

WINGET

**OPERATING
INSTRUCTIONS
&
SPARE PARTS
LIST**

**2SE DIESEL
DUMPER
(CAPACITY 15 CWT)**

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INTRODUCTION

This Parts & Operators Manual is a re-print of the manual last published in 1980 and contains some amended part numbers.

Health & Safety legislation and working practices applicable to Site Dumpers, both 2 and 4 wheel Drive, Rigid Chassis and Articulated Chassis have changed considerably in the years since this manual was last published and immediately following this Introduction are notes on the Safe Use of Site Dumpers. These notes supersede and replace all previous 'Dumper Safety' notes issued with Winget 2SE Dumpers

Reference is made on a number of pages to 'bolt c/w nut and washer', this no longer the case, fixings such as nuts, bolts, screws and washers should be ordered as individual items. A number of Whitworth and B.S.F fixings are now no longer available, in these cases the nearest metric equivalent size will be supplied.

The contents of this manual although correct at the time of publication, may be subject to alteration by the manufacturers without notice and Winget Limited can accept no responsibility for any errors or omissions contained within the following pages. Nor can we accept any liability whatsoever arising from the use of this manual howsoever caused.

Winget Limited operate a policy of continuous product development. Therefore, some illustrations or text within this publication may differ from your machine.

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Safety is the responsibility of all persons working with this machine. Think "safety" at all times. ***Read and remember the contents of this handbook.***

The safe working recommendations for specific tasks are found with the instructions for the relevant operation in this Handbook.

MACHINE MODIFICATION

WARNING Any modifications to the machine will affect its working parameters and safety factors. Refer to the Manufacturers before fitting any non-standard equipment or parts.



The Manufacturers accept no responsibility for any modifications made after the machine has left the factory, unless previously agreed by the Manufacturers in writing; the Manufacturers will accept no liability for damage to property, personnel or the machine if failure is brought about due to such modifications, or fitment of spurious parts.

TRAINING

WARNING Only trained operators should use this machine.



Operators should hold an appropriate full motor vehicle driving licence and undergo both a safety awareness course and a driver training course for Site dumpers run by the C.ITB or equivalent body leading to the award of a CTA.

It is strongly recommended that operators read the H.S.E. publication "Safe Working with Small Dumpers" which is available from government bookshops (HMSO) or from other bookshops quoting the following number ISBN 011 8836935. Another useful publication is British Standard number BS 6264, "Procedure for Operator Training For Earth Moving Machinery" available from the British Standard Institution.

RUNNING-IN

WARNING While a gradual 'running-in' of a new engine is not necessary, it is extremely important that the instructions given in *Section 2 "Operation"* on "Running-in a new engine" should be followed very closely during the first fifty hours of operation.



DRIVING

WARNING **NEVER** use the machine for purposes other than those for which it was designed. This machine was designed to carry loads such as soil, clay, sand, wet concrete, stone or other similar materials. It was not designed to carry loads which may move around in the skip uncontrollably, nor to carry any loads or materials which overhang the skip in any way. If in any doubt as to the suitability of this machine for a particular task, contact your nearest Distributor or the Manufacturer for advice.



ALWAYS be aware of local and national regulations governing the use of the machine.

NEVER commence work with the machine until the "Daily (or every ten hours)" service checks have been made. (*See Service Section* for details)

ALWAYS check wheel nut tightness daily.

NEVER carry passengers.

Ensure that the seat is securely fixed to the machine. Where seat belt restraints are fitted as part of Rops/Fops protection they must be worn. Check that the seat belt is in good condition, free from cuts and frayed edges.

ALWAYS remain in the driving seat whenever the engine is running. Never attempt to operate any controls unless seated.

ALWAYS apply the parking brake before leaving the driver's seat.

NEVER dismount with the engine running, and never leave the machine unattended with the key in the starter switch.

When Battery Isolators are fitted they must be activated only when the engine is turned off except in cases of emergency.

Activating a Battery Isolator when the engine is running can result in damage to the electrical components and circuits.

NEVER fill the fuel or hydraulic tanks with the engine running.

ALWAYS drive only on surfaces that are known to be stable.

ALWAYS keep the floor plates and walkways clean.

NEVER drive the machine close to the edge of any excavation. Always use effective wheel stops to prevent the machine running close to the edge. Make sure that the stops are in proportion to the size of the wheels and are set sufficiently far enough back from the edge of any excavation to prevent the weight of the load causing a collapse.

NEVER adjust the tyre pressures in an attempt to improve traction on soft ground or obtain a softer ride on hard ground. Incorrectly adjusted tyres can affect the steering and handling characteristics.

NEVER attempt to free a machine which is 'bogged down' by pushing with the bucket of a backhoe loader, tracked excavator or other similar machine.

NEVER make unnecessary "crash stops" when travelling at speed, especially in forward direction.

NEVER work under an unpropped skip. If the dumper was supplied with a special skip support always ensure that it is used.

SKIPS AND LOADING

WARNING NEVER exceed the rated payload. The weights of all loads above skip water level must be checked.



NEVER remain on the machine when loading the skip with excavators or loaders. Stop the engine, apply the parking brake, dismount, and stand well clear.

ALWAYS ensure that the load is evenly distributed in the skip.

NEVER carry loads or heap materials in such a manner as to affect the forward vision.

ALWAYS take extra care when tipping non free running loads.

NEVER use the skip in a tipped position to bulldoze heaped materials level or to backfill material into excavations.

TOWING

WARNING NEVER attempt to start the engine of a dumper by towing or pushing.



Dumpers are not designed as towing vehicles. However, trailers may be towed provided that:

- 1 The combined weight of the trailer and its load does not exceed the dumper "drawbar pull of 250kg (2500N)" and dumper "drawbar load of 50kg (500N)".
- 2 Trailers may be towed in first gear on level dry ground, provided a purpose made towing pin is used.
- 3 The dumper skip must be loaded with half the rated payload to ensure tyre adhesion when braking.

NEVER tow loads up, down or across gradients.

GRADIENTS

WARNING NEVER operate **Two Wheel Drive rigid chassis dumpers** on any gradients which exceed 10% (1 in 10), or across gradients which exceed 10% (1 in 10).



ALWAYS remember that slippery or loose surface conditions can adversely affect safe machine operation, including braking, particularly on gradients.

ALWAYS choose routes that avoid steep, slippery or loose gradients.

NEVER coast down gradients. Always negotiate gradients in first gear.

ALWAYS drive forwards up gradients when loaded.

ALWAYS reverse down gradients when loaded.

ALWAYS keep the load facing uphill.

NEVER park on a gradient. If this is unavoidable, *ALWAYS* chock the wheels.

NEVER attempt to turn on a gradient

NEVER tow up, down or across a gradient.

NEVER operate high discharge or rotating skips on gradients.

HYDRAULICS

WARNING *ALWAYS* "Dump" residual pressure from the system before leaving the machine or before carrying out any maintenance or adjustments.



If maintenance work requires the skip to be in the raised position, then it must be raised and supported before dumping the pressure.

Dump pressure by switching off the engine, then moving the hydraulic control lever several times in each direction.

NEVER leave the machine unattended with pressure in the system.

ALWAYS purge hydraulic rams before commencing work. With the engine running operate the hydraulic control to fully extend and retract the rams.

ALWAYS practise the greatest cleanliness in maintaining hydraulic components.

SERVICING

WARNING *ALWAYS* report any defect at once, before an accident or consequential damage can occur.



ALWAYS conform to service schedules except where:

- 1 Warning lights or warning indicators call for immediate attention.
- 2 Adverse conditions necessitate more frequent servicing.

ALWAYS wear correctly fitting protective clothing. Loose or baggy clothing can be extremely dangerous when working on running engines or machinery.

ALWAYS, where possible, work on or close to engines or machinery only when they are stopped. If this is not practical, remember to keep tools, test equipment and all parts of your body well away from the moving parts.

ALWAYS "Dump" pressure from the hydraulic system before carrying out any kind of maintenance or adjustment. (*see Service - Hydraulic system*).

ALWAYS avoid contact with exhaust pipes, exhaust manifolds and silencers when the engine is running; these can be very hot.

ALWAYS work out of doors, or in a well-ventilated area.

NEVER run an engine in an enclosed space. Exhaust fumes in enclosed areas can kill.

ALWAYS disconnect battery cables and remove battery before using an external charger, carrying out welding repairs or to prevent unauthorised usage when unattended or during a repair.

NEVER allow unqualified personnel to attempt to repair, remove or replace any part of the machine, or anyone to remove large or heavy components without adequate lifting tackle.

NEVER attempt to modify or repair Rops Frames or Fops Canopies by welding, drilling or any other means. Attempts to do so will invalidate Rops/Fops Certification.

ALWAYS obtain advice before mixing oils; some are incompatible. If in doubt drain and refill.

NEVER allow oils and fuels to come into regular contact with skin. This can lead to serious skin diseases including, medical evidence suggests, skin cancer. *ALWAYS* wear protective gloves when handling oils and fuels whether topping up, draining or refilling. *ALWAYS* wash hands if oils or fuels come into contact with the skin.

Many liquids used in this machine are harmful if taken internally or splashed into the eyes. In the event of accidentally swallowing oils, fuels, anti-freeze, battery acid etc, *DO NOT* encourage vomiting, seek qualified medical assistance immediately.

ALWAYS dispose of waste oils and fuels into waste oil storage tanks. If storage tanks are not available consult your distributor or local authority for addresses of local designated disposal points. It is illegal to dispose of waste oil into drains or water courses or to bury it.

Equipment which includes friction materials will sometimes contain asbestos. When removing friction material dust from components, such as when servicing brakes or clutches, do not blow out with an airline; it could be harmful to inhale the dust. Remove the dust with a vacuum cleaner or wipe clean with a damp rag. Waste should be placed in a sealed container, marked, and disposed of in accordance with local or national regulations.

The accumulated dust found in clutch housings may contain lead/antimony. No food should be eaten at a work place contaminated by this dust. Hands must be washed before eating. Do not blow out dust with an airline.

NEVER work under an unpropped skip. ***If the dumper was supplied with a special Skip Support always ensure that it is used.***

ALWAYS ensure that when using a starting handle that it is clean and in good condition. Keep the engine starting dog and the part of the starting handle that mates with it lightly lubricated (*Refer to the Engine Handbook*).

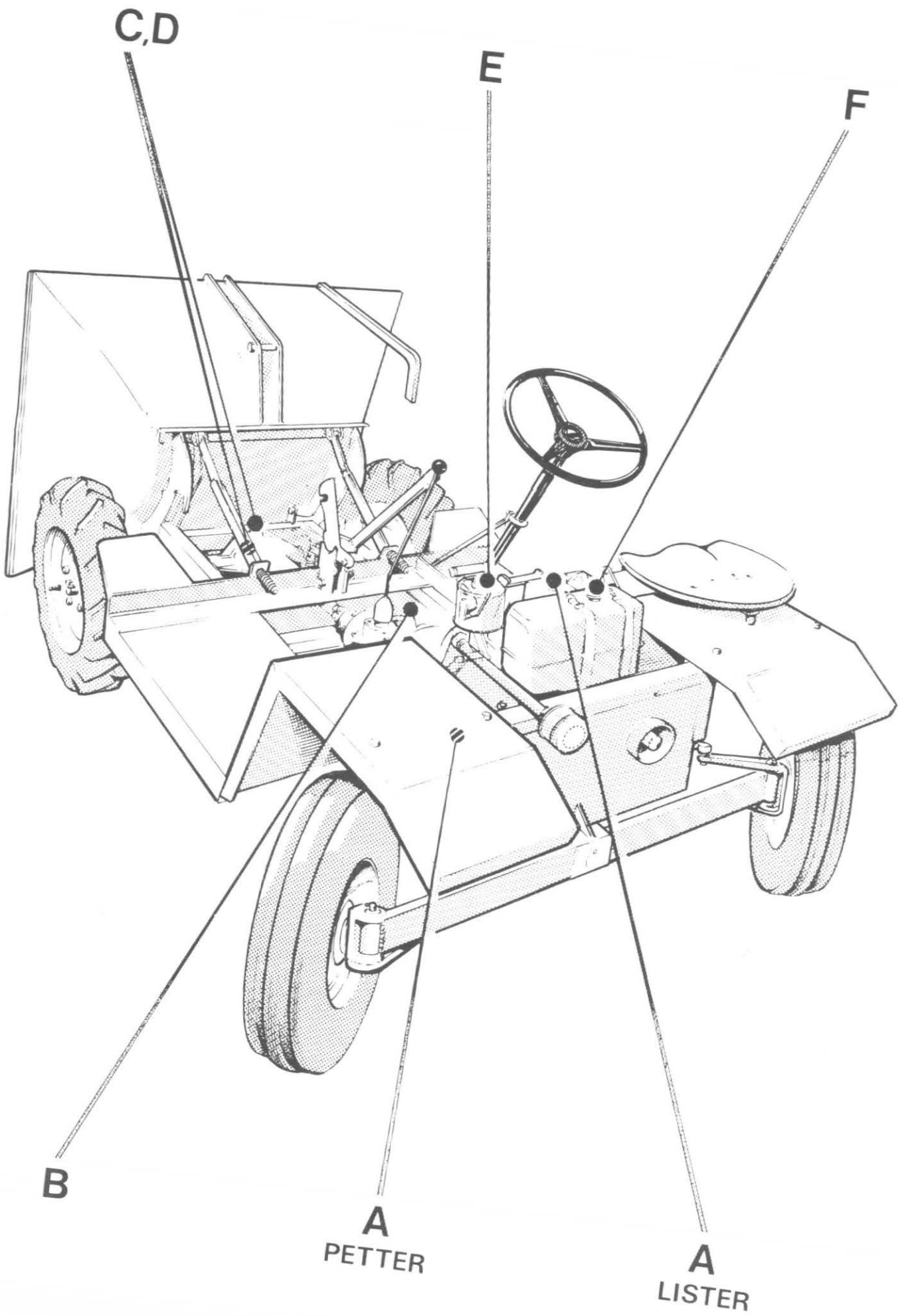
PREPARATION FOR USE

BEFORE THE DUMPER IS PUT INTO SERVICE ALWAYS CHECK THE FOLLOWING POINTS:—

(See Fig. 1)

1. **Engine**
Check the oil level on the dipstick (A), topping up if necessary to the full mark. See also 'Recommended Lubricating Oils', page 12.
2. **Gearbox**
Check the oil level on the dipstick (B), topping up if necessary to the full mark. See also 'Recommended Lubricating Oils', page 12.
3. **Drive Axle**
Remove level plug (C) and check that oil is up to bottom of hole. Top up if necessary through filler plug (D). See also 'Recommended Lubricating Oils', Page 12.
4. **Steering box**
Remove oil level/filler plug (E) (accessible through bracket) and top up if necessary. See also 'Recommended Lubricating Oils' Page 12.
5. **Fuel Tank**
Remove filler cap (F) and fill with diesel oil until approximately 1" from the top.
NOTE: Never allow fuel level to fall below 2" deep in the bottom of the tank.
6. **Miscellaneous**
Check all wheel nuts for tightness.
Check all nuts and bolts for tightness. Loose nuts and bolts may lead to damage not covered by the Dumper Warranty.
7. **Hydraulic Brake System (if fitted)**
Ensure the brake master cylinder reservoir is full of brake fluid. Top up if necessary to within 1/4" of the top of the reservoir. Use only brake fluid that conforms to SAE. J 1703.

N.B. For further Lubrication information see Fig. 5 and corresponding text (pages 8 & 9).



