

# **Standen**

## **TALISMAN**

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## INTRODUCTION

This manual provides the information for the adjustment and maintenance of your Standen Talisman to help you to obtain the best results from the machine.

Before putting the machine to work, read the manual through carefully to obtain a full understanding of what the machine should do and how to achieve it.

Adjustments may have to be made singly or in combination according to crop and soil conditions. Allow the machine to settle to a new setting before making more adjustments.

Throughout this manual the terms 'front', 'rear', 'left hand' and 'right hand' are derived from the tractor driver's position facing forward, and the normal forward direction of travel of the Talisman.

Date Purchased: .....

Date Started Work: .....

Serial Number: .....

Agent's Name: .....

Agent's Address: .....

.....

.....

Agent's Telephone Number: .....

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## INTRODUCTION

This manual provides the information for the adjustments and maintenance of your Standen Sceptre to help you to obtain the best results from the machine. Before putting the machine to work, read the manual through carefully to obtain a full understanding of what the machine should do and how to achieve it. The instructions describe the operation of the various components, then the different settings applying to those components enabling maximum efficiency to be obtained from the machine.

Adjustments may have to be made singly or in combination according to crop and soil conditions. Allow the machine to settle to a new setting before making more adjustments.

Any reference to right hand or left hand applies to the machine viewed from the rear.

Record below details of your machine in the space provided.

Date Purchased:

.....

Date Started Work:

.....

Serial Number:

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Agents Name:

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Agents Address

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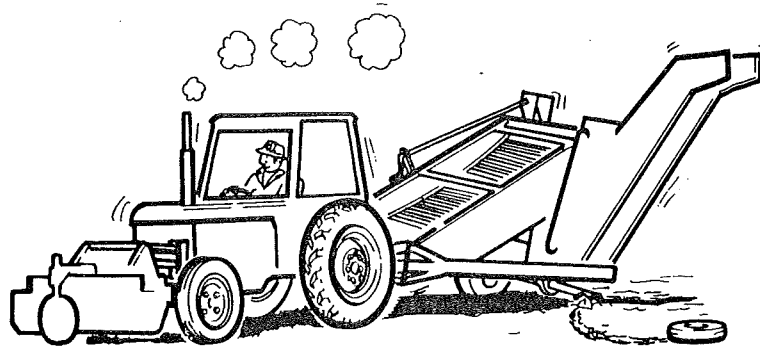
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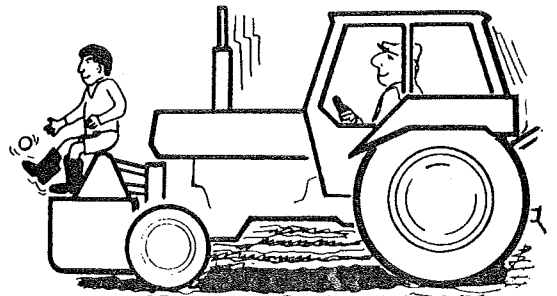
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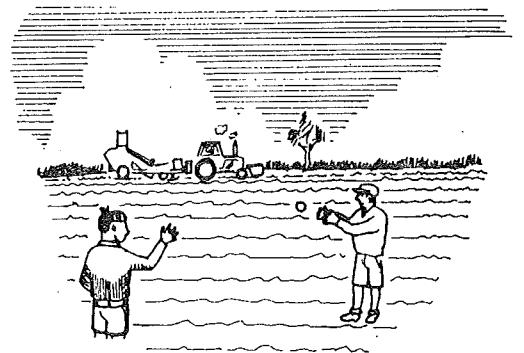
**NEVER** Operate the machine in a state of disrepair.



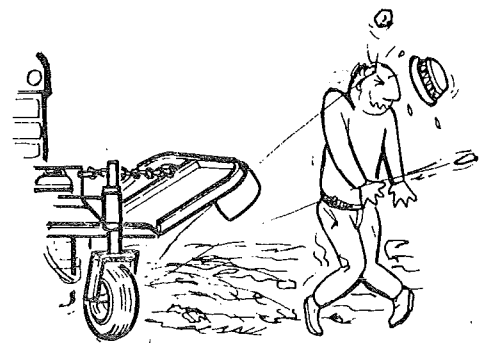
**NEVER** Allow any one *especially children* to ride on the machine.



**NEVER** Allow children to be in the vicinity where machines are working.



**NEVER** Stand near the discharge end of the topper while machine is running.

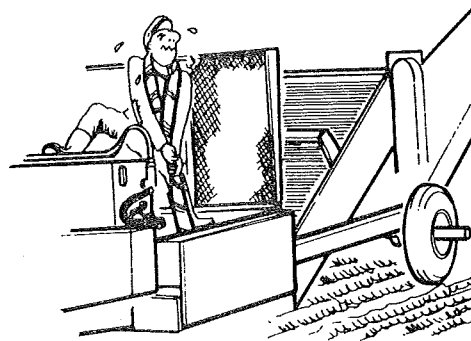


The above list of precautions is not exhaustive. All machinery is potentially dangerous and great care must be exercised by the operator(s) at all times.

... will not accept liability for damage or injury caused by their products except when such liability is specifically imposed by English Statute.

# Safety Precautions

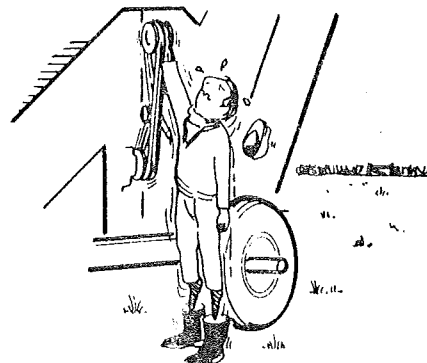
**NEVER** Operate the machine with any of the safety guards removed, remember they are fitted for two reasons — to keep dirt out, and more important to protect you and others from the various working parts. So, make sure they are always kept in good condition and they are fitted correctly when the machine is in work.



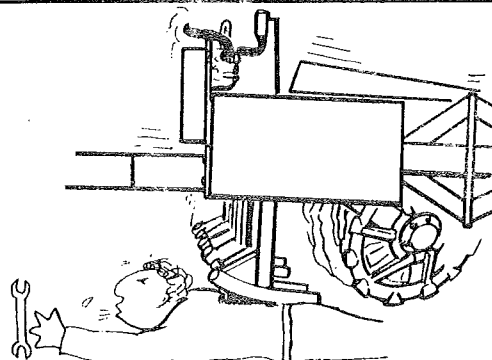
**NEVER** Attempt to adjust or clean any part of the machine with the tractor power take-off in motion and always stop the tractor engine.



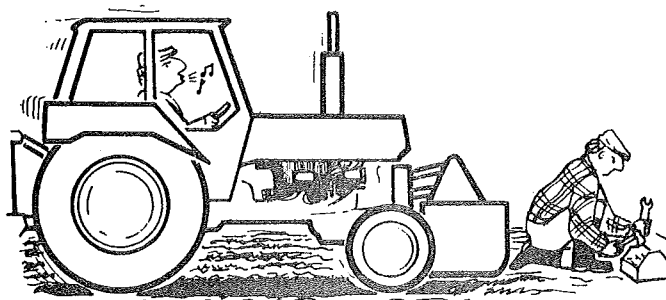
**NEVER** Fit drive chains or drive belts while the drive sprockets or drive pulleys are in motion.



**NEVER** Work under the machine when it is in a raised position on the tractor hydraulic lift linkage.



**NEVER** Set the machinery in motion before ensuring that every one in the vicinity is aware of your intention.





# **SECTION 1**

## **INSTRUCTION MANUAL**

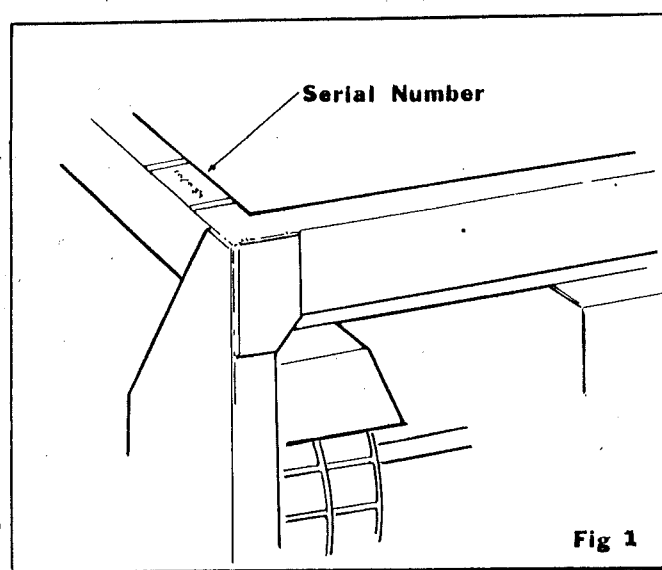
## INSTALLATION

The Standen Talisman is a two row sugar beet harvester designed to top, lift, clean and carry the beet. The power requirement is at least a 90 H.P. tractor fitted with 540 r.p.m. P.T.O. and single acting spool valve.

Check that the nuts and bolts and sprocket keys are tight, also the grub screws in the bearings, especially before starting off a new machine and during the first day or two of work.

Do not reverse or turn unless the machine is in the raised position. Pay particular attention to the lubrication and maintenance of the machine.

Pay particular attention to the safety precautions. They are written as a warning to protect you and others.



## TRACTOR WHEEL SETTING

Both front and rear tractor wheels must be set to straddle the rows of beet. For example, if the crop is grown at 20" (50.8 cms.) the distance measured between the tractor tyre centres must be 60" (152.4 cms.). This will then ensure that the wheels run in a centre line between the rows of beet. The instructions for adjusting the tractor wheels are given in the tractor manufacturer's handbook.

## SAFETY FIRST

When carrying out wheel adjustments take care to place the jack on firm ground under a solid part of the tractor. Before removing the wheel, place a stout support under the tractor frame in case the jack should become dislodged.

## CONTROL BOX INSTALLATION

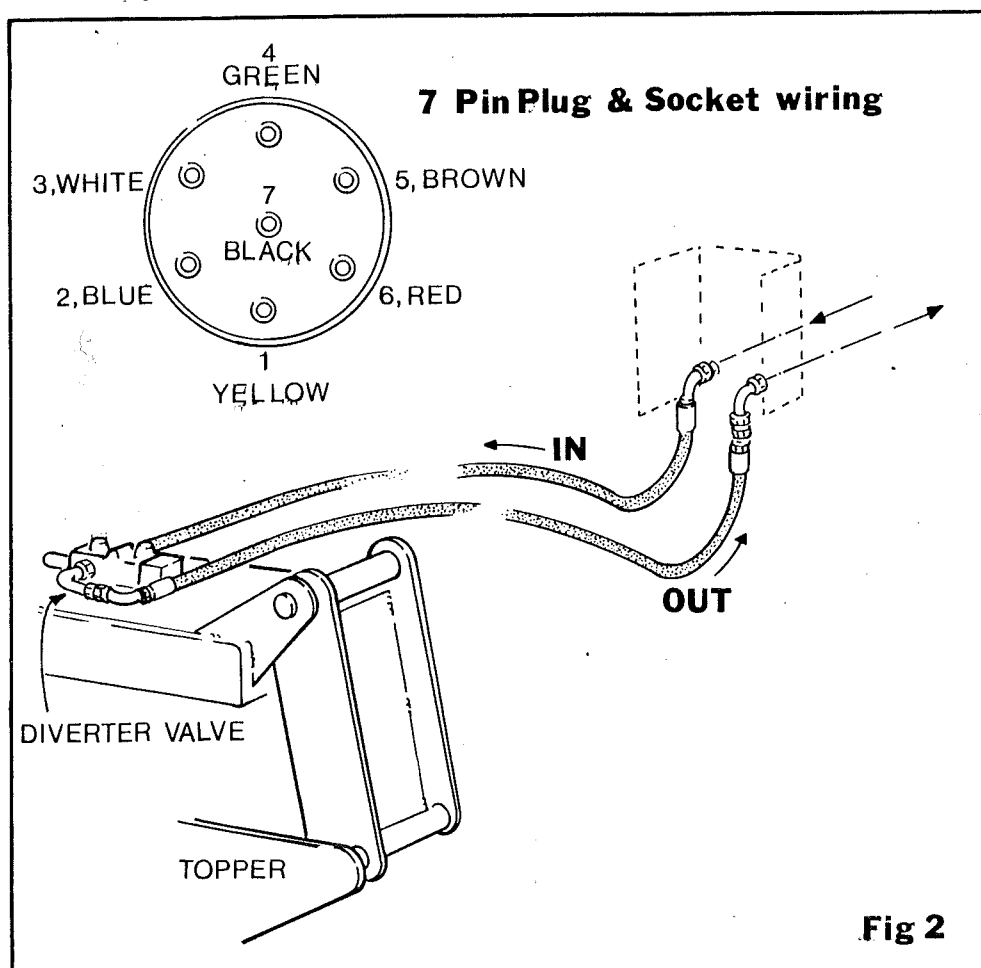
It is recommended that the control box be mounted as close to the operator's driving position as possible thus causing the minimum of inconvenience to actuate. The control box has been designed to be directly mounted to the vehicle cab. Should a special mounting bracket be required, this is not supplied and is left to the ingenuity of the customer to fit.

### CAUTION

Before attempting to make electrical connections to the control box, disconnect the vehicle battery.

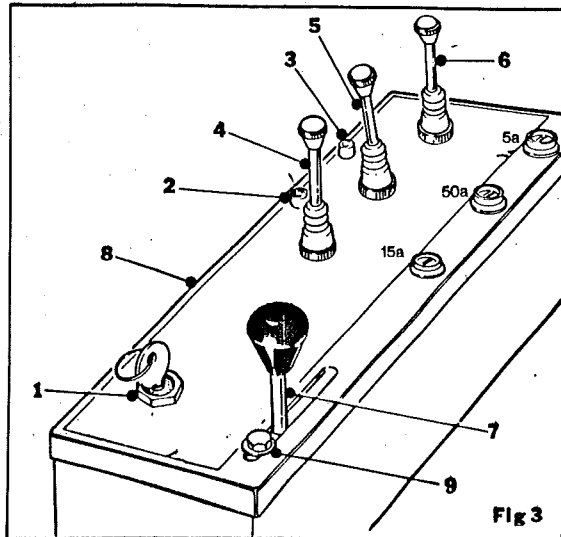
Once a suitable location has been found for the control box and it has been securely fitted, the control box can be connected to the tractor's electrical system. The two core cable from the control box must be connected directly to the vehicle's 12V battery. The blue wire is negative and the brown wire is positive.

A convenient place on the tractor, between the harvester and the tractor will need to be found to fix the mounting place supporting the three pin sockets (item 1 fig.4 ). Once this position has been established, the three, seven core cables from the control box will require connecting to the three seven pin sockets, this will mean the cable will require passing through some kind of opening in the rear of the tractor. All three sockets will be connected the same as fig. 2



**Fig 2**

## CONTROL BOX OPERATION



The electrical circuit is protected by three fuses, a 50 amp, a 15 amp and a 5 amp. They are positioned on the control box, see fig. 3. The fuses are accessible by unscrewing the casing.

(1) Key Switch

This is an isolator switch, it has two positions - 'on' and 'off'.

(2) Green Warning Light

The light is illuminated when the key switch is turned on.

(3) Red Warning Light

This light is illuminated when the automatic steering is being used.

(4) Switch (Tank Base and Discharge Elevator)

This switch raises and lowers the tank base and also positions the discharge elevator.

To raise the tank base, pull the switch towards "Tank Base Lift" conversely, to lower the tank base push the switch towards "Tank Base Lower".



To position the discharge for work, move the switch towards "DISCH ELEV OUT" and to position the elevator for transport purposes move the switch towards "DISCH ELEV IN".

(5) Switch (Cleaner and Discharge Elevator)

This switch controls the angle at which the cleaner is positioned and also engages the drives for the discharge elevator.

To decrease the angle at which the cleaner operates move the switch towards "CLEANER UP" and to increase the angle move the switch towards "CLEANER DOWN".

To engage the discharge elevator drive, the switch should be pushed towards "DISC ELEV ENGAGE" and conversely to disengage the drives pull the switch towards "DISC ELEV DISENGAGE".

(6) Switch (Steering)

This switch is for operating the steering. To steer the harvester manually move the switch to either "STEER RIGHT" or "STEER LEFT". If the automatic steering is required, move the switch to either of the two positions marked "STEER AUTO".

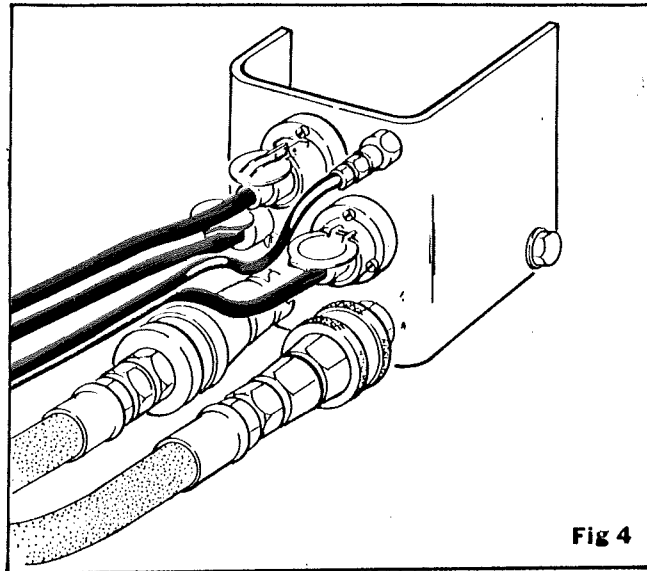
(7) Depth Control Lever

This lever determines the depth of which the beet are being lifted. To increase the depth push the lever forward in the direction of the arrow marked "LOWER" and conversely to raise the harvester pull the lever back towards "RAISE". When turning on a headland or reversing, etc., the harvester should be raised. To fully lift the machine, pull the lever backwards as far as possible. At the forward position there is an adjustable stop (item 9 fig 3). To adjust the stop, slacken the retaining bolt and slide it along the slot in the top plate and retighten.

FITTING THE HARVESTER TO THE TRACTOR

To fit the drawbar to the tractor the electrics will require connecting to the tractor. When connecting the electrics, it is important to match the correct plug with the correct socket, these should be colour coded. Fig 4 shows the hydraulic and electrical connections that are required at the rear of the tractor.

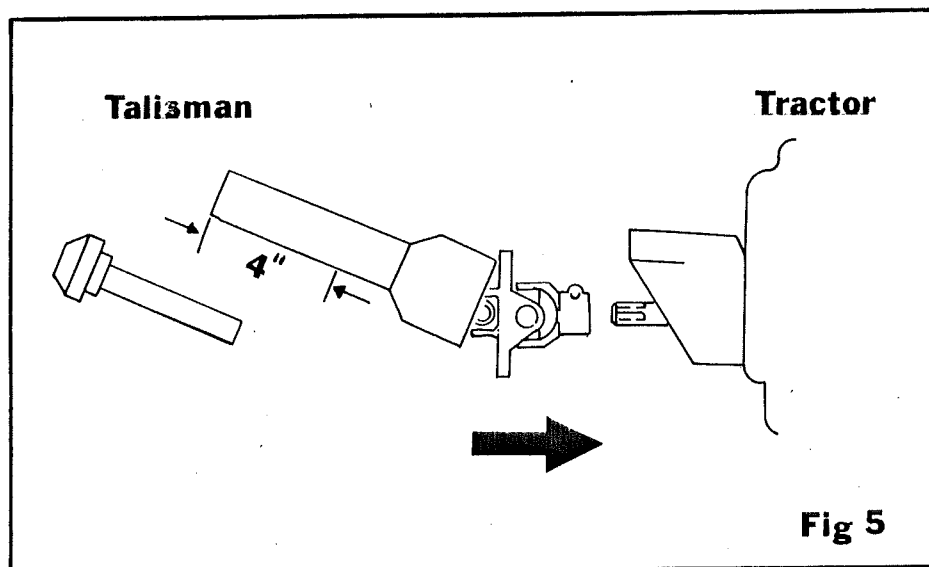
When making hydraulic connections it is most important that every precaution is taken to avoid dirt getting into the hydraulic system.



**Fig 4**

The harvester is designed to be connected to the tractor rigid drawbar. The harvester drawbar will require lifting before being able to connect it to the tractor, for lifting the drawbar see Control Box.

The P.T.O. coupling supplied with the harvester may require cutting to a correct length to suit individual tractors. The coupling should have at least a 4" (102 mm.) overlap when it is in its fully extended position (see fig. 5). To check this, the coupling should be parted and the two ends can be fitted to the harvester and tractor respectively. The wide angled joint should be fitted to the tractor. (see fig. 5). The two halves can then be measured against each other, if cutting is necessary, each half should be cut to obtain the correct overlap. After the correct length has been obtained the P.T.O. coupling guard should then be cut to correspond with the shaft. Also ensure that the rubber hood to protect the knuckles of the P.T.O. coupling is in place. Finally before engaging the P.T.O., secure the guard by fixing the chain to a convenient place on the harvester.



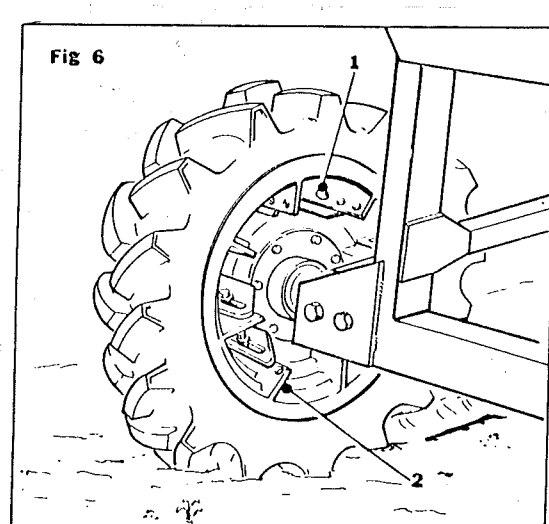
**Fig 5**

## FITTING THE TURBO TOPPER TO THE TRACTOR

The Turbo Topper is mounted to the front of the tractor, supported by mounting brackets. There are various types of tractor mounting brackets available to suit individual tractors, and they should be fitted with bolts provided in the kit. The Turbo Topper is raised and lowered by a hydraulic ram, therefore it is necessary to connect the hose from the ram into the tractor single acting spool valve. Also the Turbo Topper is hydraulically driven, therefore the hoses from the motor will need connecting into the back of the mounting bracket as fig. 2.

## REAR WHEEL ADJUSTMENT

The LH wheel can be adjusted to suit varying row centres. To adjust the wheel, slacken the 16 bolts (item 1 fig 6) and slide the wheel to the required position and retighten. If extra adjustment is required remove the 16 bolts and relocate them in any of the two holes in each of the eight rim brackets. (item 2 fig. 6).



## FOLDING AND UNFOLDING THE DISCHARGE ELEVATOR

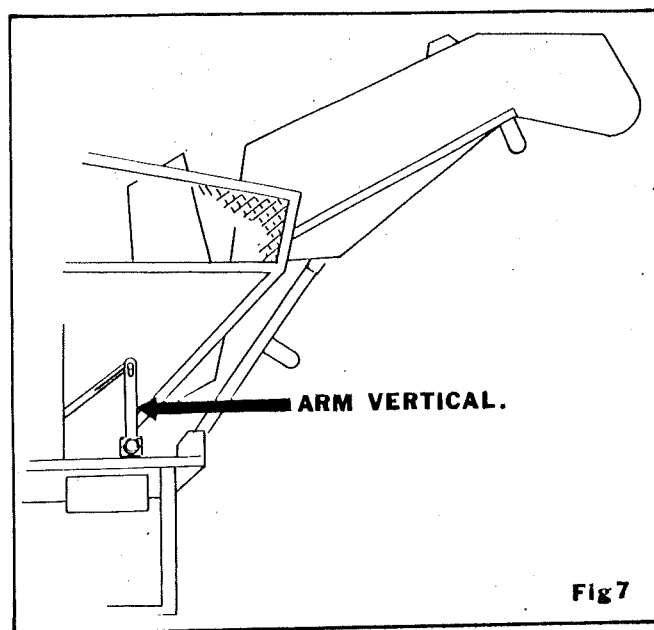
The discharge elevator has two positions, a transport position and a working position.

Unfolding the elevator into its working position is controlled from inside the tow vehicle cab, see Control Box Operation.

### Note

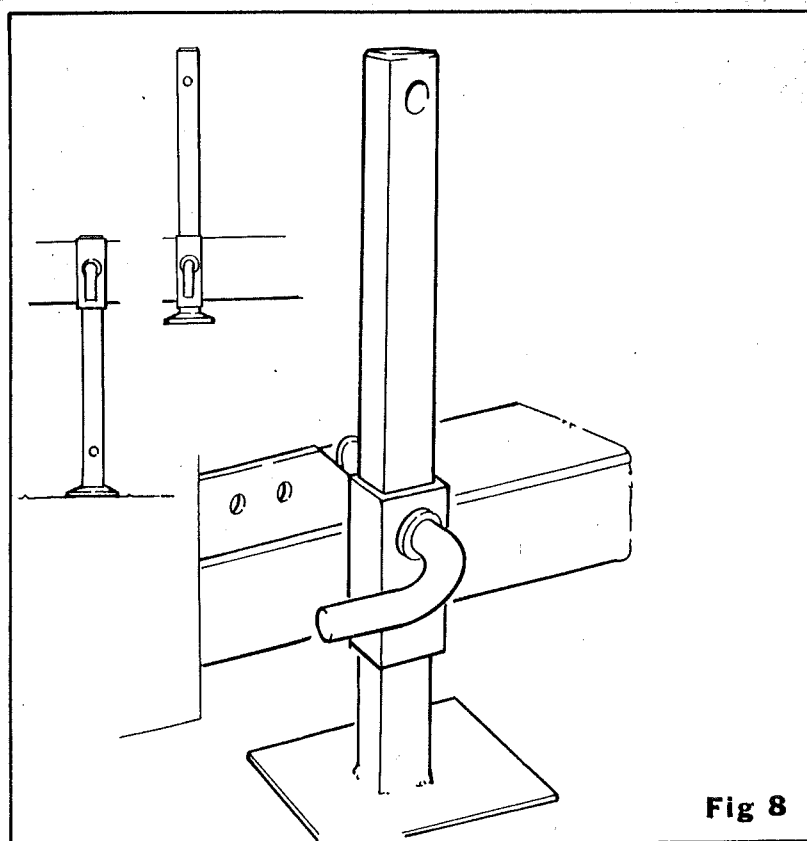
When the discharge elevator has reached approximately three parts of the way into its working position, see figure 7, the discharge elevator drives should be momentarily actuated (see Control Box Operation) to ensure that the web links on the elevator position themselves correctly around the web sprockets.

To fold the discharge elevator for transport, simply actuate via the control box inside the tow vehicle cab, see Control Box Operation.



#### MACHINE STAND

Situated at the front of the harvester is a machine stand, this stand should be raised before setting the machine into work, see figure 8.



## TURBO TOPPER

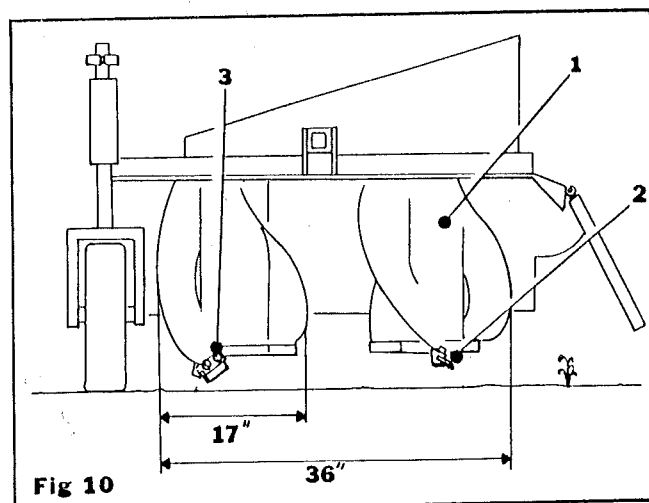
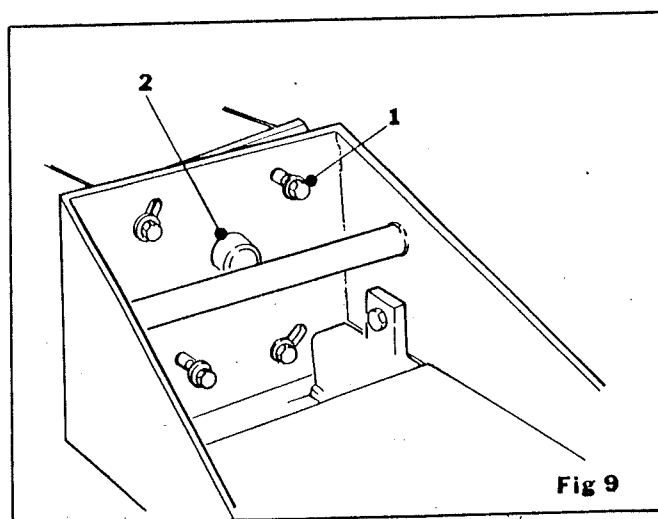
The Turbo Topper is a unit designed to cut the leaf from the beet by means of rotating cutters (item 2 fig 10) prior to the beet being topped by the topping units.

The tops are transferred from one rotor to the other and then out of the side by means of the rotating speed of the rotor (item 1 fig. 10). The suction of the spiral fins welded around the rotors lift away loose leaf and trash leaving a clean path for the lifter.

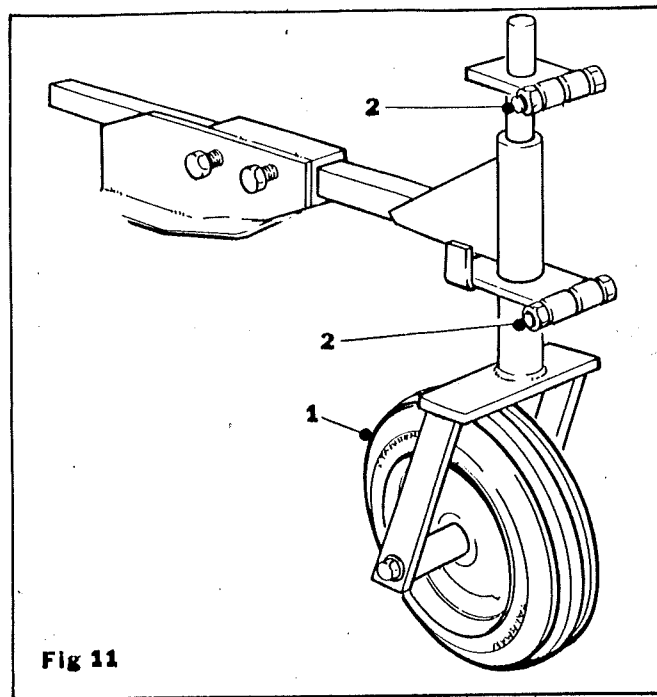
The cutting width of each individual rotor (item 1 fig. 10) is 17 inches (43 cms.), the overall cutting width of both the rotors is 36 inches (91.5 cm.).

