

BALZER INC.

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CONVENTIONAL SHREDDER PULL TYPE, FULL & SEMI-MOUNT MODELS 1200-1500-1800-2000-2200-2400

OWNERS MANUAL
FOR
INSTALLATION, OPERATION
& MAINTENANCE

DECEMBER - 95

PN SC500003

~~BALZER INC.~~

CONVENTIONAL SHREDDERS

TABLE OF CONTENTS

	Page
To The Purchaser.....	1
Warranty.....	2
Safety Section.....	3
Set-Up & Assembly.....	6
Operating.....	9
Service & Lubrication.....	10
Service Parts Ordering.....	11
Reference Drawings for Service Parts	Dwg. No.
Main Housing (Models 1200 - 2000).....	SC500101
Main Housing (Models 1800 - 2000).....	SC500102
8" Dia. Cylinder Assembly (Models 1200 - 1500).....	SC500139
8" Dia. Cylinder Assembly (Models 1800 - 2000).....	SC500140
8" Dia. Cylinder Assembly (Models 2200 - 2400).....	SC500141
6-5/8" Dia. Cylinder Assembly (Models 1200 - 1500).....	SC500143
6-5/8" Dia. Cylinder Assembly.....	SC500144
6-5/8" Dia. Cylinder Assembly.....	SC500145
Belt Tightener Assembly.....	SC500105

December - 95

BALZER INC.

CONVENTIONAL SHREDDERS

TABLE OF CONTENTS CON'T.

Reference Drawings for Service Parts	Dwg.No.
Drive Line Assembly (Models 1200 - 2400).....	SC500106
Rockshaft (Models 1200 - 1500).....	SC600107
Rockshaft (Models 1800 - 2400).....	SC500108
Hinging Guard & Rod (Models 1200 - 2400).....	SC500109
Pull Type Hitch.....	SC500110
Jack Assembly (5,000#).....	SC500138
Ratchet Jack Assembly.....	SC500112
Jack Stand (Full & Semi - Mounts Only).....	SC500113
Caster Arm Assembly	SC500114
Full Mount Parts (Conventional).....	SC500115
Semi-Mount Parts (Conventional).....	SC500116
Wheel Arm Assembly.....	SC500117
End Transport Parts.....	SC500118
Gearbox Assemblies	
Gearbox (Superior 540 & 1000 RPM).....	SC500119
Gearbox (Bondioli).....	SC500120

BALZER INC.

CONVENTIONAL SHREDDERS

TABLE OF CONTENTS CON'T.

Reference Drawings for Service Parts	Dwg.No.
Gearbox Assemblies Con't.	
Gearbox (Prairie 1:1 Ratio - 1000 RPM).....	SC500147
Gearbox (Prairie 1:1.81 Ratio - 540 RPM).....	SC500148
Gearbox (Prairie 1:1.35 Ratio - 1000 RPM).....	SC500149
Gearbox (Prairie 1:1.47 Ratio - 1000 RPM).....	SC500150
PTO'S - Pull Type Units	
1-3/8"-6 W/RA2 Clutch (540RPM).....	SC500151
1-3/8"-21 W/RA2 Clutch (1000 RPM).....	SC500152
1-3/4"-20 W/RA2 Clutch (1000 RPM).....	SC500153
1-3/8"-6CV W/RA2 Clutch (540 RPM).....	SC500154
1-3/8"-21CV W/RA2 Clutch (1000 RPM).....	SC500155
1-3/4"-20CV W/RA2 Clutch (1000 RPM).....	SC500156
PTO'S - Full & Semi-Mount	
1-3/8"-21 W/RA2 Clutch (540 RPM).....	SC500157
1-3/4"-20 W/RA2 Clutch (1000 RPM).....	SC500158

Warranty Card

December - 95

To the Purchaser

Congratulations on your selection of a Balzer Shredder. This shredder is one of the most economical means of chopping crop residue. It has been designed to provide years of profitable and dependable service. To insure maximum performance of your shredder, it is mandatory that you thoroughly study the owner's manual and follow its recommendations. Proper operation and maintenance are essential to maintain and maximize the machine life and to prevent injury or damage.

It is the owner's responsibility to:

- *Operate and maintain this shredder in a safe manner and in accordance with all applicable local, state, and federal codes, regulations and/or laws; and in compliance with on-product labeling and these instructions.
- *Make sure that all personnel have read this owner's manual and thoroughly understand safe and correct operating, installation, and maintenance procedures.
- *Make sure the shredder is set-up correctly before being placed in service and at regular intervals thereafter serviced in accordance with procedures outlined in this manual. This is important in promoting safe and efficient operations of this equipment. Contact your dealer for any clarification required on operating this shredder.
- *Fulfill all warranty obligations so as not to void the warranties.

This machine is warranted as stated in this manual. A registration card is provided and is to be filled out by your dealer, and promptly returned to the factory. This card provides a ready reference for you in securing warranty.

The serial number and identification tag is located on the front of the right portion of the unit. Please refer to these numbers when parts or warranty communication is necessary. Balzer Inc. reserves the right to make product improvements to the equipment at any time.

PLEASE FILL IN THE FOLLOWING INFORMATION FOR YOUR RECORDS:

Date of purchase _____

Owner's name _____

Dealer's name _____

Serial No./identification No. _____

WARRANTY

WARRANTY BY MANUFACTURER

Dealer or Distributor understands and agrees that 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 therefor; (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.'s 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. or any alteration or repair by others in such manner as in Balzer Inc.'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 or delay in delivery of Products resulting from acts or delays beyond its control.

Safety

OBSERVE AND FOLLOW ALL SAFETY PROCEDURES TO PREVENT PERSONAL INJURY OR DAMAGE TO THE UNIT.

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.

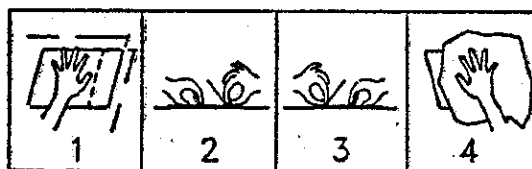
Most decals have a split backing which is meant to be removed from the split outward. To apply the decals follow these procedures:

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 or refer to the decal page of this manual.

Safety

 **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 "OPERATOR'S 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 OPERATION 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

DECALS ARE LOCATED IDENTICALLY AT BOTH ENDS OF SHREDDER

 **DANGER**

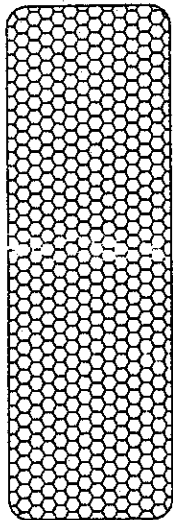


ROTATING DRIVELINE
CONTACT CAN CAUSE DEATH
KEEP AWAY
DO NOT OPERATE WITHOUT


- all driveline guards, tractor and equipment shields in place
- drivelines security attached at both ends
- driveline guards that turn freely on driveline

15295

10744
"WARNING"



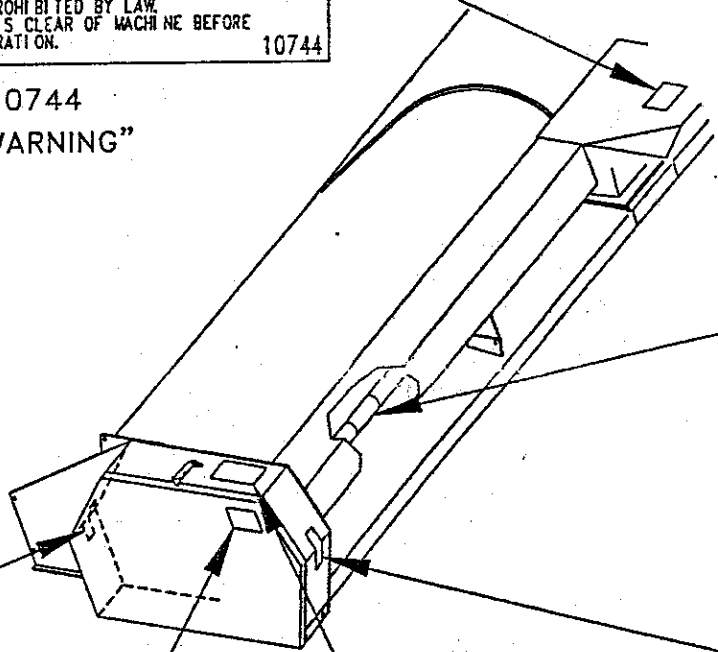
12794
RED
REFLECTOR


 **WARNING**

MOVING PARTS HAZARD
Can crush or dismember hands and fingers.
Do not operate machine with guard removed.

8154

8154
"WARNING"

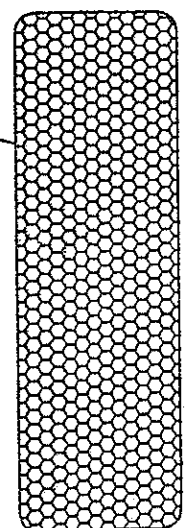


 **DANGER**

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

14175
"DANGER"



12795
AMBER
REFLECTOR


Safety

OBSERVE AND FOLLOW ALL SAFETY PROCEDURES TO PREVENT PERSONAL INJURY OR DAMAGE TO THE UNIT.

1. This machine must be operated and serviced by qualified persons who have thoroughly read and understand 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 any place other than the tractor's seat.
10. Do not stand in front, behind, or along side of the machine when the cylinders are turning.
11. Wait for movement of cylinders 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 tire pressure is 20 PSI 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.

Set-Up & Assembly-----

IMPORTANT INFORMATION

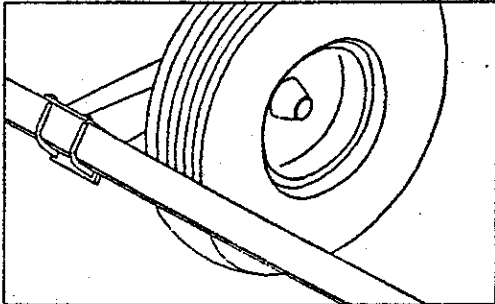
 If shredder must be raised off the ground to install any equipment, be sure to safely block it up. Be certain that entire area is safe before doing any maintenance.

WHEEL ARM ASSEMBLY

Remove hardware bag from the box of parts. The bag contains hardware for attaching the two arms.

Position the wheel arms on the rockshaft, with the tire towards the either middle or the outside for the desired row spacing.

Tires should be inflated to 15 - 20 PSI.



HYDRAULIC CYLINDER OR RATCHET JACK

Install a standard agricultural 3 x 8 hydraulic cylinder compatible ratchet jack between the lug on rockshaft and the lug on top of the housing.

HOSE STAND

Remove the right front bolt from the the top of the gearbox shield and install the hose stand. Run the hydraulic hoses thru the stand to the tractor. The stand is located in the box of parts.

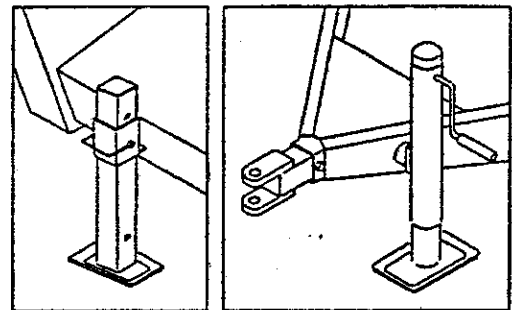
IMPLEMENT JACK OR JACK STAND

The implement jack or jack stands are in the box of parts.

The implement jack is required on all pull type of shredders.

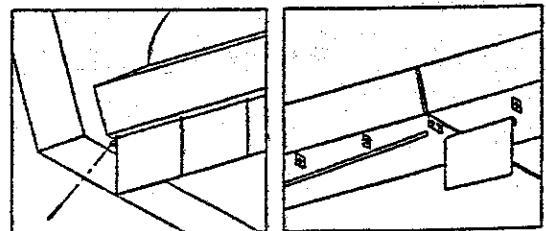
The jack stands are required on semi-mount & full mount shredders.

Install as shown in illustration below.



HINGING GUARDS

Remove hinging guards and two roll pins from the box of parts, and locate the two hinge rods. Each are about half the total length of the shredder. Install rods from the middle of the shredder outward (EXCEPT ON 15' MODELS, RODS TO BE INSTALLED FROM EACH END INWARDS). Slide one hinge rod halfway thru the first tab while positioning a hinging guard between tabs. Slide rod thru the guard and repeat until all are in place. Install roll pin between last tab and the end panel.



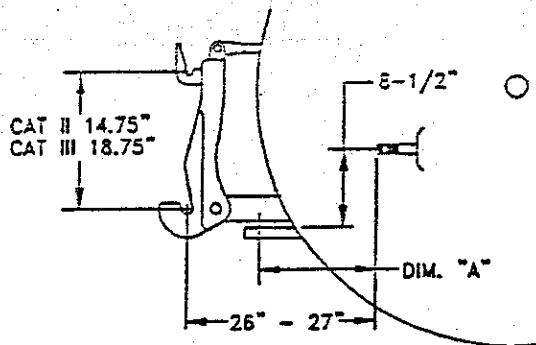
PIN PLACEMENT

GUARD PLACEMENT

RECOMMENDED TORQUE IN FOOT-POUNDS COARSE AND FINE THREAD GRADE 5 BOLTS			
DI A	TORQUE	DI A	TORQUE
1/4	10	9/16	111
5/16	18	5/8	173
3/8	39	3/4	290
7/16	58	7/8	500
1/2	87	1	620

Set-Up & Assembly

SUGGESTED MOUNTING ADJUSTMENT
FOR FULL-MOUNT, SEMI-MOUNT, AND
PULL-TYPE.

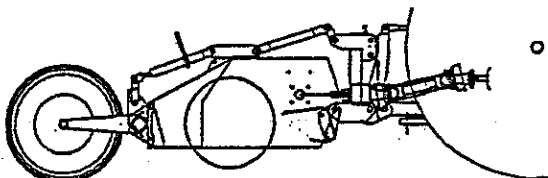


DRAWBAR ADJUSTMENT

PTO STYLE	DIM "A"
1-3/8"-6 SPLINE	14"
1-3/8"-21 SPLINE	16"
1-3/4"-20 SPLINE	20"

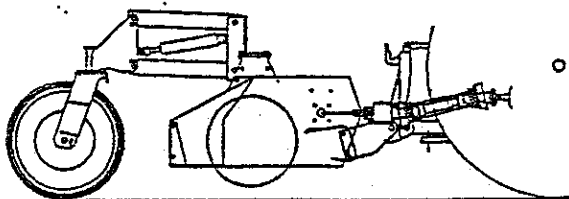
The diagram above shows ASAE standard dimensions. Safe and proper operation is dependant on correct adjustment. Compare these dimensions to your tractor, and make any necessary adjustments. If these dimensions are not possible on your tractor, contact your dealer for help.

FULL MOUNT (3 POINT)



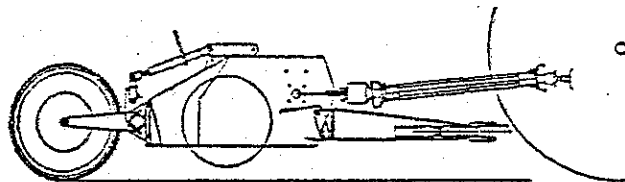
Pictured above is a full mount unit with the required quick hitch.

SEMI-MOUNT (2 POINT)



Pictured above is a semi-mount unit with the required quick hitch.

PULL TYPE



Pictured above is a pull type shredder.

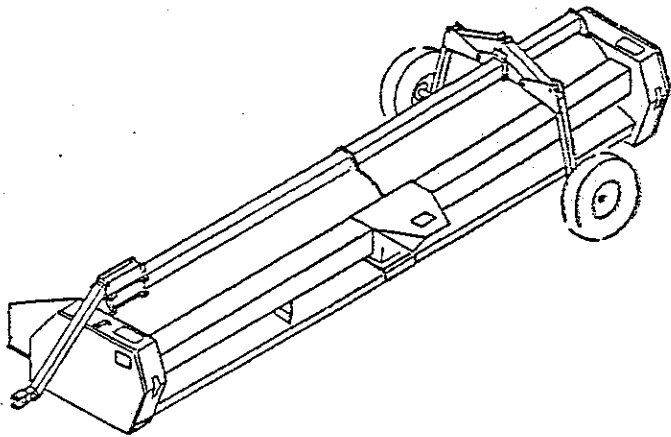
PTO DRIVES

Pull type shredders require different length pto's than do full mount or semi mount shredders. Be sure you have the correct PTO before running the shredder. Measure the PTO and compare the dimensions to the following chart. If it does not match, contact your dealer for the correct PTO.

IMPROPER PTO LENGTH CAN RESULT IN SERIOUS INJURY AND EQUIPMENT DAMAGE.

P/N	UNIT	RPM	SPLINE	COMPRESSED OVERALL LENGTH
X27023	PULL TYPE W/CLUTCH	540	1-3/8-6	49-1/2
X27024	PULL TYPE W/CLUTCH	1000	1-3/8-21	49-1/2
X27025	PULL TYPE W/CLUTCH	1000	1-3/4-20	49-1/2
X27026	PULL TYPE CV W/CLUTCH	540	1-3/8-6	51
X27027	PULL TYPE CV W/CLUTCH	1000	1-3/8-21	51
X27028	PULL TYPE CV W/CLUTCH	1000	1-3/4-20	51
X27029	FULL & SEMI W/CLUTCH	540	1-3/8-6	31-1/2

Set-Up & Assembly-----




END TRANSPORT

The end transport wheels should be placed as near to the middle of shredder as possible to reduce weight on the pulling tongue.


The tongue and wheels can be attached at either end, place them so the least amount will extend into the middle of the road when transporting.

Operating

The following procedures should be followed while operating your shredder.

 **WARNING:**
DISENGAGE TRACTOR PTO DRIVE IMMEDIATELY SHOULD EXCESSIVE VIBRATION OCCUR WHILE SHREDDER IS IN OPERATION. SHUT OFF TRACTOR AND REMOVE IGNITION KEYS BEFORE DETERMINING THE CAUSE OF THE VIBRATION.

The tractor should be operated at recommended PTO speed for maximum effectiveness of the shredder.

 **CAUTION:**
ALWAYS START UNIT UP SLOWLY AND GRADUALLY BRING IT UP TO OPERATING SPEED.


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 valley between the rows.


Do not make sharp turns while tractor PTO is engaged. This practice will damage shredder and tractor hydraulic lines. If sharper turns are desired, constant velocity PTO's are available. Consult with your local dealer for more information.

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.

FULL MOUNT

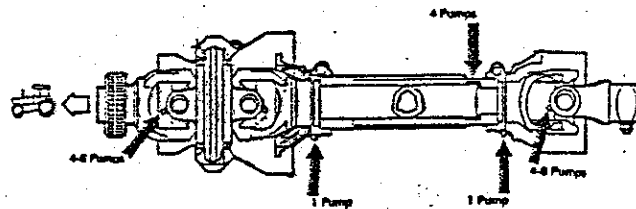
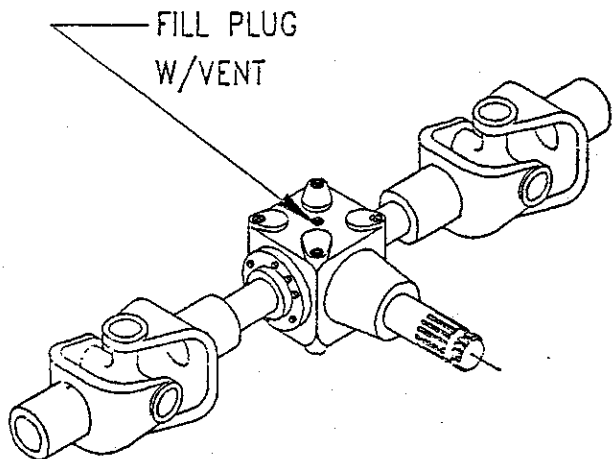
 **WARNING:**
REDUCE TRAVEL SPEED WHEN ON A ROUGH OR BUMPY SURFACE. BE SURE TO AVOID THE SHREDDER RAISED TO AVOID DAMAGE TO EITHER THE TRACTOR OR THE SHREDDER.

 **CAUTION:**
ADDITIONAL WEIGHT MAY NEED TO BE ADDED TO THE FRONT OF THE TRACTOR, TO COUNTERACT THE SHREDDER WEIGHT.

Service & Lubrication-----

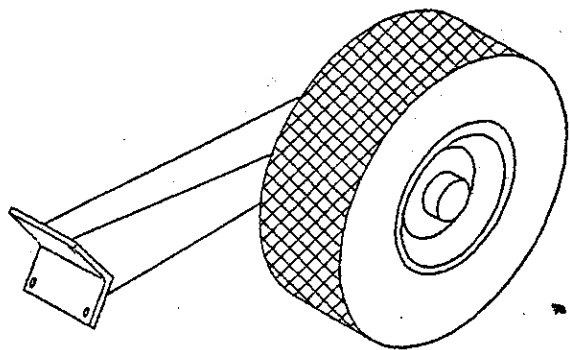
Check oil level by removing fill/vent plug and reading level on the dipstick. Use a good SAE 90 weight oil with anti-foaming additives.

PTO SHAFT MAINTENANCE



Grease U-joints every 10 hours of operation.

Grease wheel bearings every 50 hours of operation (grease zerk located on the wheel hub).



ALL POINTS SHOULD BE LUBRICATED EVERY 8 HOURS OF USE

- For maximum life and performance, the CV body must be greased regularly. Lubricate with the driveline in a straight position—up to 30 pumps of grease may be required.
- The metal drive tubes must be greased to operate properly.
- Shielding is subject to damage from abuse and weathering. Replace all damaged components and all shielding removed during maintenance.
- DO NOT use PTO adapters with CV drivelines. Replace special taper pin bolts only with genuine O.E.M. parts, periodically check tightness of nuts.

PTO LUBRICATION

Grease all PTO joints prior to operating and after every eight hours of operation. Some PTO's have a grease fitting for the slide. If your pto doesn't, it should be pulled apart and the slide cleaned and greased occasionally to insure proper and safe operation.

Parts-----

IT IS THE POLICY OF BALZER INC. TO CONSTANTLY IMPROVE ITS PRODUCTS WHENEVER IT IS PRACTICAL TO DO SO. THEREFORE, BALZER INC. 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 thru your local dealer.

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

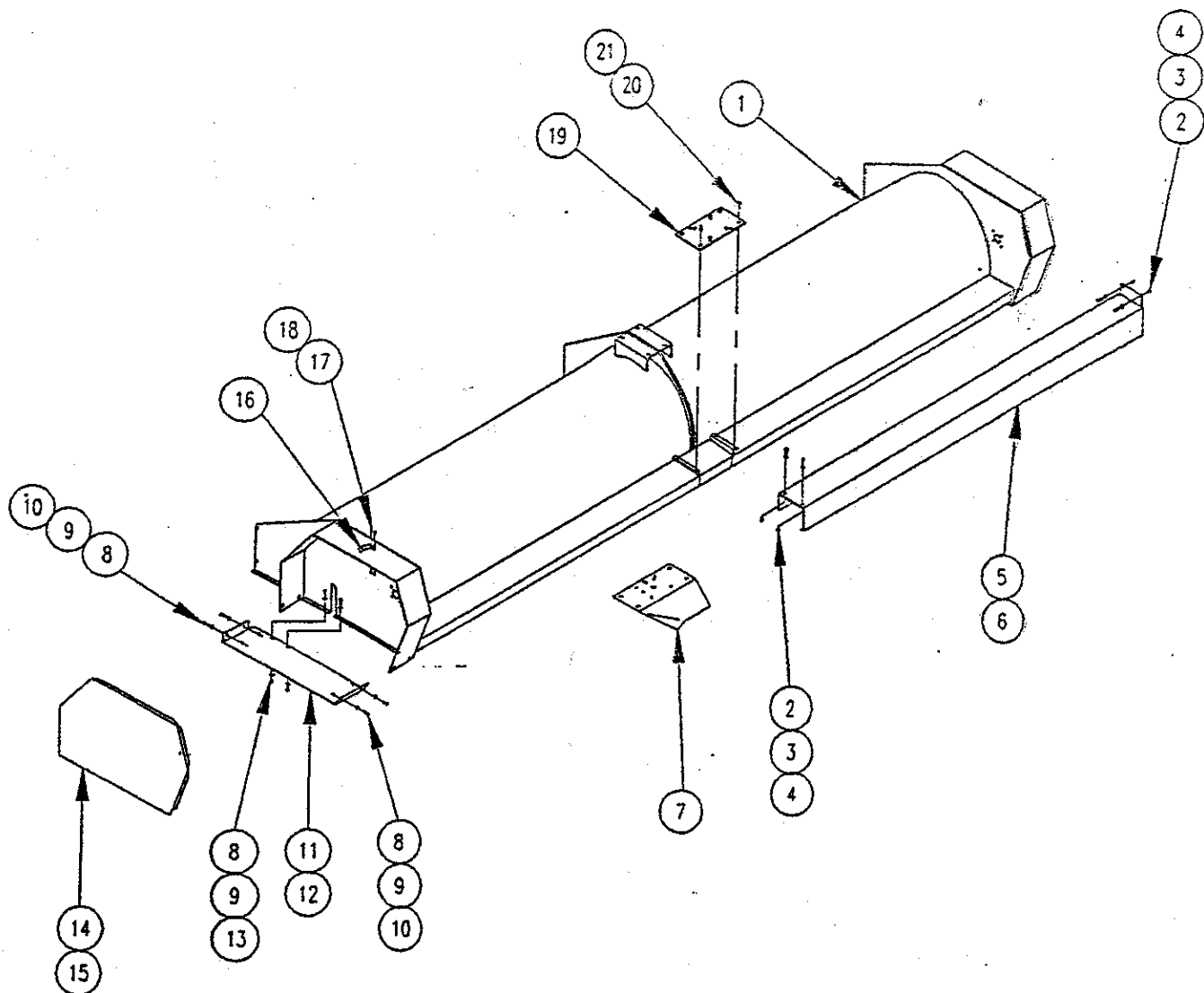
Address all orders for parts as follows:

BALZER INC.
CTY. RD. 27E.
P.O. 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.



21	X02546	4	NUT, 5/8" HEX HD TOPLOCK GR.8	9	X01598	12	FLATWASHER, 3/8"
20	X01289	4	BOLT, 5/8" X 1-1/2" LG. HEX HD	8	X01206	12	BOLT, 3/8" X 1" LG. HEX HD.
19	X24298	1	MOUNT, GEAR BOX	7	X17307	1	SHIELD, GEAR BOX
18	X02564	8	NUT, 1/4" HEX HD. (LOCKING)	6	X24173	1	SHIELD, L.H. LINE SHAFT (1500)
17	X01161	8	BOLT, 1/4" X 5/8" LG. HEX HD.	6	X12423	1	SHIELD, L.H. LINE SHAFT (1200)
16	X14403	4	LATCH, HOOD	5	X24172	1	SHIELD, R.H. LINE SHAFT (1500)
15	X14401	1	SHIELD, L.H. END	5	X12422	1	SHIELD, R.H. LINE SHAFT (1200)
14	X14400	1	SHIELD, R.H. END	4	X01185	8	BOLT, 5/16" X 1" LG. HEX HD.
13	X01207	4	BOLT, 3/8" X 1-1/4" LG. HEX HD.	3	X01597	8	FLATWASHER, 5/16"
12	X12404	1	PANEL, R.H. BOTTOM END	2	X02475	8	NUT, 5/16" HEX HD. (LOCKING)
11	X12403	1	PANEL, L.H. BOTTOM END	1	X24168	1	HOUSING, MAIN (1500)
10	X02496	12	NUT, 3/8" HEX HD (LOCKING)	1	X24195	1	HOUSING, MAIN (1200)
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

B 9-12-95

REVISED

DATE 1-15-95

SCALE 1/4" = 1"

REF. NO. 20207

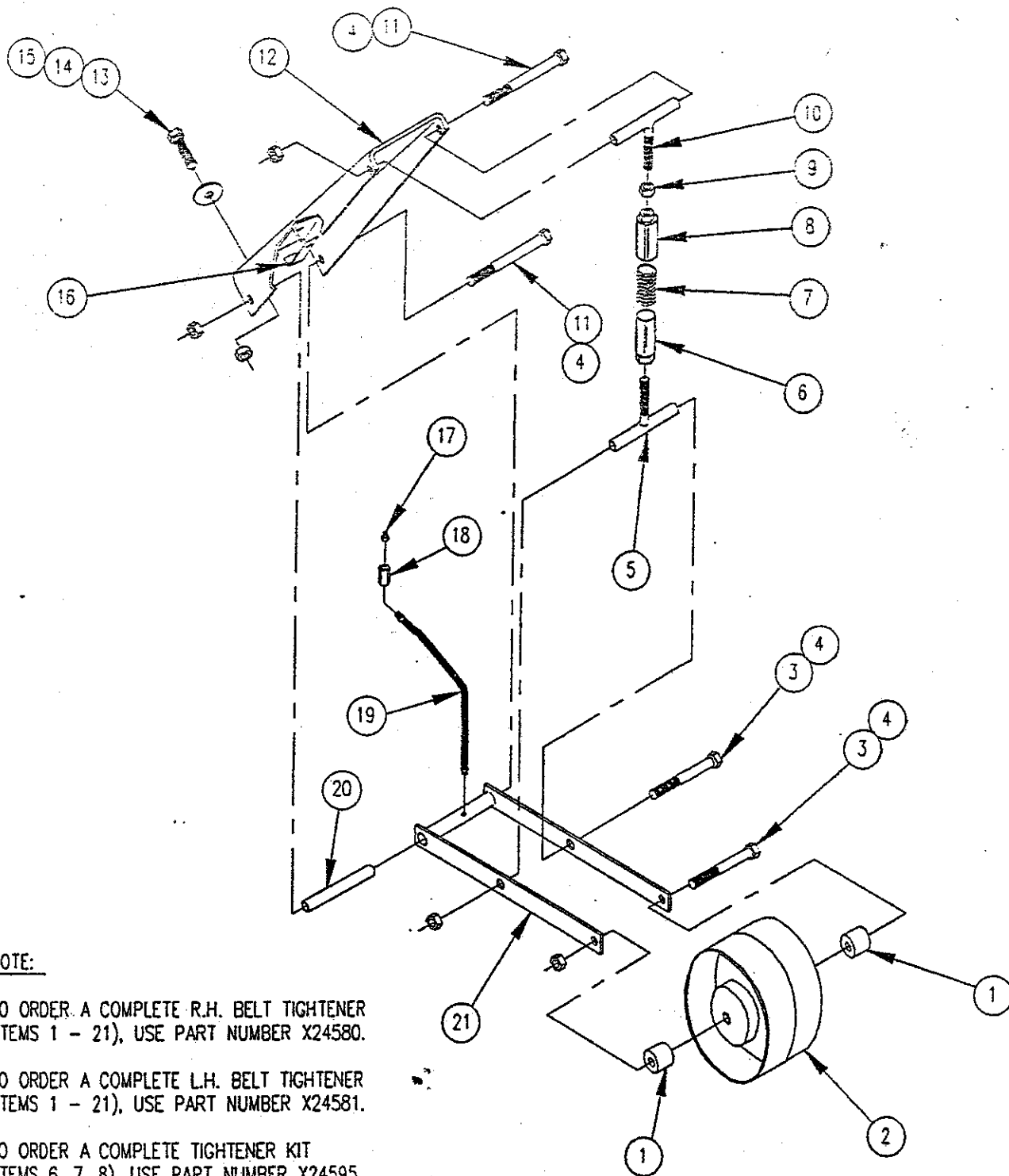
REV. DATE

DESCRIPTION OF REVISION

DRAWN TWS

MAIN HOUSING
-MODELS 1200 - 1500 CON.-

DRAWING NO. SC500101



NOTE:

TO ORDER A COMPLETE R.H. BELT TIGHTENER (ITEMS 1 - 21), USE PART NUMBER X24580.

