

# **Standen**

## **Turbobeet / TRH Mk 2 Sugar Beet Harvester**

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# Contents

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	<i>Page</i>
<b>SECTION 1:- INSTRUCTION MANUAL</b>	
Introduction .....	1.1
Safety Precautions .....	1.2
Installation .....	1.5
Tractor Wheel Settings .....	1.5
Tractor Lift Linkage Setting .....	1.5
P.T.O. to Tractor & Harvester .....	1.5
Winch .....	1.5
Guide Skids .....	1.6
Lifting Wheels .....	1.7
Top Track .....	1.7
Beet Deflectors .....	1.8
Main Web Baffle Plate .....	1.8
Main Elevator .....	1.8
Trash Extractor .....	1.8
Trash Extractor Flap .....	1.9
Rear Elevator .....	1.9
Discharge Elevator .....	1.9
Main Drives .....	1.10
Main Elevator Drive (Self Adjusting) .....	1.10
Trash Elevator Drive (Self Adjusting) .....	1.10
Discharge Elevator Drive (Self Adjusting) .....	1.10
Rear Elevator (Manual Adjusting) .....	1.10
Main Drive (Manual Adjusting) .....	1.11
Hydraulic Pump Gearbox Drive (Manual Adjusting) .....	1.11
Top Track Drive (Manual Adjusting) .....	1.11
Safety Clutch .....	1.11
Lubrication .....	1.11
Lubrication Points (Illustration) .....	1.12
Faults Causes and Corrections .....	1.13
Discharge Elevator (Hydraulic Folding & Web Adjustment) .....	1.16

# Contents Contd.

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	<i>Page</i>
<b>SECTION 2:- EXPLODED PARTS ILLUSTRATIONS</b>	
Main Frame and Draw Bar .....	8
Axle and Wheels .....	10
Lifting Wheel Frame - Lifting Wheels - Skids .....	12
Lifting Wheel Frame - Top Track .....	14
- Cage Wheels .....	14B
- Paddle Wheels .....	14C
Conveyors - Main Elevator - Continental Web .....	16
Conveyors - Main Elevator - Steel Web .....	18
Conveyors - Rear and Trash Elevators - Winch .....	20
Conveyors - Discharge Elevator .....	22
Drives and Controls .....	24
Gearboxes PS450-2TM and 11279 .....	28
Guards .....	30
Optional Extras .....	33
Gearbox - 11822 .....	36

The Turbo Topper Instruction Manual will be  
found at the rear of the Manual.





# **SECTION 1**

## **INSTRUCTION MANUAL**



# Introduction

This manual provides the information for the adjustments and maintenance to help you to obtain the best results from your new Standen Lifter-Loader MK II. Before putting the machine to work, read the manual through carefully to get a full understanding of what the machine should do and how to achieve it. The instructions describe the operation of the various components, then the different settings supplied to those components enabling maximum efficiency to be obtained from the machine, adjustments may have to be made singly or in combination according to crop and soil conditions, allow the harvester to settle to a new setting before making more adjustments.

The information is based on current models but in most part could relate to earlier machines.

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

The serial number is stamped on the front of the main frame. Always quote the serial number when ordering spare parts.

Record below details of your machine in the space provided.

Date Purchased .....

Date Started Work .....

Serial Number .....

Agents Name .....

Agents Address .....

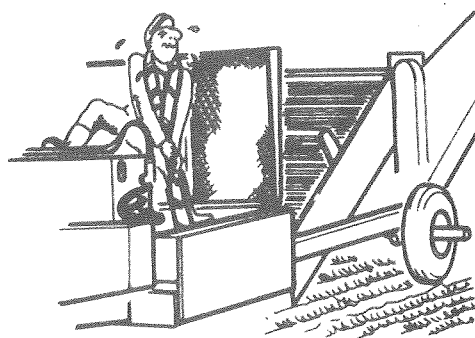
.....

Agents Tel. No. ....

# 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.



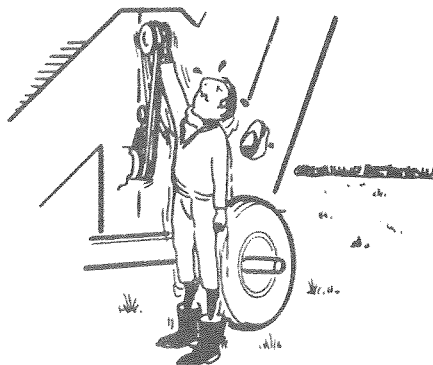
## NEVER

Attempt to adjust or clean any part of the machine with the tractor power take-off in motion and always stop the tractor engine.



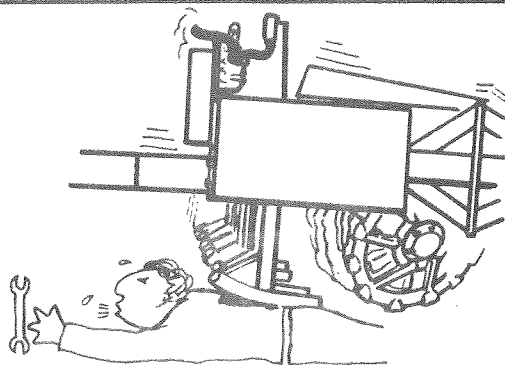
## NEVER

Fit drive chains or drive belts while the drive sprockets or drive pulleys are in motion.



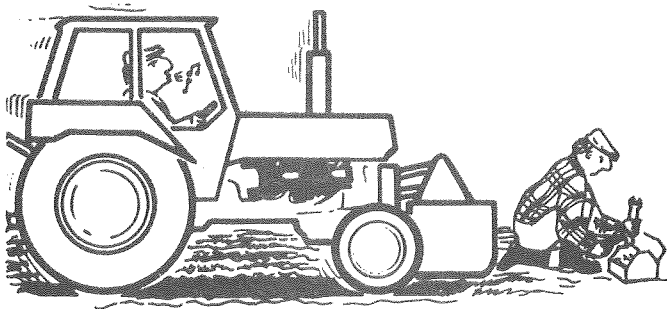
## NEVER

Work under the machine when it is in a raised position on the tractor hydraulic lift linkage.

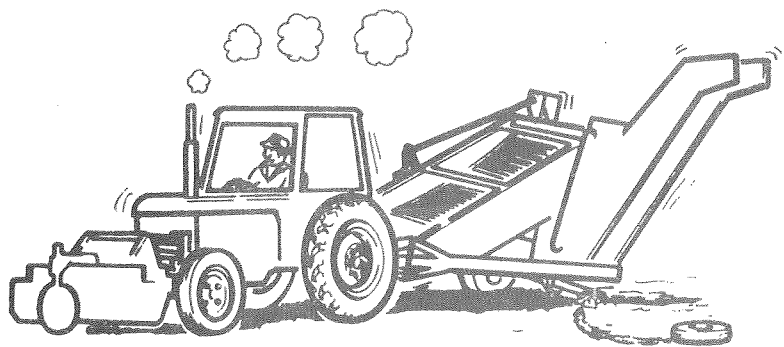


## NEVER

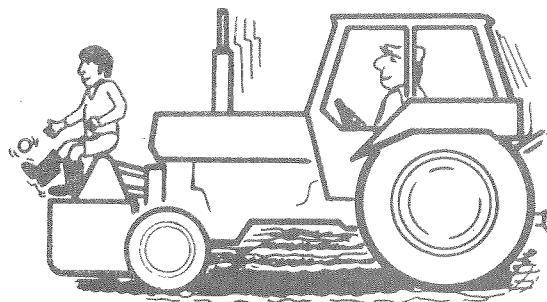
Set the machinery in motion before ensuring that every one in the vicinity is aware of your intention.



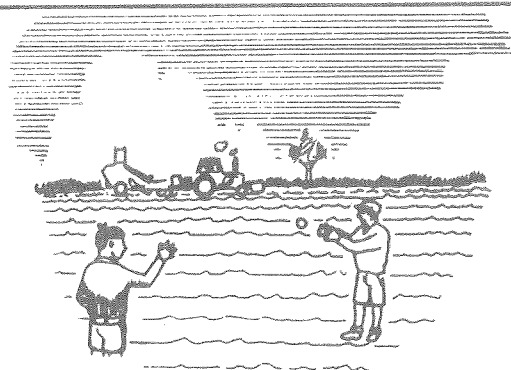
**NEVER** Operate the machine in a state of disrepair.



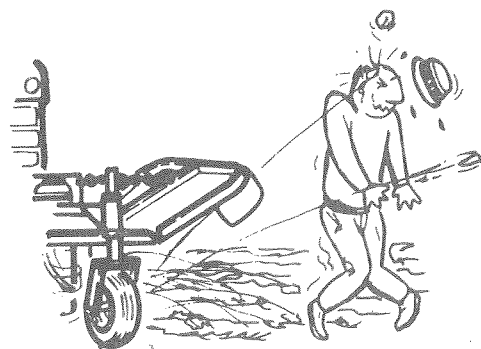
**NEVER** Allow any one *especially children* to ride on the machine.



**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.



## INSTALLATION

The Standen Lifter-Loader Mk II is a three row machine designed to lift, clean and load the sugar beet into a trailer running side the harvester. It can be used in conjunction with the Turbo-Topper, Standard Topper, Chopper Blower, Direct Loader or Flail Topper.

When the Lifter-Loader is used with a Turbo-Topper an oil reservoir and hydraulic pump is mounted to the front of the machine to provide the hydraulic power to the hydraulic motors fitted to the topping rotors.

The power required when used in conjunction with conventional toppers is 70 HP—80 HP with 540 Revs. at the P.T.O. and three point lift linkage.

When used with the Turbo-Topper the requirement is 90 HP, 540 P.T.O., and three point linkage. Check that the nuts and bolts and G.I.B. Head keys are tight, also the grub screws in the bearings, especially before starting off a new machine and during the first day or two of work.

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

Do not raise the machine with the P.T.O. engaged, pay particular attention to the lubrication and maintenance.

Pay particular attention to the safety precautions, they are written as a warning to protect you.

## TRACTOR WHEEL SETTING SETTING INSTRUCTIONS

Both front and rear tractor wheels must be set to straddle the rows of beet. For example, if the crop is growing at 20" (50.80 cms) the distance measured between the tractor tyre centres must be 60" (152.40 cms), this will then ensure that the wheels run in centre line between the rows of beet. The instructions for adjusting tractor wheels are given in the tractor manufacturer's handbook.

### SAFETY FIRST



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

## TRACTOR LIFT LINKAGE SETTING

The drawbar, supplied with the harvester, has been made to fit category two and should be fitted between the two lower lift arms 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.

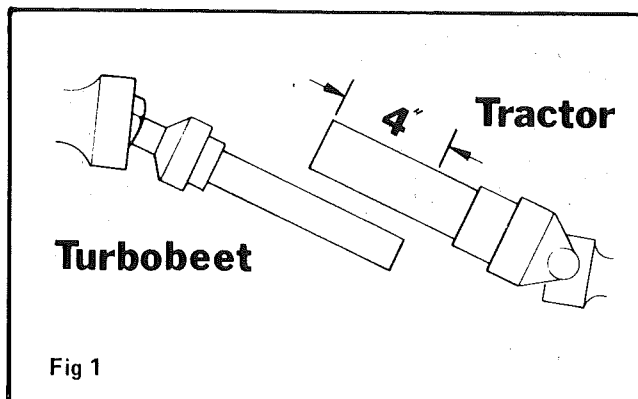
Fit the stabilizer bar and adjust so the harvester is central to the centre of the tractor.

The tractor top link is not required except when the harvester is used in conjunction with the Turbobeet.

## PTO COUPLING TO TRACTOR AND HARVESTER

The PTO 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 harvester respectively. The male and female square can then be

measured alongside each other and adjustments made by cutting the surplus bar from both male and female square. At least 4" (10 cms) overlap should be allowed. After the correct length of the coupling has been obtained, the PTO coupling guard should then be cut, to correspond with the coupling. Also ensure that the rubber hood, to protect the knuckles of the PTO coupling is in place.



## DISCHARGE ELEVATOR WINCH

### SAFETY FIRST

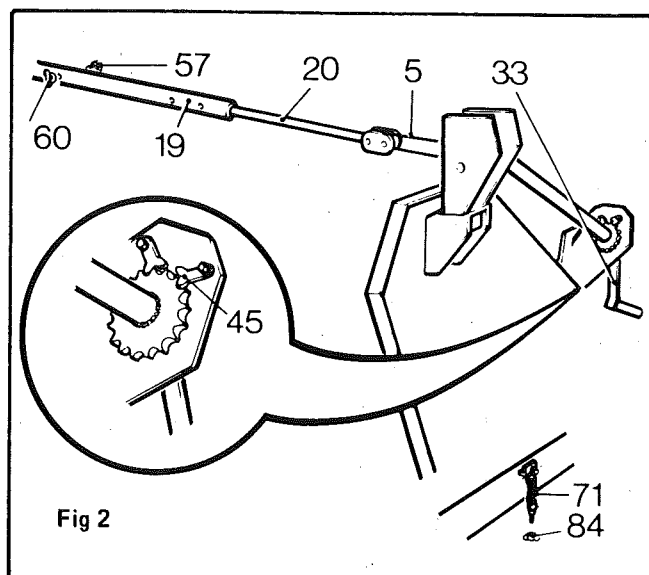


Before attempting to use the winch. Read the operating instructions carefully to familiarize yourself with the procedure of what you are about to do and how to achieve it.

The discharge elevator is fitted with the wire rope winch to facilitate the folding or unfolding of the elevator before or after transporting on the road.

## UNFOLDING THE ELEVATOR FOR WORK

Remove the wing nut (Item 60 fig 2) from the bolt (Item 57 fig 2) and withdraw the bolt from the higher bolt hole. Remove the wing nut (Item 84 fig 2) from the retaining chain (Item 71 fig 2) and release the retaining chain (Item 71 fig 2) from the tension tube (inner) (Item 20 fig 2).



Turn the handle (Item 33 fig 2) to release the tension to the wire rope (Item 5 fig 2) and withdraw the tension tube (inner) (Item 20 fig 2) from the tension tube (outer) (Item 19 fig 2) until the bolt hole in the tension tube (inner) (Item 20 fig 2) is in line with the lower bolt hole in the tension tube (outer) (Item 19 fig 2).

Fit the bolt (Item 57 fig 2) into the bolt holes in both tension tubes (Items 19-20 fig 2) and replace the wing nut (Item 60 fig 2).

Turn the handle (Item 33 fig 2) ensuring that the winch ratchet pawls (Item 45 fig 2) are operating correctly and raise the discharge elevator into the upright position.

Turn the handle (Item 33 fig 2) in the opposite direction, ensuring that the winch ratchet pawls (Item 45 fig 2) are operating correctly to allow the discharge elevator to go over the centre and to be lowered into the discharge position.

## FOLDING THE ELEVATOR FOR TRANSPORT

Remove the wing nut (Item 60 fig 2) from the bolt (Item 57 fig 2) and withdraw the bolt from the lower bolt hole. Turn the handle (Item 33 fig 2) to tighten the wire rope (Item 5 fig 2) to push the tension tube (inner) (Item 20 fig 2) into the tension tube (outer) (Item 19 fig 2) until the bolt hole in the tension tube (inner) (Item 20 fig 2) is in line with the centre bolt hole in the tension tube (outer) (Item 19 fig 2).

Fit the bolt (Item 57 fig 2) into the bolt holes in both tension tubes and replace the wing nut (Item 60 fig 2). Turn the handle (Item 33 fig 2) ensuring that the winch ratchet pawls (Item 45 fig 2) are operating correctly and raise the elevator into the upright position.

Turn the handle (Item 33 fig 2) in the opposite direction, ensuring that the winch ratchet pawls (Item 45 fig 2) are operating correctly to allow the discharge elevator to go over centre and to be lowered into the folding position.

With the discharge elevator resting in the folding position turn the handle (Item 33 fig 2) in the opposite direction to loosen the wire rope (Item 5 fig 2).

Remove the wing nut (Item 60 fig 2) from the bolt (Item 57 fig 2) and withdraw the bolt from the centre bolt hole.

Turn the handle (Item 33 fig 2) to tighten the wire rope (Item 5 fig 2) to push the tension tube (inner) (Item 20 fig 2) into the tension tube (outer) (Item 19 fig 2) until the bolt hole in the tension tube (inner) (Item 20 fig 2) is in line with the higher hole in the tension tube (outer) (Item 19 fig 2).

Fit the bolt (Item 57 fig 2) into the bolt holes in both tension tubes and replace the wing nut (Item 60 fig 2).

Fit the retaining chain (Item 71 fig 2) to the tension tube (inner) (Item 20 fig 2) and replace the wing nut (Item 84 fig 2).

When carrying out the above operation ensure that the discharge elevator is not fouling in any way during either raising or lowering the elevator. When folding the discharge elevator from the working position to the transport position first break the web by removing the web joining pins and fit the web retaining hooks to the web and the discharge elevator tie bar allowing enough slack in the discharge elevator web to allow the discharge elevator to be folded back without stretching the discharge elevator web.

## GUIDE SKIDS

The purpose of the guide skids (Items 9-30 fig 3) is to follow the row of beet in front of the lifting wheels (Item 12 fig 4) keeping the harvester in a straight line irrespective of the contours of the ground.

To set the guide skids (Items 27-30 fig 3) drive the harvester down the row of beet for a considerable distance until the required depth of the lifting wheels (Item 12 fig 4) to lift the beet efficiently has been obtained by the tractor depth control.

Stop the tractor and harvester and switch off the tractor engine, do not alter the tractor depth control, set the guide skids (Item 29-30 fig 3) to run on the ground without taking the weight of the harvester, the heels of the guide skids (Items 29-30 fig 3) should be in line with the inside front edge of the lifting wheels (Item 12 fig 4) and directed downwards with the leading curve directed upwards.

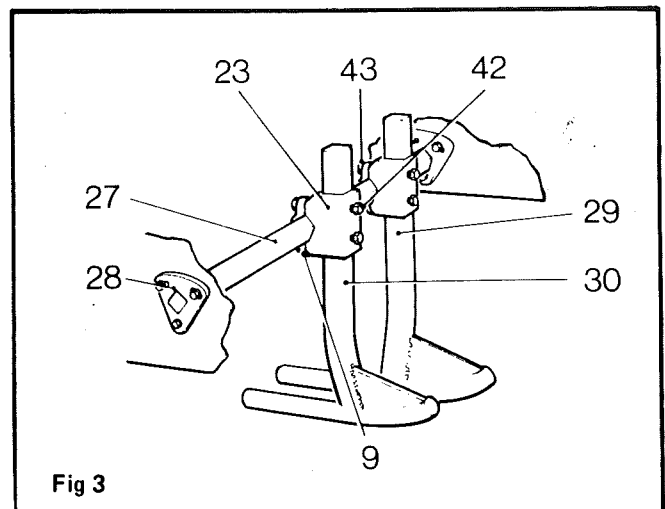


Fig 3

To adjust the guide skids (Items 29-30 fig 3) to or from the ground loosen the two adjusting studs (Item 42 fig 3) in the guide skid bracket (Item 23 fig 3) allowing the guide skids (Items 29-30 fig 3) to be raised or lowered as required. To adjust the width of the guide skids (Items 29-30 fig 3) loosen the clamp bolts (Item 43 fig 3) in the guide skid brackets (Item 23 fig 3) and the cap (Item 9 fig 3) and slide the brackets (Item 23 fig 3) horizontally along the guide skid support bar (Item 27 fig 3) to the required position according to the width of the beet rows.

To adjust the angle of the guide skids (Items 29-30 fig 3) loosen the nuts and bolts in the adjusting slots provided in the guide skid support bar clamp (Item 28 fig 3) and turn the guide skid support bar (Item 27 fig 3).

Note:— If the front of the guide skids (Items 29-30 fig 3) are lower than the heels the blocking of loose leaf may occur.

It is important that the check chains on the tractor lift arms (Item 1 fig 5) are adjusted to operate in a slack position, so when the tractor rear wheels ride over the different contours of the ground the harvester will carry on in a straight line guided by the skids.

Too much slack in the tractor check chains (Item 2 fig 5) will allow the harvester to swing about when turning at the headland making it difficult to manoeuvre.

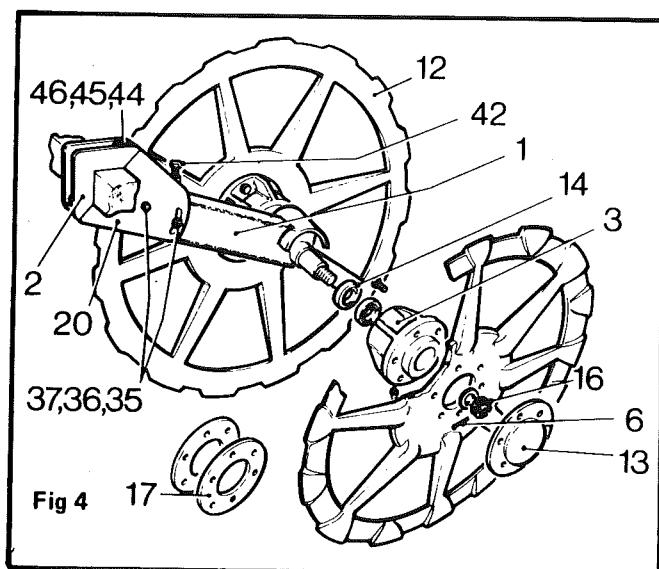


## LIFTING WHEELS

The lifting wheels (Item 12 fig 4) are designed to lift the beet from the ground and transfer them to the main digger web. The working depth of the lifting wheels (Item 12 fig 4) 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 12 fig 4), this adjustment is made by loosening the nuts and bolts (Item 35-36-37 fig 4) holding the lifting wheel mounting (Item 1 fig 4) to the lifting wheel mounting bracket (Item 20 fig 4) which is provided with slotted holes in either side to allow the lifting wheel mounting (Item 1 fig 4) to be adjusted both up and down. At the top of the lifting wheel mounting bracket (Item 20 fig 4) is fitted an adjusting set screw (Item 42 fig 4) which is provided to push down on to the lifting wheel mounting (Item 1 fig 4). The adjustment described allows the lifting wheels (Item 12 fig 4) to be raised or lowered irrespective of the harvester, it will also alter the point of the lifting of the beet in relation to the width of the lifting wheels. (Item 12 fig 4)

The working depth of the lifting wheels (Item 12 fig 4) is approximately 2 inches (51 cm).



The width of the wheels at the narrowest point is from 1½ inches (38 cm) to 1¾ inches (45 cm) and they can be adjusted by removing or adding spacers (Item 17 fig 4) between the lifting wheels (Item 12 fig 4) and the lifting wheel hubs (Item 3 fig 4).

The lifting wheel spindles on item 1 fig 4 are fitted with tapered roller bearings (Item 14 fig 4) and are adjusted by a castle nut (Item 16 fig 4) after removing the hub cap (Item 13 fig 4).

Care should be taken not to over tighten the bearings (Item 14 fig 4), adjust by turning the castle nut (Item 16 fig 4) as tight as possible while slowly rotating the lifting wheel hug (Item 3 fig 4) then slacken off one or two castlerations of the nut, (Item 16 fig 4). Secure with a new split pin (Item 6 fig 4).

The lifting wheels (Item 12 fig 4) can also be adjusted to follow rows of from 18 inches (46 cm) to 22 inches (56 cm).

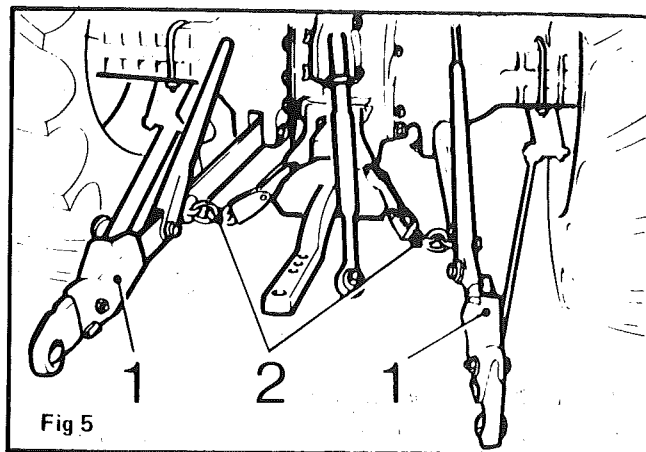


Fig 5

To obtain these settings loosen the nuts and bolts (Items 44-45-46 fig 4) in the lifting wheel mounting bracket (Item 2 fig 4) and move the lifting wheel mounting bracket (Item 2 fig 4) horizontally along the front beam of the main frame.

## TOP TRACK

The top track (fig 6) is fitted between the lifting wheels (Item 12 fig 4) to transfer the beet onto the main digger web. Provision is made to lower or raise the top track (fig 6) which should be set high when the beet are generally large and lowered when the beet are small.

To adjust, loosen, the nuts and bolts (Items 75-76 fig 6) in the support bar brackets RH & LH (Item 30 fig 6) and the nuts and bolts (Item 59 fig 6) in the support bar clamp (Item 37 fig 6). Turn the top track support bar (Item 44 fig 6) until the top track web links (Item 22 fig 6) are in the required position. Retighten all adjusting nuts and bolts.

The top track web links (Item 22 fig 6) are self tensioned by springs (Item 14 fig 6) fitted inside the top track body (Item 34 fig 6) pushing against the top track sliding roller mounting (Item 20 fig 6).

Fitted to the top track sliding roller mounting (Item 20 fig 6) are the top track clamp blocks (Items 40-41 fig 6) designed to assist the springs (Item 14 fig 6) to retain their tension by restricting the amount of travel of the top track sliding mounting (Item 20 fig 6).

When adjusting the top track clamp blocks (Items 40-41 fig 6) ensure that the top track sliding roller mounting (Item 20 fig 6) has at least one inch of movement (fig 6) inside the top track body (Item 34 fig 6).

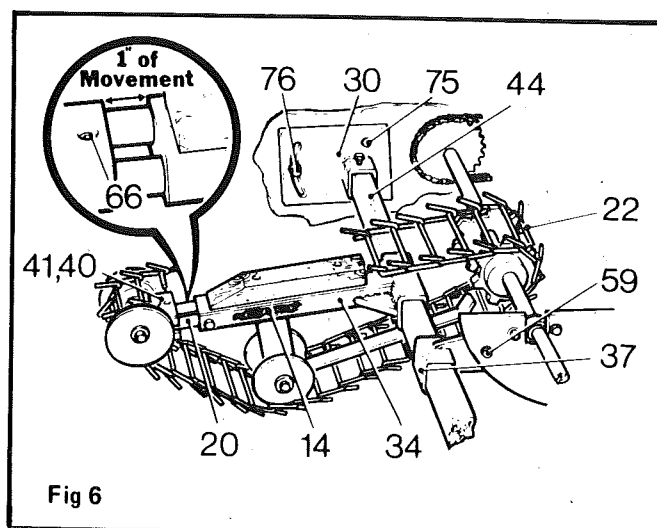


Fig 6

To adjust, loosen the two set screws (Item 66 fig 6) in the top track clamp blocks (Items 40-41 fig 6) and slide the top track clamp blocks (Items 40-41 fig 6) along the top track sliding roller mounting (Item 20 fig 6).

## SAFETY FIRST

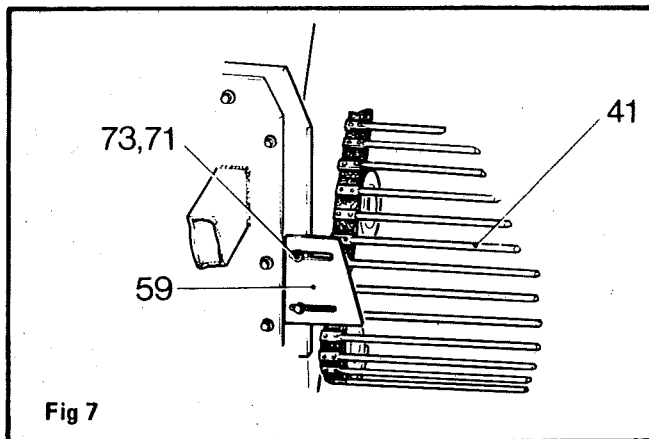


Before carrying out any adjustments switch off engine and apply the parking brake.

## BEET DEFLECTORS

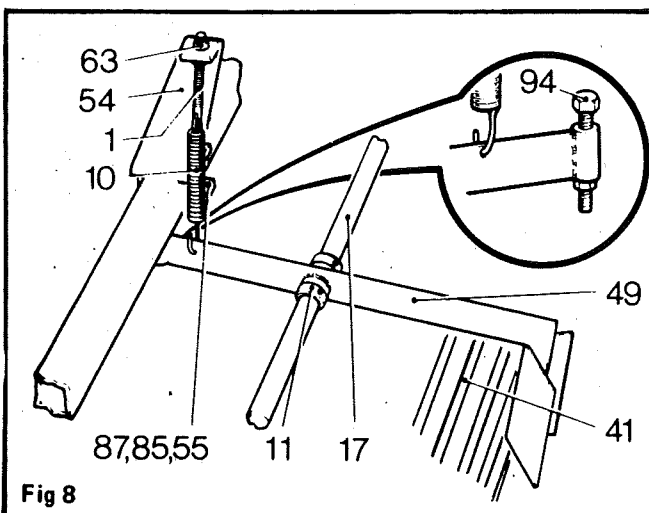
The beet deflectors (Item 59 fig 7) are fitted to trap any beet rolling down either side of the main elevator (Item 35 fig 7) and can be adjusted to suit row widths of 18 inches (46 cm) to 22 inches (56 cm).

Adjust by loosening the nuts and bolts (Items 71-73 fig 7) and slide the beet deflector (Item 59 fig 7) in the adjusting slots provided.



## MAIN WEB BAFFLE PLATES

The main web baffle plates (Item 49 fig 8) are fitted to trap any beet rolling down the centre of the main elevator web (Item 41 fig 8) and must be free to lift should any obstruction (stones etc.) be trapped between the main web baffle plates (Item 49 fig 8) and the main elevator web (Item 41 fig 8). Downward pressure is applied by the tension of the springs (Item 10 fig 8) which are tensioned by turning the adjusting nut (Item 63 fig 8) fitted to the spring tensioner. (Item 1 fig 8).



Adjustment is also provided to increase or decrease the distance between the main elevator web (Item 41 fig 8) and the baffle plates (Item 49 fig 8). The distance is determined by the size of the sugar beet, if small beet are being lost suspect that the distance is too great and lower the baffle plates (Item 49 fig 8) to the main elevator web (Item 41 fig 8), this adjustment is carried out by turning the adjusting set screw (Item 94 fig 8).

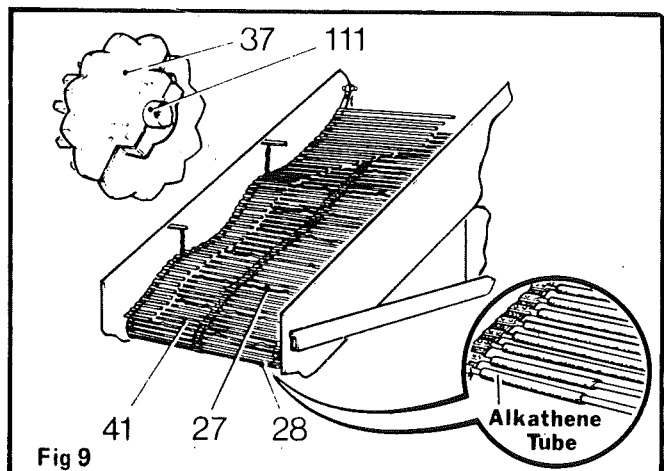
Adjustment is also provided to move the main web baffle plates (Item 49 fig 8) horizontally along the baffle plate pivot bar (Item 17 fig 8) to be in line with the position of the lifting wheels (Item 12 fig 4). To adjust, loosen the set screws in the collars (Item 11 fig 8) fitted to either side of the main web baffle plate (Item 49 fig 8) at the baffle plate pivot point, also the tension spring bracket (Items 54-55 fig 8) retaining nuts and bolts (Items 85-87 fig 8) and move the tension spring bracket (Items 54-55 fig 8) in line with the baffle plates (Item 49 fig 8).

## MAIN ELEVATOR

The main elevator consists of a main elevator web (Item 41 fig 9) to transfer the beet to the trash extractor. Suspended over the main web is a cleaning web which can be adjusted to determine the amount of cleaning required by lowering the cleaning web to the main elevator web and restricting the flow of beet, at the same time rubbing against the beet giving a cleaning action to the beet. To help to reduce small beet losses alkathene tubes are available to fit over the main elevator web links (Items 27-28 fig 9) so reducing the width of the link by approximately  $\frac{3}{8}$  in. (9.5 mm).

The width between the main web links is, continental without alkathene tubes fitted 2 $\frac{1}{8}$  in. (54 mm), continental with alkathene tubes fitted 1 $\frac{1}{8}$  in. (42 mm), steel web without alkathene tubes fitted 1 $\frac{1}{2}$  in. (47 mm), steel web with alkathene tubes fitted 1 $\frac{1}{2}$  in. (38 mm).

The main elevator web sprockets (Item 37 fig 9) are the split type sprockets and can be removed and new sprockets fitted without the need to remove the main web shaft (Item 111 fig 9), note, before splitting the main elevator web sprockets (Item 37 fig 9) mark the two halves of the sprockets with a chisel or chalk mark, this will ensure that the same two faces are matched together when refitting.



## TRASH EXTRACTOR

The trash extractor consists of two webs running side by side on to which the beet and trash are thrown from the main elevator web, the beet then roll down the trash extractor webs and onto the cross elevator.

The trash extractor webs are fitted with six down links (Item 24 fig 10) to one up link (Item 23 fig 10), each alternate up link is fitted with spikes (Item 25 fig 10) to prevent the trash from being knocked down the trash extractor web by the rolling sugar beet.

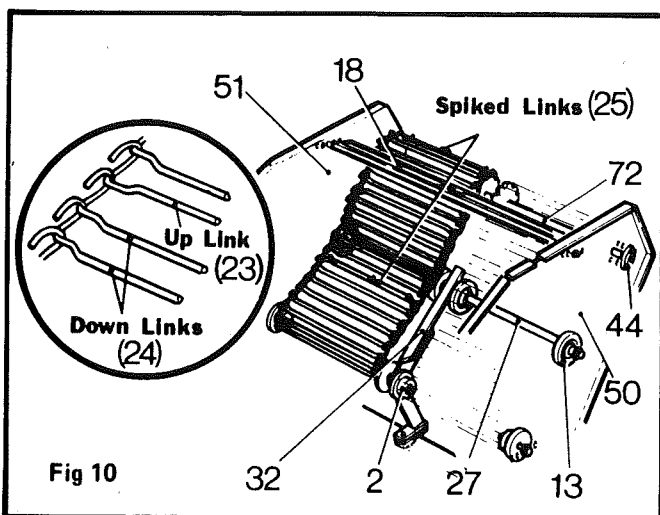
When the trash is dense extra spiked links (Item 25 fig 10) can be fitted in the place of plain links (Items 23-24 fig 10).

The up and down web link sequence can be rearranged according to the crop conditions, for example, where a lot of small beet are dominant it is possible that beet will be lost between the trash extractor web and the trash extractor flat (Item 18 fig 10) because the small beet sitting on an up link (Item 23 fig 10) can be pulled through and discharged out of the back with the trash. When the up links (Item 23 fig 10) are exchanged for down links (Item 24 fig 10) less small beet are likely to be lost.

The trash extractor is also adjustable to the vertical position by moving the rollers and the trash extractor web shaft in the various holes provided in the trash extractor side plates, the adjustments should be carried out according to the amount of trash to be removed. When the trash is dense the webs should be adjusted to a flat position, or if a small amount of trash is evident, adjust to an upright position.

To adjust the trash extractor web into the flat position, move the rollers (Item 2 fig 10) into the forward holes provided in the trash extractor side plate RH – LH (Items 50-54 fig 10) and move the trash extractor roller support (Item 32 fig 10) into the forward holes also provided in the trash extractor side plate RH – LH (Items 50-51 fig 10) ensuring that the four rollers (Item 2 fig 10) are directly in line.

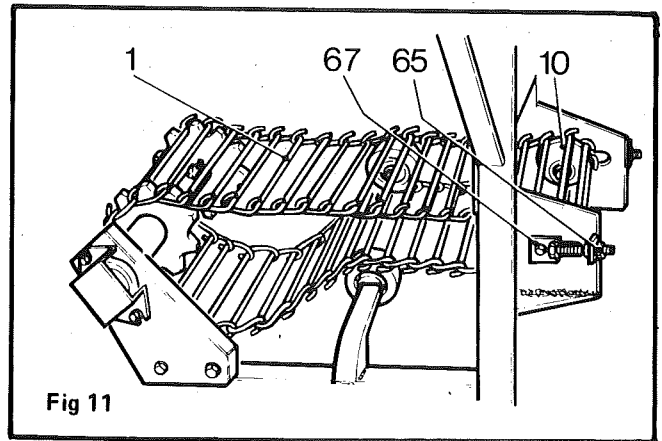
The main web top tie bar (Item 27 fig 10) fitted with the support rollers (Items 13 fig 10) is moved into the centre holes provided in the trash extractor side plate RH – LH (Items 50-51 fig 10).



The trash extractor web shaft (Item 72 fig 10) and bearings (Item 44 fig 10) are moved into the rear holes provided in the trash extractor side plate RH – LH (Item 50-51 fig 10).

To adjust the trash extractor to a vertical position the reverse of the procedure is employed. To tension the trash extractor webs, remove or add links as required.

**Note:**— Whenever adjustment is made by moving the trash extractor web shaft (Item 72 fig 10) the trash extractor flap (Item 25 fig 10) must also be moved into



the adjusting holes provided in the trash extractor side plate (Items 50-51 fig 10).

## REAR ELEVATOR WEB

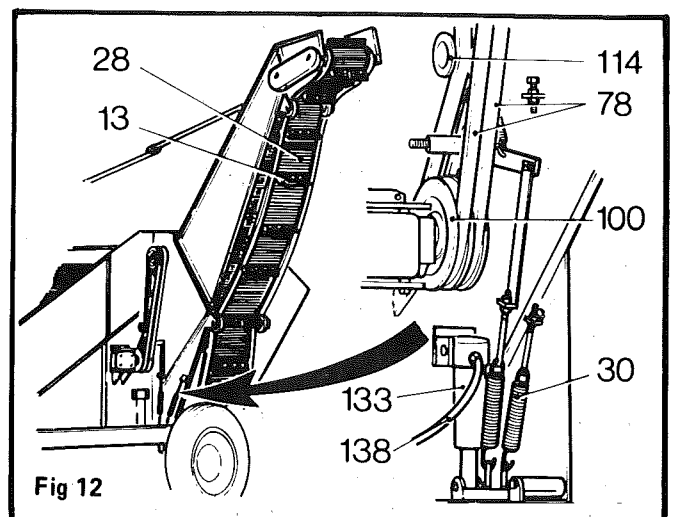
The rear elevator web is fitted to collect the sugar beet from the trash extractor and convey them onto the discharge elevator, there are no adjustments necessary to alter the position or angle of the web.

To tension the web, loosen the nut holding the roller (Item 10 fig 11) in the rear elevator roller adjuster (Item 67 fig 11) and turn the adjusting nut (Item 65 fig 11) down the rear elevator roller adjusted (Item 67 fig 11).

When all the adjustment has been taken up on the rear elevator roller adjuster (Item 67 fig 11) slacken off the adjusting nut (Item 65 fig 11) and remove a web link (Item 1 fig 11) from the rear elevator web. This will then provide more adjustment for the rear elevator roller adjuster (Item 67 fig 11).

## DISCHARGE ELEVATOR

The discharge elevator consists of a single web (Item 28 fig 12) to which is fitted the discharge elevator lats (Item 13 fig 12). It is provided to transfer the beet into a trailer running along the side of the harvester. The discharge elevator is driven by two V. Belts (Item 78 fig 12) running side by side in the two double pulleys (Item 100 fig 12) and is always in operation while the beet lifting is in progress by the tension of the two V. Belts (Item 78 fig 12) via the hydraulic ram (Item 133 fig 12) which is coupled to the tractor external hydraulics by the hydraulic hose (Item 138 fig 12) and operated from the tractor seat.



To stop the discharge elevator from rotating the oil pressure is released to the hydraulic ram (Item 133 fig 12) by the tractor external hydraulic control, the hydraulic ram (Item 133 fig 12) is then closed by the tension of the ram return spring (Item 30 fig 12) at the same time releasing the pressure of the jockey roller (Item 114 fig 12) to the drive belts (Item 78 fig 12).

## SAFETY FIRST



Remember that all revolving drive chains, shafts, sprockets and pulleys are potentially lethal so before carrying out any adjustments disengage P.T.O., switch off engine, and set the hand brake.

## MAIN DRIVES

The various main drives consist of drive shafts, drive chains and sprockets. Each drive chain is fitted with a tensioner which is either self adjusting or manual adjusting, a self adjusting tensioner keeps the drive chain under constant tension by the force of a spring pulling the tension arm and tension shaft sprocket onto the drive chain so that any slack in the drive chain caused

## MAIN ELEVATOR DRIVE

(Self Adjusting)

A self adjusting tensioner is fitted to the main elevator drive chain (Item 34 fig 13). The tensioner consists of a jockey arm (Item 2 fig 13) fitted with a jockey sprocket (Item 45 fig 13) and a jockey arm spigot (Item 120 fig 13) and is tensioned by a spring (Item 14 fig 13).

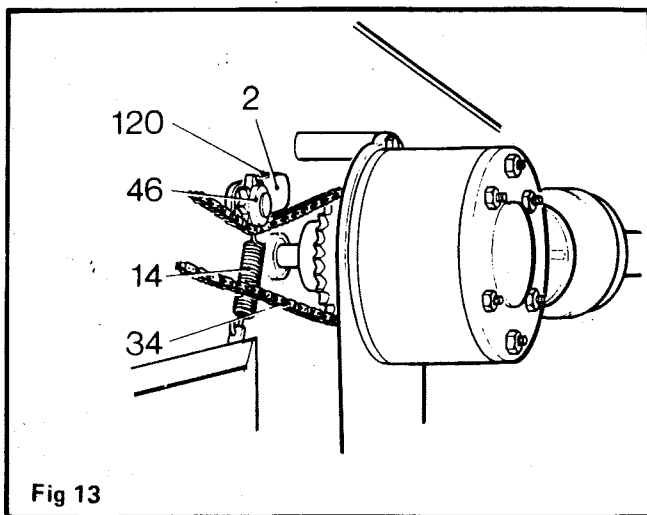


Fig 13

## TRASH EXTRACTOR DRIVE

(Self Adjusting)

The tensioner fitted to the trash extractor drive chain (Item 29 fig 14) consists of a jockey arm (Item 2 fig 14) fitted with a jockey sprocket (Item 46 fig 14) and a jockey arm spigot (Item 119 fig 14) and is tensioned by a spring (Item 14 fig 14).

## DISCHARGE ELEVATOR DRIVE

(Self Adjusting)

A self adjusting tensioner is fitted to the drive chain (Item 28 fig 15) and consists of the jockey arm (Item 67 fig 15)

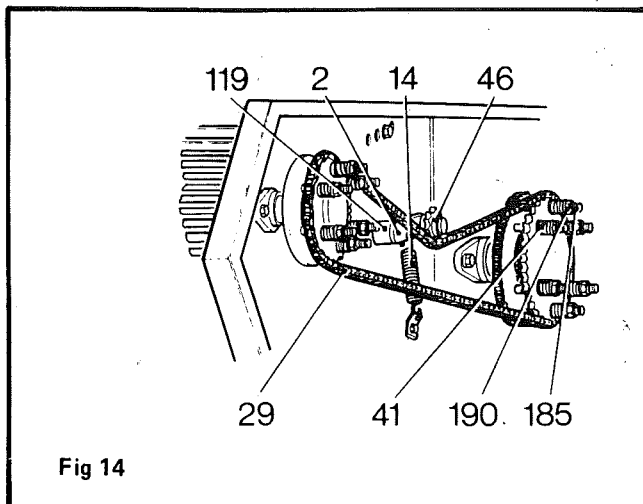


Fig 14

fitted with a jockey roller (Item 72 fig 15) and a jockey arm spigot (Item 73 fig 15) and is tensioned by a spring (Item 14 fig 15).

The secondary drive chain (Item 32 fig 15) is self adjusting by a jockey arm (Item 2 fig 15) fitted with a jockey sprocket (Item 45 fig 15) and tensioned by the spring (Item 14 fig 15).

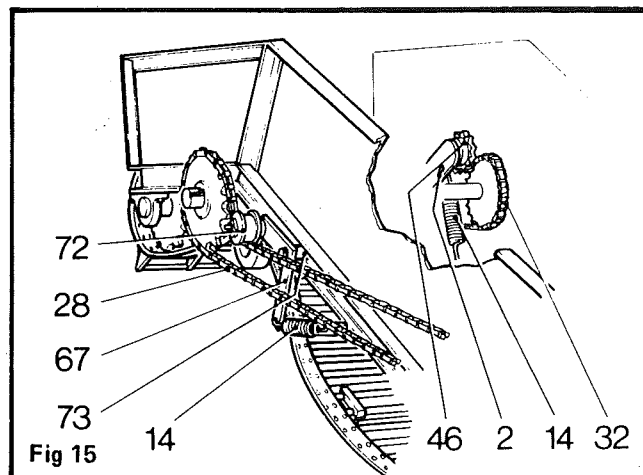


Fig 15

## REAR ELEVATOR

(Manual Adjusting)

To tension the rear elevator drive chain (Item 28 fig 16) loosen the nut and bolt (Items 197-200 fig 16) securing the chain tension block (Item 151 fig 16) to the chain tension bracket (Item 126 fig 16) and press the chain tension block (Item 151 fig 16) down onto the chain. Retighten the nut and bolt (Items 197-200 fig 16).

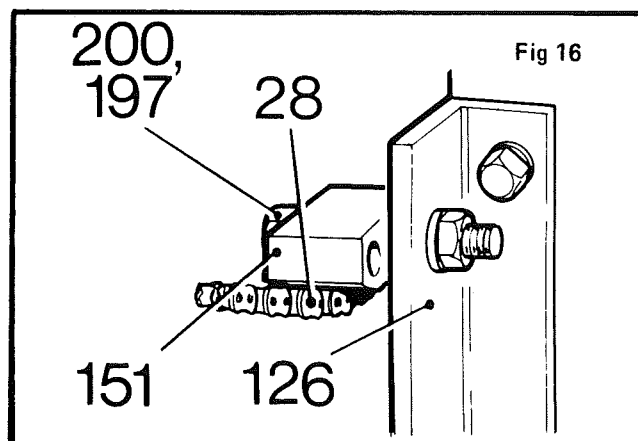
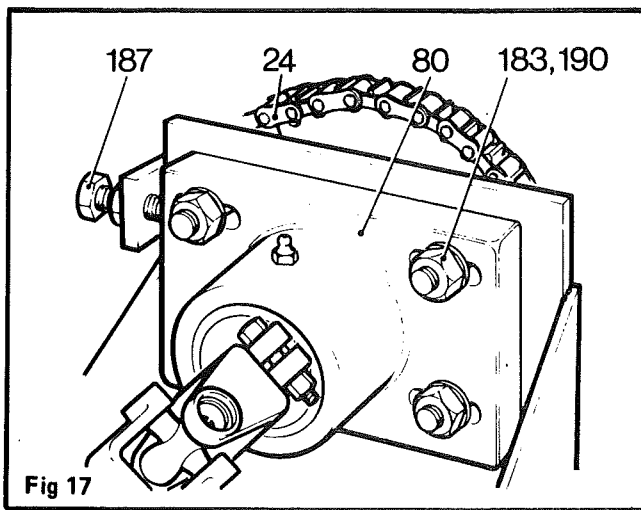


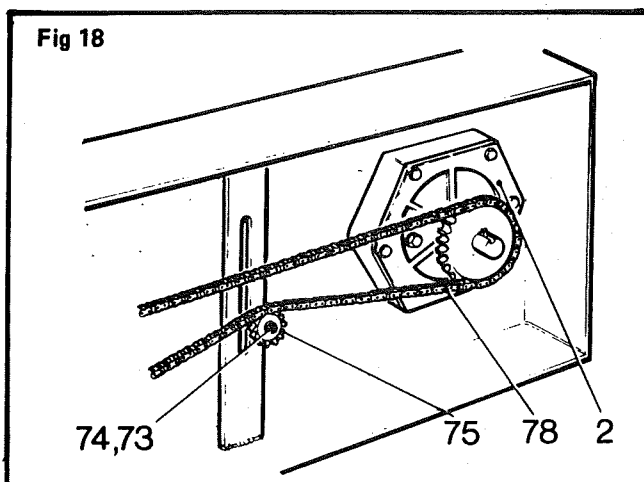
Fig 16



## MAIN DRIVE

(Manual Adjusting)

The main drive chain (Item 24 fig 17) is a 1 inch pitch chain and adjustment to the chain is provided by loosening the four nuts and bolts (Items 183-190 fig 17) in the bearing housing (Item 80 fig 17) and turning the adjusting screw (Item 187 fig 17) against the bearing housing (Item 80 fig 17) until the required tension is achieved. Retighten the four nuts and bolts (Items 183-190 fig 17).



## HYDRAULIC PUMP GEAR BOX DRIVE

(Manual Adjusting)

The drive chain (Item 78 fig 18) to the gear box (Item 2 fig 18) is tensioned by loosening the nut and bolt (Item 73-74 fig 18) securing the plastic sprocket (Item 75 fig 18) to the underside of the bottom run of the drive chain (Item 78 fig 18) and pulling the plastic sprocket (Item 75 fig 18) upwards. Retighten the nut and bolt. (Item 73-74 fig 18).

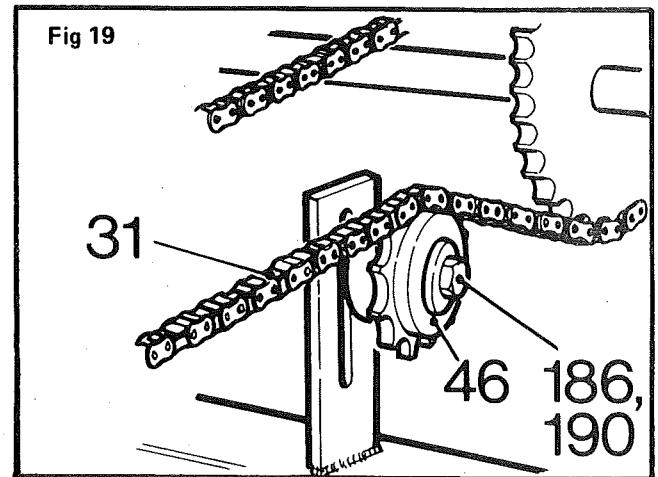
## TOP TRACK DRIVE

(Manual Adjusting)

Loosen the nut and bolts (Items 186-190 fig 19) securing the plastic sprocket (Item 46 fig 19) to the underside of the bottom run of the drive chain (Item 31 fig 19) and pull the plastic sprocket (Item 46 fig 19) upwards. Retighten the nut and bolt (Items 186-190 fig 19).