The topper is fully floating on a pivoting linkage and is raised and lowered by a hydraulic ram, the ram being fed and operated by a tractor single acting spool valve.

When the topper is in work the front should be lower than the rear, to achieve this, slacken the four securing bolts (item 1 fig. 9) and rotate the topper about the centre pin (item 2 fig. 9) and retighten the securing bolts (item 1 fig. 9).



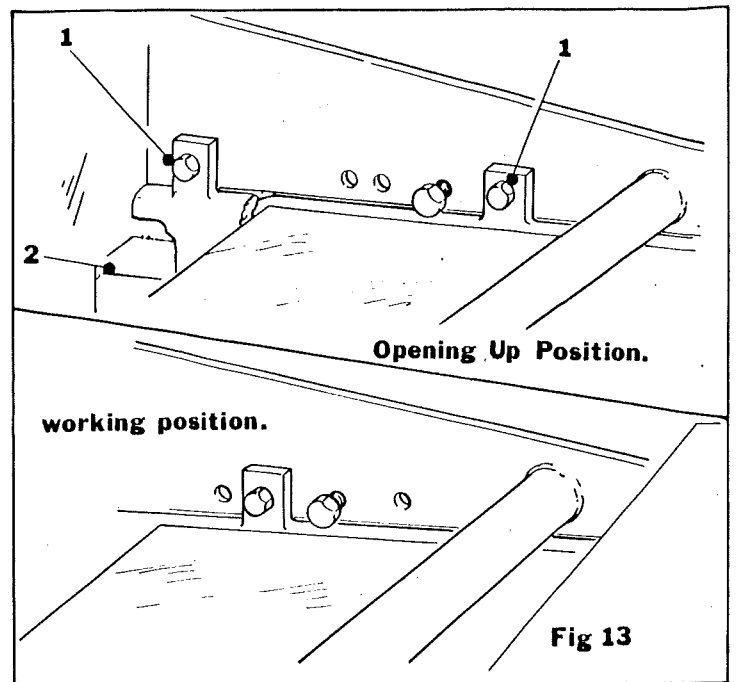
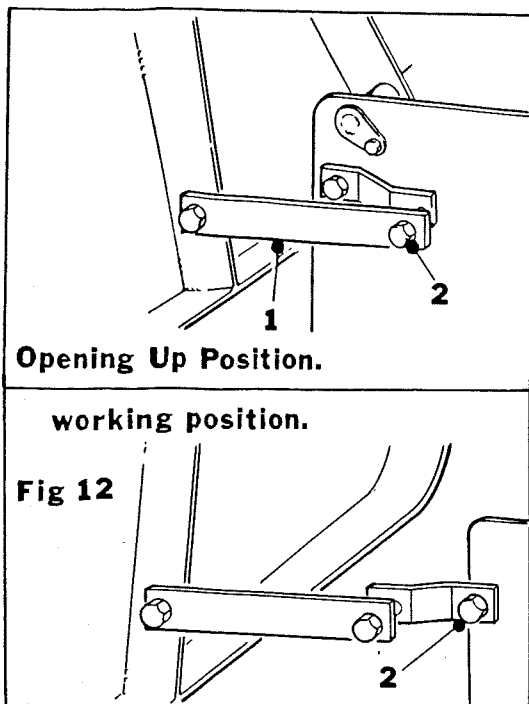
The amount of tops removed from the beet by the rotors is determined by the size of the crown that can be removed by the topping units. As a guide to the amount of top to be removed, prior to topping, set the depth of cut of the rotor knives (item 2 fig. 10) to just top the highest beet. The depth of cut is determined by the depth wheel (item 1 fig. 11). To adjust the depth wheel, loosen the two retaining screws (item 2 fig. 11) in the clamps and lift or lower the wheel according to the amount of topping required.



Steel knives (item 2 fig. 10) are fitted to the rotors (item 1 fig. 10) and can be removed or replaced by removing the retaining bolts (item 3 fig 10). When fitting or removing these bolts care should be taken not to overheat the nylon locking material fitted to the bolts. Always replace the bolts with new after they have been removed or fitted twice. Never set the topper so that the knives (item 2 fig. 10) touch the soil as damage to the knives will occur.

The topper has an opening up position and a normal working position. To achieve either, the following sequence should be followed:-

1. Set the topper in the raised position.
2. Loosen the retaining bolt (item 2 fig. 12).
3. Remove the two securing bolts (item 1 fig. 13) and slide the topper along its rails (item 2 fig. 3) and resecure in the opening up or working position as in fig. 13.
4. Set the flap stay (item 1 fig. 12) in the opening up or working position as in fig. 12 and retighten the retaining bolt (item 2 fig. 12).
5. The topper is now ready for use.



In the normal working position, there are two positions, the position required depends on the beet row centres.

For details of the hydraulic components see Hydraulic system.

#### TOPPING UNIT

The purpose of the topping unit is to crown the beet cleanly and squarely by the use of a feeler wheel (item 1 fig. 14) which runs on top of the beet holding it steady while the knife (item 2 fig. 14) crowns it.

The topping unit frame (item 3 fig. 14) is adjustable for height and angle of pitch. The height is adjustable by removing the four retaining bolts (item 4 fig. 14) and raising or lowering the frame to align the upper or lower holes with the slots and holes in the mounting plate (item 5 fig. 14). The angle of pitch of the topping unit frame is determined by the depth at which the harvester is lifting beet. As a general rule, the topping unit frame (item 3 fig. 14) should run parallel with the ground after the depth of lift has been established, although this may alter slightly when setting the disc coulters. To adjust the angle of pitch slacken the four retaining bolts (item 4 fig 14) and pivot the frame around the lower retaining bolt.

The topping units are adjustable for varying row widths, to adjust, slacken the two stop collars (item 6 fig. 14) and the drive sprocket (item 7 fig. 14) and slide the topping unit along the pivot shaft (item 8 fig. 14) to the required position and resecure with the stop collars (item 6 fig. 14). Reposition the drive sprocket (item 7 fig. 14) to align with the feeler wheel sprocket. Simultaneously when adjusting the topping unit for varying row widths, the tension rod (item 10 fig. 14) and the tie bar (item 11 fig. 14) will require repositioning. The left hand topping unit is usually the one to adjust, although the right hand can be adjusted if it is found necessary.

A very important part of the topping unit is the tension of the spring (item 2 fig. 14). The spring is designed to give a downward pressure on the knife (item 2 fig. 14). Enough pressure should be given to return the feeler wheel and knife to successfully top a low beet after topping a high beet, simultaneously, too much pressure will force the knife to dig into the highest beet causing too much to be removed or the beet may be pushed over. To adjust the spring (item 12 fig. 14) either tighten up or loosen the nut (item 13 fig. 4) until the right amount of pressure is acquired.

The feeler wheel (item 1 fig. 14) is fitted with a scraper (item 14 fig. 14) to keep it clear of tops and dirt, etc.

The scraper is adjustable, to adjust slacken the retaining bolt (item 15 fig. 14) and pivot the scraper to the required position.

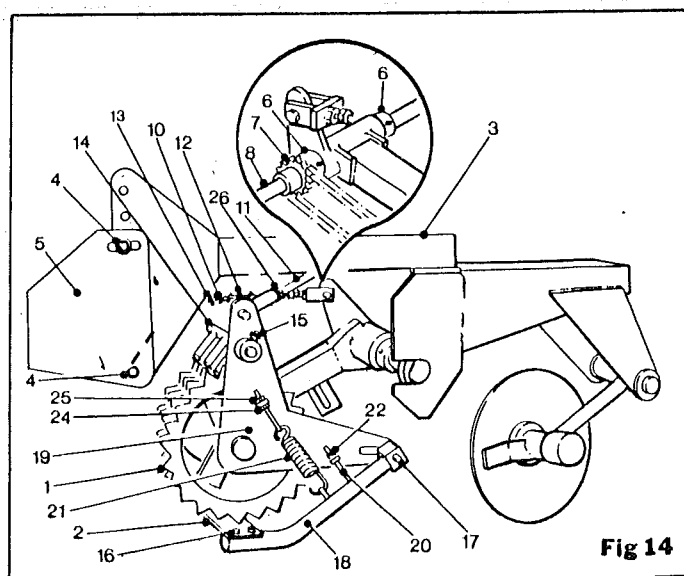
### TOPPING KNIFE SETTING

The feeler wheel should ride onto the beet before the knife starts to cut. As a pre-setting before starting off, set the knife so that the rear setscrew (item 16 fig. 14) holding the knife (item 2 fig. 14) to the knife arm is approximately in line with the centre of the feeler wheel (item 1 fig. 14). The knife should be forward for small beet and back for large beet. To make the adjustment slacken the pivot bolt (item 17 fig. 14) and slide the knife arm (item 18 fig. 14) along the slot in the mounting plate (item 19 fig. 14). It may be found necessary to slacken off the stop screw (item 20 fig. 14) and the tension of the spring (item 21 fig. 14).

The amount of crown removed is determined by the distance between the knife (item 2 fig. 14) and the feeler wheel (item 1 fig. 14). To adjust, slacken the lock nut (item 22 fig. 14) and turn the stop screw (item 20 fig. 14) to achieve the required gap .

Stones passing between the knife and the feeler wheel push the knife arm (item 18 fig. 14) out against the tension of the spring (item 21 fig. 14) until the obstruction has cleared, then the spring pulls the knife back into position. To tension the spring, slacken the lock nut (item 24 fig. 14) and turn the adjusting nut (item 25 fig. 14) to obtain the required tension. Finally, tighten the lock nut (item 24 fig. 14).

The pitch of the knife can be altered by releasing the lock nut (item 26 fig. 14) and turning the tie bar (item 11 fig. 14). As a general rule the knife is usually set parallel with the ground.





The land wheel (item 1 fig. 15) is designed to drive the topping units. Pressure is applied to the land wheel to ensure that the topping unit feeler wheel is always turning. The pressure is applied by two springs (item 2 fig. 15). To adjust the pressure, slacken the lock nut (item 3 fig. 15) and turn the adjusting nut (item 4 fig. 15). The land wheel is also adjustable for varying row widths. The adjustment is the same as for the topping unit adjustment.

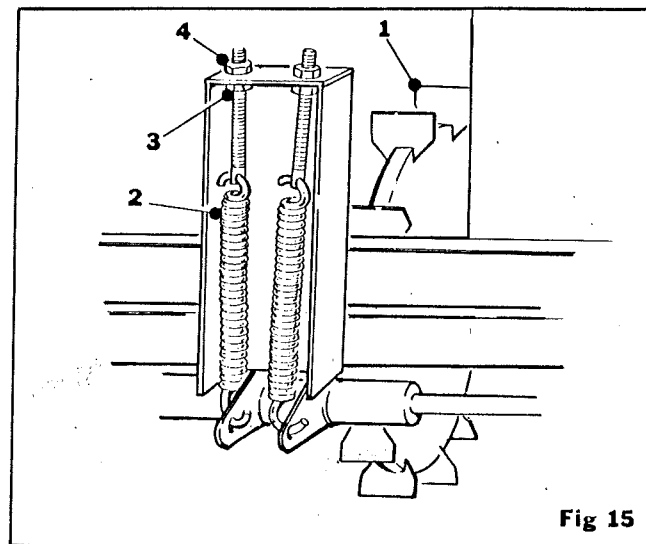


Fig 15

## DISC COULTER

The concave disc coultter, located in front of the topping unit, prevents the clogging of the topping knife by cutting away weeds and broken leaves.

The disc (item 1 fig. 16) should align with the knife arm (item 18 fig. 14) so that the knife arm runs into the furrow left by the disc. To adjust, slacken the three securing bolts (item 4 fig. 16) and slide the disc coultter frame (item 5 fig. 16) to the required position. If extra adjustment is required, the bolts (item 4 fig. 16) can be removed and replaced in a different set of holes. Under normal conditions the disc (item 1 fig. 16) should be set to cut about 1½ inches (38 mm.) below ground level. To adjust, slacken the four retaining bolts (item 4 fig. 14) and pivot the topping unit frame (item 3 fig. 14) to give the required depth.

There should be enough spring tension on the disc arm (item 2 fig. 16) to make the disc cut into the soil, but the arm must also be able to lift up when the disc rides over obstructions. To vary the spring tension, turn the adjusting nut (item 3 fig. 16).

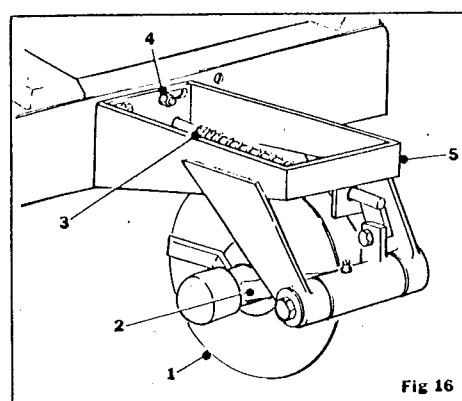


Fig 16

## AUTOMATIC DEPTH CONTROL

The Standen Talisman is fitted with an automatic depth control to ensure the lifting wheels are always lifting at the same depth.

### SETTING THE DEPTH CONTROL

When setting the automatic depth control the harvester should be standing on a concrete floor with the lifting wheels also touching the floor.

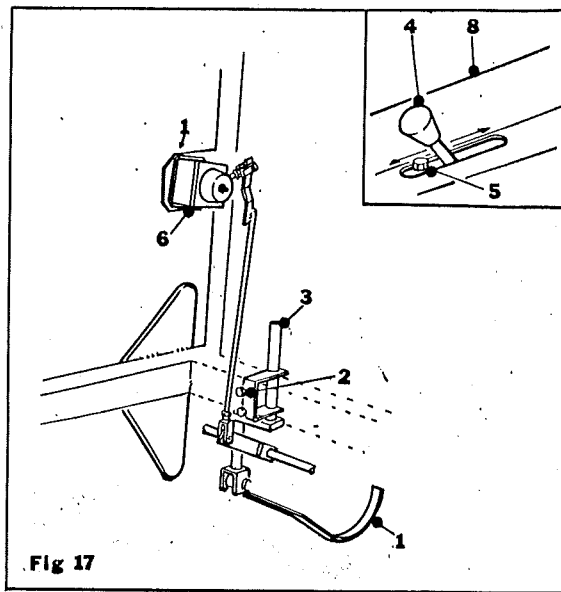
To set the depth control, the sequence below should be followed:-

1. Check the depth foot (item 1 fig. 17) is just touching the floor. If adjustment is required, slacken the two retaining screws (item 2 fig. 17) and slide the post (item 3 fig. 17) either up or down to give the required position.
2. Lift the depth foot (item 1 fig. 17) and position underneath it a 2" (51mm.) thick block of wood.
3. Start the tractor engine and engage the P.T.O. to run the machine.
4. Set the depth control lever (item 4 fig. 17) in the cab, half way between the centre position and the depth stop (item 5 fig. 17) as shown in fig. 17.
5. Release the potentiometer (item 6 fig. 17) by undoing the lock nut (item 7 fig. 17) and turning it in the direction of the arrow shown in fig. 17 until the harvester just starts to lift.
6. Lock the potentiometer with the lock nut (item 7 fig. 17).

The harvester is now set to work at a depth of 2 inches (51 mm.) with the depth control lever in the position shown in fig. 17. This position can either be marked on top of the control box (item 8 fig. 17) or the depth stop (item 5 fig. 17) can be moved. If temporary extra depth is required the depth control lever can be pushed forward (small lever movement = large depth adjustment), or for a more permanent adjustment, turn the potentiometer (item 6 fig. 17) in the direction of the arrow shown in fig. 17.

Fitted to the depth control ram is an in line flow control. It is fitted to enable the flow of oil to the ram to be controlled. The speed at which the ram works should be adjusted in respect to the forward speed of the harvester. The slower the forward speed, the slower the depth control needs to respond. For the operation of the in-line flow controls see Hydraulic System.

For the setting instructions of the depth control module see page 39.



### AUTOMATIC SELF STEERING

The purpose of the self steering is to allow the harvester to follow the rows of beet irrespective of the contours of the land. This is achieved by the two steorage feet (item 1 fig. 18) running beside the beet. Once either of the feet (item 1 fig. 18) has been lifted, it will actuate a micro switch which in turn operates a hydraulic ram connected to the drawbar, this will then correct the harvester.

Once the harvester working depth has been set, the bottom of the curve on both the steorage feet should be touching the ground, running either side of the largest beet. To achieve this, the height, width between the two steorage feet and the position of the steorage unit can all be adjusted.

The steering unit has two height positions, to adjust remove the two retaining bolts (item 2 fig. 18) and replace them in the upper or lower holes in the steering unit leg (item 3 fig. 18).

The position of the steorage unit can be adjusted to suit varying row widths, to adjust slacken the two retaining bolts (item 2 fig. 18) and move the steering unit across to the required position.

The distance between the two steorage feet (item 1 fig. 18) can be adjusted to allow the feet to pass the largest beet. to adjust, slacken the two setscrews (item 5 fig. 18) on each of the steorage feet and move the feet in or out to give the required width. Both feet should be adjusted to leave them central about the steorage unit (see fig. 18).

The mechanism inside the self steering box (item 6 fig. 18) has been factory set and should not be tampered with. The automatic steering should only be used once the machine is moving forwards. To actuate the automatic steering see Control Box Operation.

Fitted to the steorage ram (item 14 fig. 33) are two in line flow controls. These are fitted to enable the flow of oil to the rams to be controlled. The speed at which the ram works should be adjusted with respect to the forward speed of the harvester. The slower the forward speed, the slower the steering needs to respond. For the operation of the inline flow control see Hydraulic System.

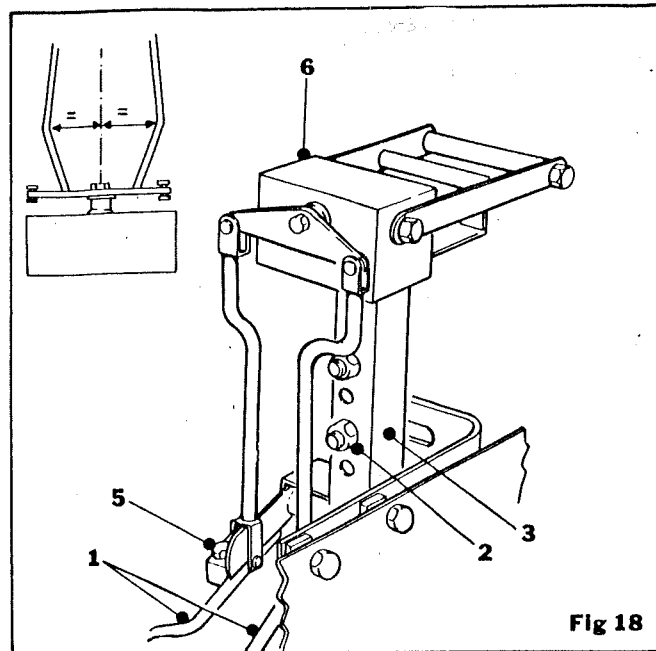


Fig 18

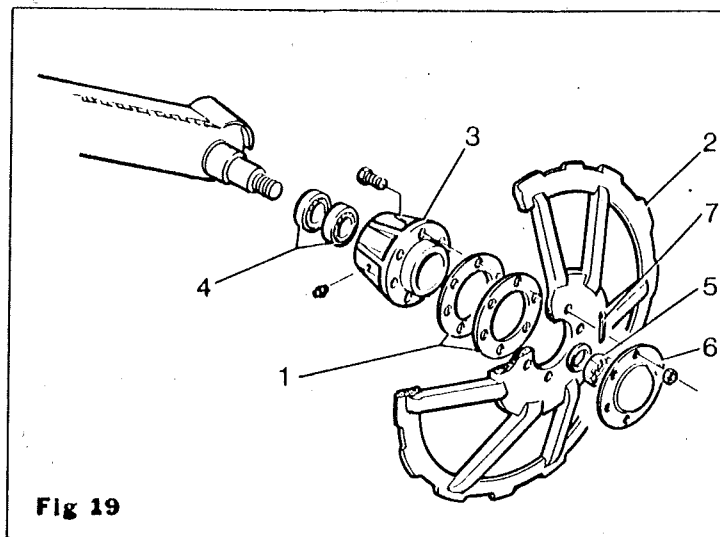
## LIFTING WHEELS

The lifting wheels (item 2 fig. 19) are designed to lift the beet from the ground and transfer them to the main elevator. The working depth of the lifting wheels is determined by the setting of the depth control which is set according to the depth required to lift the beet from the ground, without breaking off the root or lifting too much soil.

Further depth control can be effected by the setting of the angle of the lifting wheels (item 2 fig. 19). This adjustment is made by loosening the nuts and bolts (item 1 fig. 20) holding the lifting wheel mounting (item 2 fig. 20) to the lifting wheel mounting bracket (item 3 fig. 20), which is fitted with slotted holes in either side to allow the lifting wheel mounting (item 2 fig. 20) to be adjusted both up and down. At the top of the lifting wheel mounting bracket (item 2 fig. 20) is fitted an adjusting screw (item 4 fig. 20) which is provided to push down onto the lifting wheel mounting (item 3 fig. 20). The adjustment described allows the lifting wheels (item 2 fig. 19) to be raised or lowered, irrespective of the harvester, it will also alter the point of the lifting of the beet in relation to the width of the lifting wheels (item 2 fig. 19). The working depth of the lifting wheels (item 2 fig. 19) should be at least 2 inches (51 mm.).

The width of the wheels at the narrowest point is from  $1\frac{1}{2}$  inches (38 mm.) to  $1\frac{3}{4}$  inches (45 mm.) and they can be adjusted by removing or adding spacers (item 1 fig. 19) between the lifting wheels (item 2 fig. 19) and the lifting wheel hubs (item 3 fig. 19).

The lifting wheel spindles are fitted with tapered roller bearings (item 4 fig. 19) and are adjusted by a castle nut (item 5 fig. 19), after first removing the hub cap (item 6 fig. 19). Care should be taken not to overtighten the bearings (item 4 fig. 19). Adjust by turning the castle nut (item 5 fig. 19) as tight as possible while slowly rotating the lifting wheel hub (item 3 fig. 19) then slacken off one or two castle-rations of the nut (item 5 fig. 19). Secure with a new split pin (item 7 fig. 19).



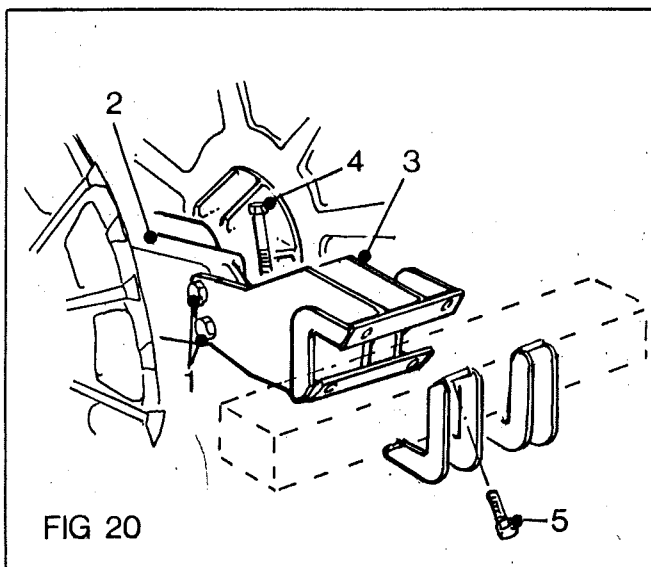
**Fig 19**

### LIFTING WHEEL (ROW SETTINGS)

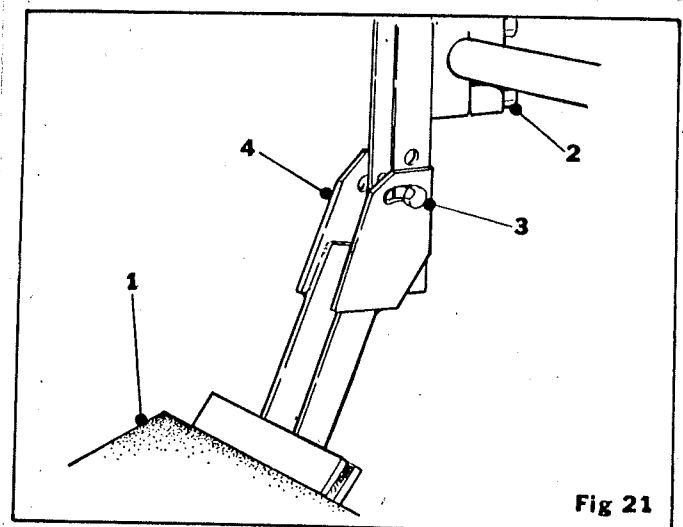
The lifting wheels (item 2 fig. 19) can be adjusted to follow rows of from 18 inches (46 cm.) to 21 inches (53 cm.). To obtain these settings, the left hand lifting wheel unit is moved horizontally across the front beam of the main frame, while the right hand lifting wheel unit is always left in its original position, which is directly in front of the right hand rear wheel. To adjust the lifting wheels to the required row width, loosen the mounting bracket clamp fixing bolt (item 5 fig. 20)

Move the lifting wheel unit across the main beam to the required position and retighten the bolt (item 5 fig. 20)

it is important that they are adjusted to ensure the lifting wheels are in a direct line (90°) behind the front beam. Check, by measuring the distance from one lifting wheel mounting bracket (item 3 fig. 20) to the other across the front beam (fig. 20) and from the centre of one pair of lifting wheels (item 2 fig. 19) to the centre of the next. Also when adjusting the lifting wheels the rubber deflector (item 1 fig. 21) may require adjusting, to adjust slacken the four retaining bolts (item 2 fig. 21) and slide the rubber deflector along to the required position and retighten. The angle at which the rubber deflector is position can also be adjusted. The deflector should be positioned to stop small beet falling back between the two sets of lifting wheels. To adjust, slacken the two retaining bolts (item 3 fig. 21) and pivot the deflector mounting (item 4 fig. 21).



**FIG 20**



**Fig 21**

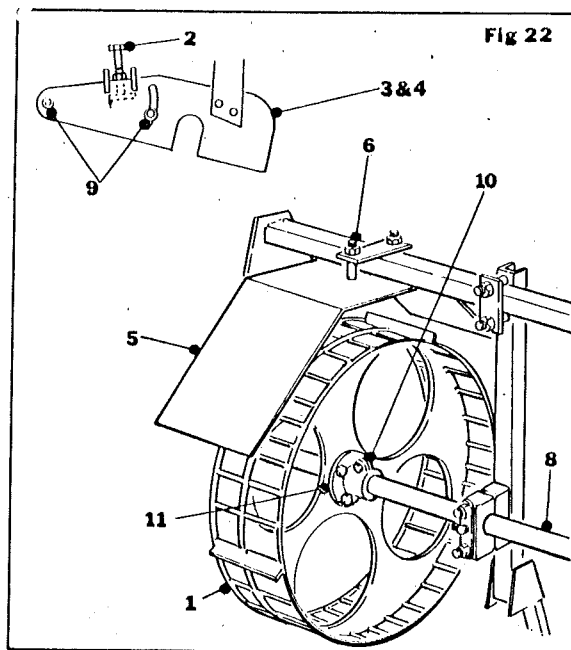
## CAGE WHEELS

The cage wheels (item 1 fig. 22) are fitted between the lifting wheels (item 2 fig. 19), to transfer the beet into the main elevator. Provision is made to raise or lower the cage wheels (item 1 fig. 22) which should generally be set higher when the beet are large and lower when the beet are small.

To adjust, loosen the nuts and bolts (item 9 fig. 22) in the support brackets RH & LH (item 3 & 4, fig. 22) and turn the adjusting screws (item 2 fig. 22) until the cage wheels (item 1 fig. 22) are in the required position. It is important when carrying out the above adjustment that the final position of the cage wheel drive shaft (item 8 fig. 22) is in a direct horizontal line across the machine. Retighten all adjusting nuts and bolts.

When various row distance settings are carried out as described in paragraph (Lifting Wheel Row Settings) it is also necessary to move the cage wheels (item 1 fig. 22) horizontally across the cage wheel drive shaft (item 8 fig. 22) to correspond with the final position of the lifting wheels.

To adjust the cage wheels (item 1 fig 22) loosen the nut and bolt (item 10 fig. 22) in the cage wheel clamp (item 11 fig. 22) and move the cage wheels (item 1 fig. 22) across the cage wheel drive shaft (item 8 fig. 22) to the required position. Retighten the nut bolt (item 10 fig. 22).



## CAGE WHEEL MUD GUARDS

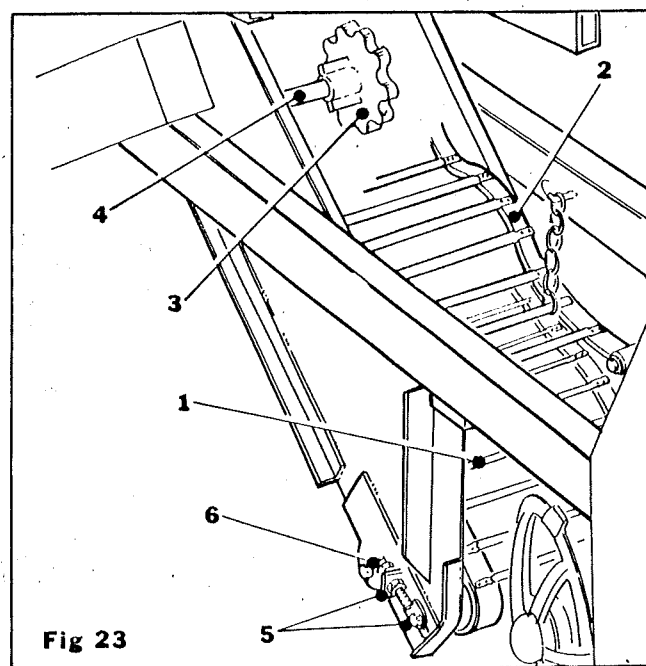
The cage wheel mud guards (item 5 fig.22) are designed to fit directly over the top of the cage wheels (item 1 fig. 22) to eliminate the danger of dirt and stones being thrown from the wheels. Always ensure they are positioned correctly., especially when moving the cage wheels (item 1 fig. 22) to a new setting. To adjust the cage wheel mud guards (item 5 fig. 22) loosen the retaining nut and bolt (item 6 fig. 22) move the mud guards (item 5 fig. 22) to the required position, retighten the nuts and bolts (item 6 fig. 22).

## MAIN ELEVATOR

The main elevator consists of a main elevator web (item 1 fig. 23) to transfer the beet to the cross web. Suspended over the main web is a cleaning apron (item 2 fig. 23) which cleans the beet as they travel up the main elevator. The cleaning apron is adjustable, to increase the cleaning, lower the cleaning apron to the main web, this restricts the flow of beet, therefore giving extra cleaning.

