

**Adjusting the front fork.**

The hydraulic damping rate of the fork is adjustable both for rebound and compression. The adjustment is made by means of external adjuster bolts: (A) for hydraulic rebound damping, (C) for compression damping.

To reach the compression damping adjusting screw, insert a screw driver through the hole on the wheel spindle at fork leg axis.

When you rotate the adjuster bolt, you will hear various clicks, each of them corresponds to an adjusting position.

Tighten the bolt fully to "0" position, which is the stiffest setting.

From this position, start turning anticlockwise and count the clicks, which correspond to setting 1, 2 and so on.

Standard settings are as follows:

- compression: 12th click;
- rebound: 10th click.

Adjusting range is 14 clicks for rebound and 17 clicks for compression, the higher the setting, the softer the damping.

In order to modify the **spring preload** of each leg, turn the upper adjuster (B) with a 22 mm Allen wrench. Preload (1) ranges from 2.5 to 10 mm/0.98-0.39 in.

Factory setting is 20 mm/0.78 in. (5th notch from the top).



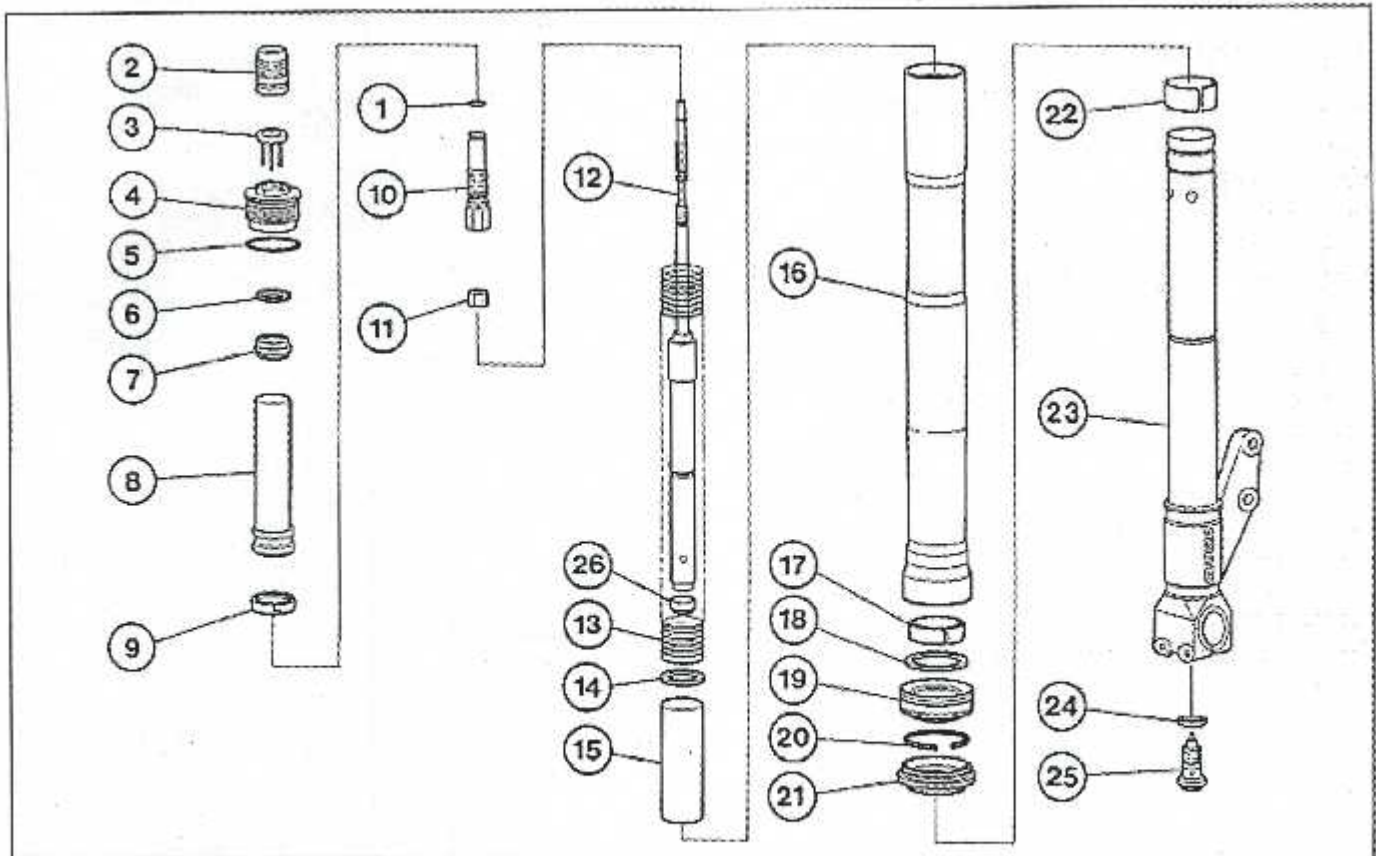
**Important-Select the same settings for both fork legs.**



**SHOWA front suspension.**

The front suspension consists in an "upside-down" hydraulic fork with adjustment for rebound and compression and spring preload.

