

WINGET

**OPERATING
INSTRUCTIONS
&
SPARE PARTS
LIST**

**FOUR/40
DIESEL
DUMPER
(CAPACITY 40 CWT)**

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INTRODUCTION

This Parts & Operators Manual is a re-print of the manual last published in the early 1970's.

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 FOUR/40 Four Wheel Drive Dumpers

Reference is made on a number of pages to 'bolt c/w nut and washer', this is 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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DUMPER SAFETY

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

MACHINE MODIFICATIONS

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.

OPERATION

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.

Where seat belt restraints are fitted as part of Rops/Fops Protection they must be worn. Ensure that the seat and seat belt are securely fixed to the machine. 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.

DUMPER SAFETY

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.*

Some articulating dumpers are manufactured with an articulation lock. If your machine has this feature proceed as follows:

ALWAYS fit the articulation lock when working within the articulation point crush zone.

NEVER attempt to lift the machine unless the articulation lock is engaged.

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.

DUMPER SAFETY

TOWING

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



Dumpers are not designed as towing vehicles, but loads (including weight of trailer) not exceeding the rated payload of the dumper may be towed on dry level ground in first gear, providing the dumper skip is loaded with half the rated payload to ensure tyre adhesion when braking.

ALWAYS use a purpose made towing pin.

NEVER tow loads up, down or across gradients.

GRADIENTS

WARNING NEVER operate *Four Wheel Drive articulated steer dumpers* on any gradients which exceed 25% (1 in 4), or across gradients which exceed 16% (1 in 6).



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.

DUMPER SAFETY

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 Hydraulics Warnings*).

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.

DUMPER SAFETY

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.

ALWAYS ensure that the starting handle 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*).

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

Some articulating dumpers are manufactured with an articulation lock. If your machine has this feature, ALWAYS fit the articulation lock when servicing or working on the machine.

Dont risk delays and errors Remember — ALWAYS QUOTE

THE SERIAL NUMBER OF THE MACHINE

(WHICH WILL BE FOUND STAMPED ON A BRASS PLATE FIXED TO THE CHASSIS)

AND THE ENGINE NUMBER.

DESCRIPTION OF PART AND PART NO'S EXACTLY AS LISTED IN THIS BOOKLET

SPARES MAY BE OBTAINED DIRECT FROM THE WORKS AT ROCHESTER OR THROUGH ANY OF THE WINGET MAIN DEPOTS LISTED BELOW OR YOUR NEAREST WINGET SERVICE AGENT IF YOU TELEPHONE OR TELEGRAPH. AN OFFICIAL CONFIRMATION ORDER MUST BE SENT BY POST IMMEDIATELY.

TELEPHONE WINGET LIMITED MEDWAY 77711 ASK FOR SPARES DEPOT

THE WINGET WATCHDOG SERVICE

OPERATING THROUGH EVERY WINGET DEPOT AND SERVICE AGENT IN THE WINGET WATCHDOG SERVICE GIVING A COMPREHENSIVE SERVICE COVER OVER THE ENTIRE COUNTRY. A CALL TO YOUR SERVICE DEPOT WILL BRING SWIFT ASSISTANCE TO GET YOUR PLANT EARNING PROFIT AGAIN IN THE SHORTEST POSSIBLE TIME. BE SURE TO GIVE THE FULLEST DETAILS OF THE MACHINE AND THE NATURE OF THE BREAKDOWN

LIST OF MAIN DEPOTS

<u>SOUTHERN</u> EXETER (DEVON) PLANT ENGINEERING SERVICES (EXETER) LTD MARSH BARTON TRADING ESTATE EXETER TEL: EXETER 76286	<u>SCOTLAND</u> COATBRIDGE (LANARKSHIRE) WINGET LTD ROSEHALL WORKS COATBRIDGE, LANARKS TEL: COATBRIDGE 21232	<u>CHESHIRE</u> DUKINFIELD (CHESHIRE) MOORE'S PLANT LTD GLOBAL WORKS PLATT STREET DUKINFIELD, CHESHIRE TEL: ASHTON-UNDER-LYME 5465
IVYBRIDGE (DEVON) PLANT ENGINEERING SERVICES (EXETER) LTD COSTLY STREET, IVYBRIDGE. TEL: IVYBRIDGE 34576	<u>MIDLANDS</u> NOTTINGHAM INOTTS' WINGET LTC OUSE BRIDGE DRIVE CARLTON, NOTTINGHAM TEL: NOTTINGHAM 242014	<u>NORTHERN IRELAND</u> BELFAST (N. IRELAND) W.D. HENDERSON & SONS LTD. 58 WARING STREET BELFAST, N. IRELAND. TEL NO. :- BELFAST 31444
<u>LONDON AREA</u> TOTTENHAM MOORE'S PLANT LTD MARKFIELD ROAD TOTTENHAM TEL: TOT 3070	TIPTON (STAFFS) MOORE'S PLANT LTD CONYGRE INDUSTRIAL ESTATE TIPTON, STAFFS TEL: TIPTON 3273	<u>SOUTH WALES</u> NEWPORT (MON.) MORRIS PROSSER LTD. ADELAIDE STREET NEWPORT, MON. TEL: NEWPORT 58295/6
ROCHESTER (KENT) WINGET LTD., ROCHESTER TEL: MEDWAY 77711	<u>CHANNEL ISLANDS</u> JERSEY (C.I.) J.W. HUELIN LTD. 44 ESPLANADE, ST. HELIER, JERSEY, C.I. TEL: JERSEY CENTRAL 32281	

WHEN ORDERING SPARES PLEASE STATE

- A) MACHINE NUMBER WHICH WILL BE FOUND ON THE PLATE FIXED TO CROSS-MEMBER AT REAR OF CHASSIS.
- B) PART NUMBER, DESCRIPTION AND QUANTITY OF SPARES REQUIRED.
- C) IF YOU REQUIRE THE NUTS, BOLTS AND WASHERS, ETC., NECESSARY TO FIT SPARE PART TO MACHINE.
- D) FULL ADDRESS WHERE SPARES ARE TO BE SENT.

ALL SPARES WILL BE DESPATCHED IMMEDIATELY ON RECEIPT OF YOUR ORDER

BEFORE A 4/40 DUMPER IS PUT INTO SERVICE THE FOLLOWING OIL LEVELS SHOULD ALWAYS BE CHECKED :-

ENGINE

INSPECT OIL LEVEL DIP-STICK DAILY AND TOP UP SUMP IF NECESSARY.

GEARBOX

INSPECT OIL LEVEL DIP-STICK WEEKLY AND TOP UP TO LEVEL MARK IF NECESSARY.

DRIVE AXLES & TRANSFER CASE

REMOVE OIL LEVEL PLUG AND TOP UP WITH CORRECT GRADE OF OIL TO PLUG HOLE

STEERING BOX

REMOVE OIL LEVEL PLUG (ACCESSIBLE THROUGH SUPPORT BRACKET) AND TOP UP AS NECESSARY.

FUEL TANK

DO NOT ALLOW THE DIESEL OIL LEVEL TO FALL BELOW 2IN. FROM TANK BOTTOM. IF FUEL TANK IS RUN DRY IT WILL BE NECESSARY TO BLEED ALL AIR FROM THE FUEL LINES.

HYDRAULIC TANK

CHECK OIL LEVEL WEEKLY. ALWAYS CLEAN ROUND CAP BEFORE REMOVING IT. TOP UP WITH RECOMMENDED GRADE OF OIL. DO NOT MIX DIFFERENT BRANDS OF OIL. PERIODICALLY REMOVE SQUARE INSPECTION COVER COMPLETE WITH INLET STRAINER AND REMOVE SUCTION FILTER MAKING SURE NO DIRT OR GRIT ENTERS TANK. CLEAN THE FILTER AND STRAINER IN PETROL AND ALLOW TO DRY BEFORE REPLACING.

HYDRAULIC BRAKES

THE BRAKE HEADER TANK MUST BE KEPT TOPPED UP AT ALL TIMES WITH THE CORRECT TYPE OF FLUID (GIRLING GRIMSON BRAKE FLUID.) NO OTHER TYPE OF FLUID SHOULD BE USED. IT IS IMPORTANT TO KEEP THE FLUID CLEAN.

IMPORTANT

CHECK ALL WHEEL NUTS FOR TIGHTNESS BEFORE THE DUMPER IS PUT IN TO SERVICE.

WINGET FOUR/40 DUMPER

SERVICE PROCEDURE FOR DISC BRAKES

THE COMPLETE BRAKE SYSTEM IS DESIGNED TO REQUIRE THE MINIMUM OF ATTENTION AND PROVIDING THE HYDRAULIC FLUID IN THE RESERVOIR IS NOT ALLOWED TO FALL BELOW THE RECOMMENDED LEVEL NO DEFECTS SHOULD NORMALLY OCCUR. FLUID LOSS MUST BE SUPPLEMENTED BY PERIODICALLY TOPPING UP THE RESERVOIR WITH FLUID OF THE SAME SPECIFICATION AS THAT IN THE SYSTEM. IT IS NOT PERMISSABLE TO TOP UP THE RESERVOIR WITH AN ALTERNATIVE APPROVED BRAND OF FLUID.

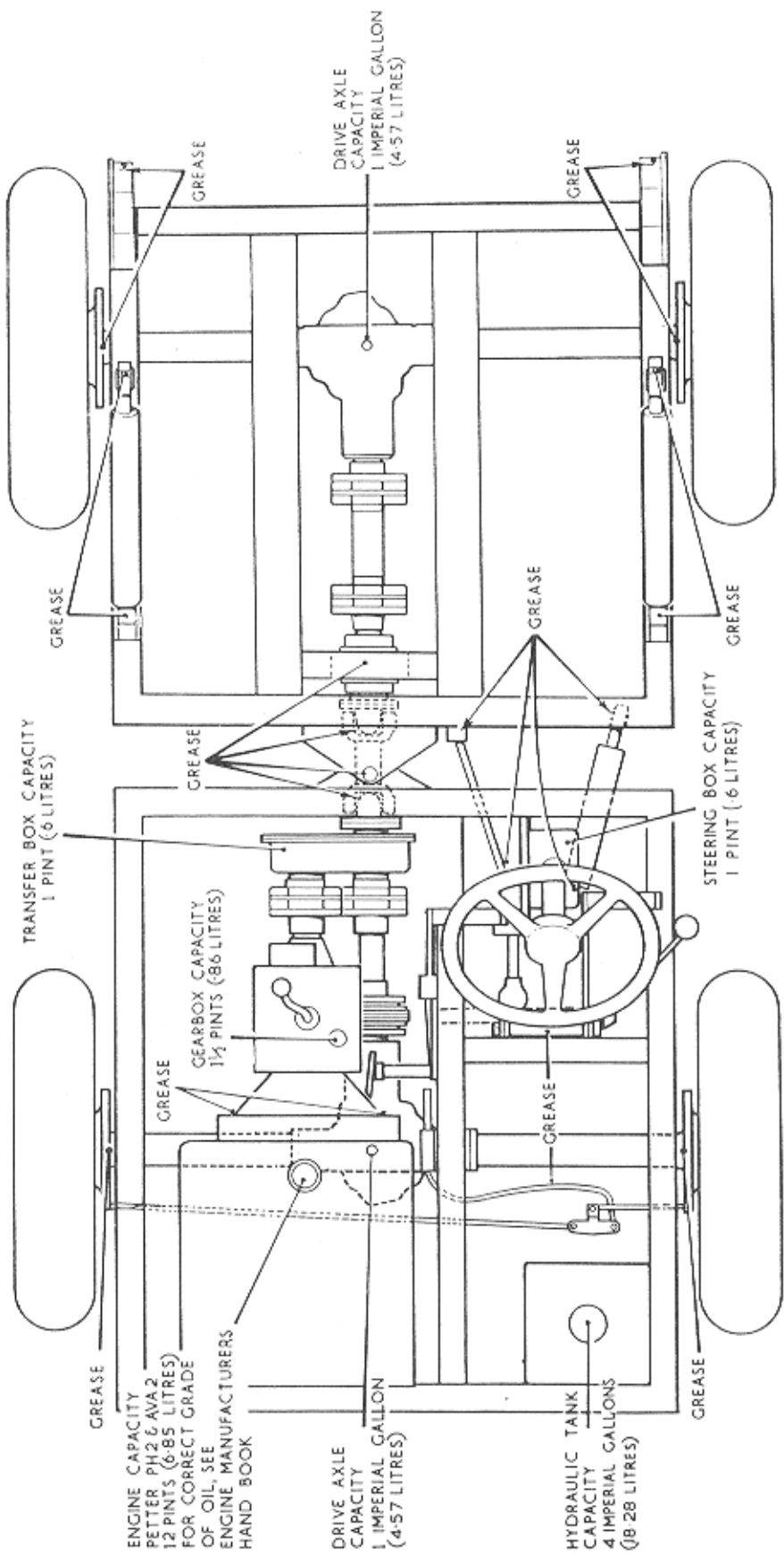
THE INCLUSION OF AIR IN THE SYSTEM WILL BE INDICATED BY SLUGGISH RESPONSE OF THE BRAKES AND SPONGY ACTION OF THE BRAKE PEDAL. THIS MAY BE DUE TO AIR INDUCTION AT A LOOSE JOINT OR THE RESERVOIR FLUID BEING ALLOWED TO FALL TO A VERY LOW LEVEL. THESE DEFECTS MUST BE IMMEDIATELY REMEDIED AND THE COMPLETE SYSTEM BLED.

THE FOLLOWING PROCEDURE SHOULD BE ADOPTED TO BLEED THE SYSTEM. DURING THE BLEEDING OPERATION IT IS IMPORTANT THAT THE RESERVOIR LEVEL IS KEPT TOPPED UP TO AVOID DRAWING AIR INTO THE SYSTEM. IT IS RECOMMENDED THAT NEW FLUID BE USED FOR THIS PURPOSE. BUT WHEN THIS IS NOT POSSIBLE, THE ORIGINAL FLUID MAY BE RETURNED TO THE RESERVOIR, PROVIDING IT IS CLEAN AND FREE FROM AIR.

- (1) CHECK THAT ALL CONNECTIONS ARE TIGHTENED AND ALL BLEED SCREWS CLOSED.
- (2) FILL THE RESERVOIR WITH BRAKE FLUID OF THE CORRECT SPECIFICATION.
- (3) ATTACH THE BLEEDER TUBE TO THE BLEED SCREW ON THE NEAR SIDE REAR BRAKE AND IMMERSE THE OPEN END OF THE TUBE IN A SMALL QUANTITY OF BRAKE FLUID CONTAINED IN A CLEAN GLASS JAR. SLACKEN THE BLEED SCREW AND OPERATE THE BRAKE PEDAL SLOWLY BACKWARDS AND FORWARDS THROUGH ITS FULL STROKE UNTIL FLUID PUMPED INTO THE JAR IS REASONABLY FREE FROM AIR BUBBLES. KEEP THE PEDAL DEPRESSED AND CLOSE THE BLEED SCREW. RELEASE THE PEDAL.
- (4) REPEAT FOR EACH BRAKE IN TURN.
- (5) REPEAT THE COMPLETE BLEEDING SEQUENCE UNTIL THE BRAKE FLUID PUMPED INTO THE JAR IS COMPLETELY FREE FROM AIR BUBBLES.
- (6) LOCK ALL BLEED SCREWS AND FINALLY REGULATE THE FLUID LEVEL IN THE RESERVOIR.
- (7) APPLY NORMAL WORKING LOAD ON THE BRAKE PEDAL FOR A PERIOD OF TWO OR THREE MINUTES AND EXAMINE THE ENTIRE SYSTEM FOR LEAKS.

