

HIGHLINE MFG.
INC.

1997

XL-6084

**Assembly-Operator
Parts Manual**

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Warranty

Highline Mfg. Inc. warrants its products to the original owner for a period of two years from date of purchase, subject to the following provisions:

- Warranty registration must be submitted to Highline Mfg. within 30 days of purchase of your XL-6084.
- 1st year Parts & Labour
- 2nd year Parts Only
- All matters related with the warranty of products must be handled through an authorized Highline Mfg. dealer.
- Any labour subject to warranty must be authorized by a Highline Mfg. Inc. Representative, before work is started.
- Machines used for rental, custom work, industrial or construction use will be warranted for a period of 30 days from date of purchase. (Parts and Labour)
- Warranty will be void if any component of this machine is altered or modified in any way, unless written permission is given by Highline Mfg. Inc.
- Highline Mfg. Inc. will not assume any responsibility for whatever damage may occur to equipment to which this machine may be attached.
- Warranty terms and conditions are subject to provincial and state legislation.
- Warranty is limited to the Purchase value of the equipment and can never exceed MSRP

Presidents Message

The XL-6084, a proven name in the rock picking field is manufactured by Highline Manufacturing Inc. The XL-6084 rock picker was designed to work in the most difficult of rock picking situations. A little time and effort spent in proper maintenance will assure the performance and durability of your picker.

This operator manual has been prepared to provide information necessary for the safe and efficient operation of your XL-6084 picker. In it you will find safety procedures, maintenance routines and detailed part diagrams.

In order to maintain high standards, changes or improvements are made from time to time. Highline Manufacturing reserves the right to make those changes and add improvements when practical to do so without incurring any obligation to make such changes and improvements on machines sold previously.

Should the need arise, this manual will assist you in acquiring replacement parts. Should your dealer not have the parts you require in stock, he will be happy to order them for you. If you should find that you require information not covered in this manual, feel free to consult Highline Manufacturing or your local dealer.

Highline Manufacturing Inc. thanks and congratulates you for selecting a XL-6084 rock picker as the machine of your choice.



Raymond Bussiere
President

Safety Precautions

CAREFUL OPERATION IS THE BEST INSURANCE AGAINST AN ACCIDENT

- Always disengage PTO and hydraulic motors before dismounting tractor.
- Do not operate unless guards are in place.
- PTO guards must turn freely and be properly attached and maintained.
- Always keep safety PTO shields in place.
- Keep yourself and others clear of rotating parts to prevent injury.
- Never allow anyone to stand near rock picker while dumping or picking rocks.
- Never attempt to manually remove rocks from tines while PTO, or hydraulic motors are engaged. Disconnect PTO or hydraulic motors before cleaning rock picker.
- Lower transport locks before raising bucket. To remove transport locks, raise apron slightly and lower brackets. **DO NOT** lift bucket when transport locks are in position otherwise sever damage **WILL** occur.
- Relieve pressure in hydraulic lines before disconnecting lines or performing maintenance on the hydraulic system.

1. Pre-delivery & Installation Instructions

1.1 General Description of XL-6084

The XL-6084 rock picker covers a width 60" wide and has a dumping height of 84". One set of hydraulic lines are required for dumping and lowering the picker's collecting apron. The rock picker may either be PTO or hydraulic driven however the hydraulic driven reel may be reversed if the rock picker becomes plugged.

1.2 Pre-Delivery Check List

The following is a list of parts required if the XL-6084 has not been assembled prior to delivery. If any parts are not included contact your authorized Highline dealer or Highline Manufacturing Inc.

Quantity	Description	Part No.
1	Rock Picker	XL-6084
2	16.5L x 16.1 Tire	301112
2	Axle Plates & Spindle For 16.5L x 16.1 Tire	70012
8	3/4"x2-1/2" UNC Grade 5 Bolt	B5C1240P
8	3/4" UNC Nut	NC12P
8	3/4" Lock Washer Plated	LW12P

1.3 Assembly Instructions

The only assembly required on the XL-6084 is tire mounting. Mounting of the tire and axle involves bolting the axle plate to the frame with the bolts supplied.

2. Operating Instructions

2.1 Field Preparation

Field preparation plays a major role affecting the picking performance of the XL-6084. For best picking conditions, the field should be cultivated prior picking. This operation brings stones to the surface and buries field residue.

2.2 Pre-start instructions

Transport locks need to be lowered before raising bucket. To remove transport locks, raise apron slightly and lower locks. DO NOT lift bucket when transport locks are in position otherwise severe damage WILL occur.

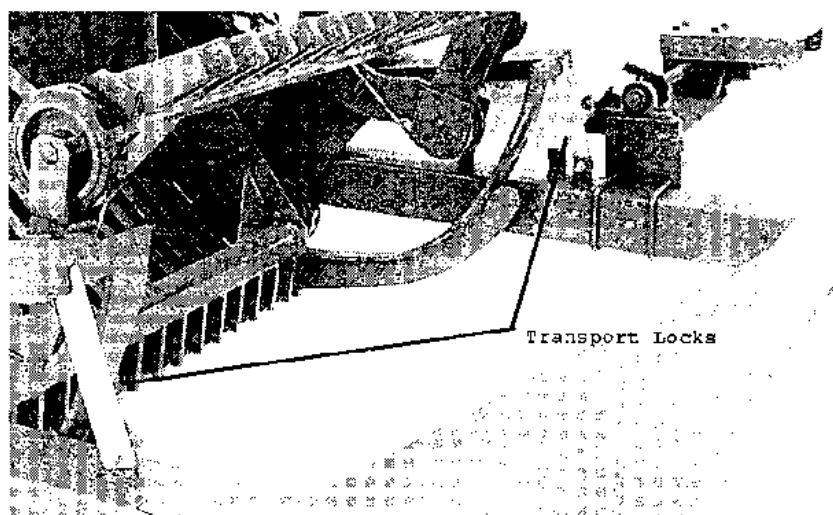


Figure 1. Locks in Transport Position

2.3 Transporting Instructions

To ensure safe transport of the XL-6084, the transport locks and reel should be raised to prevent the apron from dragging. To put transport locks in place, raise the apron until the locks catch on the reel frame. To lower locks, raise apron until locks are free and move them forward.

For road transport, the hitch may be turned to reduce the travel width of the rock picker. To change the position of the hitch, the wedge is removed and the hitch is positioned for field or transport position. The wedge is then placed back into position and ready for field or transport.

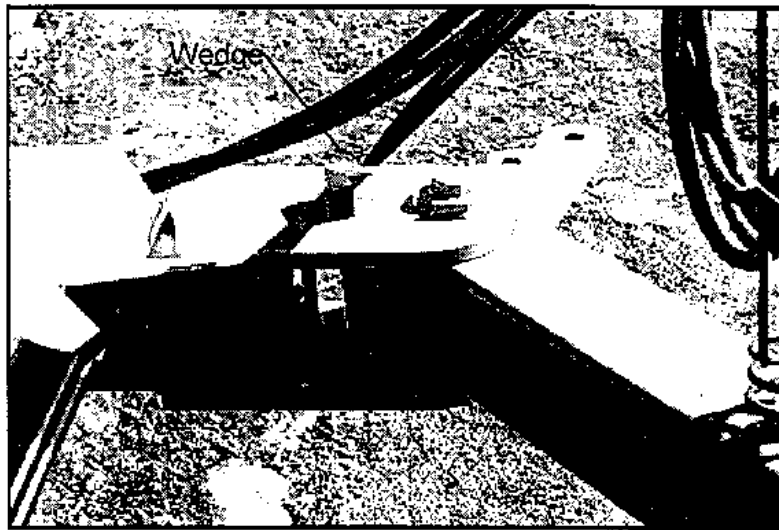


Figure 2. Hitch Wedge

2.4 Apron Height Adjustment & Bucket Dumping

The apron (Figure 3) height is adjustable through the hydraulics cylinders. By lowering the cylinders completely, the apron will be at its lowest picking level. The working height of the apron will depend upon the soil conditions and the size of rocks. By extending the cylinder, the apron will lower. Extending the cylinder more will raise the bucket into dumping position.

