

XL78 - 2003 ROCKPICKER OWNER'S MANUAL

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Warranty

Highline New Agricultural Equipment Limited Warranty

Effective July 1, 2000 Two (2) Year / 24 Months

1st Year Parts and Labour – 2nd Year Parts Only

Highline Mfg. Inc (hereinafter "Highline") warrants each new Agricultural product of Highline's manufacturer to be free from defects in material and workmanship, under normal use and service for two (2) full years after initial purchase/retail sale.

Highline will warrant its product for one (1) year parts and labour, if performed by a qualified Dealer and on the second year parts only. This Limited Warranty shall apply only to complete machines of Highline's manufacture, parts are covered by a separate Limited Warranty.

EQUIPMENT AND ACCESSORIES NOT OF HIGHLINE'S MANUFACTURE ARE WARRANTED ONLY TO THE EXTENT OF THE ORIGINAL MANUFACTURER'S WARRANTY AND SUBJECT TO THEIR ALLOWANCE TO HIGHLINE ONLY IF FOUND DEFECTIVE BY SUCH MANUFACTURER.

During the Limited Warranty period specified above, any defect in material or workmanship in any warranted item of Highline Agricultural Equipment not excluded below shall be repaired or replaced at Highline's option without charge by any authorized independent Highline Dealer. An authorized Dealer must make the warranty repair or replacement. Labour in accordance with Highline's labour reimbursement policy. Highline reserves the right to supply remanufactured replacement parts as it deems appropriate.

RETAIL PURCHASER RESPONSIBILITY: This Limited Warranty requires proper maintenance and periodic inspections of the Agricultural Equipment as indicated in the Operator's Manual furnished with each new Agricultural Equipment. The cost of routine or required maintenance and services is the responsibility of the retail purchaser. The retail purchaser is required to keep documented evidence that these services were performed. This Highline New Agricultural Equipment Limited Warranty may be subject to cancellation if the above requirements are not performed

EXCLUSIONS AND LIMITATIONS

The warranties contained herein shall **NOT APPLY TO:**

- (1) Any defect which was caused (in Highline's sole judgement) by other than normal use and service of the Agricultural Equipment, or by any of the following: (i) accident (ii) misuse or negligence (iii) overloading (iv) lack of reasonable and proper maintenance (v) improper repair or installation (vi) unsuitable storage (vii) non-Highline approved alteration or modification (viii) natural calamities (ix) vandalism (x) parts or accessories installed on Agricultural Equipment which were not manufactured or installed by Highline authorized Dealers (xi) the elements (xii) collision or other accident.
- (2) Any Agricultural Equipment whose identification numbers or marks have been altered or removed.
- (3) Any Agricultural Equipment which any of the required or recommended periodic inspection or services have been performed using parts not manufactured or supplied by Highline or meeting Highline Specifications including, but without limitation, lubricants (oil, grease), belt lacings, and hydraulic fluids.
- (4) Equipment used for rental, custom work, industrial and construction or if equipment is used for any other purpose than the intended agricultural application.
- (5) Any Agricultural Equipment used in demonstrations not performed by a Highline Dealer. Warranty will be at the discretion of Highline for all other demonstration warranty.
- (6) **New Agricultural Equipment delivered to the retail purchaser in which the warranty registration has not been completed and returned to Highline within ten (10) days from the date of purchase.**
- (7) Any defect that was caused (in Highline's sole judgement) by operation of the Agricultural Equipment not abiding by standard operating procedures outlined in the Operator's Manual.
- (8) Tire Limited Warranties and support are the responsibility of the respective product's manufacturer.
- (9) Transportation costs, if any, of transporting to the Highline Dealer.
- (10) In no event shall Highline's liability exceed the purchase price of the product.
- (11) Highline shall not be liable to any person under any circumstances for any incidental or consequential damages (including but not limited to, loss of profits, out of service time and damage to equipment which this equipment may be attached) occurring for any reason at any time.
- (12) Diagnostic and overtime labour premiums are not covered under this Limited Warranty Policy.
- (13) Depreciation damage caused by normal wear, lack of reasonable and proper maintenance, failure to follow operating instructions, misuse, and/or lack of proper protection during storage.
- (14) Accessory systems and electronics not of Highline's manufacture are warranted only to the extent of such manufacturer's respective Limited Warranty if any.
- (15) Wear items which are listed by product group below:

COMMON WEAR ITEMS: roller chain, sprockets, clutches, shear bolts, clutch components, chains, gearbox housings bolts/torqued parts, flails, feed roller belting, coupler chain, DRV couplers, bogie wheels, apron tines and hoses.

PARTS WARRANTY

Parts replaced in the warranty period will receive the balance of the two year New Agricultural Equipment Limited Warranty. Replacement parts after the original machine warranty are warranted to be free from defects of material for ninety (90) days or the part will be repaired or replaced, without labour coverage for removal and reinstallation.

EXCLUSION OF WARRANTIES. UNLESS OTHERWISE REQUIRED BY LAW, AND EXCEPT FOR THE WARRANTIES EXPRESSLY AND SPECIFICALLY MADE HEREIN, HIGHLINE MAKES NO OTHER WARRANTIES, AND ANY POSSIBLE LIABILITY OF HIGHLINE HEREIN UNDER IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HIGHLINE RESERVES THE RIGHT TO MODIFY, ALTER AND IMPROVE ANY PRODUCT WITHOUT INCURRING ANY OBLIGATION TO REPLACE ANY PRODUCT

President's Message

The XL-78, a proven name in the rock-picking field, is manufactured by Highline Mfg. Inc. The XL-78 rock picker was designed to work in the most difficult of rock picking situations. A little time and effort spent in proper maintenance will ensure the performance and durability of your rock picker.

This Operator's Manual has been prepared to provide information necessary for the safe and efficient operation of your Rock Picker. In it, you will find safety procedures, maintenance routines, and detailed parts diagrams.

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

Should the need arise, this manual will assist you in acquiring replacement parts. If your dealer does not have the parts you need in stock, they will be happy to order them in for you. Feel free to contact Highline Mfg. Inc. or your local dealer if you need information that is not included in this manual.

Highline Mfg. Inc. thanks and congratulates you for selecting a XL-78 rock picker, as the machine for your rocking picking needs.

*Chuck Lepage, President
Highline Mfg. Inc.*

PO Box 307, Vonda, Saskatchewan, S0K 4N0

Phone 1-800-665-2010 Fax (306) 258-2010

Internet Address: <http://www.highlinemfg.com>

Safety Precautions

WORK SAFELY – FOLLOW THESE INSTRUCTIONS

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.
- 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 hydraulic motor is engaged.
- 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.

1.0 Introduction & Pre-Delivery

1.1 General Description of XL-78 Rock Picker

The XL-78 rock picker covers a width of 84" and has a dumping height of 90". One set of hydraulic lines are required for dumping and lowering the picker's collecting apron. The rock picker is hydraulically driven, however, the 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-78 rock picker has not been assembled prior to delivery. If any parts are not included, contact your authorized Highline dealer or **Highline Mfg. Inc.**

Qty.	Description	Part Number
1	XL78 ROCKPICKER	
2	TIRE ASSY, 21 IN, 10 PLY	33036
2	AXLE ASSEMBLY	70601
8	BOLT, HEX, 3/4" X 2-1/2", UNC, GR5	31040
8	NUT, NYLOCK, 3/4", UNC	31175
8	WASHER, LOCK, 3/4", PLATED	31246

2.0 Operating Instructions

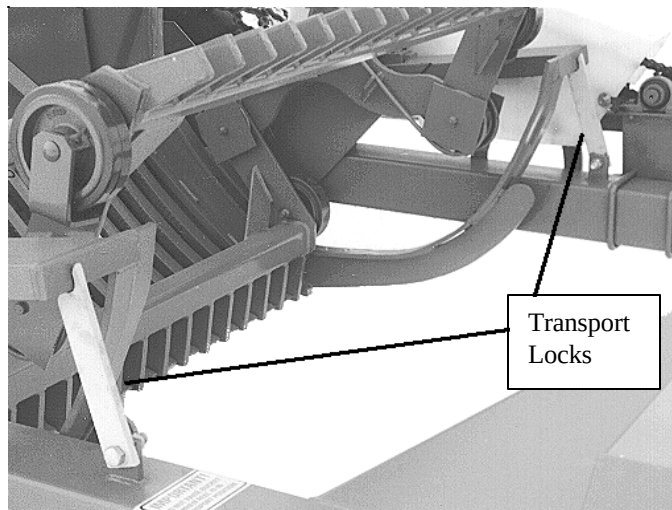
2.1 Field Preparation

Field preparation plays a major role in the picking performance of the XL-78. For best picking conditions, the field should be cultivated prior to picking. This operation brings stones to the surface and buries field residue.

2.2 Pre-Start Instructions

Transport locks need to be lowered before operation. To lower transport locks, raise apron slightly and lower transport locks towards the front of the machine. DO NOT lower apron when transport locks are in position otherwise severe damage WILL occur.

Figure 1 - Locks in Transport Position

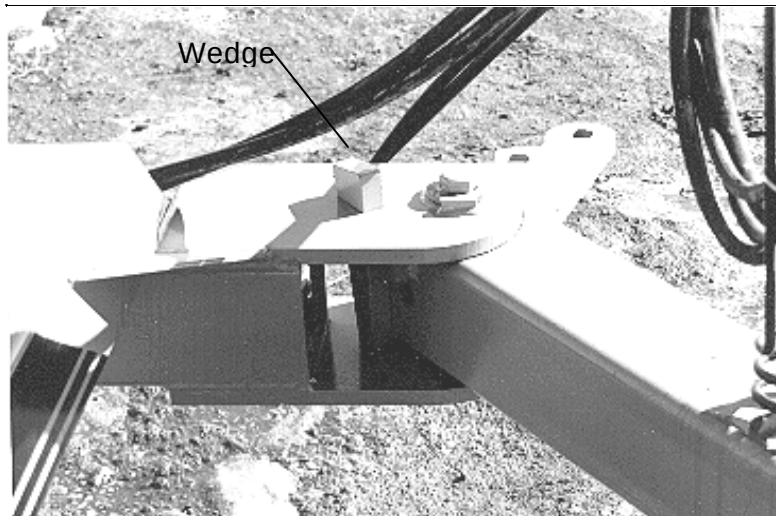


2.3 Transporting Instructions

To ensure safe transport of the XL-78 rock picker, the transport locks and apron should be raised to prevent the apron from dragging. To put transport locks in place, raise the apron until the transport locks catch on the apron frame. To lower transport locks, raise apron until locks are free and turn them forward.

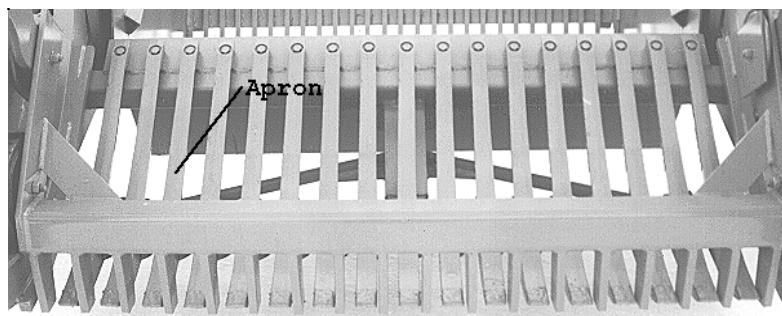
For road transport, the hitch may be turned to reduce the travel width of the rock picker. To change the position of the hitch, the wedge (Figure 2) is removed and the hitch is positioned for field or transport position. The wedge is then placed back into position and ready for field or transport.

***IF HYDRAULIC HITCH IS INSTALLED THE WEDGE MUST STILL BE USED TO PREVENT CYLINDER LUG CRACKING/BREAKAGE.** Remove wedge before moving hitch with hydraulic cylinder.

Figure 2 - Hitch Wedge

2.4 Apron Height Adjustment & Bucket Dumping

The apron (Figure 3) height is adjustable through the hydraulic cylinders. By retracting the cylinders completely, the apron will be at its highest 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-78 should run at a field speed of 3-4 mph (4.8-6.5 km/h) with the reel rotating at 35 rpm. When picking large rocks, field speed should be decreased to reduce possible damage due to 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 Bucket Lock

Two bucket locks are stored at the back of the machine. These locks fit on the cylinder shafts and prevent the bucket from falling when raised to perform maintenance on the Rockpicker. Highline Mfg. Inc. does not recommend working under a loaded bucket.

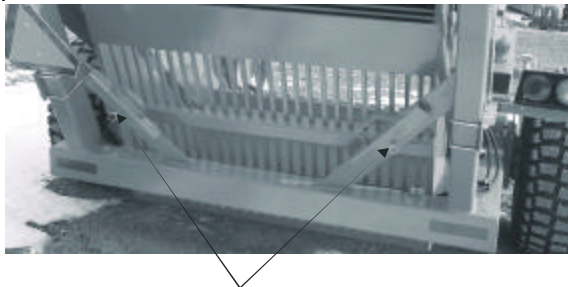
To use locks:

1. Unload bucket of all accumulated rocks.
2. Raise bucket high enough so locks fit on cylinder shafts.
3. Remove locks from storage location as shown below.
4. Install one lock on each cylinder and install retaining pin.

To remove locks:

1. Raise bucket to remove pressure from locks.
2. Remove locks from cylinders and return them to their storage position.

Both locks must be removed before hydraulic pressure is applied to lower the bucket. **FAILURE TO REMOVE BOTH LOCKS MAY RESULT IN DAMAGE TO THE ROCKPICKER.**

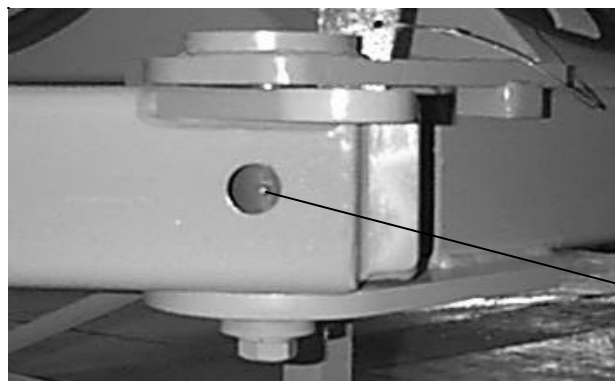


3.0 Maintenance Instructions

- To ensure a long operating life of your XL-78 Rock Picker, follow this maintenance procedure.
- Ensure tire air pressure is maintained at 27 psi. If tire pressure is not maintained, severe tire damage may result.
- Check gearbox oil and add #90 gear oil if needed.
- Periodically check all bolts and set screws for tightness.
- Grease the following points as described:

3.1 Grease Locations

Figure 4 - Hitch Grease Location



GREASE NO.	DESCRIPTION	FREQUENCY
1	Hitch Pivot	Monthly

1

Figure 5 - Reel Greasing Location



GREASE NO.	DESCRIPTION	FREQUENCY
2	Reel Bearings	Yearly

2

Figure 6 - Apron and Tire Maintenance Locations

GREASE NO.	DESCRIPTION	FREQUENCY
3	Apron Pivot	Daily
4	Wheel Hub	4 Times/Year

3**4****Figure 7 - Dump Mechanism Grease Locations**

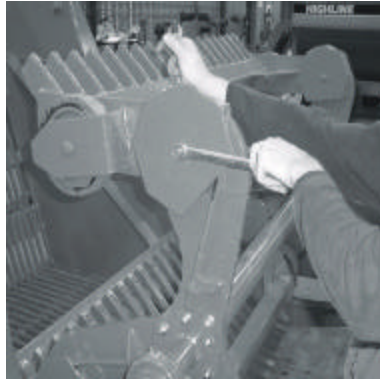
GREASE NO.	DESCRIPTION	FREQUENCY
5	Front Bucket Pivot	Daily

5

3.2 Rockpicker Reel Spring Removal Procedure

1. Loosen 9/16 reel pivot bolt to allow internal movement of spring. See Figure 1

Figure 1



2. Remove spring tool from storage location and place as shown in Figure 2.

Figure 2



3. Apply downwards force to release spring from catch as shown in Figure 3&4.

Figure 3

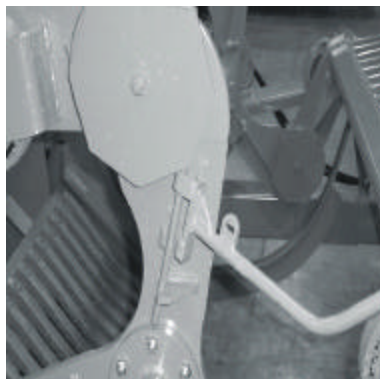
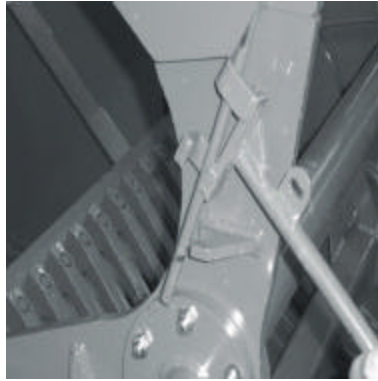


Figure 4



4. Slowly allow spring to return to released position as shown in Figure 5&6.
Release both springs on dual spring reel when replacing a broken/worn spring.

Figure 5

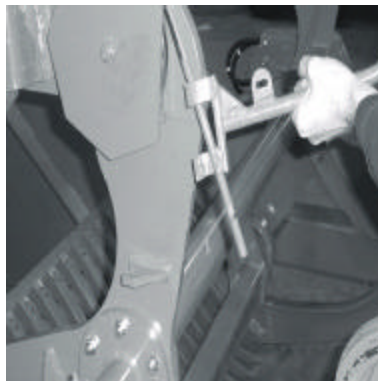


Figure 6



5. Remove bolt and spring retainer plate. Remove old/broken spring.
6. Install new spring and re-install bolt and spring retainer plate leaving bolt slightly loose.
7. Re-tension springs by reversing Step 1-4.
8. Retighten 9/16 bolt to hold spring retainers tight.
9. Return spring tool to storage location and re-secure with wing nut.

4.0 Safety Messages

General safety messages appear in this Safety Messages section. Specific safety messages are located in appropriate sections of the manual where a potential hazard may occur if the instructions or procedures are not followed.