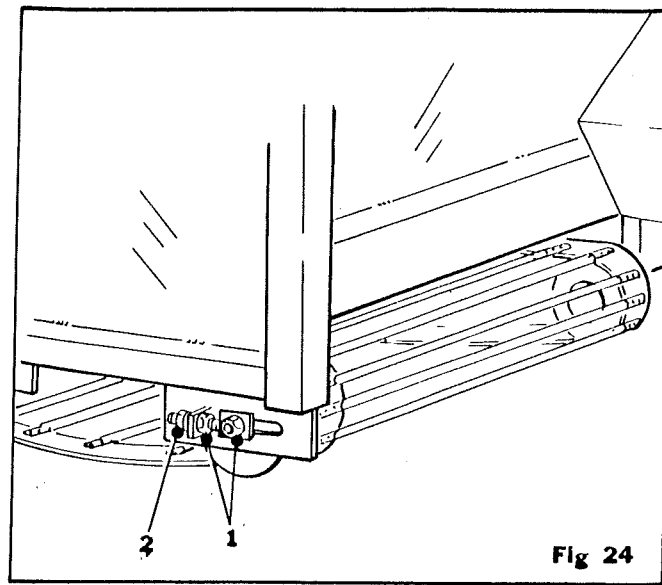
The main elevator web sprockets (item 3 fig 23) are the split type and can be removed and new sprockets fitted without the need to remove the main web shaft (item 4 fig. 23), note: before splitting the main elevator web sprockets with a chisel, mark the two halves of the sprockets. This will ensure that the same two faces are matched together when refitting.

The main web is provided with adjustment to allow for any slackness in the web to be taken out. To adjust, slacken the lock nut (item 5 fig. 23) and turn the adjusting nut (item 6 fig. 23) until the required tension is achieved. It is advisable to adjust both sides of the elevator the same amount.



## CROSS ELEVATOR

The cross elevator consists of a continental type web which transfers the beet from the main elevator to the cleaner. As the main web, the cross elevator is provided with adjustment to allow for any slackness. To adjust, loosen the lock nut (item 1 fig. 24) and turn the adjusting nut (item 2 fig. 24) until the correct tension is obtained. Again it is advisable to adjust both sides of the elevator the same amount. Also the cross elevator is fitted with split type sprockets for removal and fitting see Main Elevator.



## CLEANER

The Talisman is fitted with a cleaner designed to produce a clean sample of beet under a wide range of varying soil conditions.

A pair of rotating rollers are fitted with twelve steel rods in each, and when revolving the rods expand to the end of the slots in the cleaner plates (item 1 fig. 25). heavy density material such as stones, clods or trash force the rods inwards, allowing such material to fall through to the ground, whilst the beet are retained by the oscillating rollers. As the beet pass down the cleaner, the rods (item 2 fig. 25) clean them.

The angle at which the cleaner operates efficiently is dependant on the soil and crop conditions, therefore the required position must be found by trial and error. Once the optimum position has been established the angle of the cleaner should not need altering unless the harvester is working on hilly ground, when the cleaner will require adjusting to counteract the hill. For operation see Control Box Operation.

After a period of working it may be noticed that the rods (item 2 fig. 23) and plates (item 1 fig. 25) are wearing, consequently the rotating rollers have been designed so that the rods (item 2 fig. 25) can be turned through 180° (end to end) to give an extended life.

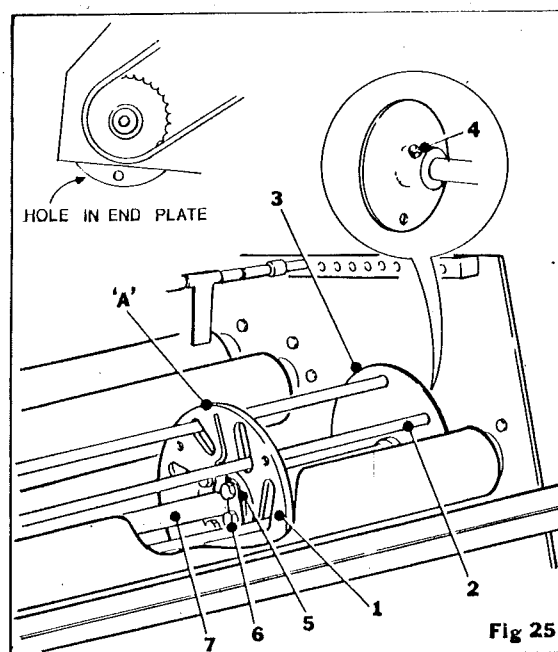
To remove the cleaner rods (item 2 fig. 25):

1. Release the end plate (item 3 fig. 25) by removing the retaining bolt (item 4 fig. 25).
2. Rotate the end plate (item 3 fig. 25) so that the hole can be seen when looking underneath the cleaner.
3. Rotate the roller to align the end of one of the slots with the hole in the end plate.
4. Slide the rod (item 2 fig. 25) through the hole in the end plate and turn it around and replace.
5. Repeat for the remaining rods.
6. Resecure the end plate (item 3 fig. 25).



The cleaner plates (item 1 fig. 25) are designed to be split for ease of fitting and removal.

To remove the cleaner plates, remove all the steel rods (item 2 fig. 25) and cut through the plates at point (A). Open the locking tabs (item 5 fig. 25) and remove the retaining bolts (item 6 fig. 25). Conversely to fit new cleaner plates, mark each half of the plate and again cut through at point (A). Offer the plate to the roller shaft (item 7 fig. 25) ensure before securing the plate that the small slot aligns with the small slot in the other plate. Position the locking tabs and replace the retaining bolts (item 6 fig. 25). Finally lock the retaining bolts by bending the locking tabs (item 5 fig. 25).



### TANK FEED ELEVATOR

The tank feed elevator consists of a continental type web which is fitted with lats to transfer the beet from the cleaner to the tank. The web is tensioned by two large rollers (item 1 fig. 26). The tension of the web can be adjusted by loosening the lock nut (item 2 fig. 26) and turning the adjusting nut (item 3 fig. 26).

Fitted inside the elevator at the rear of the machine is a beet guide (item 4 fig. 26) which prevents the beet from rolling back down the web. The beet guide is adjustable. The position of the beet guide depends on the size of the beet, for large beet the guide should be positioned further away from the lat (item 5 fig. 26) compared with small beet, when the guide should be positioned closer to the lats.

The beet guide (item 4 fig. 26) can be adjusted by slackening the four retaining bolts (item 6 fig. 26) and sliding it within the slots (item 7 fig. 26). Again as the main and cross elevators, the tank feed elevator is fitted with the split type web sprocket, for fitting and removal see Main Elevator.

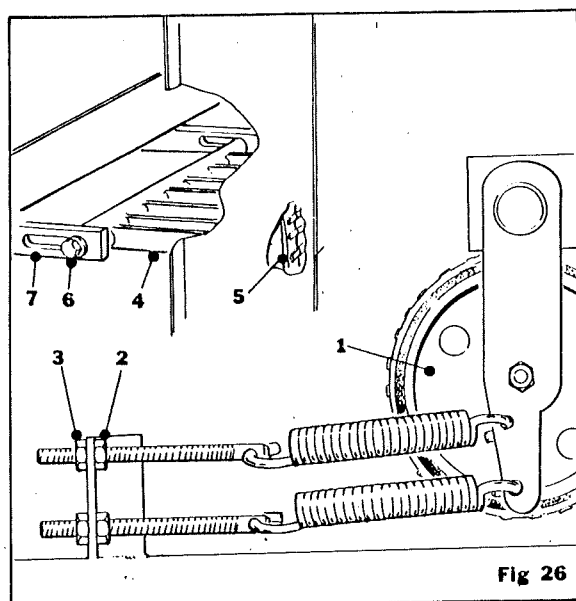


Fig 26

#### TANK AND SPINNER WHEEL

Inside the tank is situated a spinner wheel, which distributes the beet to allow the tank to fill to its full capacity. The spinner wheel is hydraulically driven and is raised and lowered by a hydraulic ram. The spinner wheel is raised or lowered simultaneously with the tank floor.

#### DISCHARGE ELEVATOR

The discharge elevator has two webs and lats to help convey the beet to the trailer. The lats must be fitted adverse to each other across the two webs. Adjustment of the webs is made by removing or adding the web links. Both webs should be adjusted equally.

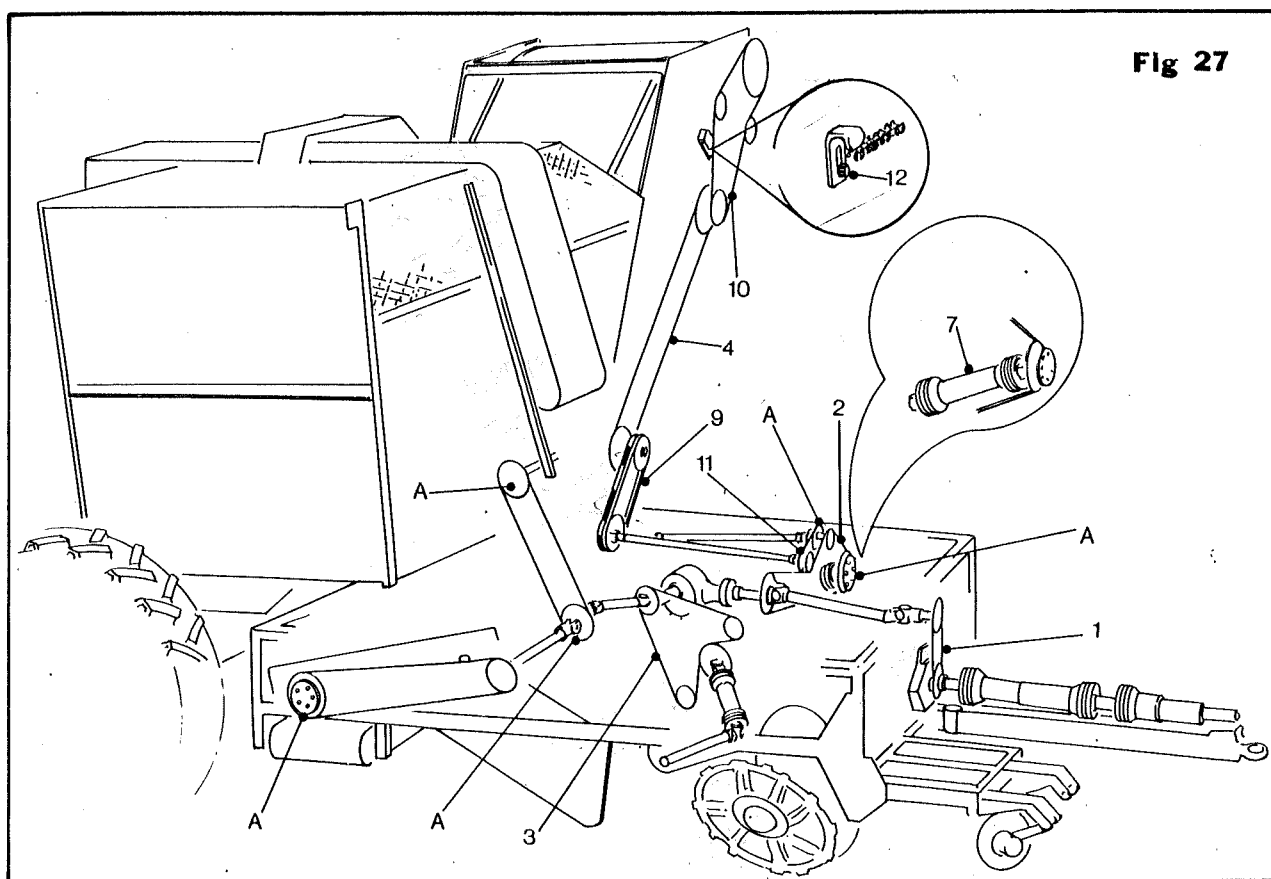
#### MECHANICAL DRIVES

The various mechanical drives that are involved in the operation of the Standen Talisman beet harvester consist of clutches, chains, sprockets, pulleys and belts. Each drive chain or belt has its own tension and adjustment, either manual or self adjusting. The chains and belts should be correctly tensioned to ensure the efficient working of the machines. It is important that the drive chains and belts are not over-tightened as this will cause excessive chain and sprocket wear.

#### CAUTION

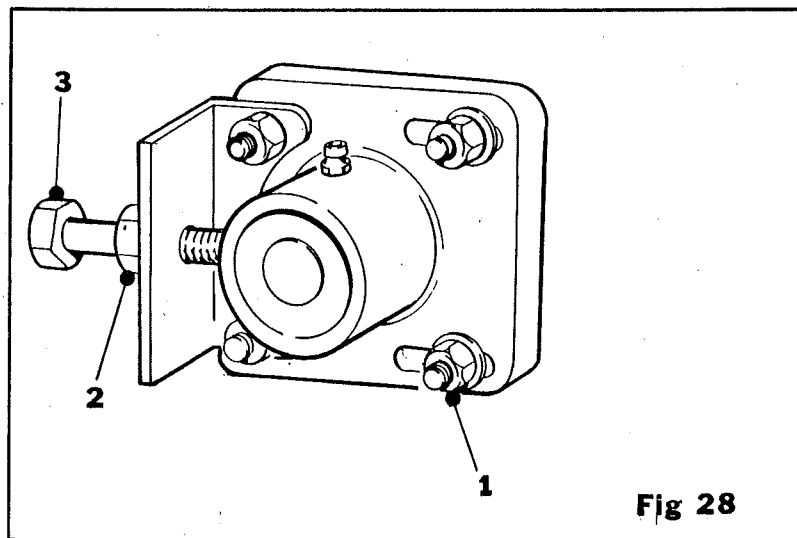
All revolving drive machinery chains, shafts and sprockets, etc., are potentially dangerous. Therefore before attempting any adjustment or maintenance of the drive equipment, switch off the engine of the tow vehicle, disconnect the power take off shaft and set the handbrake. Failure to observe the above caution could result in serious injury to personnel.

Figure 27 shows the main drive layout.

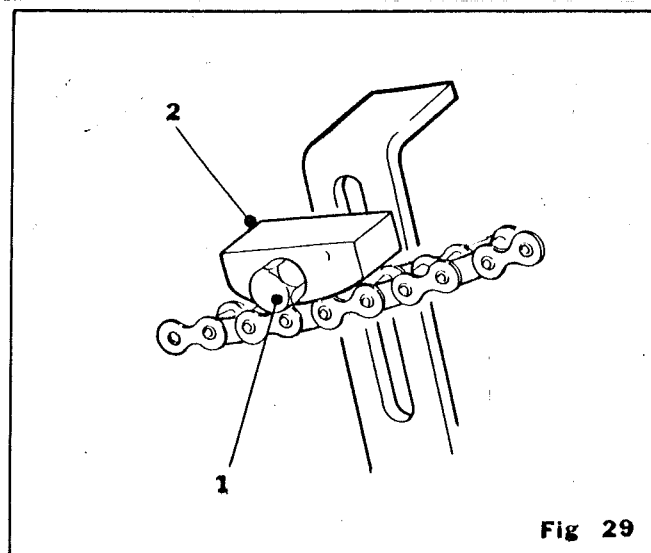


The four drive chains (items 1, 2, 3 & 4 fig. 27) are adjusted in the same kind of manner. Therefore below is the sequence to follow to adjust these four chains.

1. Release the bearing housing by loosening the four retaining bolts (item 1 fig. 28).
2. Slacken the lock nut (item 2 fig. 28).
3. Turn the adjusting screw (item 3 fig. 28) to obtain the required tension.
4. Retighten the lock nut (item 2 fig. 28) and resecure bearing housing.



In addition to the previously mentioned chains there are eight other drive chains. These chains are tensioned by a nylon tensioning block (item 1 fig. 29) and slide the tensioning block (item 2 fig. 29) towards the chain and resecure.



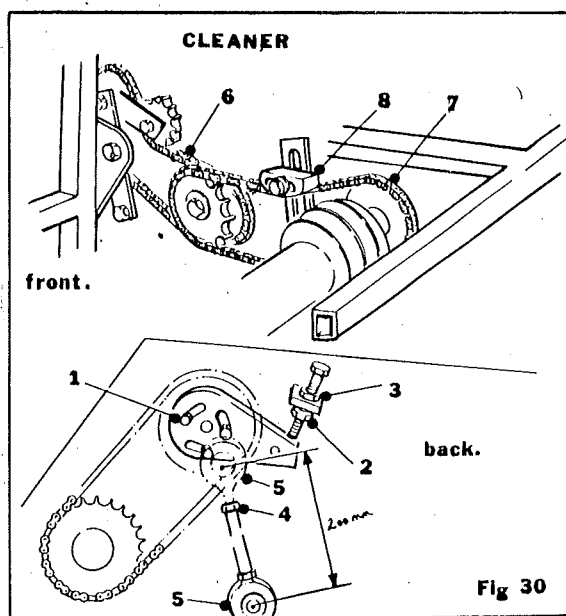
## CLEANER DRIVE

The power for the cleaner is transmitted from the main drives by a universal coupling (item 7 fig. 27). The cleaner itself has four drive chains to drive its various components. The two cleaner drive chains at the rear of the harvester can be adjusted for tension by loosening the three setscrews (item 1 fig. 30) and slackening the lock nut (item 2 fig. 30). Turn the adjusting screw (item 3 fig. 30) until the correct tension has been achieved and resecure with the lock nut (item 2 fig. 30). Finally retighten the three setscrews (item 1 fig. 30).

### NOTE

Ensure that the four lock nuts (item 4 fig. 30) are kept tight and also the centre distance between the two bearings (item 5 fig. 30) must always be kept at 200 mm.

Situated at the front end of the cleaner are the two other drive chains. The first one (item 6 fig. 30) is self tensioning, therefore no adjustment is required. The second chain (item 7 fig. 30) can be adjusted by an adjusting block (item 8 fig. 30). For adjustment of this block see page



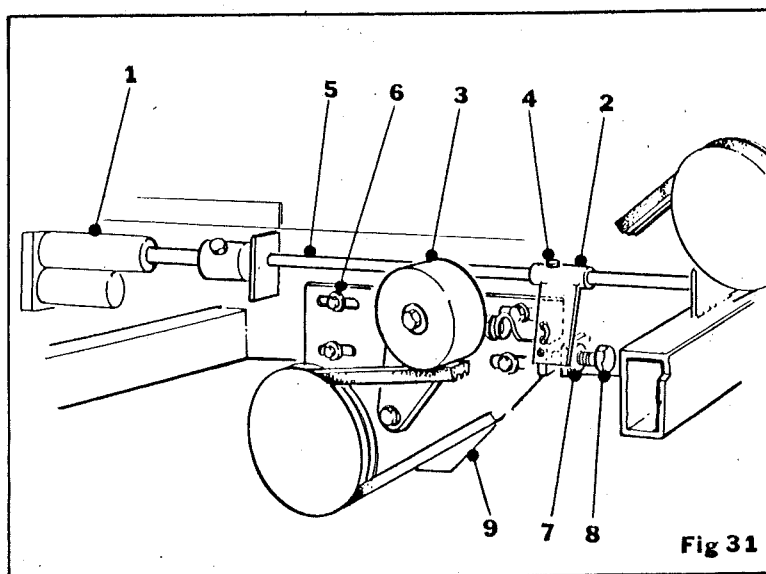
## DISCHARGE ELEVATOR DRIVES

When the PTO is engaged the machine runs continuously except for the discharge elevator. The discharge elevator is set in motion by operating an actuator (item 1 fig. 31) from the control box in the cab. Once the actuator has been operated it pushes an arm (item 2 fig. 31) which in turn pushes a jockey roller (item 3 fig. 31) onto the drive belt (item 9 fig. 27). Once the drive is engaged the jockey roller will act as a tensioner for the belt. To increase or decrease the tension, slacken the retaining bolt (item 4 fig. 31) and slide the arm (item 2 fig. 31) along the shaft (item 5 fig. 31) and resecure.

When the jockey roller (item 3 fig. 31) has been retracted and there is no more travel left in the actuator (item 1 fig. 31), the discharge elevator should not continue to run. If the drive belt (item 9 fig. 27) requires adjusting loosen the four drive plate securing bolts (item 6 fig. 31) and loosen the lock nut (item 7 fig. 31). Turn the adjusting screw (item 8 fig. 31) clockwise or anticlockwise according to the belt requirements. once the adjustment has been made, re-secure the drive plate (item 9 fig. 31) and lock the adjusting screw (item 8 fig. 31) with the lock nut (item 7 fig. 31).

From the vee belt (item 9 fig. 27) the drive is transmitted to to the main discharge elevator drive chain (item 10 fig. 27), by an intermediate drive chain (item 4 fig. 27). The intermediate drive chain (item 4 fig. 27) is adjusted by moving the bearing housing. For adjustment see sequence on page

The main discharge elevator drive chain (item 10 fig. 27) is tensioned by a tensioner (item 10 fig. 31). To adjust, slacken the two retaining bolts (item 11 fig. 31) and slide the tensioner (item 10 fig. 31) to the required position and resecure.

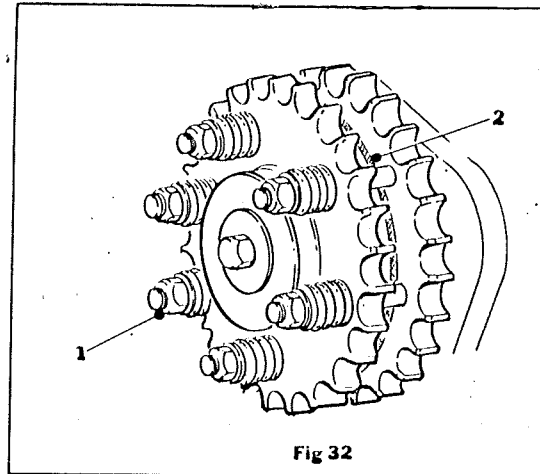


## FRICTION CLUTCH ADJUSTMENT

Within the drives on the Talisman there are five friction clutches used (shown as (A) on figure 28).

Friction clutches are fitted to prevent overloading and serious damage occurring if the elevators become jammed. The amount of torque required to start the clutch slipping can be varied by turning the nuts (item 1 fig. 32) clamping the clutch plates (item 2 fig. 32) together. The clutch should be set to just drive without slipping under normal conditions.

Overtightening on the adjustment nuts will render the clutch ineffective.

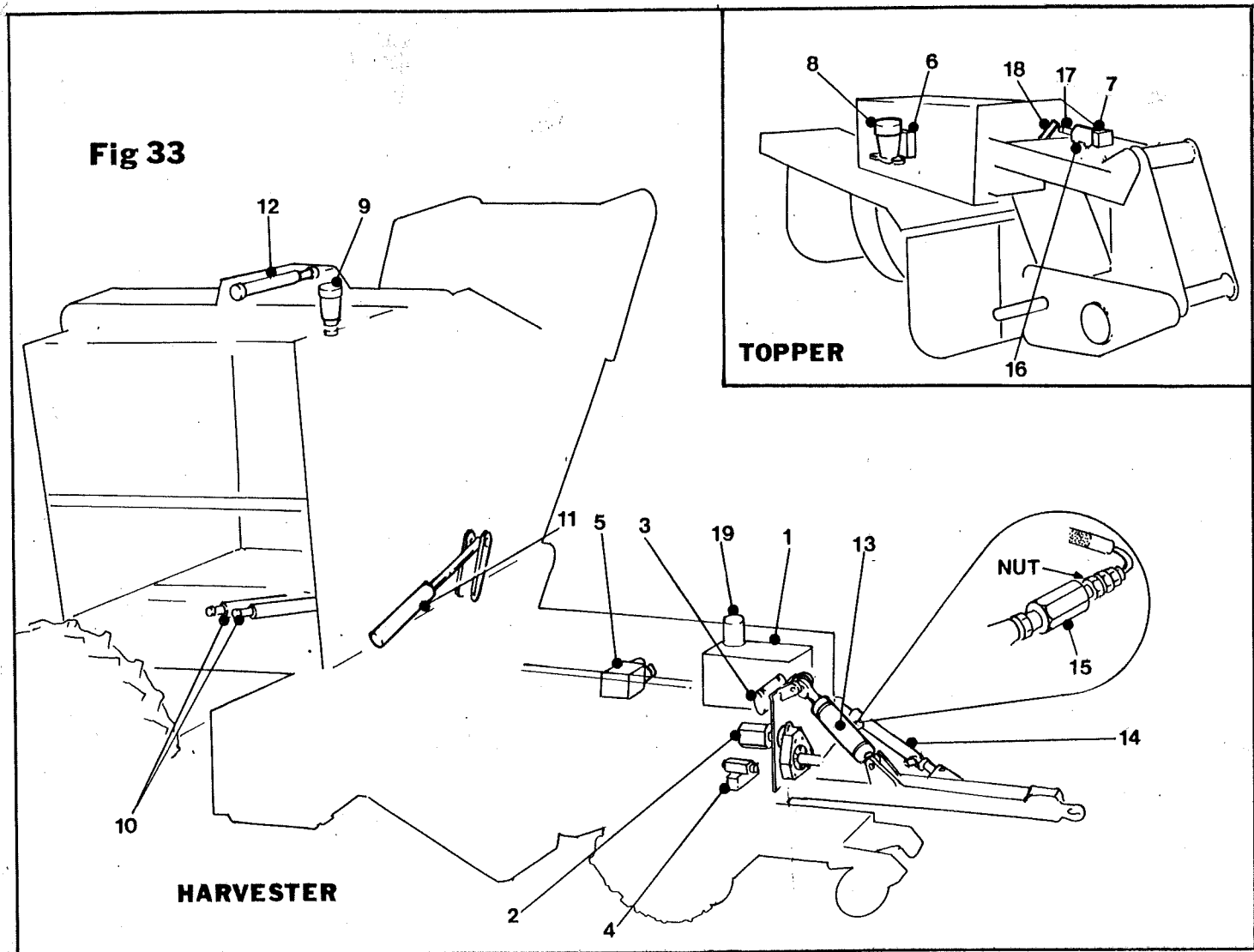


Care should be exercised to ensure all six nuts are adjusted equally, this is easily achieved by adjusting each nut one flat at a time.

## HYDRAULIC SYSTEM

Detailed descriptions of the components that make up the hydraulic system of the Talisman follows together with any relevant maintenance information necessary to ensure the trouble free operation of the system.

For the location of the various hydraulic items see fig. 33.



### (1) Hydraulic Fluid Tank

Located on the left hand side of the harvester is the hydraulic tank which provides the necessary hydraulic fluid to drive the components of the hydraulic system. The tank has a thirty gallon capacity and is fitted with a removable lid for ease of maintenance to the 125 micron suction strainer.

Situated on top of the tank is a filter unit (item 19 fig. 33) which houses a 40 micron filter. This filter must be replaced after the first 50 hours and thereafter every 500 hours.

The hydraulic tank should be filled with H68 Nuto hydraulic oil or equivalent and should always be kept full, especially when storing the machine for long periods of time. A level gauge is mounted on the side of the tank.



(2) Pump

The pump is mechanically driven from the power take off of the towing vehicle via a 3:1 mechanical gearbox. The pump is divided into two sections. The first section being the pump itself which delivers a flow rate of 20 gallons/minute at 540 PTO speed. The second section is a flow divider and relief valve. The flow divider splits the flow of oil, 10 gallons/minute to the Turbo Topper and 10 gallons/minute to the rotary flow divider.

(3) Rotary Flow Divider

The rotary flow divider splits the flow of oil four ways, the split is as follows:-

- |                  |   |  |
|------------------|---|--|
| 4 gallons/minute | - | depth control section of the valve block (item 4 fig. 33)      |
| 2 gallons/minute | - | automatic steerage section of the valve block (item 4 fig. 33) |
| 2 gallons/minute | - | tank and elevator valve block (item 5 fig. 33)                 |
| 2 gallons/minute | - | spinner wheel motor  |

(4) Auto Steering and Depth Control Valve Block

The block houses the electro magnetic valves necessary to operate the automatic steering and depth control.

(5) Tank and Elevator Valve Block

This block houses the electro magnetic valves necessary to raise and lower the tank base and to fold and unfold the discharge elevator.

(6) Check Valve

The check valve enables the rotors to slow down when the oil supply is shut off. The motor must always be connected to the oil supply via the check valve. Failure to do so will cause severe damage to the motor.

(7) Diverter Valve

The diverter valve fitted to the topper is designed to cut off the flow of oil to the motor when the topper is in its raised position, so stopping the rotors turning. The diverter valve must be adjusted with the topper in the raised position and the valve must also be closed. To adjust loosen the cap screws (item 16 fig. 33) securing the valve and slide the valve until the spool (item 17 fig. 33) touches centrally on the cam plate (item 18 fig. 33).

- (8) Turbo Topper Motor
- (9) Spinner Wheel Motor
- (10) Tank Base Ram
- (11) Discharge Elevator Ram
- (12) Spinner Wheel Ram
- (13) Depth Control Ram
- (14) Steerage Ram
- (15) In-Line Flow Control

There are three in line flow controls used in the circuit. One on the depth control ram and two on the steerage ram. The purpose of these controls is to control the rate of flow to the hydraulic rams. To adjust turn the controls with a spanner. To increase the flow of oil the control (item 17 fig. 33) should be turned so the gap between the nut and the control is increased, conversely the smaller the gap the less flow there is (see fig. 34).

#### PRESSURE RELIEF VALVE

There are five relief valves fitted within the hydraulic circuit. These relief valves are an essential safety feature of the Talisman hydraulic system. The design of the relief valve is to release pressure from the hydraulic system should an obstruction occur. All relief valves are set at 2200 p.s.i. and should NEVER be tampered with.