A
PETTER

A
LISTER

FIG.1

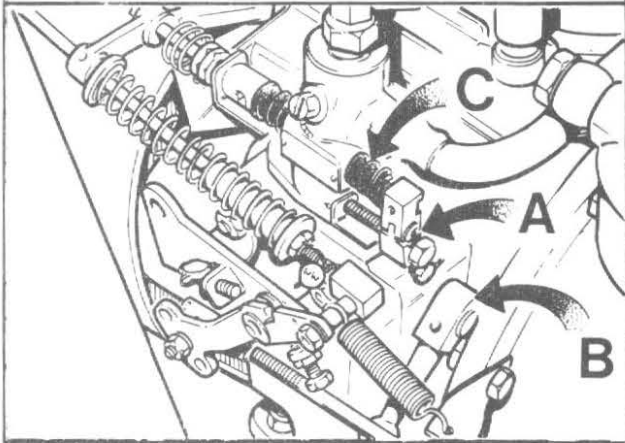
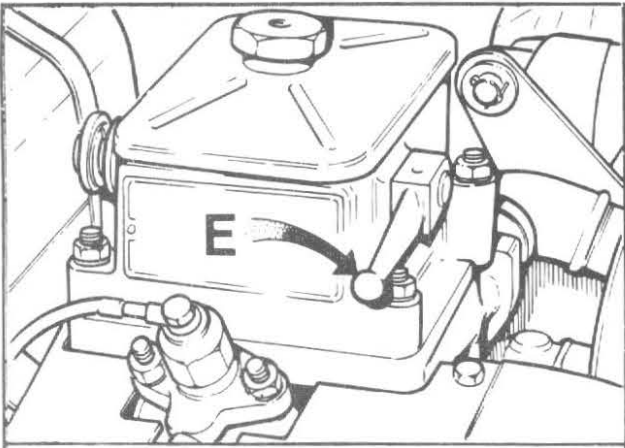


FIG 2

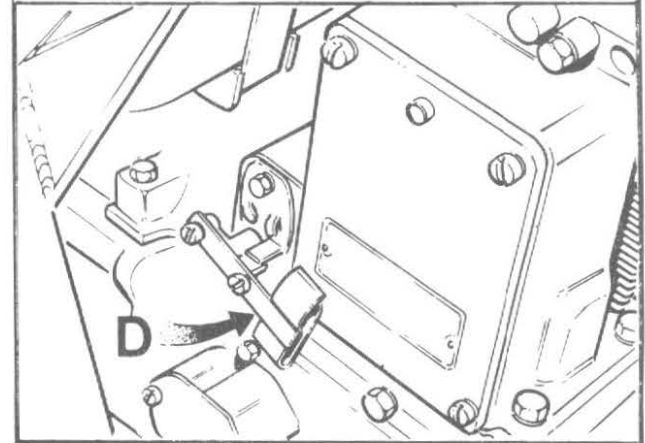
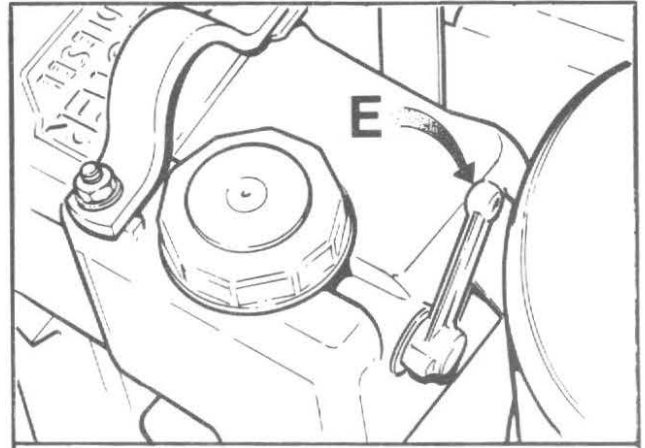


FIG 3

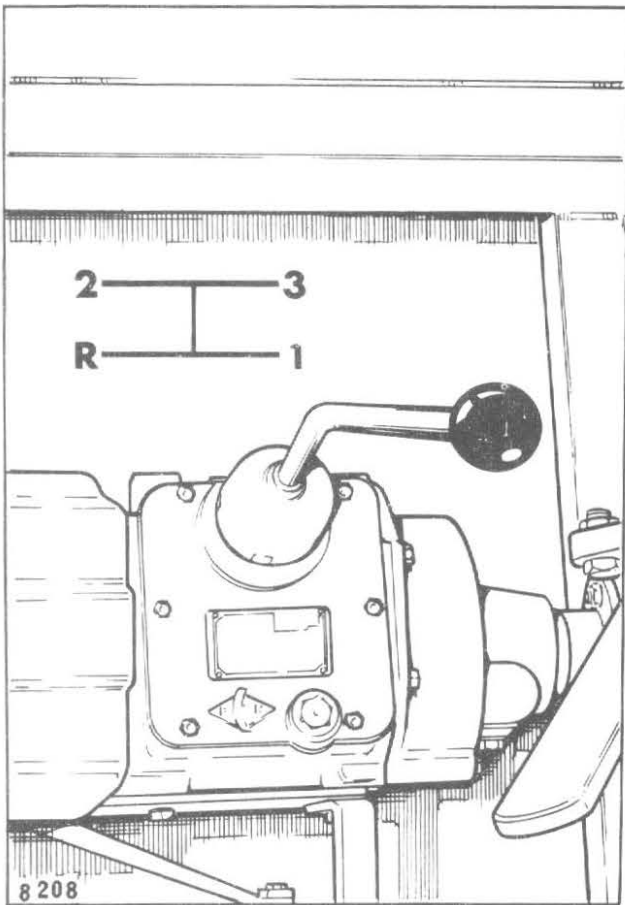


FIG 4

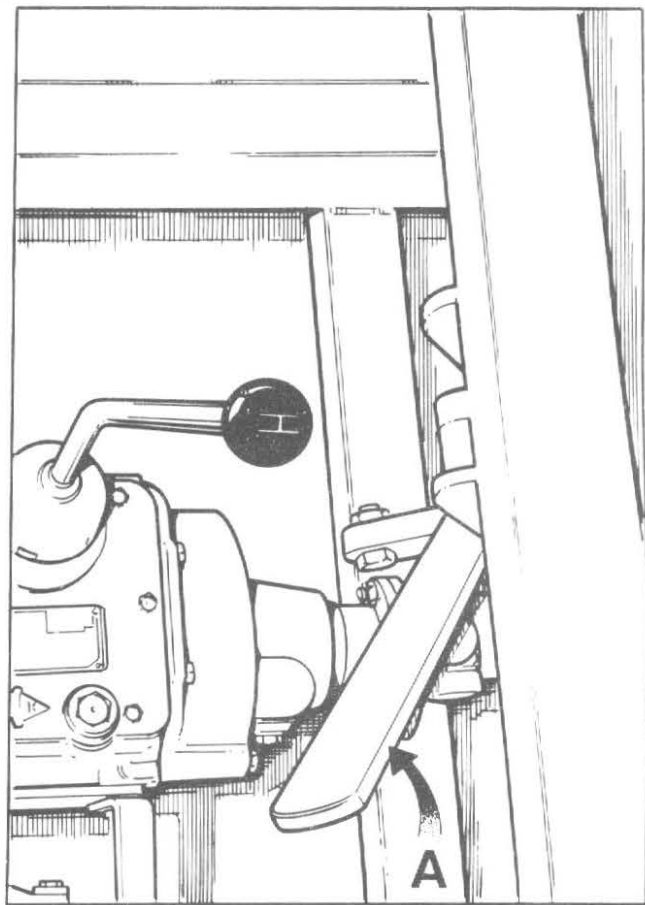


FIG 5

OPERATION

Starting

PETTER ENGINE

(See fig. 2)

1. Lift red-painted overload stop (A) situated on fuel pump immediately above priming lever (B), and move fuel pump racks (C) into fully-open position.
2. Operate priming lever (B) six times.

NOTE: This is unnecessary if engine is already warm.

3. Lift decompression lever (E), positioned on top of engine and turn engine as fast as possible using starting handle. When engine is turning at a good speed knock down decompression lever and engine should fire.
4. If engine does not fire, lift decompression lever and slowly crank engine a few times before attempting to start again. Where ambient temperature is 50F (-15°C) or below, a cold starting aid should be fitted.

LISTER ENGINE

(See fig. 3)

1. Pull out overload lever (D) and lift to its highest position.

NOTE: This is unnecessary if engine is already warm.

2. Lift decompression lever (E), positioned on top of engine and turn engine as fast as possible using starting handle. When engine is turning at a good speed knock down decompression lever and engine should fire.
3. If engine does not fire, lift decompression lever and slowly crank engine a few times before attempting to start again. Where ambient temperature is 50F (-15°C) or below, a cold starting aid should be fitted.
4. Set overload lever (D) horizontal when engine starts.

Stopping

PETTER ENGINE

(See fig. 2)

Hold the fuel pump rack (C) in the fully forward position, or lift the priming lever to the horizontal, until engine stops, then release.

LISTER ENGINE

(See fig. 3)

Push overload lever (D) to its lowest position.

IMPORTANT:

1. DO NOT stop engine by means of decompression levers, this will lead to damaged valve seats and cylinder head joints.
2. DO NOT stop engine by closing fuel tap or by allowing fuel tank to run dry. This will allow air into fuel lines and necessitate bleeding and priming system.

NOTE: LISTER ENGINE has a self-bleeding fuel system.

Gear Shift Lever

(See Fig. 4)

The dumper is fitted with three forward gears and one reverse gear. When changing gear, the clutch pedal is used in the normal manner.

Skip Release Lever

(See Fig. 5)

1. To tip the skip pull release lever (A) far enough back to release catch pin. If two position catch is fitted skip will then tip to mid position. Further movement of lever will release catch from mid position. To release from load position to fully tipped position when two position catch is fitted, pull release lever fully back.
2. To return skip to parked position pull it back using tip handle, and ensure that skip locates in second notch on release lever (A).

GENERAL MAINTENANCE

Periodic Maintenance

1. DAILY check engine oil level and fill to full mark on dipstick, if necessary.
2. DAILY fill fuel tank, Never allow there to be a depth of less than 2" of fuel in tank.
3. WEEKLY check oil level in gearbox and fill to full mark on dipstick, if necessary.
4. WEEKLY remove level plug from drive axle. Oil level should be to bottom of hole. Top up, if necessary.
5. WEEKLY remove level/filler plug from steering box and top up if necessary.
6. WEEKLY apply grease to all grease nipples.
7. WEEKLY check all wheel nuts and tighten if necessary.
8. WEEKLY check tyre pressures (32 lbs./sq. in.)
9. OCCASIONALLY check all nuts and bolts and tighten, if necessary.

Lubrication

(See fig 6)

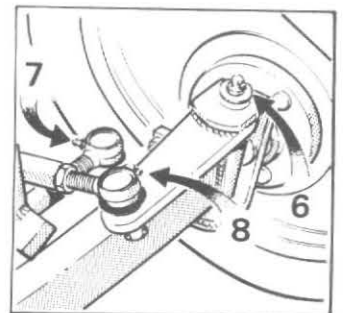
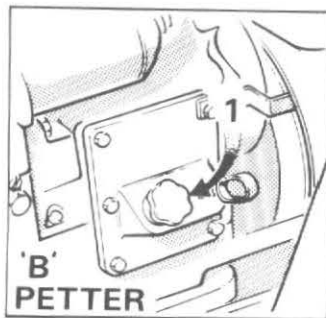
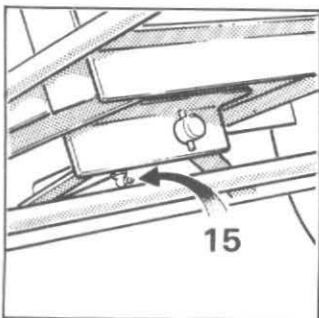
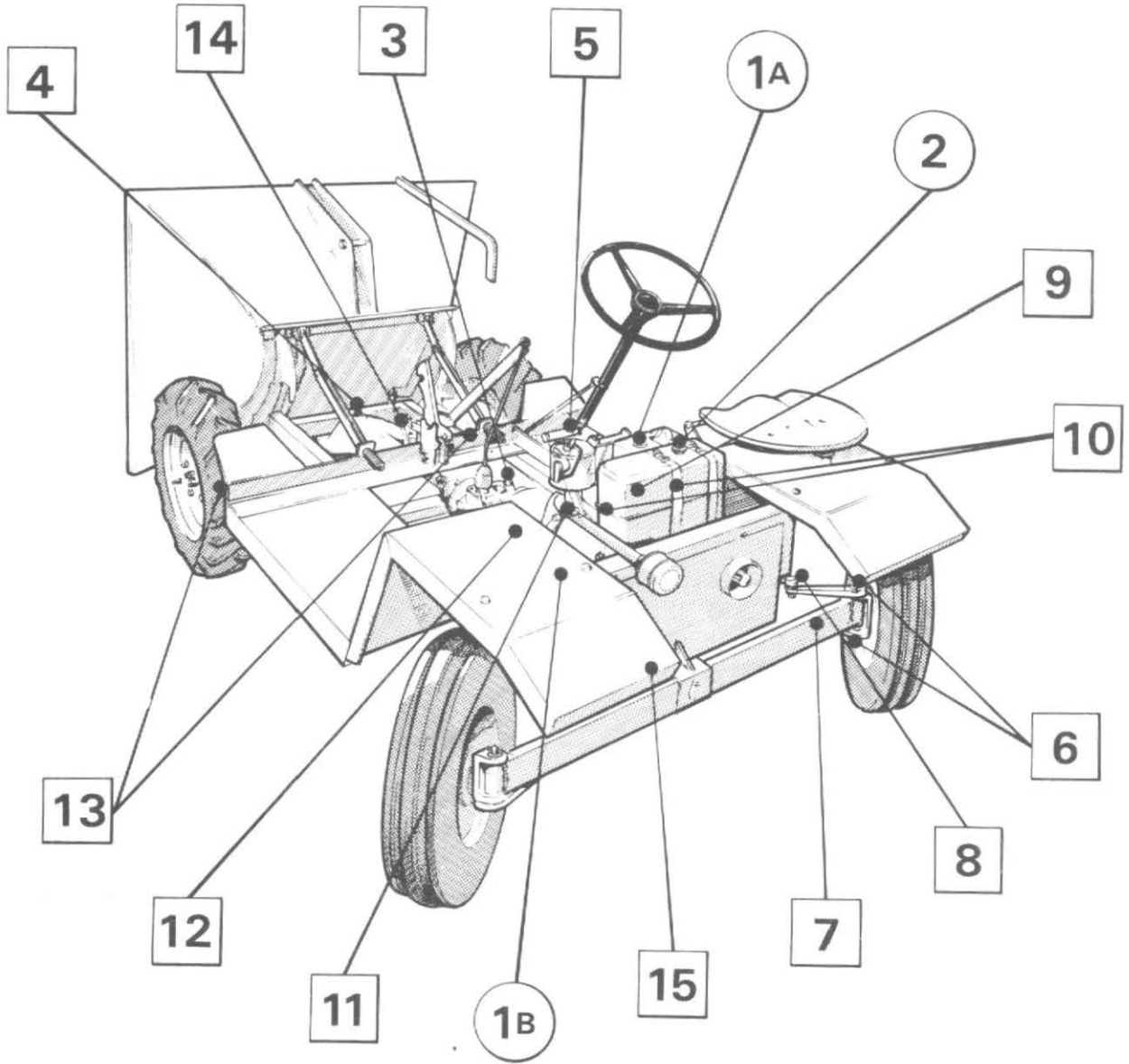
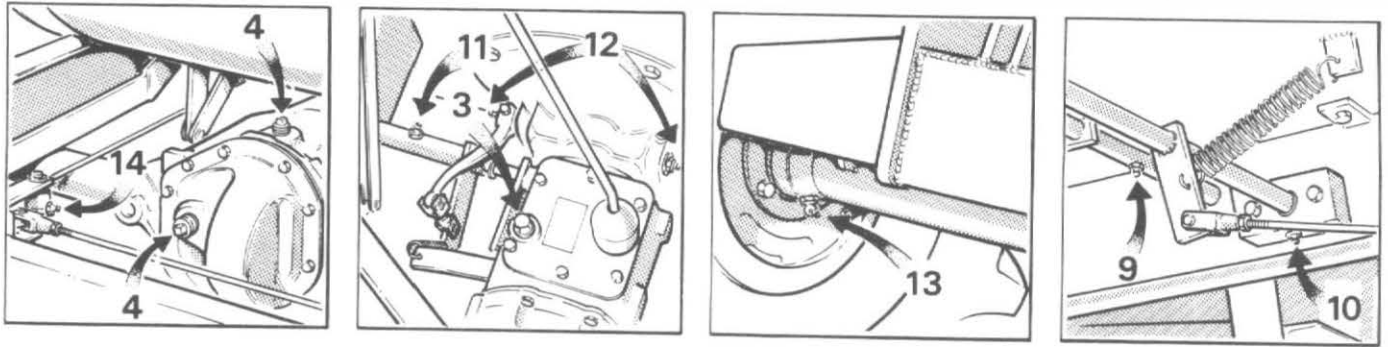
| Period | Key to Fig. | Description | Lubrication | No. of points |
|--------|-------------|------------------------------|-------------|---------------|
| Daily | 1 | Engine | Engine oil | 1 |
| | 2 | Fuel tank | Diesel Fuel | 1 |
| Weekly | 3 | Gearbox | Gearbox oil | 1 |
| | 4 | Drive Axle | Axle oil | 1 |
| | 5 | Steering box | Axle oil | 1 |
| | 6 | King pins | Grease Gun | 4 |
| | 7 | Track rod ball ends | Grease Gun | 2 |
| | 8 | Drag link ball ends | Grease Gun | 2 |
| | 9 | Accelerator Pedal | Grease Gun | 1 |
| | 10 | Footbrake Pedal Pivot Blocks | Grease Gun | 2 |
| | 11 | Clutch Pedal | Grease Gun | 1 |
| | 12 | Clutch Cross shaft | Grease Gun | 2 |
| | 13 | Drive Axle Hub bearings | Grease Gun | 2 |
| | 14 | Brake compensator lever | Grease Gun | 1 |
| | 15 | Steering Axle pivot | Grease Gun | 1 |

NB. FOR RECOMMENDED LUBRICATING OILS SEE CHART ON PAGE 12.