COMPANY		ENGINE	TRANSFER BOX DRIVING AXLE STEERING BOX	GEARBOX	WHEEL BEARINGS AND OTHER GREASE POINTS	HYDRAULIC SYSTEM (IF FITTED)
<u>SHELL</u> UK OVERSEAS	SUMMER/WINTER ABOVE 90° F 32-90° F BELOW 32° F	PETTER AVA AND PH ROTELLA 10W ROTELLA 30 ROTELLA 10W ROTELLA 10W	SPIRAX 90 EP SPIRAX 140 EP SPIRAX 90 EP SPIRAX 80 EP	ROTELLA A30	RETINAX A RETINAX A	TELLUS 27
<u>BP</u> UK OVERSEAS	SUMMER/WINTER ABOVE 90° F 32-90° F BELOW 32° F	ENERGOL DD 10W ENERGOL DD 30 ENERGOL DD 10W ENERGOL DD 10W	ENERGOL SAE 90 EP ENERGOL SAE 140 EP ENERGOL SAE 90 EP ENERGOL SAE 80 EP	ENERGOL DD 30	ENERGREASE L2 ENERGREASE L2	ENERGOL HD 65
<u>MOBIL</u> UK OVERSEAS	SUMMER/WINTER ABOVE 90° F 32-90° F BELOW 32° F ALL TEMPS.	DELVAC SPECIAL OR DELVAC 910 DELVAC 930 DELVAC 910 DELVAC 910 DELVAC SPECIAL	MOBILUBE GX 90 MOBILUBE GX 140 MOBILUBE GX 90 MOBILUBE GX 80	DELVAC 930	MOBILGREASE MP MOBILGREASE MP	MOBIL DTE LIGHT
<u>ESSO</u> UK OVERSEAS	SUMMER/WINTER ABOVE 90° F 32-90° F BELOW 32° F	ESSO FLEET HD 10W ESSOLUBE HD 30 ESSOLUBE HD 10W ESSOLUBE HD 10W	ESSO GEAR GP 90 ESSO GEAR GP 140 ESSO GEAR GP 20 ESSO GEAR GP 30	SOLUBE HD 30	ESSO MULTI-PURPOSE H ESSO MULTI-PURPOSE H	ESSO FLEET HD 10W OR ESSOLUBE HD 10W
<u>CASTROL</u> UK OVERSEAS	SUMMER/WINTER ABOVE 90° F 32-90° F BELOW 32° F	DEUSOL CR10 DEUSOL CR30 DEUSOL CR10 DEUSOL CR10	DEUSOL GEAR EP 90 DEUSOL GEAR EP 140 DEUSOL GEAR EP 90 DEUSOL GEAR EP 80	DEUSOL CR30	SPHEEROL APT 2 SPHEEROL APT 2	HYSPIN 70
<u>WALKERS</u> UK OVERSEAS	SUMMER/WINTER ABOVE 90° F 32-90° F BELOW 32° F	CENTILUBE HD10 CENTILUBE HD30 CENTILUBE HD10 CENTILUBE HD10	SAE 90	CENTILUBE SAE 30	CENTURY NO. 785 MA	CENTURY PWLA

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



LUBRICATION DIAGRAM

WORKING INSTRUCTIONS

TO START :-

- (A) LIFT THE RED PAINTED OVERLOAD STOP WHICH IS SITUATED ON THE FUEL PUMP IMMEDIATELY ABOVE THE PRIMING LEVER, AND ALLOW THE FUEL PUMP RACKS TO MOVE INTO THE FULLY OPEN POSITION.
- (B) GIVE PRIMING LEVER HALF A DOZEN STROKES. (THIS IS UNNECESSARY WITH A WARM ENGINE).
- (C) LIFT THE DECOMPRESSOR LEVERS (WHICH ARE POSITIONED ON TOP OF ENGINE) AND TURN THE ENGINE AS FAST AS POSSIBLE, WHEN IT IS TURNING AT A GOOD SPEED, KNOCK DOWN THE LEVERS. THE ENGINE SHOULD NOW FIRE.
- (D) IF THE ENGINE DOES NOT FIRE, LIFT THE DECOMPRESSOR LEVER AND SLOWLY CRANK THE ENGINE A FEW TIMES BEFORE ATTEMPTING TO START AGAIN.
- (E) WHERE THE AMBIENT AIR TEMPERATURE IS 5°F (-15°C) OR BELOW, A COLD STARTING AID SHOULD BE FITTED.

TO STOP :-

- (A) PULL ENGINE STOP CONTROL AGAINST DRIVERS SEAT OR HOLD PRIMING LEVERS IN THE HORIZONTAL POSITION UNTIL ENGINE STOPS.

IMPORTANT DON'TS

- (A) DON'T STOP THE ENGINE BY MEANS OF THE DECOMPRESSOR. THIS WILL LEAD TO DAMAGED VALVE SEATS AND CYLINDER HEAD JOINTS.
- (B) DON'T STOP THE ENGINE BY CLOSING THE FUEL TAP OR ALLOWING THE FUEL TANK TO RUN DRY. THIS WILL LET AIR INTO THE FUEL LINES AND MAKE IT NECESSARY TO BLEED AND PRIME THE SYSTEM.

CHECK ENGINE OIL LEVEL DAILY. AXLE, GEARBOX, STEERING BOX AND HYDRAULIC OIL LEVELS WEEKLY.

TYRE PRESSURES

FRONT AND REAR WHEELS 7.50 - 16 - 28 LBS TO 32 LBS. MAX.

GENERAL MAINTENANCE

KEEP ALL OIL LEVELS CORRECTLY MAINTAINED AS INDICATED AND AT WEEKLY INTERVALS GREASE ALL THE POINTS FITTED WITH TECALEMIT NIPPLES. GREASE POINTS ARE FITTED AS FOLLOWS:-

RAM BEARINGS	...	...	...	...	6
FOOTBRAKE PEDAL	...	...	...	...	1
CLUTCH PEDAL	...	...	...	...	1
CLUTCH CROSS SHAFT	...	...	...	...	2
STEERING BALL END	...	...	...	...	2
SKIP PIVOT	...	...	...	...	2
DRIVE HUBS	...	...	...	...	4
HANDBRAKE CABLE	...	...	...	...	1
CHASSIS CENTRE PIVOT	...	...	...	...	2
CENTRE PROP SHAFT	...	...	...	...	2
TRUNNION ASSEMBLY	...	...	...	...	1

REAR AXLE ARTICULATION POINTS CONSIST OF A SILENTBLOC BUSH AND A COMPOSITION BEARING NEITHER OF WHICH REQUIRE LUBRICATION.

IT IS MOST IMPORTANT THAT ALL NUTS AND BOLTS ARE CHECKED FOR TIGHTNESS FROM TIME TO TIME ESPECIALLY DURING THE FIRST FEW WEEKS.

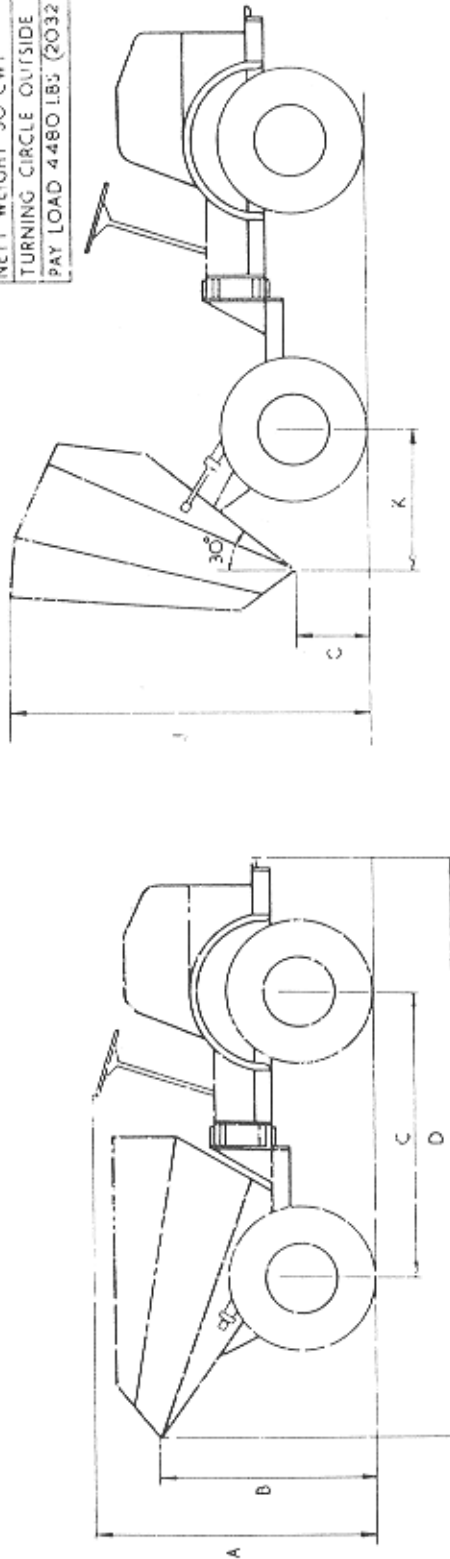
STUDY CAREFULLY THE INSTRUCTION BOOKLET ISSUED BY THE ENGINE MANUFACTURERS AND CARRY OUT THEIR INSTRUCTIONS.

DO NOT ALLOW GRIT OR DIRT TO ENTER ANY OF THE OIL FILLER POINTS WHEN TOPPING UP OIL LEVELS AND ALWAYS USE THE CORRECT GRADE OF OIL.

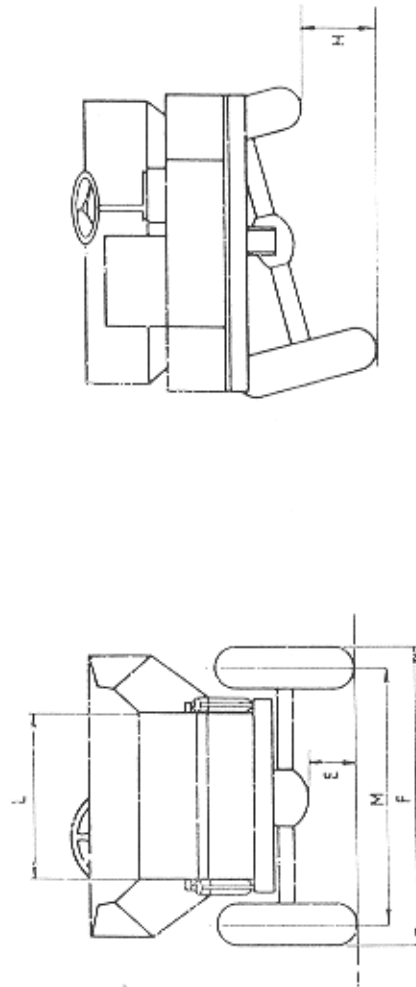
CHECK WHEEL NUT TIGHTNESS PERIODICALLY.

SKIP CAPACITIES	
WATER	27.5 CUB. FT. 78 M ³
STRUCK	35.0 " 99 M ³
HEAPED	42.0 " 119 M ³

NETT WEIGHT 30 CWT
 TURNING CIRCLE OUTSIDE 29' 6"
 PAY LOAD 4480 LBS. (2032 KG)(2 TONS)



DIMENSIONS		FT IN	CM5
A	OVERALL HEIGHT	5 0	152.4
B	SKIP LOADING HEIGHT	4 0	122.0
C	WHEEL BASE	5 7	170.2
D	OVERALL LENGTH	11 3	243.0
E	GROUND CLEARANCE	9 5	24.1
F	OVERALL WIDTH	5 4	162.6
G	SKIP GROUND CLEARANCE		
	WHEN TIPPED	10	25.4
H	ARTICULATION	1 2	35.6
J	OVERALL HEIGHT TIPPED	6 2	188
K	SKIP DISCHARGE DISTANCE	2 5	73.6
L	SKIP PROW WIDTH	3 0	91.4
M	WHEEL TRACK	4 7	139.7

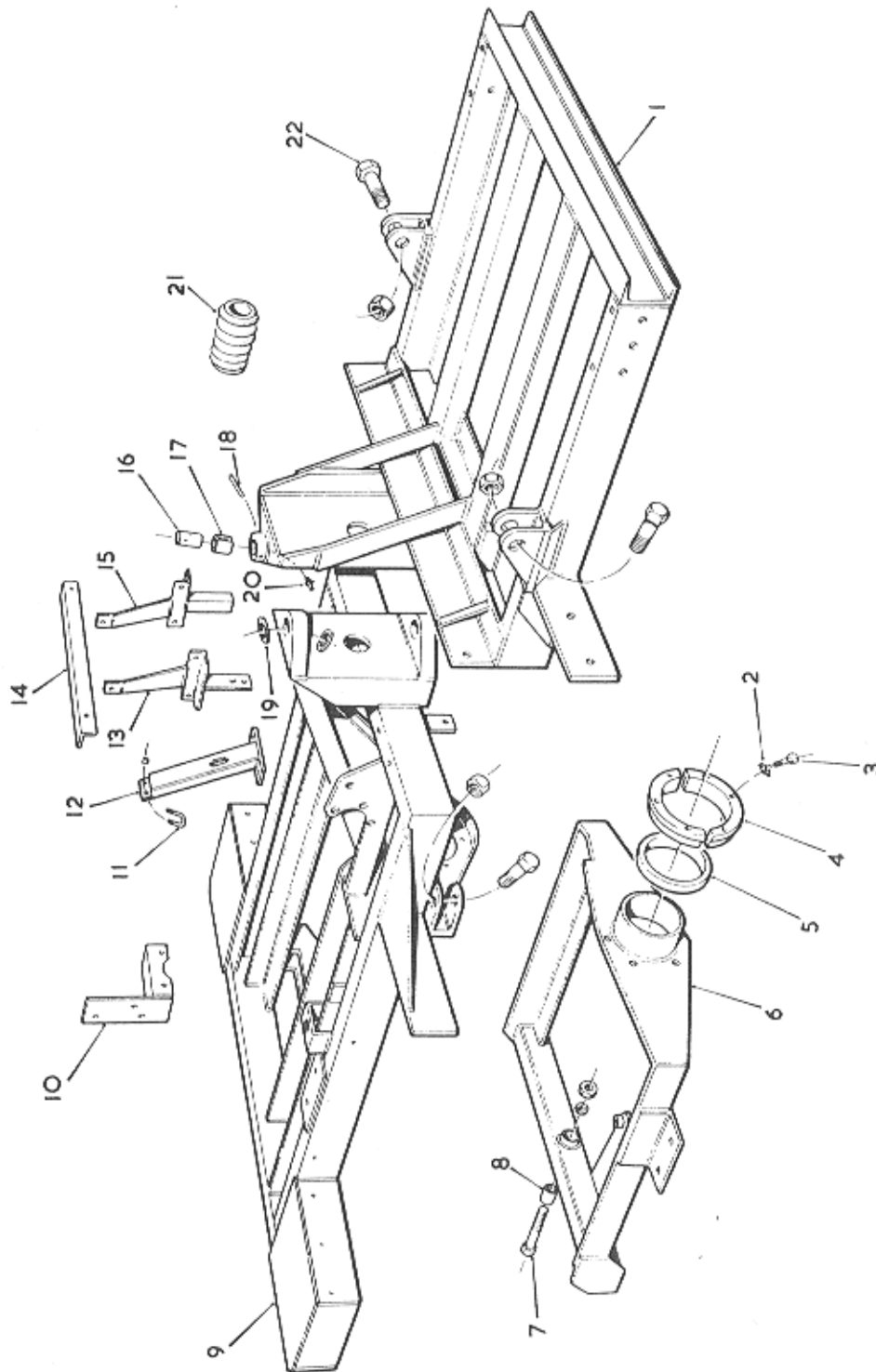


OVERALL DIMENSIONS

SPARE PARTS SECTION

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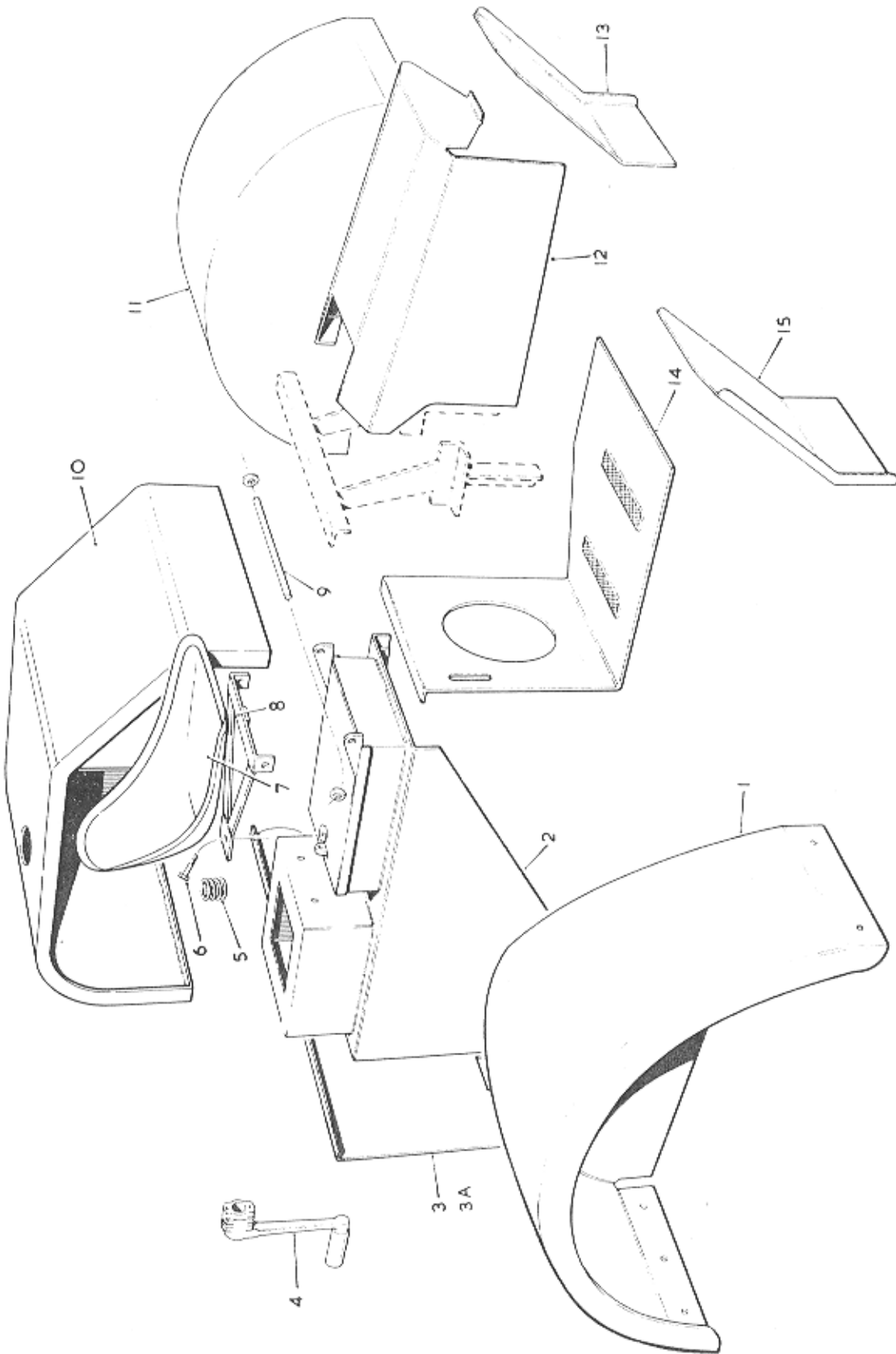
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CHASSIS ASSEMBLY

