

WINGET

OPERATING INSTRUCTIONS & SPARE PARTS LIST

2FL5000 FORKLIFT

(CAPACITY 2268Kg)

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INTRODUCTION

This Parts & Operators Manual is a re-print of the manual last published in 1977 and contains some amended part numbers.

Note: This manual is applicable to machines with Serial Numbers from and including 2FL5000-57.

Health & Safety legislation and working practices applicable to Forklift Trucks, both 2 and 4 wheel Drive, Rigid Chassis and Articulated Chassis have changed considerably in the years since this manual was last published. We would recommend that only trained operators who are in possession of the relevant certification issued by a recognised Training Authority be allowed to operate this equipment.

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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PREPARATION FOR USE

Before the 2FL-5000 is put into service, always check the following points:

Engine

Check oil level on the dipstick, top up, if necessary to the full mark. Check radiator water level, top up if necessary.

Torque Converter

Check oil level on the dipstick before starting and again when running. The level is to be between the dipstick marks at 700 R.P.M. Top up if necessary. Dipstick and filler are accessible through swing plate in cab floor.

Gearbox

Check oil level on the dipstick, accessible through swing plate in cab floor. Top up if necessary through removable plate in cab floor.

Fuel Tank

Fill tank with diesel oil.

Hydraulic Tank

Fill the hydraulic tank. Before removing the filler cap, clean around the surrounding area to prevent the entry of foreign matter.

Brake System

Check that the brake master cylinder reservoir is full of fluid. Top up if necessary.

Level Indicator

With machine on level ground check that the level in both limbs of the level indicator are correct.

Battery

Check electrolyte levels. Top up if necessary.

Miscellaneous

Check all wheelnuts for tightness.

Check all nuts and bolts for tightness. Loose nuts and bolts may lead to damage not covered by Warranty.

INSTRUMENTS

See Fig. 1

Battery Condition Indicator,

1. See 'ELECTRICAL EQUIPMENT', section

Tachometer

2. Indicates the engine revolutions per minute. It also records the hours worked by the machine.

Water Temperature Gauge.

3. The gauge is marked 'C' for cold (white sector), 'N' for normal (green sector), and 'H' for hot (red sector) indicating the temperature of the coolant as it leaves the cylinder head.

Engine Oil Pressure Gauge

4. The gauge is marked 'L' for low oil pressure (red sector) and 'H' for high oil pressure (green sector) indicating the engine lubricating oil pressure.

Main-Beam Warning Light (Blue)

5. Glows when working lamp main-beams are in use.

Direction Indicator Warning Light (Green)

6. When direction indicators are in use the appropriate light flashes.

No-Charge Warning Light

7. Glows red when the auxiliary circuits are switched on and at engine idling speed. The light should go out when the engine speed is increased above idling.

8. Transmission Oil Pressure Gauge

9. Transmission Oil Temperature Gauge.

Load Indicator Gauge.

10. The indicator senses the lift cylinder pressure see (See "Safety Systems" section on page 9).

Fuel Sight Gauge

11. Gauge situated on front end of Fuel Tank.

Hydraulic Oil Sight Gauge

12. Gauge situated on front end of Hydraulic tank.

Level Indicator

(See Fig 2)

13. The indicator shows the lateral angle of the ground on which the machine is standing.

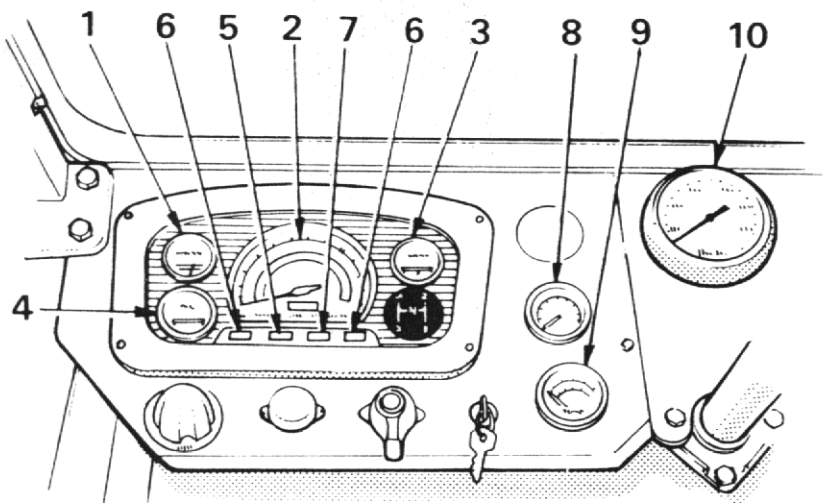


FIG 1

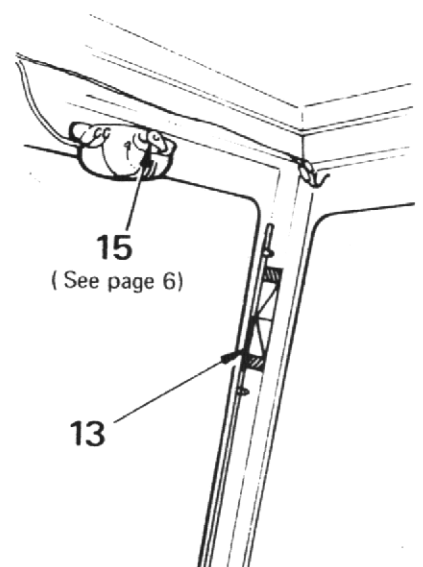


FIG 2

CONTROLS AND SWITCHES

See Fig. 3

- | | | | |
|---|--------------------------------|----|---|
| 1 | Differential Lock Pedal | 10 | Carriage Lift control lever. |
| 2 | Forward and Reverse Gear Lever | 11 | Mast Tilt Control Lever |
| 3 | Parking Brake | 12 | Gear Selector Lever |
| 4 | Footbrake Pedal | 13 | Accelerator Pedal |
| 5 | Light Switch | 14 | Seat Adjustment Lever |
| 6 | Horn Push Button | 15 | Windscreen Wiper Control Switch (See Fig.2) |
| 7 | Direction Indicator Switch | 16 | Engine Stop Control Knob (Not illustrated) |
| 8 | Starter Key Switch | 17 | Cold Start Control Knob. (Not illustrated) |
| 9 | Steering Wheel | | |

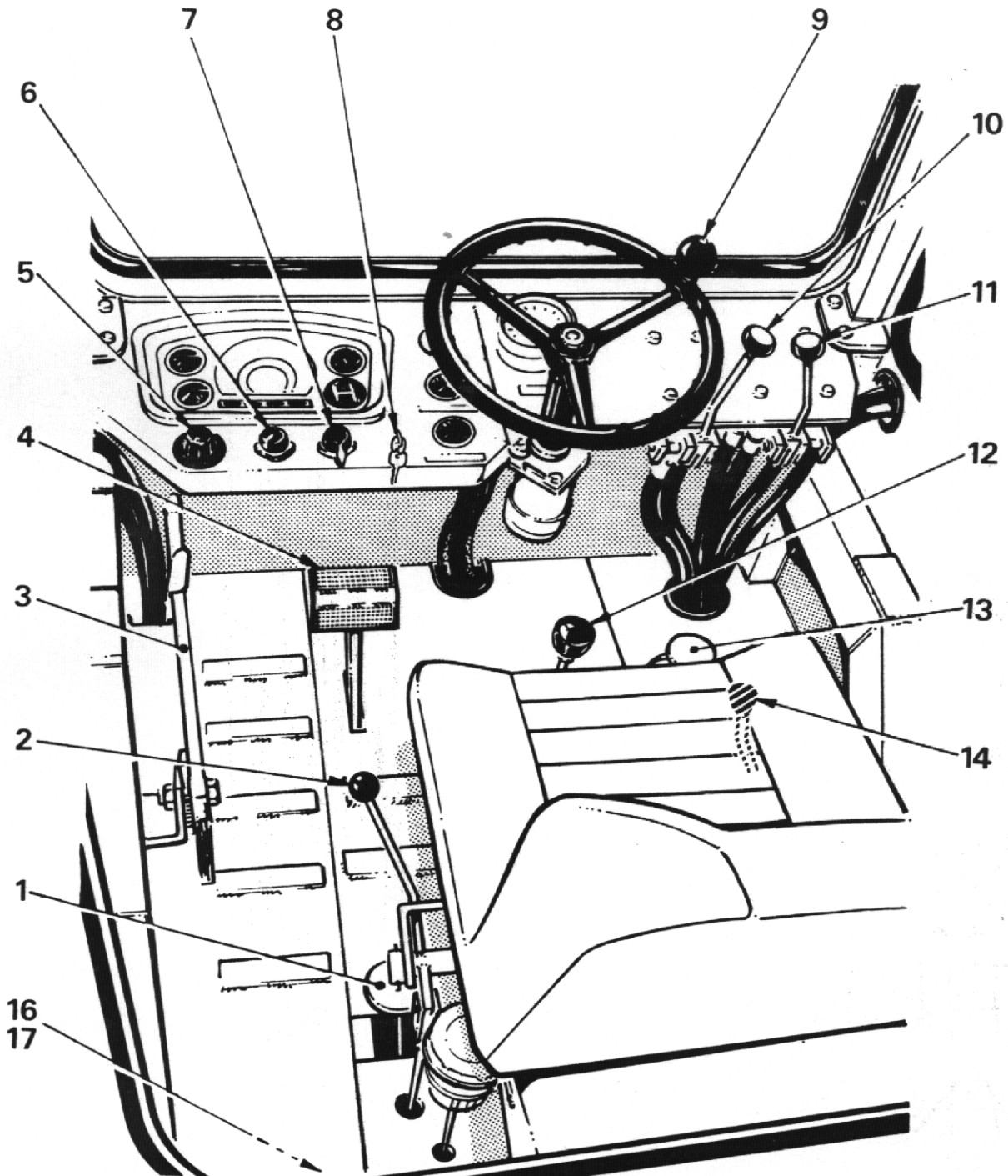


FIG. 3

SPECIFICATION

A.	Overall height (mast closed and raked back)	147"	3734 mm
B.	Overall length (minus forks)	135"	3429 mm
C.	Wheelbase	79"	2006 mm
D.	Length from front axle to rear of forks	31"	787 mm
E.	Load centre	24"	610 mm
F.	Fork lengths	48"	1220 mm
G.	Overall Height (forks lowered)	146"	3708 mm
H.	Fork centres	max. 53"	1346 mm
		min. 4"	102 mm
J.	Wheeltrack (Front)	67"	1702 mm
K.	Overall width	85"	2159 mm
	Maximum load at 2'0" (609 mm) load centre	5000lb	2268 kg.
	Total lift of forks (216" above ground level)	218"	5537 mm
	Min. Ground clearance	12"	305 mm
	Turning circle (outside dia.)	351"	8915 mm
	Unladen weight	13160lb	5969 kg.
	Hydraulic relief valve pressure	1750 psi	123 kg/cm.
	Rear axle articulation	+9.5°	
	Lifting time, loaded	25 secs.	
	Lowering time, loaded	33 secs.	

Road Speed. maximum in:

1st	2.5 mph	4.1 kph
2nd	4.0 mph	6.5 kph
3rd	7.3 mph	11.8 kph
Top	15.5 mph	25.0 kph

(all speeds similar in reverse)

Capacities

Torque converter	4½ galls (20.5 litres)	Engine	2 galls (9 litres)
Water cooling system	3 galls (13.6 litres)	Gearbox and rear axle	12 galls (54.5 litres)
Hydraulic oil tank	15 galls (68 litres).	Fuel tank	15 galls (68 litres)

Load Moment 285,000 lb.in. (32,200 Nm)

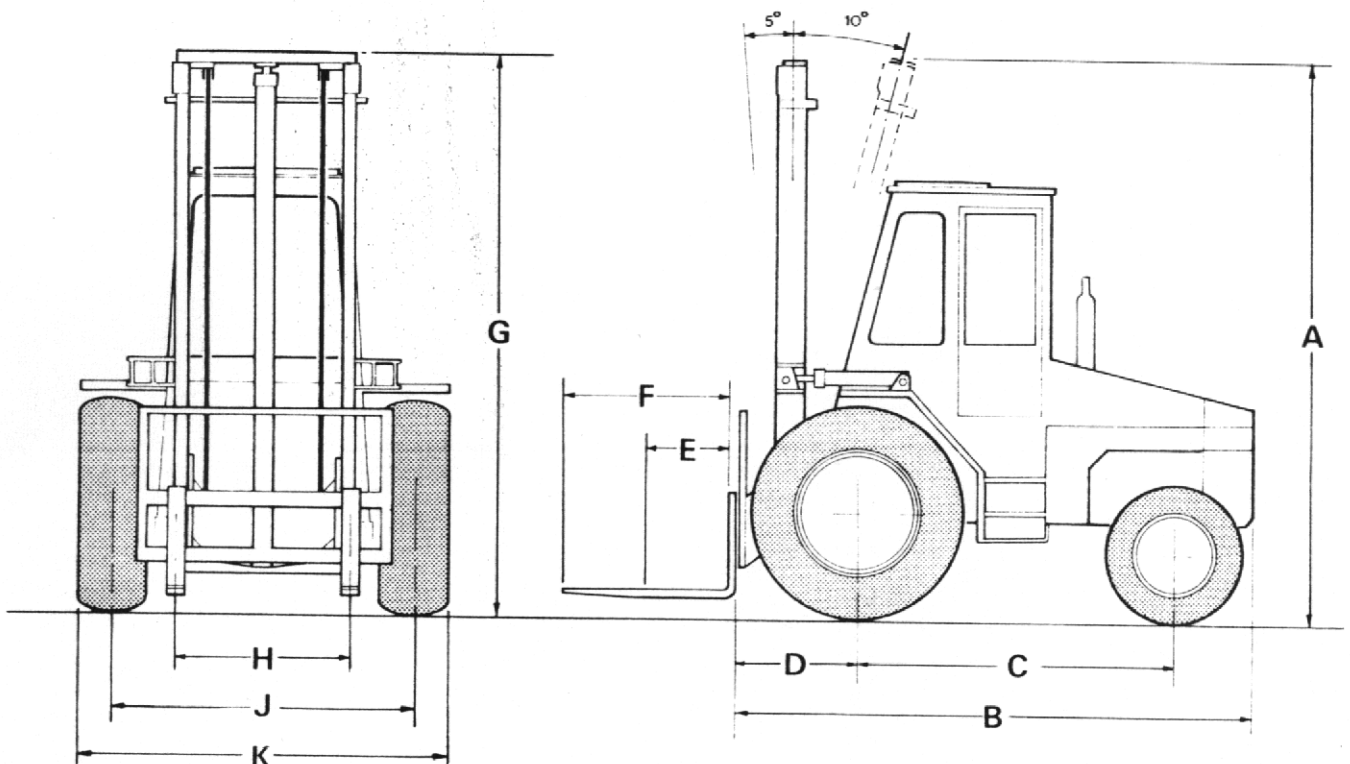


FIG. 4

OPERATION

Driver's Seat

The fore and aft position of the seat may be adjusted after pushing outwards, the locking lever that is situated under the front right corner of the seat.

Battery

Do not run the engine with the battery disconnected.

Running-in

The treatment given to a new Forklift will have an important bearing on its subsequent life; therefore, during the first 50 hours running, the following instructions should be adhered to.

Do not operate the Forklift at full power in any gear. Select a lower gear if the engine speed slows down under load.

Avoid prolonged idling or high no-load engine speeds.

Check the engine oil pressure and the coolant temperature frequently.

After the first 50-hour service the Forklift can be put to work normally.

Starter

Do not operate the starter for more than five or six seconds at a time. If the engine fails to start the first time, do not use the starter again until the engine has stopped turning.

Starting

- a) Set handbrake on.
- b) Set Fwd/Rev lever in Neutral.
- c) Set Gear Selector in Neutral.
- d) Push 'stop' control in.
- e) Operate start switch clockwise to start position and allow to return to run position after engine fires.

Starting from Cold

When starting from cold, pull out the cold start control whilst operating the starter, return upon starting.

Stopping the Engine

- a) Pull stop control out.
- b) Turn start switch to off position.

Moving from Rest

- a) Check that forks are clear of ground and raise if necessary.
- b) Select gear range (1 to 4).
- c) Apply footbrake and release parking brake.
- d) Select Forward or Reverse.
- e) Depress accelerator pedal and release footbrake as drive takes up.

Gear Changing

Do NOT attempt to change gear range whilst machine is in motion. To change gear range, STOP, then repeat as instructions for 'Moving from rest'.

Differential Lock

The differential lock provides a solid drive through the front axle to overcome wheel-spin in adverse site conditions. Do not attempt to engage the lock when one wheel is rotating very much faster than the other; momentarily apply the brake to check the spinning wheel. The differential-lock is operated through a pedal by the left heel.

The differential-lock is provided for use only on slippery surfaces. It must NOT be used when the machine is on the road nor when it is turning.

Hydraulic Controls

There are two functions on the standard machine; to raise and lower the fork carriage and to tilt the mast backward and forward.

Each lever is spring biased to the centre (neutral position) and can be moved either side of this position (See Fig. 5).

Each control lever may be used to vary the speed of the function by operating to allow partial opening of the valve; further control is available by varying the engine speed.

NOTE: If any auxilliary functions are fitted they will be controlled by levers in position 'A' and 'B' (See Fig. 5) with primary auxilliary function controlled by lever 'A'.

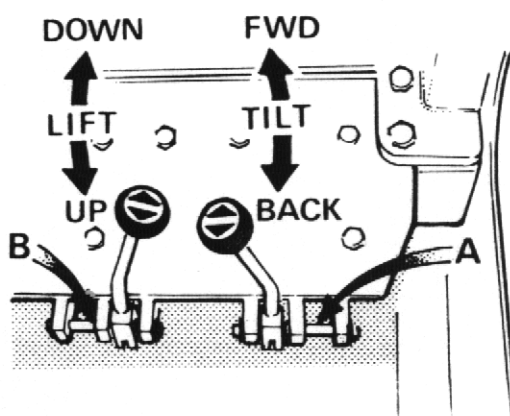


FIG. 5

Travelling with Load

The machine should NOT be driven with the load elevated, it should normally be carried with the forks at a height of approximately 400 mm (16") and with the mast tilted fully backwards. If site or load conditions make this operation impossible and the load must be carried higher, the machine should be moved only with extreme caution.

SAFETY SYSTEMS

Load Indicator

The load indicator gauge senses the increase in the cylinder pressure due to the load. It has been zeroed with the unladen carriage and forks raised. To obtain an accurate indication of the load, the loaded forks should be raised at least 200 mm (8") then lowered fractionally 10mm (3/8"), before noting the gauge reading.

The maximum permitted load is indicated on the gauge scale.

Level Indicator

The level indicator shows the lateral angle of the ground on which the machine is standing. If the ground angle is steeper than the safe limit indicated on the scale (8° , or 1 in 7) the load should NOT be raised.

COOLING SYSTEM

Radiator and Cap

To remove the cap turn it anti-clockwise until the safety stop is felt, press down and turn further until the cap can be lifted off.

If the engine is hot, protect the hand against escaping steam, turn the cap until the safety stop is felt, wait until the pressure has escaped then remove the cap.

Draining

Remove the radiator cap to release the pressure from the cooling system, then unscrew in the direction of the arrow (See Fig. 6) the radiator drain tap, which is located underneath the radiator.

Open the cylinder block drain tap (See Fig. 7) which is located on the right hand side of the cylinder block. A length of flexible tube should be attached to the outlet of each drain tap and carried clear of the machine.

Overflow Tank and Cap

To remove the cap unscrew it anti-clockwise until the cap can be lifted off. (See fig. 8)

Refilling

Close the cylinder block and radiator drain taps. Fill the radiator completely and refit the cap. Inspect the level in the overflow tank which should have sufficient coolant to submerge the bottom of the overflow tube. Refit the cap to the overflow tank.

Anti-freeze

Follow the filling instructions using the correct anti-freeze solution as shown in the table. Add $\frac{1}{4}$ pint (.14 litre, .3 U.S. pint) of undiluted anti-freeze to the coolant in the overflow tank. Anti-freeze must be used under freezing conditions and may remain in the system for two winters. Check the specific gravity of the solution at the beginning of the second winter and add anti-freeze to adjust the strength of the solution if necessary. Drain the system at the end of the second winter, and refill with fresh coolant or anti-freeze solution as weather conditions require.

