Standen

Turbobeet Mk 3/
Mk 3 Lifter Loader

Instruction Manual

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INTRODUCTION

As this manual covers both the Turbobeet or Turbo Four and the Lifter Loader it has been divided into four sections. The first two sections being the instruction manual, section 1 dealing with the harvester and section 2 dealing with topping. Section 3 and 4 are the spart parts lists, section 3 covering the Topping and section 4 covering the Harvester.

When using the manual for a Turbobeet all four sections should be used, and when using it for Lifter Loader only sections 1 and 4 are used.

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 obtain 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' (LH) and 'Right Hand' (RH) are derived from the tractor drivers position facing forwards and the normal forward direction of travel of the harvester.

As previously stated this manual provides an illustrated list of spare parts available through Standen agents. Each illustration shows a complete unit or assembly in exploded form.

Standens policy of continual improvements means that components and even complete assemblies are re-designed from time to time. Where possible the modifications will be shown in the remarks column.

The first printing of each page in the catalogue is identified as Issue 1 at the foot of the page. When a complete unit or assembly has been redesigned the appropriate pages are revised and issued as Issue 2, for filing alongside existing pages, so that a complete modification history is gradually built up. When using an illustration and parts list it is essential that both are of the same issue.

When ordering spare parts always quote the machine serial number.

Date .....

Date Started Work .....

Serial No. .....

Agents Name .....

Agents Address .....

.....

Agents Telephone No. .....

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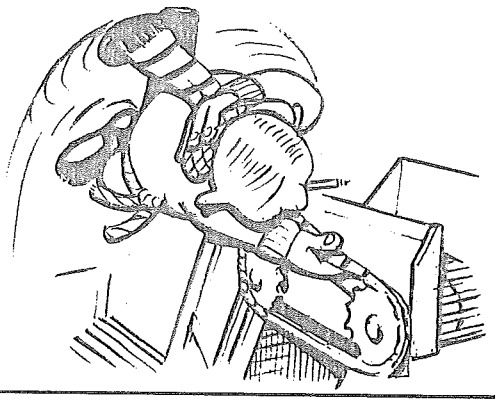
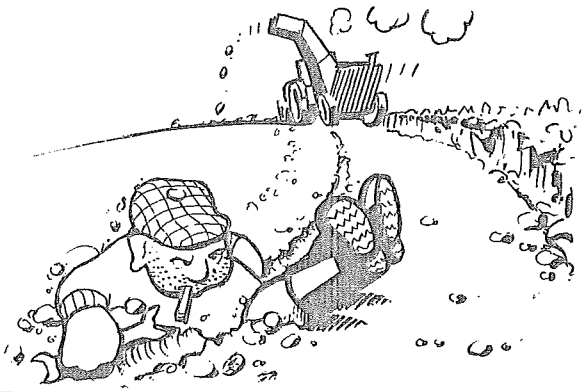
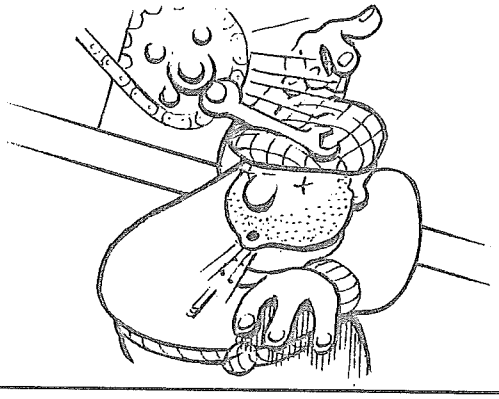
Safety Precautions



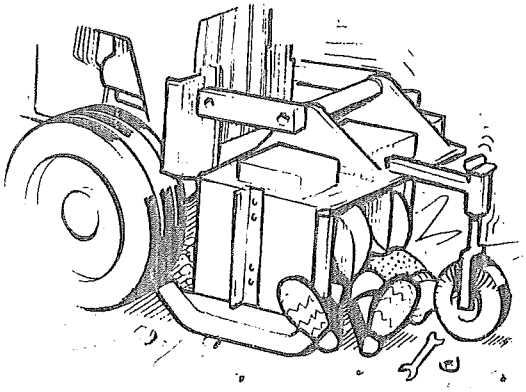
NEVER Operate the machine with any of the safety guards removed, remember they are fitted for two reasons - to keep dirt out, and more important to protect you and others from the various working parts. So, make sure they are always kept in good condition and they are fitted correctly when the machine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



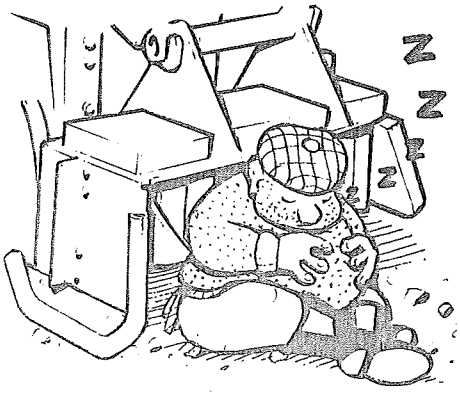
NEVER Attempt to adjust or clean any part of the machine with the tractor power take-off in motion and always stop the tractor engine.



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

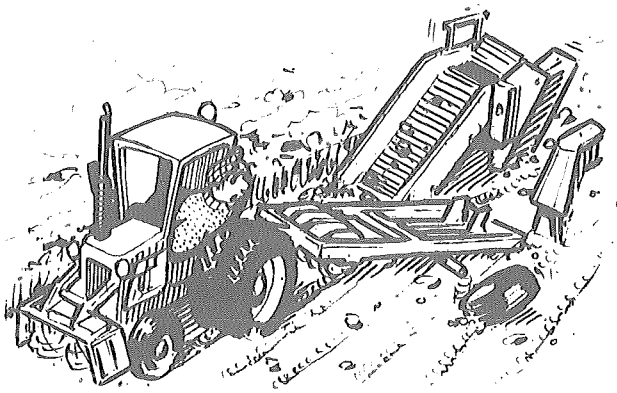


NEVER Work under the machine when it is in a raised position on the tractor hydraulic lift linkage.

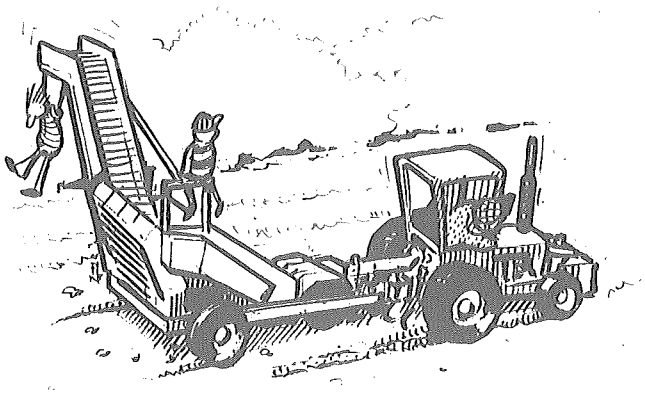


NEVER Set the machinery in motion before ensuring that every one in the vicinity is aware of your intention.

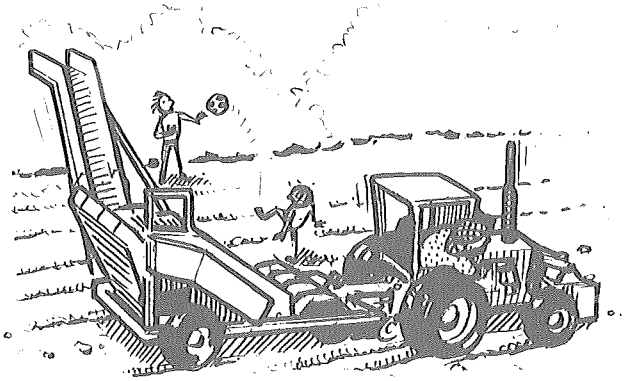
NEVER Operate the machine in a state of disrepair.



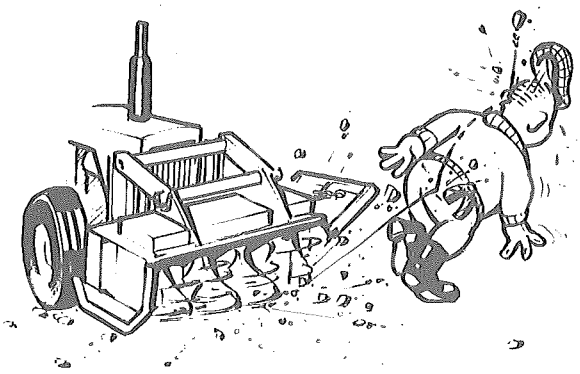
NEVER Allow any one especially children to ride on the machine.



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.

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

SECTION 1.
HARVESTER
INSTRUCTION MANUAL

INSTALLATION

The Standen Turbobeet Mk3/Lifter Loader Mk3 is a three row sugar beet harvester and the Turbo Four/Four Row Harvester is a four row sugar beet harvester. Both machines are designed to lift and load the beet into a trailer running alongside the harvester. It can be used in a single stage system by using it in conjunction with a Turbo Topper, therefore adding the topping element, or it can be used in a two stage system where upon a conventional topper is used, towed behind a second tractor. For the tractor requirement see General Data.

Check that the nuts, bolts and sprocket keys are tight expecially before starting off a new machine and during the first day or two of work.

Do not raise the machine to its fullest height with the P.T.O. engaged as serious damage could result to the P.T.O. shaft.

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 manufactures 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 stout support under the tractor frame in case the jack should become dislodged.

ATTACHING THE HARVESTER TO THE TRACTOR

The 'U' frame with the harvester has been made to fit category two and should be fitted between the two lower lift arms on the tractor and secured with a linch pin. The levelling lever, between the top lift arm and the lower lift arm should be fitted in the fixed position. Fit the stabilizer bar and adjust so the harvester is central to the centre of the tractor. The tractor top link must be fitted between the tractor and the top of the 'U' frame and adjusted so that the 'U' frame sits in an upright position.

The P.T.O. coupling supplied with the harvester may require cutting to a correct length to suit individual tractors. To do this the coupling should be parted and the two ends fitted to the tractor and the harvester respectively. The male and female shafts

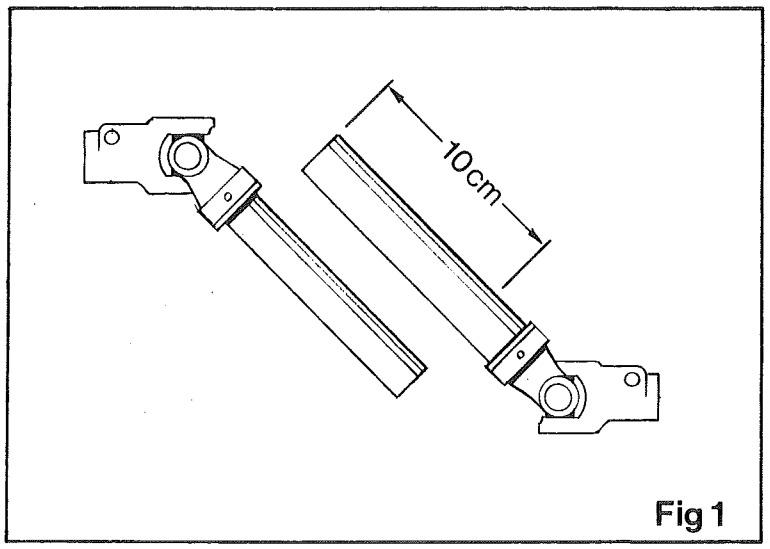


Fig 1

can then be measured alongside each other and adjustments made by cutting the surplus bar from both male and female shafts. At least 4"(10 cms) overlap should be allowed (see fig 1). After the correct length of the coupling has been obtained the P.T.O. guard should then be cut to correspond with the coupling. Before engaging the P.T.O., secure the guard by fixing the chain to a convenient place on the harvester, and ensure that the rubber hood to protect the knuckles of the P.T.O. coupling is in place.

Once the harvester has been fitted to the tractor couple up the various hydraulic services to their respective spool valves on the tractor.

Discharge Elevator (folding and unfolding)
Steerable Drawbar
Stabilizer Disc
→ Double Acting Spool Valve

Discharge Elevator Drive → Single Acting Spool Valve

REAR AXLE

Both the LH and RH rear wheels are adjustable to suit individual row settings.

To adjust the LH wheel slacken the clamps (item 1 fig 2) either side of the wheel and slide the wheel along the axle (item 2 fig 2) to the required position. Once positioned push the clamps (item 1 fig 2) up against either side of the wheel and resecure.

To adjust the RH wheel slacken the three bolts (item 5 fig 2) clamping the hub to the axle and slide the wheel to the required position.

Occasionally it is found necessary to reposition the axle itself to obtain the adjustment for the LH wheel.

To ajust the axle slacken the two grub screws in the bearings (item 3 fig 2) and release the two clamps (item 4 fig 2) adjacent to the bearings. Once the axle is free slide it through the bearings to the required position and resecure.

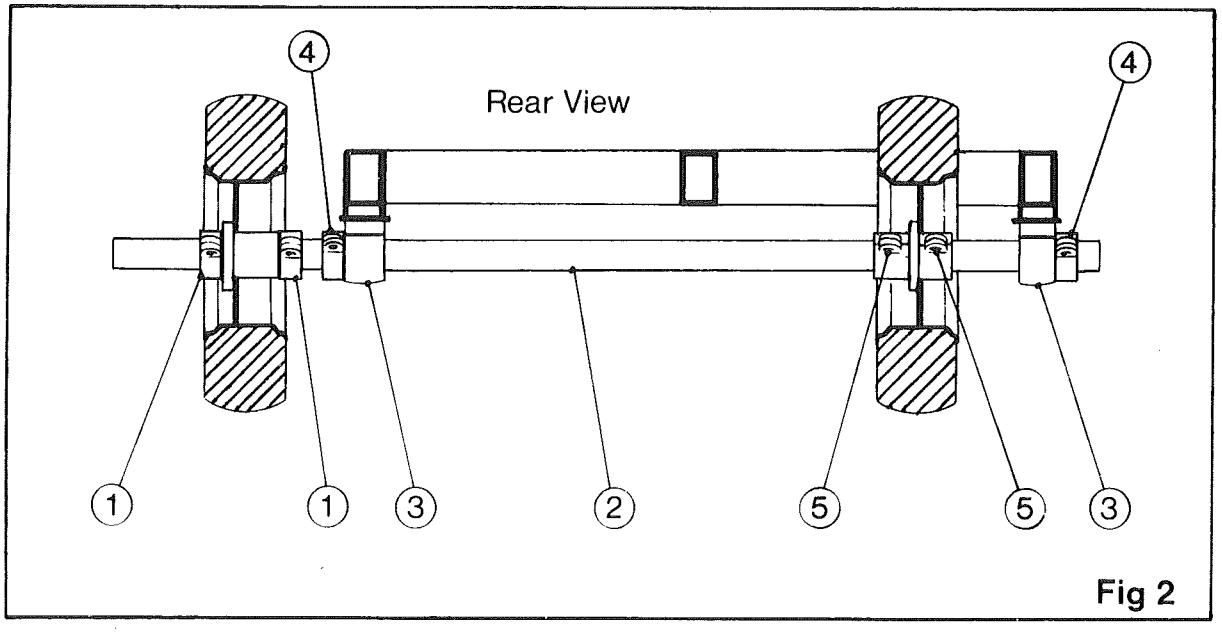


Fig 2

ADJUSTABLE DRAWBAR

The adjustable drawbar is fixed to the machine by a pivot pin, thus enabling the drawbar to pivot. This provides easy manoeuvrability of the harvester to align it with the crop, also assisting when harvesting on hillsides. Adjustment to the drawbar is made by a double acting hydraulic ram (item 1 fig 3) which is fitted to the tractor external hydraulics. On some machines a diverter valve (item 2 fig 3) or (item 2 fig 23) is fitted to divert the oil to either the drawbar or another function of the machine such as the discharge elevator or stabilizer. Therefore the diverter valve must be set to divert the oil to the drawbar before the ram can be actuated.

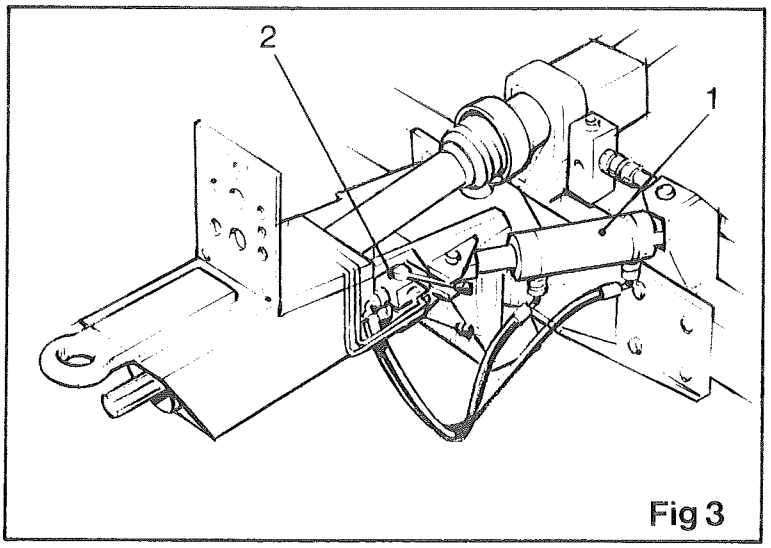


Fig 3

GUIDE SKIDS

The purpose of the guide skids (item 1 fig 4) is to follow the row of beet in front of the lifting wheels (item 2 fig 4) keeping the harvester in a straight line irrespective of the contours of the ground. To set the guide skids (item 1 fig 4) drive the harvester down the row of beet for a considerable distance until the required depth of the lifting wheels (item 2 fig 4) to lift the beet efficiently has been obtained by the setting of the tractor depth control.

Stop the harvester and switch the engine off the tractor. Do not alter the tractor depth control setting. Adjust the guide skids (item 1 fig 4), to sit on the ground without taking the weight of the harvester. The heels of the guide skids (item 1 fig 4) should be in line with the inside front edge of the lifting wheels (item 2 fig 4) and directed downwards with the leading curve directed upwards.

To adjust the guide skids (item 1 fig 4) to or from the ground, loosen the two adjusting studs (item 1 fig 5) in the guide skid bracket (item 2 fig 5) allowing the guide skid (item 1 fig 4) to be raised or lowered as required.

To adjust the width of the guide skids (item 1 fig 4) loosen the clamp bolts (item 3 fig 5) in the guide skid brackets (item 2 fig 5) and the cap (item 4 fig 5). Slide the complete guide skid assembly horizontally along the guide skid bar, to the required position, which is determined by the width of the rows of beet.

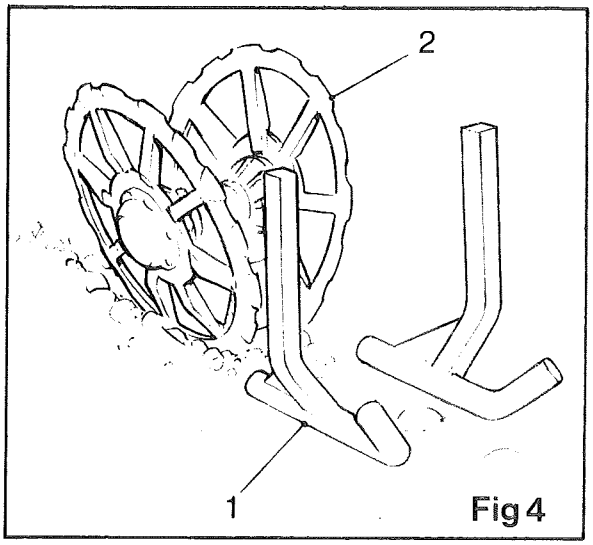


Fig 4

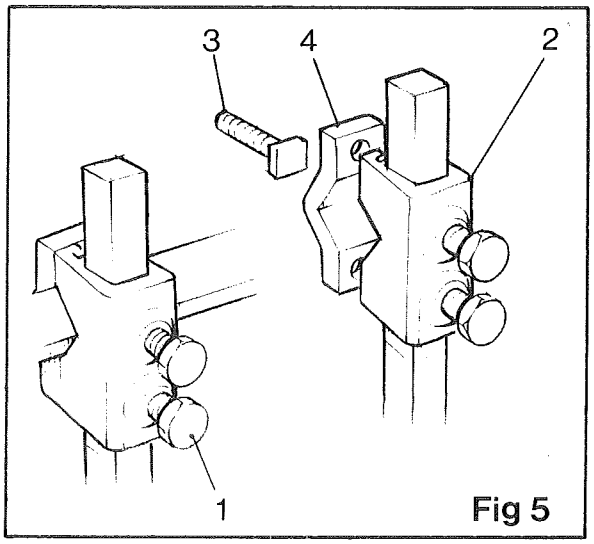


Fig 5

LIFTING WHEELS

The lifting wheels (item 1 fig 6) are designed to lift the beet from the ground and transfer them to the main digger web. The working depth of the lifting wheels is determined by the depth control on the tractor and 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 angle of the lifting wheels (item 1 fig 6). This adjustment is made by loosening the nuts and bolts (item 1 fig 7) holding the lifting wheel mounting (item 2 fig 7) to the lifting wheel mounting bracket (item 3 fig 7) which is provided with slotted holes in either side to allow the lifting wheel mounting to be adjusted both up and down. At the top of the lifting wheel mounting bracket (item 3 fig 7) is fitted an adjustings set screw (item 5 fig 7) which is provided to push down on to the lifting wheel mounting (item 2 fig 7). The adjustment described allows the lifting wheels (item 1 fig 6) 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.

The working depth of the lifting wheels is approximately 2 inches (5.1 cm).

The width of the wheels at the narrowest point is from 1 1/2 inches (3.8 cm) to 1 3/4 inches (4.5 cm) and they can be adjusted by removing or adding spacers (item 2 fig 6) between the lifting wheels and the lifting wheel hubs (item 3 fig 6)

The lifting wheel spindles (item 4 fig 6) are fitted with tapered roller bearings (item 5 fig 6) and are adjusted by a castle nut (item 6 fig 6) after removing the hub cap (item 7 fig 6).

Care should be taken not to over tighten the bearings (item 5 fig 6), adjust by turning the castle nut (item 6 fig 6) as tight as possible while slowly rotating the lifting wheel, then slacken off one or two castlerations of the nut. Secure with a new split pin (item 8 fig 6).

The lifting wheels (item 1 fig 6) can be adjusted to follow rows of 18 inches (46 cm) to 21 inches (53 cm) for a three row and 16 inches (41 cm) to 20 inches (51 cm) for a four row. (For 16 inches work a different bracket is required). To obtain these settings loosen the nuts and bolts (item 6 fig 7) in the lifting wheel mounting bracket and move the lifting wheel assembly horizontally along the beam of the main frame.

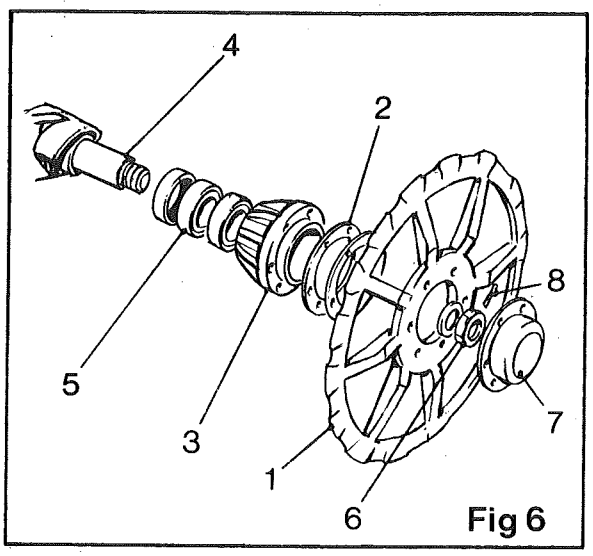


Fig 6

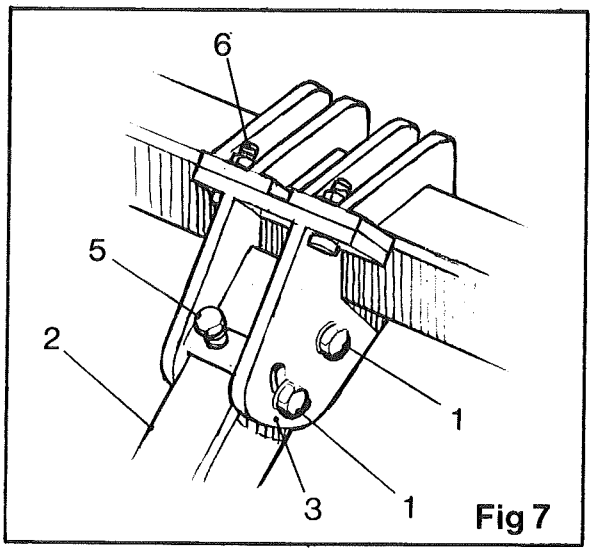


Fig 7

CAGE WHEELS

The cage wheels (item 1 fig 8) are fitted between the lifting wheels, to transfer the beet onto the main elevator. Provision is made to raise or lower the cage wheels, which generally should be higher when they are large and lower when the beet are small. To adjust loosen the bolts (item 2 fig 8) and the lock nut (item 3 fig 8). On the four row the centre support and tension screw will also have to be loosened. Once all the bolts are loose turn the two adjusting screws (item 4 fig 8) until the cage wheels are in the correct position. It is important when carrying out the above adjustment that the final position of the drive shaft (item 5 fig 8) is in a direct horizontal line across the machine.

Once the cage wheels have been positioned, re-align the guards (item 6 fig 8) by simply loosening the securing bolts (item 7 fig 8) and repositioning the guard. In the RH cage wheel guard, the side guard stay will have to be repositioned, so enabling the side guard to stay upright.

CAUTION

Before carrying out any adjustment, switch off engine and apply the parking brake.

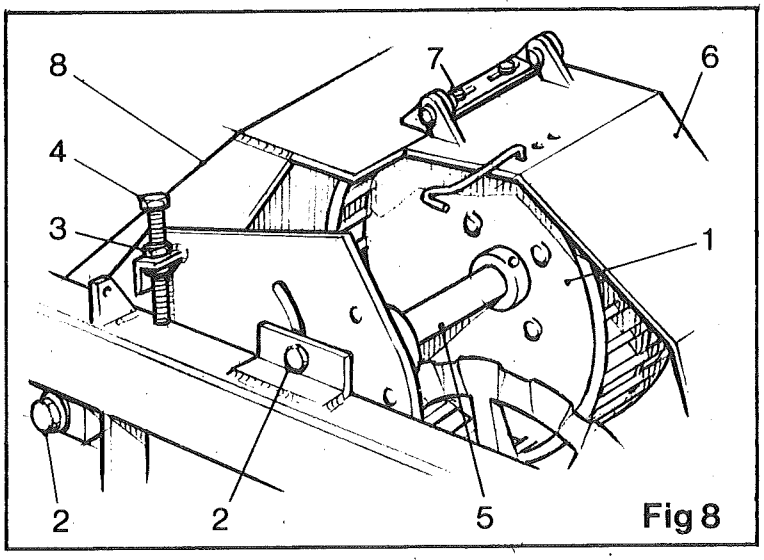


Fig 8

BEET DEFLECTORS

Beet deflectors are fitted to the bottom end of the main elevator, the outer deflectors are located on either side of the main elevator and the inner deflectors are fitted between the lifting wheels.

The deflectors are fitted to trap any beet rolling down the web. All the deflectors are adjustable to facilitate different row centres. To adjust the outer deflectors loosen the retaining bolts (item 1 fig 9) and slide the deflectors to the required position. To adjust the inner deflectors slacken the securing bolts (item 2 fig 9) and slide the deflector assembly along the support bridge (item 3 fig 9).

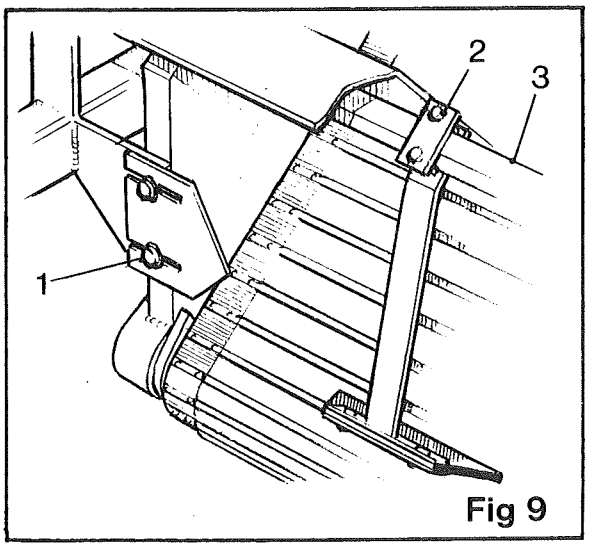


Fig 9

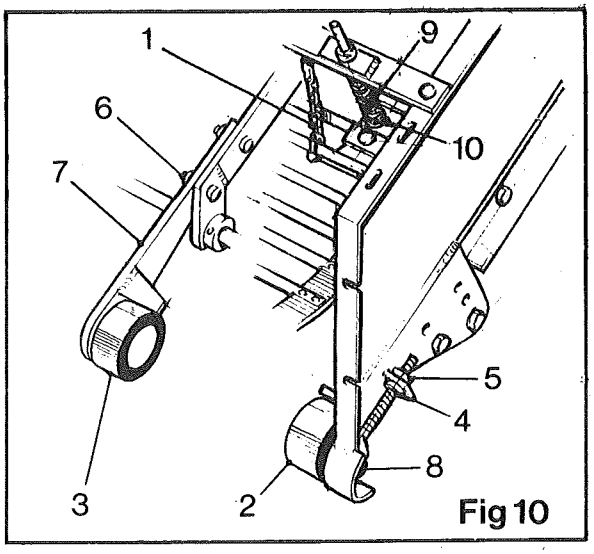


Fig 10

MAIN ELEVATOR

The main elevator consists of a main elevator web, two webs on a four row, to transfer the crop to the trash extractor. Suspended over the main web is a cleaning apron. This apron restricts the flow of beet and simultaneously rubs against the beet to give a cleaning action. Adjustment is provided for the apron to allow the operator to increase or decrease the gap between the apron and the web, so increasing or

decreasing the cleaning. To adjust shorten or lengthen the support chains (item 1 fig 10).

The main elevator is fitted with split type web sprockets, to allow for easy removal. For instructions see paragraph headed "Split Sprockets".

The bottom rollers (item 2 & 3 fig 10) are adjustable to allow the web to be tensioned. To adjust the outer rollers (item 2 fig 10) slacken the retaining nut (item 8 fig 10) whilst holding the roller spindle with an allen key.

Once the retaining nut is loose, slacken the lock nut (item 4 fig 10) and adjust by turning the adjusting nut (item 5 fig 10). When carrying out this adjustment ensure both sides are adjusted equally. Once the outer rollers have been adjusted slacken the retaining bolts (item 6 fig 10) holding the centre roller and slide the support plate (item 7 fig 10) until the roller (item 3 fig 10) is touching the web, (Three Row only).

COMPRESSION KIT (OPTIONAL)

A cleaner apron compression kit gives additional cleaning, by increasing the pressure of the cleaner web onto the beet. Varying pressures can be obtained by altering the tension of the spring (item 9 fig. 10), this is done by repositioning the collar (item 10 fig 10).

TRASH EXTRACTOR

The trash extractor consists of continental type web, on which the beet and trash are thrown onto, from the main elevator. The beet then roll down the trash extractor web and onto the cross web whilst the trash is taken out the rear of the machine. The angle at which the trash extractor operates is adjustable. When the trash is dense the trash extractor should operate at a shallow angle, whereas when a small amount of trash is evident then the trash extractor should operate at a steeper angle. To adjust slacken the two securing bolts (item 1 fig 11) and either push or pull the lever (item 2 fig 11) to obtain the desired angle. Once the trash extractor is correctly positioned, resecure with the bolts (item 1 fig 11).

The trash extractor can also be adjusted horizontally to allow for large beet. To adjust slacken the four retaining bolts (item 3 fig 11), the two securing bolts (item 1 fig 11) and the two lock nuts (item 4 fig 11). Turn the adjusting nut (item 5 fig 11) until the desired position is achieved. Beware the trash extractor can pivot once the two securing bolts (item 1 fig 11) are loose. After adjusting ensure the trash extractor is sitting square to the machine.

Situated above the trash extractor are some spring loaded flaps (item 1 fig 12). These flaps are positioned to stop beet from escaping out the rear of the machine and are hinged so simultaneously allowing trash and stones out. The flaps are fitted with springs (item 2 fig 12). These springs should be correctly tensioned so that once large stones have passed through, the spring will then close the flap so retaining the beet. To adjust the tension, slacken the lock nut (item 3 fig 12) and turn the adjusting nut (item 4 fig 12).

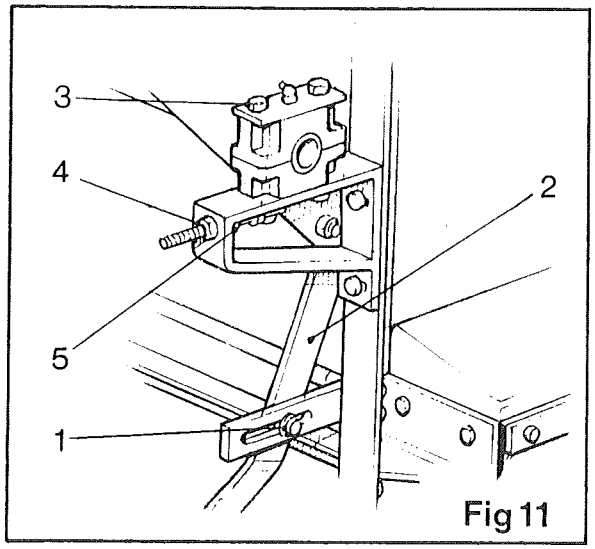


Fig 11

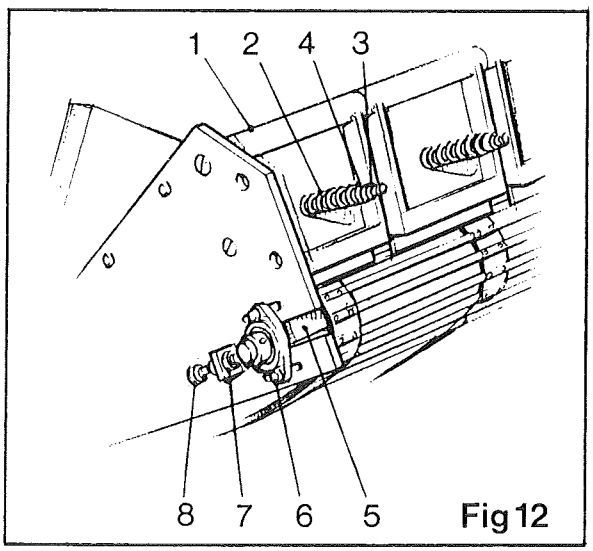


Fig 12

To ensure the web runs square in the trash extractor frame the top shaft (item 5 fig 12) can be adjusted. To adjust loosen the two bearing bolts (item 6 fig 12) and the lock nut (item 7 fig 12) and turn the adjusting screw (item 8 fig 12).

REAR CROSS WEB

The rear cross web is fitted to collect the sugar beet from the trash extractor and convey them onto the discharge elevator.

The only adjustment provided on the cross web is the adjustment for the tension of the web. To adjust slacken the roller retaining bolt (item 1 fig 13) and the lock nut (item 2 fig 13) and turn the adjusting nut (item 3 fig 13). Repeat for the opposite roller. This web can be of the continental or steel type.The speed of the web is factory set to suit most conditions, although the speed can be reduced by changing the driver sprocket to a 17 tooth sprocket.

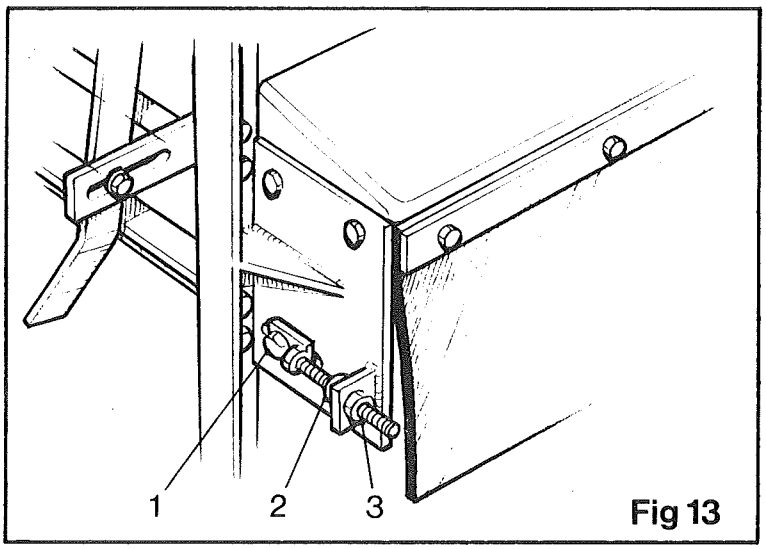


Fig 13

DISCHARGE ELEVATOR

The discharge elevator consists of a single web to which is fitted the discharge elevator lats. It is provided to transfer the beet into a trailer running alongside the harvester. The discharge elevator is driven by two 'V' belts and must always be in operation while the beet lifting is in progress. The discharge elevator can be engaged or disengaged by operating a hydraulic ram (item 1 fig 19).

The discharge elevator is fitted with a double acting hydraulic ram to facilitate the folding and unfolding of elevator before or after transporting on the road. The ram is coupled to the tractor external hydraulics and is operated from the tractor seat.

On some machines a diverter valve (item 2 fig 3) or (item 2 fig 23) is fitted to divert the oil to either the discharge elevator or another function on the machine, such as the stabilizer disc or drawbar. Therefore the diverter valve must be set to divert the oil to the discharge elevator before the ram can be actuated.

UNFOLDING THE ELEVATOR FOR WORK

1. Remove the two securing bolts (item 1 fig 14) from the discharge elevator bottom frame (item 2 fig 14).
2. Operate the ram to unfold the elevator.
3. Once the elevator is in the working position secure it by replacing the securing bolts (item 1 fig 14).
4. Position the elevator stay (item 4 fig 14) by locating the hook end of stay in the lug (item 3 fig 14) on the elevator and locate the bottom end of the stay over the pin (item 5 fig 14) on the main frame.
5. Swing the bottom roller support (item 6 fig 14) into the working position and secure with the latch (item 7 fig 14).

FOLDING THE ELEVATOR FOR TRANSPORT

1. Release the bottom roller support (item 6 fig 14) by pulling back the latch (item 7 fig 14).
2. Remove the elevator stay (item 4 fig 14).
3. Remove the two securing bolts item 1 fig 14).
4. Operate the ram to fold the elevator.
5. Fold beet deflector from transport.

If the hydraulic ram has been disconnected and reconnected again, then no attempt must be made to operate it until the ram has been bled to eliminate any air present in the system. Also the hydraulic ram must never be operated with the restrictors removed.

