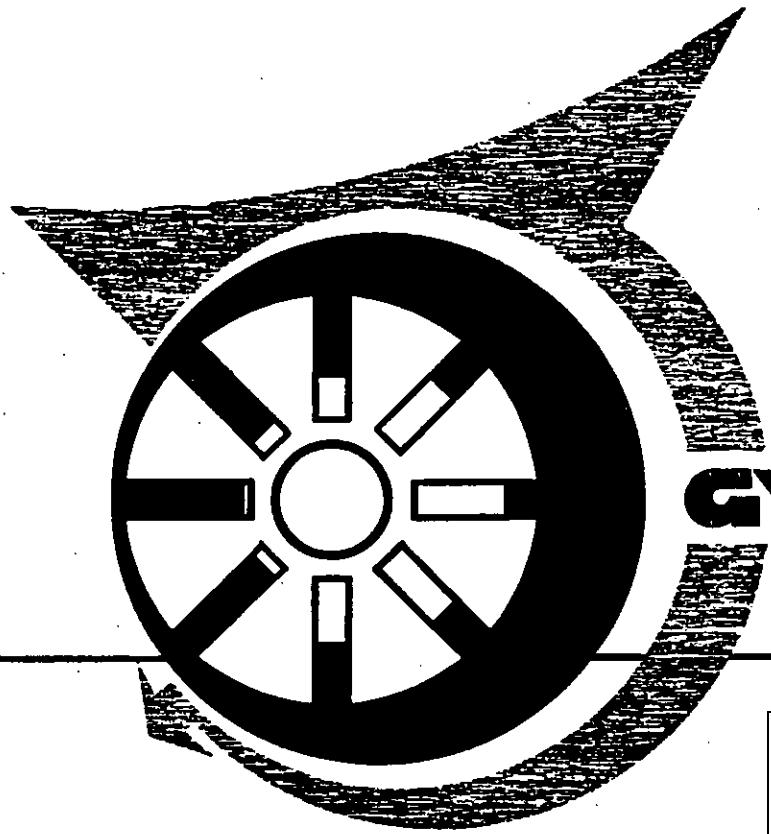

GYRO-FLO

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INSTRUCTIONS AND PARTS LIST

MODEL DR 250 S

DIESEL ENGINE PORTABLE AIR COMPRESSOR

Ingersoll-Rand®

Revised (10-12)

TP. 12034

INSTRUCTIONS & PARTS LIST

GYRO-FLO

FOREWORD

In preparing this publication, every effort has been made to provide sufficient information to permit an operator to perform his duties so as to receive maximum performance and trouble free service from the compressor. All classes of equipment, regardless of how well built, require a certain amount of attention. The purpose of this publication is to acquaint an operator with the functions, operation and servicing of the various components, which were built with the very best of materials and workmanship, to obtain maximum life from the compressor.

Before starting the compressor, the instructions should be carefully read to obtain a thorough knowledge of the duties to be performed. Take pride in the compressor, keep it clean, and in good mechanical condition. For major servicing, not covered in this publication, consult your nearest Ingersoll-Rand Company Branch Office, or the distributor from whom the compressor was purchased. Correspondence with a branch office, or distributor, must always specify the serial number of the compressor as well as the model. See page 16 for location of unit serial number.

DRIVERS - Section 2

AIR END - Section 3

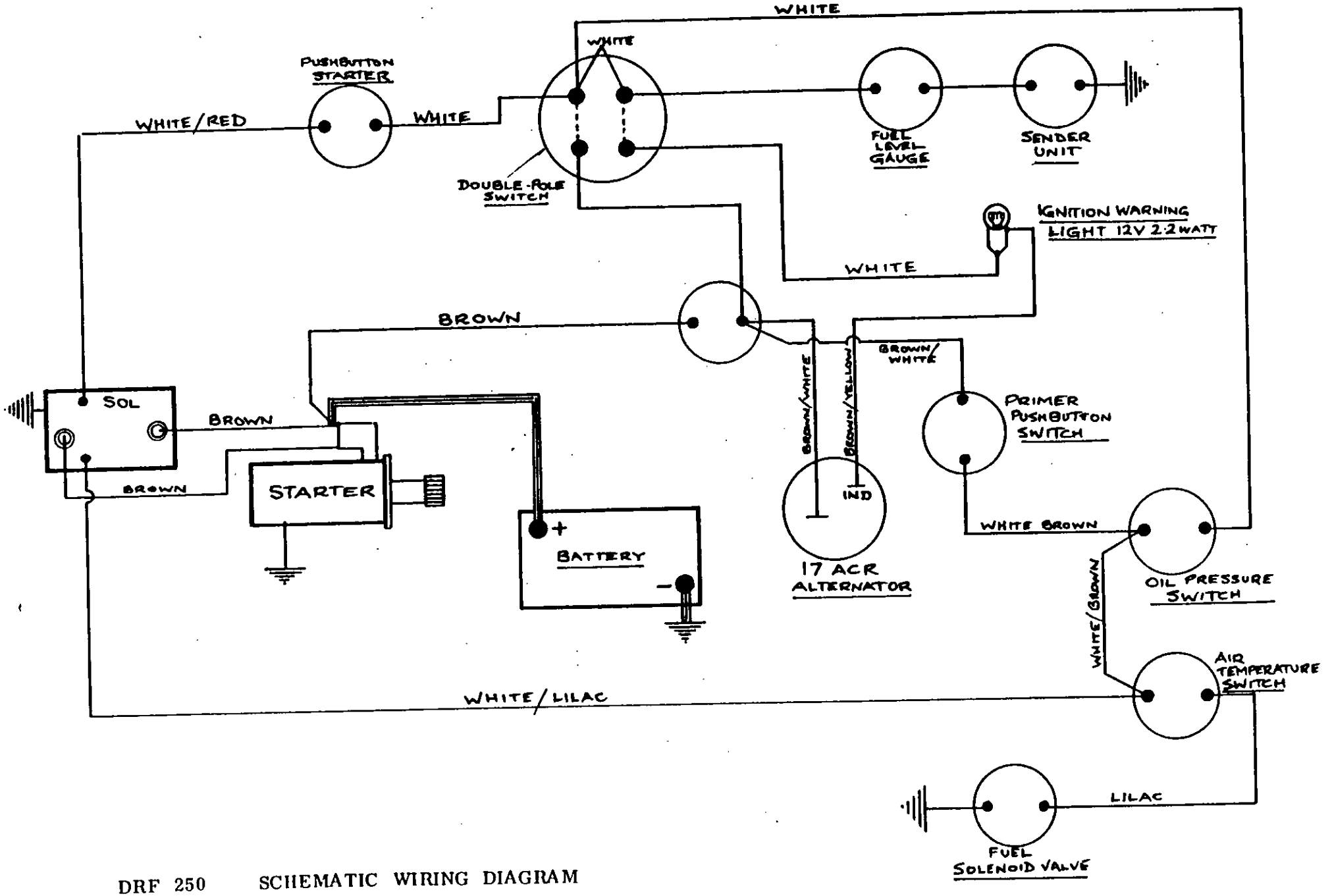
RUNNING GEAR, FRAME HOUSING - Section 4

FLEXIBLE TUBING - Section 5

AUXILIARY PARTS - Section 6

SPARES - Section 7

INSTRUCTION SECTION



DRF 250 SCHEMATIC WIRING DIAGRAM

Normal Operating Pressure - psi		100 (7.03 kg./sq.cm)
Actual Delivery - cfm		250 (7.08 cu. metre)
Full Load Speed - rpm		1800
Approximate No Load Speed - rpm		800
Oil Capacity Compressor System - Imperial Gals		10 (45.56 litres)
Type of Air Filter		DA 140
Capacity Fuel Tank - Imperial Gals		27 (122.8 litres)
Electric Starting System - volts		12
Overall Length - feet/inches	2-Wheel	
	4-Wheel	13' - 9"
Length, Parked-feet/inches	4-Wheel	10' - 0"
Length Less Drawbar	2-Wheel	9' - 0" (275 cm)
Width - feet/inches	2-Wheel	5' - 10" (175 cm)
	4-Wheel	5' - 10" (175 cm)
Height - feet/inches - All Models		6' - 6" (199 cm)

GENERAL DESCRIPTION

The Gyro - Flo Portable Compressor consists of a two-stage rotary air compressor directly connected to and driven by a heavy duty industrial type engine. This unit assembly is mounted on a sturdy, channel section, welded steel frame.

The running gear is a two-wheel or four-wheel spring mounting, having pneumatic tyred wheels. "Less running gear" units are furnished on wooden shipping skids.

Operating accessories include: oil cooler, fuel supply tank, air receiver, oil separator system and the necessary regulating devices instruments, air cleaners, oil filters, etc.

COMPRESSOR

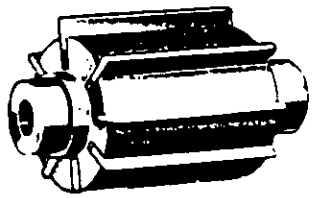
The compressor is two-stage, and is of the sliding vane rotary type. The first stage rotor chamber is supported by a yoke which is bolted directly to the flywheel housing of the engine. The second stage rotor chamber mounts directly in line with, and at the rear of the first stage chamber with a centre bearing housing between the two. A rear bearing housing and main oil pump casing with cover closes the rear end of the second stage rotor chamber. The centre bearing housing also has supporting arms which rest on the main frame and serve as an additional support to the compressor.

A front bearing, with rotary oil seal, is contained in the yoke. Special end plate inserts are located at each end of each rotor chamber to separate the chambers from the adjacent bearing assemblies and act as end guides for the vanes.

The first and second stage cylinder bores (or rotor chambers) are each offset from the shaft centre line. This causes each cylinder bore to be eccentric to its rotor.

The two rotor chambers have the same cylinder bore diameter, but the first or low pressure stage chamber, and its rotor, is considerably longer than the second or high pressure stage.

The first and second stage rotors are each slotted to receive sliding vanes which are sealed by the copious amount of lubricating oil fed to the bearings and bores. They are held against the bore wall by centrifugal force when operating.



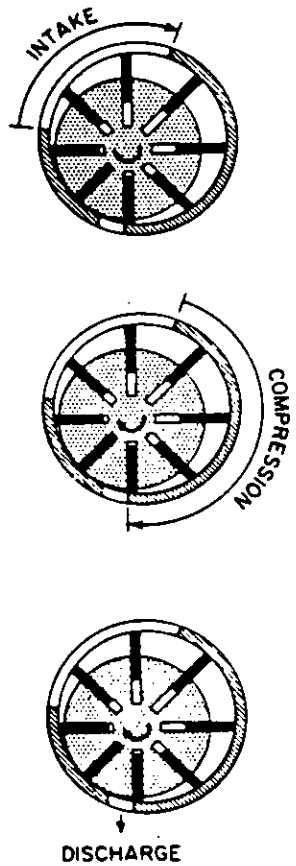


Fig. 1 - Diagram showing compression cycle of the GYRO - FLO.

AIR FLOW

Free air is taken into the first stage chamber through large ports at an area where the vanes are well out of the rotor slots, thus filling the spaces or volumes between the vanes.

As rotation proceeds, the vanes are moved radially inward in their slots by the bore wall. This causes the volume between the vanes to decrease and compresses the air trapped in this space. As this space volume approaches zero, a second series of ports is

uncovered allowing the compressed air to pass on through cast passages to the intake of the second stage rotor chamber. Here the process is repeated, raising the air pressure from the interstage pressure to the final discharge pressure.

OIL FLOW

Relatively cool lubricating oil is admitted under pressure to the precision roller bearings and also is injected in metered amounts, directly to the rotor chambers. The oil passes through the bearings at each end of each rotor, enters the close clearances at the vane ends, and thence to the rotor chambers.

All of the oil thus introduced mixes with, and passes on with the air being compressed. This removes the heat of compression to a large degree and results in an unusually low final air discharge temperature.

The second stage discharge air passes through a connection into a combination air receiver and primary oil separator where the oil is removed from the air and collects in the storage reservoir formed by the lower portion of the combination receiver and separator shell. From there, the oil is forced through piping to an oil cooler assembly. This cooler is located at the radiator end of the portable in such a manner that the engine radiator fan serves to cool both the engine jacket water and the compressor lubricating and cooling oil.

OIL PUMP

The oil pump is located at the rear end of the second stage rotor chamber. The pump is of the positive gear type, with the driven gear of the pump mounted directly on, and driven by a splined rotor shaft extension.

The oil pump receives its supply from the oil cooler through piping and an oil filter. It discharges the oil through internal passages directly to the rotor bearing and chambers.

An adjustable spring-loaded by-pass valve, mounted on the oil separator and connected to the oil pump, prevents any possibility of damage due to over pressure.

When the compressor is operating at low capacity, some of the oil may by-pass the cooler through a thermostatically controlled by-pass valve. This arrangement helps to maintain a higher average compressor oil temperature thereby reducing the possibility of water vapour condensation in the system. This valve located in the oil piping, by-passes varying amounts of oil, depending on the temperature, until the oil being circulated reaches a temperature of 185°F. (85°C.). At this point, the valve closes the by-pass completely and all of the oil is circulated through the cooler.

GENERAL – AIR END

The first stage rotor chamber intake is equipped with a UL-89 Volumetric Regulator (Fig. 5). The incoming air passes through an efficient two stage dry type air cleaner before entering the regulator and the compressor.

The first stage rotor shaft extends forward to carry an internal-external gear toothed coupling, the outer ring of which is bolted directly to the engine flywheel. This coupling assembly is lubricated and sealed against the entrance of dirt or moisture and provides a certain amount of necessary flexibility.

The second stage rotor is driven through a full floating splined shaft connection from the first stage rotor. In addition, the second stage rotor splined grooves serve to drive the oil pump splined shaft.

Each rotor rides in its own set of caged roller bearings, while the oil pump shaft operates in self-oiled sleeve bushings.

Regulation is 100% from full capacity to zero capacity, and is accomplished by a combination of engine (and compressor) speed reduction together with proportional compressor volumetric regulation.

It is recommended that vane tips be inspected at 2,000 hours or after one year. Vanes should be replaced after 4,000 hours' service or every two years as a matter of routine preventive maintenance. When vanes are replaced, make sure that driving or trailing tips of rotor slots are not razor sharp. They should be slightly rounded. This can be easily done by hand using a fine-grained stone to produce a radius of about 1/64". (.397 mm.).

To make an inspection of the high and low pressure vanes with a minimum removal of parts the following procedure is recommended.

1. To inspect low pressure vanes remove UL-89 regulator complete and then "inch" engine over with the starter and inspect vanes through the exposed air intake in cylinder.

2. To inspect high pressure vanes remove sheet metal access cover on the back of compressor housing. Remove cap screws that fasten the high pressure outer bearing housing to the cylinder. The housing with oil pump, bearing and outer race, and end plate can now be slipped off and vanes can be slipped out of rotor slots.

INSTRUMENT PANEL

The instruments are located on one panel. Instruments include, discharge air pressure gauge, engine water temperature gauge, engine oil pressure gauge, tacho-hour counter, ammeter, ignition warning light, on-off switch, pushbutton start, pushbutton primer, fuel level gauge and cold start pushbutton (when fitted).

ELECTRIC STARTING

Electric starting is standard and includes starter motor, alternator, relay and battery with necessary wiring and terminals.

AIR – RECEIVER – OIL SEPARATOR

The air receiver - oil separator system consists of a combination primary oil separator and air receiver tank plus a secondary separator tank. Both tanks are made to B.S.S. for welded steel pressure vessels and are designed for 150 psi (10.54 kg/sq. cm.) working pressure.

Removing the cover on the end of the primary separator provides a very large opening through which thorough cleaning and inspection can be performed. An internal strainer in the bottom of the primary separator tank provides a means of trapping any solids which might be carried by the oil flow through the separator outlet pipe toward the oil cooler. This strainer fitting is removable for cleaning. The delivery end of the secondary separator is arranged to provide connections for the minimum pressure valve, service valves, relief valve also the required safety valve and automatic blowdown valve. It is continuously drained of any oil accumulation by a connection at the bottom of the chamber to the inlet of the high pressure cylinder.

FUEL TANK

The fuel tank is mounted longitudinally with the compressor frame. The capacity is 27 Imperial gallons (122.8 litres). The entrance to the outlet tube connection is raised above the tank floor to provide a water and sediment settling space or trap. The low side drain plug should be removed occasionally to draw off any collection of water and sediment.

SPRING MOUNTING

The complete unit is carried on a sturdy two wheel or four-wheel mounting. The mounting has semi - eliptic springs. Pneumatic-tyred disc - type wheels are standard. A drawbar is provided as standard equipment which can be put in parking position on 4 wheel units. A drop leg is provided as standard on the two-wheel mounting only.

LESS RUNNING GEAR

"Less running gear" units are furnished on temporary wooden shipping skids. If customer mounts a "less running gear" unit on other equipment, it is his responsibility to see that the frame is not stressed or warped because of the mounting arrangement. The use of special rubber mounts may be desirable or necessary.

OPERATION

BEFORE STARTING

1. Move the portable compressor to level ground and in as clean a location as possible.

2. Check the oil level in both the compressor primary oil separator reservoir and the engine crankcase. Add oil if required. (See special instructions under lubrication Page 8).

3. Check air cleaner.

4. Check that there is sufficient fuel in tank.

5. Check engine radiator to see that it is correctly filled with clean, soft water. Use permanent type anti-freeze solution if operating in below freezing temperatures. The use of a commercial rust inhibitor is recommended to prevent internal corrosion of the cooling system.

6. With no air pressure in the air receiver and oil separator system, leave service valves and hand relief valve open.

STARTING

The diesel engine starts directly on fuel oil.

1. Depress Ignition Toggle Switch to 'ON' position, press starter pushbutton until engine fires, then close service valves.

(Normally the unit can be started with the hand relief valve closed, but in extreme cold weather, it may be advisable to leave the hand relief valve partially open until the engine starts and then close it as soon as possible.)

Engine cold starting device Ford Units – In conditions of extreme cold, push in the excess fuel device located on the fuel injection pump, set the decompressor control in the "up" position, operate the starter motor for a few seconds to break the sealing effect of the cold oil, pull the decompressor lever down to restore compression and operate the starter as for normal starting.

In extreme cold conditions, on Perkins Engines operate the heater glow plug system by depressing push button on Instrument Panel.

The closing of service valves and relief valve causes compressor unloading and results in the minimum load on the engine while it is warming up. It also applies full pressure to the lubricating oil in the storage reservoir. This causes the oil to flow to the oil cooler or through the by-pass valve direct to the oil pump inlet to establish full lubricating pressure in the compressor immediately.

2. When fully warmed up, connect air load to the compressor and open the service valve allowing air demand to regulate output as required.

STOPPING

Close the air service and relief valves, causing compressor to unload and engine to operate at minimum reduced speed until the engine has cooled down sufficiently to prevent the radiator from boiling over, then shut down.

Shut down by returning toggle switch to off position whereupon air pressure will automatically be relieved from the air receiver-oil separator system, by means of the 'Automatic Blowdown Valve' as the compressor stops.

As this occurs the manual relief valve should be opened to further relieve pressure.

Unit should never stand idle with system pressurised.

MINIMUM PRESSURE SERVICE VALVE

This is an automatic valve which maintains a minimum pressure of about 70 psi in the receiver-separator system so as to ensure oil circulation.

Shut-off discharge is accomplished by means of cocks located in panel at towed end of machine.

This valve cannot be used as a check valve in any operation where a check valve is required to prevent backflow of line pressure, such as in parallel operation, etc. (Refer to Page 8).

AUTOMATIC BLOWDOWN VALVE

This is an automatic valve to release air from the system when engine is stopped.

MAINTENANCE

COOLING SYSTEMS

ENGINE RADIATOR AND COMPRESSOR OIL COOLER

Keep all core sections of both the radiator and oil cooler clean by using a cleaning solution. Higher efficiency and lower temperatures will result when the external grease and grime and the internal oxidation of the lubricating oil is removed thoroughly.

Use only clean, soft water for filling the radiator. Where the water is known to be hard or alkaline, treat it with a softening compound to prevent formation of scale and rust both in the engine jacket spaces and in the radiator itself.

Freezing of water in the cooling system may result in serious damage. If the unit is to stand idle in freezing temperatures, the only safe plan is to drain the system, unless an anti-freeze solution is used.

Before adding any anti-freeze solution, tighten up all joints in the cooling system and make sure there are no leaks.

Ethylene-glycol solutions are recommended since they are not lost by evaporation and only water need be added to maintain a full system. If any of the solution is lost by leakage, foaming, etc., it must be replaced by new anti-freeze solution.

The entire cooling system must be thoroughly cleaned and flushed before using an ethylene-glycol solution. All hose connections and joints must be kept tight, as any leakage of air into the system may cause acid formation and corrosion.

FUEL SYSTEM AND FUEL STORAGE

A cylindrical fuel tank is mounted on the compressor frame. Pilferage is prevented by the lockable housing side covers.

The outlet connection of the tank is so arranged that fuel is taken from a point somewhat above the floor of the tank thus providing a settling space where water and sediment can collect without being drawn into the fuel system. Bottom drain openings are provided for removal of the collected water and sediment. Drain the settlings after each filling of the tank.

Clean fuel is vitally important and every precaution should be taken to ensure the fuel being clean when it is poured or pumped into the supply tanks.

Fuel oils from steel drums and commerical containers often pick up scale, water, and sediment. To properly store fuel oil, use black iron (not galvanised) storage tanks or drums, tightly sealed against water, dust, and dirt. A satisfactory way of installing tanks is shown in the accompanying illustration, Fig. 2.

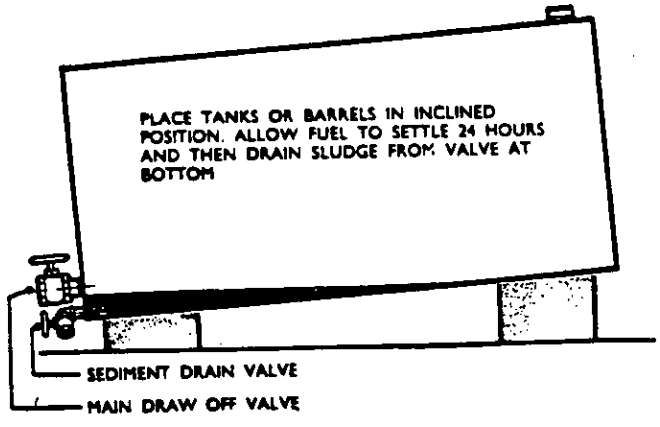


Fig. 2. - Fuel Oil Storage Tank.

Draw settlings from the well at the bottom of the storage tank at frequent intervals and always before drawing fuel for use.

When transferring fuel from the storage tank to the portable supply tanks by other methods than pump and hose, use a funnel which is kept for this purpose only. Wipe the funnel clean each time before using. Do not allow the engine fuel supply tanks to become empty because the genuine fuel pump may loose its prime and be damaged.

PROTECTIVE DEVICES

The compressor is protected against overheating by a thermal switch located in the compressor discharge connection. The switch is of the "normally closed" type and should the temperature of the discharge air rise above 220°F. (104.4°C) to 230°F. (110.0°C), this switch opens to cause immediate shutdown of the engine by de-energizing a solenoid-operated fuel cut-off valve.

GENERAL

Should the engine be shut down during operation by any of the protective devices check immediately to determine where the trouble lies and correct it before attempting further operation.

Read the engine instruction book to become familiar with the operation of the starting equipment and the various protective devices which are furnished to prevent damage to the engine due to lack of proper care and attention.

SAFETY VALVES

A safety valve is connected to the secondary oil separator to protect the compressor against any serious over pressure. It should be operated by hand monthly to make sure it is in proper operating condition. Should this safety-valve "blow" at any time due to excessive discharge pressure, check the regulating devices for improper settings.

AIR CLEANER

Both engine and compressor intake are protected against entrance of dust and foreign objects by efficient two-stage dry type air cleaner.

The cleaner should be serviced as often as required in accordance with operating conditions; daily, if in a very dusty location.

The cleaner is fitted with a restriction indicator to give visual indication of the necessity for filter cleaning.

AIR RECEIVER AND OIL SEPARATOR SYSTEM

The inside of the primary oil separator may be cleaned by removing the end cover.

An oil separator element is mounted within the secondary separator shell which is mounted on the rear housing of the unit.

OIL SEPARATOR ELEMENT

The secondary oil separator element consists of a series of chambers each packed with an oil diverting medium through which the compressor air passes on its way to the final discharge connection. (Most of the oil is thrown out of the air mechanically in the primary oil separator, before the air enters the secondary oil separator).

The secondary separator element (as shown in Fig. 3) is removable as a unit for replacement when required. This is indicated by more oil consumption by the compressor than usual. In normal operation servicing of the secondary separator element should not be required for two or three years.

The diverting medium is a very special material, purchased on a strict specification and installed in the screen element to a definite density. Servicing, therefore, is by replacement with a complete factory-packed screen assembly as shown.

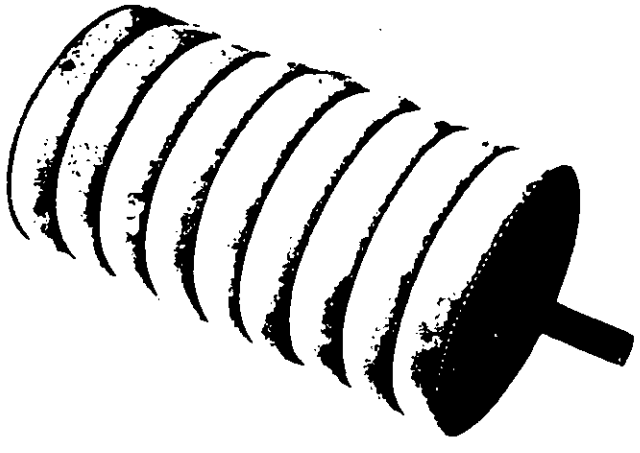


Fig. 3 - Secondary Oil Separator Element, Factory Packed, and replaceable.

CHASSIS (GENERAL)

Both mountings are equipped with grease fittings at wear points for use with a normal grease gun. The wheels should be removed and the bearings cleaned and repacked once a year. The free ends of the springs may be lubricated occasionally with heavy oil or light grease.

MAXIMUM ALLOWABLE TOWING SPEED

4 wheel units	20 mph	32.19 kph
2 wheel units	35 mph	56.35 kph

ROTARY COMPRESSORS ON PUMP – UP JOBS

The secondary oil separator on the rotary portable air compressor is designed to function correctly at normal operating pressures.

The high air velocities (zero pressure or low pressure) will carry considerable quantities of oil from the secondary oil separator over into the discharge line, therefore it is essential to hold a minimum pressure of 70 psi. (4.92 kg./sq.cm.) in the receiver-separator system until such time as the discharge line pressure has increased to that amount. This is accomplished by a minimum pressure valve which automatically maintains a minimum pressure of 70 psi (4.92 kg./sq.cm).

Attempting to operate at discharge pressures below 70 psi will not increase the actual delivery.

LIMITS OF OUT OF LEVEL OPERATION

MODEL	Standard Engine Standard Oil Pan		
	Lengthwise		Sidewise
	From Up	From Down	
DR 250 S DR 250 SL	15°	10°	7°

The engine, and not the compressor, is the limiting factor in all cases. When the unit is to be operated out of level, it is more important to keep engine crankcase oil level near the high mark than when operating on level ground. The out-of-level degrees are given on the assumption that the engine crankcase is filled to the high level mark (with the unit level) and the compressor oil gauge shows nearly full. Do not over-fill either the compressor lubricating system or the engine crankcase.

COMPRESSOR COUPLING

The complete coupling assembly is sealed to prevent the entrance of dirt and to retain the perminent lubrication installed on the original assembly.

If the engine and compressor are separated during a major overhaul, the coupling gear teeth should be repacked with grease before reassembling.

Use an automotive type front wheel bearing grease available at any service station. Use only enough to fill the gear teeth as an excess of grease in the chamber will expand with heat and resulting end thrust may cause compressor failure.

SPECIAL WARNING FOR PARALLEL OPERATION

Do not connect a Gyro-Flo Portable Air compressor into a common header with any other units of any description, or any other source of compressed air, without placing a check valve between the header and each Gyro-Flo Compressor.

Backflow of line pressure and possible contamination of the receiver-separator and lubricating system with oil, water, or scale must be prevented.

SPECIAL PRECAUTIONS FOR MOISTURE DRAINAGE

In installation where the discharge piping may slope upwards from the service outlet of the air receiver-oil separator system, provisions should be made to install a drain leg at the service outlet, to collect any drainback of condensate from the discharge line.

LUBRICATION (COMPRESSOR)

Compressor lubrication and cooling are both accomplished by the compressor lubricating oil. The compressor is cooled by oil injection directly into the rotor chambers. The compressor lubricating system consists of an oil pump, a storage reservoir, an oil cooler, and the necessary piping together with an oil filter.

The oil cooler is a radiator-like heat transfer core section placed immediately in front of engine radiator core and having approximately the same frontal area. It is so arranged internally that the oil passes through the cooling air stream on its way through the core. Oil is piped from the storage space in the primary oil-separator to the inlet opening of the cooler core. On leaving the cooler it flows through the piping and the oil filter to the oil pump intake.

COMPRESSOR OIL FILTER

The oil filter is located as on fig. 4 in a high loop of the oil piping so that the filter body-element may be removed for servicing without having to drain any other part of the system.

Elements should be inspected or replaced after:- 50 Hours operation and 150 Hours operation, initially, and at every 500 hours further operation. While filter body is removed inspect for lacquer deposit. If a lacquer deposit is noted change compressor oil completely to avoid vane sticking in the compressor.

OIL STORAGE RESERVOIR IN PRIMARY SEPARATOR

The oil storage reservoir is in the lower portion of the primary separator shell, where most of the oil collects as it is thrown out of the compressed air before it enters the secondary oil separator. The level of the oil in this storage reservoir is indicated by an oil level dial gauge, visible from the rear of the unit. This should indicate at least between "half and full" when the unit is shut down and on fairly level ground. The storage reservoir is equipped with a special filler plug and drain plugs.

For complete draining of the reservoir and piping, use the large drain plug in the pipe fitting under reservoir. Also remove drain plug under oil cooler and discharge receiver.

Do not attempt to remove the filler plug without first releasing all pressure from the receiver-separator system by opening the hand relief valve.

LUBRICATION

The use of the proper lubricating oils and grease is imperative in maintaining efficiency as well as keeping repairs to a minimum.

Normally these units are furnished with an initial supply of compressor lubricating and cooling oil sufficient to allow operation of the unit for approximately 1000 hours; however, if a unit has been completely drained of all compressor lubricating and cooling oil, the oil storage reservoir in the receiver-separator must be refilled with a new oil before operating the unit.

If the unit has been operated for 1000

If any varnish or lacquer deposits are found in the filter, this indicates that the oil is deteriorating and it should be changed immediately.

LUBRICATION

Lubrication of the engine is fully covered in the engine instruction book.

ONCE A DAY

Or every 8 Hours of Operation.

1. Maintain an oil level between half and full on the oil level indicator gauge. Check this each morning before starting.
2. Air Cleaner. Clean out dirt, every eight hours if compressor is operating in an extremely dusty location.

ONCE A WEEK

Or every 50 Hours of Operation.

2. Air Cleaner. If unit is operating in a reasonably clean atmosphere, its cleaning need only be performed once each week instead of every day.
3. The Regulator arm and linkage should receive a few drops of oil every 50 hours. Use engine crankcase oil.
4. Engine Crankcase Oil Filler Hole. See Engine Instruction Book.
5. Engine Oil Level Gauge. Check the oil level and refill if necessary. See Engine Instruction Book.
6. Generator. Oil the generator sparingly using engine crankcase oil.

TWICE A MONTH

Or every 100 Hours of Operation.

7. Compressor Lubricating Oil Filter. Remove shell, and service as per instruction on plate.
8. Engine Oil Filter Clean and renew element. See Engine Instruction Book.

EVERY THREE MONTHS

Or every 500 Hours of Operation.

10. Running Gear Spring Slip End. Apply grease with brush.
11. 12. Compressor Lubrication Oil. Change oil completely every 500 hours of operation, or more often if lacquer formation is found. To drain system remove plug, never remove filler plug when oil separator is under pressure. Do not remove drain plug except when it is necessary to completely change the oil.
13. Remove oil line screen assembly from scavenger line in secondary separator and clean.
14. Clean H. P. cylinder inlet orifice. Can be reached when scavenger line is removed.
15. Use grease gun to lubricate track rod ends, king pins and drawbar pintel, and parking mechanism.
16. Use oil can on hand parking brake linkage, and overrun brake.

TWICE A YEAR

or every 1250 hours of operation.

17. Wheel bearings. Remove wheels, replace any worn parts and repack not over half full with wheel bearing grease.

OTHER SERVICE REQUIREMENTS

18. Radiator.
Drain water in freezing weather if not protected with anti-freeze.
19. Engine Cylinder Block. Drain water in freezing weather if not protected by anti-freeze.
20. Tighten all bolts and nuts periodically, especially wheel nuts (not illustrated).
21. Compressor and engine air inlet pre-cleaner. Keep screens free of leaves etc. at all times. To remove dust, wash screen in fuel or solvent as required.

hours (or when the oil level gauge indicates low when the unit is shut down and is standing approximately level) it should be completely drained of the compressor lubricating and cooling oil. If the unit has been operated under adverse conditions, or under long shutdown periods, an earlier change period may be necessary as oil deteriorates with time as well as with operating conditions. Complete replacement of the old compressor oil with clean new oil every 500 to 1000 hours, depending upon operating conditions, is not only desirable, but is good insurance against the accumulation of dirt, sludge, or oxidized oil products in the compressor lubricating and cooling oil system.

Completely drain the oil storage reservoir in the receiver-separator and the lubricating and cooling system piping. After the unit has been completely drained of all old oil, replace the drain plugs, making sure they are tight. If the oil is drained immediately after the unit has been run for some time, most of the sediment will be in suspension, and therefore, will drain more readily.

WARNING

Do not, under any circumstances, remove any drain plugs, or the oil filler plug from the compressor lubricating and cooling oil system without first making sure the air receiver system has been completely relieved of all air pressure.

Under normal operating conditions, use H. D. detergent type motor oil or DEXRON type automatic transmission fluid.

Conditions of low ambient temperatures, $-10^{\circ}F$ to $40^{\circ}F$ ($-23.3^{\circ}C$ to $-40.0^{\circ}C$), and/or heavy duty cycle in high ambient temperatures, above $85^{\circ}F$ ($29.4^{\circ}C$), require DEXRON type automatic transmission fluid.

Descriptions for the previously mentioned oils are as follows:

H.D. Detergent Type Motor Oil

An oil complying with all requirements of Specification MIL-L-2104B, Grade SAE 10W.

DEXRON Type Automatic Transmission Fluid.

An automatic transmission fluid complying with all the requirements of the General Motors DEXRON Specification. The fluid must have been given a DEXRON approval or qualification number. The oil must also have a maximum pour point of $-45^{\circ}F$ ($-42.8^{\circ}C$) and a minimum flash point of $390^{\circ}F$ ($198.8^{\circ}C$).

CAUTION

Some oil mixtures are incompatible, and result in the formation of varnishes, shellacs, or lacquers which may be insoluble. Such deposits can cause serious trouble including clogging of the filter. Where possible, try to avoid mixing oils of the same type but different brands. A brand change is best made at the time of a complete oil change.

ENGINE LUBRICATING OIL

Refer to engine operator's manual.

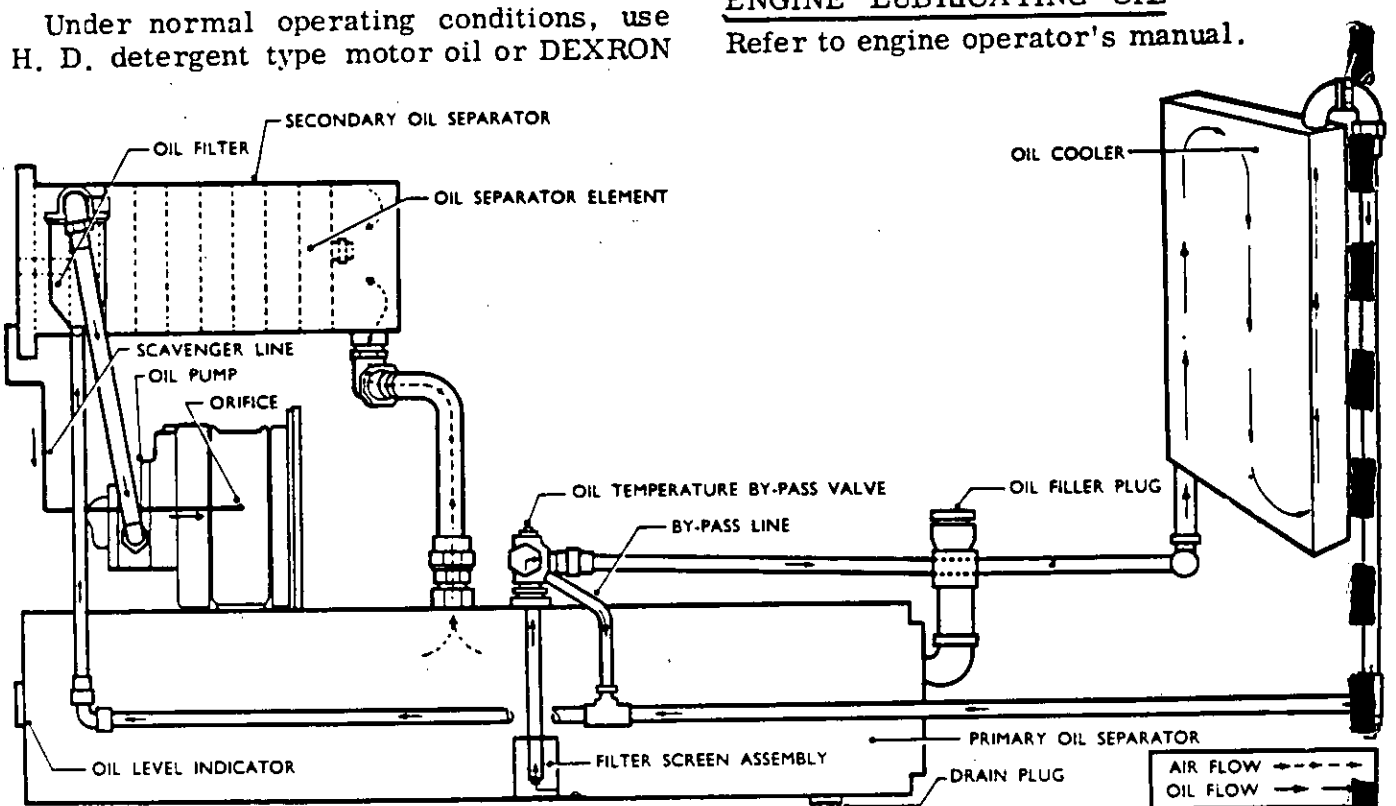


Fig. 4.

REGULATION

100% regulation is provided for by a proportional speed reduction from full capacity down to approximately 60% capacity, and a combination of further speed reduction with volumetric regulation of the compressor for capacities from 60% down to zero capacity.

The total effect is accomplished by the UL-88 "Air Glide" Speed and Pressure Regulator in conjunction with the UL-89 Volumetric Regulator and a pressure-reducing valve.

UL-88 "AIR GLIDE SPEED AND PRESSURE REGULATOR" (Fig. 5)

The UL-88 Speed and Pressure Regulator is an air pressure operated device consisting of a spring-loaded diaphragm on one side of a central body with an operating diaphragm on the opposite side of the same body. The central body forms two chambers "A" and "B", with a needle valve orifice located to pass air from one chamber to the other.

Chamber "A" is directly connected through tubing to the delivery end of the secondary oil separator and thus is subject to final discharge pressure at all times. Chamber "B" is connected through tubing to the operating diaphragm chamber "L" (Fig. 5) of the UL-89 Volumetric Regulator, where a small orifice "K" is provided to bleed off a portion of the regulating air to give range control to the system.

The spring-loaded diaphragm of chamber "A" controls the positioning of the orifice needle, thus controlling the amount of pressure passing from chamber "A" to chamber "B". A spring-loaded lever "C" (Fig. 5) is so arranged against the chamber "B" diaphragm that movement of this diaphragm is multiplied, and conveyed by linkage, to the engine governing system.

The pressure in chamber "B" will always be less than in chamber "A" because of the throttling effect of the needle valve orifice and the fact that, when less than full capacity is being used and the discharge pressure is above the set pressure, chamber "B" pressure is then constantly bleeding off through the small vent "K" in the UL 89 Volumetric Regulator. Thus, when final discharge pressure (and chamber "A" pressure) is sufficient to cause the diaphragm to raise the needle valve off its seat, chamber "B" pressure will gradually raise and overcome tension of spring "D" and move lever "C" to cause speed reduction of the engine and compressor.

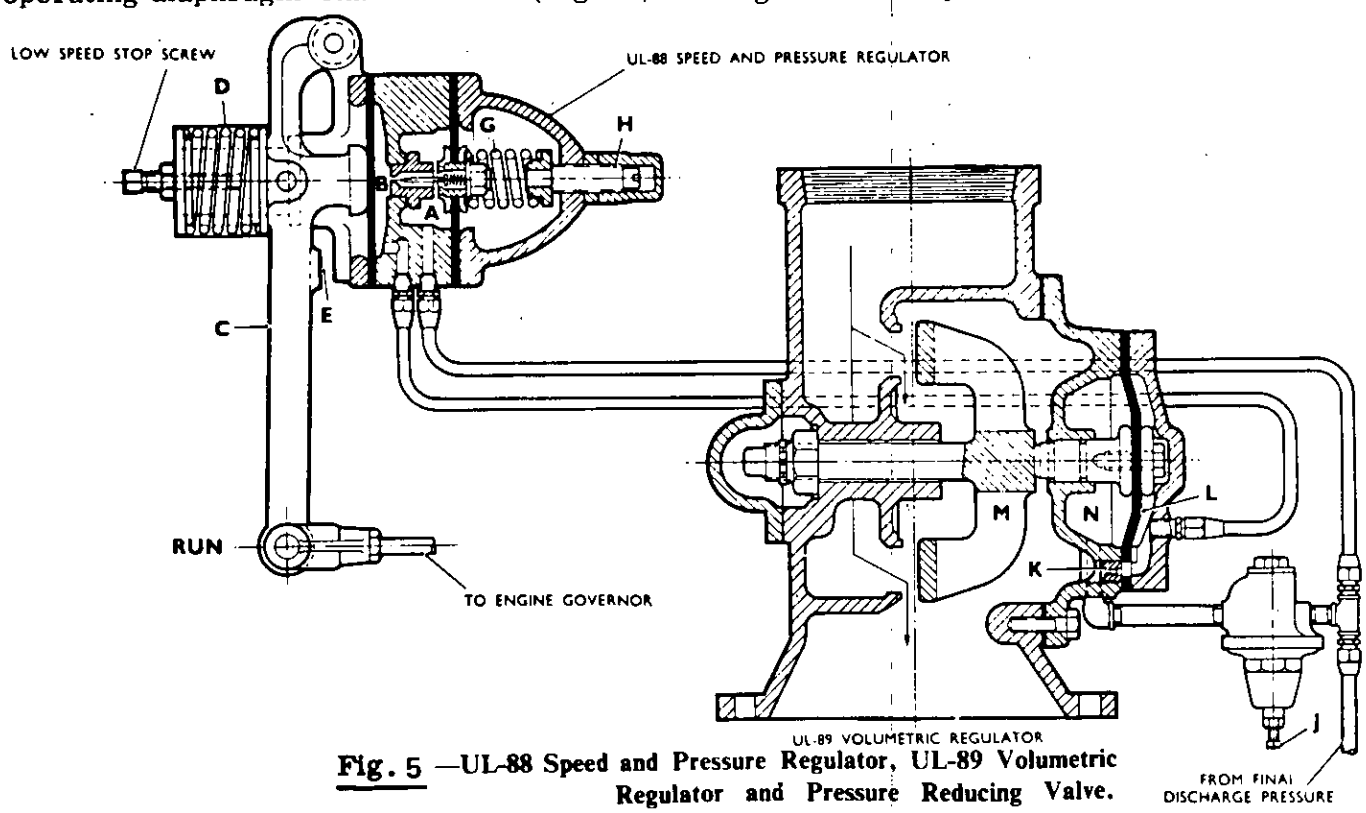


Fig. 5 —UL-88 Speed and Pressure Regulator, UL-89 Volumetric Regulator and Pressure Reducing Valve.

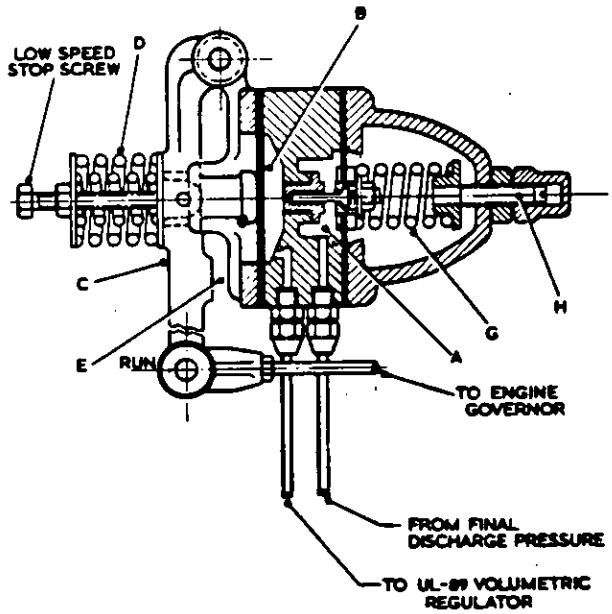


Fig. 6 - UL-88 Speed and Pressure Regulator

Since spring "D" is designed to be stronger than the engine governor spring, lever "C" will be held against the stop "E" as long as there is insufficient pressure in chamber "B" to overcome the difference in balance between spring "D" and the engine governor spring. Therefore, the engine will operate at full rated speed as long as the pressure in chamber "A" is insufficient to raise the needle valve.

The tension of spring "G" on the needle valve diaphragm is so adjusted by screw "H" that no lever movement occurs until final discharge pressure has reached 100 psi (7.03 kg./sq. cm.) (or whatever set pressure between 90 psi (6.33 kg./sq. cm.) and 110 psi (7.73 kg./sq. cm.) is desired in accordance with the tools being operated). Do not attempt to adjust below 90 psi (6.33 kg./sq. cm.) or above 100 psi (7.73 kg./sq. cm.).

If the air demand is less than the full capacity of the compressor, causing the final discharge pressure and chamber "A" pressure to rise above 100 psi (7.03 kg./sq. cm.), then movement of the needle valve will permit sufficient air to pass to chamber "B" to overcome the bleed loss. This will build up enough pressure to move lever "C" in an infinitely variable manner from the full speed just sufficient to meet the reduced air demand. This speed and capacity change, from 100% down to 60% capacity, occurs within an approximate pressure increase of six pounds, from 100 psi (7.03 kg./sq. cm.) to 106 psi (7.45 kg./sq. cm) during which the speed will drop from full speed (1,800 RPM) down to approximately 1,100 RPM.

On further reduction of air demand, the final discharge pressure will rise above 106 psi, lifting the chamber "A" needle valve still more and further increasing the pressure in chamber "B" whereupon two controlling functions occur simultaneously.

1. Since movement of lever "C" continues with further increase of pressure in chamber "B", there will be additional speed reduction, which, carried to its full limit will reduce the speed proportionately from 1,100 RPM approximately down to 800 RPM. The low speed limit is adjusted by the low speed stop screw on the UL-88 Regulator. It limits the movement of the governor lever or the regulator lever in this direction.

2. At the same time, the increase in chamber "B" pressure, which is also effective on the operating diaphragm (Fig. 5) of the UL-89 Volumetric Regulator, is now sufficient to start closing the intake regulator valve "M".

Here again the closing of the valve is in an infinitely variable manner and the resulting capacity of the unit is progressively reduced.

The combined effect of functions (1) and (2) is such that the capacity of the unit is reduced from 60% capacity to zero capacity while the final discharge pressure is rising from 106 psi to 110 psi.

Complete regulation, therefore, has occurred within a pressure range of approximately 10 psi (.703 kg./sq. cm.) and in an infinitely variable or stepless manner. (See Speed and Volumetric Regulation Diagrams, Figs. 8 and 9.

UL-89 VOLUMETRIC REGULATOR (Fig. 5)

Balancing control of the diaphragm is obtained by holding a fixed pressure in chamber "N". This is accomplished by use of an air pressure reducing valve "J" connected to the final discharge pressure at the oil separator

This valve is adjusted to maintain a pressure in chamber "N" with sufficient tension to prevent movement of the regulator diaphragm, and the valve, until the pressure in chambers "B" and "L" has increased to a predetermined value. This allows compressor volumetric regulation to start at approximately 60%. From there on it will become progressively more effective as the air demand decreases and the pressure in chamber "L" increases above the balancing point.

The UL-89 Volumetric Regulator consists of an intake housing equipped with a port and a diaphragm operated valve "M". The diaphragm chamber "L" receives its operating pressure from the UL-88 Speed and Pressure Regulator as explained before.

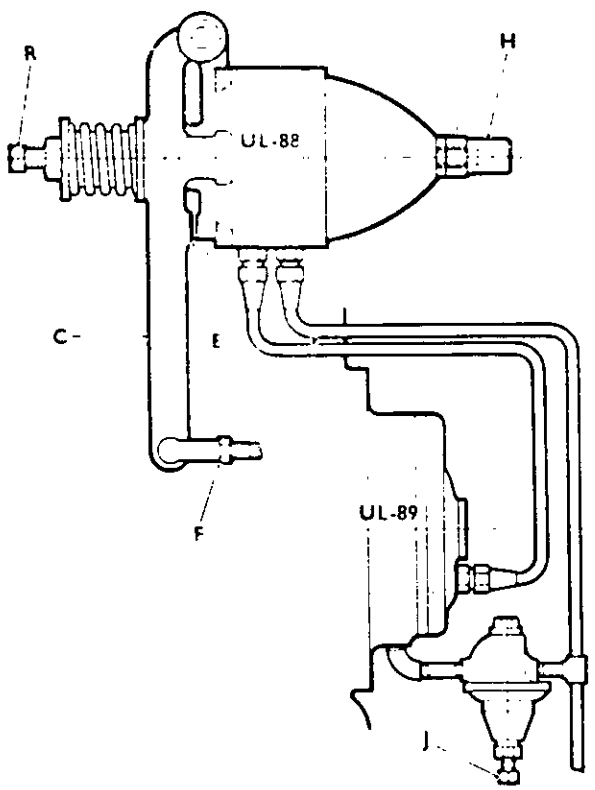
ADJUSTMENTS FOR SPEED AND PRESSURE

MAXIMUM RATED SPEED (Fig. 7)

With final pressure held at 100 psi (7.03 kg./sq. cm.) and governor link rod

ADJUSTING INSTRUCTIONS UL-88 AIR-GLIDE REGULATOR

NORMALLY REGULATION REQUIRES NO SERVICING, BUT IF PROPER ADJUSTMENT IS LOST PROCEED AS FOLLOWS:-



FIRST—With discharge pressure held at 100 lbs., adjust screw "H" so that lever "C" remains against stop "E".

SECOND—Adjust length of link rod at "F" to load engine at 1,800 RPM at 100 psi (7.03 kg./sq. cm.) pressure and lock adjustment "F".

THIRD—Readjust screw "H" so that lever "C" is just starting to leave stop "E". Lock adjustment "H".

FOURTH—Raise discharge pressure slowly and when engine RPM has dropped to approximately 1,100 RPM, turn adjusting screw "J" "in" and note the highest interstage pressure obtainable, then unscrew adjustment "J" until interstage pressure starts to fall. Lock adjustment "J".

FIFTH—Close service valves completely and adjust "LOW SPEED" Stop Screw to hold 800 RPM minimum speed. (Low Speed Stop Screw on UL-88 at R.) (See instruction book for possible variation of setting "H" for other operating pressure ranges to suit certain tools or work.)

Fig 7. - UL88 Air Glide Regulator Instruction Plate.

attached to UL-88 lever arm, adjust screw "H" so that lever "C" remains firmly against stop "E". Then adjust the length of link rod. "F" to maintain full rated speed of 1,800 RPM.

MINIMUM LOW SPEED

Close service valve causing final pressure to increase and complete unloading to occur (zero delivery). Then adjust low speed stop on the UL-88 Regulator to hold engine at 800 RPM.

START OF SPEED REGULATION

Hold final pressure at 100 psi and readjust screw "H" so that lever "C" is just leaving stop "E". (Speed starts to fall off if pressure is raised above 100 psi.).

CHANGING PRESSURE RANGE

By simple readjustment of screw "H" (Fig. 7), the start of regulation can be raised or lowered from the normal 100 psi setting. This enables the operator to select an average operating pressure suitable for the tools being operated, or to compensate for pipe line loss to a certain extent where long lines must be used. Do not attempt to adjust for more than plus or minus 10% from the normal 100 p.s.i. setting.

START OF VOLUMETRIC REGULATION

Close service valve sufficiently to cause speed to reduce to approximately, 1,100 RPM and adjust the pressure reducing valve "J" to hold the interstage pressure at its normal pressure for your altitude. This will be 25 to 30 psi at altitudes up to 2,000 ft. Determine this by observation during the first few days of operation. Check this adjustment by closing the service valve slightly further and noting that the interstage pressure starts to fall indicating that the volumetric regulation is taking effect as well as speed reduction.

UL-89 REGULATOR VALVE TRAVEL ADJUSTMENT

Should it be necessary to dismantle the regulator for any reason, when reassembling the maximum travel of valve "M", Fig. 5 should be held to the following dimensions:-

R250 Desired travel $\frac{1}{4}$" Tol. + 1/32" - 0"

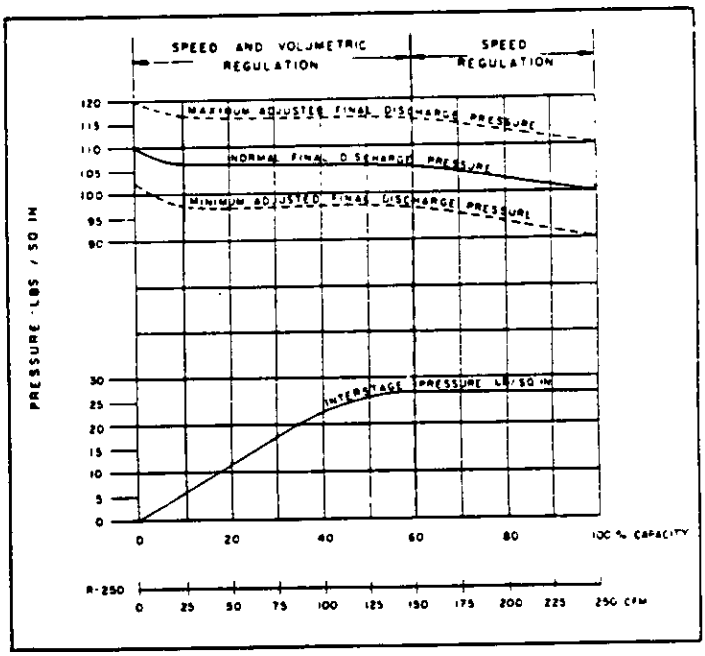


Fig. 8 - Capacity-Pressure Chart.

