



# CS SUSPENSION PIVOT BUSH REMOVAL AND REPLACEMENT

## SERVICE MANUAL

### Summary

1. PIVOT BUSH
2. PIVOT BUSH REMOVAL
3. PIVOT BUSH REPLACEMENT

The manual must be preserved with care and made known and available to all interested parties. Read this manual carefully before performing maintenance on the suspension. This will improve the safety conditions and reliability of the interventions that are performed.

**WARNING** Maintenance procedures must only be performed by duly qualified and authorized personnel.

### Pivot Bush

**WARNING:** Assure that the pips on replacement pivot bush are in line with the correct alignment marking T (TOP MOUNT) or L (LOW MOUNT) and steel plates "A" are aligned front and rear, not top and bottom, as it's shown in Fig. 1

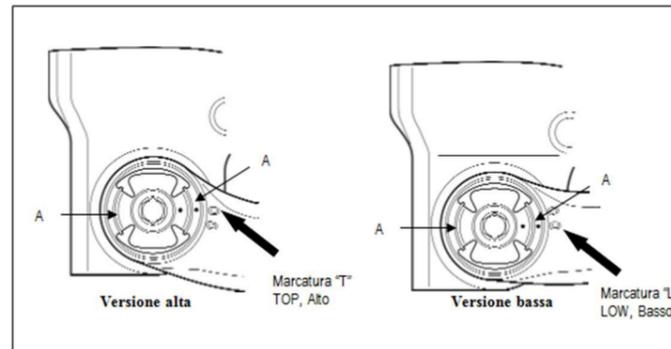


Fig. 1

**CAUTION:** Check pivot bushings for looseness and wear. Replace worn or damaged pivot bushings. Worn bushings may get loose and cause the trailer to wander during operation, causing serious injuries and damages to components.

Verify that people are clear of the trailer before inflating or deflating the air springs. The air suspension has various pinch points that can cause serious personal injury.

Park the unloaded vehicle on a flat surface and block the wheels to prevent the vehicle from moving. Support the vehicle with safety stands. Do not work under a vehicle supported only by jacks. Jacks can slip or fall over, causing serious personal injuries.

**NOTE:** Check the position and orientation of the original bush before removing (Fig 1). This will provide a guideline when fitting a new bush.

**NOTE:** This following procedure requires assistance of another person. Before removal and fitment of pivot bushes, an original pivot bush replacement kit is required (cod. G0106008800A – Fig. 2).

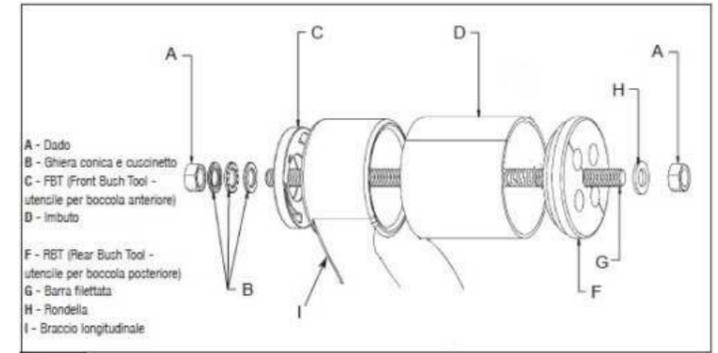


Fig. 2

### Pivot bush removal

1. Lower the landing gear.
2. Support the REAR of the trailer frame.
3. Set parking brake.
4. Exhaust air pressure from suspension air springs.
5. Sustain axle with supports, then remove wheel (or wheels) to access to the pivot bolts.

**NOTE:** Although it is not necessary to remove the road wheels when replacing the pivot bushes on SINGLE wheel axle configurations, the procedure may be easier with the wheels removed.

6. Remove the bottom shock absorber bolts from both hanger brackets. This will allow the trailing arm to articulate down when the pivot bolts are removed.
7. Remove pivot bolts and alignment bosses from hanger brackets (Fig. 3).

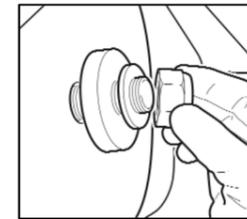


Fig. 3

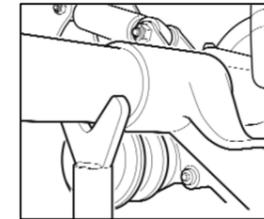


Fig. 4

**WARNING:** Ensure that the axle support is secure during this operation as the arcuate motion may cause the axle to move backwards (Fig. 4).

8. Carefully rotate the trailing arm until clear of the hanger bracket (Fig 5). DO NOT lever off the brake chamber as shown in Fig. 6.

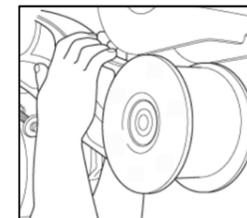


Fig. 5

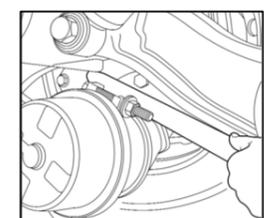


Fig. 6

9. Remove wear washers and steel inner sleeves from the pivot bushes (Fig. 7 and 8).

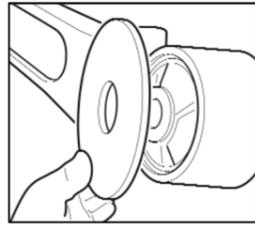


Fig.7

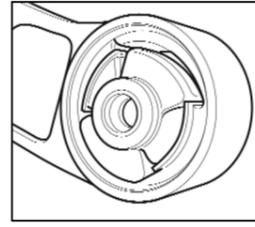


Fig.8

10. Using service tool **K10006A**, replace pivot bushes as it's described on the following paragraphs.

11. Press the Front Bush Tool (FBT) "C" against the pivot bush and insert the threaded bar "G". Fit washer "H" and nut "A" to draw bar and secure to FBT "C" (Fig. 9).

