Front Fork Disassembling and Assembling

RM-Z250L6 KAYABA Pneumatic Spring Front Fork PSF2
1. Release air
   Release the air pressure by pressing the air valve with a screwdriver.

   **Warning**
   Oil may jet out from the air bulb and may stick to your eyes and mouth. When releasing the air pressure, place a lag over the air bulb and use a screwdriver to press the air bulb.
2. Remove the top cap using the special tool.

09955-04910  Front fork cap wrench (49 mm)
(Neasily developed for RM-Z250L6)
3. Drain fork oil.
   Move the inner tube several strokes to drain the fork oil.
4. Remove the fork damper assembly.
   (1) While clamping the axle holder with a vise, loosen the center bolt at the bottom of the fork to remove the fork damper assembly.

09900-18720  Hexagon bit socket (14 mm)
09955-04920 Front fork cylinder holder
(Newly developed for RM-Z250L6)
(2) Remove the snap ring and the center bolt at the fork bottom.
5. Drain fork oil from the fork damper assembly.

Stroke the piston rod several times while plugging the piston rod hole with your finger.

Warning
Oil may jet out from the air bulb and may stick to your eyes and mouth. When releasing the air pressure, place a lag over the air bulb and use a screwdriver to press the air bulb.
6. Separate the inner tube out of the outer tube.
   (1) Remove the dust seal, scraper and stopper ring.
   (2) To separate the inner tube from the outer tube while rotating inner tube, pull out the inner tube several times until the guide bush come out from the outer tube.
(3) Inspect all the parts for wear or damage. If they are worn or damaged, replace them with new ones.
Scraper is a plastic part provided on the dust seal to scrape dust entered over the dust seal.
Fitting direction of the scraper

- Outer tube
- Oil seal
- Dust seal
1. Install dust seal, scrapper, stopper ring, etc. on the inner tube.

(1) Apply fork oil to the lip of new oil seal and new dust seal.

(2) Cover the inner tube with a plastic film.

(3) Install the following parts to the inner tube.
   - Dust seal
   - Scrapper
   - Stopper ring
   - Oil seal

(4) Remove the plastic film and install the following parts.
   - Collar
   - Seal retainer
   - Guide bush
   - Slide bush
2. Insert the guide bush (1) and seal retainer (2).
   Insert the guide bush and seal retainer with the special tool.

Front fork oil seal installer set
09940-52861
Front fork oil seal installer set
3. Insert the collar (1), oil seal (2) and stopper ring (3). Insert the collar and oil seal with the special tool, and then attach the stopper ring securely to the stopper ring groove.

RM-Z250L6  Front Fork Assembling

Tool 09940-52861  Front fork oil seal installer set
4. Insert the scrapper (1) and dust seal (2).

Direction of the scrapper
Longer rib is faced to outer tube side.
5. Install the fork damper assembly.
   (1) Clean the center bolt threads and install the new gasket and O-ring.
   (2) Install the center bolt and the fork damper assembly and tighten to the specified torque with the special tools.
   (3) Install the snap ring.

Center bolt: 70 N.m (7.0 kgf-m, 50.5 lbf-ft)

09900-18720 Hexagon bit socket (14 mm)
09955-04920 Front fork cylinder holder
6. Pour fork oil.
Pour fork oil up to the top level of the inner tube while holding the front fork vertically in fully compressed condition.

KYB SUSPENSION OIL KHL 15-11
7. Attach the fork cap to the piston rod temporarily.
   (1) Screw in the lock nut of the piston rod completely by hand.
   (2) Screw in the fork cap completely by hand.
      Note: There is a gap between the top cap and lock nut in this condition.
   (3) Turn up the lock nut until it contacts with the top cap.
   (4) While holding the lock nut, tighten the top cap temporarily.
8. Fork oil feeding to damper assembly.
   (1) Raise the outer tube while holding the fork cap.
   (2) Tighten the fork cap temporarily.
   (3) Move the outer tube several strokes.
(4) Remove the fork cap.
(5) Slide down the outer tube slowly to fully to the bottom position.
(6) Raise the fork cap and pour fork oil up to the top level of inner tube.
(7) While plugging the top cap hole with a finger, move the piston rod several times.
8. Breed air between inner tube and outer tube.
   (1) Pour fork oil up to the top level of outer tube.
   (2) While holding the fork cap in raised position, slowly move the outer tube several strokes to bleed air.
   (3) Check no air bubble comes from the gap between the inner tube and outer tube.
9. Adjust fork oil level.
   (1) Remove the fork cap, and slowly move down the piston rod.

CAUTION
Air may suck from the top hole of the piston rod if moving up and down the piston rod. Do not move up and down the piston rod.
(3) Adjust the fork oil level with a special tool in fully compressed condition.

Front fork oil level
Standard setting: 115 mm (4.5 in)
10. Install the fork cap.
(1) Slowly raise the piston rod.
(2) Screw in the lock nut of the piston rod completely by hand.
(3) Screw in the fork cap completely by hand.
   Note: There is a gap between the top cap and lock nut in this condition.
(4) Turn up the lock nut until it contacts with the top cap.
(4) While holding the lock nut, tighten the top cap to the specified torque.
(5) Clamp the lower mounting part of the outer tube with a vise, and tighten the fork cap to the specified torque.

- Lock nut/fork cap: 29 N.m (2.9 kgf-m, 21.0 lbf-ft)
- Fork cap: 45 N.m (4.5 kgf-m, 32.5 lbf-ft)
Calculation of tightening torque

To tighten to the specified torque with the combination of the special tool and a torque wrench, application torque on the torque wrench scale needs to be calculated in the following formula.

\[ T = \frac{L \times T_s}{L + L_s} \]

- \( T \): Reading torque on the torque wrench
- \( T_s \): Specified torque
- \( L_s \): 50 mm (2.0 in)
- \( L \): Effective length of the torque wrench

In the case of the fork cap tightening with a torque wrench which effective length is 300 mm

\[
\begin{align*}
L &= 300 \text{ mm} \\
T_s &= 45 \text{ N} \cdot \text{m} \\
L_s &= 50 \text{ mm}
\end{align*}
\]

\[
\frac{300 \text{ mm} \times 45 \text{ N} \cdot \text{m}}{300 \text{ mm} + 50 \text{ mm}} = \frac{13500}{350} = 38.57 \text{ N} \cdot \text{m} = T
\]