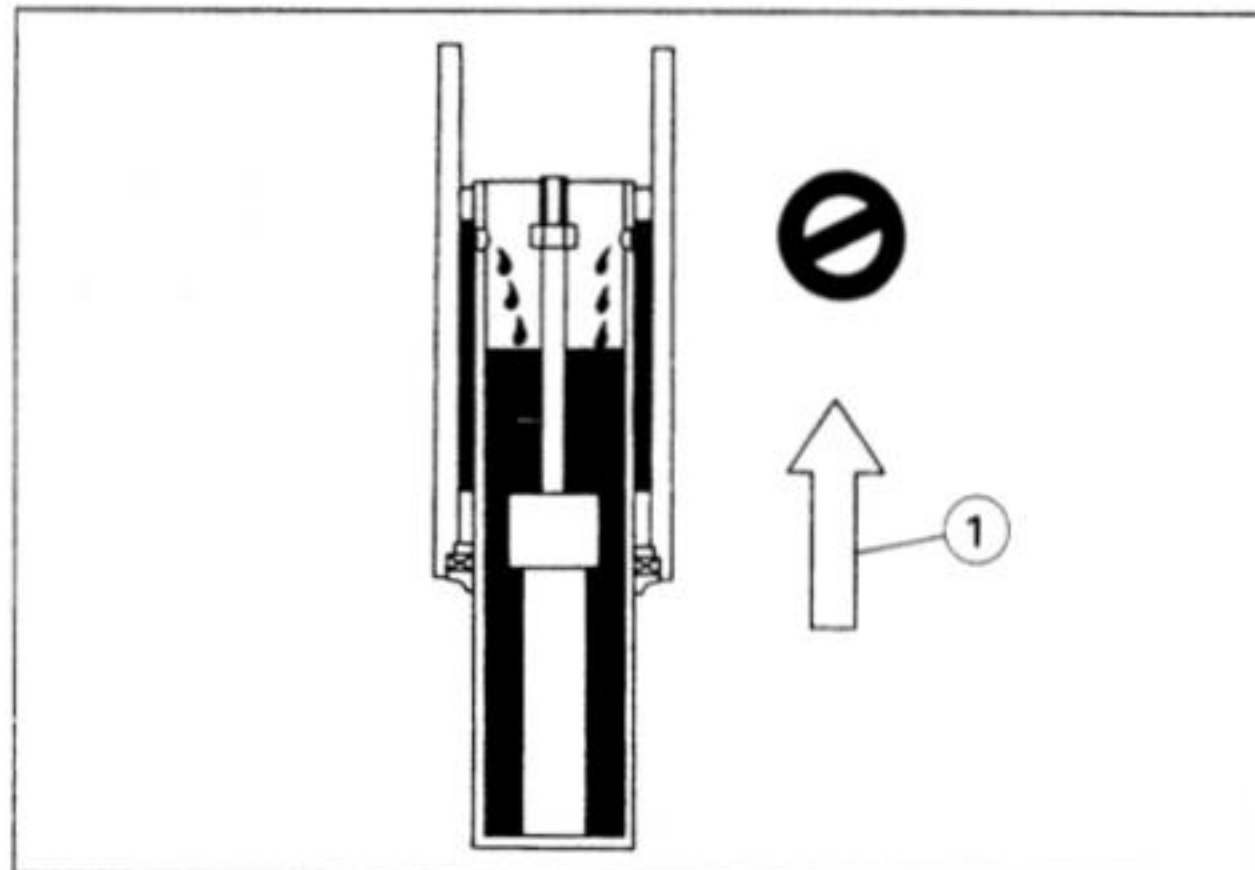


- 1. Piston Rod Puller: 57001-1298
- 2. Outer Tube
- 3. Piston Rod

- Purge the air from between the inner and outer tubes by pumping the outer tube up and down.

CAUTION

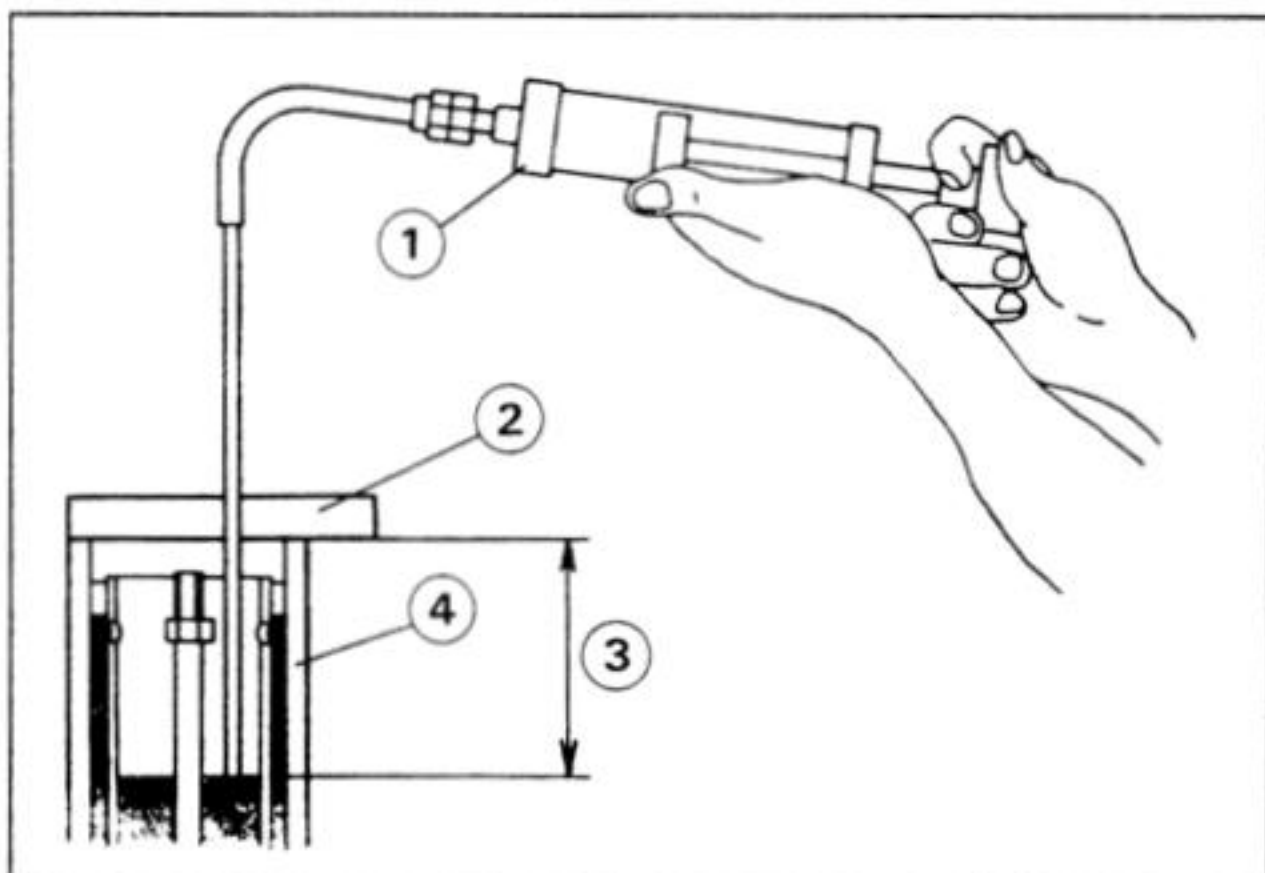
Never extend the fork fully, oil will be forced from between the tubes into the inner tube through the holes at the top of it. This raises the oil level in the inner tube. If the fork is extended to the full length of its normal travel, the oil level will be raised about 30 mm.



- 1. Never extend the fork fully.

- After purging the air from the fork, let it sit for about five minutes so that any suspended air bubbles can surface.
- Measure the oil level, using the fork oil level gauge (special tool).
- Set the gauge stopper so that its lower side shows the oil level distance specified.
- With the fork fully compressed, insert the gauge tube into the inner tube and position the stopper across the top of the outer tube.