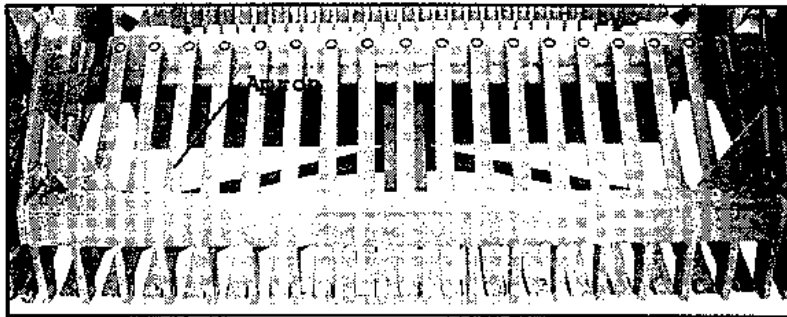


Figure 3. Front View of Apron

2.5 Field Instructions

For proper operation, the XL-6084 should run at a field speed of 3-4 mph (4.8-6.5 km/h) and the reels rotating at 35 rpm. When picking large rocks, field speed should be decreased to reduce possible damage of large impacts. The operating height of the apron varies depending on the size of stones picked. For small stones, the apron should be as low as possible to the ground and be raised to a suitable level for larger stones.

2.6 Maintenance Instructions

To ensure long operating life of your XL-6084, follow this maintenance procedure.

- Periodically check tire air pressure to guarantee equal tire pressure.
- Check gear box oil and add #90 gear oil if needed.
- Check all bolts and set screws for tightness periodically.
- Check chain tightner (If PTO equipped).
- Grease the following points as described.

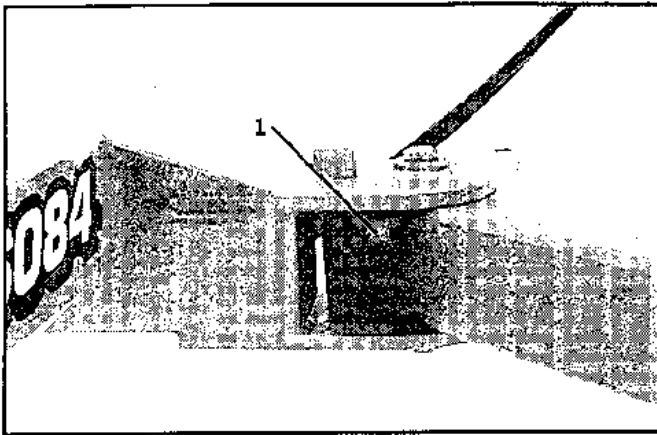


Figure 4. Hitch Greasing Points

Item No.	Description	Frequency
1	Hitch Pivot	Monthly

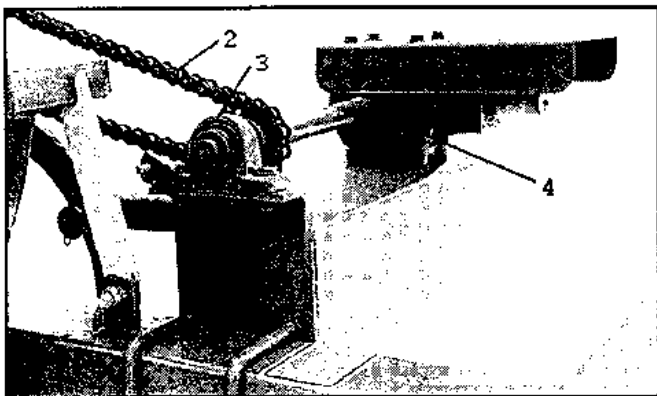


Figure 5. PTO Drive Greasing & Oiling Locations

Item No.	Description	Frequency
2	Gear Box Chain	As required
3	Gear Box Chain Bearing	As required
4	Gear Box	Bi-seasonly

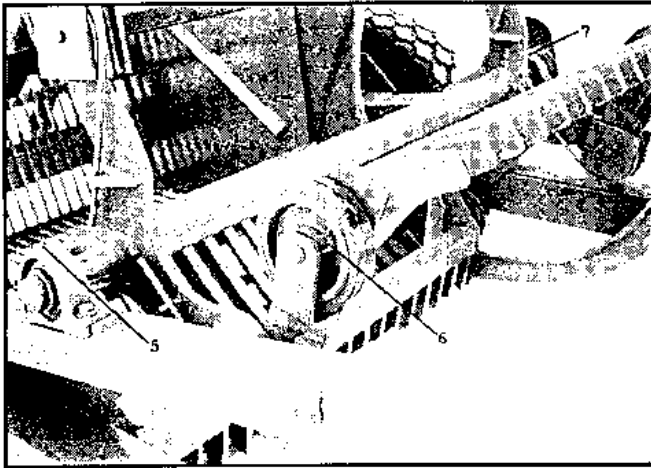


Figure 6. Reel Greasing Locations

Item No.	Description	Frequency
5	Reel Bearing (Right)	Seasonally
6	Boogie Wheel(Non Scaled Bearing)	Daily
7	Reel Bearing (Left)	Seasonally

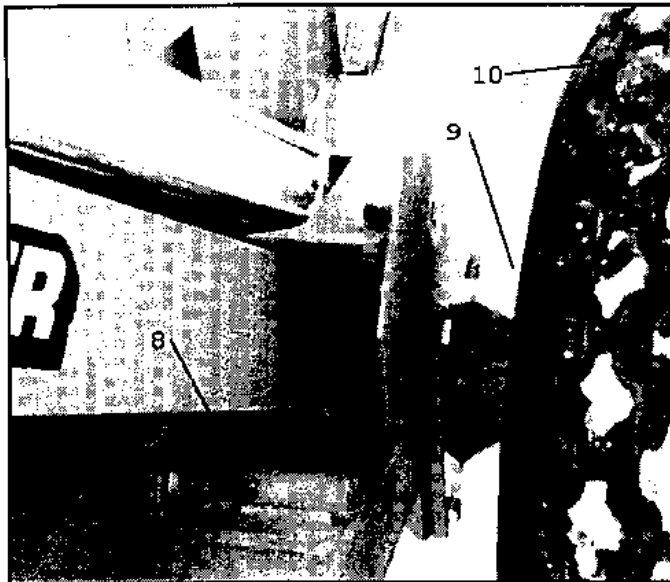


Figure 7. Apron & Tire Maintenance Locations

Item No.	Description	Frequency
8	Apron Pivot	Daily
9	Wheel Hub	4 times/year
10	Tire Pressure	As specified

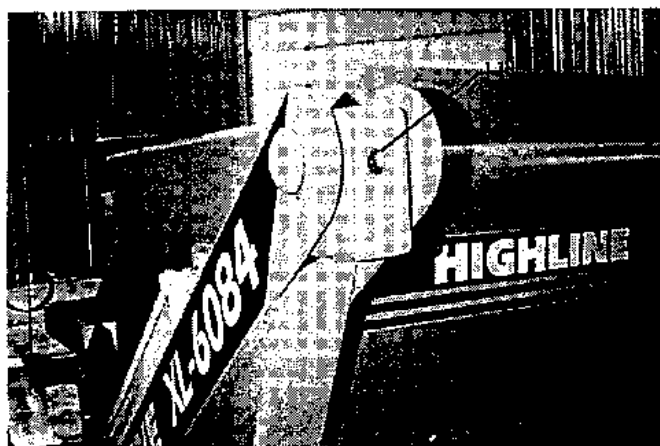


Figure 8. Grease Points of Dumping Mechanism

Item No.	Description	Frequency
11	Rear Bucket Pivot	Daily
12	Front Bucket Pivot	Daily