The relief valves are located as follows:-

- 2 in the auto steering and depth control valve block (4)
- 1 in the tank and elevator valve block (5)
- 1 in the diverter valve (7)
- 1 in the spinner motor pressure line

#### HYDRAULIC SYSTEM MAINTENANCE

The components utilised in the design of the hydraulic system have been chosen for their maintenance free characteristics. The only components requiring maintenance are the hydraulic fluid tank, strainer and tank filter. The recommended maintenance schedule for these items is as follows:-

After the first 50 hours running:

Replace tank top filter

Every 500 hours:

Replace tank top filter

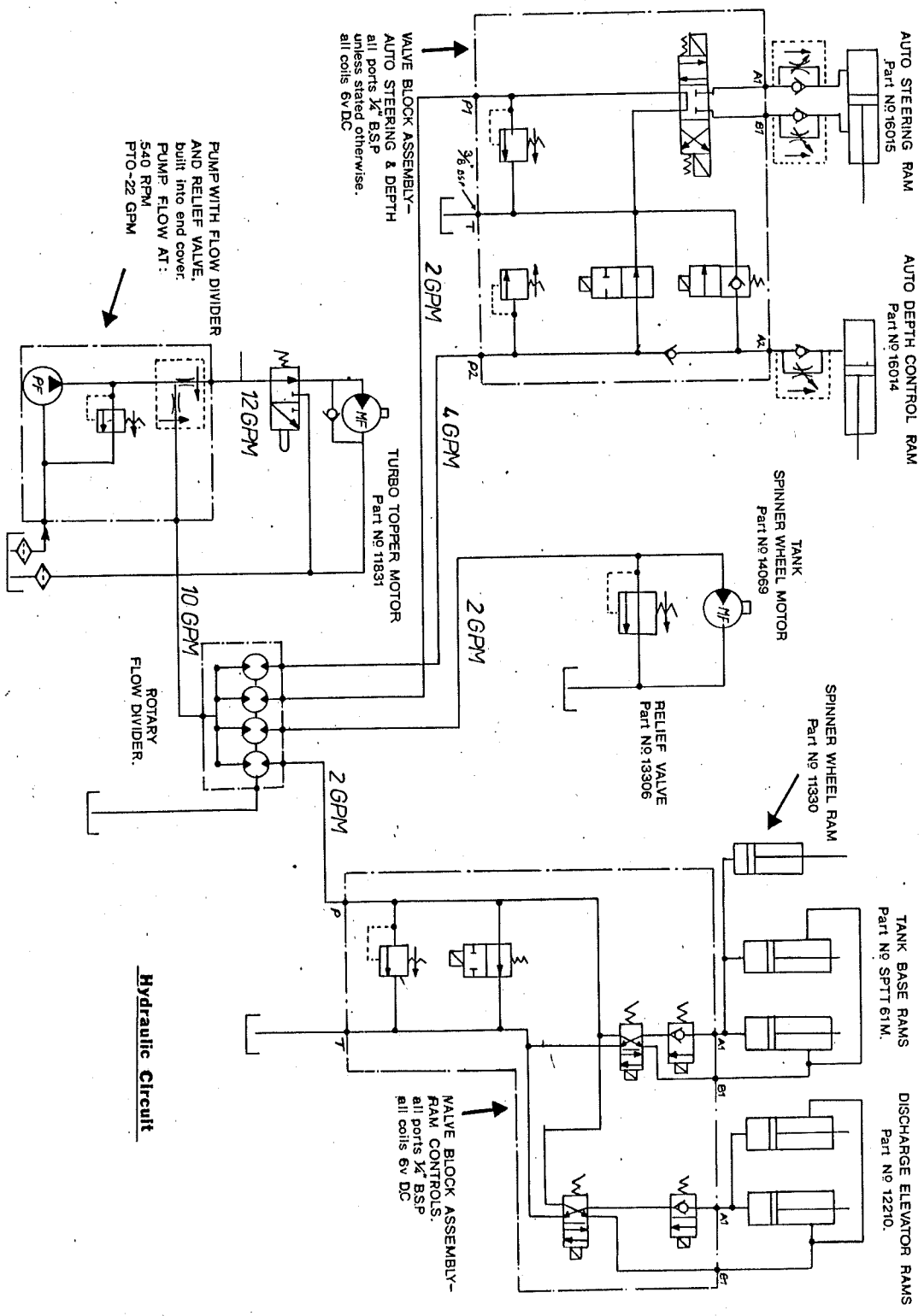
At the end of every season:

Remove the tank lid, dismantle the strainer and clean thoroughly.

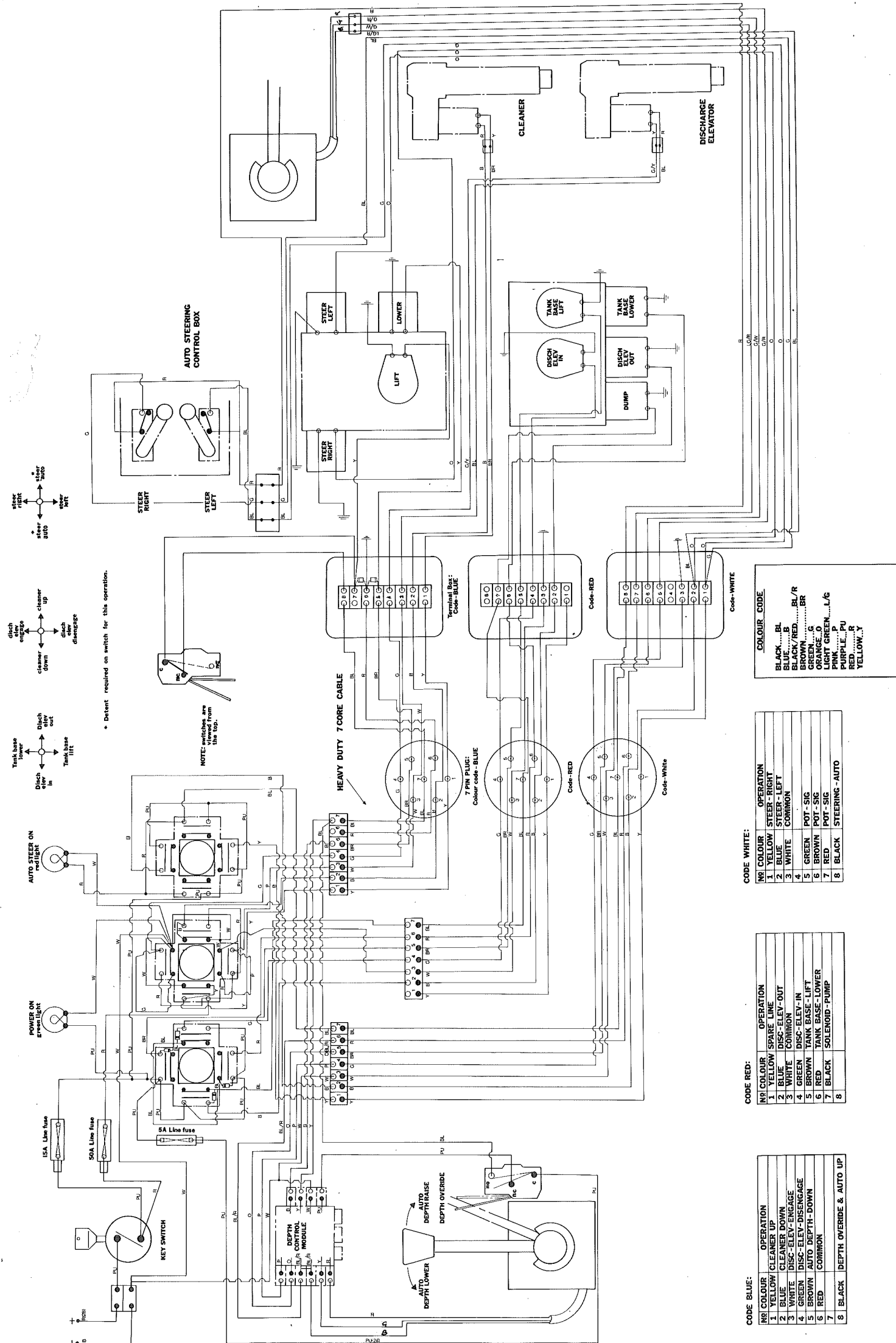
When carrying out any maintenance to the hydraulic system, cleanliness is of the utmost importance, so avoiding any dirt to enter the system.

NOTE

When topping up the tank only ESSO H68 Nuto hydraulic fluid or manufacturer's direct equivalent should be used.



Hydraulic Circuit



## LUBRICATION

Correct lubrication should be employed to ensure the full life of the various working parts and the efficient operation of the machine.

A general purpose grease should be used for the bearings and universal coupling drives. The two gearboxes should be filled with SAE 90 oil to the level of the plug, ref. O on fig. 35.

With references to fig. 35, some of the bearings are sealed and pre lubricated (Ref. GS on fig. 35), therefore care should be taken not to flood these bearings with grease or the seals will burst, allowing the grease to escape and dirt to get in. If this should happen, more frequent greasing will be required in order to keep the dirt at bay.

When lubricating sealed bearings, only two or three strokes of the grease gun every twenty acres of work is required.

The non sealed bearing (Ref G on fig. 35) should be greased at least once a day or every ten acres.

Particular care must be taken to ensure that grease or oil does not come into contact with the friction clutch discs or the vee belts and pulley on some of the drives.

We recommend that the universal couplings should be dismantled every season and their shafts smeared with general purpose grease.

# Grease Points

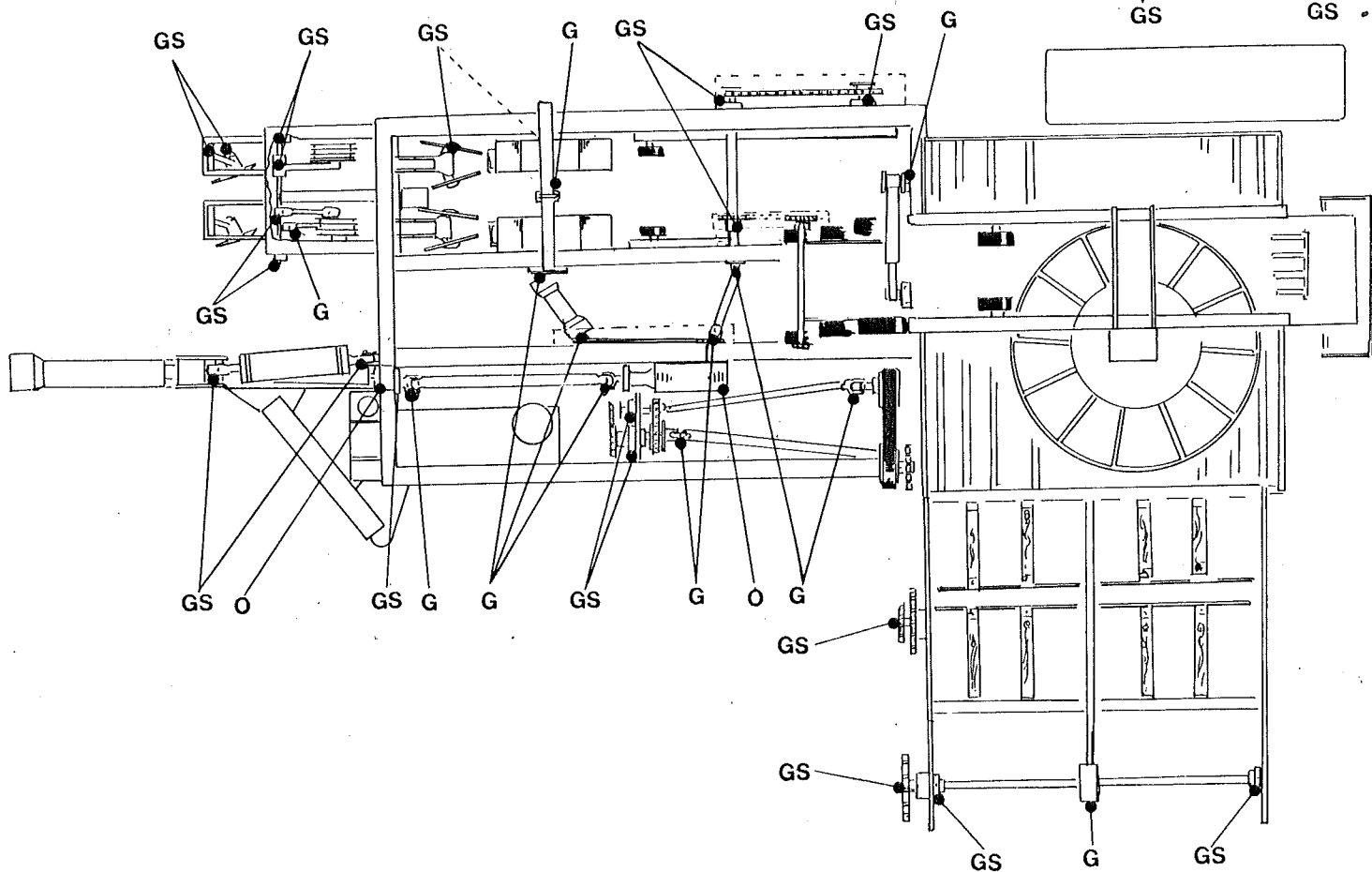
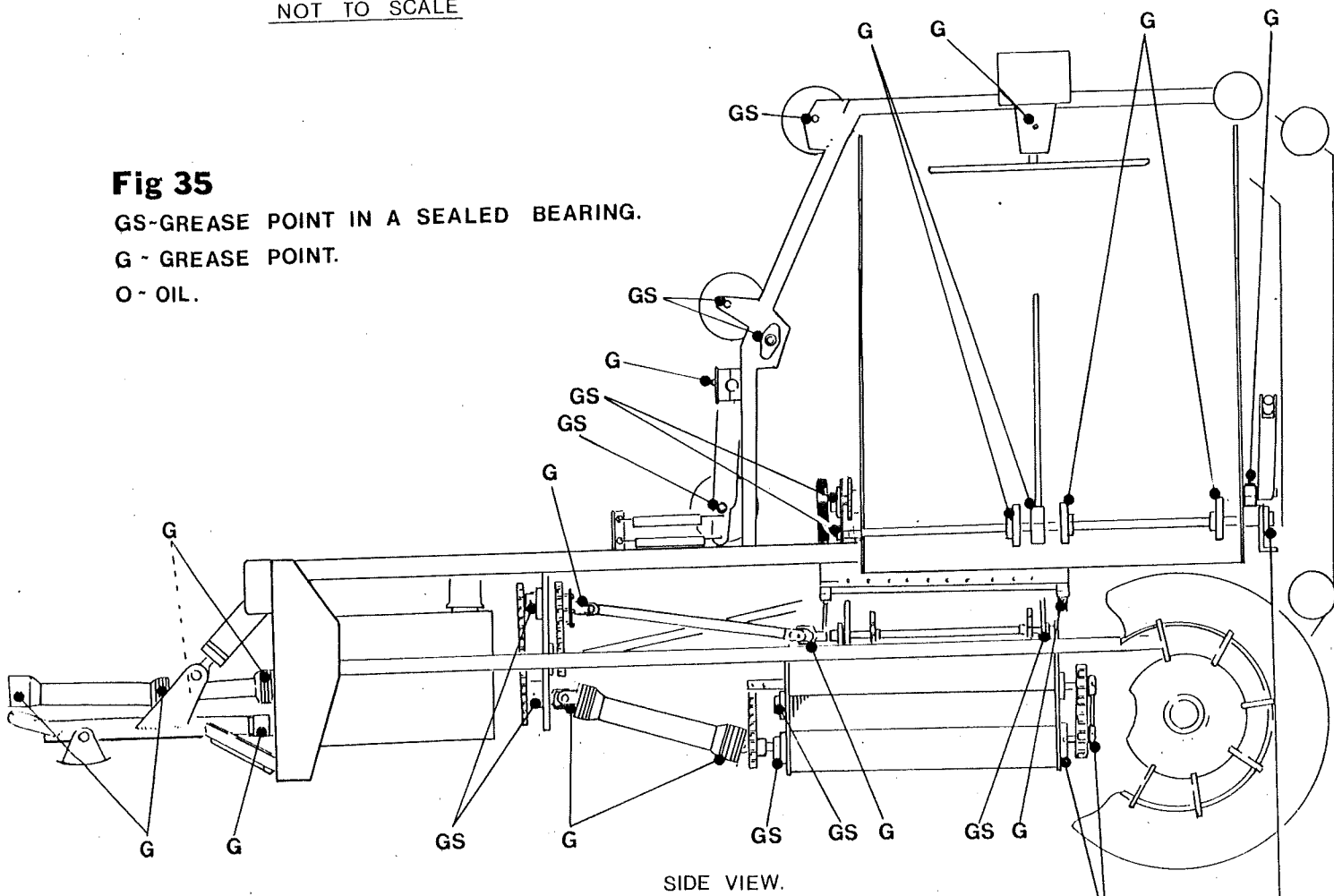
NOT TO SCALE

**Fig 35**

GS-GREASE POINT IN A SEALED BEARING.

G - GREASE POINT.

O - OIL.



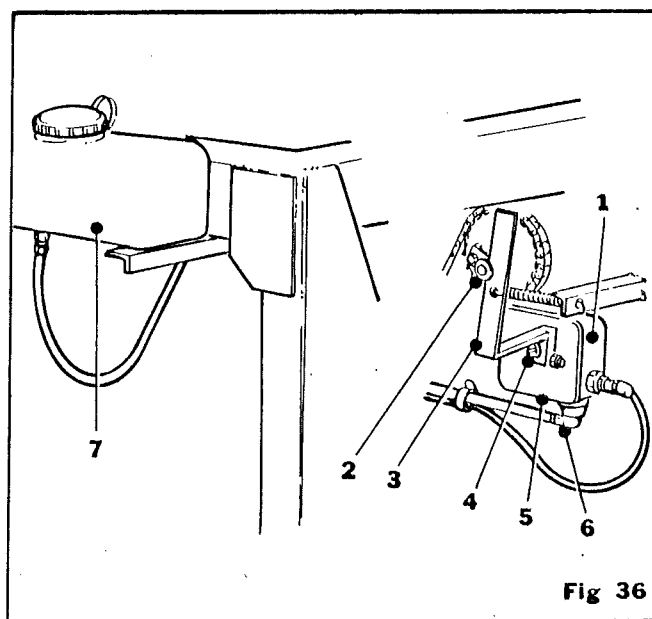
PLAN VIEW.

## AUTOMATIC LUBRICATION

Automatic lubrication is fitted to lubricate four drive chains (items 1, 2, 3, & 11 fig. 27), four cleaner drive chains and four bearings fitted on the Turbo Topper. The oil is pumped round by a lubrication pump (item 1 fig. 36). A reaction wheel (item 2 fig. 36) is fitted eccentric to the operating arm (item 3 fig. 36) giving a pressure of 200 p.s.i. The stroke of the operating arm (item 3 fig. 36) can be adjusted by loosening the clamp of the operating arm and turning the slotted spindle (item 4 fig. 36) with a screwdriver. If more lubrication is required, turn the slotted spindle towards the + position stamped on the pump top plate (item 5 fig. 36) and whilst holding this position with a screwdriver tighten the clamp bolt on the operating arm (item 3 fig. 36). When carrying out this operation ensure that the reaction wheel (item 2 fig. 36) is at its furthest stroke.

## PRIMING THE LUBRICATION SYSTEM

The system is self priming with the feed pipe (item 6 fig. 26) being fitted from the bottom of the pump (item 8 fig. 26) to the bottom of the reservoir (item 7 fig. 26). When filling the system with oil for the first time or in case the system has been allowed to become empty the system must be primed. To prime the system operate the operating arm (item 3 fig. 36) manually until the oil is discharged from one of the feed pipes. Top up the oil reservoir with oil as required. The reservoir should be filled with SAE 90 gear oil. Inside the oil reservoir there is situated a filter. This filter should be renewed annually.





## GENERAL SPECIFICATION

LENGTH - 20' 6" (6.25m.)

HEIGHT (IN TRANSPORT AND WORK) - 11' 8" (3.56m.)

WIDTH (IN TRANSPORT) - 9' 11" (3.02m.)

WIDTH (IN WORK) - 14' 4" (4.37m.)

WEIGHT - Total (unladen) - 4.6 tons

- Rear Axle (unladen) - 3.2 tons

- Rear Axle (laden) - 7 tons

- Tow Hitch - 1.4 tons

TANK CAPACITY - 4 tons

ROW WIDTHS - 18" to 21" (457 mm. to 533 mm.)

REAR WHEELS TRACK WIDTH (CENTRE TO CENTRE) - 7' 11" to 9' 2"  
(2.41 m. to 2.79 m.)

TYRE SIZE - 16.9 x 26

TYRE PRESSURE - 35 lbs/in<sup>2</sup>

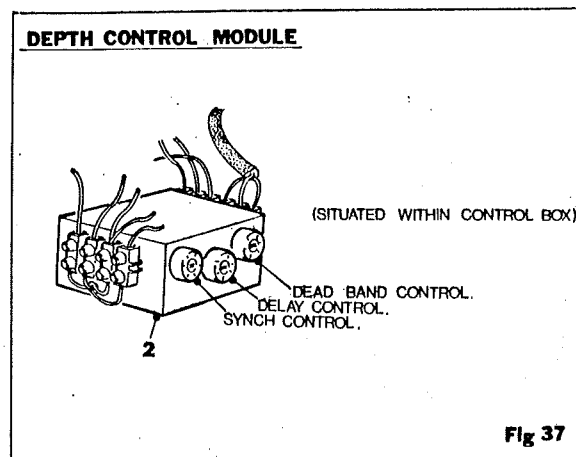
HYDRAULIC FLUID TANK CAPACITY - 30 gallons

FRONT GEARBOX (PUMP) - 3:1 ratio

MAIN DRIVE GEARBOX - 2:1 ratio

## SETTING INSTRUCTIONS FOR THE DEPTH CONTROL MODULE

The depth control module (item 2 fig. 37) is preset at the factory and should not usually need any adjustment. The only time the module may give problems is if the controls have been altered.



## SETTING THE SYNCHRONIZATION (Synch)

Using a voltmeter check the red lead to earth of each controller (item 6 fig. 17 and item 1 fig. 37).

Both the controllers should read approximately 8 volts. If one controller reads 8 volts and the other does not, turn the synch control, see fig. 37 until it does.

## SETTING THE DEAD BAND

The dead band is the time elapsed between one switch being deactuated and the other one being actuated. Therefore moving the dead band control see fig. 37, increases or decreases the amount of time elapsed. Setting the dead band is achieved by trial and error.

To set the dead band:-

1. Turn the delay control, see fig. 37, slowly anticlockwise until it stops. (This will give no delay).
2. Set the dead band to the required setting by turning the dead band control see fig. 37. The setting should now be checked by operating the depth foot (item 1 fig. 17).
3. Reset the delay control by turning it clockwise to give the desired delay.

# **SECTION 2**

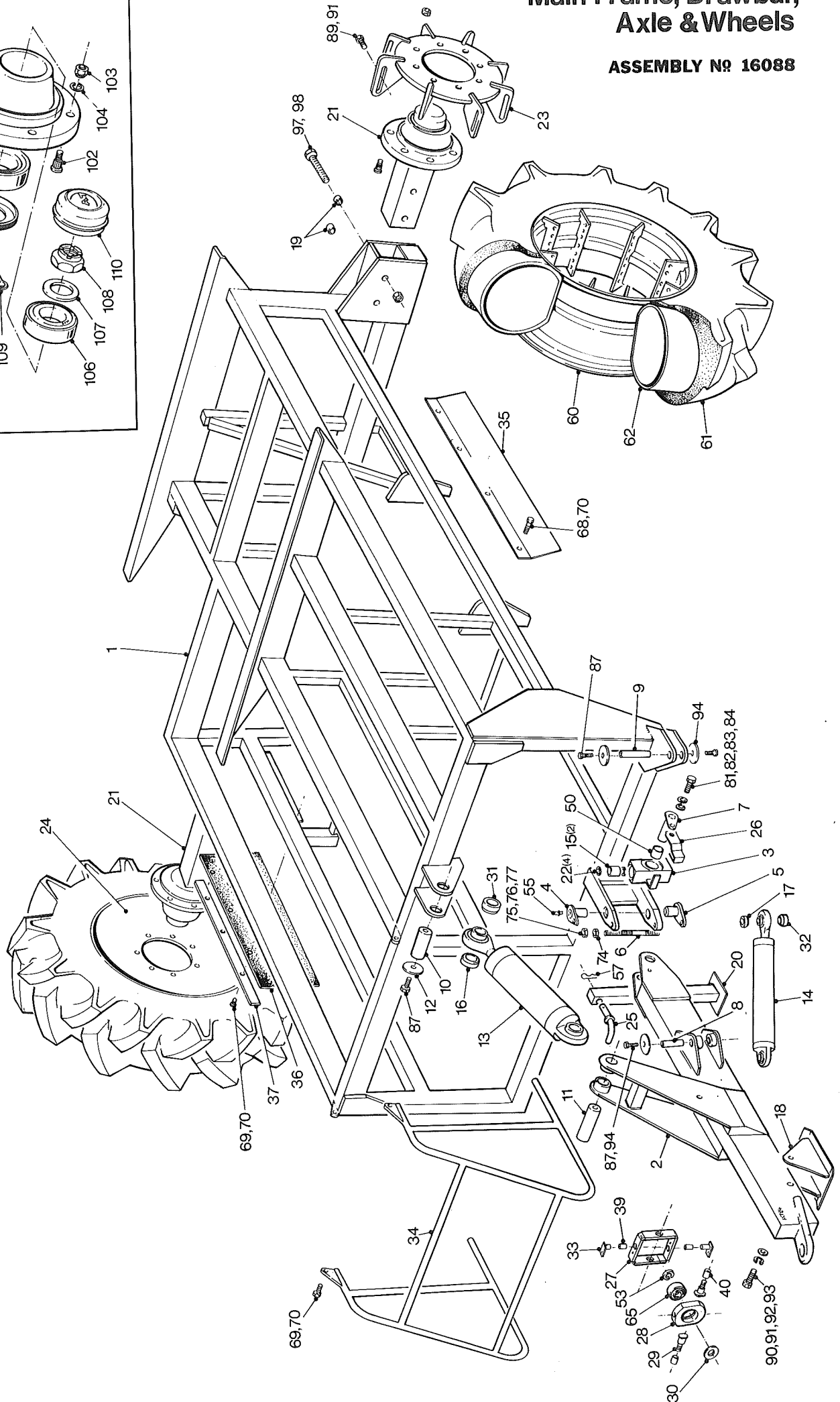
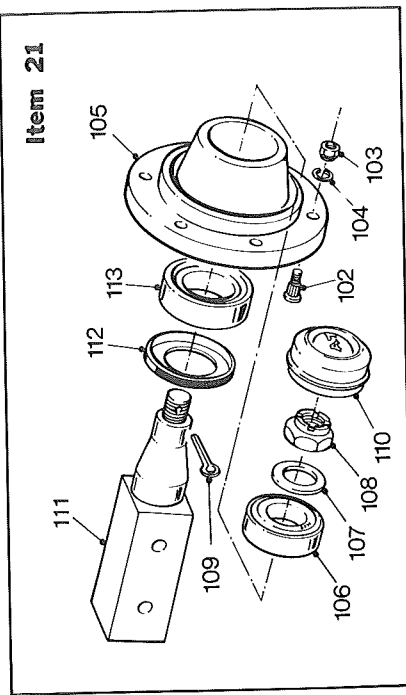
## **EXPLODED PARTS ILLUSTRATIONS**



# Item 21

## Main Frame, Drawbar, Axle & Wheels

ASSEMBLY № 16088



Item no	PART NO	DESCRIPTION	Qty
1	16001	MAIN FRAME	1
2	16002	DRAWBAR	1
3	16004	PIVOT BLOCK	1
4	16005	PIVOT PIN	1
5	16006	PIVOT PIN	1
6	16007	PIVOT TIE BAR	1
7	16008	PIVOT PIN	1
8	16009	RAM PIN	1
9	16010	RAM PIN	1
10	16011	RAM PIN	1
11	16012	RAM PIN	1
12	16013	LARGE WASHER	4
13	16014	LIFT RAM	1
14	16015	STEER RAM (	1
15	16016	OILITE BUSH	2
16	16017	SPACER	1
17	16018	SPACER	1
18	16023	FOOT	1
19	16024	AXLE SLUG	4
20	16025	MAIN SUPPORT LEG	1
21	16028	STUB AXLE	2
22	16045	OILITE WASHER	4
23	16058	ADJUSTABLE WHEEL CENTRE	1
24	16059	FIXED WHEEL RIM	1
25	16087	MAIN SUPPORT LEG PIN	1
26	16222	MICRO-SWITCH HOLDER	1
27	16293	YOKE	1
28	16294	BEARING HOUSING	1
29	16254	SHOULDER BOLT	2
30	16303	BEARING SEAL WASHER (SERIAL NO YTO03-8 ONLY)	1
31	16309	SPACER	1
32	16310	SPACER	1
33	16363	PIVOT PIN	2
34	16365	SAFETY FRAME	1
35	16366	DEFLECTOR PLATE	1
36	16369	RUBBER FLAP	1
37	16370	CLAMP STRIP	1
38			
39	16364	BUSH	2
40	11767	BUSH	2
41			
42			
43			
44			
45			
46			
47			
48			
49			
50	12123	OILITE BUSH	2
51			
52			
53	BMZ 119	CIRCLIP (DOUBLE COIL)	1
54			
55	GS 409	GREASE NIPPLE (ANGLED)	1
56			
57	H 105	QUICK RELEASE PIN	1
58			
59			