Oil Capacities

| | |
|---|--|
| Engine (Petter).. .. 5 pts. (2.86 litres) | Drive Axle 5½ pints (3.125 litres) |
| (Lister) 3½ pts. (2 litres) | Gear Box 2 Pts (1.136 litres) |

FOR FULL DETAILS OF THE LUBRICATION AND MAINTENANCE OF THE ENGINE REFER TO MANUFACTURERS MANUAL.



TP085

FIG. 6

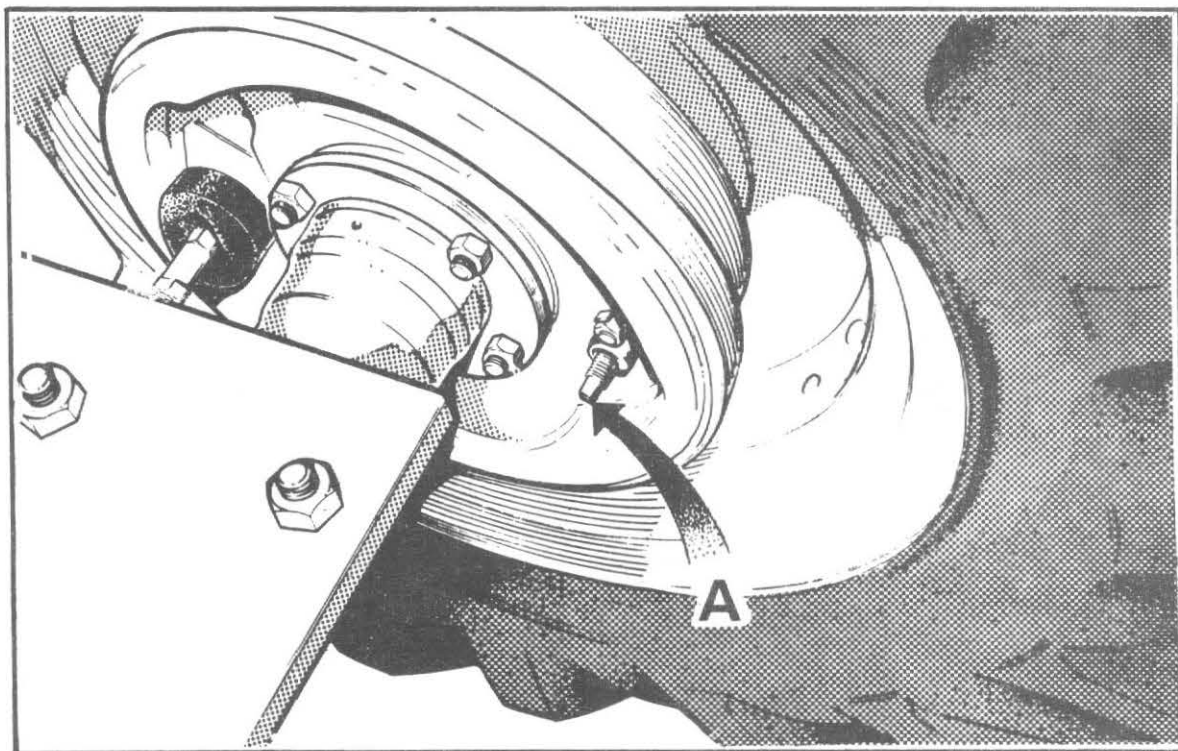
Brake Adjustment

(See fig. 7)

1. Ensure handbrake is fully off.
2. Pull off rubber cover from brake adjuster (A)
3. Screw adjuster clockwise until brakes are fully on.
4. Slacken adjuster anti-clockwise until brake shoes are just clear of drum.
This will cause shoes to be centralised on drums and ensure that whole brake lining area is used.

WARNING

IF FOR ANY REASON THE ENGINE OR DRIVE AXLE IS REMOVED, WHEN RE-ASSEMBLING MAKE SURE THE PROP. SHAFT IS FULLY SECURED TO THE ENGINE AND DRIVE AXLE BEFORE TIGHTENING UP THE ENGINE/ DRIVE AXLE MOUNTINGS. THIS IS TO PRESERVE THE CORRECT FIXED LENGTH OF THE PROP. SHAFT WHICH IS VITAL TO THE CORRECT RUNNING OF THE DUMPER.



TP087

FIG. 7

SPECIFICATION

See Fig.8

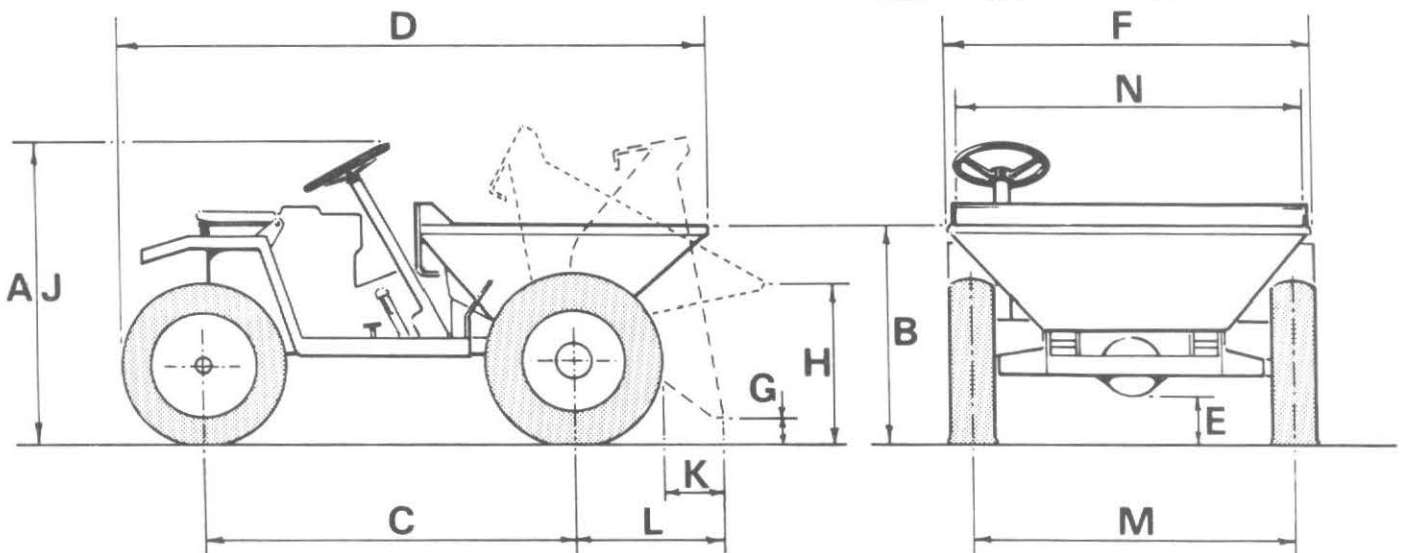
| | | | |
|---|--|-------------|-----------|
| A | Overall height | 4ft. 6in. | (1372 mm) |
| B | Skip loading height | 3ft. 2in. | (965 mm) |
| C | Wheelbase | 5ft. 3½ in. | (1613 mm) |
| D | Overall Length | 8ft. 5 in. | (2565 mm) |
| E | Ground clearance | 8in. | (203 mm) |
| F | Overall width | 5ft 1½in. | (1562 mm) |
| G | Skip ground clearance when tipped | 4in. | (102 mm) |
| H | Skip ground clearance when tipped midway | 2ft. 4in. | (711 mm) |
| J | Overall height when tipped | 4ft. 6in. | (1372 mm) |
| K | Discharge forward of tyre | 11in. | (279 mm) |
| L | Overhang | 2ft. 1in. | (635 mm) |
| M | Wheel track | 4ft. 5½in. | (1359 mm) |
| N | Prow width | 4ft.10in. | (1473 mm) |
| | Turning Circle | 24ft. 9in. | (7544 mm) |
| | Vehicle weight | 16 cwt | (813 kg) |
| | Articulation | 1ft. 2in. | (356 mm) |

Skip Capacities

| | | |
|-----------------|-----------|---------------|
| Water level | 16 cu. ft | (.453 cu.m.) |
| Struck level | 16 cu. ft | (.453 cu.m.) |
| Heaped capacity | 26 cu. ft | (.736 cu.m.) |
| Maximum Payload | 1680 lbs. | (762.72 kgs.) |

Road Speeds at 1650 R.P.M. (Petter Engine)

| | m.p.h. | k.p.h. |
|------|--------|--------|
| 1st | 2.2 | 3.5 |
| 2nd | 5.0 | 8.0 |
| 3rd | 9.25 | 14.9 |
| Rev. | 2.4 | 3.9 |



TPO87

FIG. 8

RECOMMENDED LUBRICATING OILS

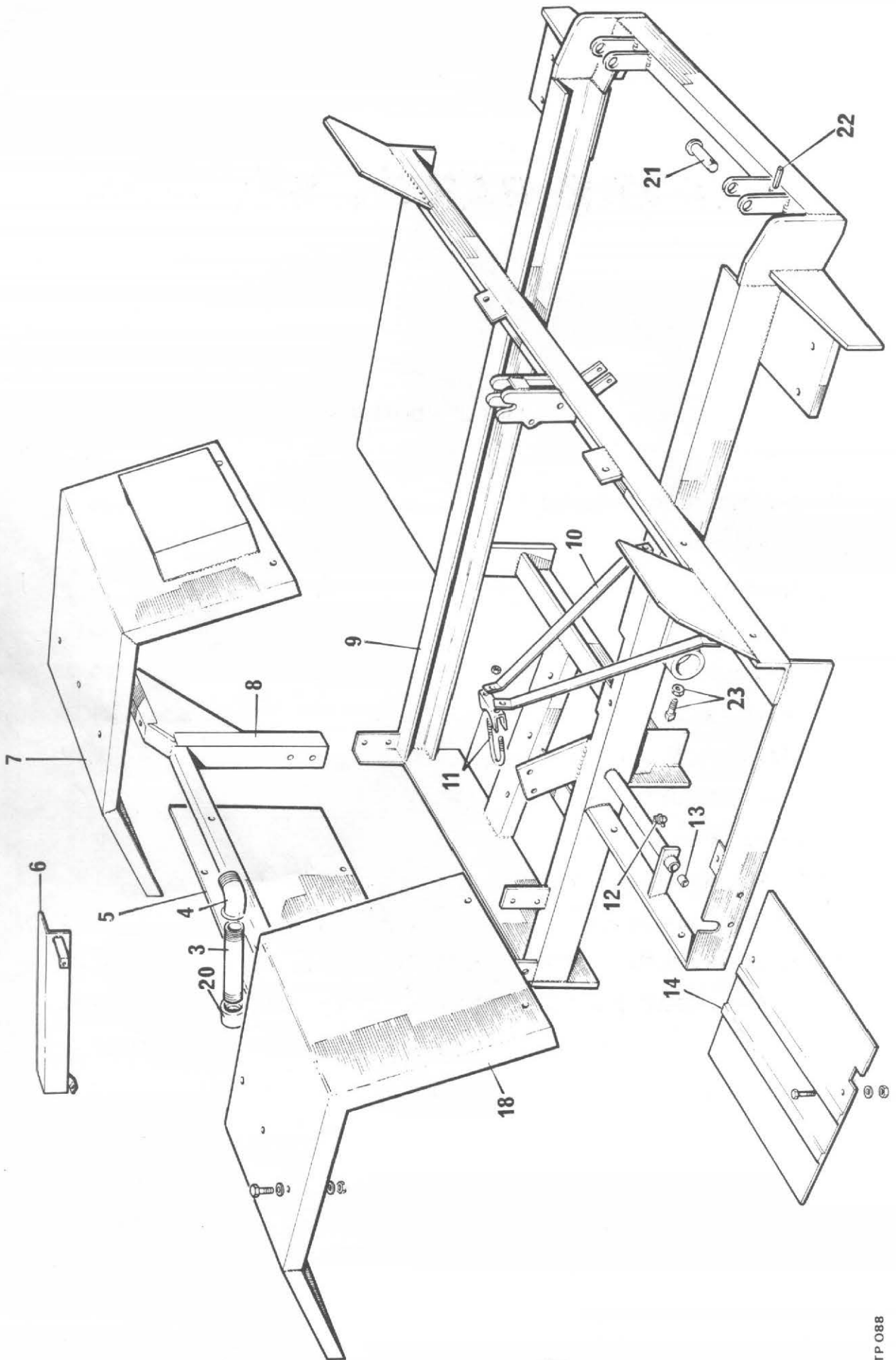
| COMPANY | | ENGINE | TRANSFER BOX & DRIVE AXLE | GEARBOX | WHEEL BEARINGS & OTHER GREASE POINTS | HYDRAULIC SYSTEM |
|--------------------------------------|------------------|-----------------------|------------------------------|-------------------|--|-------------------------|
| (U.K.) ESSO | SUMMER | ESSOLUBE HDX 20W | GEAR OIL GP 90/140 | ESSOLUBE HDX 30 | BEACON 2 | NU TO H44 |
| | WINTER | ESSOLUBE HDX 30 | GEAR OIL GP 140 | ESSOLUBE HDX 30 | BEACON 2 | NU TO H 54 |
| (Overseas) | ABOVE 32°C | ESSOLUBE HDX 20W | GEAR OIL GP 90/140 | ESSOLUBE HDX 30 | BEACON 2 | NU TO H 44 |
| | 0-32°C | ESSOLUBE HDX 10W | GEAR OIL GP 80 | | | NU TO H 40 |
| | BELOW 0°C | | | | | |
| (U.K.) CASTROL | SUMMER | DEUSOL CRB 20 | DEUSOL GEAR EP 90 | DEUSOL CRB 30 | CASTROL SPHEEROL APT 2 | CASTROL HYPIN AWS 32 |
| | WINTER | DEUSOL CRB 30 | DEUSOL GEAR EP 140 | DEUSOL CRB 30 | CASTROL SPHEEROL APT 2 | |
| | ABOVE 32°C | DEUSOL CRB 20 | DEUSOL GEAR EP 90 | | | |
| | 0-32°C | DEUSOL CRB 10 | DEUSOL GEAR EP 80 | | | |
| | BELOW 0°C | | | | | |
| (U.K.) SHELL | SUMMER | ROTELLA SX OIL 20/20W | SPIRAX 90 EP | ROTELLA SX OIL 30 | RETINAX A | TELLUS OIL 27 |
| | WINTER | ROTELLA SX OIL 30 | SPIRAX 140 EP | ROTELLA SX OIL 30 | RETINAX A | |
| | ABOVE 32°C | ROTELLA SX OIL 20/20W | SPIRAX 90 EP | | | |
| | 0-32°C | ROTELLA SX OIL 10W | SPIRAX 80 EP | | | |
| | BELOW 0°C | | | | | |
| (U.K.) BP | SUMMER | VANELLUS M20W | GEAR OIL SAE 90 EP | VANELLUS M30 | ENERGREASE L2 | ENERGOL HLP 65 |
| | WINTER | VANELLUS M30 | GEAR OIL SAE 140 EP | VANELLUS M30 | ENERGREASE L2 | |
| | ABOVE 32°C | VANELLUS M20W | GEAR OIL SAE 90 EP | | | |
| | 0-32°C | VANELLUS M10W | GEAR OIL SAE 80 EP | | | |
| | BELOW 0°C | | | | | |
| (U.K.) MOBIL | SUMMER | DELVAC 1220 | MOBILUBE HD 90 | DELVAC 1230 | MOBILGREASE MP MOBILGREASE SUPER | DTE 24 |
| | WINTER | DELVAC 1230 | MOBILUBE GX 90 | DELVAC 1230 | | |
| | | DELVAC 1230 | MOBILUBE HD 140 | | | |
| | | DELVAC 1220 | MOBILUBE GX 140 | | | |
| | ABOVE 32°C | DELVAC 1220 | MOBILUBE HD 90 | | | |
| | 0-32°C | DELVAC 1220 | MOBILUBE GX 90 | | | |
| | BELOW 0°C | DELVAC 1210 | MOBILUBE HD 80 | DELVAC 1230 | | |
| | ALL TEMPERATURES | DELVAC SPECIAL 10W-30 | MOBILUBE GX 80 | | | |
| (U.K.) WALKERS CENTURY | SUMMER | CENTLUBE HD 20 | CENTURY EP 90 | CENTLUBE HD 30 | REGULUS A2 | CENTURY PWLA HYD OIL |
| | WINTER | CENTLUBE HD 30 | CENTURY EP 140 | CENTLUBE HD30 | REGULUS A2 | CENTURY PWLA HYD OIL |
| | ABOVE 32°C | CENTLUBE HD 20 | CENTURY EP 90 | | | |
| | 0°C-32°C | CENTLUBE HD 10 | CENTURY EP 80 | | | |
| | BELOW 0°C | | | | | |
| (Overseas) | BELOW 0°C | | | | | |