Understand Safety Alert Symbol

This is the safety alert symbol. This symbol placed on your machine or in the manual is used to alert you to the potential for bodily injury or death.



Understand Signal Words.

A signal word “**Danger**”, “**Warning**”, or “**Caution**” is used with the safety alert symbol.

Safety signs with signal word “**Danger**”, “**Warning**” or “**Caution**” are located near specific hazards.

Danger – Imminent hazards which, if not avoided, will result in serious personal injury or death.

Warning – Potential hazards or unsafe practices which, if not avoided, could result in serious personal injury or death.

Caution – Potential hazards or unsafe practices which, if not avoided, could result in minor personal injury or product or property damage.

Read, Understand, and Follow Safety Instructions

Read, understand and follow all instructions and safety messages included in this manual and on decals attached to the machine. These instructions and safety messages contain important information.

Allow only responsible, properly instructed individuals to operate and service the machine.

Failure to follow the instructions and safety messages in this manual and on the decals attached to the machine could result in serious injury or death.

Keep all safety and instruction decals in good condition. Replace any missing or damaged decals.



Keep Machine in Good Condition

Be sure the machine is in good operating condition and that all safety devices are installed and functioning properly.

Visually inspect the machine daily before starting the machine.

Make no modifications to your equipment unless specifically recommended or requested by Highline Mfg Inc.

Keep Spectators Away From Machine

Keep all spectators and other workers away from the machine and work area while in operation.

Avoid Moving Parts

Contact with moving parts can cause death or serious injury.

Keep away from power-driven parts such as the reel.

Wear close-fitting clothing and confine long hair. Avoid wearing jewelry, such as rings, wrist watches, necklaces, or bracelets.

Avoid High Pressure Leaks

Pressurized fluid can penetrate body tissue and result in serious injury or death. Leaks can be invisible. Relieve pressure before working on system. When searching for a leak, use an object like cardboard – not your hand. Fluid injected under the skin must be removed immediately by a surgeon familiar with this type of injury.

Avoid Tire Explosion

Tire explosion can result if the following procedures are not followed:

- Maintain correct tire pressure. Do not inflated tire above recommended pressure.
- Low tire pressure can cause internal tire damage. Inflate to recommended pressure.
- Replace any tire with cuts or bubbles. Replace any damaged rims.
- Do not weld or heat wheel assembly. Heating will increase tire pressure.

Working on the Rock Picker

For your safety and safety of others, the Shutdown Procedure, see below, must be followed before dismounting from the tractor for inspecting, lubricating, cleaning, unplugging, servicing, or repairing the rock picker.

Warning: Failure to follow any of the above safety instructions, or those that follow within this manual, could result in serious injury or death. This machine is to be used only for those purposes for which it was intended, as explained in this Operator's manual.

Safety Decal Maintenance

Safety decals located on your machine contain important and useful information that will help you operate your equipment safely.

To assure that all decals remain in place and in good condition, follow these instructions.

- Keep decals clean. Use soap and water – not mineral spirits, abrasive cleaners, or other similar cleaners that will damage the decal
- Replace any damaged or missing decals. When attaching decals, the temperature of the mounting surface must be at least 5°C (40°F). The mounting surface must also be clean and dry.
- When replacing a machine component with a decal attached, replace the decal also.
- Replacement decals can be purchased from your Highline equipment dealer.

SHUTDOWN PROCEDURE

Important: For your safety and the safety of others, this procedure must be followed before dismounting from the tractor for repairing, servicing, cleaning, or lubricating the rock picker.

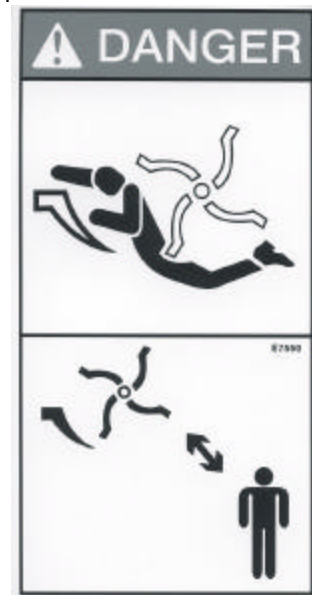
A variation of this procedure may be used if so instructed within this manual, or the tractor manual, or if an emergency requires it.

- Step 1: Reduce the engine speed to idle.
- Step 2: Fully lower bucket and apron.
- Step 3: Disengage the PTO/hydraulic motors.
- Step 4: Set the tractor park brake.
- Step 5: Shut off tractor engine and remove key.



Warning: Never carry riders on towed machine. Falling from machine can cause serious injury or death.

Danger: Contact with pickup reel can cause serious injury or death. Keep away from moving pickup reel.



Warning: Raised bucket can fall and crush, causing serious injury or death. Before working under raised bucket, always lock the bucket for service. Do not work under loaded bucket.

Danger: Do not transport the rock picker on public roadways with rocks in the bucket. Rocks may fall out of the bucket, resulting in an accident. Deposit the rocks on a pile in the field, or load them directly onto a truck or trailer.

Warning: Do not transport the rock picker with the bucket raised. Machine damage is possible.

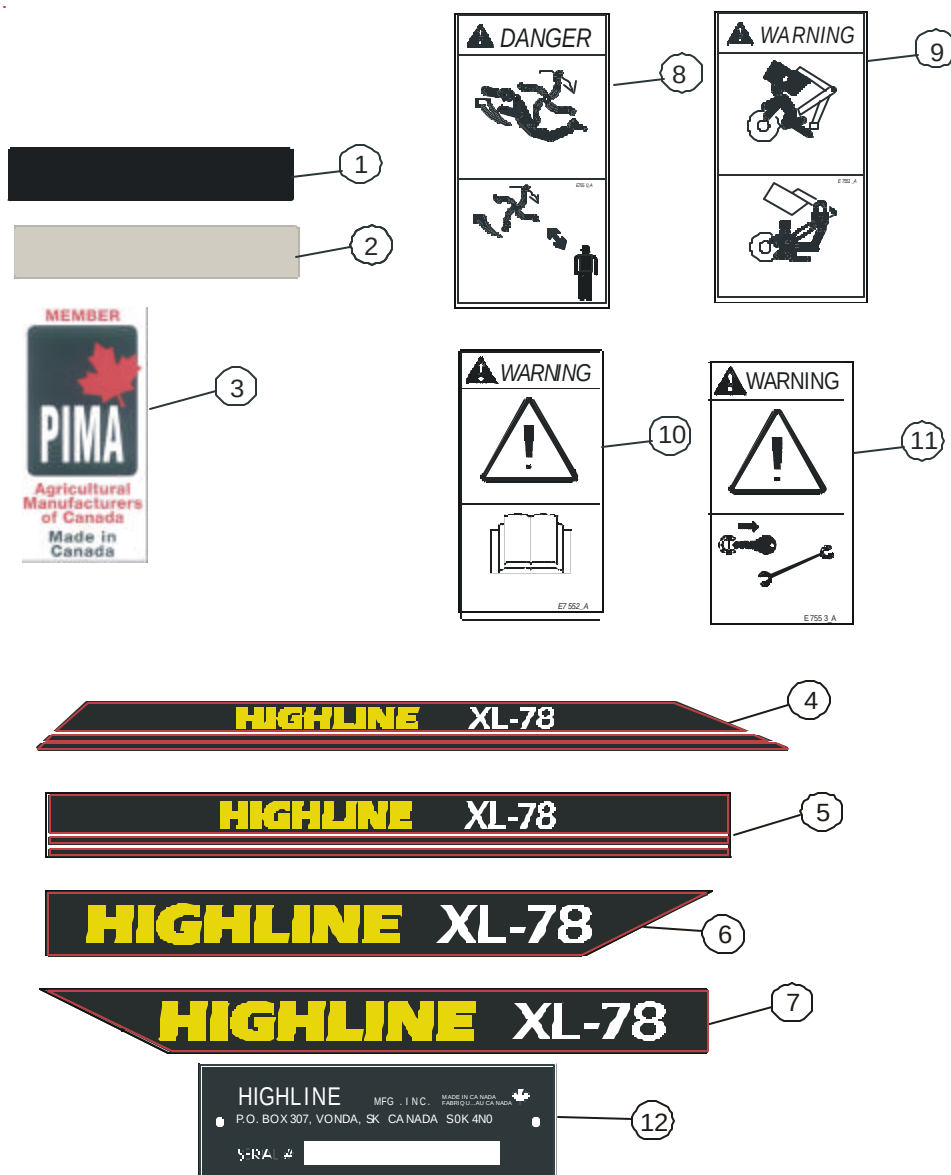
Warning: Always use both locks provided with the machine.



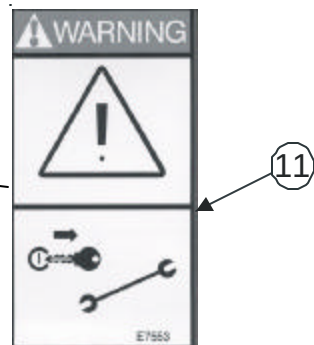
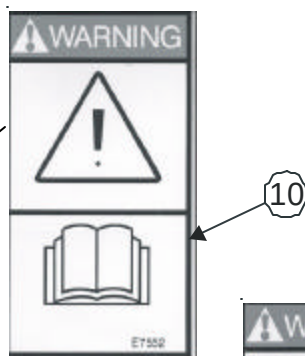
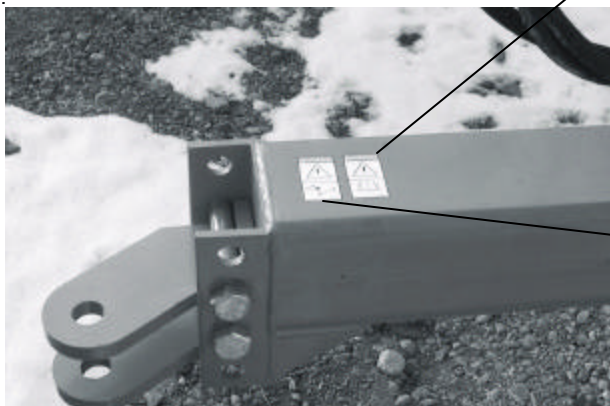
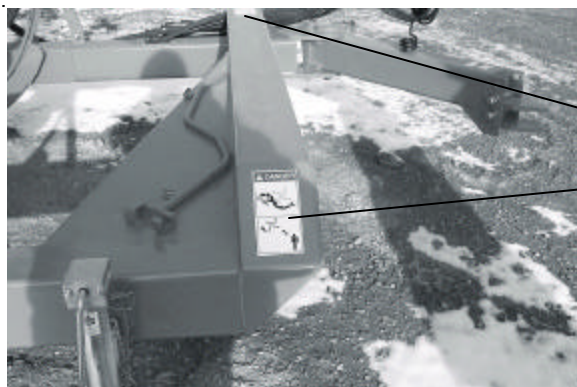
4.1 Decal Location and Placement (Part No. 70620)

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	30577	DECAL,RED REFL,2X9	2
2	30578	DECAL,AMBER REFL,2X9	2
3	32981	DECAL,PIMA	1
4	92598	DECAL,HIGHLINE,XL78,FRONT	1
5	92599	DECAL,HIGHLINE,XL78,BACK	1
6	92600	DECAL,HIGHLINE,XL78,LEFT	1
* 7	92601	DECAL,HIGHLINE,XL78,RIGHT	1
8	E7550	DECAL,DANGER,REEL_CRUSH	2
9	E7551	DECAL,WARNING,BUCKET_CRUSH	2
10	E7552	DECAL,WARNING,OWNERS_MANUAL	1
11	E7553	DECAL,WARNING,STOP_ENGINE/SERVICE	1
12	30208	PLT,SERIAL #	1

*Not shown







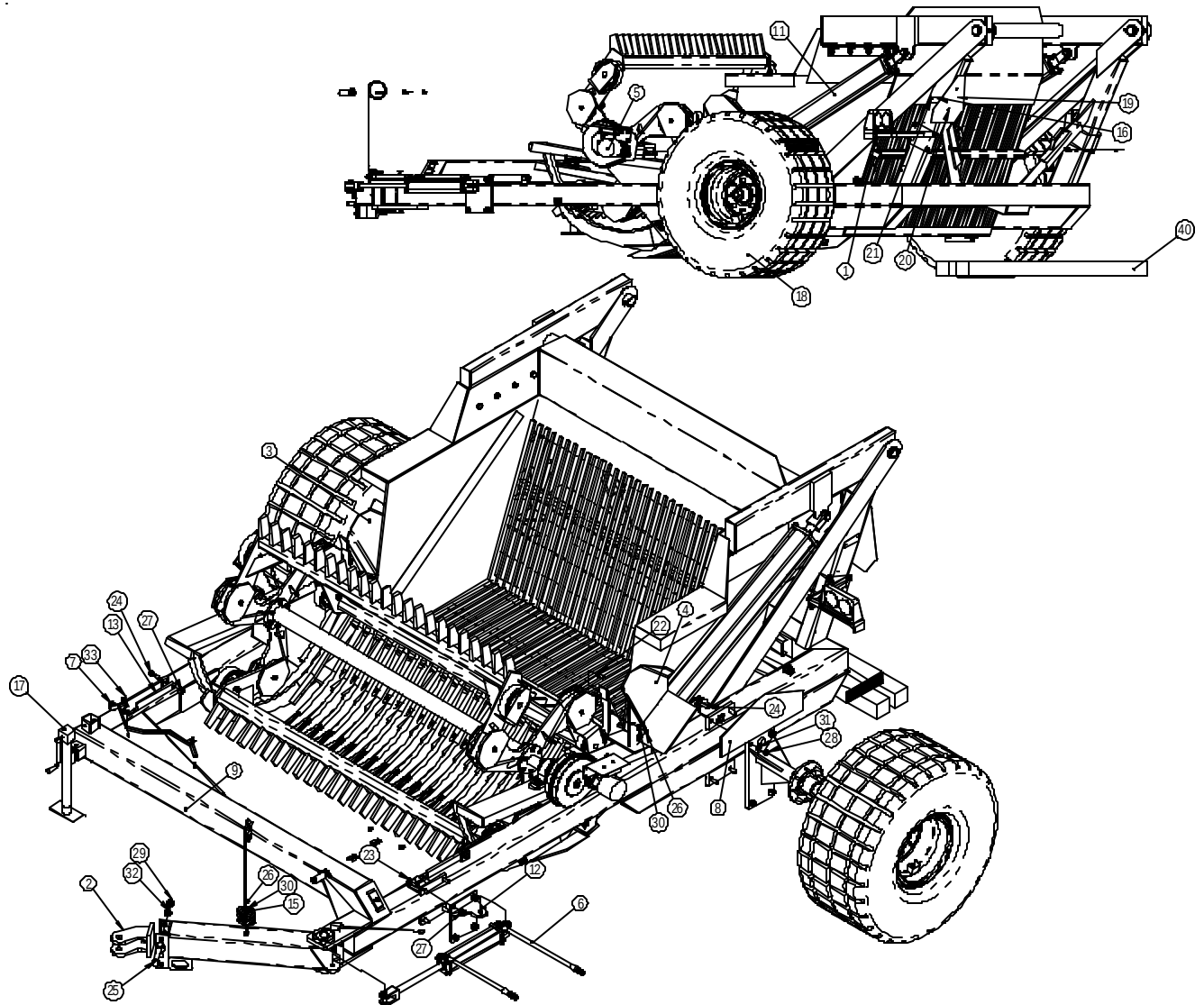
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5.0 Parts Information

5.1 Main Assembly

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	48106	KIT,LIGHT,XL78	1
2	70003	HITCH, CLEVIS,DOUBLE,ANGLE	1
3	70051	GUARD,CYL,DUMP,RIGHT	1
4	70052	GUARD,CYL,DUMP,LEFT	1
5	70083	HYDRAULIC MOTOR ASSEMBLY	1
6	70178	XL,OPTION,SWING HITCH-2	1
7	70179	TOOL,ROCKPICKER	1
8	70613	ASSY,AXLE,COMPLETE,78	2
9	70631	ASSY,PRE-PAINT,XL78-3	1
10	70620*	ASSY,DECALS,HIGHLINE,XL78	1
11	70623	ASSY,HYD,CYL,7	1
12	70626	WLDT,PLT,LUG,CYL	1
13	E4638	PLT,LOCK,TRANSPORT	2
14	E7488 *	MANUAL,HIGHLINE,XL78-3	1
15	30206	HYD,HOLDER,HOSE,1/2	1
16	30208	PLT,SERIAL#	1
17	31800	JACK,5000LBX15,SQ MNT,SIDEWIND	1
18	33036	WHEEL,21.5Lx16.1,+1.125,8,WH	2
19	92028	SIGN,SLOWMOVING,S276.5	1
20	30040	RIVET,ST,3/16x.815,.625 HEAD	2
21	30161	RIVET,ST,5/32x.665,.312 HEAD	2
22	31008	BOLT,CARR,1/2X1-1/2,UNC,GR5,ZP	4
23	31339	BOLT,HEX,3/4X2,UNC,GR5,ZP	4
24	31040	BOLT,HEX,3/4X2-1/2,UNC,GR5,ZP	10
25	31038	BOLT,HEX,1X7-1/2,UNC,GR5,ZP	2
26	31173	NUT,NYLOCK,1/2,UNC,ZP	5
27	31175	NUT,NYLOCK,3/4,UNC,ZP	6
28	31167	NUT,HEX,3/4,UNC,GR5,ZP	8
29	31172	NUT,NYLOCK,1,UNC,ZP	2
30	31236	WASHER,FLAT,1/2,ZP	5
31	31246	WASHER,LOCK,3/4,ZP	8
32	31243	WASHER,LOCK,1,ZP	2
33	31532	NUT,WING,1/4,UNC,ZP	2
34	31613*	TIE,CABLE,NYLON,BLACK,11 1/2"	5
35	31747 *	BAG,PLASTIC,6x9	1
36	30295(22)*	PAINT,ORANGE,HIGHLINE	1
37	30296(2)*	PAINT,CATALYST,SPO3937P2	1
38	33316(19)*	OIL,HYDRAULIC,UTF	1
39	33443(85)*	WIRE,WELDING	1
40	E7028	LUMBER,4X4X8FT,PINE,ROUGH	2