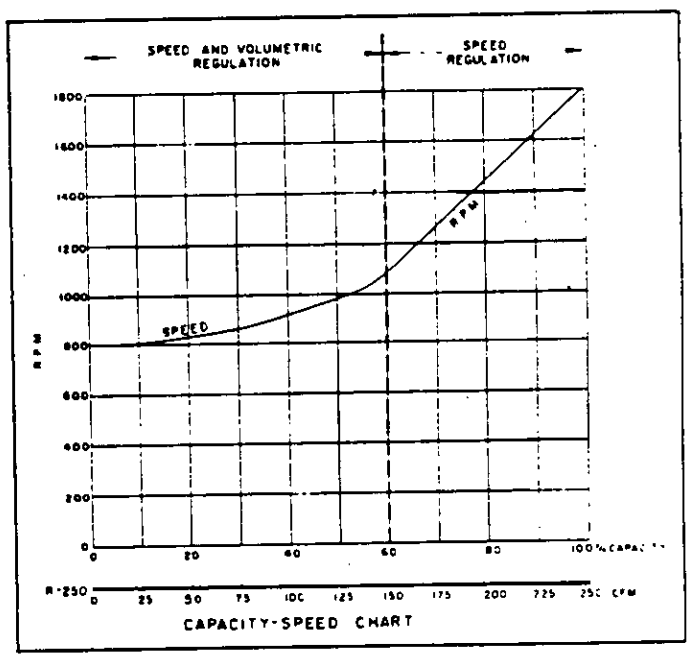


Fig. 9 - Capacity-Speed Chart.

The Gyro-Flo Compressor is manufactured with the finest quality material. Years of research and experience have been combined with quality workmanship and careful inspection to provide many years of dependable trouble-free operation.

The section, which contains an illustrated parts breakdown, has been carefully prepared as an aid in locating those parts which may be required in the maintenance of the unit. All of the compressor parts, listed in the breakdown, are manufactured with the same precision as the original equipment. For the greatest protection, always insist on Ingersoll-Rand Company parts for your compressor.

Ingersoll-Rand Company service facilities and genuine parts are available world-wide. There are Ingersoll-Rand Company Branch Offices, and authorized distributors, conveniently located in the principle cities of the United Kingdom and throughout the free world. Each branch office, or authorized distributor, is thoroughly equipped with a full and adequate supply of genuine Ingersoll-Rand Company parts. For faster and better service, your parts requirements should be ordered from your nearest Ingersoll-Rand Company Branch Office or authorized distributor. A list of branch offices will be found in the rear of this publication. Each branch office is ably equipped to provide technical assistance with prompt, intelligent, and courteous service, either through correspondence or personal contact.

All parts orders pertaining to the diesel engine should be referred to your nearest Engine Manufacturer, authorized distributor. Correspondence concerning the diesel engine should always include the engine serial and model number as well as the type number of the components being ordered.

One complete set of instruction books and parts lists covering both the compressor and engine is shipped with each compressor. Additional copies of the compressor literature may be obtained from your nearest Ingersoll-Rand Company Branch Office or authorized distributor. For additional copies of the engine literature, consult your nearest Engine Manufacturer, authorized distributor.

INTRODUCTION

The illustrated parts breakdown illustrates, lists and describes the various assemblies, sub-assemblies and detail parts which make up the Gyro-Flo Air Compressor. Each group of parts is accompanied by an illustration which shows each individual part as clearly as possible. Reference numbers only are used on each illustration. These numbers correspond to those in the illustration number column in the list of parts which follows each illustration.

Each illustration is followed immediately by a listing of the component parts. These component parts are listed in numerical order according to the number shown in the illustration.

A special feature of this parts listing is a system of identifying those parts which are included with an assembly or with other parts. The included part, or parts, is denoted by being indented from the previous item. When a part is ordered that has an indented item, or items, following the parts, the indented items are always included with that part. Indented items may also be ordered individually.

There are a number of items in the parts listing that are located on the rear or front of the unit, or that are identified as being either right hand or left hand parts. These parts are modified with the necessary descriptive information to properly identify them. In referring to the rear, the front or to either side of the unit, always consider the receiver-separator as the rear of the unit. Standing at the rear of the unit facing the receiver-separator, will determine the right and left sides.

The right hand columns show both the part number, and the quantity of each item. The quantity given is the total quantity required per assembly or per group of parts.

HOW TO ORDER

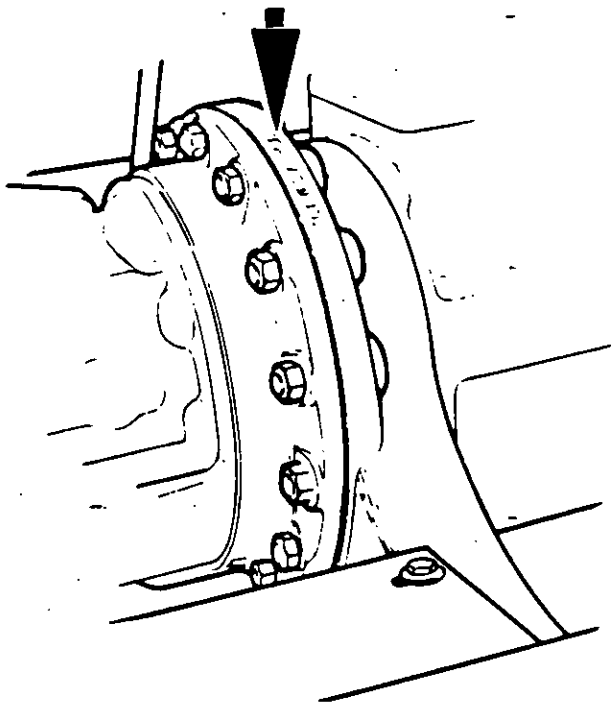
The satisfactory ordering of parts by a purchaser is greatly dependent upon the proper use of all available information. By supplying your nearest Ingersoll-Rand Company Branch Office, or authorized distributor, with complete information, you

will enable them to fill your orders correctly, and avoid any unnecessary delays. In order that all avoidable errors may be eliminated, the following instructions are offered as a guide to the purchaser when ordering replacement parts.

a. Always specify the model number of the unit as shown on the model plate attached to the housing.

b. Always specify the serial number of the unit. This is very important. The serial number of the unit will be found stamped on the instruction plate attached to the housing. The serial number of the air end will also be found stamped in the metal on the top edge of the L.P. Inner Bearing Housing.

Location of Air End Serial Number.



c. Always specify the form number of this publication.

d. Always specify the description of the part, or parts, as well as the part number exactly as it is given in the parts listing. Do not order a part, or parts, using the illustration number.

e. Never use such terms as "Assembly", "Complete", or "Sets", unless these terms appear specifically in the parts listing.

f. Always specify the quantity of parts required.

In the event of parts being returned to your nearest Ingersoll-Rand Company Branch Office, or authorized distributor, for inspection or repair, it is extremely important to include the serial number of the unit from which the parts were removed. This is necessary if the branch or distributor is to take care of your order promptly.

Engine parts must be ordered from your nearest Engine Company, authorized distributor.

SPARE PARTS

Special selections of spare parts have been prepared as insurance against prolonged shutdown periods. These selected parts, called spare parts boxes, are shown itemized in the rear of this section. The contents of each spare parts box are carefully selected so as to provide maximum protection for the unit with a minimum number of parts. Three sizes of spare parts boxes, ranging from small to extra large, are available. The small spare parts box is suitable for minimum domestic use while the large is suitable for average domestic use or for minimum export use. The extra large spare parts box is suitable to maintain up to five units, domestically or up to two units in foreign countries, or in remote locations, where transportation facilities may be slow. Section 7 will give you the correct part numbers and the contents of each box in the event they were not obtained at the time the compressor was purchased.

SPARE PARTS
(not illustrated)

Part No.	Name of part
TR250P150	Air End Complete (Includes:- Low Pressure Cylinder Assembly - Part Number T2R250P185. High Pressure Cylinder Assembly - Part Number T2R250P175. Lubricating Oil Pump Assembly - Part Number T2R250P225.
TR250P750	Complete Set of Gaskets and "O" Rings.

DRIVERS
AND
ASSOCIATED PARTS

INDEX

TABULATED DATA

Ford 2714E 6 Cylinder Diesel Engine	T2T5276
Oil Capacity Engine Crankcase - pints	20 pts. (11.35 litres)
Water Capacity Engine Cooling System - Imperial Gals	6 (27.25 litres)

Unit Weights with above Engine

Weight Dry - pounds - 2 - Wheel	
4 - Wheel	5146 lbs. - 2296 kg.
Weight with Fuel, Oil, Water - pounds - 2 - Wheel	
4 - Wheel	5416 lbs. - 2321 kg.

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	LH Rear Mounting Bracket	T2T5275	1
2	RH Rear Mounting Bracket	T2T5224	1
3	Resilient Mount	T2WPP 209	2
4	Front Mounting Bracket	T2T5225	2
5	Resilient Mounts	T2WPP6038/60	2
6	Setscrews	7/16"UNC x 1" lg	8
7	Spring Washers	7/16" Dia.	8
8	Nuts	3/8" UNF	12
9	Spring Washers	3/8" Dia.	12
10	Setscrews	3/8"UNC x 1" lg	8
11	Flat Washers	3/8" Dia.	8
12	Nuts	9/16" UNF	2
13	Spring Washers	9/16" Dia.	2
14	Exhaust Pipe	T2V8846	1
15	Exhaust Pipe Flange 508F5269B	T2V8847	1
16	Silencer	T2V8848	1
17	Silencer Flexible Mounts	T217/700	2
18	Silencer Mounting Supports	T2K4911	2
19	Tailpipe	T2K4912	1
20	Burgess Clamp	$2\frac{1}{2}$" Dia.	1
21	Water Temperature Gauge Adaptor	T2V7133	1
22	Engine Filter Adaptor	T2T4667	1
23	Engine Intake Elbow	T2K4906	1
24	Burgess Clip	3" Dia.	1
25	Rubber Hose	T2V4704-4	2
26	Jubilee Clips	3"	4
27	Inlet Pipe	T2T5291	1

AIR END
AND
ASSOCIATED PARTS

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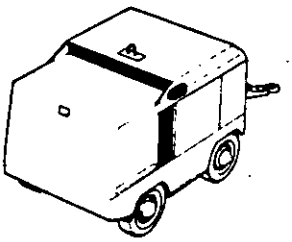
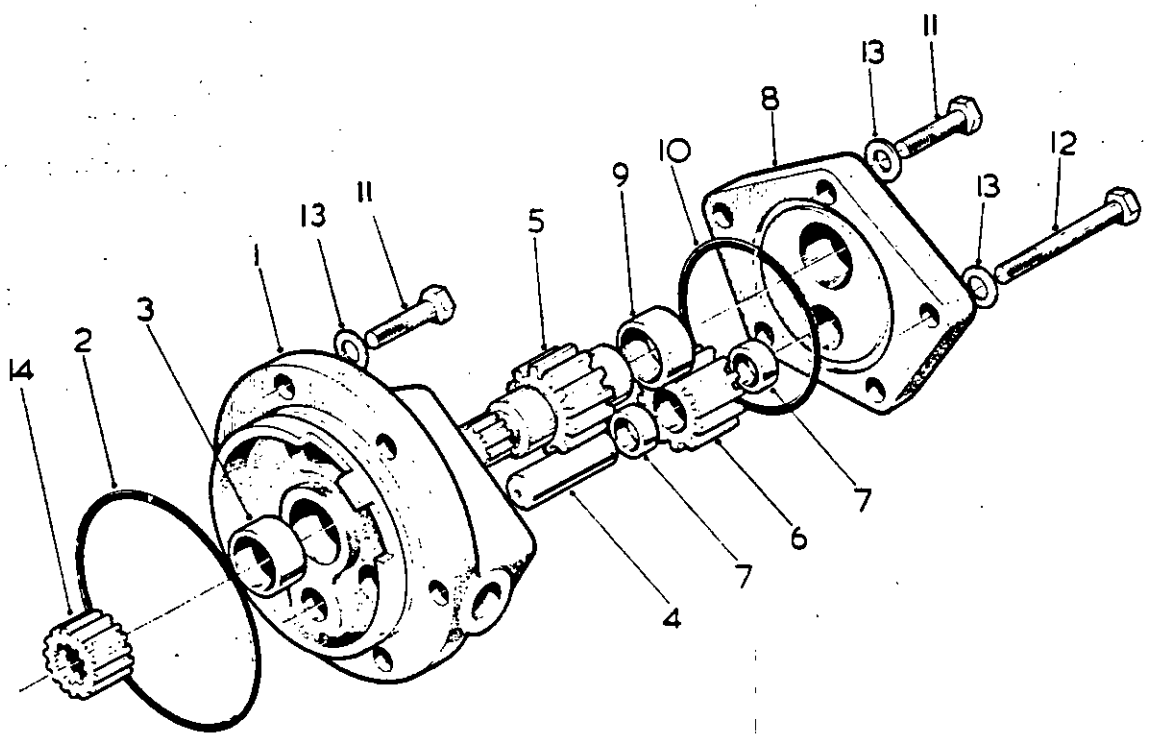
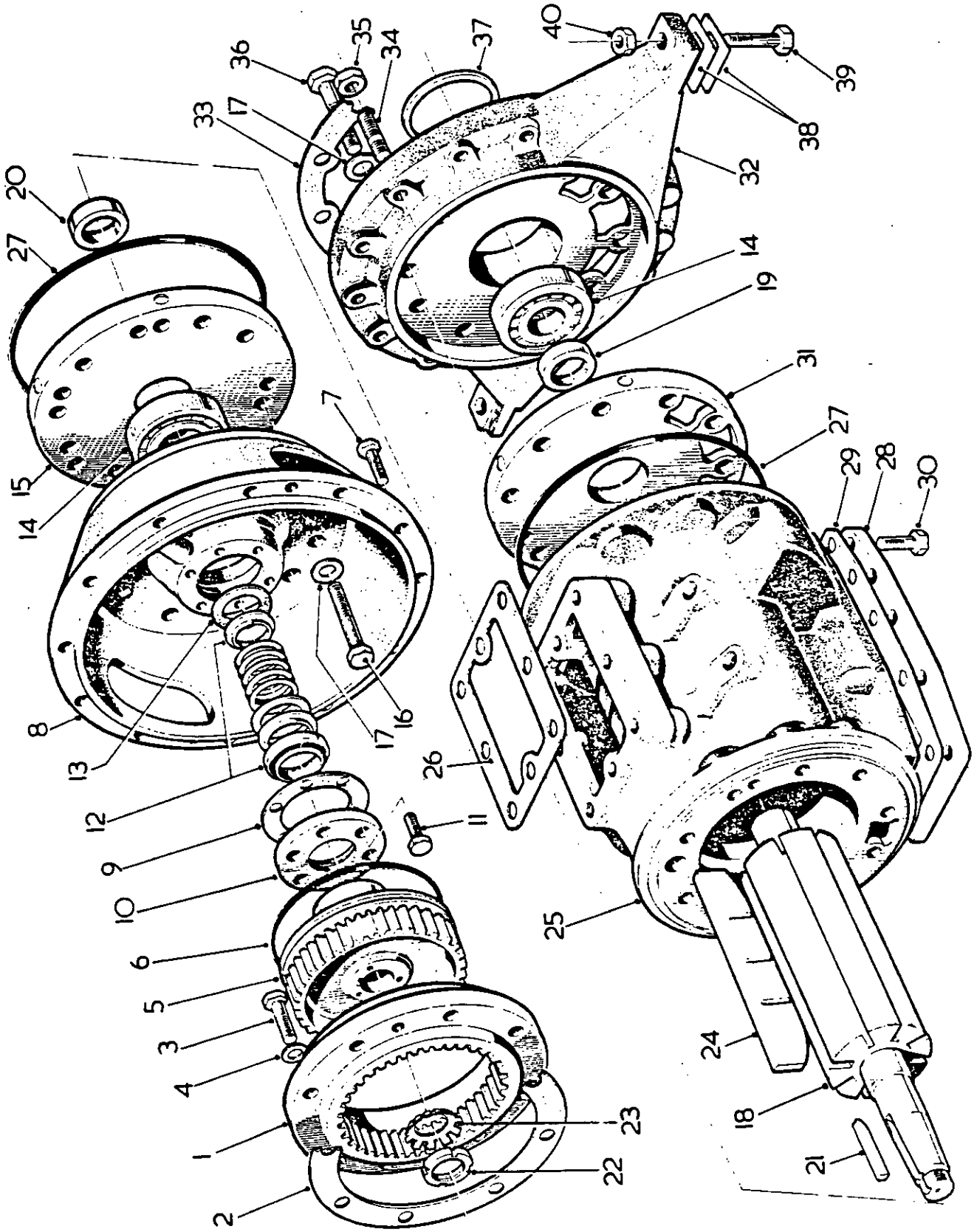




Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	LUBRICATING OIL PUMP ASSEMBLY.....	002H20602	1
1	Lubricating Oil Pump Body	002H18080	1
2	Oil Pump Body to Housing "O" Ring	00X1514T250C	1
3	Lubricating Oil Pump Gear Bushing - Inner.....	002W32624	1
4	Lubricating Oil Pump Driven Gear Shaft.....	002W48476	1
5	Lubricating Oil Pump Drive Gear.....	002H18081	1
6	Lubricating Oil Pump Driven Gear.....	002W48492	1
7	Lubricating Oil Pump Driven Gear Bushing	002W48475	1
8	Lubricating Oil Pump Body Cover	002R26339	1
9	Lubricating Oil Pump Drive Gear Bushing - Outer.	002W32624	1
10	Lubricating Oil Pump Cover to Body "O" Ring	00X1514T243C	1
11	Oil Pump to Bearing Housing Set Screw	007/16"-14 x 3¼	4
12	Oil Pump Cover to Body Set Screw	007/16"-14 x 1¼	3
13	Oil Pump Steel Washer	00X1016T32	7

Always give the serial number of your compressor.

Do not order by reference number - order by part number.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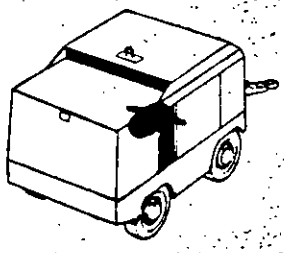
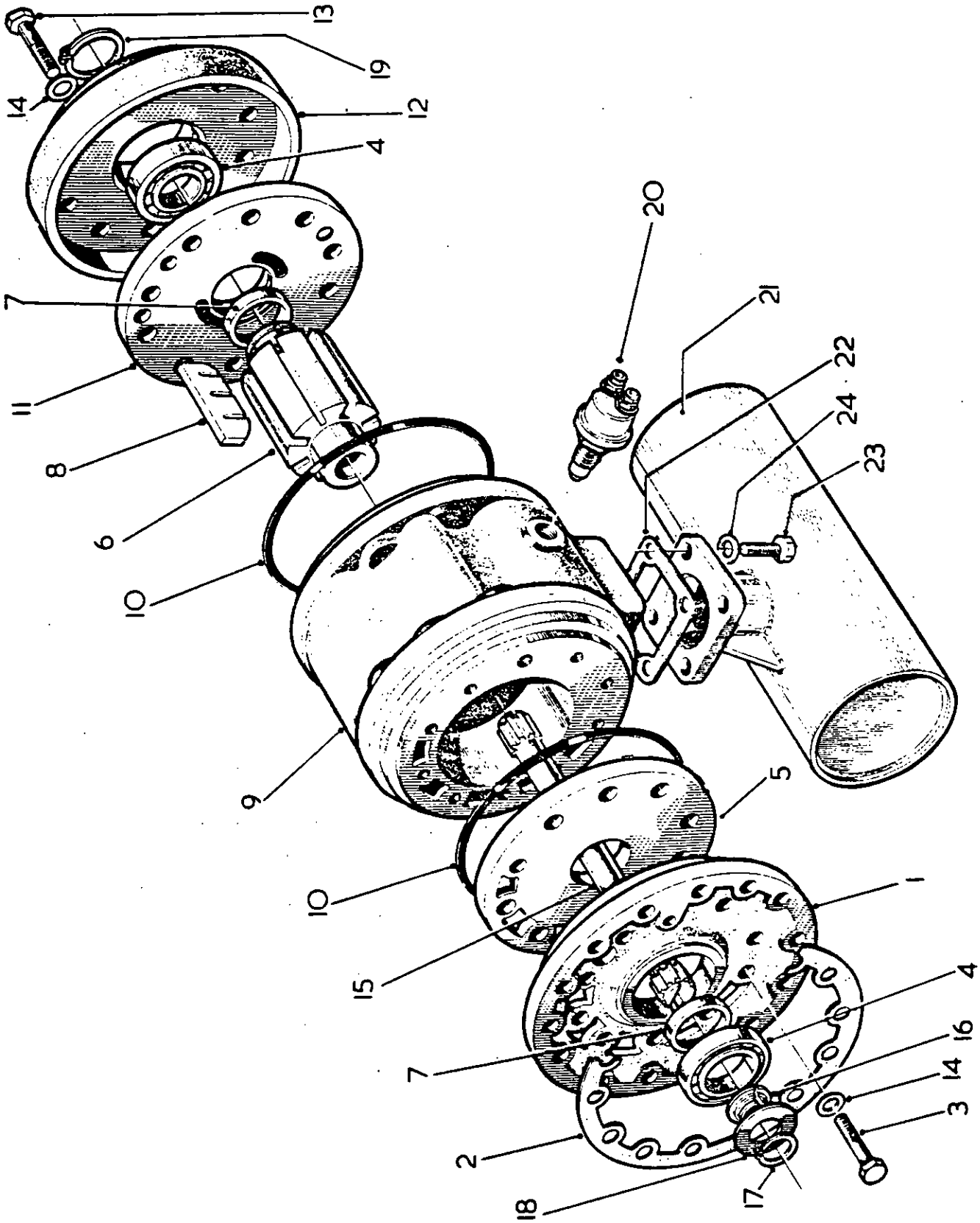


Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	Compressor Coupling Drive Gear	002H13601	1
2	Compressor Coupling Drive Gear Gasket	002W32925	1
3	Drive Gear to Flywheel Set Screw	3/8" - 16 x 1½" ht	8
4	Set Screw Lockwasher.....	3/8"	8
5	Compressor Coupling Driven Gear.....	002H13602	1
6	Compressor Coupling Driven Gear "O" Ring .	00X1514T448C	1
7	Compressor to Engine Set Screw	003/8"- 16 x 1" ht	10
	L. P. CYLINDER COMPLETE		
8	L. P. Outer Housing - Front	002H13573A	1
9	Rotary Shaft Seal Cover Gasket.....	002W26729	1
10	Rotary Shaft Seal Cover	002W26685	1
11	Rotary Shaft Seal Cover Set Screw	003/8"-16 x 1" ht	5
12	Rotary Shaft Seal	002W26684	1
14	Roller Bearing	002W48538	2
15	L. P. Cylinder Outer Plate.....	002R26350P1	1
16	Bearing Housing to L. P. Cylinder Set Screw.	005/8"-11x2¼ ht	8
17	L. P. Outer Bearing Housing Washer.....	00X1016T47	16
18	L. P. ROTOR.....	002H18000TP	1
19	L. P. Rotor Bearing Spacer	002W48400	1
20	L. P. Rotor Bearing Spacer - Engine End....	002W48400	1
21	Compressor Coupling Drive Gear Key.....	00X1495T3	1
22	Compressor Coupling Locknut.....	002W26503	1
23	Compressor Coupling Lockwasher	002W26506	1
24	L. P. Rotor Vane Set (consists of 8).....	00R250P110	1
25	L. P. Cylinder	002F11933	1
26	UL-89 Regulator Body Gasket	2W32710	1
27	Bearing Housing to Cylinder "O" Ring.....	00X1514T450C	2
28	L. P. Cylinder Bottom Cover	002R26301	1
29	L. P. Cylinder Bottom Cover Gasket	002R26302	1
30	L. P. Cylinder Bottom Cover Set Screw	00½"-13 x 1¼ ht	8
31	L. P. Cylinder Inner Plate.....	002R26349P1	1
32	L. P. Inner Bearing Housing.....	002F12129	1
34	L. P. Inner Bearing Housing Stud	00T2V4586-4	12
35	L. P. Inner Bearing Housing Stud Nut	005/8 - 11	12
36	Housing to L. P. Cylinder Set Screw.....	005/8"-11 x 2¼ ht	8
37	Housing Spacer - Outer Ring	002W32685	1
*	Resilient Mount	T2WPP210	2
*	Nuts & Spring Washers	3/8" UNF	4
*	Nut & Washer.....	9/16" UNF	2
38	L. P. Inner Bearing Housing Shim-Set(as required)	00X1406T5	1

Always give the serial number of your compressor.

Do not order by illustration number - order by part number.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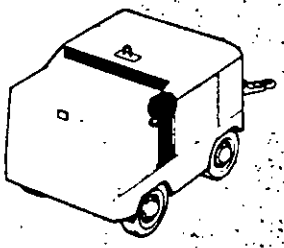
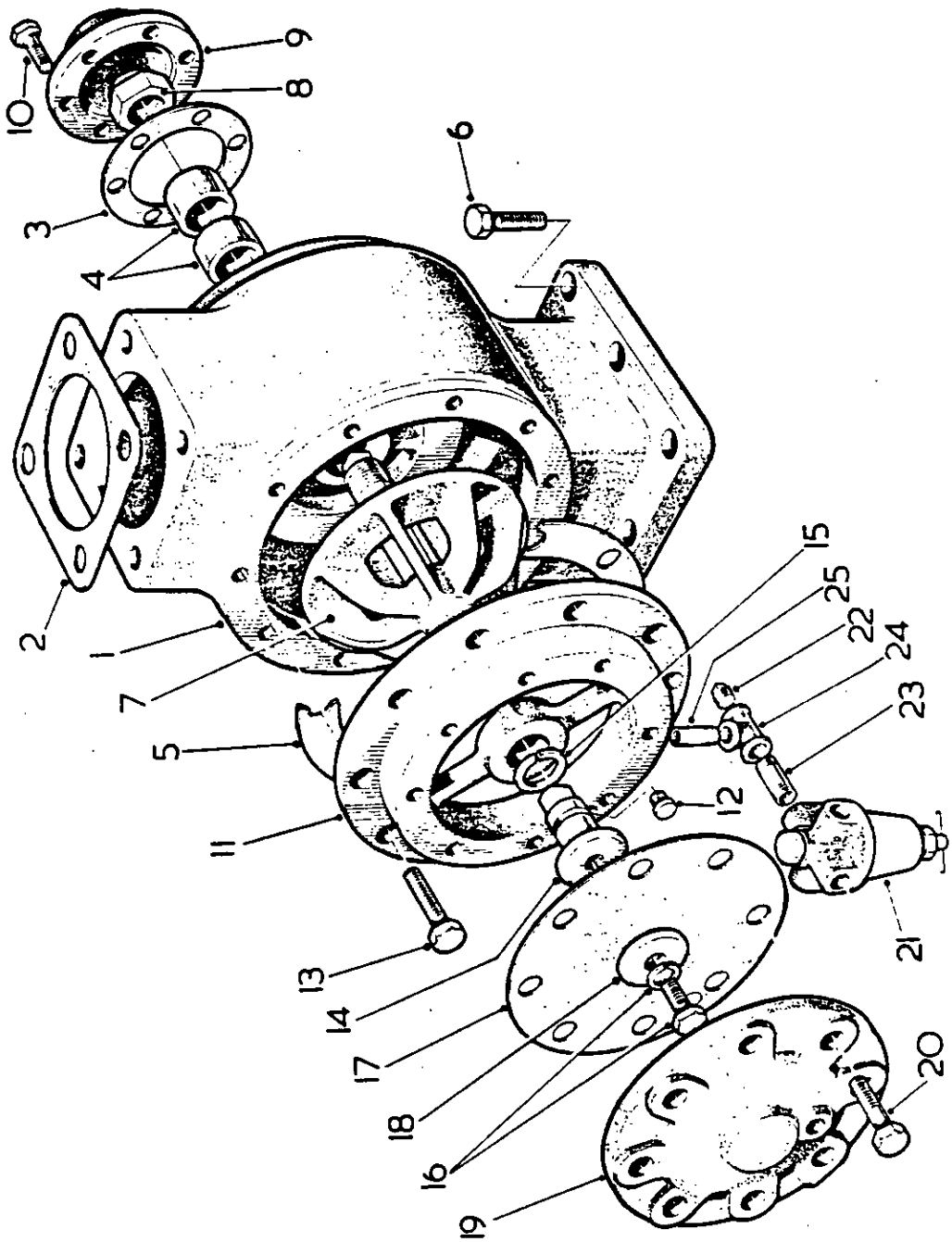


Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	H. P. CYLINDER COMPLETE	002H18120	1
1	H. P. Inner Cylinder Housing	002H18078	1
2	Inner Bearing Housing Gasket	002R26307	1
3	Bearing Housing to H. P. Cylinder Set Screw	005/8"-11 x 2¼ ht	8
4	Roller Bearing	002W48538	2
5	H. P. Cylinder Inner Plate	002R26296P1	1
6	H. P. Rotor	002H17999TP	1
7	H. P. Rotor Bearing Spacer	002W48400	2
8	H. P. Rotor Vane Set (consists of 8)	00R250P115	1
9	H. P. Cylinder	002F11943	1
10	Bearing Housing to H. P. Cylinder "O" Ring	00X1514T450C	2
11	H. P. Cylinder Outer Plate	002R26295P1	1
12	H. P. Outer Bearing Housing	002H18079	1
13	Housing to H. P. Cylinder Set Screw	005/8"-11 x 2¼ ht	8
14	Bearing Housing Steel Washer	00X1016T47	16
15	H. P. Rotor Drive Shaft	002R26259	1
16	H. P. Inner Bearing Support	002W32664	1
17	Inner Bearing Spacer Snap Ring - Centre	002W32684	1
18	H. P. Inner Bearing Spacer Inner Ring	002W32665	1
19	H. P. Outer Bearing Snap Ring - Rear	00X1318T19	1
20	H. P. Temperature Switch	2R17460	1
21	H. P. Discharge Pipe Receiver	T2N1093	1
22	H. P. Discharge Pipe Receiver Gasket	2W48477	1
23	H. P. Discharge Pipe Receiver Set Screw	7/16"-14 x 1" ht	4
24	H. P. Discharge Pipe Receiver Lockwasher	7/16"	4
*	Set Screw	5/8"UNC x 3" ht	2

Always give the serial number of your compressor.

Do not order by illustration number - order by part number.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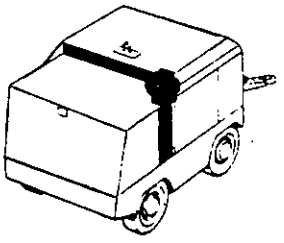

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	INLET UNLOADER ASSEMBLY.....	2F7165	1
1	UL89 Volumetric Regulator Body.....	2F122TP	1
2	Compressor Air Inlet Elbow Gasket.....	2W32766	1
3	UL89 Volumetric Regulator Valve Nut Cover Gasket	2W30340	1
4	UL89 Volumetric Regulator Valve Bushing.....	2W35030	2
5	UL89 Volumetric Regulator Diaphragm Body Gasket	2W32705	1
6	UL89 Volumetric Regulator Body Set Screw	5/8" - 11 x 1½"ht	8
7	UL89 Volumetric Regulator Valve.....	2H11590	1
8	UL89 Volumetric Regulator Valve Locknut.....	7/8" - 9	1
9	UL89 Volumetric Regulator Valve Nut Cover.....	2W30327	1
10	Valve Nut Cover Set Screw.....	3/8" - 16 x 1" ht	6
11	UL89 Volumetric Regulator Diaphragm Body.....	2H11589	1
12	Diaphragm Body Orifice Plug	X1080T38	1
13	Diaphragm Body Set Screw.....	½" - 13 x 1¼" ht	8
14	UL89 Volumetric Regulator Diaphragm Piston	2W32707	1
15	UL89 Volumetric Regulator Diaphragm Piston Ring	X1440T6A	2
16	UL89 Retaining Plate Set Screw and Lockwasher...	7/16" - 14 x 1¼"ht	1
17	UL89 Volumetric Regulator Diaphragm	2W32706	1
18	UL89 Volumetric Regulator Diaphragm Retaining Plate	2W32708	1
19	UL89 Volumetric Regulator Diaphragm Cover.....	2R18043	1
20	Diaphragm Cover Set Screw	½" - 13 x 1½ ht	6
21	UL89 Volumetric Regulator Reducing & Relief Valve	2W48571	1
22	Pipe Plug	¼ BSPT	1
23	Reducing Valve Space Nipple.....	¼"BSPT x 4½"	1
24	Pipe Tee	¼"BSPT	1
25	Hex. Nipple Tee to Regulator	¼" BSPT	1

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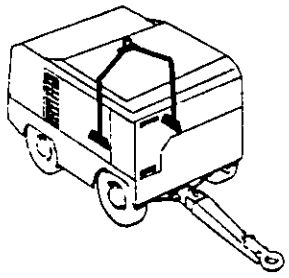
Item No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	Cylinder End Plate Discharge Hole Plug.....	2W57579	4
2	Pipe Plug (UL 89 Body)	½" BSPT	2

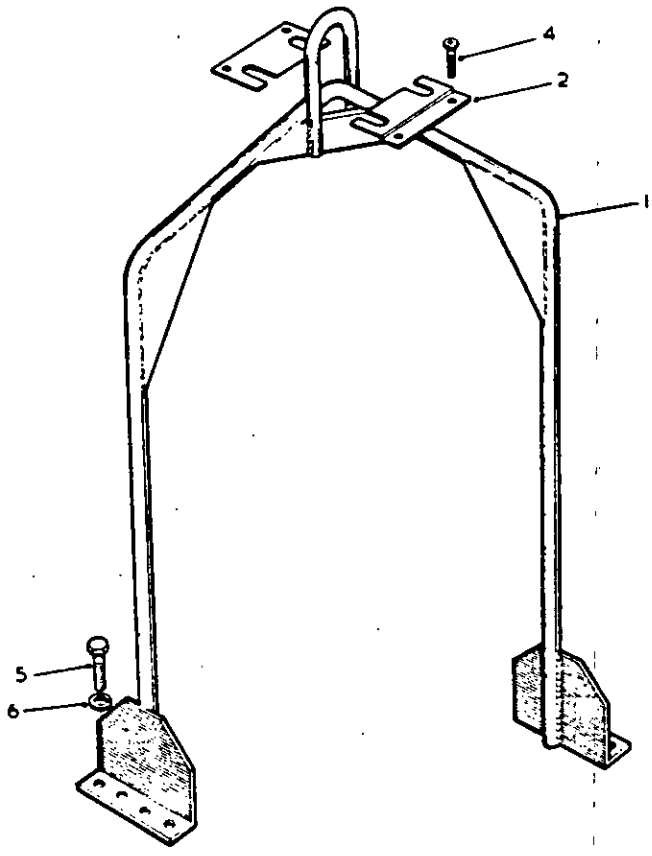
Always give the serial number of your compressor.

Do not order by illustration number - order by part number.

RUNNING GEAR FRAME HOUSING AND ASSOCIATED PARTS

INDEX





Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	Lifting Bail Assembly	T2K4843	1
2	Lifting Bail Hole Cover	T2T5277	1
4	Self Tapping Screws	No. 14	4
5	Set Screws	5/8"UNC x 11 x 2"ht	8
6	Lockwashers	5/8"	8

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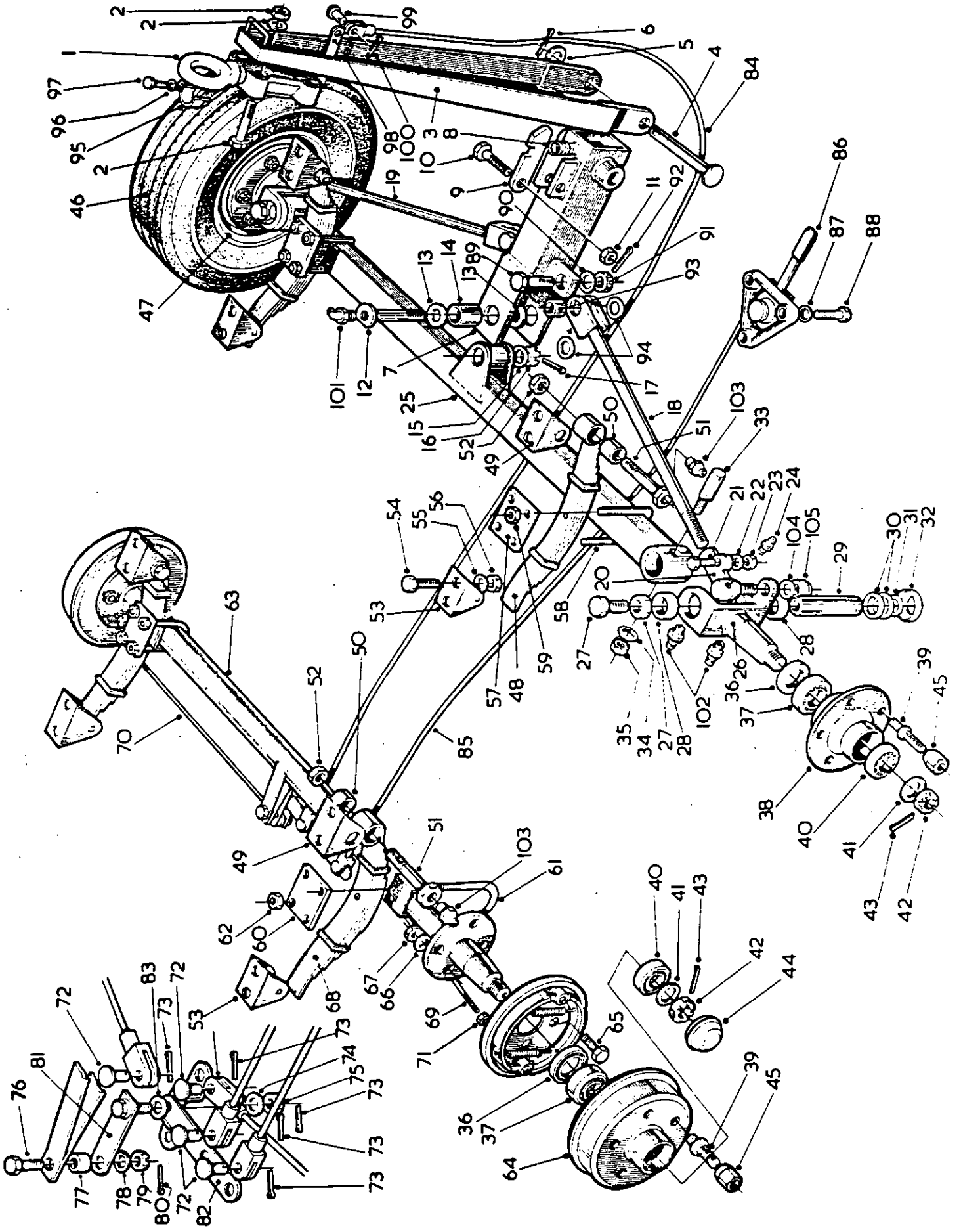
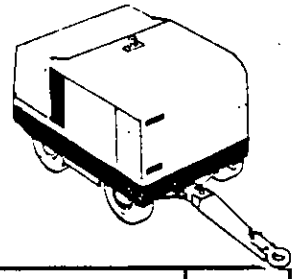
GYRO – FLO DR – 250-S
RUNNING GEAR





Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
*	Truck Frame	T2N2014	1
	Running Gear Complete	T2T5274	1
1	Towing Box	T2T5274/ 1	1
2	Towing Box,Bolt & Nut Washer	T2T5274/ 2	4
3	Draw Bar	T2T5274/ 3	1
4	Draw Bar Pin	T2T5274/ 4	1
5	Draw Bar Pin Washer	T2T5274/ 5	1
6	Draw Bar Pin Split Pin	T2T5274/ 6	1
7	Pintel	T2T5274/ 7	1
8	Latch Spring	T2T5274/ 8	1
9	Latch	T2T5274/ 9	1
10	Set Screw	T2T5274/10	1
11	Nut	T2T5274/11	2
12	Pivot Pin	T2T5274/12	1
13	Washer	T2T5274/13	2
14	Pivot Pin Bush	T2T5274/14	1
15	Washer	T2T5274/15	1
16	Nut	T2T5274/16	1
17	Split Pin	T2T5274/17	1
18	Track Rod - RH	T2T5274/18	1
19	Track Rod - LH	T2T5274/19	1
20	Track Rod End - RH	T2T5274/20	1
*	Track Rod End - LH	T2T5274/21	1
21	Set Screw	T2T5274/22	2
22	Washer	T2T5274/23	2
23	Nut	T2T5274/24	2
24	Grease Nipple	T2T5274/25	8
25	Front Axle	T2T5274/26	1
26	Stub Pivot - RH	T2T5274/27	1
*	Stub Pivot - LH	T2T5274/28	1
27	Set Screw and Hex. Nut	T2T5274/29	2
28	King Pin Bushing	T2T5274/30	4
29	King Pin	T2T5274/31	2
30	Thrust Washer	T2T5274/32	4
31	Washer	T2T5274/33	2
32	Thrust Washer Retainer	T2T5274/34	2
33	Cotter Pin	T2T5274/35	2
34	Washer	T2T5274/36	1

* Not illustrated.

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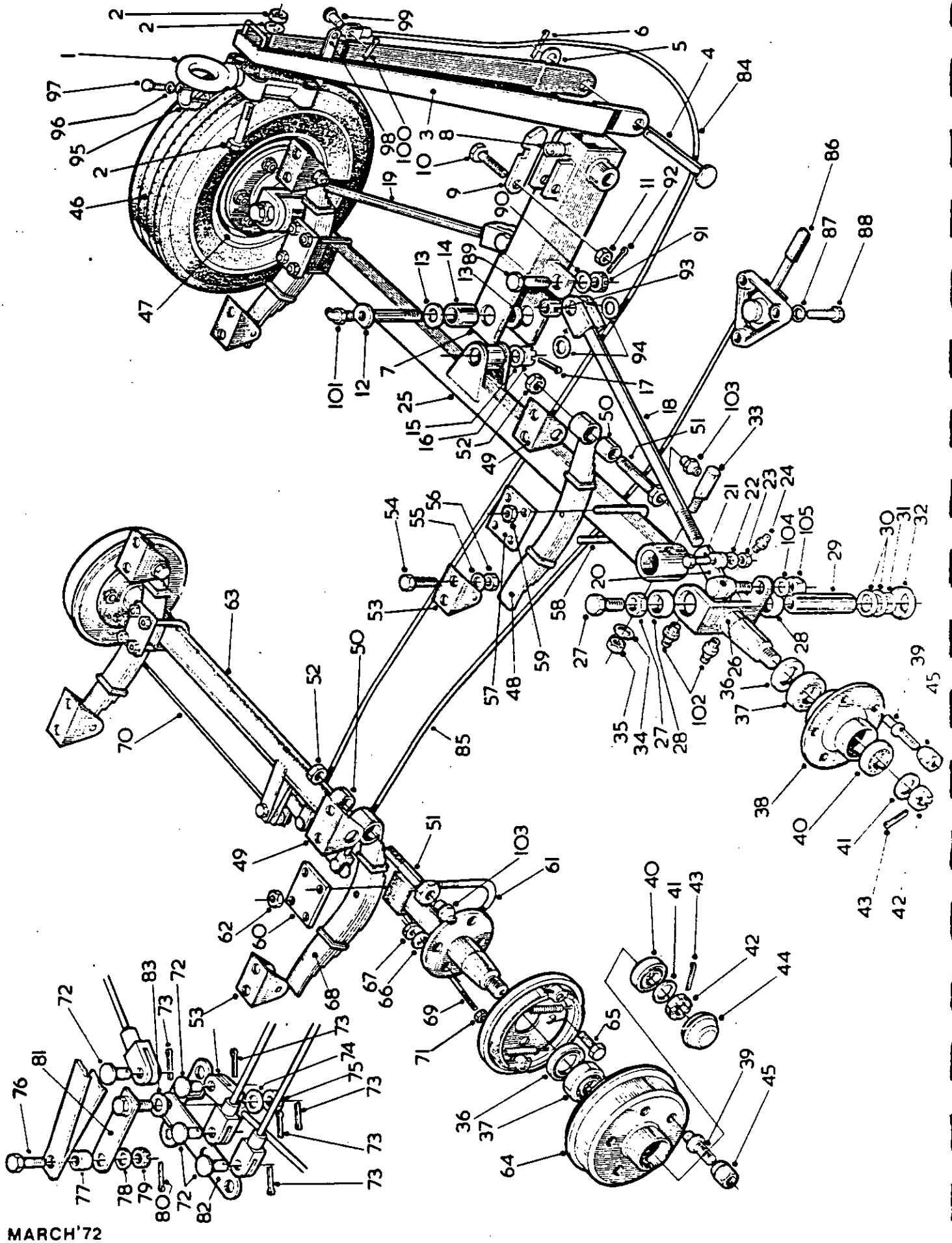

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
35	Hex. Nut	T2T5274/37	2
36	Oil Seal	T2T5274/38	4
37	Bearing - Inner	T2T5274/39	4
38	Hub	T2T5274/40	4
39	Stud - LHT	T2T5274/41	10
*	Stud - RHT	T2T5274/42	10
40	Bearing - Outer	T2T5274/43	4
41	"D" Washer	T2T5274/44	4
42	Axle End Nut	T2T5274/45	4
43	Split Pin	T2T5274/46	4
44	Hub Cap	T2T5274/47	4
45	Wheel Nut - LHT	T2T5274/48	10
*	Wheel Nut - RHT	T2T5274/49	10
46	Tyre	T2T5274/50	4
47	Wheel	T2T5274/51	4
48	Front Spring	T2T5274/52	2
49	Fixed End Shackle	T2T5274/53	4
50	Shackle Bush	T2T5274/54	4
51	Fixed End Shackle Bolt	T2T5274/55	4
52	Hex. Nut	T2T5274/56	4
53	Moving End Shackle	T2T5274/57	4
54	Set Screw	T2T5274/58	16
55	Washer	T2T5274/59	16
56	Hex. Nut	T2T5274/60	16
57	Front Spring Bolt Plate	T2T5274/61	2
58	Bolt	T2T5274/62	4
59	Hex. Nut	T2T5274/63	4
60	Rear Spring Bolt Plate	T2T5274/64	2
61	Bolt	T2T5274/65	4
62	Nut	T2T5274/66	4
63	Rear Axle	T2T5274/67	1
64	Brake Drum	T2T5274/68	2
65	Set Screw	T2T5274/69	8
66	Washer	T2T5274/70	8
67	Hex. Nut	T2T5274/71	8
68	Rear Spring	T2T5274/72	2
69	Brake Rod - N/S	T2T5274/73	1
70	Brake Rod - O/S	T2T5274/74	1

* Not illustrated.

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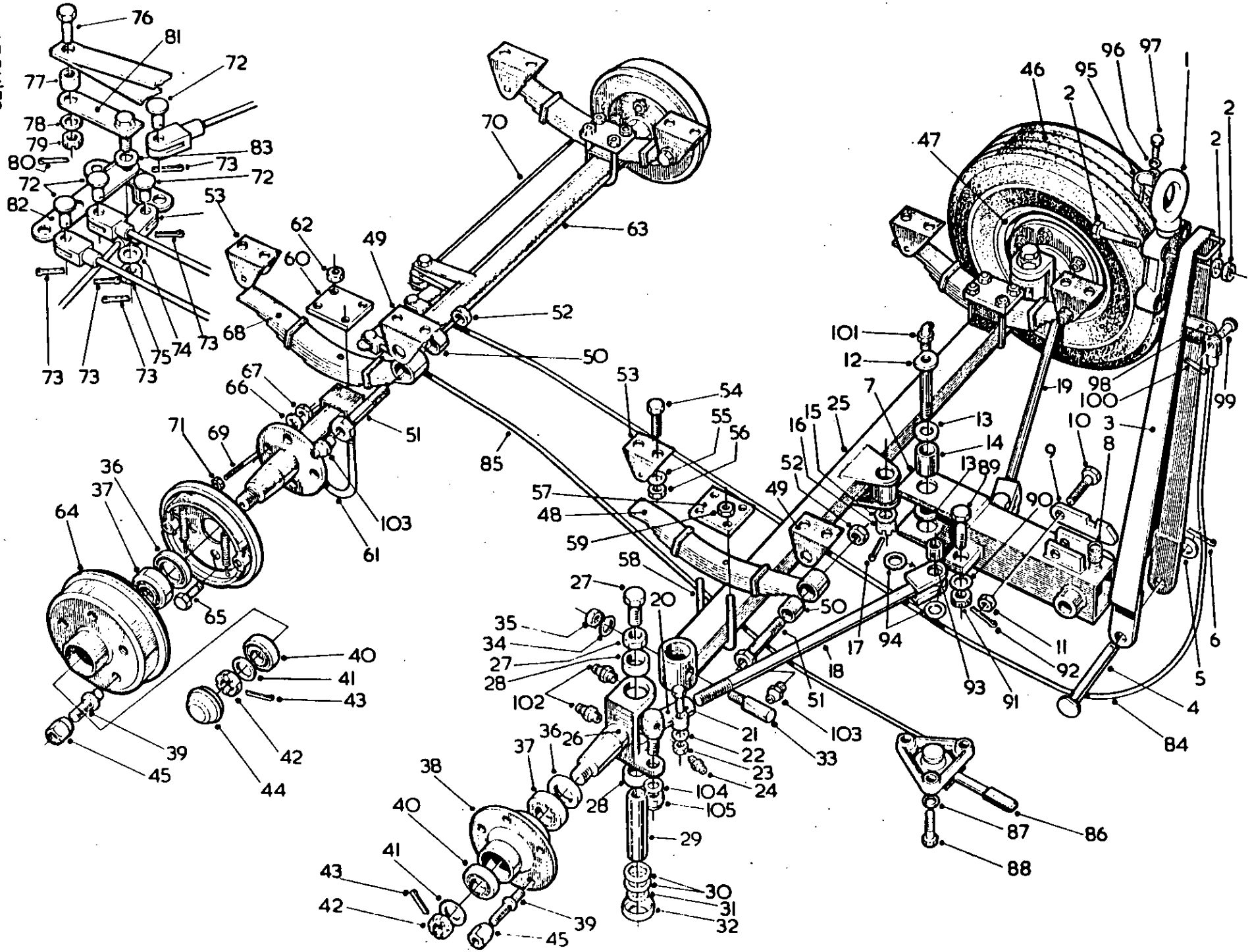
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Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
71	Brake Rod Lock Nut	T2T5274/75	2
72	Swivel Pin	T2T5274/76	4
73	Split Pin	T2T5274/77	4
74	Washer	T2T5274/78	2
75	Hex. Nut	T2T5274/79	1
76	Set Screw	T2T5274/80	1
77	Spacer	T2T5274/81	1
78	Washer	T2T5274/82	1
79	Hex. Nut	T2T5274/83	1
80	Split Pin	T2T5274/84	1
81	Plate	T2T5274/85	1
82	Lever	T2T5274/86	1
83	Washer	T2T5274/87	1
84	Brake Cable	T2T5274/88	1
85	Hand Brake Cable	T2T5274/89	1
86	Handle	T2T5274/90	1
87	Lockwasher	T2T5274/91	1
88	Set Screw	T2T5274/92	1
89	Set Screw	T2T5274/93	1
90	Washer	T2T5274/94	1
91	Castle Nut	T2T5274/95	1
92	Split Pin	T2T5274/96	1
93	Bush	T2T5274/97	1
94	Thrust Washers	T2T5274/98	2
95	Latch Plate (Tow Box)	T2T5274/99	1
96	Washer	T2T5274/100	1
97	Set Screw	T2T5274/101	1
98	Tow Box Overun Brake Lever	T2T5274/102	1
99	Clevis	T2T5274/103	1
100	Split Pin	T2T5274/104	1
101	Greaser (Angled)	T2T5274/105	1
102	Greasers (Stub Pivot)	T2T5274/106	2
103	Greasers (Fixed Shackle)	T2T5274/107	1
104	Washer	T2T5274/108	1
105	Nut	T2T5274/109	1

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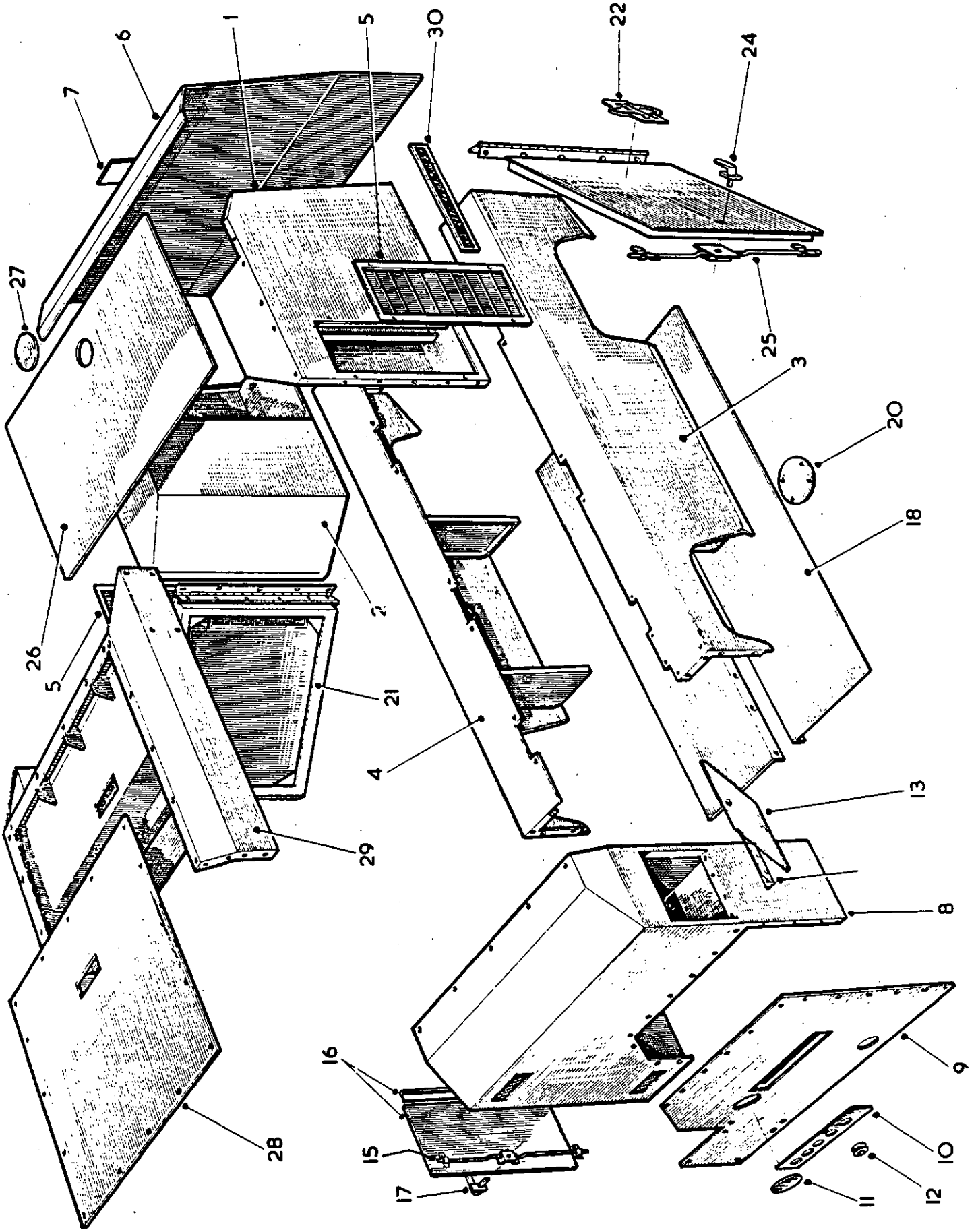
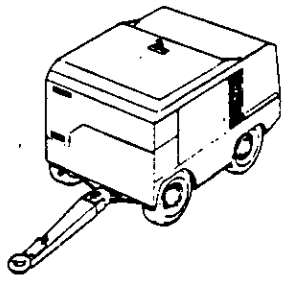
GYRO – FLO DR – 250-S
4 – WHEEL HOUSING





Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	HOUSING (4 WHEEL)		
1	Air Inlet Duct - RH	T2K4805	1
*	Setscrew	3/8"UNC x $\frac{3}{4}$"	7
*	Spring Washer	3/8"	7
2	Air Inlet Duct - LH	T2K4847	1
*	Setscrew	3/8" UNC x $\frac{3}{4}$"	7
*	Spring Washer	3/8"	7
3	Fender - RH	T2K4845	1
*	Setscrew	3/8"UNC x $\frac{3}{4}$"	8
*	Spring Washer	3/8"	8
4	Fender - LH	T2K4846	1
*	Setscrew	3/8"UNC x $\frac{3}{4}$"	8
*	Spring Washer	3/8"	8
5	Air Inlet Grill	T2T5217	2
*	Setscrew	5/16"UNC x 5/8"	8
*	Flat Washer	5/16"	8
6	Front Panel	92284173	1
*	Setscrew	3/8"UNC x $\frac{3}{4}$"	10
*	Spring Washer	3/8"	10
7	I-R Monogram	20A16A2D	1
8	Rear Panel Ass	T2N2027	1
*	Setscrew	5/16"UNC x 5/8"	18
*	Spring Washer	5/16"	18
9	Rear Panel	T2K4848	1
*	Setscrew	5/16"UNC x 5/8"	16
*	Spring Washer	5/16"	16
10	Discharge Pipe Cover	T2T5289	1
*	Self Tapping Screw	No. 14 x $\frac{1}{2}$"	8
11	Discharge Elbow Cover Plate	T2V8925	1
*	Setscrew	$\frac{1}{4}$"UNC x $\frac{1}{2}$"	3
12	Grommet	T2 3716 - 125	5
13	Instrument Panel Access Door with Hinge	T2K4903	1

* Not illustrated.