IN THE UNLIKELY EVENT OF THE ABOVE OILS NOT BEING AVAILABLE
EQUIVALENT OILS SUPPLIED BY A REPUTABLE MANUFACTURER MAY BE USED

SPARE PARTS SECTION

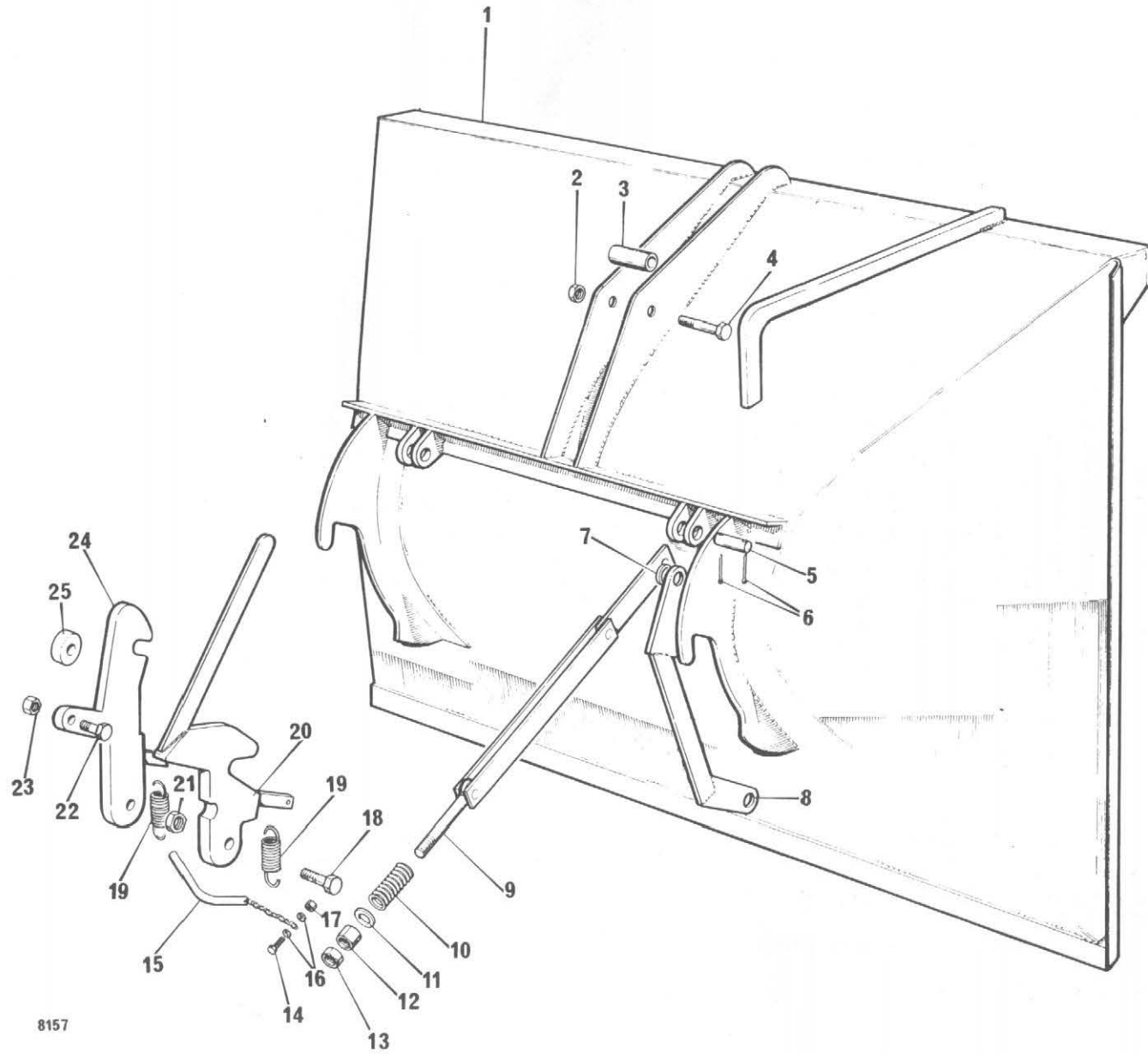
LIST OF CONTENTS

| Title | Page No. |
|---|----------|
| CHASSIS MUDWINGS & COVERS | 14, 15 |
| SKIP & LINKAGE | 16, 17 |
| FLYWHEEL & CLUTCH ASSEMBLY | 18 |
| PROP SHAFT | 19 |
| GEARBOX | 20–23 |
| DRIVE AXLE | 24, 25 |
| BRAKE DRUM ASSEMBLY | 26, 27 |
| PEDALS & CONTROLS | 28, 29 |
| DRIVE WHEELS & TYRES | 30 |
| STEERING WHEELS & TYRES | 31 |
| STEERING ASSEMBLY | 32, 33 |
| STEERING GEAR (CAM & ROLLER TYPE) | 34, 35 |
| STEERING GEAR (RECIRCULATING BALL TYPE) | 36, 37 |



CHASSIS MUDWINGS AND COVERS

| Item No. | Part No. | Description | Qty |
|----------|-----------|--|-----|
| 2 | 20072.A01 | Seat | 1 |
| 3 | 2 SE 100 | Exhaust Pipe (Petter) | 1 |
| | 2 SE 95 | Exhaust Pipe (Lister) | 1 |
| 4 | C 165-3 | Elbow 1" BSP Male & Female -(Petter) | 1 |
| | 2 SE 98 | Elbow 1 1/4" BSP Male & Female -(Lister) | 1 |
| 5 | 2 SE 94 | Rear Cover (Petter) | 1 |
| | 2 SE 88 | Rear Cover (Lister) | 1 |
| 6 | 20108.A01 | Exhaust Shroud (Petter) | 1 |
| 7 | 2 SE 61 | Left Hand Mudwing | 1 |
| 8 | 2 SE 96 | Rear Mudwing Support | 1 |
| 9 | 2 SE 60 | Chassis (Petter) | 1 |
| | 2 SE 59 | Chassis (Lister) | 1 |
| 10 | 2 SE 83 | Steering Column Brace | 2 |
| 11 | SYC 3 | Steering Column Clamp 1 3/8" (Recirculating Ball type only) | 1 |
| | SYC 7 | Steering Column Clamp 1 1/4" (Cam & Roller type only) | 1 |
| 12 | T90 | Grease Nipple | 1 |
| 13 | WB0808 | Bush | 2 |
| 14 | 2 SE 85 | Drivers Footplate | 1 |
| | 2SE 118 | Exhaust Bend (Lister ST1 only) | 1 |
| 18 | 40053.A01 | Right hand mudwing | 1 |
| 20 | C165-2 | Socket 1" BSP (Petter) | 1 |
| | 2SE 102 | Socket 1 1/4 BSP (Lister) | 1 |
| 21 | 2SE 106 | Pivot Pin | 2 |
| 22 | C 129A | Tension Pin | 2 |
| 23 | C.212 | 12mm x 25mm long Cup Point Screw and Lock Nut . | 2 |
| | 69S02E | Bolt (Seat fixing) | 4 |
| | 41S04 | Washer (Seat fixing) | 4 |
| | DM 159 | M/c Identification & payload - Label | 1 |
| | DM 154 | WINGET - Label | 3 |
| | DM 180 | Winget Dumper Safety - Label | 1 |
| | DM 197 | Recommended Lubricants - Label | 1 |

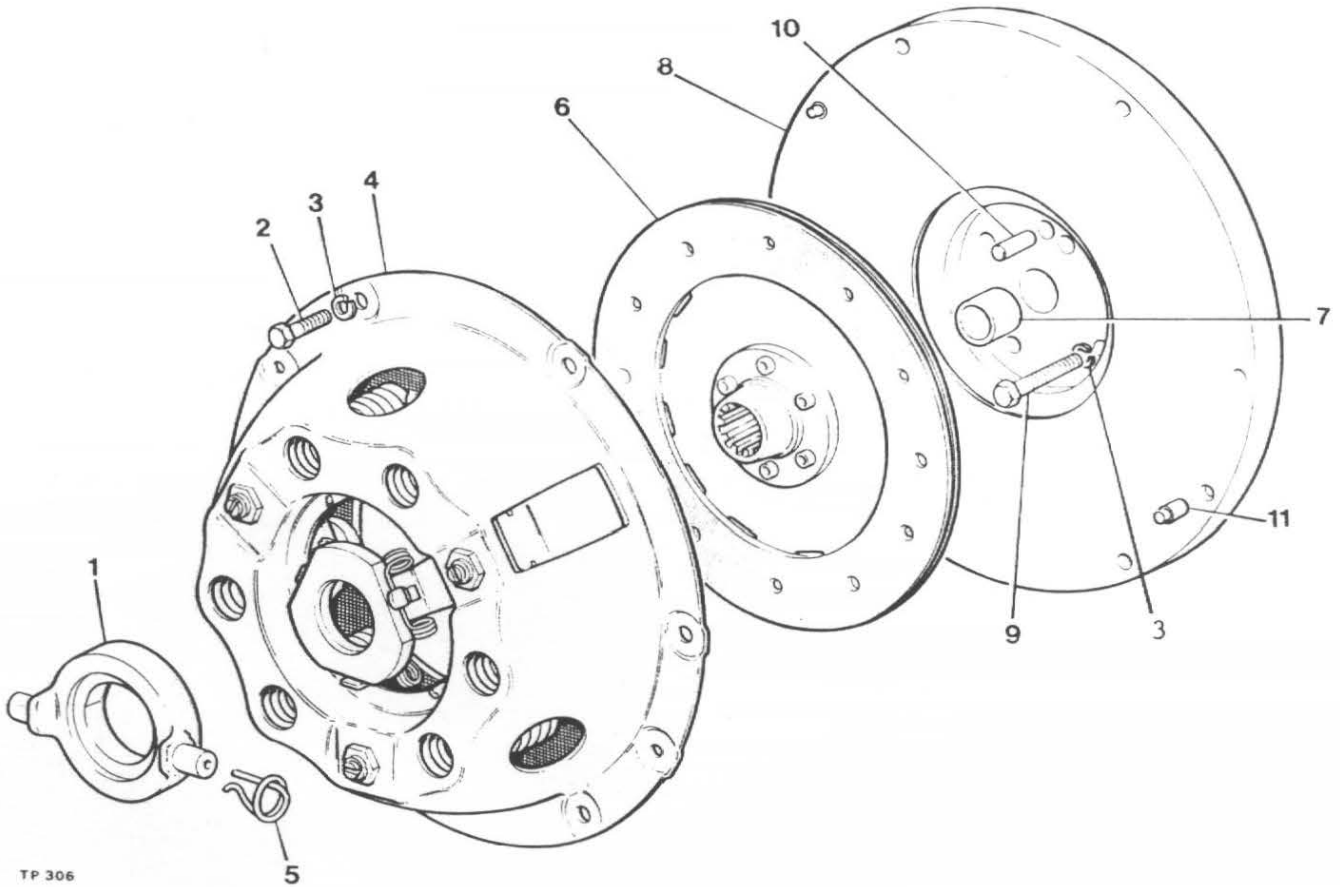


8157

SKIP AND LINKAGE

| Item No. | Part No. | Description | Qty |
|----------|-----------|---|-----|
| 1 | 2 SE 63 | Skip | 1 |
| 2 | | Nut 5/8" BSF | 1 |
| 3 | C 140 A | Tube | 1 |
| 4 | | Bolt 5/8" BSF x 4.1/2" Long | 1 |
| 5 | 2 SE 69 | Pin - (Check Chain) | 2 |
| 6 | | Split Pin 1/8" x 1" Long | 2 |
| 7 | 2 SE 73 | Spacer | 2 |
| 8 | 2 SE 70 | Radius Rod | 2 |
| 9 | 2 SE 68 | Skip Check Link | 2 |
| 10 | C173 A | Spring | 2 |
| 11 | C143 B | Plain Washer | 2 |
| 12 | | Nut 1/2" BSF | 2 |
| 13 | | Locknut 1/2" BSF | 2 |
| 14 | | Setscrew 1/4" BSF x 1.1/2" Long | 1 |
| 15 | 2 SE 99 | Pin and Chain | 1 |
| 16 | | Washer 1/4" Flat | 2 |
| 17 | | Nut 1/4" BSF | 1 |
| 18 | | Bolt 5/8" UNF x 3 1/4" long | 1 |
| 19 | C 173 B | Spring | 2 |
| 20 | 2 SE 67 | Skip catch Handle Assembly | 1 |
| 21 | | Nut 5/8" BSF | 1 |
| 22 | | Bolt 1/2" BSF x 1.1/4" Long | 1 |
| 23 | | Nut 1/2" BSF | 1 |
| 24 | 2 SE 97 | Midway Catch | 1 |
| 25 | 10569.A01 | Spacer in Lieu of Midway Catch | 1 |

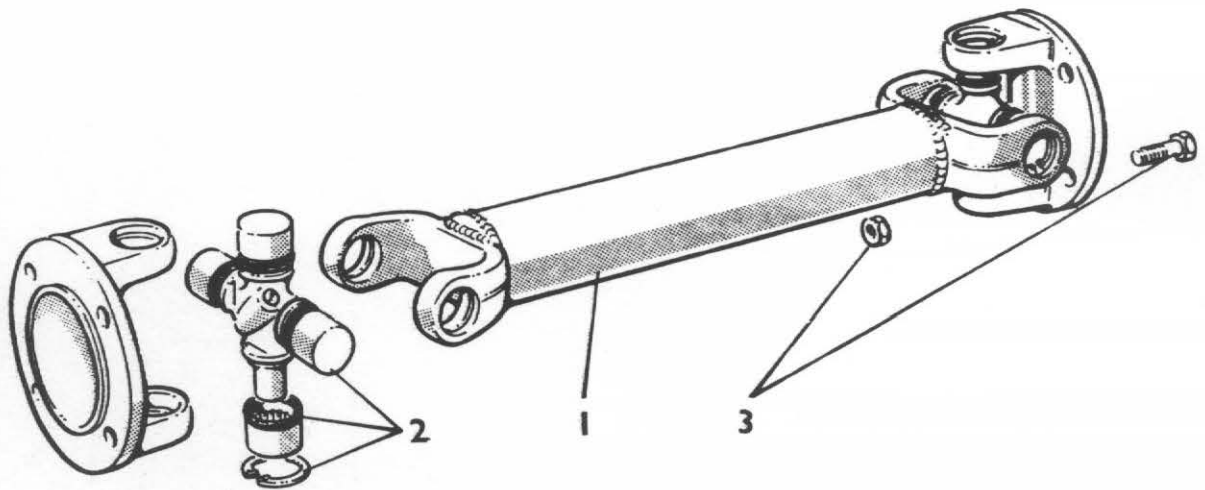
FLYWHEEL AND CLUTCH ASSEMBLY



TP 306

| Item No. | Part No. | Description | Qty. |
|----------|------------|--|------|
| 1 | 10579A01 | Clutch Release Bearing | 1 |
| 2 | 28S02D | Screw Set | 6 |
| 3 | 41S04 | Washer Spring | 10 |
| 4 | 10597A01 | Cover Assembly | 1 |
| 5 | 10579A101 | Retainer Spring | 2 |
| 6 | 10598A02 | Drive Plate | 1 |
| 7 | 10580A0101 | Bush | 1 |
| 8 | 10580A02 | Flywheel Assembly (comprises of items 7, 8, & 11) | 1 |
| 9 | 1S02C | Bolt, Petter PH Engine (drill for locking wire) | 4 |
| 9A | 6S02B | Bolt, Lister Engine (drill for locking wire) | 4 |
| 10 | C321 | Dowel | 1 |
| 11 | 10580A0102 | Dowel | 2 |
| | 10948A02 | Clutch Kit (comprises of items 1, 4, 5 & 6) | 1 |

It is recommended that instead of drilling the head of the bolts (item 9) for locking wire that one of each of tabwashers part no's 10531A02 and 10531A03 are used to prevent the bolts working loose.



