

SECTION D5—LUBRICATION OF THE STEERING AND SUSPENSION POINTS—4 STAGES

Stage 1

When production of S1 cars commenced, lubrication was provided for by the Centralised Chassis Lubrication System.

This system supplies oil to all front suspension and steering joints (see Figs. D1A and D1B).

The rear springs on both S1 and S2 cars are pre-packed with grease.

Stage 2

During the production of S1 cars, grease lubrication was introduced on the steering mechanism.

At this stage the track rod ends only were adapted for grease. This modification (shown in Fig. D2) was introduced on the following chassis:

Bentley S1	B-FA.48, 208, 386, 394, 398, 516, 526, 532, 544, 552, 556-650 onwards
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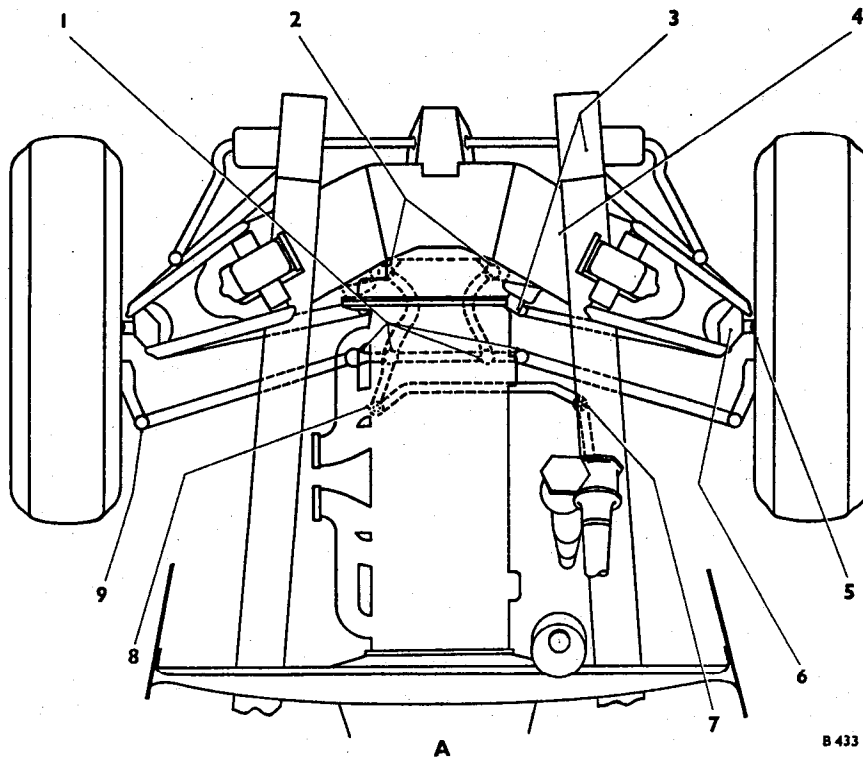


Fig. D1A Chassis lubrication system, right-hand arrangement

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|---|--|---|
| 1. CROSS BEAM CENTRE STEERING BALL JOINTS | 4. METER VALVE RATE 2 | 8. CENTRE STEERING OPERATING LEVER/DRAG LINK BALL JOINT |
| 2. CENTRE STEERING LEVER PIVOTS | 5. SWIVEL PIN | 9. SIDE STEERING LEVER-CROSS-STEERING TUBE BALL JOINT |
| 3. LOWER TRIANGLE LEVER FULCRUM BEARINGS | 6. YOKE BEARINGS | |
| | 7. PENDULUM LEVER/DRAG LINK BALL JOINT | |

Bentley Continental S1	F series onwards
Bentley S1 L.W.B.	ALB.14-18, 20 onwards
Silver Cloud	F series onwards
Silver Cloud L.W.B.	BLC.18, 19, 21, 23-35, 37-46, 50, 51 onwards

This modification was introduced on the following chassis:

Bentley S1	B-FA.644 onwards
Bentley Continental S1	BC-FM.1 onwards
Bentley S1 L.W.B.	ALB.17, 21-24 onwards
Silver Cloud	F series onwards
Silver Cloud L.W.B.	BLC.28-40, 42 onwards

Stage 3

At a later stage in the production of S1 cars, grease lubrication was used more extensively. While the Centralised Chassis Lubrication System was still retained on the suspension, all the steering joints, except the centre steering lever pivot points, were changed to grease lubrication as illustrated in Figure D3.

