

Slinger Model 712 Tow Type

DEALER SERVICE PARTS LISTING

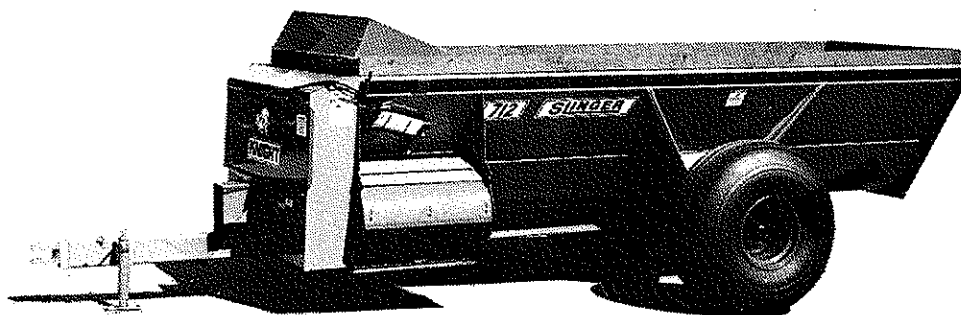


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712-TOW
SERVICE PARTS

Catalog P/N 005240
R013191

ABBREVIATIONS

712-TOW R081790

Assy	Assembly
A/R	As Required
B	Bolt
Brg	Bearing
BSN	Before Serial Number
BTM	Bottom
G Bolt	Carriage Bolt
Cttr	Cotter
CV	Constant Velocity (Joint)
Dia	Diameter
ea	Each
Eq or Equiv	Equivalent
FLN	Flanged Lock Nut
FW	Flat Washer
Ga	Gauge
Gr or Grd	Grade
Hd	Head
Hyd	Hydraulic
ID	Inside Diameter
Ill or Illus	Illustration
Ind	Indicator
KW	Keyway
LH	Left Hand
LW	Lock Washer
Mtg Hrd	Mounting Hardware
NC	National Coarse
NF	National Fine
OD	Outside Diameter
Pc(s)	Piece(s)
PD	Pitch Diameter
PTO	Power Takeoff (Shaft)
Q or Qty	Quantity
Reg Mach	Regular Machine
RH	Right hand
SN	Serial Number
Sprkt	Sprocket
Sq	Square
Std	Standard
UASN	Used After Serial Number
UBSN	Used Before Serial Number

USING THIS SERVICE PARTS LISTING

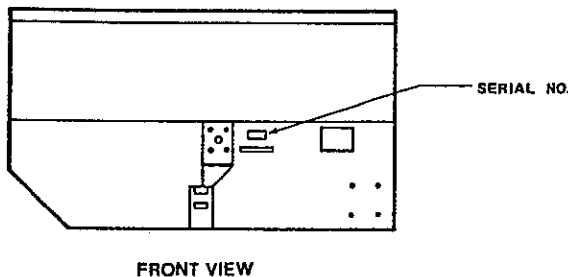
712-TOW R081090

This listing uses a number indentation system to specify the parts of an assembly. Any number which is indented to the right, indicates that it is a component of the item to the upper left. Example:

<u>Part no</u>	<u>Description</u>	<u>Qty</u>
uuu-uuu	Assembly A	2
vvv-vvv	Sub-Assembly B (Component of A)	3
www-www	Component of B	5
xxx-xxx	Another Component of B	1
yyy-yyy	Sub-Assembly C (Component of A)	1
etc.		

Using this system, the sub-assemblies and their components are included if an Assembly is ordered. Similarly, the components of a sub-assembly are included if a sub-assembly is ordered.

The quantity (qty) associated with an assembly, represents the number of times an assembly could be shown in the drawing. The sub-assembly quantity however, is the number of times a sub-assembly is used to build one assembly. Similarly, the component quantity refers to the number of times a given component is found in one sub-assembly.



Serial Number Location
Front View
Figure A

MODEL AND SERIAL NUMBER INFORMATION is located below the drive shielding (Fig. A). The model number, serial number and part number should be known when asking service personnel for parts.

If you cannot find the part you need, be as descriptive as possible when placing an order:

Sprockets: give the bore size, number of teeth, and number and size of keyways.

Roller chain: give the size of chain (stamped on the side of each link) and number of links.

Shafting: give the diameter, length, and number and size of keyways.

Hardware is generally not included with parts. If you need any hardware, check the size, the length, and the grade (Fig. B), then check the hardware list in this manual for the part numbers. All hex head bolts up to and including 7/16" diameter are grade 5, and nuts are grade B unless otherwise stated.

The hardware listing also includes listings for zerks, cotter pins, set screws, and roller chain links.

The illustrations in this manual are meant to be used only as a guide for identifying parts and locating their relative positions.

