

# **WINGET**

## **OPERATION, MAINTENANCE & SPARE PARTS MANUAL**

### **200/7 THL MIXER**

**HOMETRADE SPECIFICATION**

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# **WINGET**

# **TILTING DRUM MIXER**

## **200/7 THL HOMETRADE SPECIFICATION**

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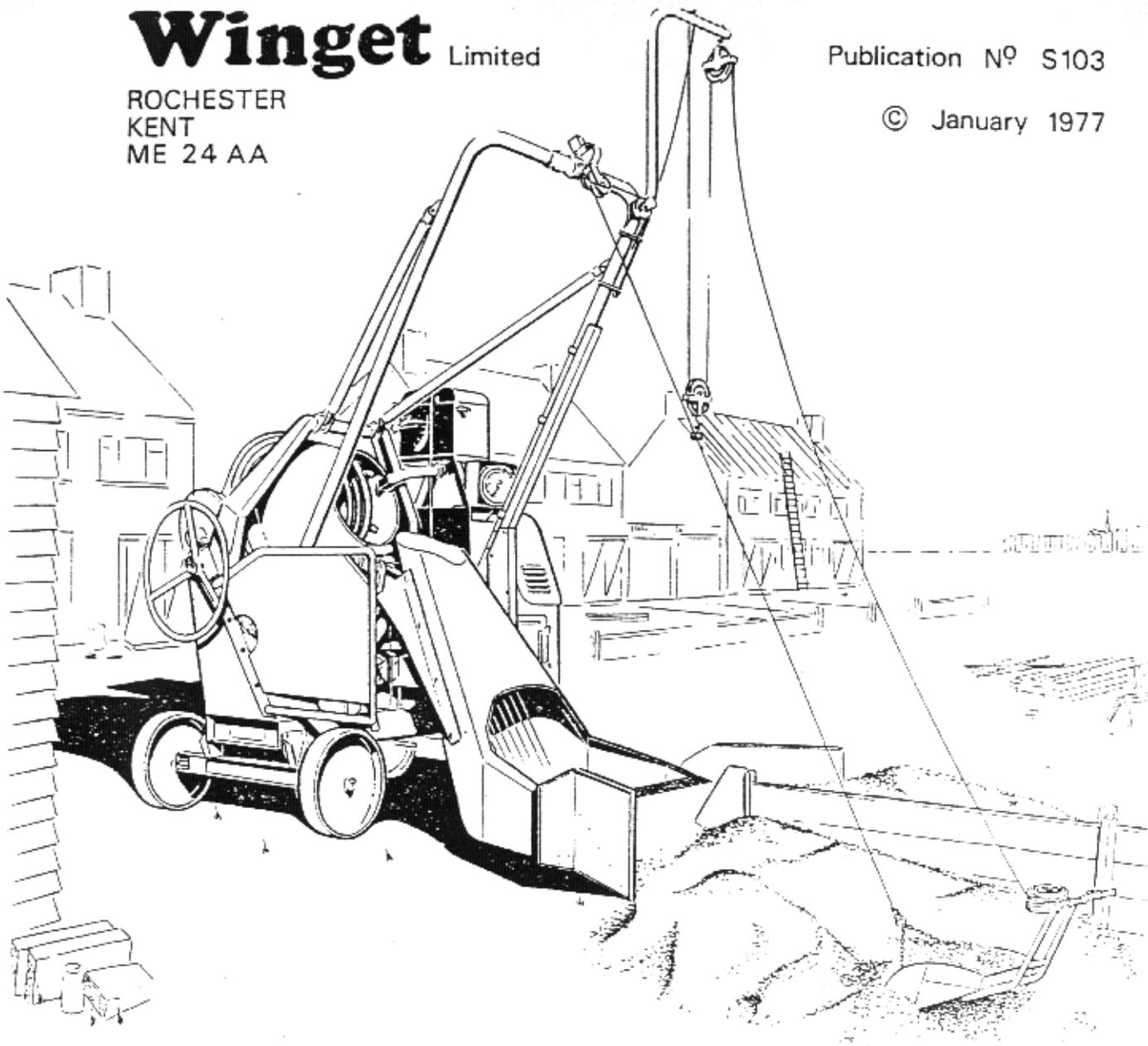
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**Winget**

200/7 THL Mixer

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Operation, Maintenance & Spare Parts Manual

# Winget

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## INTRODUCTION

The operating instructions and maintenance recommendations contained in this book will enable you to become familiar with your mixer to obtain the best results in the shortest possible time.

The life and trouble free running of your machine will depend largely on the care it receives. It is your responsibility to ensure that the maintenance instructions outlined in this book are carried out.

When replacements are required, it is essential that only genuine parts are used and that any repair or servicing work is carried out by competent mechanics.

WINGET LTD.

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## GUARANTEE

As every reasonable care is taken that goods of this Company's manufacture shall be free from defect in material and workmanship, the Company will supply free to any destination in the British Isles named in the tender or F.C.S. British Ports in the case of goods situated abroad, any part or parts which, under normal service, appears to the Company's satisfaction to have been at the time of delivery defect in such parts, provided it is notified thereof within 12 months or 2,000 working hours from the date of delivery (whichever shall be the earlier) or, where the Company is responsible for erection, within twelve months from the date on which the customer is notified that any plant or machinery is ready for starting up provided that:-

- a) Written notice is given to the Company within seven days of the discovery of the defect.
- b) Unless otherwise agreed, the alleged defective part or parts are returned to the Company's Works, carriage-paid and its inspection establishes the claim. Replaced parts shall become the property of the Company.
- c) No part which is not of the Company's manufacture has been fitted, otherwise than by it or on its behalf, or with its written approval.
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In no cases shall the Company be responsible for the cost of fitting replacement parts.

Machines parts or components sold by the Company but not of its manufacture are subject only to such warranty (whether expressed or implied by law) as is given by the makers thereof and are not covered by this Guarantee. The Company will as far as is practicable make available to the purchaser the benefit of any warranty given to the Company by the makers of such machines or components.

This Guarantee and/or warranty is personal to the Company's customer and may not be assigned.

Any other warranty or condition expressed or implied by law and whether statutory or otherwise is hereby excluded as is also any claim based on any verbal or other representation or conditions made in relation to any goods the subject of any offer or tender submitted by the Company unless confirmed in writing by a Divisional Director or the Secretary of the Company.

Save as aforesaid the Company shall not be responsible for any loss or injury or damage however caused or arising.

This guarantee is extracted from the Company's standard conditions of sale.

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# **Description & Operation**

Ensure that the label depicted below is located on your machine.

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### SAFETY WARNING

- 1 Before starting this machine, the operator should be familiar with the operating instructions issued by the manufacturer.
- 2 The manufacturer's rated capacity must never be exceeded.
- 3 Before carrying out any maintenance, servicing, or greasing, always ensure that the engine has been switched off. Never work on a machine while it is running.

If the machine is repainted for any reason a replacement label must be obtained from Winget on Spare Part Number 50-46946.

### NOTES FOR SAFE OPERATION

#### 1. IMPORTANT

Read the instructions in this handbook together with these notes, and satisfy yourself that you understand all the controls and their function before attempting to operate the machine.

#### 2. BEFORE STARTING THE MIXER

Check:

- a) That all guards are in position and fitted correctly.
- b) All control levers are in neutral.
- c) No one is in or on the machine.
- d) On electric powered mixers, ensure that the power supply has been correctly connected by a qualified electrician and any trailing cable is protected from damage and not liable to be tripped over.

#### 3. WHEN OPERATING THE MIXER

- a) Do not allow unauthorized persons to climb on or have any part in the operation of the machine.

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- b) Do not climb on the machine yourself unless absolutely necessary and then:-
  - (i) Use only the steps and platforms provided.
  - (ii) Keep your clothing clear of any moving parts.
- c) In the case of mixers fitted with loading hoppers, do not allow any person to walk, stand or lean under the hopper when raised.
- d) Where mixers are fitted with drag feeders, do not allow the rope to become snagged around any obstruction or person. Replace ropes as soon as badly frayed.
- e) Do not add fuel, hydraulic oil or lubricate the machine whilst it is running.
- f) If engine housing is fitted keep this closed whilst mixer is running.

#### 4. MAINTENANCE AND REPAIRS

Before starting any work:-

- a) Stop the engine or switch off electric motor, isolate from mains supply and remove fuses.
- b) If working out of sight under the machine or in the drum, try to have a trained person standing by.
- c) Display a warning notice.
- d) Do not work under raised loading hopper unless it is securely chained or propped.

#### 5. ON COMPLETION OF MAINTENANCE

- Check:
- a) That the mixer functions correctly.
  - b) All guards are correctly fitted.
  - c) All control levers are in neutral position.

If you are in any doubt about the safe condition of your machine please consult Winget Limited Service Department.

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## INSTALLING YOUR MIXER ON THE SITE (See Fig. 1)

Ensure that the mixer is sited on firm ground and standing level in both directions. If the ground is loose or made up, it is recommended that the mixer be stood on stout timbers.

If pneumatic roadwheels are fitted, place a stout timber under each pair of stabilising jacks, attached to the front and rear axles, lower the stabilising jacks until they come firmly into contact with the timber, lock in position. Screw the two stabiliser bolts down onto the front axle and chock the wheels firmly in position. Extend the outrigger arm, if fitted, and secure in position. Remove and stow the towing bar, replacing the drop end pin in the steering bracket.

Release the hopper safety prop. This is done by turning the engine by hand with the hopper control lever held in the 'RAISE' position until the weight of the hopper is taken off the prop. Turn retaining latch upwards and swing the prop downwards into its lowest position. Hold the hopper control in the LOWER position and allow the hopper to come down under its own weight. If a batch weigher is fitted, ensure at least 2" (50mm) clearance between the base of the hopper and the ground to ensure accurate readings to be obtained.

It is necessary when a dragline is fitted to use a loading ramp or to erect a barrier of boards in front of the loading hopper so that materials may easily be tipped into it. This is particularly important when using a mixer fitted with a batch weigher, to prevent the build up of aggregate underneath the hopper, as this will cause faulty batch weights to be given.

Assemble the portable feed apron, if one is to be used, placing it squarely in front of the mixer so that the hopper does not foul it when being raised or lowered. The horizontal rubber flap prevents material from falling between the hopper and ramp. Finally, stake the apron securely in position, using the four picketing lugs on the sides. Extend the centre position of the ramp to separate the aggregate by fitting boards.

## TRANSPORTING THE MIXER

To reduce the overall height of the mixer, it is sometimes necessary to dismantle the dragline jib and remove the loading hopper from its cradle.

### Assembling Dragline Jib (See Fig. 2)

- (a) If the jib has been split into two sections, assemble using the connecting tube with the balanced pulley block attached to it, bolt firmly together. Assemble jib tie rods to jib.
  - (b) Insert a rod approximately 1" (25mm) diameter and 5 ft. 6" (1666mm) in length through the front edge of the hopper.
  - (c) Place the jib in position and secure with the two jib pins. Support the top end of the jib on a trestle or something similar ensuring that the weight of the jib is resting on the trestle, and not on the winch guard.
  - (d) Pull out the cable from the winch, remove the cable cleats and thimble and thread the cable around the three pulley sheaves on the jib, afterwards replacing the cable cleat and thimble. Connect the cable to the shovel ring.
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- (e) Fit the cable support to the jib and unwind the electric cable from the shovel. Connect the plug to the socket on the mixer mainframe and loop the cable through the cleat at the bottom end, and around the cleat on the top of the cable support, leaving sufficient slack to allow the jib to pivot upwards. Two pulley sheaves should be assembled to the cable, attach the one nearest to the shovel along the length of the cable to the hook at the top of the cable support.
- (f) Raise the hopper slowly, either by running the engine or turning it by hand until the hopper comes into contact with the jib, continue lifting until the jib tie rods can be located in the jib support lugs. Secure in position by tightening the two locknuts.
- (g) Lower hopper and remove temporary lifting rod from front edge.
- (h) Finally check that the two jib pins are in the locked position in their mounting brackets.

## Dismantling Dragline Jib (See Fig. 2)

- (a) Insert a temporary rod approximately 1" (25mm) diameter and 5 ft. 6" (1666mm) length through the front edge of the hopper, and raise the hopper until the rod comes into contact with the jib.
- (b) Slacken the two jib tie locknuts and lift the tie rods clear of the lugs on the jib support.
- (c) Slowly lower the hopper until the jib is in a horizontal position. Place a trestle or something similar at the front edge of the jib to take the weight.
- (d) Unfasten the wire rope from the shovel and remove the cleats and thimble from the rope. Start the mixer engine and depress micro switch on the shovel handle to operate the winch, to wind the rope back onto the drum, stop engine. Leave sufficient rope clear of the winch housing to enable it to be pulled out when assembling dragline. Replace cleats and thimble onto wire rope.
- (e) Unscrew electric control cable from its socket on the winch mounting bracket. Release the cable from the two cleats on the cable support and remove pulley sheave from its hook at the tip, coil cable onto stowage on shovel and secure pulleys. Remove cable support from the jib.
- (f) Withdraw the two jib pins from the jib fixing brackets on the mainframe to release the jib, replace pins.  
To further assist in transporting, the jib is made in two sections held together by a bolted connecting tube. Before dismantling the jib the tie rods must be detached by removing the two drop end pins.

## Removing the Hopper

With the hopper down, slacken the eight bolts securing the hopper to its cradle. Remove the top six bolts and allow the hopper to pivot forward on the two remaining bolts to rest on the ground, finally remove the last two bolts. Replace the bolts in cradle to avoid loss.

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## Assembling the Hopper

Set the hopper in front of its cradle and locate the bottom two fixing holes, insert bolts and leave nuts finger tight. Lift the front edge of the hopper pivoting it on the two bolts, locate the remaining holes and insert the bolts. Finally tighten all eight bolts.

## Lifting the Mixer

Two lifting eyes are provided for using crane hooks when loading for transporting.

On a non-dragline machine they are located, one in the left-hand side of the hopper cradle, when looking at the machine from the hopper side, the second one at the top of the trunnion pedestal next to the engine housing. On a dragline machine the hopper cradle position remains unaltered. The position of the second eye remains the same, but the eye is replaced by a reinforced hole in the dragline jib support bracket.

Lifting the mixer should be carried out with the hopper up, or if the hopper has been removed for transporting, with the cradle in the up position.

## DRUM CONTROLS

Any of three pre-set positions CHARGE-MIX-DISCHARGE can be obtained. It is possible to alter the MIX position for a wet or dry mix, by removing the two set bolts holding the adjustable locking flange (Fig. 1) and moving it through half a turn, then replacing the set bolts.

## Tilting Wheel Lock

A push-pull type locking mechanism, located in the hub of the tilting handwheel gives positive locking in any of the three pre-set positions. To release the handwheel, simply pull the locking plunger outwards. To lock the handwheel, move the drum into the position you require, line up the pointer at the edge of the tilting wheel, with the fixed pointer bolted to the tilting wheel guard, and push the locking plunger in.

**WARNING:** Do not hold the locking plunger in and turn the handwheel to engage the lock, this will cause damage to the locking mechanism.

## HOPPER OPERATION

### (a) Control

The hydraulic control valve for operating the hopper is mounted on the trunnion pedestal near to the tilting handwheel.

### (b) To Raise Hopper

Lift the control lever and hold it until the hopper is fully up. Do not hold the control in the RAISE position with the hopper up for more than a few moments or overheating and loss of efficiency will result.

### (c) To Lower Hopper

Push the control lever downwards; releasing the lever will check the descent of the hopper as necessary.

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## WATER TANK (Fig. 3)

Amounts of water, from 1.1/2 to 8 gallons (7 to 36 litres) can be automatically measured. The amount of water to be discharged is selected by setting the pointer on a graduated scale mounted on the side of the tank. Remember to release and re-tighten the clamp nut holding the pointer each time the pointer is moved. Filling and discharging of the tank is automatic. When the drum is moved into the 'CHARGE' position it opens, through a spring tensioned linkage, the discharge valve in the tank, which allows the water to flow into the drum. Then, when the drum is moved into the 'MIX' position the tank refills automatically. A sight glass in the side of the tank will enable the operator to see if the tank is full or still filling.

### Filling the Tank

With the drum in the 'MIX or 'DISCHARGE' position the sequence for filling the tank is as follows:-

The float 'A' rests on the bottom of the float chamber and holds the trip lever 'B' against the pilot valve 'C' to hold it open against the action of the spring 'D'. Water enters the tank at 'E' and lifts the diaphragm 'F' off its seat allowing water to flow into the tank. It also passes through the diaphragm at point 'G' and past the pilot valve 'C' to enter the tank.

Incoming water passes down the transfer pipes 'H' and fills the airtight chamber 'J' until the water cover the end of the air pipe 'K'. When this happens no further water is admitted to the airtight chamber, instead the transfer pipes and float compartment flood until the float rises and allows the trip lever 'B' to disengage from the float cam 'P' allowing the pilot valve 'C' to close, assisted by the action of the spring 'D'. Pressure builds up in the pilot valve side of the diaphragm 'F' causing it to re-seat shutting off the incoming supply.

### Discharging the Tank

When the mixing drum is moved into the 'CHARGE' position the rod 'L' is pulled downwards, this, through the linkage, causes the discharge valve 'M' to lift off its seat discharging the contents of the tank. The float cam 'P' is also moved by the linkage away from the trip lever 'B' allowing the float to drop into the bottom of the chamber when the water is discharged. When the drum is moved into the 'MIX' position the rod 'L' is lifted by the return spring 'N'. The discharge valve 'M' is closed, the float cam 'P' moves into contact with the trip lever 'B' which opens the pilot valve 'C' to start filling the tank again.

### Draining the Tank

During periods of frosty weather, to avoid damage, it is advisable to drain the tank at the end of each day's working. To do this set the drum in the 'CHARGE' position and drain the water into the drum, then disconnect the water supply to the mixer. Finally empty the water from the drum.

### BATCH WEIGHER (If Fitted)

The weigher gauge mounted in a box on top of the engine housing is connected by hydraulic piping to the loadcell mounted near the hopper lower arm pivot. The hydraulic circuit is primed and sealed on leaving the works and on no account should it be tampered with.

The gauge, calibrated from 0-1,200 lb. (0.500 Kg.) gives accurate indication of batch weights. The adjustable coloured pointers mounted on the rim of the gauges can be set by the operator, to the aggregate proportions required. A protective lid is provided for the gauge box to prevent damage when not in use.

It is important that the mixer is standing firm and level and that there is at least two inches (50mm) clearance between the ground and the base of the hopper at all times. If aggregate is allowed to build up inaccurate gauge readings will be obtained.

### Normal Operation

Set the pointers on the gauge to the aggregate proportions you require. With the engine running lower the hopper slowly on to the loadcell. Hold the hopper control lever fully down for a few seconds until the gauge needle begins to move up to '0' then release. The hopper is then ready to load. If you cannot get an '0' reading adjust the gauge as described in the following paragraph.

### To Zero the Weighing Gauge

With the mixer engine running carry out the following:-

- (a) Lower the hopper on to the loadcell as described.
- (b) Check that the hopper is clear of the ground.
- (c) Taking care not to stand on any part of the hopper, adjust the knurled knob on the side of the gauge to set the pointer to '0'.
- (d) Repeat, lowering the hopper three to four times to check that you obtain a consistent '0' reading.

### DRAGLINE FEEDER (If Fitted)

The winch unit is mounted on the hopper side of the mixer, and is chain driven from the mixer engine. It is fitted with an electro-magnetic clutch which is controlled by a push switch on the shovel handle. The electrical circuit is energized by a 12 volt dynamo driven by the engine, the output of the dynamo being controlled by a voltage regulator.

### Operation

Rig the Mixer as shown in Fig. 2 and described on page 3. With the engine running, pull the shovel back over the aggregate away from the mixer. Depressing the push-switch on the shovel handle will operate the winch clutch and start to drag the shovel towards the mixer. To stop the loaded shovel when it has reached the hopper, simply release the push switch and slip the contents of the shovel into the hopper.

After rigging the electric control cable, a trial run of the shovel may show that the slack of the electric cable is not taken up by the bottom free pulley as the shovel moves into the mixer. To prevent this increase the size of the weight on the bottom free pulley; if the pulley then comes too close to the ground wind a couple of turns of cable onto the stowage arms on the shovel.

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## BEFORE STARTING UP

Read carefully the engine manufacturer's handbook supplied with this mixer. Check the amount of fuel in tank and the level of lubricating oil in engine sump.

With the hopper down, check the level of oil in header tank. A combined filler cap and dipstick is provided.

Set the pointer on the water tank to the amount required for the first mix. With the drum in the MIX or DISCHARGE position, connect the mains supply to the tank, and it will automatically fill. A sight glass, set in the side of the tank will indicate to the operator if the tank is full or still filling.

## TO MIX CONCRETE

Set the coloured pointers on the weigher gauge (if fitted) to the aggregate proportion you require and load hopper.

Move the drum into the CHARGE position. The water will automatically start discharging at the same time, raise the hopper to tip the aggregate into the drum. When all the materials are in the drum, lower the hopper and load for next batch, and set drum then in the MIX position.

After allowing a short interval for mixing, the concrete in the drum should be discharged. Any dumper of suitable capacity, and having a loading height of less than 3 ft. 3" (990.6mm) can be run in under the drum to be loaded.

## WHEN WORKING IS FINISHED

- (a) Thoroughly clean out the drum with water and gravel at the end of each day's working.
  - (b) Clean out the hopper and wash down the outside of the mixer.
  - (c) Drain water tank if frost is likely.
  - (d) Raise hopper, place safety prop in position and lock.
  - (e) Stop engine.
  - (f) Grease up machine for next day's working.
  - (g) Replace cover on weigher gauge box.
  - (h) Lock engine housing to prevent tampering and loss of tools.
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**Maintenance**

## LUBRICATION

### (a) General

All shafts and bearings needing daily attention are lubricated through drilled shafts and special greaseways by fitting grease nipples. The lubrication diagram, fig. will give the location of these grease nipples, which should be greased daily, using a grease gun charged with a good quality medium grease (Shell Alvania RA).

It is essential that operators do not allow grease or oil used for servicing to become contaminated with sand or cement dust. Apply a little engine oil from time to time on pin joints on water tank controls, track rods on steering assembly and hinges on housings etc. Bearings must not be allowed to run dry; when greasing it is better to give a little often rather than a lot at long intervals.

### (b) Transmission

Lubricate the main bevel pinion drive chain and the pump drive chain once a week with a little engine oil. Check chain tension and adjust if necessary as described below.

## CHAIN TENSIONING

On no account must chains be over tightened, undue tightness puts excessive strains on pump and engine bearings causing vibration and considerable wear. A very rough guide to chain tensioning is to allow the equivalent amount of one chain pitch free movement on the slack side of the chain, i.e. 3/4" (19mm) chain pitch - 3/4" (19mm) Slack, etc.

### Main Drive Chain

A jockey sprocket is provided for the purpose of chain adjustment. First slacken the chain shoe fixing nut to allow it to slide clear of the chain. Then, slacken the binx nut securing the jockey pin and sprocket to its mounting bracket and slide the assembly down the adjusting slot provided, until the correct chain tension is obtained, then retighten the fixing nut. Adjust chain shoe until it just touches chain and then tighten fixing nut.