TO ORDER A COMPLETE L.H. BELT TIGHTENER (ITEMS 1 - 21), USE PART NUMBER X24581.

*TO ORDER A COMPLETE TIGHTENER KIT (ITEMS 6, 7, 8), USE PART NUMBER X24595.

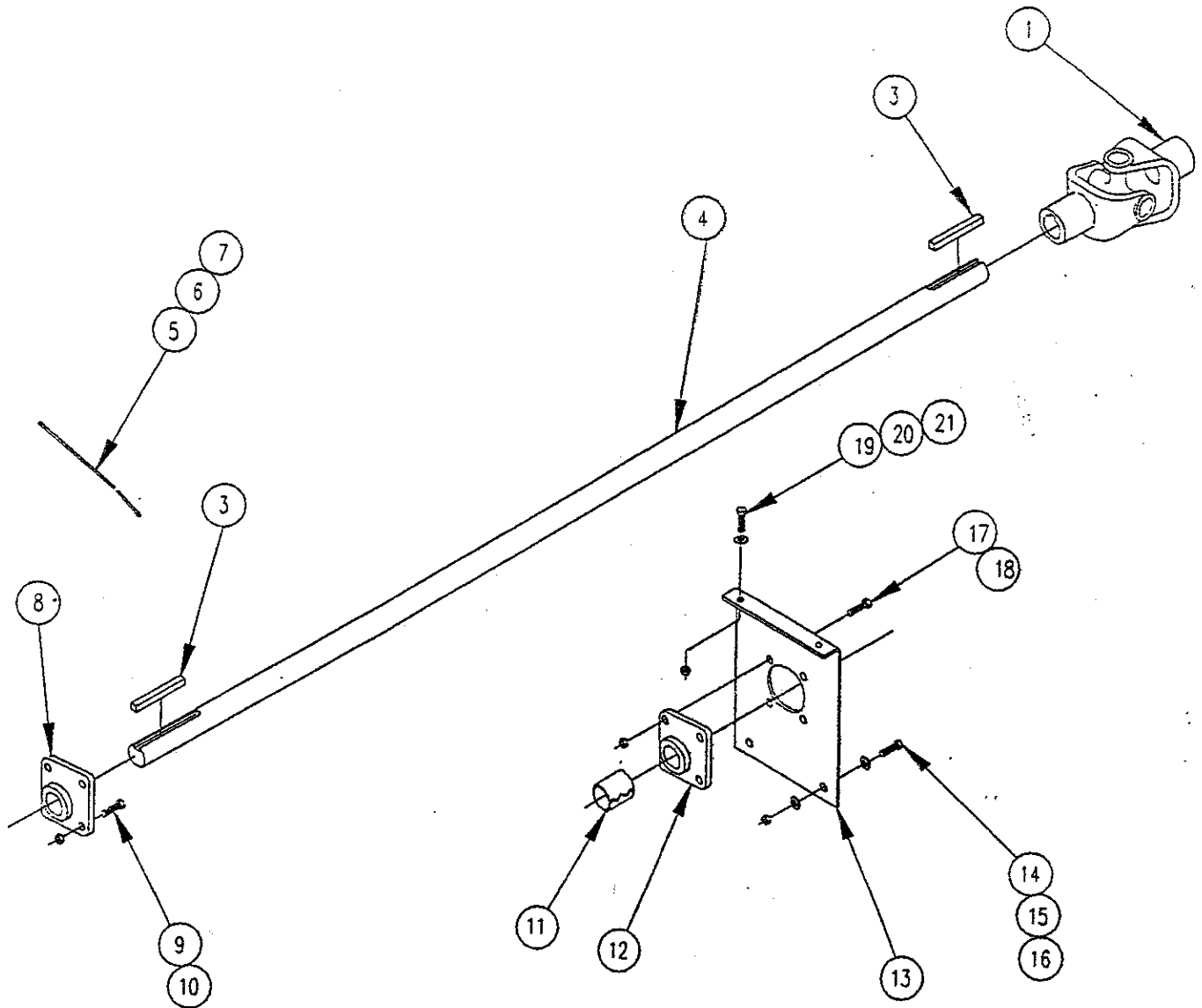
21	X24582	2	TIGHTENER, ARM LINKAGE	11	X01263	4	BOLT, 1/2" X 5-1/2" HEX HD.
20	X12400	2	BUSHING	10	X18825	2	ADJUSTER, UPPER
19	X24180	2	HOSE, GREASE LINE (1/8" X 18" LG.)	9	X01696	2	NUT, 5/8"-11UNC HEX HD, R.H.
18	X12333	2	COUPLER, 1/8" NPT	8	X24584	2	TIGHTENER, OUTER HALF
17	X02291	2	ZERK, 1/8" NPT	7	X02616	2	SPRING, 1" X 5-1/2" LG. COMPRESSION
16	X24322	4	CLAMP, GREASE HOSE	6	X24587	2	TIGHTENER, INNER HALF
15	X02496	8	NUT, 3/8" HEX HD TOPLOCK GR. 8	5	X18826	2	ADJUSTER, LOWER
14	X01598	8	FLATWASHER, 3/8"	4	X02539	8	NUT, 1/2" HEX HD TOPLOCK
13	X01206	8	BOLT, 3/8" X 1" HEX HD	3	X01262	4	BOLT, 1/2" X 5" LG. HEX HD
12	X18824	2	CHANNEL, MOUNTING	2	X20126	2	PULLEY, IDLER
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
				1	X24589	4	BUSHING

BALZER INC.

REV. B 9-13-95 REVISD DATE 1-20-95
 SCALE 1/4" = 1"

BELT TIGHTENER ASSEMBLY

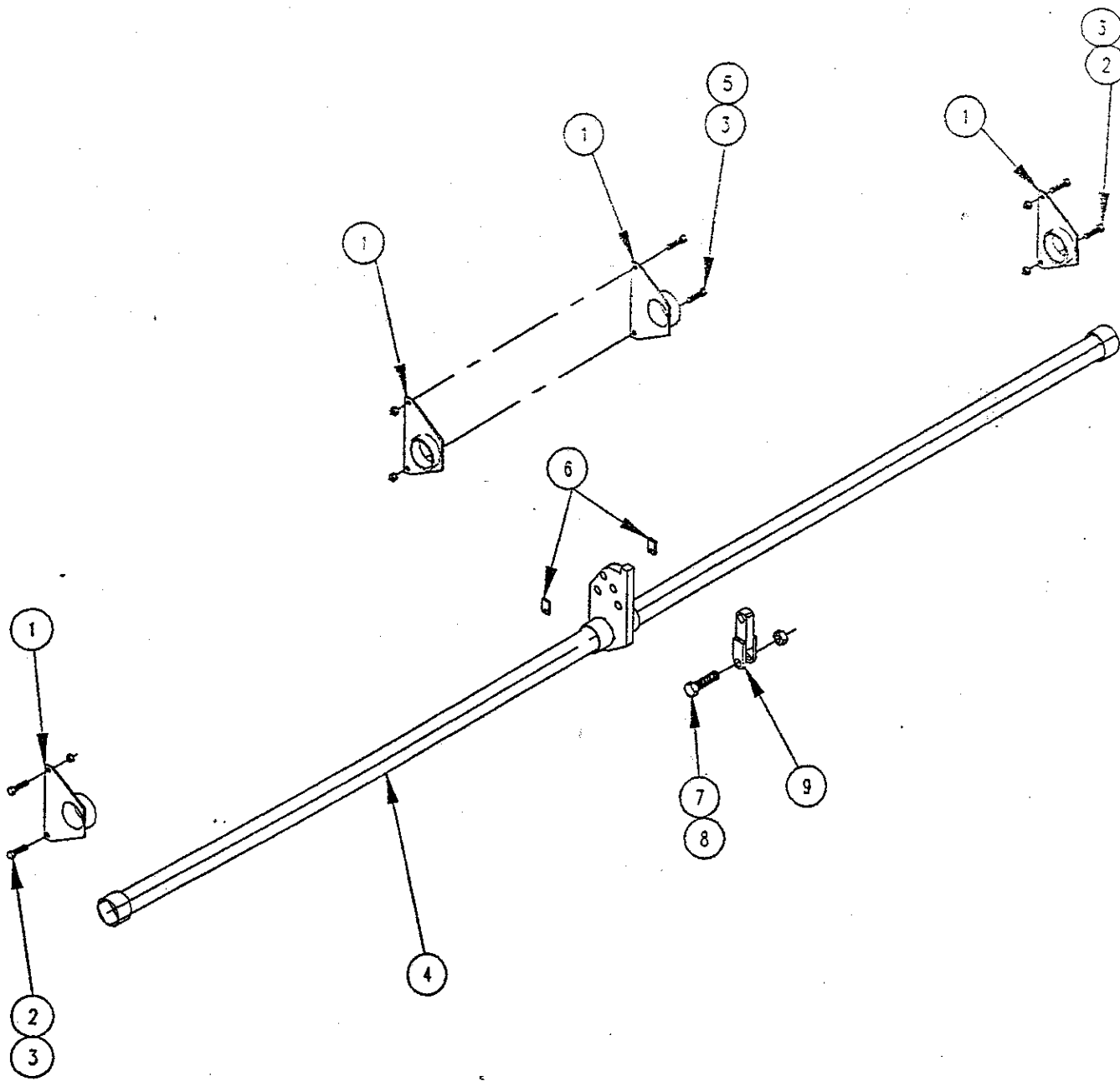
REF. NO. 20218
 DRAWING NO. SC500105



21	X02475	4	NUT, 5/16" HEX HD TOPLOCK
20	X01597	4	FLATWASHER, 5/16"
19	X01185	4	BOLT, 5/16" X 1" LG. HEX HD
18	X02546	8	NUT, 5/8" HEX HD TOPLOCK
17	X01290	8	BOLT, 5/8" X 1-3/4" LG. HEX HD
16	X02539	4	NUT, 1/2" HEX HD TOPLOCK
15	X01600	8	FLATWASHER, 1/2"
14	X01249	4	BOLT, 1/2" X 1-1/4" LG. HEX HD.
13	X24223	2	PLATE, MOUNTING (1800 - 2400)
12	X16895	2	BEARING, 2" 4-BOLT
11	X24203	2	SLEEVE, 1-3/4"
10	X02546	8	NUT, 5/8" HEX HD TOPLOCK (1800-2400)
	X02539	8	NUT, 1/2" HEX HD TOPLOCK (1200-1500)
9	X01291	8	BOLT, 5/8" X 2" LG" (1200 - 2400)
ITEM	PART NO.	QTY.	DESCRIPTION

8	X20092	2	BEARING, 1-3/4" 4-BOLT (1800 - 2400)
7	X02291	2	ZERK, 1/8" NPT
6	X12333	2	COUPLER, 1/8" NPT
5	X24179	2	HOSE, GREASE LINE (1/8" X 30" LG.)
	X24483	2	SHAFT, 1-3/4" X 137" LG. (2400)
	X24482	2	SHAFT, 1-3/4" X 125" LG. (2200)
	X24236	2	SHAFT, 1-3/4" X 112-11/16" LG. (2000)
	X24235	2	SHAFT, 1-3/4" X 100-11/16" LG. (1800)
	X31367	2	SHAFT, 1-3/4" X 81-5/16" LG. (1500)
4	X31366	2	SHAFT, 1-3/4" X 63-5/16" LG. (1200)
	X02408	4	KEY, 3/8" X 2-1/2" LG.
2	X12911	2	KIT, CROSS & BEARING (NOT SHOWN)
1	X24239	2	U-JOINT, 1-3/4" (1200 - 2400)
ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.	B	9-13-95	REVISED	DATE	1-19-95	DRIVE LINE ASSEMBLY MODELS 1200-2400	REF. NO.	20211
	REV.	DATE	DESCRIPTION OF REVISION	SCALE	1/4" = 1"		DRAWING NO.	SC500106



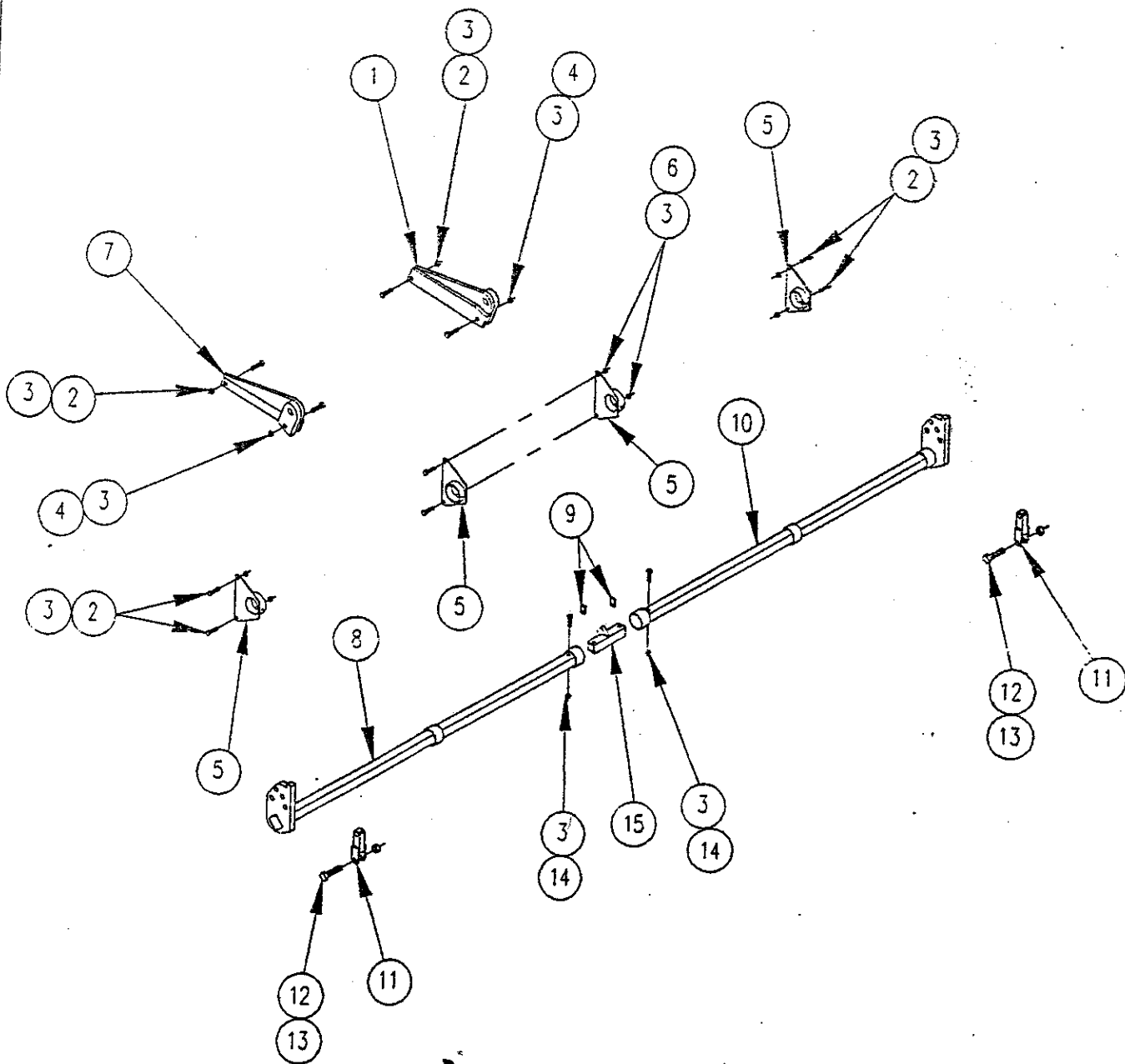
9	X24276	1	ARM CLEVIS	4	X24265	1	ROCKSHAFT (15 FT.)
8	X01779	1	NUT, 1" HEX HD TOPLOCK		X24264	1	ROCKSHAFT (12 FT.)
7	X01354	1	BOLT, 1" X 3-1/4" LG. HEX HD	3	X02546	6	NUT, 5/8" HEX HD TOPLOCK
6	X24282	2	SPACER, LOWER	2	X01290	4	BOLT, 5/8" X 1-3/4" LG. HEX HD.
5	X01294	2	BOLT, 5/8" X 2-3/4" LG. HEX HD	1	X24271	4	BEARING, ROCKSHAFT
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

B	9-13-95	REVISED	DATE 1-26-95
REV.	DATE	DESCRIPTION OF REVISION	SCALE 1/2" = 1"
			DRAWN TWS

ROCKSHAFT
MODELS 1200 - 1500

REF. NO.	20213
DRAWING NO.	SC500107



15	X24301	1	BAR, ROCKSHAFT SPLICE
14	X01298	2	BOLT, 5/8" X 3-3/4" LG. HEX HD.
13	X01779	2	NUT, 1" HEX HD TOPLOCK
12	X01343	2	BOLT, 1" X 3" HEX HD
11	X24276	2	ARM, CLEVIS
10	X24497	1	ROCKSHAFT, L. H. (2400)
	X24493	1	ROCKSHAFT, L. H. (2200)
	X24313	1	ROCKSHAFT, L. H. (2000)
	X24267	1	ROCKSHAFT, L. H. (1800)
9	X24282	2	SPACER, LOWER
ITEM	PART NO.	QTY.	DESCRIPTION

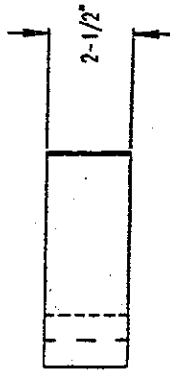
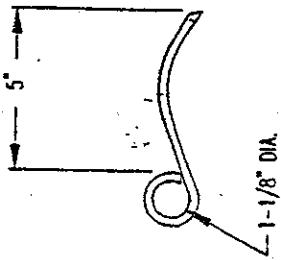
8	X24496	1	ROCKSHAFT, R. H. (2400)
	X24492	1	ROCKSHAFT, R. H. (2200)
	X24312	1	ROCKSHAFT, R. H. (2000)
	X24266	1	ROCKSHAFT, R. H. (1800)
7	X24315	1	MOUNT, L. H. CYLINDER
6	X01295	2	BOLT, 5/8" X 3" LG. HEX HD.
5	X24271	4	BEARING, ROCKSHAFT
4	X01291	2	BOLT, 5/8" X 2" HEX HD.
3	X02546	12	NUT, 5/8" HEX HD TOPLOCK
2	X01290	6	BOLT, 5/8" X 1-3/4" HEX HD.
1	X24314	1	MOUNT, R. H. CYLINDER
ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

REVISED 9-13-95
 DATE 1-27-95
 SCALE 1/4" = 1"
 REVISIONS
 DESCRIPTION OF REVISION
 DRAWN TWS

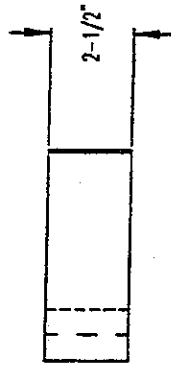
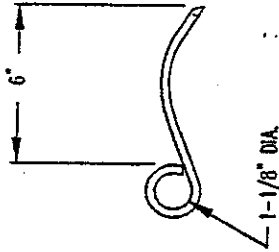
ROCKSHAFT
 MODELS 1800 - 2400

REF. NO. 20214
 DRAWING NO. SC500108



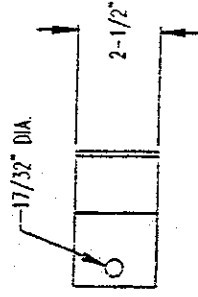
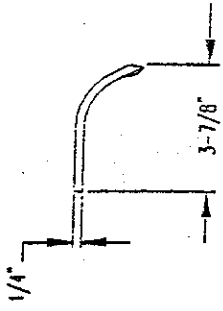
5" CUP KNIFE

24237 W/O HARD SURFACING
24331 W/HARD SURFACING



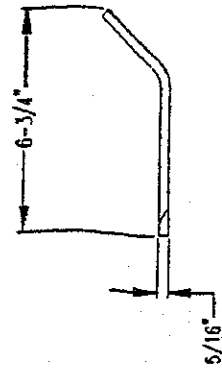
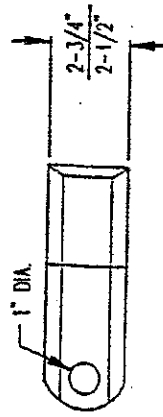
6" CUP KNIFE

24190 W/O HARD SURFACING
24330 W/HARD SURFACING



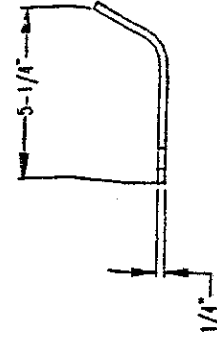
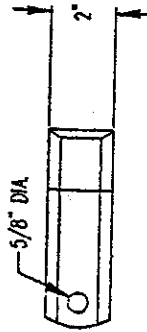
CUP KNIFE

12297 W/O HARD SURFACING
24329 W/HARD SURFACING



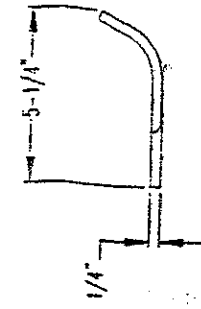
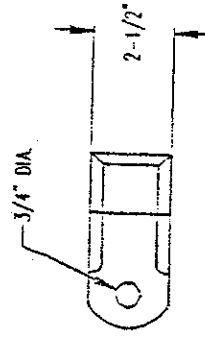
SIDE KNIFE

26569 W/O HARD SURFACING
31440 W/HARD SURFACING



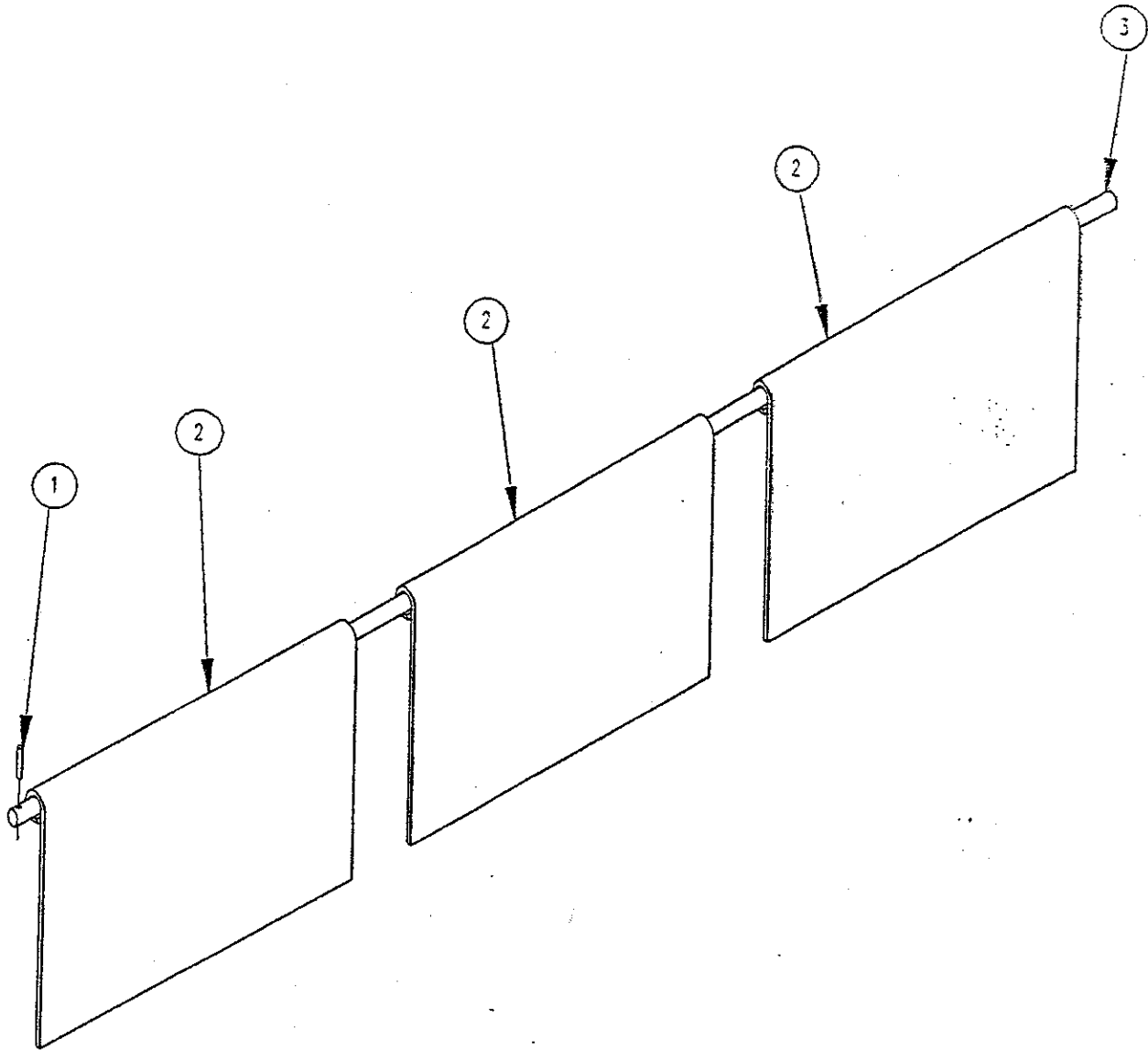
SIDE KNIFE

12357 W/O HARD SURFACING
24328 W/HARD SURFACING



SIDE KNIFE

24153 W/O HARD SURFACING
24326 W/HARD SURFACING



ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
3	X24499	2	ROD, HINGE (24 FT. UNIT)	2	X22634	24	GUARD, HINGING (24 FT. UNIT)
	X24498	2	ROD, HINGE (22 FT. UNIT)		X22634	22	GUARD, HINGING (20 FT. UNIT)
	X24104	2	ROD, HINGE (20 FT. UNIT)		X22634	20	GUARD, HINGING (20 FT. UNIT)
	X24103	2	ROD, HINGE (18 FT. UNIT)		X22634	18	GUARD, HINGING (18 FT. UNIT)
	X24188	2	ROD, HINGE (15 FT. UNIT)		X22634	15	GUARD, HINGING (15 FT. UNIT)
	X12365	2	ROD, HINGE (12 FT. UNIT)		X22634	12	GUARD, HINGING (12 FT. UNIT)
1	X01850	2	PIN, 1/8" X 1" LG. ROLL				

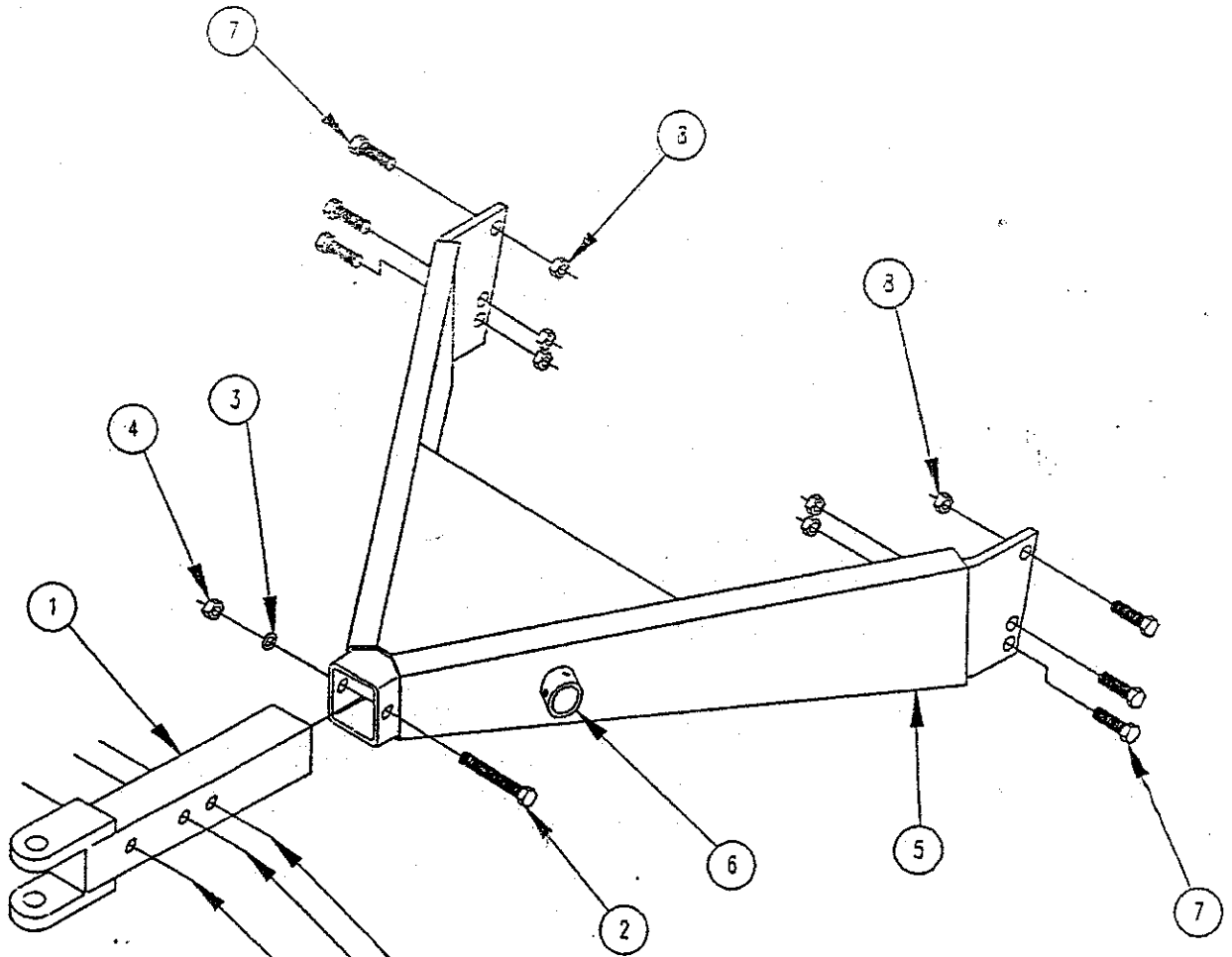
BALZER INC.

B 9-13-95 REVISED
REV. DATE DESCRIPTION OF REVISION

DATE 1-13-95
SCALE 1/4" = 1"
DRAWN TWS

HINGING GUARD & ROD

REF. NO. 20206
DRAWING NO. SC500109



USE THIS ADJUSTMENT MOUNTING HOLE FOR 1-3/4" 1000 RPM PTO.

USE THIS ADJUSTMENT MOUNTING HOLE FOR 1-3/8" 1000 RPM PTO.

