

OPERATORS HANDBOOK
SPARE PARTS LIST AND
INSTRUCTION BOOK FOR

TWOSE

ROTARY TOPPER.

7-0, AND 9-0 INLINE MODELS
-AND 8-0, OFFSET MODEL.

MANUFACTURER :-

Twose of Tiverton Ltd.,
Lowman Green,
Tiverton, Devon, England. EX16 4JT.
Telephone: (0884) 253691, Telex 42666 ('Lowman').

EDITION IDENTIFICATION NUMBER

6902 ROT-TOP-5-90

PRICE = £

THIS MANUAL IS TO BE HANDED TO THE CUSTOMER
BEFORE THE MACHINE IS TO BE USED FOR THE FIRST
TIME.

TWOSE OF TIVERTON LIMITED,
LOWMAN GREEN,
TIVERTON,
DEVON,
EX16 4JT.

TELEPHONE NO. (0884) 253691

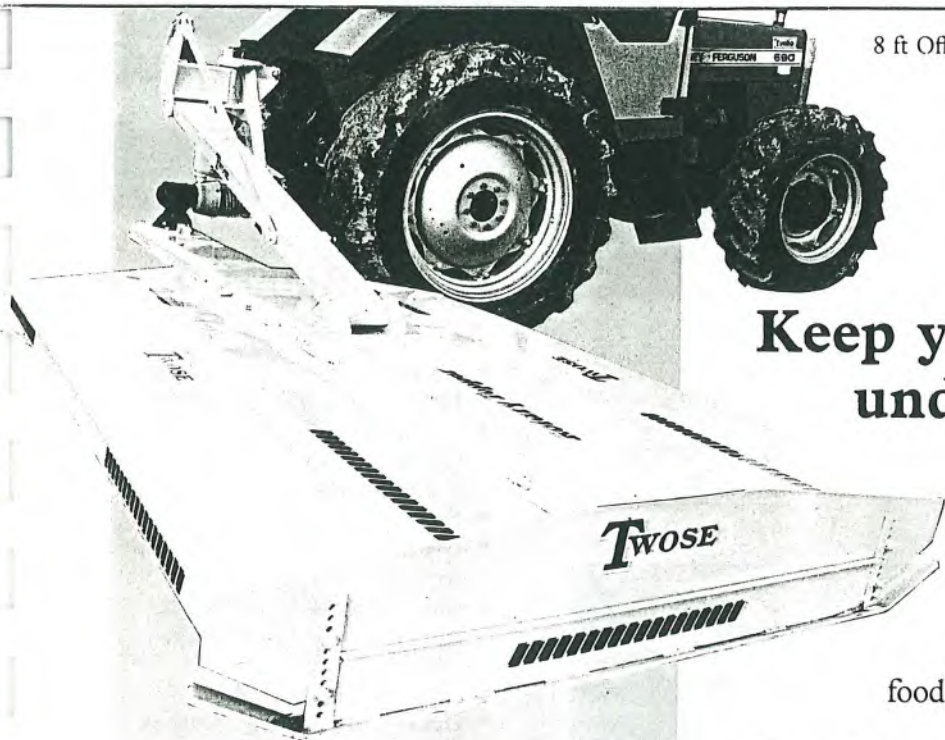
TELEX NO. 42666

All dimensions and capacities mentioned in this book are approximate. In pursuance of the Company's policy of constant development, the right is reserved to depart, without notice, from any detail illustrated or specified in this book, without incurring the obligation to provide such modifications on machines previously delivered.

No responsibility will be accepted by Twose of Tiverton Limited for any injury, damage or loss arising from the improper use or lack of maintenance of any machinery supplied by them or from any failure of the user to comply with all instructions published by Tractor or Loader Manufacturers, particularly with regard to maximum load capacities, tyre pressures and stability, or with instructions and regulations pertaining to Tractor Cabs.

TWOSE

ROTARY TOPPERS



8 ft Offset Rotary Topper

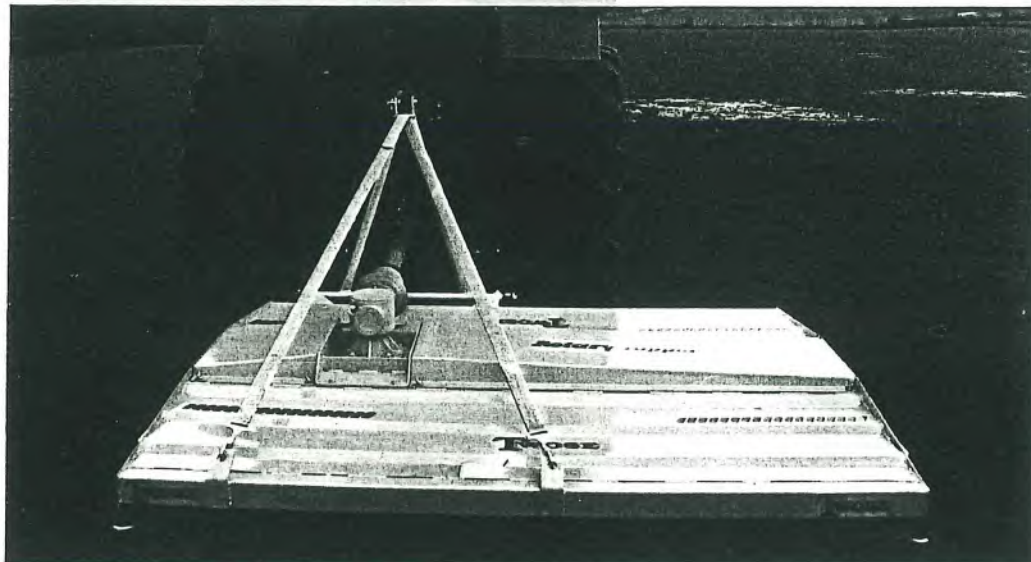
Keep your pastures under perfect control

Regular topping of pastures makes sound economic sense. It encourages the regrowth of lush sweet grass to provide improved grazing with better food values for your livestock.

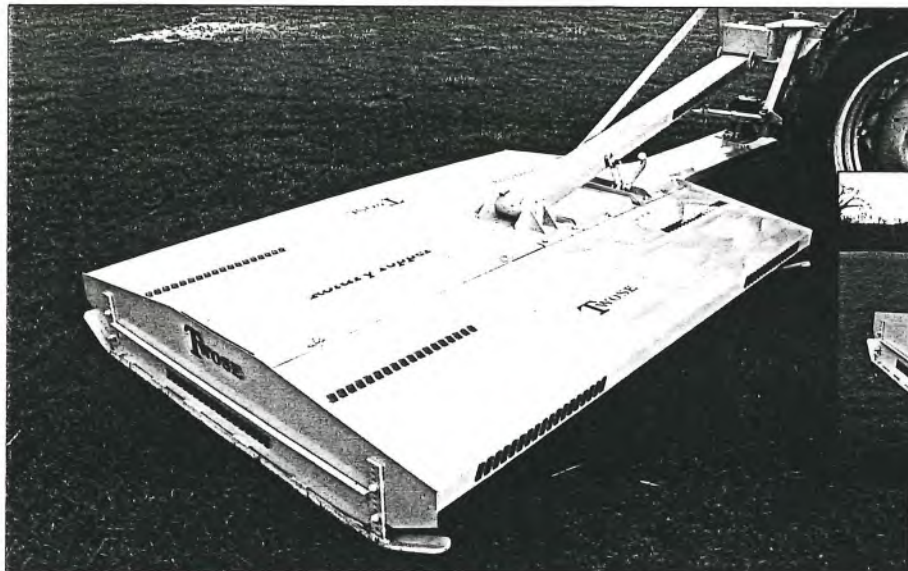
Fully offset . . .

Twose Rotary Toppers offer the best possible maintenance of grassland, with fully offset or in-line models and a choice of working widths. Whatever your topping requirements, whether it's to promote healthy lush pasture or for set-aside, Twose Toppers top the lot, making light work in clearing coarse grass, thistles, nettles, bracken and stubble. They'll also save on the use of chemical spraying to provide healthy 'green' agriculture.

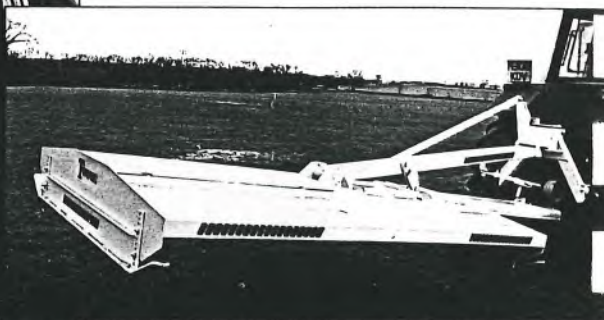
. . . or in-line models



7 ft In-line Rotary Topper



Left - 8 ft Offset Rotary Topper in working position
Below - in transport position

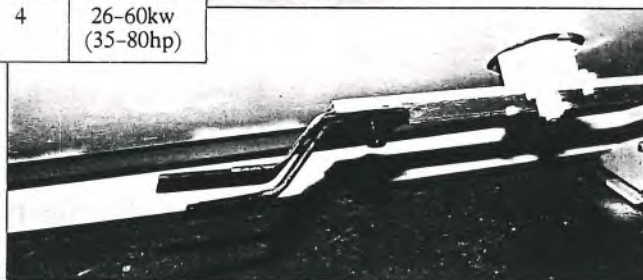


Offset Rotary Topper

- 2.44 m (8 ft) working width
- Three point linkage mounted
- Full offset working position
- Easily changed to transport position
- Safety break-away mechanism
- Swinging blades
- Overlapping blades to prevent striping
- Adjustable skids for varied cutting height from 25mm-150mm (1"-6")
- 540 rpm PTO speed
- Heavy duty oil-fired gearbox
- Robust construction for a long working life

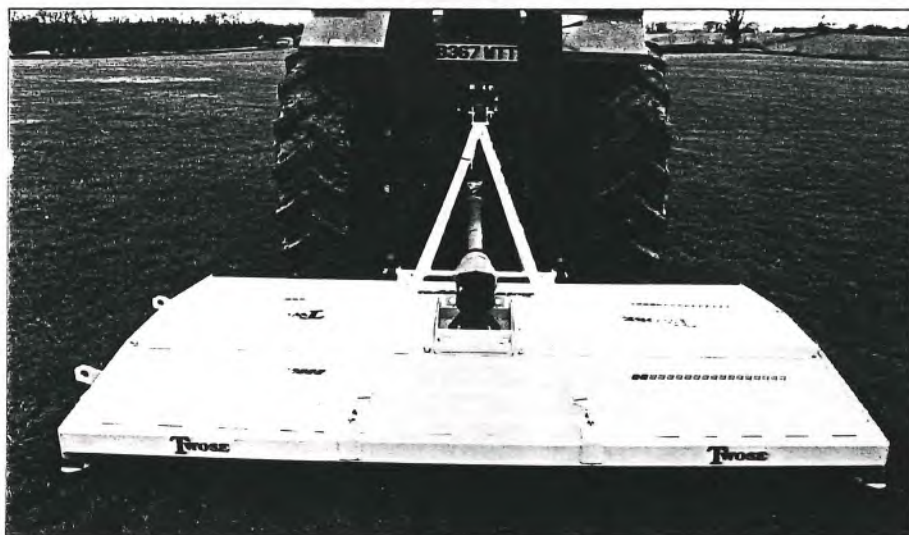
Specification		Overall Weight	No. of Blades	Power Requirement
In-line	2.1m (7ft)	330kgs (728lbs)	4	26-60kw (35-80hp)
	2.72m (9ft)	480kgs (1058lbs)	6	37-60kw (50-80hp)
Offset	2.44m (8ft)	570kgs (1257lbs)	4	26-60kw (35-80hp)

All models have overlapping blades to prevent striping



In-line Rotary Toppers

- Available in 2.1 m (7 ft) and 2.72 m (9 ft) working widths
- Three point linkage mounted
- Heavy duty straps allow machine to float when working
- Swinging blades
- Overlapping blades to prevent striping
- Adjustable skids for varied cutting height from 25mm-150mm (1"-6")
- Heavy duty oil-filled gearbox
- 540 rpm PTO speed
- Robust construction for a long working life
- 2.72 m (9 ft) model fitted with end linkage for easy transport as standard



9 ft In-line Rotary Topper in working position

TWOSE

The policy of Twose is one of continuing development and we reserve the right to change, without notice, prices, weights, measurements and specification of all machines detailed or illustrated in this leaflet, without incurring any obligation to provide modifications on machines previously delivered. Orders are accepted subject to our standard conditions of sale.

