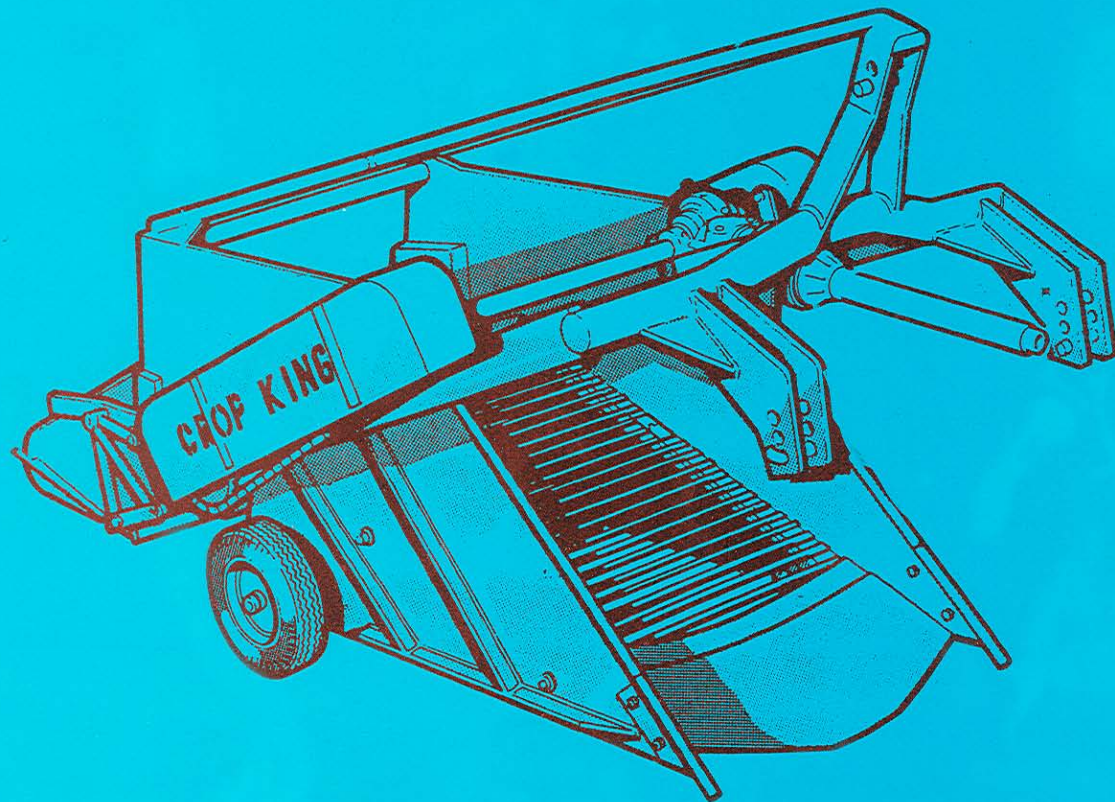


# OPERATORS MANUAL



**OPERATING, MAINTENANCE & SPARE PARTS INSTRUCTIONS  
FOR THE "CROP KING" POTATO HARVESTERS - SINGLE &  
DOUBLE ROW MACHINES.**

**ALWAYS QUOTE THE MODEL AND SERIAL NUMBER  
OF YOUR MACHINE WHEN ORDERING SPARES.**

**USE ONLY GENUINE "CROP KING" SPARES.**

The Company reserves the right to modify the machine specifications as represented in this manual, without prior notification.

Whilst every effort is made to ensure the accuracy of the particulars contained in this Handbook, neither the Manufacturer nor the Distributor or Dealer, by whom this Handbook is supplied, shall in any circumstances be held liable for any inaccuracy or the consequences thereof.

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## **INTRODUCTION**

You have bought a first class machine, where the useful life and good service you obtain from it depend to a large extent upon the way it is maintained and operated. Therefore, before attempting to use your machine, the operator should be made fully conversant with the instructions which follow regarding the simple controls, lubrication and maintenance of your machine.

