

STEWARDS FOR  ENVIRONMENTS

BALZER INC.


MOUNTAIN LAKE

January 2002



Powerful Shredders



Direct Drive



OWNER'S MANUAL FOR INSTALLATION & OPERATION



County Road 27 Box 458 Mountain Lake, MN 56159

Phone number:

(1-800) 795-8551

(1-800) 727-3133

Main:

(507) 427-3133

Fax numbers:

(507) 427-3640

Web:

<http://www.balzerinc.com>



INDEX

- 02** Balzer Inc. Address & Phone Number
- 04** Front End
- 05** Balzer Direct Drive Shredder
- 06** Welcome Page
- 07** To The Purchaser
- 08** Warranty
- 09** Lifting Unit - Handling
- 10** Safety Signs
- 11** Safety
- 12** Danger!!
- 13** Warning Signs
- 14** Danger Listen
- 15** Set-Up & Tractor Hook-Up
- 16** Operation
- 17** Lubrication & Maintenance
- 18** Greasing points - Two Rotors
- 19** Greasing points - Four Rotors
- 20** Parts
- 21** 12' Direct Drive Shredder
- 22** 12' Direct Drive Full Mount Shredder
- 23** 12' Direct Drive Pull Type Shredder
- 24** 15' Direct Drive Shredder
- 25** 15' Direct Drive Full Mount Shredder
- 26** 15' Direct Drive Pull Type Shredder
- 27** 18' Direct Drive Shredder
- 28** 18' Direct Drive Full Mount Shredder
- 29** 18' Direct Drive Pull Type Shredder
- 30** 20' Direct Drive Shredder
- 31** 20' Direct Drive Full Mount Shredder
- 32** 20' Direct Drive Semi Mount Shredder
- 33** 20' Direct Drive Pull Type Shredder
- 34** 24' Direct Drive Shredder
- 35** 24' Direct Drive Full Mount Shredder
- 36** 24' Direct Drive Semi Mount Shredder
- 37** 24' Direct Drive Pull Type Shredder
- 38** 25' Direct Drive Shredder
- 39** 25' Direct Drive Full Mount Shredder
- 40** 25' Direct Drive Pull Type Shredder
- 41** 26.5' Direct Drive Shredder
- 42** 26.5' Direct Drive Full Mount Shredder
- 43** 26.5' Direct Drive Semi Mount Shredder
- 44** 26.5' Direct Drive Pull Type Shredder
- 45** 31' Direct Drive Basic Assembly Shredder
- 46** The Direct Drive Gear Box
- 47** The Direct Drive Gear Box Exploded
- 48** Gear Box Lubrication & Adjustment
- 49** The Direct Drive Gear Box
- 50** Gear Box Flex Coupler Assembly
- 51** Intermediate Flex Coupler Hub
- 52** Intermediate Coupler Hub Installation Instructions
- 53** Rotor Bearing
- 54** Four Rotors Machines
- 55** Two Rotors Machines
- 56** Side Knives
- 57** Knife Assembly
- 58** Walterscheid P.T.O Drive Shafts
- 59** Walterscheid P.T.O Exploded # 65071
- 60** Walterscheid P.T.O Exploded # 65072
- 61** Walterscheid P.T.O Exploded # 65552
- 62** Walterscheid P.T.O # 65073
- 63** Walterscheid P.T.O # 65074
- 64** Walterscheid P.T.O # 65554
- 65** Hitch Weldment
- 66** Hinging Guards
- 67** Rock Shaft
- 68** Wheel Arm Weldment
- 69** Hub & Spindle, 6-Bolt 1" ¾ Heavy
- 70** Wheel Assembly
- 71** Ratchet Jack Assembly
- 72** Caster Arm Assembly
- 73** Direct Drive Shredder Transport
- 74** Transport Mode
- 75** Balzer Engineering Deptment

Front End



Balzer Direct Drive Shredder





The Balzer Company thanks you for buying this machine.

We wish to remind you that most accidents at work are caused by a lack of compliance with simple safety norms.

Accidents can be avoided by knowing their causes and taking preventive measures.

We recommend to check the wear of the knives on the rotor periodically.

Always replaces knives on opposite side to keep rotor balance.

The operator and/or owner of the machine is reminded that only original spare parts should be used, otherwise the guarantee will become null and void.



To The Purchaser



This is the safety alert symbol. It is used to alert the operator to an instruction concerning the personal safety and risk factor of this equipment. Always observe and heed these very important instructions to promote a safe operation with good preventive maintenance habits.

This new Balzer Inc. product is designed and manufactured to give years of very dependable service when used for the purpose for which it is intended, and when properly maintained.

NEVER OPERATE THIS EQUIPMENT UNTIL USER FULLY UNDERSTANDS THE COMPLETE CONTENTS OF THIS MANUAL. FOR OWNERS WHO DO NOT OPERATE THIS EQUIPMENT, IT IS THE OWNER'S RESPONSIBILITY THAT THE USER IS PROPERLY INSTRUCTED AND IS FULLY AWARE OF THIS MANUAL'S CONTENTS.

This is important in the safe handling of this equipment and promoting an efficient operation. If there are any questions about areas in this manual, it is important to contact your dealer for clarification.

This machine is warranted as stated on the next page. A registration card is to be filled in by your dealer with your name and address, and promptly returned to the factory. The card provides a ready reference to help you in securing warranty and in answering questions that you may have at some later date.

Operating instructions and parts book are shipped with this machine. If parts of this book are missing or become unreadable, contact your dealer for a new set.

The serial number and identification tag is located on the front of the right tank saddle. Please refer to these numbers when parts or warranty communication is necessary.

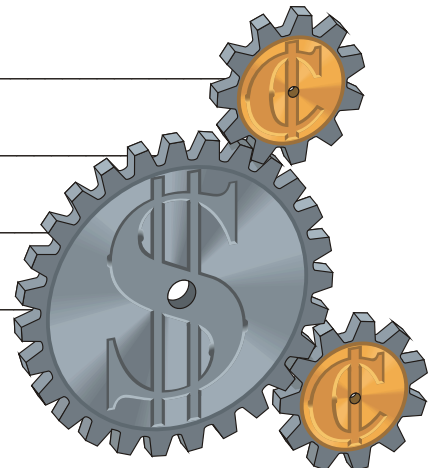
PLEASE FILL IN THE FOLLOWING INFORMATION FOR YOUR RECORDS:

Date of purchase _____

Owner's name _____

Dealer's name _____

Serial # Identification # _____



Warranty



WARRANTY MANUFACTURER

Dealer or Distributor understands and agrees that the Manufacturer extends only the following Warranty to customers. In the event Dealer or Distributor extends any additional warranty (such as by enlarging the scope or period of warranty or undertaking a warranty of merchantability or fitness for any particular purpose) or any other obligation whatsoever, Dealer or Distributor shall: (1) be solely responsible therefore (2) have no recourse against Manufacturer thereof and (3) defend, indemnify and hold Manufacturer harmless against any claim or cause of action whatsoever arising out of, or occasioned by, Dealer or Distributor's extension of said additional warranty or obligation.

CERTIFICATE OF GENERAL EQUIPMENT WARRANTY



Balzer Inc. warrants new Products sold by it to be free from defects in material or workmanship for a period of one (1) year after date of delivery to the first user and subject to the following conditions. Balzer Inc.'s obligation and liability under this Warranty is expressly limited to repairing or replacing at

Balzer Inc.'s option, any parts which appear to Balzer Inc. upon inspection to have been defective in material or workmanship. Such parts shall be provided at no cost to user, at the business establishment of the authorized Balzer Inc. dealer or distributor of the Product during regular working hours. This Warranty shall not apply to component parts or accessories of Products not manufactured by Balzer Inc. and which carry the warranty of the manufacturer thereof, or to normal maintenance (such as tune-up) or normal maintenance parts (such as oil filters). Replacement or repair parts installed in this Product covered by this Warranty are warranted only for the remainder of this Warranty as if such parts were original components of said Product. **BALZER INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.**

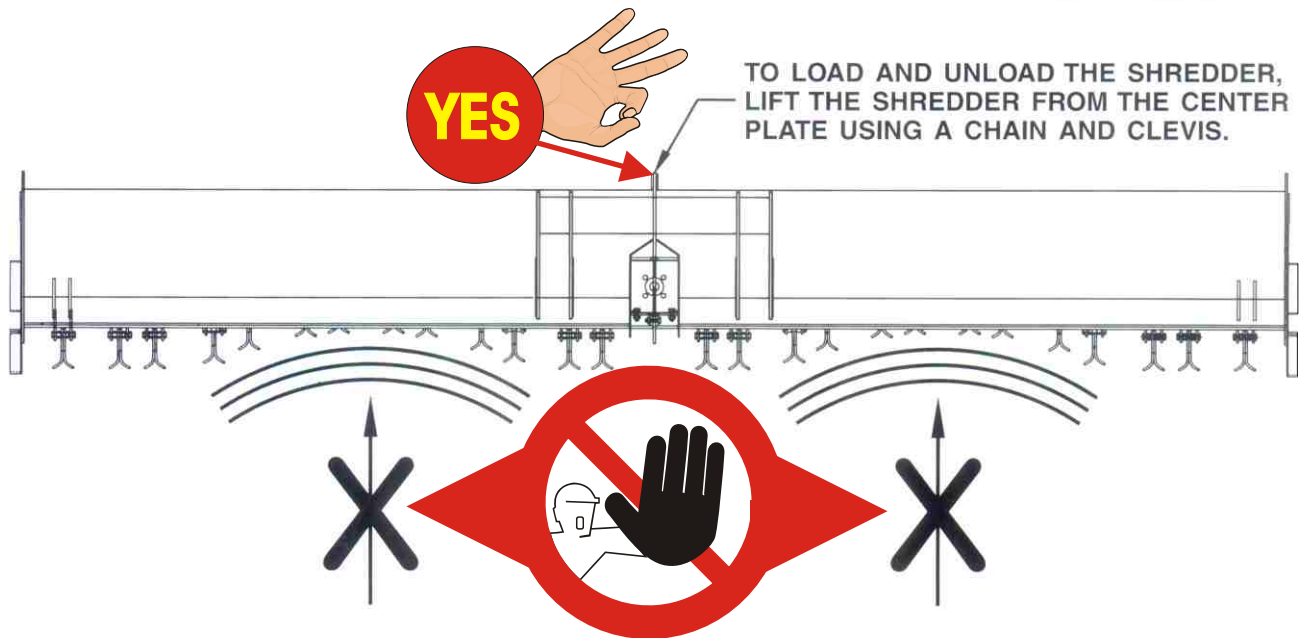
Balzer Inc.'s obligation under this Warranty shall not include any transportation charges, cost of installation, duty taxes or any other charges whatsoever, or any liability for direct, indirect, incidental or consequential damage or delay. If requested by Balzer Inc. products or parts for which a warranty claim is made are to be returned transportation prepaid to Balzer Inc. Any improper use, including operation after discovery of defective or worn parts, operation beyond rated capacity, substitution or parts not approved by Balzer Inc. company or any alteration or repair by others in such manner as in Balzer Inc. company's judgment affects the Products materially and adversely, shall void this Warranty.

“NO EMPLOYEE OR REPRESENTATIVE IS AUTHORIZED TO CHANGE THIS WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY UNLESS SUCH CHANGE IS MADE IN WRITING AND SIGNED BY AN OFFICER OF BALZER INC. AT ITS HOME OFFICE.”

LIABILITY FOR DELAYS

No liability shall attach to Manufacturer or direct, or indirect, incidental or consequential damages or expenses due to loss, damage, detention of delay in delivery of Products resulting from acts or delays beyond its control.

HANDLING NOTICE



DO NOT LIFT SHREDDER BY THE ROTORS

65109

SAFETY SIGNS

SAFETY SIGNS ARE IMPORTANT

Safety signs or decals provide very important information and instructions designed to alert you to dangers and hazards that can be present during operation of this equipment. However, safety sign instructions must be read, understood and followed to be effective.

REPLACEMENT OF SAFETY SIGNS

Safety signs or decals must be kept clean and readable. If they become unreadable for any reason, they must be replaced with an identical replacement decal. Safety decals must also be replaced if parts are repaired or replaced with new parts that do not already include the necessary safety decals.

APPLICATION OF SAFETY DECALS

Surface preparation is very important for safety decals to properly adhere. Grease, oil and dirt must be removed and the surface must be smooth and dry. Most decals have a split backing which is meant to be removed from the split outward. To apply the decals follow these procedures:

1. Position the decal in the proper location and hold firmly over the largest portion of backing.
2. Use one hand to hold the decal in position, with the other hand carefully roll the loose end over and peel the backing outward. When the backing is removed as described and shown (Fig. 1), with even and gradual pulling, the decal will roll onto the surface smooth and wrinkle free.
3. With the smallest portion of the decal attached, the same procedure can be applied to the other half.

4. When the decal has been attached in place, use a cloth or soft paper towel to burnish the decal onto the cleaned surface. Work gently from the middle outwards to avoid creating any wrinkles.



REPLACEMENT DECALS

Order replacement decals by part number through your nearest dealer. Part numbers are printed on each decal.





OBSERVE AND FOLLOW ALL SAFETY PROCEDURE TO PREVENT PERSONAL INJURY OR DAMAGE TO THE MACHINE

1. This machine must be operated and serviced by qualified persons who have thoroughly read and understood this operator's manual and the safety signs on the machine.
2. Read and follow instructions on all decals.
3. Never operate shredder with any guards or shields not in place. Replace missing or damaged shields.
4. Be sure the front flipper shields are in place and swing freely prior to operation.
5. Keep hands and feet away from all moving parts.
6. Never wear any loose clothing when working around moving parts.
7. Keep children away from machinery
8. Never leave shredder operating unattended
9. Never allow anyone to ride in any place other than the tractor's seat.
10. Do not stand in front, behind, or along side of the machine when the rotors are turning,
11. Wait for movement of rotors to stop before servicing or opening of the shields on the shredders.
12. Block wheels securely when machine is to be parked on an incline.
13. Periodically check for loose or missing hardware and tighten or replace as needed.
14. Do not work under the shredder for servicing of cutting knives or other reasons unless the machine has been safely blocked up and the PTO has been disconnected.
15. Replace any parts which show signs of excessive wear, cracking or likely failure, with original equipment service parts.
16. Make certain that everyone and everything is cleared before starting the engine or operation of the shredder.
17. Always start up the unit slowly and gradually bring it up to speed in order to check for abnormal operation.
18. If the shredder develops abnormal noises or excessive vibration, stop the unit at once and safely determine and correct the cause.
19. When parking always lower the shredder and block the wheels.
20. Insure proper tire pressure is to its maximum.
21. Hydraulic fluid pressure can be very dangerous and can cause serious personal injury. Be sure to relieve all pressure before disconnecting hydraulic lines.
22. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, not your hand to search for leaks.
23. If injured by escaping hydraulic fluid, seek' immediate medical attention, serious infection or medical reaction may develop.
24. Always use a safety chain between towing vehicle and shredder when transporting.

Danger!!



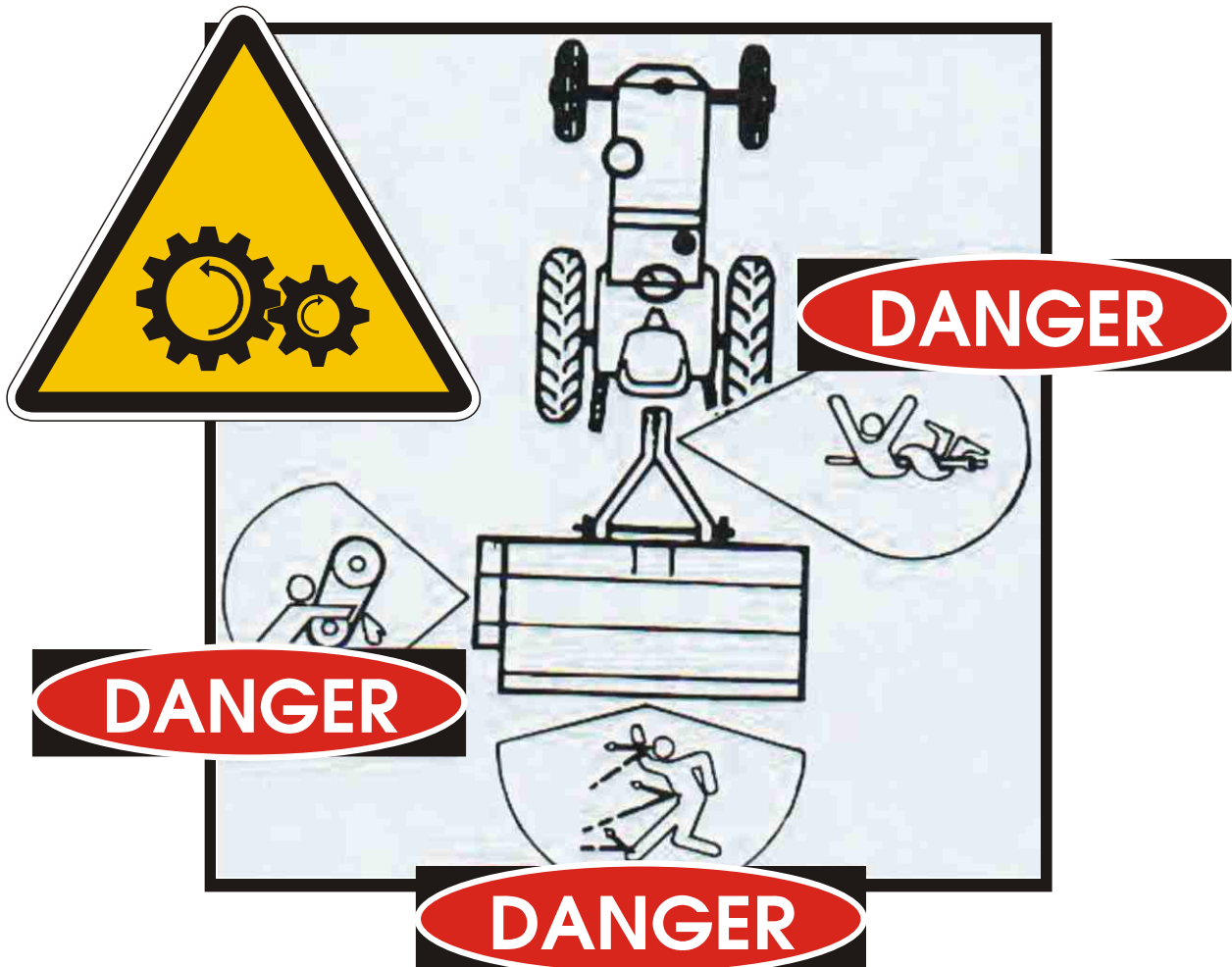
DANGEROUS AREAS AND OPERATOR'S AREAS

All operations of adjustment, maintenance and cleaning shall be carried out by a competent operator with the machine OFF.

We recommend the operator not to wear any chains, bracelets, rings or loose clothes when operating, maintaining or adjusting the machine.

The operator is recommended not to climb on the machine in operation. The machine operator shall take particular care when working inside dangerous areas.

Make sure all components have stopped before carrying out any operation on the machine.



Warning!



WARNING

1. KEEP ALL SHIELDS IN PLACE.
2. STOP ENGINE BEFORE LEAVING OPERATOR'S POSITION TO ADJUST, OIL, CLEAN OR UNCLOG MACHINES, UNLESS OTHERWISE SPECIFICALLY RECOMMENDED IN THE "OPERATORS MANUAL".
3. WAIT FOR ALL MOVEMENT TO STOP BEFORE SERVICING THE MACHINE.
4. KEEP HANDS, FEET, AND CLOTHING AWAY FROM POWER DRIVEN PARTS.
5. KEEP OFF EQUIPMENT UNLESS SEAT OR PLATFORM FOR OPERATIONS AND OBSERVATION IS PROVIDED.
6. KEEP ALL OTHERS OFF.
7. USE FLASHING WARNING LIGHTS WHEN OPERATING ON HIGHWAYS EXCEPT WHEN PROHIBITED BY LAW.
8. MAKE CERTAIN EVERYONE IS CLEAR OF MACHINE BEFORE STARTING ENGINE OR OPERATION.

10744



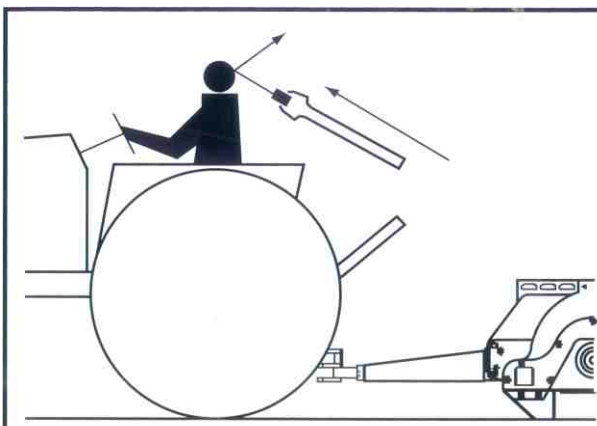
WARNING

MOVING PARTS HAZARD

Can crush or dismember hands and fingers.

Do not operate machine with guard removed.

8154



WARNING

TORQUE THE (2) BRIDGE CLAMP BOLTS ON THE DRIVELINE IMPLEMENT END TO 150 FT*LB. AFTER 2 HOURS OF OPERATION RETORQUE THE BOLTS TO 150 FT*LB. RECHECK THE BOLT TORQUE SETTINGS PERIODICALLY. FAILURE TO PROPERLY TORQUE THE BRIDGE CLAMP BOLTS COULD CAUSE THE DRIVELINE TO DISENGAGE FROM THE IMPLEMENT RESULTING IN INJURY OR DEATH.

65734

Danger!



! DANGER

MOVING PARTS HAZARD

- Keep hands, clothing, and hair away from moving belts and parts.
- Replace guard before operating.

21730

! DANGER

STOP: WAIT FOR ALL MOVEMENT TO STOP BEFORE SERVICING OR OPENING OF SHIELDS.

LOOK: THE IGNITION KEY IS REMOVED.

LISTEN: FOR ALL MOVEMENT TO STOP, ROTATING PARTS CONTINUE TO ROTATE AFTER POWER IS SHUT OFF.

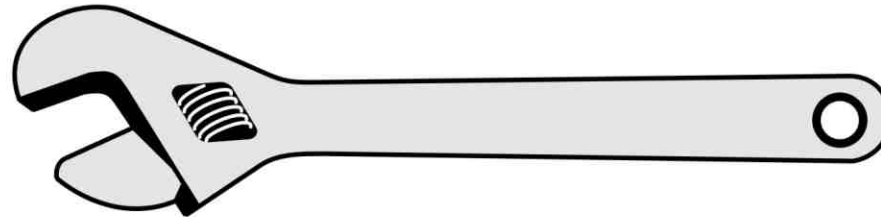
14175



**GUARD MISSING
DO NOT OPERATE**

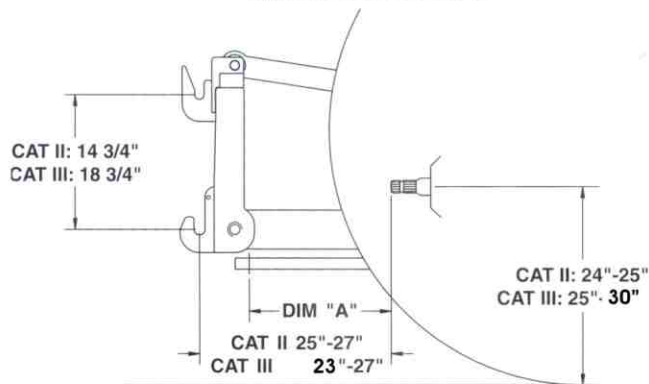
! DANGER

Set-Up & Tractor Hook-Up



INSTALLING FULL MOUNT, SEMI MOUNT, AND PULL-TYPE SHREDDERS

HITCH GEOMETRY

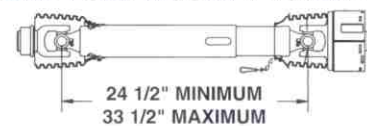


DRAWBAR ADJUSTMENT (PULL-TYPE ONLY)

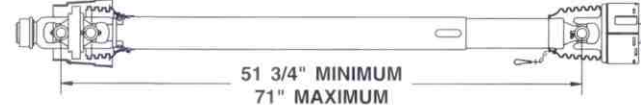
PTO STYLE	DIM "A"
1 3/8"-21 SPLINE	16"
1 3/4"-20 SPLINE	20"

IF THESE DIMENSIONS ARE NOT POSSIBLE ON YOUR TRACTOR, CONTACT YOUR BALZER DEALER

SEMI AND FULL MOUNT PTO DRIVELINE

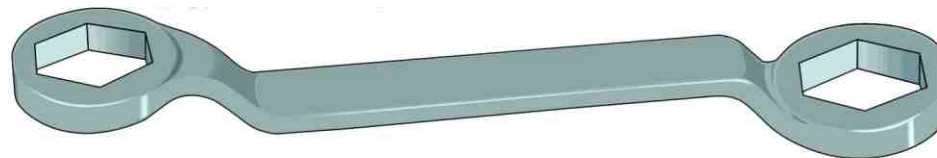


PULL TYPE PTO DRIVELINE



CLEAN AND GREASE THE PTO AND IMPLEMENT INPUT CONNECTION. PULL LOCKING COLLAR AND SIMULTANEOUSLY PUSH IMPLEMENT INPUT DRIVE IN ONTO PTO SHAFT UNTIL THE LOCKING DEVICE ENGAGES. CHECK TO INSURE ALL THE LOCKS ARE SECURELY ENGAGED BEFORE STARTING WORK WITH THE IMPLEMENT INPUT DRIVELINE.

AFTER INSTALLING THE SHREDDER TO THE TRACTOR. THE PTO DRIVELINE MUST BE CHECKED FOR PROPER LENGTH. CAREFULLY RAISE AND LOWER THE SHREDDER PAYING CLOSE ATTENTION TO THE PTO DRIVELINES ANGLE AND TELESCOPING LENGTH. NEVER ALLOW THE PTO DRIVELINE TO BOTTOM OUT. MEASURE THE DISTANCE BETWEEN THE PTO DRIVELINES CROSS BEARINGS WHEN THE SHREDDER IS IN THE FULLY LOWERED POSITION AND FULLY RAISED POSITION. CHECK TO INSURE THAT THE MEASUREMENTS ARE WITHIN THE RANGES INDICATED ABOVE. IF THE MEASUREMENT ARE OUTSIDE THE ACCEPTABLE RANGES INDICATED OR THERE IS ANY CONCERN REGARDING AN ACCEPTABLE PTO DRIVELINE APPLICATION, PLEASE CONTACT YOUR BALZER DEALER.



65104

Operation



Always start unit up slowly and gradually bring it up to operating speed.(1000 PTO)
The shredder knives must be run a minimum of 2 inches above the ground to prevent excessive wear and knife damage. Position the wheels to run in the rows.

Do not make sharp turns while tractor PTO is engaged. This practice will damage shredder PTO and tractor hydraulic lines.

Never operate shredder with any broken or missing knives, this will cause structural and bearing damage.

Keep all hinging guard shields in place and be sure that they can swing freely. Replace any broken or bent guards.

WARNING:

Disengage tractor PTO drive immediately should excessive vibration occur while shredder is in operation. Shut off tractor and remove ignition key before determining the cause of the vibration. The tractor should run at the recommended PTO speed for effectiveness of the shredder.

WARNING:

FULL MOUNT

Max speed 20 MPH

Reduce travel speed when on a rough or bumpy surface, be sure to have the shredder raised to avoid damage to either the tractor or the shredder.



CAUTION:

Additional weight may need to be added to the front of the tractor, to counter act the shredder weight.

The machine should always be driven from the drivers seat (from tractor) and visibility shall be such as to allow the driver to operate it under normal operating conditions.

Special caution should be taken with the rotors because they still rotates for a while even when the PTO is OFF.

This inertial rotation could transmit the residual motion to the tractor wheels and push it forward.



Lubrication & Maintenance



All maintenance shall be carried out by a competent operator after disconnecting the PTO from the tractor.

An adequate lubrication and the use of suitable lubricants are both essential for the long life and correct operation of the machine. (Use 90W oil)

Make sure all screws and bolts have been tightened, and the bolts are in the correct position after the first 4 hours' operation and regularly thereafter.

Make sure all safety guards and devices are in place and working.

Check the level of the lubricating oil in the gearbox. (Use 90W oil, fill up to 50% of the box)

Check the distance of the two halves of the PTO (they shall overlap of at least 1/3 of their length). This shall be checked every time you change tractor. Grease PTO & end bearings regularly.



**Check the level of the lubricating oil in the gearbox.
(Use 90W oil, fill up to 50% of the box)**

**Remove covers to
access GearBox**

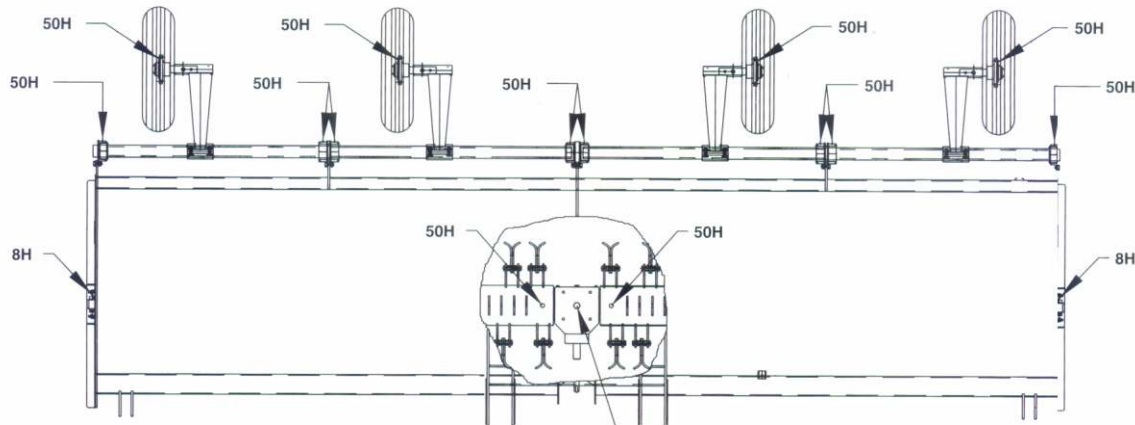


Greasing Points



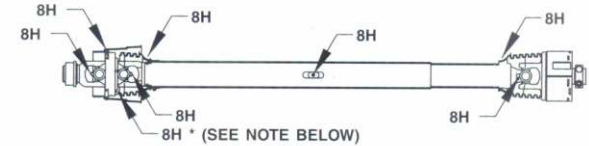
LUBRICATION REQUIREMENTS FOR PULL-TYPE AND FULL-MOUNT SHREDDERS

SHREDDER ASSEMBLY

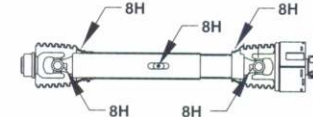


GEARBOX SHOULD BE 1/2 FULL OF OIL.
CHANGE EVERY SEASON WITH SAE 90 OIL
CONTAINING ANTI-FOAMING ADDITIVES.

PULL-TYPE PTO DRIVELINE



FULL MOUNT PTO DRIVELINE

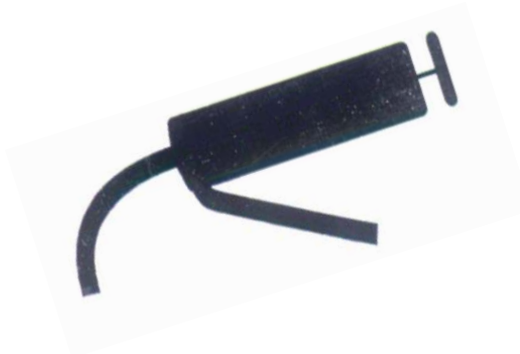


NOTE

THE DOUBLE YOKE CAVITY WILL HOLD AS MUCH AS 30 PUMPS OF GREASE. TO INSURE MAXIMUM JOINT LIFE:

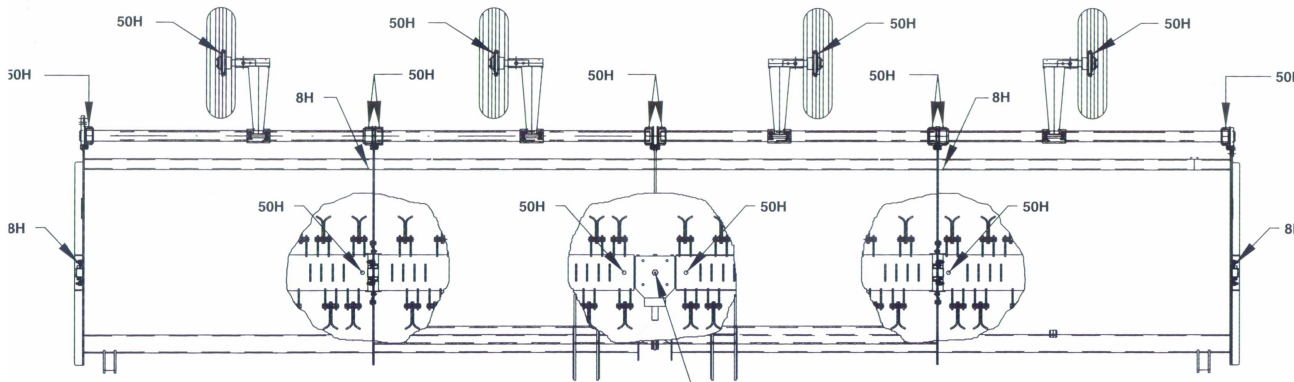
- * LUBRICATE DOUBLE YOKE WHEN JOINT IS IN STRAIGHT POSITION.
- * VISUALLY INSPECT ALL WEAR SURFACES INSIDE DOUBLE YOKE TO INSURE PRESENCE OF GREASE AFTER OPERATION.

Greasing Points



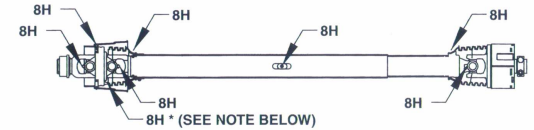
LUBRICATION REQUIREMENTS FOR PULL-TYPE AND FULL-MOUNT SHREDDERS

SHREDDER ASSEMBLY

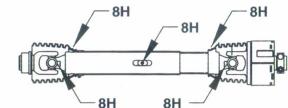


GEARBOX SHOULD BE 1/2 FULL OF OIL.
CHANGE EVERY SEASON WITH SAE 90 OIL
CONTAINING ANTI-FOAMING ADDITIVES

PULL-TYPE PTO DRIVELINE



FULL MOUNT PTO DRIVELINE



NOTE
THE DOUBLE YOKE CAVITY WILL HOLD AS MUCH AS 30
PUMPS OF GREASE. TO INSURE MAXIMUM JOINT LIFE:
* LUBRICATE DOUBLE YOKE WHEN JOINT IS IN
STRAIGHT POSITION.
* VISUALLY INSPECT ALL WEAR SURFACES INSIDE
DOUBLE YOKE TO INSURE PRESENCE OF
GREASE AFTER OPERATION.