Solution %	Commences to freeze		Frozen solid		Amount of anti-freeze		
	°C	°F	°C	°F	pts.	U.S.pts	Litres
25	-13	9	-26	-15	6.0	7.25	3.5
33 1/3	-19	-2	-36	-33	8.0	9.75	4.75
50	-36	-33	-48	-53	12.0	14.5	7.0

Use only anti-freeze conforming to specification B.S.3151 or B.S.3152.

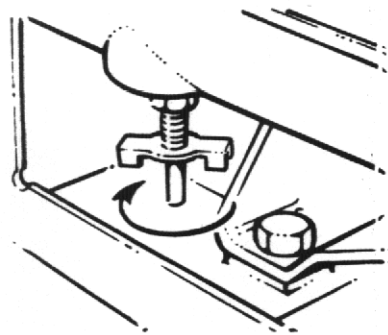


FIG. 6

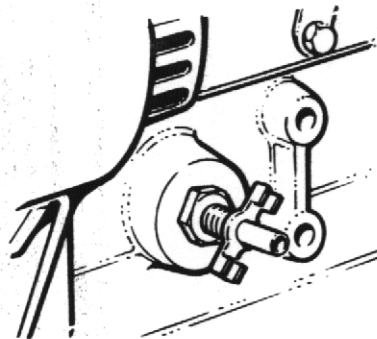


FIG. 7

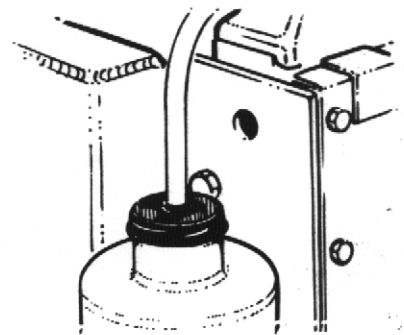


FIG. 8

WHEELS AND TYRES

Tyre Removal and Replacement

Fitting or removing will be quite easy if the tyre beads are carefully adjusted into the rim well; if this is found difficult the operation is not being carried out correctly. Lubrication of the beads and tyre levers with water or soap solution will facilitate tyre fitting and removal.

NOTE: Do not attempt to stretch the wire beads of the tyre cover over the rim flange or damage to the cover may occur.

Tyre Pressures

Using a pressure gauge check the tyres daily.

MAINTENANCE

Periodic Maintenance

DAILY (OR EVERY 10 HRS).

Check engine oil level and fill to full mark on dipstick, if necessary.

Check radiator water level.

Fill fuel tank (more often if necessary),

Check oil level in Torque Converter (See "Preparation for use" section 2 on page 4, for correct indication on dipstick). Fill to mark if necessary.

WEEKLY (OR EVERY 50 HRS)

Check oil level in the gearbox and fill to full mark on the dipstick if necessary.

Check oil level in the hydraulic tank. Check level only when forks are lowered. Always clean the surrounding area before removing the cap to prevent the possible entry of foreign matter. Fill tank if necessary.

Check brake fluid level in the master cylinder reservoir and top up if necessary, to within $\frac{1}{4}$ " of the top.

Remove and clear air cleaner element of dust by tapping it on a solid object.

Apply grease to all grease nipples.

Check tyre pressure 38 lb/in² (Front) 56 lb/in² (rear).

Check electrolyte levels in the Battery.

Check all wheel nuts and tighten, if necessary.

FREQUENTLY

Check all nuts and bolts and tighten if necessary.

Check level in both limbs of level indicator (on level ground) and top up to centre mark if necessary with correct fluid, details of which may be obtained from Winget Ltd.

EVERY 200 HRS

Remove and clean air cleaner element.

Change engine oil.

EVERY 400 HRS

Renew air cleaner element.

Remove engine oil filter (See below)

Renew torque converter filter element.

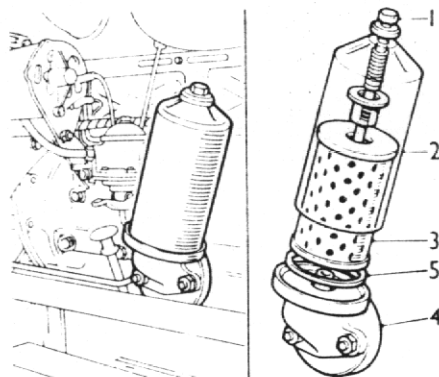
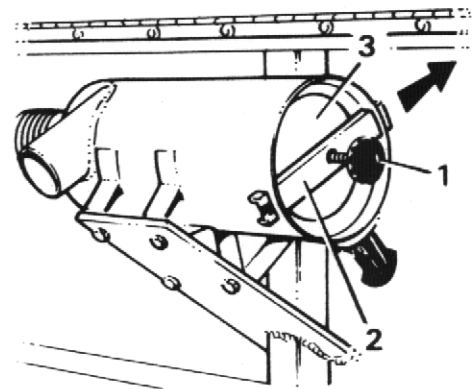
EVERY 800 HRS

Change torque converter oil.

N.B. FOR RECOMMENDED LUBRICATING OILS SEE CHART ON PAGE 16

Air Cleaner Element (See fig.)

Raise the engine cover. Slacken the fastener screw (1) until the securing bar (2) and end plate (3) are free to slide, push the bar in the direction of arrow and lift the slotted end of the bar, and end plate away from the element housing. Withdraw the filter element using the tab provided. Clear the element by tapping it lightly on a solid object and at the interval given above, clean it using a low lather detergent. Renew the element at intervals given above.



Engine Oil Filter (See fig.)

Remove the central bolt (1) and bowl (2). Remove and discard the filter element (3). Clean the bowl with petrol. Fit a new element and re-assemble the bowl to the filter head (4). Note the order of assembly of the components. Always renew the bowl sealing gasket (5).

FOR COMPLETE ENGINE AND TORQUE CONVERTER MAINTENANCE INSTRUCTIONS REFER TO LEYLAND PUBLICATIONS-NUMBERS AKD 8447 AND T.B. 0011 RESPECTIVELY.

Mast Maintenance (18 ft. Duplex Only)
(See Fig. 9)

1. PERIODICALLY adjust fork lift chains to keep fork mounting frame level.
2. PERIODICALLY check shims between bottom wear strip (C) and inner frame assembly (B). When wear has occurred fit additional shims (D) as necessary to maintain about 1/16" clearance at gap (E), when the mast is lowered – check the gap through the full extension of the mast.

NOTE: With mast fully lowered the bottom wear strip is accessible beneath the machine frame.

3. PERIODICALLY fully raise the inner mast and check the wear strip and block on the channel at the top of the outer frame (A). If wear has occurred, fit additional shims (F) as necessary behind the wearstrip mounting block assembly (G) to maintain 1/16" clearance at gap (H) when mast is lowered, check gap through full extension of mast.

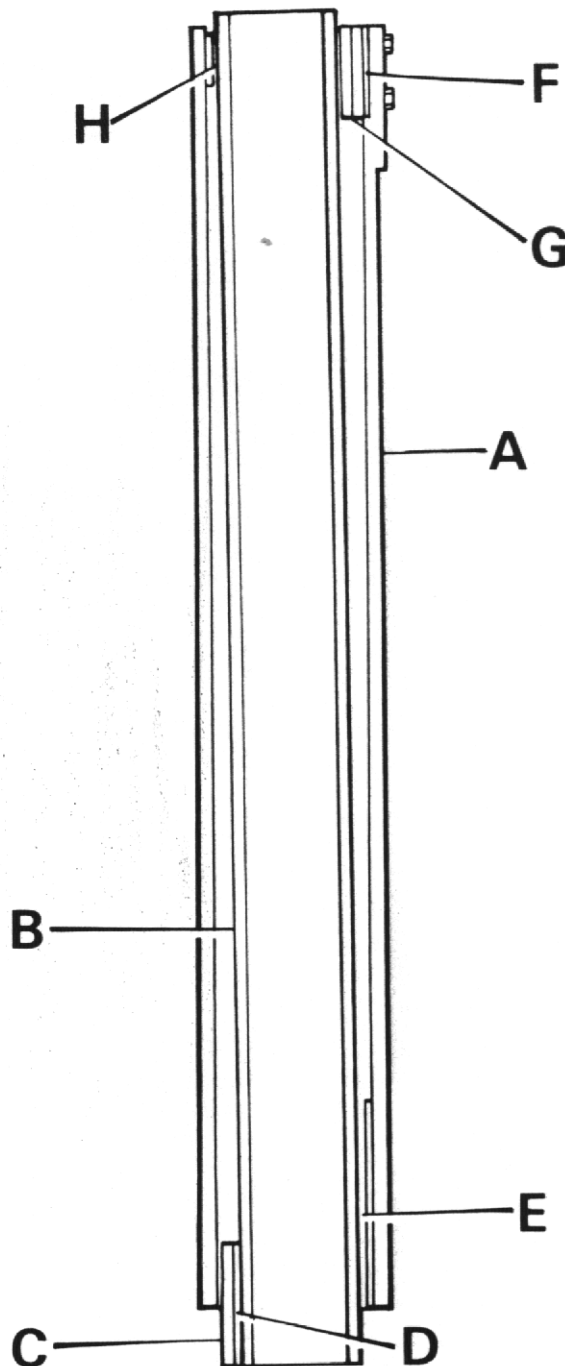


FIG. 9

FUEL SYSTEM

Fuel Tank

To remove filler cap, move locking bar and turn cap in an anti-clockwise direction.

Field Adjustment

Do not undertake any dismantling of the fuel injection pump and injectors 'in the field'. Renewing an injector is the only servicing of this kind which should be carried out. To locate a faulty injector, slacken the feed pipe on the suspected injector, and run the engine slowly. If there is no change in the engine performance or if a faulty condition such as a smoky exhaust has disappeared, it may be assumed that the injector is faulty.

Fuel Oils

Fuel oils suitable for use in the engine fitted to this machine are generally known as Diesel fuel oil, distillate Diesel fuel, automotive gas oil or Derv fuel. Users are recommended to obtain their supplies from a source which can be depended upon to maintain a consistent standard of quality. Waste or residual oils of any sort are to be avoided. It is recommended that the fuel should conform to British Standard 2869 :1967 Class A1 or equivalent.

Water Traps

(See Fig. 10)

Slacken the drain screws (A) at the bases of the main fuel filter bowls. Allow any collected water to drain away. Retighten the drain screws.

Bleeding the Fuel System

(See Fig. 10)

Air can enter the fuel system if any part is dismantled, if the tank is allowed to become empty, or through a leak in the system. This may result in failure to start or erratic running of the engine. To rectify, bleed the system as follows, first ensuring that there is an adequate supply of fuel in the tank.

- a) Slacken the bleedscrew (B) on the filter head, operate the fuel lift pump priming lever (C), and when the fuel issuing from the bleed screw is free from air bubbles tighten the bleed screw.
- b) Slacken the vent screw (D) on the injection pump governor and the vent screw (E) on the injection pump hydraulic head. Operate the lift pump priming lever and when air-free fuel flows from both vent screws, tighten the hydraulic head vent screw (E) followed by the governor vent screw (D).
- c) Start the engine and allow it to run until it is firing on all cylinders.

After renewing the fuel filter elements, it will be necessary to bleed the fuel filters as described in (a), providing that the engine has not been cranked while the filters are dismantled.

NOTE: Do not attempt to bleed the fuel system by towing the machine in gear as damage to the pump will result.

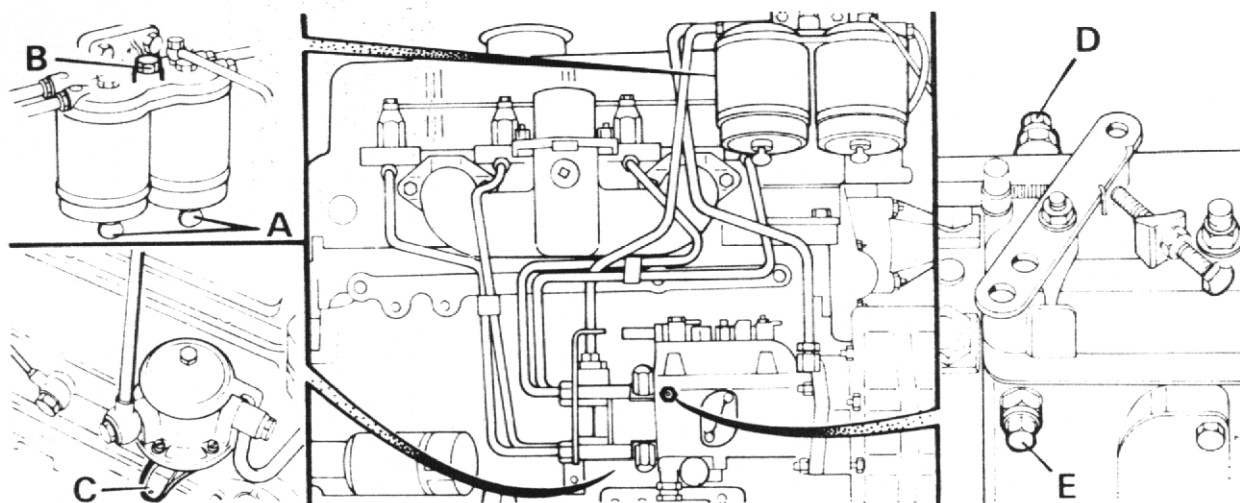


FIG. 10

ELECTRICAL EQUIPMENT

SERVICE PRECAUTIONS FOR A.C. CHARGING SYSTEMS

Alternator Polarity

Ensure that the correct battery polarity is maintained at all times. Reversed battery or charger connections will damage the alternator rectifiers.

Battery Connections

The battery must never be disconnected while the engine is running.

Testing Semi-Conductor Devices

Never use an ohmmeter of the type incorporating a hand-driven generator for checking the rectifiers or the transistors.

Electric Welding

If arc-welding is to be carried out on the vehicle, the alternator must be disconnected.

Battery

To top up the battery, raise the engine cover, clean the top of the battery and remove the vent covers. If the electrolyte levels are below the bottom of the filler tubes pour distilled water into the troughs until the tubes are filled.

DO NOT USE A NAKED LIGHT WHEN CHECKING THE LEVELS

When charging the battery from an external source ensure that the vent covers are fitted.

Fuse

The electrical system includes two fuses, one protects the lighting and horn circuits, the other protects the auxilliary circuits. The fuse holder is positioned inside the cab on the front panel below the instrument unit. 'Push fit' cartridge fuses are used in this holder, the upper one being for lighting and the lower one for auxilliaries.

Warning and Panel Lamps

Remove the four screws (1) (See Fig. 11) to release the outer bezel and the 14 screws (2) to release the inner bezel from the instrument panel. Withdraw the glass (3) complete with rubber seat and lift out the instrument surround (4). Pull each bulb (5) from its holder (6).

Battery Condition Indicator

To check the battery condition the headlights should be switched on, with the starter key switch in the auxilliary position but without the engine running.

A well-charged battery is indicated when the pointer shows to the right of the white mark in the green sector. A reading in the large red sector marked 'L', shows that the battery requires attention.

When the engine is running above idling speed the pointer should show to the right of the white mark on the green sector to indicate that the charging voltage is satisfactory.

When the pointer shows to the left of white mark on the green sector the charging voltage is too low. This position may also be indicated when the headlights and other electrical equipment are in use.

When the pointer shows in the small red sector marked 'H', the charging voltage is too high. If the pointer continues to show in the small red sector after 10 minutes running consult a Distributor.

If the pointer remains in the green sector to the left of the white mark for long periods with the engine running, switch off the engine and check the alternator driving belt tension before consulting a Distributor.

Ignore any readings shown when the engine is idling. Note that the pointer adjusts its position slowly and should not oscillate rapidly.

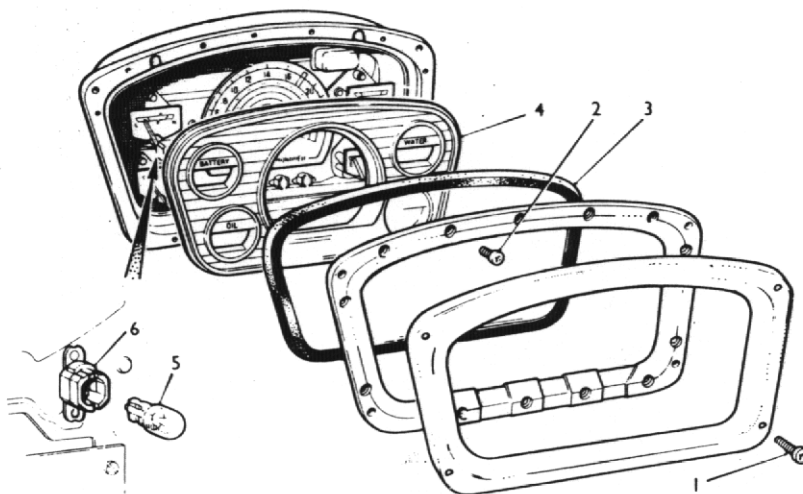
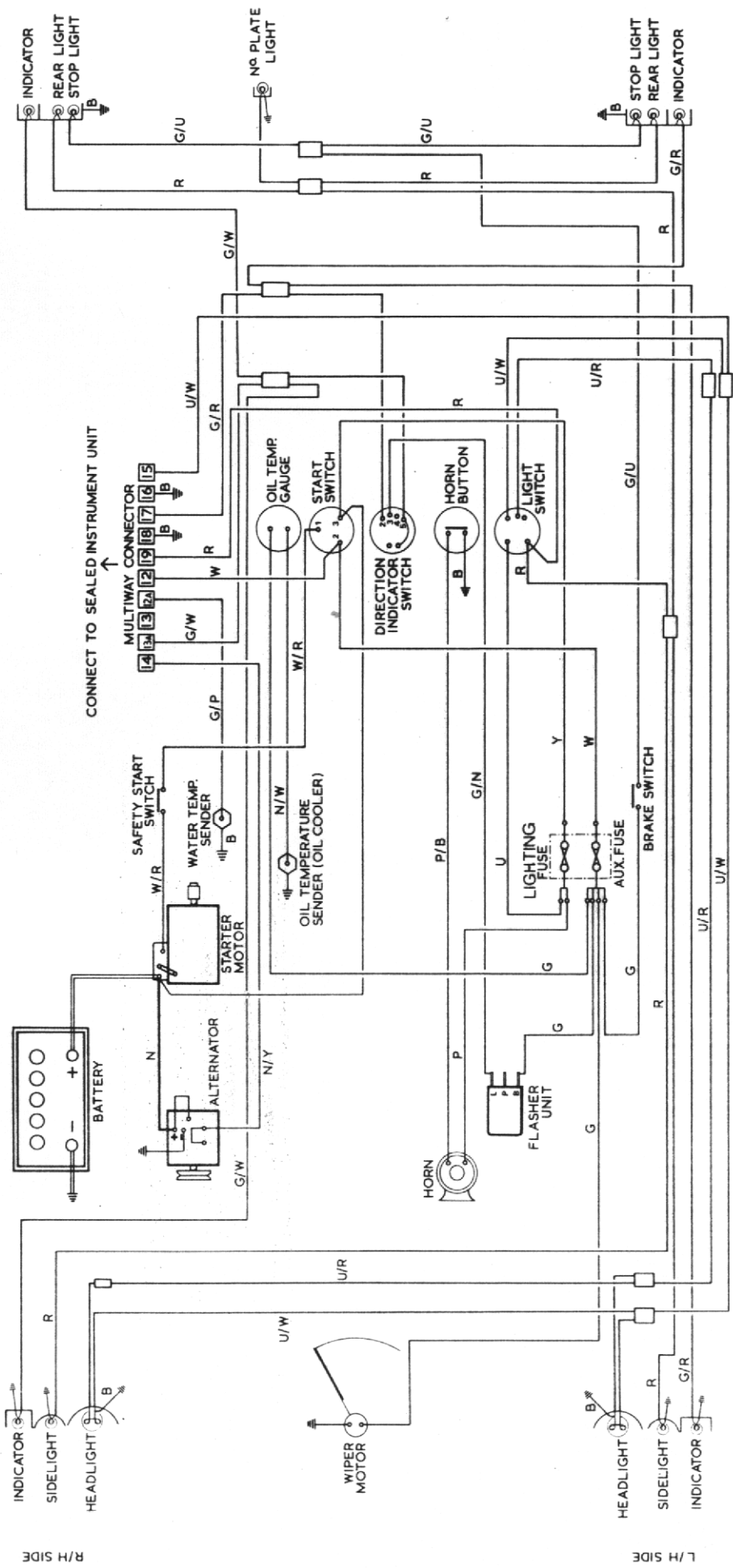