12-8 SUSPENSION



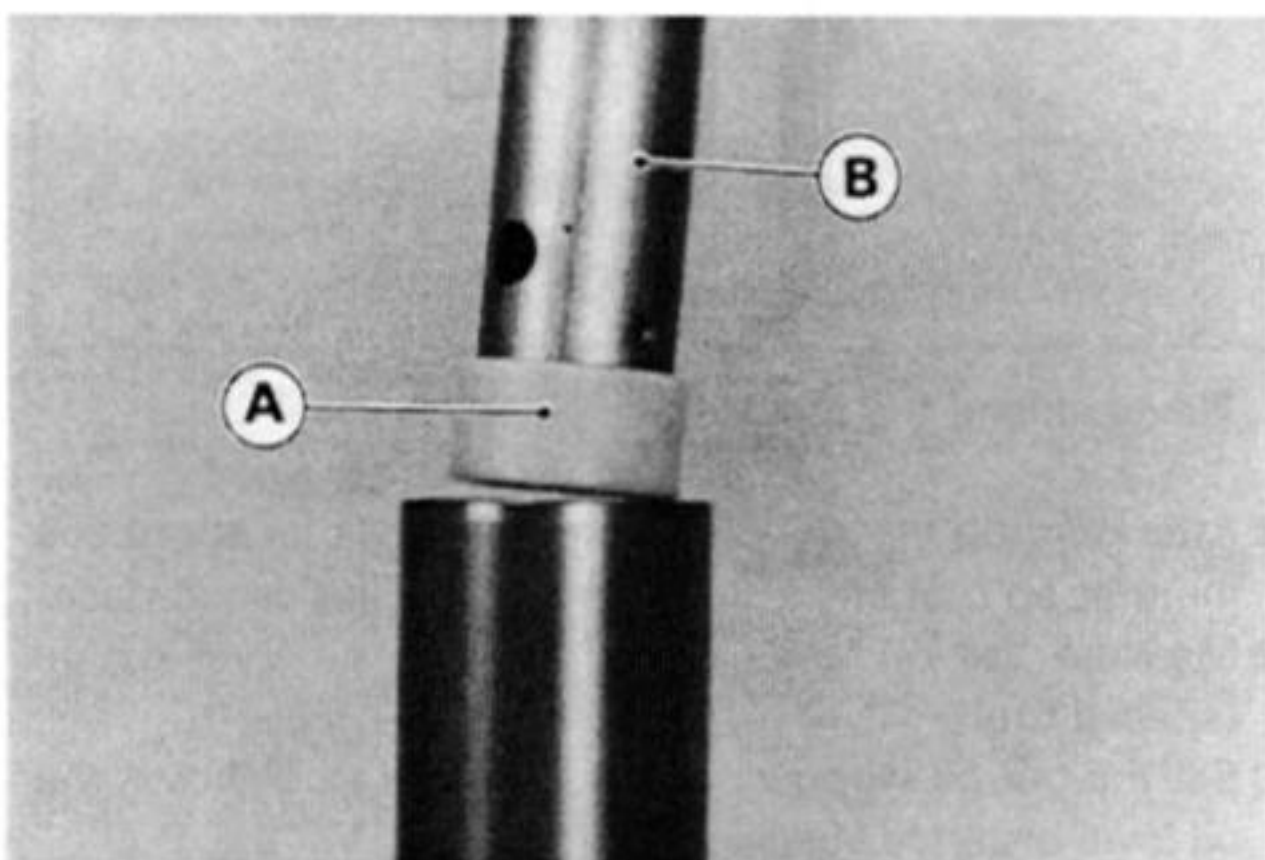
1. Level Gauge: 57001-1290 3. Oil Level Distance
2. Stopper 4. Outer Tube

NOTE

- The gauge tube is graduated in 1 cm division.
- The gauge body is graduated in 10 mL divisions, excluding the gauge tube capacity about 5 mL.
- Pull the handle slowly to draw out the excess oil until no more oil comes up the tube.
- ★ If no oil is drawn out, there is not enough oil in the fork. Pour in some more oil, then draw out the excess.

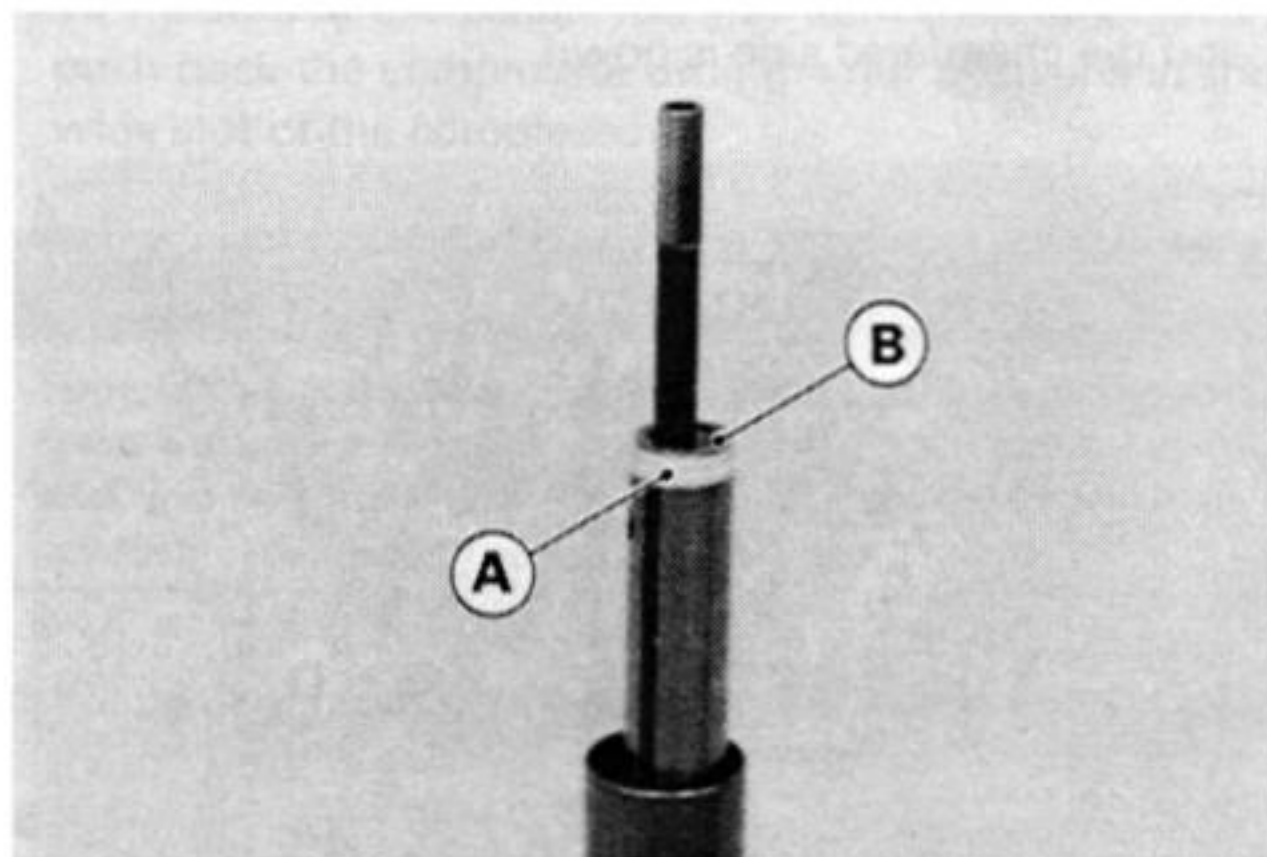
Fork Oil Level (Fully compressed with fork spring)
85 ± 8 mm

- ★ If the oil is above or below the specified level, remove or add oil and recheck the oil level.
- Screw the fork push rod puller (special tool) onto the end of the rod.
- Install the collar so that the resin bush side is down.