BEET DEFLECTOR

On the top of the discharge elevator a beet deflector is fitted to divert the beet into the trailer. The deflector is fully adjustable to obtain different angles of deflection. The holes in the side stay (item 14 fig 14) provides the adjustment. The deflector has a transport position, so reducing the overal height of the harvester see fig 14.

ELEVATOR LIFT BLOCK FOR 16 INCH WORK

A lift block is supplied with a machine, that is designed to lift beet grown at 16 inch spacing. This block is placed between the bottom and top sections of the discharge elevator and is positioned there to give a greater discharge height when opening up a field (see fig 14).

IMPORTANT

When fitting or removing the elevator block, ensure that the discharge elevator is in the fully closed position.

DISCHARGE ELEVATOR (WEB TENSION ADJUSTMENT)

The discharge elevator web can be adjusted for tension. To tension the web loosen the bottom roller (item 8 fig 14) (a spanner can be located on the flats of the roller

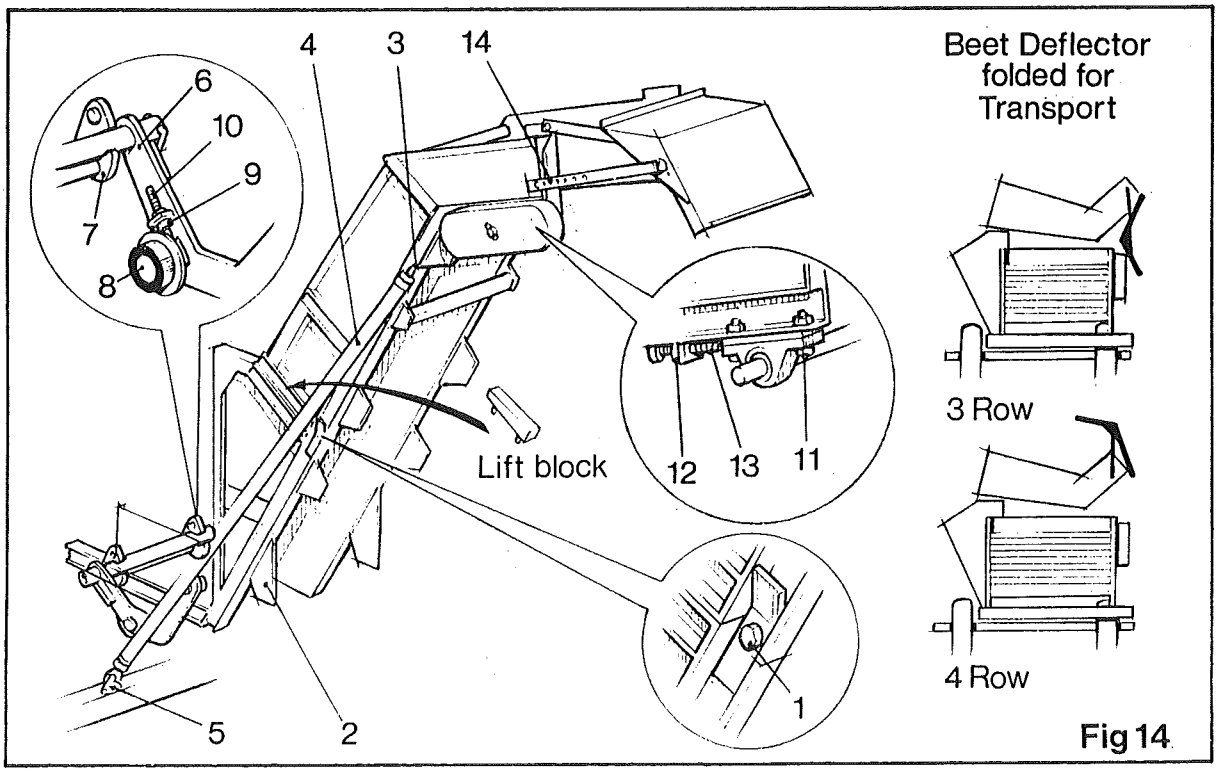


Fig 14

spindle), loosen the lock nut (item 9 fig 14) and turn the adjusting nut (item 10 fig 14) clockwise or anticlockwise to obtain the required tension. After the adjustment has been made tighten the lock nut (item 9 fig 14) and resecure the bottom roller. Ensure that both rollers are adjusted equally. A second web adjustor is situated at the top of the elevator. To adjust slacken the four bearing retaining bolts (item 11 fig 14) and the lock nut (item 12 fig 14) and turn the adjusting screw (item 13 fig 14) to give the correct tension. Ensure that both rollers are adjusted equally.

DRIVES

The various mechanical drives that are involved in the operation of the Standen beet harvester consists of clutches, chains, sprockets, pulleys and belts. Each drive chain or belt has its own tension adjustment, either manual or self-adjusting. The chains and belts should be correctly tensioned to ensure the efficient working of the machine. 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, shaft 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 result in serious injury to personnel.

MAIN DRIVES

The main drive from the power take off of the tow vehicle is connected to a bearing housing, situated on the front of the drawbar. From this bearing housing the drive is transferred back to a gearbox (item 1 fig 15) by a universal coupling (item 2 fig 15). (This shaft and the P.T.O. drive shaft (item 3 fig 15) should be checked occasionally to ensure that the inner and outer tubes can slide freely. Binding of the tubes will cause premature failure of the input and gearbox bearings). From the gearbox the drive is transferred back again to second gearbox (item 4 fig 15). From this gearbox the drive is split two ways to drive the various functions of the machine.

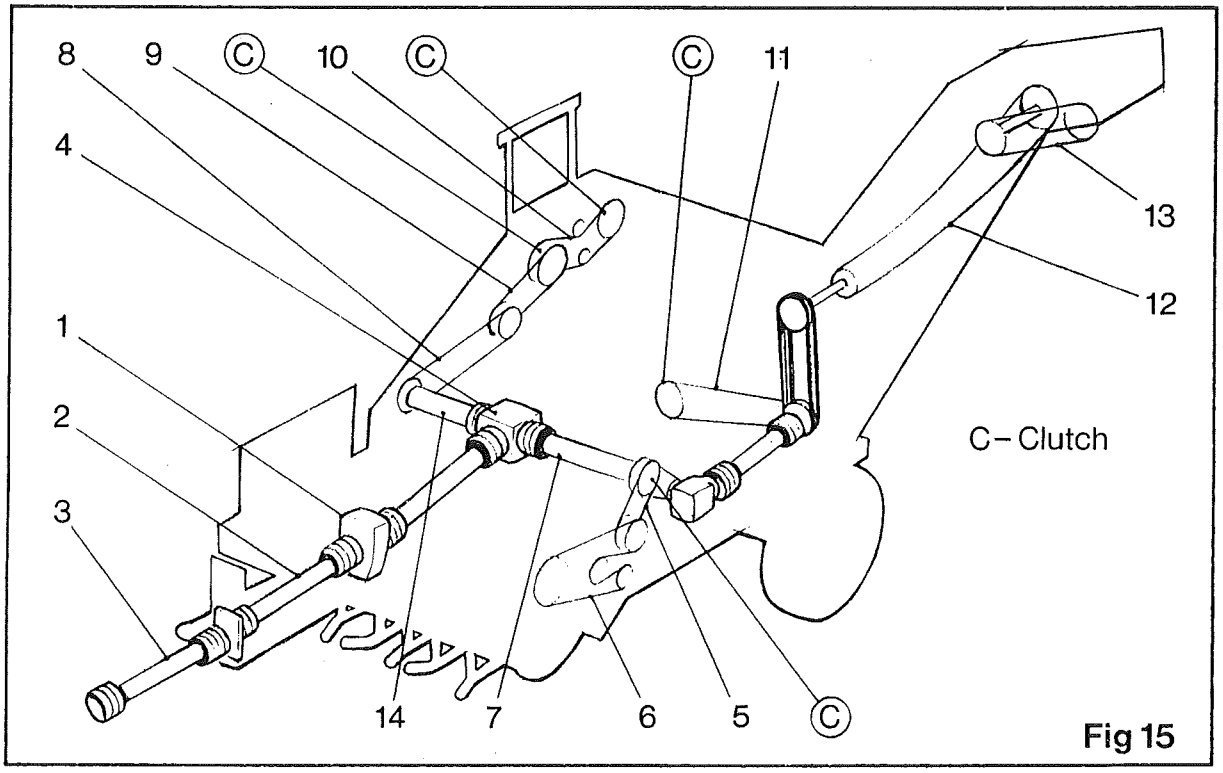


Fig 15

CAGE WHEEL DRIVE

The cage wheels are driven from LH main drive shaft (item 7 fig 15) to the cage wheel drive shaft by means of various sprockets and two drive chains (item 5 and 6 fig 15). The first chain (item 5 fig 15) is tensioned by a tension block (item 1 fig 16). To adjust slacken the retaining bolt (item 2 fig 16) and slide the tension block to the required position. The second drive chain (item 6 fig 15) is tensioned by a sprocket (item 3 fig 16). To adjust loosen the two securing bolts (item 4 fig 16) and the lock nut (item 5 fig 16) and turn the adjusting nut (item 6 fig 16) until the required tension is achieved.

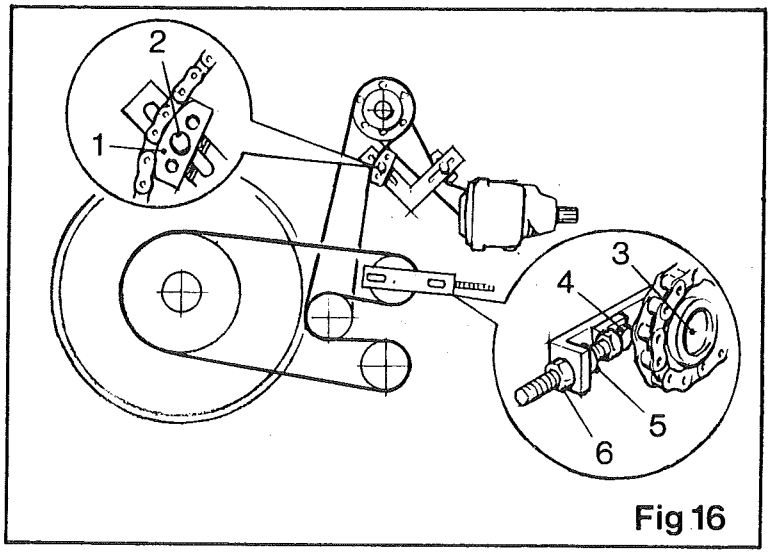


Fig 16

MAIN ELEVATOR DRIVE

The main elevator drive is taken from the RH main drive shaft (item 14 fig 15). Both drive chains are tensioned by a nylon tensioner (item 1 fig 17) to adjust either chain, loosen the retaining bolt (item 2 fig 17) and slide the tensioner to the required position.

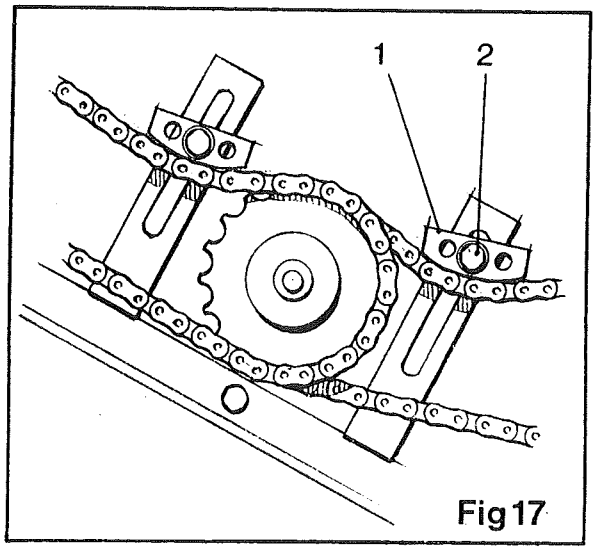


Fig 17

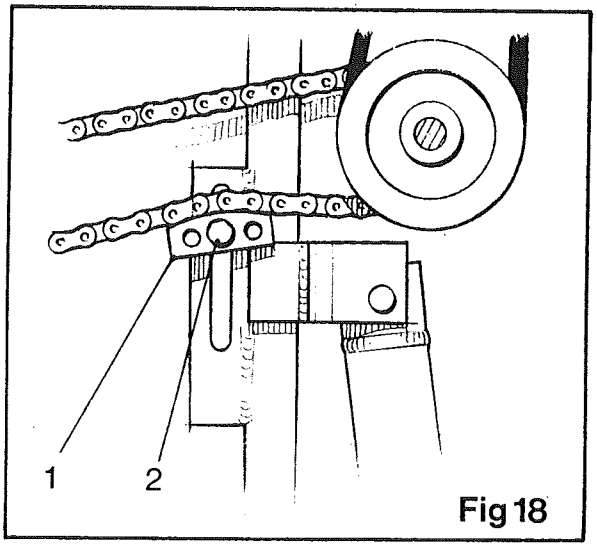


Fig 18

TRASH EXTRACTOR DRIVE

The trash extractor drive chain (item 10 fig 15) is tensioned by self tensioner, therefore, no adjustment is required.

REAR CROSS WEB DRIVE

The rear cross web drive chain (item 11 fig 15) is tensioned by a nylon tensioner (item 1 fig 18) to adjust the tension of the chain, slacken the retaining bolt (item 2 fig 18) and slide the tensioner to the required position.

DISCHARGE ELEVATOR DRIVE

When the P.T.O. is engaged, the machine runs continuously except for the discharge elevator. The discharge elevator is set in motion by actuating a hydraulic ram (item 1 fig 19). The hydraulic ram is coupled into the tractor external hydraulics. Once the ram has been actuated it pushes an arm (item 2 fig 19) which in turn pulls a jockey roller (item 3 fig 19) onto the drive belt. Once the drive is engaged the pulley will act as a tensioner for the belt. To increase or decrease the tension, slacken off the lock nut (item 4 fig 19) and adjust by turning the adjusting nut (item 5 fig 19) clockwise or anticlockwise until the tension is correct.

Remember besides providing a drive a V-belt also acts as a slip clutch, therefore it is important that the belt tension is sufficient to drive normally without slip, but not so great that the belt cannot slip when the drive is obstructed. To ensure the roller (item 3 fig 19) will retract when it is needed the tension arm (item 2 fig 19) is fitted with a spring (item 6 fig 19). To tension the spring loosen the lock nut (item 7 fig 19) and turn the adjusting nut (item 8 fig 19) until the correct tension has been achieved. Once the jockey roller (item 3 fig 19) has been retracted and there is no more travel in the ram the discharge elevator should not continue to run. If the drive belt continues to drive then one of two things could be causing it. (1) Not enough tension in the top spring (item 9 fig 19), therefore increase the tension by loosening the retaining bolt (item 10 fig 19) and turning the anchor plate (item 11 fig 19) further round or (2) too much tension in the lower spring (item 12 fig 19).

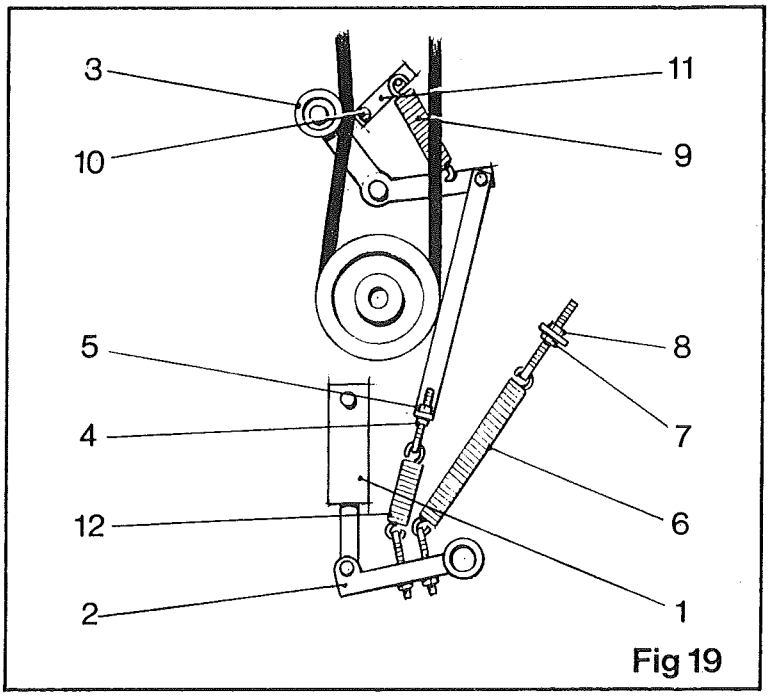


Fig 19

CAUTION

Always replace safety guard before attempting to engage the P.T.O. drive.

From the top pulley the drive is taken up the side elevator by a drive chain (item 12 fig 15) to an intermediate sprocket. From this sprocket the drive is taken to the top sprocket by a second drive chain (item 13 fig 15). Both these chains have spring assisted tensioners. If adjustment is required loosen the retaining bolt (item 1 fig 20) and turn the spring anchor (item 2 fig 20). If extra adjustment is required remove the retaining bolt (item 1 fig 20) and replace it in any one of the adjusting holes in the spring anchor (item 2 fig 20).

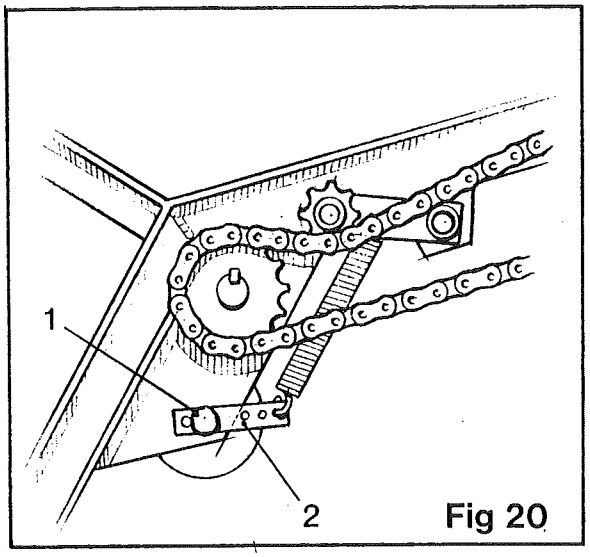


Fig 20

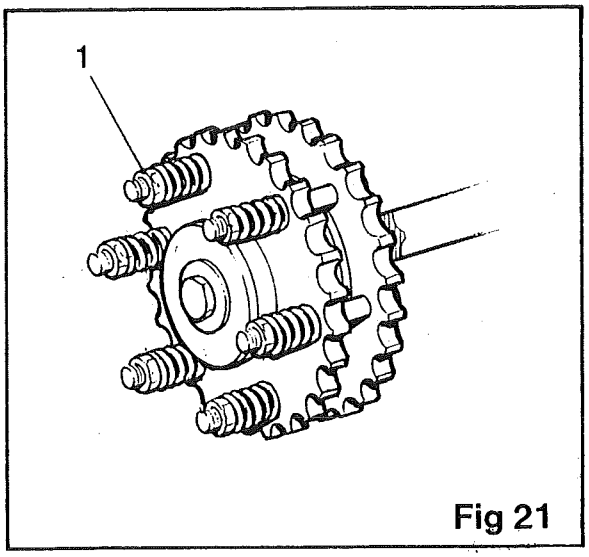


Fig 21

FRICTION CLUTCHES

All drive lines are protected by a slip clutch to prevent serious damage should the machine become overloaded or its elevators become jammed or obstructed. The amount of torque required to start the clutch slipping can be varied by turning the nuts (item 1 fig 21).

The clutch should be set to just drive without slipping under normal conditions. Over tightening on the adjustment nuts will render the clutch ineffective. Care should be exercised to ensure all six lock nuts are adjusted equally. This is easily achieved by adjusting each nut one flat at a time.

The location of each clutch is marked with 'C' on fig 15.

SPLIT SPROCKETS

Various webs on the harvester are driven by split web sprockets. These sprockets have been designed to simplify the maintenance work. Rather than dismantling a complete drive assembly the sprocket can be individually split and removed from the shaft as described below.

SPROCKET REMOVAL

1. Loosen the fixing bolts (item 1 fig 22) and remove.
2. Using a hammer and chisel, split the sprocket along the groove provided (fig 22).
3. Remove both halves of the sprocket from the shaft.

SPROCKET REPLACEMENT

1. Mark each half of the sprocket clearly before splitting.
2. Split the sprocket with a hammer and chisel in the groove provided (fig 22).
3. Locate both halves on the shaft and secure using the fixing bolts (item 1 fig 22).

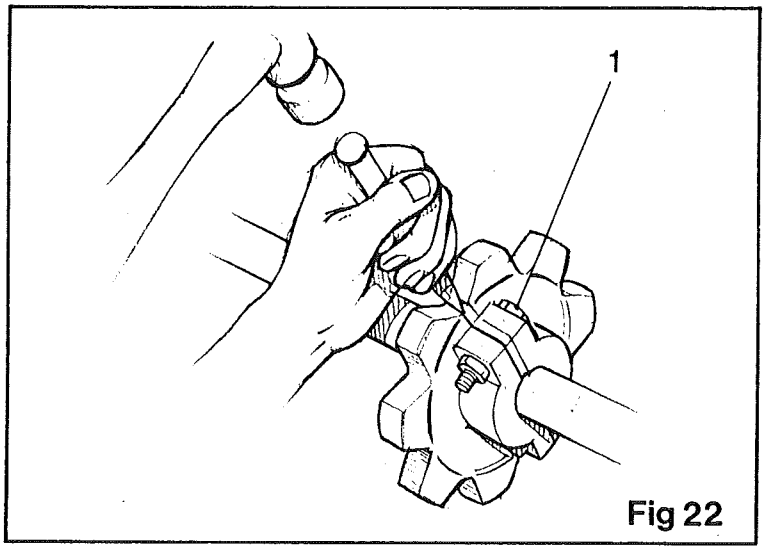


Fig 22

STABILIZER DISC (OPTIONAL)

A stabilizer kit is offered as an option to assist with hillside work. Once the machine is in work the stabilizer disc can be lowered by actuating a hydraulic ram (item 1 fig 23) from the external tractor hydraulics. On some machines a diverter valve (item 2 fig 23) is fitted to divert the oil to either the discharge elevator or stabilizer disc. Therefore this valve must be set so the oil will flow to the stabilizer disc before the ram can be actuated.

Do not reverse or turn unless the stabilizer is in its raised position.

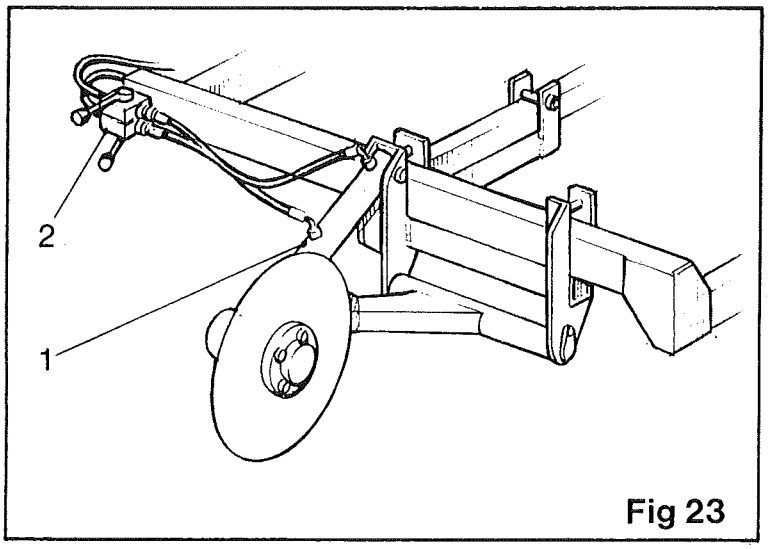


Fig 23

SHAFT MONITOR KIT (OPTIONAL)

A shaft monitor kit is fitted to indicate if a shaft slows down due to an obstruction on the elevator becoming overloaded.

Connect the seven pin plug into the monitor box. When the system is correctly installed it will operate as follows:-

When the tractor ignition is switched on, the monitor lights will come on and the buzzer will sound for approximately 10 to 20 seconds and then stop. The lights will

remain on until the harvester is operated.

Once the harvester is in work if one of the shafts slows down, the relevant light will flash and the buzzer will sound intermittently. If the shaft stops rotating then the light will come on and the buzzer will sound for about 10 to 20 seconds and then stop. The light will remain on until the shaft rotates again.

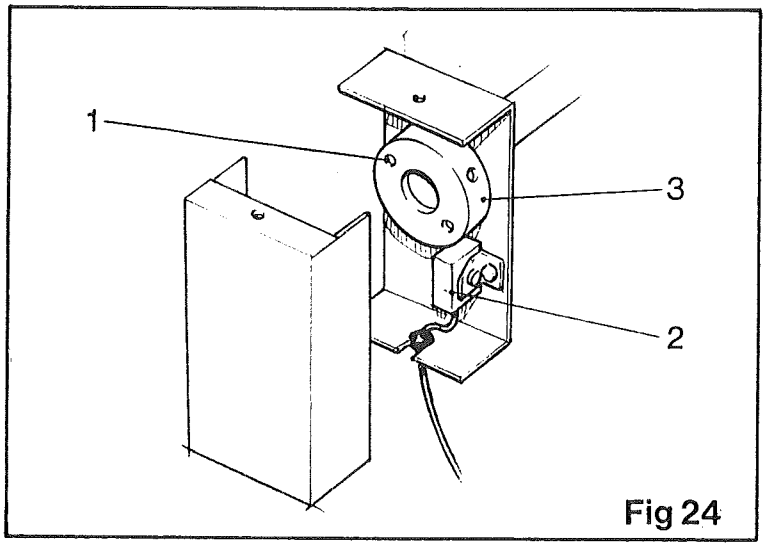
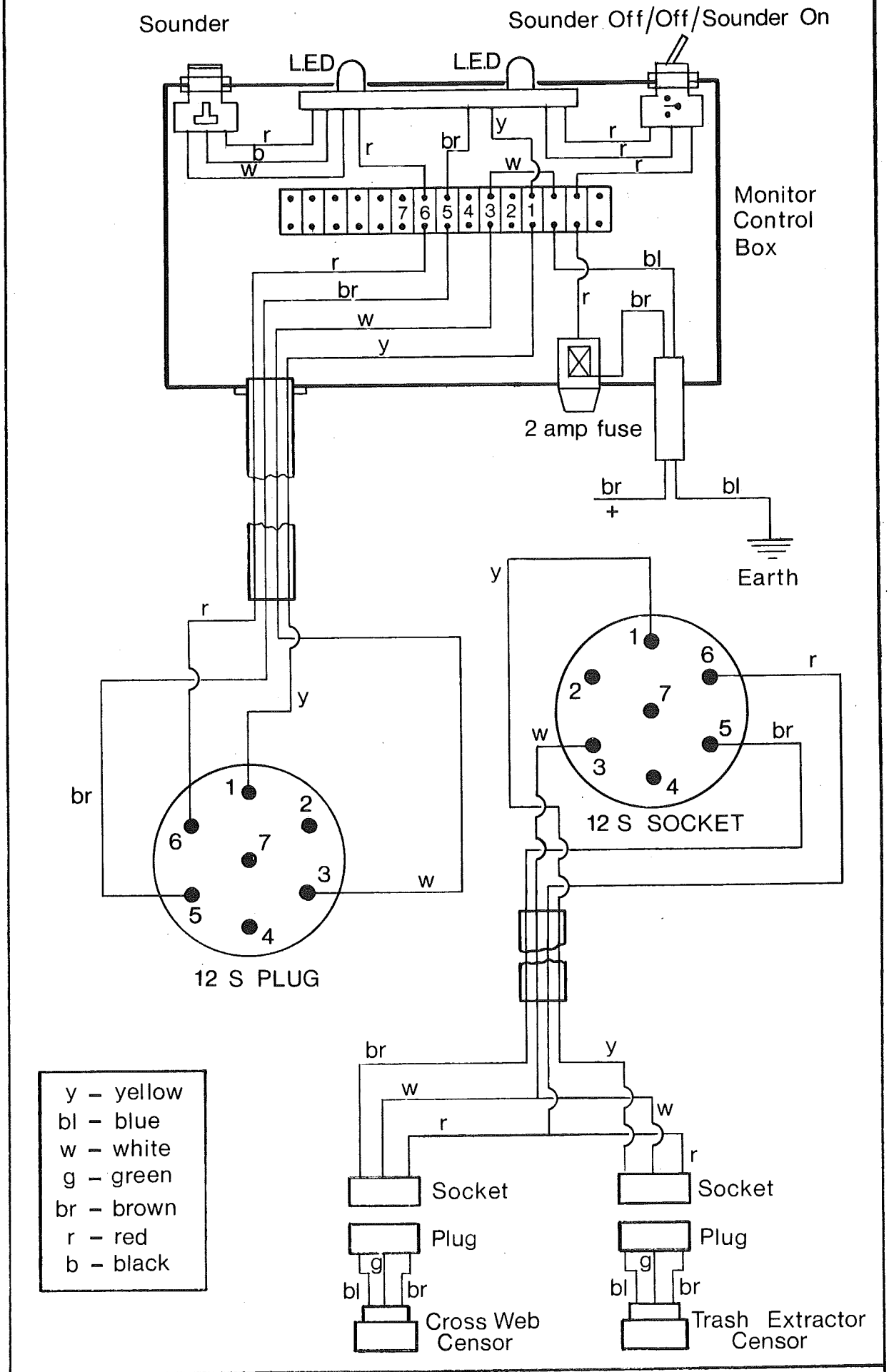


Fig 24

In the event of the system not working, the following checks should be made:-

1. Check the fuse in the monitor box.
2. Check that there is a live supply at the terminals in the junction box.
3. Check that the brown lead at the censor is live by using a test light between the brown lead and the green earth lead.
4. Check that an earth exists back to the tractor.
5. If one monitor works and the other one does not, check the wiring first and secondly interchange one censor with another. Failure here will indicate a faulty censor.
6. Check that the magnets (item 1 fig 24) are in place and that the censor (item 2 fig 24) is in close proximity of the nylon roller (item 3 fig 24), 0.25 in (6 mm) maximum.

SHAFT MONITOR WIRING DIAGRAM



Ensure that the blue lead from the censor is never connected to a positive supply as this will burn out the censor.

MAINTENANCE

Regular maintenance will ensure that the Standen harvester provides a long and efficient service life. Depending on the soil and weather conditions the maintenance time schedule can vary. However, it is recommended that the machine be lubricated and gearbox oil levels checked once a week throughout the season.

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 the universal coupling drives. All gearboxes should be filled with SAE 90 oil or equivalent (Ref O on fig 25).

NOTE:

With reference to fig 25 that some of the bearings are sealed and pre-lubricated (Ref GS) and 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. Should this 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 are required.

The non-sealed bearings (Ref G) 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 ferodo discs fitted to the clutches or the 'V' belts on some of the drives.

Grease points requiring individual quantities of lubrication will be found on the lubrication points chart fig 25.

We recommend that the universal couplings should be dismantled periodically and their shafts smeared with general purpose grease. Also all drive chains should be kept well greased.

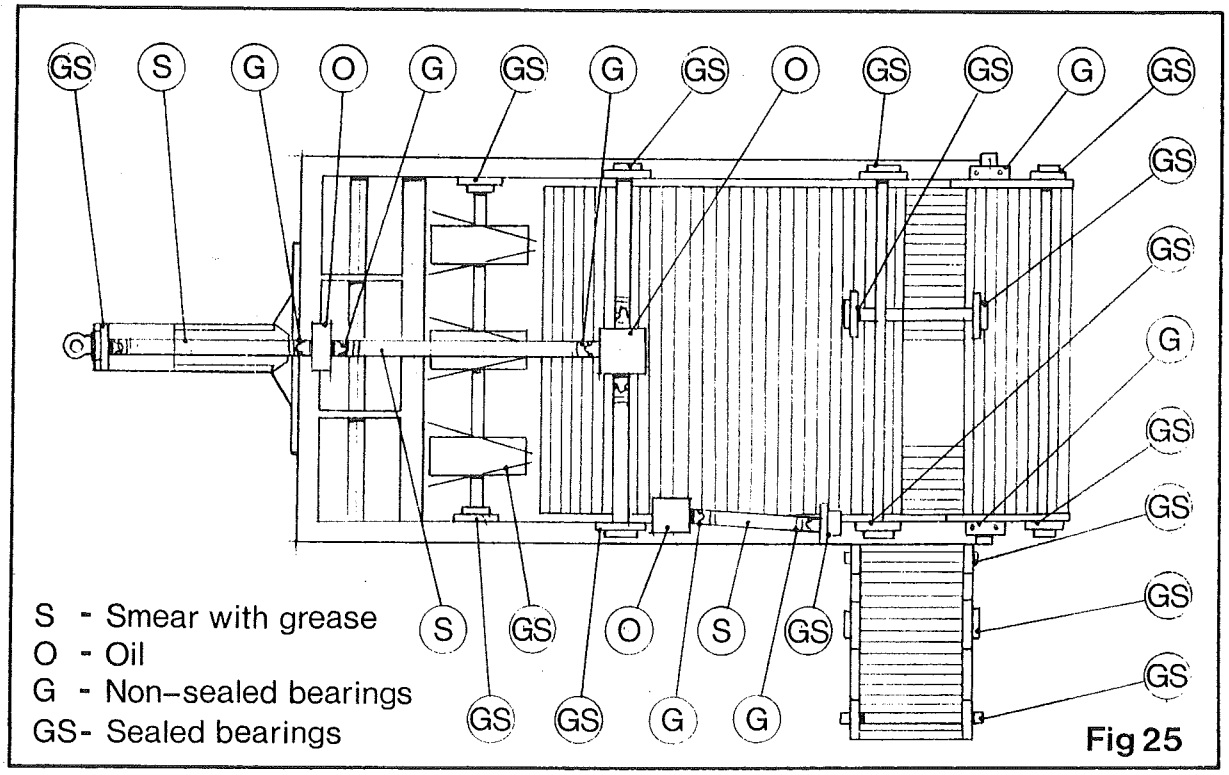


Fig 25

FAULT ANALYSIS

When considering faults and pinpointing causes most if not all Harvesting problems can be overcome by the correct setting of tractors and machines. Although, throughout this section of the operators handbook we have been considering the MK 11 Lifter Loader only, some of the faults can be attributed to the particular preceeding Topper, so, before attempting to alter any part of the Harvester examine the quality of the Topping to try to isolate the cause.

FAULT	POSSIBLE CAUSE(S)	CORRECTION
Side of beet shaved off	Lifting wheels too close together	Increase distance between wheels by adding spacers between the wheel and the wheel hub
Harvester not running in a straight line	Left hand harvester wheel not running in groove made by previous lifted row	After openings have been made, set wheel to follow lifted row
	Harvester not fitted central to tractor	Reset harvester at draw bar. Ensure that check chains on tractor lift arms are adjusted equally
Beet knocked over (by lifting wheels)	Lifting wheels too close together	Increase distance between lifting wheels by adding spacers between the wheels and wheel hubs.
	Lifting wheels not working deep enough	Increase penetration on the tractor depth control
		Raise the lifting wheels as high as possible in the slots provided in the lifting wheel mounting
		Add weight to the front of the harvester frame
	Guide skids set too deep, weight of harvester being carried on guide skids	Reduce the depth of the guide skids by adjusting to a lower hole in guide skid leg
	Driving too fast for crop conditions	Reduce forward speed
Beet knocked over (by tractor wheels)	Wheels set too narrow, causing the sides of the tyre to loosen the beet	Check wheel settings. Adjust wheels to run central to beet rows
	Operator not driving central to row	Select a point on the tractor to drive by or fit a drop marker to the tractor central over row of beet
Too much soil being lifted	Lifting wheels too deep in the ground	Reduce penetration on the tractor depth control
	Lifting wheels too far apart	Decrease distance between wheels by removing the spacers between the lifting wheels and wheel hubs
	Small beet and beet growing irregular in the row	

FAULT	POSSIBLE CAUSE(S)	CORRECTION
Beet losses (Below ground)	Lifting wheel not working deep enough	Increase penetration of the tractor depth control
	Guide skids adjusted too deep	Reduce the depth of the guide skids in the guide skid brackets
	Lifting wheels too wide apart	Decrease distance between wheels by removing the spacers between the wheel and hubs
	Worn lifting wheels	Renew wheels
	Lifting wheel hub spindles bent	Renew lifting wheel mounting
	Lifting wheels incorrectly set to the beet rows	Check harvester in relation to beet rows
	Inacurate steering	Steer correctly. Re-check guide skids
	Driving too fast in relation to crop conditions	Reduce forward speed and check results improve
Beet losses (Above ground)	Beet knocked out of the ground by lifting wheels	Fit spacers between the lifting wheels and the Lifting wheel hubs to widen the wheels
	Beet lost between web links	Fit alkathene tubes to web links to decrease the distance between the links
	Beet lost through the spokes of the lifting wheels	Fit lifting wheel "Spiders" designed to half the distance between the lifting wheel spokes
	Beet rolling off the front of the main digger web	Check if Beet deflectors or baffle plates bent or lost or out of adjustment, cag wheel between lifting wheel set too low
	Too many lats on trash extractor web	Remove some of the lats.
	Trash extractor adjusted too flat	Adjust to vertical position
	Beet lost when discharging into trailer	Ensure that trailer is central to the discharge elevator. Do not over fill the trailer
Web links unhooking (Steel web only)	Web links badly worn	Renew links
	Web links too slack	Adjust by removing the required number of links to tension web

FAULT	POSSIBLE CAUSE(S)	CORRECTION
Too much soil being lifted	Lifting wheels too deep in the ground	Reduce penetration on the tractor depth control
	Lifting wheels too far apart	Decrease distance between wheels by removing the spacers between the lifting wheels and lifting wheel hubs
	Lifting wheels set too high in the lifting wheel mounting causing the lifting wheels to penetrate at their widest point	Lower lifting wheels and reset depth control on the tractor to higher position, when the correct depth has been obtained, readjust guide skids
	Small beet or beet growing irregular in row	As above
Too much soil and trash in load	Cleaner apron suspended over main elevator not restricting the flow of beet	Adjust the apron to the best position to restrict the beet flow. Add compression kit to apron
	Trash extractor too vertical	Adjust to a more upright position. Add more lats to web
	Trash extractor safety clutch slipping	Adjust safety clutch by equal turns of the clutch spring adjusting nuts
Beet left in the ground	Lifting wheels set too wide	Decrease distance between wheels by removing the spacers between the wheels and hubs
	Worn lifting wheels	Renew wheels
	Lifting wheel hub spindles bent	Renew lifting wheel mounting
	Lifting wheels not working deep enough	Increase penetration of the Tractor depth control
	Guide skids set too deep weight of harvester being carried on guide skids	Reduce the depth of guide skids after slackening off the set screws
	Driving too fast in relation to crop conditions	Reduce forward speed
Skinned beet	Elevator webs too close for size of beet	Adjust rollers to suit size of beet
	In dry, clean working conditions, too many revs on tractor PTO in relation to ground speed	Reduce PTO speed Possibly select a higher gear

GENERAL DATA

	Turbobeet Mk 3	Lifter Loader Mk 3	Turbo Four	Four Row Lifter Loader
Length in work	10.7m	6.0m	10.7m	6.0m
Width in work	4.1m	4.1m	4.5m	4.5m
Width in transport	2.8m	2.8m	3.2m	3.2m
Height in work	3.8m	3.8m	3.8m	3.8m
Height in transport	3.3m	3.3m	3.5m	3.5m
Weight	4.1t	3.4t	4.3t	3.6t
Discharge height	3.0m	3.0m	3.0m	3.0m
Tyre size	11.0 x 16	11.0 x 16	11.0 x 16	11.0 x 16
Tyre pressure	40psi	40psi	40psi	40psi
Tractor H.P. requirement	75HP	60HP	90HP	75HP
Hydraulic Services	1 x D/A*	1 x D/A*	1 x D/A*	1 x D/A*
Requirement	2 x S/A	1 x S/A	2 x S/A	1 x S/A
Hydraulic tank capacity	24 Gals		24 Gals	
Hydraulic tank capacity (with skewbar fitted)	37 Gals		37 Gals	
Hydraulic pump flow rate to Turbo Topper	10.5 Gals/Min		10.5 Gals/Min	
Hydraulic pump flow rate to Skewbar	18 Gals/Min		18 Gals/Min	
Pressure relief valve settings Skewbar and Turbo Topper	2250psi		2250psi	

Dimension are approximate.