- Outer tube diameter ..... 43 mm/1.692 in.
- Travel ..... 127 mm/4.99 in.
- Adjustment range for rebound ..... max. -10 clicks
- Adjustment range for compression ..... max. -12 clicks
- Spring preload ..... 20 mm/0.78 in.  
..... (max. 25 mm/0.98 in. - min. 10 mm/0.39 in.)
- Oil quantity (each leg) ..... 480±2.5 cc/29.28±0.15 cu. in.
- Oil level ..... 135 mm/5.31 in.





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Special tools for overhauling the front fork are shown at page I.22.  
The numbers reported on the figures of this paragraph are referred to the details in the exploded view showed at page I.4.

#### Overhaul of "SHOWA GD 051".

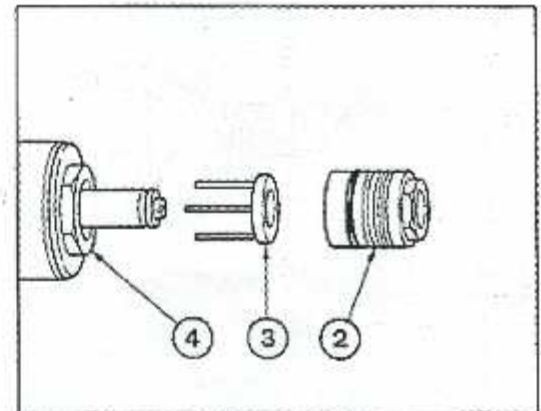
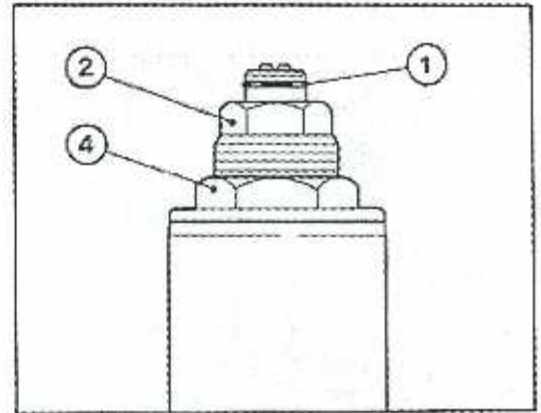
Clean up front fork before disassembling. Damping adjuster should be at minimum position.

#### DISASSEMBLY

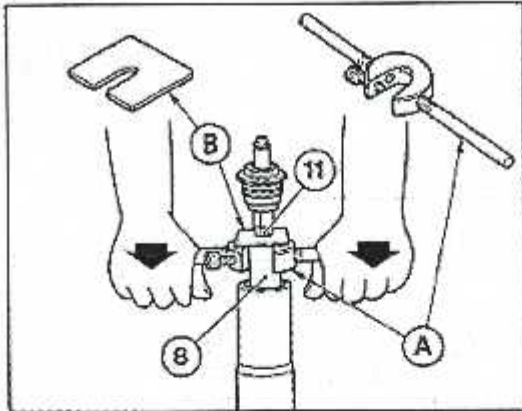
Remove the snap ring (1).

Remove the spring adjuster bolt (2) and spring cap (3).

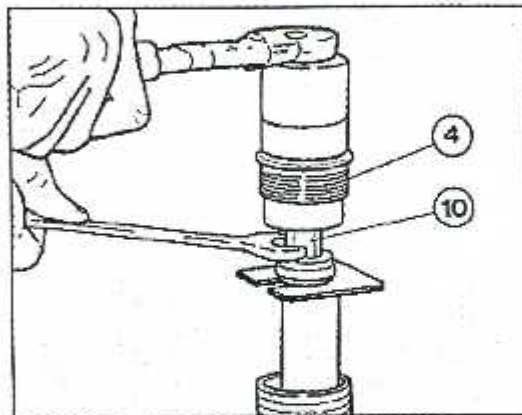
Loosen the top cap nut (4).