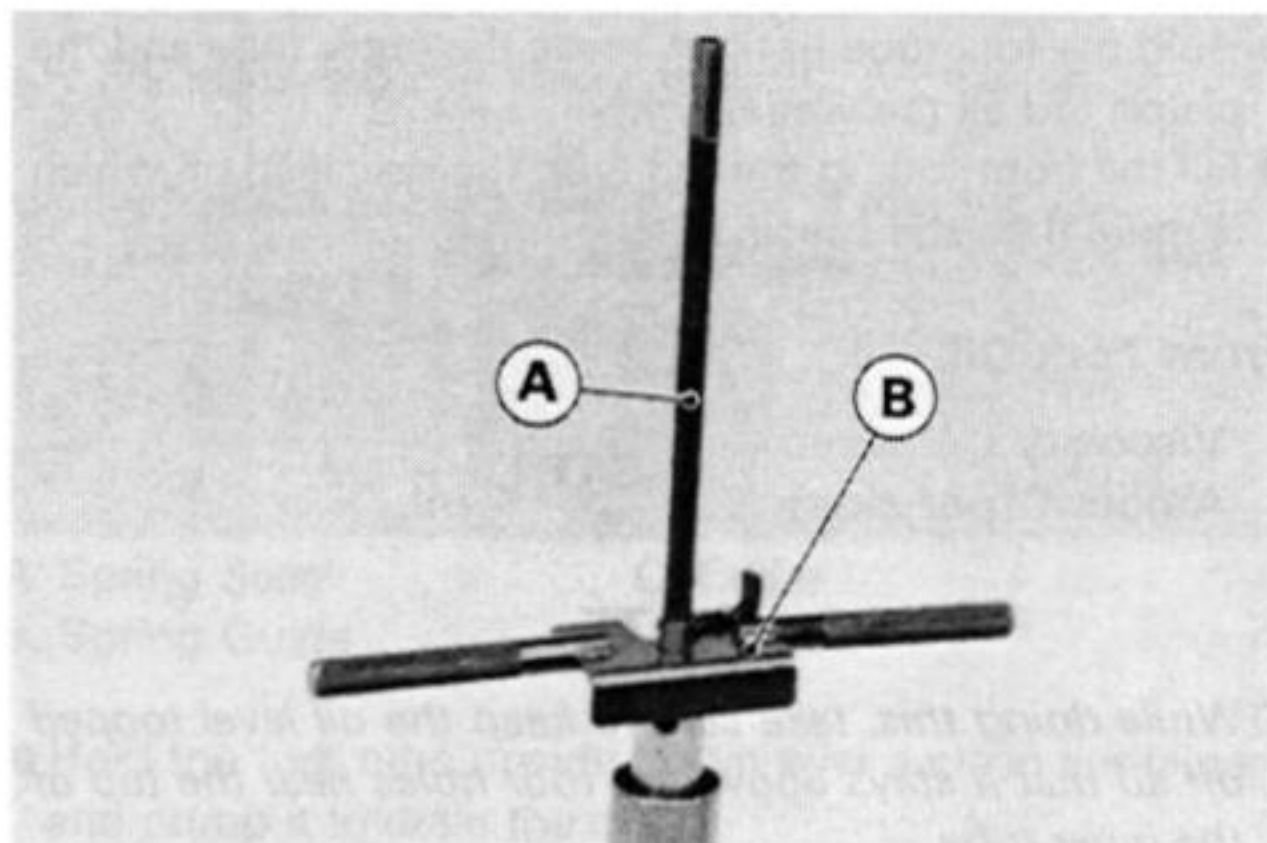
A. Resin Bush B. Collar

- Put the spring guide and spring seat on the collar.



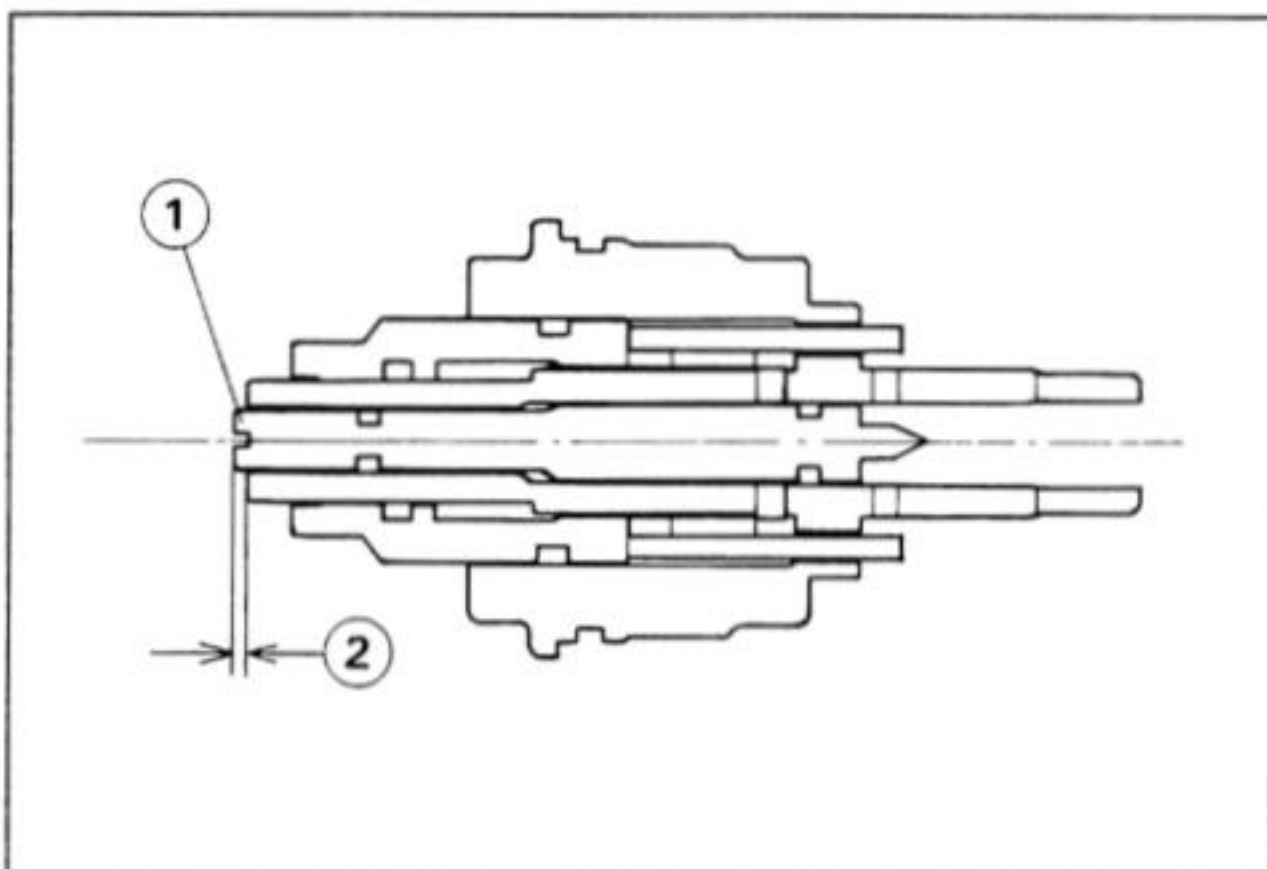
A. Spring Guide B. Spring Seat

- Using the fork spring compressor (special tool), press the collar down until the compressor has just gone past the piston rod nut.



A. Fork Piston Rod Puller : 57001-1298
B. Fork Spring Compressor : 57001-1338

- Remove the fork push rod puller (special tool).
- Check the O-ring on the top plug, and replace it with a new one if damaged.
- Screw in the rebound damping adjuster of the top plug so that the adjuster is 1.5 mm above the top plug.