### Pump Drive Chain - Non-Dragline Machine

Slacken the jockey shaft fixing nut and slide the shaft along the slot in the jockey bracket until correct tension is obtained. Tighten the shaft fixing nut.

### Pump Drive Chain - Dragline Machine

On mixers fitted with a dragline, the jockey assembly is replaced by the winch unit. Chain adjustment is done by slackening the bolts securing the winch and moving them, with the unit, along slots provided in its mounting bracket to tension the chain, then retightening the fixing bolts.

## WATER TANK CONTROLS (See Fig. 3)

Little or no servicing is required. If it is found that the tank overflows, it is possible that some foreign matter has blocked the pilot hole in the diaphragm. This can be rectified by removing the strainer assembly and clearing the pilot hole with a peice of wire.

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If any further dismantling is carried out on the linkage in the tank, the following instructions will serve as a guide to obtaining the correct setting:-

- (a) With the tank full the float cam 'P' will be disengaged from the trip lever 'B'. Adjust the setbolt 'Q' until there is 1/32" to 1/16" (.8 to 1.6mm) clearance between the face of the operating lever and the pilot valve 'C', finally tighten up the locknut on the setbolt.
- (b) With the outlet valve 'M' on its seat, adjust the connector nut and locknut 'S' until there is 1/8" (3.2mm) clearance between them and the mounting angle.
- (c) If the water tank has been removed from the mixer, or if any wear has developed in the tilting handwheel, with the drum set in the CHARGE position, check that the operating lever 'R' is in contact with the tank body at point 'T'.

The tension spring and locknut at the bottom of the rod 'L' provides adjustment if required.

## HYDRAULIC SYSTEM

### Header Tank

This is mounted inside the drive end trunnion pedestal, easily accessible through the door in the pedestal guard.

The oil in the system is continually passed through a filter mounted in the tank, it also serves as a filling filter. It should be removed for cleaning and inspection every three months (600 hrs. running), this can be carried out without draining the tank.

Check the level of the oil weekly (50 hrs. running) with the hopper down and engine stopped. A combined filler cap and dipstick is provided for this purpose, but remember to clean the area around the cap before removing it, to prevent dirt falling into the tank.

### Recommended Oils

Top up the system as necessary using an oil of the correct grade, do not mix different brands of oil. The approximate capacity of the system is three gallons (13.6 litres) and it is filled with Shell Rotella 10 at the works, the particular grade of oil being shown on a label attached to the top of the tank. Generally, if a diesel engine is fitted, any lubricating oil suitable for this, is suitable for the hydraulic system, in case of doubt use:-

- (a) SAE 10 Oil for Temperatures up to 60°F (15°C).
- (b) SAE 20 Oil for Temperatures between 60°F and 90°F (15°C and 32°C).
- (c) SAE 30 Oil for Temperatures above 90°F (32°C).

### Filter Removal

This is done with the hopper down and the engine stopped as follows:-

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- (a) Thoroughly clean the top of the tank and remove the combined filler cap and dipstick and bonded seal.
- (b) Unscrew the three setbolts securing the filter carrier cap taking care not to lose the copper washers.
- (c) Remove the cap and gasket and lift out the compression spring and finally the filter. Cover the opening with a clean rag while the filter is out.
- (d) Thoroughly clean the filter in petrol only and air dry thoroughly before re-assembly.
- (e) Replace filter, spring, gasket and cap in that order. Tighten cap fixing bolts, not forgetting to replace the copper washers.
- (f) Top tank up with oil if necessary and replace filler cap and seal.

### Dismantling System

Do not remove or expose any part of the internal hydraulic gear in the event of breakdown, unless so instructed. In doing this it may lead to further complications when correcting the fault.

Remember, you have a 'WINGET' SERVICE DEPOT near you which is always ready to assist.

### BATCH WEIGHER (If Fitted)

Include the four grease nipples on the upper hopper pivot links in your daily servicing. No other lubrication of the system is necessary, in fact further lubrication will result in deterioration of the bushes in the lower links.

To allow accurate functioning, keep the mechanism as clean as possible, special attention being paid to the lower link pivot. Clean the ground under the hopper frequently to avoid any build up of aggregate.

NOTE: On no account must the loadcell be disconnected from the weighing dial. No responsibility will be accepted by us, if the lead seals attached to the pipe unions are broken.

### DRAGLINE FEEDER (If Fitted)

#### Winch Unit

Check the winch unit weekly (50 hrs. running). Remove the clutch and slip ring guard, wipe the sliprings and check that the clutch faces are free from grease, oil and dirt. Examine the slipping brushes.

Check the level of the oil in gearcase and top up to the filling elbow, using Shell Macoma 68. Capacity of gearcase approximately 1/4 pint (.14 litres).

#### Dynamo

The dynamo can be either chain or belt driven depending on the engine fitted. To adjust the belt or chain, the general method is to slacken the dynamo fixing bolts and pivot it in its mounting to tension the drive, afterwards retightening the fixing bolts. Check the brushes periodically.

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Grease nipples are provided on the two rope sheaves on the jib, include these in your daily servicing.

If the electric cable to the shovel needs repairing, it should not be shortened by more than 5 ft. (1524mm).

The regulator cut-out voltage should be maintained at 12.1/2 to 13 volts.

## GENERAL MAINTENANCE

Check for tightness from time to time, all bolts, nuts, keys, etc. especially during the first few weeks of operation. Pay particular attention to engine fixing bolts.

Clean top of header tank before removing filler cap. Add oil of recommended grade. Drain water tank during frosty weather.

When not in use, keep weigher gauge box lid on, and engine housings locked to prevent tampering and loss of tools.

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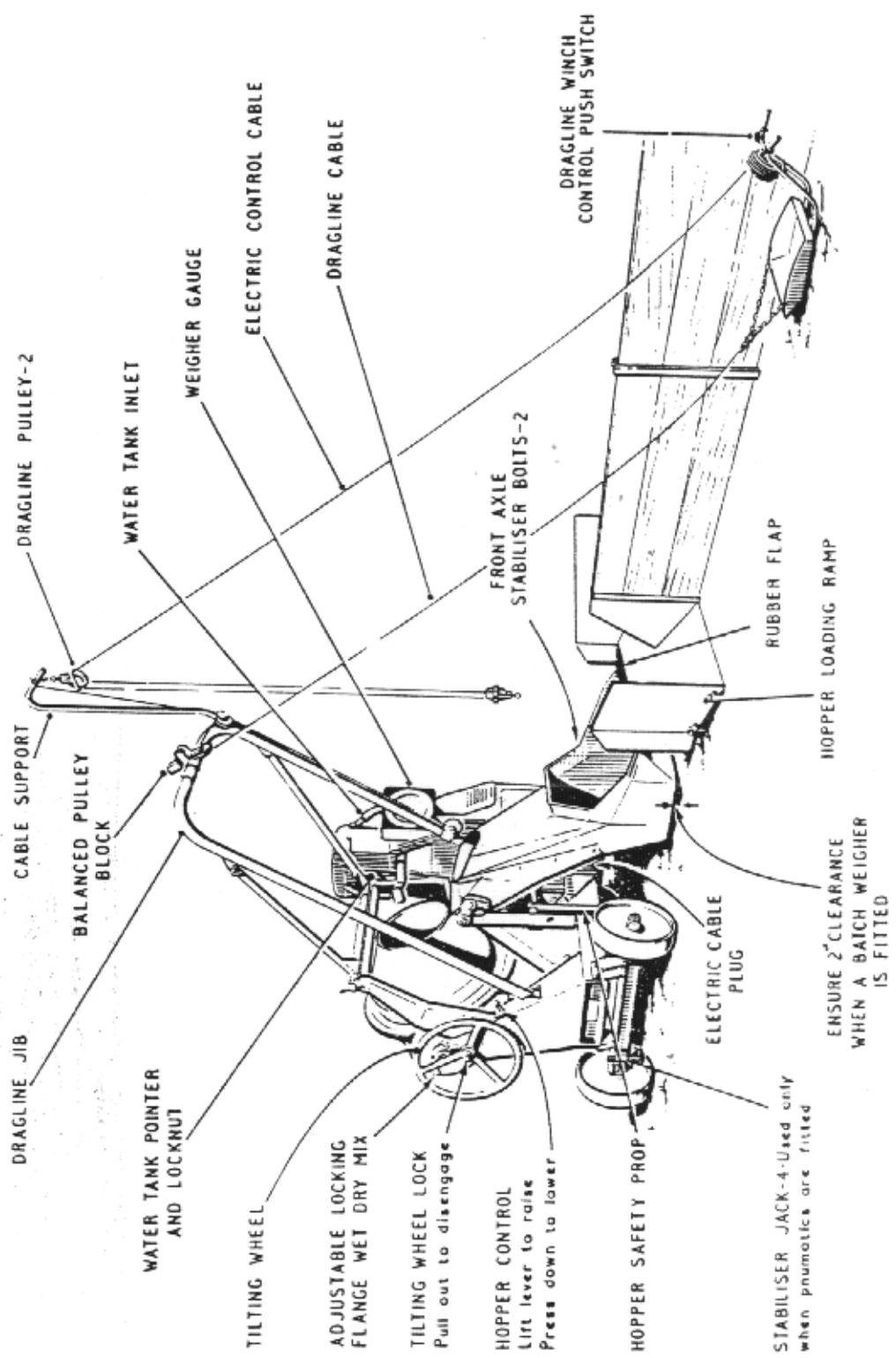
S E R V I C I N G   S C H E D U L E

DAILY	
Mixer	Grease all nipples each day with a good quality medium grease. Shell Alvania RA is used at the Works. Thoroughly clean out drum when mixing is finished, with water and gravel. Wash out hopper and hose down mixer. Keep access doors and panels closed. If frost is likely drain water tank.
Engine Sump Lubrication Fuel Tank	See Engine Handbook
WEEKLY	
Main Drive Chain Pump Drive Chain	Lubricate chains with engine oil. Check tension and adjust if required.
Hydraulic Header Tank	Clean top of tank, remove filler cap and check level. Top up as necessary. Do not mix different brands of oil. Check with hopper down and engine stopped.
Dragline Winch Unit If Fitted	Check cleanliness of slip rings and clutch faces to ensure a good electrical contact. Check level of oil in gearcase, fill to top of filling elbow with Shell Macoma 68.
General	Apply a little engine oil to joints on water tank controls, track rods and hinges on housing, etc.
THREE MONTHLY	
Hydraulic Header Tank Fitter	Remove, clean and inspect

NOTE: CHECK ENGINE MANUFACTURER'S HANDBOOK FOR ROUTINE MAINTENANCE INFORMATION

# 14 Winget

**FIG. 1**  
**LOCATION OF CONTROLS**



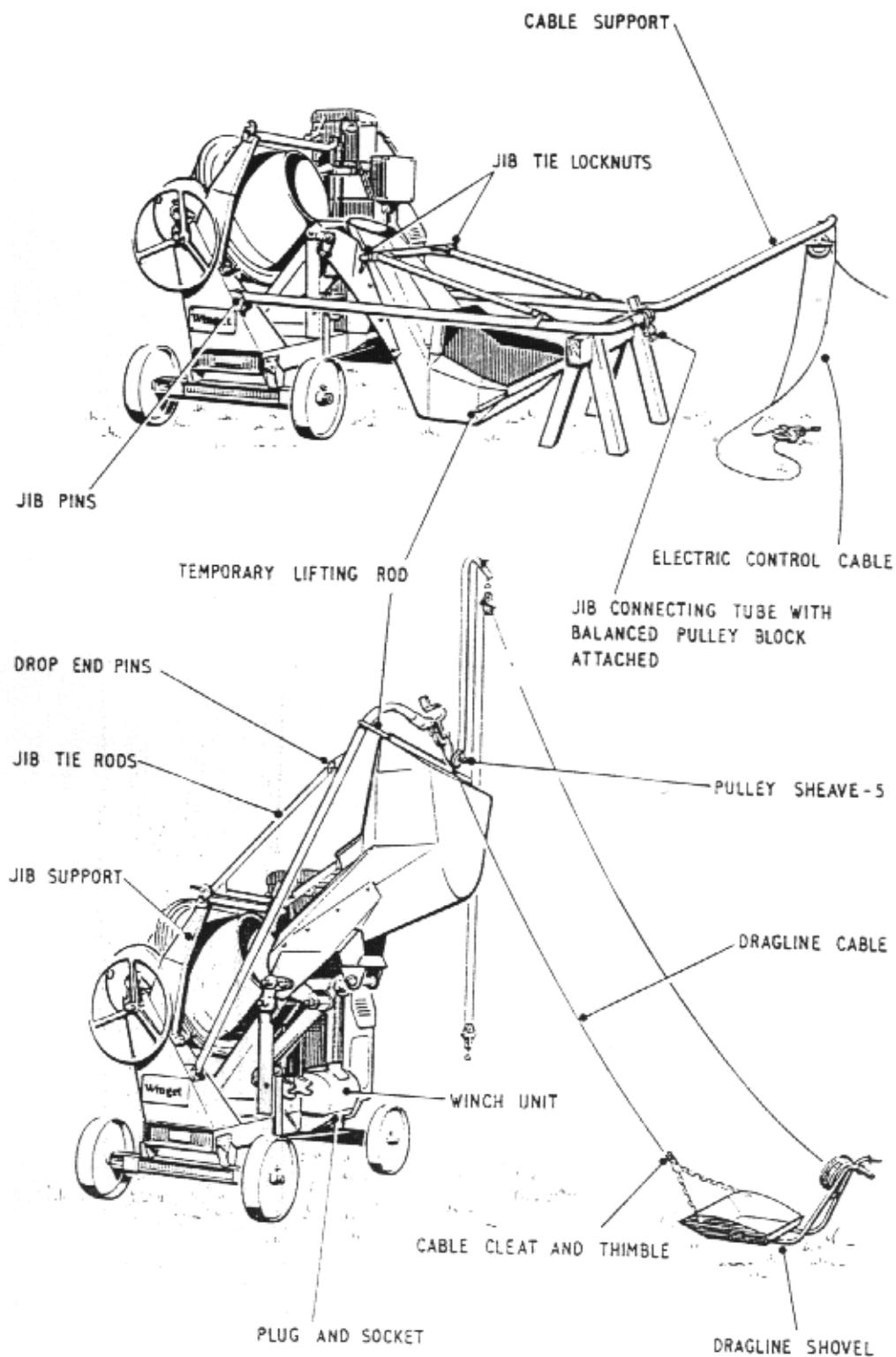
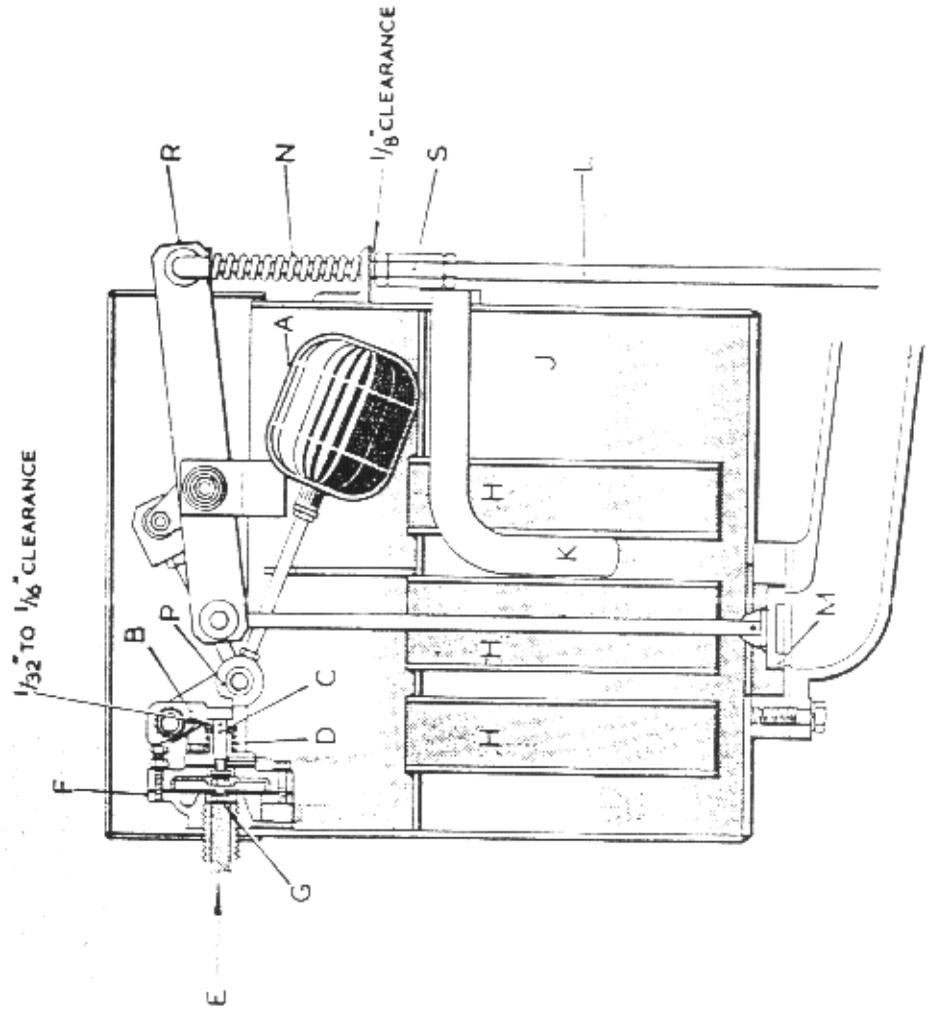


FIG. 2  
ASSEMBLY AND DISMANTLING OF DRAGLINE JIB

# 16 Winget

FIG. 3  
WATER TANK OPERATION



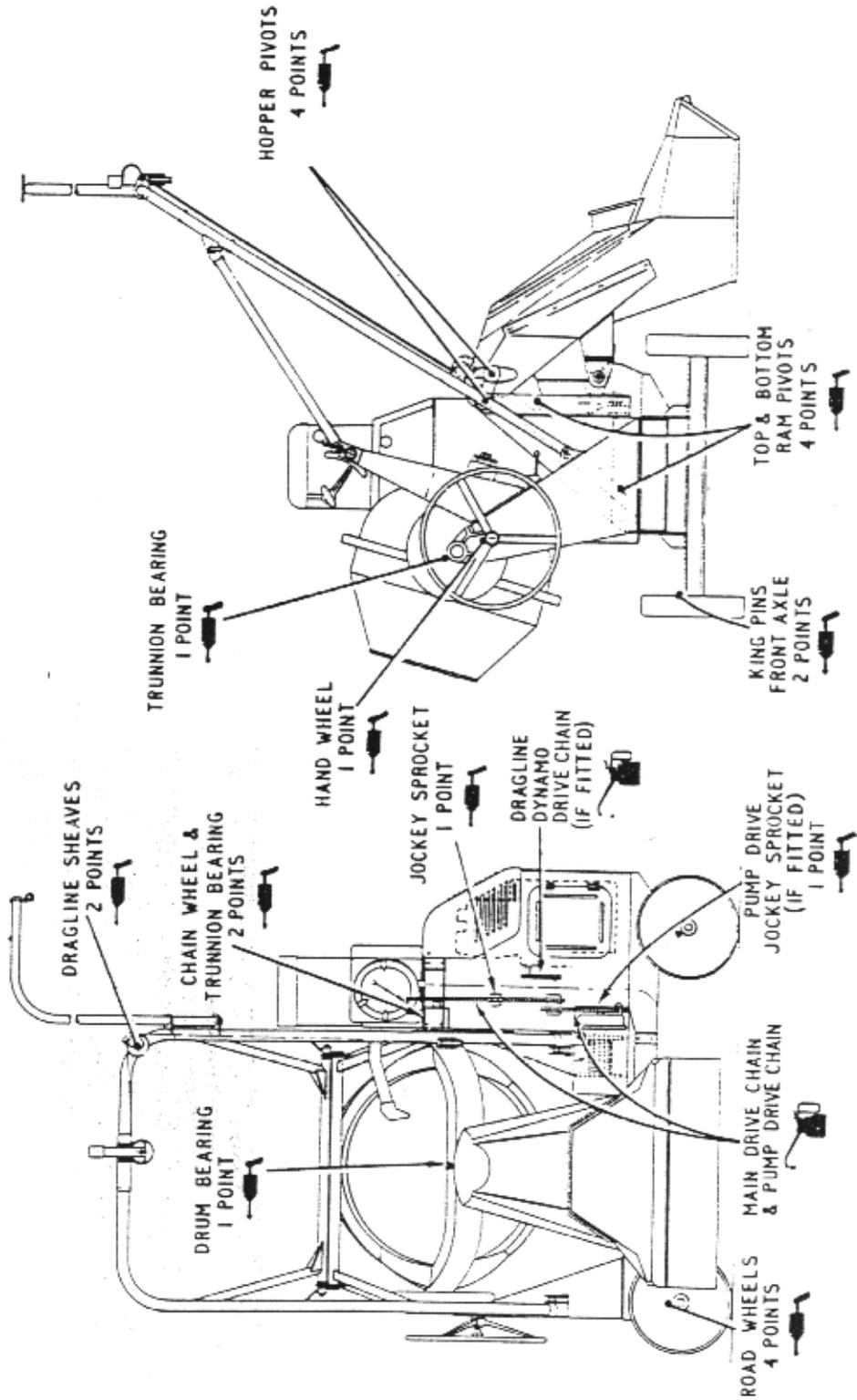


FIG. 4  
LUBRICATION DIAGRAM

# 18 Winget

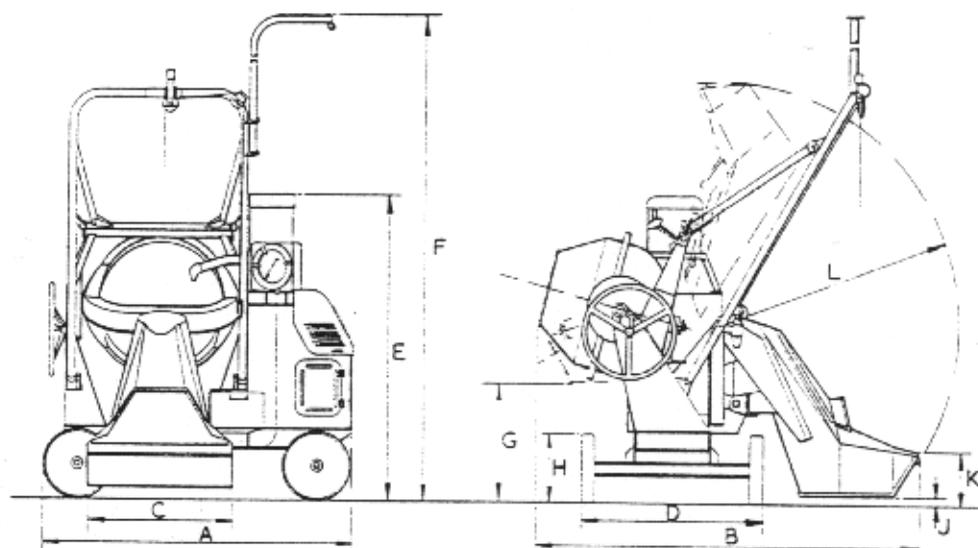


FIG. 5  
DIMENSIONAL DRAWING

A	2584 mm	—	(8 ft - 5.3/4")
B	3175 mm	—	(10 ft - 5")
C	1225 mm	—	(4 ft - 0.1/4")
D	1511 mm	—	(4 ft - 11.1/2")
E	2482 mm	—	(8 ft - 1.3/4")
F	4769 mm	—	(15 ft - 7.3/4")
G	990 mm	—	(3 ft - 3")
H	560 mm	—	(1 ft - 10")
J	76.2 mm	—	(3")
K	432 mm	—	(1 ft - 5")
L	2286 mm	—	(7 ft - 6")

## **Spares**

Please note that a number of components are described as being c/w screws, nuts and washers, this is no longer the case and all fixings should be ordered separately if required. Imperial fixings may no longer be available and the nearest metric equivalent will be supplied.