Standens policy of continued improvement means that the specification may be alterred without prior notice.

* Additional spool valves are required for various options.

Steerable Drawbar = 1 x D/A

Stabilizer Disc = 1 x D/A

S/A = Single acting spool valve.

D/A = Double acting spool valve.

SECTION 2.
TOPPING
INSTRUCTION MANUAL

INSTALLATION

The Turbo Topper is designed to remove the leaf from the beet by the use of rotating cutters prior to the beet being topped by the scapler etc.

Three rotary cutters are used and the loose leaf is thrown from one cutter to the other and finally out to the side.

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

Do not reverse the machine or turn at the end of a row unless the machine is in a raised position.

Pay particular attention to the safety precautions printed in this manual.

FITTING THE TURBO TOPPER

The Turbo Topper is mounted to the front of the tractor supported by mounting brackets fitted to the tractor. It is fully floating on pivoting linkage, and raised and lowered by a hydraulic ram (item 3 fig 26), the ram being fed and operated by hydraulic hose from the tractor external control lever.

There are various types of tractor mounting brackets available to suit individual tractors and they should be fitted by bolting to the existing holes in the tractor chassis with the bolts provided in the kit.

With the tractor mounting brackets and the mounting frame assembly (item 1 fig 26) in position on the tractor, and with the hydraulic ram (item 3 fig 26) connected to the tractor external hydraulics, the quick hitch system can be used.

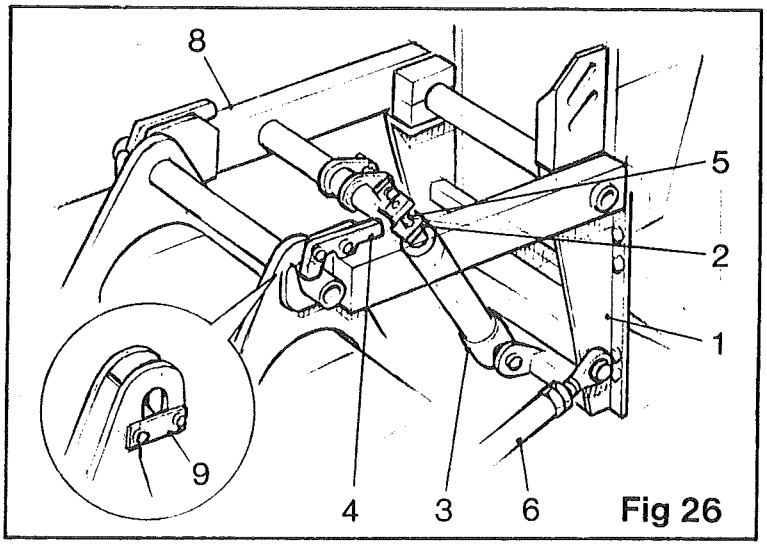


Fig 26

TO PICK UP THE TOPPER

1. Lift the ram stop (item 2 fig 26) clear of the hydraulic ram (item 3 fig 26).
2. Drive the tractor forward and locate the hooks on the lift arms (item 8 fig 26) around the lift bar on the topper. Ensure that the lift bar is fully located in the hooks before any attempt is made to lift the topper. On the four row topper the lift bar is on the lift frame and the lift arms are on the topper.
3. Lift the topper by actuating the hydraulic ram (item 3 fig 26). Ensure that the latch (item 4 fig 26) has positioned itself over the topper lift bar as shown in fig 26, (three row only. On the four row fix the strap (item 9 fig 26) underneath the lift bar.
4. Fit the stabilizer links (item 6 fig 26) between the mounting frame (item 1 fig 26) and the topper. When the topper is in work the front should be lower than the rear. To achieve this, turn the stabilizer clockwise or anti-clockwise.
5. Couple the hydraulic motor to the hydraulic system of the harvester via the diverter valve. (For adjustments on the diverter valve see Turbo Topper drives).

TO UNHITCH THE TOPPER

1. Disconnect the hydraulic motor from the diverter valve.
2. Remove the stabilizer links (item 6 fig 26)
3. Position the latch (item 4 fig 26) as shown in fig 26, (three row only). On the four row remove the strap (item 9 fig 26).
4. Lower the topper to the ground. When the topper has touched the ground continue to lower the lift arms (item 8 fig 26) and slowly reverse the tractor until the topper is free of the lift arms.

TURBO-TOPPER

The Turbo-Topper is a unit designed to cut the leaf from the beet by means of the rotating cutters (item 1 fig 27) prior to the beet being topped by the scalpers.

The tops are transferred from one rotor to the other and then out of the side by means of the rotating speed of the rotors. The suction of the spiral fins welded round the rotors lifts any loose leaf and trash, leaving a clean path for the lifter, note, that a plain rotor (item 2 fig 27) is fitted to a three row topper. Its purpose is to throw the beet tops clear of the tractor wheel.

The cutting width of each individual rotor (item 1 fig 27) is 17 inches (43 cms). The overall cutting width of all four rotors is 54 inches (137 cms) on a three row and 74 inches (187 cms) on the four row topper. Row widths of from 16 inches (48 cms) to 21 inches (56 cms) can be obtained.

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 scalpers. As a guide to the amount of top to remove, prior to scalping, set the depth of cut of the rotor knives to just top the highest beet.

The depth of cut is determined by the depth wheel (item 1 fig 28) fitted at the front of the unit. To adjust the depth wheel, loosen the retaining screws in the depth wheel stop clamps (item 2 fig 28) and lift or lower the wheel according to the amount of topping required. Stop brackets (item 2 fig 26) fitted to the hydraulic ram are there to reduce the amount of float, should the depth wheel sink into the ground when travelling over undulating ground or soft soil patches. The size of gap between the stop plate (item 2 fig 26) and the hydraulic ram determines the amount the topper is allowed to drop. To adjust turn the lock nuts (item 5 fig 26) until the stop plate is in the correct position.

Steel knives (item 3 fig 27) are fitted to the rotors and can be removed or replaced by removing the retaining patch bolts (item 4 fig 27). When fitting or removing patch bolts, care should be taken not to overheat the nylon locking material fitted to the bolt. Always replace the bolts with new after they have been removed or fitted twice. Never set the topper so that the knives touch the soil as damage to the knives will ensue.

The sugar beet tops discharge end of the topper is fitted with a hinged tops deflector flap which can be adjusted to a high or low position, according to the amount of beet tops, to form a windrow or to spread the tops. Adjustment is made by lengthening or shortening the support chain. (item 6 fig 27).

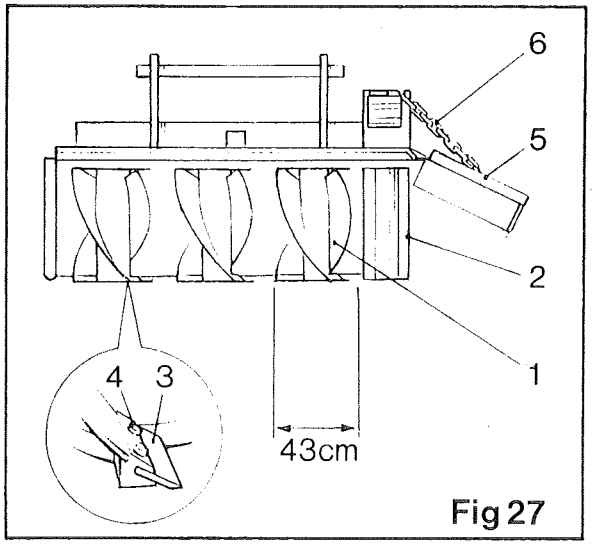


Fig 27

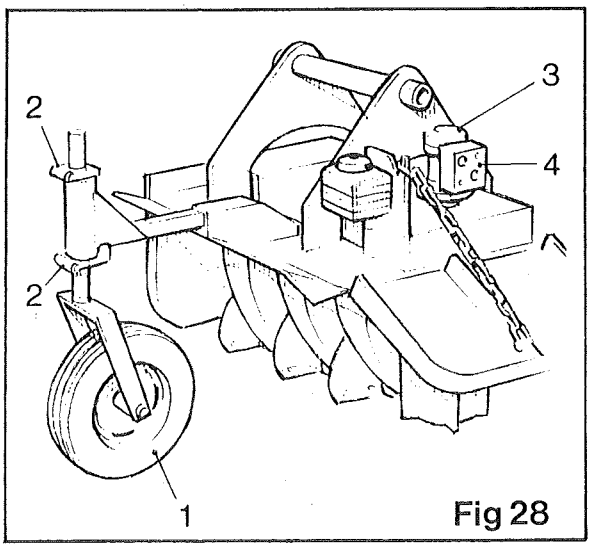


Fig 28

TOPPER DRIVES

CAUTION
All revolving drive machinery chains, shaft 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 result in serious injury to personnel.

The rotors are driven by a hydraulic motor (item 3 fig 28) being fed from a 10 1/2 g.p.m. pump (item 1 fig 29) mounted on the harvester and driven from the tractor P.T.O. shaft, via a gear-box. The oil to the hydraulic pump is supplied from a tank mounted on the harvester. The 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.

The tank has a removable lid for ease of maintenance to the strainer located inside the tank at the output port. This strainer should be dismantled and cleaned thoroughly at the end of every season.

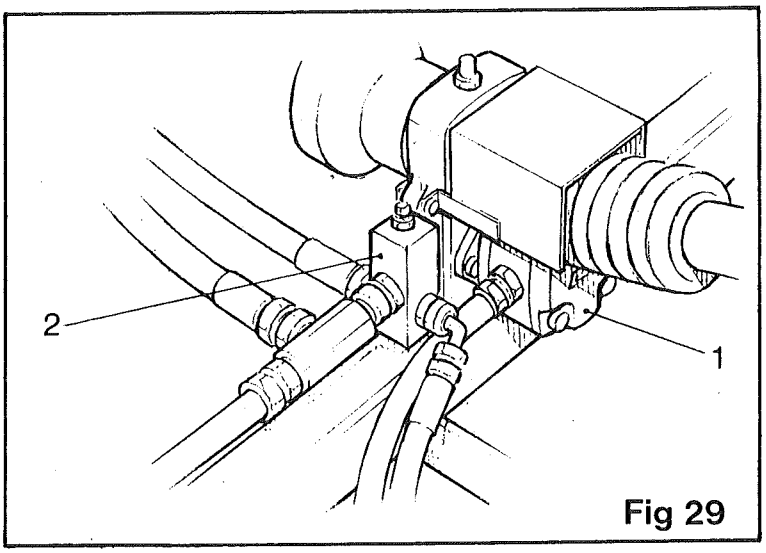


Fig 29

The replacement filter situated at the top of the tank should be renewed at the completion of the first 100 hours of work and then at every 500 hours.

A shut off valve has been fitted to the hydraulic tank to allow the undertaking of any maintenance to the hydraulic system without draining the tank.

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

NEVER OPERATE THIS MACHINE WITH THE SHUT-OFF VALVE IN THE CLOSED POSITION.

Closed Open

Situated on the RH side of the quick hitch unit is a diverter valve (item 1 fig 30) designed to cut off the flow of oil to the rotors when the machine is in the raised position, so stopping the rotors from turning.

The diverter valve must be fitted or adjusted with the topper in the raised position and the valve must be closed. Adjusting slots are provided in the diverter valve support bracket (item 2 fig 30).

To adjust, loosen the cap screws (item 3 fig 30) securing the valve and slide the valve until the spool touches centrally on the lift arm, (item 4 fig 30).

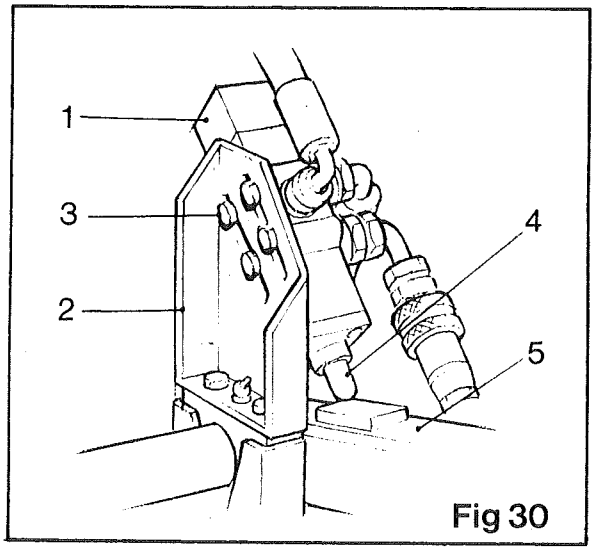


Fig 30

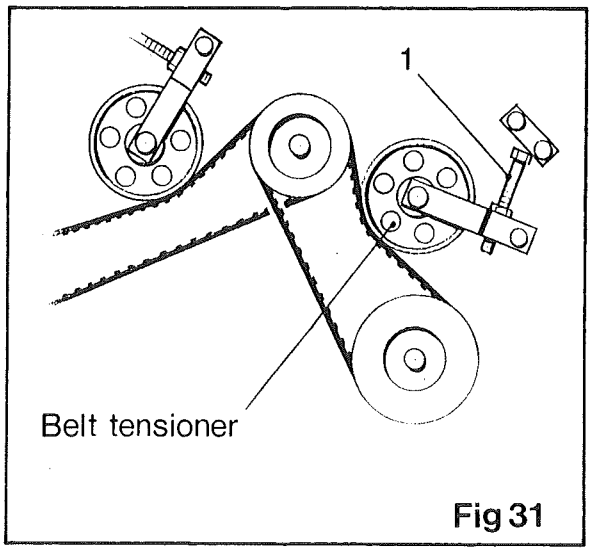


Fig 31

At the top of the diverter valve is a return spring fitted to push down on the top of the spool when the machine is lowered. The spring is encased for cleanliness and does not require adjusting. A pressure relief valve (item 2 fig 29) is situated adjacent to the gearbox. It is fitted to protect the hydraulic system should any blocking occur and is preset at a pressure of 2250 P.S.I. UNDER NO CIRCUMSTANCES SHOULD THIS VALVE BE TAMPERED WITH.

An aluminium check valve block (item 4 fig 28) is fitted which 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.

From the hydraulic motor the drive is by toothed belts to the individual pulleys which in turn drive the topper rotors. To remove the drive guard, remove the securing bolts and slide the guard out of the RH side of the topper. These drives are situated beneath the guards.

To adjust the tension of the drive belts, turn the belt tensioner adjuster screw (item 1 fig 31) clockwise or anti-clockwise until the correct tension is achieved. The correct adjustment should allow 5 mm to 7 mm of movement of the belts at a point midway between the drive pulleys. After all the necessary adjustments have been made it is essential that the guards are securely replaced to avoid loose tops and trash blocking the pulley teeth and causing damage to the belts. Never allow the belts to run slack as this will result in severe damage and their subsequent failure.

CAUTION

Always replace safety guard before attempting to engage the P.T.O. drive.

AUTOMATIC LUBRICATION

Automatic lubrication is fitted to feed eight bearings on the topper, fed by the lubrication pump (item 1 fig 32). A reaction wheel (item 2 fig 32) is fitted eccentric to the operating arm (item 3 fig 32) giving a feed pressure of 200 P.S.I. The stroke of the operating arm can be adjusted by loosening the clamp of the operating arm and turning the slotted spindle (item 4 fig 32) with a screwdriver. If more lubrication is required,

turn the slotted spindle towards the '+' position, stamped on the top plate (item 5 fig 32) and whilst holding this position with the screwdriver, tighten the clamp bolt on the operating arm (item 3 fig 32).

When carrying out this operation, ensure that the reaction wheel (item 2 fig 32) is at its furthest stroke.

PRIMING THE SYSTEM

The system is self priming with the feed pipe (item 6 fig 32) being fitted from the top of the pump (item 1 fig 32) to the bottom of the oil reservoir and through to the top of the oil inside the reservoir.

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 32) manually until the oil is discharged from the bearing feeds. Top up the oil reservoir with oil as required. The oil reservoir is made of see-through plastic and should be filled with SAE 90 gear oil. The oil filter inside the reservoir should be changed annually.

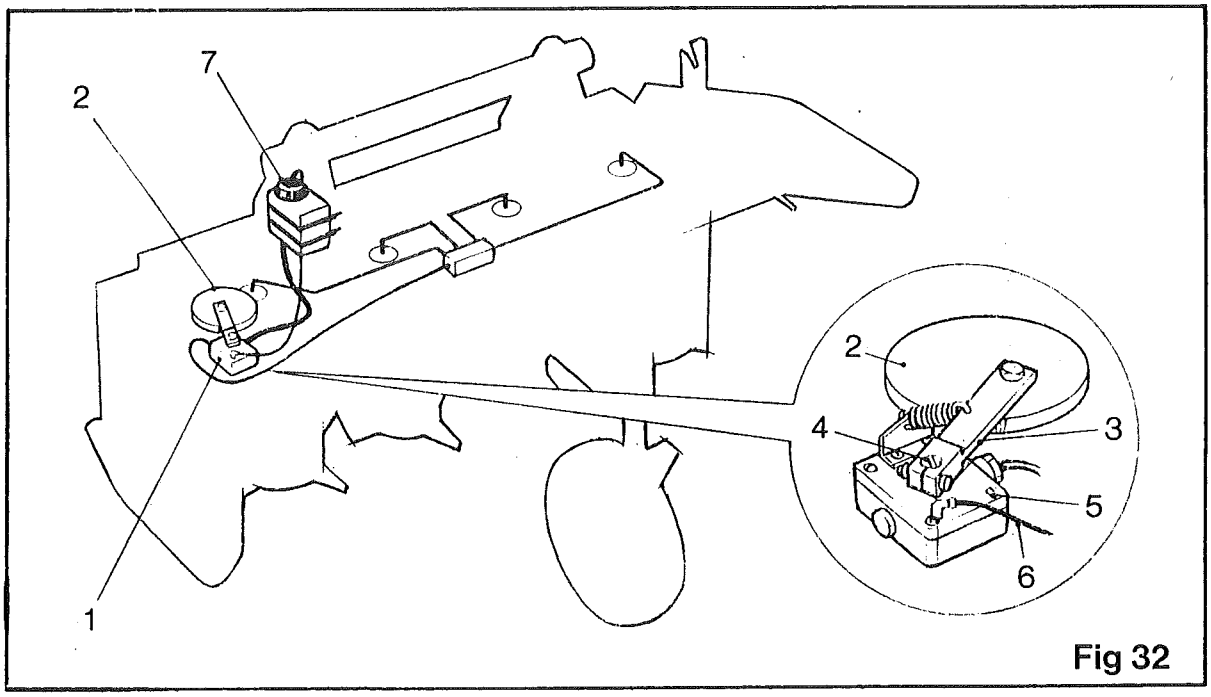


Fig 32

SCALPERS (TOWED BEHIND TRACTOR)

The scalper unit is fitted to the rear of the topper between the topper and the tractor. It is designed to crown the beet and remove the surplus leaf stubble left remaining on the beet by the Turbo Topper.

Before attempting to set up the scalpers drive the machine a short distance down the rows of beet to obtain the required pitch of the knives. When topping the beet the knife (item 2 fig 33) should be parallel with the ground. To adjust turn the tractor top links until the knife is in the required position.

The amount of beet crown removed by the knife is determined by adjusting the comb (item 1 fig 33) above the knife (item 2 fig 33). Increasing the distance between the two will remove more beet crown and decreasing the distance will remove less beet crown.

A very important part of the scalping mechanism is the tension of the springs (item 3 fig 33) fitted to the tension rods (item 4 fig 33) designed to give a downward pressure to the knife. Enough pressure should be given to return the scalper arm (item 5 fig 33) and knife to successfully top a low beet after topping a high beet. At the same time, too much pressure will force the knife to dig into the highest beet causing too much beet crown to be removed or the beet to be pushed over.

To adjust the spring, either tighten up or loosen the lock nuts (item 6 fig 33) until the right amount of pressure is acquired.

Each scalper arm (item 5 fig 33) is independently pivoted on the scalper support bar (item 7 fig 33) and by sliding the scalper arm along the scalper support bar, adjustments can be obtained to suit row widths of between 18 inches (48 cm) to 21 inches (53 cm). To adjust for row widths loosen the collars (item 8 fig 33), and the nuts and bolts in the spring clamplate (item 9 fig 33). Remove the two outside units to the required row setting ensuring that the knife (item 2 fig 33) is crowning the beet as close to the scalper arm (item 5 fig 33) as possible so that the scalper arm just misses the side of the widest beet.

The comb (item 1 fig 33) is adjustable, backwards and forwards. This setting is determined by the size of the beet. To adjust the combs (item 1 fig 33), slacken the two set-screws (item 10 fig 33) and slide the combs in the required direction to the correct position and retighten the set-screws. The comb should be forward for large beet and backwards for small beet.

Height adjustment is also provided for the scalper arm depending on the working depth of the harvester.

To adjust the height loosen the nuts and bolts (item 11 fig 33) and move the mounting plates up or down, according to the height required. If more adjustment is required remove the nuts and bolts (item 11 fig 33) from the upper holes in the mounting plates and place them in the lower set of holes and re-assemble in the slots in the 'A' frame (item 12 fig 33) and tighten when the height is correctly set.

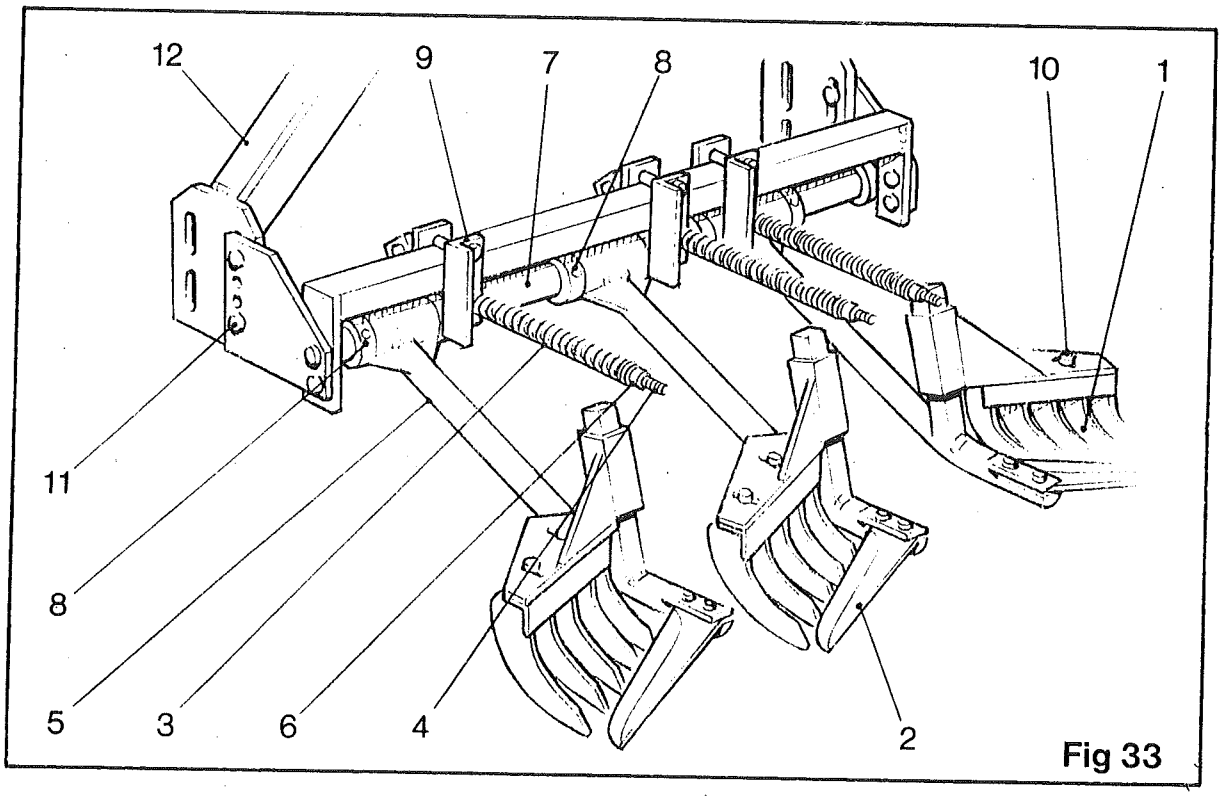


Fig 33

PARALLEL LINKAGE SCALPERS

The scalper unit is fitted to the rear of the topper between the topper and the tractor. It is designed to crown the beet and remove the surplus leaf stubble left remaining on the beet by the Turbo Topper.

Before attempting to set up the scalpers drive the machine a short distance down the rows of beet to obtain the required pitch of the knives. When topping the beet the knife (item 2 fig 33A) should be parallel with the ground. To adjust, slacken the two setscrews (item 14 fig 33A) and turn the adjusting screw (item 15 fig 33A) until the knife is in the required position and retighten the set-screws. Repeat for the remaining three scalper units.

The amount of beet crown removed by the knife is determined by adjusting the comb (item 1 fig 33A) above the knife, (item 2 fig 33A). increasing the distance between the two will remove more beet crown and decreasing the distance will remove less beet crown.

A very important part of the scalping mechanism is the tension of the springs (item 3 fig 33A) fitted to the tension rods (item 4 fig 33A) designed to give a downward pressure to the knife. Enough pressure should be given to return the scalper arm (item 5 fig 33A) and knife to successfully top a low beet after topping high beet. At the same time, too much pressure will force the knife to dig into the highest beet causing too much beet crown to be removed or the beet to be pushed over.

To adjust the spring, either tighten up or loosen the lock nuts (item 6 fig 33A) until the right amount of pressure is required.

Each scalper is individually mounted on a support bracket (item 7 fig 33A) and by loosening the retaining bolt (item 8 fig 33A) and sliding the scalper arm (item 5 fig 33A) along the support bracket, adjustments can be made to suit row widths of between 16 inches (41 cms) and 21 inches (53 cms). When setting the scalper for row width, ensure the knife is crowning the beet as close to the knife arm (item 9 fig 33A) as possible.

The comb (item 1 fig 33A) is adjustable, backwards and forwards. This setting is determined by the size of the beet. To adjust the combs (item 1 fig 33A), slacken the two set-screws (item 10 fig 33A) and slide the combs in the required direction to the correct position and retighten the set-screws. The comb should be forward for large beet and backwards for small beet.

Height adjustment is also provided for the scalper arm, depending on the working depth of the harvester. To adjust the height, loosen the two retaining bolts (item 16 fig 33A) and slide the scalper leg either up or down until the required height is obtained.

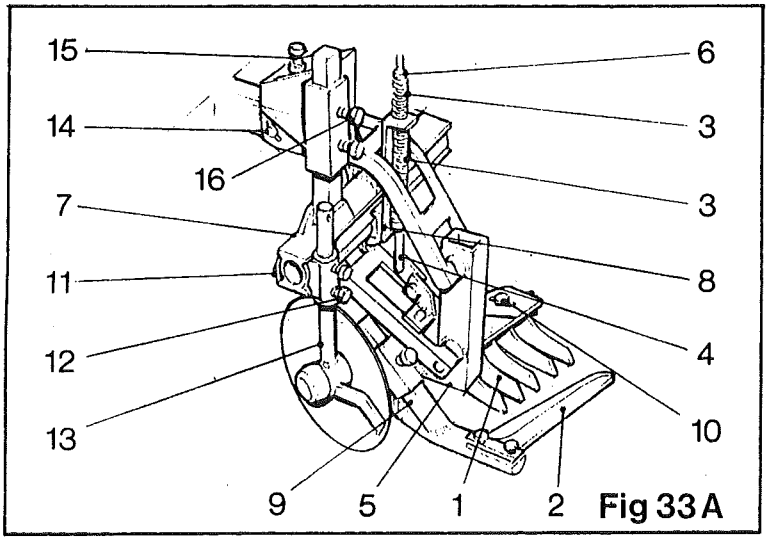


Fig 33A

DISC COULTERS (FOR USE WITH PARALLEL LINKAGE SCALPERS)

The purpose of the disc coulters fitted at the side of the scalpers is to cut sugar beet leaves and trash to prevent them from building up and clogging on the knives.

As with the scalpers, the disc coulters can also be adjusted to suit varying row widths. To adjust slacken the securing bolt (item 11 fig 33A) and slide the disc assembly along the support bracket (item 7 fig 33A) to the required position and retighten. Adjustment is also provided to obtain different depths of cut. To adjust, loosen the two retaining bolts (item 12 fig 33A) and slide the disc leg (Item 13 fig 33A) either up or down until the required depth has been obtained.

As well as varying the depth of cut, the same adjustment can also be used to alter the angle of the disc. The middle disc should be set square to the topper, whereas the two outer discs should have their leading edges slightly tracked inwards (see fig 33A).

FEELER WHEEL TOPPING UNIT

The purpose of the topping unit is to crown the beet cleanly and squarely by the use of a feeler wheel which runs on top of the beet holding it steady while the knife crowns it. The feeler wheels (item 1 fig 34) should be well onto the beet when the knives start to cut. Allowance is provided to adjust the depth of the knives (item 2 fig 34) by loosening the two locking nuts (items 3 fig 34), and turning the bolts (item 4 fig 34) to the stop plates welded to the knife arm (item 5 fig 34). This adjustment allows the topping knives to be moved towards or away from the feeler wheels, which are then held firmly in position by their tension spring (item 6 fig 34).

The tension of the spring is determined by the spring tensioner (item 7 fig 34) and the tensioner adjusting nuts (items 8 fig 34). Tension should be applied to the spring sufficiently enough to bring the knife firmly back into position after releasing an obstruction such as a stone.

The backward and forward position of the knife is also adjustable. This adjustment can vary, on some machines loosen the two setscrews (item 10 fig 34) and slide the knife arm bracket (item 11 fig 34) in the adjusting slots provided in the topping unit frame. On other machines the adjustment is provided by loosening the knife arm securing bolt (item 9 fig 34) and again sliding the knife arm in the slots to the required position.

As a guide to the most suitable position of the knife in relation to the feeler wheel, position the rear setscrew (item 12 fig 34) approximately in line with centre of the feeler wheel shaft (item 13 fig 34). The knife should be forward for small beet and backward for large beet.

Downward pressure can be applied to the feeler wheel (item 1 fig 34) by adjusting the tension of the topping unit spring (item 14 fig 34). To adjust the tension loosen the lower locking nut (item 15 fig 34) and adjust by turning the upper locking nut (item 16 fig 34) until the required tension is obtained. This adjustment will vary according to the number of high or low beet in the crop and to the firmness or looseness of the soil. The adjustments for the pitch of the topping units are provided at each end of the mounting frame (item 17 fig 34) and are determined according to the working depth of the harvester.

To adjust, loosen the bolts (item 18 fig 34) and raise or lower using the adjusting slots in the frame (item 19 fig 34) to the required position. If more adjustment is required, remove the bolts (item 18 fig 34) from the upper holes in the mounting frame (item 17

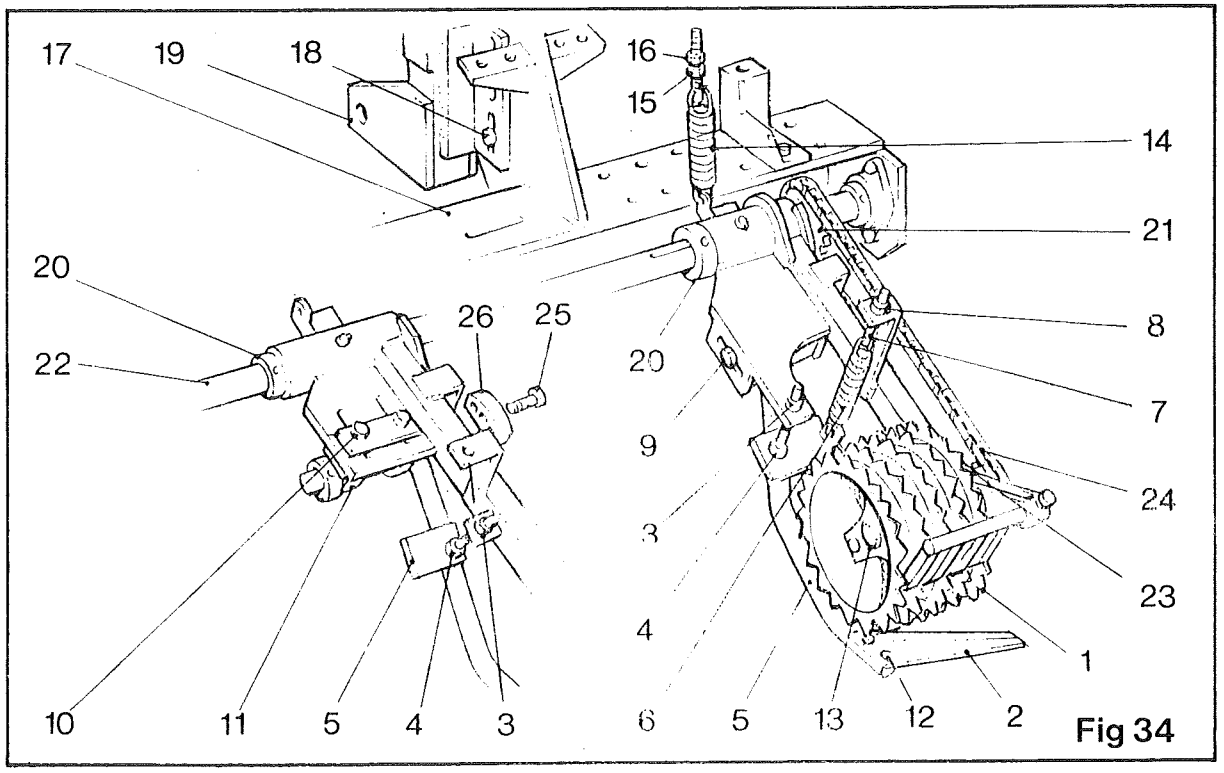


Fig 34

fig 34) and place them in the lower set of holes and reassemble in the slots in the frame (item 19 fig 34) and tighten up when the height is correctly set.

Downward pressure on the land wheel (item 1 fig 35) is applied by springs (item 2 fig 35). To adjust the pressure loosen the nearest lock nut (item 3 fig 35) to the spring and adjust by turning the other lock nut (item 4 fig 35).

Adjustment is provided for different row settings. To adjust, loosen the grub screws in the collar (item 20 fig 34) and the collar adjacent to the drive sprocket (item 21 fig 34) and slide the topping unit complete with the drive sprocket along the drive shaft.

NOTE: When setting for various rows always set the topping unit knife to top the beet as close to the knife arm as possible as this is the most rigid part of the knife, whereas the end is springy and not constant in pressure.

The row measurement should be made from feeler wheel to feeler wheel and not along the shaft (item 22 fig 34). When the correct row setting has been obtained, tighten the grub screws and align the drive sprocket with the drive sprocket (item 23 fig 34).

It is important that the topping unit drive chains are tensioned correctly or bad topping will occur. All chain are tensioned by a nylon block. To adjust the feeler wheel drive chain (item 24 fig 34) loosen the setscrew (item 25 fig 34) and pull the block (item 26 fig 34) upwards until the tension of the chain is correct and then tighten up the setscrew. To tension the topping unit main drive chain (item 5 fig 35) loosen the setscrew (item 6 fig 35) and push the block down onto the chain until the correct tension is gained and secure block.

ALWAYS ENSURE THAT THE TOPPING KNIFE IS KEPT REASONABLY SHARP.

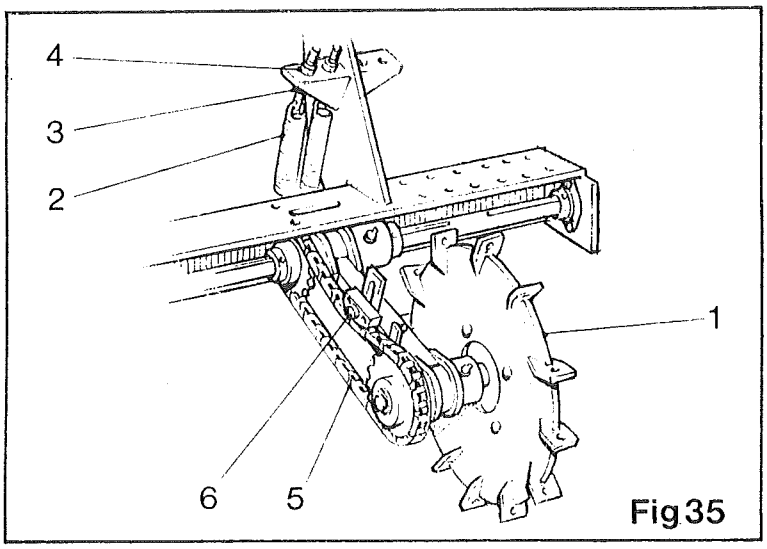


Fig 35

DISC COULTERS

The purpose of the disc coulter fitted in front of the topping unit is to cut sugar beet leaves and trash to prevent them from building up and clogging the knife, also to cut a 1½ inches (38 mm) deep furrow for the knife arms. This furrow enables the knife arm to drop down when topping beet at ground level. Adjustment can be made to the depth at which the disc cuts. This adjustment can vary, on some machines loosen the nut and bolt (item 1 fig 36) and slide the coulter stalk (item 3 fig 36) up or down to the required depth and resecure, also reposition the tensioner bracket (item 11 fig 36), on other machines the depth can be altered by loosening the four securing bolts (item 18 fig 36) and pivoting the support bar to obtain the required depth.

Each disc coulter is adjustable to suit different row-widths. To alter the discs slacken the setscrew in the collars (item 5 fig 36) or the clamps (item 19 fig 36) either side of disc coulter and slide the disc coulter along the support bar (item 6 fig 36) until the required position is obtained, making sure the disc will pass the widest beet without cutting it, then slide the collars or clamps up to the bracket, and resecure. On the machines with clamps, one clamp has a stop welded to it to stop the disc coulter from dropping down when lifting at the end of each row.