Bolt Grades

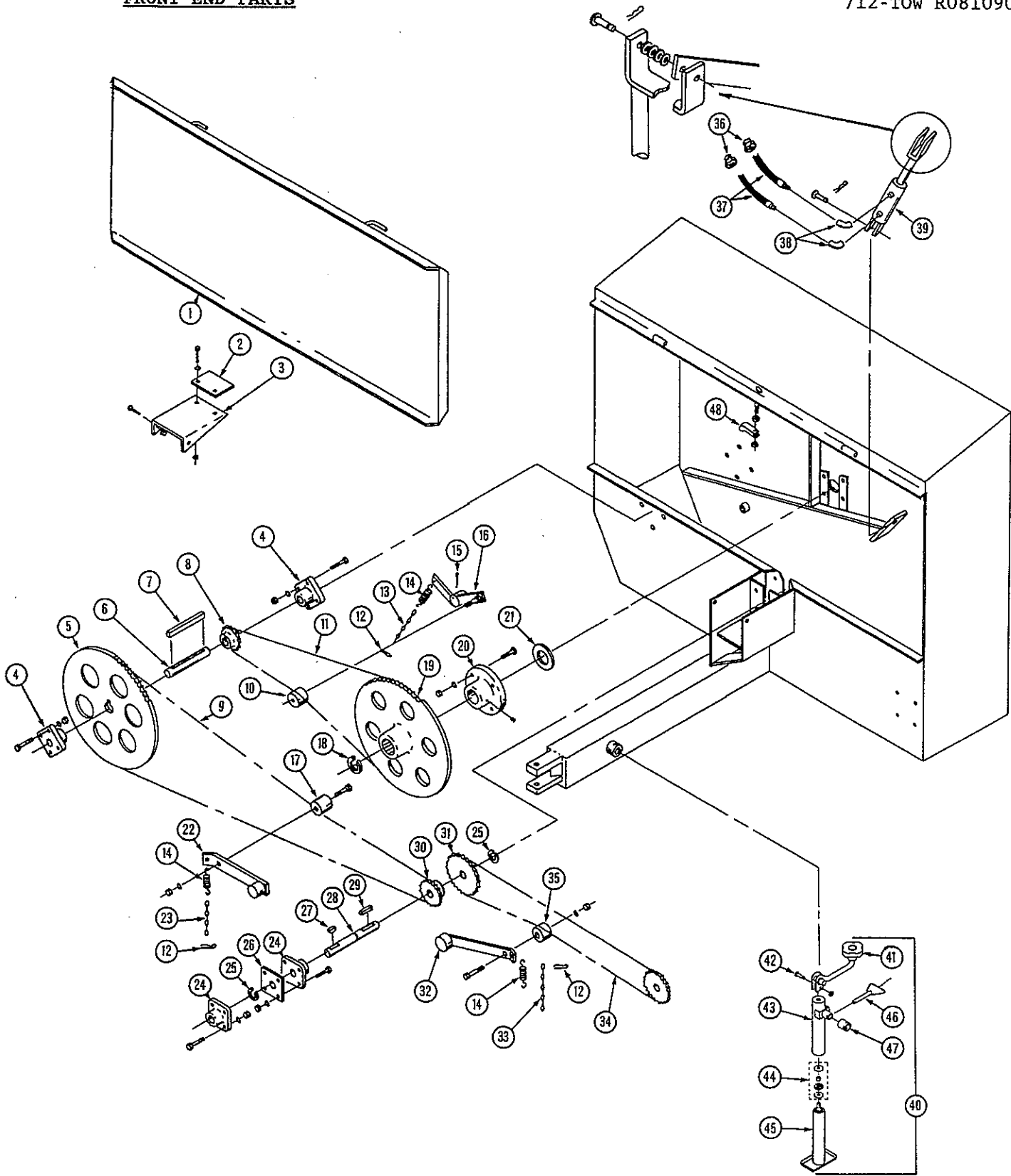


Bolt Head Grade Markings
Figure B

A * following a part number (XXX-XXX*) indicates that the part is no longer used in production for this application. Superscript letters (XXX-XXX^A) refer to footnotes and/or illustration boxes.

FRONT END PARTS

712-TOW R081090



KNIGHT MANUFACTURING CORP. PO BOX 167 BRODHEAD, WI 53520
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FRONT END PARTS

712-TOW DR040693

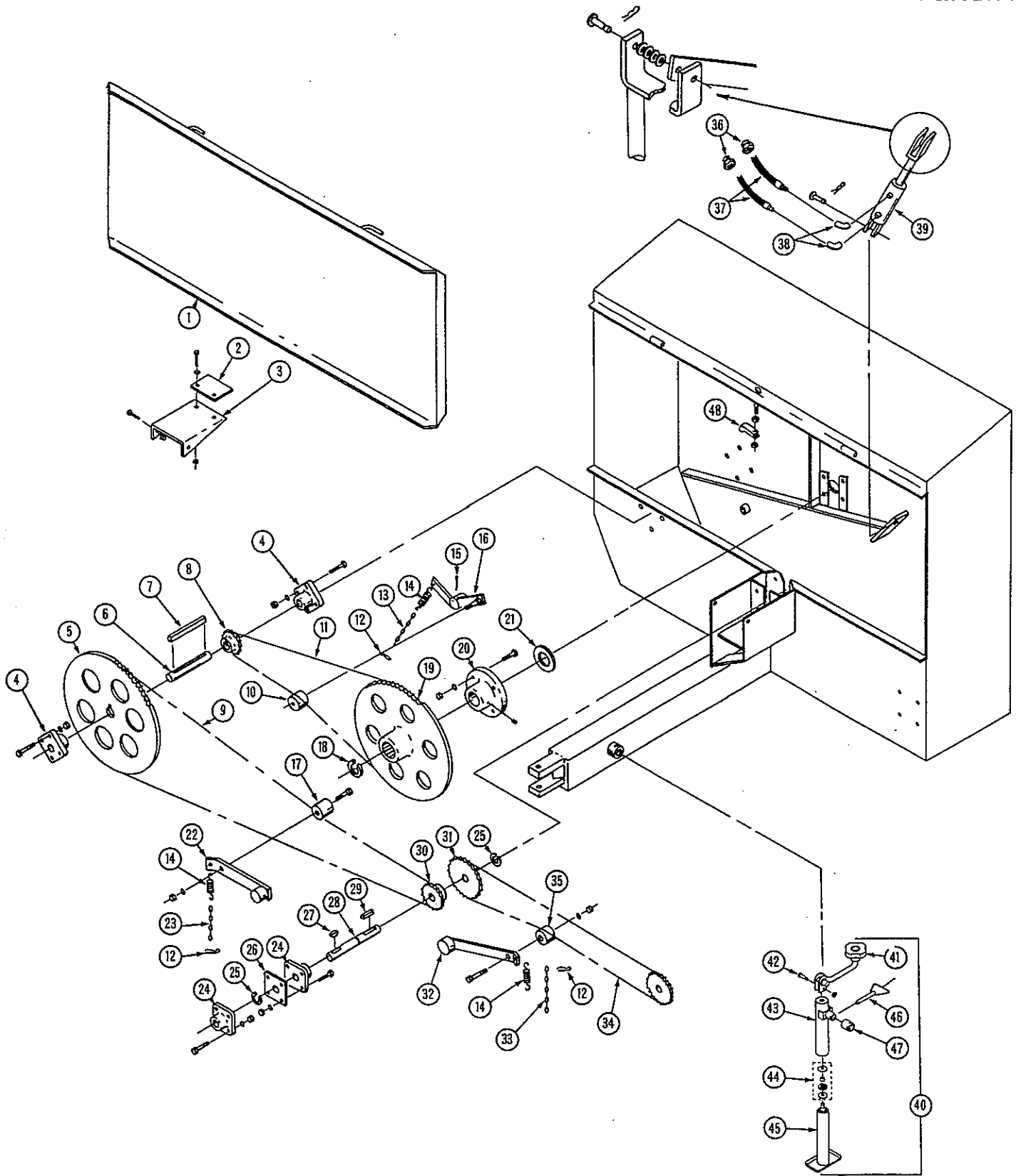
REF	PART NO	QTY	DESCRIPTION
1	101-662	1	Front Shield Assembly
2	133-539	1	Shield Belt
3	133-538	1	Mtg Hrd: 5/16" x 3/4" Bolt, FW & FLN (2 ea) PTO Shield Cover Mtg Hrd: 5/16" x 3/4" Bolt, FLN & 171-393 Belleville Washer (2 ea)
4	170-008	2	Brg; 2", FYH UCF X10-32E L-III Or Equip Mtg Hrd: 5/8" x 1-3/4" Tap Bolt, LW & Nut (3 & 4 ea)
5	133-396	1	Sprocket; 60-B-120, 2" Bore, 1/2" KW
6	133-449	1	Shaft
7	171-695	1	Key; 1/2" x 4-1/2"
8	131-352	1	Sprocket; 100-B-12, 2" Bore, 1/2" KW
9	171-697	1	Roller Chain; 60-1-140 Pitch, W/Connector Link
10	134-179	1	Tightener Block Mtg Hrd: 3/4" Jam Nut
	171-316* ^A	1	Idler Sprocket; 100-A-10, UBSN 543
	171-332*	1	Spacer Bushing; UBSN 543
11	171-699	1	Roller Chain; 100-1-71 Pitch, W/Connector Link
12	170-800	3	Clinch Pin
13	170-845	1	Machine Chain; #4 x 17 Link
14	172-006	3	Spring; 4-5/8" Long
15	170-135	1	Cotter Pin; 5/32" x 3"
16	101-577 ^A	1	Chain Tightener Arm (Works With Sprockets & Blocks)
17	134-178	1	Tightener Block Mtg Hrd: 1/2" x 2-1/4" Bolt, FW, LW & Nut
	171-264* ^A	1	Idler Sprocket; 60-A-15, UBSN 543
18	171-934	1	Snap Ring; 3", Truarc 5100-300 Or Equip
	170-152*	1	Snap Ring; 2-1/2", UBSN 543
19	134-175	1	Sprocket; 100-B-60, 3" Splined Bore
	133-595*	1	Sprocket; 100-B-60, 2-1/2" Splined Bore, UBSN 543
20	171-930	1	Bearing; 3" Spherical Roller, F-B22448E Or Equip Mtg Hrd: 3/4" x 2-1/4" Bolt, LW & Nut (4 ea)
	170-365*	1	Bearing; 2-1/2", UBSN 543
21	133-899	1	Seal; 3" ID
	133-277*	1	Seal; 2-1/2" ID, UBSN 543

A: The current tightener blocks are very wear resistant and can be used in place of idler sprockets. In order to mount the blocks, it is necessary to modify the "sprocket style" tightener arms or replace them with the current "block style" arms.