## ASSEMBLY; 16088

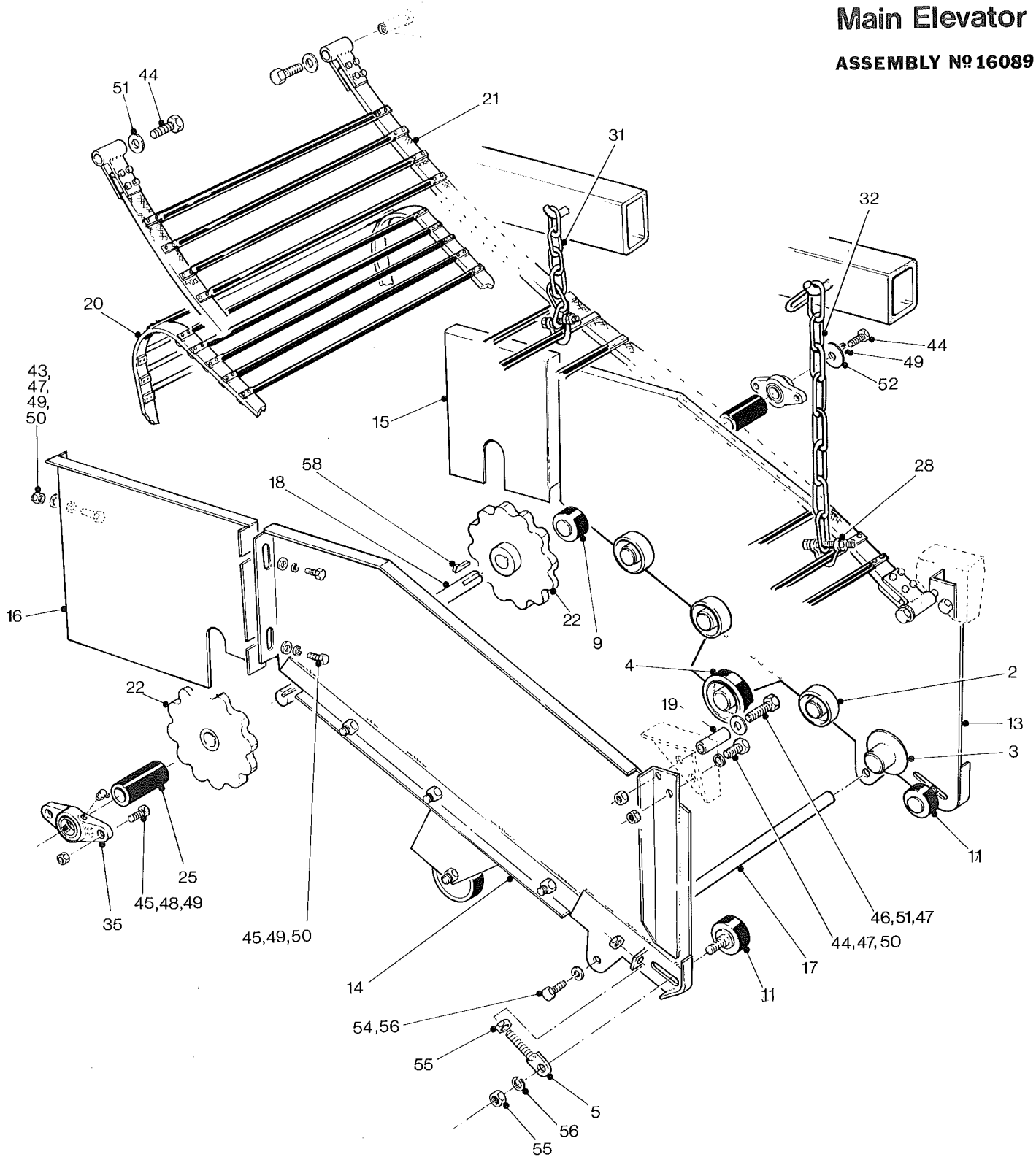
Item no	PART NO	DESCRIPTION	Qty
60	SPCL 533	ADJUSTABLE RIM	1
61	SPCL 574	TYRE 16.9 x 26	2
62	SPCL 575	TUBE 16.9/1.4 x 26	2
63			
64			
65	6207 2RS	Bearing	1
66			
67			
68		M8 x 16mm HEX HD SETSCREW	4
69		M9 x 25mm HEX HD SETSCREW	5
70		M8 LOCK NUT	9
71			
72			
73			
74		M10 NUT	2
75		M10 LOCK NUT	2
76		M10 SPRING WASHER	2
77		M10 PLAIN WASHER	2
78			
79			
80			
81		M12 x 40mm HEX HD BOLT	1
82		M12 LOCK NUT	1
83		M12 SPRING WASHER	1
84		M12 PLAIN WASHER	1
85			
86			
87		M16 x 30mm HEX HD BOLT	8
88		M16 x 40mm HEX HD BOLT	1
89		M16 x 50mm HEX HD BOLT	16
90		M16 120mm HEX HD BOLT	1
91		M16 LOCK NUT	16
92		M16 SPRING WASHER	9
93		M16 PLAIN WASHER	16
94		M16 WASHER (60mmO/D)	5
95			
96			
97		M24 x 150mm HEX HD BOLT	4
98		M24 LOCK NUT	4
99			
100		<u>STUB AXLE ASSEMBLY CONSISTS OF:-</u>	
101			
102	16028/1	SERRATED STUD	16
103	16028/2	NUT	16
104	16028/3	SPRING WASHER	16
105	16028/4	HUB	2
106	16028/5	BEARING	2
107	16028/6	RETAINING WASHER	2
108	16028/7	LOCK NUT	2
109	16028/8	COTTER PIN	2
110	16028/9	END CAP	2
111	16028/10	AXLE	2
112	16028/11	SEAL	2
113	16028/12	BEARING	2
114			
115			





# Main Elevator

ASSEMBLY № 16089



Item 9,11	Item 4	Item 3	Item 2

## ASSEMBLY; 16089

Item no	PART NO	DESCRIPTION	Qty
1			
2	11569	PLAIN ROLLER ASSY	6
3	11572	FLANGED ROLLER ASSY	2
4	11573	PLAIN RUBBERED ROLLER ASSY	2
5	11638	ROLLER ADJUSTER	2
6	11266	BEET DEFLECTOR PLATE	2
7			
8			
9	12526	PLAIN RUBBERED ROLLER ASSY	2
10			
11	19356	PLAIN RUBBERED ROLLER ASSY	2
12			
13	16035	WEB SIDE (LH)	1
14	16036	WEB SIDE (RH)	1
15	16037	REAR PANEL (LH)	1
16	16038	REAR PANEL (RH)	1
17	16039	TIE BAR	1
18	16040	WEB SHAFT	1
19	16042	SUPPORT SPACER	2
20	16048	MAIN WEB ASSY	1
21	16057	CLEANER APRON ASSY	1
22	16360	WEB SPROCKET	2
23			
24			
25	A 165	PLASTIC SPACER	2
26			
27			
28	H 171	CHAIN 'D' SHACKLE	4
29			
30			
31	PS 519/5	CHAIN	2
32	PS519/10	CHAIN	2
33			
34			
35	SFT 40A	BEARING	2
36			
37			
38		M10 x 30mm HEX HD SETSCREW	4
39			
40		M10 LOCK NUT	4
41			
42			
43		M12 x 20mm HEX HD BOLT	4
44		M12 x 30mm HEX HD BOLT	5
45		M12 x 40mm HEX HD BOLT	8
46		M12 x 90mm HEX HD BOLT	2
47		M12 NUT	8
48		M12 LOCK NUT	4
49		M12 SPRING WASHER	13
50		M12 PLAIN WASHER	10
51		M12 EX. LARGE WASHER	4
52		M12 EX. LARGE WASHER	1
53			
54		M16 x 30mm HEX. HD. BOLT	2
55		M16 NUT	18
56		M16 SPRING WASHER	16
57			
58		8 x 7 GIB HEAD KEY x 50	2
59			

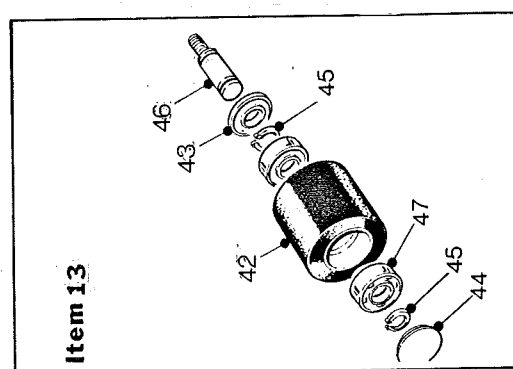
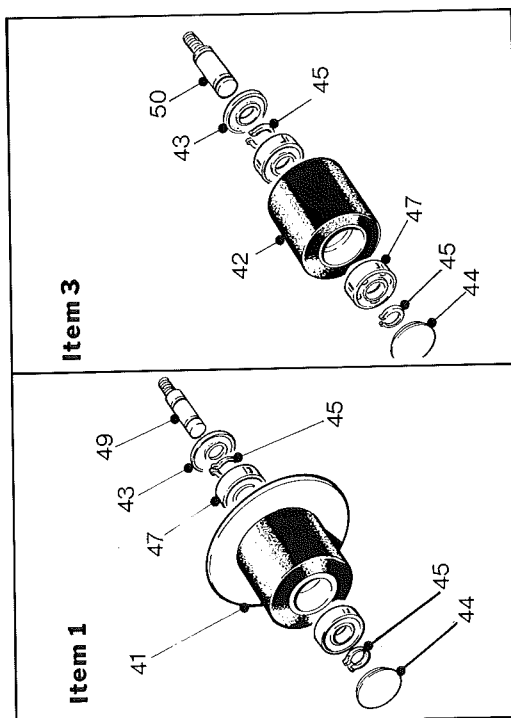
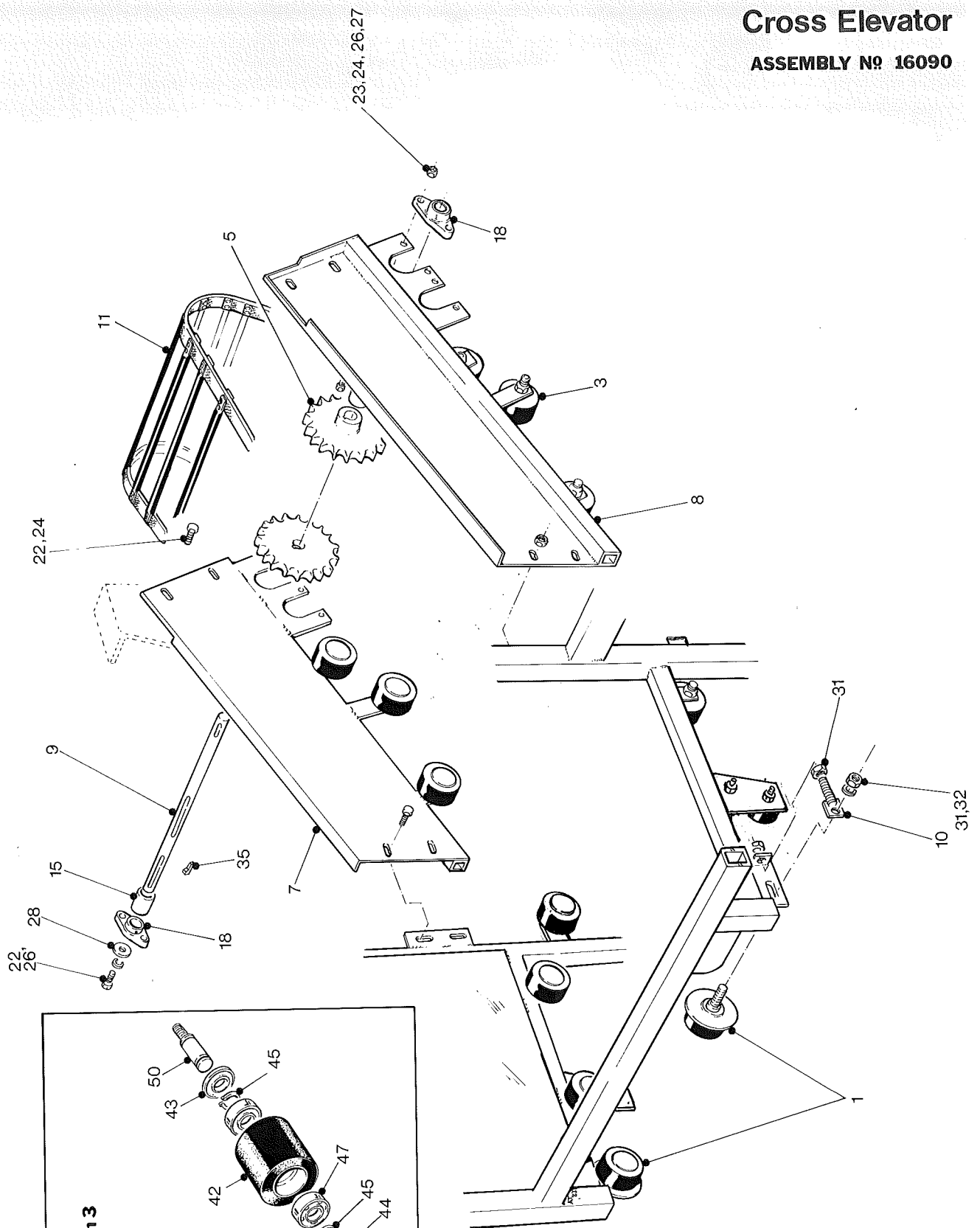
## ASSEMBLY; 16089

Item no.	PART NO	DESCRIPTION	Qty
60		ROLLER ASSEMBLIES CONSISTS OF:-	
61	PH 51A	ROLLER	2
62	PH 77AR	ROLLER	4
63	PH 407	INNER SEAL	14
64	PH 408	OUTER SEAL	14
65	PS 843	CIRCLIP	28
66	PH 406AM	SPINDLE (USED ON ASSEMBLY NO. 11 ONLY)	2
67	11033	ROLLER	6
68	11034	ROLLER	2
69	11265	SPINDLE	10
70	12522	SPINDLE (USED ON ASSEMBLY NO. 9 ONLY)	2
71			
72	6005 RS	BEARING	28



# Cross Elevator

ASSEMBLY № 16090

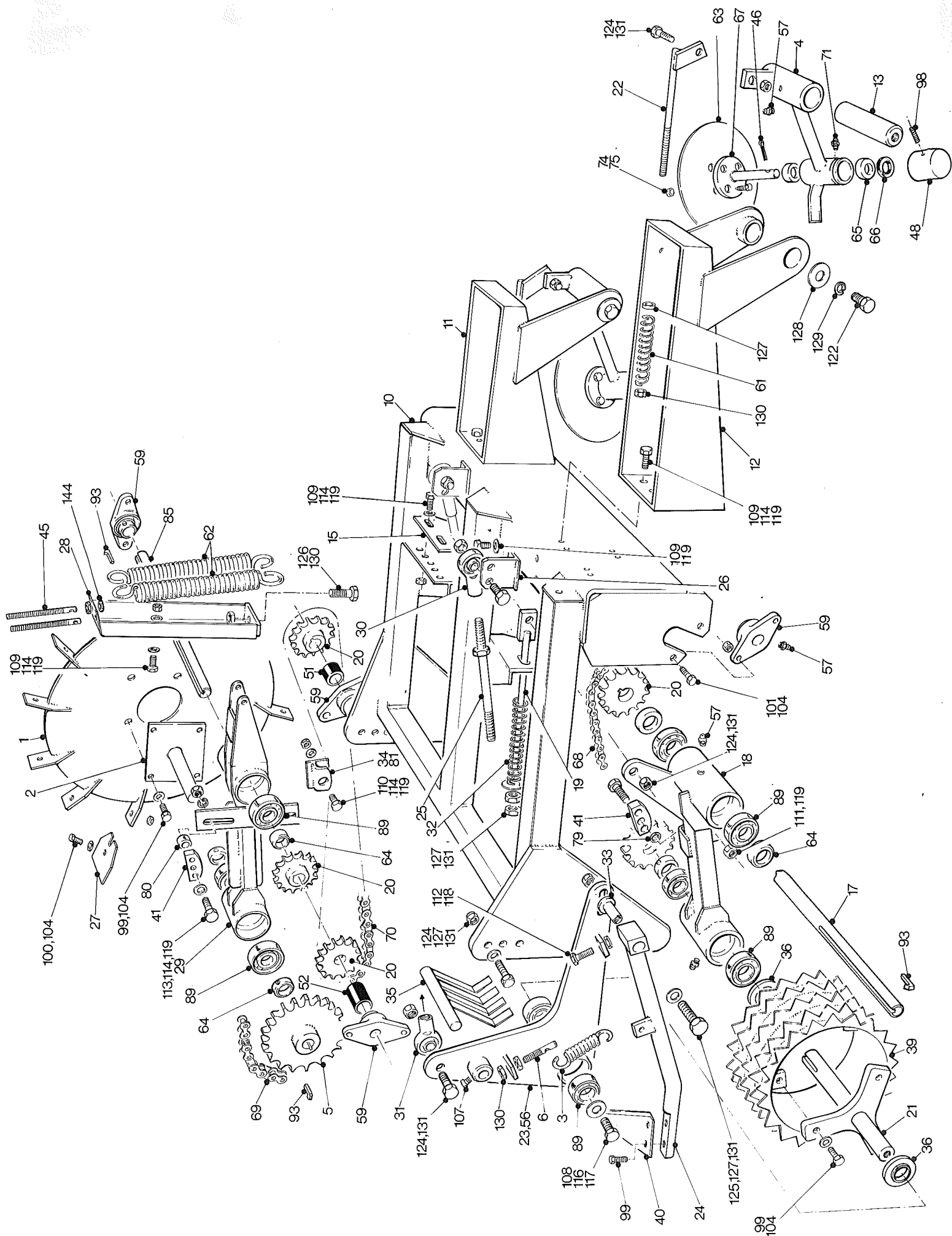


## ASSEMBLY; 16090

Item no	PART NO	DESCRIPTION	Qty
1	12506	RUBBERED ROLLER ASSY	2
2			
3	12526	RUBBERED ROLLER ASSY	12
4			
5	13212	WEB SPROCKET	2
6			
7	16043	WEB SIDE REAR	1
8	16044	WEB SIDE FRONT	1
9	16046	DRIVE SHAFT	1
10	16047	ROLLER ADJUSTER	2
11	16049	WEB ASSY	1
12			
13	19356	RUBBERED ROLLER ASSEMBLY	2
14			
15	C 60	PLASTIC SPACER	2
16			
17			
18	SFT 30A	BEARING	2
19			
20			
21			
22		M10 x 30mm HEX HD BOLT	9
23		M10 x 35 mm HEX HD BOLT	4
24		M10 NUT	4
25		M10 LOCK NUT	4
26		M10 SPRING WASHER	9
27		M10 PLAIN WASHER	8
28		M10 EX. LARGE WASHER	1
29			
30			
31		M16 NUT	18
32		M16 SPRING WASHER	14
33			
34			
35		8 x 7 GTB HEAD KEY x 50	2
36			
37			
38			
39			
40		<u>ROLLER ASSEMBLIES CONSISTS OF:-</u>	
41	PH 51AR	ROLLER	2
42	PH 77AR	ROLLER	14
43	PH 407	INNER SEAL	16
44	PH 408	OUTER SEAL	16
45	PS 843	CIRCLIP	32
46	PH406AM	SPINDLE	2
47	6005 RS	BEARING	32
48			
49	11265	SPINDLE	2
50	12522	SPINDLE	12
51			
52			

# Topping Unit

ASSEMBLY № 16091



## ASSEMBLY ; 16091

Item no	PART NO	DESCRIPTION	Qty
1	11406	PADDLE WHEEL	1
2	11527	PADDLE WHEEL SHAFT	1
3	11648	SPRING	2
4	11678	DISC ARM	2
5	11722	29T x 75" SPROCKET	1
6	11813	TENSIONER	2
7			
8			
9			
10	16019	TOPPONG UNIT FRAME	1
11	16020	L.H. DISC FRAME	1
12	16021	R.H. DISC FRAME	1
13	16022	DISC ARM PIVOT SHAFT	2
14			
15	16050	ADJUSTABLE SPRING PLATE	1
16			
17	16064	FEELER WHEEL DRIVE SHAFT	1
18	16065	FEELER WHEEL ARM	2
19	16067	BOUNCE DAMPER	2
20	16068	15T x 75" SPROCKET	7
21	16069	FEELER WHEEL SHAFT	2
22	16070	TENSION SCREW	2
23	16072	SCALPER ARM BRACKET	2
24	16073	KNIFE ARM	2
25	16074	PARALLEL MOTION LINK	2
26	16075	PARALLEL MOTION BRACKET	2
27	16077	SOFT LAND PADDLE	12
28	16078	PADDLE WHEEL SPRING BOX	1
29	16079	PADDLE WHEEL ARM	1
30	16080	LINK END R.H.	2
31	16081	LINK END L.H.	2
32	16903	SPRING	2
33	16292	KNIFE ARM PIVOT	2
34	16297	CHAIN TENSIONER	1
35	16378	SCRAPER	2
36	16415	SPACER	
37			
38			
39	17117	FEELER WHEEL	2
40	17129	KNIFE	2
41	17155	NYLON TENSIONER	3
42			
43			
44			
45	BM82M	TENSIONER SCREW	2
46	BM218	DISC RETAINING PIN	2
47			
48	BMT81M	DUST CAP	2
49			
50			
51	C 37	SPACER	1
52	C 67	SPACER	1
53			
54			
55			
56	GS 409	ANGLED GREASE NIPPLE	2
57	GS 412	GREASE NIPPLE	10
58			
59	PCJTY 30	BEARING	5



## ASSEMBLY; 16091

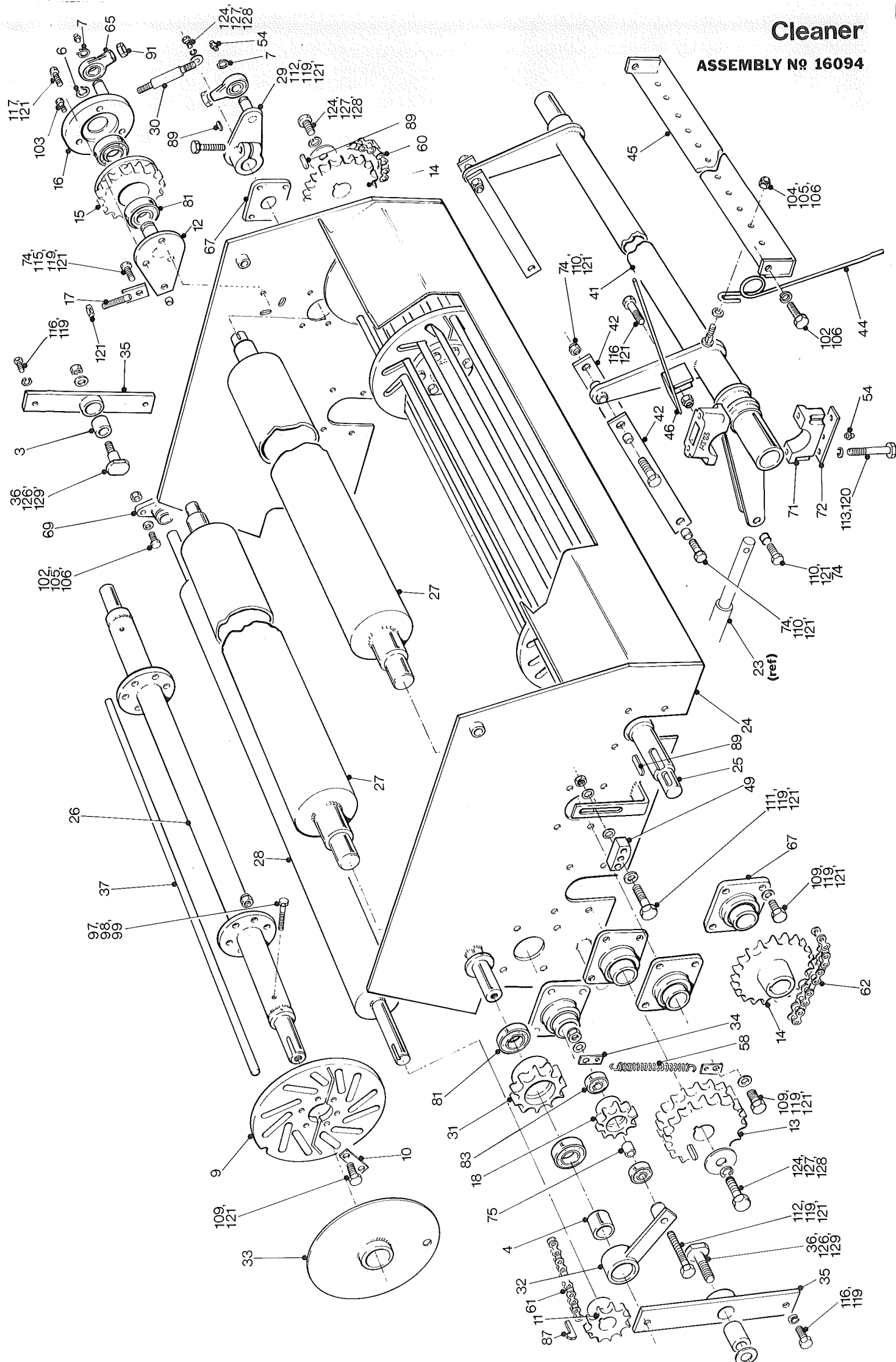
Item no	PART NO	DESCRIPTION	Qty
60			
61	PS 165	SPRING	2
62	PS 194	SPRING	2
63	PS 224	DISC	2
64	PS 326M	COLLAR	9
65	PS 386M	BUSH	4
66	PS 588	OIL SEAL	2
67	PS 596AM	DISC SPINDLE	2
68	PS871/50	CHAIN	1
69	PS871/64	CHAIN	1
70	PS871/85		
71			
72			
73			
74	2611-1007	DISC FIXING PIN	8
75	2682-1000	DISC FIXING COLLAR	8
76			
77			
78			
79	SS/025013/ 004	SPACER	2
80	SS/025013/ 018	SPACER	1
81	SS/04013/ 015	SPACER	1
82			
83			
84			
85	TBMW 362	TRANSFER SHAFT	1
86			
87			
88			
89	6206-RS	BEARING	16
90			
91			
92			
93		8 x 7 x 50 GIB HEAD KEY	7
94		8 x 7 R.B.E. KEY 30	1
95			
96			
97			
98		M10 SOCKET HD SCREW x 10	2
99		M10 BOLT x 30	16
100		M10 BOLT x 35	12
101		M10 BOLT x 50	10
102		M10 LARGE WASHER	2
103		M10 SPRING WASHER	6
104		M10 LOCK NUT	32
105			
106			
107		M12 BOLT x 20	2
108		M12 x 30	2
109		M12 BOLT x 40	8
110		M12 BOLT x 50	1
111		M12 BOLT x 70	2
112		M12 BOLT x 80	1
113		M12 SETSCREW x 80	2
114		M12 WASHER	7
115		M12 LARGE WASHER	2

## ASSEMBLY;16091

Item no	PART NO	DESCRIPTION	Qty
116		M12 SPECIAL WASHER	2
117		M12 SPRING WASHER	2
118		M12 HEX. NUT	6
119		M12 LOCKNUT	12
120			
121			
122		M16 BOLT x 30	4
123		M16 BOLT x 40	2
124		M16 BOLT x 50	10
125		M16 BOLT x 110	2
126		M16 SETSCREW x 80	1
127		M16 WASHER	12
128		M16 LARGE WASHER	4
129		M16 SPRING WASHER	4
130		M16 HEX. NUT	7
131		M16 LOCK NUT	18
132			
133			
134			
135			
136			
137			
138			
139			
140			
141			
142			
143			
144			

# Cleaner

ASSEMBLY № 16094



## ASSEMBLY; 16094

Item no	PART NO	DESCRIPTION	Qty
1	11717	STOP COLLAR	1
2			
3	12121	BUSH	2
4	12122	BUSH	1
5			
6	RH56	CIRCLIP	2
7	12298	CIRCLIP	4
8			
9	13221	ROLLER PLATE	4
10	13230	LOCKTAB	24
11	13308	SPROCKET 15	1
12	13316	AGITATOR DRIVE SPIGOT	2
13	13319	DOUBLE SPROCKET 23	1
14	13320	SPROCKET 23	3
15	13323	AGITATOR DRIVE SPROCKET	2
16	13324	AGITATOR DRIVE PLATE	2
17	13326	ADJUSTABLE SCREW	2
18	13327	16 IDLER SPROCKET	1
19			
20			
21			
22			
23	16121	LINEAR ACTUATOR	1
24	16126	BODY	1
25	16127	ROLLER SHAFT	1
26	16128	ROLLER SHAFT	1
27	16129	AGITATOR ROLLER	2
28	16130	WEB FEED ROLLER	1
29	16131	AGITATOR ARM	2
30	16132	AGITATOR ROD	2
31	16133	IDLER SPROCKET 15 T	1
32	16134	TENSIONING ARM	1
33	16135	SPRING HOLDER	2
34	16136	PIVOT ARM	2
35	16137	SHOULDER BOLT	2
36	16138	SHOULDER BOLT	2
37	16139	CENTRIFUGAL ROLLER ROD	24
38			
39			
40			
41	16143	LIFT SHAFT	1
42	16144	LIFT LINK	4
43			
44	16146	GRILL SPRING	24
45	16379	GRILL MOUNTING ANGLE PART No WAS 16145 PRIOR TO SERIAL No Y1008	1
46	16384	CLEANER ANGLE INDICATOR	1
47			
48			
49	17155	TENSIONER	1
50			
51			
52			
53			
54	GS 142	GREASE NIPPLE	4
55			
56			
57			
58	PS 457	SPRING	1
59			

## ASSEMBLY; 16094

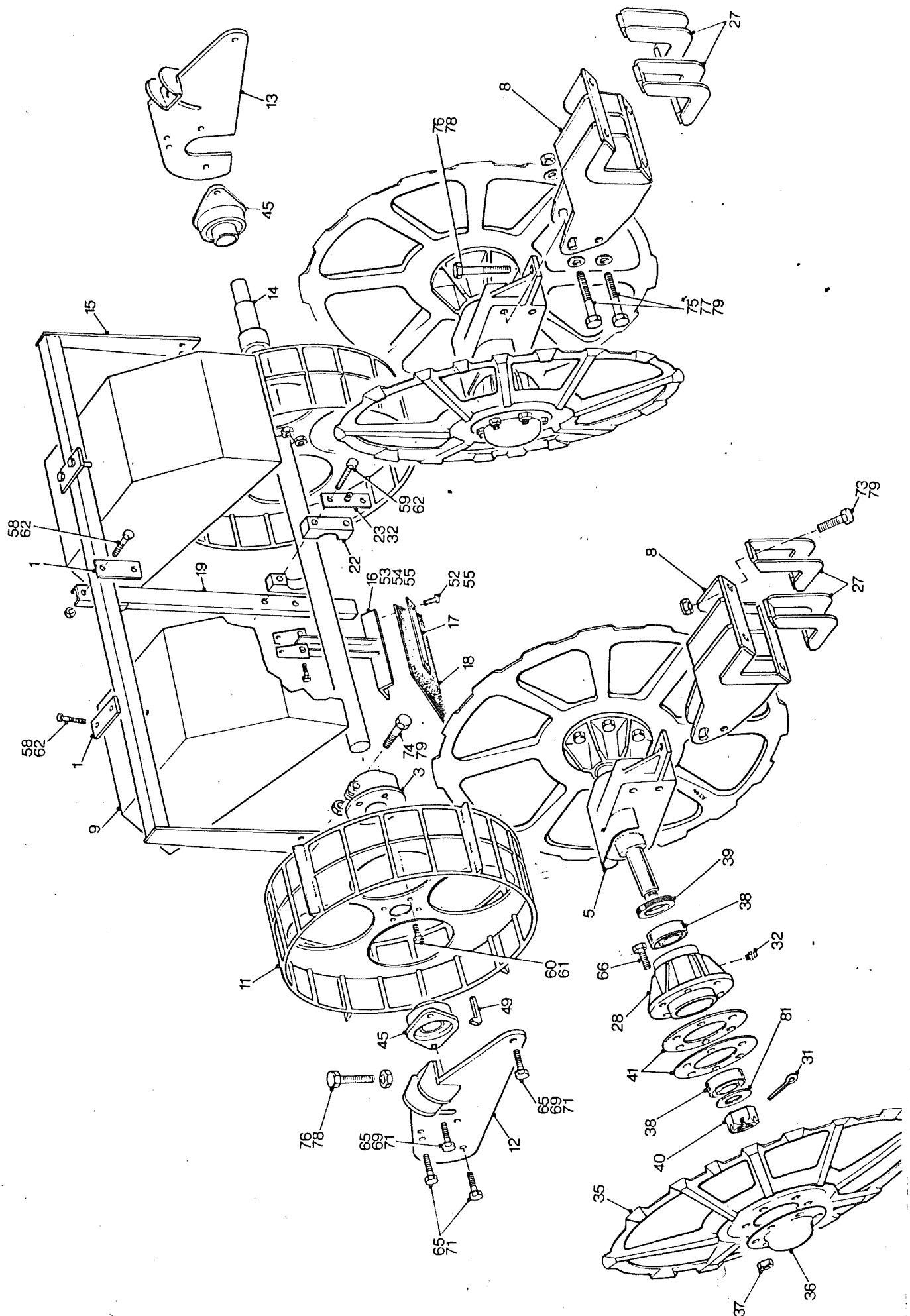
Item no	PART NO	DESCRIPTION	Qty
60	PS871/50	CHAIN (AGITATOR DRIVE)	2
61	PS871/56	CHAIN (WEB FEED DRIVE)	1
62	PS871/61	CHAIN	1
63			
64			
65	SCHB 20	BEARING	4
66			
67	SF 40	BEARING	8
68			
69	SFT 30	BEARING	2
70			
71	SPCT132	BEARING BLOCK	4
72	SPCT143	CLAMP PLATE	2
73			
74	SS/016013/007	SPACER	10
75	SS/016013/014	SPACER	1
76			
77			
78			
79			
80			
81	6206RS	BEARING Ø 30 SHAFT	6
82			
83	6301RS	BEARING Ø 12 SHAFT	2
84			
85			
86			
87		7 x 8 x 50 GIB HEAD KEY	1
88			
89		7 x 8 x 40 R.B.E. KEY	6
90			
91		½" BSP LOCKNUT	4
92			
93			
94			
95			
96			
97		MB BOLT x 80	4
98		MB WASHER	4
99		MB LOCKNUT	4
100			
101		M10 SETSCREW x 25	1
102		M10 BOLT x 40	6
103		M10 SKT HD SCREW x 25	6
104		M10 CUP SQ CARRIAGE BOLT x 30	24
105		M10 WASHER	28
106		M10 LOCKNUT	28
107		M10 SPRING WASHER	2
108			
109		M12 BOLT x 40	57
110		M12 BOLT x 60	6
111		M12 BOLT x 70	1
112		M12 BOLT x 80	3
113		M12 BOLT x 120	4
114			
115		M12 SETSCREW x 25	2
116		M12 SETSCREW x 30	7