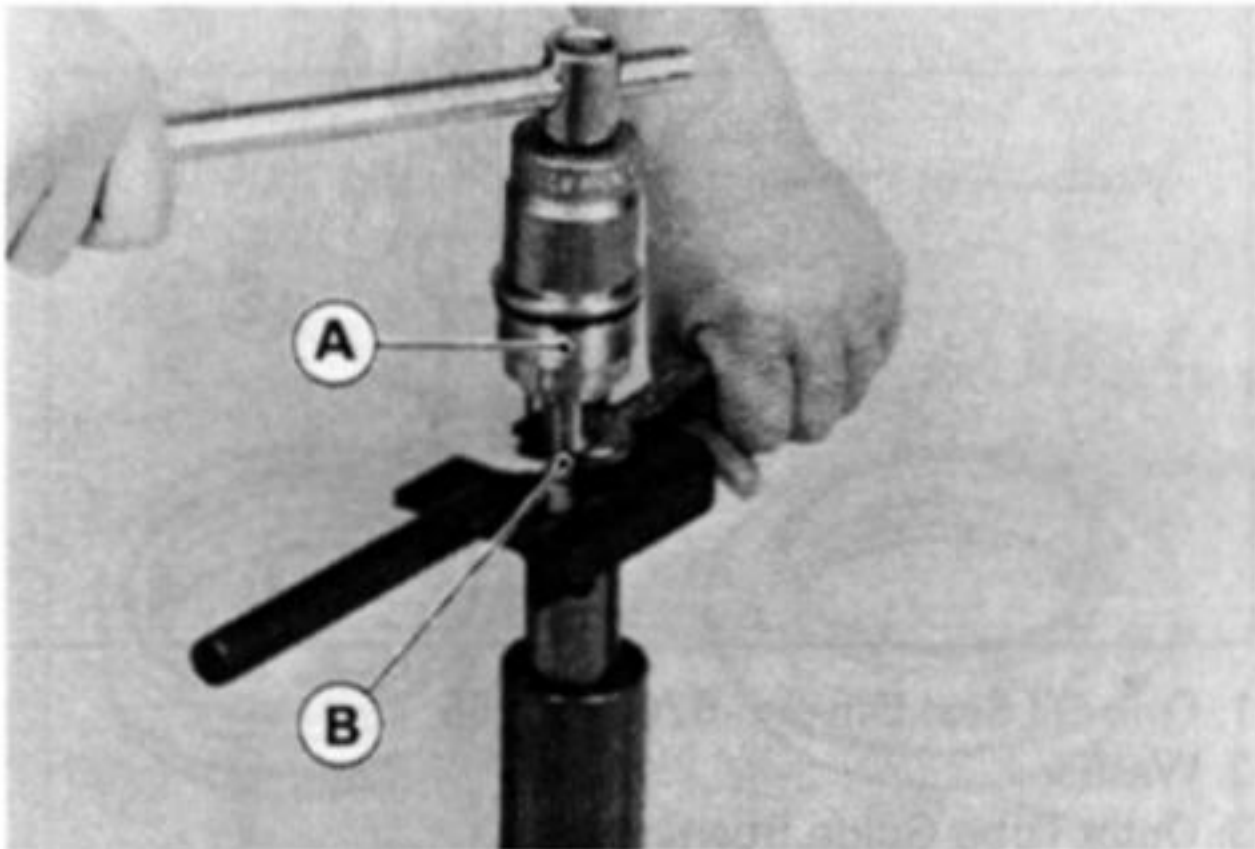


1. Rebound Damping Adjuster
2. 1.5 mm

- Tighten the top plug finger-tight.

SUSPENSION 12-9

- While holding the fork top plug, tighten the piston rod nut against the plug to the specified torque (see Exploded View).

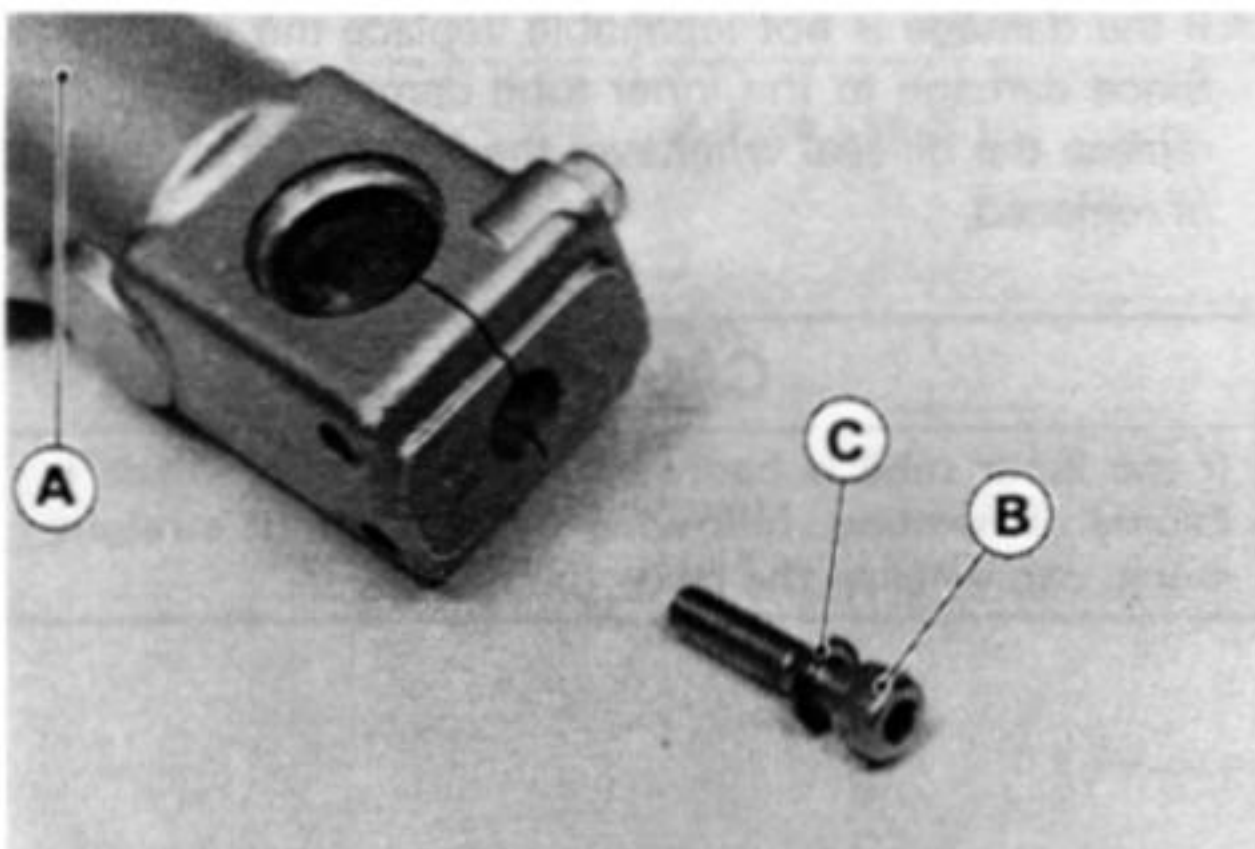


A. Top Plug B. Piston Rod Nut

- Remove the fork spring compressor (special tool).
- Raise the outer tube, and screw the top plug into it.
- Tighten the top plug to the specified torque (see Exploded View).
- Adjust the rebound damping and spring preload (see the Specifications).