An asterisk (*) at the end of a part number (XXX-XXX*) indicates that the part is no longer used in production for this application. Superscript letters (XXX-XXX^A) refer to footnotes and/or illustration boxes.

FRONT END PARTS

712-TOW R081090



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FRONT END PARTS

712-TOW R081790

REF	PART NO	QTY	DESCRIPTION
22	101-761	1	Chain Tightener Arm
	101-581* ^A	1	Tightener Arm; Sprocket Style, UBSN 543
23	170-518	1	Machine Chain; #4 x 30 Link
24	171-585	2	Bearing; 1-3/8", FYH NANF 207-22 Or Equiv Mtg Hrd: 1/2" x 1-3/4" Bolt, LW & Nut (4 ea)
25	170-499	2	Snap Ring; 1-3/8", Truarc 5160-137 Or Equiv
26	133-316	1	Spacer
27	170-170	1	Woodruff Key; 3/8" x 1-1/4"
28	133-533	1	Input Shaft
29	170-052	1	Key; 3/8" x 2-1/8"
30	133-394	1	Sprocket; 60-B-13, 1-3/8" Bore, 3/8" KW
31	133-477	1	Sprocket; 60-B-27, 1-3/8" Bore, 3/8" KW
32	101-817	1	Chain Tightener Arm
	101-579* ^A	1	Tightener Arm; Sprocket Style, UBSN 543
33	170-479	1	Machine Chain; #4 x 9 Link
34	171-698	1	Roller Chain; 60H-1-78 Pitch, W/Connector Link
35	134-155	1	Tightener Block Mtg Hrd: 1/2" x 2-3/4" Bolt, FW, LW & Nut
	171-264* ^A	1	Idler Sprocket; 60-A-15, UBSN 543
36	170-235	2	1/2" To 3/8" Reducer Bushing
37	171-309	2	Hydraulic Hose Assembly; 1/4" x 132"
38	171-030	2	Swivel Connector; 3/8" - 90 Degrees
39	170-232	1	Hydraulic Cylinder; 2-1/2" x 8" (Seal Kit #170-464) Use 170-122 FW As Shown To Prevent Binding
	170-941* ^B	1	Hyd. Cylinder; 2" x 8" (Seal Kit #170-075*), UBSN 543
40	170-984	1	Jackstand
41	170-386	1	Crank Assembly
42	171-860	1	Crank Pin (Includes "C" Washer)
43	170-986	1	Outer Tube
44	170-397	1	Thrust Bearing Kit
45	171-941	1	Inner Tube Assembly (Includes Nut & Screw)
46	170-987	1	Pin And Chain Assembly
47	170-985	1	Mount Tube
48	171-782	1	Hose Clamp; Mtg Hrd: 5/16" Hex Nut And FLN

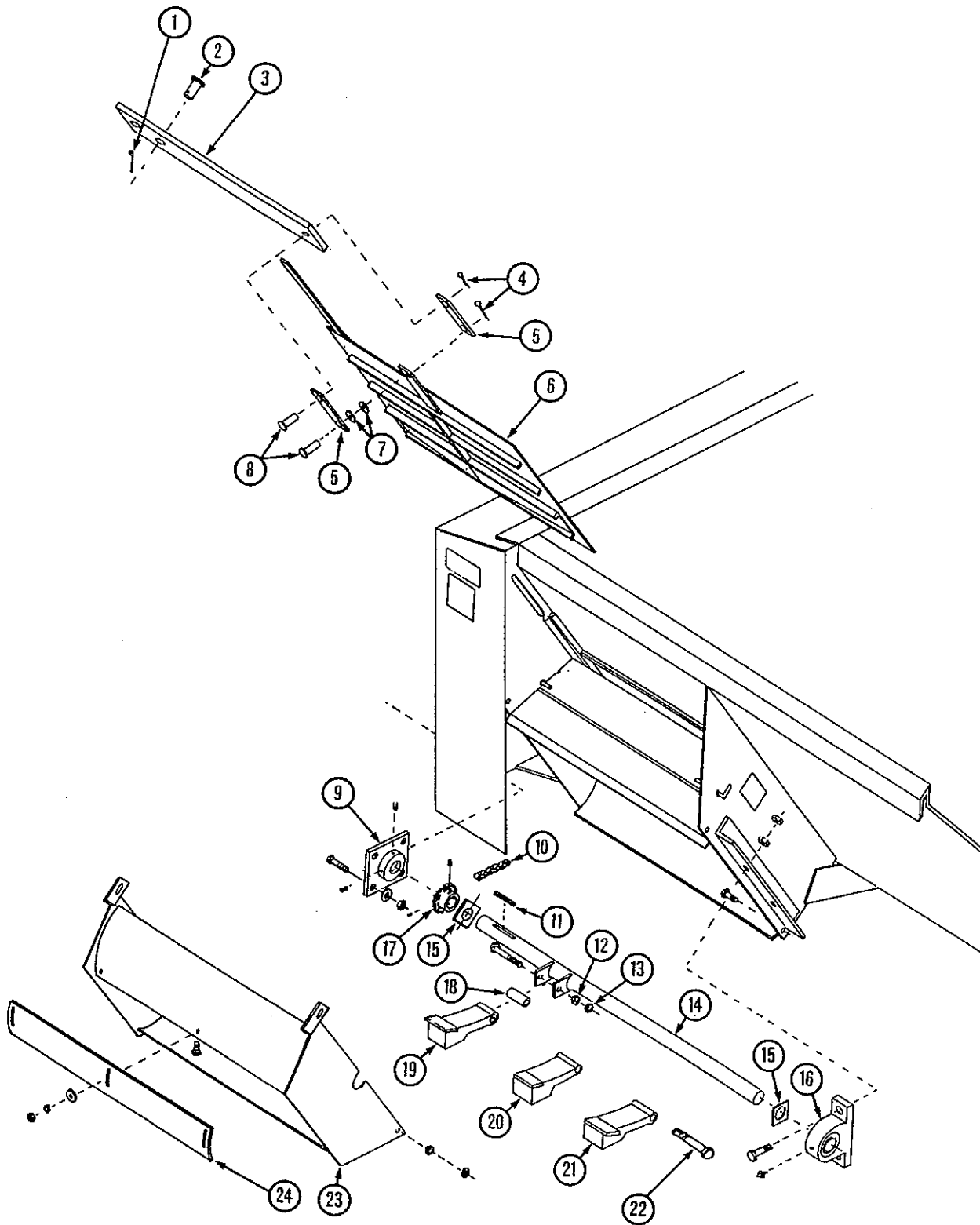
A: The current tightener blocks are very wear resistant and can be used in place of idler sprockets. In order to mount the blocks, it is necessary to modify the "sprocket style" tightener arms or replace them with the current "block style" arms.