## ASSEMBLY ; 16094

Item no	PART NO	DESCRIPTION	Qty
117		M12 SETSCREW x 25	2
118			
119		M12 WASHER	41
120		M12 SPRINGWASHER	4
121		M12 LOCKNUT	78
122			
123			
124		M16 SETSCREW x 40	5
125			
126		M16 WASHER	3
127		M16 LARGE WASHER	5
128		M16 SPRING WASHER	5
129		M16 LOCKNUT	2
130			

# Lift & Cage Wheels

ASSEMBLY No 16198



## ASSEMBLY; 16198

Item no	PART NO	DESCRIPTION	Qty
1	11187	CLAMP PLATE	3
2			
3	11389	WHEEL CLAMP	2
4			
5	12095	LIFT WHEEL MOUNTING	2
6			
7			
8	16124	LIFT WHEEL MOUNTING BRACKET	2
9	16125	CAGE WHEEL GUARD	2
10			
11	16150	CAGE WHEEL	2
12	16151	SHAFT MOUNTING BRACKET R.H.	1
13	16152	SHAFT MOUNTING BRACKET L.H.	1
14	16153	CAGE WHEEL SHAFT	1
15	16154	CAGE GUARD MOUNTING BRACKET	1
16	16156	FLAP HOLDER	1
17	16157	FLAP CLAMP	1
18	16158	FLAP	1
19	16159	FLAP HOLDER SUPPORT BAR	1
20			
21			
22	17128	BEARING (NYLON)	2
23	17133	CLAMP PLATE	1
24			
25			
26			
27	BMZ5A	CLAMP BRACKET	4
28	BMZ99	LIFT WHEEL HUB	4
29			
30			
31	GS378	SPLIT PIN	4
32	GS412	GREASE NIPPLE	5
33			
34			
35	RP/B	LIFT WHEEL	4
36	RP3B	HUB CAP	4
37	RP3N	HUB CAP NUT	24
38	RP4	TAPER ROLLER BEARING	8
39	RP5	OIL SEAL	4
40	RP6/1	HUB NUT	4
41	RP15	HUB SPACER	8
42			
43			
44			
45	SFT40	BEARING	2
46			
47			
48			
49		8 x 7 GIB HEAD KEY x 50	2
50			
51			
52		M6 BOLT x 35	2
53		M6 BOLT x 60	2
54		M6 WASHER	2
55		M6 LOCKNUT	4
56			
57			
58		M10 BOLT x 70	6
59		M10 BOLT x 90	2



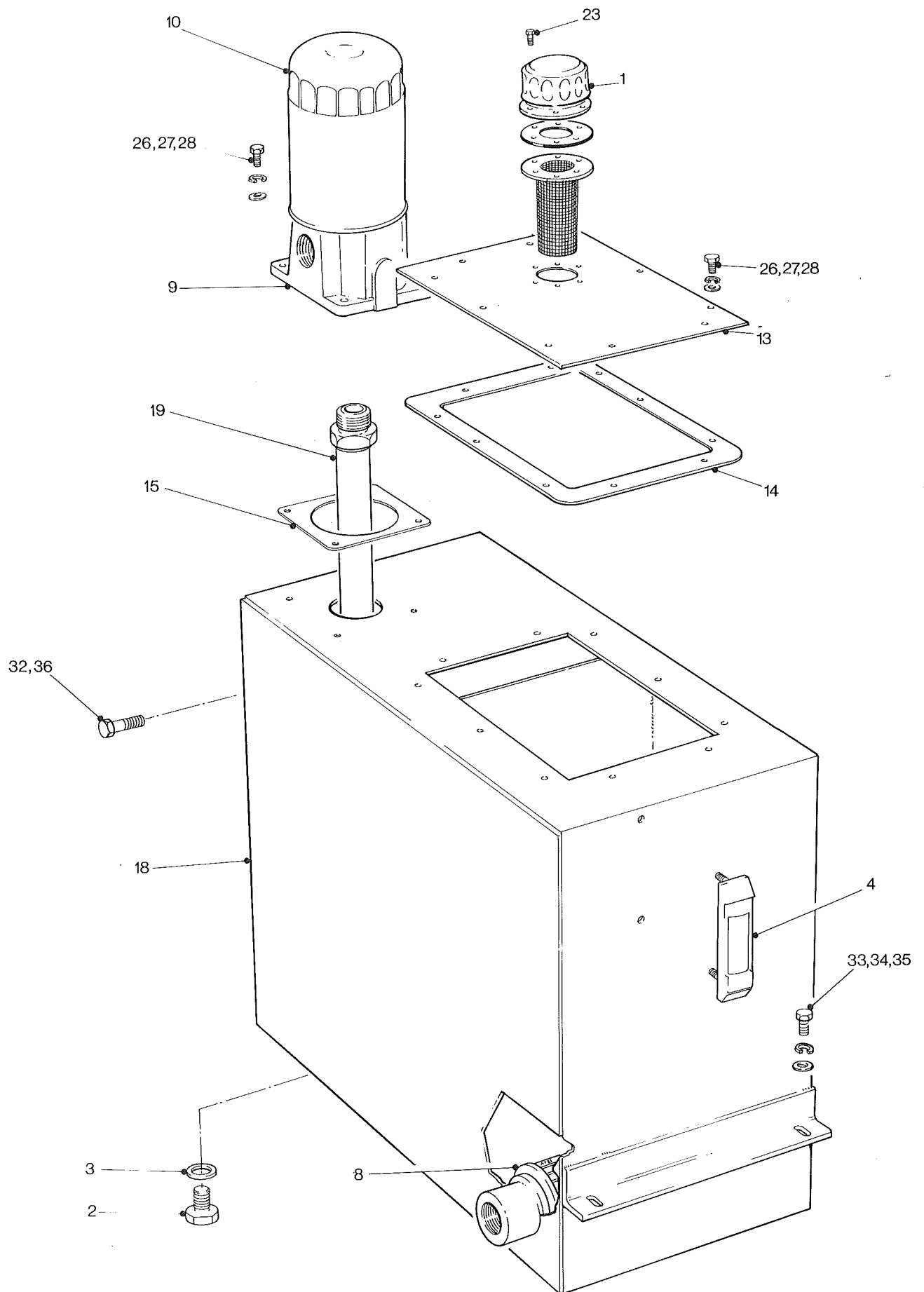
## ASSEMBLY;16198

Item no	PART NO	DESCRIPTION	Qty
60		M10 SETSCREW x 25	8
61		M10 SPRINGWASHER	8
62		M10 LOCKNUT	8
63			
64			
65		M12 BOLT x 40	12
66		M12 BOLT x 50	24
67			
68			
69		M12 WASHER	4
70		M12 HEX NUT	2
71		M12 LOCKNUT	12
72			
73		M16 BOLT x 60 LG	8
74		M16 BOLT x 80	2
75		M16 BOLT x 110	4
76		M16 SETSCREW x 110	2
77		M16 WASH	
78		M16 HEX HD NUT	4
79		M16 LOCKNUT	14
80			
81		1" PLAIN WASHER THICK	4

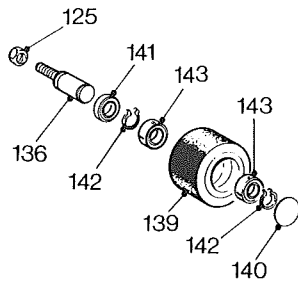
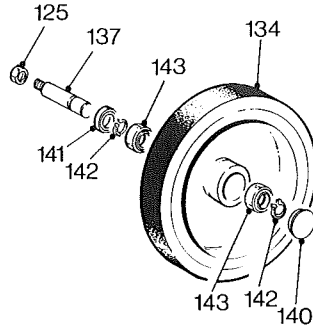
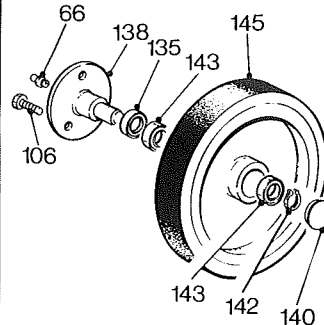


# Hydraulic Tank

ASSEMBLY N° 16199

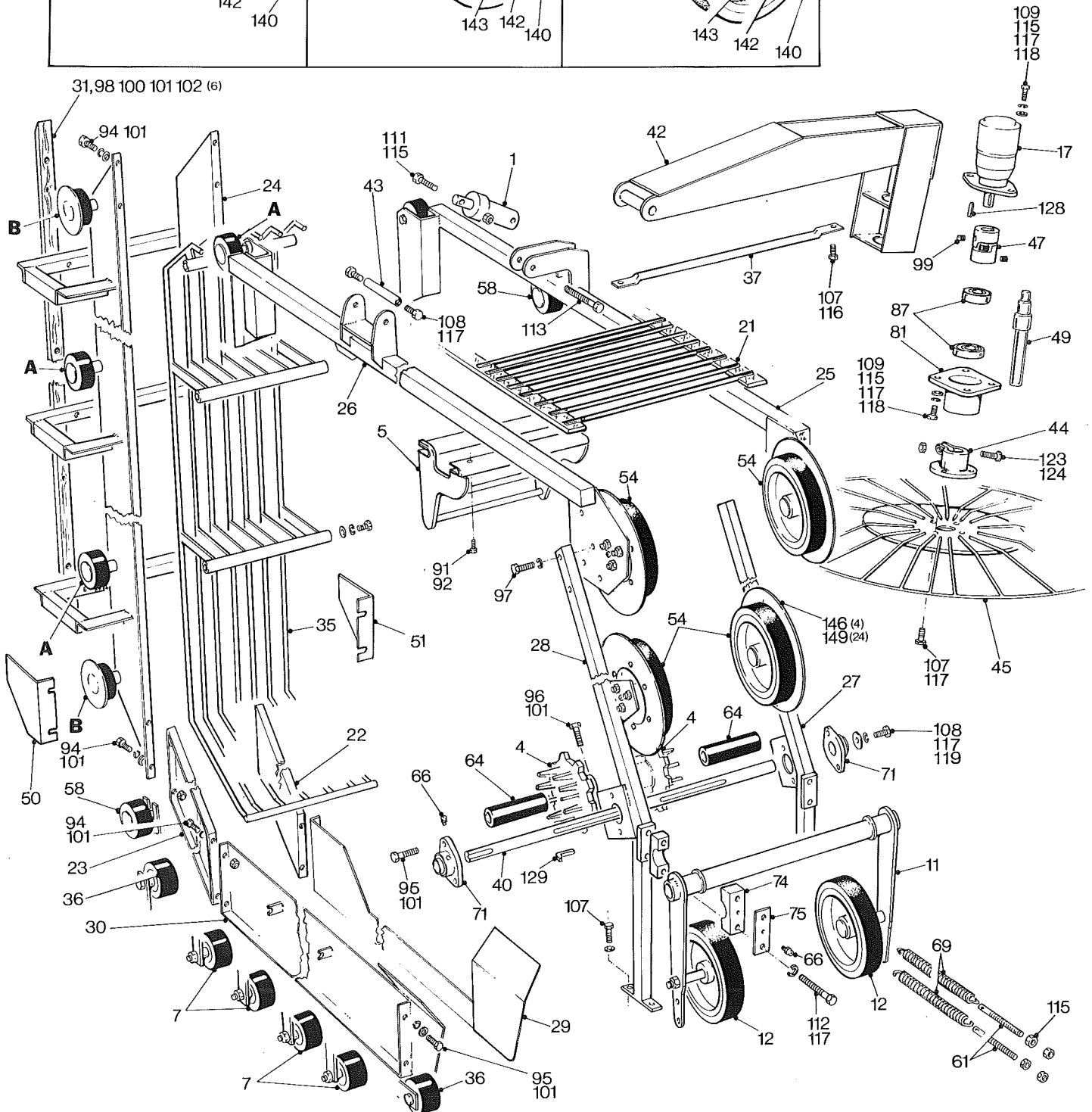
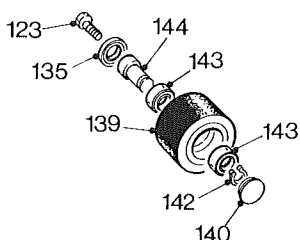
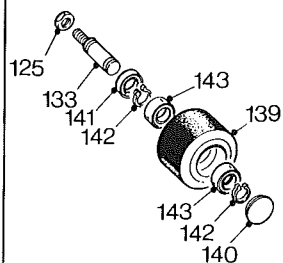
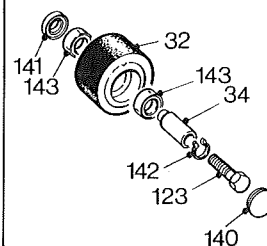
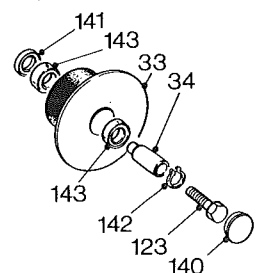


Item no	PART NO	DESCRIPTION	Qty
1	11059	FILLER/BREATHER	1
2	11117	$\frac{3}{4}$ " BSP BLANKING PLUG	1
3	11123	$\frac{3}{4}$ " BSP DOWTY SEAL WASHER	1
4	11626	LEVEL GAUGE	1
5			
6			
7			
8	12278	STRAINER	1
9	12279	FILTER UNIT	1
10	12280	FILTER ELEMENT	1
11			
12			
13	13293	TANK LID	1
14	13294	GASKET	1
15	13341	FILTER GASKET	1
16			
17			
18	16200	TANK BODY	1
19	16201	OIL RETURN PIPE ( $1\frac{1}{2}$ " )	1
20			
21			
22			
23		NO. 10 SELF TAPPING SCREW	6
24			
25			
26		M8 SETSCREW x 20LG	14
27		M8 WASHER	14
28		M8 SPRINGWASHER	14
29			
30			
31			
32		M12 BOLT x 30LG	2
33		M12 SETSCREW x 20LG	2
34		M12 WASHER	2
35		M12 SPRINGWASHER	2
36		M12 LOCKNUT	2

**Item 7****Item 12****Item 54**

# Rear Elevator & Beet Spinner

**ASSEMBLY № 16205**

**Item 36****Item 58****Item A****Item B**

## ASSEMBLY ; 16205

Item no	PART NO	DESCRIPTION	Qty
1			
2	11330	RAM	1
3			
4	12002	WEB SPROCKET	2
5	12247	LAT	20
6			
7	12526	ROLLER ASSEMBLY	8
8			
9			
10			
11	13103	ROLLER PIVOT ARM	1
12	13142	ROLLER ASSEMBLY	2
13			
14			
15			
16			
17	14069	HYDRAULIC MOTOR	1
18			
19			
20			
21	16055	WEB ASSEMBLY	1
22	16098	BOTTOM PANEL LH	1
23	16099	BOTTOM PANEL RH	1
24	16100	MIDDLE PANEL	1
25	16101	TOP SIDE SUPPORT LH	1
26	16102	TOP SIDE SUPPORT RH	1
27	16103	FRONT SUPPORT SECTION LH	1
28	16104	FRONT SUPPORT SECTION RH	1
29	16105	BOTTOM SHIELD LH	1
30	16106	BOTTOM SHIELD RH	1
31	16107	WOODEN RUNNER	2
32	16109	PLAIN RUBBERED ROLLER	6
33	16111	FLANGED RUBBERED ROLLER	4
34	16112	SPINDLE SLEEVE	10
35	16113	BEET GUIDE	1
36	16115	RUBBERED ROLLER ASSY.	4
37	16118	BEET SPINNER SUPPORT TUBE	1
38			
39			
40	16178	DRIVE SHAFT	1
41			
42	16192	BEET SPINNER MOUNTING BRKT.	1
43	16193	BEET SPINNER MTG. BRKT. PIN	1
44	16196	BEET SPINNER WHEEL	1
45	16195	BEET SPINNER WHEEL CLAMP	1
46			
47	16204	SPIDER COUPLING ASSY.	1
48			
49	16197	BEET SPINNER DRIVE SHAFT	1
50	16373	ROLLER GUARD RH	1
51	16274	ROLLER GUARD LH	1
52			
53			
54	16413	ROLLER ASSEMBLY	4
55			
56			
57			
58	19356	ROLLER ASSEMBLY	4
59			

Item no	PART NO	DESCRIPTION	Qty
60	BM 82M	SPRING TENSIONER	2
61			
62			
63	C 155	SPACER	2
64			
65			
66	GS 412	GREASE NIPPLE	7
67			
68			
69	PS 194	SPRING	2
70			
71			
72	SFT 30A	BEARING	2
73			
74			
75	SPCT 132	BEARING BLOCK	4
76			
77			
78	SPCT 143	CLAMP PLATE	2
79			
80			
81	VRT 23M	BEARING HOUSING	1
82			
83			
84	6306 RS	BEARING	2
85			
86			
87		M8 x 30mm HEX HD SETSCREW	84
88			
89			
90		M8 LOCKNUT	84
91			
92			
93		M10 x 25mm HEX HD SETSCREW	20
94			
95			
96		M10 x 30mm HEX HD SETSCREW	12
97			
98			
99		M10 x 60mm HEX HD BOLT	8
100			
101			
102		M10 x 70mm HEX HD BOLT	4
103			
104			
105		M10 x 30mm CARRIAGE BOLT	6
106			
107			
108		M10 x 20mm SOCKET HD SETSCREW	2
109			
110			
111		M10 NUT	14
112			
113			
114		M10 LOCKNUT	32
115			
116			
117		M10 SPRING WASHER	14
118			
119			
120		M12 x 20mm HEX HD SETSCREW	12
121			
122			
123		M12 x 25mm HEX HD SETSCREW	6
124			
125			
126		M12 x 30mm HEX HD SETSCREW	13
127			
128			
129		M12 x 40mm HEX HD SETSCREW	6
130			
131			
132		M12 x 80mm HEX HD BOLT	1
133			
134			
135		M12 x 120mm HEX HD BOLT	4
136			
137			
138		M12 x 160mm HEX HD BOLT	1
139			
140			
141		M12 NUT	10
142			
143			
144		M12 LOCKNUT	4
145			
146			
147		M12 SPRING WASHER	39
148			
149			
150		M12 PLAIN WASHER	6
151			
152			

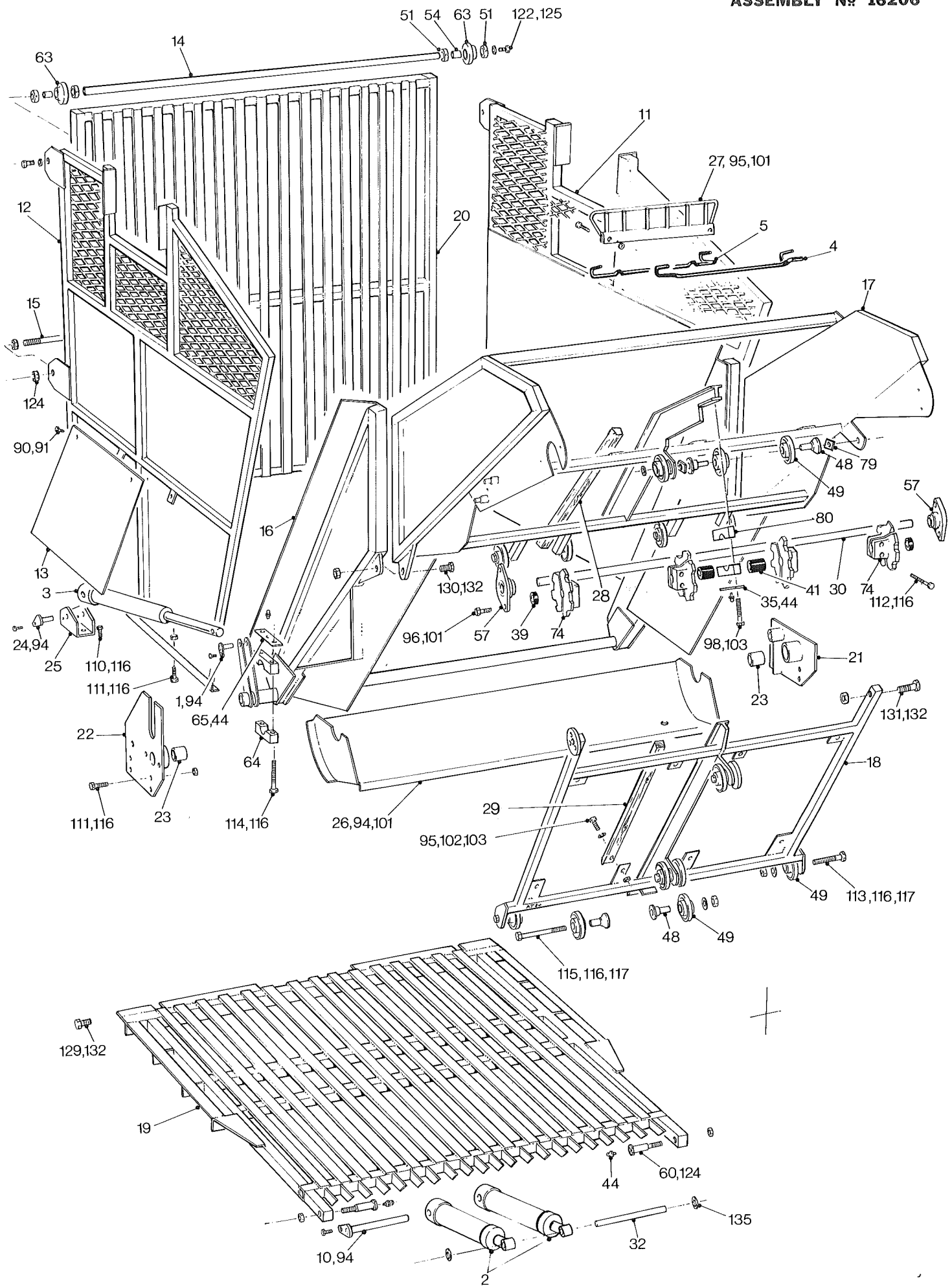
ASSEMBLY ; 16205

Item no	PART NO	DESCRIPTION	Qty
119		M12 LARGE WASHER	1
120			
121			
122		M16 x 35 HEX HD SETSCREW	2
123		M16 x 60 HEX HD BOLT	11
124		M16 LOCKNUT	1
125		M16 NUT	18
126		M16 SPRING WASHER	20
127			
128		8 x 7 RBE KEY x 32	1
129		8 x 7 GIB HEAD KEY x 50	2
130			
131		<u>ROLLER ASSEMBLIES CONSISTS OF:-</u>	
132			
133	11265	SPINDLE	6
134	12156	ROLLER	2
135	12514	SEAL	18
136	12522	SPINDLE	8
137	13117	SPINDLE	2
138	13258	SPINDLE	4
139	PH 77AR	ROLLER	18
140	PH 407	OUTER SEAL	30
141	PH 408	INNER SEAL	20
142	PS 843	CIRCLIP	50
143	6005 RS	BEARING	68
144	16114	SPINDLE	4
145	16411	ROLLER	4
146	16412	ROLLER FLANGE	4
147			
148			
149		M6 C/SK SOC. HD. SCREW x 12LG	24



# Tank & Discharge Elevator

ASSEMBLY № 16206



## ASSEMBLY; 16206

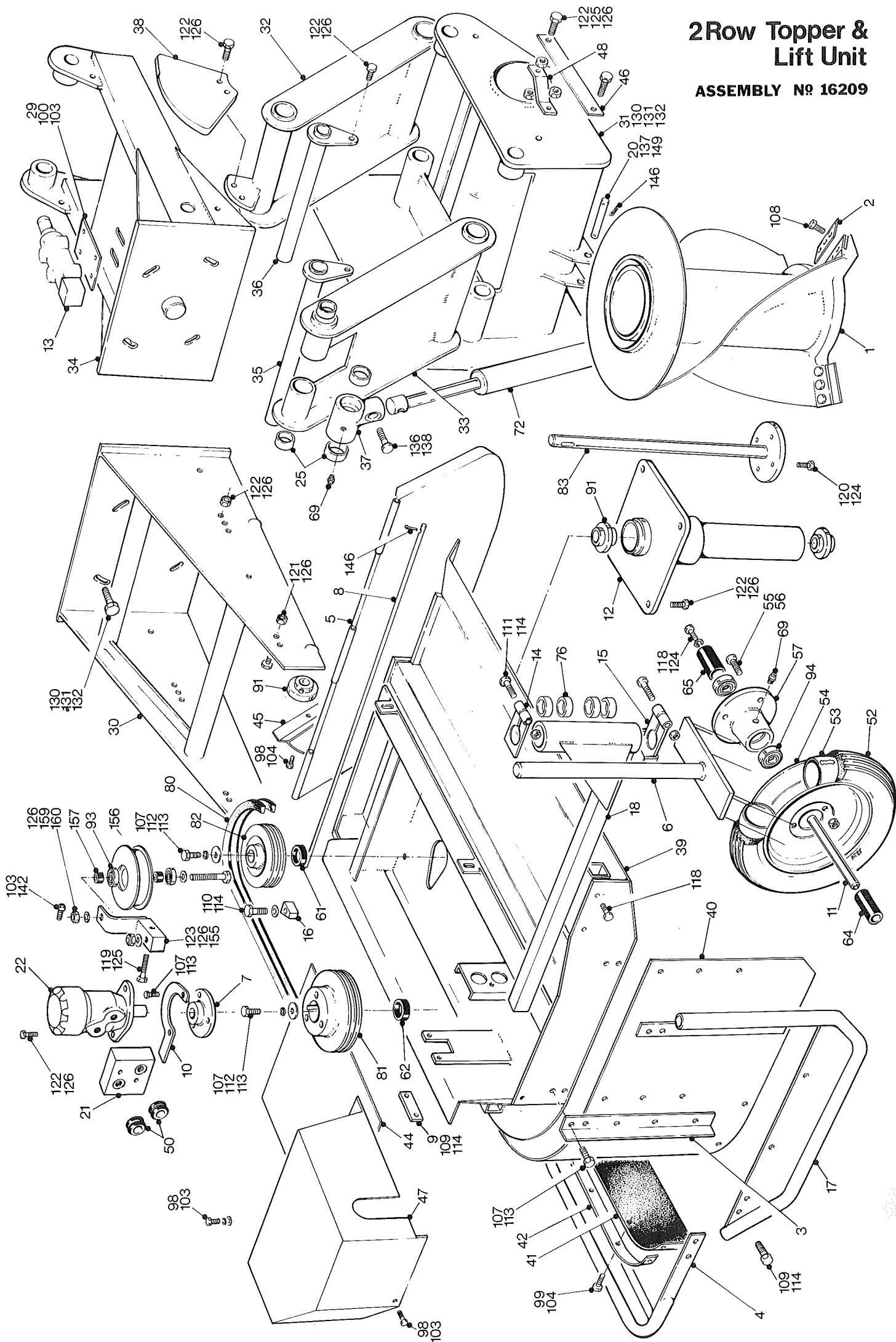
Itemno	PART NO	DESCRIPTION	Qty
1	11768	PIVOT PIN	2
2	11858	HYDRAULIC RAM	2
3	12210	RAM - DISCHARGE ELEV.	2
4	12336	WEB LINK (DOWN)	158
5	12337	WEB LINK (LOOPED)	30
6			
7			
8			
9			
10	16027	PIVOT PIN	1
11	16095	TANK REAR SIDE	
12	16096	TANK FRONT SIDE	1
13	16097	RAM DIRT SHIELD	1
14			
15	16117	TANK BOTTOM TIE BAR	1
16	16147	DIS/ELEV. BOTTOM FRAME	1
17	16148	DIS/ELEV. TOP FRAME	1
18	16149	DIS/ELEV. PIVOT FRAME	1
19	16160	TANK BASE	1
20	16161	TANK TIPPING SIDE	1
21	16162	DIS/ELEV. RAM BRKT. (REAR)	1
22	16163	DIS/ELEV. RAM PIVOT PIN	2
23	16167	OILITE BUSH	2
24	16168	DIS/ELEV. RAM PIVOT PIN	2
25	16180	RAM MOUNTING BRKT.	2
26	16181	BEET TROUGH	1
27	16182	LAT	30
28	16186	WOODEN RUNNER	4
29	16187	WOODEN RUNNER	4
30	16188	TOP DRIVE SHAFT	1
31	16189	PIVOT FRAME WEB SHAFT	1
32	16307	RAM PIN	1
33	16375	TANK TOP TIE BAR	1
34			
35	17133	CLAMP PLATE	2
36			
37			
38			
39	C 30	SPACER	2
40			
41	C 45	SPACER	2
42			
43			
44	GS 412	GREASE NIPPLE	5
45			
46			
47			
48	PS 212B	ROLLER BUSH	24
49	PS 213	WEB ROLLER	24
50			
51	PS 488M	STOP COLLAR	4
52			
53			
54	RH 53NM	NYLON BUSH	2
55			
56			
57	SFT 30A	BEARING	2
58			
59			