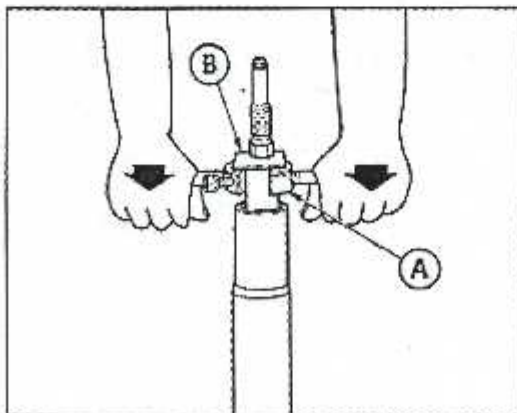
Special tool (A) bolts on the side hole of spring collar (8). Push it down to compress the spring, then slip stopper plate (B) under the lock nut (11).



Hold rebound adjuster bolt (10) steady with an Allen wrench and undo the top cap nut (4) complete.



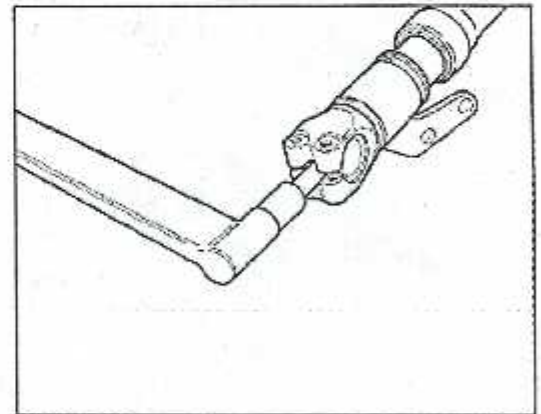
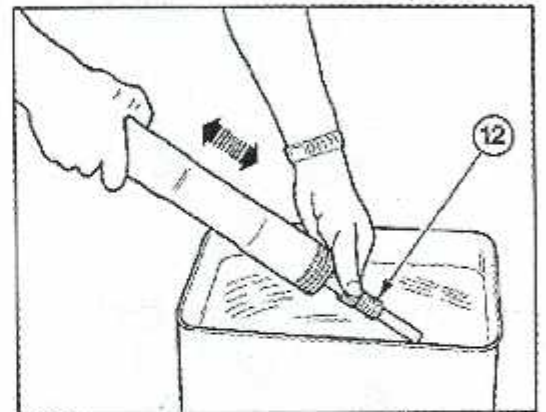
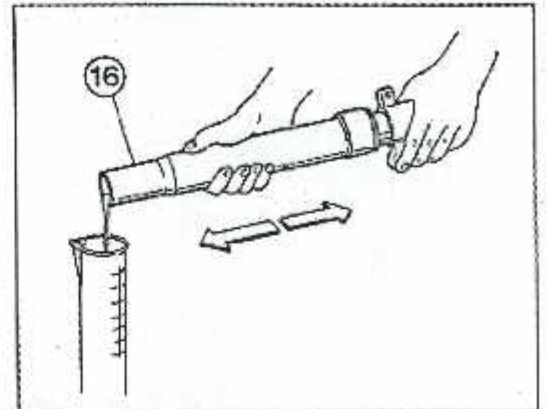
Hold the adjuster (10), not the lock nut (11) steady to undo top cap nut (4).



Push special tool (A) down to take off stopper plate (B). Remove spring collar (8), with washer (6) and cursor (7), spring (13), spring cap (14) and bottom collar (15).



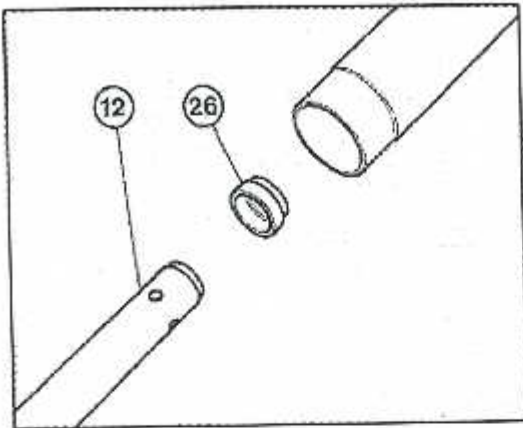
Stroke slider (16) and damper rod (12) as shown in figure 8+ 10 times to drain oil from the fork leg.