TO FIND A SPARE PART

The assemblies have been divided into groups and given identification letters A.B.C. etc. To identify a component, first find the relevant assembly in the list given on next page, this will give you a group letter to turn to. On turning to this group the illustrations will enable you to identify the part you required and give you a reference number. Against this number in the Parts List will be found the DESCRIPTION and PART NUMBER information which we require.

To avoid delays and errors, remember always to quote: THE MACHINE NUMBER, which will be found stamped on a plate at the side of the machine.

Spares compiled to LS.16111 and LS.16235

January 1977

Don't risk delays and errors remember  
**ALWAYS QUOTE THE SERIAL NUMBER  
OF THE MACHINE AND THE ENGINE  
NUMBER**

<b>WINGET LIMITED</b>			
ROCHESTER - KENT - ENGLAND			
SIZE OF MIXER	<input type="text"/>	YEAR MADE	<input type="text"/>
MIXING R.P.M.	<input type="text"/>	WT. <input type="text"/>	CWTS. <input type="text"/> QRS <input type="text"/>
RELEVANT B.S.S.	<input type="text"/>	PATENT NO.	<input type="text"/>
WHEN ORDERING SPARES		<input type="text"/>	
QUOTE MACHINE NO. :-			

# 22 Winget

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## SPARES GROUPS

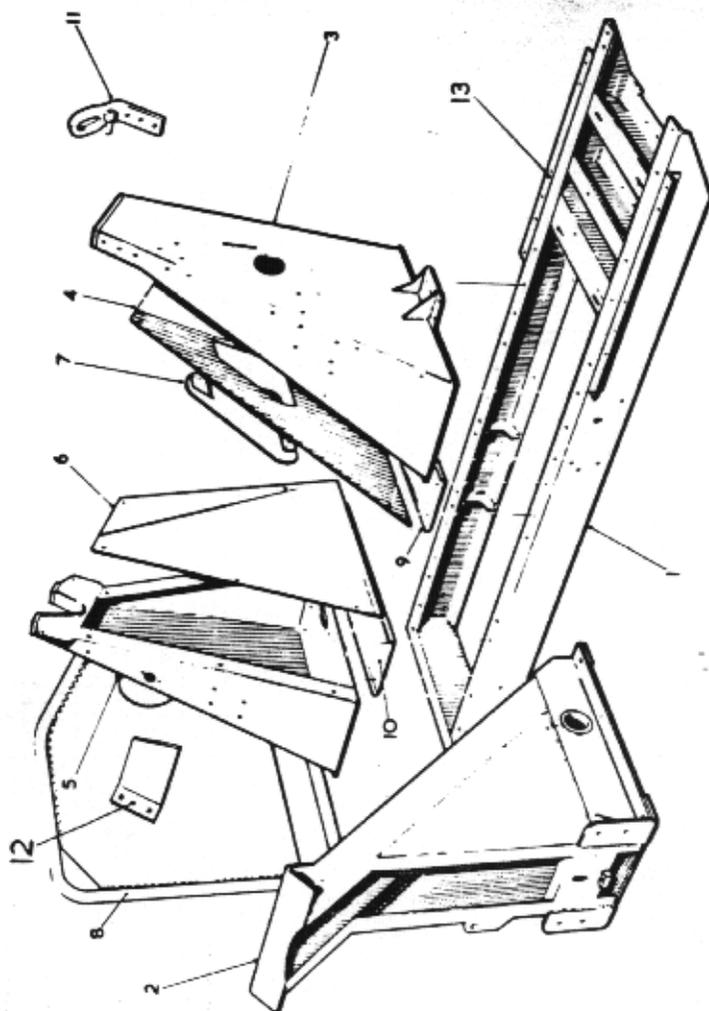
Dragline Assembly	D1
Drive Assembly - Electric	F3
Drive Assembly - Lister ST1	F2
Drive Assembly - Petter PH1	F1
Drum Assembly	B2
Engine Housing - Electric	G3
Engine Housing - Lister ST1	G2
Engine Housing - Petter PH1	G1
Float Valve Details	E1
Generator Drive Assembly - Lister ST1	D3
Generator Drive Assembly - Petter PH1 & Electric	D4
Hopper and Ram Assembly	C1
Hopper Ram Assembly	C4
Hydraulics Assembly	C2
Mainframe Assembly	A1
Main Chain Drive and Hydraulic Pump Drive Assembly	F4
Portability Assembly	A2
Shovel Assembly	D5
Tilting Gear Assembly	B3
Trunnion Assembly (Chain Wheel End)	B1
Water Tank Assembly	E2
Water Tank Mounting and Water Delivery Assembly	E3
Weigh Gear Assembly	C3
Winch Assembly	D2

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# Winget

## SPARES GROUPS

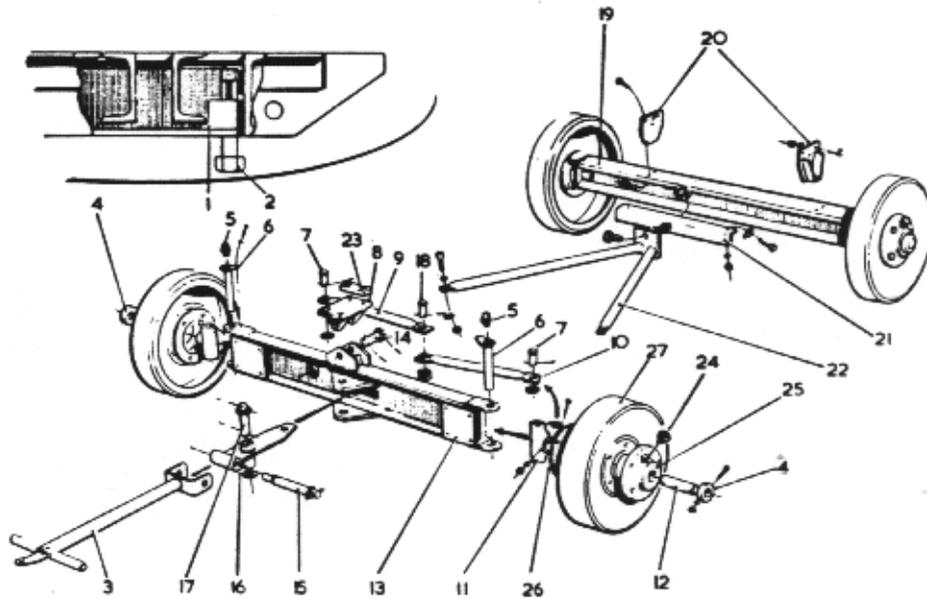
Wiring Diagram	G4
Dragline Assembly	D1
Drive Assently - Electric	F3
Drive Assembly - Lister ST1	F2
Drive Assembly - Petter PH1	F1
Drum Asseribly	B2
Engine Housing - Electric	G3
Engine Housing - Lister ST1	G2
Engine Housing - Petter PH1	G1
Float Valve Details	E1
Generator Drive Assembly - Lister ST1	D3
Generator Drive Assembly - Petter PH1 & Electric	D4
Hopper and Ram Assembly	C1
Hopper Ram Assembly (Type A)	C4
Hopper Ram Assembly (Type B)	C5
Hydraulics Asseribly	C2 & C6
Mainframe Assembly	A1
Main Chain Drive and Hydraulic Pump Drive Assembly	F4
Portability Assembly	A2
Shovel Assembly	D5
Tilting Gear Asseribly	B3
Trunnion Asseribly (Chain Wheel End)	B1
Water Tank Assembly	E2
Water Tank Mounting and Water Delivery Asseribly	E3
Weigh Gear Asseribly	C3
Winch Asseribly	D2
Fastenings	Y



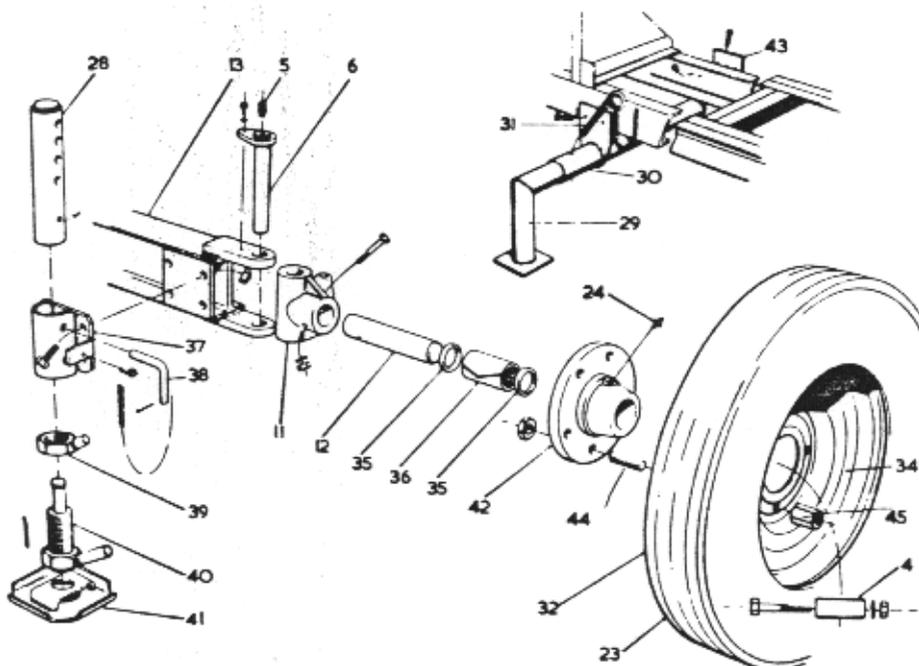
MA INFRAME ASSEMBLY

Ref	Description	Part N°	Qty
1	Mainframe	513 2899 00	1
2	Hopper Pivot Frame Complete with Y30, Y125, Y185 & Y201	513 1000 00	1
3	Trunnion Pedestal (Drive End)	513 1051 00	6
4	Trunnion Pedestal Guard Complete with Y30, Y125, Y185 & Y201	513 1077 00	6
5	Trunnion Pedestal (Tilt End) Complete with Y87 & Y183	513 1050 00	5
6	Trunnion Pedestal Guard Complete with Y30, Y125, Y185 & Y201	513 1076 00	6
7	Trunnion Pedestal Guard Door Complete with Y87 & Y183	503 0546 00	1
8	Fence Complete with Y103, Y133 & Y188	513 2541 00	1
9	Trunnion Pedestal Lower Guard (Drive End) Complete with Y15, Y123, Y183 & Y202	502 8671 00	4
10	Trunnion Pedestal Lower Guard (Tilt End) Complete with Y15, Y123, Y183 & Y202	502 8672 00	4
11	Lifting Eye (Non-Dragline Machines only) Complete with Y29, Y125 & Y185	513 1054 00	1
12	Guard for Fence Complete with Y103, Y133 & Y188	513 2568 00	3
13	Housing Support Complete with Y24, Y124, Y184	513 2901 00	2

When Ordering : - Machine N°, Part N°, Description and Quantity  
Always Quote



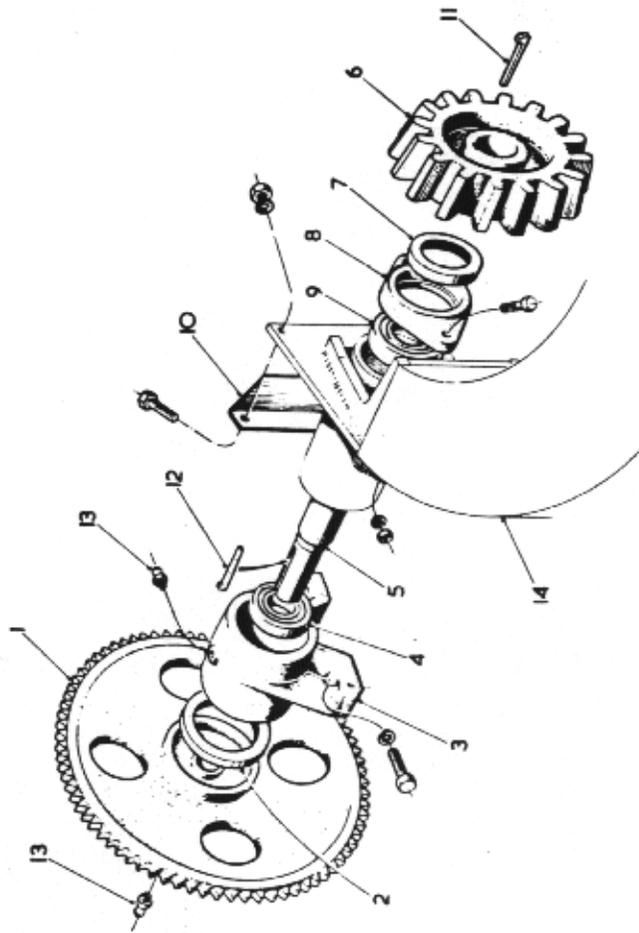
### PORTABILITY ASSEMBLY



Ref	Description	Part N°	Qty	Ref	Description	Part N°	Qty
1	Stabilizer Nut	504 5501 00	2	27	Pressed Steel Road Wheel	511 1467 00	4
2	Stabilizer Bolt	502 8181 00	2		Complete with Y31, Y125 & Y185		16
3	Towbar	502 7755 00	1	28	Stabilizer Leg	500 8696 00	4
4	Collar	145 5040 00	4		Complete with Y413		8
5	Complete with Y21, Y123 & Y183		4	29	Outrigger Leg	513 1282 00	1
6	Nipple	333 1022 00	2	30	Outrigger Support Tube	513 1283 00	1
7	King Pin	502 7761 00	2		Complete with Y26, Y124 & Y184		3
8	Complete with Y13 & Y183		2	31	Locking Pin with Dog Chain	513 1285 00	1
9	Pin for Track Rod	502 7816 00	2	32	Tyre	475 3001 61	4
10	Complete with Y464 & Y166		2	33	Tube	475 3001 62	4
11	Front Axle Swivel Bracket	502 7801 00	1	34	Wheel with Locknut	465 3001 60	4
12	Complete with Y25, Y124, Y184 & Y200		4	35	Distance Washer	501 8564 00	8
13	Offside Track Rod	502 7763 00	1	36	Bearing	113 1010 00	4
14	Nearside Track Rod	502 7762 00	1	37	Stabilizer Bracket	502 8703 00	4
15	Front Stub Axle	502 7756 00	2	38	Complete with Y24, Y124 & Y312		16
16	Complete with Y19, Y123 & Y183		2	39	Locking Pin	501 1783 00	4
17	Stub Axle Pin	502 7757 00	2	40	Locking Nut	506 6950 30	4
18	Front Axle	502 7759 00	1		Lifting Screw	501 1505 00	4
19	Swivel Bracket Pin	502 7813 00	1	41	Complete with Y169 & Y468		4
20	Complete with Y168 & Y470		2	42	Base for Stabilizer	508 6950 10	4
21	Towbar Pin	502 7818 00	1	43	Roller Bearing Hub Adaptor	501 8219 00	4
22	Steering Bracket	502 7799 00	1		Outrigger Bracket	513 1284 00	1
23	Steering Bracket Pin	502 7815 00	1	44	Complete with Y26, Y124 & Y184		3
24	Complete with Y167 & Y467		2	45	Wheel Stud	513 2515 00	20
25	Centre Track Pin	502 7817 00	1		Wheel Nut	513 2556 00	20
26	Complete with Y166 & Y464		1				
27	Rear Axle	502 7764 00	1				
28	Complete with Y40, Y130, Y316 & Y200		4				
29	Rear Axle Bracket	513 1083 00	2				
30	Complete with Y25, Y124 & Y184		6				
31	Tie Rod Cross Angle	502 7955 00	1				
32	Complete with Y25, Y124, Y184 & Y200		2				
33	Front Axle Tie Bar	504 5499 00	1				
34	Complete with Y31, Y125, Y313 & Y165		1				
35	Y25, Y124, Y184 & Y200		2				
36	Swivel Bracket Packing	504 5505 00	1				
37	Nipple	333 7440 00	4				
38	Wheel Hub (Steel Wheels Only)	513 1423 00	4				
39	Backing Plate (Steel Wheels Only)	511 1654 00	4				

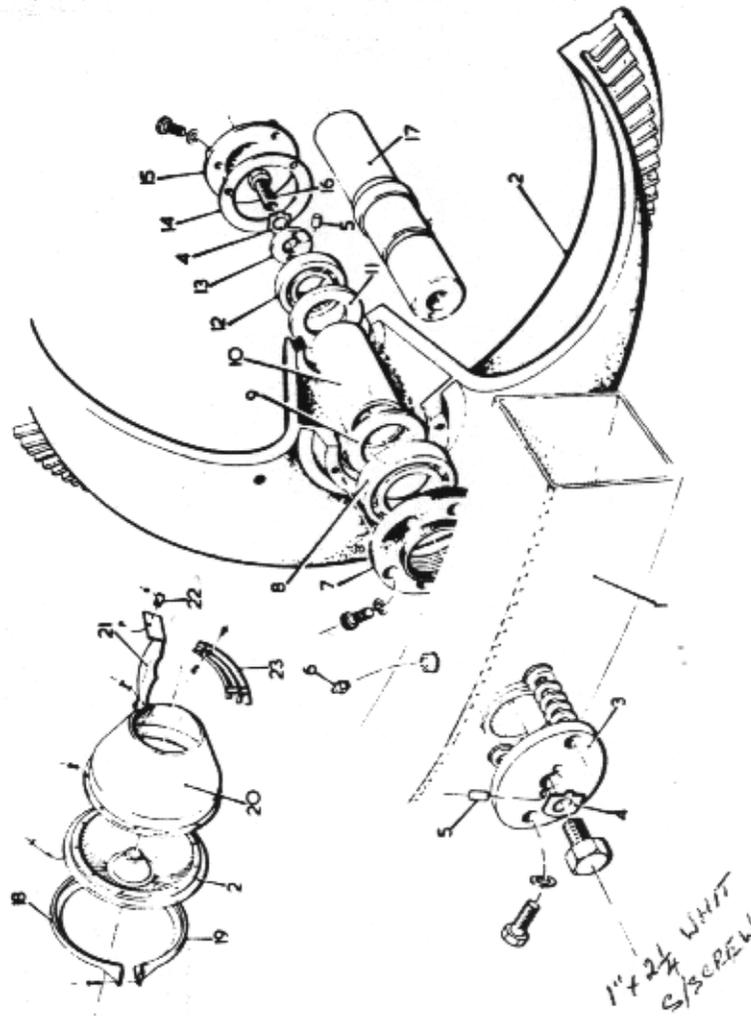
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NOTE: Items 25, 26 and 27 used with Pressed Steel Road Wheels  
Items 28 to 45 Inclusive used with Pneumatic Road Wheels



TRUNNION ASSEMBLY (CHAIN WHEEL END)

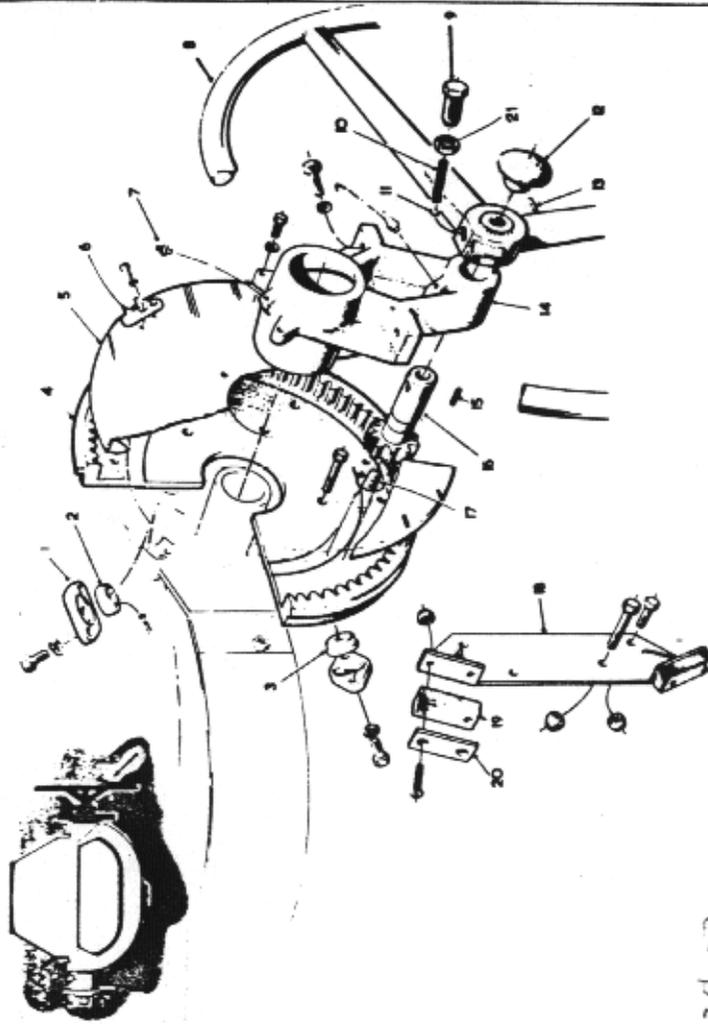
Ref	Description	Part No	Qty
1	Chain Wheel	503 0585 00	1
2	Oil Seal	417 1608 00	1
3	Trunnion Bearing (B.P. End)	502 7899 00	1
4	Complete with Y107 & Y185		2
4	Roller Bearing	100 1120 00	1
5	Bevel Pinion Shaft	501 1020 00	1
6	Bevel Pinion	501 1018 00	1
7	Oil Seal	417 1364 80	1
8	Locking Cap	501 1021 00	1
8	Complete with Y17, Y123 & Y183		2
9	Bearing	102 2120 00	1
10	Bevel Pinion Guard	501 2503 00	1
10	Complete with Y14, Y123 & Y183		2
11	Gib Hd. Key	301 1061 60	1
12	Gib Hd. Key	301 1062 00	1
13	Grease Nipple	333 1040 20	2
14	Trunnion	501 1183 00	1