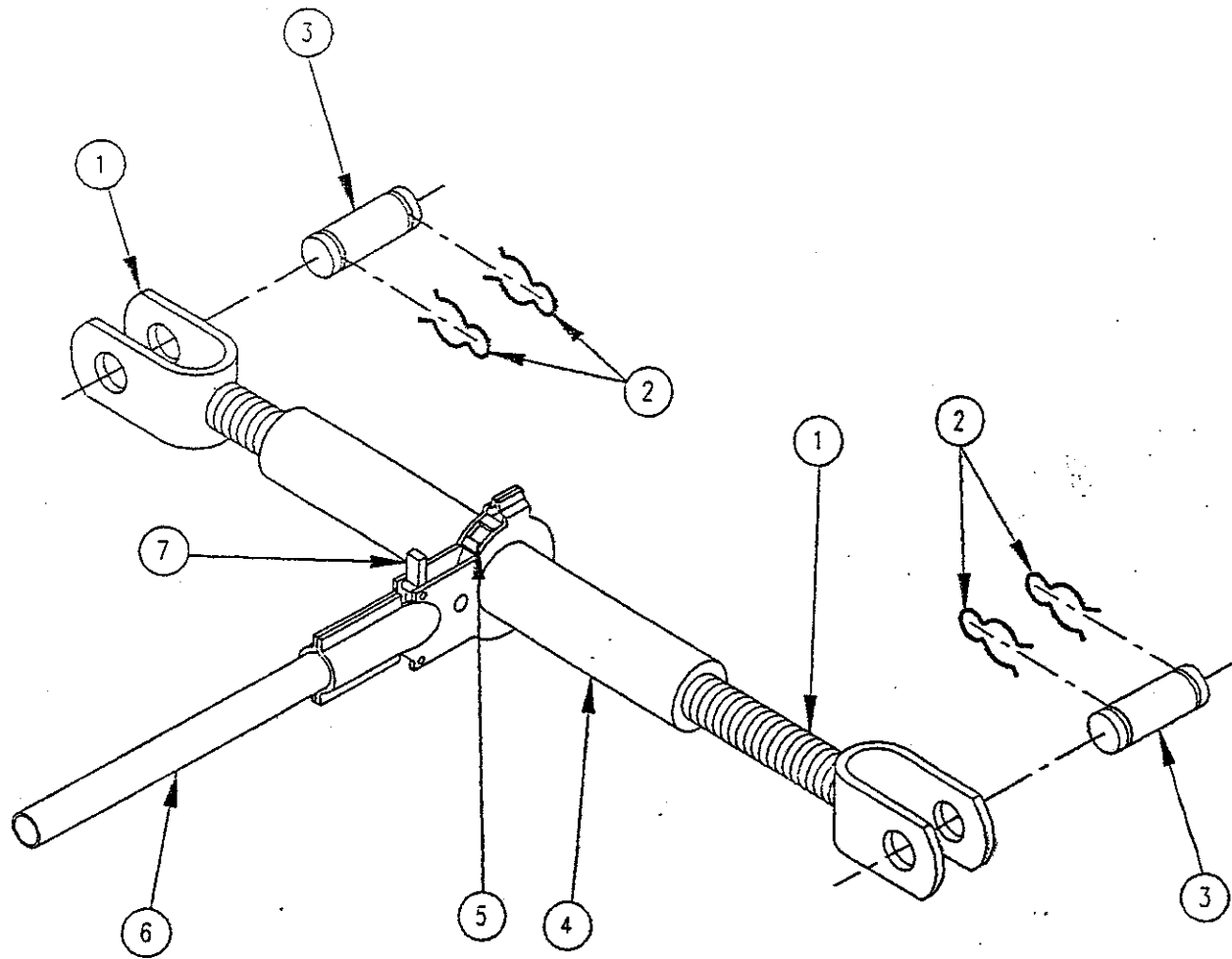
USE THIS ADJUSTMENT MOUNTING HOLE FOR 540 RPM PTO.

NOTE:

TO ORDER A COMPLETE PULL TYPE HITCH (ITEMS 1 & 5), USE PART NUMBER X24283.

ITEM #6 (X10520) IS INCLUDED WITH TONGUE HITCH, BUT CAN BE ORDERED SEPARATE.

8	X01777	6	NUT, 3/4" HEX HD. (LOCKING)	4	X01697	1	NUT, 3/4" HEX HD.
7	X01313	6	BOLT, 3/4" X 2-1/2" LG. HEX HD.	3	X01641	1	LOCKWASHER, 3/4"
6	X10520	1	SWIVEL MALE (INCLUDED W/ITEM #5)	2	X01320	1	BOLT, 3/4" X 5" LG. HEX HD.
5	X24284	1	HITCH, TONGUE	1	X24295	1	TONGUE, ADJUSTING
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
BALZER INC.			B	9-13-95	REVISED	DATE	1-16-95
			REV.	DATE	DESCRIPTION OF REVISION	SCALE	1/4" = 1"
						DRAWING	TWS
						PULL TYPE HITCH	
						REF. NO.	20209
						DRAWING NO.	SC500110



NOTE:

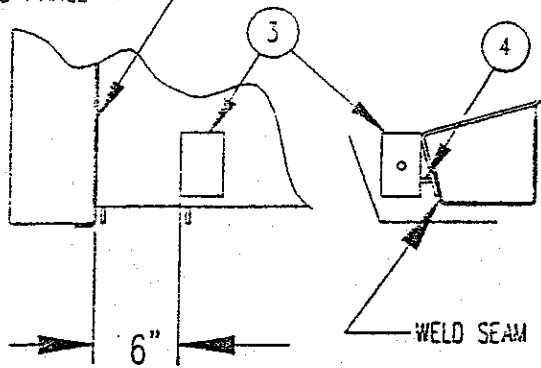
TO ORDER A COMPLETE RATCHET JACK ASSEMBLY, USE PART NUMBER X12267.

7	X12954	1	FINGER, RATCHET
6	X12956	1	HANDLE
5	X12953	1	RATCHET
ITEM	PART NO.	QTY.	DESCRIPTION

4	X12952	1	HOUSING, MAIN
3		2	PIN, 1" DIA. (INCLUDED W/JACK)
2		4	CLIP, HAIR PIN (INCLUDED W/JACK)
1	X12951	2	SCREW YOKE ASSEMBLY
ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.	REV. 8	DATE 9-13-95	REVISED	DATE 2-28-95	RATCHET JACK ASSEMBLY	REF. NO. 12267
			DESCRIPTION OF REVISION	SCALE 1/4" = 1"		DRAWING NO. SC500112

SHREDDER
END PANEL



FRONT VIEW

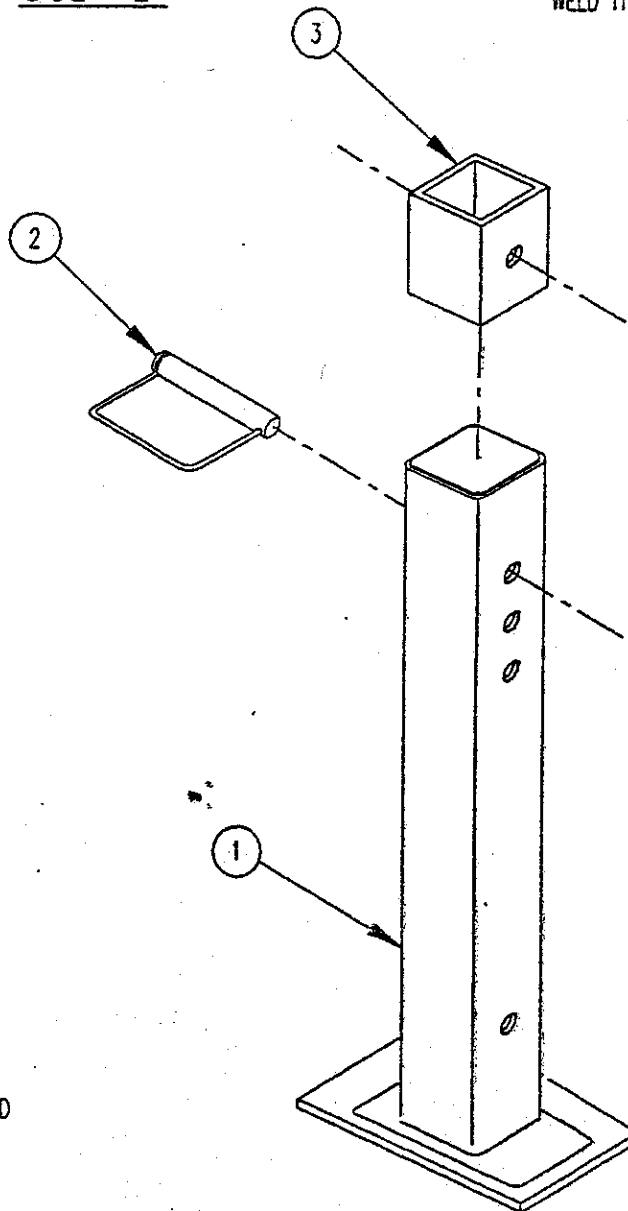
SIDE VIEW

MOUNTING INSTRUCTIONS

PLACE THE MOUNTING TUBE IN THE VERTICAL POSITION, LINING THE BOTTOM OF THE TUBE UP WITH THE WELD SEAM, TACK WELD.

PLACE THE SPACER BAR BETWEEN THE MOUNTING TUBE AND SHREDDER HOOD TO KEEP THE TUBE IN A VERTICAL POSITION, TACK WELD INTO PLACE.

INSTALL THE JACK STAND INTO THE MOUNTING TUBE AND SLIDE UP AND DOWN TO MAKE SURE IT WILL CLEAR ALL AREAS OF THE UNIT. REMOVE AND WELD ITEMS 3 & 4 SOLID TO THE UNIT.



NOTE:

TO ORDER A COMPLETE JACKSTAND KIT (ITEMS 1, 2, 3, 4), USE PART NUMBER X20730.

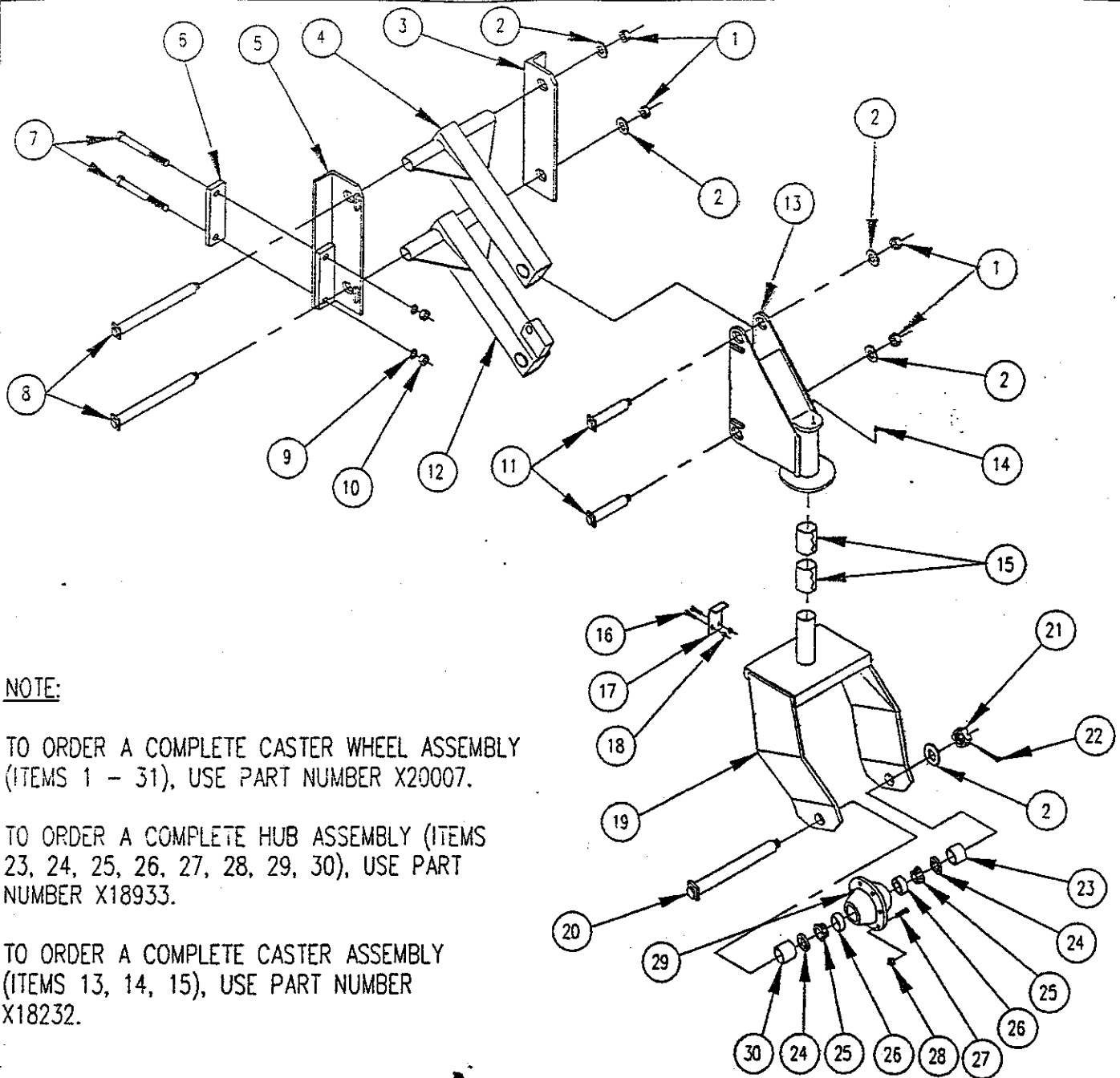
4	X20853	1	BAR, SPACER	2	X24384	1	PIN, HITCH
3	X20852	1	TUBE, MOUNTING	1	X20855	1	STAND, JACK
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

B	9-13-95	REVISED	DATE 2-28-95
REV.	DATE	DESCRIPTION OF REVISION	SCALE 1/4" = 1"
			DRAWN TMS

JACK STAND

REF. NO. 20225
DRAWING NO. SC500113



NOTE:

TO ORDER A COMPLETE CASTER WHEEL ASSEMBLY (ITEMS 1 - 31), USE PART NUMBER X20007.

TO ORDER A COMPLETE HUB ASSEMBLY (ITEMS 23, 24, 25, 26, 27, 28, 29, 30), USE PART NUMBER X18933.

TO ORDER A COMPLETE CASTER ASSEMBLY (ITEMS 13, 14, 15), USE PART NUMBER X18232.

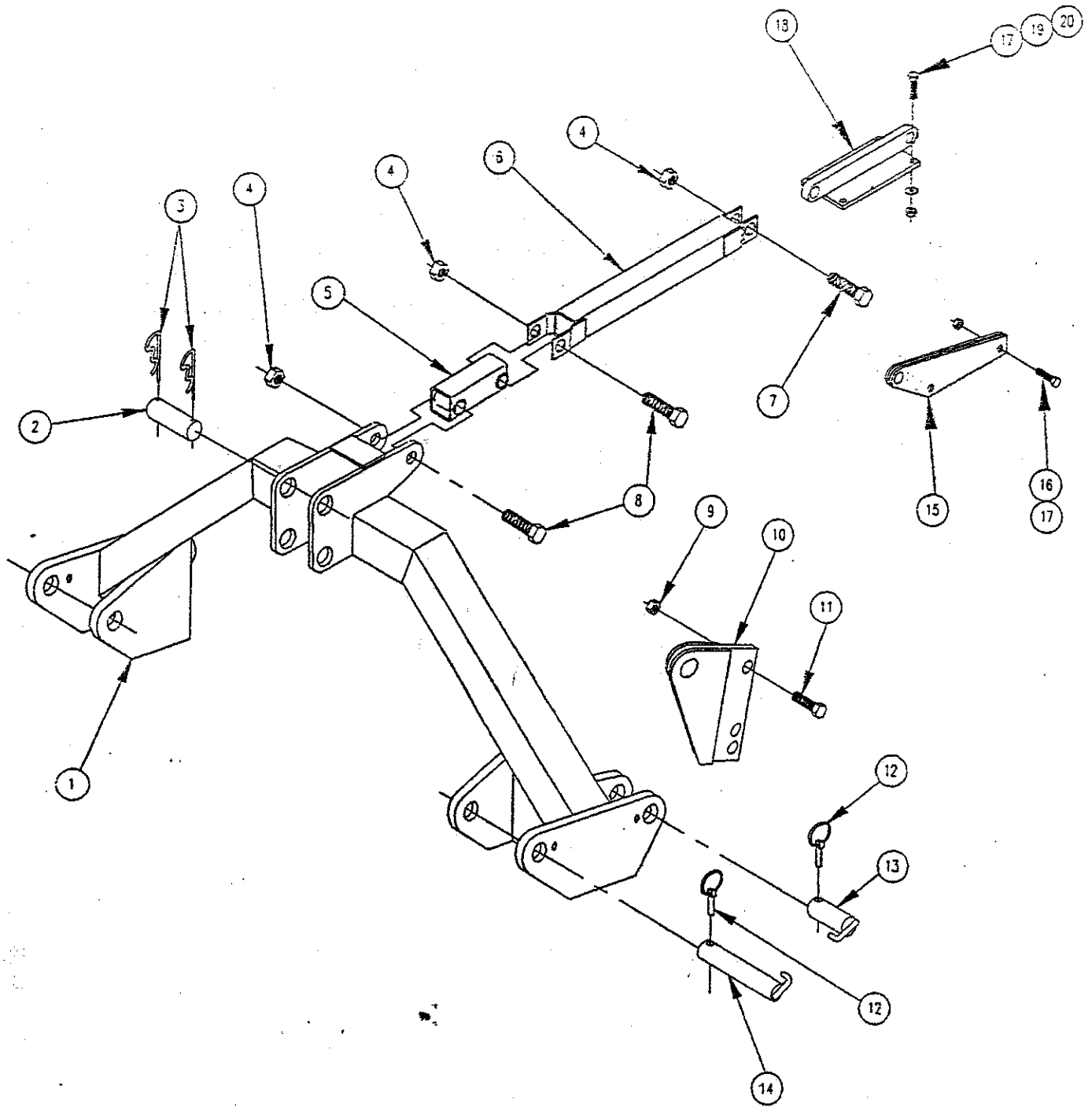
31	X08125	1	WHEEL, 15" X 6" 6-BOLT (NOT SHOWN)	16	X01206	2	BOLT, 3/8" X 1" LG. HEX HD.
30	X18887	1	SPACER	15	X18888	2	BUSHING, 2" TENSION
29	X18935	1	HUB, 6-BOLT W/CUPS	14	X02291	1	ZERK, 1/8" NPT GREASE
28	X02605	6	NUT, WHEEL	13	X18886	1	HOUSING, CASTER
27	X02604	6	STUD, WHEEL	12	X18182	1	LINK, CASTER BOTTOM
26	X07598	2	CUP, BEARING	11	X18192	2	PIN, SHORT PIVOT
25	X18900	2	CONE, BEARING	10	X01697	8	NUT, 3/4" HEX HD.
24	X18934	2	SEAL	9	X01641	8	LOCKWASHER, 3/4"
23	X18905	1	SPACER	8	X18191	2	PIN, LONG PIVOT
22	X02048	1	PIN, 5/32" X 2-1/2" LG. COTTER	7	X01325	8	BOLT, 3/4" X 8" LG. HEX HD.
21	X01754	1	NUT, 1" CASTLE	6	X18175	2	PLATE, MOUNTING
20	X18891	1	SPINDLE, 1-1/2" DIA. X 13-1/2" LG.	5	X18177	1	ANGLE, L.H. MOUNTING
19	X18889	1	FORK, CASTER	4	X18181	1	LINK, CASTER TOP
18	X02496	2	NUT, 3/8" HEX HD. (LOCKING)	3	X18176	1	ANGLE, R.H. MOUNTING
17	X18893	1	BRACKET, RETAINER	2	X01605	5	FLATWASHER, 1"
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

REVISED
 DATE: 9-13-95
 DESCRIPTION OF REVISION
 DATE: 1-12-95
 SCALE: 1/4" = 1"
 DRAWN: JWS

CASTER ARM ASSEMBLY

REF. NO. 20204
 DRAWING NO. SC500114



20	X01602	4	FLATWASHER, 5/8"	10	X24355	2	MOUNT, PIVOT
19	X01290	4	BOLT, 5/8" X 1-3/4" LG. HEX HD	9	X01777	6	NUT, 3/4" HEX HD. (LOCKING)
18	X24279	1	MOUNT, CYLINDER (1200 - 1500)	8	X01346	2	BOLT, 1" X 4-1/2" LG. HEX HD.
17	X02546	6	NUT, 5/8" HEX HD TOPLOCK	7	X01344	1	BOLT, 1" X 3" LG. HEX HD.
16	X01294	2	BOLT, 5/8" X 2-3/4" LG. HEX HD	6	X24362	1	TUBE, LIFT
15	X24365	1	MOUNT, TUBE (1800 - 2000)	5	X24570	1	TUBE, LINKAGE
14	X17299	2	PIN, 1-7/16" X 9" LG.	4	X01779	3	NUT, 1" HEX HD. (LOCKING)
13	X24370	2	PIN, 1" X 3-1/2" LG.	3	X11059	2	PIN, 5/32" HAIR
12	X02584	4	PIN, 7/16" X 2" LYNCH	2	X17303	2	PIN, 1-1/4" X 4-1/8" LG.
11	X01313	6	BOLT, 3/4" X 2-1/2" LG. HEX HD.	1	X24347	1	"A" - FRAME
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

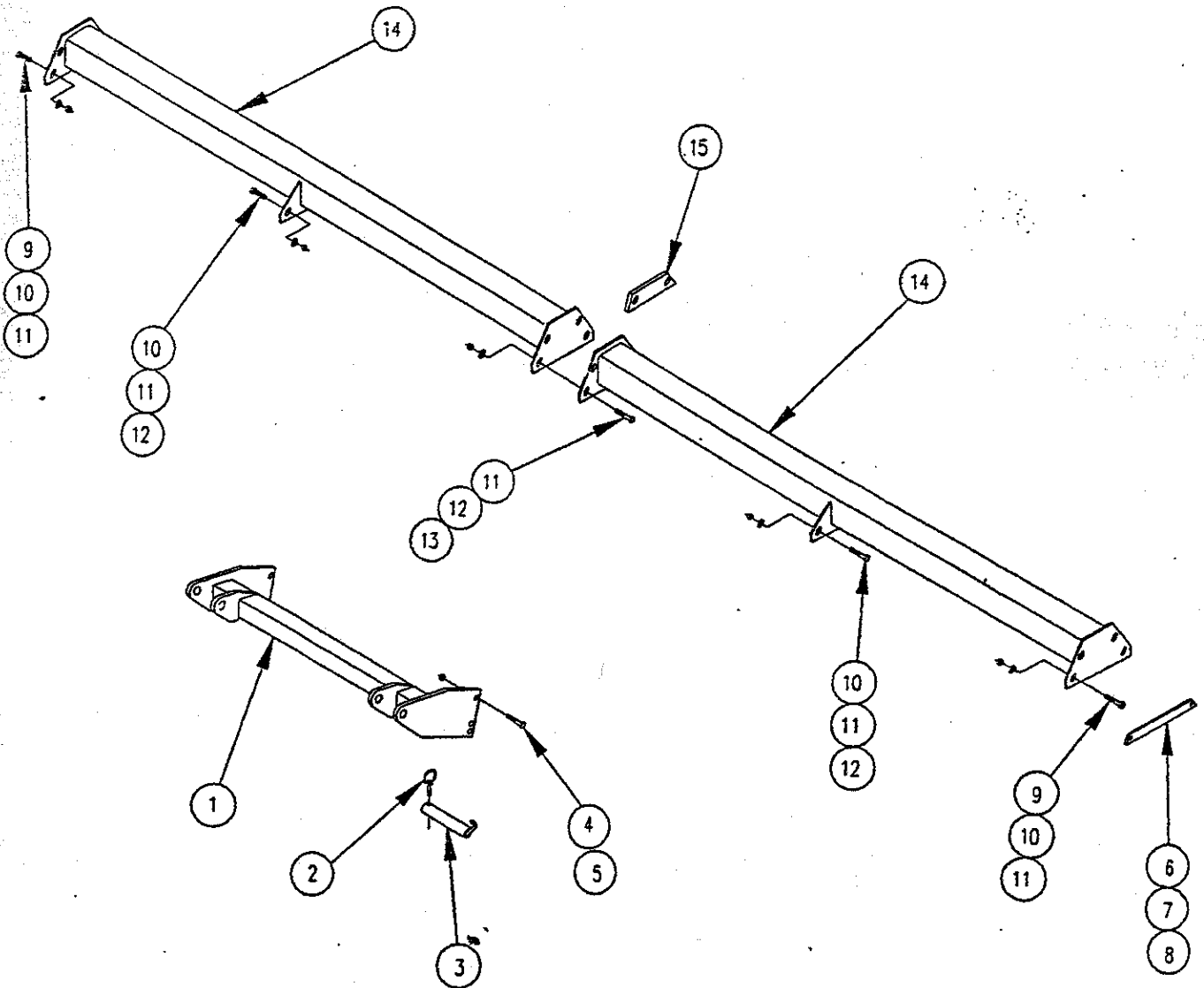
BALZER INC.

B 9-13-85 REVISED

DATE 1-23-85
SCALE 1/4" = 1"
DRAWN TWS

FULL MOUNT PARTS
CONVENTIONAL SHREDDER

REF. NO. 20212
DRAWING NO. SC500115



15	X24380	1	SHIM, 1/2"	11	X02546	14	NUT, 5/8" HEX HD. TOPLOCK
14	X24487	2	TUBE, MOUNTING (2400)	10	X01620	14	FLATWASHER, 5/8"
	X24486	2	TUBE, MOUNTING (2200)	9	X01291	8	BOLT, 5/8" X 2-1/2" LG. HEX HD
	X24371	2	TUBE, MOUNTING (2000)	8	X24404	2	SHIM, 1/4"
	X24372	2	TUBE, MOUNTING (1800)	7	X24403	2	SHIM, 10 GA.
	X24400	2	TUBE, MOUNTING (1500)	6	X24402	2	SHIM, 3/16"
	X20969	2	TUBE, MOUNTING (1200)	5	X01777	6	NUT, 3/4" HEX HD. TOPLOCK
	13	X01292	4	BOLT, 5/8" X 2-1/4" LG. HEX HD.	4	X01313	6
12	X01289	2	BOLT, 5/8" X 1-1/2" LG. HEX HD	3	X17299	2	PIN, 1-7/16" DIA. X 9" LG.
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
				1	X24377	1	HITCH, 2-POINT
				2	X02584	2	PIN, 7/16" LYNCH
				3	X17299	2	PIN, 1-7/16" DIA. X 9" LG.
				4	X01313	6	BOLT, 3/4" X 2-1/2" LG. HEX HD.
				5	X01777	6	NUT, 3/4" HEX HD. TOPLOCK
				6	X24402	2	SHIM, 3/16"
				7	X24403	2	SHIM, 10 GA.
				8	X24404	2	SHIM, 1/4"
				9	X01291	8	BOLT, 5/8" X 2-1/2" LG. HEX HD
				10	X01620	14	FLATWASHER, 5/8"
				11	X02546	14	NUT, 5/8" HEX HD. TOPLOCK

BALZER INC.

B 9-13-95

REVISED

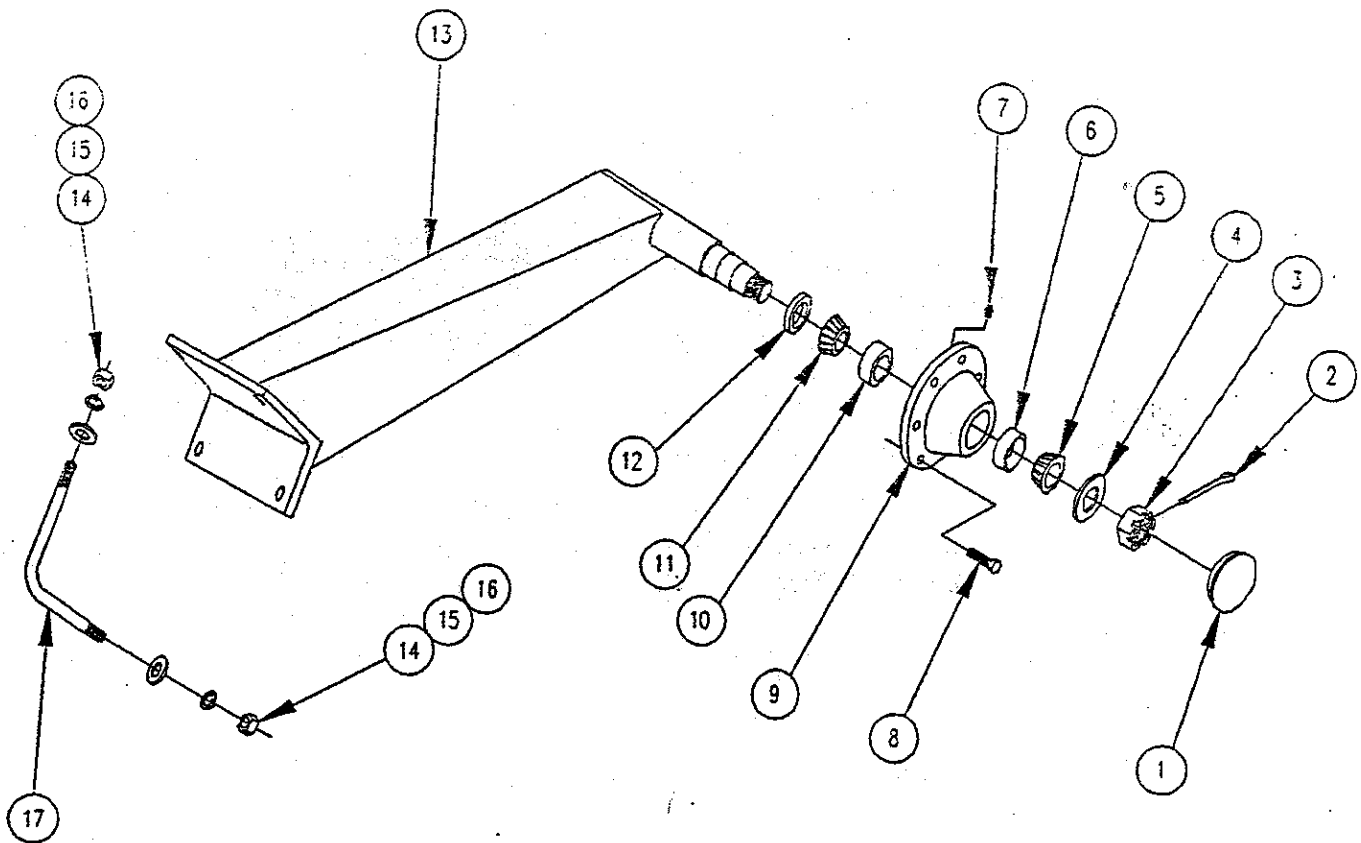
DATE 11-12-94
SCALE 1/8" = 1"

SEMI-MOUNT PARTS
CONVENTIONAL SHREDDER

REF. NO. 20215
DRAWING NO. SC500116

REV. DATE DESCRIPTION OF REVISION

DRAWN TWS



NOTE:

TO ORDER A COMPLETE WHEEL ARM ASSEMBLY (ITEMS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13), USE PART NUMBER X15349.

