BUSHING SERVICE GUIDE

For exploded diagram and part number information, refer to the Spare Parts Catalog available on our website at www.rockshox.com.

Contact your local distributor or visit the RockShox website at www.rockshox.com for ordering information.

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Why Do You Need to Replace Your Suspension Fork Bushings?

Suspension fork bushings are considered a 'wear and tear' part and require regular replacement depending on frequency of riding, terrain ridden, rider body weight, use of disc brakes, and the type of fork you ride.

Symptoms of worn bushings:

- Loose headset feel
- Knocking noise when you ride

How to Check for Loose Bushings

1. Hold the front brake lever tight, and rock the bike back and forth. See fig. 1.
2. Wrap your fingers around the dust seal and upper tube area, and feel for the lower legs rocking on the upper tubes. See fig. 2.
3. Wrap your fingers/hand around the upper headset cup. Rock the bike back and forth and feel for a loose headset. If the headset is tight, check for loose disc brake pads if you ride disc brakes. See fig. 3.
4. Listen and feel for the lower legs rocking on the upper tubes.







Tools and Lubricant Needed

- Universal Bushing Installation Post and Plate kit (Judy/Pilot/SID/Duke/Psylo) 11.4306.352.000
- Universal Bushing Removal Handle/Puller kit (All Forks) 11.4306.351.000
- 30mm Duke/Psylo Bushing Installation Sleeve Kit (Duke/Psylo) 11.4306.354.000
- 28mm Judy/Pilot/SID Bushing Installation Sleeve kit (Judy/Pilot/SID) 11.4307.498.000
- Boxxer Bushing Installation Post and Plate Kit (Boxxer) 11.4306.353.000
- Boxxer Bushing Installation Sleeve Kit (Boxxer) 11.4306.357.000
- Dust Seal Installation Kit (All forks) 11.4308.585.000





Standard Shop Tools (See fig. 4c)

- Plastic Mallet
- Oil Pan
- Bike work stand
- Work bench with mounted vice
- 24mm Socket Wrench
- 22mm Socket Wrench (00-02 Boxxer)
- 10mm Socket Wrench (SID DualAir fork, 02 Duke Race, 02 Psylo Race)
- 5mm hex wrench
- Flat-head screw driver
- Shock Pump (Air forks only)
- Clean rags
- Oil mixing syringe

Lubricants (See fig. 4c)

- 5wt Suspension Fork Oil
- Isopropyl Alcohol/Spray Bottle
- RedRum or 15wt suspension fork oil



Part Kits Needed

Judy/Pilot/SID

- Judy/Pilot/SID Dust Seal and Foam Ring Revive Kit (11.4307.250.000)
- Judy/Pilot/SID Bushing Revive Kit (11.4307.251.000)

Duke/Psylo

- Duke/Psylo Dust Seal and Foam Ring Revive Kit (11.43407.298.000)
- Duke Bushing Revive Kit (11.4307.280.000)
- Psylo Bushing Revive Kit (11.4307.296.000)

Boxxer

- Boxxer Dust/Oil Seal Replacement Kit (11.4307.312.000)
- Boxxer Bushing Replacement Kit (11.4305.621.000)

Fork Disassembly Procedures

See the appropriate complete service guides for fork disassembly and assembly procedures.

Dust Seal Removal (All fork models: SID pictured)

1. Using a medium to large flat-head screwdriver, pry the old dust seal from the lower leg (fig. 5).
2. Remove the oil foam ring (fig. 6)
3. 2000 and 2001 Judy, SID, and Psylo forks feature an inner oil seal, located just below the dust seal. To remove this oil seal, use a flat-head screwdriver to pry the seal from the lower leg. The improved current Samurai dust seal eliminates the need for the oil seal.
4. All Boxxer forks feature an inner oil seal.
   a. **2000 - 2002 Boxxer:** Remove snap ring and large washer.
   b. Using a flat-head screwdriver, pry the oil seal out of lower leg and discard. To protect the lower leg paint, place a rag in between the lower leg and the screwdriver (fig. 7).







Remove Worn Bushings: All Models

1. Clamp Bushing Removal Handle/Puller tool into bench vice. Clamp vice tight. See fig. 8.
2. With the correct bushing removal plate installed onto handle end, slide lower leg over the removal plate, below the upper bushing. See fig. 9 for removal plates.
   - 28mm Plate (Judy/Pilot/SID)
   - 30mm Plate (Duke/Psylo)
   - 32mm Plate (Boxxer)
3. Slide the removal plate past the upper bushing, pull lower leg away from puller, and hook the flat end of the plate secure under the bushing. See fig. 10.