## **SAFETY INSTRUCTIONS**

### **WARNING:**

Never attempt to adjust, clean or repair any part of the "Crop King" Potato Harvester before

**SWITCHING OFF THE TRACTOR ENGINE.**

### **BEFORE STARTING THE "CROP KING" POTATO HARVESTER:**

Check that the tractor is in neutral, the guards are in position and bystanders are clear of the machine.

### **DRIVING THE MACHINE:**

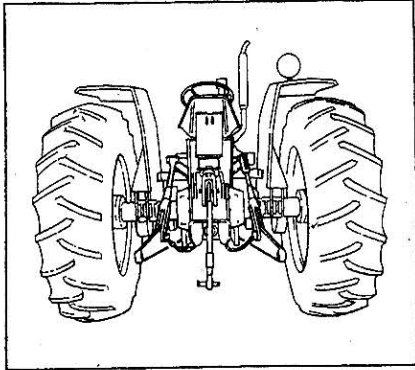
Use only GENUINE "Crop King" replacement parts, as spurious spares may be made of inferior material and may possibly injure someone. NEVER RE-USE WORN PARTS — replace them.

**DO NOT TRANSPORT WITH THE CHAIN ROTATING.**

### **LEAVING THE MACHINE UNATTENDED:**

Always park the machine on level ground. Never leave the machine unattended with the tractor engine running or with the drive to the "Crop King" Potato Harvester engaged.

## SETTING UP THE MACHINE BEFORE HARVESTING

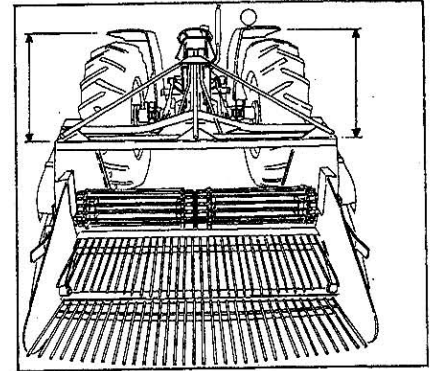


Attach lower links by inserting pins. Rock tractor backwards and forwards, as necessary, until holes in the links and hitch line up. Ensure pins are secured with cotter pins.

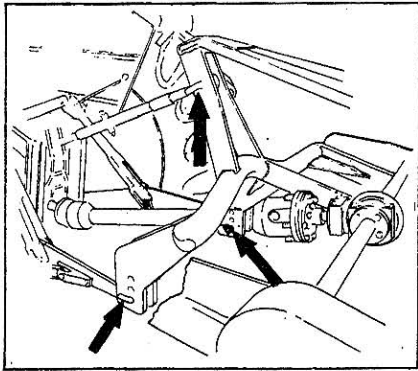
Attach the tractor top link to the top hitch point by inserting pin. Adjust the length of the top link, as necessary, until the link and hitch point holes line up. Ensure pin is secured with the cotter pin.

The "Crop King" Potato Harvester is attached to the tractor using a standard 3 point hitch which is attached to the tractor three point linkage. ENSURE THAT 3 POINT HITCH IS BOLTED IN THE CENTRE OF THE FRAME.

Back the tractor towards the centre of the 3 point hitch. Stop when the lower links of the tractor are in line with the lower hitch points. Using tractor levelling lever adjust height of links until they are at the same level as the lower hitch points.



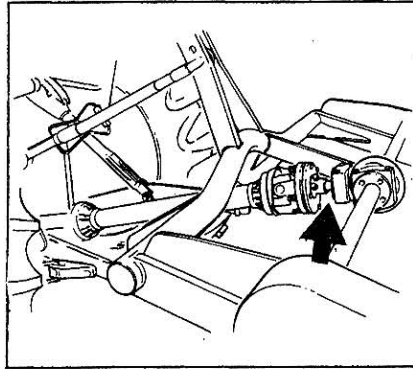
Check the machine is set level with the tractor.



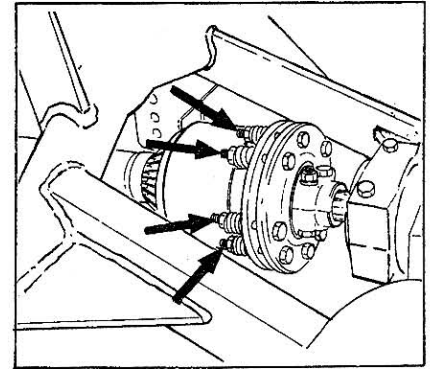
Generally the two lower links on the tractor should be located in the lowest holes of the bottom hitch points on the machine.

