SCS Self-Rotary Swivel with Speed Control (10, 12 or 22 kpsi)

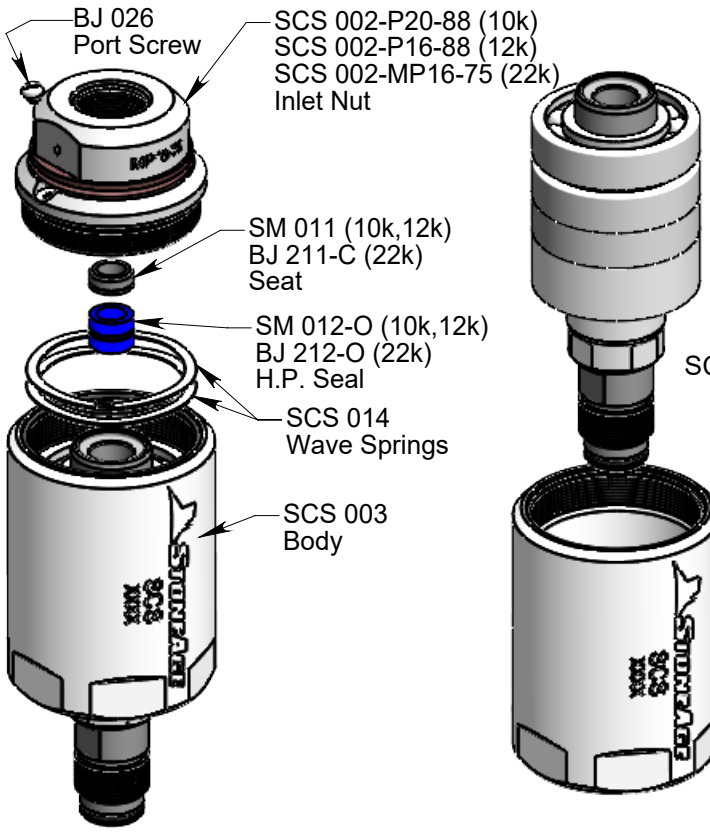
Disassembly:

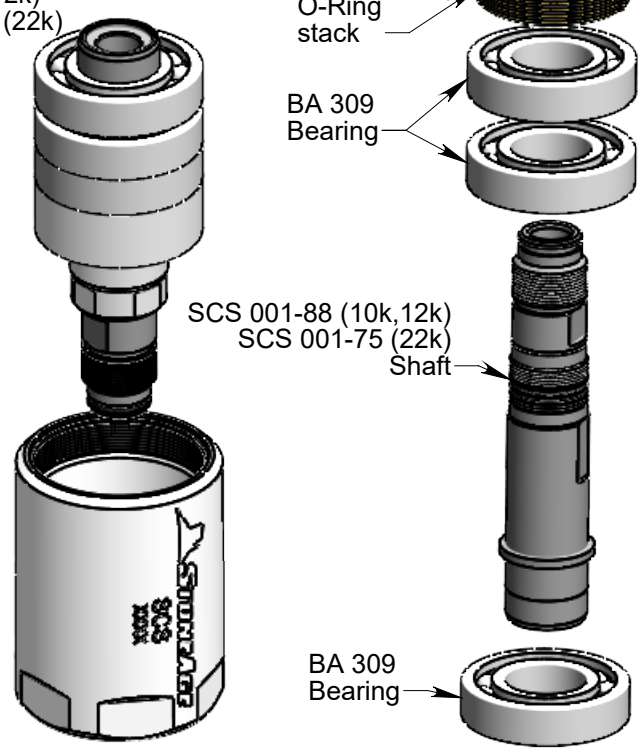
1. Remove the Port Screw (BJ 026) from the Inlet Nut (SCS 002-P20-88, SCS 002-P16-88 or SCS 002-MP16-75); unscrew the Inlet Nut from the Body (SCS 003).