Put wheel spindle mount in a vise with soft clamps.  
Undo compression adjuster bolt (25).

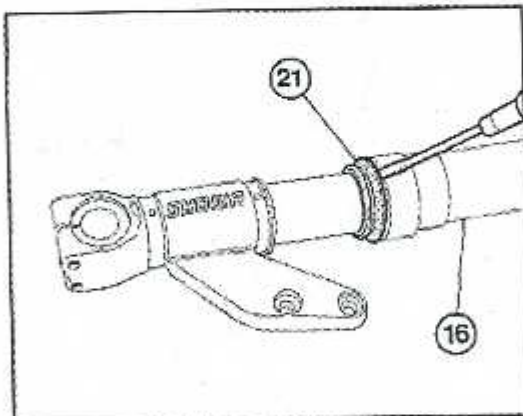
**Should this prove difficult, reassemble the components you have just dismantled (15, 14, 13, 8, 7, 6 e 4) temporarily and use top cap nut to hold the assembly steady.**

Remove compression adjuster bolt (25) and gasket (24).

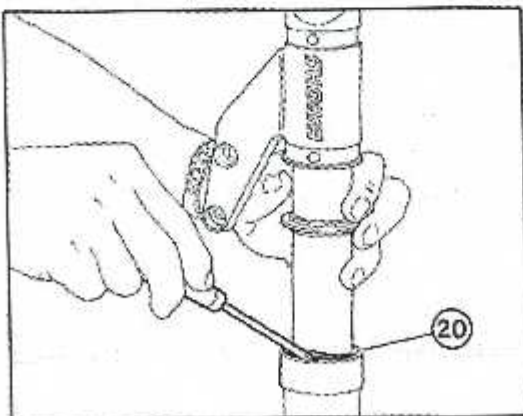


Pull out damper cartridge (12) complete and remove bottom centring bush (26).

**Do not dismantle the damper cartridge.**



Take off dust seal (21) from the top of the slider (16) prising it out with a screwdriver.

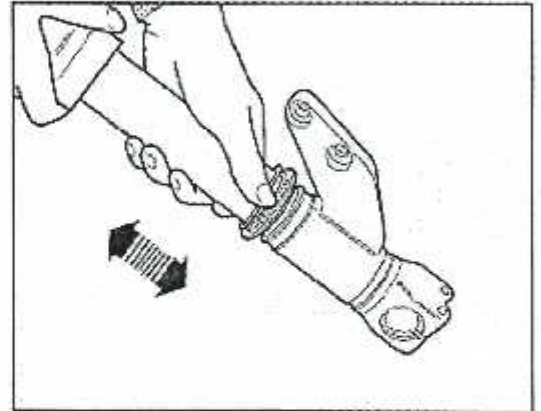


Remove stop ring (20) from the slider.

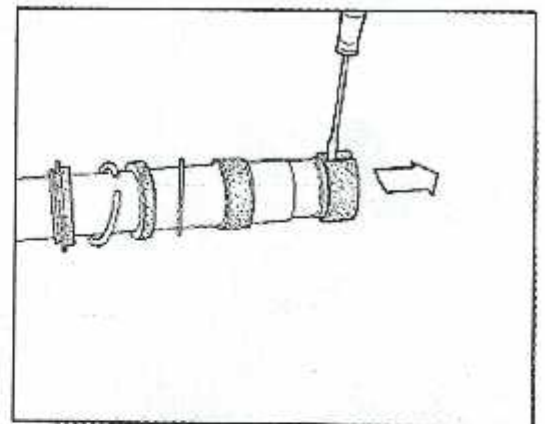
**Be careful not to damage stanchion tube (23) and the seating in the slider.**



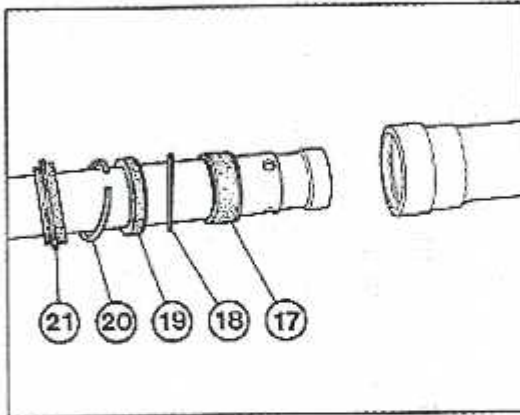
Extract slider from stanchion tube pulling strongly and repeatedly to overcome the resistance offered from the guide bush (17) that is forced on the slider.