Then the top link of the tractor should be set on the lowest hole of the top hitch point of the machine.

If you find you need to adjust the lower links from the tractor to a higher hole on bottom hitch points of the machine then you must also adjust the link from the tractor to the higher hole on the top hitch point of the machine.

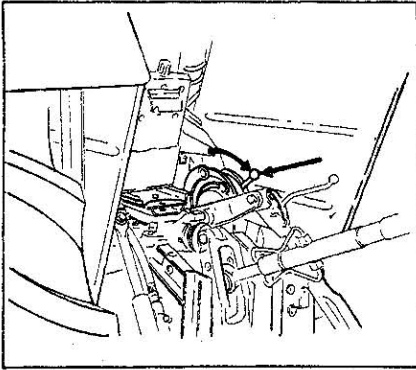


Connect the P.T.O. supplied with "Crop King". The clutch side must go on machine gearbox.

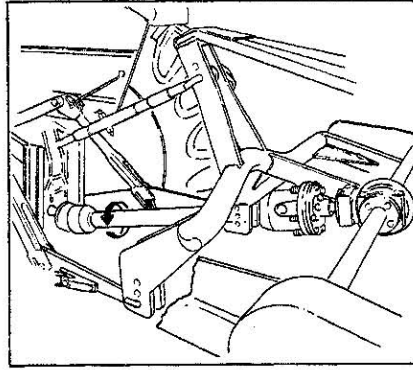


Do not overtighten the clutch as this could damage the machine.

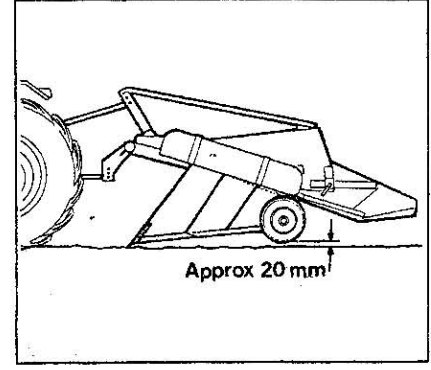
## OPERATION OF THE MACHINE



First make sure the tractor hydraulics are completely down.

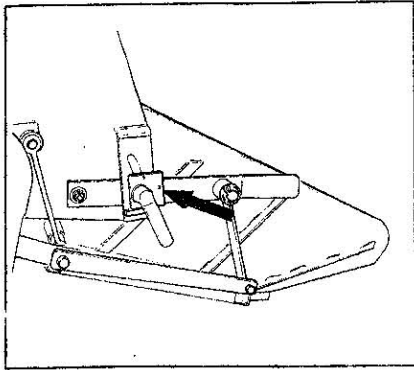


The P.T.O. shaft revs should generally be between 460 and 550 r.p.m. and the tractor revs should be between 1500 and 1800 r.p.m. If the ground is stony, lower the revs of the tractor. If the ground has a clay content, increase the revs on the tractor.



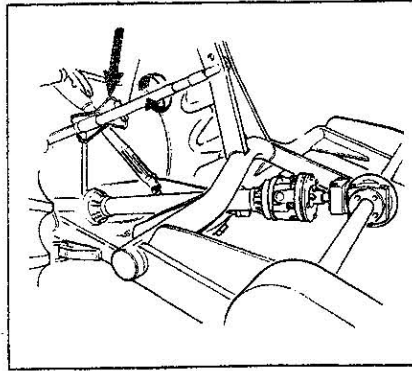
Before operation, the transport wheels should be 20 mm above the surface of the ground both sides of the potato ridge.





The shaker settings found on both sides of the machine should be set (as follows)

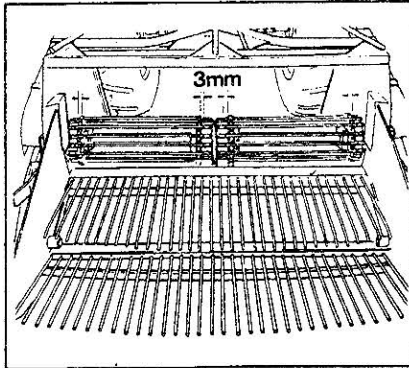
- a) If the ground is in good condition set on number 2, 3 or 4
- b) If the ground has clay or is stony etc. set on number 1 or a higher number if required.