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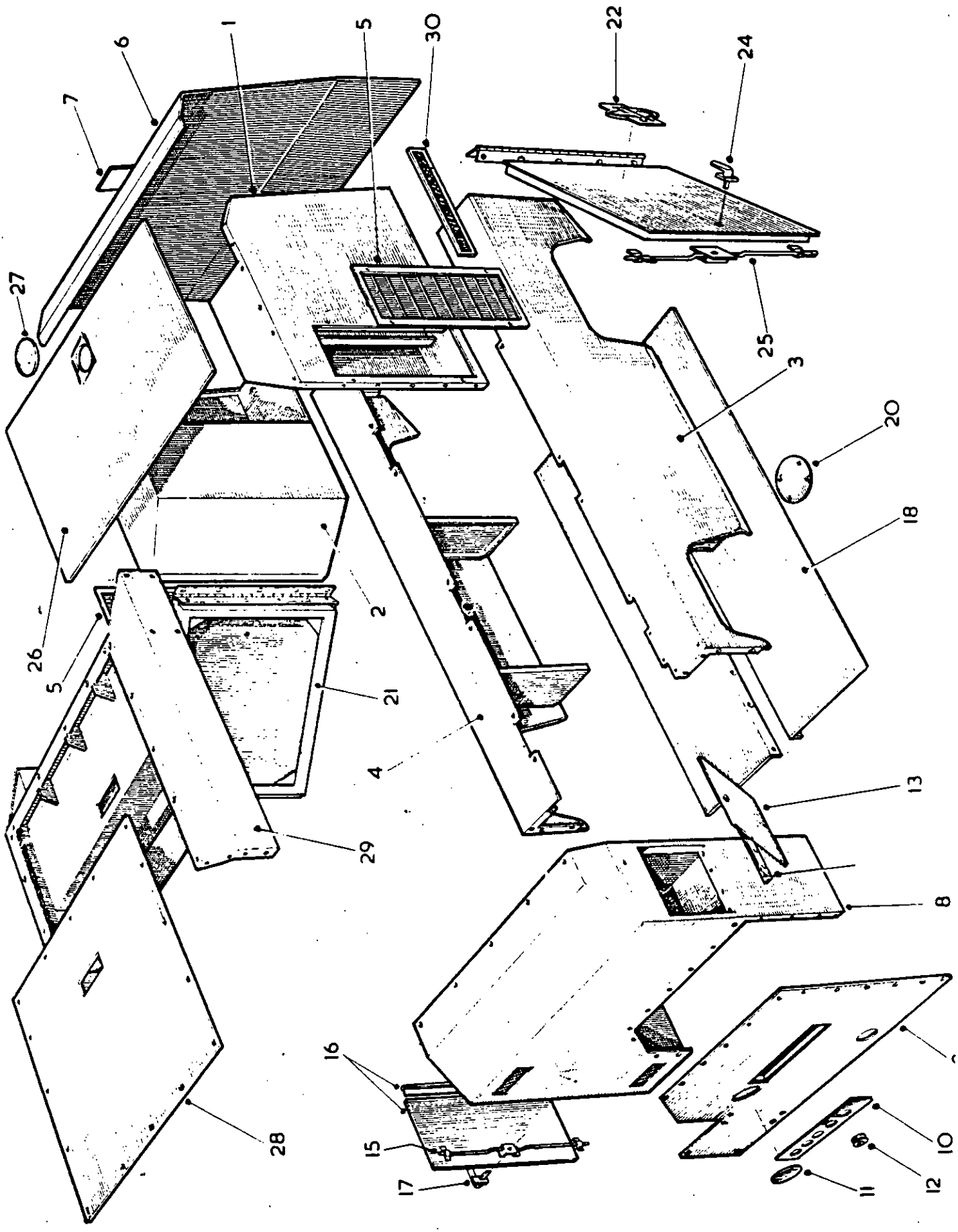
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Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
15	2 Way Rod Latch	T2V8856	1
16	Filter Access Door with Hinge	T2K4800	1
*	Setscrew	$\frac{1}{4}$" UNC x $\frac{1}{2}$"	5
*	Spring Washer	$\frac{1}{4}$"	5
17	Handle	T2V8858	1
18	Underside Baffle Plate	T2N2018	1
*	Setscrew	$\frac{1}{4}$" UNC x $\frac{1}{2}$"	16
*	Spring Washer	$\frac{1}{4}$"	16
*	Setscrew	5/16"UNC x 5/8"	18
*	Spring Washer	5/16"	18
20	Underside Baffle Plate Cover	T2V8791	1
*	Setscrew	$\frac{1}{4}$" UNC x $\frac{3}{4}$"	4
*	Spring Washer	$\frac{1}{4}$"	4
21	Main Door with Hinge	T2K4812	2
*	Setscrew	5/16"UNC x 5/8"	10
*	Spring Washer	5/16"	10
*	2 Way Rod Latch 3/18793	T2V8856	1
24	Handle	T2V8858	2
25	2 Way Rod Latch 3/18624	T2V8857	1
26	Front Cover	T5272	1
*	Setscrew	5/16"UNC x 5/8"	24
*	Spring Washer	5/16"	24
27	Radiator Filler Sealing Plate	T2V8992	1
*	Self Tapping Screw	No. 14	4
28	Top Cover	T2K4809	1
*	Setscrew	5/16"UNC x 5/8"	18
*	Washer	5/16"	18
29	Top Assembly	T2N2026	1
*	Setscrew	5/16"UNC x 5/8"	14
*	Washer	5/16"	14

* Not illustrated.

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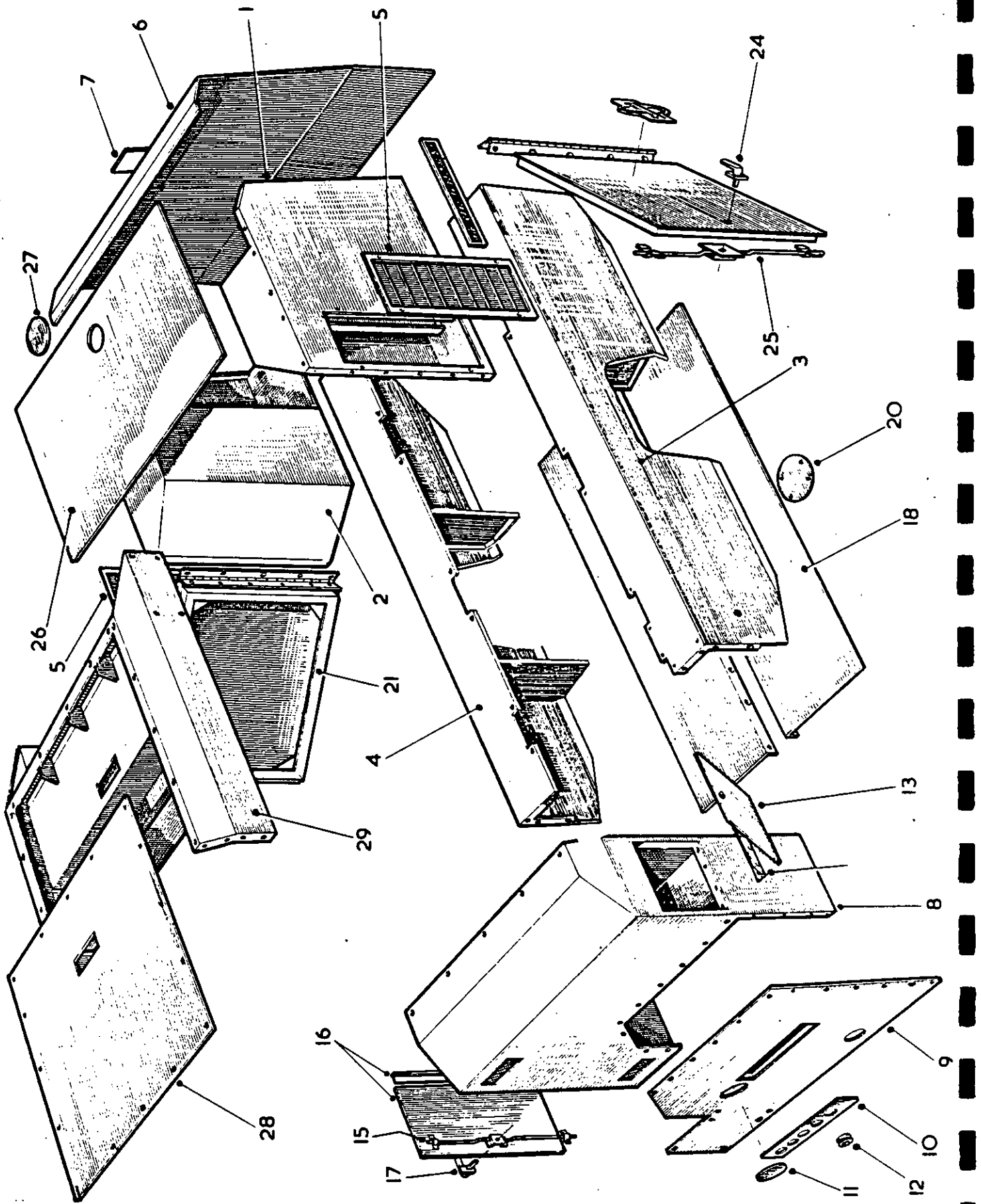
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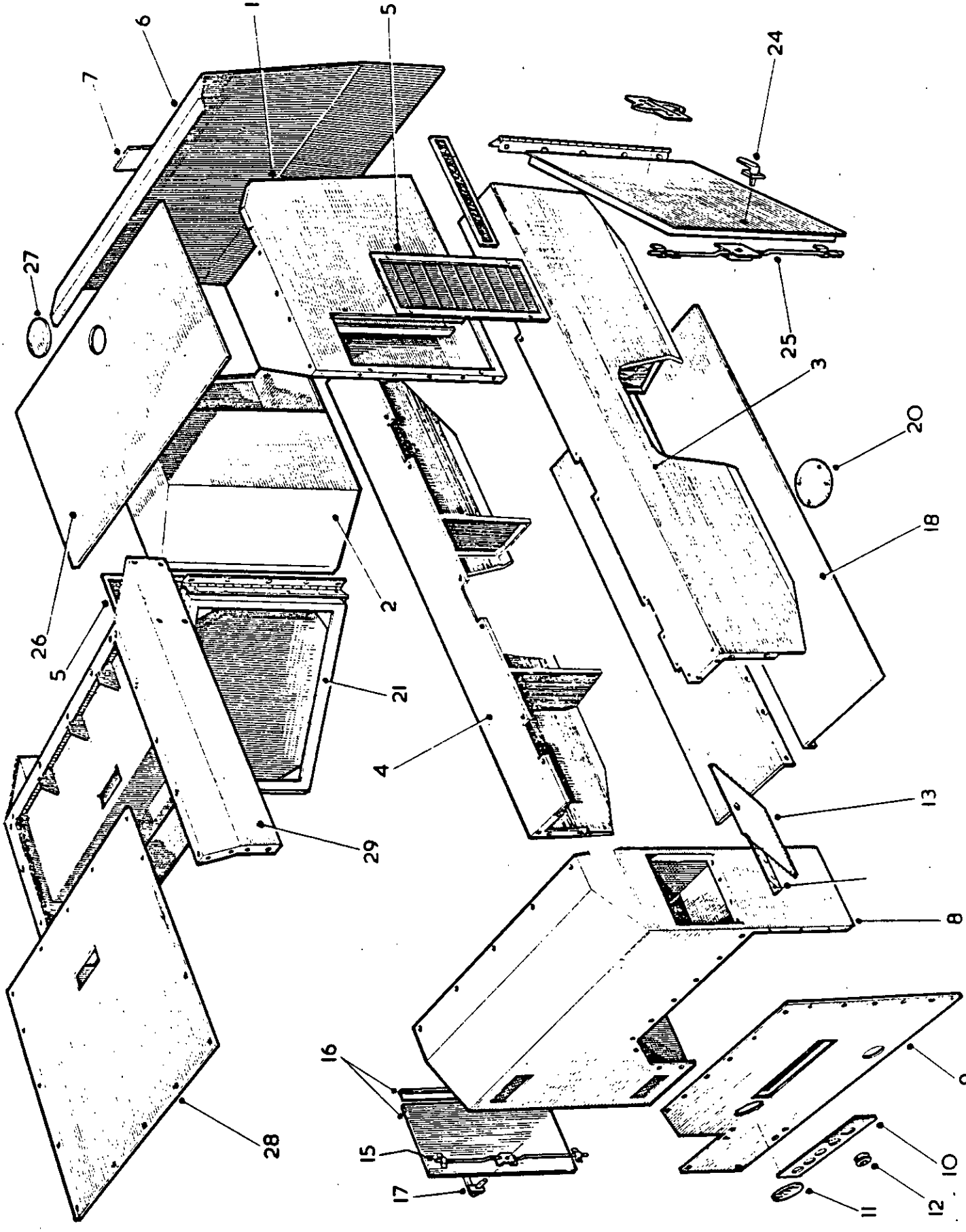
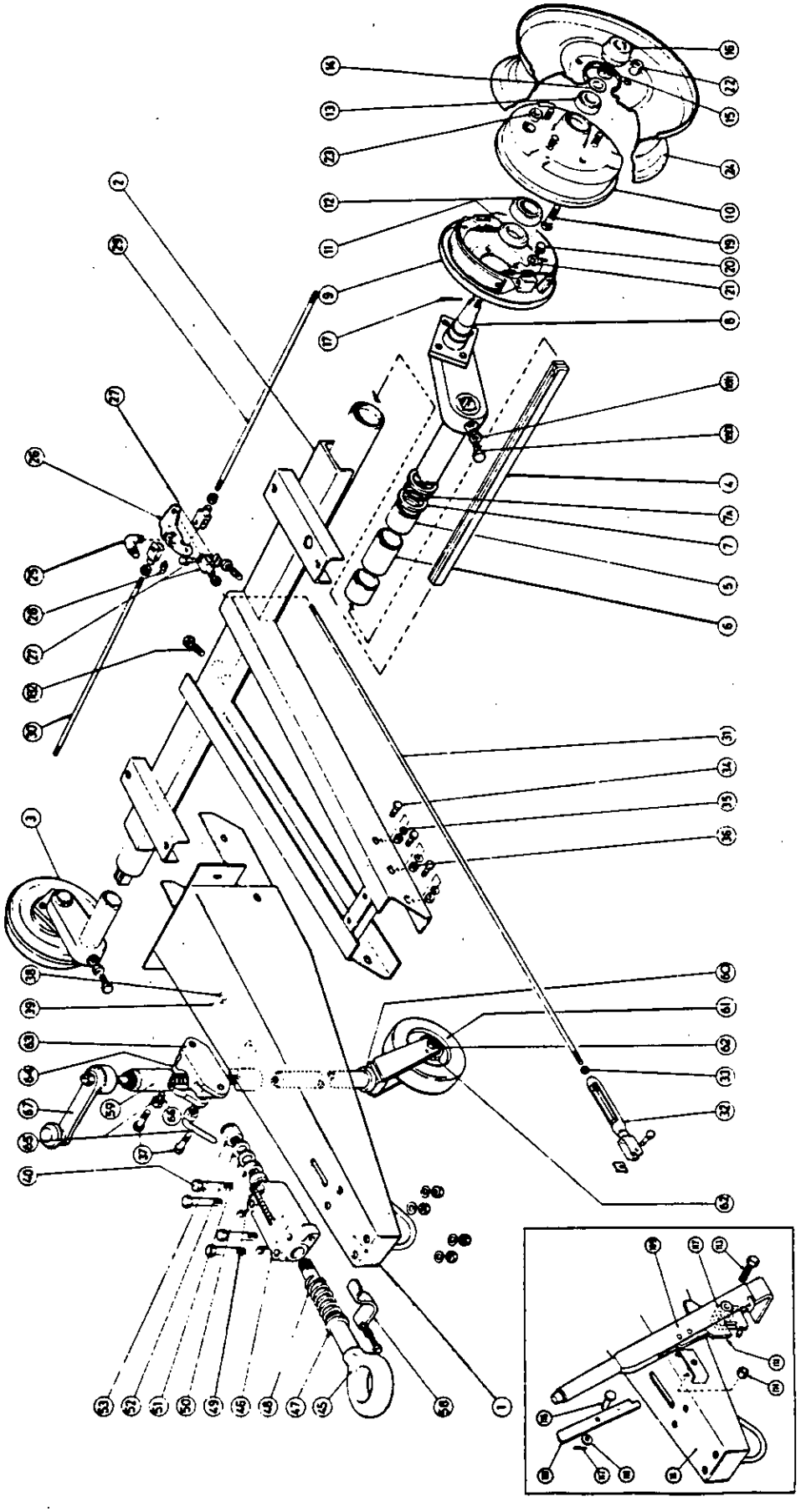
Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	HOUSING (2 WHEEL)		
1	Air Inlet Duct - RH	T2K4805	1
*	Setscrew	3/8" UNC x $\frac{3}{4}$"	7
*	Spring Washer	3/8"	7
2	Air Inlet Duct - LH	T2K4847	1
*	Setscrew	3/8"UNC x $\frac{3}{4}$"	7
*	Spring Washer	3/8"	7
3	Fender - RH	T2K4917	1
*	Setscrew	3/8"UNC x $\frac{3}{4}$"	8
*	Spring Washer	3/8"	8
4	Fender - LH	T2K4918	1
*	Setscrew	3/8"UNC x $\frac{3}{4}$"	8
*	Spring Washer	3/8"	8
5	Air Inlet Grill	T2T5217	2
*	Setscrew	5/16"UNC x 5/8"	8
*	Flat Washer	5/16"	8
6	Front Panel	92284173	1
*	Setscrew	5/16" UNC x 5/8	18
*	Spring Washer	5/16"	18
7	I-R Monogram	20A16A2D	1
8	Rear Housing Assembly	T2N2027	1
*	Setscrew	3/8"UNC x $\frac{3}{4}$"	10
*	Spring Washer	3/8"	10
9	Rear Panel	T2K4848	1
*	Setscrew	5/16"UNC x 5/8"	16
*	Spring Washer	5/16"	16
10	Discharge Pipe Cover	T2T5289	1
*	Self Tapping Screw	No.14 x $\frac{1}{2}$"	8
11	Discharge Elbow Cover Plate	T2V8925	1
*	Setscrew	$\frac{1}{4}$"UNC x $\frac{1}{2}$"	3
12	Grommet	T23716-125	5
13	Instrument Panel Access Door with Hinge	T2K4903	1

GYRO — FLO DR — 250 - S
2 WHEEL HOUSING



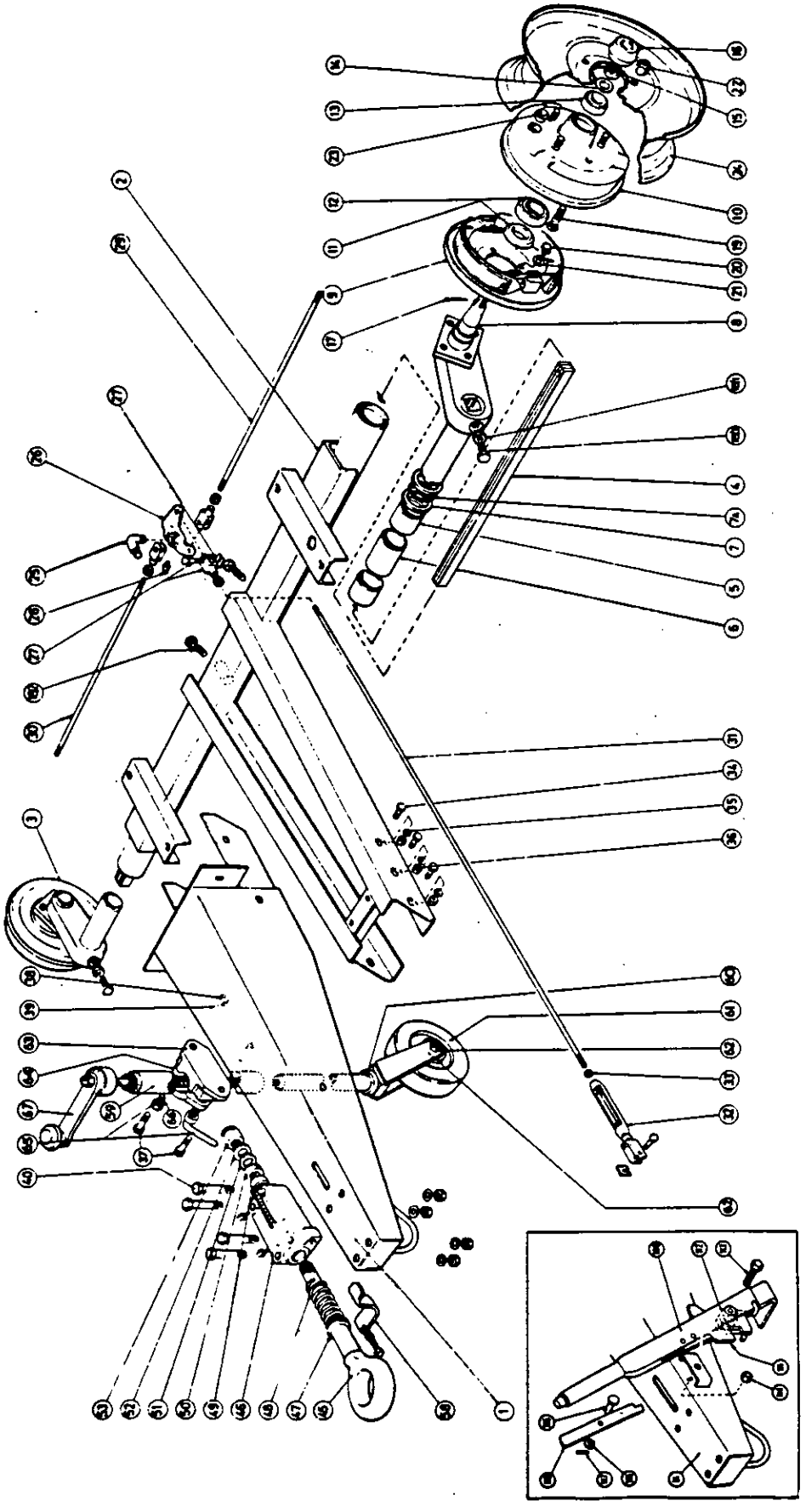
Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
15	2 Way Rod Latch	T2V8856	1
16	Filter Access Door with Hinge	T2K4800	1
*	Setscrew	$\frac{1}{4}$" UNC x $\frac{1}{2}$"	5
*	Spring Washer	$\frac{1}{4}$"	5
17	Handle	T2V8858	1
18	Underside Baffle Plate	T2N2043	1
*	Setscrew	$\frac{1}{4}$" UNC x $\frac{1}{2}$"	16
*	Spring Washer	$\frac{1}{4}$"	16
*	Setscrew	5/16"UNC x5/8"	18
*	Spring Washer	5/16"	18
20	Underside Baffle Plate Cover	T2V8791	1
*	Setscrew	$\frac{1}{4}$" UNC x $\frac{3}{4}$"	4
*	Spring Washer	$\frac{1}{4}$"	4
21	Main Door with Hinge	T2K4812	2
*	Setscrew	5/16"UNC x5/8"	10
*	Spring Washer	5/16"	10
*	2 Way Rod Latch 3/18793	T2V8856	1
24	Handle	T2V8858	2
25	2 Way Rod Latch 3/18624	T2V8857	1
26	Front Cover	T2T5272	1
*	Setscrew	5/16"UNC x5/8"	16
*	Spring Washer	5/16"	16
27	Radiator Filler Sealing Plate	T2T5222	1
*	Self Tapping Screw	No. 14	4
28	Top Cover	T2K4809	1
*	Setscrew	5/16"UNC x5/8"	18
*	Washer	5/16"	18
29	Top Assembly	T2N2026	1
*	Setscrew	5 /16"UNC x5/8"	14
*	Washer	5/16"	14

GYRO — FLO DR — 250 - S
2 WHEEL RUNNING GEAR



Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	Set Rubery Owen 2 Wheel Running Gear	T2T2350	1
*	Wheel & Tyre Assembly Complete	92296839	2
*	Bolts - ½" UNF x 1¼" lg	92273523	4
*	Philidas Nuts - ½" UNF	92022763	4
*	Bolt - 5/8"UNF x 1¼"	92272459	4
*	Philidas Nuts - 5/8"	92271642	4
1	Front Tow Bar	92305028	1
2	Rear Tow Bar/Axle Tube	92305036	1
3	Swinging Arm Hub & Brake Assembly LH	92305044	1
3a	Swinging Arm Hub & Brake Assembly RH	92305051	1
4	Torsion Bar	92305069	2
5	Axle Tube Bush	92305077	4
6	Distance Piece	92305085	2
7	Felt Ring	92305093	4
7a	"O" Ring	92305101	2
8	Swinging Arm LH	92305119	1
8a	Swinging Arm RH	92305127	1
9	Brake Assembly LH	92305135	1
9a	Brake Assembly RH	92305143	1
10	Brake Drum (complete with bearings) (studs & nuts)	92305150	2
11	Grease Seal	92305168	2
12	Inner Bearings	92305176	2
13	Outer Bearings	92305184	2
14	Washer	92305192	2
15	Slotted Nut	92305200	2
16	Grease Cap	92305218	2
17	Split Pin	92305226	2
18/1	Nut	92305234	4
18/2	Locking Screw	92305242	2
18/3	Locking Screw	92305249	2
19	Wheel Stud	92305267	10
20	Bolt .....3/8"UNF x 7/8" lg	92305275	8
*	Nut .....3/8" UNF	92305283	8
21	Spring Washer	92305291	8
22	Wheel Nut	92305309	10
25	"L" Bolt	92305325	1
26	Compensator Lever	92305333	1
27	Clevis Assembly	92305341	3
28	Grease Nipple	92305358	1
*	Spring Washer	92305366	1
29	Brake Rod LH	92305374	1
30	Brake Rod RH	92305382	1
*	Barrel Adaptor - 5/16" UNF x ¼" UNF	92305390	2
31	Brake Rod	92305408	1

GYRO — FLO DR — 250 - S
2 WHEEL RUNNING GEAR



Illus No	DESCRIPTION Parts indented after an item are included with the item	PART NO	QTY
32	Turnbuckle Assembly	92305416	1
33	Locknut	92305424	6
34	Bolt (none standard)	92305432	6
35	Washer (none standard)	92305440	6
36	Nut (none standard)	92305457	6
37	Bolt - 5/8" UNF x 1½"	92305465	2
38	Nut - 5/8" UNF	92305473	2
39	Spring Washer	92305481	2
40	Bolt - ½" UNF x 3"	92305499	4
*	Nut - ½" UNF	92305507	4
*	Spring Washer - ½"	92305515	4
45	Eye and Shaft	92305564	1
46	Hitch Body	92305572	1
47	Washer	92305580	1
48	Spring	92305598	1
49	Rubber Shock Absorber	92305606	1
50	Plain Washer	92305614	1
53	Nut	92305622	1
58	Handle & Knob	92305630	1
59	Outer Tube Assembly	92305648	1
60	Inner Tube & Castor	92305655	1
61	Jockey Wheel		1
62	Pivot Bracket	92305689	1
63	Top Cap	92305697	1
65	Locking Handle & Nut	92305705	1
66	Clamp Bolt & Nut	92305713	1
67	Bracket	92305689	1
*	Wheels - 500F	92305317	2
*	Tyres	600 x 15 x 4	2
109	Handbrake Complete	92323724	1
110	Lever	92323732	1
111	Ratchet	92323740	1
112	Spring	92323757	1
113	Pivot Bolt	92323765	1
114	Nut	92323773	1
115	Pivot Pin	92323781	1
116	Plain Washer	92376581	1
117	Split Pin	92323799	1

Not illustrated.

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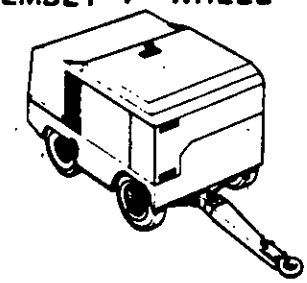

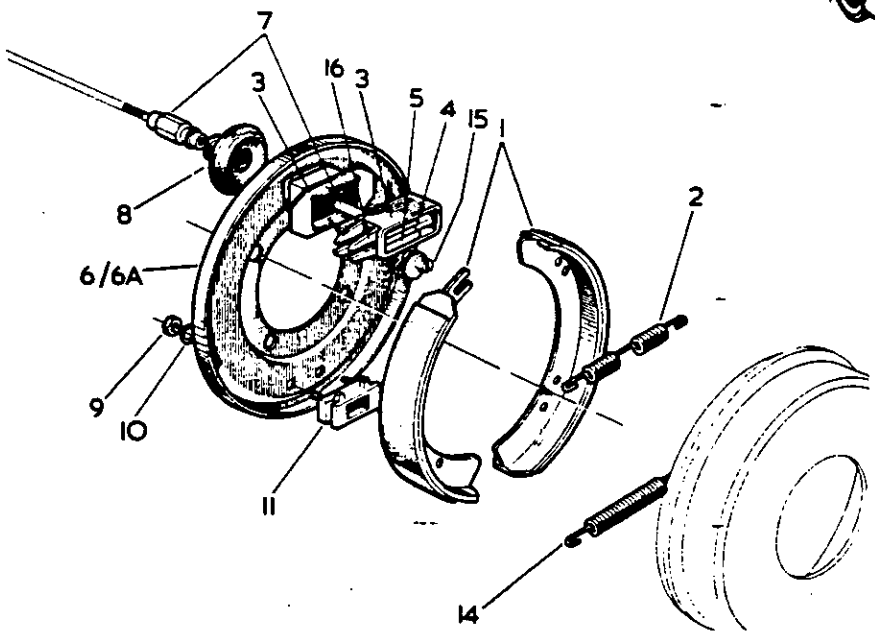

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
*	BRAKE ASSEMBLY COMPLETE RH	T2102380	1
*	BRAKE ASSEMBLY COMPLETE LH	T2102381	1
1	Brake Shoe (Pair).....	T2LB110	1
2	Pull - off Spring	T225738	1
3	Expander Body and Cover.....	T288645	1
4	Lever - Inner	T288656	1
5	Lever - Outer	T288650	2
6	Back Plate Assembly RH.....	T2102382	1
6A	Back Plate Assembly LH.....	T2102383	1
7	Pull Rod and Pin Assembly.....	T2103363	1
8	Boot.....	T232324	1
9	Nut	T2K18609	2
10	Spring Washer.....	T2K19208	2
11	Body and Abutment.....	T22594	1
*	Pin for Expander - Long.....	T291139	1
*	Pin for Expander - Short.....	T288653	2
14	Tension Spring.....	T295393	1
15	Micram Adjuster	T225254	1
16	Mask	T225253	1

* Not illustrated.
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Item No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	Gyro Model Plate	T2V8884	2
2	Nameplate	T2N2035	2
3	General Data Plate	T2T5301	1
4	Preventative Maintenance Plate	T2T5298	1
5	Operating Instruction Plate	T2T5299	1
6	Neoprene Adhesive Tags	—	24
7	Front Panel Pad	T2V8835	1
8	Inlet Duct Pad	T2V8836	6
9	Inlet Pad	T2V8837	2
10	Inlet Side Panel Pad	T2V8838	2
11	Main Door Pad	T2V8841	2
12	Bulk Head Pad	T2T5283	1
13	Front Cover Pad	T2V8839	1
14	Engine Cover Pad	T2V8840	1
15	Rear Bulk Head Pad	T2V8842	1
16	Radiator Pad	T2V8891	2
17	Main Door Perforated Panel	T2V8843	2

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FLEXIBLE TUBING

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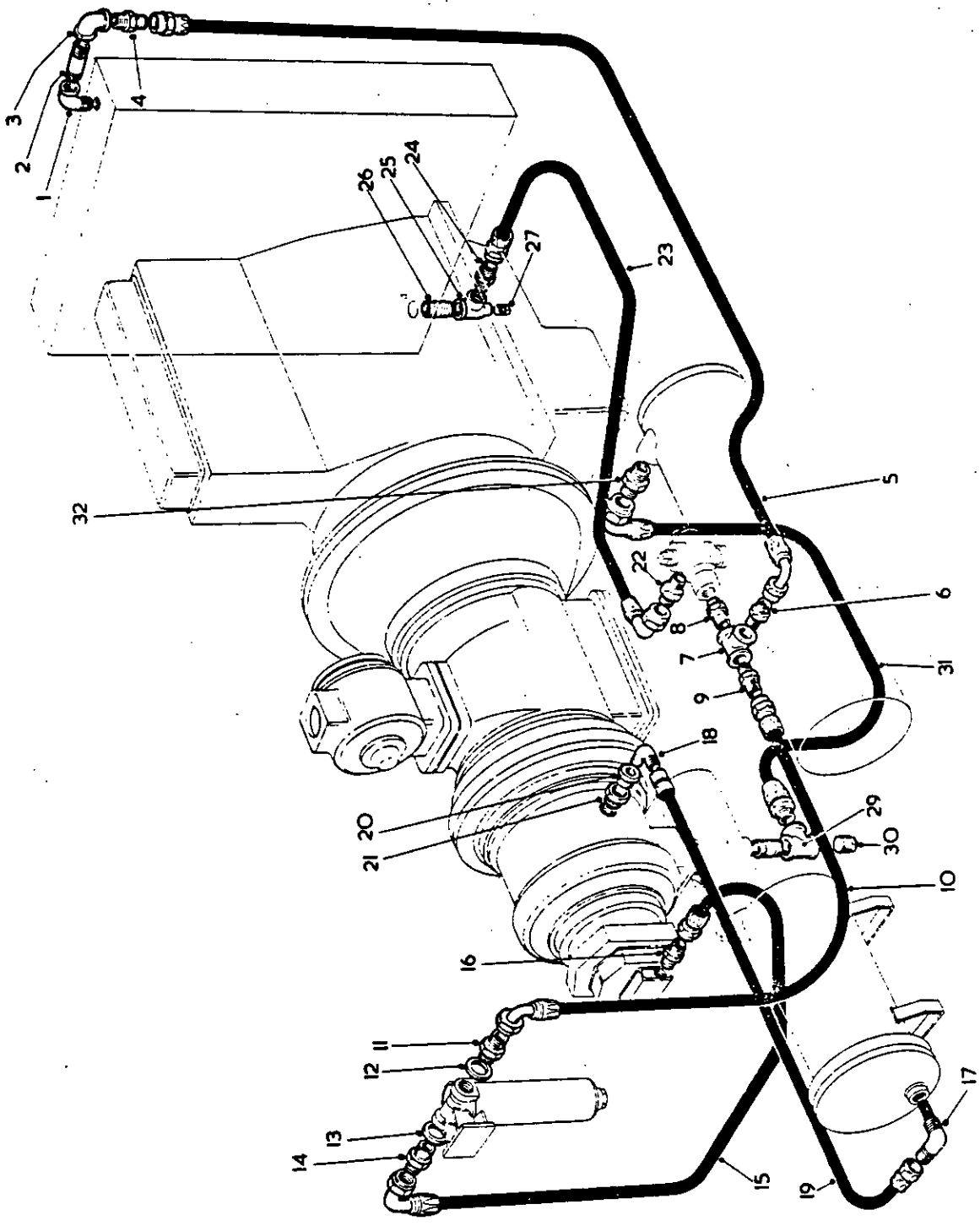

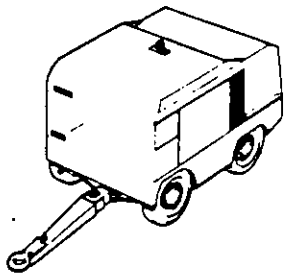

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	OIL COOLER OUTLET TO BYPASS VALVE		
1	90° Male/Female Elbow	$\frac{3}{4}$" BSPT	1
2	Space Nipple x $7\frac{3}{4}$" Long	$\frac{3}{4}$" BSPT	1
3	90° Female Elbow	$\frac{3}{4}$" BSPT	1
4	Aeroquip Adaptor	T21320-12-12	1
5	Aeroquip Hose Assembly	T2T5296/1	1
6	Aeroquip Adaptor	T21320-12-12	1
7	Equal 'T' Fitting	$\frac{3}{4}$" BSPT	1
8	Hex. Nipple	$\frac{3}{4}$" BSPT	
	BYPASS VALVE TO OIL FILTER		
9	Aeroquip Adaptor	T21320-12-12	1
10	Aeroquip Hose Assembly	T2T5296/2	1
11	Aeroquip Adaptor	T2V8830	1
12	Dowty Seal	T2V8829	1
	OIL FILTER TO OIL PUMP		
13	Dowty Seal	T2V8829	1
14	Aeroquip Adaptor	T2V8830	1
15	Aeroquip Hose Assembly	T2T5296/3	1
16	Aeroquip Adaptor	T21320-12-12	1
	SECONDARY SEPARATOR TO HP CYLINDER(Scavenge)		
17	Oil Line Screen Assembly	2W43735 TP	1
18	Male Elbow Connector	3/8" BSPT	1
19	Aeroquip Hose Assembly	T2T5296/8	1
20	Orifice	2X1080TP	1
21	Reducing Bush (HP Cyl)	$\frac{3}{4}$" x $\frac{1}{4}$" BSPT	1
	BYPASS TO OIL COOLER INLET		
22	Aeroquip Adaptor	T21320-12-12	1
23	Aeroquip Hose Assembly	T2T5296/7	1
24	Aeroquip Adaptor	T21320-12-12	1
25	'T' Fitting	$\frac{3}{4}$" x $\frac{3}{4}$" x $\frac{1}{2}$" BSPT	1
26	Space Nipple x 3" Long	$\frac{3}{4}$" BSPT	1
27	Pipe Plug	$\frac{1}{2}$" BSPT	1
	HEADER BOTTLE TO PRIMARY SEPARATOR		
29	Tee BSPT	$1\frac{1}{2}$" x $1\frac{1}{2}$" x $\frac{1}{2}$"	1
30	Pipe Plug	$\frac{1}{2}$" BSPT	1
31	Aeroquip Hose Assembly	T2T5269/6	1
32	Aeroquip Adaptor	T21320-12-12	1

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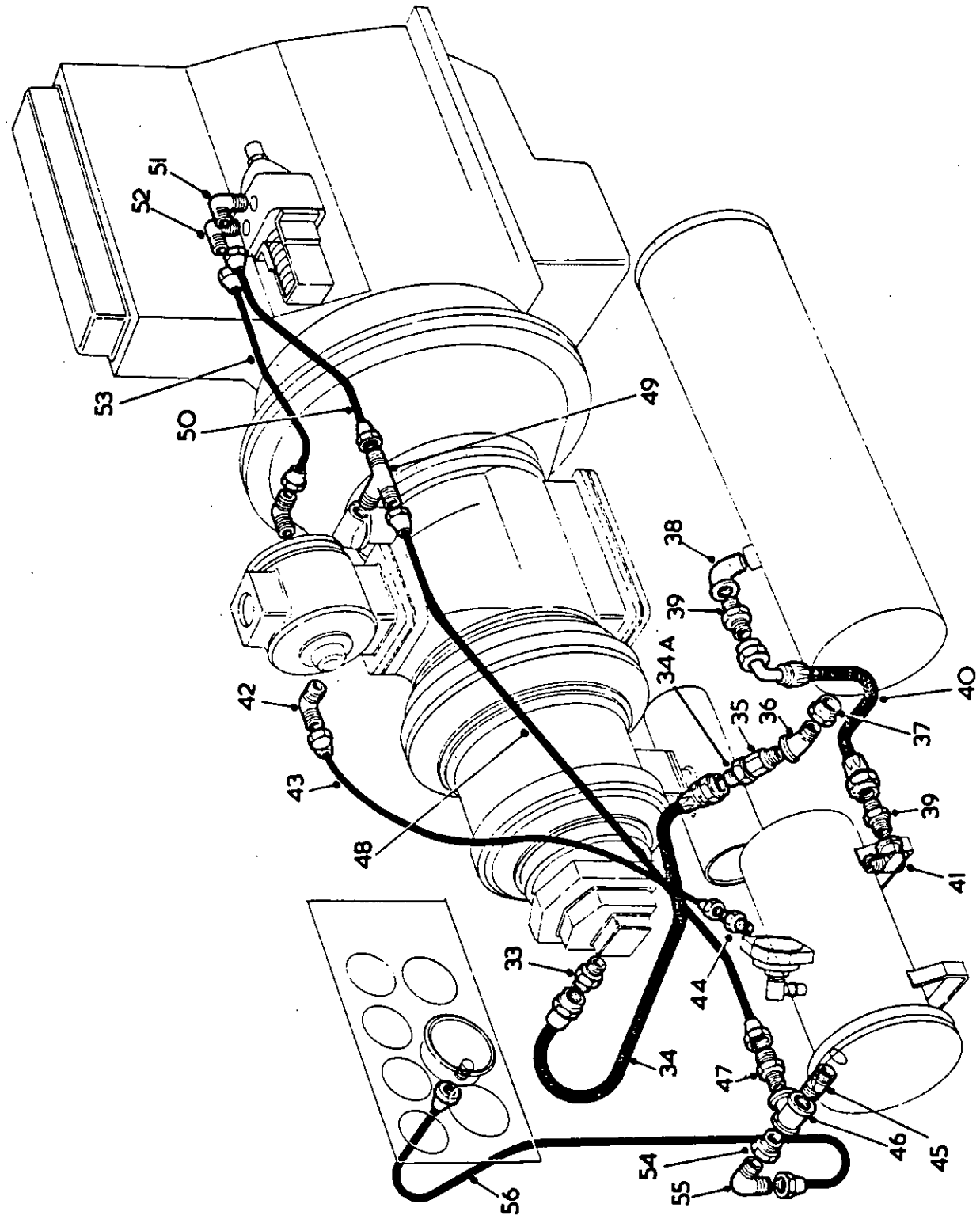
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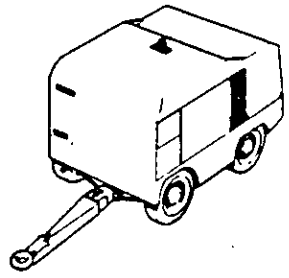

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	OIL PUMP TO SEPARATOR RELIEF VALVE		
33	Male Straight Connector - BSPT	¼" x 3/8" O/D	1
34	Aeroquip Hose	T2T5296/4	1
34a	Male/Female Adaptor - BSPT	¼" x 3/8" O/D	1
35	Oil Pump Relief Valve Assembly	PCC 192	1
36	45° Male/Female Elbow	¼" BSPT	1
37	Reducing Bush	½" x ¼" BSPT	1
	PRIMARY TO SECONDARY SEPARATOR		
38	90° Male/Female Elbow	1½" BSPT	1
39	Aeroquip Adaptor	T21320-24-24	2
40	Aeroquip Hose Assembly	T2T5296/5	1
41	90° Male/Female Elbow	1½" BSPT	1
	UL 89 TO AUTO BLOWDOWN VALVE		
42	Male Elbow Connector - BSPT - 608F	¼" x 5/16" O/D	1
43	Polypenco Tube Assembly	T2T5296/12	1
44	Male Connector - NPT - 605F	1/8" x 5/16" O/D	1
	SECONDARY SEPARATOR TO NORGREN VALVE		
45	Hex. Nipple	¼" BSPT	1
46	Equal Tee Fitting	¼" BSPT	1
47	Male Straight Connector - BSPT - 605F	¼" x 5/16" O/D	1
48	Polypenco Tube Assembly	T2T5296/13	1
	NORGREN VALVE TO UL88 REGULATOR		
49	Male 'T' Connector - BSPT - 610F	¼" x 5/16" O/D	1
50	Polypenco Tube Assembly	T2T5296/14	1
51	Male Elbow Connector - BSPT - 608F	¼" x 5/16" O/D	1
	UL88 TO UL89		
52	Male Elbow Connector - BSPT - 608F	¼" x 5/16" O/D	2
53	Polypenco Tube Assembly	T2T5296/15	1
	SECONDARY SEPARATOR TO HP DISCHARGE GAUGE		
54	Reducing Bush	¼" - 1/8" BSPT	1
55	Male Elbow Connector - BSPT - 608F	1/8" x 3/16" O/D	1
56	Polypenco Tube Assembly	T2T5296/11	1

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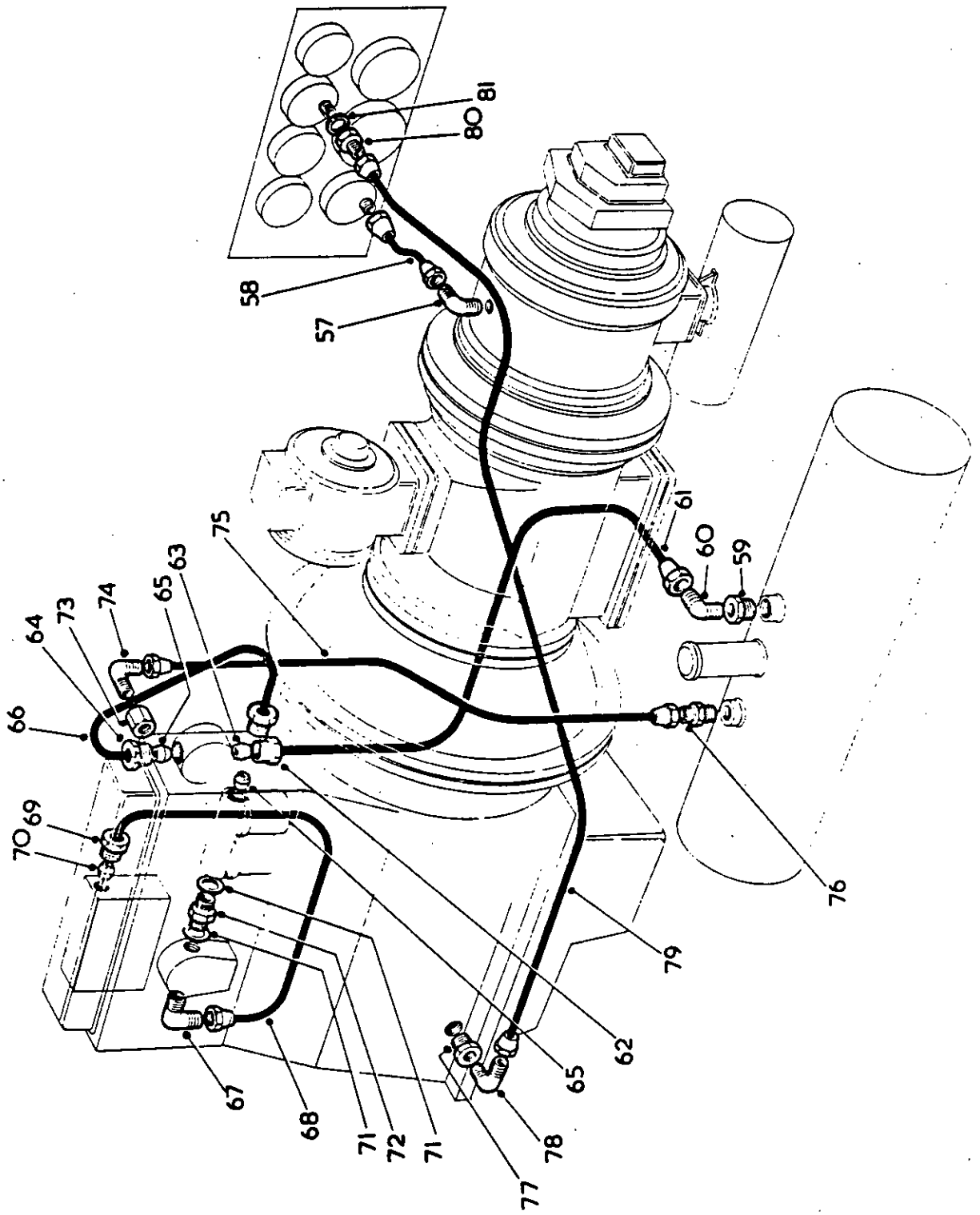
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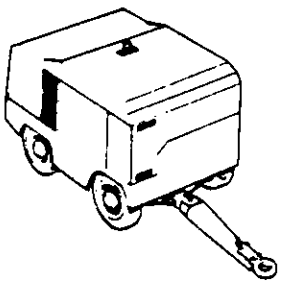

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	H.P. CYLINDER INLET TO INTERSTAGE		
57	Male Elbow Connector - BSPT - 608F	1/8" x 3/16" O/D	1
58	Polypenco Tube Assembly	T2T5296/10	1
	FUEL TANK TO FUEL PUMP		
59	Reducing Bush - BSPT	¾" x ¼"	1
60	Male Elbow Connector - BSPT	¼" x 5/16" O/D	1
61	Polypenco Tube Assembly	T2T5296/16	1
62	Tube Nut - Z404	5/16" Dia.	1
63	Olive - Z18		1
	FUEL PUMP TO FILTER		
64	Tube Nut - Z18	5/16" Dia.	2
65	Tube Olive - Z404	5/16" Dia.	2
66	Polypenco Tube Assembly	T2T5296/17	1
	FUEL SOLENOID TO FUEL PUMP		
67	Male Elbow Connector - BSPT	¼" x 5/16" O/D	1
68	Polypenco Tube Assembly	T5296/18	1
69	Nut	5/16" O/D	1
70	Olive	5/16"	1
	FUEL FILTER TO FUEL SOLENOID		
71	Copper Washer	½" dia x 3/64th.	1
72	Adaptor	T2V5712	1
	ENGINE TO FUEL TANK (EXCESS FUEL)		
73	Adaptor	T2V8297	1
74	Male Elbow Connector - BSPT	1/8" x 3/16" O/D	1
75	Polypenco Tube Assembly	T2T5296/19	1
76	Male Connector - BSPT	¼" x 3/16" O/D	1
	ENGINE TO OIL PRESSURE GAUGE		
77	Reducing Connector - BSPT - Z325-9	5/16" x 3/16" O/D	1
78	Male Elbow Adaptor - BSPT - Y116	3/8" x 5/16" O/D	1
79	Polypenco Tube Assembly	T2T5296/9	1
80	Female Connector	T2V4818	1
81	Fibre Washer 5/16" O/D x 5/32" ID x 3/64" Thick.		1

* Not illustrated.