Once adjustments have been made for row widths, depth etc. attention must be paid to the tensioning of the disc coulter. The tension setting is very important, this holds the disc firmly in the ground, but still allows it to ride obstructions. To ensure the tensioner works correctly it needs to be in line with the disc stalk (item 3 fig 36). To adjust the tensioner to be line with stalk, remove the nuts and bolts from the trunnion support (item 13 fig 36) and move it along the mounting frame until the tensioner aligns with the disc stalk and secure down onto the mounting frame. To adjust the disc for the correct tension, on some machines turn the locknut (item 17 fig 36) clockwise or anticlockwise and on other machines loosen the locknut (item 20 fig 36) and turn the adjusting nut (item 21 fig 36). If the tension is insufficent the disc will not be held firmly in the ground and consequently it will ride over the tops or trash instead of cutting it. On pre 1988 machines adjustment is provided for setting the angle of the disc, to ensure the disc will cut efficiently the angle of it must be set slightly forward to allow the disc to enter the trash instead of lifting, this adjustment is obtained by loosening the locknut (item 15 fig 36) and turning the adjusting nut (item 16 fig 36), both these nuts must be tight after adjusting, failure to do so will result in damage to the thread.

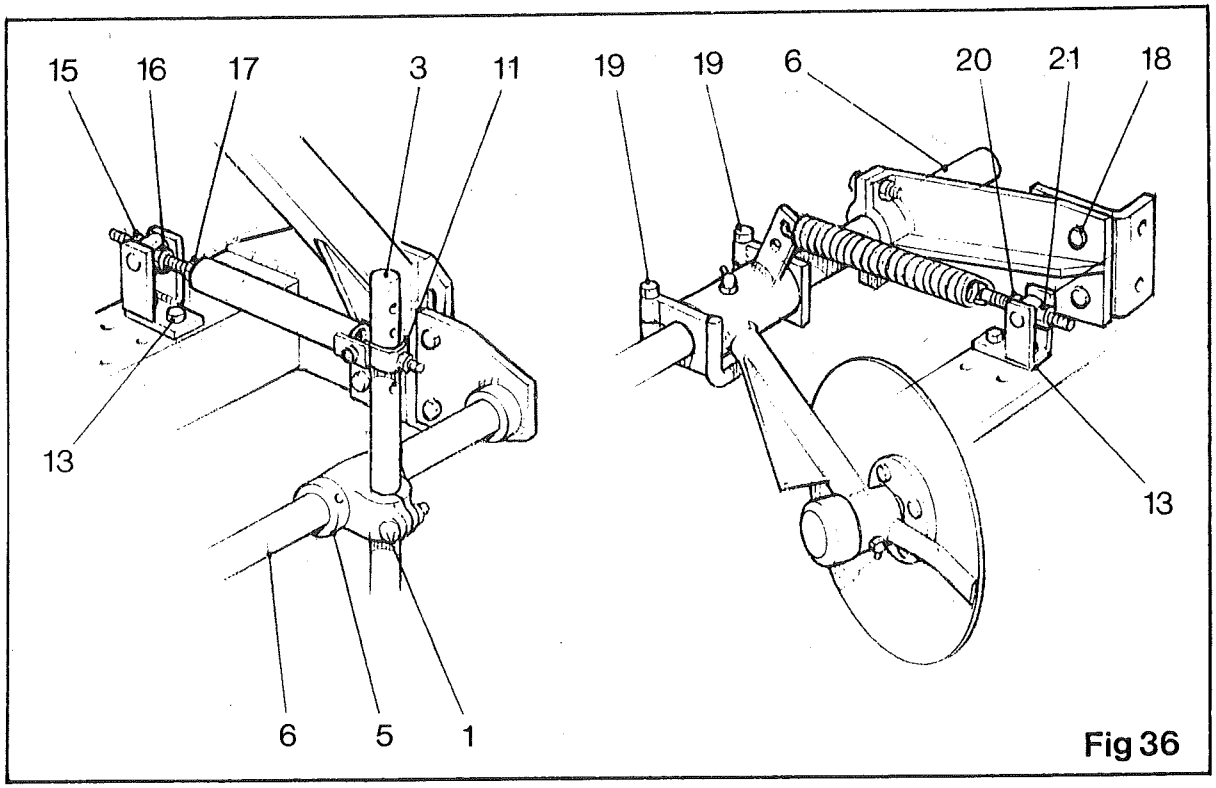


Fig 36

SKEWBAR TOPPER

The skewbar topper is designed to top beet with the use of a power driven barrel (skewbar). The skewbar barrel rubs off the remaining tops left by the Turbo Topper.

The amount of tops removed is determined by the height of the skewbar and the amount of pressure sent down on the skewbar.

To obtain good clean topping the pivot end of the skewbar arm (item 1 fig 37) should be set to clear the tops of the pre-topped beet, to adjust slacken the four retaining bolts (item 2 fig 37) and slide the mounting frame (item 3 fig 37) up or down, to give the correct setting. Do not set too high.

The height of the skewbar can be adjusted by turning the adjusting nut (item 4 fig 37). As an initial setting the skewbar can be set so that a distance of 2 ins (5 cms) exists between the bottom of the skewbar barrel and the ground, when the harvester is resting on its lifting wheels.

Another important feature to take into consideration to achieve good topping is the amount of pressure that is applied onto the skewbar. Increased pressure results in more of the tops being removed, conversely the less pressure the less tops removed.

To adjust the amount of pressure exerted onto the skewbar simply loosen the retaining collar (item 5 fig 37) and either slide it up or down the tension rod (item 6 fig 37) to give the required tension. Finally resecure the collar.

The skewbar is also adjustable for different row settings. To adjust, slacken the collar (item 7 fig 37) next to the bearing housing, and loosen the two bolts holding the bounce damper support bracket (item 8 fig 37). Before any attempt can be made to move the skewbar arm (item 1 fig 37) the drive pulley (item 9 fig 37) must be loosened.

To slacken the pully:-

1. Loosen the locking screws (item 1 fig 38) until they are no longer in contact with the pulley.
2. Loosen the nut (item 2 fig 38) slightly
3. Apply light blows to the nut (item 2 fig 38) as indicated by the arrows). This is necessary to release the inner sleeve (item 3 fig 38). to release the sleeve even more, turn it out of the pulley (LH thread). Now that the necessary components are loose, the skewbar arm (item 1 fig 37) and the pulley (item 9 fig 37) can be slid along the drive shaft (item 10 fig 37), whilst simultaneously sliding the support bracket (item 8 fig 37) along the support beam. Once in the required position slide the collar (item 7 fig 37) back up against the bearing housing and retighten, also resecure the support bracket (item 8 fig 37). Finally the drive pulley (item 9 fig 37) will require securing.

To secure:-

1. Check to see that the locking screws (item 1 fig 38) do not protrude from the rear of the nut (item 2 fig 38)
2. Tighten the nut (item 2 fig 38) onto the inner sleeve (item 3 fig 38) for as far as it will go.
3. Thread the pulley (item 4 fig 38) onto the inner sleeve (item 3 fig 38) (note LH thread) until it abuts the nut.
4. Turn the locking screws (item 1 fig 38) until they loosely abut the pulley.
5. Ensure the pulley is in the desired position, leaving a slight gap between the pulley and the adjacent spacer as shown in fig 38, this is to allow the pulley to move slightly whilst tightening.
6. Lightly tighten locking screws using an allen key.
7. Tighten locking screws to a torque of 9Nm, tighten alternately on the diagonal.
8. Tighten locking screws to a torque of 18Nm, again tighting alternately on the diagonal.
9. Tighten locking screws to ia torque of 18Nm, tighten by going circumferentially round the locking screws four times.

It is essential that this tightening procedure is followed to allow the bush assembly to transmit the required torque.

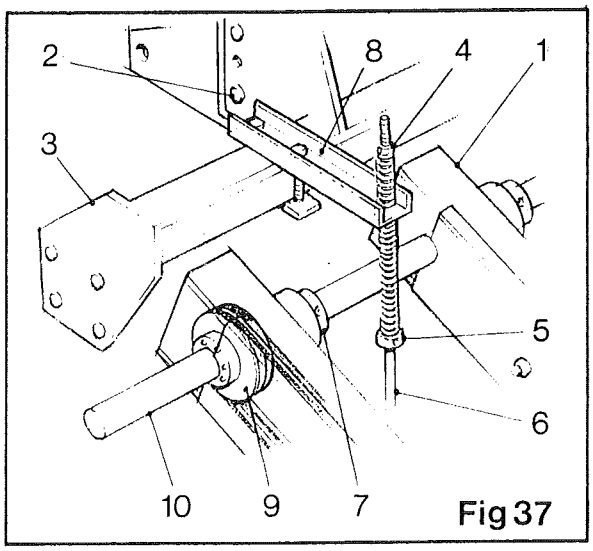


Fig 37

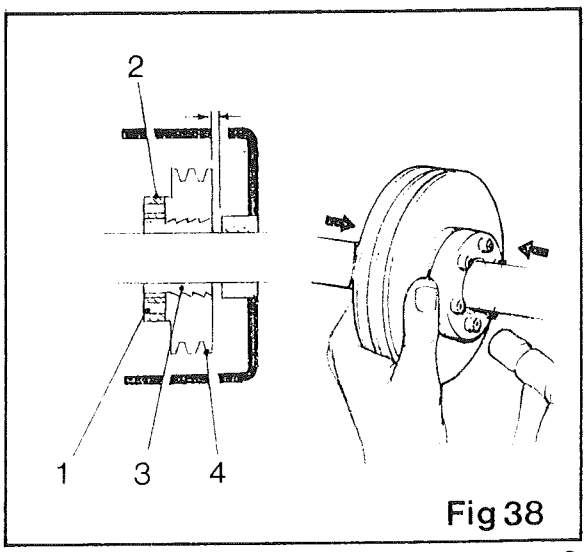


Fig 38

SKEWBAR DRIVES AND HYDRAULIC SYSTEM

CAUTION

All revolving drive machinery chains, shafts, 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 hand brake. Failure to observe the above caution could result in serious injury to personnel.

The drive for the skewbar unit is supplied by a hydraulic motor (item 1 fig 39), from this motor the drive is transferred to the drive shaft by a duplex chain (item 2 fig 39). This chain is tensioned by a nylon block (item 3 fig 39), to tension the chain, slacken the bolt (item 4 fig 39) and slide the block to give the required tension and retighten.

Each skewbar is driven by two vee belts (item 5 fig 39). The tension of the belts can be adjusted by slackening the four securing bolts (item 6 fig 39) and the locknut (item 7 fig 39), turn the adjuster screw (item 8 fig 39) to obtain the correct amount of tension and retighten the bolts.

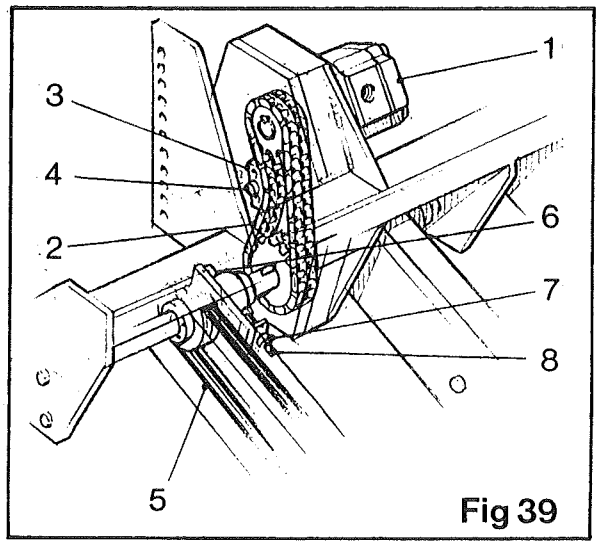


Fig 39

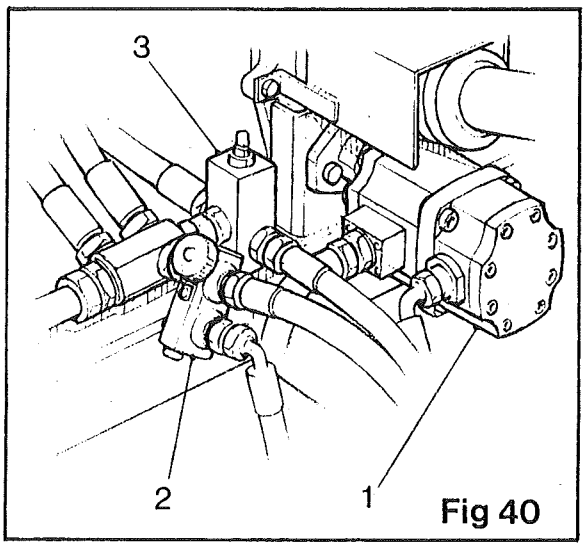
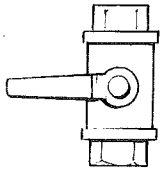
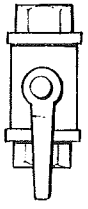


Fig 40

The motor driving the skewbars is being fed from a 18 G.P.M. pump (item 1 fig 40) between the pump and the motor is a variable flow divider (item 2 fig 40), the flow divider is fitted to enable the operator to vary the speed at which the skewbar barrel rotates, the higher the number the faster the skewbar rotates.

NEVER OPERATE THIS MACHINE WITH THE SHUT-OFF VALVE IN THE CLOSED POSITION.


Closed


Open

The oil to the hydraulic pump is supplied from an oil tank mounted on the harvester. The tank should be filled with H68 Nutro hyudraulic oil or equivalent and should always be kept full, especially when storing the machine for long periods of time.

The tank has a removable lid for ease of maintanence to the two strainers located inside the tank at the two outputs. The strainers should be dismantled and cleaned thoroughly at the end of every season.

The replàcement filter situated on the top of the tank should be renewed at the completion of the first 100 hours of work and then at every 500 hours.

A Shut off valve has been fitted to the hydraulic tank to allow the undertaking of any maintenance to the hydraulic system without draining the tank.

When undertaking any maintenance to the hydraulic system, every precaution must be taken to avoid dirt entering the system.

A pressure relief valve (item 3 fig 40) is fitted tp protect the hydraulic system, should any blocking occur and is set at a pressure of 2250 P.S.I. Under no circumstances should this valve be tampered with.

MAINTENANCE

Regular maintenance will ensure that the Standen harvester provides a long and efficient service life. Depending on the soil and weather conditions the maintenance time schedule can vary. However, it is recommended that the machine be lubricated and gearbox oil levels checked once a week throughout the season.

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

NOTE:

With reference to fig 41 that some of the bearings are sealed and pre-lubricated (Ref GS) and care should be taken not to flood these bearings with grease or the seals will burst allowing the grease to excape and dirt to get in. Should this 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 are required.

The non-sealed bearings (Ref G) 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 ferodo discs fitted to the clutches or the 'V' belts on some of the drives.

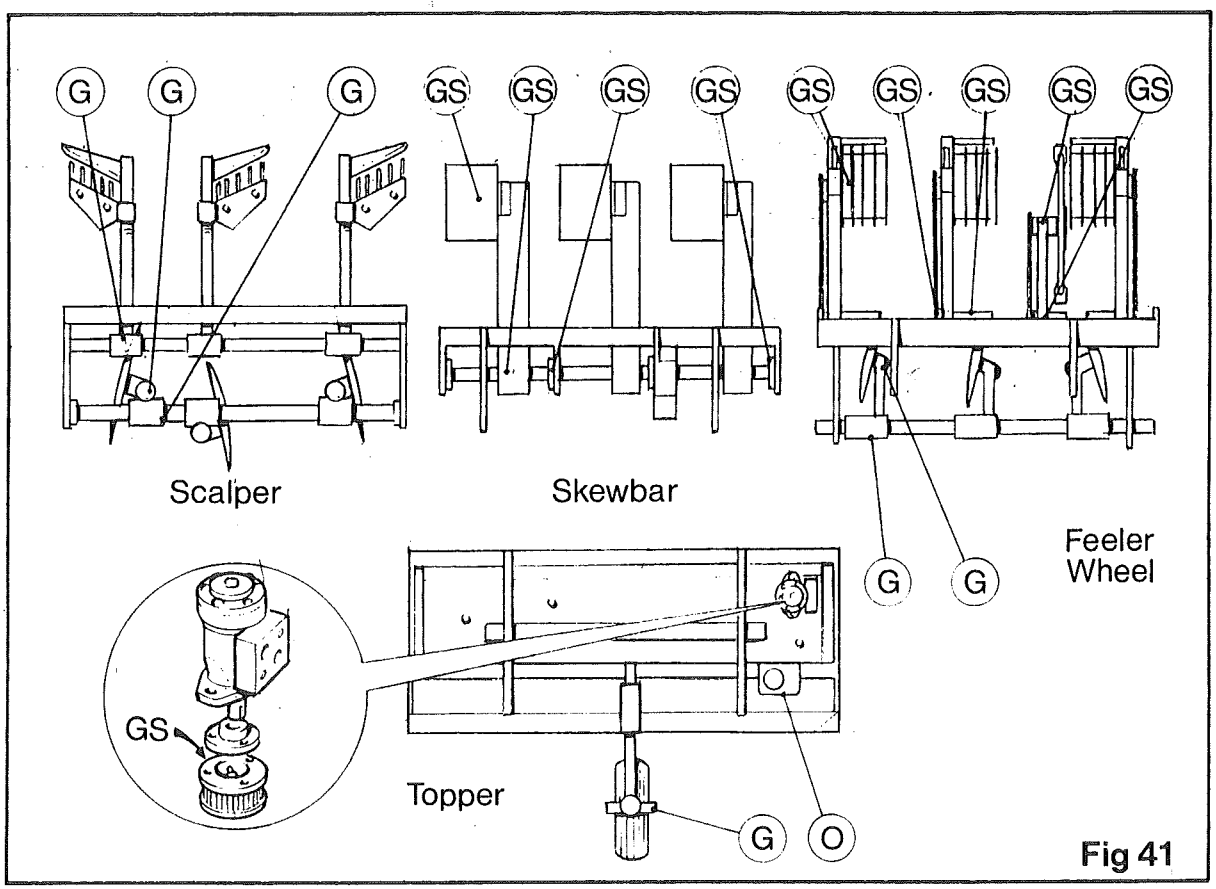


Fig 41

Grease points requiring individual quantities of lubrication will be found on the lubrication points chart fig 41.

We recommend that the universal couplings should be dismantled periodically and their shafts smeared with general purpose grease. Also all drive chains should be kept well greased.

FAULT ANALYSIS

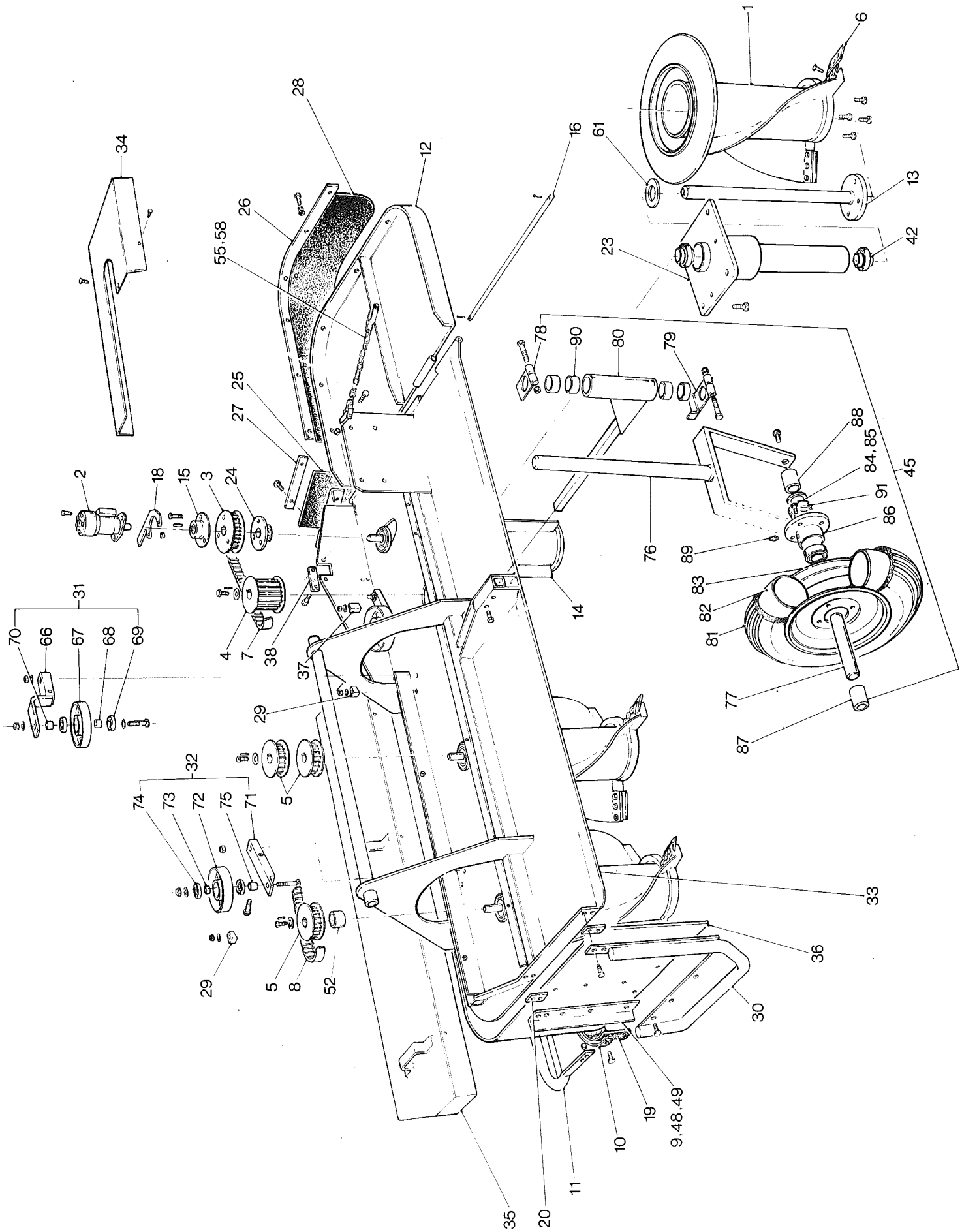
(FEELER WHEEL & SCALPER)

FAULT	POSSIBLE CAUSE(S)	CORRECTION
Too much top removed from beet	Knife too far below lowest point of feeler wheel	Set knife in highter position
	Insufficient spring tension of knife knife	Increase spring tension on knife but ensure that movement is enough to release stones
	Too much tension on topping unit	Decrease tension
Not enough top removed from beet	Knife set too high in relation to feeler wheel	Set knife in lower position
	Not enough tension on topping unit	Increase tension
Uneven topping		
Knife cutting upwards	Knife not set squarely to the beet. Front of knife arm higher than the rear	Adjust knife arm pitch
	Knife set too far forward causing feeler wheel to climb as knife begins to cut	Move knife arm back
Knife cutting downwards breaking off front edge of beet	Knife too far back causing feeler wheel to drop off beet before finishing cut	Move knife arm forward
Topping unit bouncing	Driving too fast for field conditions	Reduce speed
Beet being topped by the end of the knife	Topping unit too far to the right on pivot bar	Move unit to left so that the knife arm just misses the side of the wide beet
Scalped beet,scored across top of beet	Feeler wheel drive chains too slack, causing wheel to rock and skid across top of beet	Tighten drive chain
	To much pressure on tension spring on topping unit lift rod, in relation to the number of high beet and density of the beet tops	Release pressure

FAULT ANALYSIS (SKEW BAR)

FAULT	POSSIBLE CAUSE(S)	CORRECTION
Not enough tops removed from the beet.	Skew-Bar bouncing	1. Increase the pressure exerted on the skew bar 2. Decrease the forward speed of the harvester
	Skew-Bar set too high	Adjust the height
	Pre Topper set too high	Adjust the height
	Speed of Skew-Bar too slow	Increase the speed of rotation
Too much top removed from the beet.	Skew-Bar set too low	Increase the height
	Skew-Bar rotating to fast	Decrease the speed
	Pre Topper set too low	Increase the height of the topper
	Too much pressure exerted on the Skew-Bar	Reduce the pressure
Beet knocked over	Forward speed of the tractor is too fast for the speed of the skew	1. Decrease forward speed or 2. Increase the speed of the Skew-Bar
	Skew-Bar set too low	Increase the height of the Skew-Bar
	Too much pressure exerted on the Skew-Bar	Reduce the pressure
Skew-Bar not rotating fast enough	Insufficient oil flow	1. Adjust flow divider 2. Check to ensure that the relief is not blowing 3. Ensure that the tractor is giving enough oil flow when the Skew-Bar is plumbed direct into the tractor
Beet knocked over		
(i) By Feeler Wheel	Pressure of topping unit on beet too great in relation to the number of high beet and denisity of beet tops	Reduce pressure of feeler wheel onto the beet
	Feeler wheel drive chains too slack	Tighten drive chains
	Too much play in knife between feeler wheel and knife	Increase tension on knife spring
	Too much pitch on knife arm	Adjust knife
	Peripheral speed of feeler wheel, too slow in relation to ground speed	Reduce sprocket size at the end of the feeler wheel drive shaft, to increase the speed of the feeler wheel

SECTION 3.
TOPPING
EXPLODED PARTS ILLUSTRATIONS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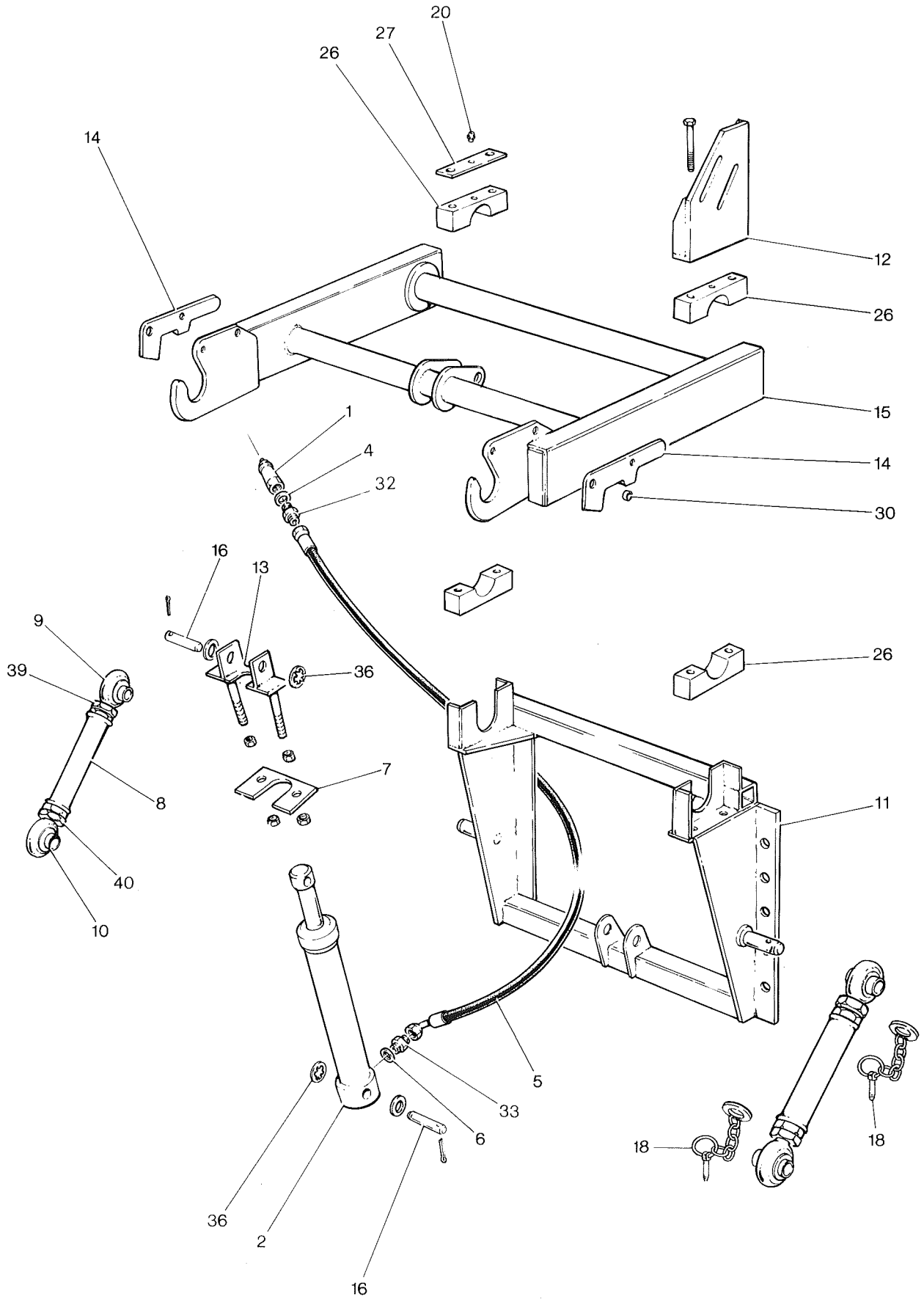
TURBO TOPPER (PART OF ASSEMBLY No. 11804)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11001	TOPPER ROTOR	3	
2	11201	HYDRAULIC MOTOR	1	(REF)
3	11202	PULLEY	1	
4	11203	PULLEY	1	
5	11204	PULLEY	3	
6	11205	KNIFE	9	
7	11206	BELT	1	
8	11207	BELT	2	
9	11209	STAY	2	
10	11211	RUBBER SUPPORT BRACKET	1	
11	11213	FOOT GUARD RH	1	
12	11215	SIDE DEFLECTOR FLAP	1	
13	11219	ROTOR SPINDLE	4	
14	11220	SIDE ROTOR	1	
15	11223	MOTOR FIXING SUPPORT	1	
16	11226	HINGE PIN	1	
17				
18	11228	MOTOR REACTION BAR	1	
19	11232	RUBBER SKIRT	1	
20	11241	SKIRT SPACER	3	
21	11227	RH STAND	1	NOT ILLUSTRATED
22	11248	LH STAND	1	NOT ILLUSTRATED
23	11427	ROTOR BEARING HOUSING	4	
24	11495	DRIVE COLLAR	1	
25	11529	REAR RUBBER FLAP	1	
26	11539	CLAMP STRIP	1	
27	11540	CLAMP STRIP	1	
28	11541	RUBBER SIDE FLAP	1	
29	11659	STOP BLOCK (SHORT)	2	
30	11693	SIDE FOOT GUARD	1	
31	11707	JOCKEY ROLLER ASSEMBLY	1	
32	11708	JOCKEY ROLLER ASSEMBLY	2	
33	11723	TOP PLATE	1	
34	11724	DRIVE GUARD (MOTOR END)	1	
35	11725	DRIVE GUARD	1	
36	11728	SKIRT	1	
37	11732	STOP BLOCK (LONG)	1	
38	11848	MOTOR STOP BRACKET	1	
39				
40				
41				
42	1130-30	BEARING	8	
43				
44				
45	24112	STRAIGHT WHEEL ASSEMBLY	1	
46				
47				
48	2611-1206	FIXING PIN	18	
49	2662-1200	COLLAR	18	
50				

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
51				
52	A 40	PLASTIC SPACER	1	
53				
54				
55	GS 506/15	CHAIN	1	
56				
57				
58	H 171	SHACKLE	2	
59				
60				
61	SS054032/002	STEEL SPACER	4	
	11707	JOCKEY ROLLER ASSEMBLY CONSISTS OF:-		
66	11661	SUPPORT BRACKET	1	
67	11663	JOCKEY ROLLER	1	
68	11706	SPACER	1	
69	6301 RS	BEARING	2	
70	SS025013/008	STEEL SPACER	1	
	11708	JOCKEY ROLLER ASSEMBLY CONSISTS OF:-		
71	11662	SUPPORT BRACKET	1	
72	11663	JOCKEY ROLLER	1	
73	11706	SPACER	1	
74	6301 RS	BEARING	2	
75	SS025013/020	STEEL SPACER	1	
	24112	STRAIGHT WHEEL ASSY. CONSISTS OF:-		
76	11218	WHEEL LEG	1	
77	11234	WHEEL AXLE SHAFT	1	
78	11643	DEPTH WHEEL CLAMP	1	
79	11644	DEPTH WHEEL STOP BRACKET	1	
80	11694	WHEEL SUPPORT	1	
81	17198	TYRE	1	
82	17199	TUBE } 17200A WHEEL COMPLETE	1	
83	17200	RIM	1	
84	17201	WHEEL STUD	4	
85	17202	WHEEL NUT	1	
86	17214	WHEEL HUB	1	
87	D 60	PLASTIC SPACER	1	
88	D 78	PLASTIC SPACER	1	
89	GS 412	GREASE NIPPLE	2	
90	RH 43M	BUSH	4	
91	6005 RS	BEARING	2	

Quick Hitch Assembly

Assy No 11804

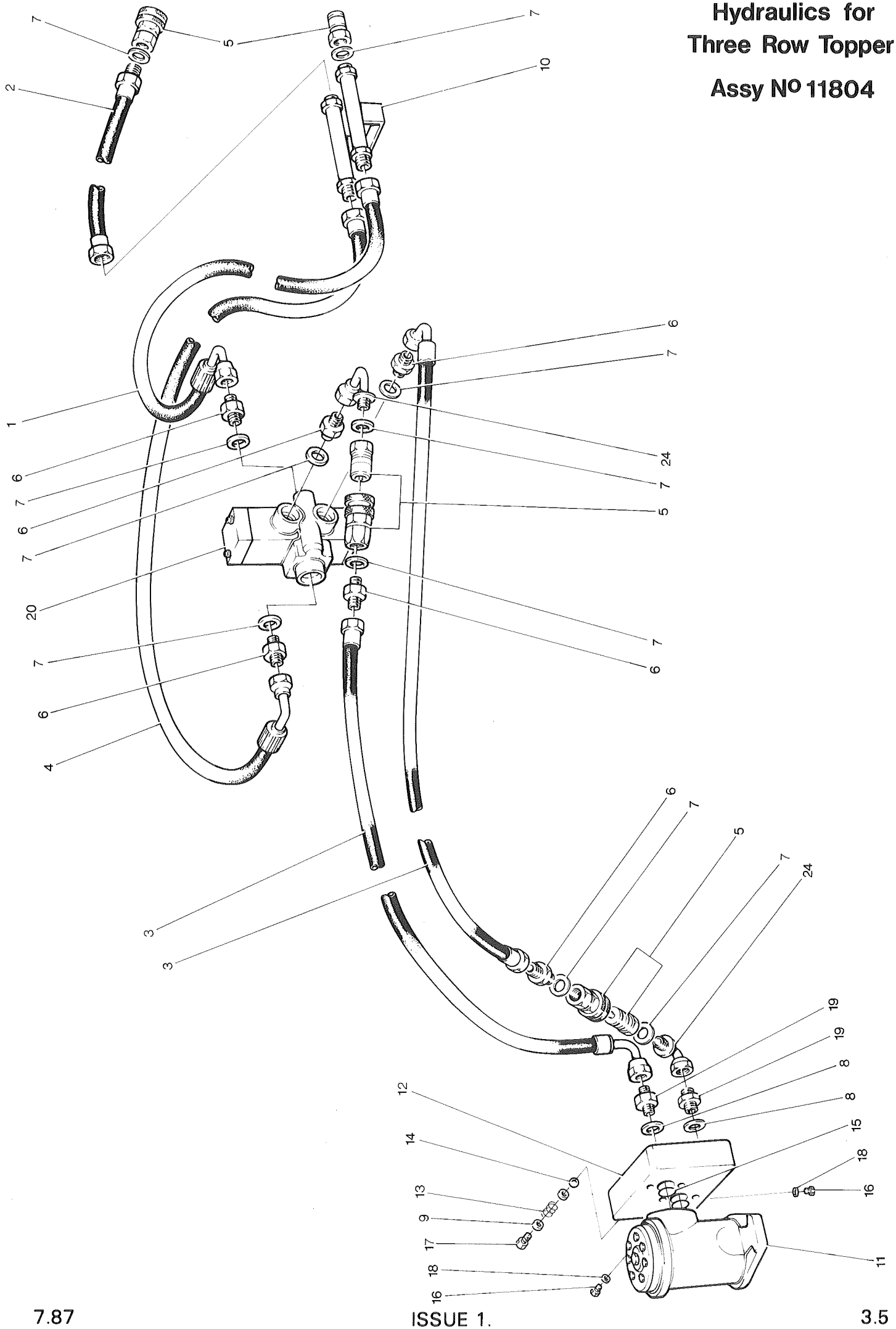


QUICK HITCH ASSEMBLY (PART OF ASSEMBLY No. 11804)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	10140	QUICK RELEASE COUPLING	2	
2	10379	HYDRAULIC RAM	1	
3				
4	11124	DOWTY SEAL	1	
5	11104	HOSE ASSEMBLY	1	
6	11125	DOWTY SEAL	1	
7	11673	STOP PLATE	1	
8	11709	STAY	2	
9	11718	ROD END RH	2	
10	11719	ROD END LH	2	
11	11730	LIFT UNIT MOUNTING FRAME	1	
12	11731	DIVERTER VALVE BRACKET	1	
13	11733	RAM STOP BRACKET	1	
14	11734	LATCH	2	
15	11735	LIFT ARM	1	
16	11816	RAM PIN	2	
17				
18	13337	STAY PIN	4	
19				
20	GS 412	GREASE NIPPLE	2	
21				
22				
23				
24				
25				
26	SPCT 132	BEARING BLOCK	4	
27	SPCT 143	CLAMP PLATE	1	
28				
29				
30	SS016013/014	STEEL SPACER	2	
31				
32	UC 25	MALE MALE ADAPTOR	1	
33	UC 31A	MALE MALE ADAPTOR	1	
34				
35				
36	22058075	STARLOCK WASHER	2	
37				
38				
39	22068112	1 1/8" UNC RH LOCKNUT	2	
40	22069112	1 1/8" UNC LH LOCKNUT	2	