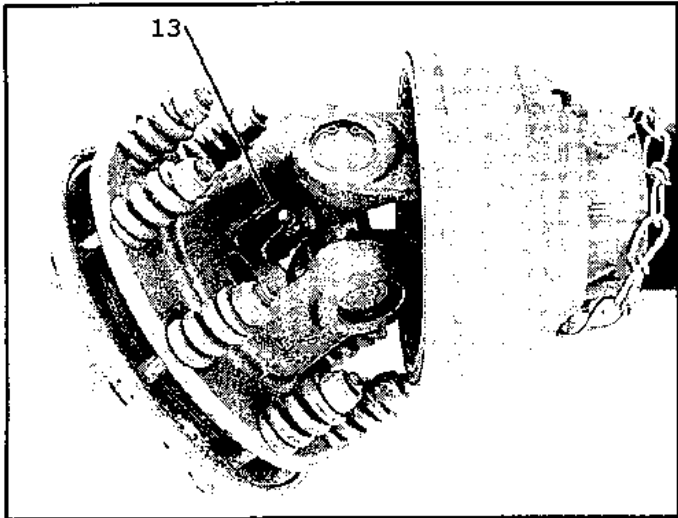


Figure 9. Clutch Grease Point

Item No.	Description	Frequency
13	Clutch Yoke	Daily

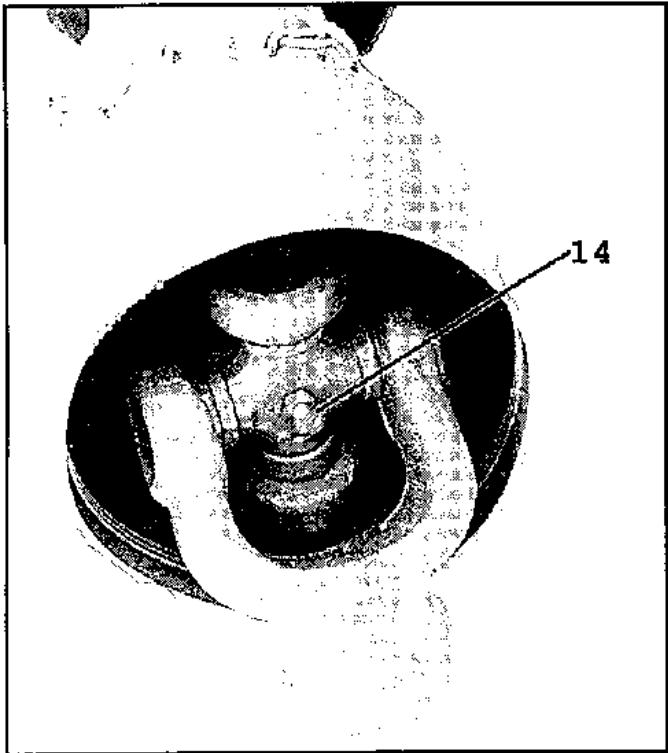


Figure 10. PTO Yoke Grease Point

Item No.	Description	Frequency
14	PTO Mount Yoke	Daily

2.7 PTO Clutch

- Atmospheric conditions and prolonged storage may alter the operating characteristics of friction clutches. Before first use or after a period of storage, all spring adjusting nuts should be backed off until springs are loose, then tightened one turn.
- The clutch should then be slipped until it starts to smoke. The springs should then be set to the desired spring setting. Set all springs to the same length.

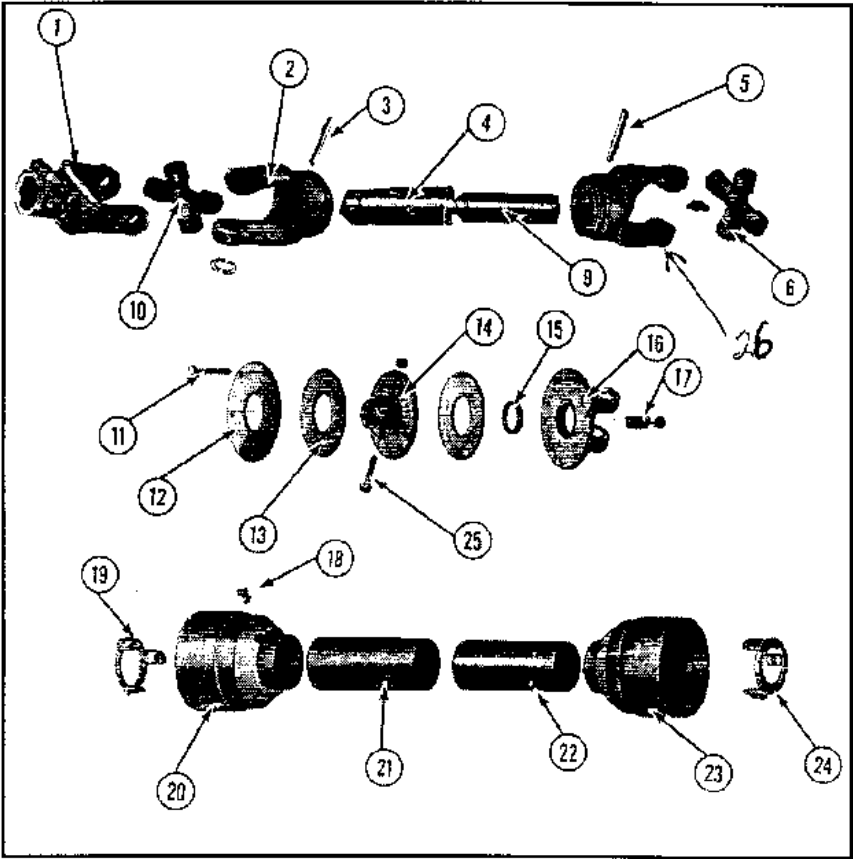
NOTE: After a clutch has been "run in", slippage will be approximately 20% higher than before.

- The temperature of the clutch should be checked often during the first 20 minutes after startup and about every eight hours of total operation. If the clutch smokes or is too hot to touch, when operation without obstruction, then the springs should be tightened or the clutch will fail.
- Some clutches may have a spring stop inside the spring to prevent tightening the spring beyond a preset length.

<u>CAUTION!</u> Injury may result if spring is tightened beyond preset length.

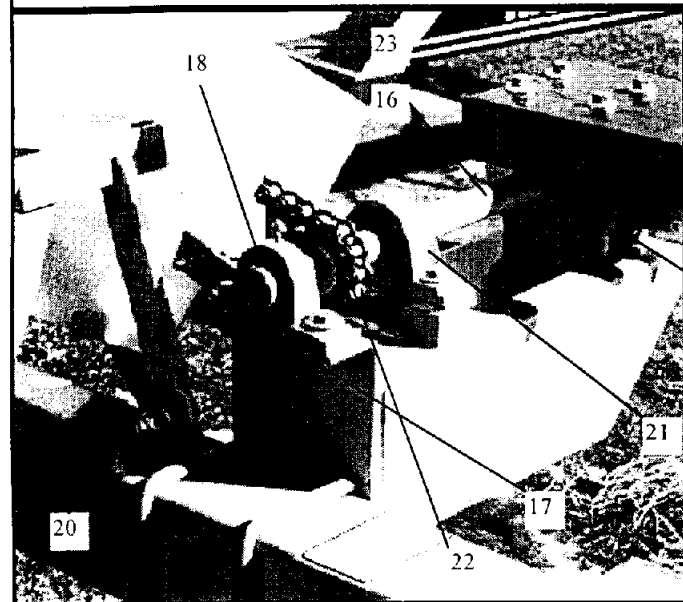
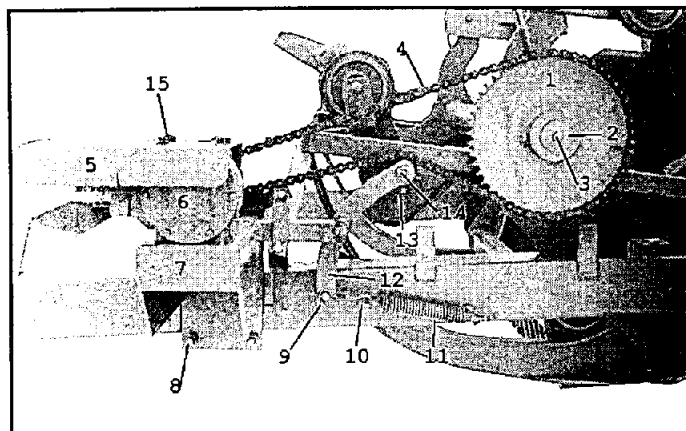
3. Parts Information