B: The current 2-1/2" x 8" hydraulic cylinder can be used in place of the 2" x 8" cylinder. The 5" wide pivot bar is recommended with this cylinder. See P/N 134-174 in the "Discharge Parts" section.

A * following a part number (XXX-XXX*) indicates that the part is no longer used in production for this application. Superscript letters (XXX-XXX^A) refer to footnotes and/or illustration boxes.

DISCHARGE PARTS

712-TOW R081090



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DISCHARGE PARTS

712-TOW DR102892

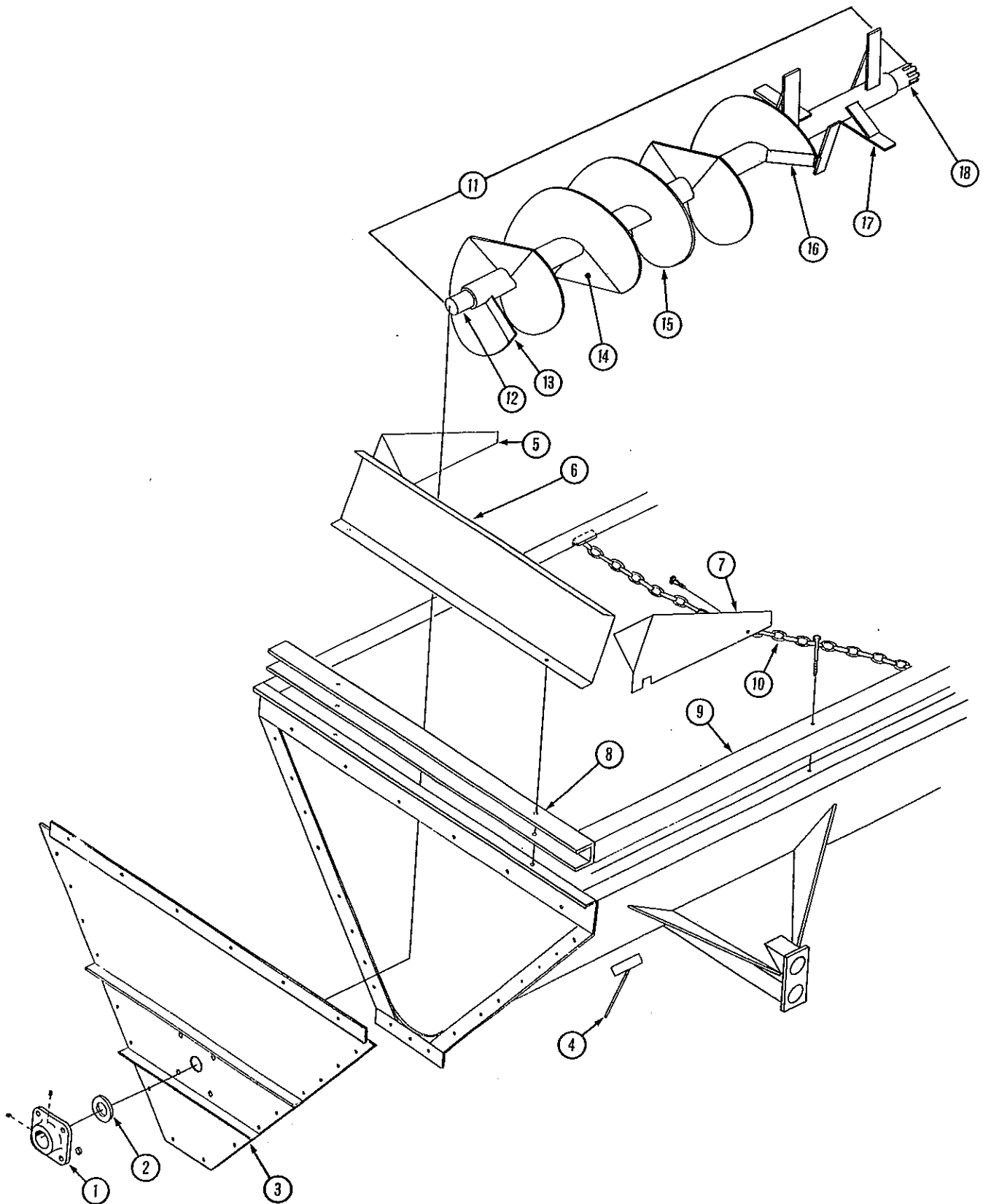
REF	PART NO	QTY	DESCRIPTION
1	170-074	1	Hairpin Clip
2	170-073	1	Clevis Pin; 1" Dia
3	134-174 ^A	1	Pivot Bar; 5" Wide
	133-444* ^A	1	Pivot Bar; 4" Wide, UBSN 543
4	170-236	2	Cotter Pin; 5/32" x 1-1/2"
5	133-445	2	Door Linkage Bar
6	101-583	1	Discharge Door Assembly
7	170-066	2	Flat Washer; 5/8"
8	171-696	2	Clevis Pin; 5/8" x 2"
9	170-008	1	Bearing; 2", FYH UCF X10-32E L-III Or Equiv Mtg Hrd: 5/8" x 1-3/4" Tap Bolt, LW & Nut (4 ea)
10	171-698	1	Roller Chain; 60H-1-78 Pitch, W/Connector Link
11	170-835	1	Key; 1/2" x 1-1/2" Long
12	171-671 ^E	12	Locknut; 1/2", Grade 8
13	170-036 ^E	12	Jam Nut; 1/2"
14	101-572* ^D	1	Hammer Shaft Assembly (Obsolete)
	102-005	1	Hammer Shaft Assembly (Upgrade)
15	133-604	2	Belt; Shaft Seal Mtg Hrd: 1/4" x 1" Bolt, FW, LN & 171-083 FW (1 ea)
16	171-586	1	Bearing; 2" Pillow Block, FYH NAP 211-32 L-III Mtg Hrd: 5/8" x 2-1/2" Bolt, FW (2 ea) & LN (4)
17	133-395	1	Sprocket; 60-B-18, 2" Bore, 1/2" KW
18	133-238 ^E	12	Hammer Sleeve
19	101-548 ^C	1	Front Hammer (Tip #133-299)
20	101-586 ^C	10	Main Hammer (Tip #133-298)
21	101-549 ^C	1	Rear Hammer (Tip #133-299) Use AWS E10018 Electrode Or Greater For Welding Replacement Tips
22	171-573 ^E	12	Bolt; 1/2" x 4-1/2", 30% Stronger Than Grade 8, 180,000 PSI Minimum Tensile Strength
23	101-633	1	Door Shroud Assy; Mtg Hrd: 3/8" x 1" Bolt, LN (4 ea) & 3/8" Heavy FW (2 ea)
24	134-586 ^B	1	Shroud Visor Mtg Hrd: 5/16" x 1" Bolt, FW, LW & Nut (3 ea)

- A: The current 5" wide pivot bar can be used in place of the 4" wide bar. The panel slot on units equipped with the 4" wide bar will have to be lengthened to accept the 5" wide bar.
- B: The edges of the visor may need to be modified to clear welds on door shroud assemblies built before 1-1-92.
- C: Use Stultz Manganese-XL or Equiv. Welding Electrodes for Hammer repair. Order Kit 300-030 - Quantity as required.
- D: Hammer Shaft Assembly 101-572 is no longer a production item. When ordering a replacement Hammer Shaft Assembly, order 102-005 with:
170-031 5/8" Grade B Lock Nut (12 ea.)
172-422 Hammer Sleeve (12 ea.)
172-421 Hammer Bolt, 5/8" x 5-1/2", Grade 5 (12 ea.)
170-037 5/8" Jam Nut
- E: Used with 101-572 Hammer Shaft Assembly only. Refer to (D) above for 102-005 Hammer Shaft Assembly Hardware.