FIG. 11



R/H SIDE

L/H SIDE

COLOUR CODE					
U	BLUE	W	WHITE	B	BLACK
R	RED	G	GREEN	P	PURPLE
N	BROWN	O	ORANGE	Y	YELLOW

WIRING DIAGRAM

RECOMMENDED LUBRICANTS

COMPANY	ENGINE AND GEARBOX		TORQUE CONVERTER	HYDRAULIC SYSTEM	WHEEL BEARINGS AND OTHER GREASE POINTS
	Above 32°C. (90°F)	32°C to -7°C (90°F to 20°F) Below -7°C (20°F)			
ESSO	ESSO TRACTOR LUBE UNIVERSAL or Essolube HDX 30	Essolube HDX (or Essolube HDX 10W 20)	ESSO GLIDE	NUTO H44	BEACON 2
CASTROL	AGRICASTROL MULTI-USE or Castrol XL or Agricastral 30	or Castrolite or Agricastral 20 or Agricastral 10	CASTROL TQF DEUSOL RFH 33	CASTROL HYSPIIN AWS 32	DEUSOL CRI 30
SHELL	SHELL TRACTOR OIL UNIVERSAL or SHELL ROTELLA M MULTIGRADE or Rotella S Oil 30	or Rotella S Oil 20/20W	DONAX T7	TELLUS OIL 27	RETINAX A
BP	BP TRACTOR OIL UNIVERSAL or BP VANELLUS MULTIGRADE or BP Vanellus S.A.E. 30	or BP Vanellus S.A.E. 20W	AUTRAN B	ENERGOL HLP 65	ENERGREASE L2
MOBIL	MOBILAND UNIVERSAL or Delvac Special 20 W 50 or Delvac 1230	or Delvac Special (or Delvac Special 10 W/30 or Delvac 1220)	ATF 210	DTE 24	MOBILGREASE SUPER

FORKLIFT SAFETY

1. This machine should be operated only by drivers who have been suitably trained.
2. Drivers should be aware of the load and stability limitations of the machine.
3. Drivers should be aware of the weight of the loads they are carrying and also of variations in those loads (e.g. wet or dry weight).
4. Drivers should take account of ground conditions which may affect stability.
5. Drivers must ensure that the intended load is in a safe condition to lift, e.g. loose bricks, banded pallets etc.
6. Do not allow anyone to stand or pass under the elevated part of any machine, whether loaded or empty.
7. Do not carry passengers.
8. Always set parking brake when loading or unloading.
9. Maintain specified tyre pressures at all times. Do not alter tyre pressures to suit ground conditions.
10. Be sure of sufficient headroom under overhead installations; lights, pipes, wiring etc.
11. Travel with load or load engaging forks low and where possible, tilted back. Do not Elevate the load except during stacking. If load and/or site conditions make this impossible (e.g. wide load and ground level obstructions) the machine should be moved only with extreme caution.
12. Modifications and additions which affect capacity and safe operation shall not be performed by the customer or user without the manufacturer's prior written approval.
13. Front end attachments other than those supplied as original equipment should be used only with the manufacturer's prior written approval.
14. Never dismount while the machine, is in motion.
15. Never start the engine from any position other than sitting in the driving seat.
16. Never drive the machine too close to the edge of any excavation, especially if the ground is loose or wet.
17. Never make any adjustments to the machine while it is in motion.
18. Never run the engine in a closed building or allow the exhaust pipe near to inflammable material.
19. Never fill the fuel tank with the engine running. Excercise caution when the engine is hot.
20. Always keep the floor plates clean.

CARE OF THE FORKLIFT

Preliminary Checks on Delivery

1. Battery connections for tightness, and level of electrolyte
2. Water level in radiator and overflow tank
3. Oil levels in engine, and transmission
4. Drain plugs for tightness.
5. Tyre pressures
6. Give the weekly grease check.

Cleanliness

Clean all external surfaces, and wipe all filling and drain plugs before removing or replacing. Store fuel and lubricating oil in closed containers under cover.

Fill fuel tanks only by means of a funnel fitted with a strainer.

Clean and dirt-free floor plates and well-lubricated pedal linkages assist the driver in controlling his machine.

Storing

Prior to the machine remaining unused for a period of one month or longer, carry out the following instructions.

1. Clean the machine.
2. Drain the fuel from the fuel tank, lift pump and fuel filters and proceed as follows:
 - a) Add 2 gallons (9.1 litres) of Shell Fusus Oil 'A' or an equivalent calibration fluid to the fuel tank and also fill the fuel filters.
 - b) Bleed the fuel filters of air.
 - c) Run the engine for about 15 minutes on light load at about half maximum engine speed.

NOTE: Do not restart the engine once the above treatment has been completed.

3. Remove the injectors and insert ½oz. (15 c.c.) of H.D. 20 oil through the injector hole of each cylinder. Rotate the crankshaft several times, ensuring that no dirt is drawn into the cylinders during this operation. Replace the injectors.
4. Lubricate all greasing points and exposed control joints.
5. Drain the complete cooling system, and flush until water runs clear from both taps. Allow to drain completely, then close both drain taps.
6. Seal the air intake.
7. Remove and clean the battery. Inspect and recharge at regular periods during storage.
8. Set the tyres to maximum recommended pressure. Jack up the machine on a firm level surface and insert blocks under both sides of the front axle, and underneath the steering axle thus releasing the machine weight from the tyres. It is essential that the wheels should be rotated at least half a turn, at intervals of one week.
9. Set the brakes in the 'off' position.
10. Cover the machine preferably with a waterproof sheet.

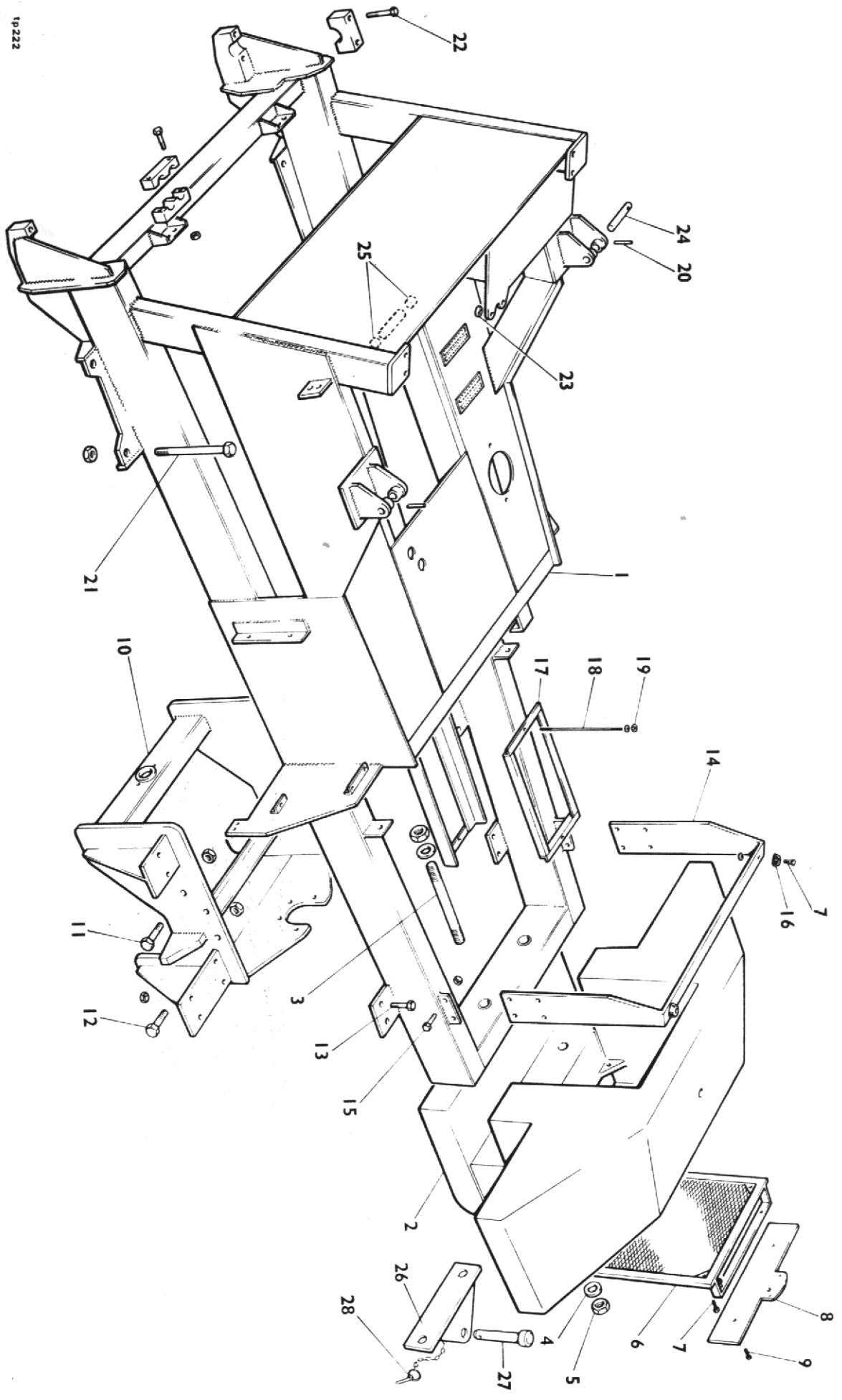
Returning to Service

1. Bleed the fuel system.
2. Cover the valve rocker gear with H.D. 20 oil.
3. Fill the cooling system.
4. Unseal the air intake.
5. Replace the battery and connect the terminals.
6. Remove the blocks from under front axle, and under steering axle.
7. Carry out weekly checks (see page 11).
8. Bring the engine to working temperature by light running (1,000 r.p.m. approximately) before driving away.

SPARE PARTS SECTION

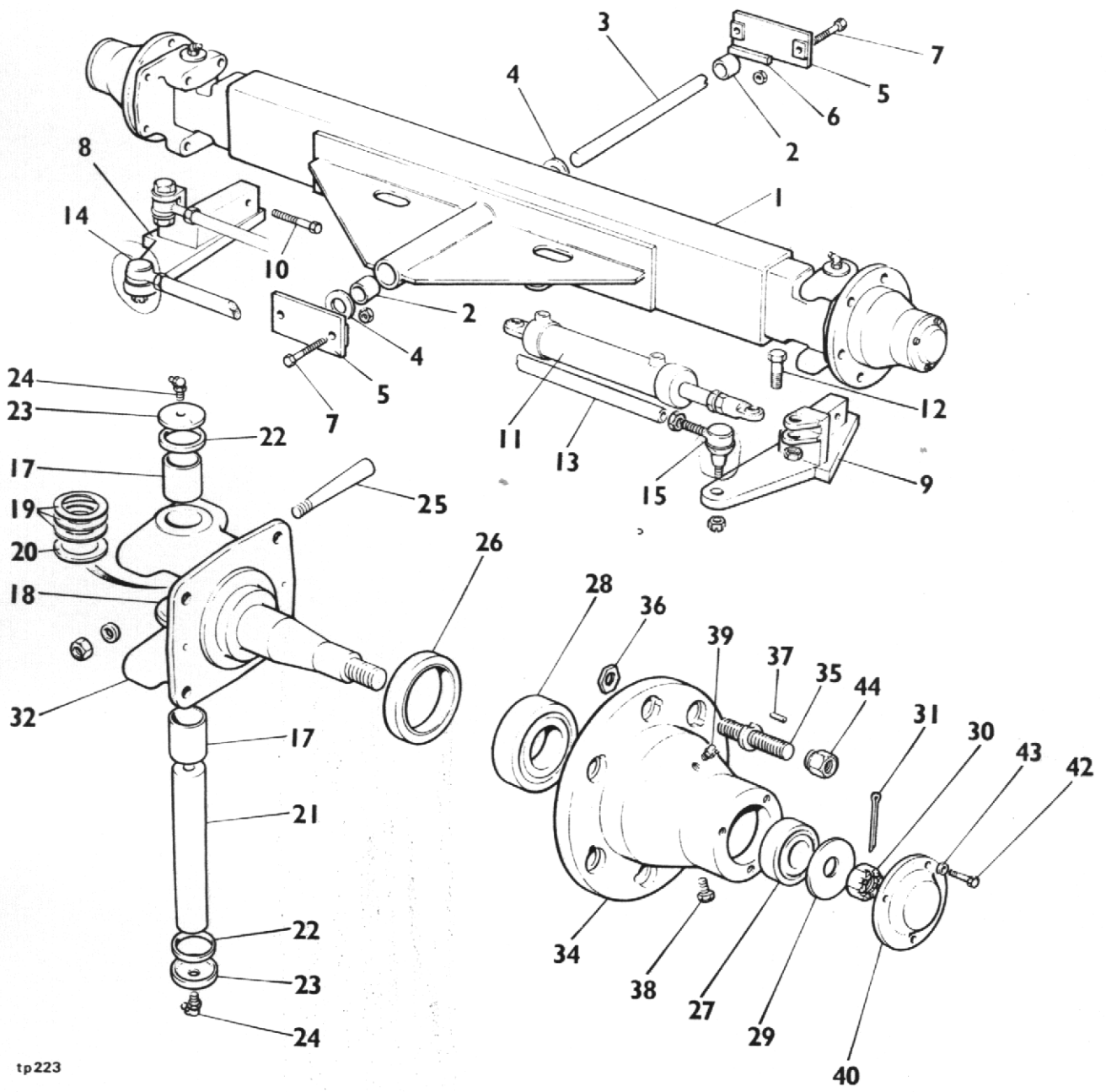
LIST OF CONTENTS

Title	Page
CHASSIS AND BALLAST	20,21
STEERING AXLE AND HUB	22,23
MUDWINGS, TANKS, COVERS AND STEPS	24,25
CAB, SAFETY FRAME AND FOOTPLATES	26,27
CONSOLE AND INSTRUMENTS	28,29
MAST, CARRIAGE AND FORKS	30,31
PEDALS AND CONTROLS	32-35
BRAKE PIPES AND CONNECTIONS	36,37
BRAKE MASTER CYLINDER	38
BRAKE SLAVE CYLINDER	39
HYDRAULIC PIPES AND FITTINGS	40-43
HYDRAULIC CONTROL VALVE (DOUBLE SPOOL)	44,45
HYDRAULIC CONTROL VALVE (SINGLE SPOOL)	46,47
HYDRAULIC PUMP AND DRIVE	48
MAST LIFT CYLINDER	49
MAST TILT CYLINDER	50
STEERING CYLINDER	51
FUEL LINES AND PRESSURE GAUGE LINES	52
DRIVE AND STEERING WHEELS AND TYRES	53
ELECTRICS	54,55



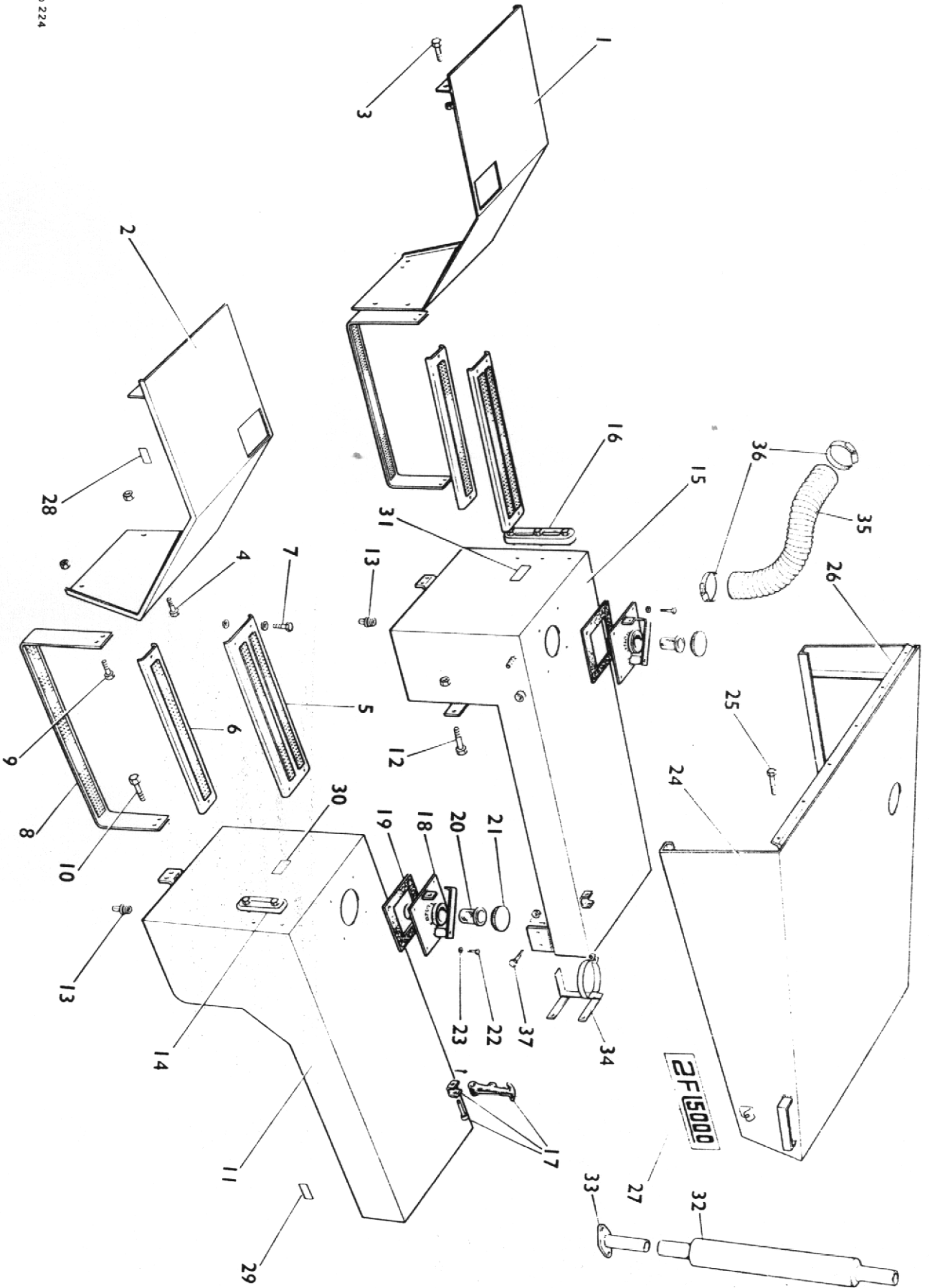
CHASSIS AND BALLAST

Item No.	Part No.	Description	Qty.
1	FSE 220	Chassis	1
2	FSE 115	Ballast Weight	1
3	FSE 173	Ballast Fixing Stud	2
4		Washer 1" dia. sq. section	4
5		Nut 1" U.N.F.	4
6	FSE 190	Grill	1
7		Bolt M6 x 25mm long	6
8	FSE 400	Number Plate	1
9		Bolt M8 x 20mm long and locknut	2
10	FSE 102	Steering Axle Cradle	1
11		Bolt M20 x 55 mm long and locknut	4
12		Bolt 3/4" UNF x 1 1/4" long and locknut	4
13		Bolt 3/4" BSF x 2" long and locknut	12
14	FSE 229	Bonnet Support Frame	1
15		Bolt M10 x 35 mm long and locknut	4
16	FSE 256	Rubber Stop	2
17	FSE 126	Battery Clamp	1
18	T20 B	Rod 1/4" UNF x 12" long	2
19		Nut 1/4" UNF	4
20		Tension Pin 5/16" dia. x 2" long	2
21		Axle Mounting Bolt 3/4" UNF x 9" long and locknut	8
22		Bolt M12 x 70 mm long	4
23	CSE 182	Spacer	2
24	FSE 387	Tilt Ram Pin	2
25	WB 0808	Bush — Accelerator Lever Pivot	2
26	ESE 149	Towing Bracket (if fitted)	1
27	ESE 222	Towing Pin (if fitted)	1
28	M 9B	Pin and Chain (if fitted)	1