3.1 40 Series PTO



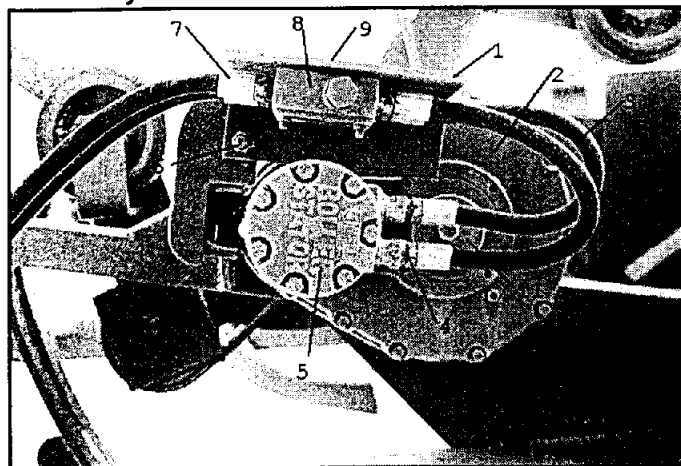
Item No.	Part No.	Description
1	901021	1-3/8" - 6 Spline Yoke 32819
	901048	1-3/8" - 21 Spline Yoke 32840
2	901023	Outer Tube Yoke 32821
3	901024	Roll Pin Outer Yoke 32822
4	901025	Outer Tube E1077
5	901028	Roll Pin 32826
6	901022	Cross Kit 32820
9	901035	Inner Tube E1076
10	901022	Cross Kit 32820
11	901031	Spring Bolt (M10x80) 32819
12	901036	Pressure Plate 32834
13	901029	Clutch Facing 32827 5/8" x 10 5/8" OD
14	901037	Clutch Support 32835
15	901038	Bushing 32836
16	901039	Flanged Yoke 32837
17	901030	Clutch Spring 32828
18	901137	Cone Retaining Bolt 32838
19	901040	Outer Tube Retaining Collar 32838
20	901041	Outer Tube Cone 32839
21	901042	Outer Shield Tube 32840
22	901043	Inner Shield Tube 32841
23	901044	Inner Tube Clutch Cone 32842
24	901045	Inner Tube Retaining Collar 32843
25	901034	M12 x 65 Bolt 32832

3.2 Gearbox Mount



Item No.	Part No.	Description
1	701020	80C50 Sprocket 32679
2	801302	1/2"x3-1/8" Washer 32734
3	B5C0816	1/2"x1" UNC Bolt 31330
	LW08P	1/2" Lock Washer Plated 31244
4	702001	#80 Chain x 98 Pins 32686
	702002	#80 Connector Link 32689
	702003	#80 Half Link 32690
5	70035	Gearbox Guard
6	101004	Gearbox Complete 32201
7	70024	Gearbox Mount
8	UB1296128	3/4"x6"x8" U-Bolt
	LW12P	3/4" Lock Washer Plated 31244
	NC12P	3/4" UNC Nut 31166
9	70037	Eye Bolt Hinge Mount
10	EB0896	1/2"x6" UNC Eye Bolt
	LNC08	1/2" UNC Lock Nut 31173
11	400005	Tightner Spring 32352
12	70036	Tightner Arm
13	701003	80A12 Idler Sprocket 32664
14	B5C1240P	3/4"x2-1/2" UNC Grade 5 Bolt 32646
	LW12P	3/4" Lock Washer Plated 31244
	NC12	3/4" UNC Nut 31166
15	B12MM30M	M12x30 Bolt Grade 8.8 31320
16	101002	1-1/2"x25" Gearbox Shaft 32200
17	B5C0940	9/16"x2-1/2" UNC Grade 5 31342
		Bolt 31152
	FW09	9/16" Flat Washer 31242
	LNC09	9/16" Lock Nut 31179
18	400001	1-3/8" Pillow Block Bearing 32348
19	B12MM30MM	M12x30 Bolt Grade 8.8
20	FW12	3/4" Flat Washer 31236
	CP0332	Cotter Pin
21	400034	1 1/2" Pillow Block 32381
	B5C0932	9/16"x2" UNC Gr. 5 31451
	FW09	9/16" Flat Washer 31242
	LNC09	9/16" UNC Locknut 31179
22	701016	80C11 Sprocket 32676
23	400028	Chain Guard 32325

3.3 Hydraulic Mount

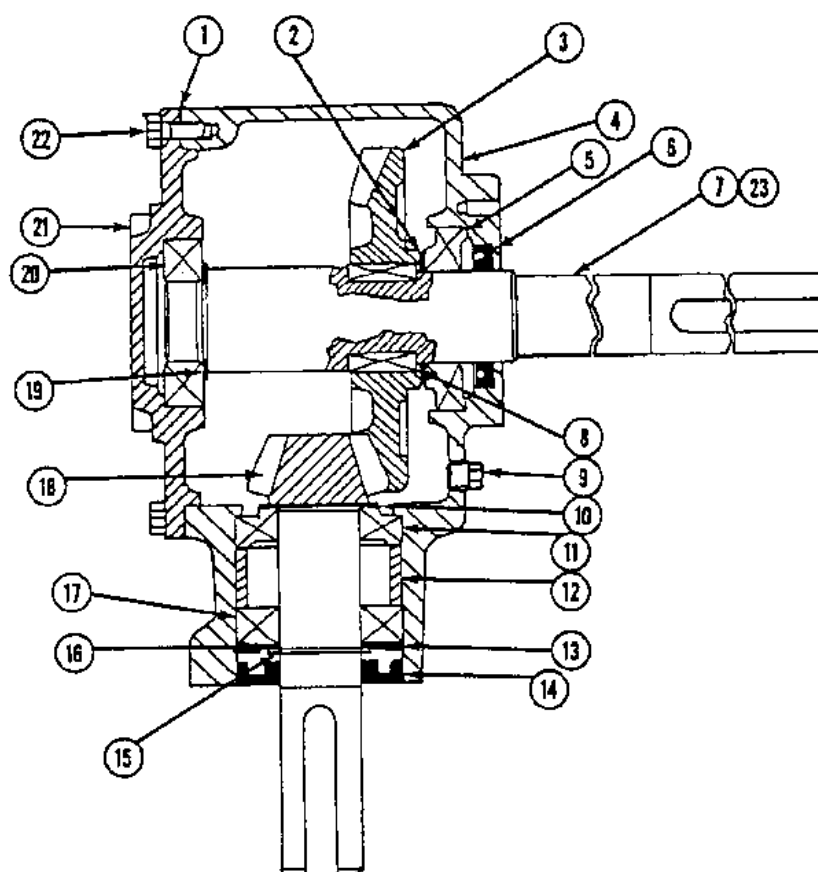


Item No.	Part No.	Description
1	70038	Hyd. Cushion Valve Anchor
2	101201	590 Gear Box 32269
3	601007	1/2"x20" 08MB-08MB Hose 32582
4	60SB1008	7/8" MORB x 1/2" FNPT Str.
5	601302 132644	RE1808050 Hyd. Motor
6	B5C0824	1/2"x1-1/2" UNC Grade 5 Bolt 313017
	LNC08	1/2" UNC Lock Nut 31173
7	601008	1/2"x144" 08MB-08MB Hose 32563
8	601404	DXV50 Cushion Valve 32660
9	70038	Hyd. Cushion Valve Anchor
10	B5C0816	1/2"x1" UNC Grade 5 Bolt 31064
11	LW08	1/2" Lockwasher 31244