An asterisk (*) at the end of a part number (XXX-XXX*) indicates that the part is no longer used in production for this application. Superscript letters (XXX-XXX^A) refer to footnotes and/or illustration boxes. 7

REAR, TOP & AUGER PARTS

712-TOW DR010692



REAR, TOP & AUGER PARTS

712-TOW R081090

REF	PART NO	QTY	DESCRIPTION
1	170-008	1	Bearing; 2", FYH UCF X10-32E L-III Or Equiv Mtg Hrd: 5/8" x 1-3/4" Bolt, FW, LW & Nut (4 ea)
2	133-376	1	Seal; 2" ID x 3-1/2" OD
3	101-571	1	Rear Panel Mtg Hrd: 5/16" x 3/4" Bolt, FLN (23 ea) & FW (17)
4	101-636	1	Cleaning Tool
5	133-556	1	Splash Guard Side (RH Front & LH Rear)
6	133-688	1	Splash Guard End Mtg Hrd: 5/16" x 1" Bolt, LW, Nut (6 ea) & FW (12)
7	133-557	1	Splash Guard Side (LH Front & RH Rear) Mtg Hrd: To Wood Rail: 3/8" x 3-1/2" C Bolt & Nut (4 ea) To Side Panel: 3/8" x 1" Bolt, LW & Nut (4 ea)
8	133-687	2	End Panel Extension Mtg Hrd: 5/16" x 1" Bolt, LW, Nut (2 ea), FW (6) & 3/8" x 2-1/2" Lag Screw (2)
9	133-640	2	Wood Rail; 3" x 4" x 168" Mtg Hrd: 3/8" x 4-1/2" Carriage Bolt & Nut (5 ea)
10	133-718	1	Restrictor Chain Mtg Hrd: 1/2" x 1-1/2" Grd 5 Bolt, FW & LN (2 ea)
11	101-826 ^A	1	Auger Assembly; 90 Degree Delayed Flight, 3" Drive.
	101-686* ^A	1	Auger Assy; 90 Degree, 2-1/2" Drive, UBSN 543
12	101-663	1	Rear Plug; 2" Dia
13	131-552	1	Rear Flighting Support Bar
14	133-737	5	90 Degree Flighting Delay Block
15	133-361	6	Flighting; 3/8" x 5-1/2" x 24" x 24" LH Actual Requirements: 5-1/2 Pcs
16	133-630	1	Front Flighting Support Bar (Tapered)
17	101-596	5	Paddle Assembly
18	101-827	1	Front Plug; 3" Splined
	101-664* ^B	1	Front Plug; 2-1/2" Splined, UBSN 543

A: 3 different auger styles have been used: the 180 degree delayed flight, the 90 degree delayed flight and the full flighted auger. The 90 degree delayed flight auger has proven to be the most versatile. All three styles use the same components except for the delay blocks. Also, the front plug is the only difference between the 2-1/2" and 3" drive augers. For parts, refer to the auger listed above and consult Knight Mfg. to determine the best method of repair.

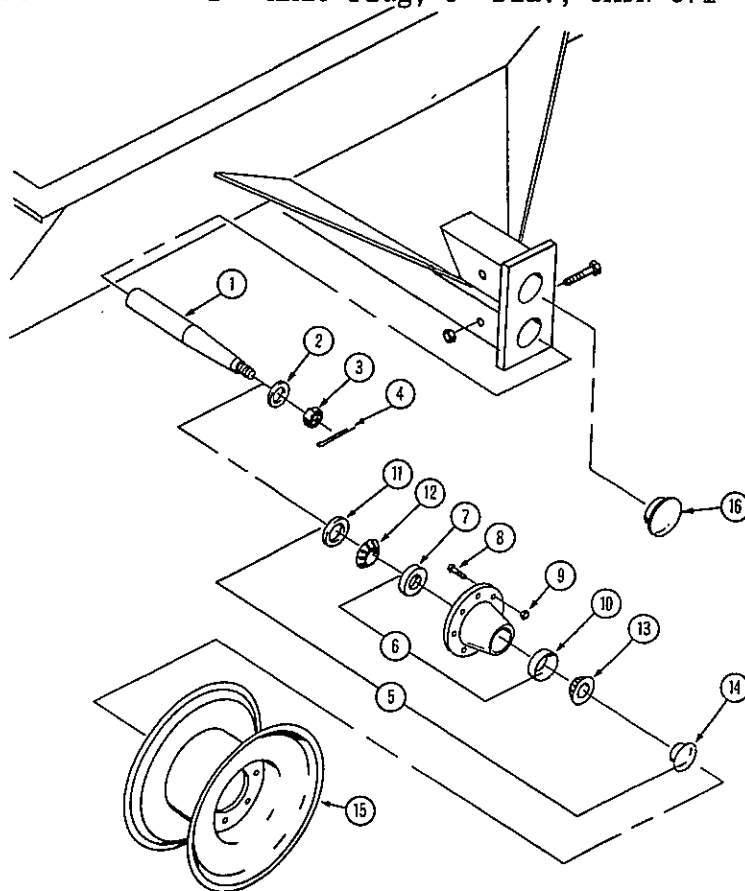
B: All 2-1/2" plugs sold after 4-89 have hardened splines for improved strength.

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SINGLE AXLE PARTS

712-TOW DR010692

REF	PART NO	QTY	DESCRIPTION
1	172-270	2	Spindle; Two Position Axle Mtg Hrd: 3/8" x 4" Bolt & LN
1	171-868*	2	Spindle; 3", Single Position Axle, UBSN 872
2	171-832	2	Spindle Washer
3	171-833	2	Castle Nut; 1" NF
4	170-056	2	Cotter Pin; 1/4" x 2"
5	171-815	2	8-Bolt Hub Assembly
6	171-823	1	8-Bolt Hub
7	171-824	1	Inside Bearing Race
8	171-826	8	Wheel Stud; 5/8"
9	171-827	8	Wheel Nut; 5/8"
10	171-825	1	Outside Bearing Race
11	171-831	1	Grease Seal
12	171-828	1	Inside Bearing Cone
13	171-829	1	Outside Bearing Cone
14	171-830	1	Dust Cap
15	171-809	2	Wheel; 16" x 16.1", 8-Hole
15	172-144	2	Wheel; 20" x 8", 8-Hole
15	172-285	2	Wheel; 22-1/2" x 8-1/4", 8-Hole
15	172-229	2	Wheel; 22-1/2" x 11-1/4", 8-Hole
16	171-850	2	Axle Plug; 3" Dia., UASN 871

