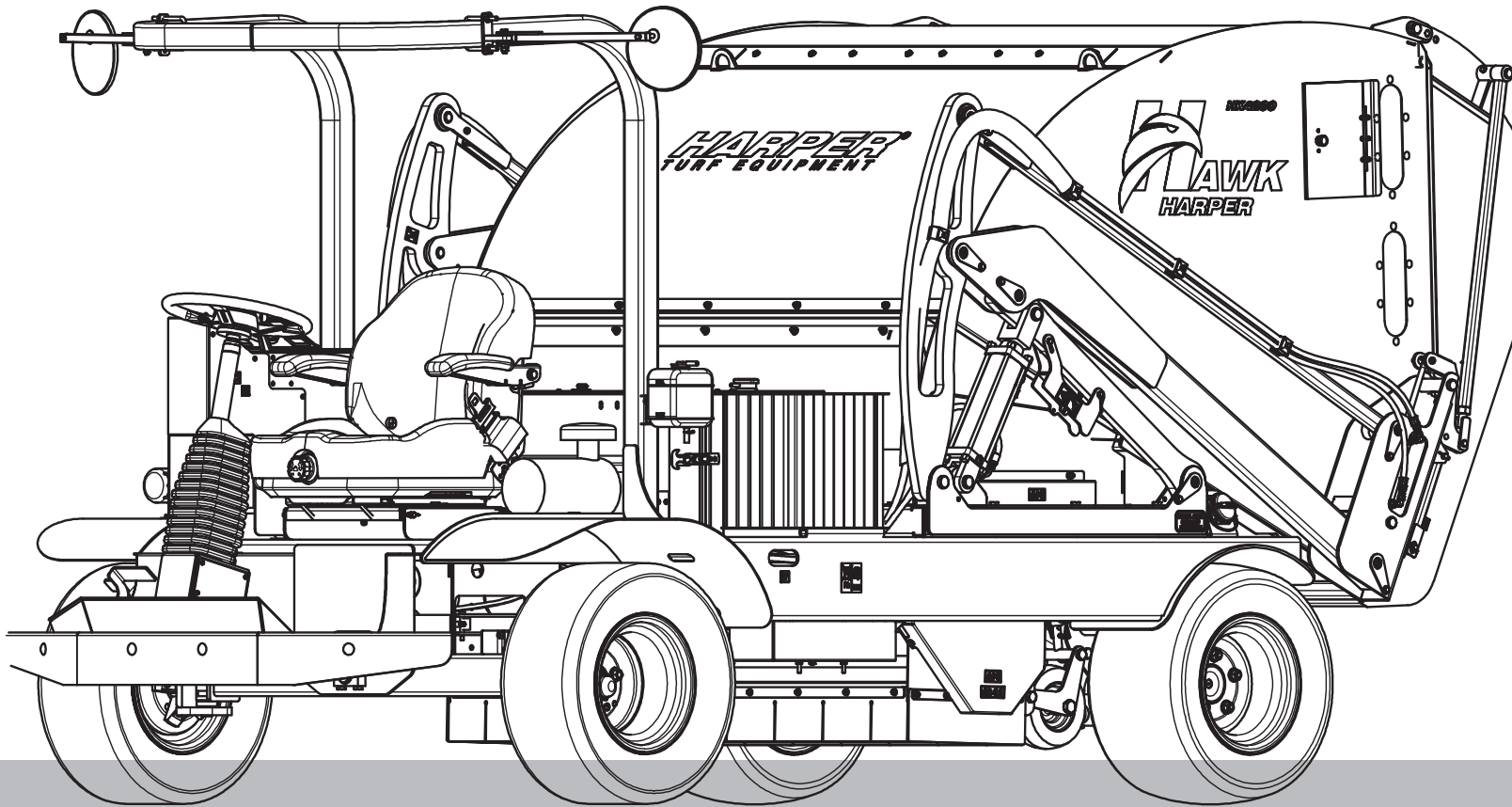


HK 4200

Serial Number: 23A01+
Part # 301043



HARPER HAWK PARTS MANUAL

Thank you for purchasing a Harper Hawk.

As with all Harper products, the Harper Hawk has been developed through tough design and testing procedures to produce a top-quality machine. This manual gives assembly, operating, and service information for the model HK4200 Sweeper. Please read and understand all instructional material included with the Sweeper or its components before assembling and operating the equipment.

A Sweeper can present hazards to an operator who follows unsafe procedures in either the operation or maintenance of the unit. Therefore, **SAFETY WARNINGS** are presented at certain locations in the text.