65106

Parts



IT IS THE POLICY OF BALZER COMPANY TO CONSTANTLY IMPROVE ITS PRODUCTS WHENEVER IT IS PRACTICAL TO DO SO. THEREFORE, BALZER COMPANY RESERVES THE RIGHT TO REDESIGN OR CHANGE ITS EQUIPMENT OR COMPONENT PARTS THEREOF WITHOUT INCURRING THE OBLIGATION TO INSTALL OR FURNISH SUCH CHANGES ON EQUIPMENT PREVIOUSLY DELIVERED.

INSTRUCTIONS FOR ORDERING PARTS

To enable our customer service department to provide you with the correct replacement parts promptly and accurately, follow the ordering instructions as listed below.

Identify your equipment by serial number whenever possible.

Use part numbers and descriptions from the illustration drawings furnished to assist in identifying the needed parts.

Owners, order all parts through your local dealer.

Dealers must indicate company name, shipping point and mailing address for notification if different from shipping point. State whether freight, express, parcel or other handling is desired.

Send all parts to:

BALZER INC.

County Road 27 Box 458

Mountain Lake, MN 56159



INSTRUCTIONS FOR RETURNING PARTS FOR ADJUSTMENT

Dealers should inspect all parts when received. Shortages or damage should be noted by the carrier agent at the time the parts are accepted. Shippers responsibility ceases upon delivery of shipment to customer in good order. Claims for damage, loss, or malfunction are to be reported within thirty (30) days for warranty considerations.

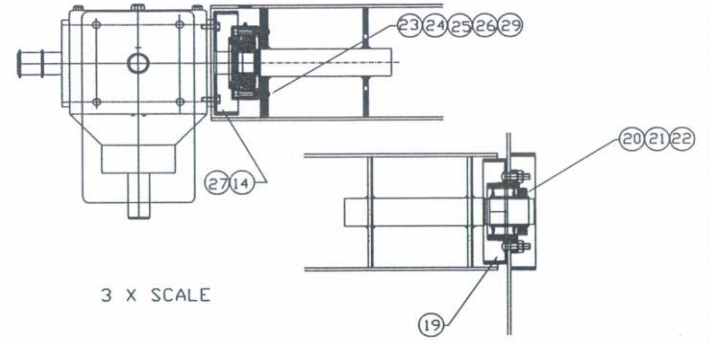
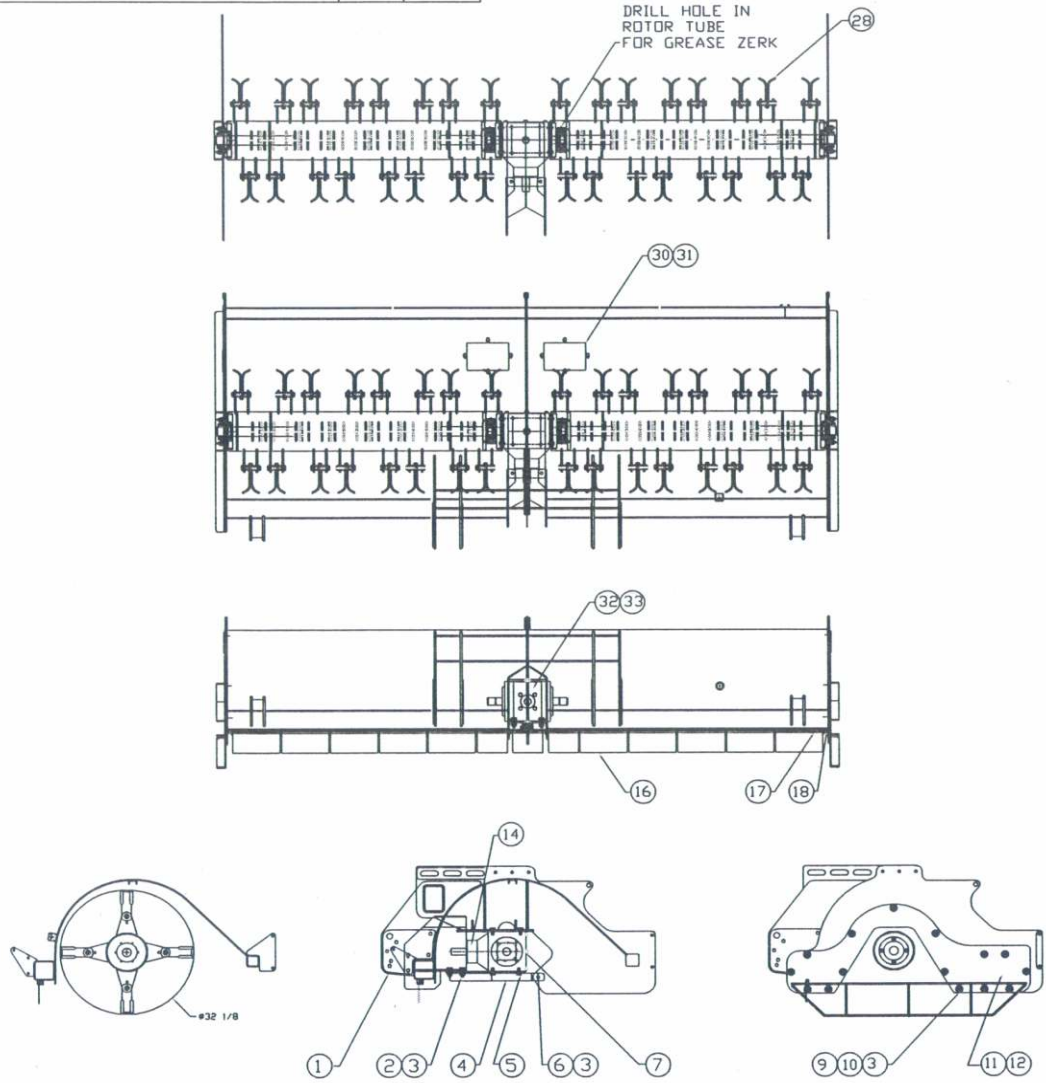
All returned parts must have return authorization, a copy of the original packing list and transportation prepaid.



12' Direct Drive Shredder



ECO#	REV.	NOTES	DATE	BY	APR
		RELEASED		GB	
3585		61287 WAS 61082 ADD (2) 2546 & 1291 ADD (2) 60568 (4) 3032	1/00	GB	
3601		ADD 61415 DECAL DRAWING	2/00	GB	



ITEM	QTY	COMPONENT #	DESCRIPTION
34	1	61415	DECALS (SEE DRAWING)
33	4	3032	BOLT 10 X 20 MM
32	2	60568	GUARD GEARBOX
31	8	2082	NUT 3/8 WHIZLOCK
30	2	61209	COVER PLATE
29	2	61164	O RING FLEX COUPLER
28	2	61286	ROTOR ASSY. 12'
27	2	61089	GRASS RING (INNER)
26	12	61126	BOLT 3/8 SOC. HD. CAP
25	4	61124	SNAP RING (GEARBOX)
24	2	65010	FLEX SLEEVE COUPLER
23	2	65009	FLEX HUB COUPLER
22	8	2539	NUT 1/2 TOPLOCK
21	8	1096	BOLT CARRIAGE 1/2 X 1 3/4
20	2	61138	BEARING OUTER 2 3/16"
19	2	61087	GRASS RING OUTER
18	2	1850	PIN 1/8" X 1" LG.
17	2	12365	HINGE ROD 12' SHREDDER
16	13	28045	HINGING GUARD
14	12	3136	BOLT 10 X 20 MM
13			
12	1	61159	END PANEL L.H.
11	1	61158	END PANEL R.H.
10	30	1602	WASHER 5/8 FLAT
9	30	1120	BOLT CARRIAGE 5/8 X 1 1/2
8			
7	1	61131	GEARBOX
6	1	1295	BOLT 5/8 X 3' LG.
5	8	61160	BOLT 16 X 35 MM
4	1	61287	BOTTOM PLATE - GEARBOX
3	35	2546	NUT 5/8 TOPLOCK
2	4	1291	BOLT 5/8 X 2' LG
1	1	61288	SHREDDER HOUSING 12'
ITEM	QTY	COMPONENT #	DESCRIPTION

WHERE USED:					
TOL. UNLESS SPECIFIED :	FAB .03	WELD .06	HOLES:	PER STDS. MAN. #1	SHEET OF
BALZER INC. HIGHWAY 60 EAST MOUNTAIN LAKE, MN 56159 PHONE# (507) 427-3133					
ASSEMBLE AS SHOWN			PART NAME:	12' DIRECT DRIVE SHREDDER	PART NO. 61300 DWG
OPER#	W/C	DESCRIPTION			

12' Direct Drive Full Mount Shredder



ECO#	REV.	NOTES	DATE	BY	APR
		RELEASED		GB	
3645		PART # 65671 WAS # 8125	08/01	TH	
3650		ELIMINATED PART # 24276, 1354 AND 1779	10/01	TH	

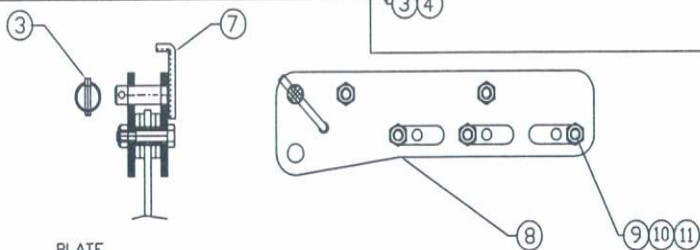
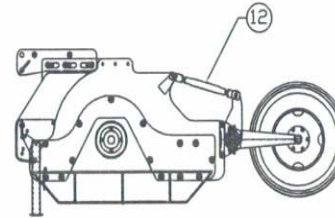
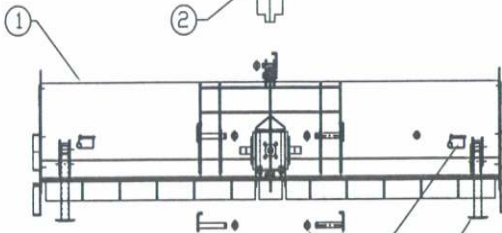
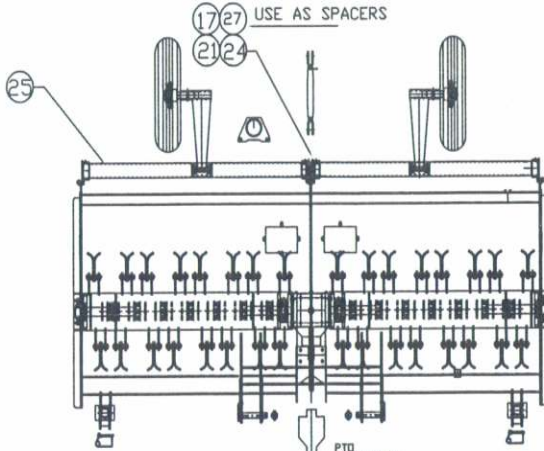


PLATE
3 POINT HITCH
TOP PLATE

(4 X SCALE)

	27	4	1602	FLATWASHER 5/8
	25	1	24264	ROCKSHAFT 12'
	24	2	1294	BOLT 5/8 X 2 3/4 LG.
	21	4	24271	BEARING ROCKSHAFT
	17	14	2546	NUT 5/8 TOPLOCK
	16	12	1290	BOLT 5/8 X 1 3/4 LG.
	15	2	65671	WHEEL 15 X 8 6 BOLT
	14	2	70052	WHEEL MT. PLATE
	13	2	70080	WHEEL ARM ASSY.
REF.	12	1	12267	RATCHET JACK ASSY
	11	5	2593	NUT 3/4 TOPLOCK
	10	5	1318	BOLT 3/4 X 4' LG
	9	5	60567	SPACER (FULL MT. HITCH)
	8	2	61083	3 POINT HITCH PLATE
	7	1	61189	PIN 1 1/4 DIA. X 3.5 WK
	6	2	28476	STAND SHREDDER
	5	2	24384	PIN 1/2" SPRING SAFETY
	4	2	17299	PIN 1 7/16 8" WORKING
	3	3	2584	LYNCH PIN 7/16'
REF.	2	1	65072	PTO 1 3/4 SPLINE
OPTION	2	1	65071	PTO 1 3/8 SPLINE
	1	1	61300	12' DIRECT DRIVE SHREDDER
	ITEM	QTY	COMPONENT #	DESCR PTI ON

WHERE USED:

TOL. UNLESS SPECIFIED :	FAB .03	WELD .06	HOLES:	PER STDS.	SHEET
				MAN. #1	OF

BALZER INC. HIGHWAY 80 EAST
MCKINTY LAKE, MN 56259 PHONE (307) 427-3133

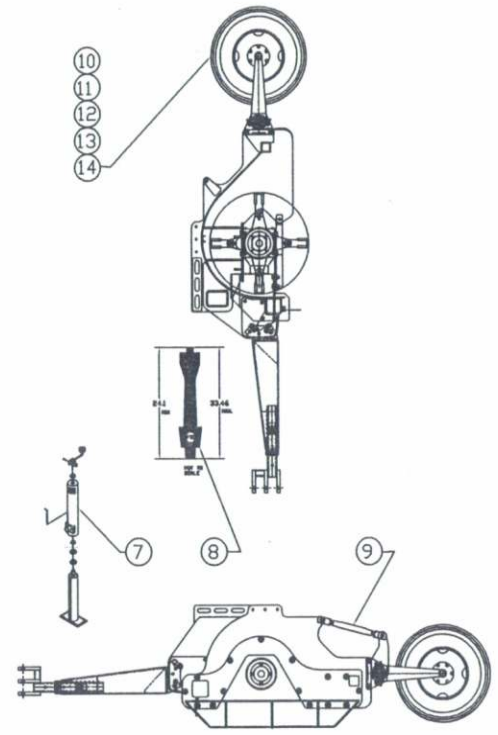
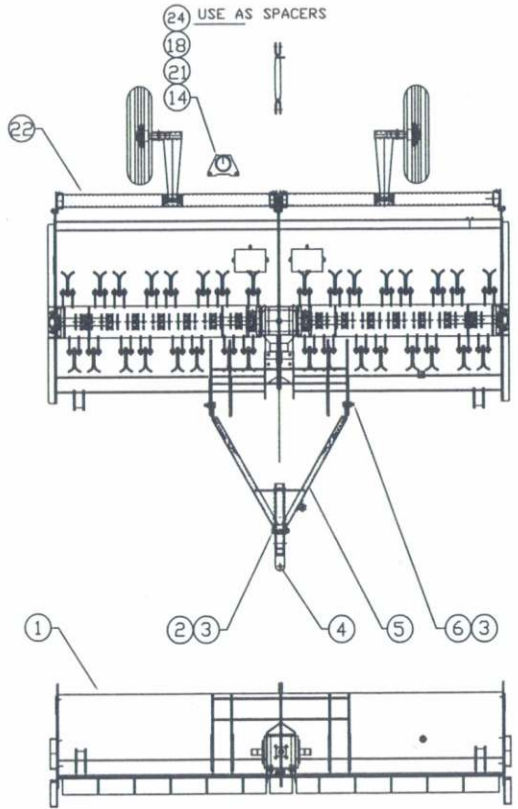
OPER#	W/C	DESCRIPTION
		ASSEMBLE AS SHOWN

PART NAME:	12' DIRECT DRIVE SHREDDER (FULL MOUNT)	PART NO.	61302 DWG
------------	---	----------	-----------

12' Direct Drive Pull Type Shredder



ECO#	REV.	NOTES	DATE	BY	APR
		RELEASED		GB	
3645		PART # 65671 WAS # 8125	08/01	TH	
3650		ELIMINATED PART # 24276, 1354 AND 1779	10/01	TH	



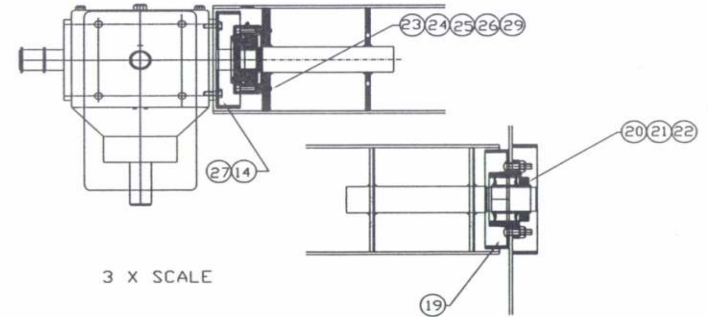
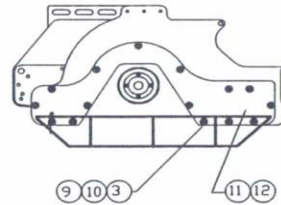
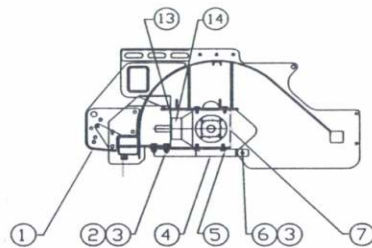
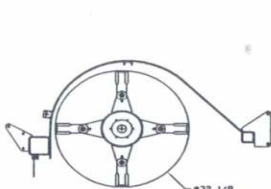
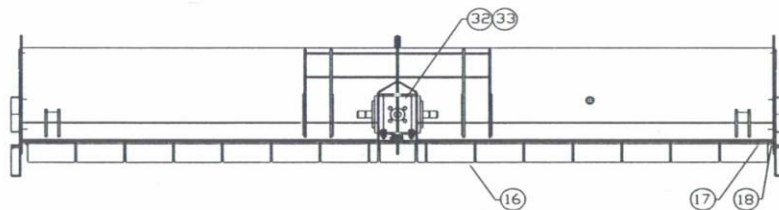
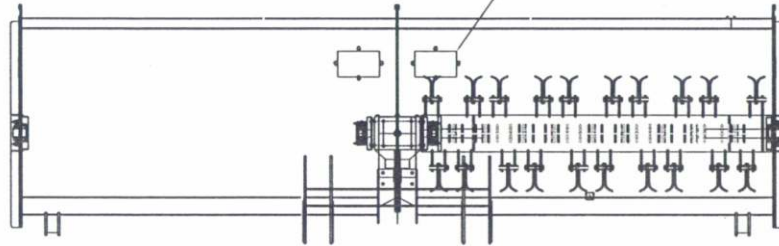
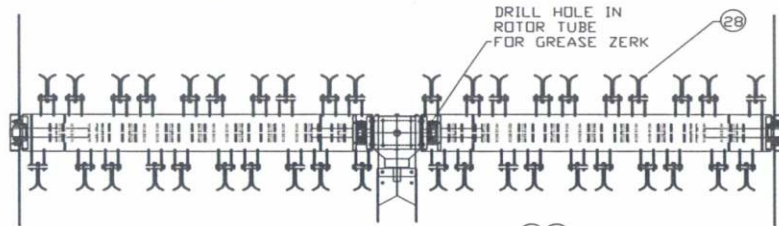
REF.	QTY	COMPONENT #	DESCRIPTION
24	4	1602	FLATWASHER 5/8
22	1	24264	ROCKSHAFT 12'
21	2	24271	BOLT 5/8 X 2 3/4' LG.
14	14	2546	NUT 5/8 TOPLOCK
13	12	1290	BOLT 5/8 X 1 3/4 LG.
12	2	65671	WHEEL (15X8 6 BOLTS)
11	2	70052	MOUNTING ANGLE
10	2	70080	WHEEL ARM ASSY.
REF.	9	1	12267 RATCHET JACK
REF.	8	1	65074 1 3/4 PTO FOR PULL TYPE
OPTION	8	1	65073 1 3/8 PTO FOR PULL TYPE
	7	1	29566 JACK TOP WIND
	6	6	1313 BOLT 3/4 X 2 1/2 LG.
	5	1	60643 HITCH ADJUSTABLE
	4	1	60646 TONGUE ADJUSTABLE
	3	7	1697 NUT 3/4 TOPLOCK
	2	1	1320 BOLT 3/4 X 5 LG.
	1	1	61300 12' DIRECT DRIVE SHRED.
ITEM	QTY	COMPONENT #	DESCRIPTION

WHERE USED: DIRECT DRIVE SHREDDER				
TOL. UNLESS SPECIFIED :	FAB .03	WELD .06	HOLE:	PER STDS. MAN. #1
ASSEMBLE AS SHOWN			BALZER INC. HIGHWAY 80 EAST MOUNTAIN LAKE, MN 56509 PHONE# (507) 427-3133	
PART NAME:	SHREDDER 12' DIRECT DRIVE PULL TYPE			PART NO. 61301 DWG
OPER#	W/C	DESCRIPTION		

15' Direct Drive Shredder



ECO#	REV.	NOTES	DATE	BY	APR
		RELEASED		GB	
3585		61287 WAS 61082 ADD (2) 2546 & 1291 ADD (2) 60568 (4) 3032	1/00	GB	
3601		ADD 61415 DECAL DRAWING	2/00	GB	



3 X SCALE

FURNISHED WITH COUPLER

ITEM	QTY	COMPONENT #	DESCRIPTION
34	1	61415	DECALS (SEE DRAWING)
33	4	3032	BOLT 10 X 20MM
32	2	60568	GUARD GEARBOX
31	8	2082	NUT 3/8 WHIZLOCK
30	2	61209	COVER PLATE
29	2	61164	O RING FLEX COUPLER
28	2	61226	ROTOR ASSY. 15'
27	2	61089	GRASS RING (INNER)
26	12	61126	BOLT 3/8 SOC. HD. CAP
25	4	61124	SNAP RING (GEARBOX)
24	2	65010	FLEX SLEEVE COUPLER
23	2	65009	FLEX HUB COUPLER
22	8	2539	NUT 1/2 TOPLOCK
21	8	1096	BOLT CARRIAGE 1/2 X 1 3/4
20	2	61138	BEARING OUTER 2 3/16"
19	2	61087	GRASS RING OUTER
18	2	1850	PIN 1/8" X 1" LG.
17	2	24188	HINGE ROD 15' SHREDDER
16	15	28045	HINGING GUARD
14	12	3136	BOLT 10 X 20 MM
13			
12	1	61159	END PANEL L.H.
11	1	61158	END PANEL R.H.
10	30	1602	WASHER 5/8 FLAT
9	30	1120	BOLT CARRIAGE 5/8 X 1 1/2
8			
7	1	61131	GEARBOX
6	1	1295	BOLT 5/8 X 3" LG.
5	8	61160	BOLT 16 X 35 MM
4	1	61287	BOTTOM PLATE - GEARBOX
3	35	2546	NUT 5/8 TOPLOCK
2	4	1291	BOLT 5/8 X 2" LG
1	1	61222	SHREDDER HOUSING 15'

WHERE USED:

TOL. UNLESS SPECIFIED :	FAB .03	WELD .06	HOLES:	PER STDS.	SHEET
				MAN. #1	OF

BALZER INC. HIGHWAY 80 EAST MOUNTAIN LAKE, MN 56155 PHONE# (507) 427-3133

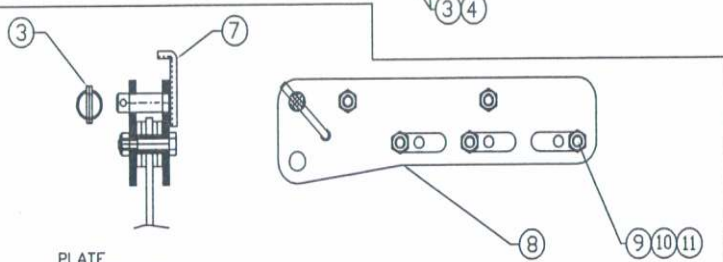
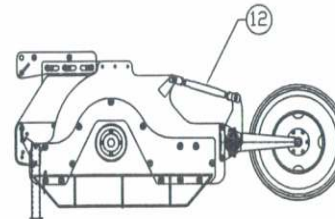
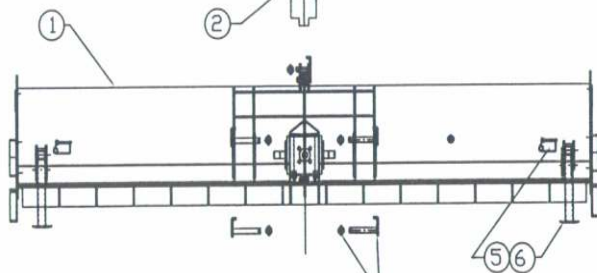
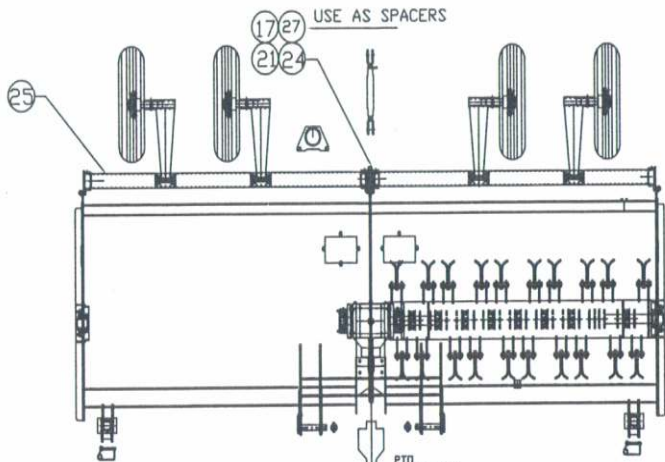
ASSEMBLE AS SHOWN	
OPER#	W/C
DESCRIPTION	

PART NAME:	15' DIRECT DRIVE SHREDDER	PART NO.	61230 DWG
------------	---------------------------	----------	-----------

15' Direct Drive Full Mount Shredder



ECO#	REV.	NOTES	DATE	BY	APR
		RELEASED		GB	
3645		PART # 65671 WAS # 8125	08/01	TH	
3650		ELIMINATED PART # 24276, 1354 AND 1779	10/01	TH	



25

PLATE
3 POINT HITCH
TOP PLATE

(4 X SCALE)

	27	4	1602	FLATWASHER 5/8
	25	1	24265	ROCKSHAFT 15'
	24	2	1294	BOLT 5/8 X 2 3/4 LG.
	21	4	24271	BEARING ROCKSHAFT
	17	22	2546	NUT 5/8 TOPLOCK
	16	20	1290	BOLT 5/8 X 1 3/4 LG.
	15	4	65671	WHEEL 15 X 8 6 BOLT
	14	4	70052	WHEEL MT. PLATE
	13	4	70080	WHEEL ARM ASSY.
REF.	12	1	12267	RATCHET JACK ASSY
	11	5	2593	NUT 3/4 TOPLOCK
	10	5	1318	BOLT 3/4 X 4' LG
	9	5	60567	SPACER (FULL MT. HITCH)
	8	2	61083	3 POINT HITCH PLATE
	7	1	61189	PIN 1 1/4 DIA. X 3.5 WK
	6	2	28476	STAND SHREDDER
	5	2	24384	PIN 1/2' SPRING SAFETY
	4	2	17299	PIN 1 7/16 8' WORKING
	3	3	2584	LYNCH PIN 7/16'
REF.	2	1	65072	PTO 1 3/4 SPLINE
OPTION	2	1	65071	PTO 1 3/8 SPLINE
	1	1	61230	15' DIRECT DRIVE SHREDDER
ITEM	QTY	COMPONENT #	DESCRIPTION	

WHERE USED:

TOL. UNLESS SPECIFIED : FAB .03 WELD .06 HOLES: PER STDS. MAN. #1 SHEET OF

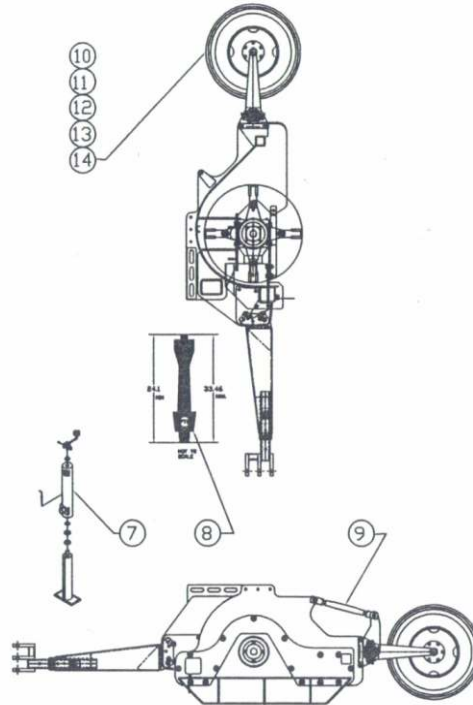
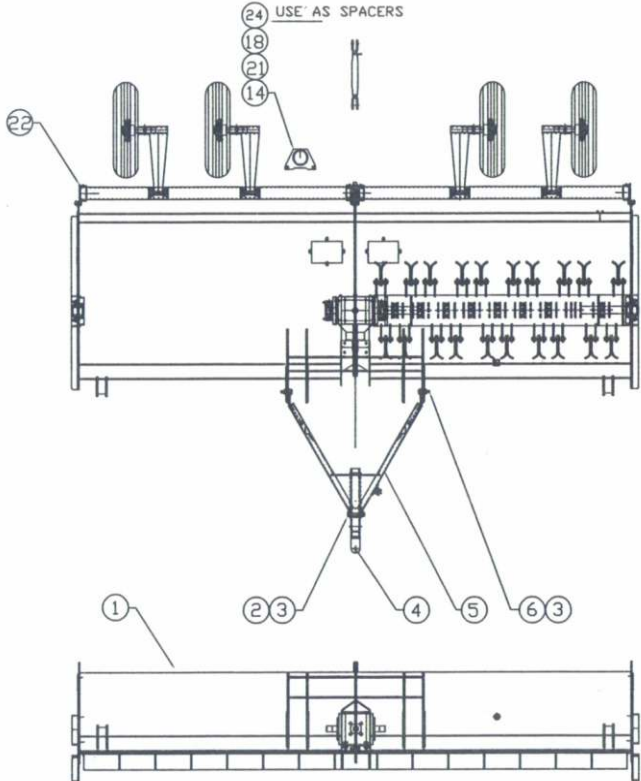
BALZER INC. HIGHWAY 60 EAST MOUNTAIN LAKE, MN 56509 PHONE# (507) 427-3133

OPER#	W/C	DESCRIPTION	PART NAME:	PART NO.
		ASSEMBLE AS SHOWN	15' DIRECT DRIVE SHREDDER (FULL MOUNT)	61232 DWG

15' Direct Drive Pull Type Shredder



ECO#	REV.	NOTES	DATE	BY	APPR.
		RELEASED		GB	
3645		PART # 65671 WAS # 8125	08/01	TH	
3650		ELIMINATED PART # 24276, 1354 AND 1779	10/01	TH	



	24	24265	1602	FLATWASHER 5/8
	22	1	24265	ROCKSHAFT
	21	2	1294	BOLT 5/8 X 2 3/4' LG
	14	22	2546	NUT 5/8 TOPLOCK
	13	20	1290	BOLT 5/8 X 1 3/4 LG.
	12	4	65671	WHEEL (15 X8 6 BOLTS)
	11	4	70052	MOUNTING ANGLE
	10	4	70080	WHEEL ARM ASSY.
REF.	9	1	12267	RATCHET JACK
REF.	8	1	65074	1 3/4 PTD FOR PULL TYPE
OPTION	8	1	65073	1 3/8 PTD FOR PULL TYPE
	7	1	29566	JACK TOP WIND
	6	6	1313	BOLT 3/4 X 2 1/2 LG.
	5	1	60643	HITCH ADJUSTABLE
	4	1	60646	TONGUE ADJUSTABLE
	3	7	1697	NUT 3/4 TOPLOCK
	2	1	1320	BOLT 3/4" X 5 LG.
	1	1	61230	15' DIRECT DRIVE SHRED.
ITEM	QTY	COMPONENT #	DESCRIPTION	

WHERE USED: DIRECT DRIVE SHREDDER				
TOL. UNLESS SPECIFIED :	FAB .03	WELD .06	HOLES:	PER STDS. MAN. #1
				SHEET OF

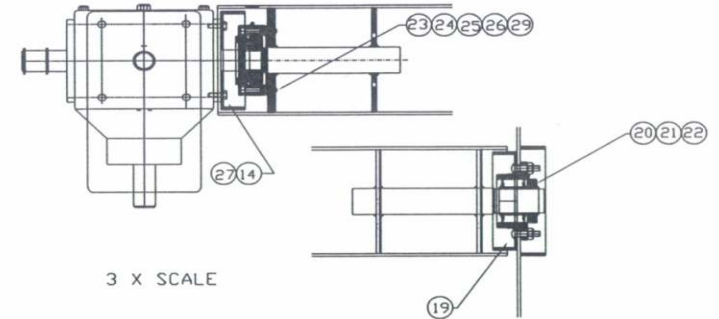
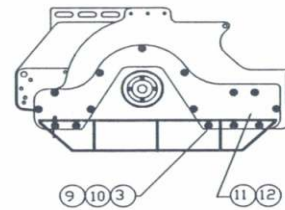
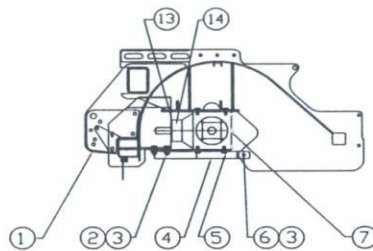
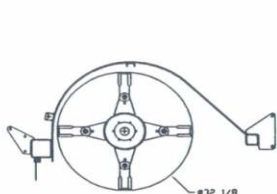
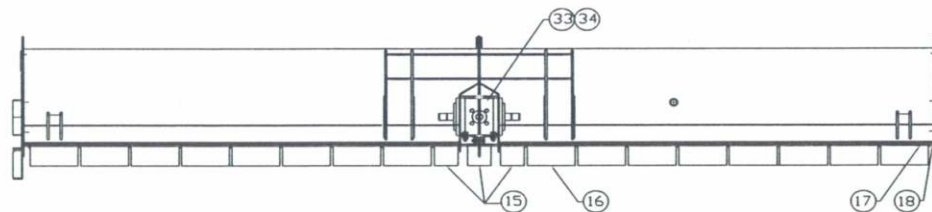
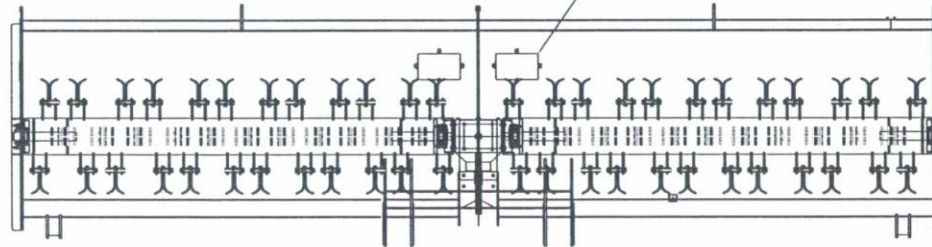
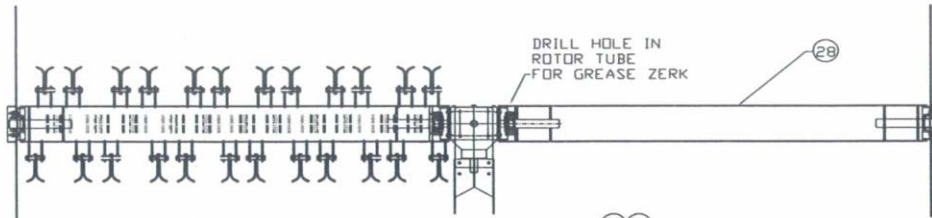
BALZER INC. HIGHWAY 80 EAST MOUNTAIN LAKE, MN 56159 PHONE (507) 427-3133

