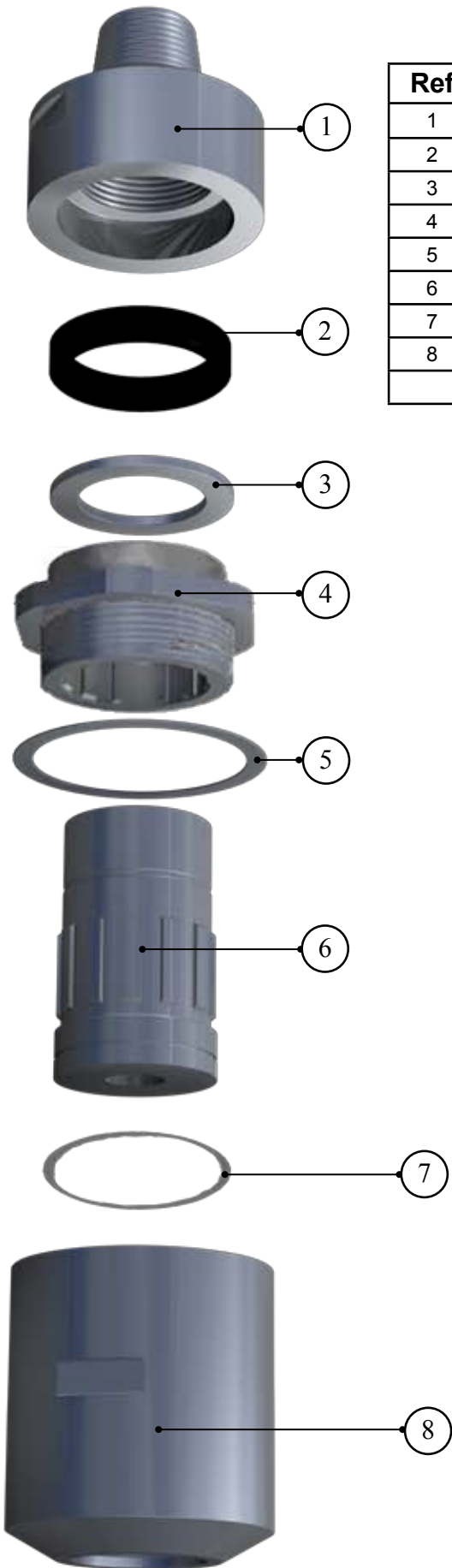




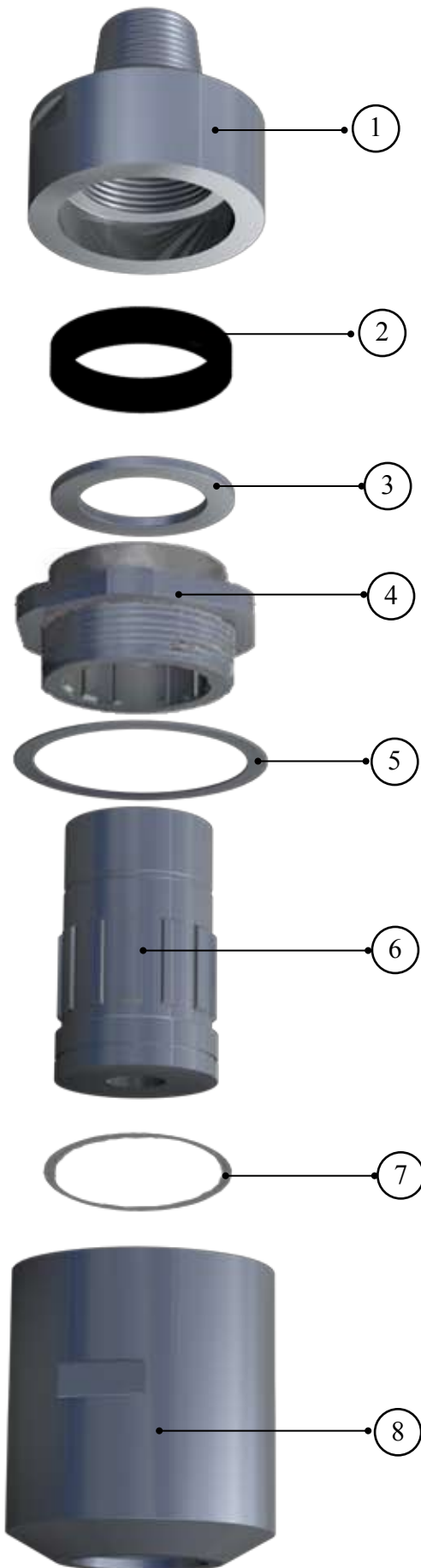
Maintenance and Service Manual for 18" - 24" Shock Absorber