Stage 4

At the commencement of the production of S2 cars the Centralised Chassis Lubrication System was omitted and all suspension and steering joints were fitted with grease points (see Fig. D4).

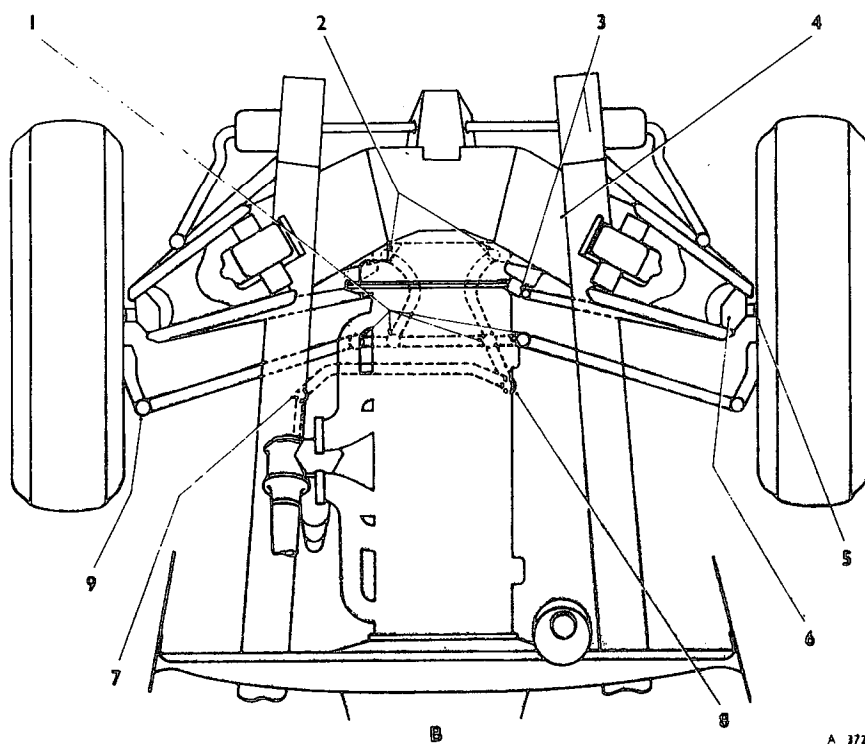


Fig. D1B Chassis lubrication system, left-hand arrangement

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|---|---|---|
| 1. CROSS BEAM CENTRE STEERING BALL JOINTS | 4. METER VALVE RATE 2 | 8. PENDULUM LEVER/DRAG LINK BALL JOINT |
| 2. CENTRE STEERING LEVER PIVOTS | 5. SWIVEL PIN | 9. SIDE STEERING LEVER/CROSS STEERING TUBE BALL JOINT |
| 3. LOWER TRIANGLE LEVER FULCRUM BEARINGS | 6. YOKE BEARINGS | |
| | 7. CENTRE STEERING OPERATING LEVER/DRAG LINK BALL JOINT | |