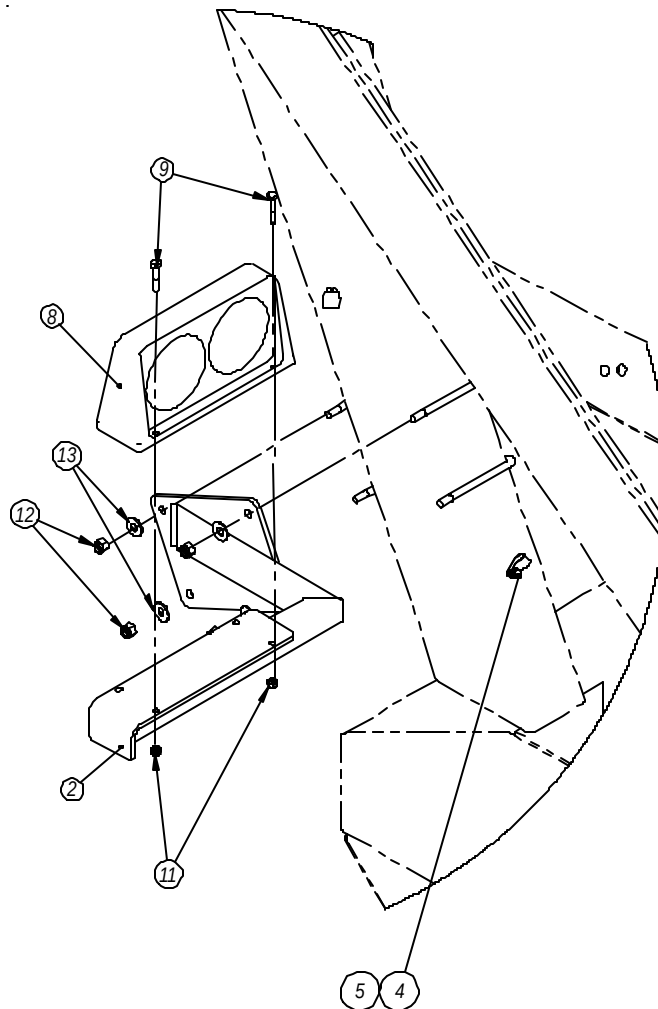
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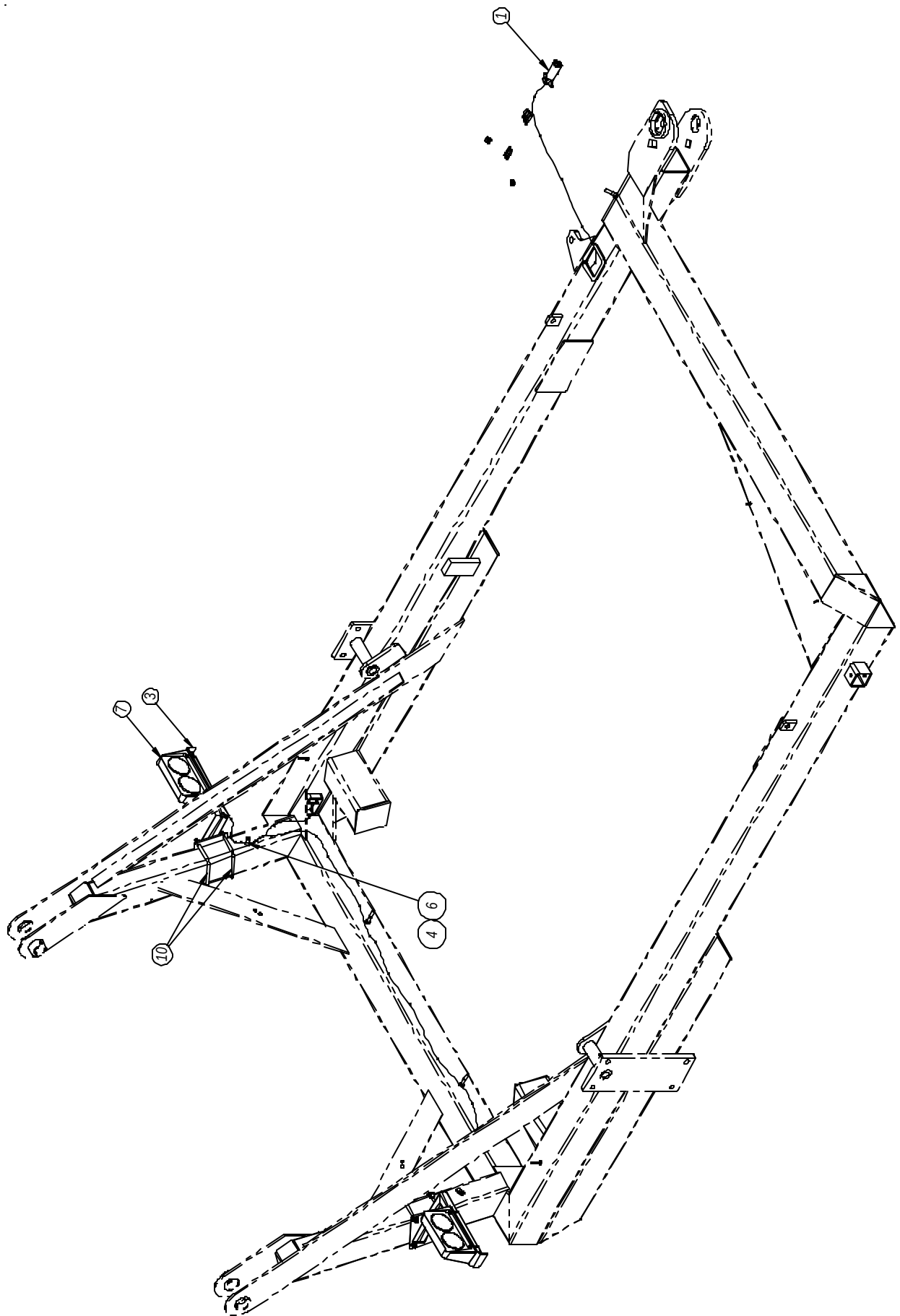


5.2 Light Kit Assembly (Part No. 48106)

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	48105	ELEC,HARNESS,LIGHTS,XL78	1
2	48109	BRACKET,LIGHT,RIGHT,RP	1
3	48110	BRACKET,LIGHT,LEFT,RP	1
4	30294	SCREW,TEK,1/4X1	2
5	31649	ELEC,CLAMP,CABLE,1/2	1
6	31650	ELEC,CLAMP,CABLE,3/4	1
7	30526	ELEC,LIGHT,RED&AMBER,LEFT	1
8	30527	ELEC,LIGHT,RED&AMBER,RIGHT	1
9	31535	BOLT,HEX,1/4X1-1/2,UNC,GR5,ZP	8
10	31686	BOLT,U,SQ,3/8-16,6x5	4
11	31174	NUT,NYLOCK,1/4,UNC,ZP	8
12	31176	NUT,NYLOCK,3/8,UNC,ZP	8
13	31351	WASHER,FLAT,3/8,ZP	8
14	31613*	TIE,CABLE,NYLON,BLACK,11 1/2"	12
15	E3794*	ELEC,LOOM,1/2,SPLIT,CORRUGATED	2

* NOT SHOWN





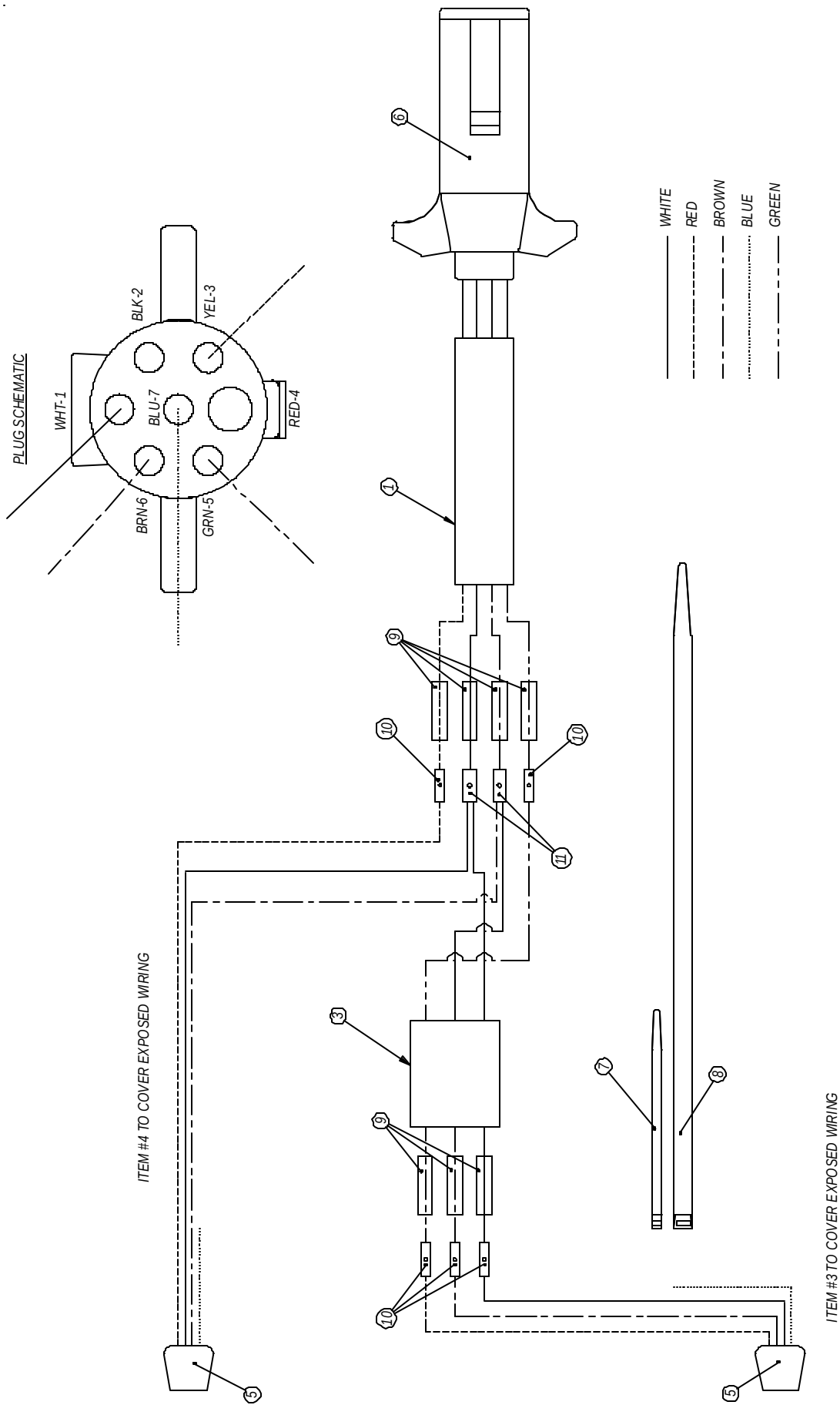
5.2.1 Light Harness Assembly (Part No. 48105)

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	E4244(25)	ELEC,CABLE,4-14,ULTRA-FLEX	1
2	E4245(9)	ELEC,CABLE,4-14,ULTRA-FLEX	1
3	E4246(1.5) [*]	ELEC,LOOM,1/2,SPLIT,CORRUGATED	1
4	E4247(1.5) [*]	ELEC,LOOM,3/4,SPLIT,CORRUGATED	1
5	30555	ELEC,CONNECTOR,LIGHT,FEMALE	2
6	30556	ELEC,CONN,7 WIRE,FEMALE	1
7	92170	TIE,CABLE,4",BLACK	10
8	31613	TIE,CABLE,NYLON,BLACK,11 1/2"	4
9	31976 **	ELEC,HEAT SHRINK,DUAL WALL,TUBE,1/4X48	7
10	31977	ELEC,CONN,BUTT,16-14GA,NON INSULATED	5
11	31978	ELEC,CONN,BUTT,12-10GA,NON INSULATED	2

*ITEMS NOT SHOWN

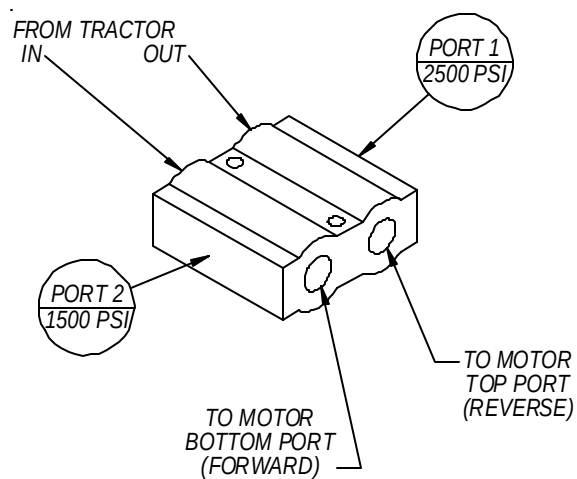
WIRE AND LOOM LENGTHS ARE IN FEET

**HEAT SHRINK TUBE LENGTH IN INCHES

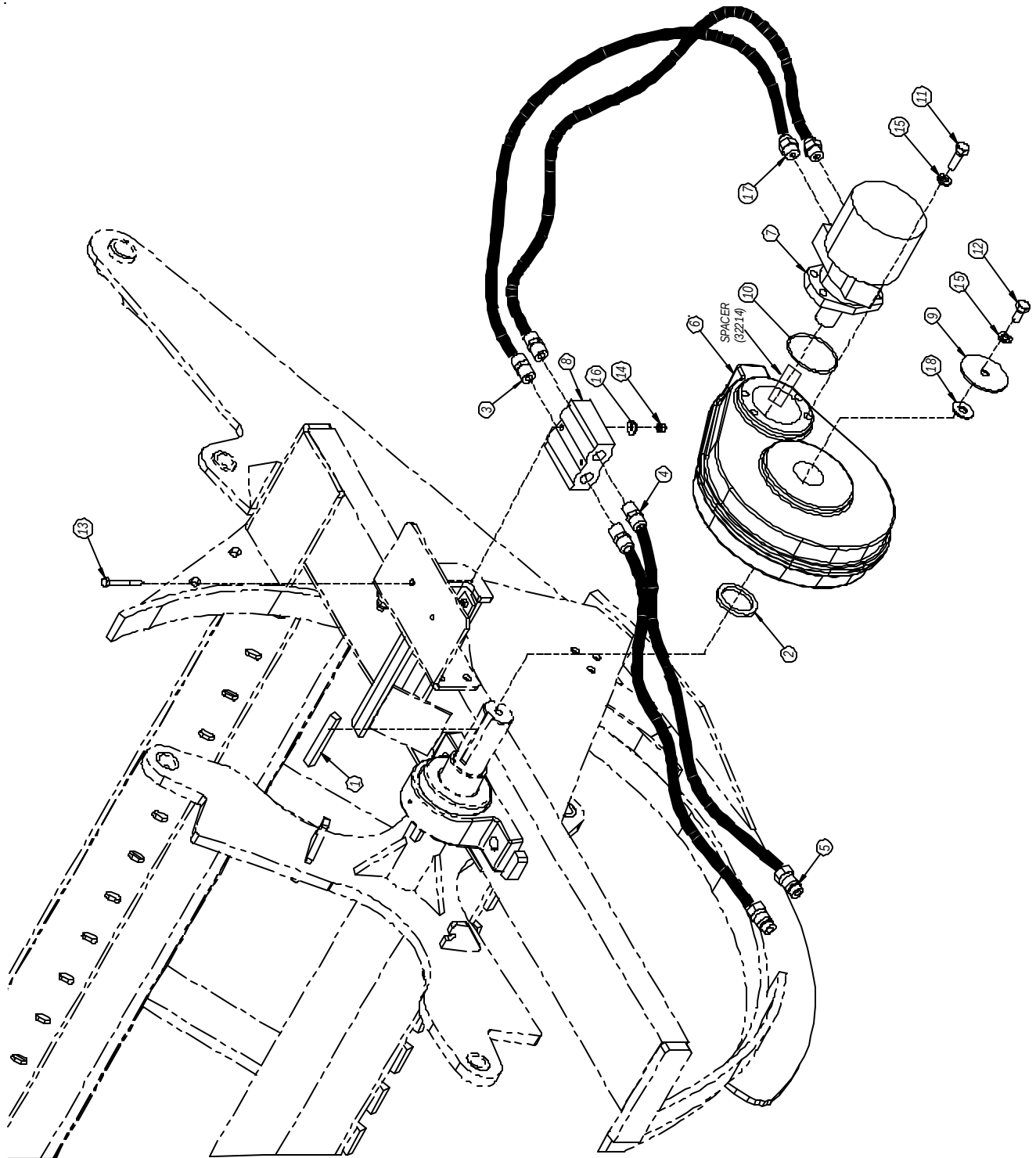


5.3 Hydraulic Motor Assembly (Part No. 70083)

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	E3045	KEY, SHAFT, DRIVE, REEL	1
2	E3044	PIPE, SMLS, 2-5/8x.281x1/4L	1
3	30586	HYD, HOSE, 1/2X20, 8FJX-8MP, 1W	2
4	31784	HYD, HOSE, 1/2X164, 8MP-8MP, 1W	2
5	30209	HYD, FIT, PIONEER, MALE, 8FP	2
6	32209	DRV, GEARBOX, COMPLETE, 590	1
7	32644	HYD, MOTOR, 18.3, 316RPM, 3000PSI	1
8	32660	HYD, VALVE, CUSHION	1
9	32734	WASHER, FLAT, 3-1/8ODX1/2	1
10	32786	O-RING, #151	1
11	31016	BOLT, HEX, 1/2X1-1/2, UNC, GR5, ZP	4
12	31069	BOLT, HEX, 1/2X1, UNC, GR5, ZP	1
13	31048	BOLT, HEX, 5/16X2-1/2, UNC, GR5, ZP	2
14	31177	NUT, NYLOCK, 5/16, UNC, ZP	2
15	31244	WASHER, LOCK, 1/2, ZP	5
16	31239	WASHER, FLAT, 5/16, ZP	2
17	30204	HYD, FIT, ADAPTER, 10MB-8MJ	2
18	31236	WASHER, FLAT, 1/2, ZP	1