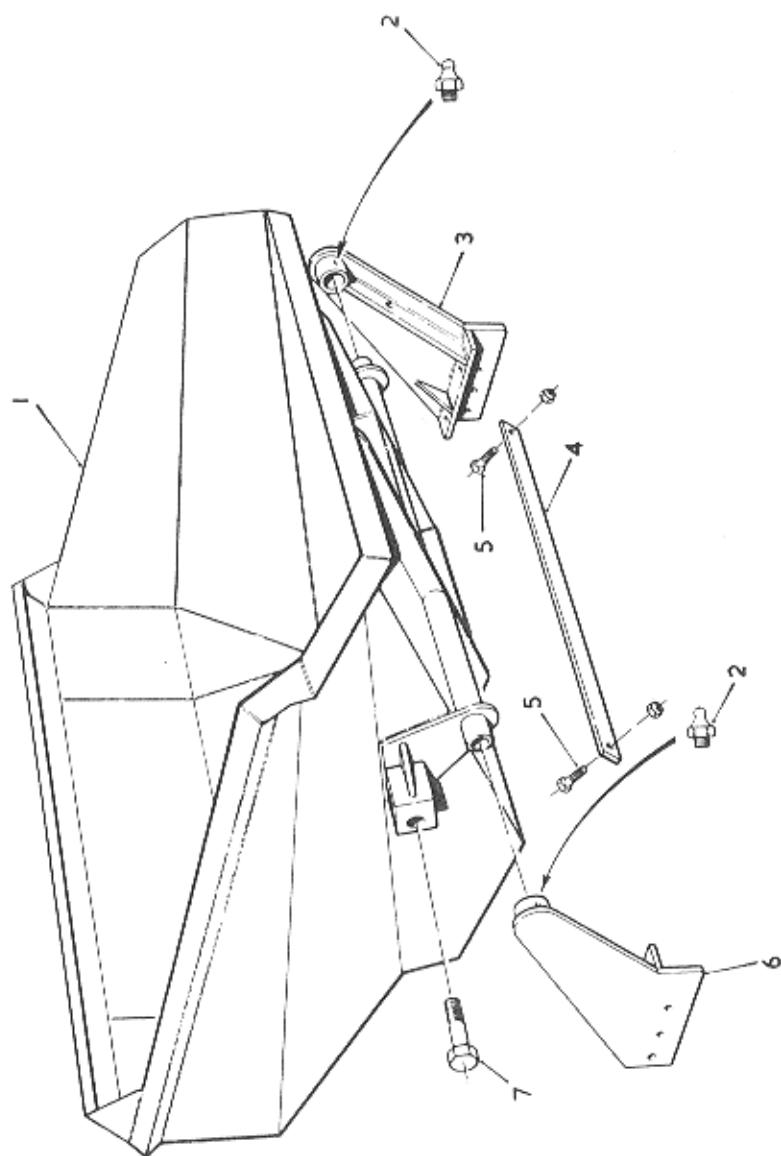
CHASSIS ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
1	4/35/103	FRONT CHASSIS	1
2	4/35/145	AXLE BEARING CARRIER TABWASHER	4
3		AXLE BEARING CARRIER BOLTS & NUTS ½" BSF X 2¼"	6
4	4/35/27	AXLE BEARING CARRIER	1
5	4/35/26	AXLE CARRIER BEARING	1
6	4/35/133	ARTICULATING FRAME	1
7		AXLE CARRIER, NUT & BOLT 7/8" BSF X 4"	1
8	E 2245	AXLE CARRIER BUSH	1
9	4/35/134	REAR CHASSIS (PETTER)	1
9A	4/35/162	REAR CHASSIS (LISTER)	1
10	4/35/127	HAND BRAKE BRACKET (PETTER)	1
10A	4/35/193	HAND BRAKE BRACKET (LISTER)	1
11	C 125	'U' BOLT & NUT	1
12	4/35/107	STEERING COLUMN SUPPORT	1
13	4/35/124	GEARBOX SUPPORT R.H.	1
14	4/35/136	ENGINE COVER SUPPORT	1
15	4/35/123	GEARBOX SUPPORT L.H.	1
16	4/35/29	CENTRE PIVOT PIN	2
17	4/35/29 B	CENTRE PIVOT BUSH	2
18	4/35/29 A	TENSION PIN 2¼" X 5/16"	2
19	4/35/29 C	CENTRE PIVOT THRUST WASHER	4
20	T.90 DEG.	GREASE NIPPLE	2
21	4/35/10 A	COVOLUTED HOSE	1
22	4/35/110	RAM BOLTS & NUTS	6

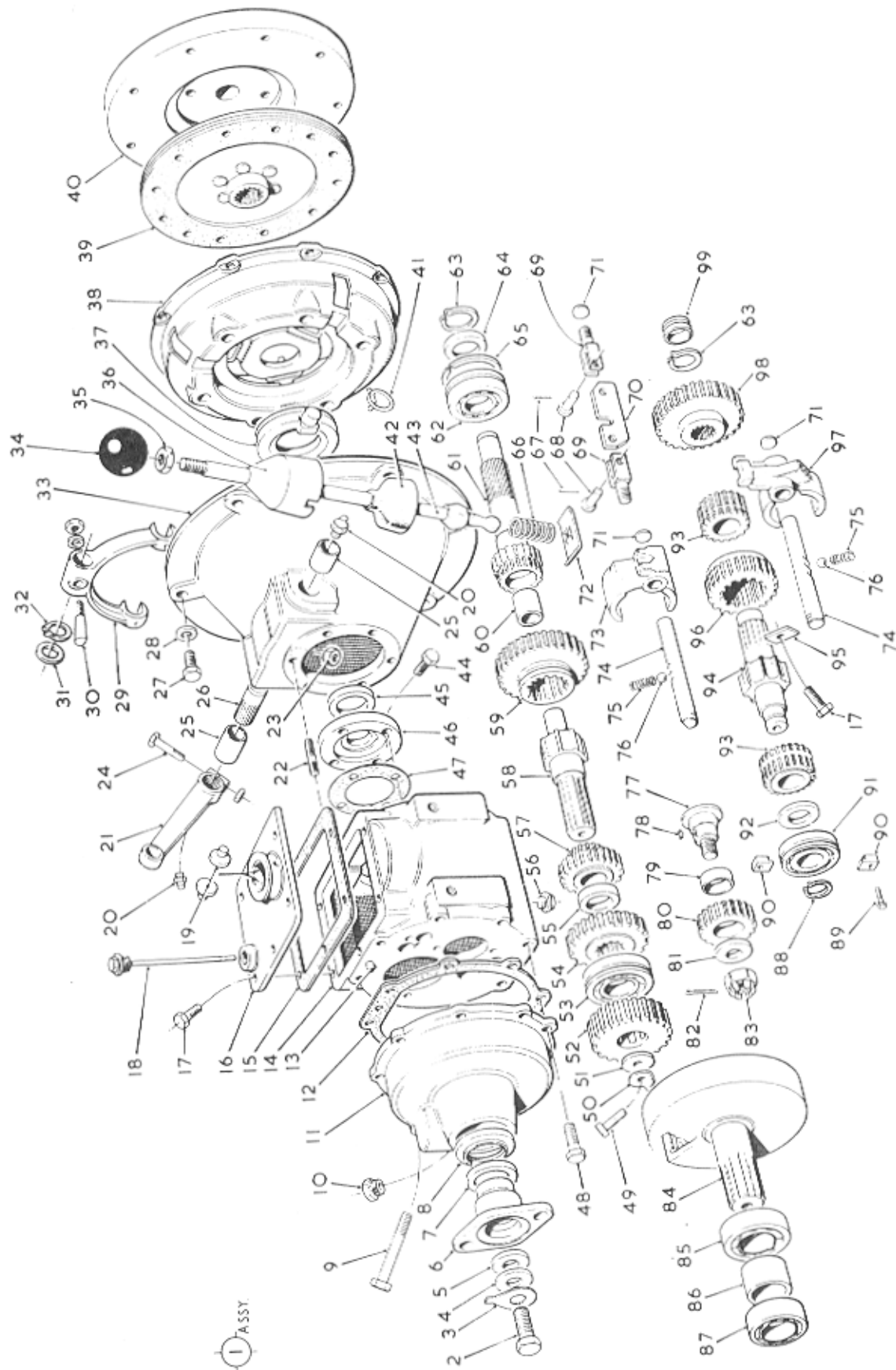


MUDWINGS & COVERS

ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
1	4/35/114	MUDWING R.H.	1
2	4/35/115	HYDRAULIC TANK & TOOL BOX	1
3	4/35/119	REAR ENGINE COVER (PETTER)	1
3A	4/35/164	REAR ENGINE COVER (LISTER)	1
4	C188	STARTING HANDLE	1
5	5ST-99	SEAT SPRING	1
6		SEAT BOLT	1
7	4/35/75	SEAT	1
8	5ST 80	SEAT FRAME	1
9	4/35/79	SEAT ROD & WASHERS	1
10	4/35/117	ENGINE COVER	1
11	4/35/113	MUDWING L.H.	1
12	4/35/116	GEARBOX COVER	1
13	L 283 LH	MUDFLAP L.H.	1
14	4/35/120	COVER & FOOT PLATE	1
15	L 283 RH	MUDFLAP R.H.	1

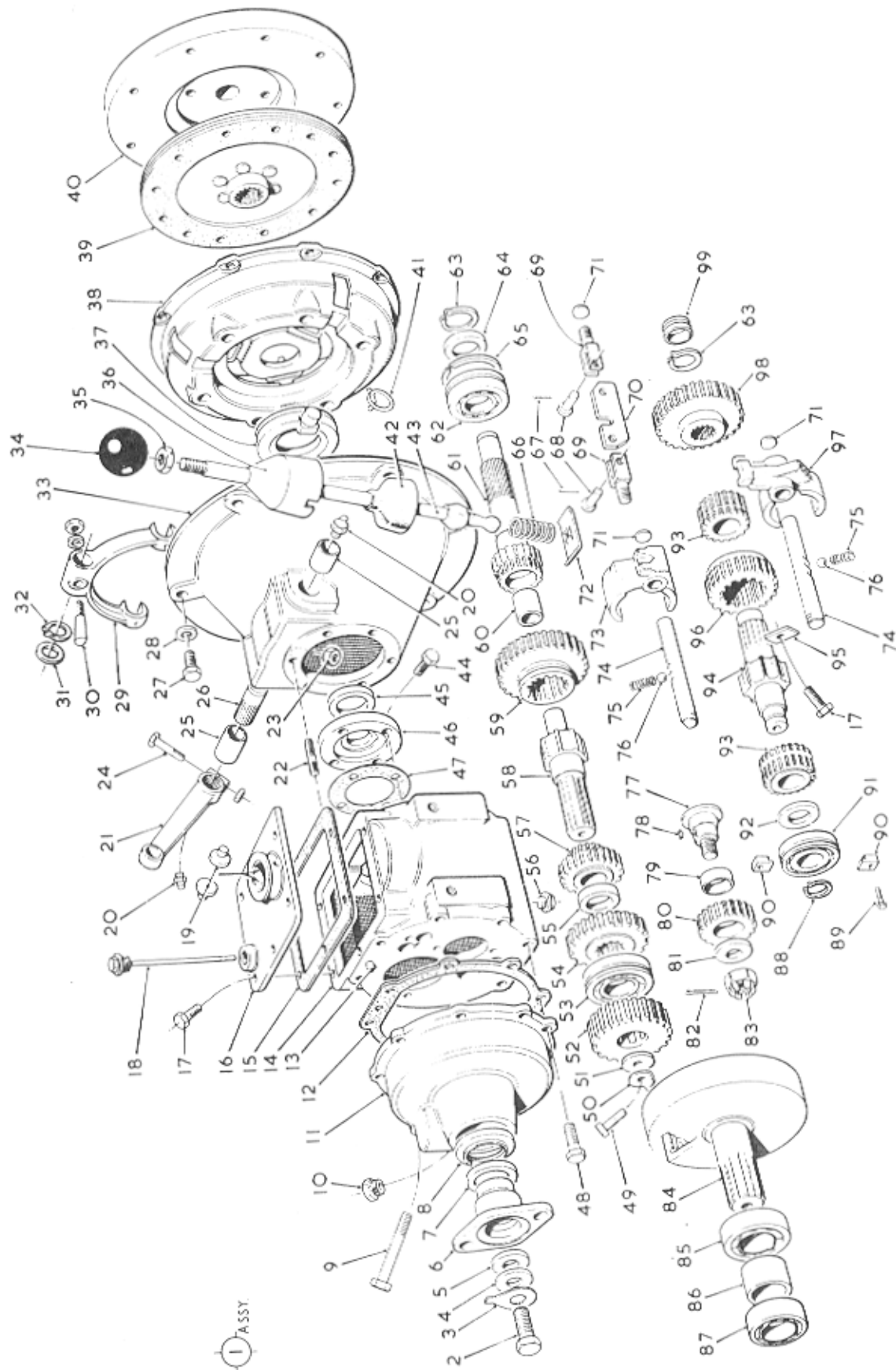


ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
1	4/35/132	SKIP	1
2	T/S	GREASE NIPPLE	2
3	4/35/138	SKIP MOUNTING BRACKET L.H.	1
4	4/35/150	TIE BAR	1
5		TIE BAR BOLT & NUTS	2
6	4/35/137	SKIP MOUNTING BRACKET R.H.	1
7	4/35/110	RAM BOLTS & NUTS	6