TO ORDER A COMPLETE DUAL ARM ASSEMBLY (ITEM 19, NOT SHOWN), USE PART NUMBER X21490.

TO ORDER A COMPLETE HUB ASSEMBLY (ITEMS 5, 6, 7, 8, 9, 10, 11, 12), USE PART NUMBER X12440.

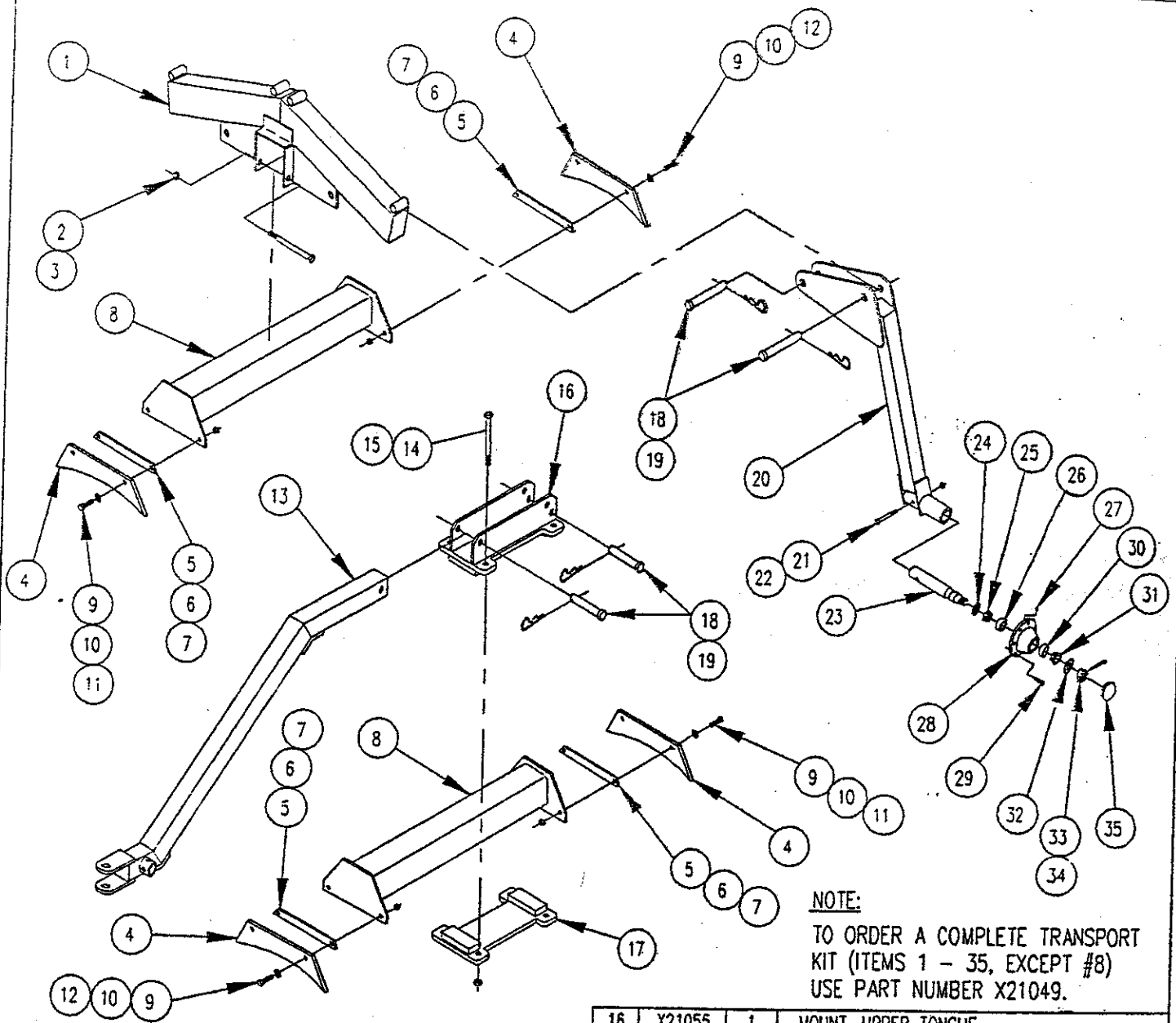
19	X21490	1	DUAL WHEEL ARM ASSEMBLY (NOT SHOWN)	9	X12441	1	HUB, 6-BOLT W/CUPS
18	X08125	1	WHEEL, 15" 6-BOLT (NOT SHOWN)	8	X09089	6	BOLT, 1/2"-20 UNF X 1-1/2" LG. WHEEL
17	X15354	1	BOLT, WHEEL ARM	7	X02286	1	ZERK, 1/4"-28
16	X01602	2	FLATWASHER, 5/8"	6	X06663	1	CUP, OUTER
15	X01640	2	LOCKWASHER, 5/8"	5	X06665	1	CONE, OUTER
14	X01696	2	NUT, 5/8" HEX HD.	4	X01605	1	FLATWASHER, 1"
13	X15351	1	ARM, WHEEL	3	X01754	1	NUT, 1" CASTLE
12	X06572	1	SEAL, GREASE	2	X02048	1	PIN, 5/32" X 2-1/2" LG. COTTER
11	X06573	1	CONE, INNER	1	X12442	1	CAP, HUB W/ZERK
10	X06574	1	CUP, INNER		X06666	1	CAP, HUB
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

8	9-13-85	REVISED	DATE	1-24-85
REV.	DATE	DESCRIPTION OF REVISION	BY	THIS

WHEEL ARM ASSEMBLY

REF. NO.	20219
DRAWING NO.	SC500117



NOTE:

TO ORDER A COMPLETE TRANSPORT KIT (ITEMS 1 - 35, EXCEPT #8) USE PART NUMBER X21049.

ITEM	PART NO.	QTY.	DESCRIPTION
35	X06666	2	CAP. HUB
34	X02048	2	PIN, 5/32" X 2-1/2" LG. COTTER
33	X01754	2	NUT, 1" HEX HD CASTLE
32	X01605	2	FLATWASHER, 1"
31	X06665	2	CONE, OUTER
30	X06663	2	CUP, OUTER
29	X09089	12	BOLT, 1/2"-20 UNF X 1-1/2" LG. WHEEL
28	X12441	2	HUB, 6-BOLT
27	X02286	2	ZERK, 1/4"-28
26	X06574	2	CUP, INNER
25	X06573	2	CONE, INNER
24	X06572	2	SEAL, GREASE
23	X18241	2	SPINDLE, 1-3/4" DIA
22	X01775	2	NUT, 1/2" HEX HD TOPLOCK
21	X01258	2	BOLT, 1/2" X 3-1/2" LG. HEX HD.
20	X24459	2	ARM, TRANSPORT WHEEL
19	X11059	6	CLIP, 1/8" HAIR PIN
18	X20943	6	PIN, 1" X 4-1/4" LG. CLEVIS
17	X21056	1	MOUNT, LOWER TONGUE

16	X21055	1	MOUNT, UPPER TONGUE
15	X01777	4	NUT, 3/4" HEX HD TOPLOCK
14	X01325	4	BOLT, 3/4" X 8" LG. HEX HD
13	X21050	1	TONGUE, TRANSPORT
12	X01291	4	BOLT, 5/8" X 2" LG. HEX HD.
11	X01776	8	NUT, 5/8" HEX HD. TOPLOCK
10	X01602	8	FLATWASHER, 5/8"
9	X01292	4	BOLT, 5/8" X 2-1/4" LG. HEX HD.
8	X24608	2	TUBE, 71" LG. (2400)
	X24607	2	TUBE, 59" LG. (2200)
	X24606	2	TUBE, 58-3/4" LG. (2000)
	X24452	2	TUBE, 52-3/4" LG. (1800)
	X20190	2	TUBE, 24" LG. (1500)
7	X24404	2	SHIM, 1/4"
6	X24402	2	SHIM, 3/16"
5	X24403	2	SHIM, 10 GA.
4	X24215	4	LUG, MOUNTING (15' ONLY)
3	X01779	2	NUT, 1" HEX HD. TOPLOCK
2	X01351	2	BOLT, 1" X 7" LG. HEX HD.
1	X24453	1	FRAME, WHEEL MOUNTING TRANSPORT

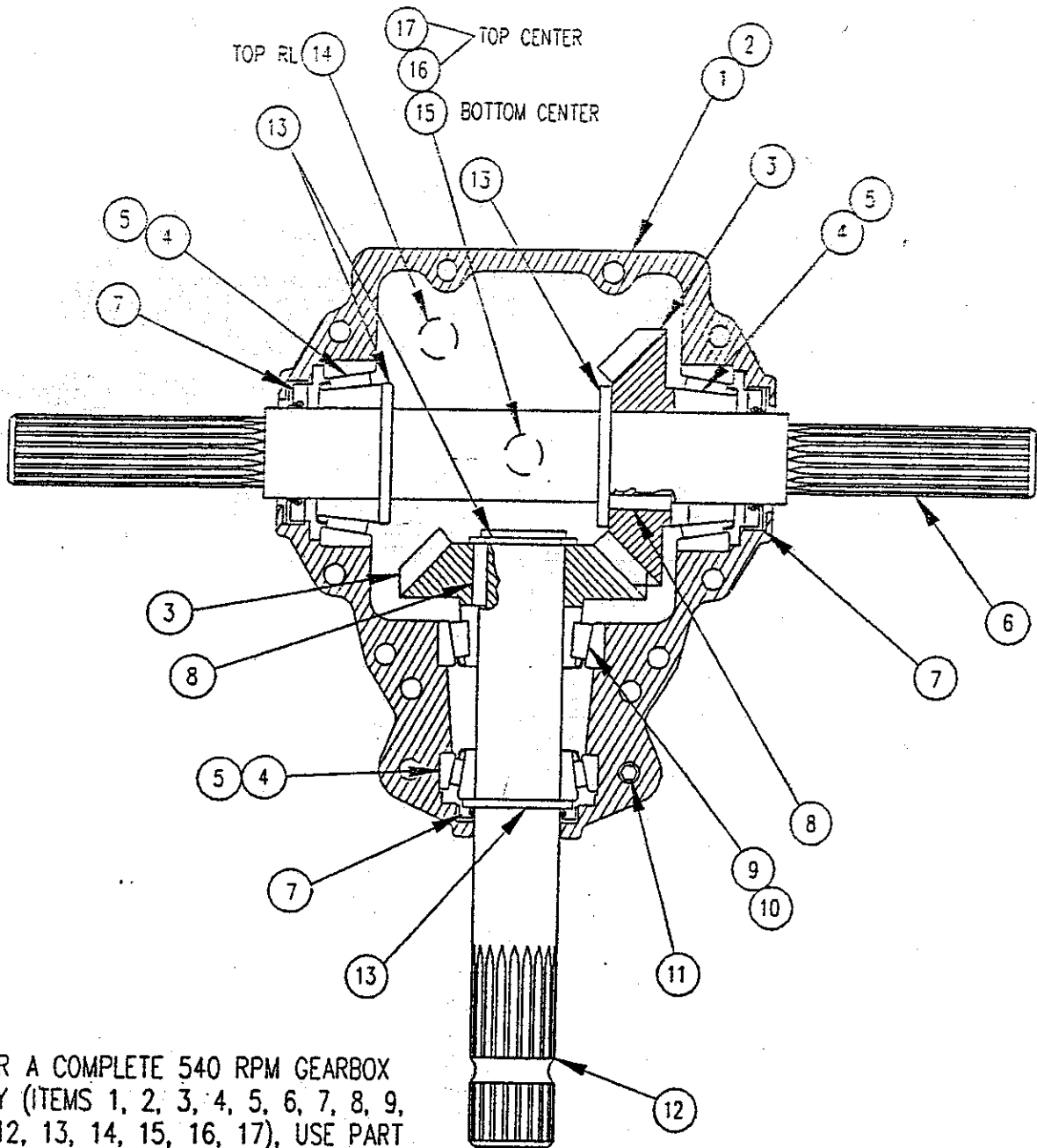
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
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BALZER INC.

REVISED DATE 9-13-95
 DATE 1-28-95
 REVISIONS
 SCALE 1/4" = 1"
 DRAWING THIS

END TRANSPORT MTG. ASSEMBLY
 MODELS 1500 - 2400

REF. NO. 21061
 DRAWING NO. SC500118



NOTE:

TO ORDER A COMPLETE 540 RPM GEARBOX ASSEMBLY (ITEMS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17), USE PART NUMBER X17182.

TO ORDER A COMPLETE 1000 RPM GEARBOX ASSEMBLY (ITEMS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17), USE PART NUMBER X17472.

17	X13097	1	RELIEF, 1/8" NPT PRESSURE	8	X17185	2	KEY, 3/8" X 1-7/16" LG.
16	X13038	1	BUSHING, 1/8" NPT TO 1/2" NPT	7	X17203	3	SEAL, 1-3/4"
15	X13181	1	PLUG, 1/2" NPT DRAIN	6	X17189	1	SHAFT, CROSS
14	X17190	1	PLUG, FILL W/DIPSTICK (1/2" NPT)	5	X12872	3	CUP, SMALL BEARING
13	X17204	4	RING, 1-3/4" RETAINING	4	X11477	3	CONE, SMALL BEARING
12	X17186	1	SHAFT, PINION	3	X17473	2	GEAR, 22 TOOTH (1000)
11	X02267	12	CAPSCREW, 3/8" X 2-1/4" LG. SOC. HD.	3	X17187	1	GEAR, 20 TOOTH (540)
10	X17205	1	CONE, LARGE BEARING	3	X17183	1	GEAR, 27 TOOTH (540)
9	X11499	1	CUP, LARGE BEARING	2	X17188	1	CASTING, BOTTOM (TAPPED)
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
				1	X17184	1	CASTING, TOP

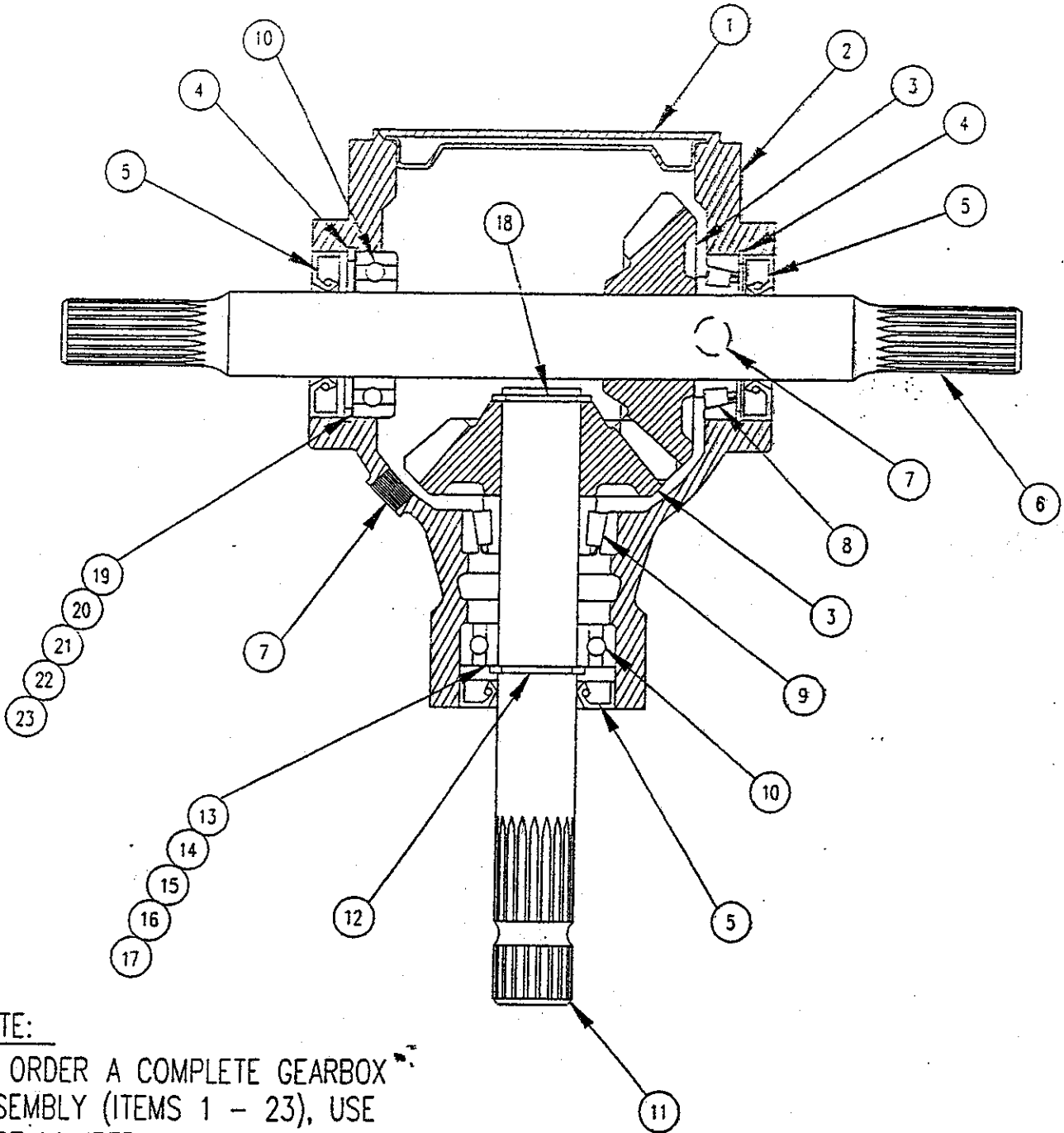
BALZER INC.

8 9-13-95 REVISED
REV. DATE DESCRIPTION OF REVISION

BAR 1-31-95
SCALE 1/4" = 1"
DWN TWS

GEARBOX
- 540 & 1000 RPM -

REF. NO. 20317
DRAWING NO. SCS00119



NOTE:

TO ORDER A COMPLETE GEARBOX ASSEMBLY (ITEMS 1 - 23), USE PART NUMBER X18776.

23	X18793	1	RING (SHIM)	12	X18782	1	RING, SNAP
22	X18792	1	RING (SHIM)	11	X18778	1	SHAFT
21	X18791	1	RING (SHIM)	10	X19456	2	BEARING, BALL
20	X18790	1	RING (SHIM)	9	X18797	1	BEARING, TAPERED ROLLER (30209 W/CUP)
19	X18789	1	RING (SHIM)	8	X18796	1	BEARING, TAPERED ROLLER (32209 W/CUP)
18	X18780	1	CLIP, CIRC	7	X18799	3	PLUG, OIL
17	X18788	1	RING (SHIM)	6	X18777	1	SHAFT, CROSS
16	X18787	1	RING (SHIM)	5	X18798	3	SEAL, OIL
15	X18786	1	RING (SHIM)	4	X18781	2	RING, SNAP
14	X18785	1	RING (SHIM)	3	X18800	2	GEAR, BEVEL (SET OF 2)
13	X18784	1	RING (SHIM)	2	X18783	1	CASE, GEARBOX
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

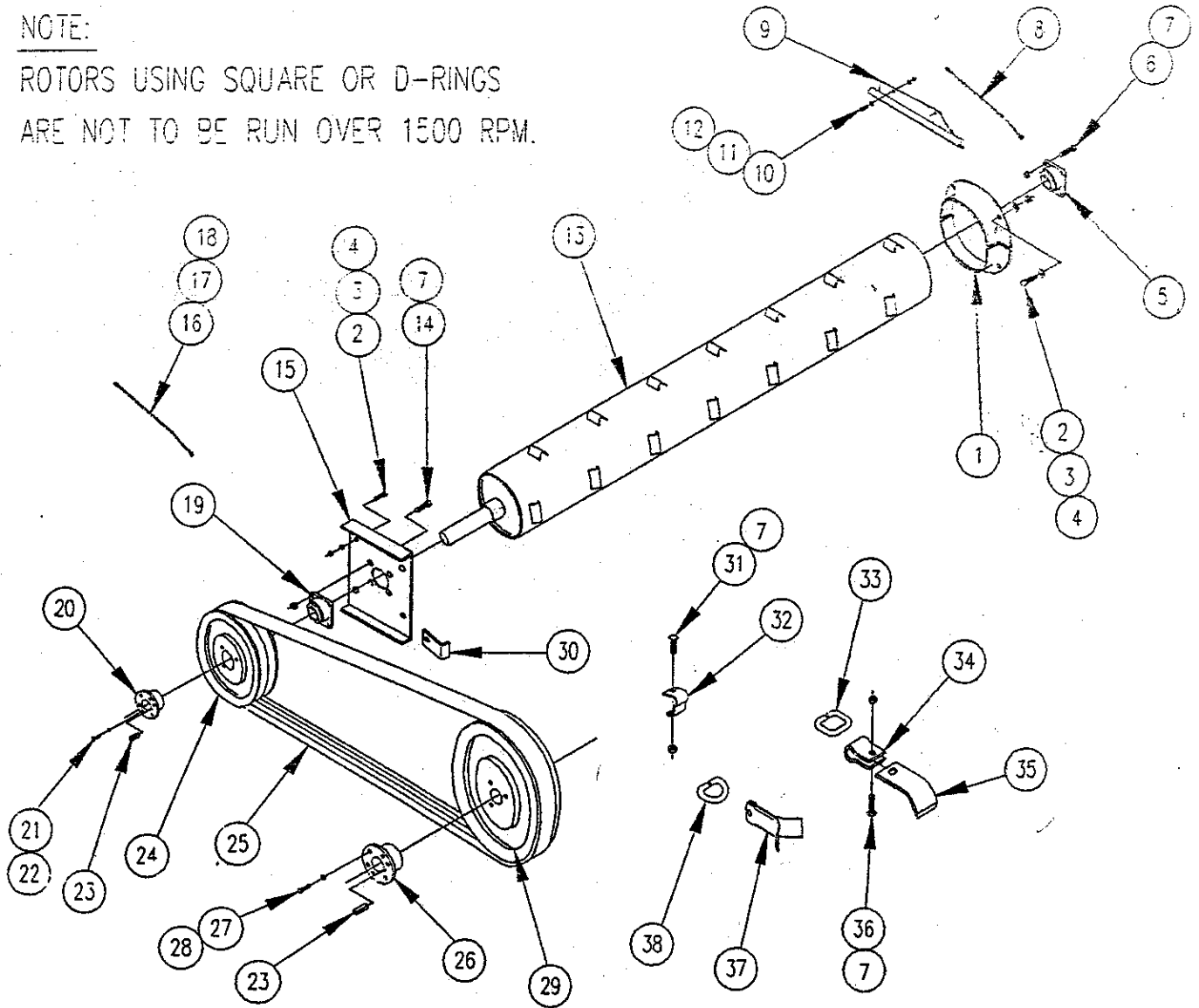
REV. 8 9-14-95 DATE 1-31-95
 REV. DATE DESCRIPTION OF REVISION SCALE 1/4" = 1" DRAWN TWS

GEARBOX - 1000 RPM

REF. NO. 20318
 DRAWING NO. SC500120

NOTE:

ROTORS USING SQUARE OR D-RINGS
ARE NOT TO BE RUN OVER 1500 RPM.



38	X12356	VAR.	D-RING	19	X26872	2	BEARING, 2-3/16" 4-BOLT (ECCENTRIC LOCK)
37	X24153	VAR.	KNIFE, HEAVY SIDE	18	X02291	2	ZERK, 1/8" STR. NPT
	X12357	VAR.	KNIFE, SIDE	17	X12333	2	COUPLER, 1/8" NPT
36	X01095	VAR.	BOLT, 1/2" X 1-1/2" LG. CARRIAGE	16	X24178	2	HOSE, GREASE LINE (1/8" X 10" LG.)
35	X12297	VAR.	KNIFE, CUP	15	X24100	2	STIFFENER, BEARING
34	X12296	VAR.	HANGER, KNIFE	14	X01251	8	BOLT, 1/2" X 1-3/4" LG. HEX HD.
33	X12295	VAR.	RING, SQUARE	13	X27246	2	ROTOR, 8" DIA. (1500)
32	X12355	VAR.	BRACKET, KNIFE		X27245	2	ROTOR, 8" DIA. (1200)
31	X02530	VAR.	BOLT, 1/2" X 3-1/4" LG. CARRIAGE	12	X02496	4	NUT, 3/8" HEX HD. TOPLOCK
30	X24322	4	CLAMP, GREASE HOSE	11	X01598	8	FLATWASHER, 3/8"
29	X12391	2	SHEAVE, 16" 2C	10	X01207	4	BOLT, 3/8" X 1-1/4" HEX HD.
28			LOCKWASHER W/X12390)	9	X24031	1	DEFLECTOR, L.H. KNIFE
27			BOLT (INCLUDED W/X12390)		X24138	1	DEFLECTOR, R.H. KNIFE
26	X27469	2	BUSHING, 1-3/4" QD	8	X24177	2	HOSE, GREASE LINE (1/8" X 21-1/2" LG.)
25	X17192	2	BELT, C78 2-BAND (540 RPM)	7	X02539	24	NUT, 1/2" HEX HD. TOPLOCK
	X12393	2	BELT, C81 2-BAND (1000 RPM)	6	X01254	8	BOLT, 1/2" X 2-1/2" LG. HEX HD.
24	X17191	2	SHEAVE, 8" 2C (540 RPM)	5	X26871	2	BEARING, 2-3/16" 4-BOLT (SET SCREW LOCK)
	X12388	2	SHEAVE, 11" 2C (1000 RPM)	4	X02475	16	NUT, 5/16" HEX HD. TOPLOCK
23	X02408	4	KEY, 3/8" X 2-1/2" LG.	3	X01597	24	FLATWASHER, 5/16"
22			LOCKWASHER (INCLUDED W/X26869)	2	X01186	16	BOLT, 5/16" X 1-1/4" LG. HEX HD.
21			BOLT (INCLUDED W/X26869)	1	X24214	2	RING, GRASS (1-PC.)
20	X26869	2	BUSHING, 2-3/16" QD		X12366	4	RING, GRASS (2-PC.)
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

A 9-19-95 ORIGINAL RELEASE
REV. DATE DESCRIPTION OF REVISION

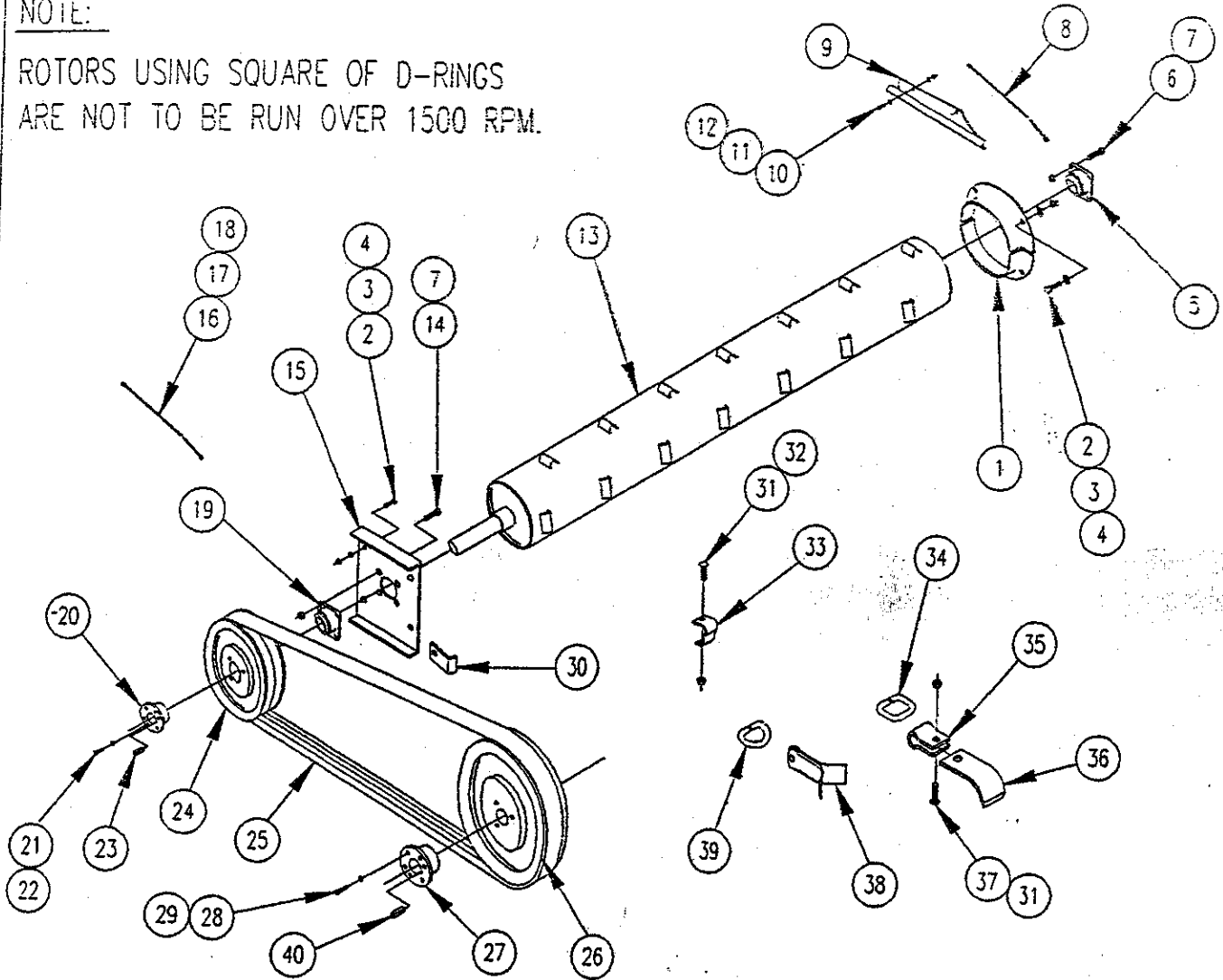
DATE 9-19-95
SCALE 1/4" = 1"
DRAWN PWS

8" DIA. CYLINDER ASSEMBLY
MODELS 1200-1500

REF. NO. 20210
DRAWING NO. SC500139

NOTE:

ROTORS USING SQUARE OF D-RINGS ARE NOT TO BE RUN OVER 1500 RPM.