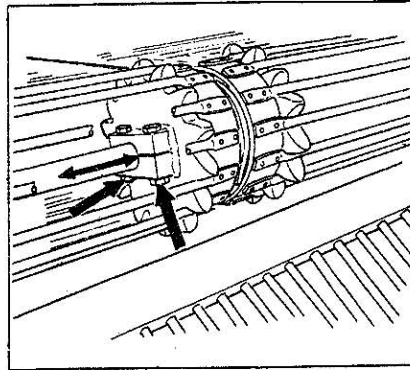
#### DO NOT CUT THE POTATOES

If the machine tends to cut the potatoes you must shorten the top link. This will enable the machine digger blade to penetrate just below the potatoes.

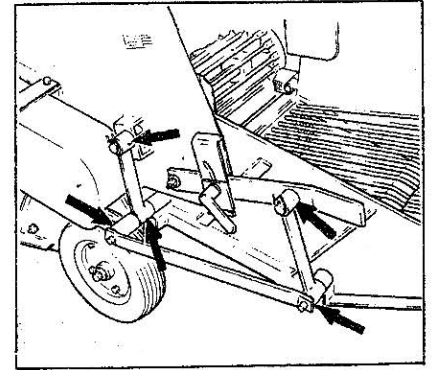
## MAINTENANCE OF THE MACHINE



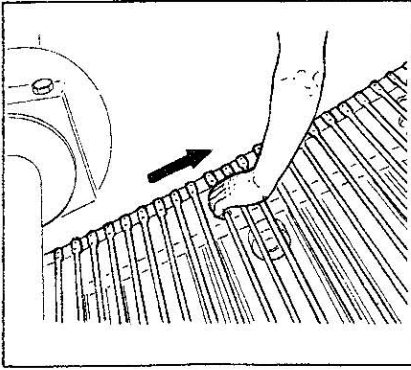
The clearance between the end of the roller chain conveyor belt and the sprockets is 3 mm.



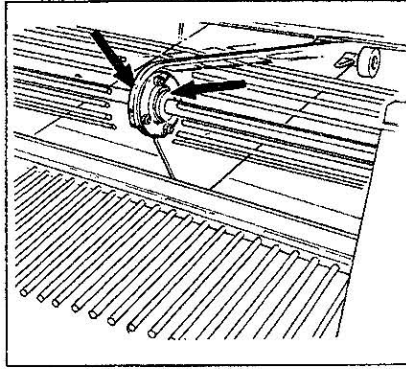
To adjust a sprocket on the roller chain conveyor belt shaft, just loosen the two bolts on the sprocket and slide either left or right to the required 3 mm position.



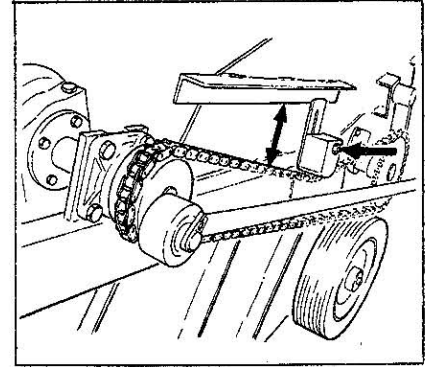
Make sure the shaker linkages are greased. There are five grease points (nipples) on both sides of the machine. Grease all five points six times daily during operation.



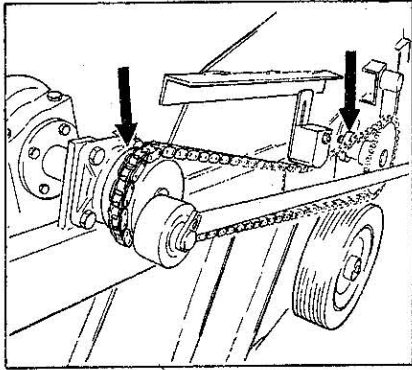
To check the conveyor belt rollers are running free, turn the chain by hand in the rear direction.