32647

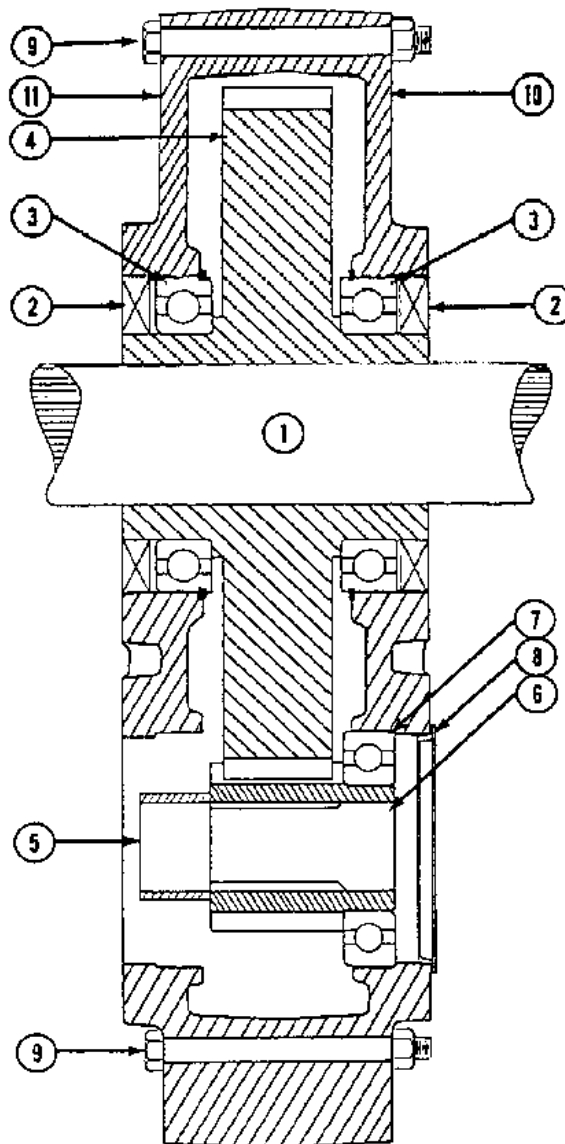
SEAL KIT

3.3 Gear Box Single



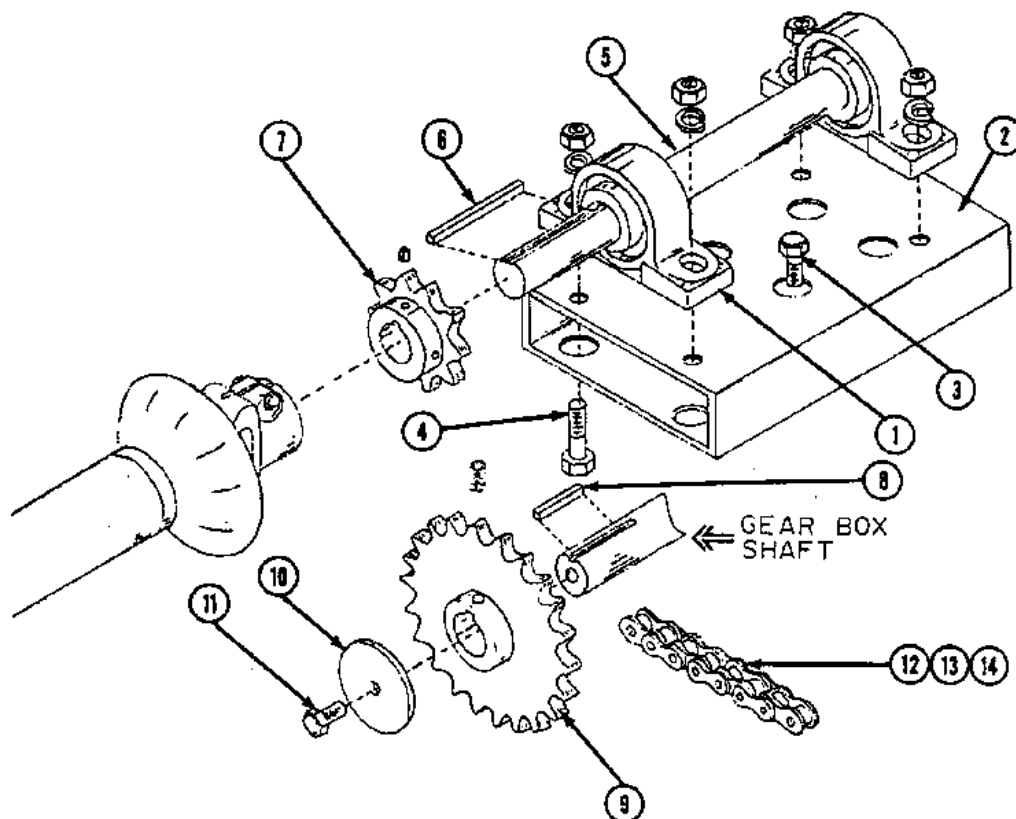
Item No.	Part No.	Description
1	100001	Gasket 32177
2	100002	Shim 40.3 x 51.5 32178
3	100003	Gear Z30 M5 32179
4	100004	Casing 32180
5	100005	30208 Bearing 32181
6	100006	Oil Seal 32182
7	101002	1-1/2"x25" Shaft
8	100007	Parallel Key 10x8x30 32183
9	100008	1/4" Plug 32184
10	100009	Shim 35.3x48 32185
11	100010	30207 Bearing 32186
12	100011	Spacer 32187
13	100012	Snap Ring 72 UNI7437 32188
14	100013	Oil Seal 32189
15	100014	Snap Ring 35 UNI7435 32190
16	100009	Shim 35.3x48 32185
17	100015	6207 Bearing 32191
18	100016	Pinion Gear Z10 M5 32192
19	100009	Shim 35.3x48 32185
20	100015	6207 Bearing 32191
21	100017	Cover 32193
22	100018	Bolt M6x20 8.8 32194
	101003	Long Shaft Gearbox Complete

3.4 590 Parallel Drive Gear Box



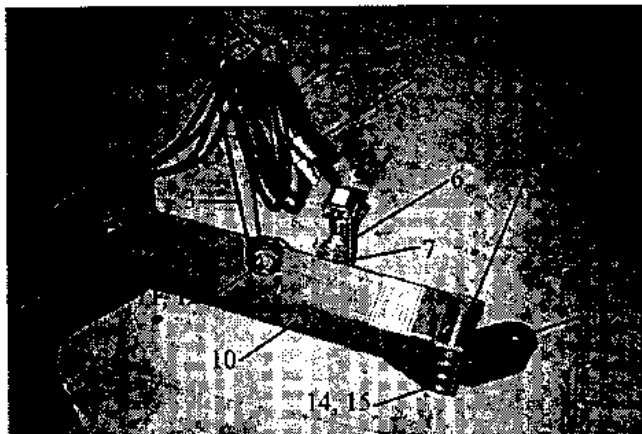
Item No.	Part No.	Description
1	400002	2" Reel Shaft 32349
2	101202	1477 Seal 32210
3	101203	1417 Bearing 32211
4	101208	58 Tooth Gear 32216
5	101206	1821 Spacer 32214
6	101207	13 Tooth Pinion 32215
7	101204	1418 Bearing 32212
8	101205	1154 Cover 32213
9	B5C0548P	5/16"x3" UNC Grade 5 Plated bolt 3056
	LNC05	5/16" UNC Lock Nut 3117
10	101210	Case, Plain Side 32218
11	101209	Case, Hydraulic Motor Side 32217
	101201	590 Gearbox complete 32303

3.5 1000 RPM kit



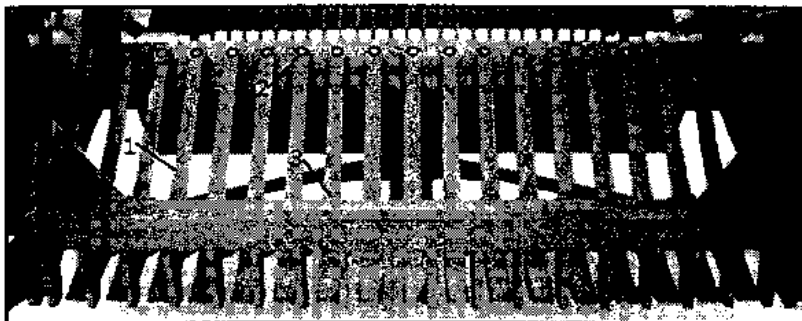
Item No.	Part No.	Description
1	400001	1-3/8" Pillow Block Complete 3234P
2	100019	1000 RPM Mounting Bracket
3	B5C0816	1/2"x1" UNC Grade 5 Bolt 31069
	LW08P	1/2" Lock Washer Plated 3173
4	B5C0832	1/2"x2" UNC Grade 5 Bolt plated 3133
	NC08P	1/2" UNC Nut Plated 3163
	LW08P	1/2" Lock Washer Plated
5	400020	1-3/8"x16-1/2" Shaft 32367
6	801606	5/16"x4" Key 32762
7	701008	60B15 Sprocket 32668
8	801602	5/16"x2" key 32758
9	701009	60B30 Sprocket 32669
10	801302	3-1/8" O.D. x 1/2" I.D. Washer 32734
11	B5C0616	3/8"x1" UNC Grade 5 Bolt 31043
	LW06P	3/8" Lock Washer Plated 31319
12	702005	#60 Chain 32692
13	702006	#60 Connector Link 32693
14	702007	#60 Half Link 32694
	400021	1000 RPM Kit Complete 32368