Hydraulics for Three Row Topper

Assy No 11804

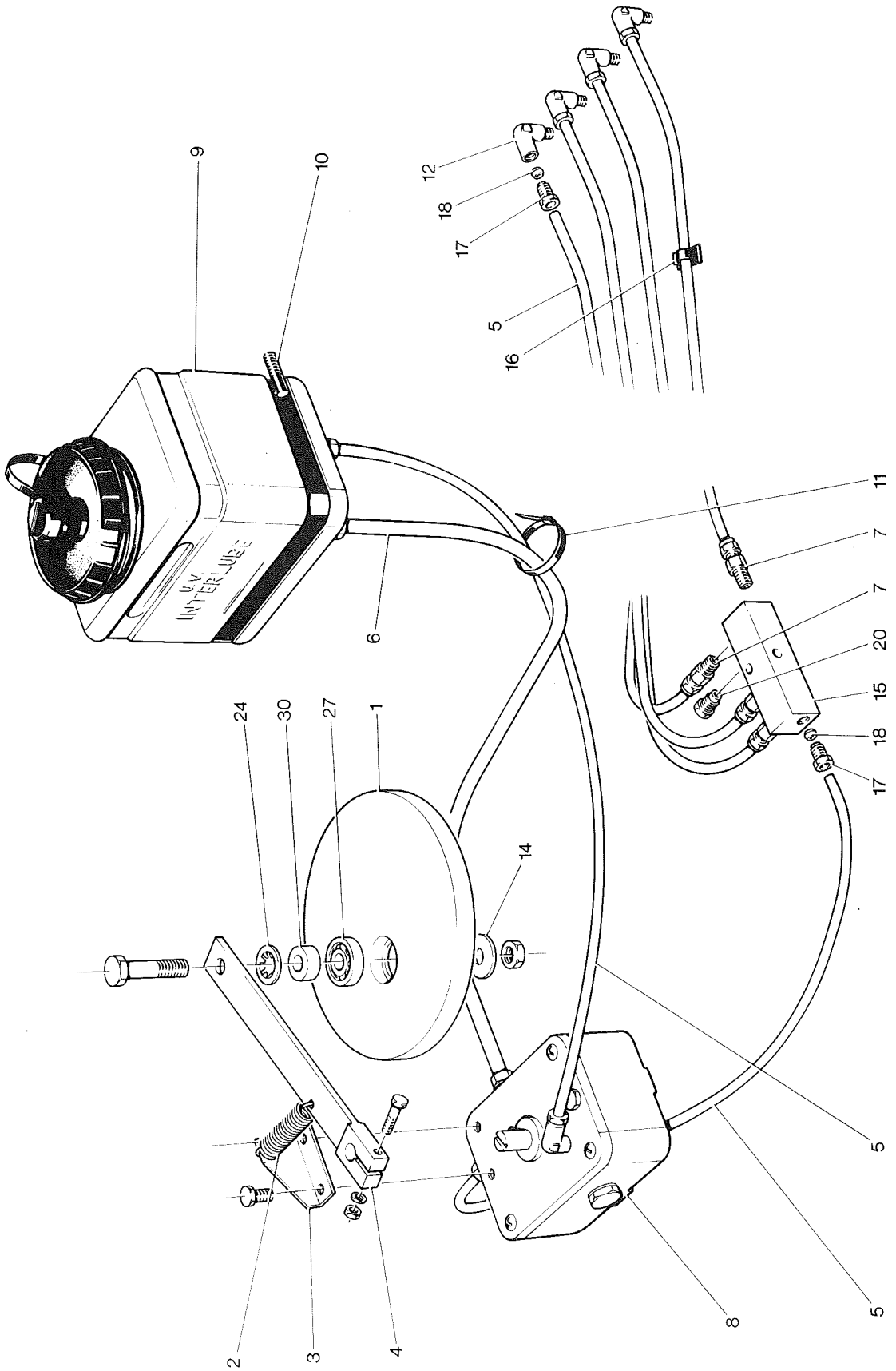


HYDRAULICS FOR THREE ROW TOPPER (PART OF ASSEMBLY No. 11804)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11100	HOSE ASSEMBLY	1	
2	11101	HOSE ASSEMBLY	1	
3	11102	HOSE ASSEMBLY	2	
4	11105	HOSE ASSEMBLY	1	
5	11108	QUICK RELEASE COUPLING	3	
6	11115	MALE MALE ADAPTOR	6	
7	11123	DOWTY SEAL	10	
8	11124	DOWTY SEAL	2	
9	11125	DOWTY SEAL	1	
10	11171	HYDRAULIC PIPE JOINER SUPPORT	1	
11	11201	HYDRAULIC MOTOR	1	
12	11288	ALUMINIUM BLOCK	1	
13	11289	SPRING	1	
14	11290	BALL BEARING	1	
15	11291	'O' RING	2	
16	11292	BLANKING PLUG	2	
17	11293	BLANKING PLUG	1	
18	11294	DOWTY SEAL	2	
19	11295	MALE MALE ADAPTOR	2	
20	11490	DIVERTER VALVE	1	
21				
22				
23				
24	12350	BENT STEM ADAPTOR	2	

Lubrication System

Assy No 11817

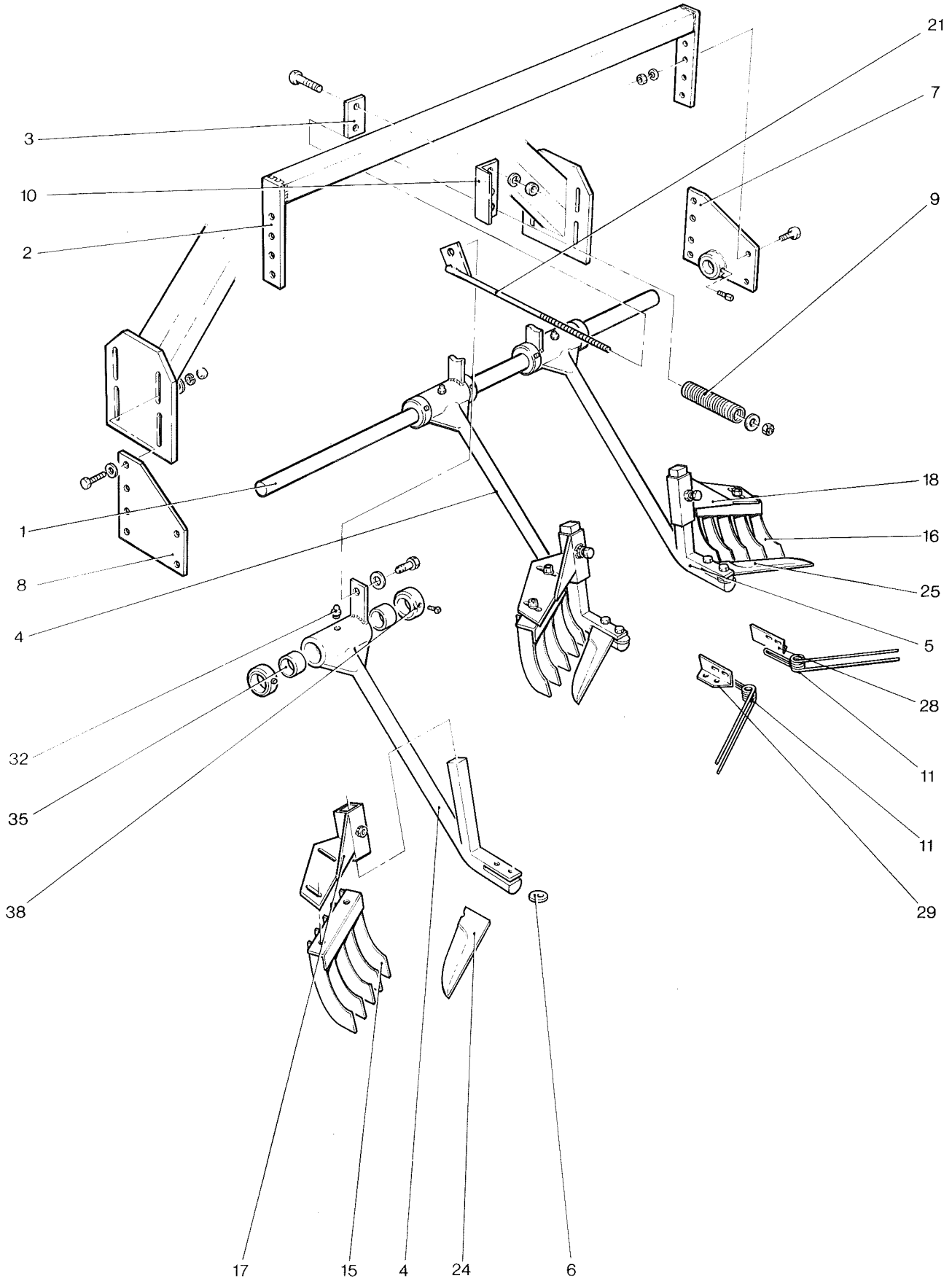


LUBRICATION SYSTEM (ASSY. No. 11817)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11242	REACTION WHEEL	1	
2	11244	SPRING	1	
3	11246	SPRING TAB	1	
4	11259	OPERATING ARM	1	
5	11447	5/32" DIA NYLON TUBE	A/R	
6	11448	5/16" DIA NYLON TUBE	A/R	
7	11450	METERING UNIT	4	
8	11455	PUMP ASSEMBLY	1	
9	11456	TANK (COMPLETE)	1	
10	11457	TANK MOUNTING STRAP	2	
11	11458	CABLE TIE	2	
12	11459	ELBOW	4	
13				
14	11543	REACTION WHEEL WASHER	1	
15	11814	MANIFOLD BLOCK	1	
16	11873	CLIP	4	
17	11452	SLEEVE NUT	5	
18	11453	CONE	5	
19				
20	13040	BLANKING PLUG	1	
21				
22				
23				
24	22059025	STARLOCK WASHER	1	
25				
26				
27	62002 RS	BEARING	1	
28				
29				
30	SS020011/010	STEEL SPACER	1	

Scalper Unit Assembly

Assy No 11565

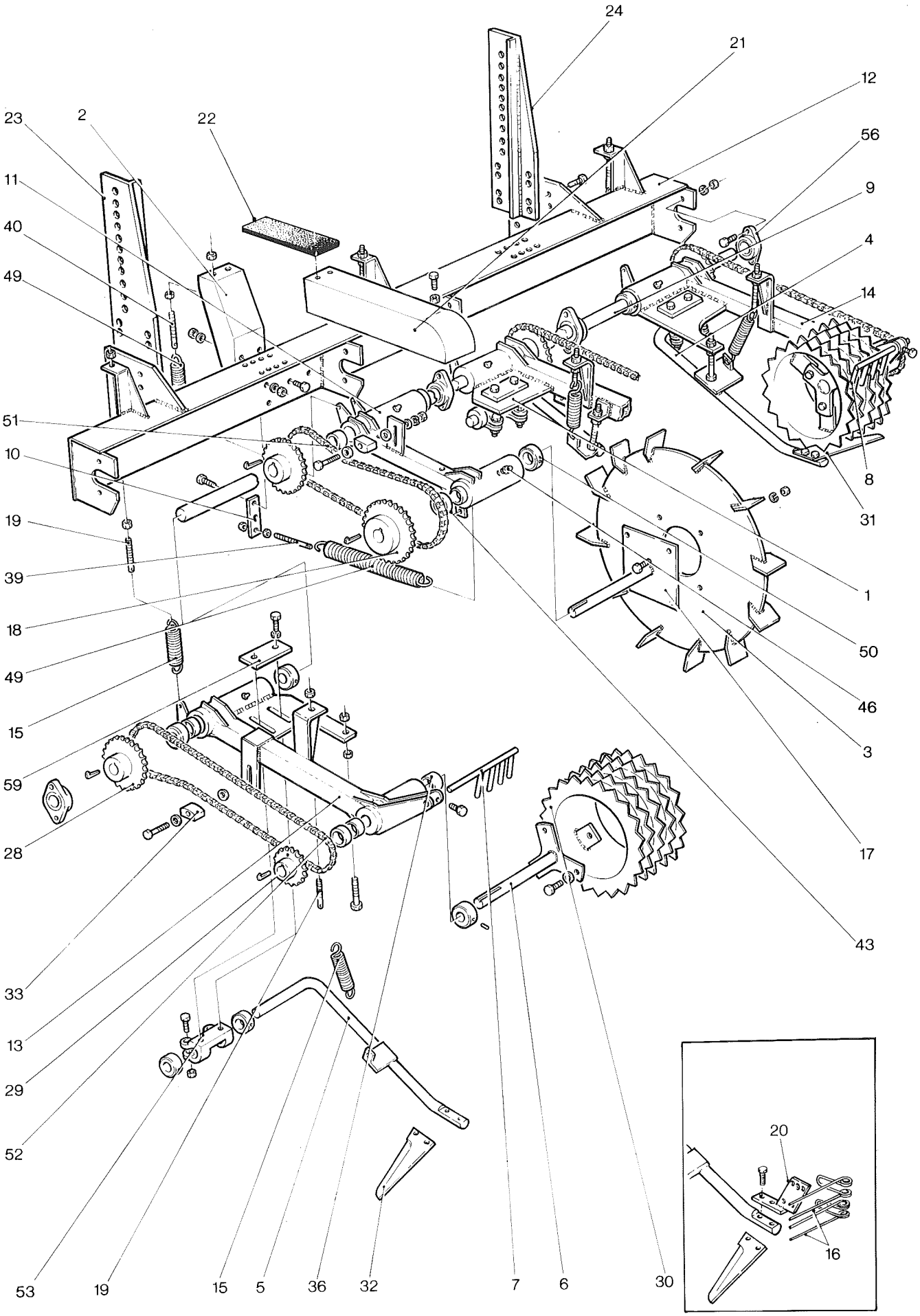


SCALPER UNIT ASSEMBLY (ASSY. No. 11565)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11180	SCALPER SUPPORT BAR	1	
2	11181	SPRING SUPPORT BAR	1	
3	11187	SPRING CLAMP TOP PLATE	3	
4	11318	SCALPER RH	2	
5	11319	SCALPER LH	1	
6	11324	LOCK DISC	3	
7	11530	MOUNTING PLATE LH	1	
8	11531	MOUNTING PLATE RH	1	
9	11630	SPRING	3	
10	11637	TENSION SCREW BRACKET	3	
11	11649	CROWN DEFLECTOR TINE	3	
12				
13				
14				
15	12152	COMB RH	2	
16	12153	COMB LH	1	
17	12261	COMB MOUNTING BRACKET RH	2	
18	12262	COMB MOUNTING BRACKET LH	1	
19				
20				
21	16070	TENSION SCREW	3	
22				
23				
24	17185	KNIFE RH	2	
25	17186	KNIFE LH	1	
26				
27				
28	24203	CROWN DEFLECTOR BRACKET LH	1	
29	24204	CROWN DEFLECTOR BRACKET RH	2	
30				
31				
32	GS 412	GREASE NIPPLE	3	
33				
34				
35	RH 43M	BUSH	6	
36				
37				
38	ST 41M	COLLAR	6	

Feeler Wheel Assembly

Assy No 11566



FEELER WHEEL UNIT ASSEMBLY (ASSY. No. 11566)

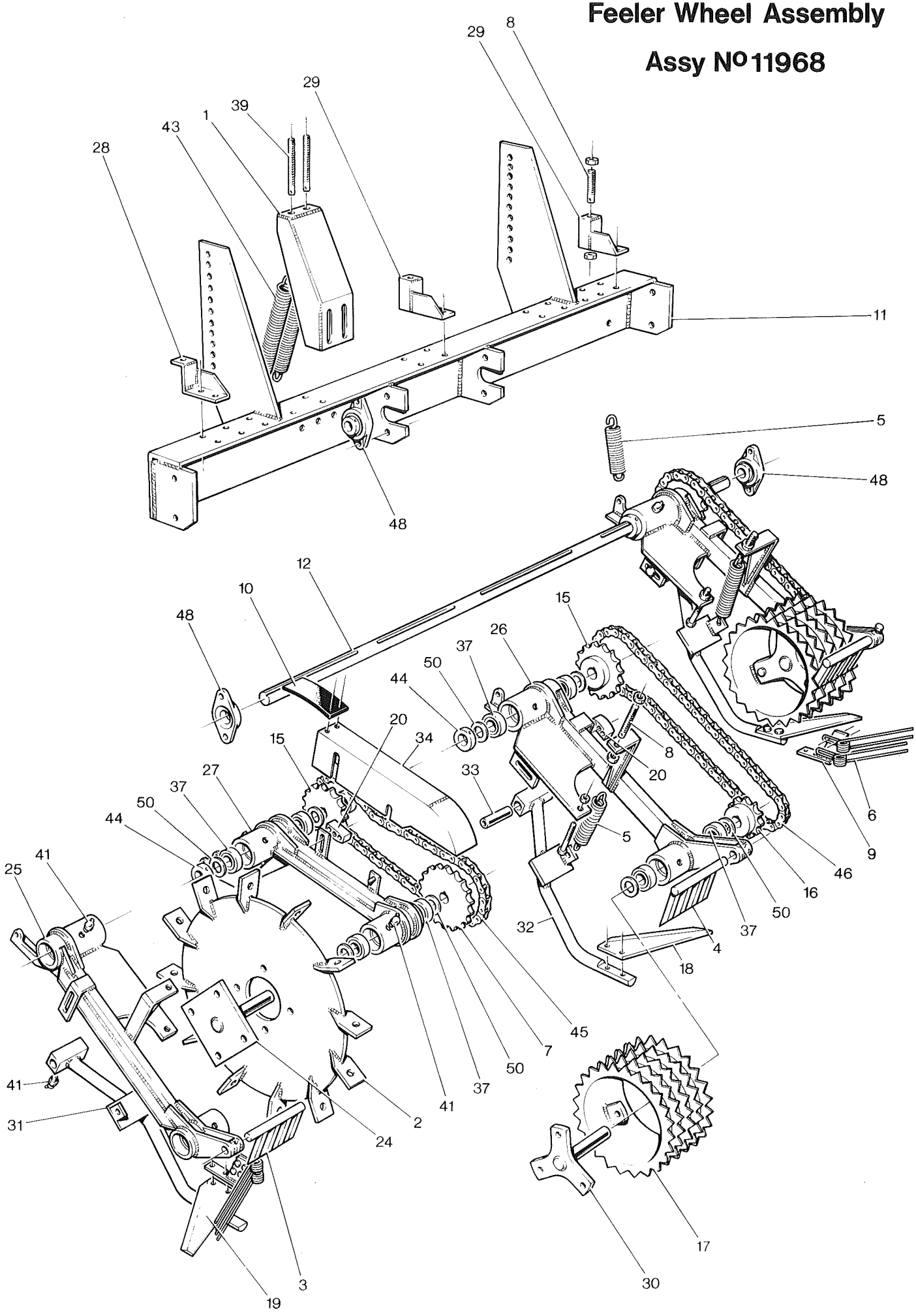
ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11402	FEELER WHEEL ARM (CENTRE)	1	
2	11405	SPRING TENSIONER	1	
3	11406	PADDLE WHEEL	1	
4	11407	KNIFE ARM LH	1	
5	11408	KNIFE ARM RH	2	
6	11409	FEELER WHEEL SHAFT	3	
7	11411 L	FEELER WHEEL SCRAPER LH	1	
8	11411 R	FEELER WHEEL SCRAPER RH	2	
9	11412	DRIVE SHAFT	1	
10	11446	TENSION BRACKET	1	
11	11524	PADDLE WHEEL ARM	1	
12	11544	MAIN BEAM	1	
13	11546	FEELER WHEEL ARM RH	1	
14	11547	FEELER WHEEL ARM LH	1	
15	11648	SPRING	6	
16	11649	CROWN DEFLECTOR TINE	6	
17	11721	PADDLE WHEEL SHAFT	1	
18	11722	SPROCKET	1	
19	11813	SPRING TENSIONER	6	
20	11818	CROWN DEFLECTOR BRACKET	3	
21	11820	PADDLE WHEEL DRIVE GUARD	1	
22	11821	RUBBER FLAP	1	
23	11960	LH ADAPTOR PLATE	1	
24	11961	RH ADAPTOR PLATE	1	
25				
26				
27				
28	17075	SPROCKET	4	
29	17087	SPROCKET	3	
30	17117	FEELER WHEEL	3	
31	17125	KNIFE LH	1	
32	17129	KNIFE RH	2	
33	17155	NYLON CHAIN TENSIONER	4	
34				
35				
36	6206 RS	BEARING	16	
37				
38				
39	BM 82M	SPRING TENSIONER	1	
40	BM 212M	SPRING TENSIONER	2	
41				
42				
43	C 8	PLASTIC SPACER	1	
44				
45				
46	GS 412	GREASE NIPPLE	8	
47				
48				
49	PS 194	SPRING	3	
50	PS 326M	COLLAR	8	

FEELER WHEEL UNIT ASSEMBLY (ASSY. No. 11566)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
51	PS 871/66	CHAIN	1	
52	PS 871/75	CHAIN	3	
53	PS 1002AM	KNIFE ARM BRACKET	3	
54				
55				
56	SFT 30A	BEARING	4	
57				
58				
59	SPCL 309	KNIFE ARM CLAMP PLATE	3	

Feeler Wheel Assembly

Assy No 11968

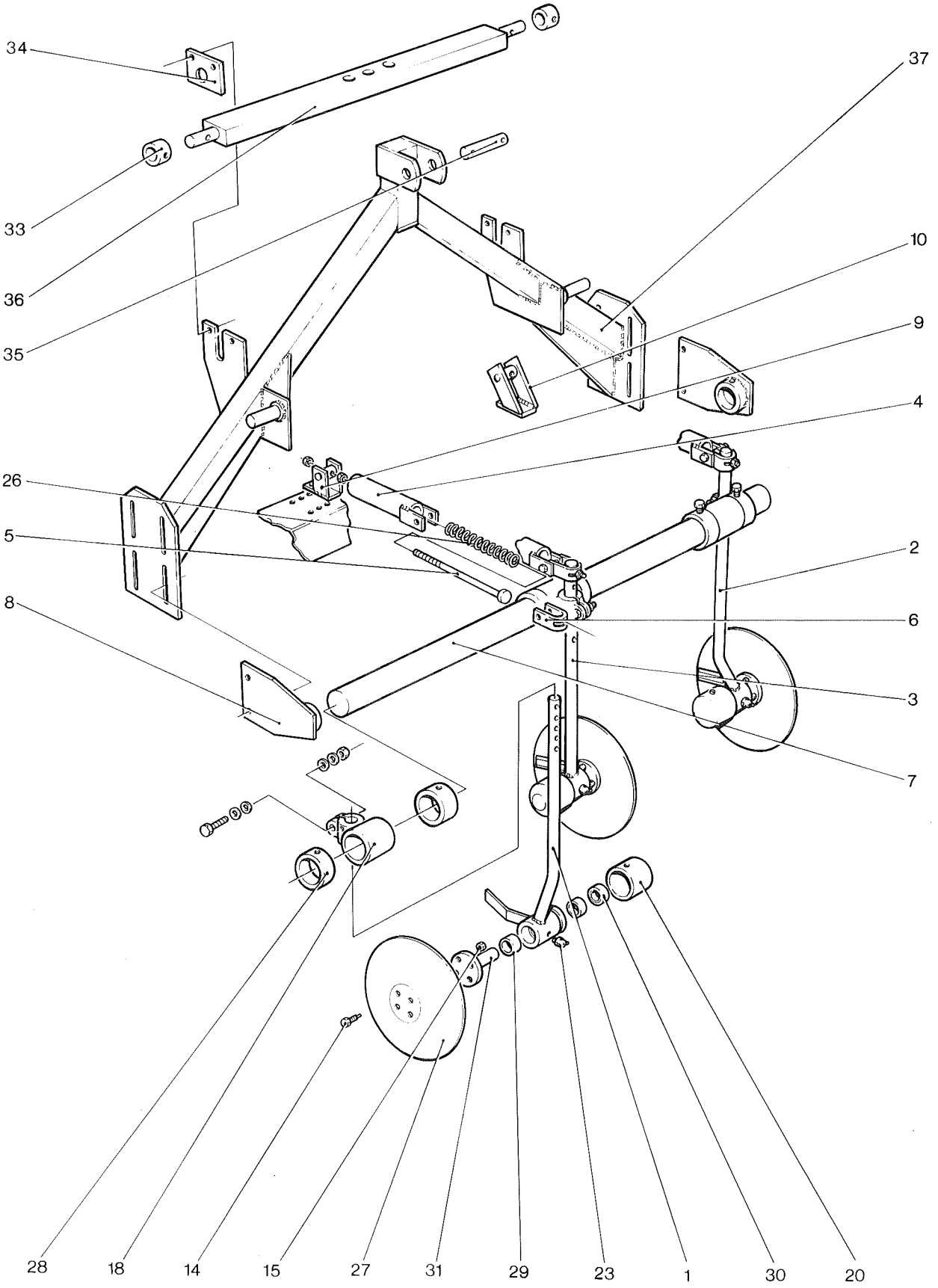


FEELER WHEEL UNIT ASSEMBLY (ASSY. No. 11968)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11405	SPRING TENSION BRACKET	1	
2	11406	PADDLE WHEEL	1	
3	11411L	LH SCRAPER	1	
4	11411R	RH SCRAPER	2	
5	11648	SPRING	6	
6	11649	CROWN DEFLECTOR TINE	6	
7	11722	SPROCKET	1	
8	11813	SPRING TENSIONER	6	
9	11818	CROWN DEFLECTOR BRACKET	3	
10	11821	RUBBER FLAP	1	
11	11969	MAIN FRAME	1	
12	11970	FEELER WHEEL UNIT DRIVE SHAFT	1	
13				
14				
15	17075	SPROCKET	4	
16	17087	SPROCKET	3	
17	17117	FEELER WHEEL	3	
18	17125	LH TOPPING KNIFE	2	
19	17129	RH TOPPING KNIFE	1	
20	17155	NYLON CHAIN TENSIONER	4	
21				
22				
23				
24	24305	PADDLE WHEEL SHAFT	1	
25	24335	RH FEELER WHEEL ARM	1	
26	24336	LH FEELER WHEEL ARM	2	
27	24338	LH PADDLE WHEEL ARM	1	
28	24342	LH SPRING TENSION BRACKET	1	
29	24343	RH SPRING TENSION BRACKET	2	
30	24345	FEELER WHEEL DRIVE SHAFT	3	
31	24348	LH KNIFE ARM	1	
32	24349	RH KNIFE ARM	2	
33	24350	KNIFE ARM PIVOT TUBE	3	
34	24353	LH PADDLE WHEEL GUARD	1	
35				
36				
37	6206 RS	BEARING	16	
38				
39	BM 212M	SPRING TENSIONER	2	
40				
41	GS 412	GREASE NIPPLE	11	
42				
43	PS 194	SPRING	2	
44	PS 326M	COLLAR	8	
45	PS 871/66	CHAIN	1	
46	PS 871/75	CHAIN	3	
47				
48	SFT 30A	BEARING	4	
49				
50	SS045031/003	STEEL SPACER	16	

Disc Unit Assembly

Assy No 11567

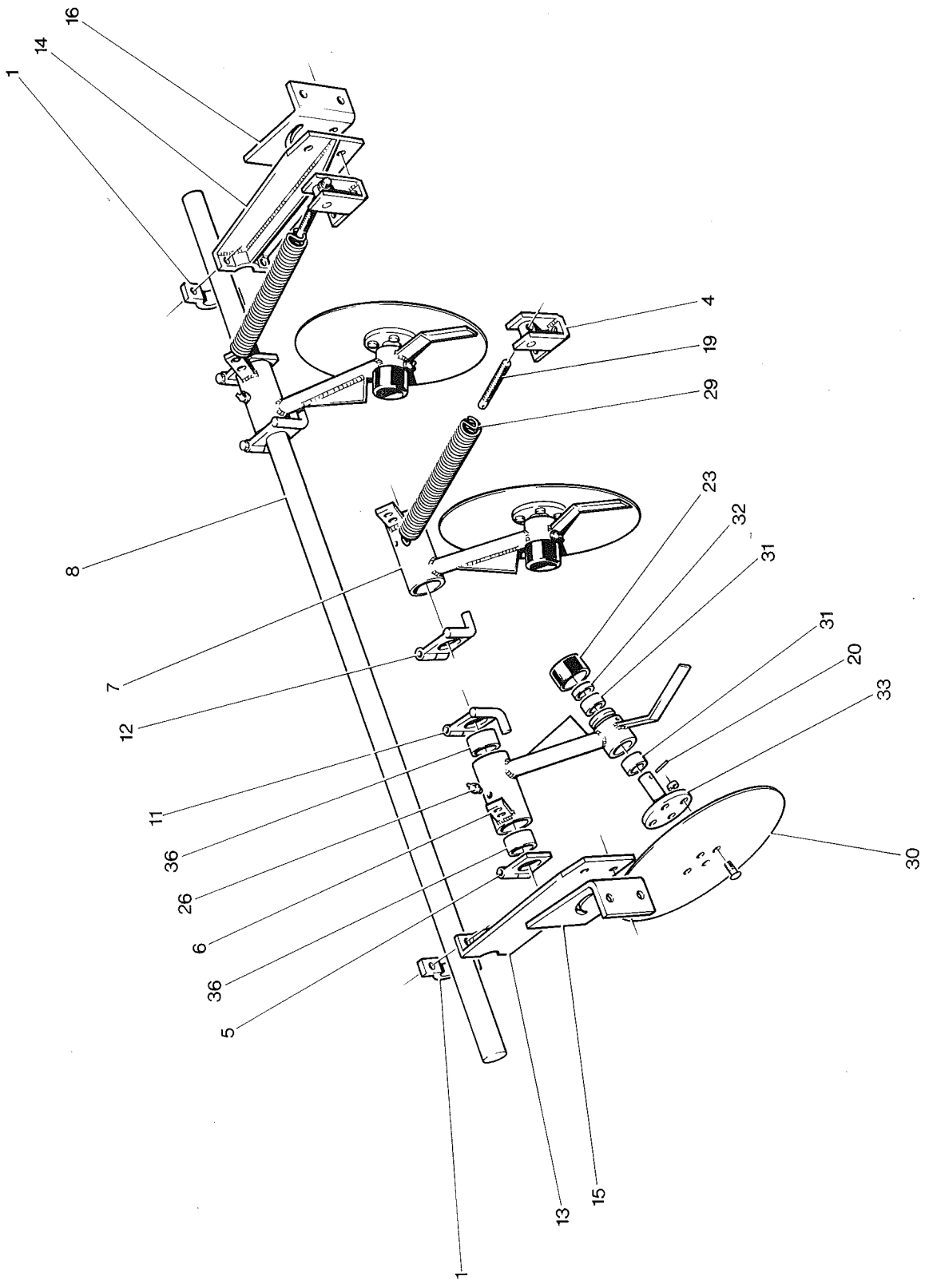


DISC UNIT ASSEMBLY (ASSY. No. 11567)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11472	DISC STALK RH	1	
2	11473	DISC STALK LH	1	
3	11474	DISC STALK STRAIGHT	1	
4	11498	TENSION BARREL	3	
5	11499	TENSION SPINDLE	3	
6	11500	CHANNEL SUPPORT BRACKET	3	
7	11520	DISC UNIT SUPPORT BAR	1	
8	11521	SUPPORT BAR BRACKET	2	
9	11522	TRUNNION SUPPORT	1	
10	11955	OUTER TRUNNION SUPPORT	2	
11				
12				
13				
14	2611-1007	FIXING PIN	12	
15	2682-1000	COLLAR	12	
16				
17				
18	BM 20AM	COULTER BRACKET	3	
19				
20	BMT 81M	DUST CAP	3	
21				
22				
23	GS 412	GREASE NIPPLE	3	
24				
25				
26	PS 165	SPRING	3	
27	PS 224/13	DISC COULTER	3	
28	PS 353M	COLLAR	6	
29	PS 386NM	NYLON BUSH	6	
30	PS 588	OIL SEAL	3	
31	PS 596M	SPINDLE	3	
32				
33	11183	RETAINING PLATE COLLAR	2	(REF)
34	11184	RETAINING PLATE	2	(REF)
35	11192	THREE POINT LINKAGE PIN	1	(REF)
36	11517	DRAWBAR	1	(REF)
37	11518	'A' FRAME	1	(REF)

Disc Unit Assembly

Assy No 11971

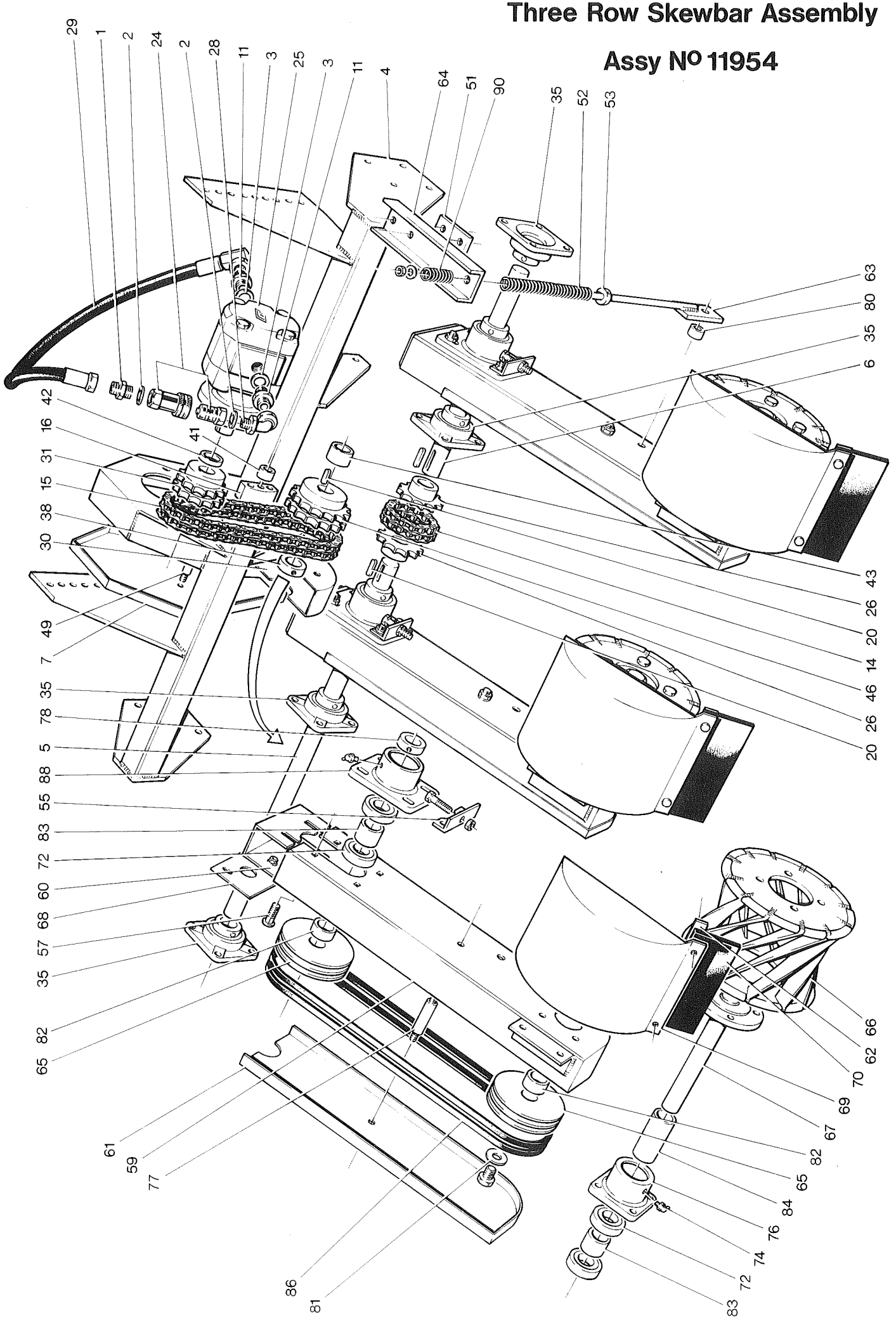


DISC UNIT ASSEMBLY (ASSY. No. 11971)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	0903602102	CLAMP	2	
2				
3				
4	11522	TRUNION SUPPORT	3	
5	11643	DEPTH WHEEL CLAMP	3	
6	11678	LH DISC ARM	1	
7	11679	RH DISC ARM	2	
8	11972	SUPPORT BAR	1	
9				
10				
11	24062	LH DEPTH CLAMP	1	
12	24063	RH DEPTH CLAMP	2	
13	24210	LH MOUNTING BRACKET	1	
14	24211	RH MOUNTING BRACKET	1	
15	24346	LH DISC UNIT SUPPORT BRACKET	1	
16	24347	RH DISC UNIT SUPPORT BRACKET	1	
17				
18				
19	BM 82M	SPRING TENSIONER	3	
20	BM 218	DISC COULTER PIN	3	
21				
22				
23	BMT 81M	DUST CAP	3	
24				
25				
26	GS 412	GREASE NIPPLE	6	
27				
28				
29	PS 194	SPRING	3	
30	PS 224/13	DISC	3	
31	PS 386NM	NYLON BUSH	6	
32	PS 588	OIL SEAL	3	
33	PS 596M	SPINDLE	3	
34				
35				
36	RH 43M	WRAPPED BUSH	6	

Three Row Skewbar Assembly

Assy No 11954



THREE ROW SKEWBAR ASSEMBLY (ASSY. No. 11954)