ASSEMBLE AS SHOWN		PART NAME: SHREDDER 15' DIRECT DRIVE PULL TYPE	PART NO. 61231 DWG
OPER#	W/C	DESCRIPTION	

18' Direct Drive Shredder



ECO#	REV.	NOTES	DATE	BY	APR
		RELEASED		GB	
3585		61287 WAS 61082 ADD (2) 2546 & 1291 ADD (2) 60568 (4) 3032	1/00	GB	
3601		ADD 61415 DECAL DRAWING	2/00	GB	



3 X SCALE

FURNISHED WITH COUPLER

ITEM	QTY	COMPONENT #	DESCRIPTION
34	1	61415	DECALS (SEE DRAWING)
33	4	3032	BOLT 10 X 20 MM
32	2	60568	GUARD GEARBOX
31	8	2082	NUT 3/8 WHIZLOCK
30	2	61209	COVER PLATE
29	2	61164	O RING FLEX COUPLER
28	2	61299	ROTOR ASSY. 18'
27	2	61089	GRASS RING (INNER)
26	12	61126	BOLT 3/8 SOC. HD. CAP
25	4	61124	SNAP RING (GEARBOX)
24	2	65010	FLEX SLEEVE COUPLER
23	2	65009	FLEX HUB COUPLER
22	8	2539	NUT 1/2 TOPLOCK
21	8	1096	BOLT CARRIAGE 1/2 X 1 3/4
20	2	61138	BEARING OUTER 2 3/16'
19	2	61087	GRASS RING OUTER
18	2	1850	PIN 1/8" X 1" LG.
17	2	24103	HINGE ROD 18' SHREDDER
16	16	28045	HINGING GUARD
15	3	28450	HINGING GUARD HALF
14	12	3136	BOLT 10 X 20 MM
12	1	61159	END PANEL L.H.
11	1	61158	END PANEL R.H.
10	30	1602	WASHER 5/8 FLAT
9	30	1120	BOLT CARRIAGE 5/8 X 1 1/2
8			
7	1	61131	GEARBOX
6	1	1295	BOLT 5/8 X 3' LG.
5	8	61160	BOLT 16 X 35 MM
4	1	61287	BOTTOM PLATE - GEARBOX
3	35	2546	NUT 5/8 TOPLOCK
2	4	1291	BOLT 5/8 X 2' LG
1	1	61305	SHREDDER HOUSING 18'

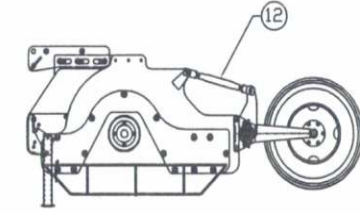
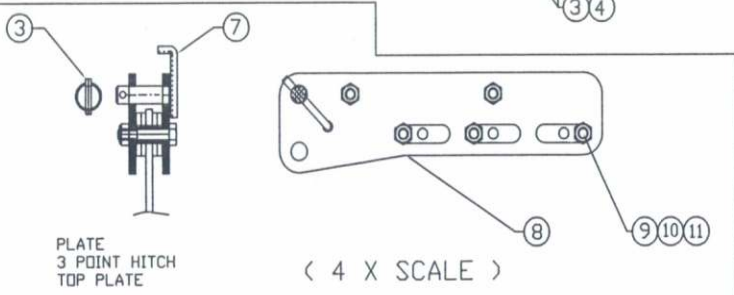
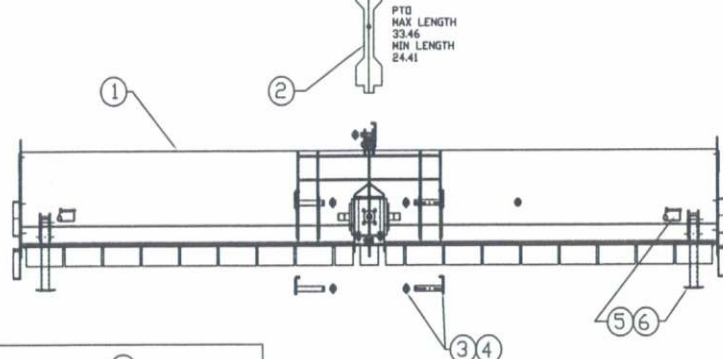
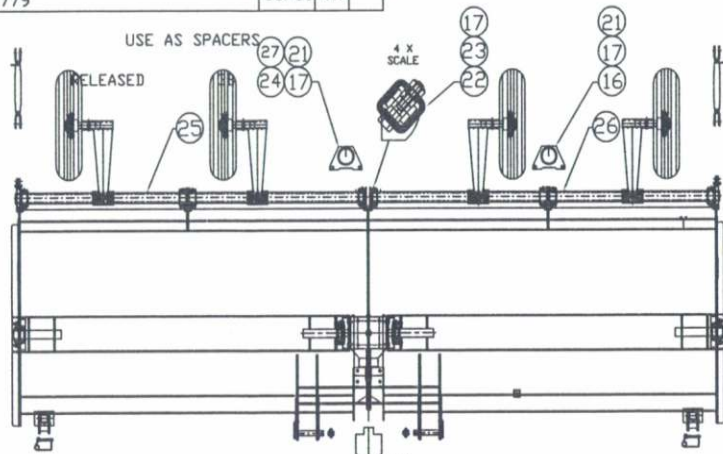
WHERE USED:					
TOL. UNLESS SPECIFIED :	FAB .03	WELD .06	HOLES:	PER STDS. MAN. #1	SHEET OF
			HIGHWAY 60 EAST MOUNTAIN LAKE, MN 56159		PHONE# (507) 427-3133
ASSEMBLE AS SHOWN					
PART NAME:	18" DIRECT DRIVE SHREDDER				PART NO. 61306 DWG

OPER#	W/C	DESCRIPTION

18' Direct Drive Full Mount Shredder



ECO#	REV.	NOTES	DATE	BY	APP
		RELEASED		GB	TJM
3645		PART # 65671 WAS # 8125	08/01	TH	
3650		ELIMINATED PART # 24276, 1354 AND 1779	10/01	TH	



OPTION [

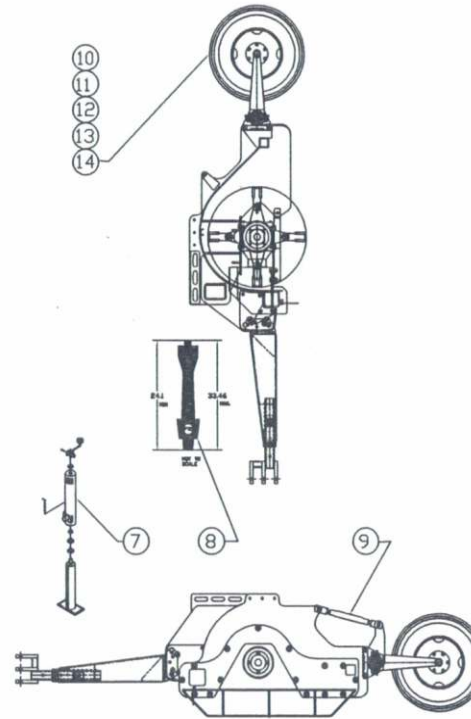
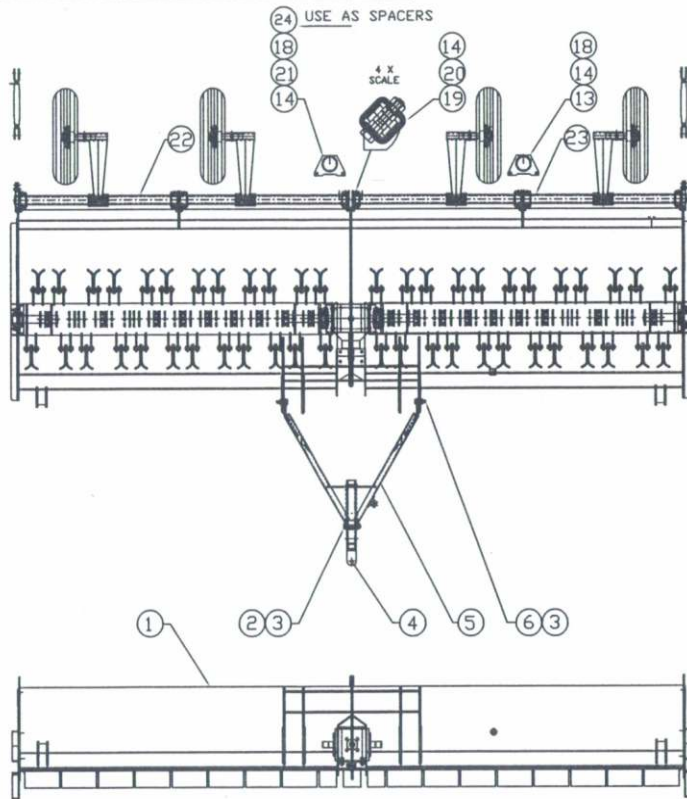
ITEM	QTY	COMPONENT #	DESCRIPTION
27	4	1602	FLATWASHER 5/8
26	1	24267	ROCKSHAFT 18' L.H.
25	1	24266	ROCKSHAFT 18' R.H.
24	2	1294	BOLT 5/8 X 2 3/4 LG.
23	1	24301	BAR ROCKSHAFT SPLICE
22	2	1298	BOLT 5/8 X 3 3/4 LG.
21	8	24271	BEARING ROCKSHAFT
17	30	2546	NUT 5/8 TOPLOCK
16	24	1290	BOLT 5/8 X 1 3/4 LG.
15	4	65671	WHEEL 15 X 8 6 BOLT
14	4	70052	WHEEL MT. PLATE
13	4	70080	WHEEL ARM ASSY.
12	2	12267	RATCHET JACK ASSY
11	5	2593	NUT 3/4 TOPLOCK
10	5	1318	BOLT 3/4 X 4' LG.
9	5	60567	SPACER (FULL MT. HITCH)
8	2	61083	3 POINT HITCH PLATE
7	1	61189	PIN 1 1/4 DIA. X 3.5 WK
6	2	28476	STAND SHREDDER
5	2	24384	PIN 1/2" SPRING SAFETY
4	2	17299	PIN 1 7/16 8" WORKING
3	3	2584	LYNCH PIN 7/16"
2	1	65072	PTO 1 3/4 SPLINE
2	1	65071	PTO 1 3/8 SPLINE
1	1	61306	18' DIRECT DRIVE SHREDDER

WHERE USED:					
TOL. UNLESS SPECIFIED :	FAB .03	WELD .06	HOLES:	PER STDS. MAN. #1	SHEET OF
BALZER INC. HIGHWAY 80 EAST MOUNTAIN LAKE, MN 56009 PHONE# (207) 427-3133					
ASSEMBLE AS SHOWN			PART NAME: 18' DIRECT DRIVE SHREDDER (FULL MOUNT)		
OPER#	W/C	DESCRIPTION	PART NO. 61308 DWG		

18' Direct Drive Pull Type Shredder



ECO#	REV.	NOTES	DATE	BY	APR
		RELEASED		GB	
3645		PART # 65671 WAS # 8125	08/01	TH	
3650		ELIMINATED PART # 24276, 1354 AND 1779	10/01	TH	



ITEM	QTY	COMPONENT #	DESCRIPTION
24	4	1602	FLATWASHER 5/8
23	1	24267	ROCKSHAFT L.H.
22	1	24266	ROCKSHAFT R.H.
21	2	1294	BOLT 5/8 X 2 3/4 LG.
20	2	1298	BOLT 5/8 X 3 3/4 LG.
19	24271	24301	BAR ROCKSHAFT SPLICE
18	8	24171	BEARING ROCKSHAFT
14	30	2546	NUT 5/8 TOPLOCK
13	24	1290	BOLT 5/8 X 1 3/4 LG.
12	4	65671	WHEEL (15 X8 6 BOLTS)
11	4	70052	MOUNTING ANGLE
10	4	70080	WHEEL ARM ASSY.
9	2	12267	RATCHET JACK
8	1	65074 1 3/4	PTO FOR PULL TYPE
8	1	65073 1 3/8	PTO FOR PULL TYPE
7	1	29566	JACK TOP WIND
6	6	1313	BOLT 3/4 X 2 1/2 LG.
5	1	60643	HITCH ADJUSTABLE
4	1	60646	TONGUE ADJUSTABLE
3	7	1697	NUT 3/4 TOPLOCK
2	1	1320	BOLT 3/4 X 5 LG.
1	1	61306	18' DIRECT DRIVE SHRED.

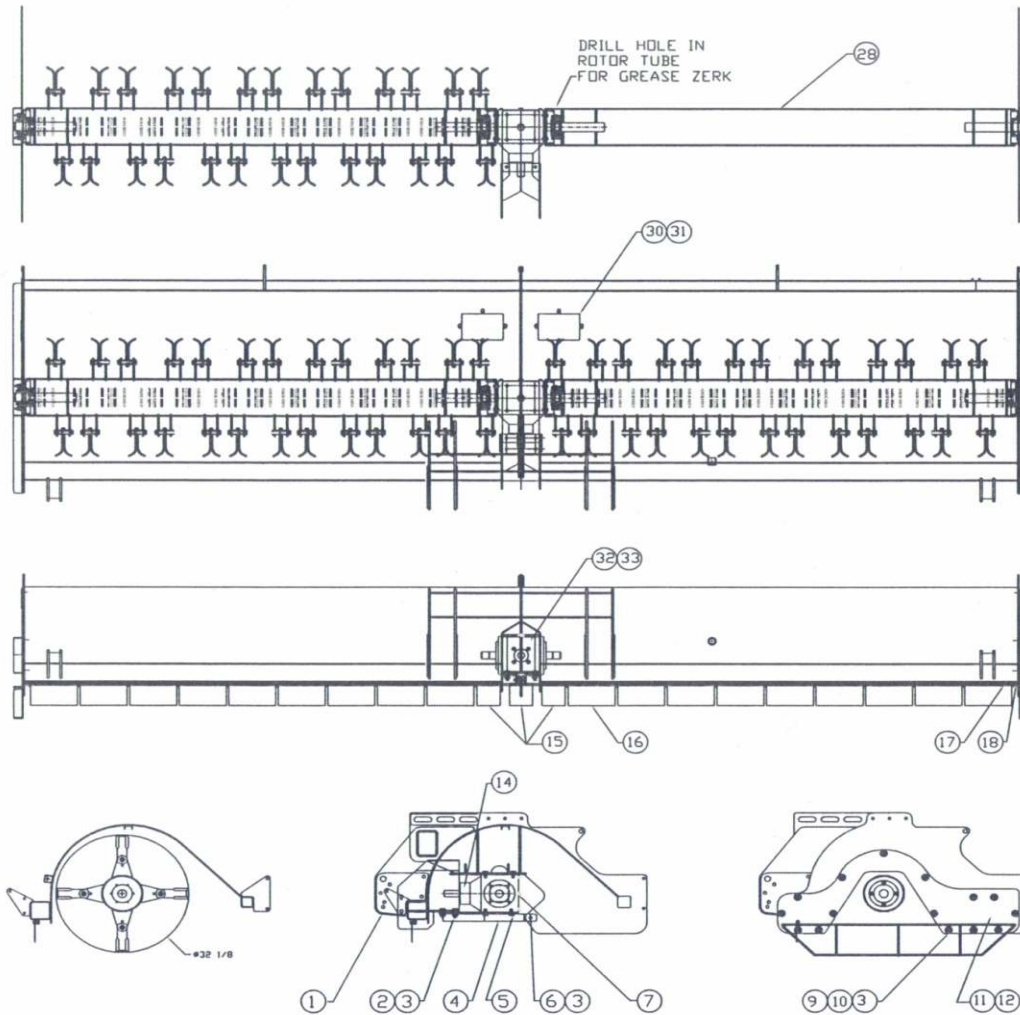
WHERE USED: DIRECT DRIVE SHREDDER
 TOL. UNLESS SPECIFIED: FAB .03 WELD .06 HOLES; PER STDS. MAN. #1 SHEET OF
BALZER INC. PHONE# (307) 427-3133
 180 MAY 80 EAST MOUNTAIN LAKE, MN 56509

OPER#	W/C	DESCRIPTION	PART NAME:	PART NO.
		ASSEMBLE AS SHOWN	SHREDDER 18' DIRECT DRIVE PULL TYPE	61307 DWG

20' Direct Drive Shredder



ECO#	REV.	NOTES	DATE	BY	APR
		RELEASED		GB	
5583		61287 WAS 61082 ADD (2) 2546 & 1291 ADD 627 60568 (4) 3032	12/99	GB	
3601		ADD 61415 DECAL DRAWING	2/00	GB	



34	1	61415	DECALS (SEE DRAWING)
33	4	3032	BOLT 10 X 20 MM
32	2	60568	GUARD GEARBOX
31	8	2082	NUT 3/8 WHIZLOCK
30	2	61209	COVER PLATE
29	2	61164	O RING FLEX COUPLER
28	2	61125	ROTOR ASSY. 20'
27	2	61089	GRASS RING (INNER)
26	12	61126	BOLT 3/8 SOC. HD. CAP
25	4	61124	SNAP RING (GEARBOX)
24	2	65010	FLEX SLEEVE COUPLER
23	2	65009	FLEX HUB COUPLER
22	8	2539	NUT 1/2 TOPLOCK
21	8	1096	BOLT CARRIAGE 1/2 X 1 3/4
20	2	61138	BEARING OUTER 2 3/16"
19	2	61087	GRASS RING OUTER
18	2	1850	PIN 1/8" X 1" LG.
17	2	24104	HINGE ROD 20' SHREDDER
16	18	28045	HINGING GUARD
15	3	28450	HINGING GUARD HALF
14	12	3136	BOLT 10 X 20 MM
12	1	61159	END PANEL L.H.
11	1	61158	END PANEL R.H.
10	30	1602	WASHER 5/8 FLAT
9	30	1120	BOLT CARRIAGE 5/8 X 1 1/2
8			
7	1	61131	GEARBOX
6	1	1295	BOLT 5/8 X 3' LG.
5	8	61160	BOLT 16 X 35 MM
4	1	61287	BOTTOM PLATE - GEARBOX
3	35	2546	NUT 5/8 TOPLOCK
2	4	1291	BOLT 5/8 X 2' LG
1	1	61150	SHREDDER HOUSING 20'
ITEM	QTY	COMPONENT #	DESCRIPTION

WHERE USED:

TOL. UNLESS SPECIFIED :	FAB .03	WELD .06	HOLES:	PER STDS. MAN. #1	SHEET OF
-------------------------	---------	----------	--------	-------------------	----------

BALZER INC. HIGHWAY 60 EAST MOUNTAIN LAKE, MN 56159 PHONE (507) 427-3153

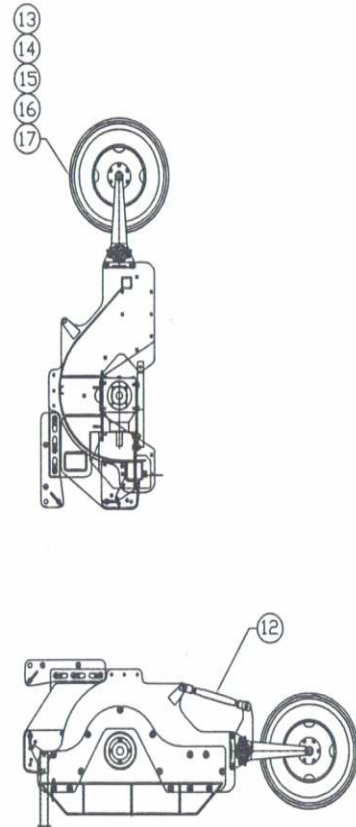
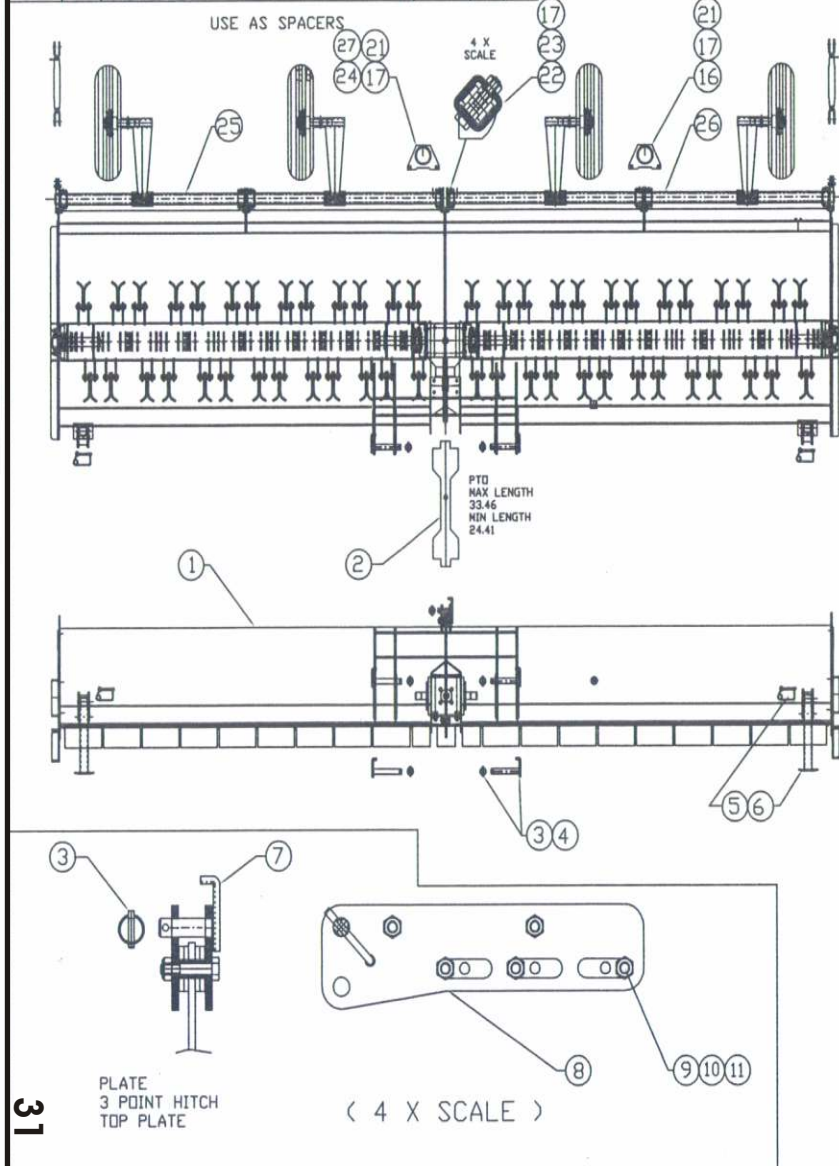
OPER#	W/C	DESCRIPTION
		ASSEMBLE AS SHOWN

PART NAME:	20' DIRECT DRIVE SHREDDER	PART NO.	61170 DWG
------------	---------------------------	----------	-----------

20' Direct Drive Full Mount Shredder



ECO#	REV.	NOTES	DATE	BY	APP
		RELEASED		GB	
3645		PART # 65671 WAS # 8125	08/01	TH	
3650		ELIMINATED PART # 24276, 1354 AND 1779	10/01	TH	



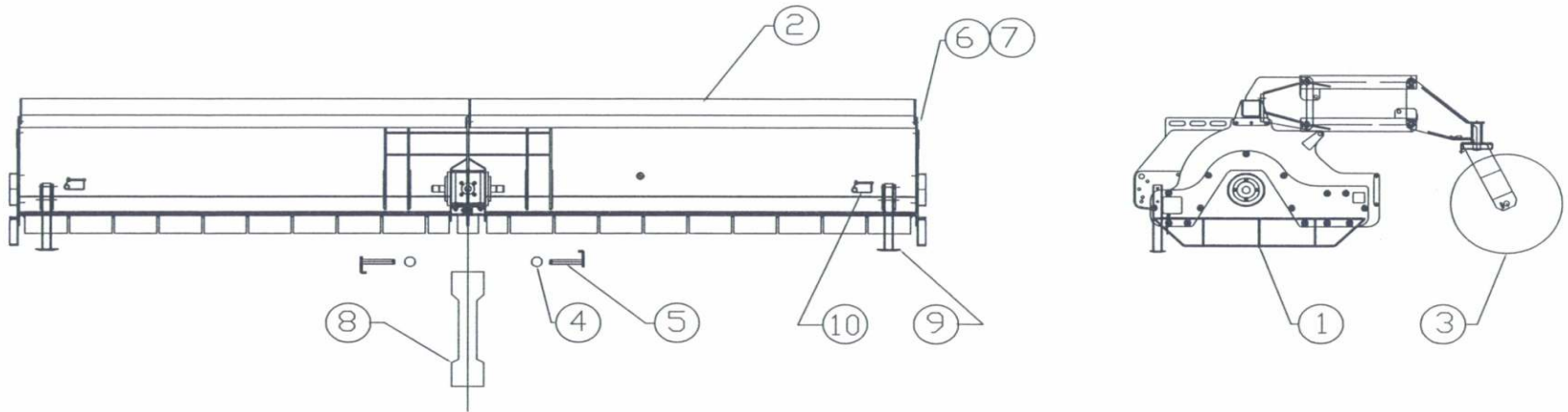
REF.	ITEM	QTY	COMPONENT #	DESCR PRT #
	27	4	1602	FLATWASHER 5/8
	26	1	24313	ROCKSHAFT 20' L.H.
	25	1	24312	ROCKSHAFT 20' R.H.
	24	2	1294	BOLT 5/8 X 2 3/4 LG.
	23	1	24301	BAR ROCKSHAFT SPLICE
	22	2	1298	BOLT 5/8 X 3 3/4 LG.
	21	8	24271	BEARING ROCKSHAFT
	17	30	2546	NUT 5/8 TOPLOCK
	16	24	1290	BOLT 5/8 X 1 3/4 LG.
	15	4	65671	WHEEL 15 X 8 6 BOLT
	14	4	70052	WHEEL MT. PLATE
	13	4	70080	WHEEL ARM ASSY.
REF.	12	2	12267	RATCHET JACK ASSY
	11	5	2593	NUT 3/4 TOPLOCK
	10	5	1318	BOLT 3/4 X 4' LG
	9	5	60567	SPACER (FULL MT. HITCH)
	8	2	61083	3 POINT HITCH PLATE
	7	1	61189	PIN 1 1/4 DIA. X 3.5 WK
	6	2	28476	STAND SHREDDER
	5	2	24384	PIN 1/2" SPRING SAFETY
	4	2	17299	PIN 1 7/16 8" WORKING
	3	3	2584	LYNCH PIN 7/16"
REF.	2	1	65072	PTO 1 3/4 SPLINE
OPTION	2	1	65071	PTO 1 3/8 SPLINE
	1	1	61170	20' DIRECT DRIVE SHREDDER
ITEM	QTY	COMPONENT #	DESCR PRT #	

WHERE USED:					
TOL. UNLESS SPECIFIED :	FAB .03	WELD .06	HOLES:	PER STDS. MAN. #1	SHEET OF
BALZER INC. HORNWAY RD EAST MOUNTAIN LAKE, MN 56120 PHONE# (507) 427-3133					
OPER#	W/C	DESCRIPTION	PART NAME:	PART NO.	
		ASSEMBLE AS SHOWN	20' DIRECT DRIVE SHREDDER (FULL MOUNT)	61201 DWG	

20' Direct Drive Semi Mount Shredder



ECO#	REV.	NOTES	DATE	BY	APR	PART#	61506
		RELEASED	9\00	GB			



REF.	QTY	COMPONENT #	DESCRIPTION
	11	AN 61509	SHIM TOP TUBE
	10	2 24384	PIN 1/2 SPRING SAFETY
	9	2 28476	STAND SHREDDER
OPTION	8	1 65072	PTO 1 3/4 SPLINE
	8	1 65071	PTO 1 3/8 SPLINE
	7	6 2546	NUT 5/8 TOPLOCK
	6	6 1290	BOLT 5/8 X 1 3/4 LG.
	5	2 17299	PIN 1 7/16 8" WORKING
	4	2 2584	LYNCH PIN 7/16
	3	2 61502	CASTER ARM
	2	1 61505	TOP TUBE 20' DIRECT DRIVE
	1	1 61170	SHREDDER 20 DIRECT DRIVE
ITEM	QTY	COMPONENT #	DESCRIPTION

WHERE USED:

TOL. UNLESS SPECIFIED :	FAB .03	WELD .06	HOLES;	PER STDS. MAN. #1	SHEET OF
-------------------------	---------	----------	--------	-------------------	----------

BALZER INC. HIGHWAY 60 EAST MOUNTAIN LAKE, MN 56159 PHONE# (507) 427-3133

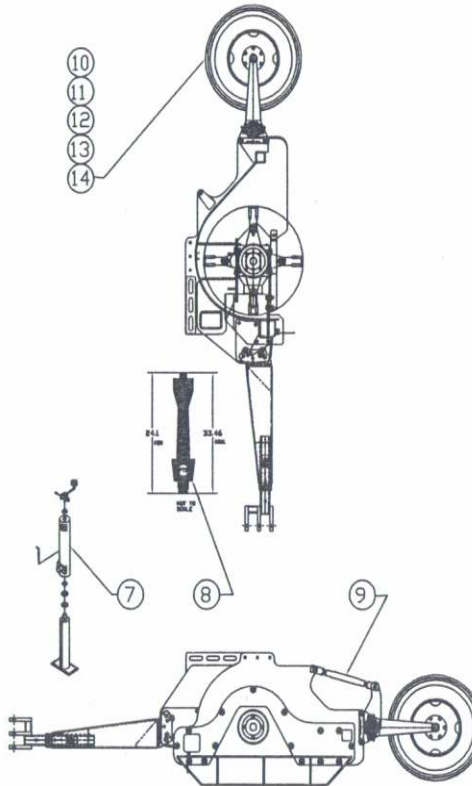
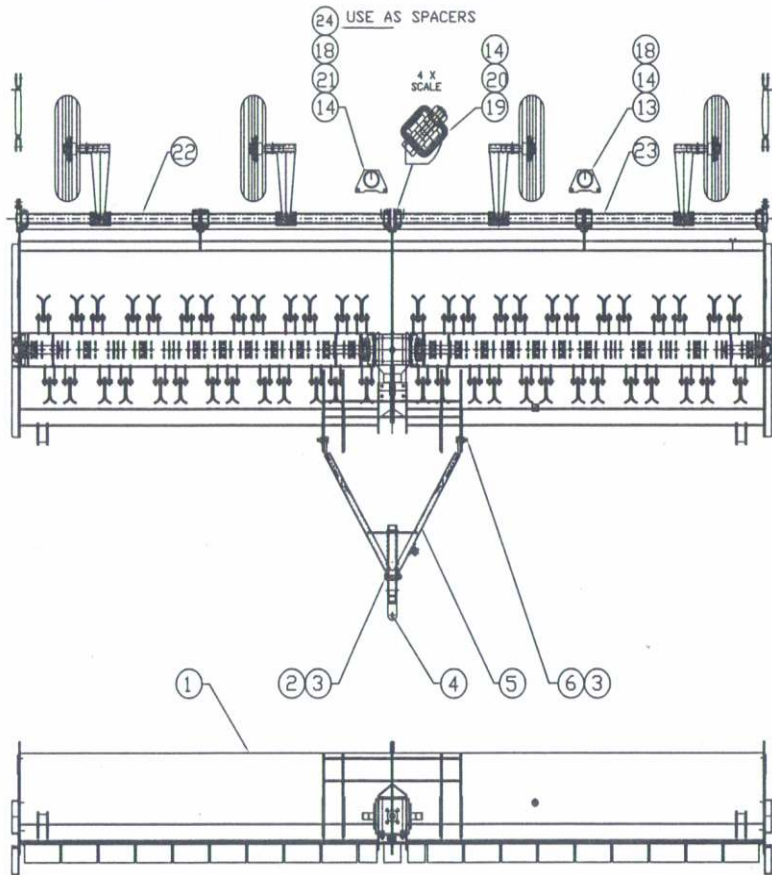
ASSEMBLE AS SHOWN	
OPER#	W/C
DESCRIPTION	

PART NAME:	SHREDDER DIRECT DRIVE SEMI MOUNT 20'	PART NO.	61506 DWG
------------	--------------------------------------	----------	-----------

20' Direct Drive Pull Type Shredder



ECO#	REV.	NOTES	DATE	BY	APP
		RELEASED		GB	
3645		PART # 65671 WAS # 8125	08/01	TH	
3650		ELIMINATED PART # 24276, 1354 AND 1779	10/01	TH	



REF.	QTY	COMPONENT #	DESCRIPTION
	24	4	1602 FLATWASHER 5/8
	23	1	24313 ROCKSHAFT L.H.
	22	1	24312 ROCKSHAFT R.H.
	21	2	1294 BOLT 5/8 X 2 3/4 LG.
	20	2	1298 BOLT 5/8 X 3 3/4 LG.
	19	1	24301 BAR ROCKSHAFT SPLICE
	18	8	24271 BEARING ROCKSHAFT
	14	30	2546 NUT 5/8 TOPLOCK
	13	24	1290 BOLT 5/8 X 1 3/4 LG.
	12	4	65671 WHEEL (15 X8 6 BOLTS)
	11	4	70052 MOUNTING ANGLE
	10	4	70080 WHEEL ARM ASSY.
	9	2	12267 RATCHET JACK
REF. OPTION	8	1	65074 1 3/4 PTO FOR PULL TYPE
	8	1	65073 1 3/8 PTO FOR PULL TYPE
	7	1	29566 JACK TOP WIND
	6	6	1313 BOLT 3/4 X 2 1/2 LG.
	5	1	60643 HITCH ADJUSTABLE
	4	1	60646 TONGUE ADJUSTABLE
	3	7	1697 NUT 3/4 TOPLOCK
	2	1	1320 BOLT 3/4 X 5 LG.
	1	1	61170 20' DIRECT DRIVE SHRED.
ITEM	QTY	COMPONENT #	DESCRIPTION

WHERE USED: DIRECT DRIVE SHREDDER			
TOL. UNLESS SPECIFIED:	FAB .03	WELD .06	Holes; PER STDS. MAN. #1 SHEET OF
PART NAME: SHREDDER 20' DIRECT DRIVE PULL TYPE		PART NO. 61163 DWG	

OPER#	W/C	DESCRIPTION
		ASSEMBLE AS SHOWN

24' Direct Drive Shredder



REV.	DATE	BY	APPR.	NOTES
3585	1/00	GB		RELEASED
3601	2/00	GB		61287 WAS 61082 ADD (2) 2546 & 1291 ADD (2) 3032
3655	11/01	TH		ADD 61415 DECAL DRAWING ADDED SHIMS NEAR INTERMEDIATE COUPLER