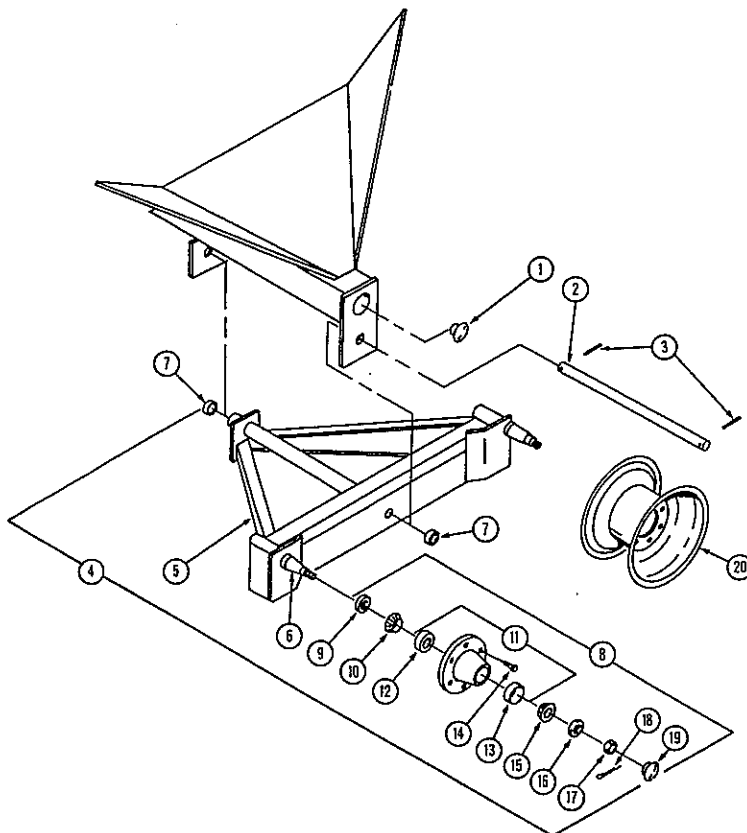


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OSCILLATING AXLE PARTS - USED BEFORE SERIAL NUMBER 872

712-TOW DR010692

REF	PART NO	QTY	DESCRIPTION
1	171-850*	2	Axle Plug; 3" Dia
2	132-967*	2	Axle Pin
3	171-414*	4	Roll Pin
4	101-669*	1	LH Oscillating Axle Assembly
5	101-665*	1	LH Oscillating Axle Weldment
4	101-668*	1	RH Oscillating Axle Assembly
5	101-666*	1	RH Oscillating Axle Weldment
6	170-543*	2	Spindle
7	170-171*	2	Bronze Bushing
8	170-699*	2	6-Bolt Hub Assembly
9	170-549*	1	Grease Seal
10	170-548*	1	Inner Bearing Cone
11	170-544*	1	Hub Housing
12	170-547*	1	Inner Bearing Race
13	170-546*	1	Outer Bearing Race
14	170-551*	6	Wheel Stud
15	170-545*	1	Outer Bearing Cone
16	170-131*	1	Flat Washer
17	170-132*	1	Castle Nut; 7/8" NF
18	170-236*	1	Cotter Pin; 5/32" x 1-1/2"
19	170-550*	1	Hub Cap
20	170-116*	4	Wheel; 15" x 8", 6-Hole
20	171-016*	4	Wheel; 20" x 7", 6-Hole



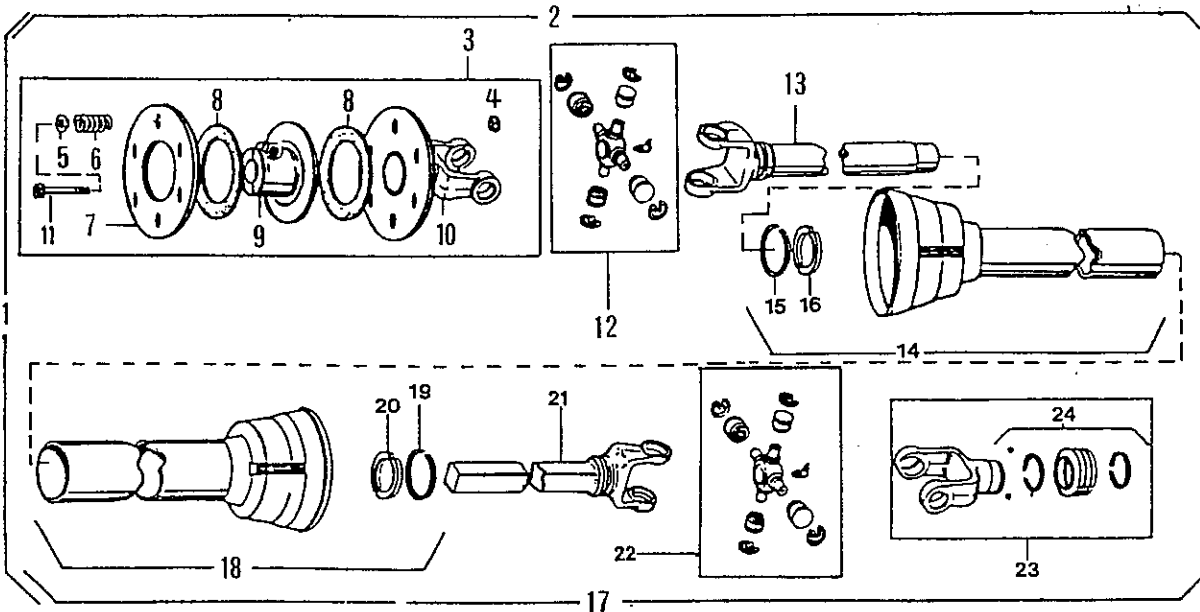
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PTO DRIVELINE AND FRICTION CLUTCH

712-TOW DR080891

REF	PART NO	QTY	DESCRIPTION
1	171-750	1	14R 9000 Friction Clutch PTO Driveline Mtg Hrd: 1/2" x 3" Bolt & LN
2	171-752	1	Joint & Friction Half (Male Half)
4	170-047	6	Stopnut
5	171-762	6	Washer
6	171-761	6	Spring
7	171-759	1	Pressure Plate
8	171-760	2	Friction Disc
9	171-758	1	Drive Hub
10	171-757	1	Clutch Yoke W/Plate
11	171-813	6	Bolt; 3/8" x 4-1/4"
12	170-720	1	Repair Kit
13	171-754	1	Yoke & Tube
14	171-755	1	Male Shield Assembly
15	170-219	1	Bearing Retainer
16	170-220	1	Nylon Bearing
17	171-751	1	Joint & Shaft Half (Female Half)
18	171-756	1	Female Shield Assembly
19	170-219	1	Bearing Retainer
20	170-220	1	Nylon Bearing
21	171-753	1	Yoke & Shaft Assembly
22	170-720	1	Repair Kit
23	172-018	1	Lock Yoke Assembly
24	172-019A	1	Spring Lock Repair Kit

A: The manual slide lock repair kit (171-529*) is obsolete. Order the 172-018 lock yoke assembly.



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DECAL & PAINT LIST

712-TOW DR091691

The following decals are listed below for your convenience.
Use the operator's manual for decal location, part number and ordering.