Item no	PART NO	DESCRIPTION	Qty
60	SPCL 504	SHOULDER BOLT	2
61			
62			
63		GUIDE ROLLER	2
64	SPCT 132	BEARING BLOCK	4
65	SPCT 143	CLAMP PLATE	2
66			
67			
68			
69			
70			
71			
72			
73			
74	TBMW 162	SPROCKET	4
75			
76			
77			
78			
79	TRT 133	PACKING PIECE	10
80	TRT 298	BEARING BLOCK	2
81			
82			
83			
84			
85			
86			
87			
88			
89			
90		M8 x 16mm HEX HD SETSCREW	2
91		M8 LOCK NUT	2
92			
93			
94		M10 x 25mm HEX HD SETSCREW	8
95		M10 x 35mm HEX HD SETSCREW	60
96		M10 x 40mm HEX HD SETSCREW	4
97		M10 x 60mm HEX HD BOLT	8
98		M10 x 75mm HEX HD BOLT	2
99		M10 x 30mm CARRIAGE BOLT	16
100		M10 x 10mm SOCKET HD. SETSCREW	10
101		M10 LOCKNUT	78
102		M10 NUT	16
103		M10 SPRING WASHER	20
104			
105			
106			
107			
108			
109			
110		M12 x 30mm HEX HD SETSCREW	4
111		M12 x 40mm HEX HD SETSCREW	16
112		M12 x 85mm HEX HD BOLT	8
113		M12 x 110mm HEX HD BOLT	12
114		M12 x 120mm HEX HD BOLT	4
115		M12 x 190mm HEX HD BOLT	7
116		M12 LOCKNUT	51

Item no	PART NO	DESCRIPTION	Qty
117		M12 LARGE WASHER	24
118			
119			
120			
121			
122		M16 x 30mm HEX HD SETSCREW	2
123		M16 LOCKNUT	2
124		M16 NUT	4
125		M16 SPRING WASHER	2
126			
127			
128			
129		M20 x 50mm HEX HD BOLT	4
130		M20 x 60mm HEX HD BOLT	2
131		M20 x 130mm HEX HD BOLT	2
132		M20 LOCKNUT	8
133			
134			
135		25mm BORE STARLOCK WASHER	2
136			
137			
138			
139			
140			
141			
142			
143			
144			
145			

# 2Row Topper & Lift Unit

ASSEMBLY № 16209



## ASSEMBLY; 16209

Item no	PART NO	DESCRIPTION	Qty
1	11001	ROTOR	2
2	11205	KNIFE	6
3	11209	SKIRT STAY	4
4	11213	FOOT GUARD	1
5	11215	DEFLECTOR FLAP	1
6	11218	WHEEL LEG	1
7	11223	MOTOR FIXING SUPPORT	1
8	11226	HINGE PIN	1
9	11227	MOTOR STOP BRACKET	1
10	11228	MOTOR REACTION BAR	1
11	11234	WHEEL AXLE SHAFT	1
12	11427	BEARING HOUSING	1
13	11490	DIVERTER VALVE	1
14	11643	DEPTH WHEEL CLAMP	1
15	11644	DEPTH WHEEL CLAMP/STOP	1
16	11659	STOP BLOCK	1
17	11693	SIDE FOOT GUARD	1
18	11694	WHEEL MOUNTING ARM	1
19	16383	JOCKEY ROLLER ASSEMBLY UP TO YTO08 PART No WAS 11707	1
20	11816	RAM PIN	1
21	11288	CHECK VALVE BLOCK PRIOR TO SERIAL No YTO08 PART NO WAS 11830	1
22	11201	HYDRAULIC MOTOR PRIOR TO SERIAL No YTO08 PART No WAS 11831	1
23			
24			
25	12123	BUSH	10
26			
27			
28			
29	16071	VALVE SPACER CLAMP PLATE	2
30	16210	ROLLER CARRIAGE	1
31	16211	LIFT FRAME	1
32	16212	IDLER ARM	1
33	16213	RAM ARM	1
34	16214	TOPPER MOUNTING BRACKET	1
35	16215	PIVOT PIN	3
36	16216	PIVOT PIN	1
37	16217	RAM HEAD	1
38	16231	VALVE CAM PLATE	1
39	16281	TOP PLATE	1
40	16282	SKIRT	1
41	16283	SKIRT RUBBER	1
42	16284	RUBBER CLAMP STRIP	1
43	16285	PIPE EXIT RUBBER SERIAL No YTO03-YTO08 ONLY	1
44	16286	TOP PLATE GUARD	1
45	16287	DEFLECTOR STONE GUARD	1
46	16288	DEFLECTOR OPERATING STRAP	1
47	16361	MOTOR GUARD PRIOR TO SERIAL No YTO08 PART No WAS 16290	1
48	16291	DEFLECTOR STRAP PIVOT ARM	1
49			
50	16362	RUBBER GROMMET	2
51			
52	17198	TYRE	1
53	17199	TUBE	1
54	17200	WHEEL DISC	1
55	17201	WHEEL STUD	4
56	17202	WHEEL NUT	4
57	17214	WHEEL HUB	1
58			
59			

## ASSEMBLY; 16209

Item no	PART NO	DESCRIPTION	Qty
60			1
61	C12	SPACER	1
62	C17	SPACER	
63			1
64	D60	SPACER	
65	D78	SPACER	
66			
67			
68			3
69	GS412	GREASE NIPPLE	
70			
71			1
72	10379	RAM	
73			
74			
75			4
76	RH43M	WRAPPED BUSH	
77			
78			
79			2
80	TBMW303	DRIVE BELT	1
81	TBMW304	MOTOR PULLEY	1
82	TBMW305	PULLEY	2
83	TBMW343	ROTOR SPINDLE	
84			
85			
86			12
87	2611-1206	AVDEL PIN	12
88	2662-1200	AVDEL COLLAR	
89			
90			8
91	1130-030	BEARING	
92			2
93	6301-RS	BEARING	2
94	6005 RS	BEARING	
95			
96			
97			8
98		M8 SETSCREW x 20LG	6
99		M8 SETSCREW x 30 LG	4
100		M8 SOCKET HD CAP SCREW x 25LG	1
101		M8 BOLT x 35LG	1
102		M8 WASHER	14
103		M8 SPRINGWASHER	9
104		M8 LOCKNUT	
105			
106			11
107		M10 SETSCREW x 25LG	18
108		M10 SETSCREW(PATCH TYPE) x 30LG	13
109		M10 BOLT x 35LG	1
110		M10 BOLT x 60LG	2
111		M10 BOLT x 100LG	2
112		M10 SPECIAL WASHER	9
113		M10 SPRING WASHER	16
114		M10 LOCKNUT	
115			
116			

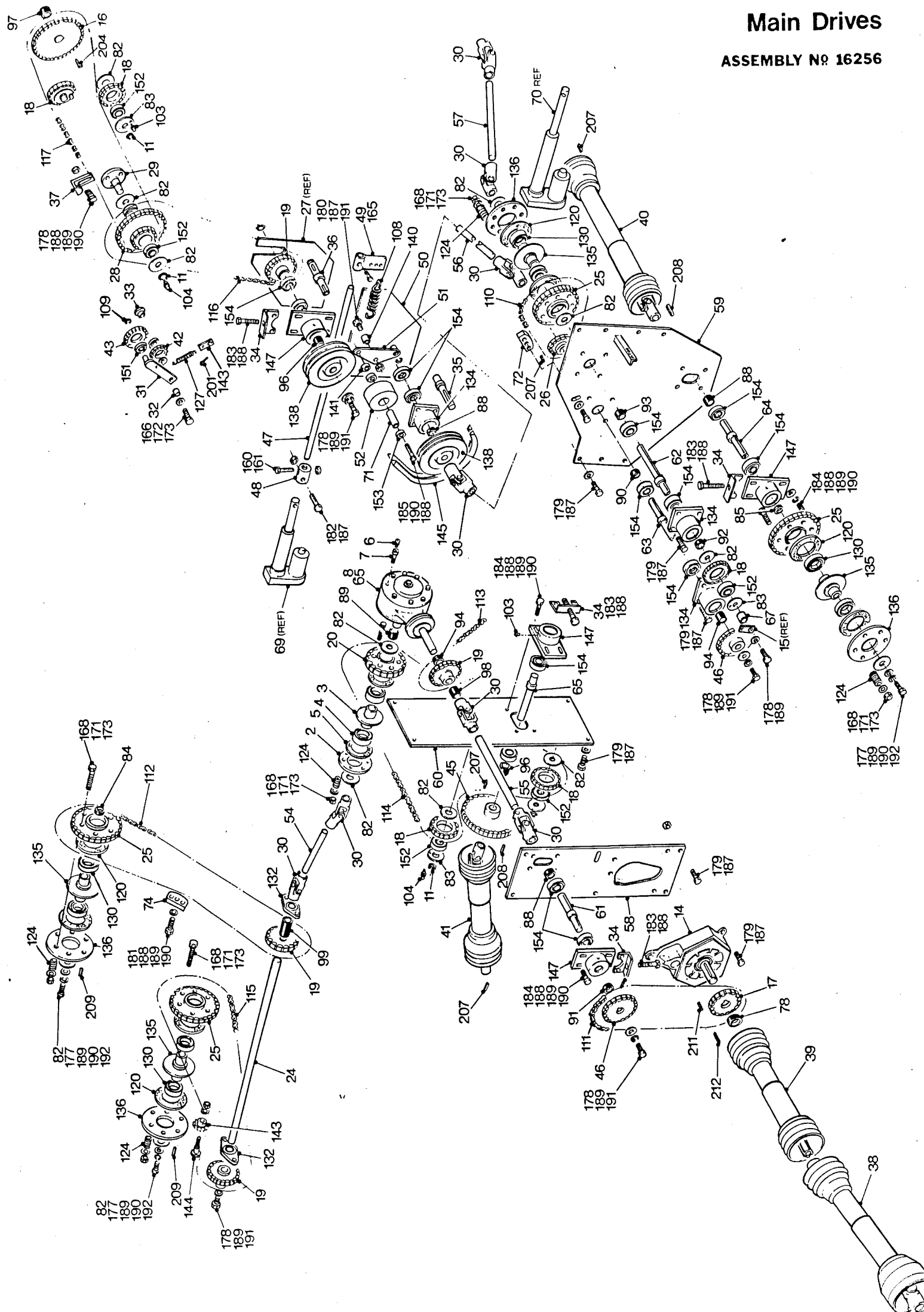
## ASSEMBLY; 16209

Item no	PART NO	DESCRIPTION	Qty
117			
118		M12 SETSCREW x 25LG	5
119		M12 SETSCREW x 80LG	1
120		M12 SETSCREW (PATCH TYPE) x 40LG	8
121		M12 BOLT x 30LG	2
122		M12 BOLT x 40LG	19
123		M12 BOLT x 60LG	1
124		M12 SPRINGWASHER	10
125		M12 HEX NUT	3
126		M12 LOCKNUT	23
127			
128			
129			
130		M16 BOLT x 50LG	8
131		M16 WASHER	16
132		M16 LOCKNUT	8
133			
134			
135			
136		M20 BOLT x 70LG	1
137		M20 WASHER	1
138		M20 LOCKNUT	1
139			
140			
141			
142		5/16" UNC SOCKET HD. CAP SCREW x 2"	4
143			
144			
145			
146		3/16" DIA. SPLIT PIN x 1 1/2" LG	3
147			
148			
149		3/4" STARLOCK WASHER	1
150			
151			
152		R.B.E. KEY 8 x 7 x 30LG	2
153			
154		<u>16383 JOCKEY ASSEMBLY CONSISTS OF:-</u>	
155	11661	SUPPORT BRACKET	1
156	16382	JOCKEY ROLLER	1
157	11706	SPACER	2
158			
159		M12 BOLT x 85LG	1
160		M12 PLAIN WASHER	1
161			
162			
163			
164			
165			
166			
167			
168			
169			
170			



# Main Drives

ASSEMBLY № 16256



## ASSEMBLY; 16256

Item no	PART NO	DESCRIPTION	Qty
1			1
2	11002	CLUTCH PLATE	1
3	11004	CLUTCH CENTRE	2
4	11005	CLUTCH BEARING	2
5	11006	FERODO DISC	1
6	11066	BREATHER	1
7	11069	BREATHER PLUG	1
8	11279	GEARBOX	1
9			
10			6
11	RH 56	CIRCLIP	
12			
13			1
14	13015	GEARBOX	1
15	13263	ECCENTRIC DRIVE PLATE	1
16	13310	35T SPROCKET	1
17	13312	19T SPROCKET	5
18	13313	17T SPROCKET	4
19	13314	19T SPROCKET	1
20	13311	CLUTCH SPROCKET 26T	
21			
22			
23			1
24	16041	MAIN ELEV. DRIVE SHAFT	4
25	16056	CLUTCH SPROCKET 35T	1
26	16068	15T SPROCKET	1
27	16163	DIS/ELEV. PIVOT BRACKET (FRONT)	1
28	16164	DIS/ELEV. DRIVE SPROCKET	1
29	16165	DIS/ELEV. DRIVE SPIGOT	8
30	16166	UNIVERSAL JOINT	1
31	16175	DIS/ELEV. JOCKEY ARM	1
32	16176	JOCKEY ARM STEEL SPACER	1
33	16177	JOCKEY ARM SPIGOT NUT	4
34	16183	BEARING HOUSING ADJ. BRACKET	1
35	16184	BEARING HOUSING SHAFT	1
36	16185	BEARING HOUSING SHAFT	1
37	16203	DIS/ELEV. CHAIN TENSIONER	1
38	16207	HARDY SPICER (WIDE ANGLE JOINT)	1
39	16208	HARDY SPICER	1
40	16218	HARDY SPICER (CLEANER)	1
41	16219	HARDY SPICER (CAGE WHEEL)	1
42	16220	11T SPROCKET	1
43	16221	15T SPROCKET	
44			1
45	16223	40T SPROCKET	2
46	16224	23T SPROCKET	1
47	16225	DIS/ELEV. JOCKEY GUIDE SHAFT	1
48	16226	ACTUATOR PISTON SUPPORT BRKT.	1
49	16227	JOCKEY ROLLER ADJUSTING BRKT.	1
50	16228	BEARING HOUSING SUPPORT PLATE	1
51	16229	JOCKEY ROLLER SUPPORT BRKT.	1
52	16230	JOCKEY ROLLER	
53			1
54	16232	DRIVE COUPLING SHAFT	1
55	16233	GEARBOX COUPLING SHAFT	1
56	16234	DRIVE COUPLING SHAFT	1
57	16235	DRIVE COUPLING SHAFT	1
58	16236	FRONT DRIVES MOUNTING PLATE	1
59	16237	BACK DRIVES MOUNTING PLATE	

## ASSEMBLY: 16256

Item no	PART NO	DESCRIPTION	Qty
60	16238	SIDE DRIVES MOUNTING PLATE	1
61	16239	FRONT BEARING HOUSING SHAFT	1
62	16240	BEARING HOUSING SHAFT	1
63	16241	BEARING HOUSING SHAFT	1
64	16242	BEARING HOUSING SHAFT	1
65	16243	BEARING HOUSING SHAFT	1
66	16244	GEARBOX OUTPUT SHAFT	1
67	16246	STEEL SPACER (LUB KIT)	1
68			
69	16120	LINEAR ACTUATOR (DIS/ELEV.)	1
70	16121	LINEAR ACTUATOR (CLEANER)	1
71	16359	STEEL SPACER	1
72			
73			
74	17155	CHAIN TENSION BLOCK	3
75			
76			
77			
78	A 30	SPACER	1
79			
80			
81			
82	BM 12	LARGE WASHER	13
83	BM 12A	LARGE WASHER	5
84	C5	SPACER	1
85	C8	SPACER	1
86	C10	SPACER	1
87	C11	SPACER	1
88	C12	SPACER	2
89	C14	SPACER	1
90	C15	SPACER	1
91	C17	SPACER	1
92	C18	SPACER	1
93	C22	SPACER	1
94	C24	SPACER	1
95	C25	SPACER	1
96	C32	SPACER	2
97	C39	SPACER	1
98	C50	SPACER	1
99	C90	SPACER	1
100			
101			
102			
103	GS410	GREASE NIPPLE	5
104	GS412	GREASE NIPPLE	9
105			
106			
107			
108	PS766	SPRING	1
109	PS843	CIRCLIP	1
110	PS871/49	CHAIN	1
111	PS871/69	CHAIN	1
112	PS871/114	CHAIN	1
113	PS871/116	CHAIN	1
114	PS871/126	CHAIN	1
115	PS871/138	CHAIN	1
116	PS871/148	CHAIN	1

ASSEMBLY; 16256

Item no	PART NO	DESCRIPTION	Qty
117	PS871/153	CHAIN	1
118			
119			
120	PT 51	FERODO DISC	8
121			
122			
123			
124	RH 149	SPRING	30
125			
126			
127	RP 71	SPRING	1
128			
129			
130	S/72/16	BEARING	8
131			
132	SFT 30A	BEARING	2
133			
134	SP 44M	BEARING HOUSING	3
135	SP524M	CLUTCH CENTRE	4
136	SP 525	CLAMP PLATE	4
137			
138	SPCL 526	PULLEY	2
139			
140	SS020013/ 030	STEEL SPACER	1
141	SS025013/ 012	STEEL SPACER	1
142			
143	TRH 210	SPRING TENSIONER	1
144			
145	VB 8	V BELT	2
146			
147	VRT 23M	BEARING HOUSING	4
148			
149			
150			
151	6005-2RS	BEARING	2
152	6206 RS	BEARING	7
153	6301 RS	BEARING	17
154	6306 RS	BEARING	14
155			
156			
157			
158			
159			
160		M8 x 70mm HEX HD SETSCREW	1
161		M8 LOCKNUT	1
162			
163			
164			
165		M10 x 25mm HEX HD SETSCREW	1
166		M10 x 40mm HEX HD SETSCREW	2
167			
168		M10 x 75mm HEX HD BOLT	30
169			
170		M10 x 10mm HEX SOCKET HD SETSCREW	8

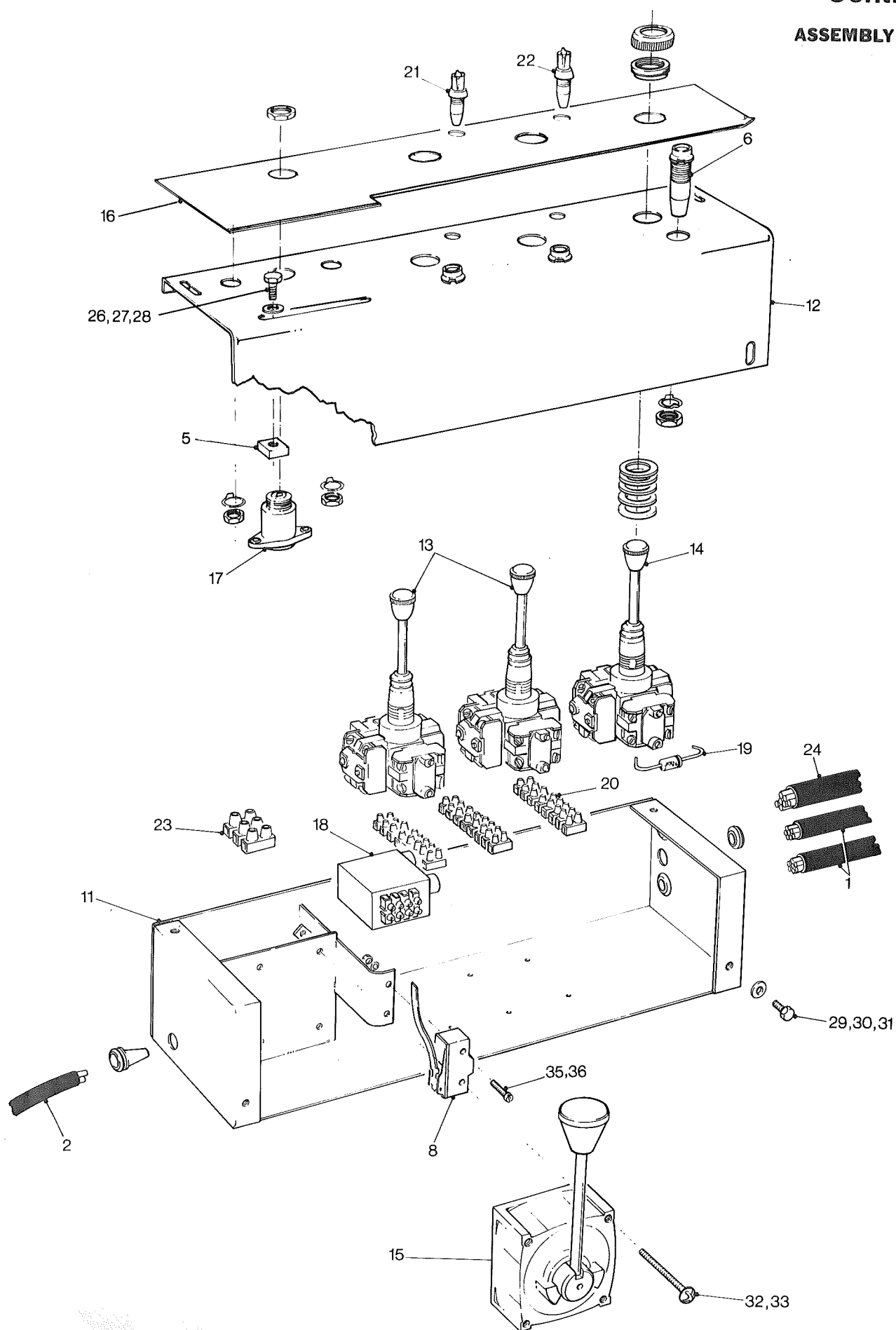
## ASSEMBLY; 16256

Item no	PART NO	DESCRIPTION	Qty
171		M10 LOCKNUT	34
172		M10 SPRING WASHER	1
173		M10 PLAIN WASHER	2
174			
175			
176			
177		M12 x 25mm HEX HD SETSCREW	4
178		M12 x 30mm HEX HD SETSCREW	21
179		M12 x 40mm HEX HD SETSCREW	26
180		M12 x 50mm HEX HD SETSCREW	1
181		M12 x 60mm HEX HD SETSCREW	7
182		M12 x 70mm HEX HD SETSCREW	1
183			
184		M12 x 45mm HEX HD BOLT	12
185		M12 x 120mm HEX HD BOLT	1
186			
187		M12 LOCKNUT	29
188		M12 NUT	17
189		M12 SPRING WASHER	41
190		M12 PLAIN WASHER	37
191		M12 WASHER	6
192		M12 LARGE WASHER	4
193			
194			
195			
196		M16 x 70mm HEX HD SETSCREW	1
197		M16 NUT	1
198			
199			
200			
201		3/16" COTTER PIN x 1 1/8"	2
202			
203			
204		8 x 7 GIB HD KEY x 45	2
205			
206			
207		8 x 7 R.B.E. KEY x 30	6
208		8 x 7 R.B.E. KEY x 45	15
209		8 x 7 R.B.E. KEY x 65	5
210			
211		10 x 8 R.B.E. KEY x 30	1
212		10 x 8 R.B.E. KEY x 45	1
213			
214			
215			
216			
217			
218			
219			
220			



# Control Box

ASSEMBLY № 16260

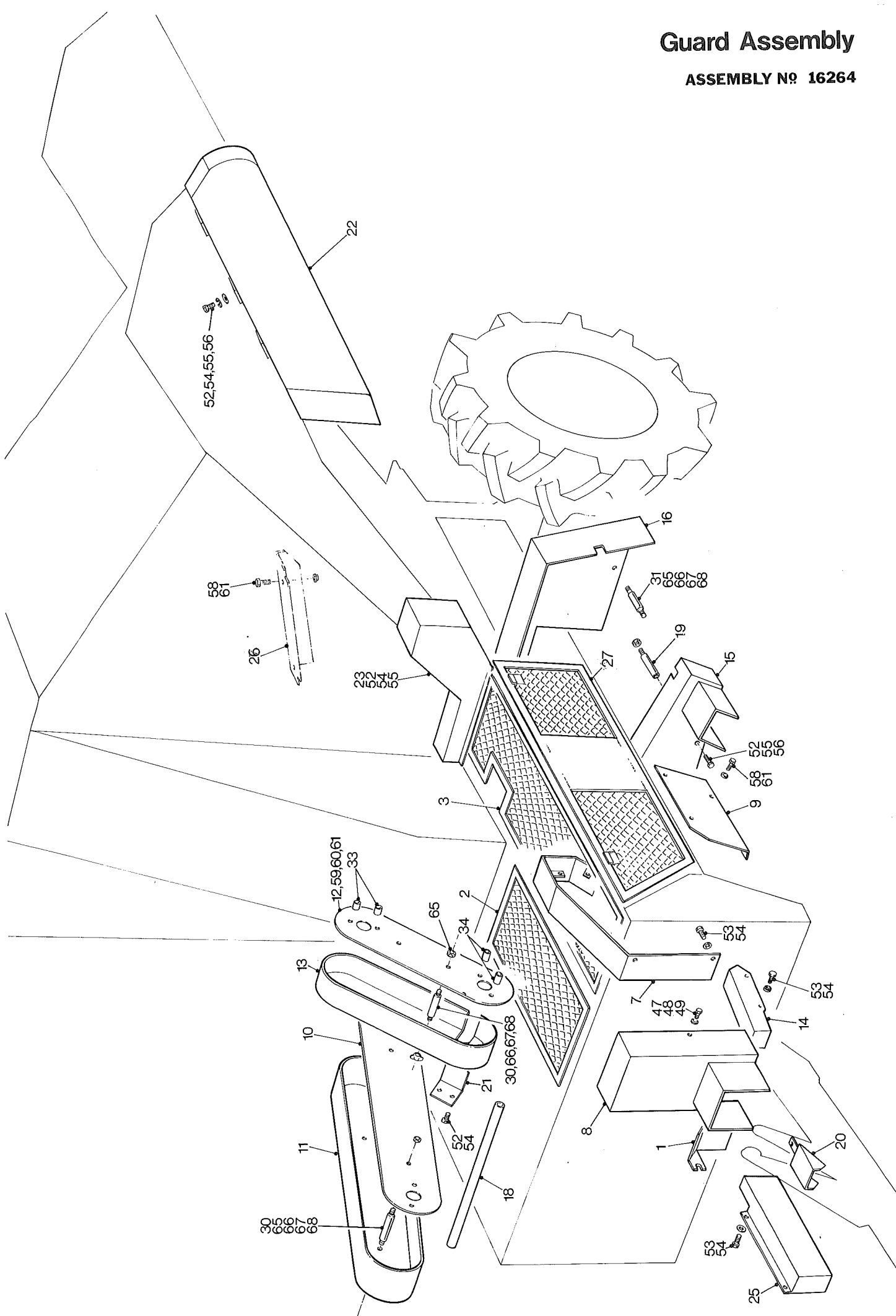


Item no	PART NO	DESCRIPTION	Qty
1	11369	7 CORE CABLE	4.5
2	11370	2 CORE CABLE	2M
3			
4			
5	12029/7	DEPTH CONTROL STOP	1
6	13290	FUSE HOLDER	3
7			
8	14670	MICRO SWITCH	1
9			
10			
11	16254	CONTROL BOX	1
12	16255	CONTROL BOX LID	1
13	16257	4 WAY SWITCH	2
14	16258	4 WAY SWITCH WITH DETENT	1
15	16259	POTENTIOMETER	1
16	16261	CONTROL BOX DECAL	1
17	16262	KEY SWITCH	1
18	16263	MODULE	1
19	16267	6 AMP DIODE	4
20	16268	TERMINAL BLOCK	3
21	16269	RED WARNING LIGHT	1
22	16270	GREEN WARNING LIGHT	1
23	16416	TERMINAL BLOCK	1
24	16398	7 CORE CABLE (HEAVY TYPE)	1
25			
26		M8 FLAT WASHER	1
27		M8 SPRING WASHER	1
28		M8 x 16mm LONG HES HD SET	1
29			
30		M6 FLAT WASHER	4
31		M6 SPRING WASHER	4
32		M6 x 60 LONG CROSS HD SETSCREW	4
33		M6 SQUARE SIDED NUT	4
34			
35		2BA x 1" SETSCREW	2
36		2BA NUT	2



# Guard Assembly

ASSEMBLY N° 16264



## ASSEMBLY : 16264

Itemno	PART NO	DESCRIPTION	Qty
1	16026	SPROCKET GUARD	1
2	16084	MIDDLE GUARD COVER	1
3	16085	LH TOP GUARD COVER	1
4	16086	SIDE GUARD COVER SERIAL No YTO03-YTO08 ONLY	1
5			
6			
7	16247	MAIN DRIVE DIRT SHIELD	1
8	16248	MAIN DRIVE FRONT GUARD	1
9	16249	MAIN DRIVE SIDE SHIELD	1
10	16250	SIDE GUARD BACK PLATE	1
11	16251	SIDE GUARD	1
12	16252	GUARD BACK PLATE	1
13	16253	GUARD	1
14	16265	PADDLE WHEEL GUARD	1
15	16276	CLEANER FRONT GUARD	1
16	16277	CLEANER REAR GUARD	1
17			
18	16298	PLASTIC GUARD TUBE	1
19	16301	GUARD BOLT	2
20	16302	DRAWBAR P.T.O. GUARD	1
21	16372	FILLER PLATE	1
22	16377	DIS/ELEV. SIDE DRIVES GUARD/PART No 16190 PRIOR TO SERIAL No YTo08	1
23	16381	DIS/ELEV. BOTTOM DRIVE GUARD/PART No 16191 PRIOR TO SERIAL NO 178	1
24			
25	16376	DRIVE CHAIN STONE GUARD	1
26	16400	D/E REAR TAN DIRT SHIELD	1
27	16414	SIDE GUARD COVER	1
28			
29			
30	19091	GUARD BOLT	2
31	19220	GUARD BOLT	2
32			
33	SS025013/ 032	STEEL SPACER	2
34	SS025013/ 045	STEEL SPACER	2
35			
36	TBM24M	GUARD BOLT	2
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47		M6 x 12mm HEX. HD. SETSCREW	3
48		M6 SPRING WASHER	3
49		M6 PLAIN WASHER	3
50			
51			
52		M8 x 16mm HEX. HD. SETSCREW	6
53		M8 x 20mm HEX. HD. SETSCREW	6
54		M8 LOCKNUT	6
55		M8 SPRING WASHER	6
56		M8 PLAIN WASHER	6
57			
58		M10 x 25mm HEX. HD. SETSCREW	5
59		M10 x 50mm HEX. HD. BOLT	2