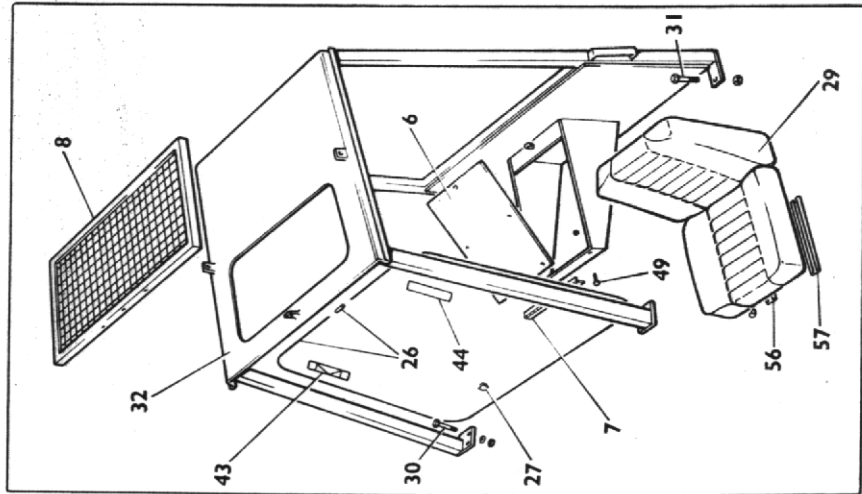
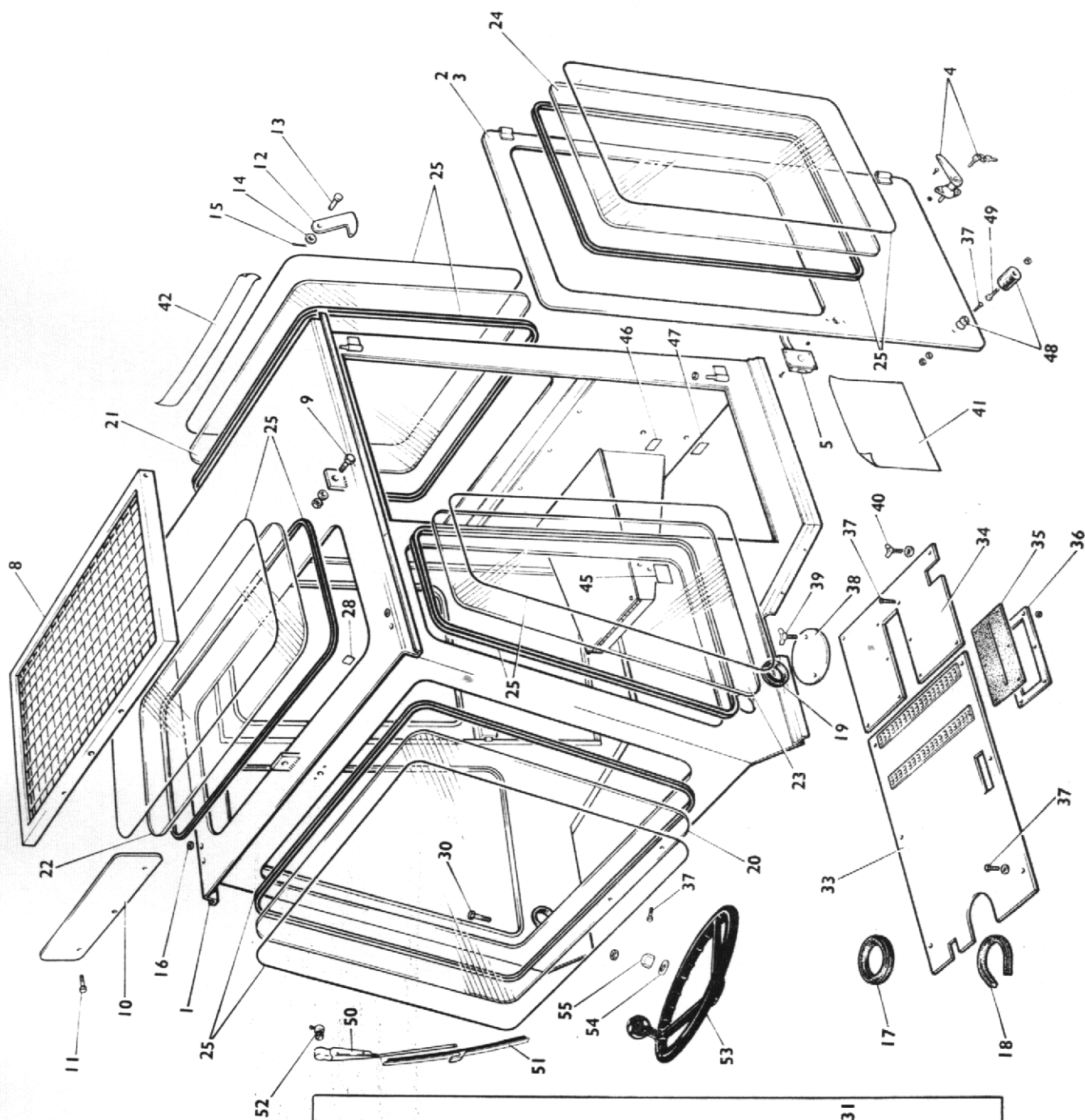
STEERING AXLE AND HUB

Item No.	Part No.	Description	Qty
1	FSE 123	Steering Axle Beam Assembly	1
2	FSE 191	Bush	2
3	FSE 110	Axle Pivot Pin	1
4	FSE 109	Bronze Thrust Washer	2
5	FSE 118	End Plate	2
6	FSE 120	Key	1
7		Bolt M10 x 75mm long and locknut	4
8	FSE 125	Steering Arm RH	1
9	FSE 124	Steering Arm LH	1
10		Bolt 5/8" UNF x 2 1/2" long (drilled for wire locking)	4
11	TD 9128	Steering Cylinder (See Page 51).	2
12		Bolt 3/4" BSF x 3" long and locknut	4
13	FSE 180-1	Track Rod	1
14	FSE 180-2	Ball End RH Thread	1
15	FSE 180-3	Ball End LH Thread	1
16	FSE 304	Stub Axle Assembly (Comprising Items 17-32 inclusive)	2
17	FSE 305	Bush	4
18	FSE 307	Cover	2
19	FSE 308	Thrust washer .114" Thick	A/R
	FSE 309	Thrust washer .116" Thick	A/R
	FSE 310	Thrust washer .119" Thick	A/R
	FSE 311	Thrust washer .121" Thick	A/R
20	FSE 312	Bronze Thrust Washer	2
21	FSE 313	Stub Axle Swivel Pin	2
22	FSE 314	Swivel Pin Oil Retainer	4
23	FSE 315	Cover	4
24		Grease Nipple 90°	4
25	FSE 317	Cotter Pin c/w Nut and Washer	2
26	FSE 318	Oil Seal	2
27	FSE 319	Outer Bearing Assembly	2
28	FSE 320	Inner Bearing Assembly	2
29	FSE 321	Washer	2
30	FSE 322	Stub Axle Nut	2
31		Split Pin	2
32	FSE 316	Stub Axle	2
33	FSE 214	Steering Hub Assembly (Comprising Items 34-44 inclusive)	2
34	FSE 326	Hub	2
35	FSE 323	Stud	12
36	FSE 331	Locknut	12
37	FSE 332	Dowel	12
38	FSE 325	Pressure Release Valve	2
39		Grease Nipple 45°	2
40	FSE 327	Hubcap	2
41	FSE 328	Hubcap Gasket (Not Illustrated)	2
42	FSE 329	Setscrew	6
43	FSE 330	Springwasher	6
44	FSE 324	Wheel Nut	12



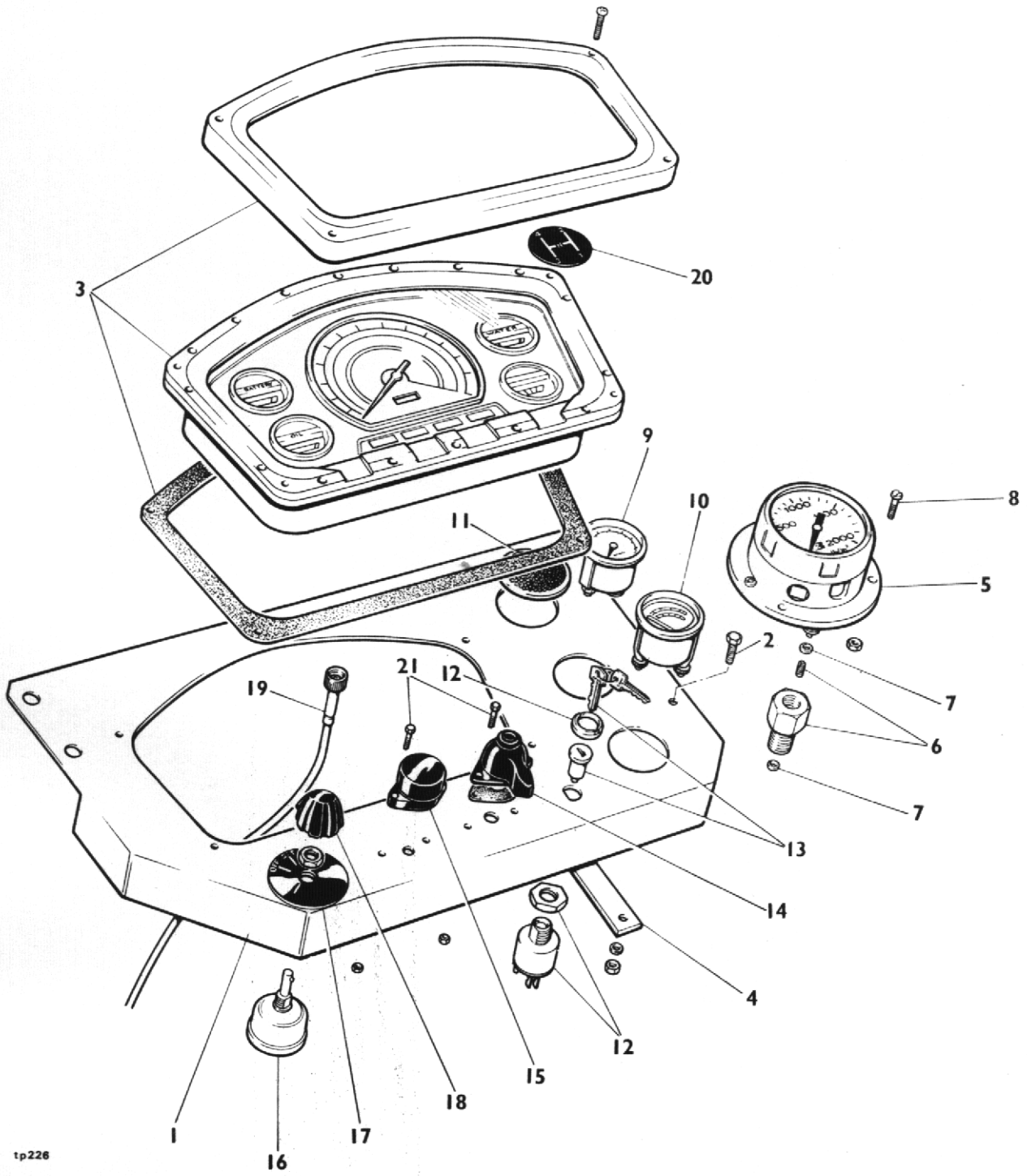
MUDWINGS, TANKS, COVERS AND STEPS

Item No.	Part No.	Description	Qty.
1	FSE 222	Wing R.H.	1
2	FSE 223	Wing L.H.	1
3		Bolt M10 x 30mm Long and Locknut	4
4		Bolt M10 x 25mm Long and Locknut	4
5	FSE 224	Step (top)	2
6	FSE 225	Step (Middle)	2
7		Bolt M6 x 25mm Long and Locknut	12
8	FSE 226	Step (Bottom)	2
9		Bolt M8 x 25mm Long and Locknut	4
10		Bolt M8 x 40mm Long and Locknut	4
11	FSE 227	Hydraulic Tank	1
12		Bolt M12 x 45mm Long and Locknut	2
13	4-60-198	Taper Plug	2
14	FSE 269	Level Gauge (Hyd. Oil)	1
15	FSE 228	Fuel Tank	1
16	FSE 268	Level Gauge (Fuel)	1
17	FSE 267	Rubber Catch Assembly	2
18	4-60-206	Cover Plate Assembly	2
19	5 ST 18B	Gasket	2
20	P1263-3	Strainer	2
21	P2792	Cap	2
22		Bolt M8 x 20mm Long	8
23		Spring Washer 8mm	8
24	FSE 230	Engine Cover	1
25		Bolt 5/16" BSF x 2 1/2" Long and Locknut	6
26	FSE 230-3	Hinge	1
27	FSE 390	Label "2FL5000"	2
28	FSE 391	Label "38 PSI"	2
29	FSE 354	Label "56 PSI"	2
30	FSE 355	Label "Hydraulic Oil"	1
31	FSE 356	Label "Diesel Fuel"	1
32	FSE 472	Exhaust Silencer	1
33	FSE 142	Exhaust Extension	1
34	FSE 398	Radiator Expansion Bottle Bracket	1
35	4-35-10A	Convuluted Hose (663mm Long) (Air Cleaner to Mnfld.)	1
36		Clip 70mm - 90mm dia.	2
37		Bolt M10 x 35mm Long	4



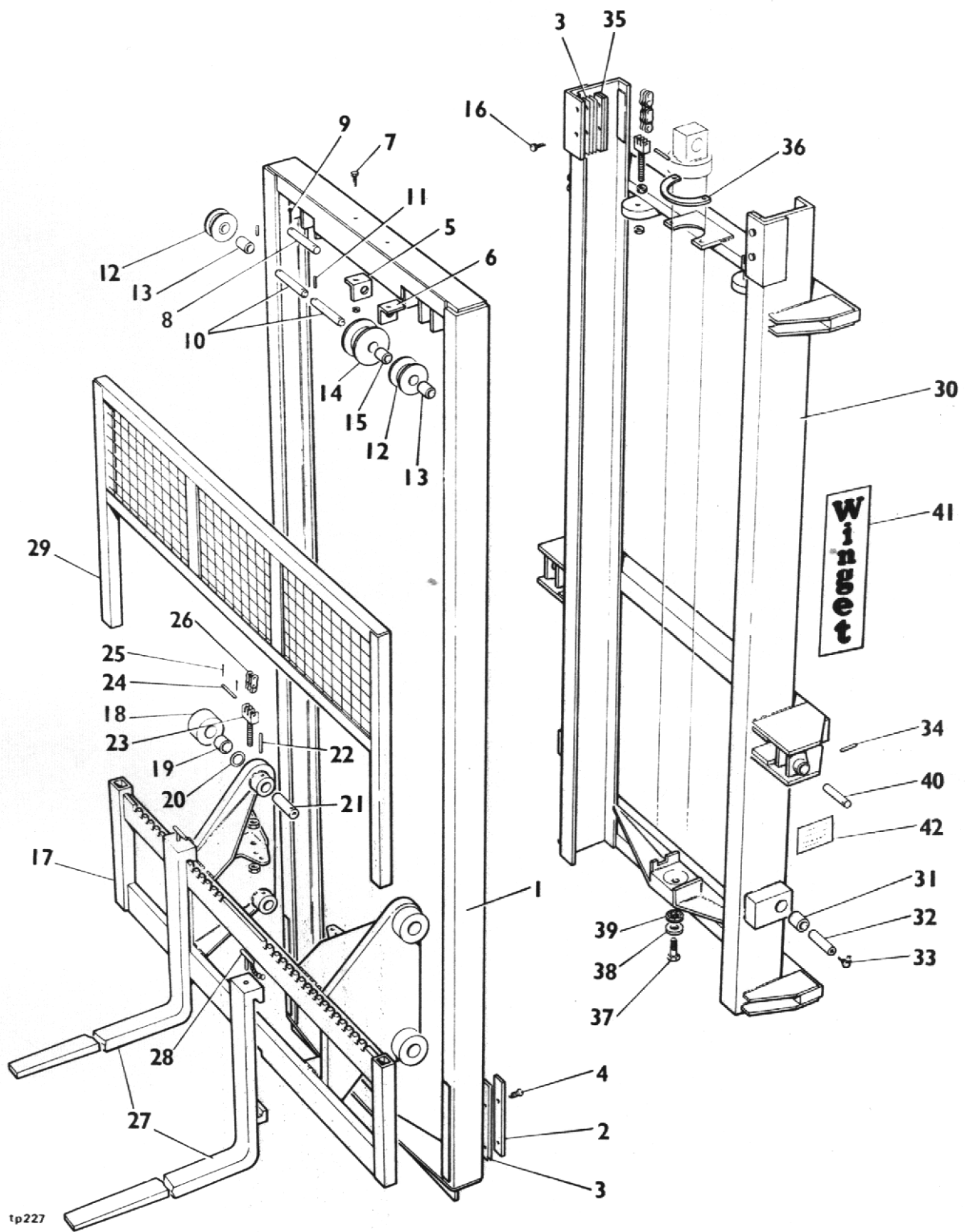
CAB, SAFETY FRAME AND FOOTPLATES

Item No.	Part No.	Description	Qty.
1	FSE 237	Cab (Complete)	1
2	FSE 444	Door R.H.	1
3	FSE 445	Door L.H.	1
4	FSE 446	Door Handle and Lock c/w Screws	2
5	FSE 447	Door Handle Inner c/w Screws	2
6	FSE 169-1	Seat Plate	1
7	FSE 169-2	Hinge	1
8	FSE 262	Stoneguard	1
9		Bolt M10 x 30mm Long and Locknut	3
10	FSE 399	Front Number Plate	1
11		Bolt M8 x 25mm Long	2
12	FSE 206-1	Bonnet Catch	1
13	C174X	Pin	1
14		Washer 3/8" dia.	1
15		Split Pin 3/32" dia.	1
16		Grommet (for 11mm dia. hole and 2mm thick mat.l). Cab Roof.	2
17	4-35-375	Grommet	1
18	FSE 442	Grommet (Cut from 4-35-375)	2
19	FSE 443	Grommet (Cut from 4-35-375)	2
20	FSE 440	Glass - Windscreen	1
21	FSE 438	Glass - Rear Window	1
22	FSE 437	Glass - Roof	1
23	FSE 439	Glass - Side	2
24	FSE 441	Glass - Door	2
25		Rubber Moulding and Filler Strip	A/R
26	FSE 450	Level Indicator Assembly	1
27	FSE 449	Clip 5/8" sq. (Self Adhesive)	A/R
28	FSE 448	Clip 1" sq. (Self Adhesive)	A/R
29	FSE 145	Seat	1
30		Bolt M12 x 45mm Long and Locknut	4
31		Bolt M12 x 40mm Long and Locknut	2
32	FSE 221	Safety Frame	1
33	FSE 211-3	Floor Plate - Centre Front	1
34	FSE 211-4	Floor Plate - Centre	1
35	FSE 235	Rubber Shroud	1
36	FSE 234	Gear Shift Frame	1
37		Bolt M6 x 20mm Long	16
38	FSE 233	Dipstick Cover Plate	1
39	FSE 233-1	Wingstud M8 x 25mm Long	2
40	FSE 452	Wingstud M6 x 25mm Long	4
41	DM 181	Label - "Winget" Fork Lift Safety	1
42	FSE 351	Label - "Winget"	1
43	FSE 368	Label - Level Indicator R.H.	1
44	FSE 369	Label - Level Indicator L.H.	1
45	FSE 359	Label - Diff Lock	1
46	FSE 357	Label - Engine Stop	1
47	FSE 358	Label - Cold Start	1
48	FSE 341	Door Catch	2
49		Bolt M8 x 20mm Long and Locknut	6
50	FSE 284	Wiper Arm	1
51	FSE 283	Wiper Blade	1
52	FSE 285	Wiper Drive Knob	1
53	FSE 279	Steering Wheel	1
54		Washer M18	1
55	FSE 377	Dome Nut	1
56	56876	Seat Slide R.H.	1
57	81988	Seat Slide L.H.	1