Remove bush (22) from stanchion tube inserting the point of a screwdriver into bush opening.



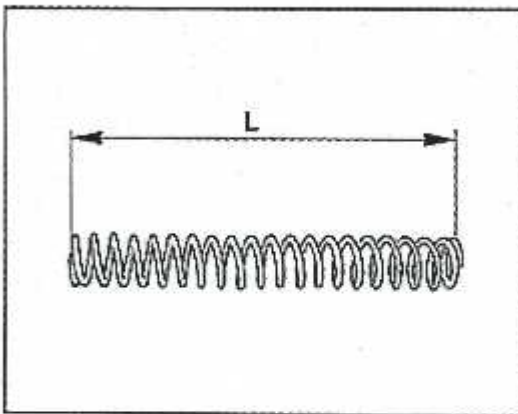




Remove:

- guide bush (17);
- ring (18);
- oil seal (19);
- stop ring (20);
- dust seal (21)

from stanchion tube.



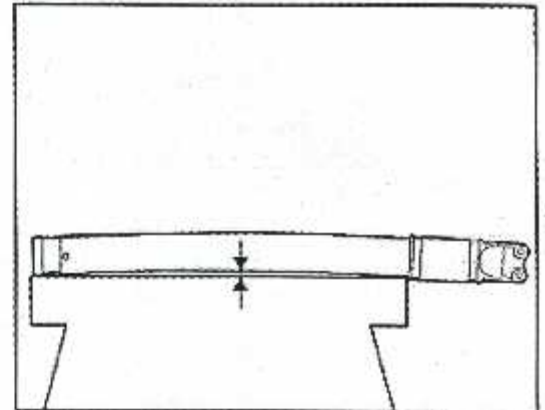
**INSPECTION**

- Lay the spring on a level surface and measure its length (L).
- Service limit: 270 mm/10.63 in.
- Replace spring if length is not within limit.

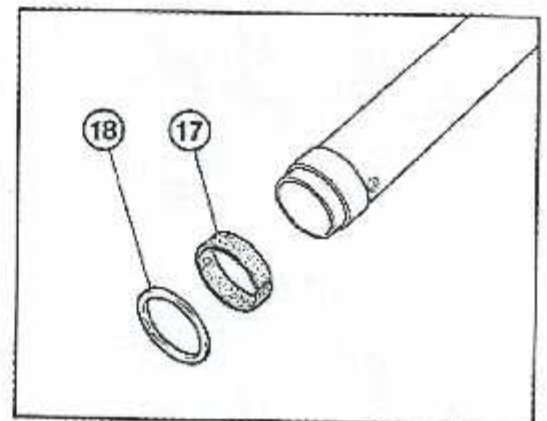


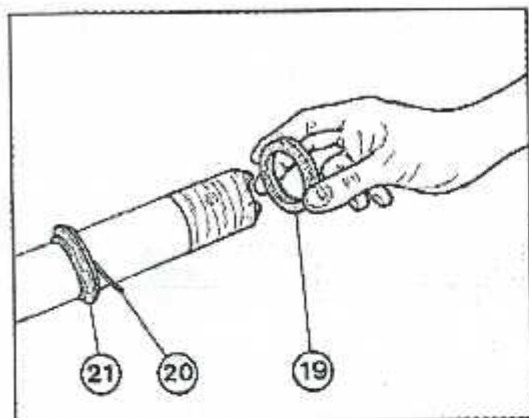


- Inspect the outer surface of the two stanchion tubes and the inner surface of the two sliders; they should show no signs of scoring, scratches or tight points.
- Make sure that each stanchion tube slides freely inside its slider, but without exceeding play.
- Check straightness of stanchion tubes (max. error allowed 0,10 mm/0.004 in.).



- Check bushes for grooves or steps. The copper on input end should not be exposed. If it is, replace bush.
- Check ring (18) laying II on a surface plane.
- If ring is distorted, replace it.





**REASSEMBLY**

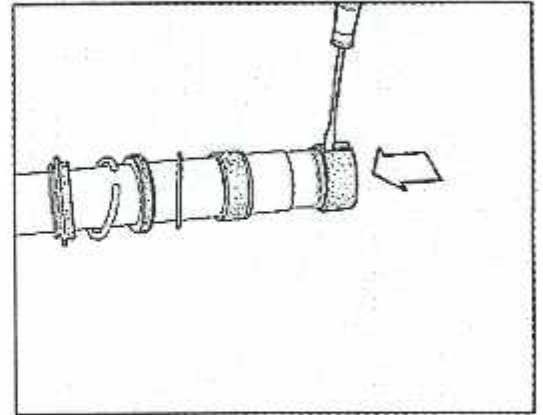
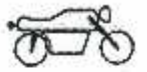
Before installing oil seal (19), lubricate new sealing lips with fork oil or sealing grease. Wrap the end of the stanchion tube with tape.