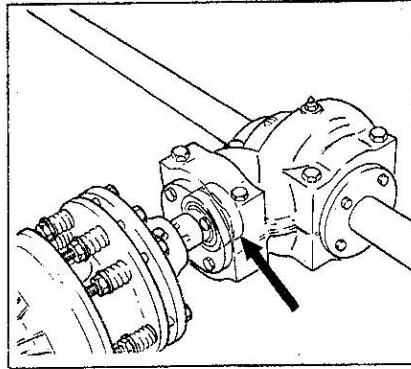
On the two conveyor belt machine the two bearings in the centre of the belt drive shaft must be checked to make sure they are running free. Failure to do so may cause the belt drive shaft to shear.



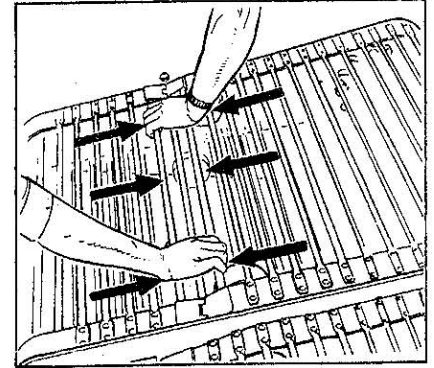
The tension on the drive chains on both sides of the machine must be checked regularly. The chain can be adjusted by loosening the nut on the tension block and moving the tension block to the required position. After adjusting, make sure the chain isn't too tight or too loose.



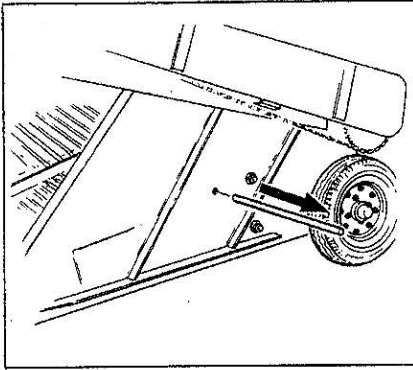
Grease the bearings on the chain drive twice daily.



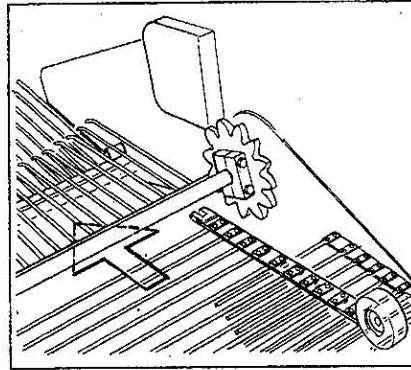
The gearbox must be greased 3 times per season. The bearings in the front of the gearbox must be checked at all times to make sure there isn't a great deal of play. If there is excessive play, the bearings must be changed as soon as possible to stop damage being caused to the bevel gears.



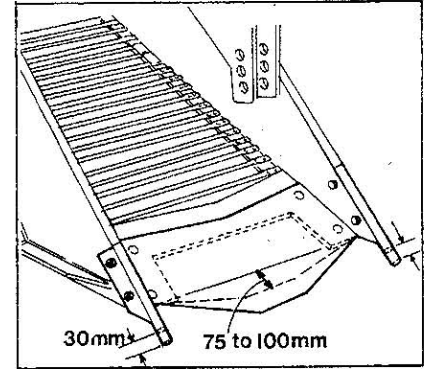
When you need to remove the chain conveyor belt, first pinch together the two master links on the belt.



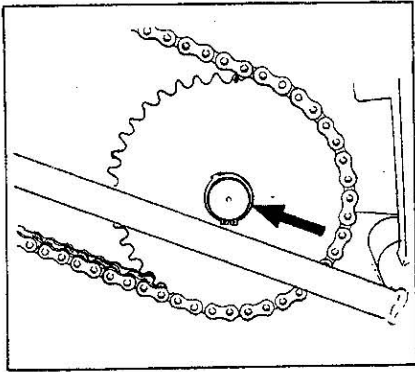
Pass the master link rod through the hole.