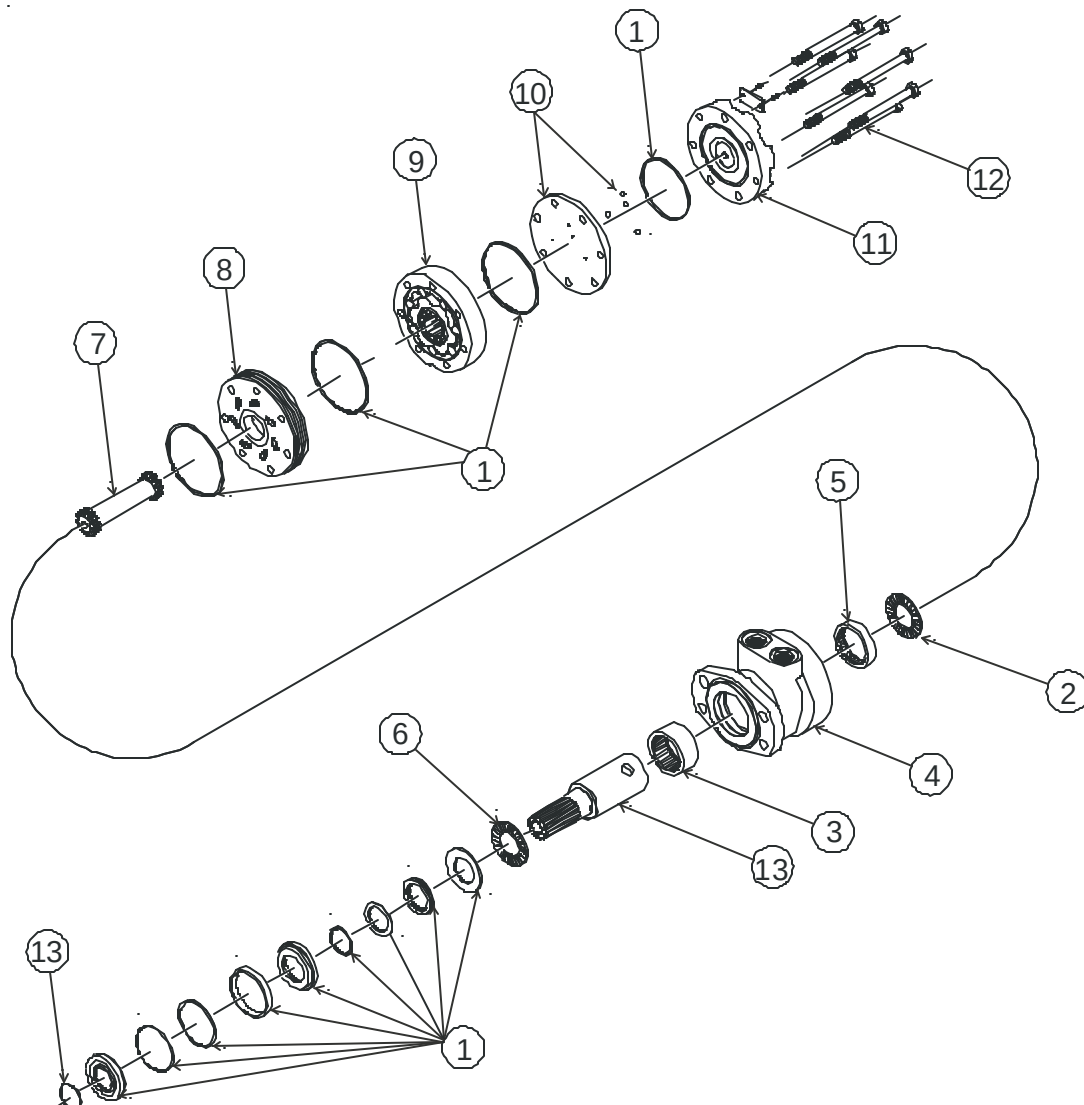


CUSHION VALVE ORIENTATION



5.3.1 Hydraulic Motor (Part No. 32644)

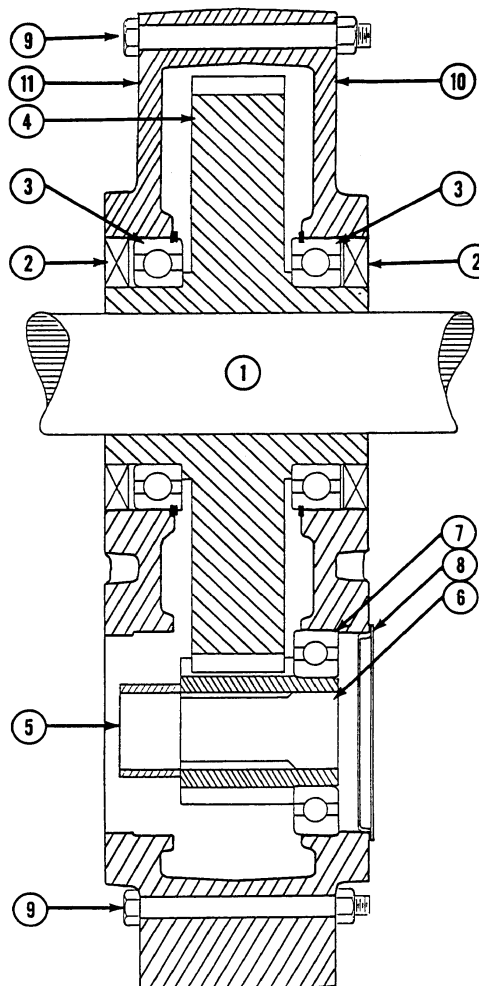
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	32647	SEAL KIT,ROLLER STAT OR	1
2	32651	BEARING,THRUST,REAR	1
3	32720	BEARING,HOUSING,FRONT	1
4	33047	HOUSING KIT	1
5	32649	BEARING,HOUSING,REAR,1/2	1
6	32639	BEARING,THRUST,FRONT	1
7	33048	DRIVE LINK	1
8	32725	MANIFOLD	1
9	33049	ROTOR KIT	1
10	32726	BALANCE PLATE & BALLS	1
11	32727	END COVER	1
12	33050	BOLT KIT,18	1
13	32653	SHAFT KIT	1



5.3.2 590 Parallel Drive Gearbox (Part No. 32209)

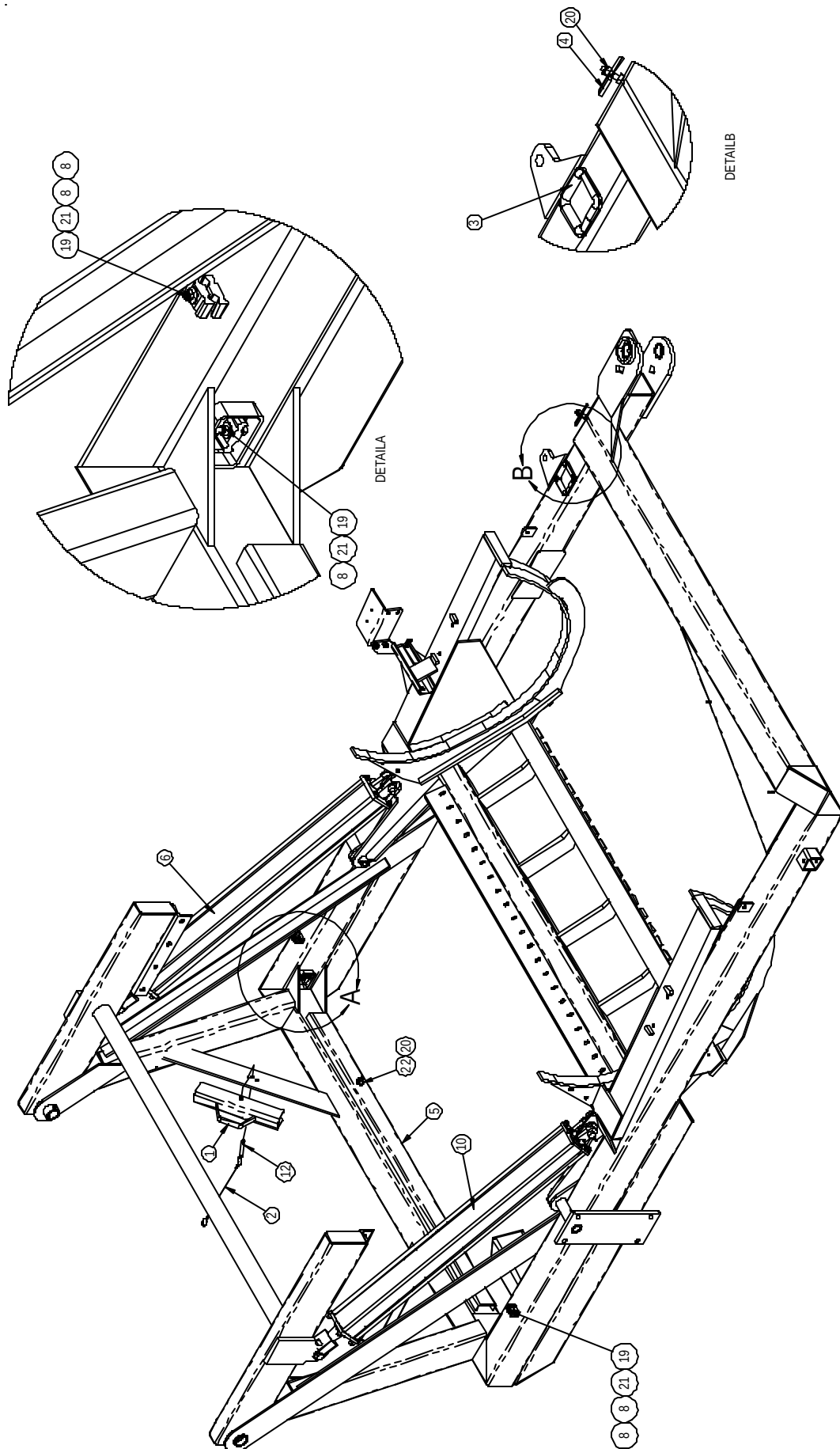
ITEM	PART NO.	DESCRIPTION	QTY
1	70094	DRIVE ARM REEL	1
2	32210	SEAL	2
3	32211	BEARING	2
4	32216	GEAR	1
5	32214	SPACER	1
6	32215	PINION	1
7	32212	BRG	2
8	32213	COVER	1
9	31050	BOLT, HEX, 5/16X3, UNC, GR5, ZP	12
10	31177	NUT, NYLOCK, 5/16, UNC ZP	12
11	32218	SHELL-BACK-PLAIN	1
12	32217	SHELL-FRONT-W/OIL PLUGS	1
*13		INTERNAL KEY	1
*14	31308	VENT PLUG - 1/4 NPT	1
*15	33022	KEY, GEAR - 58T	1
*16	33065	SLEEVE 2" BORE	1
*17	33066	SNAP RING (5100-300)	1

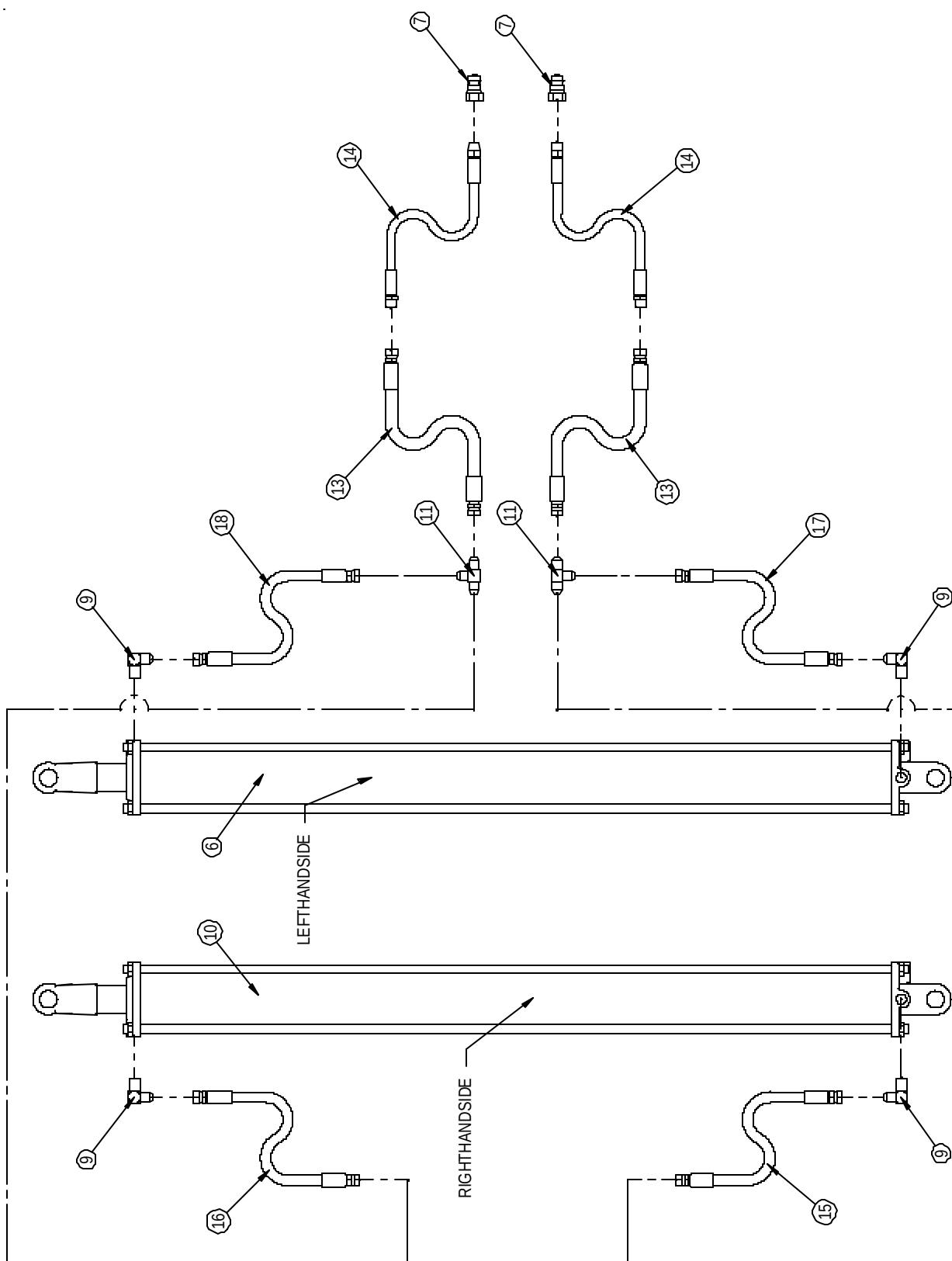
*Not Shown



5.4 Hydraulic Cylinder Assembly (Part No. 70623)

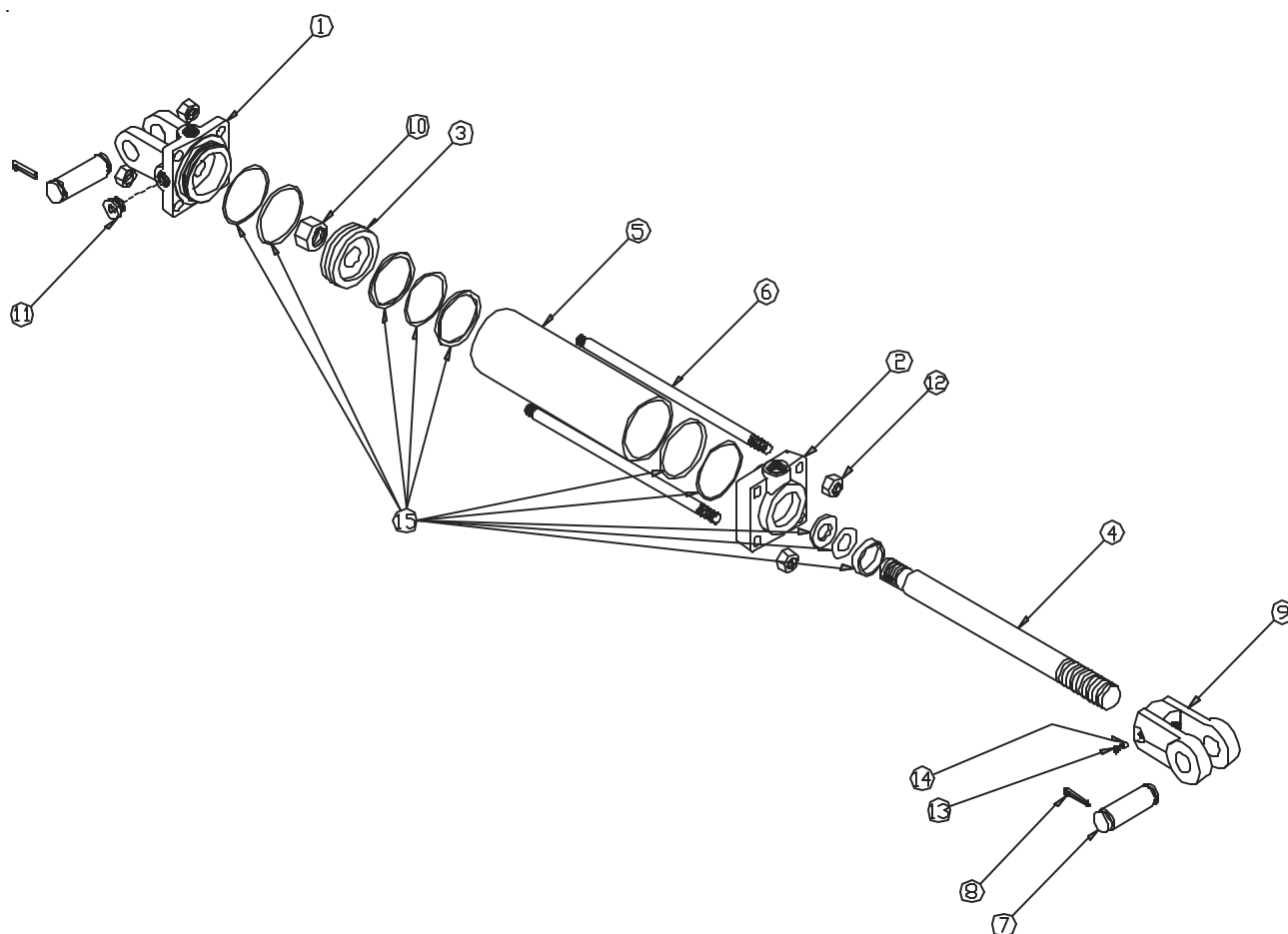
ITEMNO.	PARTNO.	DESCRIPTION	QTY.
1	70621	WLDT, LOCK, CYLINDER, XL-78	2
2	70632	TETHER, CABLE, 12"	2
3	E4247	ELEC, LOOM, SPLIT, 3/4X18	1
4	E5553	CLAMP, HOSE, HYD	1
5	E5563	GUARD, LINE, HYDRAULIC	1
6	30160	HYD, CYL, 4.5X42, 2.0, 3/4-16UNFORB, LHS	1
7	30209	HYD, FIT, PIONEER, MALE, 8FP	2
8	30210	HYD, CLAMP, HOSE, 1/2	5
9	30211	HYD, FIT, ELBOW, 8MB-8MJ90	4
10	30213	HYD, CYL, 4.5X42, 2.0, 3/4-16UNFORB, RHS	1
11	30313	HYD, FIT, TEE, 8MJ-8MJ-8MJ	2
12	31813	PIN, QUICKRELEASE, 1/2X3, ZP	2
13	30139	HYD, HOSE, 1/2X169, 8FJX-8FJX, 1W	2
14	30159	HYD, HOSE, 1/2X96, 8MP-8MJ, 1W	2
15	31791	HYD, HOSE, 3/8X162, 8FJX-8FJX, 1W	1
16	31792	HYD, HOSE, 3/8X156, 8FJX-8FJX, 1W	1
17	32054	HYD, HOSE, 3/8X54, 8FJX-8FJX, 1W	1
18	32972	HYD, HOSE, 3/8X66, 8FJX-8FJX, 1W	1
19	31177	NUT, NYLOCK, 5/16, UNC, ZP	3
20	31173	NUT, NYLOCK, 1/2, UNC, ZP	3
21	31239	WASHER, FLAT, 5/16, ZP	3
22	31236	WASHER, FLAT, 1/2, ZP	2