THIS SYMBOL:  **SAFETY WARNING!** 

MEANING: Failure to understand and obey this warning may result in injury to you or others. Whenever this symbol is used, please pay very close attention to the information presented, and make sure you fully understand. If you do not, contact your dealer or Harper Industries, Inc. for clarification.

 **SAFETY WARNING!** 
ALL SHIELDS AND GUARDS MUST BE IN PLACE FOR PROPER AND SAFE OPERATION OF THIS EQUIPMENT. WHERE THEY ARE SHOWN REMOVED IN THIS MANUAL, IT IS FOR PURPOSES OF ILLUSTRATION AND INSTRUCTION ONLY. DO NOT OPERATE THIS EQUIPMENT UNLESS ALL SHIELDS AND GUARDS ARE IN PLACE.



WARNING: Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information go to www.P65warnings.ca.gov/diesel

Harper Industries, Inc. is continually striving to improve the design and performance of its products. We reserve the right to make changes in specifications and design without thereby incurring any obligation relative to previously manufactured products.

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The Harper name is a registered trademark of Harper Industries, Inc. All other brand and product names are trademarks or registered trademarks of their respective companies.

LIMITED WARRANTY

Harper Industries, Inc. (HII) warrants to each purchaser of a new Harper Hawk from an authorized dealer or representative, that such equipment is free of manufacturer's defects in workmanship and materials which appear while in normal service for a period of ONE YEAR commencing with delivery to the original user.

The obligation of HII under this warranty is expressly limited, at our option, to replacement or repair at a service facility designated by Harper Industries or at the manufacturing plant in Harper, KS. A part will be replaced after inspection discloses it to have been defective. This warranty does not apply to defects caused by damage or unreasonable use (including failure to provide reasonable and necessary maintenance, or by performing functions without genuine Harper Turf Sweeper accessories) while in the possession of the consumer.

Warranty is limited to parts, labor and ground freight delivery of replacement parts. HII shall not be liable for the consequential damages of any kind, including but not limited to consequential labor costs or transportation charges in connection with replacement or repair of defective parts.

This warranty does not apply to parts subjected to misuse, abuse, alteration, improper or inadequate maintenance, or normal wear (including belts, battery, chains, filters, knives, brush and broom).

Engines are not covered under this warranty. Refer to manufacturer's warranty for specific warranty information. Harper Industries, its agents or representatives, make or imply no other warranties.

Harper Industries makes no warranty with respect to trade accessories. They are subject to the warranties of their respective manufacturers.

ANY IMPLIED OR STATUTORY WARRANTIES, INCLUDING ANY WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. HII makes no other express warranty, nor is anyone authorized to make any on behalf of HII.

For further information please contact your nearest Harper Turf Sweeper dealer.