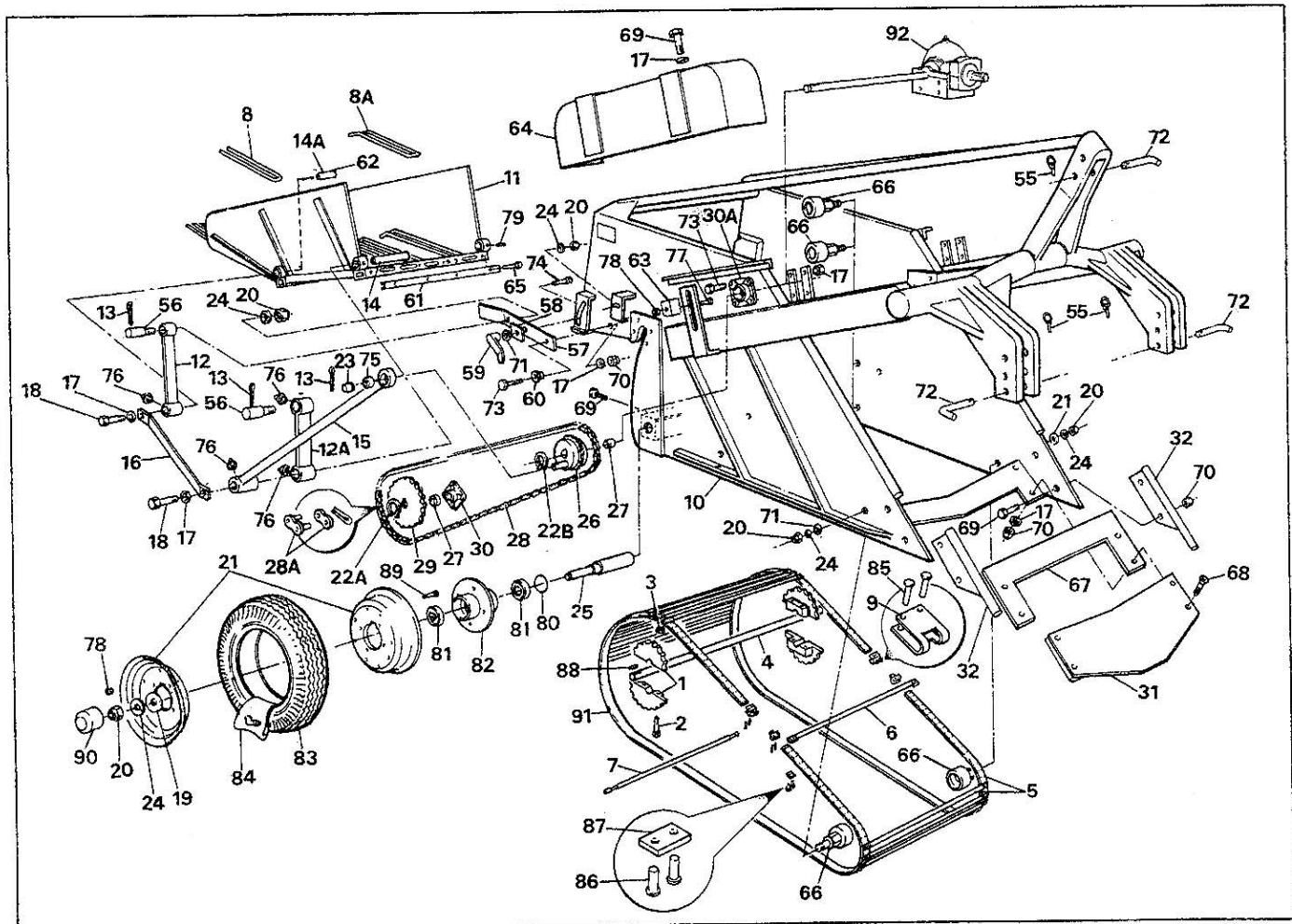
Now the chain conveyor belt can be removed by passing the belt under the shaker grid assembly.



The digger pins should only be allowed to wear 30 mm. They should never be worn more than 10 mm from the frame. The digger blade must only be allowed to wear to 75 to 100 mm in front of the digger blade bracket.



Check the sprocket circlips are located on the shafts.