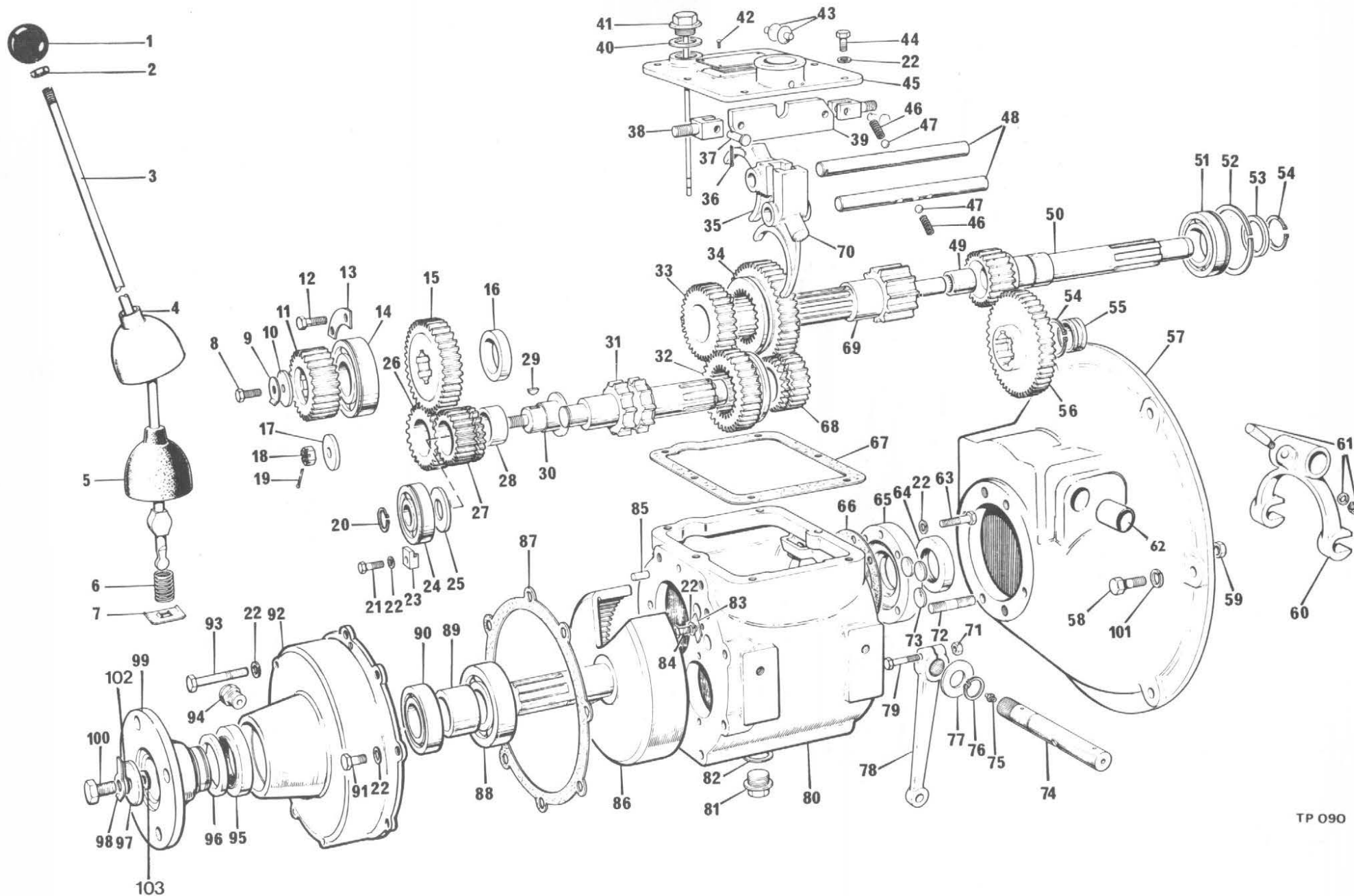
TP 089

PROPSHAFT

| Item No. | Part No. | Description | Qty. |
|----------|----------|-------------|------|
| 1 | 20265A01 | Propshaft | 1 |

Two different propshafts have been fitted in the past, whilst shafts are interchangeable the repair kits are not. When ordering spares check dimensions of old universal joint before placing order

| | | | |
|----|----------|--------------------------------|---|
| 2 | 10313A04 | Kit UJ, 63mm across, 22mm Cups | 2 |
| 2 | V601300 | Kit UJ, 63mm across, 27mm Cups | 2 |
| 3 | 6S02Z | Bolt 5/16"UNF x 1" | 8 |
| 3A | 107S02 | Nut Nyloc 5/16UNF | 8 |



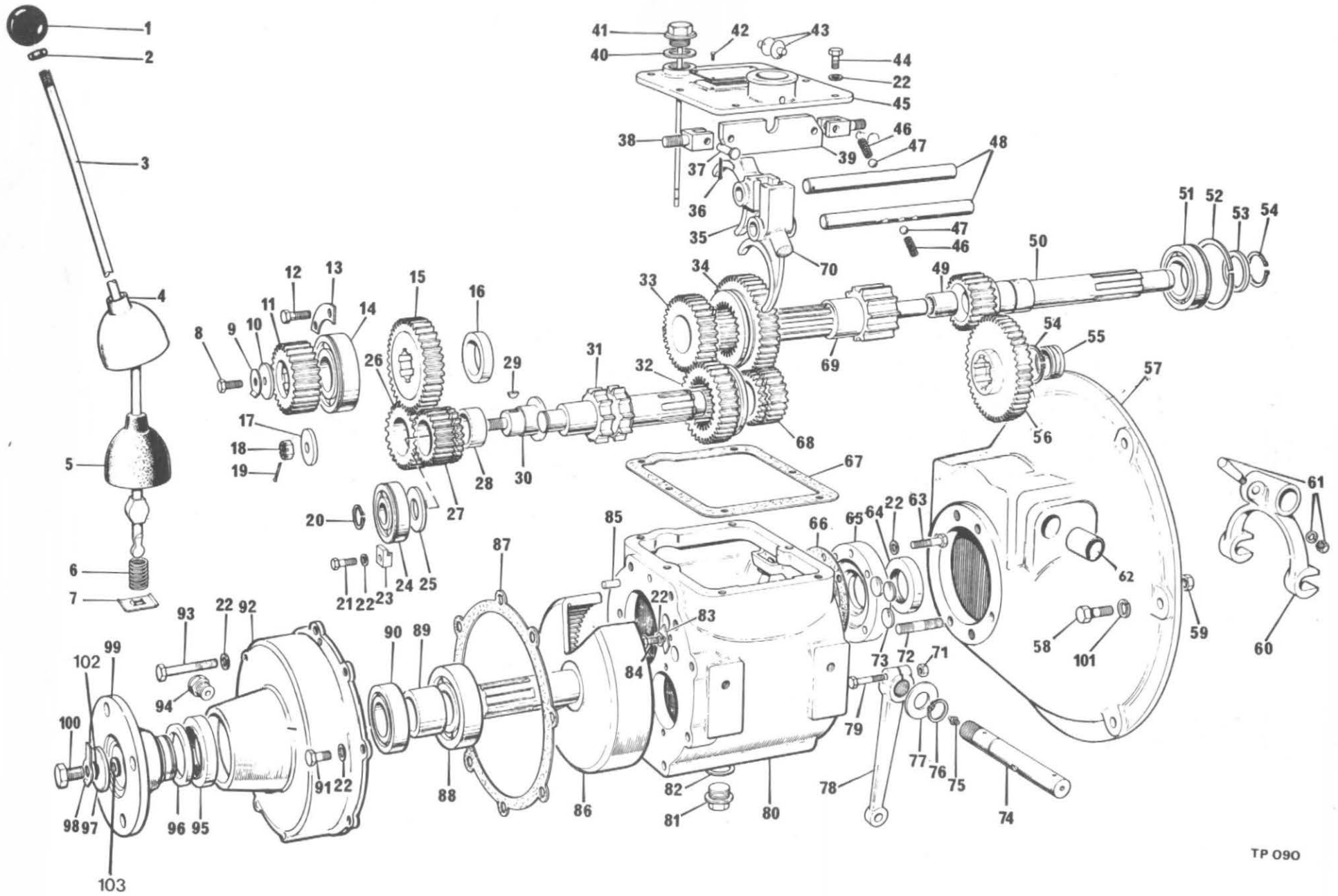
GEARBOX 40M/42 - NEWAGE 30106.A01

| Item No. | Part No. | Description | Qty. |
|----------|-------------|------------------------------------|------|
| 1 | 30101.A0201 | Knob | 1 |
| 2 | 95S .03 | Locknut - Gear Lever | 1 |
| 3 | 30106.A0102 | Gear Lever | 1 |
| 4 | 30101.A0203 | Cap - Gear Lever | 1 |
| 5 | 30101.A0204 | Cover - Gear Lever | 1 |
| 6 | 30101.A0205 | Spring - Gear Lever | 1 |
| 7 | 30101.A0206 | Retaining Plate - Gear Lever | 1 |
| 8 | 28S.03E | Screw - Mainshaft | 1 |
| 9 | 30190.A0101 | Lock Washer - Tab | 1 |
| 10 | 30190.A0102 | Washer - Reduction Pinion | 1 |
| 11 | 30190.A0103 | Reduction Pinion | 1 |
| 12 | 28S.01B | Screw - Bearing Retainers | 2 |
| 13 | 30190.A0104 | Bearing Retainer - Small | 1 |
| 14 | 30101.A0210 | Bearing - Mainshaft Rear | 1 |
| 15 | 30101.A0211 | Output Gear | 1 |
| 16 | 30101.A0212 | Spacer - Output Gear | 1 |
| 17 | 30101.A0213 | Washer - Reverse Pinion Gear | 1 |
| 18 | 102S .04 | Nut - Reverse Spindle | 1 |
| 19 | 44S .02C | Split Pin | 1 |
| 20 | 30101.A0215 | Circlip | 1 |
| 21 | 28S .01D | Screw | 2 |
| 22 | 67S .01 | Washer | A/R |
| 23 | 30190 A0105 | Clip, Layshaft Bearing | 2 |
| 24 | 30101.A0216 | Layshaft Bearing | 1 |
| 25 | 30101.A0217 | Bearing Spacer | 1 |
| 26 | 30101.A0218 | Reverse Pinion | 1 |
| 27 | 30101.A0219 | Reverse Speed Gear | 1 |
| 28 | 30101.A0220 | Bush - Reverse Pinion | 1 |
| 29 | 30101.A0221 | Key, Reverse Pinion Shaft | 1 |
| 30 | 30101.A0222 | Shaft, - Reverse Pinion | 1 |
| 31 | 30101.A0223 | Layshaft | 1 |
| 32 | 30101.A0224 | 2nd Speed Sliding Gear | 1 |
| 33 | 30101.A0225 | 2nd Speed Gear | 1 |
| 34 | 30101.A0226 | 1st Speed Gear | 1 |
| 35 | 30101.A0227 | Selector Fork 2nd & 3rd | 1 |
| 36 | 44S.01C | Split Pin, Interlock | 2 |
| 37 | 30101.A0228 | Clevis Pin, Interlock | 2 |
| 38 | 30101.A0229 | Stud, Interlock | 2 |
| 39 | 30101.A0230 | Interlock Plate | 1 |
| 40 | 42S .05 | Seal, Dipstick | 1 |
| 41 | 30101.A0232 | Dipstick | 1 |
| 42 | 30101.A0233 | Drive Screw | 4 |
| 43 | 30101.A0234 | Pad - Gear Lever | 2 |
| 44 | 28S.01C | Screw - Top Cover | 6 |
| 45 | 30101.A0235 | Top Cover | 1 |
| 46 | 30097.A0185 | Detent Spring | 2 |
| 47 | 30101.A0236 | Detent Ball | 2 |
| 48 | 30101.A0237 | Selector Shaft | 2 |
| 49 | 30101.A0238 | Bearing, Primary Shaft | 1 |
| 50 | 30101.A0239 | Primary Shaft | 1 |

IMPORTANT: With effect from G/Box Batch No.B 1238 the following changes will take place:-

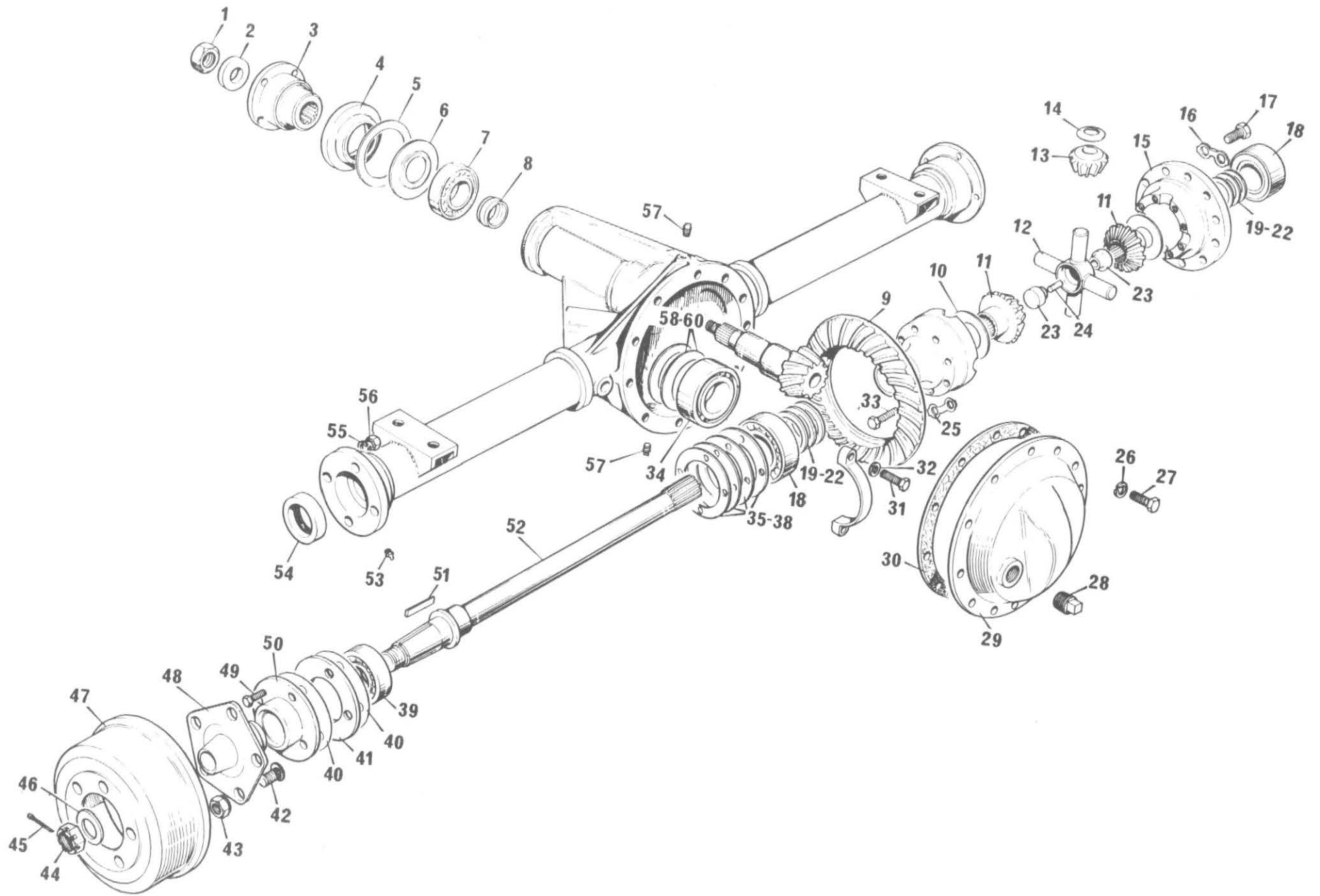
| Item | Old Part No. | Description | New Part No. |
|------|--------------|--------------------|--------------|
| 41 | 30101.A0232 | Dipstick | 30218.A0223 |
| 31 | 30101.A0223 | Layshaft | 30101.A0266 |
| 55 | 30101.A0244 | Bearing - Layshaft | 30101.A0267 |

The layshaft will only be supplied complete with bearing as a replacement under part no. 30101.A0268 and will be totally interchangeable with current layshaft. (New Oil Capacity now 2 Litres previously .85 Litres)