RECORDS

Date of Purchase _____ / _____ / _____

Dealer's Name _____

Dealer's Phone _____

Serial Number Machine _____

Serial Number Engine _____

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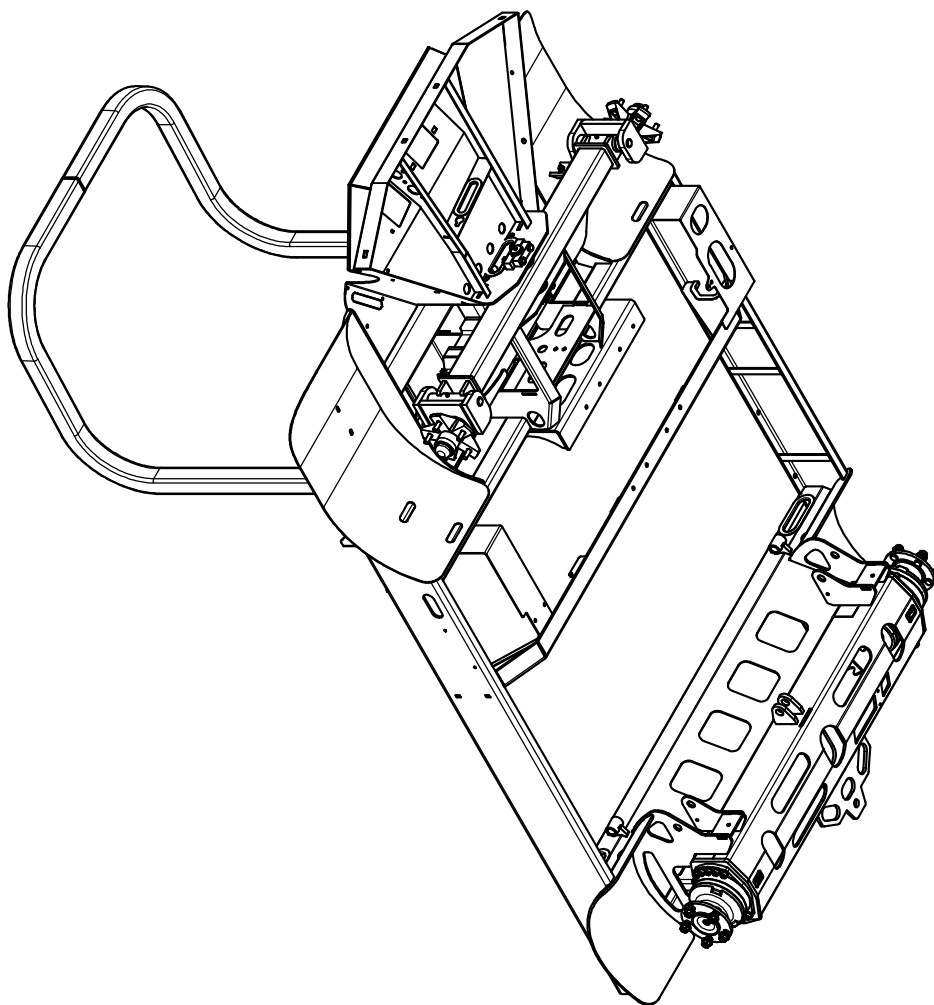
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WHEEL MOTOR & AXLE INSTALLATION