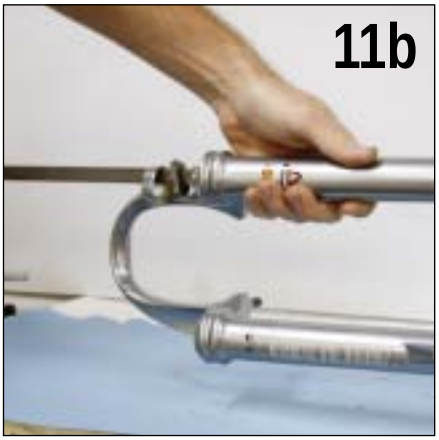






4. To pull upper bushing free from lower leg, using a plastic mallet, firmly hit the top of the lower leg, flat dust seal surface-area, until bushing pulls free. See fig. 11a/b (SID), 11c/d (Psylo), and 11e/f (Duke).













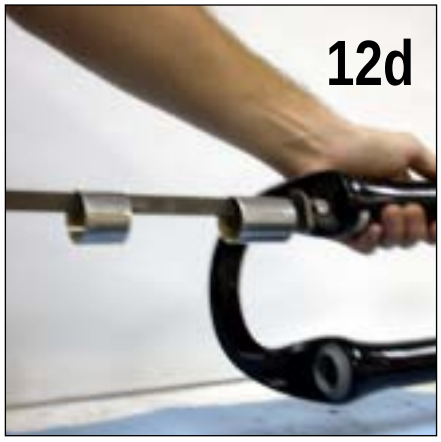
5. To pull the lower bushing free from the lower leg, slide the removal plate past the lower bushing, and hook the flat end of the plate secure under the bushing. Again, firmly hit the top of the lower leg, flat dust seal surface-area, until bushing pulls free. See figures 12a/b (SID), 12c/d (Psylo), 12e/f (Duke).

6 Repeat on other side.













Bushing Installation

Lower Bushing Installation: 28mm



Preparation: Clamp the Universal Bushing Installation tool into the bench-mounted vice-clamp (Pilot/Judy/SID/Duke/Psylo). See fig 13.

28mm Judy/Pilot/SID (20mm Lower Bushing)

1. Slide lower 28mm Judy/Pilot/SID bushing sleeve onto bushing installation post (fig. 14).
2. Slide 20mm lower bushing onto top of lower bushing installation sleeve. See fig. 15.
3. Slide lower leg over installation post, and rest of top of lower bushing. See fig. 16.
4. Insert the mallet drift tool into the lower leg shaft hole, and hold in place with one hand. See fig. 17.
5. Using a plastic mallet, hit the mallet drift to press the bushing into the lower leg. See fig. 17.
6. Hit the drift until the lower leg dust seal ridge is level with the top of the installation post spacer. You will feel the stop-point, as the bushing is 'set' into lower leg. See fig. 17.
7. Repeat on other side.









Upper Bushing Installation 28mm

Judy/Pilot/SID (10mm Upper Bushing)

1. Remove lower bushing installation sleeve from bushing installation post.
2. Slide 5mm Judy/Pilot/SID upper bushing installation spacer onto bushing installation post. See fig. 18.
3. Slide 10mm Judy/Pilot/SID upper bushing installation spacer onto bushing installation post. Spacer will rest on top of 5mm spacer. See fig. 18.
4. Slide 10mm upper bushing onto bushing installation post. Bushing will rest on top of 10mm spacer. See fig. 19.
5. Slide lower leg over installation post, and rest of top of upper bushing.
6. Insert the mallet drift tool into the lower leg shaft hole, and hold in place with one hand.
7. Using a plastic mallet, hit the mallet drift to press the bushing into the lower leg.
8. Hit the drift until the lower leg dust seal ridge is flush with the installation post plate. You will feel the stop-point, as the bushing is 'set' into lower leg. See fig. 20.
9. Check the bushing to make sure it is flush with the top of the dust seal counter bore step.
10. Repeat on other side.