Install the following parts to stanchion tube:

- dust seal (21);
- stop ring (20);
- oil seal (19).




**Install the oil seal with its marked side facing the dust seal.**

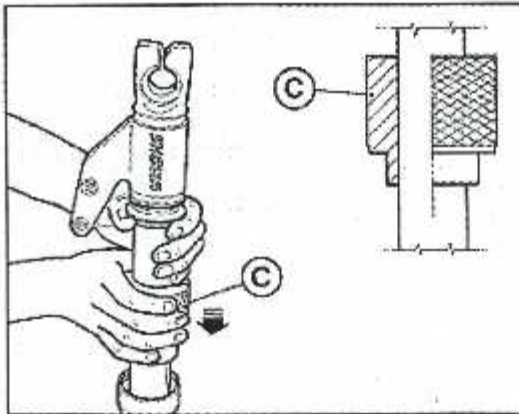


Install the following items onto stanchion tube.

- ring (18);
- guide bush (17);
- stanchion tube bush (22).

 **Remove any burrs from the bush, taking care not to peel off its coating.**

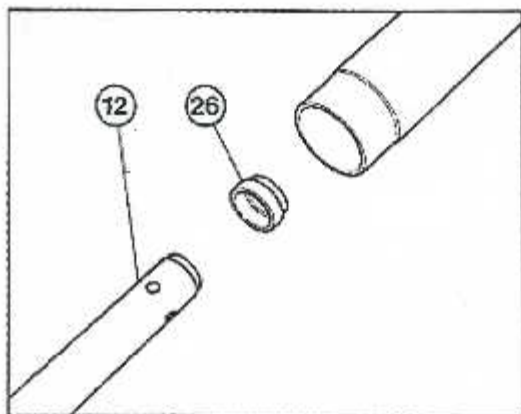
Tie dust seal and stop ring together using adhesive tape, in case they hamper you during next operations.



Before assembling the two parts, lubricate the working surfaces of bushes with fork oil. Drive the guide bush (17) with the ring (18) into the slider using special tool [C] as shown. Drive the oil seal (19) into the slider using the special tool. Install stop ring (20) and dust seal (21).



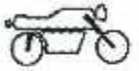
**The slider must slide freely on stanchion tube. Always hold both stanchion tube and slider with your hands to avoid damage to oil seals and guide bushes.**



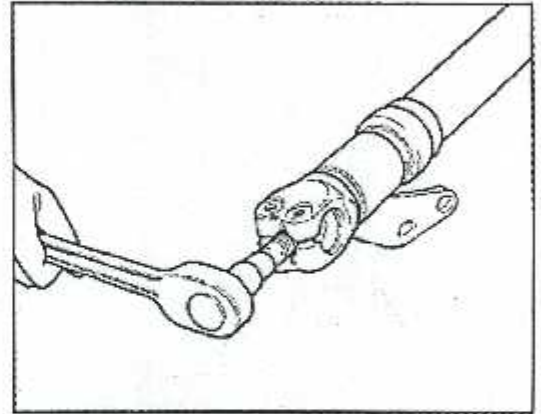
Put the wheel spindle support in the vise. Install bottom centering plate (26) on the end of damper cartridge (12) and fit them into stanchion tube.



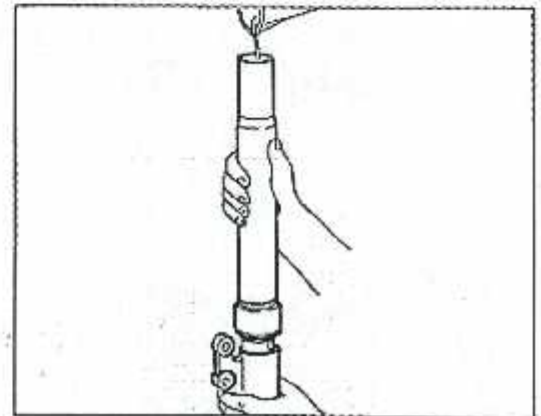
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SUSPENSIONES Y RUEDAS