3.6 Hitch



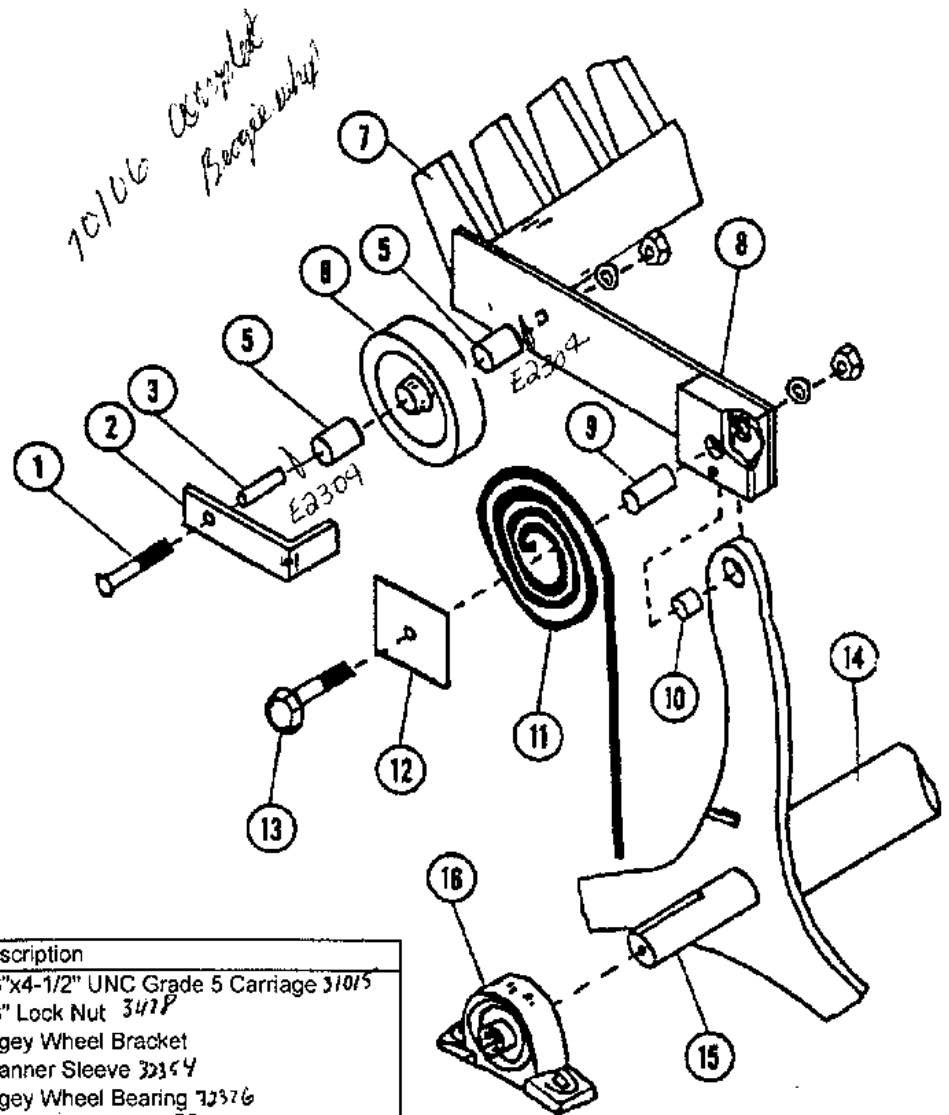
Item No.	Part No.	Description
1	601217	1/2" Male Pioneer Ends 30209
2	601003	3/8"x96" Tractor Hose 30280
3	500001	Hose Holder 32441
4	70003	Double Hitch Tongue
	70052	Single Tongue Hitch (Not Shown)
5	B5C16112P	1"x7" UNC Grade 5 Bolt
6	92095	5000 lb. x 15" Hitch Jack
7	500021	Weld on Pivot Tube 32459
8	B5C16160	1"x10" UNC Grade 5 Bolt
	LNC16	1" Lock Nut 31172
	70040	Washer
9	70039	Hitch Wedge
10	70002	Hitch Arm
11	NC08	1/2" Hex Nut 31163
12	FW08	1/2" Flat Washer 31236
13	91609	Hitch Pin
14	NC16	1" Hex Nut 31162
15	FW16	1" Flat Washer 31235

3.7 Apron



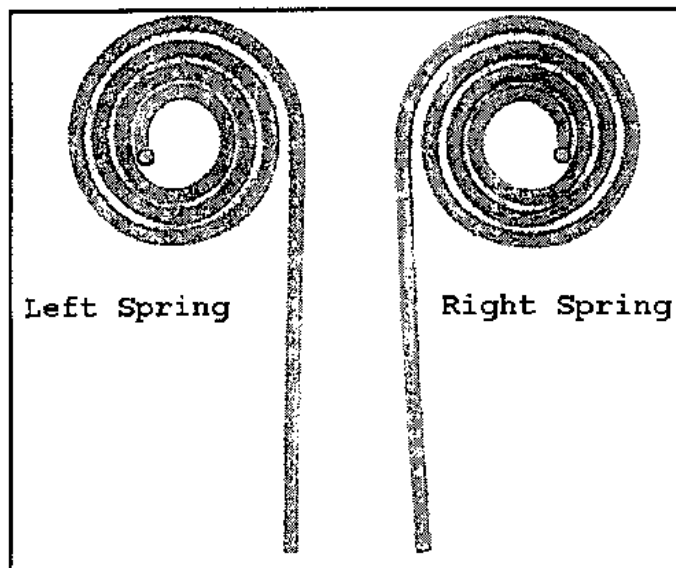
Item No.	Part No.	Description
1	500102	Apron Tine 32466
2	B8C0840	1/2"x2-1/2" UNC Grade 8 31019
	LNC08	1/2" UNC Lock Nut 31173
3	B8C0856	1/2"x3-1/2" UNC Grade 8 31024
	LNC08	1/2" UNC Lock Nut 31173

3.8 Reel Arm Assembly



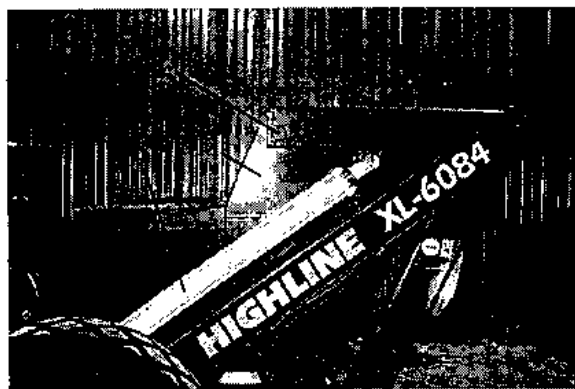
Item No.	Part No.	Description
1	C5C1072	5/8"x4-1/2" UNC Grade 5 Carriage 31075
	LN10	5/8" Lock Nut 347P
2	70046	Bogey Wheel Bracket
3	400007	Spanner Sleeve 32354
5	400029	Bogey Wheel Bearing 32376
6	400010	8" Bogey Wheel 32357
7	70041	Reel Bat Tooth
8	70006	Reel Bat
9	70044	1"x.188"x2-1/2" Bushing
	70045	1"x.188"x3-1/4" Bushing
10	70047	1-1/2"x.250"x3/4"
11	400015	Left Reel Spring 32362
	400016	Right Reel Spring 32363
12	70042	Spring Holding Plate
13	B5C0860	1/2"x3-3/4" UNC Grade 5 Bolt 31025
	B5C0872	1/2"x4-1/2" UNC Grade 5 Bolt 31027
	LN08	1/2" Lock Nut 31173
14	70007	Reel Arm
15	E2310	2-7/16" Reel Shaft
16	400026	2-7/16" Pillow Block Bearing for PTO 32370

3.9 Spring Identification



Item No.	Part No.	Description
Left Spring	400015	Left Reel Spring 32362
Right Spring	400016	Right Reel Spring 32363