TWOSE OF TIVERTON LTD.
LOWMAN GREEN
TIVERTON, DEVON, ENGLAND EX16 4JT
TELEPHONE: (0884) 253691 FAX: (0884) 255189

GENERAL INFORMATION

- NOTE: The provision of the information is a requirement of the Health and Safety at Work Act 1974.
- NOTE: The Handbook has been designed to help the operator use the machine safely and efficiently.
- NOTE: This book must be read thoroughly and completely understood before attempting to operate the machinery
- CAUTION When ordering spares. please state clearly;
- (a) Machine type and model number
 - (b) Part Number of Component
 - (c) Description of Component
 - (d) Quantity of Components
 - (e) Full Address, where spares are to be sent
 - (f) Method of delivery required

CAUTION Always insist on genuine and correct spare parts.

NOTE: SAFETY NOTES AND WARNINGS

The following Symbols and wordings used throughout this book are identified as follows:



- DANGER WARNING (a) This calls attention to instructions which must be followed precisely to avoid injury or death.
- CAUTION (b) This calls attention to instructions which must be followed precisely to avoid damage to the machine, process or its environment.
- NOTE (c) This is used for supplementary information.

NOTE Further copies of this book can be obtained from:-

Two of Tiverton Limited,
Lowman Green,
Tiverton,
Devon,
EX16 4JT.

NOTES:

<u>AMENDMENT</u>	<u>DATE</u>	<u>DETAILS</u>

C O N T E N T S

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38	Main Machine 8ft Offset Model
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40	Intermediate Drive 8ft Offset Model
41	Intermediate Drive 8ft Offset Model
42	Intermediate Drive 8ft Offset Model

HEALTH AND SAFETY

- CAUTION Always dispose of discarded and worn out parts thoughtfully - by disposing of them in an approved and specified legal scrap site, bin or skip.
- CAUTION Worn out and spent waste oil, grease and other obnoxious substances must always be disposed of in suitable and legally approved dumping containers suitable for the waste in question
- CAUTION Never drive machine at a speed that is likely to endanger others.
- CAUTION Never operate machine in an uncaring/reckless manner.
- CAUTION Always be aware of your surroundings.
- CAUTION Never attempt to adjust machine whilst raised on tractor linkage.

GENERAL INSTRUCTIONS

GENERAL

1. Before attaching any machine to a tractor make sure that the machine is standing on firm level ground and is adequately supported where necessary.
2. Before and whilst manouvering a tractor to attach machinery make sure that any other persons in the vicinity are well clear and aware of your intentions. Keep a sharp look out while reversing.
3. Always secure the tractor so that it cannot "move-off" on its own and cause injury or damage.
4. Make sure that the lift arms of the tractor and the top link are properly fitted to the machine using adaptor sleeves where necessary and that retaining pins of the correct type are used on all three point linkage machines. Also ensure that the top link used is the correct type for the tractor, and is suitable for the machinery, also that it is in good condition.
5. If the machine is of the drawbar type check that the hitch on the tractor is in good condition and that the hitch pin used is of the right size and type and is properly secured when fitted.
6. If it becomes necessary to make any adjustments to the machine while raised on the tractor's linkage, trestles or other suitable supports should be positioned to support the machine in case of accidental lowering of the lift arms.
7. Never attempt to "work on", adjust or repair machinery of any kind whilst it is "running" or working. Always "stop" machinery, switch off/stop tractor engine before maintenance commences.
8. In transit always use transport stays or locking devices provided. If, as in the case of some longer machines the unit is transported lengthwise make sure that the front of the tractor is suitably weighted to maintain stability, adding suitable weights to a correctly specified and fitted weight frame.
9. Always use machines in a reasonable manner and do not attempt to use them in work for which they are not intended. Avoid over-loading as this can cause damage to the machine and could be dangerous.
10. When detaching the machine from the tractor ensure that any

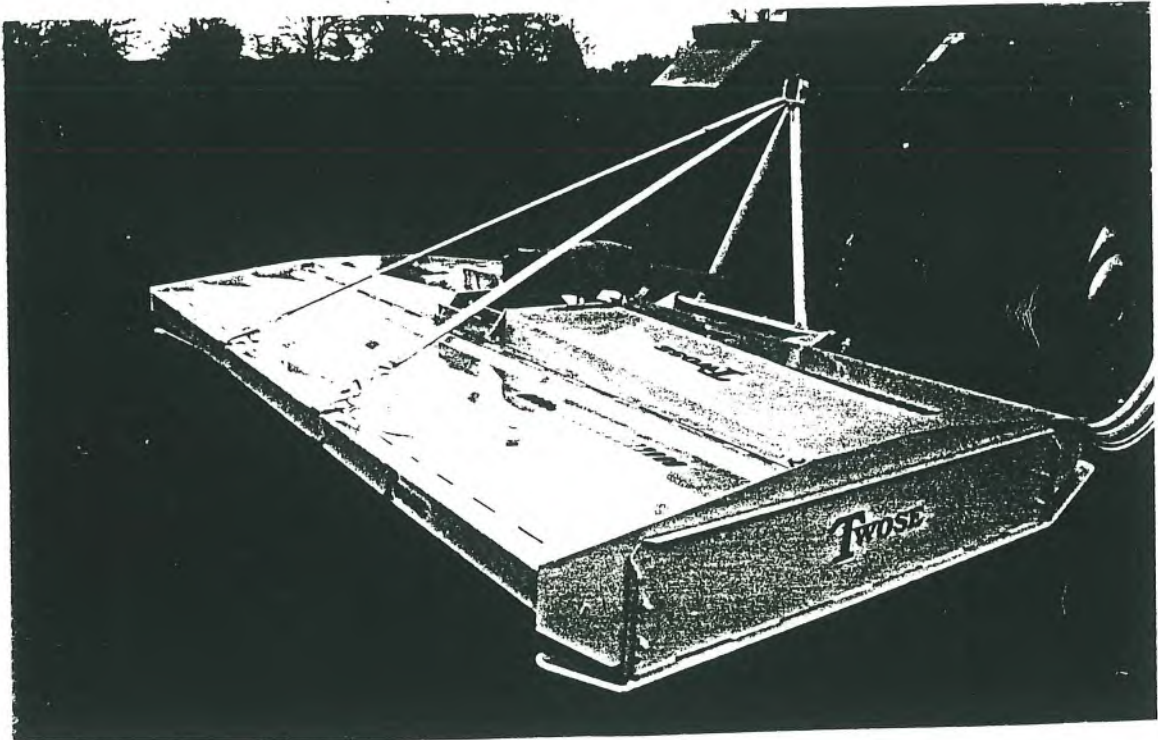
stands or legs are securely positioned and that the machine is parked where it will not be a safety hazard, or cause annoyance to others.

11. Carry out regular maintenance.
12. Ensure regular maintenance procedure is maintained for the life time of the machinery.
13. Health and Safety Rules and Regulations must be adhered to in all Agricultural aspects.

INTRODUCTION

NOTE The Rotary Topper is a robust versatile tractor mounted machine suitable for all types of ground clearance, eg grass, thistle, nettles, bracken, rushes, stubble, etc. Three widths are available (2.13m (7ft) 2.43m (8ft) and 2.72m (9ft), all are P.T.O. powered and operate at 540 rpm (max tractor P.T.O. Speed).

CAUTION Overlapping rotary, flail swingback blades are fitted to all models to prevent 'stripping' during use. Shear bolts are fitted in blade carriers to protect the carriers and blades against major damage caused by stones etc. The cutting height is adjustable to suit various applications. A 2.43m (8ft) Offset Model is also available.



2.72m (9ft) Illustrated



DANGER
WARNING

For tractors fitted with hydraulic clutch, an over-run coupling must be fitted to the P.T.O. shaft. The manufacturer cannot accept responsibility for any damage or injury caused by failure to apply this precaution.

ALL MODELS



DANGER
WARNING

Do not operate along highways and use extra caution on rough terrain or where rocks and debris are present.



DANGER
WARNING

Operate at a safe distance from bystanders. Do not allow any 'riders' on the Topper.



DANGER
WARNING

Stop P.T.O. before dismounting tractor and always keep P.T.O. and Topper guards secure and in position.



DANGER
WARNING

Maximum tractor P.T.O. operating speed 540 rpm.



DANGER
WARNING

Do not work underneath a machine unless it is supported by substantial stands.



DANGER
WARNING

When fitting P.T.O. shaft over-run clutch, make sure it is on the Topper side.

8FT OFFSET MODEL



DANGER
WARNING

When the Offset Topper is in transport position it may be necessary to fit front weights to certain tractors to improve stability.



DANGER
WARNING

When moving Topper for working or transport, make sure it is on level ground.



DANGER
WARNING

Always remain 'behind' machine when releasing or positioning pins etc in preparation for folding machine from work position to transport position.



DANGER
WARNING

UNDER NO CIRCUMSTANCES must the operator be in a position to be trapped between Topper and tractor.

TOPPER SPECIFICATION

2.1M (7FT) TOPPER

HEIGHT (INCL. HEADSTOCK)	1.15M (1FT 7")
WIDTH OF CUT	2.1M (7FT)
DEPTH	1.7M (5FT 6")
WEIGHT	330 KGS. (728 LBS)
HORSE POWER REQUIRED (MIN-MAX)	35-80
P.T.O. INPUT SPEED (RPM)	540
DRIVES - 1 PRIMARY DRIVE	1 SECONDARY DRIVE

2.72M (9FT) TOPPER

HEIGHT (INCL. HEADSTOCK)	1.15M (1FT 7")
WIDTH OF CUT	2.72m (9FT)
DEPTH	1.7M (5FT 6")
WEIGHT	480 KGS. (1058 LBS)
HORSE POWER REQUIRED (MIN-MAX)	40-80
P.T.O. INPUT SPEED (RPM)	540
DRIVE - 1 PRIMARY	2 SECONDARY

2.45M (8FT) TOPPER

HEIGHT (INCL. HEADSTOCK)	1.1M (3FT 8")
WIDHT OF CUT	2.4M (8FT)
DEPTH	1.85M (6FT)
WEIGHT	570 KGS. (1257 LBS)
HORSE POWER REQUIRED (MIN-MAX)	50-80
P.T.O. INPUT SPEED (RPM)	540
DRIVES - 1 PRIMARY	1 INTERMEDIATE 1 SECONDARY

NOTE:- DIMENSIONS APPROX ONLY

OPERATING INSTRUCTIONS (STANDARD MODELS)

CAUTION: Pre-set height of lift on the tractor three point linkage to ensure that the chain and top link attachment of Rotary Topper does not foul tractor cab.

1. P.T.O. SHAFT LENGTH

- (a) The P.T.O. Shaft length may be altered to suit individual tractor models. During operation the P.T.O. shaft should have $1/3$ engagement as shown in Fig. 3. Incorrect and dangerous engagements are shown in Figs. 1 and 2. These should not be used.
- (b) The P.T.O. Shaft is equipped with an over-run clutch and a shear bolt facility, both the clutch and shear bolts are on the same end of shaft and must be fitted at the Topper end of shaft, NOT at tractor end.

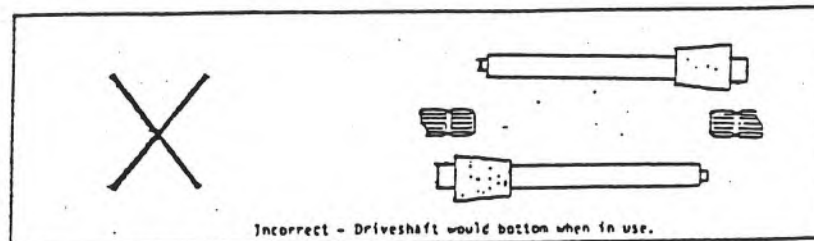


Fig. 1 Incorrect Engagement

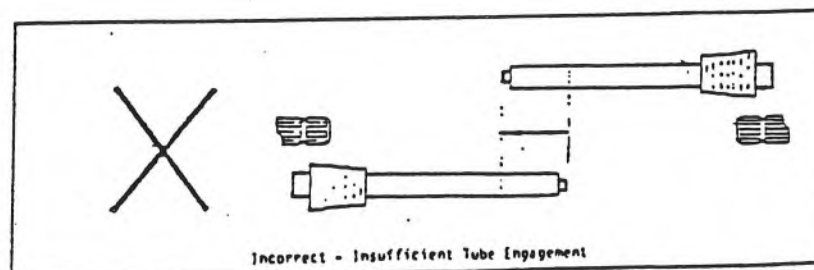


Fig. 2 Incorrect Engagement

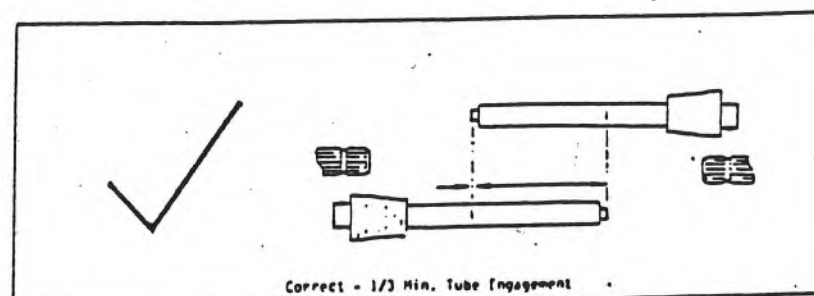


Fig. 3 Correct Engagement



DANGER
WARNING

- (b) When lifting Rotary Topper, ensure that P.T.O. shaft does not foul, see Fig. 4. To prevent this, set the hydraulic stop to a safe height or shorten top link. Manufacturers cannot be held responsible for damage to the P.T.O. caused by failure to apply these precautions.