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Item No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	90° M/F Elbow(By-Pass to Oil Cooler Inlet)	$\frac{3}{4}$" BSPT	1
2	Rubber Grommet	T23716-125	1
3	Hose Clip	T2HO1330-8	4
4	Hose Clip	T2HD1300-4	2
5	Hose Clip	T2HD1300-1	2
6	Set Screw	5/16"UNC x 1"	2
7	Philidas Nut	5/16" UNC	2
8	Back Plate	T2V3365	3
9	Double Pipe Clip	T2W029554	3
10	Nylastic Adjustable Pipe Clip	No. 2	2
11	Nylastic Adjustable Pipe Clip	No. 1	2
12	Rd. Hd. Screw	3/16"BSW x $\frac{3}{4}$"	3
13	Lockwasher	3/16"	3
14	Washer	3/16"	3
15	Hex. Nut	3/16" BSW	3
16	Pipe Bracket	T2V7820	2
17	Pipe Bracket	T2V5566	1
18	Pipe Bracket	T2V5946	1
19	Pipe Bracket	T2V5947	1

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AUXILIARY PARTS

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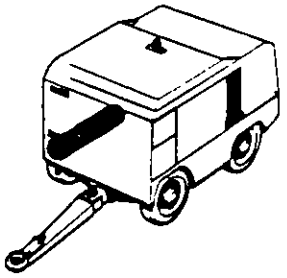

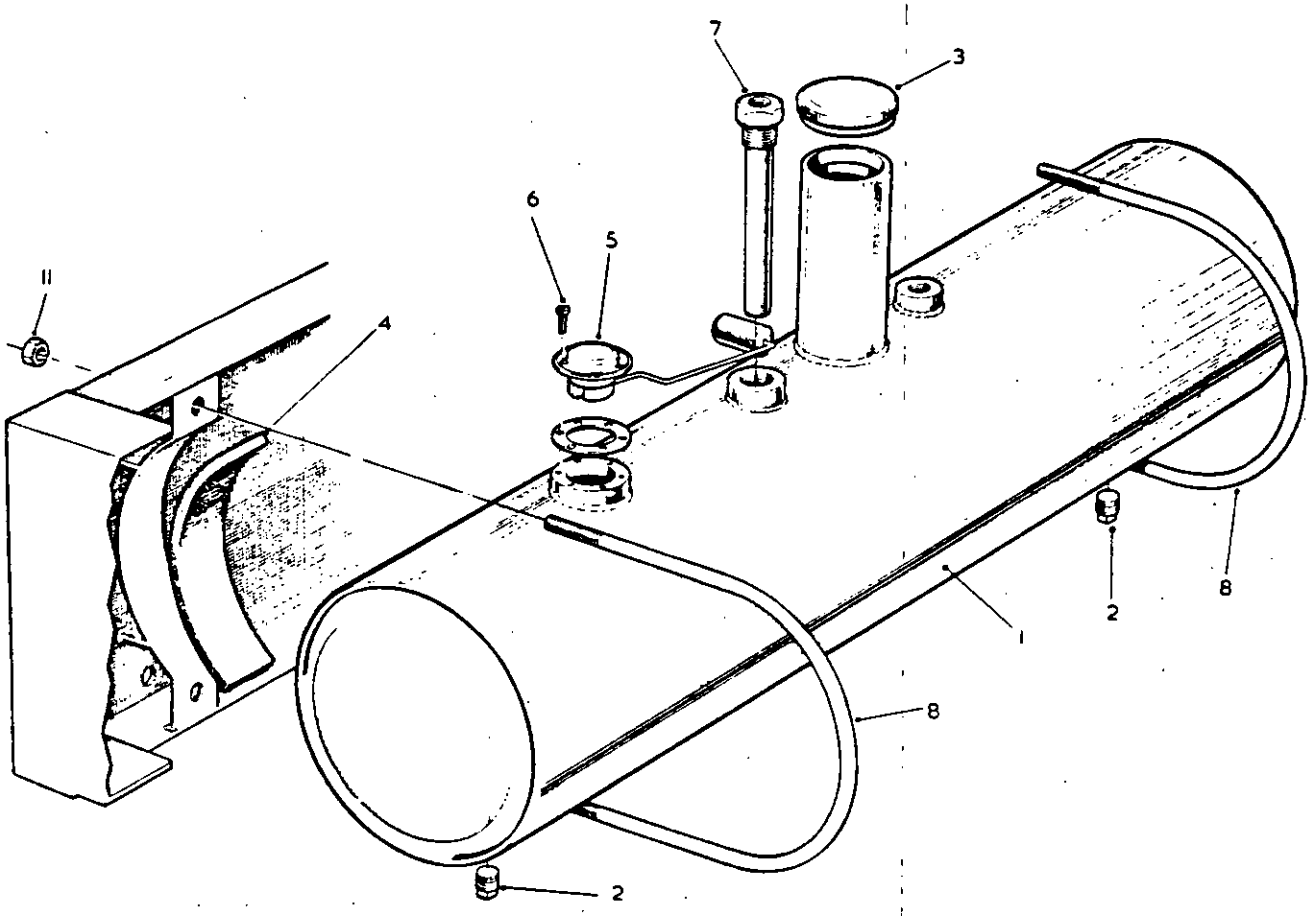

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	FUEL TANK	T2K4819	1
2	Fuel Tank Pipe Plug	$\frac{1}{4}$" BSPT	2
3	Fuel Tank Cap	T2EOA9030	1
4	Fuel Tank Cushion	3/16" x 2" x 4"	4
5	Fuel Lever Sender Unit	T2V8827	1
6	Screws	4BA x 3/8"	6
7	Fuel Tank Outlet Adaptor	2W56976	1
8	Fuel Tank Strap	2W48580	2
11	Fuel Tank Strap Locknut	3/8" UNC	4

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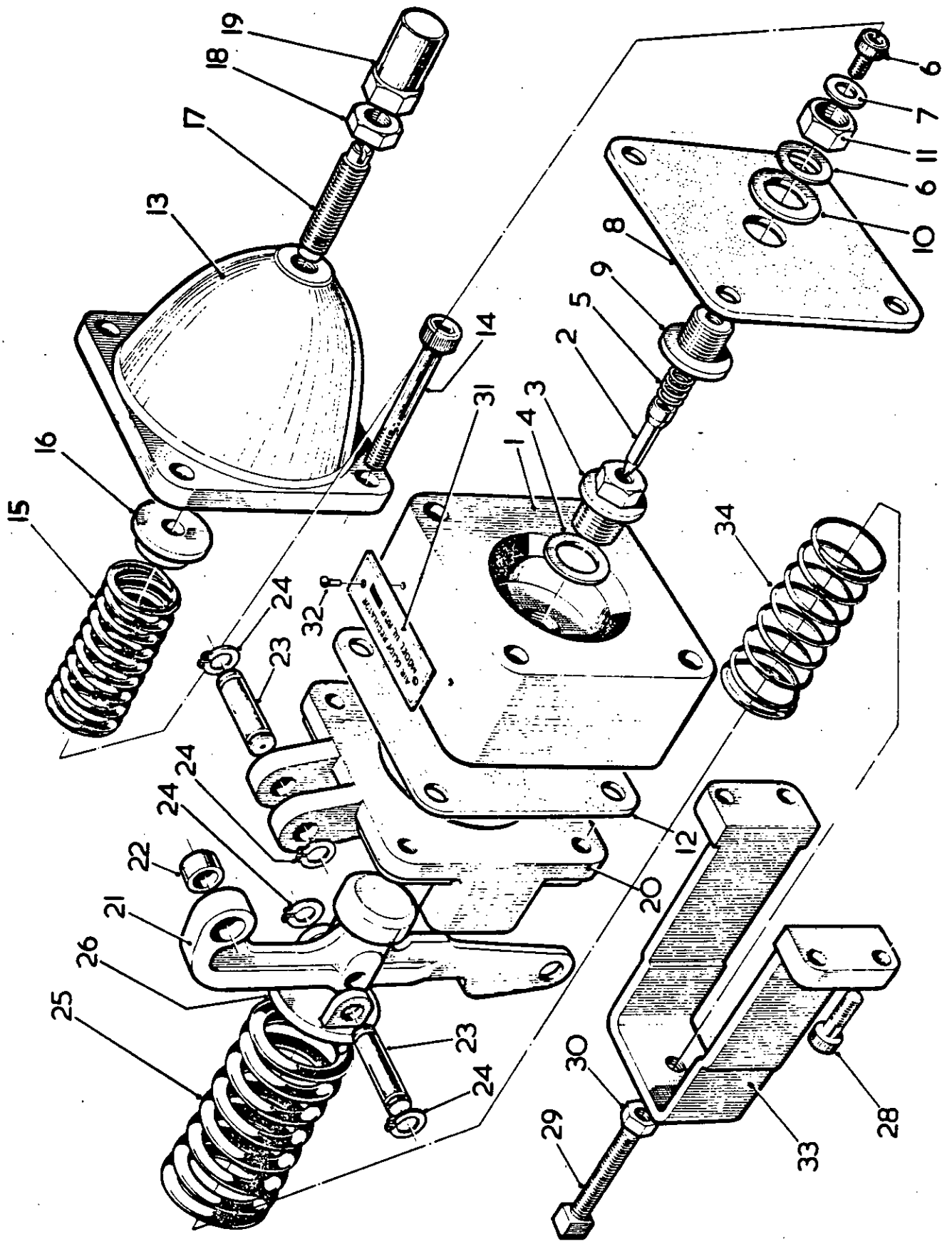
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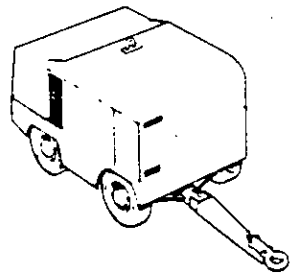

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	UL88 SPEED & PRESSURE REGULATOR COMPLETE	TUL88R210BB	1
1	UL88 Regulator Body	2R15427P2	1
*	UL88 Regulator Repair Kit	UL88 - 200	1
2	UL88 Regulator Metering Pin	2W32936	1
3	UL88 Regulator Metering Pin Seat	2W31748P2	1
4	UL88 Regulator Metering Pin Seat Gasket	T2V4912	1
5	UL88 Regulator Metering Pin Spring	PP607	1
6	UL88 Regulator Socket Head Set Screw	5/16" - 24 x 3/8"	1
7	UL88 Regulator Set Screw Gasket	X1108T20	1
8	UL88 Regulator Top Cover Diaphragm	2W37087	1
9	UL88 Regulator Top Cover Diaphragm Bolt	2W32937	1
10	Top Cover Diaphragm Washer	1W1619P1	1
11	Top Cover Diaphragm Bolt Nut	2W32938	1
12	UL88 Regulator Bottom Cover Diaphragm	2W34874	1
13	UL88 Regulator Top Cover	2R15430	1
14	UL88 Regulator Top Cover Set Screw	7/16"- 14 x $2\frac{3}{4}$	4
15	UL88 Regulator Pilot Valve Spring	PP412	1
16	UL88 Regulator Pilot Valve Spring Seat	2W90675	1
17	UL88 Regulator Pilot Valve Adjusting Screw	2W26388	1
18	Pilot Valve Adjusting Screw Lock Nut	2W46062	1
19	UL88 Regulator Pilot Valve Adjusting Screw Nut	2W12826P1	1
20	UL88 Regulator Bottom Cover	2R17467P1	1
21	UL88 Regulator Lever	2R17498ATP	1
22	UL88 Regulator Lever Bushing	2W37528	1
23	UL88 Regulator Shaft	2W26387	2
24	UL88 Regulator Retaining Ring	2W32830	4
25	UL88 Regulator Range Spring - Outside	PP604	1
26	UL88 Regulator Range Spring Seat		1
28	UL88 Support Socket Head Set Screw	$\frac{1}{4}$" - 20 x $\frac{3}{4}$"	4
29	Minimum Speed Screw (Square Head)	5/16" - 18 x $2\frac{3}{4}$"	1
30	Locknut	5/16" - 18	1
31	UL88 Regulator Name Plate	2R35027	1
32	UL88 Regulator Name Plate Drive Screw	No. 2. x $\frac{1}{4}$"	2
33	UL88 Regulator Range Spring Support	2W31759P1	1
34	UL88 Regulator Range Spring - Inside	T2V4677	1

* Not illustrated.

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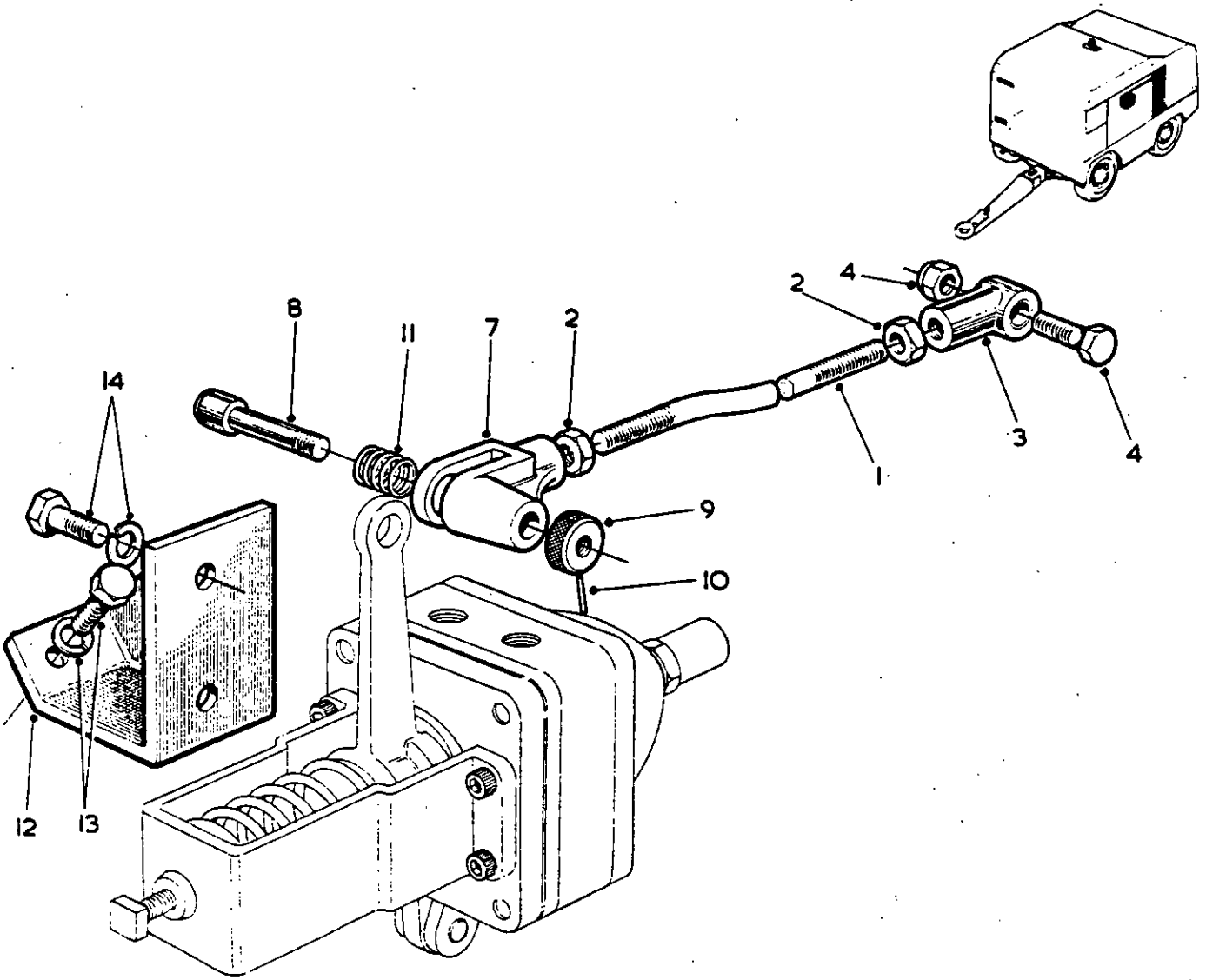
GYRO – FLO DR – 250 -S
UL88 REGULATOR LINKAGE



Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	Governor Lever Link Rod	X1519T16	1
2	Nut	¼" UNF	2
3	Unibal	2W78185	1
4	Unibal to Lever Set Screw, Nut & Lockwasher	¼" - 20 x 7/8"	1
*	UL88 Regulator Manual Speed Latch Assembly	2W35049	1
7	UL88 Regulator Manual Speed Latch	2W35048	1
8	UL88 Regulator Manual Speed Latch Pin	2W35046	1
9	UL88 Regulator Latch Plunger Pull Knob	2W43729	1
10	UL88 Regulator Latch Plunger Pull Knob Pin	094 x ½"	1
11	UL88 Speed Latch Plunger Spring	PP232	1
12	UL88 Regulator Mounting Bracket	T2K4790	1
13	Set Screw, Plain & Lockwasher	7/16"UNC x 1"	2
14	Mounting Bracket Set Screw & Lockwasher(Brkt to Reg)	½" UNC x 1"	2

* Not illustrated.

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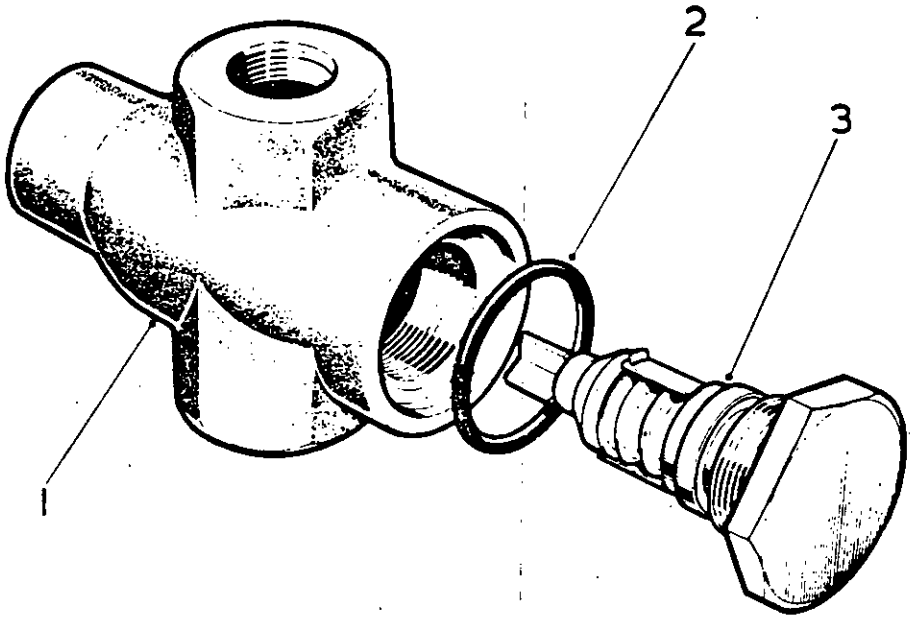

Illus. No.	Parts indented after an item are included with the item	Part Number	Qty.
	OIL TEMPERATURE BY-PASS VALVE COMPLETE...	2W40886	1
1	By - Pass Valve Body.....	2H16018	1
2	By - Pass Valve "O" Ring	X1514T220C	1
3	By - Pass Valve.....	2W40885	1

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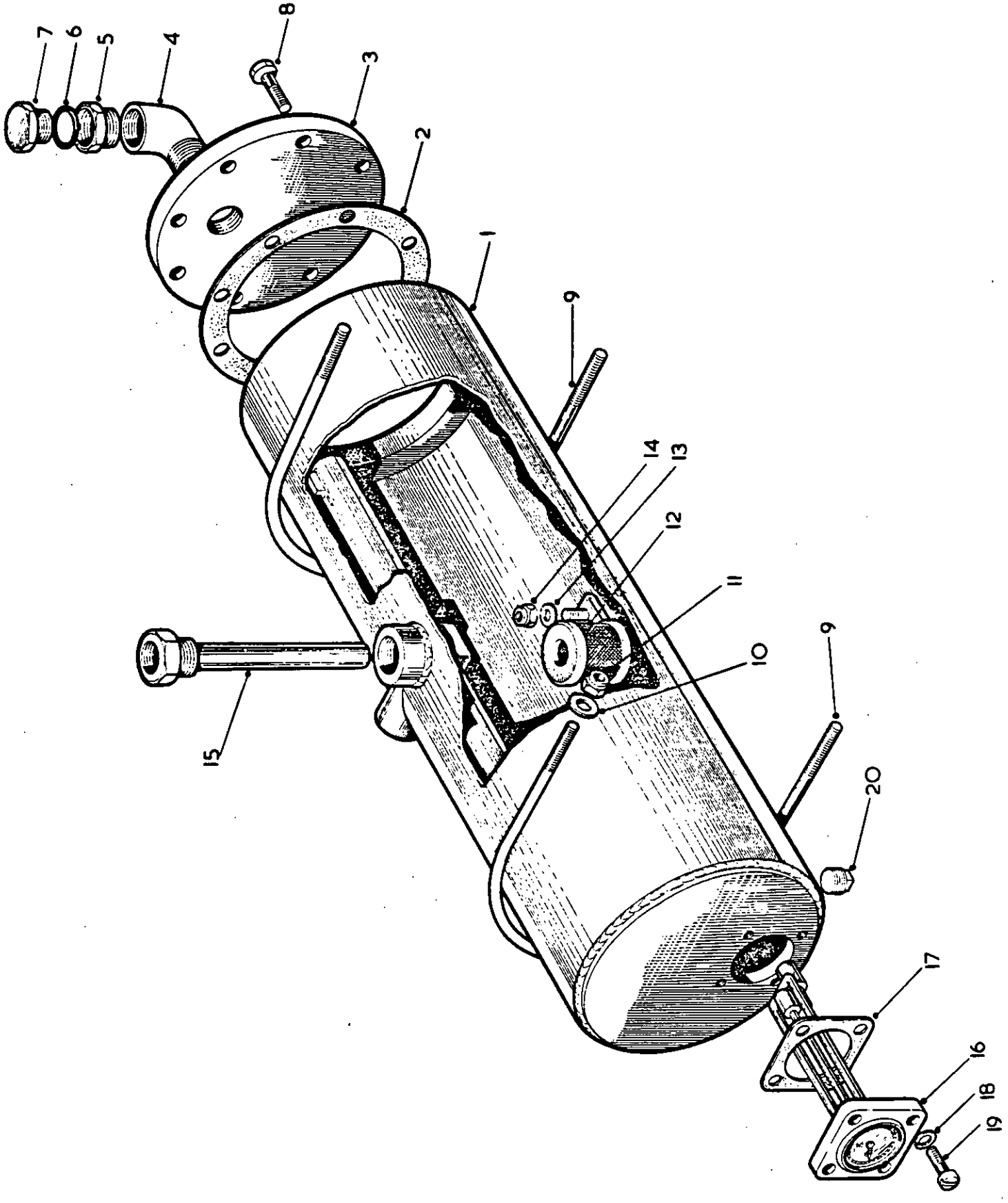
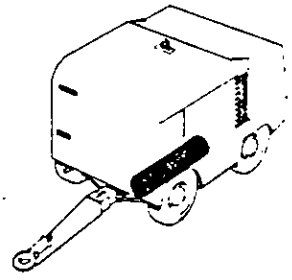
GYRO – FLO DR – 250 -S
PRIMARY OIL SEPARATOR





Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	PRIMARY OIL SEPARATOR TANK	T2N1094	1
2	Oil Separator Tank to Cover Gasket	2W48729	1
3	Primary Oil Separator Tank Cover	2W48724P1	1
4	Oil Filler Street Elbow - Reducing	1½" x 1¼" BSP	1
5	Oil Filler Hole Adaptor.....	2R26539TP	1
6	Oil Filler Hole "O" Ring.....	X1514T214C	1
7	Oil Filler Hole Plug.....	2W48777TP	1
8	Primary Oil Separator Tank Cover Set Screw.....	5/8" - 11 x 1½"	8
9	Primary Oil Separator Tank Strap.....	2W48580	2
10	Primary Oil Separator Tank Strap Washer.....	3/8"	4
11	Primary Oil Separator Tank Strap Nut	3/8" UNF	4
12	Primary Oil Separator Filter Screen Assembly	2R26531	1
13	Oil Filter Screen Bracket Washer.....	2W48723	1
14	Oil Filter Screen Assembly Locknut.....	3/8" - 16	1
15	Primary Separator Tank Outlet Pipe Assembly...	T2V5459	1
16	Primary Separator Tank Oil Level Gauge.....	2R17410	1
17	Primary Separator Tank Oil Level Gauge Gasket..	T2T4949	1
18	Primary Separator Tank Oil Level Gauge Lockwasher.	5/16" x .435 od.	4
19	Primary Separator Tank Oil Level Gauge Set Screw...	5/16" - 18 x 7/8"	4
20	Pipe Plug	½" BSP	2

* Not illustrated.
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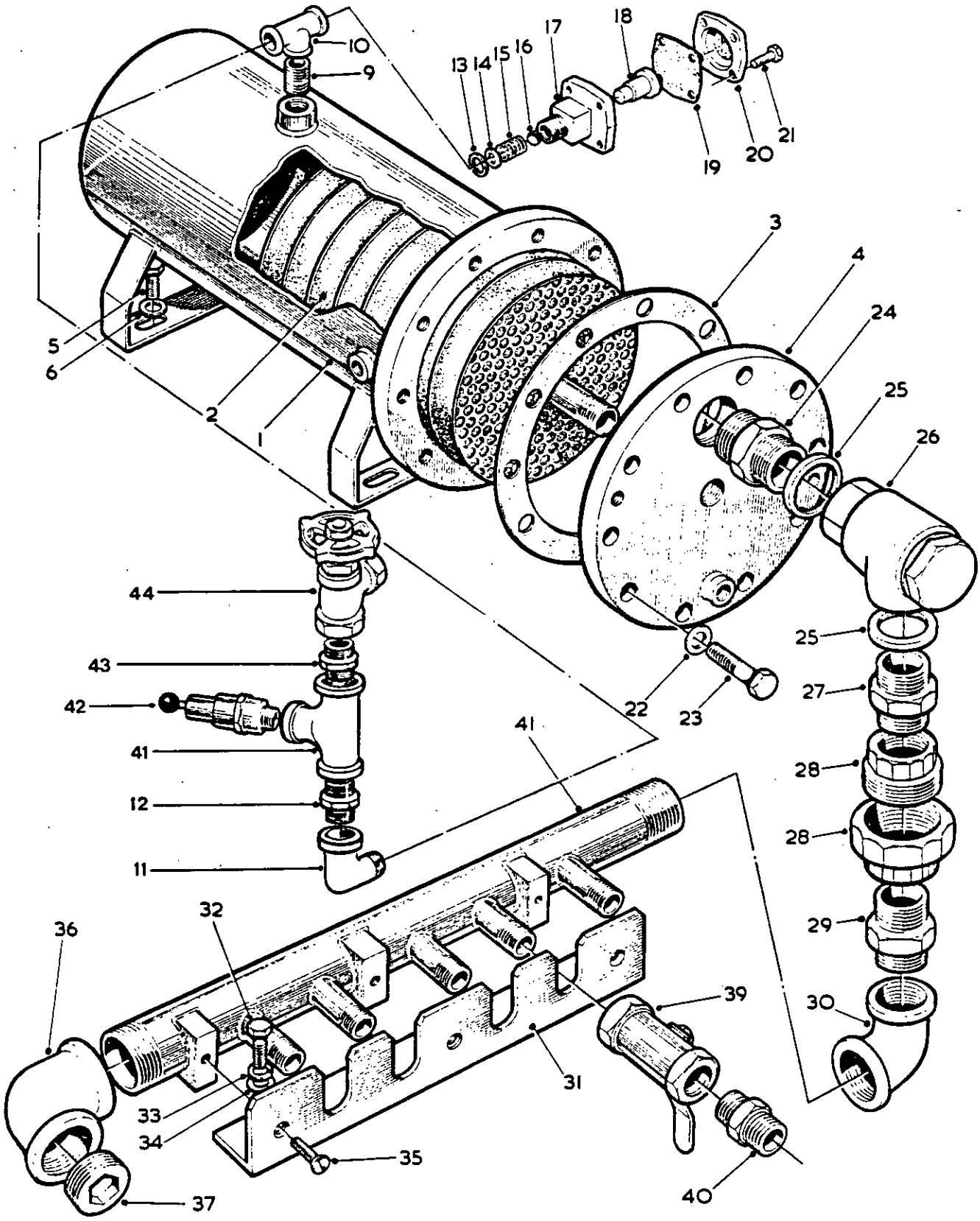
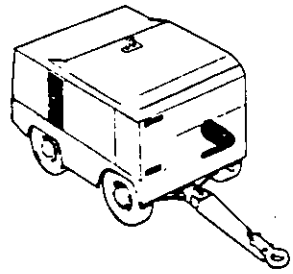
GYRO – FLO DR – 250 -S'
SECONDARY OIL SEPARATOR





Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	SECONDARY OIL SEPARATOR TANK.....	T2N2031	1
2	Oil Separator Screen Assembly.....	2R26443	1
3	Tank Cover Gasket.....	2W48579	1
4	Tank Cover.....	T2N2031/1	1
5	Setscrew.....	3/8"UNC x 1"	4
6	Flat Washer and Spring Washer.....	3/8" Dia.	4
9	Close Nipple.....	¾" BSPT	1
10	Tee Fitting.....	3/4" BSPT	1
11	90 deg. Male/Female Elbow.....	¾" BSPT	1
12	Hex. Nipple.....	¾" BSPT	1
	AUTOMATIC BLOWDOWN VALVE ASSEMBLY.....	2W56923	1
13	Retaining Ring.....	X1319T12	1
14	Washer.....	X1016T113	1
15	Spring.....	PP888	1
16	Ball.....	9/16" Dia.	1
17	Valve Body.....	2W56993	1
18	Valve Piston.....	2W56922	1
19	Valve Diaphragm.....	2W48114	1
20	Valve Cover.....	2W48116	1
21	Setscrew.....	5/16"UNC x 1"	4
22	Flat Washer.....	5/8" Dia.	10
23	Setscrew.....	5/8"UNC x 2" ht.	10
24	Aeroquip Adaptor.....	T21320-24-24	1
25	Dowty Oil Seal.....	1½" Dia.	2
26	Minimum Pressure Valve.....	T2V8818	1
27	Aeroquip Adaptor.....	1320-24-24	1
28	Female Union Fitting.....	1½" BSP	1
29	Hex. Nipple.....	1½" BSPT	1
30	90 deg. Female Red. Elbow.....	2" - 1½" BSPT	1
31	Discharge Pipe Bracket.....	T2K4836	1
32	Setscrew.....	3/8"UNC x 1"	3
33	Springwasher.....	3/8" Dia.	3
34	Flat Washer.....	3/8" Dia.	3
35	C/sunk Head Setscrew.....	3/8"UNC x 1"	3
36	90 deg. Elbow.....	2" BSPT	1
37	C/Sunk Head Plug.....	2" BSPT	1
39	Hand Valve.....	T2V8816	4
40	Hex. Nipple.....	3/4" BSPT	4
41	Discharge Pipe.....	T2K4837	1
42	Safety Valve.....	3/4" BSPT	1
43	Hex. Nipple.....	3/4" BSPT	1
44	Hand Valve.....	½" BSPT	1

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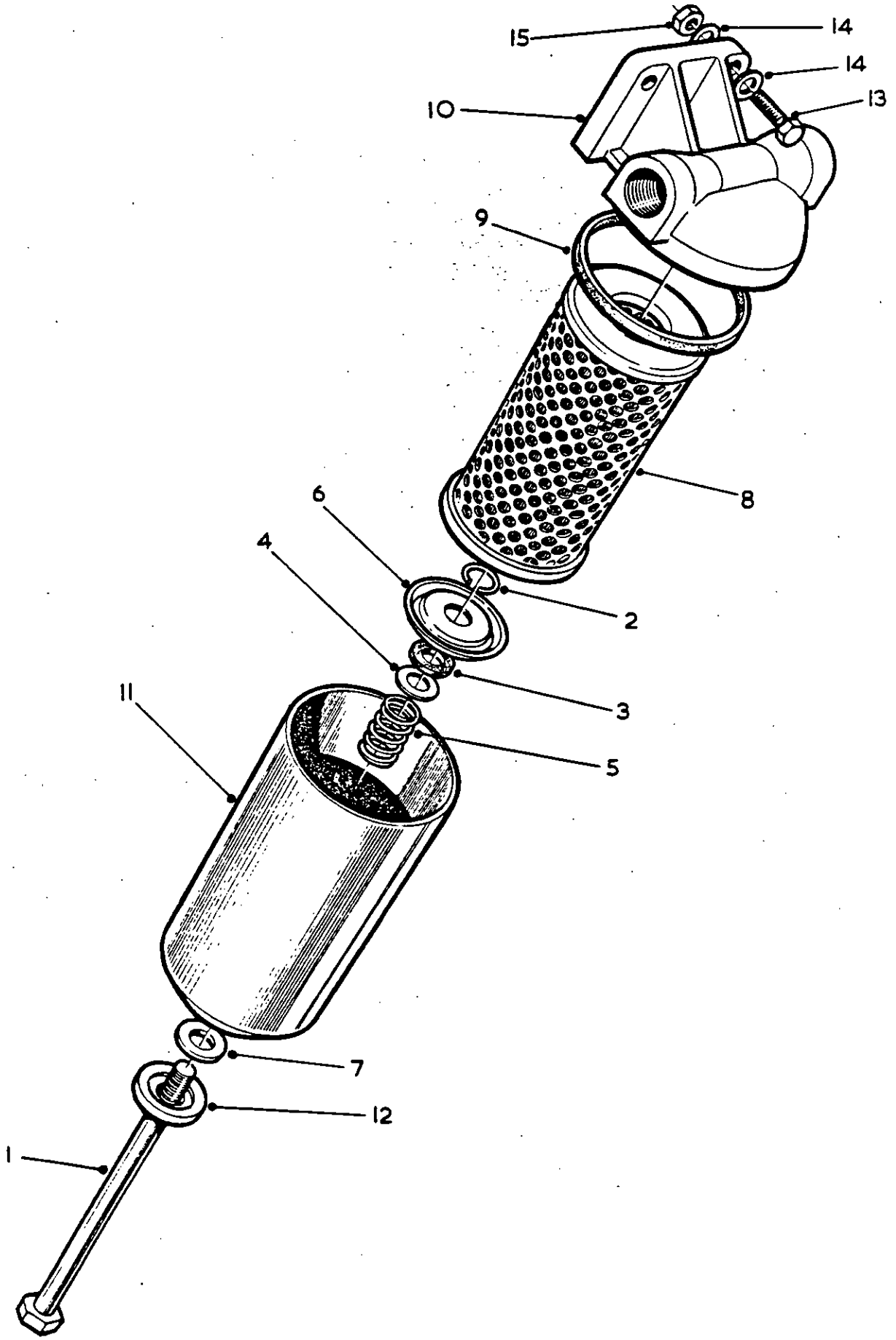
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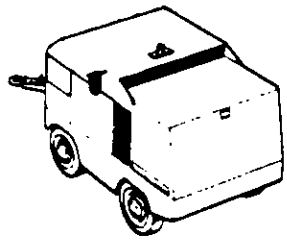

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	OIL FILTER COMPLETE	T2V8819	1
1	Filter Screw	T2V8819/ 1	1
2	Retaining Ring.....	T2V8819/ 2	1
3	Fibre Washer	T2V8819/ 3	1
4	Steel Washer	T2V8819/ 4	1
5	Spring.....	T2V8819/ 5	1
6	End Plate.....	T2V8819/ 6	1
7	Washer.....	T2V8819/ 7	1
8	Element	T2V8819/ 8	1
9	Gasket	T2V8819/ 9	1
10	Cover	T2V8819/10	1
11	Body	T2V8819/11	1
12	End Cover	T2V8819/12	1
13	Set Screw.....	5/16"UNC x $\frac{3}{4}$"	2
14	Spring Washer.....	5/16"	2
15	Hex. Nut	5/16" UNC	2
*	Filter Bracket.....	T2T5308	1
*	Element Replacement Kit	T2V8820	1

* Not illustrated.

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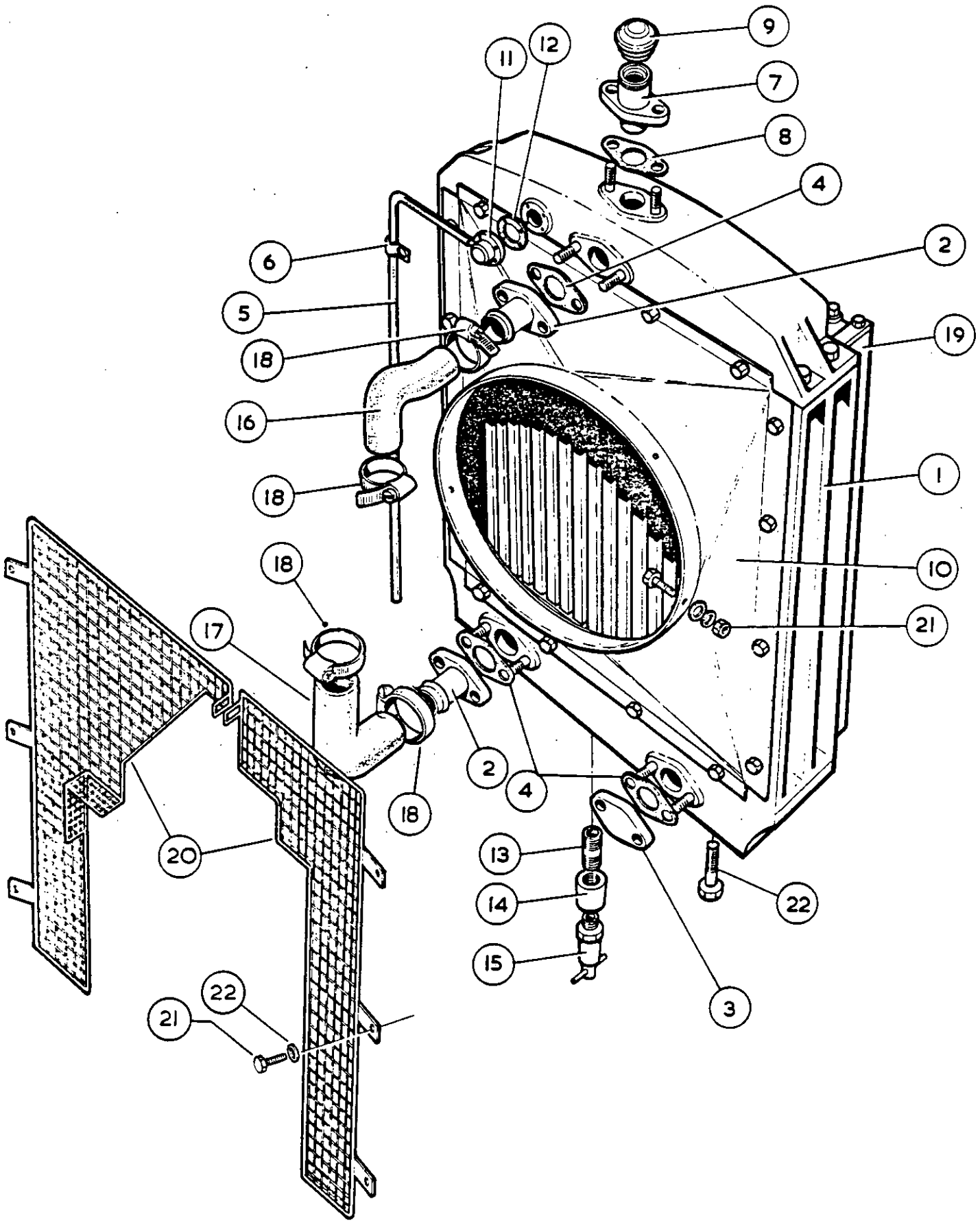
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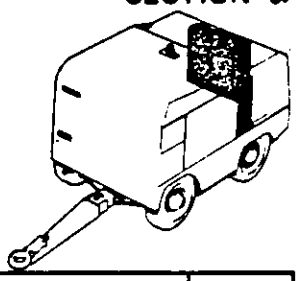
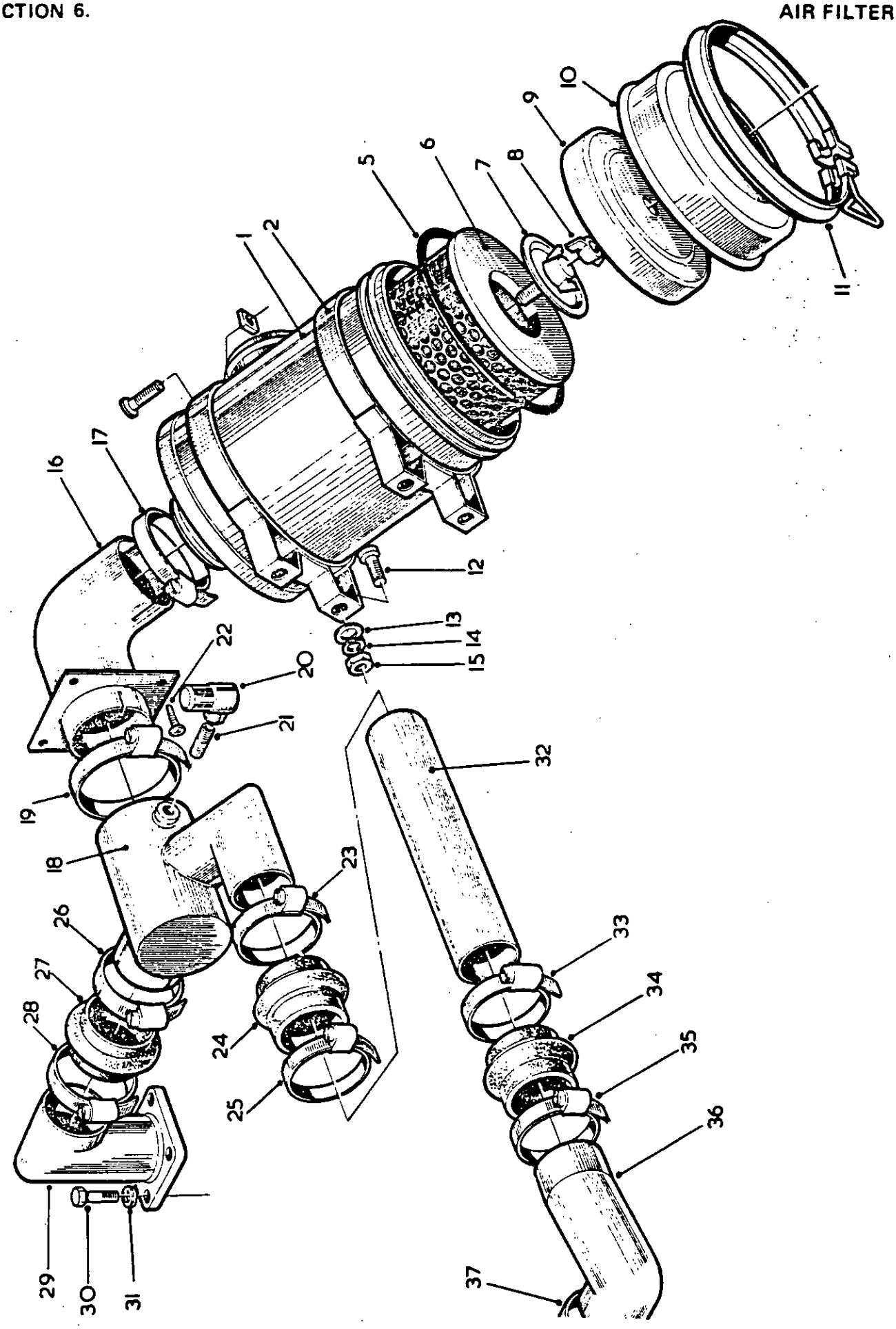
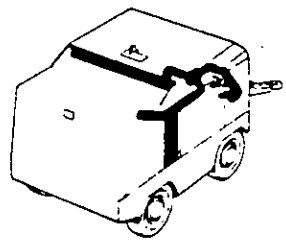


Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	RADIATOR & OIL COOLER COMPLETE.....	T2T5313	1
	RADIATOR COMPLETE.....	T2T5313/ 1	1
1	Side Standard	T2T5313/ 2	2
2	Water Pipe.....	T2T5313/ 3	2
3	Blank Flange	T2T5313/ 4	1
4	Joint - Water Pipe & Blank Flange	T2T5313/ 5	3
5	External Overflow Pipe.....	T2T5313/ 6	1
6	Overflow Pipe Clip.....	T2T5313/ 7	2
*	Internal Overflow Pipe Assembly	T2T5313/ 8	1
7	Filler Assembly	T2T5313/ 9	1
8	Joint - Filler Connection.....	T2T5313/10	1
9	Filler Cap.....	T2T5313/11	1
*	Filler Cap Washer	T2T5313/12	1
10	Fancowl	T2T5313/13	1
11	Relief Valve.....	T2T5313/14	1
12	Joint - Relief Valve	T2T5313/15	1
*	Tube Block Complete	T2T5313/16	1
*	Top Tube Plate.....	T2T5313/17	1
*	Bottom Tube Plate	T2T5313/18	1
*	Joint - Tube Plates.....	T2T5313/19	2
13	Space Nipple	½"BSPT x 3"	1
14	Reducing Socket	½" x ¼" BSPT	1
15	Drain Cock	K. 82	1
16	Radiator Upper Hose	92312-42	1
17	Radiator Lower Hose.....	92312-59	1
18	Hose Clips	No. 3	4
	OIL COOLER COMPLETE.....	T2T5313/20	1
*	Header Tank - Top	T2T5313/21	1
*	Header Tank - Bottom	T2T5313/22	1
*	Joint - Header Tank	T2T5313/23	2
*	Oil Connection Flange	T2T5313/24	2
*	Blank Flange.....	T2T5313/25	2
*	Joint - Oil Connection & Blank Flange	T2T5313/26	4
19	Side Air Baffle	T2T5313/27	2
*	Mounting Bracket	T2T5313/28	6
*	Tube Block Complete	T2T5313/29	1
*	Tube Stay Complete.....	T2T5313/30	2
*	Air Baffle - Top & Bottom	T2T5313/31	2
*	Coverplate for Vent Holes	T2T5313/32	1
*	Joint - Coverplate.....	T2T5313/33	1
20	Fan Guard	T2K4898	1
21	Set Screw.....	3/8"UNC x 1"	7
22	Lockwasher.....	3/8"	7
*	Flat Washer	3/8"	7
*	Hex. Nut.....	3/8" UNC	1

GYRO – FLO DR – 250-S
AIR FILTER





Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	DA 140 FILTER COMPLETE	T2V8831	1
1	Filter Body	T2V8831/ 1	1
2	Mounting Bands	T2V8831/ 2	2
5	Cup Gasket	T2V8831/ 5	1
6	Element	T2V8831/ 6	1
7	Gasket Washer	T2V8831/ 7	1
8	Wing Nut	T2V8831/ 8	1
9	Baffle	T2V8831/ 9	1
10	Cup Assembly	T2V8831/10	1
11	Clamp Assembly	T2V8831/11	1
12	Set Screw	$\frac{1}{4}$"UNC x $\frac{3}{4}$"	4
13	Washer	$\frac{1}{4}$"	4
14	Spring Washer	$\frac{1}{4}$"	4
15	Hex. Nut	$\frac{1}{4}$" UNC	4
16	Filter Elbow	T2T5234	1
17	Burgess Clip	5.1/8"	1
18	Intake Manifold	T2K4900	1
19	Jubilee Clip	5"	2
20	Restriction Indicator	20" WG	1
21	Space Nipple	1/8"BSPT x 1"	1
22	Set Screw	5/16"UNC x 5/8"	4
23	Jubilee Clip	3" Dia.	1
24	Rubber Hose	T2V4704-4	1
25	Jubilee Clip	3" Dia.	1
26	Jubilee Clip	4" Dia.	1
27	Rubber Hose	T2V4704-3	1
28	Jubilee Clip	4" Dia.	1
29	Air Intake Elbow	T2K4905	1
30	Set Screw	3/8"UNC x $\frac{3}{4}$"	4
31	Spring Washer	3/8"	4
32	Inlet Pipe	T2T5291	1
33	Jubilee Clip	3" Dia.	1
34	Rubber Hose	T2V4704-4	1
35	Jubilee Clip	3" Dia.	1
36	Engine Intake Elbow	T2K4906	1
37	Jubilee Clip	3" Dia	1
*	Smith & Johnson Pipe Clam	$5\frac{1}{4}$" OD	1
*	Air Inlet Hose Connection	2W30464	1

*Not illustrated.

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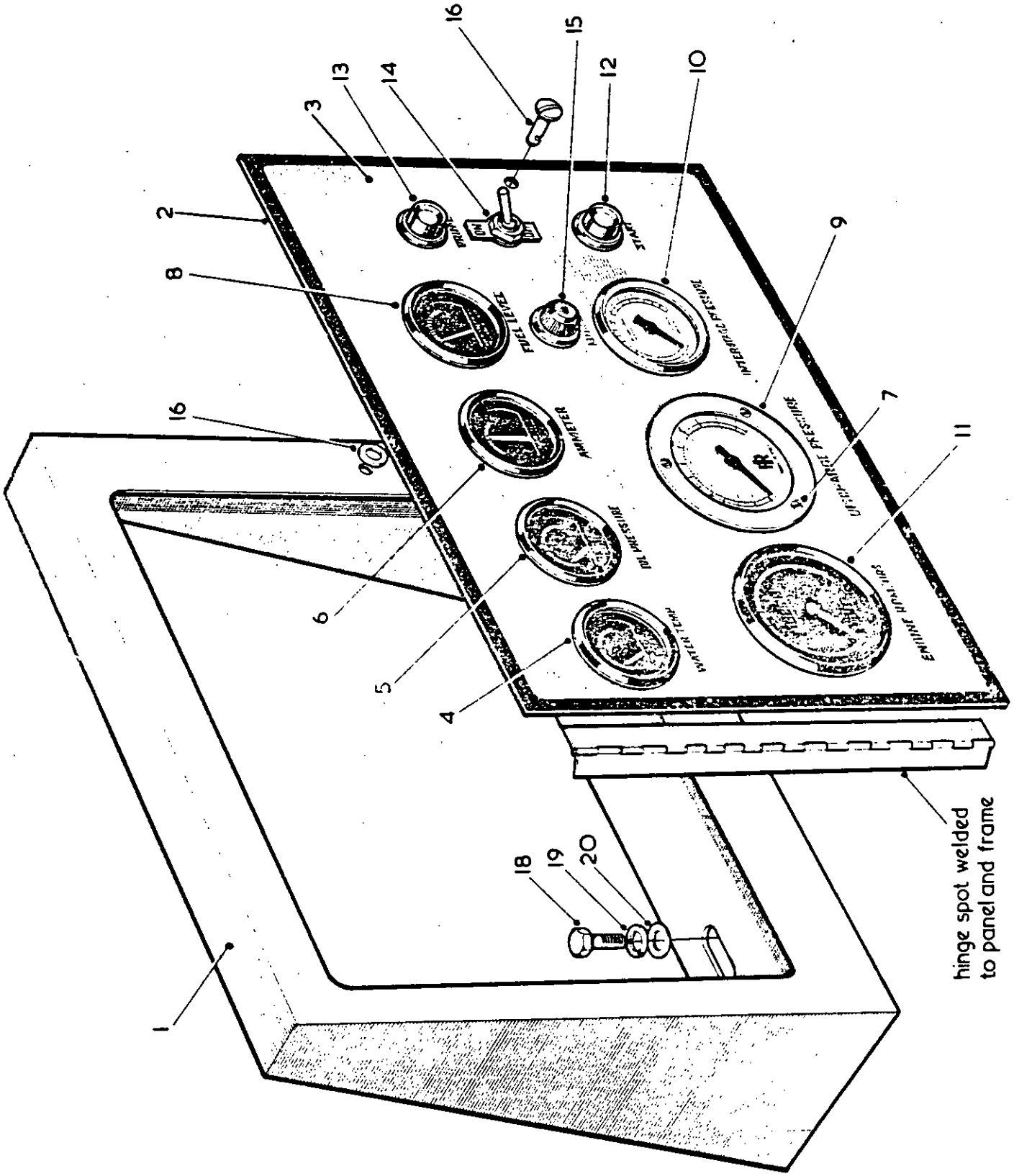
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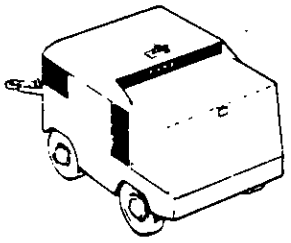
AMMETER
hinge spot welded
to panel and frame



Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	Instrument Panel	T2N2025	1
2	Instrument Panel Door	T2K4838	1
3	Instrument Panel Facia	T2K4839	1
4	Water Temp. Gauge	T2V8828	1
5	Oil Pressure Gauge	T2AC 7954338	1
6	Ammeter	T2AC 7967377	1
7	Chrome Countersunk Screw	4BA x $\frac{1}{2}$"	3
*	Nut	4BA	3
*	Lockwasher	4BA	3
8	Fuel Level Gauge	T2V8823	1
9	Discharge Pressure Gauge	3" - 200 psi	1
10	Interstage Pressure Gauge	2" - 100 psi	1
11	Tacho/Hour Counter Gauge	T2V8824	1
12	Start/Overide Push Button	T231872	1
13	Prime Push Button	T231872	1
14	On/Off Lever Switch	T2C 2720	1
15	Warning Light	T2V8834	1
18	Set Screws	3/8" UNC x 1"	4
19	Spring Washer	3/8"	4
20	Flat Washers	3/8"	4

* Not illustrated.

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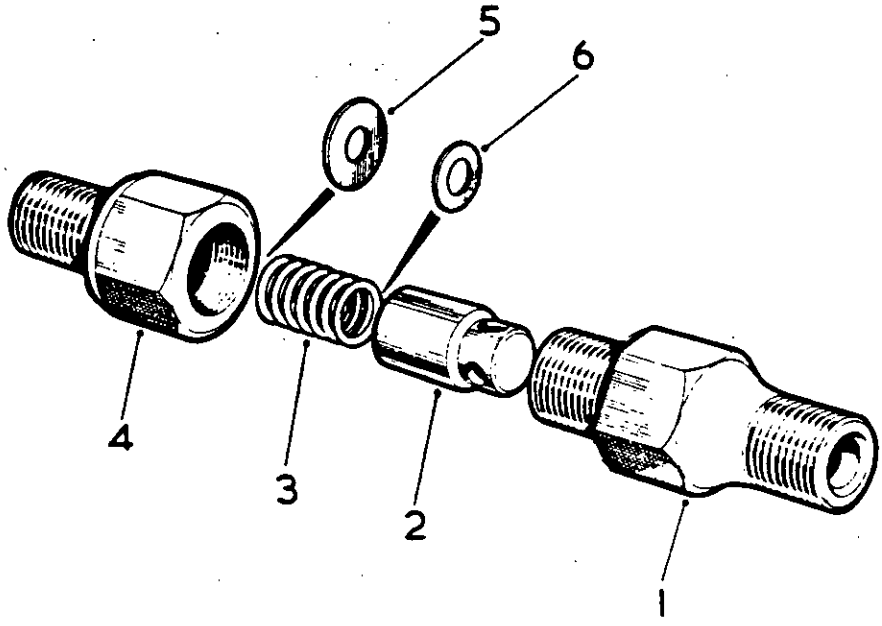

	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	OIL PUMP RELIEF VALVE ASSEMBLY.....	2W43854TP	1
1	Oil Pump Relief Valve Body	2W21461TP	1
2	Oil Pump Relief Valve Valve.....	3W21462	1
3	Oil Pump Relief Valve Spring	X1091PP755	1
4	Oil Pump Relief Valve Cap	2W43853	1
5	Shim -- if necessary (to decrease spring load).....	X1026T26	1
6	Shim -- if necessary (to increase spring load)	X1026T48	1

Always give the serial number of your compressor.

Do not order by illustration number - order by part number.

SPARES

INDEX

BOX No. TR 250 PCC 239 (Minimum Domestic).

Description Parts indented after an item are included with the item	Form Number	Qty.
COMPLETE BOX OF SPARES	TR250PCC239	1
Diaphragm Piston Ring	X1440T6A	2
UL-89 Regulator Diaphragm	2W32706	1
UL-88 Regulator Top Cover Diaphragm	2W37087	1
UL-88 Regulator Bottom Cover Diaphragm	2W34874	1
Oil Filler Plug "O" Ring	X1514T214C	2
Oil Filter Element Replacement Kit	T2V8820	1

BOX No. TR 250 PCC 240 (Average Domestic - Minimum Export)

Description Parts indented after an item are included with the item	Form Number	Qty.
COMPLETE BOX OF SPARES	TR250PCC240	1
Gasket - Set	TR250PCC241	1
Diaphragm Piston Ring	X1440T6A	4
Oil Filler Plug "O" Ring	X1514T214C	2
Oil Filter Element Replacement Kit	T2V8820	1
Low Pressure Rotor Vane - Set	R250P110	1
High Pressure Rotor Vane - Set	R250P115	1
Roller Bearing	2W48538	2
Rotary Shaft Seal	2W26684	1
Interstage Pressure Gauge	2" - 100 psi	1
Discharge Pressure Gauge	3" - 200 psi	1
Grab Bag (Misc, Bolts, Nuts, etc.)	T2V8944	1
Wood Box		1

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BOX No. TR 250 PCC 242 (Up to 5 Units Domestic. Up to 2 Units Export).