## SAFETY CLUTCHES

Each of the main drives are protected by a safety clutch fitted at the input end of the drive, the safety clutch is designed to allow the drive chains and the drive sprockets to turn independently of the elevators should any of the elevators become obstructed. The efficiency of the safety clutch is determined by the correct adjustment of the clutch springs (Items 41 fig 14). To adjust the clutch springs turn the lock nut (Item 190 fig 14) down the bolt (Item 185 fig 14) giving each nut an equal number of turns until all the looseness is taken up. If the clutch slips when loaded and in work tighten each clutch spring (Item 41 fig 14) by turning each lock nut (Item 190 fig 14) down each bolt (Item 185 fig 14) by one flat of the lock nut (Item 190 fig 14) at a time.



## LUBRICATION

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

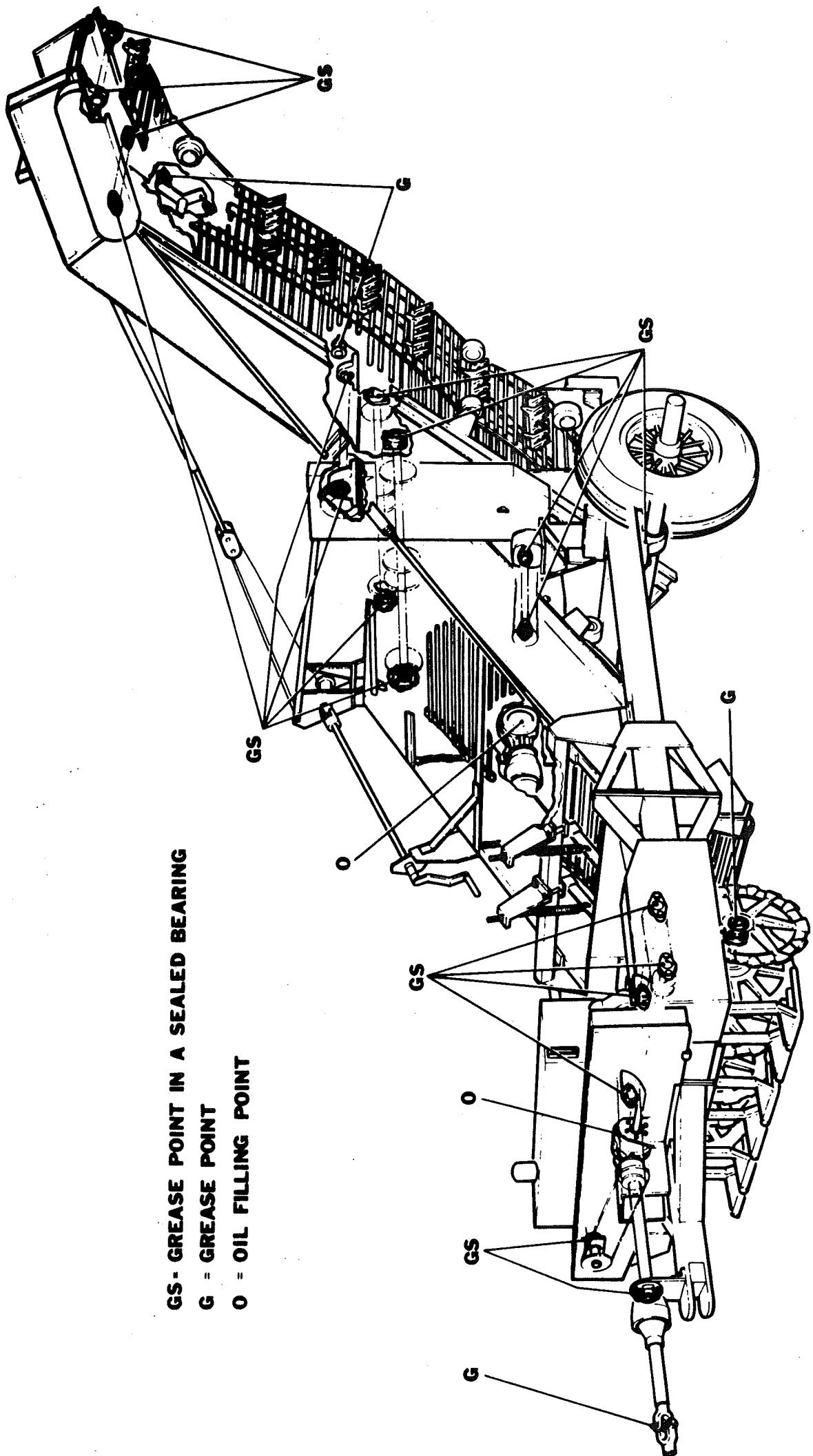
A general purpose grease should be used for the bearings and the universal coupling drives. The gear-box should be filled with a S.A.E. 90 oil to an inch below the gear-box filler hole. (Ref. 'O'). On Hiton boxes to the level plug.

Note that some of the bearings are sealed and pre-lubricated (Ref. 'G.S.') 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 all that is 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 safety clutches.

Grease points requiring the individual quantities of lubrication will be found in the lubrication points chart.



**GS- GREASE POINT IN A SEALED BEARING**

**G = GREASE POINT**

**O = OIL FILLING POINT**

## FAULTS, CAUSES AND CORRECTIONS

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 II 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
Sides 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.  Harvester not fitted central to tractor.	After openings have been made, set wheel to follow lifted row.  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.  Lifting wheels not working deep enough.  Guide skids set too deep, weight of harvester being carried on guide skids.  Driving too fast for crop conditions.	Increase distance between lifting wheels by adding spacers between the wheels and wheel hubs.  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.  Reduce the depth of the guide skids by adjusting to a lower hole in guide skid leg.  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.





FAULT	POSSIBLE CAUSE(S)	CORRECTION
<b>Beet losses.</b> <b>(Below ground)</b>	<p>Lifting wheel hub spindles bent.</p> <p>Lifting wheels incorrectly set to the beet rows.</p> <p>Inacurate steering.</p> <p>Driving too fast in relation to crop conditions.</p>	<p>Renew lifting wheel mounting.</p> <p>Check harvester in relation to beet rows.</p> <p>Steer correctly. Re-check guide skids.</p> <p>Reduce forward speed and check if results improve.</p>
<b>Beet losses.</b> <b>(Above ground)</b>	<p>Beet knocked out of the ground by lifting wheels.</p> <p>Beet lost between web links.</p> <p>Beet lost through the spokes of the lifting wheels.</p> <p>Beet rolling off the front of the main digger web.</p> <p>Too many 'up' links in trash extractor web.</p> <p>Trash extractor adjusted too flat.</p> <p>Beet lost when discharging into trailer.</p>	<p>Fit spacers between the lifting wheels and the lifting wheel hubs to widen the wheels.</p> <p>Fit alkathene tubes to web links to decrease the distance between the links.</p> <p>Fit lifting wheel "Spiders" designed to half the distance between the lifting wheel spokes.</p> <p>Check if Beet deflectors or baffle plates bent or lost or out of adjustment. Top track between lifting wheel set too low.</p> <p>Replace 'up' links with 'down' links.</p> <p>Adjust to vertical position.</p> <p>Ensure that trailer is central to the discharge elevator. Do not over fill the trailer.</p>
<b>Web links unhooking.</b>	<p>Web links badly worn.</p> <p>Web links too slack.</p>	<p>Renew links.</p> <p>Adjust by removing the required number of links to tension web.</p>



# DISCHARGE ELEVATOR

## (HYDRAULIC FOLDING)

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

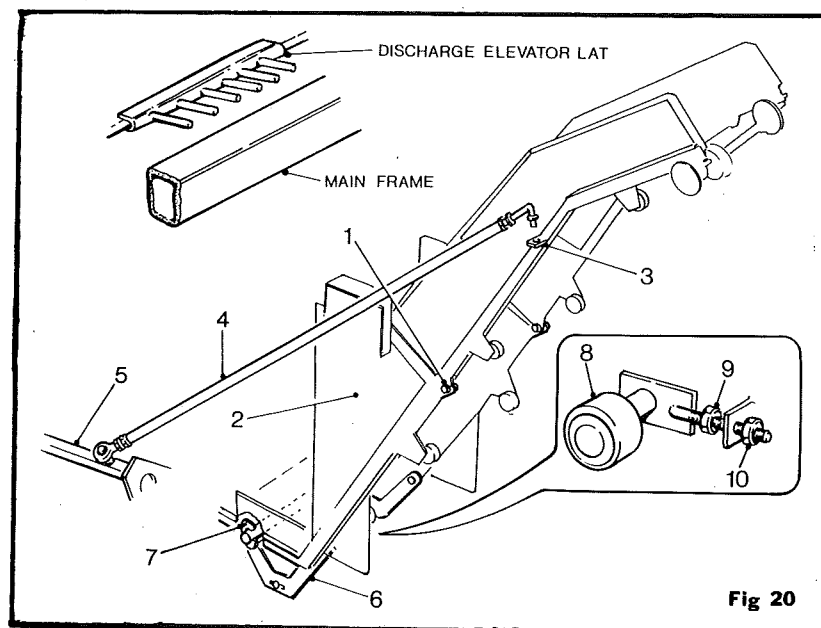
## UNFOLDING THE ELEVATOR FOR WORK

1. Remove the two securing bolts (item 1 fig. 20) from the discharge elevator bottom frame (item 2 fig. 20).
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. 20).
4. Position the elevator stay (item 4 fig. 20) by locating the hook end of stay in the lug (item 3 fig. 20) on the elevator and locate the bottom end of the stay over the pin on the main web support bar (item 5 fig. 20).
5. Swing the bottom roller support (item 6 fig. 20) into the working position and secure with the latch (item 7 fig. 20).

## FOLDING THE ELEVATOR FOR TRANSPORT

1. Before attempting to fold the elevator one of the lats on the web must be positioned just above the main frame as shown in fig. 20.
2. Release the bottom roller support (item 6 fig. 20) by pulling back the latch (item 7 fig. 20).
3. Remove the elevator stay (item 4 fig. 20).
4. Remove the two securing bolts (item 1 fig. 20).
5. Operate the ram to fold the elevator.

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 restricters removed.



## 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. 20) (a spanner can be located on the flats of the roller spindle) loosen the lock nut (item 9 fig. 20) and turn the adjusting nut (item 10 fig. 20) clockwise or anticlockwise to obtain the required tension. After the adjustment has been made tighten the lock nut (item 9 fig. 20) and resecure the bottom roller.

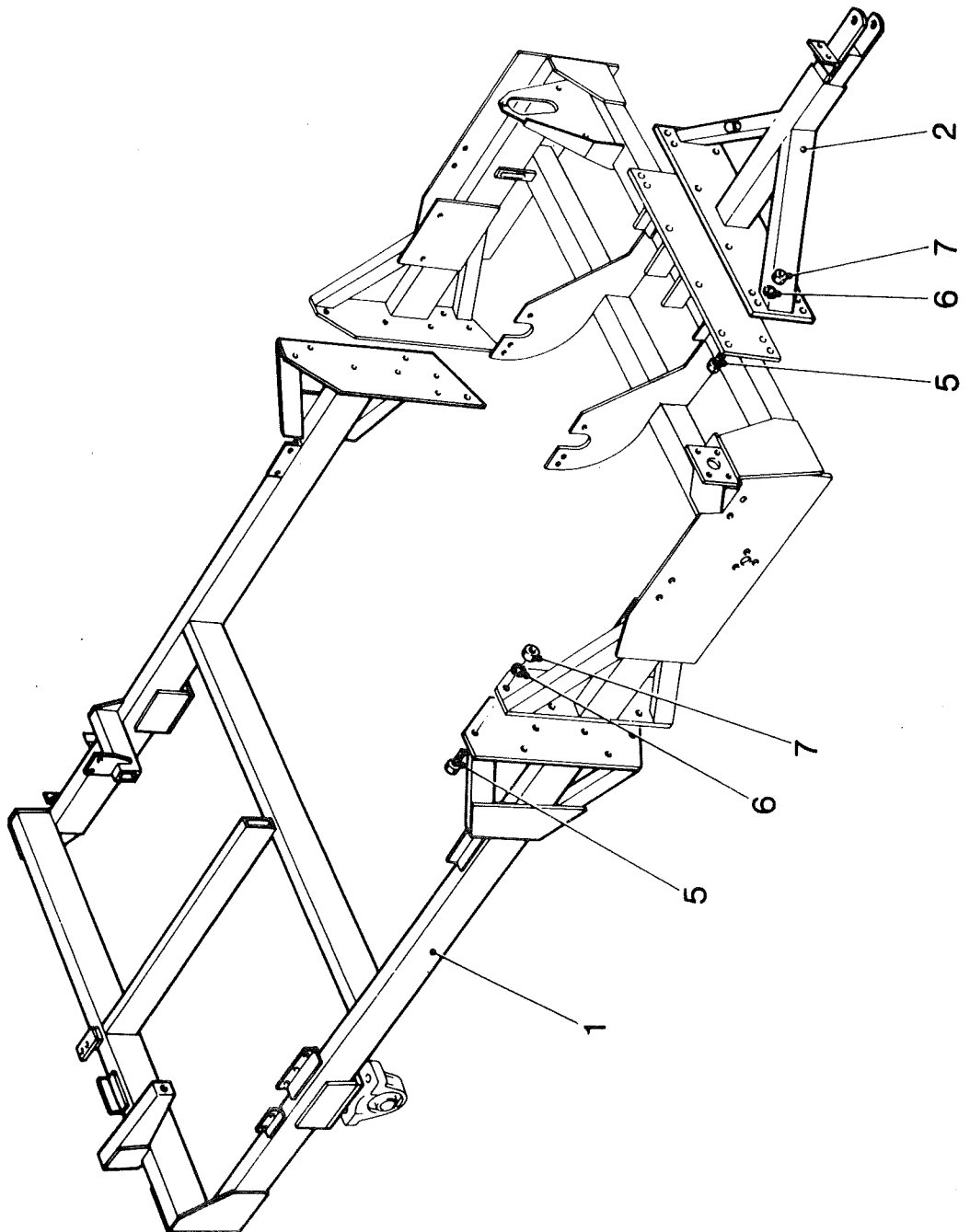


# **SECTION 2**

## **EXPLODED PARTS ILLUSTRATIONS**



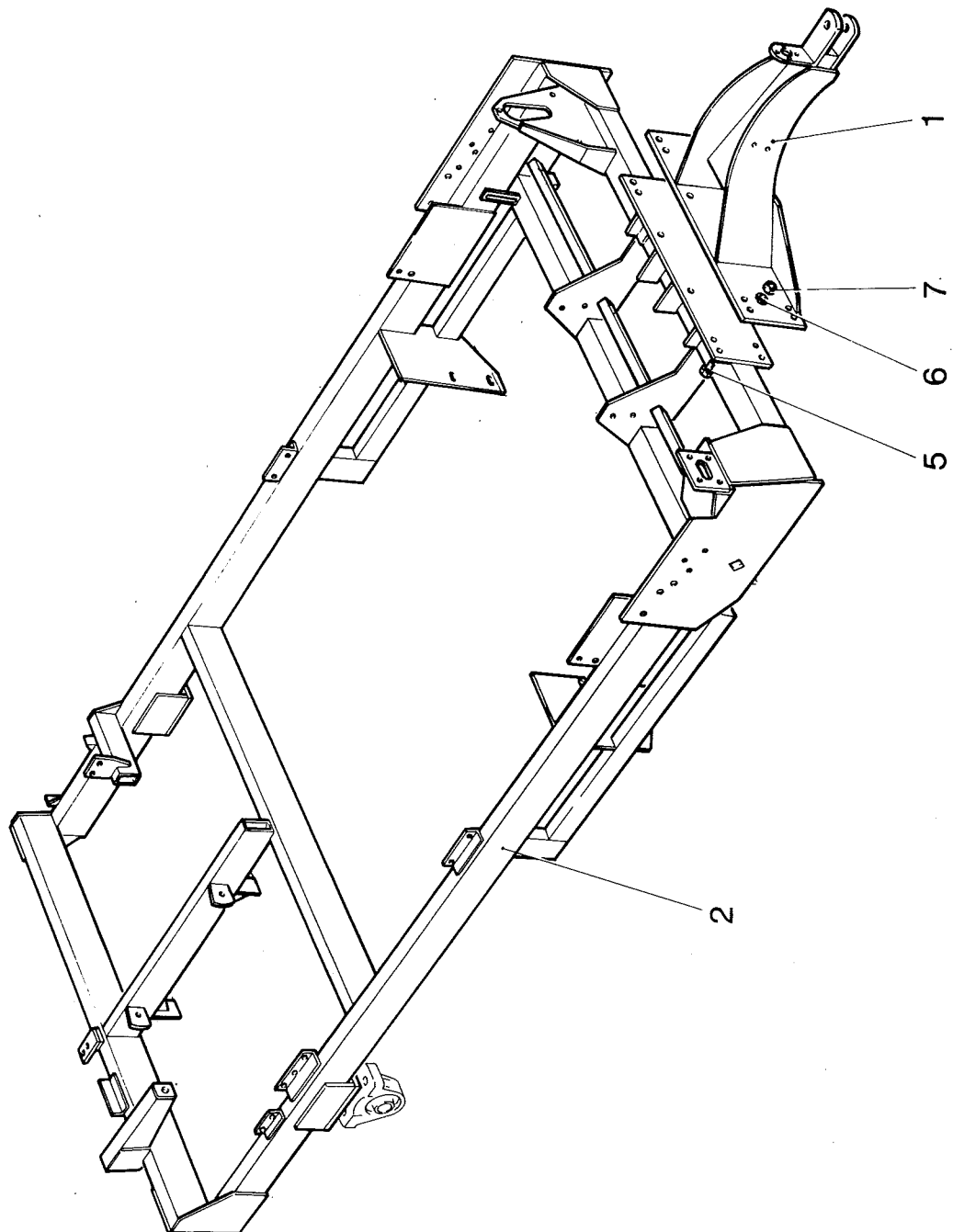
## Mainframe & Drawbar



Item No	Part No.	Description	Qty per Assy	Remarks
1	11010	Mainframe	1	
2	11015	Drawbar	1	Turbobeeet only
3	11300	Drawbar	1	TRH Mk. 2 only
4				
5		M16 x 40mm Hex Hd Bolt	22	
6		M16 Spring Washer	22	
7		M16 Nut	22	



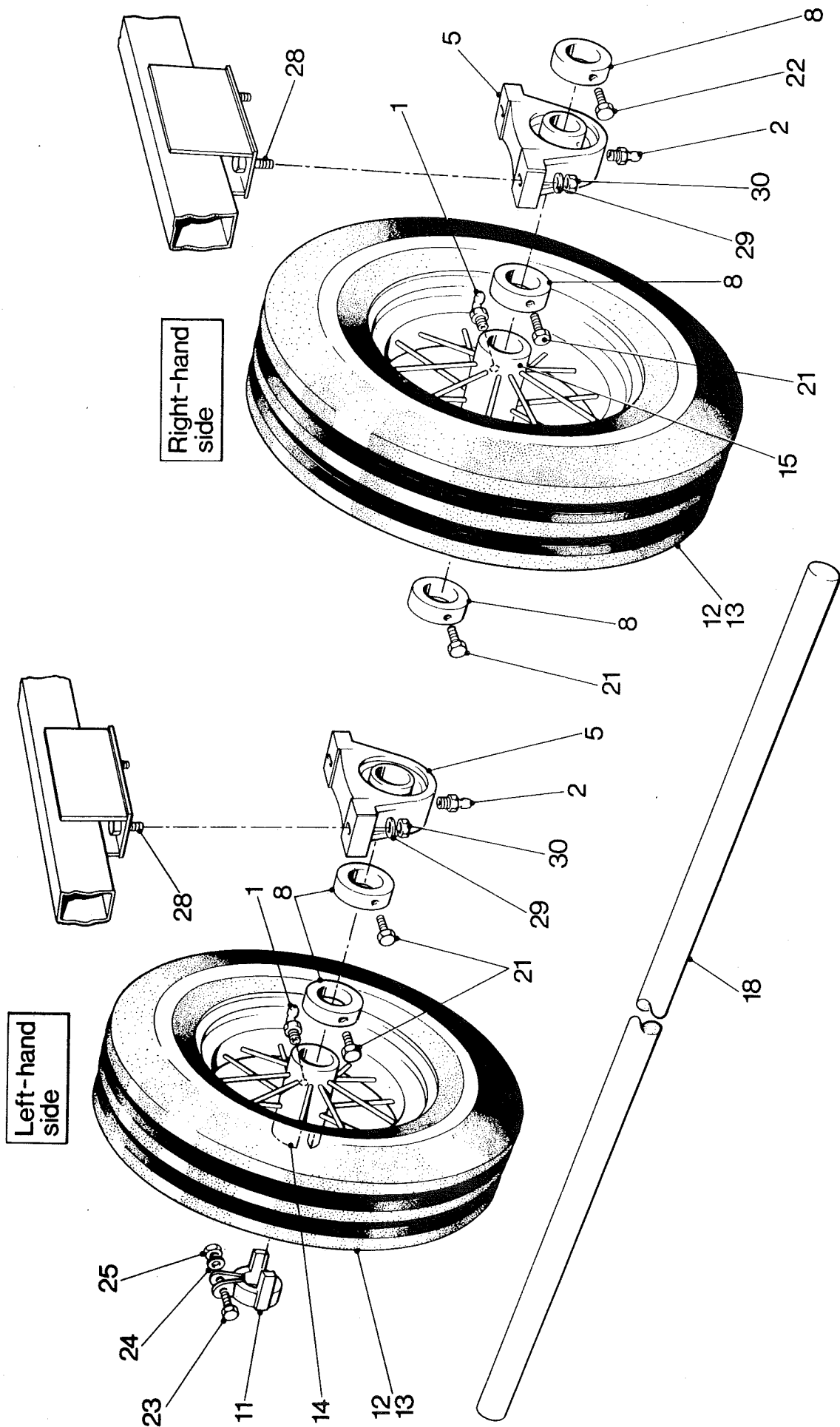
# Main Frame & Draw Bar From serial No. W134



## Main Frame from Serial No. W134

Item No	Part No.	Description	Qty per Assy	Remarks
1	11413 *	Swan Neck Drawbar	1	* Replaced by 11829 from Serial No. TRHY 1544 and Turbobeet Y228  FROM SERIAL NO. TURBOBEET - TB 277A. TRH MK2 - LL1584B. PART NO IS 11869.
2	11425	Main Frame	1	
3				
4				
5		M16 x 40mm Hex Hd Bolt	8	
6		M16 Spring Washer	8	
7		M16 Nut	8	

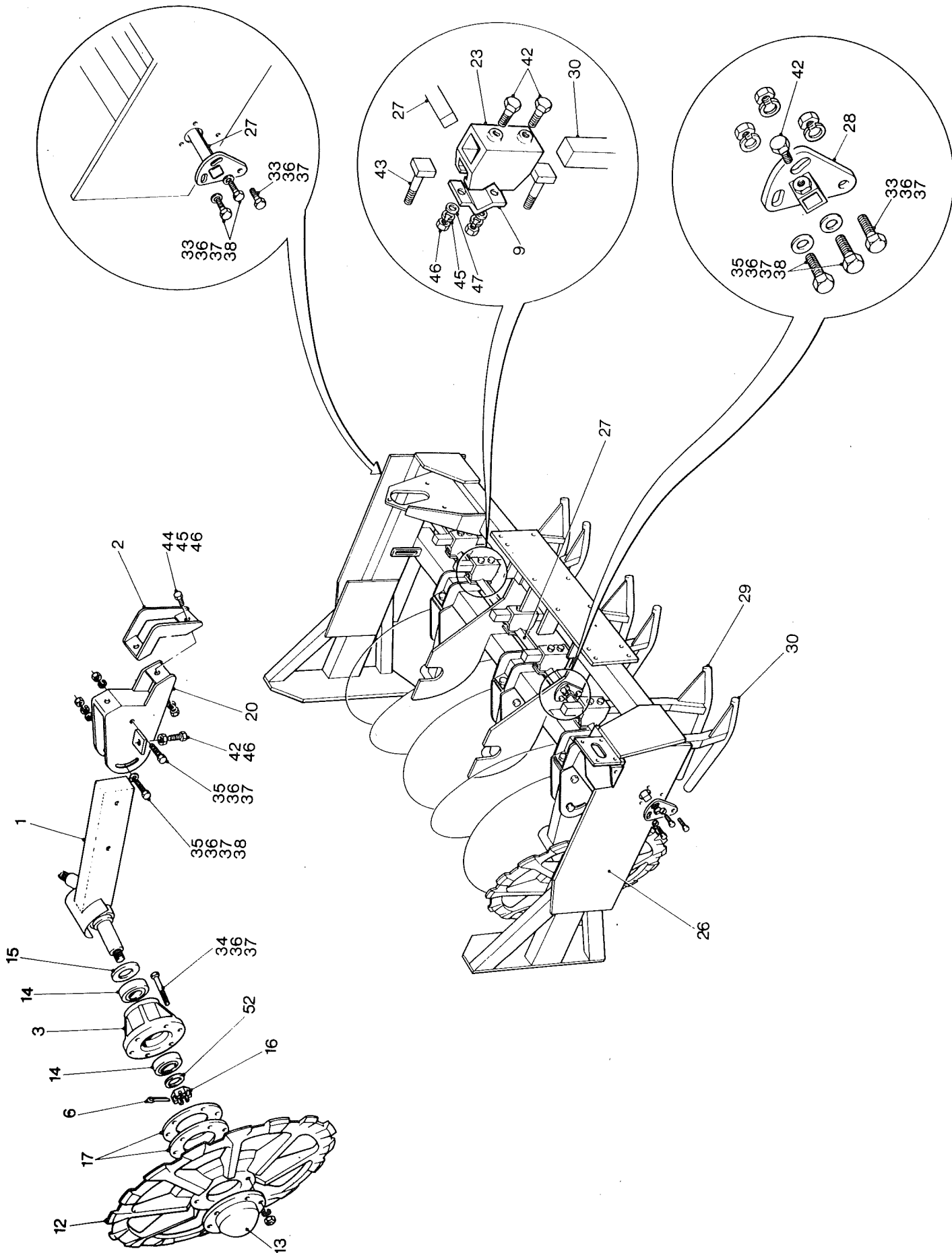
# Axle & Wheels



# Axle and Wheels

Item No	Part No.	Description	Qty per Assy	Remarks
1	GS 409	Grease Nipple	2	
2	GS 450	Grease Nipple	2	
3				
4				
5	SLG 2½in	Bearing	2	
6				
7				
8	TBM 11A	Collar 2½in Bore	5	
9				
10				
11	TBM 91	Axle Clamp	1	
12	TBM 92A	Tyre 8.25 x 20	2	
13	TBM 92B	Tube 8.25 x 20	2	
14	TBM 92C	Slotted Wheel	1	
15	TBM 93	Plain Wheel	1	
16				
17				
18	11173	Main Axle 2½in Dia	1	
19				
20				
21		M16 x 25mm Hex Hd Bolt	4	
22		M16 x 30mm Hex Hd Bolt	1	
23		M16 x 90mm Hex Hd Bolt	1	
24		M16 Spring Washer	1	
25		M16 Nut	1	
26				
27				
28		M18 x 55mm Hex Hd Bolt	4	
29		M18 Spring Washer	4	
30		M18 Nut	4	

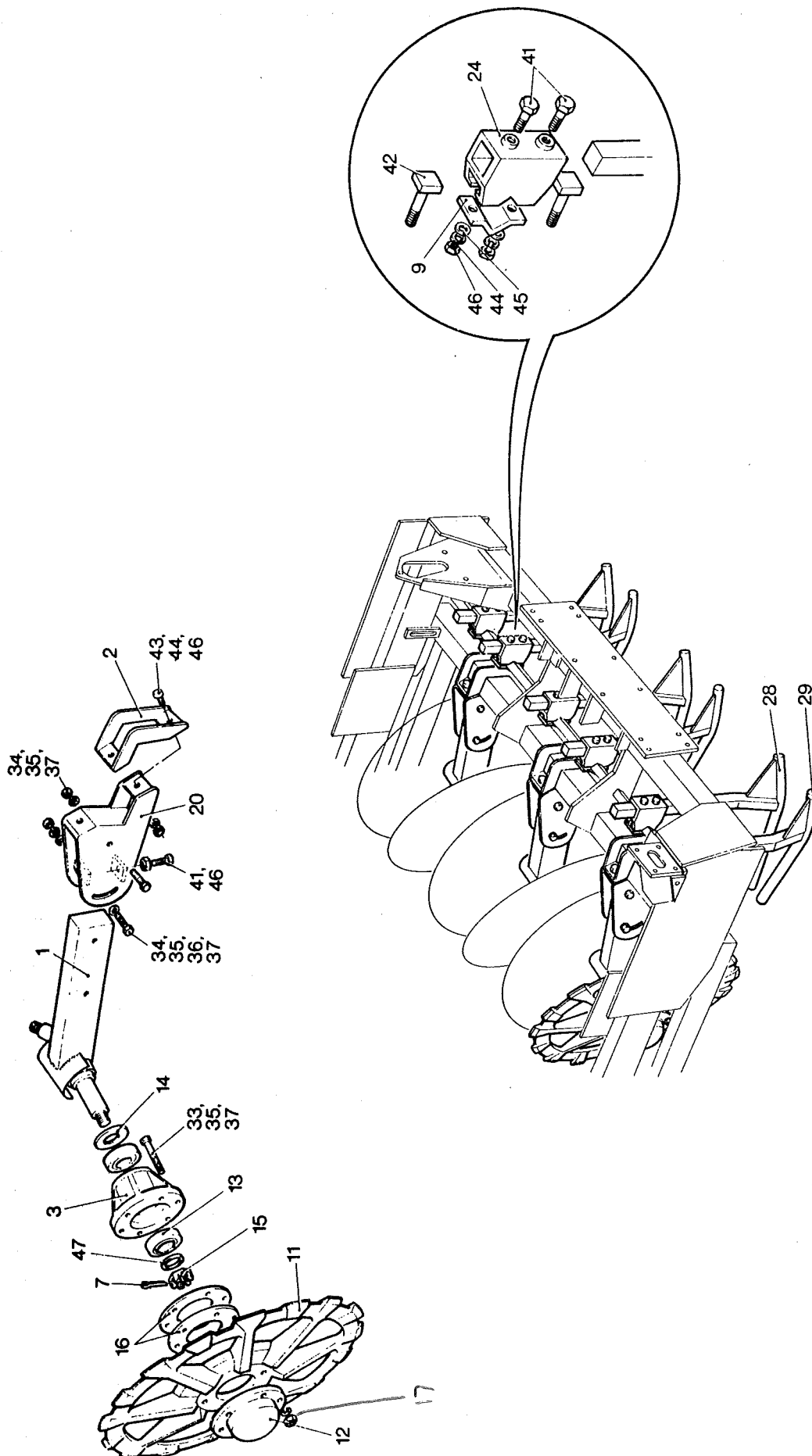
# Lifting Wheel Frame-Lifting Wheels-Skids



Lifting Wheel Frame – Lifting Wheels – Skids

Item No	Part No.	Description	Qty per Assy	Remarks
1	BMZ 3	Lifting Wheel Mounting	3	
2	BMZ 5A	Lifting Wheel Mounting		
		Bracket Cap	3	
3	BMZ 99	Lifting Wheel Hub	6	
4				
5				
6	GS 378	Split Pin	6	
7				
8				
9	H 74	Guide Skid Mounting Bracket		
		Cap	6	
10				
11				
12	RP 1B	Lifting Wheel	6	
13	RP 3	Hub Cap	6	
14	RP 4	Hub Bearing	12	
15	RP 5	Hub Oil Seal	6	
16	RP 6/1	Hub Nut	6	
17	RP 15	Hub Spacer	12	
18				
19				
20	SP236A	Lifting Wheel Mounting		
		Bracket	3	
21				
22				
23	TBMW 270	Guide Skid Bracket	6	
24				
25				
26	11011	Lifting Wheel Frame	1	
27	11016	Guide Skid Support Bar	1	
28	11022	Guide Skid Support Bar Clamp	3	
29	11075	Guide Skid LH	3	
30	11076	Guide Skid RH	3	
31				
32				
33		M12 x 40mm Hex Hd Bolt	12	
34		M12 x 50mm Hex Hd Bolt	36	
35		M12 x 105mm Hex Hd Bolt	6	
36		M12 Spring Washer	54	
37		M12 Nut	54	
38		M12 Plain Washer	14	
39				
40				
41				
42		M16 x 30mm Hex Hd Bolt	15	
43		M16 x 60mm Sq Hd Bolt	12	
44		M16 x 60mm Hex Hd Bolt	6	
45		M16 Spring Washer	18	
46		M16 Nut	21	
47		M16 Plain Washer	12	
48				
49		1 5/16in Plain Washer - Thick	6	

# Lifting Wheels-Guide Skids From Serial No. W134

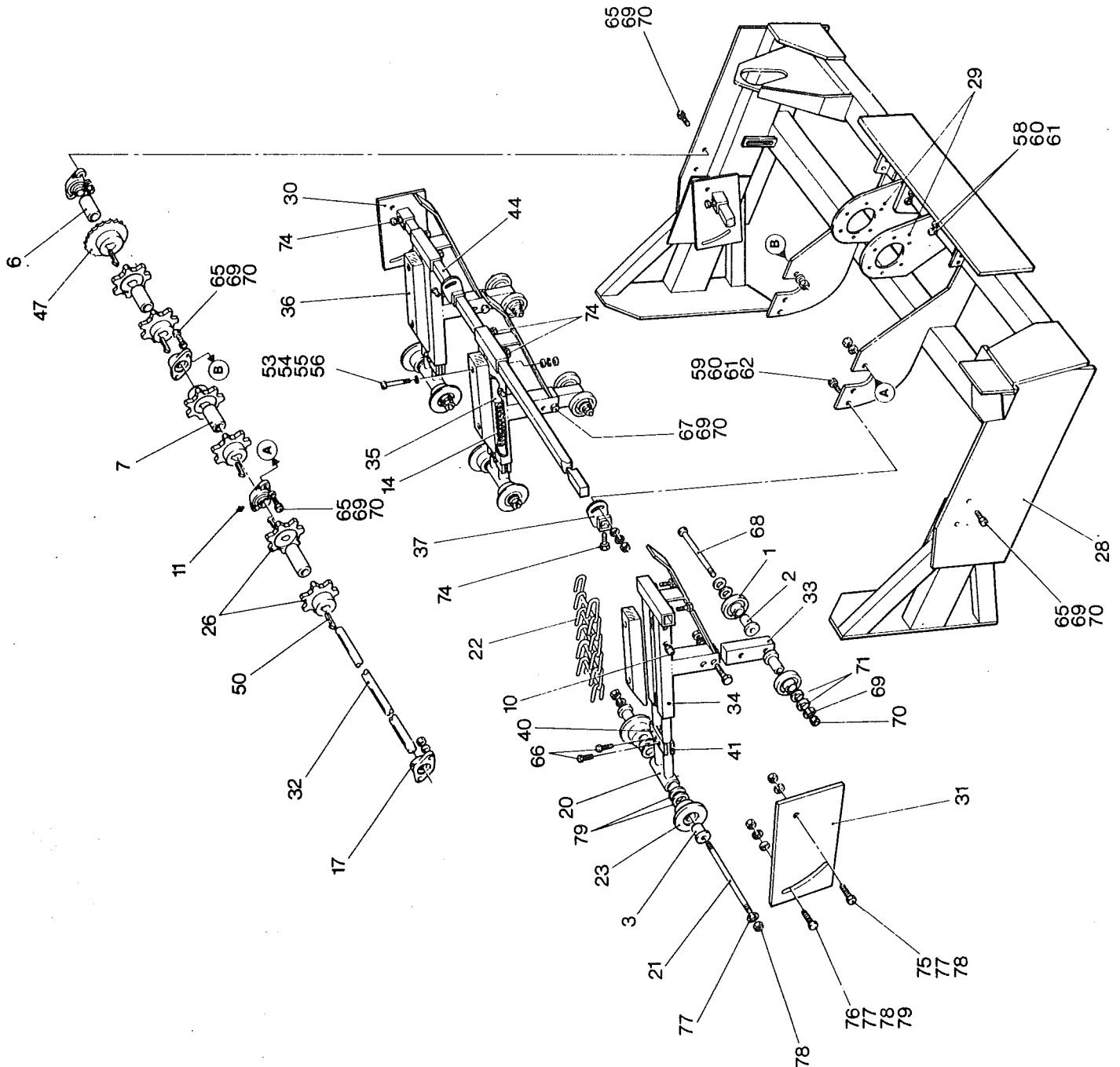


Lifting Wheels — Skids from Serial No. W134

Item No	Part No.	Description	Qty per Assy	Remarks
1	BMZ 3/A	Lifting Wheel Mounting	3	
2	BMZ 5/A	Lifting Wheel Mounting Bracket Cap	3	
3	BMZ 99	Lifting Wheel Hub	6	
4				
5				
6				
7	GS 378	Split Pin	6	
8				
9	H 74	Guide Skid Mounting Bracket Cap	6	
10				
11	RP 1B	Lifting Wheel	6	
12	RP 3	Hub Cap	6	
13	RP 4	Hub Bearing	12	
14	RP 5	Hub Oil Seal	6	
15	RP 6/I	Hub Nut	6	
16	RP 15	Hub Spacer	12	
17	RP 3 NM	HUB CAP NUT	36	
18				
19				
20	SP 236A	Lifting Wheel Mounting Bracket	3	
21				
22				
23				
24	TBMW 270	Guide Skid Bracket	6	
25				
26				
27				
28		Guide Skid LH	3	
29		Guide Skid RH	3	
30				
31				
32				
33		M12 x 50mm Hex Hd Bolt	36	
34		M12 x 105mm Hex Hd Bolt	6	
35		M12 Spring Washer	42	
36		M12 Plain Washer	3	
37		M12 Nut	42	
38				
39				
40				
41		M16 x 30mm Hex Hd Bolt	18	
42		M16 x 60mm Sq Hd Bolt	12	
43		M16 x 60mm Hex Hd Bolt	6	
44		M16 Spring Washer	18	
45		M16 Plain Washer	12	
46		M16 Nut	24	
47		1 " Plain Washer — Thick	6	



# Lifting Wheel Frame-Top Track

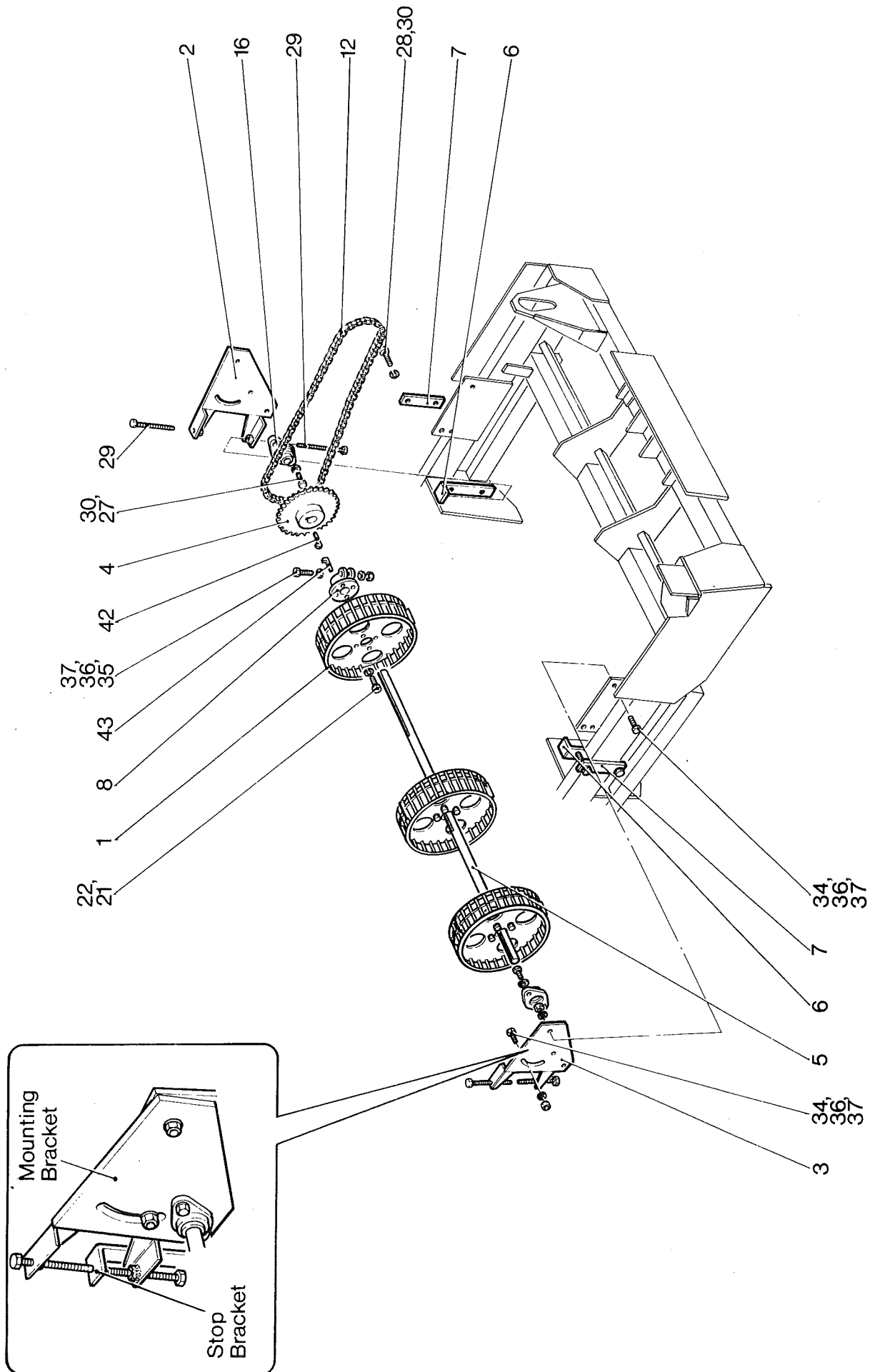


# Lifting Wheel Frame — Top Track

Item No	Part No.	Description	Qty per Assy	Remarks
1	BM 2	Roller	6	31 Links per Track
2	BM 2A	Roller Bush	6	
3	BM 125/1	Bush	6	
4				
5				
6	C 60	Spacer	1	
7	C 70	Spacer	3	
8				
9				
10	GS 412	Grease Nipple	3	
11	GS 450	Grease Nipple	4	
12				
13				
14	PS 165	Spring	6	
15				
16				
17	SFT 30	Bearing	4	
18				
19				
20	SPCL 21AM	Top Track Sliding Roller Mounting	3	
21	SPCL 23	Top Track Sliding Roller Mounting Tie Bar	3	
22	SPCL 55	Web Link	93	
23	SPCL 274	Flanged Roller	6	
24				
25				
26	TBMW 167	Split Sprocket	6	
27				
28	11011	Lifting Wheel Frame	RF	
29	11012	Gearbox Mounting Plate	2	
30	11025	Top Track Support Bar Bracket LH	1	
31	11026	Top Track Support Bar Bracket RH	1	
32	11044	Top Track Drive Shaft	1	
33	11079	Top Track Bottom Roller Bar	3	
34	11080	Top Track Body	3	
35	11081	Top Track Spring Spacer	6	
36	11082	Top Track Wooden Runner	3	
37	11085	Top Track Support Bar Clamp	2	
38				
39				
40	11155	Top Track Clamp Block - Top	3	
41	11156	Top Track Clamp Block - Bottom	3	
42				
43				
44	11254	Top Track Support Bar	1	
45				
46				
47	17076	Sprocket 29T x 0.75 in.	RF	
48				
49				
50		40mm Jib Head Key	7	
51				
52				
53		M8 x 50mm Hex Hd Bolt	6	
54		M8 Spring Washer	6	
55		M8 Nut	6	
56		M8 Plain Washer	12	
57				
58		M10 x 30mm Hex Hd Bolt	6	
59		M10 x 40mm Hex Hd Bolt	2	
60		M10 Spring Washer	8	
61		M10 Nut	8	
62		M10 Plain Washer	2	
63				
64				
65		M12 x 40mm Hex Hd Bolt	8	
66		M12 x 50mm Hex Hd Bolt	6	
67		M12 x 70mm Hex Hd Bolt	3	
68		M12 x 160mm Hex Hd Bolt	3	
69		M12 Spring Washer	17	
70		M12 Nut	17	
71		M12 Plain Washer	12	
72				
73				
74		M16 x 30mm Hex Hd Bolt	10	
75		M16 x 40mm Hex Hd Bolt	2	
76		M16 x 45mm Hex Hd Bolt	2	
77		M16 Spring Washer	10	
78		M16 Nut	10	
79		M16 Plain Washer	14	

(Page 12)  
 REPLACED BY 11856 FROM SERIAL  
 NO. TURBOBEET - TR 260A  
 TRH MK 2 - LL 1575A.