DRUM ASSEMBLY

Ref	Description	Part No	Qty
1	Trunnion	501 1183 00	1
2	Drum Base	502 7568 00	1
3	Flange for Drum Shaft Complete with Y32 & Y166 Y166	502 7609 00	1
			2
			As Reqd
4	Tag Washer Y34	504 5843 00	1
5	Dowel Pin	352 9100 80	2
6	Grease Nipples	333 1040 20	2
7	Bearing Lap Complete with Y351	502 7610 00	1
8	Bearing	102 2220 00	6
9	Grease Shield	502 7614 00	1
10	Distance Tube	502 7613 00	1
11	Thrust Washer	502 7612 00	1
12	Bearing	102 2180 00	1
13	Retaining Washer	500 9280 00	1
14	Drum Base Cap Gasket	502 8287 00	1
15	Drum Base Cap Complete with Y93 & Y164	502 7608 00	1
16	Special Bolt	502 7611 00	3
17	Drum Shaft	502 7607 00	1
18	Drum Guard (Discharge Side) Complete with Y88 & Y183 Y22, Y123 & Y183	501 1718 00	1
			5
19	Drum Guard (Charge Side) Complete with Y88 & Y183	513 1709 00	1
20	Drum Top Complete with Y90 & Y184	502 7721 00	5
21	Drum Blade (Lower) Complete with Y90, Y124 & Y184	502 7728 00	12
22	Drum Blade Cleat Complete with Y390, Y124 & Y184	502 7758 00	2
23	Skeleton Blades Complete with Y390, Y124 & Y184	502 4764 00	8
			2
			4

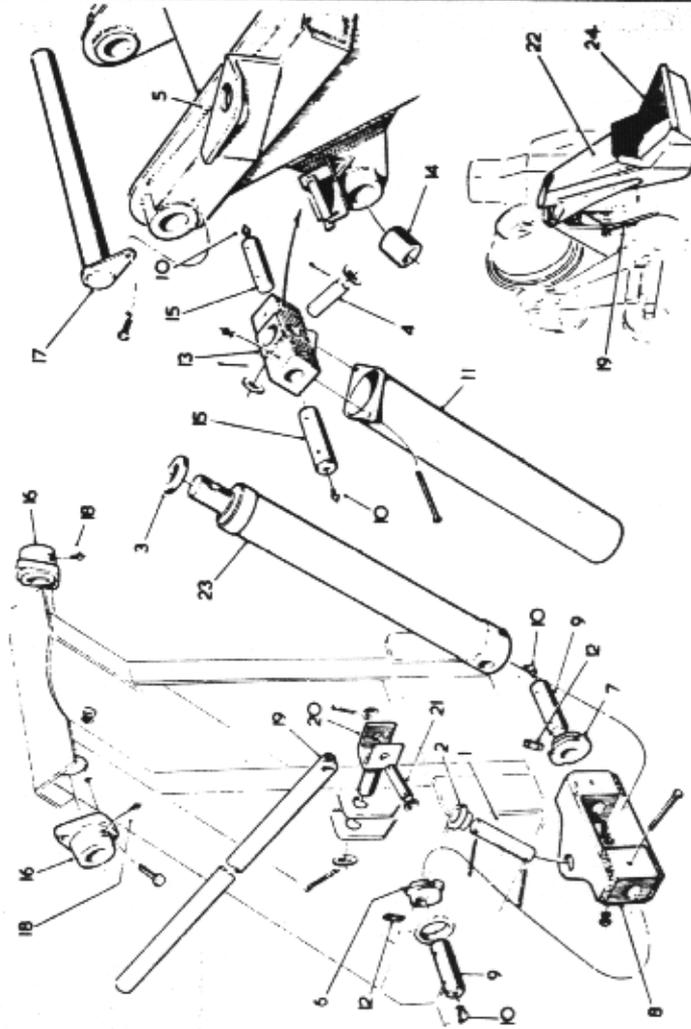
When Ordering :- Always Quote Machine N°, Part N°, Description and Quantity.



TILTING GEAR ASSEMBLY

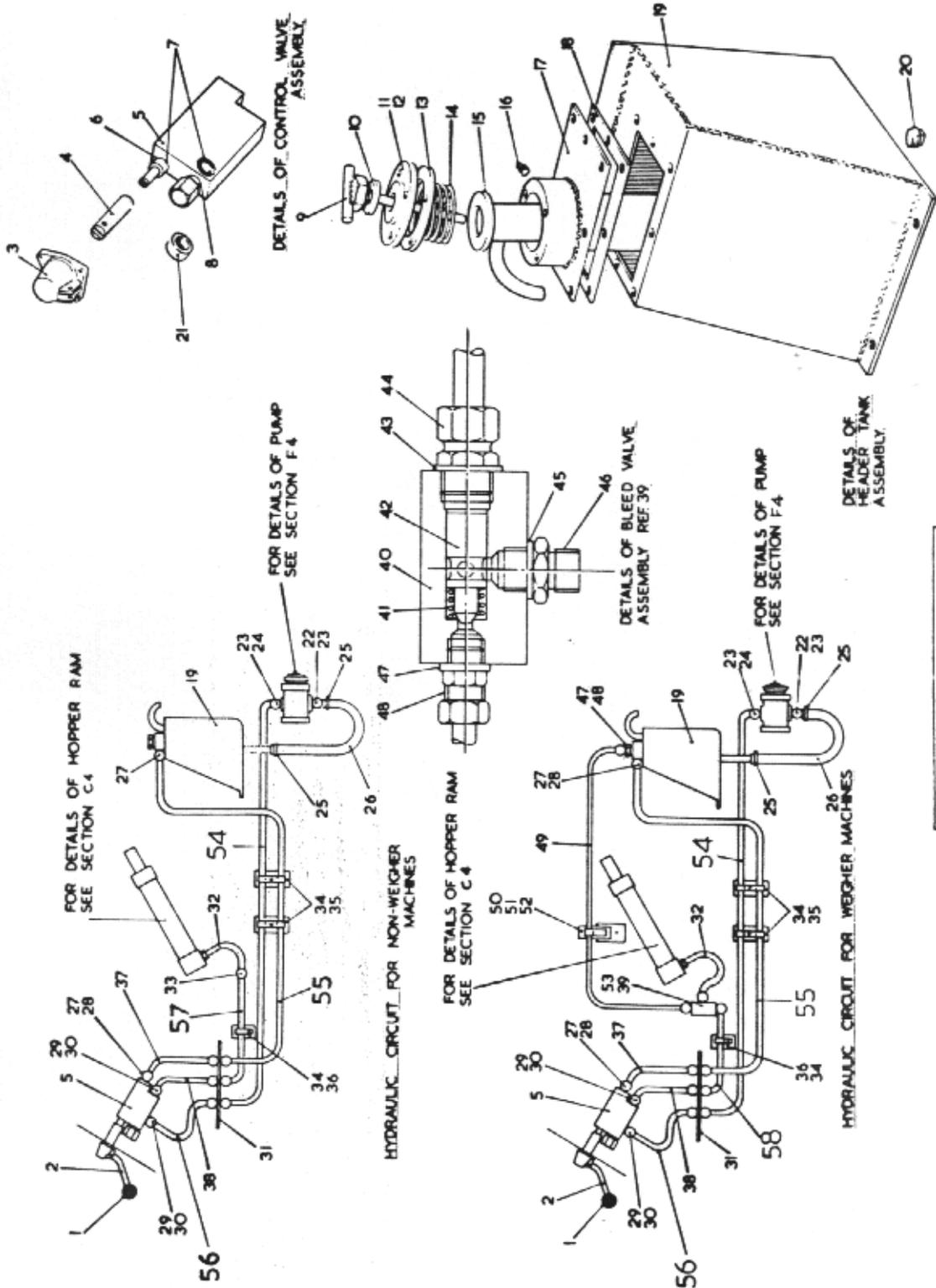
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Ref	Description	Part No	Qty
1	Locking Flange Complete with Y92 & Y184	513 1226 00	3
2	Adjustable Locking Flange Boss	513 1228 00	6
3	Complete with Y352 & Y181	513 1227 00	1
4	Locking Flange Boss	513 1047 00	2
	Tilting Wheel	513 1047 00	1
	Complete with Y43 & Y236	513 1047 00	2
	Y44 & Y236	513 1049 00	2
5	Tilt Wheel Guard	513 1049 00	1
6	Complete with Y89 & Y183	513 1042 00	4
	Pointer	513 1042 00	1
7	Complete with Y81 & Y181	333 1020 20	2
	Grease Nipple	513 1048 00	2
8	Hand Wheel	513 1048 00	1
9	Set Bolt	513 1040 00	1
10	Compression Spring	513 1039 00	1
11	Steel Ball	101 1120 00	1
12	Plunger Knob	513 1043 00	1
13	Mills Pin	352 4031 00	1
14	Tilt Bracket and Trunnion Bearing	502 7888 00	1
	Complete with Y94, Y125 & Y185	502 7888 00	1
15	Feather Key	305 1061 20	2
16	Tilting Pinion and Shaft	513 1045 00	1
17	Locking Plunger	513 1044 00	1
18	Tilting Wheel Stop Bracket Complete with Y39 & Y236	513 1046 00	1
19	Rubber Stop	502 9144 00	2
20	Tilting Wheel Stop	502 9145 00	2
21	Backnut	330-1080-00	1



HOPPER AND RAM ASSEMBLY

Ref	Description	Part No	Qty
1	Lower Yoke Pin	513 2456 00	1
2	Complete with Y469	513 2455 00	2
3	Lower Yoke Bush	503 0035 00	2
4	Rubber Buffer (Non-Weigher only)	503 0497 00	1
5	Upper Yoke Pin	513 1100 00	1
6	Complete with Y469 & Y168	513 1001 00	1
7	Hopper Cradle	513 1002 00	1
8	Lower Yoke Bearing (a)	513 1229 00	1
9	Lower Yoke Bearing (b)	503 0537 00	2
10	Lower Ram Yoke	333 6010 10	4
11	Complete with Y19, Y123 & Y183	503 0496 00	1
12	Ram Yoke Pin	513 1003 00	2
13	45° Grease Nipple	503 0515 00	4
14	Ram Shroud	105 2100 00	2
15	Lower Yoke Bearing Key	503 0537 00	2
16	Complete with Y3, Y121 & Y181	503 0519 00	2
17	Upper Ram Yoke	503 0518 00	4
18	Complete with Y54, Y123 & Y183	503 0518 00	1
19	Yoke Bush	333 1020 20	1
20	Ram Yoke Pin	503 0487 00	2
21	Hopper Pivot Bearing	502 8013 00	1
22	Complete with Y25, Y124 & Y184	502 8015 00	1
23	Hopper Pivot Shaft	513 1094 00	2
24	Complete with Y88 & Y183	513 2459 00	1
25	Grease Nipple	513 1090 00	1
26	Hopper Prop		8
27	Hopper Prop Swivel		2
28	Complete with Y167 & Y466		2
29	Hopper Prop Swivel Pin		1
30	Complete with Y462 & Y166		1
31	Hopper Cover		8
32	Complete with Y13, Y123, Y183 Y370, Y123, Y183		2
33	Ram Complete		1
34	Loading Hopper		1
35	Complete with Y335, Y125 & Y313		8



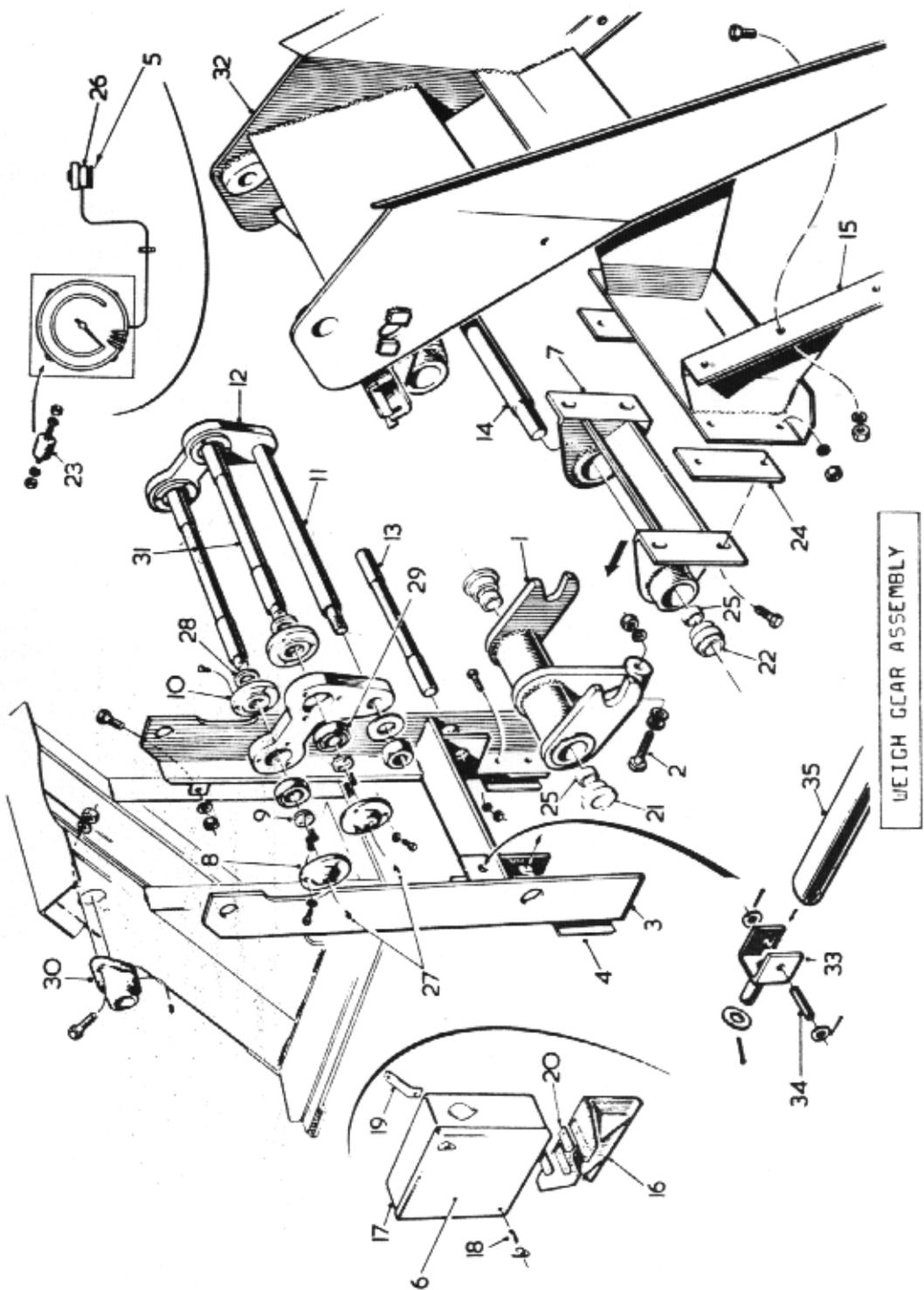
HYDRAULICS ASSEMBLY

Ref	Description	Part N°	Qty	Ref	Description	Part N°	Qty
1	Knob	307 1010 00	1	33	Coupling	513 1195 00	1
2	Control Lever	503 0494 00	1	34	Pipe Clip Block	503 0935 00	3
3	Complete with Y57, Y230 & Y162		1	35	Clip for Return and Pressure Pipes	503 0934 00	2
4	Control Lever Bearing	503 0510 00	1	36	Complete with Y16, Y123 & Y183		2
5	Control Valve Link	503 0493 00	3	37	Clip for Ram Steel Pipe	503 0933 00	1
6	Complete with Y4 & Y230		1	38	Complete with Y16, Y123 & Y183		1
7	Control Valve	020 1610 00	1	39	Hydraulic Pipe	513 2577 00	1
8	Complete with Y12, Y122 & Y182		1	40	Hydraulic Pipe	513 2578 00	1
9	Wiper Ring	417 7023 00	2	41	Bleed Valve Assembly Complete	503 1393 00	1
10	'0' Ring	417 7024 00	1	42	Bleed Valve Body	503 1394 00	1
11	Seal	417 9570 00	2	43	Compression Spring	402 4280 00	1
12	Header Tank Dipstick	503 0561 00	2	44	Bleed Valve Plunger	503 1395 00	1
13	Seal	417 8080 00	1	45	Rounded Seal	417 8040 00	1
14	Filter Carrier Cap	503 0509 00	1	46	Coupling	446 3490 00	1
15	Complete with Y86		1	47	Rounded Seal	417 8030 00	1
16	Selon Washers	417 7170 00	3	48	Male Adaptor	013 1066 00	1
17	Gasket	503 0646 00	3	49	Rounded Seal	417 8020 00	1
18	Spring	423 3341 20	1	50	Coupling	141 1064 00	2
19	Tank Filter	503 0513 00	1	51	Nylon Pipe	110 9530 00	2
20	Taper Plug (Non-Weigher M/c's only)	241 7020 00	1	52	Support for Clip	504 4376 00	1
21	Header Tank Cover	503 0904 00	1	53	Pipe Clip	504 4375 00	1
22	Complete with Y84 & Y182		1	54	Complete with Y16, Y123 & Y183		1
23	Header Tank Gasket	503 0905 00	8	55	Packing Block for Bleed Pipe	513 1324 00	1
24	Header Tank	503 0903 00	1	56	Securing Piece for Bleed Valve	503 1770 00	1
25	Complete with Y2, Y121 & Y181		1	57	Hydraulic Pipe	513 2576 00	1
26	Plug	241 7030 00	4	58	Hydraulic Pipe	513 2575 00	1
27	Valve Mounting Boss	503 0898 00	1		Hydraulic Pipe	513 2579 00	1
28	Stud Standpipe	446 6600 00	2		Hydraulic Pipe	513 2573 00	1
29	Seal	417 8060 00	1		Hydraulic Pipe	513 2574 00	1
30	Coupling	446 6120 00	2				
31	Clip	132 1010 00	1				
32	Moulded Hose	513 2041 00	2				
	Coupling	446 6310 00	2				
	Rounded Seal	417 8030 00	2				
	Coupling	446 3400 00	2				
	Rounded Seal	417 8020 00	2				
	Pipe Header	513 1173 00	2				
	Complete with Y14, Y123 & Y183		1				
	Hopper Ram Hose	230 4052 00	2				
			1				

\* These items are used on machines with Weigher only

When Ordering  
Always Quote

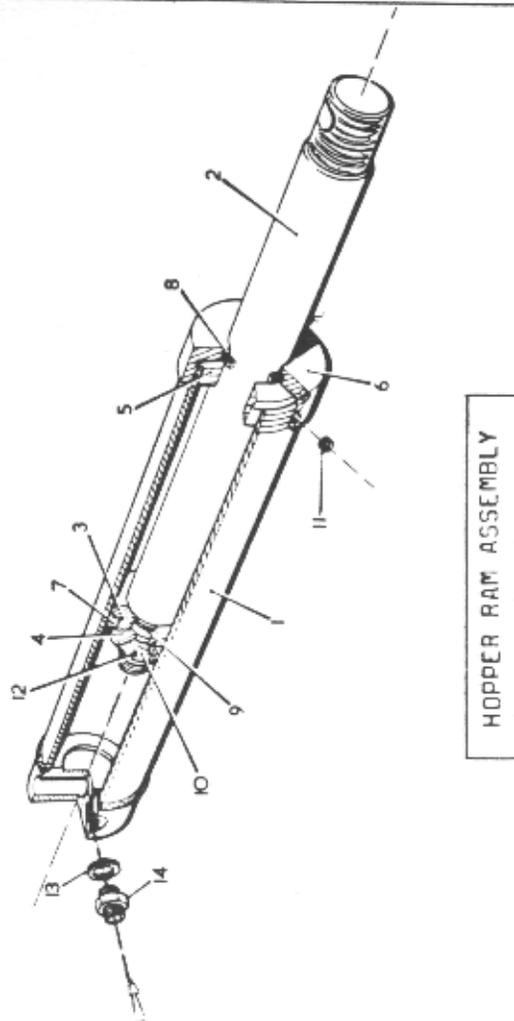
Machine N°, Part N°, Description and Quantity



Ref	Description	Part N°	Qty	Ref	Description	Part N°	Qty
1	Lower Arm Pivot	503 1207 00	1	29	Roller Bearing	113 1250 00	4
2	Striking Button	503 1507 00	1	30	Hopper Pivot Bearing	503 1163 00	2
3	Complete with Y125 & Y185		1		Complete with Y26, Y124 & Y184		4
	Weigher Frame	504 4211 00	1		Y415		2
	Complete with Y14, Y123, Y183 & Y414		2	31	Hopper Pivot Shaft	503 1165 00	2
	Y25, Y124 & Y184		4	32	Hopper Cradle	513 1093 00	1
4	Weigher Frame Packing Plates	504 4212 00	1Set	33	Hopper Prop Swivel	502 8013 00	1
5	Loadcell Liner	515 1730 00	1		Complete with Y466 & Y167		2
6	Gauge Cover	504 5541 00	1	34	Hopper Prop Swivel Pin	502 8015 00	1
7	Lower Hopper Cradle Bracket	503 1204 00	1	35	Hopper Prop	513 1225 00	1
	Complete with Y80 & Y181		2				
8	Bearing Cap	503 1162 00	4				
9	Bearing Retainer	503 1160 00	4				
	Complete with Y85		8				
10	Seal Housing	503 1161 00	4				
11	Top Link Spacer	503 1164 00	1				
	Complete with Y131 & Y168		2				
12	Upper Links	503 1166 00	2				
	Complete with Y85, Y332 & Y182		12				
13	Lower Arm Pivot Shaft	503 1206 00	1				
14	Lower Cradle Shaft	503 1205 00	1				
15	Connection Bracket	513 1099 00	1				
	Complete with Y23, Y124 & Y184		6				
	Y25, Y124 & Y184		4				
16	Gauge Mounting Box Bracket	513 1097 00	1				
17	Gauge Mounting Box	504 5539 00	1				
	Complete with Y14, Y123 & Y183		4				
	Y250 & Y163		2				
18	Gauge Box Stud	504 5596 00	2				
19	Gauge Box Strap	513 1168 00	1				
20	Packing Piece	513 1251 00	2				
21	Pivot Arm Insert	513 2359 00	2				
22	Cradle Bracket Insert	513 2360 00	2				
23	Anti-Vibration Mounting	013 2020 00	4				
	Complete with Y121 & Y181		8				
24	Packing Plates	513 1099 05	2				
25	Nylon Bush	114 6180 00	8				
26	Loadcell and Gauge Assembly	513 1961 00	1				
27	Grease Nipple	333 1020 20	4				
28	Seal	463 6010 00	4				