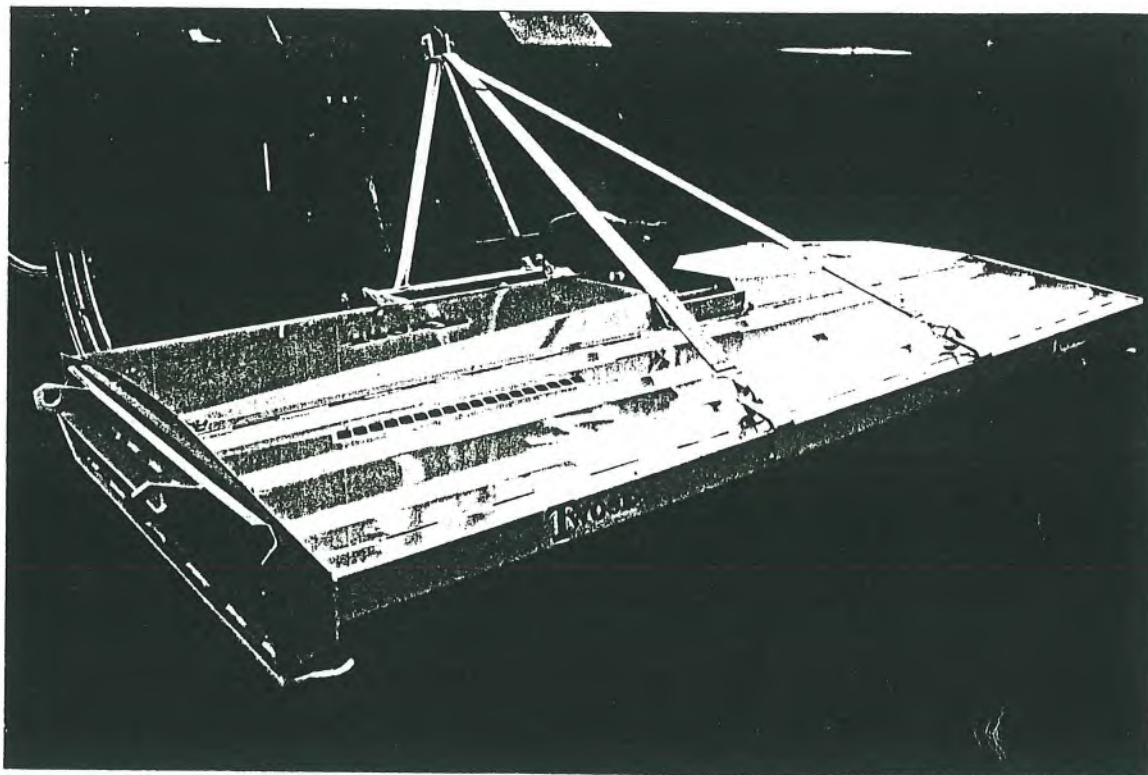


Fig. 4 P.T.O. Shaft Setting Height

2. ATTACHING TO TRACTOR (STANDARD UNIT)

- (a) Fit Rotary Topper to the tractor's hydraulic three point linkage in the normal way. If possible use righthand and lefthand stay bars or check chains. While in operating position, adjust top link until rear support straps are slack as illustrated in Fig. 5.

IMPORTANT NOTE:- P.T.O. Shaft to have over-run clutch at Topper end.

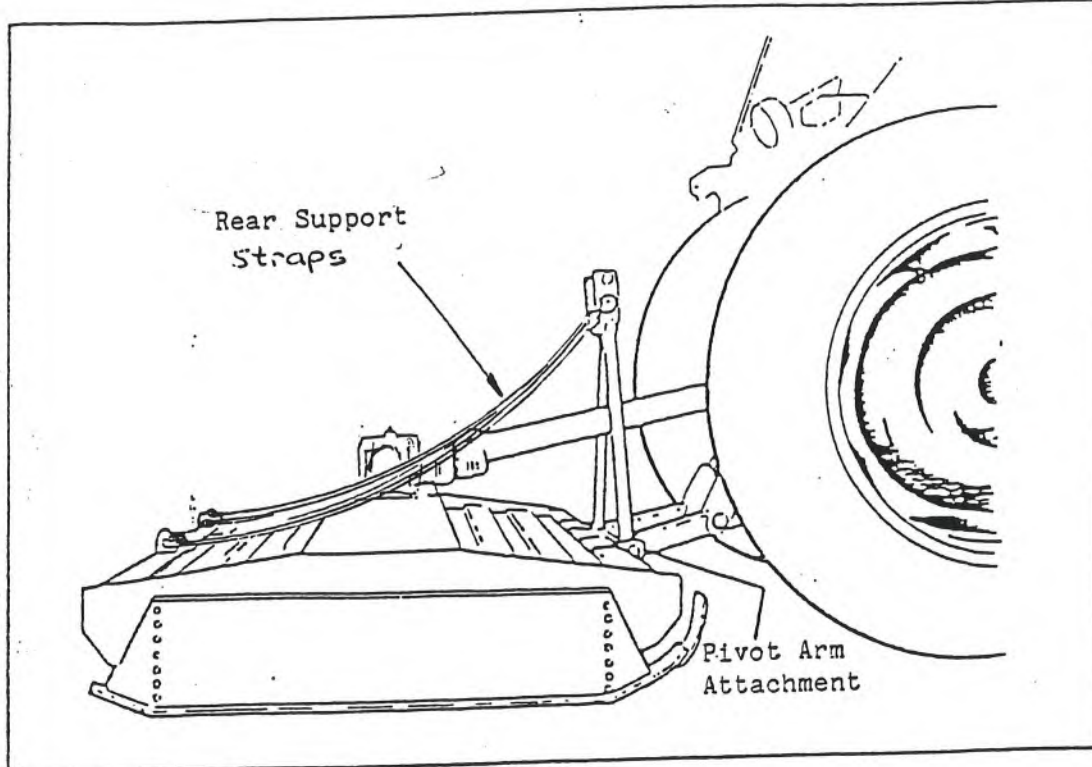


FIG. 5 Support Chains

CAUTION

- (b) Cutting height should be set as required by adjusting the side skids. These are held in place by four bolts on each side to the Rotary Topper main frame assembly. After adjusting, ensure that all bolts are replaced and secured.

Ensure the skids are not set too low as stone etc. could damage blades. See Fig. 6.

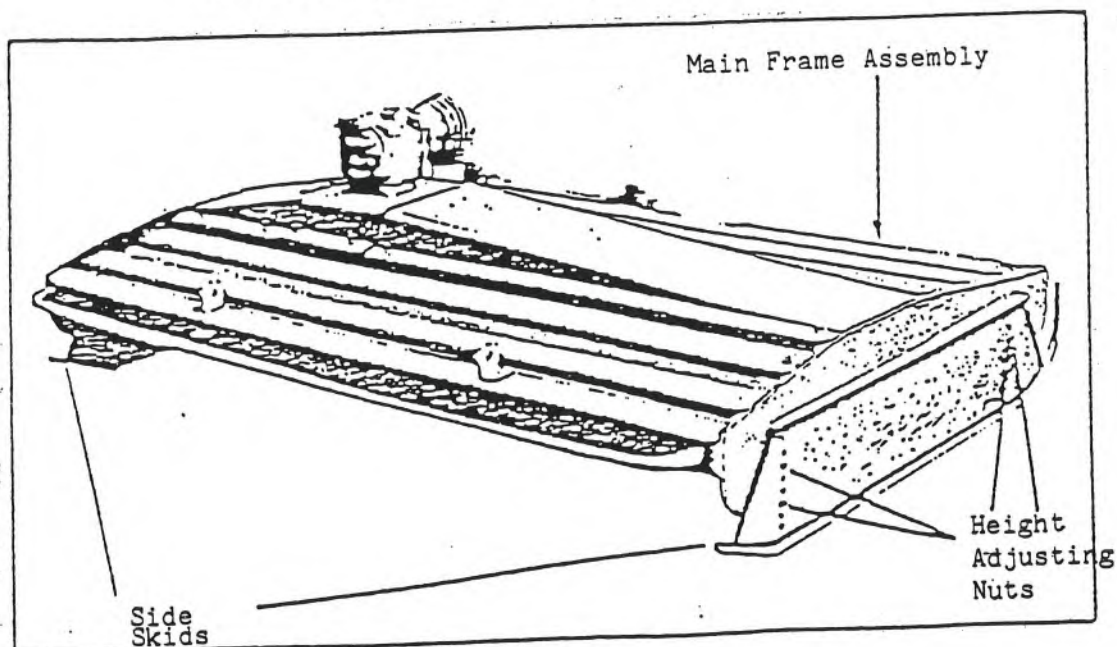


FIG. 6 Adjustable Side Skids

CAUTION NOTE:

When replacing skid adjustment bolts, ensure threaded portion is on the outside. If bolts are placed with threaded portion facing the blades damage to the thread may result and hinder future adjustment and interrupt crop flow.

3. ATTACHING TO TRACTOR (OFFSET UNIT) AND SETTING UP



DANGER
WARNING



DANGER
WARNING



DANGER
WARNING



DANGER
WARNING



DANGER
WARNING



DANGER
WARNING



DANGER

1. Always set up with Offset Topper and Tractor on firm level ground or facing slightly uphill.
2. Make sure to select position control in tractor cab. (NO LINK SENSING)
3. Fully lower hydraulic arms and adjust the height of the arm balls by means of droparm to be roughly in line with link pins on the Topper.
4. Offer Tractor to Topper.
5. Fit the Topper to rear three point linkage ensuring all pins in place.
6. Adjust check chains to prevent side swing.
7. Lift Topper sufficiently to clear the ground, release transport stay catch on tractor three point linkage and transport pins, into working position, ensuring the spring loaded breakback device is located properly into the headstock jaws on 'A' Frame and securing pin if fitted.

SAFETY NOTE:

When releasing transport pin remain behind machine when moving to the working position. Under no circumstances must the operator be in a position where he/she will be trapped between Topper and Tractor.



DANGER
WARNING

8. Lower the Topper until it is on the ground and adjust top link so Topper is level, ie no load on top link. Then stop tractor engine (ensure Topper is on firm level ground)



DANGER
WARNING

9. When cutting stubble, soil build up in front of the skids may be overcome by tilting the machine backwards, ie lengthening the top link.



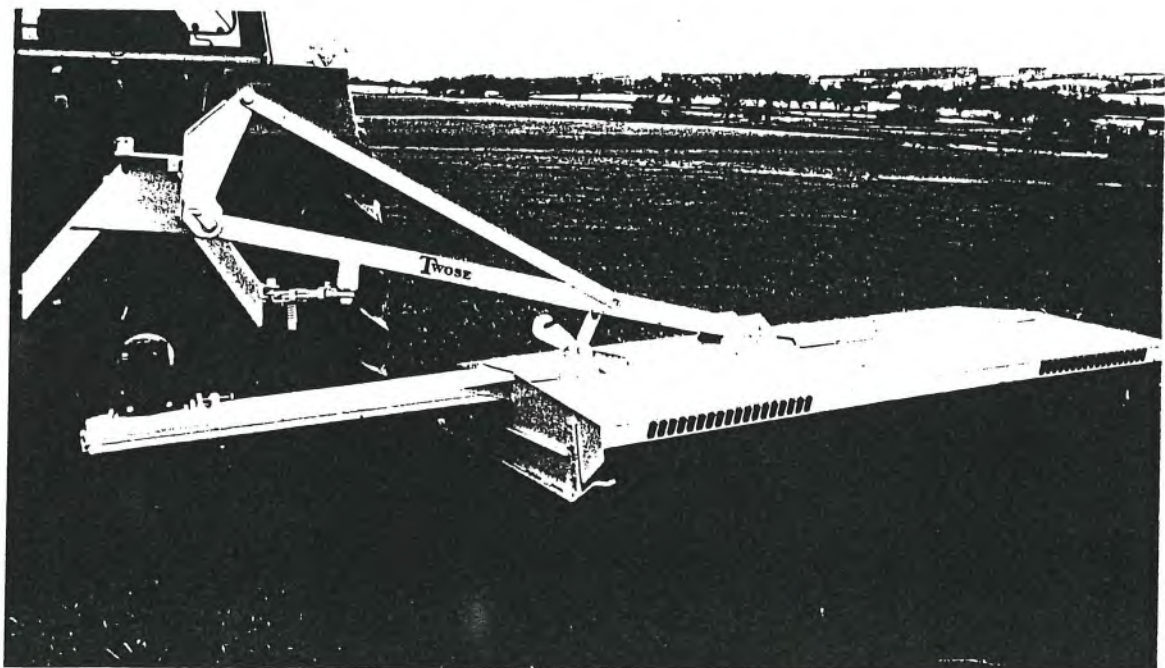
DANGER
WARNING

10. Adjust the height of the hydraulics to bring the short floatation arm bolt to the centre of its slot. Tighten locking nut sufficiently so machine can just float. Adjust the tractor leveling box to bring long floatation arm pin to the centre of its slot.