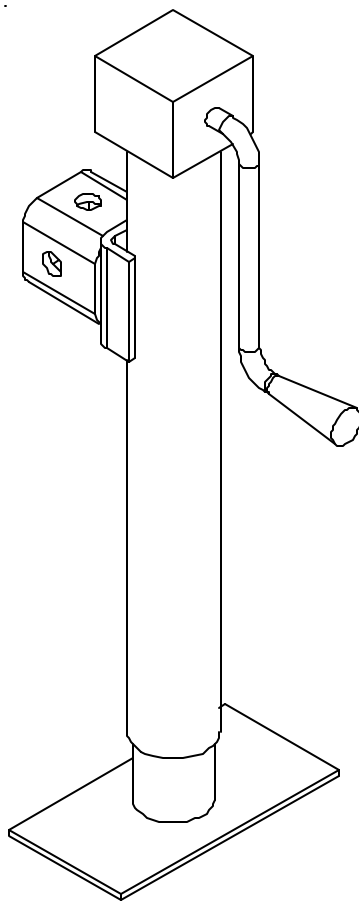
5.4.1 4-1/2x42 Cylinder (Part No. 30160 - LHS, 30213 - RHS)

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	30175	HYD,C LEVIS,CAP,4.50 ORB,1.25 PIN	1
2	30176	HYD,CYL,CAP,ROD,4-1/2,2,12FB	1
3	30177	HYD,CYL,PISTON,4-1/2,MONARCH	1
4	30178	HYD,CYL,ROD,2X51-3/4,MONARCH	1
5	30179	HYD,CYL,TUBE,CYL,4-1/2X51-9/16	1
6	30180	HYD,CYL,5/8X51-9/16,MONARCH	4
7	30181	HYD,CYL,PIN,1-1/4,H2094	2
8	30182	PIN,COTTER,HAMERLOCK,3/16X1-1/4	4
9	31796	HYD,CAP,C LEVIS,4 1/2 X 42,HARD	1
10	30192	NUT,HEX,1 1/4-12UNF GRB	1
11	30193	HYD,FIT,PLUG,3/4"-16 UNF,STRTHD	1
12	30663	NUT,HEX,5/8" UNF GRADE 5	8
13	30239	SETSCREW,SOCKET,3/8X1/2 KNU RL	1
14	30261	LOCK,TH READ,NYLON	1
15	30338	HYD,CYL,SEALKIT,4-1/2,2" ROD	1



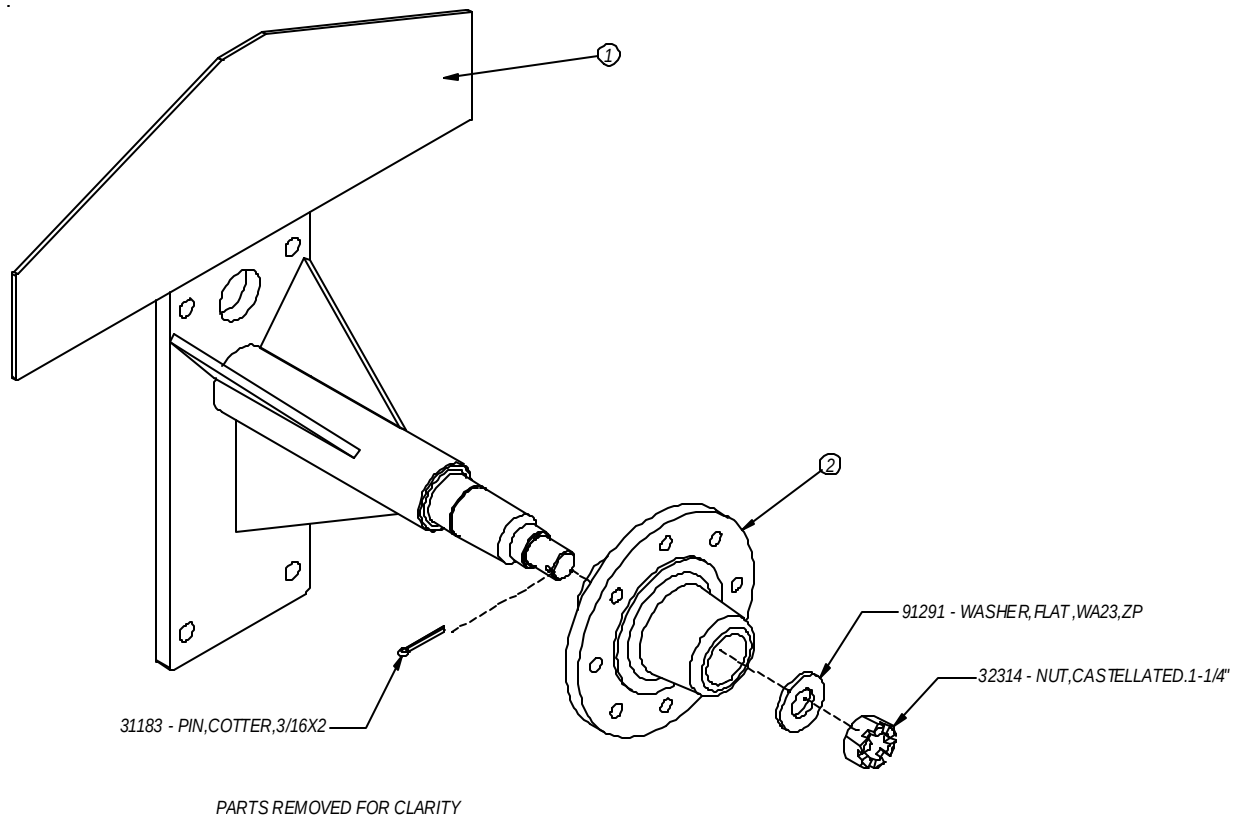
5.5 Jack Assembly (Part No. 31800)

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	31800	JACK,5000LBX15,SQ MNT,SIDEWIND	1
2	33438	KIT,PIN & CHAIN-5/8"X4.25"	1
3	33439	KIT,5K BEARING REPLACEMENT	1
4	33440	KIT,STD BEVEL GEAR REPLAC.	1
5	33441	KIT,SW CRN CRANK REPLAC.	1
6	33442	COVER,GEARBOX	1



5.6 Axle Assembly (Part No. 70613)

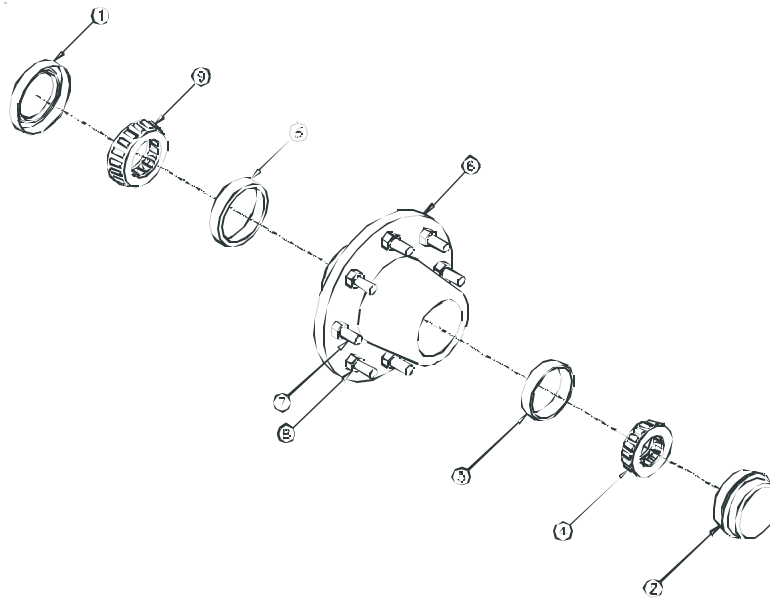
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	70612	WLDT,AXLE,78	1
2	32327	SUSP,HUB,HA817-3,COMPLETE	1



5.6.1 H817 Hub (Part No. 32327)

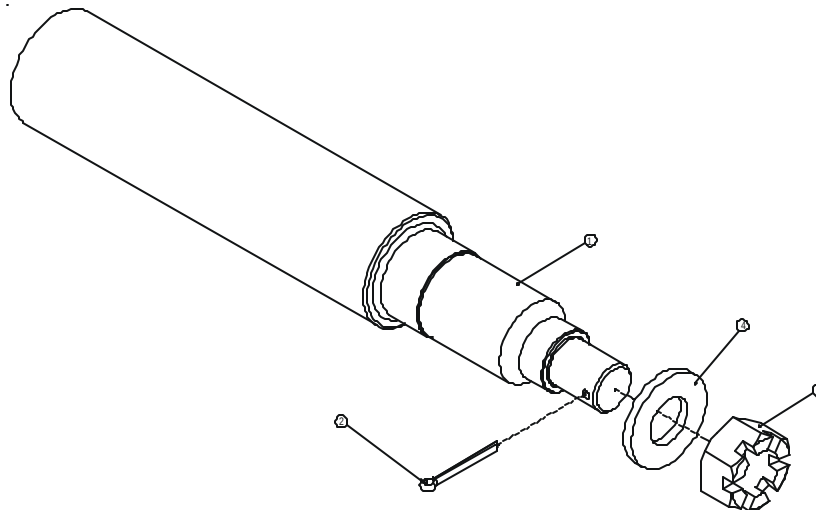
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	32323	SUSP,SEAL,SE42 (CR 29952)	1
2	32313	SUSP,CAP,DUST,DC26	1
3	32322	SUSP,CUP,INNER,#301110 382A	1
4	32315	SUSP,BRG,OUTER,LM501349	1
5	32316	BRG,RACE,OUTER,LM501310	1
6	32318	SUSP,HUB,H817	1
7	32320	SUSP,STUD,WHEEL,5/8	8
8	32319	SUSP,NUT,WHEEL,5/8	8
9	32321	SUSP,BRG,387AS	1
*10	30207	ZERK,1/4-28,GF641,STRAIGHT	1

*Not Shown



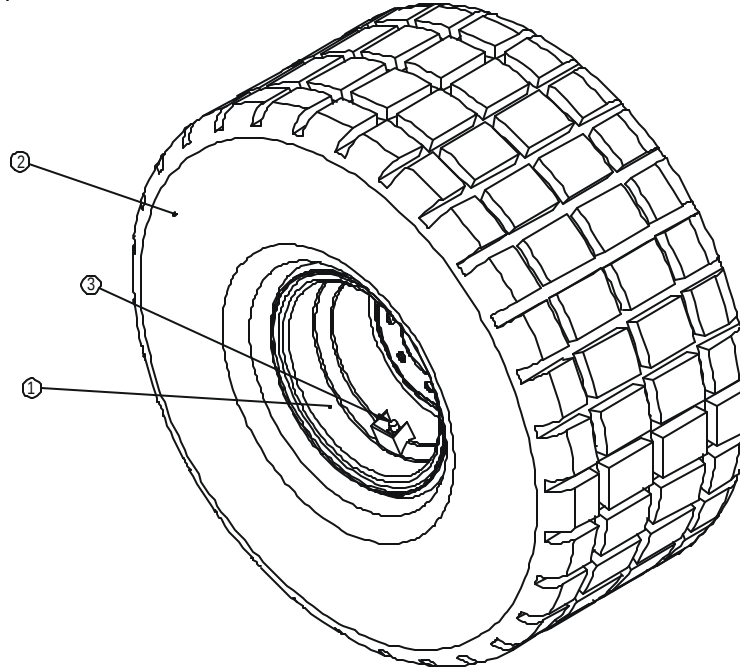
5.6.2 Spindle Assembly (Part No. 33045)

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	33045	SUSP,SPINDLE,S817,18.5,COMPLETE	1
2	31183	PIN,COTTER,3/16X2	1
3	32314	NUT,CASTELLATED,1-1/4	1
4	91291	WASHER,FLAT,WA23,ZP	1



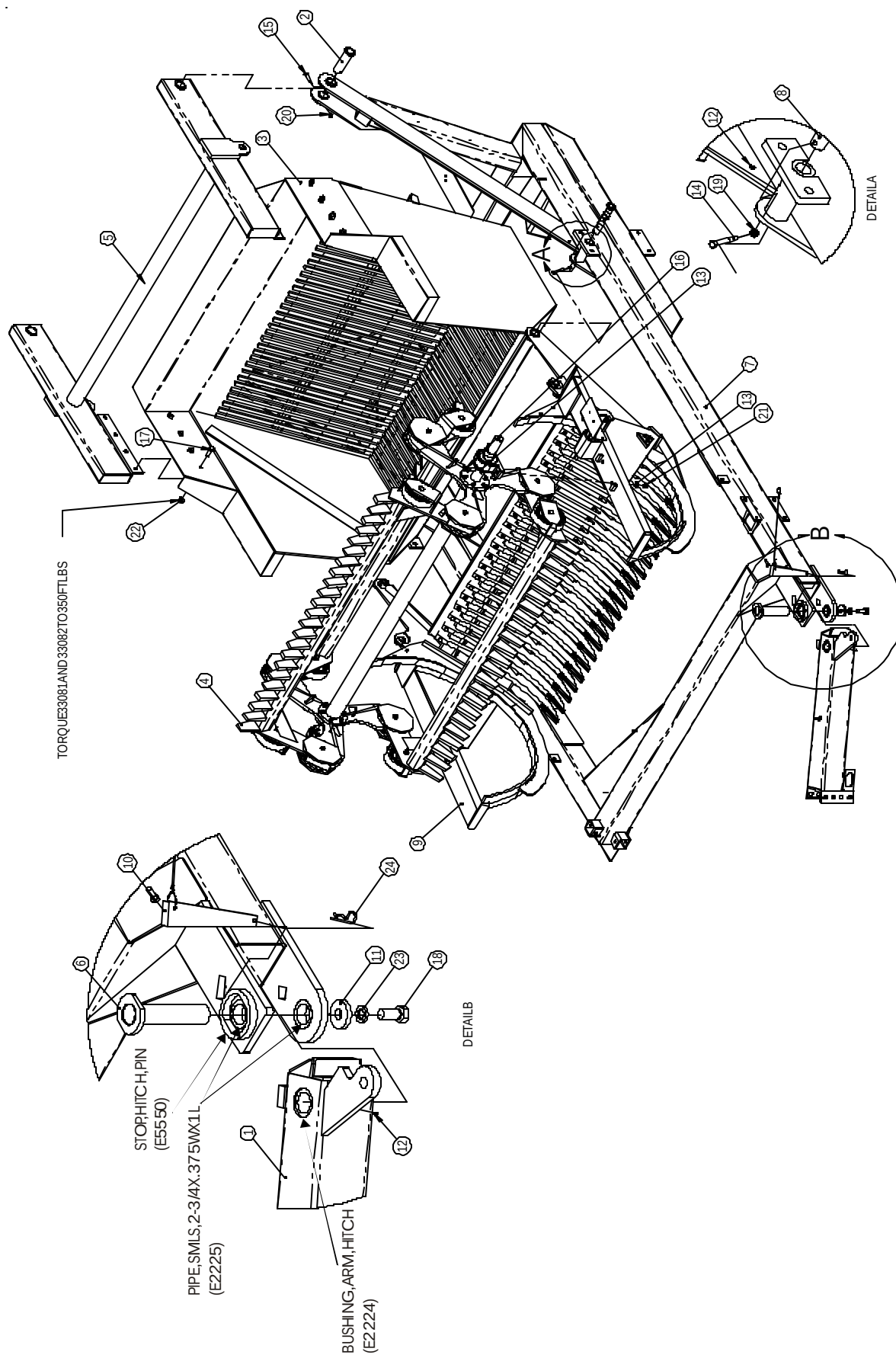
5.7 Wheel Assembly (Part No. 33036)

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	33035	SUSP, RIM,W16CX16.1,+1.125,8,WH	1
2	30136	SUSP,TIRE,21.5LX16.1,ST 2,10 PLY	1
3	91048	SUSP,STEM,VALVE,TR801HP	1