GEARBOX 40M/42 - NEWAGE 30106.A01

| Item No. | Part No. | Description | Qty. |
|----------|-------------|--|------|
| 51 | 30101.A0240 | Input Bearing | 1 |
| 52 | 30101.A0241 | Snap Ring | 1 |
| 53 | 30101.A0242 | Bearing Spacer | 1 |
| 54 | 30101.A0243 | Circlip | 2 |
| 55 | 30101.A0244 | Bush - Layshaft | 1 |
| 56 | 30101.A0245 | 1st Reduction Gear | 1 |
| 57 | 30101.A0246 | Clutch Housing | 1 |
| 58 | 3S.03E | Bolt - 3/8" B.S.F. x 1" (Petter) (G/Box - Eng.). | 8 |
| | 69S.03E | Bolt - 3/8" U.N.C. x 1" (Lister) (" " "). | 8 |
| 59 | 9S.03 | Nut 3/8" U.N.F. | 6 |
| 60 | 30097.A0110 | Clutch Release Fork | 1 |
| 61 | 30097.A0111 | Cotter, Nut & Washer S/A | 1 |
| 62 | 30097.A0114 | Bush, Cross Shaft | 2 |
| 63 | 6S.01B | Bolt, Front Cover | 4 |
| 64 | 30101.A0247 | Oil Seal - Input | 1 |
| 65 | 30101.A0248 | Front Cover | 1 |
| 66 | 30101.A0249 | Joint, Front Cover | 1 |
| 67 | 30101.A0250 | Joint, Top Cover | 1 |
| 68 | 30101.A0219 | Reverse Speed Gear | 1 |
| 69 | 30190.A0106 | Mainshaft | 1 |
| 70 | 30101.A0252 | Selector Fork 1st & Rev | 1 |
| 71 | 9S.01 | Nut, Clutch Lever | 1 |
| 72 | 30101.A0253 | Stud, Clutch Housing | 6 |
| 73 | 30101.A0254 | Sealing Disc, Selector Shaft | 3 |
| 74 | 30101.A0255 | Clutch Cross Shaft | 1 |
| 75 | 30103.A0102 | Grease Nipple | 2 |
| 76 | 30101.A0256 | Circlip | 1 |
| 77 | 30097.A0133 | Washer - Cross Shaft | 1 |
| 78 | 30097.A0109 | Clutch Release Lever | 1 |
| 79 | 6S.01C | Bolt - Clutch Lever | 1 |
| 80 | 30101.A0262 | Casing | 1 |
| 81 | 30190.A0108 | Drain Plug | 1 |
| 82 | 42S.05 | Seal, Drain Plug | 1 |
| 83 | 30101.A0259 | Selector Locking Strip | 1 |
| 84 | 28S.01C | Setscrew | 2 |
| 85 | 30097.A0155 | Dowel | 2 |
| 86 | 30190.A0110 | Internal Gear | 1 |
| 87 | 30190.A0112 | Joint - Reduction Housing | 1 |
| 88 | 30190.A0111 | Bearing - Internal Gear Front | 1 |
| 89 | 30101.A0260 | Spacer | 1 |
| 90 | 30190.A0113 | Bearing - Internal Gear Rear | 1 |
| 91 | 28S.02D | Screw - Hex. Hd. | 5 |
| 92 | 30190.A0114 | Reduction - Housing | 1 |
| 93 | 6S.02J | Bolt - Hex. Hd. | 1 |
| 94 | 30097.A0171 | Breather | 1 |
| 95 | 30097.A0132 | Oil Seal - Rear | 1 |
| 96 | 30101.A0265 | Dust Shield | 1 |
| 97 | 30101.A0208 | Washer - Coupling | 1 |
| 98 | 30101.A0207 | Lock Washer | 1 |
| 99 | 30106.A0101 | Coupling | 1 |
| 100 | 28S.05E | Screw - Coupling | 1 |
| 101 | 41S.05 | Spring Washer | 8 |
| 102 | 30143.A0111 | Fibre Washer | 1 |
| 103 | 30143.A0101 | Fibre Washer | 1 |



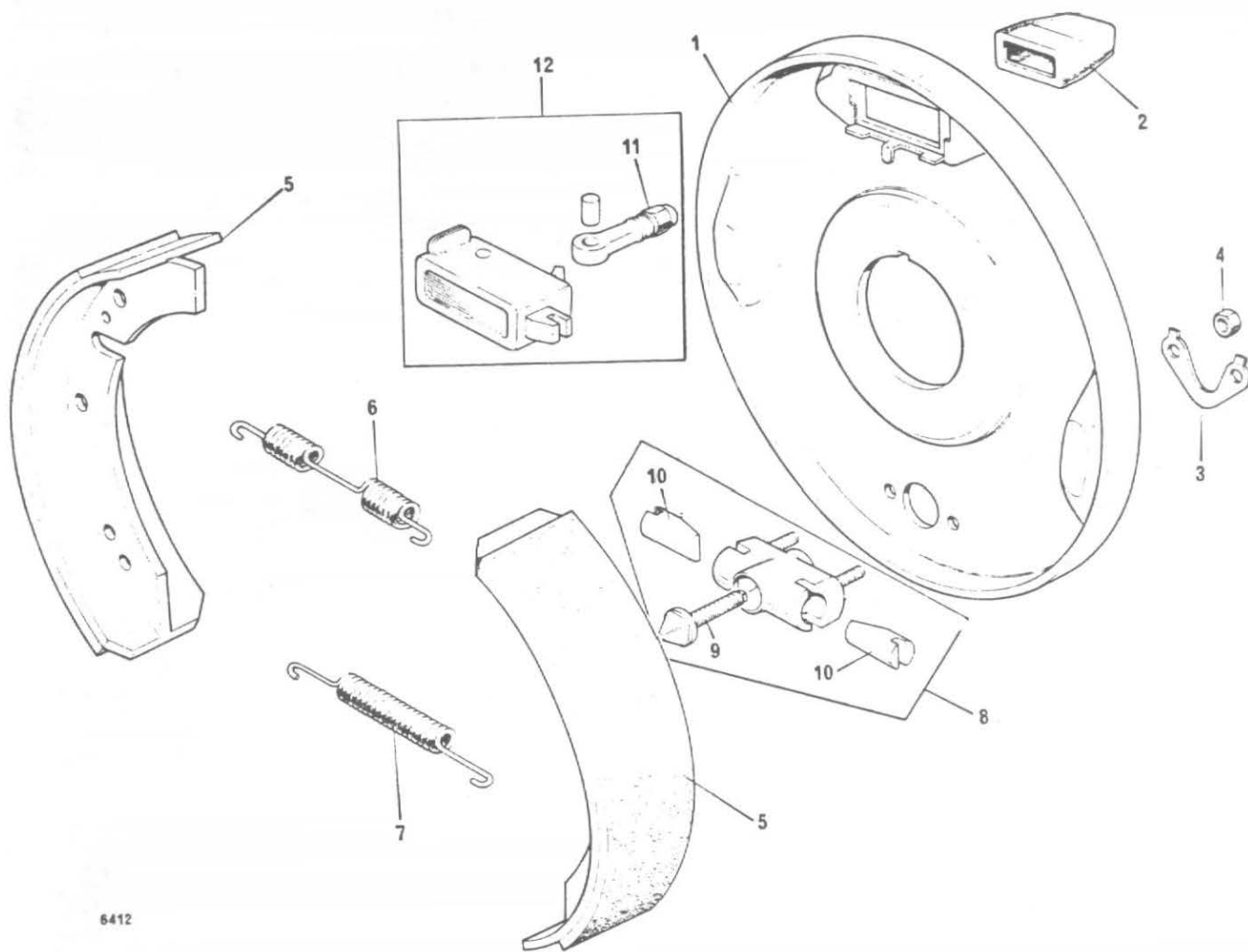
SALISBURY AXLE (30085.A03)

| Item No. | Part No. | Description | Qty. |
|----------|-------------|--|------|
| | 30085.A03 | Drive Axle Complete 04HA001268CFA | 1 |
| 1 | 30166.A0106 | Pinion Lock Nut | 1 |
| 2 | 30088.A0101 | Pinion Washer | 1 |
| 3 | 30085.A0301 | Companion Flange | 1 |
| 4 | 30166.A0156 | Pinion Oil Seal | 1 |
| 5 | 30166.A0146 | Pinion Seal Gasket | 1 |
| 6 | 30085.A0102 | Pinion Oil Slinger | 1 |
| 7 | 30085.A0103 | Pinion Bearing Outer | 1 |
| 8 | 30085.A0104 | Collapsible Spacer | 2 |
| 9 | 30085.A0105 | Service Drive Gear | 1 |
| 10 | 30085.A0106 | Differential Side Gear Thrust Washer | 4 |
| 11 | 30085.A0107 | Differential Side Gear | 2 |
| 12 | 30085.A0108 | Differential Pinion Mate Shaft | 1 |
| 13 | 30085.A0109 | Differential Pinion Mate | 4 |
| 14 | 30085.A0110 | Differential Pinion Mate Thrust Washer | 4 |
| 15 | 30085.A0111 | Differential Case | 1 |
| 16 | 30085.A0112 | Drive Gear Lock Straps | 5 |
| 17 | 30085.A0113 | Drive Gear Bolts | 10 |
| 18 | 30085.A0114 | Differential Bearings | 2 |
| 19 | 30085.A0115 | Differential Bearing Shims .003" | A/R |
| 20 | 30085.A0116 | Differential Bearing Shims .005" | A/R |
| 21 | 30085.A0117 | Differential Bearing Shims .010" | A/R |
| 22 | 30085.A0118 | Differential Bearing Shims .030" | A/R |
| 23 | 30085.A0119 | Axle Shaft Spacer | 2 |
| 24 | 30242.A0144 | Shaft Spacer Roll Pin | 1 |
| 25 | 30085.A0120 | Differential Case Lock Strap | 4 |
| 26 | 30085.A0121 | Bolt (Differential Cover) | 10 |
| 27 | | | |
| 28 | 30085.A0122 | Oil Level Plug | 1 |
| 29 | 30085.A0123 | Differential Cover | 1 |
| 30 | 30085.A0124 | Differential Cover Gasket | 1 |
| 31 | 30166.A0103 | Differential Bearing Cap Bolts | 4 |
| 32 | 30166.A0157 | Differential Cap Lock Washer | 4 |
| 33 | 30085.A0125 | Differential Case Bolts | 8 |
| 34 | 30085.A0126 | Pinion Bearing - Inner | 1 |
| 35 | 30085.A0127 | Wheel Bearing Shim .003" | A/R |
| 36 | 30085.A0128 | Wheel Bearing Shim .005" | A/R |
| 37 | 30085.A0129 | Wheel Bearing Shim .010" | A/R |
| 38 | 30085.A0130 | Wheel Bearing Shim .030" | A/R |
| 39 | 30085.A0131 | Hub Bearing | 2 |
| 40 | 30085.A0132 | Hub Oil Seal Gasket | 4 |
| 41 | 30085.A0133 | Bearing Retainer Plate | 2 |
| 42 | 30085.A0134 | Wheel Stud | 10 |
| 43 | | | |
| 44 | 30085.A0135 | Shaft Nut | 2 |
| 45 | 30085.A0136 | Shaft Split Pin 44#04E | 2 |
| 46 | 30085.A0137 | Shaft Washer | 2 |
| 47 | 30085.A0138 | Brake Drum | 2 |
| 48 | 30085.A0139 | Wheel Hub | 2 |
| 49 | 30085.A0140 | Setscrew | 8 |
| 50 | 30085.A0141 | Hub Oil Seal Assembly | 2 |
| | 30085.A0142 | Hub Oil Seal (Not Illustrated) | 2 |
| 51 | 30085.A0143 | Shaft Key | 2 |
| 52 | 30085.A0144 | Axle Shaft | 2 |
| 53 | 30085.A0145 | Grease Nipple - Bearing | 2 |
| 54 | 30085.A0146 | Shaft Oil Seal | 2 |

| Item No. | Part No. | Description | Qty. |
|----------|-------------|--|------|
| 55 | 30170.A0110 | Lock Washer | 8 |
| 56 | 30171.A0109 | Nut | 8 |
| 57 | 30085.A0147 | Drain & Filler Plug | 2 |
| 58 | 30085.A0148 | Pinion Bearing Shims .003" | A/R |
| 59 | 30085.A0149 | Pinion Bearing Shims .005" | A/R |
| 60 | 30085.A0150 | Pinion Bearing Shims .010" | A/R |
| | 30085.A0151 | Brake Assembly R.H. (See Sep. Illustration) | 1 |
| | 30085.A0152 | Brake Assembly L.H. (" " " ") | 1 |
| | 30085.A0166 | Service Carrier & Tube Assy..... | 1 |
| | 30085.A0167 | Diff. case Assy. (Comp. items 10,11,12,13,14,15, 23,24,25 & 33..... | 1 |

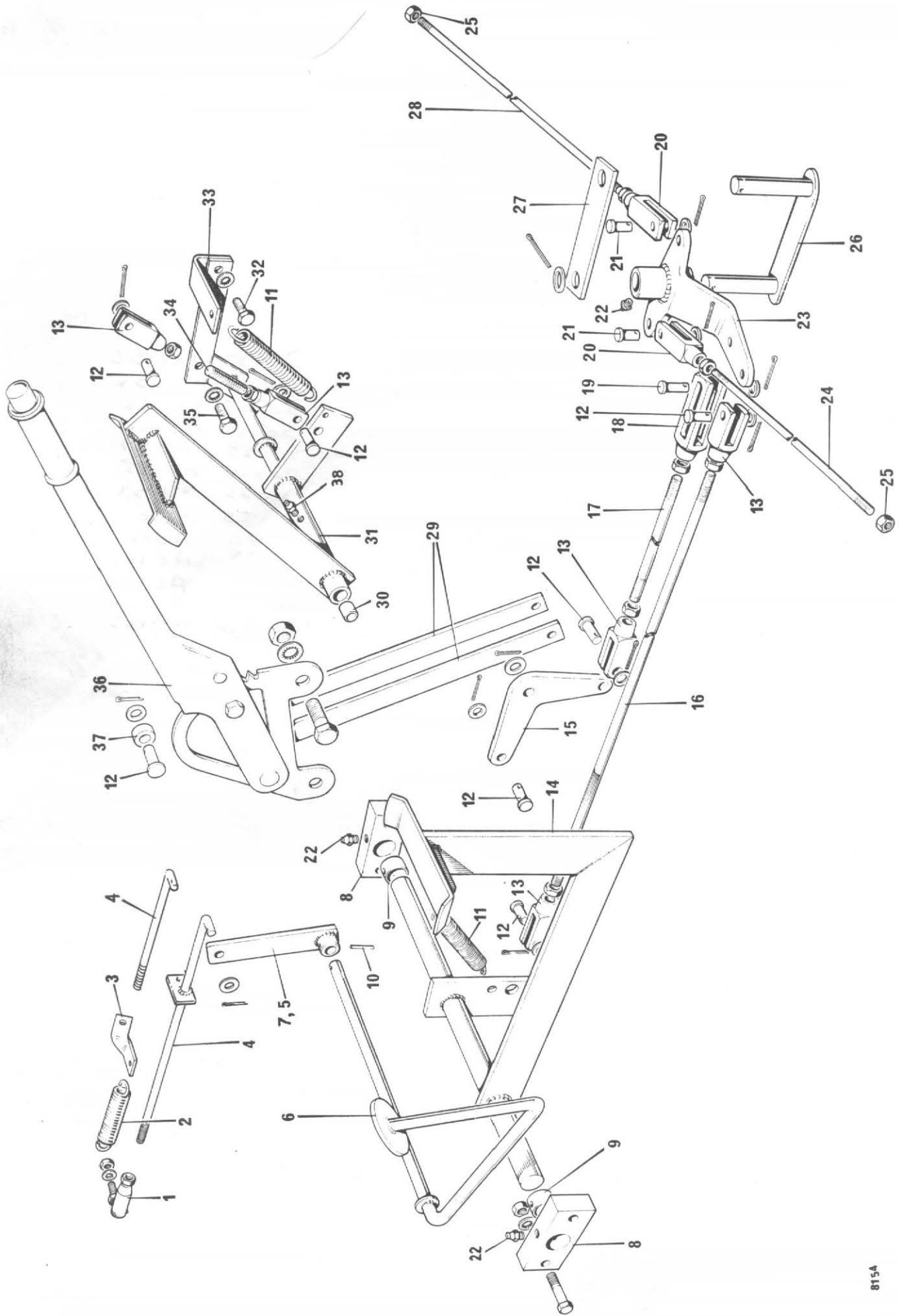
BRAKE DRUM ASSEMBLY

30085.A0151/30085.A0152 (SALISBURY AXLE)