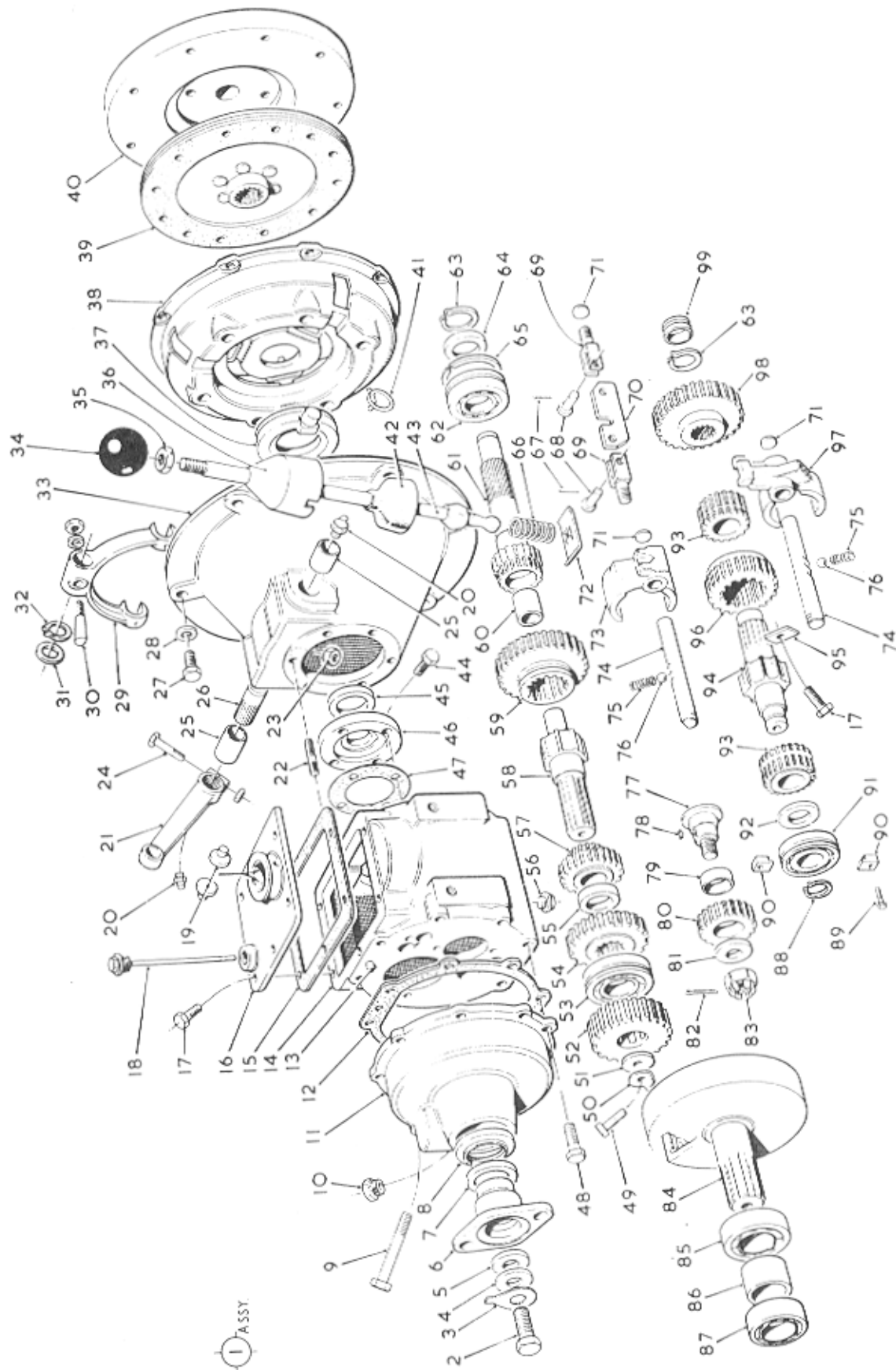
GEARBOX ASSEMBLY-40M/42 INV.

ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
1	40M/42 INV.	GEARBOX COMPLETE	1
2	USF 55	BOLT	1
3	CM 2050	WASHER TAB	1
4	CM 2123	WASHER PLAIN	1
5	40M 340	WASHER FIBRE	1
6	40M/383	COMPANION FLANGE	1
7	CM 2201	DUST EXCLUDER	1
8	40M/167	OIL SEAL - REAR	1
9	UBF 141	BOLT - REDUCTION HOUSING WITH WASHER	3
10	CM 2106	BREATHER	1
11	40M/106	REDUCTION HOUSING	1
12	40M/170	JOINT - REDUCTION HOUSING	1
13	40M/359	DOWEL	2
14	40M/101/A	GEARBOX CASING	1
15	40M/169	JOINT - TOP COVER	1
16	40M/220	GEARBOX COVER	1
17	USF 21	SCREW LOCKING STRIP & TOP COVER WITH WASHER	7
18	40M/153	DIPSTICK	1
19	40M/254	PIN - GEAR LEVER	2
20	CP 1069	GREASE NIPPLE - STRAIGHT	2
21	CM 2090	CLUTCH RELEASE LEVER	1
22	40M/177	STUD	6
23	UNL 106	NUT - CLUTCH MOUNTING	6
24	UBF 91	BOLT - CLUTCH LEVER WITH NUT	1
25	CM 2179	BUSH - CLUTCH CROSS SHAFT	2
26	40M/394	CLUTCH CROSS SHAFT	1
27	C 191	BOLT - CLUTCH ASSY	6
28	C 192	WASHER - CLUTCH ASSY	6
29	CM 2083	FORK - CLUTCH RELEASE	1
30	CM 20845/A	COTTER PIN WITH NUT & WASHER	1
31	40M/398	WASHER - CROSS SHAFT	1
32	CP 1006	CIRCLIP - CROSS SHAFT	1
33	40M/392	CLUTCH HOUSING	1
34	40M/133	KNOB GEAR LEVER	1
35	UN 512	LOCKNUT - GEAR LEVER	1
36	40M/377	COVER STEEL	1
37	46890	BEARING CLUTCH RELEASE	1
38	45688/22	COVER ASSY	1
39	40496	DRIVE PLATE	1
40	40M/253	WHEEL - FLY	1
40 A	40M/198	BUSH	
41	41628	SPRING RETAINER	2
42	40M/129	COVER - GEAR BOX LEVER	1



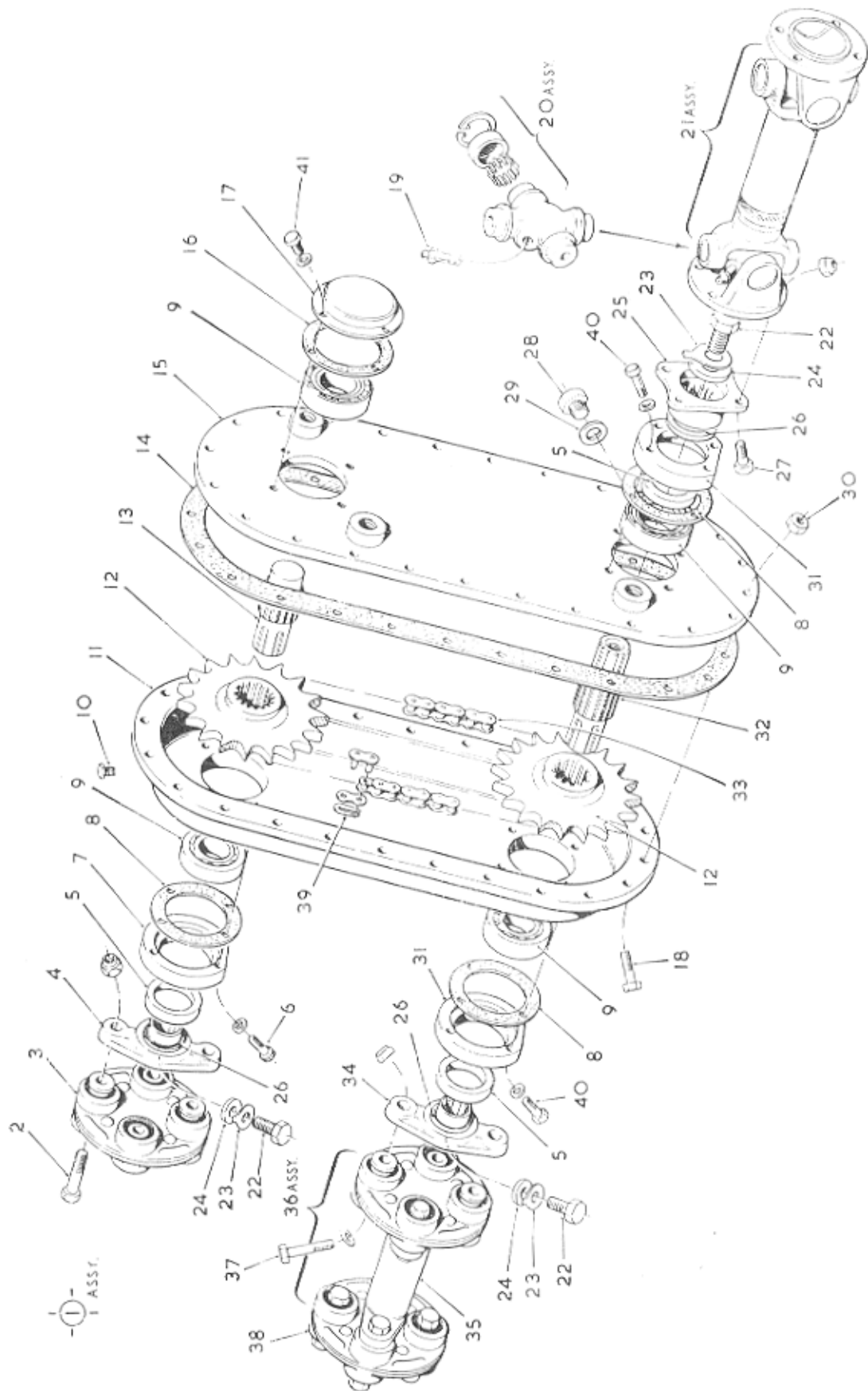
GEARBOX ASSEMBLY-40M/42 INV.

ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
43	40M/298	GEAR LEVER S/A	1
44	UBF 71	BOLT - FRONT COVER	4
45	40M/150	OIL SEAL - INPIJT	1
46	40M/126	FRONT COVER	1
47	40M/172	JOINT - FRONT COVER	1
48	USF 31	BOLT - REDUCTION HOUSING	5
49	USF 53	BOLT - MAINSHAFT	1
50	40M/179	LOCKWASHER - TAB	1
51	40M/178	WASHER - REDUCTION PINION	1
52	40M/125	REDUCTION PINION FIRST	1
53	CM 2052	REAR BEARING - MAIN SHAFT	1
54	40M/110	OUTPUT GEAR	1
55	40M/128	SPACER - OUTPIJT GEAR	1
56	CP 1002	DRAIN PLUG	1
57	40M/113	SECOND SPEED GEAR	1
58	40M/515	MAIN SHAFT	1
59	40M/115	FIRST SPEED GEAR	1
60	40M/513	BEARING PRIMARY SHAFT	1
61	40M/117	PRIMARY SHAFT	1
62	40M/143	BEARING INPUT	1
63	CM 2053	CIRCLIP PRIMARY & LAYSHAFT	2
64	40M/174	BEARING SPACER	1
65	40M/252	SNAP RING	1
66	40M/367	SPRING - GEAR LEVER	1
67	40M/244	SPLIT PIN	2
68	40M/232	CLEVIS PIN	2
69	40M/231	STUD INTERLOCK	2
70	40M/505	INTERLOCK PLATE	1
71	CM.2113	SEALING DISC	3
72	40M/245	RETAINING PLATE GEAR LEVER	1
73	40M/501	SELECTOR FORK - FIRST & REVERSE	1
74	40M/135	SELECTOR SHAFT	2
75	CM 2103	DETENT SPRING	2
76	CP 1077	DETENT BALL	2
77	40M/119	SHAFT REVERSE PINION	1
78	40M/222	KEY - REVERSE PINION SHAFT	1
79	40M/161	BUSH - REVERSE PINION	1
80	40M/111	REVERSE PINION	1
81	40M/155	WASHER - REVERSE PINION SHAFT	1
82	CP 1004	SPLIT PIN	1
83	UN 507	NUT - REVERSE SPINDLE	1
84	40M/120	INTERNAL GEAR	1
85	CM 2068	FRONT BEARING INTERNAL GEAR	1
86	40M/138	SPACER	1



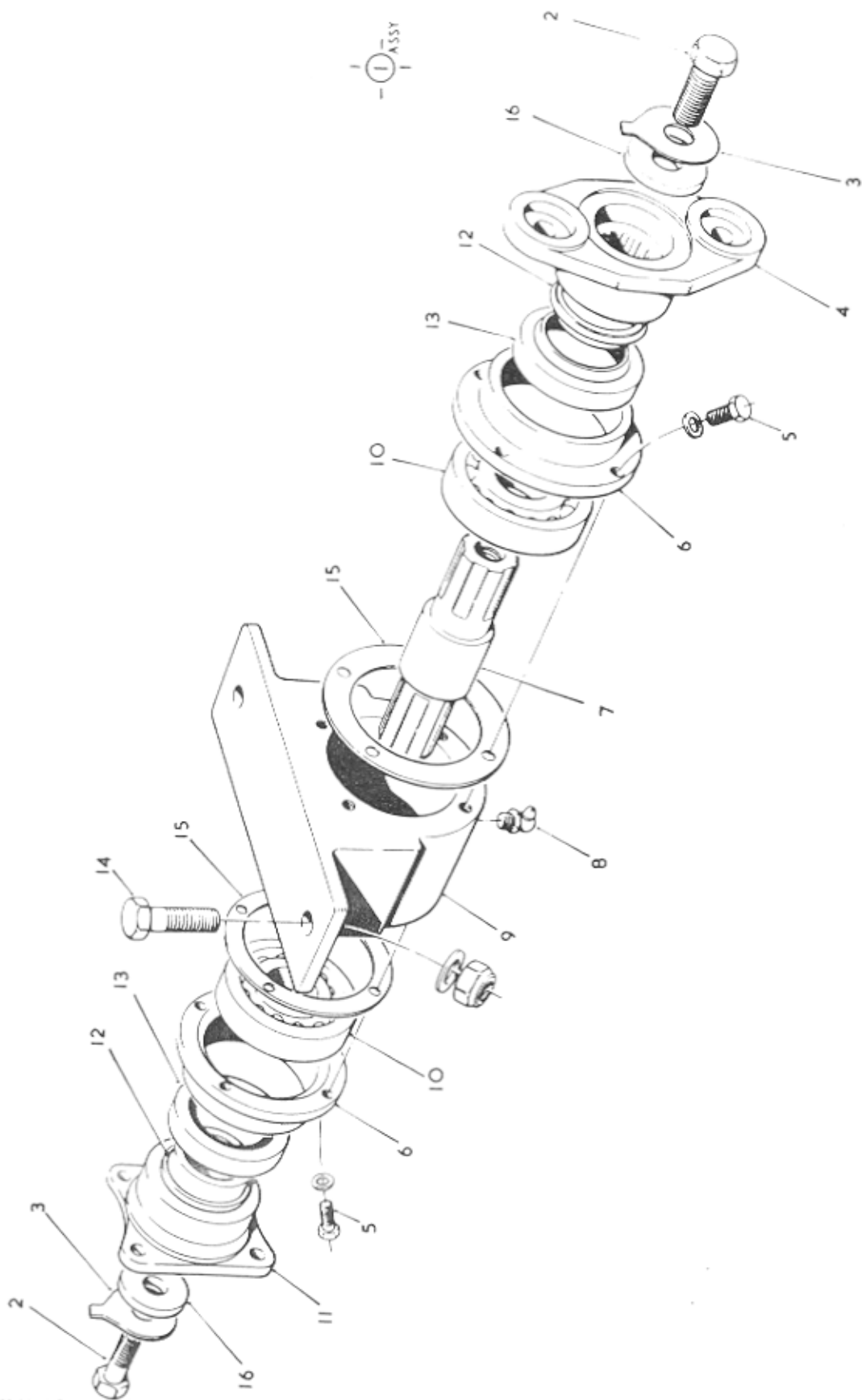
GEARBOX ASSEMBLY-40M/42 INV.

ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
87	40M/149	REAR BEARING INTERNAL GEAR	1
88	40M/148	CIRCLIP	1
89	USF 11	BOLT - BEARING RETAINER	1
90	40M/299	CLIP - LAYSHAFT BEARING	2
91	40M/146	REAR BEARING - LAYSHAFT	1
92	40M/130	BEARING SPACER	1
93	40M/114	REVERSE SPEED GEAR	2
94	40M/118	LAYSHAFT	1
95	40M/136	SELECTOR - LOCKING STRIP	1
96	40M/116	SECOND SPEED SLIDING GEAR	1
97	40M/502	SELECTOR FORK - SECOND & THIRD GEAR	1
98	40M/360	FIRST REDUCTION GEAR	1
99	40M/162	BUSH LAYSHAFT	1



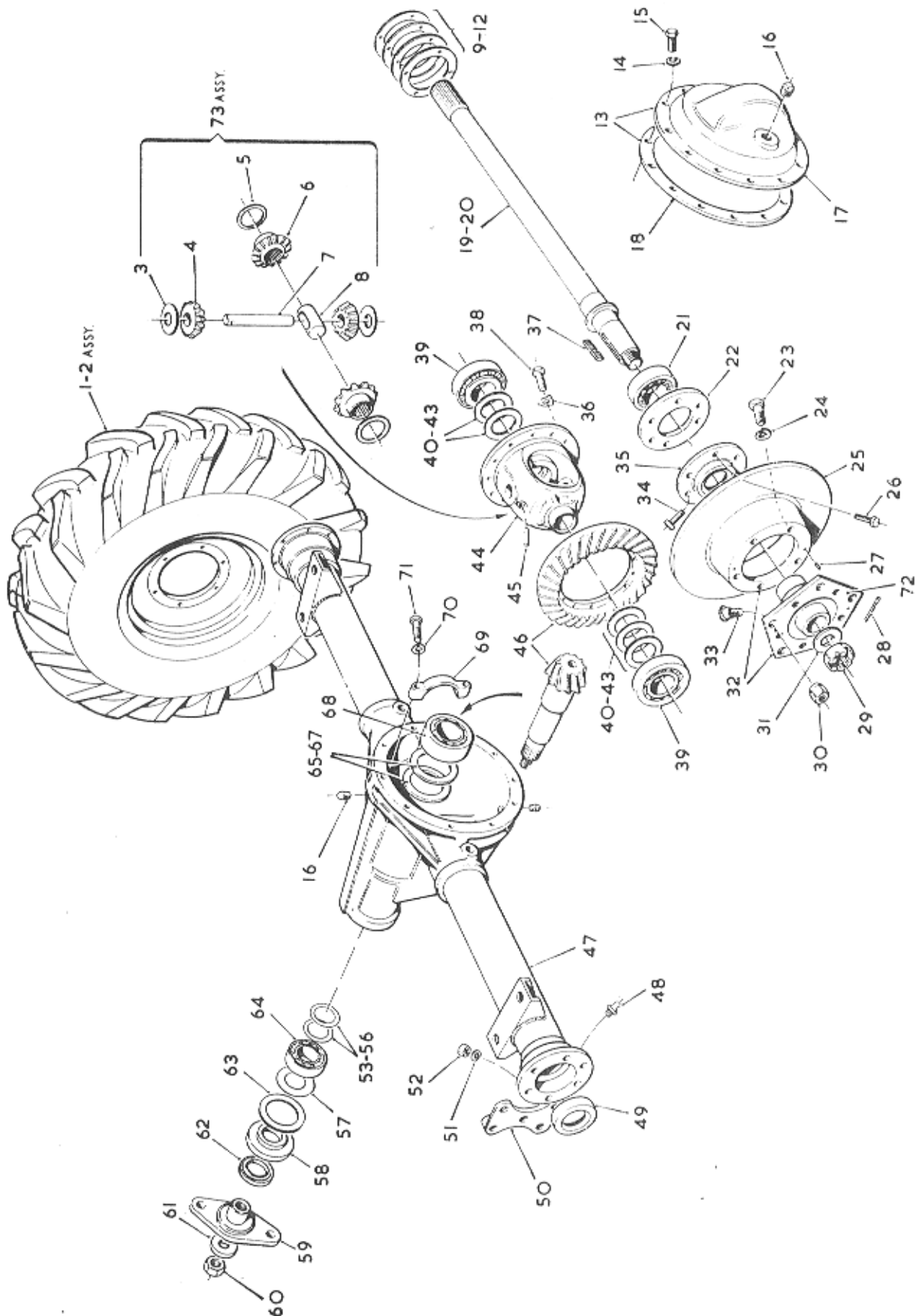
TRANSFER BOX & PROP. SHAFT ASSEMBLY - 4/35/14

ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
1	4/35/14/70	TRANSFER BOX COMPLETE	1
2	10203A	COUPLING BOLT WASHER & NUT	4
3	10203	COUPLING	1
4	40M/383	COMPANION FLANGE	1
5	40M/167	OIL SEAL	3
6	UFC 416	CAP SCREW	4
7	4/35/102	OIL SEAL HOUSING	1
8	CM 2073	GASKET	3
9	CM 2068	BEARING	4
10	CM 2106	BREATHER	1
11	4/35/96	MAIN CASE	1
12	4/35/17	CHAIN WHEEL	2
13	4/35/15	INPUT SHAFT	1
14	4/35/20	JOINT	1
15	4/35/97	MAIN COVER	1
16	CM 2072	JOINT	1
17	4/35/95	COVER	1
18	UBF 41	HOUSING SCREW	24
19	94 GB 2459	GREASE NIPPLE	2
20	K5GB18	REPAIR KIT	
21	1350 YSA	PROP SHAFT	1
22	USF 55	COMPANION FLANGE BOLT	2
23	CM 2050	TAB WASHER	3
24	CM 2123	THICK WASHER	3
25	40M/366	COMPANION FLANGE	1
26	CM 2201	DUST SHIELD	3
27		PROP SHAFT NUT & BOLT 1 1/4" X 7/16" UNF	8
28	CP 1002	DRAIN PLUG	1
29	CP 1068	FIBRE WASHER	1
30	UN 501	NUT	24
31	CM 2205	OIL SEAL HOUSING	2
32	4/35/16	OUTPUT SHAFT	1
33	4/35/18	DRIVE CHAIN	1
34	40M/204	COMPANION FLANGE	1
35	L 307	PROP SHAFT	2
36	76491	PROP SHAFT ASSY. COMPLETE	2
37	2407 A	COUPLING BOLT WASHER & NUT	16
38	2407	COUPLING	4
39	4/35/18A	CONNECTING LINK (CHAIN)	1
40	UBF 61	BEARING COVER SCREWS	8
41	USF 31	END COVER SCREWS	4



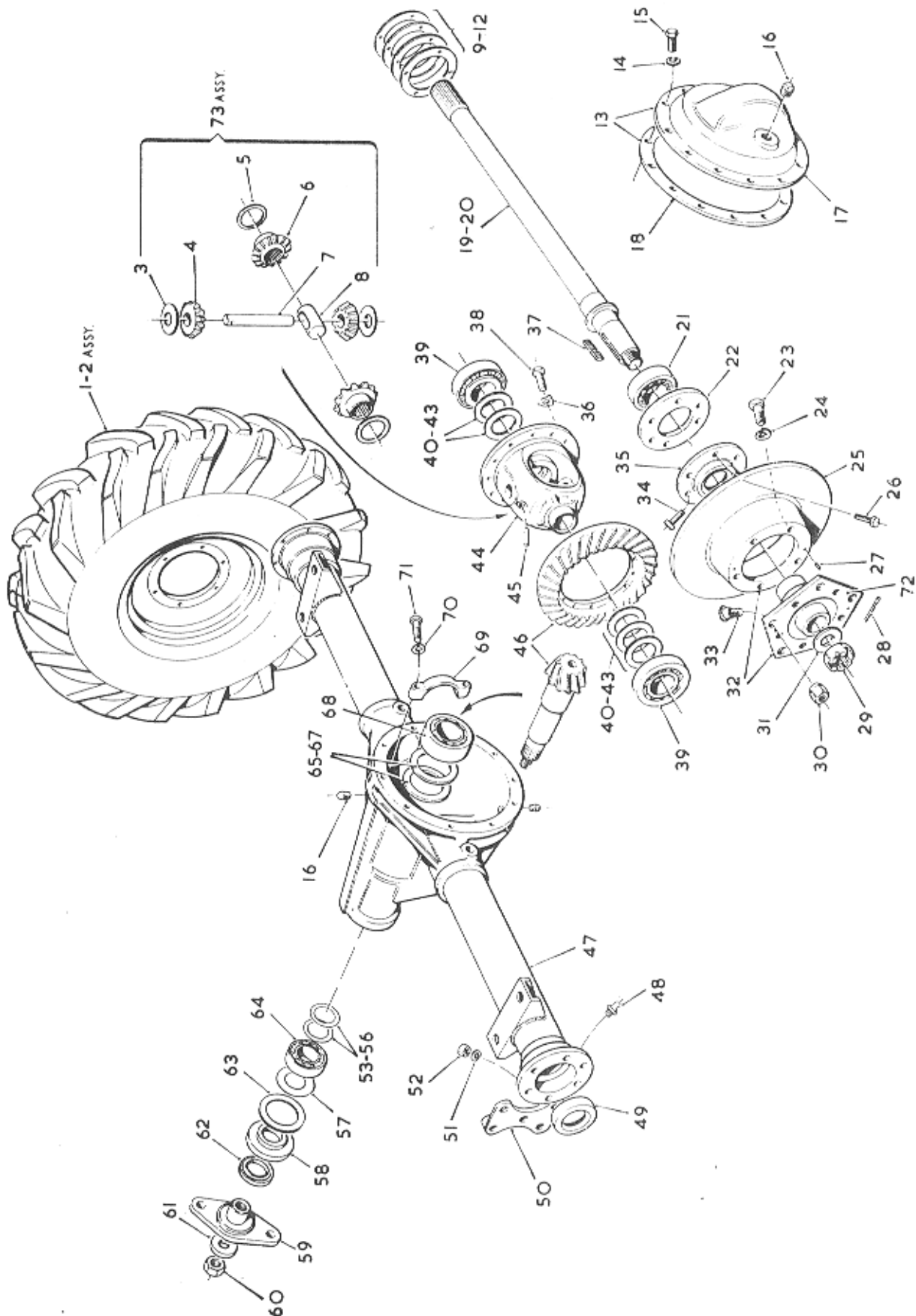
TRUNNION ASSEMBLY - 4/35/147

ITEM NO	PART NO.	DESCRIPTION	NO. OFF
1	4/35/147	TRUNNION ASSEMBLY	1
2	USF 55	COMPANION FLANGE BOLT	2
3	CM.2050	TAB WASHER	2
4	40M/204	COMPANION FLANGE	1
5		HOUSING BOLT $\frac{1}{2}$ " UNF X $\frac{1}{2}$ "	8
6	40M/622	OIL SEAL HOUSING	2
7	4/35/131	SHAFT	1
8	T/90 DEG.	GREASE NIPPLE	1
9	4/35/143	HOUSING	1
10	CM 2068	BEARING	2
11	40M/366	COMPANION FLANGE	1
12	CM 2201	DUST SHIELD	2
13	40M/167	OIL SEAL	2
14		MOUNTING BOLT & NUT $\frac{5}{8}$ " BSF X 2"	2
15	4/35/20A	GASKET	2
16	CM 2123	WASHER	2



DRIVE AXLE ASSEMBLY SHA-001-120-174

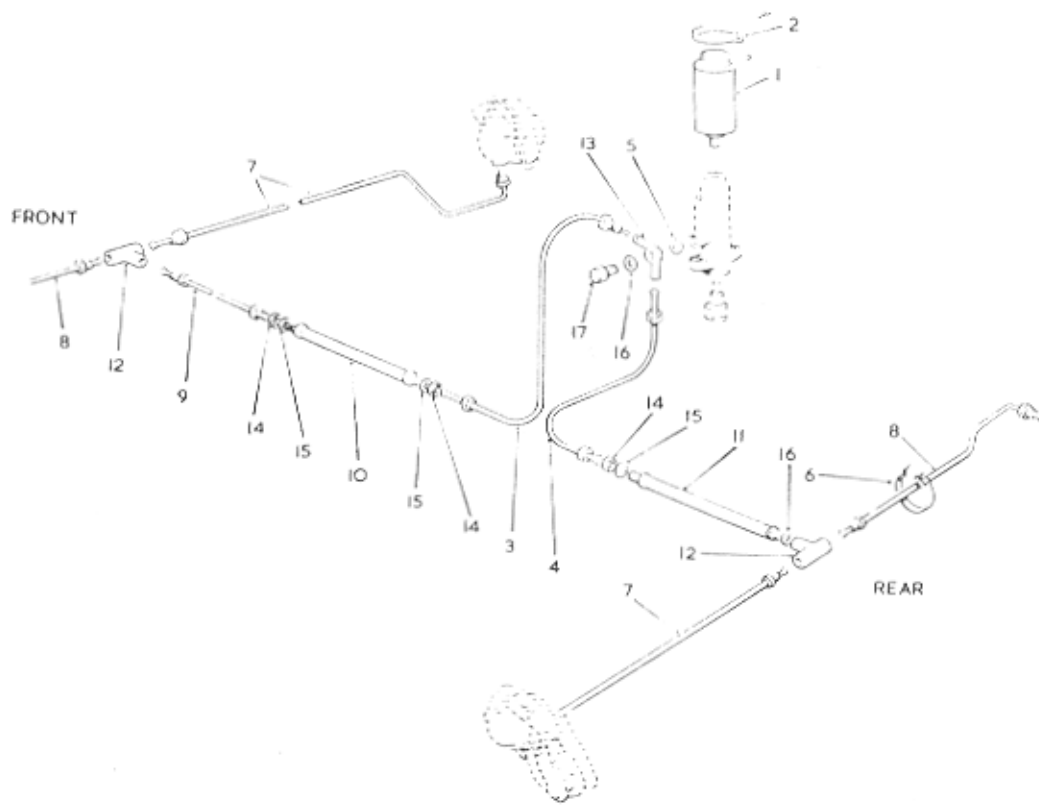
ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
1	L 327	WHEEL R.H. COMPLETE	2
2	L 328	WHEEL L.H. COMPLETE	2
3	5HA-037	DIFFERENTIAL PINION MATE THRUSTWASHER	2
4	5HA-008-1	DIFFERENTIAL PINION MATE	2
5	5HA-038	DIFFERENTIAL SIDE GEARS THRUST WASHER	2
6	5HA-007-2	DIFFERENTIAL SIDE GEAR	2
7	5HA-012	DIFFERENTIAL PINION MATE SHAFT	1
8	5HA-033-3	AXLE SHAFT SPACER	1
9	5HA-050-3	AXLE SHAFT BEARING SHIM .003"	2
10	5HA-051-3	AXLE SHAFT BEARING SHIM .005"	2
11	5HA-052-3	AXLE SHAFT BEARING SHIM .010"	2
12	5HA-053-3	AXLE SHAFT BEARING SHIM .030"	2
13	5HA-064-1	GEAR CARRIER COVER ASSEMBLY	1
14	6LW-105	COVER SCREW LOCKWASHER	10
15	6B-NC 10	COVER SCREW	10
16	HA-059	FILLER AND DRAIN PLUG	2
17	5HA-010	GEAR CARRIER COVER	1
18	5HA-026	GEAR CARRIER COVER GASKET	1
19	5HA-005-51	AXLE SHAFT RIGHT HAND	1
20	5HA-005-51	AXLE SHAFT LEFT HAND	1
21	5HA-025	AXLE SHAFT BEARING	2
22	5HA-035-6	AXLE SHAFT BEARING RETAINER	2
23	6B-NF-21	BRAKE DISC BOLT	10
24	6 LW-105	BRAKE DISC LOCKWASHER	10
25	10HA-136	BRAKE DISC	2
26	6B-NF 21	BEARING RETAINER, BOLT	6
27	6D-16	BRAKE DISC, DOWEL	4
28	12 SP-18	AXLE SHAFT COTTER	2
29	18 SN-NF 12	AXLE SHAFT NUT	2
30	PN 3445	WHEEL NUT	10
31	18W-32	AXLE SHAFT WASHER	2
32	5HA-028-52	HUB & DISC ASSEMBLY	2
33	5HA-055-17	WHEEL STUD	10
34	6B-NF 24A	CALIPER BRACKET, BOLT	6
35	5HA-057-1	HUB OIL SEAL ASSEMBLY	1
36	5HA-074-1	DRIVE GEAR SCREW LOCKSTRAP	6
37	5HA-029	AXLE SHAFT KEY	2
38	5HA-075-2	DRIVE GEAR SCREW	12
39	5HA-024/1	DIFFERENTIAL BEARING	2
40	5HA-046	DIFFERENTIAL BEARING SHIM .003"	2
41	5HA-047	DIFFERENTIAL BEARING SHIM .005"	2
42	5HA-048	DIFFERENTIAL BEARING SHIM .010"	2
43	5HA-049	DIFFERENTIAL BEARING SHIM .030"	1
44	5HA-006	DIFFERENTIAL CASE	1