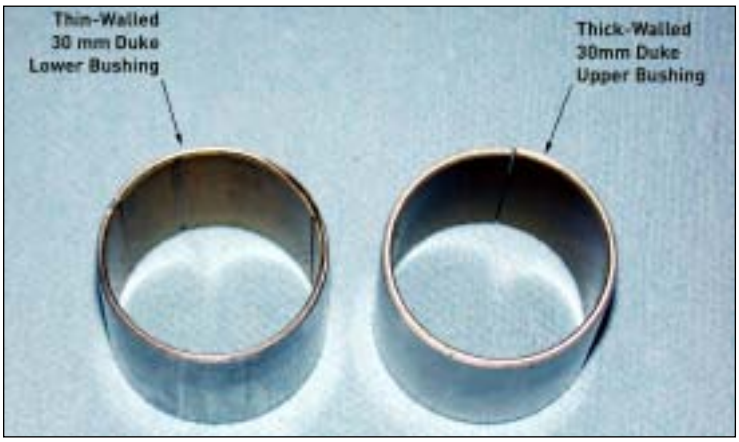


Lower Bushing Installation

Duke (30mm Lower Bushing)

1. Slide 15mm Duke lower bushing sleeve spacer (for 30mm lower bushing) onto bushing installation post. See fig. 21
2. Slide the long Duke/Psylo lower bushing sleeve onto bushing installation post. Sleeve will rest on top of 15mm spacer. See fig. 21
3. Slide 30mm lower bushing (thin-wall bushing) onto top of lower bushing installation sleeve. See fig. 22

   Important! See 30mm Duke bushing figure to identify thin/lower, and thick/upper bushings.
4. Slide lower leg over installation post, and rest of top of lower bushing. See fig. 23
5. Insert the mallet drift tool into the lower leg shaft hole, and hold in place with one hand. See fig. 24
6. Using a plastic mallet hit the mallet drift tool to press the bushing into the lower leg. See fig. 24
7. Hit the drift until the lower leg dust seal ridge is flush with the top of the installation post spacer. You will feel the stop-point, as the lower bushing is 'set' into lower leg. See fig. 25
8. Repeat on other side.













Upper Bushing Installation

Duke (30mm Upper Bushing)

1. Remove Duke lower bushing sleeves from bushing installation post. See fig 21.
2. Slide Duke/Psylo upper bushing installation sleeve onto bushing installation post, thin side up. See fig 26.
3. Slide 30mm Duke (thick-wall bushing) upper bushing onto bushing installation post. Bushing will rest on top of Duke/Psylo upper bushing installation sleeve. See fig. 27.
4. Slide lower leg over installation post, and rest on top of upper bushing.
5. Insert the mallet drift tool into the lower leg shaft hole, and hold in place with one hand.
6. Using a plastic mallet, hit the mallet drift to press the bushing into the lower leg. See fig. 25.
7. Hit the drift until the lower leg dust seal ridge is flush with the installation post plate. You will feel the stop-point as the bushing is 'set' into lower leg. See fig. 25.
8. Check the bushing to make sure it is flush with the top of the dust seal counter bore step.
9. Repeat on other side.

Lower Bushing Installation

Psylo (45mm Lower Bushing): 2002, 2003, & 2004 Psylo Lower Legs ONLY

Not compatible with 2001 Psylo Lower Legs

1. Slide the long Duke/Psylo lower bushing sleeve onto bushing installation post. See fig. 28.
2. Slide 45mm Psylo lower bushing onto top of lower bushing installation sleeve. See fig. 28.
3. Slide lower leg over installation post, and rest of top of lower bushing. See fig. 29.
4. Insert the mallet drift tool into the lower leg shaft hole, and hold in place with one hand. See fig. 30.
5. Using a plastic mallet, hit the mallet drift tool to press the bushing into the lower leg. See fig. 30.











6. Hit the drift until the lower leg dust seal ridge is flush with the top of the installation post spacer. You will feel the stop-point as the lower bushing is 'set' into lower leg. See fig. 30.
7. Repeat other side.