Description Parts indented after an item are included with the item	Form Number	Qty.
COMPLETE BOX OF SPARES	TR250PCC242	1
Gasket - Set	TR250PCC241	1
Diaphragm Piston Ring	X1440T6A	4
Rotary Shaft Seal	T2W26684	1
Compressor Coupling Drive Gear Gasket	2W32925	1
Roller Bearing	2W48538	2
L.P. Cylinder Plate - Inner	2R26349P1	1
L.P. Cylinder Plate - Outer	2R26350P1	1
L.P. Cylinder	2F11933	1
L.P. Rotor Vane - Set	R250P110	1
L.P. Rotor Bearing Spacer	2W48400	2
H.P. Cylinder Plate - Inner	2R26296P1	1
H.P. Cylinder Plate - Outer	2R26295P1	1
H.P. Cylinder	T2F11943	1
H.P. Rotor	2H17999TP	1
H.P. Rotor Vane - Set	R250P115	1
H.P. Rotor Drive Shaft	2R26259	1
H.P. Outer Bearing Snap Ring - Rear	X1318T19	1
Oil Pump Drive Gear	2H18081	1
Oil Pump Gear Bushing - Inner	2W32624	1
Oil Pump Driven Gear - Bushed	2W48492	1
UL-89 Regulator Valve Bushing	2W35030	2
UL-89 Regulator Diaphragm Piston	2W32707	1
UL-88 Regulator Repair Kit	UL88-200	1
UL-89 Reducing and Relief Valve	2W48571	1
UL88 Range Spring - Outer	PP604	1
UL-88 Range Spring - Inner	T2V4677	1
Oil Separator Screen Assembly - packed	2R26443T	1
Oil Filler Hole Plug "O" Ring	X1514T214C	2
Radiator Upper Hose	T2V4984	1
Radiator Lower Hose	T2V7753	1
Radiator Cap	T2T5276/10	1
Air Discharge Pressure Gauge	3"-200 psi	1
Interstage Pressure Gauge	2"-100 psi	1
Fuel Tank Cap	T2EOA9030	1
Oil Filter Element Replacement Kit	T2V8820	2
Grab Bag(Misc.Bolt, Nuts, Fittings etc)	T2V8944	1
Wood Box	—	1

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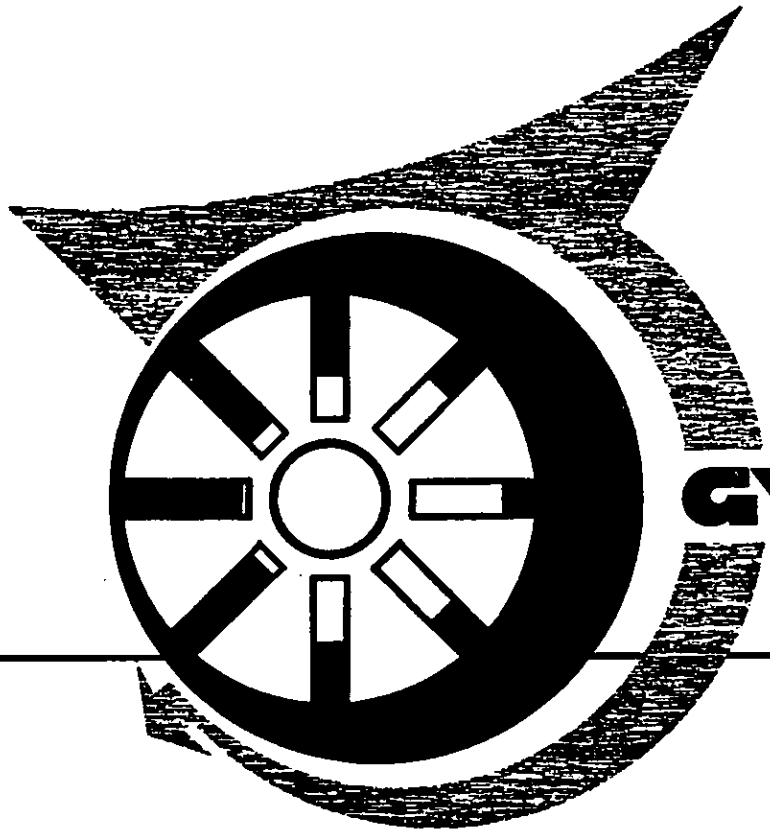


GYRO-FLO

INSTRUCTIONS AND PARTS LIST

MODEL DR 250 S

DIESEL ENGINE PORTABLE AIR COMPRESSOR

Ingersoll-Rand®

TP. 12034

INSTRUCTIONS & PARTS LIST

GYRO-FLO

FOREWORD

In preparing this publication, every effort has been made to provide sufficient information to permit an operator to perform his duties so as to receive maximum performance and trouble free service from the compressor. All classes of equipment, regardless of how well built, require a certain amount of attention. The purpose of this publication is to acquaint an operator with the functions, operation and servicing of the various components, which were built with the very best of materials and workmanship, to obtain maximum life from the compressor.

Before starting the compressor, the instructions should be carefully read to obtain a thorough knowledge of the duties to be performed. Take pride in the compressor, keep it clean, and in good mechanical condition. For major servicing, not covered in this publication, consult your nearest Ingersoll-Rand Company Branch Office, or the distributor from whom the compressor was purchased. Correspondence with a branch office, or distributor, must always specify the serial number of the compressor as well as the model. See page 16 for location of unit serial number.

DRIVERS - Section 2

AIR END - Section 3

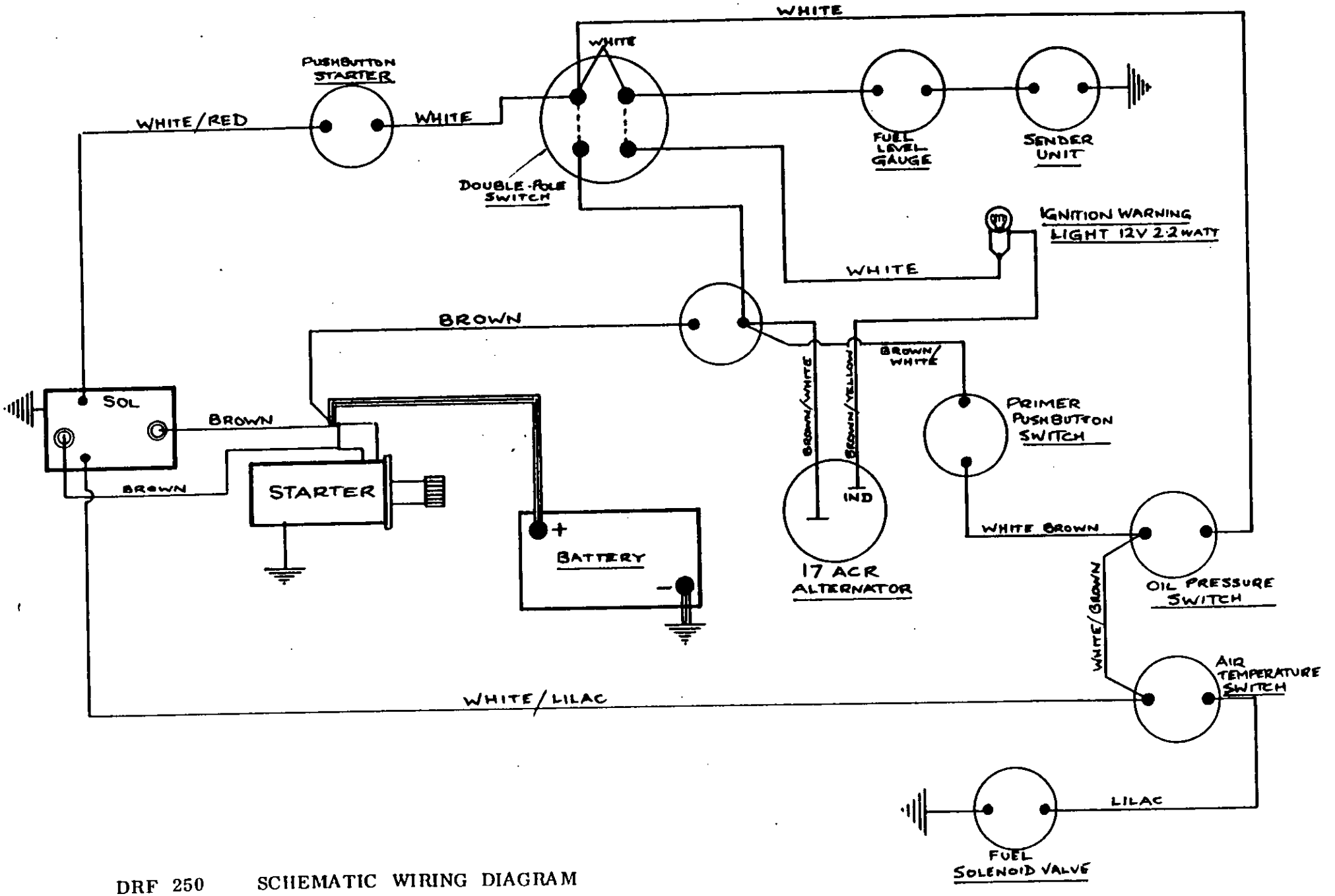
RUNNING GEAR, FRAME HOUSING - Section 4

FLEXIBLE TUBING - Section 5

AUXILIARY PARTS - Section 6

SPARES - Section 7

INSTRUCTION SECTION



DRF 250 SCHEMATIC WIRING DIAGRAM

Normal Operating Pressure - psi		100 (7.03 kg./sq.cm)
Actual Delivery - cfm		250 (7.08 cu. metre)
Full Load Speed - rpm		1800
Approximate No Load Speed - rpm		800
Oil Capacity Compressor System - Imperial Gals		10 (45.56 litres)
Type of Air Filter		DA 140
Capacity Fuel Tank - Imperial Gals		27 (122.8 litres)
Electric Starting System - volts		12
Overall Length - feet/inches	2-Wheel	
	4-Wheel	13' - 9"
Length, Parked-feet/inches	4-Wheel	10' - 0"
Length Less Drawbar	2-Wheel	9' - 0" (275 cm)
Width - feet/inches	2-Wheel	5' - 10" (175 cm)
	4-Wheel	5' - 10" (175 cm)
Height - feet/inches - All Models		6' - 6" (199 cm)

GENERAL DESCRIPTION

The Gyro - Flo Portable Compressor consists of a two-stage rotary air compressor directly connected to and driven by a heavy duty industrial type engine. This unit assembly is mounted on a sturdy, channel section, welded steel frame.

The running gear is a two-wheel or four-wheel spring mounting, having pneumatic tyred wheels. "Less running gear" units are furnished on wooden shipping skids.

Operating accessories include: oil cooler, fuel supply tank, air receiver, oil separator system and the necessary regulating devices instruments, air cleaners, oil filters, etc.

COMPRESSOR

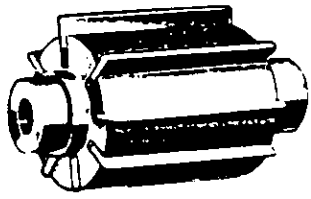
The compressor is two-stage, and is of the sliding vane rotary type. The first stage rotor chamber is supported by a yoke which is bolted directly to the flywheel housing of the engine. The second stage rotor chamber mounts directly in line with, and at the rear of the first stage chamber with a centre bearing housing between the two. A rear bearing housing and main oil pump casing with cover closes the rear end of the second stage rotor chamber. The centre bearing housing also has supporting arms which rest on the main frame and serve as an additional support to the compressor.

A front bearing, with rotary oil seal, is contained in the yoke. Special end plate inserts are located at each end of each rotor chamber to separate the chambers from the adjacent bearing assemblies and act as end guides for the vanes.

The first and second stage cylinder bores (or rotor chambers) are each offset from the shaft centre line. This causes each cylinder bore to be eccentric to its rotor.

The two rotor chambers have the same cylinder bore diameter, but the first or low pressure stage chamber, and its rotor, is considerably longer than the second or high pressure stage.

The first and second stage rotors are each slotted to receive sliding vanes which are sealed by the copious amount of lubricating oil fed to the bearings and bores. They are held against the bore wall by centrifugal force when operating.



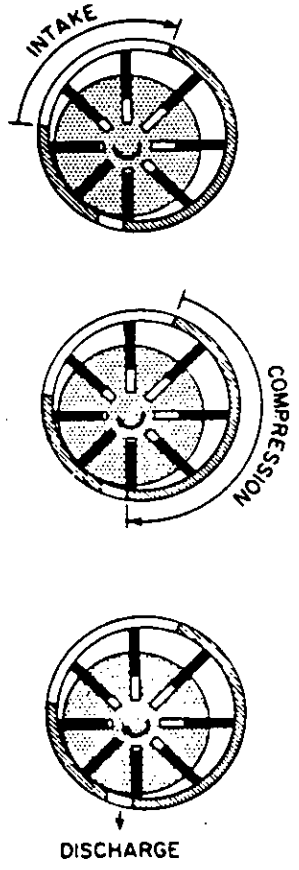


Fig. 1 - Diagram showing compression cycle of the GYRO - FLO.

AIR FLOW

Free air is taken into the first stage chamber through large ports at an area where the vanes are well out of the rotor slots, thus filling the spaces or volumes between the vanes.

As rotation proceeds, the vanes are moved radially inward in their slots by the bore wall. This causes the volume between the vanes to decrease and compresses the air trapped in this space. As this space volume approaches zero, a second series of ports is

uncovered allowing the compressed air to pass on through cast passages to the intake of the second stage rotor chamber. Here the process is repeated, raising the air pressure from the interstage pressure to the final discharge pressure.

OIL FLOW

Relatively cool lubricating oil is admitted under pressure to the precision roller bearings and also is injected in metered amounts, directly to the rotor chambers. The oil passes through the bearings at each end of each rotor, enters the close clearances at the vane ends, and thence to the rotor chambers.

All of the oil thus introduced mixes with, and passes on with the air being compressed. This removes the heat of compression to a large degree and results in an unusually low final air discharge temperature.

The second stage discharge air passes through a connection into a combination air receiver and primary oil separator where the oil is removed from the air and collects in the storage reservoir formed by the lower portion of the combination receiver and separator shell. From there, the oil is forced through piping to an oil cooler assembly. This cooler is located at the radiator end of the portable in such a manner that the engine radiator fan serves to cool both the engine jacket water and the compressor lubricating and cooling oil.

OIL PUMP

The oil pump is located at the rear end of the second stage rotor chamber. The pump is of the positive gear type, with the driven gear of the pump mounted directly on, and driven by a splined rotor shaft extension.

The oil pump receives its supply from the oil cooler through piping and an oil filter. It discharges the oil through internal passages directly to the rotor bearing and chambers.

An adjustable spring-loaded by-pass valve, mounted on the oil separator and connected to the oil pump, prevents any possibility of damage due to over pressure.

When the compressor is operating at low capacity, some of the oil may by-pass the cooler through a thermostatically controlled by-pass valve. This arrangement helps to maintain a higher average compressor oil temperature thereby reducing the possibility of water vapour condensation in the system. This valve located in the oil piping, by-passes varying amounts of oil, depending on the temperature, until the oil being circulated reaches a temperature of 185°F. (85°C.). At this point, the valve closes the by-pass completely and all of the oil is circulated through the cooler.

GENERAL – AIR END

The first stage rotor chamber intake is equipped with a UL-89 Volumetric Regulator (Fig. 5). The incoming air passes through an efficient two stage dry type air cleaner before entering the regulator and the compressor.

The first stage rotor shaft extends forward to carry an internal-external gear toothed coupling, the outer ring of which is bolted directly to the engine flywheel. This coupling assembly is lubricated and sealed against the entrance of dirt or moisture and provides a certain amount of necessary flexibility.

The second stage rotor is driven through a full floating splined shaft connection from the first stage rotor. In addition, the second stage rotor splined grooves serve to drive the oil pump splined shaft.

Each rotor rides in its own set of caged roller bearings, while the oil pump shaft operates in self-oiled sleeve bushings.

Regulation is 100% from full capacity to zero capacity, and is accomplished by a combination of engine (and compressor) speed reduction together with proportional compressor volumetric regulation.

It is recommended that vane tips be inspected at 2,000 hours or after one year. Vanes should be replaced after 4,000 hours' service or every two years as a matter of routine preventive maintenance. When vanes are replaced, make sure that driving or trailing tips of rotor slots are not razor sharp. They should be slightly rounded. This can be easily done by hand using a fine-grained stone to produce a radius of about 1/64". (.397 mm.).

To make an inspection of the high and low pressure vanes with a minimum removal of parts the following procedure is recommended.

1. To inspect low pressure vanes remove UL-89 regulator complete and then "inch" engine over with the starter and inspect vanes through the exposed air intake in cylinder.
2. To inspect high pressure vanes remove sheet metal access cover on the back of compressor housing. Remove cap screws that fasten the high pressure outer bearing housing to the cylinder. The housing with oil pump, bearing and outer race, and end plate can now be slipped off and vanes can be slipped out of rotor slots.

INSTRUMENT PANEL

The instruments are located on one panel. Instruments include, discharge air pressure gauge, engine water temperature gauge, engine oil pressure gauge, tacho-hour counter, ammeter, ignition warning light, on-off switch, pushbutton start, pushbutton primer, fuel level gauge and cold start pushbutton (when fitted).

ELECTRIC STARTING

Electric starting is standard and includes starter motor, alternator, relay and battery with necessary wiring and terminals.

AIR – RECEIVER – OIL SEPARATOR

The air receiver - oil separator system consists of a combination primary oil separator and air receiver tank plus a secondary separator tank. Both tanks are made to B.S.S. for welded steel pressure vessels and are designed for 150 psi (10.54 kg/sq. cm.) working pressure.

Removing the cover on the end of the primary separator provides a very large opening through which thorough cleaning and inspection can be performed. An internal strainer in the bottom of the primary separator tank provides a means of trapping any solids which might be carried by the oil flow through the separator outlet pipe toward the oil cooler. This strainer fitting is removable for cleaning. The delivery end of the secondary separator is arranged to provide connections for the minimum pressure valve, service valves, relief valve also the required safety valve and automatic blowdown valve. It is continuously drained of any oil accumulation by a connection at the bottom of the chamber to the inlet of the high pressure cylinder.

FUEL TANK

The fuel tank is mounted longitudinally with the compressor frame. The capacity is 27 Imperial gallons (122.8 litres). The entrance to the outlet tube connection is raised above the tank floor to provide a water and sediment settling space or trap. The low side drain plug should be removed occasionally to draw off any collection of water and sediment.

SPRING MOUNTING

The complete unit is carried on a sturdy two wheel or four-wheel mounting. The mounting has semi - eliptic springs. Pneumatic-tyred disc - type wheels are standard. A drawbar is provided as standard equipment which can be put in parking position on 4 wheel units. A drop leg is provided as standard on the two-wheel mounting only.

LESS RUNNING GEAR

"Less running gear" units are furnished on temporary wooden shipping skids. If customer mounts a "less running gear" unit on other equipment, it is his responsibility to see that the frame is not stressed or warped because of the mounting arrangement. The use of special rubber mounts may be desirable or necessary.

OPERATION

BEFORE STARTING

1. Move the portable compressor to level ground and in as clean a location as possible.
2. Check the oil level in both the compressor primary oil separator reservoir and the engine crankcase. Add oil if required. (See special instructions under lubrication Page 8).
3. Check air cleaner.
4. Check that there is sufficient fuel in tank.
5. Check engine radiator to see that it is correctly filled with clean, soft water. Use permanent type anti-freeze solution if operating in below freezing temperatures. The use of a commercial rust inhibitor is recommended to prevent internal corrosion of the cooling system.
6. With no air pressure in the air receiver and oil separator system, leave service valves and hand relief valve open.

STARTING

The diesel engine starts directly on fuel oil.

1. Depress Ignition Toggle Switch to 'ON' position, press starter pushbutton until engine fires, then close service valves.

(Normally the unit can be started with the hand relief valve closed, but in extreme cold weather, it may be advisable to leave the hand relief valve partially open until the engine starts and then close it as soon as possible.)

Engine cold starting device Ford Units – In conditions of extreme cold, push in the excess fuel device located on the fuel injection pump, set the decompressor control in the "up" position, operate the starter motor for a few seconds to break the sealing effect of the cold oil, pull the decompressor lever down to restore compression and operate the starter as for normal starting.

In extreme cold conditions, on Perkins Engines operate the heater glow plug system by depressing push button on Instrument Panel.

The closing of service valves and relief valve causes compressor unloading and results in the minimum load on the engine while it is warming up. It also applies full pressure to the lubricating oil in the storage reservoir. This causes the oil to flow to the oil cooler or through the by-pass valve direct to the oil pump inlet to establish full lubricating pressure in the compressor immediately.

2. When fully warmed up, connect air load to the compressor and open the service valve allowing air demand to regulate output as required.

STOPPING

Close the air service and relief valves, causing compressor to unload and engine to operate at minimum reduced speed until the engine has cooled down sufficiently to prevent the radiator from boiling over, then shut down.

Shut down by returning toggle switch to off position whereupon air pressure will automatically be relieved from the air receiver-oil separator system, by means of the 'Automatic Blowdown Valve' as the compressor stops.

As this occurs the manual relief valve should be opened to further relieve pressure.

Unit should never stand idle with system pressurised.

MINIMUM PRESSURE SERVICE VALVE

This is an automatic valve which maintains a minimum pressure of about 70 psi in the receiver-separator system so as to ensure oil circulation.

Shut-off discharge is accomplished by means of cocks located in panel at towed end of machine.

This valve cannot be used as a check valve in any operation where a check valve is required to prevent backflow of line pressure, such as in parallel operation, etc. (Refer to Page 8).

AUTOMATIC BLOWDOWN VALVE

This is an automatic valve to release air from the system when engine is stopped.

MAINTENANCE

COOLING SYSTEMS

ENGINE RADIATOR AND COMPRESSOR OIL COOLER

Keep all core sections of both the radiator and oil cooler clean by using a cleaning solution. Higher efficiency and lower temperatures will result when the external grease and grime and the internal oxidation of the lubricating oil is removed thoroughly.

Use only clean, soft water for filling the radiator. Where the water is known to be hard or alkaline, treat it with a softening compound to prevent formation of scale and rust both in the engine jacket spaces and in the radiator itself.

Freezing of water in the cooling system may result in serious damage. If the unit is to stand idle in freezing temperatures, the only safe plan is to drain the system, unless an anti-freeze solution is used.

Before adding any anti-freeze solution, tighten up all joints in the cooling system and make sure there are no leaks.

Ethylene-glycol solutions are recommended since they are not lost by evaporation and only water need be added to maintain a full system. If any of the solution is lost by leakage, foaming, etc., it must be replaced by new anti-freeze solution.

The entire cooling system must be thoroughly cleaned and flushed before using an ethylene-glycol solution. All hose connections and joints must be kept tight, as any leakage of air into the system may cause acid formation and corrosion.

FUEL SYSTEM AND FUEL STORAGE

A cylindrical fuel tank is mounted on the compressor frame. Pilferage is prevented by the lockable housing side covers.

The outlet connection of the tank is so arranged that fuel is taken from a point somewhat above the floor of the tank thus providing a settling space where water and sediment can collect without being drawn into the fuel system. Bottom drain openings are provided for removal of the collected water and sediment. Drain the settlings after each filling of the tank.

Clean fuel is vitally important and every precaution should be taken to ensure the fuel being clean when it is poured or pumped into the supply tanks.

Fuel oils from steel drums and commerical containers often pick up scale, water, and sediment. To properly store fuel oil, use black iron (not galvanised) storage tanks or drums, tightly sealed against water, dust, and dirt. A satisfactory way of installing tanks is shown in the accompanying illustration, Fig. 2.

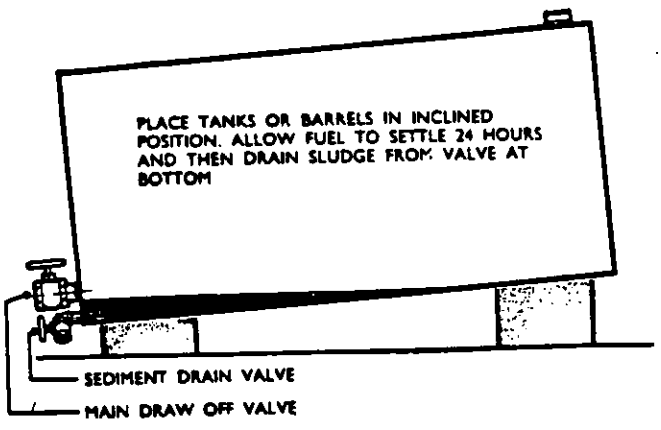


Fig. 2. - Fuel Oil Storage Tank.

Draw settlings from the well at the bottom of the storage tank at frequent intervals and always before drawing fuel for use.

When transferring fuel from the storage tank to the portable supply tanks by other methods than pump and hose, use a funnel which is kept for this purpose only. Wipe the funnel clean each time before using. Do not allow the engine fuel supply tanks to become empty because the genuine fuel pump may loose its prime and be damaged.

PROTECTIVE DEVICES

The compressor is protected against overheating by a thermal switch located in the compressor discharge connection. The switch is of the "normally closed" type and should the temperature of the discharge air rise above 220°F. (104.4°C) to 230°F. (110.0°C), this switch opens to cause immediate shutdown of the engine by de-energizing a solenoid-operated fuel cut-off valve.

GENERAL

Should the engine be shut down during operation by any of the protective devices check immediately to determine where the trouble lies and correct it before attempting further operation.

Read the engine instruction book to become familiar with the operation of the starting equipment and the various protective devices which are furnished to prevent damage to the engine due to lack of proper care and attention.

SAFETY VALVES

A safety valve is connected to the secondary oil separator to protect the compressor against any serious over pressure. It should be operated by hand monthly to make sure it is in proper operating condition. Should this safety-valve "blow" at any time due to excessive discharge pressure, check the regulating devices for improper settings.

AIR CLEANER

Both engine and compressor intake are protected against entrance of dust and foreign objects by efficient two-stage dry type air cleaner.

The cleaner should be serviced as often as required in accordance with operating conditions: daily, if in a very dusty location.

The cleaner is fitted with a restriction indicator to give visual indication of the necessity for filter cleaning.

AIR RECEIVER AND OIL SEPARATOR SYSTEM

The inside of the primary oil separator may be cleaned by removing the end cover.

An oil separator element is mounted within the secondary separator shell which is mounted on the rear housing of the unit.

OIL SEPARATOR ELEMENT

The secondary oil separator element consists of a series of chambers each packed with an oil diverting medium through which the compressor air passes on its way to the final discharge connection. (Most of the oil is thrown out of the air mechanically in the primary oil separator, before the air enters the secondary oil separator).

The secondary separator element (as shown in Fig. 3) is removable as a unit for replacement when required. This is indicated by more oil consumption by the compressor than usual. In normal operation servicing of the secondary separator element should not be required for two or three years.

The diverting medium is a very special material, purchased on a strict specification and installed in the screen element to a definite density. Servicing, therefore, is by replacement with a complete factory-packed screen assembly as shown.

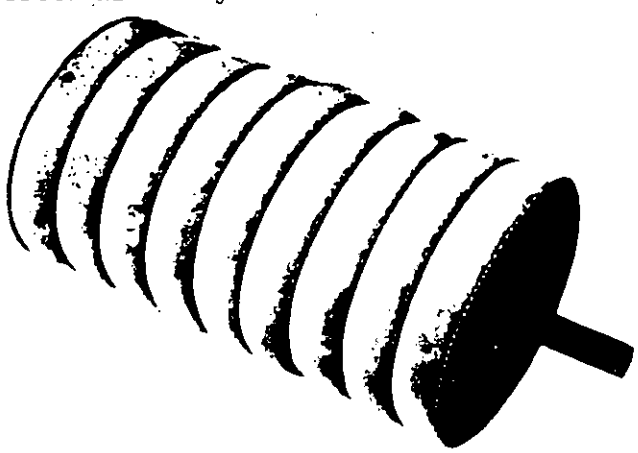


Fig. 3 - Secondary Oil Separator Element, Factory Packed, and replaceable.

CHASSIS (GENERAL)

Both mountings are equipped with grease fittings at wear points for use with a normal grease gun. The wheels should be removed and the bearings cleaned and repacked once a year. The free ends of the springs may be lubricated occasionally with heavy oil or light grease.

MAXIMUM ALLOWABLE TOWING SPEED

4 wheel units	20 mph	32.19 kph
2 wheel units	35 mph	56.35 kph

ROTARY COMPRESSORS ON PUMP – UP JOBS

The secondary oil separator on the rotary portable air compressor is designed to function correctly at normal operating pressures.

The high air velocities (zero pressure or low pressure) will carry considerable quantities of oil from the secondary oil separator over into the discharge line, therefore it is essential to hold a minimum pressure of 70 psi. (4.92 kg./sq.cm.) in the receiver-separator system until such time as the discharge line pressure has increased to that amount. This is accomplished by a minimum pressure valve which automatically maintains a minimum pressure of 70 psi (4.92 kg./sq.cm).

Attempting to operate at discharge pressures below 70 psi will not increase the actual delivery.

LIMITS OF OUT OF LEVEL OPERATION

MODEL	Standard Engine Standard Oil Pan		
	Lengthwise		Sidewise
	Front Up	Front Down	
DR 250 S DR 250 SL	15°	10°	7°

The engine, and not the compressor, is the limiting factor in all cases. When the unit is to be operated out of level, it is more important to keep engine crankcase oil level near the high mark than when operating on level ground. The out-of-level degrees are given on the assumption that the engine crankcase is filled to the high level mark (with the unit level) and the compressor oil gauge shows nearly full. Do not over-fill either the compressor lubricating system or the engine crankcase.

COMPRESSOR COUPLING

The complete coupling assembly is sealed to prevent the entrance of dirt and to retain the perminent lubrication installed on the original assembly.

If the engine and compressor are separated during a major overhaul, the coupling gear teeth should be repacked with grease before reassembling.

Use an automotive type front wheel bearing grease available at any service station. Use only enough to fill the gear teeth as an excess of grease in the chamber will expand with heat and resulting end thrust may cause compressor failure.

SPECIAL WARNING FOR PARALLEL OPERATION

Do not connect a Gyro-Flo Portable Air compressor into a common header with any other units of any description, or any other source of compressed air, without placing a check valve between the header and each Gyro-Flo Compressor.

Backflow of line pressure and possible contamination of the receiver-separator and lubricating system with oil, water, or scale must be prevented.

SPECIAL PRECAUTIONS FOR MOISTURE DRAINAGE

In installation where the discharge piping may slope upwards from the service outlet of the air receiver-oil separator system, provisions should be made to install a drain leg at the service outlet, to collect any drainback of condensate from the discharge line.

LUBRICATION (COMPRESSOR)

Compressor lubrication and cooling are both accomplished by the compressor lubricating oil. The compressor is cooled by oil injection directly into the rotor chambers. The compressor lubricating system consists of an oil pump, a storage reservoir, an oil cooler, and the necessary piping together with an oil filter.

The oil cooler is a radiator-like heat transfer core section placed immediately in front of engine radiator core and having approximately the same frontal area. It is so arranged internally that the oil passes through the cooling air stream on its way through the core. Oil is piped from the storage space in the primary oil-separator to the inlet opening of the cooler core. On leaving the cooler it flows through the piping and the oil filter to the oil pump intake.

COMPRESSOR OIL FILTER

The oil filter is located as on fig. 4 in a high loop of the oil piping so that the filter body-element may be removed for servicing without having to drain any other part of the system.

Elements should be inspected or replaced after:- 50 Hours operation and 150 Hours operation, initially, and at every 500 hours further operation. While filter body is removed inspect for lacquer deposit. If a lacquer deposit is noted change compressor oil completely to avoid vane sticking in the compressor.

OIL STORAGE RESERVOIR IN PRIMARY SEPARATOR

The oil storage reservoir is in the lower portion of the primary separator shell, where most of the oil collects as it is thrown out of the compressed air before it enters the secondary oil separator. The level of the oil in this storage reservoir is indicated by an oil level dial gauge, visible from the rear of the unit. This should indicate at least between "half and full" when the unit is shut down and on fairly level ground. The storage reservoir is equipped with a special filler plug and drain plugs.

For complete draining of the reservoir and piping, use the large drain plug in the pipe fitting under reservoir. Also remove drain plug under oil cooler and discharge receiver.

Do not attempt to remove the filler plug without first releasing all pressure from the receiver-separator system by opening the hand relief valve.

LUBRICATION

The use of the proper lubricating oils and grease is imperative in maintaining efficiency as well as keeping repairs to a minimum.

Normally these units are furnished with an initial supply of compressor lubricating and cooling oil sufficient to allow operation of the unit for approximately 1000 hours; however, if a unit has been completely drained of all compressor lubricating and cooling oil, the oil storage reservoir in the receiver-separator must be refilled with a new oil before operating the unit.

If the unit has been operated for 1000

If any varnish or lacquer deposits are found in the filter, this indicates that the oil is deteriorating and it should be changed immediately.

LUBRICATION

Lubrication of the engine is fully covered in the engine instruction book.

ONCE A DAY

Or every 8 Hours of Operation.

1. Maintain an oil level between half and full on the oil level indicator gauge. Check this each morning before starting.
2. Air Cleaner. Clean out dirt, every eight hours if compressor is operating in an extremely dusty location.

ONCE A WEEK

Or every 50 Hours of Operation.

2. Air Cleaner. If unit is operating in a reasonably clean atmosphere, its cleaning need only be performed once each week instead of every day.
3. The Regulator arm and linkage should receive a few drops of oil every 50 hours. Use engine crankcase oil.
4. Engine Crankcase Oil Filler Hole. See Engine Instruction Book.
5. Engine Oil Level Gauge. Check the oil level and refill if necessary. See Engine Instruction Book.
6. Generator. Oil the generator sparingly using engine crankcase oil.

TWICE A MONTH

Or every 100 Hours of Operation.

7. Compressor Lubricating Oil Filter. Remove shell, and service as per instruction on plate.
8. Engine Oil Filter Clean and renew element. See Engine Instruction Book.

EVERY THREE MONTHS

Or every 500 Hours of Operation.

10. Running Gear Spring Slip End. Apply grease with brush.
11. 12. Compressor Lubrication Oil. Change oil completely every 500 hours of operation, or more often if lacquer formation is found. To drain system remove plug, never remove filler plug when oil separator is under pressure. Do not remove drain plug except when it is necessary to completely change the oil.
13. Remove oil line screen assembly from scavenger line in secondary separator and clean.
14. Clean H. P. cylinder inlet orifice. Can be reached when scavenger line is removed.
15. Use grease gun to lubricate track rod ends, king pins and drawbar pintel, and parking mechanism.
16. Use oil can on hand parking brake linkage, and overrun brake.

TWICE A YEAR

or every 1250 hours of operation.

17. Wheel bearings. Remove wheels, replace any worn parts and repack not over half full with wheel bearing grease.

OTHER SERVICE REQUIREMENTS

18. Radiator.
Drain water in freezing weather if not protected with anti-freeze.
19. Engine Cylinder Block. Drain water in freezing weather if not protected by anti-freeze.
20. Tighten all bolts and nuts periodically, especially wheel nuts (not illustrated).
21. Compressor and engine air inlet pre-cleaner. Keep screens free of leaves etc. at all times. To remove dust, wash screen in fuel or solvent as required.

hours (or when the oil level gauge indicates low when the unit is shut down and is standing approximately level) it should be completely drained of the compressor lubricating and cooling oil. If the unit has been operated under adverse conditions, or under long shutdown periods, an earlier change period may be necessary as oil deteriorates with time as well as with operating conditions. Complete replacement of the old compressor oil with clean new oil every 500 to 1000 hours, depending upon operating conditions, is not only desirable, but is good insurance against the accumulation of dirt, sludge, or oxidized oil products in the compressor lubricating and cooling oil system.

Completely drain the oil storage reservoir in the receiver-separator and the lubricating and cooling system piping. After the unit has been completely drained of all old oil, replace the drain plugs, making sure they are tight. If the oil is drained immediately after the unit has been run for some time, most of the sediment will be in suspension, and therefore, will drain more readily.

WARNING

Do not, under any circumstances, remove any drain plugs, or the oil filler plug from the compressor lubricating and cooling oil system without first making sure the air receiver system has been completely relieved of all air pressure.

Under normal operating conditions, use H. D. detergent type motor oil or DEXRON type automatic transmission fluid.

Conditions of low ambient temperatures, -10°F to 40°F (-23.3°C to -40.0°C), and/or heavy duty cycle in high ambient temperatures, above 85°F (29.4°C), require DEXRON type automatic transmission fluid.

Descriptions for the previously mentioned oils are as follows:

H. D. Detergent Type Motor Oil

An oil complying with all requirements of Specification MIL-L-2104B, Grade SAE 10W.

DEXRON Type Automatic Transmission Fluid.

An automatic transmission fluid complying with all the requirements of the General Motors DEXRON Specification. The fluid must have been given a DEXRON approval or qualification number. The oil must also have a maximum pour point of -45°F (-42.8°C) and a minimum flash point of 390°F (198.8°C).

CAUTION

Some oil mixtures are incompatible, and result in the formation of varnishes, shellacs, or lacquers which may be insoluble. Such deposits can cause serious troubles including clogging of the filter. Where possible, try to avoid mixing oils of the same type but different brands. A brand change is best made at the time of a complete oil change.

ENGINE LUBRICATING OIL

Refer to engine operator's manual.

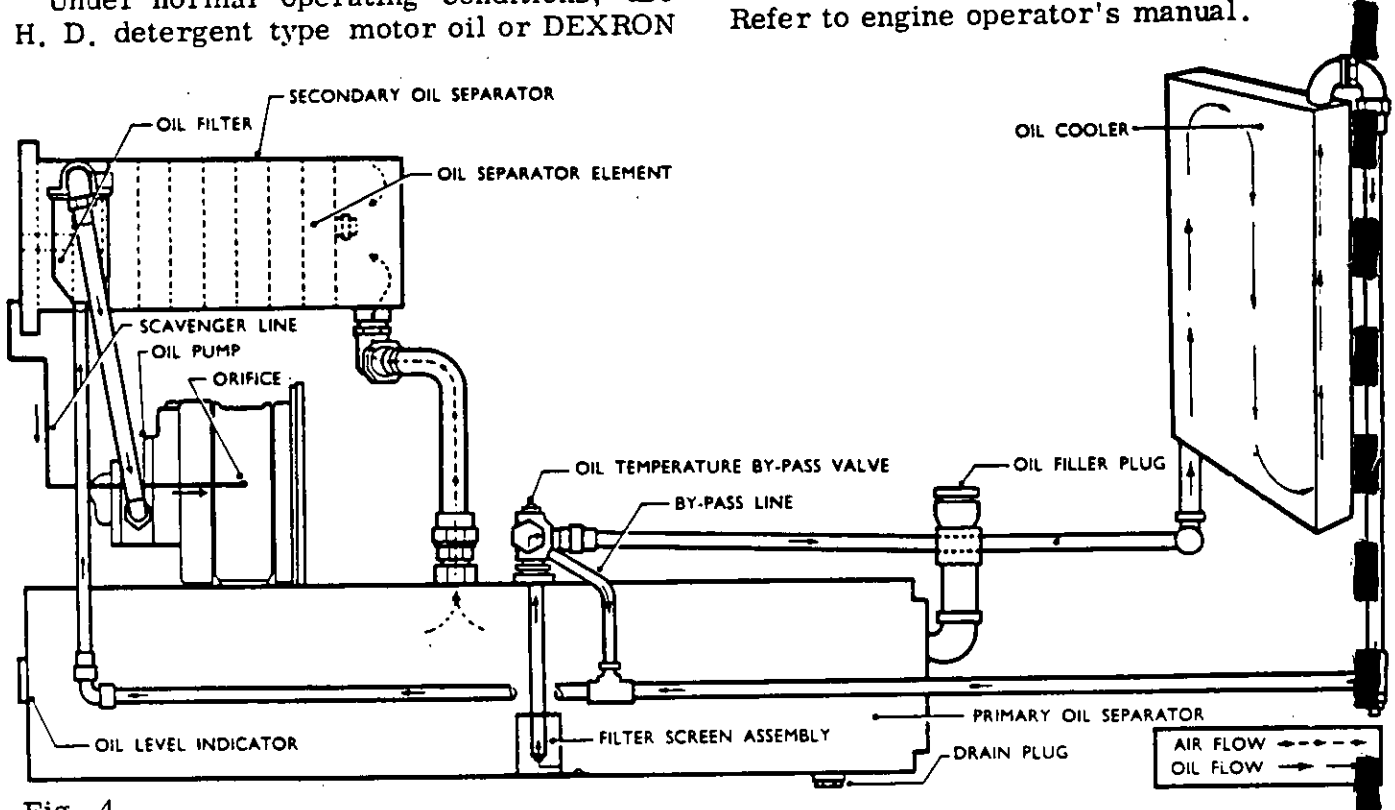


Fig. 4.

REGULATION

100% regulation is provided for by a proportional speed reduction from full capacity down to approximately 60% capacity, and a combination of further speed reduction with volumetric regulation of the compressor for capacities from 60% down to zero capacity.

The total effect is accomplished by the UL-88 "Air Glide" Speed and Pressure Regulator in conjunction with the UL-89 Volumetric Regulator and a pressure-reducing valve.

UL-88 "AIR GLIDE SPEED AND PRESSURE REGULATOR" (Fig. 5)

The UL-88 Speed and Pressure Regulator is an air pressure operated device consisting of a spring-loaded diaphragm on one side of a central body with an operating diaphragm on the opposite side of the same body. The central body forms two chambers "A" and "B", with a needle valve orifice located to pass air from one chamber to the other.

Chamber "A" is directly connected through tubing to the delivery end of the secondary oil separator and thus is subject to final discharge pressure at all times. Chamber "B" is connected through tubing to the operating diaphragm chamber "L" (Fig. 5) of the UL-89 Volumetric Regulator, where a small orifice "K" is provided to bleed off a portion of the regulating air to give range control to the system.

The spring-loaded diaphragm of chamber "A" controls the positioning of the orifice needle, thus controlling the amount of pressure passing from chamber "A" to chamber "B". A spring-loaded lever "C" (Fig. 5) is so arranged against the chamber "B" diaphragm that movement of this diaphragm is multiplied, and conveyed by linkage, to the engine governing system.

The pressure in chamber "B" will always be less than in chamber "A" because of the throttling effect of the needle valve orifice and the fact that, when less than full capacity is being used and the discharge pressure is above the set pressure, chamber "B" pressure is then constantly bleeding off through the small vent "K" in the UL 89 Volumetric Regulator. Thus, when final discharge pressure (and chamber "A" pressure) is sufficient to cause the diaphragm to raise the needle valve off its seat, chamber "B" pressure will gradually raise and overcome tension of spring "D" and move lever "C" to cause speed reduction of the engine and compressor.

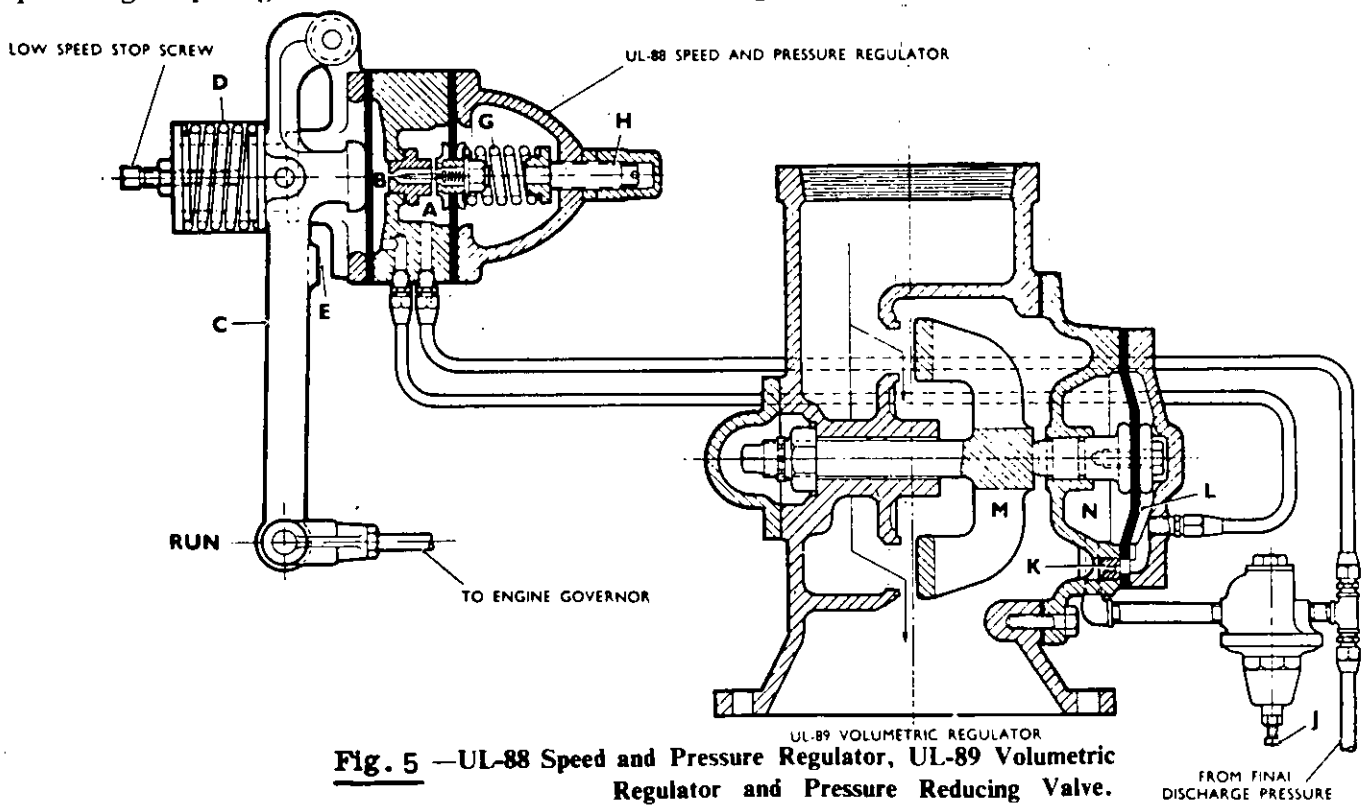


Fig. 5 —UL-88 Speed and Pressure Regulator, UL-89 Volumetric Regulator and Pressure Reducing Valve.

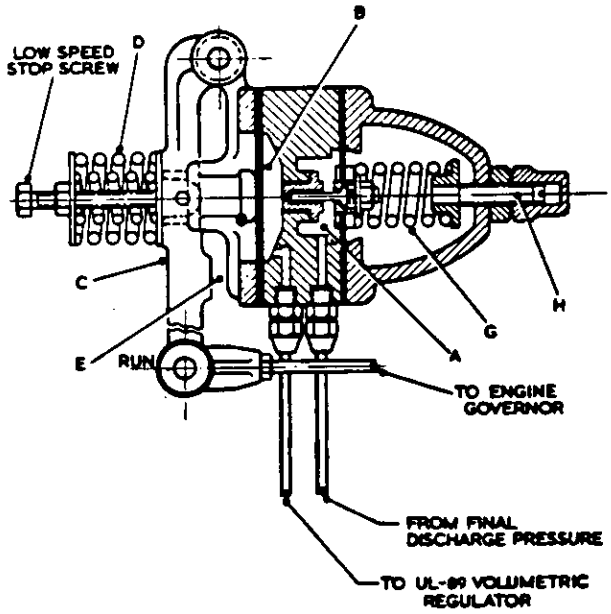


Fig. 6 - UL-88 Speed and Pressure Regulator

Since spring "D" is designed to be stronger than the engine governor spring, lever "C" will be held against the stop "E" as long as there is insufficient pressure in chamber "B" to overcome the difference in balance between spring "D" and the engine governor spring. Therefore, the engine will operate at full rated speed as long as the pressure in chamber "A" is insufficient to raise the needle valve.

The tension of spring "G" on the needle valve diaphragm is so adjusted by screw "H" that no lever movement occurs until final discharge pressure has reached 100 psi (7.03 kg./sq. cm.) (or whatever set pressure between 90 psi (6.33 kg./sq. cm.) and 110 psi (7.73 kg./sq. cm.) is desired in accordance with the tools being operated). Do not attempt to adjust below 90 psi (6.33 kg./sq. cm.) or above 100 psi (7.73 kg./sq. cm.).

If the air demand is less than the full capacity of the compressor, causing the final discharge pressure and chamber "A" pressure to rise above 100 psi (7.03 kg./sq. cm.), then movement of the needle valve will permit sufficient air to pass to chamber "B" to overcome the bleed loss. This will build up enough pressure to move lever "C" in an infinitely variable manner from the full speed just sufficient to meet the reduced air demand. This speed and capacity change, from 100% down to 60% capacity, occurs within an approximate pressure increase of six pounds, from 100 psi (7.03 kg./sq. cm.) to 106 psi (7.45 kg./sq. cm) during which the speed will drop from full speed (1,800 RPM) down to approximately 1,100 RPM.

On further reduction of air demand, the final discharge pressure will rise above 106 psi, lifting the chamber "A" needle valve still more and further increasing the pressure in chamber "B" whereupon two controlling functions occur simultaneously.

1. Since movement of lever "C" continues with further increase of pressure in chamber "B", there will be additional speed reduction, which, carried to its full limit will reduce the speed proportionately from 1,100 RPM approximately down to 800 RPM. The low speed limit is adjusted by the low speed stop screw on the UL-88 Regulator. It limits the movement of the governor lever or the regulator lever in this direction.

2. At the same time, the increase in chamber "B" pressure, which is also effective on the operating diaphragm (Fig. 5) of the UL-89 Volumetric Regulator, is now sufficient to start closing the intake regulator valve "M".

Here again the closing of the valve is in an infinitely variable manner and the resulting capacity of the unit is progressively reduced.

The combined effect of functions (1) and (2) is such that the capacity of the unit is reduced from 60% capacity to zero capacity while the final discharge pressure is rising from 106 psi to 110 psi.

Complete regulation, therefore, has occurred within a pressure range of approximately 10 psi (.703 kg./sq. cm.) and in an infinitely variable or stepless manner. (See Speed and Volumetric Regulation Diagrams, Figs. 8 and 9.

UL-89 VOLUMETRIC REGULATOR (Fig. 5)

Balancing control of the diaphragm is obtained by holding a fixed pressure in chamber "N". This is accomplished by use of an air pressure reducing valve "J" connected to the final discharge pressure at the oil separator

This valve is adjusted to maintain a pressure in chamber "N" with sufficient tension to prevent movement of the regulator diaphragm, and the valve, until the pressure in chambers "B" and "L" has increased to a predetermined value. This allows compressor volumetric regulation to start at approximately 60%. From there on it will become progressively more effective as the air demand decreases and the pressure in chamber "L" increases above the balancing point.

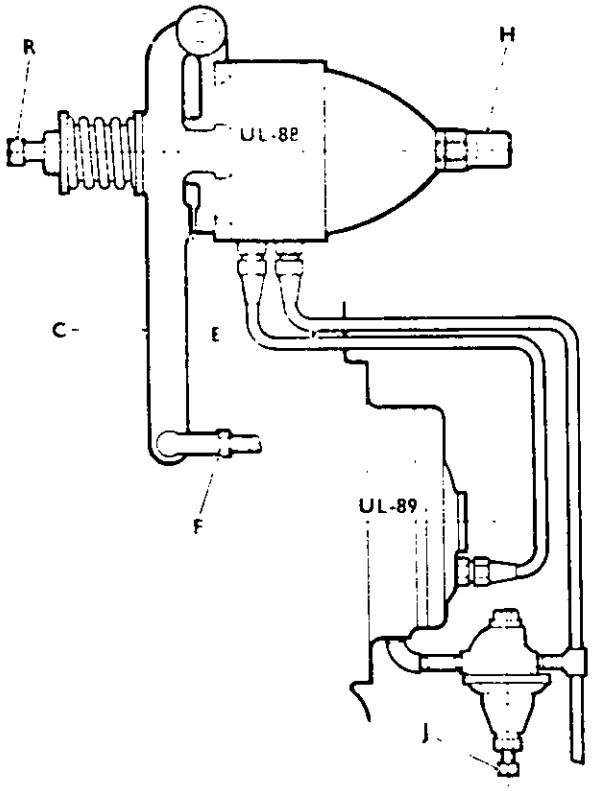
The UL-89 Volumetric Regulator consists of an intake housing equipped with a port and a diaphragm operated valve "M". The diaphragm chamber "L" receives its operating pressure from the UL-88 Speed and Pressure Regulator as explained before.

ADJUSTMENTS FOR SPEED AND PRESSURE
MAXIMUM RATED SPEED (Fig. 7)

With final pressure held at 100 psi (7.03 kg./sq. cm.) and governor link rod

ADJUSTING INSTRUCTIONS UL-88 AIR-GLIDE REGULATOR

NORMALLY REGULATION REQUIRES NO SERVICING, BUT IF PROPER ADJUSTMENT IS LOST PROCEED AS FOLLOWS:-



FIRST—With discharge pressure held at 100 lbs., adjust screw "H" so that lever "C" remains against stop "E".

SECOND—Adjust length of link rod at "F" to [illegible] engine at 1,800 RPM at 100 psi (7.03 kg./sq. cm.) pressure and lock adjustment "F".

THIRD—Readjust screw "H" so that lever "C" is just starting to leave stop "E". Lock adjustment "H".

FOURTH—Raise discharge pressure slowly and when engine RPM has dropped to approximately 1,[illegible] RPM, turn adjusting screw "J" "in" and note the highest interstage pressure obtainable, then unscrew adjustment "J" until interstage pressure starts to fall. Lock adjustment "J".

FIFTH—Close service valves completely and adjust "LOW SPEED" Stop Screw to hold 800 RPM minimum speed. (Low Speed Stop Screw on UL-88 at R.) (See instruction book for possible variation of setting "H" for other operating pressure ranges to suit certain tools or work.)

Fig 7. - UL88 Air Glide Regulator Instruction Plate.

attached to UL-88 lever arm, adjust screw "H" so that lever "C" remains firmly against stop "E". Then adjust the length of link rod. "F" to maintain full rated speed of 1,800 RPM.

MINIMUM LOW SPEED

Close service valve causing final pressure to increase and complete unloading to occur (zero delivery). Then adjust low speed stop on the UL-88 Regulator to hold engine at 800 RPM.

START OF SPEED REGULATION

Hold final pressure at 100 psi and readjust screw "H" so that lever "C" is just leaving stop "E". (Speed starts to fall off if pressure is raised above 100 psi.).

CHANGING PRESSURE RANGE

By simple readjustment of screw "H" (Fig. 7), the start of regulation can be raised or lowered from the normal 100 psi setting. This enables the operator to select an average operating pressure suitable for the tools being operated, or to compensate for pipe line loss to a certain extent where long lines must be used. Do not attempt to adjust for more than plus or minus 10% from the normal 100 p.s.i. setting.

START OF VOLUMETRIC REGULATION

Close service valve sufficiently to cause speed to reduce to approximately, 1,100 RPM and adjust the pressure reducing valve "J" to hold the interstage pressure at its normal pressure for your altitude. This will be 25 to 30 psi at altitudes up to 2,000 ft. Determine this by observation during the first few days of operation. Check this adjustment by closing the service valve slightly further and noting that the interstage pressure starts to fall indicating that the volumetric regulation is taking effect as well as speed reduction.

UL-89 REGULATOR VALVE TRAVEL ADJUSTMENT

Should it be necessary to dismantle the regulator for any reason, when reassembling the maximum travel of valve "M", Fig. 5 should be held to the following dimensions:-

R250 Desired travel $\frac{1}{4}$" Tol. + 1/32" - 0"

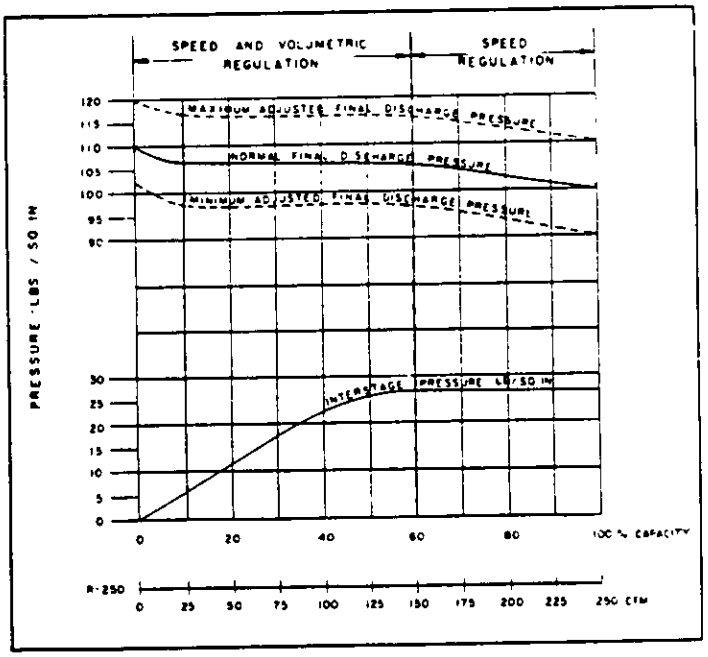


Fig. 8 - Capacity-Pressure Chart.

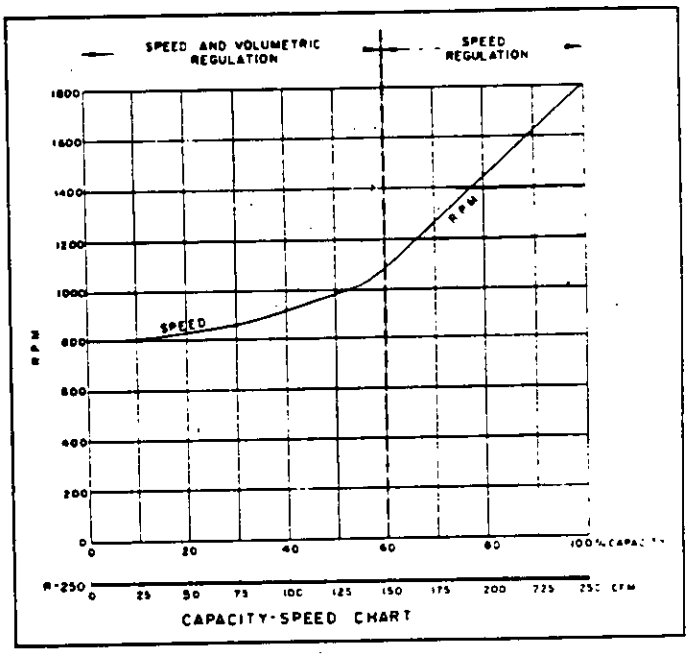


Fig. 9 - Capacity-Speed Chart.