DRIVE AXLE ASSEMBLY SHA-001-120-174

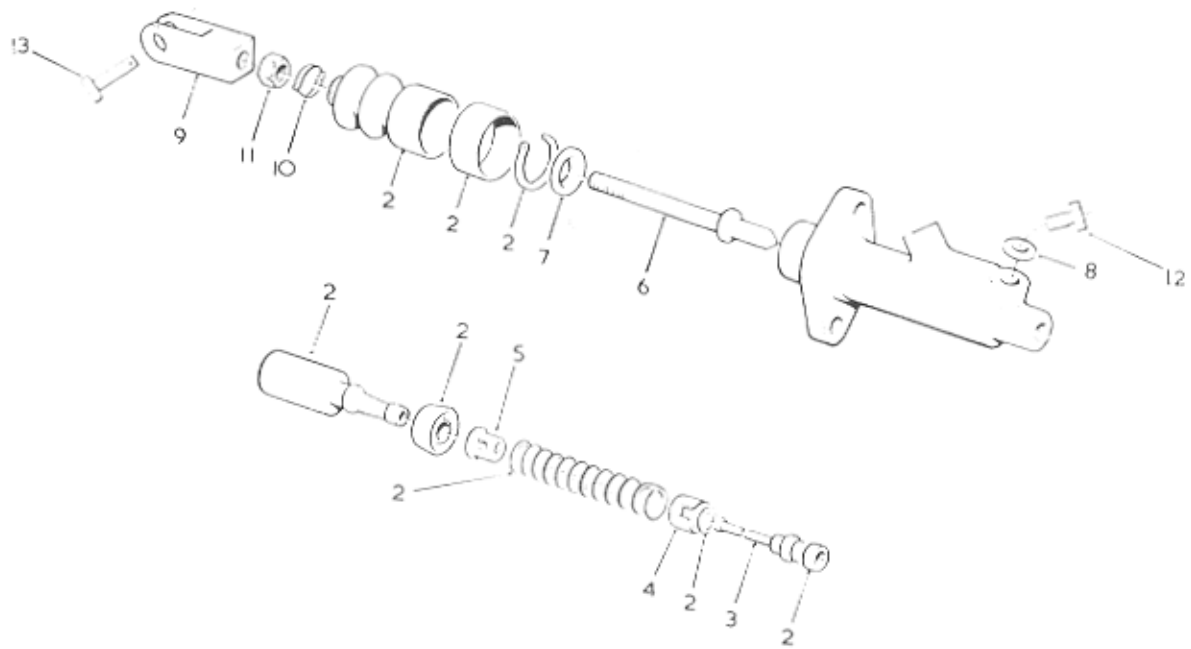
ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
45	5HA-013	DIFFERENTIAL PINION MATE SHAFT LOCK PIN	1
46	5HA-105-15	DRIVE GEAR AND PINION ASSY. COMPLETE	1
47	5HA-101-73	SERVICE CARRIER & TUBE ASSY.	1
48	5HA-056-1	AXLE SHAFT BEARING GREASE NIPPLE	2
49	5HA-027	AXLE SHAFT OIL SEAL	2
50	5HA-137	CALIPER BRACKET	2
51	6LW-105	BEARING RETAINER & CALIPER BRACKET LOCKWASHER	4
52	6N-NF5	BEARING RETAINER & CALIPER BRACKET NUT	12
53	5HA-039	PINION BEARING ADJUSTING SHIM OUTER .003"	2
54	5HA-040	PINION BEARING ADJUSTING SHIM OUTER .005"	2
55	5HA-041	PINION BEARING ADJUSTING SHIM OUTER .010"	2
56	5HA-042	PINION BEARING ADJUSTING SHIM OUTER .030"	1
57	2HA-036	PINION OIL SLINGER	1
58	2HA-019	PINION OIL SEAL	1
59	3HA-083-1	COMPANION FLANGE ASSY	1
60	12LN-NF9	PINION NUT	1
61	12W-24	PINION NUT WASHER	1
62	2HA-021	COMPANION FLANGE DUST SHIELD	1
63	2HA-020	PINION OIL SEAL GASKET	1
64	5HA-022	PINION BEARING OUTER	1
65	5HA-043	PINION ADJUSTING SHIM INNER .003"	2
66	5HA-044	PINION ADJUSTING SHIM INNER .005"	2
67	5HA-045	PINION ADJUSTING SHIM INNER .010"	2
68	5HA-023	PINION BEARING INNER	1
69	5HA-011	DIFFERENTIAL BEARING CAP	2
70	8LW-115	DIFFERENTIAL BEARING CAP LOCKWASHER	4
71	8B-NC 36	DIFFERENTIAL BEARING CAP BOLT	4
72	5HA-028-56	WHEEL HUB AND STUDS	2
73	5HA-082-5	DIFFERENTIAL CASE ASSY.	1
* 74	5HA-001-120	DRIVE AXLE COMPLETE WITH BRAKES	1
* 75	5HA-001-174	DRIVE AXLE COMPLETE WITH BRAKES	1

* ITEMS NOT ILLUSTRATED.



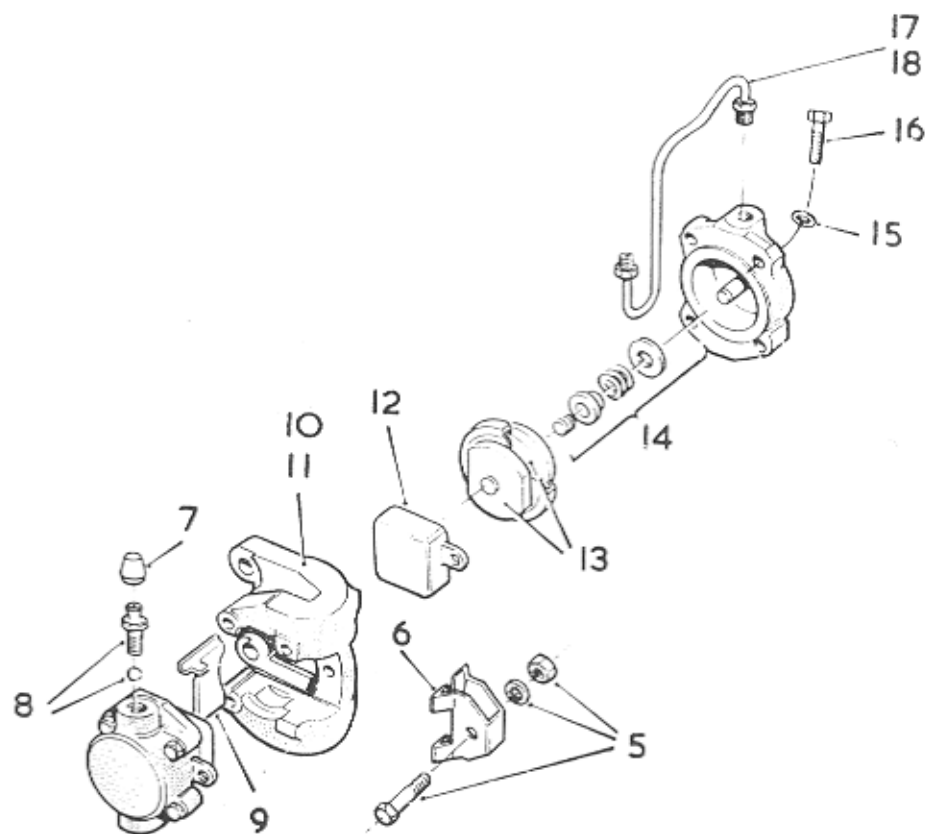
BRAKES, PIPES AND FITTINGS

ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
1	640 47211	HEADER TANK	1
2	378620	CLIP	1
3	360 9830 W	PIPE	1
4	64473484	PIPE	1
5	37870 3	WASHER	1
6	4-350-S	CLIP	1
7	64473266	PIPE	4
8	64473383	..	2
9	64473878	..	2
10	640 46115	FLEX. PIPE	1
11	640 4790 3	.. ..	1
12	64474341	TEE PIECE	2
13	64474289	DOUBLE BANJO	1
14	64100050	THIN NUT	3
15	64140087	SHAKEPROOF WASHER	3
16	378700	WASHER	2
17	376102W	BOLT	1



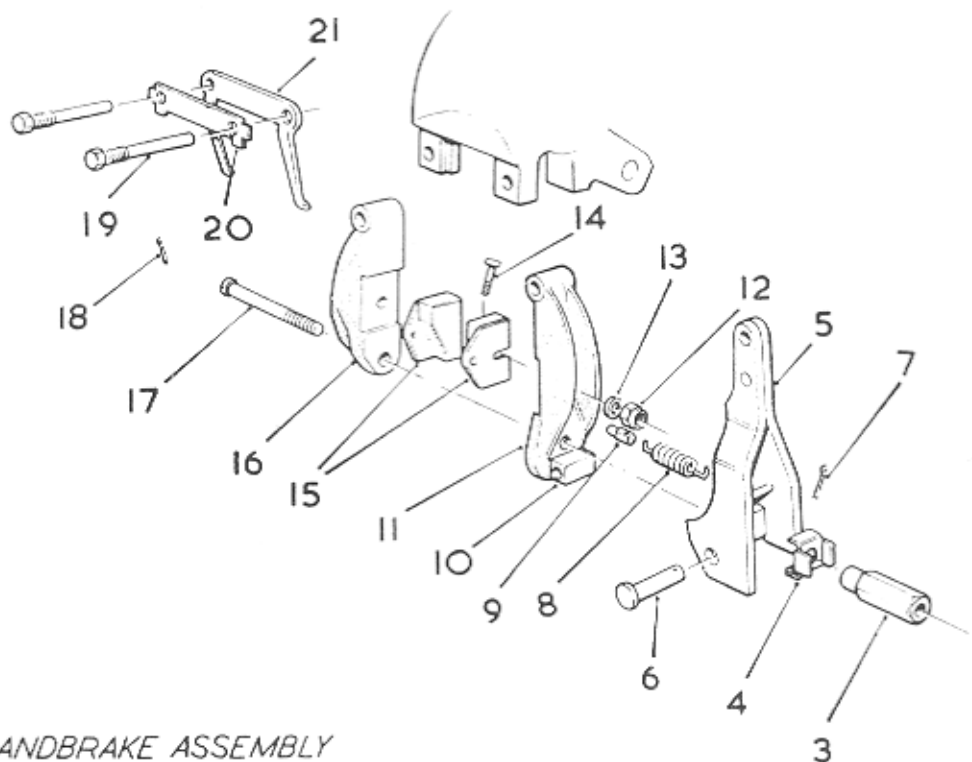
MASTER CYLINDER ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION	NO.OFF
1	64067970	MASTER CYLINDER (COMPLETE)	1
2	SP 1996 /2	SEAL KIT	1
3	378641	VALVE STEM	1
4	318001	VALVE SPACER	1
5	64673391	VALVE SPRING RETAINER	1
6	351257 W	PUSH ROD	1
7	378242	RETAINING WASHER	1
8	378700	WASHER	1
9	64671286	CLEVIS	1
10	378312	DUST COVER RETAINER	1
11	64100052	LOCKNUT	1
12	64110348	PLUG	1
13	C174 Y	CLEVIS PIN	1



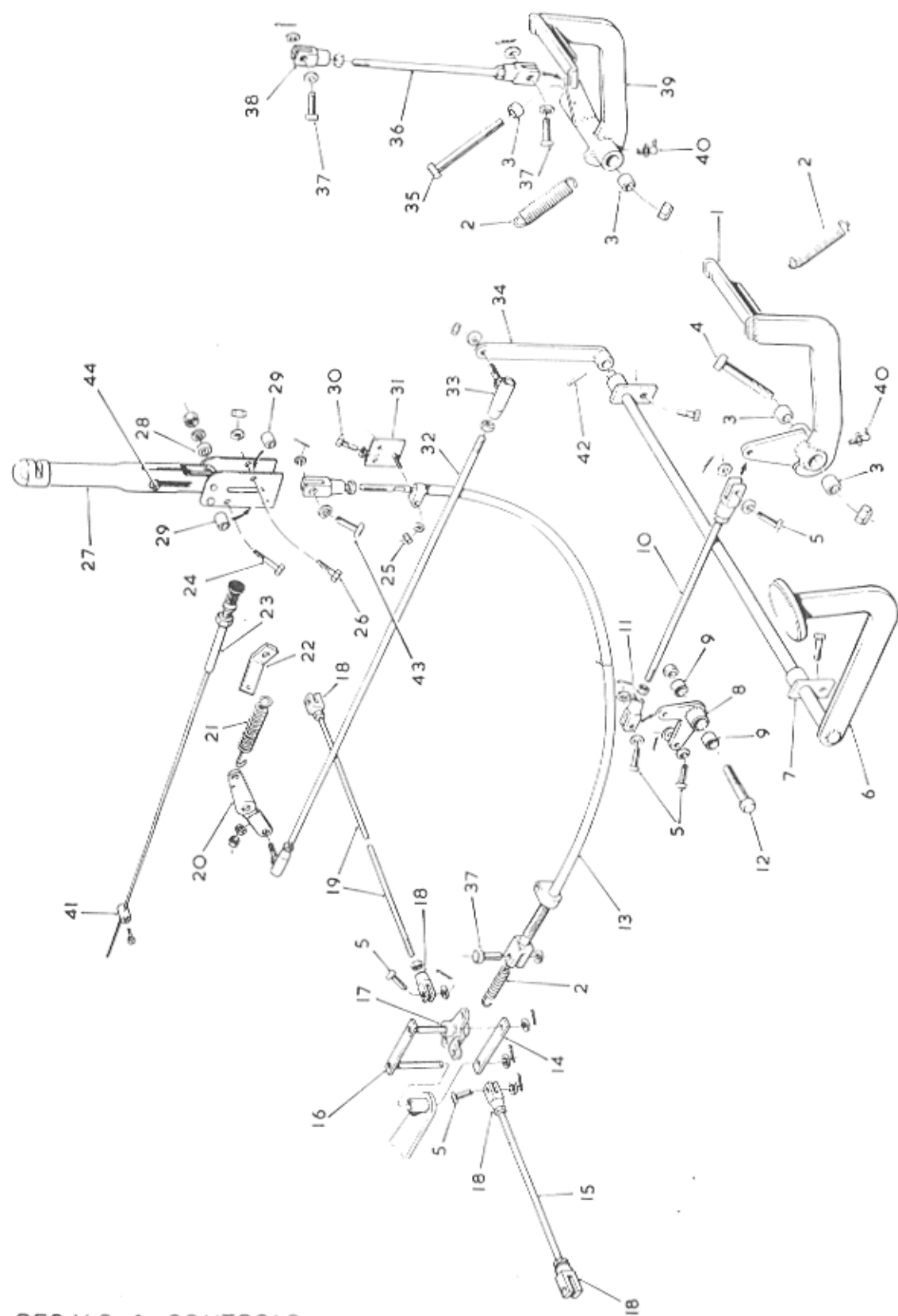
CALIPER ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
1	CB 90 262	CALIPER ASSY. R.H. FRONT	1
2	CB 90 263	CALIPER ASSY. L.H. FRONT	1
3	CB 90 263/INV	CALIPER ASSY. R.H. REAR	1
4	CB 90 262/INV	CALIPER ASSY. L.H. REAR	1
5	VBO 8491	NUT, BOLT & WASHER	4
6	VBO 5123	KEEP PLATE	4
7	CBO 849	DUST CAP	4
8	VBO 8378	BLEED SCREW & BALL ASSY.	4
9	VBO 5133	SUPPORT PLATE	8
10	CB 60 252	CALIPER BODY R.H. FRONT, L.H. REAR	2
11	CB 60 253	CALIPER BODY L.H. FRONT, R.H. REAR	2
12	CB 20 478/114	FRICTION PAD COMPLETE (4 PER SET)	2 SETS
13	VBO 8210/A	SEAL KIT (DUST & PISTON)	8
14	VBO 5505	PISTON & CYLINDER ASSY.	8
15	VBO 6101/L	SHAKEPROOF WASHER	32
16	VBO 5100	RETAINING BOLT	32
17	VBO 3927	BRIDGE PIPE ASSY. R.H. FRONT, L.H. REAR	2
18	VBO 3926	BRIDGE PIPE ASSY. L.H. FRONT, R.H. REAR	2