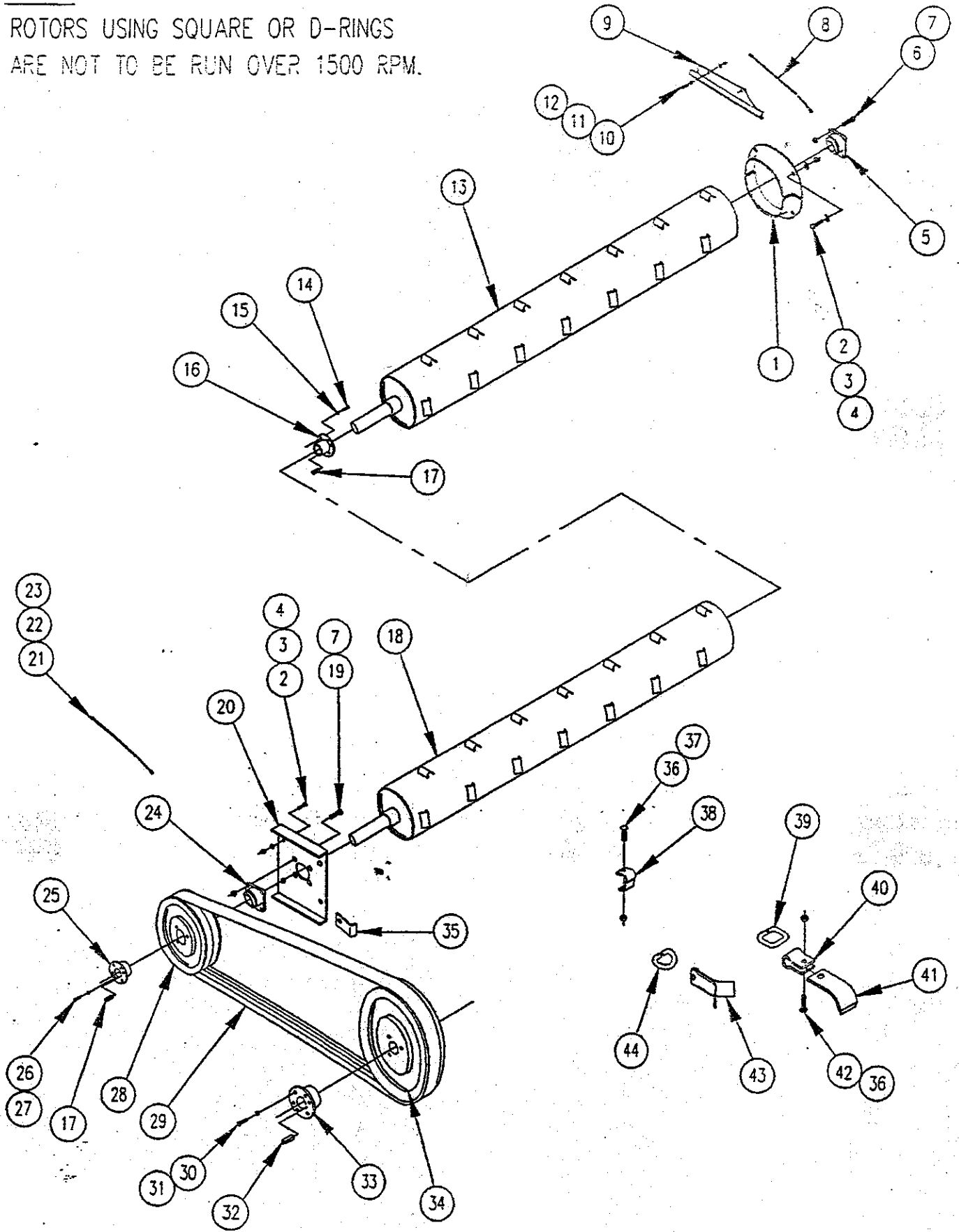


ITEM	PART NO.	QTY.	DESCRIPTION
40	X02408	2	KEY, 3/8" X 2-1/2" LG.
39	X12356	VAR.	D-RING
38	X24153	VAR.	KNIFE, HEAVY SIDE
	X12357	VAR.	KNIFE, SIDE
37	X01095	VAR.	BOLT, 1/2" X 1-1/2" LG. CARRIAGE
36	X12297	VAR.	KNIFE, CUP
35	X12296	VAR.	HANGER, KNIFE
34	X12295	VAR.	RING, SQUARE
33	X12355	VAR.	BRACKET, KNIFE
32	X02530	VAR.	BOLT, 1/2" X 3-1/4" LG. CARRIAGE
31	X02539	VAR.	NUT, 1/2" HEX HD. TOPLOCK
30	X24322	4	CLAMP, GREASE HOSE
29			LOCKWASHER (INCLUDED W/X24222)
28			BOLT (INCLUDED W/X24222)
27	X24222	2	BUSHING, 1-3/4" OD
26	X24074	2	SHEAVE, 16" 3C
25	X17477-	2	BELT, C78 3-BAND (1000 RPM SPEED-UP)
	X24076	2	BELT, C81 3-BAND (1000 RPM)
24	X17476	2	SHEAVE, 8" 3C (1000 RPM SPEED-UP)
	X24073	2	SHEAVE, 10.5" 3C (1000 RPM)
23	X02439	2	KEY, 1/2" X 2-1/2" LG.
22			LOCKWASHER (INCLUDED W/X26870)

ITEM	PART NO.	QTY.	DESCRIPTION
21			BOLT (INCLUDED W/X26870)
20	X26870	2	BUSHING, 2-3/16" OD
19	X26872	2	BEARING, 2-3/16" 4-BOLT (ECCENTRIC LOCK)
18	X02291	2	ZERK, 1/8" STR. NPT
17	X12333	2	COUPLER, 1/8" NPT
16	X24178	2	HOSE, GREASE LINE (1/8" X 10" LG.)
15	X24100	2	STIFFENER, BEARING
14	X01291	8	BOLT, 5/8" X 2" LG. HEX HD.
	X27248	2	ROTOR, 8" DIA. (2000)
13	X27247	2	ROTOR, 8" DIA. (1800)
	X02496	4	NUT, 3/8" HEX HD. TOPLOCK
12	X01598	8	FLATWASHER, 3/8"
11	X01207	4	BOLT, 3/8" X 1-1/4" HEX HD.
9	X24031	1	DEFLECTOR, L.H. KNIFE
	X24138	1	DEFLECTOR, R.H. KNIFE
8	X24177	2	HOSE, GREASE LINE (1/8" X 21-1/2" LG.)
7	X02546	24	NUT, 5/8" HEX HD. TOPLOCK
6	X01293	8	BOLT, 5/8" X 2-1/4" LG. HEX HD.
5	X26871	2	BEARING, 2-3/16" 4-BOLT (SET SCREW LOCK)
4	X02475	16	NUT, 5/16" HEX HD. TOPLOCK
3	X01597	24	FLATWASHER, 5/16"
2	X01186	16	BOLT, 5/16" X 1-1/4" LG. HEX HD.
	X24214	2	RING, GRASS (1-PC.)
1	X12366	4	RING, GRASS (2-PC.)

NOTE:

ROTORS USING SQUARE OR D-RINGS
ARE NOT TO BE RUN OVER 1500 RPM.



BALZER INC.

A	9-19-95	ORIGINAL RELEASE	DATE 9-19-95
REV.	DATE	DESCRIPTION OF REVISION	SCALE 1/4" = 1"
			DRWING TMS

8" DIA. CYLINDER ASSEMBLY
MODELS 2200 - 2400

REF. NO. 20210
DRAWING NO. SC500141

PARTS LIST PAGE FOR DRAWING NUMBER SC500141

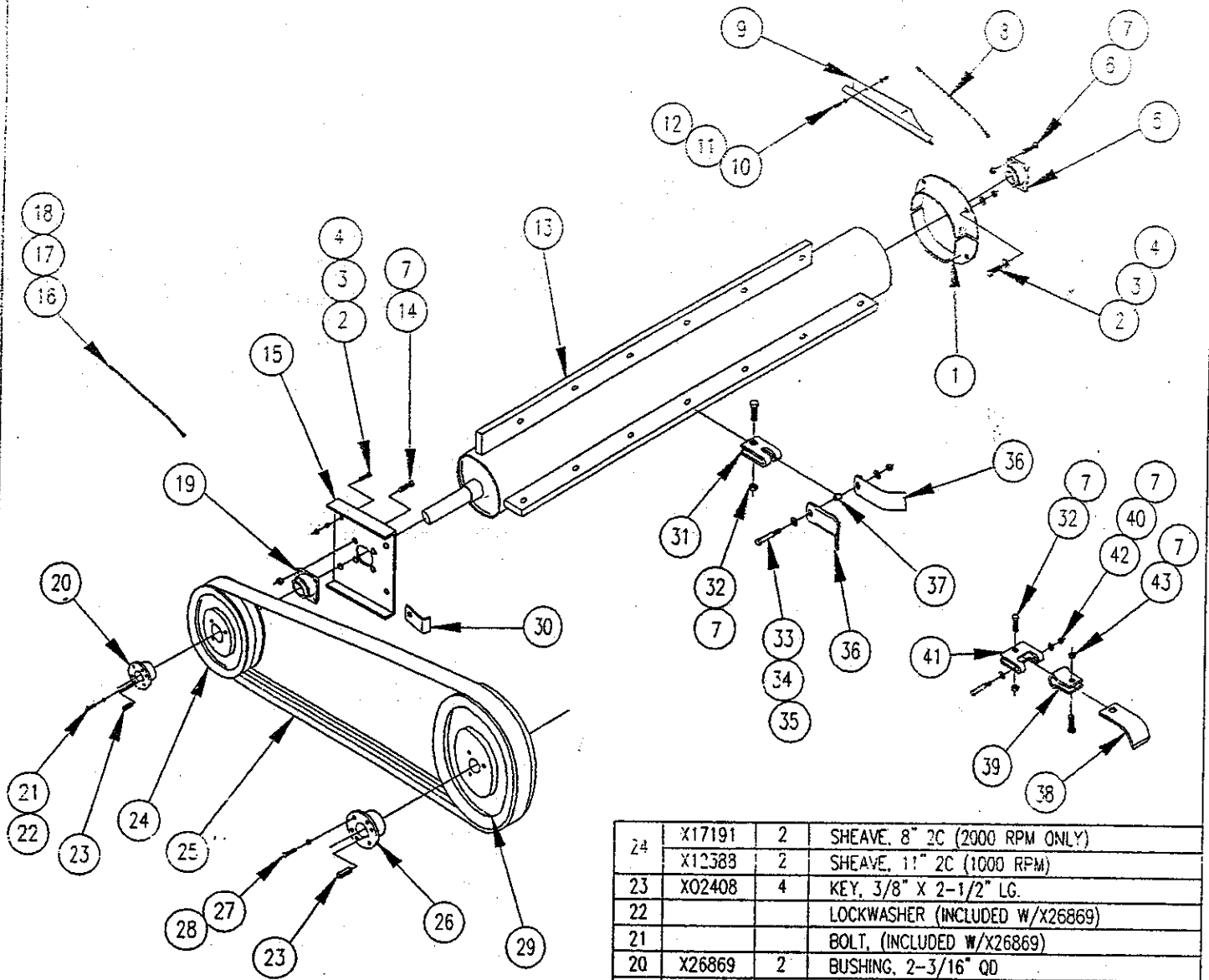
NOTE:

ROTORS USING SQUARE OR D-RINGS
ARE NOT TO BE RUN OVER 1500 RPM.

ITEM	PART NO.	QTY.	DESCRIPTION
44	X12356	VAR.	D-RING
43	X12357	VAR.	KNIFE, SIDE
	X24153	VAR.	KNIFE, HEAVY SIDE
42	X01095	VAR.	BOLT, 1/2" X 1-1/2" LG. CARRIAGE
41	X12297	VAR.	KNIFE, CUP
40	X12296	VAR.	HANGER, KNIFE
39	X12295	VAR.	RING, SQUARE
38	X12355	VAR.	BRACKET, KNIFE
37	X02530	VAR.	BOLT, 1/2" X 3-1/4" LG. CARRIAGE
36	X02539	VAR.	NUT, 1/2" HEX HD TOPLOCK
35	X24322	4	CLAMP, GREASE HOSE
34	X24074	2	SHEAVE, 16" 3C
33	X24222	2	BUSHING, 1-3/4" OD
32	X02408	2	KEY, 3/8" X 2-1/2" LG.
31			LOCKWASHER (INCLUDED W/X24222)
30			BOLT (INCLUDED W/X24222)
29	X24076	2	BELT, C81 3-BAND (1000 RPM)
	X17477	2	BELT, C78 3-BAND (1000 RPM SPEED-UP)
28	X24073	2	SHEAVE, 11" 3C (1000 RPM)
	X17476	2	SHEAVE, 11" 3C (1000 RPM SPEED-UP)
27			LOCKWASHER (INCLUDED W/X26870)
26			BOLT (INCLUDED W/X26870)
25	X26870	2	BUSHING, 2-3/16" OD
24	X26872	2	BEARING, 2-3/16" 4-BOLT (ECCENTRIC LOCK)

23	X02291	2	ZERK, 1/8" STR. NPT
22	X12333	2	COUPLER, 1/8" NPT
21	X24178	2	HOSE, GREASE LINE (1/8" X 10" LG.)
20	X24100	2	STIFFENER, BEARING
19	X01291	8	BOLT, 5/8" X 2" LG.
18	X27251	2	ROTOR, 8" DIA. (2400)
	X27250	2	ROTOR, 8" DIA. (2200)
17	X02439	4	KEY, 1/2" X 2-1/2" LG.
16	X26869	2	BUSHING, 2-3/16" OD
15			LOCKWASHER (INCLUDED W/X26869)
14			BOLT (INCLUDED W/X26869)
13	X27249	2	ROTOR, 8" DIA. (2200 - 2400)
12	X02496	4	NUT, 3/8" HEX HD. TOPLOCK
11	X01598	8	FLATWASHER, 3/8"
10	X01207	4	BOLT, 3/8" X 1-1/4" HEX HD.
9	X24031	1	DEFLECTOR, L.H. KNIFE
	X24138	1	DEFLECTOR, R.H. KNIFE
8	X24177	2	HOSE, GREASE LINE (1/8" X 21-1/2" LG.)
7	X02546	24	NUT, 5/8" HEX HD. TOPLOCK
6	X01293	8	BOLT, 5/8" X 2-1/4" LG. HEX HD.
5	X26871	2	BEARING, 2-3/16" 4-BOLT (SET SCREW LOCK)
4	X02475	16	NUT, 5/16" HEX HD. TOPLOCK
3	X01597	24	FLATWASHER, 5/16"
2	X01186	16	BOLT, 5/16" X 1-1/4" LG. HEX HD.
1	X24214	2	RING, GRASS (1-PC.)
	X12366	4	RING, GRASS (2-PC.)

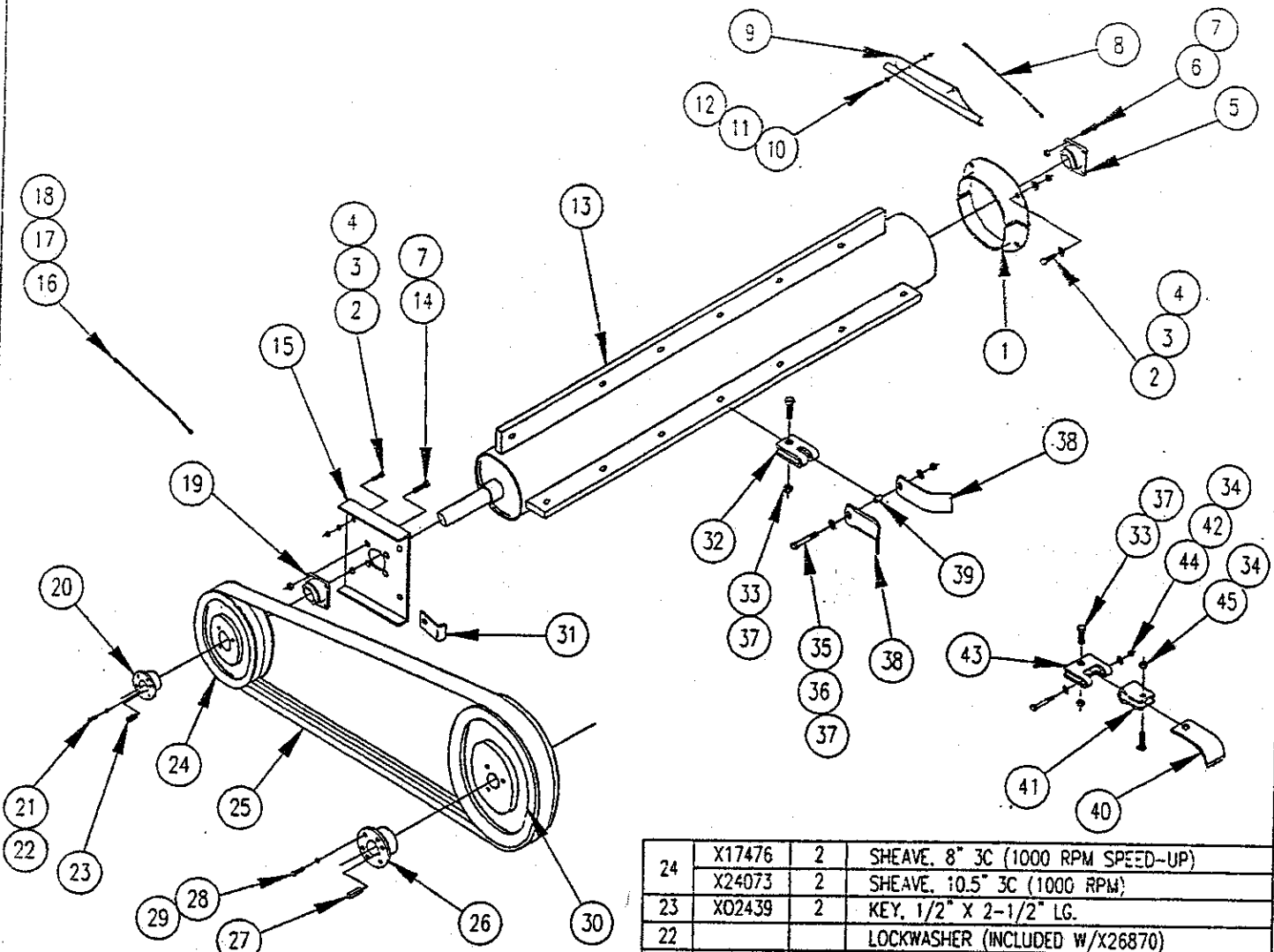
BALZER INC.	A	9-19-95	ORIGINAL RELEASE	DATE 9-19-95	8" DIA. CYLINDER ASSEMBLY MODELS 2200 - 2400	REF. NO. 20220
	REV.	DATE	DESCRIPTION OF REVISION	SCALE 1/4" = 1"		DRAWING NO. SC500142



43	X01095	VAR.	BOLT, 1/2" X 1-1/2" LG. CARRIAGE GR. 5
42	X01260	VAR.	BOLT, 1/2" X 4" LG. HEX HD GR. 8
41	X26994	VAR.	HANGER, KNIFE
40	X01600	VAR.	FLATWASHER, 1/2"
39	X12296	VAR.	HANGER, CUP KNIFE
38	X12297	VAR.	KNIFE, STD. CUP
	X24329	VAR.	KNIFE, STD. CUP W/HARD SURFACE
37	X20995	VAR.	BUSHING
36	X26569	VAR.	KNIFE, SIDE
35	X01776	VAR.	NUT, 5/8" HEX HD TOPLOCK
34	X01602	VAR.	FLATWASHER, 5/8" (2-REQ'D. PER BOLT)
33	X01295	VAR.	BOLT, 5/8" X 3" LG. HEX HD.
32	X01252	VAR.	BOLT, 1/2" X 2" LG. HEX HD GR. 5
31	X26566	VAR.	HANGER, KNIFE
30	X24322	4	CLAMP, GREASE HOSE
29	X12391	2	SHEAVE, 16" 2C
			NUT (INCLUDED W/X12390)
27			BOLT (INCLUDED W/X12390)
	X27469	2	BUSHING, 1-3/4" OD
25	X17192	2	BELT, C78 2-BAND (2000 RPM ONLY)
	X12393	2	BELT, C81 2-BAND (1000 RPM)

24	X17191	2	SHEAVE, 8" 2C (2000 RPM ONLY)
	X12388	2	SHEAVE, 11" 2C (1000 RPM)
23	X02408	4	KEY, 3/8" X 2-1/2" LG.
22			LOCKWASHER (INCLUDED W/X26869)
21			BOLT, (INCLUDED W/X26869)
20	X26869	2	BUSHING, 2-3/16" OD
19	X26872	2	BEARING, 2-3/16" 4-BOLT (ECCENTRIC LOCK)
18	X02291	2	ZERK, 1/8" STR. NPT
17	X12333	2	COUPLER, 1/8" NPT
16	X24178	2	HOSE, GREASE LINE (1/8" X 10" LG.)
15	X24100	2	STIFFENER, BEARING
14	X01291	8	BOLT, 5/8" X 2" LG. HEX HD. GR. 5
	X27229	2	ROTOR, 6-5/8" DIA. (1500)
13	X27228	2	ROTOR, 6-5/8" DIA. (1200)
	X02496	4	NUT, 3/8" HEX HD. TOPLOCK
11	X01598	8	FLATWASHER, 3/8"
10	X01207	4	BOLT, 3/8" X 1-1/4" HEX HD.
	X24031	1	DEFLECTOR, L.H. KNIFE
9	X24138	1	DEFLECTOR, R.H. KNIFE
	X24177	2	HOSE, GREASE LINE (1/8" X 21-1/2" LG.)
8	X02539	24	NUT, 1/2" HEX HD. TOPLOCK
7	X01293	8	BOLT, 5/8" X 2-1/2" LG. HEX HD. GR.5
6	X26871	2	BEARING, 2-3/16" 4-BOLT (SET SCREW LOCK)
5	X02475	16	NUT, 5/16" HEX HD. TOPLOCK
4	X01597	24	FLATWASHER, 5/16"
2	X01186	16	BOLT, 5/16" X 1-1/4" LG. HEX HD.
	X24214	2	RING, GRASS (1-PC.)
1	X12366	4	RING, GRASS (2-PC.)

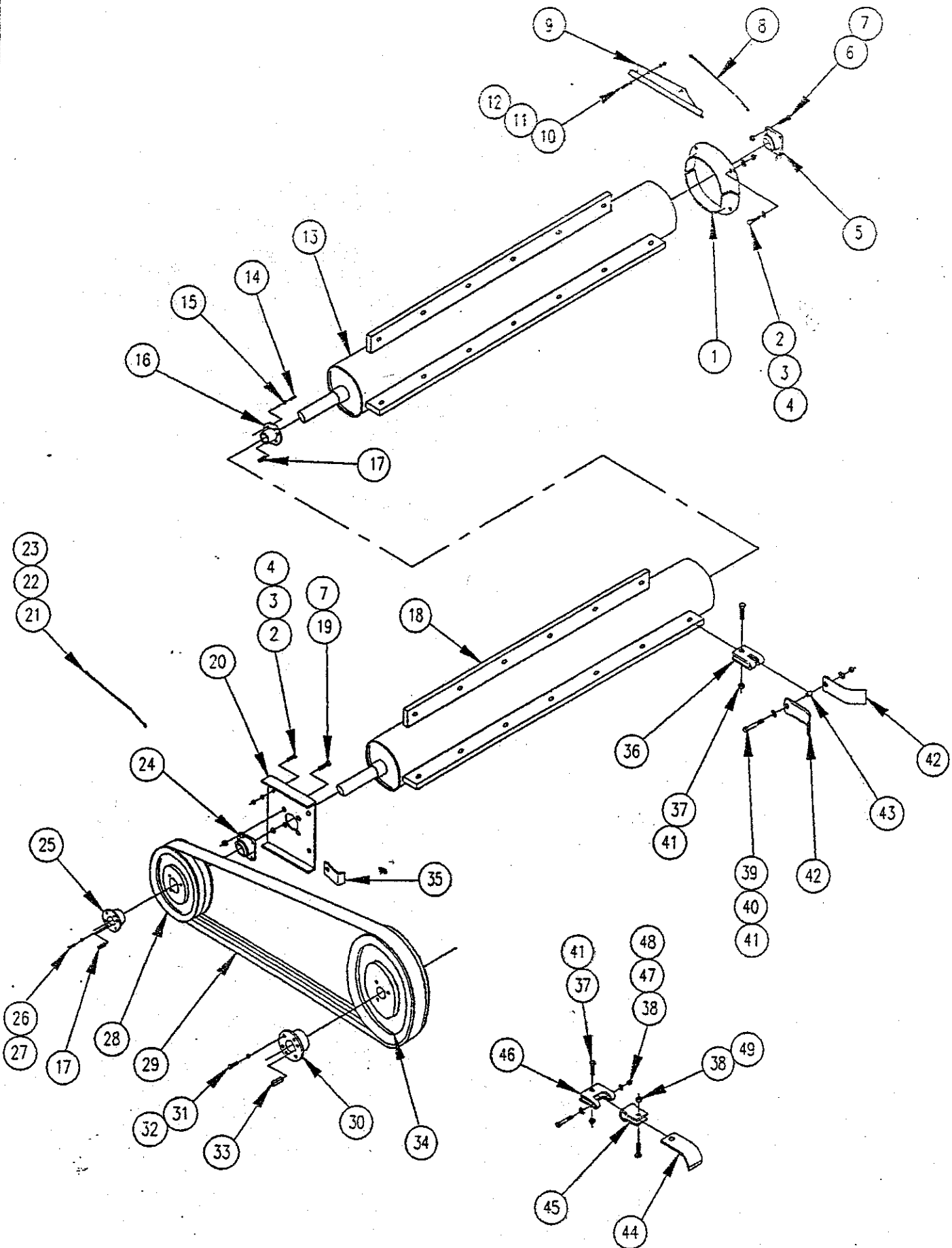
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION				
BALZER INC.				ORIGINAL RELEASE DATE 9-19-95 SCALE 1/4" = 1"				6-5/8" DIA. CYLINDER ASSEMBLY MODELS 1200-1500		REF. NO. 20210	
										DRAWING NO. SC500143	



45	X01095	VAR.	BOLT, 1/2" X 1-1/2" LG. CARRIAGE GR. 5
44	X01260	VAR.	BOLT, 1/2" X 4" LG. HEX HD GR. 8
43	X26994	VAR.	HANGER, KNIFE
42	X01600	VAR.	FLATWASHER, 1/2"
41	X12296	VAR.	HANGER, CUP KNIFE
40	X12297	VAR.	KNIFE, STD. CUP
	X24329	VAR.	KNIFE, STD. CUP W/HARD SURFACE
39	X20995	VAR.	BUSHING
38	X26569	VAR.	KNIFE, SIDE
37	X02546	VAR.	NUT, 5/8" HEX HD TOPLOCK GR.8
36	X01602	VAR.	FLATWASHER, 5/8" (2-REQ'D. PER BOLT)
35	X01295	VAR.	BOLT, 5/8" X 3" LG. HEX HD.
34	X02539	VAR.	NUT, 1/2" HEX HD TOPLOCK
33	X01252	VAR.	BOLT, 1/2" X 2" LG. HEX HD GR. 5
32	X26566	VAR.	HANGER, KNIFE
31	X24322	4	CLAMP, GREASE HOSE
30	X24074	2	SHEAVE, 16" 3C
29			NUT (INCLUDED W/X24222)
28			BOLT (INCLUDED W/X24222)
27	X02408	2	KEY, 3/8" X 2-1/2" LG.
26	X24222	2	BUSHING, 1-3/4" OD
25	X17477	2	BELT, C78 3-BAND (1000 RPM SPEED-UP))
	X24076	2	BELT, C81 3-BAND (1000 RPM)

24	X17476	2	SHEAVE, 8" 3C (1000 RPM SPEED-UP)
	X24073	2	SHEAVE, 10.5" 3C (1000 RPM)
23	X02439	2	KEY, 1/2" X 2-1/2" LG.
22			LOCKWASHER (INCLUDED W/X26870)
21			BOLT (INCLUDED W/X26870)
20	X26870	2	BUSHING, 2-3/16" OD
19	X26872	2	BEARING, 2-3/16" 4-BOLT (ECCENTRIC LOCK)
18	X02291	2	ZERK, 1/8" STR. NPT
17	X12333	2	COUPLER, 1/8" NPT
16	X24178	2	HOSE, GREASE LINE (1/8" X 10" LG.)
15	X24100	2	STIFFENER, BEARING
14	X01251	8	BOLT, 1/2" X 1-3/4" LG. HEX HD.
13	X27123	2	ROTOR, 6-5/8" DIA. (2000)
	X27230	2	ROTOR, 6-5/8" DIA. (1800)
12	X02496	4	NUT, 3/8" HEX HD. TOPLOCK
11	X01598	8	FLATWASHER, 3/8"
10	X01207	4	BOLT, 3/8" X 1-1/4" HEX HD.
9	X24031	1	DEFLECTOR, L.H. KNIFE
	X24138	1	DEFLECTOR, R.H. KNIFE
8	X24177	2	HOSE, GREASE LINE (1/8" X 21-1/2" LG.)
7	X02546	24	NUT, 5/8" HEX HD. TOPLOCK GR.8
6	X01293	8	BOLT, 5/8" X 2-1/2" LG. HEX HD.
5	X26871	2	BEARING, 2-3/16" 4-BOLT (SET SCREW LOCK)
4	X02475	16	NUT, 5/16" HEX HD. TOPLOCK
3	X01597	24	FLATWASHER, 5/16"
2	X01186	16	BOLT, 5/16" X 1-1/4" LG. HEX HD.
1	X24214	2	RING, GRASS (1-PC.)
	X12366	4	RING, GRASS (2-PC.)

BALZER INC.		A	9-20-95	ORIGINAL RELEASE	SCALE	9-20-95	6-5/8" DIA. CYLINDER ASSEMBLY	REF. NO.	20210
REV.	DATE	DESCRIPTION OF REVISION		DRAWN	TWS		MODELS 1800 - 2000	DRAWING NO.	SC500144



BALZER INC.