GEARBOX COUPLER

DETAILS 3 X SCALE

SHIM

INTERMEDIATE COUPLER

END PANEL BEARING

INTERMEDIATE BEARING PLATE

78

71 15/16

71 15/16

78

50 51

42

43

48 49

16

16

17

18

CUT TO SIZE

FURNISHED WITH COUPLER

CENTER PLATE

END PANEL

INTERMEDIATE PLATE

ITEM	QTY	COMPONENT #	DESCRIPTION
51	16	2082	NUT 3/8 WHIZLOCK
50	4	61209	COVER PLATE
49	4	3032	BOLT 10 X20 MM
48	2	60568	GUARD GEARBOX
47	2	15307	ADAPTER 1/4-28 M 1/8 FPT
46			
45	2	2285	ZERK 1/4-28 90 DEG
44	AR	60700-CHART	BUSHING ROTOR (SHIM)
43	2	61391	ROTOR (OUTSIDE)
42	2	61388	ROTOR (INSIDE)
41	2	24179	HOSE 30' LG
40	1	61415	DECALS (SEE DRAWING)
39	2	12333	COUPLER 1/8" NPT
38	1	61191	GREASE SHIELD L.H.
37	1	61192	GREASE SHIELD R.H.
36	4	2291	ZERK GREASE 1/8
35	2	70083	GRASS RING INTERMEDIATE
34	2	61186	BEARING PLATE INTERMEDIATE
33	8	2475	NUT 5/16 TOPLOCK
32	16	1597	FLATWASHER 5/16
31	8	1186	BOLT 5/16 X 1 1/4 LG.
30	16	1249	BOLT 1/2 X 1 1/4 LG.
29	2	61173	FLEX HUB (INTERMEDIATE
28	4	61164	O RING
27	2	61089	GRASS RING (INNER)
26	24	61126	BOLT 3/8 SOC.HD. CAP
25	4	61124	SNAP RING (GEARBOX)
24	4	65010	FLEX SLEEVE COUPLER
23	2	65009	FLEX HUB COUPLER
22	34	2539	NUT TOPLOCK 1/2"
21	16	1096	BOLT CARRIAGE 1/2X1 3/4
20	4	61138	BEARING RING 2 3/16"
19	2	61087	GRASS RING (OUTER)
18	2	1850	PIN 1/8" X 1" LG.
17	2	24499	HINGE ROD 24'
16	25	28045	HINGING GUARD
15			
14	8	3136	BOLT 10 X 20 MM
13			
12	1	61159	END PANEL L.H.
11	1	61158	END PANEL R.H.
10	30	1602	WASHER 5/8 FLAT
9	30	1120	BOLT CARRIAGE 5/8 X 1 1/2
8	2	2439	KEY .5 X .5 X 2.5
7	1	61131	GEARBOX
6	1	1295	BOLT 5/8 X 3" LG.
5	8	61160	BOLT 16 X 35 MM
4	1	61287	BOTTOM PLATE (GEARBOX)
3	35	2546	NUT 5/8 TOPLOCK
2	4	1291	BOLT 5/8 X 2" LG.
1	1	61380	HOUSING SHREDDER 24'

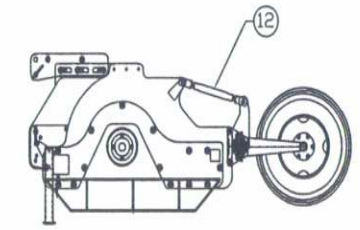
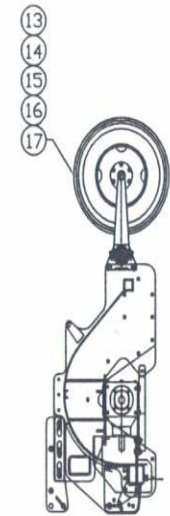
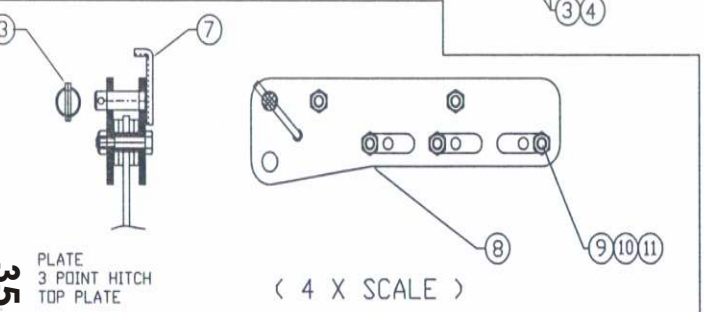
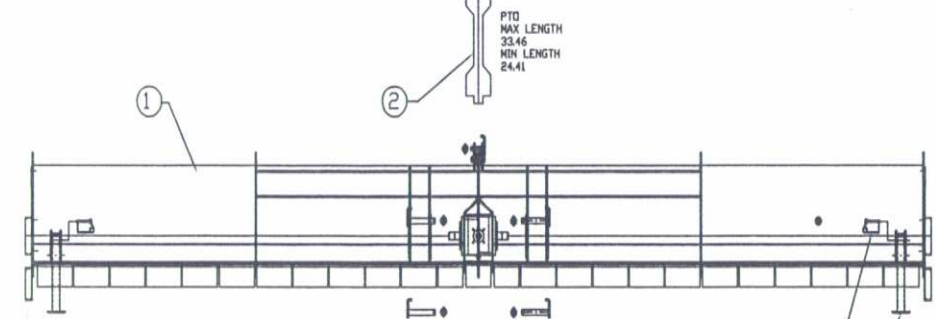
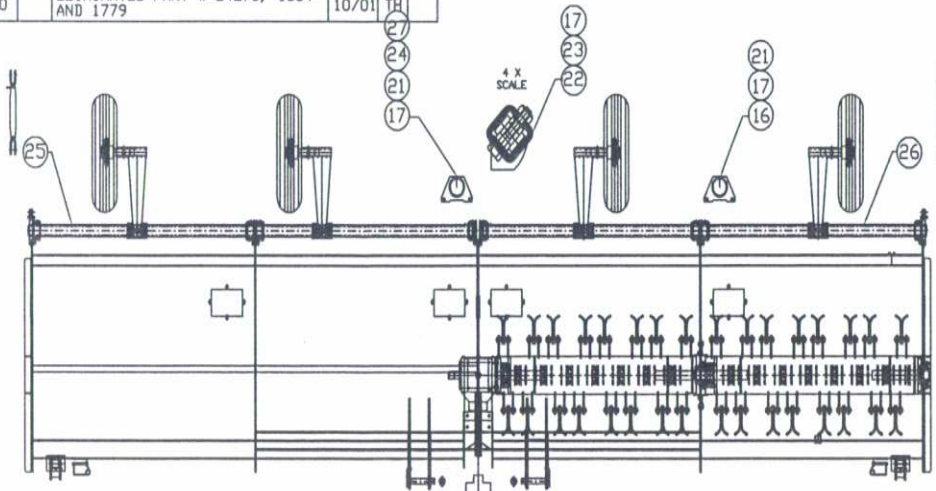
OPER#	W/C	DESCRIPTION

WHERE USED: 24' DIRECT DRIVE SHREDDER				
TOL. UNLESS SPECIFIED :	FAB .03	WELD .06	HOLES PER STDS.	SHEET OF
			MAN. #1	
		HERRINGTON RD EAST HERRINGTON LAKE, NY 3809		PHONE (507) 227-3533
ASSEMBLE AS SHOWN			PART NAME: 24' DIRECT DRIVE SHREDDER	PART NO. 61385 DWG

24' Direct Drive Full Mount Shredder



ECOP	REV.	NOTES	DATE	BY	APR
		RELEASED		GB	
3645		PART # 65671 WAS # 8125	08/01	TH	
3650		ELIMINATED PART # 24276, 1354 AND 1779	10/01	TH	



REF.	QTY	COMPONENT #	DESCRIPTION	
27	4	1602	FLATWASHER 5/8	
26	1	24497	ROCKSHAFT 24' L.H.	
25	1	24496	ROCKSHAFT 24' R.H.	
24	2	1294	BOLT 5/8 X 2 3/4 LG.	
23	1	24301	BAR ROCKSHAFT SPLICE	
22	2	1298	BOLT 5/8 X 3 3/4 LG.	
21	8	24271	BEARING ROCKSHAFT	
17	30	2546	NUT 5/8 TOPLOCK	
16	24	1290	BOLT 5/8 X 1 3/4 LG.	
15	4	65671	WHEEL 15 X 8 6 BOLT	
14	4	70052	WHEEL MT. PLATE	
13	4	70080	WHEEL ARM ASSY.	
REF.	2	12267	RATCHET JACK ASSY	
11	5	2593	NUT 3/4 TOPLOCK	
10	5	1318	BOLT 3/4 X 4' LG	
9	5	60567	SPACER < FULL MT. HITCH >	
8	2	61083	3 POINT HITCH PLATE	
7	1	61189	PIN 1 1/4 DIA. X 3.5 WK	
6	2	28476	STAND SHREDDER	
5	2	24384	PIN 1/2" SPRING SAFETY	
4	2	17299	PIN 1 7/16 8" WORKING	
3	3	2584	LYNCH PIN 7/16"	
REF.	2	1	65072	PTO 1 3/4 SPLINE
OPTION	2	1	65071	PTO 1 3/8 SPLINE
1	1	61385	24' DIRECT DRIVE SHREDDER	
ITEM	QTY	COMPONENT #	DESCRIPTION	

WHERE USED:					
TOL. UNLESS SPECIFIED:	FAB .03	WELD .06	HOLES:	PER STDS. MAN. #1	SHEET OF
BALZER INC. HIGHWAY 80 EAST MOUNTAIN LAKE, MN 55091 PHONE (507) 427-3533					
PART NAME:	24' DIRECT DRIVE SHREDDER (FULL MOUNT)			PART NO.	61393 DWG

35 PLATE 3 POINT HITCH TOP PLATE

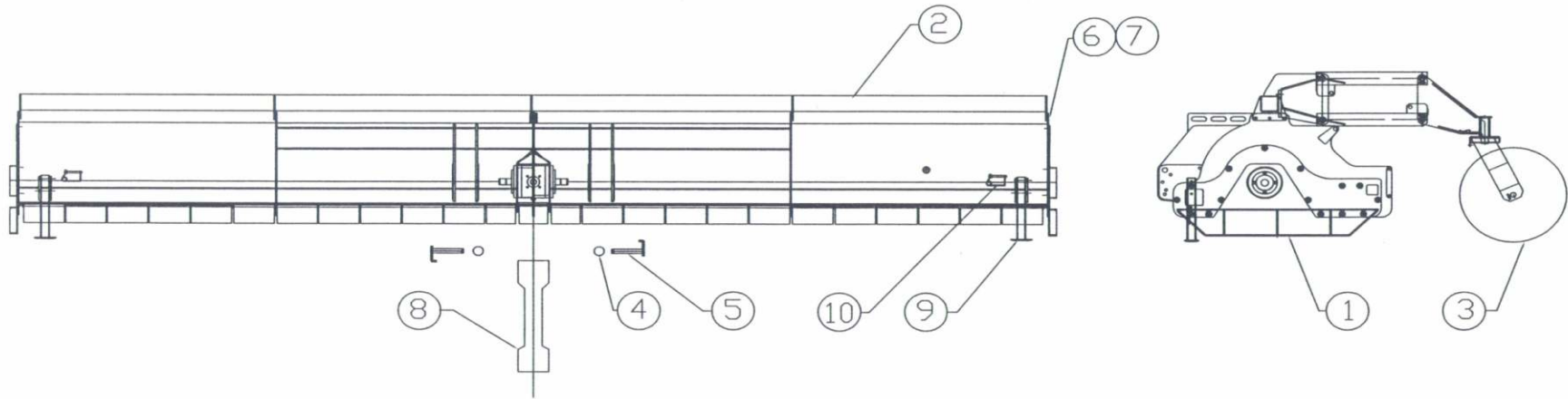
(4 X SCALE)

OPER#	W/C	DESCRIPTION
		ASSEMBLE AS SHOWN

24' Direct Drive Semi Mount Shredder



ECO#	REV.	NOTES	DATE	BY	APR	PART#	61510
		RELEASED	9\00	GB			



REF.	QTY	COMPONENT #	DESCRIPTION
	11	AN 61509	SHIM TOP TUBE
	10	2 24384	PIN 1/2 SPRING SAFETY
	9	2 28476	STAND SHREDDER
	8	1 65072	PTD 1 3/4 SPLINE
OPTION	8	1 65071	PTD 1 3/8 SPLINE
	7	10 2546	NUT 5/8 TOPLOCK
	6	10 1290	BOLT 5/8 X 1 3/4 LG.
	5	2 17299	PIN 1 7/16 8" WORKING
	4	2 2584	LYNCH PIN 7/16
	3	2 61502	CASTER ARM
	2	1 61508	TOP TUBE 24' DIRECT DRIVE
	1	1 61385	SHREDDER 24' DIRECT DRIVE
ITEM	QTY	COMPONENT #	DESCRIPTION

WHERE USED:
 TOL. UNLESS SPECIFIED : FAB .03 WELD .06 HOLES; PER STDS. MAN. #1 SHEET OF
BALZER INC. HIGHWAY 60 EAST MOUNTAIN LAKE, MN 56159 PHONE# (507) 427-3133

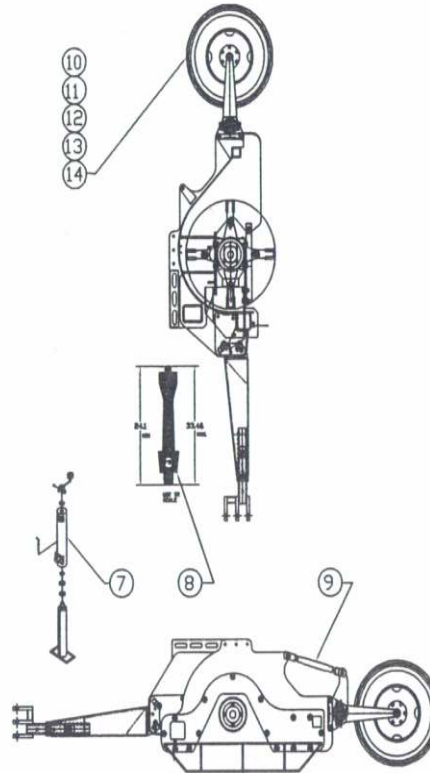
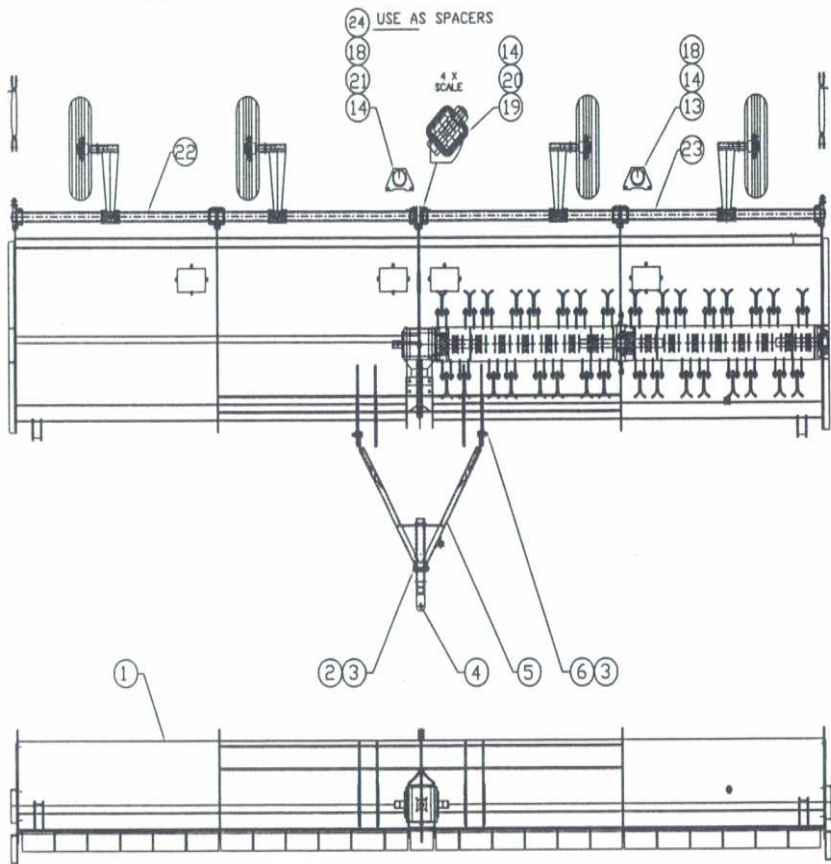
		ASSEMBLE AS SHOWN
OPER#	W/C	DESCRIPTION

PART NAME: SHREDDER DIRECT DRIVE SEMI MOUNT 24'
 PART NO. 61510 DWG

24' Direct Drive Pull Type Shredder



ECOP	REV.	NOTES	DATE	BY	APPR
		RELEASED	2/00	GB	
3645		PART # 65671 WAS # 8125	08/01	TH	
3650		ELIMINATED PART # 24276, 1354 AND 1779	10/01	TH	



24	4	1602	FLATWASHER 5/8
23	1	24497	ROCKSHAFT L.H.
22	1	24496	ROCKSHAFT R.H.
21	2	1294	BOLT 5/8 X 2 3/4' LG.
20	2	1298	BOLT 5/8 X 3 3/4' LG.
19	1	24301	BAR ROCKSHAFT SPLICE
18	8	24271	BEARING ROCKSHAFT
14	30	2546	NUT 5/8 TOPLOCK
13	24	1290	BOLT 5/8 X 1 3/4' LG.
12	4	65671	WHEEL (15 X8 6 BOLTS)
11	4	70052	MOUNTING ANGLE
10	4	70080	WHEEL ARM ASSY.
REF.	9	1	12267 RATCHET JACK
REF.	8	1	65074 1 3/4 PTD FOR PULL TYPE
OPTION	8	1	65073 1 3/8 PTD FOR PULL TYPE
7	1	29566	JACK TOP WIND
6	6	1313	BOLT 3/4 X 2 1/2 LG.
5	1	60643	HITCH ADJUSTABLE
4	1	60646	TONGUE ADJUSTABLE
3	7	1697	NUT 3/4 TOPLOCK
2	1	1320	BOLT 3/4' X 5 LG.
1	1	61385	24' DIRECT DRIVE SHRED.
ITEM	QTY	COMPONENT #	DESCRIPTION

WHERE USED: DIRECT DRIVE SHREDDER

TOL. UNLESS SPECIFIED: FAB .03 WELD .06 HOLES: PER STDS. MAN. #1 SHEET OF

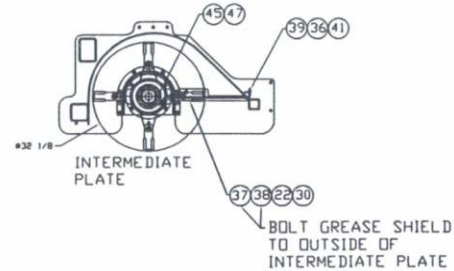
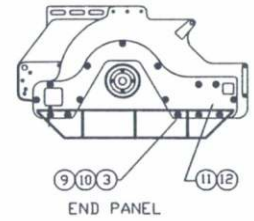
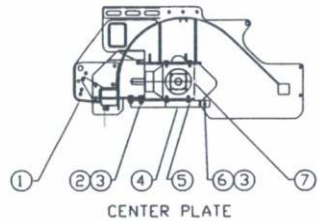
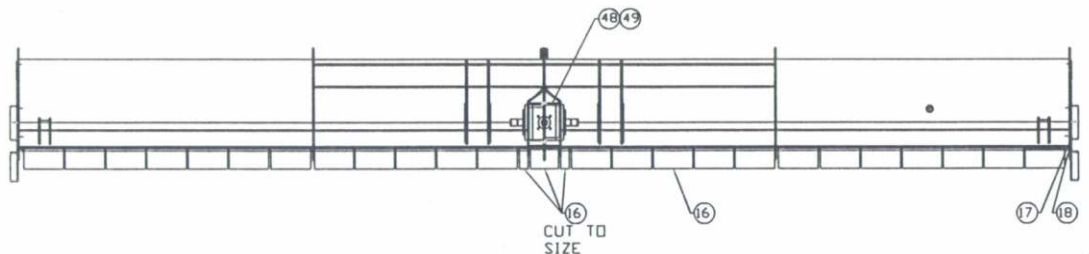
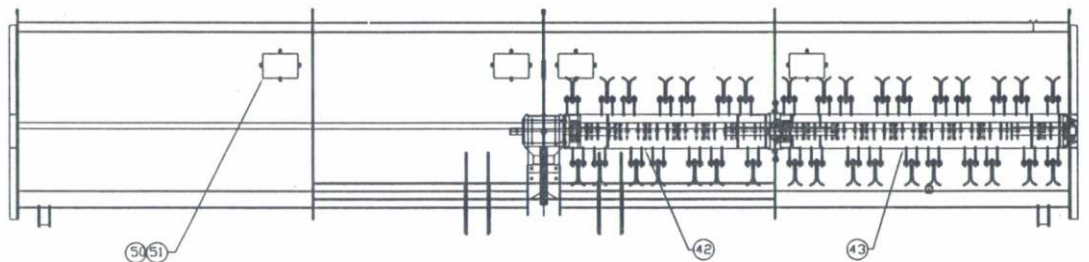
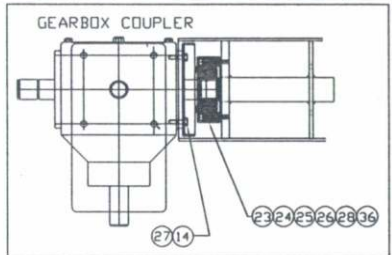
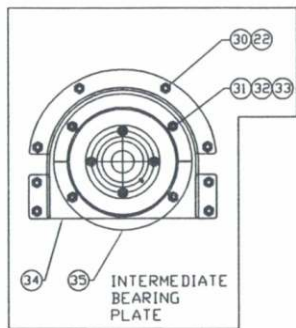
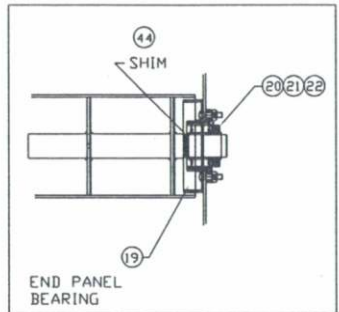
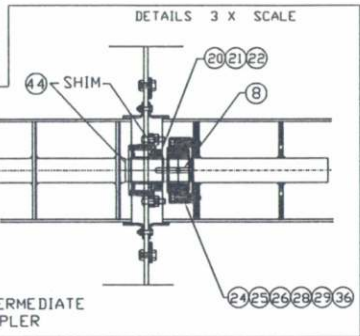
BALZER INC. HIGHWAY 80 EAST MOUNTAIN LAKE, MN 55089 PHONE# (207) 427-3033

OPER#	W/C	DESCRIPTION	PART NAME:	PART NO.
		ASSEMBLE AS SHOWN	SHREDDER 24' DIRECT DRIVE PULL TYPE	61392 DWG

25' Direct Drive Shredder



REV.	NOTES	DATE	BY	APP.
0585	61287 WAS 61082 ADD (2) 2546 & 1291 ADD (2) 60568 (4) 3032	1/00	GB	
0601	ADD 61415 DECAL DRAWING	2/00	GB	
0655	ADDED SHIMS NEAR INTERMEDIATE COUPLER	11/01	TH	



51	16	2082	NUT 3/8 WHIZLOCK
50	4	61209	COVER PLATE
49	4	3032	BOLT 10 X20 MM
48	2	60568	GUARD GEARBOX
47	2	15307	ADAPTER 1/4-28 M 1/8 FPT
46			
45	2	2285	ZERK 1/4-28 90 DEG
44	AR	60700-CHART	BUSHING ROTOR (SHIM)
43	2	61212	ROTOR (OUTSIDE)
42	2	61213	ROTOR (INSIDE)
41	2	24179	HOSE 30" LG
40	1	61415	DECALS (SEE DRAWING)
39	2	12333	COUPLER 1/8 " NPT
38	1	61191	GREASE SHIELD L.H.
37	1	61192	GREASE SHIELD R.H.
36	4	2291	ZERK GREASE 1/8
35	2	70083	GRASS RING INTERMEDIATE
34	2	61186	BEARING PLATE INTERMEDIATE
33	8	2475	NUT 5/16 TOPLOCK
32	16	1597	FLATWASHER 5/16
31	8	1186	BOLT 5/16 X 1 1/4 LG.
30	16	1249	BOLT 1/2 X 1 1/4 LG.
29	2	61173	FLEX HUB (INTERMEDIATE)
28	4	61164	O RING
27	2	61089	GRASS RING (INNER)
26	24	61126	BOLT 3/8 SOCD.HD. CAP
25	4	61124	SNAP RING (GEARBOX)
24	4	65010	FLEX SLEEVE COUPLER
23	2	65009	FLEX HUB COUPLER
22	34	2539	NUT TOPLOCK 1/2"
21	16	1096	BOLT CARRIAGE 1/2X1 3/4
20	4	61138	BEARING 2 3/16"
19	2	61087	GRASS RING (OUTER)
18	2	1850	PIN 1/8" X 1" LG.
17	2	31555	HINGE ROD 25'
16	25	28045	HINGING GUARD
15			
14	8	3136	BOLT 10 X 20 MM
13			
12	1	61159	END PANEL L.H.
11	1	61158	END PANEL R.H.
10	30	1602	WASHER 5/8 FLAT
9	30	1120	BOLT CARRIAGE 5/8 X 1 1/2
8	2	2439	KEY .5 X .5 X 2.5
7	1	61131	GEARBOX
6	1	1295	BOLT 5/8 X 3" LG.
5	8	61160	BOLT 16 X 35 MM
4	1	61287	BOTTOM PLATE (GEARBOX)
3	35	2546	NUT 5/8 TOPLOCK
2	4	1291	BOLT 5/8 X 2" LG.
1	1	61205	HOUSING SHREDDER 25'

WHERE USED:	25' DIRECT DRIVE SHREDDER			
TOL. UNLESS SPECIFIED:	FAB .03	WELD .06	HOLE: PER STDS.	SHEET OF
			MAN. #1	
	BALZER INC.		PHENIX	(307) 437-3133
	25' DIRECT DRIVE SHREDDER		PART NO. 61210 DWG	

OPER	W/C	DESCRIPTION
		ASSEMBLE AS SHOWN

25' Direct Drive Full Mount Shredder



ECO#	REV.	NOTES	DATE	BY	APP
		RELEASED		GB	
3645		PART # 65671 WAS # 8125	08/01	TH	
3647		PART # 65552 WAS # 65072 PART # 65553 WAS # 65071	09/01	TH	
3650		ELIMINATED PART # 24276, 1354 AND 1779	10/01	TH	

PTO
MAX LENGTH
33.46
MIN LENGTH
24.41

PLATE
3 POINT HITCH
TOP PLATE

(4 X SCALE)

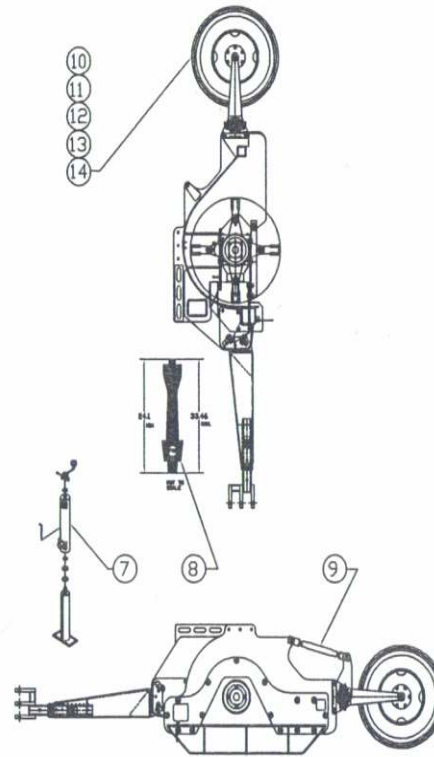
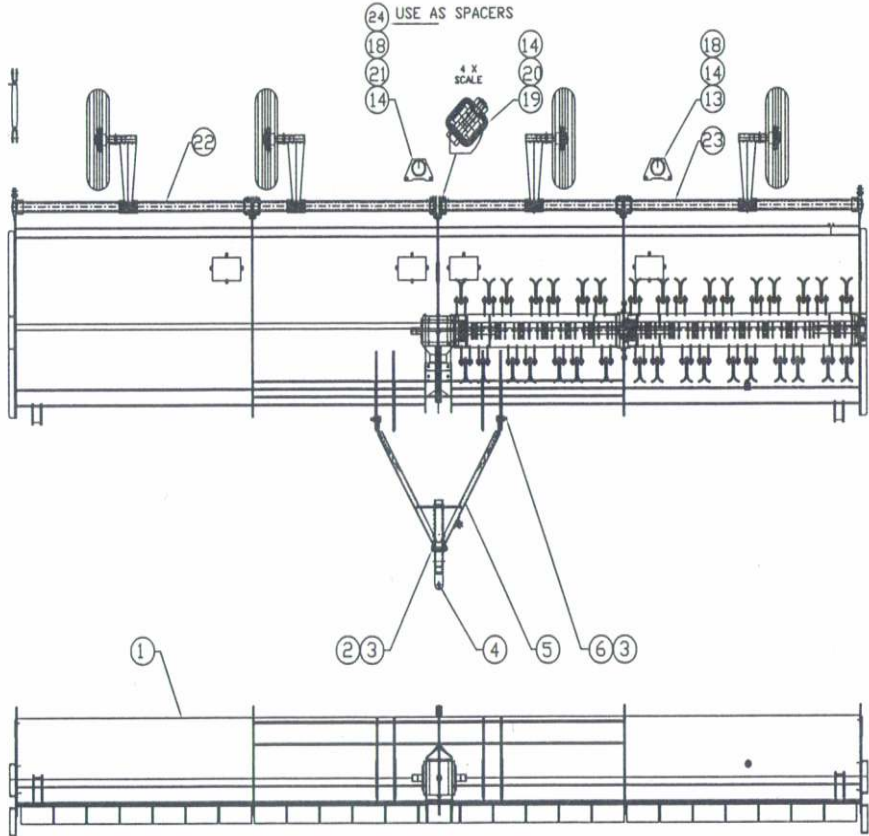
REF.	ITEM	QTY	COMPONENT #	DESCRIPTION
	27	4	1602	FLATWASHER 5/8
	26	1	28151	ROCKSHAFT 25' L.H.
	25	1	28152	ROCKSHAFT 25' R.H.
	24	2	1294	BOLT 5/8 X 2 3/4 LG.
	23	1	24301	BAR ROCKSHAFT SPLICE
	22	2	1298	BOLT 5/8 X 3 3/4 LG.
	21	8	24271	BEARING ROCKSHAFT
	17	30	2546	NUT 5/8 TOPLOCK
	16	24	1290	BOLT 5/8 X 1 3/4 LG.
	15	4	65671	WHEEL 15 X 8 6 BOLT
	14	4	70052	WHEEL MT. PLATE
	13	4	70080	WHEEL ARM ASSY.
REF.	12	2	12267	RATCHET JACK ASSY
	11	5	2593	NUT 3/4 TOPLOCK
	10	5	1318	BOLT 3/4 X 4' LG.
	9	5	60567	SPACER (FULL MT. HITCH)
	8	2	61083	3 POINT HITCH PLATE
	7	1	61189	PIN 1 1/4 DIA. X 3.5 WK
	6	2	28476	STAND SHREDDER
	5	2	24384	PIN 1/2" SPRING SAFETY
	4	2	17299	PIN 1 7/16 8" WORKING
	3	3	2584	LYNCH PIN 7/16"
REF.	2	1	65552	H.D. PTO 1 3/4 SPLINE
OPTION	2	1	65553	H.D. PTO 1 3/8 SPLINE
	1	1	61210	25' DIRECT DRIVE SHREDDER

WHERE USED:					
TOL. UNLESS SPECIFIED :	FAB .03	WELD .06	HOLES:	PER STDS. MAN. #1	SHEET OF
BALZER INC. HIGHWAY 80 EAST MOUNTAIN LAKE, IN 46039 PHONE (307) 427-3153					
ASSEMBLE AS SHOWN				PART NAME:	PART NO.
				25' DIRECT DRIVE SHREDDER (FULL MOUNT)	61221 DWG
OPER#	W/C	DESCRIPTION			

25' Direct Drive Pull Type Shredder



ECO#	REV.	NOTES	DATE	BY	APR
		RELEASED		GB	
3645		PART # 65671 WAS # 8125	08/01	TH	
3647		PART # 65554 WAS # 65074 PART # 65555 WAS # 65073	09/01	TH	
3650		ELIMINATED PART # 24276, 1354 AND 1779	10/01	TH	



REF.	QTY	COMPONENT #	DESCRIPTION
24	4	1602	FLATWASHER 5/8
23	1	28151	ROCKSHAFT L.H.
22	1	28152	ROCKSHAFT R.H.
21	2	1294	BOLT 5/8 X 2 3/4" LG.
20	2	1298	BOLT 5/8 X 3 3/4" LG.
19	1	24301	BAR ROCKSHAFT SPLICE
18	8	24271	BEARING ROCKSHAFT
14	30	2546	NUT 5/8 TOPLOCK
13	24	1290	BOLT 5/8 X 1 3/4" LG.
12	4	65671	WHEEL (15 X 8 6 BOLTS)
11	4	70052	MOUNTING ANGLE
10	4	70080	WHEEL ARM ASSY.
REF.	9	12267	RATCHET JACK
REF.	8	1	65554 1 3/4 H.D. PTD FOR PULL TYPE
OPTION	8	1	65555 1 3/8 H.D. PTD FOR PULL TYPE
	7	1	29566 JACK TOP WIND
	6	6	1313 BOLT 3/4 X 2 1/2 LG.
	5	1	60643 HITCH ADJUSTABLE
	4	1	60646 TONGUE ADJUSTABLE
	3	7	1697 NUT 3/4 TOPLOCK
	2	1	1320 BOLT 3/4" X 5 LG.
	1	1	61210 25' DIRECT DRIVE SHRED.
ITEM	QTY	COMPONENT #	DESCRIPTION