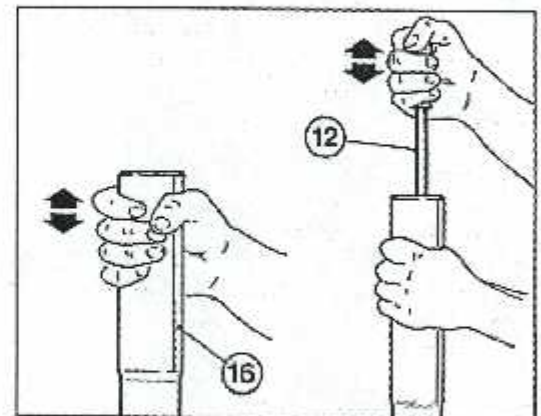
Install gasket (24) and compression adjuster bolt (25).  
Torque to 3.0+4.0 Kgm.

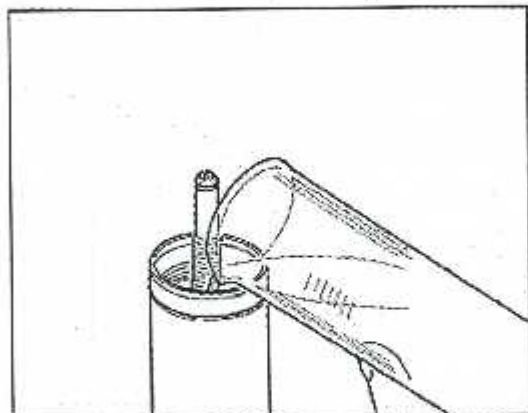


Pour half of prescribed quantity of fork oil into each fork leg.  
Then, fill oil into damper cartridge through the upper hole on the rod until oil flows out  
from side breather hole.



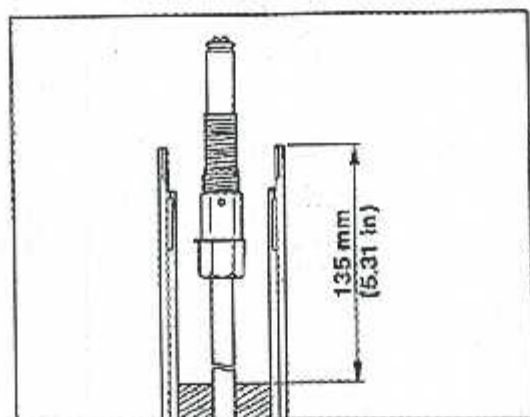
Stroke cartridge rod and slider at least 10 times (travel should be at least 150 mm/5.9  
in.) to ensure fork leg is filled to capacity with oil.  
Bring damper rod and slider to fully bottomed position.





Pour remaining oil into fork leg and measure oil level.

- Place fork leg upright when measuring oil level. Be sure oil level is the same in both fork legs.



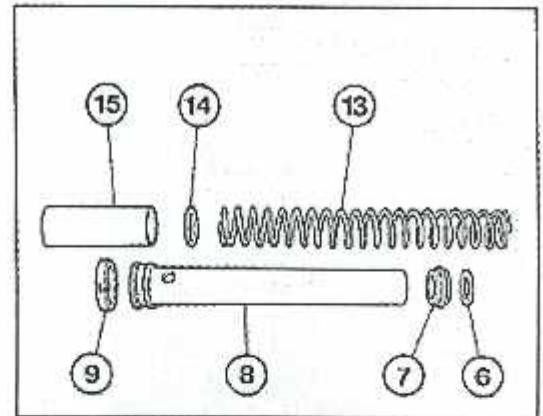
Recommended oil: SHOWA SS08 fork oil.  
Standard capacity: 480 cc/29.28 cu.in.  
Standard oil level: 135 mm/5.31 in.  
Oil quantity affects fork behaviour at full compression.  
Compression load increases or decreases with oil level.  
Maximum oil level: 106 mm/4.17 in.  
Minimum oil level: 150 mm/5.90 in.



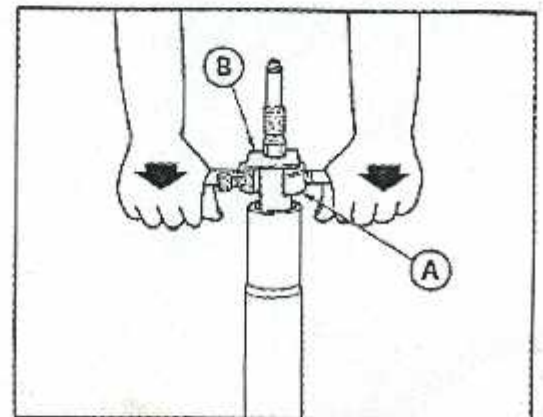
Before reassembling, wipe off any traces oil from spring and spring collar.