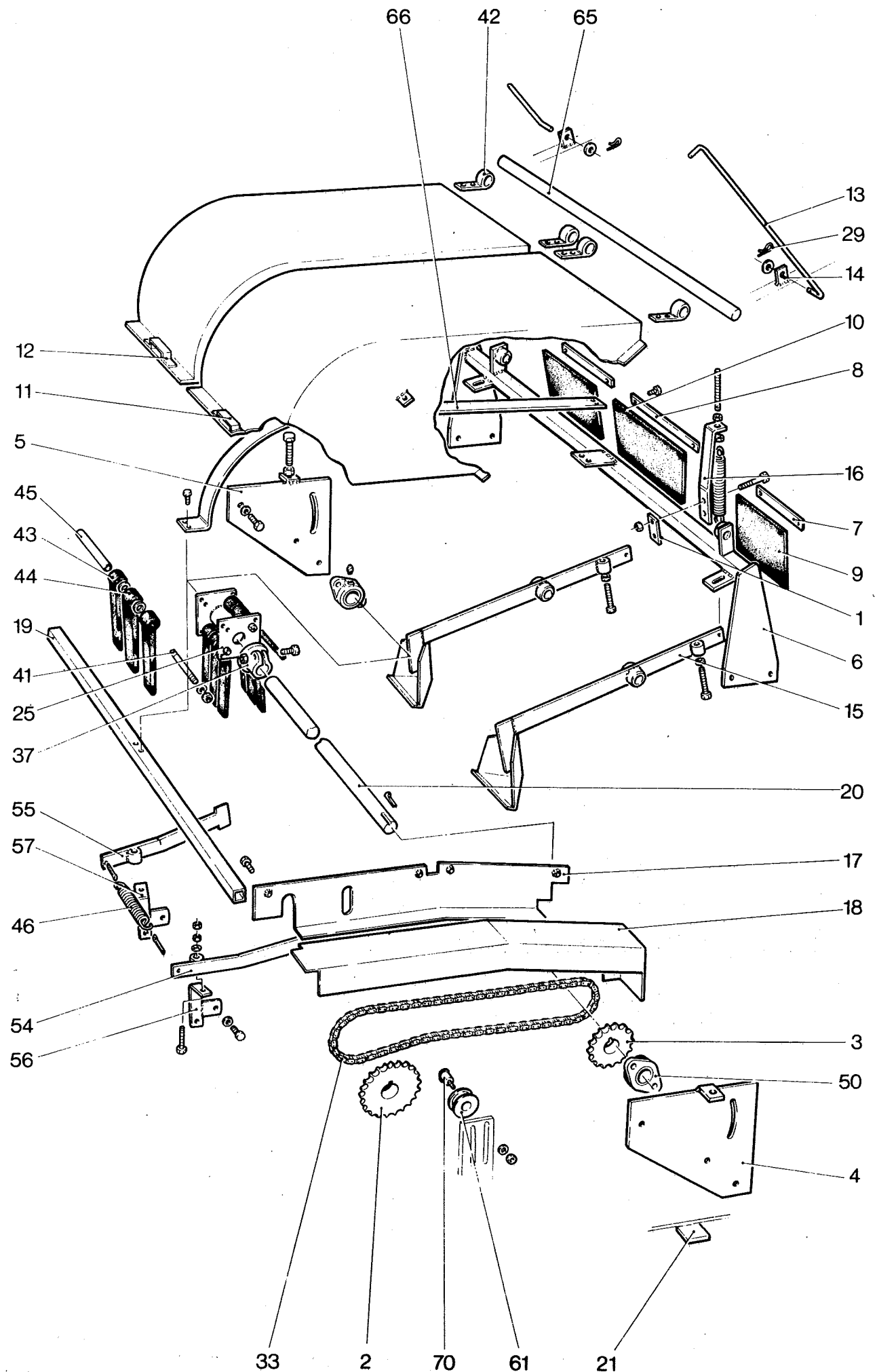
(Page 24)



## Cage Wheel from Serial No. W134

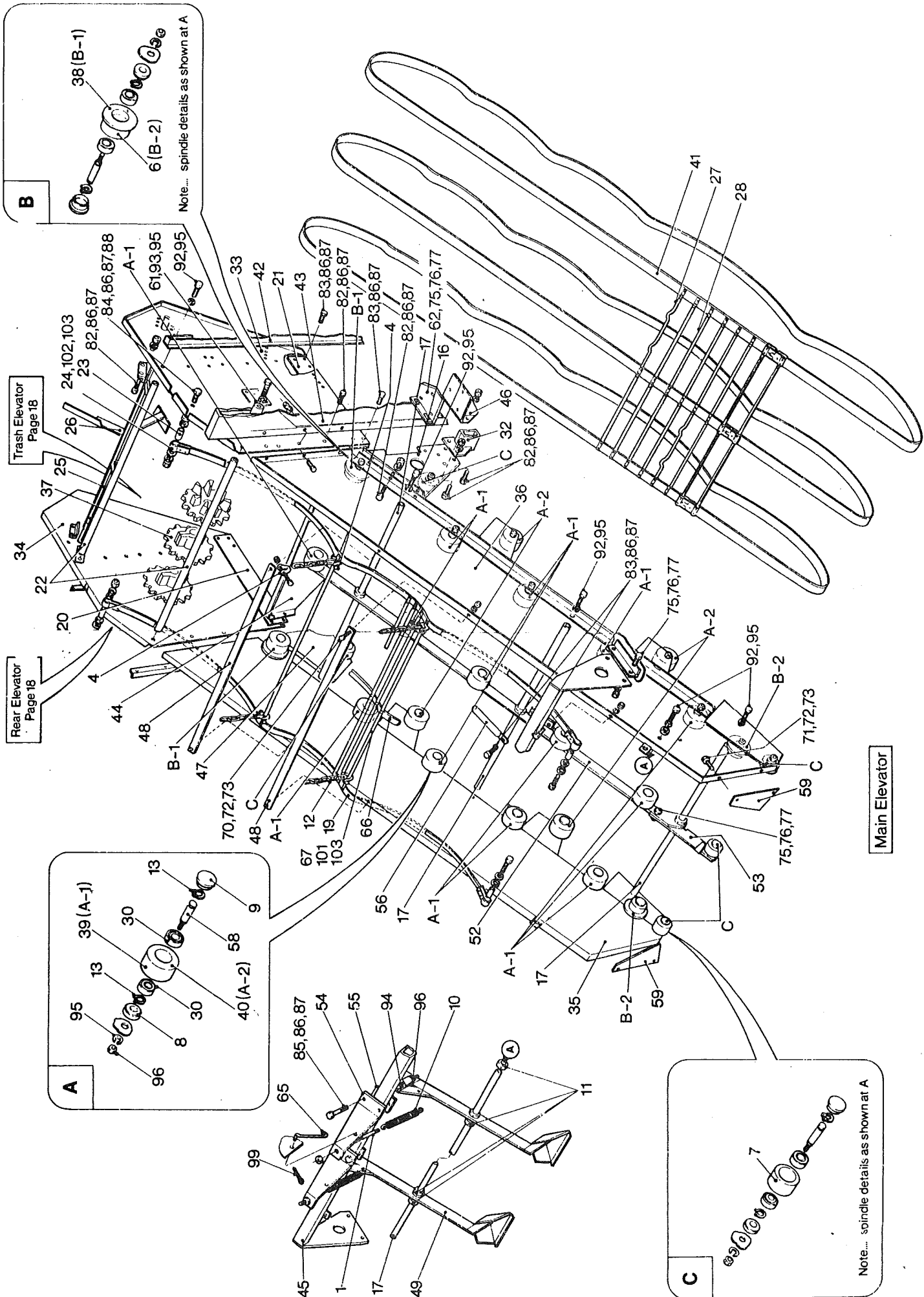
Item No	Part No.	Description	Qty per Assy	Remarks
1	<del>11377</del>	Cage Wheel NOW 11348	3	PRIOR TO SERIAL NO TB3 343C PART NO WAS 11377
2	11378	Mounting Bracket LH	1	
3	11379	Mounting Bracket RH	1	
4	11380	Sprocket 40T	1	
5	11383	Drive Shaft	1	
6	11384	Stop Bracket	2	
7	11385	Stop Bracket Clamp	2	
8	<del>11389</del>	Cage Wheel Clamp NOW 24243	3	PRIOR TO SERIAL NO TB3 343C PART NO WAS 11389
9				
10				
11				
12	PS 871/118	Chain	1	
13				
14				
15				
16	SFT 40	Bearing	2	
17				
18				
19				
20				
21		M10 x 40mm Hex Hd Setscrew	12	
22		M10 Spring Washer	12	
23				
24				
25				
26				
27		M12 x 25mm Hex Hd Setscrew	4	
28		M12 x 80mm Hex Hd Bolt	4	
29		M12 x 150mm Hex Hd Setscrew	4	
30		M12 Spring Washer	8	
31				
32				
33				
34		M16 x 30mm Hex Hd Setscrew	4	
35		M16 x 80mm Hex Hd Setscrew	3	
36		M16 Spring Washer		
37		M16 Nut		
38				
39				
40				
41				
42		Gib Head Key 8 x 7 x 45 Lg	1	
43		Gib Head Key 8 x 7 x 45 Lg	3	

# Paddle Wheels From Serial No. W134



# Paddle Wheels from Serial No. W134

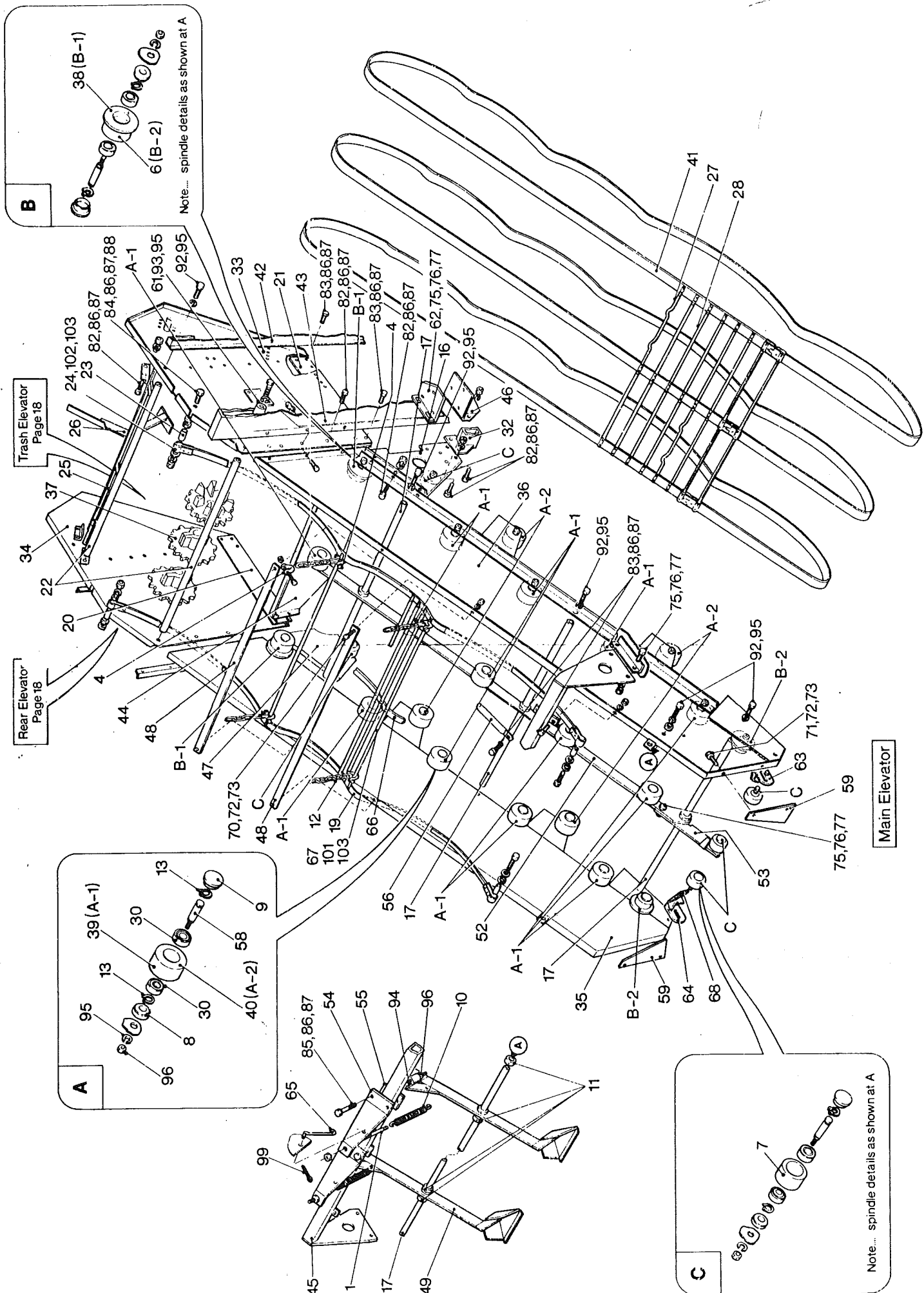
Item No	Part No.	Description	Qty per Assy	Remarks
1	11145	Clamp Plate	2	
2	11585	Sprocket 1" Pitch 24 Tooth	1	
3	11586	Sprocket 1" Pitch 12 Tooth	1	
4	11587	Mounting Bracket LH	1	
5	11588	Mounting Bracket RH	1	
6	11589	Main Web Support Bar	1	
7	11590	Flap Clamp Strip	2	
8	11591	Flap Clamp Strip	1	
9	11592	Rubber Flap	2	
10	11593	Rubber Flap	1	
11	11594	Canopy LH	1	
12	11595	Canopy RH	1	
13	11596	Canopy Hook	2	
14	11597	Hook Fixing Bracket	2	
15	11598	Baffle Plate	2	
16	11599	Spring Support Bracket	2	
17	11600	Guard Inner	1	
18	11601	Guard Outer	1	
19	11604	Canopy Support	1	
20	11609	Paddle Shaft	1	
21	11610	Mounting Bracket Stop Plate	2	
22				
23				
24				
25	BMZ 100M	Flail Mounting	3	
26				
27				
28				
29	H 105/A	'R' Clip	4	
30				
31				
32				
33	PS 429/93	Chain	1	
34				
35				
36				
37	RH 66M	Clamp	3	
38				
39				
40				
41	RP 24	Flail Tie	12	
42	RP 38	Hinge	4	
43	RP 42	Flail	24	
44	RP 43	Flail	12	
45	RP 68	Flail Tube	12	
46	RP 71	Spring	3	
47				
48				
49				
50	SFT 40A	Bearing	2	
51				
52				
53				
54	SP 247LH	Scraper	3	
55	SP 247RH	Scraper	3	
56	SP 248LH	Scraper Support Bracket	3	
57	SP 248RH	Scraper Support Bracket	3	
58				
59				
60				
61	PS 215	Jockey Roller	1	
62				
63				
64				
65	TRH 152	Canopy Hinge Tube	1	
66	TRH 185	Canopy Centre Support	1	
67				
68				
69				
70	PS 264M	Jockey Roller Shoulder Bolt	1	
71				
72				
73				
74				
75				
76				
77				
78				



# Conveyors — Main Elevators — Continental Web

Item No	Part No.	Description	Qty per Assy	Remarks
1	BM 82M	Spring Tensioner	2	
2				
3				
4	H 171	Cleaner Web Support Chain 'D' Shackles	8	
5				
6	PH 51 A	Plain Roller	2	
7	PH 77AR	Plain rubbered Roller	5	
8	PH 407	Inner Plastic Seal	26	
9	PH 408	Outer Plastic Seal	26	
10	PS 194	Spring	2	
11	PS 326M	Collar Locking 30mm Dia	4	
12	PS 519/6	Chain	4	
13	PS 843	Circlip	52	
14				
15				
16	TRH 29	Main Web Side Support Plate LH	1	
17	TRH 40	Main Web Tie Bar	4	
18				
19	TRH 102	Cleaner Web Belting	2	(1 pair)
20	TRH 108	Trash Extractor Roller Support RH	1	
21	TRH 109	Trash Extractor Roller Support LH	1	
22	TRH 117M	Main Web Top Tie Bar	2	
23	TRH 139M	Cleaner Web Pivot Shackle Spacer	4	
24	TRH 188	Cleaner Web Pivot Shackle	4	
25	TRH 201M	Trash Extractor Flap	1	
26	TRH 202	Trash Extractor Roller Support	RF	(Page 20)
27	TRH 248	Continental Web Link (Hoopd)	26	
28	TRH 255	Continental Web Link	132	
29				
30	6005 RS	Bearing	52	
31				
32	11010	Mainframe	RF	(Page 8)
33	11018	Trash Extractor Side Plate LH	1	
34	11019	Trash Extractor Side Plate RH	RF	(Page 20)
35	11020	Main Elevator Side Plate RH	1	
36	11021	Main Elevator Side Plate LH	1	
37	11024	Main Elevator Web Sprocket	3	
38	11032	Flanged Roller	2	
39	11033	Plain Roller	13	
40	11034	Plain Rubber Roller	4	
41	11036	Main Elevator Web	1	(Complete with items 27 and 28)
42	11039	Discharge Elevator Bottom Frame - Rear	RF	(Page 22)
43	11040	Discharge Elevator Bottom Frame - Front	RF	(Page 22)
44	11042	Rear Elevator Support Panel	RF	(Page 20)
45	11048	Main Web Support Bar	1	
46	11049	Gearbox Support Bracket	1	
47	11070	Main Web Side Support Plate RH	RF	(Page 20)
48	11077	Cleaner Web Chain Support Angle	2	
49	11097	Main Web Baffle Plate	2	
50				
51				
52	11135	Main Web Centre Support	1	
53	11138	Main Web Centre Support Extension	1	
54	11143	Baffle Plate Spring Support Plate	2	
55	11145	Baffle Plate Spring Support Plate Clamp	2	
56	11166	Discharge Elevator Stay (Bottom)	RF	(Page 22)
57				
58	11265	Roller Spindle	26	
59	11266	Beet Deflector	2	
60				
61	11301	Plastic Spacer	1	
62	11302	Gearbox Support Bracket	1	
63				
64				
65	11327	Hook (Canopy)	1	Not required after March 1981
66	11328	Centre Web Belting	1	
67	11329	Main Web Cleaner Rod	49	
68				
69				
70		M8 x 30mm Hex Hd Bolt	4	
71		M8 x 40mm Hex Hd Bolt	4	
72		M8 Spring Washer	8	
73		M8 Nut	8	
74				
75		M10 x 30mm Hex Hd Bolt	7	





# Conveyors – Main Elevators – Continental Web from Serial No. W134

Item No	Part No.	Description	Qty per Assy	Remarks
1	BM 82M	Spring Tensioner	2	
2				
3				
4	H 171	Cleaner Web Support Chain 'D' Shackles	8	
5				
6	PH 51 A	Plain Roller	2	
7	PH 77AR	Plain rubbered Roller	5	
8	PH 407	Inner Plastic Seal	26	
9	PH 408	Outer Plastic Seal	26	
10	PS 194	Spring	2	
11	PS 326M	Collar Locking 30mm Dia	4	
12	PS 519/6	Chain	4	
13	PS 843	Circlip	52	
14				
15				
16	TRH 29	Main Web Side Support Plate LH	1	
17	TRH 40	Main Web Tie Bar	4	
18				
19	TRH 102	Cleaner Web Belting	2	(1 pair)
20	TRH 108	Trash Extractor Roller Support RH	1	
21	TRH 109	Trash Extractor Roller Support LH	1	
22	TRH 117M	Main Web Top Tie Bar	2	
23	TRH 139M	Cleaner Web Pivot Shackle Spacer	4	
24	TRH 188	Cleaner Web Pivot Shackle	4	
25	TRH 201M	Trash Extractor Flap	1	
26	TRH 202	Trash Extractor Roller Support	RF	(Page 20)
27	TRH 248	Continental Web Link (Hoopd)	26	
28	TRH 255	Continental Web Link	132	
29				
30	6005 RS	Bearing	52	
31				
32	11010	Mainframe	RF	(Page 8)
33	11018	Trash Extractor Side Plate LH	1	
34	11019	Trash Extractor Side Plate RH	RF	(Page 20)
35	11020	Main Elevator Side Plate RH	1	
36	11021	Main Elevator Side Plate LH	1	
37	11024	Main Elevator Web Sprocket	3	
38	11032	Flanged Roller	2	
39	11033	Plain Roller	13	
40	11034	Plain Rubber Roller	4	
41	11036	Main Elevator Web	1	(Complete with items 27 and 28)
42	11039	Discharge Elevator Bottom Frame - Rear	RF	(Page 22)
43	11040	Discharge Elevator Bottom Frame - Front	RF	(Page 22)
44	11042	Rear Elevator Support Panel	RF	(Page 20)
45	11048	Main Web Support Bar	1	
46	11049	Gearbox Support Bracket	1	
47	11070	Main Web Side Support Plate RH	RF	(Page 20)
48	11077	Cleaner Web Chain Support Angle	2	
49	11097	Main Web Baffle Plate	2	
50				
51				
52	11135	Main Web Centre Support	1	
53	11138	Main Web Centre Support Extension	1	
54	11143	Baffle Plate Spring Support Plate	2	
55	11145	Baffle Plate Spring Support Plate Clamp	2	
56	11166	Discharge Elevator Stay (Bottom)	RF	(Page 22)
57				
58	11265	Roller Spindle	26	
59	11266	Beet Deflector	2	
60				
61	11301	Plastic Spacer	1	
62	11302	Gearbox Support Bracket	1	
63	11432	Stone Deflector LH	1	Used on machines after March 1981
64	11433	Stone Deflector RH	1	Used on machines after March 1981
65	11327	Hook (Canopy)	1	Not required after March 1981
66	11328	Centre Web Belting	1	
67	11329	Main Web Cleaner Rod	49	
68	11434	Deflector Flap	2	Used on machines after March 1981
69				
70		M8 x 30mm Hex Hd Bolt	4	
71		M8 x 40mm Hex Hd Bolt	4	
72		M8 Spring Washer	8	
73		M8 Nut	8	
74				
75		M10 x 30mm Hex Hd Bolt	7	

Conveyors — Main Elevator — Continental Web (Cont.)

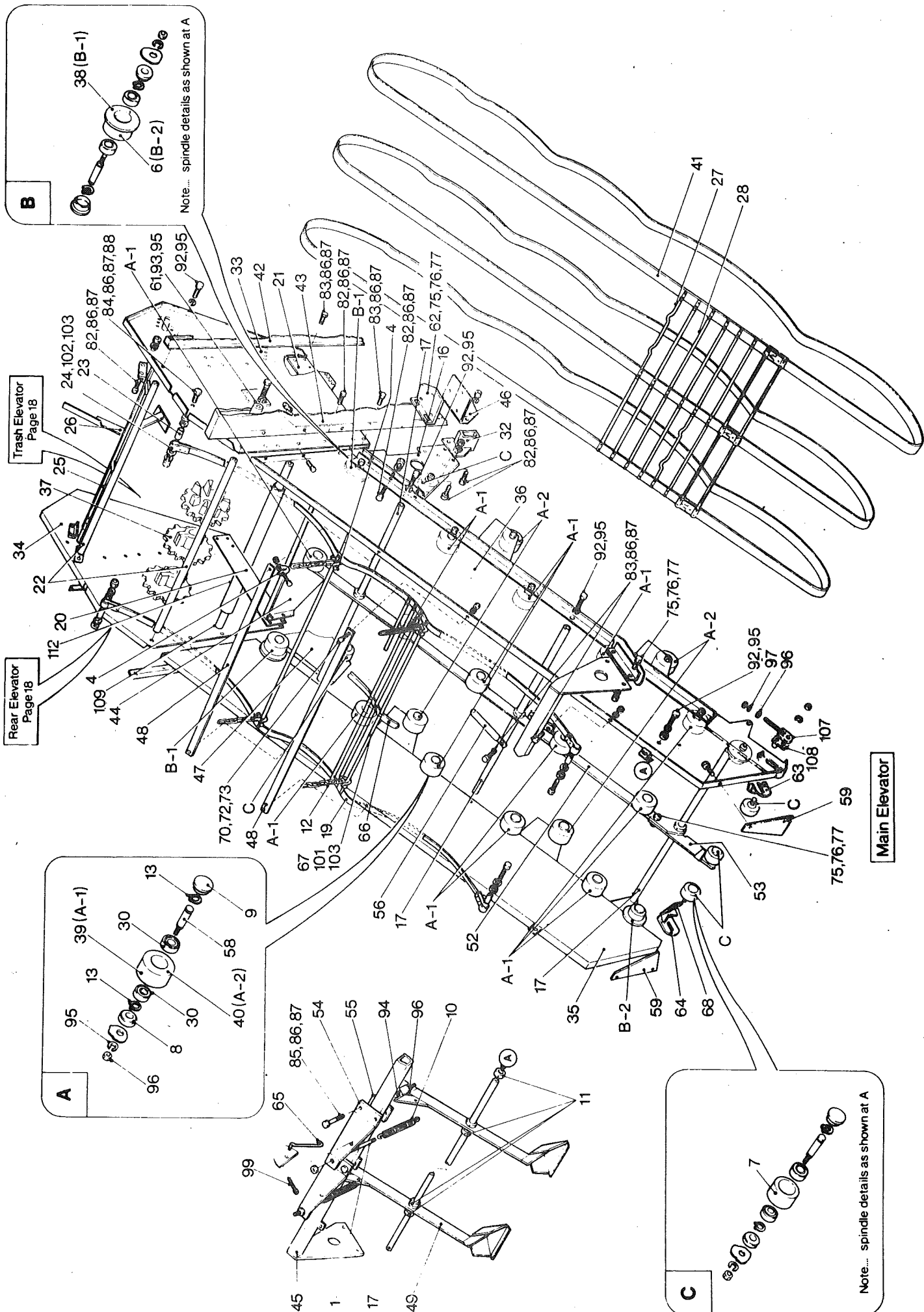
Item No	Part No.	Description	Qty per Assy	Remarks
76		M10 Spring Washer	7	
77		M10 Nut	7	
78		M10 Plain Washer	1	
79				
80				
81				
82		M12 x 30mm Hex Hd Bolt	17	
83		M12 x 40mm Hex Hd Bolt	6	
84		M12 x 90mm Hex Hd Bolt	4	
85		M12 x 100mm Hex Hd Bolt	4	
86		M12 Spring Washer	31	
87		M12 Nut	31	
88		M12 Plain Washer	12	
89				
90				
91				
92		M16 x 30mm Hex Hd Bolt	14	
93		M16 x 75mm Hex Hd Bolt	1	
94		M16 x 110mm Hex Hd Bolt	2	
95		M16 Spring Washer	41	
96		M16 Nut	26	
97				
98				
99		Split Pin ¼in Dia x 1in	1	
100				
101	2611-06-08	Fixing Pin	294	
102	2611-06-10	Fixing Pin	8	
103	2611-06-00	Fixing Collar	302	



## Conveyors — Main Elevator — Continental Web (Cont.)

Item No	Part No.	Description	Qty per Assy	Remarks
76		M10 Spring Washer	7	
77		M10 Nut	7	
78		M10 Plain Washer	1	
79				
80				
81				
82		M12 x 30mm Hex Hd Bolt	17	
83		M12 x 40mm Hex Hd Bolt	6	
84		M12 x 90mm Hex Hd Bolt	4	
85		M12 x 100mm Hex Hd Bolt	4	
86		M12 Spring Washer	31	
87		M12 Nut	31	
88		M12 Plain Washer	12	
89				
90				
91				
92		M16 x 30mm Hex Hd Bolt	14	
93		M16 x 75mm Hex Hd Bolt	1	
94		M16 x 110mm Hex Hd Bolt	2	
95		M16 Spring Washer	41	
96		M16 Nut	30	
97		M16 Plain Washer	2	
98				
99		Split Pin 1/4in Dia x 1in	1	
100				
101	2611-06-08	Fixing Pin	294	
102	2611-06-10	Fixing Pin	8	
103	2611-06-00	Fixing Collar	302	
104				
105				
106				
107	11638	Main Web Adjuster	2	
108	11640	Stone Deflector Stop Plate	2	
109	11812	Tie Bar	1	
110				
111				
112	D 1340	Plastic Tube	1	





# Conveyors – Main Elevators – Continental Web

Item No	Part No.	Description	Qty per Assy	Remarks
1	BM 82M	Spring Tensioner	2	
2				
3				
4	H 171	Cleaner Web Support Chain 'D' Shackles	8	
5				
6	PH 51 A	Plain Roller	2	
7	PH 77AR	Plain rubbered Roller	5	
8	PH 407	Inner Plastic Seal	26	
9	PH 408	Outer Plastic Seal	26	
10	PS 194	Spring	2	
11	PS 326M	Collar Locking 30mm Dia	4	
12	PS 519/6	Chain	4	
13	PS 843	Circlip	52	
14				
15				
16	TRH 29	Main Web Side Support Plate LH	1	
17	TRH 40	Main Web Tie Bar	4	
18				
19	TRH 102	Cleaner Web Belting	2	(1 pair)
20	TRH 108	Trash Extractor Roller Support RH	1	
21	11811	Trash Extractor Roller Support LH	1	
22	TRH 117M	Main Web Top Tie Bar	2	
23	TRH 139M	Cleaner Web Pivot Shackle Spacer	4	
24	TRH 188	Cleaner Web Pivot Shackle	4	
25	TRH 201M	Trash Extractor Flap	1	
26	TRH 202	Trash Extractor Roller Support	RF	(Page 20)
27	TRH 248	Continental Web Link (Hoopd)	26	
28	TRH 255	Continental Web Link	132	
29				
30	6005 RS	Bearing	52	
31				
32	11010	Mainframe	RF	(Page 8)
33	11810	Trash Extractor Side Plate LH	1	
34	11019	Trash Extractor Side Plate RH	RF	(Page 20)
35	11020	Main Elevator Side Plate RH	1	
36	11021	Main Elevator Side Plate LH	1	
37	11024	Main Elevator Web Sprocket	3	
38	11032	Flanged Roller	2	
39	11033	Plain Roller	13	
40	11034	Plain Rubber Roller	4	
41	11036	Main Elevator Web	1	(Complete with items 27 and 28)
42	11750	Discharge Elevator Bottom Frame - Rear	RF	(Page 22)
43	11751	Discharge Elevator Bottom Frame - Front	RF	(Page 22)
44	11042	Rear Elevator Support Panel	RF	(Page 20)
45	11048	Main Web Support Bar	1	
46	11049	Gearbox Support Bracket	1	
47	11070	Main Web Side Support Plate RH	RF	(Page 20)
48	11077	Cleaner Web Chain Support Angle	2	
49	11097	Main Web Baffle Plate	2	
50				
51				
52	11135	Main Web Centre Support	1	
53	11138	Main Web Centre Support Extension	1	
54	11143	Baffle Plate Spring Support Plate	2	
55	11145	Baffle Plate Spring Support Plate Clamp	2	
56	11166	Discharge Elevator Stay (Bottom)	RF	(Page 22)
57				
58	11265	Roller Spindle	26	
59	11266	Beet Deflector	2	
60				
61	11301	Plastic Spacer	1	
62	11302	Gearbox Support Bracket	1	
63	11642	Stone Deflector LH	1	Used on machines after March 1981
64	11641	Stone Deflector RH	1	Used on machines after March 1981
65	11327	Hook (Canopy)	1	Not required after March 1981
66	11328	Centre Web Belting	1	
67	11329	Main Web Cleaner Rod	49	
68	11434	Deflector Flap	2	Used on machines after March 1981
69				
70		M8 x 30mm Hex Hd Bolt	4	
71		M8 x 40mm Hex Hd Bolt	4	
72		M8 Spring Washer	8	
73		M8 Nut	8	
74				
75		M10 x 30mm Hex Hd Bolt	7	



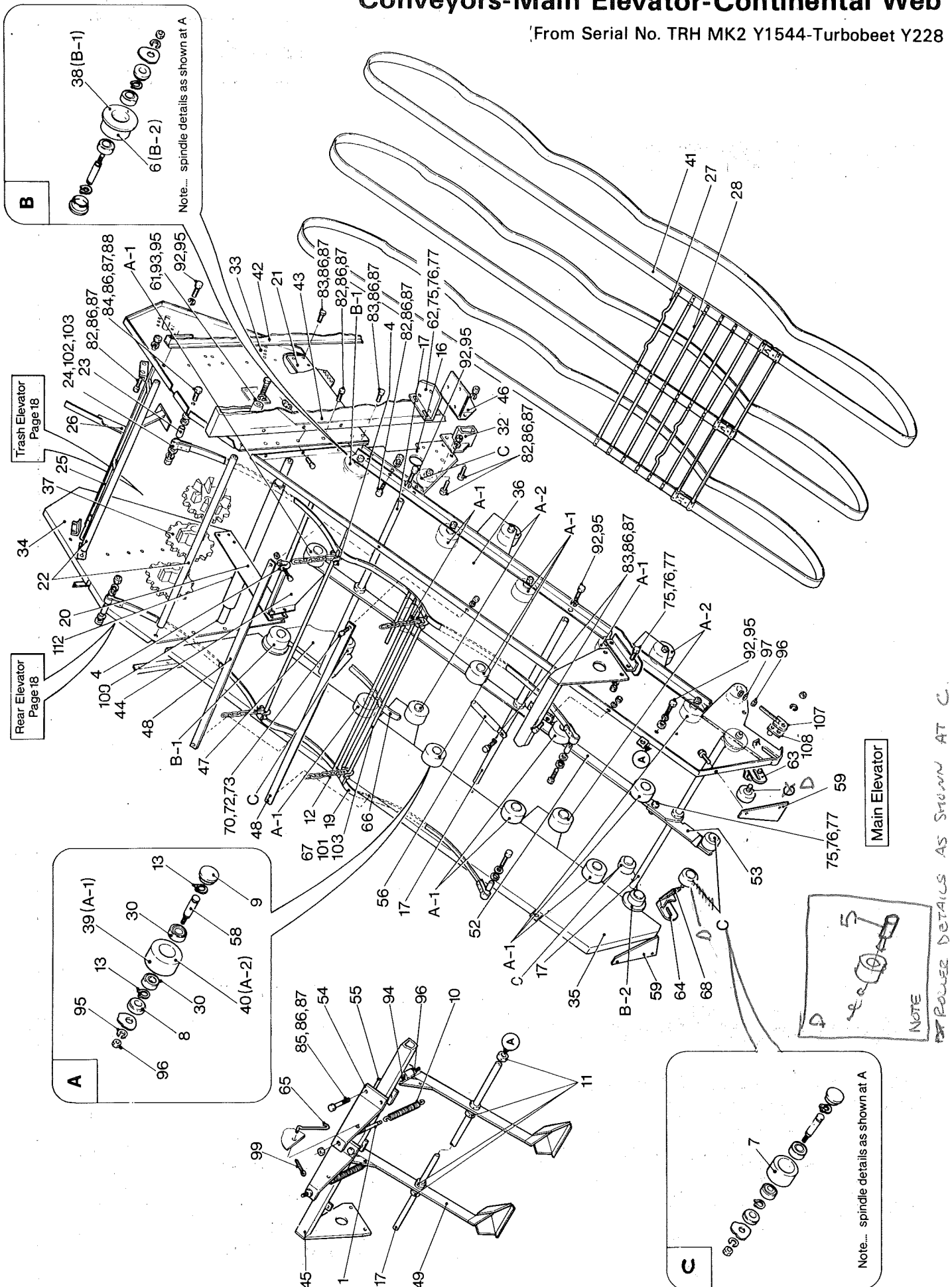
Conveyors – Main Elevator – Continental Web (Cont.)

Item No	Part No.	Description	Qty per Assy	Remarks
76		M10 Spring Washer	7	
77		M10 Nut	7	
78		M10 Plain Washer	1	
79				
80				
81				
82		M12 x 30mm Hex Hd Bolt	17	
83		M12 x 40mm Hex Hd Bolt	6	
84		M12 x 90mm Hex Hd Bolt	4	
85		M12 x 100mm Hex Hd Bolt	4	
86		M12 Spring Washer	31	
87		M12 Nut	31	
88		M12 Plain Washer	12	
89				
90				
91				
92		M16 x 30mm Hex Hd Bolt	14	
93		M16 x 75mm Hex Hd Bolt	1	
94		M16 x 110mm Hex Hd Bolt	2	
95		M16 Spring Washer	41	
96		M16 Nut	30	
97		M16 Plain Washer	2	
98				
99		Split Pin 1/4in Dia x 1in	1	
100				
101	2611-06-08	Fixing Pin	294	
102	2611-06-10	Fixing Pin	8	
103	2611-06-00	Fixing Collar	302	
104				
105				
106				
107	11638	Main Web Adjuster	2	
108	11640	Stone Deflector Stop Plate	2	
109	11812	Tie Bar	1	
110				
111				
112	D 1340	Plastic Tube	1	



# Conveyors-Main Elevator-Continental Web

From Serial No. TRH MK2 Y1544-Turbobeet Y228

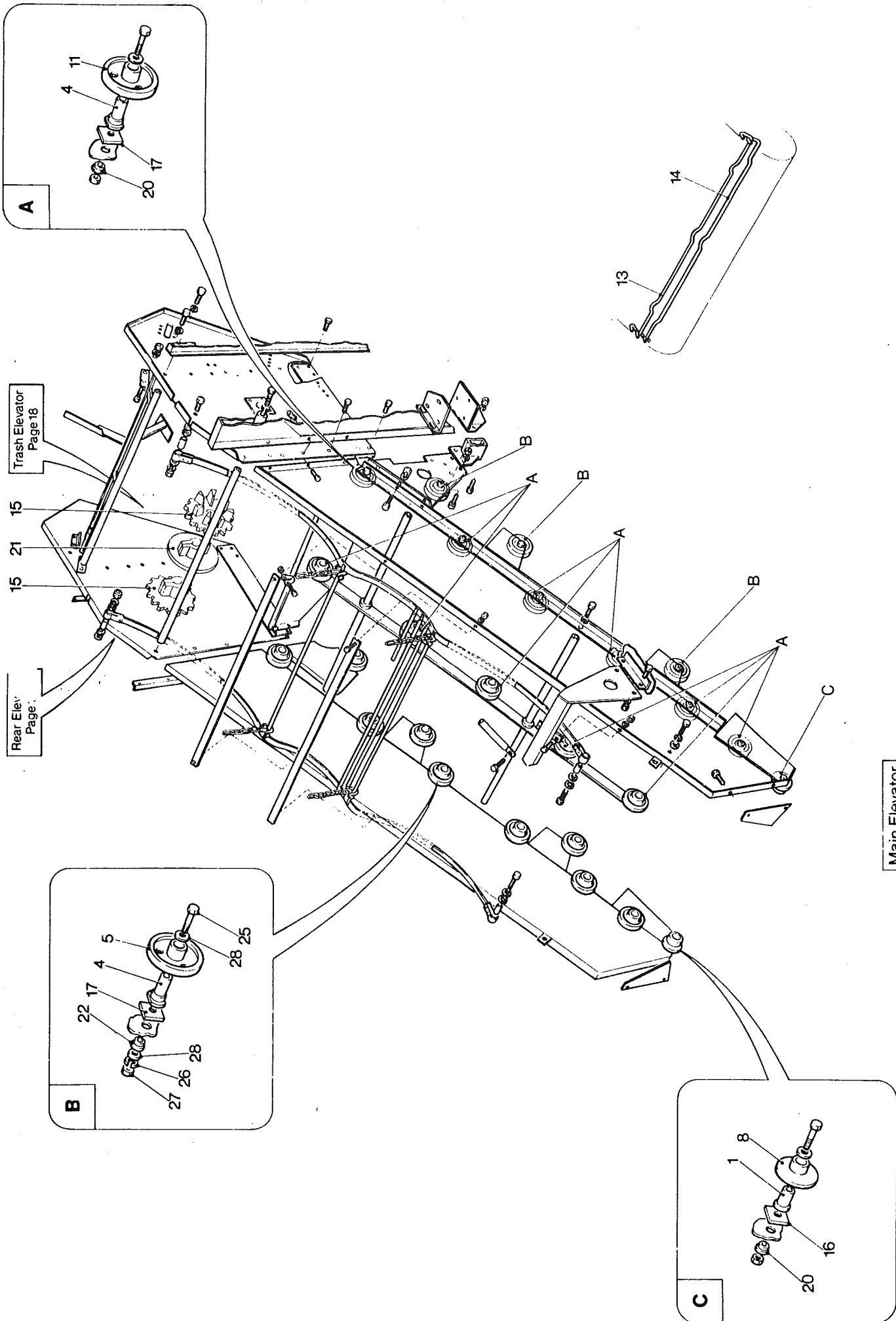


Item No	Part No.	Description	Qty per Assy	Remarks
1	BM 82M	Spring Tensioner	2	
2				
3				
4	H 171	Cleaner Web Support		
		Chain 'D' Shackles	8	
5	PH 406 AM	SPINDLE	2	
6	PH 51 A	Plain Roller	2	
7	PH 77AR	Plain rubbered Roller	7	
8	PH 407	Inner Plastic Seal	28	
9	PH 408	Outer Plastic Seal	28	
10	PS 194	Spring	2	
11	PS 326M	Collar Locking 30mm Dia	4	
12	PS 519/6	Chain	4	
13	PS 843	Circlip	56	
14				
15				
16	TRH 29	Main Web Side Support Plate LH	1	
17	TRH 40	Main Web Tie Bar	4	
18				
19	TRH 102	Cleaner Web Belting	2	(1 pair)
20	TRH 108	Trash Extractor Roller Support RH	1	
21	11811	Trash Extractor Roller Support LH	1	
22	TRH 117M	Main Web Top Tie Bar	2	
23	TRH 139M	Cleaner Web Pivot Shackle Spacer	4	
24	TRH 188	Cleaner Web Pivot Shackle	4	
25	TRH 201M	Trash Extractor Flap	1	
26	TRH 202	Trash Extractor Roller Support	RF	(Page 20)
27	TRH 248	Continental Web Link (Hooped)	26	
28	TRH 255	Continental Web Link	132	
29				
30	6005 RS	Bearing	56	
31				
32	11010	Mainframe	RF	(Page 8)
33	11810	Trash Extractor Side Plate LH	1	
34	11019	Trash Extractor Side Plate RH	RF	(Page 20)
35	11020	Main Elevator Side Plate RH	1	
36	11021	Main Elevator Side Plate LH	1	
37	11024	Main Elevator Web Sprocket	3	
38	11032	Flanged Roller	2	
39	11033	Plain Roller	13	
40	11034	Plain Rubber Roller	4	
41	11036	Main Elevator Web	1	(Complete with items 27 and 28)
42	11750	Discharge Elevator Bottom		
		Frame - Rear	RF	(Page 22)
43	11751	Discharge Elevator Bottom		
		Frame - Front	RF	(Page 22)
44	11042	Rear Elevator Support Panel	RF	(Page 20)
45	11048	Main Web Support Bar	1	
46	11049	Gearbox Support Bracket	1	
47	11070	Main Web Side Support Plate RH	RF	(Page 20)
48	11077	Cleaner Web Chain Support Angle	2	
49	11097	Main Web Baffle Plate	2	
50				
51				
52	11135	Main Web Centre Support	1	
53	11835	Main Web Centre Support Extension	1	Part No. was 11138 Prior to Serial No.
54	11143	Baffle Plate Spring Support Plate	2	TRH MK2 Y1544 - Turbobeet Y228
55	11145	Baffle Plate Spring Support Plate		
		Clamp	2	
56	11166	Discharge Elevator Stay (Bottom)	RF	(Page 22)
57				
58	11265	Roller Spindle	26	26
59	11266	Beet Deflector	2	
60				
61	11301	Plastic Spacer	1	
62	11302	Gearbox Support Bracket	1	
63	11642	Stone Deflector LH	1	Used on machines after March 1981
64	11641	Stone Deflector RH	1	Used on machines after March 1981
65	11327	Hook (Canopy)	1	Not required after March 1981
66	11328	Centre Web Belting	1	
67	11329	Main Web Cleaner Rod	49	
68	11434	Deflector Flap	2	Used on machines after March 1981
69				
70		M8 x 30mm Hex Hd Bolt	4	
71		M8 x 40mm Hex Hd Bolt	4	
72		M8 Spring Washer	8	
73		M8 Nut	8	
74				
75		M10 x 30mm Hex Hd Bolt	7	

Item No	Part No.	Description	Qty per Assy	Remarks
76		M10 Spring Washer	7	
77		M10 Nut	7	
78		M10 Plain Washer	1	
79				
80				
81				
82		M12 x 30mm Hex Hd Bolt	17	
83		M12 x 40mm Hex Hd Bolt	6	
84		M12 x 90mm Hex Hd Bolt	4	
85		M12 x 100mm Hex Hd Bolt	4	
86		M12 Spring Washer	31	
87		M12 Nut	31	
88		M12 Plain Washer	12	
89				
90				
91				
92		M16 x 30mm Hex Hd Bolt	14	
93		M16 x 75mm Hex Hd Bolt	1	
94		M16 x 110mm Hex Hd Bolt	2	
95		M16 Spring Washer	43	
96		M16 Nut	32	
97		M16 Plain Washer	2	
98				
99		Split Pin 1/4in Dia x 1in	1	
100				
101	2611-06-08	Fixing Pin	294	
102	2611-06-10	Fixing Pin	8	
103	2611-06-00	Fixing Collar	302	
104				
105				
106				
107	11638	Main Web Adjuster	2	
108	11640	Stone Deflector Stop Plate	2	
109	11812	Tie Bar	1	
110				
111				
112	D 1340	Plastic Tube	1	



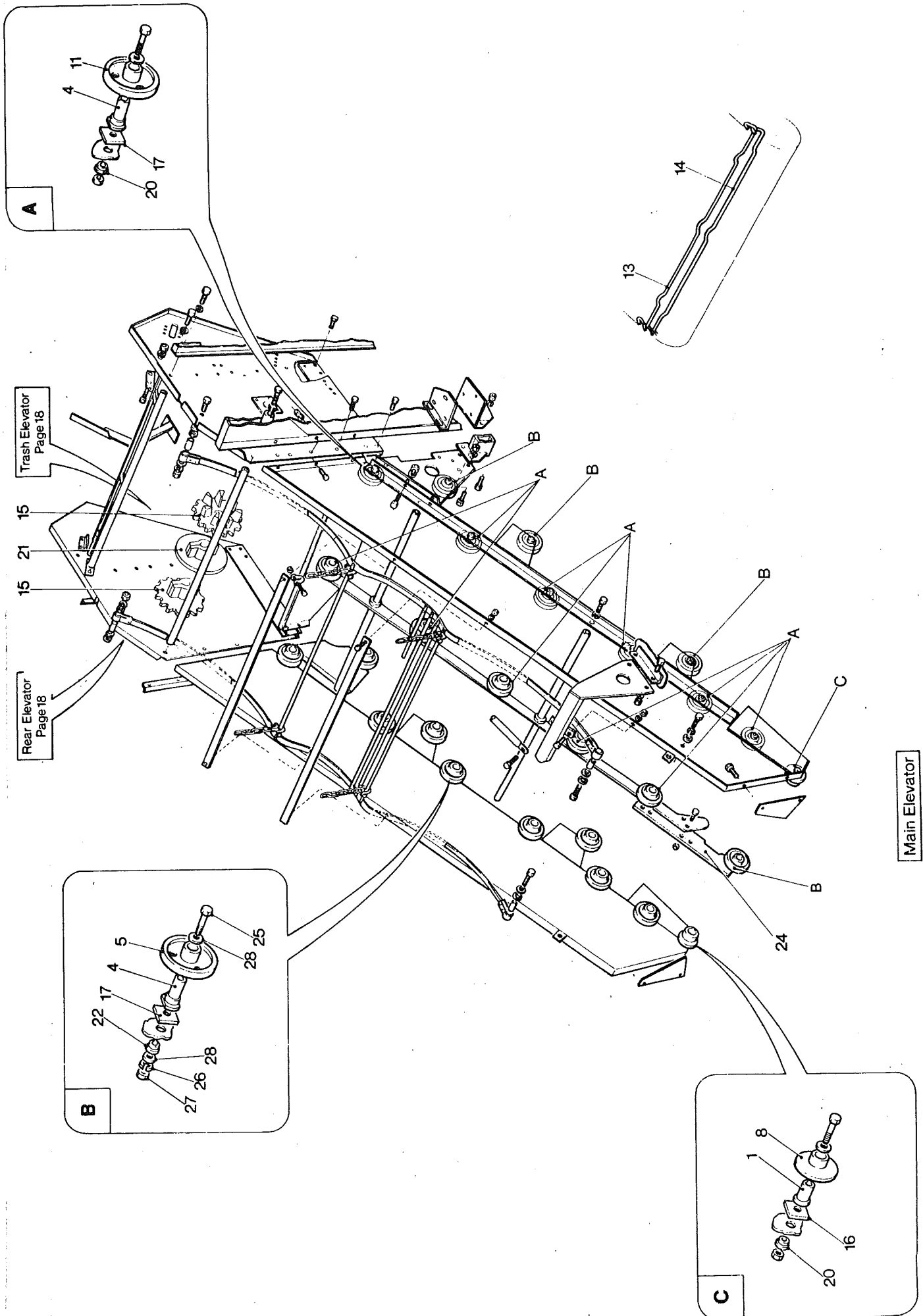
Main Elevator



Conveyors — Main Elevator — Steel Web from Serial No. W134

Item No	Part No.	Description	Qty per Assy	Remarks
1	BM 125/1	Roller Bush	2	NOTE: For general assembly items and attaching parts refer to Page 16.
2				
3				
4	PS 212B	Roller Bush	23	
5	PS 213 B	Roller	6	
6				
7				
8	SPCL 274	Bottom Roller	2	
9				
10				
11	TBM 133	Roller	17	
12				
13	TRH 43	Web Links (Up)	27	
14	TRH 44	Web Links (Down)	79	
15	TRH 53M	Sprocket	2	
16	TRH 132	Packing Piece	2	
17	TRH 133	Packing Piece	12	
18				
19				
20	11309	Collar	17	
21	11313	Roller	1	
22	11315	Collar	4	
23	11317	Steel Web Conversion Kit Complete	1	
24				
25		M16 x 100mm Hex Hd Bolt	25	
26		M16 Spring Washer	25	
27		M16 Nut	25	
28		M16 Plain Washer	50	





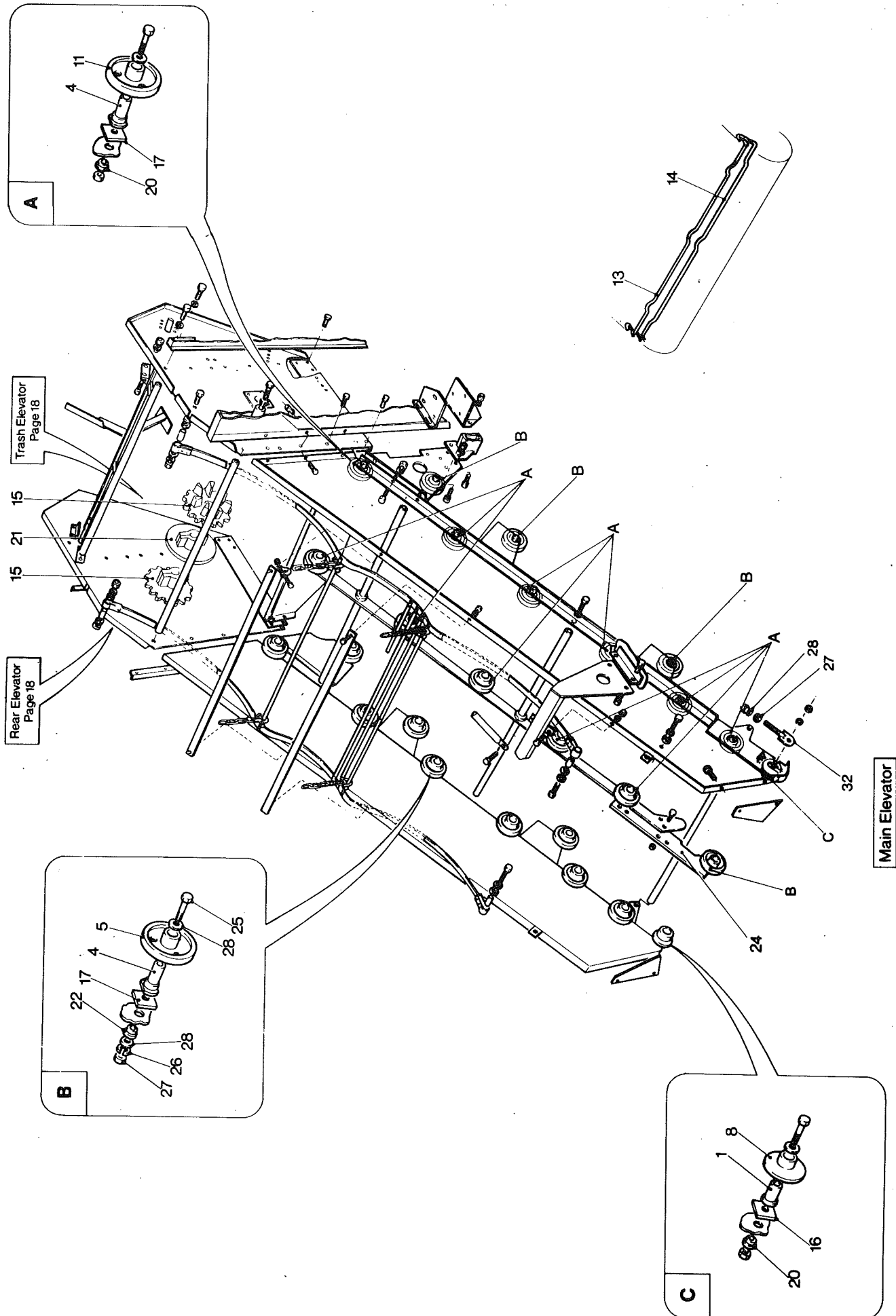
Trash Elevator  
Page 18

Rear Elevator  
Page 18

Main Elevator

# Conveyors — Main Elevator — Steel Web from Serial No. W134

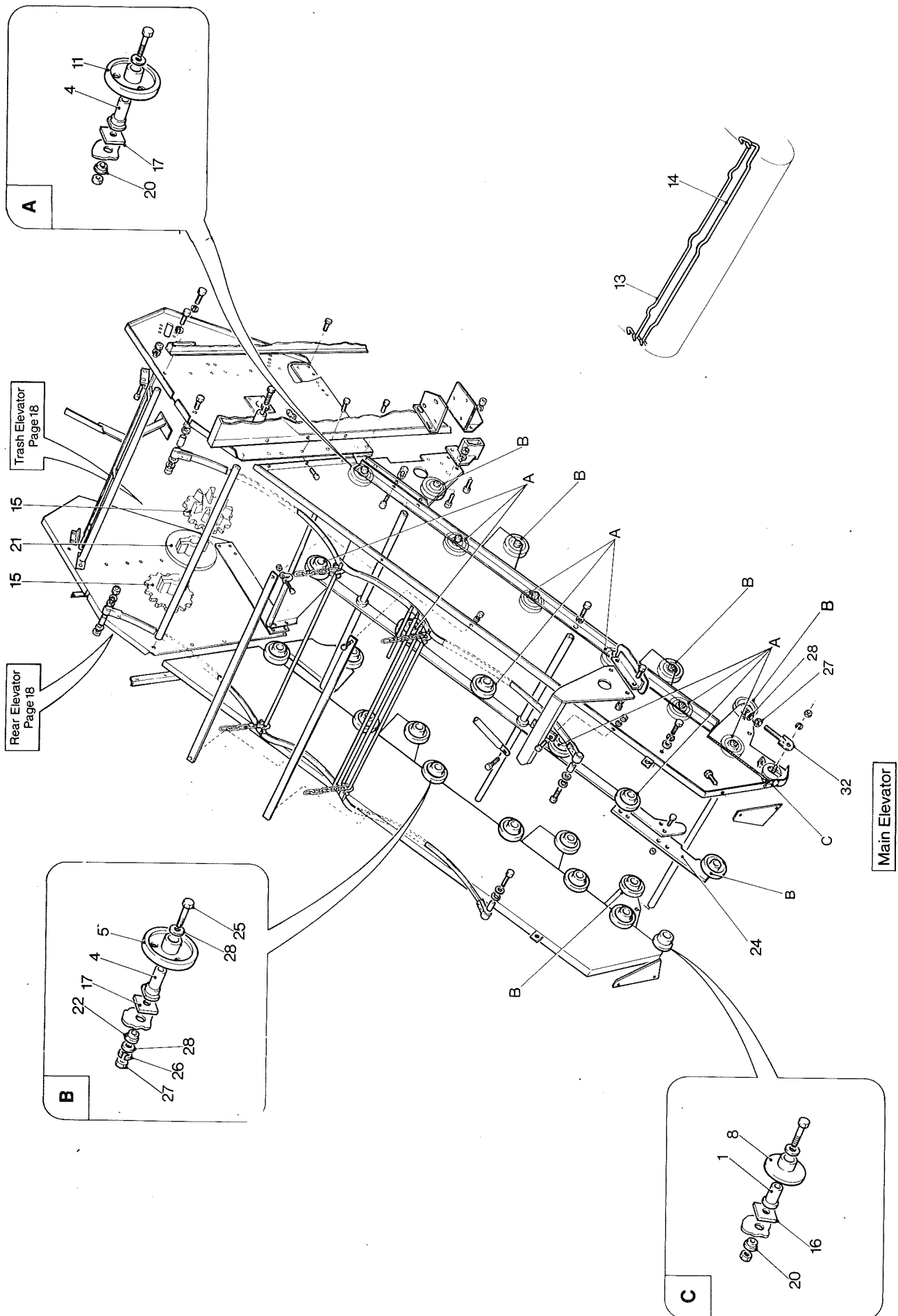
Item No	Part No.	Description	Qty per Assy	Remarks
1	BM 125/1	Roller Bush	2	Quantity per Assy. is 24 when centre extension is fitted Quantity per Assy. is 7 when centre extension is fitted
2				
3				
4	PS 212B	Roller Bush	23	
5	PS 213 B	Roller	6	Replaced by TRH 437 from March 1981
6				
7				
8	SPCL 274	Bottom Roller	2	
9				
10				
11	TBM 133	Roller	17	
12				
13	TRH 43	Web Links (Up)	27	
14	TRH 44	Web Links (Down)	79	
15	TRH 53M	Sprocket	2	
16	TRH 132	Packing Piece	2	
17	TRH 133	Packing Piece	12	
18				
19				
20	11309	Collar	17	
21	11313	Roller	1	Used on Machines from Marsh 1981
22	11315	Collar	4	
23	11317	Steel Web Conversion Kit Complete	1	
24	11516	Main Web Centre	1	
25		M16 x 100mm Hex Hd Bolt	25	NOTE: For general assembly items and attaching parts refer to Page 16.
26		M16 Spring Washer	25	
27		M16 Nut	25	
28		M16 Plain Washer	50	



# Conveyors – Main Elevator – Steel Web

Item No	Part No.	Description	Qty per Assy	Remarks
1	BM 125/1	Roller Bush	2	
2				
3				
4	PS 212B	Roller Bush	23	Quantity per Assy. is 24 when centre extension is fitted
5	PS 213 B	Roller	6	Quantity per Assy. is 7 when centre extension is fitted
6				
7				
8	SPCL 274	Bottom Roller	2	Replaced by TRH 437 from March 1981
9				
10				
11	TBM 133	Roller	17	
12				
13	TRH 43	Web Links (Up)	27	
14	TRH 44	Web Links (Down)	79	
15	TRH 53M	Sprocket	2	
16	TRH 132	Packing Piece	2	
17	TRH 133	Packing Piece	12	
18				
19				
20	11309	Collar	17	
21	11313	Roller	1	
22	11315	Collar	4	
23	11317	Steel Web Conversion Kit Complete	1	
24	11516	Main Web Centre	1	Used on Machines from March 1981
25		M16 x 100mm Hex Hd Bolt	25	
26		M16 Spring Washer	25	
27		M16 Nut	27	
28		M16 Plain Washer	52	
29				
30				
31				
32	11638	Bottom Roller Adjuster	2	
				NOTE: For general assembly items and attaching parts refer to Page 16.