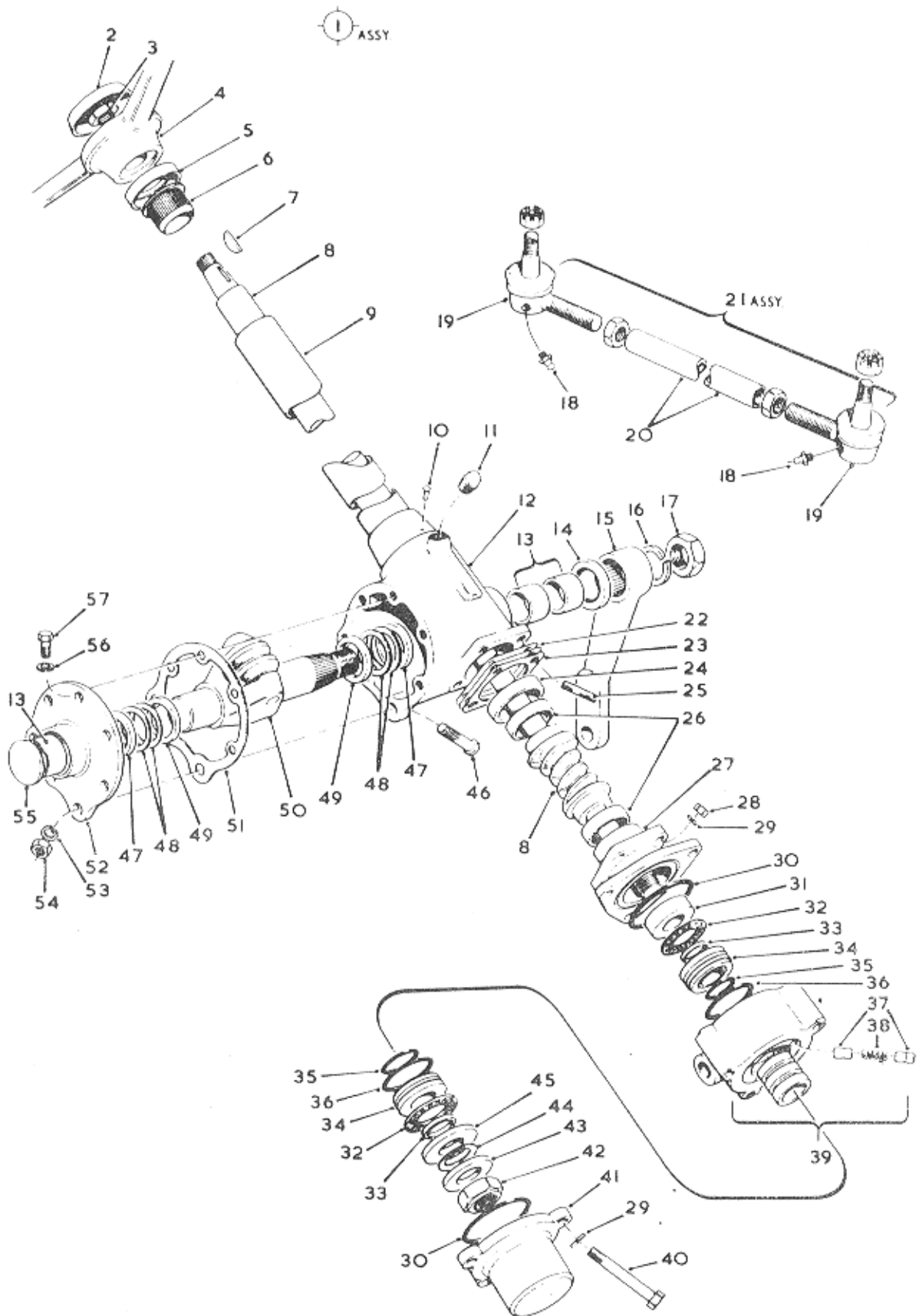
HANDBRAKE ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
1	CB 90 257	HANDBRAKE ASSEMBLY L.H.	1
2	CB 90 256	HANDBRAKE ASSEMBLY R.H.	1
3	CB 20 258	ADJUSTMENT NUT	2
4	VBO 8307	FRICTION SPRING	2
5	CB 20 526	LEVER ASSEMBLY	2
6	VBO 8315	HINGE PIN	2
7	VBO 6135 D	SPLIT PIN	2
8	VBO 7329	RETURN SPRING	2
9	VBO 7330	SPRING ANCHOR	2
10	VBO 8308	PIVOT SEAT	2
11	CB 60 249/8308	PAD CARRIER ASSY. INNER COMPLETE WITH PIVOT SEAT	2
12	VBO 60 50	NUT 2 B.A.	4
13	VBO 6101 F	WASHER	4
14	VBO 4124	BOLT	4
15	CB 20 311 Y	FRICTION PAD (4 PER SET)	1 SET
16	VBM 4573	PAD CARRIER OUTER	2
17	CB 20 289	BOLT	2
18	VBO 6158/G	SPLIT PIN	2
19	VBO 4190	BOLT	4
20	VBO 4226	TAB WASHER	2
21	VBM 4635/1	RETRACTION PLATE	2



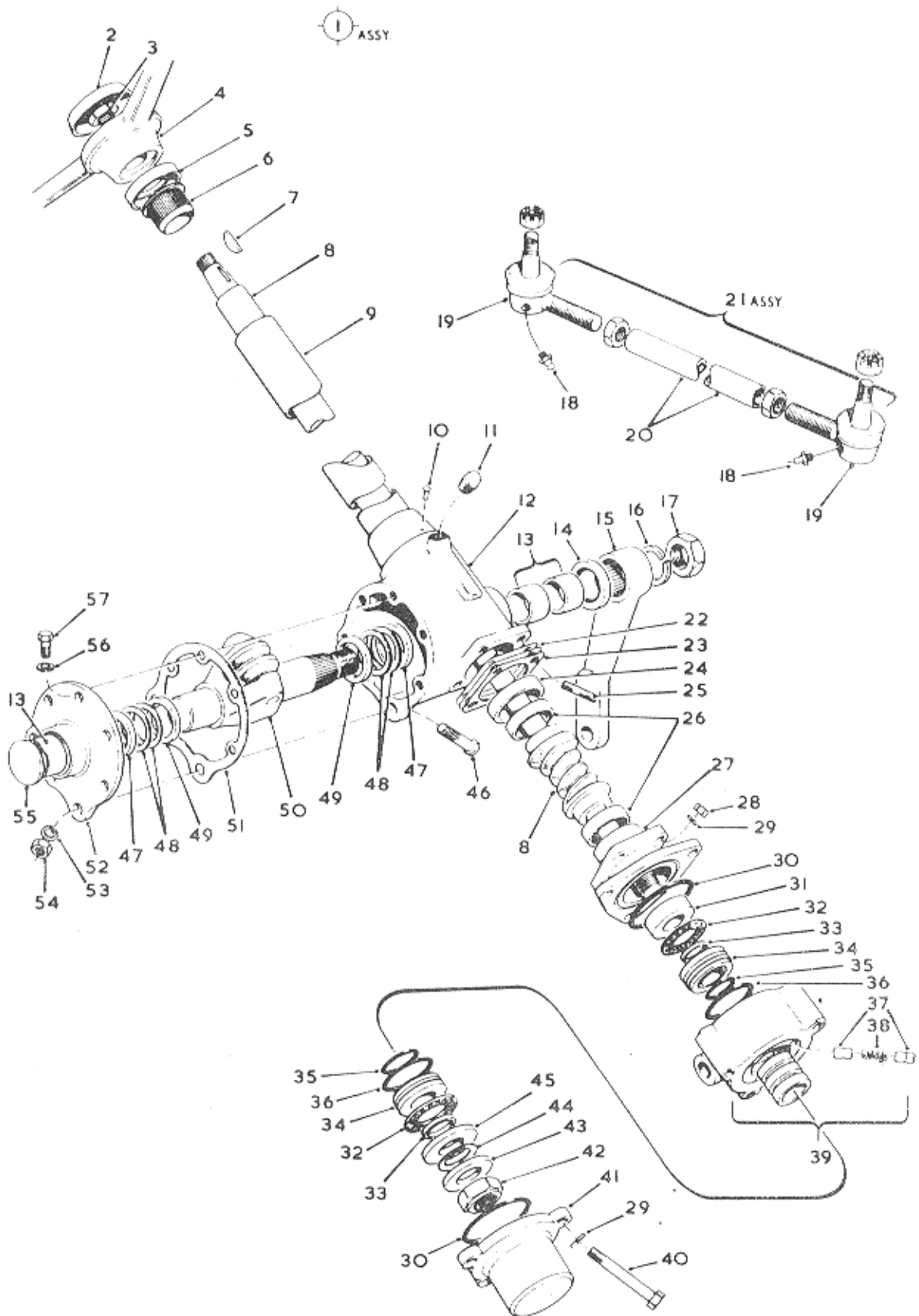
PEDALS & CONTROLS

ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
1	4/35/125	FOOTBRAKE PEDAL	1
2	C 173B	RETURN SPRING	3
3	WB 1010	PEDAL BUSH	4
4		PEDAL BOLT & NUT 3½" X 5/8" BSF	1
5	C 174Y	CLEVIS PIN	5
6	4/35/135	ACCELERATOR PEDAL	1
7	4/35/151	ACCELERATOR MOUNTING BRACKETS	2
8	4/35/128 (435256)	BRAKE TRANSFER LEVER	1
9	WB 0808	BRAKE TRANSFER LEVER BUSH	2
10	4/35/139	FOOTBRAKE 5'16" UNF X 8¼" LONG	1
11	C 174 E	FORK END	2
12		BRAKE TRANSFER LEVER BOLT & NUT 3½" X ½" BSF	1
13	4/35/111	HANDBRAKE CABLE	1
14	C 189A	COMPENSATOR LINK	1
15	4/35/62B	BRAKE ROD SHORT ¼" UNF X 7" LONG	1
16	C 271	COMPENSATOR LINK ASSY.	1
17	4/35/176	COMPENSATOR LEVER ARM	1
18	C 174 C	FORK END	4
19	4/35/62 A	BRAKE ROD LONG ¼" UNF X 30" LONG	1
20	F 523	ACCELERATOR LEVER ENGINE	1
21	C 173 D	ACCELERATOR RETURN SPRING	1
22	C 163	ACCELERATOR SPRING RETAINER	1
23	4/35/82	STOP CONTROL	1
24		MOUNTING BOLT & NUT 2½" X 3/8" BSF	2
25		NUT WITH SPRING WASHER 5/16" BSF	1
26		MOUNTING BOLT & NUT 1¼" X 3/8" BSF	1
27	715-C-11605	HANDBRAKE ASSEMBLY	1
28	C 179	HANDBRAKE MOUNTING WASHER	3
29	715-C-11605 B	HANDBRAKE SPACER	2
30		SETSCREW 5/8" X ¼" BSF	2
31	4/35/140	CABLE LOCATING PLATE	1
32	4/35/61	ACCELERATOR ROD ½" BSF X 22" LONG	1
33	C 160B	ACCELERATOR ROD BALL ENDS	2
34	F 522	ACCELERATOR LEVER	1
35		CLUTCH PEDAL BOLT & NUT 8½" X 5/8" BSF	1
36	4/35/63	CLUTCH ROD 3/8" BSF X 8¼" LONG	1
37	C 174X	CLEVIS PIN	3
38	C 174A	FORK END	2
39	4/35/126	CLUTCH PEDAL	1
40	T 90 DEG.	GREASE NIPPLE	2
41		SOLDERLESS NIPPLE	1
42	C 129A	TENSION PIN 1¼" X 3/16"	1
43	715-C-11605-C	BRAKE LEVER CLEVIS PIN	1
44	715-C-11605-D	LEVER PIN	1



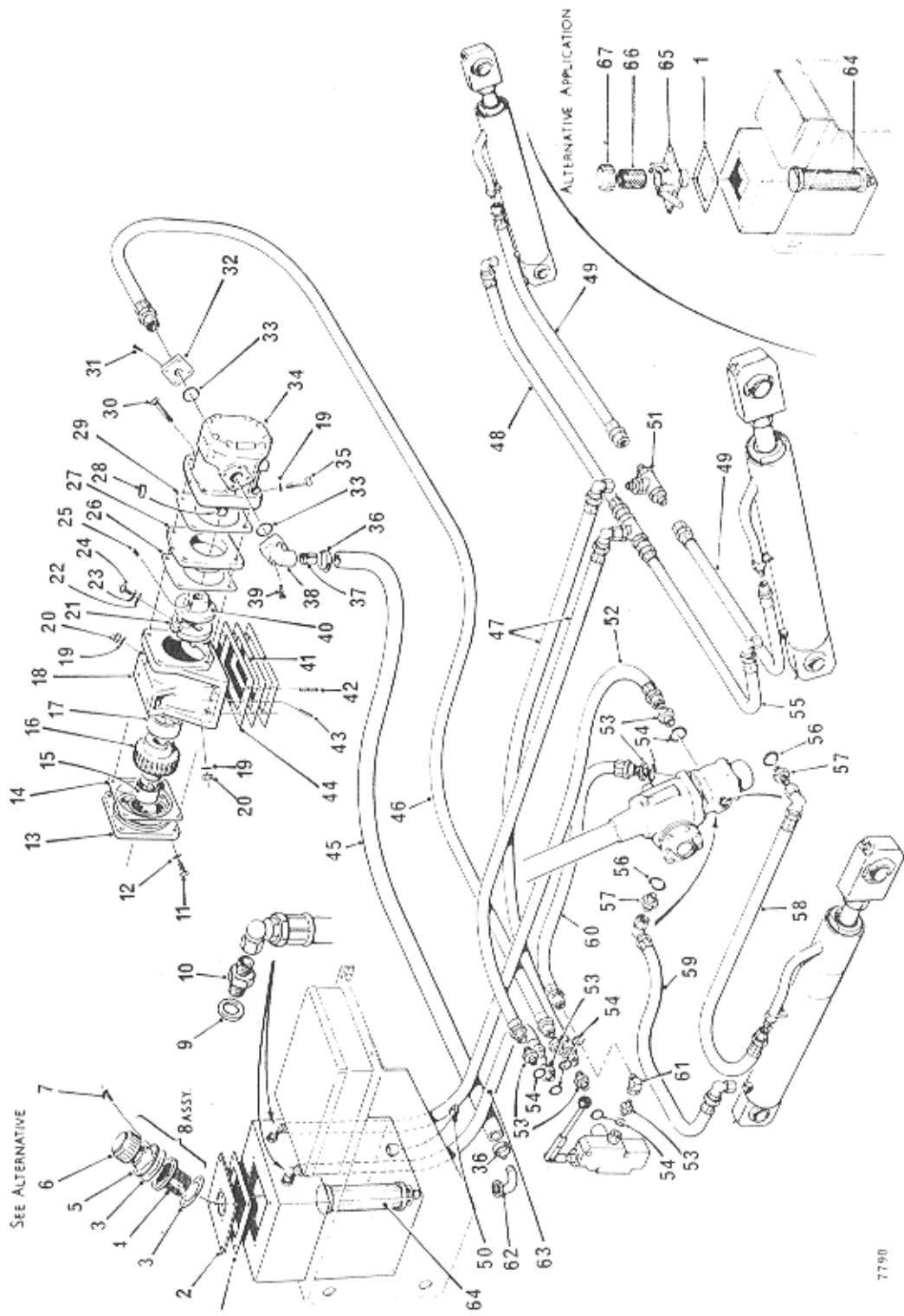
STEERING GEAR ASSEMBLY-6UHMGA 33196

ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
1	6UHMGA33196	STEERING GEAR COMPLETE	1
2	153A	STEERING WHEEL CAP	1
3	C 197	STEERING WHEEL NUT	1
4	153	STEERING WHEEL	1
5	M 33418	SEALING COVER	1
6	PA 4438	RUBBER BUSH	1
7	S 9119	KEY	1
8	HMA 33216	INNER COLUMN & CAM ASSY	1
9	PA 4472	OUTER TUBE	1
10	S 9166	PIN GROOVED	1
11	S 9033	PLUG ½" GAS	1
12	PA 4828	OUTER TUBE, BOX, COVER PLATE & BUSHES	1
13	P 3967	BUSH	3
14	S 9244	OIL SEAL 2.1/8" X 3/8" X 1½"	1
15	M 33197	DROP ARM	1
16	S 9174	WASHER 1¼" DIA SPRING	1
17	S 9249	NUT ROCKERSHAFT 1½" UNF	1
18		GREASE NIPPLE	2
19	C 159 BD	BALLEND WITH NUT (R.H. & L.H.)	1 EACH
20	4/35/130	DRAG LINK INTERMEDIATE	1
21	4/35/109	DRAG LINK COMPLETE	1
22	P 3648C	.005" SHIM BOTTOM & TOPCAP PLASTIC	AS REQ.
	P 3648D	.010" " " " "	AS REQ.
	P 3648E	.015" " " " "	AS REQ.
	P 3648F	.007" " " " "	AS REQ.
23	P 3648G	.010" BOTTOM CAP LINER FIBROL	1
24	UH 922	SLEEVE	1
25	S 9404	3/8" UNF X 1½" STUD	4
26	S 9678	NEEDLE BEARING	2
27	UH 915	ADAPTOR PLATE	1
28	S 9259	NUT 3/8" UNF 2B	4
29	S 903	WASHER 3/8" SPRING	7
30	S 9376	'O' RING - 3.1/16" O/D X .139"	2
31	UH 938	THRUST PAD	1
32	S 9711	THRUST BEARING	2
33	UH 942	WASHER	2
34	UH 937	THRUST SPACER	2
35	S 9675	'O' RING 1½" O/D X .106"	2
36	S 9277	'O' RING 2½" O/D X .139"	2
37	UH 894	PISTON	6
38	UH 895	SPRING	3
39	UHA 899	VALVE ASSEMBLY	1