CONSOLE AND INSTRUMENTS

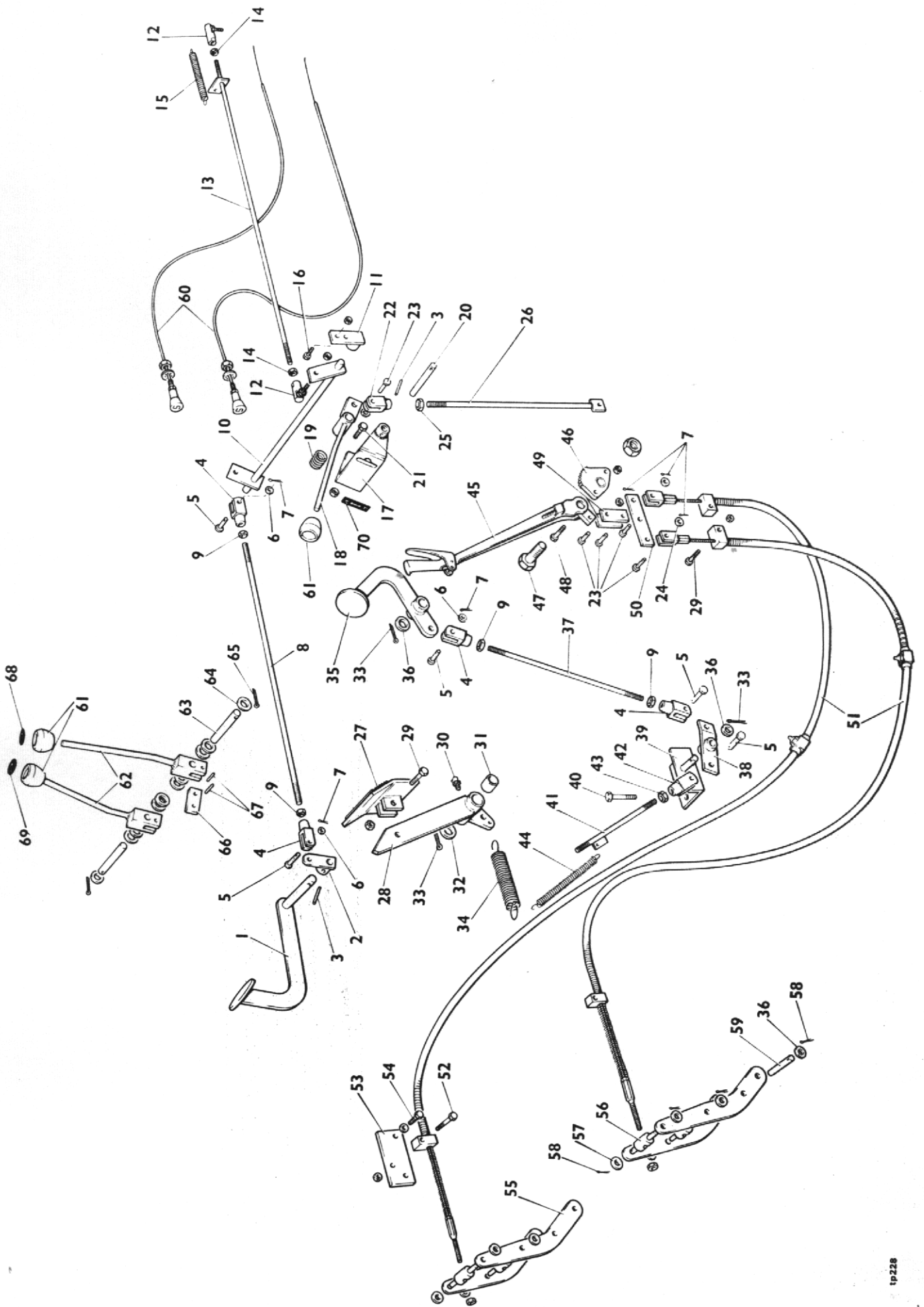
Item No.	Part No.	Description	Qty.
1	FSE 159	Instrument Mounting Panel	1
2		Bolt M6 x 25mm Long and Locknut	2
3	ATJ 9101	Instrument Cluster (for complete Spares list see Engine Manufacturers Spares Manual)	1
4	FSE 151	Packing Strip	1
5	FSE 384	Hydraulic System Pressure Gauge	1
6		Snubber ½" BSP x 3/8" BSP	1
7		Copper Washer ¼" I.D. x 9/16" O.D. x 14 SWG	2
8		Screw 2BA x 1½" Long and Locknut	3
9	FSE 271	Transmission Oil Pressure Gauge	1
10	FSE 273	Transmission Oil Temperature Gauge	1
11	FSE 413	Rubber Blanking Plug	1
12	31973K	Start Switch Body	1
13	54335169	Keys and Barrel	1
14	31190F	Direction Indicator Switch	1
15	76205D	Horn Button	1
16	31495	Light Switch	1
17	WT201	Light Switch Position Plate	1
18	54331311	Knob	1
19	FSE 270	Tachometer Cable	1
20	FSE 364	Gear Position Label	1
21		Screw 4 BA x ¾" Long and Nut	4
22	FSE 361	Label "Transmission Oil Temperature (Not Illustrated)	1
23	FSE 362	Label "Transmission Oil Pressure" (Not Illustrated)	1
24	FSE 363	Label "Hydraulic Oil Pressure" (Not Illustrated).	1



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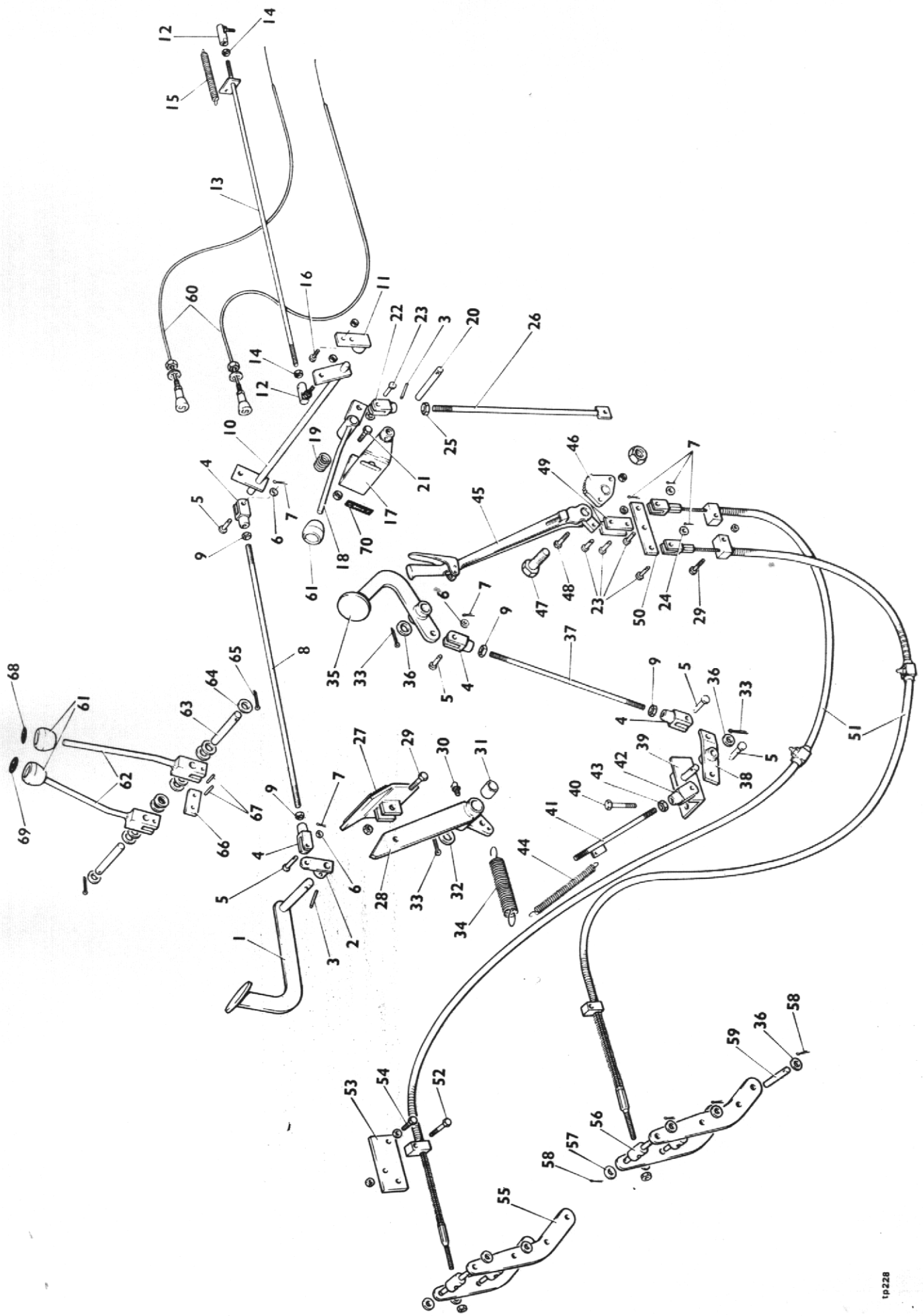
MAST, CARRIAGE AND FORKS

Item No.	Part No.	Description	Qty.
1	FSE 218	Inner Mast Assembly	1
2	FSE 383	Brass Rubbing Strip	2
3	FSE 373	Shim 24 SWG	A/R
4		Screw Csk. M8 x 20mm Long	4
5	FSE 404	Lift Cylinder Bracket RH	1
6	FSE 404	Lift Cylinder Bracket LH	1
7		Bolt M12 x 40mm Long and Locknut	2
8	FSE 261	Lift Cylinder Pin	1
9		Split Pin 3/16" dia x 2" Long	2
10	FSE 185	Pulley Pivot Pin	2
11	4-35-29A	Tension Pin 5/16" dia. x 2 1/4" Long	4
12	FSE 196	Chain Pulley	2
13	FSE 348	Chain Pulley Bush	2
14	FSE 198	Hose Pulley (If Fitted)	1
15	FSE 349	Hose Pulley Bush (If Fitted)	1
16		Screw M8 x 25mm Long	4
17	FSE 215	Carriage Assembly	1
18	FSE 215-5	Roller	4
19	FSE 236	Bush	4
20	FSE 396	Spacer	A/R
21	F4-45-214	Carriage Roller Pin	4
22	F4-45-216	Tension Pin 8mm dia. x 65mm Long	4
23	FSE 187-2	Tensioner	4
24	FSE 187-3	Chain Tensioner Pin	4
25	FSE 187-4	Split Pin	8
26	FSE 187-1	Chain	2
27	FSE 117	Fork	2
28	E288-15	Peg and Chain Assy	2
29	FSE 263	Brickguard	1
30	FSE 219	Outer Mast Assy	1
31	FSE 247	Mast Pivot Bush	2
32	FSE 204	Mast Pivot Pin	2
33	T90	Grease Nipple 90°	2
34	4-35-29A	Tension Pin 5/16" dia. x 2 1/4" Long	2
35	FSE 195	Rubbing Plate Assy	2
36	FSE 199	Clamp Ring	1
37		Bolt M12 x 25mm Long	1
38	FSE 217-5	Washer	1
39	C180A	Felt Washer	2
40	ESE 157	Tilt Cylinder Pin	2
41	FSE 350	Label "Winget"	2
42	FSE 371	Warning Plate	1



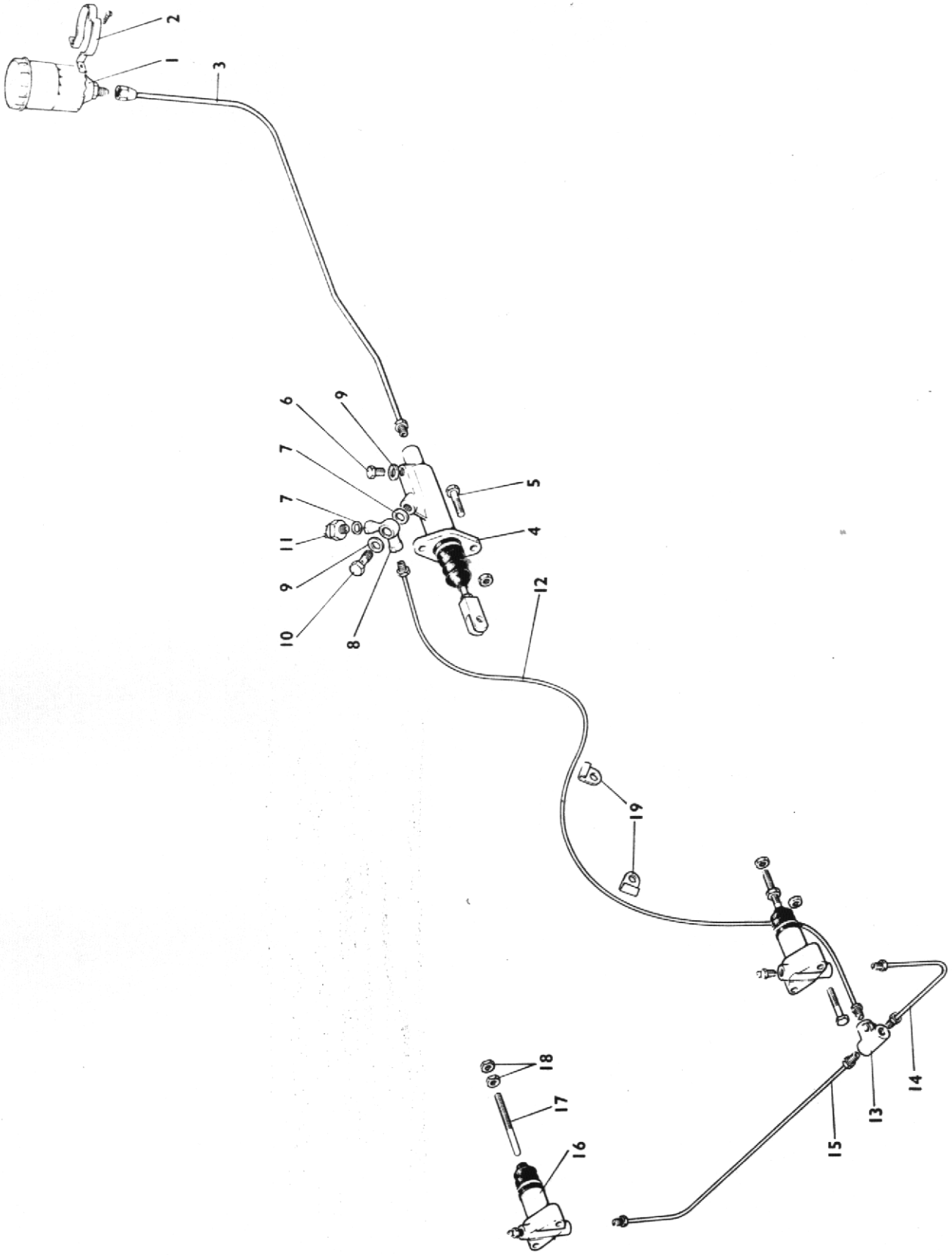
PEDALS AND CONTROLS

Item No.	Part No.	Description	Qty.
1	FSE 167	Accelerator Pedal	1
2	FSE 161	Accelerator Lever Arm	1
3	C129A	Tension Pin 3/16" dia. x 1 1/4" Long	2
4	C174F	Clevis	4
5	C174Y	Clevis Pin 5/16" dia.	5
6		Washer 5/16"	5
7		Split Pin 3/32"	10
8	FSE 139	Accelerator Rod 5/16" dia. x 535 mm Long	1
9		Nut 5/16" BSF	4
10	FSE 138	Accelerator Linkage	1
11	4-35-151	Accelerator Pedal Pivot Brkt.	2
12	C160B	Ball End	2
13	FSE 157	Accelerator Rod (rear) 1/4" dia x 760mm Long	1
14		Nut 1/4" BSF	2
15	FSE 292	Spring	1
16		Bolt M6 x 25mm Long and Locknut	4
17	FSE 409	Forward and Reverse Selector Brkt.	1
18	FSE 410	Forward and Reverse Selector Lever	1
19	FSE 170-4	Spring	1
20	FSE 170-8	Rod	1
21		Bolt M8 x 25mm Long and Locknut	2
22	C174A	Clevis	1
23	C174X	Clevis Pin	5
24		Washer 3/8"	5
25		Nut 3/8" BSF	1
26	FSE 411	Forward and Reverse Link	1
27	4-60-130	Brake Pedal Pad	1
28	FSE 164	Brake Pedal Lever	1
29		Bolt M8 x 40mm Long and Locknut	3
30	T90	Grease Nipple 90°	1
31	WB1212	Bush	2
32		Washer 3/4" dia.	1
33		Split Pin 1/8"	3
34	C173B	Spring	1
35	FSE 166	Differential Lock Pedal	1
36		Washer 1/2" dia.	6
37	FSE 136	Rod 5/16" dia. x 425 mm Long	1
38	FSE 135	Differential Lock Swivel Plate	1
39	FSE 134	Differential Lock Swivel Bracket	1
40		Bolt M8 x 45mm Long and Locknut	2
41	FSE 137	Rod 5/16" dia x 231 mm Long	1
42	C174E	Clevis	1
43		Nut 5/16" UNF	1
44	FSE 292	Spring	1
45	FSE 213	Handbrake Lever	1
46	C156A	Quadrant	1
47	C164	Carrier Bolt and Nut	1
48		Bolt M8 x 30mm Long and Locknut	2
49	FSE 130	Brake Linkage Drop Arm.	2



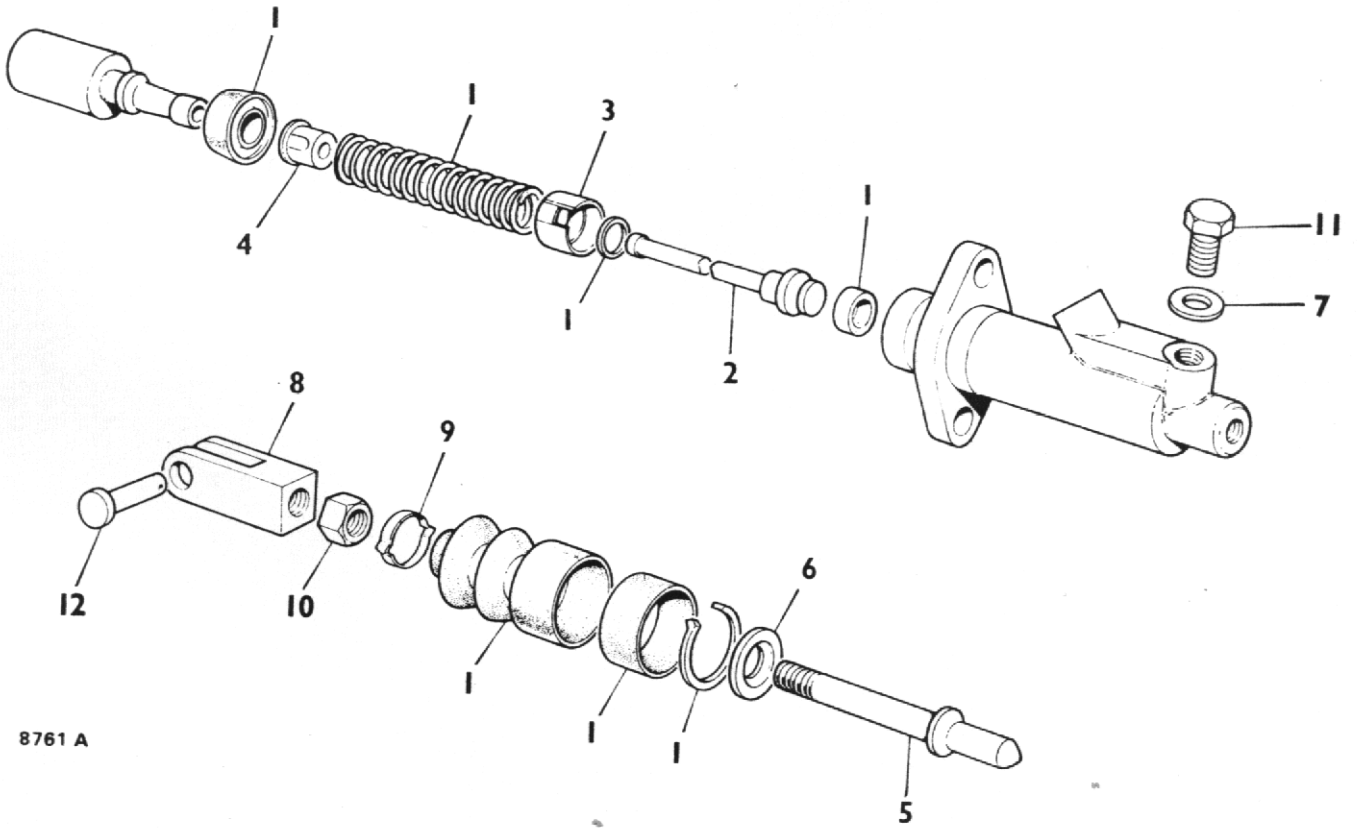
PEDALS AND CONTROLS (Cont'd)