WHERE USED:	DIRECT DRIVE SHREDDER				
TOL UNLESS SPECIFIED :	FAB .03	WELD .06	HOLES:	PER STDS.	SHEET
				MAN #1	OF

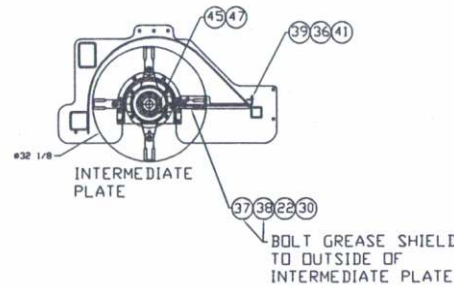
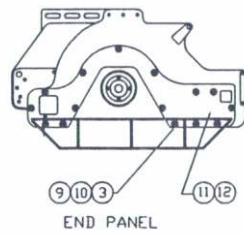
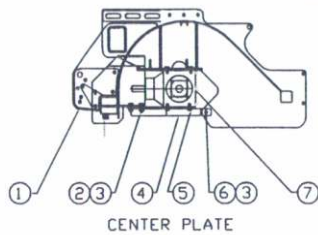
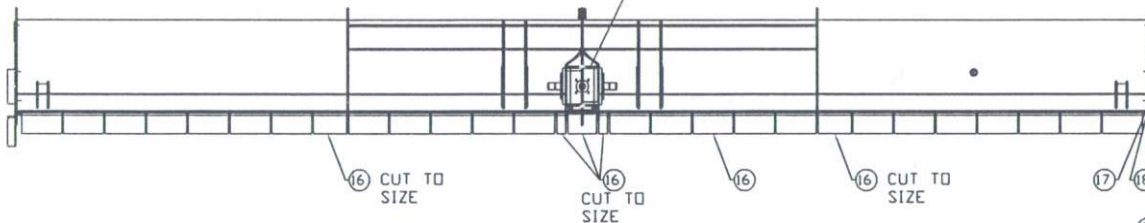
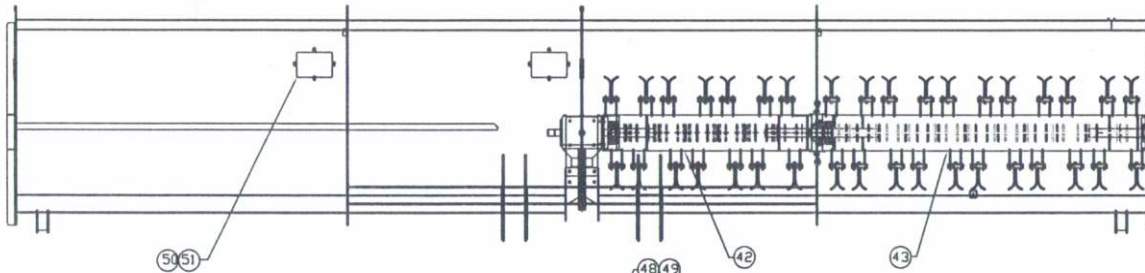
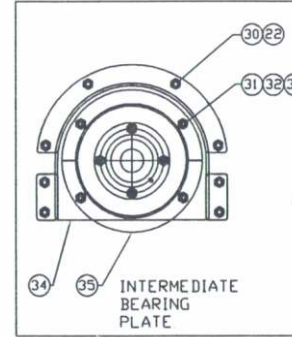
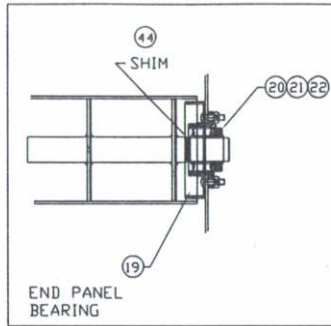
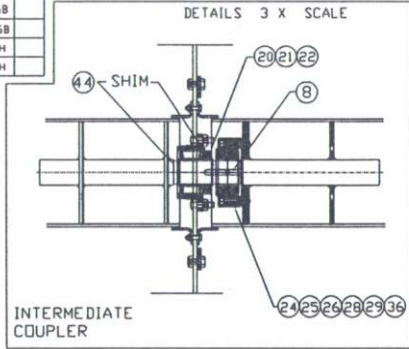
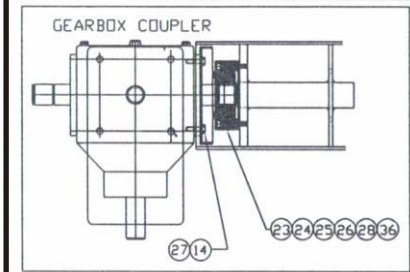
BALZER INC. HIGHWAY 80 EAST, HIGHWAY LAKE, MN 56559 PHONE# (807) 427-3333

OPER#	W/C	DESCRIPTION	PART NAME:	PART NO.
		ASSEMBLE AS SHOWN	SHREDDER 25' DIRECT DRIVE PULL TYPE	61220 DWG

26 1/2' Direct Drive Shredder



REV.	DATE	BY	APPR.	NOTES
				RELEASED
3595	1/00	GB		61207 WAS 61082 ADD (2) 2546 & 1291 ADD (2) 60568 (4) 3032
3601	2/00	GB		ADD: 61415 DECAL DRAWING
3634	04/01	TH		MOVED INT. BEARING PLATE TOWARDS CENTER
3655	11/01	TH		ADDED SHIMS NEAR INTERMEDIATE COUPLER



51	16	2082	NUT 3/8 WHIZLOCK
50	4	61209	COVER PLATE
49	4	3032	BOLT 10 X20 MM
48	2	60568	GUARD GEARBOX
47	2	15307	ADAPTER 1/4-28 M 1/8 FPT
46			
45	2	2285	ZERK 1/4-28 90 DEG
44	AR	60700-CHART	BUSHING ROTOR (SHIM)
43	2	61184	ROTOR (OUTSIDE)
42	2	61213	ROTOR (INSIDE)
41	2	24179	HOSE 30" LG
40	1	61415	DECALS (SEE DRAWING)
39	2	12333	COUPLER 1/8 " NPT
38	1	61191	GREASE SHIELD L.H.
37	1	61192	GREASE SHIELD R.H.
36	4	2291	ZERK GREASE 1/8
35	2	70083	GRASS RING INTERMEDIATE
34	2	61186	BEARING PLATE INTERMEDIATE
33	8	2475	NUT 5/16 TOPLOCK
32	16	1597	FLATWASHER 5/16
31	8	1186	BOLT 5/16 X 1 1/4 LG.
30	16	1249	BOLT 1/2 X 1 1/4 LG.
29	2	61173	FLEX HUB (INTERMEDIATE)
28	4	61164	O RING
27	2	61089	GRASS RING (INNER)
26	24	61126	BOLT 3/8 SOC.HD. CAP
25	4	61124	SNAP RING (GEARBOX)
24	4	65010	FLEX SLEEVE COUPLER
23	2	65009	FLEX HUB COUPLER
22	34	2539	NUT TOPLOCK 1/2"
21	16	1096	BOLT CARRIAGE 1/2X1 3/4
20	4	61138	BEARING 2 3/16"
19	2	61087	GRASS RING (OUTER)
18	2	1850	PIN 1/8" X 1" LG.
17	2	31555	HINGE ROD 25'
16	27	28045	HINGING GUARD
15			
14	8	3136	BOLT 10 X 20 MM
13			
12	1	61159	END PANEL L.H.
11	1	61158	END PANEL R.H.
10	30	1602	WASHER 5/8 FLAT
9	30	1120	BOLT CARRIAGE 5/8 X 1 1/2
8	2	2439	KEY .5 X .5 X 2.5
7	1	61131	GEARBOX
6	1	1295	BOLT 5/8 X 3" LG.
5	8	61160	BOLT 16 X 35 MM
4	1	61287	BOTTOM PLATE (GEARBOX)
3	35	2546	NUT 5/8 TOPLOCK
2	4	1291	BOLT 5/8 X 2" LG.
1	1	61169	HOUSING SHREDDER 26 1/2'
ITEM	QTY	COMPONENT #	DESCRIPTION

WHERE USED:			
TOL. UNLESS SPECIFIED :	FAB .03	WELD .06	HOLES: PER STDS. MAIN #1
HIGHWAY 90 EAST MCINTYRE LAKE, MN 55088 PHONE (507) 427-3133			
ASSEMBLE AS SHOWN		PART NAME: 26 1/2' DIRECT DRIVE SHREDDER	PART NO. 61190.DWG
OPER#	W/C	DESCRIPTION	

26 1/2' Direct Drive Full Mount Shredder



ECOP	REV.	NOTES	DATE	BY	APPR
		RELEASED			GB
3630		PART # 65552 WAS 65072 PART # 65553 WAS 65071	01/01	TH	
3634		PART # 65621 WAS 28185 PART # 65620 WAS 28184	04/01	TH	
3645		PART # 65671 WAS # 8125	08/01	TH	
3650		ELIMINATED PART # 24276, 1354 AND 1779	10/01	TH	

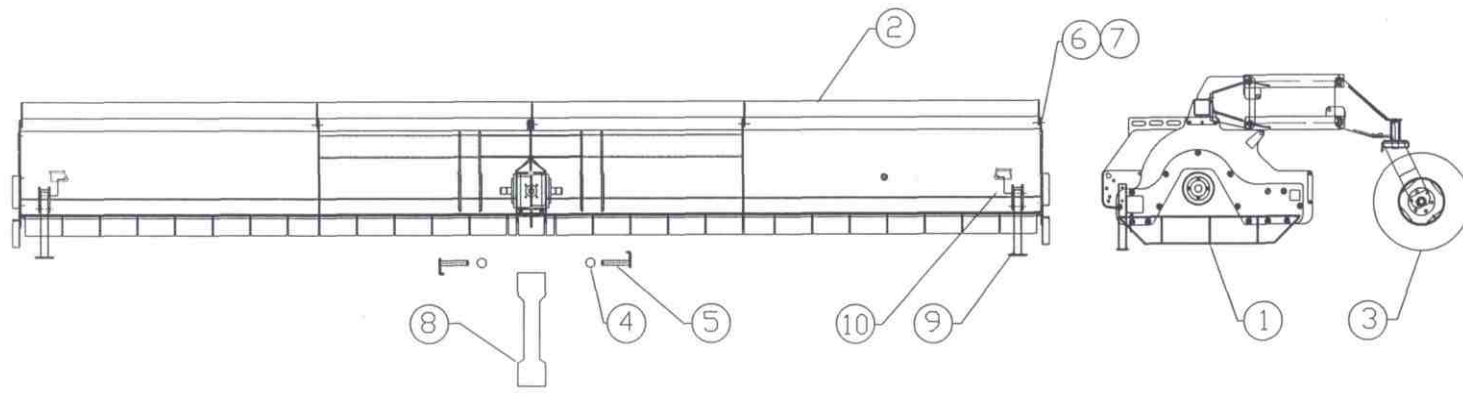
REF.	ITEM	QTY	COMPONENT #	DESCRIPTION
	27	4	1602	FLATWASHER 5/8
	26	1	65621	ROCKSHAFT 26.5' L.H.
	25	1	65620	ROCKSHAFT 26.5' R.H.
	24	2	1294	BOLT 5/8 X 2 3/4 LG.
	23	1	24301	BAR ROCKSHAFT SPLICE
	22	2	1298	BOLT 5/8 X 3 3/4 LG.
	21	8	24271	BEARING ROCKSHAFT
	17	30	2546	NUT 5/8 TOPLOCK
	16	24	1290	BOLT 5/8 X 1 3/4 LG.
	15	4	65671	WHEEL 15 X 8 6 BOLT
	14	4	70052	WHEEL MT. PLATE
	13	4	70080	WHEEL ARM ASSY.
	12	2	12267	RATCHET JACK ASSY
	11	5	2593	NUT 3/4 TOPLOCK
	10	5	1318	BOLT 3/4 X 4' LG
	9	5	60567	SPACER (FULL MT. HITCH)
	8	2	61083	3 POINT HITCH PLATE
	7	1	61189	PIN 1 1/4 DIA. X 3.5 WK
	6	2	28476	STAND SHREDDER
	5	2	24384	PIN 1/2" SPRING SAFETY
	4	2	17299	PIN 1 7/16 8" WORKING
	3	3	2584	LYNCH PIN 7/16'
	2	1	65552	PTO 1 3/4 SPLINE HEAVY DUTY
	2	1	65553	PTO 1 3/8 SPLINE HEAVY DUTY
	1	1	61190	26.5' DIRECT DRIVE SHREDDER

WHERE USED:					
TOL. UNLESS SPECIFIED :	FAB .03	WELD .06	HOLES:	PER STDS. MAN. #1	SHEET OF
<small>HIGHWAY 80 EAST MOUNTAIN LAKE, NY 10858 PHONE (507) 427-3133</small>					
ASSEMBLE AS SHOWN			PART NAME: 26.5' DIRECT DRIVE SHREDDER (FULL MOUNT)		PART NO. 61200 DWG
OPER#	W/C	DESCRIPTION			

26 1/2' Direct Drive Semi Mount Shredder



ECO#	REV.	NOTES	DATE	BY	APR	PART#
		RELEASED	9\00	GB		61503
3630		PART # 65552 WAS 65072 PART # 65553 WAS 65071	01/01	TH		
3634		MOVED INT. BEARING PLATES TOWARDS CENTER. ILL CHANGE ONLY	04/01	TH		



OPTION

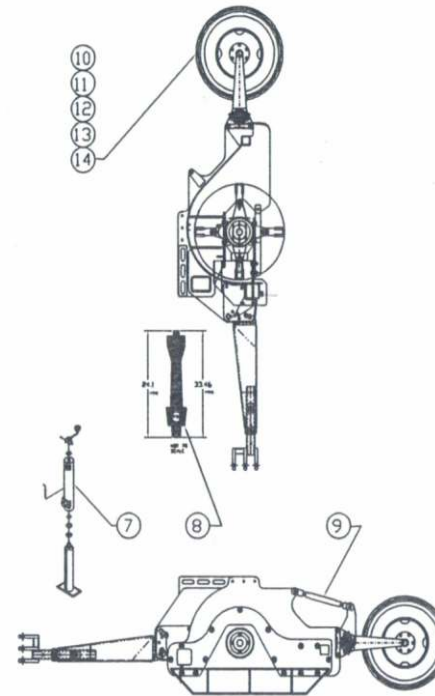
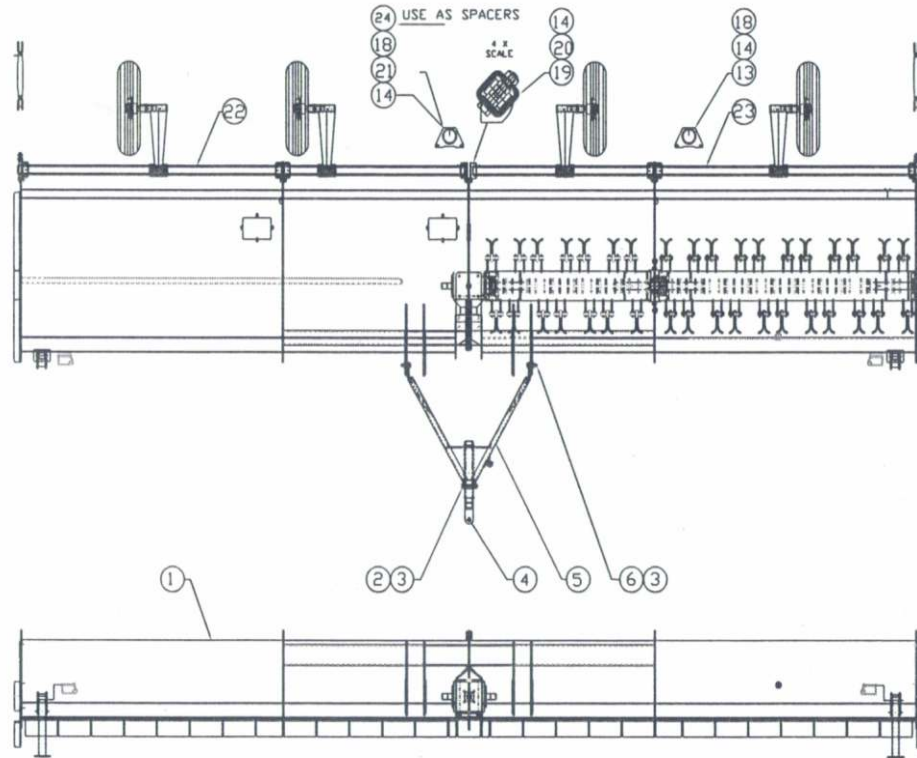
ITEM	QTY	COMPONENT #	DESCRIPTION
11	AN	61509	SHIM TOP TUBE
10	2	24384	PIN 1/2 SPRING SAFETY
9	2	28476	STAND SHREDDER
8	1	65552	PTD 1 3/4 SPLINE HEAVY DUTY
8	1	65553	PTD 1 3/8 SPLINE HEAVY DUTY
7	15	2546	NUT 5/8 TOPLOCK
6	15	1290	BOLT 5/8 X 1 3/4 LG.
5	2	17299	PIN 1 7/16 8" WORKING
4	2	2584	LYNCH PIN 7/16
3	2	61502	CASTER ARM
2	1	65325	TOP TUBE 26.5 DIRECT DRIVE
1	1	61190	SHREDDER 26.5 DIRECT DRIVE

WHERE USED:					
TOL. UNLESS SPECIFIED :	FAB .03	WELD .06	HOLES;	PER STDS. MAN. #1	SHEET OF
ASSEMBLE AS SHOWN			BALZER INC. HIGHWAY 60 EAST MOUNTAIN LAKE, MN 56159 PHONE# (507) 427-3133		
OPER#	W/C	DESCRIPTION	PART NAME:	PART NO. 61503 DWG	
			SHREDDER DIRECT DRIVE SEMI MOUNT 26.5		

26 1/2' Direct Drive Pull Type Shredder



ECOM	REV.	NOTES	DATE	BY	APR
3630		RELEASED		GB	
3630		PART # 65554 WAS 65074 PART # 65555 WAS 65073	01/01	TH	
3634		PART # 65621 WAS 28185 PART # 65620 WAS 28184	04/01	TH	
3645		PART # 65671 WAS # 8125	08/01	TH	
3650		ELIMINATED PART # 24276, 1354 AND 1779	10/01	TH	



ITEM	QTY	COMPONENT #	DESCRIPTION
24	4	1602	FLATWASHER 5/8
23	1	65621	ROCKSHAFT L.H.
22	1	65620	ROCKSHAFT R.H.
21	2	1294	BOLT 5/8 X 2 3/4" LG.
20	2	1298	BOLT 5/8 X 3 3/4" LG.
19	1	24301	BAR ROCKSHAFT SPLICE
18	8	24271	BEARING ROCKSHAFT
14	30	2546	NUT 5/8 TOPLOCK
13	24	1290	BOLT 5/8 X 1 3/4 LG.
12	4	65671	WHEEL (15 X8 X 6 BOLTS)
11	4	70052	MOUNTING ANGLE
10	4	70080	WHEEL ARM ASSY.
9	1	12267	RATCHET JACK
8	1	65554	1 3/4 PTD H.D. PULL-TYPE
8	1	65555	1 3/8 PTD H.D. PULL-TYPE
7	1	29566	JACK TOP WIND
6	6	1313	BOLT 3/4 X 2 1/2 LG.
5	1	60643	HITCH ADJUSTABLE
4	1	60646	TONGUE ADJUSTABLE
3	7	1697	NUT 3/4 TOPLOCK
2	1	1320	BOLT 3/4" X 5 LG.
1	1	61190	26.5' DIRECT DRIVE SHRED.

REF. OPTION

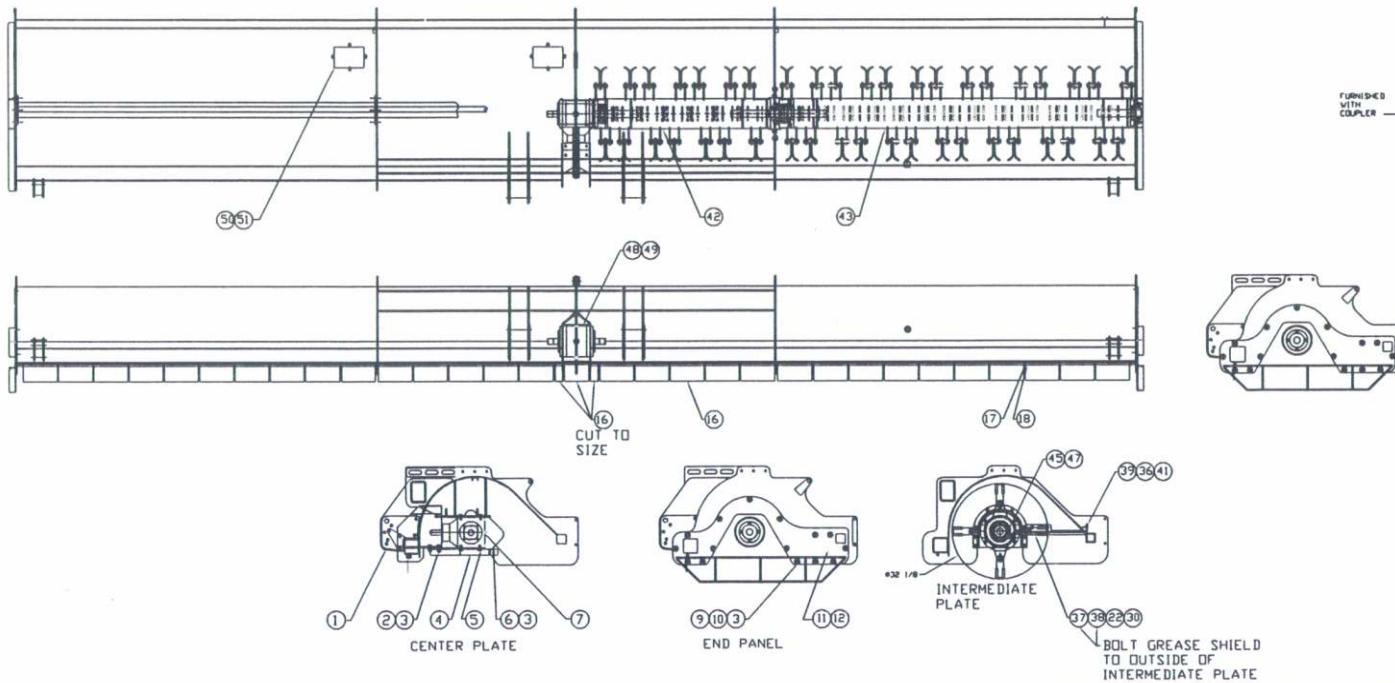
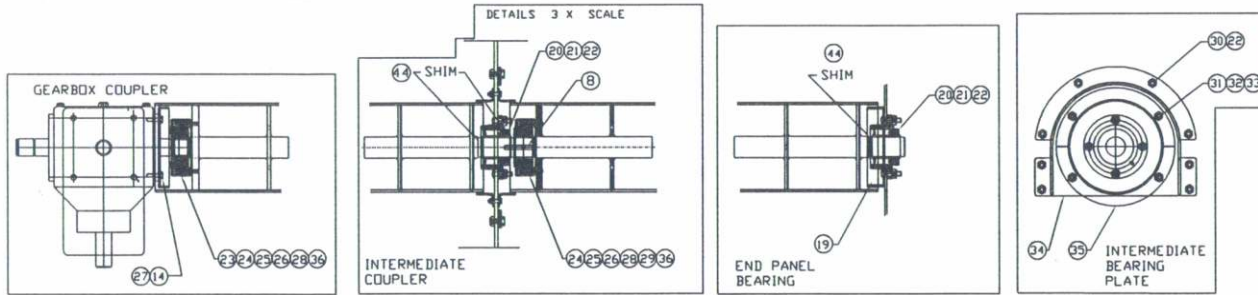
WHERE USED: DIRECT DRIVE SHREDDER			
TOL. UNLESS SPECIFIED:	FAB .03	WELD .06	HOLE: PER STDS. MAN. #1
<small>HIGHWAY 80 EAST MOUNTAIN LAKE, NY 58100 PHONE# (507) 427-3133</small>			
PART NAME:	SHREDDER 26.5' DIRECT DRIVE PULL TYPE	PART NO.	61195 DWG

OPER#	W/C	DESCRIPTION
		ASSEMBLE AS SHOWN

31' Direct Drive Basic Assembly Shredder



ECO#	REV.	NOTES	DATE	BY	APP
		RELEASED	04/01	TH	
3655		ADDED SHIMS AT LOCATION OF INTERMEDIATE COUPLER	11/01	TH	



51	16	2082	NUT 3/8 WHIZLOCK
50	4	61209	COVER PLATE
49	4	3032	BOLT 10 X20 MM
48	2	60568	GUARD GEARBOX
47	2	15307	ADAPTER 1/4-28 M 1/8 FPT
46			
45	2	2285	ZERK 1/4-28 90 DEG
44	AR	60700-CHART	BUSHING ROTOR (SHIM)
43	2	65616	ROTOR (OUTSIDE)
42	2	61213	ROTOR (INSIDE)
41	2	24179	HOSE 30' LG
40	1	61415	DECALS (SEE DRAWING)
39	2	12333	COUPLER 1/8" NPT
38	1	61191	GREASE SHIELD L.H.
37	1	61192	GREASE SHIELD R.H.
36	4	2291	ZERK GREASE 1/8
35	2	70083	GRASS RING INTERMEDIATE
34	2	61186	BEARING PLATE INTERMEDIATE
33	8	2475	NUT 5/16 TOPLOCK
32	16	1597	FLATWASHER 5/16
31	8	1186	BOLT 5/16 X 1 1/4 LG.
30	16	1249	BOLT 1/2 X 1 1/4 LG.
29	2	61173	FLEX HUB (INTERMEDIATE
28	4	61164	O RING
27	2	61089	GRASS RING (INNER)
26	24	61126	BOLT 3/8 SO.C.H.D. CAP
25	4	61124	SNAP RING (GEARBOX)
24	4	65010	FLEX SLEEVE COUPLER
23	2	65009	FLEX HUB COUPLER
22	34	2539	NUT TOPLOCK 1/2"
21	16	1096	BOLT CARRIAGE 1/2X1 3/4
20	4	61138	BEARING 2 3/16"
19	2	61087	GRASS RING (OUTER)
18	2	1850	PIN 1/8" X 1" LG.
17	2	65617	HINGE ROD 31' SHREDDER
16	31	28045	HINGING GUARD
15			
14	8	3136	BOLT 10 X 20 MM
13			
12	1	65643	END PANEL L.H.
11	1	65642	END PANEL R.H.
10	30	1602	WASHER 5/8 FLAT
9	30	1120	BOLT CARRIAGE 5/8 X 1 1/2
8	2	2439	KEY .5 X .5 X 2.5
7	1	61131	GEARBOX
6	1	1295	BOLT 5/8 X 3" LG.
5	8	61160	BOLT 16 X 35 MM
4	1	61287	BOTTOM PLATE (GEARBOX)
3	35	2546	NUT 5/8 TOPLOCK
2	4	1291	BOLT 5/8 X 2" LG.
1	1	65611	HOUSING SHREDDER 31'
ITEM	QTY	COMPONENT #	DESCRIPTION

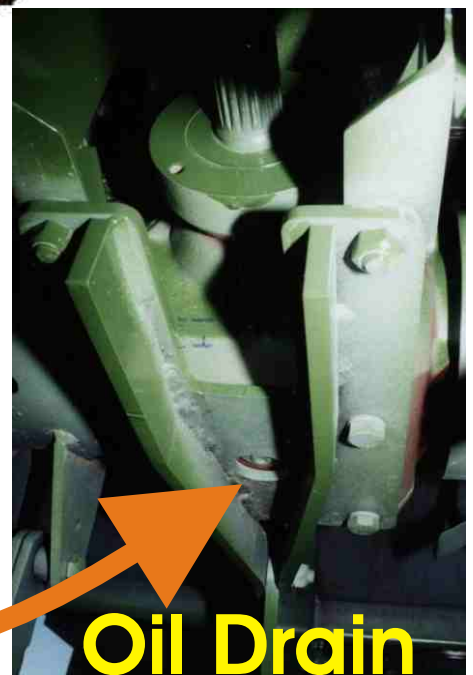
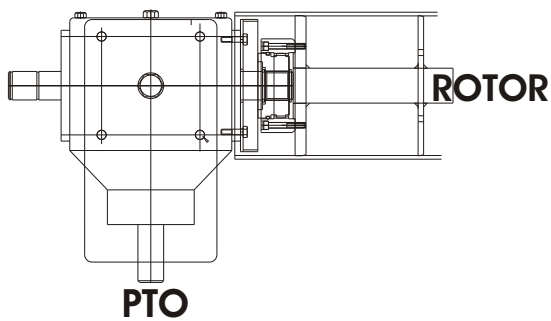
WHERE USED:				
TOL. UNLESS SPECIFIED :	FAB .03	WELD .06	HOLES:	PER STD.
				SHEET
				OF
HIGHWAY 80 EAST MCKEAN TWP, PA 18809 PHONE (307) 437-3133				
PART NAME:	31' DIRECT DRIVE SHREDDER BASIC ASSEMBLY			PART NO.
				65610.DWG

OPER#	W/C	DESCRIPTION
		ASSEMBLE AS SHOWN

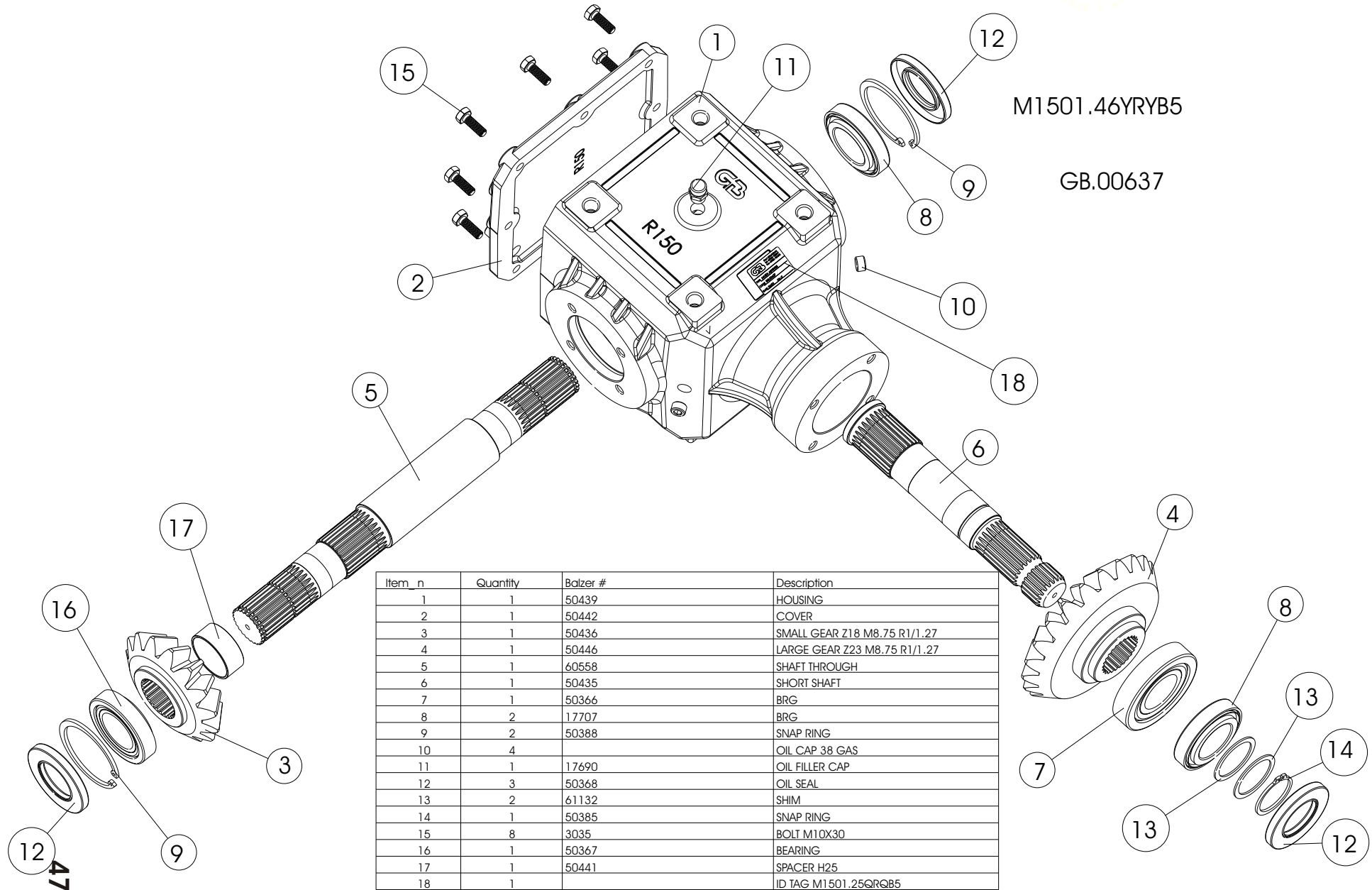
The Direct Drive Gear Box



To Order The Complete Gearbox
Use Part Number #61131



The Direct Drive Gear Box Exploded

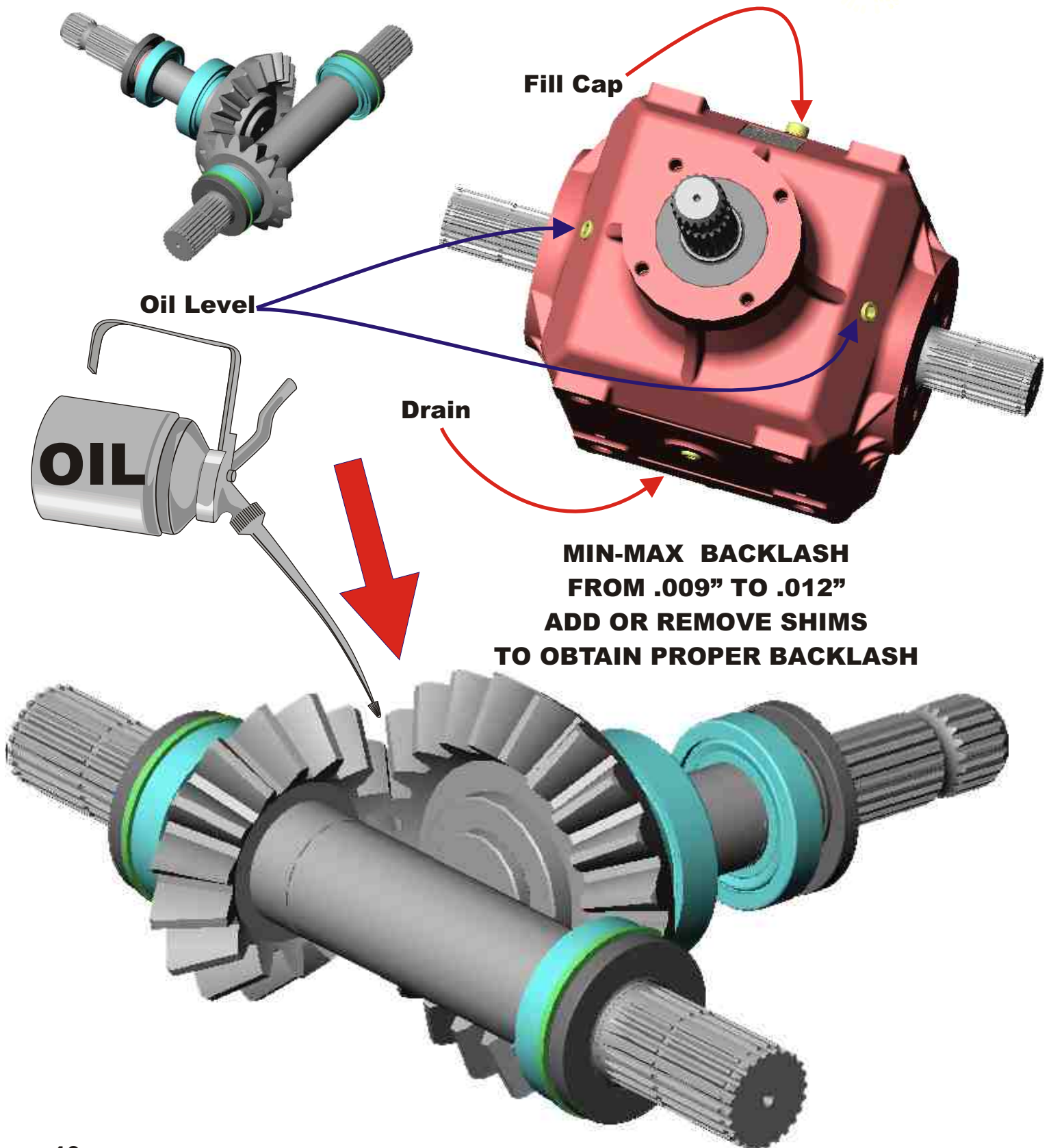


M1501.46YRYB5

GB.00637

Item_n	Quantity	Balzer #	Description
1	1	50439	HOUSING
2	1	50442	COVER
3	1	50436	SMALL GEAR Z18 M8.75 R1/1.27
4	1	50446	LARGE GEAR Z23 M8.75 R1/1.27
5	1	60558	SHAFT THROUGH
6	1	50435	SHORT SHAFT
7	1	50366	BRG
8	2	17707	BRG
9	2	50388	SNAP RING
10	4		OIL CAP 38 GAS
11	1	17690	OIL FILLER CAP
12	3	50368	OIL SEAL
13	2	61132	SHIM
14	1	50385	SNAP RING
15	8	3035	BOLT M10X30
16	1	50367	BEARING
17	1	50441	SPACER H25
18	1		ID TAG M1501.25QRQB5