REV.	DATE	DESCRIPTION OF REVISION	DATE	SCALE	DRAWN
A	9-20-95	ORIGINAL RELEASE	9-20-95	1/2" = 1"	TWS

6-5/8" DIA. CYLINDER ASSEMBLY
MODELS 2200 - 2400

REF. NO.	20210
DRAWING NO.	SC500145

PARTS LIST PAGE FOR DRAWING NUMBER SC500145

44	X12297	VAR.	KNIFE, STD. CUP
	X24329	VAR.	KNIFE, STD. CUP W/HARD SURFACE
43	X20995	VAR.	BUSHING
42	X26569	VAR.	KNIFE, SIDE
41	X02546	VAR.	NUT, 5/8" HEX HD TOPLOCK GR. 8
40	X01602	VAR.	FLATWASHER, 5/8" (2-REQ'D. PER BOLT)
39	X26568	VAR.	BOLT, 5/8" X 3" LG. HEX HD GR. 8
38	X02539	VAR.	NUT, 1/2" HEX HD TOPLOCK GR. 8
37	X01291	VAR.	BOLT, 5/8" X 2" LG. HEX HD. GR. 5
36	X26566	VAR.	HANGER, KNIFE
35	X24322	4	CLAMP, GREASE HOSE
34	X24074	2	SHEAVE, 16" 3C
33	X02406	2	KEY, 3/8" X 2-1/2" LG.
32			NUT (INCLUDED W/24222)
31			BOLT (INCLUDED W/24222)
30	X24222	2	BUSHING, 1-3/4" OD
29	X24076	2	BELT, C81 3-BAND (1000 RPM)
	X17477	2	BELT, C78 3-BAND (1000 RPM SPEED-UP)
28	X24073	2	SHEAVE, 10.5" 3C (1000 RPM)
	X17476	2	SHEAVE, 8" 3C (1000 RPM SPEED-UP)
27			LOCKWASHER (INCLUDED W/26870)
26			BOLT (INCLUDED W/26870)
25	X26870	2	BUSHING, 2-3/16" OD
24	X26872	2	BEARING, 2-3/16" 4-BOLT (ECCENTRIC LOCK)
23	X02291	2	ZERK, 1/8" STR. NPT
22	X12333	2	COUPLER, 1/8" NPT
21	X24178	2	HOSE, GREASE LINE (1/8" X 10" LG.)
20	X24100	2	STIFFENER, BEARING
19	X01291	8	BOLT, 5/8" X 2" LG.
18	X27232	2	ROTOR, 6-5/8" DIA. (2400)
	X27231	2	ROTOR, 6-5/8" DIA. (2200)
17	X02439	4	KEY, 1/2" X 2-1/2" LG.
16	X26869	2	BUSHING, 2-3/16" OD
15			LOCKWASHER (INCLUDED W/26870)
14			BOLT (INCLUDED W/26870)
13	X27233	2	ROTOR, 6-5/8" DIA. (2200 - 2400)
12	X02496	4	NUT, 3/8" HEX HD TOPLOCK
11	X01598	8	FLATWASHER, 3/8"
10	X01207	4	BOLT, 3/8" X 1-1/4" HEX HD.
9	X24031	1	DEFLECTOR, L.H. KNIFE
	X24138	1	DEFLECTOR, R.H. KNIFE
8	X24177	2	HOSE, GREASE LINE (1/8" X 21-1/2" LG.)
7	X02546	24	NUT, 5/8" HEX HD. TOPLOCK
6	X01293	8	BOLT, 5/8" X 2-1/4" LG. HEX HD.
5	X26871	2	BEARING, 2-3/16" 4-BOLT (SET SCREW LOCK)
4	X02475	16	NUT, 5/16" HEX HD. TOPLOCK
3	X01597	24	FLATWASHER, 5/16"
2	X01186	16	BOLT, 5/16" X 1-1/4" LG. HEX HD.
1	X24214	2	RING, GRASS (1-PC.)
	X12366	4	RING, GRASS (2-PC.)

49	X01095	VAR.	BOLT, 1/2" X 1-1/2" LG. CARRIAGE GR. 5
48	X01260	VAR.	BOLT, 1/2" X 4" LG. HEX HD. GR. 8
47	X01600	VAR.	FLATWASHER, 1/2"
46	X26994	VAR.	HANGER, KNIFE
45	X12296	VAR.	HANGER, CUP KNIFE
ITEM	PART NO.	QTY.	DESCRIPTION

ITEM	PART NO.	QTY.	DESCRIPTION
			6-5/8" DIA. CYLINDER ASSEMBLY
			MODELS 2200 - 2400
			REF. NO. 20220
			DRAWING NO. SC500145

BALZER INC.

A 9-20-95

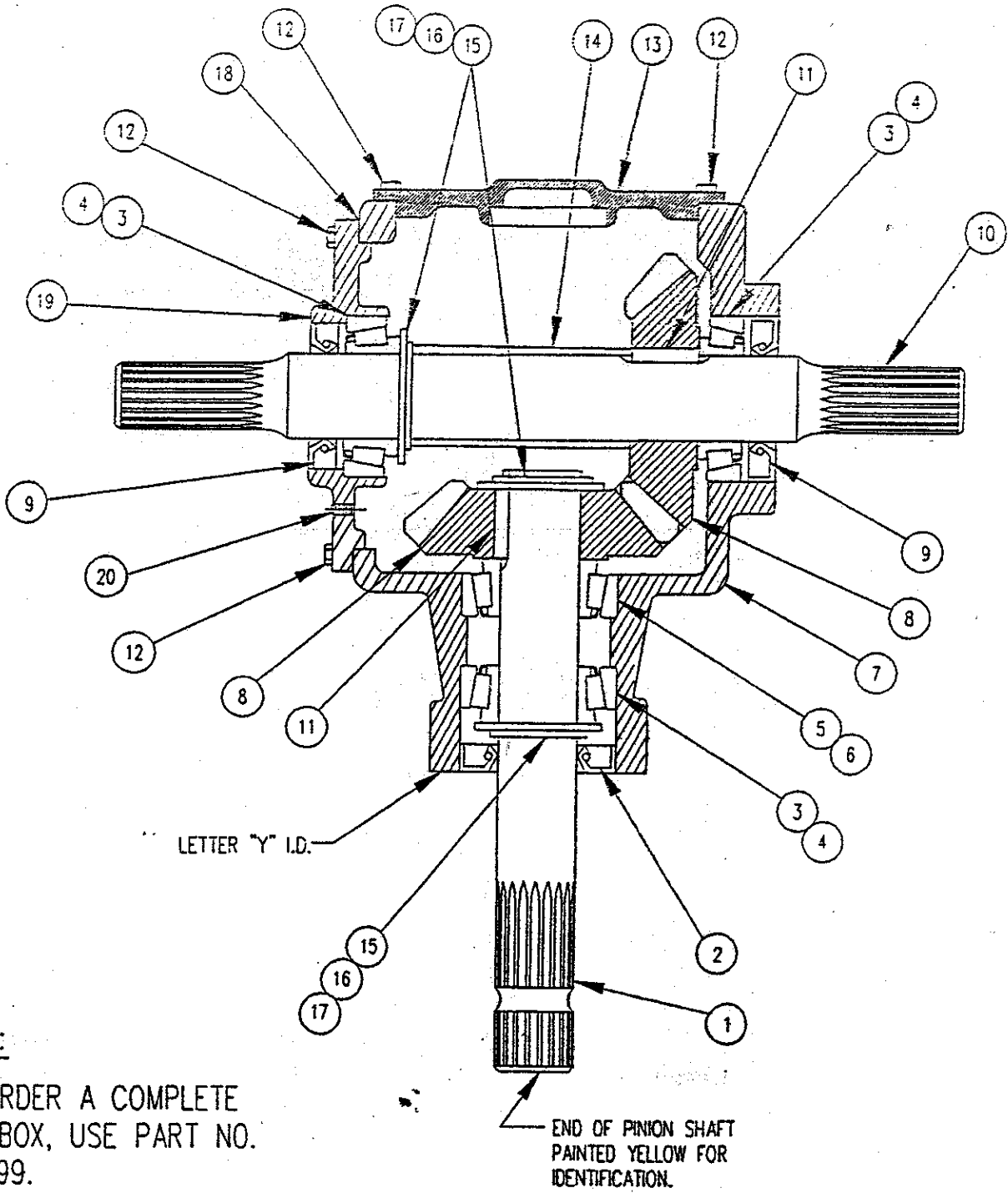
ORIGINAL RELEASE

DATE 9-20-95
BY 1/2" x 1"

REV. DATE

DESCRIPTION OF REVISION

DRAWING THIS



NOTE:

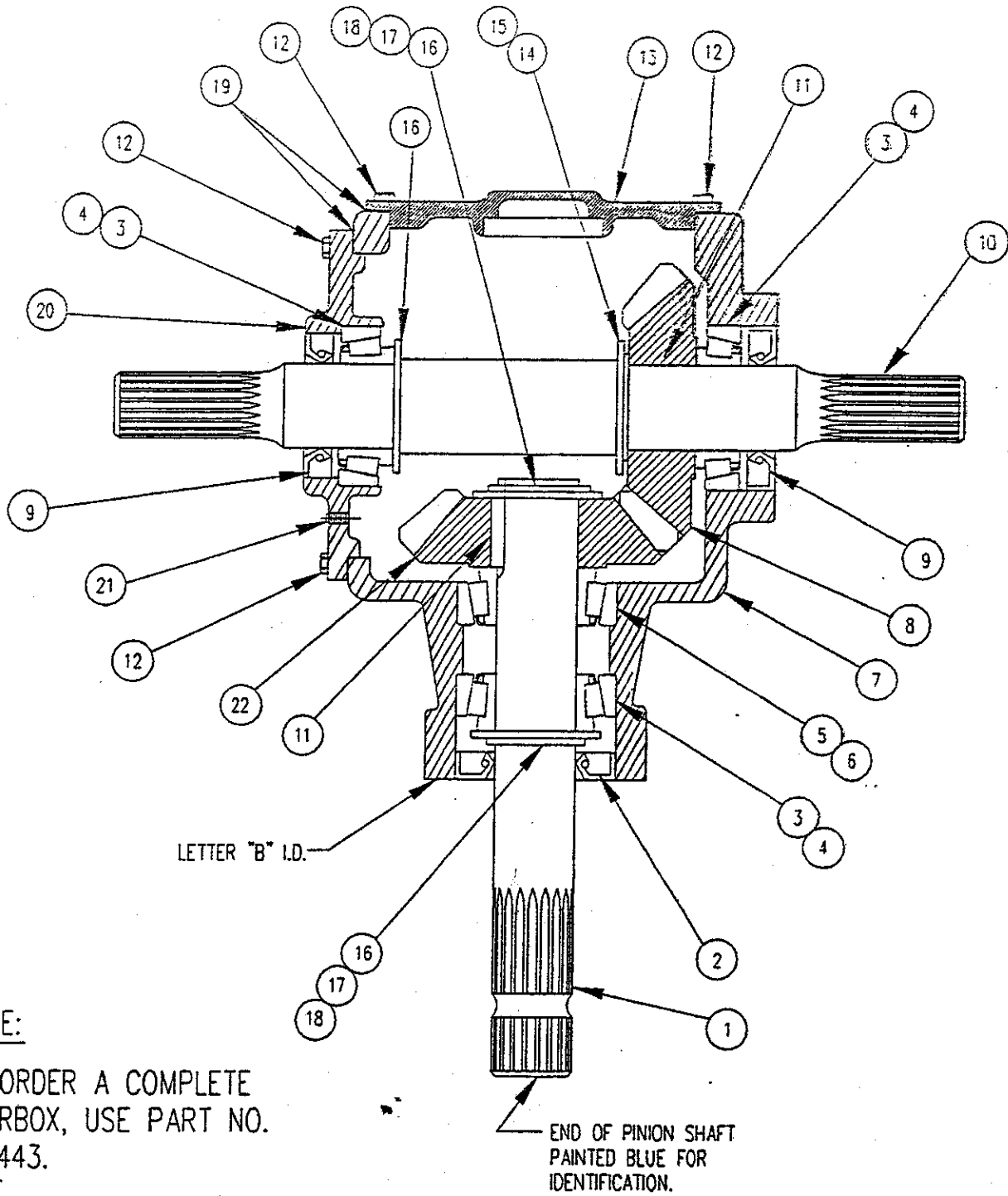
TO ORDER A COMPLETE GEARBOX, USE PART NO. X21599.

END OF PINION SHAFT PAINTED YELLOW FOR IDENTIFICATION.

23	X13038	1	BUSHING, 1/2" X 1/8" REDUCER (NOT SHOWN)
22	X13181	1	PLUG, 1/2" NPT PIPE (NOT SHOWN)
21	X13097	1	PLUG, 1/8" NPT VENT (NOT SHOWN)
20	X06697	1	PLUG, 1/4" NPT PIPE
19	X22614	1	COVER, OPEN
18	X22604	AR.	SHIM, .007" (COVER)
17	X22603	AR.	SHIM, .007" (1.75" DIA SHAFT)
16	X22611	3	WASHER, 1.75" I.D. X .179" THK.
15	X22606	3	RING, SNAP (5160 - 175)
14	X22610	1	SPACER
13	X22615	1	COVER, CLOSED
ITEM	PART NO.	QTY.	DESCRIPTION

12	X01206	16	BOLT, 3/8" UNC X 1" LG. HEX HD GR. 5
11	X17185	2	KEY, 3/8" SO. X 1.46" LG.
10	X22619	1	SHAFT, THRU
9	X22264	2	SEAL, OIL
8	X22599	2	GEAR, 22T W/1.75" BORE
7	X22595	1	HOUSING, SIDE PORT
6	X22602	1	CUP, BEARING
5	X17205	1	CONE, BEARING
4	X08491	3	CUP, BEARING
3	X11477	3	CONE, BEARING
2	X22594	1	SEAL, OIL
1	X22620	1	SHAFT, PINION
ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.		A	9-25-95	ORIGINAL RELEASE	DATE	9-25-95	GEARBOX - 1000 RPM (1:1 RATIO)	REF. NO.	21599
REV.	DATE	DESCRIPTION OF REVISION		SCALE	1/4" = 1"	THS		DRAWING NO.	SC500147



NOTE:

TO ORDER A COMPLETE GEARBOX, USE PART NO. X22443.

END OF PINION SHAFT PAINTED BLUE FOR IDENTIFICATION.

25	X13038	1	BUSHING, 1/2" X 1/8" REDUCER (NOT SHOWN)
24	X13181	1	PLUG, 1/2" NPT PIPE (NOT SHOWN)
23	X13097	1	PLUG, 1/8" NPT VENT (NOT SHOWN)
22	X22638	1	GEAR, 29T
21	X06997	1	PLUG, 1/4" NPT PIPE
20	X22614	1	COVER, OPEN
19	X22604	AR.	SHIM, .007" (COVER)
18	X22603	AR.	SHIM, .007" (1.75" DIA. SHAFT)
17	X22606	2	RING, SNAP (5160 - 175)
16	X22611	3	WASHER, 1.75" I.D. X .179" THK.
15	X22607	1	RING, SNAP (5160 - 200)
14	X22612	1	SPACER
13	X22615	1	COVER, CLOSED
ITEM	PART NO.	QTY.	DESCRIPTION

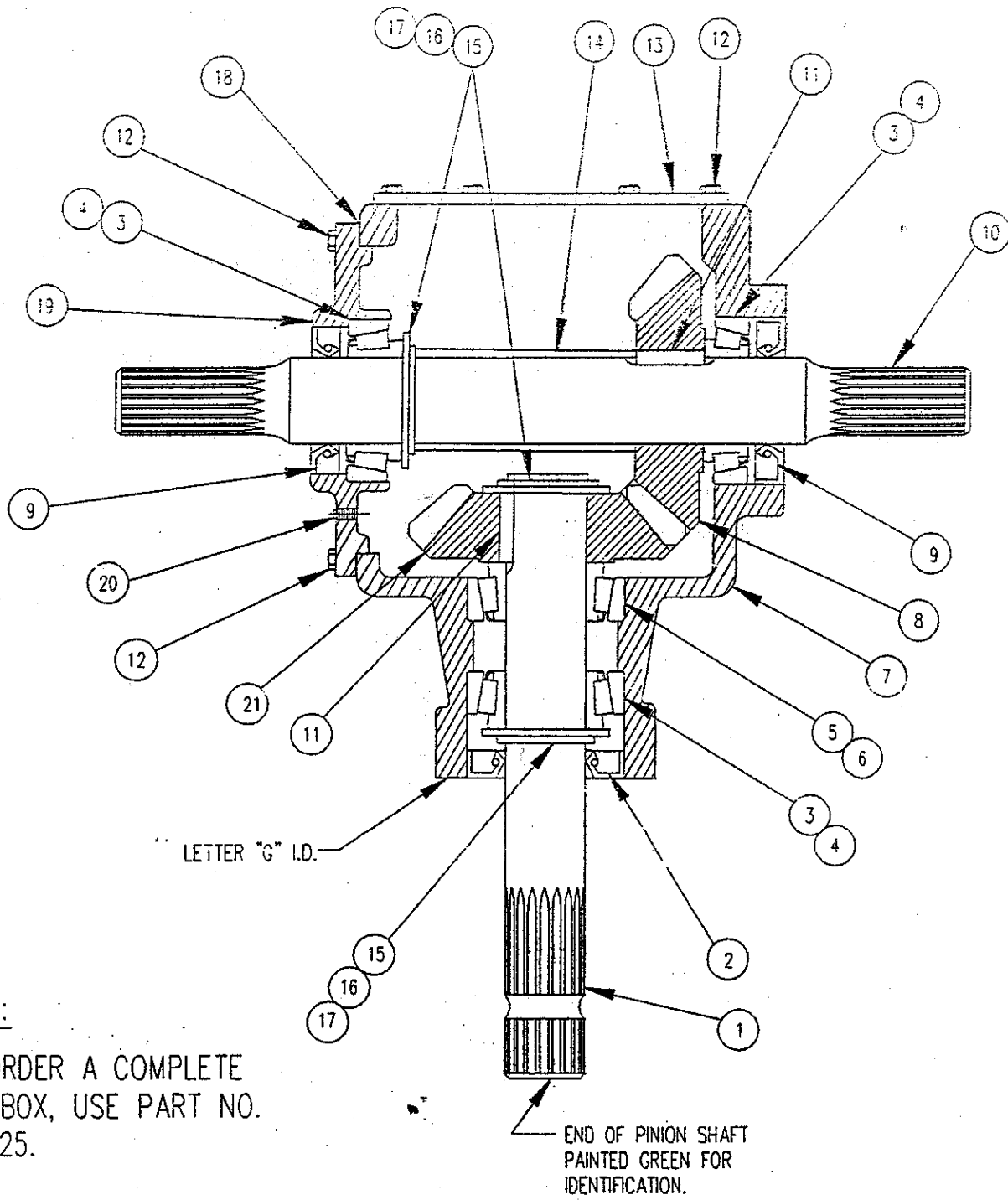
12	X01206	16	BOLT, 3/8" UNC X 1" LG. HEX HD GR. 5
11	X17185	1	KEY, 3/8" SQ. X 1.46" LG.
10	X22621	1	SHAFT, THRU
9	X22264	2	SEAL, OIL
8	X22637	1	GEAR, 16T
7	X22595	1	HOUSING, SIDE PORT
6	X22602	1	CUP, BEARING
5	X17205	1	CONE, BEARING
4	X08491	3	CUP, BEARING
3	X11477	3	CONE, BEARING
2	X22594	1	SEAL, OIL
1	X22620	1	SHAFT, QUILL
ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

A 9-28-95 ORIGINAL RELEASE
 REV. DATE DESCRIPTION OF REVISION
 DATE 9-28-95
 SCALE 1/4" = 1"
 DRAWN TWS

GEARBOX - 540 RPM
 (1:1.81 RATIO)

REF. NO. 22443
 DRAWING NO. SC500148



LETTER "G" I.D.

END OF PINION SHAFT
PAINTED GREEN FOR
IDENTIFICATION.

NOTE:

TO ORDER A COMPLETE
GEARBOX, USE PART NO.
X21525.

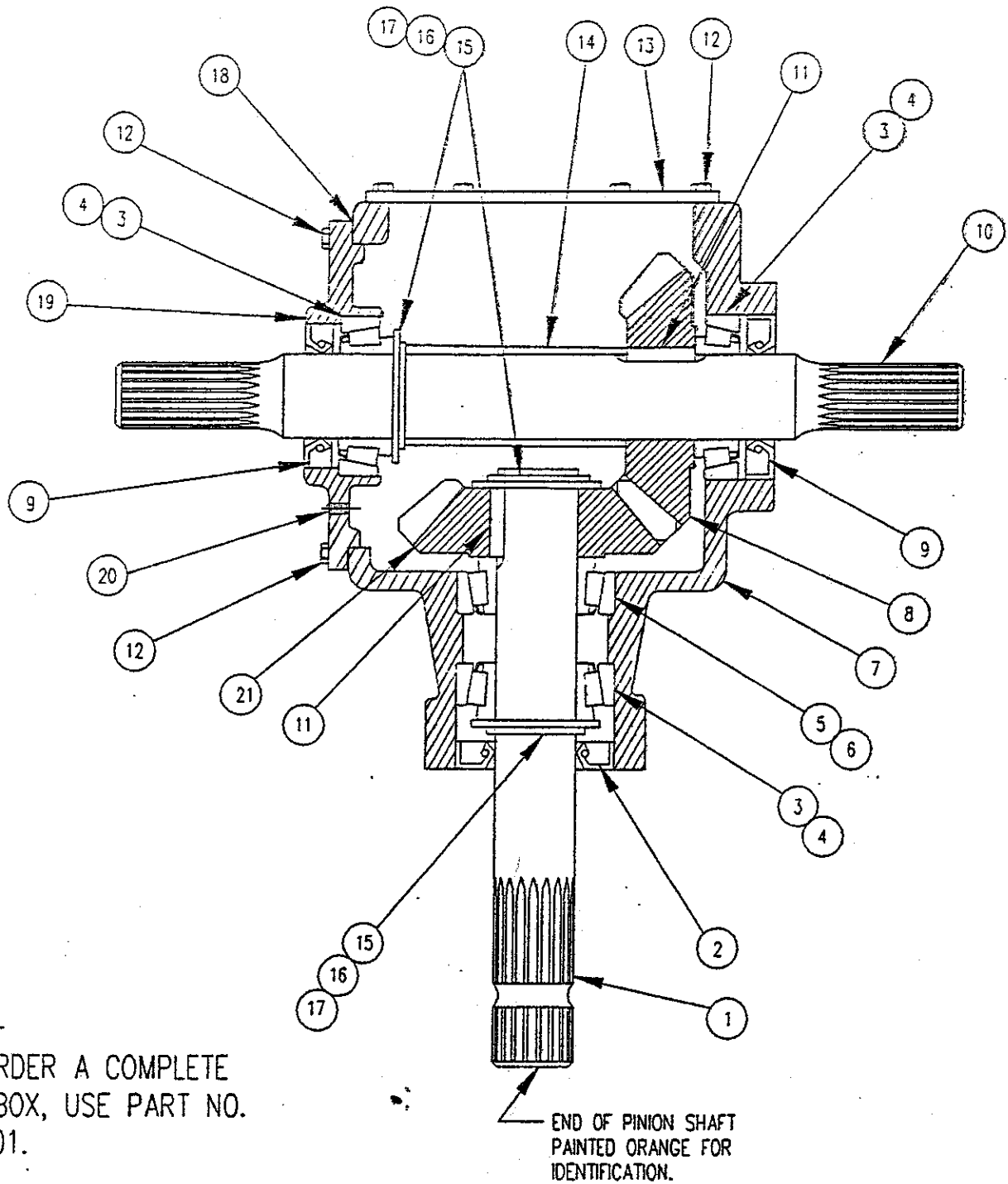
24	X13038	1	BUSHING, 1/2" X 1/8" REDUCER (NOT SHOWN)	12	X01206	16	BOLT, 3/8" UNC X 1" LG. HEX HD GR. 5
23	X13181	1	PLUG, 1/2" NPT PIPE (NOT SHOWN)	11	X17185	2	KEY, 3/8" SQ. X 1.46" LG.
22	X13097	1	PLUG, 1/8" NPT VENT (NOT SHOWN)	10	X22619	1	SHAFT, THRU
21	X22600	1	GEAR, 27T	9	X22264	2	SEAL, OIL
20	X06997	1	PLUG, 1/4" NPT PIPE	8	X22601	1	GEAR, 20T
19	X22614	1	COVER, OPEN	7	X22595	1	HOUSING
18	X22604	AR.	SHIM, .007" (COVER)	6	X22602	1	CUP. BEARING
17	X22603	AR.	SHIM, .007" (1.75" DIA. SHAFT)	5	X17205	1	CONE. BEARING
16	X22611	3	WASHER, 1.75" I.D. X .179" THK.	4	X08491	3	CUP. BEARING
15	X22606	3	RING, SNAP (5160 - 175)	3	X11477	3	CONE. BEARING
14	X22610	1	SPACER	2	X22594	1	SEAL, OIL
13	X22613	1	COVER, PLATE	1	X22620	1	SHAFT, PINION
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

A	9-27-95	ORIGINAL RELEASE	DATE 9-27-95
REV.	DATE	DESCRIPTION OF REVISION	SCALE 1/4" = 1"
			DRAWN TMS

GEARBOX - 1000 RPM
(1:1.35 RATIO)

REF. NO. 21525
DRAWING NO. SC500149



NOTE:

TO ORDER A COMPLETE GEARBOX, USE PART NO. X22501.

END OF PINION SHAFT PAINTED ORANGE FOR IDENTIFICATION.

24	X13038	1	BUSHING, 1/2" X 1/8" REDUCER (NOT SHOWN)	12	X01206	16	BOLT, 3/8" UNC X 1" LG. HEX HD GR. 5
23	X13181	1	PLUG, 1/2" NPT PIPE (NOT SHOWN)	11	X17185	2	KEY, 3/8" SQ. X 1.46" LG.
22	X13097	1	PLUG, 1/8" NPT VENT (NOT SHOWN)	10	X22619	1	SHAFT, THRU
21	X22618	1	GEAR, 28T	9	X22264	2	SEAL, OIL
20	X06997	1	PLUG, 1/4" NPT PIPE	8	X22617	1	GEAR, 24T
19	X22614	1	COVER, OPEN	7	X22595	1	HOUSING
18	X22604	AR.	SHIM, .007" (COVER)	6	X22602	1	CUP, BEARING
17	X22603	AR.	SHIM, .007" (1.75" DIA. SHAFT)	5	X17205	1	CONE, BEARING
16	X22611	3	WASHER, 1.75" I.D. X .179" THK.	4	X08491	3	CUP, BEARING
15	X22606	3	RING, SNAP (5160 - 175)	3	X11477	3	CONE, BEARING
14	X22610	1	SPACER	2	X22594	1	SEAL, OIL
13	X22613	1	COVER, PLATE	1	X22620	1	SHAFT, PINION
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

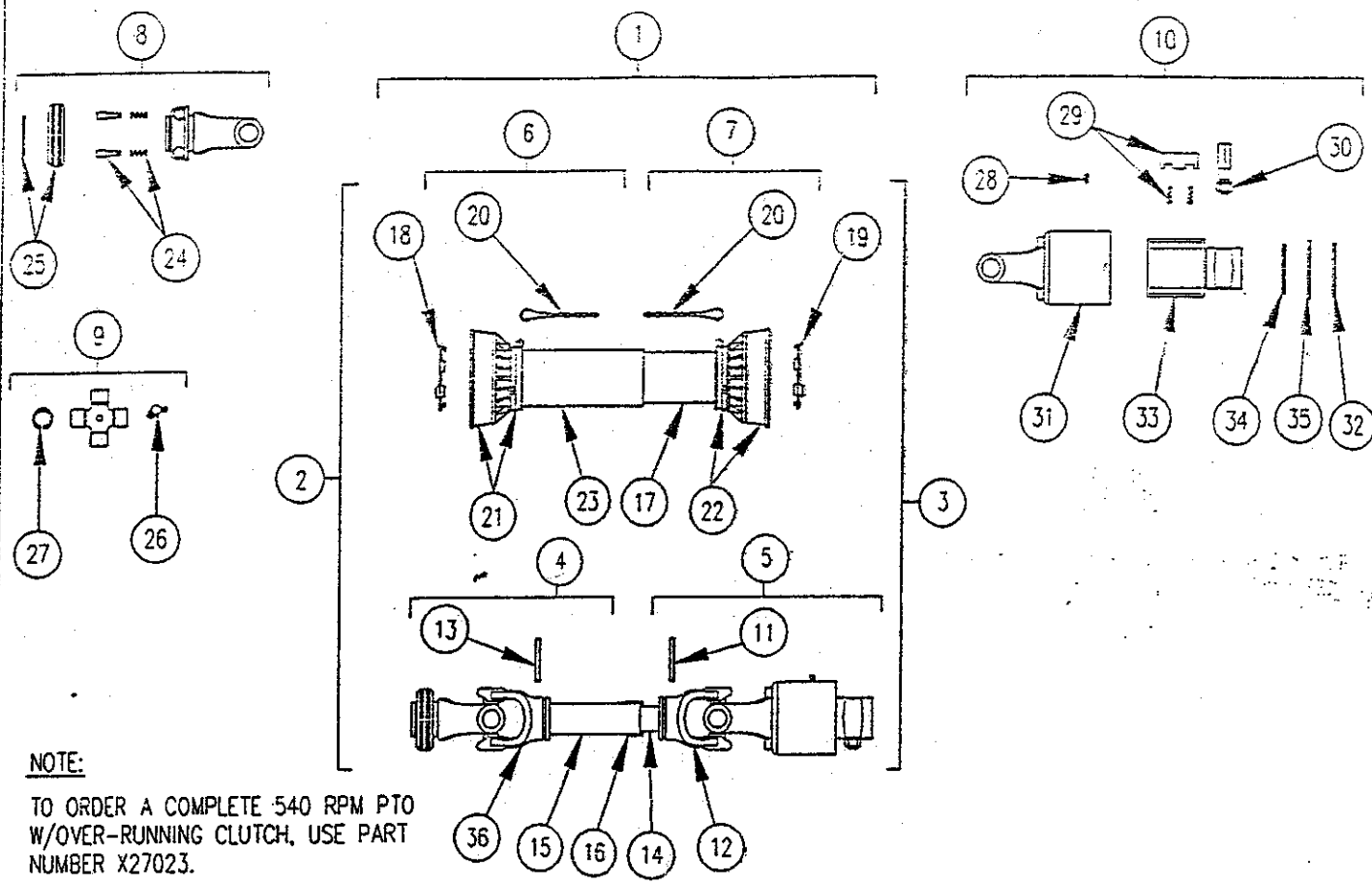
BALZER INC.

A 9-27-95 ORIGINAL RELEASE

DATE 9-27-95
SCALE 1/4" = 1"

GEARBOX - 1000 RPM
(1:1.147 RATIO)

REF. NO. 22501
DRAWING NO. SC500150



NOTE:

TO ORDER A COMPLETE 540 RPM PTO W/OVER-RUNNING CLUTCH, USE PART NUMBER X27023.

TO ORDER A COMPLETE TRACTOR HALF PTO W/SHIELD (ITEMS 13, 15, 16, 18, 20, 21, 23, 36), USE PART NUMBER X27032.

TO ORDER A COMPLETE IMPLEMENT HALF PTO W/SHIELD (ITEMS 11, 12, 14, 17, 19, 20, 22), USE PART NUMBER X27073.

TO ORDER A COMPLETE SAFETY GUARD (ITEMS 17, 18, 19, 20, 21, 22, 23), USE PART NUMBER X23076.

TO ORDER A COMPLETE TRACTOR HALF GUARD (ITEMS 18, 20, 21, 23), USE PART NUMBER X27074.

TO ORDER A COMPLETE IMPLEMENT HALF GUARD (ITEMS 17, 19, 20, 22), USE PART NUMBER X27075.

TO ORDER A COMPLETE TRACTOR HALF PTO W/O SHIELD (ITEMS 13, 15, 16, 36), USE PART NUMBER X27081.

TO ORDER A COMPLETE IMPLEMENT HALF PTO W/O SHIELD (ITEMS 11, 12, 14), USE PART NUMBER X27071.