5.8 Pre-Paint Assembly (Part No. 70631)

ITEMNO.	PARTNO.	DESCRIPTION	QTY.
1	70002	ARM,HITCH	1
2	70025	PIN,DUMP	2
3	70089	BUCKET,7	1
4	70090	REEL,COMPLETE,7	1
5	70091	DUMP,BUCKET,7,3/4HOLES	1
6	70190	HITCH,PIN	1
7	70627	WLDT,FRAME,7,HIGHLINE	1
8	70628	WLDT,PIN,APRON	2
9	70630	ASSY,APRON,XL78-3	1
10	70300	HITCH,STOP,ASSY	1
11	E2240	WASHER,HITCH,BOTTOM	1
12	30207	ZERK,1/4-28,GF641,STRAIGHT	3
13	32075	WASHER,FLAT,1-1/2X11/16X3/16	8
14	33506	BOLT,HEX,7/16X3,UNC,GR8,ZP	2
15	31023	BOLT,HEX,1/2X3-1/2,UNC,GR5,ZP	2
16	31054	BOLT,HEX,5/8X2-1/2,UNC,GR5,ZP	4
17	33081	BOLT,HEX,3/4X2,UNF,GR8,ZP	8
18	33083	BOLT,HEX,1X2,UNC,GR5,ZP	1
19	31560	NUT,NYLOCK,7/16,UNC,GR5,ZP	2
20	31173	NUT,NYLOCK,1/2,UNC,ZP	2
21	31169	NUT,STOVER,5/8,UNC,GR5,ZP	4
22	33082	NUT,STOVER,3/4,UNF,GR8,ZP	8
23	31243	WASHER,LOCK,1,ZP	1
24	91609	PIN,HITCH,5/32X3	1

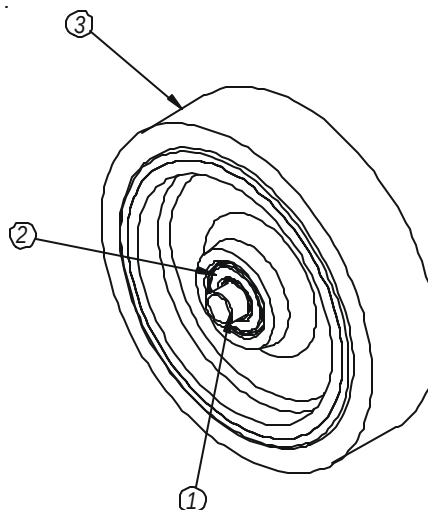


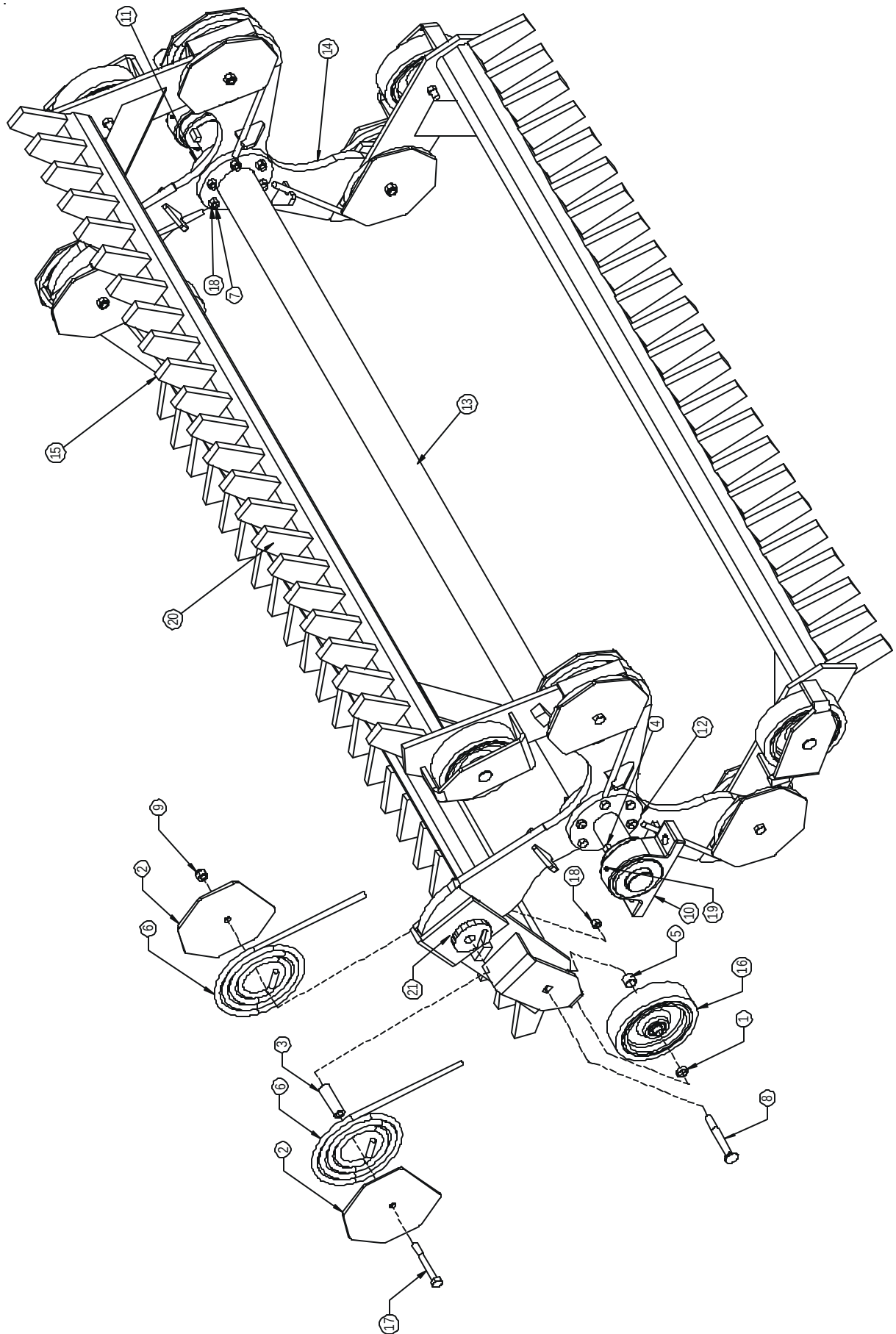
5.8.1 Reel Assembly (Part No. 70090)

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	E2304	PIPE,SCH40,3/4x1/4L	6
2	E4548	PLT,RETAINER,SPRING	12
3	E4549	PIPE,SMLS,1x.188x3-1/4L	6
4	E4559	PLT,R,1/2x1/2x1	2
5	E4626	PIPE,SCH40,3/4x11/16L	6
6	30138	SPRING,REEL	12
7	31022	BOLT,HEX,1/2X3,UNC,GR8,ZP	12
8	31642	BOLT,CARR,5/8X5,UNC,GR5,ZP	6
9	31646	NUT,NYLOCK,9/16,UNC,GRC,ZP	6
10	32373	DRV,BRG,PILLOW-BLOCK,2-7/16	2
11	70094	DRIVE,ARM,REEL	1
12	70095	IDLER,ARM,REEL	1
13	70096	TUBE,ARM,REEL	1
14	70097	ARM,REEL,7	2
15	70105	BATT,REEL,7	3
16	70106	WHEEL,BOGIE,COMPLETE	6
17	31644	BOLT,HEX,9/16X4-1/2,UNC,GR8,ZP	6
18	31612	NUT,STOVER,1/2,UNC,ZP	18
19	30207	ZERK,1/4-28,GF641,STRAIGHT	2
20	E2304	TOOTH,REEL	
21	E2308	PIPE,SMLS,1-1/2X.240X3/4L	

5.8.1.1 Bogie Wheel Assembly (Part No. 70106)

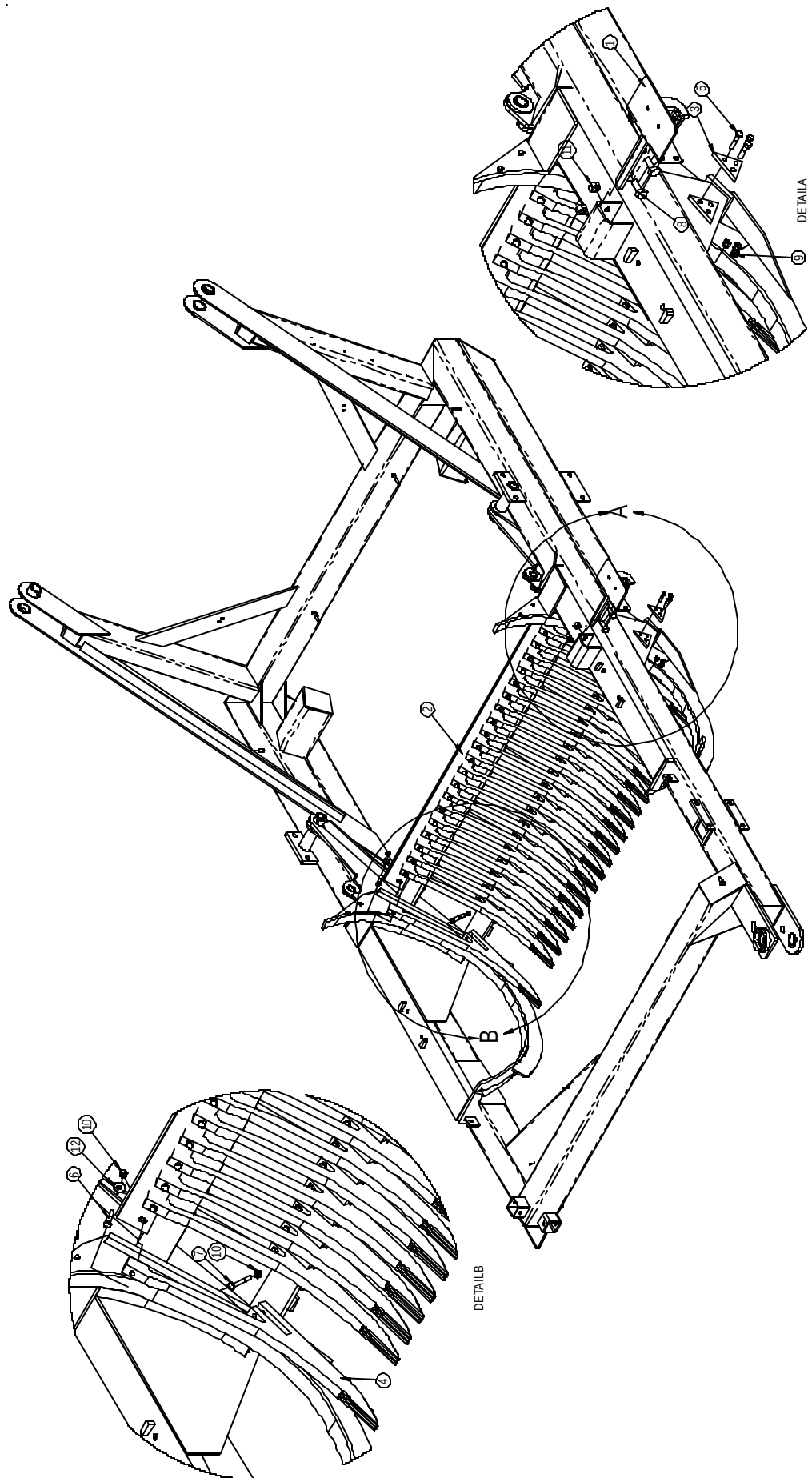
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	E4627	BUSHING,WHEEL,BOGIE	1
2	32376	BEARING,BALL,.788,1.65	2
3	32357M	CASTING,RUBBERIZED	1





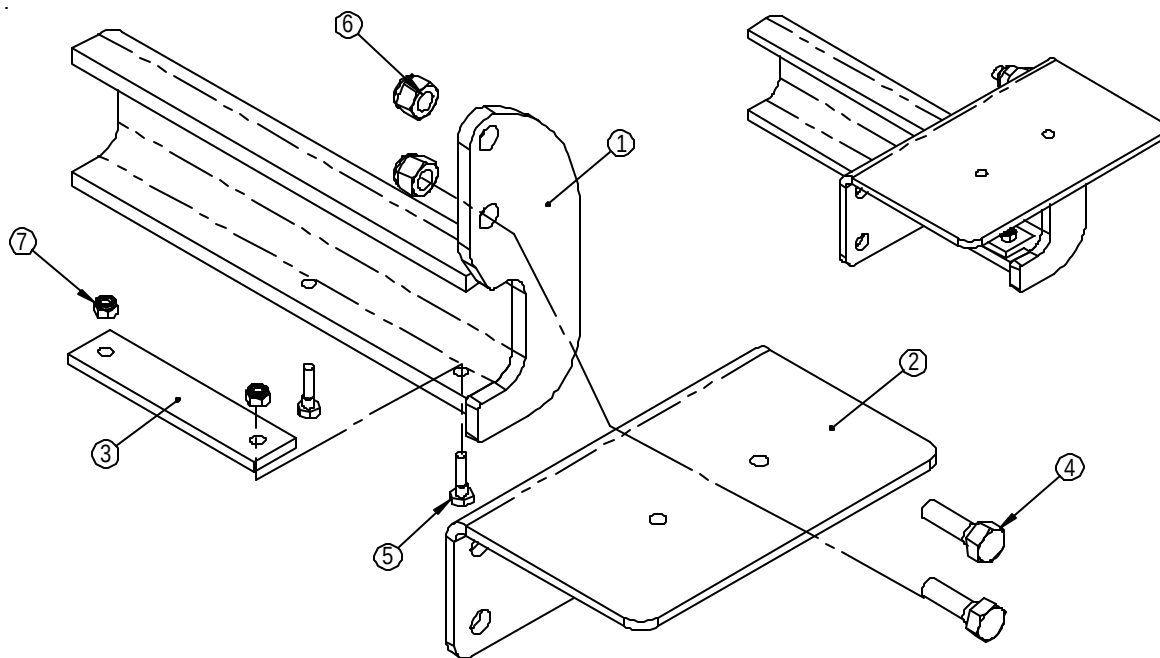
5.8.2 Apron Assembly (Part No. 70630)

ITEMNO.	PARTNO.	DESCRIPTION	QTY.
1	70129	MOUNT, VALVE/GEARBOX	1
2	70629	WLDT, APRON, XL78-3	1
3	E5346	STOP, APRON, DBL	4
4	32466M	TYNE, APRON, HARDENED	22
5	31070	BOLT, HEX, 1/2X2, UNC, GR5, ZP	6
6	31019	BOLT, HEX, 1/2X2-1/2, UNC, GR8, ZP	22
7	31024	BOLT, HEX, 1/2X3-1/2, UNC, GR8, ZP	22
8	31338	BOLT, HEX, 3/4X1-3/4, UNC, GR5, ZP	2
9	31173	NUT, NYLOCK, 1/2, UNC, ZP	6
10	31612	NUT, STOVER, 1/2, UNC, ZP	44
11	33234	NUT, STOVER, 3/4, UNC, GR5, ZP	2
12	31236	WASHER, FLAT, 1/2, ZP	22



5.8.2.1 Gearbox Mount Assembly (Part No. 70129)

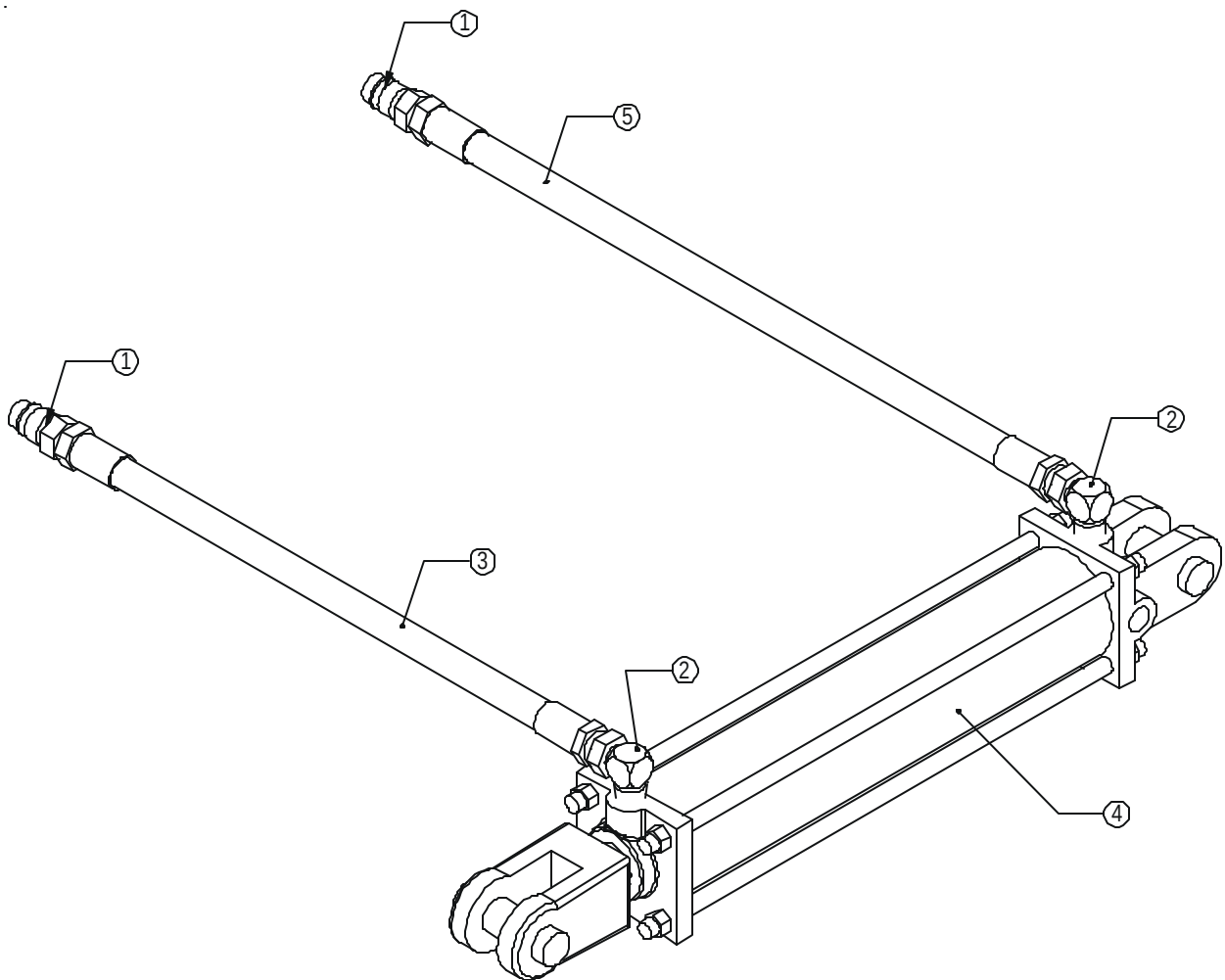
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	70128	BUMPER,GEARBOX	1
2	E2339	ANCHOR,VALVE,CUSHION,HYDRAULIC	1
3	E4502	BUMPER,MOTOR,HYDRAULICS	1
4	31016	BOLT,HEX,1/2X1-1/2,UNC,GR5,ZP	2
5	31029	BOLT,HEX,1/4X1,UNC,GR5,ZP	2
6	31173	NUT,NYLOCK,1/2,UNC,ZP	2
7	31174	NUT,NYLOCK,1/4,UNC,ZP	2