The Gyro-Flo Compressor is manufactured with the finest quality material. Years of research and experience have been combined with quality workmanship and careful inspection to provide many years of dependable trouble-free operation.

The section, which contains an illustrated parts breakdown, has been carefully prepared as an aid in locating those parts which may be required in the maintenance of the unit. All of the compressor parts, listed in the breakdown, are manufactured with the same precision as the original equipment. For the greatest protection, always insist on Ingersoll-Rand Company parts for your compressor.

Ingersoll-Rand Company service facilities and genuine parts are available world-wide. There are Ingersoll-Rand Company Branch Offices, and authorized distributors, conveniently located in the principle cities of the United Kingdom and throughout the free world. Each branch office, or authorized distributor, is thoroughly equipped with a full and adequate supply of genuine Ingersoll-Rand Company parts. For faster and better service, your parts requirements should be ordered from your nearest Ingersoll-Rand Company Branch Office or authorized distributor. A list of branch offices will be found in the rear of this publication. Each branch office is ably equipped to provide technical assistance with prompt, intelligent, and courteous service, either through correspondence or personal contact.

All parts orders pertaining to the diesel engine should be referred to your nearest Engine Manufacturer, authorized distributor. Correspondence concerning the diesel engine should always include the engine serial and model number as well as the type number of the components being ordered.

One complete set of instruction books and parts lists covering both the compressor and engine is shipped with each compressor. Additional copies of the compressor literature may be obtained from your nearest Ingersoll-Rand Company Branch Office or authorized distributor. For additional copies of the engine literature, consult your nearest Engine Manufacturer, authorized distributor.

INTRODUCTION

The illustrated parts breakdown illustrates, lists and describes the various assemblies, sub-assemblies and detail parts which make up the Gyro-Flo Air Compressor. Each group of parts is accompanied by an illustration which shows each individual part as clearly as possible. Reference numbers only are used on each illustration. These numbers correspond to those in the illustration number column in the list of parts which follows each illustration.

Each illustration is followed immediately by a listing of the component parts. These component parts are listed in numerical order according to the number shown in the illustration.

A special feature of this parts listing is a system of identifying those parts which are included with an assembly or with other parts. The included part, or parts, is denoted by being indented from the previous item. When a part is ordered that has an indented item, or items, following the parts, the indented items are always included with that part. Indented items may also be ordered individually.

There are a number of items in the parts listing that are located on the rear or front of the unit, or that are identified as being either right hand or left hand parts. These parts are modified with the necessary descriptive information to properly identify them. In referring to the rear, the front or to either side of the unit, always consider the receiver-separator as the rear of the unit. Standing at the rear of the unit facing the receiver-separator, will determine the right and left sides.

The right hand columns show both the part number, and the quantity of each item. The quantity given is the total quantity required per assembly or per group of parts.

HOW TO ORDER

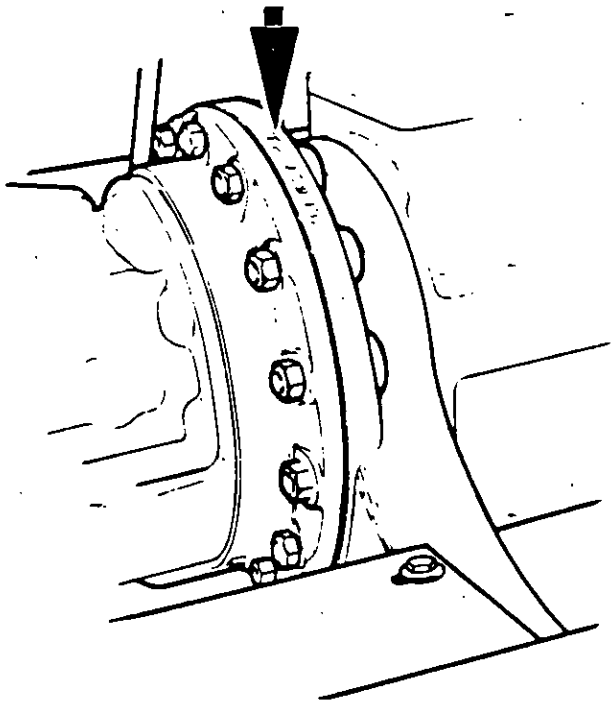
The satisfactory ordering of parts by a purchaser is greatly dependent upon the proper use of all available information. By supplying your nearest Ingersoll-Rand Company Branch Office, or authorized distributor, with complete information, you

will enable them to fill your orders correctly, and avoid any unnecessary delays. In order that all avoidable errors may be eliminated, the following instructions are offered as a guide to the purchaser when ordering replacement parts.

a. Always specify the model number of the unit as shown on the model plate attached to the housing.

b. Always specify the serial number of the unit. This is very important. The serial number of the unit will be found stamped on the instruction plate attached to the housing. The serial number of the air end will also be found stamped in the metal on the top edge of the L. P. Inner Bearing Housing.

Location of Air End Serial Number.



c. Always specify the form number of this publication.

d. Always specify the description of the part, or parts, as well as the part number exactly as it is given in the parts listing. Do not order a part, or parts, using the illustration number.

e. Never use such terms as "Assembly", "Complete", or "Sets", unless these terms appear specifically in the parts listing.

f. Always specify the quantity of parts required.

In the event of parts being returned to your nearest Ingersoll-Rand Company Branch Office, or authorized distributor, for inspection or repair, it is extremely important to include the serial number of the unit from which the parts were removed. This is necessary if the branch or distributor is to take care of your order promptly.

Engine parts must be ordered from your nearest Engine Company, authorized distributor.

SPARE PARTS

Special selections of spare parts have been prepared as insurance against prolonged shutdown periods. These selected parts, called spare parts boxes, are shown itemized in the rear of this section. The contents of each spare parts box are carefully selected so as to provide maximum protection for the unit with a minimum number of parts. Three sizes of spare parts boxes, ranging from small to extra large, are available. The small spare parts box is suitable for minimum domestic use while the large is suitable for average domestic use or for minimum export use. The extra large spare parts box is suitable to maintain up to five units, domestically or up to two units in foreign countries, or in remote locations, where transportation facilities may be slow. Section 7 will give you the correct part numbers and the contents of each box in the event they were not obtained at the time the compressor was purchased.

SPARE PARTS
(not illustrated)

Part No.	Name of part
TR250P150	Air End Complete (Includes:- Low Pressure Cylinder Assembly - Part Number T2R250P185. High Pressure Cylinder Assembly - Part Number T2R250P175. Lubricating Oil Pump Assembly - Part Number T2R250P225.
TR250P750	Complete Set of Gaskets and "O" Rings.

DRIVERS
AND
ASSOCIATED PARTS

INDEX

TABULATED DATA

Ford 2714E 6 Cylinder Diesel Engine	T2T5276
Oil Capacity Engine Crankcase - pints	20 pts. (11.35 litres)
Water Capacity Engine Cooling System - Imperial Gals	6 (27.25 litres)

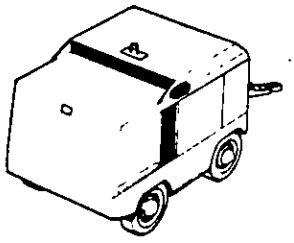
Unit Weights with above Engine

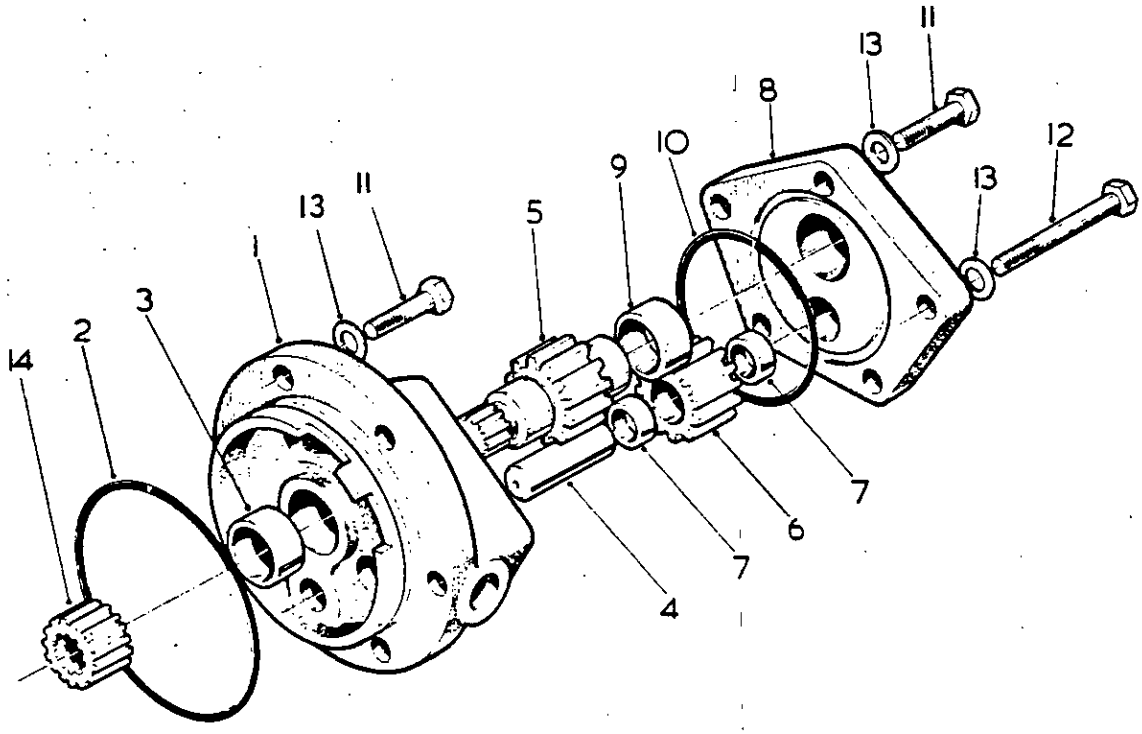
Weight Dry - pounds - 2 - Wheel	
4 - Wheel	5146 lbs. - 2296 kg.
Weight with Fuel, Oil, Water - pounds - 2 - Wheel	
4 - Wheel	5416 lbs. - 2321 kg.

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	LH Rear Mounting Bracket	T2T5275	1
2	RH Rear Mounting Bracket	T2T5224	1
3	Resilient Mount	T2WPP 209	2
4	Front Mounting Bracket	T2T5225	2
5	Resilient Mounts	T2WPP6038/60	2
6	Setscrews	7/16"UNC x 1" lg	8
7	Spring Washers	7/16" Dia.	8
8	Nuts	3/8" UNF	12
9	Spring Washers	3/8" Dia.	12
10	Setscrews	3/8"UNC x 1" lg	8
11	Flat Washers	3/8" Dia.	8
12	Nuts	9/16" UNF	2
13	Spring Washers	9/16" Dia.	2
14	Exhaust Pipe	T2V8846	1
15	Exhaust Pipe Flange 508F5269B	T2V8847	1
16	Silencer	T2V8848	1
17	Silencer Flexible Mounts	T217/700	2
18	Silencer Mounting Supports	T2K4911	2
19	Tailpipe	T2K4912	1
20	Burgess Clamp	2½" Dia.	1
21	Water Temperature Gauge Adaptor	T2V7133	1
22	Engine Filter Adaptor	T2T4667	1
23	Engine Intake Elbow	T2K4906	1
24	Burgess Clip	3" Dia.	1
25	Rubber Hose	T2V4704-4	2
26	Jubilee Clips	3"	4
27	Inlet Pipe	T2T5291	1

AIR END
AND
ASSOCIATED PARTS

INDEX

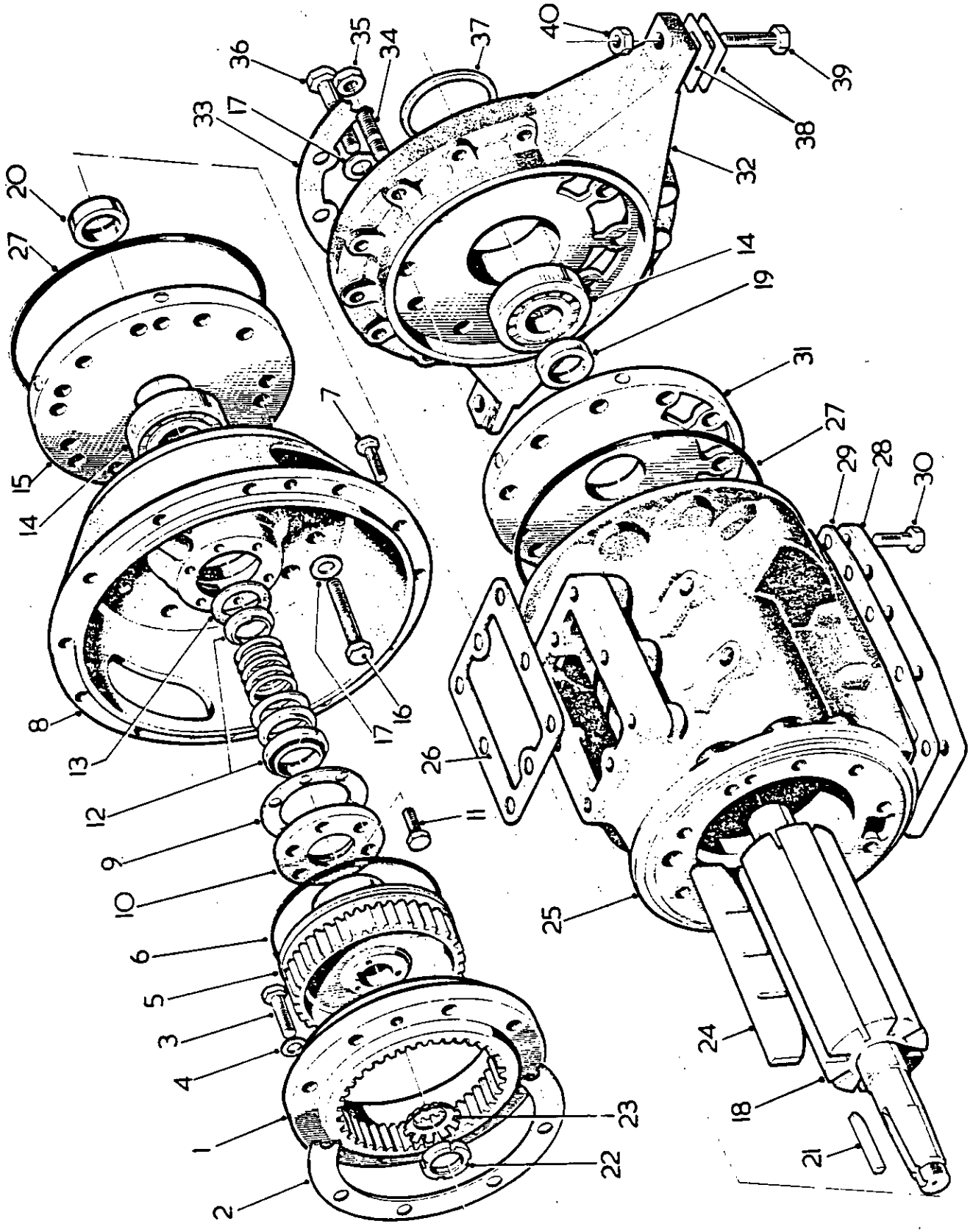




Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	LUBRICATING OIL PUMP ASSEMBLY.....	002H20602	1
1	Lubricating Oil Pump Body	002H18080	1
2	Oil Pump Body to Housing "O" Ring	00X1514T250C	1
3	Lubricating Oil Pump Gear Bushing - Inner.....	002W32624	1
4	Lubricating Oil Pump Driven Gear Shaft.....	002W48476	1
5	Lubricating Oil Pump Drive Gear.....	002H18081	1
6	Lubricating Oil Pump Driven Gear.....	002W48492	1
7	Lubricating Oil Pump Driven Gear Bushing.....	002W48475	1
8	Lubricating Oil Pump Body Cover	002R26339	1
9	Lubricating Oil Pump Drive Gear Bushing - Outer.	002W32624	1
10	Lubricating Oil Pump Cover to Body "O" Ring	00X1514T243C	1
11	Oil Pump to Bearing Housing Set Screw	007/16"-14 x 3¼	4
12	Oil Pump Cover to Body Set Screw	007/16"-14 x 1¼	3
13	Oil Pump Steel Washer	00X1016T32	7

Always give the serial number of your compressor.

Do not order by reference number - order by part number.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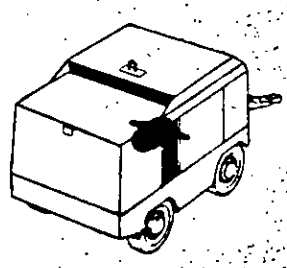
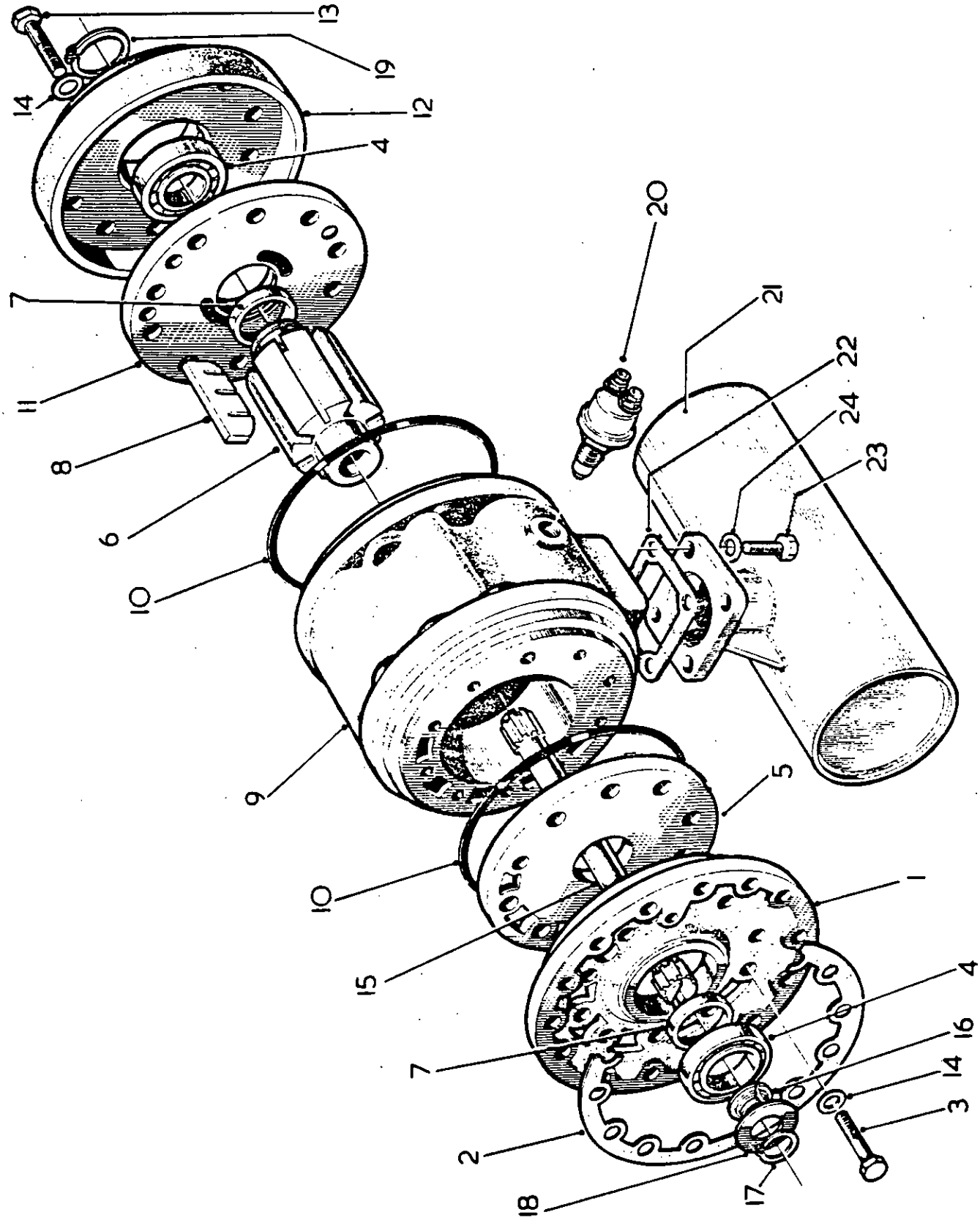


Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	Compressor Coupling Drive Gear	002H13601	1
2	Compressor Coupling Drive Gear Gasket	002W32925	1
3	Drive Gear to Flywheel Set Screw	3/8" - 16 x 1½" ht	8
4	Set Screw Lockwasher.....	3/8"	8
5	Compressor Coupling Driven Gear.....	002H13602	1
6	Compressor Coupling Driven Gear "O" Ring.	00X1514T448C	1
7	Compressor to Engine Set Screw	003/8"- 16 x 1"ht	10
	L. P. CYLINDER COMPLETE		
8	L. P. Outer Housing - Front	002H13573A	1
9	Rotary Shaft Seal Cover Gasket.....	002W26729	1
10	Rotary Shaft Seal Cover	002W26685	1
11	Rotary Shaft Seal Cover Set Screw.....	003/8"-16 x 1"ht	5
12	Rotary Shaft Seal	002W26684	1
14	Roller Bearing	002W48538	2
15	L. P. Cylinder Outer Plate.....	002R26350P1	1
16	Bearing Housing to L. P. Cylinder Set Screw.	005/8"-11x2¼ ht	8
17	L. P. Outer Bearing Housing Washer.....	00X1016T47	16
18	L. P. ROTOR.....	002H18000TP	1
19	L. P. Rotor Bearing Spacer.....	002W48400	1
20	L. P. Rotor Bearing Spacer - Engine End....	002W48400	1
21	Compressor Coupling Drive Gear Key.....	00X1495T3	1
22	Compressor Coupling Locknut.....	002W26503	1
23	Compressor Coupling Lockwasher.....	002W26506	1
24	L. P. Rotor Vane Set (consists of 8).....	00R250P110	1
25	L. P. Cylinder	002F11933	1
26	UL-89 Regulator Body Gasket	2W32710	1
27	Bearing Housing to Cylinder "O" Ring.....	00X1514T450C	2
28	L. P. Cylinder Bottom Cover	002R26301	1
29	L. P. Cylinder Bottom Cover Gasket.....	002R26302	1
30	L. P. Cylinder Bottom Cover Set Screw	00½"-13 x 1¼ ht	8
31	L. P. Cylinder Inner Plate.....	002R26349P1	1
32	L. P. Inner Bearing Housing.....	002F12129	1
34	L. P. Inner Bearing Housing Stud.....	00T2V4586-4	12
35	L. P. Inner Bearing Housing Stud Nut	005/8 - 11	12
36	Housing to L. P. Cylinder Set Screw.....	005/8"-11 x 2¼ht	8
37	Housing Spacer - Outer Ring.....	002W32685	1
*	Resilient Mount	T2WPP210	2
*	Nuts & Spring Washers.....	3/8" UNF	4
*	Nut & Washer.....	9/16" UNF	2
38	L. P. Inner Bearing Housing Shim-Set(as required)	00X1406T5	1

Always give the serial number of your compressor.

Do not order by illustration number - order by part number.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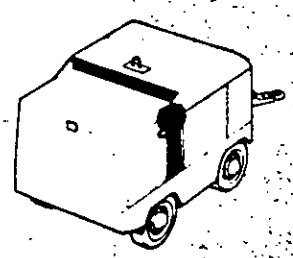
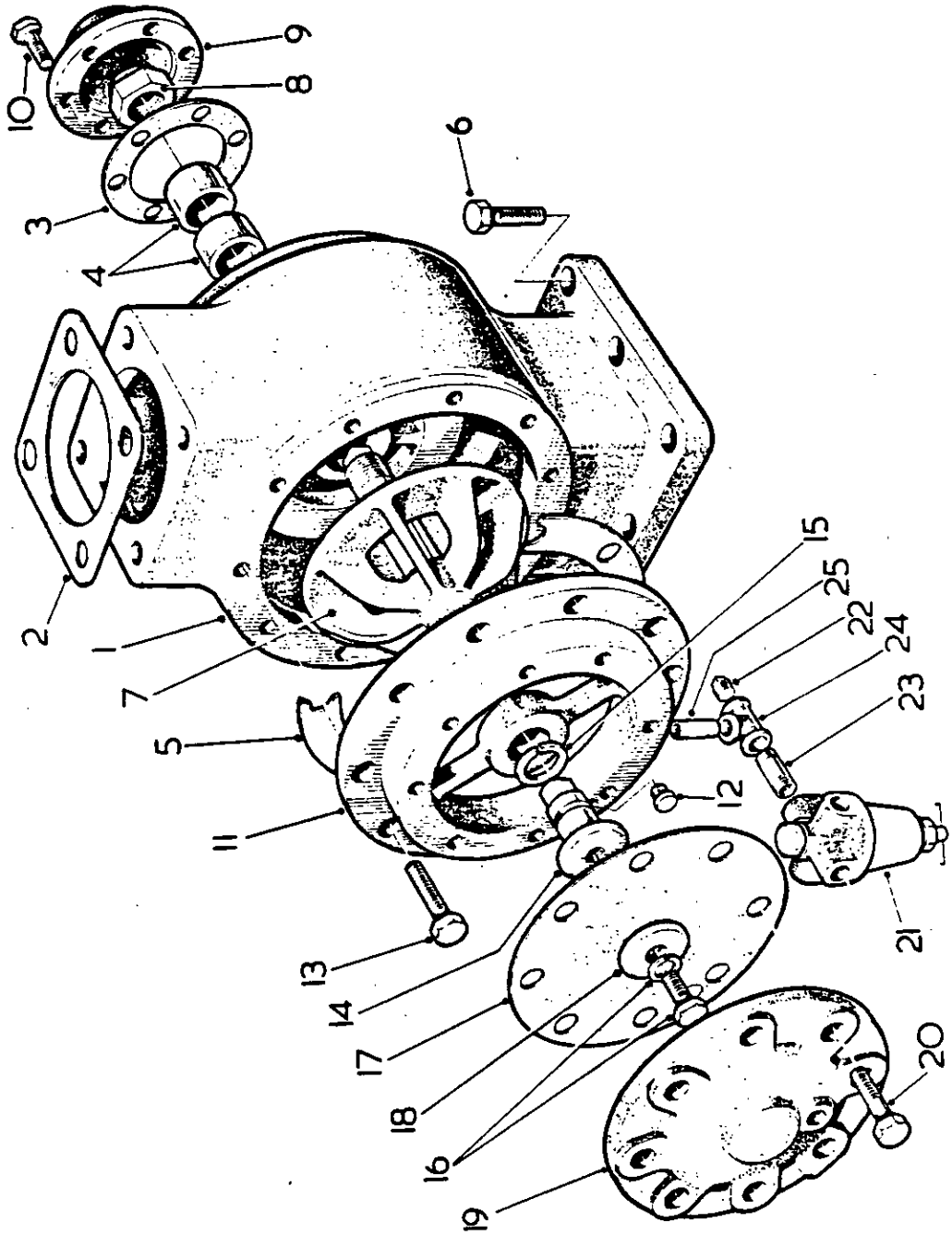


Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	H. P. CYLINDER COMPLETE	002H18120	1
1	H. P. Inner Cylinder Housing	002H18078	1
2	Inner Bearing Housing Gasket	002R26307	1
3	Bearing Housing to H. P. Cylinder Set Screw	005/8"-11 x 2¼ ht	8
4	Roller Bearing	002W48538	2
5	H. P. Cylinder Inner Plate	002R26296P1	1
6	H. P. Rotor	002H17999TP	1
7	H. P. Rotor Bearing Spacer	002W48400	2
8	H. P. Rotor Vane Set (consists of 8)	00R250P115	1
9	H. P. Cylinder	002F11943	1
10	Bearing Housing to H. P. Cylinder "O" Ring	00X1514T450C	2
11	H. P. Cylinder Outer Plate	002R26295P1	1
12	H. P. Outer Bearing Housing	002H18079	1
13	Housing to H. P. Cylinder Set Screw	005/8"-11 x 2¼ ht	8
14	Bearing Housing Steel Washer	00X1016T47	16
15	H. P. Rotor Drive Shaft	002R26259	1
16	H. P. Inner Bearing Support	002W32664	1
17	Inner Bearing Spacer Snap Ring - Centre	002W32684	1
18	H. P. Inner Bearing Spacer Inner Ring	002W32665	1
19	H. P. Outer Bearing Snap Ring - Rear	00X1318T19	1
20	H. P. Temperature Switch	2R17460	1
21	H. P. Discharge Pipe Receiver	T2N1093	1
22	H. P. Discharge Pipe Receiver Gasket	2W48477	1
23	H. P. Discharge Pipe Receiver Set Screw	7/16"-14 x 1" ht	4
24	H. P. Discharge Pipe Receiver Lockwasher	7/16"	4
*	Set Screw	5/8"UNC x 3" ht	2

Always give the serial number of your compressor.

Do not order by illustration number - order by part number.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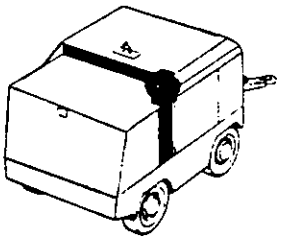


Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	INLET UNLOADER ASSEMBLY.....	2F7165	1
1	UL89 Volumetric Regulator Body.....	2F122TP	1
2	Compressor Air Inlet Elbow Gasket.....	2W32766	1
3	UL89 Volumetric Regulator Valve Nut Cover Gasket	2W30340	1
4	UL89 Volumetric Regulator Valve Bushing.....	2W35030	2
5	UL89 Volumetric Regulator Diaphragm Body Gasket	2W32705	1
6	UL89 Volumetric Regulator Body Set Screw	5/8" - 11 x 1½"ht	8
7	UL89 Volumetric Regulator Valve.....	2H11590	1
8	UL89 Volumetric Regulator Valve Locknut.....	7/8" - 9	1
9	UL89 Volumetric Regulator Valve Nut Cover.....	2W30327	1
10	Valve Nut Cover Set Screw.....	3/8" - 16 x 1" ht	6
11	UL89 Volumetric Regulator Diaphragm Body.....	2H11589	1
12	Diaphragm Body Orifice Plug	X1080T38	1
13	Diaphragm Body Set Screw.....	½" - 13 x 1¼" ht	8
14	UL89 Volumetric Regulator Diaphragm Piston	2W32707	1
15	UL89 Volumetric Regulator Diaphragm Piston Ring	X1440T6A	2
16	UL89 Retaining Plate Set Screw and Lockwasher...	7/16" - 14 x 1¼"ht	1
17	UL89 Volumetric Regulator Diaphragm	2W32706	1
18	UL89 Volumetric Regulator Diaphragm Retaining Plate	2W32708	1
19	UL89 Volumetric Regulator Diaphragm Cover.....	2R18043	1
20	Diaphragm Cover Set Screw	½" - 13 x 1½ ht	6
21	UL89 Volumetric Regulator Reducing & Relief Valve	2W48571	1
22	Pipe Plug	¼ BSPT	1
23	Reducing Valve Space Nipple.....	¼"BSPT x 4½"	1
24	Pipe Tee	¼"BSPT	1
25	Hex. Nipple Tee to Regulator	¼" BSPT	1

Always give the serial number of your compressor.
Do not order by illustration number - order by part number.

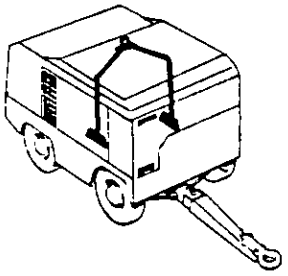
Item No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	Cylinder End Plate Discharge Hole Plug.....	2W57579	4
2	Pipe Plug (UL 89 Body)	½" BSPT	2

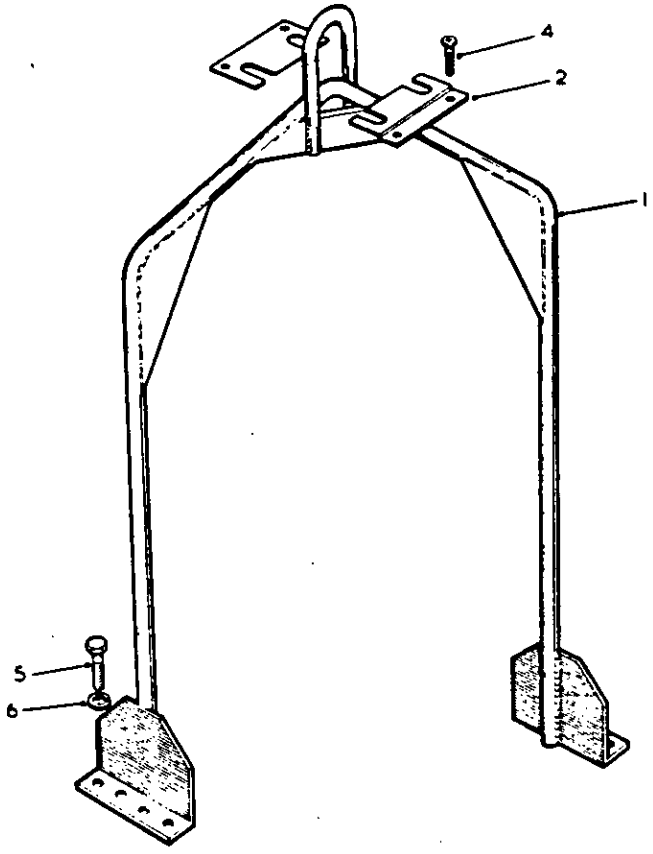
Always give the serial number of your compressor.

Do not order by illustration number - order by part number.

RUNNING GEAR FRAME HOUSING AND ASSOCIATED PARTS

INDEX

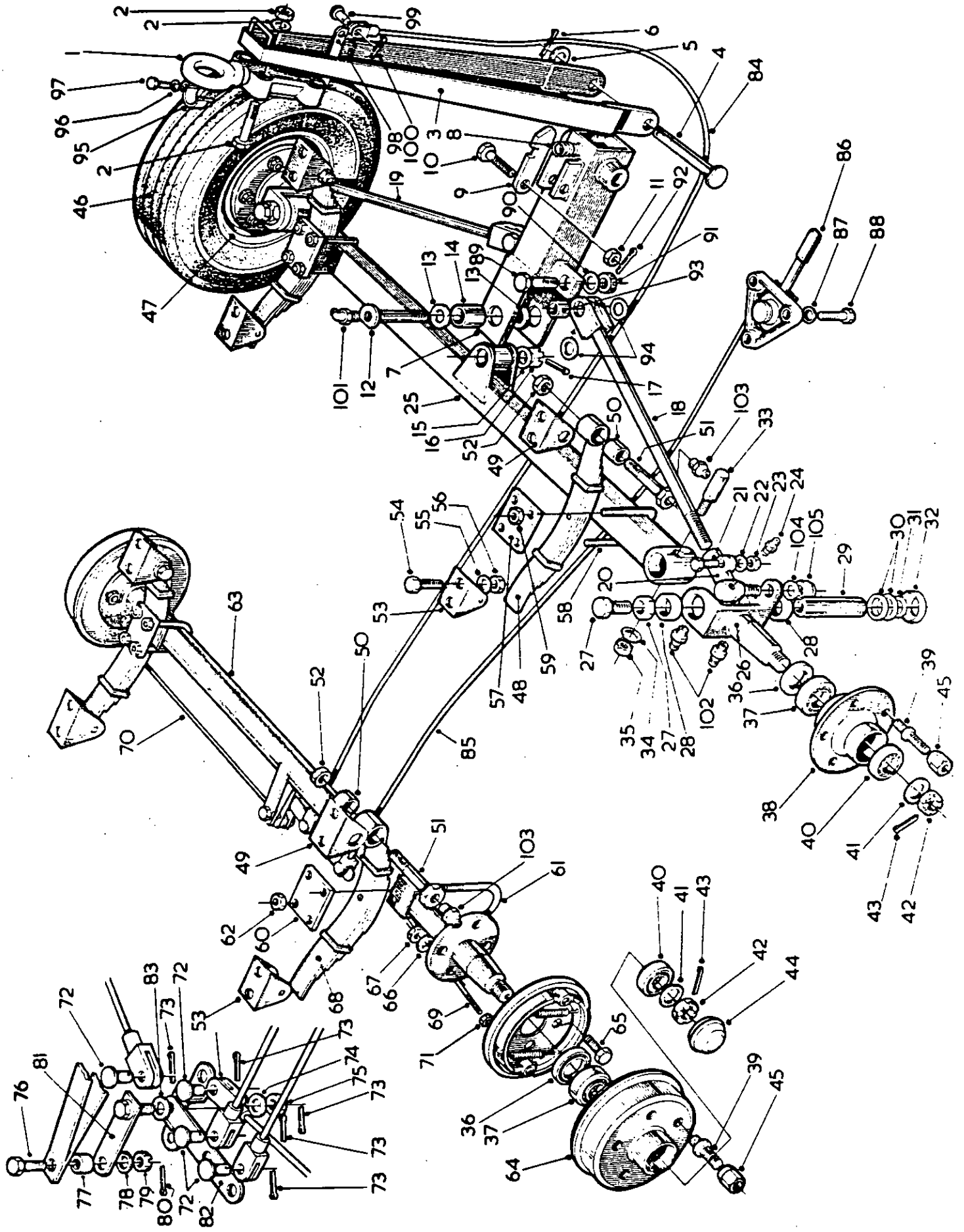


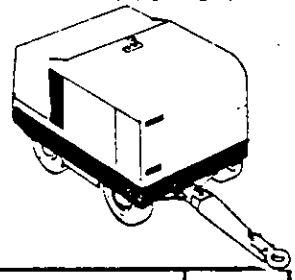


Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	Lifting Bail Assembly	T2K4843	1
2	Lifting Bail Hole Cover.....	T2T5277	1
4	Self Tapping Screws	No. 14	4
5	Set Screws	5/8"UNC x 11 x 2"ht	8
6	Lockwashers	5/8"	8

Always give the serial number of your compressor.
Do not order by illustration number - order by part number

GYRO – FLO DR – 250-S
RUNNING GEAR



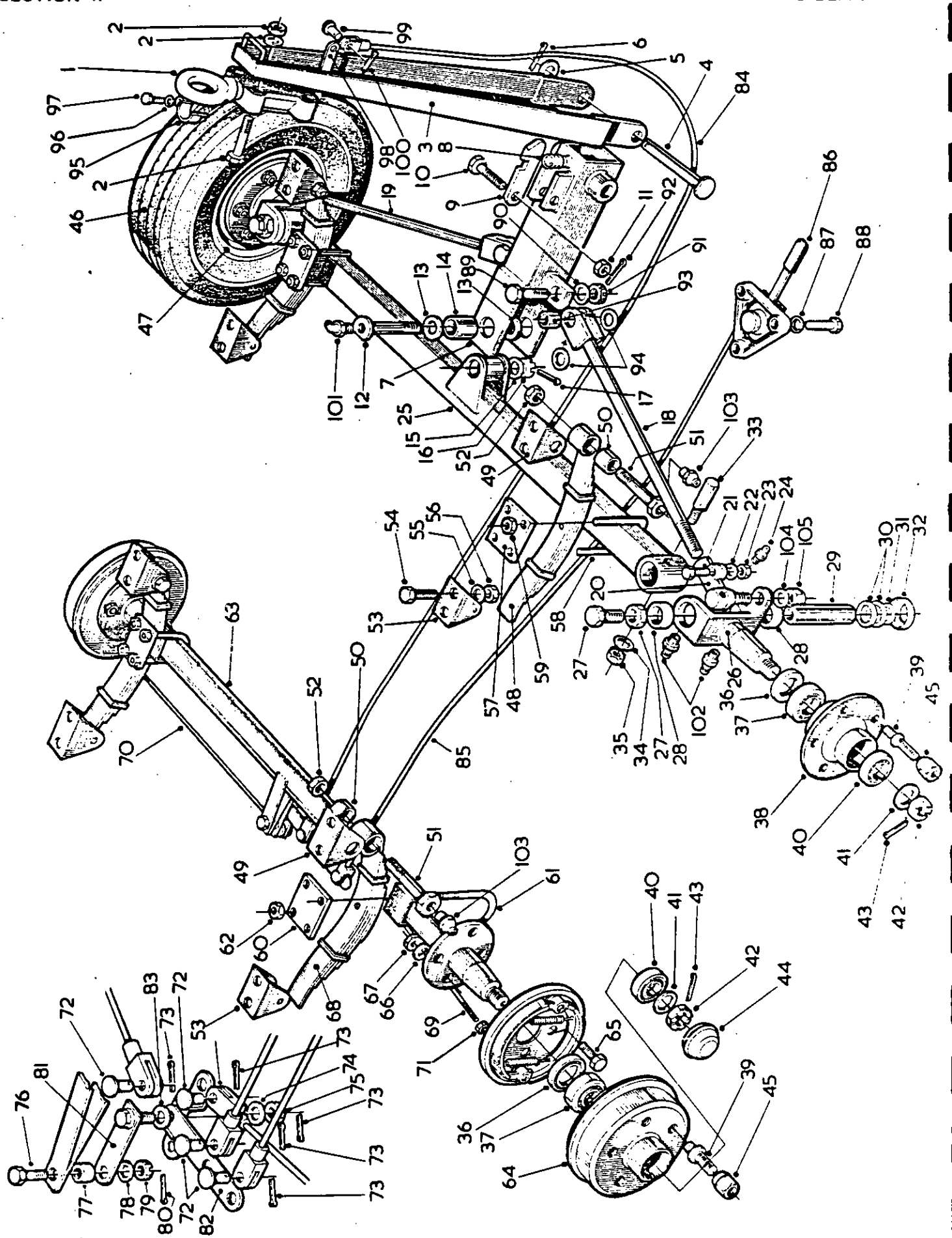


Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
*	Truck Frame	T2N2014	1
	Running Gear Complete	T2T5274	1
1	Towing Box	T2T5274/ 1	1
2	Towing Box,Bolt & Nut Washer	T2T5274/ 2	4
3	Draw Bar	T2T5274/ 3	1
4	Draw Bar Pin	T2T5274/ 4	1
5	Draw Bar Pin Washer	T2T5274/ 5	1
6	Draw Bar Pin Split Pin	T2T5274/ 6	1
7	Pintel	T2T5274/ 7	1
8	Latch Spring	T2T5274/ 8	1
9	Latch	T2T5274/ 9	1
10	Set Screw	T2T5274/10	1
11	Nut	T2T5274/11	2
12	Pivot Pin	T2T5274/12	1
13	Washer	T2T5274/13	2
14	Pivot Pin Bush	T2T5274/14	1
15	Washer	T2T5274/15	1
16	Nut	T2T5274/16	1
17	Split Pin	T2T5274/17	1
18	Track Rod - RH	T2T5274/18	1
19	Track Rod - LH	T2T5274/19	1
20	Track Rod End - RH	T2T5274/20	1
*	Track Rod End - LH	T2T5274/21	1
21	Set Screw	T2T5274/22	2
22	Washer	T2T5274/23	2
23	Nut	T2T5274/24	2
24	Grease Nipple	T2T5274/25	8
25	Front Axle	T2T5274/26	1
26	Stub Pivot - RH	T2T5274/27	1
*	Stub Pivot - LH	T2T5274/28	1
27	Set Screw and Hex. Nut	T2T5274/29	2
28	King Pin Bushing	T2T5274/30	4
29	King Pin	T2T5274/31	2
30	Thrust Washer	T2T5274/32	4
31	Washer	T2T5274/33	2
32	Thrust Washer Retainer	T2T5274/34	2
33	Cotter Pin	T2T5274/35	2
34	Washer	T2T5274/36	1

* Not illustrated.

Always give the serial number of your compressor.

Do not order by illustration number - order by part number.

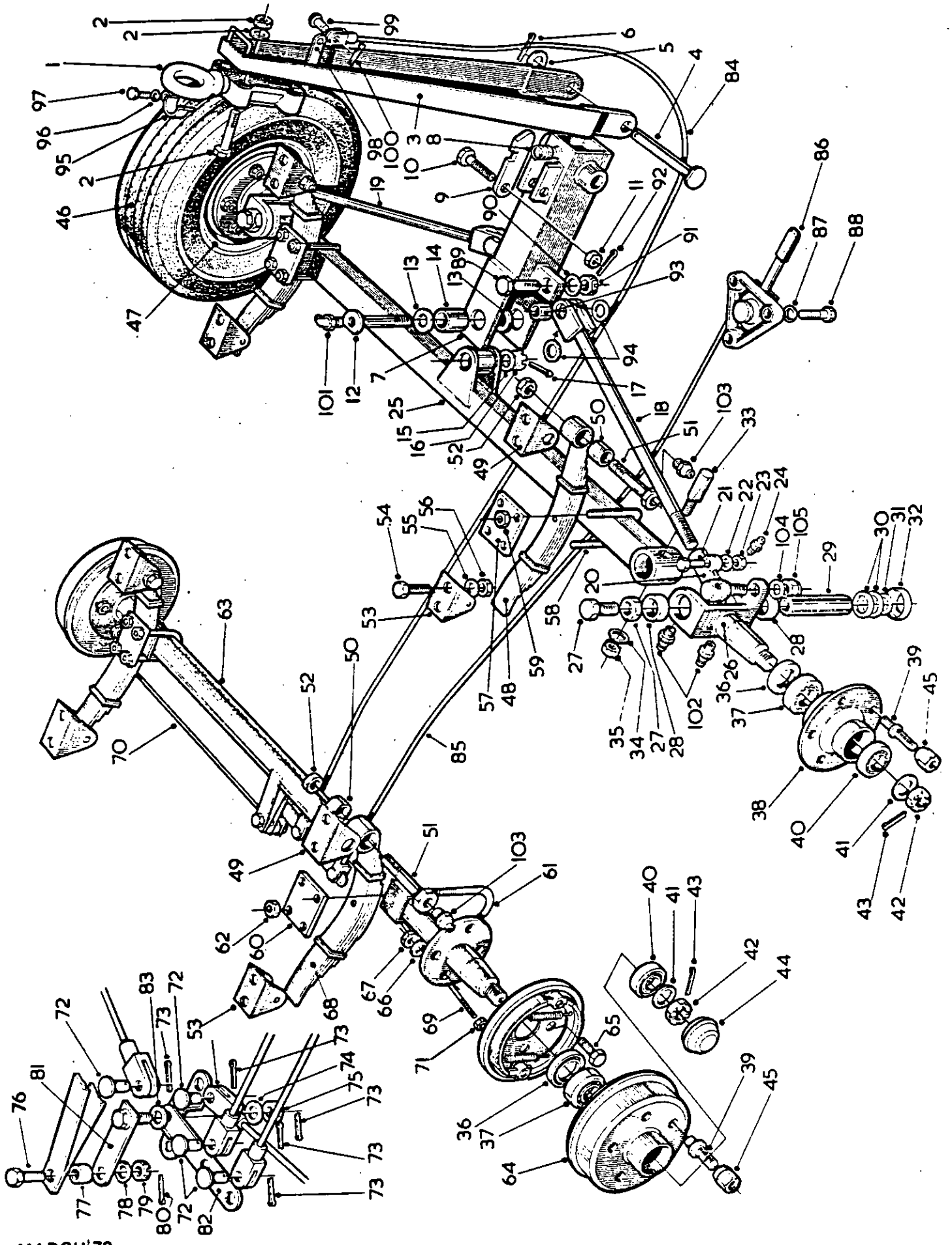


Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
35	Hex. Nut	T2T5274/37	2
36	Oil Seal	T2T5274/38	4
37	Bearing - Inner	T2T5274/39	4
38	Hub	T2T5274/40	4
39	Stud - LHT	T2T5274/41	10
*	Stud - RHT	T2T5274/42	10
40	Bearing - Outer	T2T5274/43	4
41	"D" Washer	T2T5274/44	4
42	Axle End Nut	T2T5274/45	4
43	Split Pin	T2T5274/46	4
44	Hub Cap	T2T5274/47	4
45	Wheel Nut - LHT	T2T5274/48	10
*	Wheel Nut - RHT	T2T5274/49	10
46	Tyre	T2T5274/50	4
47	Wheel	T2T5274/51	4
48	Front Spring	T2T5274/52	2
49	Fixed End Shackle	T2T5274/53	4
50	Shackle Bush	T2T5274/54	4
51	Fixed End Shackle Bolt	T2T5274/55	4
52	Hex. Nut	T2T5274/56	4
53	Moving End Shackle	T2T5274/57	4
54	Set Screw	T2T5274/58	16
55	Washer	T2T5274/59	16
56	Hex. Nut	T2T5274/60	16
57	Front Spring Bolt Plate	T2T5274/61	2
58	Bolt	T2T5274/62	4
59	Hex. Nut	T2T5274/63	4
60	Rear Spring Bolt Plate	T2T5274/64	2
61	Bolt	T2T5274/65	4
62	Nut	T2T5274/66	4
63	Rear Axle	T2T5274/67	1
64	Brake Drum	T2T5274/68	2
65	Set Screw	T2T5274/69	8
66	Washer	T2T5274/70	8
67	Hex. Nut	T2T5274/71	8
68	Rear Spring	T2T5274/72	2
69	Brake Rod - N/S	T2T5274/73	1
70	Brake Rod - O/S	T2T5274/74	1

* Not illustrated.

Always give the serial number of your compressor.
Do not order by illustration number - order by part number.

GYRO – FLO DR – 250 · RUNNING GEAR



Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
71	Brake Rod Lock Nut	T2T5274/75	2
72	Swivel Pin	T2T5274/76	4
73	Split Pin	T2T5274/77	4
74	Washer	T2T5274/78	2
75	Hex. Nut	T2T5274/79	1
76	Set Screw	T2T5274/80	1
77	Spacer	T2T5274/81	1
78	Washer	T2T5274/82	1
79	Hex. Nut	T2T5274/83	1
80	Split Pin	T2T5274/84	1
81	Plate	T2T5274/85	1
82	Lever	T2T5274/86	1
83	Washer	T2T5274/87	1
84	Brake Cable	T2T5274/88	1
85	Hand Brake Cable	T2T5274/89	1
86	Handle	T2T5274/90	1
87	Lockwasher	T2T5274/91	1
88	Set Screw	T2T5274/92	1
89	Set Screw	T2T5274/93	1
90	Washer	T2T5274/94	1
91	Castle Nut	T2T5274/95	1
92	Split Pin	T2T5274/96	1
93	Bush	T2T5274/97	1
94	Thrust Washers	T2T5274/98	2
95	Latch Plate (Tow Box)	T2T5274/99	1
96	Washer	T2T5274/100	1
97	Set Screw	T2T5274/101	1
98	Tow Box Overun Brake Lever	T2T5274/102	1
99	Clevis	T2T5274/103	1
100	Split Pin	T2T5274/104	1
101	Greaser (Angled)	T2T5274/105	1
102	Greasers (Stub Pivot)	T2T5274/106	2
103	Greasers (Fixed Shackle)	T2T5274/107	1
104	Washer	T2T5274/108	1
105	Nut	T2T5274/109	1

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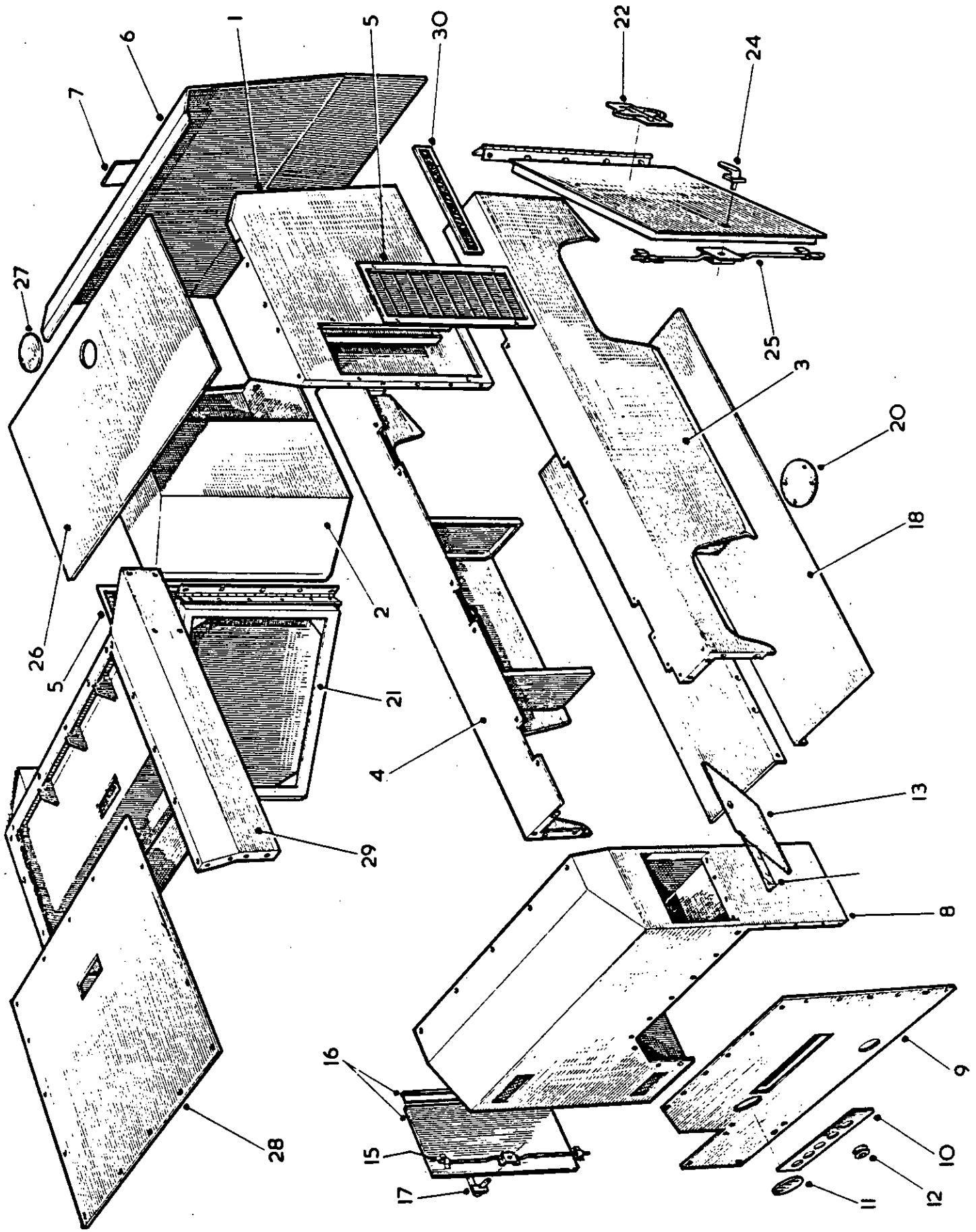
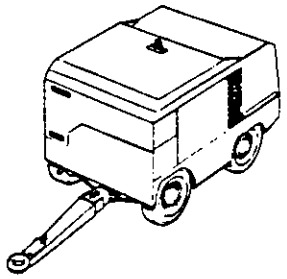
Do not order by illustration number - order by part number.