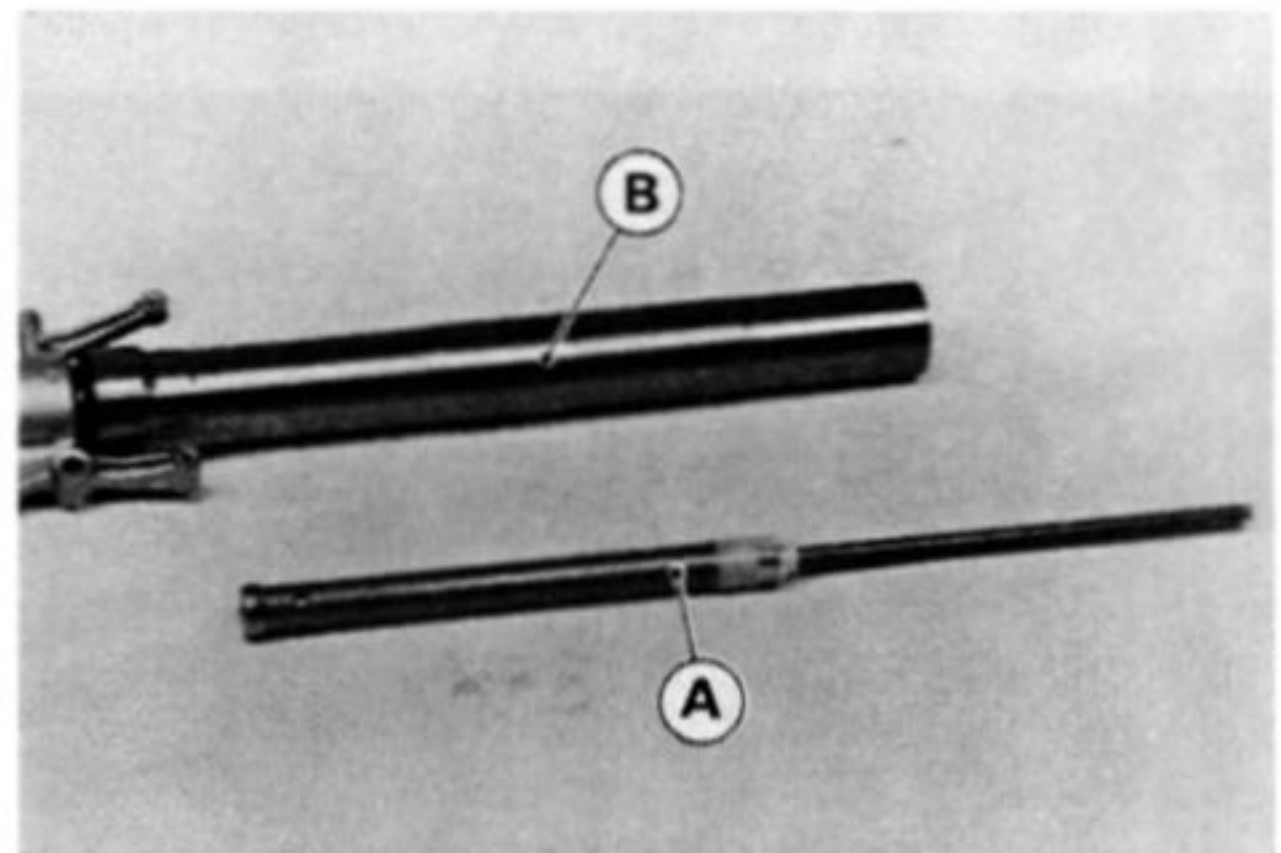
Disassembly (for each leg)

- Loosen the top plug before removing the front fork.
- Remove the front fork, and then pour out the fork oil (see Fork Oil Change).
- The following parts are removed during draining the fork oil.
 - Top Plug
 - Spring Seat
 - Spring Guide
 - Collar
 - Main Spring
- Hold the fork tube horizontally in a vise.
- Unscrew the Allen bolt, and take a gasket out of the bottom of the inner tube.



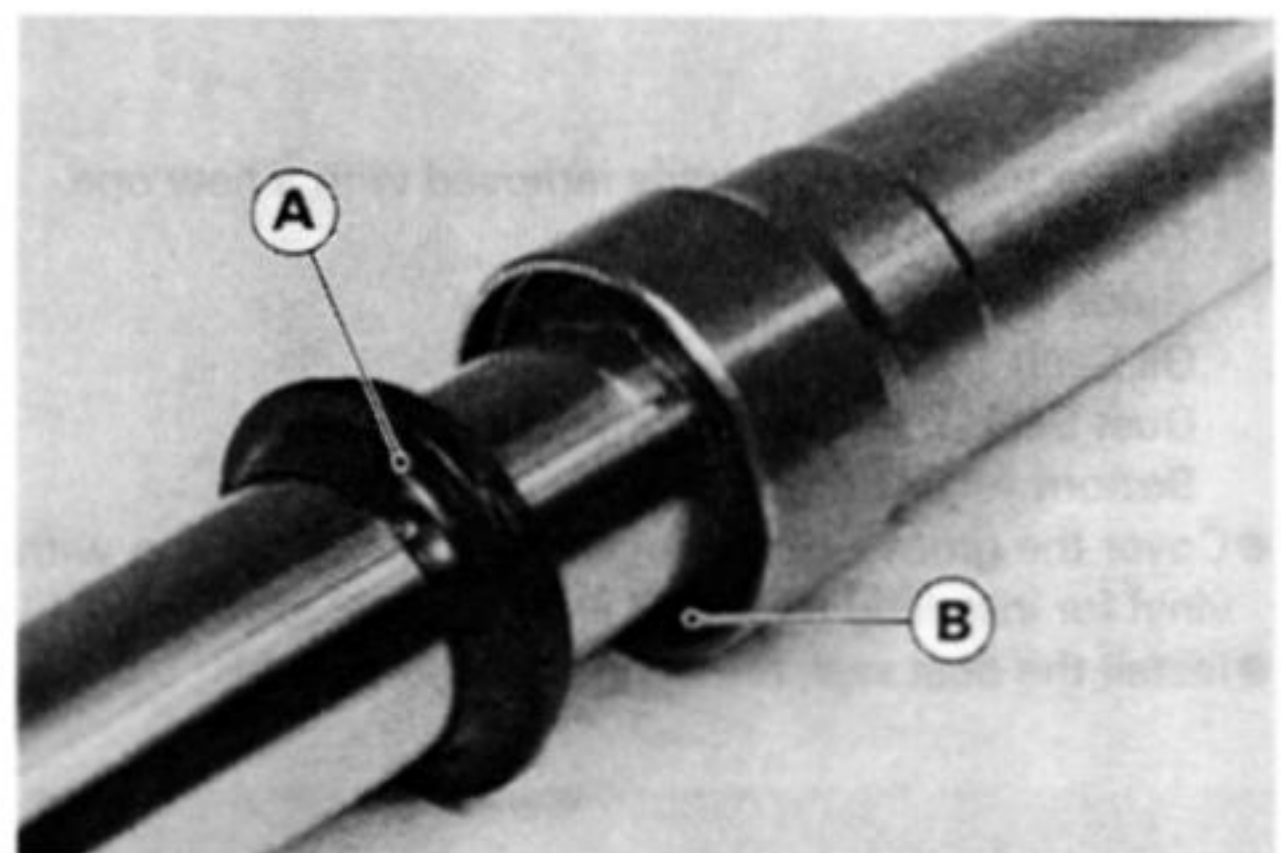
A. Inner Tube C. Gasket
B. Allen Bolt

- Take the piston cylinder unit from the top of the outer tube.
- Do not disassemble the piston cylinder unit.