DANGER
WARNING

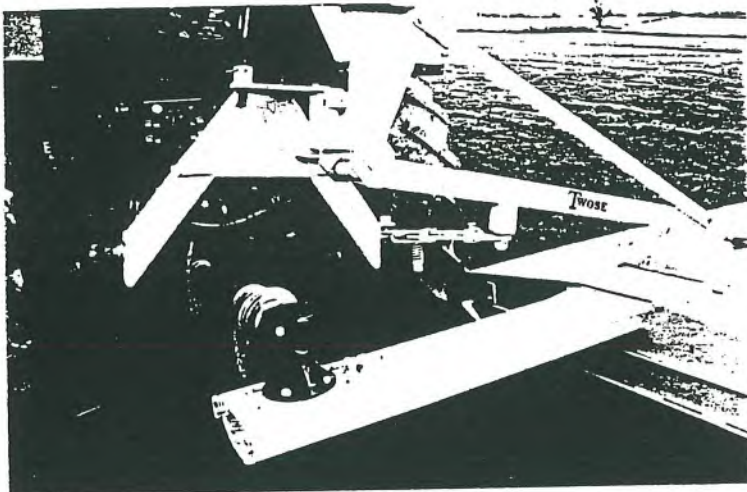
11. Fit the P.T.O. shaft in accordance with any indication showing tractor or machine and adjust length (see Page 2). Check that the guards are in good order and they are secured with the chains provided. NOTE: Overrun coupling on Topper side. The cutting height can now be set by adjustment of the skids (see section 5 page 6.) Set the machine as high as possible to reduce wear and possible damage to the machine. It may be necessary to re-adjust the floatation link settings after the cutting height is set.



BREAK BACK DEVICE

In the event of the machine contacting a solid object, a sliding breakaway is provided to allow the machine to 'break back'.

WORKING TO TRANSPORT POSITION



1. Ensure tractor is standing on level ground or facing slightly downhill.
2. Stop tractor engine and remove P.T.O. shaft from both tractor and machine.
3. Raise tractor hydraulic until machine is just clear of the ground.
4. Remove transport location pin from main beam end of breakback assembly and by holding the rear offside corner - pull machine into the transport position. Relocate pin into hole at 'A' frame end of slider tube. Note pin in transport position locates upwards and lock into position using pin and ring assembly



DANGER
WARNING

SAFETY NOTE: Under no circumstances should a person stand between tractor and topper.

NOTE: These steps can be taken as a general guide. Variations maybe necessary to suit difference tractors.

4 BELT TENSIONERS

CAUTION

Drive from the centre pulley or main drive pulley to the outside rotary blades pulley can be tightened by removing the top cover/s, slackening the idler pulley adjuster bolt, then retighten to selected position.

CAUTION

NOTE: The belts should not be slack enough to touch the trough 63.5mm (2.1/2") and the angle section belt guide situated over the idler pulley MUST be free of belt by minimum of 2mm.

CAUTION Belt drive from the P.T.O. shaft/gearbox on the offset model can be tightened by moving the gearbox and its pulley forward. The gearbox retaining screws and adjuster are located on top of the gearbox snout.

CAUTION To remove the belts, release tension on main pulleys and if necessary take out the idler pulley and belt retainer. Access is obtained by first removing the top covers.



WARNING BEFORE ADJUST BELTS DISCONNECT P.T.O.

5. MOWING HINTS

- | | | | |
|---------|-----|------------------------|---|
| CAUTION | (a) | ROUGH STUBBLE | : Sharpen blades, cut lower if possible. |
| CAUTION | (b) | VERY UNDULATING GROUND | : Lengthen top link giving support straps more slack
Also increase cutting height. (See Fig. 6). |
| CAUTION | (c) | RUSHES | : For 'Old Man' rushes etc, use high rotary cutter speed or 540 rpm and 3-6 mph tractor speed (Forward). |
| CAUTION | (d) | TOPPING | : Forward speed up to 15 mph max. depending on field conditions. Low P.T.O. speed, 300-400 rpm. Adjust skid height to suit application. |

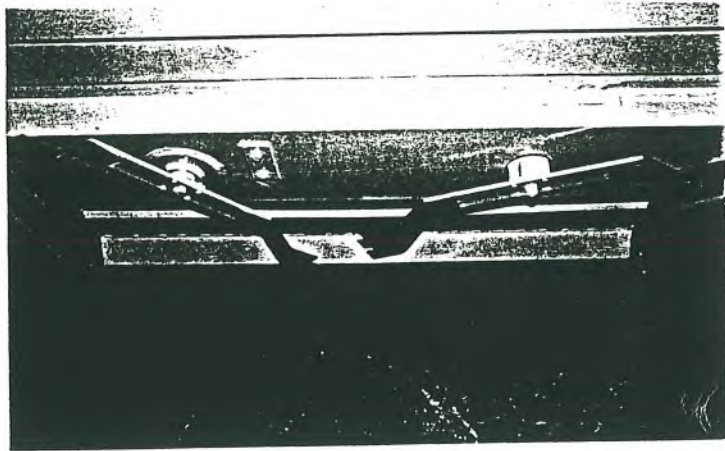
MAINTENANCE

1. BLADES, SHEAR BOLTS AND CENTRE SHEAR STUDS

- (a) Check blades for sharpness daily.
Renew damaged blades and damaged or broken shear bolts and centre bolt.

- (b) To move Carrier:-

Remove P.T.O. Drive Shaft from Tractor, wedge the faulty blade carrier securely with a piece of timber and undo the main centre nut and the 4 - M8 Shear Bolts. (Ref. Fig. 9).



- (c) Bolts:-

To renew Blades and Bolts, loosen the blade retaining bolt/nut remove blade and spacer, re-assemble new blade and spacer. Tighten blade centre bolts and blade.

Check tightness of blade bolts after first and second hours of use then every 40 hours.

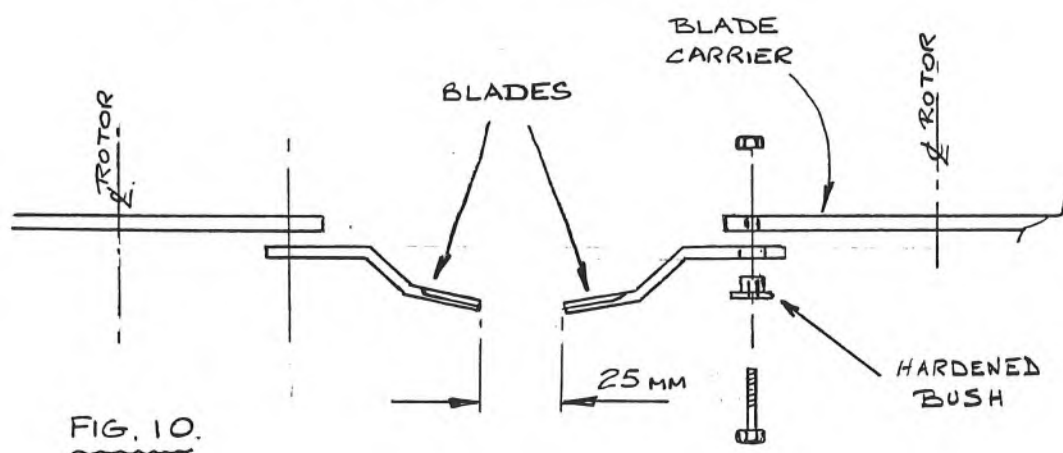
(E) Fitting New Blades

CAUTION (i) Locate new blade to appropriate hardened steel pivot bush and position onto blade carrier, - secure with nut and bolt.

CAUTION (ii) Rotate the new blade by hand and if it makes contact with another blade, remove excess from the new blade using a grindstone until blades rotate without touching. See Fig. 10.

NOTE Space between blade ends should be 25mm.

NOTE (iii) Refit the P.T.O. shaft to tractor and start Rotary Topper under load, ie in long grass. This will assist self-tightening of the new blade.



NOTE After assembly of new blades check all nuts and bolts for tightness after first and second hours of use, then at intervals of 40 hours.

NOTE Always use correct size spanners for appropriate nuts etc.

2. ROUTINE MAINTENANCE AND LAYING-UP

DAILY

CAUTION Check level of oil in the gearbox (also on delivery)
Use EP90 Oil.

CAUTION Check the V Belt for tightness (see section 4 and 6).

DANGER
WARNING Check P.T.O. shaft guard nuts and secure.



NOTE: All bearing housings are fitted with double seal bearings (top and bottom) and are non-greasable. The centre being packed with grease on initial build at factory, purely to prevent centre shaft rusting.

CAUTION Check blades for sharpness. Sharpen with a grindstone if necessary.

CAUTION P.T.O. shaft joints, over-run clutch, tubes and guard should be greased every 40 hours.

CAUTION Oil all pivot and support pins every 10 hours.

WEEKLY

CAUTION Check all nuts and bolts for tightness, ensure blades are kept in a sharpened condition and are free to rotate without fouling.

CAUTION Check V Belts for wear.

CAUTION Grease front linkage pivot on the floatation mechanism on the Offset Topper.

LAYING UP

NOTE Clean the machine and note any damage or repairs needed.

NOTE Remove tension from drive belts.

NOTE Fully lubricate the machine.

NOTE Store the machine in dry conditions under cover.

PARTS LIST.

When ordering spare parts, please specify:-

Rotary Topper type and serial number of machine.

Part number, description and quantity of spares required.

WARRANTY AND SPARE PARTS

All enquiries regarding these machines and orders for spare parts must be addressed to:-

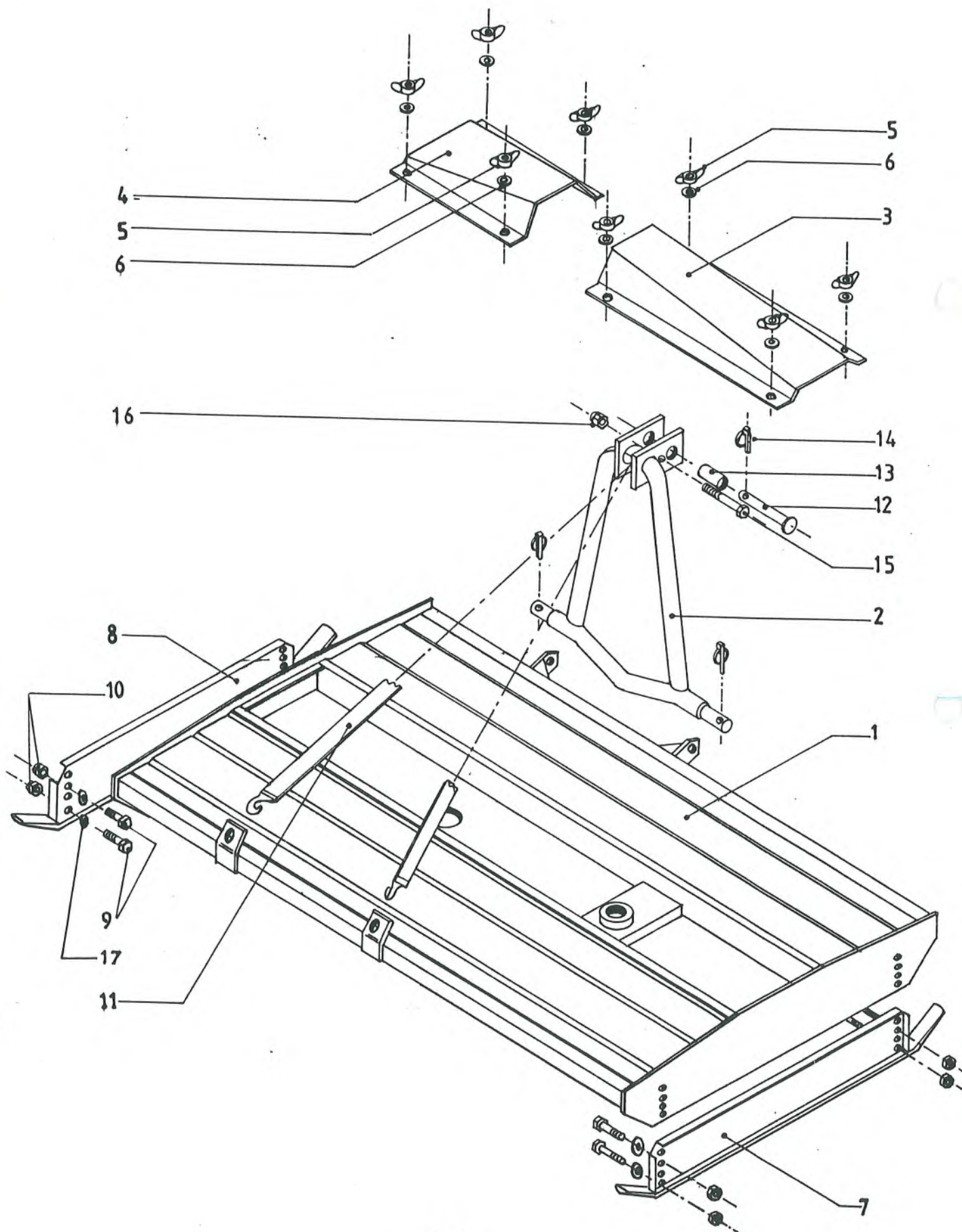
TWOSE OF TIVERTON LIMITED.
LOWMAN GREEN,
TIVERTON.
DEVON.
EX16 4JT.