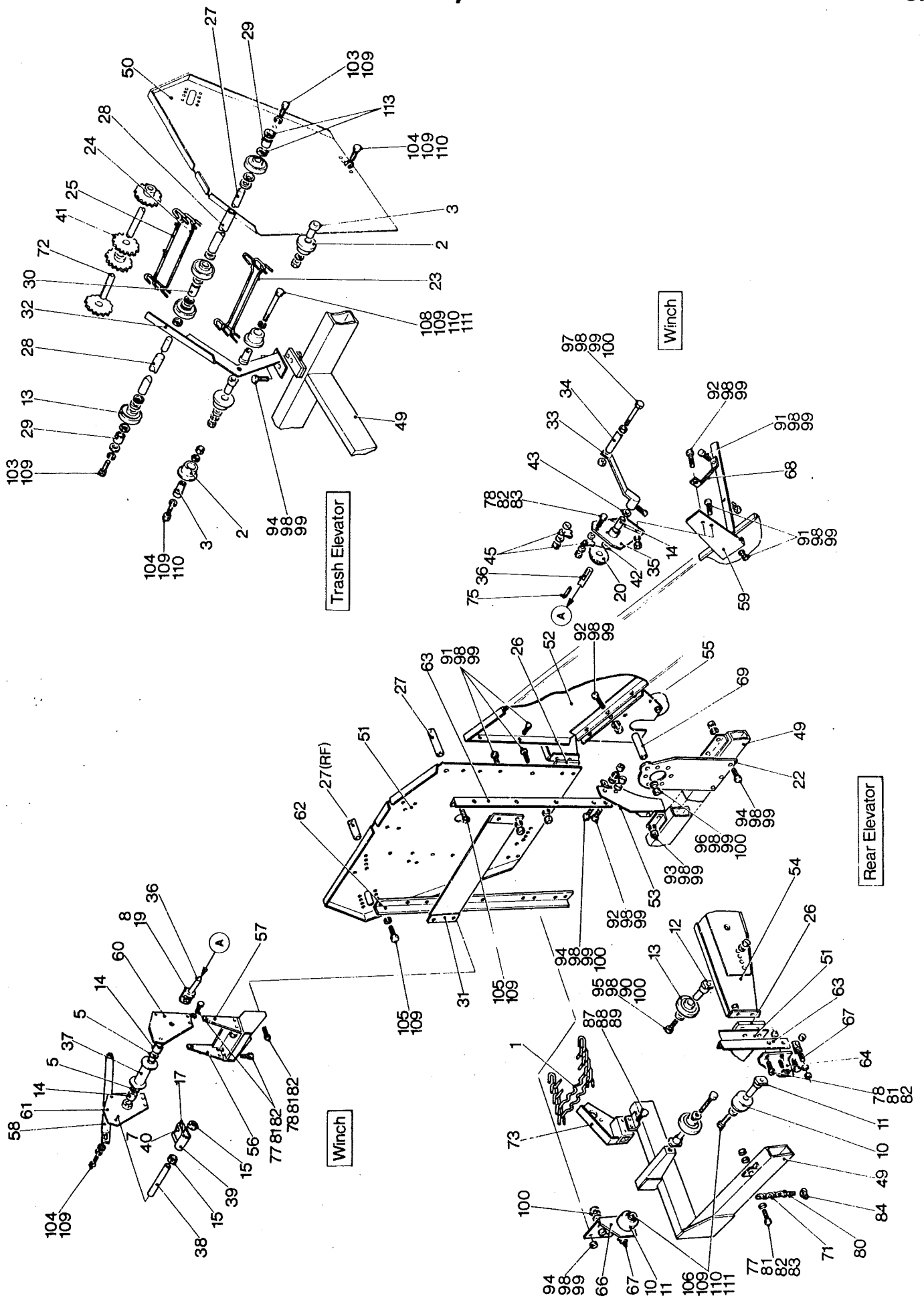
# Conveyors-Main Elevator-Steel Web



# Conveyors – Main Elevator – Steel Web

Item No	Part No.	Description	Qty per Assy	Remarks
1	BM 125/1	Roller Bush	2	
2				
3				
4	PS 212B	Roller Bush	26	Quantity per Assy. is 24 when centre extension is fitted
5	PS 213 B	Roller	9	Quantity per Assy. is 7 when centre extension is fitted
6				
7				
8	SPCL 274	Bottom Roller	2	Replaced by TRH 437 from March 1981
9				
10				
11	TBM 133	Roller	17	
12				
13	TRH 43	Web Links (Up)	27	
14	TRH 44	Web Links (Down)	79	
15	TRH 53M	Sprocket	2	
16	TRH 132	Packing Piece	2	
17	TRH 133	Packing Piece	14	
18				
19				
20	11309	Collar	17	
21	11313	Roller	1	
22	11315	Collar	4	
23	11317	Steel Web Conversion Kit Complete	1	
24	11516	Main Web Centre	1	Used on Machines from March 1981
25		M12 x 100mm Hex Hd Bolt	28	
26		M12 Spring Washer	28	
27		M12 Nut	30	
28		M12 Plain Washer	58	
29				
30				
31				
32	11638	Bottom Roller Adjuster	2	
				NOTE: For general assembly items and attaching parts refer to Page 16.

# Conveyors-Rear & Trash Elevators-Winch



# Conveyors -- Rear and Trash Elevators -- Winch

Item No	Part No.	Description	Qty per Assy	Remarks
1	BM 44/A	Web Link Down	29	
2	BM 125	Roller	4	
3	BM 125/1	Bush	4	
4				
5	C 10	Spacer	2	
6				
7	GS 378	Split Pin	1	
8	GS 409	Grease Nipple (Angled)	1	
9				
10	PH 673	Bottom Cone Roller	2	
11	PH 674	Bottom Cone Roller Bush	2	
12	PS 212B	Bush	2	
13	PS 213B	Roller	6	
14	PS 386M	Nylon Bush	3	
15	PS 488M	Stop Collar	2	
16				
17	SP 426	Plastic Pulley	1	
18				
19	TBMT 38M	Hardy Spicer Coupling	1	
20	TBMW 505	Sprocket 17T x 0.75in	1	
21				
22	TRH 23	Gearbox Mounting Plate	1	
23	TRH 100	Trash Extractor Link-Up	8	
24	TRH 100/1	Trash Extractor Link-Down	100	
25	TRH 101	Trash Extractor Link-Splked	8	
26	TRH 108	Trash Extractor Roller Support RH	RF	(Page 16)
27	TRH 117M	Main Web Top Tie Bar	3	2-RF (Page 16)
28	TRH 140	Trash Extractor Tie Bar Spacer, 500mm	2	
29	TRH 141	Trash Extractor Tie Bar Spacer, 30mm	2	
30	TRH 142	Trash Extractor Tie Bar Spacer, 35mm	1	
31	TRH 191M	Trash Extractor Side Plate RH Strengthening Plate	1	
32	TRH 202	Trash Extractor Roller Support	1	
33	TRH 400	Handle	1	
34	TRH 401	Handle Grip	1	
35	TRH 402	Handle Support Plate	1	
36	TRH 403	Drive Shaft	1	
37	TRH 404	Barrel	1	
38	TRH 406	Tie Bar (Winch)	1	
39	TRH 409	Wire Rope Pivot Plate	1	
40	TRH 410	Pivot Plate Roller Spindle	1	
41	TRH 422	Drive Sprocket	RF	(Page 24)
42	TRH 436	Washer	1	
43	TRH 442	Spacer	1	
44				
45	TRT 408	Winch Ratchet Pawl	2	
46				
47				
48				
49	11010	Mainframe	RF	(Page 8)
50	11018	Trash Extractor Side Plate LH	RF	(Page 16)
51	11019	Trash Extractor Side Plate RH	1	
52	11020	Main Elevator Side Plate RH	RF	(Page 16)
53	11029	Trash Extractor Front Support	1	
54	11042	Rear Elevator Support Panel	1	
55	11070	Main Web Side Support Plate RH	1	
56	11071	Barrel Mounting Bracket (Winch)	1	
57	11072	Mounting Bracket	1	
58	11073	Barrel Stay	RF	(Page 22)
59	11074	Handle Support Plate Bracket	1	
60	11083	Barrel Support Plate - Front	1	
61	11084	Barrel Support Plate - Rear	1	
62	11095	Trash Extractor Web Side Support - Rear	1	
63	11096	Trash Extractor Web Side Support - Front	1	
64	11098	Rear Elevator Roller Support Plate - Front	1	
65				
66	11136	Rear Elevator Roller Support Plate - Rear	1	
67	11137	Rear Elevator Roller Adjuster	2	
68	11148	Winch Handle Stay	1	
69	11174	Gearbox Spacer	1	
70				
71	11256	Retaining Chain	1	

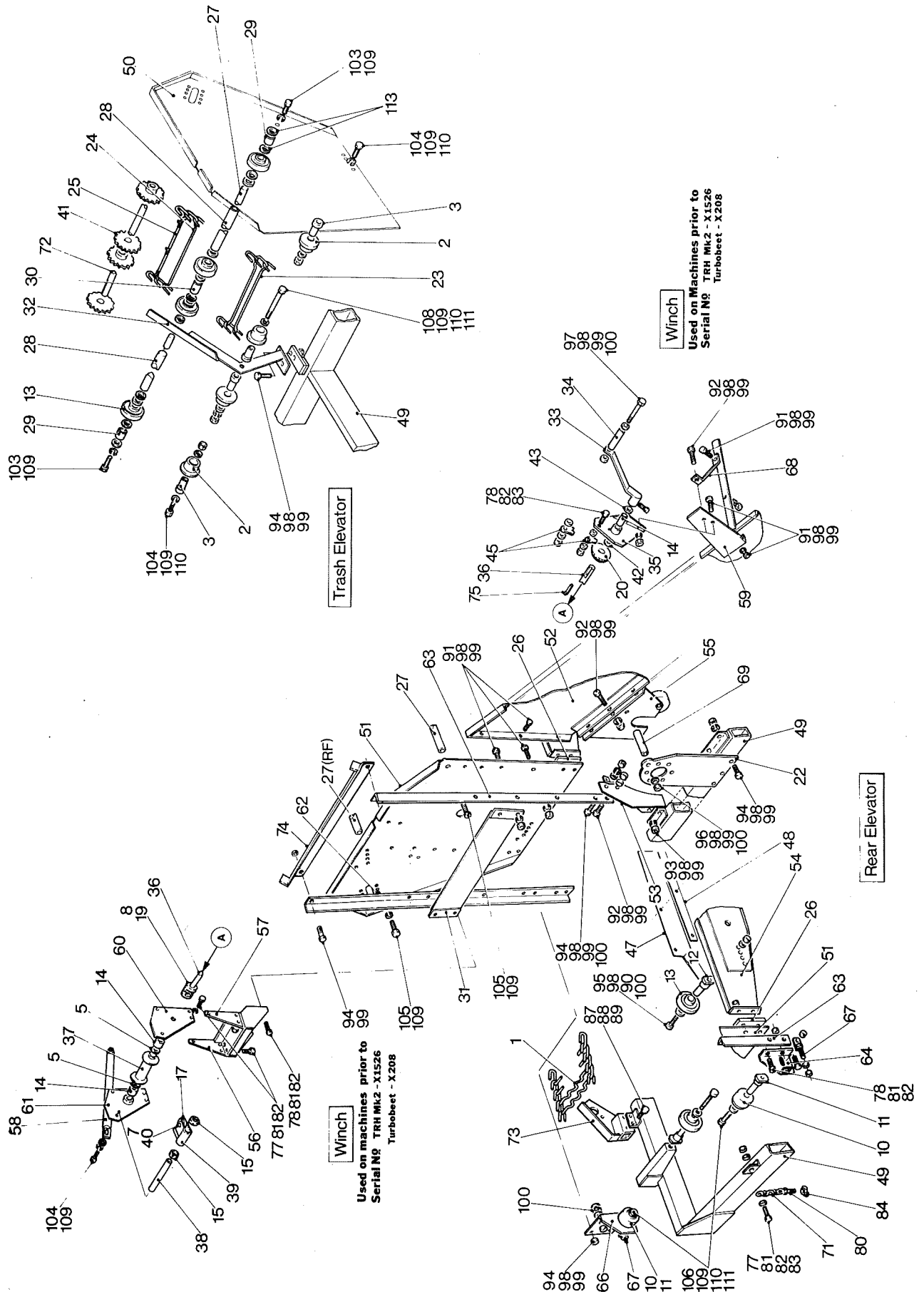


Conveyors — Rear and Trash Elevators — Winch (Cont.)

Item No	Part No.	Description	Qty per Assy	Remarks
72	11267	Trash Extractor Web Shaft	RF	(Page 24)
73	11297	Drive Plate	1	
74				
75		Jib Head Key	1	
76				
77		M8 x 25mm Hex Hd Bolt	15	
78		M8 x 30mm Hex Hd Bolt	5	
79		M8 x 40mm Hex Hd Bolt	1	
80		M8 x 50mm Hex Hd Bolt	1	
81		M8 Spring Washer	20	
82		M8 Nut	21	
83		M8 Plain Washer	5	
84		M8 Wing Nut	1	
85				
86				
87		M10 x 80mm Hex Hd Bolt	2	
88		M10 Spring Washer	2	
89		M10 Nut	2	
90				
91		M12 x 25mm Hex Hd Bolt	7	
92		M12 x 30mm Hex Hd Bolt	5	
93		M12 x 35mm Hex Hd Bolt	2	
94		M12 x 40mm Hex Hd Bolt	9	
95		M12 x 100mm Hex Hd Bolt	2	
96		M12 x 165mm Hex Hd Bolt	1	
97		M12 x 190mm Hex Hd Bolt	1	
98		M12 Spring Washer	26	
99		M12 Nut	26	
100		M12 Plain Washer	8	
101				
102				
103		M16 x 30mm Hex Hd Bolt	2	
104		M16 x 35mm Hex Hd Bolt	2	
105		M16 x 45mm Hex Hd Bolt	2	
106		M16 x 80mm Hex Hd Bolt	2	
107		M16 x 85mm Hex Hd Bolt	2	
108		M16 x 130mm Hex Hd Bolt	1	
109		M16 Spring Washer	11	
110		M16 Nut	5	
111		M16 Plain Washer	2	
112				
113		Plain Washer 55m Dia, 30mm Bore	12	



# Conveyors-Rear & Trash Elevators-Winch



# Conveyors — Rear and Trash Elevators -- Winch

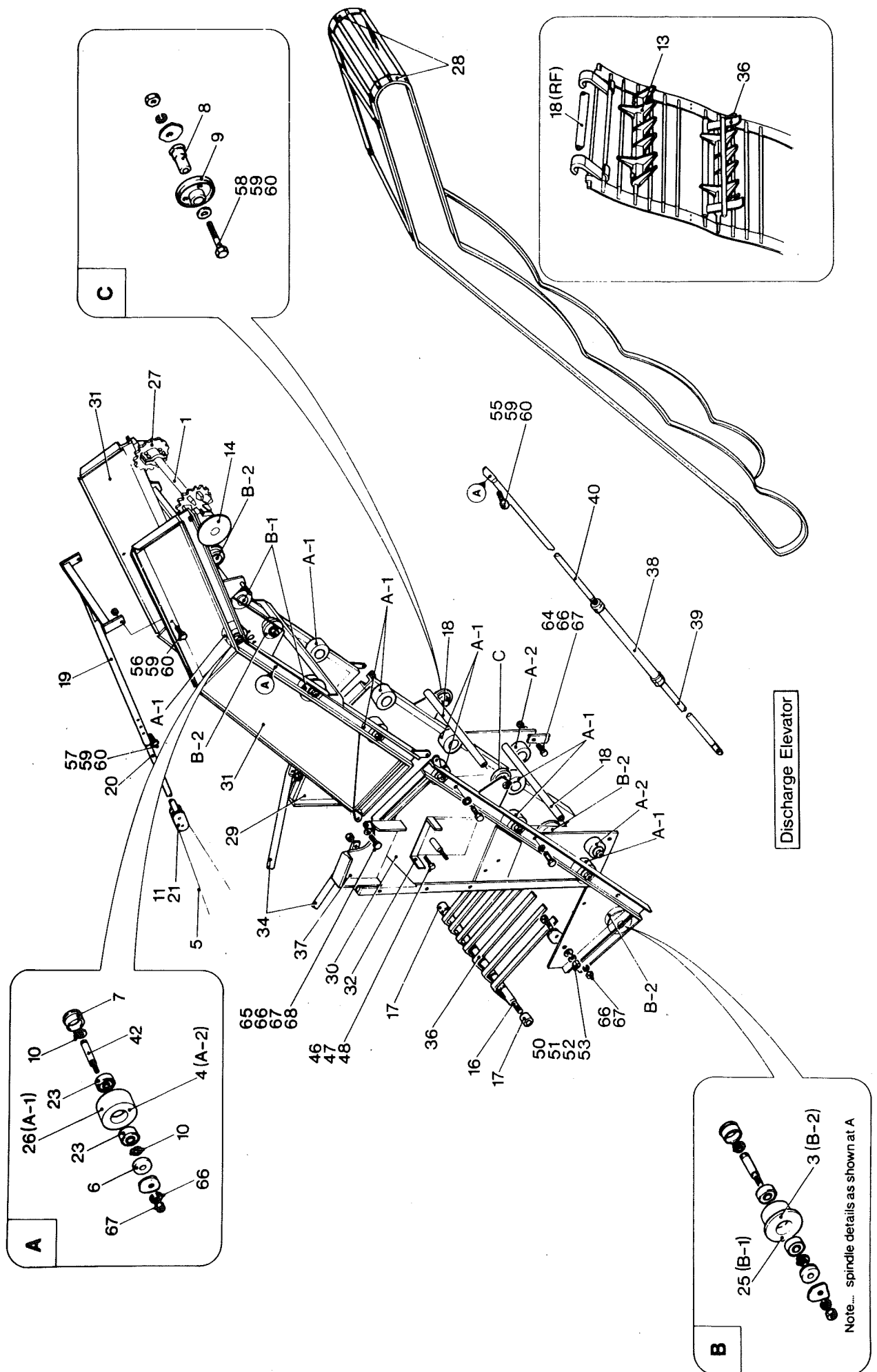
Item No	Part No.	Description	Qty per Assy	Remarks
1	BM 44/A	Web Link Down	29	
2	BM 125	Roller	4	
3	BM 125/1	Bush	4	
4				
5	C 10	Spacer	2	
6				
7	GS 378	Split Pin	1	
8	GS 409	Grease Nipple (Angled)	1	
9				
10	PH 673	Bottom Cone Roller	2	
11	PH 674	Bottom Cone Roller Bush	2	
12	PS 212B	Bush	2	
13	PS 213B	Roller	6	
14	PS 386M	Nylon Bush	3	
15	PS 488M	Stop Collar	2	
16				
17	SP 426	Plastic Pulley	1	
18				
19	TBMT 38M	Hardy Spicer Coupling	1	
20	TBMW 505	Sprocket 17T x 0.75in	1	
21				
22	TRH 23	Gearbox Mounting Plate	1	
23	TRH 100	Trash Extractor Link-Up	8	
24	TRH 100/1	Trash Extractor Link-Down	100	
25	TRH 101	Trash Extractor Link-Spiked	8	
26	TRH 108	Trash Extractor Roller Support RH	RF	(Page 16)
27	TRH 117M	Main Web Top Tie Bar	3	2-RF (Page 16)
28	TRH 140	Trash Extractor Tie Bar Spacer, 500mm	2	
29	TRH 141	Trash Extractor Tie Bar Spacer, 30mm	2	
30	TRH 142	Trash Extractor Tie Bar Spacer, 35mm	1	
31	TRH 191M	Trash Extractor Side Plate RH Strengthening Plate	1	
32	TRH 202	Trash Extractor Roller Support	1	
33	TRH 400	Handle	1	
34	TRH 401	Handle Grip	1	
35	TRH 402	Handle Support Plate	1	
36	TRH 403	Drive Shaft	1	
37	TRH 404	Barrel	1	
38	TRH 406	Tie Bar (Winch)	1	
39	TRH 409	Wire Rope Pivot Plate	1	
40	TRH 410	Pivot Plate Roller Spindle	1	
41	TRH 422	Drive Sprocket	RF	(Page 24)
42	TRH 436	Washer	1	
43	TRH 442	Spacer	1	
44				
45	TRT 408	Winch Ratchet Pawl	2	
46				
47	11442	Deflector Plate	1	
48	11443	Clamp Strip	1	
49	11010	Mainframe	RF	(Page 8)
50	11018	Trash Extractor Side Plate LH	RF	(Page 16)
51	11019	Trash Extractor Side Plate RH	1	
52	11020	Main Elevator Side Plate RH	RF	(Page 16)
53	11029	Trash Extractor Front Support	1	
54	11042	Rear Elevator Support Panel	1	
55	11070	Main Web Side Support Plate RH	1	
56	11071	Barrel Mounting Bracket (Winch)	1	
57	11072	Mounting Bracket	1	
58	11073	Barrel Stay	RF	(Page 22)
59	11074	Handle Support Plate Bracket	1	
60	11083	Barrel Support Plate - Front	1	
61	11084	Barrel Support Plate - Rear	1	
62	11777	Trash Extractor Web Side Support - Rear Angle	1	
63	11778	Trash Extractor Web Side Support - Front Angle	1	
64	11098	Rear Elevator Roller Support Plate - Front	1	
65				
66	11136	Rear Elevator Roller Support Plate - Rear	1	
67	11137	Rear Elevator Roller Adjuster	2	
68	11148	Winch Handle Stay	1	
69	11174	Gearbox Spacer	1	
70				
71	11256	Retaining Chain	1	

Conveyors — Rear and Trash Elevators — Winch (Cont.)

Item No	Part No.	Description	Qty per Assy	Remarks
72	11267	Trash Extractor Web Shaft	RF	(Page 24)
73	11297	Drive Plate	1	
74	11779	Support Plate		
75		Jib Head Key	1	
76				
77		M8 x 25mm Hex Hd Bolt	15	
78		M8 x 30mm Hex Hd Bolt	5	
79		M8 x 40mm Hex Hd Bolt	1	
80		M8 x 50mm Hex Hd Bolt	1	
81		M8 Spring Washer	20	
82		M8 Nut	21	
83		M8 Plain Washer	5	
84		M8 Wing Nut	1	
85				
86				
87		M10 x 80mm Hex Hd Bolt	2	
88		M10 Spring Washer	2	
89		M10 Nut	2	
90				
91		M12 x 25mm Hex Hd Bolt	7	
92		M12 x 30mm Hex Hd Bolt	5	
93		M12 x 35mm Hex Hd Bolt	2	
94		M12 x 40mm Hex Hd Bolt	11	
95		M12 x 100mm Hex Hd Bolt	2	
96		M12 x 165mm Hex Hd Bolt	1	
97		M12 x 190mm Hex Hd Bolt	1	
98		M12 Spring Washer	26	
99		M12 Nut	28	
100		M12 Plain Washer	8	
101				
102				
103		M16 x 30mm Hex Hd Bolt	2	
104		M16 x 35mm Hex Hd Bolt	2	
105		M16 x 45mm Hex Hd Bolt	2	
106		M16 x 80mm Hex Hd Bolt	2	
107		M16 x 85mm Hex Hd Bolt	2	
108		M16 x 130mm Hex Hd Bolt	1	
109		M16 Spring Washer	11	
110		M16 Nut	5	
111		M16 Plain Washer	2	
112				
113		Plain Washer 55m Dia, 30mm Bore	12	



# Conveyors-Discharge Elevator

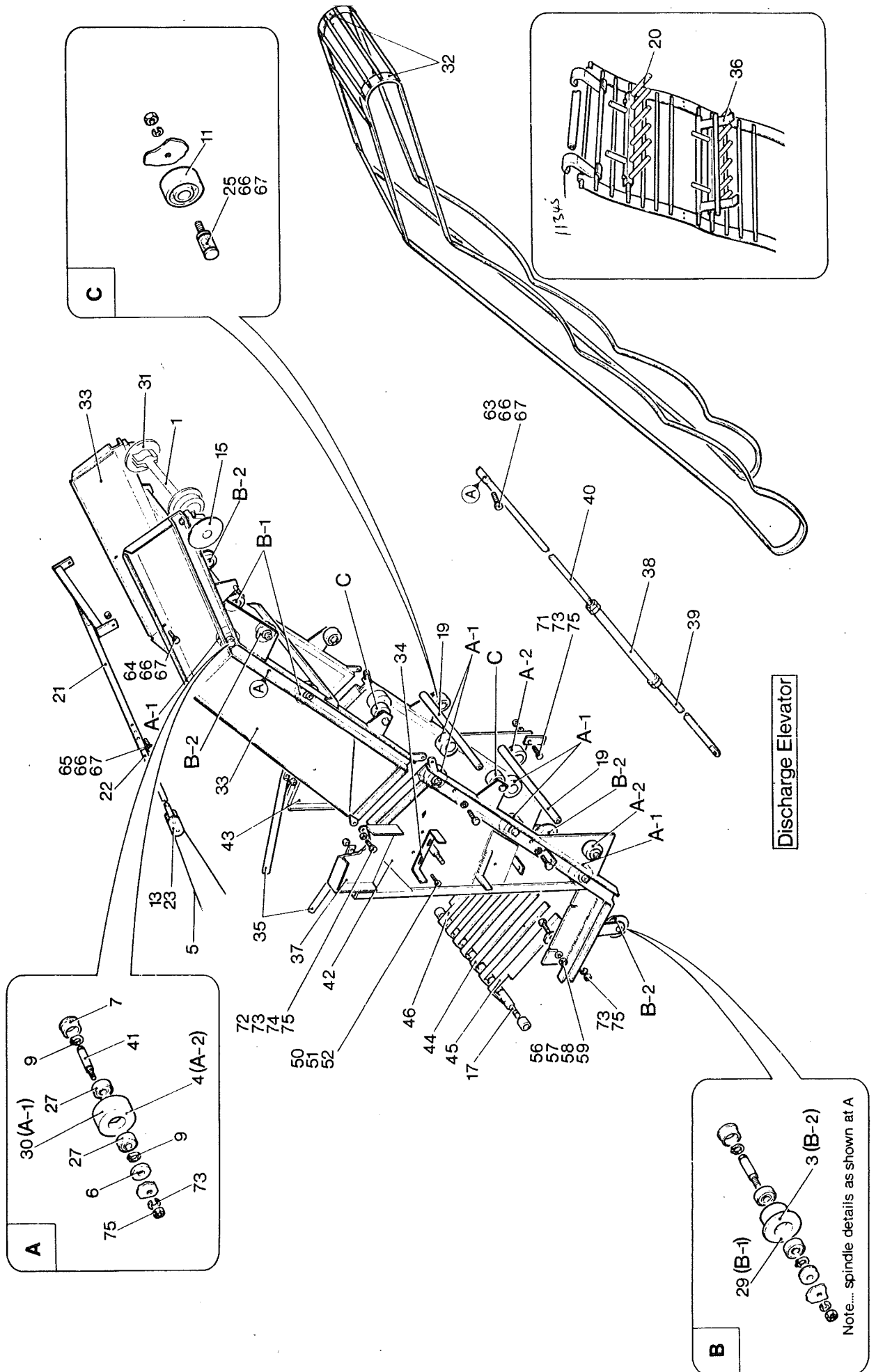


# Conveyors -- Discharge Elevator

Item No	Part No.	Description	Qty per Assy	Remarks
1	BMZ 64M	Discharge Elevator Top Shaft	RF	(Page 24)
2				
3	PH 51AR	Rubbered Roller	4	
4	PH 77AR	Plain Rubbered Roller	2	
5	PH 101/40 ft	Wire Rope	1	
6	PH 407	Inner Plastic Seal	18	
7	PH 408	Outer Plastic Seal	18	
8	PS 212B	Bush	2	
9	PS 213B	Roller	2	
10	PS 843	Circlip	36	
11	SP 426	Plastic Pulley	4	
12				
13	TBM 14	Discharge Elevator Lat	29	
14	TBMW 206	Sprocket 26T x 0.75 in	RF	(Page 24)
15				
16	TRH 158AM	Tip Grill Tie Bar	1	
17	TRH 160A	Tip Grill Spacer	2	
18	TRH 162M	Discharge Elevator Tie Bar	2	
19	TRH 411	Tension Tube	1	
20	TRH 412B	Tension Tube Inner	1	
21	TRH 413	Inner Tube Roller Plate	4	
22				
23	6005RS	Bearing	36	
24				
25	11032	Flanged Roller	2	
26	11033	Plain Roller	10	
27	11035	Discharge Elevator Web Sprocket	RF	(Page 24)
28	11037	Discharge Elevator Web	1	
29	11039	Discharge Elevator Bottom		
		Frame - Rear	1	
30	11040	Discharge Elevator Bottom		
		Frame - Front	1	
31	11041	Discharge Elevator Top Frame	1	
32	11043	Discharge Elevator Belt Guide	1	
33				
34	11073	Barrel Stay	2	
35	11146	Tip Grill Fingers	7	
36	11154	Discharge Elevator Drop-away Link	3	
37	11161	Discharge Elevator Drive 'V' Belt		
		Back Plate	1	
38	11165	Discharge Elevator Stay-Middle	1	
39	11166	Discharge Elevator Stay- Bottom	1	
40	11167	Discharge Elevator Stay-Top	1	
41				
42	11265	Roller Spindle	18	
43				
44				
45				
46		M8 x 25mm Hex Hd Bolt	2	
47		M8 Spring Washer	2	
48		M8 Nut	2	
49				
50		M10 x 25mm Hex Hd Bolt	1	
51		M10 Spring Washer	1	
52		M10 Nut	9	
53		M10 Plain Washer	1	
54				
55		M12 x 40mm Hex Hd Bolt	1	
56		M12 x 50mm Hex Hd Bolt	2	
57		M12 x 65mm Hex Hd Bolt	1	
58		M12 x 100mm Hex Hd Bolt	2	
59		M12 Spring Washer	6	
60		M12 Nut	6	
61		M12 Plain Washer	1	
62				
63		M16 x 30mm Hex Hd Bolt	4	
64		M16 x 35mm Hex Hd Bolt	2	
65		M16 x 50mm Hex Hd Bolt	4	
66		M16 Spring Washer	22	
67		M16 Nut	20	
68		M16 Plain Washer	4	



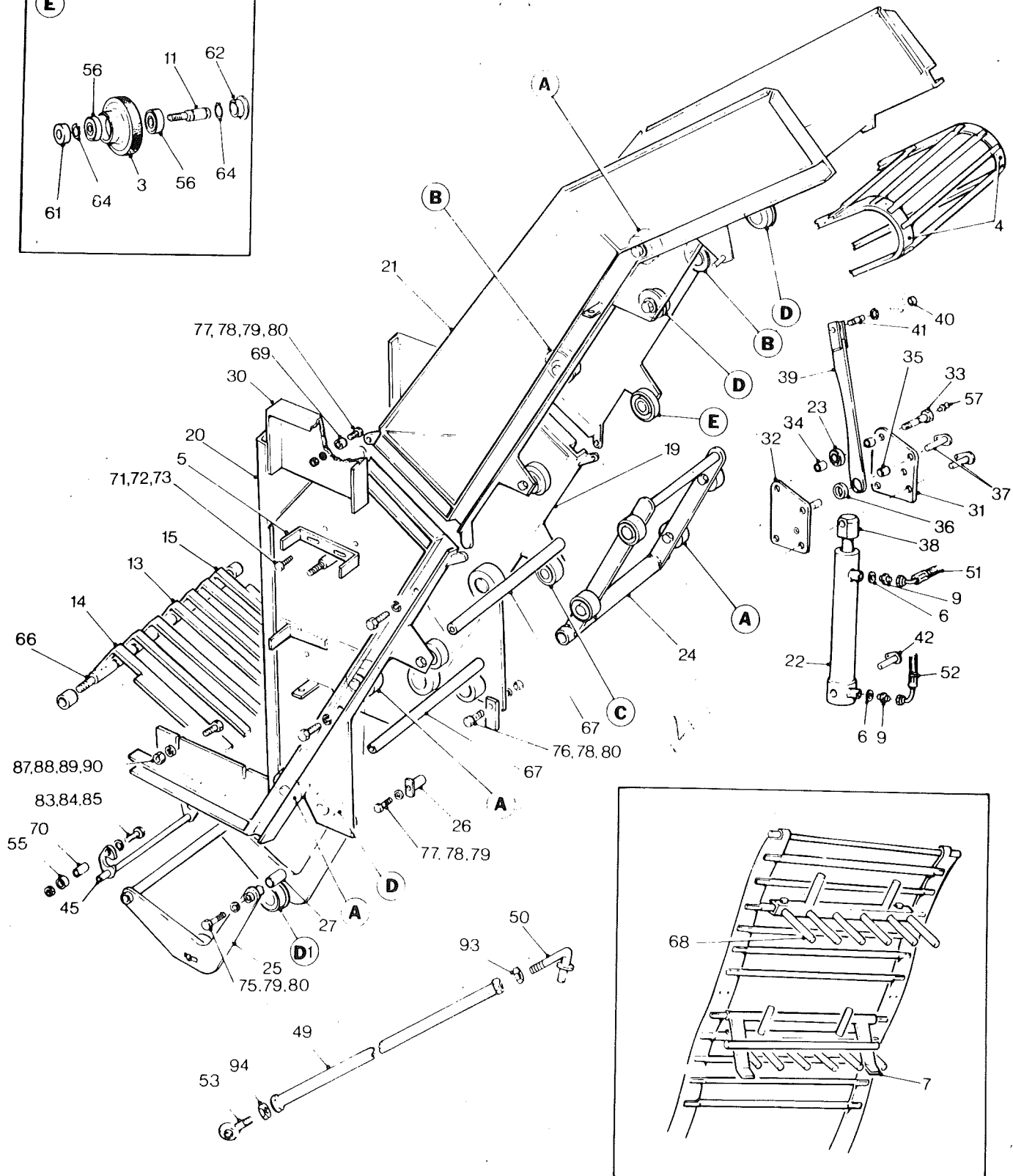
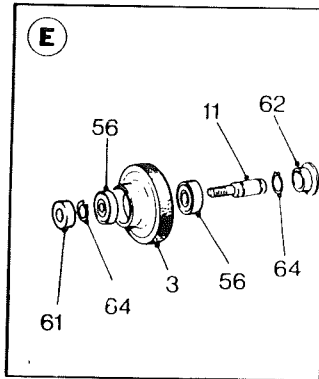
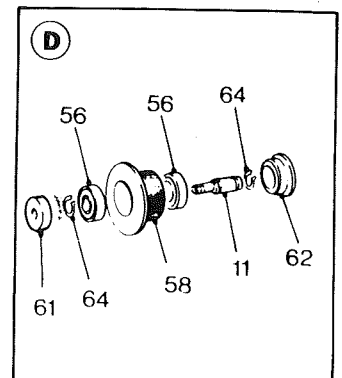
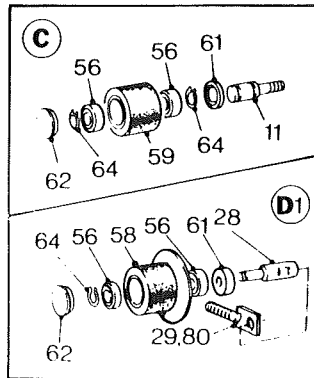
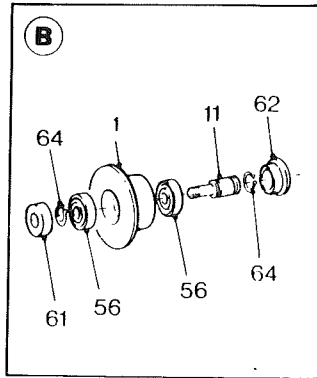
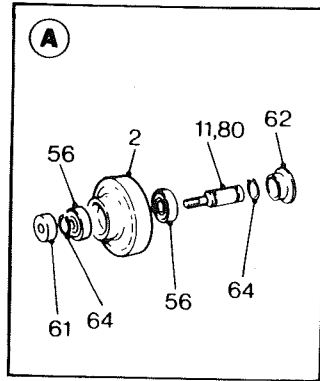
# Conveyors-Discharge Elevator From Serial No. W134



# Conveyors – Discharge Elevator from Serial No. W134

Item No	Part No.	Description	Qty per Assy	Remarks
1	BMZ 64M	Discharge Elevator Top Shaft	Ref	Page 24
2				
3	PH 51AR	Rubbered Roller	4	
4	PH 77AR	Plain Rubbered Roller	2	
5	PH 101/40ft.	Wire Rope	1	
6	PH 407	Inner Plastic Seal	16	
7	PH 408	Outer Plastic Seal	16	
8				
9	PS 843	Circlip	34	
10				
11	RH 76N	Nylon Roller	4	
12				
13	SP 426	Plastic Pulley	4	
14				
15	TBMW 206	Sprocket 26T x 0.75 in.	Ref	Page 24
16				
17	TRH 158AM	Tip Grill Tie Bar	1	
18				
19	TRH 162M	Discharge Elevator Tie Bar	2	
20	TRH 361	Elevator Lats	29	
21	TRH 411	Tension Tube	1	
22	TRH 412B	Tension Tube Inner	1	
23	TRH 413	Inner Tube Roller Plate	4	
24				
25	FPS 118	Bearing	4	
26				
27	6005 RS	Bearing	34	
28				
29	11032	Flanged Roller	2	
30	11033	Plain Roller	8	
31	11035	Discharge Elevator Web Sprocket	Ref	Page 24
32	11037	Discharge Elevator Web	1	
33	11041	Discharge Elevator Top Frame	1	
34	11043	Discharge Elevator Belt Guide	1	
35	11073	Barrel Stay	2	
36	11154	Discharge Elevator Drop Away Link	3	
37	11161	Discharge Elevator Drive 'V' Belt Back Plate	1	
38	11165	Discharge Elevator Stay-Middle	1	
39	11166	Discharge Elevator Stay-Bottom	1	
40	11167	Discharge Elevator Stay-Top	1	
41	11265	Roller Spindle	18	
42	11485	Discharge Elevator Bottom Front	1	
43	11486	Discharge Elevator Bottom Rear	1	
44	11487	Top Grill Fingers	5	
45	11488	Tip Grill Finger Front	1	
46	11489	Tip Grill Finger Rear	1	
47				
48				
49				
50		M8 x 25mm Hex Hd Bolt	2	
51		M8 Spring Washer	2	
52		M8 Nut	2	
53				
54				
55				
56		M10 x 25mm Hex Hd Bolt	1	
57		M10 Spring Washer	1	
58		M10 Plain Washer	1	
59		M10 Nut	9	
60				
61				
62				
63		M12 x 40mm Hex Hd Bolt	1	
64		M12 x 50mm Hex Hd Bolt	2	
65		M12 x 65mm Hex Hd Bolt	1	
66		M12 Spring Washer	6	
67		M12		
68				
69				
70				
71		M16 x 35mm Hex Hd Bolt	2	
72		M16 x 50mm Hex Hd Bolt	4	
73		M16 Spring Washer	22	
74		M16 Plain Washer	4	
75		M16 Nut	20	
76				
77				
78				

# Discharge Elevator



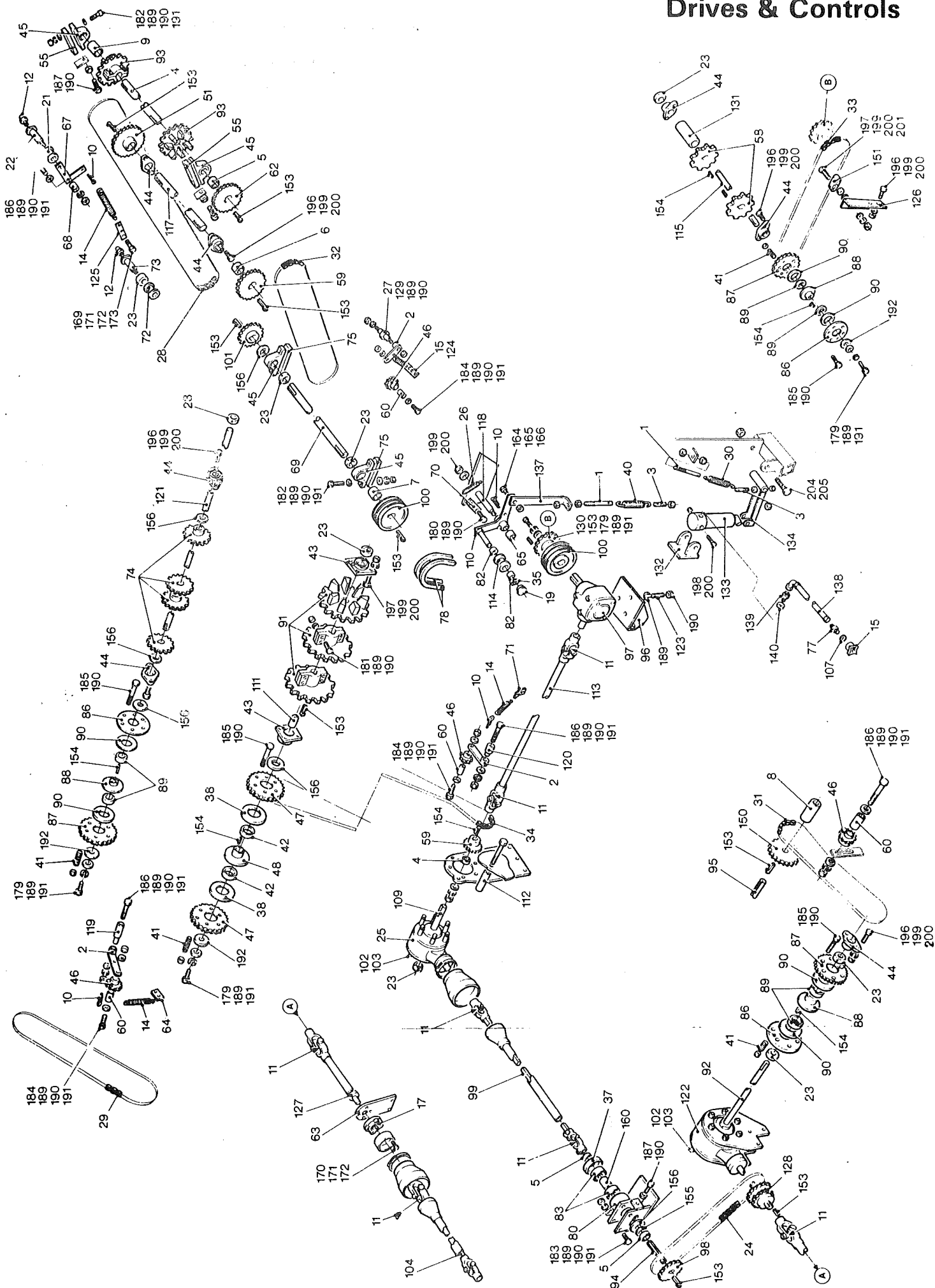
# Discharge Elevator

Item No	Part No.	Description	Qty per Assy	Remarks
1	11032	Flanged Roller	2	
2	11033	Plain Roller	10	
3	11034	Plain Rubber Roller	2	
4	11037	Discharge Elevator Web	1	
5	11043	Discharge Elevator Belt Guide	1	
6	11125	3/8" Dowty Seal Washer	2	
7	11154	Discharge Elevator Drop Away Link	3	
8				
9	10291	Ram Restrictor	2	
10				
11	11265	Roller Spindle	18	
12				
13	11487	Tip Grill Finger	5	
14	11488	Tip Grill Front	1	
15	11489	Tip Grill Rear	1	
16				
17				
18				
19	11750	Discharge Elevator Bottom Frame, Rear	1	
20	11751	Discharge Elevator, Bottom Frame, Front	1	
21	11752	Discharge Elevator Top Frame	1	
22	<del>11753</del>	Hydraulic Ram	1	
23	11754	Bearings	3	
24	11755	Discharge Elevator Roller Support	1	
25	11756	Discharge Elevator Bottom Roller Support	1	
26	11757	Discharge Elevator Roller Support Pivot Spigot	1	
27	11758	Discharge Elevator Roller Support Pivot Shaft	1	
28	11759	Discharge Elevator Bottom Roller Spigot	2	
29	11760	Discharge Elevator Bottom Roller Adjuster	2	
30	11761	Discharge Elevator Drive Guard Back Plate	1	
31	11762	Roller Carriage Front Plate	1	
32	11763	Roller Carriage Rear Plate	1	
33	11764	Roller Carriage Bearing Pin	3	
34	11765	Roller Carriage Bearing Spacer	6	
35	11766	Roller Carriage Link Spacer	2	
36	11767	Bush 20 1/8 x 15 LG		
37	11768	Roller Carriage Pivot Pin	2	
38	11769	Roller Carriage Ram End Boss	1	
39	11770	Discharge Elevator Connecting Link	1	
40	11771	Bush 20 1/8 x 12 LG	1	
41	11772	Connecting Link Spindle	1	
42	11773	Ram Pivot Pin	1	
43				
44				
45	11776	Discharge Elevator Bottom Roller Support Latch	1	
46				
47				
48				
49	11780	Discharge Elevator Stay	1	
50	11781	Discharge Elevator Stay Hook	1	
51	11782	3/8" Hose 24 Long, One End 3/8" FM ST Other 3/8" 90° Female	1	
52	11790	3/4" Hose 26 Long, One End 3/8" FM ST Other 3/8" 90° FM	1	
53	13036	Elevator Stay End (Rose)	1	
54				
55	D20	Spacer	2	
56	6005RS	Bearing	40	
57	GS412	Grease Nipple	3	
58	PH51AR	Flanged Roller	8	
59	PH77AR	Plain Roller	2	
60				
61	PH407	Inner Plastic Seal	16	
62	PH408	Outer Plastic Seal	16	
63				
64	PS843	Circlip	38	
65				

# Discharge Elevator (Cont.)

Item No	Part No.	Description	Qty per Assy	Remarks
66	TRH158AM	Top Grill Tie Bar	1	
67	TRH162M	Discharge Elevator Tie Bar	2	
68	TRH361	Elevator Lats	29	
69	SS/025/013/045	Steel Spacer	2	
70	SS/025/013/034	Steel Spacer	2	
71		M8 x 25 Hex Hd Bolt	2	
72		M8 Spring Washer	2	
73		M8 Nut	2	
74				
75		M16 x 70 Hed Hd Setscrew	1	
76		M16 x 35 Hex Hd Bolt	2	
77		M16 x 50 Hex Hd Bolt	6	
78		M16 Spring Washer	28	
79		M16 Plain Washer	11	
80		M16 Nut	27	
81				
82				
83		M12 x 60 Hex Hd Bolt	2	
84		M12 Plain Washer	2	
85		M12 Nut	2	
86				
87		M10 x 25mm Hed Hd Bolt	2	
88		M10 Spring Washer	2	
89		M10 Plain Washer	2	
90		M10 Nut	2	
91				
92				
93		M24 Lock Nut	1	
94		1 1/8" UNC Lock Nut	1	