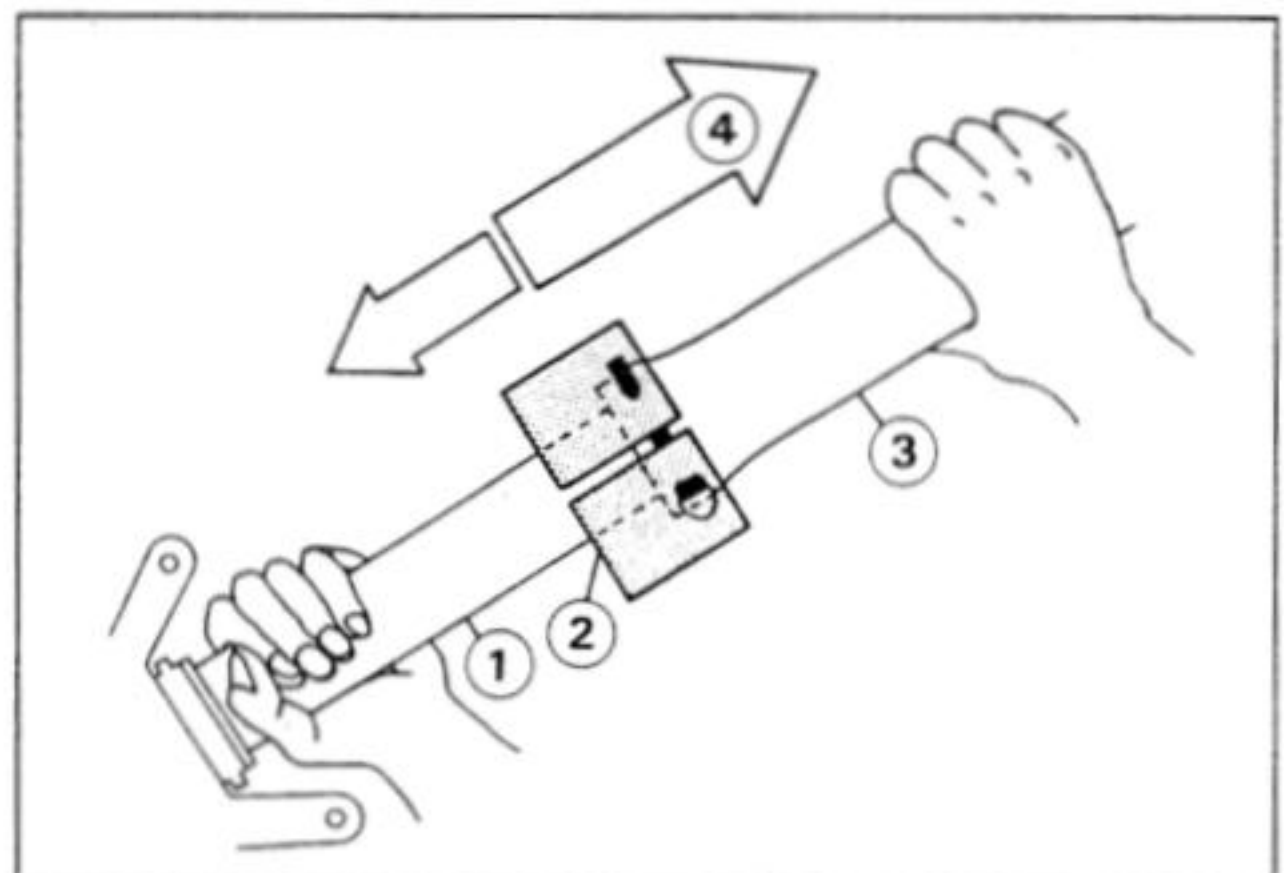
A. Piston Cylinder Unit B. Outer Tube

- Remove the following the outer tube.
 - Dust Seal
 - Retaining Ring



A. Dust Seal B. Retaining Ring

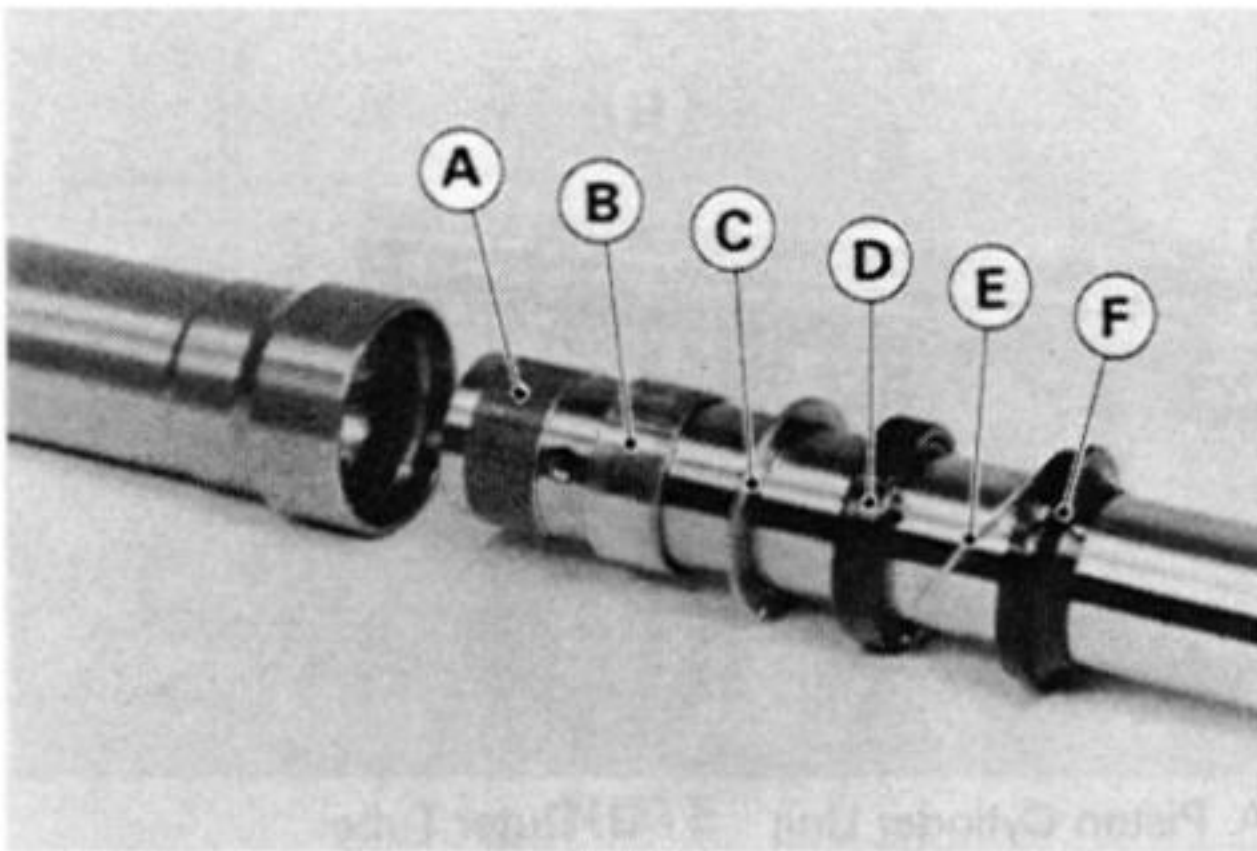
- Use the fork outer tube weight (special tool) to separate the outer tube from the inner tube.
- Holding the outer tube by hand, pull the outer tube several times to pull out the inner tube.