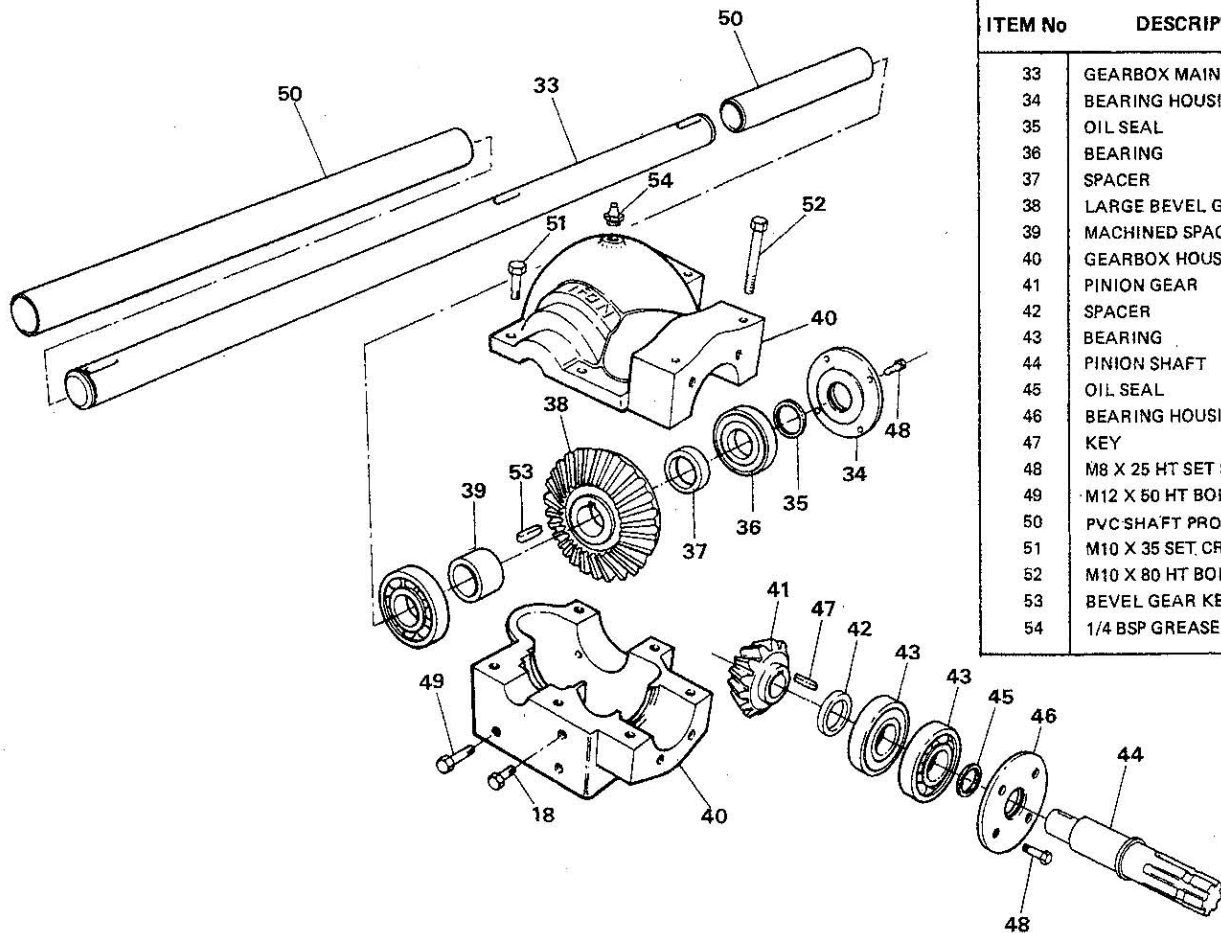


ITEM No	DESCRIPTION	ITEM No	DESCRIPTION	ITEM No	DESCRIPTION
1	CONVEYER BELT SPROCKET	30	FLANGED BEARING UNIT 35	85	5 X 25 ROUND HEAD RIVET
2	M12 X 80 HT BOLT	30A	FLANGED BEARING UNIT 30	86	6 X 19 FLAT HEAD RIVET
3	M12 HT NUT	31	DIGGER BLADE	87	RIVET PLATE
4	MAIN DRIVE SHAFT	32	DIGGER PIN	88	10 X 10 X 40 KEY
5	CONVEYER BELT	55	SPRING COTTER LOCKING PIN	89	M10 x 20 BOLT
6	CONVEYER BELT ROD	56	SHAKER PINS	90	DUST COVER
7	CONVEYER BELT MASTER ROD	57	SHAKER HEIGHT ADJUSTMENT ARM	91	CONVEYER BELT STRIP
8	REAR SHAKER BAR	58	SHAKER HEIGHT ADJUSTMENT PLATE	92	GEARBOX (COMPLETE) (See Page 15)
8A	FRONT SHAKER BAR	59	SHAKER LOCKING HANDLE	93	CENTRE BEARING HOUSING (COMPLETE ASSEMBLY) 2 OFF
9	CONVEYER BELT MASTER LINK SET	60	PIVOT BUSH	94	BEARING 2 OFF
10	MACHINE BODY	61	SHAKER BAR CLAMPING BRACKET	95	SEAL 2 OFF
11	SHAKER COMPLETE	62	SHAKER SHAFT CIRCLIP	96	M12 x 45 BOLT 4 OFF
12A	SHAKER ARM FRONT	63	ROLLER CHAIN TENSION BLOCK	97	M12 NYLOC NUT 4 OFF
12	SHAKER ARM REAR	64	ROLLER CHAIN GUARD		
13	SPLIT PIN	65	M12 X 30 SET SCREW		
14	SHAKER SHAFT FRONT	66	CONVEYER BELT ROLLER (See Page 16)		
14A	SHAKER SHAFT REAR	67	RUBBER STONE DEFLECTOR		
15	MAIN SHAKER SHAFT	68	M12 X 50 CSK CAP SCREWS		
16	SHAKER BRACKET	69	M12 X 35 HT BOLT		