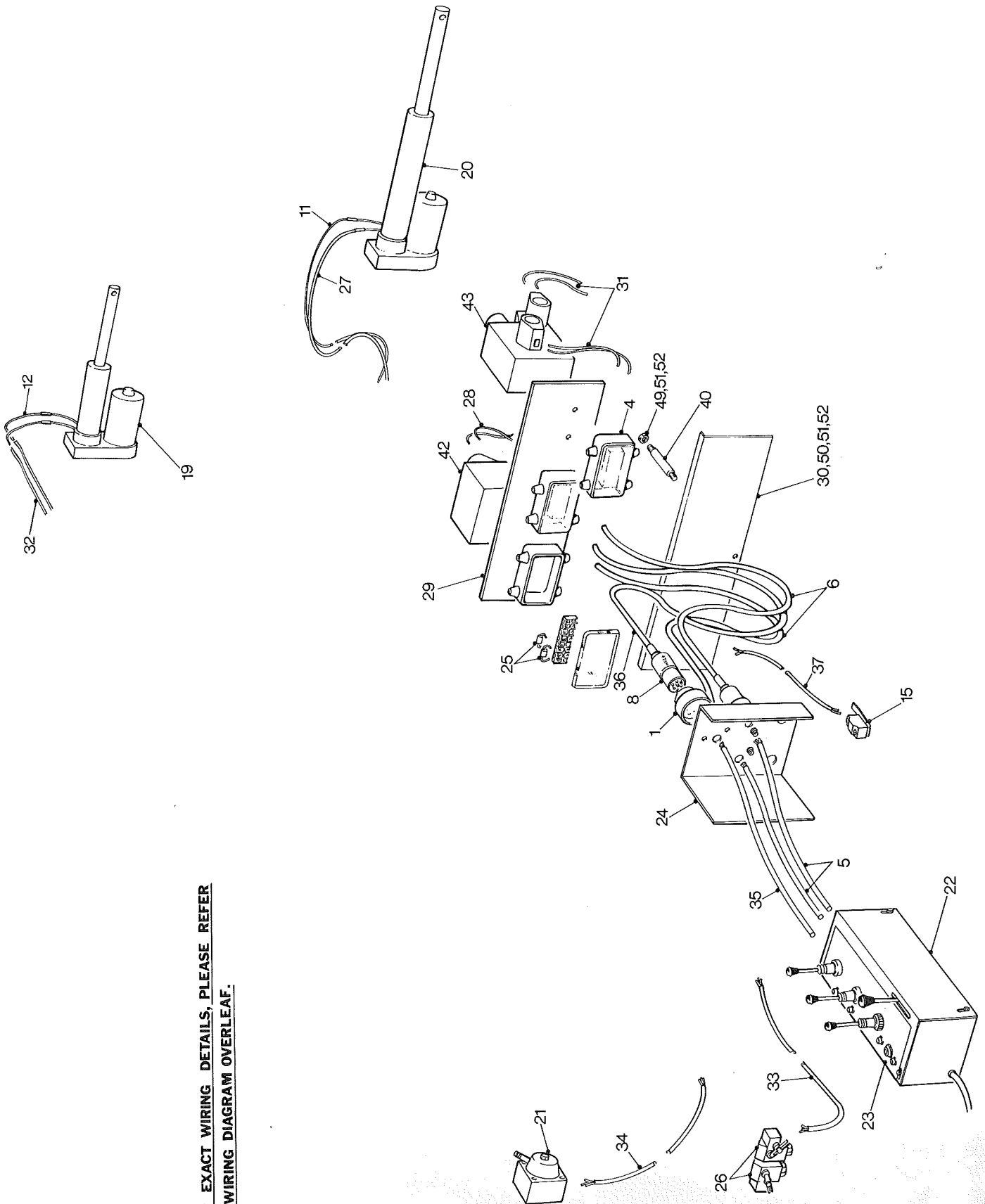
ASSEMBLY; 16264

Itemno	PART NO	DESCRIPTION	Qty
60		M10 x 70mm HEX. HD. BOLT	2
61		M10 LOCKNUT	9
62			
63			
64		M12 x 20mm HEX. HD. SETSCREW	2
65		M12 NUT	8
66		M12 WING NUT	6
67		M12 SPRING WASHER	18
68		M12 PLAIN WASHER	
69			
70			
71			
72			



# Electrical System

ASSEMBLY Nº 16273



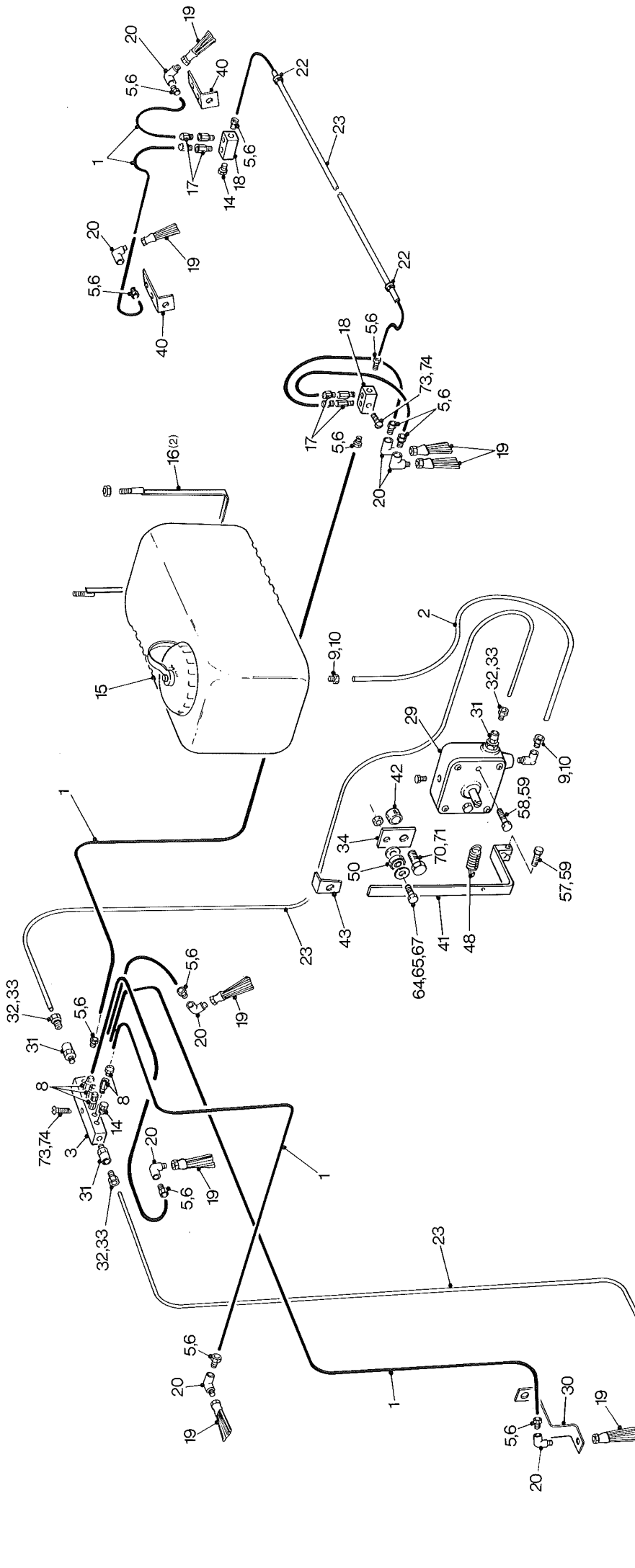
FOR EXACT WIRING DETAILS, PLEASE REFER  
TO WIRING DIAGRAM OVERLEAF.

Item no	PART NO	DESCRIPTION	Qty
1	10134	7 PIN SOCKET "N" TYPE	3
2			
3			
4	11362	JUNCTION BOX	3
5	11369/1.5m	7 CORE CABLE	2
6	11369/4 m	7 CORE CABLE	2
7			
8	13287	7 PIN PLUM "N" TYPE	3
9			
10			
11	14108	CABLE : BROWN	6M
12	14109	CABLE : BLACK	3M
13			
14			
15	14670	MICRO SWITCH (DRAWBAR)	1
16			
17			
18			
19	16120	DIS/ELEV. LINEAR ACTUATOR	1
20	16121	CLEANER LINEAR ACTUATOR	1
21	16259	POTENTIOMETRE	1
22	16260	CONTROL BOX COMPLETE	1
23	16261	CONTROL BOX DECAL	1
24	16266	SUPPORT PLATE	1
25	16267	6 AMP DIODE	2
26	16272	MICRO SWITCH (AUTO STEER)	2
27	16278	CABLE : BLUE	3M
28	16279	CABLE : YELLOW	3M
29	16367	JUNCTION BOX MOUNTING PLATE	1
30	16368	JUNCTION BOX FRONT COVER	1
31	16393	CABLE : ORANGE	3M
32	16395	CABLE : GREEN/YELLOW	3M
33	16396	3 CORE CABLE (AUTO STEER)	3M
34	16397	3 CORE CABLE (POTENTIOMETRE)	3M
35	16398-1.5M	HEAVY DUTY 7 CORE CABLE	1
36	16398-4M	HEAVY DUTY 7 CORE CABLE	1

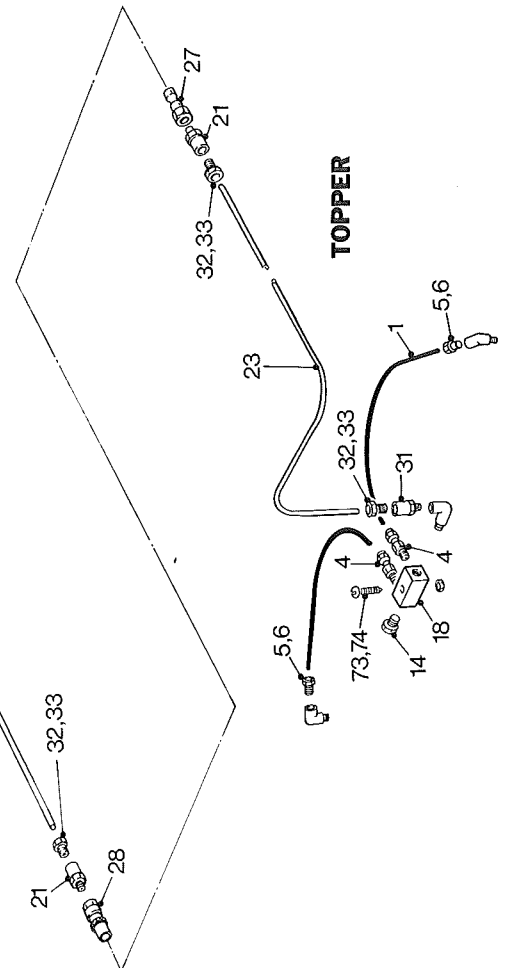
# Lubrication System

ASSEMBLY № 16274

## HARVESTER



## TOPPER



Item no	PART NO	DESCRIPTION	Qty
1	11447	NYLON TUBE 5/32" DIA	A/R
2	11448	NYLON TUBE 5/16" DIA	A/R
3	11449	6 WAY MANIFOLD BLOCK	1
4	11450	METER UNIT NO. 24	2
5	11452	SLEEVE NUT	14
6	11453	CONE	14
7	11459	ELBOW	1
8	11837	METER UNIT NO. 2	4
9	11534	1/2" UNF SLEEVE NUT	2
10	11836	5/16" CONE	2
11			
12			
13			
14	13040	BLANKING PLUG	3
15	13041	RESERVOIR	11
16	13042	STRAP	2
17	13043	METER UNIT NO. 23	4
18	13044	2 WAY MANIFOLD BLOCK	3
19	13046	BRUSH	8
20	13047	ELBOW	8
21	13048	CONNECTOR	2
22	13050	GROMMET	3
23	13051	NYLON TUBE 1/4" DIA	A/R
24			
25			
26			
27	13176	MALE QUICK RELEASE COUPLING	1
28	13179	FEMALE QUICK RELEASE COUPLING	1
29	13218	PUMP ASSEMBLY	1
30	13260	BRUSH SUPPORT	1
31	13329	CONNECTOR	4
32	13330	SLEEVE NUT	6
33	13331	CONE	6
34	13263	ECCENTRIC DRIVE PLATE	1
35			
36			
37			
38			
39			
40	16142	BRUSH SUPPORT	2
41	16245	PUMP ARM	1
42	16246	STEEL SPACER	1
43	16371	FIXING TAG	1
44			
45			
46			
47			
48	PS457	SPRING	1
49			
50	6200RS	BEARING	1
51			
52			
53			
54			
55			
56			
57		M6 x 25mm HEX HD SETSCREW	1
58		M6 x 60mm HEX HD BOLT	2
59		M6 LOCKNUT	3

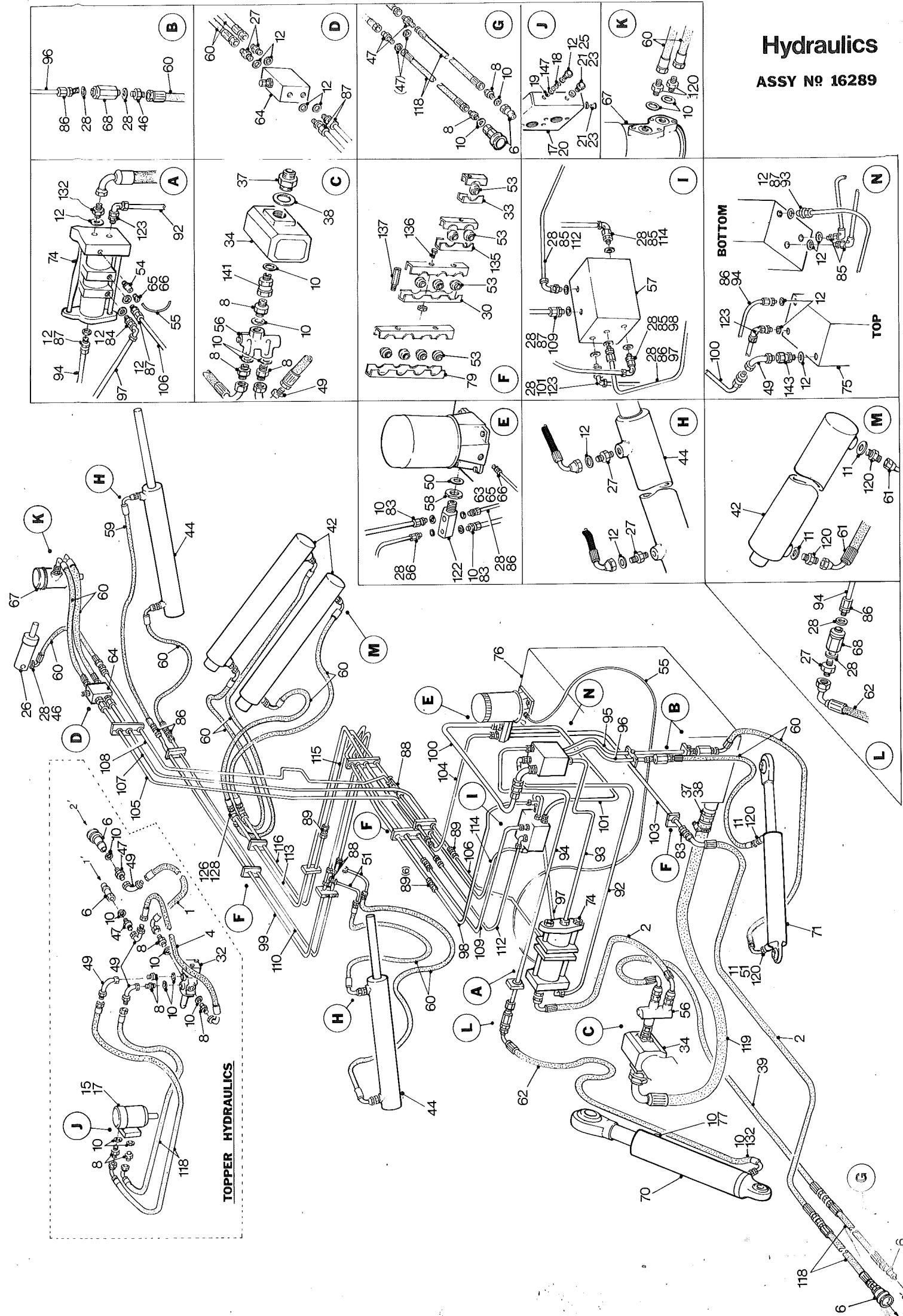


Item no	PART NO	DESCRIPTION	Qty
60			
61			
62			
63		M10 x 25mm HEX HD SETSCREW	2
64		M10 x 35mm HEX HD SETSCREW	1
65		M10 NUT	1
66		M10 LOCKNUT	1
67		M10 LARGE WASHER	2
68			
69			
70		M12 x 30mm HEX HD SETSCREW	1
71		M12 SPRING WASHER	1
72			
73		2 BA x 1 $\frac{1}{4}$ " HEX HD BOLT	4
74		2 BA NUT	4
75			
NOTE	13218	<u>PUMP ASSY CONSISTS OF:-</u>	
	11452	SLEEVE NUT	2
	11453	CONE	2
	13047	ELBOW	1
	13347	ELBOW	1
	13348	SLEEVE NUT	1
	13349	SLEEVE NUT	1
	13350	SLEEVE NUT	1
	13351	'O' RING	1



# Hydraulics

ASSY N<sup>o</sup> 16289



Item no.	PART NO	DESCRIPTION	Qty
1	1110	HYDRAULIC HOSE ASSEMBLY 4750mm	1
2	11102	HYDRAULIC HOSE ASSEMBLY 1000mm	2
3	11104	HYDRAULIC HOSE ASSEMBLY 4750mm	1
4	11105	HYDRAULIC HOSE ASSEMBLY 4750mm	1
5			
6	11108	QUICK RELEASE COUPLING	2PR
7			
8	11115	$\frac{3}{4}$ " BSP MALE/MALE ADAPTOR	9
9			
10	11123	$\frac{3}{4}$ " BSP DOWTY SEAL WASHER	18
11	1124	$\frac{1}{2}$ " BSP DOWTY SEAL WASHER	7
12	11125	$\frac{3}{8}$ " BSP DOWTY SEAL WASHER	21
13			
14			
15	11201	HYDRAULIC MOTOR	1
16			
17	11288	CHECK VALVE BLOCK	1
18	11289	SPRING	1
19	11290	BALL BEARING	1
20	11291	O'RING	2
21	11292	$\frac{1}{8}$ " BSP BLANKING PLUG	2
22	11293	$\frac{3}{8}$ " BSP BLANKING PLUG	1
23	11294	DOWTY SEAL WASHER $\frac{1}{8}$ " BSP	2
24			
25			
26	11330	BEET SPINNEK RAM	1
27	11336	$\frac{3}{8}$ x $\frac{1}{4}$ " BSP MALE/MALE ADAPTOR	5
28	11337	$\frac{1}{4}$ " BSP DOWTY SEAL WASHER	
29			
30	11373	3 PIPE CLAMP STRIP	2
31			
32	11490	DIVERDER VALVE	1
33	11510	1 PIPE CLAMP STRIP	3
34	11650	PUMP	1
35			
36			
37	11739	$1\frac{1}{4}$ " BSP MALE/MALE ADAPTOR	2
38	11740	$1\frac{1}{4}$ " BSP DOWTY SEAL	2
39	11744	HYDRAULIC HOSE ASSEMBLY 1400LG	1
40			
41			
42	11858	HYDRAULIC RAM (TANK BASE)	2
43			
44	12210	HYDRAULIC RAM(DISCHARGE ELEV.)	2
45			
46	12316	$\frac{3}{4}$ " BSP MALE/MALE ADAPTOR	2
47			
48			
49	12350	$\frac{3}{4}$ " BSP MALE/90 FEMALE SWIVEL ADAPTOR	5
50	12352	$1\frac{1}{2}$ " DOWTY SEAL WASHER	1
51	12378	$\frac{1}{4}$ " BSP MALE/90 FEMALE SWIVEL ADAPTOR	1
52			
53	12590	GROMMET	30
54	13048	CONNECTOR	1
55	13051	$\frac{1}{4}$ " NYLON TUBING	A/R
56	13059	FLOW DIVIDER	1
57	13108	VALVE BLOCK	1
58	13175	$1\frac{1}{2}$ " BSP LOCKNUT	1
59	13187	HYDRAULIC HOSE ASSEMBLY 700mm LG	1

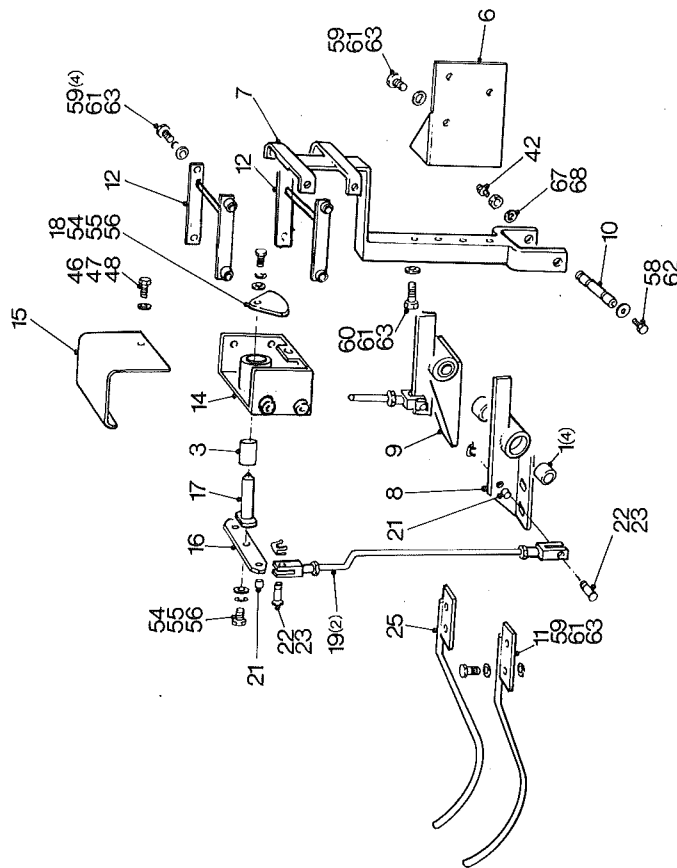
Item no	PART NO	DESCRIPTION	Qty
60	13188	HYDRAULIC HOSE ASSEMBLY 1000mm	12
61			
62	13192	HYDRAULIC HOSE ASSEMBLY 10000mm	1
63	13329	CONNECTOR BODY	1
64	13306	RELIEF VALVE	1
65	13330	SLEEVE NUT	2
66	13331	OLIVE	2
67	14069	HYDRAULIC MOTOR	1
68	14505	IN LINE FLOW CONTROL	3
69			
70	16014	LIFT RAM	1
71	16015	STEERING RAM	1
72			
73	16119	HP1 PUMP	1
74	16122	ROTARY FLOW DIVIDER	1
75	16123	VALVE BLOCK	1
76	16199	HYDRAULIC TANK ASSEMBLY	1
77	16299	BREATHER PLUG	1
78	16300		
79	16304	4 PIPE CLAMP STRIP	1
80			
81			
82			
83	16312	MALE STUD COUPLING	4
84	16313	ADJ MALE STUD ELBOW COUPLING	1
85	16314	ADJ MALE STUD ELBOW COUPLING	5
86	16315	MALE STUD COUPLING	8
87	16316	MALE STUD COUPLING	7
88	16317	EQUAL TEE COUPLING	3
89	16318	STRAIGHT COUPLING	6
90			
91			
92	16323	STEEL PIPE	1
93	16324	STEEL PIPE	1
94	16325	STEEL PIPE	1
95	16326	STEEL PIPE	1
96	16327	STEEL PIPE	1
97	16328	STEEL PIPE	1
98	16329	STEEL PIPE	1
99	16330	STEEL PIPE	1
100	16331	STEEL PIPE	1
101	16332	STEEL PIPE	1
102			
103	16335	STEEL PIPE	1
104	16336	STEEL PIPE	1
105	16337	STEEL PIPE	1
106	16338	STEEL PIPE	1
107	16339	STEEL PIPE	1
108	16340	STEEL PIPE	1
109	16341	STEEL PIPE	1
110	16342	STEEL PIPE	1
111			
112	16344	STEEL PIPE	1
113	16345	STEEL PIPE	1
114	16346	STEEL PIPE	1
115	16347	STEEL PIPE	1
116	16348	STEEL PIPE	1

## ASSEMBLY; 16289

Item no	PART NO	DESCRIPTION	Qty
117			
118	16352	HOSE ASSEMBLY	4
119	16353		
120	16356	$\frac{1}{2}$ BSP x $\frac{1}{4}$ " BSP MALE/MALE ADAPTOR	8
121			
122	16386	FILTER FITTING	1
123	16387	ADJUSTABLE MALE/STUD ELBOW COUPLING	3
124	16388	MALE STUD COUPLING	1
125	16389	ADJUSTABLE MALE STUD TEE COUPLING	2
126	16390	FEMALE STRAIGHT COUPLING	2
127			
128	16391	$\frac{1}{4}$ MALE TEE	2
129	16392	MALE STUD COUPLING	1
130			
131			
132	SPCT 7	$\frac{3}{4}$ x $3\frac{3}{8}$ BSP MALE/MALE ADAPTOR	2
133			
134			
135	SPCT208	2 PIPE CLAMP STRIP	7
136	SPCT 210	STACKING NUT	17
137	SPCT 212	STACKING STUD	17
138	SPCT222	GROMMET	1
139			
140			
141	TBMW 338	$\frac{3}{4}$ M/FM SWIVEL ADAPTOR	1
142			
143	TBMW 607	$\frac{3}{8}$ MALE $\frac{3}{4}$ FEMALE SWIVEL ADAPTOR	1
144			
145			
146			
147		M6 PLAIN WASHER	1
148			
149			
150			

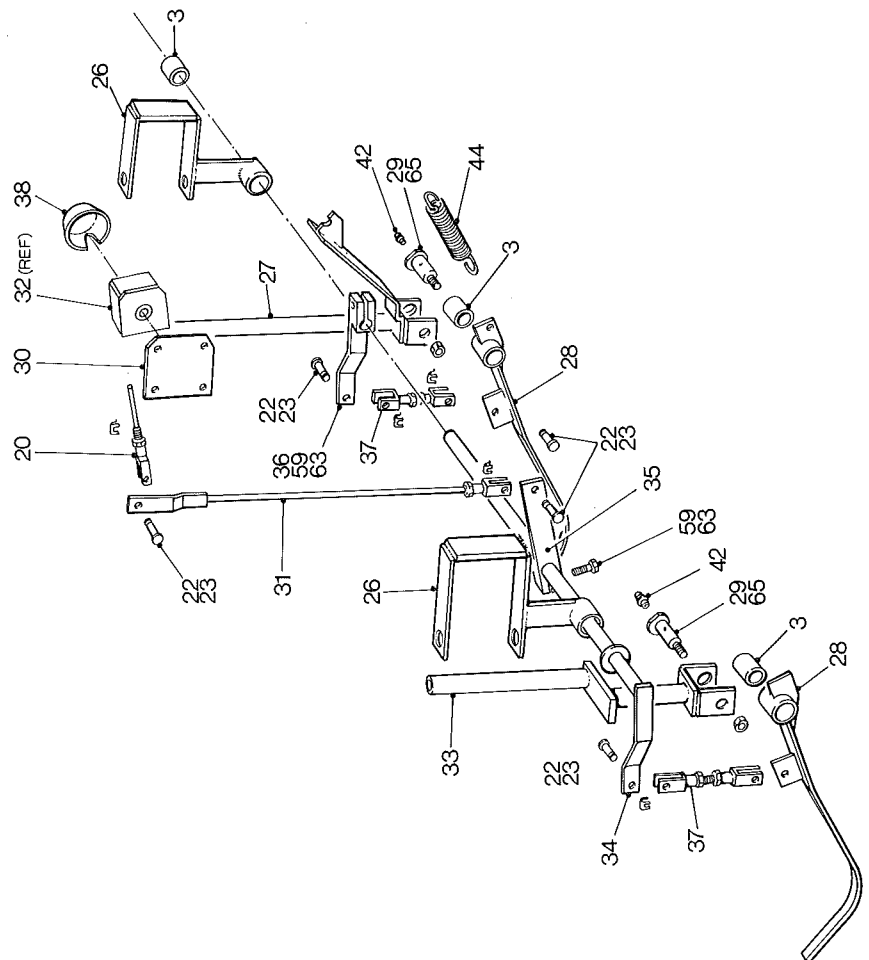
# Auto Depth & Steering

ASSEMBLY Nº 16385



**AUTO-STEER**

**AUTO-DEPTH**



## ASSEMBLY; 16385

Item no	PART NO	DESCRIPTION	Qty
1	11771	BUSH	4
2			
3	12120	BUSH	5
4			
5			
6	16029	STEERING MOUNTING BRACKET	1
7	16030	STEERING SUPPORT LEG	1
8	16931	STEERING FOOT R.H.	1
9	16032	STEERING FOOT L.H.	1
10	16033	STEERING FOOT PIVOT SHAFT	1
11	16034	STEERING FEELER R.H.	1
12	16051	BOX CONTROL ARM	2
13	16052	TAB WASHER	1
14	16053	BOX BODY	1
15	16054	BOX COVER	1
16	16060	ROCKER ARM	1
17	16061	ROCKER SHAFT	1
18	16062	CAM PLATE	1
19	16063	CONNECTING ROD	2
20	16076	AUTO DEPTH SWITCH LEVER	1
21	16082	BUSH	10
22	16083	CLEVIS PIN	10
23	16092	CLEVIS PIN RETAINER CLOP	10
24			
25	16155	STEERING FEELER L.H.	1
26	16168	AUTO DEPTH MOUNTING BRACKET	2
27	16169	AUTO DEPTH LEG L.H.	1
28	16171	AUTO DEPTH FOOT	2
29	16172	AUTO DEPTH FOOT PIVOT PIN	2
30	16173	AUTO DEPTH SWITCH MOUNT	1
31	16174	AUTO DEPTH SWITCH OPERATING ROD	1
32	16259	POTENTIOMETER	1
33	16403	AUTO DEPTH LEG R.H.	1
34	16404	AUTO DEPTH PIVOT SHAFT	1
35	16405	CLAMPED ARM	1
36	16406	OFFSET CLAMPED ARM	1
37	16407	AUTO-DEPTH LOWER LINK	2
38	16408	POTENTIOMETER COVER	1
39			
40			
41			
42	GS 412	GREASE NIPPLE	3
43			
44	PS 766	SPRING	1
45			
46		M5 SOCKET HD SETSCREW x 10LG	1
47		M5 WASHER	1
48		M5 SPRING WASHER	1
49			
50		M6 SETSCREW x 12LG	1
51		M6 WASHER	1
52		M6 SPRINGWASHER	1
53			
54		M8 SETSCREW x 16LG	2
55		M8 WASHER	2
56		M8 SPRINGWASHER	2
57			
58		M10 SETSCREW x 25LG	5
59		M10 BOLT x 40LG	15



## ASSEMBLY; 16385

Itemno	PART NO	DESCRIPTION	Qty
60		M10 BOLT x 60LG	2
61		M10 WASHER	23
62		M10 LARGE WASHER	1
63		M10 LOCKNUT	19
64			
65		M12 LOCKNUT	2
66			
67		M16 WASHER	1
68		M16 LOCKNUT	1
69			
70			