2. Remove the Seat (SM 011 or BJ 211-C) and H.P. Seal (SM 012-O or BJ 212-O) from the bore of the Shaft.

3. Remove the Wave Springs (SCS 014).

4. Push the Shaft (SCS 001-88 or SCS 001-75) with bearings and sleeve out of the Body. It may be necessary to remove the Sleeve from the Body separately.





5. Remove O-Ring (SCS 020) and Backup Ring (SCS 021) from end of shaft.

6. Remove Retaining Ring (PGC 303) from end of shaft.

7. Unscrew Adjusting Sleeve (SCS 022) from the end of the Shaft.

8. Remove the two O-Rings (WT 008) from the grooves in the Shaft.

9. Remove the Sleeve (SCS 004).

10. Remove the stack of Discs and O-Rings.

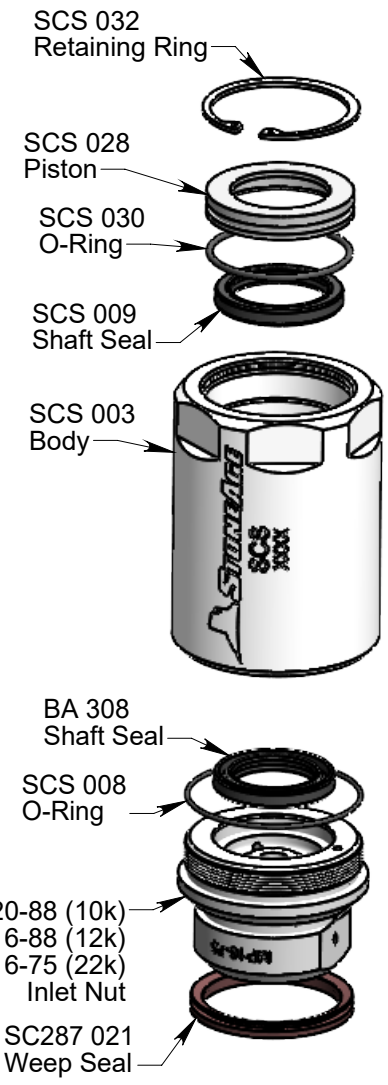
11. Remove the Bearings (BA 309).

12. Press off the remaining Bearing (BA 309) from other side of the shoulder on the Shaft.

13. Remove the Retaining Ring (SCS 032) from the Body. Push out the Piston (SCS 028).

14. Inspect the O-Ring (SCS 030) and the Shaft Seal (SCS 009); replace if damaged.

15. Inspect the O-Ring SCS 008), Shaft Seal (BA 308) and Weep Seal (SC287 021) on the Inlet Nut; replace if damaged.

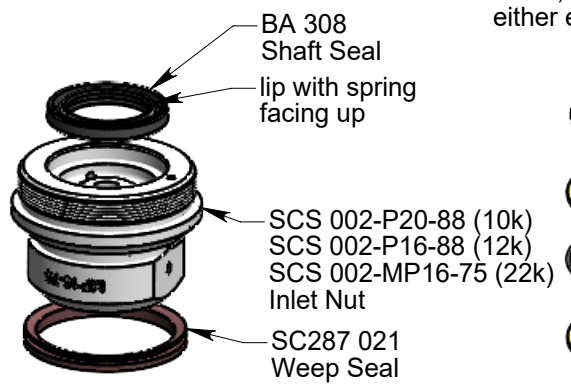


Assembly:

1. Install Shaft Seal (BA 308) in Inlet Nut (SCS 002-P20-88, SCS 002-P16-88 or SCS 002-MP16-75) as shown.

2. Place O-Ring (SCS 008) over threads of Inlet Nut.

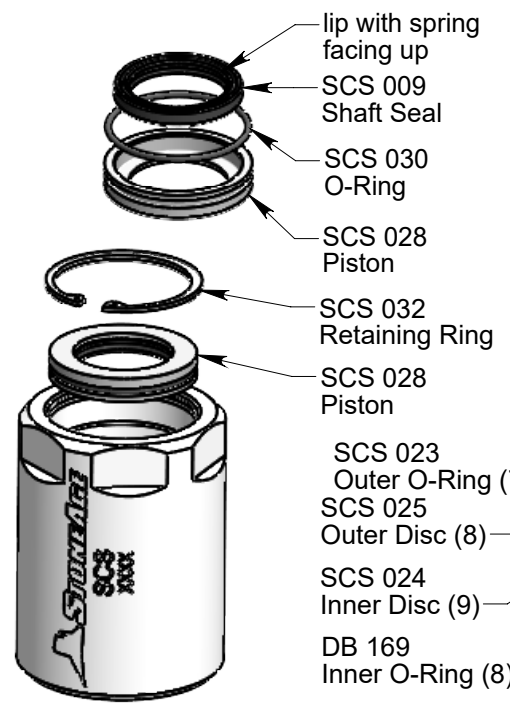
3. Install Weep Seal (SC287 021).



4. Install Shaft Seal (SCS 009) in Piston (SCS 028) as shown.

5. Place O-Ring (SCS 030) in groove around Piston.

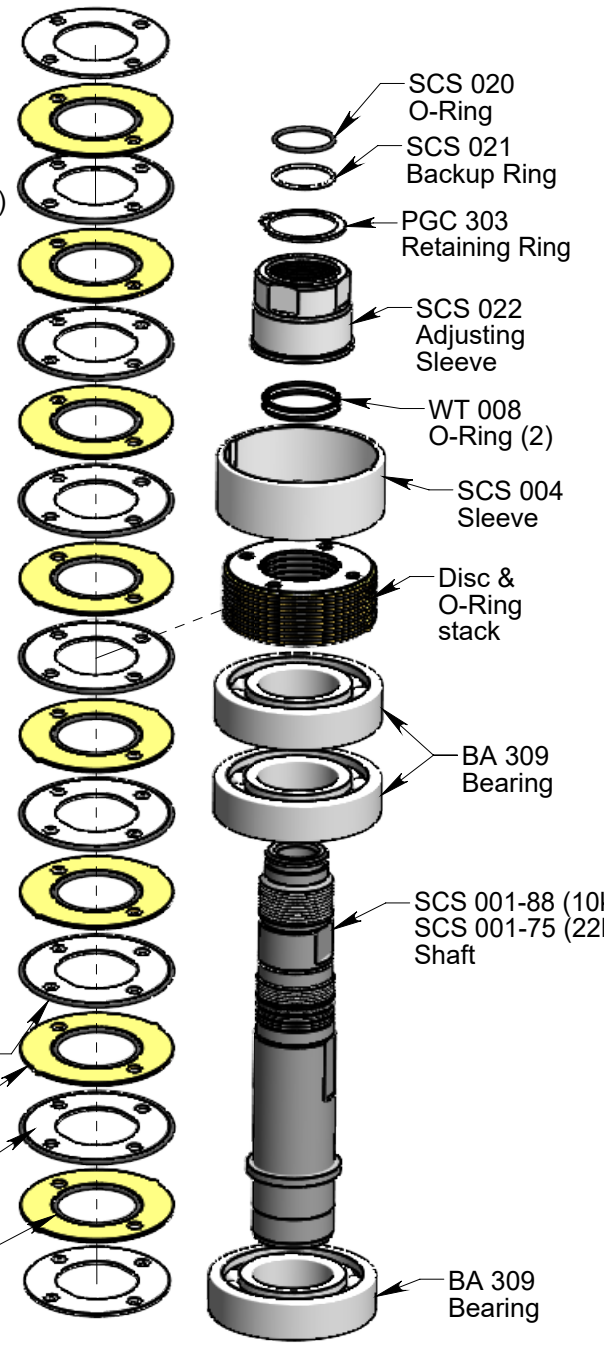
6. Push Piston into Body (BJ 003), install Retaining Ring (SCS 032).