Item No.	Part No.	Description	Qty.
50	FSE 129	Brake Linkage Pivot Arm	1
51	FSE 111	Handbrake Cable	2
52		Bolt M8 x 30mm Long and Locknut	2
53	FSE 246	Bracket	1
54		Bolt 3/8" UNF	2
55	FSE 132	Brake Pivot Arm	4
56	FSE 231	Pivot Arm Spacer	4
57		Washer 25mm	8
58		Split Pin 1/16"	8
59	FSE 232	Pivot Arm Pin	2
60	4-60-239	Control Cable - Engine Stop and Cold Start	2
61	F4-45-184	Control Knob	3
62	FSE 172	Hydraulic Control Lever	2
63	FSE 158	Control Lever Pivot Pin	2
64		Washer 10mm	10
65		Split Pin 2mm	4
66	FSE 168	Hydraulic Lever Link	2
67		Tension Pin 5mm dia.	4
68	FSE 365	Label - "Mast Lift Control"	1
69	FSE 366	Label - "Mast Tilt Control"	1
70	FSE 360	Label - "Forward/Reverse Control"	1



BRAKE PIPES AND CONNECTIONS

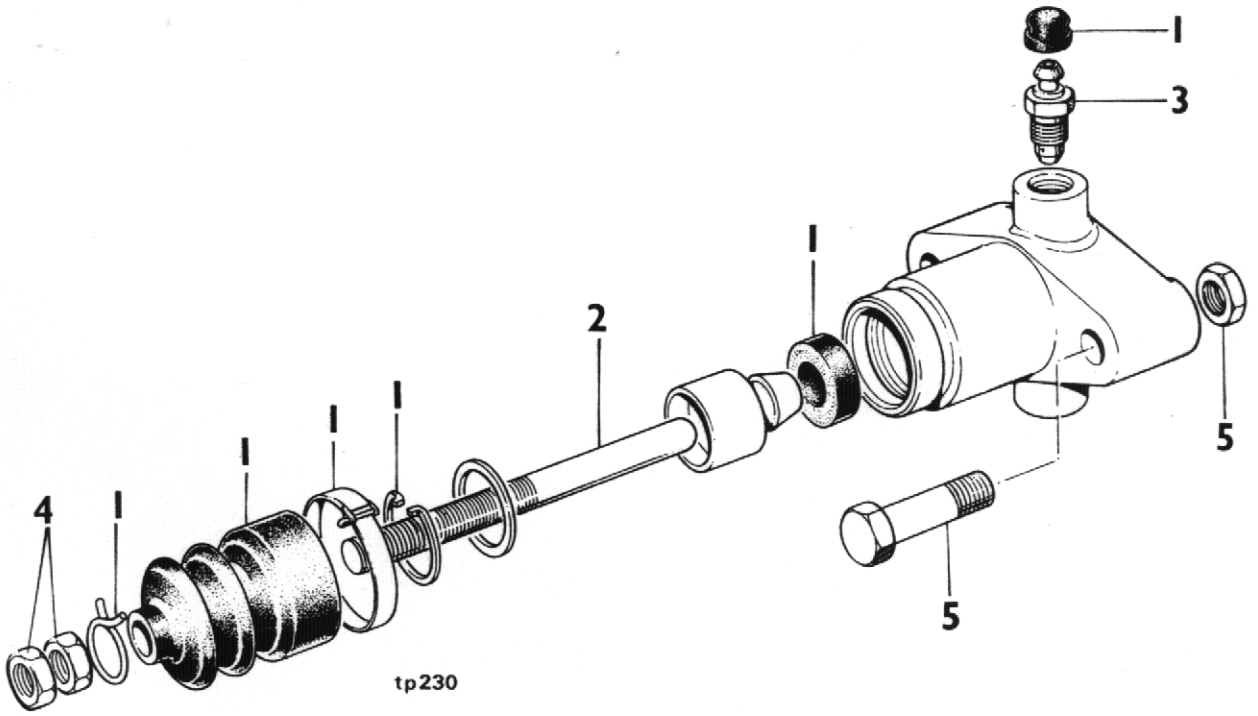
Item No.	Part No.	Description	Qty.
1	64046158	Header Tank	1
2	64477544	Clip c/w Screws	1
3	DM 141-2	Pipe 1/4" dia x 25" Long (Header Tank to Master Cyl.)	1
4	64067970	Master Cylinder (See Page 38)	1
5		Bolt	2
6	64110348	Plug	1
7	378703	Copper Washer	2
8	64474289	Double Banjo	1
9	378700	Copper Washer	2
10	376102W	Banjo Bolt	1
11	FSE 337	Brake Switch	1
12	DM-38-1	Pipe 3/16" dia. x 38" Long (Master Cyl. to Tee) . . .	1
13	64474341	Tee Piece	1
14	DM-78-16	Pipe 3/16" dia x 10" Long (Tee to Slave Cylinder LH)	1
15	DM-78-17	Pipe 3/16" dia x 22" Long (Tee to Slave Cylinder RH)	1
16	4-35-401	Slave Cylinder (See Page 39)	2
17	4-35-395	Push Rod	2
18		Nut 3/8" BSF	4
19	4S 132	Clip	2



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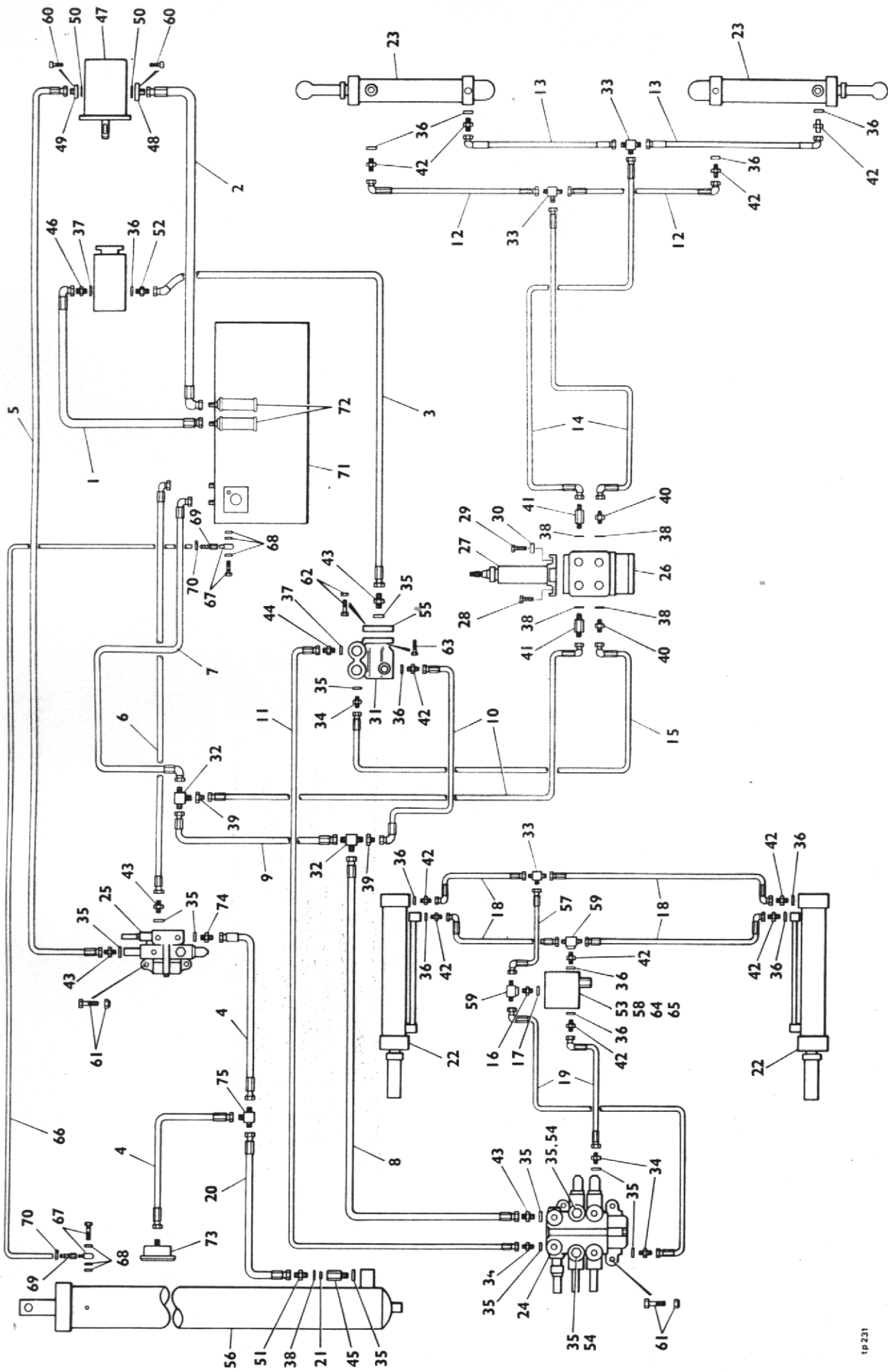
BRAKE MASTER CYLINDER

Item No.	Part No.	Description	Qty.
	64067970	Master Cylinder (Complete)	1
1	SP 1996/2	Seal Kit	1
2	378641	Valve Stem	1
3	318001	Valve Spacer	1
4	64673391	Valve Spring Retainer	1
5	351257 W	Push Rod	1
6	378242	Retaining Washer	1
7	378700	Washer	1
8	64671286	Clevis	1
9	378312	Dust Cover Retainer	1
10	64100052	Locknut	1
11	64110348	Plug	1
12	C174Y	Clevis Pin	1



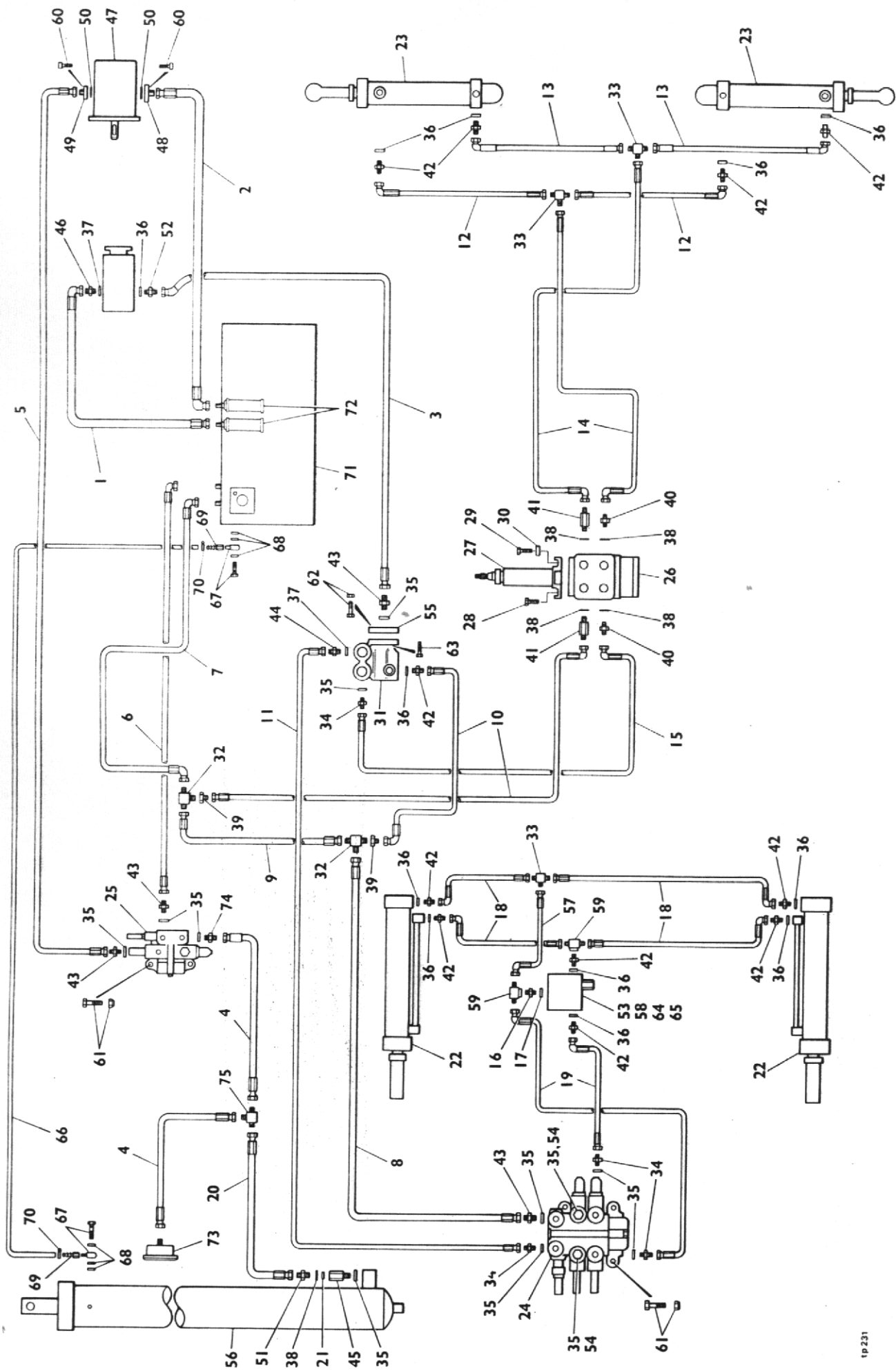
BRAKE SLAVE CYLINDER

Item No.	Part No.	Description	Qty.
	4-35-401	Slave Cylinder (Complete including items 2, 3 and 4)	2
1	SP 2694	Repair Kit	A/R
2	4-35-395	Push Rod	2
3	64470444	Bleed Nipple	2
4		Nut 3/8" BSF	4
5		Bolt M8 x 50 mm Long and Locknut	4



HYDRAULIC PIPES AND FITTINGS

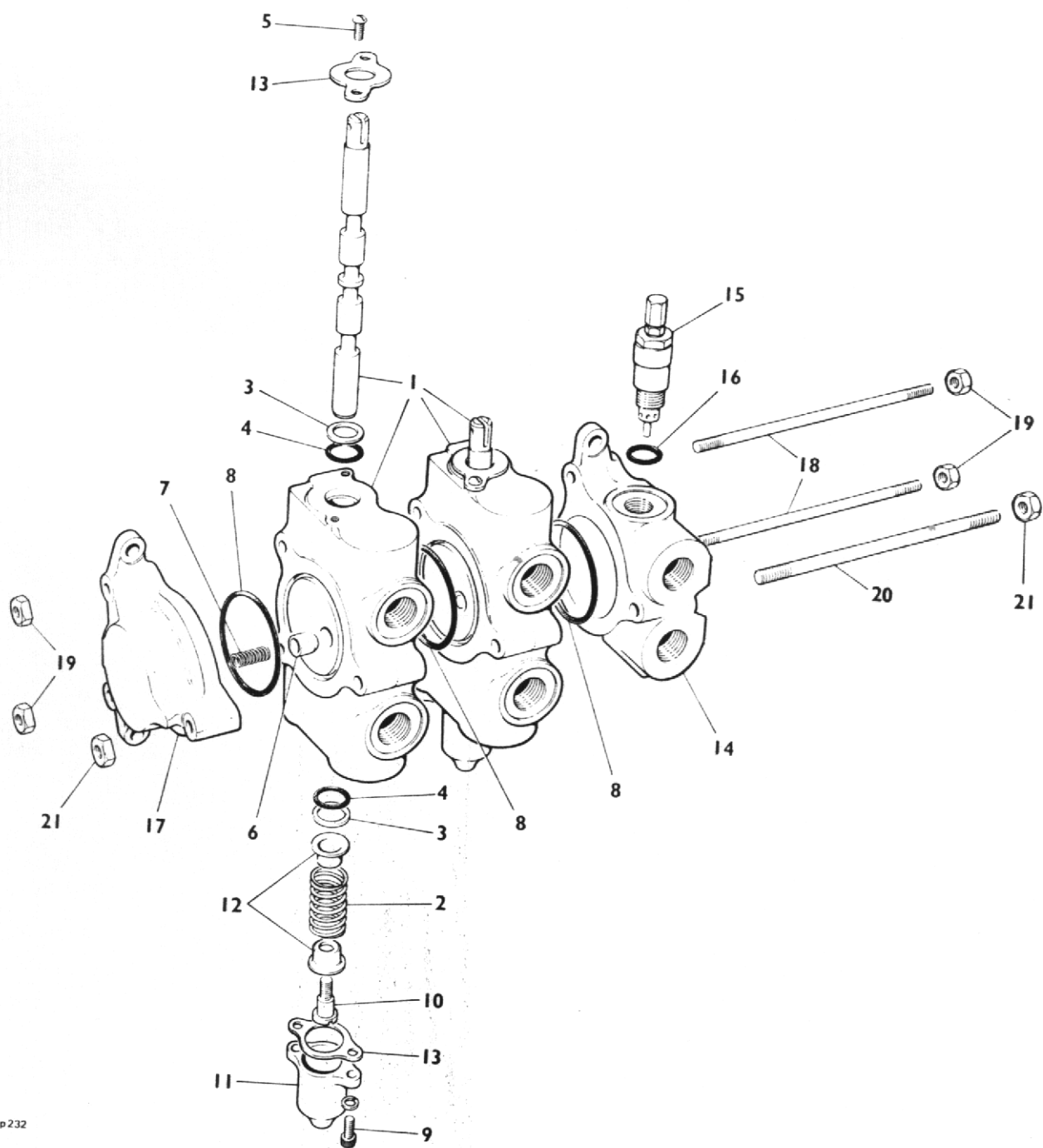
Item No.	Part No.	Description	Qty.
1	FSE 376-1	Hose 3/4" BSP x 610mm Long ST-90°	1
2	FSE 376-2	Hose 3/4" BSP x 1110mm Long ST-90°	1
3	FSE 376-3	Hose 1/2" BSP x 3000mm Long ST-135°	1
* 4	FSE 376-4	Hose 1/2" BSP x 790mm Long ST-ST	2
†	3SHD 65	Hose 3/8" BSP x 31 1/2" Long ST-ST	2
5	FSE 376-5	Hose 1/2" BSP x 3250mm Long ST-ST	1
6	FSE 376-6	Hose 1/2" BSP x 3350mm Long ST-90°	1
7	FSE 376-7	Hose 1/2" BSP x 2150mm Long 90°-90°	1
8	FSE 376-8	Hose 1/2" BSP x 510mm Long ST-ST	1
9	FSE 376-9	Hose 1/2" BSP x 340mm Long ST-ST	1
10	3SH 63	Hose 3/8" BSP x 597mm Long ST-90°	2
11	4-35-108C	Hose 3/8" BSP x 45" Long ST-ST	1
12	FSE 376-12	Hose 3/8" BSP x 190mm Long ST-90°	2
13	FSE 376-13	Hose 3/8" BSP x 440mm Long ST-90°	2
14	FSE 376-14	Hose 3/8" BSP x 3400mm Long ST-90°	2
15	3SH 60	Hose 3/8" BSP x 51" Long ST-90°	1
16	4-60-189	Adaptor 1/4" BSP x 3/8" BSP Male - Male	1
17	ESE 130-47	Sealing Washer 1/4"	1
18	4-35-179	Hose 3/8" BSP x 56" Long ST-90°	4
19	4SHL 82	Hose 3/8" BSP x 43" Long ST-90°	2
* 20	FSE 376-20	Hose 1/2" BSP x 700mm Long ST-ST	1
†	3SHD 65	Hose 3/8" BSP x 31 1/2" Long ST-ST	1
21	16097-358	Orifice Plate	1
22	FSE 287	Tilt Cylinder (See Page 50)	2
23	FSE 288	Steering Cylinder (See Page 51)	2
24	FSE 143	Valve 2 Spool (See Page 45)	1
25	FSE 144	Valve 1 Spool (See Page 47)	1
26	FSE 291	Steering Valve	1
27	FSE 289	Steering Column	1
28		Setscrew 3/8" UNC x 3/4" Long	2
29		Setscrew 3/8" UNC x 1 1/4" Long (Steering Valve Mtg.)	2
30	CSE 182	Spacer (Steering Valve Mtg.)	2
31	FSE 346	Flow Divider	1
32	H1022-8	Tee Piece 1/2" x 1/2" x 1/2" BSP Male-Male-Male	2
33	H1022-6	Tee Piece 3/8" x 3/8" x 3/8" BSP Male-Male-Male	3
34	H1001-6-8	Adaptor 3/8" x 1/2" BSP Male-Male	4
35	H1501-8	Bonded Seal 1/2" BSP	12
36	H1501-6	Bonded Seal 3/8" BSP	12
37	H1501-12	Bonded Seal 3/4" BSP	2
38	H1500-908	'O' Ring 3/4"	5
39	H1007-6-8	Adaptor 3/8" BSP x 1/2" BSP, Male-Female Swivel	2
40	H1027-6-12	Adaptor 3/8" BSP x 3/4" UNF	2
41	H1028-6-12	Adaptor 3/8" BSP x 3/4" UNF Long	2
42	H1001-6-6	Adaptor 3/8" BSP x 3/8" BSP	11
43	H1001-8-8	Adaptor 1/2" BSP x 1/2" BSP	4
44	H1001-6-12	Adaptor 3/8" BSP x 3/4" BSP	1
45	FSE 121	Adaptor	1
46	H1001-12-12	Adaptor 3/4" BSP x 3/4" BSP	1
47	IP3072APSF8	Pump (See Page 48)	1
48	FSE 344	Adaptor	1
49	FSE 345	Adaptor	1
50	DM 69A5	'O' Ring	2