1. Inner Tube 3. Outer Tube
2. Weight : 57001-1218 4. Pull.

12-10 SUSPENSION

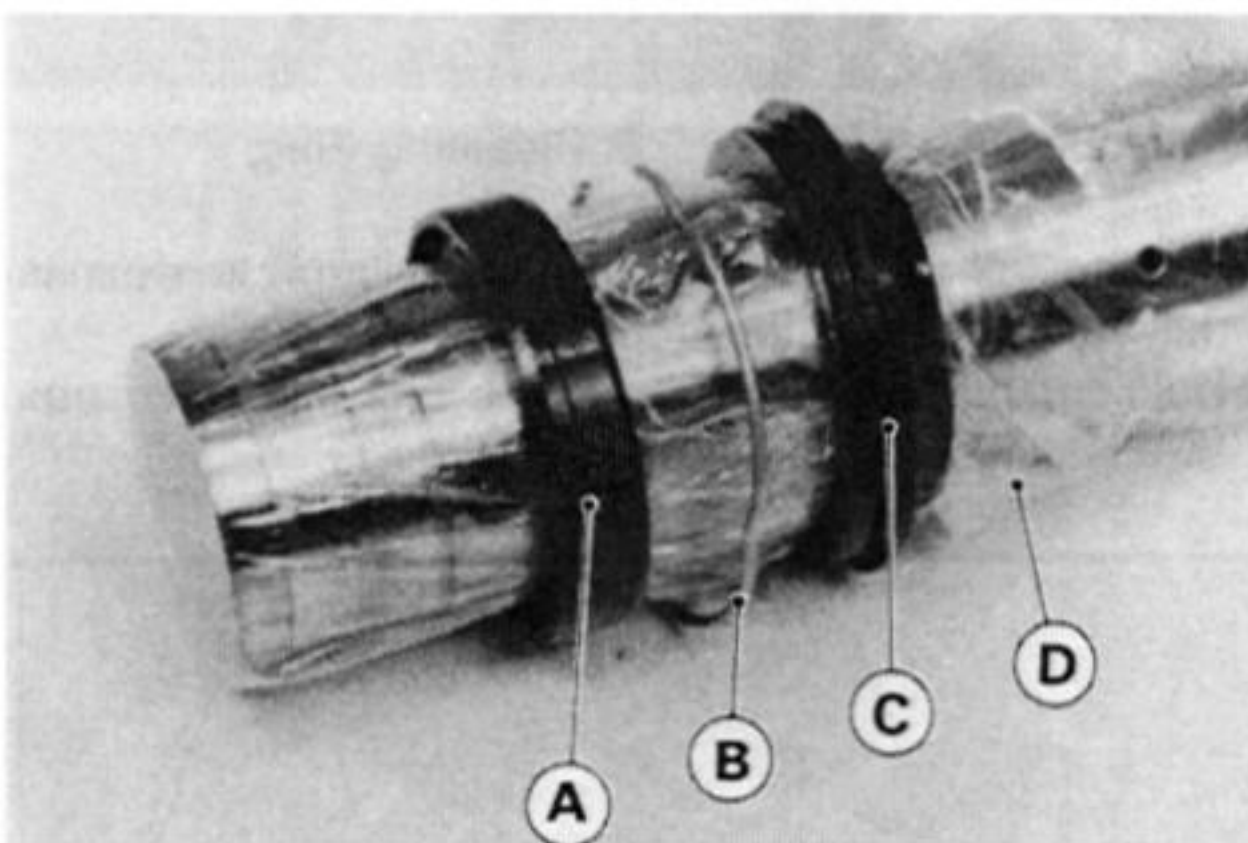
- The oil seal, washer, and guide bushings come off with the inner tube.
- Remove the guide bushings, washer, oil seal, retaining ring, dust seal from the inner tube.



- | | |
|-----------------------------|-------------------|
| A. Inner Tube Guide Bushing | D. Oil Seal |
| B. Outer Tube Guide Bushing | E. Retaining Ring |
| C. Washer | F. Dust Seal |

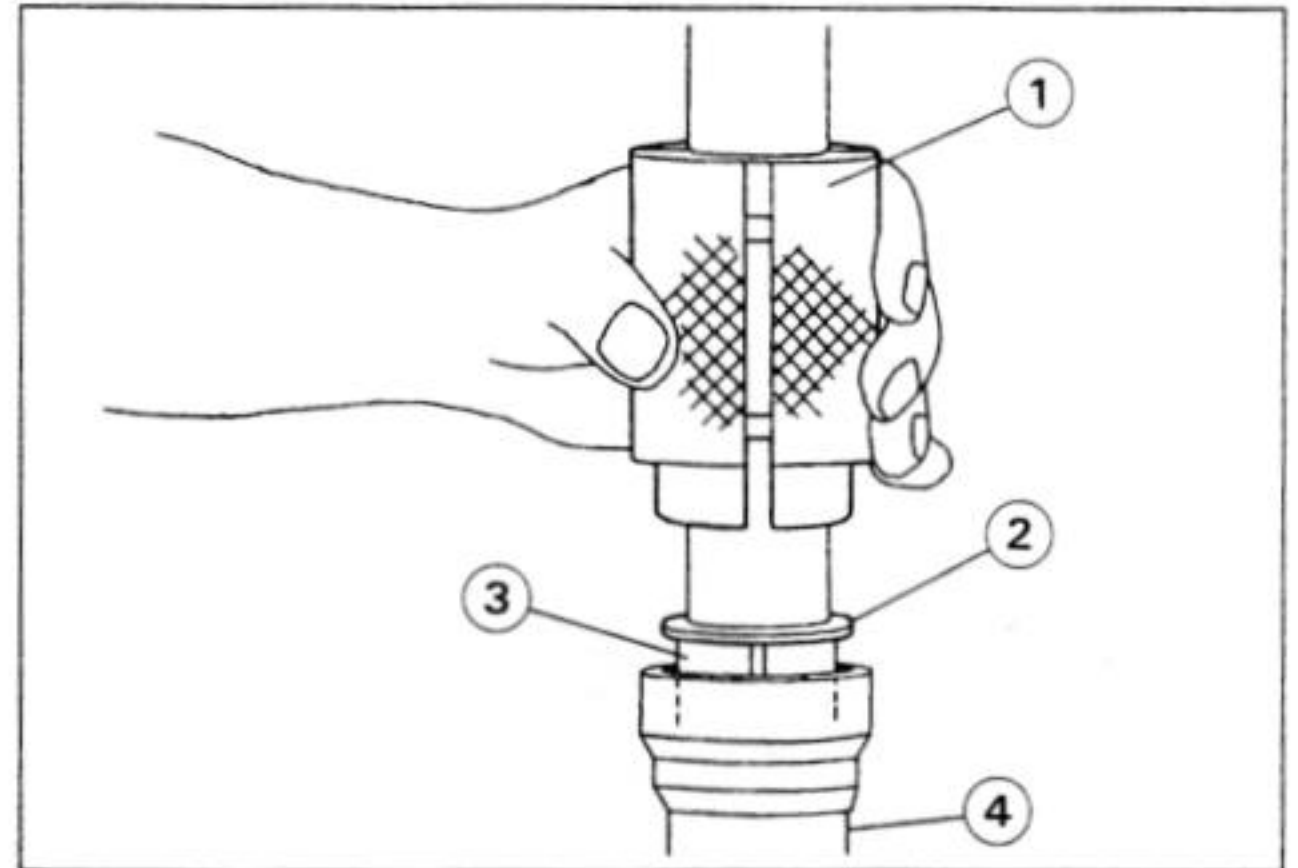
Assembly

- Replace the following parts removed with a new one.
 - Top Plug O-Ring
 - Guide Bushings
 - Oil Seal
 - Dust Seal (If removed from the inner tube)
 - Bottom Allen Bolt Gasket
- Cover the groove of the inner tube guide bushing with vinyl for installing a new oil seal and dust seal.
- Install the dust seal, retaining ring and oil seal.



- | | |
|-------------------|--------------|
| A. Oil Seal | C. Dust Seal |
| B. Retaining Ring | D. Vinyl |

- Remove the vinyl.
- Install the following onto the inner tube.
 - Washer
 - Outer Tube Guide Bushing
 - Inner Tube Guide Bushing
- When installing the inner tube into the outer tube, put the washer on the outer tube guide bushing, and tap the washer with the fork oil seal driver (special tool) until it stops.



1. Fork Oil Seal Driver : 57001-1288
2. Washer
3. Outer Tube Guide Bushing
4. Outer Tube

- Install the oil seal into the outer tube, using the oil seal driver (special tool).
- Install the following by hand.
 - Retainer
 - Dust Seal
- Hold the fork tube horizontally in a vise.
- Install the piston cylinder unit in the inner tube.
- Apply a non-permanent locking agent to the Allen bolt and tighten it to the specified torque (see Exploded View).
- Hold the fork tube vertically in a vise.
- Press the outer tube and the piston rod all the way down.
- Install the main spring into the inner tube.
- Pour in the specified type of oil and install the parts removed (see Fork Oil Change).