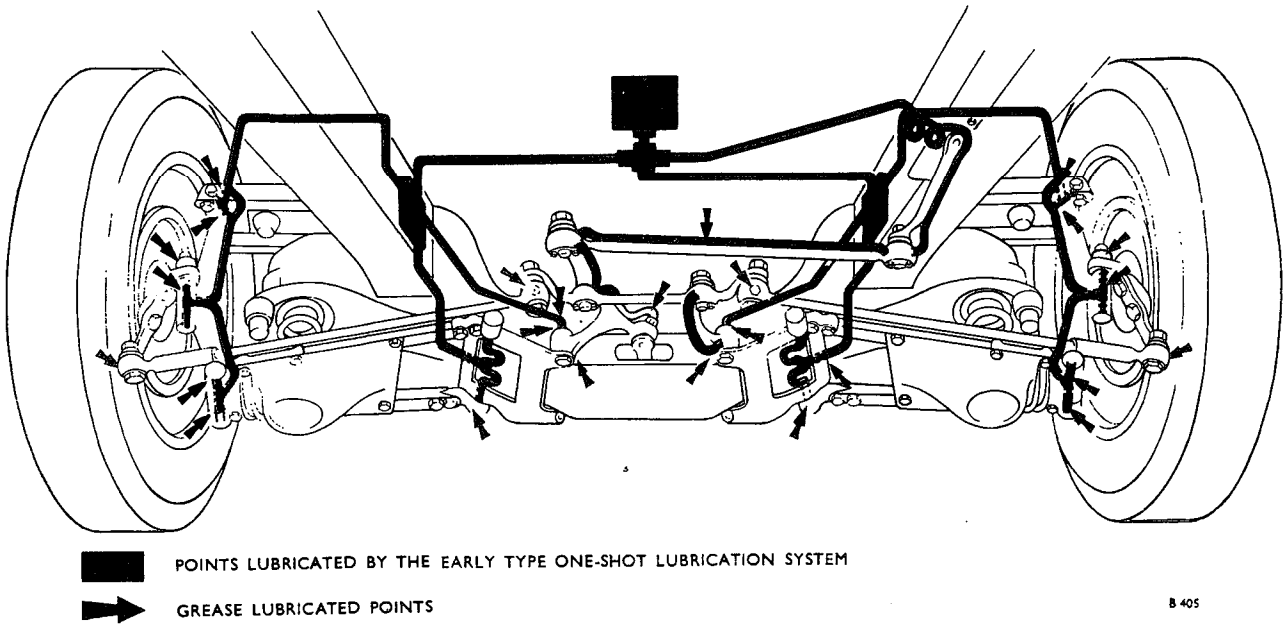


Fig. D2 Early type one-shot oil lubrication system and grease lubricated track rods only