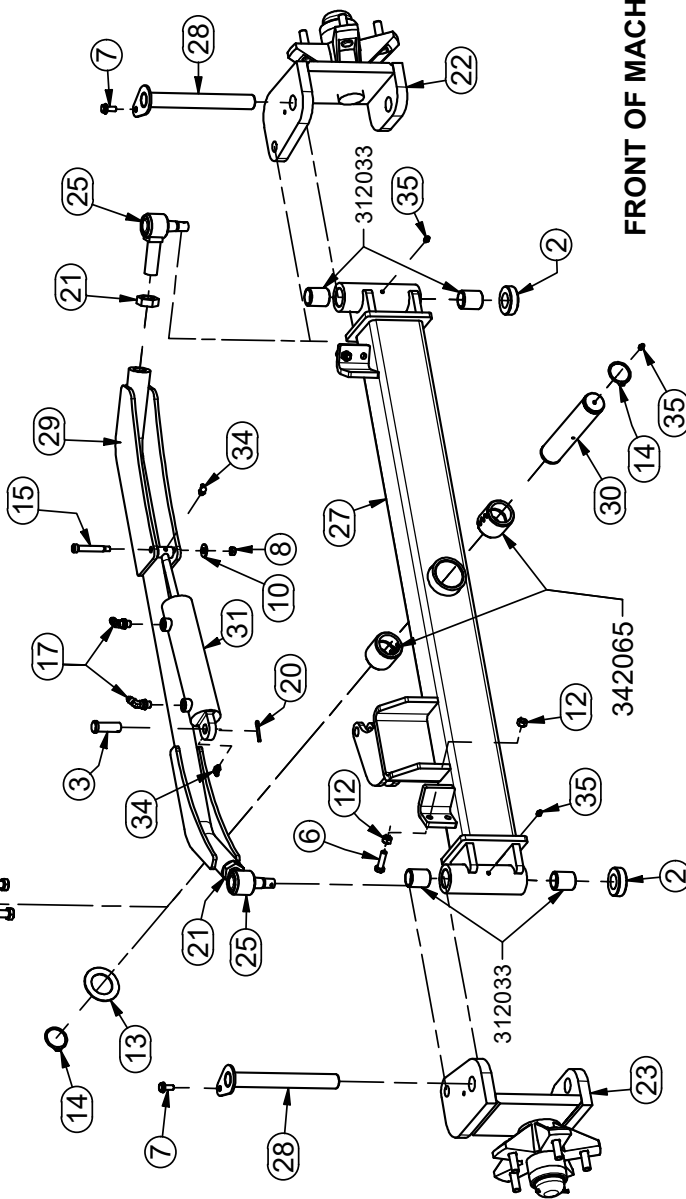


Parts List			DESCRIPTION
ITEM	QTY	PART #	
1	7'	100365	MOLDING - EDGE GUARD, 5/32
2	2	102043	BEARING - THRUST, 1.0 ID X 5/8 T
3	1	102136	Clevis Pin, 5/8 x 1.5
4	4	110129	BOLT, 1/2-13 X 2.75 HEX
5	20	110244	BOLT, 1/2-13 X 1.5 SHCS
6	2	110425	BOLT, 3/8-16 X 1.25
7	2	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
8	1	110600	NUT, 5/16-18, UNITORQUE LOCK
9	4	110610	NUT, 1/2-13
10	1	110665	WASHER, 5/16" FLAT STANDARD
11	24	110666	WASHER, 1/2" LOCK
12	4	110826	NUT, 3/8-16 GR 5
13	1	110862	WASHER - THRUST, IGUS MTI-24
14	2	110888	SNAP RING - EXT, 1-1/2
15	1	111190	BOLT, 3/8 X 2.0 SHOULDER SHCS
16	11'	112084	Rubber Seal, .625 X .25
17	2	120027	ADAPTER, 4MB-4MJ 45
18	6	120249	ADAPTER, 4MJ-6MB
19	4	120446	ADAPTER, 8MJ-10MB
20	1	200029	COTTER PIN, 5/32 X 1
21	2	302129	NUT, 7/8-18 HEX JAM GR 2
22	1	305109	ASSY, LH SPINDLE & HUB
23	1	305110	ASSY, RH SPINDLE & HUB
24	2	311459	KEEPER - AXLE PIVOT, LOWER
25	2	312032	Tie Rod End, RH
26	1	315350	FRAME WELDMENT, SWEEPER
27	1	315394	WELDMENT, FRONT AXLE, 2WD
28	2	315397	WELDMENT, 2WD KINGPIN
29	1	315398	WELDMENT, ROUND STEERING LINK
30	1	317174	PIN, FRONT AXLE
31	1	323010	CYLINDER - STEERING, 1-3/4 X 6
32	1	323057	MOTOR, LH REAR WHEEL, 24.3 CI, 2-SPD
33	1	323058	MOTOR, RH REAR WHEEL, 24.3 CI, 2-SPD
34	2	500230	GREASE ZERK, 1/4-28 90deg
35	3	510174	GREASE ZERK, 1/4-28 ST

FRONT AXLE INSTALLATION

SAME RETAINER AND
HARDWARE USED TO
SECURE REAR SIDE
OF AXLE PIN

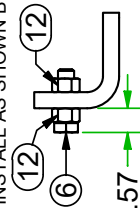
- ADJUSTING TIE ROD ENDS & SETTING ALIGNMENT**
1. START BY ADJUSTING THE TIE ROD LOCATED ON THE RH SIDE OF THE MACHINE. EXTEND STEERING CYLINDER COMPLETELY AND ADJUST THE RH TIE ROD SO THAT THE SPINDLE CONTACTS THE STEERING STOP WHEN THE CYLINDER IS FULLY EXTENDED.
 2. THEN ADJUST THE TIE ROD END LOCATED ON THE LH SIDE OF THE MACHINE SO THAT THE WHEEL HUB FACES ARE PARRALLEL. AS A STARTING POINT, THE APPROXIMATE DIMENSION IS 42.0" BETWEEN TIE ROD ENDS (CTR TO CTR).



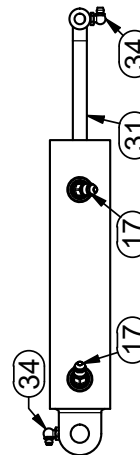
FRONT OF MACHINE

Hub Service Parts		
PART #	QTY	DESCRIPTION
342068	1	HUB KIT (INCLUDES BEARINGS)
312001	1	GREASE CAP
312002	1	GREASE SEAL
312003	5	STUD, 1/2 - 20 NF
312005	1	OUTER RACE, OD 1.980
312006	1	OUTER BEARING, ID 1.063
312007	1	INNER RACE, OD 2.362
312008	1	INNER BEARING, ID 1.378
312038	1	HUB (ONLY), 5 ON 5-1/2
310261	1	NUT, CASTLE 1-14
312009	1	WASHER, FLAT 1.0"
510993	1	COTTER PIN, 5/32 X 2

STEERING STOP INSTALLATION
- INSTALL AS SHOWN BELOW



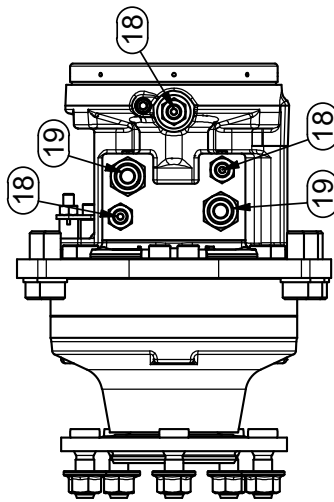
STEERING CYLINDER ADAPTER & ZERK ORIENTATION



WHEEL MOTOR INSTALLATION

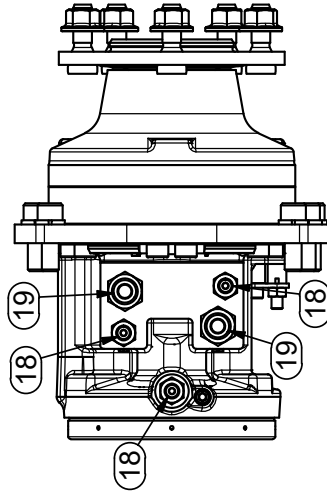
LH Wheel Motor:

Model Code: MSE02-2-**G**2A-F03-1120-Y8JM

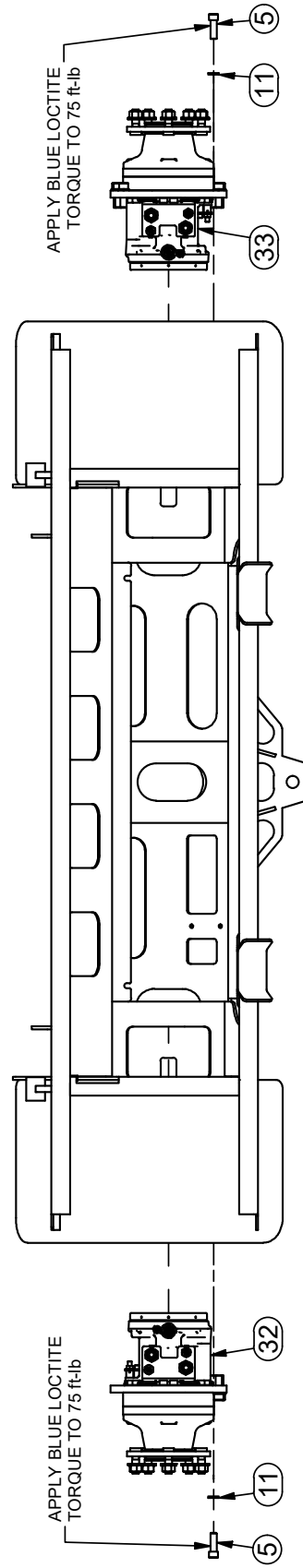


RH Wheel Motor:

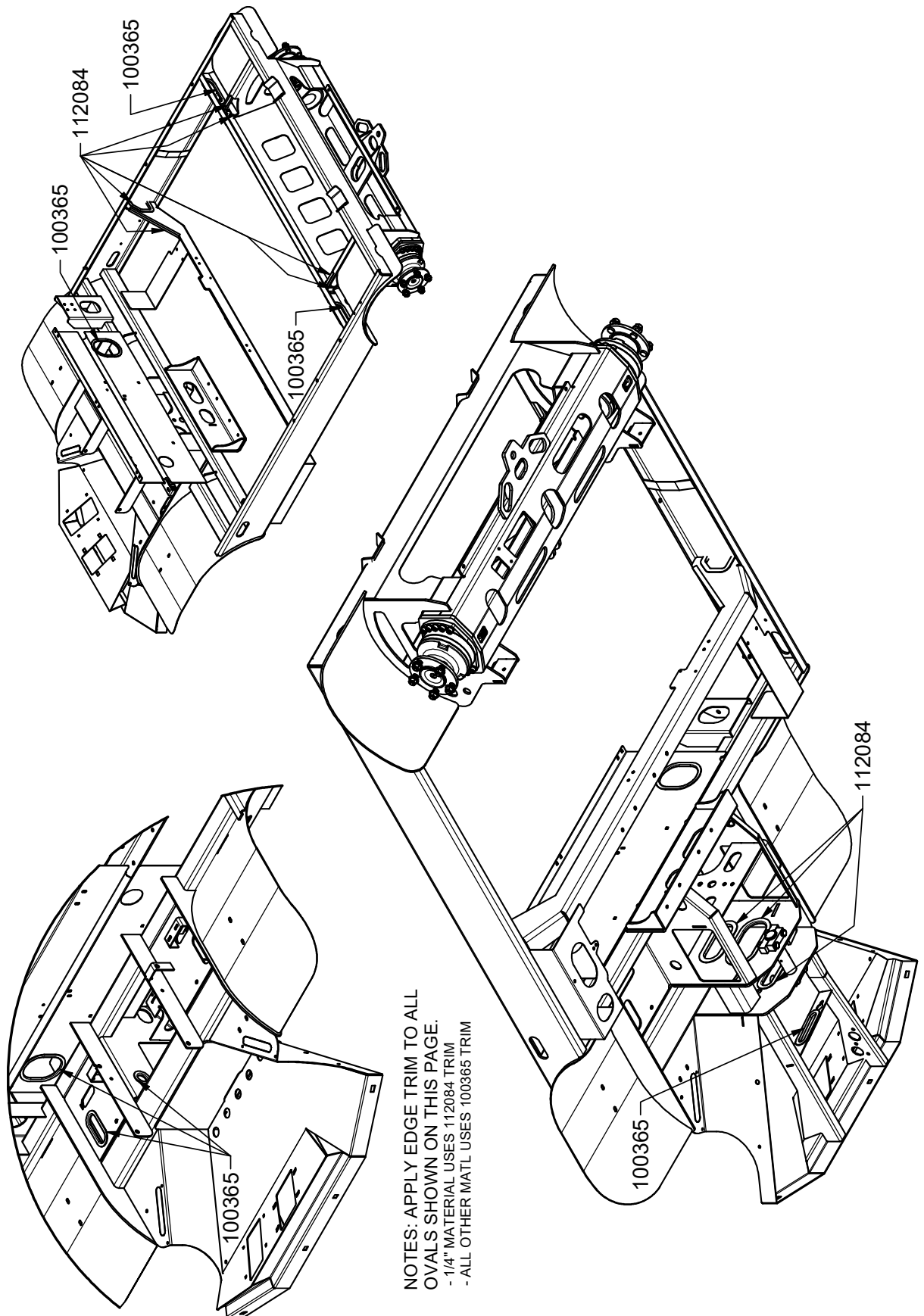
Model Code: MSE02-2-**D**2A-F03-1120-Y8JM



Parts List			DESCRIPTION
ITEM	QTY	PART #	
5	20	110244	BOLT, 1/2-13 X 1.5 SHCS
11	24	110666	WASHER, 1/2" LOCK
18	6	120249	ADAPTER, 4MJ-6MB
19	4	120446	ADAPTER, 8MJ-10MB
32	1	323057	MOTOR, LH REAR WHEEL, 24.3 CI, 2-SPD
33	1	323058	MOTOR, RH REAR WHEEL, 24.3 CI, 2-SPD
22	1	305109	ASSY, LH SPINDLE & HUB
23	1	305110	ASSY, RH SPINDLE & HUB

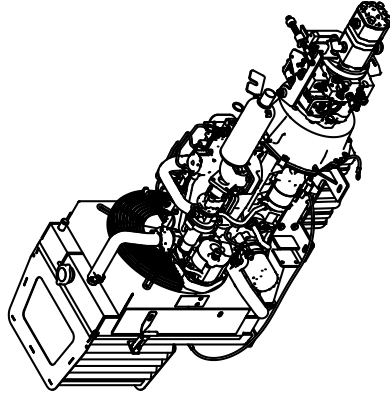


EDGE TRIM PLACEMENT



NOTES: APPLY EDGE TRIM TO ALL
OVALS SHOWN ON THIS PAGE.
- 1/4" MATERIAL USES 112084 TRIM
- ALL OTHER MATL USES 100365 TRIM

ENGINE ASSEMBLY



Parts List				Parts List			
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION
1	1	102074	Clamp, Adel .75w x 1.25id x .406 Hole	32	1	120254	ADAPTER, 12MJ-12MB
2	4	110001	BOLT, 1/2-13 X 1.25, WIZ FLANGE	33	2	120256	ADAPTER, 12MJ-16MB
3	2	110020	Bolt, 5/16-18 X 0.75 in Carriage	34	1	120319	ADAPTER, 6MJ-6MB
4	6	110069	WASHER, 5/16" FLAT SAE	35	1	120546	ADAPTER, 20BH-16MB90
5	3	110074	Hex Nut M6 X 1.0 Thd	36	1	120705	Test Port, M16, 4MB
6	1	110141	NUT, M8 X 1.25 WIZFLANGE	37	1	120740	Adapter, 20mj-12mb
7	2	110155	WASHER, 3/8" FLAT SAE	38	1	120754	Adapter, 6fx-6mj, -4fb Gage Port
8	2	110176	BOLT, M10x1.5 x 35 SHCS	39	2	132014	INSULATOR CAP, (ALTERNATOR)
9	4	110220	BOLT, 1/2-13 X 1, WIZ FLANGE	40	1	132092	FUSE COVER, BUSS CFCOVER-1R
10	1	110300	COTTER PIN, 3/32 X 0.75	41	1	132093	FUSE HOLDER, BUSS CFBAR1-M8XSP
11	2	110419	BOLT, 1/2-13 X 1.75	42	1	132150	FUSE, 50 AMP
12	2	110422	BOLT, 5/16-18 X .75	43	1	302151	Formed Hose, Radiator Bottom
13	1	110459	BOLT, 5/16-18 X 1, WIZ FLANGE	44	1	302152	Formed Hose, Radiator Top
14	5	110469	BOLT, M8x1.25 x 20 Gr 10.9	45	1	302161	COLLAR, TAPERED SPRING TENSIONER
15	9	110560	BOLT, M10-1.25 X 20 HHCS 8.8 PLAIN	46	1	302162	COLLAR, SPRING TENSIONER
16	4	110588	NUT, 1/2-13 WIZ FLANGE	47	1	305112	ASSY, RADIATOR SCREEN
17	3	110606	NUT, 5/16-18 WIZ FLANGE	48	1	315186	Weldment, Kubota Throttle Mnt
18	3	110623	NUT, 5/16-24	49	1	315379	WELDMENT, RADIATOR MOUNT
19	2	110666	WASHER, 1/2" LOCK	50	1	315417	WELDMENT, NEUTRAL CENTERING
20	7	110674	WASHER, 5/16" LOCK	51	2	317301	CATCH, LATCH
21	11	110689	Washer, M10, Lock	52	1	317303	BRKT, NEUTRAL SAFETY SW
22	2	110692	WASHER, 6mm LOCK	53	1	317304	LEVER, PROPULSION PUMP
23	1	110728	CLAMP, ADEL DOUBLE .75WX.5IDX.406HOLE	54	1	317305	BRKT, PUSH/PULL CABLE
24	2	110931	BOLT, M6x1 x 25 Gr 8.8	55	1	317316	BOLT, NEUTRAL CENTERING PIVOT
25	1	111196	Connecting Rod, 5/16-24 X 5/16-24 X 6.0, ZINC	56	1	317421	BRKT, NEUTRAL SPRING
26	1	111197	Spring, Compression 5.12 L X .54 OD X .049 Wire	57	1	323054	Pump, PM30 Propulsion, 1.53 CI / .49 CI Charge
27	4	112101	CLAMP, 1.50", T-BOLT	58	1	323063	PUMP, DOUBLE GEAR 1.16 / .24 CI
28	1	112148	Washer, .474 X .937 X .1, GR 9 Zinc-Plated	59	1	332004	Sender, Water, 3/8 Npt
29	1	120144	ADAPTER, 6MJ-10MB	60	1	332066	SWITCH, 221 F TEMP, 6MP, N.O. RISING
30	1	120224	ADAPTER, 10MJ-10MB90	61	1	342011	ADAPTER - PUMP, KUBOTA 1505, KIT
31	2	120249	ADAPTER, 4MJ-6MB	62	1	342067	MANIFOLD, TOP OUTLET EXHAUST

(PARTS LIST CONTINUED
ON PAGE 2)