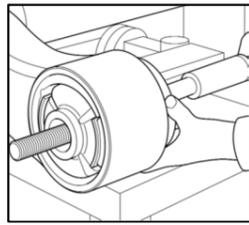


Fig.9

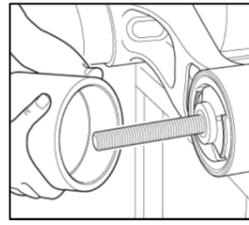


Fig.10

12. Push funnel "D" onto the trailing arm outer tube opposite the FBT "C" (Recess facing towards pivot bush) (Fig. 10).

13. Attach the Rear Bush Tool (RBT) "F" to the funnel "D" and secure in place with the bearing cups, bearing race "B" and nut "A" (Fig. 11).

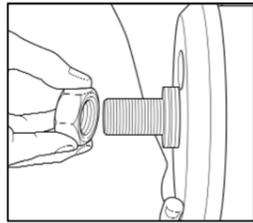


Fig. 11

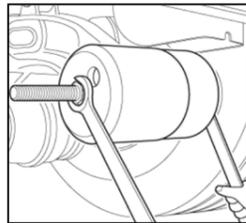


Fig. 12

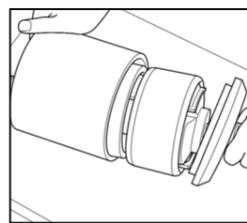


Fig. 13

14. Apply nut "A" to the bearing end. Continue turning the nut until the pivot bush is drawn completely into the funnel "D" (Fig. 12).

15. Dismantle tools and remove pivot bush from funnel "D" (Fig. 13).

16. Remove any residuals that may be left from the trailing arm outer tube.

## Pivot bush replacement

1. Apply GEL P-80 solution around the pivot bush (Fig. 14), funnel "D" (Fig 15) and trailing arm outer tube (Fig. 16).

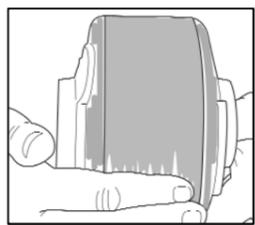


Fig. 14

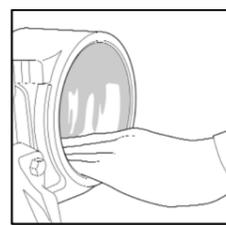


Fig. 15

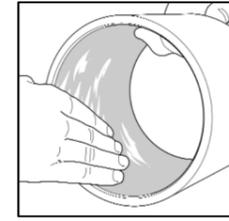


Fig. 16

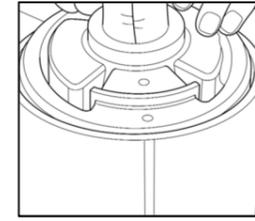


Fig. 17

2. Insert replacement pivot bush inside funnel "D" and align the pips on the pivot bush to the marked line on the funnel (Fig. 17)

3. Fit the bush tool on the trailing arm as shown in Fig. 18.

4. Press the Rear Bush Tool (RBT) "F" against the trailing arm outer tube and insert the threaded bar "G". Fit washer "H" and nut "A" to draw bar and secure to RBT "F".

5. Push funnel "D" onto the trailing arm outer tube opposite the RBT "F" (Recess facing towards outer tube). Attach the FBT "C" to the funnel "D" and secure in place with the bearing cups, bearing race "B" and nut "A".

6. Rotate the funnel "D" aligning mark with the one on the trailing arm (Fig. 19).

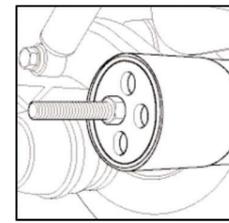


Fig. 18

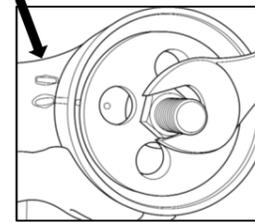


Fig. 19

7. Apply nut "A" to the bearing "B" end, continue turning the nut until the pivot bush is drawn completely into the trailing arm outer tube. The turning action will lock out when the pivot bush mates up with the RBT "F".

8. Back off the nut and dismantle pivot bush tool. Check for any damage to the membrane of the pivot bush.

9. Insert steel inner sleeve "X" into the pivot bush central tube. Fit the replacement wear washers "Y" to either side of the pivot bush (Fig. 20).

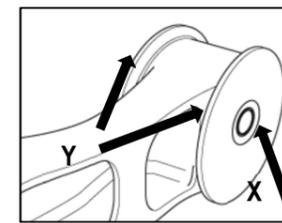


Fig. 20

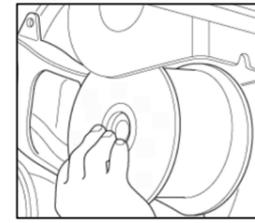


Fig. 21

10. Refit trailing arm on hanger bracket (Fig. 21) and insert new pivot bolts.

**NOTE:** DO NOT torque the pivot nuts to final torque until the axle is aligned and the trailer is at the ride height with the wheels on.

11. Refit the shock absorber.

**NOTE:** DO NOT torque the pivot nuts to final torque until the axle is aligned and the trailer is at the ride height with the wheels on.

12. Refit the wheel (s), where applicable, pressurize the air springs and set ride height.

13. Torque all nuts and bolts to final tightening torque.