When Ordering  
Always Quote

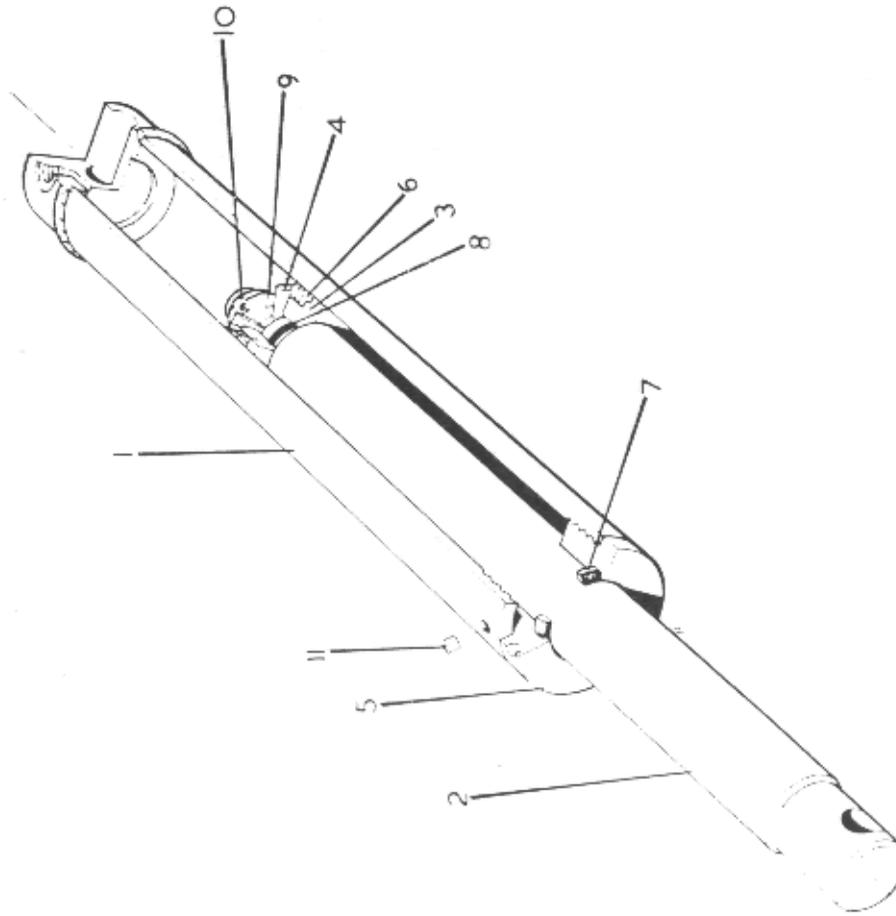
Machine N°, Part N°, Description and Quantity



Ref	Description	Part No	Qty
1	Tube	272 1270 14	1
2	Piston Rod	272 1270 18	1
3	Piston Head	272 1270 03	1
4	Back-up Plate	272 1270 06	1
5	Front Insert	272 1270 13	1
6	Front Cap	272 1270 12	1
*7	Piston Seal Assembly	272 1270 08	1
*8	Wiper Seal	272 1270 09	1
*9	Piston Head 'O' Ring	272 1270 10	1
10	Nut	272 1270 16	1
11	Set Screw	272 1270 11	1
12	Cotter Pin	272 1270 15	1
13	Bonded Seal	417 8040 00	1
14	Coupling	446 6140 00	1

These Rams are number stamped 8200 and onwards

\* These Items can be bought in Kit Form - Ram Seal Kit, Part Number 272 1270 17

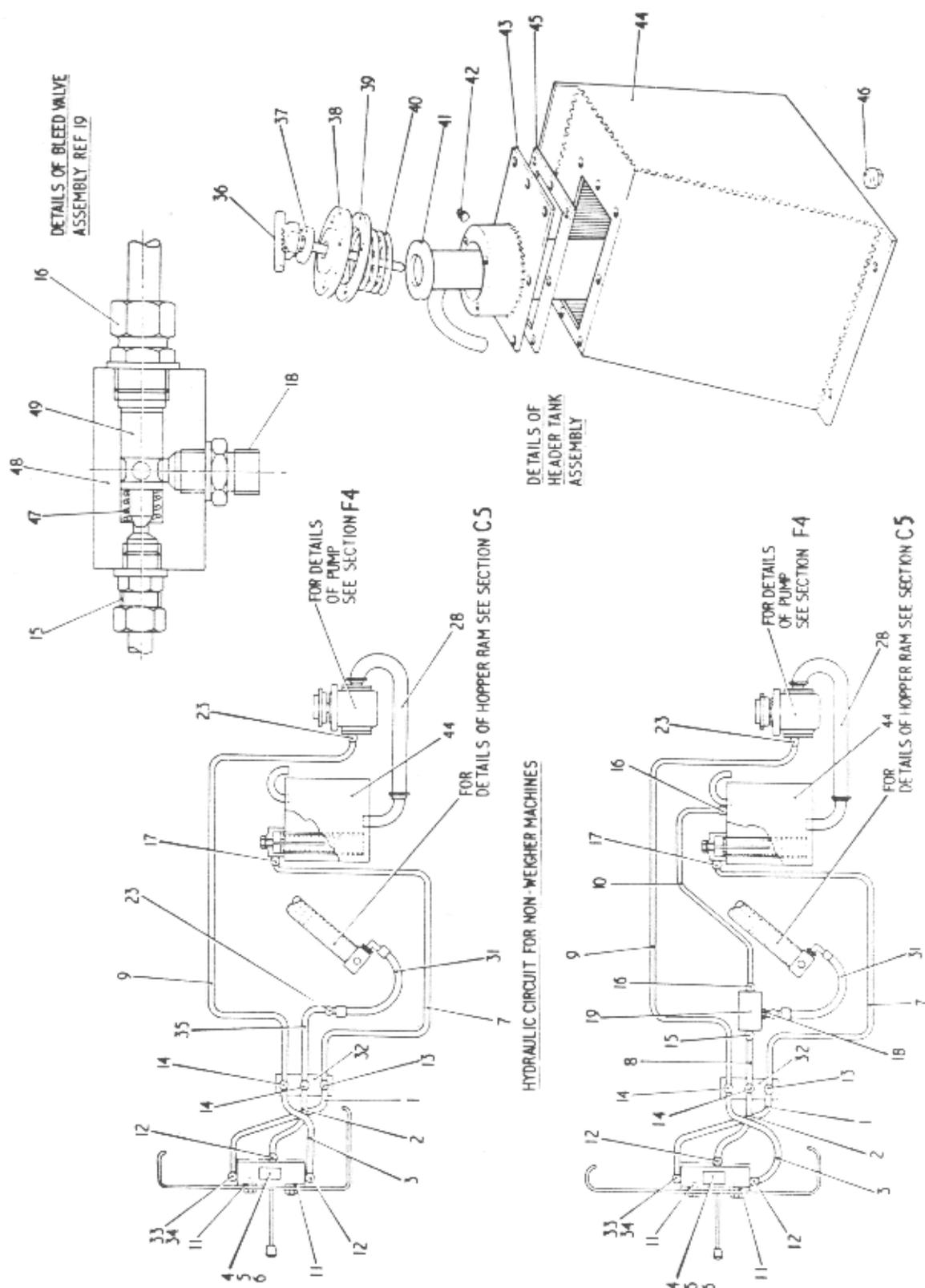


Ref	Description	Part No	Qty
1	Tube assembly	272 1350 01	1
2	Piston Rod	272 1350 02	1
3	Piston Head	272 1270 03	1
4	Back up Plate	272 1270 06	1
5	Front End	272 1400 03	1
6	Piston Seal	272 1270 08	1
7	Wiper Seal	272 1270 09	1
8	Key Ring	272 1270 10	1
9	Nut	272 1270 16	1
10	Split Pin	272 1270 15	1
11	Screw	272 1400 04	1

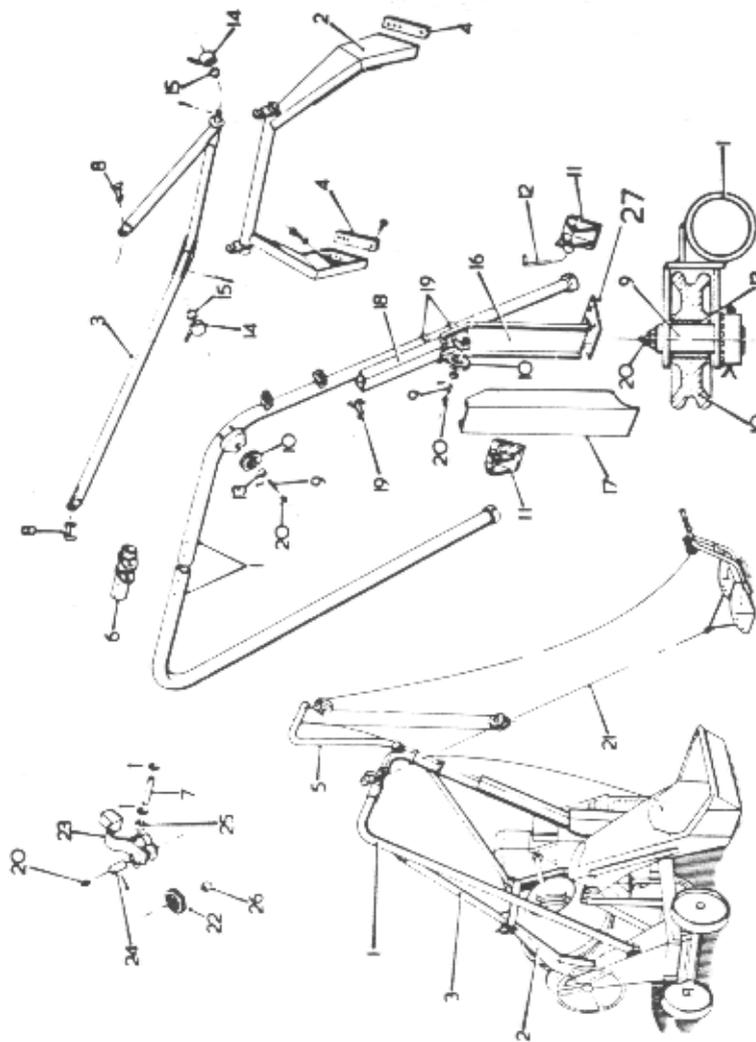
TO IDENTIFY THIS TYPE OF CYLINDER THE LETTER 'B' IS STAMPED ON THE FREE END OF THE PISTON ROD.

For complete Hopper Ram assembly comprising all items listed above order Part No. 272 1350 00.

NOTE: Items 6, 7 & 8 can be bought in kit form - Ram Seal Kit - Part No. 272 1270 17.



Ref	Description	Part No	Qty	Ref	Description	Part No	Qty
1	Hydraulic Hose	513 2916 00	1	32	Pipe Header Plate	513 2921 00	1
2	Hydraulic Hose	513 2915 00	1	33	Male Adaptor (Ref 4 only) complete with: Bonded Seal	446 6620 00	1
3	Hydraulic Hose	513 2917 00	1	34	Male Adaptor (Refs 5 & 6 only) complete with: Bonded Seal	417 8040 00	1
4	Control Valve Ref 451 4417 00	451 4417 00	1	35	Hydraulic Pipe	446 6140 00	1
5	Control Valve Ref 451 4426 00	451 4426 00	1	36	Header Tank Dipstick	417 8030 00	1
6	Control Valve Ref 451 4425 00 4, 5 & 6 each complete with Y108 and Y104	451 4425 00	1	37	Seal	513 2573 00	1
7	Hydraulic Pipe	513 2575 00	2	38	Filter Carrier Cap complete with: Y86 Salon Washers	503 0561 00	1
8	Hydraulic Pipe	513 2574 00	1	39	Gasket	417 7170 00	3
9	Hydraulic Pipe	513 2576 00	1	40	Spring	503 0646 00	3
10	Nylon Pipe	110 9537 10	1	41	Tank Filter	423 3341 00	1
11	Spacer (for Refs 5 & 6 only)	513 2918 00	2	42	Taper Plug (non weigher M/C only)	503 0513 00	1
12	Male Adaptor complete with: Bonded Seal	446 6110 00	2	43	Header Tank Cover complete with: Y84 & Y182	241 7020 00	1
13	Bulkhead Connector	446 4870 00	1	44	Header Tank	503 0904 00	1
14	Bulkhead Connector	446 4880 00	2	45	complete with: Y2, Y121 & Y181	503 0903 00	8
15	Coupling complete with: Bonded Seal	141 1064 00	1	46	Header Tank Gasket	503 0905 00	1
16	Coupling complete with: Bonded Seal	417 8020 00	1	47	Plug	241 7030 00	1
17	Coupling complete with: Bonded Seal	446 7420 00	2	48	Compression Spring	402 4280 00	1
18	Coupling complete with: Bonded Seal	417 8030 00	1	49	Bleed Valve Body	503 1394 00	1
19	Coned Adaptor complete with: Bonded Seal	013 1056 00	1	*	Bleed Valve Plunger	503 1395 00	1
20	Bleed Valve Assembly complete	417 8030 00	1				
21		503 1393 00	1				
22							
23	Coupling complete with: Bonded Seal	466 6120 00	1				
24		417 8030 00	1				
25							
26							
27							
28	Preulded Hose complete with: Clip	513 2041 00	1				
29		132 1010 00	2				
30							
31	Stepper Ram Hose	260 4062 00	1				



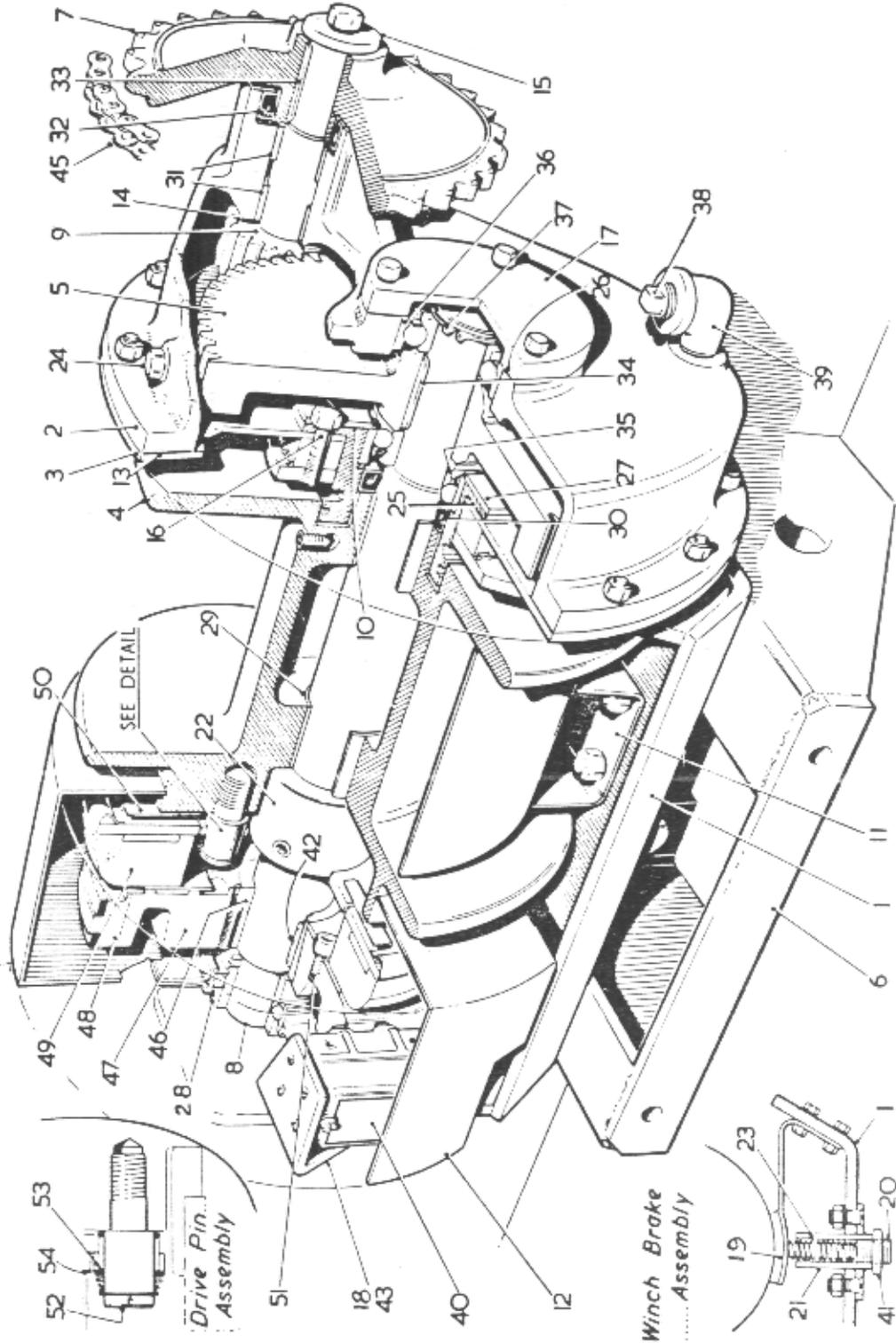
DRAGLINE ASSEMBLY

Ref	Description	Part No	Qty
1	Dragline Jib	513 1027 00	1
2	Dragline Jib Support Complete with Y47, Y355, Y237 & Y216	513 1196 00	1
3	Dragline Jib Tie	513 1197 00	4
4	Back Plate for Jib Tie	513 1201 00	2
5	Cable Support	513 1030 00	1
6	Connecting Tube	513 1032 00	1
7	Complete with Y28, Y124 & Y184 Upper Pivot Pin	513 1037 00	4
8	Complete with Y167 & Y468 Drop End Pin	513 1031 00	2
9	Pulley Pin	513 1034 00	2
10	Complete with Y468 Top Rope Sheave	515 1152 00	2
11	Dragline Jib Bracket	513 1033 00	1LH 1RH
12	Complete with Y24, Y124 & Y184 Dragline Jib Pin	513 1035 00	8
13	Rush	511 1356 00	2
14	Jib Tie Locknut	513 1199 00	2
15	Complete with Y471 Chamfered Washer	513 1200 00	2
16	Rear Rope Guard	513 2537 00	1
17	Front Rope Guard Complete with Y100 Captive Nut	513 2538 00	1
18	Upper Rope Guard	332 7130 00	7
19	Clip	513 2539 00	1
20	Complete with Y101 & Y191 Grease Nipple	513 2540 00	3
21	Cable	333 1020 00	2
22	Side Pulley	477 5626 00	3
23	Balance Pulley Block	879 1195 00	1
24	Pulley Pin	555 2131 00	1
25	Complete with Y472 Rush	555 2132 00	1
26	Rush	114 6370 00	2
27	Hopper Securing Plate Complete with Y374 & Y180	879 1200 00 513 1206 00	1 1 6

When Ordering Always Quote :- Machine No, Part No, Description and Quantity

ASSY 513132200

WINCH ASSEMBLY

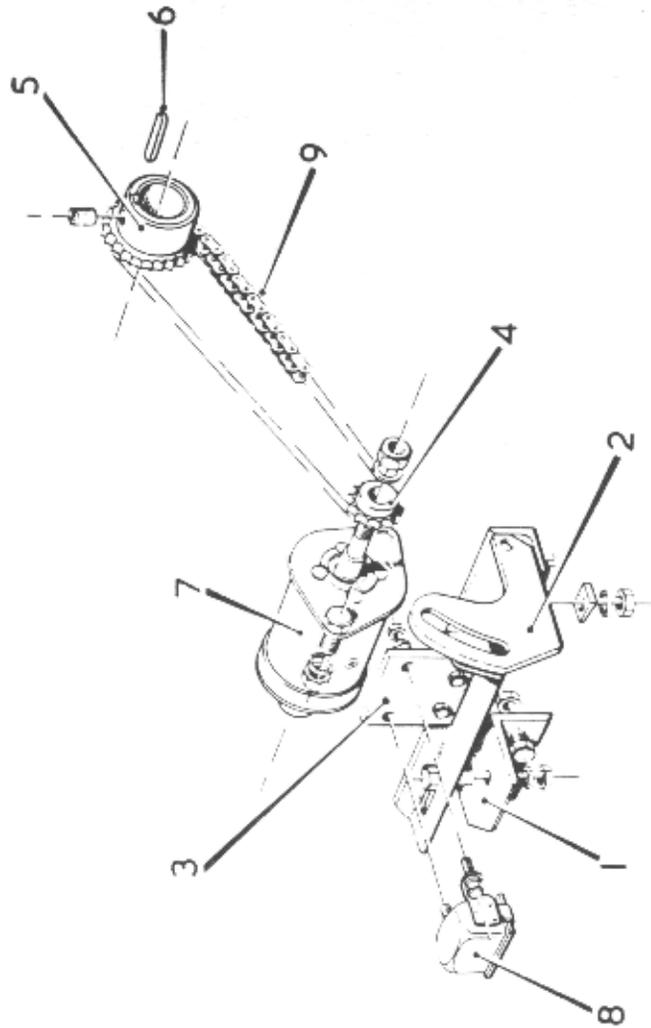


Ref	Description	Part No	Qty
1	Winch Cradle	513 1005 00	1
2	Complete with Y24, Y124 & Y184 Y14, Y123 & Y183	513 1006 00	4
3	Gearcase - Winch Unit	513 1007 00	1
4	Complete with Y7, Y122 & Y182	513 1321 00	13
5	Gearcase - Backplate	513 1009 00	1
6	Winch Winding Drum	513 1010 00	1
7	Complete with Y411	513 1011 00	2
8	Winch Drive Pinion	513 1012 00	1
9	Winch Support	513 1013 00	1
10	Complete with Y46, Y137 & Y317	513 1320 00	1
11	Dragline Chainwheel	513 1015 00	1
12	Complete with Y56 & Y183	513 1016 00	4
13	Winch Shaft	513 1160 00	1
14	Pinion and Shaft	513 1018 00	2
15	Gearcase Spigot	513 1019 00	1
16	Winch Cradle Rope Guard	513 1020 00	6
17	Complete with Y13, Y123 & Y183	513 1021 00	1
18	Winch Clutch Guard	513 1022 00	3
19	Complete with Y82 & Y181	513 1023 00	1
20	Thrust Washer	513 1024 00	2
21	Chainwheel Retaining Plate	513 1025 00	1
22	Special Set Bolts with Locking Wire	513 1017 00	2
23	Bearing Cap	513 1026 00	1
24	Complete with Y82 & Y181	513 1036 00	1
25	Bush Holder Bracket	513 1161 00	1
26	Complete with Y13, Y123 & Y183	513 1166 00	1
27	Winch Brake Finger	513 1164 00	1
28	Complete with Y2, Y121 & Y181		
29	Spring Adjuster		
30	Winch Brake Spring Guide		
31	Complete with Y334		
32	Collar		
33	Complete with Y412		
34	Compression Spring		
35	Breather Plug		
36	Gearcase Spigot Gasket		
37	Bearing Cap Gasket		
38	Gearcase Spigot Backing Plate		
28	Flangette	290 1200 00	1
29	Complete with Y14, Y123 & Y183	112 8100 00	3
30	Bush	417 1243 80	2
31	Oil Seal	113 1270 00	1
32	Roller Bearing	417 1284 00	2
33	Oil Seal	305 4041 31	1
34	Feather Key	304 1051 20	1
35	Feather Key	104 1100 00	1
36	Bearing	102 2100 00	1
37	Bearing	132 4200 00	1
38	Circlip	241 7010 00	1
39	Plug	241 7030 00	1
40	Male/Female Elbow	020 2140 00	1
41	Brush Holder	240 1030 00	4
42	Complete with Y373 & Y21	305 1061 00	1
43	Backnut		
44	Feather Key		
45	Y163 as reqd.		
45	Pump and Winch Drive Chain	134 1067 40	1
46	Petter PH1	134 1060 87	1
47	Lister ST1	134 1060 70	1
48	Electric	021 0920 00	1
49	Tapered Lockbush	021 0730 00	1
50	Hub R.H.	021 0740 00	1
51	Collector Ring Assembly	020 2830 00	1
52	Magnet Assembly	020 2310 00	1
53	Armature - Pin Type	021 0780 00	6
54	Cap screws and Lockwasher		
55	Drive Pin and Retainer with Locking Wire		
56	Retainer Detent Spring		
57	Spring Assembly (8)		