17	12mm SPRING WASHER	70	M12 NYLOC NUT		
18	M12 X 40 HT BOLT	71	16mm HEAVY FLAT WASHER		
19	16mm MACHINED WASHER	72	HITCH PINS		
20	M16 NYLOC NUT	73	M12 x 45 HT BOLT		
21	WHEEL RIMS	74	M16 x 65 HT BOLT		
22 A	35 EXTERNAL CIRCLIP	75	BEARING		
22B	30 EXTERNAL CIRCLIP	76	GREASE NIPPLE		
23	SPACER	77	M10 X 70 BOLT		
24	16mm SPRING WASHER	78	M10 NUT		
25	WHEEL AXEL	79	M10 x 12 GRUB SCREW		
26	ROLLER CHAIN SPROCKET FRONT	80	OIL SEAL		
27	MACHINED DISTANCE PIECE	81	BEARING		
28	ROLLER CHAIN	82	WHEEL HUB		
	ROLLER CHAIN MASTER LINK	83	TYRE		
	ROLLER CHAIN SPROCKE	84	TUBE		

Notes  
Items 93,94,95,96 & 97  
are not illustrated and are  
only applicable to the  
Double Row Machine

Item 93 consists of items  
94 to 97 which can be  
purchased separately





ITEM No	DESCRIPTION
33	GEARBOX MAIN SHAFT
34	BEARING HOUSING COVER
35	OIL SEAL
36	BEARING
37	SPACER
38	LARGE BEVEL GEAR
39	MACHINED SPACER
40	GEARBOX HOUSING
41	PINION GEAR
42	SPACER
43	BEARING
44	PINION SHAFT
45	OIL SEAL
46	BEARING HOUSING COVER
47	KEY
48	M8 X 25 HT SET SCREWS
49	M12 X 50 HT BOLTS
50	PVC SHAFT PROTECTOR
51	M10 X 35 SET. CR
52	M10 X 80 HT BOLTS
53	BEVEL GEAR KEY
54	1/4 BSP GREASE NIPPLE

ITEM No. DESCRIPTION

100	ROLLER SHAFT
101	BELT ROLLER
102	DUST SEAL
103	BEARING
104	CIRCLIP
105	DUST COVER
106	CIRCLIP