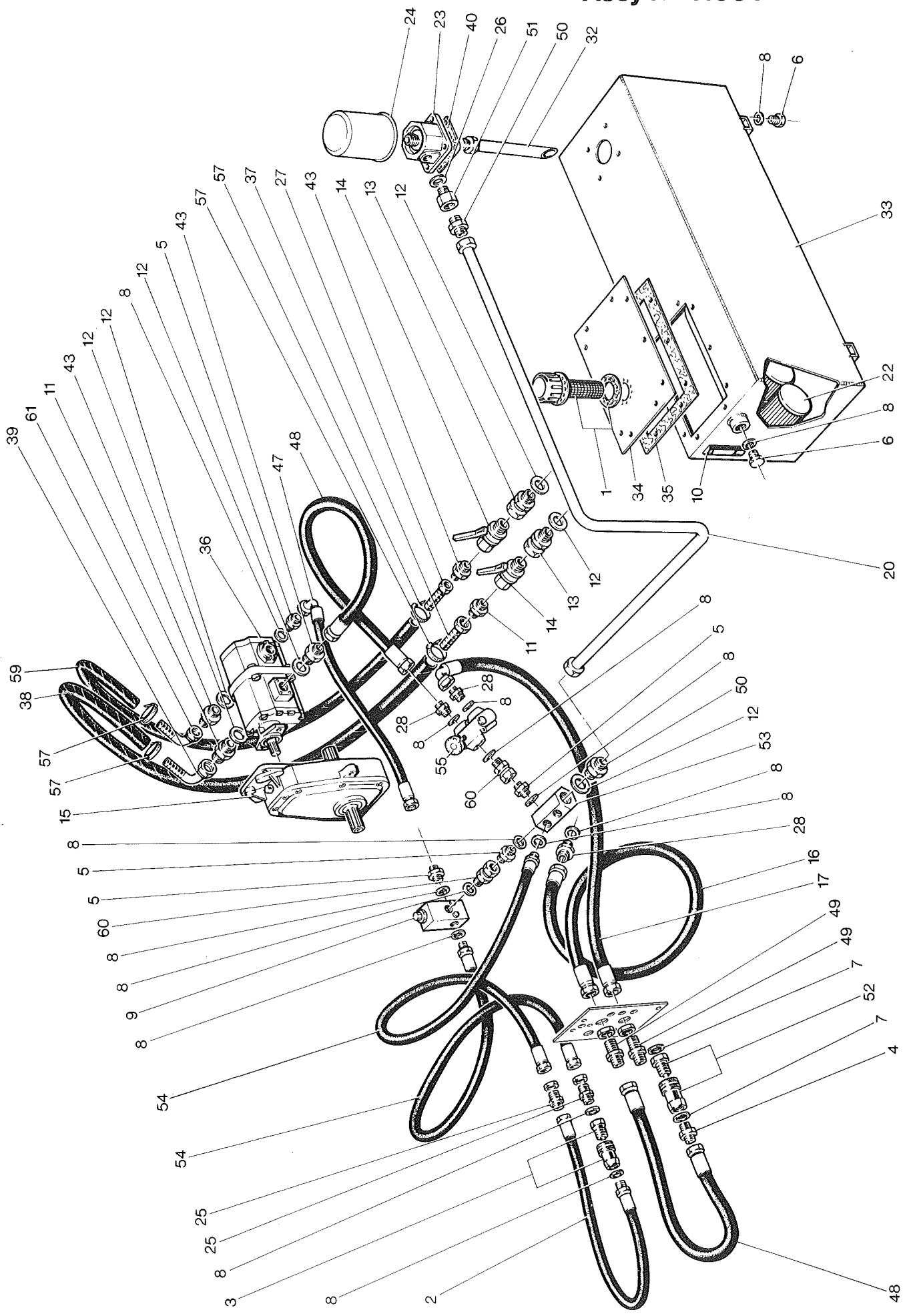
ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11114	MALE ADAPTOR	1	
2	11122	DOWTY SEAL	2	
3	11123	DOWTY SEAL	2	
4	11956	MAIN FRAME	1	
5	11957	LH MAIN DRIVE SHAFT	1	REPLACES 11953
6	11958	RH MAIN DRIVE SHAFT	1	REPLACES 11952
7	11973	MAIN DRIVE GUARD COVER	1	
8				
9				
10				
11	12560	MALE ADAPTOR	2	
12				
13				
14	17088/15	DUPLEX CHAIN	1	
15	17088/46	DUPLEX CHAIN	1	REPLACES PS871/67
16	17155	NYLON CHAIN TENSIONER	1	
17				
18				
19				
20	22062008/030	R.B.E KEY	3	
21				
22				
23				
24	24160	QUICK RELEASE COUPLING	1	
25	24261	HYDRAULIC MOTOR	1	
26	24262	SPROCKET	2	
27	24280	SKEWBAR UNIT ARM ASSEMBLY	3	
28	24299	MALE / FEMALE ADAPTOR	1	
29	24300	HOSE ASSEMBLY	1	
30	24361	BOTTOM DIRT SHIELD	1	
31	24362	DUPLEX SPROCKET	1	REPLACES 24263
32				
33				
34				
35	SF 35A	BEARING	4	
36				
37				
38	SPCT 131	STOP COLLAR	1	
39				
40				
41	SS025013/020	STEEL SPACER	1	
42	SS045032/008	STEEL SPACER	1	
43	SS045036/026	STEEL SPACER	1	
44				
45				
46	24373	DUPLEX SPROCKET	1	REPLACES 11833
47				
48				
49	TRT 105M	GUARD BOLT	1	
50				

THREE ROW SKEWBAR ASSEMBLY (ASSY. No. 11954)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
	24280	SKEWBAR ARM ASSY. CONSISTS OF:-		
51	11145	SUPPORT PLATE CLAMP	1	
52	11630	SPRING	1	REPLACES 24083
53	11717	STOP COLLAR	1	
54				
55	16183	BEARING HOUSING ADJUSTING BRACKET	1	
56				
57	22070012/050	M12 x 50 CUP SQ. BOLT	4	
58				
59	24265	MOUNTING ARM	1	
60	24266	END BRACKET	1	
61	24267	MOUNTING ARM COVER	1	
62	24274	CLAMP STRIP	1	
63	24276	BOUNCE DAMPER	1	
64	24277	SUPPORT BRACKET	1	
65	24355	SH LOCKING PULLEY/BUSH ASSEMBLY	2	REPLACES 24269
66	24360	SKEWBAR BARREL	1	REPLACES TBMW 749
67	24364	SKEWBAR DRIVE SHAFT	1	REPLACES 24270
68	24366	SIDE DIRT SHIELD	1	
69	24367	SKEWBAR BARREL GUARD	1	
70	24368	BARREL RUBBER FLAP	1	
71				
72	6207 RS	BEARING	4	
73				
74	GS 412	GREASE NIPPLE	2	
75				
76	SP 44M	BEARING HOUSING	1	
77	SP 279M	GUARD BOLT	1	
78	SPCT 131	STOP COLLAR	1	
79				
80	SS025017/015	STEEL SPACER	1	
81	SS042011/005	STEEL SPACER	1	
82	SS045036/022	STEEL SPACER	2	
83	SS045036/042	STEEL SPACER	2	
84	SS045036/130	STEEL SPACER	1	
85				
86	VB 73	VEE BELT	2	REPLACES VB63(1)
87				
88	VRT 23M	BEARING HOUSING	1	
89				
90	W0668	SPRING	1	REPLACES 24275

Harvester Hydraulics for Skewbar

Assy No 11959



HARVESTER HYDRAULICS FOR SKEWBAR (ASSY. No. 11959)

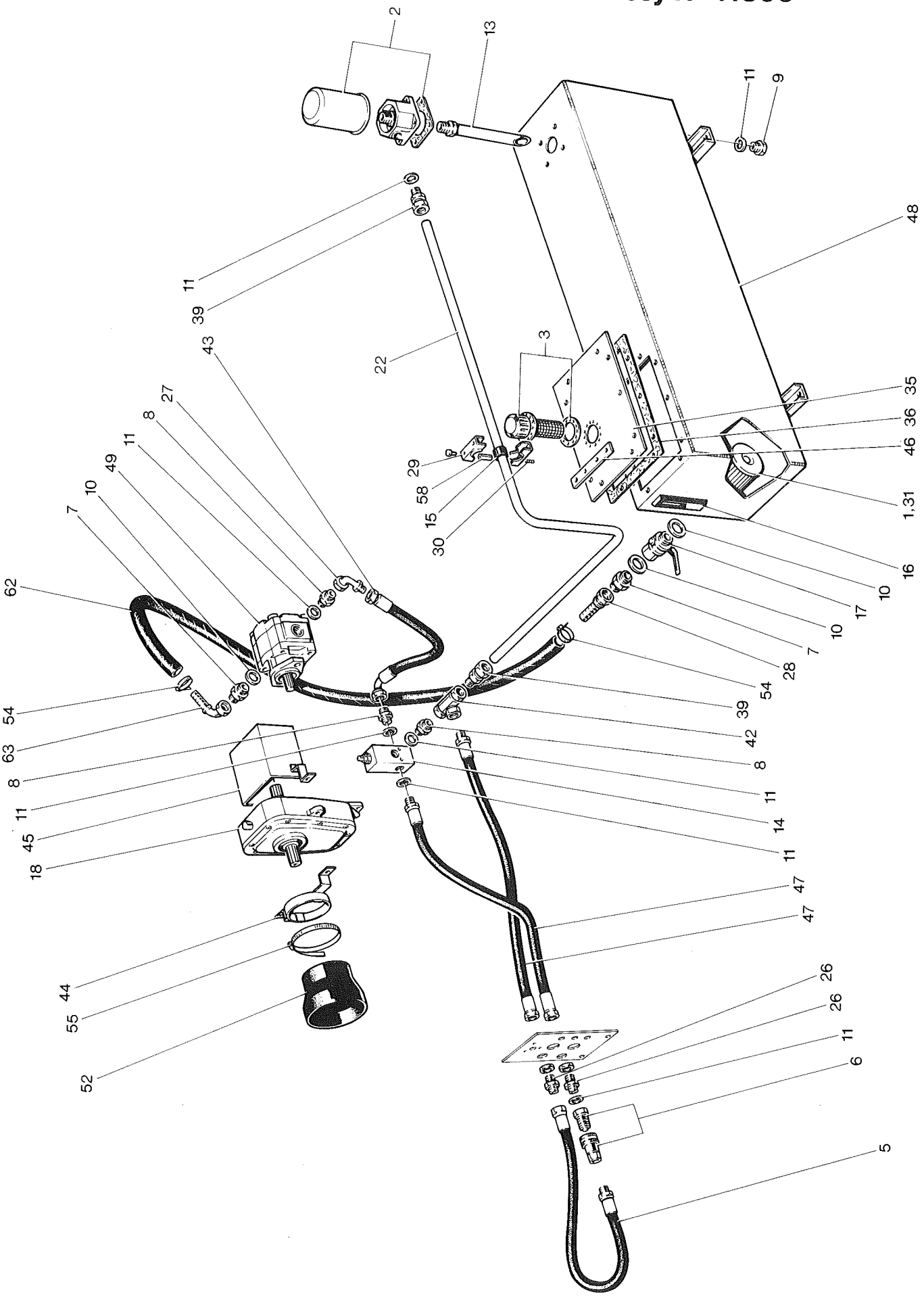
ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11059	AIR BREATHER	1	
2	11101	HOSE ASSEMBLY	1	
3	11108	QUICK RELEASE COUPLING	1	
4	11114	MALE ADAPTOR	1	
5	11115	MALE ADAPTOR	3	
6	11117	BLANKING PLUG	2	
7	11122	DOWTY SEAL	2	
8	11123	DOWTY SEAL	15	
9	11132	RELIEF VALVE	1	
10	11626	FLUID LEVEL GAUGE	1	
11	11739	MALE ADAPTOR	2	
12	11740	DOWTY SEAL	6	
13	11796	SWIVEL ADAPTOR	2	
14	11797	SHUT OFF VALVE	2	
15	11876	GEARBOX	1	(REF)
16	11946	HOSE ASSEMBLY	1	
17	11947	HOSE ASSEMBLY	1	
18				
19				
20	11914	STEEL PIPE	1	
21				
22	12278	STRAINER	2	
23	12279	FILTER UNIT	1	
24	12280	FILTER ELEMENT	1	
25	12320	BULKHEAD ADAPTOR	2	
26	12352	DOWTY SEAL	1	
27	12508	FEMALE STANDPIPE ADAPTOR	1	
28	12560	MALE ADAPTOR	3	
29				
30				
31				
32	13140	OIL RETURN PIPE	1	
33	13292	HYDRAULIC TANK	1	
34	13293	HYDRAULIC TANK LID	1	
35	13294	GASKET	1	
36	13295	DOUBLE PUMP	1	
37	13297	FEMALE STANDPIPE ADAPTOR	1	
38	13298	SUCTION HOSE	1.6m	
39	13299	FEMALE STANDPIPE ADAPTOR	1	
40	13341	GASKET	1	
41				
42				
43	23143	MALE ADAPTOR	3	
44				
45				
46				
47	24131	HOSE ASSEMBLY	1	
48	24146	HOSE ASSEMBLY	2	
49	24147	MALE BULKHEAD	2	
50	24149	MALE STUD COUPLING	2	

HARVESTER HYDRAULICS FOR SKEWBAR (ASSY. No. 11959)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
51	24150	REDUCING ADAPTOR	1	
52	24160	QUICK RELEASE COUPLING	1	
53	24191	MANIFOLD BLOCK	1	
54	24240	HOSE ASSEMBLY	2	
55	24298	FLOW DIVIDER	1	
56				
57	GS 406	JUBILEE CLIP	4	
58				
59	TBMW 333	SUCTION HOSE	1.6m	
60	TBMW 338	SWIVEL ADAPTOR	2	
61	TBMW 340	STANDPIPE ADAPTOR	1	

Harvester Extras for Turbo Topper

Assy No 11895



HARVESTER EXTRAS FOR TURBO TOPPER (ASSY. No. 11895)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11056	STRAINER	1	
2	11057	FILTER COMPLETE	1	ELEMENT 11058
3	11059	AIR BREATHER	1	
4				
5	11101	HOSE ASSEMBLY	1	
6	11108	QUICK RELEASE COUPLING	1	
7	11114	MALE ADAPTOR	2	
8	11115	MALE ADAPTOR	3	
9	11117	BLANKING PLUG	1	
10	11122	DOWTY SEAL	3	
11	11123	DOWTY SEAL	7	
12				
13	11126	OIL RETURN PIPE	1	
14	11132	RELIEF VALVE	1	
15	11551	GROMMET	1	
16	11626	FLUID LEVEL GAUGE	1	
17	11807	SHUT OFF VALVE	1	
18	11876	GEARBOX	1	SEE PAGE 4.19
19				
20				
21				
22	11913	STEEL PIPE	1	
23				
24				
25				
26	12320	MALE BULKHEAD ADAPTOR	2	
27	12350	BENT STEM ADAPTOR	1	
28	12508	FEMALE STANDPIPE ADAPTOR	1	
29	12563	HYDRAULIC PIPE CLAMP	2	
30	12564	STACKING NUT	2	
31	12579	BARREL NIPPLE	1	
32				
33				
34				
35	13293	HYDRAULIC TANK LID	1	
36	13294	TANK GASKET	1	
37				
38				
39	16312	MALE STUD COUPLING	2	
40				
41				
42	24130	3/4" FEMALE TEE	1	
43	24131	HOSE ASSEMBLY	1	
44	24178	GEARBOX GUARD MOUNTING RING	1	
45	24179	GEARBOX REAR GUARD	1	
46	24193	PIPE CLAMP SUPPORT	1	
47	24240	HOSE ASSEMBLY	2	
48	24253	HYDRAULIC TANK	1	
49	24322	HYDRAULIC PUMP	1	PRIOR TO SERIAL No. TB3/344C PART No. WAS 11067
50				

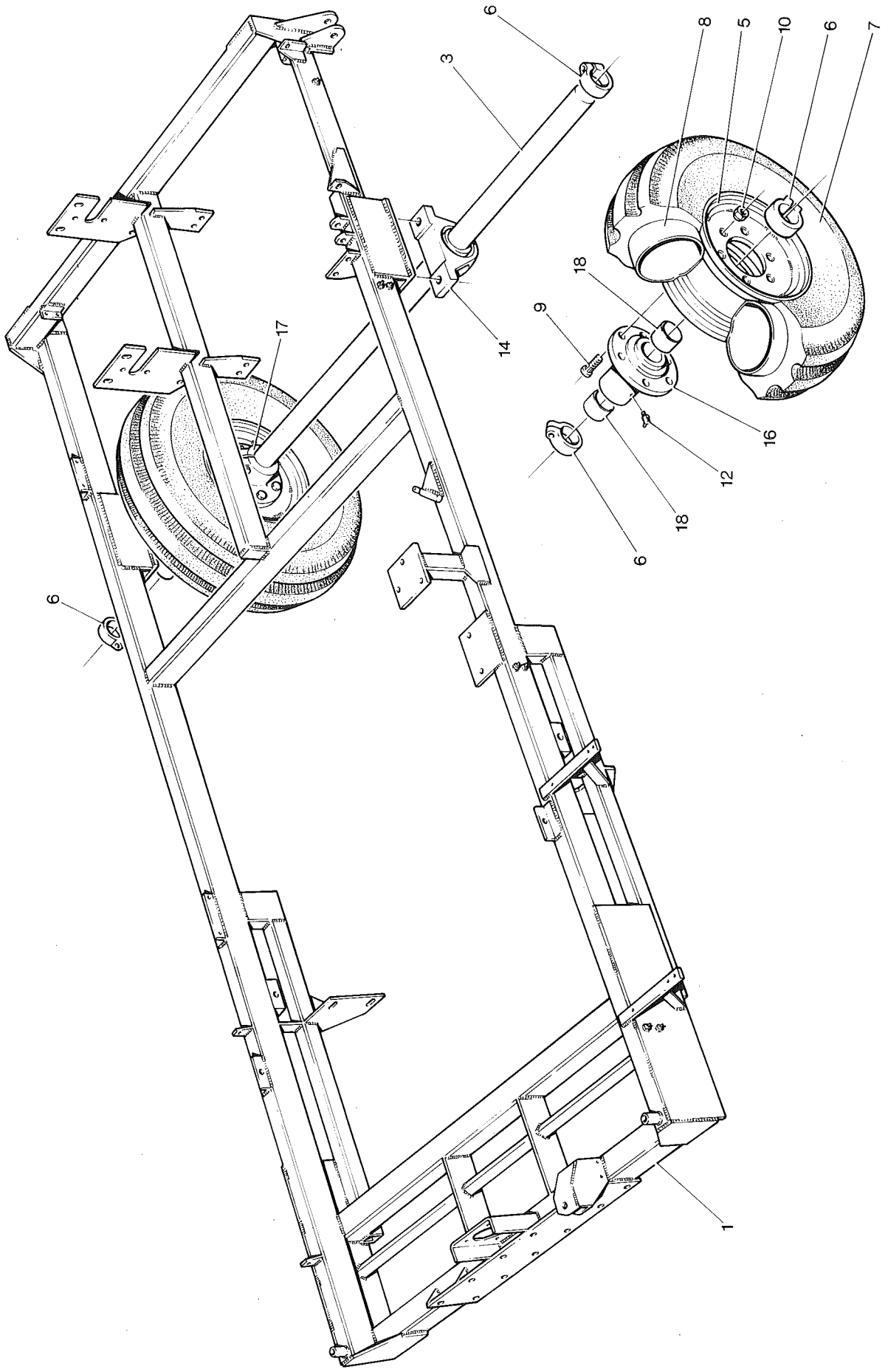
HARVESTER EXTRAS FOR TURBO TOPPER (ASSY. No. 11895)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
51				
52	BM 196	SAFETY GUARD	1	
53				
54	GS 406	HOSECLIP	2	
55	GS 407	HOSECLIP	1	
56				
57				
58	SPCT 212	STACKING NUT	2	
59				
60				
61				
62	TBMW 333	SUCTION TUBE	A/R	
63	TBMW 340	STANDPIPE	1	

SECTION 4.
HARVESTER
EXPLODED PARTS ILLUSTRATIONS

Main Frame, Axle and Wheels

Assy No 11886



MAIN FRAME, AXLE AND WHEELS (ASSY. No. 11886)

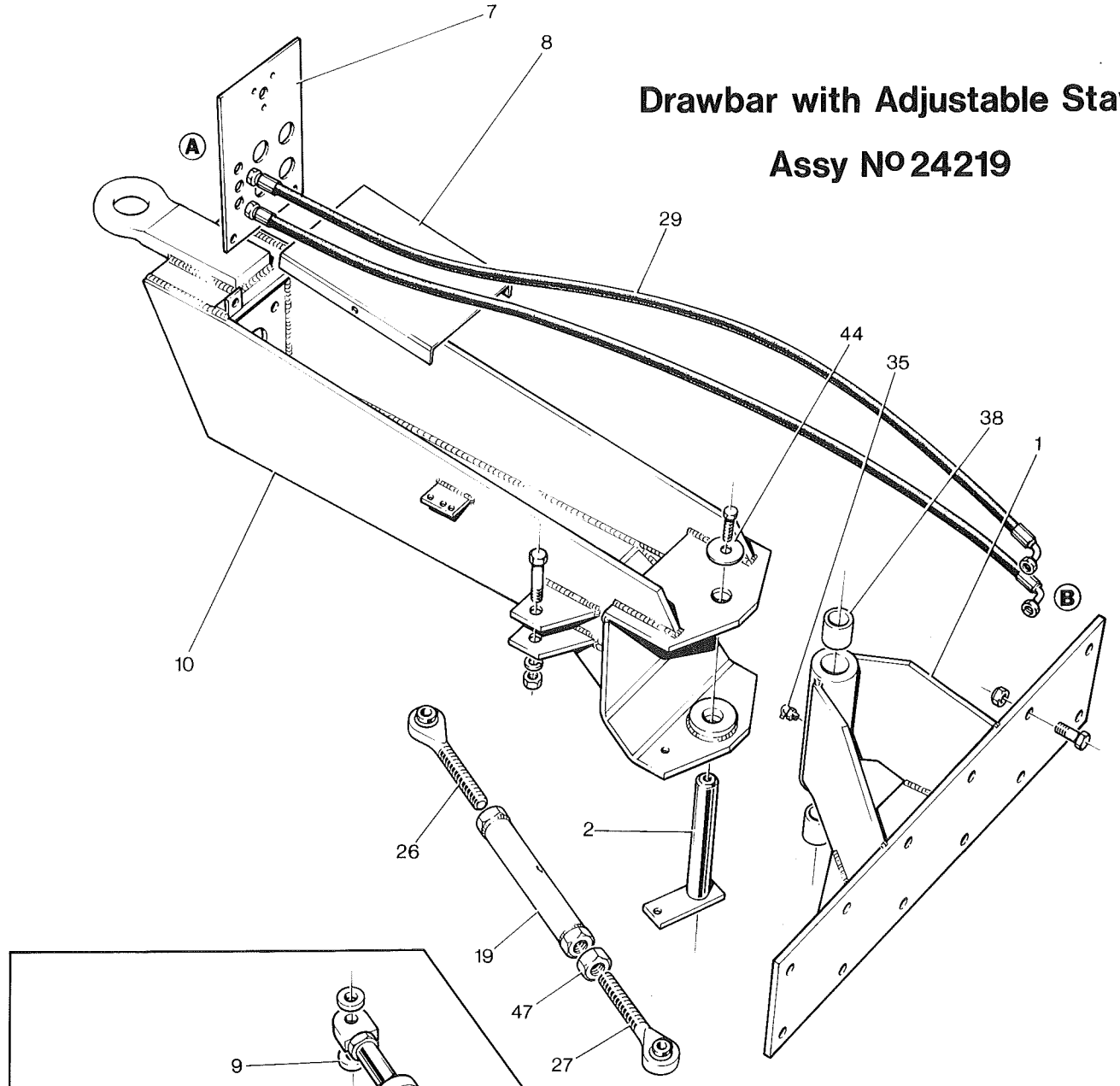
ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11881	MAIN FRAME	1	
2				
3	10976	AXLE	1	
4				
5	13008	WHEEL RIM	2	
6	13012	COLLAR	4	
7	13033	TYRE	2	
8	13034	TUBE	2	
9	13208	WHEEL STUD	12	
10	13209	WHEEL NUT	12	
11				
12	GS 411	GREASE NIPPLE	2	
13				
14	MP 3	BEARING	2	
15				
16	TBMW 392	WHEEL HUB (DRIVEN)	1	
17	TBMW 393	WHEEL HUB (DRIVER)	1	
18	TBMW 634	BUSH	2	

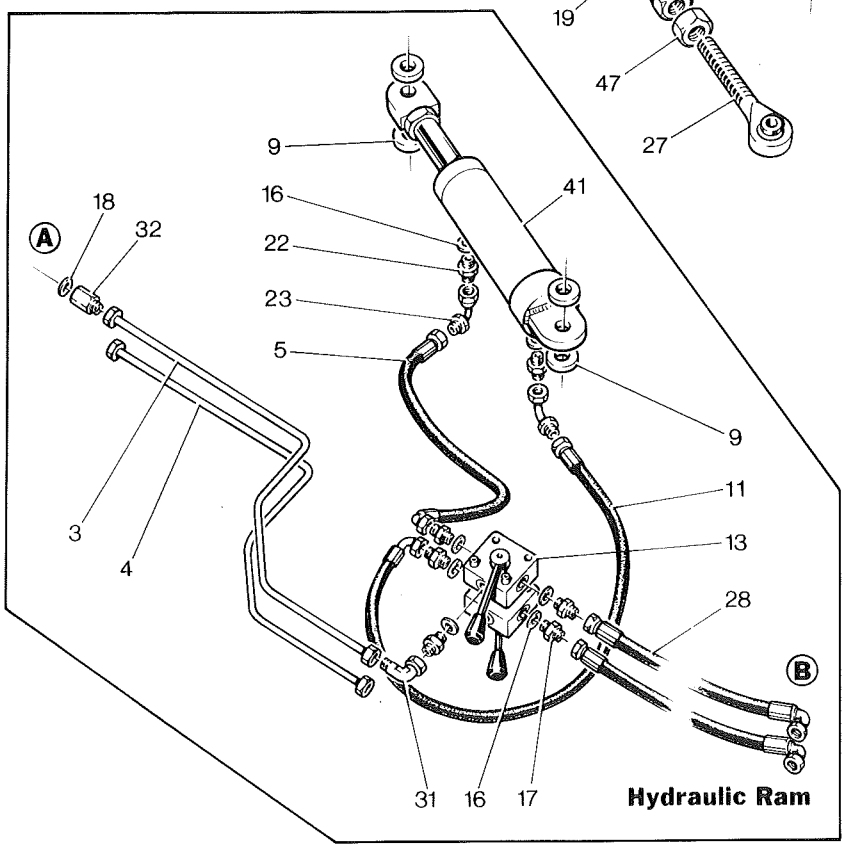
Drawbar with Hydraulic Ram

Assy No 24206

Drawbar with Adjustable Stay

Assy No 24219



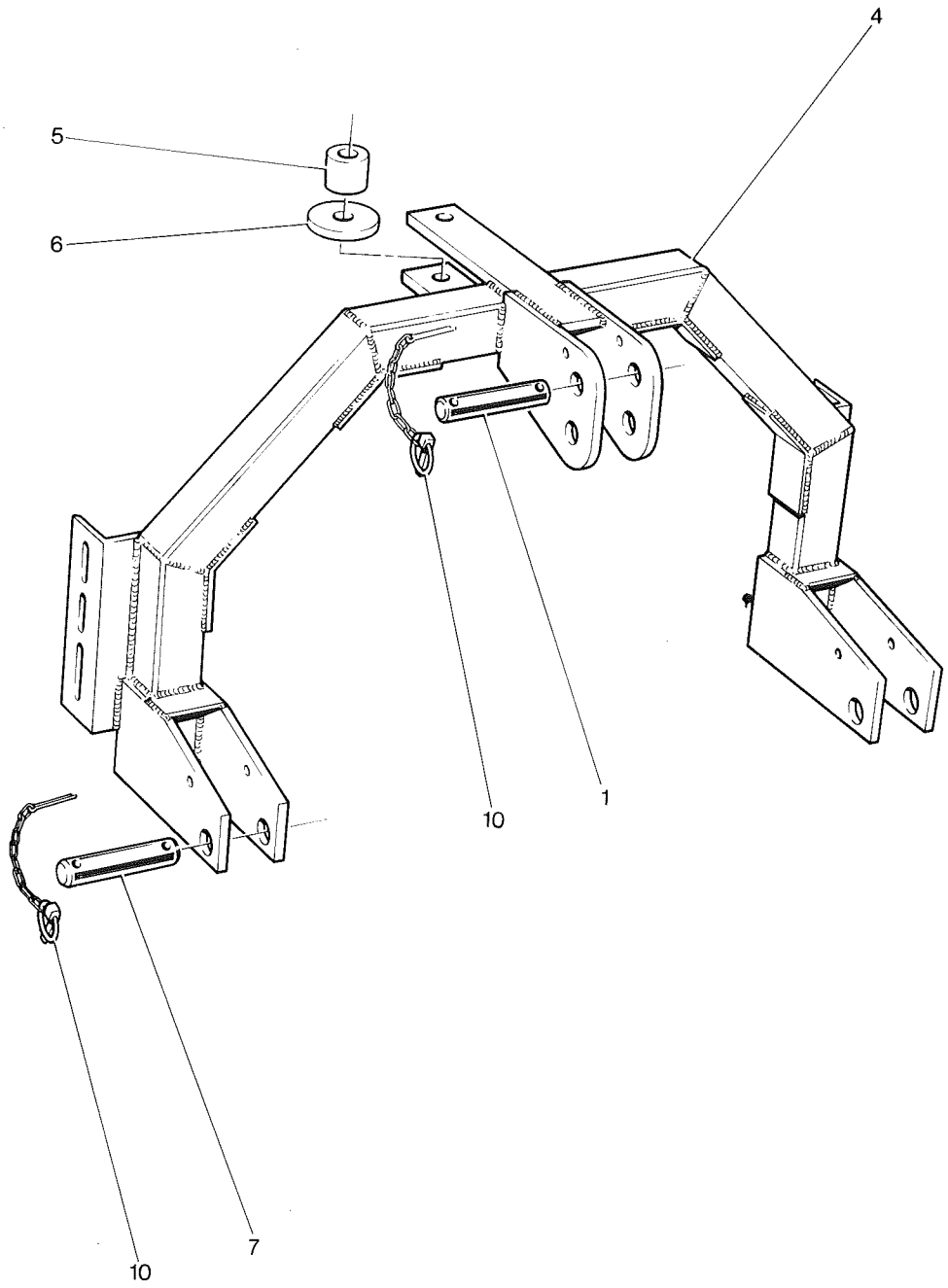


A, B — see page No 4.15

DRAWBAR ASSEMBLY (HYDRAULIC RAM / ADJUSTABLE STAY) (ASSY. No. 24206 / 24219)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	24033	PIVOT FRAME	1	
2	24035	PIVOT PIN	1	
3	24142	STEEL PIPE	1	
4	24143	STEEL PIPE	1	
5	24144	HOSE ASSEMBLY	1	
6				
7	24200	BULKHEAD PLATE	1	(REF)
8	24205	TOP GUARD	1	(REF)
9	24218	RAM SPACER	4	
10	24319	DRAWBAR	1	PRIOR TO SERIAL No. TB4/026C TB3/344C PART No.WAS 24199
11	24333	HOSE ASSEMBLY	1	
12				
13	10275	VALVE ASSEMBLY	2	
14				
15				
16	11125	WASHER	8	
17	11336	MALE / MALE ADAPTOR	6	
18	11337	DOWTY SEAL	2	
19	11709	STAY	1	
20				
21				
22	12316	MALE / MALE ADAPTOR	2	
23	12378	BENT STEM ADAPTOR	2	
24				
25				
26	13035	LH STAY END	1	
27	13036	RH STAY END	1	
28	13188	HOSE ASSEMBLY	2	
29	13223	HOSE ASSEMBLY	2	
30				
31	16313	ADJ. MALE STUD ELBOW COUPLING	2	
32	16390	FEMALE STRAIGHT COUPLING	2	
33				
34				
35	GS 411	GREASE NIPPLE	1	
36				
37				
38	24332	BRONZE BUSH	2	
39				
40				
41	SPCL 693	HYDRAULIC RAM	1	
42				
43				
44	SS060017/005	STEEL SPACER	1	
45				
46				
47	22068112	LOCK NUT	1	

U' Frame Assembly
Assy No 24220



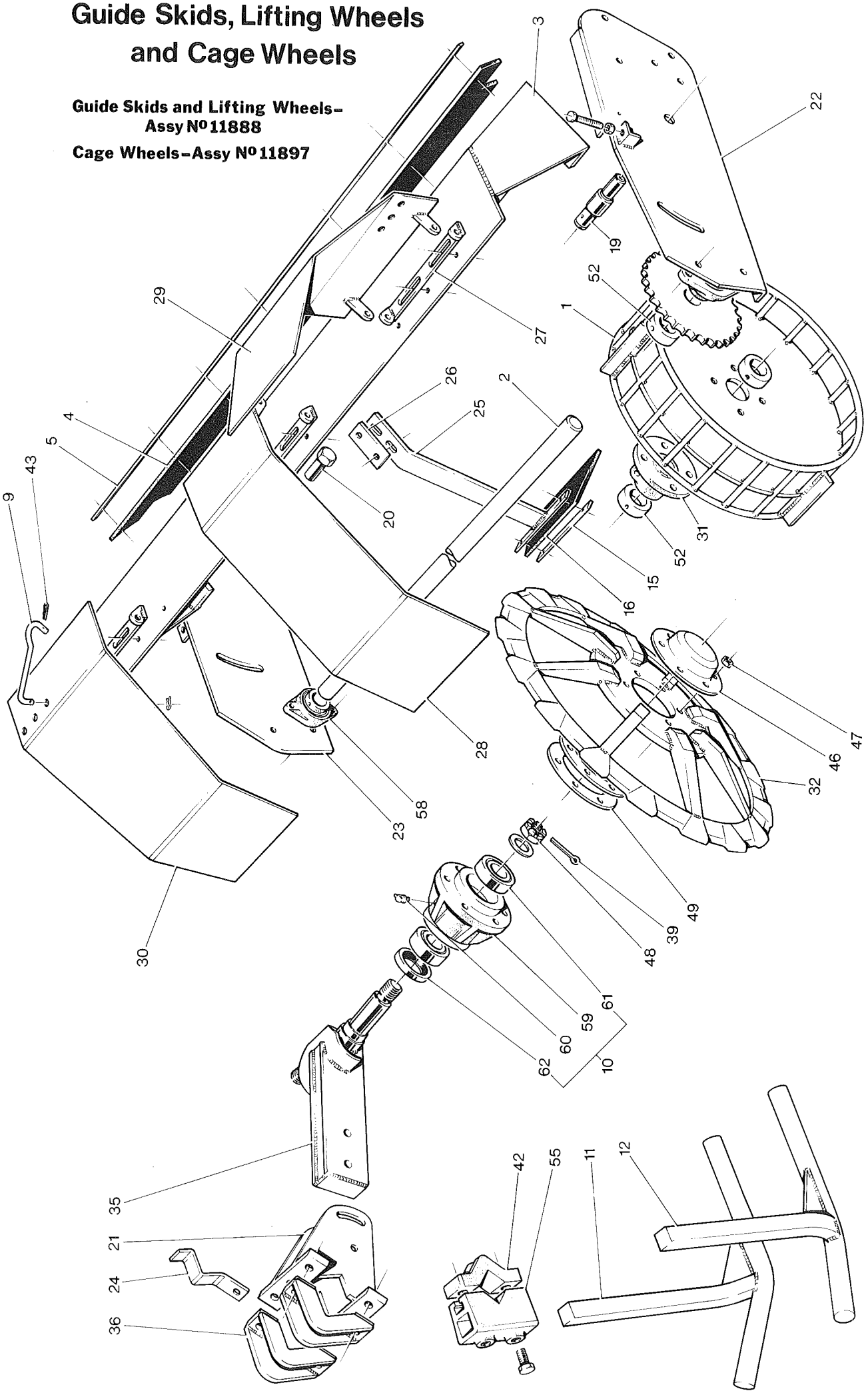
'U' FRAME ASSEMBLY (ASSY. No. 24220)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11192	TOP LINK PIN	1	
2				
3				
4	24198	'U' FRAME	1	
5	24201	PIVOT BOSS	1	
6	24202	PIVOT WASHER	1	
7	24321	BOTTOM LINK PIN	2	
8				
9				
10	PS 714/5	QUICK RELEASE PIN	6	

Guide Skids, Lifting Wheels and Cage Wheels

Guide Skids and Lifting Wheels–Assy Nº 11888

Cage Wheels–Assy Nº 11897



GUIDE SKIDS, LIFTING WHEELS AND CAGE WHEELS (ASSY.No. 11888/11897)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11377	CAGE WHEEL	3	
2	11383	DRIVE SHAFT	1	
3	11906	SUPPORT BRIDGE	1	
4	11907	RUBBER FLAP	1	
5	11908	CLAMP STRIP	1	
6				
7				
8				
9	13090	FIXING HOOK	1	
10	13133	HUB ASSEMBLY	6	
11	13278	RH GUIDE SKID	3	
12	13279	LH GUIDE SKID	3	
13				
14				
15	16157	FLAP CLAMP	2	
16	16158	RUBBER FLAP	2	
17				
18				
19	24020	PIVOT SPIGOT	1	(REF)
20	24021	PIVOT BOSS	1	
21	24067	MOUNTING BRACKET	3	
22	24084	LH MOUNTING PLATE	1	
23	24085	RH MOUNTING PLATE	1	
24	24094	SUPPORT BRACKET	3	
25	24110	BEET DEFLECTOR ARM	2	
26	24111	CLAMP PLATE	2	
27	24212	HINGE BRACKET	3	USED FROM SERIAL No. TB3/319B
28	24213	MIDDLE GUARD	1	PRIOR TO SERIAL No. TB3/319B PART No. WAS 24091
29	24214	LH GUARD	1	PRIOR TO SERIAL No. TB3/319B PART No. WAS 24092
30	24215	RH GUARD	1	PRIOR TO SERIAL No. TB3/319B PART No. WAS 24093
31	24249	CAGE WHEEL CLAMP	3	PRIOR TO SERIAL No. TB3/319B PART No. WAS 11389
32	24246	LIFTING WHEEL	6	
33				
34				
35	BMZ 3A	LIFTING WHEEL MOUNTING	3	
36	BMZ 5A	MOUNTING BRACKET CAP	6	
37				
38				
39	GS 378	SPLIT PIN	6	
40				
41				
42	H 74	MOUNTING BRACKET CAP	6	
43	H 105A	QUICK RELEASE PIN	2	
44				
45				
46	RP 3	HUB CAP	6	
47	RP 3NM	HUB CAP NUT	36	
48	RP 6/1	HUB NUT	6	
49	RP 15	HUB SPACER	12	
50				

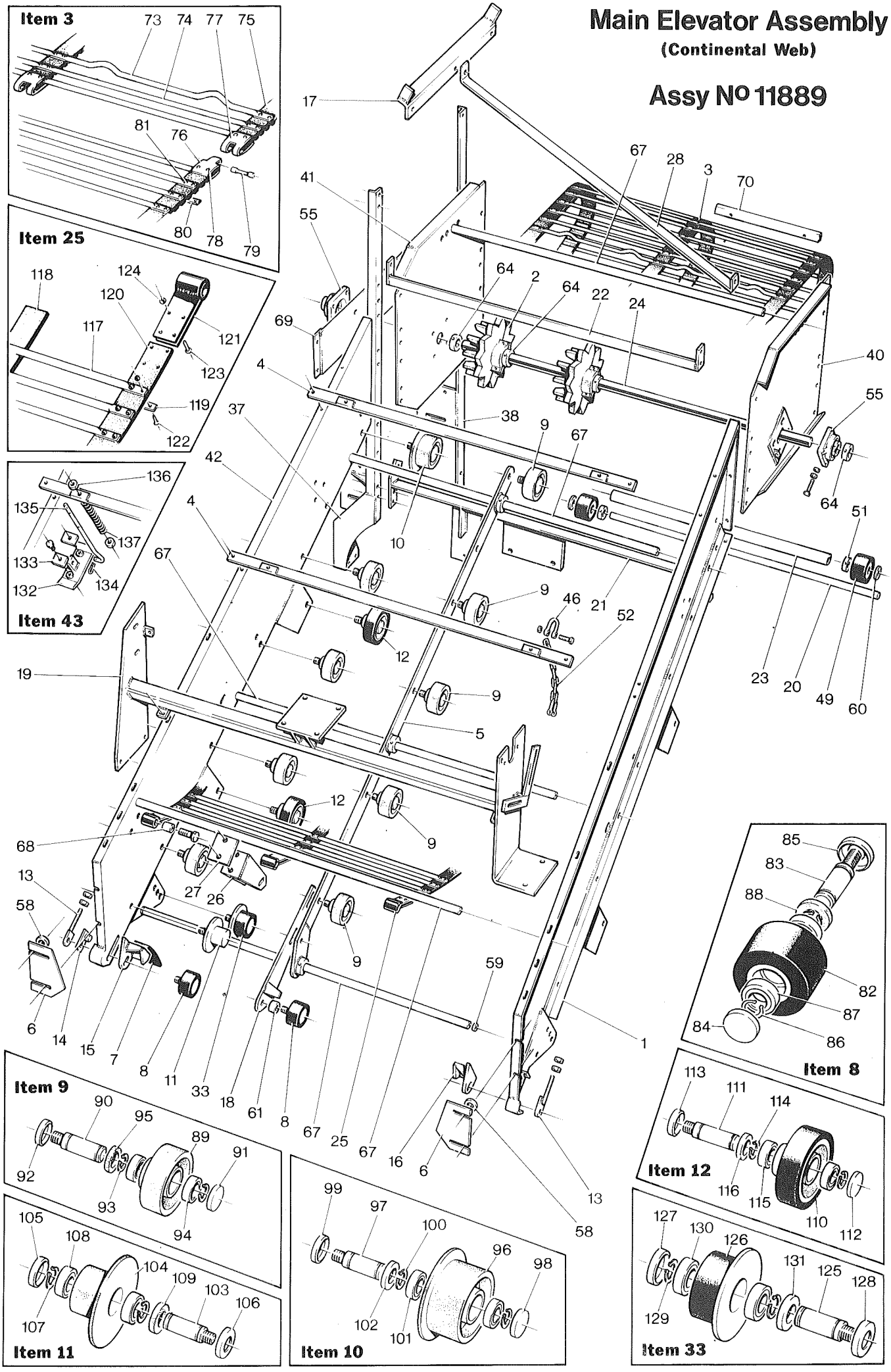
GUIDE SKIDS, LIFTING WHEELS AND CAGE WHEELS (ASSY.No. 11888/11897)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
51				
52	ST 41M	COLLAR	7	
53				
54				
55	TBMW 270	GUIDE SKID BRACKET	6	
56				
57				
58	TSFT 40	BEARING	2	
	13133	WHEEL HUB ASSEMBLY CONSISTS OF:-		
59	BMZ 99	LIFTING WHEEL HUB	1	
60	GS 412	GREASE NIPPLE	1	
61	RP 4	TAPER BEARING	2	
62	RP 5	HUB OIL SEAL	1	