TELEPHONE (0884) 253691

TELEX 42666

MAIN FRAME ASSEMBLY FOR 2.13m (7ft) MODEL

<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	1720236	Body Assembly	1
2	1720204	Headstock Assembly	1
3	1720037	Cover - Long	1
4	1720036	Cover - Short	1
5	3632	Wing Nut M10	8
6	3219	Flat Washer M10	8
7	1720203	Skid L/H	1
8	1720202	Skid R/H	1
9	2748	Bolt M12 x 40 (8.8)	8
10	3082	Stiffnut M12	8
11	7033	Webbing Strap c/w Hooks	1
12	1657	Top Link Pin	1
13	190050	Conversion Bush (Cat 2)	1
14	0832	7/16" Linch Pin and Ring	3
15	3856	Bolt M8 x 100 (8.8)	1
16	3182	M8 Stiffnut (Nyloc)	1
17	3192	M12 Flat Washer	8

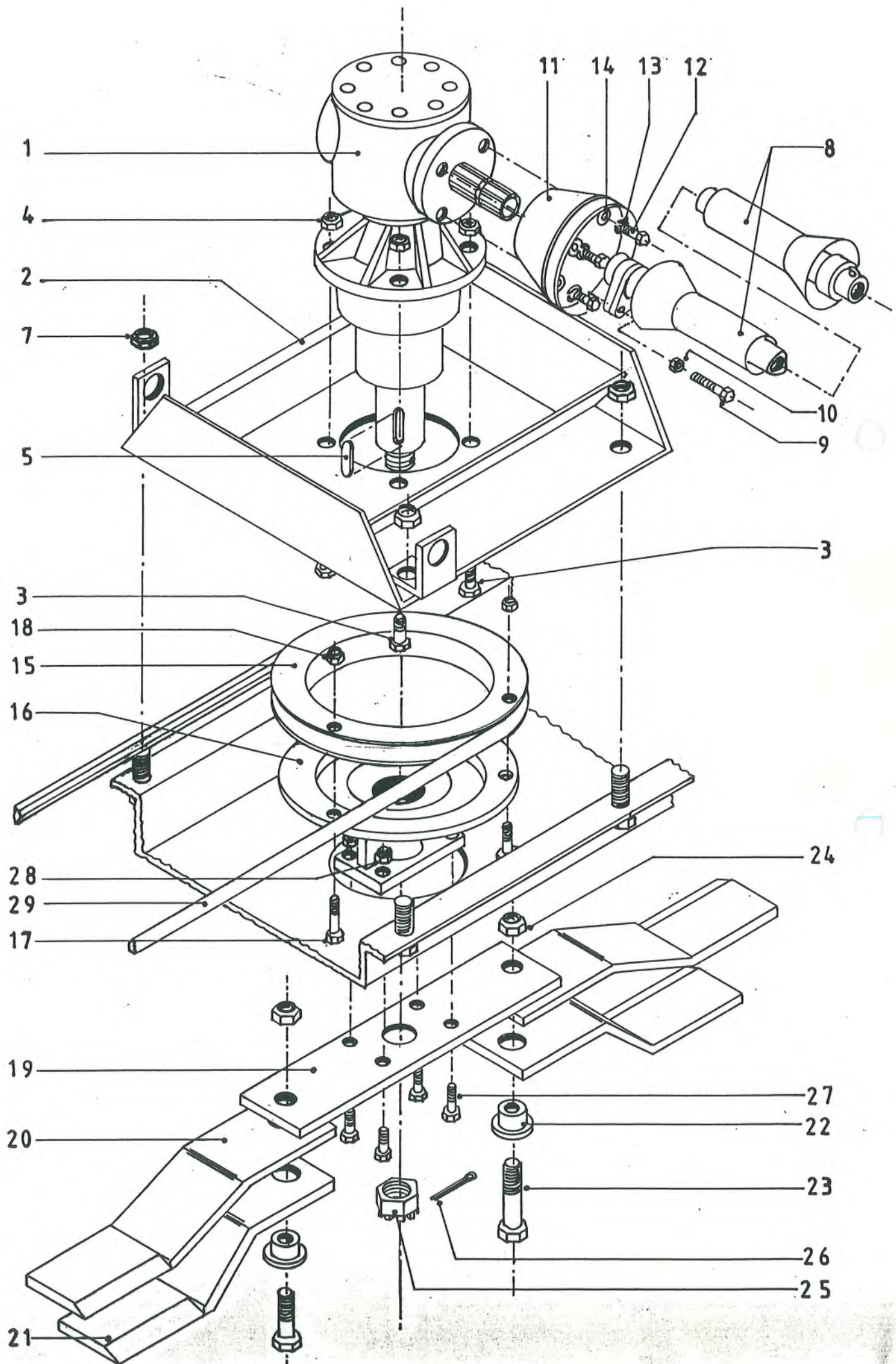


PRIMARY DRIVE

PRIMARY DRIVE FOR 2.13m (7ft) MODEL

<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	7034	Gearbox	1
2	1720232	Gearbox Platform	1
3	2929	Bolt M16 x 45 (8.8)	4
4	3747	Stiffnut M16	4
5	7062	Key 12 x 8 x 50 Long (Rnd End)	1
6			
7	3082	Stiffnut M12	4
8	7063	PTO Shaft	1
9	3183	Shear Bolt M8 x 45 (8.8)	1
10	2719	Stiffnut M8	1
11	6385	PTO Guard	1
12	4923	Setscrew M8 x 12	4
13	3001	Spring Washer M8	4
14	3111	Plain Washer M8	4
*15	1720213	Pulley *	2
*16	1720214	Drive Hub *	1
17	3548	Bolt M8 x 50	3
18	3182	Stiffnut M8	3
19	1720216	Blade Carrier (7ft)	1
20	1720219	Overlapping Blade	2
21	1720218	Standard Blade	2
22	1720230	Spacer (Long)	2
23	2878	Bolt M16 x 55 (8.8)	2
24	3747	Stiffnut M16 (Nyloc)	2
25	7061	Slotted Nut M30 (Fine)	1
26	7064	Split Pin Ø 5.5 x 80 Long	1
27	6393	Bolt M8 x 35 (8.8)	4
28	3182	Stiffnut M8	4
29	7043	Drive Belt C112	1

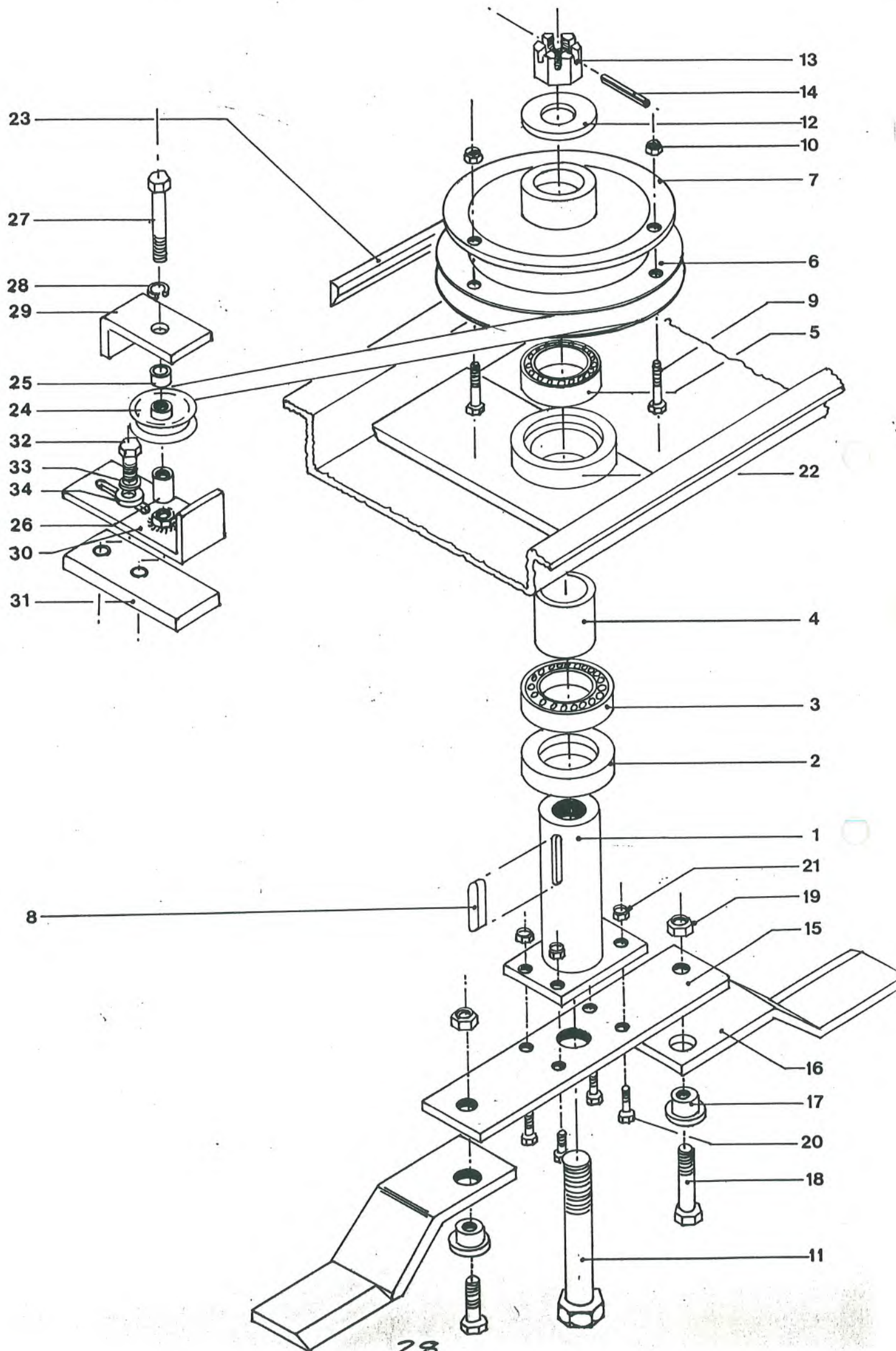
SEE PAGE 31



SECONDARY DRIVESECONDARY DRIVE FOR 2.13m (7ft) MODEL

<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	1720224	Rotor Shaft	1
2	1720223	Spacer Ring	1
3	7010	Bearing	1
4	1720222	Bearing Spacer	1
5	7009	Bearing	1
6	1720213	Pulley Ring } use 172.290.	1
7	1720217	Drive Hub	1
8	7031	Key 12 x 8 x 40 Long	1
9	3183	Bolt M8 x 45 (8.8)	3
10	3182	Stiffnut M8	3
11	7036	M20 x 220 Bolt (8.8)	1
13	1720221	Washer Special	1
13	3203	Slotted Nut M20	1
14	6351	Tension Pin Ø 4.0 x 30	1
15	1720216	Blade Carrier (7ft)	1
16	1720218	Standard Blade	2
17	1720229	Spacer (Short)	2
18	2704	Bolt M16 x 50 (8.8)	2
19	3747	Stiffnut (Nyloc) M16	2
20	6393	M8 x 35 Bolt (8.8)	4
21	3182	M8 Stiffnut	4
22*	1720201.9	Bearing Hub	1
23	7043	Drive Belt C112	1
24	1301	Idler Pulley	1
25	1720208	Spacer (Short)	1
26	1720207	Spacer (Long)	1
27	2864	Bolt M16 x 100	1
28	2730	Spring Washer M16	1
29	1720231	Belt Retaining Bracket	1
30	1720153	Idler Pulley Mounting Bracket	1
31	1720209	Clamp Plate	1
32	2901	Bolt M16 x 35 (8.8)	2
33	2730	Spring Washer M16	2
34	2867	Flat Washer M16	2