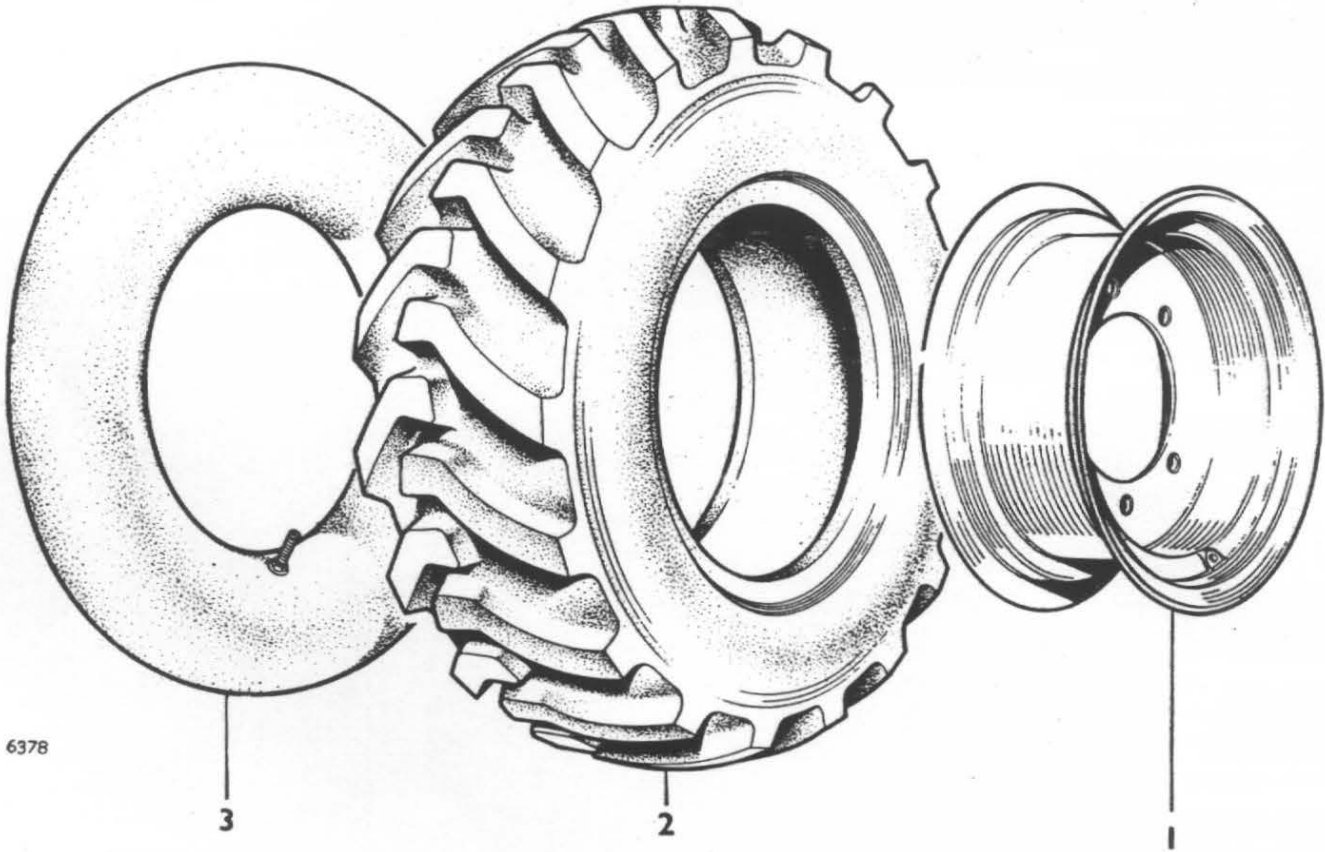
6412

| Item No. | Part No. | Description | Qty. |
|----------|-------------|--|------|
| 1 | 30085.A0153 | Backplate Right Hand | 1 |
| | 30085.A0154 | Backplate Left Hand | 1 |
| 2 | 30085.A0155 | Boot | 2 |
| 3 | 30088.A0156 | Locking Plate | 2 |
| 4 | 30085.A0157 | Nut | 4 |
| 5 | 30085.A0158 | Brake Shoes LB.203(Pairs). | 2 |
| 6 | 30085.A0159 | Pull off Spring | 2 |
| 7 | 30085.A0160 | Tension Spring | 2 |
| 8 | 30085.A0161 | Adjusting Assembly (with items 9 & 10) | 2 |
| 9 | 30085.A0162 | Adjuster Screw | 2 |
| 10 | 30088.A0163 | Tapper | 4 |
| 11 | 30085.A0164 | Pull Rod and Pin | 2 |
| 12 | 30085.A0165 | Expander Assembly (inch item 11) | 2 |



PEDALS AND CONTROLS

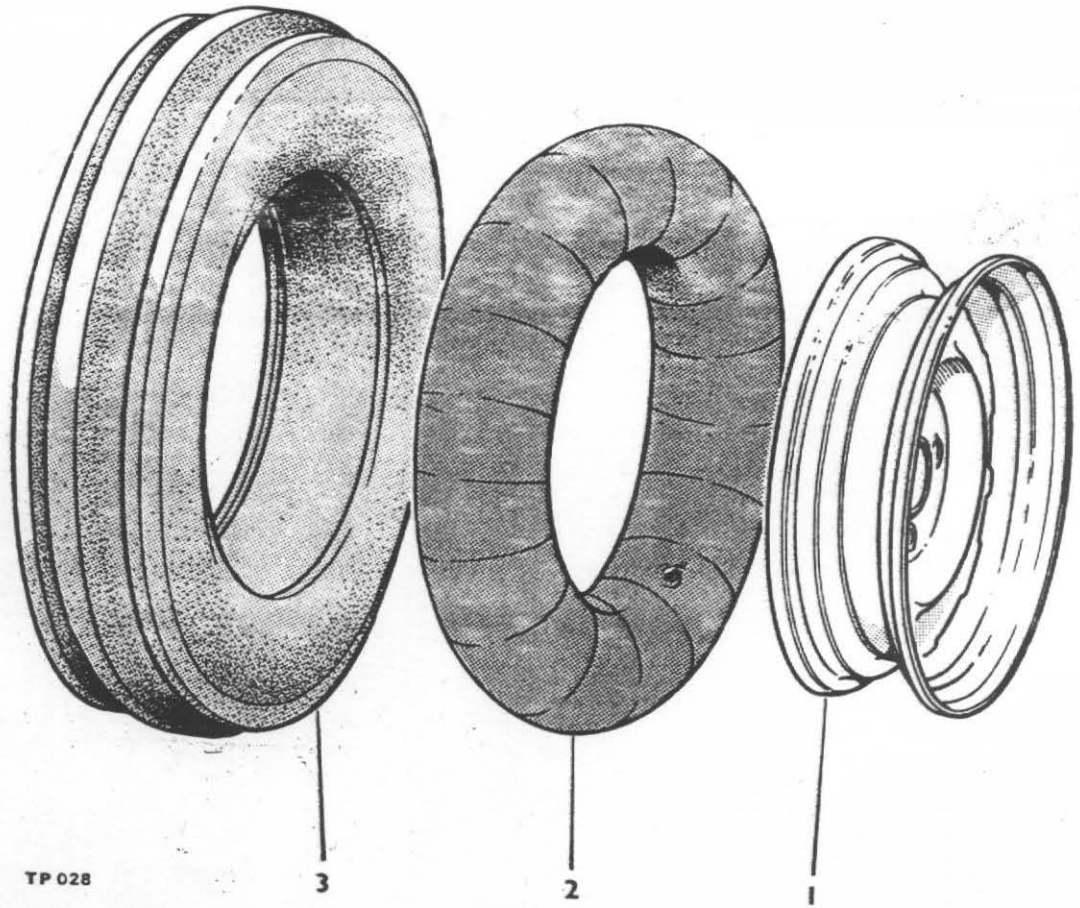
| Item No. | Part No. | Description | Qty |
|----------|----------|---|-----|
| 1 | C 160/B | Accelerator Ball Joint | 1 |
| 2 | C 173/D | Accelerator Spring | 1 |
| 3 | C 163 | Accelerator Spring Bracket | 1 |
| 4 | 2SE 117 | Accelerator Rod — Lister | 1 |
| | C 299 | Accelerator Rod — Petter | 1 |
| 5 | C 129 | Accelerator Lever (Petter) | 1 |
| 6 | C 137 | Accelerator Pedal | 1 |
| 7 | C308 | Accelerator Lever (Lister). | 1 |
| 8 | 2 SE 84 | Footbrake Bearing Block | 2 |
| 9 | WB 1212 | Bush | 2 |
| 10 | C 251-1 | Tension Pin | 1 |
| 11 | C 173/B | Spring | 2 |
| 12 | C 174/X | Pin 3/8" Dia | 7 |
| 13 | C 174/A | Clevis 3/8" BSF | 5 |
| 14 | 2 SE 64 | Footbrake Pedal | 1 |
| 15 | 2 SE 82 | Bell Crank Lever | 1 |
| 16 | 2 SE 53 | Brake Rod 42" x 3/8" Dia. | 1 |
| 17 | 2 ST 73 | Brake Rod 31.1/4" x 3/8" Dia. | 1 |
| 18 | C 174/B | Clevis 3/8" BSF Slotted | 1 |
| 19 | C 174/XL | Pin 3/8" Dia. | 1 |
| 20 | C 174/E | Clevis 5/16" UNF | 2 |
| 21 | C 174/Y | Pin 5/16" Dia. | 2 |
| 22 | 5 ST 100 | Grease Nipple | 3 |
| 23 | C 272 | Compensator | 1 |
| 24 | 4/60 155 | Brake Rod 12" x 5/16" Dia. | 1 |
| 25 | | Locknut 5/16" UNF | 2 |
| 26 | C 271 | Link Assembly | 1 |
| 27 | C 189 A | Link | 1 |
| 28 | 2 SE 54 | Brake Rod 32" x 5/16" Dia. | 1 |
| 29 | 2 SE 89 | Handbrake Link Strap | 2 |
| 30 | WB 0808 | Bush | 2 |
| 31 | 2 SE 65 | Clutch Pedal | 1 |
| 32 | | Setscrew 3/8" UNF x 1" Long | 1 |
| 33 | 2 SE 75 | Clutch Pedal Mtg. Bracket | 1 |
| 34 | C 184 | Clutch Rod | 1 |
| 35 | | Setscrew 3/8" UNF x 3/4" Long | 2 |
| 36 | 303 | Handbrake Assembly | 1 |
| 37 | C 179 | Handbrake link spacer | 1 |
| 38 | 131S.4 | Grease Nipple (Short) | 1 |



6378

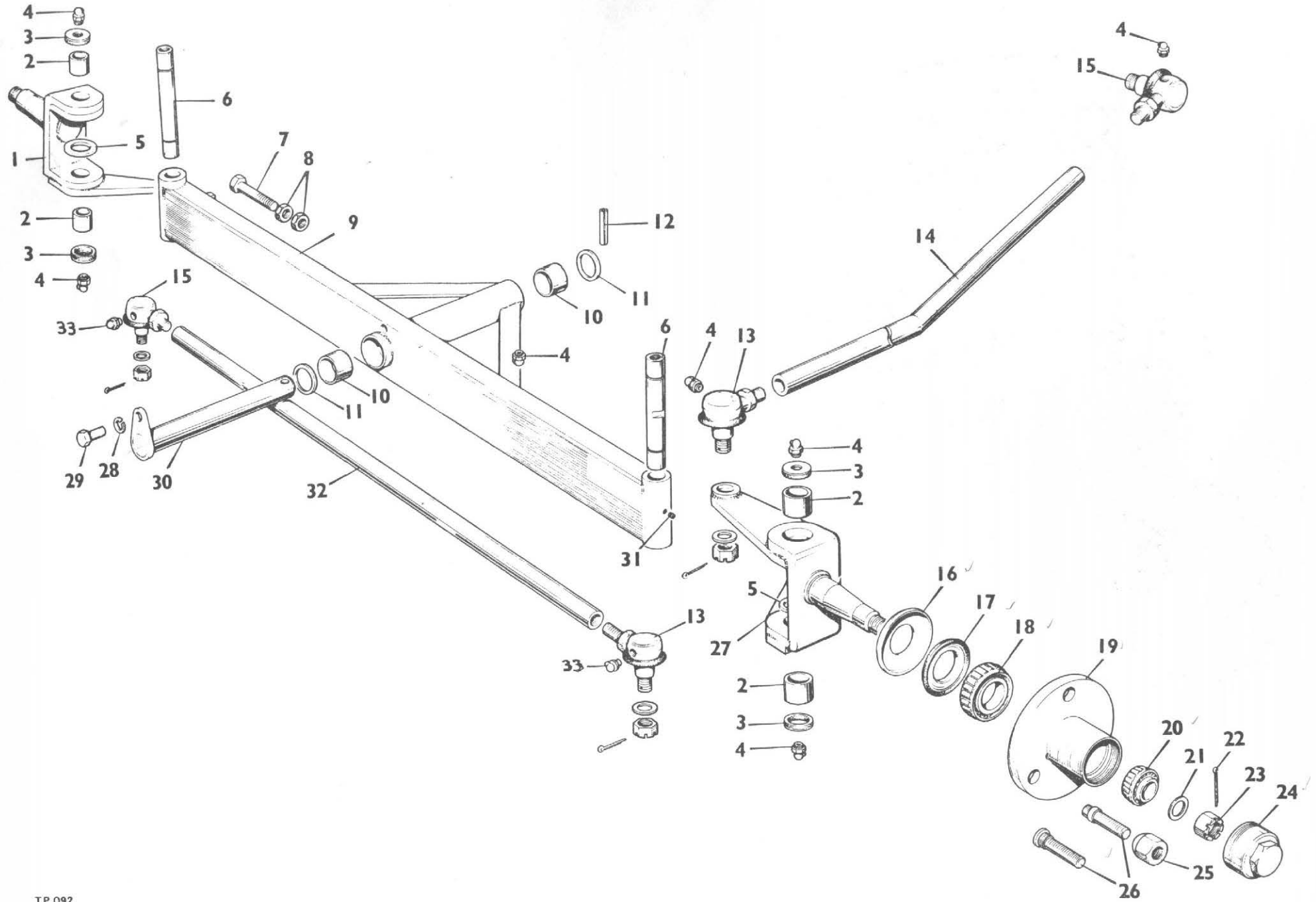
DRIVE WHEELS & TYRES

| Item No. | Part No. | Description | Qty. |
|----------|----------|----------------------------|------|
| 1 | 24S20 | RH Wheel Assembly Complete | 1 |
| 1 | 24S19 | LH Wheel Assembly Complete | 1 |
| 2 | 30033A01 | Wheel Rim 4.00 x 16 | 2 |
| 2 | 20S09 | Tyre 600 x 16-4 Ply | 2 |
| 3 | 23S02 | Tube 600 x 16 | 2 |



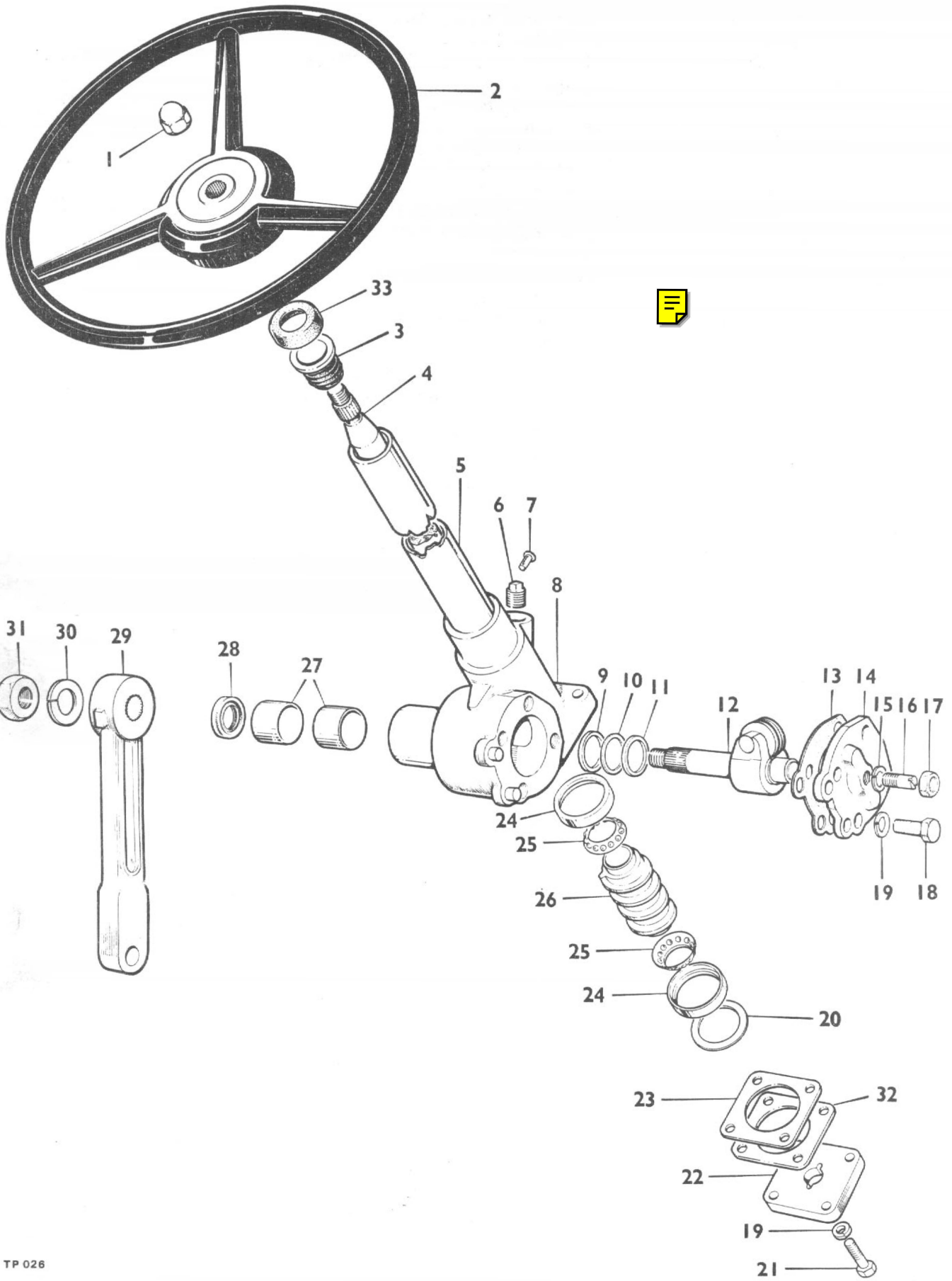
STEERING WHEELS & TYRES

| Item No. | Part No. | Description | Qty. |
|----------|----------|-------------------------|------|
| 1 | 24S35 | Steering Wheel Complete | 2 |
| 2 | LP598 | Wheel Rim 4.00 x 16 | 2 |
| 2 | 23S01 | Tube 5.50 x 16 | 2 |
| 3 | 21S02 | Tyre 5.50 x 16-4 Ply | 2 |