Main Elevator Assembly

(Continental Web)

Assy No 11889



MAIN ELEVATOR (CONTINENTAL WEB) (ASSY. No. 11889)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11021	LH WEB SIDE	1	
2	11024	12T WEB SPROCKET	3	
3	11036	MAIN WEB ASSEMBLY	1	
4	11077	CHAIN SUPPORT ANGLE	2	
5	11135	CENTRE SUPPORT	1	
6	11266	BEET DEFLECTOR	2	
7	11434	RUBBER DEFLECTOR FLAP	2	
8	11568	ROLLER ASSEMBLY	3	
9	11569	ROLLER ASSEMBLY	13	
10	11570	ROLLER ASSEMBLY	2	
11	11572	ROLLER ASSEMBLY	2	
12	11573	ROLLER ASSEMBLY	4	
13	11638	BOTTOM WEB ADJUSTER	2	
14	11640	STONE DEFLECTOR STOP PLATE	2	
15	11641	RH STONE DEFLECTOR	1	
16	11642	LH STONE DEFLECTOR	1	
17	11779	SUPPORT PLATE	1	
18	11835	CENTRE SUPPORT EXTENSION	1	
19	11885	MAIN WEB BRIDGE	1	
20	11899	ROLLER TIE BAR	1	
21	11901	FRONT SUPPORT ANGLE	1	(REF)
22	11903	TOP SUPPORT ANGLE	1	
23	11904	PLASTIC TUBE	1	
24	11909	MAIN WEB SHAFT	1	
25	11925	CLEANER WEB ASSEMBLY	1	
26	11926	CLEANER APRON SUPPORT BRACKET	1	
27	11927	CLAMP PLATE	1	
28	11935	TIE STRAP	1	
29				
30				
31				
32				
33	12506	ROLLER ASSEMBLY	2	
34				
35				
36				
37	24030	FRONT SUPPORT MOUNTING	1	
38	24031	REAR SUPPORT MOUNTING	1	
39				
40	24097	LH SIDE PLATE	1	
41	24098	RH SIDE PLATE	1	
42	24103	RH WEB SIDE	1	
43	24190	PRESSURE PLATE ASSEMBLY	4	
44				
45				
46	H171	'D' SHACKLE	12	
47				
48				
49	PH 77BR	RUBBERED ROLLER	2	
50				

MAIN ELEVATOR (CONTINENTAL WEB) (ASSY. No. 11889)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
51	PS 488M	COLLAR	2	
52	PS 519/6	CHAIN	6	
53				
54				
55	SF 40A	BEARING	2	
56				
57				
58	SS050022/015	STEEL SPACER	4	
59	SS030017/003	STEEL SPACER	2	
60	SS045026/003	STEEL SPACER	2	
61	SS025017/030	STEEL SPACER	1	
62				
63				
64	ST 41M	COLLAR	7	
65				
66				
67	TRH 40M	TIE BAR	5	
68	TRH 139M	SHACKLE SPACER	5	
69	TRH 191M	STRENGTHENING PLATE	1	
70	TRH 262/1	LAT	50	
71				
72				
	11036	MAIN WEB ASSEMBLY CONSISTS OF:-		
73	11036/1	LOOPED LINK	25	
74	11036/2	PLAIN LINK	75	
75	11036/3	WEB BELTING	3	
76	12238/2	MALE CONNECTOR	3	
77	12238/3	FEMALE CONNECTOR	3	
78	12238/4	RIVET	A/R	
79	12238/5	PIN	3	
80	12238/6	RETAINING PLATE	A/R	
81	12238/7	RIVET	A/R	
	11568	ROLLER ASSEMBLY CONSISTS OF:-		
82	PH 77AR	RUBBERED ROLLER	1	
83	PH 406AM	ROLLER SPINDLE	1	
84	PH 407	SEAL	1	
85	PH 408	SEAL	1	
86	PS 843	CIRCLIP	2	
87	6005 RS	BEARING	2	
88	0000300504	FELT SEAL	1	

MAIN ELEVATOR (CONTINENTAL WEB) (ASSY. No. 11889)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
	11569	ROLLER ASSEMBLY CONSISTS OF:-		
89	11033	PLAIN ROLLER	1	
90	11265	ROLLER SPINDLE	1	
91	PH 407	SEAL	1	
92	PH 408	SEAL	1	
93	PS 843	CIRCLIP	2	
94	6005 RS	BEARING	2	
95	0000300504	FELT SEAL	1	
	11570	ROLLER ASSEMBLY CONSISTS OF:-		
96	11032	FLANGED ROLLER	1	
97	11265	ROLLER SPINDLE	1	
98	PH 407	SEAL	1	
99	PH 408	SEAL	1	
100	PS 843	CIRCLIP	2	
101	6005 RS	BEARING	2	
102	0000300504	FELT SEAL	1	
	11572	ROLLER ASSEMBLY CONSISTS OF:-		
103	11265	ROLLER SPINDLE	1	
104	PH 51A	FLANGED ROLLER	1	
105	PH 407	SEAL	1	
106	PH 408	SEAL	1	
107	PS 843	CIRCLIP	2	
108	6005 RS	BEARING	2	
109	0000300504	FELT SEAL	1	
	11573	ROLLER ASSEMBLY CONSISTS OF:-		
110	11034	RUBBERED ROLLER	1	
111	11265	ROLLER SPINDLE	1	
112	PH 407	SEAL	1	
113	PH 408	SEAL	1	
114	PS 843	CIRCLIP	2	
115	6005 RS	BEARING	2	
116	0000300504	FELT SEAL	1	

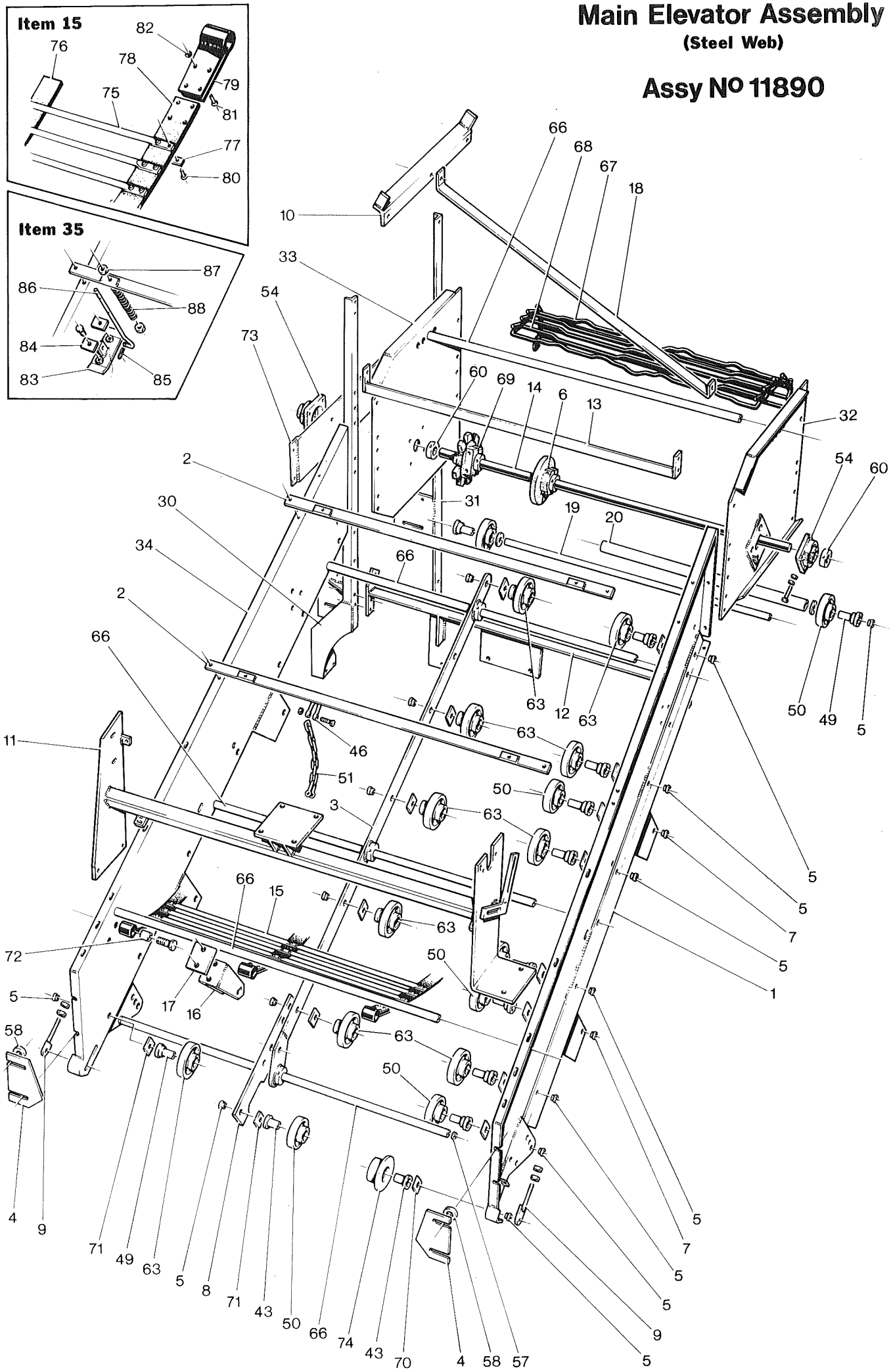
MAIN ELEVATOR (CONTINENTAL WEB) (ASSY. No. 11889)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
	11925	CLEANER WEB ASSEMBLY CONSISTS OF:-		
117	11329	ROD	49	
118	11925/1	CENTRE WEB BELTING	1	
119	PH 57/1	RETAINING PLATE	147	
120	TRH 102	WEB BELTING	2	
121	TRH 188	PIVOT SHACKLE	5	
122	2611-0606	FIXING PIN	20	
123	2611-0608	FIXING PIN	318	
124	2662-0600	FIXING COLLAR	338	
	12506	ROLLER ASSEMBLY SONSISTS OF:-		
125	11265	ROLLER SPINDLE	1	
126	PH 51AR	RUBBERED ROLLER	1	
127	PH 407	SEAL	1	
128	PH 408	SEAL	1	
129	PS 843	CIRCLIP	2	
130	6005 RS	BEARING	2	
131	0000300504	FELT SEAL	1	
	24190	PRESSURE PLATE ASSY. CONSISTS OF:-		
132	24188	BOTTOM PRESSURE PLATE	1	
133	24189	TOP PRESSURE PLATE	2	
134	H 105A	QUICK RELEASE PIN	1	
135	H 210/1	ARM	1	
136	H 211	COLLAR	2	
137	PS 165	SPRING	1	

Main Elevator Assembly

(Steel Web)

Assy No 11890



MAIN ELEVATOR (STEEL WEB) (ASSY. No. 11890)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11021	LH WEB SIDE	1	
2	11077	CHAIN SUPPORT ANGLE	2	
3	11135	CENTRE SUPPORT	1	
4	11266	BEET DEFLECTOR	2	
5	11309	COLLAR	24	
6	11313	SPLIT ROLLER	1	
7	11315	COLLAR	4	
8	11516	CENTRE SUPPORT EXTENSION	1	
9	11638	WEB BOTTOM ADJUSTER	2	
10	11779	SUPPORT PLATE	1	
11	11885	MAIN WEB BRIDGE	1	
12	11901	FRONT SUPPORT ANGLE	1	(REF)
13	11903	TOP SUPPORT ANGLE	1	
14	11909	MAIN WEB SHAFT	1	
15	11925	CLEANER WEB ASSEMBLY	1	
16	11926	CLEANER WEB SUPPORT BRACKET	1	
17	11927	CLAMP PLATE	1	
18	11935	TIE STRAP	1	
19	11941	TIE BAR	1	
20	11904	PLASTIC TUBE	1	
21				
22				
23				
24				
25				
26				
27				
28				
29				
30	24030	FRONT SUPPORT MOUNTING	1	
31	24031	REAR SUPPORT MOUNTING	1	
32	24097	LH SIDE PLATE	1	
33	24098	RH SIDE PLATE	1	
34	24103	RH WEB SIDE	1	
35	24190	PRESSURE PLATE ASSEMBLY	4	
36				
37				
38				
39				
40				
41				
42				
43	BM 125/1	BUSH	2	
44				
45				
46	H 171	'D' SHACKLE	12	
47				
48				
49	PS 212B	BUSH	26	
50	PS 213B	ROLLER	9	

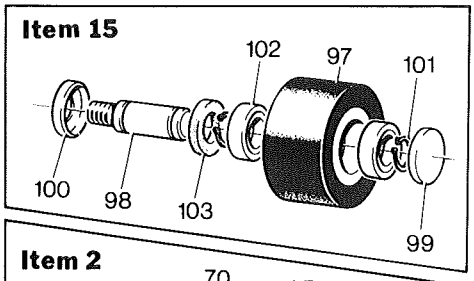
MAIN ELEVATOR (STEEL WEB) (ASSY. No. 11890)

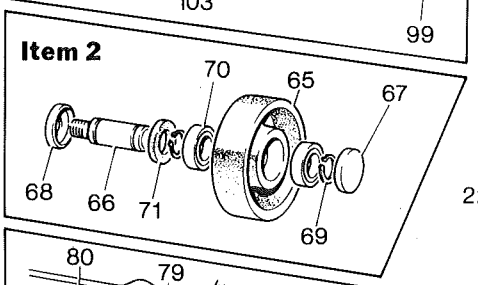
ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
51	PS 519/6	CHAIN	6	
52				
53				
54	SF 40A	BEARING	2	
55				
56				
57	SS030017/003	STEEL SPACER	2	
58	SS050022/015	STEEL SPACER	4	
59				
60	ST 41M	COLLAR	7	
61				
62				
63	TBM 133	ROLLER	17	
64				
65				
66	TRH 40M	TIE BAR	5	
67	TRH 43	WEB LINK (UP)	27	
68	TRH 44	WEB LINK (DOWN)	79	
69	TRH 53M	WEB SPROCKET	2	
70	TRH 132	PACKING PIECE	2	
71	TRH 133	PACKING PIECE	24	
72	TRH 139M	SHACKLE SPACER	5	
73	TRH 191M	STRENGTHING PLATE	1	
74	TRH 437	ROLLER	2	
	11925	CLEANER WEB ASSEMBLY CONSISTS OF:-		
75	11329	ROD	49	
76	11925/1	CENTRE WEB BELTING	1	
77	PH 57/1	RETAINING PLATE	147	
78	TRH 102	WEB BELTING	2	
79	TRH 188	PIVOT SHACKLE	5	
80	2611-0606	FIXING PIN	20	
81	2611-0608	FIXING PIN	318	
82	2662-0600	FIXING COLLAR	338	
	24190	PRESSURE PLATE ASSEMBLY CONSISTS OF:-		
83	24188	BOTTOM PRESSURE PLATE	1	
84	24189	TOP PRESSURE PLATE	2	
85	H 105A	QUICK RELEASE PIN	1	
86	H 210/1	ARM	1	
87	H 211	COLLAR	2	
88	PH 165	SPRING	1	

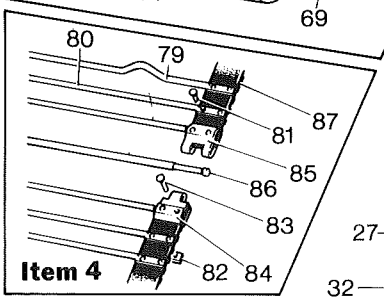
Cross Web and Trash Extractor Assembly

Steel Cross Web version – Assy Nº 11891

Continental Cross Web version – Assy Nº 11937



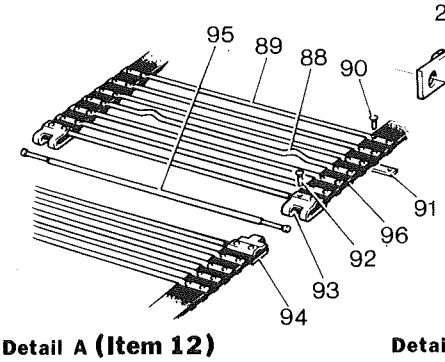




Steel Cross Web

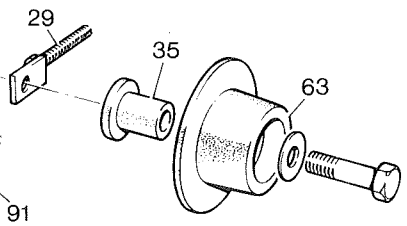
(For Continental Cross Web details see A,B,C,D,E)

Continental Cross Web details

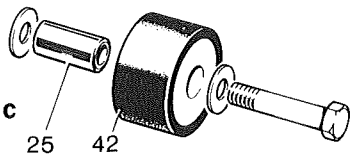


Detail A (Item 12)

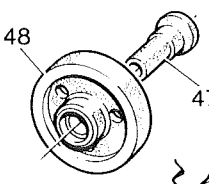
Detail B



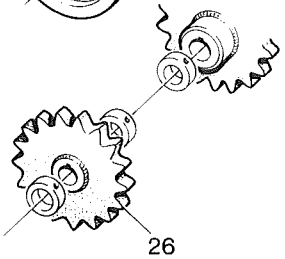
Detail C



Detail E



Detail D



CROSS WEB AND TRASH EXTRACTOR ASSEMBLY (ASSY.No. 11891/11937)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11137	ROLLER ADJUSTER	4	
2	11569	ROLLER ASSEMBLY	3	
3				
4	11879	TRASH EXTRACTOR WEB	1	
5	11883	TRASH EXTRACTOR FRAME	1	
6	11884	TIE BAR	2	
7	11898	TRASH EXTRACTOR WEB SHAFT	1	
8	11901	FRONT SUPPORT ANGLE	1	
9	11902	REAR SUPPORT ANGLE	1	
10	11905	BEET DEFLECTOR	1	
11	11934	BEET DEFLECTOR TUBE	1	
12	11936	CROSS WEB ASSEMBLY	1	
13				
14				
15	19356	ROLLER ASSEMBLY	3	
16				
17				
18				
19	24015	MOUNTING BRACKET	2	
20	24017	ADJUSTER STRAP	2	
21	24068	TOP FLAP	3	
22	24069	SPRING ROD	3	
23	24072	CROSS WEB DRIVE SHAFT	1	
24	24083	SPRING	3	
25	24222	ROLLER SPINDLE SLEEVE	1	
26	24225	18T x 28 PITCH SPROCKET	2	
27	24239	DIRT SHIELD	1	
28	24260	12T WEB SPROCKET	3	REPLACES 19032
29	24295	ROLLER ADJUSTER	2	
30	24314	TRASH EXTRACTOR WEB LAT	6	
31	24323	LH SIDE SHIELD	1	PRIOR TO SERIAL No. TB3/344C PART No. WAS 24028
32	24324	RH SIDE SHIELD	1	PRIOR TO SERIAL No. TB3/344C PART No. WAS 24029
33				
34				
35	BM 125/1	ROLLER BUSH	2	
36	C 100	PLASTIC SPACER	2	
37				
38				
39	GS 412	GREASE NIPPLE	2	
40				
41				
42	PH 77BR	RUBBERED ROLLER	1	
43	PH 673	CONE ROLLER	2	
44	PH 674	CONE ROLLER BUSH	2	
45				
46				
47	PS 212B	BUSH	3	
48	PS 213A	ROLLER	2	
49	PS 213B	ROLLER	1	
50	PS 326M	COLLAR	10	

CROSS WEB AND TRASH EXTRACTOR ASSEMBLY (ASSY.No. 11891/11937)

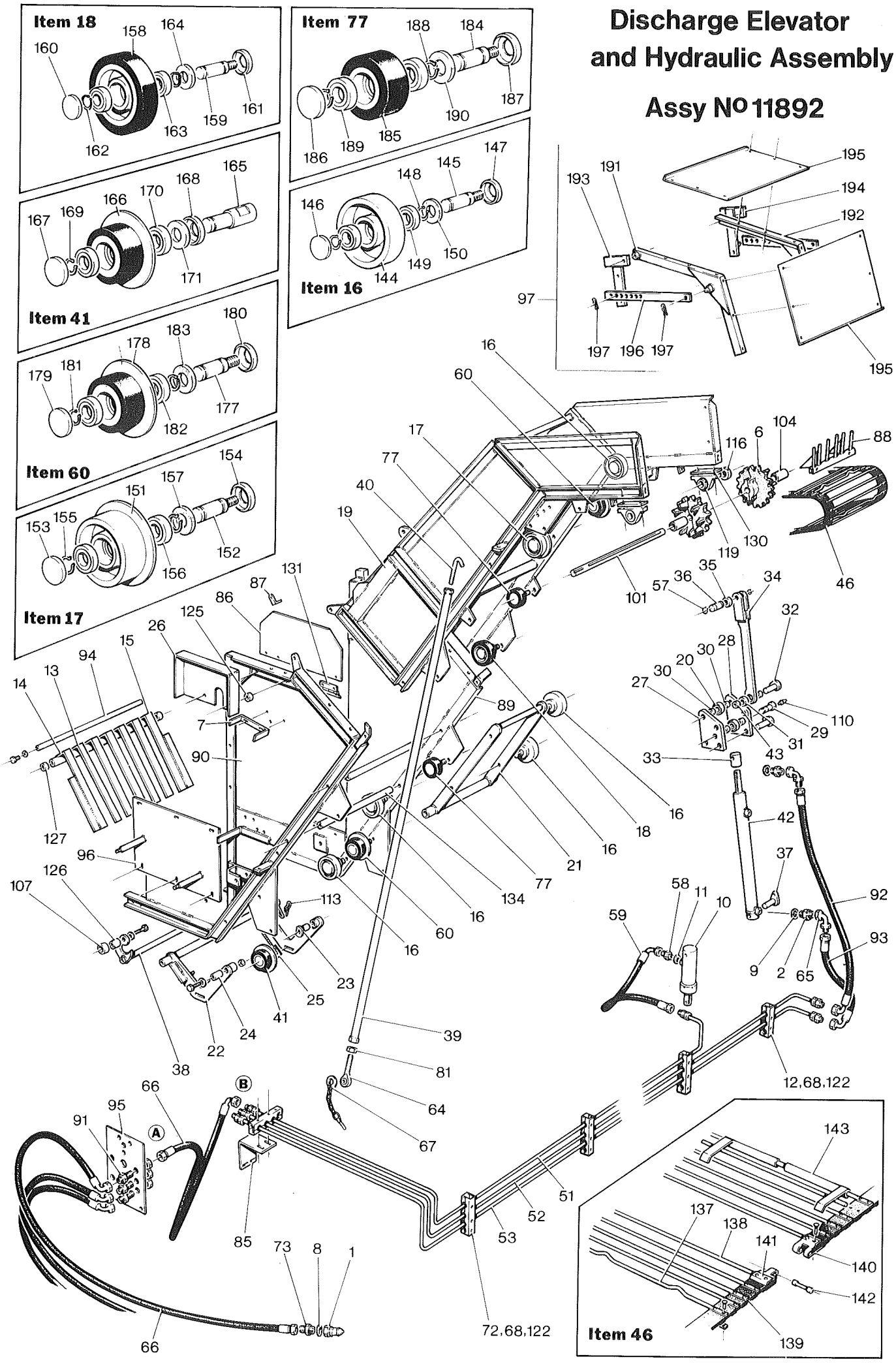
ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
51				
52				
53	SFT 30A	BEARING	4	
54				
55				
56	SPCT 132	NYLON BEARING BLOCK	4	
57	SPCT 143	BEARING CLAMP	2	
58				
59				
60	TBM 15	PLAIN LINK	31	
61	TBM 16	LOOPED LINK	2	
62				
63	TRH 437	FLANGED STEEL ROLLER	2	REPLACES ASSEMBLY 12506
64	TBMW 162	9T WEB SPROCKET	2	
	11569	ROLLER ASSEMBLY CONSISTS OF:-		
65	11033	PLAIN ROLLER	1	
66	11265	ROLLER SPINDLE	1	
67	PH 407	SEAL	1	
68	PH 408	SEAL	1	
69	PS 843	CIRCLIP	2	
70	6005 RS	BEARING	2	
71	0000300504	FELT SEAL	1	
72				
73				
74				
75				
76				
77				
78				
	11879	TRASH EXTRACTOR WEB CONSISTS OF:-		
79	11879/1	LOOPED LINK	11	
80	11879/2	PLAIN LINK	46	
81	12238/4	RIVET	A/R	
82	12238/6	RETAINING PLATE	112	
83	12238/7	RIVET	A/R	
84	24007/3	MALE CONNECTOR	3	
85	24007/4	FEMALE CONNECTOR	3	

CROSS WEB AND TRASH EXTRACTOR ASSEMBLY (ASSY.No. 11891/11937)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
86	24007/5	JOINING ROD	1	
87	24007/6	WEB BELTING	3	
	11936	CROSS WEB CONSISTS OF:-		
88	11037/1	LOOPED LINK	5	
89	11037/2	PLAIN LINK	61	
90	12238/4	RIVET	A/R	
91	12238/6	RETAINING PLATE	132	
92	12238/7	RIVET	A/R	
93	12238/9	FEMALE CONNECTOR	2	
94	12238/10	MALE CONNECTOR	2	
95	13211/1	JOINING ROD	2	
96	13211/2-2	WEB BELTING	2	
	19356	ROLLER ASSEMBLY CONSISTS OF:-		
97	PH 77AR	RUBBERED ROLLER	1	
98	11265	ROLLER SPINDLE	1	
99	PH 407	SEAL	1	
100	PH 408	SEAL	1	
101	PS 843	CIRCLIP	2	
102	6005 RS	BEARING	2	
103	0000300504	FELT SEAL	1	

Discharge Elevator and Hydraulic Assembly

Assy No 11892



DISCHARGE ELEVATOR AND HYDRAULIC ASSEMBLY (ASSY. No. 11892)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	10140	MALE QUICK RELEASE COUPLING	3	
2	10291	RESTRICTOR ASSEMBLY	2	
3				
4				
5				
6	11035	WEB SPROCKET	2	
7	11043	BELT GUIDE	1	
8	11124	DOWTY SEAL	3	
9	11125	DOWTY SEAL	2	
10	11330	HYDRAULIC RAM	1	
11	11337	DOWTY SEAL	1	
12	11373	HYDRAULIC PIPE CLAMP	2	
13	11487	TIP GRILLE FINGER	5	
14	11488	TIP GRILLE FINGER FRONT	1	
15	11489	TIP GRILLE FINGER REAR	1	
16	11569	ROLLER ASSEMBLY	10	
17	11570	ROLLER ASSEMBLY	2	
18	11573	ROLLER ASSEMBLY	2	
19	11752	TOP FRAME	1	
20	11754	BEARING	3	
21	11755	ROLLER SUPPORT	1	
22	11756	BOTTOM ROLLER SUPPORT	1	
23	11757	ROLLER SUPPORT PIVOT SPIGOT	1	
24	11758	ROLLER SUPPORT PIVOT SHAFT	1	
25	11760	BOTTOM ROLLER ADJUSTER	2	
26	11761	DRIVE GUARD BACK PLATE	1	(REF)
27	11762	ROLLER CARRIAGE FRONT PLATE	1	
28	11763	ROLLER CARRIAGE REAR PLATE	1	
29	11764	ROLLER CARRIAGE BEARING PIN	3	
30	11765	ROLLER CARRIAGE BEARING SPACER	6	
31	11767	OILITE BUSH	1	
32	11768	ROLLER CARRIAGE PIVOT PIN	2	
33	11769	RAM END BOSS	1	
34	11770	CONNECTING LINK	1	
35	11771	OILITE BUSH	1	
36	11772	CONNECTING LINK SPINDLE	1	
37	11773	RAM PIVOT PIN	1	
38	11776	BOTTOM ROLLER SUPPORT LATCH	1	
39	11780	DISCHARGE ELEVATOR STAY	1	
40	11781	DISCHARGE ELEVATOR STAY HOOK	1	
41	11864	ROLLER ASSEMBLY	2	
42	11932	HYDRAULIC RAM	1	REPLACES 11753
43	11766	ROLLER CARRIAGE LINK SPACER	2	
44				
45				
46	11037	WEB ASSEMBLY	1	
47				
48				
49				
50				

DISCHARGE ELEVATOR AND HYDRAULIC ASSEMBLY (ASSY. No. 11892)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
51	11963	STEEL PIPE ASSEMBLY	1	
52	11964	STEEL PIPE ASSEMBLY	1	
53	11965	STEEL PIPE ASSEMBLY	1	
54				
55				
56				
57	12298	CIRCLIP	2	
58	12316	MALE MALE ADAPTOR	1	
59	12377	HOSE ASSEMBLY	1	
60	12506	ROLLER ASSEMBLY	4	
61				
62				
63				
64	13035	ELEVATOR STAY END	1	
65	13189	BENT SWIVEL ADAPTOR	2	
66	13223	HOSE ASSEMBLY	4	
67	13337	STAY PIN	1	REPLACES 10282
68	13386	RUBBER GROMMET	14	
69				
70				
71				
72	16304	HYDRAULIC PIPE CLAMP	8	
73	16356	MALE MALE ADAPTOR	3	
74				
75				
76				
77	19356	ROLLER ASSEMBLY	4	
78				
79				
80				
81	22069112	LH LOCKNUT	1	
82				
83				
84				
85	24065	PIPE CLAMP BRACKET	1	
86	24074	REAR DROP FLAP	1	
87	24076	SECURING TAB	2	
88	24126	DISCHARGE ELEVATOR LAT	26	
89	24128	REAR BOTTOM FRAME	1	
90	24129	FRONT BOTTOM FRAME	1	
91	24132	1/4" BSP MALE BULKHEAD	3	
92	24136	HOSE ASSEMBLY	1	
93	24137	HOSE ASSEMBLY	1	
94	24186	TIP GRILLE TIE BAR	1	
95	24200	BULKHEAD PLATE	1	
96	24313	FRONT BEET SHIELD	1	PRIOR TO SERIAL No. TB3/343C PART No. WAS 24025
97	24331	BEET DEFLECTOR ASSEMBLY	1	
98				
99				
100				

DISCHARGE ELEVATOR AND HYDRAULIC ASSEMBLY (ASSY. No. 11892)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
101	BMZ 64M	TOP DRIVE SHAFT	1	
102				
103				
104	C 100	PLASTIC SPACER	2	
105				
106				
107	D 18	PLASTIC SPACER	2	
108				
109				
110	GS 412	GREASE NIPPLE	3	
111				
112				
113	H 105	QUICK RELEASE PIN	1	
114				
115				
116	PS 326M	COLLAR	1	
117				
118				
119	SL 30A	BEARING	2	
120				
121				
122	SPCT 210	STACKING NUT	10	
123				
124				
125	SS025013/045	STEEL SPACER	2	
126	SS025017/030	STEEL SPACER	2	
127	SS030026/029	STEEL SPACER	2	
128				
129				
130	TBMW 143	PACKING PIECE	2	
131	TBMW 739	HINGE	2	
132				
133				
134	TRH 162M	TIE BAR	2	
135				
136				
	11037	WEB ASSEMBLY CONSISTS OF:-		
137	11037/1	LOOPED LINK	26	
138	11037/2	PLAIN LINK	129	
139	11037/3	WEB BELTING	2	
140	12238/10	FEMALE CONNECTOR	2	
141	12238/9	MALE CONNECTOR	2	
142	12238/5	CONNECTING PIN	2	
143	11154	DROP AWAY LINK	3	

DISCHARGE ELEVATOR AND HYDRAULIC ASSEMBLY (ASSY. No. 11892)

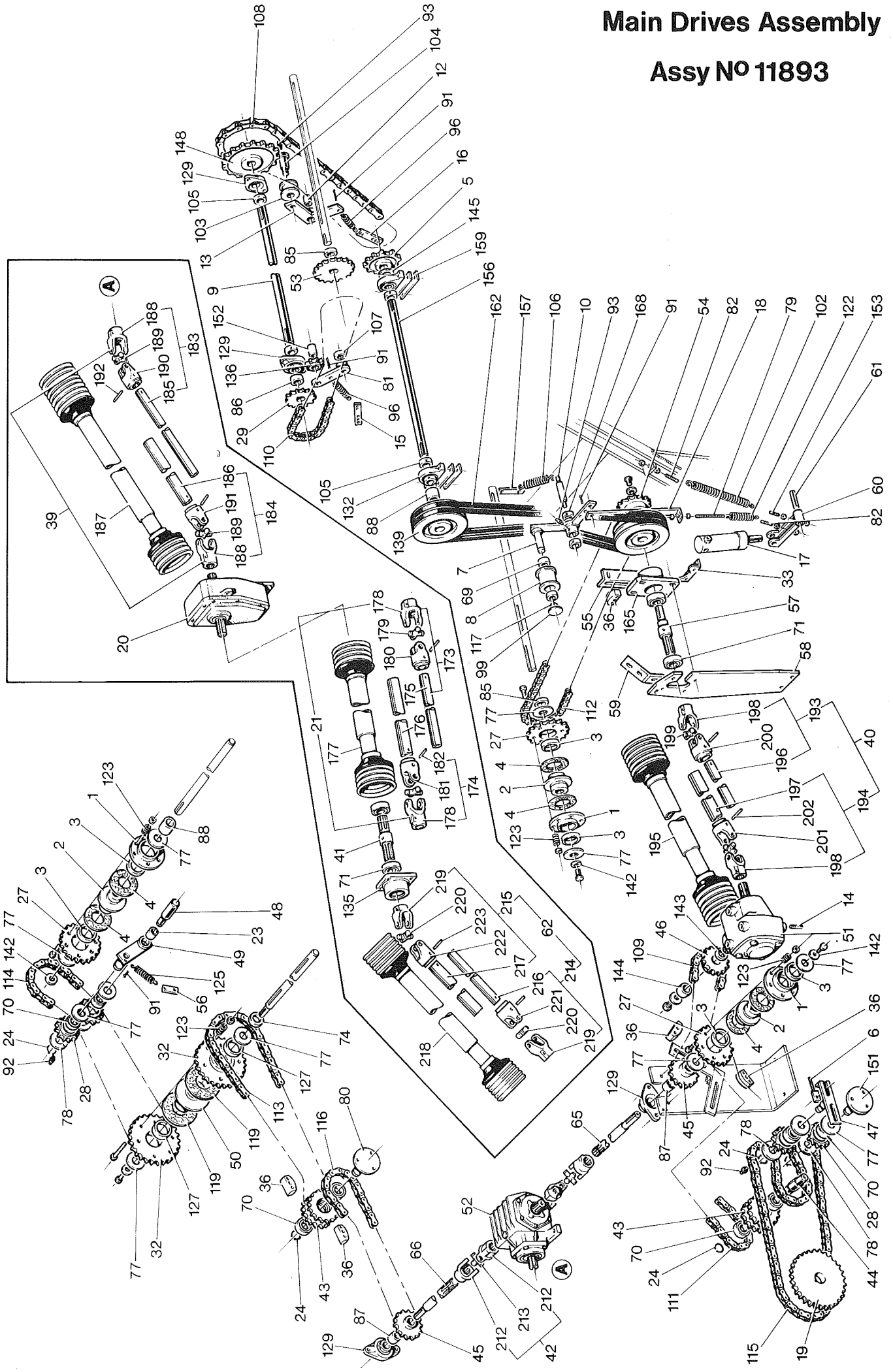
ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
	11569	ROLLER ASSEMBLY CONSISTS OF:-		
144	11033	PLAIN ROLLER	1	
145	11265	ROLLER SPINDLE	1	
146	PH 407	SEAL	1	
147	PH 408	SEAL	1	
148	PS 843	CIRCLIP	2	
149	6005 RS	BEARING	2	
150	0000300504	FELT SEAL	1	
	11570	ROLLER ASSEMBLY CONSISTS OF:-		
151	11032	FLANGED ROLLER	1	
152	11265	ROLLER SPINDLE	1	
153	PH 407	SEAL	1	
154	PH 408	SEAL	1	
155	PS 843	CIRCLIP	2	
156	6005 RS	BEARING	2	
157	0000300504	FELT SEAL	1	
	11573	ROLLER ASSEMBLY CONSISTS OF:-		
158	11034	PLAIN ROLLER	1	
159	11265	ROLLER SPINDLE	1	
160	PH 407	SEAL	1	
161	PH 408	SEAL	1	
162	PS 843	CIRCLIP	2	
163	6005 RS	BEARING	2	
164	0000300504	FELT SEAL	1	
	11864	ROLLER ASSEMBLY CONSISIS OF:-		
165	11759	ROLLER SPIGOT	1	
166	PH 51AR	FLANGED RUBBERED ROLLER	1	
167	PH 407	SEAL	1	
168	PH 408	SEAL	1	
169	PS 843	CIRCLIP	2	
170	6005 RS	BEARING	2	
171	0000300504	FELT SEAL	1	