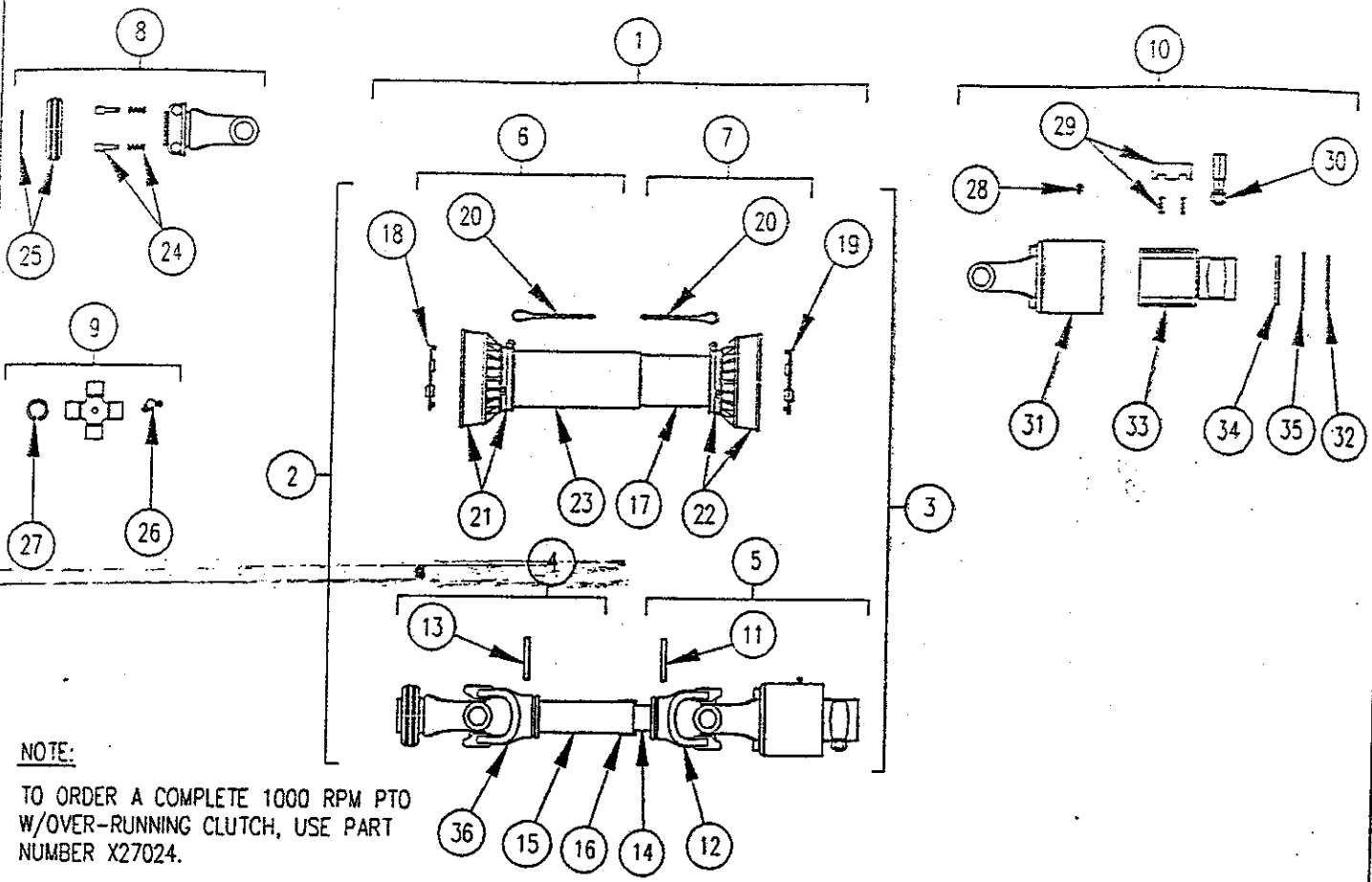
36	X18682	1	YOKE, OUTER TUBE	18	X18707	1	O.BEARING, 8-9-0
35	X23077	2	CLOSING PLATE HALF	17	X27080	1	TUBE, CM SAFETY (IMPLEMENT HALF)
34	X23076	1	RING, SCREEN	16	X18700	1	NUT, RING
33	X27041	1	HUB (CLUTCH INNER)	15	X27066	1	TUBE, CM CARDAN (TRACTOR HALF)
32	X23079	1	CIRCLIP (SNAP RING)	14	X27067	1	TUBE, CM CARDAN (IMPLEMENT HALF)
31	X27040	1	CLUTCH OUTER BODY	13	X18714	1	PIN, FLEXIBLE
30	X27043	1	PIVOT PIN ASSEMBLY	12	X18683	1	YOKE, INNER TUBE
29	X27042	1	RACHET W/SPRING	11	X18715	1	PIN, FLEXIBLE
28	X27039	1	ZERK, GREASE NIPPLE	10	X27035	1	CLUTCH, FREE WHEEL RA2/8
27	X23061	8	CIRCLIP (SNAP RING)	9	X18676	2	CROSS JOURNAL COMPLETE
26	X18716	2	ZERK, GREASE NIPPLE	8	X18670	1	YOKE, 1-3/8 - 6
25	X20463	1	HUB (ROTARY LATCH)	7	X27075	1	GUARD, HALF (IMPLEMENT END)
24	X18720	2	PUSH BUTTON COMPLETE	6	X27074	1	GUARD, HALF (TRACTOR END)
23	X27079	1	TUBE, CM SAFETY (TRACTOR HALF)	5	X27071	1	SHAFT, IMPLEMENT HALF W/O SHIELD
22	X27032	1	I.CONE SETS, F8-9	4	X27081	1	SHAFT, TRACTOR HALF W/O SHIELD
21	X27036	1	O.CONE SETS, F8-9	3	X27073	1	SHAFT, IMPLEMENT HALF W/SHIELD
20	X18704	2	CHAIN COMPLETE	2	X27082	1	SHAFT, TRACTOR HALF W/SHIELD
19	X18708	1	I.BEARING, 8-9-0	1	X27076	1	SAFETY GUARD COMPLETE
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

A 11-13-95 ORIGINAL RELEASE
REV. DATE DESCRIPTION OF REVISION DRAWN TWS

1-3/8 - 6 PTO RA2 (540 RPM)
- PULL TYPE UNIT -

REF. NO. 27023
DRAWING NO. SC500151



NOTE:

TO ORDER A COMPLETE 1000 RPM PTO W/OVER-RUNNING CLUTCH, USE PART NUMBER X27024.

TO ORDER A COMPLETE TRACTOR HALF PTO W/SHIELD (ITEMS 13, 15, 16, 18, 20, 21, 23, 36), USE PART NUMBER X27072.

TO ORDER A COMPLETE IMPLEMENT HALF PTO W/SHIELD (ITEMS 11, 12, 14, 17, 19, 20, 22), USE PART NUMBER X27073.

TO ORDER A COMPLETE SAFETY GUARD (ITEMS 17, 18, 19, 20, 21, 22, 23), USE PART NUMBER X27076.

TO ORDER A COMPLETE TRACTOR HALF GUARD (ITEMS 18, 20, 21, 23), USE PART NUMBER X27074.

TO ORDER A COMPLETE IMPLEMENT HALF GUARD (ITEMS 17, 19, 20, 22), USE PART NUMBER X27075.

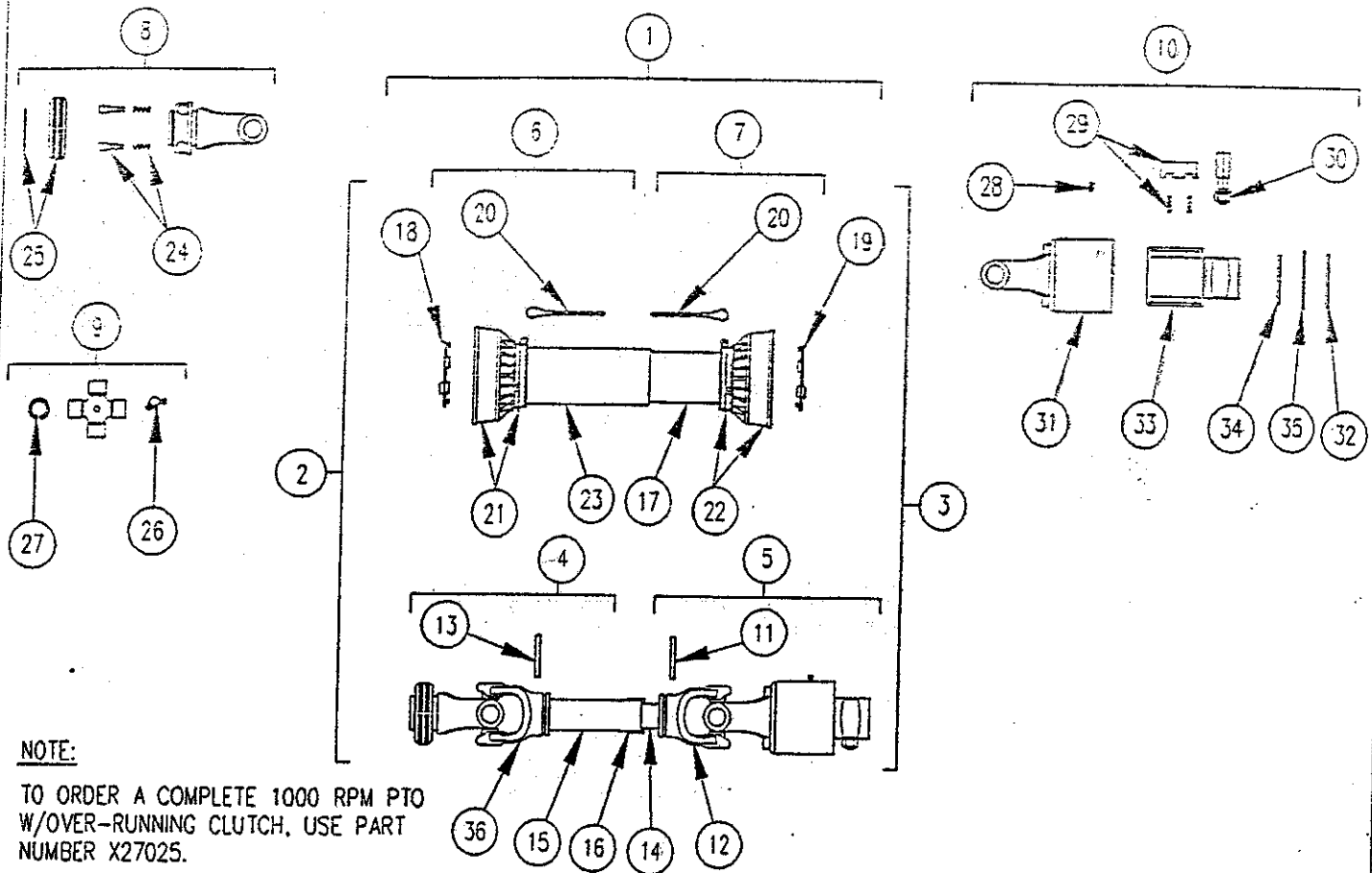
TO ORDER A COMPLETE TRACTOR HALF PTO W/O SHIELD (ITEMS 13, 15, 16, 36), USE PART NUMBER X27070.

TO ORDER A COMPLETE IMPLEMENT HALF PTO W/O SHIELD (ITEMS 11, 12, 14), USE PART NUMBER X27071.

36	X18682	1	YOKE, OUTER TUBE	18	X18707	1	O.BEARING, 8-9-0
35	X23077	2	CLOSING PLATE HALF	17	X27069	1	TUBE, CM SAFETY (IMPLEMENT HALF)
34	X23076	1	RING, SCREEN	16	X18700	1	NUT, RING
33	X27041	1	HUB (CLUTCH INNER)	15	X27066	1	TUBE, CM CARDAN (TRACTOR HALF)
32	X23079	1	CIRCLIP (SNAP RING)	14	X27067	1	TUBE, CM CARDAN (IMPLEMENT HALF)
31	X27040	1	CLUTCH OUTER BODY	13	X18714	1	PIN, FLEXIBLE
30	X27043	1	PIVOT PIN ASSEMBLY	12	X18683	1	YOKE, INNER TUBE
29	X27042	1	RACHET W/SPRING	11	X18715	1	PIN, FLEXIBLE
28	X27039	1	ZERK, GREASE NIPPLE	10	X27035	1	CLUTCH, FREE WHEEL RA2/8
27	X23061	8	CIRCLIP (SNAP RING)	9	X18676	2	CROSS JOURNAL COMPLETE
26	X18716	2	ZERK, GREASE NIPPLE	8	X18732	1	YOKE, 1-3/8" - 21
25	X18702	1	HUB (ROTARY LATCH)	7	X27075	1	GUARD, HALF (IMPLEMENT END)
24	X18722	2	PUSH BUTTON COMPLETE	6	X27074	1	GUARD, HALF (TRACTOR END)
23	X27068	1	TUBE, CM SAFETY (TRACTOR HALF)	5	X27071	1	SHAFT, IMPLEMENT HALF W/O SHIELD
22	X27032	1	I.CONE SETS, F8-9	4	X27070	1	SHAFT, TRACTOR HALF W/O SHIELD
21	X27036	1	O.CONE SETS, F8-9	3	X27073	1	SHAFT, IMPLEMENT HALF W/SHIELD
20	X18704	2	CHAIN COMPLETE	2	X27072	1	SHAFT, TRACTOR HALF W/SHIELD
19	X18708	1	I.BEARING, 8-9-0	1	X27076	1	SAFETY GUARD COMPLETE
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

REV. A	DATE 11-14-95	DESCRIPTION ORIGINAL RELEASE	DATE 11-14-95	SCALE 1/4" = 1"	1-3/8-21 PTO RA2 (1000 RPM)	REF. NO. 27024
					- PULL TYPE UNIT -	DRAWING NO. SC500152



NOTE:

TO ORDER A COMPLETE 1000 RPM PTO W/OVER-RUNNING CLUTCH, USE PART NUMBER X27025.

TO ORDER A COMPLETE TRACTOR HALF PTO W/SHIELD (ITEMS 13, 15, 16, 18, 20, 21, 23, 36), USE PART NUMBER X27078.

TO ORDER A COMPLETE IMPLEMENT HALF PTO W/SHIELD (ITEMS 11, 12, 14, 17, 19, 20, 22), USE PART NUMBER X27073.

TO ORDER A COMPLETE SAFETY GUARD (ITEMS 17, 18, 19, 20, 21, 22, 23), USE PART NUMBER X27076.

TO ORDER A COMPLETE TRACTOR HALF GUARD (ITEMS 18, 20, 21, 23), USE PART NUMBER X27074.

TO ORDER A COMPLETE IMPLEMENT HALF GUARD (ITEMS 17, 19, 20, 22), USE PART NUMBER X27075.

TO ORDER A COMPLETE TRACTOR HALF PTO W/O SHIELD (ITEMS 13, 15, 16, 36), USE PART NUMBER X27077.

TO ORDER A COMPLETE IMPLEMENT HALF PTO W/O SHIELD (ITEMS 11, 12, 14), USE PART NUMBER X27071.

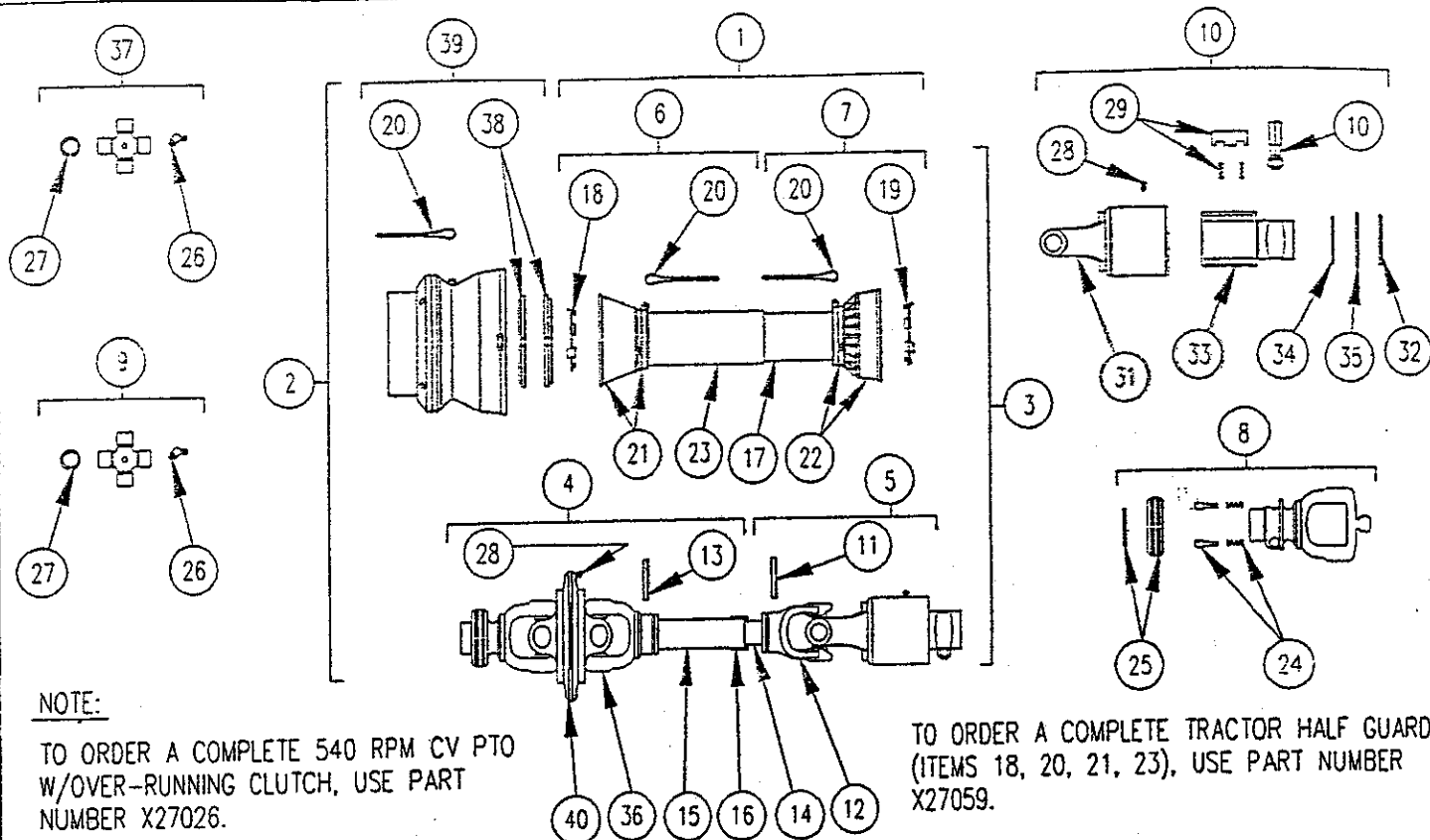
36	X18682	1	YOKE, OUTER TUBE	18	X18707	1	O.BEARING, 8-9-0
35	X23077	2	CLOSING PLATE HALF	17	X27069	1	TUBE, CM SAFETY (IMPLEMENT HALF)
34	X23076	1	RING, SCREEN	16	X18700	1	NUT, RING
33	X27041	1	HUB (CLUTCH INNER)	15	X27066	1	TUBE, CM CARDAN (TRACTOR HALF)
32	X23079	1	CIRCLIP (SNAP RING)	14	X27067	1	TUBE, CM CARDAN (IMPLEMENT HALF)
31	X27040	1	CLUTCH OUTER BODY	13	X18714	1	PIN, FLEXIBLE
30	X27043	1	PIVOT PIN ASSEMBLY	12	X18683	1	YOKE, INNER TUBE
29	X27042	1	RACHET W/SPRING	11	X18715	1	PIN, FLEXIBLE
28	X27039	1	ZERK, GREASE NIPPLE	10	X27035	1	CLUTCH, FREE WHEEL RA2/8
27	X23061	8	CIRCLIP (SNAP RING)	9	X18676	2	CROSS JOURNAL COMPLETE
26	X18716	2	ZERK, GREASE NIPPLE	8	X23086	1	YOKE, 1-3/4" - 20
25	X18701	1	HUB (ROTARY LATCH)	7	X27075	1	GUARD, HALF (IMPLEMENT END)
24	X18722	2	PUSH BUTTON COMPLETE	6	X27074	1	GUARD, HALF (TRACTOR END)
23	X27068	1	TUBE, CM SAFETY (TRACTOR HALF)	5	X27071	1	SHAFT, IMPLEMENT HALF W/O SHIELD
22	X27032	1	L.CONE SETS, F8-9	4	X27077	1	SHAFT, TRACTOR HALF W/O SHIELD
21	X27036	1	O.CONE SETS, F8-9	3	X27073	1	SHAFT, IMPLEMENT HALF W/SHIELD
20	X18704	2	CHAIN COMPLETE	2	X27078	1	SHAFT, TRACTOR HALF W/SHIELD
19	X18708	1	I.BEARING, 8-9-0	1	X27076	1	SAFETY GUARD COMPLETE
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

A 11-14-95 ORIGINAL RELEASE
REV. DATE DESCRIPTION OF REVISION
DATE 11-16-95
SCALE 1/4" = 1"
DRAWN TWS

1-3/4-20 PTO RA2 (1000 RPM)
- PULL TYPE UNIT -

REF. NO. 27025
DRAWING NO. SC500153



NOTE:

TO ORDER A COMPLETE 540 RPM CV PTO W/OVER-RUNNING CLUTCH, USE PART NUMBER X27026.

TO ORDER A COMPLETE TRACTOR HALF CV PTO W/SHIELD (ITEMS 13, 15, 16, 18, 20, 21, 23, 28, 36, 38, 40), USE PART NUMBER X27057.

TO ORDER A COMPLETE IMPLEMENT HALF CV PTO W/SHIELD (ITEMS 11, 12, 14, 17, 19, 20, 22). USE PART NUMBER X27058.

TO ORDER A COMPLETE SAFETY GUARD (ITEMS 17, 18, 19, 20, 21, 22, 23), USE PART NUMBER X27061.

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TO ORDER A COMPLETE TRACTOR HALF GUARD (ITEMS 18, 20, 21, 23), USE PART NUMBER X27059.

TO ORDER A COMPLETE IMPLEMENT HALF GUARD (ITEMS 17, 19, 20, 22), USE PART NUMBER X27060.

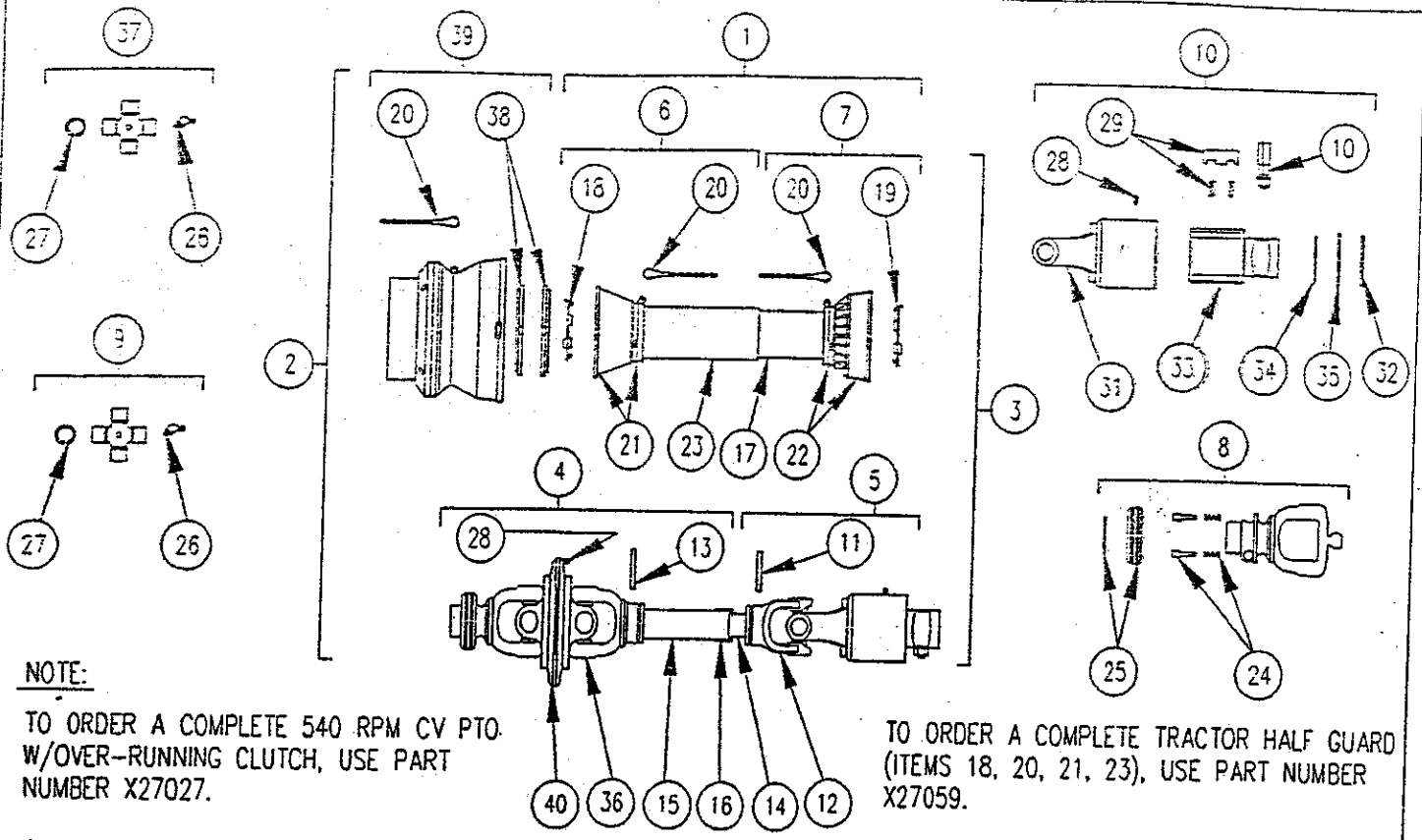
TO ORDER A COMPLETE TRACTOR HALF CV PTO W/O SHIELD (ITEMS 13, 15, 16, 28, 36, 40), USE PART NUMBER X27055.

TO ORDER A COMPLETE IMPLEMENT HALF CV PTO W/O SHIELD (ITEMS 11, 12, 14), USE PART NUMBER X27056.

40	X23011	1	CENTRAL BODY	20	X18704	3	CHAIN COMPLETE
39	X18743	1	COMPLETE SHELL	19	X18706	1	I.BEARING, 8-9-0
38	X18771	1	DOWELS, RING NUT	18	X18707	1	O.BEARING, 8-9-0
37	X23008	2	CROSS JOURNAL ASSEMBLY (TRACTOR HALF)	17	X27054	1	TUBE, CM SAFETY (IMPLEMENT HALF)
36	X18749	1	YOKE, OUTER TUBE	16	X18762	1	NUT, RING
35	X23077	2	CLOSING PLATE HALF	15	X27051	1	TUBE, CM CARDAN (TRACTOR HALF)
34	X23076	1	RING, SCREEN	14	X27052	1	TUBE, CM CARDAN (IMPLEMENT HALF)
33	X27041	1	HUB (CLUTCH INNER)	13	X18714	1	PIN, FLEXIBLE
32	X23079	1	CIRCLIP (SNAP RING)	12	X18683	1	YOKE, INNER TUBE
31	X27040	1	CLUTCH OUTER BODY	11	X18715	1	PIN, FLEXIBLE
30	X27043	1	PIVOT PIN ASSEMBLY	10	X27035	1	CLUTCH, FREE WHEEL RA2/8
29	X27042	1	RATCHET W/SPRING	9	X18676	1	CROSS JOURNAL ASSEMBLY (IMPLEMENT HALF)
28	X23004	2	ZERK, GREASE NIPPLE	8	X18739	1	YOKE, 1-3/8" - 6 RS
27	X23061	12	CIRCLIP (SNAP RING)	7	X27060	1	GUARD, HALF (IMPLEMENT END)
26	X18716	3	ZERK, GREASE NIPPLE	6	X27059	1	GUARD, HALF (TRACTOR END)
25	X18702	1	HUB (ROTARY LATCH)	5	X27056	1	SHAFT, IMPLEMENT HALF W/O SHIELD
24	X18720	2	PUSH BUTTON COMPLETE	4	X27055	1	SHAFT, TRACTOR HALF W/O SHIELD
23	X27053	1	TUBE, CM SAFETY (TRACTOR HALF)	3	X27058	1	SHAFT, IMPLEMENT HALF W/SHIELD
22	X27032	1	I.CONE SETS, F8-9	2	X27057	1	SHAFT, TRACTOR HALF W/SHIELD
21	X18766	1	O.CONE SETS, N8-9	1	X27061	1	SAFETY GUARD ASSEMBLY
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

REV: A	DATE: 11-14-95	ORIGINAL RELEASE	DATE: 11-14-95	SCALE: 1/4" = 1"	1-3/8-6 CV PTO RA2(540 RPM)	REF. NO. 27026
		DESCRIPTION OF REVISION	DATE:	PRINT: TWS	- PULL TYPE UNIT -	DRAWING NO. SC500154



NOTE:

TO ORDER A COMPLETE 540 RPM CV PTO W/OVER-RUNNING CLUTCH, USE PART NUMBER X27027.

TO ORDER A COMPLETE TRACTOR HALF CV PTO W/SHIELD (ITEMS 13, 15, 16, 18, 20, 21, 23, 28, 36, 38, 40), USE PART NUMBER X27063.

TO ORDER A COMPLETE IMPLEMENT HALF CV PTO W/SHIELD (ITEMS 11, 12, 14, 17, 19, 20, 22), USE PART NUMBER X27058.

TO ORDER A COMPLETE SAFETY GUARD (ITEMS 17, 18, 19, 20, 21, 22, 23), USE PART NUMBER X27061.

TO ORDER A COMPLETE TRACTOR HALF GUARD (ITEMS 18, 20, 21, 23), USE PART NUMBER X27059.

TO ORDER A COMPLETE IMPLEMENT HALF GUARD (ITEMS 17, 19, 20, 22), USE PART NUMBER X27060.

TO ORDER A COMPLETE TRACTOR HALF CV PTO W/O SHIELD (ITEMS 13, 15, 16, 28, 36, 40), USE PART NUMBER X27062.

TO ORDER A COMPLETE IMPLEMENT HALF CV PTO W/O SHIELD (ITEMS 11, 12, 14), USE PART NUMBER X27056.