Upper Bushing Installation

Psylo (30mm Upper Bushing)

Compatible with ALL Psylo Lower Legs

1. Remove Duke/Psylo lower bushing sleeve from bushing installation post.
2. Slide Duke/Psylo upper bushing installation sleeve onto bushing installation post, thin side up. See fig. 31.
3. Slide 30mm Psylo (thick-wall bushing) upper bushing onto bushing installation post. Bushing will rest on top of Duke/Psylo upper bushing installation sleeve. See fig. 32.
4. Slide lower leg over installation post, and rest on top of upper bushing. See fig. 33.
5. Insert the mallet drift tool into the lower leg shaft hole, and hold in place with one hand. See fig. 34.
6. Using a plastic mallet, hit the mallet drift to press the bushing into the lower leg. See fig. 34.
7. Hit the drift until the lower leg dust seal ridge is flush with the installation post plate. You will feel the stop-point as the bushing is 'set' into lower leg. See fig. 35.
8. Check the bushing to make sure it is flush with the top of the dust seal counter bore step.
9. Repeat on other side.











Lower Bushing Installation

PREPARATION: Clamp the Universal Bushing Installation tool into the bench-mounted vice-clamp.

Boxxer (30mm Lower Bushing)

1. Slide the Boxxer lower bushing sleeve onto Boxxer bushing installation post. See fig. 36.
2. Slide Boxxer lower bushing onto top of lower bushing installation sleeve. See fig. 37.
3. Slide lower leg over installation post, and rest of top of lower bushing. See fig. 38.
4. Insert the mallet drift tool into the lower leg shaft hole, and hold in place with one hand.
5. Using a plastic mallet, hit the Boxxer mallet drift tool to press the bushing into the lower leg. See fig. 39.
6. Hit the drift until the lower leg dust seal ridge is flush with the top of the installation plate. You will feel the stop-point as the lower bushing is 'set' into lower leg. See fig. 40.
7. Repeat on other side.











Upper Bushing Installation

Boxxer (10mm Upper Bushing)

10. Remove Boxxer lower bushing sleeve and spacer from Boxxer bushing installation post.
11. Slide small Boxxer upper bushing onto bushing installation post. Bushing will rest on top of post step. See fig. 41.
12. Slide lower leg over installation post, and rest on top of upper bushing. See fig. 42.
13. Insert the Boxxer mallet drift tool into the lower leg shaft hole, and hold in place with one hand. See fig 43.
14. Using a plastic mallet, hit the Boxxer mallet drift to press the bushing into the lower leg. See fig. 43.
15. Hit the drift until the lower leg dust seal ridge is flush with the upper bushing/oil seal step in the lower leg. You will feel the stop-point as the bushing is 'set' into lower leg. See fig. 44.









16. Check the bushing to make sure it is flush with the top of the oil seal/upper bushing counter bore step.
17. Repeat on other side.

Dust Seal Installation

Judy/Pilot/Duke/SID/Psylo

1. Soak new foam rings in 15wt-suspension oil, RedRum, or a mixture of RedRum and 15wt suspension oil. See fig 45.
2. Slide dust deal installation tool over universal bushing installation post tool. See fig 46.
3. Slide new dust seal over bushing installation post tool, and fit on top of Dust Seal Installation tool. See fig 47.
4. Slide oil-saturated foam ring over bushing installation post tool, and fit on top of Dust Seal. Seat the foam ring snug inside the under cavity of dust seal. See fig 48.
5. Using a clean rag and isopropyl alcohol, clean the inside of dust seal area of the lower leg. See fig 49.
6. Using a plastic mallet, lightly tap on the lower leg drop out until dust seal seats flush with top of lower leg. See fig 50.
7. Dust seal should be press-fit snug and flush into the lower leg. See fig 51.
8. Repeat on other side.















Boxxer

1. Apply grease or 15wt oil to inside of Boxxer lower leg oil seal counter bore. See fig 52.
2. Insert the oil seal onto stepped end of Boxxer oil seal installation tool. See fig 53.
3. Using the Boxxer oil seal installation tool, insert the oil seal down and into the oil seal step in the lower leg. Apply pressure on all sides of the oil seal to seat it into place. See fig 54a and 54b.

   The 2000-2002 oil seal washer and snap ring are no longer required when replacing oil and dust seals. No need to re-install. 2004 dust seal kits Do NOT include the oil washer and snap ring.
4. Insert new dust seal into the other end of the dust seal installation tool. See fig 55.
5. Press straight down and press new dust seal into lower leg. See fig 56.
6. Dust seal should be press-fit snug and flush into the lower leg. See fig 57.
7. Repeat on other side.

Finishing Up

1. Spray entire completed lower leg assembly with isopropyl alcohol.
2. Wipe lower leg assembly clean with a rag.
3. Check decals and replace if desired.

Fork Assembly

See the appropriate complete service guide for lower leg disassembly and re-assembly for instructions.