DISCHARGE ELEVATOR AND HYDRAULIC ASSEMBLY (ASSY. No. 11892)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
	11963	STEEL PIPE ASSEMBLY CONSISTS OF:-		
172	16315	1/4"BSP 10 PIPE MALE STUD	2	(NOT SHOWN)
	11964	STEEL PIPE ASSEMBLY CONSISTS OF:-		
173	16315	1/4"BSP 10 PIPE MALE STUD	1	(NOT SHOWN)
174	16316	3/8"BSP 10 PIPE MALE STUD	1	(NOT SHOWN)
	11965	STEEL PIPE ASSEMBLY CONSISTS OF:-		
175	16315	1/4"BSP 10 PIPE MALE STUD	1	(NOT SHOWN)
176	16316	3/8"BSP 10 PIPE MALE STUD	1	(NOT SHOWN)
	12506	ROLLER ASSEMBLY CONSISTS OF:-		
177	11265	ROLLER SPINDLE	1	
178	PH 51AR	FLANGED RUBBERED ROLLER	1	
179	PH 407	SEAL	1	
180	PH 408	SEAL	1	
181	PS 843	CIRCLIP	2	
182	6005 RS	BEARING	2	
183	0000300504	FELT SEAL	1	
	19356	ROLLER ASSEMBLY CONSISTS OF:-		
184	11265	ROLLER SPINDLE	1	
185	PH 77AR	PLAIN RUBBERED ROLLER	1	
186	PH 407	SEAL	1	
187	PH 408	SEAL	1	
188	PS 843	CIRCLIP	2	
189	6005 RS	BEARING	2	
190	0000300504	FELT SEAL	1	
	24331	BEET DEFLECTOR ASSEMBLY CONSISTS OF:-		
191	24325	FRONT ANGLE FRAME	1	
192	24326	REAR ANGLE FRAME	1	
193	24327	FRONT MOUNTING BRACKET	1	
194	24328	REAR MOUNTING BRACKET	1	
195	24329	DEFLECTOR PANEL	2	
196	24330	ADJUSTING STAY	2	
197	H 105	QUICK RELEASE PIN	4	

Main Drives Assembly

Assy No 11893



MAIN DRIVES ASSEMBLY (ASSY. No. 11893)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11002	CLUTCH PLATE	3	
2	11004	CLUTCH CENTRE	3	
3	11005	CLUTCH BEARING	6	
4	11006	FERODO DISC	6	
5	11065	SPROCKET	1	
6	11137	ROLLER ADJUSTER	1	
7	11141	BELT JOCKEY SEGMENT	1	
8	11176	JOCKEY ROLLER	1	
9	11253	DRIVE SHAFT	1	
10	11255	GUARD BOLT	1	(REF)
11				
12	11273	JOCKEY SPIGOT	1	
13	11274	JOCKEY ARM	1	
14	11280	GEARBOX STUD	3	
15	11282	SPRING TAB	1	
16	11283	SPRING TAB	1	
17	11330	HYDRAULIC RAM	1	(REF)
18	11334	TENSION LINK	1	
19	11380	SPROCKET	1	
20	11876	GEARBOX	1	SEE PAGE 4.19
21	11877	DRIVE COUPLING	1	
22				
23	12122	OILITE BUSH	1	
24	12271	CIRCLIP	6	
25				
26				
27	13311	SPROCKET	3	
28	13313	SPROCKET	4	
29	13314	SPROCKET	1	
30				
31				
32	16056	CLUTCH SPROCKET	2	
33	16183	BEARING HOUSING ADJUSTING BRACKET	1	
34				
35				
36	17155	NYLON CHAIN TENSIONER	5	
37				
38				
39	24004	DRIVE COUPLING	1	
40	24005	DRIVE COUPLING	1	
41	24008	DRIVE SHAFT	1	
42	24010	KNUCKLE JOINT	2	
43	24019	DOUBLE SPROCKET	2	
44	24020	PIVOT SPIGOT	1	
45	24022	SPROCKET	2	
46	24023	SPROCKET	1	
47	24024	CHAIN TENSION PLATE	1	
48	24025	IDLER SPIGOT	1	
49	24026	CHAIN TENSIONER	1	
50	24027	CLUTCH CENTRE	1	

MAIN DRIVES ASSEMBLY (ASSY. No. 11893)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
51	24032	GEARBOX	1	SEE PAGE 4.19
52	24112	GEARBOX	1	SEE PAGE 4.19
53	24116	SPROCKET	1	
54	24117	SPROCKET	1	
55	24119	SUPPORT ANGLE	1	
56	24123	SPRING TAB	1	
57	24254	BEARING HOUSING SHAFT	1	PRIOR TO SERIAL No. TB3/343C PART No. WAS 24115
58	24255	ELEVATOR DRIVE PLATE	1	PRIOR TO SERIAL No. TB3/343C PART No. WAS 24118
59	24256	SUPPORT PLATE	1	PRIOR TO SERIAL No. TB3/343C PART No. WAS 24124
60	24306	RAM ADJUSTMENT ARM	1	PRIOR TO SERIAL No. TB3/343C PART No. WAS 11331
61	24307	PIVOT PIN	1	
62	24320	DRIVE COUPLING	1	PRIOR TO SERIAL No. TB3/343C PART No. WAS 11877
63				
64				
65	11910	GEARBOX LH CROSS SHAFT	1	
66	11911	GEARBOX RH CROSS SHAFT	1	
67				
68				
69	6005 RS	BEARING	2	
70	6206 RS	BEARING	8	
71	6207 RS	BEARING	4	
72				
73				
74	A 8	PLASTIC SPACER	1	
75				
76				
77	BM 12	LARGE WASHER	12	
78	BM 12A	LARGE WASHER (WITH NIPPLE HOLE)	4	
79	BM 82M	SPRING TENSIONER	1	
80	BM 174A	DOUBLE SPROCKET SPIGOT	1	
81	BM 184A	JOCKEY ROLLER ARM	1	
82	BM 212M	SPRING TENSIONER	2	
83				
84				
85	C 10	PLASTIC SPACER	2	
86	C 15	PLASTIC SPACER	1	
87	C 35	PLASTIC SPACER	2	
88	C 45	PLASTIC SPACER	2	
89				
90				
91	GS 378	SPLIT PIN	4	
92	GS 410	GREASE NIPPLE	4	
93	GS 412	GREASE NIPPLE	2	
94				
95				
96	H 121B	SPRING	2	
97				
98				
99	PH 408	SEAL	1	
100				

MAIN DRIVES ASSEMBLY (ASSY. No. 11893)

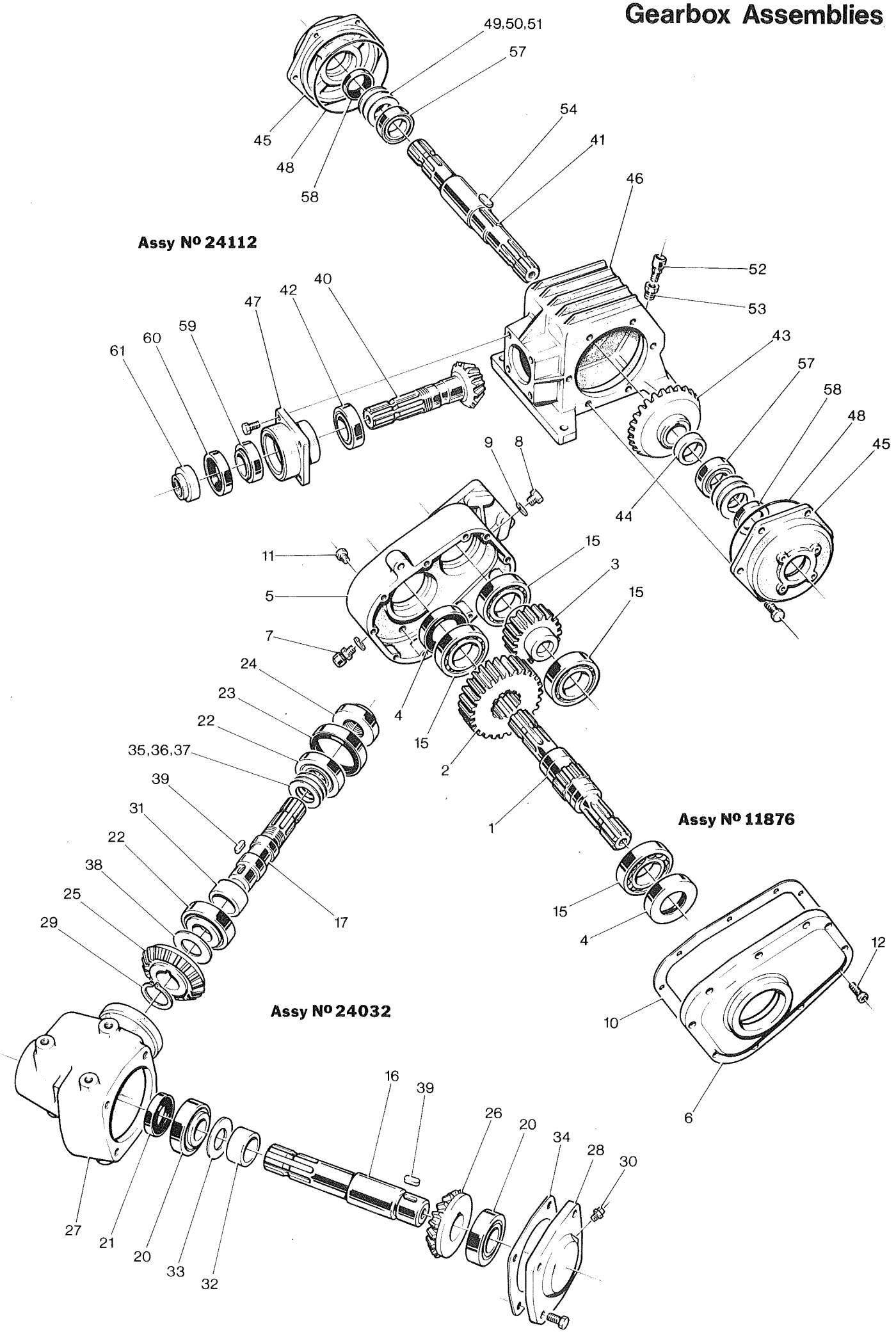
ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
101				
102	PS 194	SPRING	1	
103	PS 215	JOCKEY ROLLER	1	
104	PS 264M	SHOULDER BOLT	1	
105	PS 326M	COLLAR	4	
106	PS 457	SPRING	1	
107	PS 488M	COLLAR	1	
108	PS 599/108	CHAIN	1	
109	PS 871/57	CHAIN	1	
110	PS 871/77	CHAIN	1	
111	PS 871/110	CHAIN	1	
112	PS 871/114	CHAIN	1	
113	PS 871/119	CHAIN	1	
114	PS 871/130	CHAIN	1	
115	PS 871/134	CHAIN	1	
116	PS 871/140	CHAIN	1	
117	PS 843	CIRCLIP	1	
118				
119	PT 51	FERODO DISC	2	
120				
121				
122	RH 80	SPRING	1	
123	RH 149A	SPRING	24	
124				
125	RP 71	SPRING	1	
126				
127	S72-16-16RA	NEEDLE BEARING	2	
128				
129	SFT 30A	BEARING	4	
130				
131				
132	SL 30A	BEARING	2	
133				
134				
135	SP 44M	BEARING HOUSING	1	
136	SP 295	PLASTIC SPROCKET	1	
137				
138				
139	SPCL 526	DOUBLE PULLEY	2	
140				
141				
142	SS040011/003	STEEL SPACER	3	
143	SS045036/005	STEEL SPACER	1	
144	SS045036/015	STEEL SPACER	1	
145	SS055030/005	STEEL SPACER	1	
146				
147				
148	TBM 64AM	SPROCKET	1	
149				
150				

MAIN DRIVES ASSEMBLY (ASSY. No. 11893)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
151	TBMW 148	IDLER SPROCKET SPIGOT	1	
152	TBMW 178	JOCKEY SPINDLE	1	
153	TBMW 405	SPRING TENSIONER	1	
154				
155				
156	TRH 151M	DRIVE SHAFT	1	
157	TRH 157	STRAP	1	
158				
159	TRH 440	PACKING PIECE	4	
160				
161				
162	VB 60	VEE BELT	2	
163				
164				
165	VRT 23M	BEARING HOUSING	1	
166				
167				
168	W0979	COLLAR	2	
169				
170				
171				
172				
	11877	COUPLING CONSISTS OF:-		
173	11877/1	MALE COUPLING COMPLETE	1	
174	11877/2	FEMALE COUPLING COMPLETE	1	
175	11877/3	MALE LEMON TUBE	1	
176	11877/4	FEMALE LEMON TUBE	1	
177	11877/5	GUARD COMPLETE	1	
178	11557/5	SPLINED YOKE	2	
179	11557/7	UNIT PACKAGE	2	
180	11557/9	MALE END INNER YOKE	1	
181	11557/10	FEMALE END INNER YOKE	1	
182	11557/11	SPRING PIN	2	
	24004	COUPLING CONSISTS OF:-		
183	24004/1	MALE COUPLING COMPLETE	1	
184	24004/2	FEMALE COUPLING COMPLETE	1	
185	24004/3	MALE LEMON TUBE	1	
186	24004/4	FEMALE LEMON TUBE	1	
187	24004/5	GUARD COMPLETE	1	
188	11557/5	SPLINED YOKE	2	
189	11557/7	UNIT PACKAGE	2	
190	11557/9	MALE END INNER YOKE	1	
191	11557/10	FEMALE END INNER YOKE	1	
192	11557/11	SPRING PIN	2	

MAIN DRIVES ASSEMBLY (ASSY. No. 11893)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
	24005	COUPLING CONSISTS OF:-		
193	24005/1	MALE COUPLING COMPLETE	1	
194	24005/2	FEMALE COUPLING COMPLETE	1	
195	24005/3	GUARD COMPLETE	1	
196	24005/4	MALE LEMON TUBE	1	
197	24005/5	FEMALE LEMON TUBE	1	
198	24005/6	SPLINED YOKE	2	
199	16218/6	UNIT PACKAGE	2	
200	16218/7	MALE END INNER YOKE	1	
201	16218/8	FEMALE END INNER YOKE	1	
202	16218/9	SPRING PIN	2	
	24010	KNUCKLE JOINT CONSISTS OF:-		
212	24005/6	SPLINED YOKE	2	
213	16218/6	UNIT PACKAGE	1	
	24320	COUPLING CONSISTS OF:-		
214	24320/1	MALE COUPLING COMPLETE	1	
215	24320/2	FEMALE COUPLING COMPLETE	1	
216	24320/3	MALE LEMON TUBE	1	
217	24320/4	FEMALE LEMON TUBE	1	
218	24320/5	GUARD COMPLETE	1	
219	11557/5	SPLINED YOKE	2	
220	11557/7	UNIT PACKAGE	2	
221	11557/9	MALE END INNER YOKE	1	
222	11557/10	FEMALE END INNER YOKE	1	
223	11557/11	SPRING PIN	2	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Assy Nº 11876
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Assy Nº 24032
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GEARBOX ASSEMBLIES

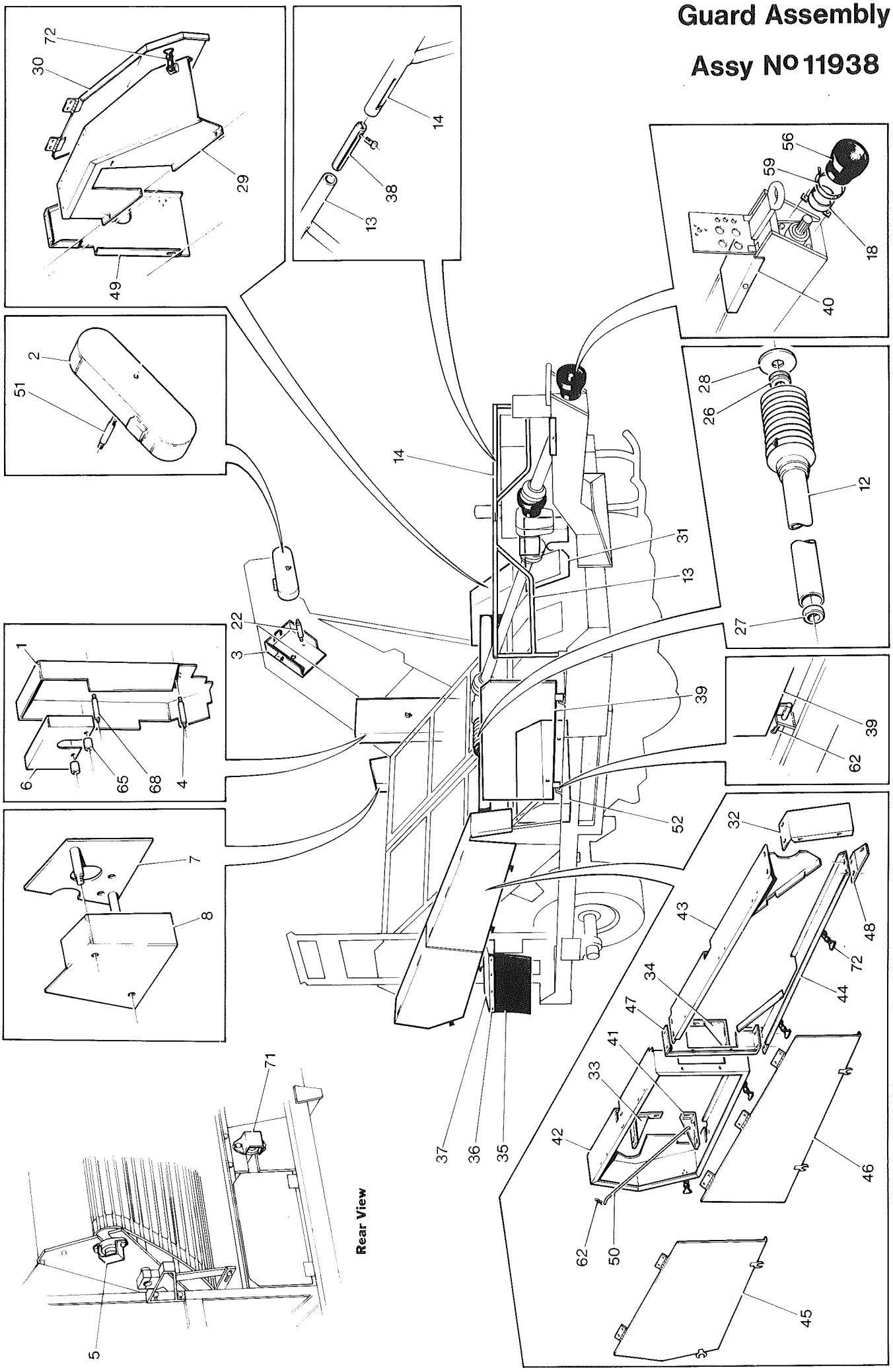
ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
	11876	**GEARBOX ASSEMBLY CONSISTS OF:-**		
1	11876/1	INPUT SHAFT (SPLINED)	1	
2	11876/2	GEAR (INPUT)	1	
3	11876/3	GEAR (OUTPUT)	1	
4	11876/4	SEAL	2	
5	11876/5	MAIN BODY	1	
6	11876/6	END PLATE	1	
7	11876/7	BREATHER PLUG	1	
8	11876/8	DRAIN PLUG	1	
9	11876/9	WASHER	2	
10	11876/10	GASKET	1	
11	11876/11	LEVEL PLUG	1	
12	11876/12	SCREW	14	
13				
14				
15	6210	BEARING	4	
	24032	**GEARBOX ASSEMBLY CONSISTS OF:-**		
16	24032/1	INPUT SHAFT (SPLINED)	1	
17	24032/2	OUTPUT SHAFT (SPLINED)	1	
18				
19				
20	11051/1	INPUT BEARING	2	
21	11051/2	INPUT SEAL	1	
22	11051/3	OUTPUT BEARING	2	
23	11051/4	OUTPUT SEAL	1	
24	11051/7	NUT	1	
25	11051/8	GEAR	1	
26	11051/9	GEAR	1	
27	11051/10	MAIN BODY	1	
28	11051/11	END PLATE	1	
29	11051/12	CIRCLIP	1	
30	11051/13	FILLER PLUG	1	
31	11051/14	SPACER	1	
32	11051/15	SPACER	1	
33	11051/16	SHIM	1	
34	11051/17	SHIM	1	
35	11051/18	SHIM	A/R	
36	11051/19	SHIM	A/R	
37	11051/20	SHIM	A/R	
38	11051/21	BEARING SHIELD	1	
39	11051/22	KEY	2	

GEARBOX ASSEMBLIES

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
	24112	**GEARBOX ASSEMBLY CONSISTS OF:-**		
40	24112/1	INPUT SHAFT (SPLINED)	1	
41	24112/2	OUTPUT SHAFT (SPLINED)	1	
42	24112/3	INPUT BEARING	1	
43	24112/4	GEAR	1	
44	24112/5	SPACER	1	
45	24112/6	END PLATE	2	
46	24112/7	MAIN BODY	1	
47	24112/8	END CAP	1	
48	24112/9	SEALING RING	2	
49	24112/10	SHIM	A/R	
50	24112/11	SHIM	A/R	
51	24112/12	SHIM	A/R	
52	24112/13	BREATHER PLUG	1	
53	24112/14	BREATHER NUT	1	
54	24112/15	KEY	1	
55				
56				
57	11051/1	OUTPUT BEARING	2	
58	11051/2	SEAL	2	
59	11051/3	INPUT BEARING	1	
60	11051/4	SEAL	1	
61	11051/7	NUT	1	

Guard Assembly

Assy No 11938



GUARD ASSEMBLY (ASSY. No. 11938)

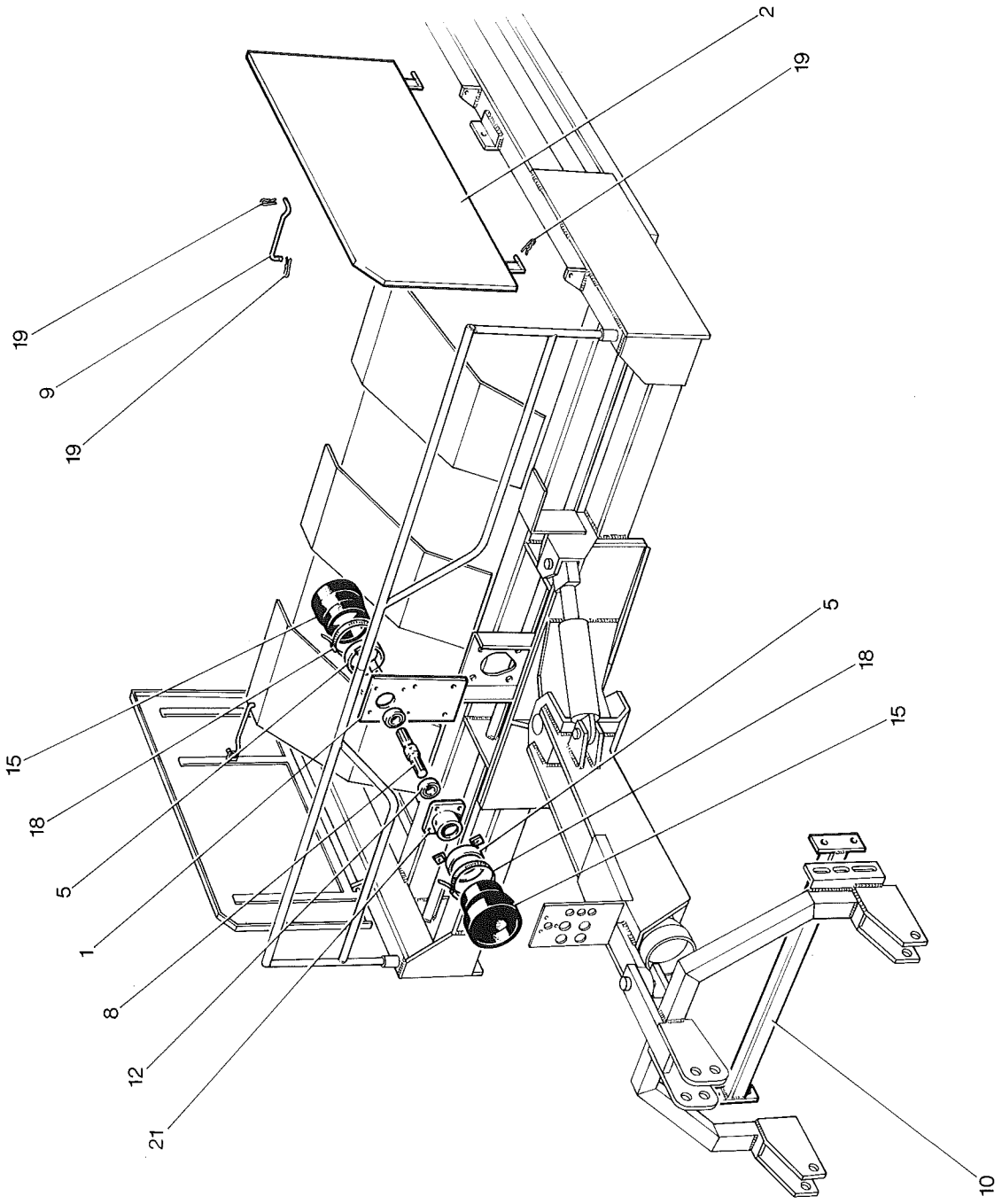
ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11160	VEE BELT GUARD	1	
2	11162	DISCHARGE ELEVATOR TOP GUARD FRONT	1	
3	11163	DISCHARGE ELEVATOR TOP GUARD REAR	1	
4	11255	GUARD BOLT	1	
5	11268	SHAFT END GUARD	1	
6	11761	DRIVE GUARD BACK PLATE	1	
7	11774	CHAIN GUARD BACK PLATE	1	
8	11775	DRIVE CHAIN GUARD	1	
9				
10				
11				
12	11912	MALE GUARD COUPLING	2	
13	11923	FRONT GUARD RAIL RH	1	
14	11924	FRONT GUARD RAIL LH	1	
15				
16				
17				
18	13118	GUARD SUPPORT BRACKET	1	
19				
20				
21				
22	19091	GUARD BOLT	1	
23				
24				
25				
26	24121	FIXING BOSS	2	
27	24122	SUPPORT BOSS	2	
28	24127	NYLON END DISC	4	
29	24161	MAIN DRIVE GUARD BODY	1	
30	24162	MAIN DRIVE GUARD COVER	1	
31	24163	CAGE WHEEL DRIVE GUARD	1	
32	24167	FRONT SIDE GUARD PANEL	1	
33	24171	TOP GUARD SUPPORT BRACKET	1	
34	24172	BOTTOM GUARD SUPPORT BRACKET	1	
35	24175	RUBBER FLAP	1	
36	24176	CLAMP STRIP	1	
37	24177	CROSS WEB END GUARD	1	
38	24182	FRONT GUARD RAIL LATCH	1	
39	24184	RH SIDE GUARD	1	
40	24205	TOP GUARD	1	
41	24227	TOP GUARD SUPPORT BRACKET	1	
42	24228	REAR GUARD BODY	1	
43	24229	TOP GUARD PANEL	1	
44	24230	BOTTOM GUARD PANEL	1	
45	24231	TOP GUARD COVER	1	
46	24232	BOTTOM GUARD COVER	1	
47	24233	END PANEL	1	
48	24234	END BRACKET	1	
49	24235	GUARD END	1	
50	24238	STAY	1	

GUARD ASSEMBLY (ASSY. No. 11938)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
51	24243	GUARD BOLT	1	
52	24312	CROSS WEB DRIVE GUARD	1	PRIOR TO SERIAL No. TB3/344C PART No. WAS 24173 / 24174
53				
54				
55				
56	BM 196	RUBBER SAFETY GUARD	1	
57				
58				
59	GS 407	JUBILEE CLIP	1	
60				
61				
62	H 105A	QUICK RELEASE PIN	3	
63				
64				
65	SS025013/045	STEEL SPACER	2	
66				
67				
68	TBM 24M	GUARD BOLT	1	
69				
70				
71	TBMW 221	SHAFT END GUARD	1	
72	TBMW 494	RUBBER SAFETY HOOKS	6	

Lifter Loader Extras

Assy No 11940

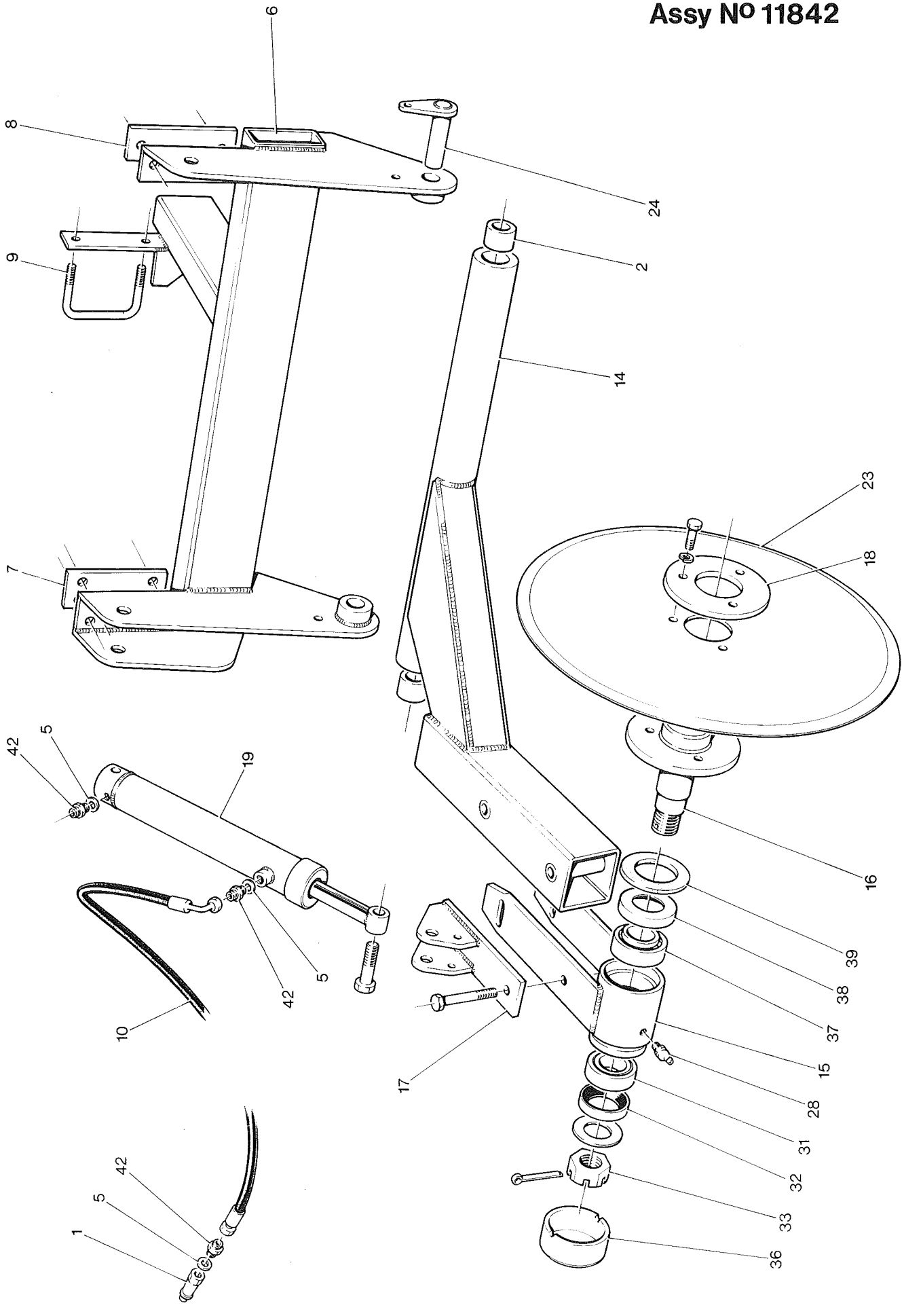


LIFTER LOADER EXTRAS (ASSY. No. 11940)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	11939	SUPPORT PLATE	1	
2	11942	LH SIDE GUARD	1	
3				
4				
5	13118	RUBBER GUARD SUPPORT RING	2	
6				
7				
8	24008	DRIVE SHAFT	1	
9	24185	FIXING HOOK	1	
10	24293	'U' FRAME SUPPORT TIE BRACKET	1	
11				
12	6207 RS	BEARING	2	
13				
14				
15	BM 196	RUBBER GUARD	2	
16				
17				
18	GS 407	JUBILEE CLIP	2	
19	H 105A	QUICK RELEASE PIN	4	
20				
21	SP 44M	BEARING HOUSING	1	

Stabilizer Disc Assembly

Assy No 11842

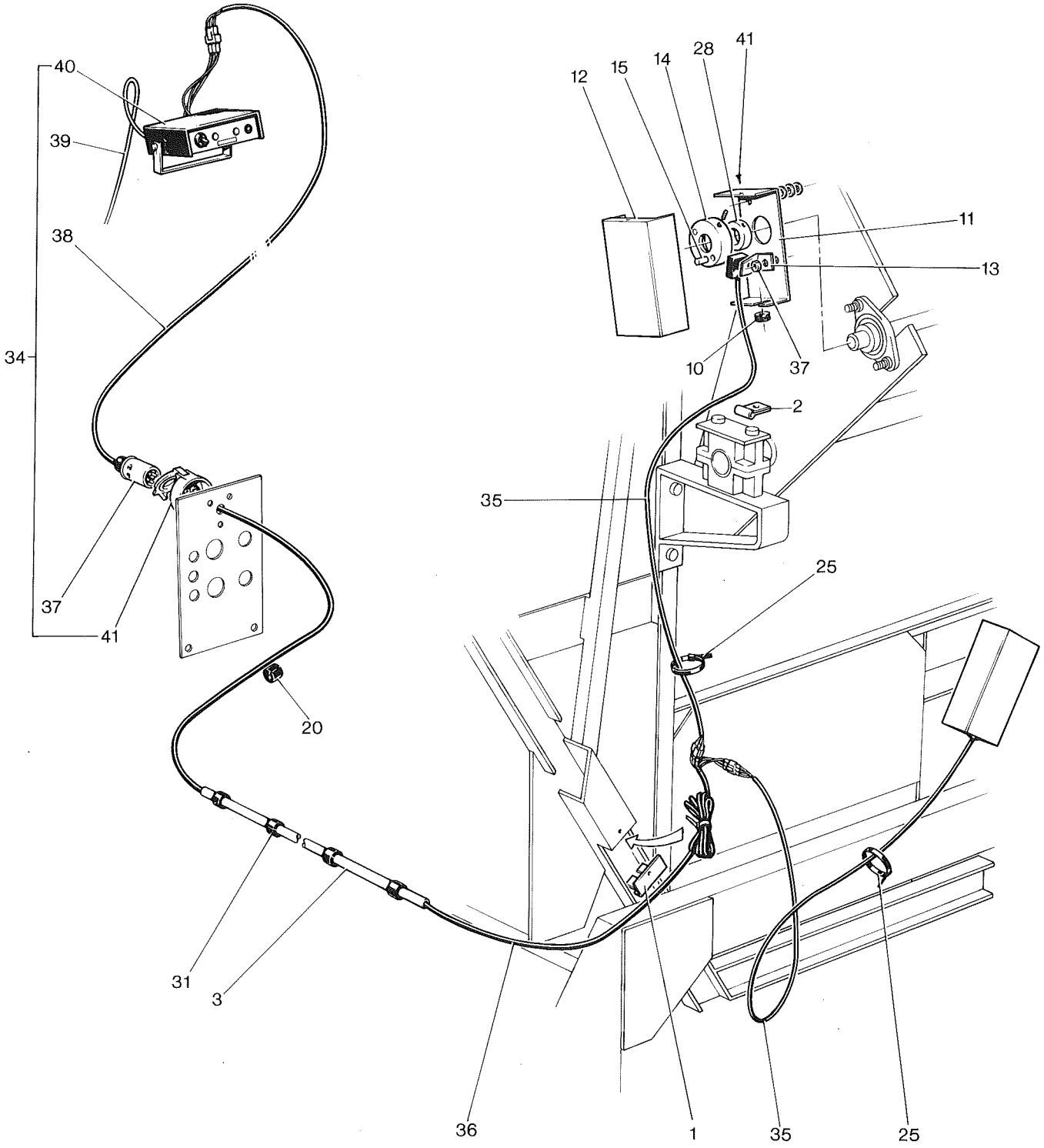


STABILIZER DISC ASSEMBLY (ASSY. No. 11842)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	10140	MALE QUICK RELEASE COUPLING	2	
2	10337	BUSH	2	
3				
4				
5	11125	DOWTY SEAL	4	
6	11838	MOUNTING FRAME	1	
7	11839	CLAMP PLATE (LARGE)	1	
8	11840	CLAMP PLATE (SMALL)	1	
9	11841	'U' BOLT	1	
10	11843	HOSE ASSEMBLY	2	
11				
12				
13				
14	13360	MOUNTING ARM	1	
15	13361	HUB	1	
16	13362	SPINDLE	1	
17	13363	RAM SUPPORT BRACKET	1	
18	13368	CLAMP DISC	1	
19	13391	HYDRAULIC RAM	1	
20				
21				
22				
23	14039	DISC	1	
24	14194	PIVOT PIN	2	
25				
26				
27				
28	GS 412	GREASE NIPPLE	1	
29				
30				
31	RP 4	TAPER BEARING	1	
32	RP 5	OIL SEAL	1	
33	RP 6/1	WHEEL NUT	1	
34				
35				
36	SPCL 58	HUB CAP	1	
37	SPCL 231	ROLLER BEARING	1	
38	SPCL 232	OIL SEAL	1	
39	SPCL 303	FELT SEAL	1	
40				
41				
42	UC 31A	ADAPTOR	4	

Shaft Monitor Kit Assembly

Assy No 24292



Item 4 (All Monitor Electrical Components)

SHAFT MONITOR KIT ASSEMBLY (ASSY. No. 24292)

ITEM No.	PART No.	DESCRIPTION	QTY	REMARKS
1	24287	CABLE SUPPORT BRACKET	1	
2	24288	CABLE FIXING TAG	1	
3	24289	CABLE SUPPORT TUBE	1	
4	24291	MONITOR ELECTRICAL COMPONENTS	1	
5				
6				
7				
8				
9				
10	11460	RUBBER GROMMET	2	
11	11560	GUARD PLATE	2	
12	11561	GUARD PLATE COVER	2	
13	11581	CENSOR SUPPORT BRACKET	2	
14	11583	NYLON COLLAR	2	
15	11584	MAGNET	4	
16				
17				
18				
19				
20	13386	RUBBER GROMMET	1	
21				
22				
23				
24				
25	H 418A	PLASTIC RETAINING TIE	A/R	
26				
27				
28	PS 326M	COLLAR	2	
29				
30				
31	SPCT 222	RUBBER GROMMET	4	
32				
33				
	24291	SHAFT MONITOR ELECTRICAL COMPONENTS CONSISTS OF:-		
34	24283	MONITOR CONTROL BOX ASSEMBLY	1	(SEE BELOW)
35	24286	CENSOR UNIT C/W CABLE	2	
36	24290	CABLE C/W CONNECTORS	1	
	24283	MONITOR CONTROL BOX ASSEMBLY CONSISTS OF:-		
37	11367	7 PIN PLUG (S TYPE)	1	
38	24365	5 CORE CABLE	4.0m	
39	11370	2 CORE CABLE	2.5m	
40	24284	MONITOR BOX	1	
41	24285	7 PIN SOCKET (S TYPE)	1	