3.10 Dump & Bucket



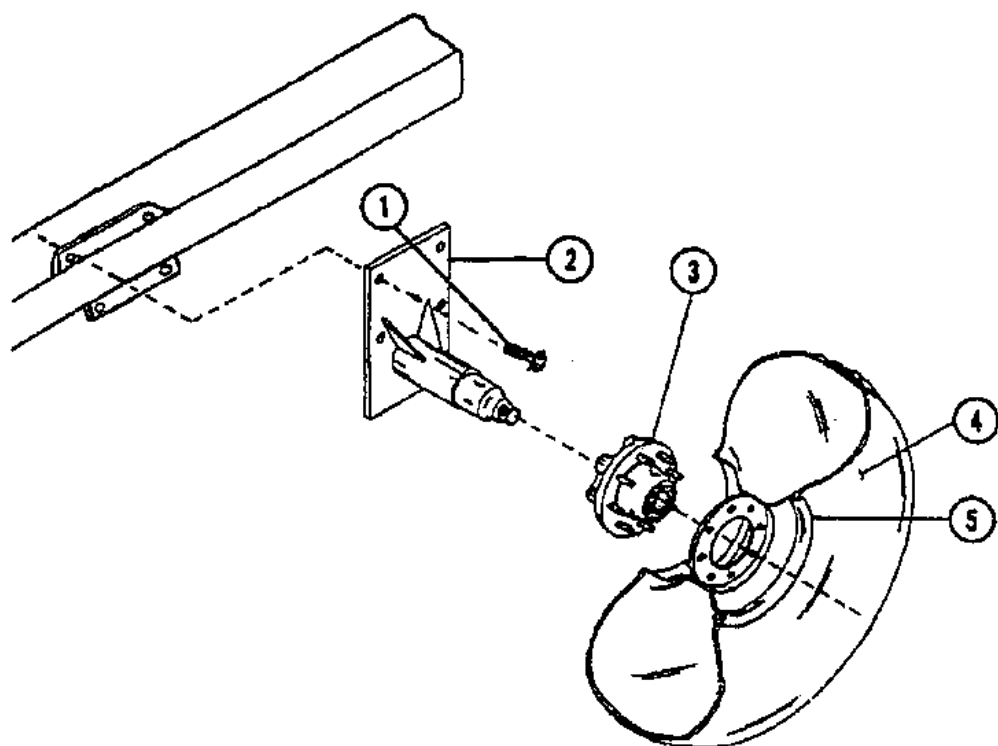
Item No.	Part No.	Description
1	70025	Back PostPivot Pin
	70026	Collar
2	70001	Dump Assembly
3	B5C20120	1-1/4"x7-1/2" UNC Grade 5 Bolt
4	70008	Bucket
5	204201	Hydraulic Cylinder 3-1/2"x42" 32364
6	203003	Clevis Pin 32356

3.11 Cylinder Guard



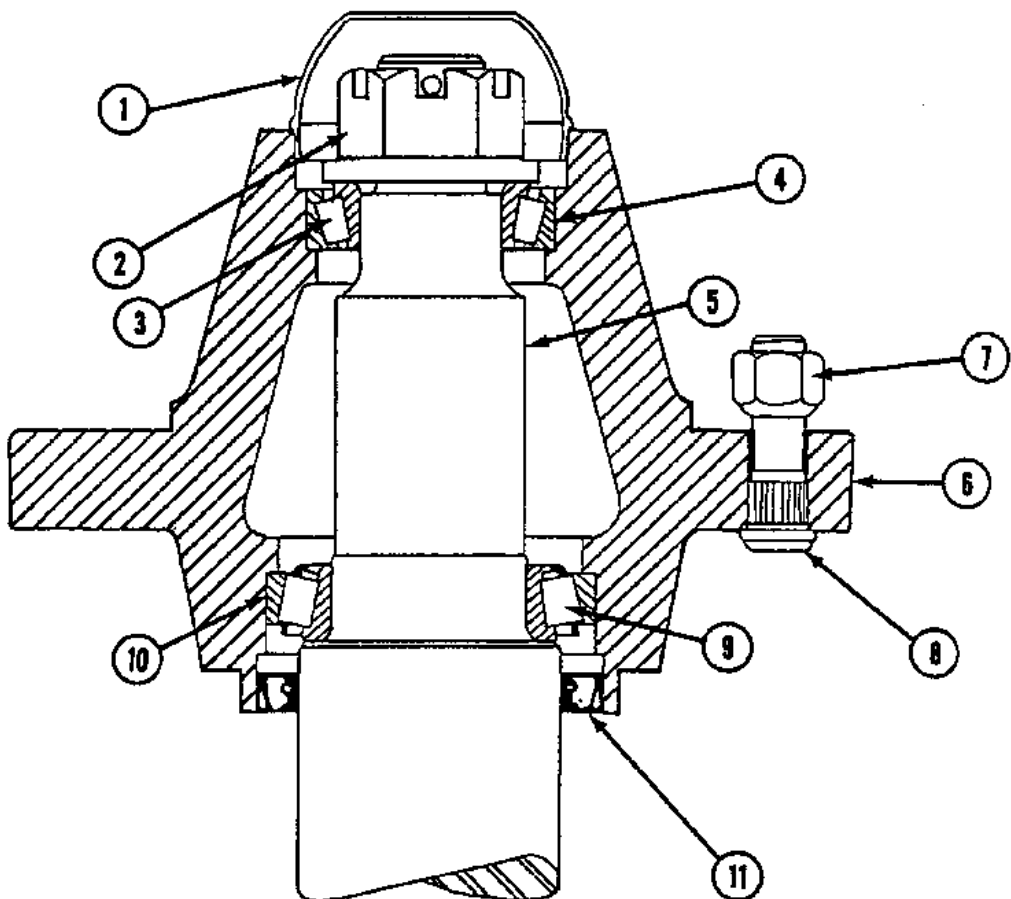
Item No.	Part No.	Description
1	70012	16" Tire Axle Mount
2	70043	Hydraulic Cylinder Rock Shield
3	B5C0824P	1/2" UNC Grade 5 Bolt 31017
	LNC08	1/2" Lock Nut 3413
	FW08	1/2" Flat Washer 31236
4	70027	Apron Side Pins
5	801704	1/4" Grease Zerk 30207

3.12 Axle and Wheel Assembly



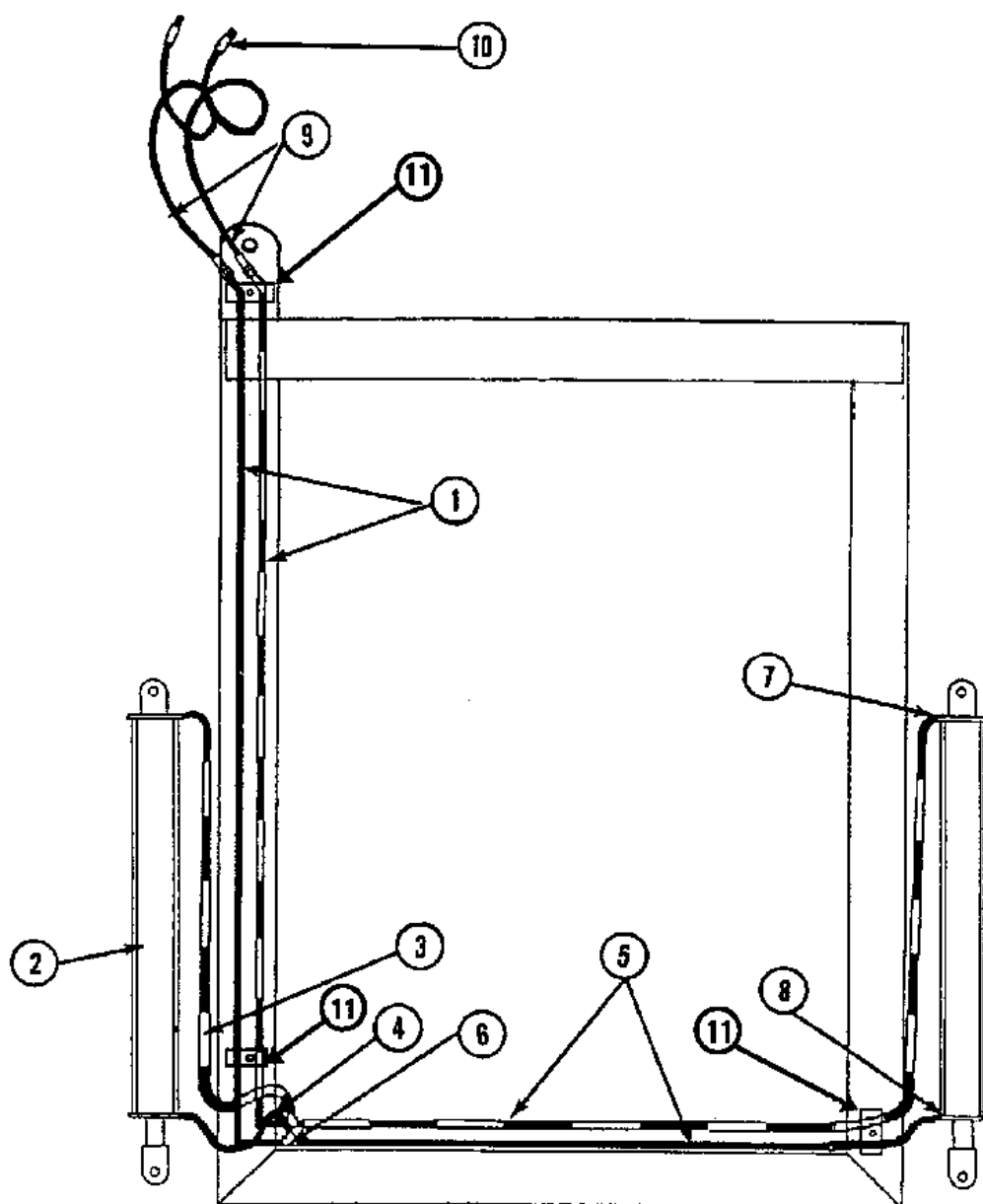
Item No.	Part No.	Description	
1	B5C1240P	3/4"x2-1/2" UNC Grade 5 Bolt	31340
	LW12P	3/4" Lock Washer Plated	31246
	NC12	3/4" UNC Nut	31167
2	70012	Spindle Plate Assembly	
3	301106	H817 Hub	32318
4	301112	16.5 x 16.1, 6 Ply Flotation Tire	32324
5	301113	16 x 14-8 Hole Rim	32325