6.0 Options

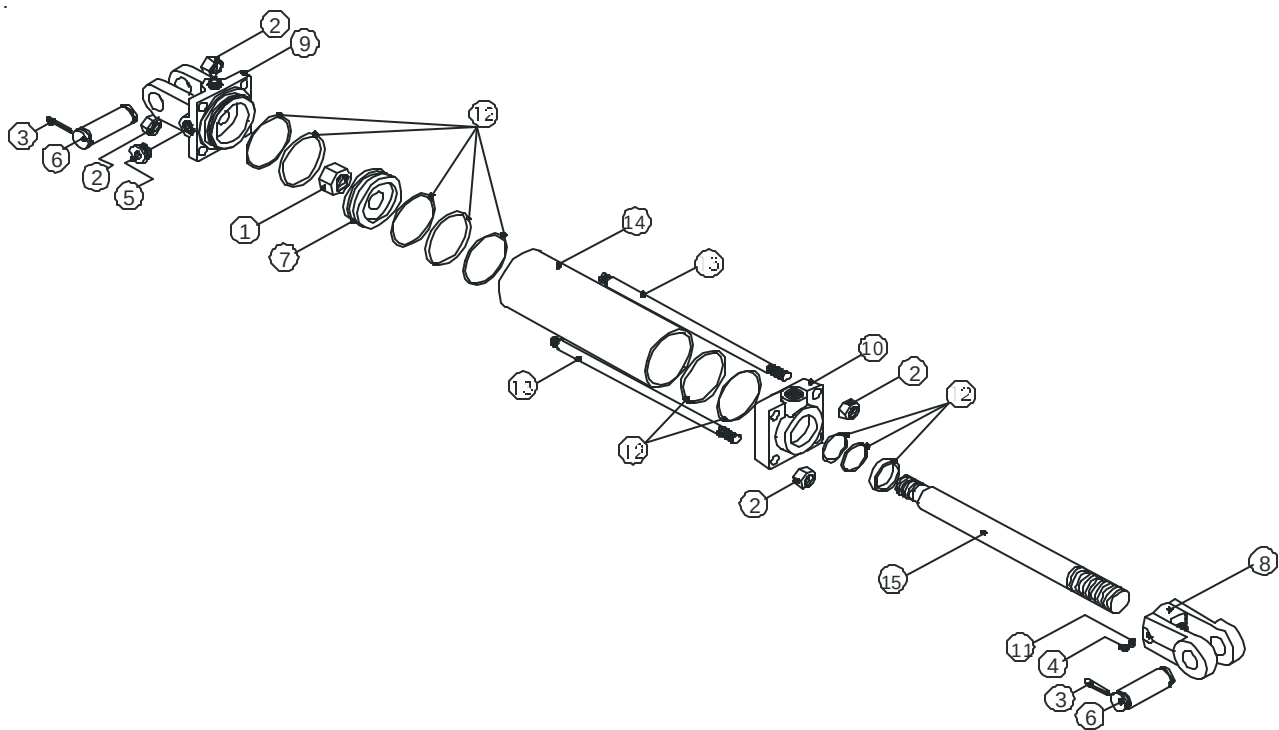
6.1 Swing Hitch Assembly (Part No. 70178)

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	30209	HYD,FIT,PIONEER,MALE,8FP	2
2	30212	HYD,FIT,ELBOW,8MP-8MJ90	2
3	31850	HYD,HOSE,3/8X108,8FJX-8MP,1W,1W	1
4	32247	HYD,CYL,3X14,1.25,8FP	1
5	90301	HYD,HOSE,3/8X120,8MP-8FJX,1W	1



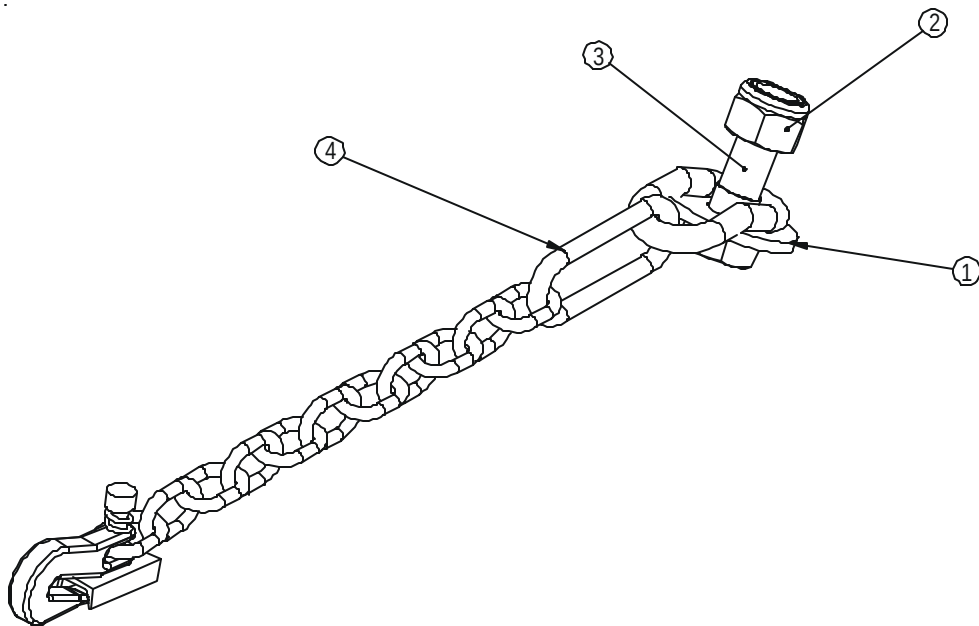
6.1.1 3x14 Cylinder (Part No. 32247)

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	31163	NUT,HEX,1/2,UNC,GR5,ZP	8
2	30237	NUT,HEX,1,UNS,GR5	1
3	30238	PIN,COTTER,3/16X1-1/2	4
4	30239	SETSCREW, SOCKET,3/8X1-1/2KNUR	1
5	30240	HYD,FIT,PLUG,1/2-14,NPTF,DRYSEAL	1
6	32250	HYDCYL,PIN,1	2
7	30250	HYD,CYL,PISTON,3,H6680	1
8	30253	HYD,CLEVES,1-1/4,1PIN	1
9	30256	HYD,CYL,CLEVIS,CAP, 3,NPTF	1
10	30257	HYD,CYL,CAP, ROD,3X1-1/4,NPTF	1
11	30261	LOCK,THREAD,NYLOCK	1
12	30262	HYD,CYL,SEALKIT,3,1-1/4ROD	1
13	33023	HYD,CYL,TIEROD,1/2X14	4
14	33024	HYD,CYL,3X14,H6140	1
15	33025	HYD,CYL,ROD,1-1/4X16-5/8	1



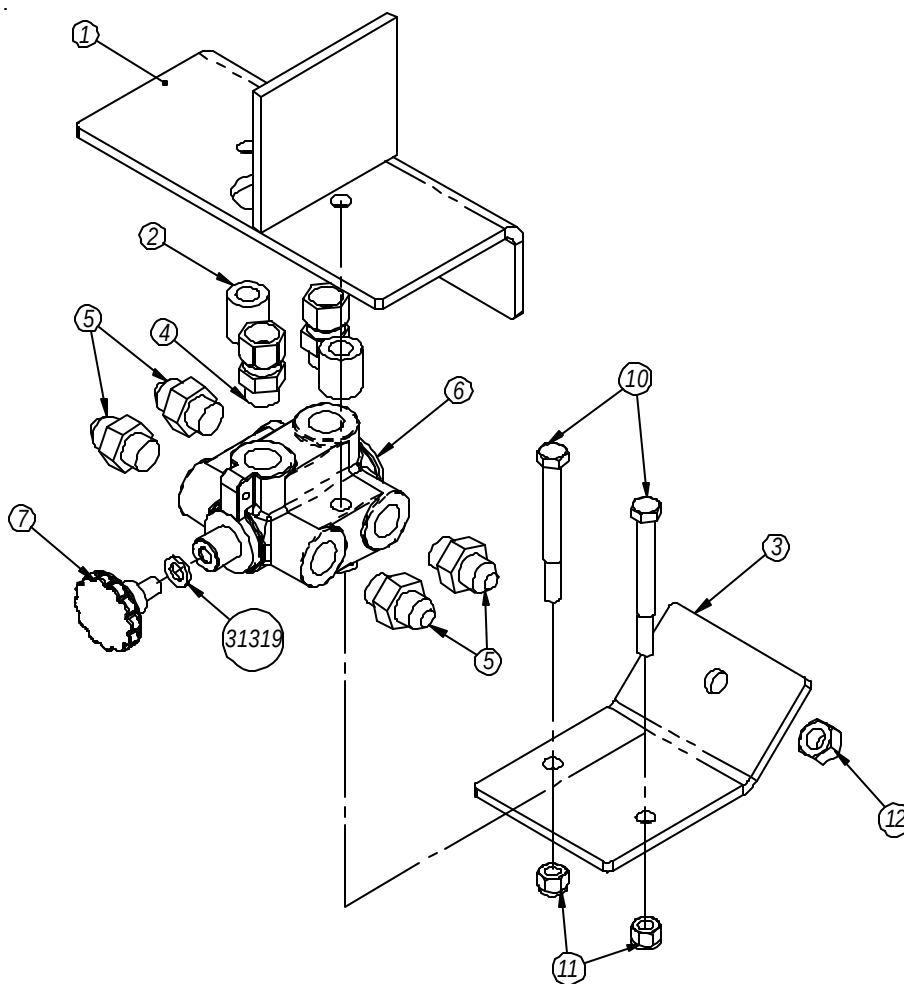
6.2 Safety Chain Option (Part No. 70604)

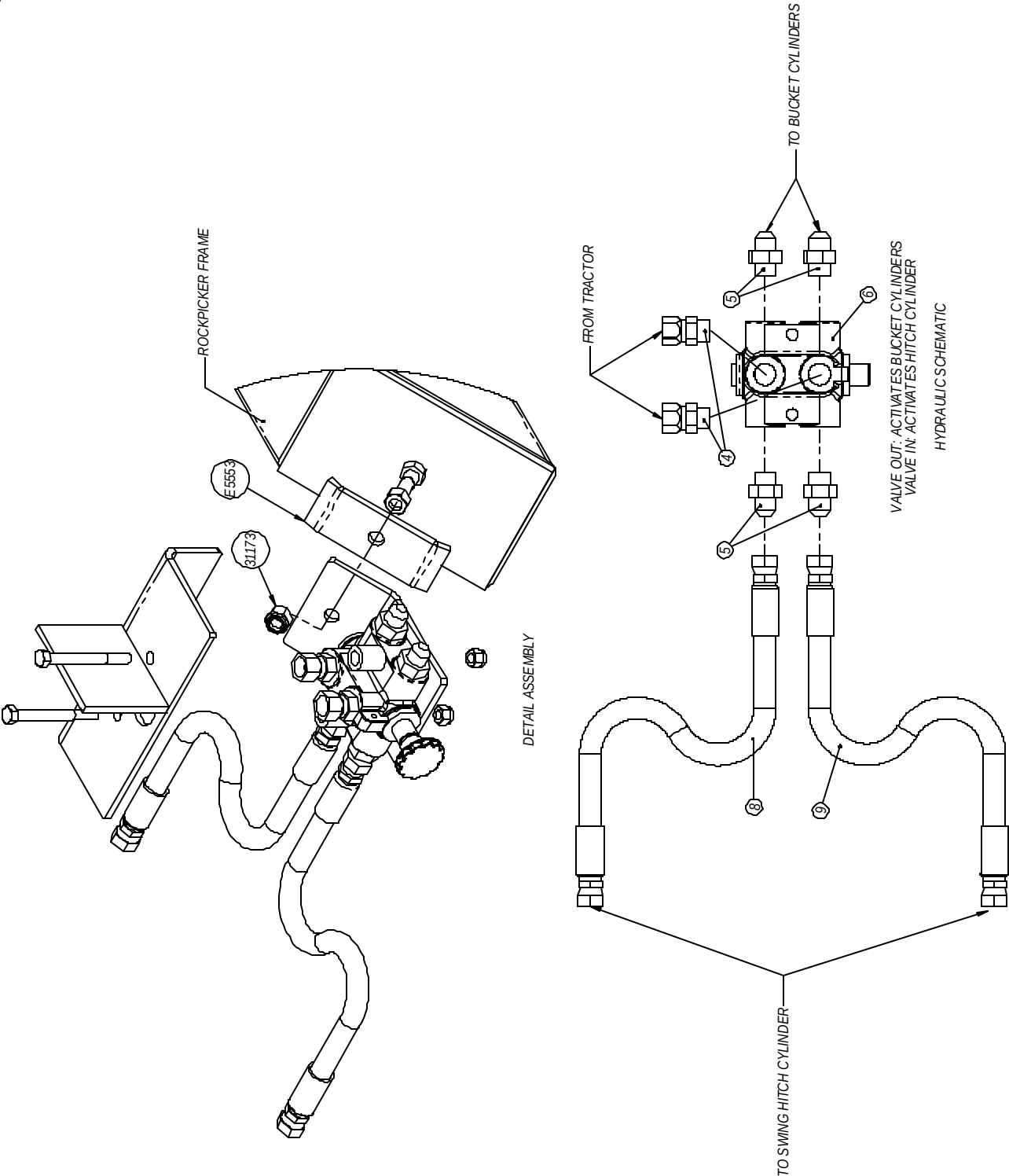
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	E6151	PLT,C,1/4x3	1
2	31172	NUT,NYLOCK,1,UNC,ZP	1
3	31471	BOLT,HEX,1X3,UNC,GR5,ZP	1
4	31590	CHAIN,SAFETY,ASAE,10100LB,5'4"	1



6.3 Selector Valve Option (Part No. RPOSV-3 (89042))

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	70605	WLDT, GUARD, DBL VALVE, RP	1
2	E6174	PIPE, SMLS, 7/8x.188x1L	2
3	E6879	BRACKET, DBL VALVE MOUNT, RP	1
4	30152	HYD, FIT, ADAPTER, 8MB-8FJX	2
5	30215	HYD, FIT, ADAPTER, 8MB-8MJ	4
6	31965	HYD, VALVE, DOUBLE SELECTOR	1
7	33236	KNOB, VALVE, SELECTOR, 3/8-16 UNC	1
8	33237	HYD, HOSE, 3/8X36, 8FJX-8FJX, 1W	1
9	90313	HYD, HOSE, 3/8X18, 8FJX-8FJX, 1W	1
10	31781	BOLT, HEX, 3/8X3-1/2, UNC, GR5, ZP	2
11	31176	NUT, NYLOCK, 3/8, UNC, ZP	2
12	31163	NUT, HEX, 1/2, UNC, GR5, ZP	1





7.0 Parts Index

Part No.	Description	Page	Item
30040	RIVET,ST,3/16X.815,.625 HEAD	24	20
30136	SUSP,TIRE,21.5LX16.1,ST2,10PLY	41	2
30138	SPRING,REEL	44	6
30139	HYD,HOSE,1/2X169,8FJX-8FJX,1W	34	13
30152	HYD,FIT,ADAPTER,8MB-8FJX	52	4
30159	HYD,HOSE,1/2X96,8MP-8MJ,1W	34	14
30160	HYD,CYL,4.5X42,2.0,3/4-16UNF ORB,LHS	34	6
30161	RIVET,ST,5/32X.665,.312 HEAD	24	21
30175	HYD,CYL,CAP,CLEVIS,4.5 ORB,1.25 PIN	37	1
30176	HYD,CYL,CAP,ROD,4-1/2X2,3/4 ORB	37	2
30177	HYD,CYL,PISTON,4-1/2	37	3
30178	HYD,CYL,ROD,2X51-3/4	37	4
30179	HYD,CYL,TUBE,4-1/2X51-9/16	37	5
30180	HYD,CYL,5/8X51-9/16"	37	6
30181	HYD,CYL,PIN,1-1/4,H2094	37	7
30182	PIN,COTTER,HAMERLCK,3/16X1-1/4	37	8
30192	NUT,HEX,1-1/4,UNF,GRB,ZP	37	10
30193	HYD,FIT,PLG,3/4-16 UNF STRTHD	37	11
30204	HYD,FIT,ADAPTER,10MB-8MJ	30	17
30206	HYD,HOLDER,HOSE,1/2	24	15
30207	ZERK,1/4-28,GF641,STRAIGHT	40	10
30207	ZERK,1/4-28,GF641,STRAIGHT	42	12
30207	ZERK,1/4-28,GF641,STRAIGHT	44	19
30208	PLT,SERIAL#	20	12
30208	PLT,SERIAL#	24	16
30209	HYD,FIT,PIONEER,MALE,8FP	30	5
30209	HYD,FIT,PIONEER,MALE,8FP	34	7
30209	HYD,FIT,PIONEER,MALE,8FP	49	1
30210	HOSECLAMP,1/2	34	8
30211	HYD,FIT,ELBOW,8MB-8MJ90	34	9
30212	HYD,FIT,ELBOW,8MP-8MJ90	49	2
30213	HYD,CYL,4.5X42,2.0,3/4-16UNF ORB,RHS	34	10
30215	HYD,FIT,ADAPTER,8MB-8MJ	52	5
30237	NUT,HEX,1,UNS,GR5	50	2
30238	PIN,COTTER,3/16X1-1/2	50	3
30239	SETSCREW,SOCKET,3/8X1/2 KNURL	37	13
30239	SETSCREW,SOCKET,3/8X1-1/2 KNURL	50	4
30240	HYD,FIT,PLUG,1/2-14,NPTF,DRYSEAL	50	5
30250	HYD,CYL,PISTON,3,H6680	50	7
30253	HYD,CLEVIS,1-1/4,1PIN	50	8
30256	HYD,CYL,CLEVIS,CAP,3,NPTF	50	9
30257	HYD,CYL,CAP,ROD,3X1-1/4,NPTF	50	10
30261	LOCK,THREAD,NYLOCK	37	14
30261	LOCK,THREAD,NYLOCK	50	11
30262	HYD,CYL,SEALKIT,3,1-1/4ROD	50	12
30294	SCREW,TEK,1/4X1	26	4
30295	PAINT,ORANGE,HIGHLINE	24	36
30296	PAINT,CATALYST	24	37
30313	HYD,FIT,TEE,8MJ-8MJ-8MJ	34	11