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Ref	Description	Part Number
1	Top Conn. 8 5/8" API Reg Pin	SA1824ST0882M
2	Buffer	SA1824ST05
3	Thrust Washer	SA1824ST04
4	Nut	SA1824ST01
5	Breakout Washer	SA1824ST25
6	Shaft	SA1824ST02
7	Shaft 'O' Ring	SA1824ST03
8	Bottom Conn. 8 5/8" API Reg Box	SA1824ST0982F
	Complete Shock Absorber	SA1824ST82MF

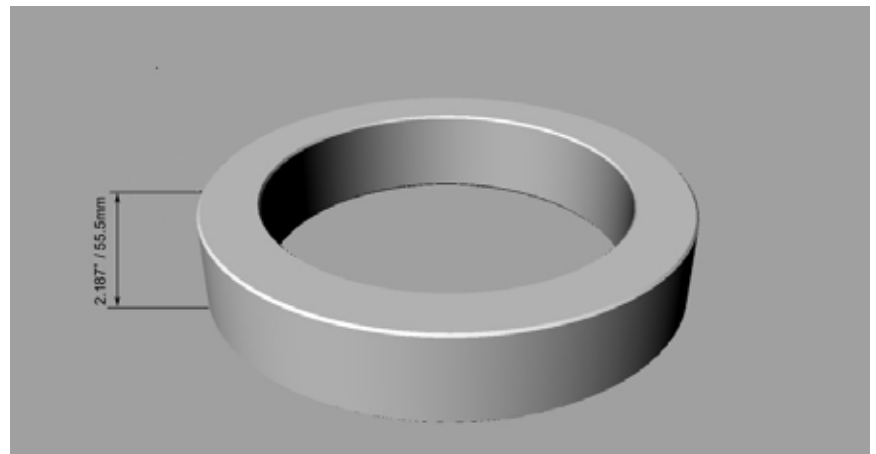


The Bulroc 18-24 inch "Down The Hole" Shock Absorber should be serviced after every 500 hours of operation or every six months of intermittent use.

To disassemble the unit you must first securely clamp (item 8) the Bottom Connector to the bed of an appropriately sized stripping bench before attaching a Spanner to the flats on (item 1) the Top Connector. Once the Spanner is in position you can then attach the benches Hydraulic Cylinder to the Spanner and apply the necessary load to unscrew the Top Connector (item 1) from the Shaft (item 6).

Once the Top Connector is fully removed (item 3) the Thrust Washer and (item 2) the Buffer can be pulled from their housing.

The Buffer (item 2) should be checked for any signs of damage and its thickness measured. When the thickness has worn below 2" the Buffer should be replaced. Similarly if there are any signs of cracking or breaking up, the Buffer should be replaced.