**Drives and Controls**

Item No	Part No.	Description	Qty per Assy	Remarks
1	BM82M	Spring Tensioner	2	(Page 28)
2	BM 184A	Jockey Arm	3	
3	BM 212M	Spring Tensioner	2	
4	BMZ 64M	Discharge Elevator Top Shaft	1	
5	C 10	Spacer	4	
6	C 15	Spacer	1	
7	C 46	Spacer	1	
8	C 60	Spacer	1	
9	C 100	Spacer	1	
10	GS 378	Split Pin	4	
11	GS 409	Grease Nipple (Angled)	7	
12	GS 412	Grease Nipple (Straight)	2	
13				
14	H 121/B	Spring	3	
15	H 420	Extractor Coupling (Complete)	1	
16				
17	MFC 30	Bearing	1	
18				
19	PH 408	Outlet Plastic Seal	1	
20				
21	PS 215	Jockey Roller	1	
22	PS 264M	Jockey Roller Shoulder Bolt	1	
23	PS 326M	Collar, Locking 30mm Dia	9	
24	PS 429/91	Chain	1	
25	PS 450-2TM	Gearbox	RF	
26	PS 457	Spring	1	
27	PS 488M	Collar	1	
28	PS 599/103	Chain	1	
29	PS 666/114	Chain	1	
30	PS 766	Spring	1	
31	PS 871/76	Chain	1	
32	PS 871/80	Chain	1	
33	PS 871/96	Chain	1	
34	PS 871/106	Chain	1	
35	PS 843	Circlip	1	
36				
37	PT 50M	Bearing Housing Dust Cap	1	
38	PT 51M	Ferodo Clutch Disc	2	
39				
40	RH 80	Spring	1	
41	RH 149	Spring	24	
42	S/72/16	Bearing	2	
43	SF 40	Bearing	2	
44	SFT 30	Bearing	7	
45	SLG 30	Bearing	4	
46	SP 295	Plastic Sprocket	4	
47	SP 523	Clutch Sprocket	2	
48	SP 524M	Clutch Centre Plate	1	
49				
50				
51	TBM 64AM	Discharge Elevator Top Drive Sprocket	1	
52				
53				
54				
55	TBMW 143	Spacer	2	
56				
57				
58	TBMW 162	Sprocket 9T (Split)	2	
59	TBMW 172	Sprocket 19T	2	
60	TBMW 178	Jockey Spindle	4	
61				
62	TBMW 206	Sprocket 26T	1	
63	TRH 48	Main Drive Bracket	1	
64	TRH 120	Trash Elevator Spring Tension Tab	1	
65	TRH 128	Discharge Elevator Drive Belt Pulley Guard Bolt Spacer	1	
66				
67	TRH 149	Discharge Elevator Jockey Arm	1	
68	TRH 150M	Discharge Elevator Jockey Arm Spigot	1	
69	TRH 151M	Discharge Elevator Counter Shaft	1	
70	TRH 157	Discharge Elevator Jockey Spring Tensioner	1	
71	TRH 210	Main Web Drive Spring Tension Tab	1	
72	TRH 415	Jockey Roller	1	
73	TRH 416	Jockey Roller Spindle	1	

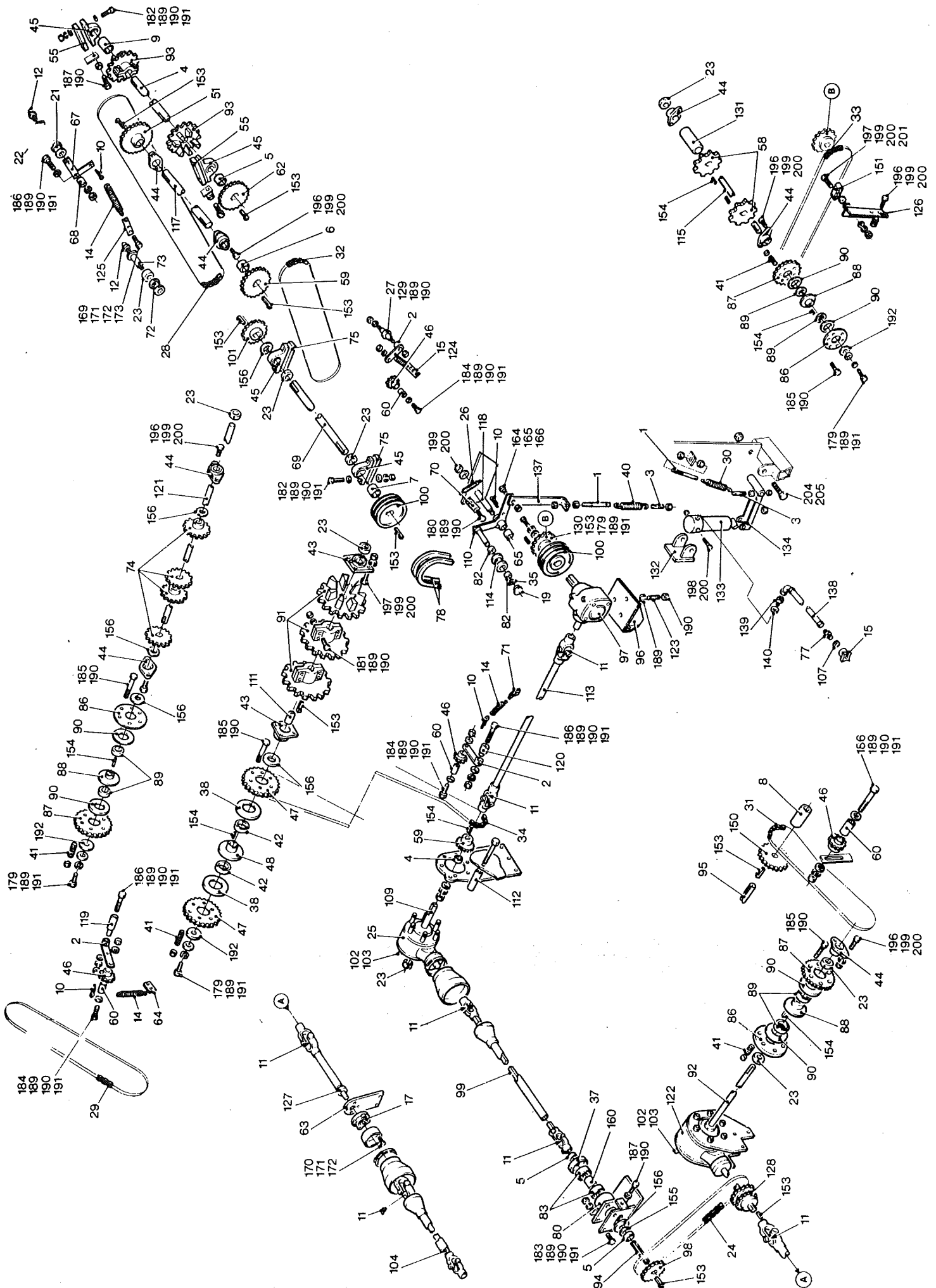


**Drives and Controls (Cont.)**

Item No	Part No.	Description	Qty per Assy	Remarks
74	TRH 422	Drive Sprocket	4	
75	TRH 440	Spacer	2	
76				
77	UC 31	Double Ended Male Connector	1	
78	VB 60	Vee Belt	2	
79				
80	VRT 23M	Bearing Housing	1	
81				
82	6200RS	Bearing	2	
83	6306RS	Bearing	2	
84				
85				
86	11002	Clutch Plate	3	
87	11003	Clutch Sprocket	3	
88	11004	Clutch Centre	3	
89	11005	Clutch Bearing	6	
90	11006	Ferodo Clutch Disc	6	
91	11024	Main Elevator Web Sprocket	RF	(Page 16)
92	11027	Main Drive Gearbox Shaft	1	
93	11035	Discharge Elevator Web Sprocket	2	
94	11038	Bearing Housing Shaft	1	
95	11044	Top Track Drive Shaft	RF	(Page 14)
96	11049	Gearbox Support Bracket	RF	(Page 16)
97	11051	Hilton Gearbox 1:1	1	
98	11062	Sprocket 19T x 1 in.	1	
99	11063	Hardy Spicer Gearbox Coupling Shaft	1	
100	11064	Double Pulley	2	
101	11065	Discharge Elevator Drive Sprocket	1	
102	11066	Gearbox Breather	RF	(Page 28)
103	11069	Gearbox Breather Plug	RF	(Page 28)
104	11078	PTO Coupling Drive Shaft	1	
105				
106				
107	11125	Washer	1	
108				
109	11140	Banjo Gearbox Output Shaft	1	
110	11141	Discharge Elevator Belt Jockey Segment	1	
111	11142	Main Web Shaft	1	
112	11174	Gearbox Spacer	RF	(Page 20)
113	11175	Banjo Gearbox Drive Shaft	1	
114	11176	Jockey Roller	1	
115	11177	Cross Web Drive Shaft	1	
116				
117	11253	Intermediate Drive Shaft	1	
118	11255	Guard Belt	1	
119	11263	Jockey Arm Spigot	1	
120	11264	Jockey Arm Spigot	1	
121	11267	Trash Extractor Web Spigot	1	
122	11279	Gearbox	RF	(Page 28)
123	11280	Gearbox Mounting Stud	6	
124	11282	Spring Tab	1	
125	11283	Spring Tab	1	
126	11298	Tension Bracket	1	
127	11306	Input Drive Shaft	1	TRH Mk 2 only
	11307	Input Drive Shaft	1	Turbobeeet only
128	11308	Main Drive Sprockets 21T and 17T	1	
129	11310	Guard Bolt	RF	(Page 30)
130	11311	Sprocket 21T	1	
131	11323	Plastic Guard	1	
132	11325	Ram Support Bracket	1	
133	11330	Ram	1	
134	11331	Ram Adjustment Arm	1	
135				
136				
137	11334	Tension Link	1	
138	11335	Hydraulic Hose	1	
139	11336	Reducing Adaptor Male/Male	1	
140	11337	Washer	1	
141				
142				
143				
144				
145				
146				
147				
148				

**Drives and Controls (Cont.)**

Item No	Part No.	Description	Qty per Assy	Remarks
149	17076	Sprocket 29T x 0.75 in.	1	
150		Chain Tension Block	1	
151				
152	17155	Jib Head Key	12	
153		RBE Key	6	
154				
155		Plain Washer 55mm Dia		
156		30mm Bore	1	
157		Plain Washer 75mm Dia		
158	C 37	30mm Bore	7	
159		Plastic Spacer	1	
160				
161		M6 x 35mm Hex Hd Bolt	1	
162		M6 Spring Washer	1	
163		M6 Nut	1	
164				
165		M8 x 50mm Hex Hd Bolt	3	
166		M8 Spring Washer	4	
167		M8 Nut	4	
168				
169				
170		M10 x 30mm Hex Hd Bolt	7	
171		M10 x 40mm Hex Hd Bolt	1	
172		M10 x 45mm Hex Hd Bolt	12	
173		M10 x 50mm Hex Hd Bolt	8	
174		M10 x 60mm Hex Hd Bolt	4	
175		M10 x 65mm Hex Hd Bolt	3	
176		M10 x 75mm Hex Hd Bolt	24	
177		M10 x 90mm Hex Hd Bolt	3	
178		M10 x 100mm Hex Hd Bolt	3	
179		M10 Spring Washer	38	
180		M10 Nut	61	
181		M10 Plain Washer	22	
182		M10 Plain Washer 73mm Dia	3	
183				
184				
185		M12 x 40mm Hex Hd Bolt	12	
186		M12 x 50mm Hex Hd Bolt	12	
187		M12 x 100mm Hex Hd Bolt	2	
188		M12 Spring Washer	31	
189		M12 Nut	23	
190		M12 Plain Washer	6	
191				
192		M20 x 130mm Hex Hd Bolt	1	
193		M20 Locknut	1	
194				
195				
196				
197				
198				
199				
200				
201				
202				
203				
204				
205				



**Drives and Controls from Serial No. W134**

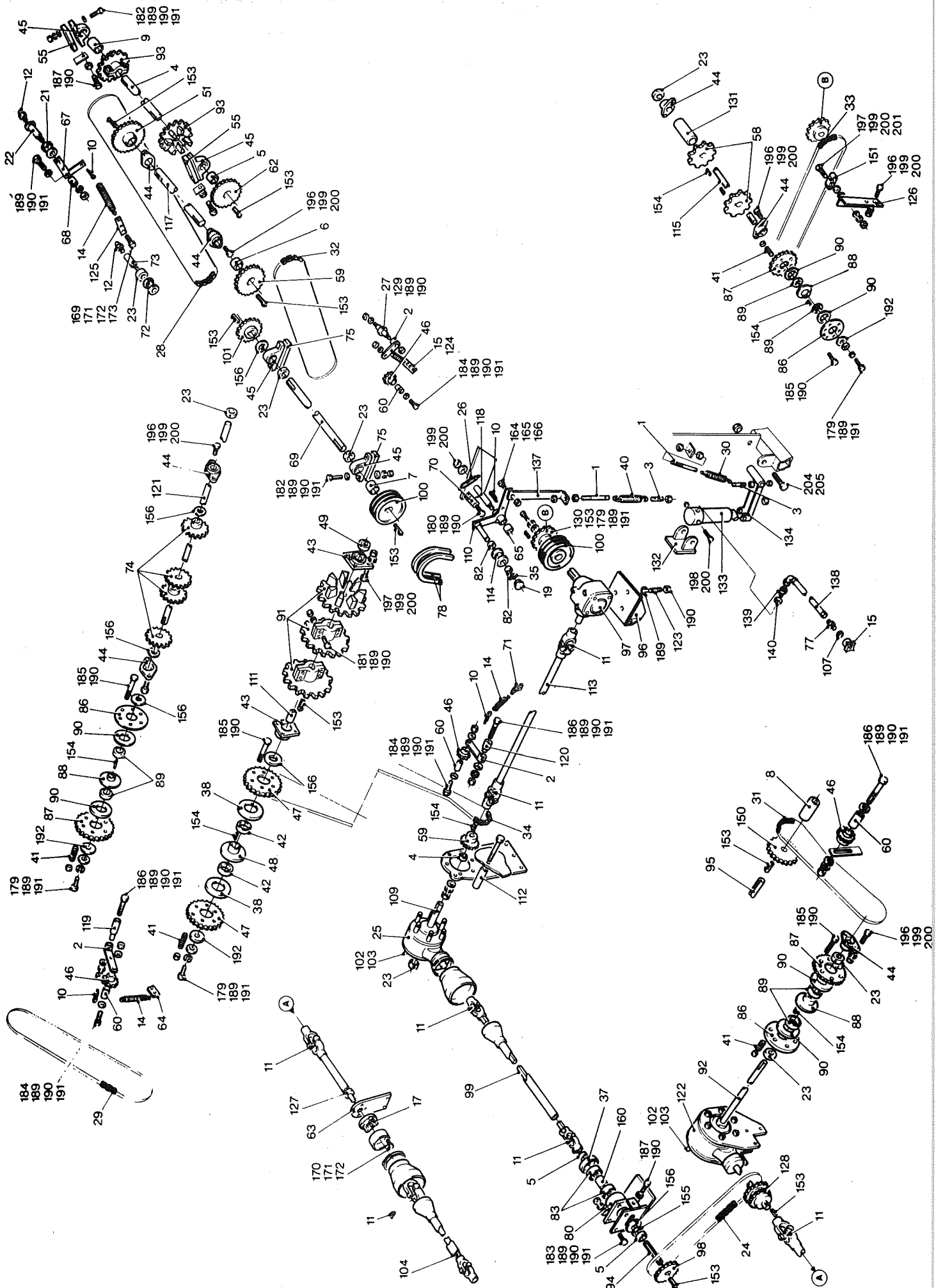
Item No	Part No.	Description	Qty per Assy	Remarks
1	BM82M	Spring Tensioner	2	(Page 28)
2	BM 184A	Jockey Arm	3	
3	BM 212M	Spring Tensioner	2	
4	BMZ 64M	Discharge Elevator Top Shaft	1	
5	C 10	Spacer	4	
6	C 15	Spacer	1	
7	C 46	Spacer	1	
8	C 60	Spacer	1	
9	C 100	Spacer	1	
10	GS 378	Split Pin	4	
11	GS 409	Grease Nipple (Angled)	7	
12	GS 412	Grease Nipple (Straight)	2	
13				
14	H 121/B	Spring	3	
15	H 420	Extractor Coupling (Complete)	1	
16				
17	MFC 30	Bearing	1	
18				
19	PH 408	Outlet Plastic Seal	1	
20				
21	PS 215	Jockey Roller	1	
22	PS 264M	Jockey Roller Shoulder Bolt	1	
23	PS 326M	Collar, Locking 30mm Dia	9	
24	PS 429/91	Chain	1	
25	PS 450-2TM	Gearbox	RF	
26	PS 457	Spring	1	
27	PS 488M	Collar	1	
28	PS 599/103	Chain	1	
29	PS 666/114	Chain	1	
30	PS 766	Spring	1	
31	PS 871/76	Chain	1	
32	PS 871/80	Chain	1	
33	PS 871/96	Chain	1	
34	PS 871/106	Chain	1	
35	PS 843	Circlip	1	
36				
37	PT 50M	Bearing Housing Dust Cap	1	
38	PT 51M	Ferodo Clutch Disc	2	
39				
40	RH 80	Spring	1	
41	RH 149	Spring	24	
42	S/72/16	Bearing	2	
43	SF 40	Bearing	2	
44	SFT 30	Bearing	7	
45	SLG 30	Bearing	4	
46	SP 295	Plastic Sprocket	4	
47	SP 523	Clutch Sprocket	2	
48	SP 524M	Clutch Centre Plate	1	
49				
50				
51	TBM 64AM	Discharge Elevator Top Drive Sprocket	1	
52				
53				
54				
55	TBMW 143	Spacer	2	
56				
57				
58	TBMW 162	Sprocket 9T (Split)	2	
59	TBMW 172	Sprocket 19T	2	
60	TBMW 178	Jockey Spindle	4	
61				
62	TBMW 206	Sprocket 26T	1	
63	TRH 48	Main Drive Bracket	1	
64	TRH 120	Trash Elevator Spring Tension Tab	1	
65	TRH 128	Discharge Elevator Drive Belt Pulley Guard Bolt Spacer	1	
66				
67	TRH 149	Discharge Elevator Jockey Arm	1	
68	TRH 150M	Discharge Elevator Jockey Arm Spigot	1	
69	TRH 151M	Discharge Elevator Counter Shaft	1	
70	TRH 157	Discharge Elevator Jockey Spring Tensioner	1	
71	TRH 210	Main Web Drive Spring Tension Tab	1	
72	TRH 415	Jockey Roller	1	
73	TRH 416	Jockey Roller Spindle	1	

**Drives and Controls (Cont.)**

Item No	Part No.	Description	Qty per Assy	Remarks
74	TRH 422	Drive Sprocket	4	
75	TRH 440	Spacer	2	
76				
77	UC 31	Double Ended Male Connector	1	
78	VB 60	Vee Belt	2	
79				
80	VRT 23M	Bearing Housing	1	
81				
82	6200RS	Bearing	2	
83	6306RS	Bearing	2	
84				
85				
86	11002	Clutch Plate	3	
87	11003	Clutch Sprocket	3	
88	11004	Clutch Centre	3	
89	11005	Clutch Bearing	6	
90	11006	Ferodo Clutch Disc	6	
91	11024	Main Elevator Web Sprocket	RF	(Page 16)
92	11027	Main Drive Gearbox Shaft	1	
93	11035	Discharge Elevator Web Sprocket	2	
94	11038	Bearing Housing Shaft	1	
95	11044	Top Track Drive Shaft	RF	(Page 14)
96	11049	Gearbox Support Bracket	RF	(Page 16)
97	11051	Hilton Gearbox 1:1	1	
98	11062	Sprocket 19T x 1 in.	1	
99	11063	Hardy Spicer Gearbox Coupling Shaft	1	
100	11064	Double Pulley	2	
101	11065	Discharge Elevator Drive Sprocket	1	
102	11066	Gearbox Breather	RF	(Page 28)
103	11069	Gearbox Breather Plug	RF	(Page 28)
104	11078	PTO Coupling Drive Shaft	1	Replaced by 11557 from March 1981
105				
106				
107	11125	Washer	1	
108				
109	11140	Banjo Gearbox Output Shaft	1	
110	11141	Discharge Elevator Belt Jockey Segment	1	
111	11142	Main Web Shaft	1	
112	11174	Gearbox Spacer	RF	(Page 20)
113	11175	Banjo Gearbox Drive Shaft	1	
114	11176	Jockey Roller	1	
115	11177	Cross Web Drive Shaft	1	
116				
117	11253	Intermediate Drive Shaft	1	
118	11255	Guard Belt	1	
119	11263	Jockey Arm Spigot	1	
120	11264	Jockey Arm Spigot	1	
121	11267	Trash Extractor Web Shaft	1	
122	11279	Gearbox	RF	(Page 28)
123	11280	Gearbox Mounting Stud	6	
124	11282	Spring Tab	1	
125	11283	Spring Tab	1	
126	11298	Tension Bracket	1	
127	11306	Input Drive Shaft	1	TRH Mk 2 only ) Replaced by 11558 and PS 326M
	11307	Input Drive Shaft	1	Turbobeeet only ) from March 1981
128	11308	Main Drive Sprockets 21T and 17T	1	
129	11310	Guard Bolt	RF	(Page 30)
130	11311	Sprocket 21T	1	
131	11323	Plastic Guard	1	
132	11325	Ram Support Bracket	1	
133	11330	Ram	1	
134	11331	Ram Adjustment Arm	1	
135				
136				
137	11334	Tension Link	1	
138	11335	Hydraulic Hose	1	
139	11336	Reducing Adaptor Male/Male	1	
140	11337	Washer	1	
141				
142				
143				
144				
145				
146				
147				
148				

## Drives and Controls (Cont.)

Item No	Part No.	Description	Qty per Assy	Remarks
149	C 37	Sprocket 29T x 0.75 in. Chain Tension Block	1	
150			1	
151		Jib Head Key	12	
152		RBE Key	6	
153		Plain Washer 55mm Dia 30mm Bore	1	
154			1	
155		Plain Washer 75mm Dia 30mm Bore	7	
156			7	
157		Plastic Spacer	1	
158			1	
159		M6 x 35mm Hex Hd Bolt	1	
160			1	
161		M6 Spring Washer	1	
162		M6 Nut	1	
163		M8 x 50mm Hex Hd Bolt	3	
164			4	
165		M8 Spring Washer	4	
166		M8 Nut	4	
167		M10 x 30mm Hex Hd Bolt	7	
168			1	
169		M10 x 40mm Hex Hd Bolt	12	
170		M10 x 45mm Hex Hd Bolt	8	
171		M10 x 50mm Hex Hd Bolt	4	
172		M10 x 60mm Hex Hd Bolt	3	
173		M10 x 65mm Hex Hd Bolt	24	
174		M10 x 75mm Hex Hd Bolt	3	
175		M10 x 90mm Hex Hd Bolt	3	
176		M10 x 100mm Hex Hd Bolt	38	
177		M10 Spring Washer	61	
178		M10 Nut	22	
179		M10 Plain Washer	3	
180		M10 Plain Washer 73mm Dia	12	
181		M12 x 40mm Hex Hd Bolt	12	
182		M12 x 50mm Hex Hd Bolt	2	
183		M12 x 100mm Hex Hd Bolt	31	
184		M12 Spring Washer	23	
185		M12 Nut	6	
186		M12 Plain Washer	1	
187		M20 x 130mm Hex Hd Bolt	1	
188		M20 Locknut	1	
189				
190				
191				
192				
193				
194				
195				
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205				



**Drives and Controls**

Item No	Part No.	Description	Qty per Assy	Remarks
1	BM82M	Spring Tensioner	2	(Page 28)
2	BM 184A	Jockey Arm	3	
3	BM 212M	Spring Tensioner	2	
4	BMZ 64M	Discharge Elevator Top Shaft	1	
5	C 10	Spacer	4	
6	C 15	Spacer	1	
7	C 46	Spacer	1	
8	C 60	Spacer	1	
9	C 100	Spacer	1	
10	GS 378	Split Pin	4	
11	GS 409	Grease Nipple (Angled)	7	
12	GS 412	Grease Nipple (Straight)	2	
13				
14	H 121/B	Spring	3	
15	H 420	Exactor Coupling (Complete)	1	
16				
17	MFC 30	Bearing	1	
18				
19	PH 408	Outlet Plastic Seal	1	
20				
21	PS 215	Jockey Roller	1	
22	PS 264M	Jockey Roller Shoulder Bolt	1	
23	PS 326M	Collar, Locking 30mm Dia	7	
24	PS 429/91	Chain	1	
25	PS 450-2TM	Gearbox	RF	
26	PS 457	Spring	1	
27	PS 488M	Collar	1	
28	PS 599/103	Chain	1	
29	PS 666/114	Chain	1	
30	PS 766	Spring	1	
31	PS 871/76	Chain	1	
32	PS 871/80	Chain	1	
33	PS 871/96	Chain	1	
34	PS 871/106	Chain	1	
35	PS 843	Circlip	1	
36				
37	PT 50M	Bearing Housing Dust Cap	1	
38	PT 51M	Ferodo Clutch Disc	2	
39				
40	RH 80	Spring	1	
41	RH 149	Spring	24	
42	S/72/16	Bearing	2	
43	SF 40	Bearing	2	
44	SFT 30	Bearing	7	
45	SLG 30	Bearing	4	
46	SP 295	Plastic Sprocket	4	
47	SP 523	Clutch Sprocket	2	
48	SP 524M	Clutch Centre Plate	1	
49	ST 41M	Stop Collar	2	
50				
51	TBM 64AM	Discharge Elevator Top Drive Sprocket	1	
52				
53				
54				
55	TBMW 143	Spacer	2	
56				
57				
58	TBMW 162	Sprocket 9T (Split)	2	
59	TBMW 172	Sprocket 19T	2	
60	TBMW 178	Jockey Spindle	4	
61				
62	TBMW 206	Sprocket 26T	1	
63	TRH 48	Main Drive Bracket	1	
64	TRH 120	Trash Elevator Spring Tension Tab	1	
65	TRH 128	Discharge Elevator Drive Belt Pulley Guard Bolt Spacer	1	
66				
67	11274	Discharge Elevator Jockey Arm	1	
68	11273	Discharge Elevator Jockey Arm Spigot	1	
69	TRH 151M	Discharge Elevator Counter Shaft	1	
70	TRH 157	Discharge Elevator Jockey Spring Tensioner	1	
71	TRH 210	Main Web Drive Spring Tension Tab	1	
72	TRH 415	Jockey Roller	1	
73	11272	Jockey Roller Spindle	1	

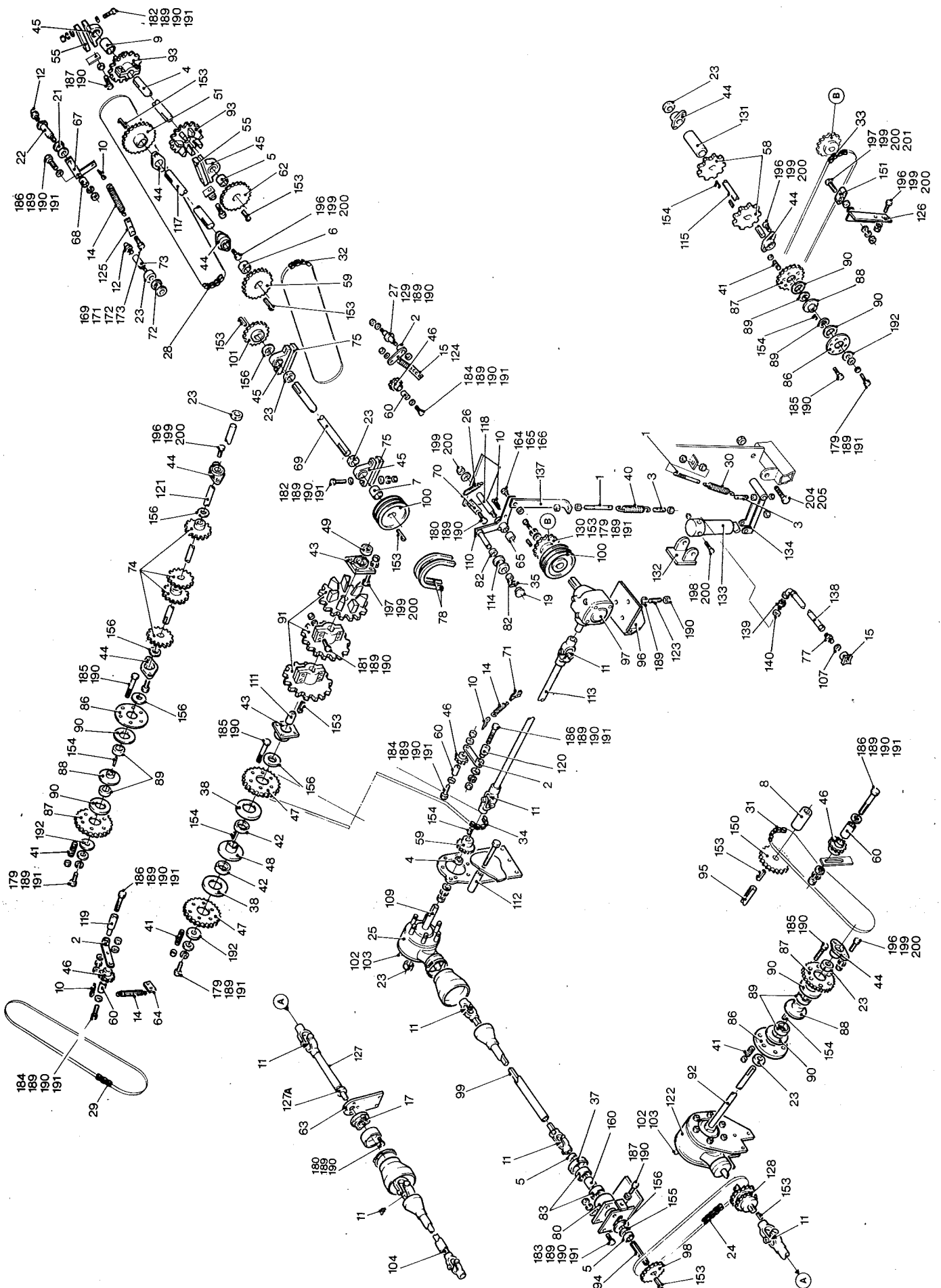


**Drives and Controls (Cont.)**

Item No	Part No.	Description	Qty per Assy	Remarks
74	TRH 422	Drive Sprocket	4	
75	TRH 440	Spacer	2	
76				
77	UC 31	Double Ended Male Connector	1	
78	VB 60	Vee Belt	2	
79				
80	VRT 23M	Bearing Housing	1	
81				
82	6005RS	Bearing	2	
83	6306RS	Bearing	2	
84				
85				
86	11002	Clutch Plate	3	
87	11003	Clutch Sprocket	3	
88	11004	Clutch Centre	3	
89	11005	Clutch Bearing	6	
90	11006	Ferodo Clutch Disc	6	
91	11024	Main Elevator Web Sprocket	RF	(Page 16)
92	11027	Main Drive Gearbox Shaft	1	
93	11035	Discharge Elevator Web Sprocket	2	
94	11038	Bearing Housing Shaft	1	
95	11044	Top Track Drive Shaft	RF	(Page 14)
96	11049	Gearbox Support Bracket	RF	(Page 16)
97	11051	Hilton Gearbox 1:1	1	
98	11062	Sprocket 19T x 1 in.	1	
99	11063	Hardy Spicer Gearbox Coupling Shaft	1	
100	11064	Double Pulley	2	
101	11065	Discharge Elevator Drive Sprocket	1	
102	11066	Gearbox Breather	RF	(Page 28)
103	11069	Gearbox Breather Plug	RF	(Page 28)
104	11078	PTO Coupling Drive Shaft	1	Replaced by 11557 from March 1981
105				
106				
107	11125	Washer	1	
108				
109	11140	Banjo Gearbox Output Shaft	1	
110	11141	Discharge Elevator Belt Jockey Segment	1	
111	11142	Main Web Shaft	1	
112	11174	Gearbox Spacer	RF	(Page 20)
113	11175	Banjo Gearbox Drive Shaft	1	
114	11176	Jockey Roller	1	
115	11177	Cross Web Drive Shaft	1	
116				
117	11253	Intermediate Drive Shaft	1	
118	11255	Guard Belt	1	
119	11263	Jockey Arm Spigot	1	
120	11264	Jockey Arm Spigot	1	
121	11267	Trash Extractor Web Shaft	1	
122	11279	Gearbox	RF	(Page 28)
123	11280	Gearbox Mounting Stud	6	
124	11282	Spring Tab	1	
125	11283	Spring Tab	1	
126	11298	Tension Bracket	1	
127	11306	Input Drive Shaft	1	TRH Mk 2 only ) Replaced by 11558 and PS 326M
	11307	Input Drive Shaft	1	Turbobeeet only ) from March 1981
128	11308	Main Drive Sprockets 21T and 17T	1	
129	11310	Guard Bolt	RF	(Page 30)
130	11311	Sprocket 21T	1	
131	11323	Plastic Guard	1	
132	11325	Ram Support Bracket	1	
133	11330	Ram	1	
134	11331	Ram Adjustment Arm	1	
135				
136				
137	11334	Tension Link	1	
138	11335	Hydraulic Hose	1	
139	11336	Reducing Adaptor Male/Male	1	
140	11337	Washer	1	
141				
142				
143				
144				
145				
146				
147				
148				

**Drives and Controls (Cont.)**

Item No	Part No.	Description	Qty per Assy	Remarks
149	17076	Sprocket 29T x 0.75 in.	1	
150		Chain Tension Block	1	
151	17155			
152				
153		Jib Head Key	12	
154		RBE Key	6	
155				
156		Plain Washer 55mm Dia 30mm Bore	1	
157		Plain Washer 75mm Dia 30mm Bore	7	
158				
159	C 37	Plastic Spacer	1	
160				
161				
162				
164		M6 x 35mm Hex Hd Bolt	1	
165		M6 Spring Washer	1	
166		M6 Nut	1	
167				
168				
169				
170		M8 x 50mm Hex Hd Bolt	3	
171		M8 Spring Washer	4	
172		M8 Nut	4	
173				
174				
175				
176				
177				
178				
179		M10 x 30mm Hex Hd Bolt	7	
180		M10 x 40mm Hex Hd Bolt	1	
181		M10 x 45mm Hex Hd Bolt	12	
182		M10 x 50mm Hex Hd Bolt	8	
183		M10 x 60mm Hex Hd Bolt	4	
184		M10 x 65mm Hex Hd Bolt	3	
185		M10 x 75mm Hex Hd Bolt	24	
186		M10 x 90mm Hex Hd Bolt	3	
187		M10 x 100mm Hex Hd Bolt	3	
188				
189		M10 Spring Washer	38	
190		M10 Nut	61	
191		M10 Plain Washer	22	
192		M10 Plain Washer 73mm Dia	3	
193				
194				
195				
196		M12 x 40mm Hex Hd Bolt	12	
197		M12 x 50mm Hex Hd Bolt	12	
198		M12 x 100mm Hex Hd Bolt	2	
199		M12 Spring Washer	31	
200		M12 Nut	23	
201		M12 Plain Washer	6	
202				
203				
204		M20 x 130mm Hex Hd Bolt	1	
205		M20 Locknut	1	



Drives and Controls (From serial No. TRH MK2 Y1544 - Turbobeet Y228)

Item No	Part No.	Description	Qty per Assy	Remarks
1	BM82M	Spring Tensioner	2	
2	BM 184A	Jockey Arm	3	
3	BM 212M	Spring Tensioner	2	
4	BMZ 64M	Discharge Elevator Top Shaft	1	
5	C 10	Spacer	4	
6	C 15	Spacer	1	
7	C 46	Spacer	1	
8	C 60	Spacer	1	
9	C 100	Spacer	1	
10	GS 378	Split Pin	4	
11	GS 409	Grease Nipple (Angled)	7	
12	GS 412	Grease Nipple (Straight)	2	
13				
14	H 121/B	Spring	3	Part No. was MFC 30 Prior to Serial No. TRH MK2 Y1544 - Turbobeet Y228
15	H 420	Exactor Coupling (Complete)	1	
16				
17	MFC 35	Bearing	1	
18				
19	PH 408	Outlet Plastic Seal	1	
20				
21	PS 215	Jockey Roller	1	
22	PS 264M	Jockey Roller Shoulder Bolt	1	
23	PS 326M	Collar, Locking 30mm Dia	7	
24	PS 429/91	Chain	1	
25	PS 450-2TM	Gearbox	RF	
26	PS 457	Spring	1	(Page 28)
27	PS 488M	Collar	1	
28	PS 599/103	Chain	1	
29	PS 666/114	Chain	1	
30	PS 766	Spring	1	
31	PS 871/76	Chain	1	
32	PS 871/80	Chain	1	
33	PS 871/96	Chain	1	
34	PS 871/106	Chain	1	
35	PS 843	Circlip	1	
36				
37	PT 50M	Bearing Housing Dust Cap	1	
38	PT 51M	Ferodo Clutch Disc	2	
39				
40	RH 80	Spring	1	
41	RH 149	Spring	24	
42	S/72/16	Bearing	2	
43	SF 40	Bearing	2	
44	SFT 30	Bearing	7	
45	SLG 30	Bearing	4	
46	SP 295	Plastic Sprocket	4	
47	SP 523	Clutch Sprocket	2	
48	SP 524M	Clutch Centre Plate	1	
49	ST 41M	Stop Collar	2	
50				Superseded from Serial No. TRH MK2 Y1544 Turbobeet Y228
51	TBM 64AM	Discharge Elevator Top Drive Sprocket	1	
52				
53				
54				
55	TBMW 143	Spacer	2	
56				
57				
58	<del>TBMW 162</del>	Sprocket 19T (Split) 13314	2	
59	TBMW 172	Sprocket 19T	2	
60	TBMW 178	Jockey Spindle	4	
61				
62	TBMW 206	Sprocket 26T	1	
63	TRH 48	Main Drive Bracket	1	
64	TRH 120	Trash Elevator Spring Tension Tab	1	
65	TRH 128	Discharge Elevator Drive Belt Pulley Guard Bolt Spacer	1	
66				
67	11274	Discharge Elevator Jockey Arm	1	
68	11273	Discharge Elevator Jockey Arm Spigot	1	
69	TRH 151M	Discharge Elevator Counter Shaft	1	
70	TRH 157	Discharge Elevator Jockey Spring Tensioner	1	
71	TRH 210	Main Web Drive Spring Tension Tab	1	
72	TRH 415	Jockey Roller	1	
73	11272	Jockey Roller Spindle	1	

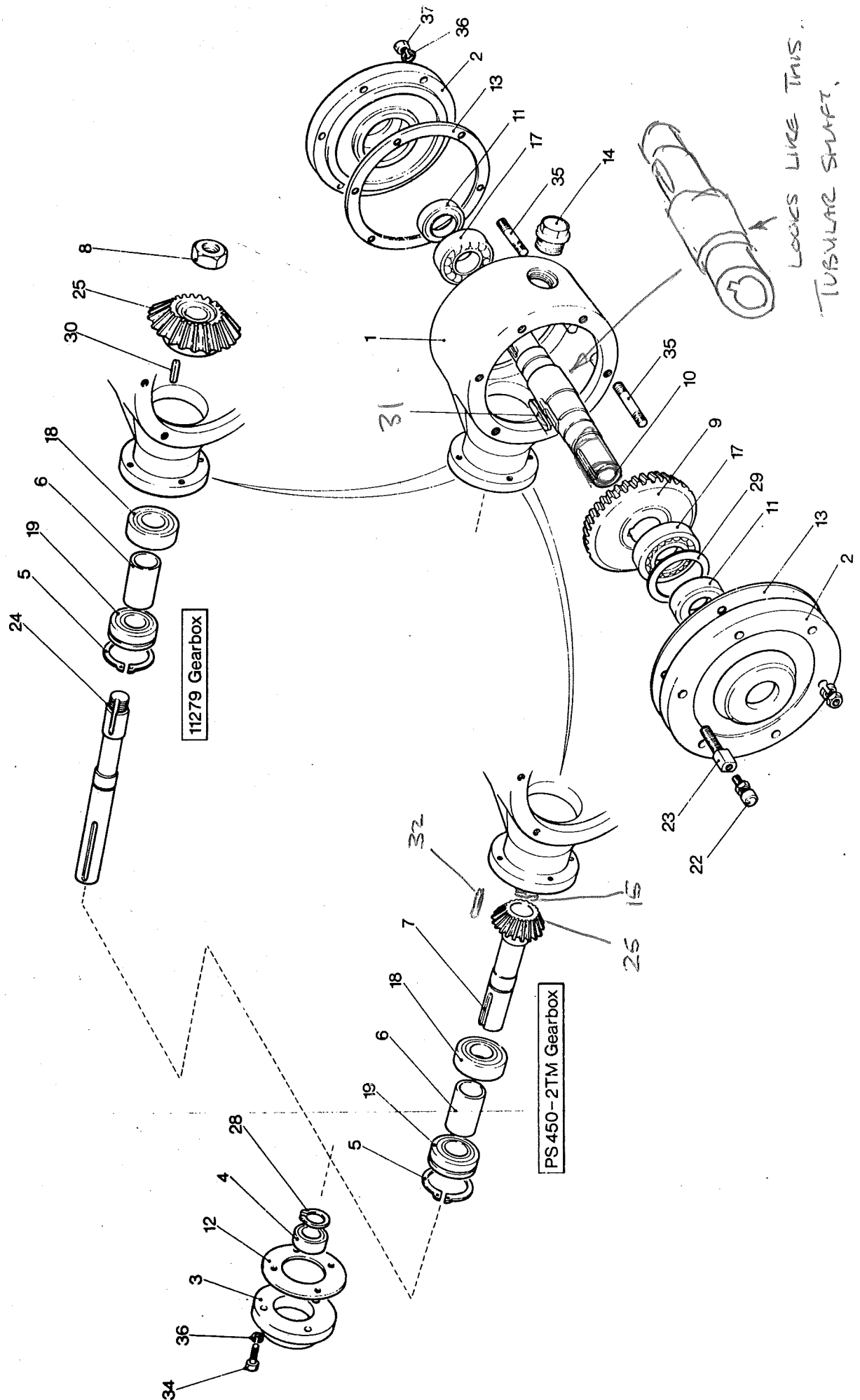
Drives and Controls (Cont.) (From serial No. TRH MK2 Y1544 - Turbobeet Y228)

Item No	Part No.	Description	Qty per Assy	Remarks
74	TRH 422	Drive Sprocket	4	
75	TRH 440	Spacer	2	
76				
77	UC 31	Double Ended Male Connector	1	
78	VB 60	Vee Belt	2	
79				
80	VRT 23M	Bearing Housing	1	
81				
82	6005RS	Bearing	2	
83	6306RS	Bearing	2	
84				
85				
86	11002	Clutch Plate	3	
87	11003	Clutch Sprocket	3	
88	11004	Clutch Centre	3	
89	11005	Clutch Bearing	6	
90	11006	Ferodo Clutch Disc	6	
91	11024	Main Elevator Web Sprocket	RF	(Page 16)
92	11027	Main Drive Gearbox Shaft	1	
93	11035	Discharge Elevator Web Sprocket	2	
94	11038	Bearing Housing Shaft	1	
95	11044	Top Track Drive Shaft	RF	(Page 14)
96	11049	Gearbox Support Bracket	RF	(Page 16)
97	11051	Hilton Gearbox 1:1	1	
98	11062	Sprocket 19T x 1 in.	1	
99	11844	Hardy Spicer Gearbox Coupling Shaft	1	-Part No. was 11063 Prior to serial No. TRH MK2 Y1544 - Turbobeet Y228
100	SPCL 526	Double Pulley	2	
101	11065	Discharge Elevator Drive Sprocket	1	
102	11066	Gearbox Breather	RF	See Back Page of Amendments
103	11069	Gearbox Breather Plug	RF	See back page of Amendments
104	13019	PTO Coupling Drive Shaft	1	-Part No. was 11078 prior to March 1981
105				Part No. was 11557 prior to serial No. TRH MK2 Y1544 - Turbobeet Y228
106				
107	11125	Washer	1	
108				
109	11140	Banjo Gearbox Output Shaft	1	
110	11141	Discharge Elevator Belt Jockey Segment	1	
111	11142	Main Web Shaft	1	
112	11174	Gearbox Spacer	RF	(Page 20)
113	11175	Banjo Gearbox Drive Shaft	1	
114	11176	Jockey Roller	1	
115	11177	Cross Web Drive Shaft	1	
116				
117	11253	Intermediate Drive Shaft	1	
118	11255	Guard Belt	1	
119	11263	Jockey Arm Spigot	1	
120	11264	Jockey Arm Spigot	1	
121	11267	Trash Extractor Web Shaft	1	
122	11822	Gearbox	RF	-Part No. was 11279 prior to serial No. TRH MK2 Y1544 - Turbobeet Y228
123	11280	Gearbox Mounting Stud	6	(see back page of amendments)
124	11282	Spring Tab	1	
125	11283	Spring Tab	1	
126	11298	Tension Bracket	1	
127	11828 *	Input Drive Shaft	1	Part No. was 11558 } Prior to serial No.
127A	SPCT 131	Stop Collar	1	Part No. was PS326M } TRH MK2 Y1544
128	11826	Main Drive Sprockets 21T and 17T	1	Part No. was 11308 } Turbobeet Y228
129	11310	Guard Bolt	RF	(Page 30)
130	11311	Sprocket 21T	1	
131	11323	Plastic Guard	1	
132	11325	Ram Support Bracket	1	* FROM SERIAL No TURBO - TB 277A.
133	11330	Ram	1	TRH MK2 - LL 1584B.
134	11331	Ram Adjustment Arm	1	Part No is 11870.
135				
136				
137	11334	Tension Link	1	
138	11335	Hydraulic Hose	1	
139	11336	Reducing Adaptor Male/Male	1	
140	11337	Washer	1	
141				
142				
143				
144				
145				
146				
147				
148				

**Drives and Controls (Cont.)** From Serial No. TRH MK2 Y1544 - Turbobeet Y228

Item No	Part No.	Description	Qty per Assy	Remarks
149	C 37			
150		Sprocket 29T x 0.75 in.	1	
151		Chain Tension Block	1	
152				
153		Jib Head Key	12	
154		RBE Key	6	
155				
156		Plain Washer 55mm Dia 30mm Bore	1	
157		Plain Washer 75mm Dia 30mm Bore	7	
158				
159				
160		Plastic Spacer	1	
161				
162				
164		M6 x 35mm Hex Hd Bolt	1	
165		M6 Spring Washer	1	
166		M6 Nut	1	
167				
168				
169				
170		M8 x 50mm Hex Hd Bolt	3	
171		M8 Spring Washer	4	
172		M8 Nut	4	
173				
174				
175				
176				
177				
178				
179		M10 x 30mm Hex Hd Bolt	7	
180		M10 x 40mm Hex Hd Bolt	1	
181		M10 x 45mm Hex Hd Bolt	12	
182		M10 x 50mm Hex Hd Bolt	8	
183		M10 x 60mm Hex Hd Bolt	4	
184		M10 x 65mm Hex Hd Bolt	3	
185		M10 x 75mm Hex Hd Bolt	24	
186		M10 x 90mm Hex Hd Bolt	3	
187		M10 x 100mm Hex Hd Bolt	3	
188				
189		M10 Spring Washer	38	
190		M10 Nut	61	
191		M10 Plain Washer	22	
192		M10 Plain Washer 73mm Dia	3	
193				
194				
195				
196		M12 x 40mm Hex Hd Bolt	12	
197		M12 x 50mm Hex Hd Bolt	12	
198		M12 x 100mm Hex Hd Bolt	2	
199		M12 Spring Washer	31	
200		M12 Nut	23	
201		M12 Plain Washer	6	
202				
203				
204		M20 x 130mm Hex Hd Bolt	1	
205		M20 Locknut	1	