Inner Tube Inspection

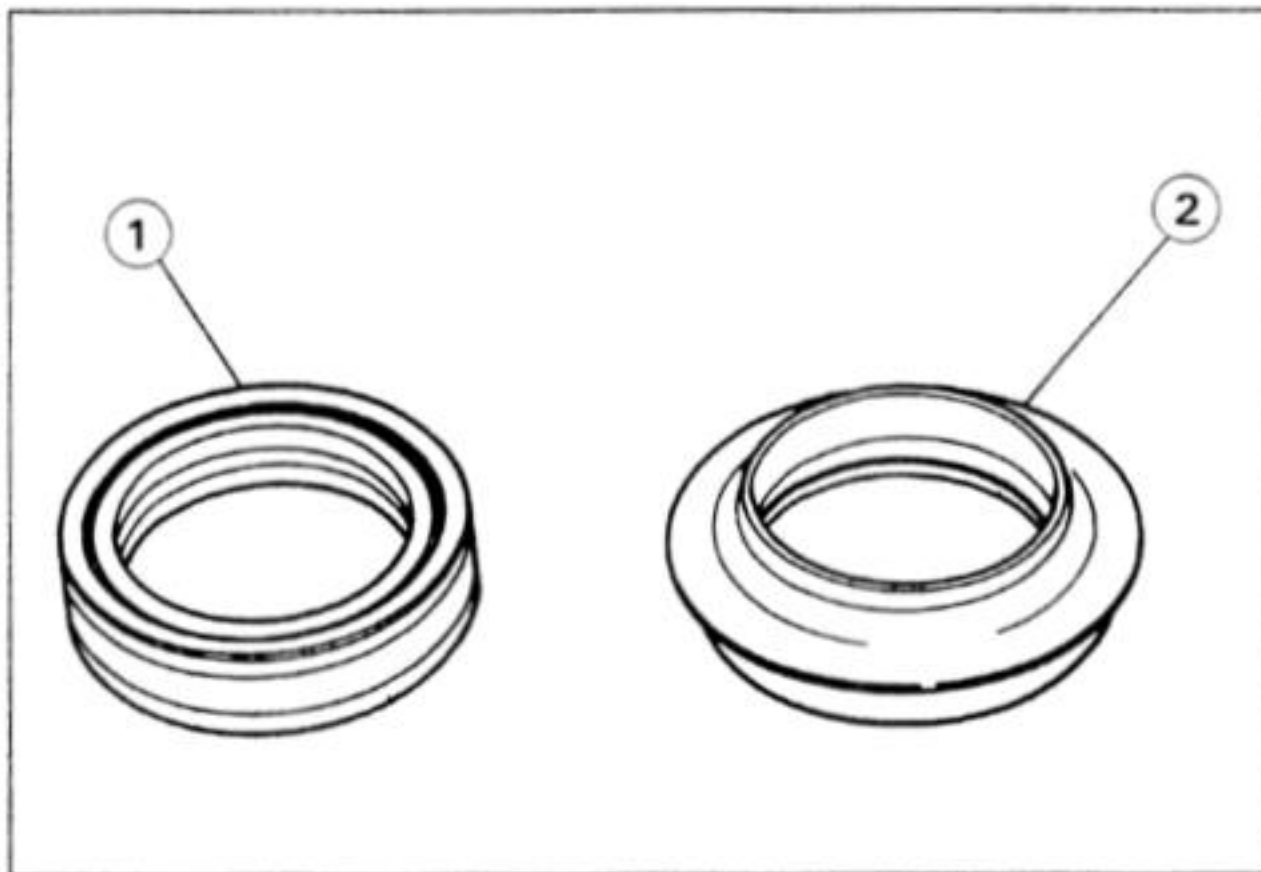
- ★ If the inner tube is damaged, replace it.
- Nicks or rust damage can sometimes be repaired by using a wet-stone to remove sharp edges or raised areas which cause seal damage.
- ★ If the damage is not repairable, replace the inner tube. Since damage to the inner tube damages the oil seal, replace the oil seal whenever the inner tube is repaired or replaced.

CAUTION

If the inner tube is badly bent or creased, replace it. Excessive bending, following by subsequent straightening, can weaken the inner tube.

Oil Seal and Dust Seal Inspection

- ★ If dust seal has any damage or wear, replace it.
- Replace the oil seal with a new one whenever it has been removed.

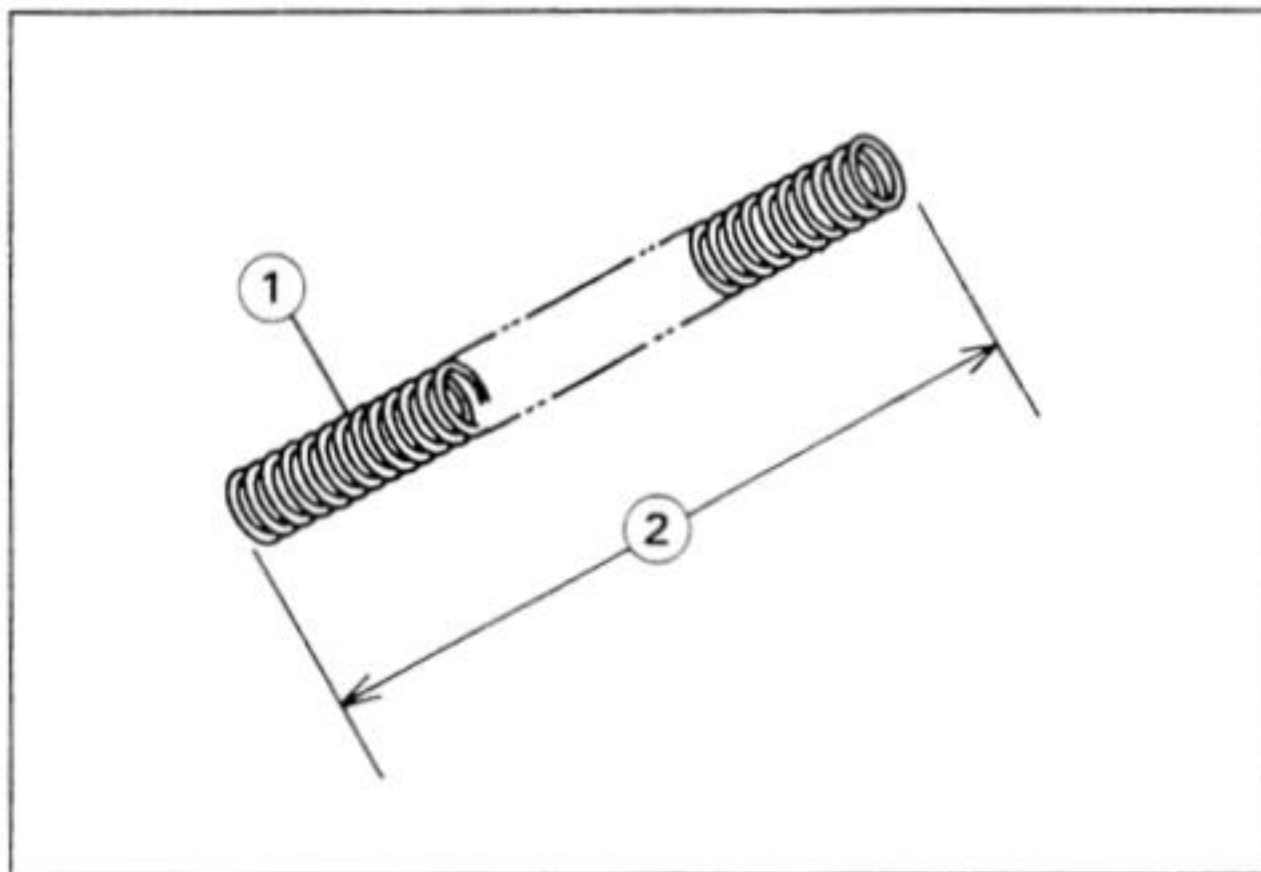


1. Oil Seal

2. Dust Seal

Spring Tension

- ★ If the spring of either fork tube is shorter than the service limit, it must be replaced. If the length of a replacement spring and that of the remaining spring vary greatly, the remaining spring should also be replaced in order to keep the fork tubes balanced for motorcycle stability.



1. Main Spring

2. Free Length

Fork Spring Length

Standard:	325.1 mm
Service Limit:	319 mm