40	X23011	1	CENTRAL BODY	20	X18704	3	CHAIN COMPLETE
39	X18743	1	COMPLETE SHELL	19	X18708	1	I.BEARING, 8-9-0
38	X18771	1	DOWELS, RING NUT	18	X18707	1	O.BEARING, 8-9-0
37	X23008	2	CROSS JOURNAL ASSEMBLY (TRACTOR HALF)	17	X27054	1	TUBE, CM SAFETY (IMPLEMENT HALF)
36	X18749	1	YOKE, OUTER TUBE	16	X18762	1	NUT, RING
35	X23077	2	CLOSING PLATE HALF	15	X27051	1	TUBE, CM CARDAN (TRACTOR HALF)
34	X23076	1	RING, SCREEN	14	X27052	1	TUBE, CM CARDAN (IMPLEMENT HALF)
33	X27041	1	HUB (CLUTCH INNER)	13	X18714	1	PIN, FLEXIBLE
32	X23079	1	CIRCLIP (SNAP RING)	12	X18683	1	YOKE, INNER TUBE
31	X27040	1	CLUTCH OUTER BODY	11	X18715	1	PIN, FLEXIBLE
30	X27043	1	PIVOT PIN ASSEMBLY	10	X27035	1	CLUTCH, FREE WHEEL RA2/8
29	X27042	1	RATCHET W/SPRING	9	X18676	1	CROSS JOURNAL ASSEMBLY (IMPLEMENT HALF)
28	X23004	2	ZERK, GREASE NIPPLE	8	X18738	1	YOKE, 1-3/8" - 21 RS
27	X23061	12	CIRCLIP (SNAP RING)	7	X27060	1	GUARD, HALF (IMPLEMENT END)
26	X18716	3	ZERK, GREASE NIPPLE	6	X27059	1	GUARD, HALF (TRACTOR END)
25	X18702	1	HUB (ROTARY LATCH)	5	X27056	1	SHAFT, IMPLEMENT HALF W/O SHIELD
24	X18720	2	PUSH BUTTON COMPLETE	4	X27062	1	SHAFT, TRACTOR HALF W/O SHIELD
23	X27053	1	TUBE, CM SAFETY (TRACTOR HALF)	3	X27058	1	SHAFT, IMPLEMENT HALF W/SHIELD
22	X27032	1	I.CONE SETS, F8-9	2	X27063	1	SHAFT, TRACTOR HALF W/SHIELD
21	X18766	1	O.CONE SETS, N8-9	1	X27061	1	SAFETY GUARD ASSEMBLY
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

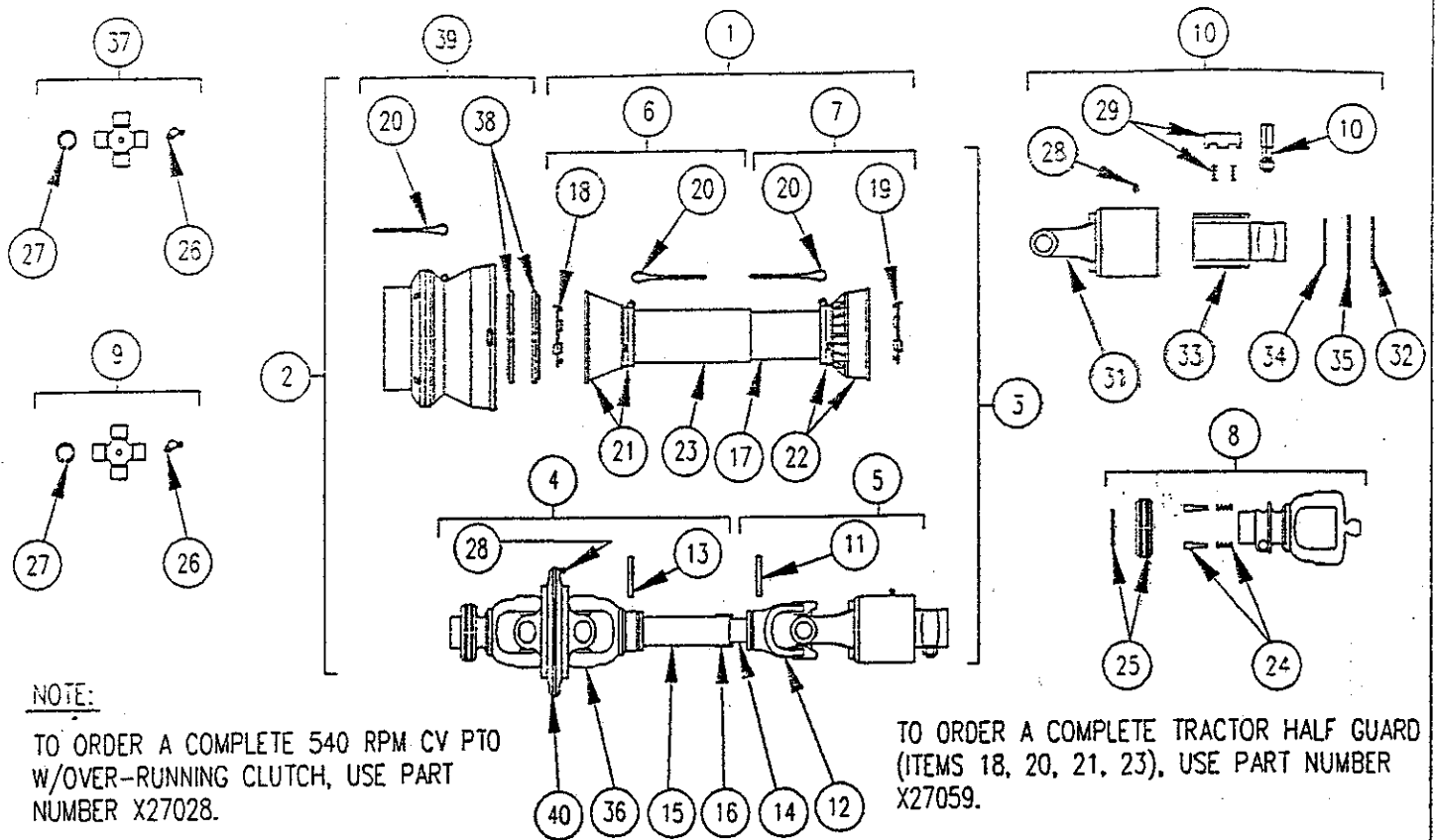
BALZER INC.

A 11-14-95 ORIGINAL RELEASE
REV. DATE DESCRIPTION OF REVISION

DATE 11-14-95
SCALE 1/4" = 1"
DRAWN TWS

1-3/8-21 CV PTO RA2
-PULL TYPE UNIT (1000 RPM)-

REF. NO. 27027
DRAWING NO. SC500155



NOTE:

TO ORDER A COMPLETE 540 RPM CV PTO W/OVER-RUNNING CLUTCH, USE PART NUMBER X27028.

TO ORDER A COMPLETE TRACTOR HALF CV PTO W/SHIELD (ITEMS 13, 15, 16, 18, 20, 21, 23, 28, 36, 38, 40), USE PART NUMBER X27065.

TO ORDER A COMPLETE IMPLEMENT HALF CV PTO W/SHIELD (ITEMS 11, 12, 14, 17, 19, 20, 22), USE PART NUMBER X27058.

TO ORDER A COMPLETE SAFETY GUARD (ITEMS 17, 18, 19, 20, 21, 22, 23), USE PART NUMBER X27061.

TO ORDER A COMPLETE TRACTOR HALF GUARD (ITEMS 18, 20, 21, 23), USE PART NUMBER X27059.

TO ORDER A COMPLETE IMPLEMENT HALF GUARD (ITEMS 17, 19, 20, 22), USE PART NUMBER X27060.

TO ORDER A COMPLETE TRACTOR HALF CV PTO W/O SHIELD (ITEMS 13, 15, 16, 28, 36, 40), USE PART NUMBER X27064.

TO ORDER A COMPLETE IMPLEMENT HALF CV PTO W/O SHIELD (ITEMS 11, 12, 14), USE PART NUMBER X27056.

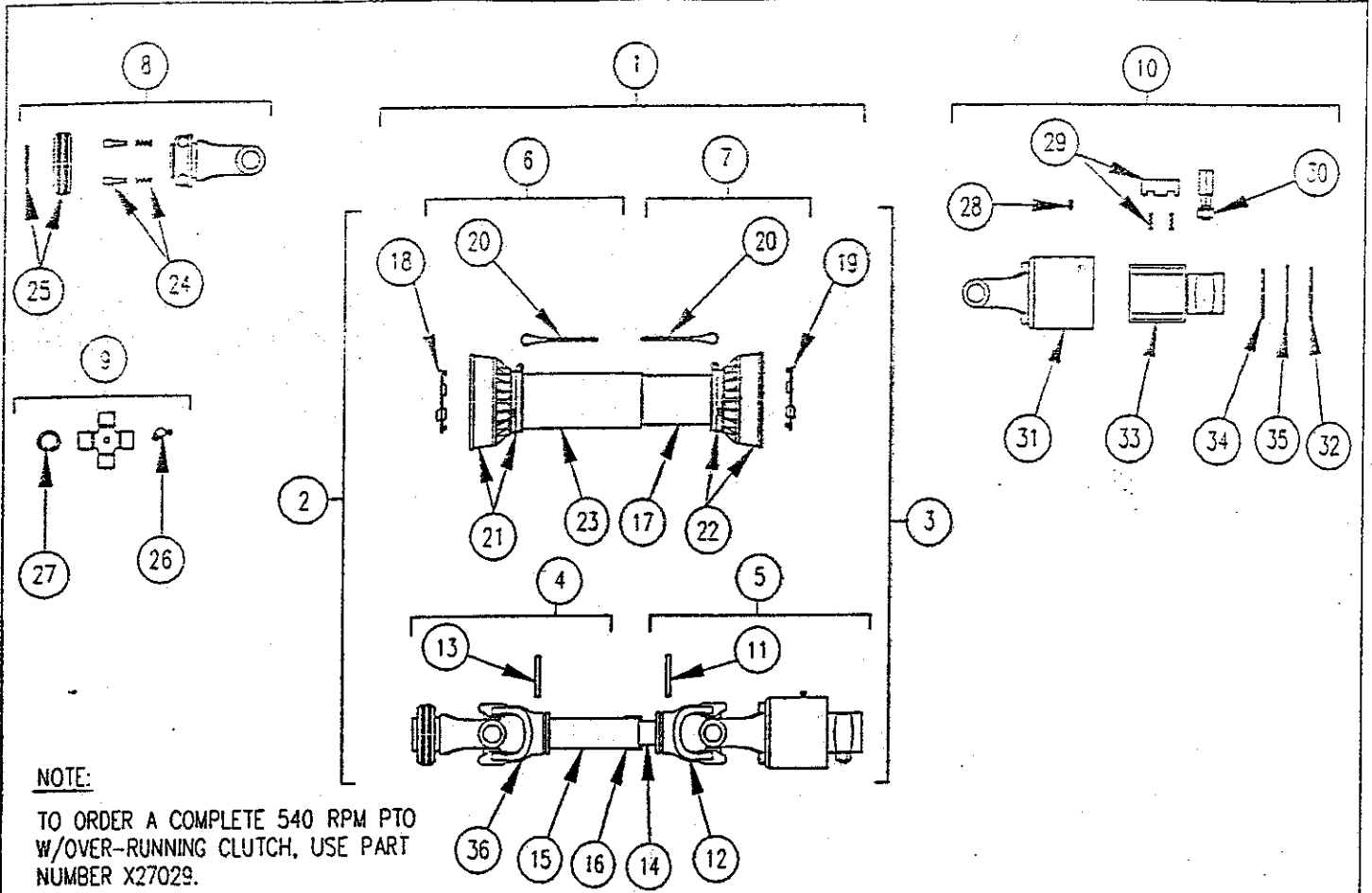
40	X23011	1	CENTRAL BODY	20	X18704	3	CHAIN COMPLETE
39	X18743	1	COMPLETE SHELL	19	X18708	1	I.BEARING, 8-9-0
38	X18771	1	DOWELS, RING NUT	18	X18707	1	O.BEARING, 8-9-0
37	X23008	2	CROSS JOURNAL ASSEMBLY (TRACTOR HALF)	17	X27054	1	TUBE, CM SAFETY (IMPLEMENT HALF)
36	X18749	1	YOKE, OUTER TUBE	16	X18762	1	NUT, RING
35	X23077	2	CLOSING PLATE HALF	15	X27051	1	TUBE, CM CARDAN (TRACTOR HALF)
34	X23076	1	RING, SCREEN	14	X27052	1	TUBE, CM CARDAN (IMPLEMENT HALF)
33	X27041	1	HUB (CLUTCH INNER)	13	X18714	1	PIN, FLEXIBLE
32	X23079	1	CIRCLIP (SNAP RING)	12	X18683	1	YOKE, INNER TUBE
31	X27040	1	CLUTCH OUTER BODY	11	X18715	1	PIN, FLEXIBLE
30	X27043	1	PIVOT PIN ASSEMBLY	10	X27035	1	CLUTCH, FREE WHEEL RA2/8
29	X27042	1	RATCHET W/SPRING	9	X18676	1	CROSS JOURNAL ASSEMBLY (IMPLEMENT HALF)
28	X23004	2	ZERK, GREASE NIPPLE	8	X23085	1	YOKE, 1-3/4" - 20 RS
27	X18711	12	CIRCLIP (SNAP RING)	7	X27060	1	GUARD, HALF (IMPLEMENT END)
26	X18716	3	ZERK, GREASE NIPPLE	6	X27059	1	GUARD, HALF (TRACTOR END)
25	X18701	1	HUB (ROTARY LATCH)	5	X27056	1	SHAFT, IMPLEMENT HALF W/O SHIELD
24	X18721	2	PUSH BUTTON COMPLETE	4	X27064	1	SHAFT, TRACTOR HALF W/O SHIELD
23	X27053	1	TUBE, CM SAFETY (TRACTOR HALF)	3	X27058	1	SHAFT, IMPLEMENT HALF W/SHIELD
22	X27032	1	I.CONE SETS, F8-9	2	X27065	1	SHAFT, TRACTOR HALF W/SHIELD
21	X18766	1	O.CONE SETS, N8-9	1	X27061	1	SAFETY GUARD ASSEMBLY
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

A 11-15-95 ORIGINAL RELEASE DATE 11-15-95
 REV. DATE DESCRIPTION OF REVISION SCALE 1/4" = 1" DRAWN TWS

1-3/4-20 CV PTO RA2
 -PULL TYPE UNIT (1000 RPM)-

REF. NO. 27028
 DRAWING NO. SC500156



NOTE:

TO ORDER A COMPLETE 540 RPM PTO W/OVER-RUNNING CLUTCH, USE PART NUMBER X27029.

TO ORDER A COMPLETE TRACTOR HALF PTO W/SHIELD (ITEMS 13, 15, 16, 18, 20, 21, 23, 36), USE PART NUMBER X27046.

TO ORDER A COMPLETE IMPLEMENT HALF PTO W/SHIELD (ITEMS 11, 12, 14, 17, 19, 20, 22), USE PART NUMBER X27047.

TO ORDER A COMPLETE SAFETY GUARD (ITEMS 17, 18, 19, 20, 21, 22, 23), USE PART NUMBER X27050.

TO ORDER A COMPLETE TRACTOR HALF GUARD (ITEMS 18, 20, 21, 23), USE PART NUMBER X27048.

TO ORDER A COMPLETE IMPLEMENT HALF GUARD (ITEMS 17, 19, 20, 22), USE PART NUMBER X27049.

TO ORDER A COMPLETE TRACTOR HALF PTO W/O SHIELD (ITEMS 13, 15, 16, 36), USE PART NUMBER X27044.

TO ORDER A COMPLETE IMPLEMENT HALF PTO W/O SHIELD (ITEMS 11, 12, 14), USE PART NUMBER X27045.

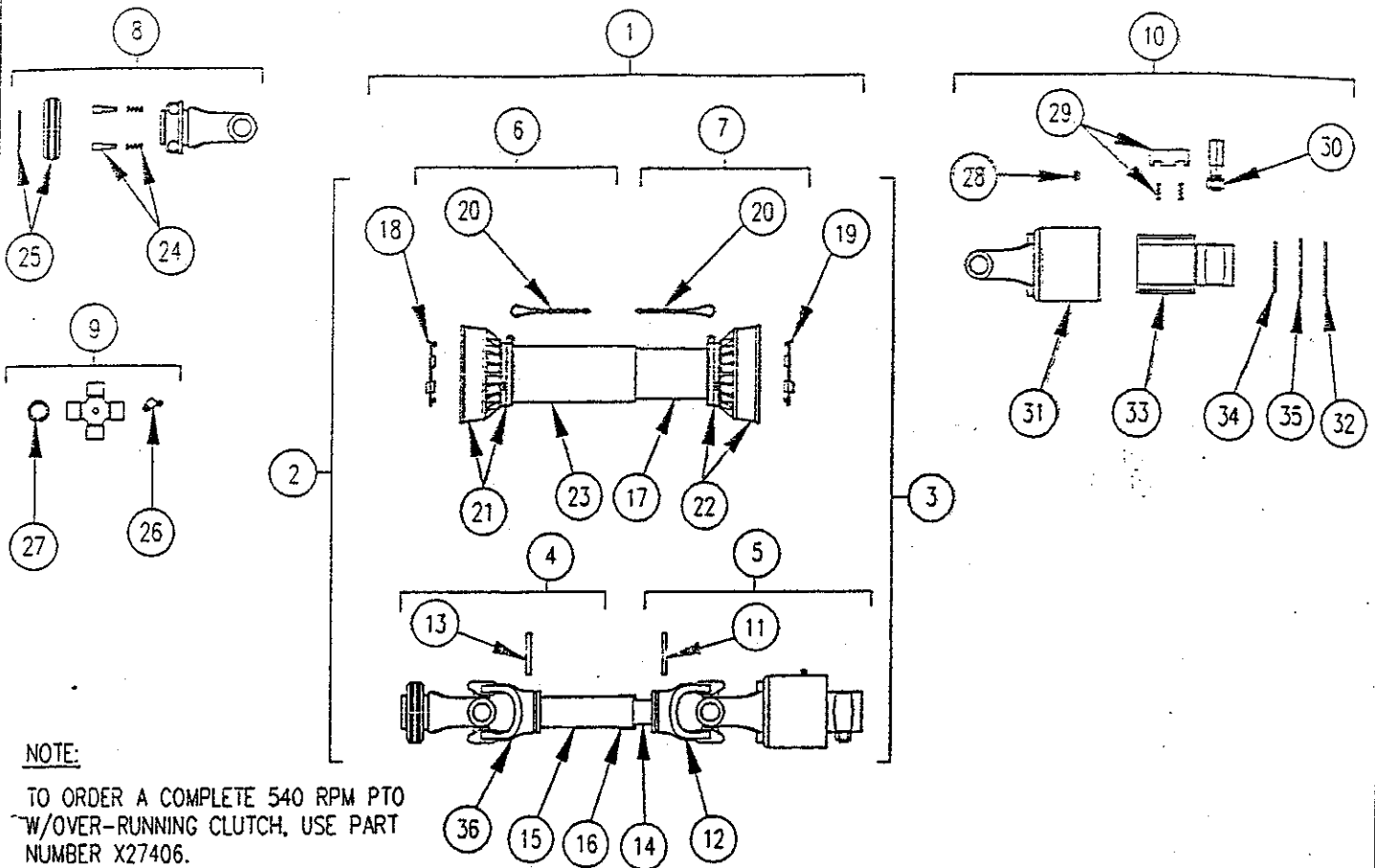
36	X18682	1	YOKE, OUTER TUBE	18	X18707	1	O.BEARING, 8-9-0
35	X23077	2	CLOSING PLATE HALF	17	X27038	1	TUBE, CM SAFETY (IMPLEMENT HALF)
34	X23076	1	RING, SCREEN	16	X18700	1	NUT, RING
33	X27041	1	HUB (CLUTCH INNER)	15	X27033	1	TUBE, CM CARDAN (TRACTOR HALF)
32	X23079	1	CIRCLIP (SNAP RING)	14	X27034	1	TUBE, CM CARDAN (IMPLEMENT HALF)
31	X27040	1	CLUTCH OUTER BODY	13	X18714	1	PIN, FLEXIBLE
30	X27043	1	PIVOT PIN ASSEMBLY	12	X18683	1	YOKE, INNER TUBE
29	X27042	1	RACHET W/SPRING	11	X18715	1	PIN, FLEXIBLE
28	X27039	1	ZERK, GREASE NIPPLE	10	X27035	1	CLUTCH, FREE WHEEL RA2/8
27	X23061	8	CIRCLIP (SNAP RING)	9	X18676	2	CROSS JOURNAL COMPLETE
26	X18716	2	ZERK, GREASE NIPPLE	8	X18732	1	YOKE, 1-3/8" - 6
25	X18702	1	HUB (ROTARY LATCH)	7	X27049	1	GUARD, HALF (IMPLEMENT END)
24	X18722	2	PUSH BUTTON COMPLETE	6	X27048	1	GUARD, HALF (TRACTOR END)
23	X27037	1	TUBE, CM SAFETY (TRACTOR HALF)	5	X27045	1	SHAFT, IMPLEMENT HALF W/O SHIELD
22	X27032	1	L.CONE SETS, F8-9	4	X27044	1	SHAFT, TRACTOR HALF W/O SHIELD
21	X27036	1	O.CONE SETS, F8-9	3	X27047	1	SHAFT, IMPLEMENT HALF W/SHIELD
20	X18704	2	CHAIN COMPLETE	2	X27046	1	SHAFT, TRACTOR HALF W/SHIELD
19	X18706	1	I.BEARING, 8-9-0	1	X27050	1	SAFETY GUARD COMPLETE
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

B 9-15-95 REVISED DATE 2-3-95 SCALE 1/4" = 1" DRAWN TWS

1-3/8-21 PTO RA2 (540 RPM) - FULL & SEMI-MOUNT -

REF. NO. 27039 DRAWING NO. SC500157



NOTE:

TO ORDER A COMPLETE 540 RPM PTO W/OVER-RUNNING CLUTCH, USE PART NUMBER X27406.

TO ORDER A COMPLETE TRACTOR HALF PTO W/SHIELD (ITEMS 13, 15, 16, 18, 20, 21, 23, 36), USE PART NUMBER X27046.

TO ORDER A COMPLETE IMPLEMENT HALF PTO W/SHIELD (ITEMS 11, 12, 14, 17, 19, 20, 22), USE PART NUMBER X27047.

TO ORDER A COMPLETE SAFETY GUARD (ITEMS 17, 18, 19, 20, 21, 22, 23), USE PART NUMBER X27050.

TO ORDER A COMPLETE TRACTOR HALF GUARD (ITEMS 18, 20, 21, 23), USE PART NUMBER X27048.

TO ORDER A COMPLETE IMPLEMENT HALF GUARD (ITEMS 17, 19, 20, 22), USE PART NUMBER X27049.

TO ORDER A COMPLETE TRACTOR HALF PTO W/O SHIELD (ITEMS 13, 15, 16, 36), USE PART NUMBER X27044.

TO ORDER A COMPLETE IMPLEMENT HALF PTO W/O SHIELD (ITEMS 11, 12, 14), USE PART NUMBER X27045.

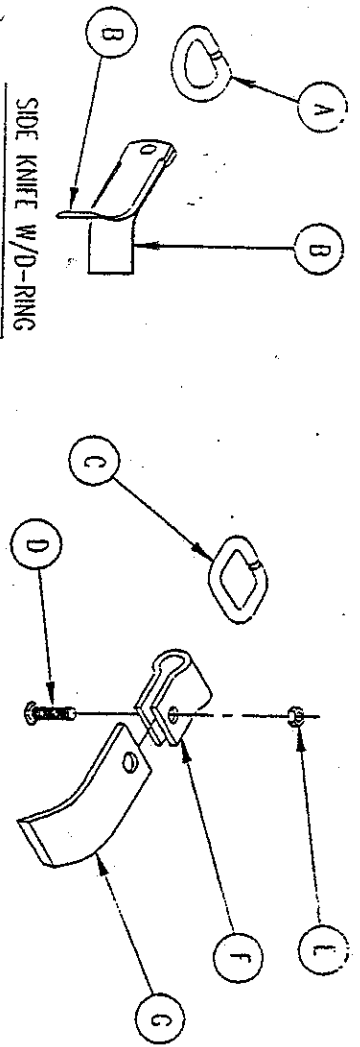
36	X18682	1	YOKE, OUTER TUBE	18	X18707	1	O.BEARING, 8-9-0
35	X23077	2	CLOSING PLATE HALF	17	X27038	1	TUBE, CM SAFETY (IMPLEMENT HALF)
34	X23076	1	RING, SCREEN	16	X18700	1	NUT, RING
33	X27041	1	HUB (CLUTCH INNER)	15	X27033	1	TUBE, CM CARDAN (TRACTOR HALF)
32	X23079	1	CIRCLIP (SNAP RING)	14	X27034	1	TUBE, CM CARDAN (IMPLEMENT HALF)
31	X27040	1	CLUTCH OUTER BODY	13	X18714	1	PIN, FLEXIBLE
30	X27043	1	PIVOT PIN ASSEMBLY	12	X18683	1	YOKE, INNER TUBE
29	X27042	1	RACHET W/SPRING	11	X18715	1	PIN, FLEXIBLE
28	X27039	1	ZERK, GREASE NIPPLE	10	X27035	1	CLUTCH, FREE WHEEL RA2/8
27	X23061	8	CIRCLIP (SNAP RING)	9	X18676	2	CROSS JOURNAL COMPLETE
26	X18716	2	ZERK, GREASE NIPPLE	8	X23086	1	YOKE, 1-3/4 - 20
25	X18702	1	HUB (ROTARY LATCH)	7	X27049	1	GUARD, HALF (IMPLEMENT END)
24	X18722	2	PUSH BUTTON COMPLETE	6	X27048	1	GUARD, HALF (TRACTOR END)
23	X27037	1	TUBE, CM SAFETY (TRACTOR HALF)	5	X27045	1	SHAFT, IMPLEMENT HALF W/O SHIELD
22	X27032	1	I.CONE SETS, F8-9	4	X27044	1	SHAFT, TRACTOR HALF W/O SHIELD
21	X27036	1	O.CONE SETS, F8-9	3	X27047	1	SHAFT, IMPLEMENT HALF W/SHIELD
20	X18704	2	CHAIN COMPLETE	2	X27046	1	SHAFT, TRACTOR HALF W/SHIELD
19	X18708	1	I.BEARING, 8-9-0	1	X27050	1	SAFETY GUARD COMPLETE
ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION

BALZER INC.

A 12-27-95 ORIGINAL RELEASE
 REV. DATE DESCRIPTION OF REVISION
 DATE 12-27-95
 SIZE 1/4" x 1"
 DRAWN TMS

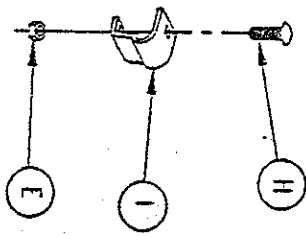
1-3/4-20 PTO RA2 (1000 RPM)
 - PULL TYPE UNIT -

REF. NO. 27406
 DRAWING NO. SC500158

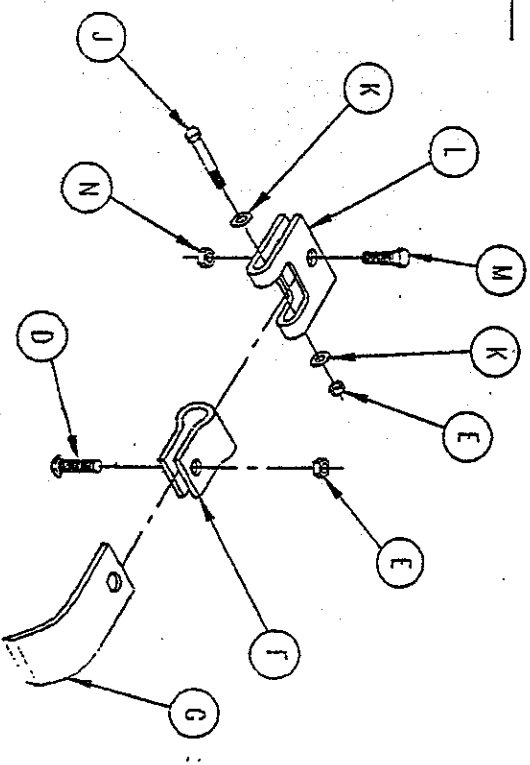


SIDE KNIFE W/D-RING

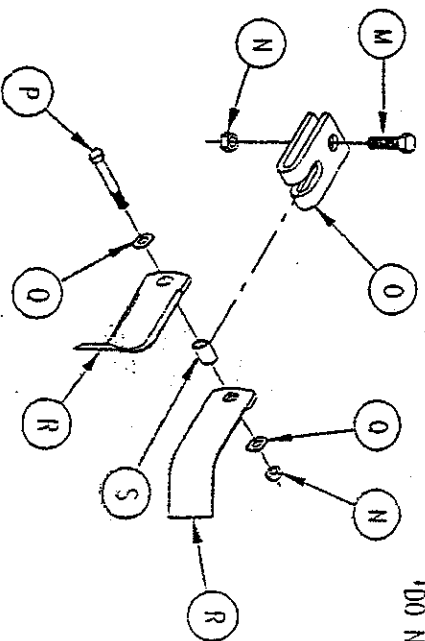
CUP KNIFE W/SQ.-RING & HANGER
12294 COMPLETE ASS'Y. NO.



KNIFE BRACKET FOR
"0" & SQ. RINGS



CUP KNIFE W/BRACKETS
RIGID MOUNT



SIDE KNIFE W/BRACKETS
RIGID MOUNT

ITEM	PART NO.	QTY.	DESCRIPTION
A	12356	AR	D-RING
B	12357	AR	KNIFE, 2" LIGHT SIDE (SERVICE ONLY)
B	24328	AR	KNIFE, 2" STANDARD W/HARD SURFACE
	24326	AR	KNIFE, 2-1/2" HEAVY SIDE W/HARD SURFACE
	24153*	AR	KNIFE, 2-1/2" HEAVY SIDE
C	12295	AR	SQ.-RING
D	1095	AR	BOLT, 1/2" X 1-1/2" CARRIAGE GR. 5
E	2539	AR	NUT, 1/2" TOPLOCK GR. 8
F	12296	AR	HANGER, CUP KNIFE
F	12297	AR	KNIFE, CUP KNIFE
G	12297	AR	KNIFE, STD. CUP
G	24329	AR	KNIFE, STD. CUP W/HARD SURFACE
H	2530	AR	BOLT, 1/2" X 3-1/4" LG. CARRIAGE GR. 5
I	12355	AR	BRACKET, KNIFE
J	1260	AR	BOLT, 1/2" X 4" LG. HEX HD GR. 8
K	1600	AR	FLATWASHER, 1/2"
L	26994	AR	HANGER, KNIFE
M	1291	AR	BOLT, 5/8" X 2" LG. HEX HD GR. 5
N	2546	AR	NUT, 5/8" TOPLOCK GR. 8
O	26566	AR	HANGER, KNIFE
P	26568	AR	BOLT, 5/8" X 3" LG. HEX HD GR. 8
Q	1602	AR	FLATWASHER, 5/8"
R	26569	AR	KNIFE, SIDE
R	31440	AR	KNIFE, SIDE W/HARD SURFACE
S	20595	AR	BUSHING

*DO NOT USE THIS KNIFE.

Important—Read This First

The registration card is to be filled in completely and promptly returned to factory. It provides a ready reference to help you in securing parts and in answering questions that you may have at a later date.

This card does not put you on a mailing list. Nor is the information on the card made available to anyone else.

We urge the return of this card so that you will receive maximum service benefits.

Where a separate instruction manual has been received by the customer, a parts manual was sent with this machine. If you have not received the parts manual, ask your dealer.

Date of Purchase _____

Owner's Name _____

Dealer's Name _____

Serial No. _____

PLEASE
RETURN
THIS
CARD
WITHIN
7 DAYS



Warranty Registration Card

This form must be filled out and signed by customer at the time of delivery.

Product _____ Model # _____ Serial # _____

Date of Purchase _____

Customer Name _____ Dealers Name _____

Address _____ Address _____

City _____ City _____

State _____ Zip _____ State _____ Zip _____

The above unit and operator's manual have been received by me and I understand and have been thoroughly instructed by my dealer as to operator's manual content, equipment care, adjustments, safe operation & explained and reviewed the warranty policy.

Owner's Signature _____