Unit Decals:

PART NO	QTY	DESCRIPTION
171-844	1	Set of Decals
170-154	2	"KNIGHT"
170-155	1	Knight Head
170-490	1	Important - Reduce Engine Speed . . .
170-849	2	WARNING - Beware Of Power Driven . . .
170-893	1	Slow Moving Vehicle Decal
171-598	2	"Slinger"
171-599	1	CAUTION - Do Not Exceed 540 RPM
171-712	1	NOTICE - Retighten Set Screws . . .
172-370	1	NOTICE - Friction Clutch Adjustment
171-820	2	DANGER - Rotating Auger Inside . . .
171-821	2	DANGER - Material Discharges . . .
171-836	2	"712"
171-912	1	Caution - Implement Driveline
171-913	1	WARNING - Do Not Operate . . .
171-950	1	"U.S. Patent No. . . ."
171-992	2	Red Reflector
172-171	1	CAUTION - Read Operator's Manual

PTO Driveline Decals:

171-550	1	DANGER, PTO . . .
171-599	1	Do Not Exceed 540 RPM . . .
171-799	1	DANGER - Shield Missing

Paint:

170-366		Knight Yellow Aerosol Can
170-812		Knight Yellow Quart Can
170-813		Knight Yellow Gallon Can
170-367		Knight Red Aerosol Can
170-814		Knight Red Quart Can
170-815		Knight Red Gallon Can

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OPTIONAL KITS

712-TOW R081090

Safety Chain For Towed Equipment P/N 172-195

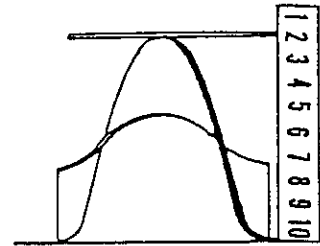
This chain is designed to retain the connection between the towing and towed machines in the event of separation of the primary attaching system. It should be used whenever the unit is transported on the highway.

Light Kit For Towed Equipment

This light kit is designed for lighting and marking of agricultural field equipment whenever the equipment is on a highway. This kit is pre-assembled, and it includes mounting hardware.

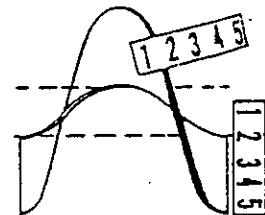
PART NO	QTY	DESCRIPTION
300-007	1	Complete Light Kit - Assembled
172-173	2	Red And Amber Light Assembly
172-174	25'	4 Conductor Wire
172-175	1	4 Pin In-Line Connector (Male & Female)
Options:		
172-110	1	7 Pin Female Connector

OUTSIDE DIAMETER: Outside diameter can be determined by laying the flight on a flat surface and measuring from the top to the base.
NOTE: Dimensions may vary slightly.

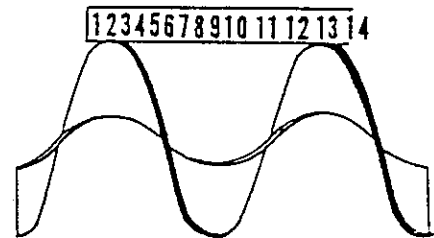


THICKNESS: Thickness of flighting can be determined with any linear measuring instrument.

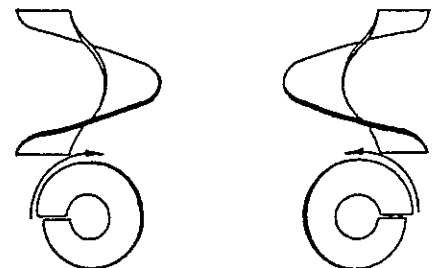
INSIDE DIAMETER: To find the inside diameter of flight, measure the distance from the inside of the flight to the peak. Then multiply the dimension by two and subtract the answer from the outside diameter dimension.



PITCH: Pitch is the dimension from one peak to the next, measured along the axis of the shaft. The term full pitch means that the outside diameter and the pitch are the same.



RIGHT HAND AND LEFT HAND FLIGHTING: As you look at the face of flighting and it is slanting downward to the right; it is right hand and if it is slanting downward to the left; it is left hand.



Flighting dimensions are written in a series similar to the following:

1/4" - 4" - 14" - 14"
Thick - I.D. - O.D. - Pitch

UNIVERSAL JOINT REPAIR PROCEDURE

712-TOW R081090

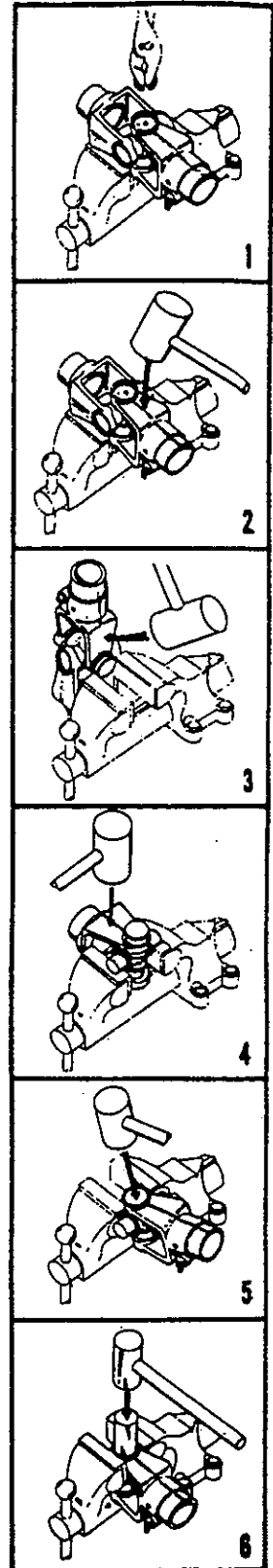
DISASSEMBLY PROCEDURE:

1. Remove the four snap rings as shown in Figure #1.
2. Position the joint in an open vise, with each ear of one yoke supported by a vise jaw. Figure #2
3. With a soft hammer or mallet, strike the top ear of the unsupported yoke as indicated by the arrow in Figure #2. This will drive the top bushing outward approximately 3/8 of an inch.
4. Grip the loosened bushing in the vise as shown in Fig. #3. Drive the yoke off the bushing by striking the yoke ear with a mallet in the direction of the arrow. (Fig. #3)
5. This same procedure should be followed to remove the bushing that is directly opposite the one in Step 4. After this, the yoke itself may be removed.
6. To remove the remaining two bushings, support the cross as shown in Figure #4. Make certain that the vise jaws are covered with brass protectors. By striking the yoke ear as indicated by the arrow in Figure #4, the remaining bushings can be removed by repeating the procedure called for in Step 4.

ASSEMBLY PROCEDURE:

DURING REASSEMBLY, BE SURE THAT THERE IS NO DIRT ON THE TRUNNIONS OF THE CROSS OR IN THE BUSHINGS!

1. Start one bushing in the yoke ear and position the center cross through the yoke. Drive the first bushing down flush with the outside surface of the ear as shown in Fig. #5. Support the underside of the ear so as not to spring the yoke.
2. Clamp the ear in the vise as shown in Figure #6. Use a punch of the same diameter as the bushing, drive the bushing past the snapping groove, and insert a snap ring.
3. Position the cross and drive in the opposite bushing as described in Steps 1 & 2, and Insert a snap ring.
4. Assemble the second yoke in the same manner.
5. To insure proper seating, and to eliminate any possible tightness, strike the forged surfaces of the yoke ears with a mallet. This will insure a free flexing joint.
6. Lubricate with a good grade of multipurpose grease.



HARDWARE PART NUMBER LISTING

712-TOW R081090

All hex head bolts up to and including 7/16" dia are grade 5 unless otherwise specified. All fasteners are NC thread unless otherwise specified.

