

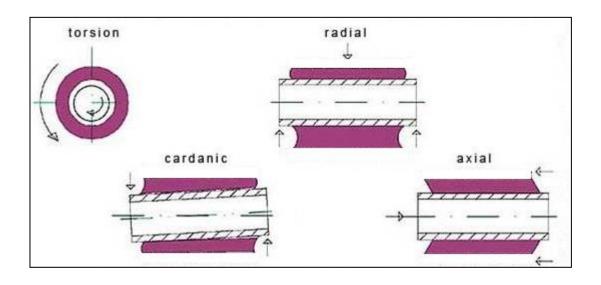
No:	SB26-24	Issue:	1
Date:	02/04/24	Sheet:	Page 1 of 4

SUBJECT: Dennis Elite Second Steer (ETS) Trailing Arm Bush Design - Checks

This document is written to help understand the design and methods used to check and determine if replacement is required of Dennis Elite second steer trailing arm bush/silent block fitted to ETS axles.

The design of the silent block makes it possible to achieve torsional, radial, cardanic and axial movement, see Fig. 1 below:

Fig. 1



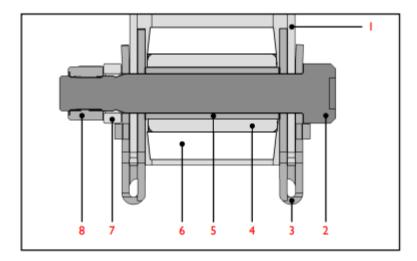


No:	SB26-24	Issue:	1
Date:	02/04/24	Sheet:	Page 2 of 4

SUBJECT: Dennis Elite Second Steer (ETS) Trailing Arm Bush Design - Checks

Fig. 2 shows fitment of the silent block in the spring eye and hanger bracket.

Fig. 2



- 1. Hanger bracket
- 2. Clamp bolt
- 3. Wear plates
- 4. Rubber part of silent block
- 5. Steel inner bush part of silent block
- 6. Rolled spring eye of the trailing arm
- 7. Ring
- 8. Nut

The steel inner bush of the silent block is clamped between the wear plates, this creates a fixed construction between the inner bush and the hanger bracket/wear plates.

The rubber part of the silent block is vulcanised to the inner bush, the complete silent block is pressed into the rolled spring eye of the trailing arm.

If there is a gap between the rubber and the inner bush, or the rolled spring eye of the trailing arm the silent block must be replaced.

The elasticity of the rubber in the silent block allows a certain displacement as mentioned before. This is required to create the performances of the suspension system.



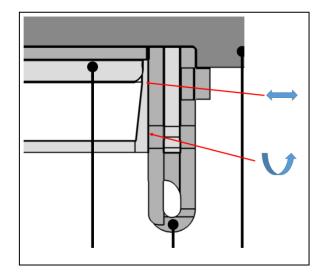
No:	SB26-24	Issue:	1
Date:	02/04/24	Sheet:	Page 3 of 4

SUBJECT: Dennis Elite Second Steer (ETS) Trailing Arm Bush Design - Checks

The displacement is restricted by the shape of trailing arm in combination with the wear plates.

In Fig. 3 you can see the space between the rolled spring eye of the trailing arm and the wear plates.

Fig. 3



Checking:

To determine if the silent block has excessive wear/deterioration; move the vehicle back and forth slightly with the brake applied, or lever rolled spring ends with the aid of a bar. The rubber part of the silent block should return to its original position due to the elasticity, this "return"- movement might take some time.

Silent Block Condition:

- 1. The inner bushing must be tightly clamped between the wear plates by means of the spring bolt.
- 2. The rubber must have no play in the spring eye or on the inner bush, as described above.



No:	SB26-24	Issue:	1
Date:	02/04/24	Sheet:	Page 4 of 4

SUBJECT: Dennis Elite Second Steer (ETS) Trailing Arm Bush Design - Checks

- 3. Melted rubber, or rubber particles around the rubber steel bush indicate that the bush must be replaced.
- 4. Excessive wear of the wear plates is also an indication of worn silent blocks, see Fig. 4 as an example, (these parts were used in an internal test), replacement would be necessary.
- 5. If the Clamp Bolt is loose (loss of the pre-tension), it could be a sign of wear in the silent block/clamp plates. Always check the torque and re-tighten if required, 800 850 Nm, 590 627 lb-ft.

Fig. 4