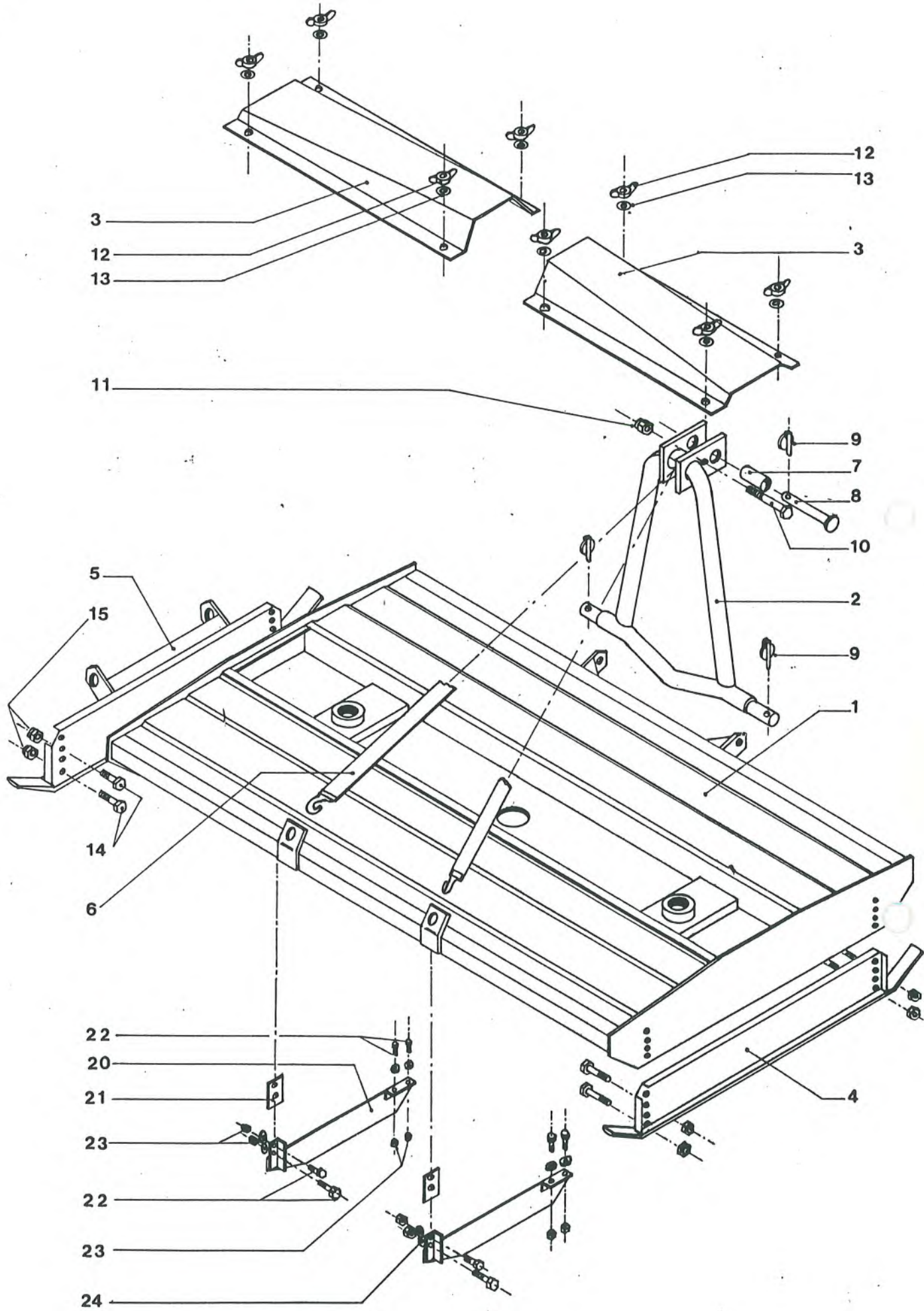
NOTE * Bearing Hub. This item is welded into the Main Frame Assembly and can only be replaced during a major overhaul/reconstruction of the Topper. It is not normally considered as a spare item.



MAIN FRAME ASSEMBLY FOR 2.74m (9ft) MODEL

<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	1720201	Body Assembly	1
2	1720204	Headstock Assembly	1
3	1720172	Cover	2
4	1720202	Skid Assembly R/H	1
5	1720220	Skid Assembly L/H	1
6	7033	Webbing Strap c/w Hooks	1
7	190050	Top Link Sleeve (Cat 2)	1
8	1657	Top Link Pin	1
9	0832	7/16" Linch Pin	3
10	3856	Bolt M8 x 100 (8.8)	1
11	3182	Stiffnut M8 Nyloc	1
12	3632	Wing Nut M10	8
13	3219	Flat Washer M10	8
14	2748	Bolt M12 x 40 (8.8)	8
15	3082	Stiffnut M12	8
16	3192	M12 Flat Washer	8
17			
18			
19			
20*	1720234	Baffle Plate Assembly	2
21*	1720241	Securing Bracket	2
22*	2987	Bolt M8 x 25 (8.8)	8
23*	3182	Stiffnut M8	8
24*	3111	M8 Flat Washer	8

NOTE * Baffle Plate Kit optional extra.

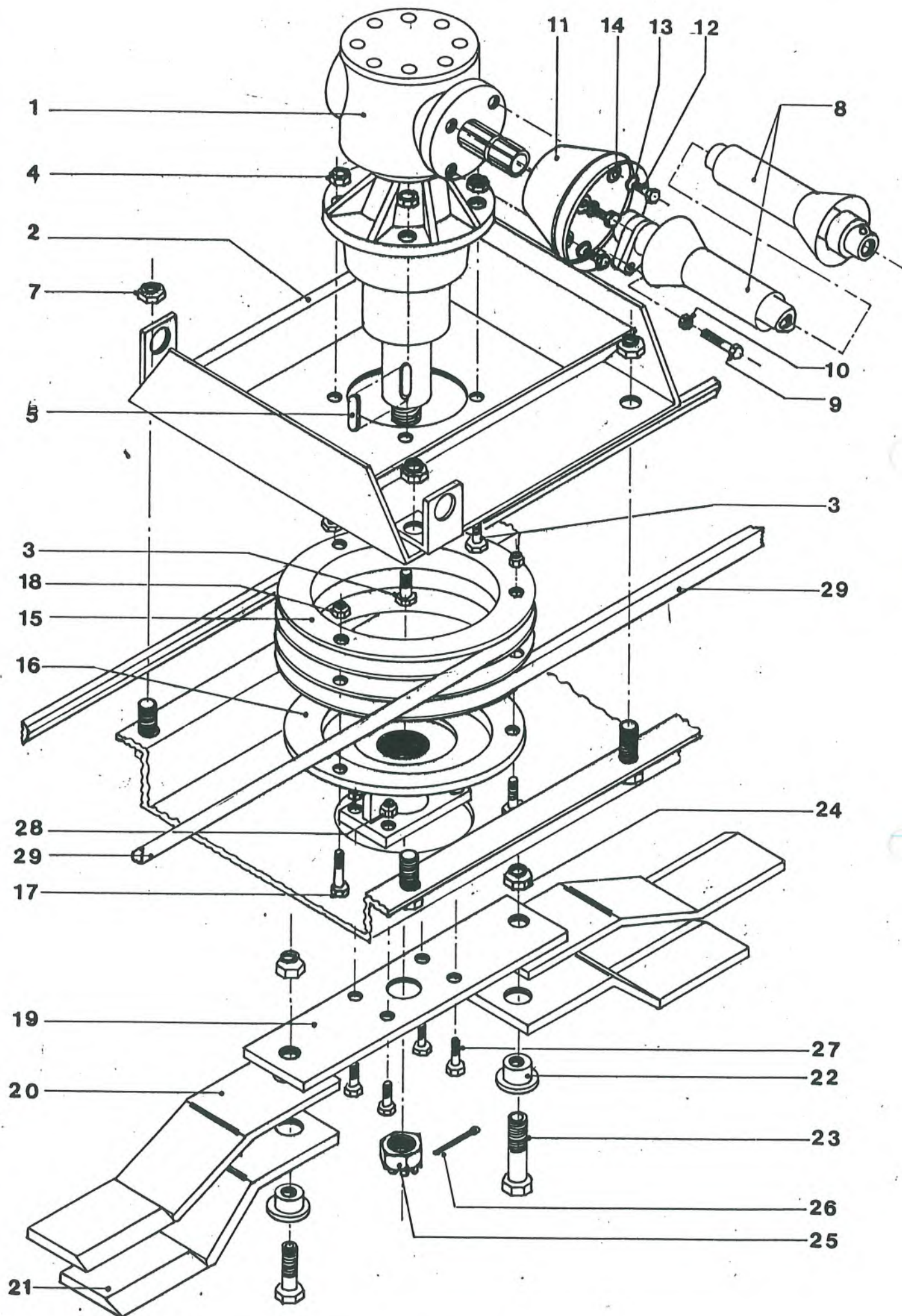


PRIMARY DRIVE

PRIMARY DRIVE FOR 2.74m (9ft) MODEL

<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	7034	Gearbox	1
2	1720232	Gearbox Platform	1
3	2929	Bolt M16 x 45 (8.8)	4
4	3747	Stiffnut M16	4
5	7062	Key 12 x 8 x 50 Long (Round End)	1
6			
7	3082	Stiffnut M12	4
8	7063	PTO Shaft	1
9	3183	Shear Bolt M8 x 45 (8.8)	1
10	2719	Stiffnut M8	1
11	6385	PTO Guard	1
12	4923	Setscrew M8 x 12	4
13	3001	Spring Washer M8	4
14	3111	Plain Washer M8	4
* 15	1720213	Pulley X	2
* 16	1720214	Drive Hub X	1
17	5385	Bolt M8 x 80 (8.8)	3
18	3182	Stiffnut M8	3
19	1720215	Blade Carrier (9ft)	1
20	1720219	Overlapping Blade	2
21	1720218	Standard Blade	2
22	1720230	Spacer (Long)	2
23	2878	Bolt M16 x 55 (8.8)	2
24	3747	Stiffnut M16 (Nyloc)	2
25	7061	Slotted Nut M30 (Fine)	1
26	7064	Split Pin Ø 5.5 x 80 Long	1
27	6393	Bolt M8 x 35 (8.8)	4
28	3182	Stiffnut M8	4
29	7005	Drive Belt C102	2