CLUTCH ASSY - 02024/000  
PLATE 02023/000

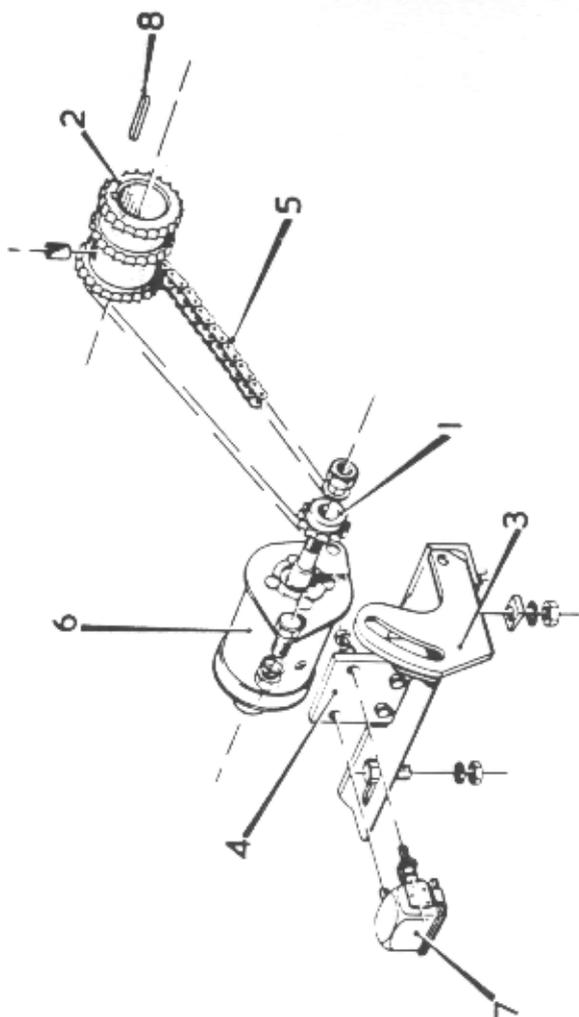
\* These items are supplied as a complete assembly, Tilted - Clutch Mounting Accessories Part No. 021 0820 00

When Ordering Always Quote Machine No, Part No, Description and Quantity



GENERATOR DRIVE ASSEMBLY - LISTER ST1

Ref	Description	Part No	Qty
1	Generator Bracket Cleat Complete with Y25 & Y233	513 2552 00	1
2	Generator Mounting Bracket Complete with Y25, Y125 & Y184 Y200	504 5502 00	2
3	Regulator Mounting Bracket Complete with Y1 & Y181	504 5504 00	1
4	Generator Sprocket	504 4249 00	2
5	Generator Drive Sprocket Complete with Y410	504 4336 00	1
6	Parallel Key	304 1071 20	1
7	Generator Complete with Y15, Y122 & Y182	205 5010 00	1
8	Regulator Complete with Y50, Y132 & Y187	020 2030 00	2
9	Chain	134 1031 01	1
10	Brushes for Generator (not illustrated)	020 2050 02	1Set

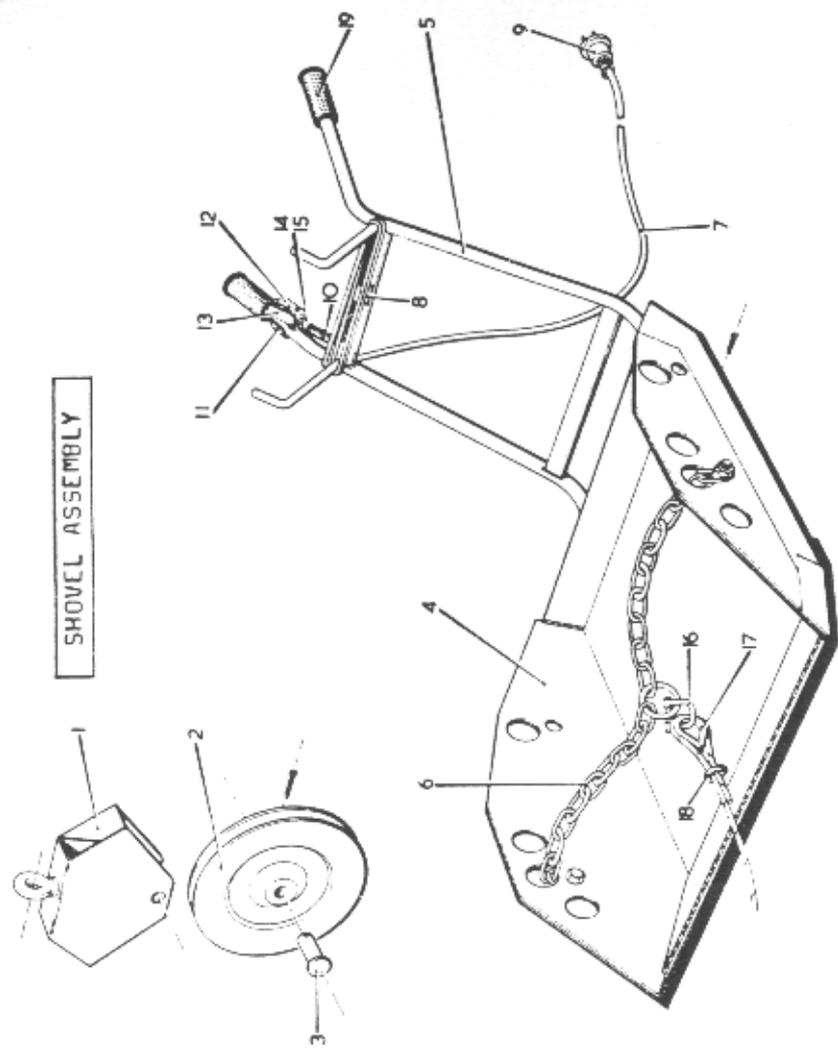


GENERATOR DRIVE ASSEMBLY - PETTER PH1 AND ELECTRIC

Ref	Description	Part No	Qty
1	Generator Sprocket	504 4249 00	1
2	Generator Drive Sprocket Petter PH1 Electric	504 4250 00 513 1967 00	1 1
3	Complete with Y410 Generator Mounting Bracket Petter PH1 Complete with Y25, Y124, Y184 & Y200	504 5502 00	1
	Electric	504 4251 00	2
	Complete with Y24, Y25 & Y200 Y124 & Y184		1
4	Regulator Mounting Bracket Petter PH1 Complete with Y3 & Y181	504 5504 00	1
5	Chain		2
	Petter PH1	134 1037 80	1
	Electric	134 1039 20	1
6	Generator Complete with Y8, Y122 & Y182	205 5010 00	1
7	Regulator Complete with Y50, Y132 & Y187	020 2030 00	2
8	Parallel Key Petter PH1 Electric	304 1061 20 304 7120 25	1 1
9	Brushes for Generator (not illustrated)	020 2050 02	1Set

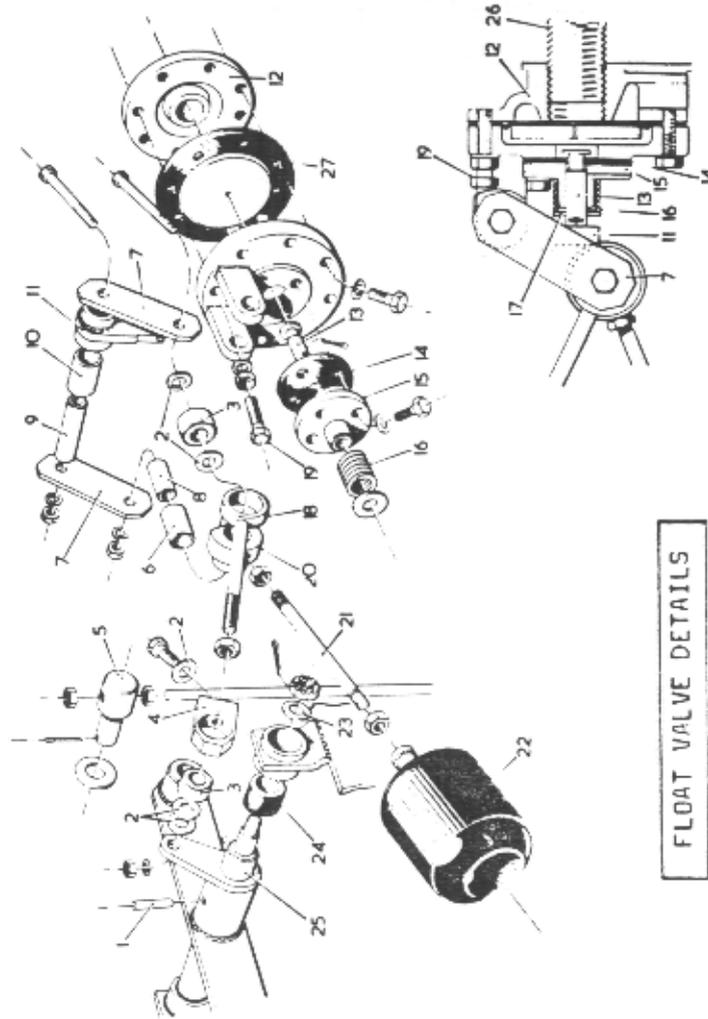
When Ordering  
Always Quote :-

Machine N°, Part N°, Description and Quantity



SHOVEL ASSEMBLY

Ref	Description	Part No	Qty
1	Pulley Block	555 2084 00	1
2	Pulley Wheel	555 2081 00	1
3	Pulley Pin	555 2083 00	1
4	Complete with Y473	555 2092 00	1
5	Shovel Body	555 2091 00	1
6	Shovel Handle	135 9020 00	1
7	Complete with Y472		1
8	Ring and Chain Set		2
9	Complete with Y104, Y134 & Y170		1
10	Electric cable		1
11	Cable Clip	143 2003 00	1
12	Complete with Y431, Y135 & Y189		1
13	Plug and Socket	205 3230 00	1
14	Rubber Tube	260 5070 00	1
15	Switch Clamp	555 2148 00	1
16	Complete with Y53, Y136 & Y190		1
17	Switch	208 5610 00	2
18	Black Sleeving	208 1430 00	1
19	Cable Gland	250 1660 10	1
20	Special Washer	463 5040 00	1
1	Shackle and Pin	353 8550 00	1
2	Thimble	443 1051 00	1
3	Bull Dog Grip	132 2040 00	1
4	Handle Bar Grip	264 7050 00	1
5	Shovel Complete	555 2093 00	2
6			1

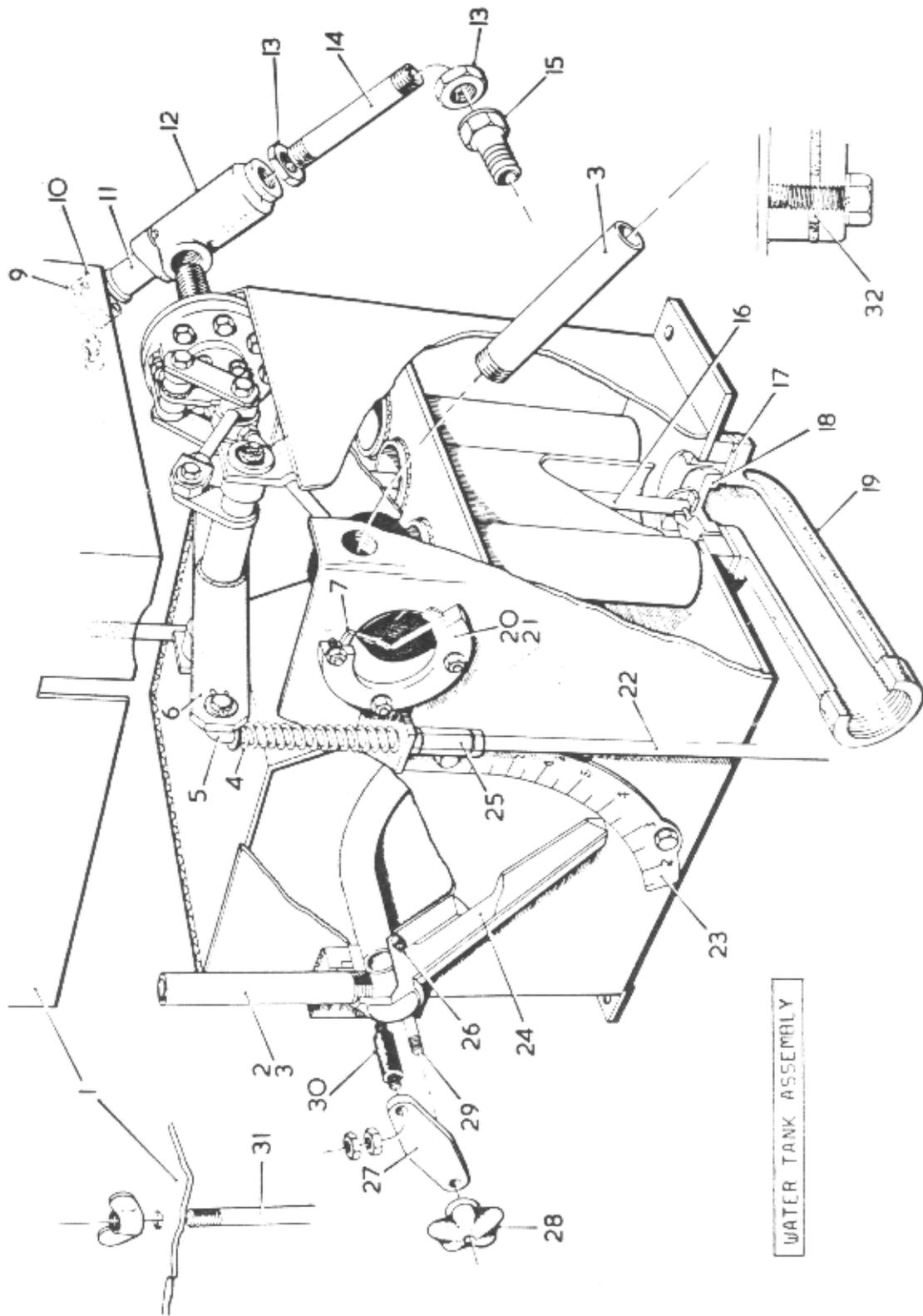


FLOAT VALVE DETAILS

Ref	Description	Part No	Qty
1	Taper Pin	352 1081 00	1
2	Washer (Reset Lever)	513 1125 00	5
3	Bearing	107 3060 00	2
4	Reset Link End	513 1134 00	1
5	Complete with Y9, Y122 & Y182	513 1132 00	1
6	Operating Pin	513 1127 00	1
7	Complete with Y164 & Y461	513 1136 00	2
8	Tufnol Bush (Cam)	513 1130 00	2
9	Complete with Y11, Y122 & Y182	513 1138 00	1
10	Distance Piece (Cam)	513 1126 00	1
11	Distance Piece (Trip Lever)	513 1128 00	1
12	Tufnol Bush (Trip Lever)	513 1116 00	1
13	Trip Lever	513 1139 00	7
14	Float Valve Body	513 1144 00	1
15	Complete with Y3 & Y481	513 1143 00	1
16	Pilot Valve	513 1152 00	1
17	Complete with Y461	513 1146 00	1
18	Pilot Valve Seat	513 1133 00	1
19	Pilot Valve Guide		4
20	Complete with Y2 & Y481	513 1152 00	1
21	Pilot Valve Spring	513 1146 00	1
22	Pilot Valve Washer	513 1133 00	1
23	Reset Link		1
24	Complete with Y311		1
25	Y83 Complete with Y121 & Y481	513 1149 00	1
26	Cam	513 1135 00	1
27	Float Arm	220 3000 00	2
28	Complete with Y310		1
29	Float		2
30	Washer (Operating Lever Shaft)	513 1131 00	2
31	Rubber Bush	513 1123 00	2
32	Operating Lever Shaft	513 1129 00	1
33	Complete with Y290 & Y461		2
34	Nipple	241 4031 20	1
35	Diaphragm Complete	513 1220 00	1
36	Float Valve Cover	513 1115 00	1
37	Complete with Y34, Y481, Y57, Y121 & Y481		7

When Ordering  
Always Quote :-

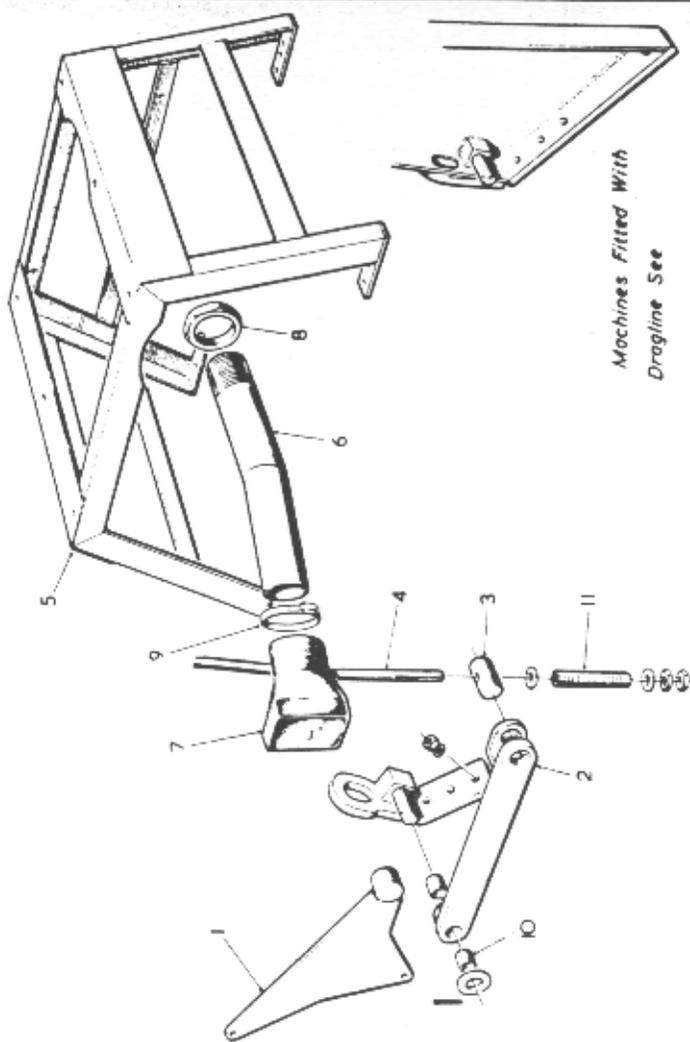
Machine N°, Part N°, Description and Quantity



Ref	Description	Part N°	Qty	Ref	Description	Part N°	Qty
1	Water Tank Cover	513 1148 00	1	26	Rubber Sealing Ring	502 8107 00	1
2	Air Pipe	502 8117 00	1	27	Clamp Stirrup	502 8102 00	1
3	Air Pipe Extension	502 8133 00	2	28	Locking Handle	502 8105 00	1
4	Compression Spring	424 2104 07	1	29	Y441		2
5	Operating Link	502 8127 00	1	30	Complete with Y124 & Y312	502 8165 00	1
6	Complete with Y164 & Y461		1	31	Rubber Distance Piece	513 1151 00	1
7	Operating Lever	513 1147 00	1	32	Cover Stud		1
8	Sight Glass	513 1120 00	1		Complete with Y250		1
9	Tank Body	513 1117 00	1		Distance Washer	502 8849 00	3
10	Complete with Y13, Y123 & Y183		6				
11	Strainer Body Cap	502 9175 00	1				
12	Complete with Y106 & Y1&2		2				
13	Strainer Cap Gasket	502 9177 00	1				
14	Strainer Element	502 9174 00	1				
15	Strainer Body	502 9172 00	1				
16	Backnut	240 1060 00	2				
17	Water Supply Pipe	502 8583 00	1				
18	Hose Connection	130 3060 00	1				
19	Valve Rod	513 1153 00	1				
20	Complete with Y232		2				
21	Valve Seat	502 8071 00	1				
22	Outlet Valve	502 8103 00	1				
23	Tank Outlet Connector	502 8681 00	1				
24	Complete with Y92 & Y184		3				
25	Sight Glass Seal	513 1121 00	1				
26	Sight Glass Frame	513 1122 00	1				
27	Complete with Y3, Y121, Y181 & Y481		4				
28	Connecting Rod	513 1081 00	1				
29	Complete with Y312 & Y164 00		2				
30	Tank Scale (Gallons)	502 8155 00	1				
31	Tank Scale (Litres)	513 1775 00	1				
32	Tank Scale (Gallons and Litres)	555 1645 00	1				
33	All Complete with Y88 & Y163		2				
34	Indicator (used with individual gallon and litre scales)		1				
35	Indicator (used with dual gallon and litre scale)	502 8109 00	1				
36	Connector	555 1646 00	1				
37	Complete with Y312	502 8134 00	2				

When Ordering  
Always Quote

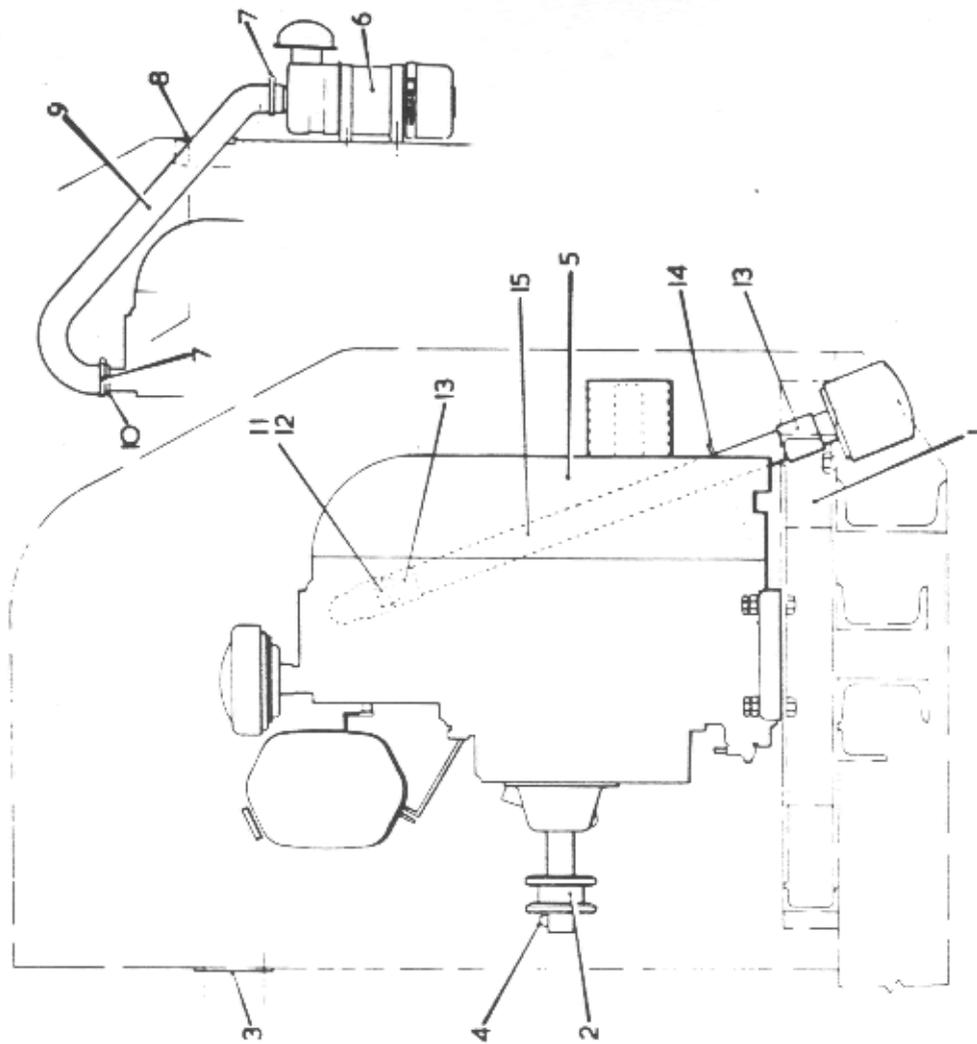
Machine N°, Part N°, Description and Quantity