Gear Box Lubrication & Adjustment



Oil Level

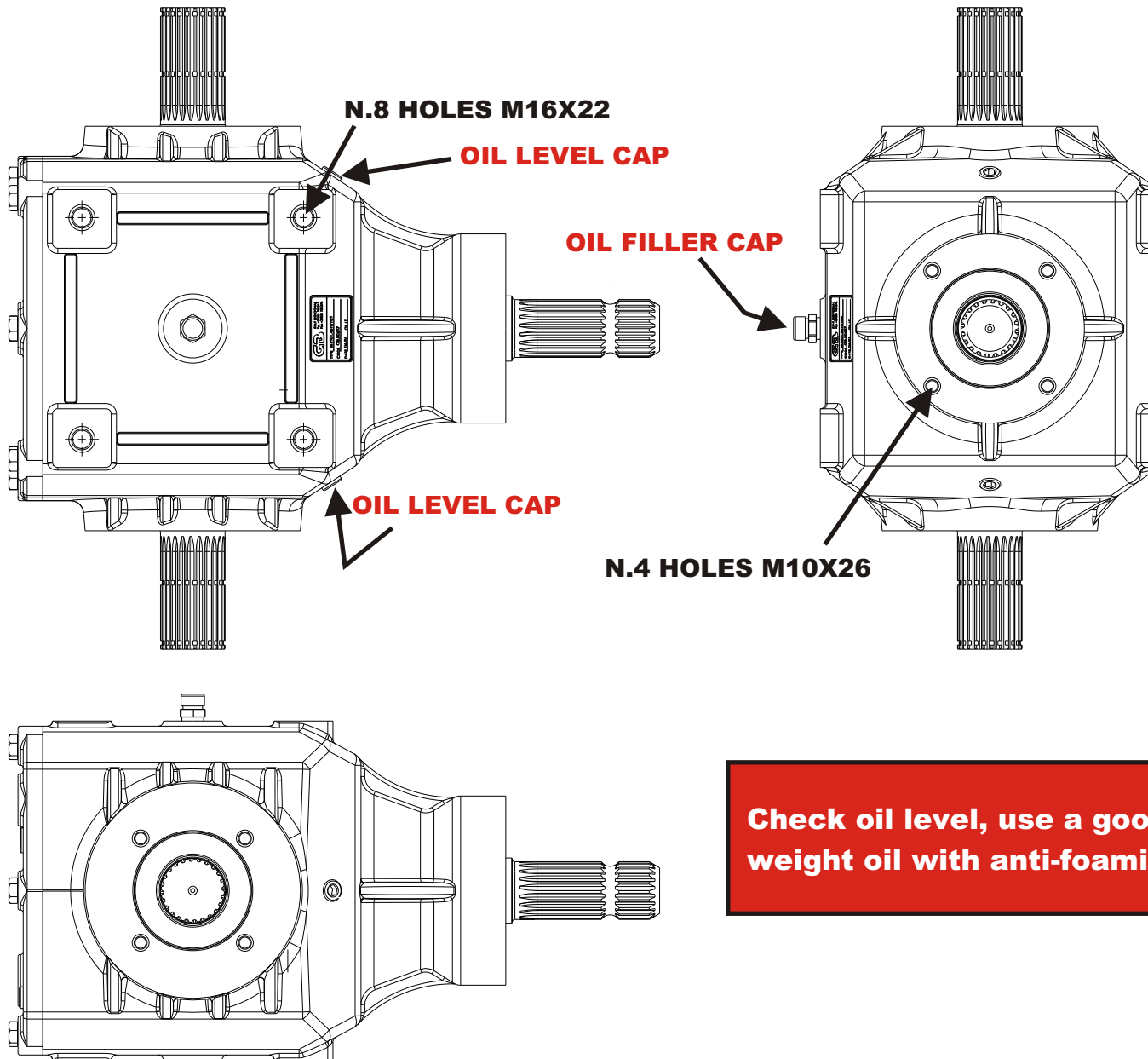
Fill Cap

Drain

OIL

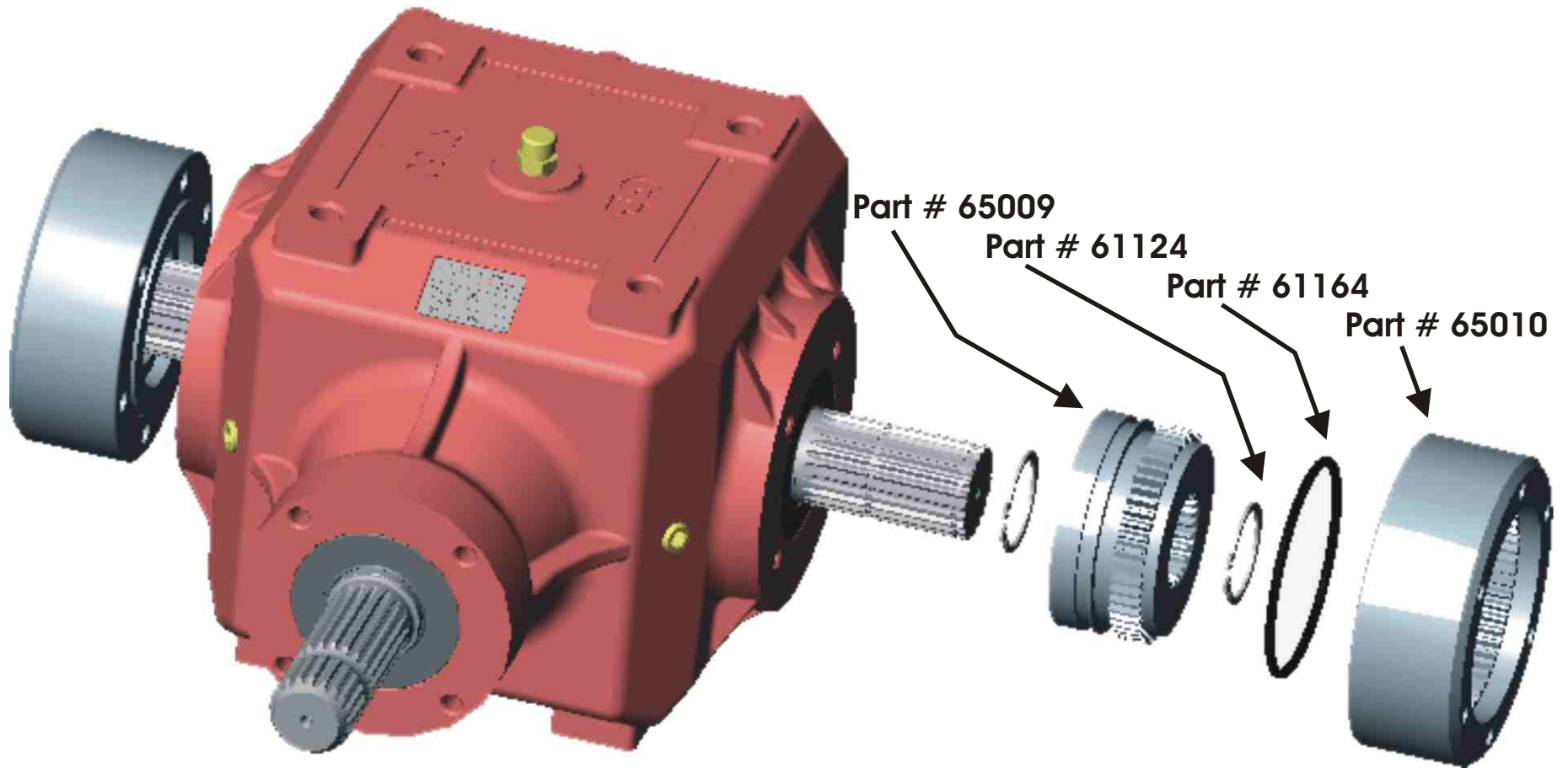
**MIN-MAX BACKLASH
FROM .009" TO .012"
ADD OR REMOVE SHIMS
TO OBTAIN PROPER BACKLASH**

The Direct Drive Gear Box



Check oil level, use a good SAE 90 weight oil with anti-foaming additives

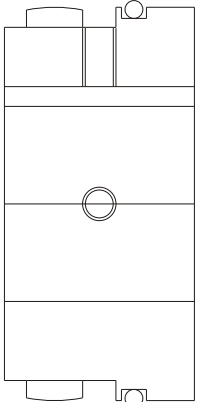
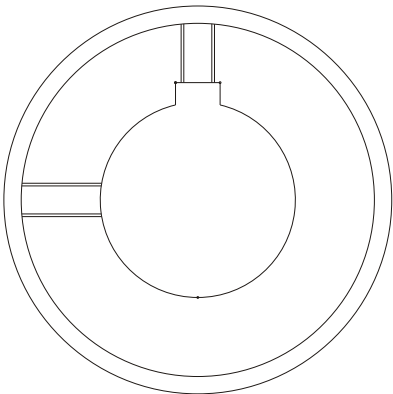
Gear Box Flex Coupler Assembly



Intermediate Flex Coupler Hub

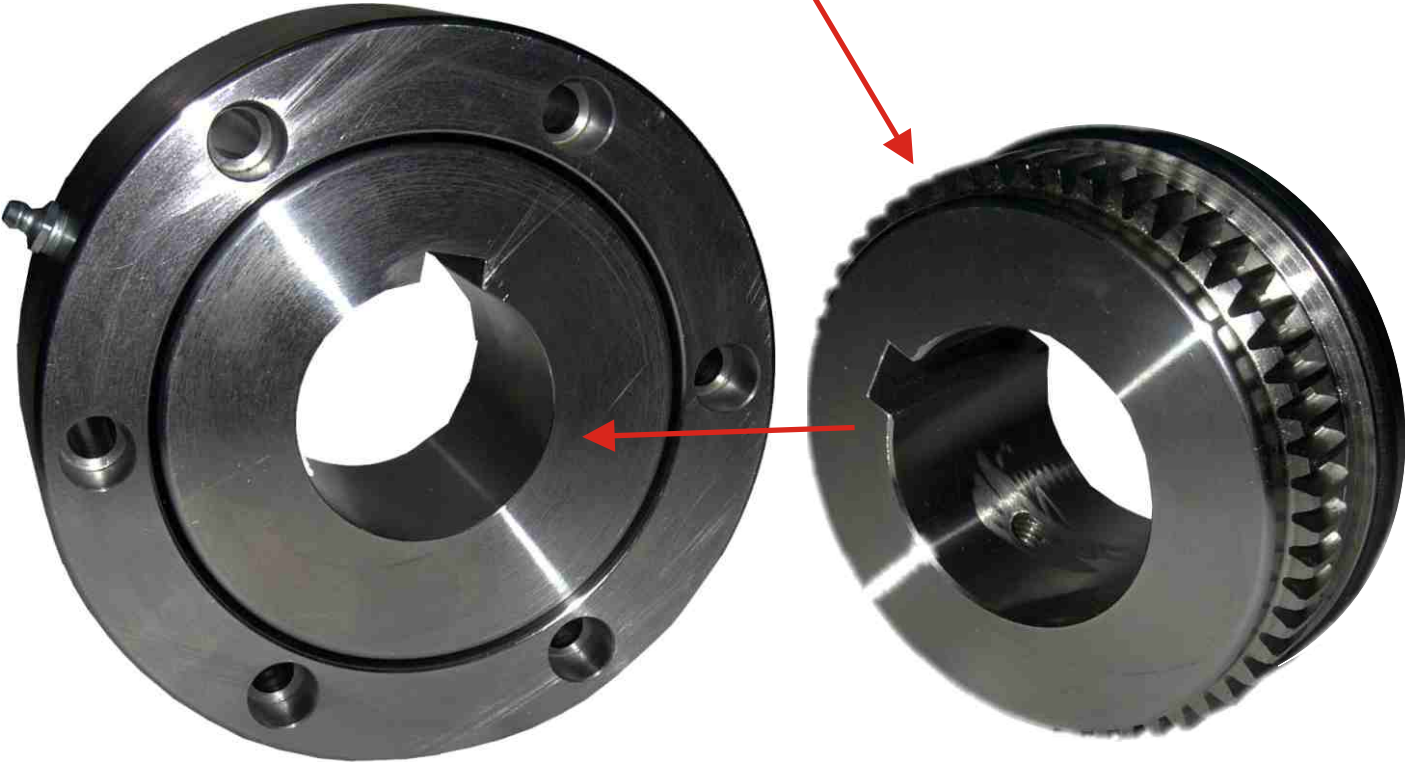


.500 / .5025

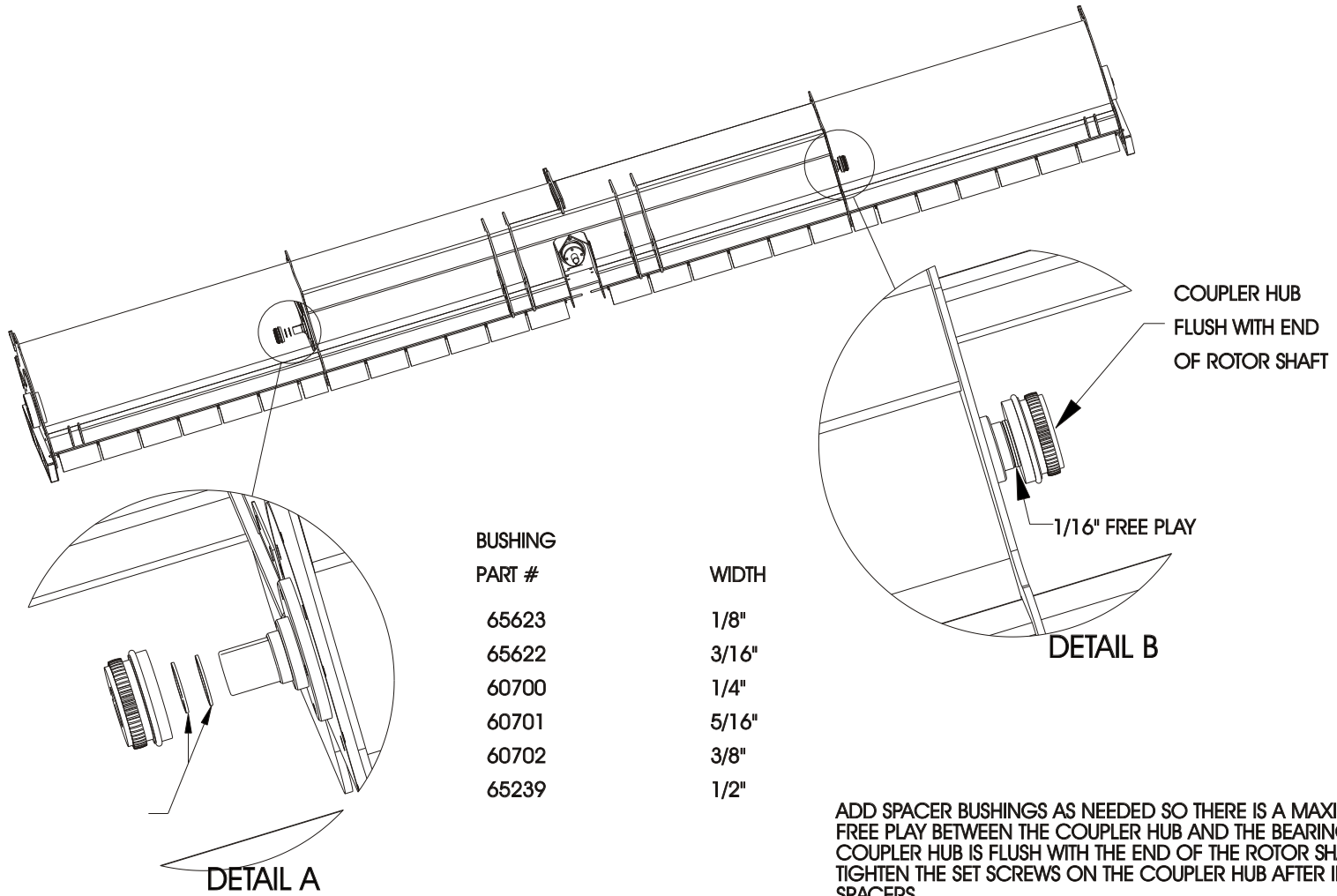


Part #61173

REF. 61164



Intermediate Coupler Hub Installation Instructions

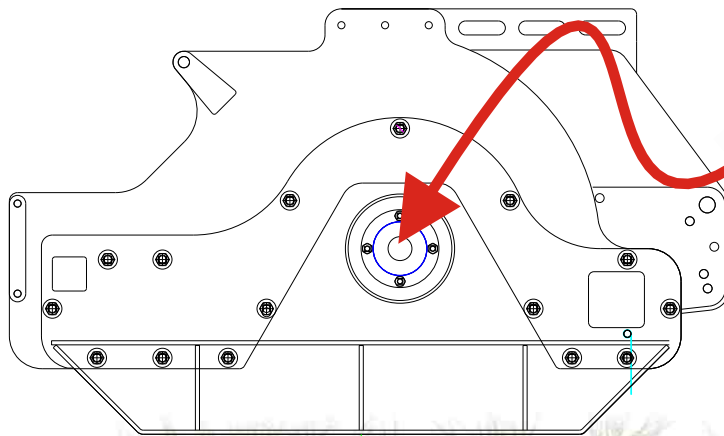
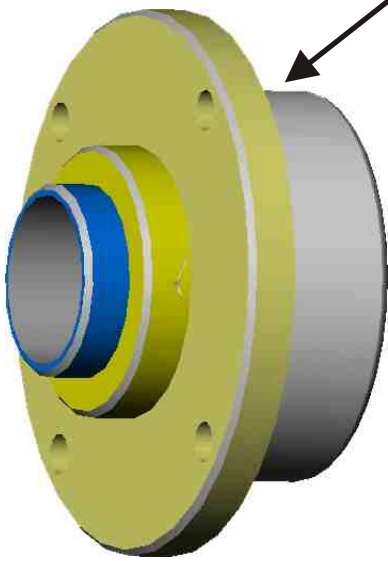


ADD SPACER BUSHINGS AS NEEDED SO THERE IS A MAXIMUM OF 1/16" FREE PLAY BETWEEN THE COUPLER HUB AND THE BEARING WHEN THE COUPLER HUB IS FLUSH WITH THE END OF THE ROTOR SHAFT. BE SURE TO TIGHTEN THE SET SCREWS ON THE COUPLER HUB AFTER INSTALLING THE SPACERS.

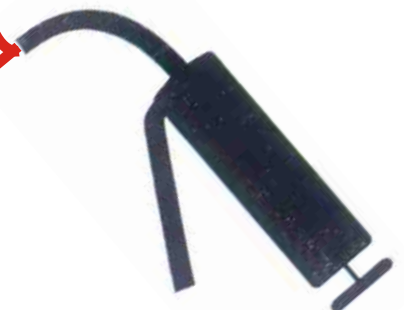
Rotor Bearing



2 3/16 Spherical Bearing



**Three Pumps
Of Grease
Every 8 hrs**



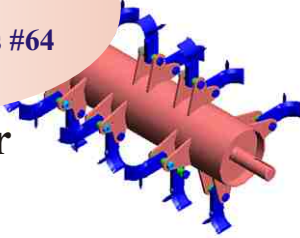
Four Rotors Machines



24 Foot - Four Rotors Unit

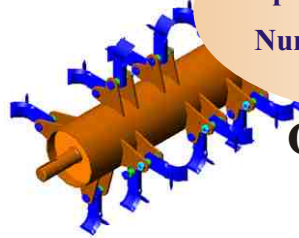
Complete Rotor Part # 61391
Number of Knives #64

Inner Rotor



Complete Rotor Part # 61388
Number of Knives #60

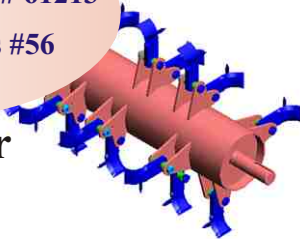
Outer Rotor



25 Foot - Four Rotors Unit

Complete Rotor Part # 61213
Number of Knives #56

Inner Rotor



Complete Rotor Part # 61212
Number of Knives #76

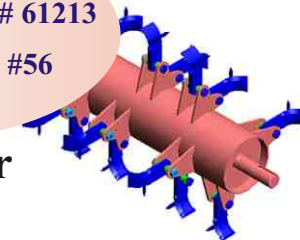
Outer Rotor



26 1/2 Foot - Four Rotors Unit

Complete Rotor Part # 61213
Number of Knives #56

Inner Rotor



Complete Rotor Part # 61184
Number of Knives #84

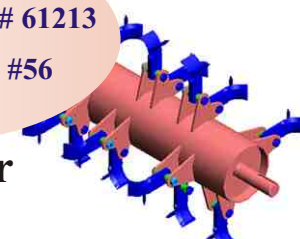
Outer Rotor



31 Foot - Four Rotors Unit

Complete Rotor Part # 61213
Number of Knives #56

Inner Rotor



Complete Rotor Part # 65616
Number of Knives #108

Outer Rotor



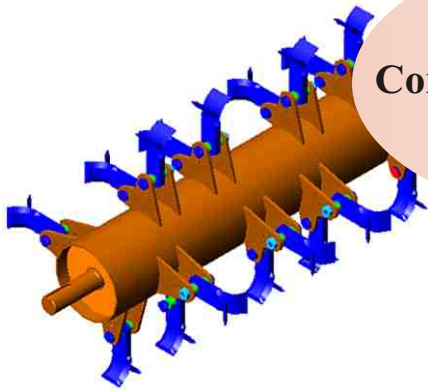
Two Rotors Machines



12' Unit

Complete Rotor Part # 61286

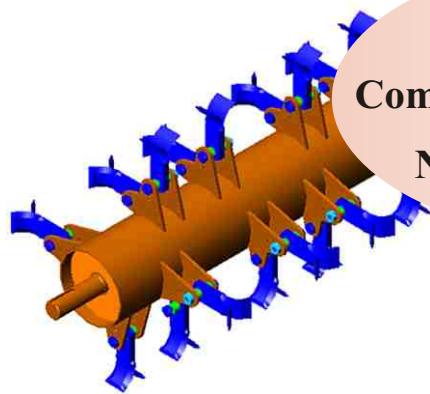
Number of Knives #60



15' Unit

Complete Rotor Part # 61226

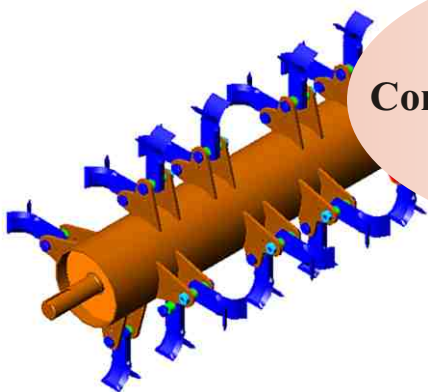
Number of Knives #76



18' Unit

Complete Rotor Part # 61299

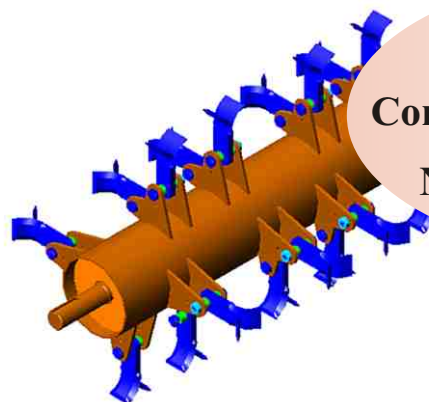
Number of Knives #92



20' Unit

Complete Rotor Part # 61125

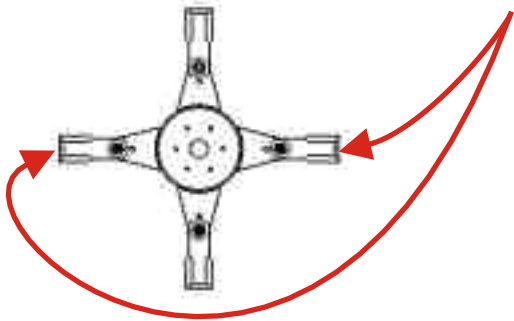
Number of Knives #104



The Side Knives



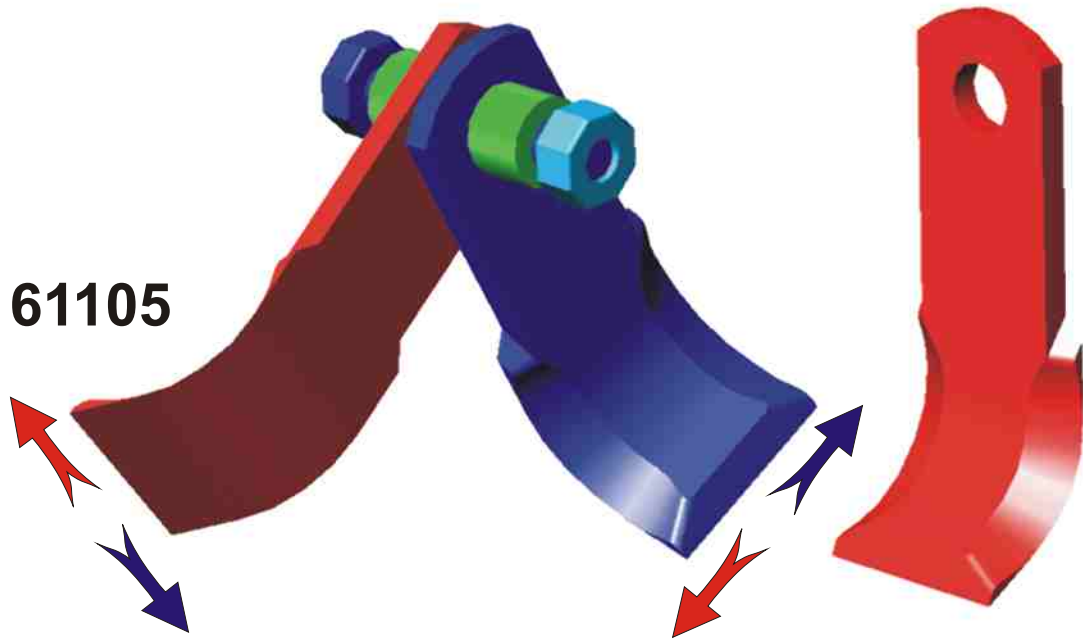
If You Change This Set Of Knives You **MUST** Change The Opposite Side Too



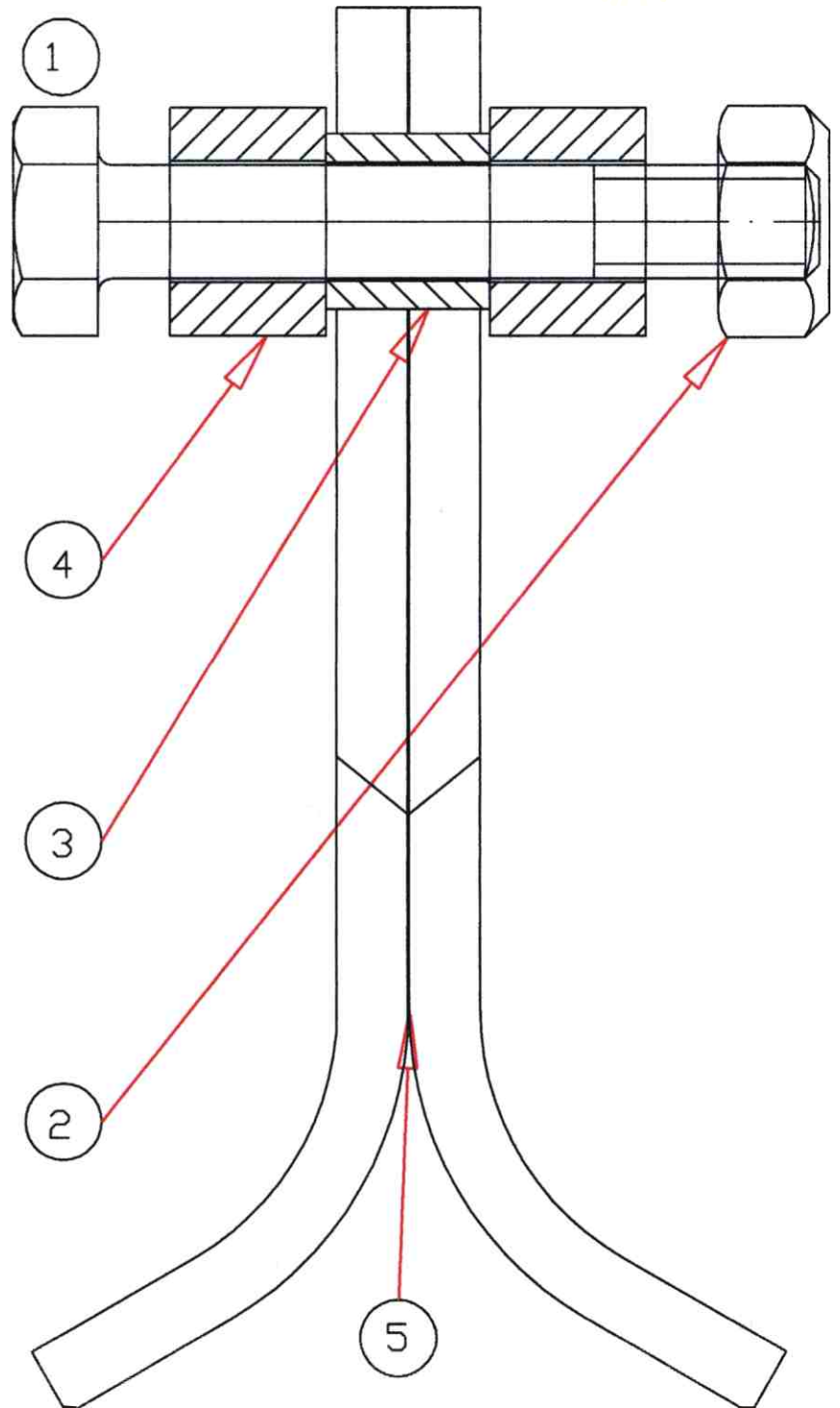
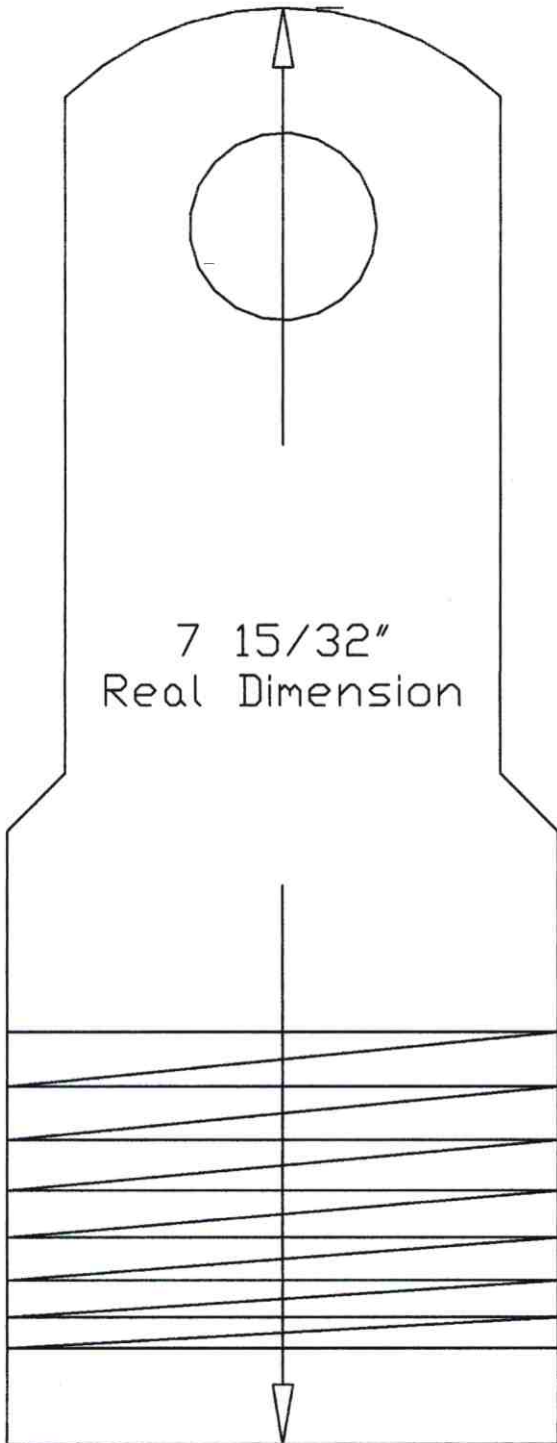
Part # 61105



Part # 61105



Knife Assembly



1	1299	BOLT 5/8 X 4" LG. G5
2	2546	NUT 5/8 TOPLOCK
3	61137	BUSHING .906 WIDE
4	31454	BUSHING .6 X 1.25 X .88
5	61105	SIDE KNIFE
ITEM	COMPONENT #	DESCRIPTION

Walterscheid P.T.O. drive shafts



Leaders in technology and practice

Power Drive

Cost-efficiency for maximum demands

- Longer maintenance intervals due to dirt-repellent multi-lip seals
- Sturdy, durable needle bearing technology
- Extended service life due to integrated profile tube lubrication

The trend-setter in guard technology:

- Improved handling due to highly elastic, sliding guard cone
- Greater robustness due to profiled, thick-walled guard tubes
- Only one safety chain needed
- Enhanced safety due to integrated full guard

Standard line

Time-proven standard series

- Available in a wide range of performance classes for various applications
- High market penetration guarantees service
- Great flexibility due to modular design
- Guard technology of worldwide renown



Wide-angle P.T.O. drive shafts

The leaders in wide-angle technology for more than 30 years

- High angular movement with full power transmission
- Enhanced quiet running even with unilateral joint angling
- Wide range of products for extensive power coverage
- Compact, space-saving design