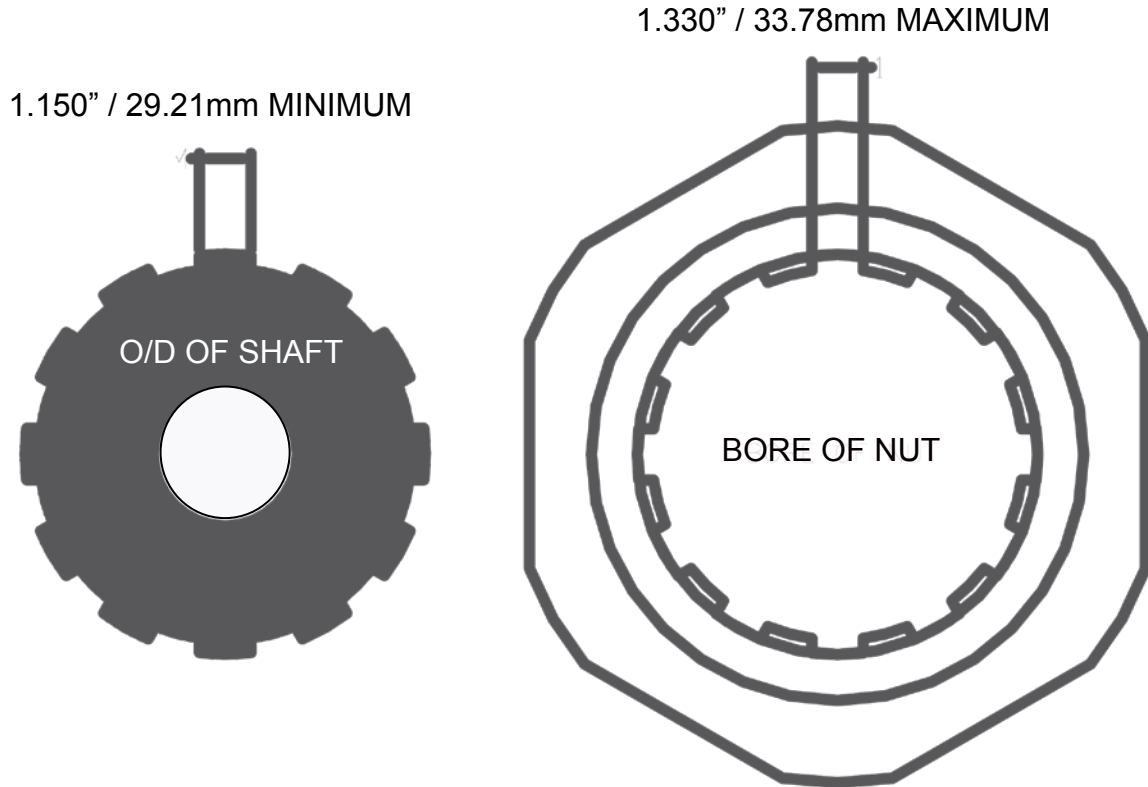


Due to the high torque loading applied to the Shock Absorber during its working cycle it is recommended that before you attempt to remove (item 4) the Splined Nut from the Bottom Connector (item 8) you first use a small pencil grinder to remove (item 5) the Breakout Washer. This will reduce the frictional loading between the two parts thus making it easier to unscrew the Nut.

In a similar way to removing the Top Connector a Spanner should now be attached to the spanner flats on (item 4) the Nut, and the Hydraulic Cylinder on the stripping bench used to apply the necessary load to unscrew it from (item 8) the Bottom Connector.

Once the Nut and Shaft are removed from the Bottom Connector the splines on both items must be checked for wear.

The diagram below shows the maximum permissible wear limits for both items. Should either, or both items show wear greater than these values then the component, or components should be replaced as excessive wear on these items will eventually result in failure of the unit and could cause loss of the Hammer and Button Bit down the hole.



It is recommended that every time the unit is stripped for inspection (item 7) the Shaft "O"Ring is removed and replaced with a new one. Before re-assembling the unit all parts should be cleaned and checked for damage. Any "burrs" or sharp edges caused by the natural wearing of the components should be removed with a small hand grinder. Prior to assembly all Splined and Threaded areas on the Nut, Shaft, Top Connector and Bottom Connector should be coated with a good quality, heat resistant grease, which will both reduce wear and aid stripping when the unit next requires servicing.

To assemble the unit first slide (item 6), the Shaft with its new "O"Ring (item 7), into (item 8) the Bottom Connector. Fit the Breakout Washer (item 5) to the O/D of the Nut (item 4) then slide the assembly over (item 6) the Shaft making sure the splines are correctly engaged before screwing the Nut into the Bottom Connector. Then slide (item 3) the Thrust Washer and (Item 2) the Buffer over the Shaft(item6), onto the top face of (Item 4) the Nut. Finally screw (item 1) the Top Connector down on (item 6) the Shaft making sure the Buffer and Thrust Washer enter their housing as the Top Connector advances down the Shaft. The unit should be tightened to recommended maximum torque of 16.15 Ton.m / 16148 Kgm for the 18" and the 24" shockabsorbers.



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