30338	HYD,CYL,SEALKIT,4-1/2,2"ROD	37	15
30526	ELEC,LIGHT,RED&AMBER,LEFT	26	7
30527	ELEC,LIGHT,RED&AMBER,RIGHT	26	8
30555	ELEC,CONNECTOR,LIGHT,FEMALE	28	5
30556	ELEC,CONN,7,WIRE,FEMALE	28	6
30577	DECAL,RED REFL,2X9	20	1
30578	DECAL,AMBER REFL,2X9	20	2
30586	HYD,HOSE,1/2X20,8FJX-8MP,1W	30	3
30663	NUT,HEX,5/8,UNF GRADE 5	37	12
31008	BOLT,CARR,1/2X1-1/2,UNC,GR5,ZP	24	22
31016	BOLT,HEX,1/2X1-1/2,UNC,GR5,ZP	30	11
31016	BOLT,HEX,1/2X1-1/2,UNC,GR5,ZP	48	4
31019	BOLT,HEX,1/2X2-1/2,UNC,GR8,ZP	46	6
31022	BOLT,HEX,1/2X3,UNC,GR8,ZP	44	7
31023	BOLT,HEX,1/2X3-1/2,UNC,GR5,ZP	42	15
31024	BOLT,HEX,1/2X3-1/2,UNC,GR8,ZP	46	7
31029	BOLT,HEX,1/4X1,UNC,GR5,ZP	48	5
31038	BOLT,HEX,1X7-1/2,UNC,GR5,ZP	24	25
31040	BOLT,HEX,3/4X2-1/2,UNC,GR5,ZP	24	24
31048	BOLT,HEX,5/16X2-1/2,UNC,GR5,ZP	30	13
31050	BOLT,HEX,5/16X3,UNC,GR5,ZP	33	9
31054	BOLT,HEX,5/8X2-1/2,UNC,GR5,ZP	42	16
31069	BOLT,HEX,1/2X1,UNC,GR5,ZP	30	12
31070	BOLT,HEX,1/2X2,UNC,GR5,ZP	46	5
31163	NUT,HEX,1/2,UNC,GR5,ZP	50	1
31167	NUT,HEX,3/4,UNC,GR5,ZP	24	28
31169	NUT,STOVER,5/8,UNC,GR5,ZP	42	21
31172	NUT,NYLOCK,1,UNC,ZP	24	29
31172	NUT,NYLOCK,1,UNC,ZP	51	2
31173	NUT,NYLOCK,1/2,UNC,ZP	24	26
31173	NUT,NYLOCK,1/2,UNC,ZP	34	20
31173	NUT,NYLOCK,1/2,UNC,ZP	42	20
31173	NUT,NYLOCK,1/2,UNC,ZP	46	9
31173	NUT,NYLOCK,1/2,UNC,ZP	48	6
31174	NUT,NYLOCK,1/4,UNC,ZP	26	11
31174	NUT,NYLOCK,1/4,UNC,ZP	48	7
31175	NUT,NYLOCK,3/4,UNC,ZP	24	27
31176	NUT,NYLOCK,3/8,UNC,ZP	26	12
31176	NUT,NYLOCK,3/8,UNC,ZP	52	11
31177	NUT,NYLOCK,5/16,UNC,ZP	30	14
31177	NUT,NYLOCK,5/16,UNC,ZP	33	10
31177	NUT,NYLOCK,5/16,UNC,ZP	34	19
31183	PIN,COTTER,3/16X2	40	2
31236	WASHER,FLAT,1/2,ZP	24	30
31236	WASHER,FLAT,1/2,ZP	30	18
31236	WASHER,FLAT,1/2,ZP	34	22
31236	WASHER,FLAT,1/2,ZP	46	12
31239	WASHER,FLAT,5/16,ZP	30	16
31239	WASHER,FLAT,5/16,ZP	34	21
31243	WASHER,LOCK,1,ZP	24	32
31243	WASHER,LOCK,1,ZP	42	23
31244	WASHER,LOCK,1/2,ZP	30	15

31246	WASHER,LOCK,3/4,ZP	24	31
31308	VENT PLUG-1/4 NPT	33	14
31319	WASHER,LOCK,3/8,ZP	52	12
31338	BOLT,HEX,3/4X1-3/4,UNC,GR8,ZP	46	8
31339	BOLT,HEX,3/4X2,UNC,GR5,ZP	24	23
31351	WASHER,FLAT,3/8,ZP	26	13
31471	BOLT,HEX,1X3,UNC,GR5,ZP	51	3
31532	NUT,WING,1/4,UNC,ZP	24	33
31535	BOLT,HEX,1/4X1-1/2,UNC,GR5,ZP	26	9
31560	NUT,NYLOCK,7/16,UNC,GR5,ZP	42	19
31590	CHAIN,SAFETY,ASAE,10100LB,5'4"	51	4
31612	NUT,STOVER,1/2,UNC,ZP	44	18
31612	NUT,STOVER,1/2,UNC,ZP	46	10
31613	TIE,CABLE,NYLON,BLACK,11-1/2	24	34
31613	TIE,CABLE,NYLON,BLACK,11-1/2	26	14
31613	TIE,CABLE,NYLON,BLACK,11-1/2	28	8
31642	BOLT,CARR,5/8X5,UNC,GR5,ZP	44	8
31644	BOLT,HEX,9/16X4-1/2,UNC,GR8,ZP	44	17
31646	NUT,NYLOCK,9/16,UNC,GRC,ZP	44	9
31649	ELEC,CLAMP,CABLE,1/2	26	5
31650	ELEC,CLAMP,CABLE,3/4	26	6
31686	BOLT,U,SQ,3/8-16,6X5	26	10
31747	BAG,PLASTIC,6X9	24	35
31781	BOLT,HEX,3/8X3-1/2,UNC,GR5,ZP	52	10
31784	HYD,HOSE,1/2X164,8MP-8MP,1W	30	4
31791	HYD,HOSE,3/8X142,8FJX,1W	34	15
31792	HYD,HOSE,3/8X139,8FJX,1W	34	16
31796	HYD,CAP,CLEVIS,4-1/2X42 HARD	37	9
31800	JACK,5000LBX15,SQ MNT,SIDEWIND	24	17
31800	JACK,5000LBX15,SQ MNT,SIDEWIND	38	1
31813	PIN,QUICK RELEASE,1/2X3,ZP	34	12
31850	HYD,HOSE,3/8X108,8FJX-8MP,1W	49	3
31965	HYD,VALVE,DOUBLE_SELECTOR	52	6
31976	ELEC,HEAT_SHRINK,DUAL_WALL,TUBE,1/4X48	28	9
31977	ELEC,CONN,BUTT,16-14GA,NON_INSULATED	28	10
31978	ELEC,CONN,BUTT,12-10GA,NON_INSULATED	28	11
32054	HYD,HOSE,3/8X54,8FJX,1W	34	17
32075	WASHER,FLAT,1-1/2X11/16X3/16	42	13
32209	DRV,GEARBOX,COMPLETE,590	30	6
32210	SEAL	33	2
32211	BEARING	33	3
32212	BRG	33	7
32213	COVER	33	8
32214	SPACER	33	5
32215	PINION	33	6
32216	GEAR	33	4
32217	SHELL-FRONT-W/OIL PLUGS	33	12
32218	SHELL-BACK-PLAIN	33	11
32247	HYD,CYL,3X14,1.25,8FP	49	4
32250	HYD,CYL,PIN,1	50	6
32313	SUSP,CAP,DUST,DC26	40	2
32314	NUT,CASTELLATED,1-1/4	40	3

32315	SUSP,BRG,OUTER	40	4
32316	SUSP,RACE,OUTER	40	5
32318	SUSP,HUB,H817	40	6
32319	SUSP,NUT,WHEEL,5/8	40	8
32320	SUSP,STUD,WHEEL,5/8	40	7
32321	SUSP,BRG,387AS	40	9
32322	SUSP,CUP,INNER,#301110 382A	40	3
32323	SUSP,SEAL,SE42 (CR29952)	40	1
32327	SUSP,HUB,HA817-3,COMPLETE	39	2
32373	DRV,BRG,PILLOW-BLOCK,2-7/16	44	10
32376	BEARING,BALL,.788,1.65	44	2
32639	BEARING,THRUST,FRONT	32	6
32644	HYD,MOTOR,18.3,316RPM,3000PSI	30	7
32647	SEAL,KIT,ROLLER,STATOR	32	1
32649	BEARING,HOUSING,REAR,1/2	32	5
32651	BEARING,THRUST,REAR	32	2
32653	SHAFT KIT	32	13
32660	HYD,VALVE,CUSHION	30	8
32720	BEARING,HOUSING,FRONT	32	3
32725	MANIFOLD	32	8
32726	BALANCE PLATE & BALLS	32	10
32727	END COVER	32	11
32734	WASHER,FLAT,3-1/8ODX1/2	30	9
32786	O-RING,#151	30	10
32972	HYD,HOSE,3/8X66,8FJX,1W	34	18
32981	DECAL,PIMA	20	3
33022	KEY,GEAR - 58T	33	15
33023	HYD,CYL,TIEROD,1/2X14	50	13
33024	HYD,CYL,3X14,H6140	50	14
33025	HYD,CYL,ROD,1-1/4X16-5/8	50	15
33035	SUSP,RIM,W16CX16.1,+1.125,8,WH	41	1
33036	WHEEL,21.5LX16.1,+1.1258,WH	24	18
33045	SUSP,SPINDLE,S817,18.5,COMPLETE	40	1
33047	HOUSING KIT	32	4
33048	DRIVE LINK	32	7
33049	ROTOR KIT	32	9
33050	BOLT KIT,18	32	12
33065	SLEEVE_2" BORE	33	16
33066	SNAP RING (5100-300)	33	17
33081	BOLT,HEX,3/4X2,UNF,GR8,ZP	42	17
33082	NUT,STOVER,3/4,UNF,GR8,ZP	42	22
33083	BOLT,HEX,1X1,UNC,GR5,ZP	42	18
33234	NUT,STOVER,3/4,UNC,GR5,ZP	46	11
33236	KNOB,VALVE,SELECTOR,3/8-16UNC	52	7
33237	HYD,HOSE,3/8X36,8FJX-8FJX,1W	52	8
33316	OIL,HYDRAULIC,UTF	24	38
33438	KIT,PIN&CHAIN-5/8"X4.25"	38	2
33439	KIT,5K BEARING REPLACEMENT	38	3
33440	KIT,STD BEVEL GEAR REPLAC.	38	4
33441	KIT,SW CRN CRANK REPLAC.	38	5
33442	COVER,GEARBOX	38	6
33443	WIRE,WELDING	24	39

33506	BOLT,HEX,7/16X3,UNC,GR8,ZP	42	14
48105	ELEC,HARNESS,LIGHTS,XL78	26	1
48106	KIT,LIGHT,XL78	24	1
48109	BRACKET,LIGHT,RIGHT,RP	26	2
48110	BRACKET,LIGHT,LEFT,RP	26	3
70002	ARM,HITCH	42	1
70003	HITCH,CLEVIS,DOUBLE,ANGLE	24	2
70025	PIN,DUMP	42	2
70051	GUARD,CYL,DUMP,RIGHT	24	3
70052	GUARD,CYL,DUMP,LEFT	24	4
70083	HYDRAULIC MOTOR,ASSEMBLY	24	5
70089	BUCKET,7	42	3
70090	REEL,COMPLETE,7	42	4
70091	DUMP,BUCKET,7	42	5
70094	DRIVE,ARM,REEL	33	1
70094	DRIVE,ARM,REEL	44	11
70095	IDLER,ARM,REEL	44	12
70096	TUBE,ARM,REEL	44	13
70097	ARM,REEL,7	44	14
70105	BATT,REEL,7	44	15
70106	WHEEL,BOGIE,COMPLETE	44	16
70128	BUMPER,GEARBOX	48	1
70129	MOUNT,VALVE,GEARBOX	46	1
70178	XL,OPTION,SWING HITCH-2	24	6
70179	TOOL,ROCKPICKER	24	7
70190	HITCH,PIN	42	6
70300	HITCH,STOP,ASSY	42	10
70605	WLDT,GUARD,DBL_VALVE,RP	52	1
70612	WLDT,AXLE,78	39	1
70613	ASSY,AXLE,COMPLETE,XL78	24	8
70620	ASSY,DECALS,HIGHLINE,XL78	24	10
70621	WLDT,LOCK,CYLINDER,XL-78	34	1
70623	ASSY,HYD,CYL,7	24	11
70626	WLDT,PLT,LUG,CYL	24	12
70627	WLDT,FRAME,7,HIGHLINE	42	7
70628	WLDT,PIN,APRON	42	8
70629	WLDT,APRON,XL78-3	46	2
70630	ASSY,APRON,XL78-3	42	9
70631	ASSY,PRE-PAINT,XL78-3	24	9
70632	TETHER,CABLE,12"	34	2
90301	HYD,HOSE,3/8X120,8MP-8FJX,1W	49	5
90313	HYD,HOSE,3/8X18,8FJX-8FJX,1W	52	9
91048	SUSP,STEM,VALVE,TR801HP	41	3
91291	WASHER,FLAT,WA23,ZP	40	4
91609	PIN,HITCH,5/32X3	42	24
92028	SIGN,SLOWMOVING,S276.5	24	19
92170	TIE,CABLE,4",BLACK	28	7
92598	DECAL,HIGHLINE,XL78,FRONT	20	4
92599	DECAL,HIGHLINE,XL78,BACK	20	5
92600	DECAL,HIGHLINE,XL78,LEFT	20	6
92601	DECAL,HIGHLINE,XL78,RIGHT	20	7
32357M	CASTING,RUBBERIZED	44	3

32466M	TYNE,APRON,HARDENED	46	4
E2240	WASHER,HITCH,BOTTOM	42	11
E2294	TOOTH,REEL	44	20
E2304	PIPE,SCH40,3/4X1/4L	44	1
E2308	PIPE,SMLS,1-1/2X.240X3/4L	44	21
E2339	ANCHOR,VALVE,CUSHION,HYDRAULIC	48	2
E3044	PIPE,SMLS,2-5/8X.281X1/4L	30	2
E3045	KEY,SHAFT,DRIVE,REEL	30	1
E3794	ELEC,LOOM,1/2,SPLIT,CORRUGATED	26	15
E4244	ELEC,CABLE,4-14,ULTRA-FLEX	28	1
E4245	ELEC,CABLE,4-14,ULTRA-FLEX	28	2
E4246	ELEC,LOOM,1/2,SPLIT,CORRUGATED	28	3
E4247	ELEC,LOOM,3/4,SPLIT,CORRUGATED	28	4
E4247	ELEC,LOOM,SPLIT,3/4X18	34	3
E4502	BUMPER,MOTOR,HYDRAULIC	48	3
E4548	PLT,RETAINER,SPRING	44	2
E4549	PIPE,SMLS,1X.188X3-1/4L	44	3
E4559	PLT,R,1/2X1/2X1	44	4
E4626	PIPE,SCH40,3/4X11/16L	44	5
E4627	BUSHING,WHEEL,BOGIE	44	1
E4638	PLT,LOCK,TRANSPORT	24	13
E5346	STOP,APRON,DBL	46	3
E5553	CLAMP,HOSE,HYD	34	4
E5563	GUARD,LINE,HYDRAULIC	34	5
E6151	PLT,C,1/4X3	51	1
E6174	PIPE,SMLS,7/8X.188X1L	52	2
E6879	BRACKET,DBL_VALVE_MOUNT,RP	52	3
E7028	LUMBER,4X4X8FT,PINE,ROUGH	24	40
E7488	MANUAL,HIGHLINE,XL78-3	24	14
E7550	DECAL,DANGER,REEL_CRUSH	20	8
E7551	DECAL,WARNING,BUCKET_CRUSH	20	9
E7552	DECAL,WARNING,OWNERS_MANUAL	20	10
E7553	DECAL,WARNING,STOP_ENGINE/SERVICE	20	11

8.0 Specifications

Weight:	Approximately 7250 lbs (3290 kg)
Total Length:	17'3"
Total Width:	12'6"
Total Height:	5'8"
Picking Width:	84"
Dumping Height:	Approximately 90"
Ground Clearance:	11"
Maximum Capacity:	3.3 cubic yards (2.52 m ³)
Tires:	21.5L x 16.1 Softrac Tires
Tire Pressure:	27 psi
Horsepower Required:	90-150 Horsepower 18 gpm flow required
Hydraulic Outlets:	2
Hydraulic Pressure:	3000 psi (20,680 kPa)

Dealer Information

Dealer: _____

Address: _____

City: _____

Province / State: _____

Postal Code / Zip Code: _____

Phone: _____



Identification Numbers

Model Number: _____

Serial Number: _____

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Dealer Checklist

Rock Picker Dealer Checklist

Checked	Check List Item
	Run the reel and raise and lower the bucket to ensure that all components run freely without binding and are free of excessive impact. Check all hydraulic components for leaks and test hydraulic line lock.
	Tail/warning lights installed with machine.
	SMV sign installed.
	Tongue pivot lock pin with tether installed.
	Apron transport lock bars installed.
	Ensure hitch arm moves freely from working position to transport position and that the hitch wedge can be installed in both positions.
	Ensure all grease points are lubricated.
	Check tire pressure and adjust as required.(as specified on tire).
	Cycle all cylinders a minimum of three times, check for leaks and clearance problems.
	Hydraulic motors to be operated and checked for leaks and free movement.
	Check tire hubs for proper bearing adjustments.
	Owners manual shipped with machine.