TANK MOUNTING AND WATER DELIVERY ASSEMBLY

Ref	Description	Part No	Qty
1	Trip Plate	513 1080 00	1
2	Water Tank Lever	513 1078 00	1
3	Complete with Y463 & Y166	513 1079 00	1
4	Link Pivot	513 1081 00	1
5	Connecting Rod	513 1075 00	2
6	Complete with Y164 & Y312	504 5314 00	1
7	Water Tank Mounting	504 5315 00	1
8	Delivery Pipe	240 1160 00	1
9	Delivery Pipe Rubber Nozzle	132 1040 00	1
10	Backnut	112 8110 00	2
11	Jubilee Clip	423 6126 70	1
	Bush		
	Compression Spring		

When Ordering Always Quote : Machine N°, Part N°, Description and Quantity

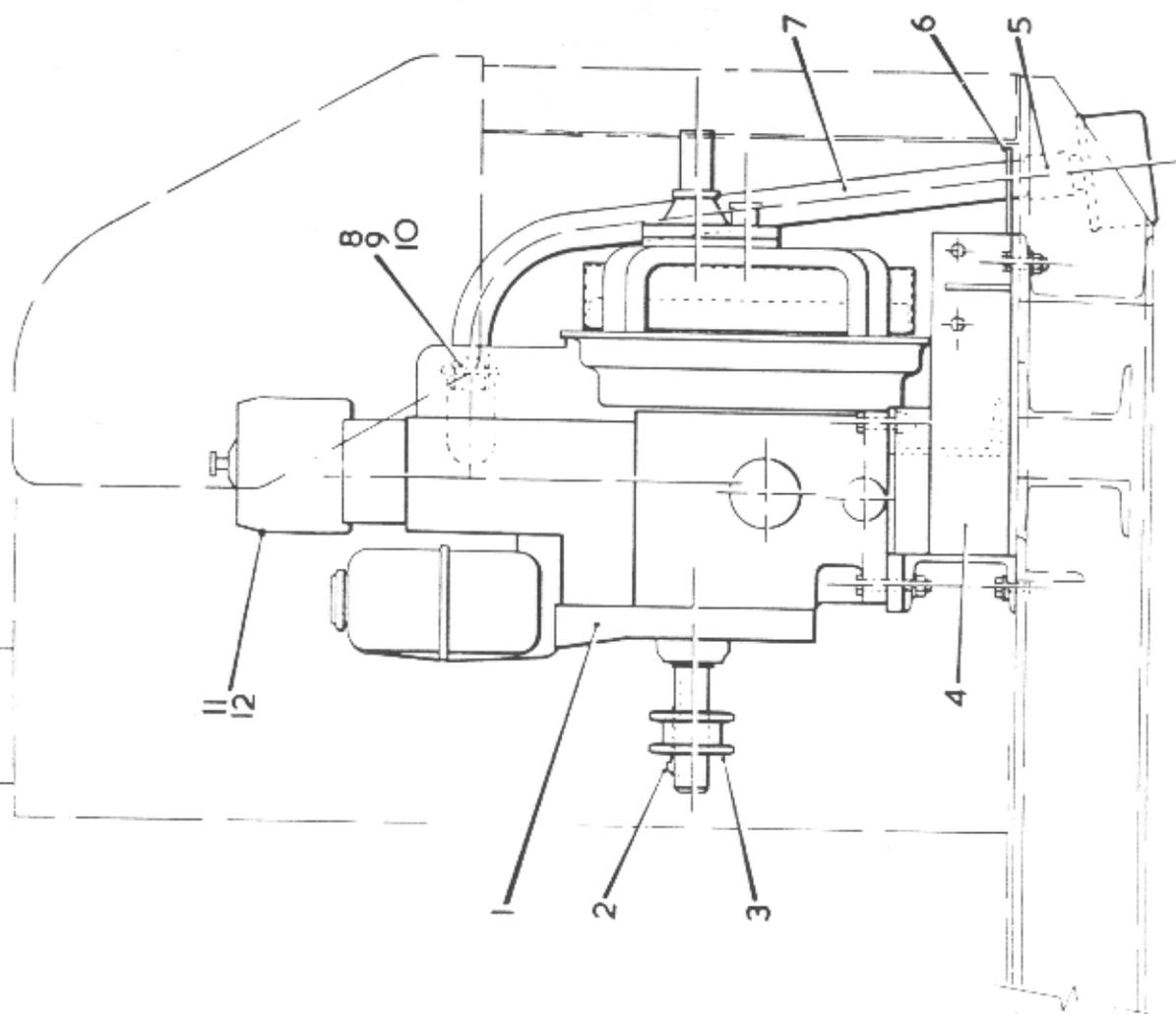


DRIVE ASSEMBLY - PETTER PH1

Ref	Description	Part No	Qty
1	Engine Mounting Complete with Y41, Y236 & Y200	513 1162 00	1
2	Engine Sprocket	503 0499 00	8
3	Blanking Plate	502 8589 00	1
	Complete with Y13, Y123 & Y183		2
4	Gib. Hd. Key	300 1061 60	1
5	Petter PH1 Diesel Engine Complete with Y43, Y236 & Y200	354 0540 00	1
6	Cyclopac Air Cleaner Complete with Y105 & Y231	220 2290 00	4
7	Hose Clip	132 1200 20	1
8	Rubber Strip	394 4110 00	4
9	Hose	260 9160 36	2
10	Insert	260 5120 70	1
11	Elbow	240 7080 00	1
12	Nipple	243 9080 00	1
13	Socket	241 9080 00	2
14	Exhaust Pipe Clip	504 4879 00	1
15	Exhaust Pipe	502 8606 00	1

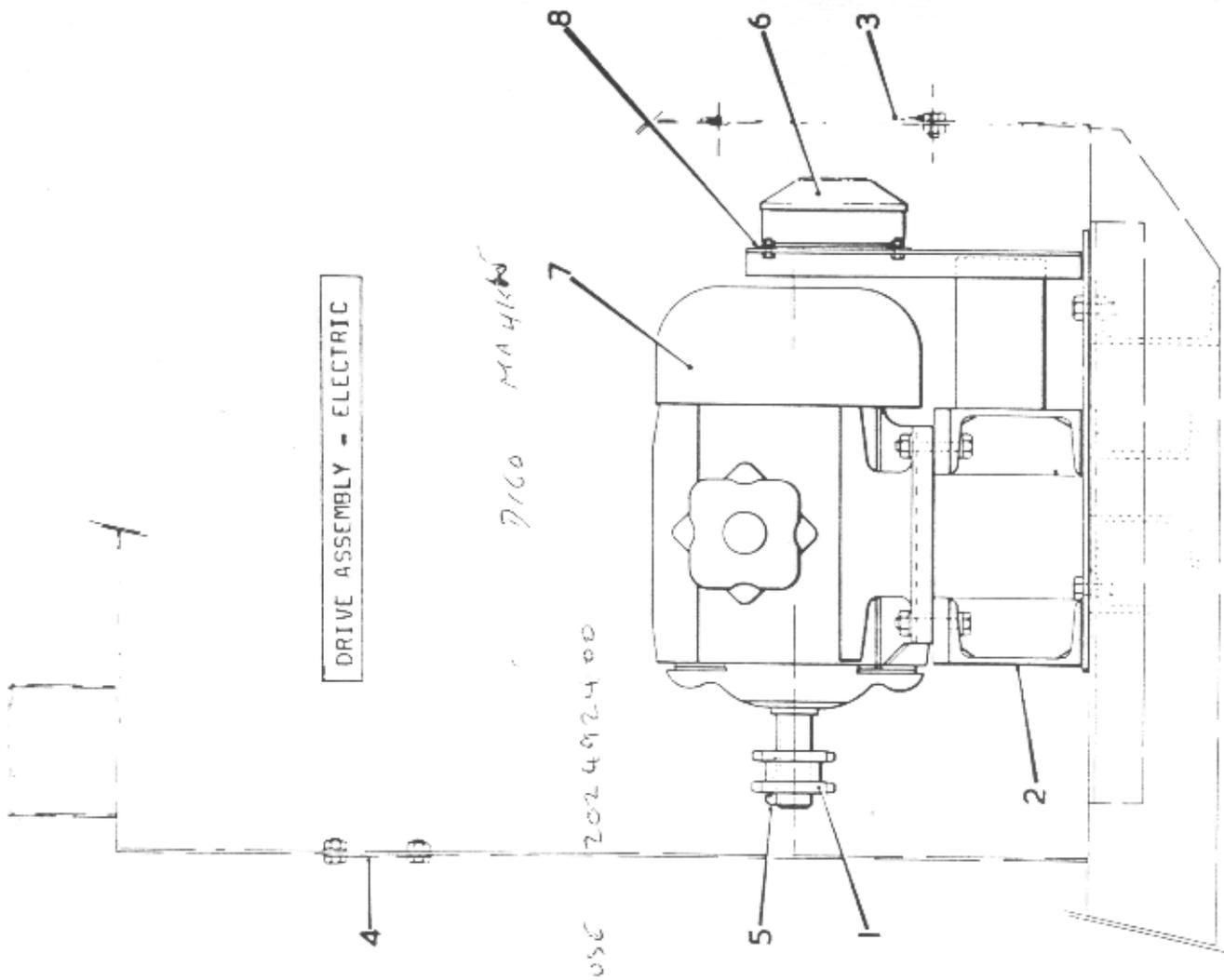
When Ordering Always Quote :- Machine No, Part No, Description and Quantity

DRIVE ASSEMBLY - LISTER ST1



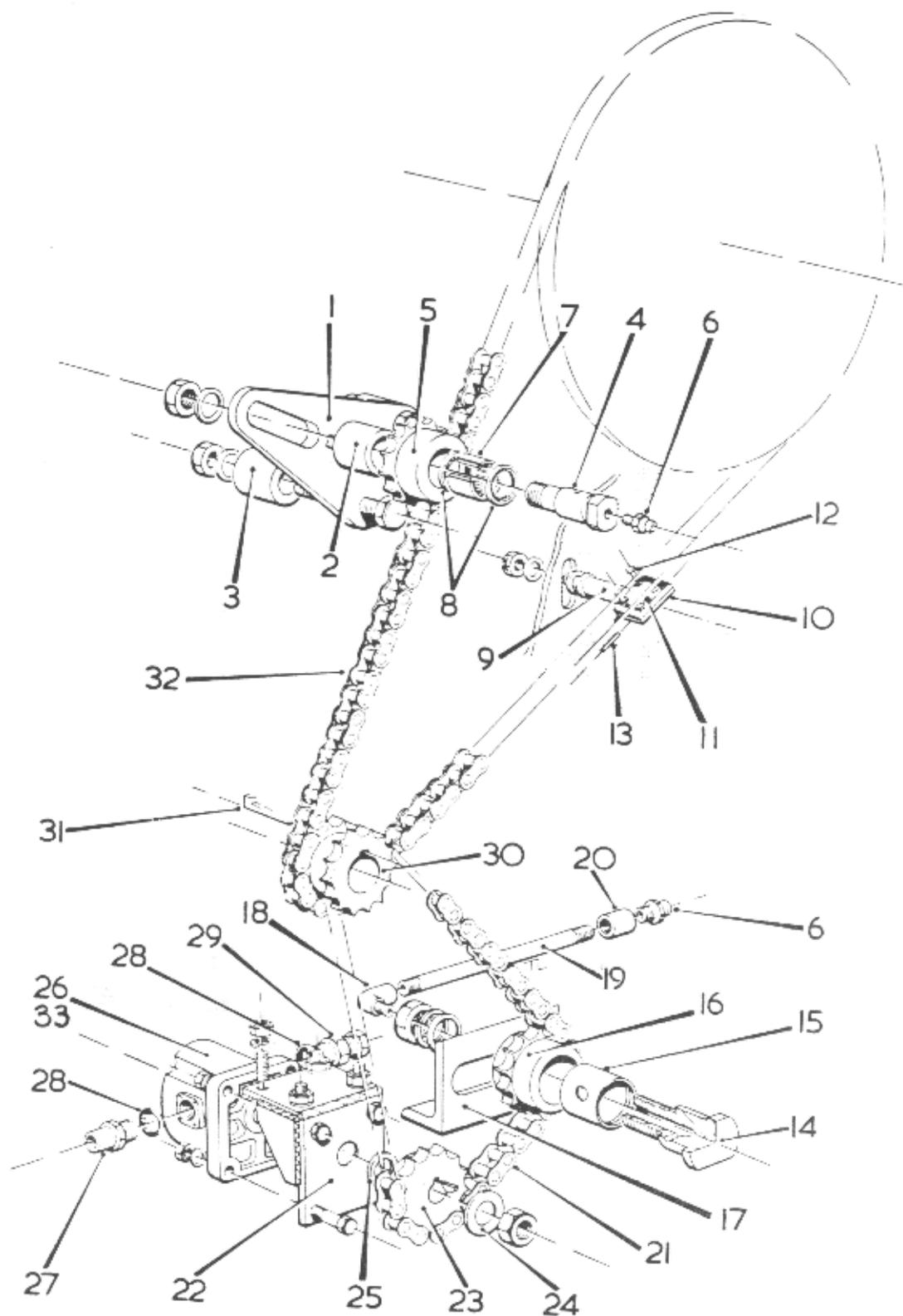
Ref	Description	Part No	Qty
1	Lister ST1 Diesel Engine Complete with Y42, Y236 & Y200	354 0530 00	1
2	Gib. Hd. Key	300 1072 40	2
3	Engine Sprocket	503 1746 00	1
4	Engine Mounting frame Complete with Y99, Y184 & Y200	513 2129 00	1
5	Socket	241 9100 00	1
6	Exhaust Pipe Clip	513 2131 00	1
7	Exhaust Pipe	513 2130 00	1
8	Backnut	240 1100 00	1
9	Hexagon Exhaust Nipple	513 2584 00	1
10	Female Bend	240 3100 00	1
11	Manifold Adaptor Bush	513 2569 00	1
12	Purolator Air Cleaner	220 2850 00	1

When Ordering Always Quote : - Machine N°, Part N°, Description and Quantity



Ref	Description	Part No	Qty
1	Motor Sprocket	513 1966 00	1
2	Motor and Starter Support Complete with Y39, Y130 & Y184	513 1387 00	1
	Y40, Y130 & Y184		2
3	Starter Access Door Complete with Y13, Y123 & Y183	513 2011 00	1
4	Blanking Plate Complete with Y13, Y123 & Y183	502 8589 00	2
5	Gib Hd. Key	304 3120 50	1
6	Starter Complete with Y4, Y121 & Y181	208 3044 00	1
7	Electric Motor Complete with Y44, Y130 & Y184	202 4660 00	2
8	Starter Mounting Plate Complete with Y95, Y128 & Y188	513 2010 00	1
			4

When Ordering Always Quote :- Machine N°, Part N°, Description and Quantity



MAIN CHAIN DRIVE AND HYDRAULIC PUMP DRIVE ASSEMBLY

Ref	Description	Part N°	Qty	Ref	Description	Part N°	Qty
1	Chain Jockey Bracket (Petter PH1 & Electric)	513 1211 00	1	27	Stud Standpipe	446 6600 00	1
2	Chain Jockey Bracket (Lister ST1)	513 1212 00	1	28	Bonded Seal	417 8060 27	2
3	Complete with Y27, Y124 & Y184	513 1213 00	3	29	Male Stud Coupling	446 6120 00	1
4	Distance Piece	513 1214 00	1	30	Engine Sprocket	503 1746 00	1
5	Distance Piece	513 1215 00	3		Lister ST1	503 0499 00	1
6	Jockey Pin	513 1216 00	1		Petter PH1	513 1966 00	1
7	Complete with Y234 & Y166	333 1020 20	2	31	Gib Hd. Key	300 1072 40	1
8	Chain Jockey	113 1280 00	1		Lister ST1	300 1061 60	1
9	Grease Nipple	422 7040 00	2		Petter PH1	304 3120 50	1
10	Bearing	513 1209 00	1	32	Electric	134 1061 37	1
11	Chain Shoe Shaft	513 1210 00	1		Main Drive Chain	134 1061 27	1
12	Complete with Y233 & Y164	513 1941 00	1		Lister ST1	134 1061 31	1
13	Chain Reaction Pad	380 3020 60	4	33	Electric	365 8230 04	1
14	Flat Head Rivet	513 1217 00	1	34	Hydraulic Pump Shaft Seal	365 8230 02	1Set
15	Chain Shoe Pin	513 1390 00	1		Hydraulic Pump Seal Kit		
16	Jockey Pin	503 0861 00	1		(not illustrated)		
17	Complete with Y167, Y186 & Y127	503 0503 00	1				
18	Jockey Sprocket Bush	503 0505 00	2				
19	Jockey Sprocket	240 7010 00	1				
20	Jockey Bracket	513 1252 00	1				
21	Complete with Y23, Y124 & Y184	244 9010 00	1				
22	Male to Female Elbow	134 1066 40	1				
23	Jockey Lubricator Extension	134 1066 20	1				
24	Socket	134 1066 40	1				
25	Pump Drive Chain	513 2083 00	1				
26	Lister LT1	513 2085 00	4				
27	Petter PH1	513 2086 00	1				
28	Electric	513 2084 00	1				
29	Pump Bracket	361 1350 00	1				
30	Complete with Y232, Y163 & Y440	361 1350 00	4				
31	Pump Sprocket		1				
32	Complete with Y315		1				
33	Retaining Washer		1				
34	Spacer		1				
35	Hydraulic Pump		1				
36	Complete with Y36, Y238 & Y162		4				

100534

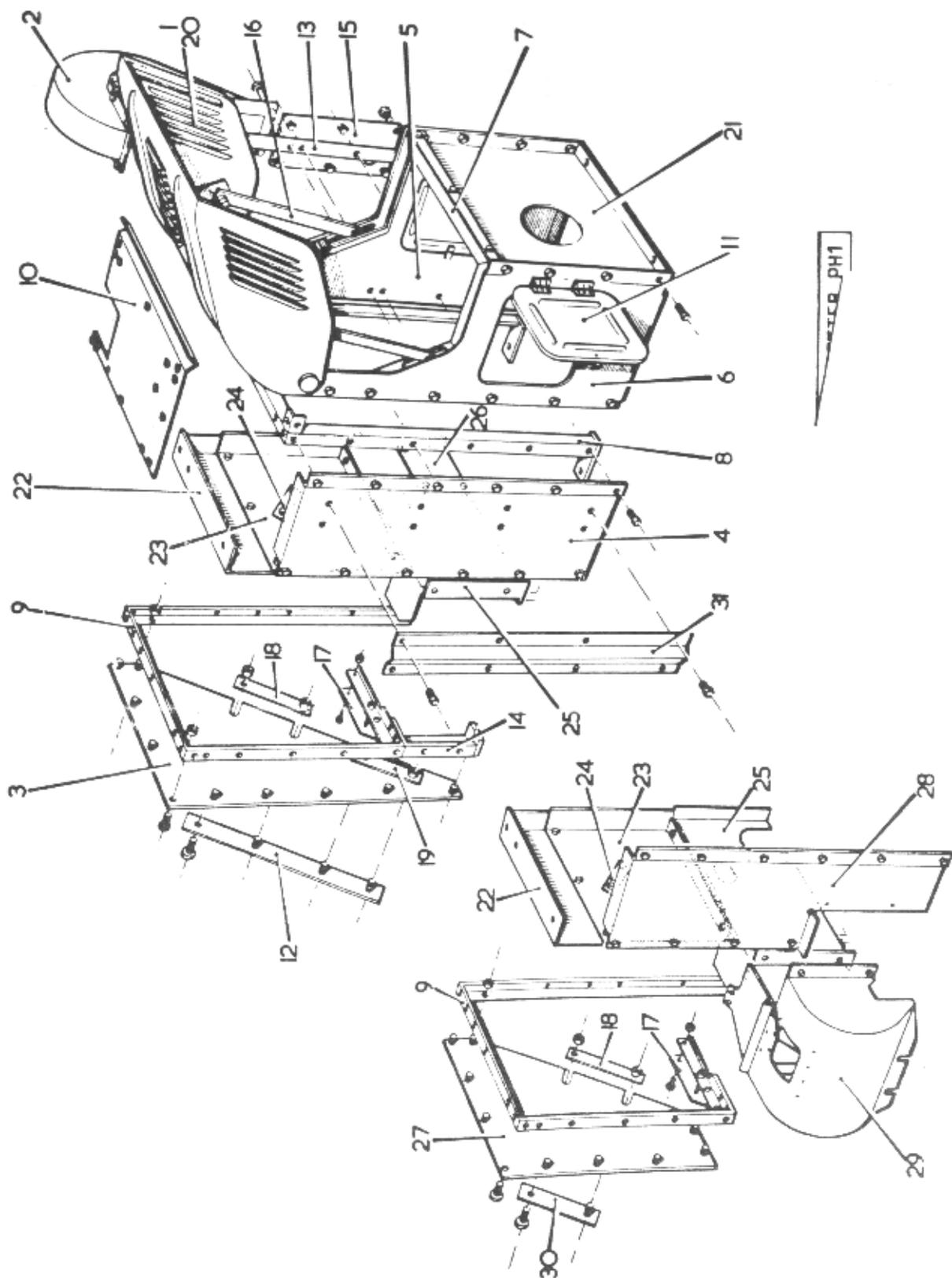
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When Ordering  
Always Quote