<u>Size</u>	<u>Hex Nuts</u>	<u>Locknuts</u>	<u>Jam Nuts</u>	<u>Flt Wsh.</u>	<u>Lk Wsh.</u>
#10	171-606			171-525	171-605
1/4	170-125	170-069		170-301	170-124
5/16	170-119	170-028		170-127	170-118
3/8	170-007	170-047	170-022	170-244	170-006
7/16	170-062	170-239	170-046	170-138	170-061
1/2	170-004	170-042	170-036	170-040	170-003
5/8	170-011	170-031	170-037	170-066	170-010
3/4	170-017	170-185	170-035	170-015	170-016
7/8				170-131	172-003
1				170-122	171-021

HEX HEAD BOLTS

<u>Bolt Size</u>	<u>Part No</u>	<u>Bolt Size</u>	<u>Part No</u>	<u>Bolt Size</u>	<u>Part No</u>
1/4 x 3/4	170-803	3/8 x 3	170-380	5/8 x 1-3/4	170-030
1/4 x 7/8	171-094	3/8 x 3-1/2	170-292	(Tap Bolt - Grade 5)	
1/4 x 1	170-310	3/8 x 4	170-877	5/8 x 2	170-009
1/4 x 1-1/2	170-068	3/8 x 4-1/2	170-519	(Grade 5)	
1/4 x 2-3/4	171-203	3/8 x 5	170-493	5/8 x 2	171-772
1/4 x 3	171-403	3/8 x 5-1/2	170-593	(Tap Bolt)	
5/16 x 5/8	170-532	3/8 x 6-1/2	171-291	5/8 x 2-1/2	170-129
5/16 x 3/4	170-262	7/16 x 3/4	170-265	(Tap Bolt)	
5/16 x 7/8	170-256	7/16 x 1	170-032	5/8 x 3	170-258
5/16 x 1	170-027	7/16 x 1-1/4	170-354	5/8 x 3-1/2	170-038
5/16 x 1-1/4	170-188	7/16 x 1-1/2	170-059	5/8 x 4	170-371
5/16 x 1-1/2	170-372	7/16 x 2	170-356	5/8 x 4-1/2	170-067
5/16 x 1-3/4	170-263	7/16 x 2-1/2	170-379	5/8 x 5	170-065
5/16 x 2	170-376	7/16 x 3	170-270	5/8 x 6	170-381
5/16 x 2-1/2	170-369	7/16 x 5-1/2	170-377	5/8 x 9-1/2	171-039
5/16 x 3	170-295	7/16 x 6	170-378	3/4 x 2	170-058
5/16 x 3-1/4	171-639	1/2 x 3/4	171-252	3/4 x 2-1/4	171-275
5/16 x 4	170-293	1/2 x 1	170-149	3/4 x 2-1/2	170-374
(Tap Bolt)		1/2 x 1-1/4	170-373	3/4 x 3	170-014
5/16 x 4-1/2	170-294	1/2 x 1-1/2	170-002	3/4 x 3-1/2	170-195
3/8 x 3/4	170-439	1/2 x 2	170-050	3/4 x 4	170-419
3/8 x 7/8	170-268	1/2 x 2-1/2	170-319	3/4 x 4-1/2	170-846
3/8 x 1	170-054	1/2 x 3	170-168	(Grade 5)	
3/8 x 1-1/4	170-005	1/2 x 4	171-509	3/4 x 6	171-116
3/8 x 1-1/2	170-368	1/2 x 4-1/2	171-573	(Grade 5)	
3/8 x 2	170-245	1/2 x 5	171-412		
3/8 x 2-1/4	170-320	5/8 x 1 (G.5)	171-087		
3/8 x 2-1/2	170-257	5/8 x 1-1/4	171-366		

HARDWARE LISTING CONTINUED

712-TOW R081090

TRUSS HEAD BOLTS

<u>Bolt Size</u>	<u>Part No</u>
#8 x 1-1/2	171-210
#10 x 3/4	171-604
1/4 x 1/2	170-123
1/4 x 3/4	170-193
1/4 x 1	170-194
5/16 x 1 (Grade 5)	170-117

CARRIAGE BOLTS

<u>Bolt Size</u>	<u>Part No</u>
1/4 x 1-1/2	170-355
1/4 x 2-1/2	171-394
1/4 x 3	170-509
5/16 x 1	170-370
5/16 x 2-1/2	171-395
5/16 x 5-1/2	170-494
3/8 x 3-1/2	171-283
3/8 x 4-1/2	170-191
3/8 x 5	170-495
3/8 x 6-1/2	171-174
3/8 x 8	170-297
1/2 x 6-1/2	171-098
1/2 x 9	171-255

ZERKS

<u>Size</u>	<u>Part No</u>
1/4-28	170-023
1/4-28 - 45	170-148
1/4-28 - 90	170-049
1/4 NPT	170-277
1/8 NPT	170-865
1/8 NPT-45	170-864
1/8 NPT-65	170-215
1/8 NPT-90	170-866

COTTER PINS

<u>Size</u>	<u>Part No</u>
1/16 x 1/2	170-992
3/32 x 3/4	170-364
1/8 x 3/4	170-177
1/8 x 1	170-045
1/8 x 1-1/4	170-033
1/8 x 1-1/2	170-382
5/32 x 1	170-421
5/32 x 1-1/2	170-236
5/32 x 3	170-135
3/16 x 1-1/4	170-991
3/16 x 2	170-115
1/4 x 1-1/2	170-521
1/4 x 2	170-056

SET SCREWS

<u>Size</u>	<u>Part No</u>
1/4 x 1/4 NC	170-247
5/16 x 5/16NC	170-248
5/16 x 1/2 NC	170-254
5/16 x 1/4 NF	170-993
5/16 x 5/16NF	170-825
5/16 x 5/8 NF	170-456
3/8 x 1/4 NC	170-856
3/8 x 3/8 NC	170-151
3/8 x 1/2 NC	170-857
(nylock)	
3/8 x 3/4 NC	170-289
(sq head)	
3/8 x 3/4 NC	170-290
(sq hd drilled)	
3/8 x 1 NC	170-021
3/8 x 1/2 NF	171-469
7/16 x 7/16NC	170-288
7/16 x 1 NC	170-147
(sq head)	
1/2 x 5/8 NC	170-249
1/2 x 1 NC	170-438
1/2 x 1-1/4NC	171-085
(half dog point)	
5/8 x 5/8 NC	170-250

ROLLER CHAIN
CONNECTOR LINKS

<u>Size</u>	<u>Part No</u>
#50-2R	170-094
#50	170-088
#60-2R	170-095
#60	170-089
#60H	171-102
#80	170-090
#80H	170-821
#100	170-091
#100H	171-969
#120	170-092
#140	170-093
#160	170-888

OFFSET LINKS

<u>Size</u>	<u>Part No</u>
#50	170-096
#60-2R	170-103
#60	170-097
#80	170-098
#80H	170-820
#100	170-099
#120	170-100
#140	170-101
#160	170-887

ROLLER LINKS

<u>Size</u>	<u>Part No</u>
#50	171-415
#60	171-416
#80	171-417
#80H	170-795
#120	171-419
#140	171-420

KNIGHT MANUFACTURING CORP. PO BOX 167 BRODHEAD, WI 53520

OFFICE: (608) 897-2131 PARTS/SERVICE: (608) 897-2125 FAX: (608) 897-2561

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