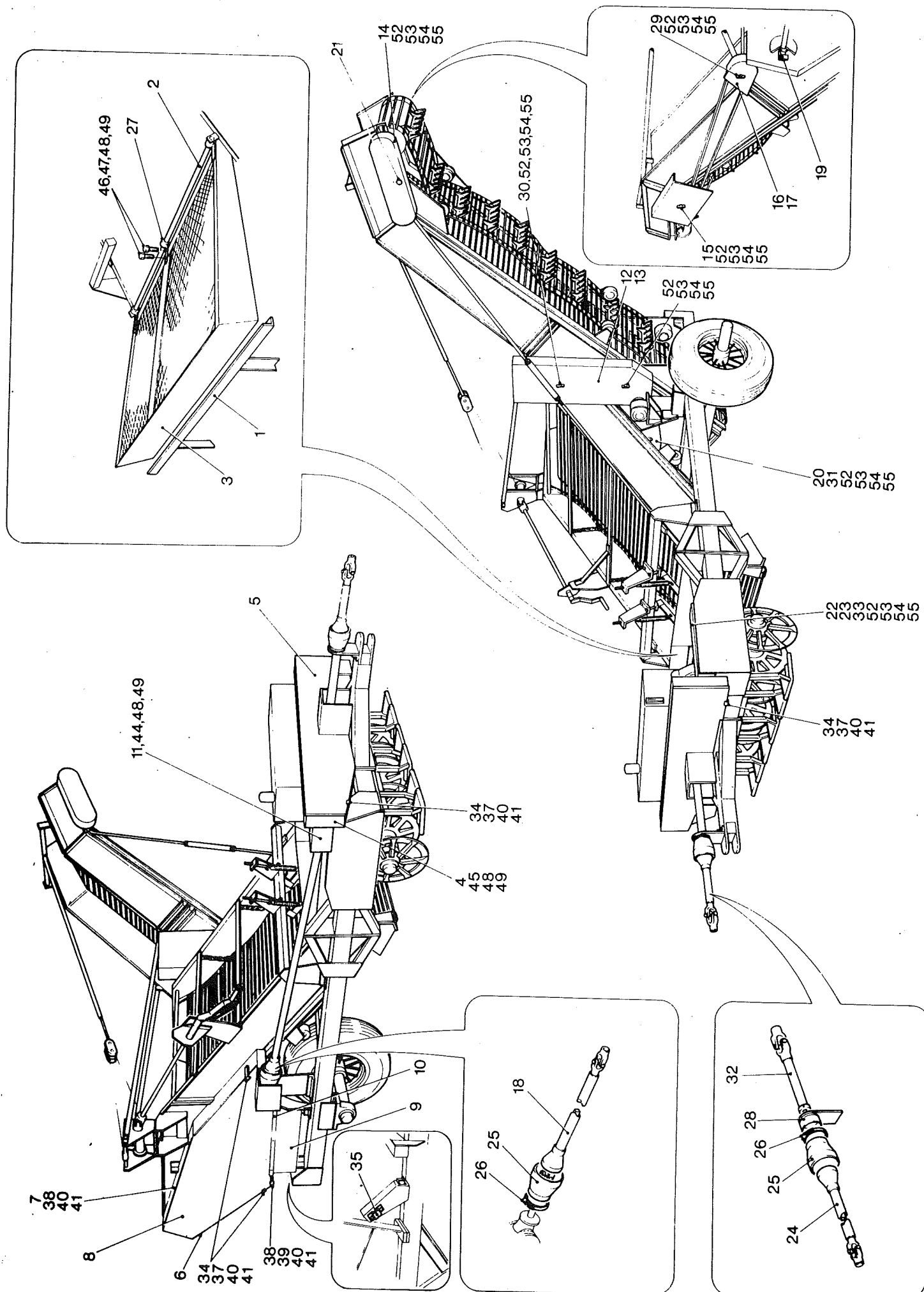
# Gearbox - PS450-2TM and 11279



## Gearboxes PS 450-2TM and 11279

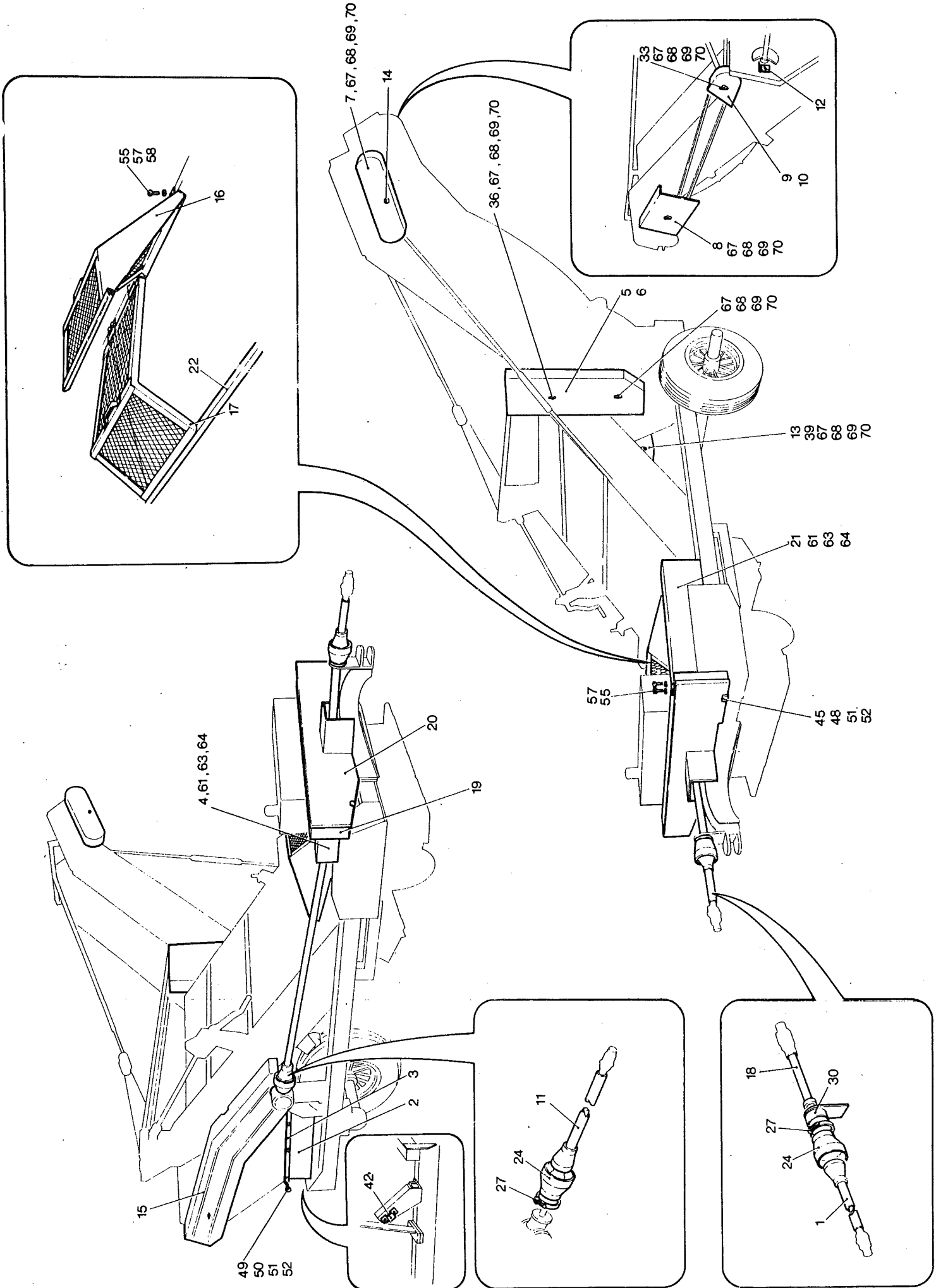
Item No	Part No.	Description	Qty per Assy	Remarks
1	PS 200/2M	Gearbox Housing	1	
2	PS 201/2M	Gearbox Side Plate	2	
3	PS 202	Tail Shaft End Plate	1	
4	PS 233	Tail Shaft Oil Seal	1	
5	PS 236	Bearing Circlip	1	
6	PS 237	Spacer	1	
7	PS 238/M	Tail Shaft and Bevel Pinion	1	(PS 450-2TM only)
8	PS 240/1	Locknut	1	(11279 only)
9	PS 242	Bevel Gear	1	
10	PS 243/M	Output Shaft <i>PS 243/M</i>	1	
11	PS 245	Output Shaft Oil Seal	2	
12	PS 469	Tail Shaft End Plate Gasket	1	
13	PS 470/A	Gearbox Side Plate Gasket	2	
14	PS869	Drain/Filter Plug	1	
15	<i>PS 240/1</i>	<i>LOCK NUT</i>	1	
16				
17	145	Output Shaft Bearing	2	
18	330	Tail Shaft Bearing	1	
19	330/C	Tail Shaft Bearing with Circlip Groove	1	
20				
21				
22	11066	Gearbox Breather	1	
23	11069	Gearbox Breather Plug	1	
24	11277	Tail Shaft	1	(11279 only)
25	11278	Bevel Pinion	1	(11279 only)
26				
27				
28		Tail Shaft Circlip	1	
29		Side Plate Shim	AR	
30		RBE Key 8 x 7 x 25mm	1	(11279 only)
31		<del>RBE Key 8 x 32mm</del>	1	
32		<i>RBE KEY 1/4" x 1/4" x 1 1/4" LG</i>	1	<i>5/16" x 1 3/4"</i>
33				
34		M10 x 30mm Hex Hd Bolt	4	
35		M10 Housing Stud	11	
36		M10 Spring Washer	15	
37		M10 Nut	11	





# Guards

Item No	Part No.	Description	Qty per Assy	Remarks
1	11047	Hydraulic Tank Rear Support Bracket	1	
2	11090	Top Track Canopy Hinge Tube	1	
3	11091	Top Track Canopy	1	
4	11147	Main Drive Guard	1	
5	11149	Main Drive Guard Cover	1	
6	11150	Main Web and Trash Extractor Drive Guard Bottom	1	
7	11151	Main Web and Trash Extractor Drive Guard Top	1	
8	11153	Main Web and Trash Extractor Drive Guard Cover	1	
9	11157	Main Web Drive Guard Flap (Rubber)	1	
10	11158	Main Web Drive Guard Flap Clamp Strip	1	
11	11159	Bearing Housing Cover Guard	1	
12	11160	Discharge Elevator Drive 'V' Belt Guard	1	
13	11161	Discharge Elevator Drive 'V' Belt Back Plate	RF	(Page 22)
14	11162	Discharge Elevator Top Guard Front	1	
15	11163	Discharge Elevator Top Guard Rear	1	
16	11168	Discharge Elevator Drive Chain Guard Back Plate	1	
17	11169	Discharge Elevator Drive Chain Guard	1	
18	11172	Gearbox Coupling Guard Tube	1	
19	11268	Trash Extractor Web Shaft End Guard	1	
20	11296	Drive Guard	1	
21	11310	Guard Bolt	RF	(Page 24)
22	11321	Top Track Drive Chain Guard	1	
23	11322	Top Track Drive Chain Guard Cover	1	
24	11332	Guard Tube	1	
25	BM 196	Rubber Guard	2	
26	GS 407	Jubilee Clip	2	
27	RP 38	Top Track Canopy Hinge	3	
28	RH 176	Coupling Guard	1	
29	SPCL 154/M	Guard Bolt	1	
30	TBM 24M	Guard Bolt	1	
31	TBMW 40M	Guard Bolt	2	
32	TRH 203	Intermediate Drive Shaft Guard Tube	1	Turbobeet only
	11343	Intermediate Drive Shaft Guard Tube	1	TRH Mk. 2 only
33	PH 608M	Guard Bolt	2	
34	17006	Catch	4	
35	TBMW 221	Guard	1	
36				
37		M6 x 12mm Hex Hd Bolt	8	
38		M6 x 25mm Hex Hd Bolt	4	
39		M6 Plain Washer	4	
40		M6 Spring Washer	12	
41		M6 Nut	12	
42				
43				
44		M10 x 25mm Hex Hd Bolt	7	
45		M10 x 30mm Hex Hd Bolt	2	
46		M10 x 35mm Hex Hd Bolt	6	
47		M10 Plain Washer	6	
48		M10 Spring Washer	15	
49		M10 Nut	15	
50				
51				
52		M12 Plain Washer	11	
53		M12 Spring Washer	18	
54		M12 Nut	7	
55		M12 Wingnut	11	



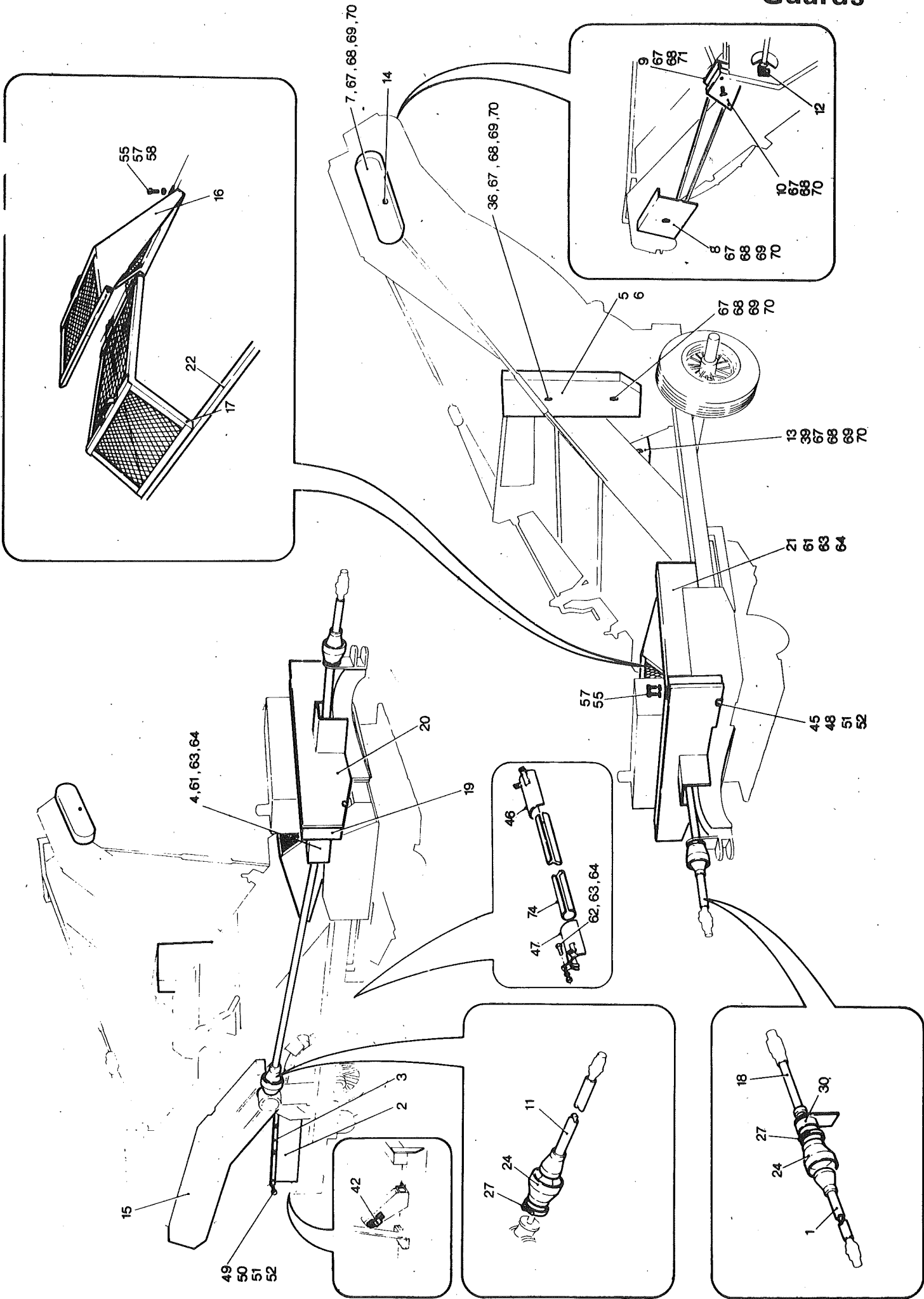
Guards from Serial No. W134

Item No	Part No.	Description	Qty per Assy	Remarks
1	11078	PTO Coupling Drive Shaft	1	Page 22
2	11157	Main Web Drive Guard Flap (Rubber)	1	
3	11158	Main Web Drive Guard Flap Clamp Strip	1	
4	11159	Bearing Housing Cover Guard	1	
5	11160	Discharge Elevator Drive 'V' Belt Guard	1	
6	11161	Discharge Elevator Drive 'V' Belt Back Plate	Ref	
7	11162	Discharge Elevator Top Guard Front	1	
8	11163	Discharge Elevator Top Guard Rear	1	
9	11168	Discharge Elevator Drive Chain Guard Back Plate	1	
10	11169	Discharge Elevator Drive Chain Guard	1	
11	11172	Gearbox Coupling Guard Tube	1	
12	11268	Trash Extractor Web Shaft End Guard	1	
13	11296	Drive Guard	1	Page 24
14	11310	Guard Bolt	Ref	
15	11360	Trash Extractor Drive Chain Guard	1	Replaced by 11559 from March 1981
16	11381	Cage Wheel Guard Cover LH	1	
17	11382	Cage Wheel Guard Cover RH	1	
18	11415	Plastic Guard Tube	1	
19	11417	Main Drive Guard	1	
20	11418	Main Drive Guard Cover	1	TRH Mk. II only, Turbobeet 11556
21	11545	Cage Wheel Drive Chain Guard	1	
22	11152	Canopy Support	1	
23				
24	BM 196	Rubber Guard	2	
25				
26				
27	GS 407	Jubilee Clip	2	
28				
29				
30	RH 176	Coupling Guard	1	
31				
32				
33	SPCL 154/M	Guard Bolt	1	
34				
35				
36	TBM 24M	Guard Bolt	1	
37				
38				
39	TBMW 40M	Guard Bolt	2	
40				
41				
42	TBMW 221	Guard	1	
43				
44				
45	17006	Catch	4	
46				
47				

# Guards

Item No	Part No.	Description	Qty per Assy	Remarks
48		M6 x 12mm Hx Hd Bolt	4	
49		M6 x 25mm Hex Hd Bolt	3	
50		M6 Plain Washer	3	
51		M6 Spring Washer	7	
52		M6 Nut	7	
53				
54				
55		M8 x 20mm Hex Hd Bolt	2	
56		M8 x 25mm Hex Hd Bolt	8	
57		M8 Spring Washer	10	
58		M8 Nut	8	
59				
60				
61		M10 x 25mm Hex Hd Bolt	3	
62		M10 x 30mm Hx Hd Bolt	2	
63		M10 Spring Washer	5	
64		M10 Nut	5	
65				
66				
67		M12 Plain Washer	9	
68		M12 Spring Washer	16	
69		M12 Nut	5	
70		M12 Wing Nut	9	
71				
72				
73				





# Guards

Item No	Part No.	Description	Qty per Assy	Remarks
1	11078	PTO Coupling Drive Shaft	1	
2	11157	Main Web Drive Guard Flap (Rubber)	1	
3	11158	Main Web Drive Guard Flap Clamp Strip	1	
4	11159	Bearing Housing Cover Guard	1	
5	11160	Discharge Elevator Drive 'V' Belt Guard	1	
6	11161	Discharge Elevator Drive 'V' Belt Back Plate	Ref	Page 22
7	11162	Discharge Elevator Top Guard Front	1	
8	11163	Discharge Elevator Top Guard Rear	1	
9	11774	Discharge Elevator Drive Chain Guard Back Plate	1	
10	11775	Discharge Elevator Drive Chain Guard	1	
11	11172	Gearbox Coupling Guard Tube	1	
12	11268	Trash Extractor Web Shaft End Guard	1	
13	11296	Drive Guard	1	
14	11310	Guard Bolt	Ref	Page 24
15	11360	Trash Extractor Drive Chain Guard	1	
16	11381	Cage Wheel Guard Cover LH	1	
17	11382	Cage Wheel Guard Cover RH	1	
18	11415	Plastic Guard Tube	1	Replaced by 11559 from March 1981
19	11417	Main Drive Guard	1	
20	11418	Main Drive Guard Cover	1	
21	11545	Cage Wheel Drive Chain Guard	1	TRH Mk. II only, Turbobeeet 11556
22	11152	Canopy Support	1	
23	19091	Guard Bolt	1	
24	BM 196	Rubber Guard	2	
25				
26				
27	GS 407	Jubilee Clip	2	
28				
29				
30	RH 176	Coupling Guard	1	
31				
32				
33				
34				
35				
36	TBM 24M	Guard Bolt	3	
37				
38				
39				
40				
41				
42	TBMW 221	Guard	1	
43				
44				
45	17006	Catch	4	
46	11438	LH Knuckle Guard	1	
47	11439	RH Knuckle Guard	1	



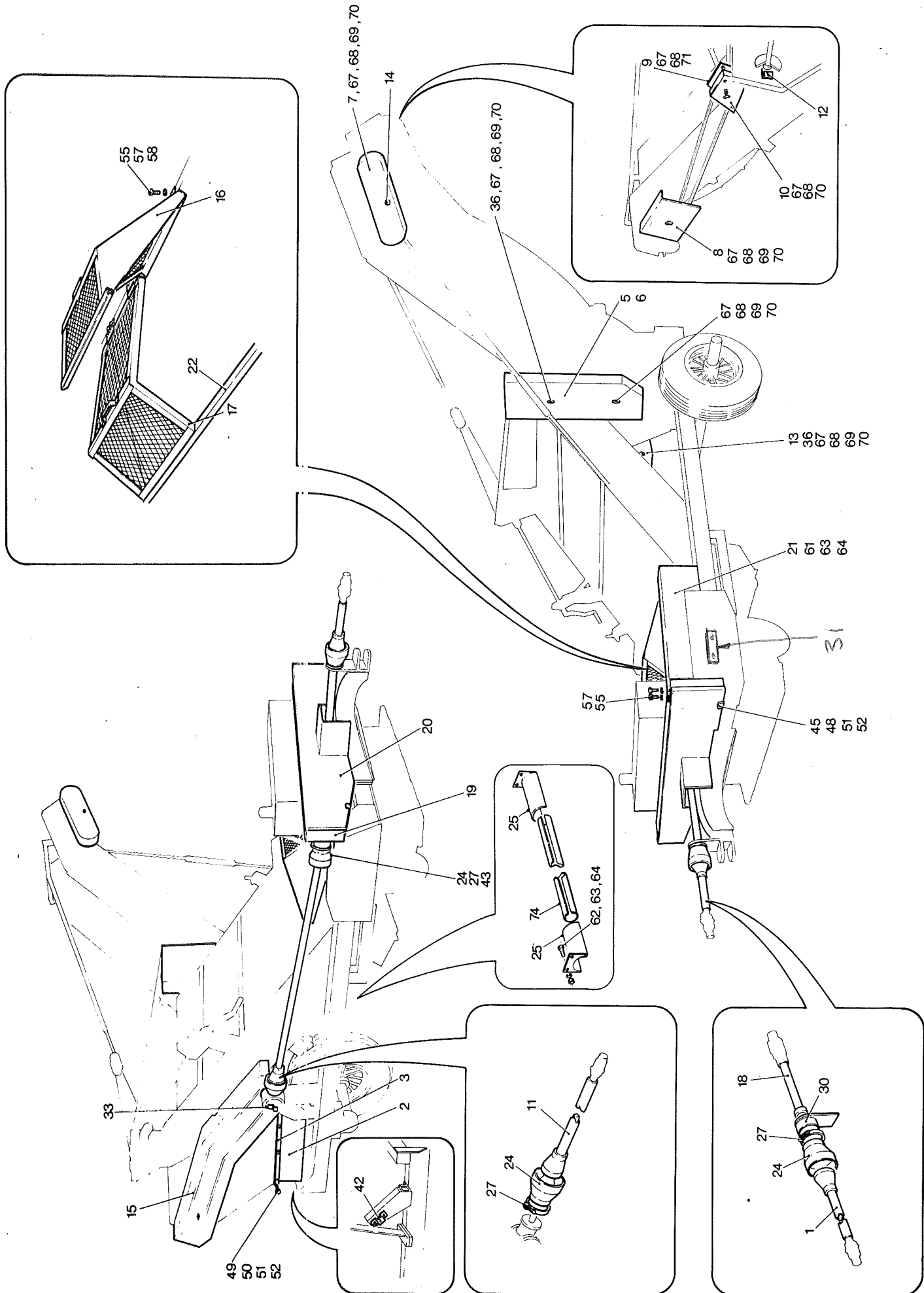
# Guards

Item No	Part No.	Description	Qty per Assy	Remarks
48	11445	M6 x 12mm Hx Hd Bolt	4	
49		M6 x 25mm Hex Hd Bolt	3	
50		M6 Plain Washer	3	
51		M6 Spring Washer	7	
52		M6 Nut	7	
53				
54				
55		M8 x 20mm Hex Hd Bolt	2	
56		M8 x 25mm Hex Hd Bolt	8	
57		M8 Spring Washer	10	
58		M8 Nut	8	
59				
60				
61		M10 x 25mm Hex Hd Bolt	3	
62		M10 x 40mm Hx Hd Bolt	2	
63		M10 Spring Washer	5	
64		M10 Nut	5	
65				
66				
67		M12 Plain Washer	12	
68		M12 Spring Washer	19	
69		M12 Nut	5	
70		M12 Wing Nut	10	
71		M12 x 30mm Hex Hd Setscrew	2	
72				
73				
74		Guard Tube	1	



# Guards

From Serial No. TRH MK2 Y1544 - Turbobeet Y228



Guards (From serial No. TRH MK2 Y1544 - Turbobeet Y228)

Item No	Part No.	Description	Qty per Assy	Remarks
1	13019	PTO Coupling Drive Shaft	1	Part No. was 11078 Prior to March 1981 Part No. was 11557 Prior to serial No. TRH MK2 Y1544 - Turbobeet Y228
2	11157	Main Web Drive Guard Flap (Rubber)	1	
3	11158	Main Web Drive Guard Flap Clamp Strip	1	
4				
5	11160	Discharge Elevator Drive 'V' Belt Guard	1	Page 22
6	11161	Discharge Elevator Drive 'V' Belt Back Plate	Ref	
7	11162	Discharge Elevator Top Guard Front	1	
8	11163	Discharge Elevator Top Guard Rear	1	
9	11774	Discharge Elevator Drive Chain Guard Back Plate	1	Part No. was 11172 Prior to serial No. TRH MK2 Y1544 - Turbobeet Y228
10	11775	Discharge Elevator Drive Chain Guard	1	
11	11844/5	Gearbox Coupling Guard Tube	1	
12	11268	Trash Extractor Web Shaft End Guard	1	
13	11296	Drive Guard	1	Page 24
14	11310	Guard Bolt	Ref	
15	11360	Trash Extractor Drive Chain Guard	1	
16	11381	Cage Wheel Guard Cover LH	1	
17	11382	Cage Wheel Guard Cover RH	1	Replaced by 11559 from March 1981
18	11415	Plastic Guard Tube	1	
19	11417	Main Drive Guard	1	
20	11418	Main Drive Guard Cover	1	
21	11545	Cage Wheel Drive Chain Guard	1	TRH MK2 Only Turbobeet 11556
22	11152	Canopy Support	1	
23	19091	Guard Bolt	1	
24	BM 196	Rubber Guard	3	
25	11852	Knuckle Guard	2	Part No. was RH 176 Prior to serial No. TRH MK2 Y1544 - Turbobeet Y228
26				
27	GS 407	Jubilee Clip	3	
28				
29				Part No. was RH 176 Prior to serial No. TRH MK2 Y1544 - Turbobeet Y228
30	11834	Coupling Guard	1	
31	11862	SHAFT END GUARD	1	
32				
33	PH 337	Shaft Guard	1	
34				
35				
36	TBM 24M	Guard Bolt	3	
37				
38				
39				
40				
41				
42	TBMW 221	Guard	1	
43	TBMW 466	Bracket	1	
44				
45	17006	Catch	4	
46				
47				

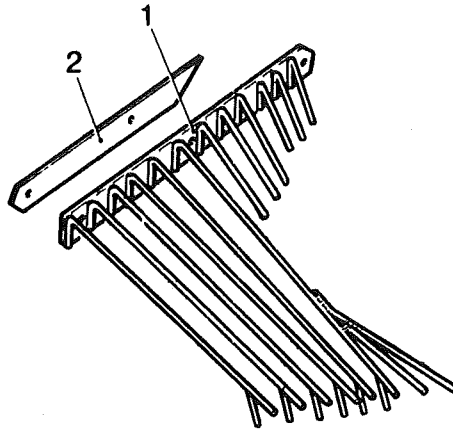
Guards (From Serial No. TRH MK2 Y1544 - Turbobeet Y228)

Item No	Part No.	Description	Qty per Assy	Remarks
48	11445	M6 x 12mm Hx Hd Bolt	4	
49		M6 x 25mm Hex Hd Bolt	3	
50		M6 Plain Washer	3	
51		M6 Spring Washer	7	
52		M6 Nut	7	
53				
54				
55		M8 x 20mm Hex Hd Bolt	2	
56		M8 x 25mm Hex Hd Bolt	8	
57		M8 Spring Washer	10	
58		M8 Nut	8	
59				
60				
61		M10 x 25mm Hex Hd Bolt	3	
62		M10 x 40mm Hx Hd Bolt	2	
63		M10 Spring Washer	5	
64		M10 Nut	5	
65				
66				
67		M12 Plain Washer	12	
68		M12 Spring Washer	19	
69		M12 Nut	5	
70		M12 Wing Nut	10	
71		M12 x 30mm Hex Hd Setscrew	2	
72				
73				
74		Guard Tube	1	

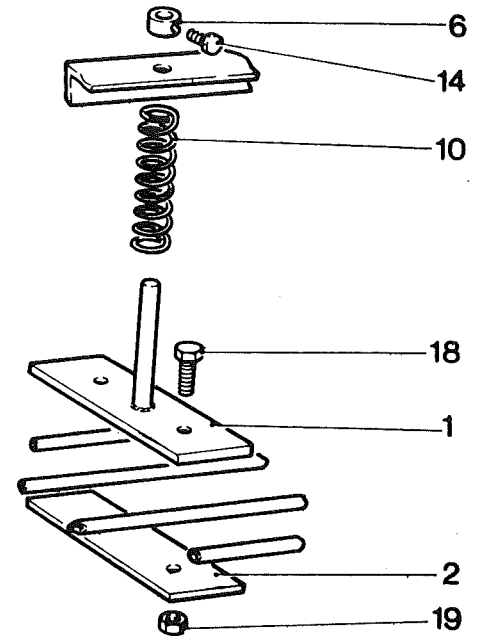


# Optional Extra's From serial N° W 134.

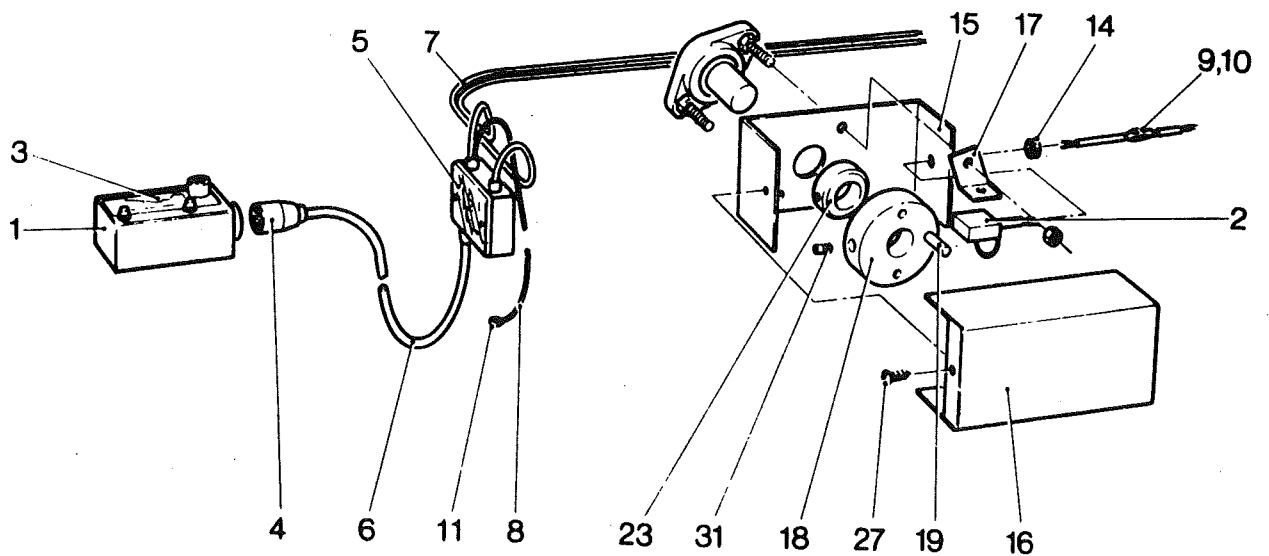
## REAR BEET GRILLE



## CLEANER WEB PRESSURE PLATES



## SHAFT MONITOR KIT



## Optional Extras from Serial No. W134

Item No	Part No.	Description	Qty per Assy	Remarks
		REAR BEET GRILLE		
1	11475	Beet Grille	1	
2	11507	Strengthening Plate	1	
		CLEANER WEB PRESSURE PLATES		
1	11476	Pressure Plate	2	
2	11476/1	Pressure Plate	2	
3				
4				
5				
6	H 210	Collar	2	
7				
8				
9				
10	PS 165	Spring	2	
11				
12				
13				
14		M10 x 20mm Hex Hd Setscrew	2	
15				
16				
17				
18		M12 x 35mm Hex Hd Bolt	4	
19		M12 Locknut	4	



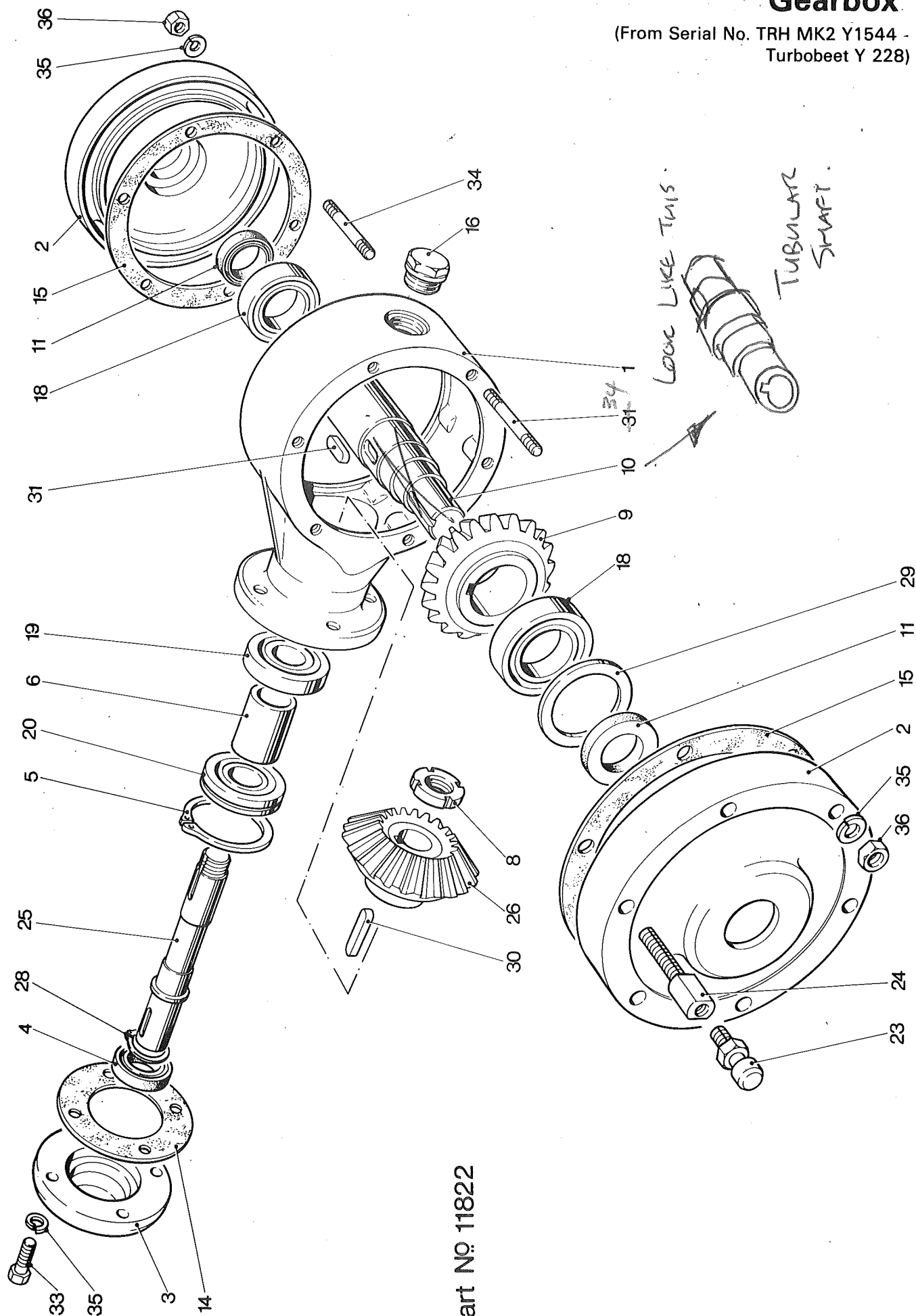
# Shaft Monitor Kit Optional Extras Continued

Item No	Part No.	Description	Qty per Assy	Remarks
1	11349	Monitor Box	1	
2	11350	Censor Unit	2	
3	11366	Monitor Box Transfer	1	
4	11367	7-pin Plug	1	
5	11368	Junction Box	1	
6	11369	7-core Cable		
7	11370	2-core Cable		
8	11371	Single Core Cable		
9	11391	Auto Bullet Crimp Connector Male 4mm	4	
10	11392	Auto Bullet Crimp Connector Female 4mm	4	
11	11393	Crimp Connector Ring 6mm	1	
12	11396	Cable Clip		
13	11397	Cable Clip		
14	11460	Rubber Grommet	2	
15	11560	Guard Plate	2	
16	11561	Plate Guard Cover	2	
17	11581	Censor Support Bracket	2	
18	11583	Nylon Reaction Collar	2	
19	11584	Magnet	4	
20				
21				
22				
23	PS 326M	Stop Collar	2	
24				
25				
26				
27		Self Tapping Screw	4	
28				
29				
30				
31		M10 x 10mm Hex Soc Hd Setscrew	2	
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				



# Gearbox

(From Serial No. TRH MK2 Y1544 -  
Turbobeet Y 228)



Part No 11822

Gearbox From Serial No. TRH MK2 Y1544 - Turbobeet Y228)

Item No	Part No.	Description	Qty per Assy	Remarks
1	PS200/2M	Gearbox Housing	1	
2	PS201/2M	Gearbox Side Plates	2	
3	11824	Tail Shaft End Plate	1	
4	11835	Tail Shaft Oil Seal	1	
5		Circlip	1	(Part of item 20)
6	11825	Spacer	1	
7				
8	PS240/1	Lock Nut	1	
9	PS242	Bevel Gear	1	
10	PS243M	Tubular Output Shaft	1	
11	PS245	Output Oil Seal	2	
12				
13				
14	PS269A	End Plate Gasket	1	
15	PS470A	Side Plate Gasket	2	
16	PS869	Drain/Filer Plug	1	
17c				
18	145	Output Shaft Bearing	2	
19	6207	Tail Shaft Bearing	1	
20	6207NR	Tail Shaft Bearing	1	(Complete with Circlip)
21				
22				
23	11066	Gearbox Breather	1	
24	11069	Gearbox Breather Plug	1	
25	11823	Input Shaft	1	
26	11278	Bevel Pinion	1	
27				
28		Tail Shaft Circlip	1	
29		Side Plate Shim	AR	
30		RBE Key 1/4" x 1/4" x 1 1/4" LG	1	
31		RBE Key 8mm x 7mm x 32mm	1	5/16" x 3/4" LG KEY.
32				
33		M10 x 30 Hex Hd Bolt	4	
34		M10 x 50 Stud	11	
35		M10 Spring Washer	15	
36		M10 Nut	11	

# **Standen**

## **TURBO 3 SCALPERS & FEELER WHEEL TOPPING UNIT 'A' FRAME & DISCS**

**Parts Catalogue &  
Instruction Manual**

**Standen Engineering Limited  
Hereward Works  
Station Road, Ely CB7 4BP  
Cambridgeshire, England**

**Telephone: Ely 61111  
Cables: Hereward, Ely  
Telex: 81486**



# Contents

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## SECTION 1:- INSTRUCTION MANUAL

Introduction .....	1.1
Safety Precautions .....	1.2
Installation .....	1.5
Tractor Wheel Setting .....	1.5
Fitting Turbo Topper to Tractor .....	1.5
Turbo Topper .....	1.5
Turbo Topper Drives .....	1.6
Turbo Topper Lubrication .....	1.7
Turbo Topper Depth Wheel Lubrication .....	1.7
Scalper Topper Unit .....	1.8
Feeler Wheel Topping Unit .....	1.9
'A' Frame and Disc's .....	1.11

## SECTION 2:- EXPLODED PARTS ILLUSTRATIONS

Turbo Topper .....	2.1
Hydraulic Drive & Lubrication System .....	2.3
Scalper Topping Unit .....	2.5
Feeler Wheel Topping Unit .....	2.7
'A' Frame & Disc's .....	2.9
Turbobeet Hydraulics .....	2.11
Quick Hitch .....	2.13

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# **SECTION 1**

## **INSTRUCTION MANUAL**



# Introduction

---

This manual provides the information for the adjustments and maintenance to help you to obtain the best results from your new Standen Turbo-Topper. Before putting the machine to work, read the manual through carefully to get a full understanding of what the machine should do and how to achieve it.

The instructions describe the operation of the various components, then the different settings supplied to those components enabling maximum efficiency to be obtained from the machine, adjustments may have to be made singly or in combination according to crop and soil conditions, allow the machine to settle to a new setting before making more adjustments.

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

The serial number is stamped on the front left hand side of the top plate. Always quote the serial number when ordering spare parts.

Record below details of your machine in the space provided.

Date Purchased .....

Date Started Work .....

Serial Number .....

Agents Name .....

Agents Address .....

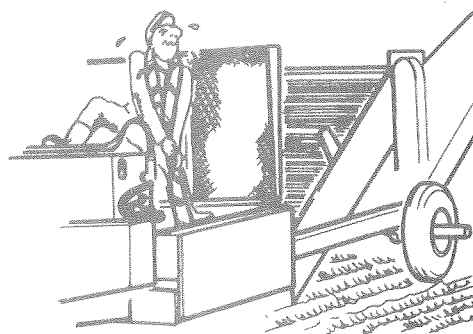
.....

Agents Tel. No. ....

# 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.



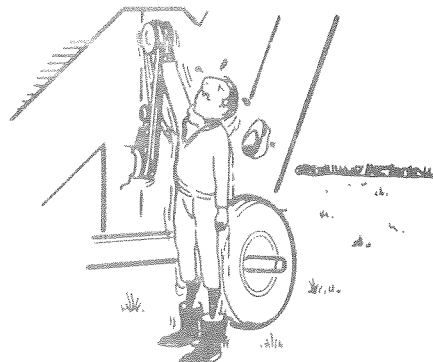
## NEVER

Attempt to adjust or clean any part of the machine with the tractor power take-off in motion and always stop the tractor engine.



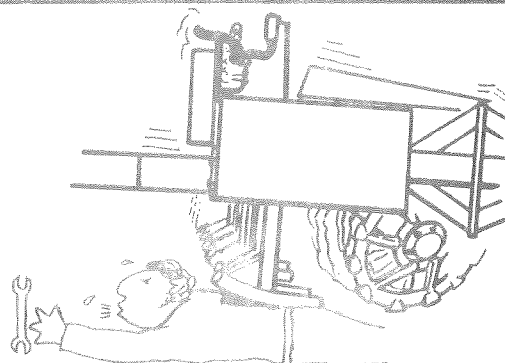
## NEVER

Fit drive chains or drive belts while the drive sprockets or drive pulleys are in motion.



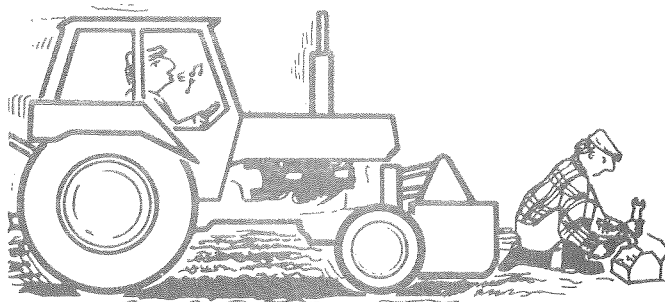
## NEVER

Work under the machine when it is in a raised position on the tractor hydraulic lift linkage.

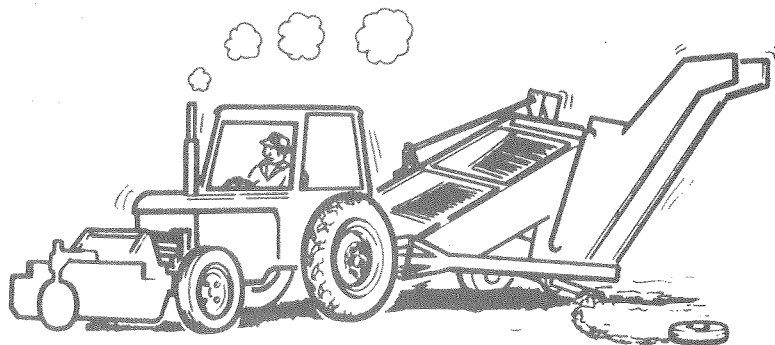


## NEVER

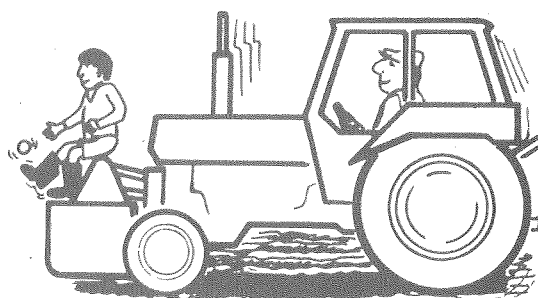
Set the machinery in motion before ensuring that every one in the vicinity is aware of your intention.



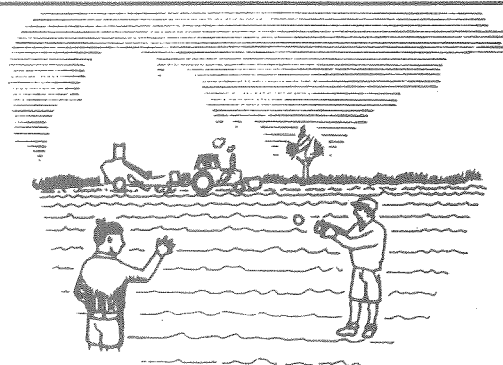
**NEVER** Operate the machine in a state of disrepair.



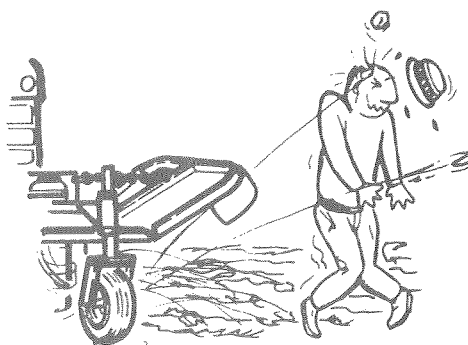
**NEVER** Allow any one *especially children* to ride on the machine.



**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.



## INSTALLATION

The Standen Turbo-Beet is designed to remove the leaf from the beet by the use of rotating cutters prior to the beet being topped by the scalpers.

Three rotary cutters are used and the loose leaf is thrown from one cutter to the other and finally out to the side. The surplus sugar beet crown is then removed by the scalpers, leaving a clean path of topped sugar beet for the lifter loader.

The tractor power required is a minimum of 75 HP with 540 revs from the P.T.O., three point linkage and a double spool valve.

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, symbolized in the setting instructions.

## TRACTOR WHEEL SETTING

Both front and rear tractor wheels must be set to straddle the rows of beet. For example, if the crop is growing at 20" (50.80 cms) the distance measured between the tractor tyre centres must be 60" (152.40 cms), this will then ensure that the wheels run in centre line between the rows of beet. The instructions for adjusting tractor wheels are given in the tractor manufacturer's handbook.

### SAFETY FIRST



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

## FITTING

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 1), 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.

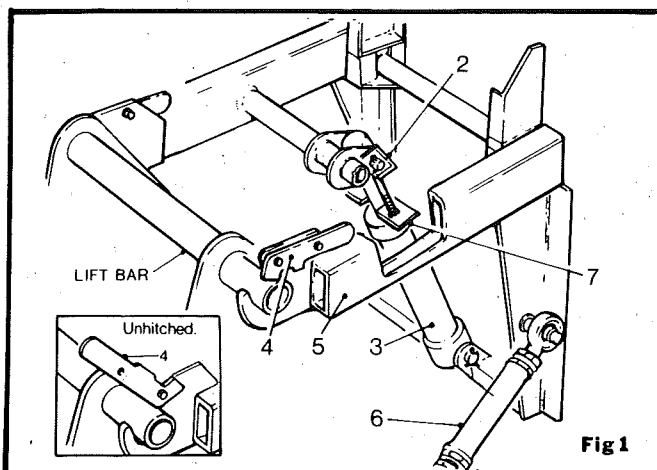


Fig 1

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

## TO PICK UP THE TOPPER

1. Lift the ram stop (Item 2 fig.1) clear of the hydraulic ram (Item 3 fig.1).
2. Drive the tractor forward and locate the hooks on the lift arms (Item 5 fig.1) 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.
3. Lift the topper by actuating the hydraulic ram (Item 3 fig.1). Ensure that the latch (Item 4 fig.1) has positioned itself over the topper lift bar as shown in fig 1.
4. Fit the stabilizer links (Item 6 fig.1) between the mounting frame (Item 1 fig.1) and the topper. Then 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 Drives).
6. If the topper is fitted with a Sceptre the automatic lubrication will have to be coupled to the harvester lubrication system.

## TO UNHITCH THE TOPPER

1. Disconnect the hydraulic motor from the diverter valve.
2. Remove the stabilizer links (Item 6 fig.1).
3. Position the latch (Item 4 fig.1) as shown in fig. 1.
4. Lower the topper to the ground, when the topper has touched the ground continue to lower the lift arms (Item 5 fig.1) 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 2) 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 (Item 1, fig 2). The suction of the spiral fins welded round the rotors (Item 1 fig 2) lifts any loose leaf and trash, leaving a clean path for the lifter, note, that a fourth rotor (Item 20 fig 2) is fitted to the unit, it's purpose is to throw the beet tops clear of the tractor wheel.

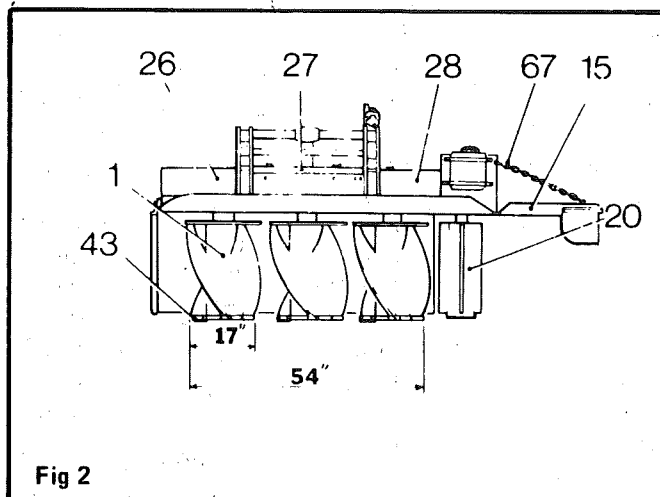


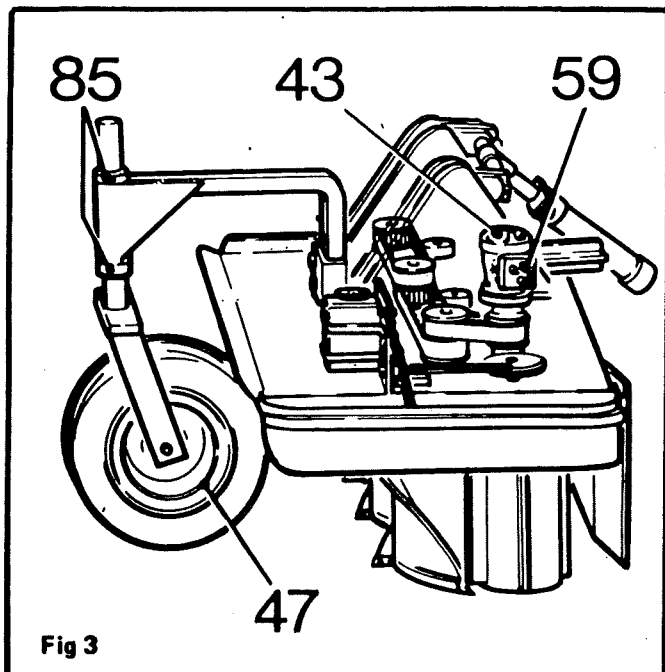
Fig 2

The cutting width of each individual rotor (Item 1 fig 2) is 17 inches (43 cms), the overall cutting width of all three rotors is 54 inches (137.16 cms).

Row widths of from 18 inches (48 cms) to 21 inches (56 cms) can be obtained.