Machine N°, Part N°, Description and Quantity



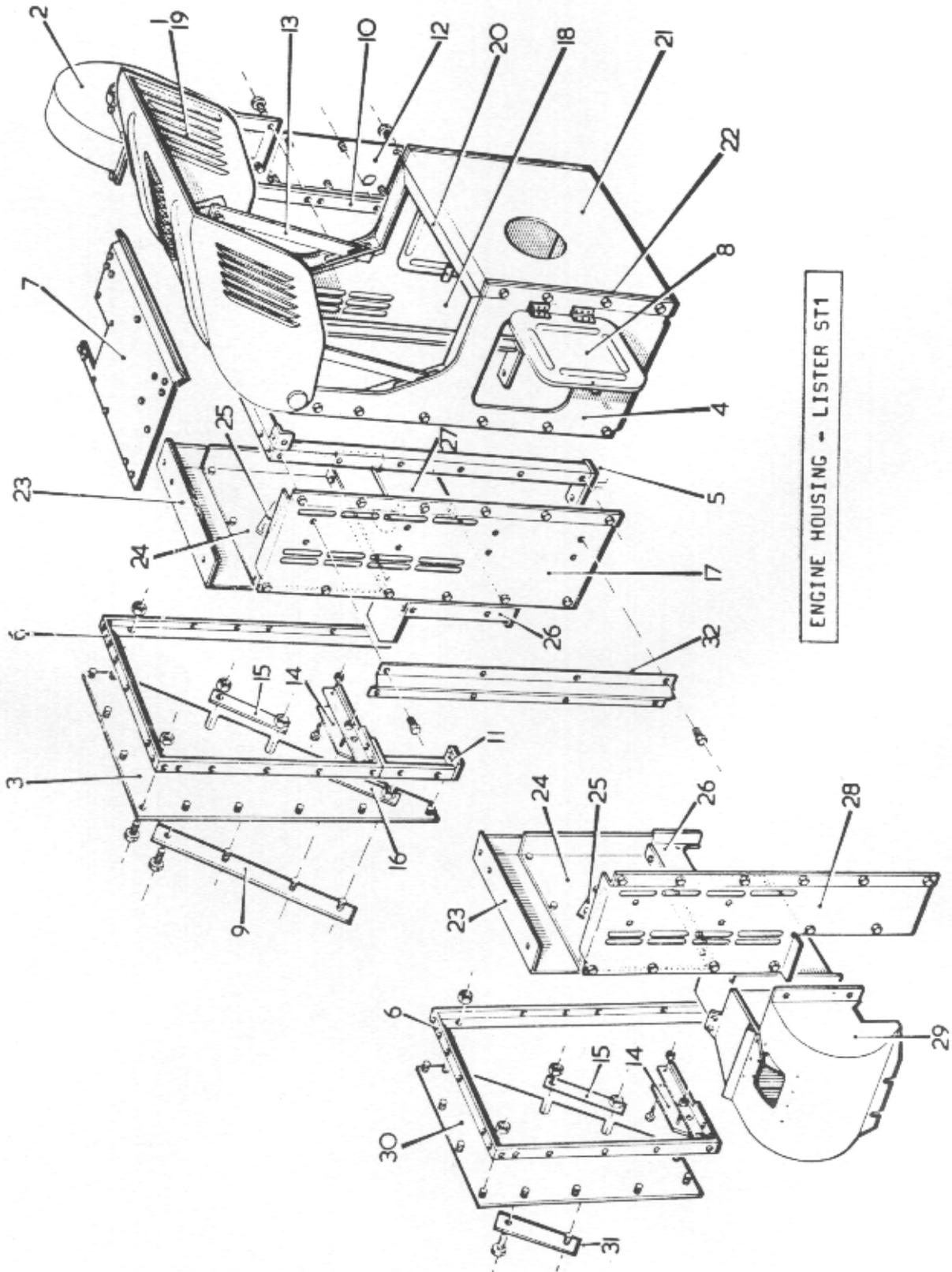
Ref	Description	Part N°	Qty
1	Engine Housing Lid	513 1056 00	1
2	Complete with Y371, Y123 & Y163	513 1057 00	2
3	Chainwheel Guard	513 1058 00	1
4	Complete with Y13, Y123 & Y183	513 1059 00	11
5	Backplate	513 1060 00	1
6	Complete with Y88, Y183	513 1061 00	7
7	Complete with Y13, Y123 & Y183	513 1062 00	3
8	Side Panel (Hopper Side)	513 1063 00	1
9	Complete with Y13, Y123 & Y183	513 1064 00	13
10	Closing Panel (Discharge Side)	513 1065 00	1
11	Complete with Y13, Y123 & Y183	513 1066 00	12
12	Closing Panel (Hopper Side)	513 1067 00	1
13	Complete with Y13, Y123 & Y183	513 1068 00	1
14	Closing Panel (Former)	513 1069 00	6
15	Complete with Y333, Y123 & Y183	513 1070 00	1
16	Engine Housing Frame No. 1	513 1071 00	15
17	Complete with Y14, Y123 & Y183	513 1072 00	1
18	Engine Housing Frame No. 2	513 1073 00	4
19	Complete with Y14, Y123 & Y183	513 1074 00	1
20	Top Plate	513 1075 00	1
21	Complete with Y16, Y123 & Y183	513 1076 00	3
22	Y13, Y123 & Y183	513 1077 00	1
23	Y88 & Y183	513 1078 00	6
24	Side Door	513 1712 00	2
25	Secure for Backplate	513 1068 00	2
26	Complete with Y88 & Y183	513 1069 00	1
27	Backing Strip	513 1070 00	8
28	Engine Housing Frame No. 3	513 1071 00	1
29	Complete with Y14, Y123 & Y183	513 1072 00	1
30	Side Panel (Discharge Side)	513 1073 00	1
31	Complete with Y13, Y123 & Y183	513 1074 00	6
32	Stay	513 1075 00	2
33	Complete with Y123, Y311 & Y163	513 1076 00	2
34	Packer	513 1077 00	1
35	Complete with Y15, Y123 & Y183	513 1078 00	2
36	Rear Panel Retainer (Large)	513 1079 00	1
37	Rear Panel Retainer (Small)	502 9761 00	1
38	Warning Label	504 6009 00	1
39	Front Panel	513 2542 00	1

Ref	Description	Part N°	Qty
22	Upper Guard	513 2543 00	1
23	Complete with Y102, Y133 & Y188	513 2544 00	1
24	Intermediate Guard	513 2545 00	1
25	Complete with Y102 & Y188	513 2546 00	3
26	Cover Plate	513 2549 00	1
27	Complete with Y102 & Y188	513 1085 00	1
28	Lower Chain Guard	513 1086 00	7
29	Complete with Y133 & Y188	513 1084 00	3
30	Cover Plate	513 1087 00	1
31	Complete with Y102, Y133 & Y188	513 1170 00	1
32	Backplate		8
33	Complete with Y13, Y123 & Y183		
34	Y88 & Y183		
35	Side Panel (Hopper Side)		
36	Complete with Y13, Y123 & Y183		
37	Winch Guard		
38	Complete with Y13, Y123 & Y183		
39	Y88 & Y183		
40	Secure for Backplate		
41	Complete with Y88 & Y183		
42	Loadcell Pipe Guard		
43	Complete with Y88 & Y183		

When Ordering  
Always Quote

Machine N°, Part N°, Description and Quantity



ENGINE HOUSING - LISTER ST1

When Ordering :-  
Always Quote :-

Machine N°, Part N°, Description and Quantity

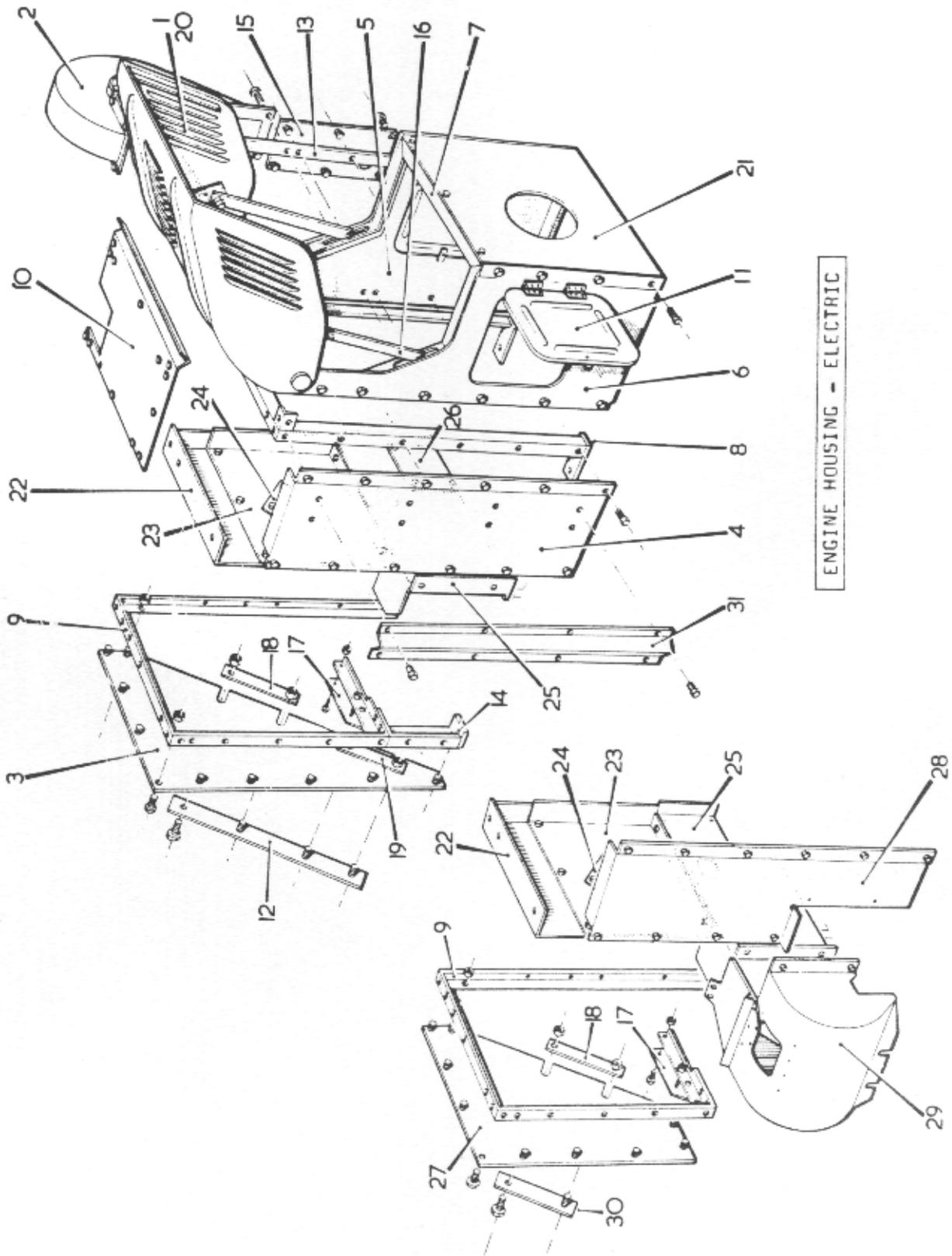
Ref	Description	Part N°	Qty
1	Engine Housing Lid	513 1056 00	1
2	Complete with Y371, Y123 & Y163	513 1057 00	2
3	Chain Wheel Guard	513 1058 00	1
4	Complete with Y13, Y123 & Y183	513 1061 00	11
5	Back Plate	513 1063 00	1
6	Complete with Y88 & Y183	513 1064 00	7
7	Y13, Y123 & Y183	513 1066 00	3
8	Closing Panel (Hopper Side)	513 1712 00	6
9	Complete with Y13, Y123 & Y183	513 1068 00	4
10	Engine Housing Frame No. 1	513 1069 00	2
11	Complete with Y14, Y123 & Y183	513 1070 00	2
12	Engine Housing Frame No. 2	513 1071 00	1
13	Complete with Y14, Y123 & Y183	513 1072 00	1
14	Top Plate	513 1073 00	6
15	Complete with Y16, Y123 & Y183	513 1074 00	2
16	Y13, Y123 & Y183	502 9761 00	2
17	Y88 & Y183	513 1713 00	1
18	Side Door	513 1714 00	13
19	Secure for Back Plate	504 6009 00	1
20	Complete with Y88 & Y183	513 2133 00	1
21	Backing Strip	513 2134 00	15
22	Engine Housing Frame No. 3	513 2135 00	2
23	Complete with Y14, Y123 & Y183		1
24	Stay		1
25	Complete with Y123, Y311 & Y163		6
26	Packer		2
27	Complete with Y15, Y123 & Y183		1
28	Rear Panel Retainer (Large)		2
29	Rear Panel Retainer (Small)		1
30	Side Panel (Hopper Side)		1
31	Complete with Y13, Y123 & Y183		13
32	Closing Panel (Discharge Side)		1
	Complete with Y13, Y123 & Y183		12
	Warning Label		1
	Closing Panel Former		1
	Complete with Y333, Y123 & Y183		15
	Front Panel		1
	Packing Strip		2

Ref	Description	Part N°	Qty
23	Upper Guard	513 2543 00	1
24	Complete with Y102, Y133 & Y188	513 2544 00	1
25	Intermediate Guard	513 2545 00	3
26	Complete with Y102 & Y188	513 2548 00	1
27	Cover Plate	513 2550 00	2
28	Complete with Y102 & Y188	513 1715 00	1
29	Lower Chain Guard	513 1084 00	11
30	Complete with Y103 & Y188	513 1085 00	1
31	Cover Plate	513 1087 00	7
32	Complete with Y102, Y133 & Y188	513 1392 00	3
	Side Panel (Hopper Side)		1
	Complete with Y13, Y123 & Y183		4
	Winch Guard		1
	Complete with Y13, Y123 & Y183		8
	Y88 & Y183		1
	Back Plate		2
	Complete with Y13, Y123 & Y183		1
	Y88 & Y183		7
	Secure for Back Plate		3
	Complete with Y88 & Y183		1
	Loadcell Pipe Guard		4
	Complete with Y88 & Y183		1

When Ordering  
Always Quote

Machine N°, Part N°, Description and Quantity



ENGINE HOUSING - ELECTRIC

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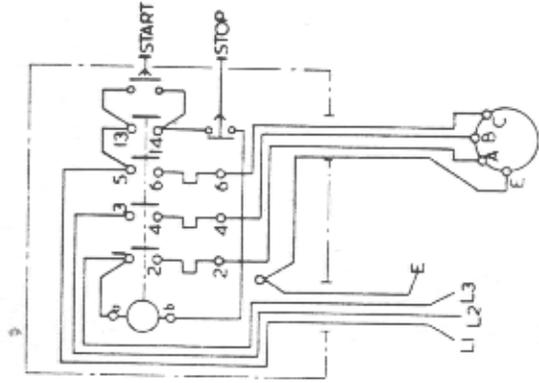
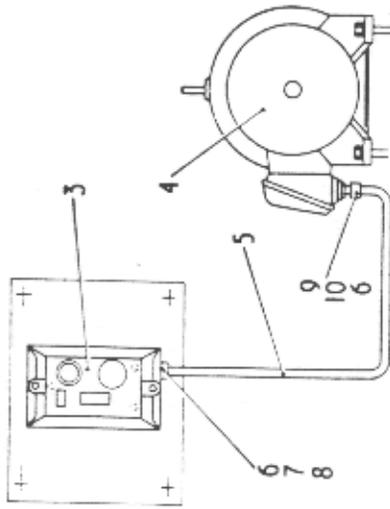
Machine N°, Part N°, Description and Quantity

Ref	Description	Part N°	Qty
1	Engine Housing Lid	513 1056 00	1
2	Complete with Y371, Y123 & Y163	513 1057 00	2
3	Chain Wheel Guard	513 1058 00	1
4	Complete with Y13, Y123 & Y183	513 1059 00	11
5	Back Plate	513 1060 00	1
6	Complete with Y88 & Y183	513 1061 00	7
7	Y13, Y123 & Y183	513 1062 00	3
8	Side Plate (Hopper Side)	513 1063 00	1
9	Complete with Y13, Y123 & Y183	513 1064 00	13
10	Closing Panel (Discharge Side)	513 1065 00	1
11	Complete with Y13, Y123 & Y183	513 1066 00	12
12	Closing Panel (Hopper Side)	513 1067 00	1
13	Complete with Y13, Y123 & Y183	513 1068 00	1
14	Closing Panel Former	513 1069 00	6
15	Complete with Y333, Y123 & Y183	513 1070 00	1
16	Engine Housing Frame No. 1	513 1071 00	15
17	Complete with Y14, Y123 & Y183	513 1072 00	1
18	Engine Housing Frame No. 2	513 1073 00	4
19	Complete with Y14, Y123 & Y183	513 1074 00	1
20	Top Plate	502 9761 00	3
21	Complete with Y16, Y123 & Y183	504 6009 00	1
22	Y13, Y123 & Y183	513 1065 00	1
23	Y88 & Y183	513 1075 00	2
24	Side Door	513 1076 00	1
25	Secure for Back Plate	513 1077 00	2
26	Complete with Y88 & Y183	513 1078 00	2
27	Backing Strip	513 1079 00	1
28	Engine Housing Frame No. 3	513 1080 00	8
29	Complete with Y14, Y123 & Y183	513 1081 00	1
30	Side Panel (Discharge Side)	513 1082 00	1
31	Complete with Y13, Y123 & Y183	513 1083 00	1
32	Stay	513 1084 00	6
33	Complete with Y13, Y123 & Y183	513 1085 00	4
34	Complete with Y123, Y311 & Y163	513 1086 00	2
35	Packer	513 1087 00	1
36	Complete with Y15, Y123 & Y183	513 1170 00	2
37	Rear Panel Retainer (Large)		1
38	Rear Panel Retainer (Small)		1
39	Warning Label		1
40	Front Panel		1

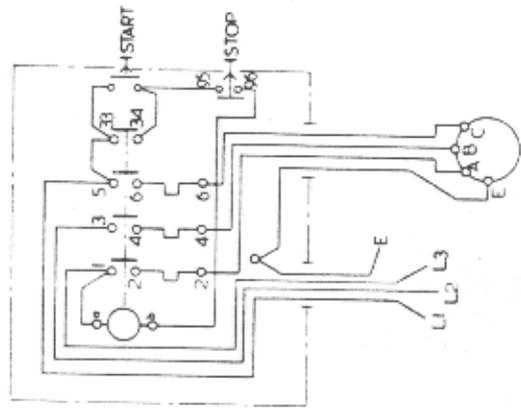
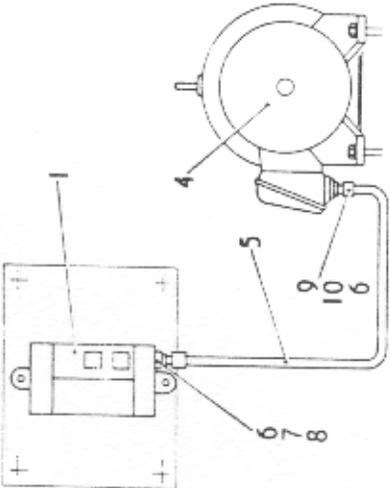
When Ordering  
Always Quote

Machine N°, Part N°, Description and Quantity

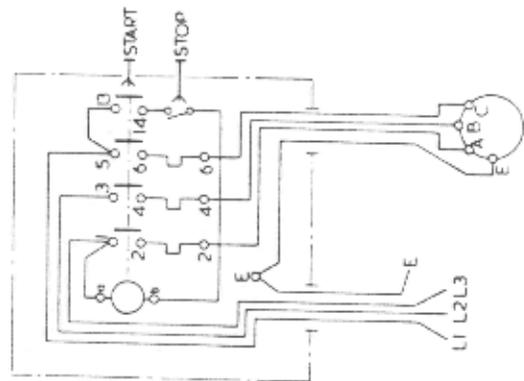
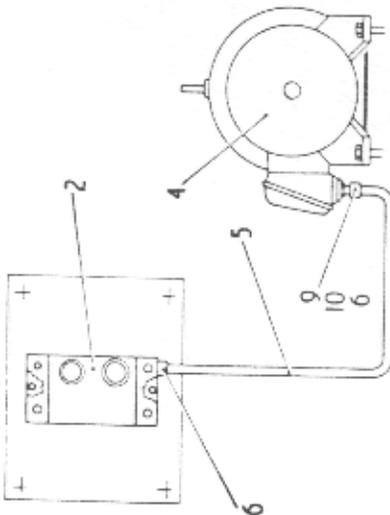
**D.S.C. STARTER**



**M.T.E. STARTER**



**DANFOSS STARTER**







Ref	Part N <sup>o</sup>	Ref	Part N <sup>o</sup>	Ref	Part N <sup>o</sup>
	<b>Lock Washers</b>	Y316	330 5508 00		<b>Skt Setscrews</b>
Y215	466 5030 00	Y317	330 5510 00	Y410	403 5604 06
Y216	466 6100 00			Y411	403 5504 08
				Y412	403 5606 08
			<b>C'sk Hd Screws</b>	Y413	403 5760 10
	<b>Binx Nuts</b>	Y330	400 2503 06	Y414	403 5608 08
Y230	335 7604 00	Y331	400 2504 08	Y415	403 5608 10
Y231	335 7605 00	Y332	400 2505 07		
Y232	335 7606 00	Y333	400 2506 06		<b>Pan Hd Screws</b>
Y233	335 7608 00	Y334	400 2506 08	Y430	402 3904 20
Y234	335 7612 00	Y335	400 2510 14		
Y235	330 3605 00	Y336	400 3026 00		
Y236	330 3608 00	Y337	400 2506 14		
Y237	330 3610 00				<b>Studs</b>
Y238	330 3604 00			Y440	411 9061 00
			<b>Skt Hd Capscrews</b>	Y441	411 9082 80
	<b>Wing Nuts</b>	Y350	404 7505 16		
Y250	335 1506 00	Y351	404 7506 16		
		Y352	404 7041 00		
		Y353	404 7052 00		
		Y354	404 7061 60		
		Y355	404 7102 40		
	<b>Brass Nuts</b>				<b>Split Pins</b>
Y270	334 3740 00			Y460	353 3028 00
			<b>Rd Hd Screws</b>	Y461	353 3038 00
		Y370	402 3506 06	Y462	353 3041 20
		Y371	402 3506 08	Y463	353 3051 40
		Y372	402 4102 12	Y464	353 3051 60
	<b>Slotted Nuts</b>	Y373	402 4103 06	Y465	353 3061 30
Y290	330 7506 00	Y374	402 4002 08	Y466	353 3061 60
				Y467	353 3061 80
				Y468	353 3062 00
				Y469	353 3071 40
				Y470	353 3072 20
				Y471	353 3051 20
				Y472	353 3205 40
				Y473	353 3225 20
	<b>Locknuts</b>	Y390	461 5580 08		
Y310	302 5050 00				
Y311	302 5060 00				
Y312	302 5080 00				
Y313	302 5100 00				
Y314	302 5200 00				
Y315	330 5507 00				
			<b>Ch Hd Screws</b>		<b>Fibre Washers</b>
		Y395	407 2705 45	Y481	463 6040 00
		Y396	407 2705 25		

# CALIFORNIA

## Proposition 65 Warning

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