STEERING GEAR ASSEMBLY-6UHMGA 33196

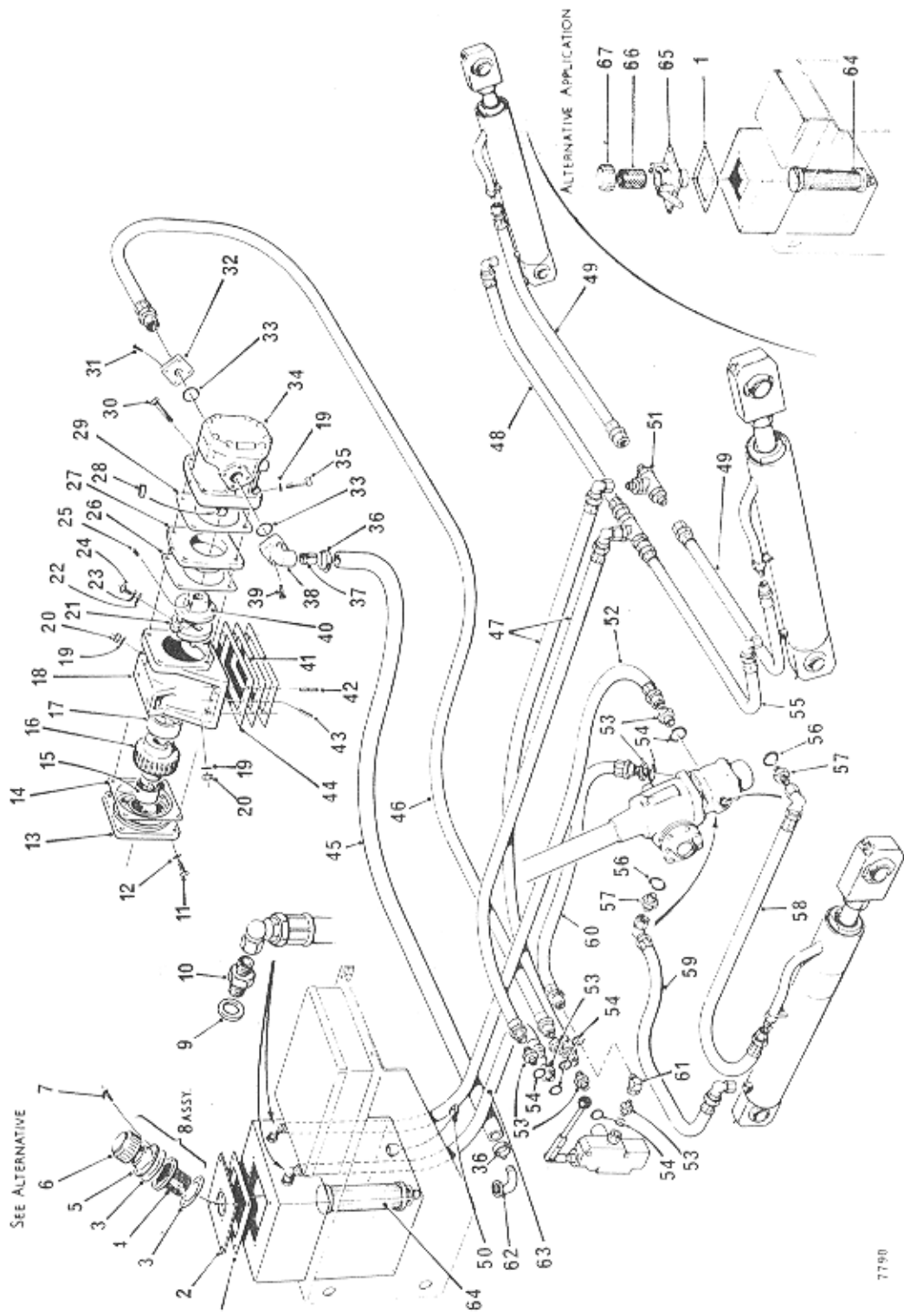
ITEM NO.	PART NO.	DESCRIPTION	NO.OFF
40	S 9680	BOLT 3/8" UNF X 3"	3
41	UH 914	COVER	1
42	UH 946	NUT	1
43	S 9713	PLAIN WASHER	1
44	S 9712	DISC SPRING	1
45	UH 939	THRUST WASHER	1
46	P 4145	FITTED BOLT	2
47	P 4170	A.032" WASHER ROCKERSHAFT THRUST	AS REQ.
		B.064" " " "	AS REQ.
		C.092" " " "	AS REQ.
		D.135" " " "	AS REQ.
48	P 4171	A.005" SHIM ROCKERSHAFT	AS REQ.
		B.010" " "	AS REQ.
		C.015" " "	AS REQ.
		D.007" " "	AS REQ.
49	P 4169	WASHER ROCKERSHAFT THRUST	2
50	PA 4685	ROCKERSHAFT COMPLETE	1
51	P 3649	SHIM COVER PLATE LINER	1
52	QA 859	COVER PLATE & BUSHES	1
53	S 9030	WASHER 7/16" SPRING	2
54	S 9239	NUT 7/16" UNF	2
55	P 1367	PLUG COVER PLATE	1
56	S 902	WASHER 5/16" SPRING	5
57	S 9300	SCREW	5



SEE ALTERNATIVE

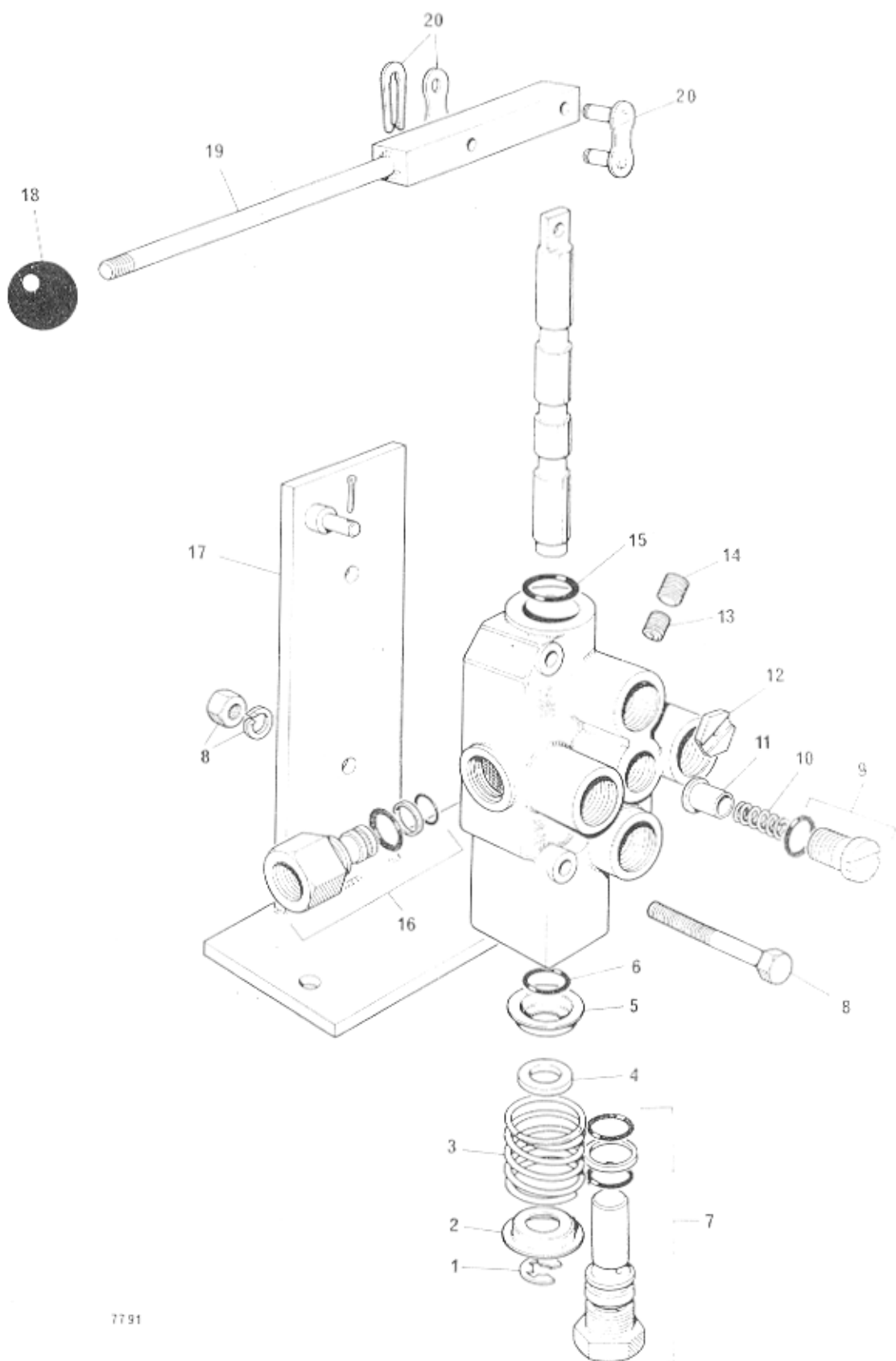
HYDRAULIC PIPES & FITTINGS

ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
1	T 18 B	GASKET	1
2	4/35/141	COVER PLATE	1
3	UC 1163-5	GASKET	2
4	UC 1163-6	STRAINER	1
5	UC 1163-1	BAYONET PLATE	1
6	UC 1163-11	BREATHER - FILLER CAP	1
7	UC 1163-7	SET SCREW	4
8	UC 1163	AIR BREATHER - OIL FILLER ASSY COMPLETE	1
9	T/14/1	DOWTY SEAL 3/8"	2
10	T/14/J	ADAPTOR PARALLEL - PARALLEL 3/8" X 3/8"	2
11	NSD 111	SETSCREW 5/16" X 5/8" LG	4
12	NSD 137	WASHER SPRING X 5/16"	4
13	264701	COVER	1
14	264702	JOINT	1
15	2-202485	BEARING	1
16	2-264703	GEAR WHEEL	1
17	2-264704	BEARING	1
18	2-197597	PUMP HOUSING	1
19	NSD 137	WASHER SPRING X 3/8"	8
20	NSD 20	NUT X 3/8"	6
21	265413	COUPLING BLOCK	1
22	264705	WASHER PLAIN	1
23	NSD 137	WASHER SPRING X 1/2"	1
24	NSD 1004	SETSCREW 1/2" X 1/2" LG	1
25	NSD 840	SOCKET SCREW 1/2" X 3/8" LG	1
26	266159	JOINT	1
27	266158	SPIGOT PLATE	1
28	4/35/72	KEY	1
29	263871	JOINT	1
30	NSD 110	BOLT 3/8" X 2 1/2" L.G.	2
31		CAPSCREW 5/16" UNF X 1"	2
32	PD 4352-21A	PUMP OUTLET	1
33	DH 25-19	'O' RING	2
34	GP 265 CV	PUMP	1
35	NSD 110	BOLT 3/8" X 2" LG	2
36	T 63 M	HOSE CLIP	2
37	T 48	PUMP INLET ADAPTOR,	1
38	GP 2A2	PUMP ELBOW	1
39	GP 2A2A	CAP SCREW 5/16 UNF X 1 1/4" LG	2
40	266156	COUPLING PUMP MALE	1
41	264706	SHIM	AS REQ.
42	NSD 60	STUD 3/8" X 1 1/2"	4

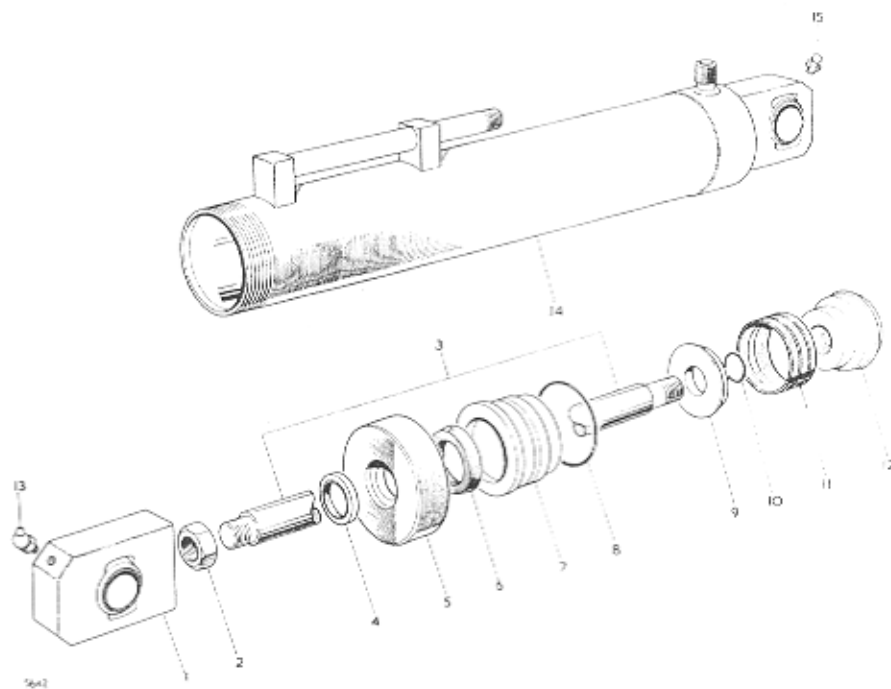


HYDRAULIC PIPES & FITTINGS

ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
43	255073	DOWEL	2
44	264700	JOINT	1
45	4/35/108 L	HOSE – TANK TO PUMP X .38" LG	1
46	4/35/108 C	HOSE – PUMP TO VALVE X 45" LG	1
47	4/35/108 D	HOSE – VALVE TO TEE X 70-1/2" LG	2
48	4/35/108 G	HOSE – TEE TO CYLINDER BASE L/H X 31-1/2" LG	1
49	4/35/108 F	HOSE – TEE TO RAM HEAD X 39" LG	2
50		DRAIN PLUG	1
51	2ST. 72M	TEE 3/8" BSP	2
52	4/35/108/E	HOSE – STEERING GEAR TO TANK X 72" LG	1
53	HX 1318	ADAPTOR PARALLEL – PARALLEL 3/8" B.S.P.X 7/8" U.N.F.	7
54	S 9698	'O' RING X 7/8"	7
55	4/35/108H	HOSE – TEE TO RAM BASE R/H X 33-1/2" LG	1
56	S 9697	'O' RING X 3/4"	2
57	HX 1317	ADAPTOR PARALLEL – PARALLEL 3/8" B.S.P.X 3/4" U.N.F.	2
58	4/35/108A	HOSE STEERING GEAR TO RAM HEAD X 18" LG	1
59	4/35/108B	HOSE STEERING GEAR TO RAM BASE X 21" LG	1
60	4/35/108/J	HOSE VALVE TO STEERING GEAR X 36" LG	1
61	2ST. 72N	90° ADAPTOR	1
62	4/35/221	MALE – FEMALE ELBOW	1
63	4/35/108/1	HOSE VALVE TO TANK X 26" LG	1
64	UC 1457	SUCTION FILTER	1
65	4.35.187	COVER PLATE ASSEMBLY	1
66	P.1145	STRAINER	1
67	P 2578.2	CAP	1



ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
1	16124-50	CLIP RING (1/2" SHAFT)	1
2	15546-6	SHALLOW WASHER	1
3	30501-39	SPOOL SPRING	1
4	16048-31	WASHER SPACER	1
5	30501-10	DEEP WASHER	1
6	16003-12	'O' RING 3/32" X 5/8" I/D	1
7	32018-J9	RELIEF VALVE ASSEMBLY	1
8		BOLT 2-1/2" X 5/16" U.N.F., NUT AND WASHER	2
9	30501-17	LIFT CHECK PLUG ASSEMBLY	1
10	30501-13	LIFT CHECK SPRING	1
11	30501-12	LIFT CHECK PLUNGER	1
12	16097-451	ORIFICE PLATE	1
13	300024004	1/16" - 27 NPTF PLUG .070	1
14	16002-1	1/8" - 27 NPTF. PLUG	1
15	16004-63	'O' RING	1
16	30501-15	PRESSURE BEYOND PLUG ASSEMBLY	1
17	4/35/225	BRACKET	1
18	2ST. 88	KNOB	1
19	4.60. 143	ACTUATING LEVER	1
20	4.60. 178	CHAIN LINK	1



HYDRAULIC CYLINDER ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION	NO. OFF
1	K1/11	PISTON ROD FITTING	1
2	K1/19	LOCKNUT	1
3	K1/2	PISTON ROD	1
4	K1/18	WIPER	1
5	K1/4	TUBE CAP	1
6	K1/17	SLEEVE SEAL	1
7	K1/5	SLEEVE	1
8	K1/16	SLEEVE 'O' RING	1
9	K1/15	BACKING WASHER	1
10	K1/13	PISTON 'O' RING	1
11	K1/12	PISTON SEAL	1
12	K1/14	PISTON HEAD	1
13	T ST	GREASE NIPPLE STRAIGHT	1
14	K1/20	CYLINDER, BOSSES AND END CAP	1
15	T 90°	GREASE NIPPLE 90°	1
16	TD3894	CYLINDER COMPLETE	—

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	1676.40	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	2260.60
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".

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

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

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

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