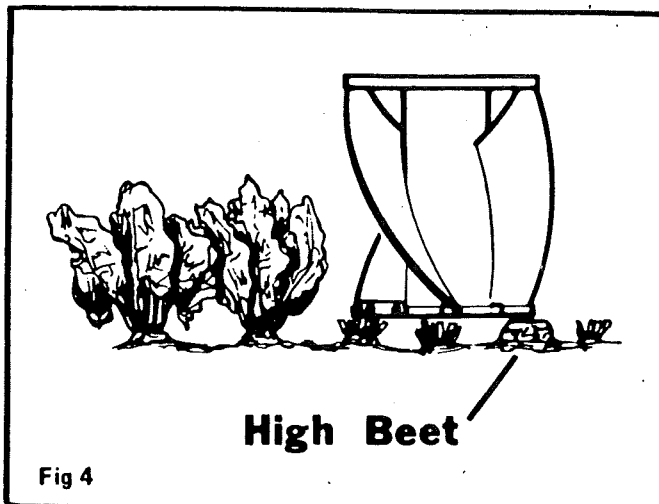
The amount of tops removed from the beet by the rotors is determined by the size of the crown that can be removed by the scalpings. As a guide to the amount of top to remove, prior to scalping set the depth of cut of the rotors knives (Item 5 fig.2) to just top the highest beet (fig.4). The depth of cut is determined by the depth wheel (Item 47 fig.3) fitted at the front of the unit. To adjust the depth wheel (Item 47 fig.3) loosen the two retaining screws in the depth wheel stop clamps (Item 85 fig.3) and lift or lower the wheel according to the amount of topping required. Stop brackets (Item 2 fig.1) fitted to the hydraulic ram (Item 3 fig.1), its purpose is to reduce the amount of float should the depth wheel (Item 47 fig.3) sink into the ground when travelling over undulating ground or soft soil patches.

To adjust the stop bracket (Item 2 fig.1), the position of the stop plate (Item 7 fig.1) must be altered in relationship to the hydraulic ram (Item 3 fig.1). The size of the gap between the stop plate (Item 7 fig.1) and the hydraulic ram determines the depth at which the topper is allowed to drop.



Steel knives (Item 5 fig 2) are fitted to the rotors (Item 1 fig 2) and can be removed or replaced by removing the retaining patch bolts (Item 43 Fig 2). 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 (Item 5 Fig 2) touch the soil as damage to the knives (Item 5 Fig 2) will ensure.

The sugar beet tops discharge end of the topper is fitted with a hinged tops deflector flap (Item 15 Fig 2) 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 67 Fig 2).



## DRIVES

The rotors (Item 1-20 fig 2) are driven by an hydraulic motor (Item 43 fig 3) being fed from a 12 G.P.M. pump mounted on the front of the harvester and driven from the harvester PTO shaft via the 3 to 1 gear box. The oil to the hydraulic pump is supplied from an oil tank mounted on the harvester. The tank should be filled with HI 32 Nutro Hydraulic Oil or equivalent and should always be kept full specially when storing the machine for long periods of time.

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.

Situated at the left hand corner of the tractor mounting bracket is a diverter valve (Item 1 Fig 5) designed to cut off the flow of oil to the rotors (Items 1 Fig 2) when the machine is in the raised position, so stopping the rotors (Item 1 Fig 2) from turning.

The diverter valve (Item 1 Fig 5) 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 5).

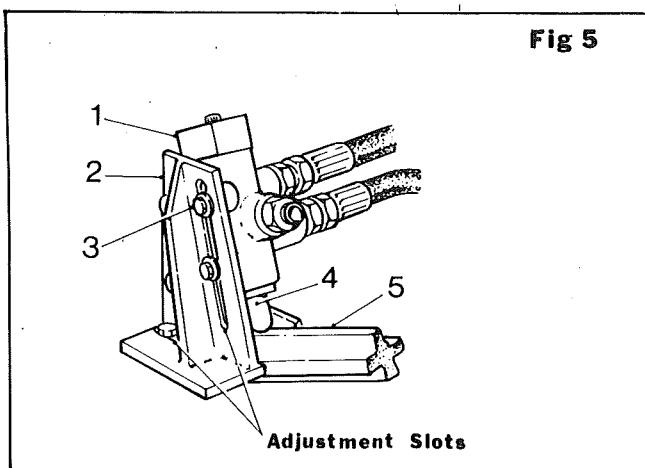
To adjust loosen the cap screws (Item 3 Fig 5) securing the valve and slide the valve until the spool (Item 4 Fig 5) touches centrally on the lift arm (Item 5 Fig 5). If additional adjustment is required to the diverter valve a spacer block supplied with the machine should be fitted.

At the top of the diverter valve (Item 1 Fig 5) is a return spring fitted to push down on the top of the spool (Item 4 Fig 5) when the machine is lowered.

The spring is encased for cleanliness and does not require adjusting.

The pressure relief valve is situated at the rear of the diverter valve (Item 1 Fig 5) is fitted to protect the hydraulic system should any blocking occur and is preset at a pressure of 2000 P.S.I.

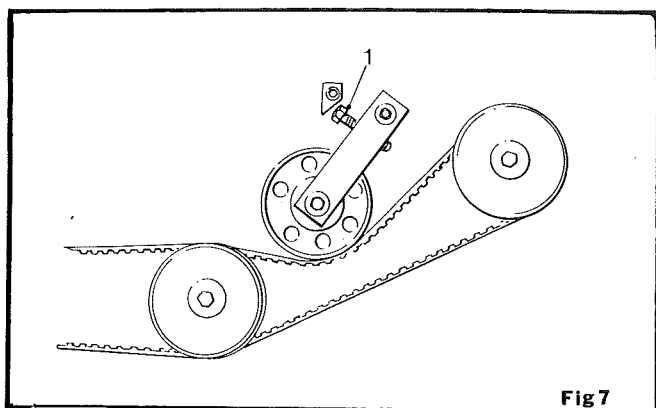


**Fig 5**

The aluminium check valve (Item 59 Fig 3) enables the rotors (Item 1 Fig 2) to slow down when the oil supply is shut off. The motor (Item 43 Fig 3) must be always connected to the oil supply via the check valve (Item 59 Fig 3). Failure to do so will cause severe damage to the motor.

From the hydraulic motor (Item 43 fig.3) the drive is by toothed belts to the individual pulleys which in turn drive the topper rotors (Item 1). 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.7) clockwise or anti-clockwise until the correct tension is achieved. The correct adjustment should allow 5mm to 7mm 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.

**Fig 7**

## **AUTOMATIC LUBRICATION (FOR TURBOBEET)**

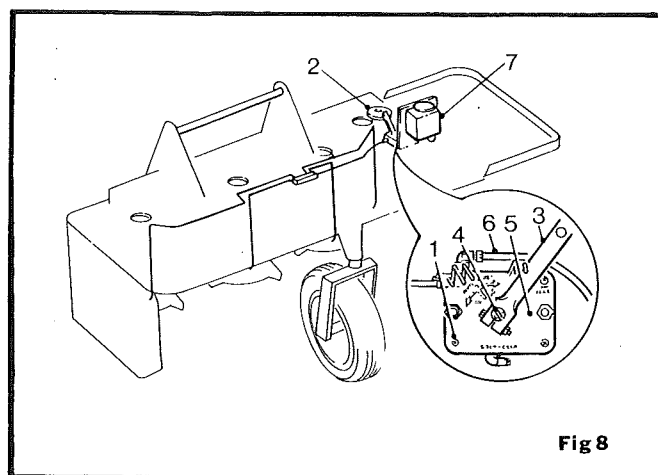
Automatic lubrication if fitted to feed 4 bearings fed by the lubrication pump (Item 1 fig.8). A reaction wheel (Item 2 fig.8) is fitted eccentric to the operating arm (Item 3 fig.8) giving a pressure of 200lbs P.S.I. The stroke of the operating arm (Item 3 fig.8) can be adjusted by loosening the clamp of the operating arm (Item 3 fig.8) and turning the slotted spindle (Item 4 fig.8) with a screwdriver. If more lubrication is required turn the slotted spindle (Item 4 fig.8) towards the + position stamped on the pump top plate (Item 5 fig.8) and whilst holding this position with a screwdriver tighten the clamp bolt on the operating arm (Item 3 fig.8). When carrying out this operation ensure that the reaction wheel (Item 2 fig.8) is at its furthest stroke.

## **PRIMING THE SYSTEM**

The system is self priming with the feed pipe (Item 6 fig.8) being fitted from the top of the pump (Item 1 fig.8) to the bottom of the oil reservoir (Item 7 fig.8) and through to the top of the oil inside the reservoir (Item 7 fig.8). 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.8) 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.

## **AUTOMATIC LUBRICATION (FOR SCEPTRE)**

Automatic lubrication if fitted to feed 4 bearings by the lubrication pump which is located on the harvester. For adjustment and operation see the Sceptre Instruction Manual.

**Fig 8**

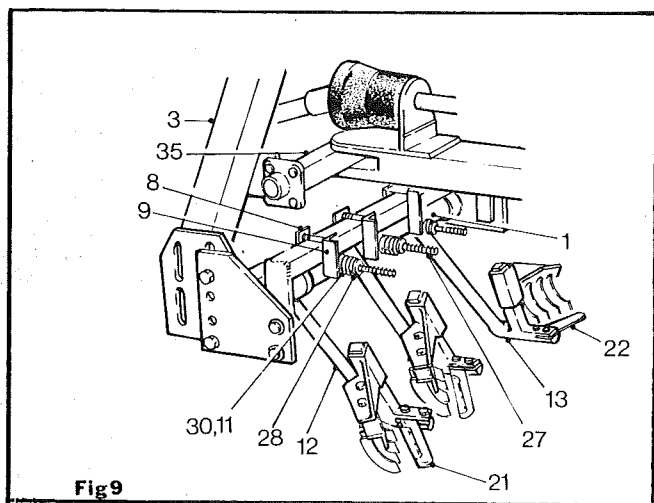
## **DEPTH WHEEL LUBRICATION**

Two grease points are fitted to lubricate the depth wheel leg and the wheel axle shaft and should be greased with general purpose grease at least once every day.

## SCALPERS

The scalper unit is fitted to the rear of the tractor between the tractor and the lifter-loader, it is designed to crown the beet and remove the surplus leaf stubble left remaining on the beet by the Turbo-Topper. The unit is attached to the tractor by fitting the 'A'-Frame (Item 3 Fig 9) to the tractor three points lift linkage, to the 'A'-Frame (Item 3 Fig 9) is fitted the scalper support bar (Item 1 Fig 9) and the drawbar (Item 35 Fig 9) supplied for towing the lifter-loader. Before attempting to set up the scalpings drive the machine a short distance down the rows of beet to obtain the required depth of the lifting wheels of the harvester which will in turn determine the pitch of the scalpings (Items 12-13 Fig 9). The amount of beet crown removed by the knife (Items 21-22 Fig 9) is determined by adjusting the comb (Items 18-19 Fig 9) above the knife (Items 21-22 Fig 9), increasing the distance between the two will remove more beet crown and decreasing the distance will remove less beet crown.

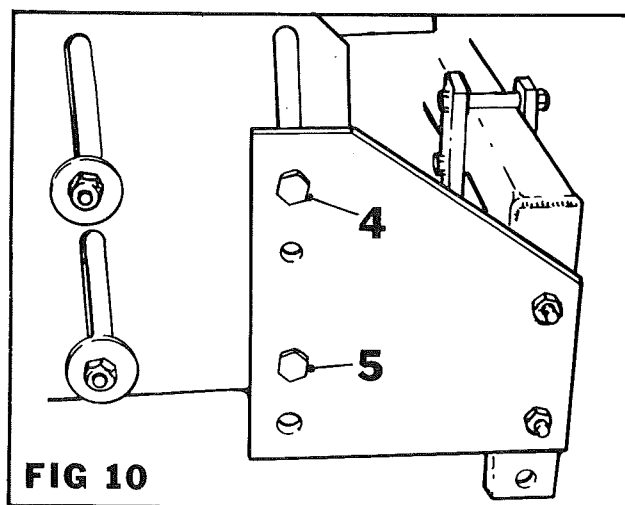
A very important part of the scalping mechanism is the tension of the springs (Item 11-30 Fig 9) fitted to the tension rods (Item 27 Fig 9) designed to give a downward pressure to the knife (Item 21-22 Fig 9). Enough pressure should be given to return the scalper arm (Items 12-23 Fig 9) and knife (Item 21-22 Fig 9) to successfully top a low beet after topping a high beet, (Fig 9) at the same time, too much pressure will force the knife (Item 21-22 Fig 9) 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 (Items 11-30 Fig 9) either tighten up or loosen the nut (Item 28 Fig 9) until the right amount of pressure is acquired.

Each scalper arm (Item 12-13 fig.9) is independently pivoted on the scalper support bar (Item 1 fig.9) and by sliding the scalper arm (Item 12-13 fig.9) along the scalper support bar (Item 1 fig.9) adjustments can be obtained to suit row widths of between 18 inches (48cm) to 21 inches (53 cm). To adjust for row widths, loosen the collars fitted to each side of the scalper arm (Items 12-13 fig.9) and the nuts and bolts in the spring clamplete (Item 8-9 fig.9), remove the two outside units to the required row setting ensuring that the knife (Items 21-22 fig.9) is crowning the beet as close to the scalper arm (Items 12-13 fig.9) as possible so that the scalper arm (Items 12-13 fig.9) just misses the side of the widest beet. Height adjustment is also provided for the scalper arms depending on the working depth of the harvester.

To adjust the height loosen the nuts and bolts (Items 4-5 Fig 10) and move the mounting plates up or down according to the height required. If more adjustment is required remove the nuts and bolts (Items 4-5 Fig 10) 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 3 Fig 9) and tighten when the height is correctly set.



## 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 11) 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 11) by loosening the two locking nuts (Item 3 Fig 11) on the adjusting bolts (Item 4 Fig 11) and turning the bolts (Item 4 Fig 11) to the stop plates welded to the knife arm (Item 5 Fig 11). This adjustment allows the topping knives (Item 2 Fig 11) to be moved towards or away from the feeler wheels (Item 1 Fig 11) which are then held firmly in position by their tension spring (Item 6 Fig 11). The tension of the spring (Item 6 Fig 11) is determined by the spring tensioner (Item 7 Fig 11) and the tensioner adjusting nuts (Items 8-9 Fig 11). Tension should be applied to the spring (Item 6 Fig 11) sufficient to bring the knife (Item 2 Fig 11) firmly back into position after releasing an obstruction such as a stone. The horizontal setting of the knife (Item 2 Fig 11) is obtained by loosening the two set screws (Item 10 Fig 11) in the two stop collars (Item 11 Fig 11) and sliding the knife arm (Item 5 Fig 11) through the knife arm bracket. Always set the knives to top the beet as close to the knife arm (Item 5 Fig 11) as possible as this is the most rigid part of the knife whereas the end is springy and not constant in pressure.

The forward and backward position of the knives is adjusted by loosening the two set screws (Item 12 Fig 11) in the knife arm bracket (Item 13 Fig 11) and sliding the knife arm bracket (Item 13 Fig 11) in the adjusting slots provided in the topping unit frame (Item 14 Fig 11). As a guide to the most suitable position of the knife (Item 2 Fig 11) in relation to the feeler wheels (Item 1 Fig 3) position the rear set screw (Item 15 Fig 11) holding the knife (Item 2 Fig 11) to the knife arm (Item 5 Fig 11) approximately in line with the centre of the feeler wheel shafts (Item 16 Fig 11). The knives should be forward for small beet and backward for large beet.

Downward pressure can be applied to the feeler wheel (Item 1 Fig 11) by adjusting the tension of the topping unit spring (Item 27 Fig 11). To adjust the tension loosen the lower locking nut (Item 28 Fig 11) on the spring tensioner (Item 29 Fig 11) and adjust by turning the upper locking nut (Item 30 Fig 11) 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 is provided at each end of the mounting frame (Item 17 Fig 11) and is determined according to the working depth of the harvester. To adjust loosen the nuts on the setscrews (Item 18 Fig 11) in the mounting frame (Item 17 Fig 11) and raise or lower using the adjusting slots in the A frame (Item 19 Fig 11) to the required position. If more adjustment is required remove the setscrews (Item 18 Fig 11) from the upper holes in the mounting frame (Item 17 Fig 11) and place them in the lower set of holes and reassemble in the slots of the 'A' frame (Item 19 Fig 11) and tighten up when the height is correctly set.

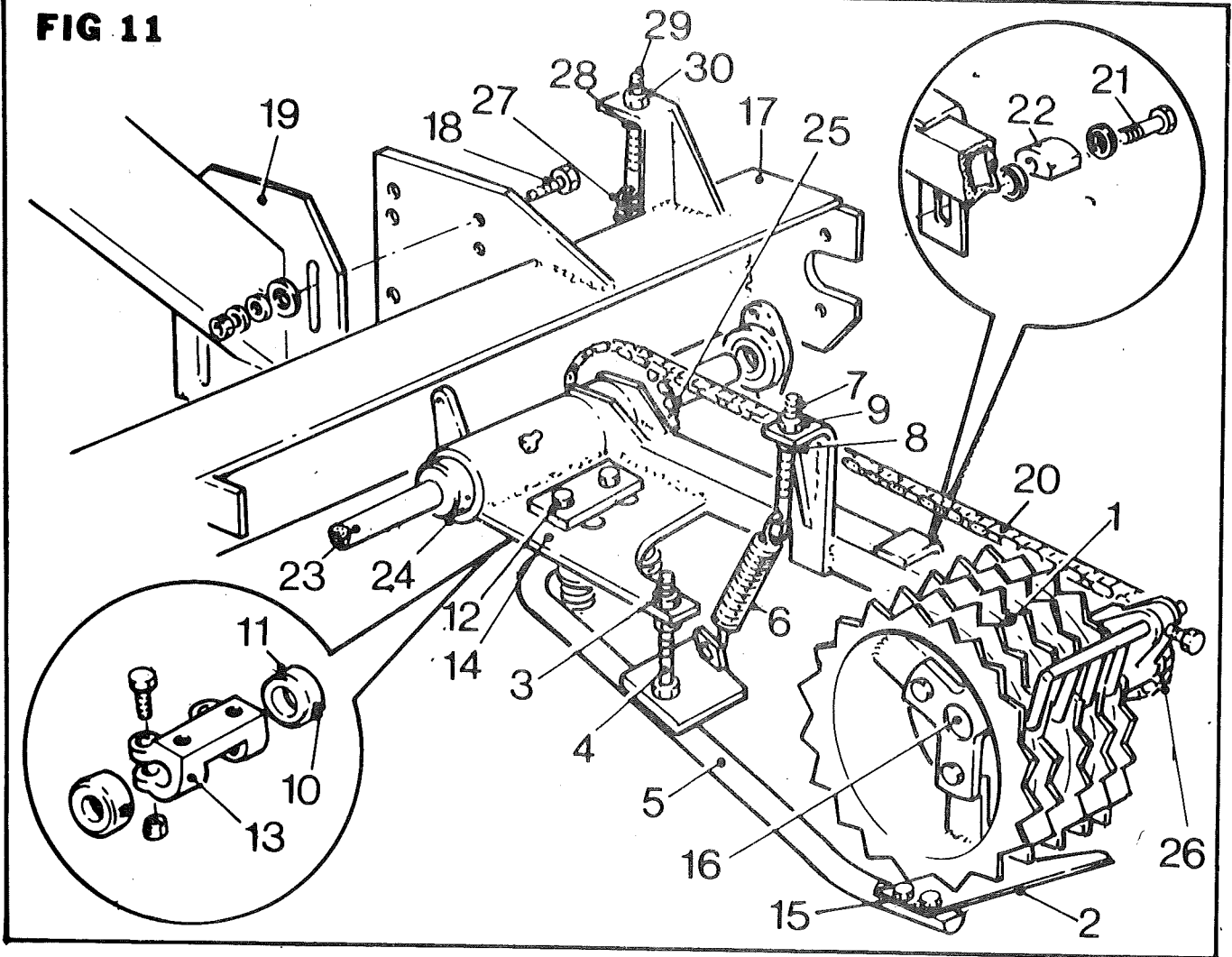
Downward pressure on the land wheel (Item 1 Fig 12) is applied by three springs (Item 2 Fig 12). To adjust the pressure loosen the nearest lock nut (Item 3 Fig 12) to the spring (Item 2 Fig 12) and adjust by turning the other lock nut (Item 4 Fig 12).

Adjustment for various row widths is carried out by moving the outside units and leaving the centre unit in its original position. To adjust, loosen the grub screws in the pivot boss (Item 24 Fig 11). Remove the gib head key from the drive sprocket (Item 25 Fig 11). The topping units can be moved along the shaft (Item 23 Fig 11) to the required position.

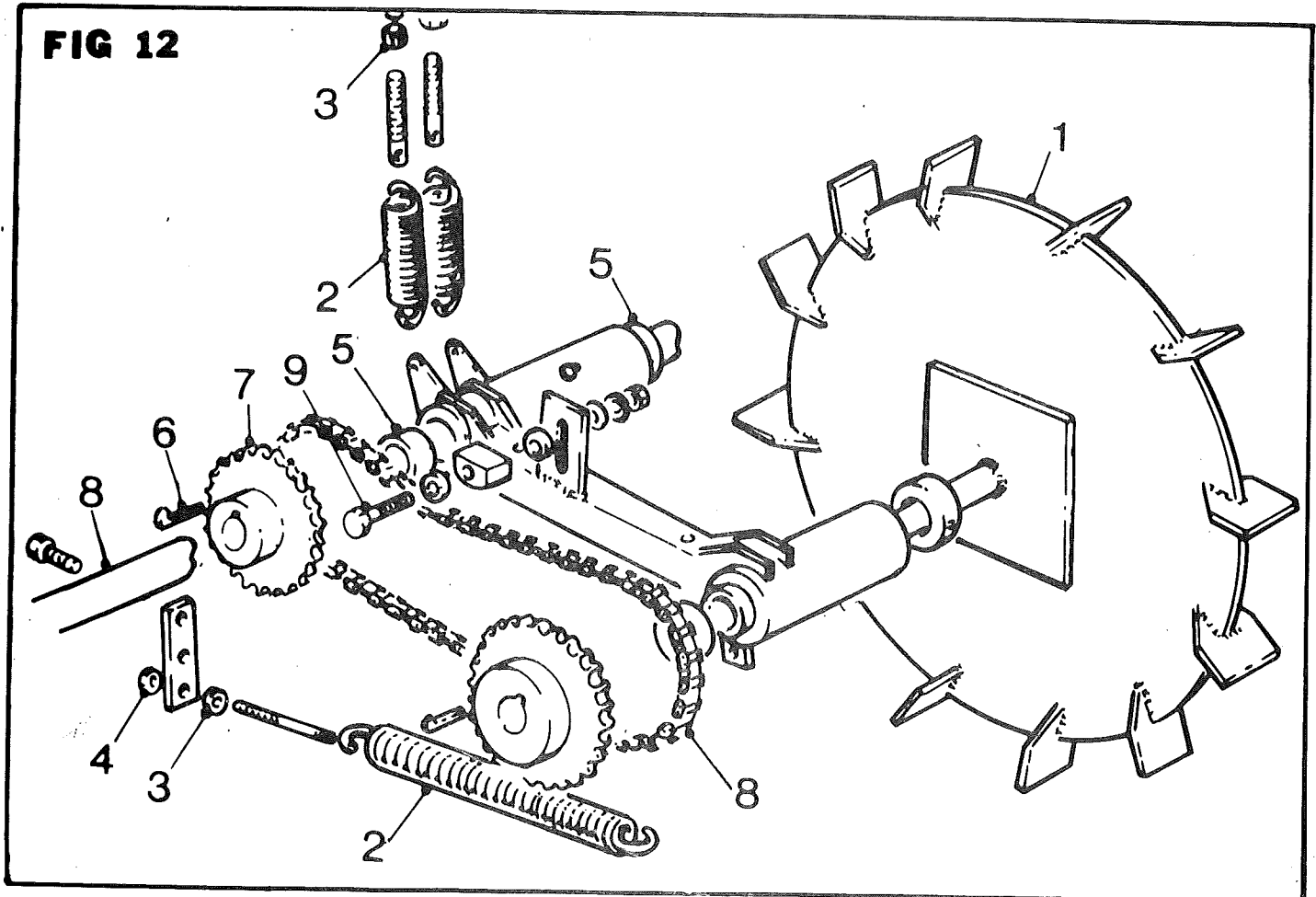
Note: The row width measurement should be made from the centre of the centre feeler wheel to the centre of the outside feeler wheel not along the shaft (Item 23 Fig 11). When the correct row width has been obtained tighten the grub screws (Item 24 Fig 11) and align the drive sprocket (Item 25 Fig 11) with the drive sprocket (Item 26 Fig 11) fitted to the end of the feeler wheel shaft (Item 16 Fig 11). Always ensure that the topping knife (Item 2 Fig 11) is kept reasonably sharp.

It is important that the topping unit drive chains are tensioned correctly or bad topping will occur. All chains are tensioned by a nylon block. To adjust the feeler wheel drive chain (Item 20 Fig 11) loosen the nut on the setscrew (Item 21 Fig 11) and pull the block (Item 22 Fig 11) upwards until the tension of the chain is correct and then tighten up the nut. To tension the topping unit main drive chain (Item 8 Fig 12) loosen the nut on the setscrew (Item 9 Fig 12) and push the block down on to the chain until the correct tension is gained and secure block.

**FIG 11**



**FIG 12**



## DISC COULTERS

The purpose of the disc coulters fitted in front of the topping unit is to cut sugar beet leaves and trash to prevent them from building up and clogging on the knives (Item 2 Fig 11), also to cut a  $1\frac{1}{2}$  in (38mm) 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 of the disc by loosening the nut and bolt (Item 1 Fig 13) in the stalk bracket (Item 2 Fig 13) and sliding the disc coulters stalk (Item 3 Fig 13) up or down depending on the depth required. To alter the disc coulters for different row centres, first loosen the setscrew (Item 4 Fig 13) in the collars (Item 5 Fig 13) either side of the stalk bracket (Item 2 Fig 13) and move the bracket along the support bar (Item 6 Fig 13) until the required position is obtained, making sure the disc will pass the widest beet without cutting it, then slide the collars (Item 5 Fig 13) up to the bracket (Item 2 Fig 13) and tighten the setscrews. To adjust the height of the disc coulters support bar (Item 6 Fig 13) in relationship to the 'A' frame (Item 7 Fig 13) loosen the nuts and bolts (Item 8 Fig 13) and move the disc coulters support brackets (Item 9 Fig 13) up or down the slots in the 'A' frame (Item 7 Fig 13) until the bar is correctly positioned then secure with nuts and bolts. Once these adjustments have been made, attention must be paid to the tension barrel assembly (Item 10 Fig 13). The barrel should be in line with the disc stalk (Item 3 Fig 13) to ensure that the spring tensioner will work correctly. To adjust the tension barrel (Item 10 Fig 13) to come parallel with the ground move the tension bracket (Item 11 Fig 13) up or down the disc coulters stalk (Item 3 Fig 13), securing with the nut and setscrew (Item 12 Fig 13). To adjust the barrel to be in line with the disc stalk (Item 3 Fig 13) when looking down on the tension barrel assembly remove the nuts and bolts from the trunnion support (Item 13 Fig 13) and move it along the mounting frame (Item 14 Fig 13) until the tension barrel (Item 10 Fig 13) aligns with the disc stalk (Item 3 Fig 13) and secure down on to the mounting frame (Item 14 Fig 13). If the holes in the trunnion support (Item 13 Fig 13) do not quite align with those in the mounting frame (Item 14 Fig 13) when in the ideal position. Move the trunnion support along to the nearest set of holes. Adjustment is provided for setting the angle and for tensioning the disc coulters, to ensure that the disc will cut efficiently the angle of it must be set slightly forward to allow it to enter the trash instead of lifting, also at the same time the disc should be tensioned correctly. If the tension is insufficient the disc will not be held firmly in the ground and consequently it will ride over the tops or trash instead of cutting it. Adjustment for the angle is made by loosening the lock nut (Item 15 Fig 13) and turning the other nut (Item 16 Fig 13) clockwise or anticlockwise depending on the angle required. Once the angle is achieved secure by tightening up nut (Item 16 Fig 13), both nuts must be tight failure to do so will result in damage to the thread. To adjust the tension turn the nut (Item 17 Fig 13) clockwise or anticlockwise, under no circumstances must the nut be loose:

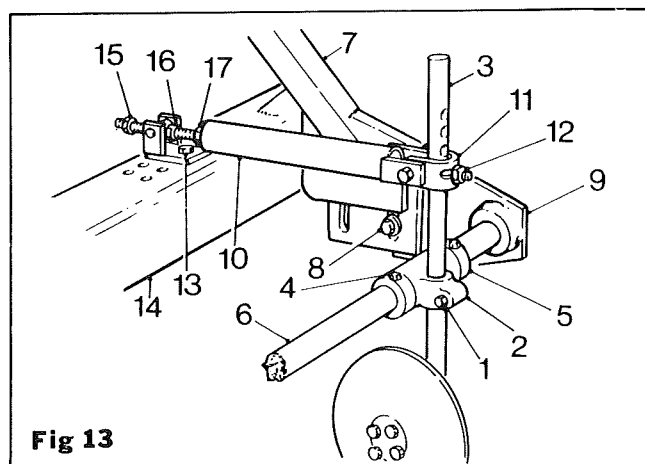
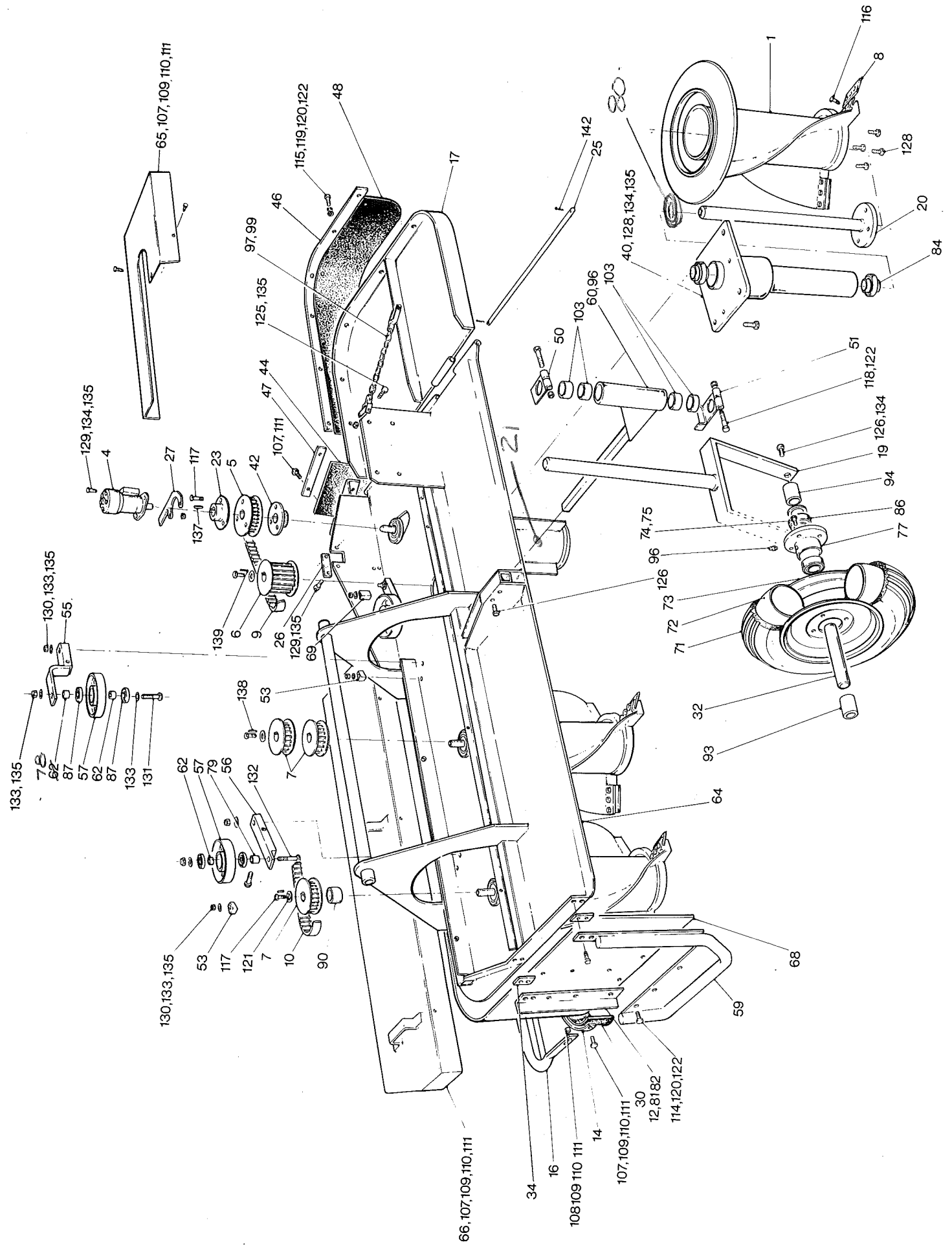


Fig 13





**TOPPER**

Item No.	Part No.	DESCRIPTION	Qty.	Remarks.
1	11001	Rotor	3	
2				
3				
4	11201	Motor	1	
5	11202	Pulley (48 Grooves)	1	
6	11203	Pulley (38 Grooves x 95)	1	
7	11204	Pulley (38 Grooves x 40)	3	
8	11205	Knife	9	
9	11206	Belt	1	
10	11207	Belt	2	
11				
12	11209	Rotor Skirt Stay	2	
13				
14	11211	Rubber Support Bracket	1	
15				
16	11213	Foot Guard	1	
17	11215	Side Deflector Flap	1	
18				
19	11218	Wheel Leg	1	
20	11219	Rotor Spindle	4	
21	11220	Rotor Side	1	
22				
23	11223	Motor Fixing Support	1	
24				
25	11226	Hinge Pin	1	
26	11227	Motor Stop Bracket	1	
27	11228	Motor Reaction Bar	1	
28				
29				
30	11232	Rubber Skirt	1	
31				
32	11234	Wheel Axle Shaft	1	
33				
34	11241	Spacer (Skirt)	3	
35				
36				
37	11247	Stand Right Hand	1	Not Illustrated
38	11248	Stand Left Hand	1	Not Illustrated
39				
40	11427	Rotor Bearing Housing	4	
41				
42	11495	Drive Collar	1	
43				
44	11529	Rear Rubber Flap	1	
45				
46	11539	Clamp Strip	1	
47	11540	Clamp Strip	1	
48	11541	Rubber Side Flap	1	
49				
50	11643	Depth Wheel Clamp	1	
51	11644	Depth Wheel Clamp Stop Bracket	1	
52				
53	11659	Stop Block (Short)	2	
54				
55	11661	Jockey Roller Support Bracket	1	
56	11662	Jockey Roller Support Bracket	2	
57	11663	Jockey Roller	3	
58				
59	<del>11692</del> 11693	Side Foot Guard	1	
60	11694	Wheel Support	1	
61				
62	11706	Jockey Roller Spacer	4	
63				
64	11723	Top Plate	1	
65	11724	Drive Guard-Motor End	1	
66	11725	Drive Guard	1	
67				
68	11728	Skirt	1	
69	11732	Stop Block (Long)	1	
70				
71	17198	Tyre	1	
72	17199	Tube	1	
73	17200	Rim	1	
74	17201	Wheel Stud	4	
75	17202	Wheel Nut	4	
76				
77	17214	Wheel Hub	1	
78	SS-025013/020 SPACER	SPACER	1	
79	SS-025013/020 SPACER	SPACER	2	
80	SS-025013-020	Steel Spacer	4	
81	SS/054032/002 STEEL SPACER	STEEL SPACER	4	
82	2611-1206	Fixing Pin	18	
	2662-1200	Fixing Collar	18	



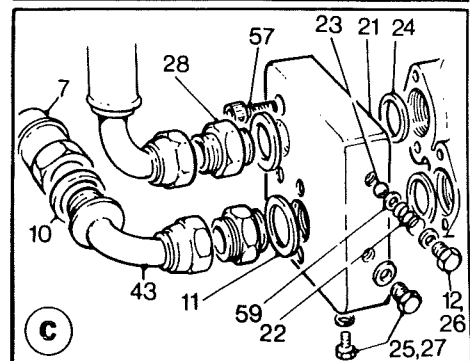
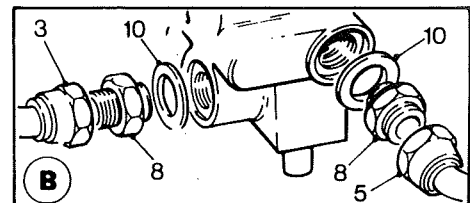
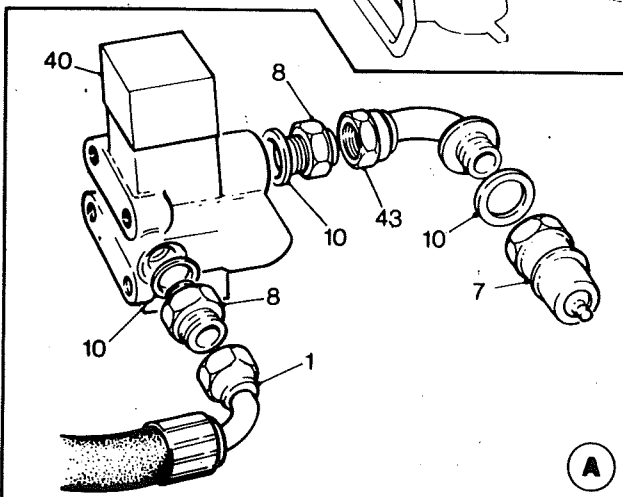
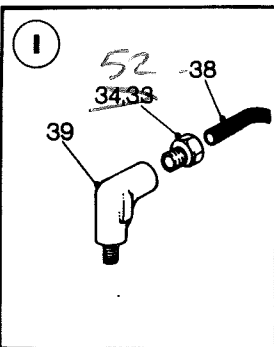
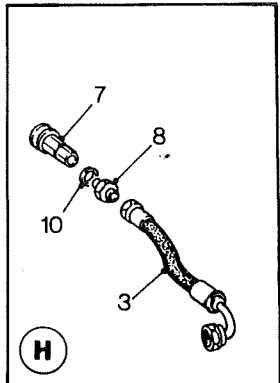
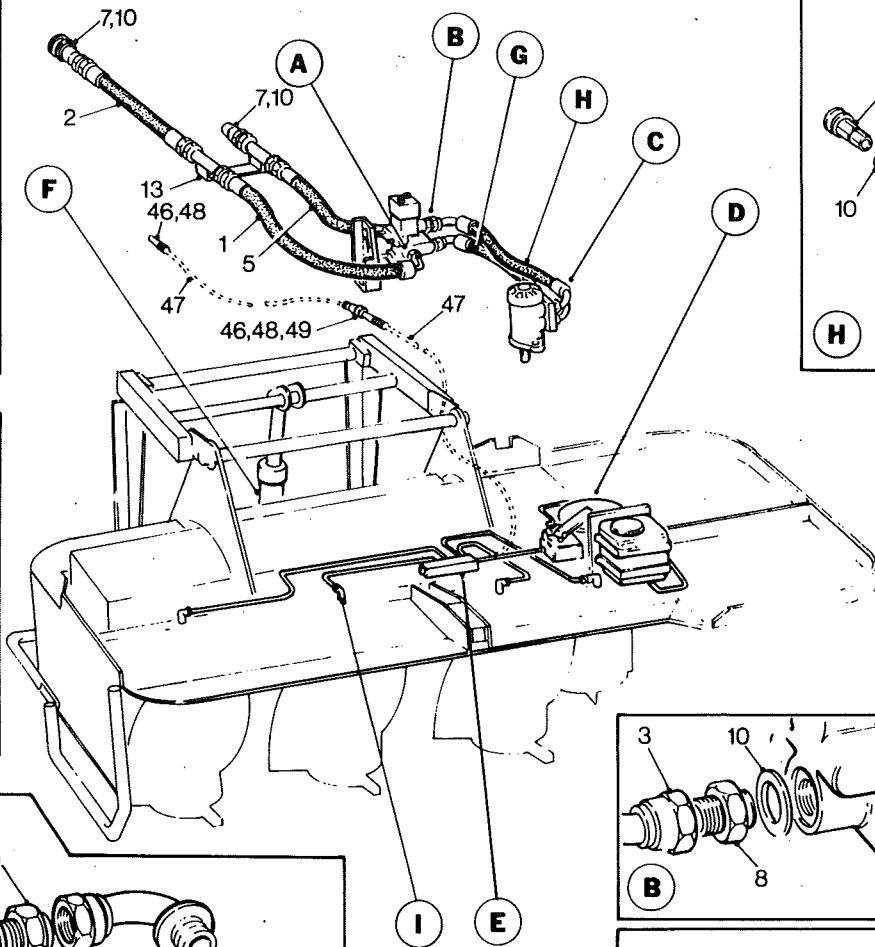
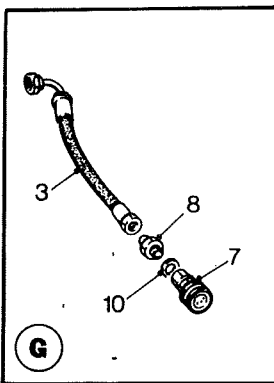
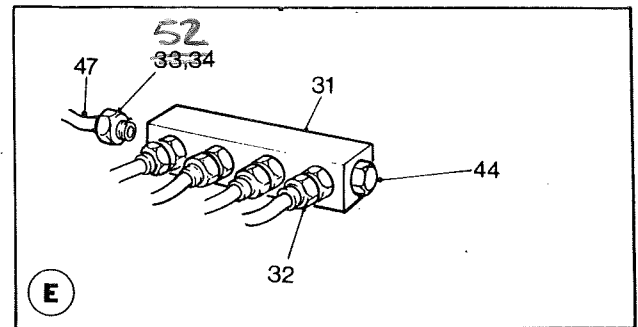
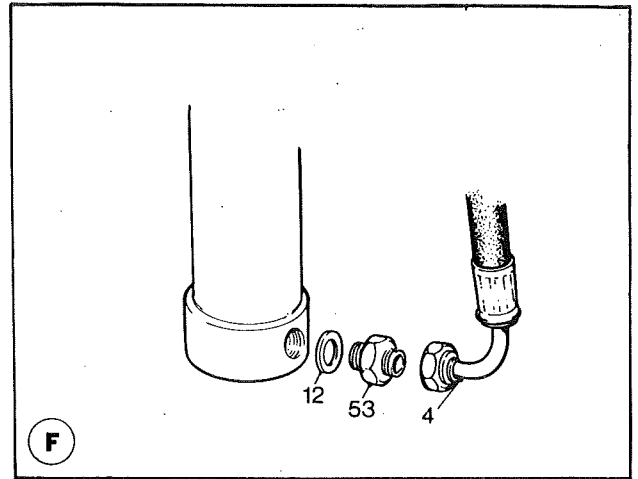
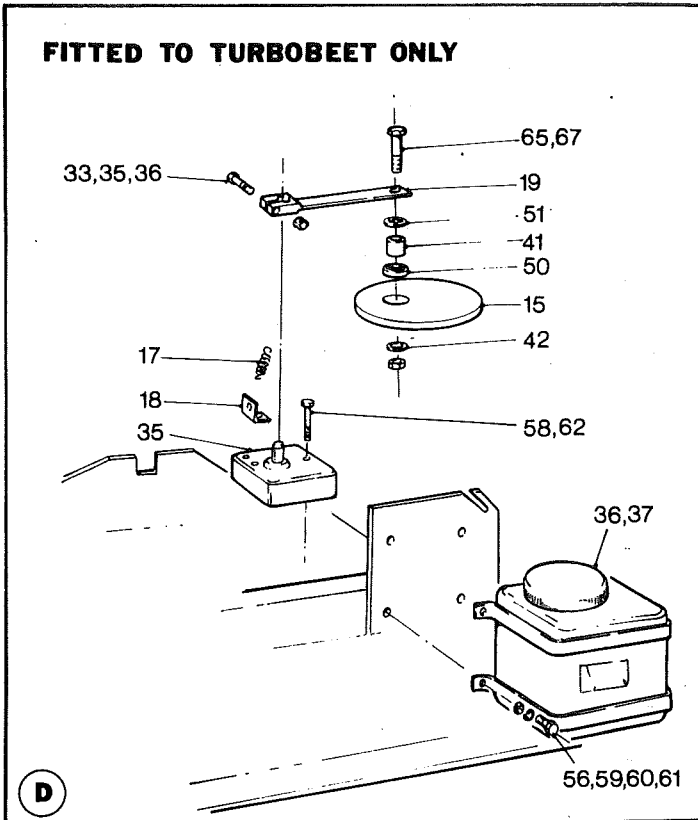
# TOPPER

Item No.	Part No.	DESCRIPTION	Qty.	Remarks	
83	1130-30	Bearing Insert	8		
84					
85					
86	6005RS	Bearing	2		
87		Bearing	6		
88					
89	A40	Spacer	1		
90					
91					
92	D60	Spacer	1		
93					
94					
95	D78	Spacer	1		
96					
97					
98	GS412	Grease Nipple	2		
99		GS506/15	Chain		1
100					
101					
102	H171	Shackle	1		
103					
104					
105	RH43M	Bush	4		
106					
107					
108		M8 x 25 Hex Hd Bolt	27		
109		M8 x 35 Hex Hd Bolt	3		
110		M8 Spring Washer	28		
111		M8 Plain Washer	28		
112		M8 Nut	30		
113					
114		M10 x 25 Hed Hd Bolt	17		
115		M10 x 25 Hed Hd Setscrew	6		
116		M10 x 25 Hex Hd Bolt (Patch Type)	27		
117		M10 x 30 Hed Hd Setscrew (Patch)	9		
118		M10 x 95 Hex Hd Setscrew	2		
119		M10 Plain Washer	23		
120		M10 Spring Washer	23		
121		M10 Special Washer	3		
122		M10 Nut	25		
123					
124					
125					
126		M12 x 25 Hex Hd Bolt	1		
127		M12 x 30 Hex Hd Setscrew	4		
128		M12 x 30 Hex Hd Setscrew (Patch Type)	16		
129		M12 x 40 Hex Hd Setscrew (Patch Type)	16		
130		M12 x 40 Hex Hd Setscrew	4		
131		M12 x 60 Hex Hd Bolt	6		
132		M12 x 85 Hex Hd Bolt	1		
133		M12 x 110 Hex Hd Bolt	2		
134		M12 Plain Washer	9		
135		M12 Spring Washer	4		
136		M12 Nut			
137					
138		RBE Key 8 x 7 x 32mm	2		
139		RBE Key 8 x 7 x 40mm	4		
140		RBE Key 8 x 7 x 80mm	1		
141		Split Pin 1/4 Dia x 1	2		
142					
143					
144					



# Hydraulic Drive & Lubrication

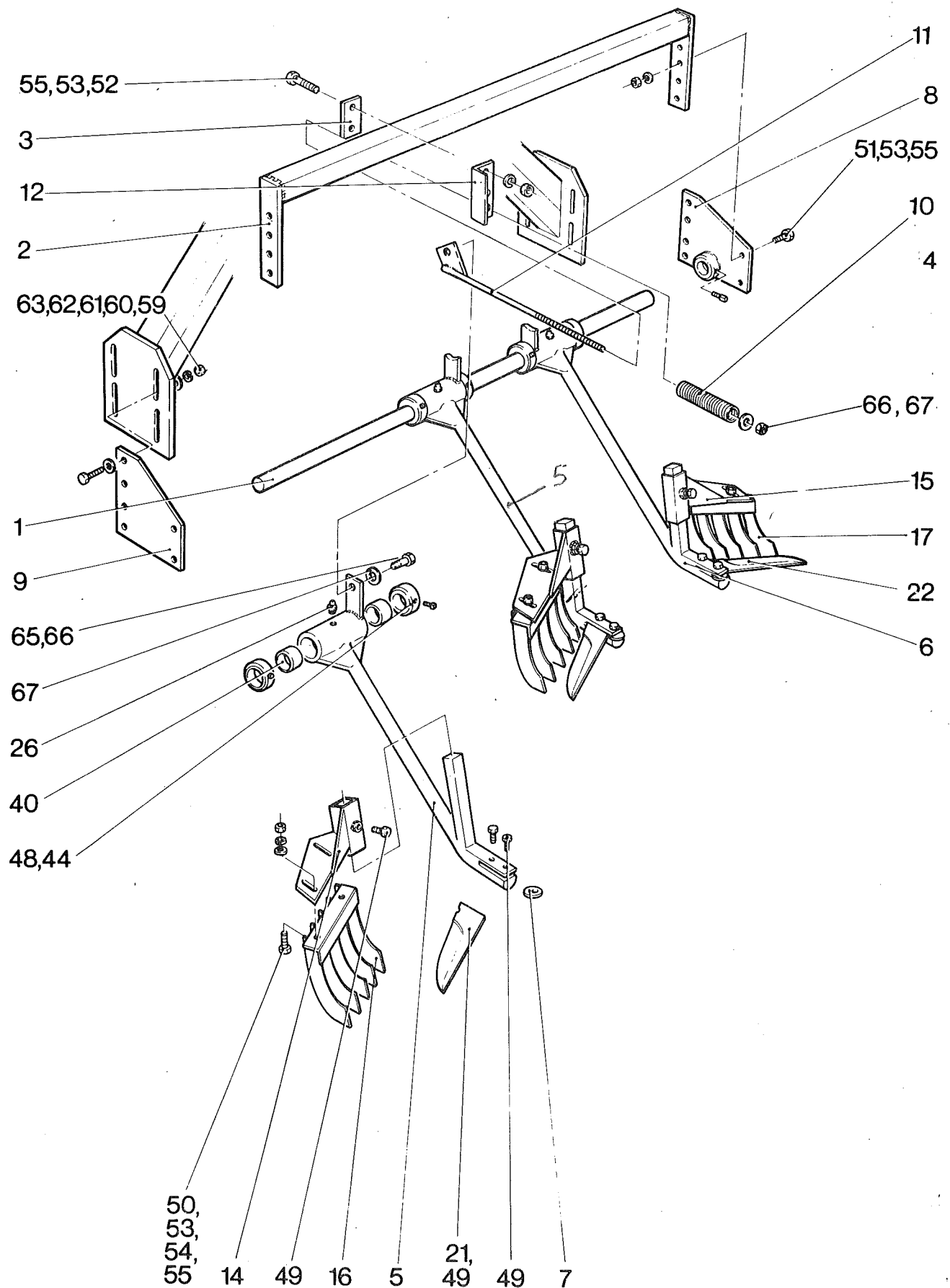
**FITTED TO TURBOBEET ONLY**



# HYDRAULIC DRIVE & LUBRICATION

Item No.	Part No.	DESCRIPTION	Qty.	Remarks
1	11100	Pressure Hose 3/4" Unit Length 4750	1	
2	11101	Pressure Hose 3/4" Unit Length 1000	1	
3	11102	Pressure Hose 3/4" FM Unit Length 1000	2	
4	11104	Pressure Hose 3/8" BSP Unit Length 4750	1	
5	11105	Return Hose 3/4" Unit Length 4750	1	
6			3pr	
7	11108	3/4" BSP Quick Release Coupling		
8	11115	Male/Male Adaptor 3/4" BSP 3/4" BSP	6	
9			12	
10	11123	Dowty Seal 3/4" BSP	2	
11	11124	Dowty Seal 1/2" BSP	3	
12	11125	Dowty Seal 3/8" BSP	1	
13	11171	Hydraulic Pipe Joiner Support		
14			1	
15	11242	Reaction Wheel		
16			1	
17	11244	Reaction Wheel Spring	1	
18	11246	Spring Tab	1	
19	11259	Operating Arm		
20			1	
21	11288	Aluminum Block	1	
22	11289	Spring	1	
23	11290	Ball Bearing	2	
24	11291	O' Ring	2	
25	11292	Blanking Plug 1/8" BSP	1	
26	11293	Blanking Plug 3/8" BSP	2	
27	11294	Dowty Seal 1/8" BSP		
28	11295	Male/Male Adaptor 3/4" BSP 1/2" BSP	2	
29			1	
30			4	
31	11814	4 Way Manifold Block	4	
32	11450	Metering Unit	4	
33	11452	Sleeve Nut	1	
34	11453	Sleeve Cone	1	
35	11455	Pump	1	
36	11486	Tank	2	
37	11457	Strap	A/R	
38	11447	5/32 Tubing	4	
39	11459	Elbow	1	
40	11490	Diverter Valve	1	
41	11493	Operating Arm Spacer	1	
42	11543	Reaction Wheel Washer	2	
43	12350	3/4" Bent Stem Adaptor	1	
44	11815 13040	5/16 UNF Blanking Plug	3	
45	13040	Blanking Plug	1	
46	13048	Connector	A/R	Sceptre Only
47	13051	1/4" Nylon Tubing	2	Sceptre Only
48	13178	Quick Release Coupling (Male)	1	Sceptre Only
49	13179	Quick Release Coupling (Female)	1	Sceptre Only
50	6200RS	Bearing	1	
51	22059025	Starlock Washer	1	
52	13329	CONNECTOR ASSEMBLY	1	
53	UC 31A	3/8" BSP 3/8" BSP Male/Male Adaptor	1	
54			4	
55		M6 x 25mm Hex Hd Setscrew	2	
56		M6 x 40mm Socket Hd Setscrew	2	
57		M6 x 56mm Hd Hd Bolt	5	
58		M6 Plain Washer	4	
59		M6 Spring Washer	4	
60		M6 Nut	2	
61		M6 Lock-nut	1	
62			1	
63		M10 x 30 Hex Hd Setscrew	1	
64		M10 x 50 Hex Hd Bolt	1	
65		M10 Plain Washer	2	
66		M10 Lock-nut		
67				
68				
69				
70				

