

BROUWER

RoboMax

ILLUSTRATED PARTS LIST

MODEL:

BSH-1200 ROBOMAX SOD HARVESTER, NEW HOLLAND



WARNING: If incorrectly used this machine can cause severe injury. Those who use and maintain this machine should be trained in its proper use, warned of its dangers and should read the entire manual before attempting to set up, operate, adjust or service the machine.

August 2013

BROUWER
EQUIPMENT BUILT FROM EXPERIENCE

KM99178 REV D



STATEMENT OF LIMITED WARRANTY

Kesmac and Brouwer Turf warrants its full line of equipment to be free from defects in material and factory workmanship for a period of 12 months. This warranty begins on the date of sale or use of the equipment to the original purchaser. This statement does not extend or limit engine, tractor or component warranties in which the engine, tractor or component manufacturers may carry extended time periods up to 24 months. Engine, tractor or component warranty claims will be subject to the engine, tractor or components manufacturer's approval.

Replacement Parts carry a 90 day replacement warranty and are reimbursed to the dealer. All electrical and hydraulic parts are limited by this policy and will only be covered upon approval by the service department after inspection of the part. The installation and removal of a part will automatically place that part under the replacement parts warranty.

This warranty is limited exclusively to equipment or accessories manufactured or supplied by **Kesmac and Brouwer Turf** and are subject to the inspection and analysis by the company to conclusively identify the nature and cause of failure.

PRODUCT REGISTRATION FORM must be completely filled out, signed by the customer at the original date of installation, and returned to **Kesmac and Brouwer Turf** before any claims will be considered.

Kesmac and Brouwer Turf reserves the right to incorporate improvements in material and design of its products without notice and is not obligated to make the same improvements to equipment previously manufactured.

Kesmac and Brouwer Turf is not obliged under any warranty policy different from the Kesmac Brouwer Turf warranty policy as published above.

KESMAC AND BROUWER TURF RESPONSIBILITIES

Kesmac and Brouwer Turf's obligation under the terms of this warranty is limited to the repair, replacement or credit, at its option, of the equipment, parts or supply items that conform to its warranty.

Kesmac and Brouwer Turf will pay for the parts and the cost of surface transportation for the parts that conform to this warranty.

DEALER'S RESPONSIBILITIES

1. Only factory-trained service or approved personnel will be permitted to perform warranty service on **Kesmac and Brouwer Turf** equipment.
2. All major warranty claims exceeding \$650.00 (in total including parts and labour) must be authorized by **Kesmac and Brouwer Turf** before work is performed.
3. All replacement parts used in warranty situations must be furnished by **Kesmac and Brouwer Turf** or approved by **Kesmac and Brouwer Turf** personnel. The use of non-recommended oil could nullify warranty.

OWNERS RESPONSIBILITIES

The owner is obligated to operate and maintain the equipment in accordance with the recommendations published by **Kesmac and Brouwer Turf** in the owners/operators manual for the unit. The owner is responsible for the costs associated with such maintenance and operating adjustments that may be required on a regularly scheduled basis. Where applicable the owner is responsible for transportation to and from the dealership or service calls made by the dealer.

CONDITIONS THAT VOID WARRANTY

This warranty shall not apply to equipment which:

- 1. Has had repairs or modifications not authorized by **Kesmac and Brouwer Turf**.
- 2. Has been subject to abuse, improper maintenance, or improper application.
- 3. Has been modified from original equipment specifications.

WARRANTY EXCEPTIONS

This warranty does not apply to the following items:

- 1. Wear items including blades, cutting edges, cutting arms, spark plugs, belts, filters, bearings, sprockets, chains, tires, light bulbs, lubricants and fluids etc. Cost of normal maintenance including replacement of service items.
- 2. Damages to engine/drive systems caused by lack of/ or improper lubricants and/ or fluids.
- 3. Damages arising from accident, misuse or neglect.
- 4. Damages to engine/drive systems caused by improper operation and/ or maintenance.
- 5. **Kesmac and Brouwer Turf** will not be liable for any incidental or consequential damage or injuries, including but not limited to loss of profits, loss of crops, rental of substitute equipment, or other commercial loss or for damage to the equipment in which the Company Product is installed.

FREIGHT CARRIER DAMAGE

Claims for equipment damaged in transit should be referred to the freight carrier. Visible damage should be reported immediately and concealed damage as soon as possible, in accordance with freight carrier regulations.

**CALIFORNIA
Proposition 65 Warning**

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.



WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

**Californie Proposition 65
Avertissement**

Les échappements des moteurs diesel et certains de leurs composés sont reconnus par l'Etat de Californie pour être cancérigènes, provoquer des défauts congénitaux et d'autres dangers en matière de reproduction.



AVERTISSEMENT

L'émission du moteur de ce matériel contient des produits chimiques que l'Etat de Californie considère être cancérigènes, provoquer des défauts congénitaux et d'autres dangers en matière de reproduction.

**California Advertencia
de la Proposicion 65**

El estado de California hace saber que los gases de escape de los motores diesel y algunos de sus componentes producen cáncer, defectos de nacimiento y otros daños en el proceso de reproducción humana.



ADVERTENCIA

El estado de California hace saber que los gases de escape de este producto contienen productos químicos que producen cáncer, defectos de nacimiento y otros daños en el proceso de reproducción humana.

**CALIFORNIA
Proposition 65 Warning**

Battery posts, terminals, wiring insulation, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
WASH HANDS AFTER HANDLING.

BROUWER

289 N. Kurzen Rd., P.O. Box 504, Dalton, OH 44618
Tel. (330) 828-0200 Fax. (330) 828-1008

Date of Purchase: Month _____ Day _____ Year _____

Dealer Name _____ Phone _____

Serial Number _____

Model Number _____

*ALWAYS GIVE THE SERIAL NUMBER, MODEL NUMBER AND PART COLOR WHEN
ORDERING SERVICE PARTS.*

IMPORTANT

Your new **Robomax Turf Harvester** has been designed and built to give many years of outstanding performance. The service and reliability you receive from this product will be affected by the proper maintenance and operation of the machine.

It is important the operator of the machine follows all recommended operating procedures and service schedules, to ensure the safety of the machine, themselves and any bystanders.

It is not possible to list all situations that may effect the safety of the machine or that of the operators, therefore Brouwer Turf cannot identify all precautions that may possibly prevent accidents.

The owner/operator must assume responsibility for their own safety, the safety of others and of the machine.

BE A QUALIFIED OPERATOR BY ;

Reading and obeying the instructions in this manual and on the safety decals on the machine.

Receiving training on the correct operation of the machine.

Asking your supervisor or equipment dealer to explain anything you do not understand.

Explaining the instructions in the operator's manual and safety decals to user/operators who cannot read or understand them.

IF YOU DO NOT UNDERSTAND....ASK

Use only genuine Brouwer replacement parts. Parts not supplied by Brouwer may not meet factory specifications or standards of manufacture. The use of non-approved parts may result in component failure and result in an accident to the operator or bystanders.

The Brouwer **Robomax Turf Harvesters** must not be used for any purpose other than that for which they are designed.

Prior to shipping from the manufacturer the machines are inspected to insure that all safety guards, shields and warning/safety/operating decals are correctly positioned and secure.

The machine must not be used if any of the above items are missing or damaged.

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WARNING

Unauthorized modifications may result in extreme safety hazards to operators and bystanders, and could result in damage to the machine.

Brouwer Turf warns against and strongly rejects and disclaims against any modifications, add-on accessories or product modifications that are not designed, developed, tested, and approved by Brouwer Engineering Department.

Any Brouwer product that is altered or modified in anyway that is not authorized after original manufacture, including after market accessories or component parts that are not approved by Brouwer, will result in the machine warranty be voided.

All liability for personal injury and/or property damage caused by any unauthorized modifications, add-on accessories or products not approved by Brouwer will be considered the responsibility of the individual(s) or company designing and/or making such changes.

Brouwer Turf will vigorously pursue full indemnification and costs from any party responsible for unauthorized post-manufacture modifications and/or accessories should personal injury and/or property damage result.

CAUTION

To protect both of the Electronic Controllers from potential damage :

Do not do any welding on the machine until :

- Both battery cables are disconnected.
- The Plus 1 Micro-controllers are disconnected.

D001-183

BROUWER
EQUIPMENT BUILT FROM EXPERIENCE

BROUWER TURF LTD.
KESWICK, ONT. CANADA
PHONE: (905) 476-6222
FAX: (905) 476-6744

SERIAL NO.

WEIGHT

kg.

lbs.



This symbol means:
ATTENTION!
BECOME ALERT!

Your safety and the safety of others is involved.

Signal word definitions:

The signal words below are used to identify levels of hazard seriousness. These words appear in this manual and on the safety labels attached to Brouwer machines. For your safety and the safety of others, read and follow the information given with these signal words and/or the symbol shown above.

⚠ DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

⚠ WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

⚠ CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices or property damage.

CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, **MAY** result in property damage.

MODEL NUMBER:

This number appears on sales literature, technical manuals and price lists.

SERIAL NUMBER:

This number applies only to the machine to which it is allocated.

The serial number must be quoted when ordering parts or calling for service or warranty advice.

The serial number plate is located on the Lower Right Hand Door Frame.

PARTS SECTION

FIGURE 1

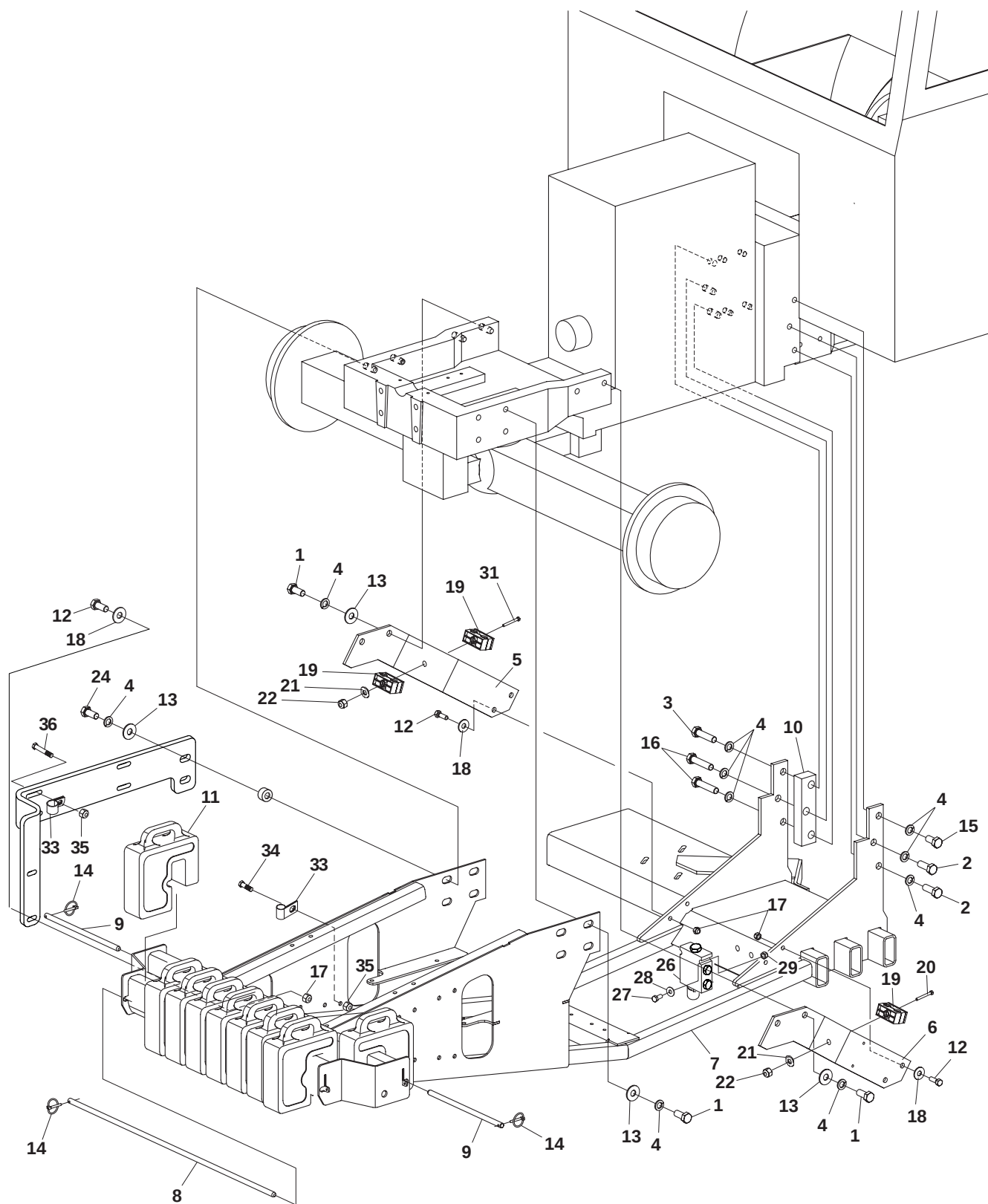


FIGURE 1

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	G0420045	BOLT-MET M20-2.5X45	10				
2	G0420055	BOLT-MET M20-2.5X55	2				
3	G0420080	BOLT-MET M20-2.5X80	1				
4	G312000	LOCKWASHER, 20MM ZP	18				
5	4136308	PLATE-FORMED-RH	1				
6	4136309	PLATE-FORMED-LH	1				
7	4160306	MAIN FRAME. UP TO #137A	1				
	4160569	MAIN FRAME. FROM #137B	1				
8	4132393	ROD-WEIGHT STOP LONG	1				
9	4132394	ROD-WEIGHT STOP SHORT	2				
10	4135065	SPACER-FLAT BAR	1				
11	62-540	50# BALLAST WEIGHT	A/R				
12	F040816	BOLT, 1/2 UNC X 1-3/4	6				
13	G3211000	WASHER	12				
14	KX30020	QUICK PIN 1/4X1-3/4	3				
15	G0420040	BOLT-MET M20-2.5X40	1				
16	G0420090	BOLT-MET M20-2.5X90	2				
17	F210808	LOCKNUT, 1/2-13 NYLON	4				
18	F330808	FLAT WASHER, 1/2 SAE ZP	6				
19	4135022	CLAMP-3/4 OD HOSE	2				
20	F040526	BLT-HEX 5/16-18X2-3/4	1				
21	F330508	FLATWASHER 5/16	1				
22	F210508	LOCKNUT-NYLON 5/16-18	2				
23	11-057	CLAMP-1-1/4	1				
24	G0120070	BOLT - M20 X 2.5 X 70	2				
25	4160252	AUTO-STEER ADAPTER	1				
26	4141230	WHEEL LOCKOUT MANIFOLD	1				
27	F040420	BOLT 1/4 UNC X 2 GR.8	2				
28	F320400	FLATWASHER 1/4	2				
29	F210400	LOCKNUT 1/4	2				
30	4135024	HOSE CLAMP - 5/8	1				
31	F040540	BOLT 5/16 UNC X 4 GR.8	1				
32	C100248	SPACER	2				
33	KH68024	CLAMP	2				
34	F040814	BOLT 1/2 UNC X 1 1/2 GR.8	1				
35	F840800	NUT 1/2 UNC SRRTD. FLNGD.5	1				
36	F040830	BOLT 1/2 UNC X 3 GR.8	1				

FIGURE 2

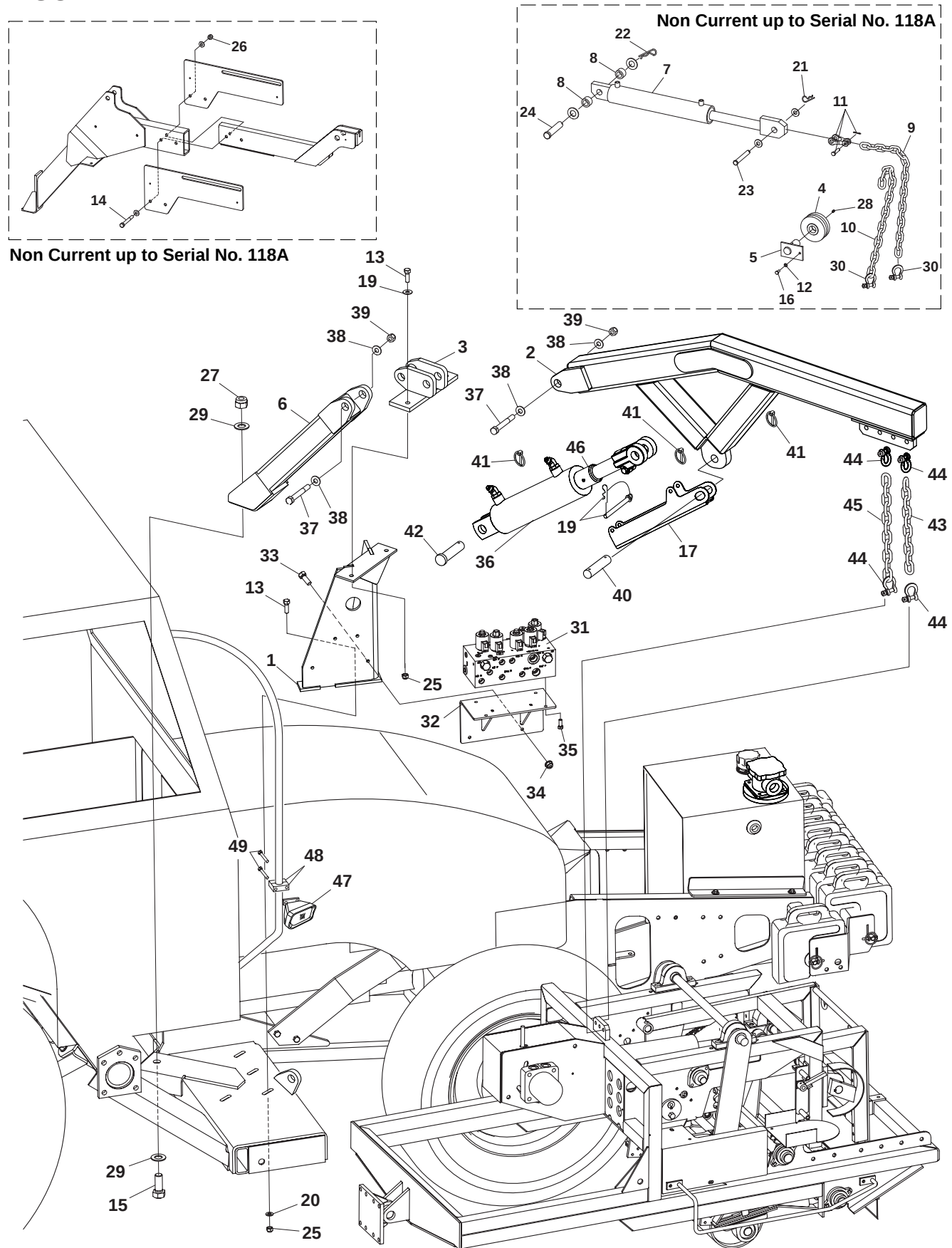


FIGURE 2

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4130505	WLDMT-BRACE, LIFT ARM	1	47	KE90010	WORK LIGHT	1
2	4160208	LIFT ARM	1	48	4136839	CLAMP	1
3	4160217	MOUNT. LIFT ARM	1	49	F040414	BOLT 1/4 UNC X 1 1/2 GR.8	2
4	4130532	PULLEY-CHAIN	1				
5	4130534	WLDMT-PIN, PULLEY	1				
6	4160228	ANCHOR. LIFT ARM	1				
7	KH31005	CYLINDER-CONVEYOR LIFT	1				
8	4133049	SPACER-CYLINDER	2				
9	H100529	CHAIN-LIFT, CUTTING HEAD	2				
10	4134866	CHAIN-SAFETY, CUTTING HD	1				
11	4134875	CONNECTOR-CHAIN	1				
12	64006-02	LOCKWASHER-5/16	1				
13	F040814	BOLT-HEX 1/2-13X1-1/2	6				
14	64123-152	BOLT-HEX 5/8-11X5	2				
15	F041624	BOLT-HEX 1-8X2.5	1				
16	64123-54	BOLT-HEX 5/16-18X3/4	1				
17	4160555	CYLINDER LOCK	1				
18	F331008	WASHER 5/8	6				
19	KX06100	PIN 3/8 IN.	1				
20	F330808	WASHER 1/2	4				
21	64168-1	COTTER-HAIRPIN .120X2-3/8	1				
22	64168-5	COTTER-HAIRPIN .18X3.68	1				
23	64188-56	PIN-CLEVIS 5/8X4.5	1				
24	KX01644	PIN-CLEVIS 1X4.5	1				
25	F210808	LOCKNUT-1/2-13	6				
26	64229-06	LOCKNUT-5/8-11	2				
27	F211608	LOCKNUT-1-8	1				
28	85010N	ZERK-1/4-28 STR SLF THRD	1				
29	F321600	FLAT WASHER-1"	4				
30	G8003	SHACKLE-ANCHOR 3/8"	2				
31	4132956	MANIFOLD-MAIN CONVEYOR	1				
32	4133570	WLDMT-CONV. MNFLD BRKT	1				
33	F040612	BOLT 3/8 UNC X1 1/4 GR.8	4				
34	F210608	LOCKNUT-3/8-16	4				
35	F870606	BOLT-WLF 3/8-16X3/4	4				
36	H500208	LIFT CYLINDER ASSEMBLY	1				
	KH31005	LIFT CYLINDER	1				
	KH70038	SEAL KIT. LIFT CYLINDER	1				
37	F041664	BOLT 1 UNC X 6 1/2 GR.8	2				
38	F321600	WASHER 1 IN.	4				
39	F211600	LOCKNUT 1 IN. UNC	2				
40	P100061	HINGE PIN	1				
41	KX30319	LYNCH PIN 3/16 X 1 9/16	4				
42	03-1624	LOWER PIN. LIFT CYLINDER	1				
43	4160458	CHAIN. 10 LINK	1				
44	KC01006	SCREW PIN SHACKLE 3/8	4				
45	4160459	CHAIN. 11 LINK	1				
46	H110212	STROKE LIMITER	1				
	F660603	SET SCREW. 3/8 UNC X 3/8	1				

NOTE

ITEMS 4, 5, 7, 8, 9, 10, 11, 12, 14, 16, 21, 22, 23, 26, 28 & 30 ARE NON CURRENT UP TO SERIAL NO. 118A.

FIGURE 3

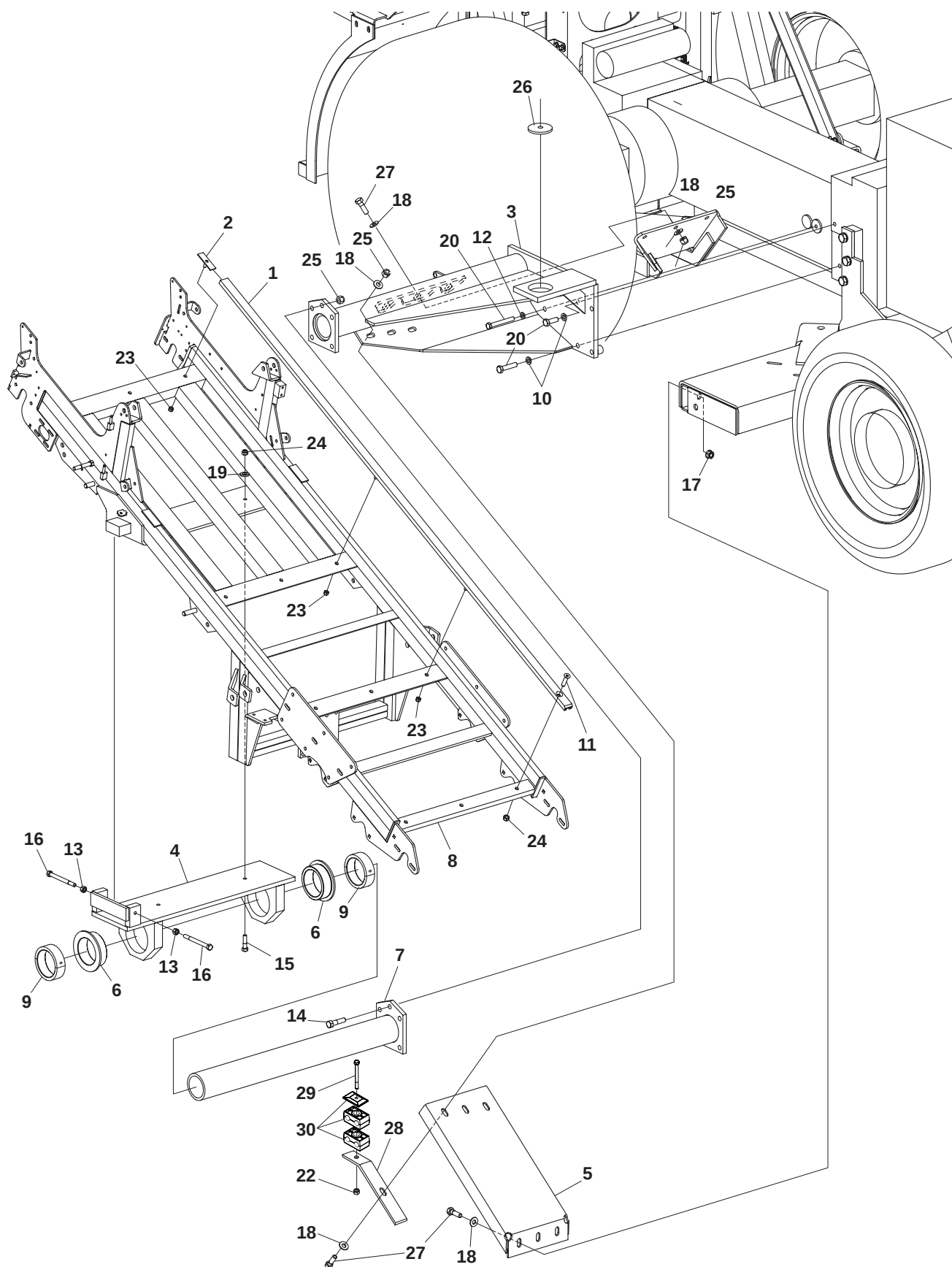


FIGURE 3

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	016361	SLIDER-1560 CONVEYOR	3				
2	016661	SLIDER-T-BOLT	9				
3	4129378.7	WLDMT-CENTER	1				
4	4129386.7	WLDMT-CONVEYOR PIVOT	1				
5	4130523.7	SUPPORT-FRONT	1				
6	4130524	BUSHING-PIVOT	2				
7	4137130	WLDMT-CONVEYOR-PIVOT	1				
8	4137639	S-WLDMT-MAIN CONVEYOR	1				
9	4137326	COLLAR-SPLT. LCKNG. 4" ID.	2				
10	64006-04	LOCKWASHER-HELICAL 5/8	4				
11	F120820	SCREW-HEX SOC FLAT HD	3				
12	64006-13	WASHER-9/16	1				
13	64025-40	NUT-HEX 3/4-10	2				
14	64123-168	BOLT-HEX 5/8-11X2-1/2	5				
15	64123-24	BOLT-HEX 1/2-13X2	2				
16	64123-242	BOLT-3/4-10X4-1/2	2				
17	64141-12	NUT-WLF 5/8-11	3				
18	F331208	WASHER-41/64X1-3/8X12 GA	15				
19	64163-19	WASHER-33/64X1-1/4X12GA	2				
20	64205-067	BOLT-MET M16-1.5X45	2				
21	64205-071	BOLT-MET M14-1.5X110	1				
22	F210500	LOCKNUT 5/16 UNC	1				
23	64229-03	LOCKNUT-3/8-16	9				
24	F210808	LOCKNUT-1/2-13	5				
25	64229-06	LOCKNUT, NYLON 5/8-11	11				
26	4133103.7	WASHER-SPACER, CAB	1				
27	90-1016	BOLT-HEX 5/8-11 X 2 NC	9				
28	4160269	HOSE BRACKET	1				
29	F040540	BOLT 5/16 UNC X 4 GR.8	1				
30	4135022	HOSE CLAMP 3/4	2				

FIGURE 4

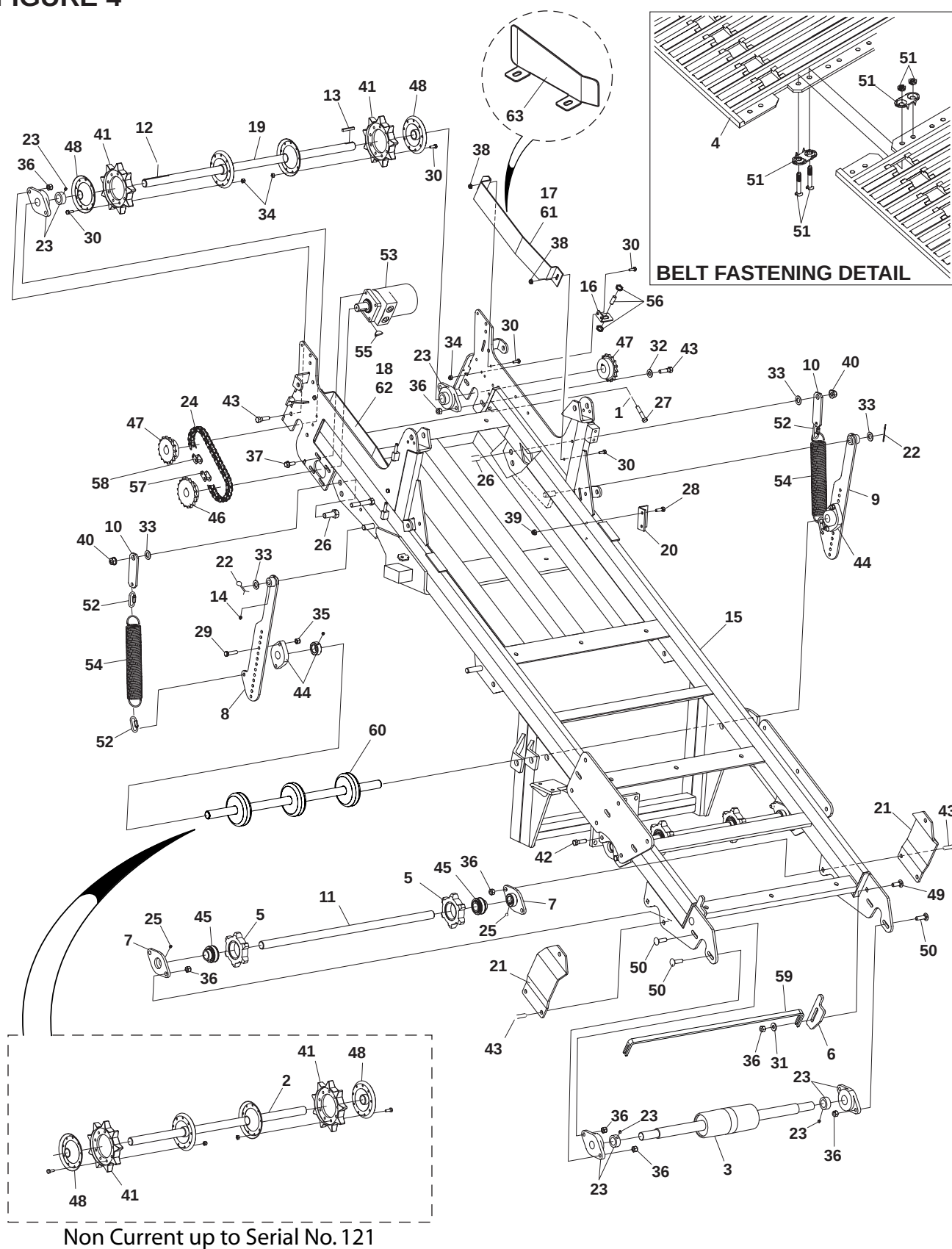


FIGURE 4

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	F230608	NUT-3/8-16 HEX	1	50	F020716	BOLT-CRG 7/16 x 1 3/4	4
2	4136960.7	WLDMT-FRT-INDEX-IDLER	1	51	G8008	MAT SPLICER	7
3	002625.7	CROWN ROLLER-24"	1	52	G8084	QUICK LINK-3/16	4
4	002638	BELT-BROUWER 24" CONV.	1	53	H0012	MOTOR - OBSOLETE	1
5	014268	SPROCKET-CONVEYOR BLT	4		KH30007	MOTOR - SEE NOTE 1	1
6	016352.7	PLATE-ADJUSTER WEDGE	2	54	S2003	SPRING-EXTENSION	2
7	016382.7	FLANGE-SHAFT	4	55	G8019	KEY	1
8	016637.7	WLDMT-TENSIONER ARM LH	1	56	4132981	SENSOR-INDUCTIVE	1
9	016638.7	WLDMT-TENSIONER ARM RH	1	57	81-055	HALF LINK	1
10	016640.7	MOUNT-IDLER SPRING	2	58	81-053	CONNECTOR LINK	1
11	016683	SHAFT-ROLLUP CONVEYOR	2	59	4160048	CROWN ROLLER SCRAPER	1
12	Q0579	KEY-1/4 X 1/4 X 3-5/8	1	60	4160246	IDLER SHAFT W/A	1
13	64164-10	KEY-1/4X1/4X1-1/4 SQ END	1	61	4160249	SOD GUIDE - 23 IN. L.H.	1
14	KM11400	FITTING-GREASE 1/4-28	2	62	4160248	SOD GUIDE - 23 IN. R.H.	1
15	4137639	S-WLDMT-MAIN CONVEYOR	1	63	4160448	SOD GUIDE - 16 IN. L.H.	1
16	4133815.7	BRKT-SENSOR, CONVEYOR	1		4160449	SOD GUIDE - 16 IN. R.H.	1
17	4133836.7	SOD GUIDE - L.H.	1				
18	4133842.7	SOD GUIDE - R.H.	1				
19	4134106.7	WLDMT-SHAFT, CONVEYOR	1				
20	4134750.7	BRKT-HOSE CLAMPS	1				
21	6115963.7	BRKT-FLOAT ASSIST LOWER	2				
22	F910514	COTTER PIN-5/32 X 1-1/2	2				
23	55-FB23016	2-BOLT FLANGE BEARING	4				
24	Q8432	CHAIN	1				
25	F140502	SCREW-SET 5/16-18X1/4	4				
26	F041014	BOLT-HEX 5/8-11X1-1/2	2				
27	F040620	BOLT-HEX 3/8-16X2	1				
28	F040510	BOLT-HEX 5/16-18X1	2				
29	F040614	BOLT-HEX 3/8-16X1-1/2	4				
30	F040406	BOLT-HEX 1/4-20X3/4	24				
31	F330708	WASHER 7/16	2				
32	F330708	WASHER 7/16	2				
33	F331008	WASHER 5/8	4				
34	F210408	LOCKNUT-1/4-20	20				
35	F210608	LOCKNUT-3/8-16	4				
36	F210708	LOCKNUT-7/16-14	18				
37	F040610	BLT-WLF 3/8-16 X 1	4				
38	F210408	LOCKNUT-1/4-20	4				
39	F210508	LOCKNUT-5/16-18	2				
40	F210808	LOCKNUT-1/2-13	2				
41	83-053	GEAR	2				
42	F040712	BOLT-7/16-14 X 1-1/4 NC	4				
43	F040714	BOLT-7/16-14 X 1-1/2 NC	8				
44	B0121	BEARING-2 BOLT FLANGE	2				
45	B2022	BEARING- BALL	4				
46	KD41110	SPROCKET #50 X 11T	1				
47	KD41610	SPROCKET #50 X 16T	1				
48	D8001	FLANGE, SPROCKET	2				
49	F020720	BOLT-CRG 7/16-14 x 2	2				

NOTE 1

ITEM 53 - H0012 IS OBSOLETE
AND IS REPLACED BY SERVICE KIT
4160611. IT INCLUDES:
MOTOR - KH30007 QTY. 1
FITTINGS - 8-10-070220. QTY. 2

NOTE 2

ITEMS 2, 41 & 48 ARE NON CURRENT
UP TO SERIAL NUMBER 121 AND ARE
REPLACED BY ITEM 60 - 4160246.

FIGURE 5

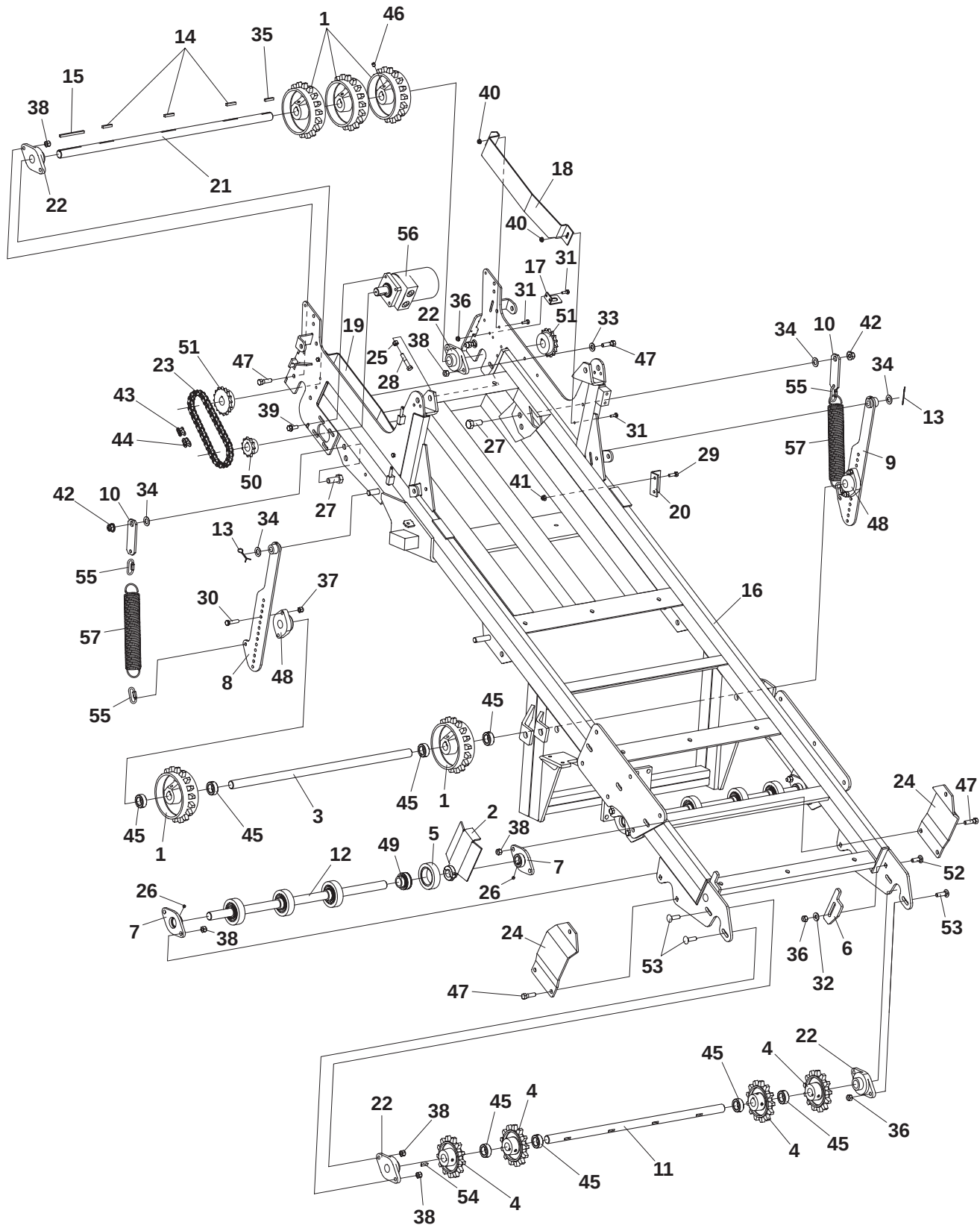


FIGURE 5

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	001351	SPROCKET-6" CAST	5	50	D1206	SPROCKET-FIXED	1
2	002206.7	GUIDE-MAT	1	51	D1216	SPROCKET-FIXED	2
3	002615	SHAFT-IDLER	1	52	F4101	BOLT-CRG 7/16-14 X 1-1/4	2
4	014058	SPROCKET, THIN	4	53	F4104	BOLT-CRG 7/16	4
5	014074	IDLER ROLLER	8	54	G8019	KEY	2
6	016352.7	PLATE-ADJUSTER WEDGE	2	55	G8084	QUICK LINK-3/16	4
7	016382	FLANGE-SHAFT	4	56	MG121310AAA	MOTOR	1
8	016637.7	TENSIONER ARM LH	1	57	S2003	SPRING-EXTENSION	2
9	016638.7	WLDMT-TENSIONER ARM RH	1	58*	001512	BELT-MINTEX CONVYR 24"	1
10	016640.7	MOUNT-IDLER SPRING	2	59*	A03484	ASSY-MAT CONNECTOR 24"	1
11	016650	SHAFT-IDLER	1				
12	016683	SHAFT-ROLLUP CONVEYOR	2				
13	02-CP0512	COTTER PIN-5/32 X 1-1/2	2				
14	124422	KEY-1/4 X 1/4 X 1-3/8	3				
15	124458	KEY,1/4 X 1/4 X 3-5/8	1				
16	4132084.7	WLDMT-MAIN CONVEYOR	1				
17	4133815.7	BRACKET-SENSOR	1				
18	4133836.7	SOD GUIDES	1				
19	4133842.7	SOD GUIDES	1				
20	4134750.7	BRACKET- HOSE CLAMPS	1				
21	4134912	SHAFT-CONVEYOR DRIVE	1				
22	55-FB23016	2-BOLT FLANGE BEARING	4				
23	56-RC50	CHAIN	1				
24	6115963.7	BRKT-FLOAT ASSIST LOWER	2				
25	64025-05	NUT-3/8-16 HEX	1				
26	64044-6	SCREW-SET 5/16-18X1/4	4				
27	64123-109	BLT-HEX 5/8-11X1-1/2	2				
28	64123-67	BLT-HEX 3/8-16X2	1				
29	64123-68	BOLT-HEX 5/16-18X1	2				
30	64123-70	BOLT-HEX 3/8-16X1-1/2	4				
31	64123-89	BOLT-HEX 1/4-20X3/4	6				
32	64163-43	WSHR.443/.454X1X11	2				
33	64163-67	WASHER-.516X1X12	2				
34	64163-73	WASHER	4				
35	64164-10	1/4X1/4X1-1/4 MACH KEY	1				
36	64229-01	LOCKNUT-1/4-20	2				
37	64229-03	LOCKNUT-NYLON 3/8-16	13				
38	64229-04	S LCK NUT-NYLN 7/16-14	18				
39	64262-011	BOLT-FLG HD 3/8-16 X 1	4				
40	64268-01	NUT-FL NYLON LOCK 1/4-20	4				
41	64268-02	NUT-FL NYLON LOCK 5/16-18	2				
42	64268-05	NUT-FL NYLON LOCK 1/2-13	2				
43	81-053	CONNECTOR LINK, #50	1				
44	81-055	\50 HALF LINK	1				
45	85-SC16	SET COLLAR	8				
46	85-SS14	SET SCREW, 3/8-16 X 3/8	6				
47	90-0712	BOLT-7/16-14 X 1-1/2	8				
48	B0121	BEARING	2				
49	B2022	BEARING	8				

* NOT ILLUSTRATED

FIGURE 6

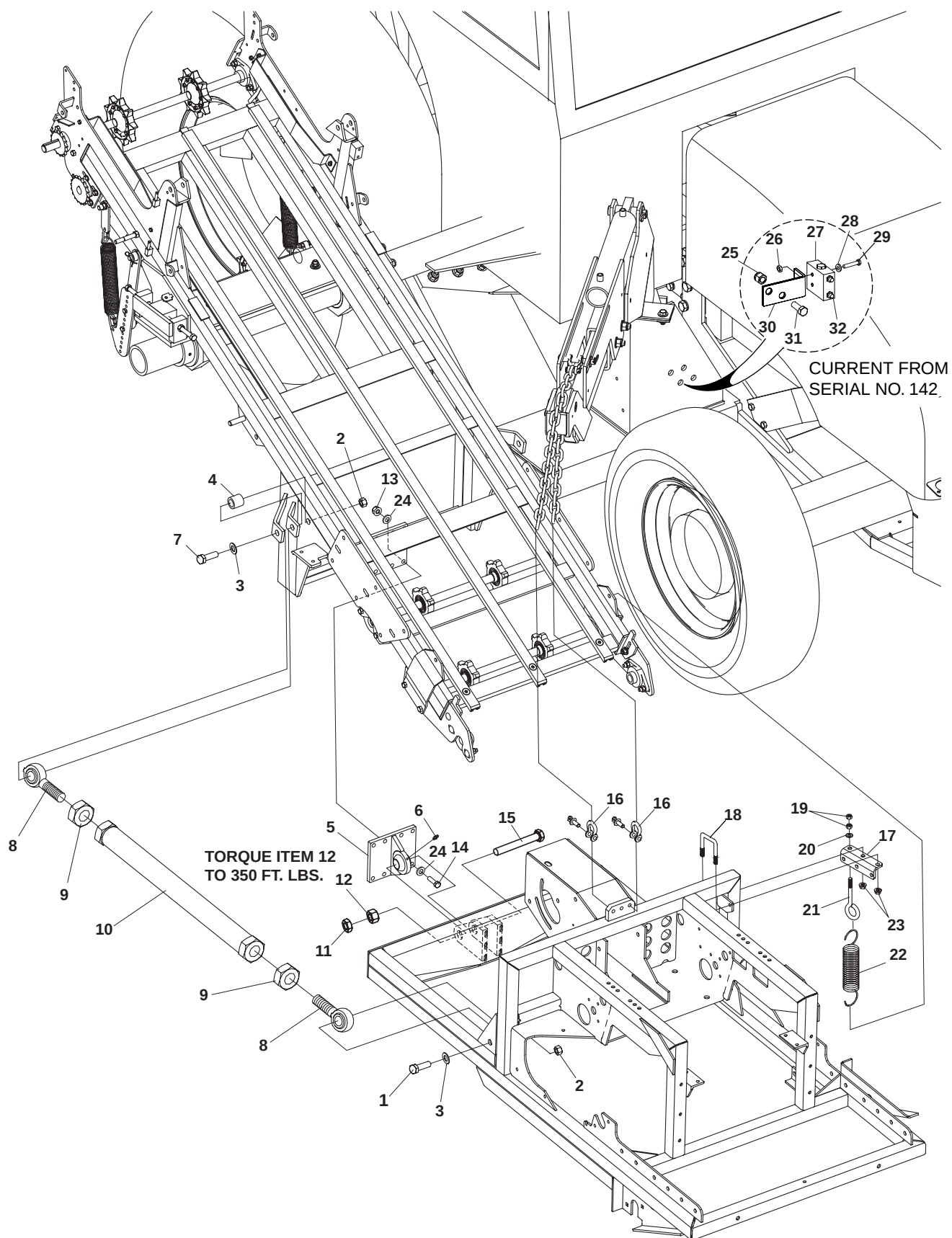


FIGURE 6

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	F041434	BOLT-3/4-10 X 3-1/2 NC	2				
2	F211208	LOCKNUT-3/4-10	4				
3	F331208	WASHER-.768/.756X1.25X14G	4				
4	4112501	HOUSING-LIFT SHAFT	2				
5	6115771.7	MOUNT-SWIVEL BALL	1				
6	KM11400	GREASE FITTING-1/4-28 45	1				
7	F041254	BOLT-3/4-10 X 5-1/2 NC	2				
8	43-012	ROD END-3/4 X 7 - R.H.	4				
	43-013	ROD END-3/4 X 7 - L.H.	4				
9	F221800	JAM NUT-1-1/8" UNC - R.H.	4				
	F221810	JAM NUT-1-1/8" UNC - L.H.	4				
10	4160022	ARM-LINK	2				
11	99-E66	JAM NUT-1-1/4 NC	1				
12	92-20	NUT-1-1/4 NC	1				
13	F840800	NUT-WLF 1/2-13	8				
14	F040814	BOLT-FLANGE 1/2-13X1-1/2	8				
15	F042054	BOLT-1-1/4X5-1/2 NC	1				
16	G8003	SHACKEL-ANCHOR 3/8"	2				
17	6115962.7	BRACKET, FLOAT ASSIST	2				
18	99-K49	U-BOLT	2				
19	64025-05	NUT-3/8-16 HEX	4				
20	64163-61	WSHR .81X.406X16GA	2				
21	F050660	EYE-BOLT. 3/8 X 5	2				
22	S2006	SPRING-EXT	2				
23	64141-4	NUT-WLF 3/8-16	4				
24	F330808	WASHER 1/2	8				
25	F211200	LOCKNUT 3/4 UNC	2				
26	F210400	LOCKNUT 1/4 UNC	2				
27	KH20169	LOCK VALVE	1				
28	F330400	FLATWASHER 1/4	2				
29	F040420	BOLT 1/4 UNC X 2 GR.8	2				
30	4160616	MOUNTING BRACKET	1				
31	F011216	BOLT 3/4 UNC X 1 3/4 GR.8	2				
32	8-8-0070220	FITTING	4				

NOTE

ITEMS 8, 9 & 10 ARE AVAILABLE
AS ASSEMBLY - 4160023.

NOTE

ITEMS 25, 26, 27, 28, 29, 30, 31
& 32 ARE AVAILABLE AS
ASSEMBLY - 4160629.

FIGURE 7

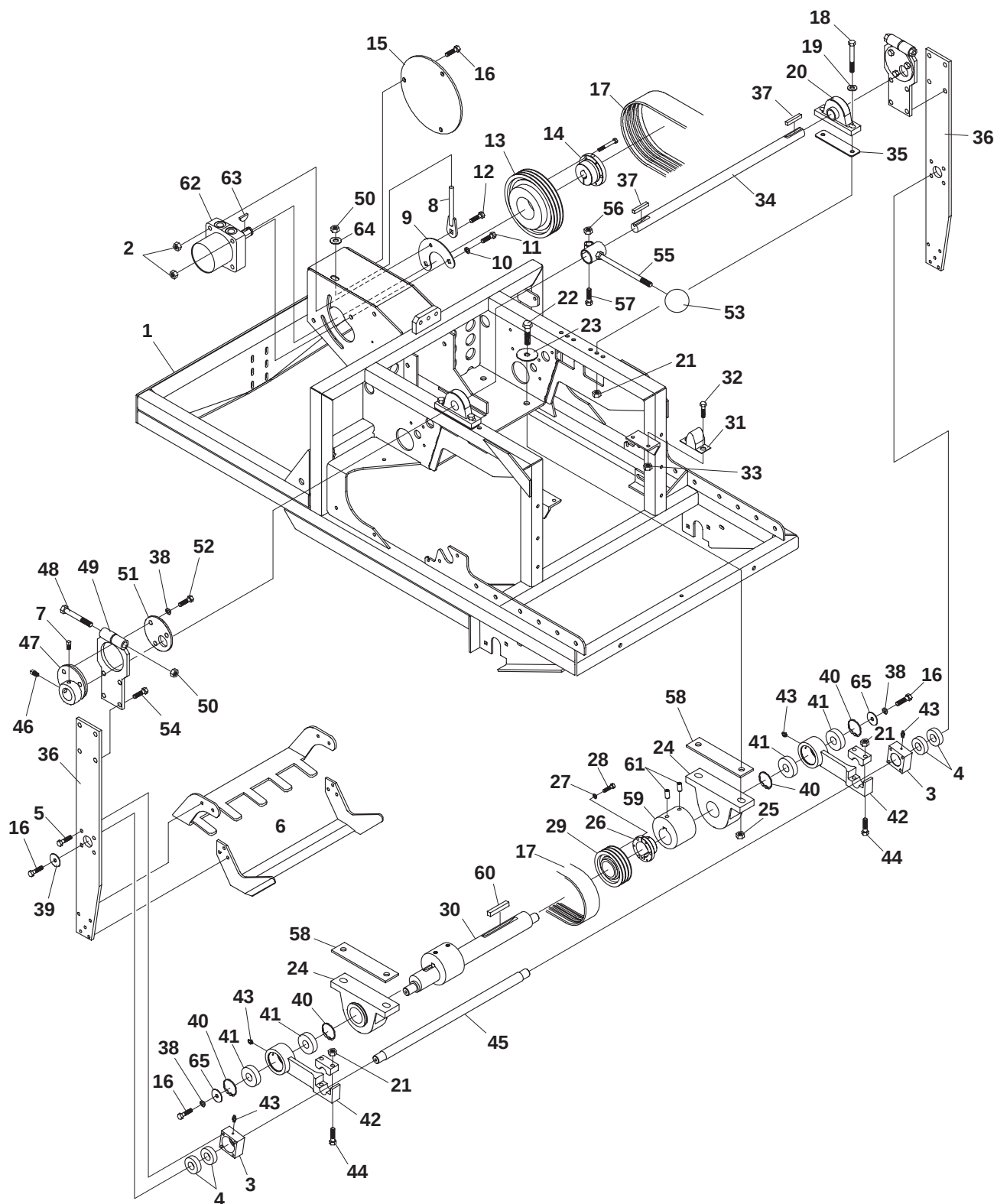


FIGURE 7

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4137626	S-24" CUTTING HEAD	1	43	KM11400	GREASE FITTING-1/4-28	4
2	F230808	NUT-1/2-13	4	44	F040724	BOLT-HEX 7/16-14X2-1/2	4
3	001281.6	WRISTSHAFT MNTNG BLK	2	45	001527	SHAFT-WRIST 24"	1
4	B2014	BEARING-BALL	4	46	F110606	SET SCREW-3/8-16 X 3/4	2
5	F040612	BOLT-WLF 3/8-16X1-1/4	8	47	001318.6	ECCENTRIC-ADJUSTMENT	2
6		CUTTING BLADES	1	48	F040840	BOLT-1/2-13 X 4	2
	(REFER TO FIGURE 7)			49	90-1317.6	PLATE-ADJ	2
7	F110610	SCREW	2	50	F210808	LOCKNUT-1/2-13	3
8	016296	TENSIONER-DRIVE MTR	1	51	001320	ECC ADJ COVER PLATE	2
9	016295.7	SCRAPER-MTR SHEAVE	1	52	F040610	BOLT-HEX 3/8-16X1	6
10	94-10	FLAT WASHER-5/8	1	53	M5001	PLASTIC KNOB	1
11	F020830	BOLT-CRG 1/2-13	2	54	F040610	BOLT-WLF 3/8-16 X 1	8
12	F020830	BOLT-CRG 1/2-13 X 3	1	55	001321.6	CUTTING BLADE ADJ	1
13	D2704	SHEAVE	1	56	F210608	LOCKNUT-NYLON 3/8-16	1
14	D3029	BUSHING	1	57	F040614	BOLT-HEX 3/8-16X1-1/2	1
15	016228.7	PLATE-MTR COVER	1	58	4131186.7	BEARING-SPACER	2
16	F040604	BOLT-3/8-16 X 1/2	7	59	4131094	CAM-COUNTERWEIGHT	2
17	81-3VX560	BELT	1	60	Q0720	KEY-1/2 X 1/2 X 3	2
18	F040734	BOLT-7/16-14 X 3-1/2	4	61	F140810	SCREW-SET 1/2-13 X 1	4
19	F320708	WASHER-.453X1.38X7	4	62	21-091	MOTOR-HYD, CUTTER HEAD	1
20	B1003	BEARING	2	63	G8019	KEY-WOODRUFF 1/4 X 1"	1
21	F210708	LOCKNUT-7/16-14	8	64	64163-16	WASHER-41/64X1-3/8X12GA	1
22	F041024	BOLT- 5/8-11 X 2-1/2	4	65	F340600	FENDER WASHER-3/8	2
23	F331008	WASHER	4				
24	B1120	BEARING	2				
25	F211002	NUT	4				
26	D3042	BUSHING	1				
27	F310408	LOCKWASHER-1/4	3				
28	F040420	BOLT-1/4-20X2	3				
29	D2705	SHEAVE	1				
30	4131799	CRANKSHAFT-24"	1				
31	014082	BUMPER-RUBBER	2				
32	F040606	BOLT-WLF 3/8-16X3/4	4				
33	F840600	NUT-WLF 3/8-16	4				
34	001324	SHAFT-CUTTER ARM	1				
35	6115733.7	PLATE-HEAD BRG SUPT	2				
36	4131756.6	ARM-CUTTING BLADE	2				
37	Q0579	KEY-1/4 X 1/4 X 1-3/8	2				
38	F320608	WASHER-3/8	26				
39	F320608	WASHER-13/32IDX1-9/32OD	2				
40	G1002	RETAINING RING-INTRNL	4				
41	B2015	BEARING	4				
42	001692.6	SPLIT CONNECTING ROD	2				

CUTTING BLADE OPTIONS

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FIGURE 8

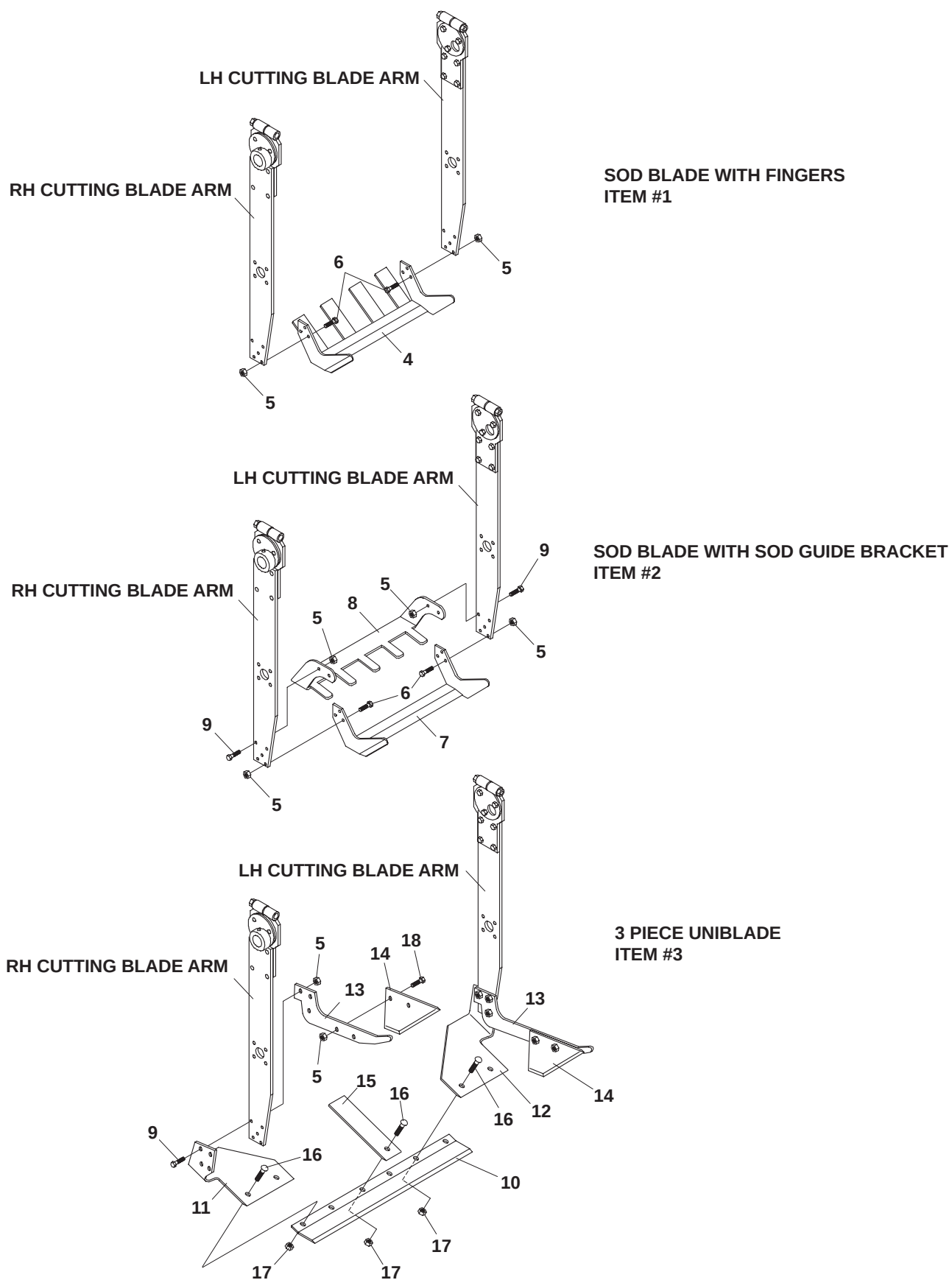


FIGURE 8

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	A03123	KIT-SOD BLADE, W/FING, 24" (INCLUDES ITEMS 4-6)	1				
2	A03927	KIT-SOD BLADE, W/BRKT, 24" (INCLUDES ITEMS 5-9)	1				
3	A03358	KIT-UNIBLADE, 3 PIECE, 24" (INCLUDES ITEMS 5, 9-18)	1				
4	4132643.7	CUTTING BLADE COMBO 24"	1				
5	64025-03	NUT-HEX 5/16-24 (QTY 6 USED ON A03123) (QTY 10 USED ON A03927) (QTY 12 USED ON A03358)					
6	515011	SCREW-.31-24 1.00 ZS HX G8	6				
7	4132718.7	BLADE-CUTTING 24" HD	1				
8	4136538.7	GUIDE-SOD, 24"	1				
9	F2717	SHCS-FLAT (QTY 4 USED ON A03927) (QTY 8 USED ON A03358)					
10	002270.7	BLADE-24" HD 1/4X3"	1				
11	015180.7	HOLDER-BLADE, RH	1				
12	015179.7	HOLDER-BLADE, LH	1				
13	015183.7	HOLDER-SIDE BLADE	2				
14	001550.7	BLADE-SIDE CUT .093X3.25	2				
15	015184.7	SOD GUIDE, CENTER	2				
16	F3701	BOLT-PLOW, G5	6				
17	F3013	NUT-FLANGED STOVER LCK	6				
18	64123-01	BOLT-HEX 5/16-24X3/4	4				

FIGURE 9

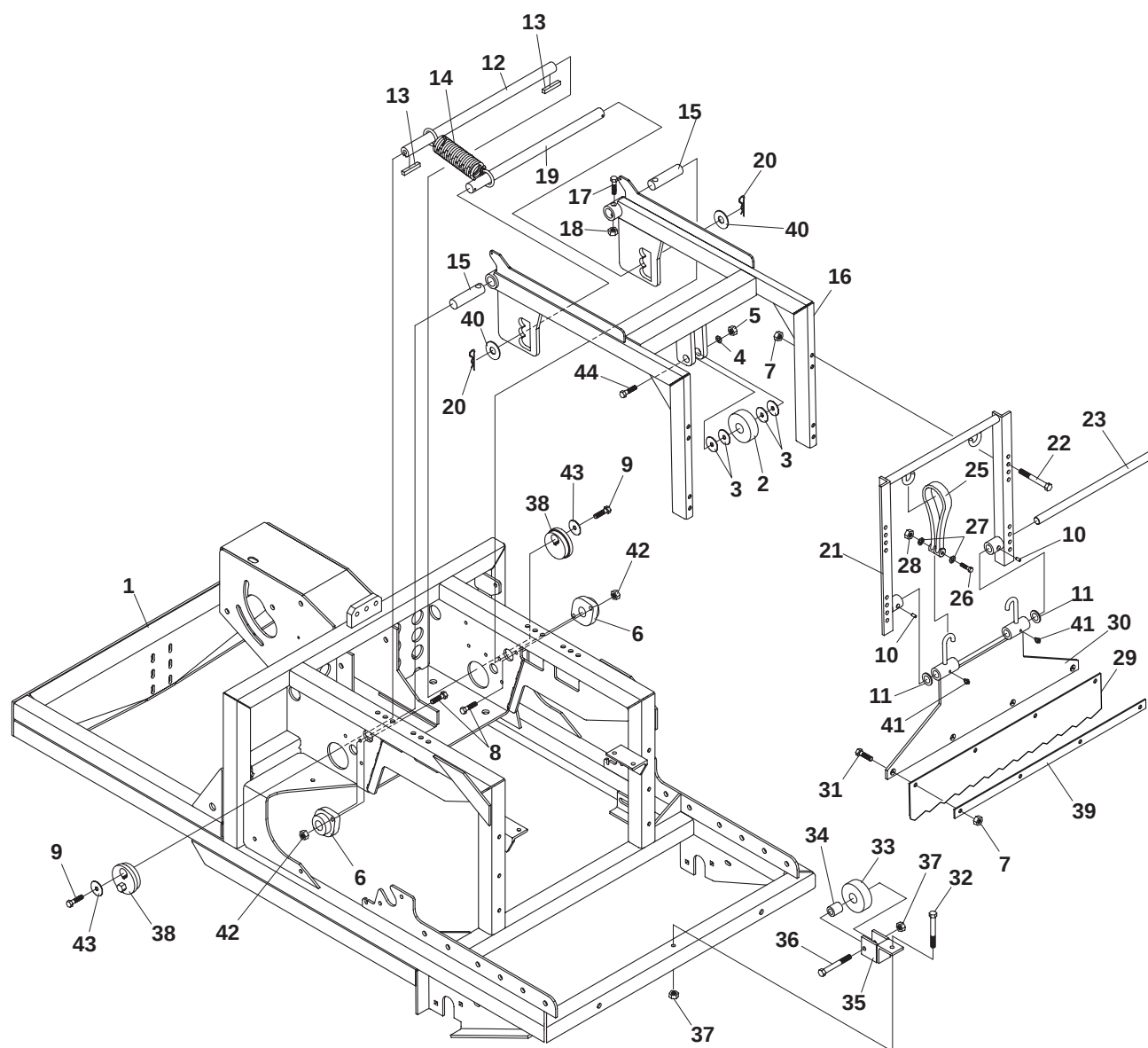


FIGURE 9

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4137626	S-24" CUTTING HEAD	1				
2	B8002	BEARING	1				
3	F321200	WASHER 3/4 GR.8	4				
4	G312000	LOCKWASHER-20MM	1				
5	F231208	NUT 3/4 UNC GR.8	1				
6	55-117	BEARING	2				
7	F840600	NUT-WLF 3/8-16	8				
8	F040512	BOLT-5/16-18 X 1-1/4	4				
9	F040806	BOLT-FLANGE 1/2-13 X 3/4	2				
10	F140604	SET SCREW 3/8 X 1/2	2				
11	F331208	WASHER-.768/.756X1.25X14G	2				
12	6115595.7	SHAFT-SPRING 24"	1				
13	F924410	KEY-1/4X1/4X1	2				
14	S2006	SPRING	7				
15	6115395	SHAFT	2				
16	4137638	S-FRAME, CUT OFF 24"	1				
	4160726	S-FRAME, CUT OFF 16" & 18"	1				
17	F040824	BOLT-HEX 1/2-13X2-1/2	2				
18	F210808	LOCKNUT-1/2-13	2				
19	6115596.7	SHAFT-SPRING 24"	1				
20	F940229	PIN-HITCH CLIP	2				
21	001445.6	FRAME-CUTOFF BLADE	1				
22	F040630	BOLT-3/8-16X3	4				
23	001418	PIN-BLADE PIVOT	1				
24*	001452	SPRING-CUT OFF ASSY	2				
	(INCLUDES ITEMS 25-28)						
25	S8001	STRAP-15"	2				
26	F040420	BOLT-1/4-20X2	2				
27	F320408	FLATWASHER-1/4	4				
28	F210408	LOCKNUT-1/4-20	2				
29	001677	BLADE-CUTOFF - 24" WIDE	1				
30	001447.6	MOUNT-CUTOFF BLADE	1				
31	F470610	BOLT-PLOW GR 5	4				
32	F040626	BOLT-3/8-16X2-3/4	1				
33	001507	BUMPER-RUBBER	1				
34	001764	BUSHING-RUBBER BUMPER	1				
35	6115437.7	BRACKET	1				
36	F040622	BOLT-3/8-16X2-1/4	1				
37	F210608	LOCKNUT-3/8-16	2				
38	6115667.7	ECCENTRIC SPRING CAM	2				
39	001424.6	CLAMP-CUTOFF BLADE	1				
40	F310608	LOCKWASHER 3/8	2				
41	29-010	GREASE FITTING	2				
42	F230508	NUT-5/16-18	4				
43	F320808	WASHER-41/64 X 1-3/8 X 12	4				
44	F041230	SCREW 3/4 X 3 GR.8	1				

* NOT ILLUSTRATED

FIGURE 10

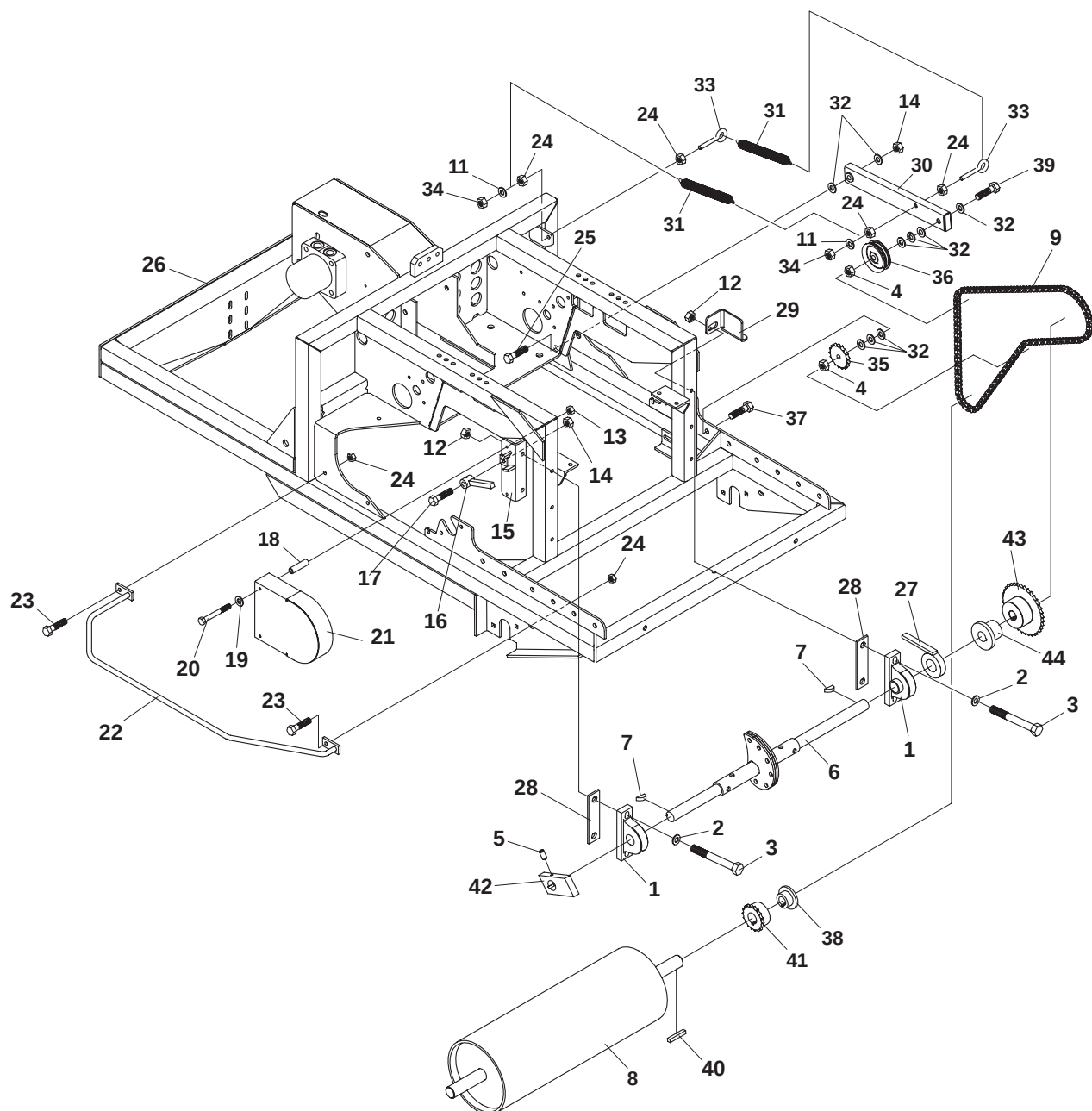


FIGURE 10

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	B1003	BEARING-24"	2	39	64123-31	BOLT-1/2-13X3	1
2	F320708	WASHER-1-1/32ODX15/32ID	4	40	Q0579	KEY-1/4 X 1/4 X 1-3/8	1
3	F040740	BOLT-7/16-14X4	4	41	KD71812	ROLLER SPROCKET 18T	1
4	F840800	NUT-WLF 1/2-13	2			(USED ON 54" ONLY)	
5	F110606	SET SCREW-3/8-16 X 3/4	1		KD72212	ROLLER SPROCKET 22T	1
6	4136472.6	24" CUT-OFF CAM FAST LIFT	1			(USED ON 60" ONLY)	
7	F924410	KEY-1/4X1/4X1	2				
8	015995	ROLLER-8" DIA. 12"	1	42	001789	RETURN CAM	1
	015996	ROLLER-8" DIA. 15"	1	43	KD80036	CAMSHAFT SPROCKET 36T	1
	4160686	ROLLER-8" DIA. 15.38" SP	1	43	KD80037	CAMSHAFT SPROCKET 37T	1
	015997	ROLLER-8" DIA. 16"	1	43	KD80038	CAMSHAFT SPROCKET 38T	1
	015998	ROLLER-8" DIA. 18"	1			(USED ON 54" ONLY)	
	015999	ROLLER-8" DIA. 24"	1		KD80049	CAMSHAFT SPROCKET 49T	1
9	56-RC40	CHAIN-ROLLER, #40	1		KD80050	CAMSHAFT SPROCKET 50T	1
10*	81-056	CONNECTOR LINK-#40	1			(USED ON 60" ONLY)	
11	F320608	WASHER-.81X.406X16GA	2				
12	F210708	LOCKNUT-7/16-14	4	44	83-P118	CAMSHAFT BUSHING	1
13	F230408	NUT-WLF 1/4-20	2				
14	F210808	LOCKNUT-1/2-13	2				
15	001558.7	PLATE-RET CAM STOP MNT	1				
16	001557.7	RETURN CAM STOP	1				
17	F040924	BOLT-HEX 1/2-13X2-1/2	1				
18	6115697	TUBE-SHIELD STANDOFF	2				
19	F320408	WASHER-.256IDX.62ODX18	2				
20	F040430	BOLT-1/4 UNC X 3	2				
21	6115686.6	SHIELD-CAM STOP	1				
22	6115676.6	TOE GUARD	1				
23	F040610	BOLT-WLF 3/8-16 X 1	2				
24	F840600	NUT-WLF 3/8-16	6				
25	F040830	BOLT-1/2-13 X 3					
26	4137626	S-24" CUTTING HEAD	1				
27	001836.7	INDICATOR-FULL LENGTH	1				
28	015761.7	SHIM-CAMSHAFT 1/8"	A/R				
	002653.7	SHIM-CAMSHAFT 1/4"	A/R				
29	6115994.7	TAB-INDICATOR	1				
30	6115877.7	IDLER ARM	1				
31	S2003	SPRING-EXTENSION	2				
32	F320808	WASHER-.516X1X12GA	A/R				
33	F050640	EYE-BOLT-3/8 X 3-7/8	2				
34	F210608	LOCKNUT-3/8-16	2				
35	83-4017E08	IDLER	1				
36	D2902	SHEAVE	1				
37	F040820	BOLT-FLANGE 1/2-13 X 2	1				
38	83-H20	BUSHING	1				

DEPTH CONTROL ASSEMBLY

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FIGURE 11

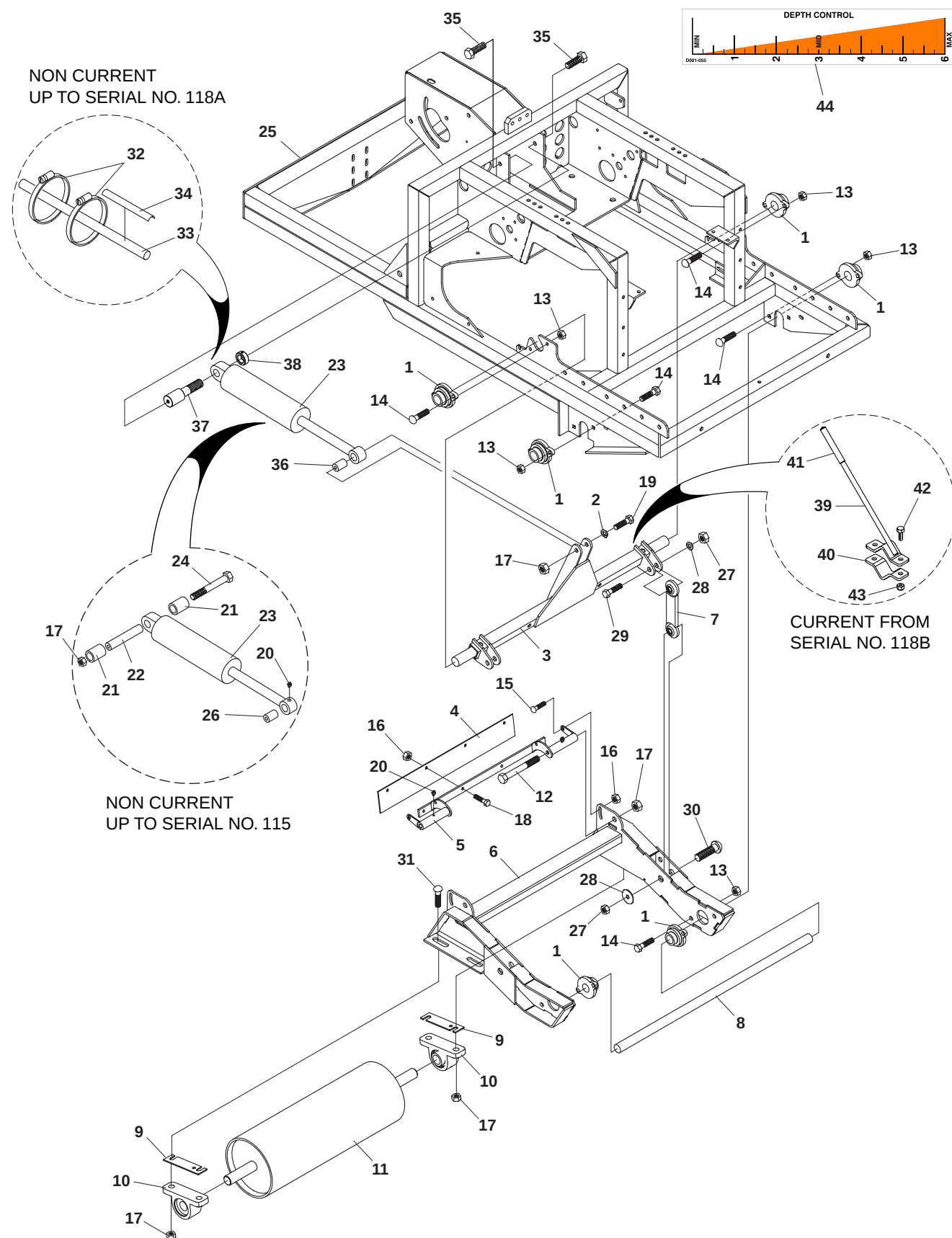


FIGURE 11

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	B0122	BEARING	6	41	47-138	HANDLE GRIP	1
2	F310800	LOCKWASHER-HELICAL 1/2	1	42	F040612	BOLT 3/8 UNC X 1 1/4 GR.8	2
3	6115975	ROLLER DEPTH CRANK	1	43	F210608	LOCKNUT 3/8 UNC	2
4	4160687	BLADE-SCRAPER 15.5" SP	1	44	D001-055	DECAL. DEPTH INDICATOR	1
	001326	BLADE-SCRAPER 16"	1				
	001327	BLADE-SCRAPER 18"	1				
	001328	BLADE-SCRAPER 24"	1				
5	6115509	FRAME-SCRAPER	1				
6	6115888	FRAME-ROLLER MOUNTING	1				
7	6115104	LIFT LINK	2				
8	6115477	SHAFT-ROLLER MOUNT 24"	1				
9	002295	SHIM-10GA.	A/R				
	002296	SHIM-16GA.	A/R				
10	B1111	BEARING	2				
11	015995	ROLLER-8" DIA. 12"	1				
	015996	ROLLER-8" DIA. 15"	1				
	4160686	ROLLER-8" DIA. 15.38" SP	1				
	015997	ROLLER-8" DIA. 16"	1				
	015998	ROLLER-8" DIA. 18"	1				
	015999	ROLLER-8" DIA. 24"	1				
12	F040854	BLT-HEX 1/2-13X5-1/2	2				
13	F840600	NUT-WLF 3/8-16	16				
14	F020612	BOLT-CRG 3/8-16X1-1/4	12				
15	F020506	BOLT-CRG 5/16-18 X 3/4	2				
16	F230508	NUT-5/16-18	7				
17	F840800	NUT-WLF 1/2-13	8				
18	F040506	BOLT-HEX 5/16-18X3/4	5				
19	F040826	BOLT-HEX 1/2-13X2-3/4	1				
20	29-010	GREASE FITTING	3				
21	6115508	TUBE	2				
22	6109613	PIVOT-CYLINDER, TUBE	1				
23	23-178	CYLINDER-HYDRAULIC 3X8	1				
24	90-0856	BOLT-/2-13X7 NC	1				
25	4137626	S-24" CUTTING HEAD	1				
26	6115979	SPACER	1				
27	F211008	LOCKNUT-5/8-11	4				
28	F321008	WASHER-41/64 X 1-3/8 X 12	4				
29	F041022	BOLT-HEX 5/8-11 X 2-1/4	2				
30	99-K98	BOLT-BHSCS 5/8-11 X 2-1/4	2				
31	F020824	BOLT-CARRIAGE	4				
32	11-020	STAINLESS CLAMP	2				
33	002447	ROD-DEPTH INDICATOR	1				
34	00-267	LABEL-CUTTERHEAD DEPTH	1				
35	F040810	BOLT 1/2 UNC X 1 GR.8	2				
36	4160031	SPACER	1				
37	4160033	PIN. CYLINDER PIVOT	1				
38	85-SC16	SET COLLAR	1				
39	4160441	DEPTH INDICATOR	1				
40	4160439	BRACKET. DEPTH INDICATOR	1				

NOTE

ITEMS 17, 20, 21, 22, 24 & 26 ARE NON CURRENT UP TO SERIAL NO. 115 AND ARE REPLACED BY ITEMS 35, 36, 37 & 38.

NOTE

ITEMS 32, 33 & 34 ARE NON CURRENT UP TO SERIAL NO. 118A AND ARE REPLACED BY ITEMS 39, 40, 41, 42, 43 & 44.

NOTE

ITEMS 39, 40, 41, 42 & 43 ARE AVAILABLE AS DEPTH INDICATOR ASSEMBLY - 4160442.

FIGURE 12

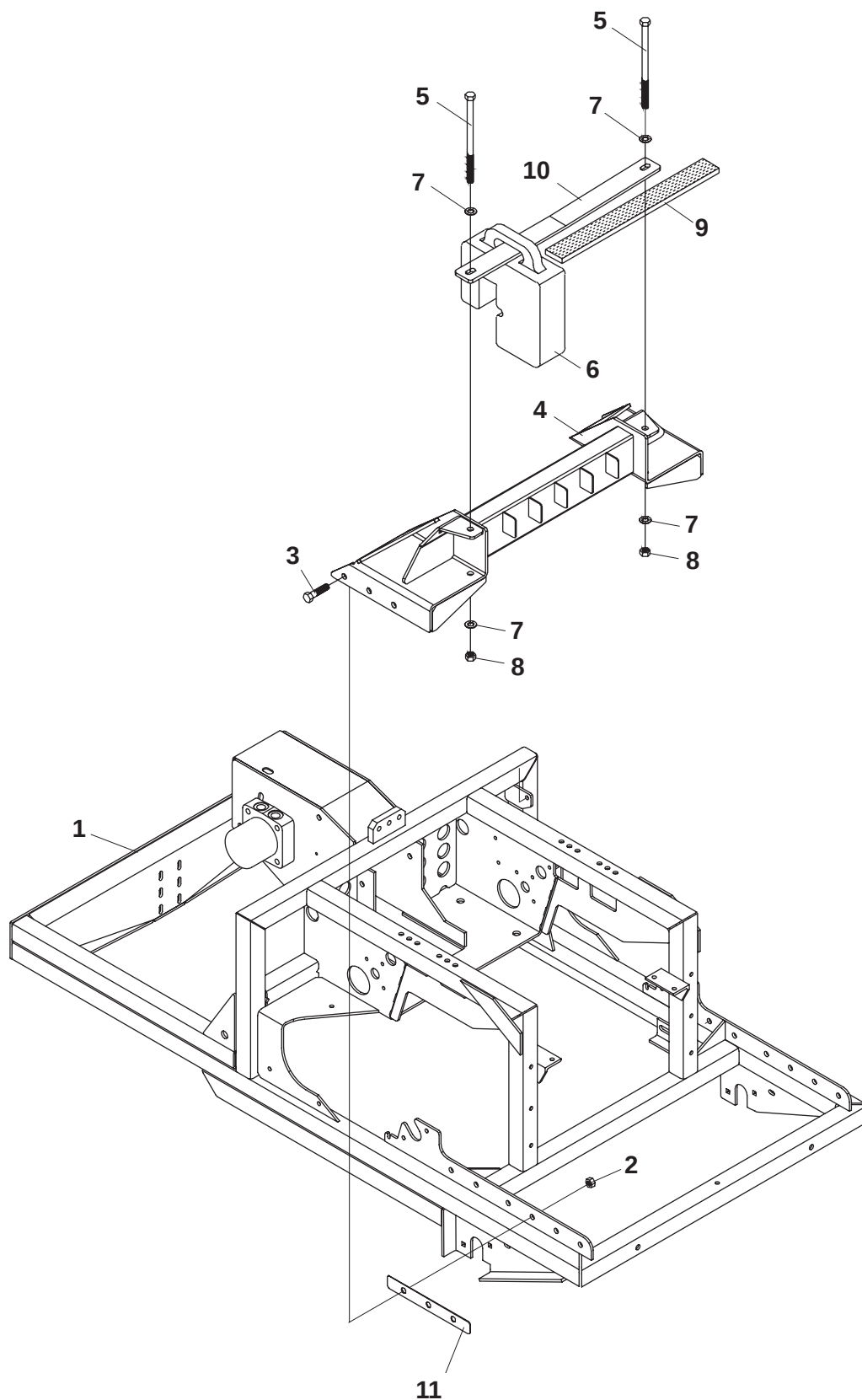


FIGURE 12

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4137626	S-24" CUTTING HEAD	1				
2	F840800	NUT-WLF 1/2-13	6				
3	F040812	BOLT-FLANGE 1/2-13X1-1/4	6				
4	6115992.6	WEIGHT BAR-24" HEAD	1				
5	90-0868	BOLT-HEX 1/2 X 8-1/2	2				
6	62-540.7	WEIGHT	6				
7	64163-67	WASHER-.516X1X12GA	4				
8	64229-05	LOCKNUT-1/2-13	2				
9	Q7475	WEATHERSTRIP-1/2 X 2 19"	1				
10	6115990.6	BAR-HOLD DOWN	1				
11	6109602.7	SHIM-WEIGHT BAR	A/R				

FIGURE 13

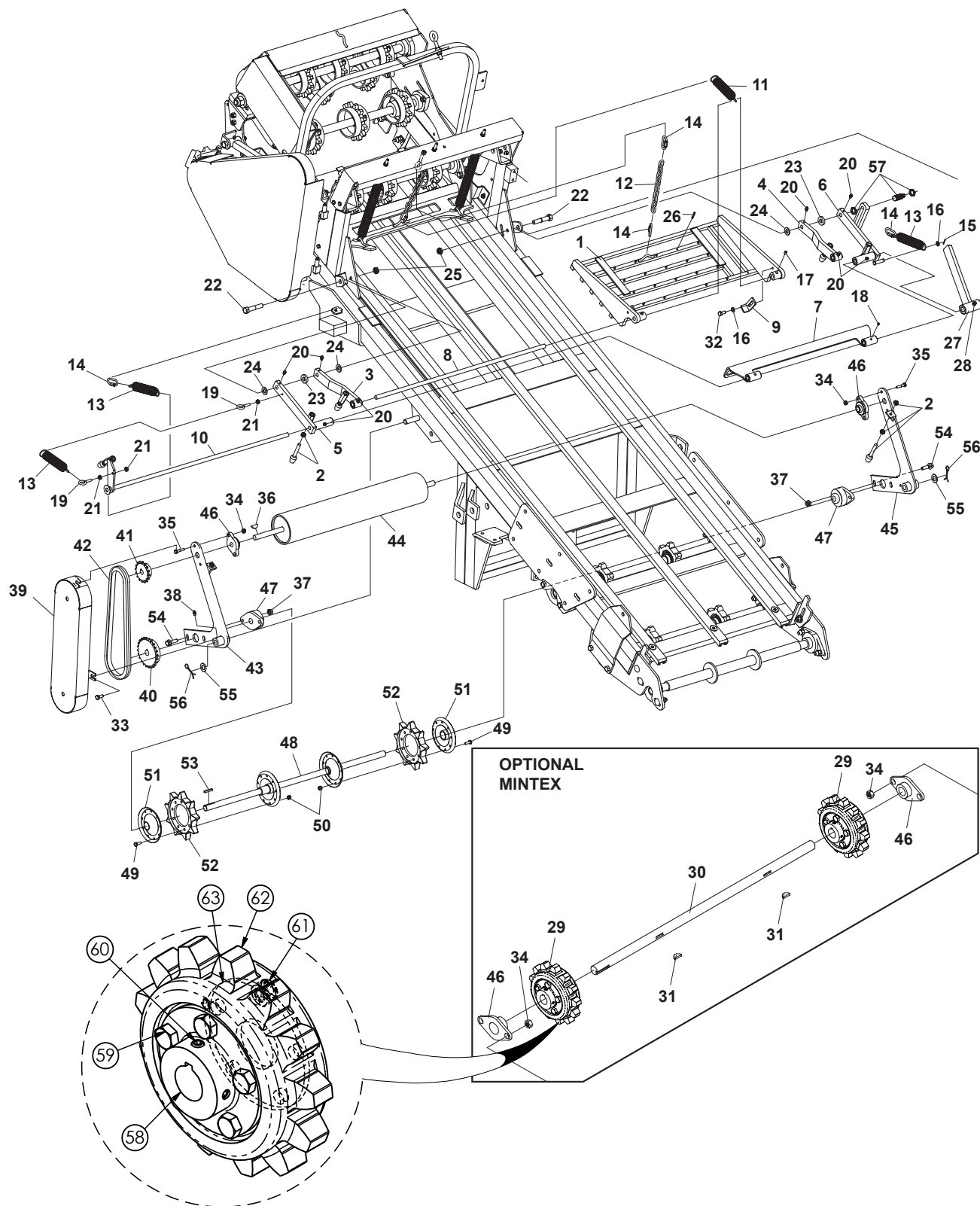


FIGURE 13

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4160255	STARTER TRAY-24". 4 BAR	1	47	B0105	BEARING	2
	4133514	STARTER TRAY-24". 5 BAR	1	48	002611.7	SHAFT-IDLER 24" ROLLER	1
2	F3748	BOLT-RUBBER HEAD 3/8-16	7	49	64123-89	BOLT-HEX 1/4-20X3/4	18
3	6115859	WLDMT-OFFSET LINK ARM	1	50	F210408	LOCKNUT-NYLON 1/4-20	18
4	6115860	WLDMT-OFFSET LINK ARM	1	51	D8001	FLANGE, SPROCKET	2
5	6115857	WLDMT-LINK ARM (RH)	1	52	83-053	GEAR	2
6	4139946	WLDMT-LINK ARM (LH)	1	53	Q0570	KEY-3/16X3/16X1-1/4 SQ	1
7	6115825	STARTER GATE-16 & 18"	1	54	64262-013	BOLT-FLG HD 3/8-16 X 1-1/2	4
	6115826	STARTER GATE-24"	1	55	F321000	WASHER-.625X1.12X.062 PL	2
8	6115892	ROD-STARTER TRAY, 24"	1	56	F910514	COTTER PIN-5/32 X 1-1/2	2
9	6115861.7	STOP-STARTER TRAY	2	57	4132983	SENSOR-INDUCTIVE 8MM	1
10	4139954.7	WLDMT-24" PIVOT ROD	1	58	4161372	3/4 BORE SPROCKET HUB	2
11	001277	SPRING-STARTER TRAY	1	59	F040416	BOLT - HEX HEAD	10
12	Q8402	CHAIN-STARTER TRAY	1			1/4 UNC x 1 3/4 GR 8	
13	001279	SPRING-SCRAPER BLADE	3	60	F140402	SET SCREW - 1/4 -20 UNC	4
14	G8084	QUICK LINK-3/16 ZP	4			SOC HD CUP POINT	
15	F910310	COTTER PIN-3/32 X 1	1	61	F210408	1/4-20 UNC NYLOC NUT GR 8	10
16	F320608	WASHER 3/8	3	62	R100621	ROLL-UP SPROCKET MINTEX	2
17	64044-2	SET SCREW-5/16-18	2	63	R100622	ROLL-UP SPROCKET PLATE	2
18	64044-13	SCREW-SET 1/4-28 X 1/4	2				
19	F050420	EYE BOLT-1/4 X 2 W/9/16	2				
20	KM11400	GREASE FITTING-1/4-28	8				
21	F840824	NUT-WLF 1/4-20	3				
22	F040824	BOLT-HEX 1/2-13X2-1/2	2				
23	99-B12	SPACER	2				
24	F320808	WASHER-.516X1X12GA	4				
25	F220800	NUT-JAM NYLON INSERT	2				
26	F940312	PIN-SPRING TENSION	24				
27	4139958.7	WLDMT-ROLL UP FLAG	1				
28	F110610	SCREW	1				
29	4161371	4" SPROCKET ASSEMBLY	2				
30	001407	SHAFT, DRIVE- 4" ROLLER	1				
31	64164-19	KEY WOODRUFF	2				
32	F040506	BOLT-HEX 5/16-18X3/4	3				
33	F320500	WASHER 5/16	3				
34	F210508	NUT-FL NYLON LOCK 1/4-20	4				
35	F040412	BOLT-HEX 1/4-20X1-1/4	4				
36	F900310	KEY-WOODRUFF #608	1				
37	F840600	NUT-FL NYLON LOCK 3/8-16	4				
38	F910208	COTTER PIN 1/8 X 1	2				
39	6115895.6	GUARD-4" ROLLER DRIVE	1				
40	KD72406	SPROCKET-#40 X 24T X 3/4	1				
41	KD71605	SPROCKET-#40 X 16T X 3/8	1				
42	Q8430	CHAIN	1				
	81-056	CONNECTOR LINK	1				
	81-076	HALF LINK	1				
43	001404.7	4" ROLLER ARM BASIC	1				
44	001437.7	4" ROLLER 24" MACHINE	1				
45	001405.7	4" L.H. ROLLER ARM	1				
46	B0002	2-BOLT FLANGED BRG-5/8"	2				

FIGURE 14

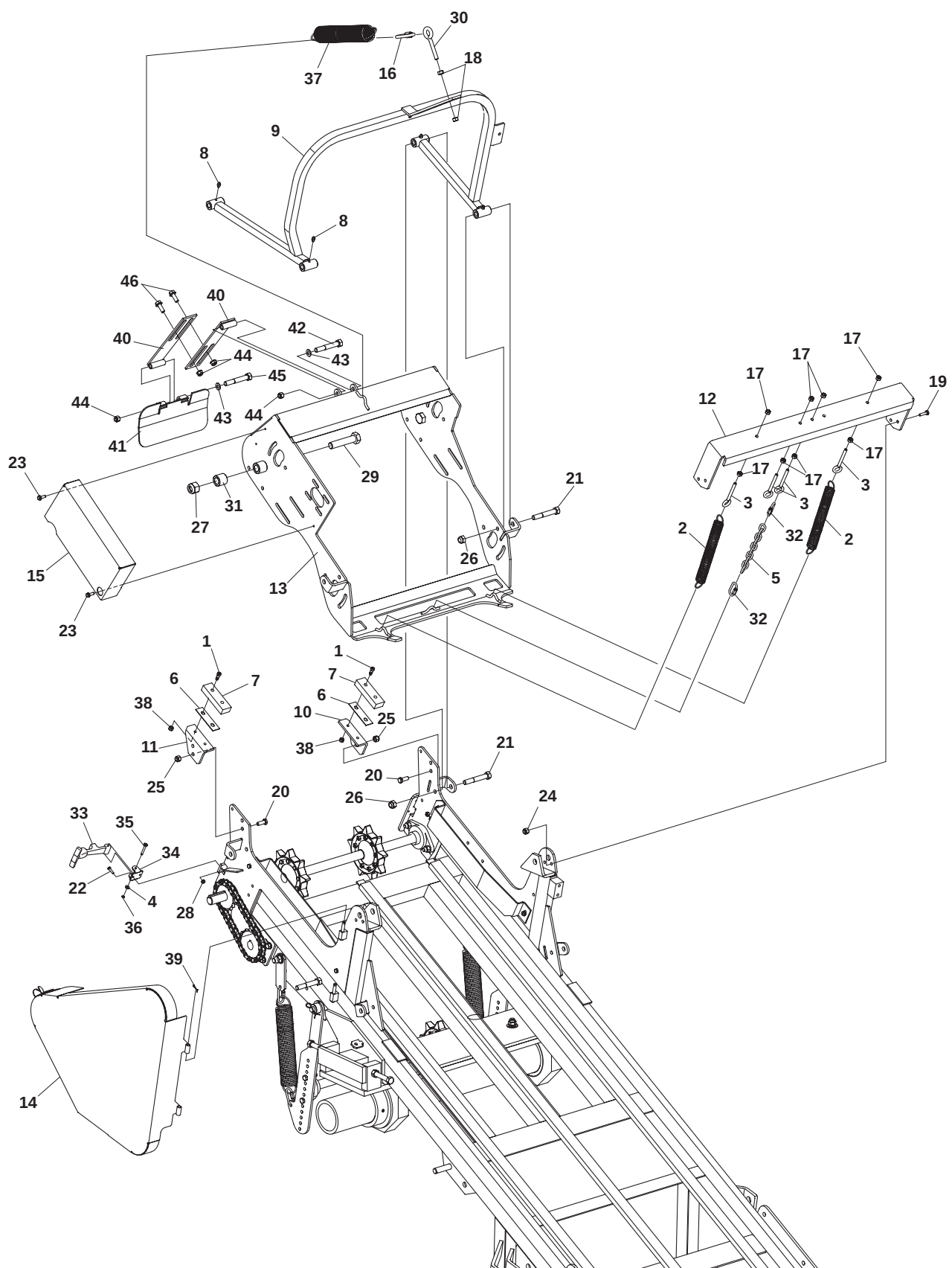


FIGURE 14

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	F500503	BOLT-SHOULDER 5/16X3/8	4				
2	001279	SPRING-SCRAPER BLADE	2				
3	002102	EYEBOLT-STARTER TRAY	4				
4	F320200	WASHER-FLAT #10 SAE	1				
5	Q8402	CHAIN-STARTER TRAY	1				
6	016961	SHIM-16 GA X 1 X 3-1/2	2				
7	05-041	BUMPER	2				
8	KM11400	GREASE FITTING-1/4-28	4				
9	4129625.7	WLDMT-ROLLUP TRAY	1				
10	4129779.7	ANGLE-ROLLUP	1				
11	4129787.7	ANGLE-ROLLUP	1				
12	4137495	S-BAR	1				
13	4137514	S-WLDMT- ROLL-UP TRAY	1				
14	4134747.6	WLDMT-GUARD ROLL UP	1				
15	4134758.6	GUARD-ROLL UP	1				
16	4134811	LINK-QUICK 5/16	1				
17	F230558	NUT-HEX 5/16-18	8				
18	F230608	NUT-HEX 3/8-16	2				
19	F040410	BOLT-HEX 1/4-20X1	4				
20	F230610	BOLT-HEX 3/8-16X1	4				
21	F040832	BOLT-HEX 1/2-13X3-1/4	4				
22	F540206	MACH SCREW-10-24X3/4	2				
23	F840410	BOLT-FLANGE 1/4-20X1	3				
24	F210408	LOCKNUT-1/4-20	4				
25	F210608	LOCKNUT-3/8-16	4				
26	F210808	LOCKNUT-1/2-13	4				
27	F211208	LOCKNUT-3/4-10	2				
28	F210200	NUT-#10-24	2				
29	F091234	BOLT-.75 X 3.50	2				
30	F050644	EYE BOLT	1				
31	4135837	BUSHING-NYLON	2				
32	G8084	QUICK LINK-3/16 ZP	2				
33	G8115	HANDLE	1				
34	G8116	BRACKET	1				
35	G8117	STUD	1				
36	G8119	RETAINER	1				
37	S2003	SPRING-EXTENSION	1				
38	F840400	NUT-WLF 1/4-20	4				
39	F910112	COTTER-HAIRPIN.08X1.19	2				
40	4136095.7	WLDMT-BRKT, END OF ROLL	2				
41	4136092.7	WLDMT-FLAP, END OF ROLL	1				
42	F040632	BOLT-HEX 3/8-16X3-1/4	1				
43	F320608	WASHER-.81X.406X16GA	2				
44	F210608	NUT-FL NYLON LOCK 3/8-16	4				
45	F040650	BOLT-HEX 3/8-16X5	1				
46	F850610	BOLT-FLG HD 3/8-16 X 1	2				

FIGURE 15

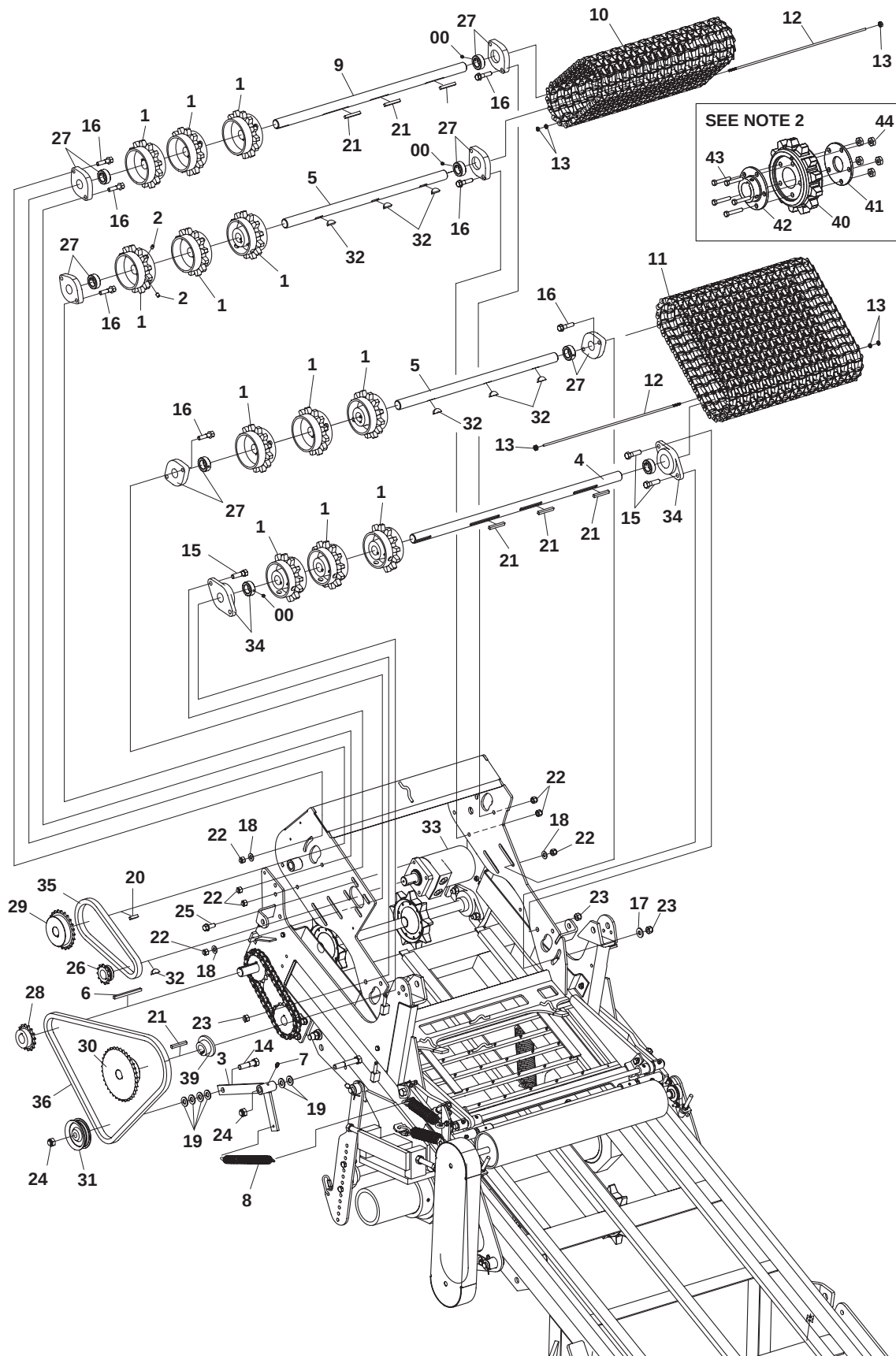


FIGURE 15

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	001348	GEAR	12	40	R100621	ROLL UP SPROCKET	1
	(INCLUDES ITEM 2)			41	R100622	ROLL UP SPROCKET PLATE	1
	R500068	ROLL UP SPROCKET ASSY	12	42	R100623	ROLL UP SPROCKET HUB	1
2	F140503	SCREW-SET 5/16-18X3/8	24	43	F040416	BOLT-1/4 UNC X 1-3/4 GR.8	5
3	001375.7	IDLER ARM-ROLLUP DRIVE	1	44	F210400	NUT-1/4 UNC NYLOC	5
4	001390	DRIVESHAFT-ROLL UP	1				
5	016720	SHAFT-CONVEYOR DRIVE	2				
6	Q0579	KEY-1/4 X 1/4 X 3-5/8	1				
7	KM11400	GREASE FITTING-1/4-28	1				
8	41-047	SPRING	1				
9	4129654	SHAFT-VERTICAL DRIVE	1				
10	4134808	BELT-MINTEX 18"	1				
	(INCLUDES ITEMS 12 & 13)						
11	4134809	BELT-MINTEX 18"	1				
	(INCLUDES ITEMS 12 & 13)						
12	001465	CONNECTOR-18" MINTEX	2				
13	F230200	NUT-HEX-#10-24	6				
14	F040822	BOLT-HEX 1/2-13X2-1/4	1				
15	F040714	BOLT-HEX 7/16-14X1-1/2	4				
16	F040604	BOLT-WLF 3/8-16 X 1/2	12				
17	F330708	WASHER-.443/.454X1X11GA	2				
18	F330608	WSHR .81X.406X16	6				
19	F320808	WASHER-.516X1X12GA	6				
20	F924410	KEY-1/4X1/4X1 SQ	1				
21	F924420	KEY-1/4X1/4X2 SQ	7				
22	F210608	LOCKNUT-3/8-16	12				
23	F210707	LOCKNUT-7/16-14	4				
24	F210808	LOCKNUT-1/2-13	2				
25	F040610	BOLT-WLF 3/8-16X1	4				
26	KD71210	SPROCKET-#40 12-TOOTH	1				
27	B0121	BEARING-2 BOLT FLANGE	6				
28	KD80016	DRIVESHAFT SPROCKET	1				
29	KD80024	SPROCKET-#40 X 24T	1				
30	KD80036	ROLL UP SPROCKET	1				
31	D2902	SHEAVE-BELT IDLER	1				
32	F924410	KEY - 1/4 X 1/4 X 1"	7				
33	H0012	MOTOR - OBSOLETE	1				
	KH30007	MOTOR - SEE NOTE 1	1				
34	55-FB23016	BEARING-2 BOLT FLANGE	2				
35	Q8430	CHAIN-CUT OFF LENGTH 24"	1				
36	Q8430	CHAIN-CUT OFF LENGTH 51.6"	1				
37*	81-056	LINK-CONNECTOR #40	2				
38*	81-076	HALF LINK #40	2				
39	83-P116	BUSHING	1				

*NOT ILLUSTRATED

NOTE 1

ITEM 33 - H0012 IS OBSOLETE AND IS REPLACED BY SERVICE KIT 4160611. IT INCLUDES:
MOTOR - KH30007 QTY. 1
FITTINGS - 8-10-070220. QTY. 2

NOTE 2

ITEM 1 IS NON CURRENT AND IS REPLACED BY ROLL-UP SPROCKET ASSEMBLY R500068 WHICH INCLUDE ITEMS 40, 41, 42, 43 & 44.

FIGURE 16

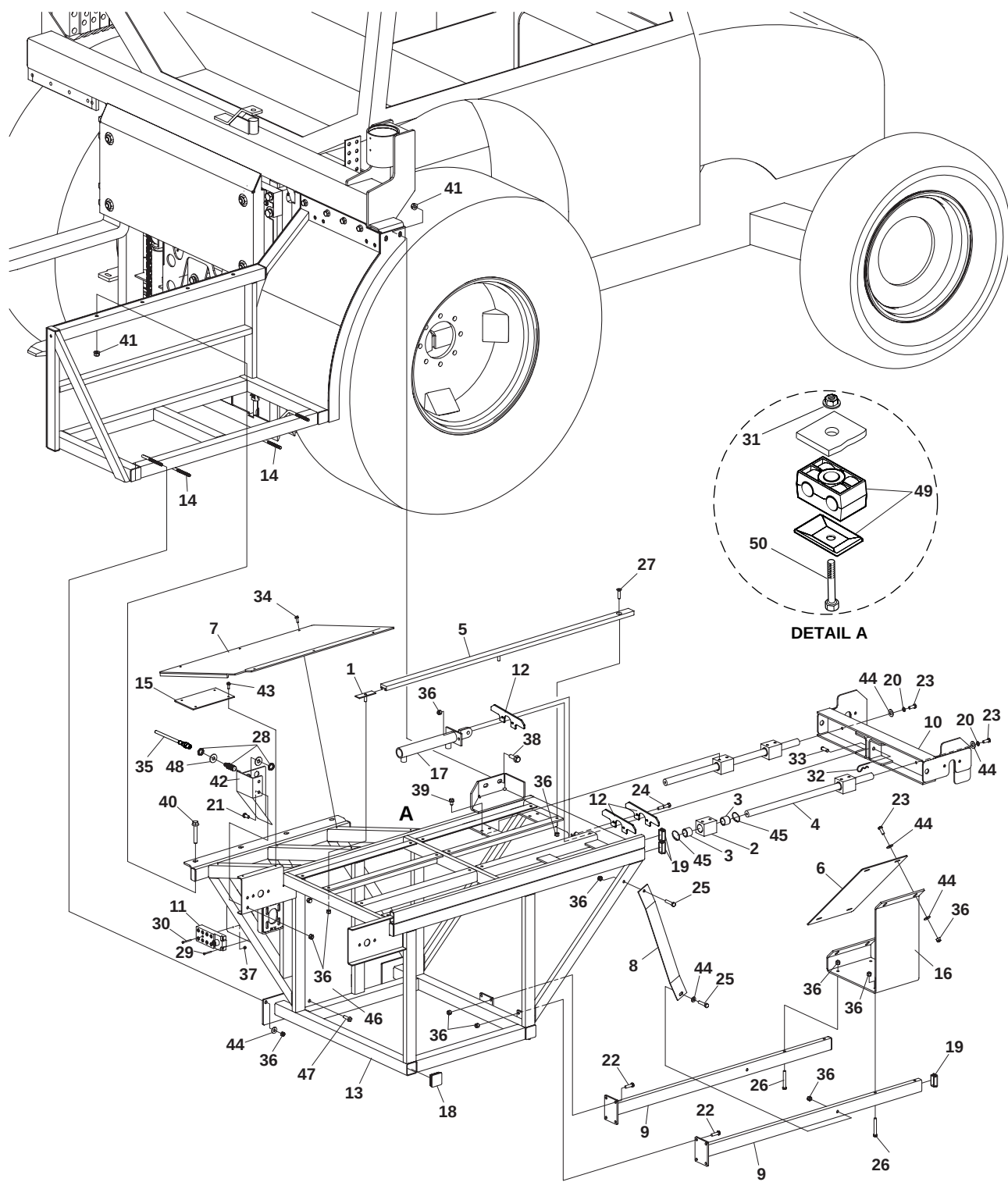


FIGURE 16

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	016661	SLIDER-T-BOLT	8	41	F840800	NUT-FL NYLON LOCK 1/2-13	6
2	4128917	BLOCK-GUIDE	4	42	4160407	BRACKET-SENSOR, MOTOR	1
3	4128942	BEARING-SLEEVE	8	43	F870406	BOLT-WLF 1/4-20X3/4	4
4	4129177	SHAFT-GUIDE	2		04-009	INSERT, 1/4-20	4
5	4129323	SLIDER-INDEX CONVEYOR	4	44	F330608	FLATWASHER 3/8	15
6	4135608.7	PLATE-BAD ROLL SLIDE	1	45	F815125	INTERNAL RETAINING RING	8
7	4160406	GUARD	1	46	4160280	DUST SHIELD. OIL COOLER	1
8	4129996.7	BRACE-INDEX CONVEYOR	1	47	F870404	BOLT FLNGD. 1/4 X 1/2	4
9	4130022.7	WLDMT-SOD DEFLECTOR	2	48	G321800	FLATWASHER - M18	2
10	4138642	S-WLDMT-BRKT BAD ROLL	1	49	4135024	HOSE CLAMP - 5/8	1
11	KE60115	JUNCTION BOX-8 PORT	1	50	F040520	BOLT 5/16 UNC X 2 GR.8	1
12	4160493	SPACER - SEE NOTE 1	3				
13	4160400	S-WLDMT-INDEX CONVEYOR	1				
14	4132982	U-BOLT	2				
15	4160420	GUARD-MOTOR	1				
16	4129438.7	BRACKET-TURF-DEFLECTOR	1				
17	4131860	CYLINDER-1.25X.625X8.0	1				
18	4134550	CAPLUGS-2 X 2	2				
19	4134551	CAPLUGS-1 X 2	8				
20	F310608	WASHER-3/8 HELICAL LOCK	2				
21	F040606	BOLT-3/8-16X3/4 HEX	21				
22	F040612	BOLT-HEX 3/8-16X1-1/4	12				
23	F040610	BOLT-HEX 3/8-16X1	2				
24	F040620	BOLT- 3/8 UNC. SEE NOTE 2	2				
25	F040616	BOLT-HEX 3/8-16X1-3/4	2				
26	F040626	BOLT-HEX 3/8-16X2-3/4	4				
27	F120614	FLT-HEX SCR 3/8-16 1-1/2	4				
28	4132983	SENSOR-INDUCTIVE 8MM	1				
29	F180112	8-32 X 1-1/4 HEX SOC SCR	2				
30	F180114	8-32 X 1-1/2 HEX SOC SCR	1				
31	F840500	NUT - SRRTD. FLNGD. 5/16	1				
32	F910224	COTTER-HAIRPIN 1/8x1 1/2	1				
33	KX00814	PIN-CLEVIS 1/2X1-1/2	1				
34	F870406	BLT-TDFM 1/4-20X3/4	6				
35	4134048	SENSOR CABLE	1				
36	F210608	LOCKNUT-NYLON 3/8-16	40				
37	F210100	LOCKNUT-NYLON INS #8-32	3				
38	F870814	BOLT-FLG HD 1/2-13 X 1-1/2	2				
39	F870604	BOLT-FLG HD 3/8-16 X 1/2	8				
40	F870830	BOLT-FLG HD 1/2-13 X 3	4				

NOTE 1

THE QUANTITY OF ITEM 12 VARIES
DEPENDING ON THE WIDTH OF
CUT.

16 INCH WIDTH OF CUT - 6 QTY.
24 INCH WIDTH OF CUT - 4 QTY.

NOTE 2

THE LENGTH OF ITEM 24 VARIES
DEPENDING ON THE WIDTH OF
CUT.

16 INCH WIDTH OF CUT - 2 3/4 IN.
24 INCH WIDTH OF CUT - 2 1/4 IN.

FIGURE 17

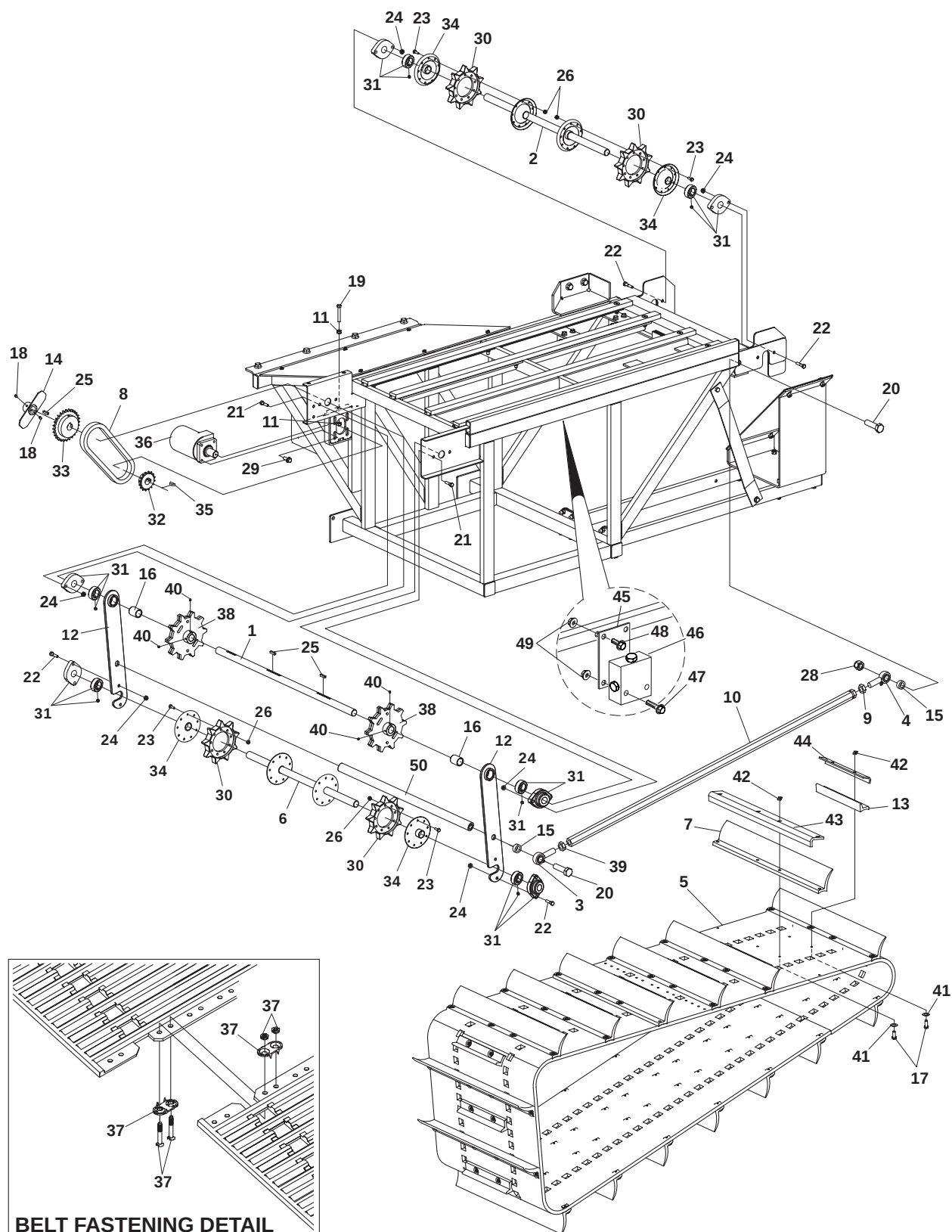


FIGURE 17

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4137005	SHAFT-INDEX CON. DRIVE	1				
2	4136960.7	WLDMT-IDLER FRONT - 28"	1				
3	2188142-03	ROD-END 3/4	2				
4	2188142-04	ROD-END 3/4 LH	2				
5	4129322	BELT-CONVEYOR, 24" INDEX	1				
6	4136926.7	WLDMT-IDLER REAR - 24.5"	1				
7	4131919	CLEAT-RUBBER	16				
8	4131924	CHAIN-INDEX CONVEYOR	1				
9	F221218	NUT-HEX JAM 3/4-16 LH	2				
10	4131990.6	LINKAGE-TIE	2				
11	64141-4	NUT-WLF 3/8-16	2				
12	4133218.7	WLDMT-TENSION ARM IDLER	2				
13	4133515	CLEAT-RUBBER	16				
14	4134059.7	WLDMT-SENSOR FLAG	1				
15	4134399	SPACER	4				
16	4134452	BEARING-SLEEVE	2				
	4128942	BEARING-SLEEVE	2				
17	F040414	BOLT-1/4-20X1-1/2	96				
18	F040503	SET SCREW-5/16-18	2				
19	F870624	BOLT-FLNGD. 3/8-16X2-1/2	1				
20	F041226	BOLT-HEX 3/4-10X2-3/4	4				
21	F870614	BOLT-HEX 3/8-16X1-1/2	4				
22	F040614	BOLT-HEX 3/8-16X1-1/2	8				
23	F040406	BOLT-HEX 1/4-20X3/4	36				
24	F840600	NUT-WLF 3/8-16	12				
25	F924410	KEY-1/4X1/4X1 SQ END	1				
26	F210408	LOCKNUT-1/4-20	132				
27	F210608	LOCKNUT-3/8-16	30				
28	F211258	LOCKNUT-3/4-10	4				
29	F870610	BLT-WLF 3/8-16 X 1	4				
30	83-053	GEAR	4				
31	B0121	BEARING-1", 2 BOLT FLANGE	6				
32	D1103	SPROCKET-#40 X 15T	1				
33	D1116	SPROCKET-#40 X 28T X 1"	1				
34	D8001	FLANGE-SPROCKET	4				
35	G8019	KEY-WOODRUFF 1/4 X 1"	1				
36	H0012	MOTOR - OBSOLETE	1				
	KH30007	MOTOR - SEE NOTE 1	1				
37	G8008	MAT SPLICER	7				
38	4135600.7	WLDMT-10 TOOTH SPRCKT	2				
39	F221200	NUT-HEX JAM 3/4-16	2				
40	F140403	SCREW-SET 1/4-20X3/8	4				
41	F330400	WASHER	96				
42	64229-01	LOCKNUT-1/4-20	9				
43	4140214	METAL STRIP-CLEAT	16				
44	4140215	METAL STRIP-CLEAT	16				
45	4136360	VALVE MOUNT BRACKET	1				
46	4135655	CHECK VALVE	1				
47	F870416	BOLT 1/4 X 1 3/4 FLANGED	2				
48	F870406	BOLT 1/4 X 3/4 FLANGED	2				
49	F840400	NUT - SRRTD. FLNGD. 1/4	4				
50	R101133	IDLER ARM TIE ROD	1				

NOTE

ITEMS 2, 23, 24, 26, 30 & 34 ARE
AVAILABLE AS:
4160827 - FRONT INDEX IDLER ASSY.

NOTE 1

ITEM 36 - H0012 IS OBSOLETE
AND IS REPLACED BY SERIVCE KIT
4160611. IT INCLUDES:
MOTOR - KH30007 QTY. 1
FITTINGS - 6-10-070120 QTY. 2

NOTE 2

BEARING-SLEEVE 4134452 IS
NON CURRENT AND IS REPLACED
BY CURRENT BEARING-SLEEVE
4128942. ITEMS 12 & 16 ARE
AVAILABLE AS - TENSION IDLER
ARM ASSEMBLY - R500100.

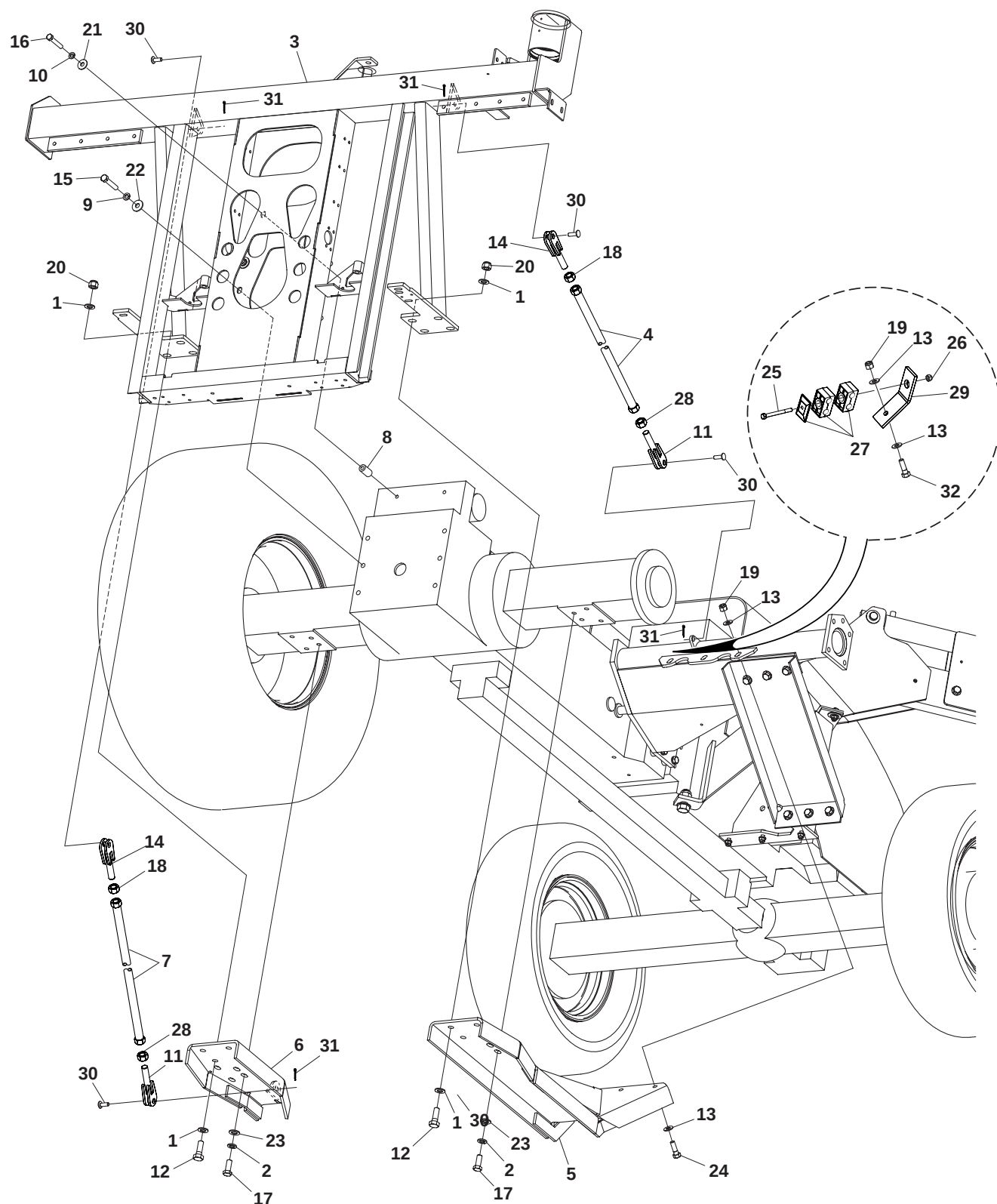


FIGURE 18

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	F331208	FLAT WASHER-3/4 SAE	8				
2	G312000	LOCKWASHER-20MM	16				
3	4129220	WLDMT-MOUNT ROBOMAX	1				
4	4160747	TENSIONER BAR - R.H.	1				
5	4132366	WLDMT-SUPPORT REAR	1				
6	4132432	WLDMT-SUPPORT REAR	1				
7	4160746	TENSIONER BAR - L.H.	1				
8	4132943	SPACER-1-1/16"ODX1/4"X1.8	2				
9	G311600	LOCKWASHER-HELICAL M16	6				
10	G311400	LOCKWASHER-HELICAL M14	2				
11	4160728	CLEVIS WELDMENT - L.H.	2				
12	F041222	BOLT-HEX 3/4-10X2-1/4	8				
13	F331008	WASHER-41/64X1-3/8X12GA	6				
14	4160729	CLEVIS WELDMENT - R.H.	2				
15	G0816080	BOLT-MET M16-1.5X80	6				
16	G0814080	BOLT-MET M14-1.5X80	2				
17	G0818045	BOLT-MET M18-1.5X45	8				
18	F231200	NUT 3/4 UNC	2				
19	F211008	LOCKNUT 5/8 UNC	3				
20	F211200	LOCKNUT 3/4 UNC	8				
21	G321400	WASHER-FLAT M14	2				
22	G321600	WASHER-FLAT M16	6				
23	G321800	WASHER-FLAT M18	8				
24	F041020	BOLT-HEX 5/8 UNC X 2 GR.8	3				
25	F040540	BOLT 5/16 UNC X 4 GR.8	1				
26	F210500	LOCKNUT 5/16 UNC	1				
27	4135022	HOSE CLAMP - 3/4	1				
28	F231210	NUT 3/4 UNC - L.H.	2				
29	4160750	HOSE CLAMP. MNTG. BRKT.	1				
30	KX01012	CLEVIS PIN 5/8 X 1 1/4 LG.	4				
31	F910208	COTTER PIN 1/8 X 1 LG.	4				
32	F041022	BOLT 5/8 UNC X 2 1/4 GR.8	4				

NOTE

ITEM 3 - IF REPLACING ON UNITS
PRIOR TO SERIAL NO. 116 THE
FOLLOWING PARTS MUST BE
ORDERED: 4160103 - SUPPORT L.H.
4140104 - SUPPORT R.H.
KB10001 - COMBINATION
BEARING
(SEE PAGE 42 ITEMS 54, 55 & 56.)

NOTE

ITEMS 4, 11, 14, 18 & 28 ARE
AVAILABLE AS ASSEMBLY:
4160749 - TENSIONER BAR ASSY. R.H.

ITEMS 7, 11, 14, 18 & 28 ARE
AVAILABLE AS ASSEMBLY:
4160748 - TENSIONER BAR ASSY. L.H.

FIGURE 19

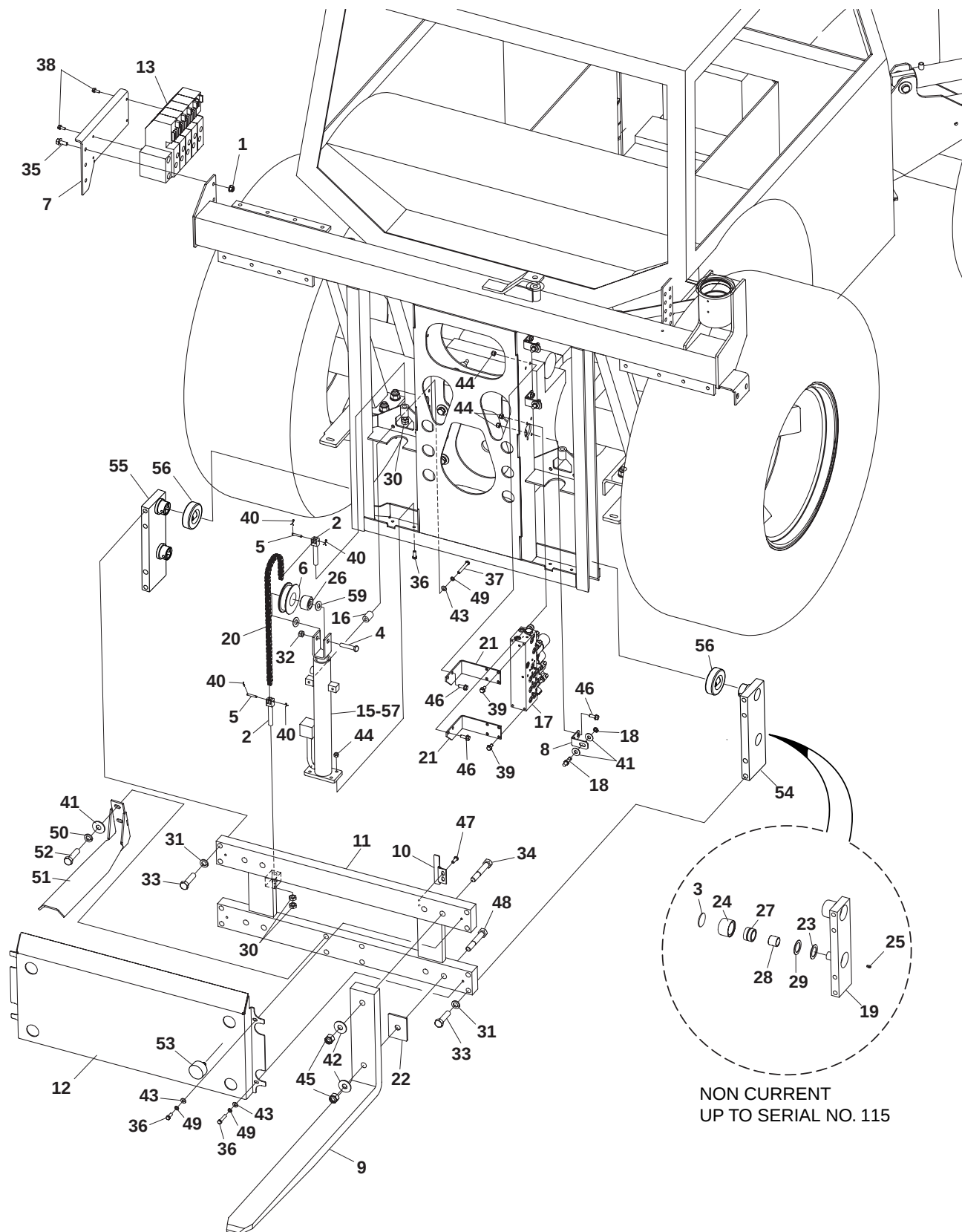


FIGURE 19

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	F210805	NUT-FL NYLON LOCK 1/2-13	3	41	F330808	FLATWASHER - M12	8
2	4160117	BOLT-CHAIN ANCHOR	4	42	64163-57	WASHER	4
3	202769	FROST PLUG	4	43	F330608	FLATWASHER - 3/8	8
4	F041030	BOLT 5/8 UNC X 3 GR.8	2	44	F210600	LOCKNUT-3/8-16	20
5	202779	CLEVIS PIN-LIFT CHAIN	4	45	F211212	FLANGED NUT-3/4-10	4
6	4129416	SHEAVE	2	46	F870610	BOLT-FLG HD 3/8-16 X 1	12
7	4129425	S-BRKT-VALVE MOUNT	1	47	F870606	BOLT-WLF 3/8-16X3/4	2
8	4129705	BRKT-PROXIMITY SENSOR	3	48	F041250	BOLT-3/4-10 X 5-1/2	2
9	4139411	FORKS	2	49	F310608	WASHER-HELICAL LOCK, 3/8	8
10	4130663	FLAG	1	50	F310808	LOCKWSHR-HELICAL 1/2	4
11	4130668	WLDMT-MOUNT FORKS	1	51	4137205	WLDMT-CENTERING BARS	2
12	4140748	COVER-FORKS	1	52	F040814	BOLT-HEX 1/2-13X1-1/2	4
13	4131610	VALVE-PROPORTIONAL	1	53	05-042	ISOLATOR. RUBBER	1
14	4132178	WLDMT-ROLLER PLATE, LH	1	54	4160103	ROLLER PLATE. RH	1
15	4132569	CYLINDER-PALLET LIFT	2			CURRENT FROM SERIAL NO. 116	
16	4132663	SPACER-BUSHING	4	55	4160104	ROLLER PLATE. LH	1
17	4134062	MANIFOLD-GRIPPER/PALLET	1			CURRENT FROM SERIAL NO. 116	
18	4132981	SENSOR-INDUCTIVE 4MM	3	56	KB10001	COMBINATION BEARING	4
19	4133011	WLDMT-ROLLER PLATE, RH	1	57	4160105	REPAIR KIT. PALLET CYL.	1
20	4133017	CHAIN-28.12" PALLET LIFT	2	58	F330908	FLATWASHER 9/16	4
21	4138809	BRKT-GRIPPER MANIFOLD	2	59	F320400	FLATWASHER 1/4	2
22	4134962	SHIM-FORK	A/R				
23	99-B31	WASHER-MACH 1-1/2ID 14GA	4				
24	5202768	RING-RAIL BEARING	4				
25	29-010	GREASE FITTING-1/4-28	4				
26	55-CYR-2-S	BEARING-2 OD X 5/8 ID	2				
27	55-GR-22	BEARING-ROLLER 1-3/8	4				
28	55-MI-18	BEARING-INNER RING 1-1/8	4				
29	55-TRC-2435	WASHER-THRUST	4				
30	F221050	NUT-HEX JAM,5/8-18	8				
31	F311200	WASHER-HELICAL LOCK, 3/4	8				
32	F211000	LOCKNUT 5/8 UNC	2				
33	F041226	BOLT-HEX 3/4-10X2-3/4	8				
34	F041244	BLT-HEX 3/4-10 X 5	2				
35	F040834	BOLT-HEX 1/2-13X1-1/4	3				
36	F040610	BOLT-HEX 3/8-16X1	16				
37	F040626	BOLT-HEX 3/8-16X2-3/4	4				
38	F040506	BOLT-WLF 5/16-18X3/4	4				
39	F040606	BOLT-WLF 3/8-16X3/4	4				
40	F910306	COTTER PIN-3/32X3/4	8				

NOTE

ITEMS 3, 14, 19, 23, 24, 25, 27, 28 & 29 ARE NON CURRENT UP TO SERIAL NO. 115 AND ARE REPLACED BY ITEMS 54, 55 & 56.

Exploded view diagram of a mechanical assembly, likely a pump or engine component. The diagram shows the main assembly structure with various sub-components and their assembly sequence indicated by numbers. Key components and callouts include:

- Main Assembly:** The central structure showing the pump head, cylinder, and connecting rods.
- Callout 1 (Top Left):** Shows a small assembly of parts 36, 29, 35, 10, 8, and 11.
- Callout 2 (Top Right):** Shows a small assembly of parts 28, 27, and 26.
- Callout 3 (Middle Right):** Shows a small assembly of parts 43 and 45.
- Callout 4 (Bottom Left):** Shows a small assembly of parts 12, 46, and 18.
- Callout 5 (Bottom Center):** Shows a small assembly of parts 2, 1, 3, 4, 16, 9, and 15.
- Text:** "NON CURRENT UP TO SERIAL NO. 116" is written near the top right callout.

FIGURE 20

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4131551	CONE-INNER BEARING	2	41	4160108	TONGUED WASHER	1
2	4131552	CUP-BEARING	2	42	KB51610	NEEDLE BEARING 1"ID	2
3	4132497	SPACER	1	43	4160106	LOCKNUT	1
4	4132501	SEAL-4.505X3.0X.438	2	44	4160107	LOCKWASHER	1
5	4160718	CYLINDER-2" BORE, 1" ROD	1	45	4160624	SPINDLE NUT SOCKET	A/R
	KH70115	SEAL KIT	1	46	F501230	SHOULDER BOLT. FROM #143	1
6	4132971	CYLINDER-1.5" BORE, 1" ROD	1				
7	4134564	BEARING-THRUST	4				
8	F840400	NUT 1/4. SERRATED FLNGD.	1				
9	KX20039	NUT-SLOTTED HEX 1-1/2-12	1				
10	KM60027	HOSE CLAMP #5	7				
11	F141004	SCREW-SET 5/8-18 X .50	1				
12	F041226	BOLT-HEX 3/4. UP TO #142	1				
13	F041234	BOLT-HEX 3/4-10X3-1/2	1				
14	KM60017	HOSE CLAMP #5	7				
15	F910434	COTTER PIN-1/4X3-1/2	1				
16	64144-41	SNAP RING-4.5" INTERNAL	2				
17	F331208	WASHER- 3/4	2				
18	KB12815	INNER BEARING. FROM #143	1				
19	F211250	LOCKNUT 3/4 UNC	2				
20	F041244	BOLT 3/4 UNC X 4 1/2 GR.8	1				
21	B4017	BEARING-CUP	1				
22	KB23014	BEARING-CUP	1				
23	B4511	BEARING-CONE	1				
24	B4514	BEARING-CONE	1				
25	4132788	SEAL-3.061X2X.25	1				
		NON CURRENT UP TO SERIAL NO. 117					
	4160123	SEAL-3.061X2.25X.25	1				
		CURRENT FROM SERIAL NO. 118					
26	64163-25	1-1/32X2X11GA WASHER	1				
27	64025-39	NUT-SLOTTED HEX 1-14	1				
28	64140-15	COTTER PIN-1/4-2	1				
29	KM60027	HOSE CLAMP #40	1				
30	KM11400	GREASE FITTING-1/8	2				
31	4133645	INNER SLEEVE	4				
32	4136256	FITTING-RELIEF GREASE	1				
33	KH68007	CLAMP-3/4 CLIP	3				
34	F870904	BOLT 1/4 X 3/4. FLANGED	2				
35	218307103	SPACER	1				
36	F870414	BOLT 1/4 X 1 1/2 FLANGED	1				
37	4160118	REPAIR KIT. CYLINDER	1				
		CYLINDER 4132965 - NON CURRENT					
	4160133	REPAIR KIT. CYLINDER	1				
		CYLINDER 4160013 - NON CURRENT					
38	4160xxx	REPAIR KIT. CYLINDER	1				
39	4160055	BUSHING - SEE NOTE 1	2				
40	4160109	SPACER	1				
		CURRENT FROM SERIAL NO. 118					

NOTE 1

ITEM 39 IS NON CURRENT FROM SERIAL NO. 115 TO 125.

NOTE 2

ITEMS 26, 27 & 28 ARE NON CURRENT UP TO SERIAL NO. 116. REPLACED BY ITEMS 41, 43 & 44.

NOTE 3

ITEM 37 IS NON CURRENT UP TO SERIAL NO. 149.

NOTE 4

ITEM 5 REPLACES OBSOLETE TURN CYLINDER 4160013. WHEN REPLACING THE OBSOLETE CYLINDER, CABLE KE60156 IS REQUIRED.

FIGURE 21

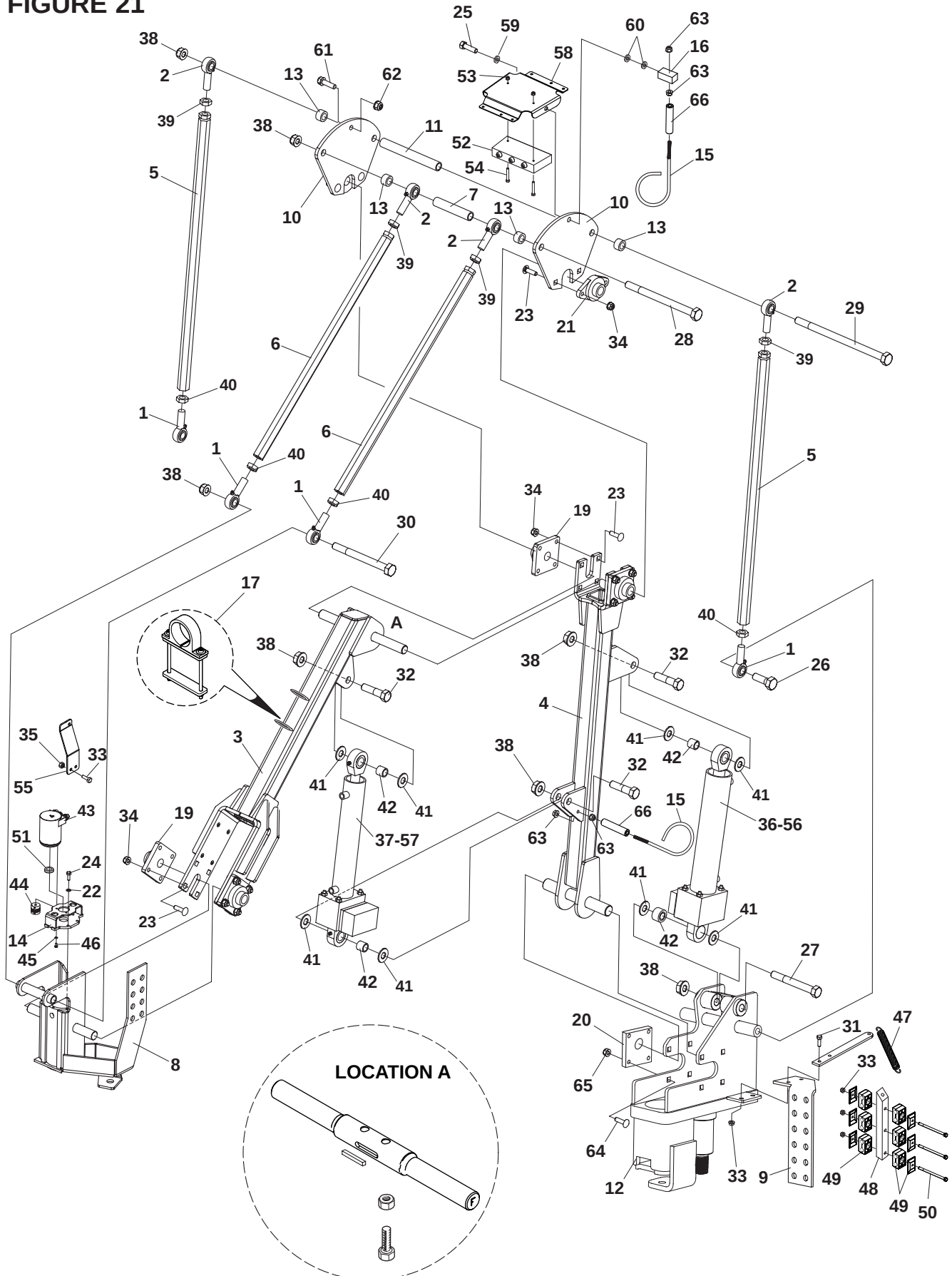


FIGURE 21

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	2188142-03	ROD-END 3/4	4	47	001279	SPRING	1
2	2188142-04	ROD-END 3/4 LH	4	48	4160263	HOSE SUPPORT BRACKET	1
3	4160766	REACH ARM - SEE NOTE 2, 3 & 4	1	49	4135024	HOSE CLAMP - 5/8 IN.	12
4	4139824	LIFT ARM - SEE NOTE 2 & 3	1	50	F040540	BOLT 5/16 UNC X 4 GR.8	3
5	4129668	LINKAGE-LIFT - LONG	2	51	4132789	SEAL. 26 OD X 10 X 7 MM	1
6	4129669	LINKAGE-LIFT - SHORT	2	52	4160177	JUNCTION BOX	1
7	4136040	SPACER	1	53	6422909	NUT 8-32	2
8	4129778	WLDMT-PIVOT HEAD	1	54	6415262	BOLT 8-32 X 1 1/4	2
9	4129447	BRKT-HOSE	1	55	4153737	BRKT. HRNS. STRAIN RELIEF	1
10	4131229	PIVOT-LINKAGE ELBOW	2	56	4160135	REPAIR KIT. CYL. 4132790	1
11	4160736	SPACER-LINKAGE LIFT	1		4160134	REPAIR KIT. CYL. 4160014	1
12	4138595	MAIN PIVOT ARM	1	57	4160118	REPAIR KIT. CYL. 4132793	1
13	4160735	SPACER LINKAGE - SHORT	2		4160133	REPAIR KIT. CYL. 4160015	1
	4160734	SPACER LINKAGE - LONG	2	58	4160737	BRACKET. CAN BUS JUNC.	1
14	4131997	WLDMT-ENCODER MOUNT	1	59	F310700	LOCKWASHER 7/16	1
15	4160130	WIREFORM-4" DIA	2	60	G461000	LOCKWASHER. SERRATED	2
16	4160141	BAR	1	61	F870810	BOLT 1/2 X 1. FLANGED	1
17	4160418	CABLE GUIDE ASSEMBLY	1	62	F840800	NUT 1/2. SERRATED FLNGD.	1
18	4134993	STRAP-SPRING	1	63	F840700	NUT 7/16. SERRATED FLNGD.	4
19	55-FB22016	BEARING-4-BOLT, 1"	4	64	F020816	BOLT 1/2 X 1 3/4. CARRIAGE	8
20	4161074	BEARING-4-BOLT, 1-1/4"	2	65	F210800	LOCKNUT 1/2 UNC	8
21	55-FB23016	BEARING-2-BOLT, 1"	2	65	R100799	HOSE HOOK STIFFENER	2
22	F310408	LOCKWASHER-1/4	6				
23	F020714	BOLT-CRG 7/16-14X1-1/2	20				
24	F040406	BOLT-HEX 1/4-28X3/4	6				
25	F040710	BOLT-HEX 7/16 x 1	1				
26	F041222	BOLT-HEX 3/4-10X2-1/4	2				
27	4160944	MODIFIED BOLT	1				
28	F041200	BOLT-HEX 3/4-10X10	1				
29	F041230	BOLT-HEX 3/4-10X13	1				
30	F041280	BOLT-HEX 3/4-10X8	1				
31	F871012	BOLT-FLNGD. 5/16-18X1 1/4	2				
32	F201234	BOLT-HEX 3/4-10X3 1/2	3				
33	F210500	LOCKNUT 5/16 UNC	5				
34	F210705	LOCKNUT-FL NYLON 7/16-14	20				
35	F210408	LOCKNUT 1/4 UNC	2				
36	4160719	CYLINDER-2.5"BORE,1.25"RD	1				
	KH70116	SEAL KIT	1				
37	4160720	CYLINDER-2" BORE, 1" ROD	1				
	KH70115	SEAL KIT	1				
38	F211212	LOCKNUT-3/4. STOVER	7				
39	F221218	NUT-HEX JAM 3/4-16 LH	4				
40	F221200	NUT-HEX JAM 3/4-16 RH	4				
41	4134564	BEARING-THRUST	8				
42	KB51610	BEARING-NEEDLE ROLLER	4				
43*	4140874	ENCODER-ABSOLUTE	1				
44	4131770	COUPLING	1				
45	G320400	WASHER	3				
46	G0104008	BOLT-MET M4-.7X8	3				

NOTE 1

ITEMS 17 - CABLE GUIDE ASSEMBLY:

- 1 - 4160416 - STRAP. FULL LOOP
- 2 - 4160417 - STRAP CLAMP
- 2 - F210250 - LOCKNUT 10-32 UNC
- 2 - F880238 - SCREW 10-32 X 3 1/2
- 2 - F320200 - FLATWASHER #10

NOTE 2

WHEN CHANGING TO REV D OF ITEM 4 BUT KEEPING THE REV C OF ITEM 3, 4160753 BOLT KIT IS REQUIRED.

NOTE 3

WHEN CHANGING TO REV D OF ITEMS 3 & 4, 4160754 BOLT AND SPACER KIT IS REQUIRED.

NOTE 4

ITEM 3 REACH ARM ASSEMBLY CONTAINS	
4160765 - REACH ARM	QTY. 1
4139808 - REACH ARM PIN	QTY. 1
F040610 - BOLT 3/8 UNC X 1 GR.8	QTY. 2
F230600 - NUT 3/8 UNC	QTY. 2
F925512 - KEY 5/16 X 5/16 X 1 1/4	QTY. 1

FIGURE 21

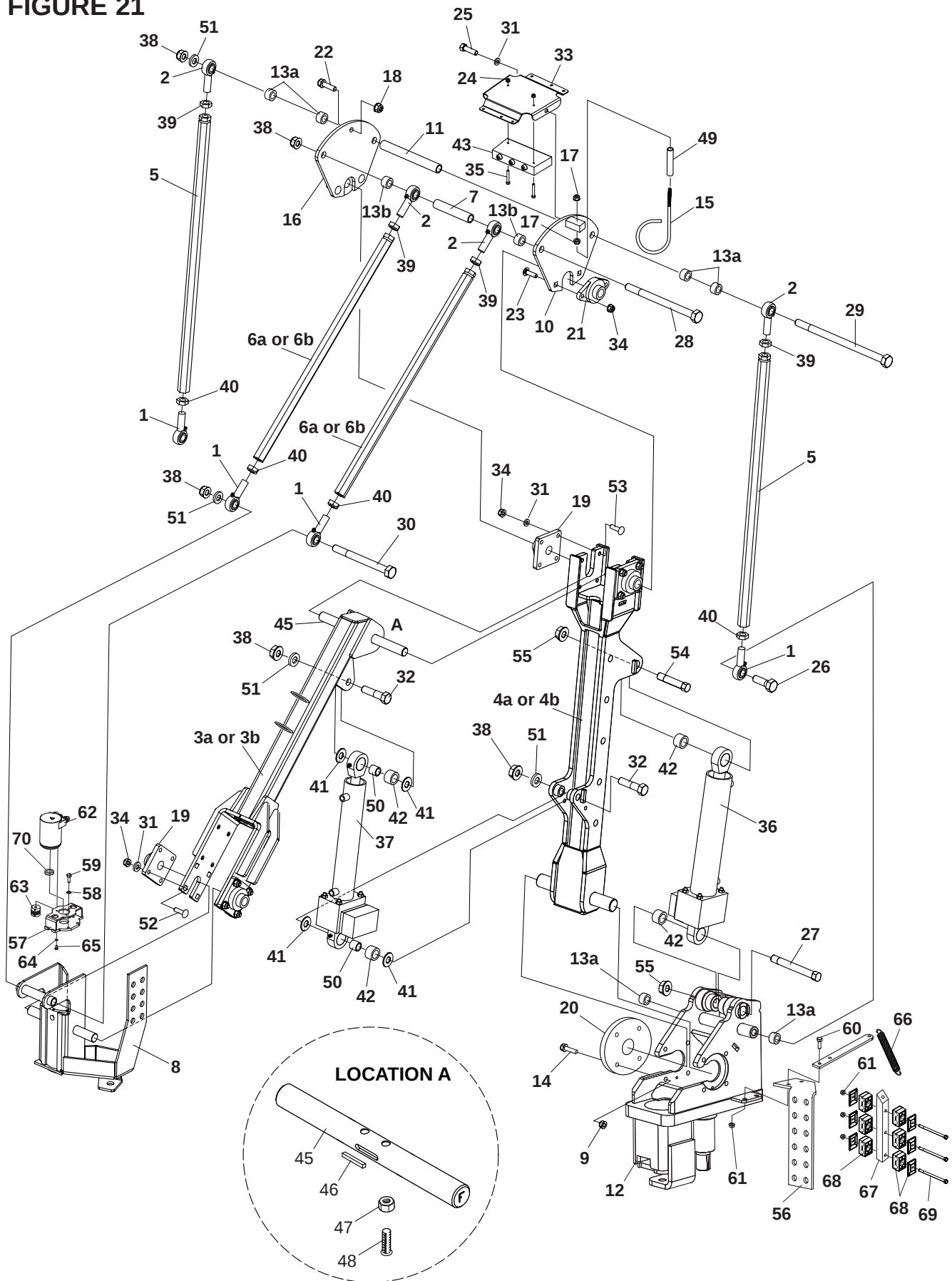


FIGURE 21

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	218CM00121	ROD END 3/4"	4	45	R100333	REACH ARM PIN	1
2	218CM00122	ROD END 3/4" L.H.	4	46	F925512	KEY 5/16 X 5/16 X 1 1/4	1
3a	R500022	REACH ARM	1	47	F230600	NUT 3/8 UNC	2
3b	R500079	EURO REACH ARM	1	48	F110606	SET SCREW 3/8 UNC X 3/4	2
4a	R300043	LIFT ARM	1	49	R100799	HOSE HOOK STIFFENER	1
4b	4161005	EURO LIFT ARM	1	50	KB12815	BEARING SLEEVE	4
5	4129668	LINKAGE. LIFT	2	51	F311200	LOCKWASHER 3/4	2
6a	4160645	LINKAGE. REACH - LONG	2	52	F020718	BOLT-CRG 7/16 UNC X 1 3/4	8
6b	4129669	LINKAGE. REACH - SHORT	2	53	F030716	BOLT 7/16 UNC X 1 3/4	8
7	4136040	SPACER	1	54	R100891	UPPER PIN. LIFT CYLINDER	1
8	4129778	PIVOT HEAD	1	55	F211600	NUT - 1 UNC NYLOC	2
9	F310800	LOCKWASHER 1/2	8	56	4129447	BRKT-HOSE	1
10	R300064	PIVOT LINKAGE ELBOW	1	57	4131997	WLDMT-ENCODER MOUNT	1
11	4160736	SPACER. LIFT LINKAGE	1	58	F310408	LOCKWASHER-1/4	6
12	4161003	MAIN PIVOT ARM	1	59	F040406	BOLT-HEX 1/4-28X3/4	6
13a	4160735	LINKAGE SPACER - SHORT	2	60	F871012	BOLT-FLNGD. 5/16-18X1 1/4	2
13b	4160734	LINKAGE SPACER - LONG	2	61	F210500	LOCKNUT 5/16 UNC	5
14	F020816	BOLT-CRG GR.5 1/2-13X1 3/4	2	62	4140874	ENCODER-ABSOLUTE	1
15	4160130	WIREFORM - 4" DIA.	1	63	4131770	COUPLING	1
16	R100339	PIVOT LINKAGE ELBOW	1	64	G320400	WASHER	3
17	F840700	NUT 7/16 UNC SERRATED	1	65	G0104008	BOLT-MET M4-.7X8	3
18	F840800	NUT 1/2 UNC SERRATED	1	66	001279	SPRING	1
19	55-FB22020S	BEARING. 4 BOLT - 1"	2	67	4160263	HOSE SUPPORT BRACKET	1
20	KB31024	BEARING. 4 BOLT - 1 1/2"	2	68	4135024	HOSE CLAMP - 5/8"	12
21	KB32020	BEARING. 2 BOLT - 1"	2	69	F040540	BOLT 5/16 UNC X 4 GR.8	3
22	F870810	BOLT 1/2 UNC X 1 FLANGED	1	70	4132789	SEAL. 26 OD X 10 X 7 MM	1
23	F021020	BOLT-CRG 5/8 UNC X 2	4				
24	6422909	NUT #8-32	2				
25	F040710	BOLT 7/16 UNC X 1 GR.8	1				
26	F041222	BOLT 3/4 UNC X 2 1/4 GR.8	2				
27	R100892	LOWER PIN. LIFT CYLINDER	1				
28	F041200	BOLT 3/4 UNC X 10 GR.8	1				
29	F041230	BOLT 3/4 UNC X 13 GR.8	1				
30	F041280	BOLT 3/4 UNC X 8 GR.8	1				
31	F310700	LOCKWASHER 7/16	17				
32	F201250	BOLT 3/4 UNC X 5 GR.9	1				
33	4160737	BRACKET CAN BUS JUNC.	1				
34	F210705	LOCKNUT 7/16 UNC	8				
35	6415262	BOLT #8-32 X 1 1/4	2				
36	4160719	CYLINDER-2.5"BORE,1.25"RD	1				
	KH70116	SEAL KIT	1				
37	4160720	CYLINDER-2" BORE, 1" ROD	1				
	KH70115	SEAL KIT	1				
38	F211200	LOCKNUT 3/4 UNC	5				
39	F221218	JAM NUT 3/4 L.H.	4				
40	F221200	JAM NUT 3/4 R.H.	4				
41	4134564	THRUST WASHER	4				
42	KB51610	BEARING. NEEDLE ROLLER	4				
43	4160177	JUNCTION BOX	1				

NOTE

ITEMS: 10, 12, 16, 19, 20, 27, 45, 54, 55 &
 4160765 - REACH ARM WLDMT QTY. 1
 R300115 - LIFT ARM WLDMT QTY. 1
 ARE AVAILABLE AS NEW HOLLAND STD ARMS
 - JD COMPATIBLE ASSEMBLY: R500124

NOTE

ITEMS: 4b, 10, 12, 16, 19, 20, 27, 45, 54, 55 &
 4160798 - EURO REACH ARM WLDMT QTY. 1
 ARE AVAILABLE AS NEW HOLLAND EURO
 ARMS - JD COMPATIBLE ASSEMBLY: R500122

FIGURE 22

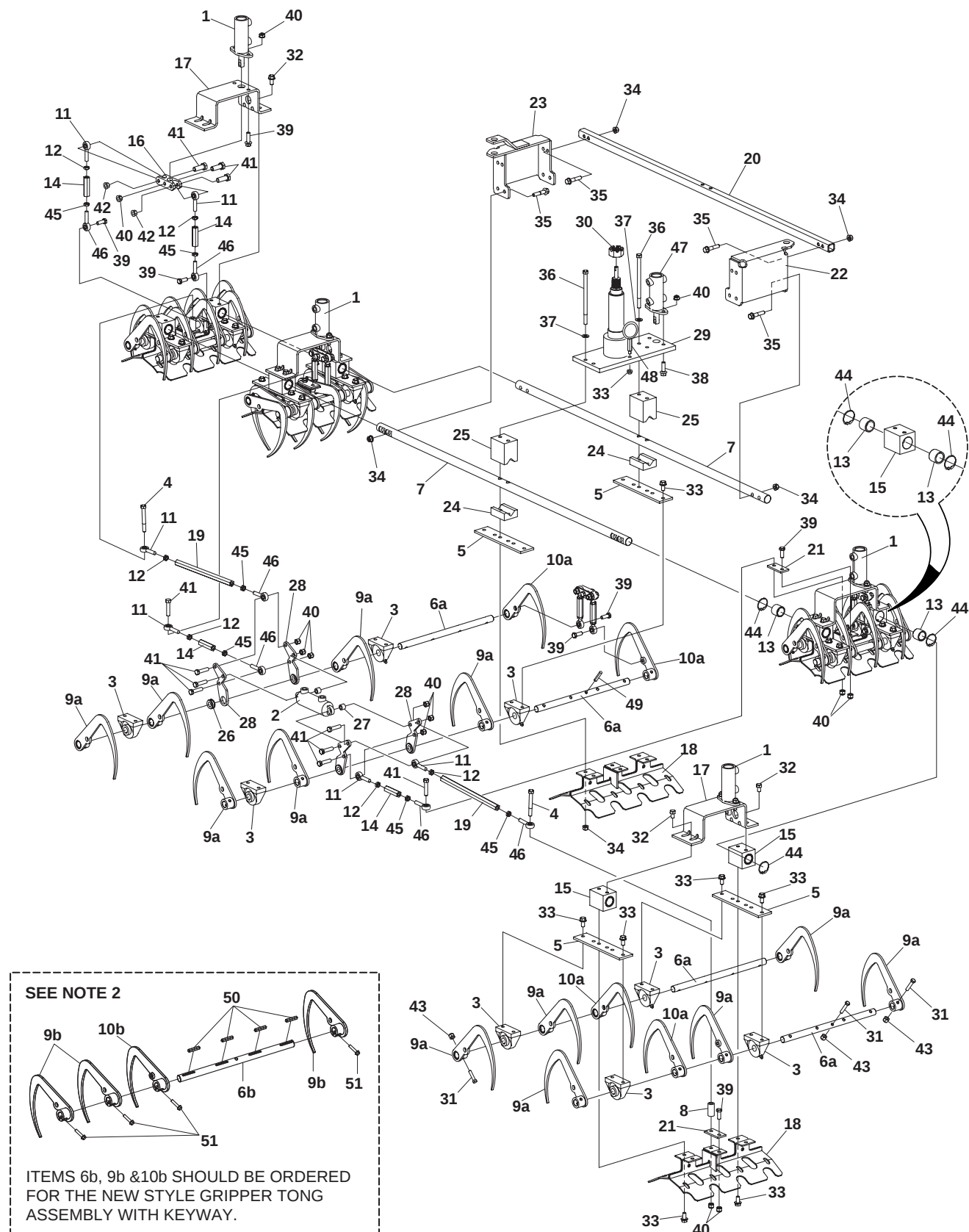


FIGURE 22

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4128723	CYLINDER-FACE MOUNT	4	47	4160312	CYLINDER - 4 PORT	1
2	4128874	CYLINDER-HYDRAULIC	1	48	4160411	HOSE RING SUPPORT	1
3	4128914	PILLOW BLOCK	20	49	6417602	ROLL PIN 1/4 X 1-1/2	2
4	F040630	BOLT-HEX 3/8-16X3	2	50	F923312	KEY 3/16 X 3/16 X 1-1/4	48
5	4129300	PLATE-FRAME	10	51	F870512	BOLT-HEX FLG 5/16 X 1-1/4	48
6a	4128968	SHAFT-PIVOT	10				
6b	R100955	SHAFT-PIVOT W/KEYWAY	10				
7	4129259	SHAFT-GUIDE	2				
8	4129241	SPACER-0.750X0.406X1.51	2				
9a	4135961	WLDMT-GRASPING TONG	30				
9b	R300139	WLDMT-GRASPING TONG W/KEYWAY	30				
10a	4135960	WLDMT-GRSPNG TONG/NUT	10				
10b	R300140	WLDMT-GRSPNG TONG/NUT W/KEYWAY	10				
11	4128925	ROD END-3/8" MALE R.H.	14				
12	F220600	NUT-JAM 3/8 UNC R.H.	14				
13	4128942	BEARING-SLEEVE	16				
14	4160364	LINK-HEX, 5/8	12				
15	4128917	BLOCK-GUIDE	8				
16	4142710	BRKT-PIVOT. GRIPPER	5				
17	4129294	BRKT-CYLINDER MOUNT	4				
18	4132920	WLDMT-ROLL BRKT	5				
19	4160365	LINK-HEX, 5/8	2				
20	4160053	TUBE-FRAME	2				
21	4132724	PLATE-LINK	4				
22	4137484	S-WLDMT-BRKT GRIPR HEAD	1				
23	4137483	S-WLDMT-CYLINDER MOUNT	1				
24	4128981	BLOCK-V-LOWER	2				
25	4128982	BLOCK-V-UPPER	2				
26	38304-04	BEARING-FLANGED PLASTIC	4				
27	4129317	SPACER-.625 X .385 X .50	2				
28	4129315	PLATE-CYLINDER LINK	4				
29	4132819	HEAD PLATE - SEE NOTE	1				
30	KX20032	NUT-SLOTTED HEX 1-14 NF	1				
31	F040420	BOLT 1/4 UNC X 2 GR.8	48				
32	F870904	BOLT-FLG HD 3/8-16 X 1/2	16				
33	F870606	BOLT-FLG HD 3/8-16 X 3/4	56				
34	F210612	NUT-FLANGED. STOVER. 3/8	20				
35	F870816	BOLT-FLG HD 3/8-16 X 1-3/4	16				
36	F040664	BOLT-3/8-16 X 6-1/2	4				
37	F330608	FLATWASHER 3/8	4				
38	F040612	BOLT-HEX 3/8-16X1-1/4	2				
39	F040610	BOLT-HEX 3/8-16X1	22				
40	F210608	LOCKNUT-3/8-16	29				
41	F040614	BOLT-HEX 3/8-16X1-1/2	23				
42	F840600	NUT-WLF 3/8-16	10				
43	F210408	LOCKNUT 1/4 UNC	48				
44	F815125	INTERNAL RETAINING RING	16				
45	F220660	JAM NUT 3/8 UNC L.H.	14				
46	4160363	ROD END 3/8 MALE L.H.	14				

NOTE

ITEMS 11, 12, 14, 45 & 46 ARE AVAILABLE AS - ADJUSTING LINK ASSEMBLY GRASPING TONG - 4160589

NOTE

ITEMS 11, 12, 19, 45 & 46 ARE AVAILABLE AS - ADJUSTING LINK ASSEMBLY GRIPPER SQUEEZE - 4160588

NOTE

UP TO SERIAL NO. 116 THE FOLLOWING PARTS MUST BE ORDERED WHEN ORDERING ITEM 29 - HEAD PLATE:
4160106 - LOCKNUT
4160107 - LOCKWASHER
4160108 - TONGUED WASHER
4160123 - SEAL
4160109 - SPACER

NOTE

ITEMS 13 x1, 15 x2 & 44 x2 ARE AVAILABLE AS - ASSEMBLY 4160635.

NOTE 2

ITEMS 6b, 9b, 10b, 50 & 51 ARE AVAILABLE AS - RETROFIT GRIPPER TONG ASSEMBLY - R500098.

FIGURE 23

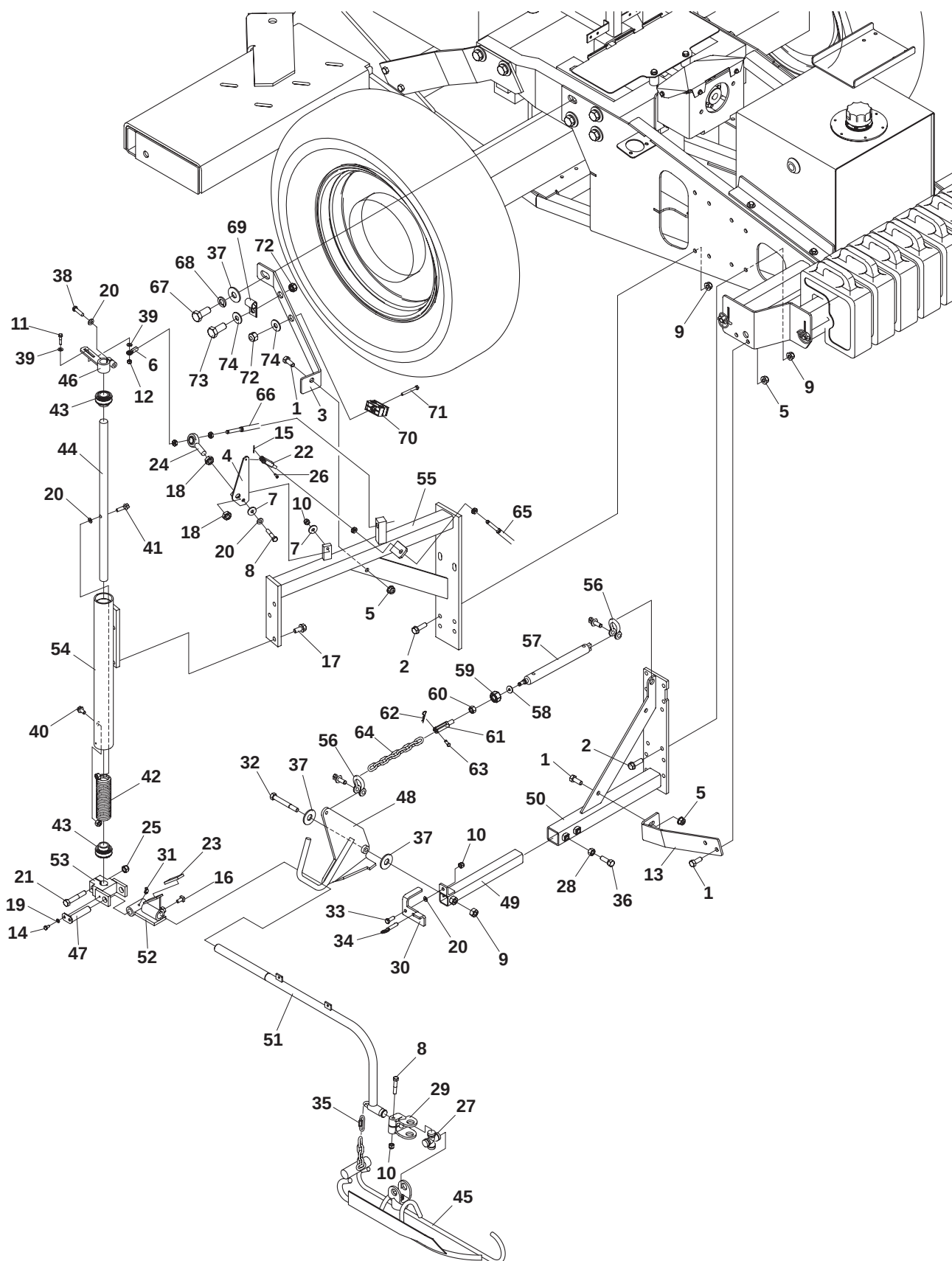


FIGURE 23

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	64123-39	BOLT-HEX 1/2-13X1-1/4	4	41	99-K61	BOLT, FLANGE 3/8-16X1/2	1
2	64262-016	BOLT-FLG HD 1/2-13 X 1-1/2	8	42	015099	SPRING-SHOE COLUMN	1
3	4137040.7	BRACE-STIFFENER	1	43	B2022	BEARING-BALL 1"	2
4	016530.6	CABLE-ARM	1	44	015095	SHOE-COLUMN SHAFT	1
5	64268-05	NUT-FL NYLON LOCK 1/2-13	4	45	200706.6	SHOE-AUTOSTEER	1
6	43-004A	ROD END-1/4" (ALL STEEL)	1	46	016469.7	ARM-TOP LINKAGE	1
7	301691	FRICTION WASHER	2	47	015059	PIN-SHOE ARM PIVOT	1
8	64123-67	BOLT-HEX 3/8-16X2	2	48	6109803.6	ARM-AUTOSTEER LIFT	1
9	64141-13	NUT-WLF 1/2-13	9	49	6109806.7	ADJUSTER-AUTOSTEER LIFT	1
10	64229-03	LOCKNUT-NYLON 3/8-16	3	50	4134074.7	WLDMT-AUTOSTEER LIFT	1
11	64123-80	BOLT-HEX 1/4-20X1-1/4	1	51	015110.6	WLDMT-SHOE ARM	1
12	64229-01	LOCKNUT-NYLON 1/4-20	1	52	015061.7	SHOE-ARM-SUPPORT	1
13	4135125.7	BRACE-STIFFENER	1	53	015102.7	PIVOT-SHOE-ARM	1
14	64123-49	BOLT-HEX 1/4-20X1/2	1	54	4137641	S-SHOE COLUMN BDY ASSY	1
15	64140-2	COTTER PIN-1/16X1/2	1	55	4134077.7	WLDMT-AUTOSTEER ARM	1
16	F3603	SET SCREW-3/8-16 X 3/4	2	56	G8048	SHACKLE-ANCHOR	2
17	64139-22	BOLT-WLF 1/2-13X1	3	57	23-199	CYLINDER-AUTOSTEER	1
18	99-E11	JAM NUT-5/8-18 NF ZP	2	58	E8024	SEAL-ROD WIPER	1
19	64006-01	LOCKWASHER-1/4	1	59	016310	NUT	1
20	64163-61	WASHER-.81X.406X16GA	4	60	F1006	NUT-JAM	1
21	64123-31	BOLT-1/2-13X3 HEX	1	61	43-Y0404F	YOKE END	1
22	43-Y0303F	YOKE-CLEVIS 10-32 THRD	1	62	G2510	PIN-HITCH CLIP	1
23	016657	BUMPER-RUBBER	1	63	64188-06	PIN-CLEVIS	1
24	M0302	BALL END-RH	1	64	6109811	CHAIN-AUTOSTEER	1
25	64229-05	LOCKNUT-1/2-13	1	65	4134398	CABLE-AUTOSTEER ADJ	1
26	03-0305	CLEVIS PIN-3/16 X 5/8 ZP	1	66	M5270	CABLE-PUSH/PULL	1
27	D0008	BEARING-BALL 1/4IDX3/4OD	1	67	07-2025045	BOLT-MET M20-2.5X45	1
28	64025-09	NUT-HEX 1/2-13	2	68	07-C20	LOCKWASHER, 20MM ZP	1
29	D0004	YOKE-ROUND HOLE	1	69	11-057	CLAMP-1-1/4	1
30	6109799.7	STOP-AUTOSTEER TRANSPT	1	70	4135022	CLAMP-3/4 OD HOSE	1
31	29-045	GREASE FITTING, 1/4-28 45	1	71	64123-12	BLT-HEX 5/16-18X2-1/2	1
32	90-0832	BOLT-1/2-13X4 NC	1	72	64229-02	LOCKNUT-NYLON 5/16-18	2
33	64123-50	BOLT-HEX 3/8-16X1	1	73	64123-68	BOLT-HEX 5/16-18X1	1
34	03-020	PIN-QUICK RELEASE 3/8"	1	74	64163-55	WASHER .328X.75X14	2
35	G8084	QUICK LINK-3/16 ZP	1				
36	64123-117	BOLT-HEX 1/2-13X1-1/2	2				
37	64163-57	WASHER	3				
38	64123-70	BOLT-HEX 3/8-16X1-1/2	1				
39	453023	FLATWASHER, 1/4	2				
40	64262-010	BOLT-FLG HD 3/8-16 X 3/4	1				

NOTE

See pages 120 to 125 for the Auto-Steer current from Serial No. 118B.

FIGURE 24

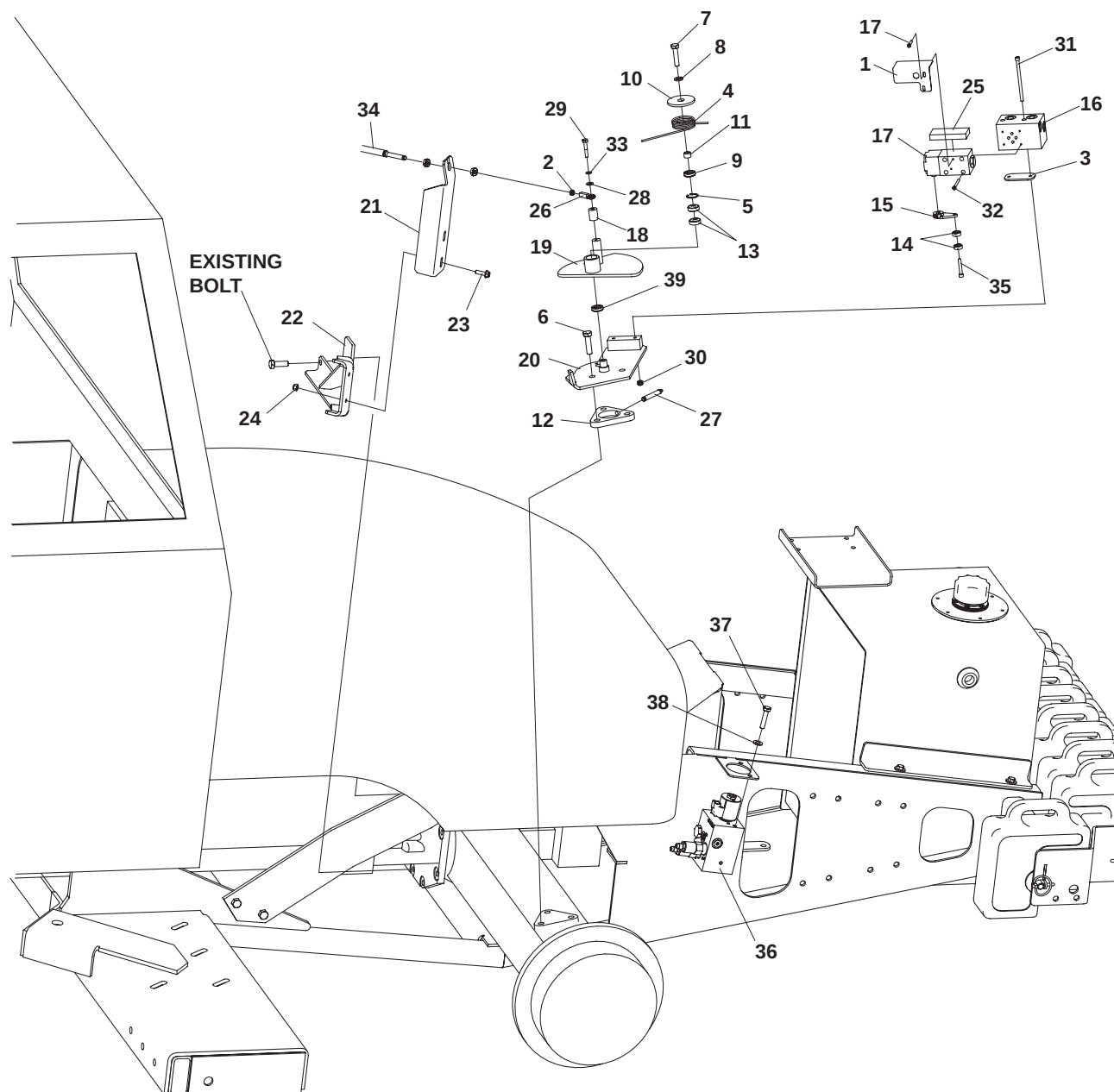


FIGURE 24

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	016535.7	VALVE COVER	1				
2	F1006	NUT-JAM 1/4-28 UNF	1				
3	016440.7	SHIM-.134 THICK	1				
4	4134863	SPRING-TORSION	1				
5	64144-40	SNAP RING-26MM INTERNAL	1				
6	64205-073	BOLT-MET M12-1.25X45	3				
7	64205-034	BOLT-MET M10-1.50X45	1				
8	64006-06	LOCKWASHER-7/16	1				
9	4128000	SEAL-16 X 26 X 7	1				
10	64163-17	WASHER-25/64 X 2 X 11GA	1				
11	4134864	SPACER	1				
12	4135004.7	SPACER-SELECTOR MOUNT	1				
13	4128004	BEARING-BALL 10X26X8	2				
14	55-106	BEARING-BALL 1/4IDX3/4OD	2				
15	002633.7	AUTOSTEER TRIP ARM	1				
16	H4085	STEERING MANIFOLD	1				
17	23-142	VALVE-AUTOSTEER SENSOR	1				
18	6115428	SPACER-4WD AUTOSTEER	1				
19	4133950.7	WLDMT-AUTOSTEER CAM	1				
20	4133868.7	WLDMT-MNT CAM AUTOSTR	1				
21	4133981.7	BRKT-AUTOSTEER CABLE	1				
22	4135222.7	WLMT-MNT AUTOSTR CABLE	1				
23	64262-007	BOLT-FLG HD 5/16-18X1	2				
24	64229-02	LOCKNUT-5/16-18	2				
25	016663	SEAL-FOAM	1				
26	43-004A	ROD END-1/4" (ALL STEEL)	1				
27	4135005	ZERK-EXT. 1/8 PTF	1				
28	453023	FLATWASHER-1/4	1				
29	64123-60	BOLT-HEX 1/4-20X2	1				
30	64229-01	LOCKNUT-NYLON 1/4-20	2				
31	F1735	SCREW-SHCS	2				
32	99-24	BOLT-10-24 X 1-1/4 SHCS	4				
33	64006-01	LOCKWASHER-1/4	1				
34	M5270	CABLE-PUSH/PULL	1				
35	99-K96	BOLT-1/4-20X7/8 BUTTON HD	1				
36	4134547	MANIFOLD-AUTOSTR SLND	1				
37	64123-15	BOLT-HEX 3/8-16X3/4	2				
38	F3076	WASHER-DISC LOCK-3/8"	2				
39	4127999	SEAL-16 X 24 X 7	1				

NOTE

See pages 120 to 125 for the Auto-Steer current from Serial No. 118B.

FIGURE 25

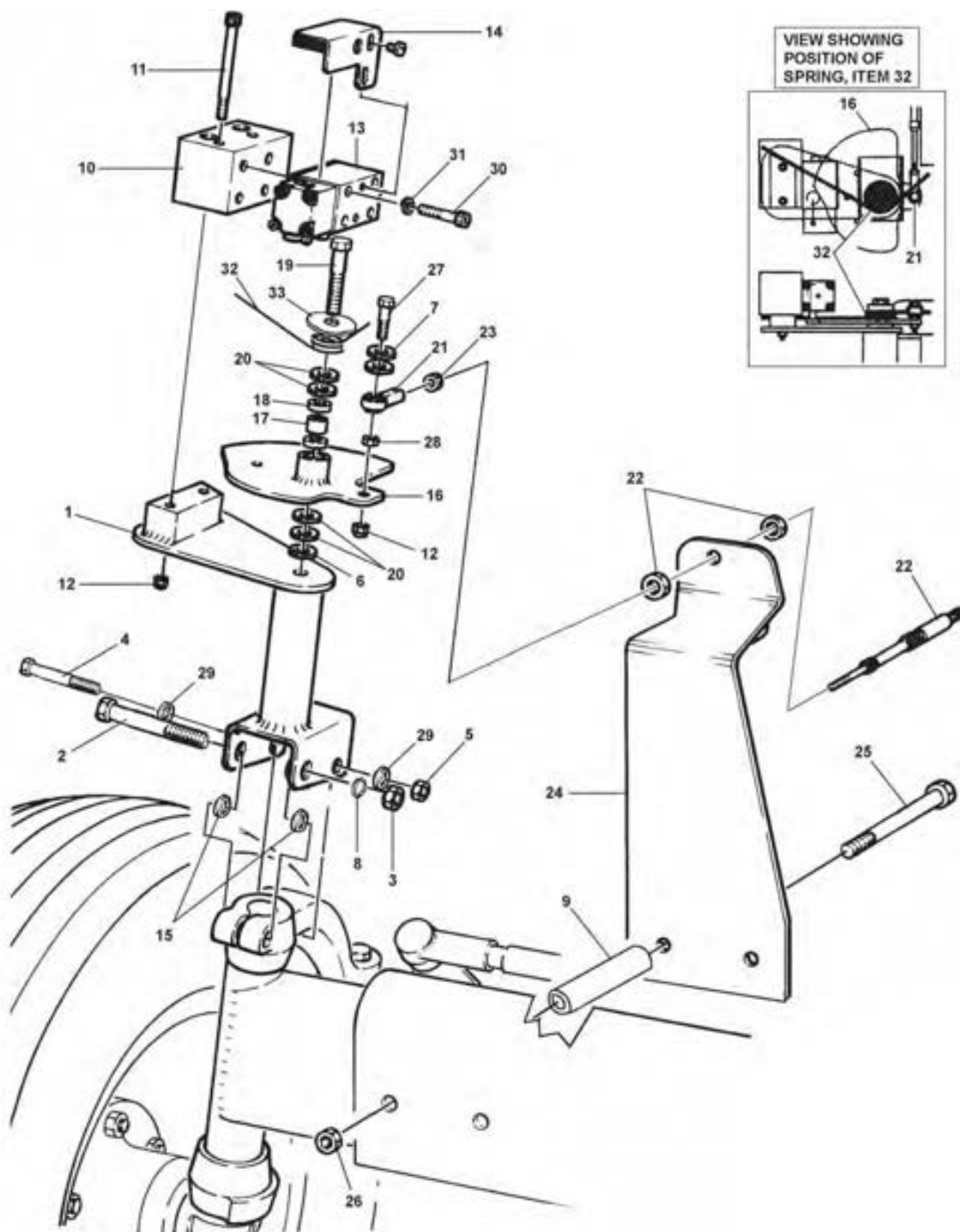


FIGURE 25

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
25-1	002073.7	SENSOR VALVE MOUNT	1				
25-2	90-0932	BOLT-9/16-12 X 4	1				
25-3	99-E54	NUT-9/16-12	1				
25-4	90-0732	BOLT-7/16-14 X 4	1				
25-5	64229-04	S LCK NUT-NYLN 7/16-14	1				
25-6	64163-67	WASHER-.516X1X12	A/R				
25-7	453023	FLATWASHER, 1/4	2				
25-8	64006-13	WASHER-9/16	1				
25-9	002060	SPACER, AXLE TUBE	2				
25-10	H4085	STEERING MANIFOLD	1				
25-11	F1735	SCREW-HEX	2				
25-12	64229-01	LOCKNUT-1/4-20	3				
25-13	23-142	VLV-AUTOSTEER SENSOR	1				
25-14	016535.7	COVER, VALVE	1				
	Q7475	SEAL, FOAM	1				
25-15	F6051	WASHER, FLAT 5/8"	A/R				
25-16	016483.7	CAM, AUTOSTEER	1				
25-17	015256	SPACER, SENSOR PIVOT	1				
25-18	B2010	BEARING	2				
25-19	64123-72	BLT-HEX 1/2-13X2-1/2	1				
25-20	99-B59	WASHER	4				
25-21	43-004A	ROD END	1				
25-22	M5270	CABLE,PUSH/PULL	1				
25-23	F1006	NUT, JAM 1/4-28	1				
25-24	002082.7	ANCHOR BRACKET	1				
25-25	64123-242	BOLT-3/4-10X4-1/2	2				
25-26	64229-07	LOCKNUT-NYLON 3/4-10	2				
25-27	64123-07	BOLT, 1/4-20X1-1/2	1				
25-28	64025-01	NUT-1/4-20	1				
25-29	64229-01	LOCKNUT-1/4-20 NYLON	2				
25-30	99-24	BOLT, 10-24 X 1-1/4	4				
25-31	120052	LOCKWASHER	4				
25-32	016796	SPRING	1				
25-33	F6053	WASHER	1				

FIGURE 26

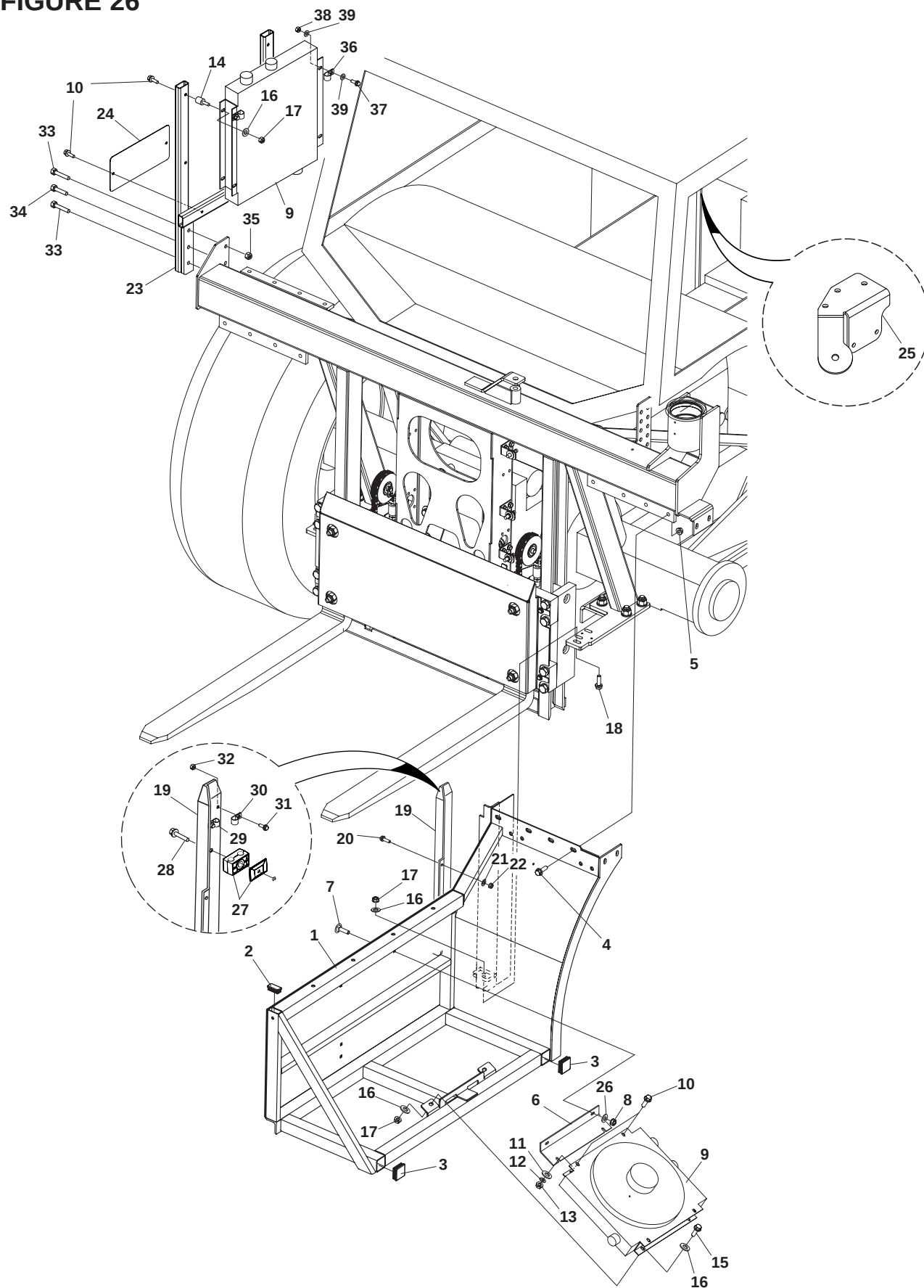


FIGURE 26

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4160387	WELDMENT-FENDER, RIGHT	1				
2	4134551	CAPPLUGS-1X2	1				
3	4134550	CAPPLUGS-2X2	1				
4	F870814	BOLT-FLG HD 1/2-13X1-1/2	4				
5	F840800	NUT-WLF 1/2-13	4				
6	4136172	BRKT-MOUNT, OIL COOLER	1				
7	F020506	BOLT-CRG 5/16-18X3/4	2				
8	F210500	LOCKNUT-5/16-18	2				
9	4136036	OIL COOLER ASSEMBLY	1				
	(INCLUDES ITEMS 10-13)						
	4160656	THRML. TRNSFR. COOLER	1				
	4142912	S-FAN-OIL COOLER	1				
	(SERVICE ONLY)						
10	F870614	BOLT 3/8 x 1 1/2. FLANGED	8				
11	F330608	WASHER 3/8	8				
12	F310608	LOCKWASHER 3/8	8				
13	F840600	NUT 3/8. SERRATED FLNGD.	4				
14	KS60012	RUBBER ISOLATOR	4				
15	F040610	BOLT-HEX 3/8-16X1	2				
16	F320600	FLATWASHER 3/8	9				
17	F210600	LOCKNUT-NYLON 3/8	7				
18	F870614	BLT-WLF 3/8-16 X 1-1/2	5				
19	4140175	BRACKET. HOSE COVER	1				
20	F040506	BOLT 5/16 UNC X 3/4 GR.8	2				
21	F320500	FLATWASHER 5/16	2				
22	F210500	LOCKNUT 5/16 UNC	2				
23	4160001	COOLER BRACKET	1				
24	4160019	DECAL PLATE	1				
25	4135163	LIGHT BRACKET. up to #137A	1				
	4160582	LIGHT BRACKET. from #137B	1				
26	F320500	FLATWASHER 5/16	2				
27	KH65014	DOUBLE HOSE CLAMP. 1 1/2	2				
28	F040522	BOLT 5/16 UNC X 2 1/4 GR.8	2				
29	KM60022	HOSE CLAMP #16	1				
30	KM60023	HOSE CLAMP #20	2				
31	F870404	BOLT 1/4 X 1/2. FLANGED	3				
32	F840400	NUT 1/4. SERRATED FLNGD.	3				
33	F040840	BOLT 1/2 UNC X 4 GR.8	2				
34	F040832	BOLT 1/2 UNC X 3 1/2 GR.8	1				
35	F210812	NUT 1/2. FLANGED STOVER	3				
36	KM60014	HOSE CLAMP #18	3				
37	F040410	BOLT 1/4 UNC X 1 GR.8	2				
38	F230400	NUT 1/4 UNC	2				
39	F320400	FLATWASHER 1/4	4				

REAR TRACK UNIT (LEFT & RIGHT)

RoboMax

FIGURE 27
(RIGHT SIDE SHOWN)

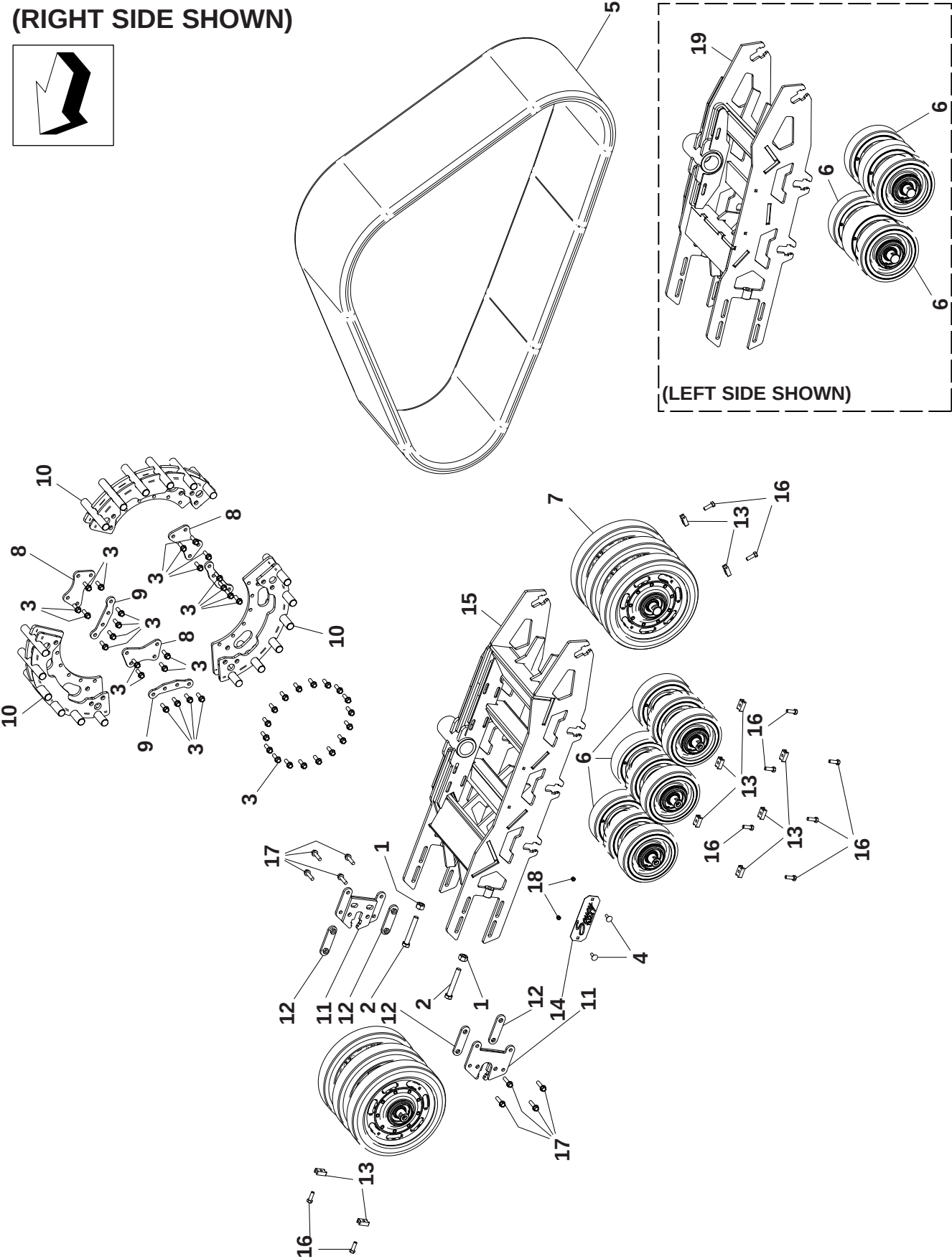


FIGURE 27

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	F231200	NUT 3/4 UNC	2				
2	F041250	BOLT 3/4 UNC X 5 GR.8	2				
3	4160200	BOLT. FLANGE 1/2 X 1 1/2	42				
4	F020614	CARRIAGE BOLT 3/8 X 1 1/4	2				
5	4160181	TRACK. RIGHT - 36 PITCH	1				
	4160180	TRACK. LEFT - 32 PITCH	1				
6	4160197	WHEEL ASSEMBLY 3" X 10"	3				
7	4160198	WHEEL ASSEMBLY 3" X 17"	2				
8	4160184	INNER SPROCKET LINK	3				
9	4160185	OUTER SPROCKET LINK	3				
10	4160183	SPROCKET THIRD. 6 TEETH	3				
11	4160193	TRACK TENSIONER	2				
12	4160194	TENSIONER CLAMP PLATE	4				
13	4160195	AXLE LOCK 5/8"	10				
14	4160196	TRACK PLATE	1				
15	4160192	RIGHT REAR FRAME	1				
16	F040814	BOLT 1/2 UNC X 1 1/2 GR.8	10				
17	4160201	BOLT. FLANGE 1/2 X 2	8				
18	F210600	LOCKNUT 3/8 UNC	2				
19	4160191	LEFT REAR FRAME	1				

FIGURE 28

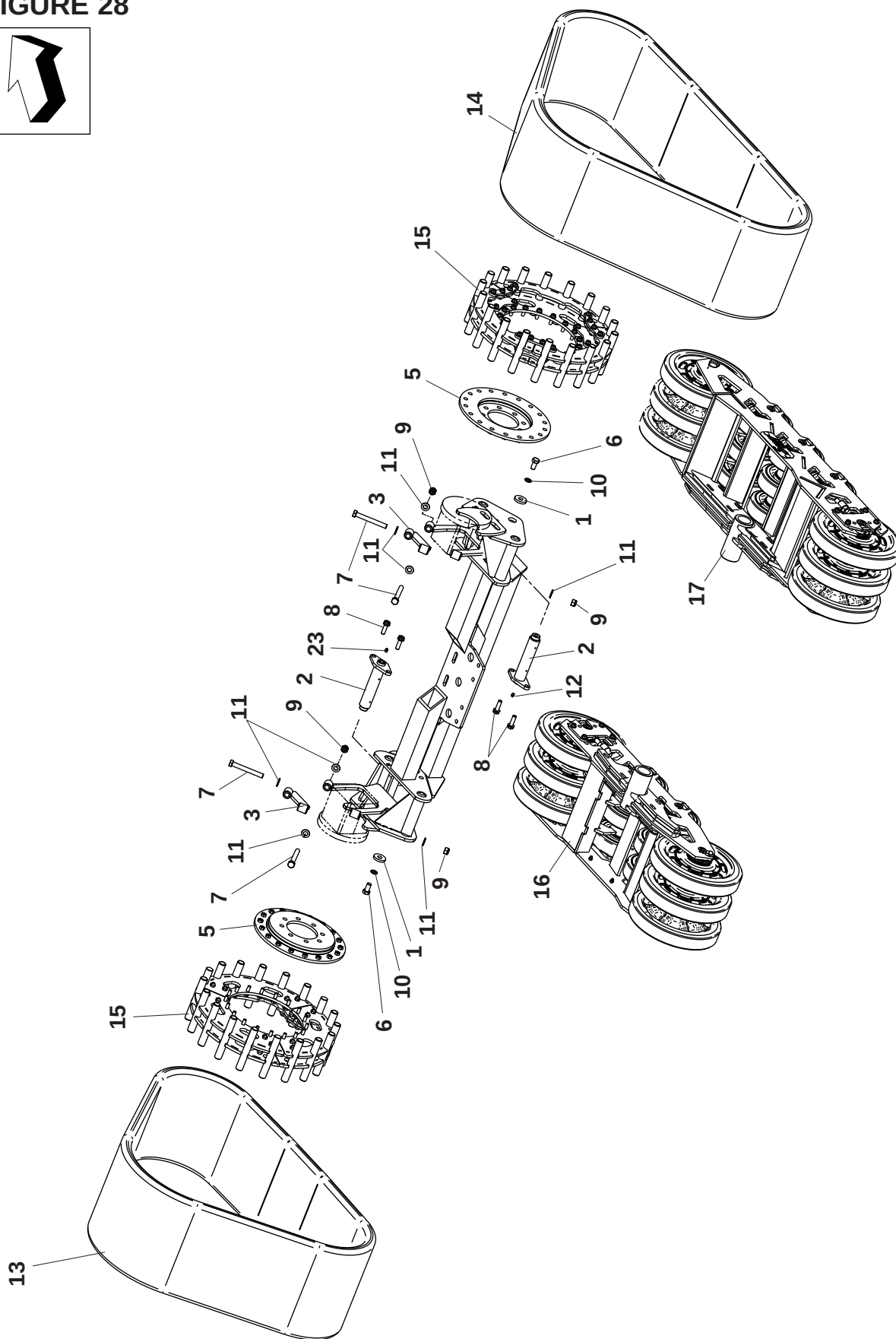
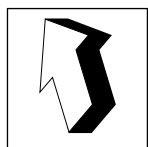


FIGURE 28

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	F321200	FLATWASHER 3/4	2				
2	4160199	PIVOT AXLE	2				
3	4160188	TOP SUPPORT ASSEMBLY	2				
4	4160187	REAR FRAME ATTACHMENT	1				
5	4160186	SPROCKET ATTACHEMENT	2				
6	F041214	BOLT 3/4 UNC X 1 1/2 GR.8	2				
7	F041260	BOLT 3/4 UNC X 6 GR.8	4				
8	4160202	BOLT. FLANGE 5/8 UNC X 2	4				
9	F211200	LOCKNUT 3/4 UNC	4				
10	F311200	LOCKWASHER 3/4	2				
11	F351200	FLATWASHER 3/4 O.D. 1 1/2	8				
12	KM11494	GREASE FITTING 1/8 X 7/16	2				
13	4160180	TRACK. LEFT - 32 PITCH	1				
14	4160181	TRACK. RIGHT - 36 PITCH	1				
15	4160182	FRONT SPRCKT 18 TEETH	2				
16	4160189	TRACK FRAME ASSY. LEFT	1				
17	4160190	TRACK FRAME ASSY. RIGHT	1				

FIGURE 29

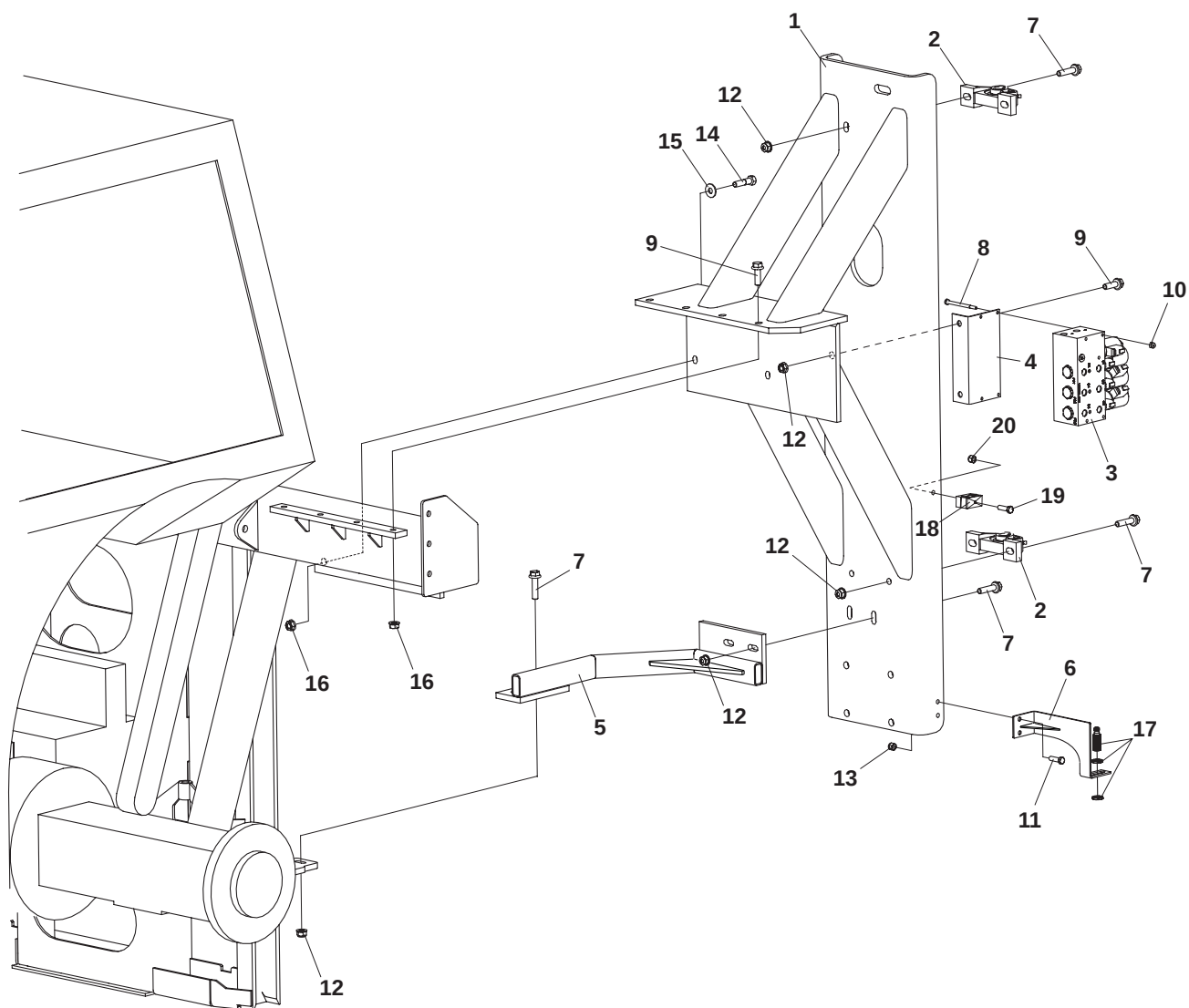


FIGURE 29

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4139139.7	MNT-PALLET DISPENSER	1				
2	4133659	BEARING	2				
3	4136313	MANIFOLD-PALLET DISP	1				
4	4136866.7	BRKT-PALLET MANIFOLD	1				
5	4138840.7	MNT PALLET DISP	1				
6	4139128.7	BRKT-SENSOR PALLET DISP	1				
7	F870818	BOLT-FLANGE 1/2-13 X 2	6				
8	F040434	BLT-HEX 1/4-20 X 3-1/2	4				
9	F040816	BLT-FLG HD 1/2-13 X 1-1/2	6				
10	F210408	LOCKNUT-1/4-20	4				
11	F040612	BLT-HEX 3/8-16X1-1/4	2				
12	F210812	LOCKNUT-1/2-13	8				
13	F210608	LOCKNUT-3/8-16	2				
14	F040820	BLT-HEX 1/2-13X2	2				
15	F330808	WASHER-33/64X1-1/4X12	2				
16	F210802	NUT-WLF 1/2-13	6				
17	4132983	SENSOR	1				
18	4135022	CLAMP-3/4 OD HOSE	1				
19	F040524	BLT-HEX 5/16-18X2-1/2	1				
20	F210508	LOCKNUT-NYLON 5/16-18	1				

FIGURE 30

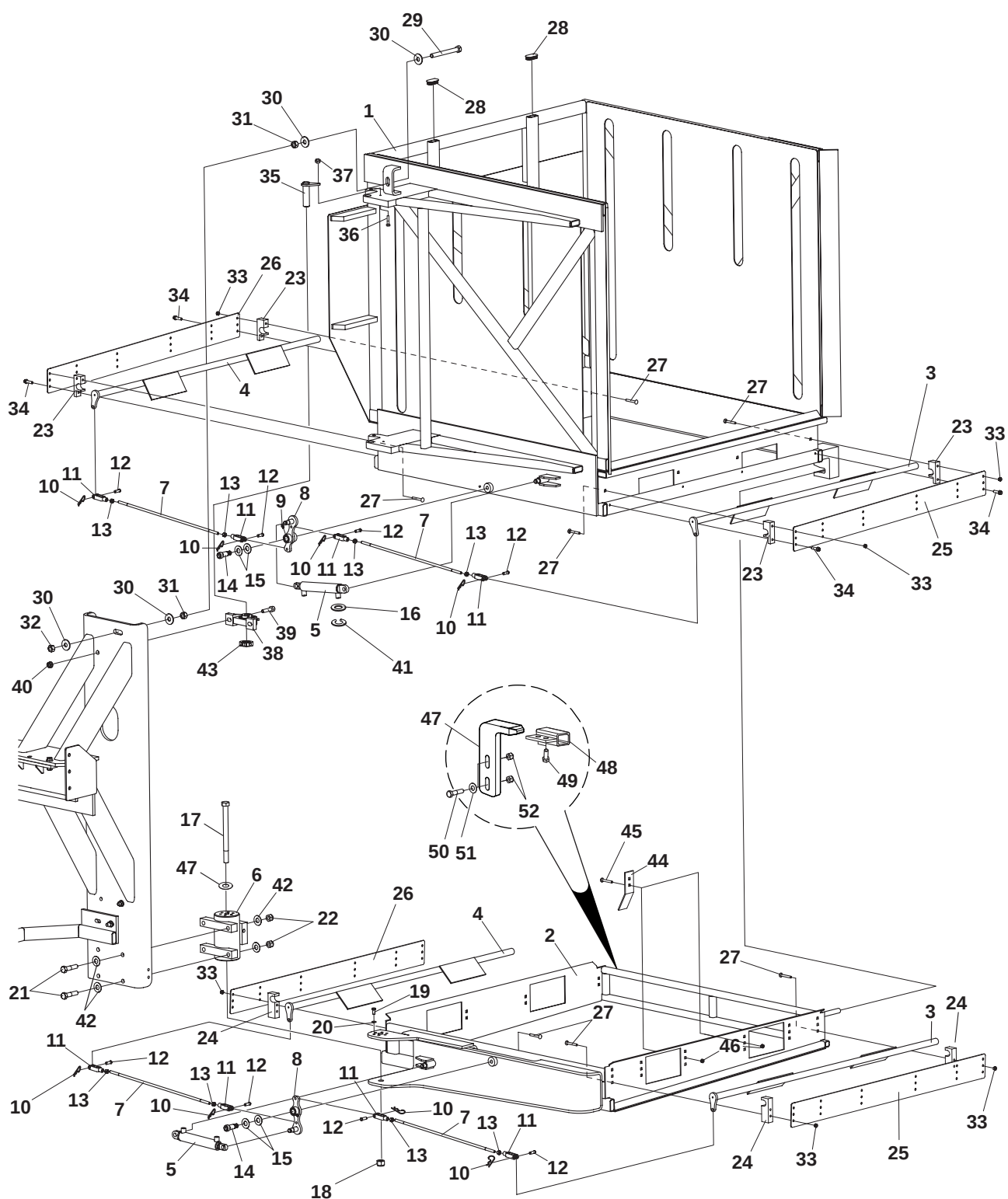


FIGURE 30

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4160426	S-WLDMT-PALLET DISPNSR	1	41	64144-36	SNAP RING	4
2	4139140	S-WLDMT-PALLET DISPNSR	1	42	F331008	WASHER	8
3	4138353	WLDMT-DISP PADDLES	2	43	4138481	COLLAR-CLAMP	2
4	4138354	WLDMT-DISP PADDLES	2	44	4139860	BRKT-PALLET SLIDE	2
5	4134118	CYLINDER	2	45	F020520	BLT-CRG 5/16-18 X 2	4
6	4133657	ACTUATOR-ROTARY HYD	1	46	F210508	LOCKNUT-NYLON 5/16-18	4
7	4133802	LINK-ARM, ACTUATOR	4	47	4160283	LATCH - SECONDARY	1
8	4136786	WLDMT-BELLCRANK	2	48	4160307	RCVR. LATCH - SECONDARY	1
	4136835	BEARING BUSHING (INCLUDES ITEM 9)	2	49	F140606	SCREW 3/8 UNC X 3/4 SOC.	2
9	85010N	ZERK	2	50	F040632	BOLT 3/8 UNC X 1 1/4 GR.8	2
10	F910110	COTTER PIN	8	51	F320600	FLATWASHER 3/8	8
11	38020-01	CLEVIS YOKE	8	52	F210600	LOCKNUT 3/8 UNC	4
12	KX00622	S PIN-CLEVIS	8	52	F321200	FLATWASHER 3/4	1
13	F230608	NUT-3/8-24	8				
14	4136870	SHOULDER SCREW	2				
15	F331208	WASHER	4				
16	F330908	WASHER	4				
17	F041210	BOLT-3/4 X 10	1				
18	F211208	LOCKNUT-3/4-10	1				
19	F040612	BOLT-HEX 3/8-16X1 1/4	6				
20	F310608	LOCKWASHER-3/8	6				
21	F041026	BOLT,5/8-11 X 3-1/2	4				
22	F211008	LOCKNUT-5/8-11	4				
23	4136042	BLOCK-BAR SUPPORT	8				
24	4136043	BLOCK-BAR SUPPORT	8				
25	4137551	S-PLATE-SMOOTH SURFACE	2				
26	4137552	PLATE-PALLET SOD GUIDE	2				
27	F020516	BOLT-CRG 5/16-18 X 1-3/4	20				
28	4134551	CAPPLUGS- 1 X 2	2				
29	F041060	BOLT-5/8-11X6.00	1				
30	F331008	WASHER	4				
31	F231008	NUT-HEX 5/8-11	2				
32	F211008	LOCKNUT-5/8-11	1				
33	64273-01	NUT-LOW PROFILE CMTAINR	20				
34	64152-65	SCREW-5/16-18 X 1 1/4	8				
35	4133793	WLDMT-PIVOT PIN	2				
36	F040416	BOLT-1/4-20 X 1-3/4	2				
37	F210408	LOCKNUT-1/4-20	2				
38	4133659	BEARING-HOUSED	2				
39	F870818	BOLT-FLANGE 1/2-13 X 2	4				
40	F210808	LOCKNUT-1/2-13	4				

* NOT ILLUSTRATED

FIGURE 31

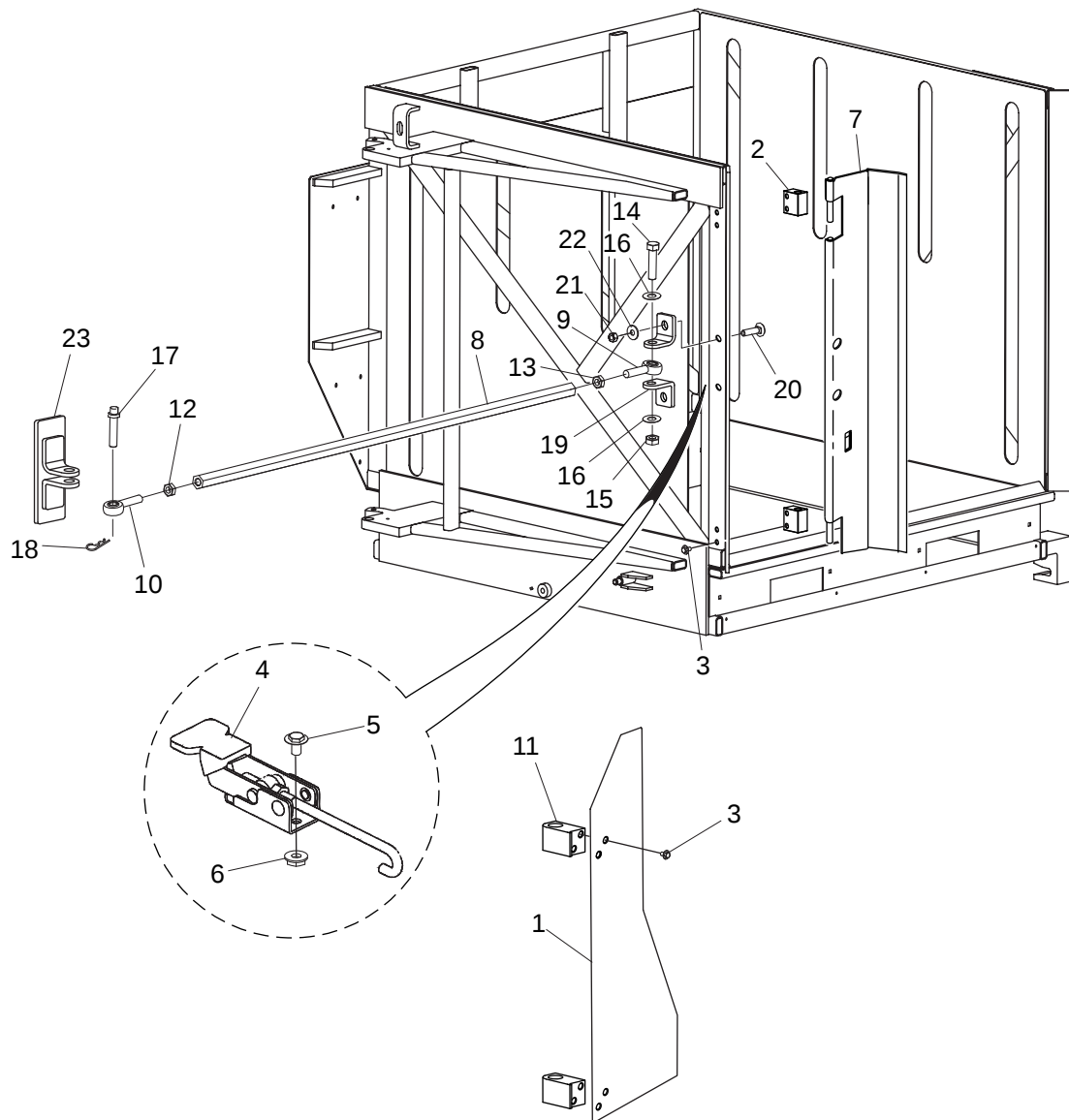


FIGURE 31

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4160149	WLDMT-PILING WALL EXT.	1				
2	4160316	HINGE BLOCK	2				
3	F870606	BOLT 3/8 UNC X 3/4 FLANGED	12				
4	4160218	DRAW LATCH	1				
5	F870406	BOLT 1/4 UNC X 3/4 FLANGED	2				
6	F840400	NUT 1/4-20 UNC. FLANGED	2				
7	4160315	PILING WALL GUIDE	1				
8	4160111	TIE ROD - 38 1/2 IN.	1				
9	CM00121	ROD END - R.H. 3/4 IN.	1				
10	CM00122	ROD END - L.H. 3/4 IN.	1				
11	4160146	HINGE BLOCK	2				
12	F231260	JAM NUT 3/4 UNF L.H.	1				
13	F231250	JAM NUT 3/4 UNF R.H.	1				
14	F041230	BOLT 3/4 UNC X 3 GR.8	1				
15	F211200	LOCKNUT 3/4 UNC	1				
16	F321200	FLATWASHER 3/4 SAE	2				
17	KX08150	CLEVIS PIN	1				
18	KX30219	LYNCH PIN	2				
19	4160102	HOLDING BRACKET	1				
20	F020814	CARRIAGE BOLT 1/2 X 1 1/2	2				
21	F210800	LOCKNUT 1/2 UNC	2				
22	F320800	FLATWASHER 1/2	2				
23	4160121	TRANSPORT BRACKET	1				

FIGURE 32

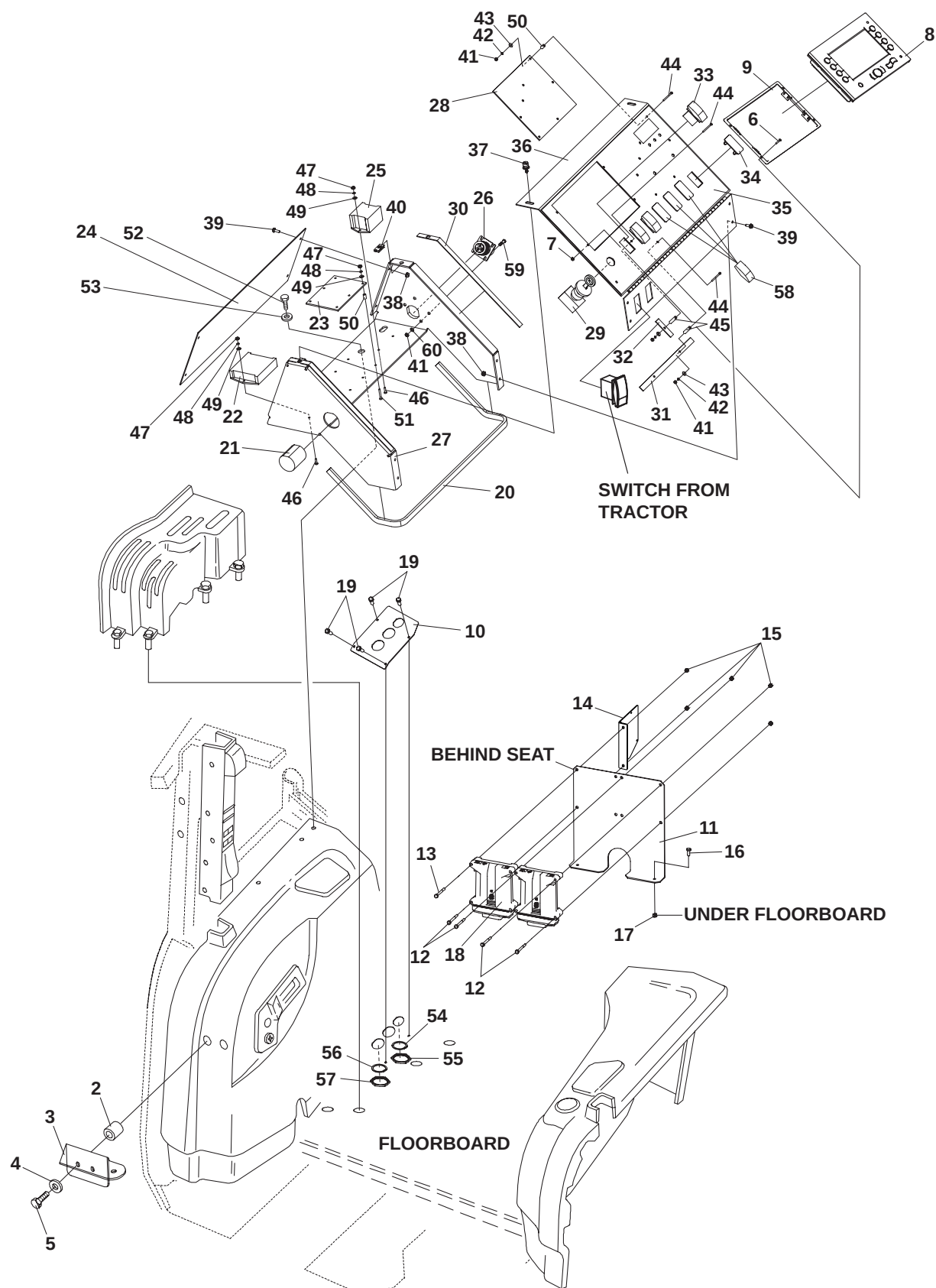


FIGURE 32

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4134149	ASSY- CONTROL PANEL (INCLUDES ITEMS 20 - 53)	1	35	4136074	LABEL-CONTROL PANEL	1
2	4129241	SPACER	2	36	4136073	WLDMT-PANEL CONTROL	1
3	4137513	S-BRKT-MNT AUTOSTR ADJ	1	37	4134149-11	KNURLED SLOTTED STUD	2
4	64006-06	LOCKWASHER-7/16	2	38	64229-10	NUT-NYLON INS #10-24	8
5	64205-009	BLT-MET M10-1.5X65	2	39	64152-46	SCREW-SLT HH 10-24X1/2	8
6	64152-57	SCREW-MACH #8-32X3/8	4	40	4134149-12	CLIP ON RECEPTACLE	2
7	64229-09	LOCKNUT-NYLON INS #8-32	4	41	4134149-24	#4-40 HEX MACHINE NUT	17
8	4133998	DISPLAY UNIT	1	42	4134149-22	LOCKWASHER-#4 DIA.	15
9	4133993	MOUNTING PANEL	1	43	4134149-21	WASHER-#4 DIA. TYPE "B"	12
10	4129899.7	PLATE-BULKHEAD MOUNT	1	44	4134149-25	#4-40 X 1 HSBHCS	12
11	4129635	WLDMT-RLR PLATE LIFT RH	1	45	4134149-26	STANDOFF-LONG	5
12	F870422	BOLT 1/4 X 2 1/4 FLANGED	6	46	4134149-20	#6-32 X 1/2 PH SCREW	4
13	F870424	BOLT 1/4 X 2 1/2 FLANGED	2	47	4134149-18	#6-32 HEX MACHINE NUT	10
14	4160166	BRACKET. CAN BUS JUNC.	1	48	4134149-17	LOCKWASHER-#6 DIA.	10
15	64229-01	LOCKNUT-1/4-20 NYLON	8	49	4134149-16	WASHER-#6 DIA. TYPE "A"	10
16	64123-54	BOLT-5/16-18X3/4 HEX	2	50	4134149-15	STANDOFF-SHORT	13
17	64229-02	LOCKNUT-NYLON 5/16-18	2	51	4134149-19	#6-32 X 1 PH SCREW	6
18	4133992	CONTROLLER	2	52	4134149-13	BOLT	3
19		BOLTS (INCLUDED WITH TRACTOR)	4	53	4134149-23	WASHER	3
20	4134149-14	TRIM	1	54	4138952	LOCKWASHER	2
21	4134149-6	DEUTSCH CONN	1	55	4138953	NUT	2
22	4134149-7	DUAL PWM CNTRL MOD	1	56	4138954	LOCKWASHER	1
23	4134149-8	FUSE PANEL PCB	1	57	4138955	NUT	1
*	4134149-28	FUSE-3 AMP	3	58	4138301	SWITCH-ROCKER	3
*	4134149-29	FUSE-10 AMP	1	59	64152-30	SCREW	4
*	4134149-30	FUSE-20 AMP	1	60	01-039	LOCKWASHER	4
24	4134162	COVER PLATE-CNTRL PNL	1	* NOT ILLUSTRATED SEE FIGURE 49			
25	4134149-9	12V TO 24V CONVERTER	1				
26	4134149-10	DEUTSCH CONN	1				
27	4132624	BASE-INSTRUMENT PNL	1				
28	4134149-5	COUNTER, CUTTER HEAD, CONVEYOR SPD. CNTL. PCB.	1				
29	4134149-2	E-STOP SWITCH	1				
30	4134152	STRIP-FOAM RUBBER	2				
31	4134149-4	LED BACKLIGHT PCB LONG	1				
32	4134149-3	LED BACKLIGHT PCB SHORT	3				
33	4134149-1	CARLING SWITCH	3				
34	4134149-27	PLUG-CARLING SWITCH	4				

FIGURE 33

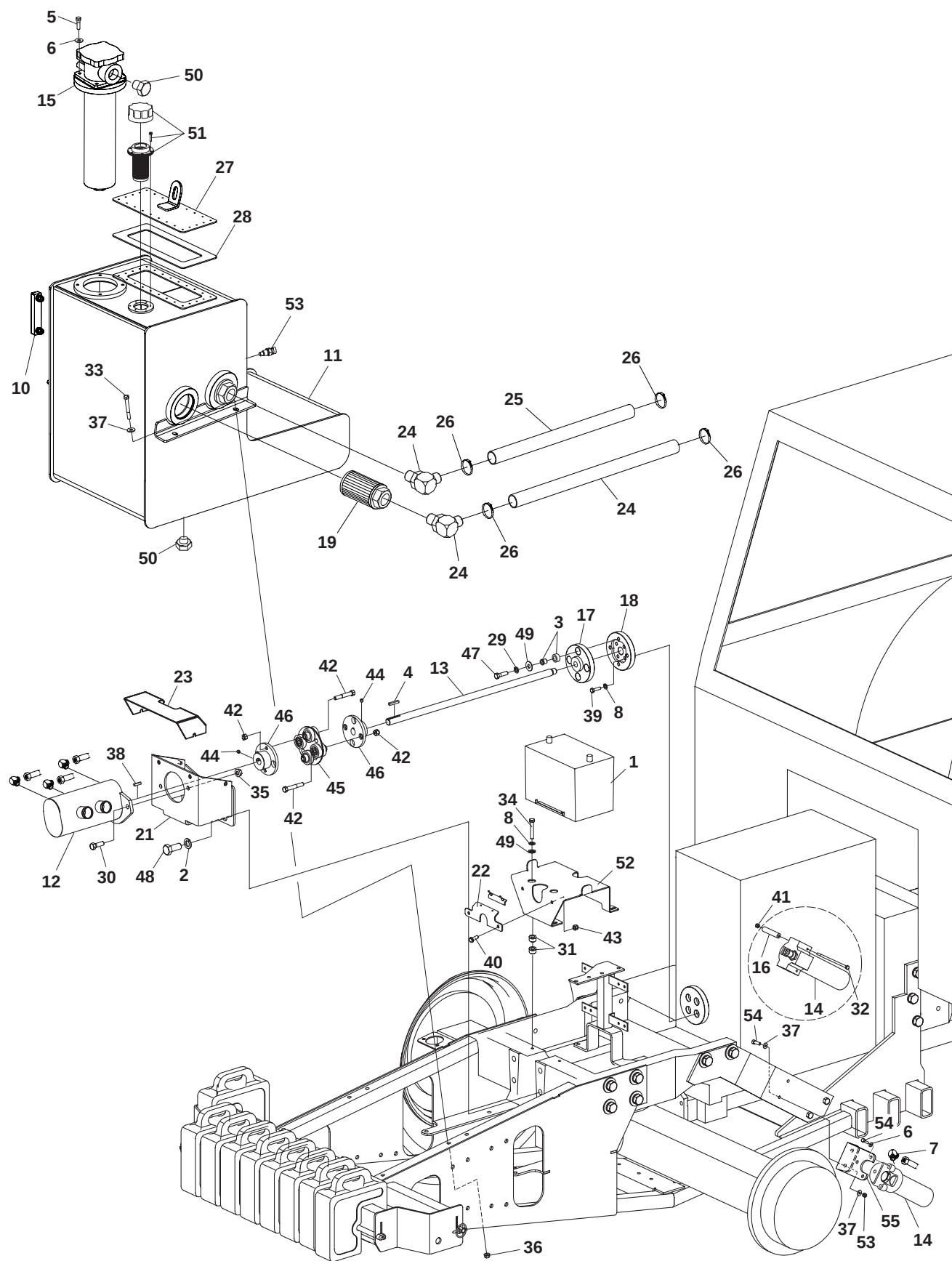


FIGURE 33

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4160018	BATTERY	1	37	F330600	WASHER 3/8	8
2	G311200	LOCKWASHER-20MM	4	38	Q0579	KEY-1/4X1/4X1 SQ END	1
3	001425	BUSHING-PUMP FLANGE	4	39	G0710040	BOLT M10 - 1.5 X 40	3
4	424424	KEY-1/4" X 1/4" X 1 1/2"	1	40	F040610	BOLT-HEX 3/8-16X1	4
5	F040612	BOLT 3/8 UNC X 1 1/4 GR.8	4	41	F210408	LOCKNUT-1/4-20	2
6	F310600	LOCKWASHER 3/8	7			NON CURRENT UP TO SERIAL NO. 151	
7	12-12-070320	FITTING. NO.12-45 deg. ELB.	4	42	87-201	BOLT SET-502	1
8	G311000	LOCKWASHER M10	7			(INCLUDES 4 BOLTS AND 4 NUTS)	
9	8-10-070320	FITTING. NO.8-45 deg. ELB.	1	43	4134628	SENSOR- LIQUID TEMP	1
10	KH10005	LEVEL GAUGE	1	44	F110604	SET SCREW-3/8-16 X 1/2	2
11	4160159	HYDRAULIC TANK	1	45	87-202	COUPLING-502 CENTER	1
12	4131272	PUMP-3 SECTION	1	46	H111162	COUPLER-MORFLEX FLANGE	2
13	4160586	SHAFT-PUMP DRIVE. up to #137A	1	47	F040714	BOLT-7/16-14 X 1-1/2 NC	4
	4160586	SHAFT-PUMP DRIVE. from #137B	1	48	G0420045	BOLT-MET M20-2.5X45	4
14	4131669	FILTER-HIGH PRESSURE	1	49	REF.	FLATWASHER - N.H.	4
	4131669-01	FILTER-REPL HI PRESSURE	1	50	24-090109A	PLUG - SAE	2
	KO00138	'O' RING-FILTER CANNISTER	1	51	H8074	PRESSURE FILTER BRTHR.	1
		OBSOLETE - SEE NOTE		52	4137236	TRAY-BATTERY	1
				53	F210608	LOCKNUT-NYLON 3/8-16	6
	KH40060	FILTER-HIGH PRESSURE	1	54	F040606	BOLT 3/8 UNC X 3/4 GR.8	5
	KH40061	ELEMENT-PRESSURE FILTER	1	55	4160637	MOUNTING BRACKET	1
	KH70104	SEAL KIT-PRESSURE FILTER	1				
		CURRENT FROM SERIAL NO. 152					
15	KH40049	RETURN FILTER	1				
	KH40048	FILTER ELEMENT	1				
16	4132690	SPACER-BUSHING	2				
		NON CURRENT UP TO SERIAL NO. 151					
17	4136050	FLANGE-PUMP DRIVE	1				
18	4136045	ADAPTOR-CRANKSHAFT	1				
19	KH40020	SUCTION STRAINER	2				
20	24-24-430292	FITTING. NO.24 90 deg. ELB.	2				
21	4136361	WLDMT-MOUNT, HYD PUMP	1				
22	4137237	CLAMP-REAR BATTERY	2				
23	4136364	SHIELD-PUMP DRIVE SHAFT	1				
24	4160634	HOSE - 1 1/2" X 27"	1				
25	4160633	HOSE - 1 1/2" X 21"	1				
26	KM60008	HOSE CLAMP	4				
27	4160351	COVER	1				
28	4160233	GASKET	1				
29	F210708	LOCKWASHER-7/16	4				
30	64123-117	BOLT-HEX 1/2-13X1-1/2	10				
31	4160581	SPACER	8				
32	F040460	BOLT-HEX 1/4-20X6	2				
		NON CURRENT UP TO SERIAL NO. 151					
33	F040630	BOLT-HEX 3/8-16X3	4				
34	G0710060	BOLT M10 - 1.25 X 60	4				
35	F210805	NUT-WLF 1/2-13	2				
36	F210605	NUT-WLF 3/8-16	4				

NOTE

ITEM 14 IS OBOSOLETE FROM SERIAL NO. 151.
PRESSURE FILTER REPLACEMENT KIT - 4160811.
IT CONTAINS:
4160637 - MOUNTING BRACKET
4040606 - BOLT 3/8 UNC X 3/4 GR.8
F040612 - BOLT 3/8 UNC X 1 1/4 GR.8
F210600 - LOCKNUT 3/8 UNC
F310600 - LOCKWASHER 3/8
F330600 - WASHER 3/8 SAE
KH40060 - FILTER-HIGH PRESSURE

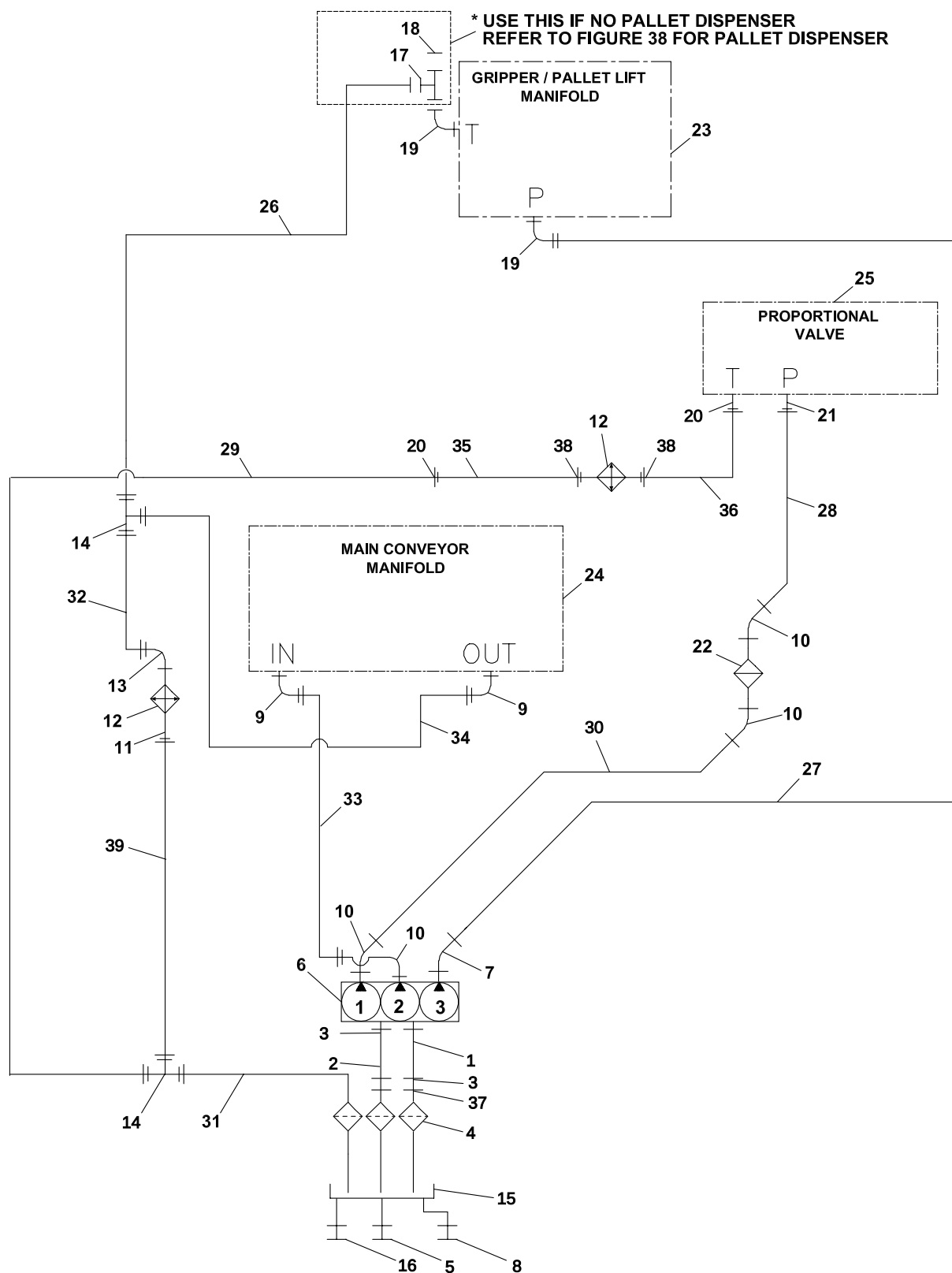
FIGURE 34

FIGURE 34

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4160634	HOSE ASSEMBLY - 28 IN. LG.	1				
2	4160633	HOSE ASSEMBLY - 23 IN. LG.	1				
3	KH60008	HOSE CLAMP	4				
4	KH40020	SUCTION STRAINER	3				
5	H8011	PLUG-MAGNETIC	1				
6	4131272	PUMP-HYDRAULIC	1				
7	8-10-070320	ELBOW-MALE 45 8X10	1				
8	4136961	SIGHT-RESERVOIR	1				
9	12-12-070220	FIT-90 -12MORB/-12MJIC	3				
10	12-12-070320	FIT-45 -12MORB X -12MJIC	3				
11	16-16-070320	FIT-45 -16M ORB/-16MJIC	1				
12	4136036	COOLER-OIL	2				
13	16-16-070220	FIT-90 -16 MJIC X -16 MORB	1				
14	16-16-16-070432	FIT-UNION TEE -16 MJIC	1				
15	4160519	WLDMT-HYDRAULIC TANK	1				
16	4134628	SENSOR-LIQUID TEMP	1				
17	8-8-8-070401	FIT-TEE -8 FJIC/ 2)-8 MJIC	1				
18	8-070112	CAP- -8 FEM JIC	1				
		(NOT USED WITH PALLET DISPENSER)					
19	6-8-070220	FIT-90 -6 M ORB X -8 M JIC	2				
20	12-12-070101	FIT-STR -12 MORB/ -12 MJIC	1				
21	10-12-070120	FIT-STR -10 M ORB/-12 MJIC	1				
22	4131669	FILTER-HIGH PRESSURE	1				
	4131669-01	FILTER-REPL HI PRESSURE	1				
	KO00138	'O' RING-FILTER CANNISTER	1				
		NON CURRENT UP TO SERIAL NO. 151					
	KH40060	FILTER-HIGH PRESSURE	1				
	KH40061	ELEMENT-PRESSURE FILTER	1				
	KH70104	SEAL KIT-PRESSURE FILTER	1				
		CURRENT FROM SERIAL NO. 152					
23	4134062	MANIFOLD-GRIPPER/PALLET	1				
24	4132956	MANIFOLD-MAIN CONVEYOR	1				
25	4142690	VALVE-PROPORTIONAL	1				
26	2692319-01	HOSE-#8 JIC/#12 JIC X 37	1				
27	2692305-06	HOSE-#8 JIC/90S JIC X 154	1				
28	2692321-03	HOSE-#12 JIC/JIC X 120	1				
29	2692318-02	HOSE-#16 JIC/#12 JIC X 87	1				
30	2692321-01	HOSE-#12 JIC/JIC X 89	1				
31	2692317-02	HOSE-#16 JIC/JIC X 222	1				
32	2692336-02	HOSE-#16 JIC/JIC X 61	1				
33	2692321-02	HOSE-#12 JIC/JIC X 73	1				
34	2692318-01	HOSE-#16 JIC/#12 JIC X 47	1				
35	2692400-01	HOSE ASSEMBLY	1				
36	2692400-02	HOSE ASSEMBLY	1				
37	24-24-430292	FITTING-90 DEG ELBOW #24	2				
38	16-12-070220	FITTING-90 DEG ELBOW #12	2				
39	2692338-01	HOSE-#16 JIC/JIC X 61	1				

NOTE

HOSE KIT. MAIN - 4160058.

* USE THIS IF NO PALLET DISPENSER
REFER TO FIGURE 40 FOR PALLET
DISPENSER

FIGURE 35

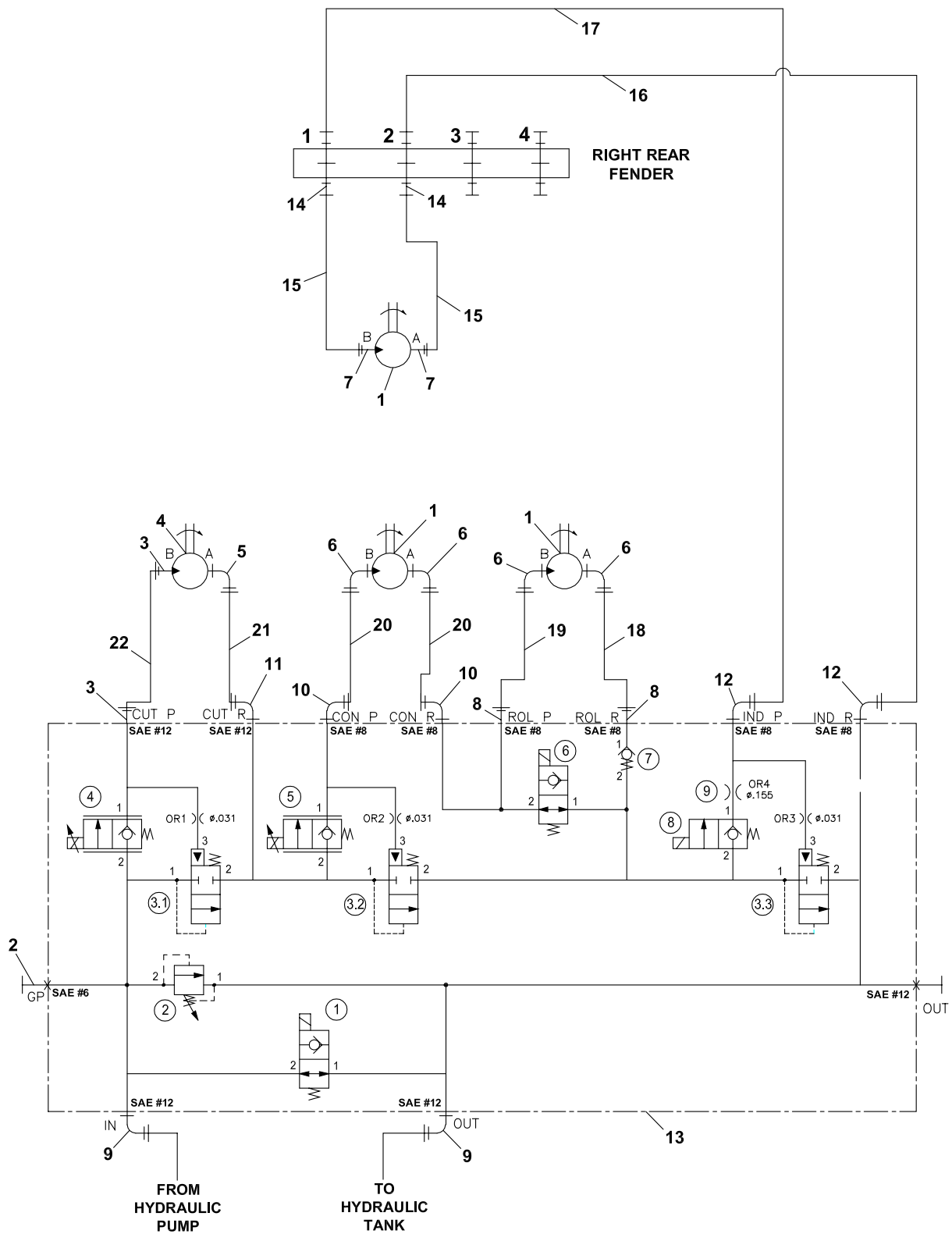


FIGURE 35

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	H0012	MOTOR - OBSOLETE	3				
	KH30007	MOTOR - SEE NOTE 1	3				
2	2690043	FITTING-TEST PORT	1				
3	10-10-070120	FIT-STR -10 M ORB/-10 MJIC	2				
4	21-091	MOTOR-HYD CUTTERHEAD	1				
5	10-10-070220	FIT-90 -10 M ORB/-10 M JIC	1				
6	8-8-070120	FIT-90 -8 MPT X -8 M JIC	4				
7	6-8-070120	FIT-STR -8 MPT X -6 MJIC	2				
8	8-8-070601	FIT-STRAIGHT 8 ORB X 8 JIC	2				
9	12-12-070220	FIT-90 -12 M ORB/-12 M JIC	2				
10	8-8-070220	FIT-90 -8 M ORB X -8 M JIC	2				
11	10-12-070220	FIT-90 -12 M ORB/-10 M JIC	1				
12	6-8-070220	FIT-90 -8 M ORB X -6 M JIC	2				
13	4132956	MANIFOLD-MAIN CONVEYOR	1				
14	6-6-070801	FIT-BH 45 EL #6 MJIC/#6 MJIC	2				
15	2692308-01	HOSE-#6 JIC/45 JICX46	2				
16	2692304-03	HOSE-#6 JIC/90S JICX96.50	1				
17	2692304-04	HOSE-#6 JIC/90L JICX96.50	1				
18	2692305-05	HOSE-#8 JIC/90L JICX151	1				
19	2692305-04	HOSE-#8 JIC/90S JICX147	1				
20	2692305-03	HOSE-#8 JIC/90S JICX109	2				
21	2692306-01	HOSE-#10 JIC/90S JICX102.50	1				
22	2692316-01	HOSE-#12 JIC/#10 JICX95.50	1				

NOTE 1

ITEM 1 - H0012 IS OBSOLETE
AND IS REPLACED BY SERVICE KIT
4160611. IT INCLUDES:
MOTOR - KH30007 QTY. 1
FITTINGS - 8-10-070220. QTY. 2

NOTE 2

HOSE KIT. MAIN CONVEYOR
MANIFOLD - 4160059.

The diagram illustrates a hydraulic circuit for a pallet dispenser. At the top left, two solenoid valves (labeled 2) are connected to a common supply line (12). These valves control two parallel flow paths (10) leading to two sets of actuators (11). The actuators are connected to a common return line (13). A pressure relief valve (14) is installed between the supply and return lines. On the right side, a vertical stack of six solenoid valves (A1 through B6) is shown, labeled "BULKHEAD A-B". These valves are controlled by a series of lines (9) originating from a central manifold (8). This manifold is connected to a pump (P) at the bottom, which draws fluid from a tank (T) via a filter (G1). The pump's output passes through a check valve (RV) and a pressure-reducing valve (PR) before reaching the manifold. The manifold also receives input from a "FROM HYDRAULIC PUMP" source (3). The entire system is enclosed in a dashed box labeled "TO ITEM 5".

FIGURE 36

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4134062	MANIFOLD-GRIPPER/PALLET	1				
2	4132569	CYLINDER-PALLET LIFT	2				
3	6-8-070220	FIT-90 -6 M ORB X -8 M JIC	2				
4	2690043	FIT-TEST PORT	2				
5	8-8-070401	FIT-TEE -8 FJIC/ 2)-8 MJIC	1				
6	8-070112	CAP, -8 FEM JIC	1				
		(NOT USED WITH PALLET DISPENSER)					
7	6-6-070220	FIT-90 -6 M ORB X -6 M JIC	2				
8	6-6-070320	FIT-45 -6 M ORB X -6 M JIC	6				
9	6-6-070801	FIT-BH 45 EL#6 MJIC/#6 MJIC	6				
10	6-6-6-070432	FIT-UNION TEE -6 M JIC (3)	2				
11	6-8-070220	FIT-90 -8 M ORB X -6 M JIC	4				
12	2692301-08	HOSE-#6 JIC/JICX35.00	2				
13	2692301-09	HOSE-#6 JIC/JICX26.00	2				
14	2692301-07	HOSE-#6 JIC/JICX30.00	2				
15	2692301-06	HOSE-#6 JIC/JICX28.00	6				
16	2692319-01	HOSE-#8 JIC/#12 JIC X 37.00	1				

* USE THIS IF NO PALLET DISPENSER
REFER TO FIGURE 40 FOR PALLET
DISPENSER

NOTE

HOSE KIT. GRIPPER/PALLET LIFT
MANIFOLD - 4160060.

FIGURE 37

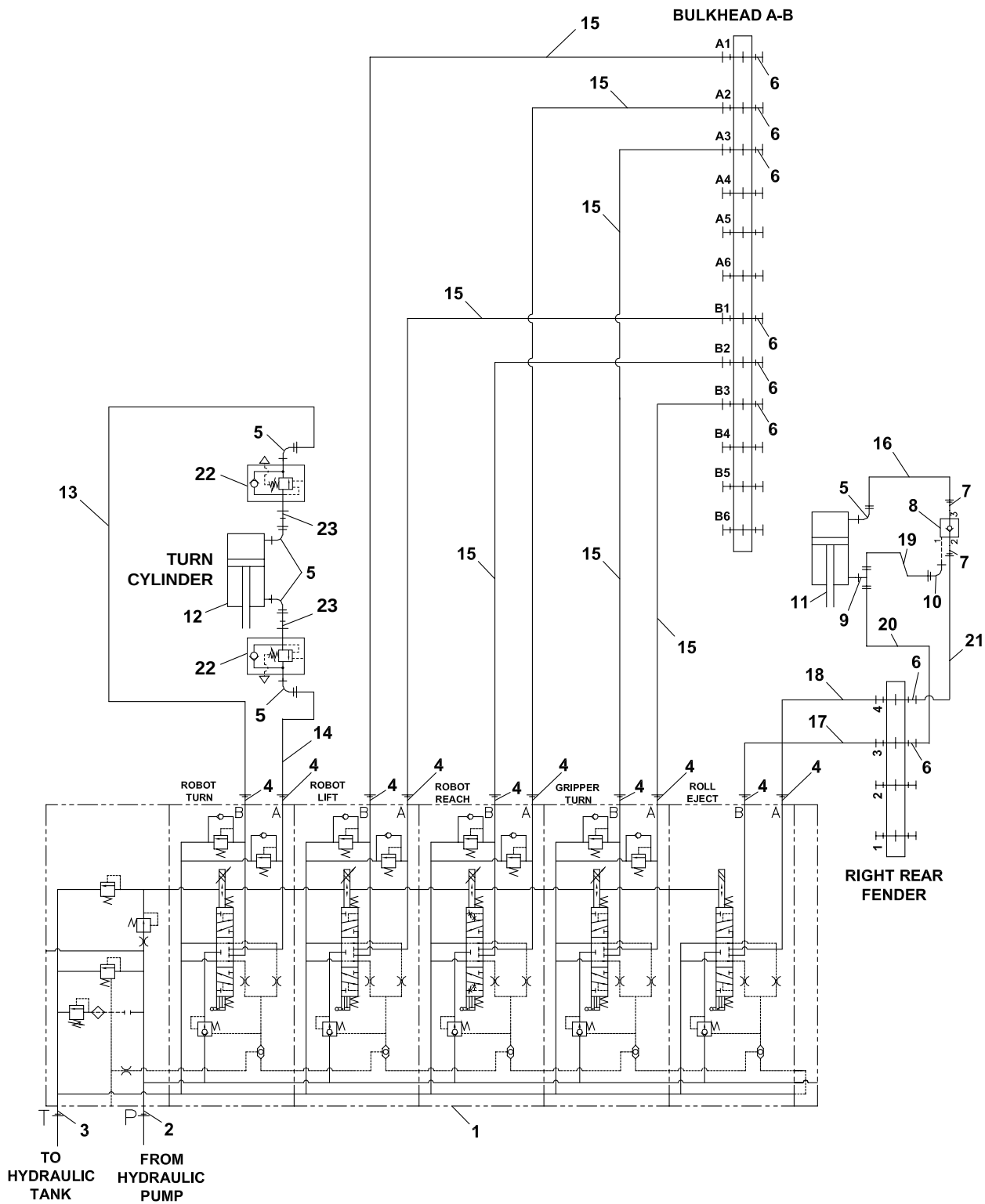


FIGURE 37

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4142690	VALVE-PROPORTIONAL	1				
2	12-12-070120	FITTING - #12 CONNECTOR	1				
3	12-12-070220	FITTING - #12 90 deg. ELBOW	1				
4	10-06-070120	FIT-STR -10 M ORB/-6 M JIC	10				
5	6-6-070220	FIT-90 -6 M ORB X -6 M JIC	4				
6	6-6-070801	FIT-BH 45 EL #6 MJIC/#6 MJIC	8				
7	6-8-070120	FIT-STR -8 M ORB/-6 M JIC	2				
8	4135655	VALVE-PILOT OPERATED	1				
9	6-6-6-070429	FIT-TEE 6 M ORB X 6 JIC	1				
10	8-6-070220	FIT-90 -8 M ORB X -6 M JIC	1				
11	4131860	CYLINDER-.75 DIA/10.5 STRK	1				
12	4160718	CYLINDER-2.0 BORE, 1.0 ROD	1				
	KH70115	SEAL KIT	1				
13	2692301-05	HOSE-#6 JIC/JIC X 63.50	1				
14	2692301-03	HOSE-#6 JIC/JIC X 78.00	1				
15	2692301-04	HOSE-#6 JIC/JIC X 80.00	6				
16	2692301-09	HOSE-#6 JIC/JIC X 26.00	1				
17	2692304-02	HOSE-#6 JIC/90S JIC X 92.00	1				
18	2692304-01	HOSE-#6 JIC/90L JIC X 93.50	1				
19	2692304-06	HOSE-#6 JIC/90S JIC X 36.50	1				
20	2692301-02	HOSE-#6 JIC/JIC X 60.00	1				
21	2692301-01	HOSE-#6 JIC/JIC X 53.50	1				
22	KH20185	VALVE CARTIDGE	2				
	KH20184	VALVE BODY	2				
23	6-6-070181	NO.6 TO NO.6 SWIVEL	2				

NOTE

HOSE KIT. PROPORTIONAL VALVE
STACK - 4160061.

NOTE

COUNTER BALANCE VALVE KIT FOR
THE TURN CYLINDER.

4160786 CONTAINS:

KH20184	- VALVE CARTRIDGE	QTY.2
KH20185	- VALVE BODY	QTY.2
6-6-070181	- NO. 6 SWIVEL ELBOW	QTY.2
6-6-070220	- NO. 6 SAE ELBOW	QTY.2
4-070109	- NO. 4 PLUG	QTY.2

FIGURE 38

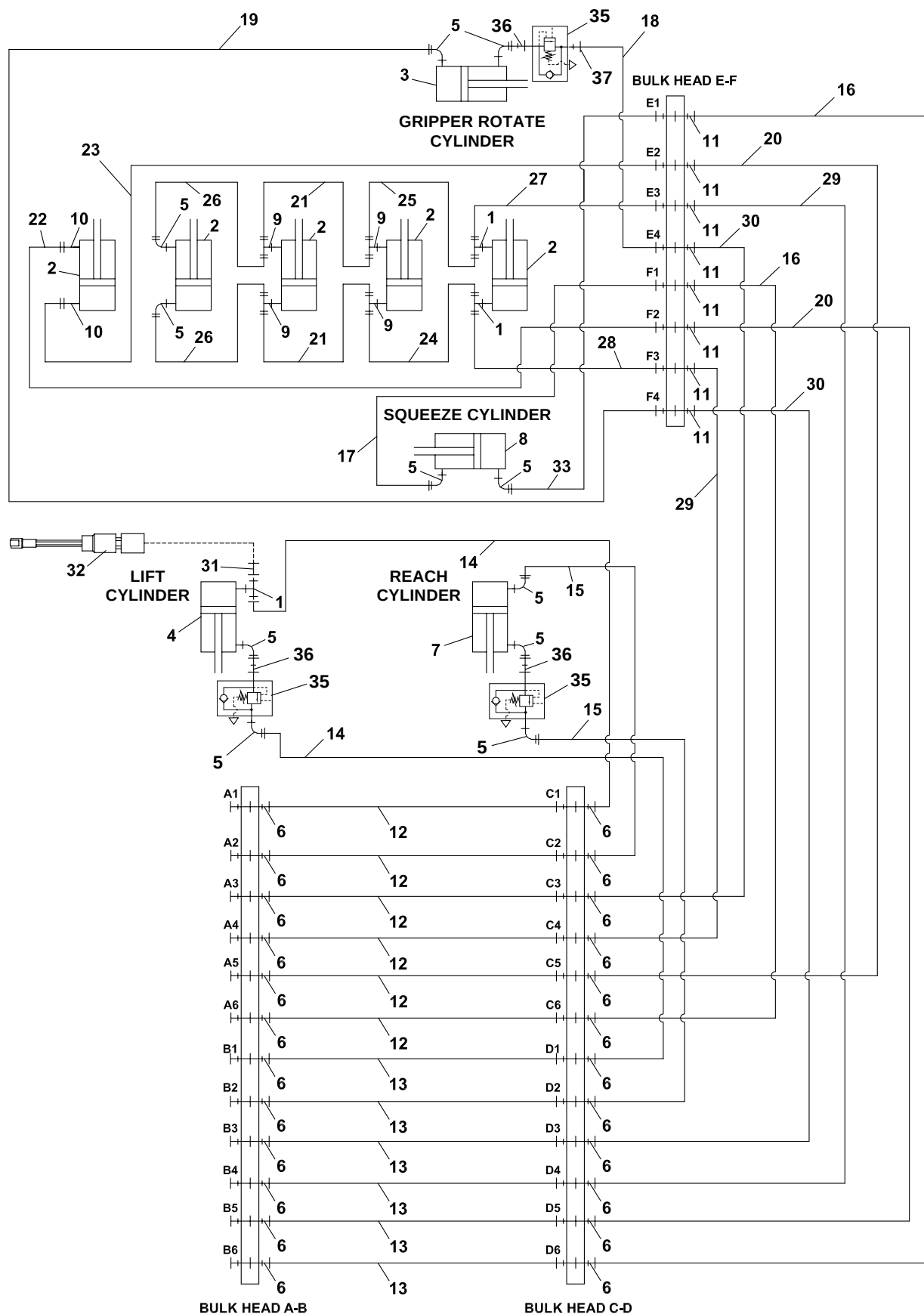


FIGURE 38

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	6-6-6-070429	FIT-RUN TEE -6 M ORB (X1)	3				
2	4128723	CYLINDER-FACE MOUNT	4				
3	4132971	CYLINDER-1.5 BORE, 1.0 RD	1				
4	4160719	CYLINDER-2.5 BORE, 1.25 RD	1				
	KH70116	CYLINDER-2.5 BORE, 1.25 RD	1				
5	6-6-070220	FIT-90 -6 M ORB X -6 M JIC	11				
6	6-6-070801	FIT-BH 45 EL #6 MJIC/#6 MJIC	24				
7	4160720	CYLINDER- 2 BORE, 1 ROD	1				
	KH70115	CYLINDER- 2 BORE, 1 ROD	1				
8	4128874	CYLINDER-HYDRAULIC	1				
9	6-6-6-070428	FITTING,TEE 6 M ORB X 6	2				
10	6-6-070120	FIT-STR -6 M ORB/-6 M JIC	6				
11	6-6-070701	FIT-BH 90 EL #6 MJIC/#6 MJIC	8				
12	2692304-06	HOSE-#6 JIC/90S JIC X 36.50	6				
13	2692304-05	HOSE-#6 JIC/90L JIC X 29.50	6				
14	2692301-11	HOSE-#6 JIC/JIC X 40	2				
15	2692301-12	HOSE-#6 JIC/JIC X 53	2				
16	2692301-10	HOSE-#6 JIC/JIC X 85	2				
17	2692307-05	HOSE-#6 90JIC/90JIC X 54	1				
18	2692304-09	HOSE-#6 JIC/90L JIC X 55	1				
19	2692304-08	HOSE-#6 JIC/90S JIC X 46.5	1				
20	2692308-02	HOSE-#6 JIC/45 JIC X 88	2				
21	2692304-11	HOSE-#6 JIC/90S JIC X 19	2				
22	2692307-01	HOSE-#6 90L JIC/90S JICX54	1				
23	2692307-02	HOSE-#6 90L JIC/90LJICX55.5	1				
24	2692307-03	HOSE-#6 90S JIC/90S JICX19	1				
25	2692304-12	HOSE-#6 JIC/90S JICX20.00	1				
26	2692304-13	HOSE-#6 JIC/90S JICX18.00	2				
27	2692307-04	HOSE-#6 90L JIC/90LJICX45.5	1				
28	2692304-14	HOSE-#6 JIC/90S JICX40.50	1				
29	2692304-15	HOSE-#6 JIC/90S JICX87.00	2				
30	2692304-16	HOSE-#6 JIC/90L JICX92.00	2				
31	25-6402-6-6	FTG-6M O-RING	1				
32	4134283	SWITCH-ADJ PRESSURE	1				
33	2692335-01	HOSE-#6 90JIC/45JIC X 51	1				
34	4160312	CYLINDER - 4 PORT	1				
35	KH20184	VALVE CARTRIDGE	3				
	KH20185	VALVE BODY	3				
36	6-6-070181	NO.6 TO NO.6 SWIVEL	3				
37	6-6-070220	NO.6 TO NO.6 SAE 'O' RING	1				

NOTE

HOSE KIT. ROBOTIC ARM/GRIPPER
HEAD - 4160062.

NOTE

COUNTER BALANCE VALVE KIT FOR
LIFT AND REACH CYLINDER.
4160786 CONTAINS:
KH20184 - VALVE CARTRIDGE
KH20185 - VALVE BODY
6-6-070181 - NO. 6 SWIVEL ELBOW
6-6-070220 - NO. 6 SAE ELBOW
4-070109 - NO. 4 PLUG

NOTE

COUNTER BALANCE VALVE KIT FOR
GRIPPER TURN CYLINDER.
4160787 CONTAINS:
KH20184 - VALVE CARTRIDGE
KH20185 - VALVE BODY
6-6-070181 - NO. 6 SWIVEL ELBOW
6-6-070120 - NO. 6 SAE 'O' RING
4-070109 - NO. 4 PLUG

[illegible]

FIGURE 39

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	25-063T-6-6	NUT, RUN TEE SWIVEL	2				
2	25-2503-6-8	FIT-90 -6 M ORB X -8 M JIC	3				
3	25-2503-6-6	FIT-90 -6 M ORB X -6 M JIC	2				
4	25-0503-6-6	FIT-STR -6 M ORB/-6 M JIC	4				
		(USED ON 4-WHEEL DRIVE ONLY)					
	25-3503-6-6	FITTING-45	2				
		(USED ON 2-WHEEL DRIVE ONLY)					
5	H6189	FIT-90 DEG 1/8"NPTx3/8"	2				
6	23-199	CYLINDER, AUTOSTEER	1				
7	25-05CP-8	FIT-PLUG -8 M ORB	1				
8	4134547	MANIFOLD-AUTOSTEER	1				
9	25-053T-8-8	FIT-RUN TEE -8 M ORB (X1)	1				
10	25-063T-10-10	FITTING-TEE	1				
11	25-053T-6-6	FITTING-RUN TEE	1				
12	25-3903-6-6	FITTING-90	2				
13	H500208	CYLINDER-CONVEYOR LIFT	1				
		(SEE PG. 8, FIG. 2 FOR LIFT CYLINDER ASSY.)					
14	23-178	CYLINDER, HYD. 3 X 8	1				
15	2690044	FIT-.030 ORIFICE #6 ORB/#8	2				
16	2690038-02	FIT-BH 90 EL #8 MJIC/#8 MJIC	2				
17	25-0353-8-8	FIT-STR BULKHEAD -8 MJIC	2				
18	2692305-01	HOSE-#8 JIC/90S JIC X 104	2				
19	2692305-02	HOSE-#8 JIC/90S JIC X 35.50	1				
20	2692302-01	HOSE-#8 JIC/JIC X 49.00	1				
21	2692309-01	HOSE-#8 JIC/#8 BANJOx56.5	4				
		(ITEM 21 INSTALLED BY TRACTOR SUPPLIER)					
22	2692326-01	HOSE-#10 JIC/#8 JIC X 62.00	1				
23	2692327-01	HOSE-#10 JIC/#6 JIC X 80.00	1				
24	2692325-01	HOSE-#6 JIC/#10 X 72.00	1				
25	2692301-15	HOSE-#6 JIC/JIC X 66.00	2				
		(USED ON 4-WHEEL DRIVE ONLY)					
	2692301-01	HOSE-#6 JIC/JIC X 53.50	2				
		(USED ON 2-WHEEL DRIVE ONLY)					
26	2692304-19	HOSE-#6 JIC/90L JIC X 38.00	1				
27	2692304-22	HOSE-#6 JIC/90S JIC X 43.00	1				
		(USED ON 4-WHEEL DRIVE ONLY)					
	2692304-08	HOSE-#6 JIC/90S JIC X 46.50	1				
		(USED ON 2-WHEEL DRIVE ONLY)					
28	2692308-03	HOSE-#6 JIC/45 JIC X 31.00	1				
29	2692323-01	HOSE-#8 90 JIC/#6 JIC X 45.00	1				
30	H4085	STEERING MANIFOLD	1				
31	KH20169	LOCK VALVE	1				
32	8-8-0070220	FITTING	4				

NOTE

HOSE KIT. AUTO-STEER/CONVEYOR
LIFT - 4160063.

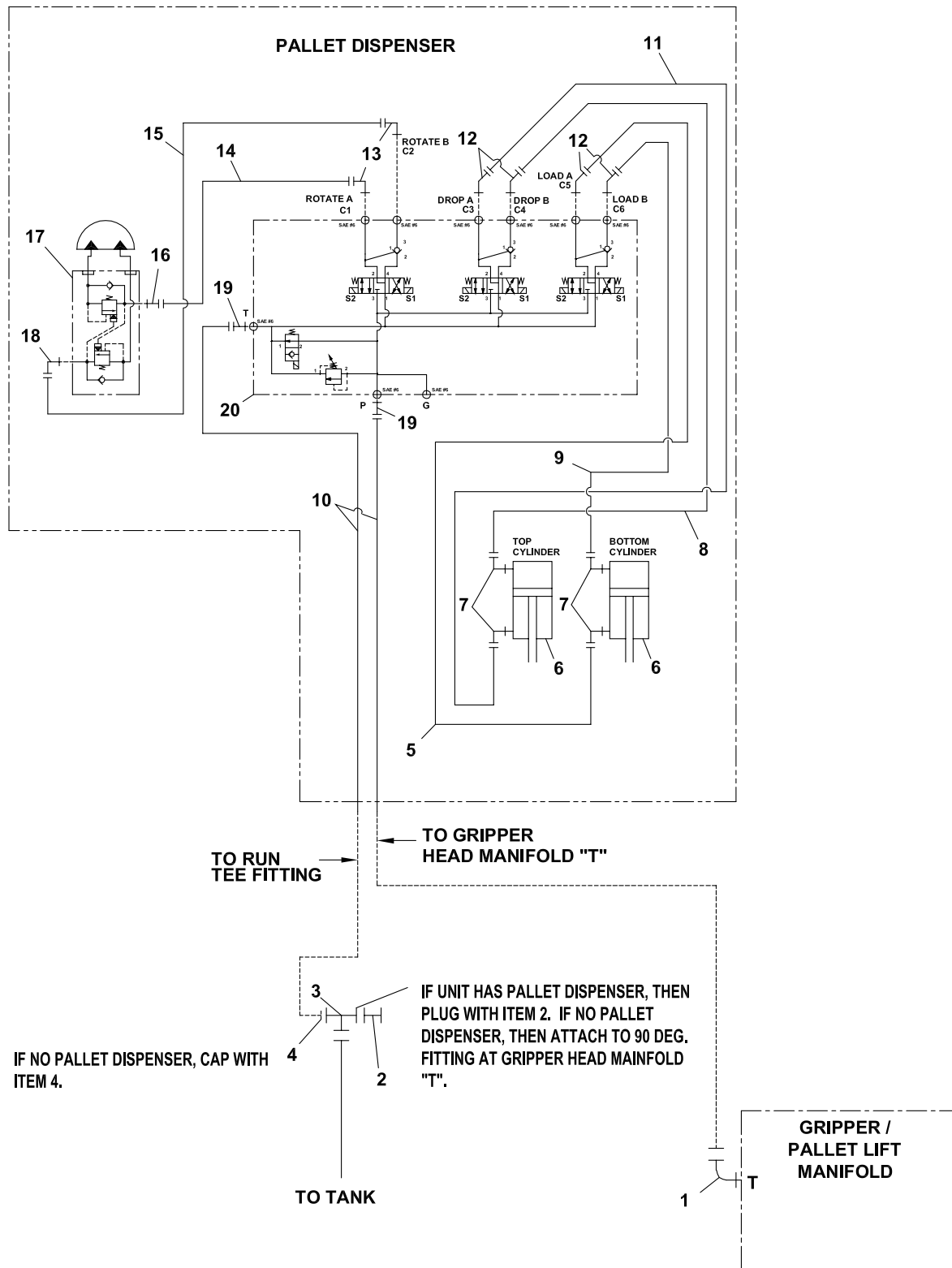


FIGURE 40

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	6-8-070220	FITTING-90	1	NOTE HOSE KIT. PALLET DISPENSER - 4160064.			
2	08-070109	FITTING-PLUG	1				
3	8-8-8-070401	FITTING-TEE	1				
4	8070112	CAP	1				
5	2692301-18	HOSE - #6 JIC/JIC X 55.00	1				
6	4134118	CYLINDER-5IN STROKE	2				
7	6-6-070220	FITTING-90	2				
8	2692301-11	HOSE - #6 JIC/JIC X 40.00	3				
9	2692301-12	HOSE - #6 JIC/JIC X 53.00	1				
10	2692322-01	HOSE-#8 JIC/#6 JIC X 81.00	2				
11	2692301-08	HOSE - #6 JIC/JIC X 35.00	1				
12	6-6-070320	FITTING-45	4				
13	2690048	FTG-.030 ORIFICE	2				
14	2692301-02	HOSE-#6 JIC/JIC X 60.00	1				
15	2692304-21	HOSE-#6 JIC/90S JIC X 57.00	1				
16	4-6-070120	FITTING-STR	1				
17	4133657	ACTUATOR-ROTARY HYD	1				
18	4-6-070220	FITTING-90	1				
19	6-6-070120	FITTING-STR	2				
20	4136313	MANIFOLD-PLT DIPENSER	1				

FIGURE 41

MANIFOLD - GRIPPER / PALLET LIFT				
ITEM	QTY	DESCRIPTION	PART #	SEAL KIT #
SV3 - SV5	3	#10 SOLENOID, SPOOL, 4W3P	4138894-01	4138894-03
SV3 - SV5	6	#10 COIL, 12VDC, INTEGRAL DEUTSCH	4138894-02	-----
SV1	1	#08 SOLENOID, POPPET, 2W, N.C.	4134062-04	4134062-05
SV2	1	#10 SOLENOID, SPOOL, 4W3P, CLOSED CENTER	4134062-01	4134062-03
SV1	1	#10 COIL, 12VDC, INTEGRAL DEUTSCH	4134062-11	-----
PC	1	#10 CHECK, PILOT - TO - OPEN	4134062-08	4134062-09
RV	1	#08 RELIEF, DIFF, AREA POPPET 1500 PSI	4134062-10	4134062-05
PR	1	#10 PRESSURE RED / RELIEVING PILOT OPERATED	4134062-06	4134062-07
SV2	2	#10 COIL, 12VDC DEUTSCH LEAD	4134062-02	-----

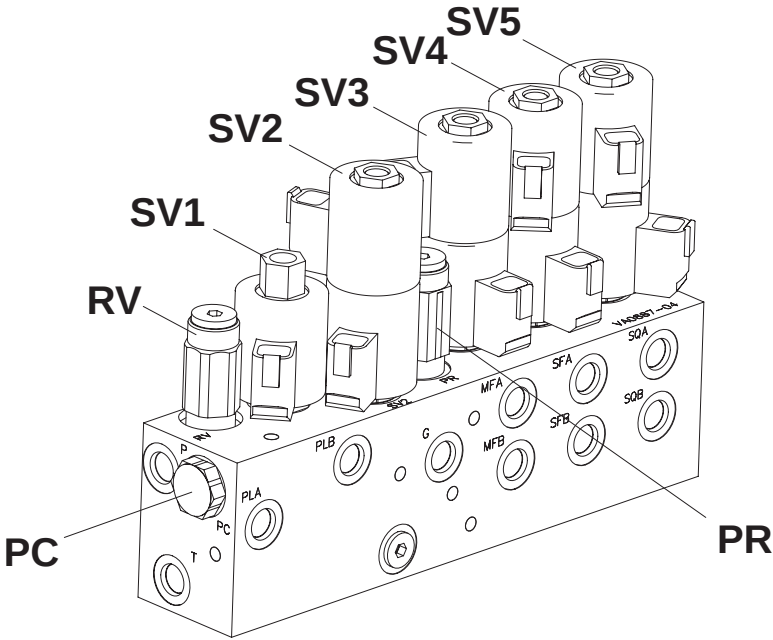


FIGURE 42

MANIFOLD - PALLET DISPENSER				
ITEM	QTY	DESCRIPTION	PART #	SEAL KIT #
SV2 - SV4	3	#10 SOLENOID, SPOOL, 4W3P	4138894-01	4138894-03
SV2 - SV4	6	#10 COIL, 12VDC, INTEGRAL DEUTSCH	4138894-02	-----
SV1	1	#10 COIL, 10VDC, INTEGRAL DEUTSCH	4138894-06	-----
PC1	3	#10 CHECK, PILOT - TO - OPEN	4138894-07	4138894-13
SV1	1	#10 SOLENOID, POPPET, 2W, N.O.	4138894-04	4138894-11
RV1	1	#08 RELIEF, DIFFERENTIAL AREA POPPET	4138894-10	4138894-14

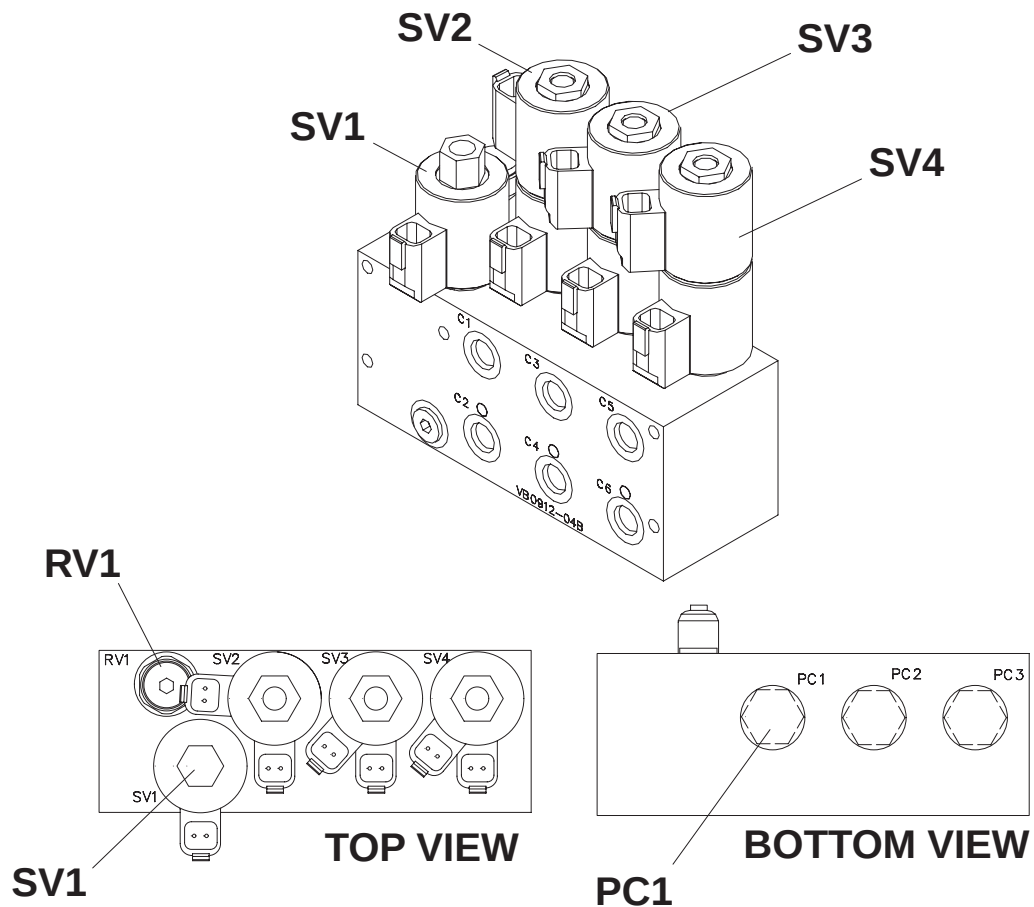
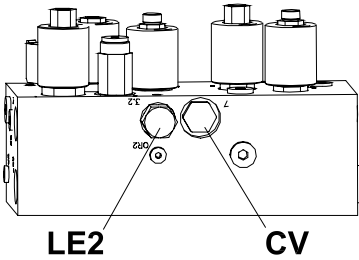
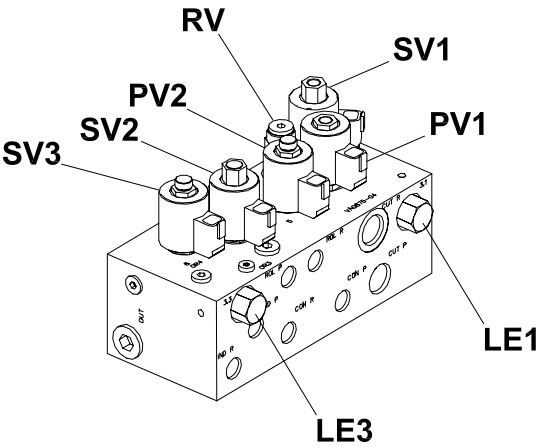




FIGURE 43

MANIFOLD - MAIN CONVEYOR				
ITEM	QTY	DESCRIPTION	PART #	SEAL KIT #
SV1	1	#12 SOLENOID, N.O. POPPET	4132956-01	4132956-02
RV	1	#10 RELIEF, DIFF.AREA 3000PSI	4132956-03	4138894-11
LE1 - LE3	3	#10 PILOTED LOGIC ELEMENT 110PSI	4132956-04	4132956-05
PV1	1	#12 PROPORTIONAL, N.C. POPPET	4132956-06	4132956-02
PV2	1	#10 PROPORTIONAL, N.C. POPPET	4132956-07	4138894-11
SV2	1	#10 SOLENOID, N.O. POPPET	4138894-04	4138894-11
SV3	1	#10 SOLENOID, N.C. POPPET	4132956-09	4138894-11
CV	1	#10 CHECK VALVE	4132956-08	4138894-11
OD	1	#10 - 2HD ORIFICE DISK 0.155 DIA.	4132956-10	-----
SV1 - SV3 PV1 - PV2	5	#10 COIL, 12VDC INTEGRAL DEUTSCH	4138894-06	-----



BACK VIEW

FIGURE 44

MANIFOLD - AUTOSTEER				
ITEM	QTY	DESCRIPTION	PART #	SEAL KIT #
RV1	1	#10 RELIEF, DIFF AREA POPPET	4134547-01	4138894-11
RV2	1	#10 RELIEF, DIRECT-ACTING POPPET	4134547-02	4134547-06
CV1	1	#10 CHECK, PILOT-TO-OPEN	4138894-07	4138894-13
CV2	1	#10 CHECK VALVE	4134547-03	4134547-06
SV	1	#10 SOLENOID, SPOOL, 4-WAY, 2-POS.	4134547-04	4138894-12
SV	1	#10 E-COIL, 12VDC DEUTSCH	4134547-05	-----

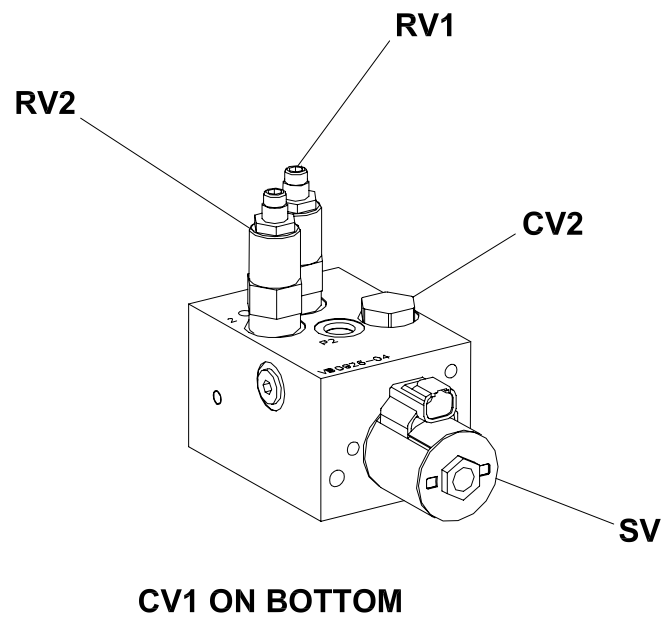
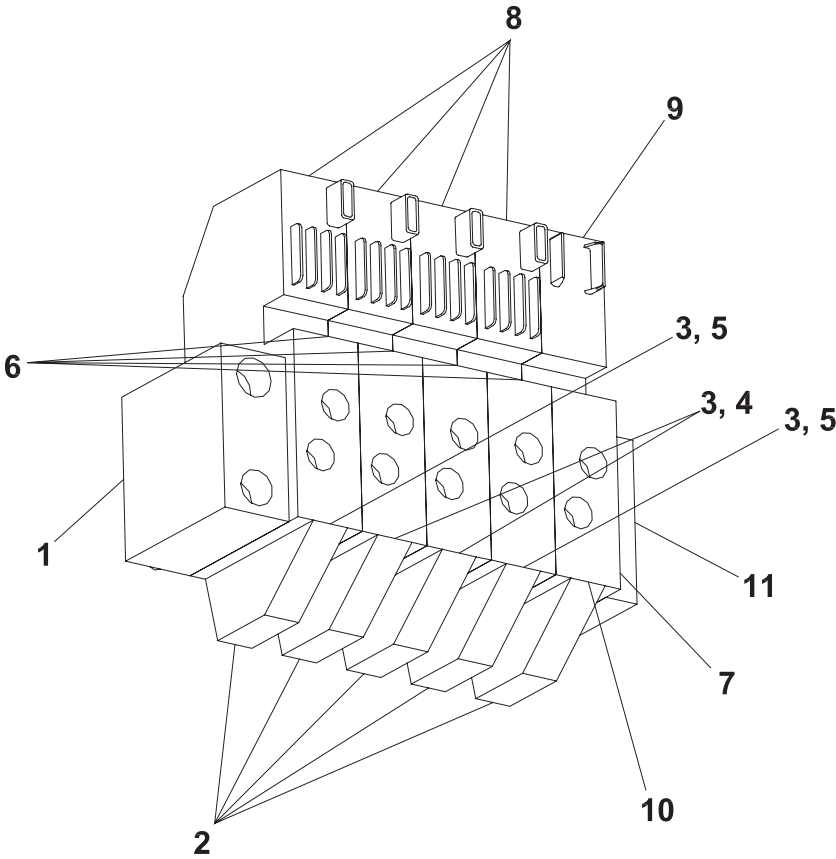




FIGURE 45

MANIFOLD - STACKING ARM - 4142690				
ITEM	QTY	DESCRIPTION	PART #	SEAL KIT #
1	1	PUMP SIDE MODULE	4142690-05	4132690-09
2	5	HANDLE ASSEMBLY W/ ACUTATOR	4142690-10	4132690-13
3	8	VALVE, SHOCK/ANTI-CAVITATION	4142690-11	-----
4	2	VALVE SPOOL 2.6GPM	4142690-02	-----
5	2	VALVE SPOOL 6.6 GPM	4142690-14	-----
6	4	BASIC VALVE MODULE	4142690-04	4132690-09
7	1	BASIC VALVE MODULE	4142690-03	4132690-09
8	4	PVEA MODULE	4142690-07	4132690-12
9	1	ON/OFF ACTUATOR MODULE	4142690-06	4132690-12
10	1	VALVE SPOOL 6.6 GPM (OPEN NEUTRAL)	4142690-01	-----
1	1	END PLATE	4142690-08	4132690-09
12	1	ASSEMBLY KIT (NOT SHOWN)	4142690-09	-----



ROBOMAX SPROCKET SELECTION CHART		
CUT-OFF-LENGTH (inches) (metric)	54" 137cm	60" 152cm
Roller Sprocket	D1404 18T	D1404 18T
Roller Bushing	For machines with 24-inch cutterhead, use 83-H20.	
Roller Key	Use 124422 for all units.	
Camshaft Sprocket	D1423 36T	D1435 50T
Camshaft Bushing	83-P116 83-P118	83-P116
Camshaft Key	Use G8019 for ALL units.	
Stop Return Cam 24"	001789	
ROLL UP SYSTEM SPROCKETS		
Roll Up Sprocket	D1114	D1114
Roll Up Bushing	83-P116	83-P116
Roll Up Key	Use G8019 for ALL units.	
Driveshaft Sprocket	D1106 16T	D1106 16T
Driveshaft Key	Use 124458 for ALL units.	

FIGURE 47

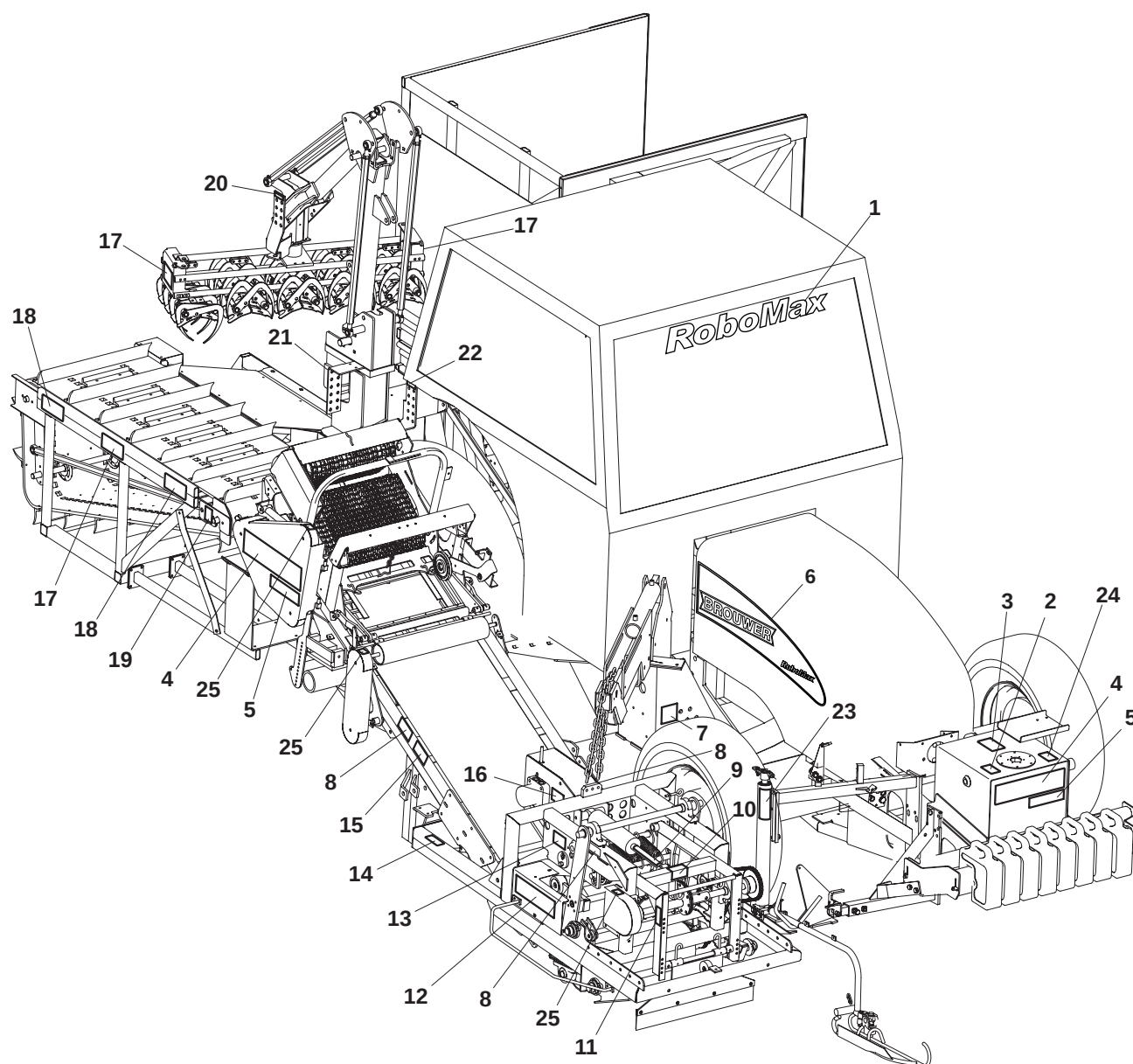


FIGURE 47

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	D001-180	LABEL-WNDSHLD, ROBOMAX	1				
2	00-074	LABEL-HYDRAULIC OIL	1				
3	006204	LABEL-CAUTION, HOT HYD	1				
4	D001-173	LABEL-BROUWER, 16 INCH	2				
5	4135178	LABEL-ROBOMAX	3				
6	D001-175	LABEL-HOOD, RH, BROUWER	1				
7	4135182	LABEL-BULKHEAD, G-H	1				
8	00-370	LABEL-WARNING	3				
9	00-267	LABEL-DEPTH INDICATOR	1				
10	009097	LABEL-WARNING CUTTING	1				
11	009432	LABEL-WARNING CAM STOP	1				
12	D001-172	LABEL-BROUWER, 12 INCH	1				
13	00-280	LABEL-GUARD IN PLACE	1				
14	00-282	LABEL-CLOSE CLEARANCE	1				
15	015900	LABEL-WARNING KEEP CLR	1				
16	00-283	LABEL-STOP ENGINE	1				
17	4135014	LABEL-WARNING, ARM	3				
18	4135016	LABEL-WARNING, ENTANGLE	2				
19	4135181	LABEL-CRUSH	1				
20	4135096	LABEL-BULKHEAD, E-F	1				
21	4135095	LABEL-BULKHEAD, C-D	1				
22	4135094	LABEL-BULKHEAD, A-B	1				
23	015777	LABEL-WARNING ACTUATOR	1				
24	2000653	LABEL-HIGH PRESS LEAK	1				
25	00-226	LABEL-LUBE OIL SYMBOL	3				

FIGURE 48

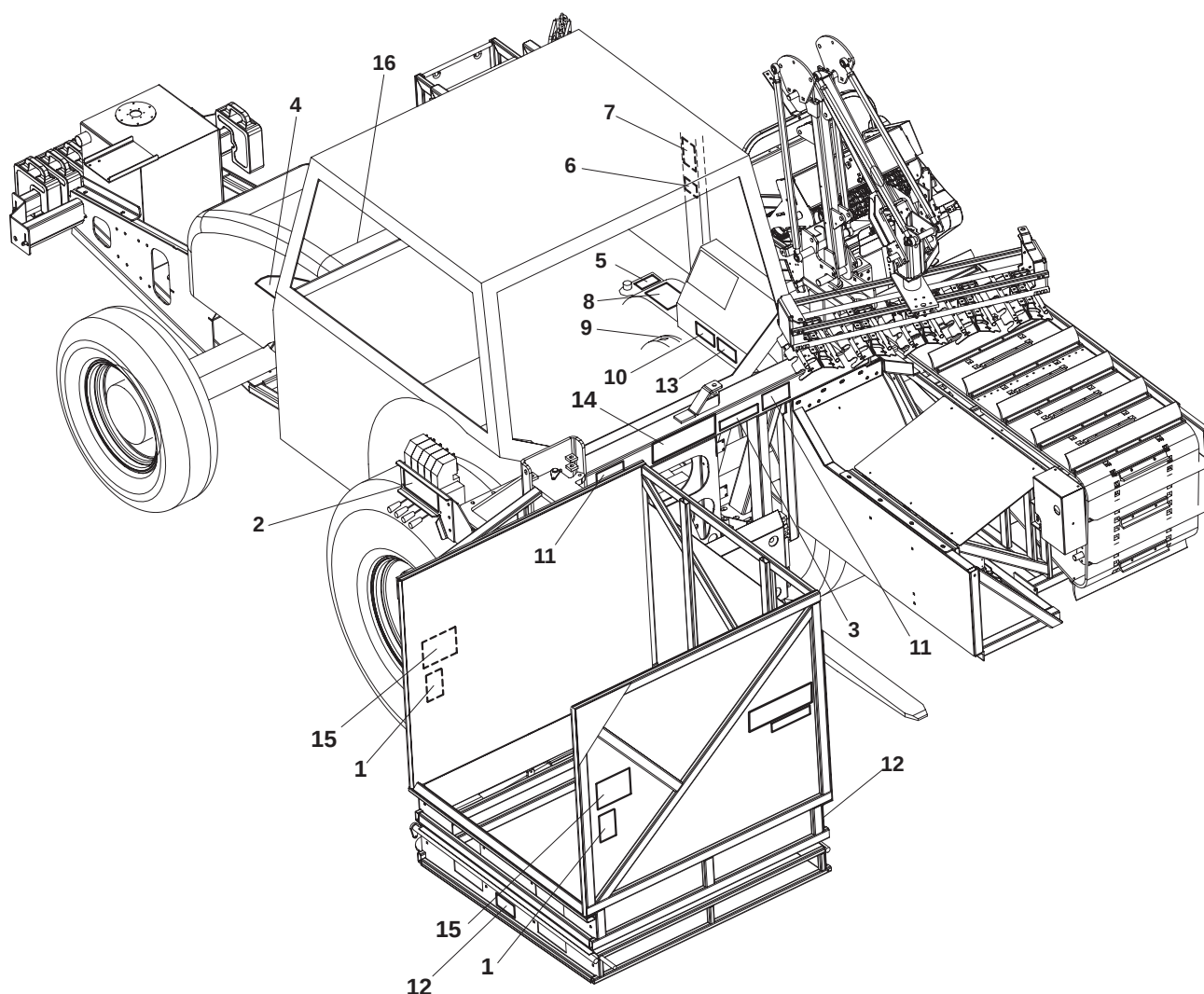


FIGURE 48

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	00-266	LABEL-WARNING NO RIDERS	2				
2	4135180	LABEL-ROBOTIC ARM	1				
3	4135178	LABEL-ROBOMAX	2				
4	D001-174	LABEL-HOOD, LH, BROUWER	1				
5	015499	LABEL-CAUTION AUTOSTEER	1				
6	00-262	LABEL-CAUTION CLUTCH	1				
7	340830	LABEL-CAUTION SPANISH	1				
8	4133093	LABEL-CAUTION HARVESTER	1				
9	4135935	LABEL-LEVERS, ROBOMAX	1				
10	202525	LABEL-CAUTION MANUAL	1				
11	4135015	LABEL-WARNING ARM	2				
12	4137371	LABEL-WARNING, CRUSH	3				
13	015899	DECAL, PATENTS	1				
14	D001-172	LABEL-BROUWER 12 INCH	2				
15	4136687	LABEL-WARNING, PLLT DISP	3				
16	D001-222	LABEL-WARNING TURN OFF	1				

FIGURE 49

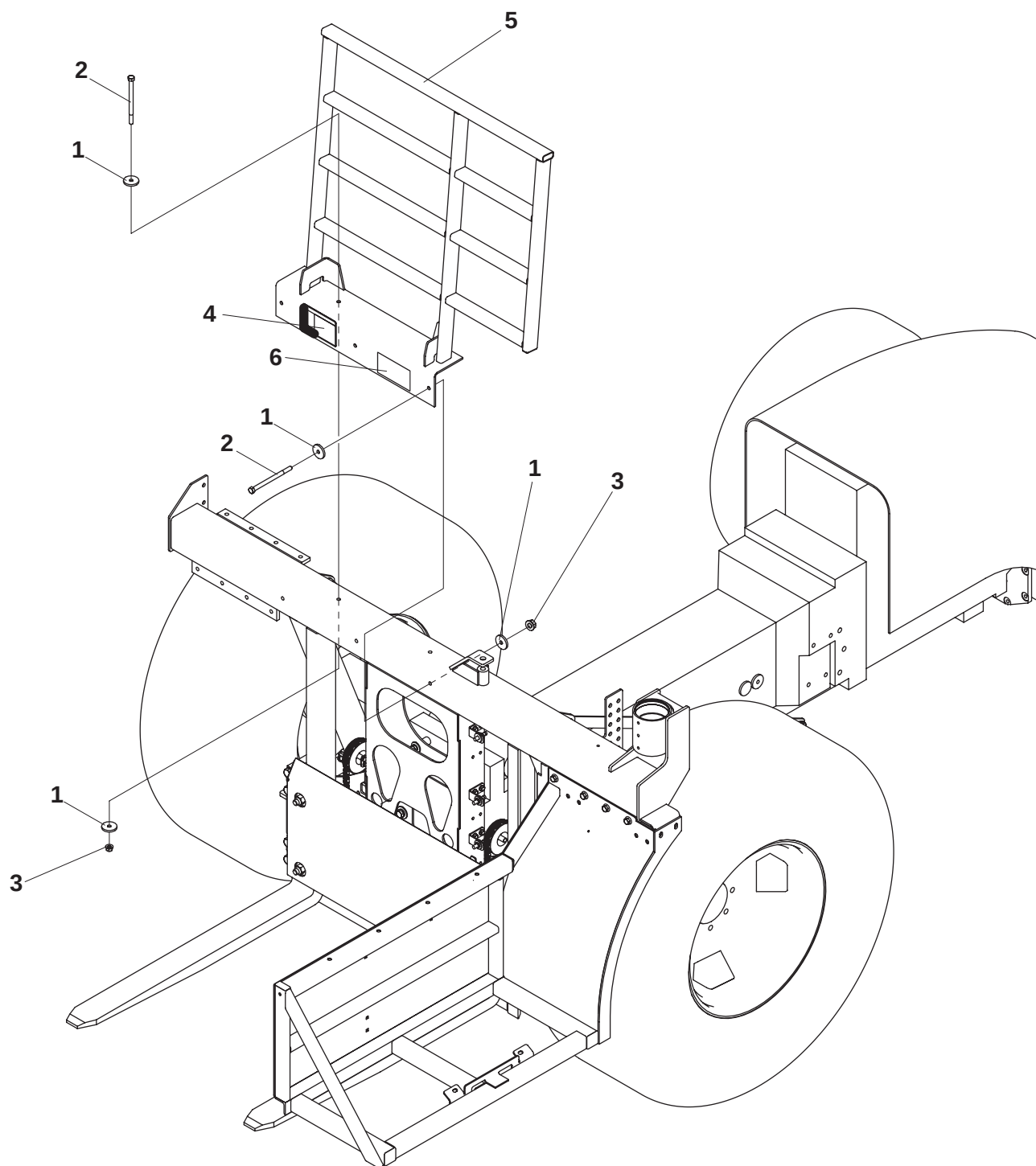


FIGURE 49

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	F330808	WASHER	10				
2	F040870	BOLT-1/2-13 X 7	5				
3	F210805	NUT-FL NYLON LOCK 1/2-13	5				
4	4135015	LABEL-WARN ROBOT ARM	1				
5	4136863	S-WLDMT WINDOW GUARD	1				
		(INCLUDES ITEM 4)					
6	D001-161	LABEL-BROUWER	1				

HOOD LATCH

RoboMax

FIGURE 50

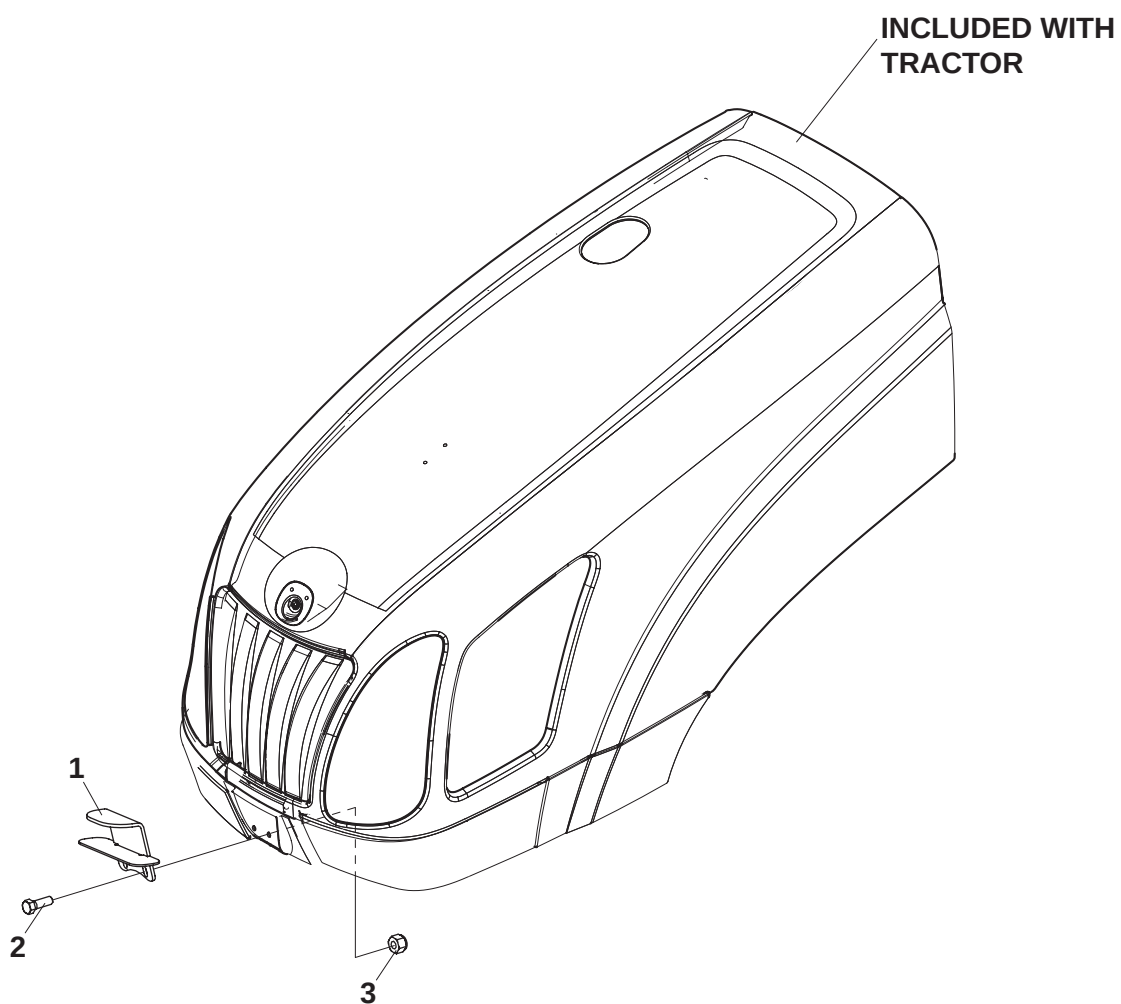


FIGURE 50

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4137411.7	WLDMT-LATCH HOOD	1				
2	99-K27	BOLT, FLANGE 1/4-20 X 1	2				
3	64229-01	LOCKNUT-1/4-20 NYLON	2				

HARNESS-MAIN WIRING

RoboMax

FIGURE 51

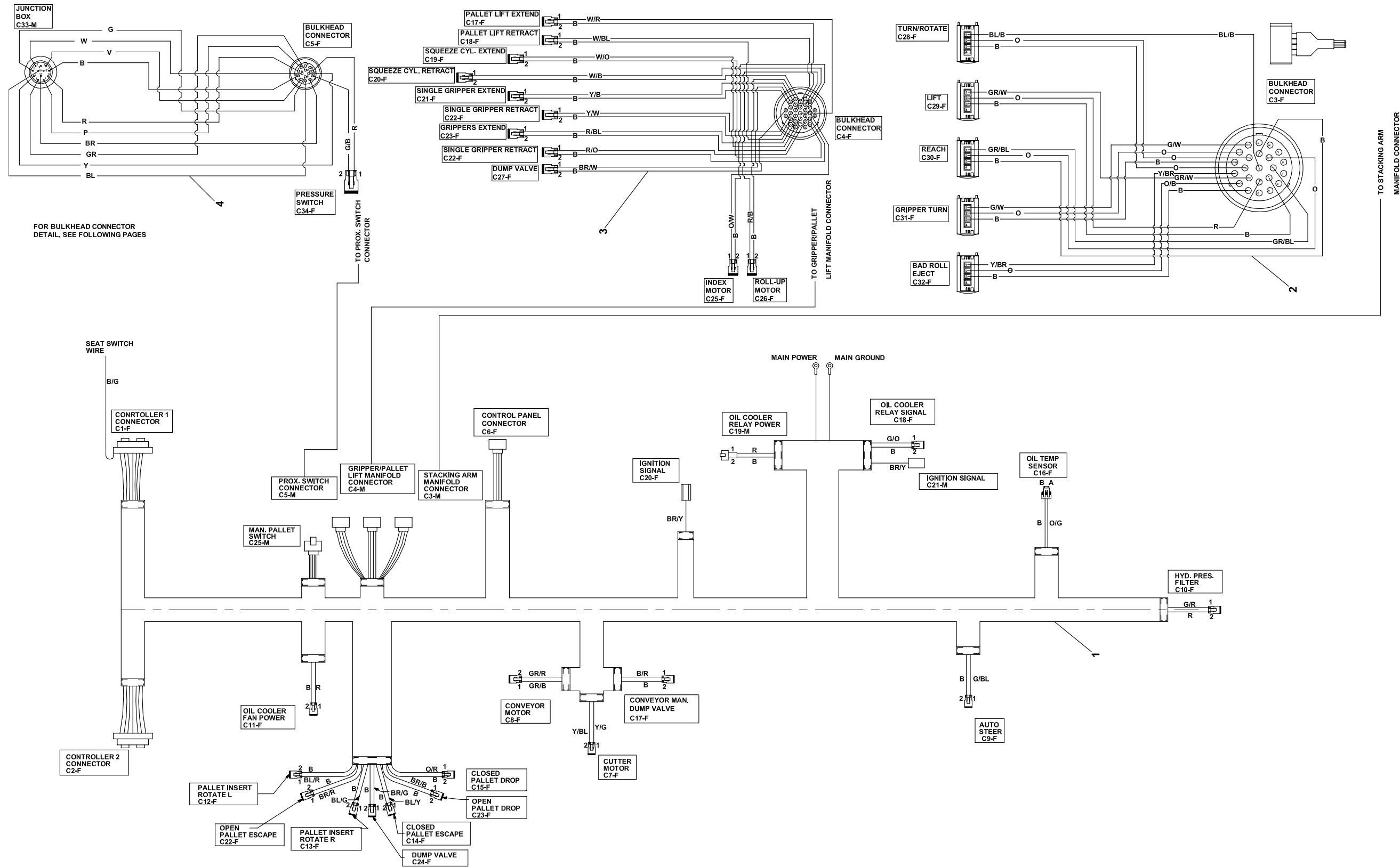


FIGURE 51

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4140033	HARNESS- MAIN	1				
2	4130614	HARNESS-VALVE STACK	1				
3	4129984	HARNESS-HIC VLV MAN	1				
4	4129895	HARNESS-JUNCTION BOX	1				

FIGURE 52

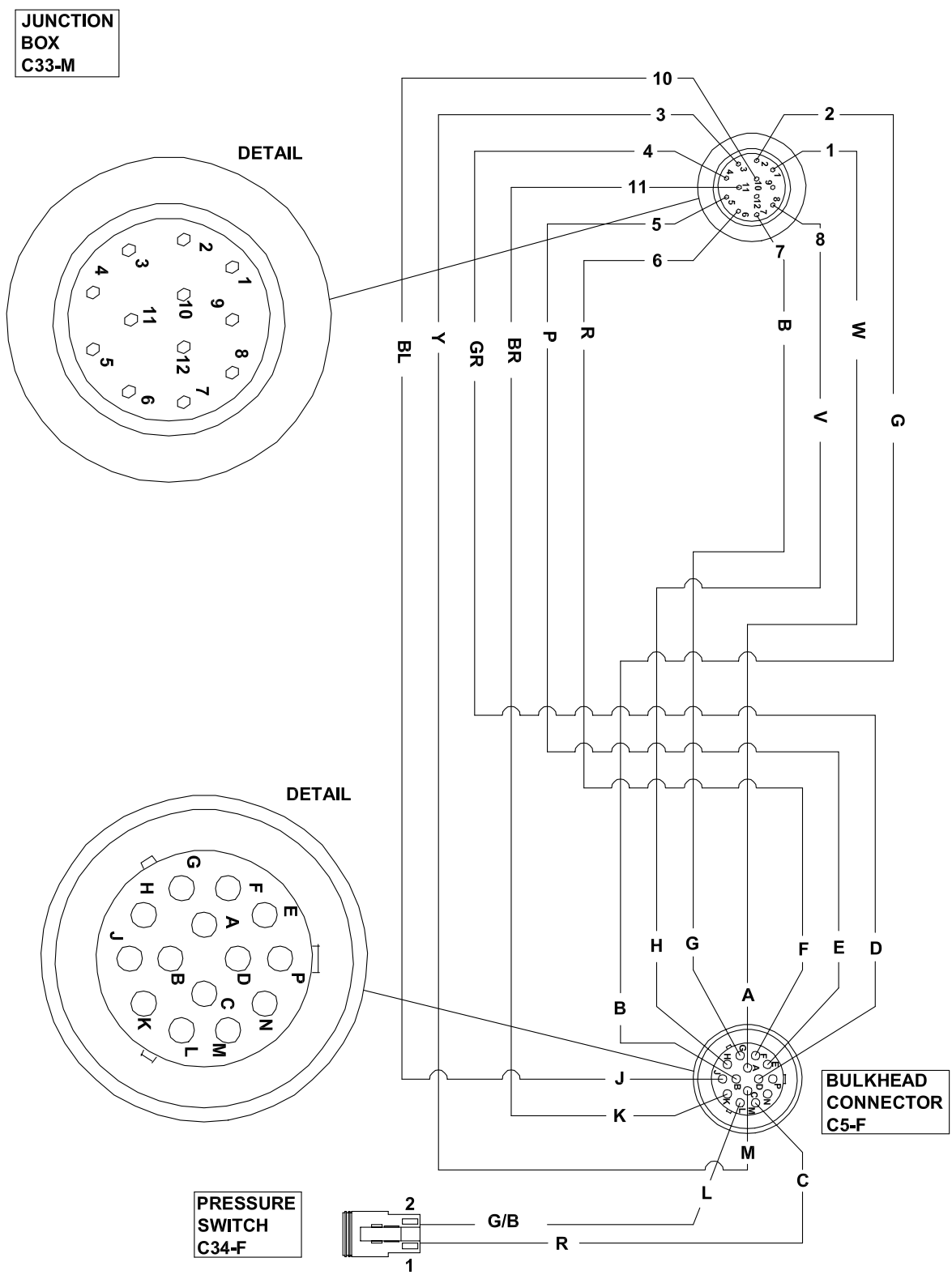


FIGURE 53

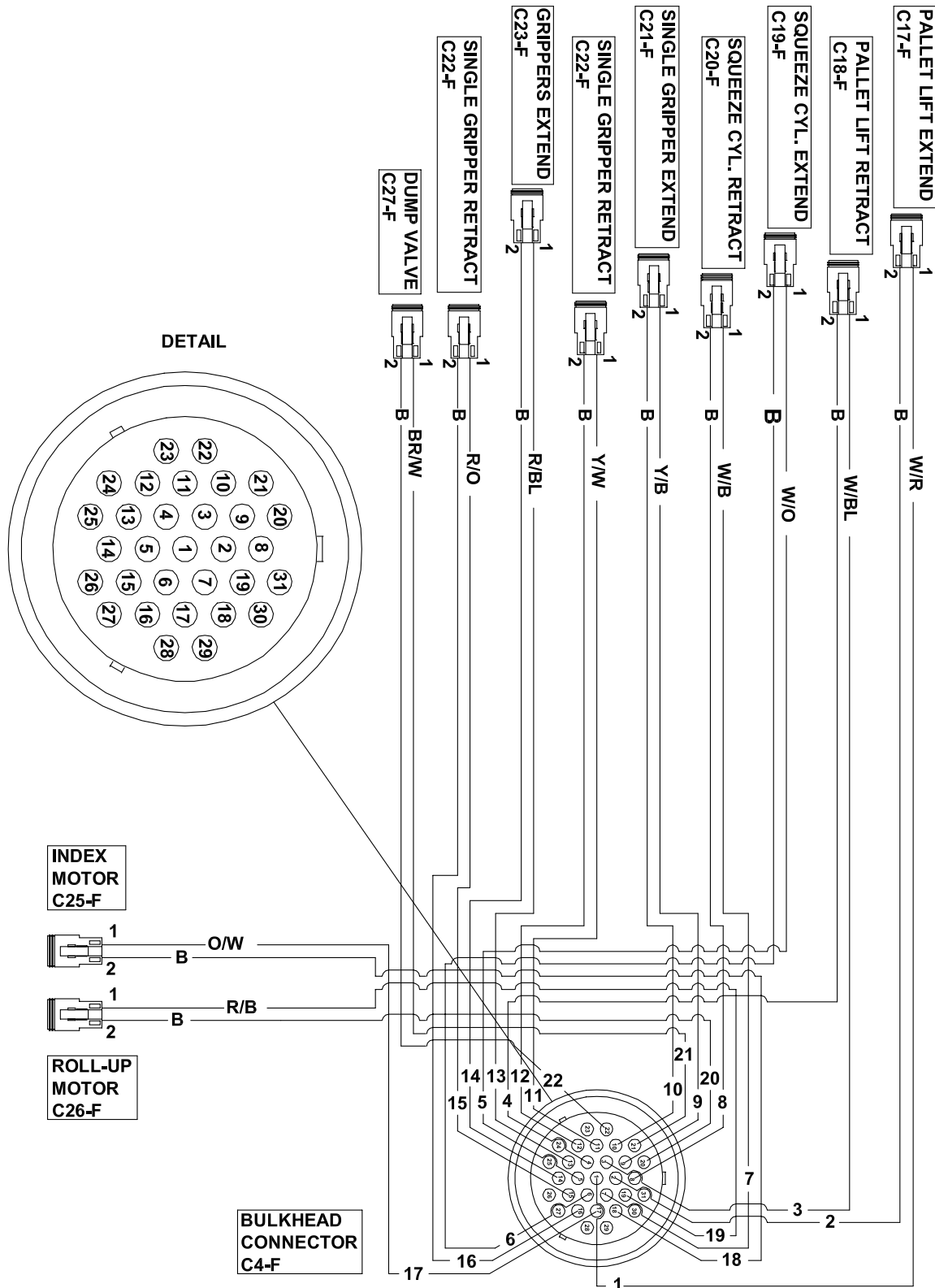


FIGURE 54

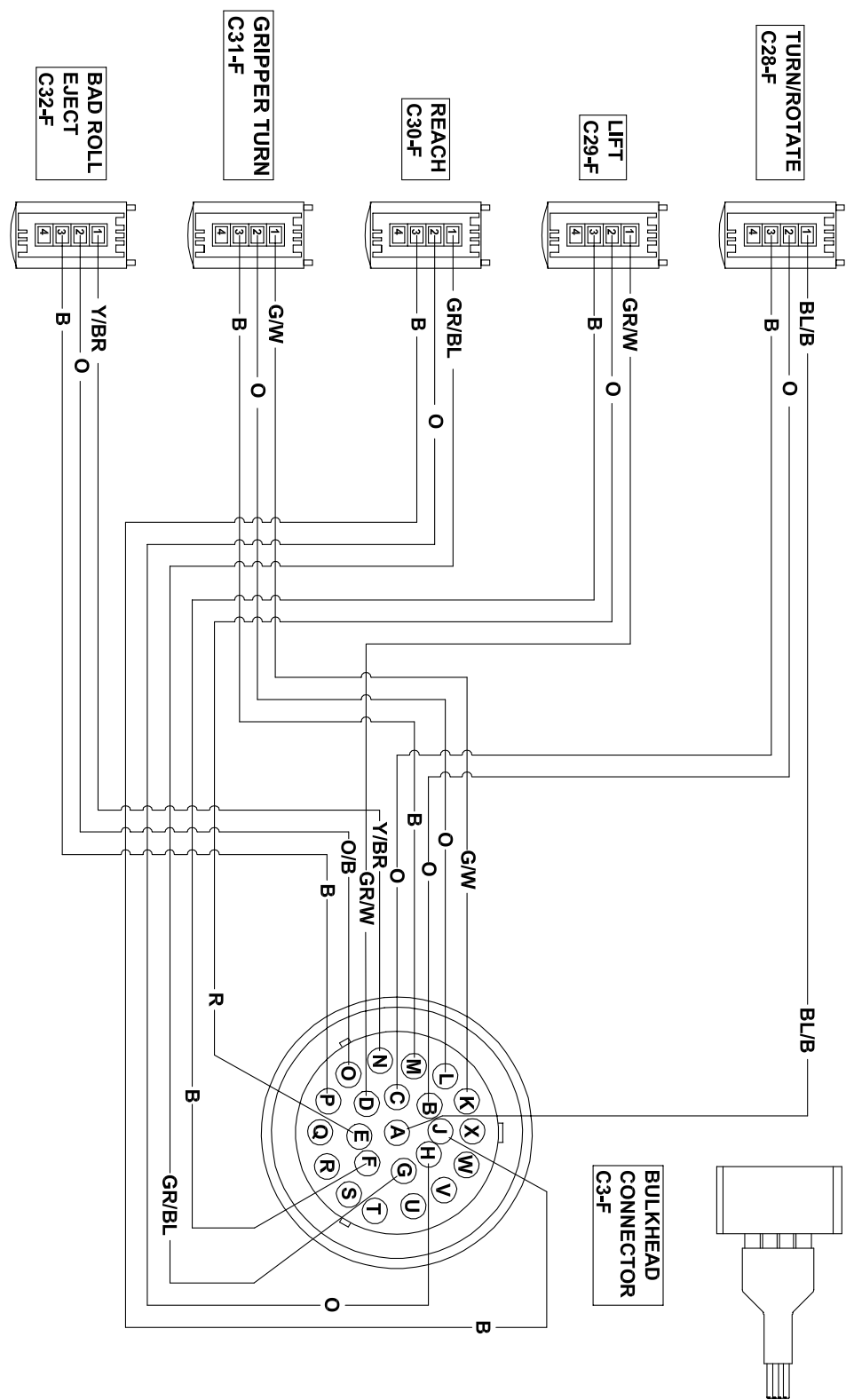


FIGURE 55

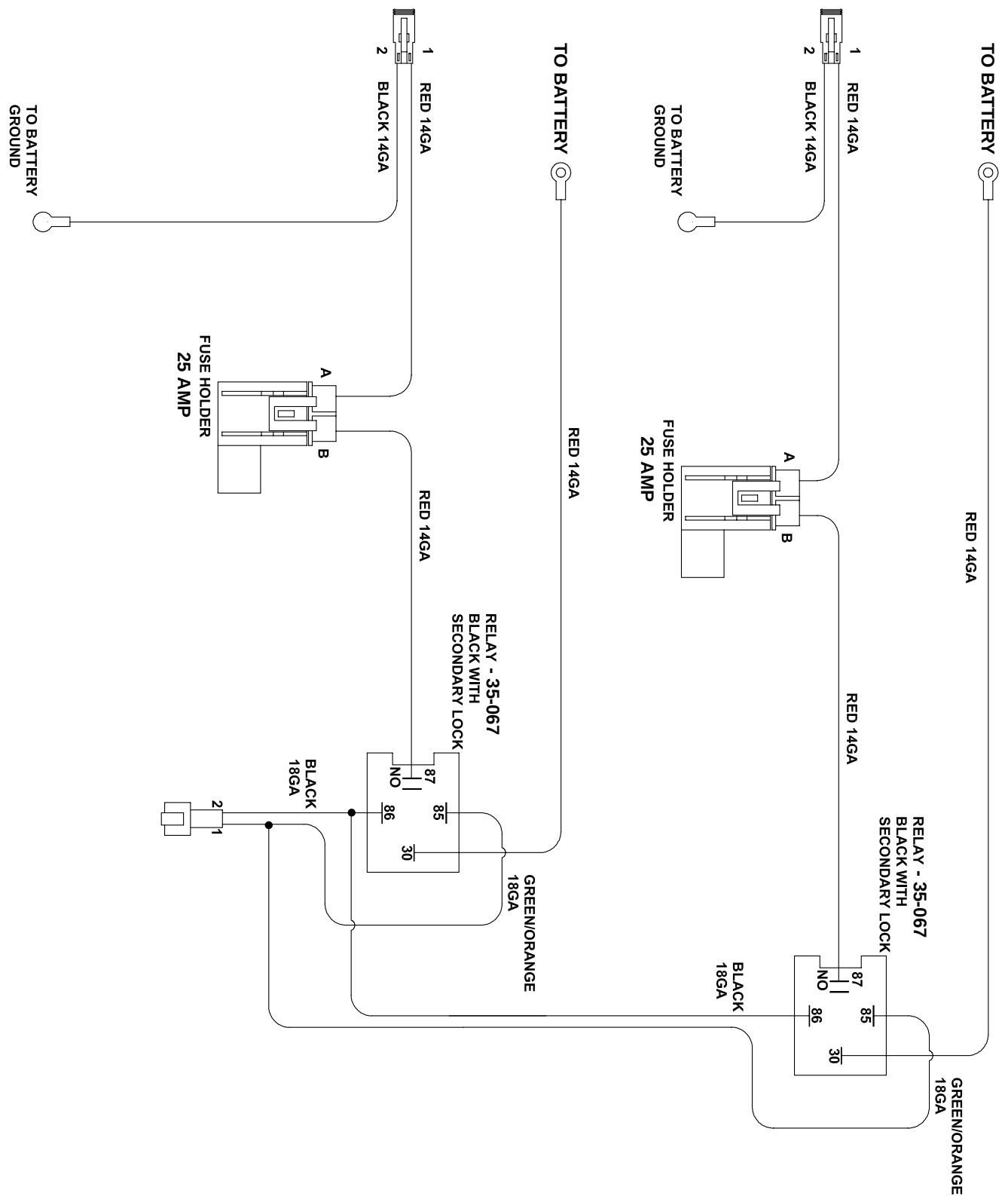


FIGURE 56

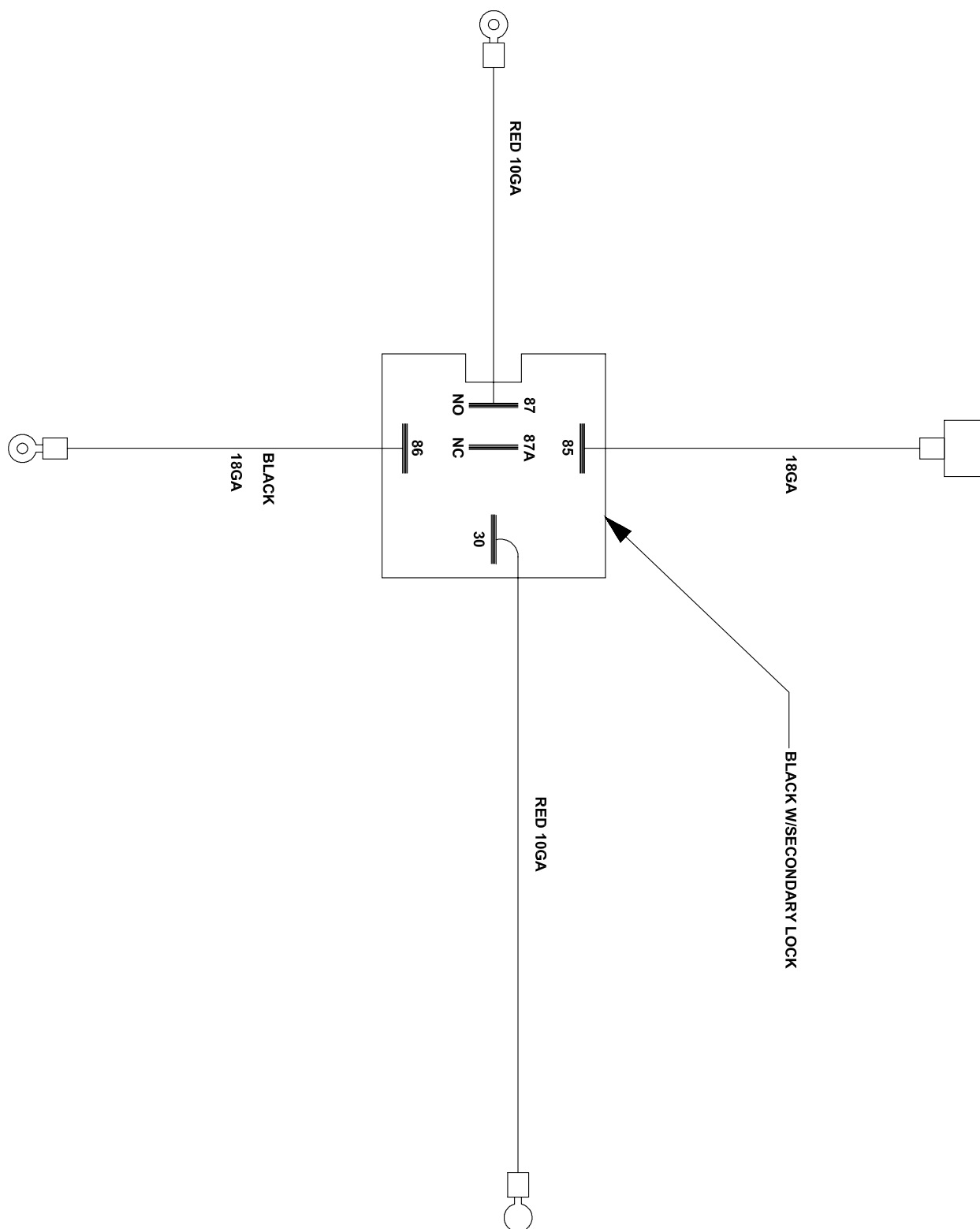


FIGURE 57

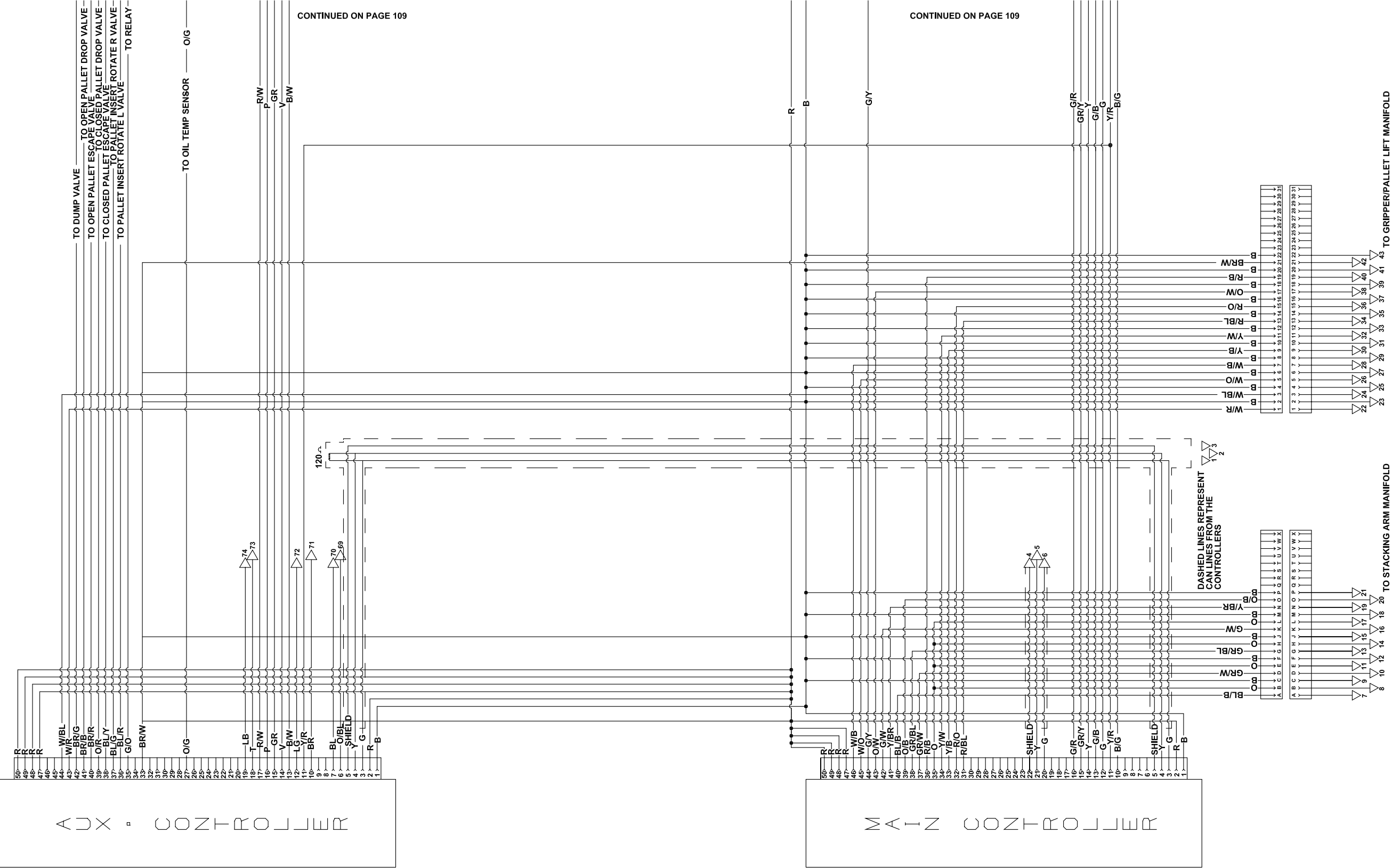


FIGURE 58

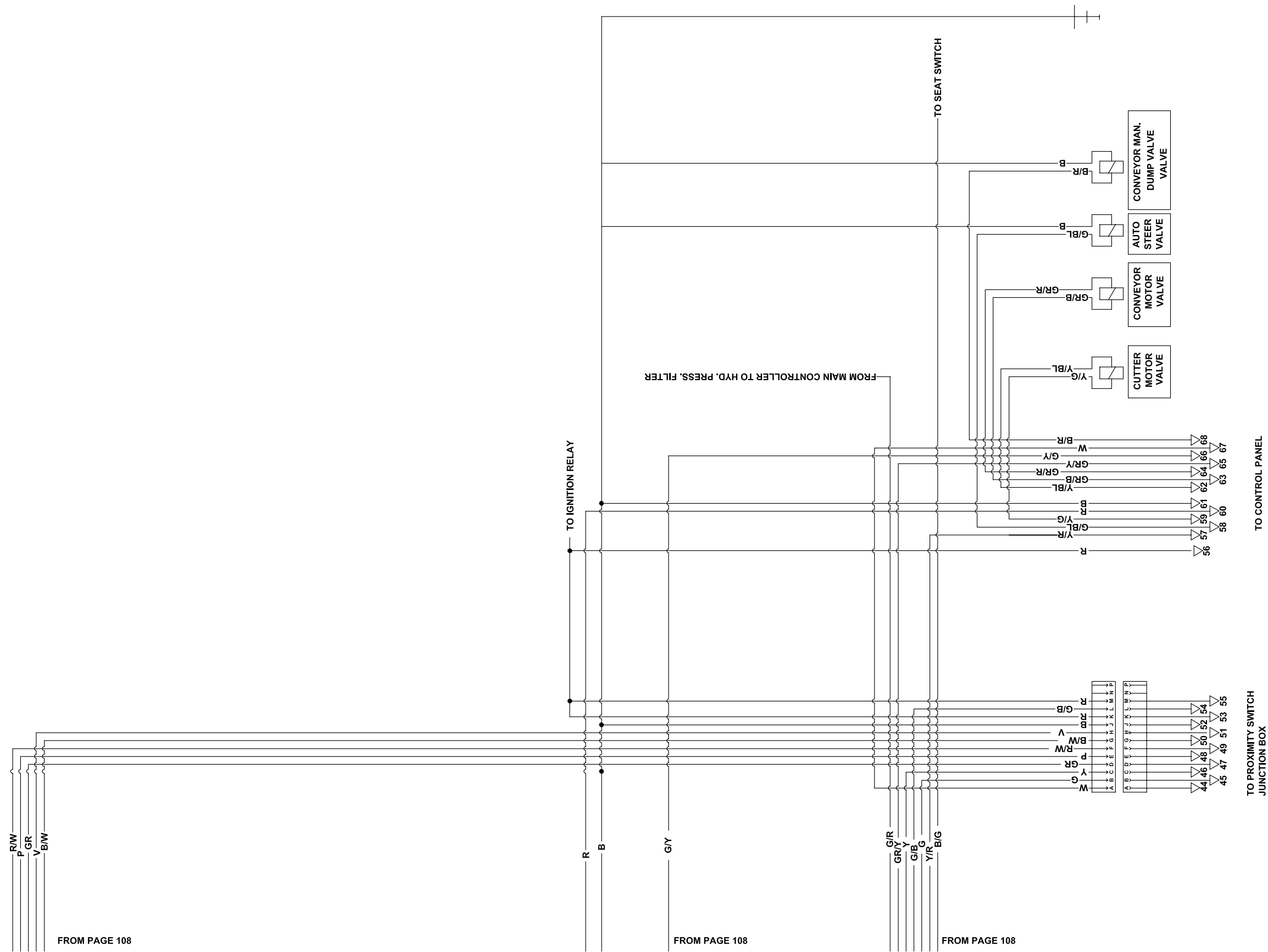


FIGURE 59

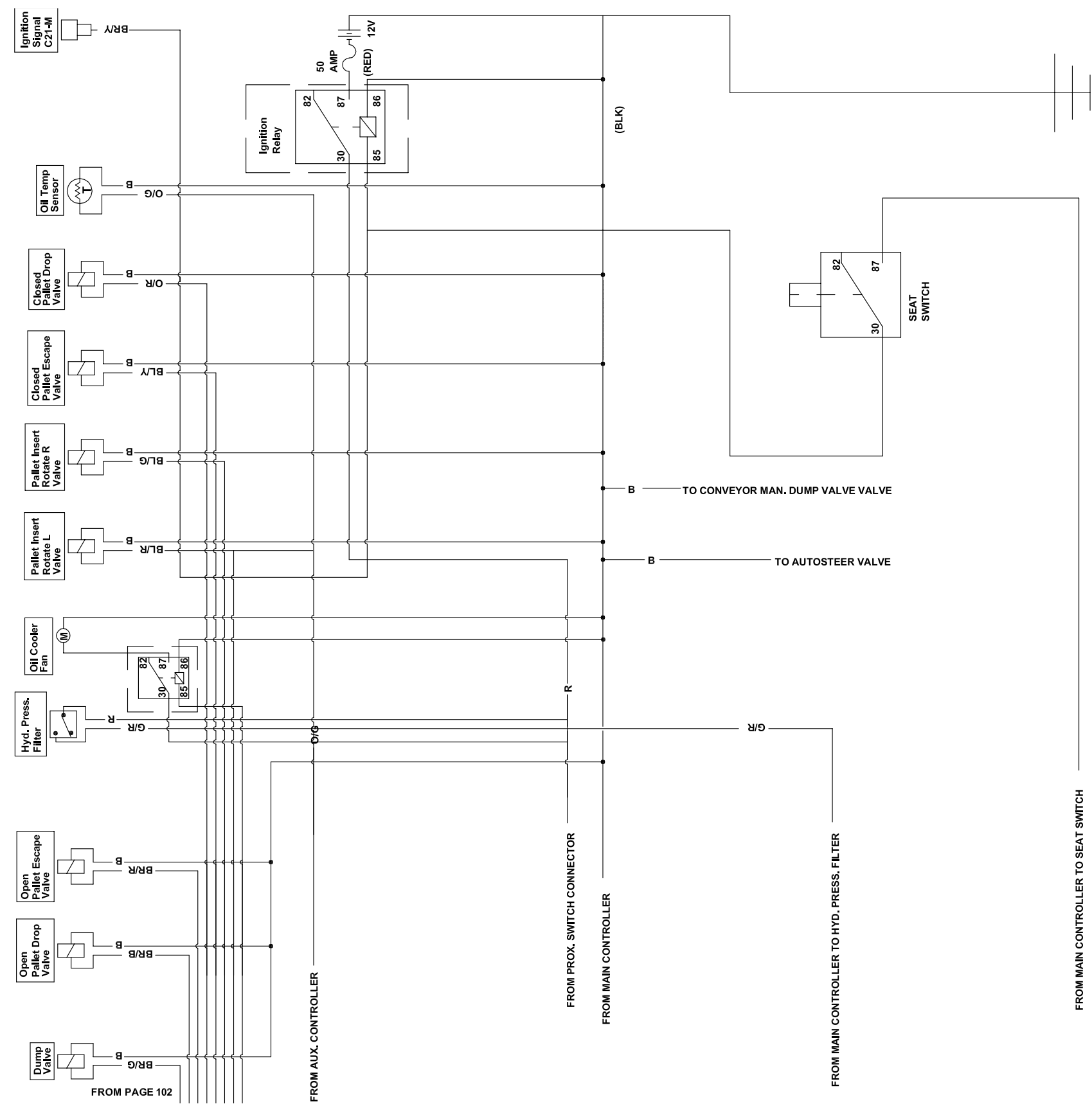


FIGURE 60

ELECTRICAL SCHEMATIC (PART 4)

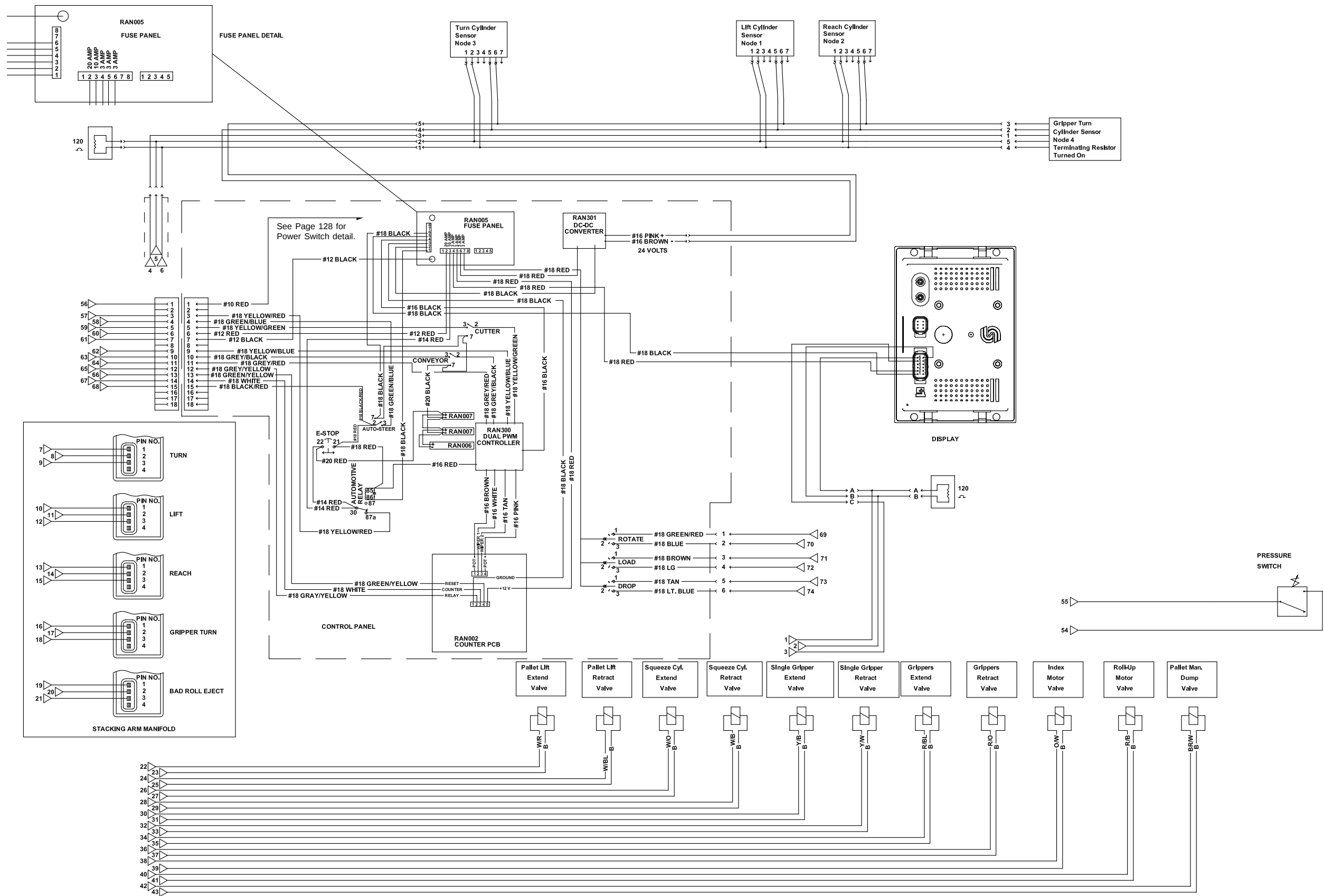


FIGURE 61

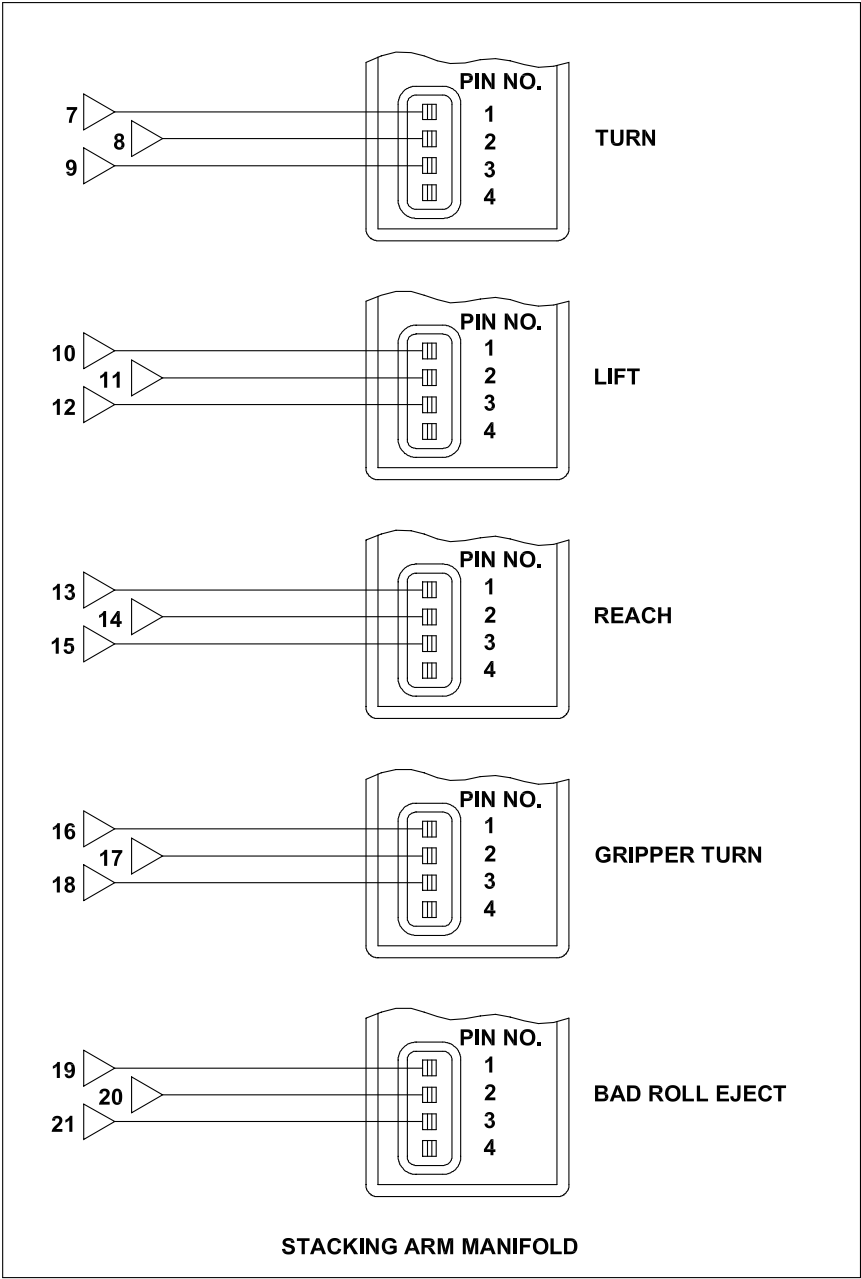
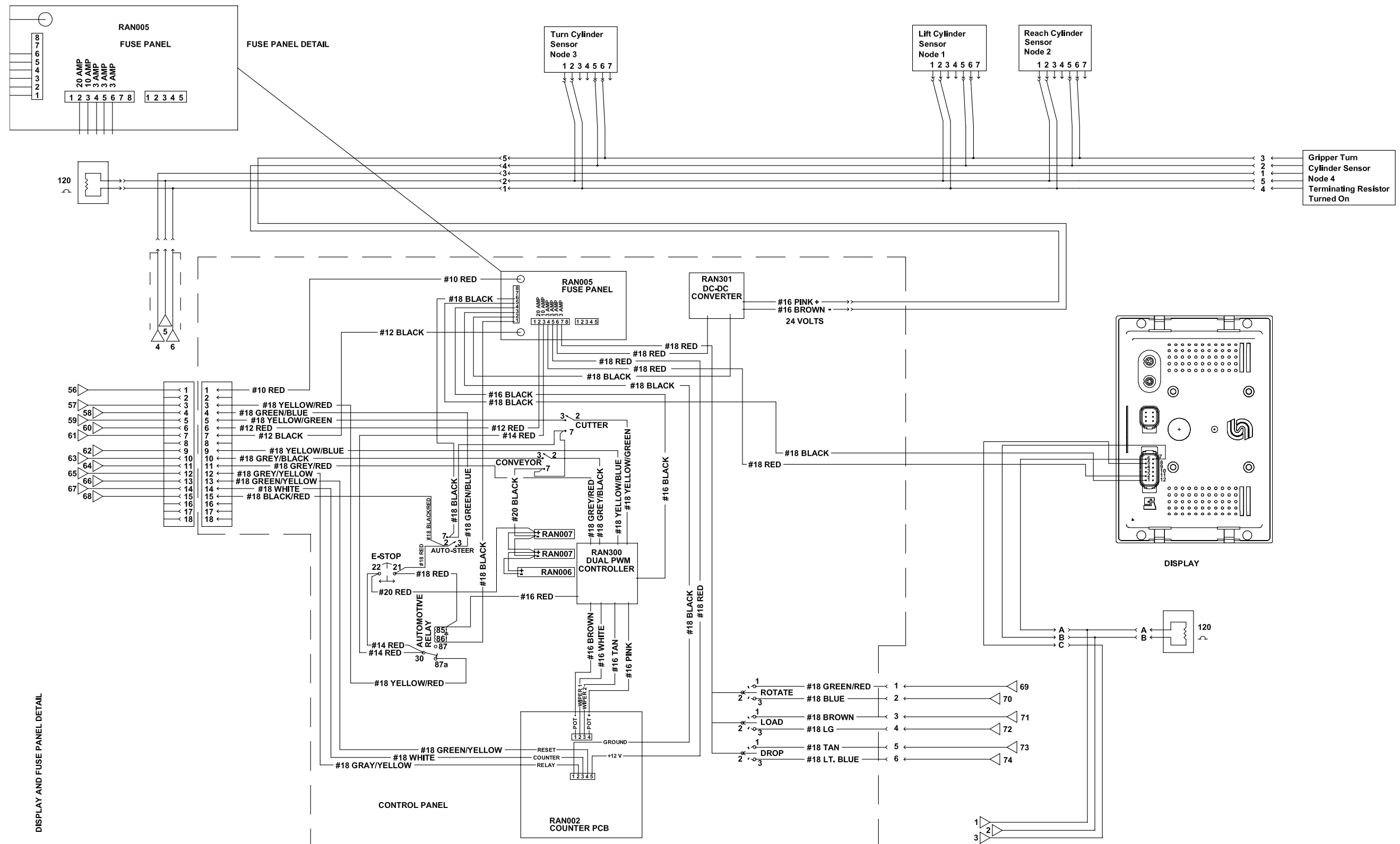


FIGURE 62

HARNESS-VALVES

HARNESS-VALVES

FIGURE 63

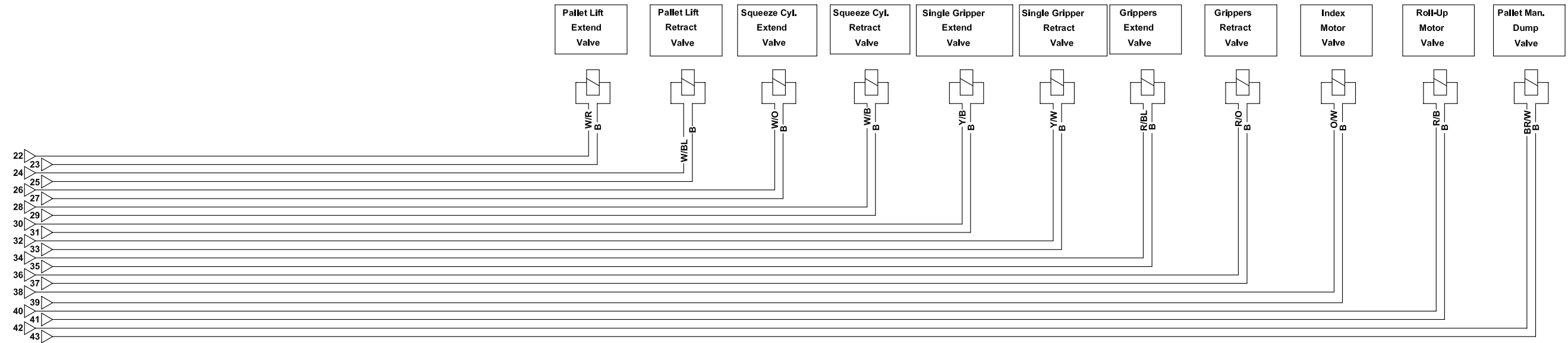


FIGURE 64

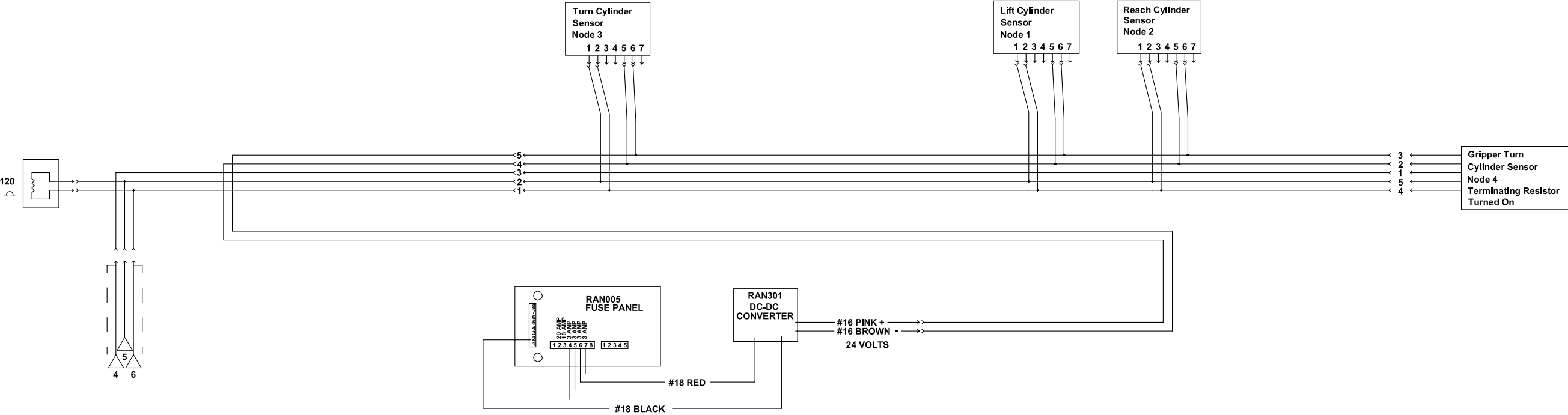


FIGURE 65

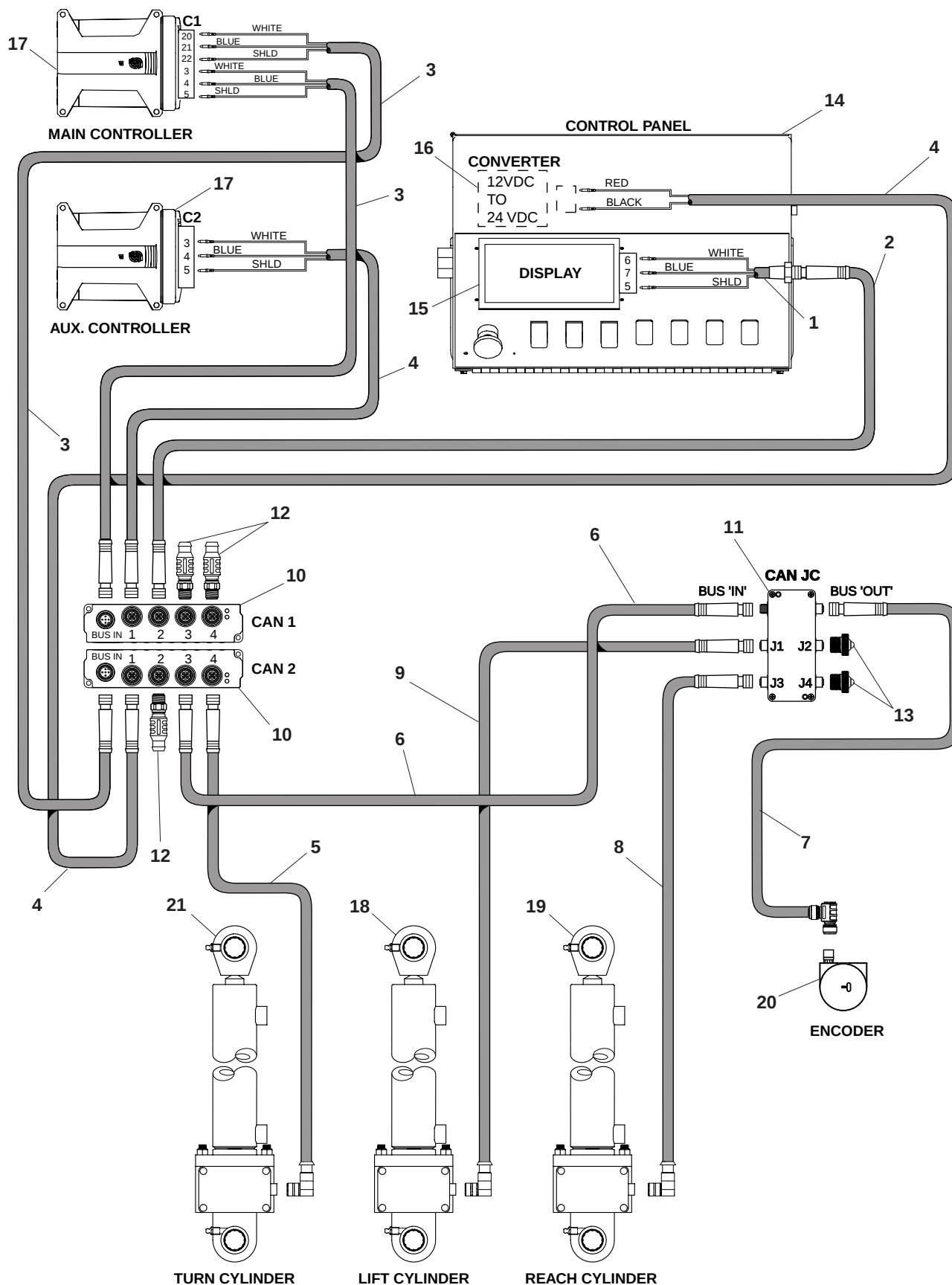


FIGURE 65

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4160167	CABLE. CANBUS MALE	1				
2	4160168	CABLE. CAN 1 TO DISPLAY	1				
3	4160169	CABLE. MAIN CONTROLLER	2				
4	4160170	CABLE. AUX. CONTROLLER	1				
5	4160171	CABLE. CAN 2 TO TURN CYL.	1				
		NON CURRENT UP TO SERIAL NO. 149					
	KE60156	CABLE. CAN 2 TO TURN CYL.	1				
		CURRENT FROM SERIAL NO. 150					
6	4160172	CABLE. CAN 2 TO CAN JC	1				
7	4160173	CABLE. CAN JC TO ENC.	1				
8	4160174	CABLE. CAN JC TO REACH CYL.	1				
		NON CURRENT UP TO SERIAL NO. 149					
	KE60157	CABLE. CAN JC TO REACH CYL.	1				
		CURRENT FROM SERIAL NO. 150					
9	4160175	CABLE. CAN JC TO LIFT CYL.	1				
		NON CURRENT UP TO SERIAL NO. 149					
	KE60158	CABLE. CAN JC TO LIFT CYL.	1				
		CURRENT FROM SERIAL NO. 150					
10	4160176	JUNCTION BOX. CAN 1 & CAN 2	2				
11	4160177	JUNCTION BOX. CAN JC	1				
12	4160178	TERMINATING RESISTOR	3				
13	4160179	CLOSURE CAP	2				
14	4134149	CONTROL PANEL	1				
15	4133998	DISPLAY	1				
16	4134249-9	CONVERTER	1				
17	4133992	CONTROLLER	2				
18	4160719	LIFT CYLINDER	1				
	KH70115	SEAL KIT	1				
19	4160720	REACH CYLINDER	1				
	KH70116	SEAL KIT	1				
20	4140874	ENCODER	1				
21	4160718	TURN CYLINDER	1				
	KH70116	SEAL KIT	1				

FIGURE 66

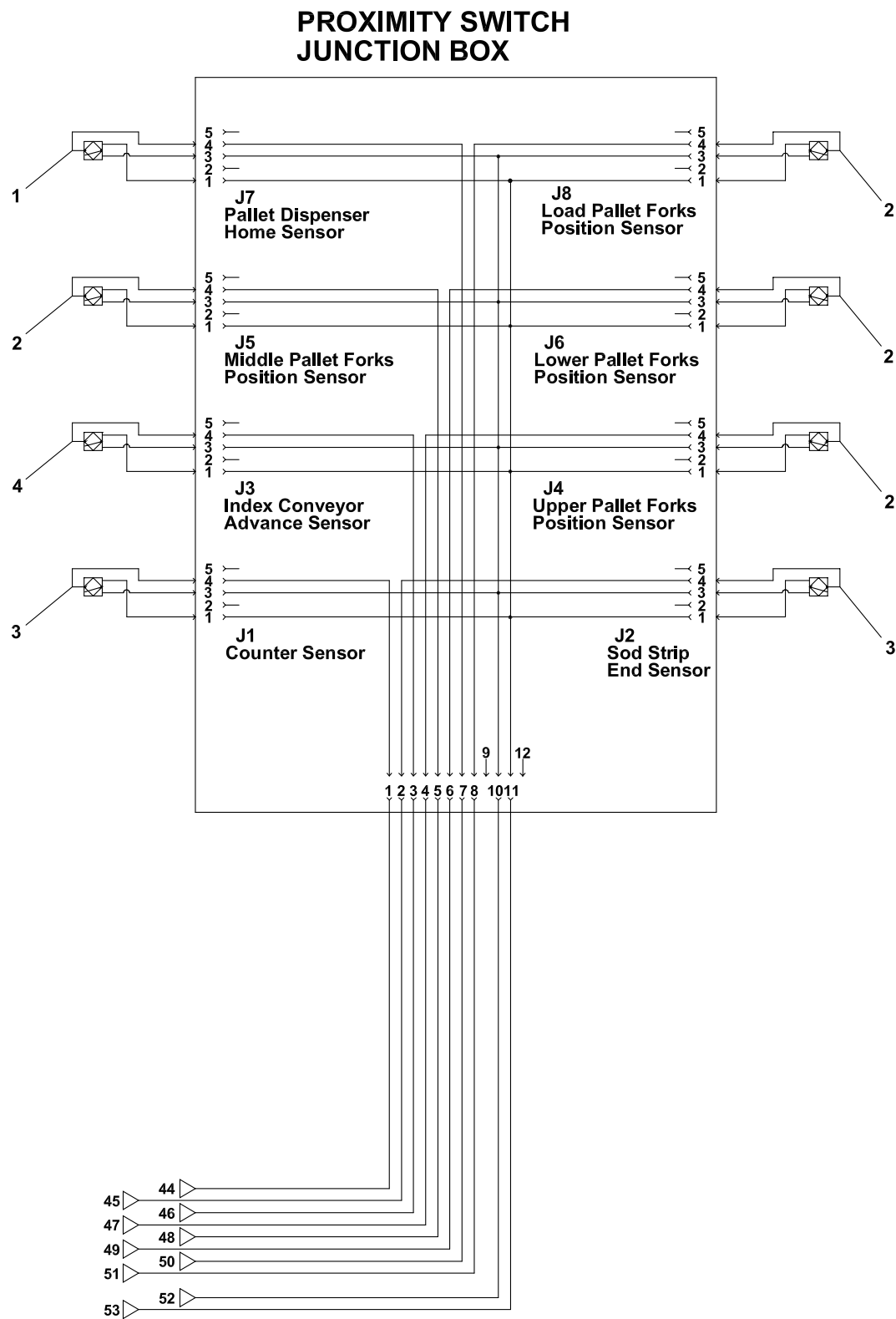


FIGURE 66

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4134047	CABLE- PROX- SWITCH 7m	1				
2	4134045	CABLE- PROX- SWITCH 4m	4				
3	4134046	CABLE- PROX- SWITCH 5m	2				
4	4134048	CABLE- PROX- SWITCH 1m	1				

FIGURE 67

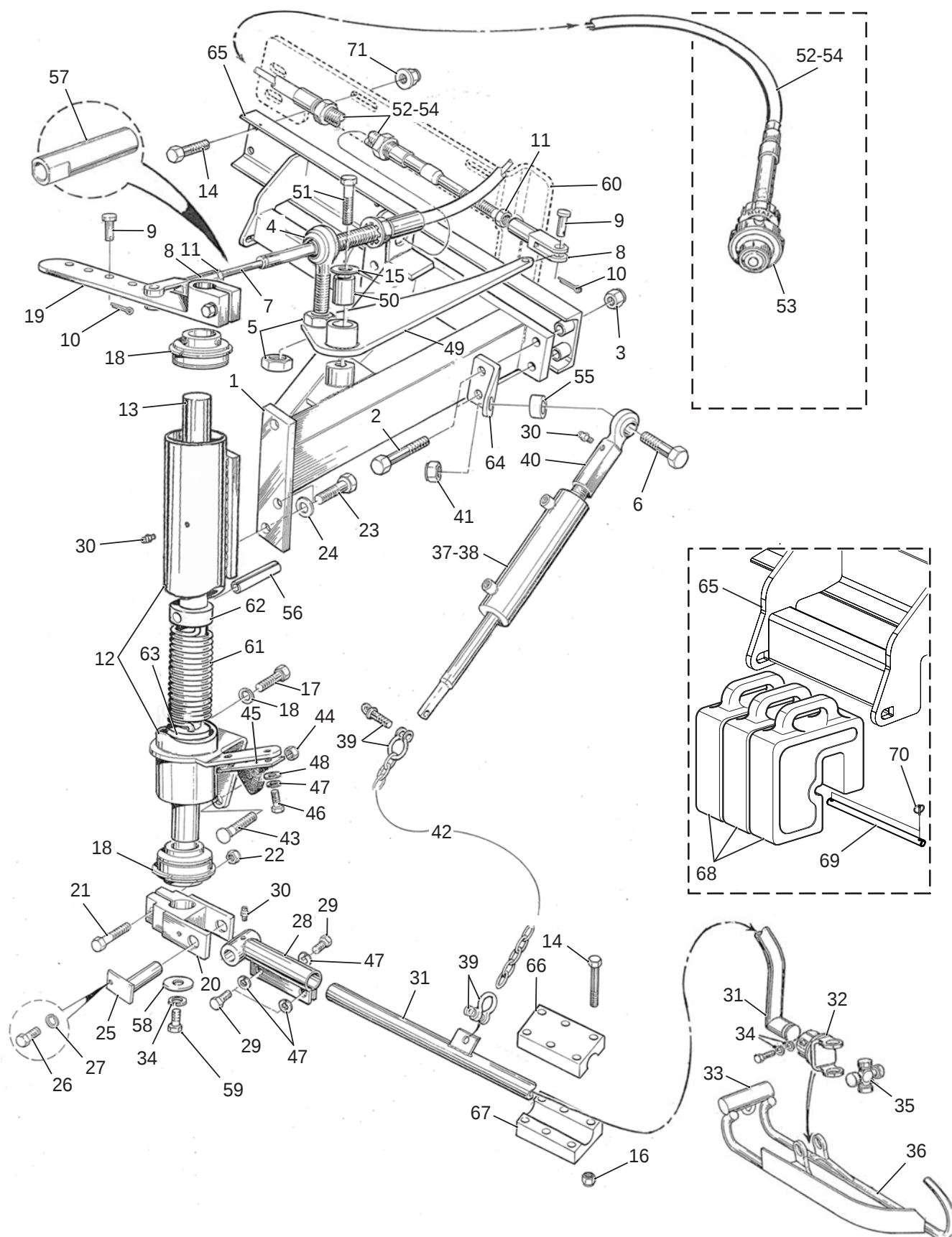


FIGURE 67

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	H310134	SPRING COLUMN MOUNT	1	41	F211200	LOCKNUT 3/4 UNC	1
2	F040832	BOLT 1/2 UNC X 3 1/2 GR.8	2	42	H110693	CHAIN - SHOE ARM LIFT	1
3	F210800	LOCKNUT 1/2 UNC	4	43	F020816	CARRIAGE BOLT 1/2 X 1 3/4	1
4	KB16010	ROD END	1	44	F230800	NUT 1/2 UNC	1
5	F221250	JAM NUT 3/4 UNF	2	45	KS60001	BUMP STOP - SHOE ARM	1
6	F041230	BOLT 3/4 UNC X 3 GR.8	1	46	F040506	BOLT 5/16 UNC X 3/4 GR.8	2
7	KD10056	CABLE ASSEMBLY (TOP)	1	47	F310500	LOCKWASHER 5/16	3
8	KD10026	CLEVIS - CABLE END	2	48	F320500	WASHER 5/16	2
9	-----	CLEVIS PIN (PART OF #8)	2	49	A300257	LEVER ARM - FINE ADJUST	1
10	-----	COTTER PIN (PART OF #8)	2	50	H110399	BUSHING	1
11	F220450	JAM NUT	2	51	F040820	BOLT 1/2 UNC X 2 GR.8	1
12	4160320	SPRING COLUMN	1	52	KD10041	CABLE ASSY. - FINE ADJUST	1
13	H110334	SHAFT-SPRING COLUMN	1	53	KD10029	CONTROL HEAD	1
14	F040514	BOLT 5/16 UNC X 1 1/2 GR.8	4	54	KD10031	CONTROL CABLE ONLY	1
15	F320500	WASHER 5/16	1	55	4130903	SPACER	1
16	F210500	LOCKNUT 5/16 UNC	4	56	F940616	SPRING PIN 3/8 DIA. X 1 3/4	1
17	F040606	BOLT 3/8 UNC X 3/4 GR.8	1	57	A101279	CABLE GUIDE	1
18	KB20510	BEARING C/W SNAP RING	2	58	H100045	RETAINER WASHER	1
19	A100672	TOP LEVER ARM	1	59	F040606	BOLT 3/8 UNC X 3/4 GR.8	1
20	H310055	SUPPORT PIVOT - SKI ARM	1	60	4160252	ADAPTER	1
21	F040824	BOLT 1/2 UNC X 2 1/2 GR.8	1	61	H111207	SPRING	1
22	F210800	LOCKNUT 1/2 GR.8	1	62	H111208	UPPER SPRING SOCKET	1
23	F040812	BOLT 1/2 UNC X 1 1/4 GR.8	3	63	H111209	LOWER SPRING SOCKET	1
24	F310800	LOCKWASHER 1/2	3	64	A101135	CYLINDER MOUNT	1
25	H310056	PIVOT PIN	1	65	4160559	TOWER MOUNTING CHANNEL	1
26	F040404	BOLT 1/4 UNC X 1/2 GR.8	1	66	M100157	COUPLER WEIGHT. TOP	1
27	F310400	LOCKWASHER 1/4	1	67	M100158	COUPLER WEIGHT. BOTTOM	1
28	H310052	MNTG. PIVOT - SHOE ARM	1	68	62-540	50# BALLAST WEIGHT	3
29	F040510	BOLT 5/16 UNC X 1 GR.8	1	69	4160676	ROD WEIGHT STOP 62-540	1
30	KM11400	GREASE FITTING	3	70	KX30020	QUICK PIN 1/4 X 1-3/4	2
31	015110	ARM - GUIDE SHOE	1	71	F840800	NUT - 1/2. SRRTD. FLNGD.	2
32	D0004	SPLIT CLAMP YOKE	1				
33	F040612	BOLT 3/8 UNC X 1 1/4 GR.8	1				
34	F310600	LOCKWASHER 3/8	3				
35	KD91103	CROSSPIECE C/W BEARINGS	1				
36	A21175	GUIDE SHOE - AUTO-STEER	1				
37	4160414	RESET CYLINDER	1				
38	KH70108	SEAL KIT - RESET CYL.	1				
39	KC00102	SHACKLE	2				
40	KB16011	ROD END (MW12)	1				

NOTE

Items 56, 61, 62 & 63 are available as Torsion Spring Service Kit - H510199.

NOTE

Items 32, 33, 34, 35, are available as Guide Shoe Service Kit - A21175

FIGURE 68

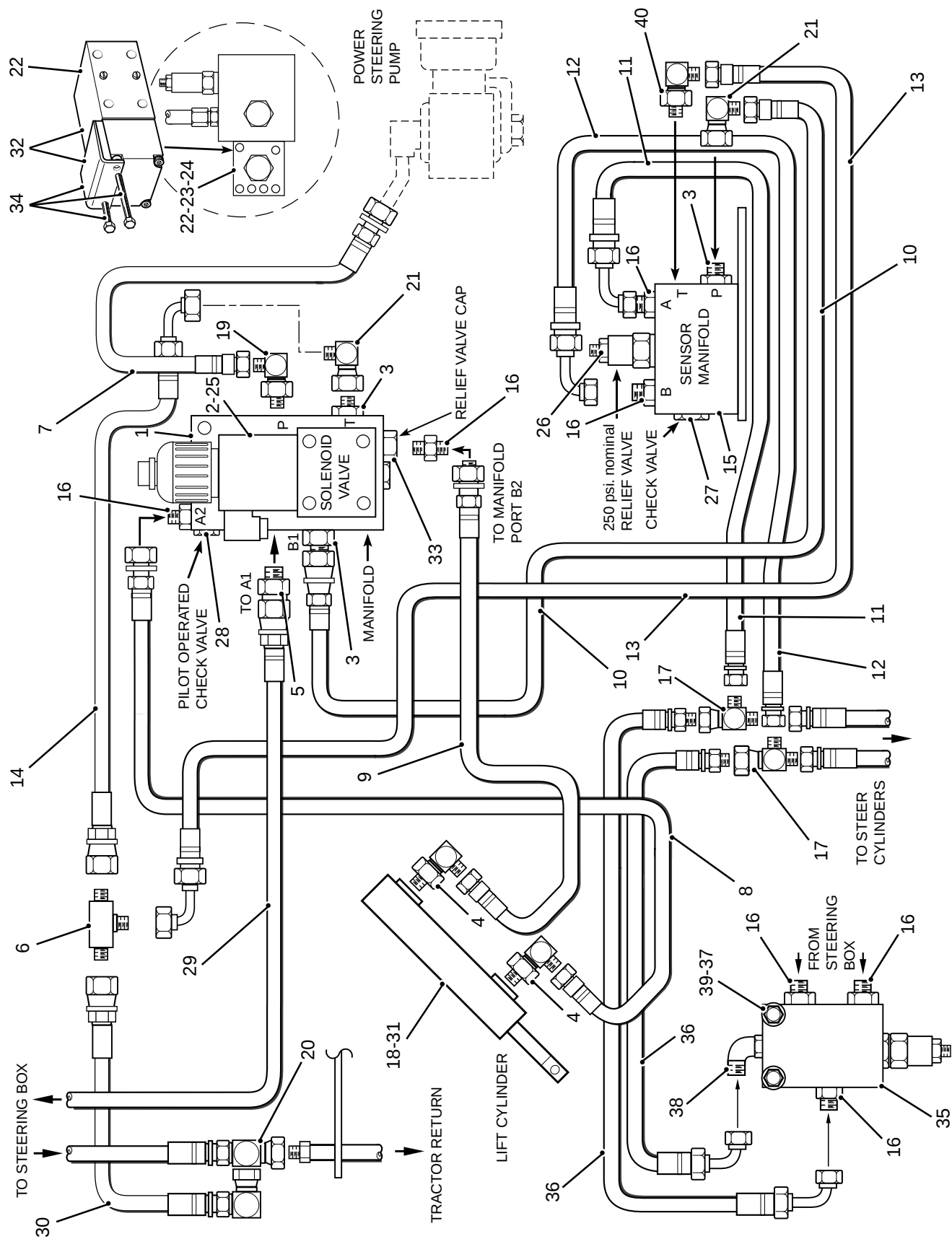


FIGURE 68

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	H500007	MANIFOLD	1				
2	KH20071	SOLENOID VALVE	1				
3	8-8-070120	#8 CONNECTOR	5				
4	6-6-070220	FITTING #6 SWIVEL 90°	4				
5	6-8-070120	FITTING - 1/2 STRT. 'O' RING	1				
6	8-8-8-070401	FITTING - SWIVEL NUT TEE	1				
7	2692327-01	HOSE ASSEMBLY	1				
8	2692308-04	HOSE ASSEMBLY	1				
9	2692301-11	HOSE ASSEMBLY	1				
10	2692302-02	HOSE ASSEMBLY	1				
11	2692301-15	HOSE ASSEMBLY	1				
12	2692301-15	HOSE ASSEMBLY	1				
13	2692305-11	HOSE ASSEMBLY	1				
14	2692302-03	HOSE ASSEMBLY	1				
15	H500013	SENSOR MANIFOLD	1				
16	6-6-070120	#6 CONNECTOR	10				
17	6-6-6-070432	FITTING - SWIVEL NUT RUN TEE	2				
18	H500014	AUTO-STEER RESET CYLINDER	1				
19	6-8-070220	FITTING - #6 90° CONNECTOR	1				
20	10-10-10-070432	FITTING - 5/8 SWIVEL RUN TEE	1				
21	8-8-070221	FITTING - 1/2 SWIVEL NUT 90°	3				
22	KH20051	SENSOR VALVE	1				
23	KH70041	SEAL KIT. SENSOR VALVE	1				
24	KH20054	END CAP KIT. SENSOR VALVE	1				
25	KH70048	SEAL KIT - KH20071	1				
26	KH20036	RELIEF VALVE FOR H500013	2				
27	KH20056	CHECK VALVE FOR H500013	1				
28	KH20042	CHECK VALVE FOR H500007	1				
29	2692325-01	HOSE ASSEMBLY	1				
30	2692326-02	HOSE ASSEMBLY	2				
31	KH70039	SEAL KIT - RESET CYLINDER	A/R				
32	H510079	SENSOR VALVE ASSEMBLY	3				
33	KH20052	RELIEF VALVE KIT	3				
34	H510109	SENSOR VALVE COVER ASSY.	4				
35	4141230	BLOCK MANIFOLD ASSY.	1				
36	2692304-18	HOSE ASSEMBLY	2				
37	F440400	1/4 UNC FLANGED NUT	2				
38	06-06-070220	3/8 - 90 DEG. ADAPTER	1				
39	F850422	BOLT 1/4 UNC X 2 1/4 GR.8	2				
40	8-8-070220	FITTING #8 SWIVEL 90	1				

FIGURE 69

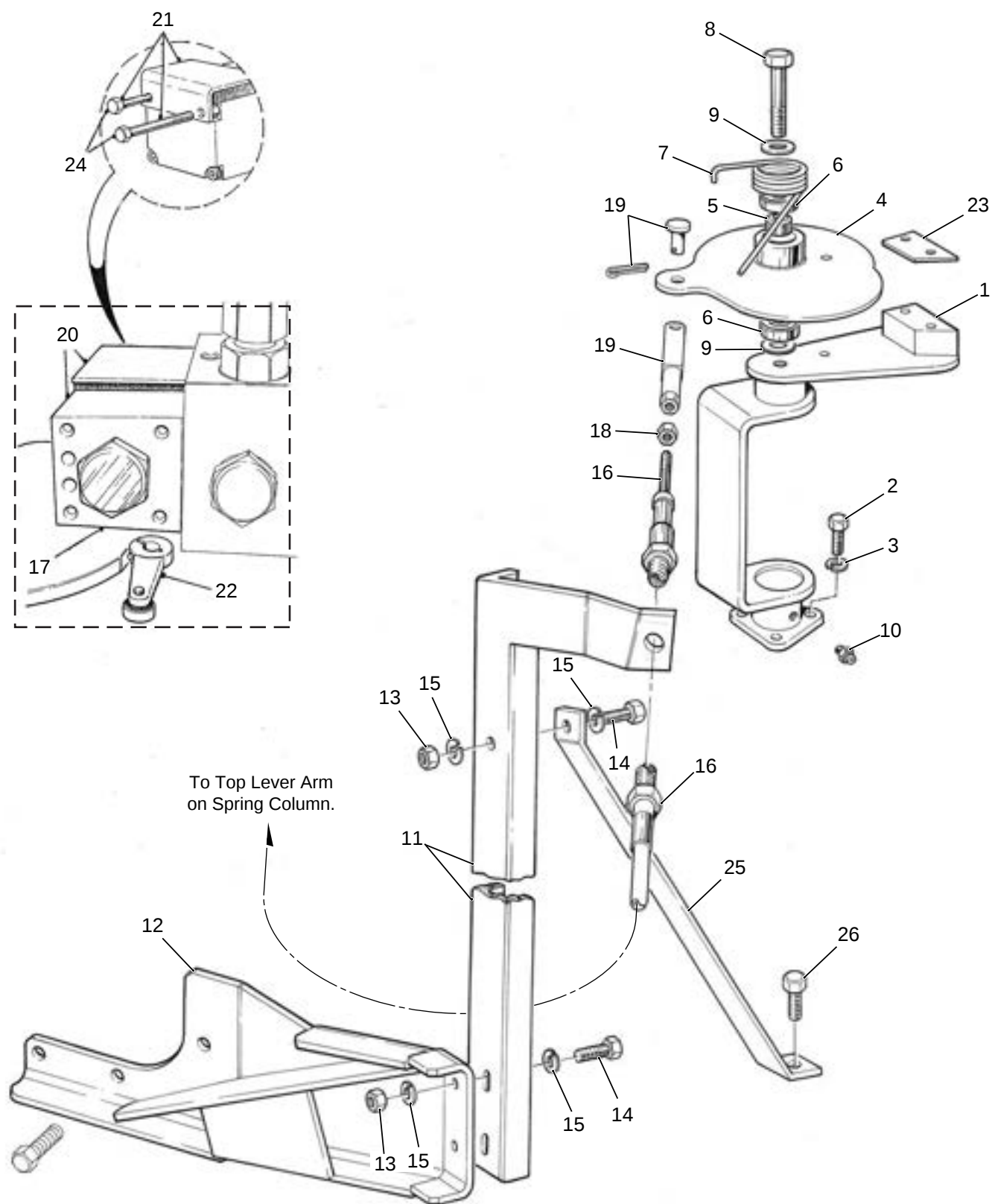


FIGURE 69

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4160222	SENSOR VALVE MOUNT	1				
2	G0710050	BOLT M10 X 1.5 X 50	3				
3	G311000	LOCKWASHER M10	3				
4	H310014	AUTO-STEER CAM	1				
5	H110116	SPACER - CAM BEARINGS	1				
6	KB16001	BEARING - CAM	2				
7	H110113	SPRING - CAM	1				
8	G0112070	BOLT M12 - 70	1				
9	F320800	WASHER 1/2	2				
10	KM11400	GREASE FITTING	1				
11	4160558	BRKT - AUTO-STEER CABLE	1				
12	4135222	WDMT. AUTO-STEER MOUNT	1				
13	F230800	NUT 1/2 UNC	3				
14	F040810	BOLT 1/2 UNC X 1 GR.8	3				
15	F310800	LOCKWASHER 1/2	6				
16	KD10056	CABLE - CAM TO COLUMN	1				
17	KH20051	SENSOR VALVE	1				
18	F220450	JAM NUT 1/4 UNF	1				
19	KD10026	CLEVIS CABLE END	1				
20	H510079	SENSOR VAVLE ASSEMBLY	1				
21	H510109	VALVE COVER ASSEMBLY	1				
22	H510111	CAM ROLLER ARM	1				
23	H111196	SHIM. VALVE MOUNT	1				
24	G0105040	BOLT M5 X .8 X 40	2				
25	4160434	CABLE ANCHOR BRACE	1				
26	REF.	BOLT	1				

NOTE

Items 4, 5 & 6 are available
as Torsion Spring Service Kit -
H510199.

NOTE

See page 122 for the Sensor Valve
Seal Kit and End Cap Kit.

FIGURE 69

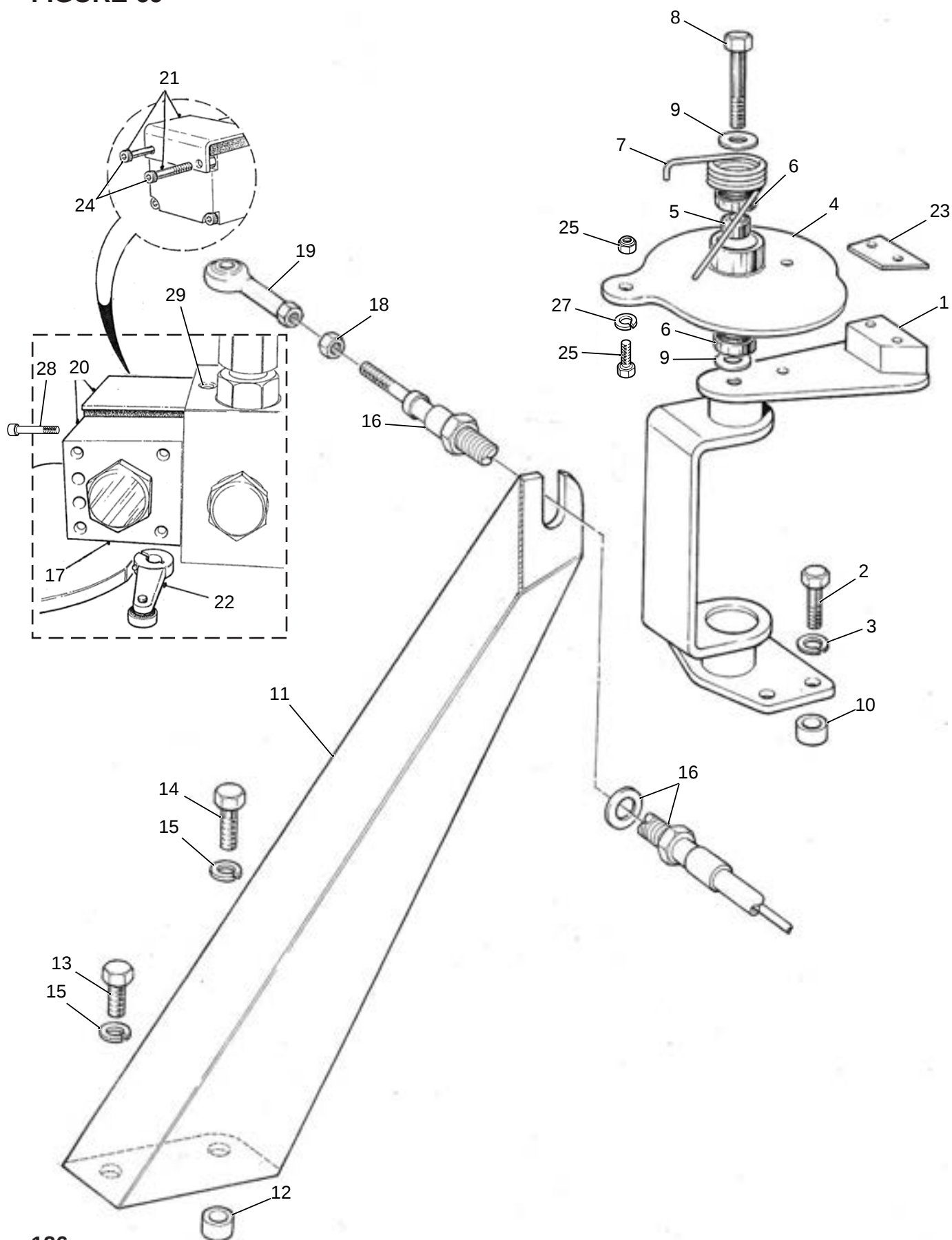


FIGURE 70

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4160574	SENSOR VALVE MOUNT	1				
2	G0716045	BOLT M16 X 1.5 X 45	4				
3	G311600	LOCKWASHER M16	4				
4	H310014	AUTO-STEER CAM	1				
5	H110116	SPACER - CAM BEARINGS	1				
6	KB16001	BEARING - CAM	2				
7	H110113	SPRING - CAM	1				
8	G0112070	BOLT M12 - 70	1				
9	F320800	WASHER 1/2	2				
10	4160573	SPACER	4				
11	4160681	CABLE ANCHOR	1				
12	4160581	SPACER	1				
13	G0412030	BOLT M12 X 1.5 X 30	1				
14	G0412045	BOLT M12 X 1.5 X 45	1				
15	G311200	LOCKWASHER M12	2				
16	KD10056	CABLE - CAM TO COLUMN	1				
17	KH20051	SENSOR VALVE	1				
18	F220450	JAM NUT 1/4 UNF	1				
19	43-004A	ROD END	1				
20	H510079	SENSOR VAVLE ASSEMBLY	1				
21	H510109	VALVE COVER ASSEMBLY	1				
22	H510111	CAM ROLLER ARM	1				
23	H111196	SHIM. VALVE MOUNT	1				
24	G0105040	BOLT M5 X .8 X 40	2				
25	F040412	BOLT 1/4 UNC X 1 1/4 GR.8	1				
26	F210400	LOCKNUT 1/4 UNC	1				
27	F310400	LOCKWASHER 1/4	1				
28	F180214	BOLT 10-20 X 1 1/2 SOC. HD.	1				
29	F180430	BOLT 1/4-20 X 3 SOC. HD.	1				

NOTE

Items 4, 5 & 6 are available
as Torsion Spring Service Kit -
H510199.

NOTE

See page 122 for the Sensor Valve
Seal Kit and End Cap Kit.

NOTE

See page 125 for the Auto-Steer Valve
Mount Non Current from Serial No.
118B to 136A.

RoboMax

FIGURE 71

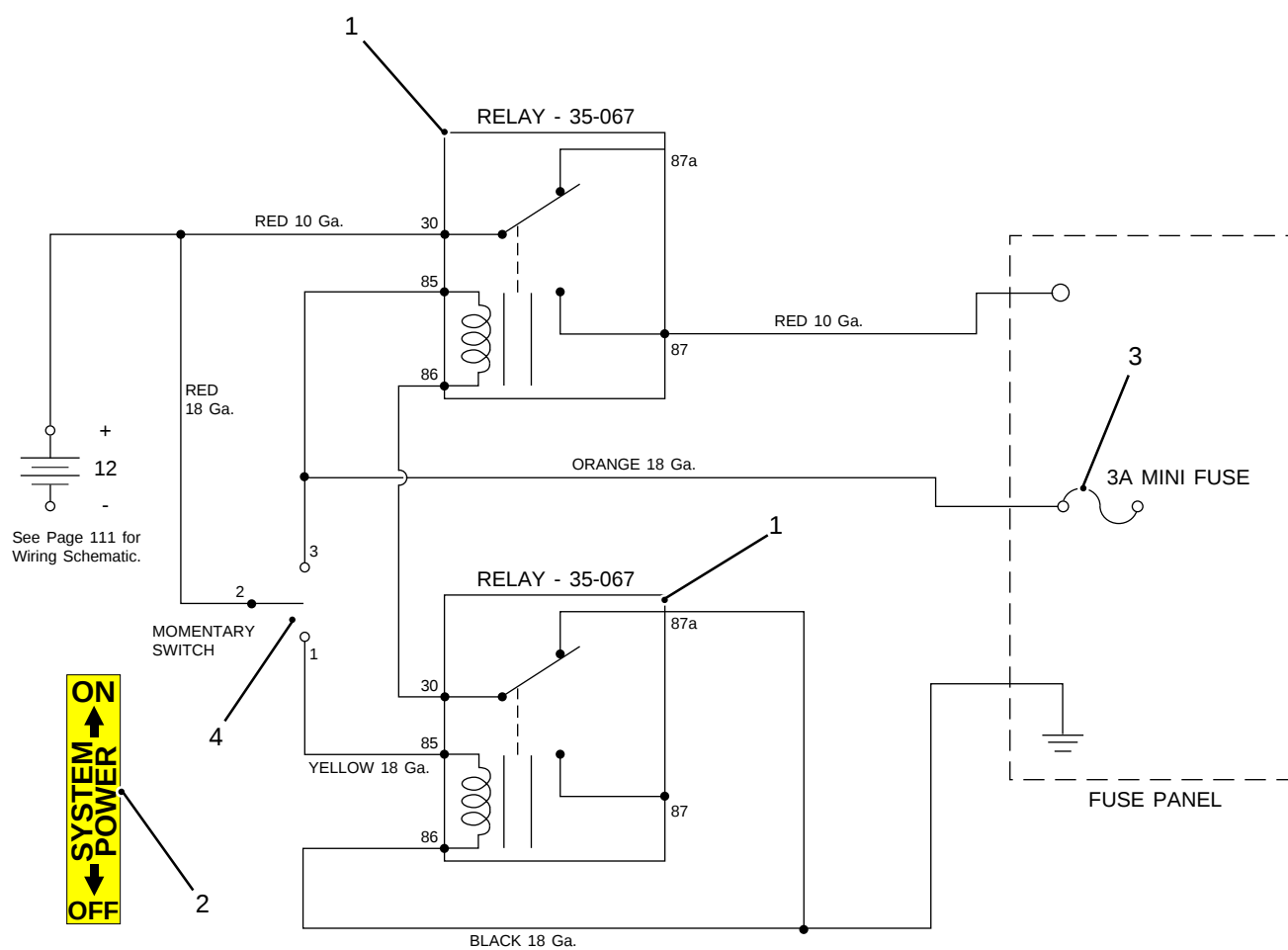


FIGURE 71

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
	4160793	HARNESS	1				
1	35-067	RELAY	2				
2	D001-156	DECAL 'SYSTEM ON-OFF'	1				
3	KE10207	FUSE 3 AMP MINI	1				
4	KE80024	MOMENTARY SWITCH	1				
		NOT ILLUSTRATED					
5	F210100	NYLOC NUT 8-32	1				
6	F580104	PAN HD PHIL 8-32 X 1/2	1				
7	KX99104	CABLE TIES	6				

FIGURE 72

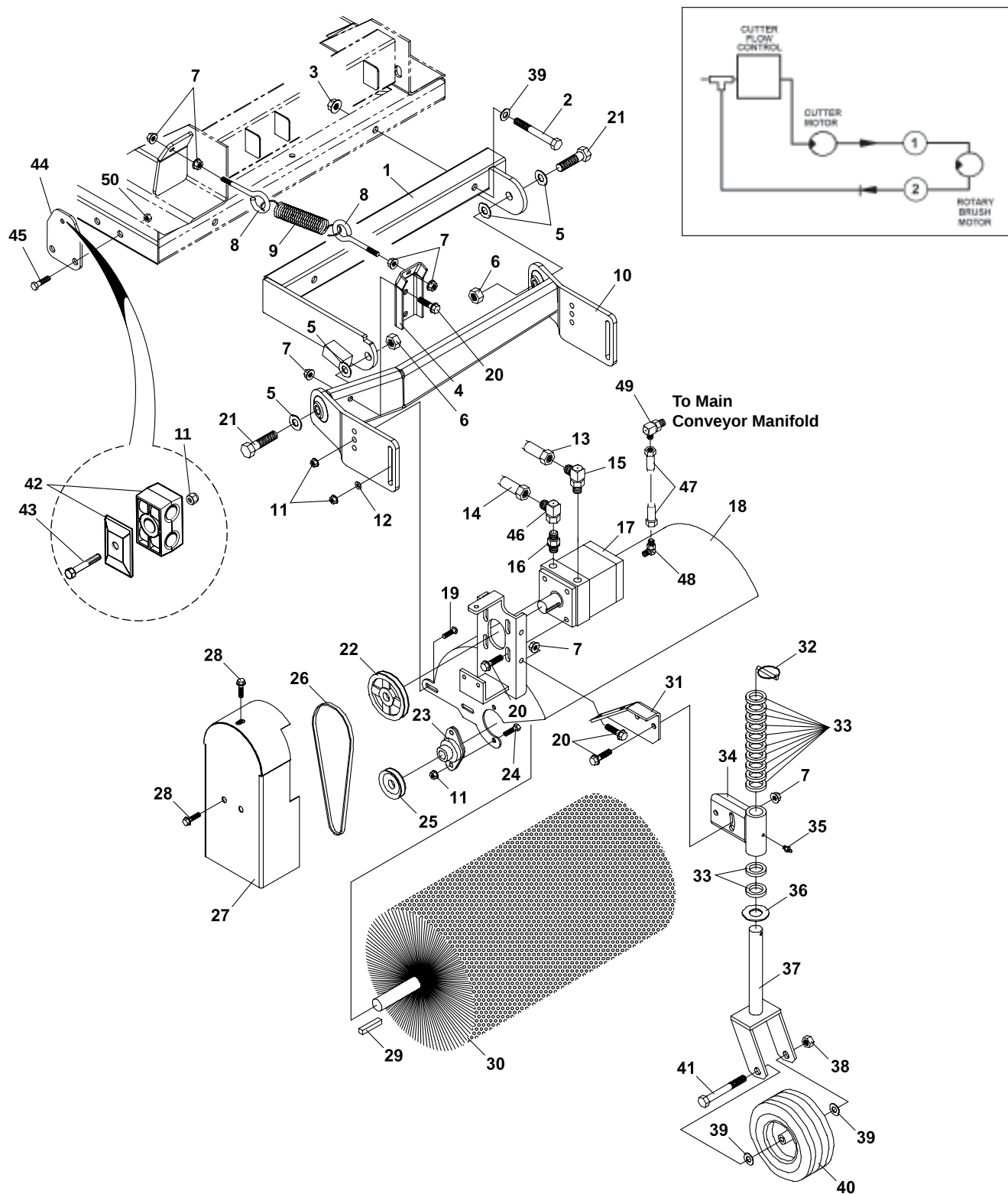


FIGURE 72

ITEM	PART NO.	DESCRIPTION	QTY
1	6115929	FRAME, FLOATING BRUSH (USED ON 16" & 18" ONLY)	1
	6115930	FRAME, FLOATING BRUSH (USED ON 24" ONLY)	1
2	F040850	BLT-HEX 1/2-13X5	2
3	F440800	NUT WLF 1/2-13	2
4	6115909	SPRING ASSIST	1
5	F330808	WSHR-41/64X1-3/8X12	A/R
6	F211008	LOCKNUT-5/8-11	2
7	F440600	NUT-WLF 3/8-16	10
8	F050644	EYE-BOLT, 3/8 X 3-7/8	2
9	41-012	SPRING	1
10	6115931	MOUNT, FLOATING BRUSH (USED ON 16" & 18" ONLY)	1
	6115932	MOUNT, FLOATING BRUSH (USED ON 24" ONLY)	1
11	F210512	NUT, 5/16-18	9
12	F440500	WASHER-25/64X5/8X16	2
13	2692404-1	HOSE-1/2 X 98"	1
14	2692405-1	HOSE-1/2 X 96"	1
15	10-10-070220	FITTING-90	1
16	10-10-070120	FITTING-STR	1
17	KH30044	MOTOR-HYD	1
18	009249	COVER-ROTARY BRUSH (USED ON 16" & 18" ONLY)	1
	016321	COVER-ROTARY BRUSH (USED ON 24" ONLY)	1
19	F020512	BLT-CRG 5/16-18X1-1/4	4
20	F870606	BLT-WLF 3/8-16X3/4	10
21	F041026	BOLT,5/8-11 X 2-3/4	2
22	83BK5016	PULLEY	1
23	B8007	BEARING	2
	B8008	FLANGE-PRSD STL F/BRG	4
24	F040510	BOLT-HEX 5/16-18X1	4
25	D2207	SHEAVE	1
26	D2006	BELT	1
27	6115928	SHIELD-FLOATING BRUSH	1
28	F870506	BOLT-5/16-18X3/4	3
29	124422	KEY,1/4 X 1/4 X 1-3/8	1

ITEM	PART NO.	DESCRIPTION	QTY
30	006680	BRUSH-ROTARY (USED ON 16" & 18" ONLY)	
	006681	BRUSH-ROTARY (USED ON 24" ONLY)	1
31	6115908	MOUNT-CASTER	1
32	03-017	CLIP-5/16"	1
33	6112057	SPACER	12
34	6115927	BRKT-CASTER PIVOT	1
35	29-010	GREASE FITTING	1
36	F331608	WASHER	1
37	62810	YOKE-CASTER WHEEL	1
38	F210808	LOCKNUT, 1/2-13	1
39	F330508	WASHER-.516X1X12	4
40	53-111	WHEEL	1
41	F040840	BOLT,1/2-13 X 4	1
42	4135022	HOSE CLAMP 3/4	1
43	F040520	BOLT 5/16 UNC X 2 GR.8	1
44	6115947	MOUNT. HOSE CLAMP	1
45	F040812	BOLT 1/2 UNC X 1 1/4 GR.8	2
46	10-10-070221	FITTING 90 DEG. SWIVEL	1
47	2692406-1	HOSE - 1/4X192"	1
48	4-4-070220	FITTING NO.4 TO NO.4	1
49	4-12-070220	FITTING NO.4 TO NO.12	1
50	F210800	LOCKNUT 1/2 UNC	2
*	00-370	DECAL, WARNING	1
*	4131393	LBL-BROUWER	1
*	00-369	LBL-THROWN OBJECTS	1
*	56-027	EDGING 11/32X17X32	1

* NOT ILLUSTRATED

NOTE

BRUSH KIT
16 IN. / 18 IN. - 4160776
24 IN. - 416-777

BROUWER TURF

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