Install the following parts.

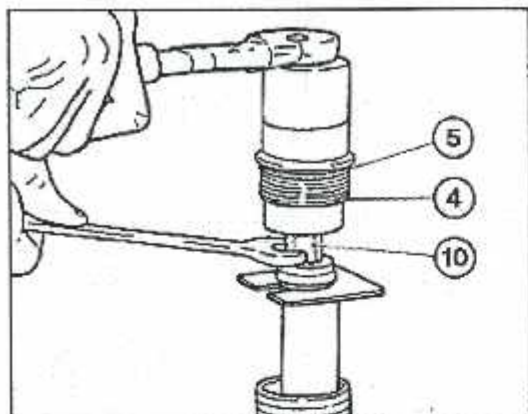
- bottom collar (15);
- spring cap (14);
- spring (13), with the tapered end facing the collar (8);
- spring collar (8) with snap ring (9);
- cursor (7);
- top washer (6).



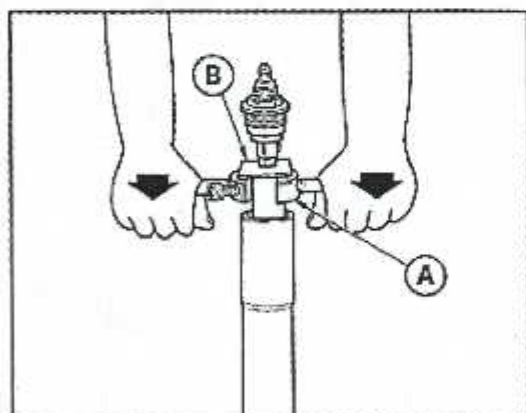
Special tool (A) bolts on the side hole of spring collar (8). Push tool down and slip stopper plate (B) under lock nut (11).



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Tighten top cap nut (4) complete with O-ring (5) on rebound adjuster bolt (10). Hold rebound adjuster bolt steady with an Allen wrench and tighten top cap nut to 3.0÷4.0 Kgm.

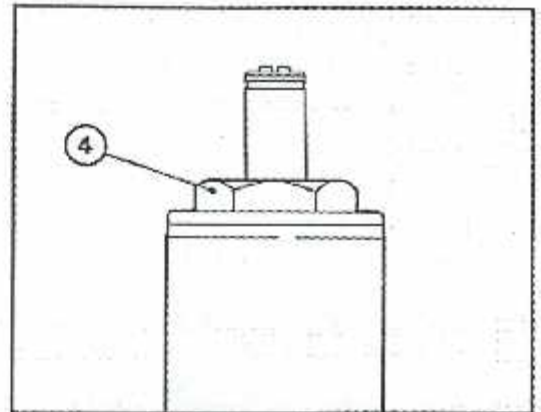


To remove stopper plate (B), push special tool (A) down.

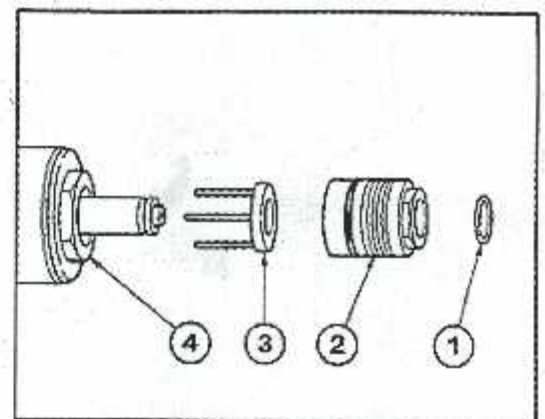




Tighten top cap nut (4) on slider and torque up to 3.0+4.0 Kgm.



Install:  
 - spring cap (3);  
 - spring adjuster bolt (2);  
 - stop ring (1)  
 in the above order.



## SUSPENSIONS AND WHEELS



### SPECIAL TOOLS

POS. N.	PART NO.	DESCRIPTION
A+B	887130957	Tool for holding stopper plate.
C	88713.1096	Tool for installing oil seal.

These special tools are indispensable for overhauling fork SHOWA GD051 and are available from our Spare Parts Department. Use the part nos. in the table when ordering.