* THIS PULLEY IS N/A USE *
T172 02 86 (40MM SHAFT)
MAY WANT LONGER BELTS

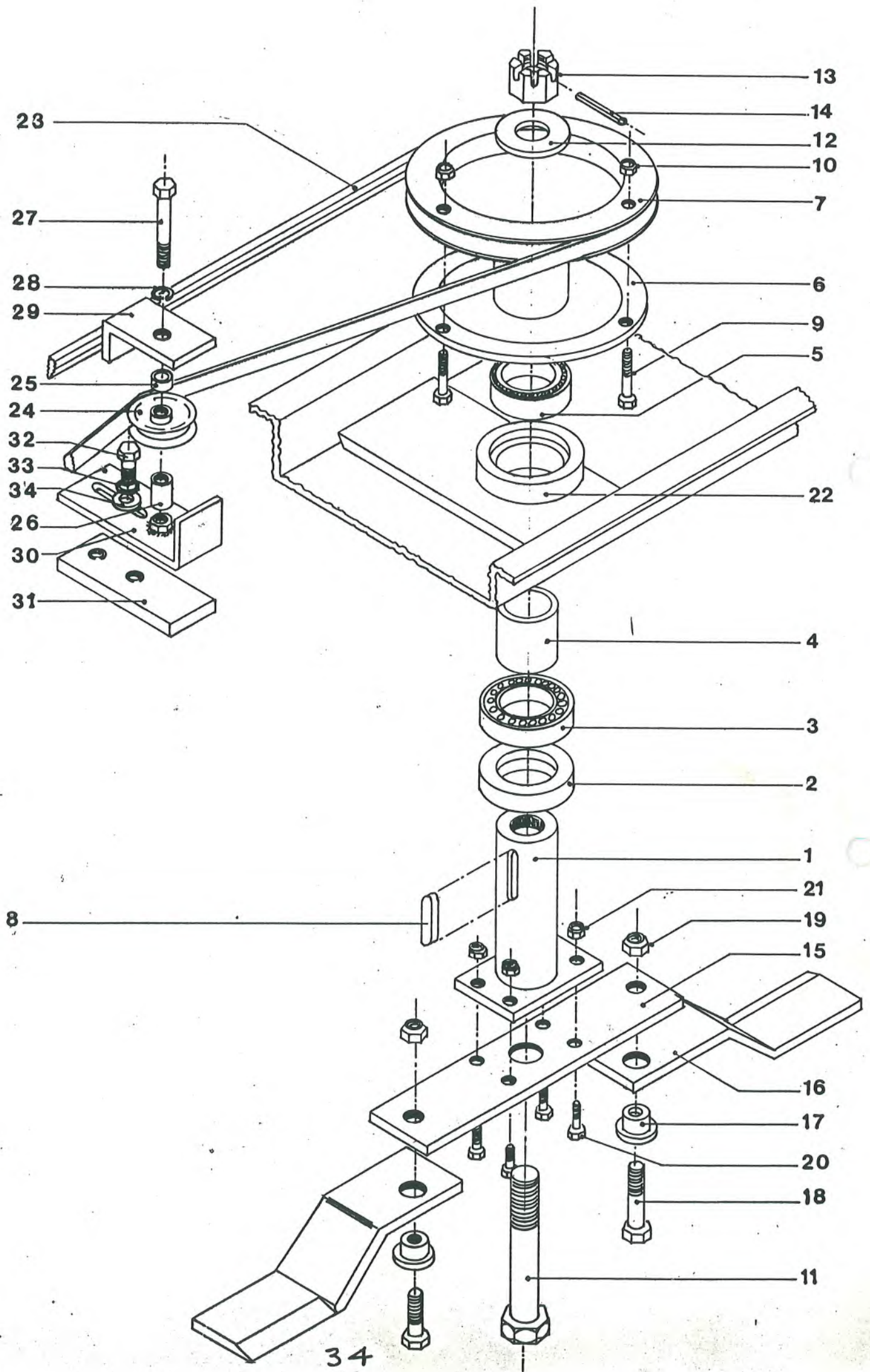


SECONDARY DRIVE

SECONDARY DRIVE FOR 2.74m (9ft) MODEL

<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	1720224	Rotor Shaft	2
2	1720223	Spacer Ring	2
3	7010	Bearing	2
4	1720222	Bearing Spacer	2
5	7009	Bearing	2
6	< 1720217	Hub	2
7	< 1720213	Pulley Ring	2
8	7031	Key 12 x 8 x 40 Long	2
9	3183	Bolt M8 x 45 (8.8)	6
10	3182	Stiffnut M8	6
11	7036	Bolt M20 x 220 (8.8)	2
12	1720221	Special Washer	2
13	3203	Slotted Nut M20	2
14	6351	Tension Pin Ø 4.0 x 30 Long	2
15	1720215	Blade Carrier (9ft)	2
16	1720218	Standard Blade	4
17	1720229	Spacer (Short).	4
18	2704	Bolt M16 x 50 (8.8)	4
19	3747	Stiffnut M16 (Nyloc)	4
20	6393	Bolt M8 x 35 (8.8)	8
21	3182	Stiffnut M8	8
22*	1720201.9	Bearing Hub	2
23	7005	Drive Belt C102	2
24	1301	Idler Pulley	2
25	1720208	Spacer (Short)	2
26	1720207	Spacer (Long)	2
27	2864	Bolt M16 x 100	2
28	2730	Spring Washer M16	2
29	1720231	Belt Retaining Bracket	2
30	1720153	Idler Pulley Mounting Bracket	2
31	1720209	Clamp Plate	2
32	2901	Bolt M16 x 35 (8.8)	4
33	2730	Spring Washer M16	4
34	2867	Flat Washer M16	4

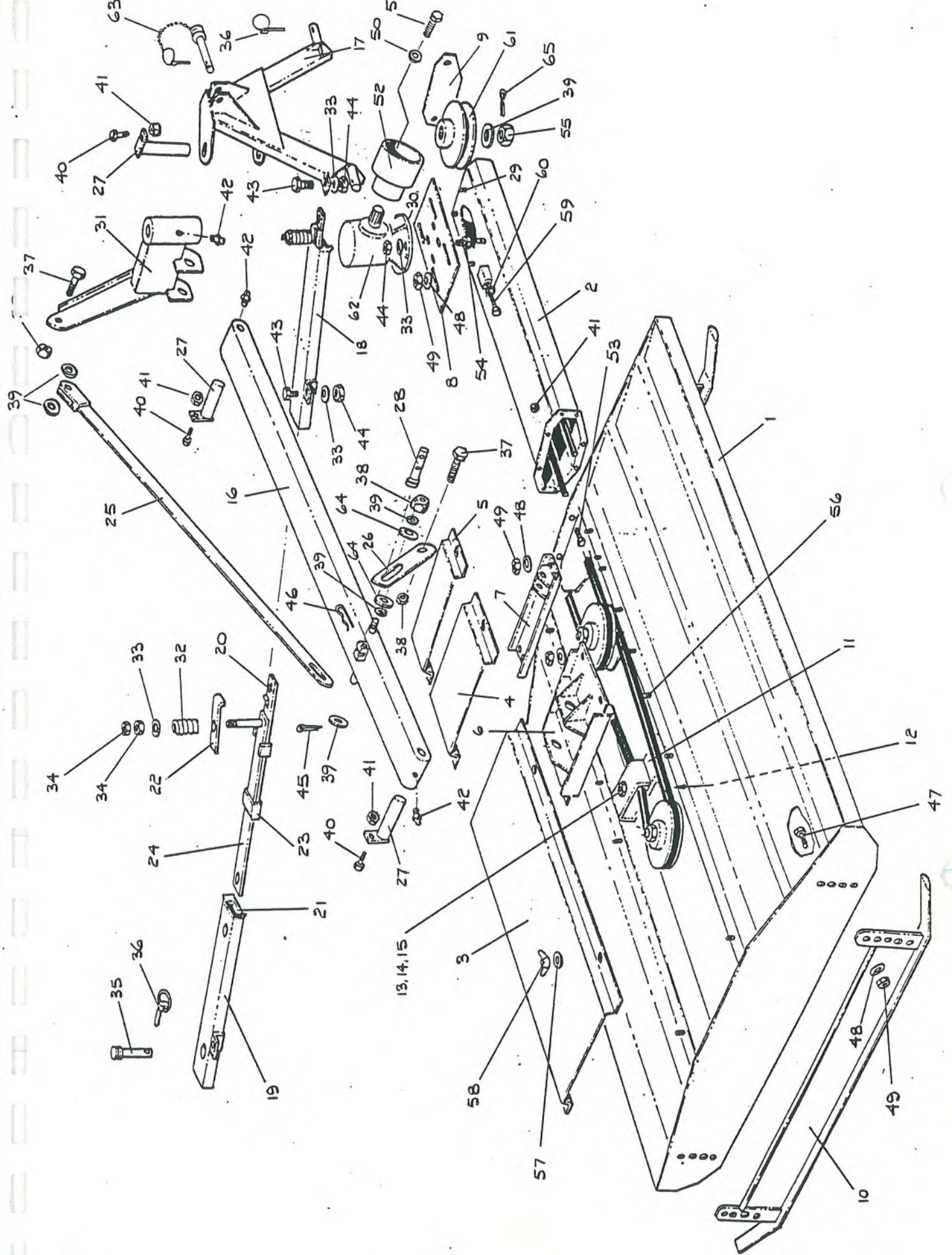
NOTE * Bearing Hub. This item is welded into the Main Frame Assembly and can only be replaced during a major overhaul/reconstruction of the Topper. It is not normally considered as a spare item.



MAIN MACHINE ASSEMBLY FOR 8' - 0" OFFSET TOPPER

<u>ITEM</u>	<u>PART No.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
1	179/49	Body	1
2	179/48	Gearbox Support	1
3	179/8	COver R/H	1
4	179/4	Cover Centre	1
5	179/6	Cover L/H	1
6	179/7	Beam Mounting Plate	1
7	179/5	Mounting Plate	1
8	179/13	Gearbox Mounting Plate	1
9	179/37	End Cover	1
10	179/25	Skid Assembly	2
11	172/153	Idler Pulley Mount	1
12	172/209	Clamp Plate (Under Frame)	1
13	172/231	Belt Retaining Bracket	1
14	172/207	Spacer(Long)	1
15	172/208	Spacer(Short)	1
16	179/11	Beam Assembly	1
17	179/27	'A' Frame Assembly	1
18	179/47	Breakback Assembly Comprising :	1
19	179/41	Strut Box	1
20	179/42	Lower Strut	1
21	179/43	End Stop	1
22	179/44	Bracket	1
23	179/45	Keep Plate	1
24	179/46	Upper Strut	1
25	179/10	Link Arm Assembly	1
26	179/40	SHort Link Arm	1
27	179/9	Pivot Pin	3
28	179/50	Transport Pin	1
29	179/14	Gearbox Mounting Strap	2
30	179/36	Gearbox Hub	2
31	179/26	Pivot Frame	1
32	7082	Spring	1
33	2867	Flatwasher M16.	7
34	2724	Locknut M.16	2
35	1657	Top Link Pin	1
36	0832	Linch Pin And Ring	3
37	2998	Bolt M.20 x 65 (8.8)	2
38	3732	Stiffnut M.20	3
39	3062	Flatwasher M.20	6
40	3643	Setscrew M.10 x 40 (8.8)	3
41	4421	Stiffnut M.10	9
42	6956	Greasenipple M.6	3
43	2704	Bolt M.16 x 50 (8.8)	2
44	3747	Stiffnut M.16	6
45	0436	SPLit Pin	1
46	0487	'R' Clip	1
47	2733	Bolt M.12 x 40 (8.8)	8
48	2716	Flatwasher M.12	20
49	3082	Stiffnut M.12	20
50	3111	Flatwasher M.8 x 12 (8.8.)	4
51	4923	Setscrew M.8 x 12 (8.8)	4
52	6385	Guard	1
53	2710	Setscrew M.10 x 30 (8.8)	6
54	2892	Setscrew M.16 x 40 (8.8)	4
55	7037	Slotted Nut M.20 Fine	1

Cont.

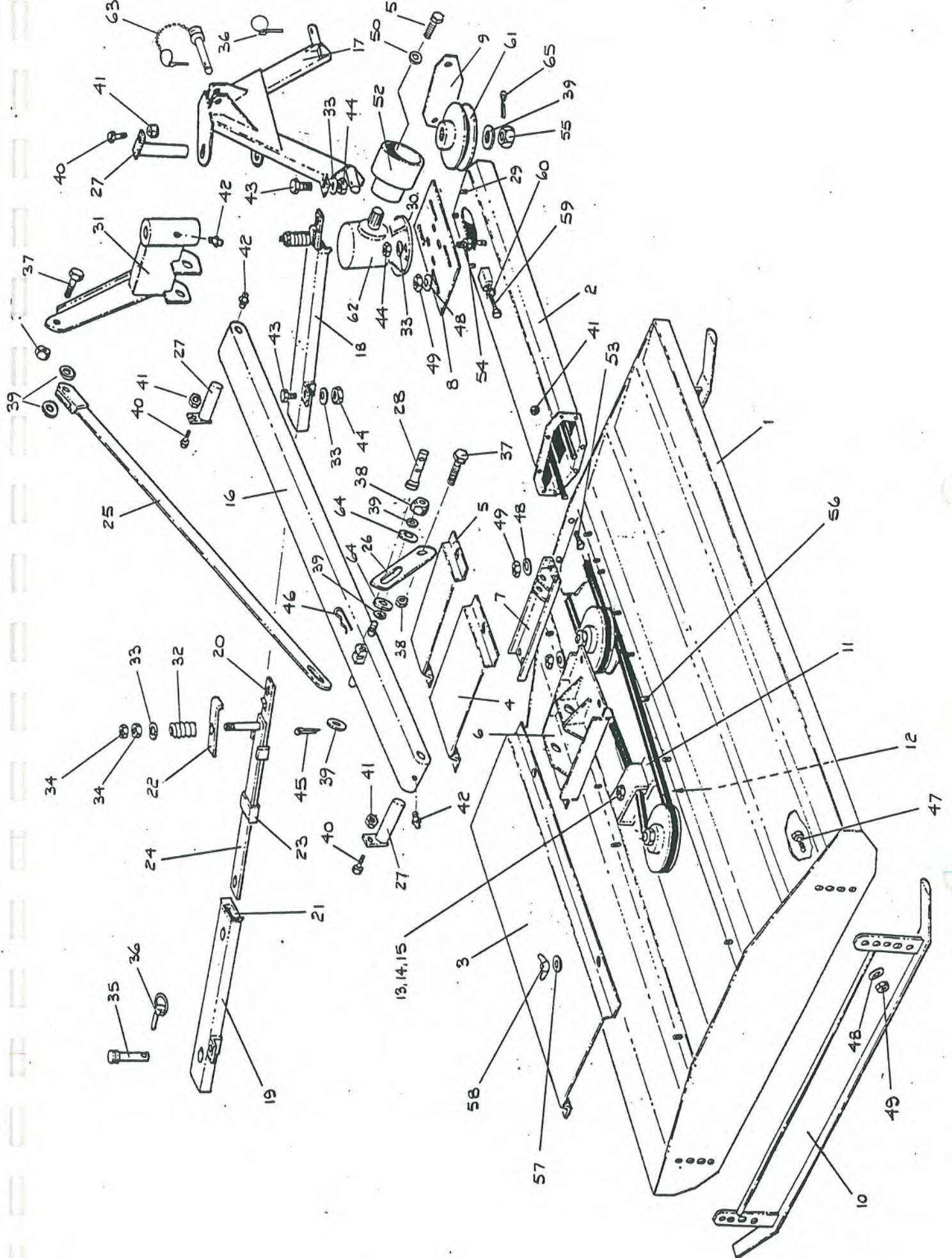


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179/4 ✓

<u>ITEM</u>	<u>PART No.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
56	2962	Setscrew M.12 x 35 (8.8)	8
57	3219	Flatwasher M.10	8
58	3632	Wingnut M.10	8
59	7090	Setscrew M.10 x 100 (8.8)	1
60	2799	Fullnut M.10	2
61	172/213	Pulley	1
62	7035	Gearbox	1
63	2584	Top Link (CatII)	1
64	172/91	Nylon 'Friction' Washer	2
65	7064	Split Pin	1
*	3183	Pulley MTG Bolt M.8 x 45 (8.8.)	3
*	3182	Stiffnut M.' (For 3182)	3
*	7063	P.T.O. Shaft	1