GYRO – FLO DR – 250 · S
4 – WHEEL HOUSING



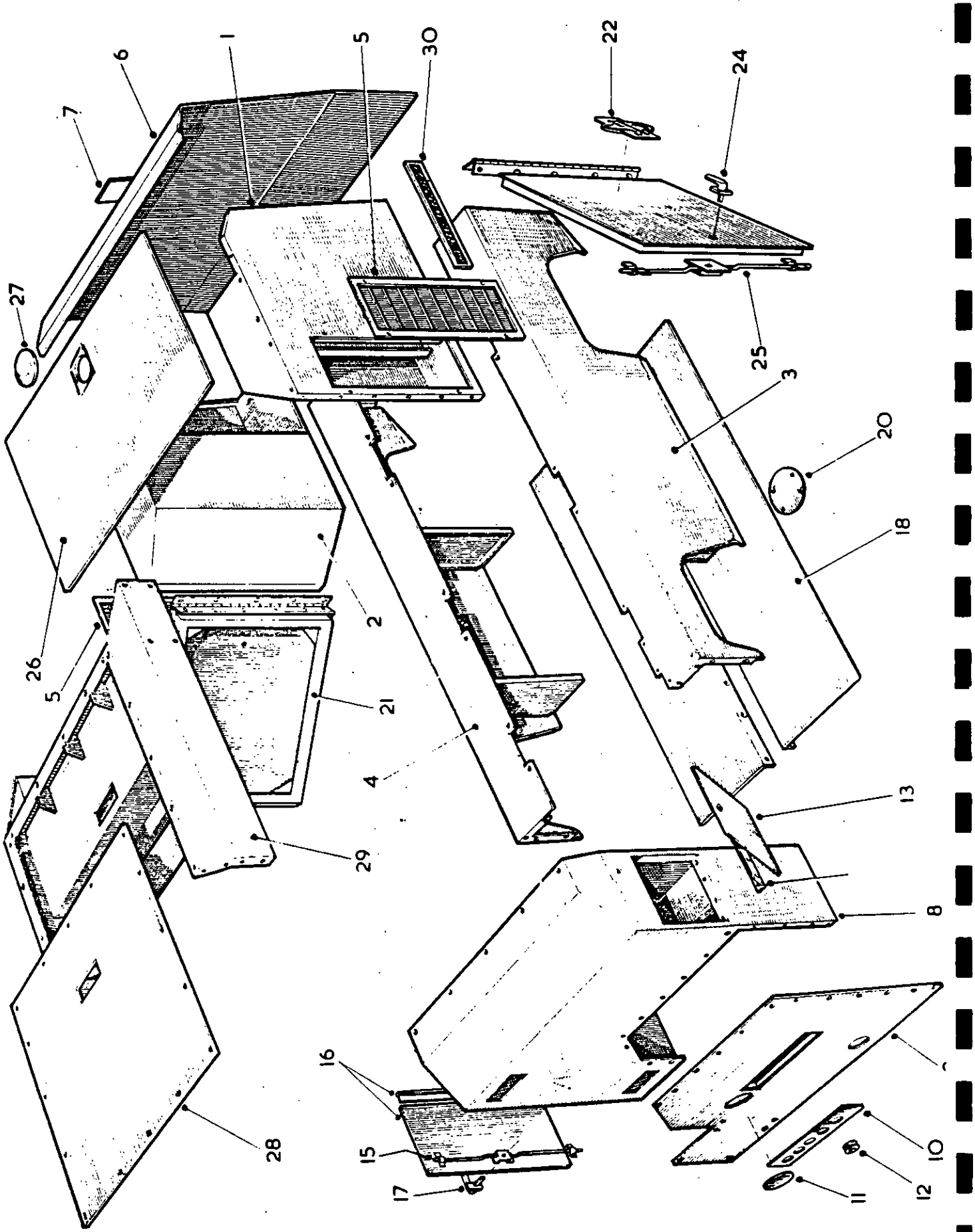


Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	HOUSING (4 WHEEL)		
1	Air Inlet Duct - RH	T2K4805	1
*	Setscrew	3/8"UNC x $\frac{3}{4}$"	7
*	Spring Washer	3/8"	7
2	Air Inlet Duct - LH	T2K4847	1
*	Setscrew	3/8" UNC x $\frac{3}{4}$"	7
*	Spring Washer	3/8"	7
3	Fender - RH	T2K4845	1
*	Setscrew	3/8"UNC x $\frac{3}{4}$"	8
*	Spring Washer	3/8"	8
4	Fender - LH	T2K4846	1
*	Setscrew	3/8"UNC x $\frac{3}{4}$"	8
*	Spring Washer	3/8"	8
5	Air Inlet Grill	T2T5217	2
*	Setscrew	5/16"UNC x 5/8"	8
*	Flat Washer	5/16"	8
6	Front Panel	92284173	1
*	Setscrew	3/8"UNC x $\frac{3}{4}$"	10
*	Spring Washer	3/8"	10
7	I-R Monogram	20A16A2D	1
8	Rear Panel Ass	T2N2027	1
*	Setscrew	5/16"UNC x 5/8"	18
*	Spring Washer	5/16"	18
9	Rear Panel	T2K4848	1
*	Setscrew	5/16"UNC x 5/8"	16
*	Spring Washer	5/16"	16
10	Discharge Pipe Cover	T2T5289	1
*	Self Tapping Screw	No. 14 x $\frac{1}{2}$"	8
11	Discharge Elbow Cover Plate	T2V8925	1
*	Setscrew	$\frac{1}{4}$"UNC x $\frac{1}{2}$"	3
12	Grommet	T2 3716 - 125	5
13	Instrument Panel Access Door with Hinge	T2K4903	1

* Not illustrated.

Always give the serial number of your compressor.

Do not order by illustration number - order by part number.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Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
15	2 Way Rod Latch	T2V8856	1
16	Filter Access Door with Hinge	T2K4800	1
*	Setscrew	$\frac{1}{4}$" UNC x $\frac{1}{2}$"	5
*	Spring Washer	$\frac{1}{4}$"	5
17	Handle	T2V8858	1
18	Underside Baffle Plate	T2N2018	1
*	Setscrew	$\frac{1}{4}$" UNC x $\frac{1}{2}$"	16
*	Spring Washer	$\frac{1}{4}$"	16
*	Setscrew	5/16"UNC x 5/8"	18
*	Spring Washer	5/16"	18
20	Underside Baffle Plate Cover	T2V8791	1
*	Setscrew	$\frac{1}{4}$" UNC x $\frac{3}{4}$"	4
*	Spring Washer	$\frac{1}{4}$"	4
21	Main Door with Hinge	T2K4812	2
*	Setscrew	5/16"UNC x 5/8"	10
*	Spring Washer	5/16"	10
*	2 Way Rod Latch 3/18793	T2V8856	1
24	Handle	T2V8858	2
25	2 Way Rod Latch 3/18624	T2V8857	1
26	Front Cover	T5272	1
*	Setscrew	5/16"UNC x 5/8"	24
*	Spring Washer	5/16"	24
27	Radiator Filler Sealing Plate	T2V8992	1
*	Self Tapping Screw	No. 14	4
28	Top Cover	T2K4809	1
*	Setscrew	5/16"UNC x 5/8"	18
*	Washer	5/16"	18
29	Top Assembly	T2N2026	1
*	Setscrew	5/16"UNC x 5/8"	14
*	Washer	5/16"	14

* Not illustrated.

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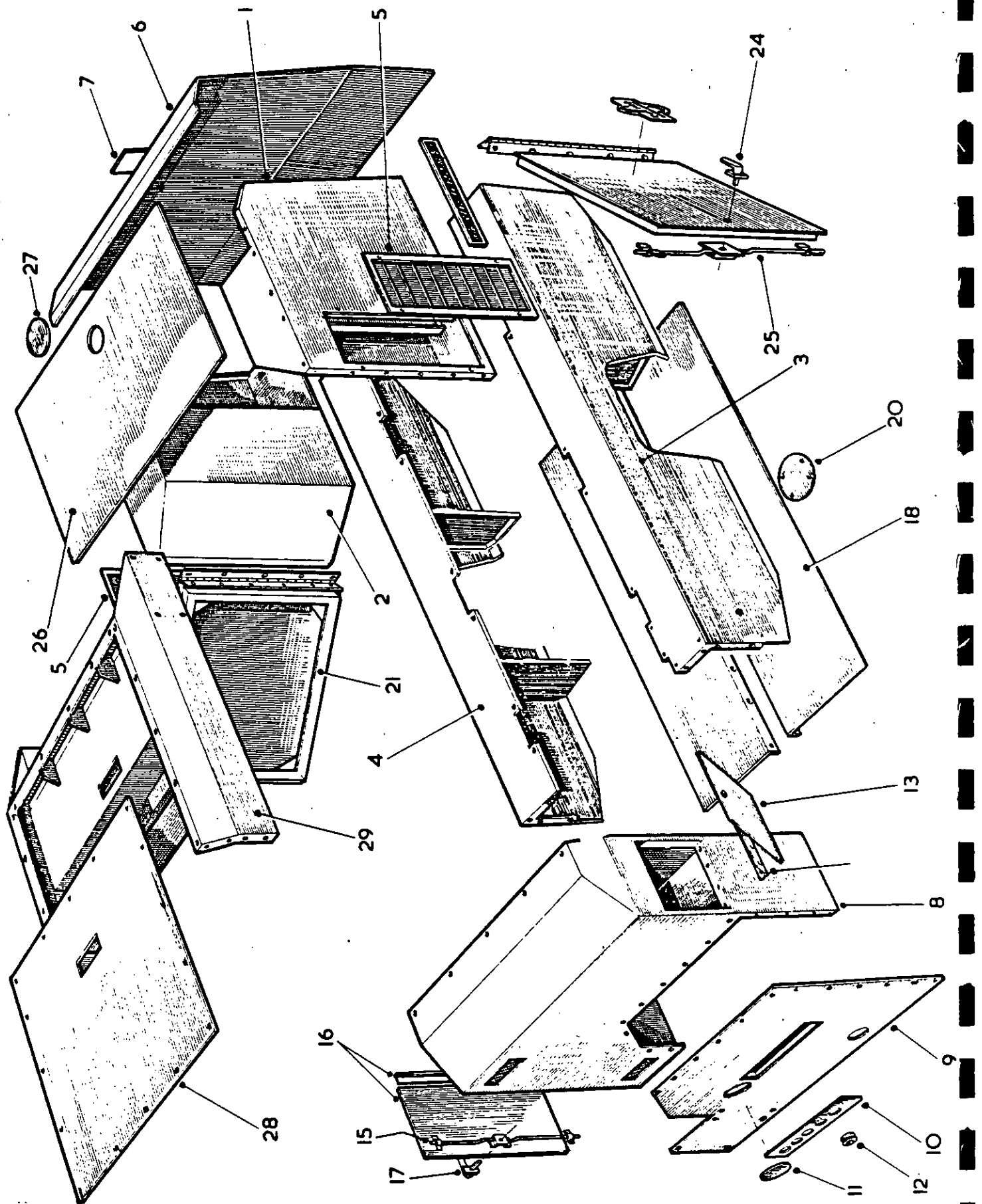
Do not order by illustration number, order by part number.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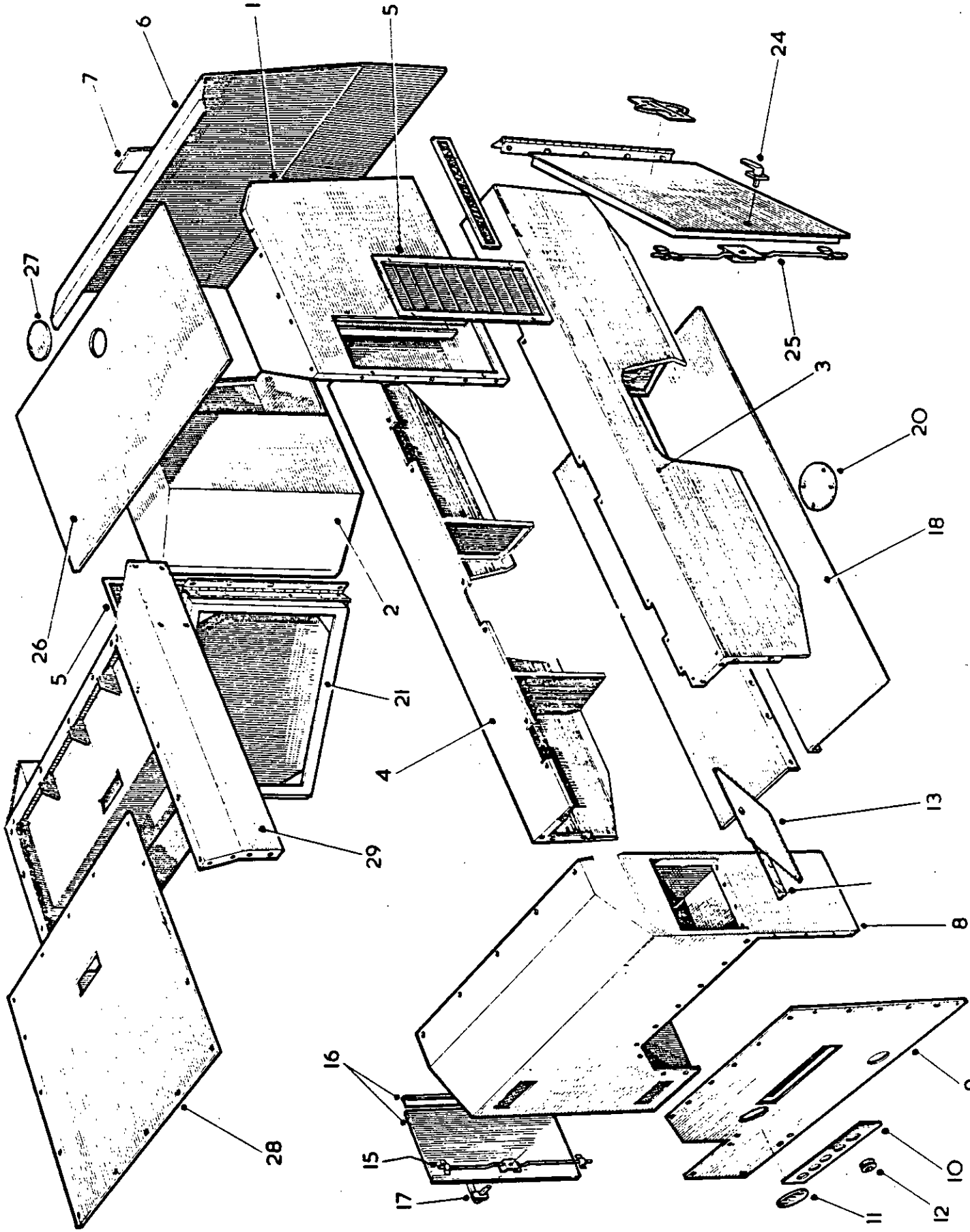
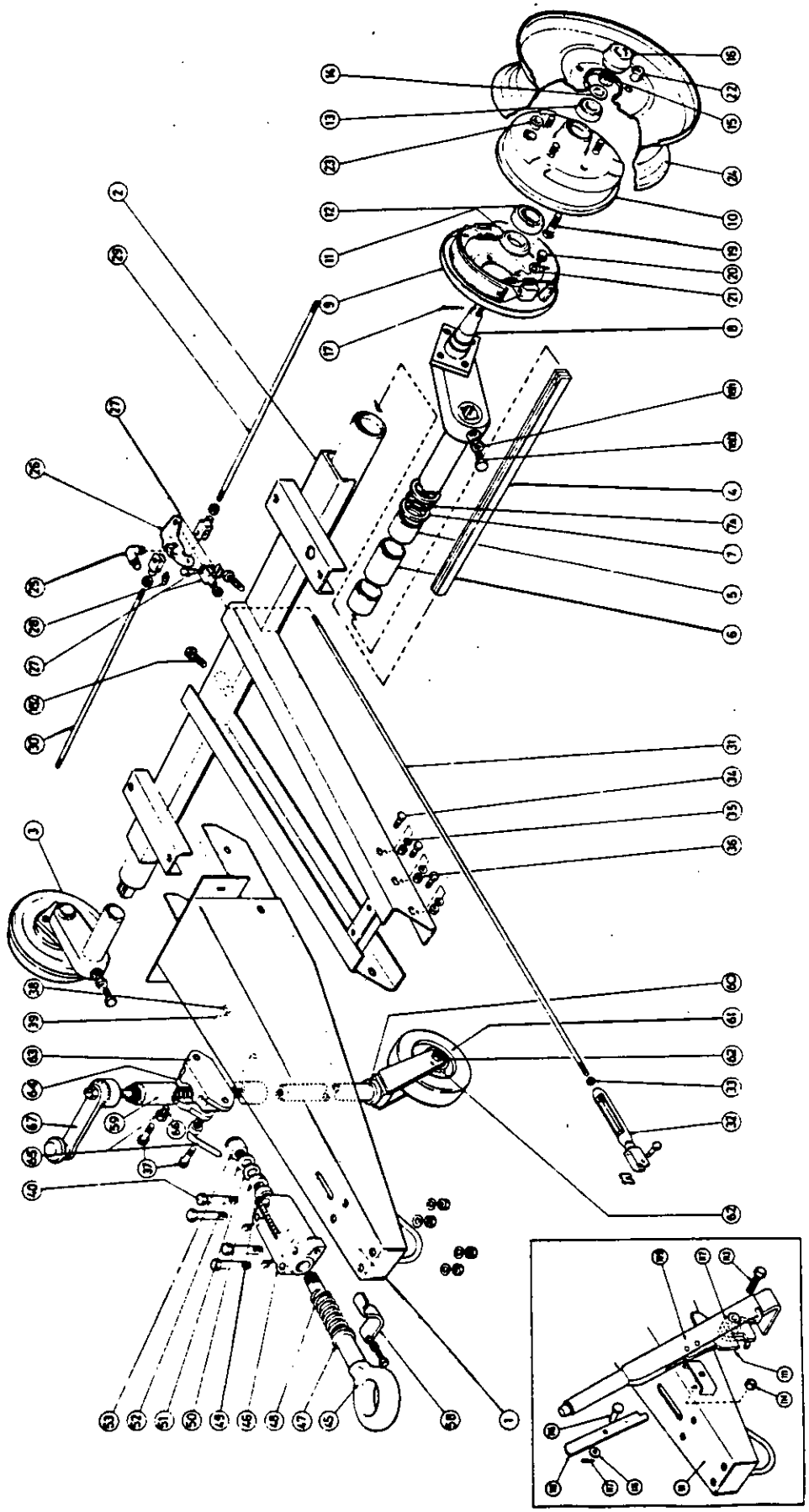
Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	HOUSING (2 WHEEL)		
1	Air Inlet Duct - RH	T2K4805	1
*	Setscrew	3/8" UNC x $\frac{3}{4}$"	7
*	Spring Washer	3/8"	7
2	Air Inlet Duct - LH	T2K4847	1
*	Setscrew	3/8"UNC x $\frac{3}{4}$"	7
*	Spring Washer	3/8"	7
3	Fender - RH	T2K4917	1
*	Setscrew	3/8"UNC x $\frac{3}{4}$"	8
*	Spring Washer	3/8"	8
4	Fender - LH	T2K4918	1
*	Setscrew	3/8"UNC x $\frac{3}{4}$"	8
*	Spring Washer	3/8"	8
5	Air Inlet Grill	T2T5217	2
*	Setscrew	5/16"UNC x 5/8"	8
*	Flat Washer	5/16"	8
6	Front Panel	92284173	1
*	Setscrew	5/16" UNC x 5/8	18
*	Spring Washer	5/16"	18
7	I-R Monogram	20A16A2D	1
8	Rear Housing Assembly	T2N2027	1
*	Setscrew	3/8"UNC x $\frac{3}{4}$"	10
*	Spring Washer	3/8"	10
9	Rear Panel	T2K4848	1
*	Setscrew	5/16"UNC x 5/8"	16
*	Spring Washer	5/16"	16
10	Discharge Pipe Cover	T2T5289	1
*	Self Tapping Screw	No. 14 x $\frac{1}{2}$"	8
11	Discharge Elbow Cover Plate	T2V8925	1
*	Setscrew	$\frac{1}{4}$"UNC x $\frac{1}{2}$"	3
12	Grommet	T23716-125	5
13	Instrument Panel Access Door with Hinge	T2K4903	1

GYRO — FLO DR — 250 - S
2 WHEEL HOUSING



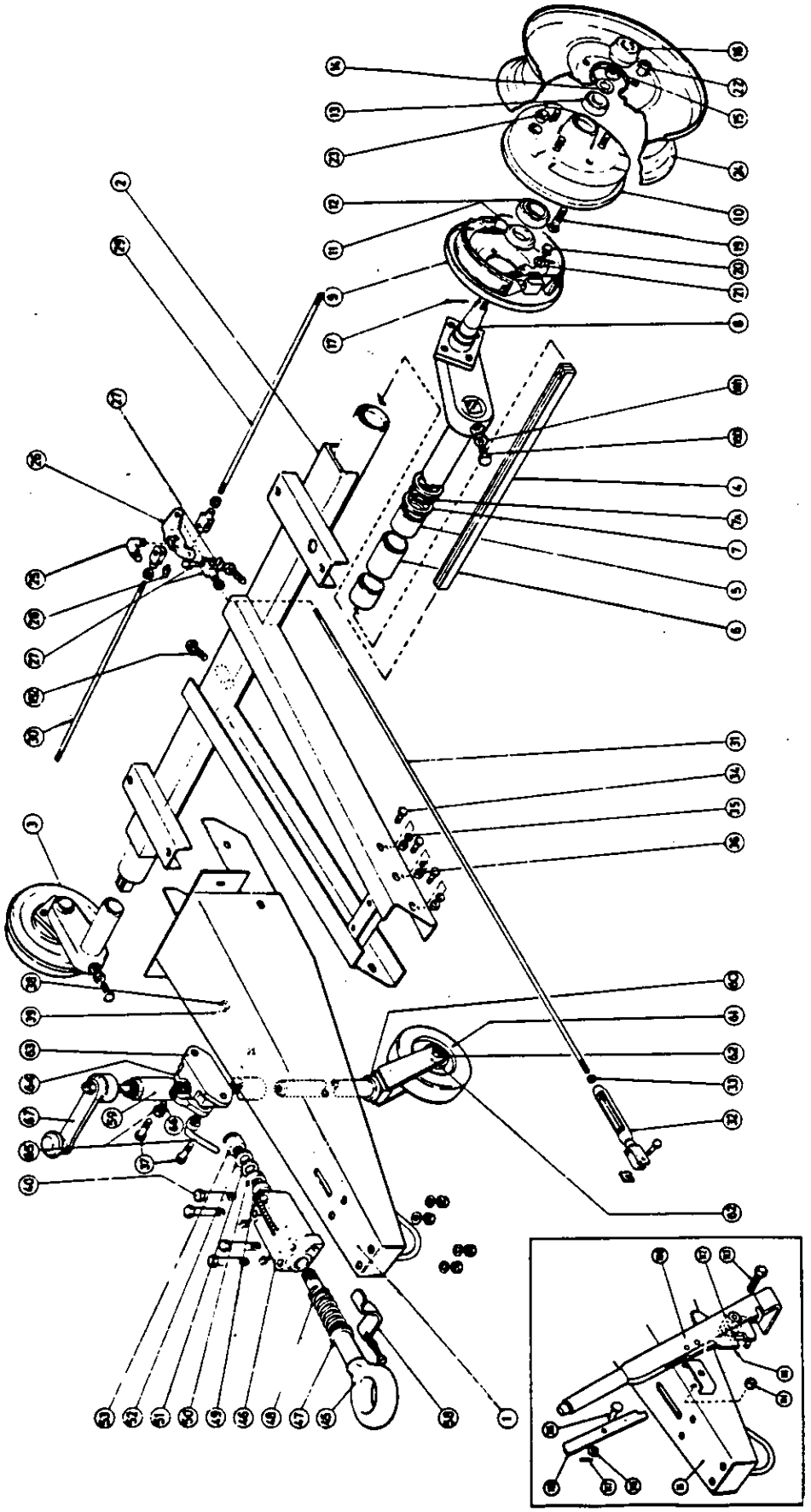
Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
15	2 Way Rod Latch	T2V8856	1
16	Filter Access Door with Hinge	T2K4800	1
*	Setscrew	$\frac{1}{4}$" UNC x $\frac{1}{2}$"	5
*	Spring Washer	$\frac{1}{4}$"	5
17	Handle	T2V8858	1
18	Underside Baffle Plate	T2N2043	1
*	Setscrew	$\frac{1}{4}$" UNC x $\frac{1}{2}$"	16
*	Spring Washer	$\frac{1}{4}$"	16
*	Setscrew	5/16"UNC x 5/8"	18
*	Spring Washer	5/16"	18
20	Underside Baffle Plate Cover	T2V8791	1
*	Setscrew	$\frac{1}{4}$" UNC x $\frac{3}{4}$"	4
*	Spring Washer	$\frac{1}{4}$"	4
21	Main Door with Hinge	T2K4812	2
*	Setscrew	5/16"UNC x 5/8"	10
*	Spring Washer	5/16"	10
*	2 Way Rod Latch 3/18793	T2V8856	1
24	Handle	T2V8858	2
25	2 Way Rod Latch 3/18624	T2V8857	1
26	Front Cover	T2T5272	1
*	Setscrew	5/16"UNC x 5/8"	16
*	Spring Washer	5/16"	16
27	Radiator Filler Sealing Plate	T2T5222	1
*	Self Tapping Screw	No. 14	4
28	Top Cover	T2K4809	1
*	Setscrew	5/16"UNC x 5/8"	18
*	Washer	5/16"	18
29	Top Assembly	T2N2026	1
*	Setscrew	5 /16"UNC x 5/8"	14
*	Washer	5/16"	14

GYRO — FLO DR — 250 - S
2 WHEEL RUNNING GEAR



Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	Set Rubery Owen 2 Wheel Running Gear	T2T2350	1
*	Wheel & Tyre Assembly Complete	92296839	2
*	Bolts - ½" UNF x 1¼" lg	92273523	4
*	Philidas Nuts - ½" UNF	92022763	4
*	Bolt - 5/8"UNF x 1¼"	92272459	4
*	Philidas Nuts - 5/8"	92271642	4
1	Front Tow Bar	92305028	1
2	Rear Tow Bar/Axle Tube	92305036	1
3	Swinging Arm Hub & Brake Assembly LH	92305044	1
3a	Swinging Arm Hub & Brake Assembly RH	92305051	1
4	Torsion Bar	92305069	2
5	Axle Tube Bush	92305077	4
6	Distance Piece	92305085	2
7	Felt Ring	92305093	4
7a	"O" Ring	92305101	2
8	Swinging Arm LH	92305119	1
8a	Swinging Arm RH	92305127	1
9	Brake Assembly LH	92305135	1
9a	Brake Assembly RH	92305143	1
10	Brake Drum (complete with bearings) (studs & nuts)	92305150	2
11	Grease Seal	92305168	2
12	Inner Bearings	92305176	2
13	Outer Bearings	92305184	2
14	Washer	92305192	2
15	Slotted Nut	92305200	2
16	Grease Cap	92305218	2
17	Split Pin	92305226	2
18/1	Nut	92305234	4
18/2	Locking Screw	92305242	2
18/3	Locking Screw	92305249	2
19	Wheel Stud	92305267	10
20	Bolt .....3/8"UNF x 7/8" lg	92305275	8
*	Nut .....3/8" UNF	92305283	8
21	Spring Washer	92305291	8
22	Wheel Nut	92305309	10
25	"L" Bolt	92305325	1
26	Compensator Lever	92305333	1
27	Clevis Assembly	92305341	3
28	Grease Nipple	92305358	1
*	Spring Washer	92305366	1
29	Brake Rod LH	92305374	1
30	Brake Rod RH	92305382	1
*	Barrel Adaptor - 5/16" UNF x ¼" UNF	92305390	2
31	Brake Rod	92305408	1

GYRO — FLO DR — 250 - S
2 WHEEL RUNNING GEAR



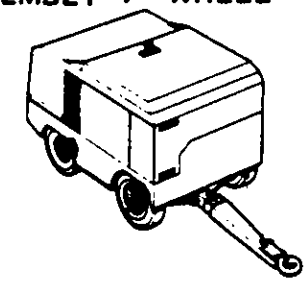
Illus No	DESCRIPTION Parts indented after an item are included with the item	PART NO	QTY
32	Turnbuckle Assembly	92305416	1
33	Locknut	92305424	6
34	Bolt (none standard)	92305432	6
35	Washer (none standard)	92305440	6
36	Nut (none standard)	92305457	6
37	Bolt - 5/8" UNF x 1½"	92305465	2
38	Nut - 5/8" UNF	92305473	2
39	Spring Washer	92305481	2
40	Bolt - ½" UNF x 3"	92305499	4
*	Nut - ½" UNF	92305507	4
*	Spring Washer - ½"	92305515	4
45	Eye and Shaft	92305564	1
46	Hitch Body	92305572	1
47	Washer	92305580	1
48	Spring	92305598	1
49	Rubber Shock Absorber	92305606	1
50	Plain Washer	92305614	1
53	Nut	92305622	1
58	Handle & Knob	92305630	1
59	Outer Tube Assembly	92305648	1
60	Inner Tube & Castor	92305655	1
61	Jockey Wheel		1
62	Pivot Bracket	92305689	1
63	Top Cap	92305697	1
65	Locking Handle & Nut	92305705	1
66	Clamp Bolt & Nut	92305713	1
67	Bracket	92305689	1
*	Wheels - 500F	92305317	2
*	Tyres	600 x 15 x 4	2
109	Handbrake Complete	92323724	1
110	Lever	92323732	1
111	Ratchet	92323740	1
112	Spring	92323757	1
113	Pivot Bolt	92323765	1
114	Nut	92323773	1
115	Pivot Pin	92323781	1
116	Plain Washer	92376581	1
117	Split Pin	92323799	1

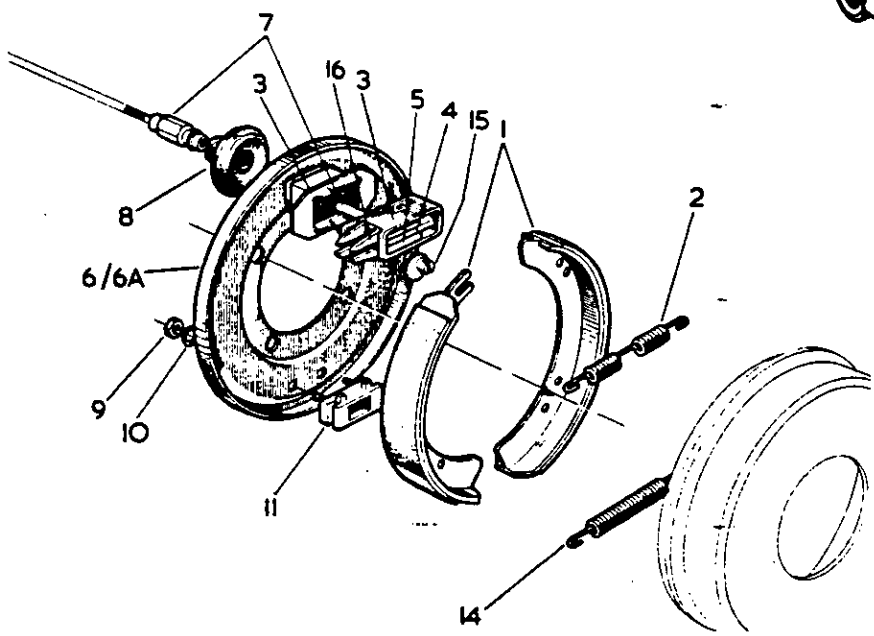
Not illustrated.

Always give the serial number of your compressor.

Do not order by illustration number - order by part number.

GYRO – FLO DR – 250 -S
BRAKE ASSEMBLY 4 – WHEEL





Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
*	BRAKE ASSEMBLY COMPLETE RH	T2102380	1
*	BRAKE ASSEMBLY COMPLETE LH	T2102381	1
1	Brake Shoe (Pair)	T2LB110	1
2	Pull - off Spring	T225738	1
3	Expander Body and Cover	T288645	1
4	Lever - Inner	T288656	1
5	Lever - Outer	T288650	2
6	Back Plate Assembly RH	T2102382	1
6A	Back Plate Assembly LH	T2102383	1
7	Pull Rod and Pin Assembly	T2103363	1
8	Boot	T232324	1
9	Nut	T2K18609	2
10	Spring Washer	T2K19208	2
11	Body and Abutment	T22594	1
*	Pin for Expander - Long	T291139	1
*	Pin for Expander - Short	T288653	2
14	Tension Spring	T295393	1
15	Micram Adjuster	T225254	1
16	Mask	T225253	1

* Not illustrated.
Always give the serial number of your compressor.
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Item No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	Gyro Model Plate	T2V8884	2
2	Nameplate	T2N2035	2
3	General Data Plate	T2T5301	1
4	Preventative Maintenance Plate	T2T5298	1
5	Operating Instruction Plate	T2T5299	1
6	Neoprene Adhesive Tags	—	24
7	Front Panel Pad	T2V8835	1
8	Inlet Duct Pad	T2V8836	6
9	Inlet Pad	T2V8837	2
10	Inlet Side Panel Pad	T2V8838	2
11	Main Door Pad	T2V8841	2
12	Bulk Head Pad	T2T5283	1
13	Front Cover Pad	T2V8839	1
14	Engine Cover Pad	T2V8840	1
15	Rear Bulk Head Pad	T2V8842	1
16	Radiator Pad	T2V8891	2
17	Main Door Perforated Panel	T2V8843	2

Always give the serial number of your compressor.

Do not order by illustration number - order by part number.

FLEXIBLE TUBING

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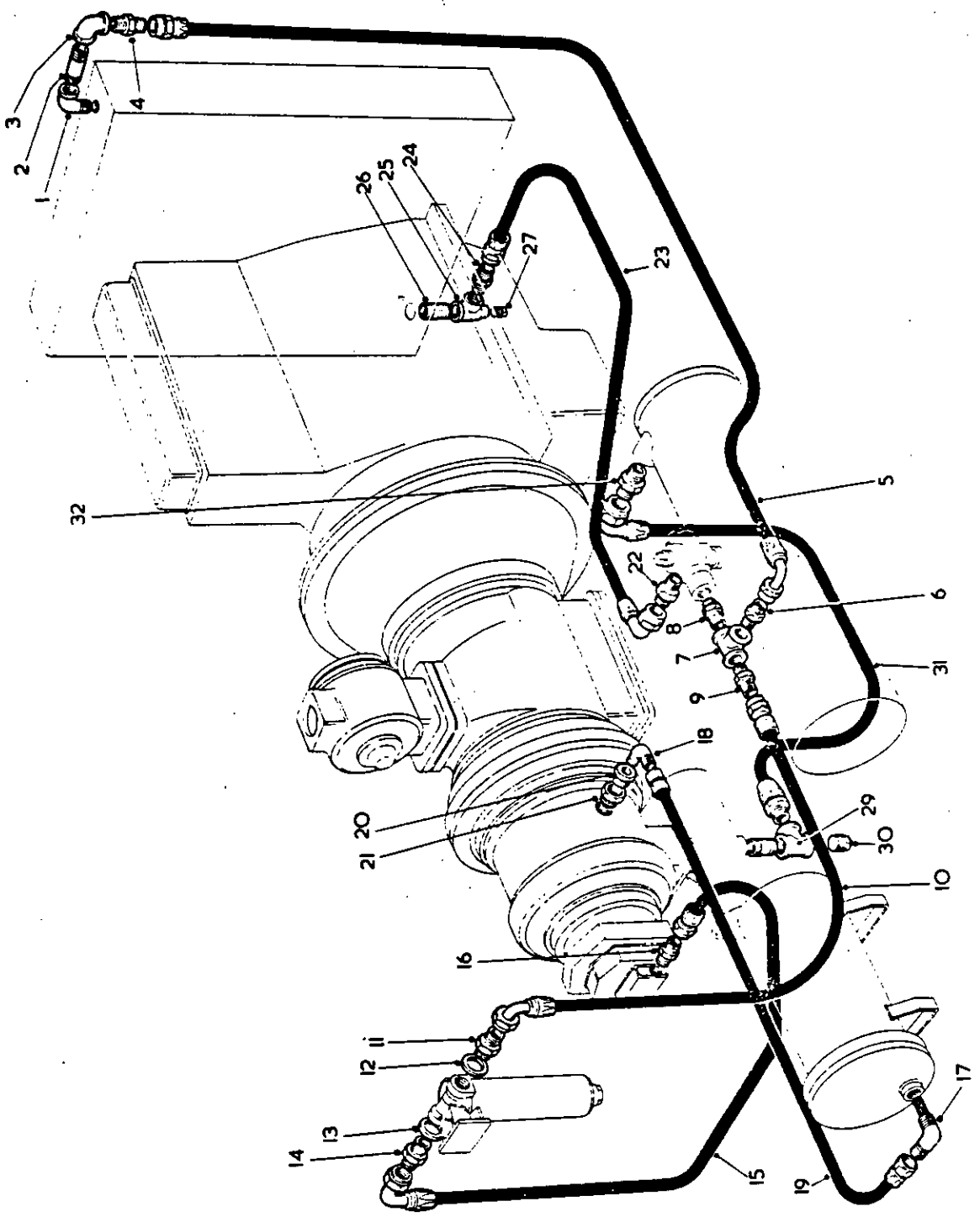

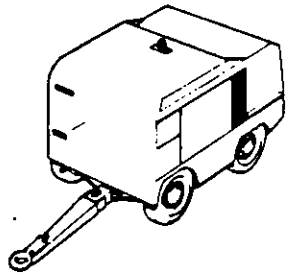

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	OIL COOLER OUTLET TO BYPASS VALVE		
1	90° Male/Female Elbow	$\frac{3}{4}$" BSPT	1
2	Space Nipple x $7\frac{3}{4}$" Long	$\frac{3}{4}$" BSPT	1
3	90° Female Elbow	$\frac{3}{4}$" BSPT	1
4	Aeroquip Adaptor	T21320-12-12	1
5	Aeroquip Hose Assembly	T2T5296/1	1
6	Aeroquip Adaptor	T21320-12-12	1
7	Equal 'T' Fitting	$\frac{3}{4}$" BSPT	1
8	Hex. Nipple	$\frac{3}{4}$" BSPT	
	BYPASS VALVE TO OIL FILTER		
9	Aeroquip Adaptor	T21320-12-12	1
10	Aeroquip Hose Assembly	T2T5296/2	1
11	Aeroquip Adaptor	T2V8830	1
12	Dowty Seal	T2V8829	1
	OIL FILTER TO OIL PUMP		
13	Dowty Seal	T2V8829	1
14	Aeroquip Adaptor	T2V8830	1
15	Aeroquip Hose Assembly	T2T5296/3	1
16	Aeroquip Adaptor	T21320-12-12	1
	SECONDARY SEPARATOR TO HP CYLINDER(Scavenge)		
17	Oil Line Screen Assembly	2W43735 TP	1
18	Male Elbow Connector	3/8" BSPT	1
19	Aeroquip Hose Assembly	T2T5296/8	1
20	Orifice	2X1080TP	1
21	Reducing Bush (HP Cyl)	$\frac{3}{4}$" x $\frac{1}{4}$" BSPT	1
	BYPASS TO OIL COOLER INLET		
22	Aeroquip Adaptor	T21320-12-12	1
23	Aeroquip Hose Assembly	T2T5296/7	1
24	Aeroquip Adaptor	T21320-12-12	1
25	'T' Fitting	$\frac{3}{4}$" x $\frac{3}{4}$" x $\frac{1}{2}$" BSPT	1
26	Space Nipple x 3" Long	$\frac{3}{4}$" BSPT	1
27	Pipe Plug	$\frac{1}{2}$" BSPT	1
	HEADER BOTTLE TO PRIMARY SEPARATOR		
29	Tee BSPT	$1\frac{1}{2}$" x $1\frac{1}{2}$" x $\frac{1}{2}$"	1
30	Pipe Plug	$\frac{1}{2}$" BSPT	1
31	Aeroquip Hose Assembly	T2T5269/6	1
32	Aeroquip Adaptor	T21320-12-12	1

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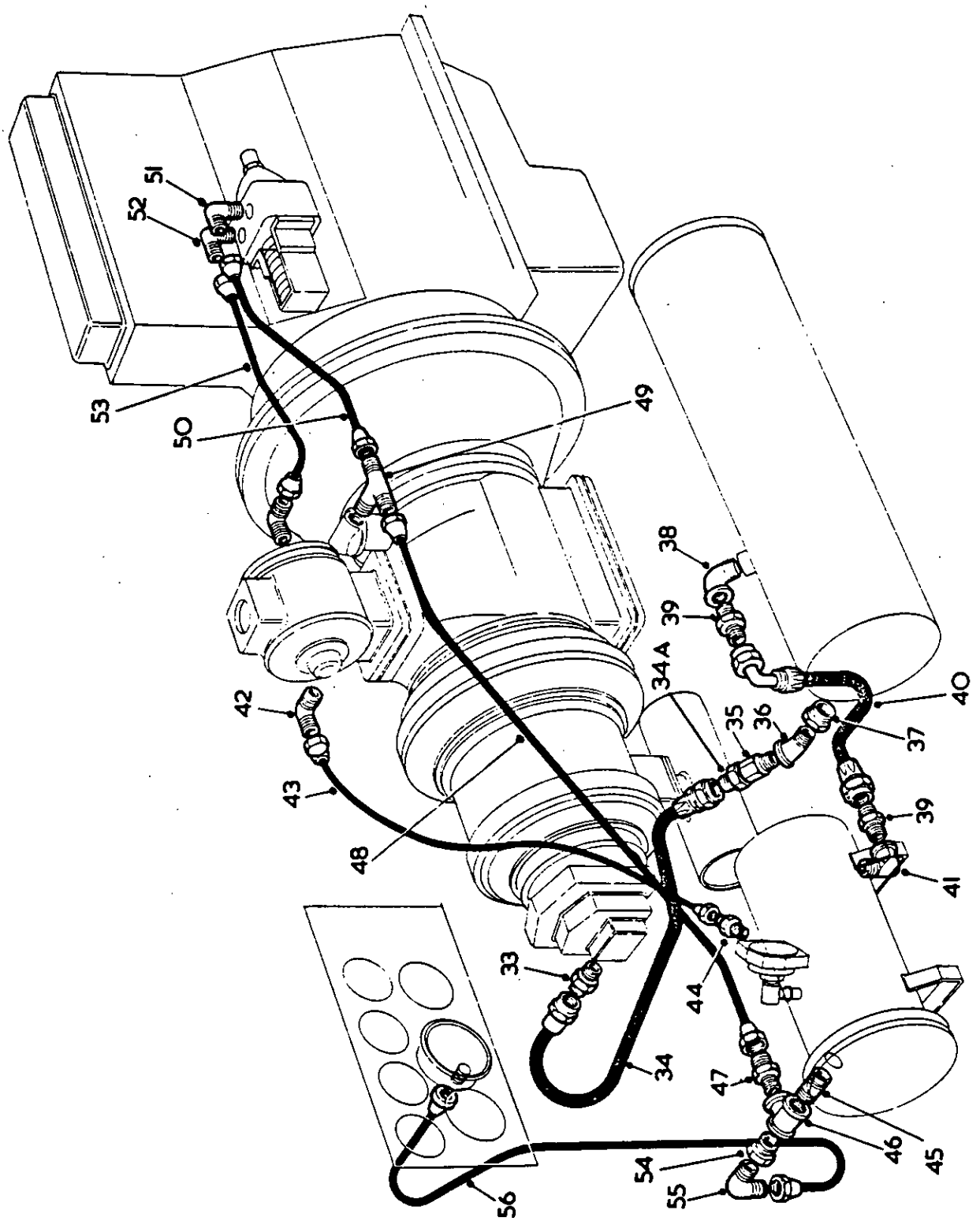
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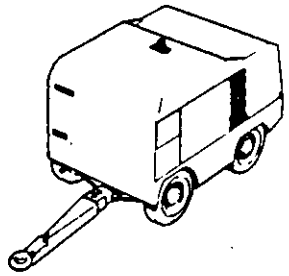

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	OIL PUMP TO SEPARATOR RELIEF VALVE		
33	Male Straight Connector - BSPT	¼" x 3/8" O/D	1
34	Aeroquip Hose	T2T5296/4	1
34a	Male/Female Adaptor - BSPT	¼" x 3/8" O/D	1
35	Oil Pump Relief Valve Assembly	PCC 192	1
36	45° Male/Female Elbow	¼" BSPT	1
37	Reducing Bush	½" x ¼" BSPT	1
	PRIMARY TO SECONDARY SEPARATOR		
38	90° Male/Female Elbow	1½" BSPT	1
39	Aeroquip Adaptor	T21320-24-24	2
40	Aeroquip Hose Assembly	T2T5296/5	1
41	90° Male/Female Elbow	1½" BSPT	1
	UL 89 TO AUTO BLOWDOWN VALVE		
42	Male Elbow Connector - BSPT - 608F	¼" x 5/16" O/D	1
43	Polypenco Tube Assembly	T2T5296/12	1
44	Male Connector - NPT - 605F	1/8" x 5/16" O/D	1
	SECONDARY SEPARATOR TO NORGREN VALVE		
45	Hex. Nipple	¼" BSPT	1
46	Equal Tee Fitting	¼" BSPT	1
47	Male Straight Connector - BSPT - 605F	¼" x 5/16" O/D	1
48	Polypenco Tube Assembly	T2T5296/13	1
	NORGREN VALVE TO UL88 REGULATOR		
49	Male 'T' Connector - BSPT - 610F	¼" x 5/16" O/D	1
50	Polypenco Tube Assembly	T2T5296/14	1
51	Male Elbow Connector - BSPT - 608F	¼" x 5/16" O/D	1
	UL88 TO UL89		
52	Male Elbow Connector - BSPT - 608F	¼" x 5/16" O/D	2
53	Polypenco Tube Assembly	T2T5296/15	1
	SECONDARY SEPARATOR TO HP DISCHARGE GAUGE		
54	Reducing Bush	¼" - 1/8" BSPT	1
55	Male Elbow Connector - BSPT - 608F	1/8" x 3/16" O/D	1
56	Polypenco Tube Assembly	T2T5296/11	1

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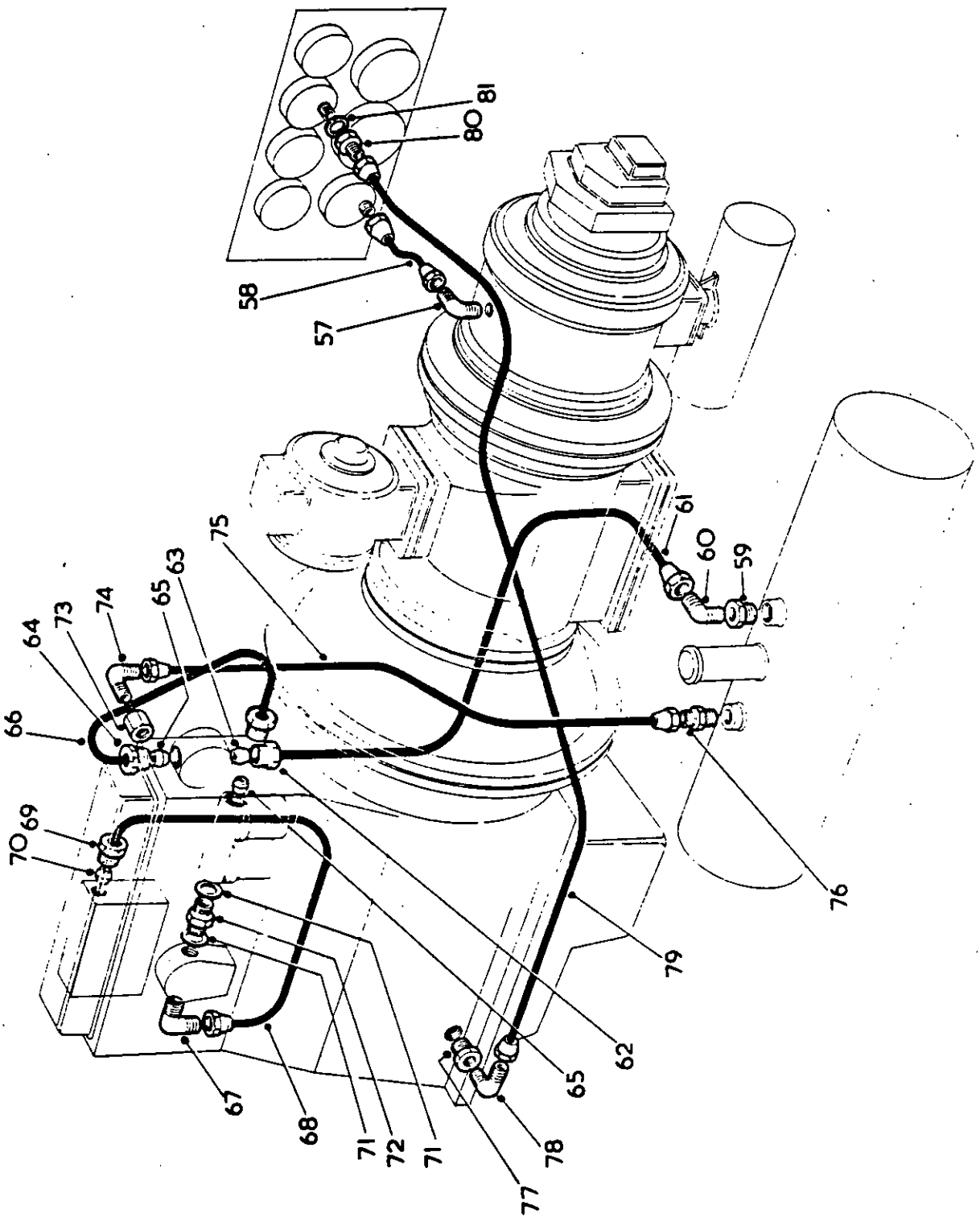
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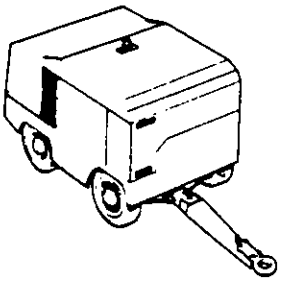

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	H.P. CYLINDER INLET TO INTERSTAGE		
57	Male Elbow Connector - BSPT - 608F.....	1/8" x 3/16" O/D	1
58	Polypenco Tube Assembly.....	T2T5296/10	1
	FUEL TANK TO FUEL PUMP		
59	Reducing Bush - BSPT.....	$\frac{3}{4}$" x $\frac{1}{4}$"	1
60	Male Elbow Connector - BSPT	$\frac{1}{4}$" x 5/16" O/D	1
61	Polypenco Tube Assembly.....	T2T5296/16	1
62	Tube Nut - Z404.....	5/16" Dia.	1
63	Olive - Z18		1
	FUEL PUMP TO FILTER		
64	Tube Nut - Z18	5/16" Dia.	2
65	Tube Olive - Z404.....	5/16" Dia.	2
66	Polypenco Tube Assembly.....	T2T5296/17	1
	FUEL SOLENOID TO FUEL PUMP		
67	Male Elbow Connector - BSPT	$\frac{1}{4}$" x 5/16" O/D	1
68	Polypenco Tube Assembly.....	T5296/18	1
69	Nut	5/16" O/D	1
70	Olive	5/16"	1
	FUEL FILTER TO FUEL SOLENOID		
71	Copper Washer.....	$\frac{1}{2}$" dia x 3/64th.	1
72	Adaptor.....	T2V5712	1
	ENGINE TO FUEL TANK (EXCESS FUEL)		
73	Adaptor	T2V8297	1
74	Male Elbow Connector - BSPT	1/8" x 3/16" O/D	1
75	Polypenco Tube Assembly.....	T2T5296/19	1
76	Male Connector - BSPT	$\frac{1}{4}$" x 3/16" O/D	1
	ENGINE TO OIL PRESSURE GAUGE		
77	Reducing Connector - BSPT - Z325-9	5/16" x 3/16" O/D	1
78	Male Elbow Adaptor - BSPT - Y116	3/8" x 5/16" O/D	1
79	Polypenco Tube Assembly.....	T2T5296/9	1
80	Female Connector	T2V4818	1
81	Fibre Washer 5/16" O/D x 5/32" ID x 3/64" Thick..		1

* Not illustrated.