STEERING ASSEMBLY

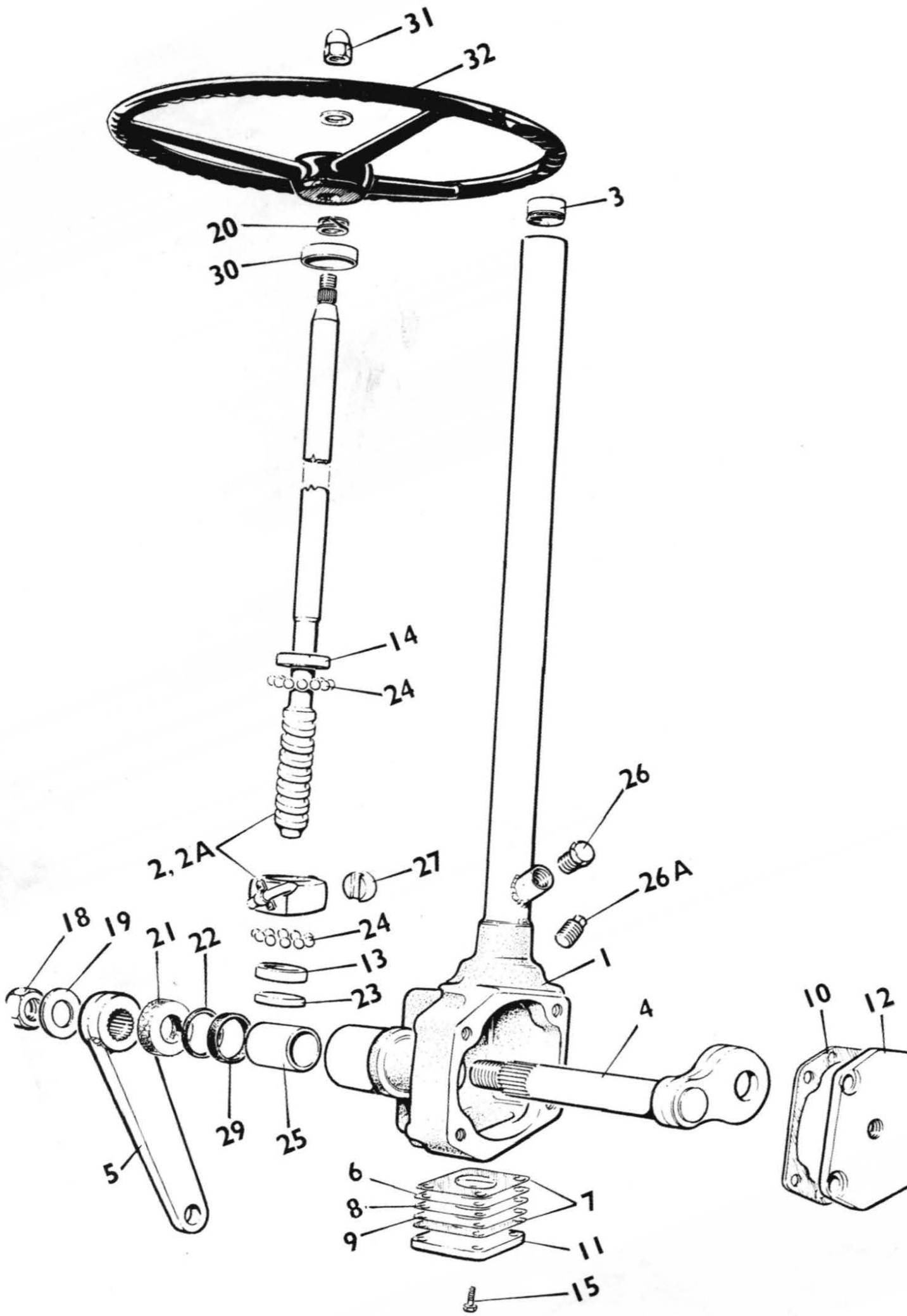
| Item No. | Part No. | Description | Qty |
|----------|-----------|---|--------|
| 1 | 2 SE 78 | Stub Axle Left Hand | 1 |
| 2 | C 190 | King Pin Bushes | 4 |
| 3 | C 180 | King Pin Felt and Steel Washer | 4 Each |
| 4 | 131802 | Grease Nipple | 7 |
| 5 | C 175 | Thrust Washer | 4 |
| 6 | L 264 | King Pin | 2 |
| 7 | | Bolt 5/8" BSW x 2" | 2 |
| 8 | | Locknut 5/8" BSW | 4 |
| 9 | 2 SE 74 | Steering Axle | 1 |
| 10 | 4 SHL 91 | Articulating tube bush | 2 |
| 11 | 2 SE 57 | Articulating tube washer | 2 |
| 12 | 4-35-29A | Tension Pin | 1 |
| 13 | C 159 LH | Steering Ball Joint with Nut | 2 |
| 14 | 2 SE 50 | Drag Link | 1 |
| 15 | C 159 RH | Steering Ball Joint with Nut | 2 |
| 16 | EC 2752 | Washer | 2 |
| 17 | 186 C | Oil Seal | 2 |
| 18 | K 14133/1 | Bearing | 2 |
| 19 | C 186 | Hub (Comprising items 16,17, 18, 20, 24 & 26) | 2 |
| 20 | K 09074 | Bearing | 2 |
| 21 | 10805 | Washer 5/8" Flat | 2 |
| 22 | 44803C | Split Pin 1/8" x 1" | 2 |
| 23 | 92807 | Nut-Slotted 5/8" BSF | 2 |
| 24 | C 186 A | Hub Cap | 2 |
| 25 | 10668A01 | Wheel Nut | 6 |
| 26 | O 156 | Wheel Stud | 6 |
| 27 | 2 SE 79 | Stub Axle Right Hand | 1 |
| 28 | 41804 | Spring Washer 5/16" | 1 |
| 29 | | Bolt 5/16" UNF x 3/4" Long | 1 |
| 30 | 2 SE 80 | Axle Pivot Pin | 1 |
| 31 | C 111A | King Pin Retaining Screw | 2 |
| 32 | 2 SE 51 | Track Rod | 1 |
| 33 | 131801 | Grease Nipple | 2 |



TP 026

STEERING GEAR (CAM AND ROLLER TYPE)

| Item No. | Part No. | Description | Qty. |
|------------|--------------|---|------|
| (40294A01) | MGA 34849 | Steering column assy. complete less items, 1,2 & 29 | 1 |
| 1 | C318 | Steering wheel nut | 1 |
| 2 | 40064.A01 | Steering wheel V.2.00.2.350 | 1 |
| 3 | PA3904A | Column top bush | 1 |
| 4 | P5244/30" | Inner shaft | 1 |
| 5 | P3911/24" | Outer tube | 1 |
| 6 | S 9033 | Oil plug | 1 |
| 7 | S 9166 | Pin | 1 |
| 8 | PA4426 | Steering box c/w item 14 | 1 |
| 9 | P4151 | Thrust washer | 2 |
| 10 | P 3308 | Shim | A/R |
| 11 | P 4150 | Thrust washer | 2 |
| 12 | PA5229/4¼" | Rocker shaft c/w roller | 1 |
| 13 | P3306A | Cover plate gasket | A/R |
| 14 | MA 23984 | Cover plate and bush | 1 |
| 15 | S 999 | Spring washer | 1 |
| 16 | P 4222 | Adjuster screw | 1 |
| 17 | P 4221 | Nut | 1 |
| 18 | S 9240 | Setscrew | 4 |
| 19 | S 902 | Spring washer | 8 |
| 20 | P3342 | Washer | 1 |
| 21 | S 9300 | Setscrew | 4 |
| 22 | P 3907 | Bottom cap | 1 |
| 23 | P 3301/.005" | Shim | A/R |
| 24 | P 3341 | Outer race | 2 |
| 25 | PA2733 | Cage and balls | 2 |
| 26 | P 3340 | Cam | 1 |
| 27 | P 3309 | Bush | 2 |
| 28 | S 9242 | Oil seal | 1 |
| 29 | M 29629 | Drop arm . 40294A0101 | 1 |
| 30 | S 955 | Spring washer | 1 |
| 31 | S 9332 | Nut | 1 |
| 32 | P 3301G | Bottom cap liner | 2 |
| 33 | M33418 | Inner column shroud | 1 |



STEERING GEAR (RECIRCULATING BALL TYPE)

| Item No | Part No. | Description | Qty |
|---------|-----------|---|-----|
| | 11-077 | Steering gear complete (less items 5 & 32) | |
| 1 | SA-01-183 | Box and Tube assembly | 1 |
| 2 | SA-02-269 | Inner column assembly and main nut (700mm long) | 1 |
| 2A | SA-02-277 | Inner column assembly and main nut (750mm long) | 1 |
| 3 | SA-21-004 | Bearing assembly | 1 |
| 4 | S-7-103 | Rocker shaft | 1 |
| 5 | 2SE90 | Drop arm | 1 |
| 6 | S-10-14 | End plate shim .005" | 3 |
| 7 | S-10-15 | End plate gasket | 2 |
| 8 | S-10-42 | End plate shim .002" | 2 |
| 9 | S-10-111 | End plate shim .010" | 2 |
| 10 | S-10-191 | Cover plate gasket | 1 |
| 11 | S-11-83 | End plate | 1 |
| 12 | S-12-186 | Cover plate | 1 |
| 13 | S-23-32 | Ballrace (small) | 1 |
| 14 | S-23-33 | Ballrace (large) | 1 |
| 15 | 10-3-37 | End Plate bolt | 4 |
| 16 | 10-4-16 | Cover Plate bolt | 4 |
| 17 | 11-7-2 | Rocker shaft adjuster screw nut | 1 |
| 18 | 11-8-7 | Rocker shaft nut | 1 |
| 19 | 12-8-36 | Rocker shaft tab washer | 1 |
| 20 | 12-8-85 | Spring | 1 |
| 21 | 12-9-61 | Drop arm felt washer | 1 |
| 22 | 12-10-7 | Oil seal retaining washer | 1 |
| 23 | 12-12-26 | Inner column packing plate | 1 |
| 24 | 17-3-4 | Steel ball | 54 |
| 25 | 19-9-17 | Rocker shaft bush | 1 |
| 26 | 21-8-4 | Oil Plug | 1 |
| 26A | 21-7-2 | Oil Plug | 1 |
| 27 | 24-5-5 | Main nut roller | 1 |
| 28 | 25-7-2 | Rocker shaft adjuster screw | 1 |
| 29 | 27-9-6 | Oil seal | 1 |
| 30 | 32-8-8 | Dust cap | 1 |
| 31 | S9260 | nut | 1 |
| 32 | 1036 B | Steering wheel | 1 |

DECIMAL, FRACTIONAL AND METRIC EQUIVALENTS

| Inches | | Milli- metres | Inches | | Milli- metres |
|-----------|----------|------------------|-----------|----------|------------------|
| Fractions | Decimals | | Fractions | Decimals | |
| 1/64 | 0.015625 | 0.397 | 33/64 | 0.515625 | 13.097 |
| 1/32 | 0.03125 | 0.794 | 17/32 | 0.53125 | 13.494 |
| 3/64 | 0.046875 | 1.191 | 35/64 | 0.546875 | 13.891 |
| 1/16 | 0.0625 | 1.588 | 9/16 | 0.5625 | 14.288 |
| 5/64 | 0.078125 | 1.984 | 37/64 | 0.578125 | 14.684 |
| 3/32 | 0.09375 | 2.381 | 19/32 | 0.59375 | 15.081 |
| 7/64 | 0.109375 | 2.778 | 39/64 | 0.609375 | 15.478 |
| 1/8 | 0.125 | 3.175 | 5/8 | 0.625 | 15.875 |
| 9/64 | 0.140625 | 3.572 | 41/64 | 0.640625 | 16.272 |
| 5/32 | 0.15625 | 3.969 | 21/32 | 0.65625 | 16.669 |
| 11/64 | 0.171875 | 4.366 | 43/64 | 0.671875 | 17.066 |
| 3/16 | 0.1875 | 4.763 | 11/16 | 0.6875 | 17.463 |
| 13/64 | 0.203125 | 5.159 | 45/64 | 0.703125 | 17.859 |
| 7/32 | 0.21875 | 5.556 | 23/32 | 0.71875 | 18.256 |
| 15/64 | 0.234375 | 5.953 | 47/64 | 0.734375 | 18.653 |
| 1/4 | 0.250 | 6.350 | 3/4 | 0.750 | 19.050 |
| 17/64 | 0.265625 | 6.747 | 49/64 | 0.765625 | 19.447 |
| 9/32 | 0.28125 | 7.144 | 25/32 | 0.78125 | 19.844 |
| 19/64 | 0.296875 | 7.541 | 51/64 | 0.796875 | 20.241 |
| 5/16 | 0.3125 | 7.938 | 13/16 | 0.8125 | 20.638 |
| 21/64 | 0.328125 | 8.334 | 53/64 | 0.828125 | 21.034 |
| 11/32 | 0.34375 | 8.731 | 27/32 | 0.84375 | 21.431 |
| 23/64 | 0.359375 | 9.128 | 55/64 | 0.859375 | 21.828 |
| 3/8 | 0.375 | 9.525 | 7/8 | 0.875 | 22.225 |
| 25/64 | 0.390625 | 9.922 | 57/64 | 0.890625 | 22.622 |
| 13/32 | 0.40625 | 10.319 | 29/32 | 0.90625 | 23.019 |
| 27/64 | 0.421875 | 10.716 | 59/64 | 0.921875 | 23.416 |
| 7/16 | 0.4375 | 11.113 | 15/16 | 0.9375 | 23.813 |
| 29/64 | 0.453125 | 11.509 | 61/64 | 0.953125 | 24.209 |
| 15/32 | 0.46875 | 11.906 | 31/32 | 0.96875 | 24.606 |
| 31/64 | 0.484375 | 12.303 | 63/64 | 0.984375 | 25.003 |
| 1/2 | 0.500 | 12.700 | 1 | 1.000 | 25.400 |

INCHES INTO MILLIMETRES

| Inches | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0 | 0 | 25.40 | 50.80 | 76.20 | 101.60 | 127.00 | 152.40 | 177.80 | 203.20 | 228.60 |
| 10 | 254.00 | 279.40 | 304.80 | 330.20 | 355.60 | 381.00 | 406.40 | 431.80 | 457.20 | 482.60 |
| 20 | 508.00 | 533.40 | 558.80 | 584.20 | 609.60 | 635.00 | 660.40 | 685.80 | 711.20 | 736.60 |
| 30 | 762.00 | 787.40 | 812.80 | 838.20 | 863.60 | 889.00 | 914.40 | 939.80 | 965.20 | 990.60 |
| 40 | 1016.00 | 1041.40 | 1066.80 | 1092.20 | 1117.60 | 1143.00 | 1168.40 | 1193.80 | 1219.20 | 1244.60 |
| 50 | 1270.00 | 1295.40 | 1320.80 | 1346.20 | 1371.60 | 1397.00 | 1422.40 | 1447.80 | 1473.20 | 1498.60 |
| 60 | 1524.00 | 1549.40 | 1574.80 | 1600.20 | 1625.60 | 1651.00 | 1678.40 | 1701.80 | 1727.20 | 1752.60 |
| 70 | 1778.00 | 1803.40 | 1828.80 | 1854.20 | 1879.60 | 1905.00 | 1930.40 | 1955.80 | 1981.20 | 2006.60 |
| 80 | 2032.00 | 2057.40 | 2082.80 | 2108.20 | 2133.60 | 2159.00 | 2184.40 | 2209.80 | 2235.20 | 2260.00 |
| 90 | 2286.00 | 2311.40 | 2336.80 | 2362.20 | 2387.60 | 2413.00 | 2438.40 | 2463.80 | 2489.20 | 2514.61 |

Use in conjunction with above table.

Example: Find equivalent mm. for 84 5/8".

$$84'' = 2133.60 \text{ mm.}$$

$$5/8'' = 15.875 \text{ mm.}$$

$$84 \frac{5}{8}'' = 2149.475 \text{ mm.}$$

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm