

SECTION 19 - SUSPENSION AND ROAD WHEELS

SUSPENSION

1. Each road wheel is mounted on an independent suspension assembly (Fig 51 and 52), and each wheel is driven. Each assembly bracket is fixed to the hull and carries two links, an upper and a lower. The outer ends of the links are connected by pivot pins to the outer tracta joint housings at the rear wheel stations and to the swivel pin yokes at the front wheel stations.

2. A helical spring and hydraulic shock absorber (Fig 52(1)) are connected to the upper suspension link (14) and a bracket on the hull, the spring platform being mounted on a pivot pin and connected to the suspension bracket by a spring control link. Two rubber pads limit the rebound or downward movement of the suspension links and a rubber buffer, located on the top of the shock absorber, limits the bump or upward movement. The shock absorbers control bump and rebound.

3. On Mk 1 and 2 vehicles, there are twelve lubricating nipples on each suspension unit, including four on the spring seat pivot and stabilizing link. They are as follows:-

Suspension link pivot pins	8 nipples (Fig 50(5), (10), (18) and (26))
Spring seat fulcrum bushes	2 nipples (8)
Spring control link fulcrum pin	2 nipples (23)

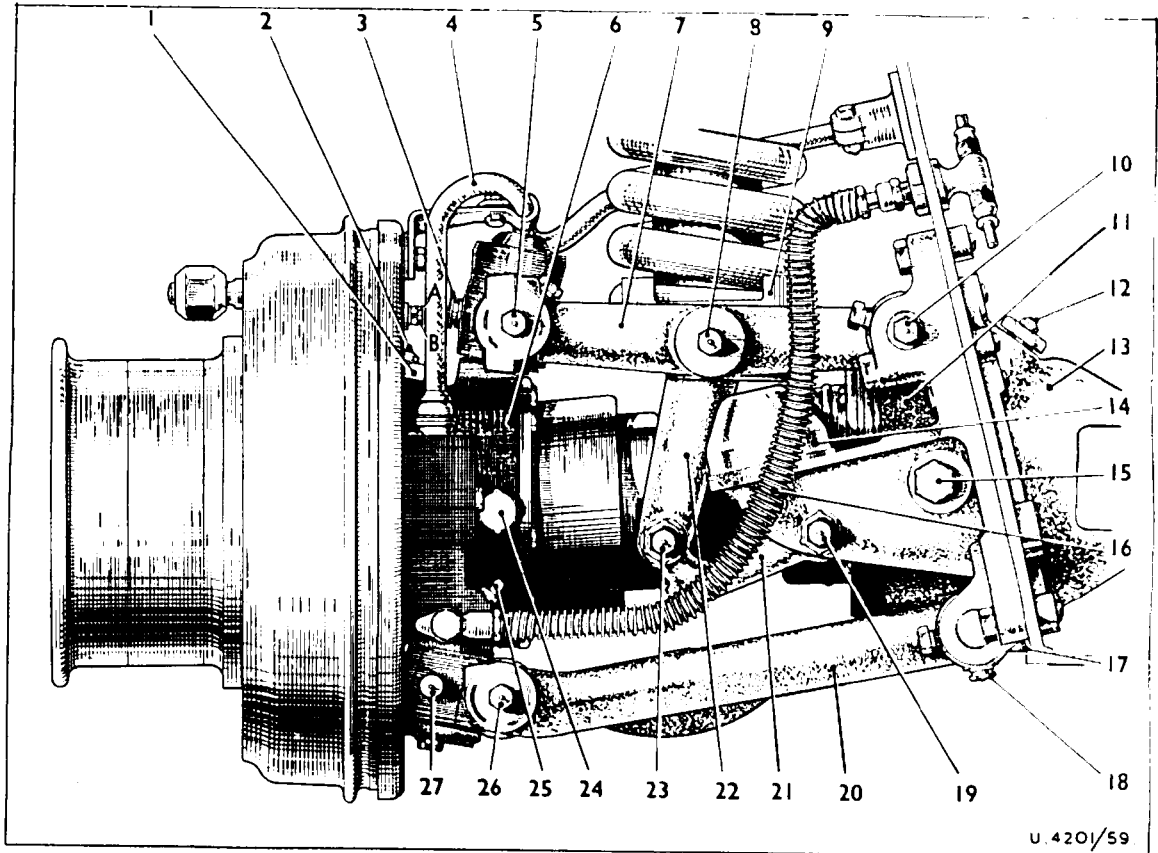
4. On Mk 3, 4 and 5 vehicles, each arm of the upper suspension link is constructed to provide an oil reservoir and has a lubricating nipple. A relief valve (Fig 52(2) and (15)) is fitted to each arm adjacent to the inner pivot and a bleed plug (4) and (11) in the outer pivot. The inner and outer pivots and the spring platform pivots are lubricated via the nipples (3) and (13). The lower suspension link is attached to the pivots by bonded rubber bushes, no lubrication is required.

SHOCK ABSORBERS

5. The shock absorbers are of the double acting hydraulic type and are filled with fluid on assembly and do not normally require attention between vehicle overhauls. Six valves are arranged in the piston head, one group of four allowing the passage of fluid on bump and the remainder on rebound. The valve springs are so rated that greater damping effect occurs when the wheel is on rebound.

ROAD WHEELS

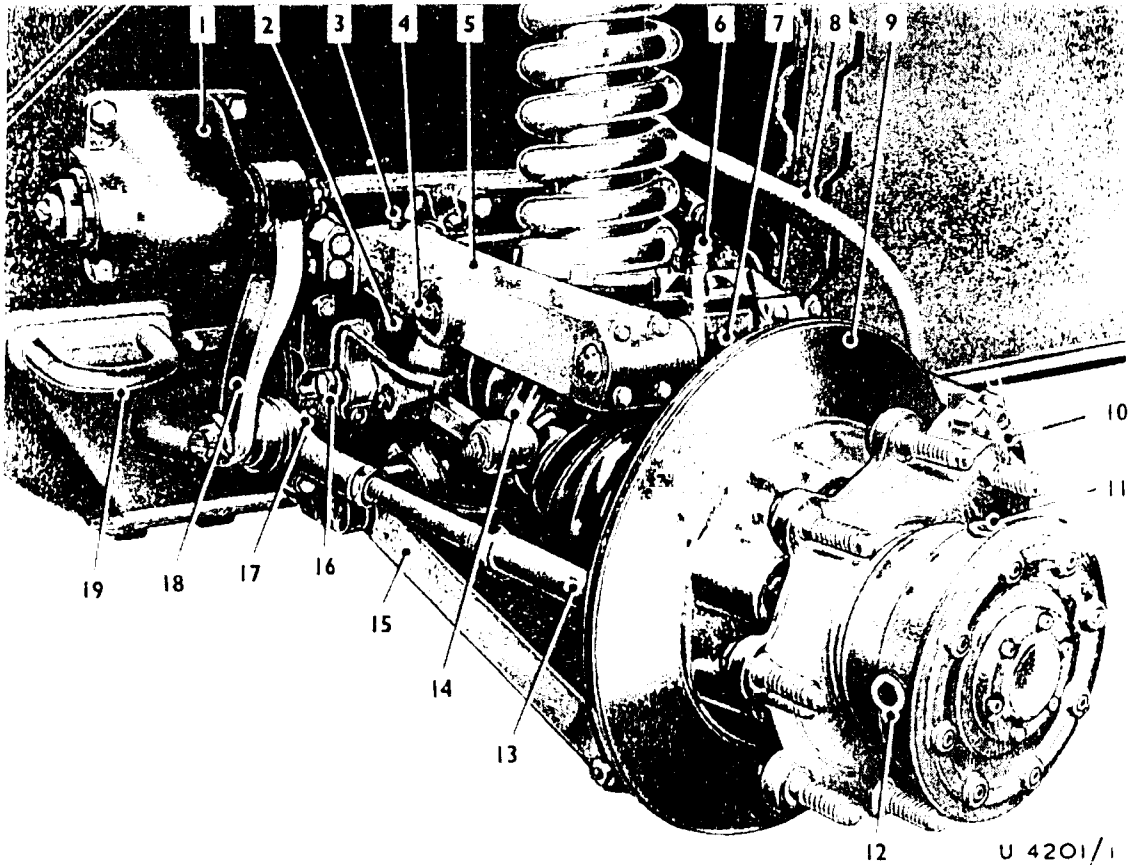
6. The road wheels are of the twin disc type and are clamped together by a ring of nuts and bolts. (Alloy wheels are fitted to Mk 3, 4 and 5 vehicles.) The clamping nuts (Fig 53(1)) are painted red and should not be moved unless it is necessary to change a tyre. The tyres must be completely deflated before any attempt is made to loosen the nuts painted red. The Mk 1 and 2 vehicles carry a spare wheel bolted to the left side escape hatch.



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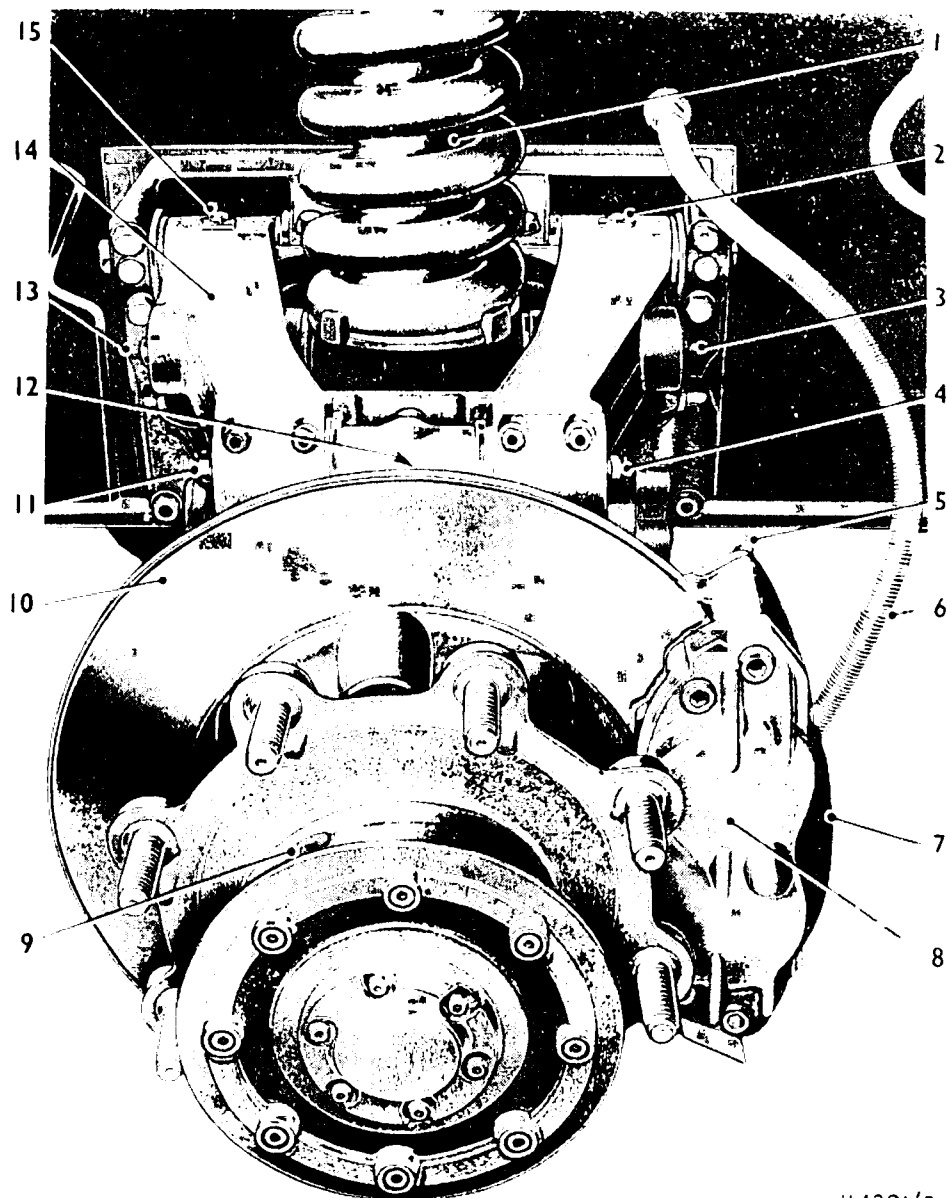
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|---|--|
| 1 Filler plug, outer tracta joint | 15 Filler/level plug, inner tracta joint and bevel box |
| 2 Relief valve, outer tracta joint | 16 Brake fluid pipe |
| 3 Lubricator, upper swivel pin | 17 Drain plug, inner tracta joint |
| 4 Parking brake cable | 18 Lubricator (2), lower inner link pin |
| 5 Lubricator (2), upper outer link pin | 19 Lubricator, spring control link fulcrum pin |
| 6 Outer tracta joint housing | 20 Lower link |
| 7 Upper link | 21 Spring control link |
| 8 Lubricator (2), spring seat fulcrum pin | 22 Spring seat lever |
| 9 Spring seat | 23 Lubricator, spring seat lever pin |
| 10 Lubricator (2), upper inner link pin | 24 Oil level plug, outer tracta joint |
| 11 Inner tracta joint housing | 25 Brake bleed nipple |
| 12 Relief valve, bevel box | 26 Lubricator (2), lower outer link pin |
| 13 Bevel box | 27 Lubricator, lower swivel pin |
| 14 Rebound stop | |
| A Square headed adjuster | B Hexagon headed adjuster |