* Denotes Items not illustrated,

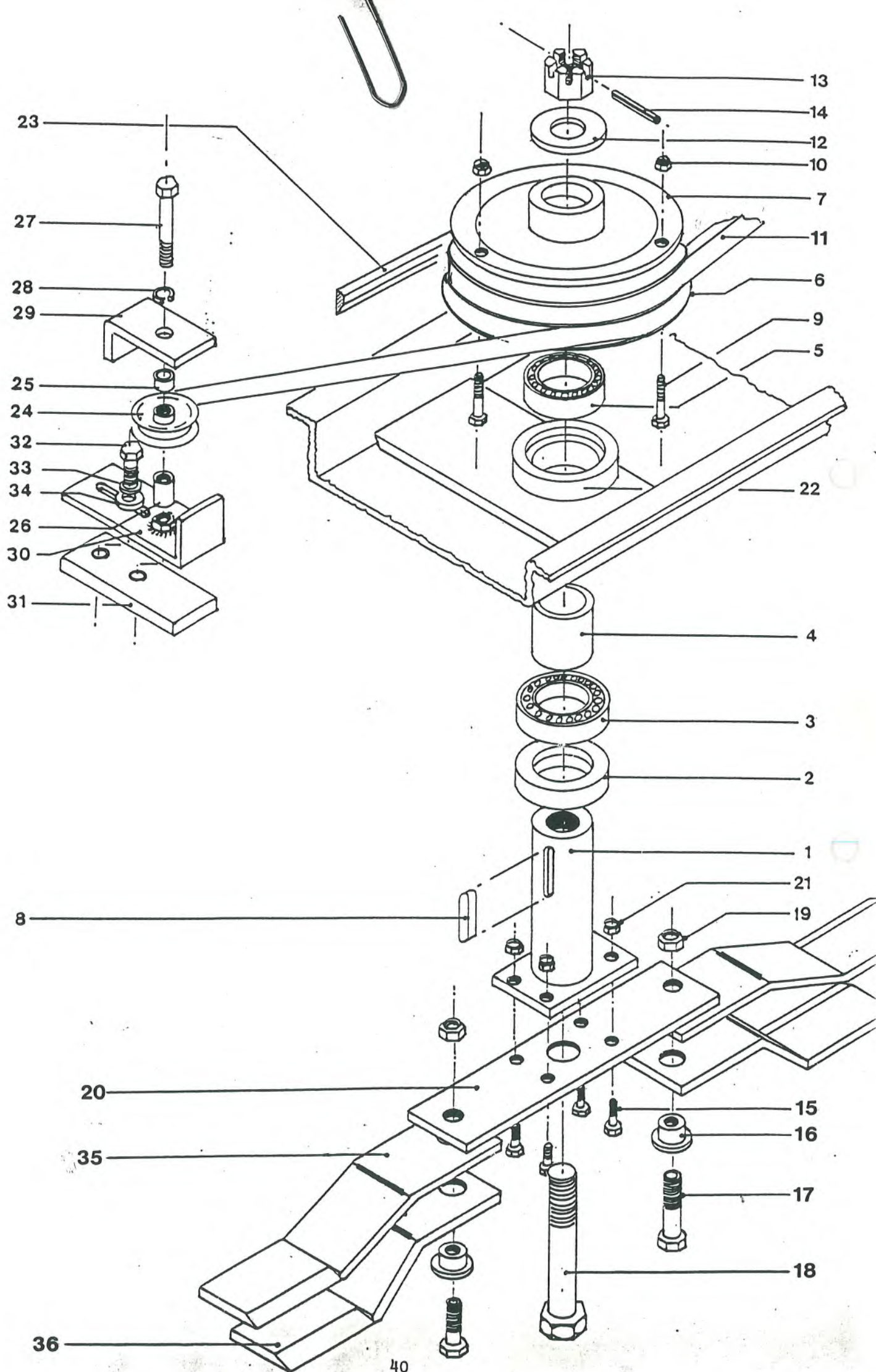


INTERMEDIATE DRIVE

INTERMEDIATE DRIVE FOR 8' - 0" OFFSET TOPPER MODEL

<u>ITEM</u>	<u>PART No.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
1	1720224	Rotor Shaft	1
2	1720223	Spacer Ring	1
3	7010	Bearing	1
4	1720222	Bearing Spacer	1
5	7009	Bearing	1
6	1720213	Pulley Ring	1
7	1720217	Drive Hub	1
8	7031	Key 12 x 8 x 40 Long	1
9	3183	Bolt M8 x 45 (8.8)	3
10	3182	Stiffnut M8	3
11	7036	M20 x 220 Bolt (8.8)	1
12	1720221	Washer Special	1
13	3203	Slotted Nut M20	1
14	6351	Tension Pin Ø 4.0 x 30	1
15	1720216	Blade Carrier (7ft) 650 MM	1
16	1720218	Standard Blade	2
17	1720229	Spacer (Short)	2
18	2704	Bolt M16 x 50 (8.8)	2
19	3747	Stiffnut (Nyloc) M16	2
20	6393	M8 x 35 Bolt (8.8)	4
21	3182	M8 Stiffnut	4
22*	1720201.9	Bearing Hub	1

Note. *Bearing Hub This Item is welded into the main frame assembly and can only be replaced during a major overhaul/reconstruction of the Topper. It is not normally considered a spare item.

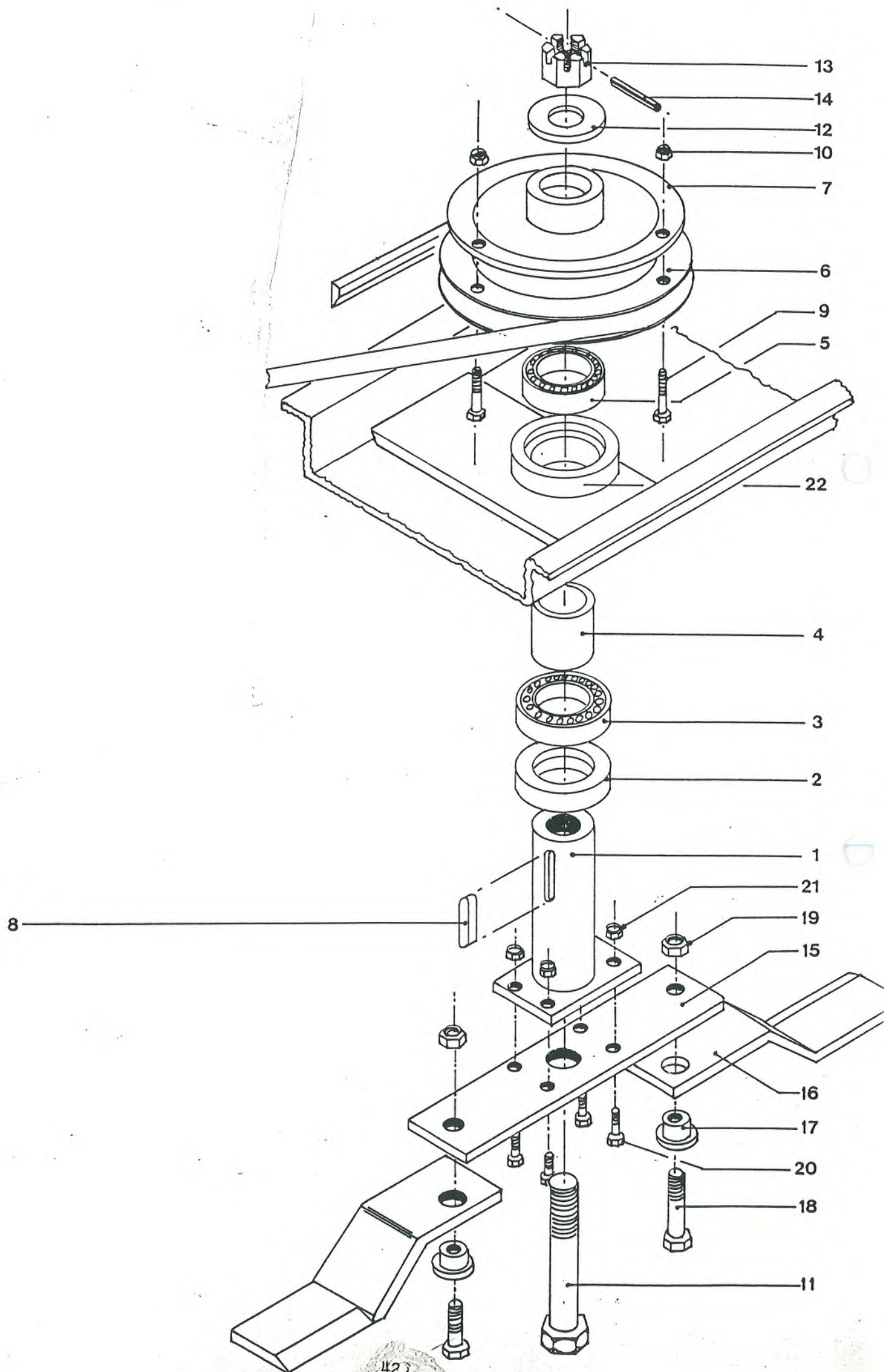


INTERMEDIATE DRIVE FOR 8' - 0" OFFSET TOPPER MODEL

<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
1	1720224	Rotor Shaft	1
2	1720223	Spacer Ring	1
3	7010	Bearing	1
4	1720222	Bearing Spacer	1
5	7009	Bearing	1
6	1720213	Pulley Ring	2
7	1720217	Drive Hub	1
8	7031	Key 12 x 18 x 40 Long	1
9	2765	Bolt M.8 x 70 (8.8)	3
10	3182	Stiffnut M.8	3
11	7046	Drive Belt SPC 4250	1
12	1720221	Washer Special	1
13	3203	Slotted Nut M.20	1
14	6351	Tension Pin Ø 4.0 x 30	1
15	6393	Bolt M.8 x 35 (8.8)	4
16	1720230	Spacer (Long)	2
17	2878	Bolt M.16 x 55 (8.8.)	22
18	7036	Bolt M20 x 220 (8.8.)	1
19	3747	Stiffnut (Nyloc) M.16	2
20	1790038	Blade Carrier 820 MM.	1
21	3182	Stiffnut M.8	4
22*	1720201.9	Bearing Hub	1
23	7045	Drive Belt C.125	1
24	1301	Idler Pulley	1
25	1720208	Spacer (Short)	1
26	1720207	Spacer (Long)	1
27	2864	Bolt M16 x 100 (8.8)	1
28	2730	Springwasher M.16	1
29	1720231	Belt Retaining Bracket	1
30	1720153	Idler Pulley Mounting Bracket	1
31	1720209	Clamp Plate	1
32	2901	Bolt M.16 x 35 (8.8.)	2
33	2730	Springwasher M.16	2
34	2867	Flatwasher M.16	2
35	1720219	Overlapping Blade.	2
36	1720218	Standard Blade	2

NOTE

* Bearing Hub. This item is welded into the main frame assembly and can only be replaced during a major overhaul/reconstruction of the Topper. It is not normally considered as a spare item.



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EDITION IDENTIFICATION NUMBER

6902 ROT-TOP-5-90

SERIAL NUMBER