7. Press Bearing (BA 309) onto other side of the shoulder on Shaft (SCS 001-88 or SCS 001-75). Press two Bearings (BA 309) onto near side of shoulder on Shaft.

8. Install the Sleeve.

9. Begin disc stack on shaft with an Inner Disc (SCS 024). Slip an Inner O-Ring (DB 169) onto Shaft. Stack an Outer Disc (SCS 025) onto Shaft. Add another Inner Disc, and then slip an Outer O-Ring (SCS 023) over the OD of the Inner Disc. Continue stacking arrangement as shown using a total of (9) Inner Discs, (8) Outer Discs, (8) Inner O-Rings and (7) Outer O-Rings. No Outer O-Ring is required at either end.



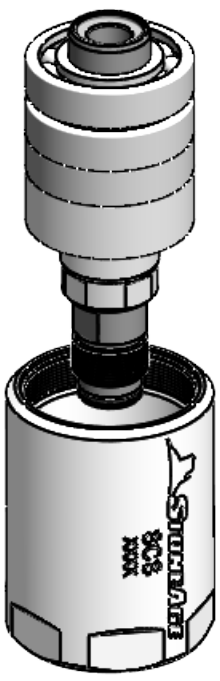
10. Install two O-Rings (WT 008) into grooves in Shaft.

113. Screw the Adjusting Sleeve (SCS 022) onto the Shaft until the end of the Adjusting Sleeve is aligned with the innermost edge of the retaining ring groove on the Shaft.

12. Install Retaining Ring (PGC 303) into groove on Shaft.

13. Install the Backup Ring (SCS 021) and finally the O-Ring (SCS 022) into the groove at the end of the Shaft.

14. Slide entire Shaft assembly into Body.



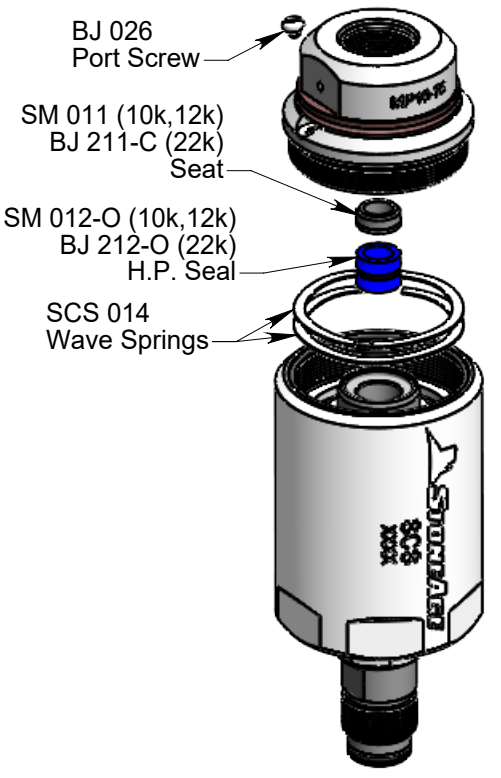
15. Adjust the piston depth so that there is about a 1/16" (.06) gap between the outer face of the piston and the inner face of the retaining ring (**see detail**).

16. Place the two Wave Springs (SCS 014) on top of bearing. Fill the swivel with viscous fluid until the Wave Springs are covered. Rotate shaft occasionally to aid in removing air bubbles. It may take several hours to fully bleed out all of the air from the fluid.

17. Apply grease to the H.P. Seal (SM 012-O or BJ 211-O) and install in bore of shaft. Install Seat (SM 011 or BJ 211-C) on top of Seal, as shown in the Maintenance Section.

18. Apply anti-seize to threads of Inlet Nut and thread into Body. Tighten to 60 ft-lb.

19. Install Port Screw (BJ 026).



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