Ecoline

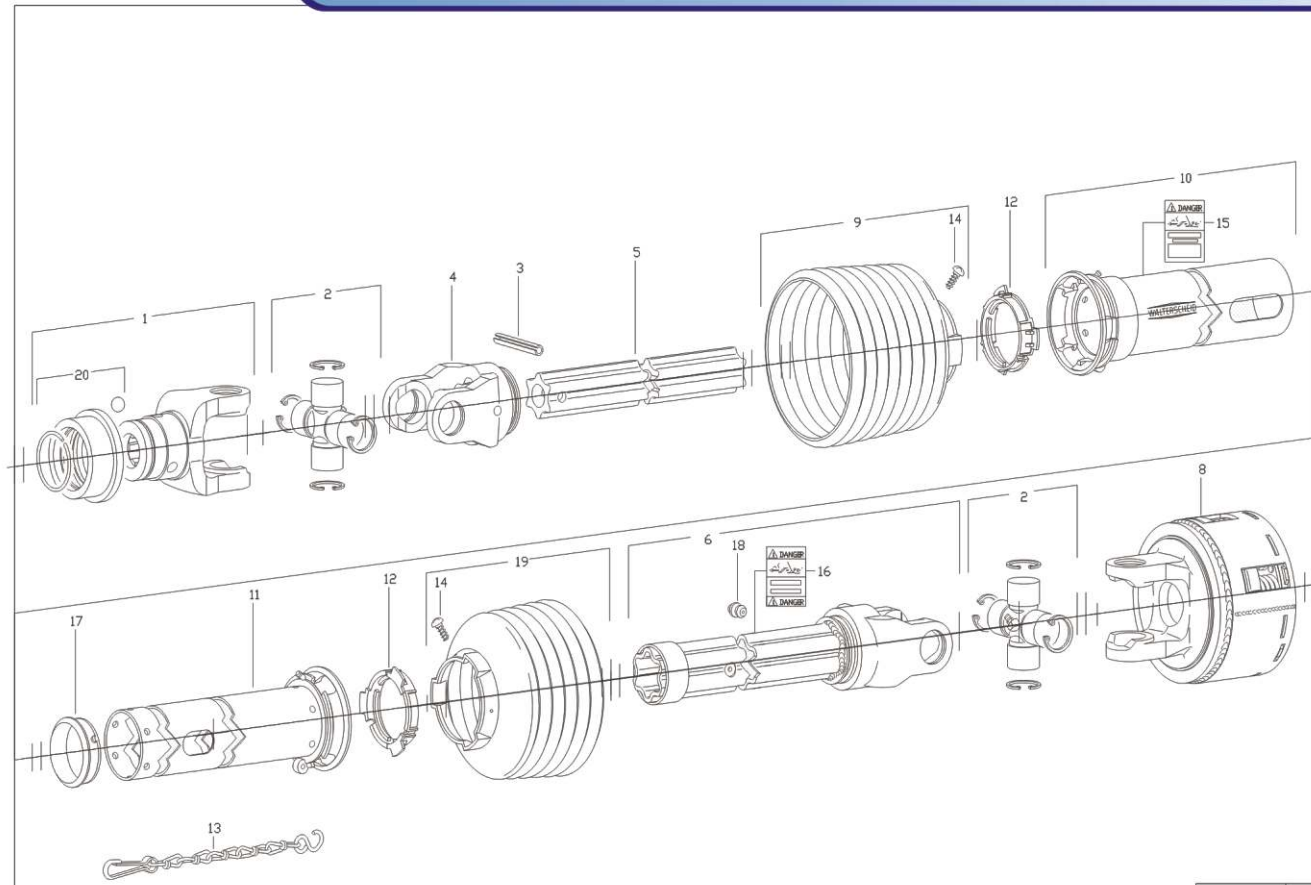
An economical alternative in the low-end power range

- adapted in terms of function and power transmission
- Low-cost alternative with Walterscheid quality
- Widely available service



65071	Mounted Shredder	1000 1 3/8 -	21 SPL
65072	Mounted Shredder	1000 1 3/4 -	20 SPL
65552	Mounted Shredder with H.D. Clutch	1000 1 3/4 -	20 SPL
65073	Pull Type	1000 1 3/8 -	21 SPL
65074	Pull Type	1000 1 3/4 -	20 SPL
65554	Pull Type with H.D. Clutch	1000 1 3/4 -	20 SPL

PTO Exploded #65071



BILL OF MATERIALS				
/	QTY	VAL NUMBER	CUSTOMER	DESCRIPTION
1	1	/	17479	YOKE 1 3/8"-21 SPL ASG
2	2	/	17157	CROSS & BEARING KIT
3	1	/	17158	SPRING PIN 10 X 90
4	1	/	17159	INBOARD YOKE S4
5	1	/	50460	INNER PROFILE S4
6	1	/	50461	I.B. YOKE, PROFILE &
/	/	/		SLEEVE W.A.
8	1	/	50457	FRICTION/OVERRUNNING CLUTCH
9	1	/	17163	SHIELD CONE 7 RIB
10	1	/	50462	OUT. SHIELD TUBE OVL.
11	1	/	50463	INN. SHIELD TUBE RND.
12	2	/	16814	BEARING RING SC25
13	1	/	16815	SAFETY CHAIN
14	2	/	16818	SCREW-IN ITEM 9 & 19
15	1	/	16816	DECAL OUT.-IN ITEM 10
16	1	/	16817	DECAL INN.-IN ITEM 6
17	1	/	17171	SUPPORT BEARING
18	1	/	16820	ZERK-IN ITEM 6
19	1	/	50454	SHIELD CONE 6 RIB
20	1	/	17172	ASG COL. KIT-IN ITEM 1

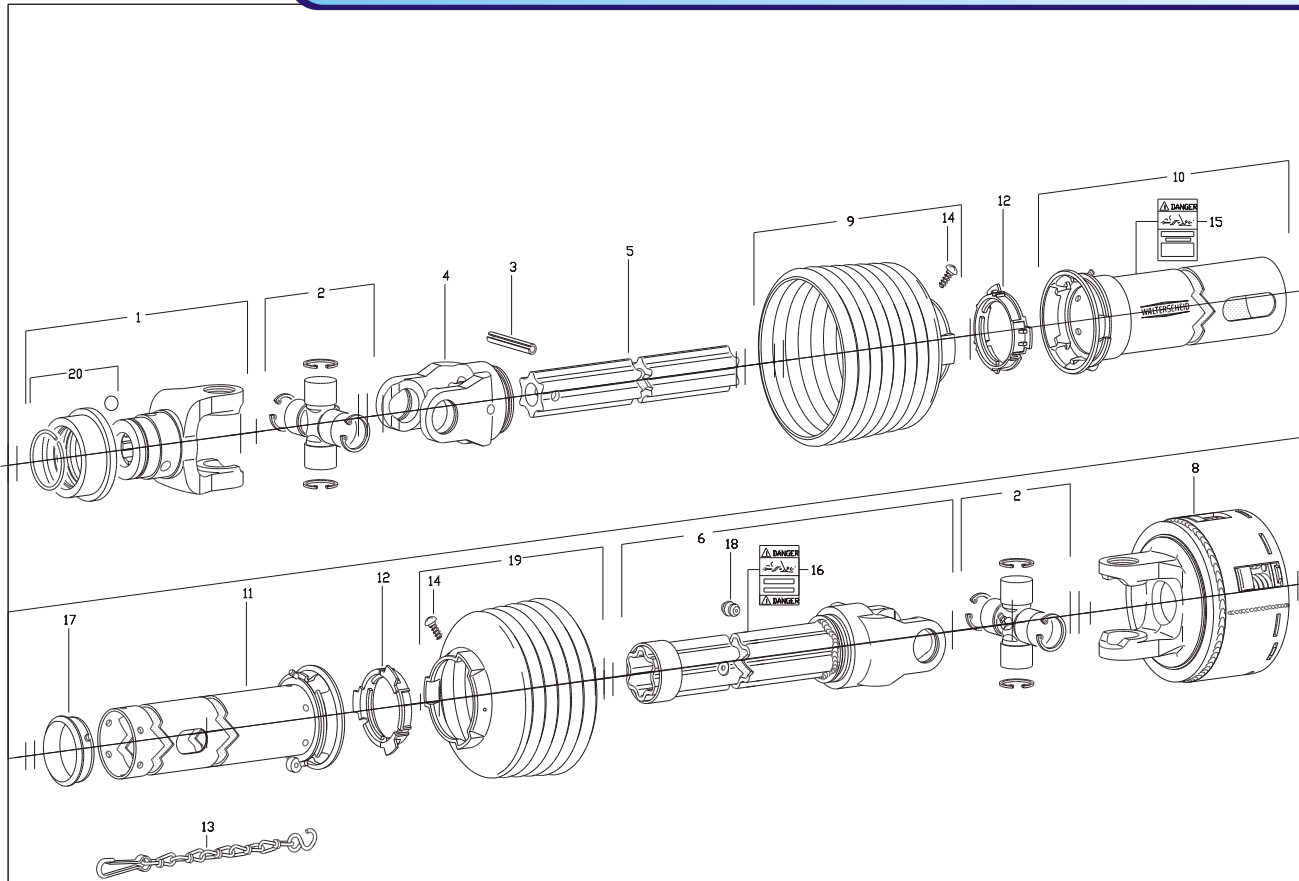
POSITION IV

CLUTCH SETTING	DIR. OF ROT.	APPL. RPM	THIS DRIVE SHAFT EXCEEDS ASAE S-331.5 CATEGORY 5 (</)REGULAR/< X)HEAVY DUTY SPECIFICATION
(lbs) 2600	(FT/LBS) 1917	R 1000	

APPLICATION
MOUNTED FLAIL SHREDDER (DD)

				General tolerance	
Rtg. Code					
Scale					
File	GKN Walterscheid, Inc. Burr Ridge, IL USA				
Drawn	Date	Name	Description		
Checked	17MAY01	RDH	W2500 x SC25Z x FK96/4R		
Approved	18MAY01	LFB	620 x S4/S5WDL		
Customer	BALZER			Drawing No.	W16177
Customer Part No	65071			Part No.	392609

PTO Exploded #65072



BILL OF MATERIALS			
/	QTY	WAL. NUMBER	CUSTOMER DESCRIPTION
1	1	17200	YOKE 1 3/4"-20 SPL. ASG
2	2	17157	CROSS & BEARING KIT
3	1	17158	SPRING PIN 10 X 90
4	1	17159	INBOARD YOKE S4
5	1	50460	INNER PROFILE S4
6	1	50461	I.B. YOKE, PROFILE &
/	/		SLEEVE W.A.
8	1	50457	FRICTION/OVERRUNNING CLUTCH
9	1	17163	SHIELD CONE 7 RIB
10	1	50462	OUT. SHIELD TUBE OVL.
11	1	50463	INN. SHIELD TUBE RND.
12	2	16814	BEARING RING SC25
13	1	16815	SAFETY CHAIN
14	2	16818	SCREW-IN ITEM 9 & 19
15	1	16816	DECAL OUT.-IN ITEM 10
16	1	16817	DECAL INN.-IN ITEM 6
17	1	17171	SUPPORT BEARING
18	1	16820	ZERK-IN ITEM 6
19	1	50454	SHIELD CONE 6 RIB
20	1	17173	ASG COL. KIT-IN ITEM 1

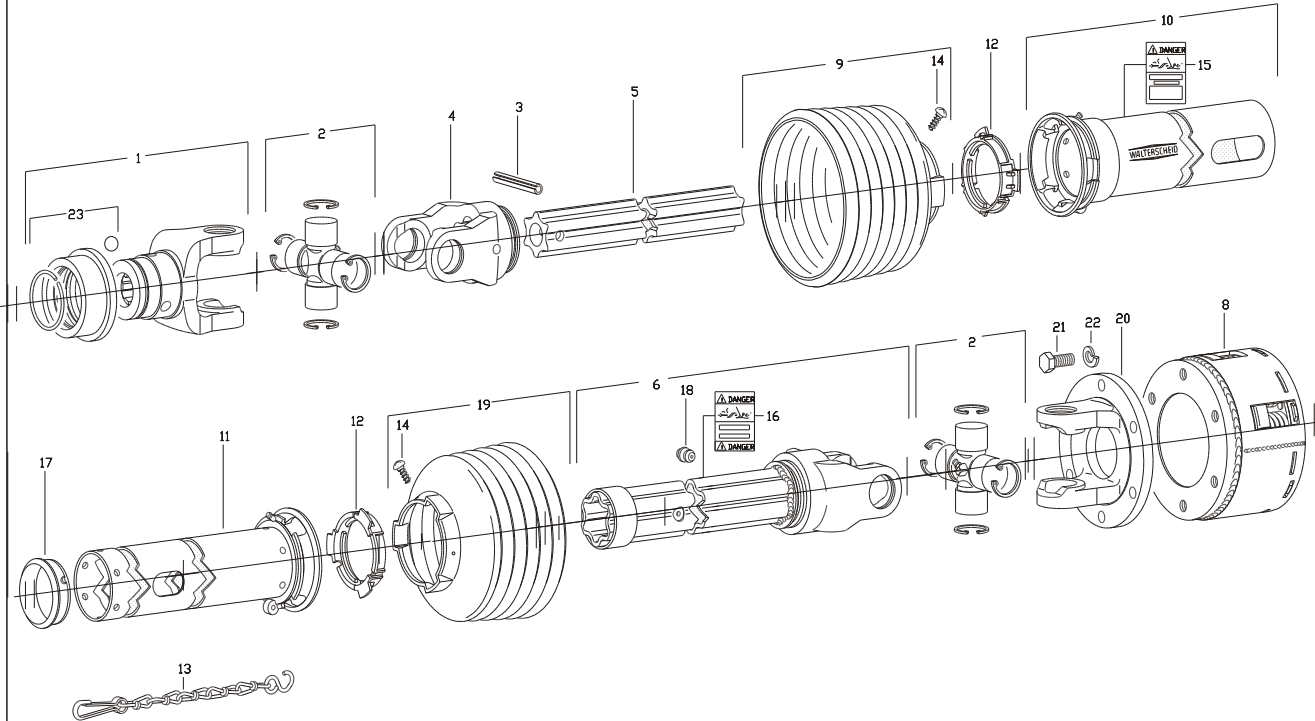
POSITION IV

CLUTCH SETTING	BURD. ROT.	APPL.RPM	THIS DRIVE SHAFT EXCEEDS ASAE S-331.5 CATEGORY 5 (/)REGULAR/ (X)HEAVY DUTY SPECIFICATION	APPLICATION
(KNO) 2600 (FT.LBS) 1917	R	1000		MOUNTED FLAIL SHREDDER (DD)

This document contains proprietary information and is the property of GKN WALTERSCHEID. It shall not be reproduced in whole or in part without prior written permission of GKN WALTERSCHEID. It shall not be used for manufacturing purposes or in any way detrimental to the interest of GKN WALTERSCHEID.

Reg. Code						General tolerance
Scale	NONE					ALL DIMENSIONS REFERENCE
File	/	/	/	/	/	GKN Walterscheid, Inc. Burr Ridge, IL USA
Drawn	17MAY01	RDH				W2500 * SC25Z * FK96/4R
Checked	/	/				620 * S4/S5WDL
Approved	18MAY01	LFB				362434 / 119859
Customer	BALZER			Drawing No.	W16178	
Customer Part No.	65072			Part No.	392610	

PTO Exploded #65552



		BILL OF MATERIALS	
/	QTY	CUSTOMER	DESCRIPTION
1	1	17200	YOKE 1 3/4"-20 SPL ASG
2	2	17157	CROSS & BEARING KIT
3	1	17158	SPRING PIN 10 X 90
4	1	17159	INBOARD YOKE S4
5	1	50460	INNER PROFILE S4GA
6	1		IB YOKE, PROFILE(S5GEH) & SLEEVE W.A.
8	1	65647	FRICITION/OVERRUNNING CLUTCH
9	1	17163	SHIELD CONE 7 RIB
10	1	50462	OUT. SHIELD TUBE OVL.
11	1	50463	INN. SHIELD TUBE RND.
12	2	16814	BEARING RING SC25
13	1	16815	SAFETY CHAIN
14	2	16818	SCREW-IN ITEM 9 & 19
15	1	16816	DECAL OUT.-IN ITEM 10
16	1	16817	DECAL INN.-IN ITEM 6
17	1	17171	SUPPORT BEARING
18	1	16820	ZERK-IN ITEM 6
19	1	50454	SHIELD CONE 6 RIB
20	1		FLANGE YOKE
21	6		BOLT M12 X 30
22	6		LOCK WASHER M12
23	1	17173	AS CQL. KIT-IN ITEM 1
24	1		CC LOCK ASSY-IN ITEM 8

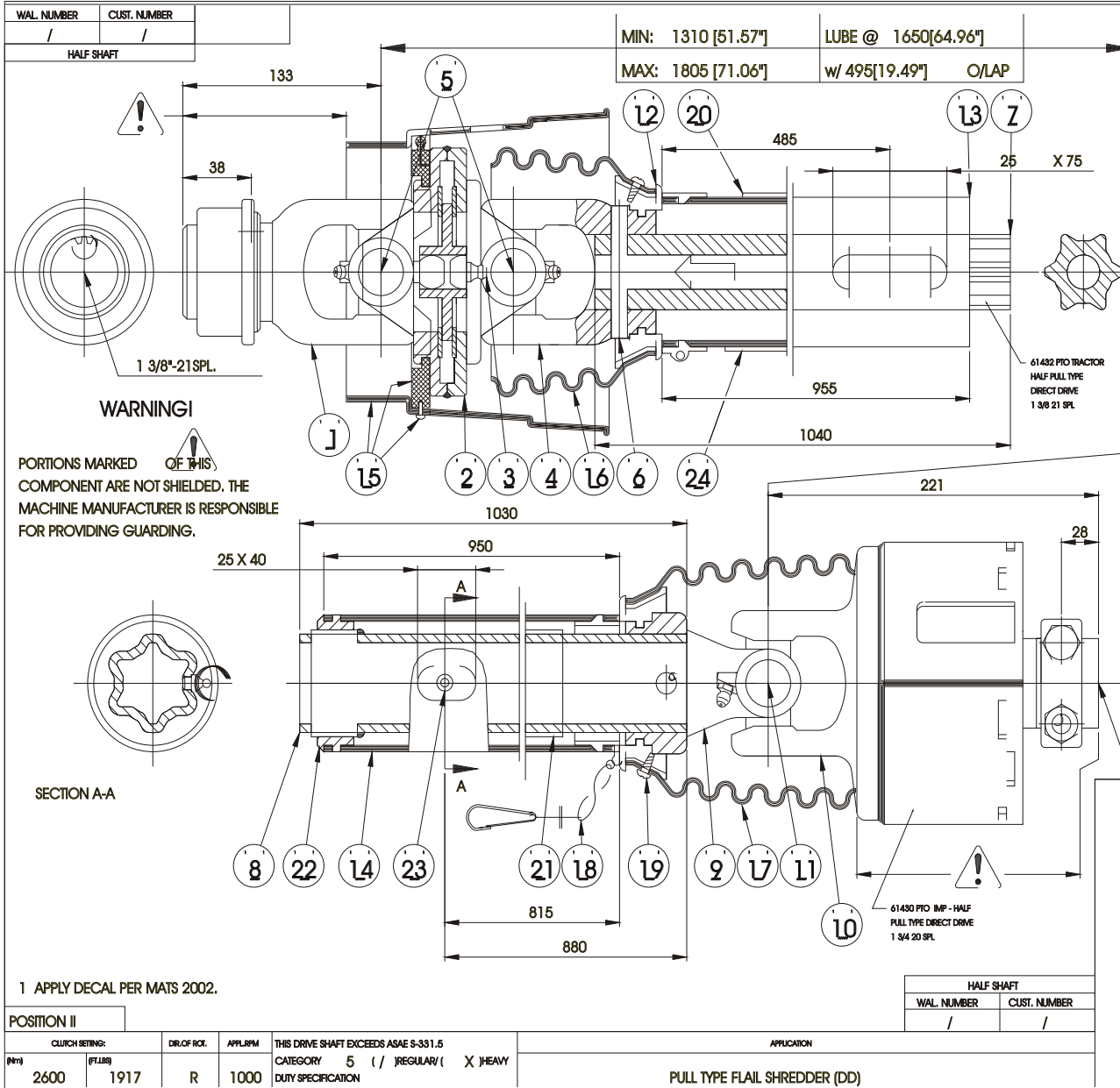
POSITION II

CLUTCH SETTING (No) 3000 (FTLBS) 2212	DIR.DF ROT. R	APPL.RPM 1000	THIS DRIVE SHAFT EXCEEDS ASAE S-331.5 CATEGORY 5 (/)REGULAR/ (X)HEAVY DUTY SPECIFICATION
---	------------------	------------------	--

APPLICATION MOUNTED FLAIL SHREDDER (DD)
--

				General tolerance			
ALL DIMENSIONS REFERENCE							
Rtg. Code /							
Scale NONE				GKN Walterscheid, Inc. Burr Ridge, IL USA			
File /							
Date /							
Letter /							
Change Description /							
Date /							
None /							
Description				W2500×SC25Z×EFK97/4R			
Drawn 17MAY01 RDH				620 × S4GA/S5GEHWDL			
Checked / /				362434 / 112421			
Approved 18MAY01 LFB							
Customer BALZER				Drawing No. W16568			
Customer Part No. 65552				Part No. 393612			

WALTERSCHEID PTO #65073



BILL OF MATERIALS			
/	QTY	WAL. NUMBER	CUSTOMER DESCRIPTION
1	1	/ 17169	YOKE 1 3/8"-21 SPL. ASG
2	1	/ 17194	DOUBLE YOKE
3	1	/ 17195	ZERK-IN ITEM 2
4	1	/ 17196	INBOARD YOKE S4
5	2	/ 17197	CROSS & BEARING KIT
6	2	/ 17158	SPRING PIN 10 X 90
7	1	/ 50459	INNER PROFILE S4GA
8	1	/ 50458	PROFILE & SLEEVE W.A.
9	1	/ 17162	INBOARD YOKE S5
10	1	/ 50457	FRICION/OVERRUNNING CLUTCH
11	1	/ 17157	CROSS & BEARING KIT
12	2	/ 16814	BEARING RING SC25
13	1	/ 50455	OUT. SHIELD TUBE OVAL
14	1	/ 50456	INN. SHIELD TUBE RND.
15	1	/ 17201	CV CONE & BEARING ASSY.
16	1	/ 50450	SHIELD CONE 4 RIB
17	1	/ 50454	SHIELD CONE 6 RIB
18	1	/ 16815	SAFETY CHAIN
19	8	/ 16818	SCREW-IN ITEMS 15,16,17
20	1	/ 16816	DECAL OUT.-IN ITEM 13
21	1	/ 16817	DECAL INN.-IN ITEM 8
22	1	/ 17171	SUPPORT BEARING
23	1	/ 16820	ZERK-IN ITEM 8
24	1	/	LUBRICATION DECAL
/	/	/ 17172	ASG COL. KIT-IN ITEM 1

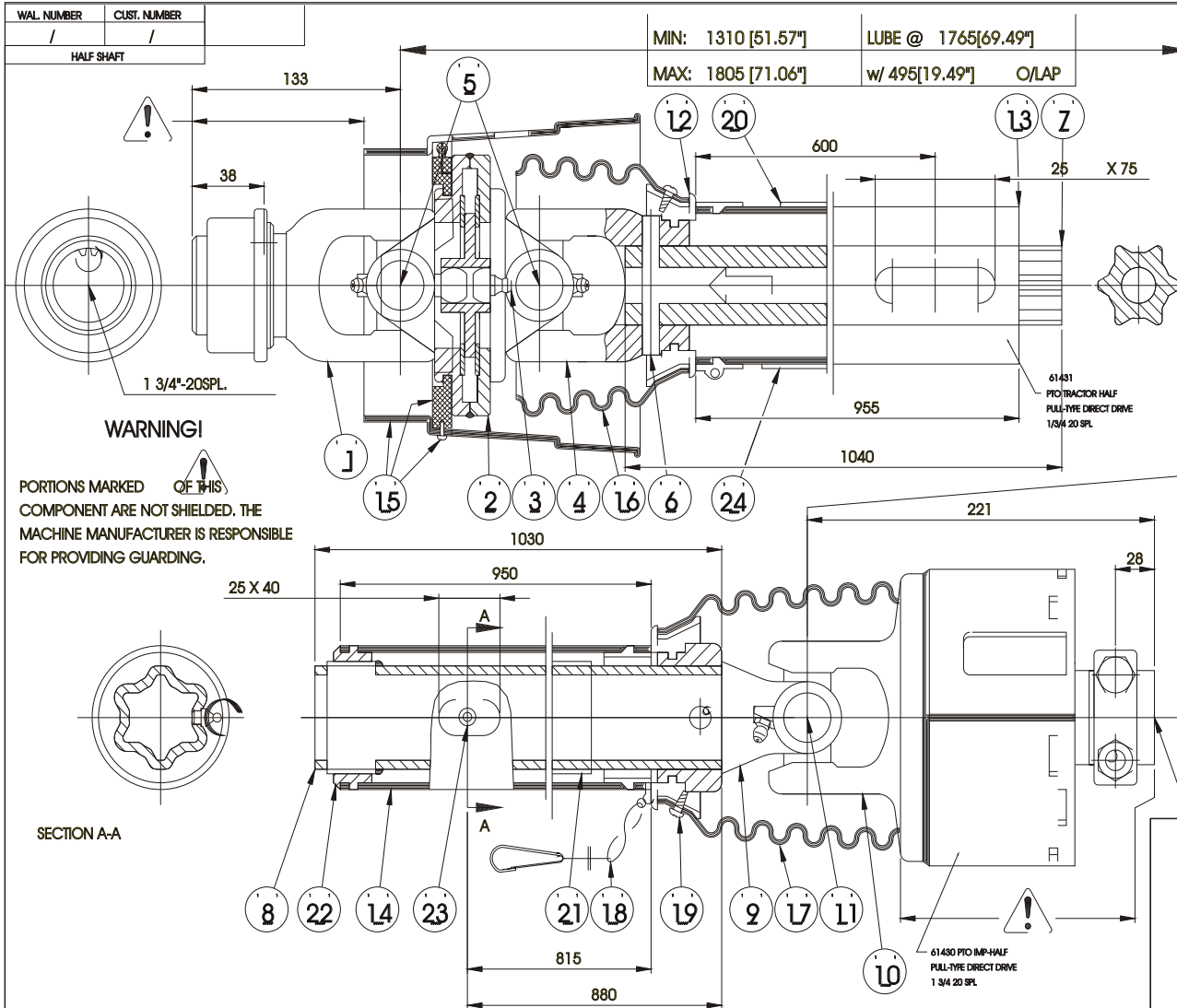
1 3/4"-20SPL INT. CLAMP

61430 PTO IMP - HALF FULL TYPE DIRECT DRIVE 1 3/4 20 SPL

61432 PTO TRACTOR HALF FULL TYPE DIRECT DRIVE 1 3/8 21 SPL

Rig. Code		A		TORQUE WAS 2100N/m		200000		3621			
Scale		NONE		Letter		Change Description		Date			
File		1919		Name		GKN Walterscheid, Inc.		Burr Ridge, IL USA			
Drawn		15SEP99		RDH		Description		WWE2580 * SC25Z * FK96/4R			
Checked		/		/				1310 * S4GA/S5L			
		15SEP99		LFB				363696 / 392166			
Customer				BALZER				Drawing No.		W16179	
Customer Part No.				65073				Part No.		X392611	

WALTERSCHEID PTO #65074

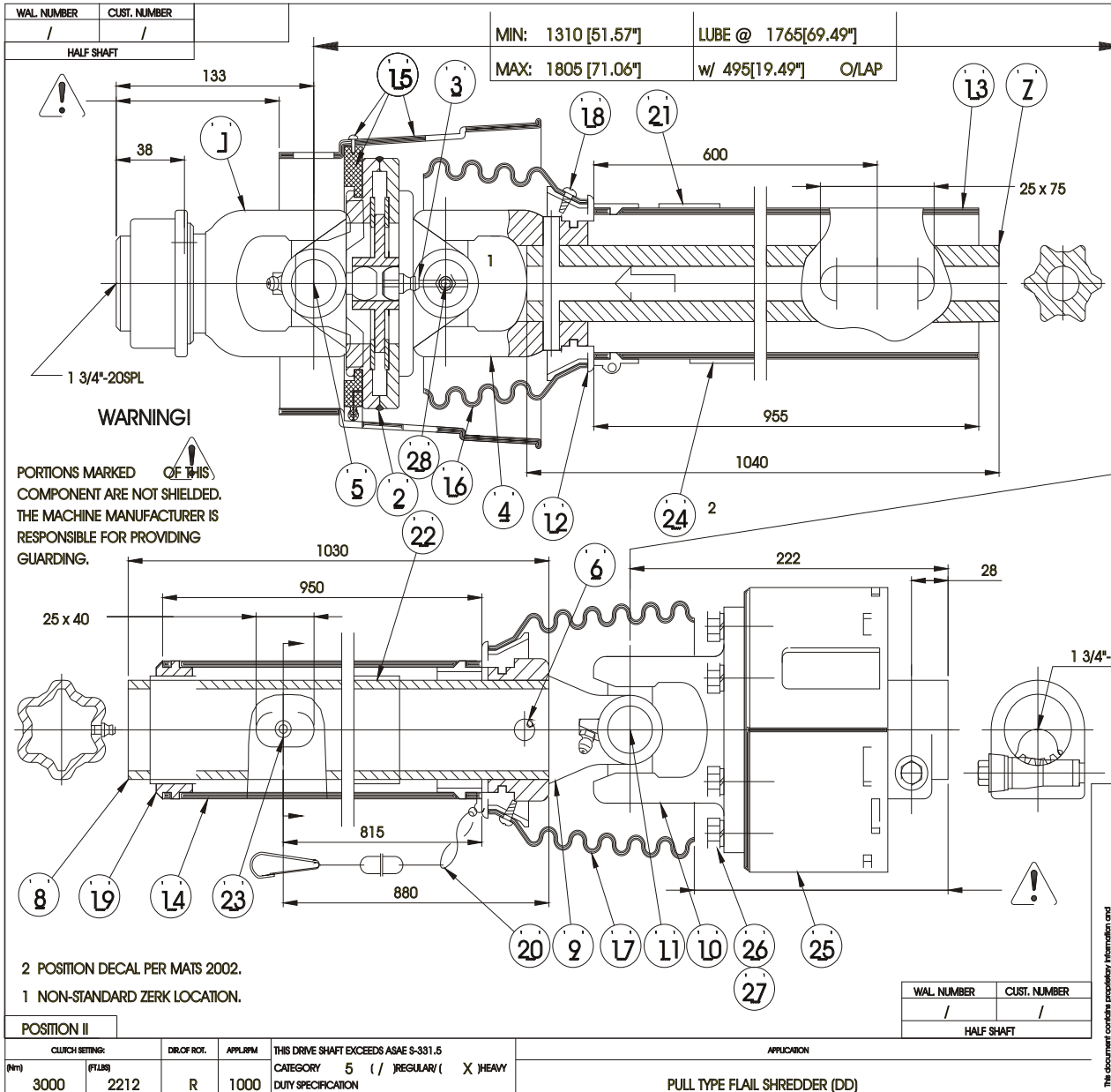


BILL OF MATERIALS			
/	QTY	WAL NUMBER	DESCRIPTION
/	1	16792	YOKE 1 3/4"-20 SPL. ASG
/	2	17194	DOUBLE YOKE
/	3	17195	ZERK-IN ITEM 2
/	4	17196	INBOARD YOKE S4
/	5	17197	CROSS & BEARING KIT
/	6	17158	SPRING PIN 10 X 90
/	7	50459	INNER PROFILE S4GA
/	8	50458	PROFILE & SLEEVE W.A.
/	9	17162	INBOARD YOKE S5
/	10	50457	FRICION/OVERRUNNING CLUTCH
/	11	17157	CROSS & BEARING KIT
/	12	16814	BEARING RING SC25
/	13	50455	OUT. SHIELD TUBE OVAL
/	14	50456	INN. SHIELD TUBE RND.
/	15	17201	CV CONE & BEARING ASSY.
/	16	50450	SHIELD CONE 4 RIB
/	17	50454	SHIELD CONE 6 RIB
/	18	16815	SAFETY CHAIN
/	19	16818	SCREW-IN ITEMS 15,16,17
/	20	16816	DECAL OUT.-IN ITEM 13
/	21	16417	DECAL INN.-IN ITEM 8
/	22	17171	SUPPORT BEARING
/	23	16820	ZERK-IN ITEM 8
/	24		LUBRICATION DECAL
/	/	17173	ASG COL. KIT-IN ITEM 1

1 3/4"-20SPL INT. CLAMP		ALL DIMENSIONS REFERENCE	
/	A	TORQUE WAS 21029m	200C70 3421
NONE	/	/	/
1919			
15SEP99	RDH	WWE2580 * SC25Z * FK96/4R	
Checked	/	1310 * S4GA/S5L	
15SEP99	LFB	363729 / 392166	
Customer	BALZER		W16180
Customer Part No.	65074		X392612

POSITION II				APPLICATION	
CLUTCH SETTING (FT.LBS)	DR.FOF ROT.	APPL.RPM	THIS DRIVE SHAFT EXCEEDS ASAE S-331.5 CATEGORY 5 (/) REGULAR (X) HEAVY DUTY SPECIFICATION	WAL NUMBER	CUST. NUMBER
2600	1917	R	1000	/	/
				PULL TYPE FLAIL SHREDDER (DD)	

WALTERSCHEID PTO #65554

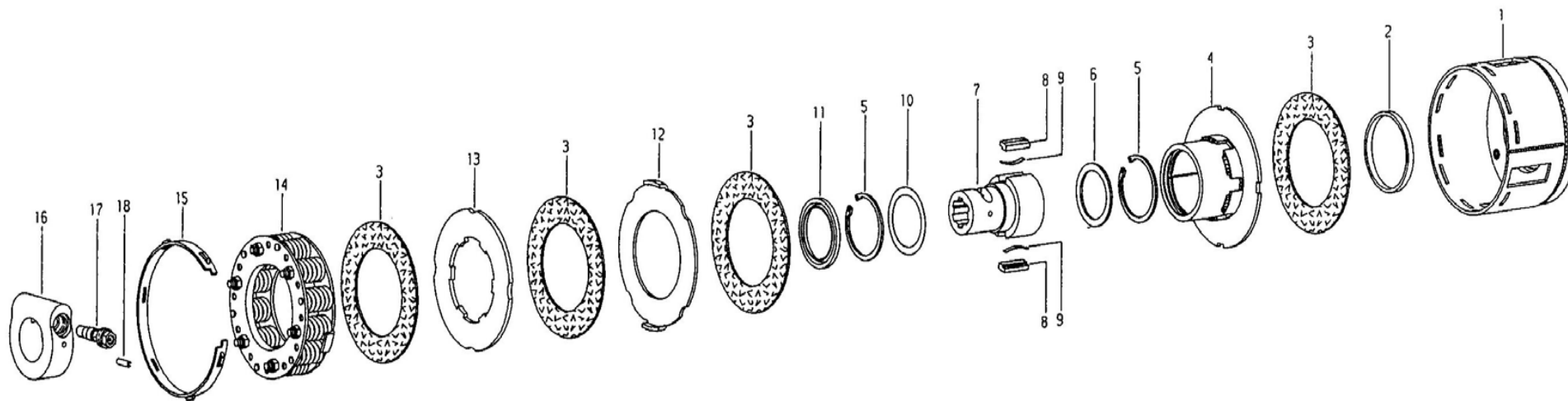


BILL OF MATERIALS				
QTY	WAL. NUMBER	CUSTOMER	DESCRIPTION	
1	1	16792	YOKE 1 3/4"-20SPL AS	
2	1	17194	DOUBLE YOKE	
3	1	17195	ZERK - IN ITEM 2	
4	1	/	INBOARD YOKE S4	
5	1	17197	CROSS & BEARING KIT	
6	2	17158	SPRING PIN, 10 X 90	
7	1	/50459	INNER PROFILE S4GA	
8	1	/	PROFILE S5GH & SLVWA.	
9	1	17162	INBOARD YOKE S5	
10	1	/	FLANGE YOKE	
11	1	17157	CROSS & BEARING KIT	
12	2	16814	BEARING RING SC25	
13	1	/	OUT SHIELD TUBE OVL	
14	1	/	INN SHIELD TUBE RND	
15	1	/ 50456	CV CONE & BRG ASSY	
16	1	/	SHIELD CONE 4 RIB	
17	1	/ 50454	SHIELD CONE 6 RIB	
18	8	16818	SCREW-IN ITEM 15,16&17	
19	1	17171	SUPPORT BEARING	
20	1	16815	SAFETY CHAIN	
21	1	16816	DECAL OUT-IN ITEM 13	
22	1	16817	DECAL INN-IN ITEM 8	
23	1	16820	ZERK - IN ITEM 8	
24	1	/	LUBRICATION DECAL	
25	1	/ 65647	FRICTION/OVERRUNNING CLUTCH	
26	6	/	BOLT M12 X 30	
27	6	/	LOCK WASHER M12	
28	1	/	CROSS & BEARING KIT	
/	1	17173	AS COL. KIT-IN ITEM1	
/	1	/	CC. LOCK ASSY-IN ITEM25	