HYDRAULIC PIPES AND FITTINGS (Cont'd)

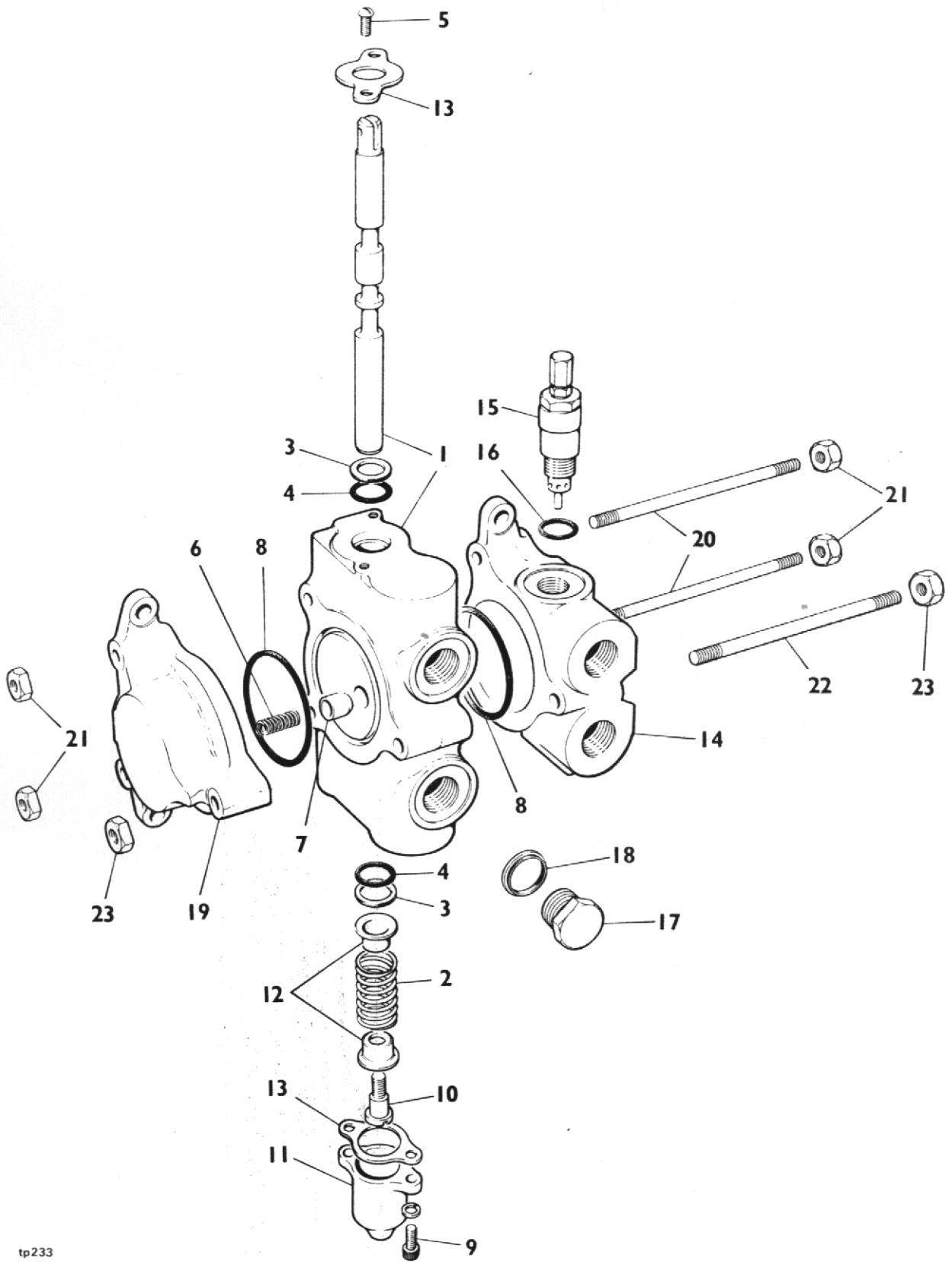
Item No.	Part No.	Description	Qty.
* 51	FSE 378	Adaptor 1/2" BSP x 3/4" UNF	1
†	4-35-40K	Adaptor 3/8" BSP x 3/4" UNF	1
52	FSE 382	Adaptor 3/8" BSP x 1/2" BSP	1
53	ESE 130-6	Tilt Control Valve	1
54	H1011-8	Blanking Plug 1/2" BSP. Male	2
55	FSE 122	Adaptor 1/2" BSP - Flow Control	1
56	TD 9572	Mast Lift Cylinder	1
57	2ST 72C	Hose 3/8" BSP x 13/4" Long ST-90°	1
58	FSE 453	Mounting Plate (Tilt Control Valve) (Not Illustrated)	1
59	F4-45-99	Tee Piece 3/8" x 3/8" x 3/8" BSP Male-Female-Male	2
60		Capscrew 5/16" UNC x 1" Long (Adaptor to Pump)	4
61		Bolt M10 x 35mm Long and Locknut (Valves to Chassis)	8
62		Bolt M8 x 40mm Long and Locknut (Block to Chassis)	2
63		Setscrew 3/8" UNC x 1" Long (Flow Divider to Block)	4
64		Setscrew M10 x 25mm Long (Mtg. Brkt. to Axle Casing)	2
65		(Not Illustrated)	2
		Bolt 5/16" UNF x 2 1/2" Long and Locknut (Valve to Mtg. Brkt.) (Not Illustrated)	2
O 66		Hose PVC Nylon Braided	1
O 67	3051	Banjo c/w Bolt	2
O 68	M351	Washer	6
O 69	F102	Coupling	2
O 70		Clip M.00	2
71	FSE 227	Hydraulic Tank (See Page 25)	1
72	UC1457	Suction Filter	2
73	FSE 384	Oil Pressure Gauge (See Page 29)	1
* 74	H1001-8-8	Adaptor 1/2" BSP x 1/2" BSP	1
†	H1001-6-8	Adaptor 3/8" BSP x 1/2" BSP	1
* 75	H1022-8	Tee Piece 1/2" x 1/2" x 1/2" BSP Male-Male-Male	1
†	H1022-6	Tee Piece 3/8" x 3/8" x 3/8" BSP Male-Male-Male	1

Note: * Fitted on machines with serial No. up to and including 2FL5000-62
 † Fitted on machines with serial No. from and including 2FL5000-63
 O Items fitted on machines with Mast Lift Cylinder Part No. TD9572 only.



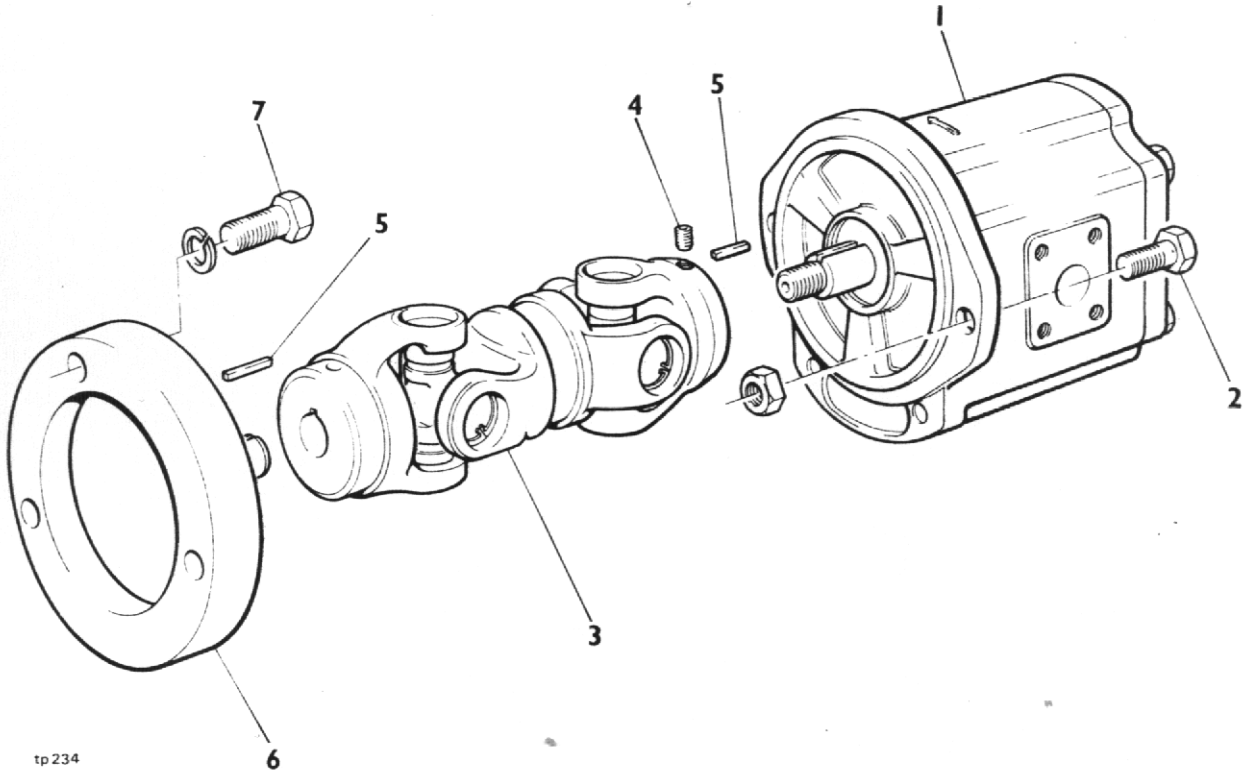
**HYDRAULIC CONTROL VALVE
(DOUBLE SPOOL)**

Item No.	Part No.	Description	Qty.
	FSE 143	Valve Complete	1
1	5002-A-1	Spool Section S/A (Including items 2-13 incl.)	2
2	5014	Spring	2
3	5029	Wiper Seal	4
4	130	'O' Ring	4
5	3432	Screw	4
6	5011	Poppet	2
7	5064	Spring	2
8	564	'O' Ring	3
9	5035	Capscrew	4
10	5015	Spring Seat Screw	2
11	5028	End Cap	2
12	5013	Spring Seat	4
13	5012	Seal Plate	4
14	5001-A-1	Inlet Section (Including items 8, 15, and 16)	1
15	5060	Relief Valve Assembly	1
16	3384	'O' Ring	1
17	5003-A-1	Blank Outlet Section	1
18	5069-2	Tie Rod 5/16" x 6" Long	2
19		Nut 5/16" UNC	4
20	5089-2	Tie Rod 3/8" x 6 1/8" Long	1
21		Nut 3/8" UNF	2
	FSE 481	Seal Kit (Comprising items 4, 8, and 16)	A/R



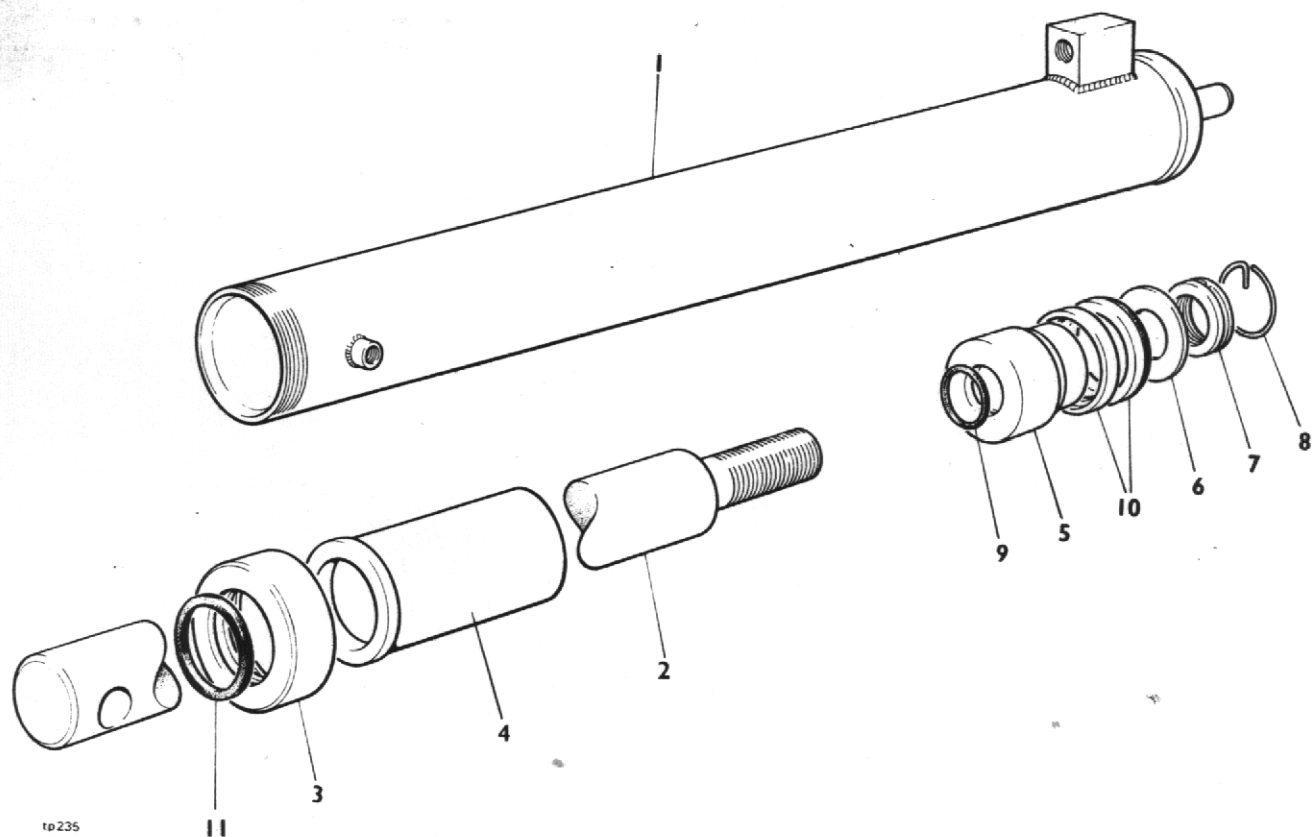
**HYDRAULIC CONTROL VALVE
(SINGLE SPOOL)**

Item No.	Part No.	Description	Qty.
	FSE 144	Valve Complete	1
1	5002-A-4	Spool Section S/A (Including Items 2-13 incl.) . . .	1
2	5014	Spring	1
3	5029	Wiper Seal	2
4	130	'O' Ring	2
5	3432	Screw	2
6	5064	Spring	1
7	5011	Poppet	1
8	564	'O' Ring	2
9	5035	Capscrew	2
10	5015	Spring Seat Screw	1
11	5028	End Cap	1
12	5013	Spring Seat	2
13	5012	Seal Plate	2
14	5001-A-1	Inlet Section (Including Items 8, 15 and 16)	1
15	5060	Relief Valve Assembly	1
16	3384	'O' Ring	1
17	DH 45-D	Blanking Plug 1/2" BSP	1
18	DH 12-D	Bonded Seal 1/2" BSP	1
19	5003-A-1	Blank Outlet Section	1
20	5069-1	Tie Rod 5/16" x 4 1/2" Long	2
21		Nut 5/16" UNC	4
22	5089-1	Tie Rod 3/8" x 4 5/8" Long	1
23		Nut 3/8" UNF	2
	FSE 482	Seal Kit (Comprising items 4, 8, 16 and 18)	A/R



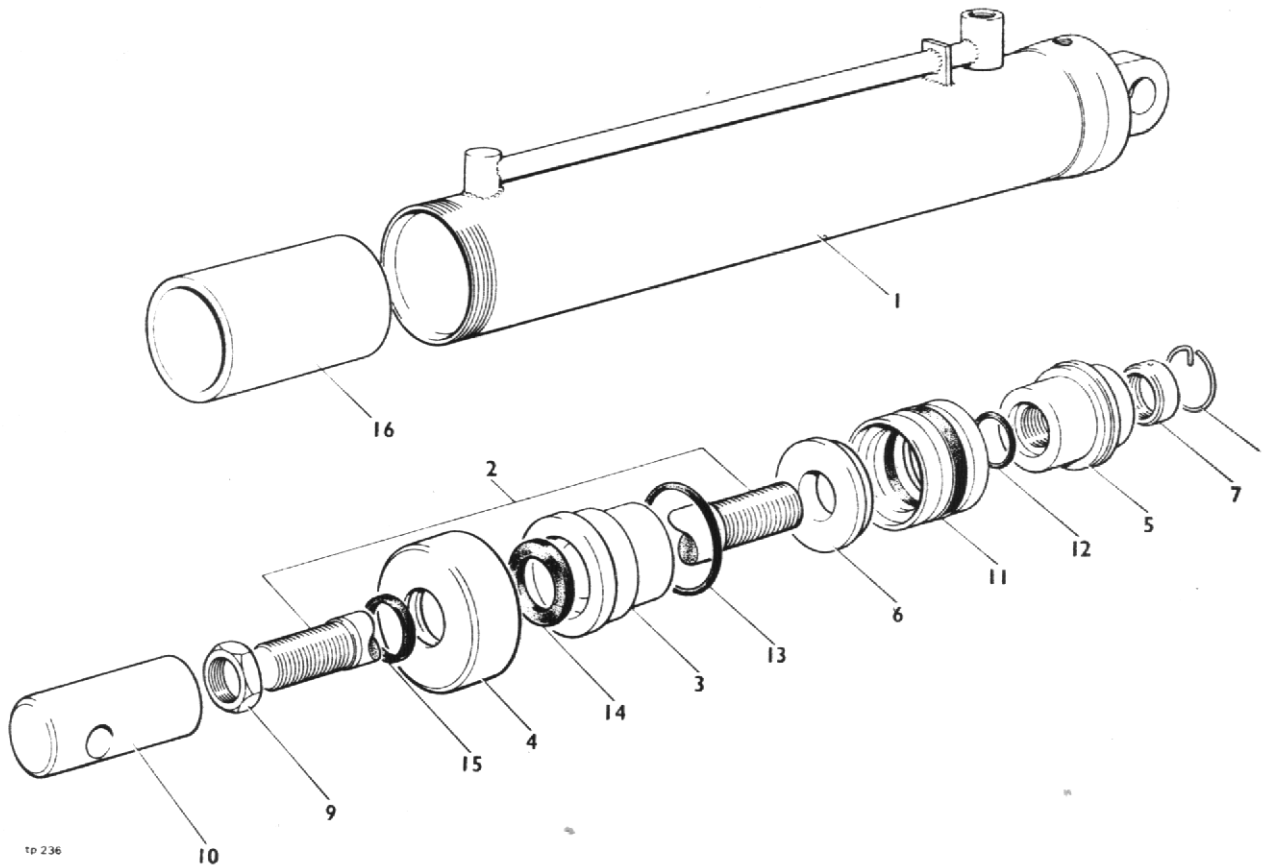
HYDRAULIC PUMP AND DRIVE

Item No.	Part No.	Description	Qty.
1	IP3072 APSFB	Hydraulic Pump	1
2		Bolt M10 x 35mm Long and Locknut	2
3	FSE 249	Pump Drive Shaft	1
4		Grubscrew M8	1
5		Key 3/16" Square x 3/4" Long	2
6	FSE 252	Pulley Adaptor	1
7		Bolt 7/16" UNF x 1 3/4" Long and Spring Washer	3