Fig 50 Suspension unit, left front (Mk 1 and 2 vehicles)



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|--|---|
| 1 Steering relay box | 10 Brake caliper |
| 2 Bump stop | 11 Hub level plug |
| 3 Relief valve | 12 Hub level plug |
| 4 Lubricator, inner and outer
link pins - spring seat
pivot, front | 13 Lubricator, steering ball joint |
| 5 Upper suspension link | 14 Spring seat lever |
| 6 Lubricator, upper swivel pin | 15 Lower suspension link |
| 7 Relief valve | 16 Filler/level plug, bevel box and
inner tracta joint |
| 8 Hydraulic brake pipe | 17 Lubricator, steering ball joint |
| 9 Brake disc | 18 Drop arm |
| | 19 Towing/lashing eye |

Fig 51 Suspension unit, front left (Mk 3, 4 and 5 vehicles)



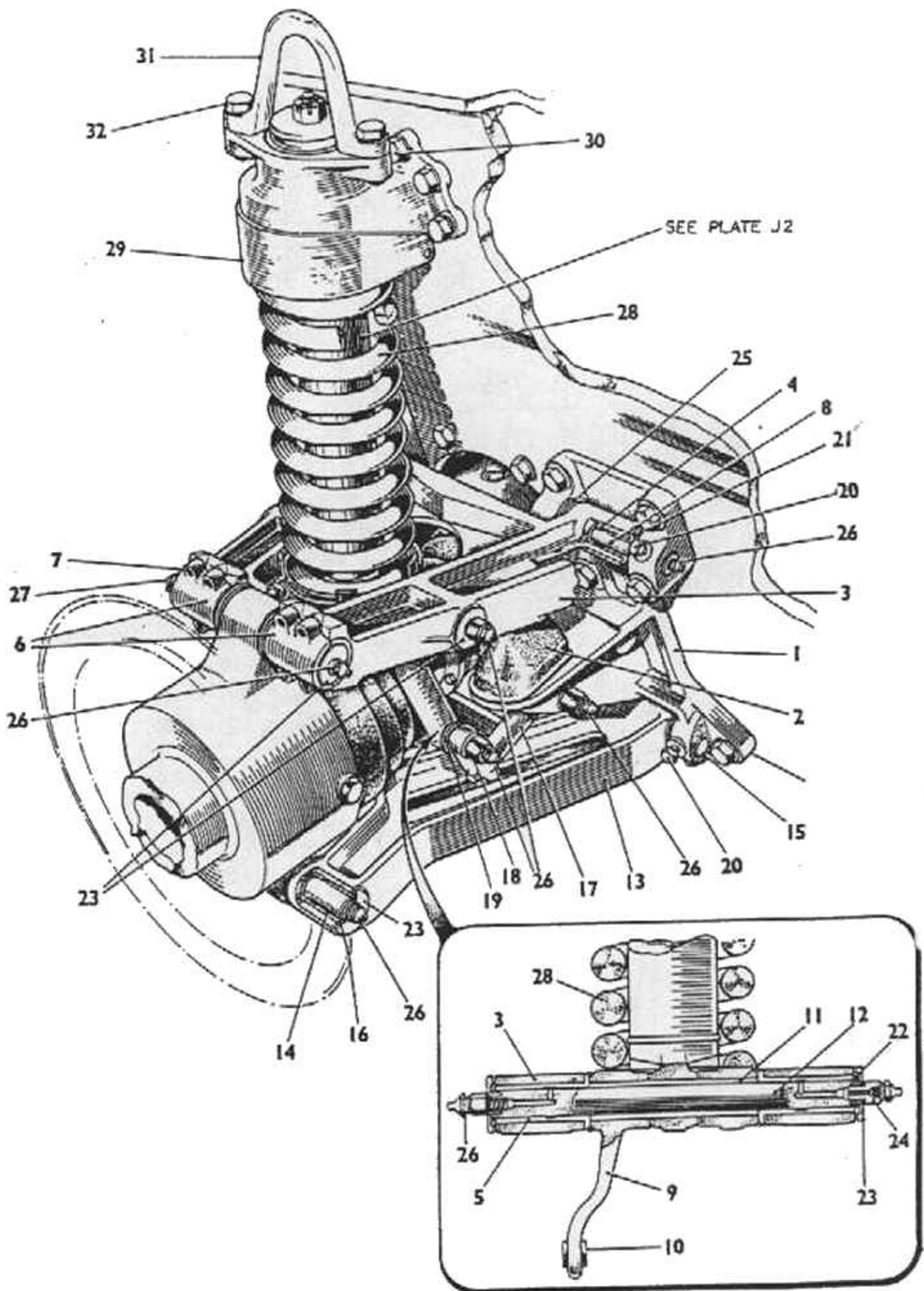
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- 1 Shock absorber
- 2 Relief valve
- 3 Lubricator (inner and outer link pins - spring seat, rear)
- 4 Bleed plug
- 5 Bleed nipple
- 6 Hydraulic brake pipe
- 7 Cover plate
- 8 Brake caliper
- 9 Level plug (outer tracta joint - hub reduction gear)
- 10 Brake disc
- 11 Bleed screw
- 12 Filler plug (outer tracta joint - hub reduction gear)
- 13 Lubricator (inner and outer link pin - spring seat, front)
- 14 Upper suspension link
- 15 Relief valve

Fig 52 Suspension unit, rear left (Mk 3, 4 and 5 vehicles)

SUSPENSION UNIT

J1



SHOCK ABSORBER

J2