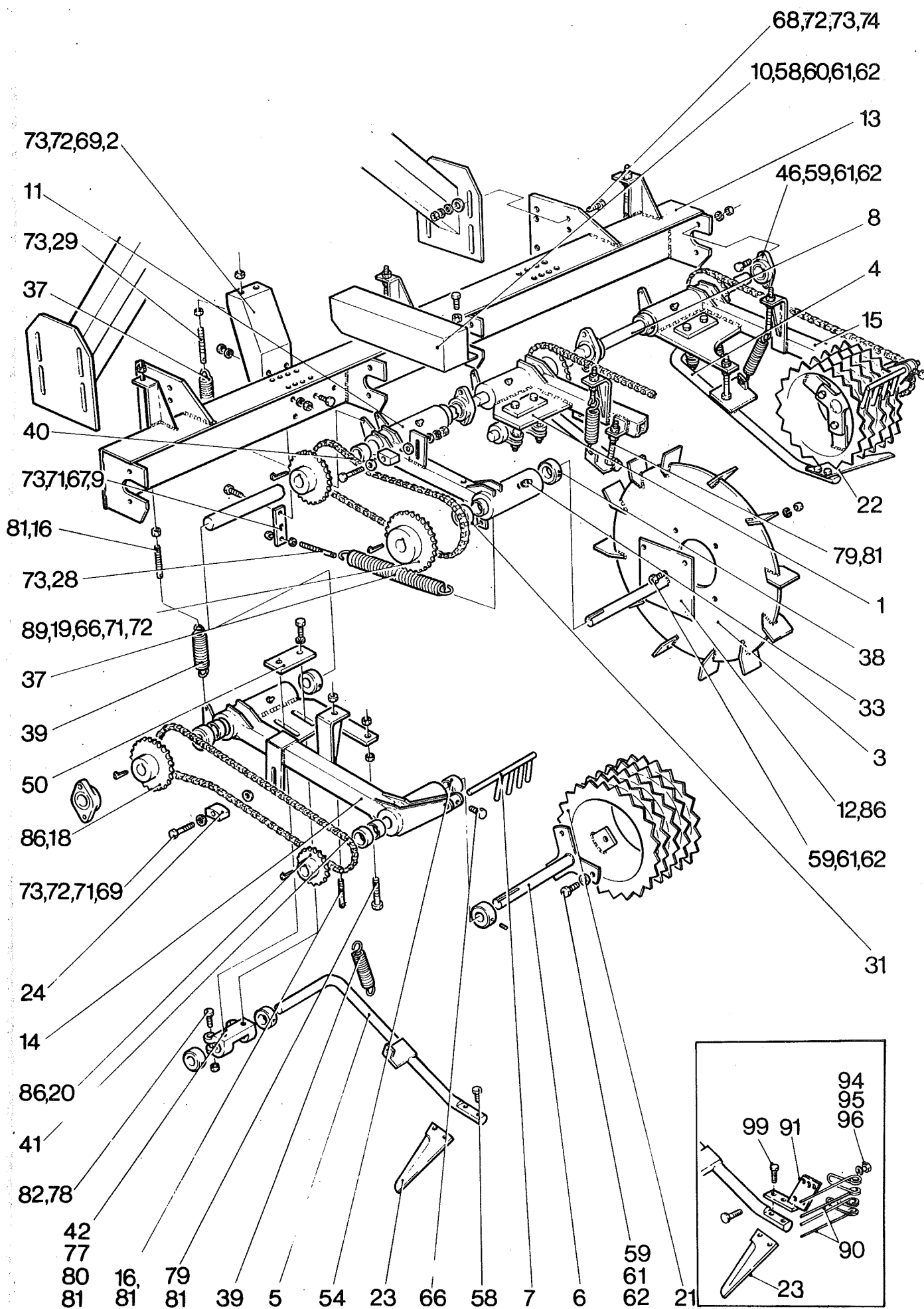
# Scalpers



# Scalpers

Item No	Part No.	Description	Qty per Assy	Remarks
1	11180	Scalper Support Bar	1	
2	11181	Spring Support Bar	1	
3	11187	Spring Clamp Bar	3	
4				
5	11318	Scalper R.H.	2	
6	11319	Scalper L.H.	1	
7	11324	Blade Locking Disc	3	
8	11530	Mounting Plate L.H.	1	
9	11531	Mounting Plate R.H.	1	
10	11630	Spring	1	
11	11636	Tension Screw	1	
12	11637	Tension Screw Bracket	1	
13				
14	12261	R.H. Comb Mounting Bracket	2	
15	12262	L.H. Comb Mounting Bracket	1	
16	12152	R.H. Comb	2	
17	12153	L.H. Comb	1	
18				
19				
20				
21	17185	Knife R.H.	2	
22	17186	Knife L.H.	1	
23				
24				
25				
26	GS 412			
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40	RH 43M	Bush	6	
41				
42				
43				
44	ST 41M	Collar	6	
45				
46				
47				
48		M10x20mm Sq. HD. Setscrew	1	
49		M10x20mm Hex HD. Setscrew	9	
50		M10x30mm Hex HD. Setscrew	6	
51		M10x40mm Hex HD. Setscrew	4	
52		M10x80mm Hex HD. Bolt	6	
53		M10 Spring Washer	16	
54		M10 Plain Washer	6	
55		M10 Nut	16	
56				
57				
58				
59		M12x40 Hex HD. Setscrew		
60		M12 Spring Washer	4	
61		M12 Plain Washer	4	
62		M12 Special Washer	4	
63		M12 Nut	4	
64				
65		M16x40 Hex Head Bolt	1	
66		M16 Nut	2	
67		M16 Washer	2	

# Feeler Wheels



# FEELER WHEEL ASSEMBLY

Item No.	Part No.	DESCRIPTION	Qty.	Remarks
1	11402	Centre Arm	1	
2	11405	Spring Tension Bracket	1	
3	11406	Paddle Wheel	1	
4	11407	Knife Arm	1	
5	11408	Knife Arm	2	
6	1140	Feeler Wheel Shaft	3	
7	11411	Scraper	3	
8	11412	Drive Shaft	1	
9	11446	Tension Bracket	1	
10	11462	Paddle Wheel Drive Guard	1	
11	11524	Paddle Wheel Arm	1	
12	11721	Paddle Wheel Shaft	1	
13	11544	Main Beam	1	
14	11546	Right Hand Arm	1	
15	11547	Left Hand Arm	1	
16	11813	Spring Tensioner	6	
17				
18	17075	21T. Sprocket	4	
19	11722	29T. Sprocket	1	
20	17087	15T. Sprocket	3	
21	17117	Feeler Wheel	3	
22	17125	Knife LH	1	
23	17129	Knife RH	2	
24	17155	Nylon Chain Tensioner	4	
25				
26				
27				
28	BM82m	Spring Tensioner	1	
29	BM212m	Spring Tensioner	2	
30				
31	C8	Spacer	1	
32				
33	GS412	Grease Nipple	8	
34				
35				
36				
37	PS194	Spring	3	
38	PS326m	Collar	14	
39	11648	Spring	6	
40	PS871/67	Chain	1	
41	PS871/74	Chain	3	
42	PS1002am	Knife Arm Bracket	3	
43				
44				
45				
46	SFT30	Bearing	4	
47				
48				
49				
50	SPCL309	Knife Arm Clamp Plate	3	
51				
52				
53				
54	6206RS	Bearing	16	
55				
56				
57				
58		M10 x 25mm LG Hex Hd Setscrew	8	
59		M10 x 30 LG Hex Hd Setscrew	21	
60		M10 Plain Washer	2	
61		M10 Spring Washer	23	
62		M10 Nut	23	
63				
64				
65				
66		M12 x 25mm LG Hex Hd Setscrew	4	
67		M122 x 45mm LG Hex Hd Setscrew	4	
68		M12 x 50mm LG Hex Hd Setscrew	8	
69		M12 x 70mm LG Hex Hd Setscrew	4	
70				
71		M12 Special Washer	17	
72		M12 Spring Washer	17	
73		M12 Nut	22	
74				
75				
76				
77		M16 x 40mm LG Hex Hd Setscrew	6	
78		M16 x 50mm LG Hex Hd Setscrew	6	
79		M16 x 110mm LG Hex Hd Setscrew	3	
80		M16 Spring Washer	6	
81		M16 Nut	18	
82		M16 Locknut	6	

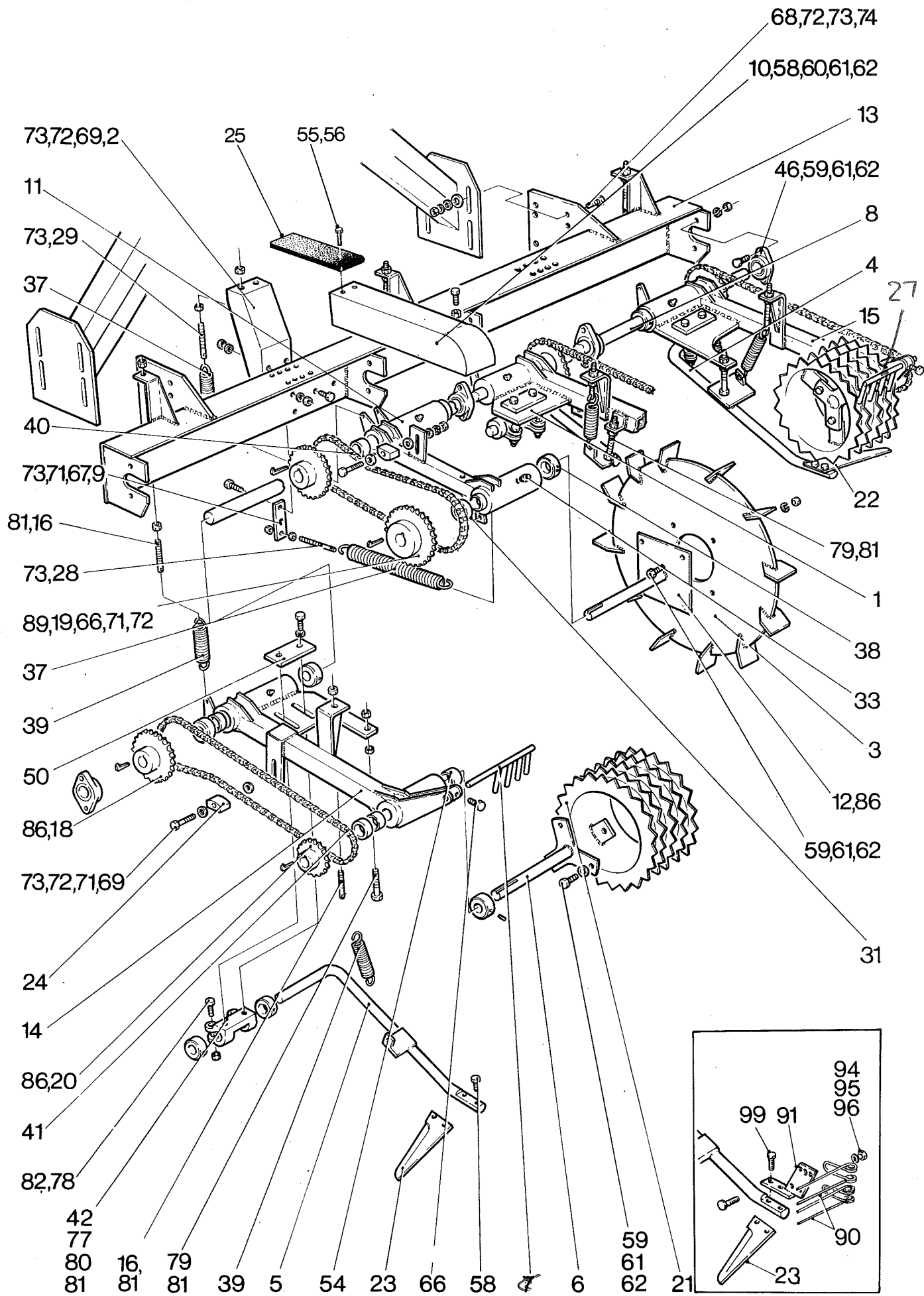


# FEELER WHEEL ASSEMBLY

Item No.	Part No.	DESCRIPTION	Qty.	Remarks
83	11649 11818			
84				
85		7x8x30mm RBE Key	1	
86		7x8x50mm LG Gib Hd Key	8	
87				
88				
89				
90		Crown Deflector Tine	6	Optional
91		Crown Deflector Bracket	3	Optional
92				
93				
94		M8 x 30mm Hex Hd Setscrew	12	Optional
95		M8 Flat Washer	12	Optional
96		M8 Nut	12	Optional
97				
98				
99		M10 x 30mm Hex Hd Setscrew	6	Optional



# Feeler Wheel Assembly (From Serial No. Y408A)



# FEELER WHEEL ASSEMBLY (From Serial No. Y408A)

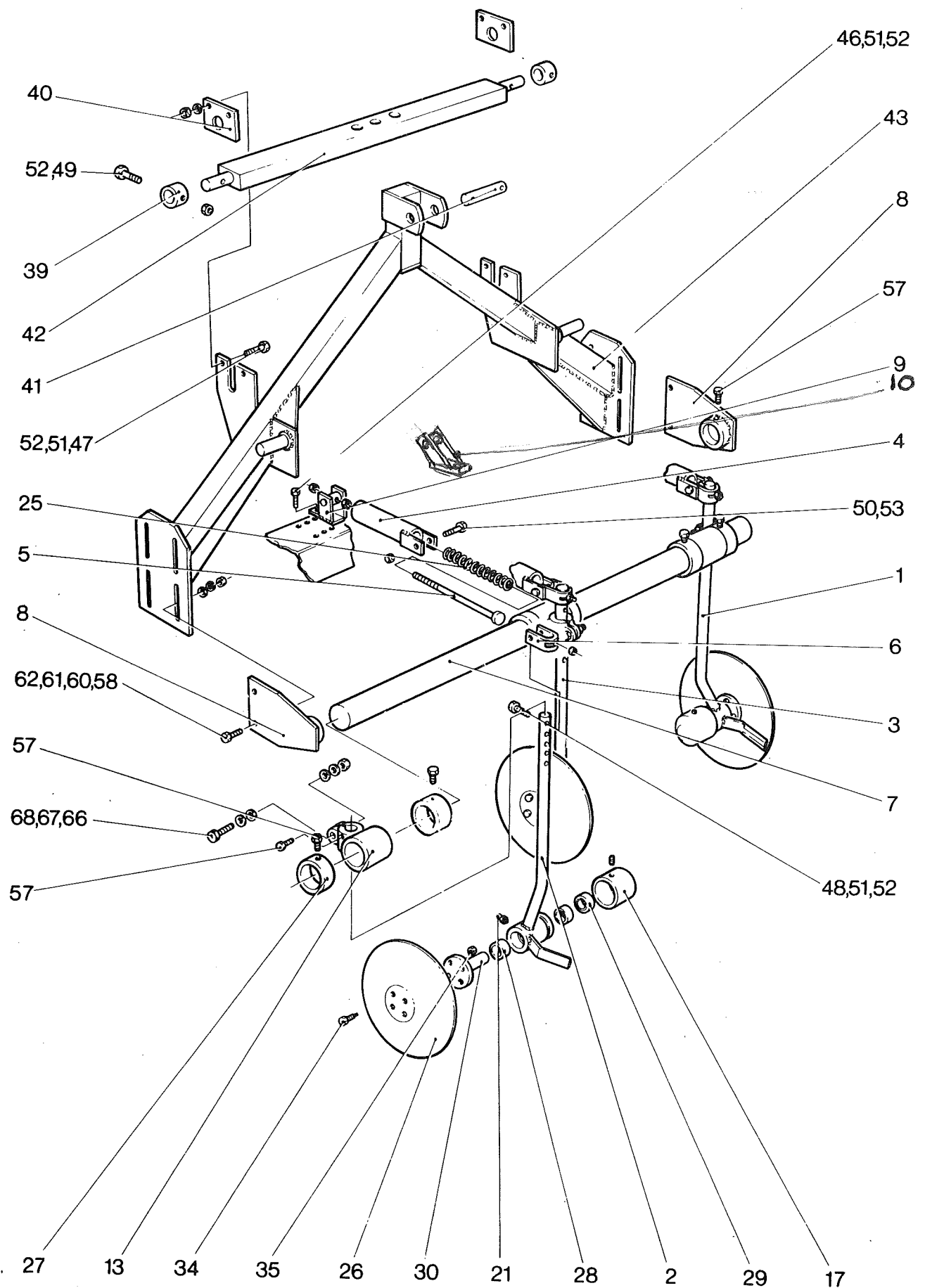
Item No.	Part No.	DESCRIPTION	Qty	Remarks
1	11402	Centre Arm	1	
2	11405	Spring Tension Bracket	1	
3	11406	Paddle Wheel	1	
4	11407	Knife Arm	1	
5	11408	Knife Arm	2	
6	11409	Feeler Wheel Shaft	3	
7	<del>11411</del>	<del>Scraper</del>	3	
8	11412	Drive Shaft	1	
9	11446	Tension Bracket	1	
10	11820	Paddle Wheel Drive Guard	1	
11	11524	Paddle Wheel Arm	1	
12	11721	Paddle Wheel Shaft	1	
13	11544	Main Beam	1	
14	11546	Right Hand Arm	1	
15	11547	Left Hand Arm	1	
16	11813	Spring Tensioner	6	
17				
18	17075	21T. Sprocket	4	
19	11722	29T. Sprocket	1	
20	17087	15T. Sprocket	3	
21	17117	Feeler Wheel	3	
22	17125	Knife LH	1	
23	17129	Knife RH	2	
24	17155	Nylon Chain Tensioner	4	
25	11821	Rubber Flap	1	
26	11411L	SCRAPER LH	1	
27	11411R	SCRAPER RH	2	
28	BM82m	Spring Tensioner	1	
29	BM212m	Spring Tensioner	2	
30				
31	C8	Spacer	1	
32				
33	GS412	Grease Nipple	8	
34				
35				
36				
37	PS194	Spring	3	
38	PS326m	Collar	14	
39	11648	Spring	6	
40	PS871/67	Chain	1	
41	PS871/74	Chain	3	
42	PS1002am	Knife Arm Bracket	3	
43				
44				
45				
46	SFT30	Bearing	4	
47				
48				
49				
50	SPCL309	Knife Arm Clamp Plate	3	
51				
52				
53				
54	6206RS	Bearing	16	
55		M6 x 20 Hex Hd Setscrew	2	
56		M6 Locknut	2	
57				
58		M10 x 25mm LG Hex Hd Setscrew	8	
59		M10 x 30 LG Hex Hd Setscrew	21	
60		M10 Plain Washer	2	
61		M10 Spring Washer	23	
62		M10 Nut	23	
63				
64				
65				
66		M12 x 25mm LG Hex Hd Setscrew	4	
67		M12 x 45mm LG Hex Hd Setscrew	4	
68		M12 x 50mm LG Hex Hd Setscrew	8	
69		M12 x 70mm LG Hex Hd Setscrew	4	
70				
71		M12 Special Washer	17	
72		M12 Spring Washer	17	
73		M12 Nut	22	
74				
75				
76				
77		M16 x 40mm LG Hex Hd Setscrew	6	
78		M16 x 50mm LG Hex Hd Setscrew	6	
79		M16 x 110mm LG Hex Hd Setscrew	3	
80		M16 Spring Washer	6	
81		M16 Nut	18	
82		M16 Locknut	6	

# FEELER WHEEL ASSEMBLY (From Serial No. Y408A)

Item No.	Part No.	DESCRIPTION	Qty.	Remarks
83	11649 11818			
84				
85		7x8x30mm RBE Key	1	
86		7x8x50mm LG Gib Hd Key	8	
87				
88				
89				
90		Crown Deflector Tine	6	Optional
91		Crown Deflector Bracket	3	Optional
92				
93				
94		M8 x 30mm Hex Hd Setscrew	12	Optional
95		M8 Flat Washer	12	Optional
96		M8 Nut	12	Optional
97				
98				
99		M10 x 30mm Hex Hd Setscrew	6	Optional



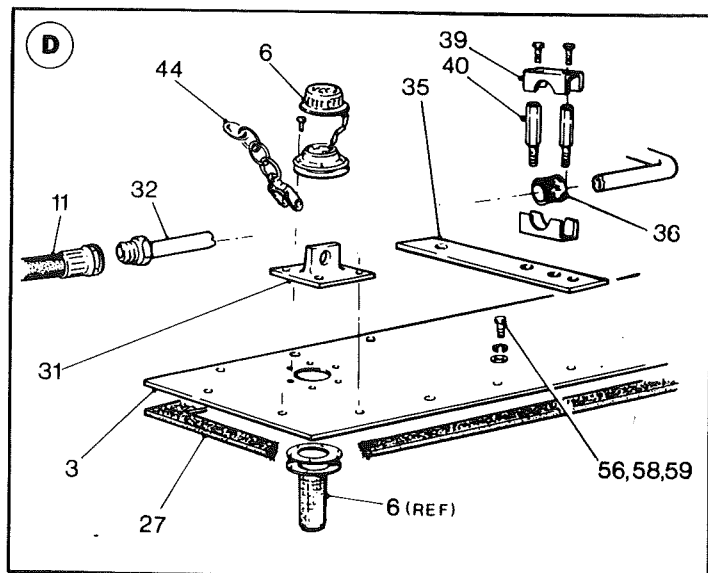
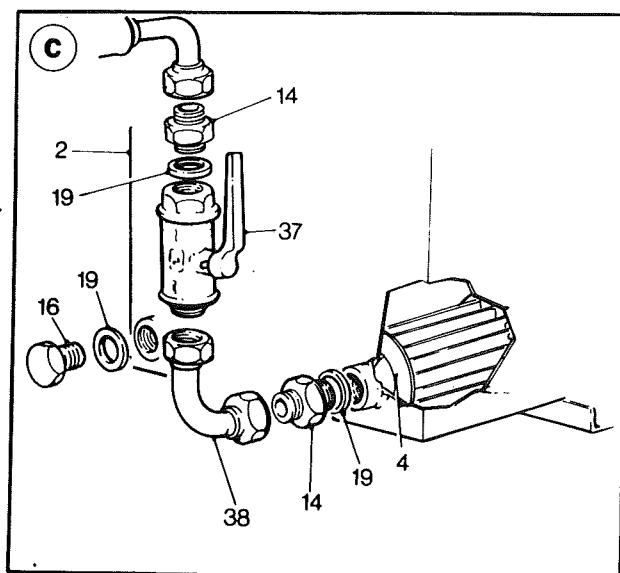
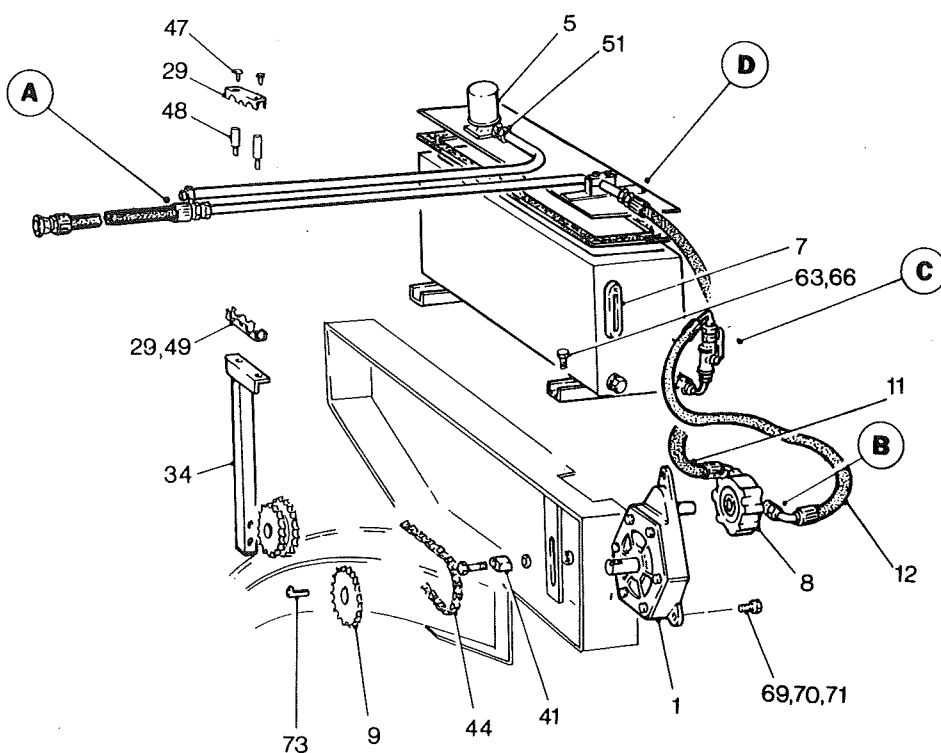
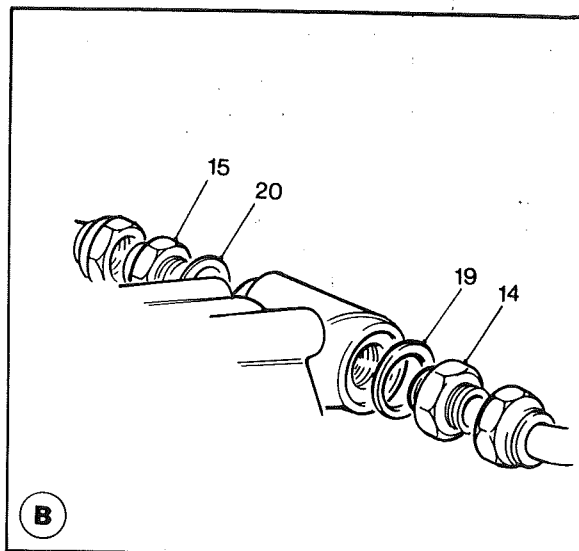
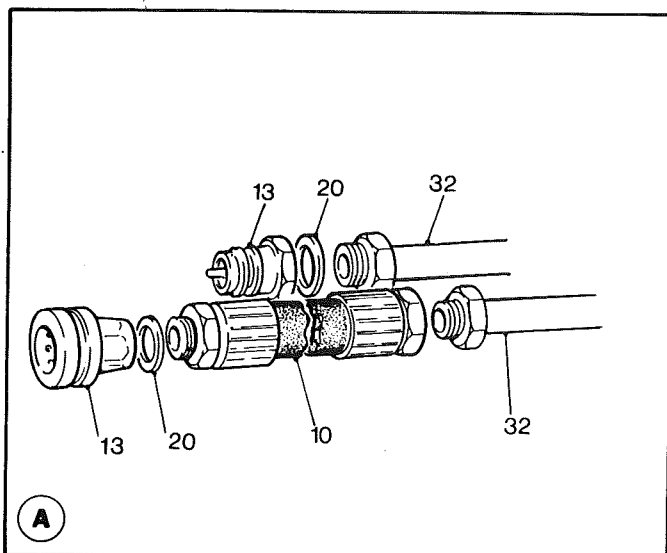
# 'A' Frame and Disc Unit



'A' Frame and Discs

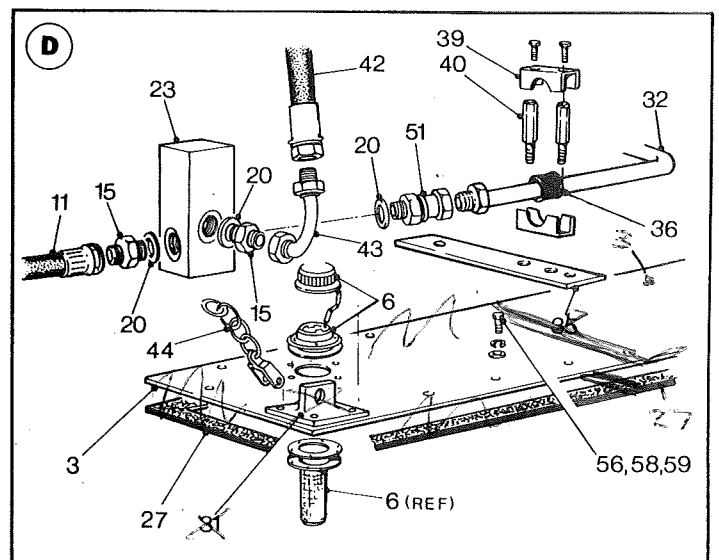
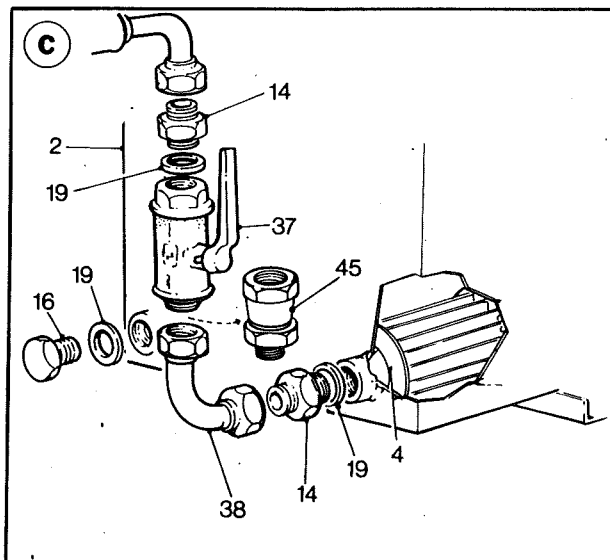
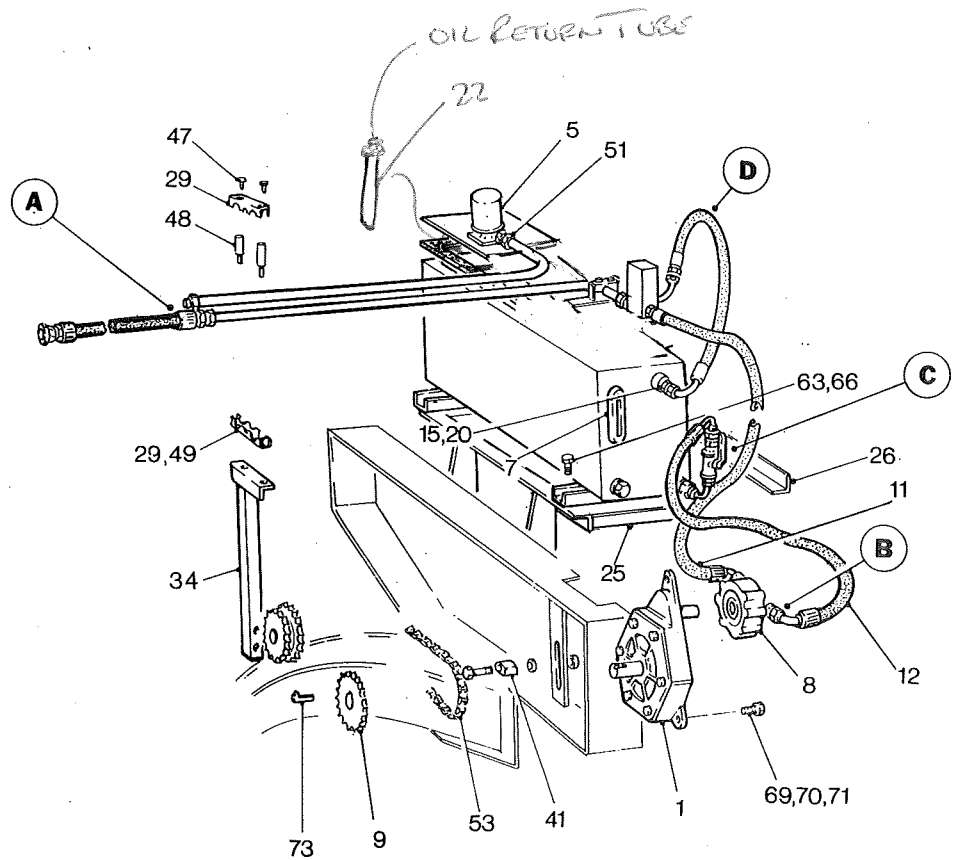
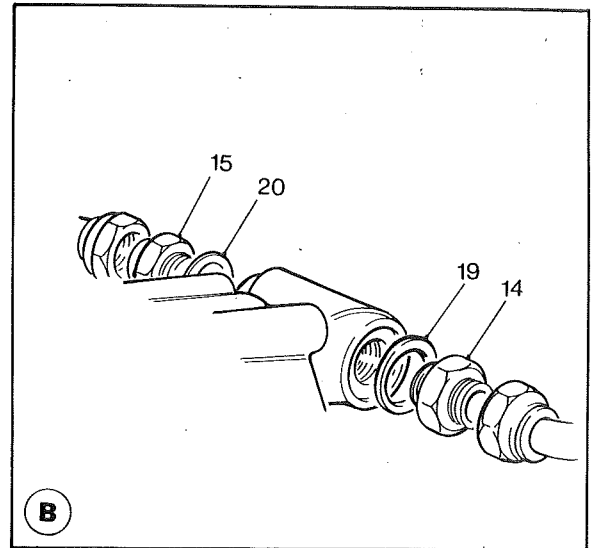
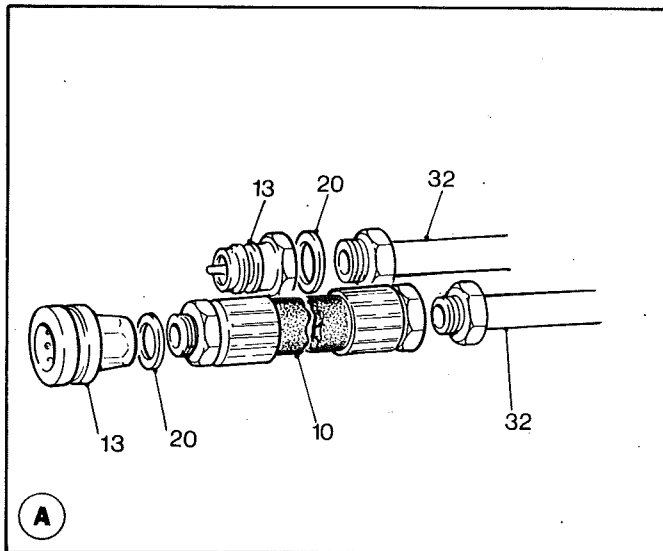
Item No	Part No.	Description	Qty per Assy	Remarks
1	11472	R.H. Disc Stalk	1	
2	11473	L.H. Disc Stalk	1	
3	11474	Centre Disc Stalk	1	
4	11498	Tension Barrel	3	
5	11499	Tension Spindle	3	
6	11500	Tension Bracket	3	
7	11520	Disc Unit Support Bar	1	
8	11521	Support Bar Bracket	2	
9	11522	Trunnion Support	2	
10	11955	OUTER TRUNNION SUPPORT	2	
11				
12				
13	BM 20MM	Disc Coulter Stalk Bracket	3	
14	20 AN			
15				
16	81M			
17	BMT 81MM	Dust Cap	3	
18				
19				
20				
21	GS 412	Grease Nipple	3	
22				
23				
24				
25	PS 165	Spring	3	
26	PS 224	Disc	3	
27	PS 353M	Collar	6	
28	PS 386M/M	Bush	6	
29	PS 588	Oil Seal	3	
30	PS 596AM	Disc Spindle	3	
31				
32				
33				
34	2611-1007	Fixing Pin	12	
35	2682-1000	Fixing Collar	12	
36				
37				
38		'A' Frame Assembly 11564		
39	11183	Retaining Plate Collar	2	
40	11184	Retaining Plate	2	
41	11192	Three Point Linkage Pin	1	
42	11517	Draw Bar	1	
43	11518	'A' Frame	1	
44				
45				
46		M10 x 30mm Lg Hex Hd Setscrew	6	
47		M10 x 40mm Lg Hex Hd Bolt	4	
48		M10 x 50mm Lg Hex Hd Bolt	3	
49		M10 x 60mm Lg Hex Hd Bolt	2	
50		M10 x 70mm Lg Hex Hd Bolt	3	
51		M10 Spring Washer	13	
52		M10 Nut	15	
53		M10 Locknuts	3	
54				
55				
56				
57		M12 x 20mm Lg Hex Hd Setscrew	14	
58		M12 x 40mm Lg Hex Hd Bolt	4	
59		M12 Plain Washer	4	
60		M12 Special Washer	4	
61		M12 Spring Washer	4	
62		M12 Nuts	13	
63				
64				
65				
66		M16 x 80mm Lg Hex Hd Bolt	3	
67		M16 Plain Washers	12	
68		M16 Nuts	3	
69				





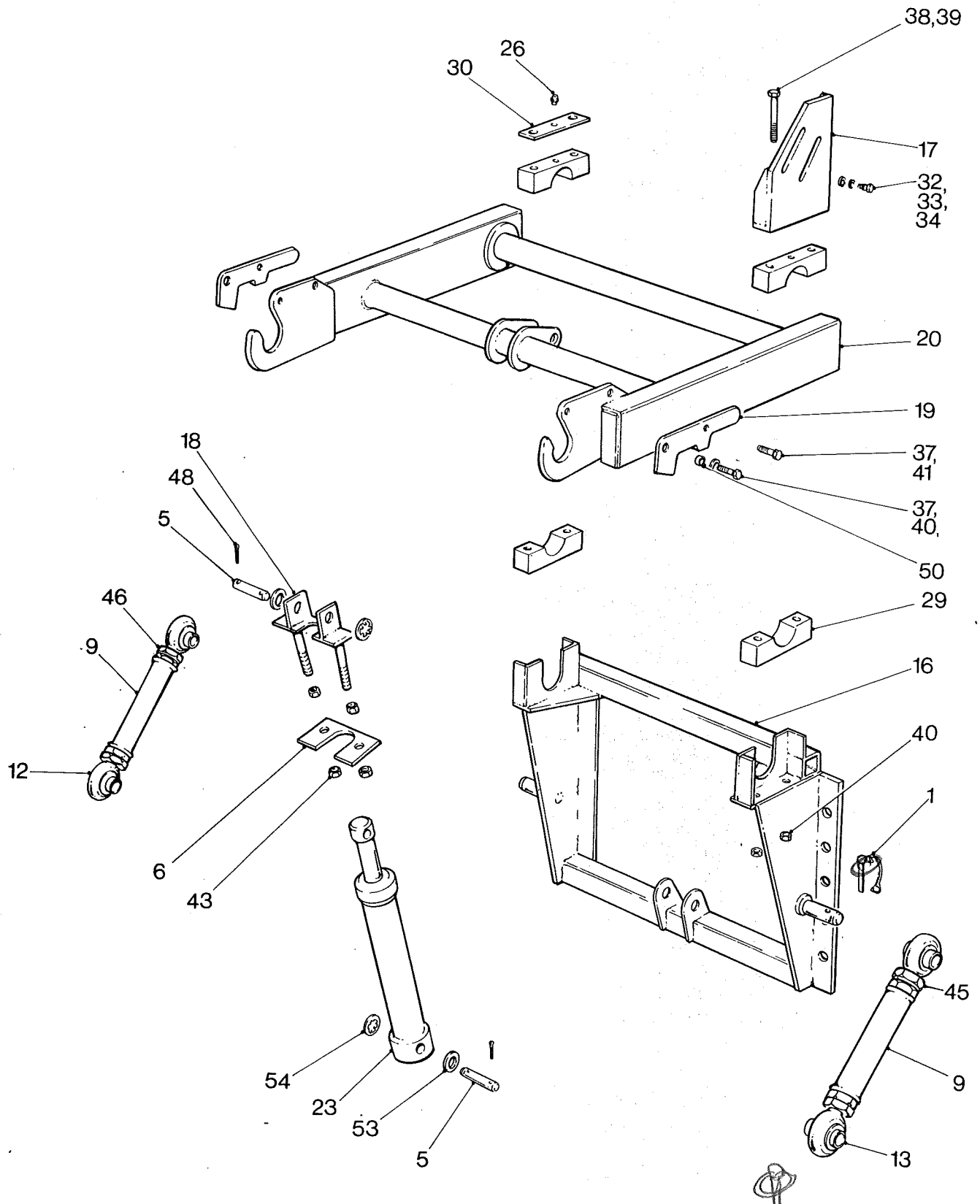
# HYDRAULICS

Item No.	Part No.	DESCRIPTION	Qty.	Remarks
1	11052	Gearbox	1	
2	11053	Tank	1	
3	11054	Tank Lid	1	
4	11056	Strainer	1	
5	11057	Filter Complete	1	
6	11059	Air Breather	1	
7	11060	Fluid Level plus Temp Guage	1	
8	11067	Pump & Webster	1	
9	11068	Sprocket	1	
10	11101	Hose 3/4" BSP FM/M Length 1000mm	1	
11	11102	Pressure Hose 3/4" Unit Length 1000	1	
12	11107	Suction Hose 1" Unit Length 975	1	
13	11108	Quick Release Coupling 3/4"	2pr	
14	11114	Male/Male Adaptor 1" BSP - 1" BSP	3	
15	11115	Male/Male Adaptor 3/4" BSP - 3/4" BSP	1	
16	11116	Blanking Plug 1" BSP	1	
17	11117	Blanking Plug 3/4" BSP	2	
18				
19	11122	Dowty Seal 1" BSP	4	
20	11123	Dowty Seal 3/4" BSP	3	
21				
22	11126	Oil Return Tube	1	
23				
24	11171	Hydraulic Pipe Joiner Support	1	
25				
26				
27	11305	Tank Gasket	1	
28				
29	11373	Hydraulic Pipe Clamp (Triple)	1pr	
30				
31	11440	Fixing Bracket	2	
32	11494	3/4" OD Hydraulic Steel Pipe	2	
33				
34	11509	Hydraulic Support Angle	1	
35	11542	Clamp Support Strip	1	
36	11551	Grommet	1	
37	11807	1" BSP Shut Off Valve	1	
38	11819	1" BSP F/Male 90° Adaptor - 1" BSDP Female	1	
39	12563	Clamp		
40	12564	Stacking Nut	2	
41	17155	Nylon Jockey	1	
42				
43				
44	11327	Retaining Hook		
45				
46				
47	SPCT210	Stacking Nut	2	
48	SPCT212	Stacking Stud	2	
49	SPCT222	Rubber Grommet	3	
50				
51	TBMW388	Male/Female Swivel Adaptor	1	
52				
53				
54				
55				
56		M6 x 25 Hed Hd Setscrew	26	
57		M6 x 35 Hex Hd Bolt	4	
58		M6 Plain Washer	30	
59		M6 Spring Washer	30	
60				
61				
62		M10 x 20 Hex Hd Setscrew	2	
63		M10 x 30 Hex Hd Setscrew	4	
64		M10 Spring Washer	2	
65		M10 Nut	2	
66		M10 Lock-Nut	4	
67				
68				
69		M12 x 40 Hex Hd Setscrew	3	
70		M12 Spring Washer	3	
71		M12 Nut	3	
72				
73		8mm x 7mm x 40mm Gib Head Key	1	
74				
75				



# TURBOBEET HYDRAULICS (From Serial No. TB242A)

Item No.	Part No.	DESCRIPTION	Qty.	Remarks
1	11052	Gearbox	1	
2	<del>11053</del> 11054	Tank	1	PART NO WAS 11053
3	<del>11054</del> 13203	Tank Lid	1	PART NO WAS 11054
4	11056	Strainer	1	
5	11057	Filter Complete	1	
6	11059	Air Breather	1	
7	11060	Fluid Level plus Temp Guage	1	
8	11067	Webster Pump	1	
9	11068	Sprocket	1	
10	11101	Hose 3/4 BSP FM/M Length 1000mm	1	
11	11102	Pressure Hose 3/4" Unit Length 1000	1	
12	11107	Suction Hose 1" Unit Length 975	1	
13	11108	Quick Release Coupling 3/4"	2pr	
14	11114	Male/Male Adaptor 1" BSP - 1" BSP	3	
15	11115	Male/Male Adaptor 3/4" BSP - 3/4" BSP	4	
16	11118	Blanking Plug 1" BSP	1	
17				
18				
19	11122	Dowty Seal 1" BSP	4	
20	11123	Dowty Seal 3/4" BSP	6	
21				
22	11126	Oil Return Tube	1	
23	11132	Relief Valve	1	
24	11171	Hydraulic Pipe Joiner Support	1	
25	11046	Tank Support Bracket Front	1	
26	11047	Tank Support Bracket Rear	1	
27	<del>11305</del> 13204	Tank Gasket	1	PART NO WAS 11305
28				
29	11373	Hydraulic Pipe Clamp (Triple)	1pr	
30				
31	<del>11440</del>	Fixing Bracket	2	
32	11494	3/4" OD Hydraulic Steel Pipe	2	
33				
34	11509	Hydraulic Support Angle	1	
35	<del>11542</del>	Clamp Support Strip	1	
36	11551	Grommet	1	
37	11807	1" BSP Shut Off Valve	1	
38	11819	1" BSP F/Male 90° Adaptor - 1" BSDP Female	1	
39	12563	Clamp		
40	12564	Stacking Nut	2	
41	17155	Nylon Jockey	1	
42	12345	3/4 90° FEM x 3/4 STR FEM Hose Assembly 700LG	1	
43	12350	3/4 BSP Male x 3/4 BSP Fem 90° Adaptor	1	
44	11327	Retaining Hook		
45	11808	1" BSP Male x 1" BSP Fem ale Swivel Adaptor	1	
46				
47	SPCT210	Stacking Nut	2	
48	SPCT212	Stacking Stud	2	
49	SPCT222	Rubber Grommet	3	
50				
51	TBMW388	Male/Female Swivel Adaptor	2	
52				
53	PS871/96	Chain	1	
54				
55				
56		M6 x 25 Hex Hd Setscrew	<del>10</del> 26	
57		<del>M6 x 35 Hex Hd Bolt</del>	<del>10</del> 4	
58		M6 Plain Washer	10 30	
59		M6 Spring Washer	10 30	
60				
61				
62		M10 x 20 Hex Hd Setscrew	2	
63		M10 x 30 Hex Hd Setscrew	4	
64		M10 Spring Washer	2	
65		M10 Nut	2	
66		M10 Lock-Nut	4	
67				
68				
69		M12 x 40 Hex Hd Setscrew	3	
70		M12 Spring Washer	3	
71		M12 Nut	3	
72				
73		8mm x 7mm x 40mm Gib Head Key	1	
74				
75				



# QUICK HITCH

Item No.	Part No.	DESCRIPTION	Qty.	Remarks
1	<del>10282</del>	Quick Release Pin <i>PS 714/S.</i>	<del>2</del> 4	
2				
3				
4				
5	11816	Ram Pin (Top & Bottom)	2	
6	11673	Stop Plate	1	
7				
8				
9	11709	Stay	2	
10				
11				
12	11718	Rod End RH (short)	2	
13	11719	Rod End LH (Short)	2	
14				
15				
16	11730	Lift Unit Mounting Frame	1	
17	11731	Diverter Valve Bracket	1	
18	11733	Ram Stop Bracket	1	
19	11734	Latch	2	
20	11735	Lift Arm	1	
21				
22				
23	<del>H399</del> 10379	Ram	1	PRIOR TO SERIAL NO TT465A, PART N° WAS H399.
24				
25				
26	GS412	Grease Nipple	2	
27				
28				
29	SPCT132	Bearing Block	4	
30	SPCT143	Bearing Block Clamp Plate	1	
31				
32		M8 x 30 Hed Hd Setscrew	4	
33		M8 Plain Washer	4	
34		M8 Spring Washer	4	
35				
36				
37		M12 x 40 Hex Hd Setscrew	4	
38		M12 x 140 Hex Hd Bolt	4	
39		M12 Plain Washer	6	
40		M12 Lock Nut	6	
41		M12 Plain Nut	2	
42				
43		M16 Nut	2	
44			2	
45		1 1/8 UNC Locknut LH	2	
46		1 1/8 UNC Locknut RH	2	
47				
48		Split Pin 1/4" Dia x 2"	4	
49				
50	SS016013/014	Steel Spacer	2	
51				
52				
53		M20 Flat Washer	4	
54		3/4" Starlock Washer	2	