Rig. Code		AC		General tolerance	
Scale		RELEASE FOR PROD.		ALL DIMENSIONS REFERENCE	
File	1193	Letter	Change Description	Date	Name
Drawn	11APR01	Name	MS	GKN Walterscheid, Inc. Burr Ridge, IL USA	
Checked	/	Description		WWE2580*SC25Z*EFK97/4R	
Approved	23APR01	LFB		1310*S4GA/S5GEHL	
Customer	BALZER			Drawing No.	W16654
Customer Part No.	65554			Part No.	393760

This document contains proprietary information and

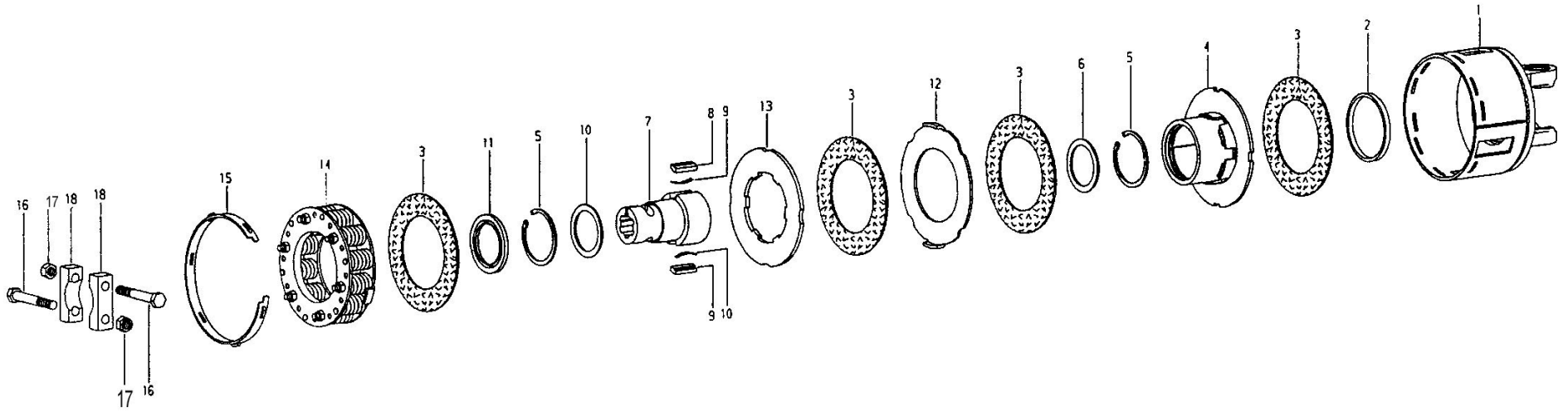
HEAVY DUTY FRICTION CLUTCH, PART NUMBER 65647



ITEM#	PART#	QTY	DESCRIPTION	ITEM#	PART#	QTY	DESCRIPTION
1	50608	1	HOUSING	10	50479	1	WASHER 59.8X72
2	50471	1	WEAR RING	11	50480	1	SEAL RING
3	50607	4	FRICTION DISC	12	50611	1	DRIVE PLATE
4	50609	1	OVERRUNNING HOUSING	13	50612	1	DRIVE PLATE
5	50474	2	RETAINING RING	14	50613	1	SPRING PACK
6	50475	1	WASHER 56X72	15	50614	1	SETTING RING
7	50610	1	HUB	16	50615	1	CLAMPING RING
8	50477	2	DRIVE KEY	17	50616	1	CLAMPING CONE (TORQUE TO 75 FT POUNDS)
9	50478	2	LEAF SPRING	18	50617	1	SPRING PIN 6X22

USED ON PTO NUMBERS 65552-65555, 26.5' AND ABOVE DIRECT DRIVE

NORMAL DUTY FRICTION CLUTCH, PART NUMBER 50457

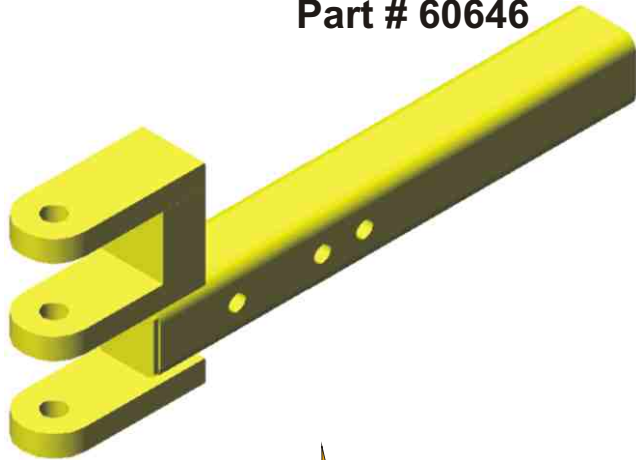


ITEM#	PART#	QTY	DESCRIPTION	ITEM#	PART#	QTY	DESCRIPTION
1	50470	1	CLUTCH HOUSING WITH YOKE	10	50479	1	SUPPORT RING
2	50471	1	WEAR RING	11	50480	1	SEAL RING
3	50472	4	FRICTION DISC	12	50481	1	DRIVE PLATE
4	50473	1	OVERRUNNING HOUSING	13	50482	1	DRIVE PLATE
5	50474	2	RETAINING RING	14	50483	1	SPRING PACK
6	50475	1	SUPPORT RING	15	50484	1	SETTING RING
7	50476	1	HUB	16	50485	2	BOLT HEX, 16mm x 110mm
8	50477	2	DRIVE KEY	17	3149	2	TOPLOCK NUT, HEX HD 16mm
9	50478	2	LEAF SPRING	18	50486	1	CLAMP BRIDGE

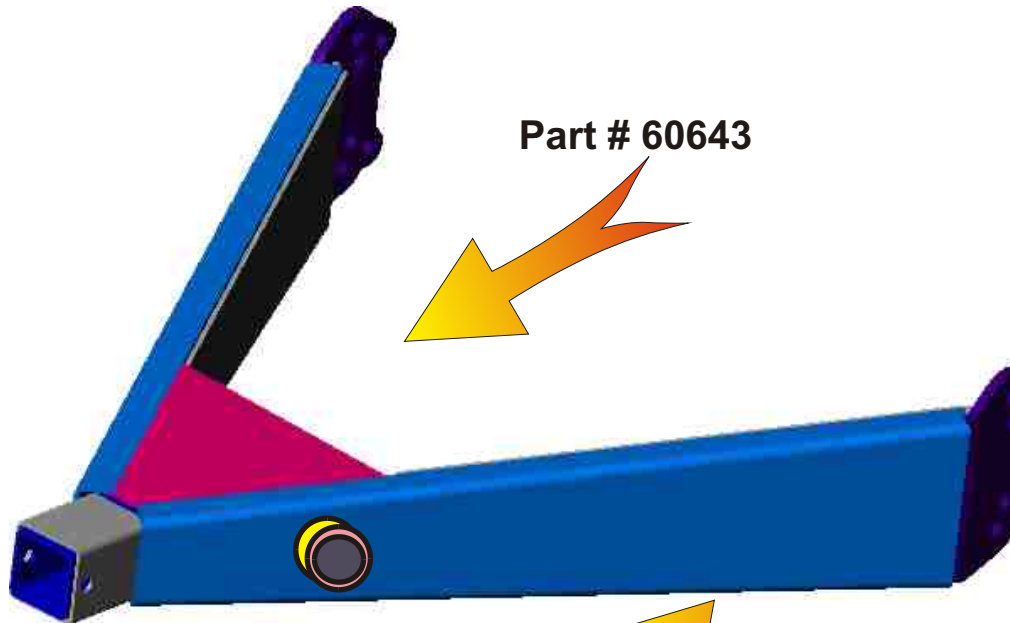
Hitch Weldement



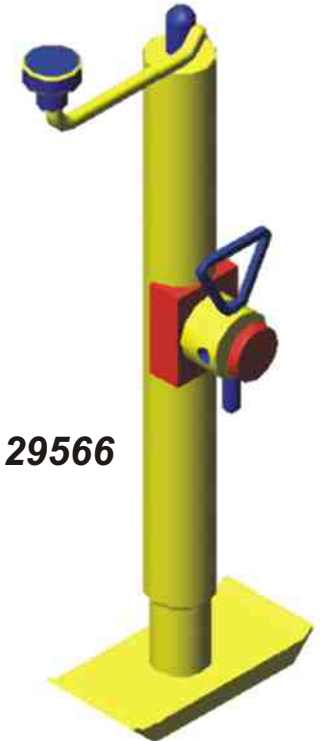
Tongue Adjustable 2 Dim
Part # 60646



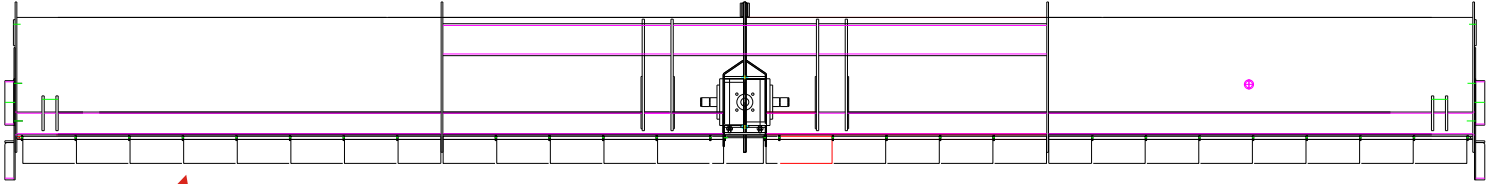
Part # 60643



Jack
Part # 29566

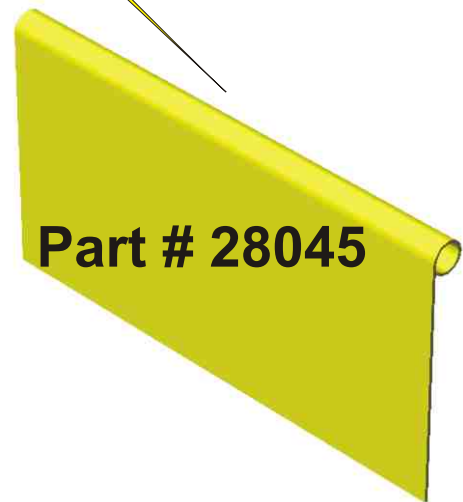


Hinging Guards



**1/2 Hingig Guard
Part # 28450**

Keep guards moving freely



Part # 28045

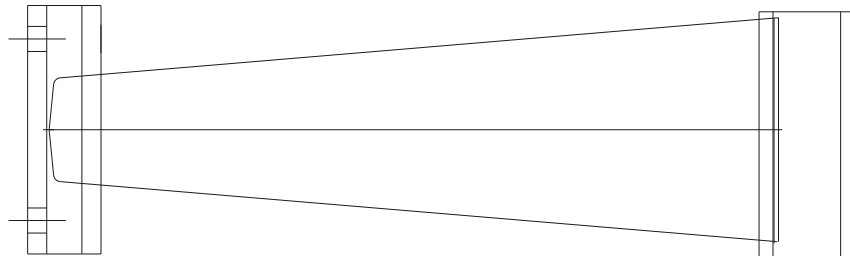
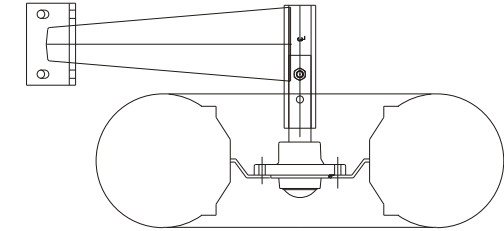
Rock Shaft



3x10° Cylinder P/N#22714



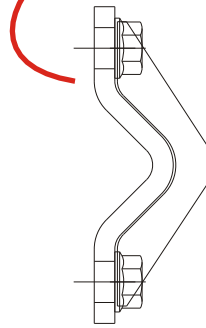
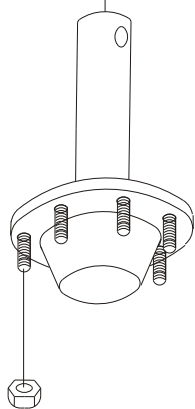
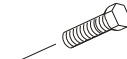
Wheel Arm Weldment



Part #2539



Part #1256

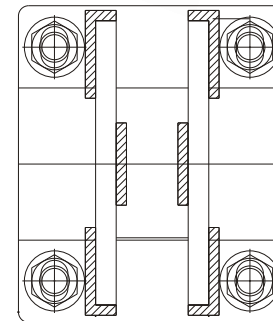


Part #70054

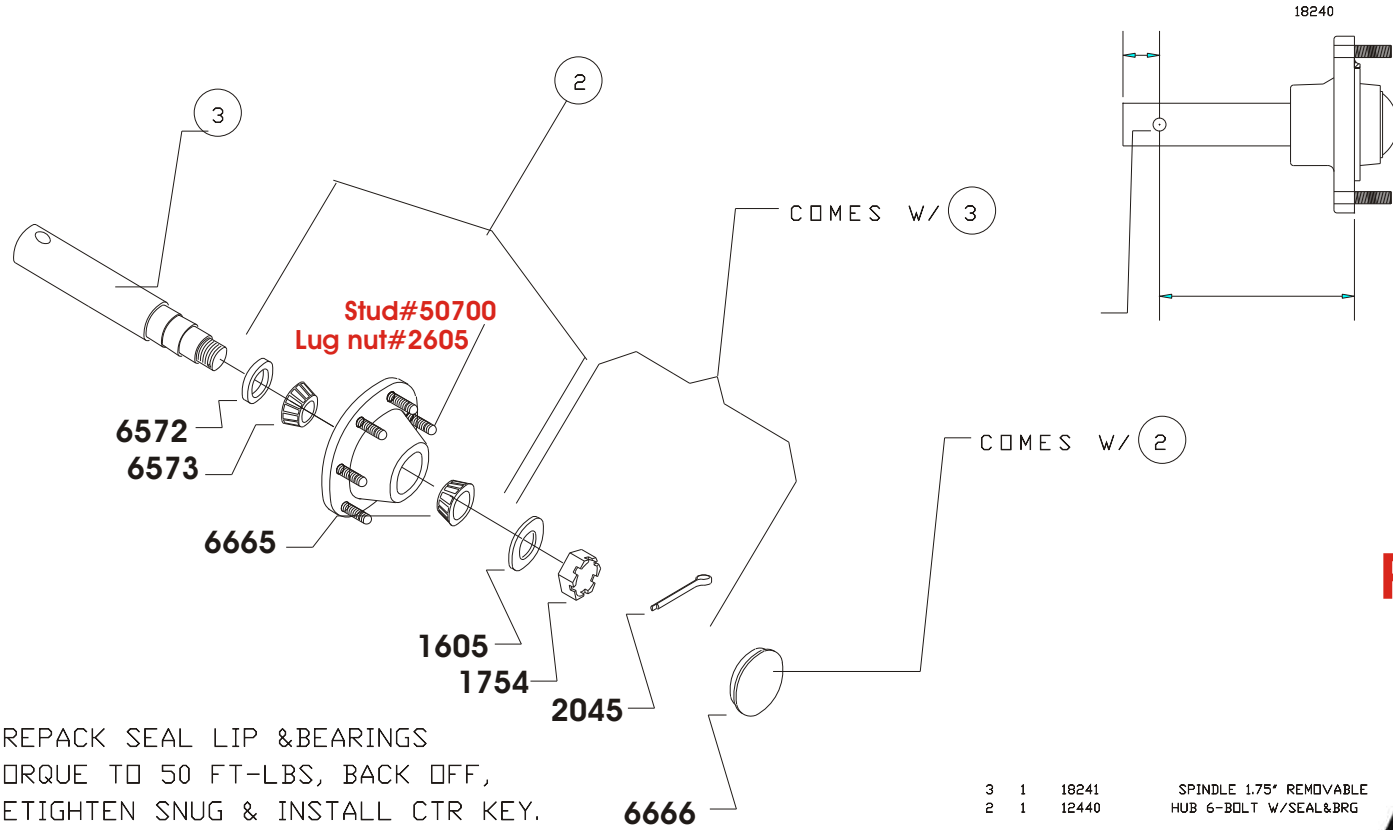


**Bolt #1296
Washer #1602
LockWasher #1640
Nut #1696**

Part #70052



Hub & Spindle, 6-Bolt 1" 3/4 Heavy

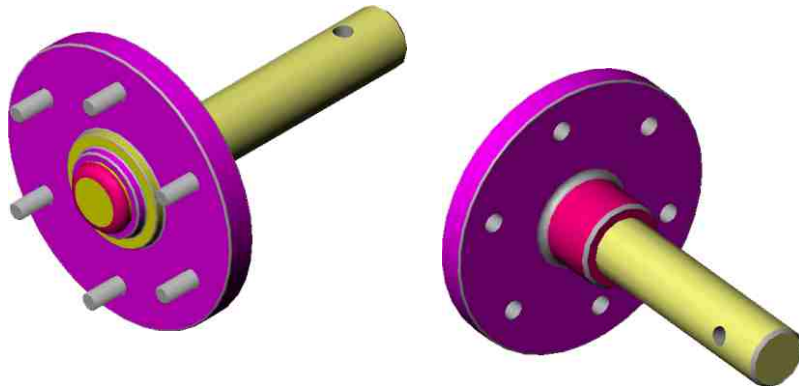


PREPACK SEAL LIP & BEARINGS
 TORQUE TO 50 FT-LBS, BACK OFF,
 RETIGHTEN SNUG & INSTALL CTR KEY.

3	1	18241
2	1	12440

SPINDLE 1.75" REMOVABLE
 HUB 6-BOLT W/SEAL&BRG

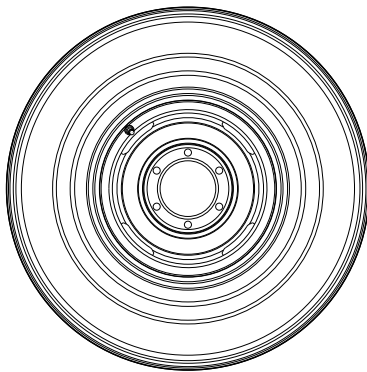
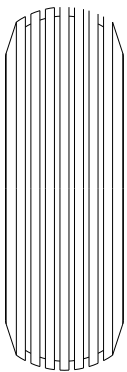
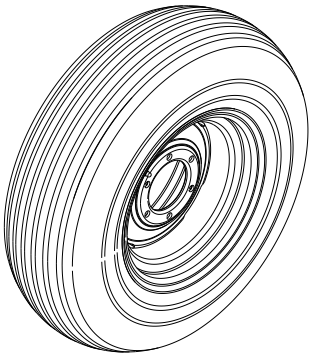
Part# 18240



Wheel Assembly



Part #65670

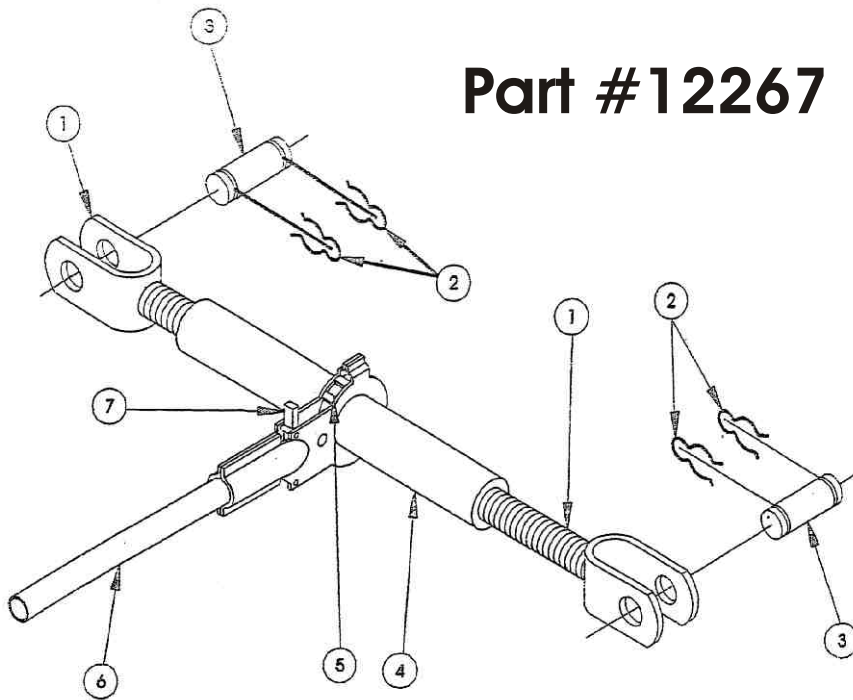


ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	65671	WHEEL 15 X 8 6-BOLT
2	1	11025	TIRE 9.50-15 8 PLY TUBELESS
3	1	14016	VALVE STEM

Ratchet Jack Assembly



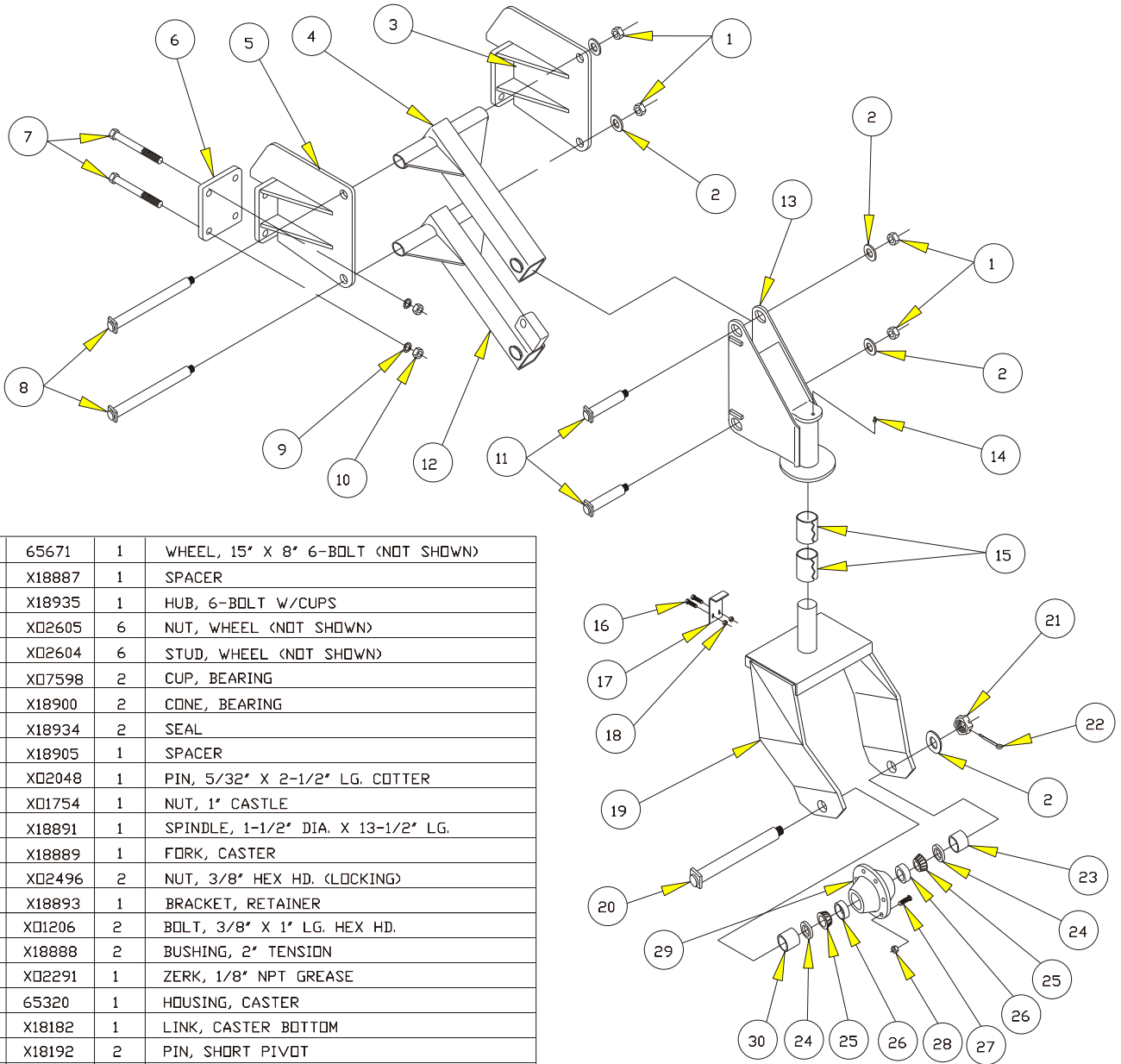
Part #12267



- 1 12951 2 Screw yoke assembly
- 2 4 Clip, hair pin (included w/jack)
- 3 2 Pin 1" Dia. (Included w/jack)
- 4 12952 1 Housing, man
- 5 12953 1 Ratchet
- 6 12956 1 Handle
- 7 12954 1 Finger, ratchet



Caster Arm Assembly



31	65671	1	WHEEL, 15" X 8" 6-BOLT (NOT SHOWN)
30	X18887	1	SPACER
29	X18935	1	HUB, 6-BOLT W/CUPS
28	X02605	6	NUT, WHEEL (NOT SHOWN)
27	X02604	6	STUD, WHEEL (NOT SHOWN)
26	X07598	2	CUP, BEARING
25	X18900	2	CONE, BEARING
24	X18934	2	SEAL
23	X18905	1	SPACER
22	X02048	1	PIN, 5/32" X 2-1/2" LG. COTTER
21	X01754	1	NUT, 1" CASTLE
20	X18891	1	SPINDLE, 1-1/2" DIA. X 13-1/2" LG.
19	X18889	1	FORK, CASTER
18	X02496	2	NUT, 3/8" HEX HD. (LOCKING)
17	X18893	1	BRACKET, RETAINER
16	X01206	2	BOLT, 3/8" X 1" LG. HEX HD.
15	X18888	2	BUSHING, 2" TENSION
14	X02291	1	ZERK, 1/8" NPT GREASE
13	65320	1	HOUSING, CASTER
12	X18182	1	LINK, CASTER BOTTOM
11	X18192	2	PIN, SHORT PIVOT
10	X01697	8	NUT, 3/4" HEX HD.
9	X01641	8	LOCKWASHER, 3/4"
8	X18191	2	PIN, LONG PIVOT
7	X01325	8	BOLT, 3/4" X 8" LG. HEX HD.
6	X18175	2	PLATE, MOUNTING
5	65329	1	L.H. LINKAGE
4	X18181	1	LINK, CASTER TOP
3	65330	1	R.H. LINKAGE
2	X01605	5	FLATWASHER, 1"
1	X02591	4	NUT, 1" UNF HEX HD. (LOCKING)
ITEM	PART NO.	QTY.	DESCRIPTION

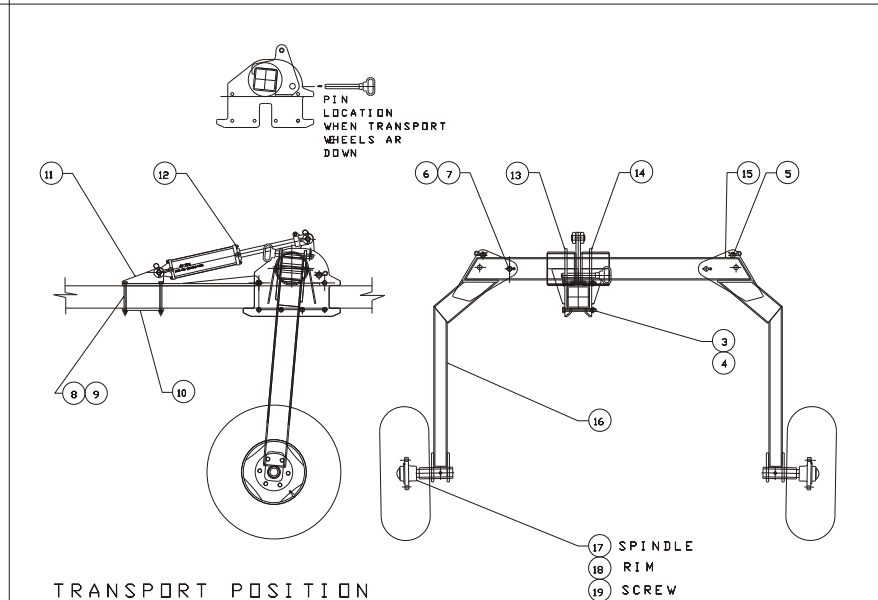
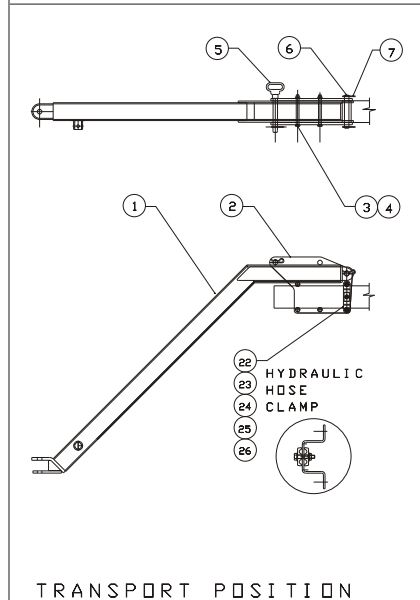
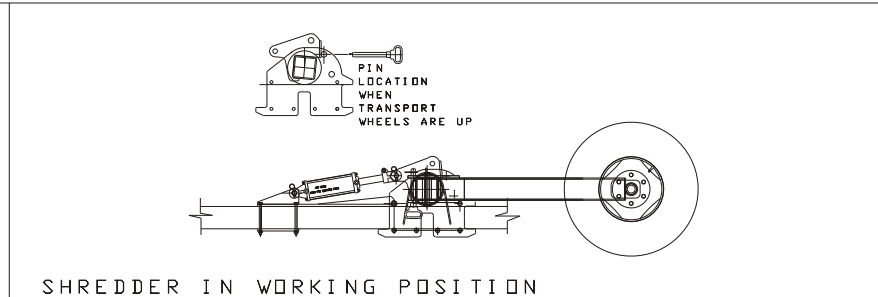
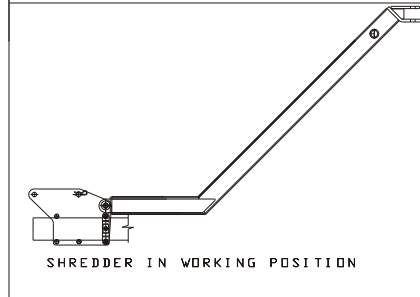
Part #61502

Direct Drive Shredder Transport



ECD#	REV.	NOTES	DATE	BY	APR
		RELEASED	6/99	GB	
3631		ADDED PART # 2605, LUG NUT	02/01	TH	
3645		PART # 65671 WAS # 8125	08/01	TH	

PART# 61021



30	12	2605	LUG NUT, 1/2"
29	2	33174	ELBOW ADAPTER .37X.37X90
28	2	8222	REDUCER BUSHING .5 X .37
27	1	27835	DRAWING-TRANSPORT
26	1	2475	NUT HEX HD 5/16
25	2	1597	WASHER FLAT 5/16
24	1	1190	BOLT HEX HD 5/16 X 2
23	1	15742	HOSE CLAMP
22	1	27833	BRACKET-HOSE, TRANSPORT
21	1	15056	BAG <FOR PARTS>
20	2	18453	HOSE-.25 X 192 HYDRA.
19	2	1258	BOLT-HEX HD 1/2" X 3.5
18	2	65671	RIM
17	2	18240	SPINDLE 1.75" REMOVABLE
16	2	65475	ARM-TRANSPORT
15	1	61022	CENTER ARM-TRANSPORT
14	1	27826	MOUNT-ROCKSHAFT R. H.
13	1	27827	MOUNT-ROCKSHAFT L. H.
12	1	27831	CYL. 4" X 12" HYDRAULIC
11	1	29713	CYLINDER MOUNT
10	1	27807	PLATE-MOUNTING
9	6	2539	NUT-HEX HD 1/2" SELF LK
8	4	1266	BOLT-HEX HD 1/2 X 7
7	6	2065	PIN COTTER 1/4 X 2"
6	3	15987	PIN-1" DIA X 7.5"
5	4	27829	PIN-HITCH 1" DIA
4	11	2546	NUT-HEX HD 5/8 SELF LK
3	11	1305	BOLT-HEX HD 5/8 X 7
2	2	27803	PLATE-MOUNTING
1	1	65478	TONGUE-TRANSPORT
ITEM	QTY	COMPONENT #	DESCRIPTION

NOTE:
PARTS INCLUDED, BUT NOT SHOWN

(20) HYDRAULIC HOSE AND FITTINGS	(28) REDUCER HEX BUSHING .5X.37
(21) BAG FOR PARTS	(29) ELBOW SWIVEL ADAPTER .37X.37X 90 DEG.
(27) 27835 DRAWING	

WHERE USED: DIRECT DRIVE SHREDDER					
TOL. UNLESS SPECIFIED	FAB .03	WELD .06	HOLES;	PER STDS. MAN. IN.	SHEET OF
BALZER INC. HIGHWAY 60 EAST MOUNTAIN LAKE, MN 56159			PHONE (507) 427-3133		
PART NAME: TRANSPORT-SHREDDER DIRECT DRIVE SHREDDER				PART NO. 65477.DWG	
OPER#	W/C	DESCRIPTION			

Transport Mode

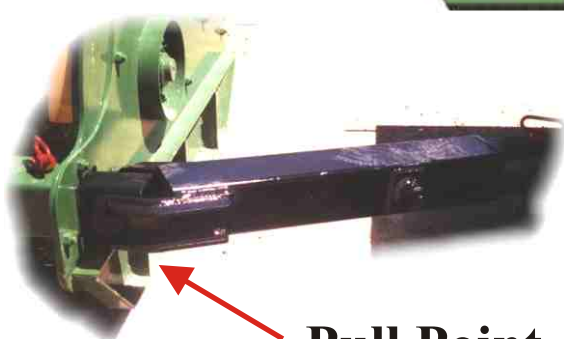


31 Foot Unit in Transport Position

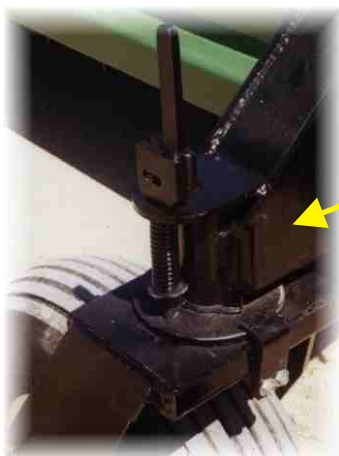


MAX SPEED 20 MPH

31 Foot Unit End View



Pull Point



**Caster
Wheel**



BALZERINC.

*County Road 27 Box 458 Mountain Lake, MN 56159
Phone number:(1-800) 795-8551 — (1-800) 727-3133 — Main:(507) 427-3133
Fax numbers: (507) 427-3640 — Web: www.balzerinc.com*