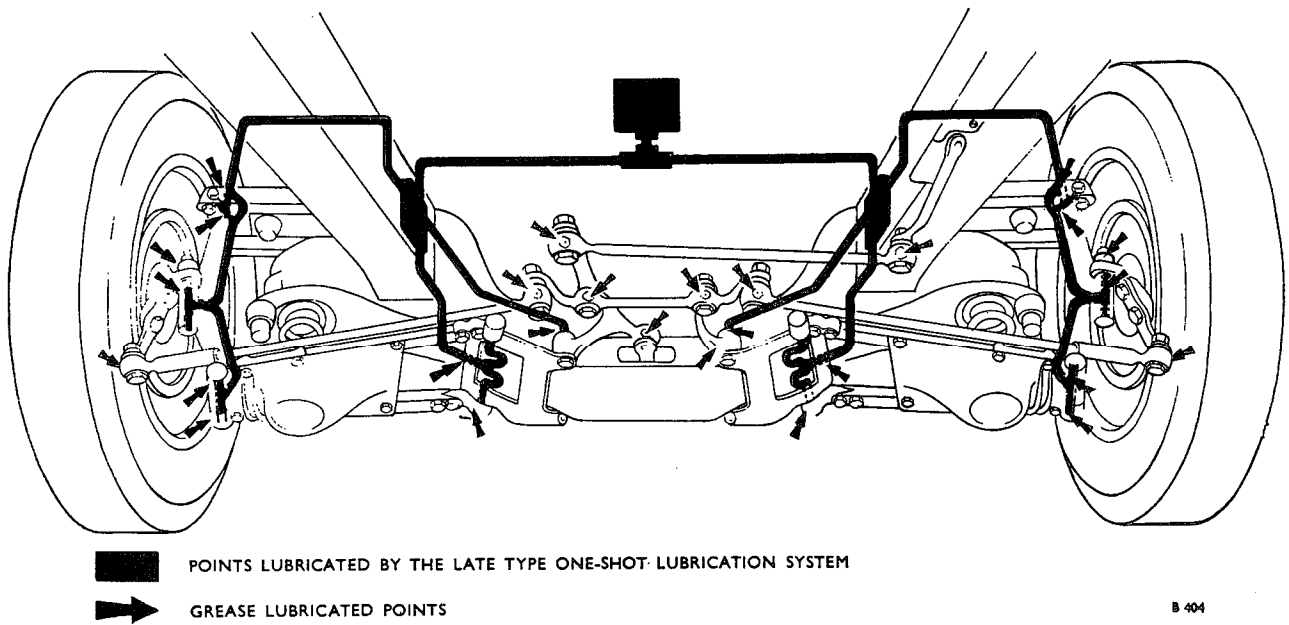


Fig. D3 Late type one-shot oil lubrication system and grease lubricated steering joints

SECTION D6—THE CENTRALISED CHASSIS LUBRICATION SYSTEM

The Luvax Bijur foot-operated pump and combined oil reservoir is fitted on the front of the bulkhead and supplies oil through brass tubing to the front chassis lubrication points as shown in Figures D1A and B, D2 and D3.

The rear springs are interleaved and pre-packed with grease. They and the rubber-bushed shackle pins require no additional lubrication.

Figure D5. Pressure on the foot pedal raises the piston and compresses the return spring. Oil is drawn through a non-return ball valve in the centre of the piston to the underside of the piston. On releasing the pressure from the pedal, the piston is forced downward by the return spring and oil is forced through the filter pad to the outlet pipe.

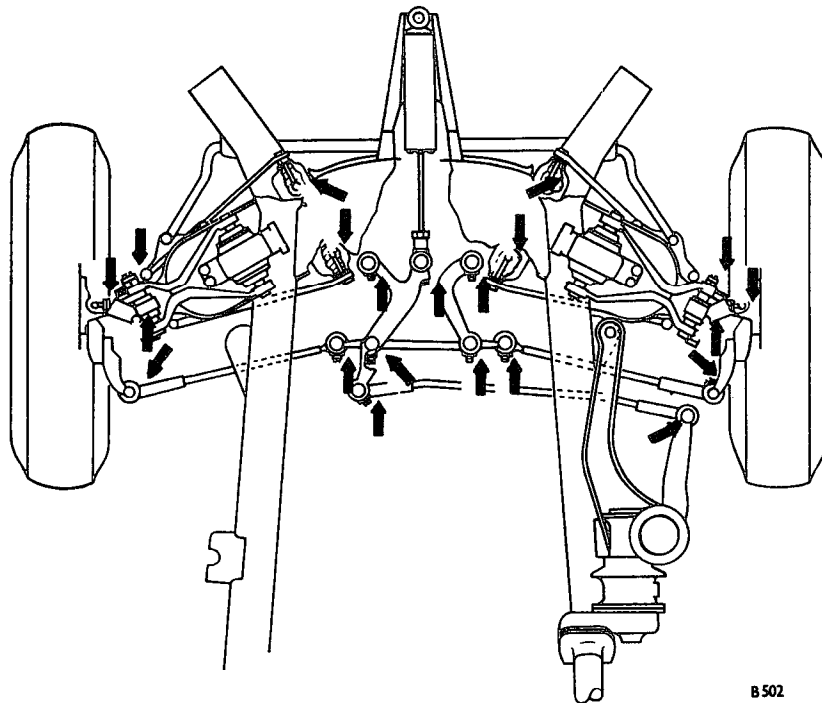


Fig. D4 Steering and front suspension joints, grease lubrication points

The oil delivered is not metered by drip plugs and each bearing point is designed to ensure that correct lubrication is effected. As this is a total loss system, oil leakage from the points is desirable but excessive individual leakage should be rectified. Joints and connections in the piping are made by cap nuts and olives.

The construction of the pump is shown in

The spring is so rated that the pressure is practically constant throughout the stroke and the rate of discharge depends upon the viscosity of the oil. Normally it should take approximately five minutes for the pedal to return to its original position. At the end of its stroke the piston seals the hole in the filter retaining plate, preventing oil leakage by gravity.

The pedal should be depressed four times every 200 miles to ensure adequate lubrication.