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Item No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	90° M/F Elbow(By-Pass to Oil Cooler Inlet)	$\frac{3}{4}$" BSPT	1
2	Rubber Grommet	T23716-125	1
3	Hose Clip	T2HO1330-8	4
4	Hose Clip	T2HD1300-4	2
5	Hose Clip	T2HD1300-1	2
6	Set Screw	5/16"UNC x 1"	2
7	Philidas Nut	5/16" UNC	2
8	Back Plate	T2V3365	3
9	Double Pipe Clip	T2W029554	3
10	Nylastic Adjustable Pipe Clip	No. 2	2
11	Nylastic Adjustable Pipe Clip	No. 1	2
12	Rd. Hd. Screw	3/16"BSW x $\frac{3}{4}$"	3
13	Lockwasher	3/16"	3
14	Washer	3/16"	3
15	Hex. Nut	3/16" BSW	3
16	Pipe Bracket	T2V7820	2
17	Pipe Bracket	T2V5566	1
18	Pipe Bracket	T2V5946	1
19	Pipe Bracket	T2V5947	1

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AUXILIARY PARTS

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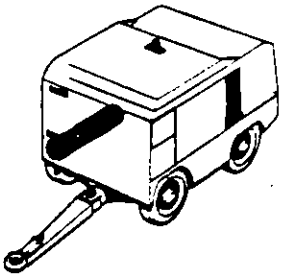

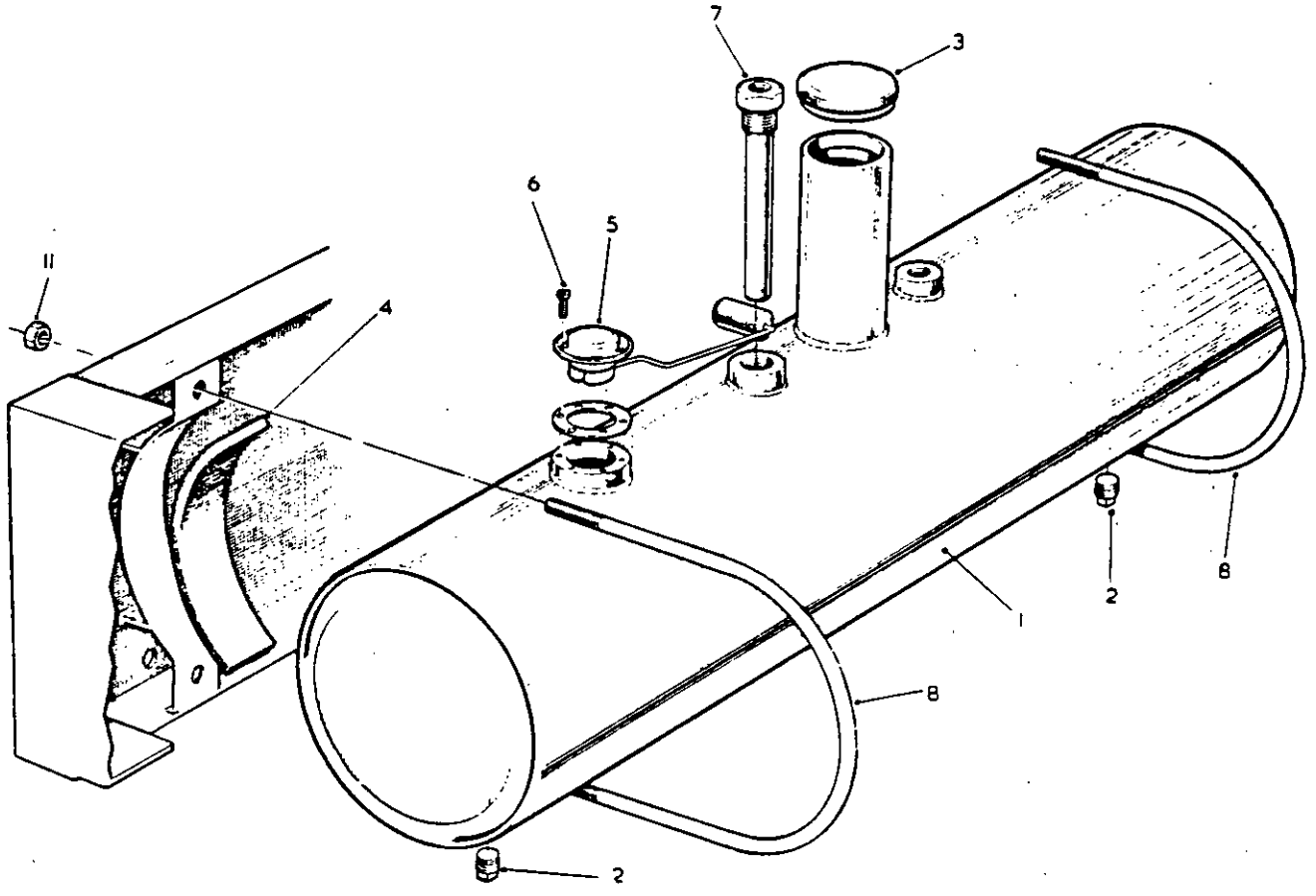

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	FUEL TANK	T2K4819	1
2	Fuel Tank Pipe Plug	$\frac{1}{4}$" BSPT	2
3	Fuel Tank Cap	T2EOA9030	1
4	Fuel Tank Cushion	3/16" x 2" x 4"	4
5	Fuel Lever Sender Unit	T2V8827	1
6	Screws	4BA x 3/8"	6
7	Fuel Tank Outlet Adaptor	2W56976	1
8	Fuel Tank Strap	2W48580	2
11	Fuel Tank Strap Locknut	3/8" UNC	4

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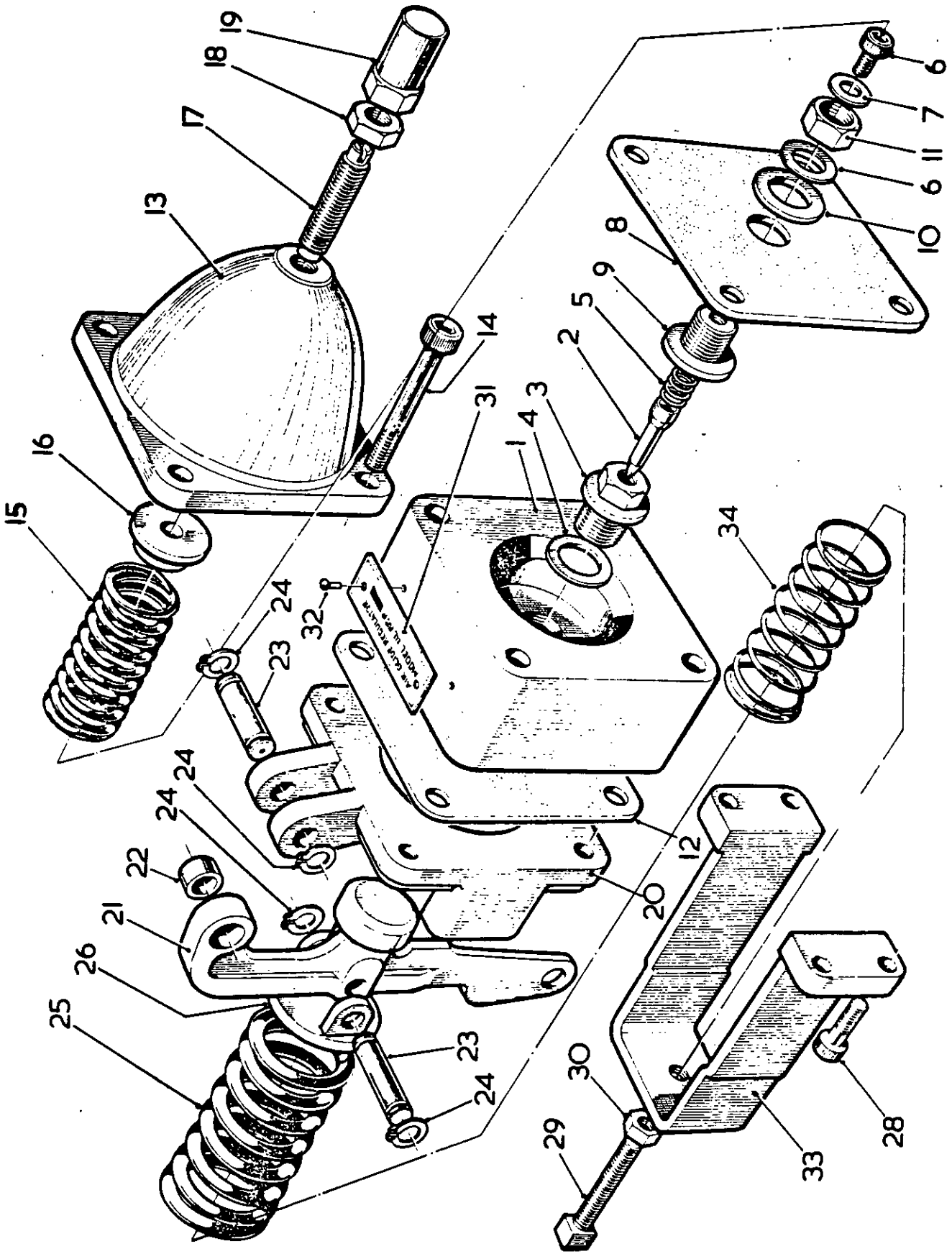
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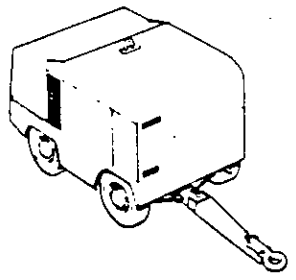

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	UL88 SPEED & PRESSURE REGULATOR COMPLETE	TUL88R210BB	1
1	UL88 Regulator Body	2R15427P2	1
*	UL88 Regulator Repair Kit	UL88 - 200	1
2	UL88 Regulator Metering Pin	2W32936	1
3	UL88 Regulator Metering Pin Seat	2W31748P2	1
4	UL88 Regulator Metering Pin Seat Gasket	T2V4912	1
5	UL88 Regulator Metering Pin Spring	PP607	1
6	UL88 Regulator Socket Head Set Screw	5/16" - 24 x 3/8"	1
7	UL88 Regulator Set Screw Gasket	X1108T20	1
8	UL88 Regulator Top Cover Diaphragm	2W37087	1
9	UL88 Regulator Top Cover Diaphragm Bolt	2W32937	1
10	Top Cover Diaphragm Washer	1W1619P1	1
11	Top Cover Diaphragm Bolt Nut	2W32938	1
12	UL88 Regulator Bottom Cover Diaphragm	2W34874	1
13	UL88 Regulator Top Cover	2R15430	1
14	UL88 Regulator Top Cover Set Screw	7/16" - 14 x 2¾	4
15	UL88 Regulator Pilot Valve Spring	PP412	1
16	UL88 Regulator Pilot Valve Spring Seat	2W90675	1
17	UL88 Regulator Pilot Valve Adjusting Screw	2W26388	1
18	Pilot Valve Adjusting Screw Lock Nut	2W46062	1
19	UL88 Regulator Pilot Valve Adjusting Screw Nut	2W12826P1	1
20	UL88 Regulator Bottom Cover	2R17467P1	1
21	UL88 Regulator Lever	2R17498ATP	1
22	UL88 Regulator Lever Bushing	2W37528	1
23	UL88 Regulator Shaft	2W26387	2
24	UL88 Regulator Retaining Ring	2W32830	4
25	UL88 Regulator Range Spring - Outside	PP604	1
26	UL88 Regulator Range Spring Seat		1
28	UL88 Support Socket Head Set Screw	¼" - 20 x ¾"	4
29	Minimum Speed Screw (Square Head)	5/16" - 18 x 2¾"	1
30	Locknut	5/16" - 18	1
31	UL88 Regulator Name Plate	2R35027	1
32	UL88 Regulator Name Plate Drive Screw	No. 2. x ¼"	2
33	UL88 Regulator Range Spring Support	2W31759P1	1
34	UL88 Regulator Range Spring - Inside	T2V4677	1

* Not illustrated.

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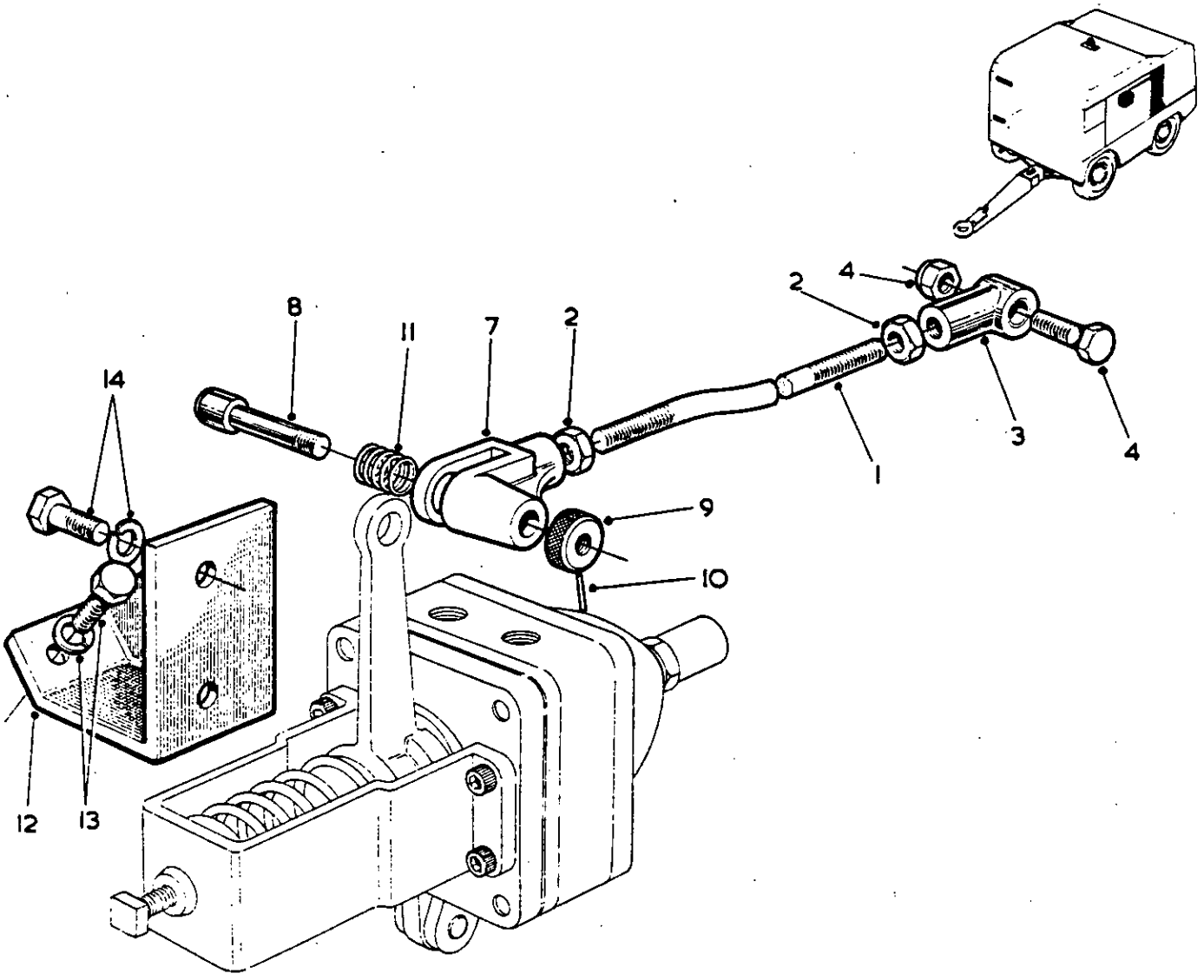
GYRO – FLO DR – 250 ·S
UL88 REGULATOR LINKAGE



Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	Governor Lever Link Rod	X1519T16	1
2	Nut	¼" UNF	2
3	Unibal	2W78185	1
4	Unibal to Lever Set Screw, Nut & Lockwasher	¼"-20x7/8"	1
*	UL88 Regulator Manual Speed Latch Assembly	2W35049	1
7	UL88 Regulator Manual Speed Latch	2W35048	1
8	UL88 Regulator Manual Speed Latch Pin	2W35046	1
9	UL88 Regulator Latch Plunger Pull Knob	2W43729	1
10	UL88 Regulator Latch Plunger Pull Knob Pin	094 x ½"	1
11	UL88 Speed Latch Plunger Spring	PP232	1
12	UL88 Regulator Mounting Bracket	T2K4790	1
13	Set Screw, Plain & Lockwasher	7/16"UNC x 1"	2
14	Mounting Bracket Set Screw & Lockwasher(Brkt to Reg)	½" UNC x 1"	2

* Not illustrated.

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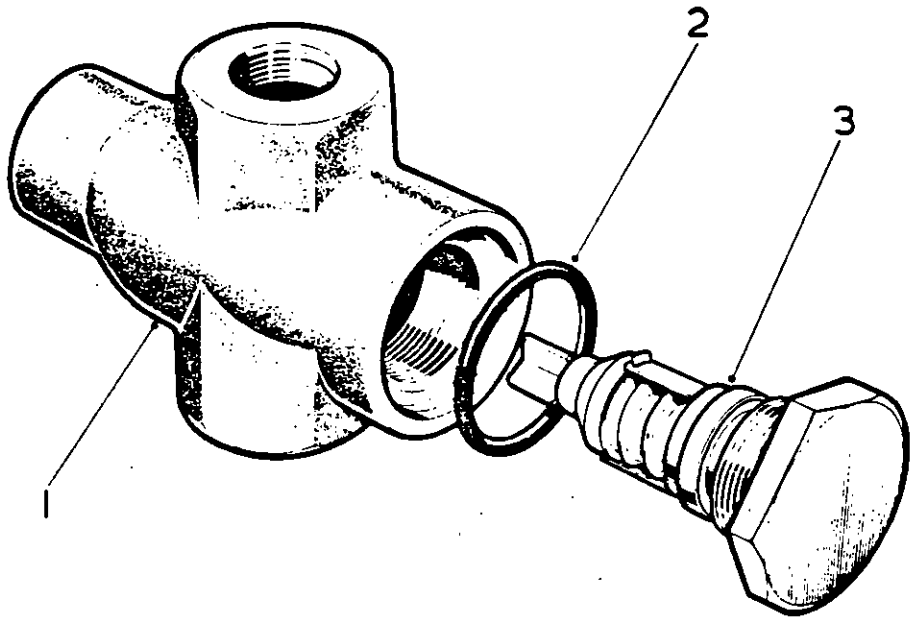

Illus. No.	Parts indented after an item are included with the item	Part Number	Qty.
	OIL TEMPERATURE BY-PASS VALVE COMPLETE...	2W40886	1
1	By - Pass Valve Body.....	2H16018	1
2	By - Pass Valve "O" Ring	X1514T220C	1
3	By - Pass Valve.....	2W40885	1

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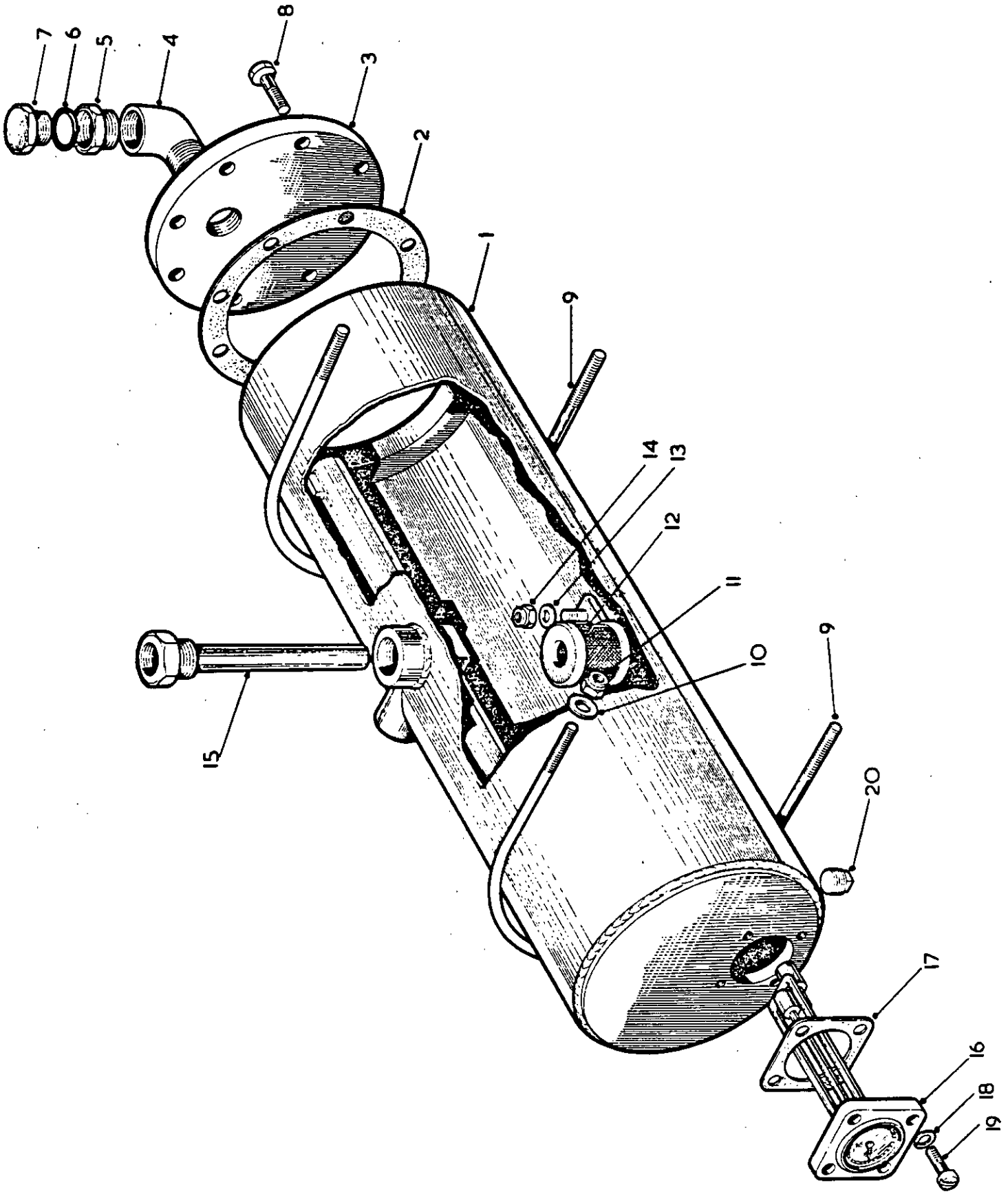
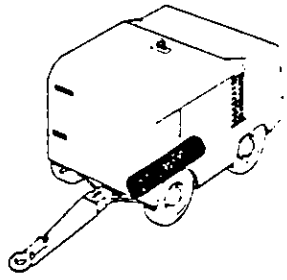
GYRO – FLO DR – 250 -S
PRIMARY OIL SEPARATOR





Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	PRIMARY OIL SEPARATOR TANK	T2N1094	1
2	Oil Separator Tank to Cover Gasket	2W48729	1
3	Primary Oil Separator Tank Cover	2W48724P1	1
4	Oil Filler Street Elbow - Reducing	1½" x 1¼" BSP	1
5	Oil Filler Hole Adaptor.....	2R26539TP	1
6	Oil Filler Hole "O" Ring.....	X1514T214C	1
7	Oil Filler Hole Plug.....	2W48777TP	1
8	Primary Oil Separator Tank Cover Set Screw.....	5/8" - 11 x 1½"	8
9	Primary Oil Separator Tank Strap.....	2W48580	2
10	Primary Oil Separator Tank Strap Washer.....	3/8"	4
11	Primary Oil Separator Tank Strap Nut	3/8" UNF	4
12	Primary Oil Separator Filter Screen Assembly	2R26531	1
13	Oil Filter Screen Bracket Washer.....	2W48723	1
14	Oil Filter Screen Assembly Locknut.....	3/8" - 16	1
15	Primary Separator Tank Outlet Pipe Assembly...	T2V5459	1
16	Primary Separator Tank Oil Level Gauge.....	2R17410	1
17	Primary Separator Tank Oil Level Gauge Gasket..	T2T4949	1
18	Primary Separator Tank Oil Level Gauge Lockwasher.	5/16" x .435 od.	4
19	Primary Separator Tank Oil Level Gauge Set Screw...	5/16" - 18 x 7/8"	4
20	Pipe Plug.....	¼" BSP	2

* Not illustrated.
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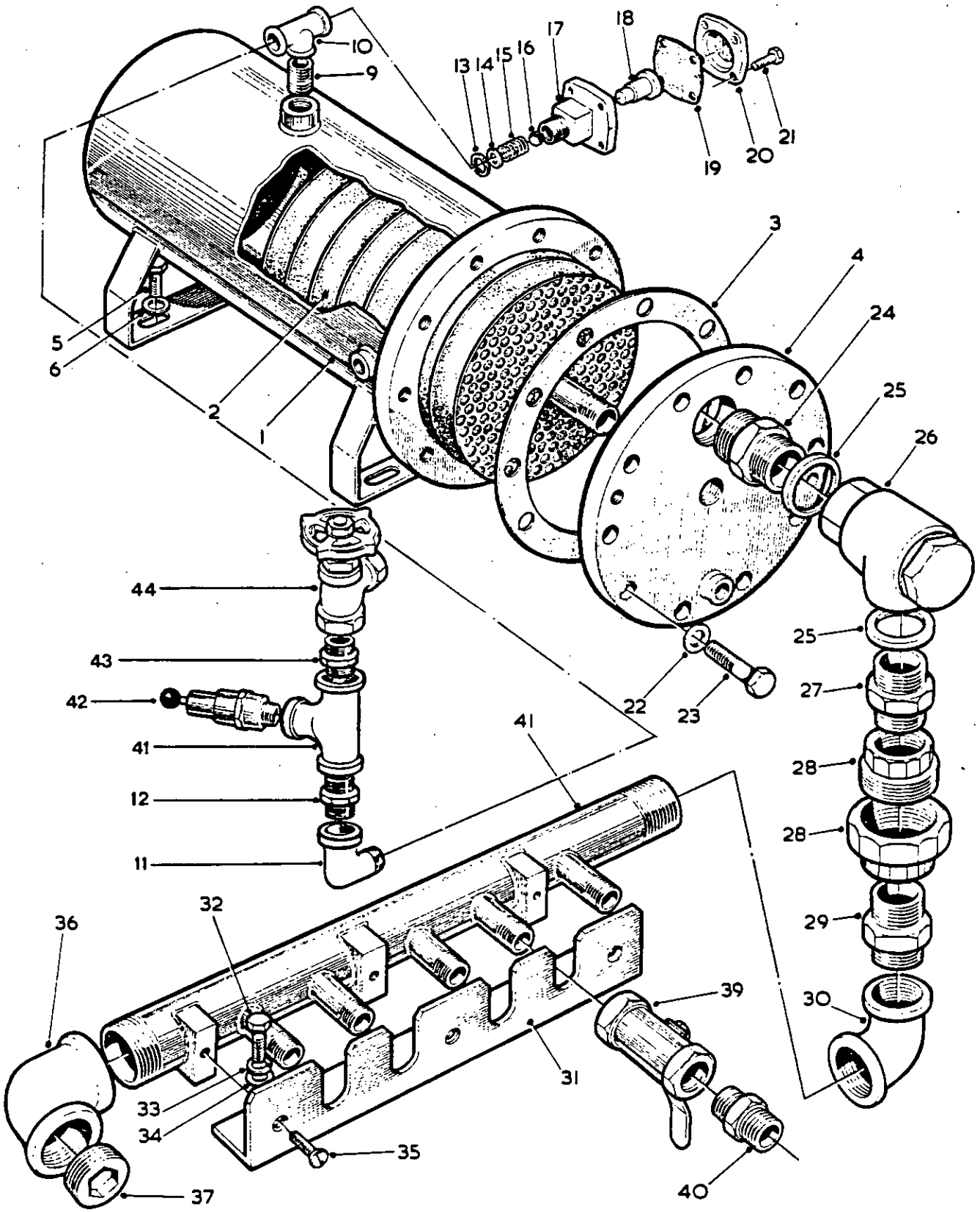
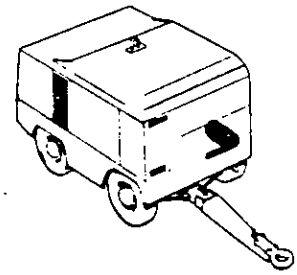
Do not order by illustration number - order by part number.

GYRO – FLO DR – 250 -S'
SECONDARY OIL SEPARATOR





Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	SECONDARY OIL SEPARATOR TANK.....	T2N2031	1
2	Oil Separator Screen Assembly.....	2R26443	1
3	Tank Cover Gasket.....	2W48579	1
4	Tank Cover.....	T2N2031/1	1
5	Setscrew.....	3/8"UNC x 1"	4
6	Flat Washer and Spring Washer.....	3/8" Dia.	4
9	Close Nipple.....	¾" BSPT	1
10	Tee Fitting.....	3/4" BSPT	1
11	90 deg. Male/Female Elbow.....	¾" BSPT	1
12	Hex. Nipple.....	¾" BSPT	1
	AUTOMATIC BLOWDOWN VALVE ASSEMBLY.....	2W56923	1
13	Retaining Ring.....	X1319T12	1
14	Washer.....	X1016T113	1
15	Spring.....	PP888	1
16	Ball.....	9/16" Dia.	1
17	Valve Body.....	2W56993	1
18	Valve Piston.....	2W56922	1
19	Valve Diaphragm.....	2W48114	1
20	Valve Cover.....	2W48116	1
21	Setscrew.....	5/16"UNC x 1"	4
22	Flat Washer.....	5/8" Dia.	10
23	Setscrew.....	5/8"UNC x 2" ht.	10
24	Aeroquip Adaptor.....	T21320-24-24	1
25	Dowty Oil Seal.....	1½" Dia.	2
26	Minimum Pressure Valve.....	T2V8818	1
27	Aeroquip Adaptor.....	1320-24-24	1
28	Female Union Fitting.....	1½" BSP	1
29	Hex. Nipple.....	1½" BSPT	1
30	90 deg. Female Red. Elbow.....	2" - 1½" BSPT	1
31	Discharge Pipe Bracket.....	T2K4836	1
32	Setscrew.....	3/8"UNC x 1"	3
33	Springwasher.....	3/8" Dia.	3
34	Flat Washer.....	3/8" Dia.	3
35	C/sunk Head Setscrew.....	3/8"UNC x 1"	3
36	90 deg. Elbow.....	2" BSPT	1
37	C/Sunk Head Plug.....	2" BSPT	1
39	Hand Valve.....	T2V8816	4
40	Hex. Nipple.....	3/4" BSPT	4
41	Discharge Pipe.....	T2K4837	1
42	Safety Valve.....	3/4" BSPT	1
43	Hex. Nipple.....	3/4" BSPT	1
44	Hand Valve.....	½" BSPT	1

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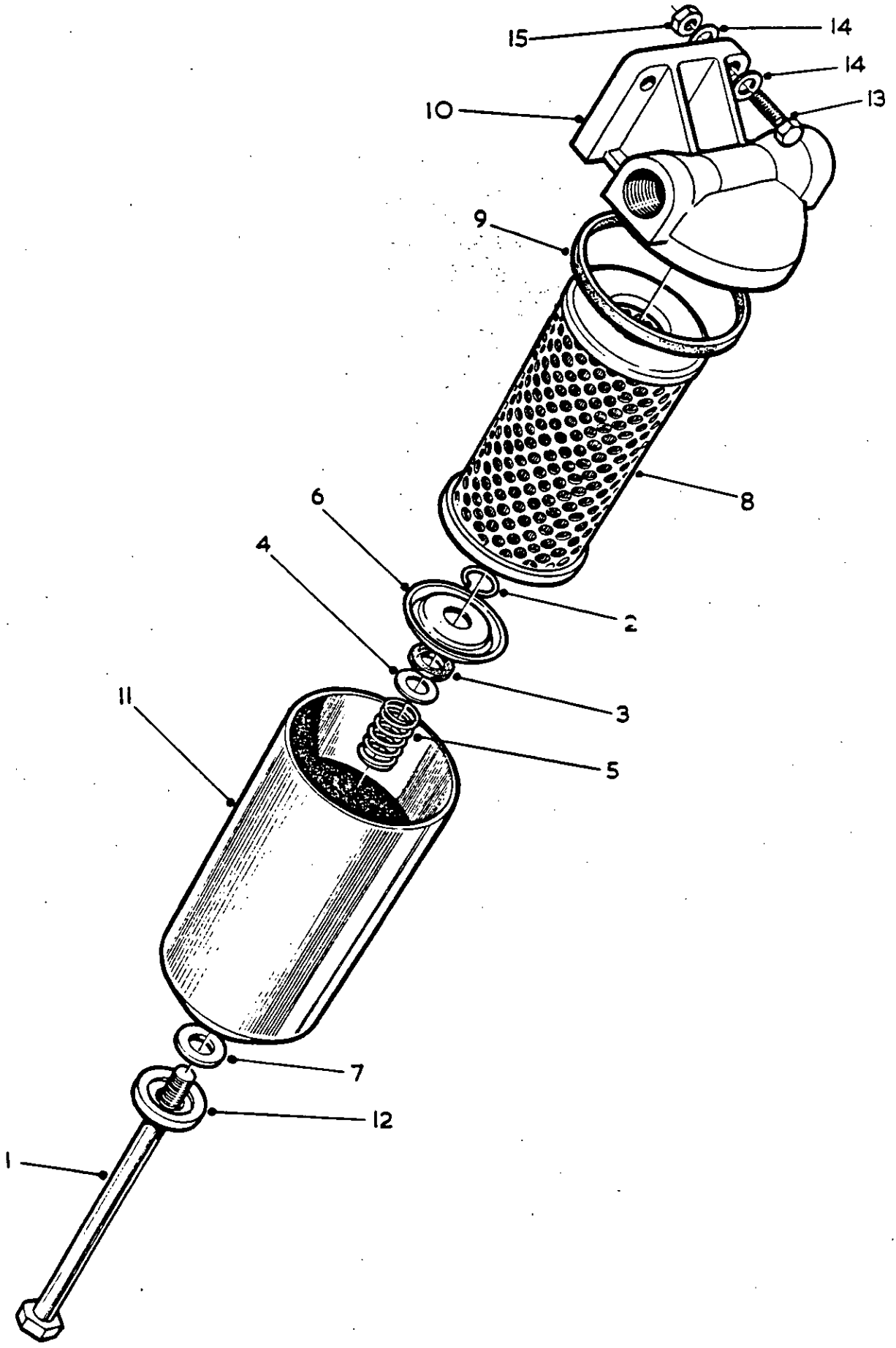
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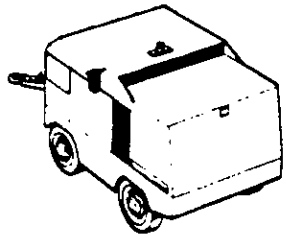

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	OIL FILTER COMPLETE	T2V8819	1
1	Filter Screw	T2V8819/ 1	1
2	Retaining Ring.....	T2V8819/ 2	1
3	Fibre Washer	T2V8819/ 3	1
4	Steel Washer	T2V8819/ 4	1
5	Spring.....	T2V8819/ 5	1
6	End Plate.....	T2V8819/ 6	1
7	Washer.....	T2V8819/ 7	1
8	Element	T2V8819/ 8	1
9	Gasket	T2V8819/ 9	1
10	Cover	T2V8819/10	1
11	Body	T2V8819/11	1
12	End Cover	T2V8819/12	1
13	Set Screw.....	5/16"UNC x $\frac{3}{4}$"	2
14	Spring Washer.....	5/16"	2
15	Hex. Nut	5/16" UNC	2
*	Filter Bracket.....	T2T5308	1
*	Element Replacement Kit	T2V8820	1

* Not illustrated.

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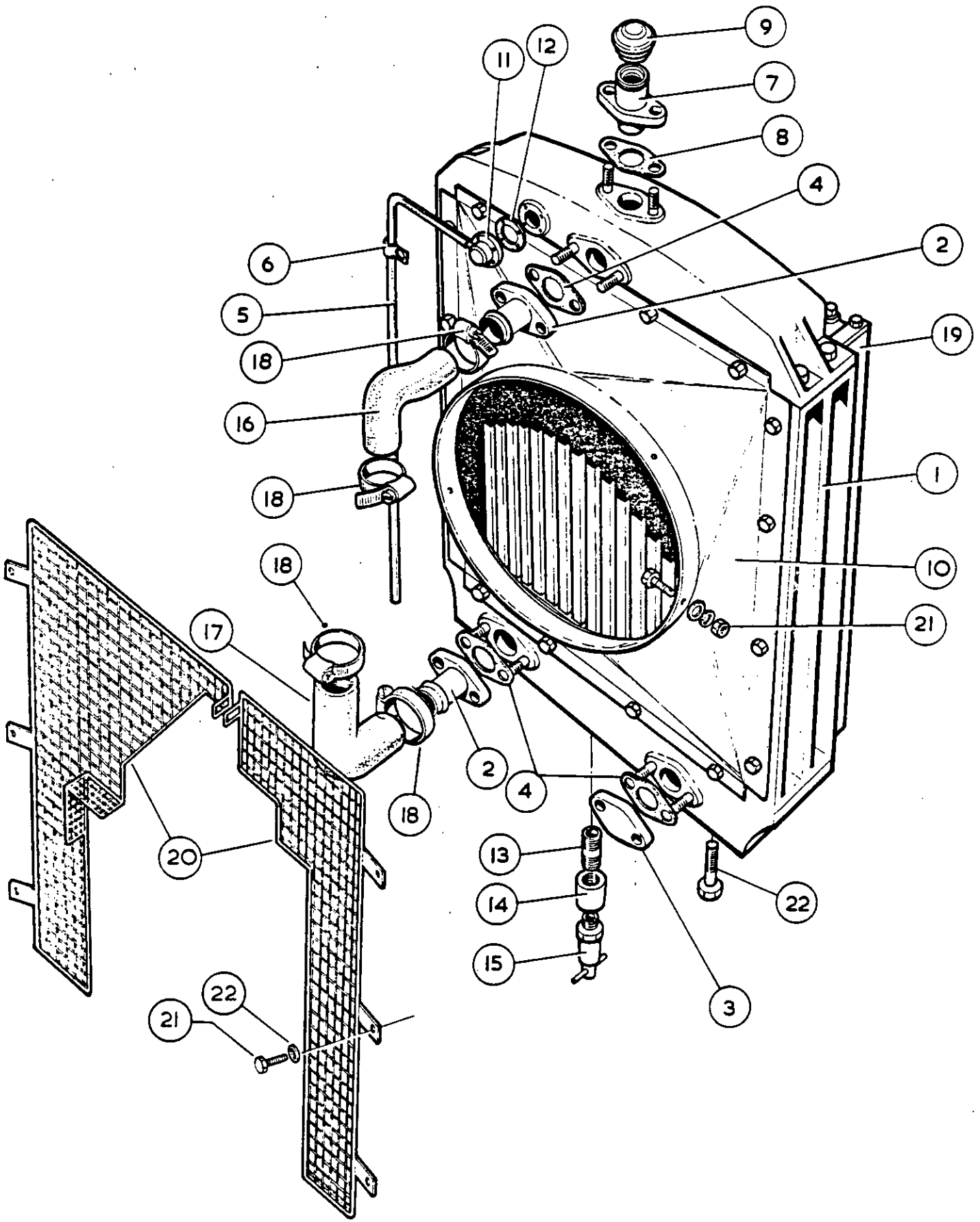
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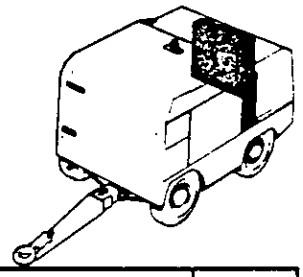
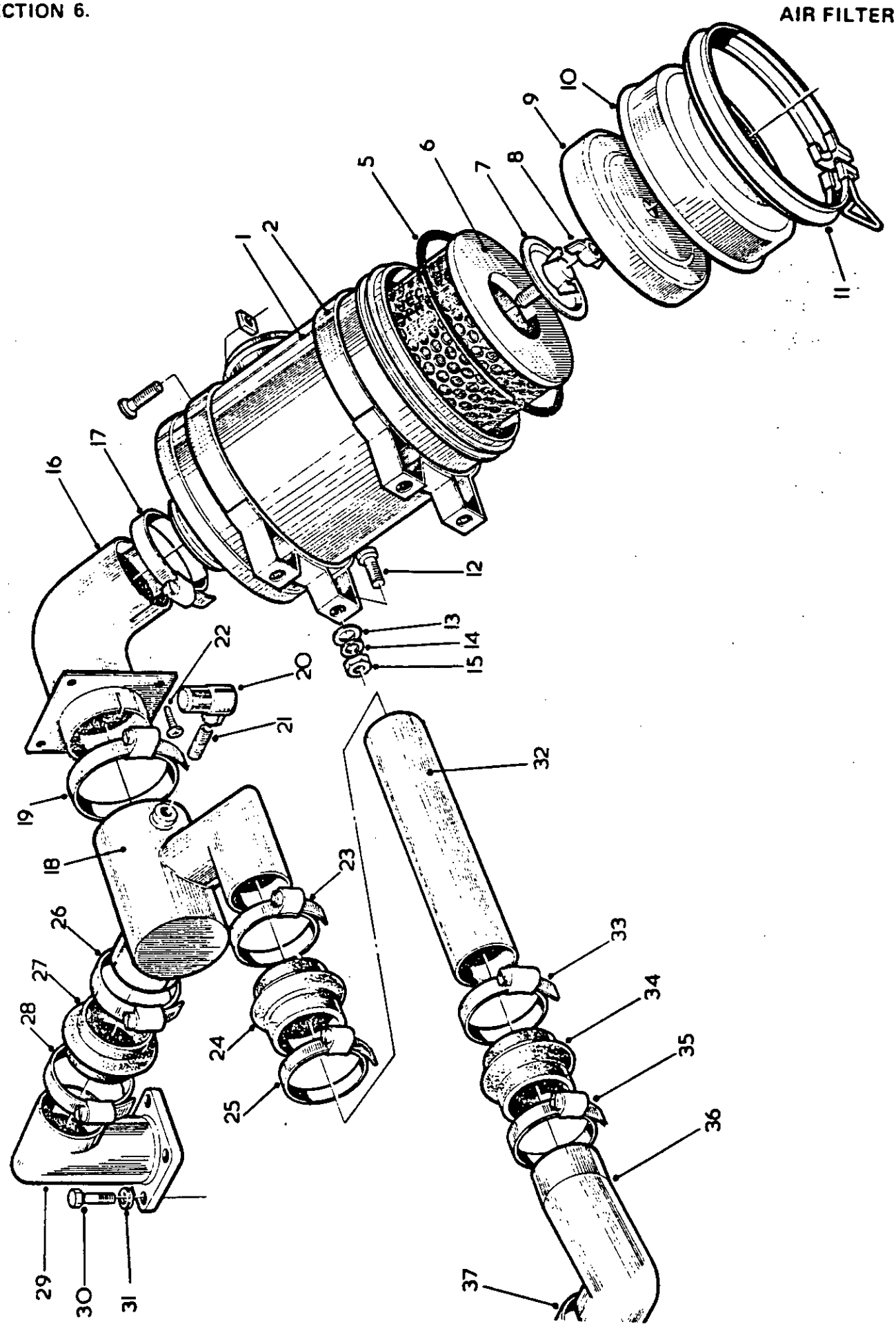


Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	RADIATOR & OIL COOLER COMPLETE.....	T2T5313	1
	RADIATOR COMPLETE.....	T2T5313/ 1	1
1	Side Standard	T2T5313/ 2	2
2	Water Pipe.....	T2T5313/ 3	2
3	Blank Flange	T2T5313/ 4	1
4	Joint - Water Pipe & Blank Flange	T2T5313/ 5	3
5	External Overflow Pipe.....	T2T5313/ 6	1
6	Overflow Pipe Clip.....	T2T5313/ 7	2
*	Internal Overflow Pipe Assembly	T2T5313/ 8	1
7	Filler Assembly	T2T5313/ 9	1
8	Joint - Filler Connection.....	T2T5313/10	1
9	Filler Cap.....	T2T5313/11	1
*	Filler Cap Washer	T2T5313/12	1
10	Fancowl	T2T5313/13	1
11	Relief Valve.....	T2T5313/14	1
12	Joint - Relief Valve	T2T5313/15	1
*	Tube Block Complete	T2T5313/16	1
*	Top Tube Plate.....	T2T5313/17	1
*	Bottom Tube Plate	T2T5313/18	1
*	Joint - Tube Plates.....	T2T5313/19	2
13	Space Nipple	½"BSPT x 3"	1
14	Reducing Socket	½" x ¼" BSPT	1
15	Drain Cock	K. 82	1
16	Radiator Upper Hose	92312-42	1
17	Radiator Lower Hose.....	92312-59	1
18	Hose Clips	No. 3	4
	OIL COOLER COMPLETE.....	T2T5313/20	1
*	Header Tank - Top	T2T5313/21	1
*	Header Tank - Bottom	T2T5313/22	1
*	Joint - Header Tank	T2T5313/23	2
*	Oil Connection Flange	T2T5313/24	2
*	Blank Flange.....	T2T5313/25	2
*	Joint - Oil Connection & Blank Flange	T2T5313/26	4
19	Side Air Baffle	T2T5313/27	2
*	Mounting Bracket	T2T5313/28	6
*	Tube Block Complete	T2T5313/29	1
*	Tube Stay Complete.....	T2T5313/30	2
*	Air Baffle - Top & Bottom	T2T5313/31	2
*	Coverplate for Vent Holes	T2T5313/32	1
*	Joint - Coverplate.....	T2T5313/33	1
20	Fan Guard	T2K4898	1
21	Set Screw.....	3/8"UNC x 1"	7
22	Lockwasher.....	3/8"	7
*	Flat Washer	3/8"	7
*	Hex. Nut.....	3/8" UNC	1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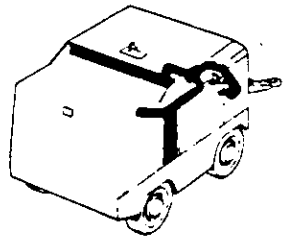

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	DA 140 FILTER COMPLETE	T2V8831	1
1	Filter Body	T2V8831/ 1	1
2	Mounting Bands	T2V8831/ 2	2
5	Cup Gasket	T2V8831/ 5	1
6	Element	T2V8831/ 6	1
7	Gasket Washer	T2V8831/ 7	1
8	Wing Nut	T2V8831/ 8	1
9	Baffle	T2V8831/ 9	1
10	Cup Assembly	T2V8831/10	1
11	Clamp Assembly	T2V8831/11	1
12	Set Screw	$\frac{1}{4}$"UNC x $\frac{3}{4}$"	4
13	Washer	$\frac{1}{4}$"	4
14	Spring Washer	$\frac{1}{4}$"	4
15	Hex. Nut	$\frac{1}{4}$" UNC	4
16	Filter Elbow	T2T5234	1
17	Burgess Clip	5.1/8"	1
18	Intake Manifold	T2K4900	1
19	Jubilee Clip	5"	2
20	Restriction Indicator	20" WG	1
21	Space Nipple	1/8"BSPT x 1"	1
22	Set Screw	5/16"UNC x 5/8"	4
23	Jubilee Clip	3" Dia.	1
24	Rubber Hose	T2V4704-4	1
25	Jubilee Clip	3" Dia.	1
26	Jubilee Clip	4" Dia.	1
27	Rubber Hose	T2V4704-3	1
28	Jubilee Clip	4" Dia.	1
29	Air Intake Elbow	T2K4905	1
30	Set Screw	3/8"UNC x $\frac{3}{4}$"	4
31	Spring Washer	3/8"	4
32	Inlet Pipe	T2T5291	1
33	Jubilee Clip	3" Dia.	1
34	Rubber Hose	T2V4704-4	1
35	Jubilee Clip	3" Dia.	1
36	Engine Intake Elbow	T2K4906	1
37	Jubilee Clip	3" Dia	1
*	Smith & Johnson Pipe Clam	$5\frac{1}{4}$" OD	1
*	Air Inlet Hose Connection	2W30464	1

*Not illustrated.

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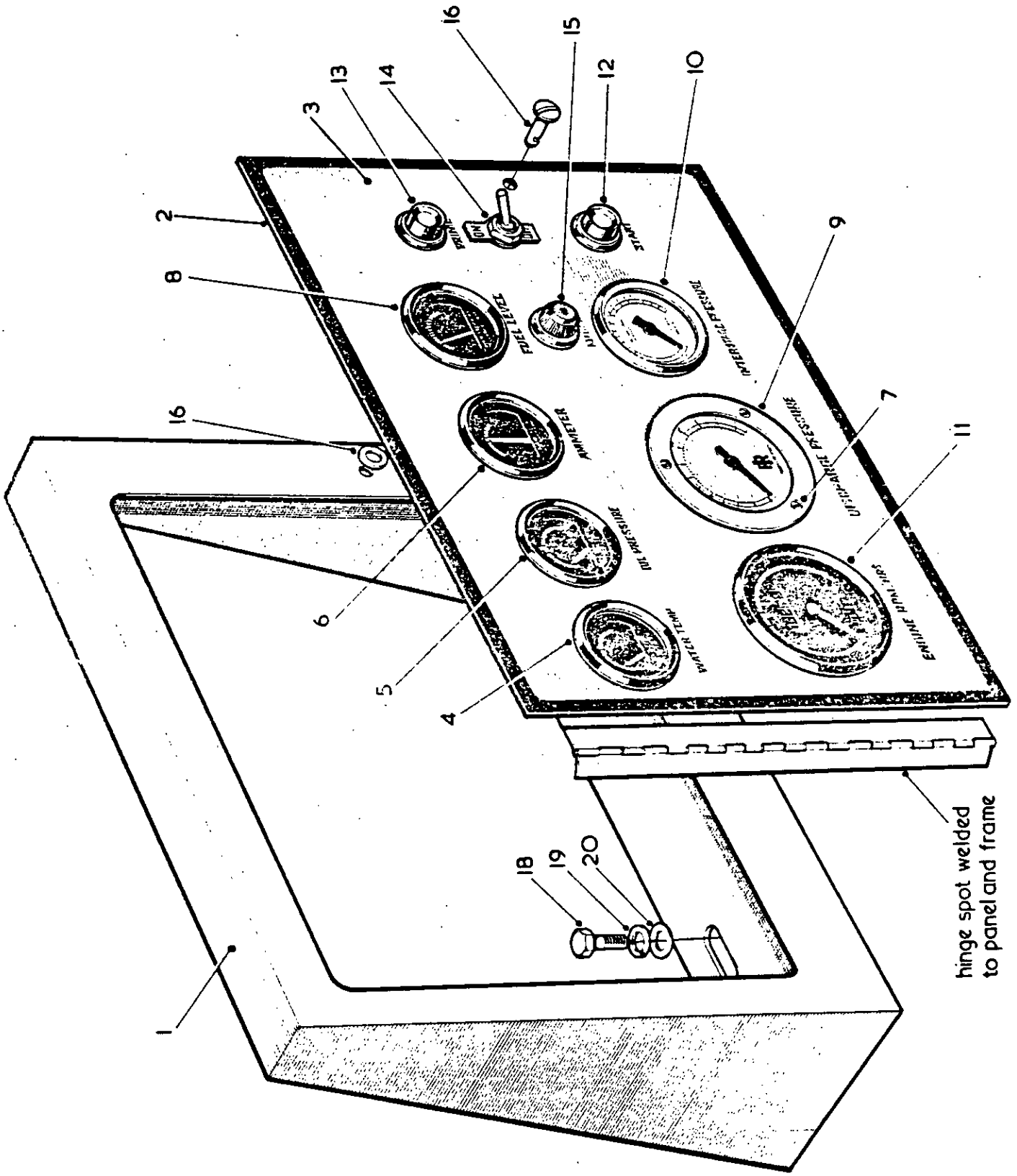
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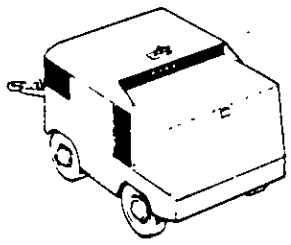

Illus. No.	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
1	Instrument Panel	T2N2025	1
2	Instrument Panel Door	T2K4838	1
3	Instrument Panel Facia	T2K4839	1
4	Water Temp. Gauge	T2V8828	1
5	Oil Pressure Gauge	T2AC 7954338	1
6	Ammeter	T2AC 7967377	1
7	Chrome Countersunk Screw	4BA x $\frac{1}{2}$"	3
*	Nut	4BA	3
*	Lockwasher	4BA	3
8	Fuel Level Gauge	T2V8826	1
9	Discharge Pressure Gauge	3" - 200 psi	1
10	Interstage Pressure Gauge	2" - 100 psi	1
11	Tacho/Hour Counter Gauge	T2V8824	1
12	Start/Overide Push Button	T231872	1
13	Prime Push Button	T231872	1
14	On/Off Lever Switch	T2C 2720	1
15	Warning Light	T2V8834	1
18	Set Screws	3/8" UNC x 1"	4
19	Spring Washer	3/8"	4
20	Flat Washers	3/8"	4

* Not illustrated.

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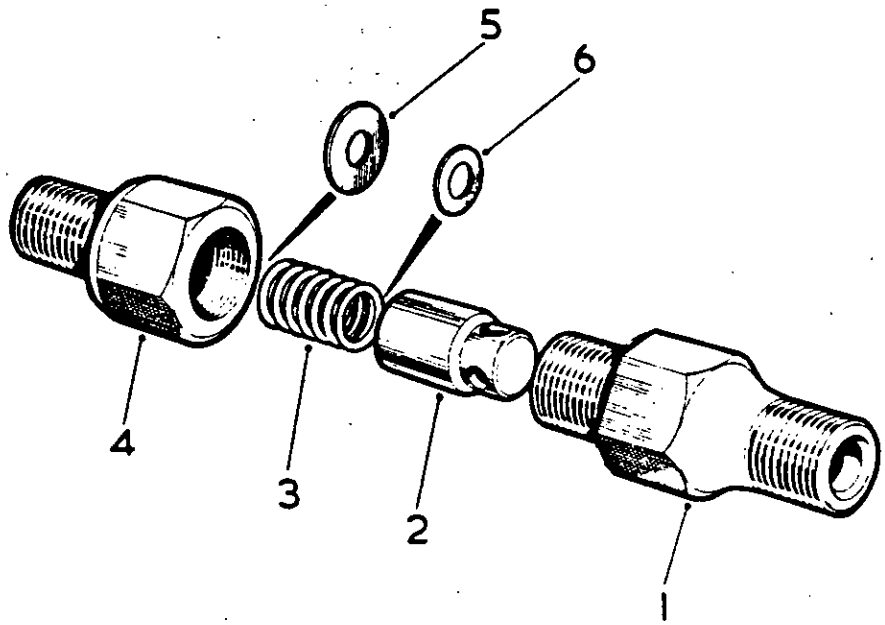

	NAME OF PART Parts indented after an item are included with the item.	PART NO.	QTY.
	OIL PUMP RELIEF VALVE ASSEMBLY.....	2W43854 TP	1
1	Oil Pump Relief Valve Body	2W21461TP	1
2	Oil Pump Relief Valve Valve.....	3W21462	1
3	Oil Pump Relief Valve Spring	X1091PP755	1
4	Oil Pump Relief Valve Cap	2W43853	1
5	Shim -- if necessary (to decrease spring load).....	X1026T26	1
6	Shim -- if necessary (to increase spring load)	X1026T48	1

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SPARES

INDEX

BOX No. TR 250 PCC 239 (Minimum Domestic).

Description Parts indented after an item are included with the item	Form Number	Qty.
COMPLETE BOX OF SPARES	TR250PCC239	1
Diaphragm Piston Ring	X1440T6A	2
UL-89 Regulator Diaphragm	2W32706	1
UL-88 Regulator Top Cover Diaphragm	2W37087	1
UL-88 Regulator Bottom Cover Diaphragm	2W34874	1
Oil Filler Plug "O" Ring	X1514T214C	2
Oil Filter Element Replacement Kit	T2V8820	1

BOX No. TR 250 PCC 240 (Average Domestic - Minimum Export)

Description Parts indented after an item are included with the item	Form Number	Qty.
COMPLETE BOX OF SPARES	TR250PCC240	1
Gasket - Set	TR250PCC241	1
Diaphragm Piston Ring	X1440T6A	4
Oil Filler Plug "O" Ring	X1514T214C	2
Oil Filter Element Replacement Kit	T2V8820	1
Low Pressure Rotor Vane - Set	R250P110	1
High Pressure Rotor Vane - Set	R250P115	1
Roller Bearing	2W48538	2
Rotary Shaft Seal	2W26684	1
Interstage Pressure Gauge	2" - 100 psi	1
Discharge Pressure Gauge	3" - 200 psi	1
Grab Bag (Misc, Bolts, Nuts, etc.)	T2V8944	1
Wood Box		1

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BOX No. TR 250 PCC 242 (Up to 5 Units Domestic. Up to 2 Units Export).

Description Parts indented after an item are included with the item	Form Number	Qty.
COMPLETE BOX OF SPARES	TR250PCC242	1
Gasket - Set	TR250PCC241	1
Diaphragm Piston Ring	X1440T6A	4
Rotary Shaft Seal	T2W26684	1
Compressor Coupling Drive Gear Gasket	2W32925	1
Roller Bearing	2W48538	2
L.P. Cylinder Plate - Inner	2R26349P1	1
L.P. Cylinder Plate - Outer	2R26350P1	1
L.P. Cylinder	2F11933	1
L.P. Rotor Vane - Set	R250P110	1
L.P. Rotor Bearing Spacer	2W48400	2
H.P. Cylinder Plate - Inner	2R26296P1	1
H.P. Cylinder Plate - Outer	2R26295P1	1
H.P. Cylinder	T2F11943	1
H.P. Rotor	2H17999TP	1
H.P. Rotor Vane - Set	R250P115	1
H.P. Rotor Drive Shaft	2R26259	1
H.P. Outer Bearing Snap Ring - Rear	X1318T19	1
Oil Pump Drive Gear	2H18081	1
Oil Pump Gear Bushing - Inner	2W32624	1
Oil Pump Driven Gear - Bushed	2W48492	1
UL-89 Regulator Valve Bushing	2W35030	2
UL-89 Regulator Diaphragm Piston	2W32707	1
UL-88 Regulator Repair Kit	UL88-200	1
UL-89 Reducing and Relief Valve	2W48571	1
UL88 Range Spring - Outer	PP604	1
UL-88 Range Spring - Inner	T2V4677	1
Oil Separator Screen Assembly - packed	2R26443T	1
Oil Filler Hole Plug "O" Ring	X1514T214C	2
Radiator Upper Hose	T2V4984	1
Radiator Lower Hose	T2V7753	1
Radiator Cap	T2T5276/10	1
Air Discharge Pressure Gauge	3"-200 psi	1
Interstage Pressure Gauge	2"-100 psi	1
Fuel Tank Cap	T2EOA9030	1
Oil Filter Element Replacement Kit	T2V8820	2
Grab Bag(Misc.Bolt, Nuts, Fittings etc)	T2V8944	1
Wood Box	—	1

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