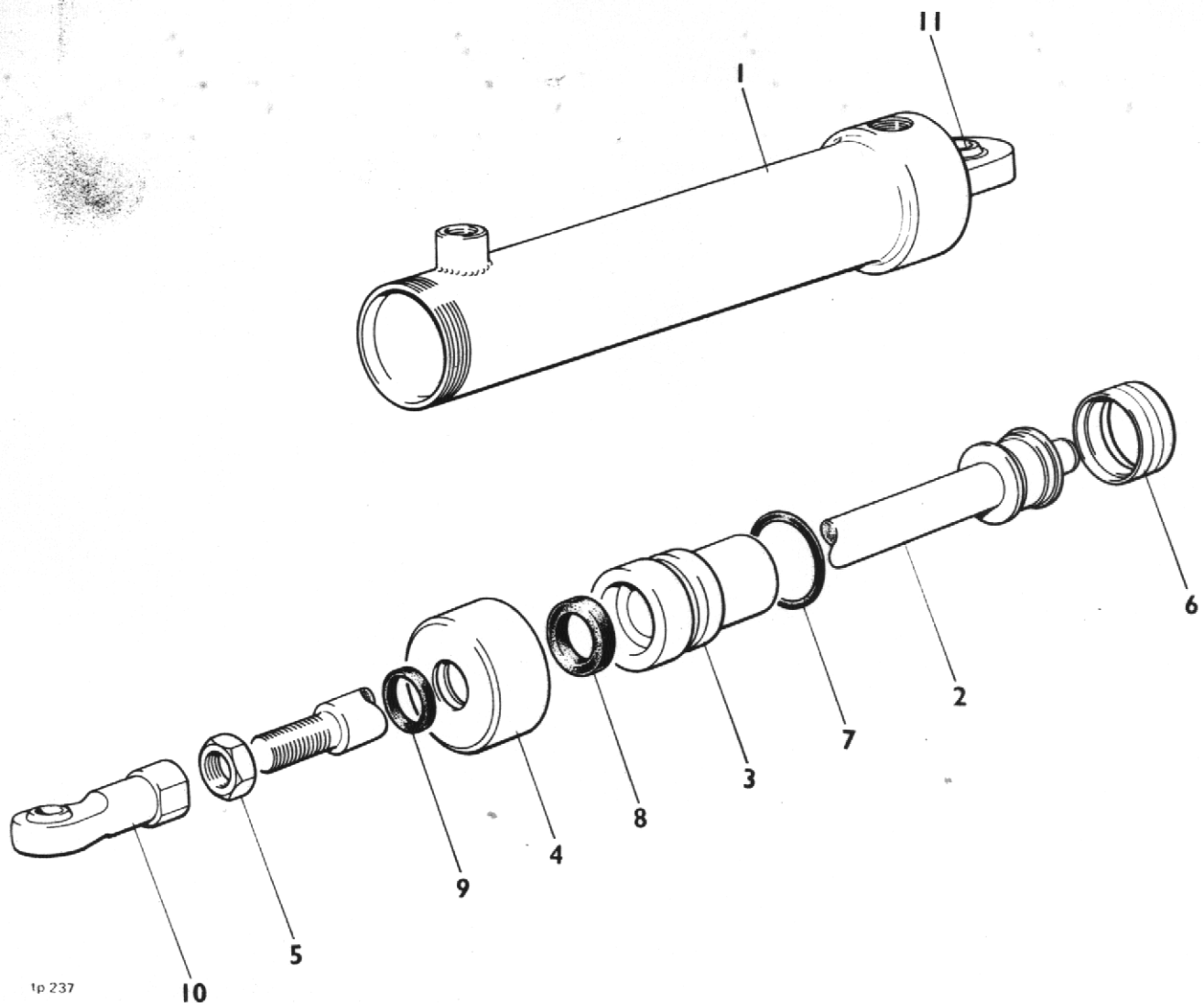
MAST LIFT CYLINDER

Item No	Part No.	Description	Qty.
1	TD 9572	Cylinder Complete	1
1	TD 9572-1	Cylinder Assembly	1
2	TD 9606	Piston Rod	1
3	TD 9605	Tube Cap	1
4	FSE 412	Sleeve Assembly c/w bushes	1
5	TD 6019	Piston Head	1
6	LS 104-16	Backing Washer	1
7	TD 1828	Locknut	1
8	TD 7263	Locking Wire	1
9	BS 222	Piston 'O' Ring	1
10	R4378 SW	Piston Seal	1
11	PP58-31	Wiper Seal	1
	FSE 408	Seal Kit (comprising items 9, 10 and 11)	1



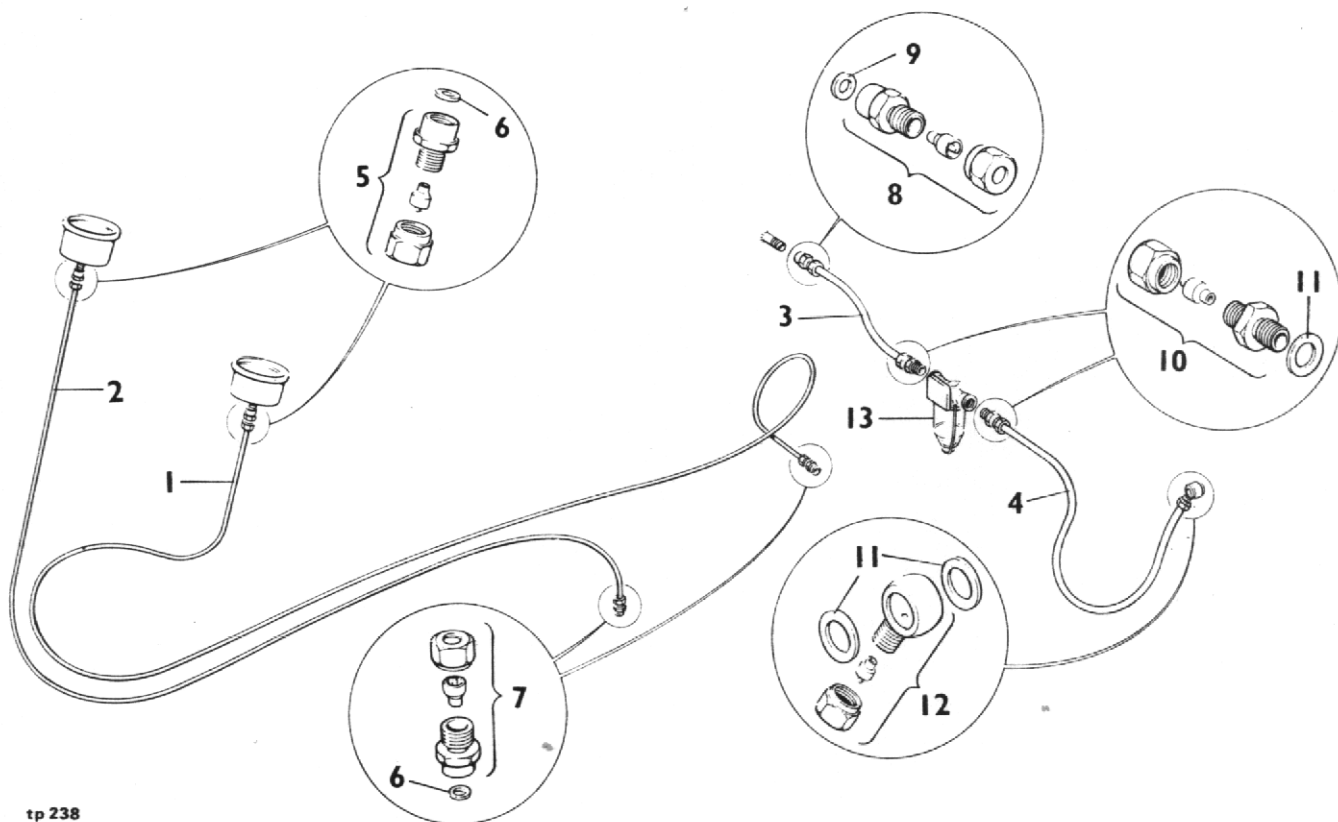
MAST TILT CYLINDER

Item No.	Part No.	Description	Qty.
	TD 8547	Cylinder Complete	2
1	TD 8547-1	Cylinder Assembly	1
2	TD 9443	Piston Rod	1
3	TD 4903	Sleeve	1
4	TD 4902	Tube Cap	1
5	TD 6038	Piston Head	1
6	TD 6039	Backing Washer	1
7	TD 1737	Locknut	1
8	TD 7239	Locking Wire	1
9		Locknut 1 1/4" BSF	1
10	TD 9444	Rod End	1
11	R10984 SDW	Piston Seal	1
12	BS218	Piston 'O' Ring	1
13	BS 232	Sleeve 'O' Ring	1
14	R5604	Sleeve Seal	1
15	PP 58-17	Wiper Seal	1
16	FSE 389	Spacer	1
	FSE 477	Seal Kit (Comprising items 11-15 inclusive)	1



STEERING CYLINDER

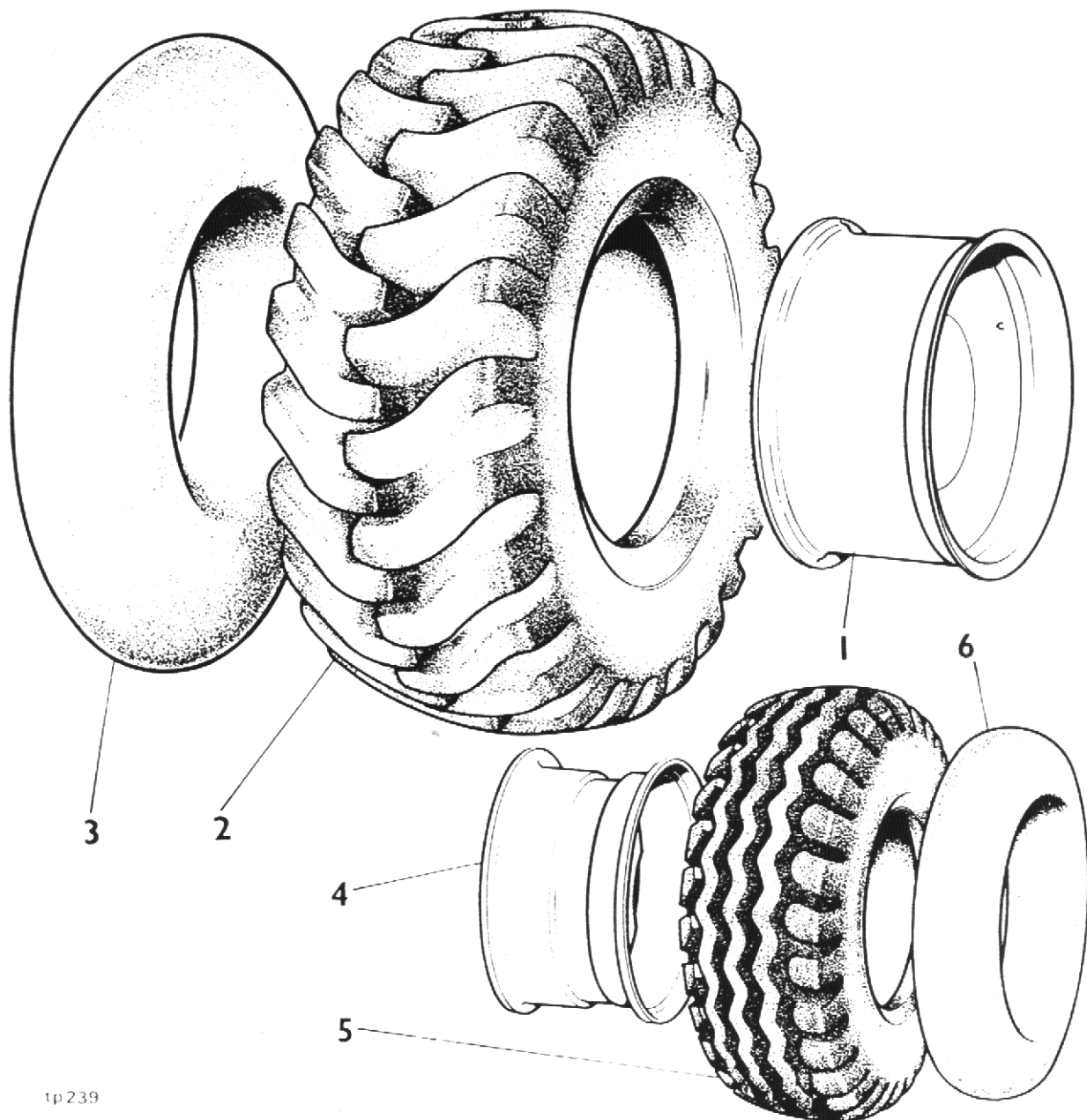
Item No.	Part No.	Description	Qty.
1	TD 9128	Cylinder Complete	2
1	TD 9128-1	Cylinder Assembly c/w item 11	1
2	TD 9128-5	Piston Rod Assembly	1
3	TD 8742	Sleeve	1
4	TD 4434	Tube Cap	1
5		Locknut 3/4" BSF	1
6	DS 200162	Piston Seal	1
7	BS 224	Sleeve 'O' Ring	1
8	R 4224S	Sleeve Seal	1
9	PP58-9	Wiper Seal	1
10	1764 P	Rod End Spherical Bearing (Complete)	1
11	1244P	Spherical bearing (Cylinder Plug End)	1
	FSE 478	Seal Kit (Comprising Items 6-9 inclusive)	1



tp 238

FUEL LINES AND PRESSURE GAUGE LINES

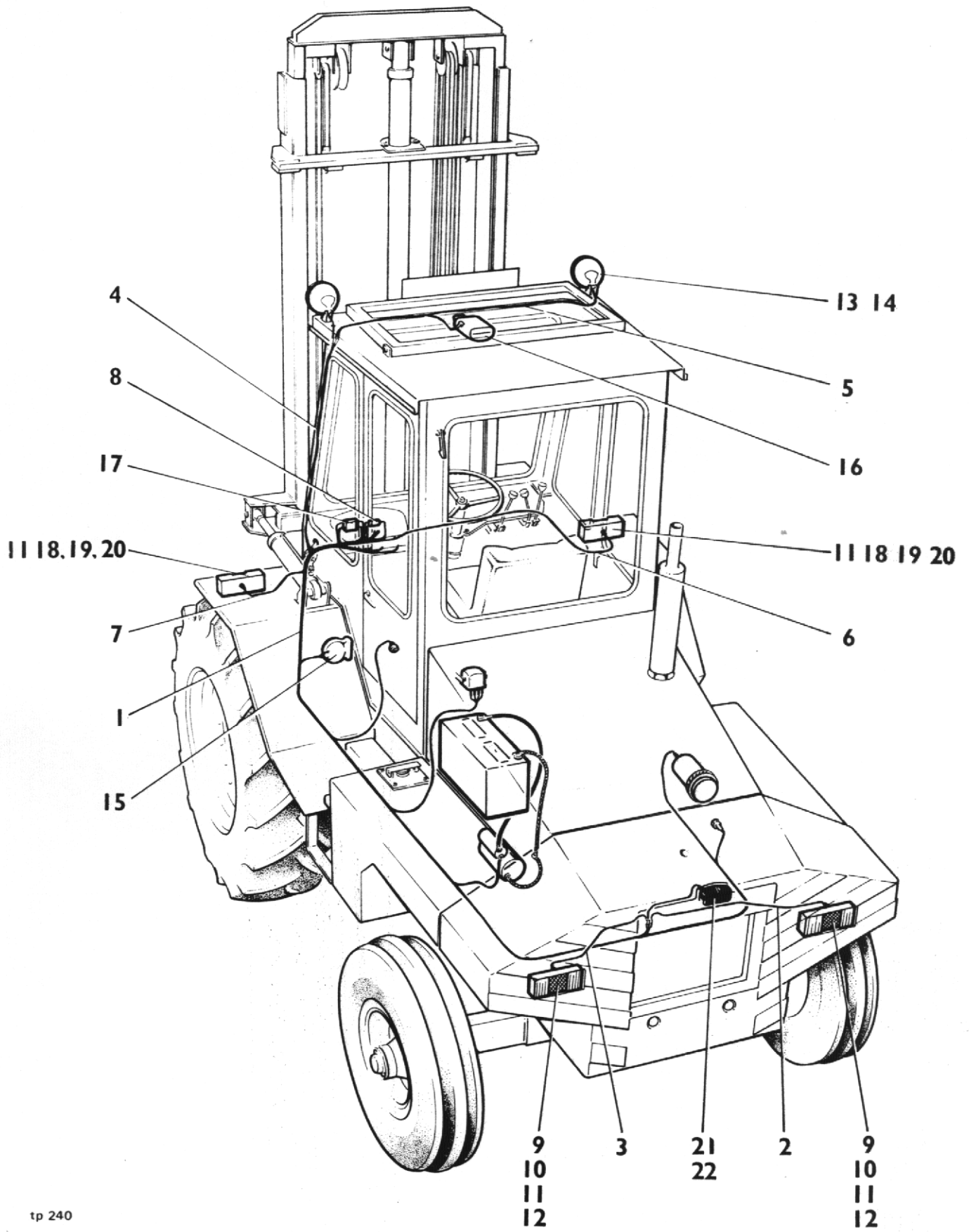
Item No.	Part No.	Description	Qty.
1		Nylon Pipe 4mm O.D. x 2600mm Long	1
2		Nylon Pipe 4mm O.D. x 2300mm Long	1
3		Nylon Pipe 8mm O.D. x 180 mm Long	1
4		Nylon Pipe 8mm O.D. x 550 mm Long	1
5	FSE 347	Pressure Gauge Coupling	2
6	M 362	Washer	4
7	FSE 483	Coupling	2
8	FSE 484	Coupling	1
9	M 363	Washer	1
10	FSE 485	Coupling	2
11	M352	Washer	4
12	FSE 486	Banjo Coupling	1
13	7950371	Fuel Strainer	1



tp239

WHEELS AND TYRES

Item No.	Part No.	Description	Qty.
	24S22	Front Wheel Assembly R/H	1
	24S21	Front Wheel Assembly L/H	1
1	FSE473	Front Wheel Rim 15F28	2
2	20S09	Tyre 16.9-14x28 10 Ply	2
	24S41	Rear Wheel Assembly	2
4	FSE474	Rear Wheel Rim 9x8	2
5	22S02	Tyre 10.5-80x18 10 Ply	2
6	23S04	Tube 10.5x18	2



ELECTRICS

Item No.	Part No.	Description	Qty.
1	FSE 212-1	Main Loom c/w 10 Way Connector	1
2	FSE 212-2	Loom (RH Rear - to Stop, Tail and Flasher)	1
3	FSE 212-3	Loom (LH Rear - to Stop, Tail and Flasher)	1
4	FSE 212-4	Loom (Dash to Cab Roof)	1
5	FSE 212-5	Loom (LH to RH Cab Roof)	1
6	FSE 212-6	Loom (RH Front - to Side and Flasher)	1
7	FSE 212-7	Loom (LH Front - to Side and Flasher)	1
8	35020	Flasher Unit	1
9	FSE 334	Stop, Tail and Flasher Light Unit	2
10	L380	Stop and Tail Bulb 12V-21/5W (Not Illustrated)	2
11	L382	Flasher Bulb 12V-21W (Not Illustrated)	4
12	10144-00	Lens (Not Illustrated)	2
13	1720-40	Headlight Complete	2
14	1720-33	Headlight Unit	2
15	69219	Horn c/w Bracket	1
16	FSE 282	Wiper Motor	1
17	FSE 286	Fuse Box 12 Volt	1
18	FSE 333	Side and Flasher Light Unit	2
19	L207	Side Light Bulb 12V-21W	2
20	10145-01	Lens	2
21	53837	Rear Number Plate Light	1
22	989	Bulb 12V-5W	2

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".

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

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

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

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