3.13 H817 Hub



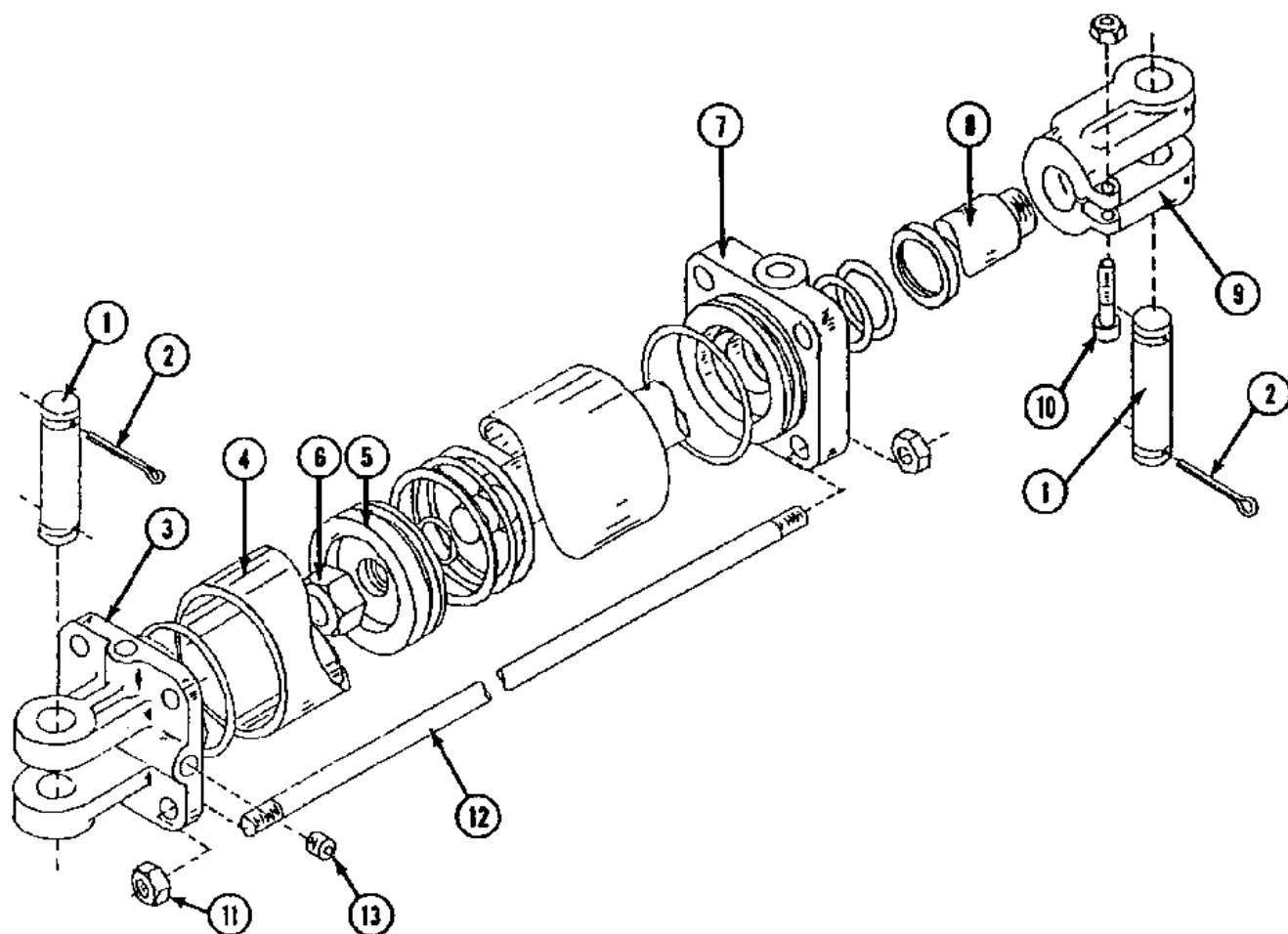
Item No.	Part No.	Description
1	301101	DC26 Dust Cap 32315
2	301102	Castellated Nut 1-1/4" - 12 UNF 32314
3	301103	LM501349 Outer Cone 32315
4	301104	LM501310 Outer Cup 32316
5	301105	S817 Spindle Only 32317
6	301106	H817 Hub Only 32318
7	301107	WB18 Nut 5/8" - 18 UNF 32319
8	301108	WB48 Stud 5/8" - 18 UNF x 2-1/4" 32320
9	301109	387AS Inner Cone 32321
10	301110	382A Inner Cup 32322
11	301111	SE42 Grease Seal 32323

3.14 Hydraulic Layout



Item No.	Part No.	Description	
1	601038	3/8"x144" 08FJIC-08FJIC HOSE	32613
2	204201	2 1/2" Hydraulic Cylinder	342
3	601026	3/8"x55" 08MJIC-08FJIC Hose	32661
4	601026	3/8"x55" 08MJIC-08FJIC Hose	32661
5	601039	3/8"x108" 08FJIC-08FJIC	32614
6	872FS08	1/2" JIC Tee M-F-M	
7	849FS0808	90 Deg 3/4" MJIC - 1/2" MNPT	
8	848FS0808	1/2" MJIC - 1/2" MNPT STR.	
9	601003	3/8"x96" Tractor Hoses	32780
10	601217	1/2" Male Pioneer Tip	32709
11	500001	1/2" Hydraulic Hose Holder	32441
	LNC04	1/4" Lock Nut	31174
	FW04	1/4" Washer	31237

3.15 3-1/2"x42" Hydraulic Cylinder



seal kit 204210 - 32268

Item No.	Part No.	Description
1	203003	Clevis Pin 32250
2	801403	3/16"x2-1/2" Cotter Pin 32250
3	204202	Anchor End Cap 32261
4	204203	Casing 32262
5	204204	Piston 32263
6	203008	1"-14 UNS Nut 32254
7	204205	Rod End Cap 32264
8	204206	Cyl. Shaft 32265
9	204207	Clevis
10	203004	Clevis Cap Screw & Nut 32251
11	204208	Tie Rod Nut 32266
12	204209	Tie Rod 32267
13	203005	Port Plug 32252

4. Specifications

Picking Width	60"
Dump Height	Aproximately 84"
Cylinder	3-1/2"x42"
Chain & Sprocket	No. 80
PTO Drive	540 Standard
Hydraulic Pressure	2500 psi.(17240 kPa)
Bucket Capacity	1.6 cu. yd. (1.25 m ³)
Weight	Aproximately 4800 lbs (2258 kg)