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REV: H

Parts List

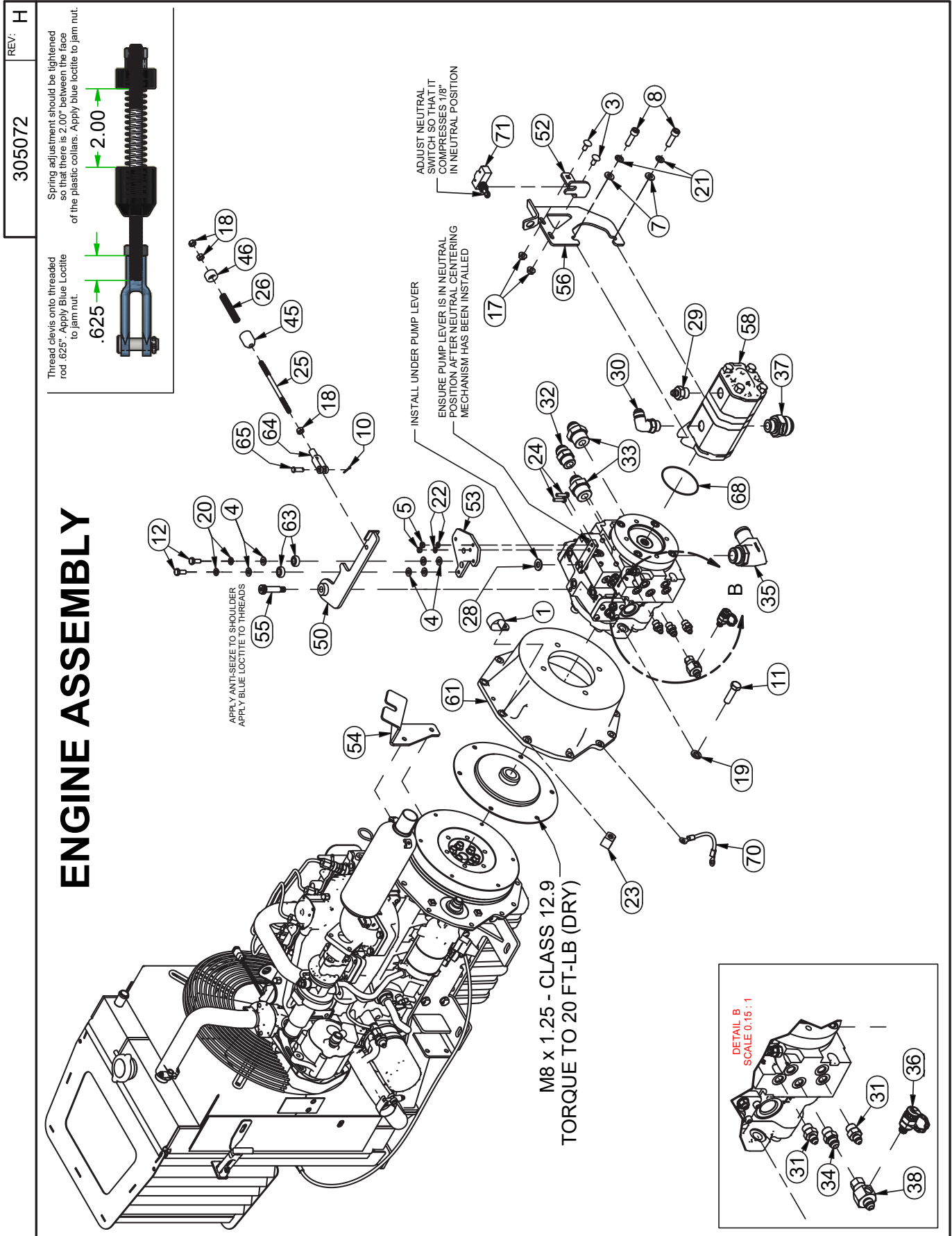
ITEM	QTY	PART #	DESCRIPTION
63	2	540079	BEARING, BALL, 1620RS
64	1	550046	CLEVIS, 5/16-24 X 1.5
65	1	550048	CLEVIS PIN, 5/16"
66	1	815097	WELDMENT, LH ENG/RAD MOUNT
67	1	815098	WELDMENT, RH ENG/RAD MOUNT
68	1	820247	ORING 2-042 1/16" BUNA
69	1	830063	CABLE, POSITIVE BATTERY
70	1	832001	CABLE, GROUND
71	1	832002	SWITCH ROLLER PLUNGER
72	1	832072	HARNESS, 72LC ENGINE
73	1	832076	Switch, 190 F Temp, 8MB, N.C. Rising
74	1	843005	ENGINE, KUBOTA V1505 TIER 4F (25HP)
75	1	843006	COOLING PACKAGE, RADIATOR & OIL

(PARTS LIST CONTINUED FROM PAGE 1)

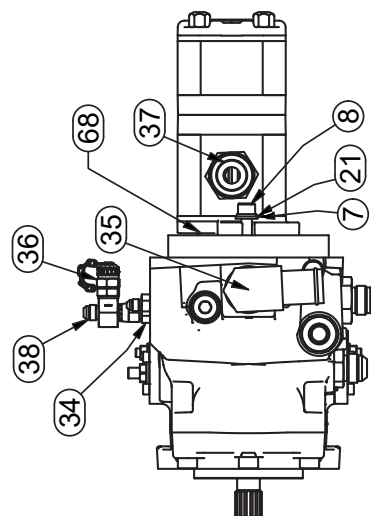
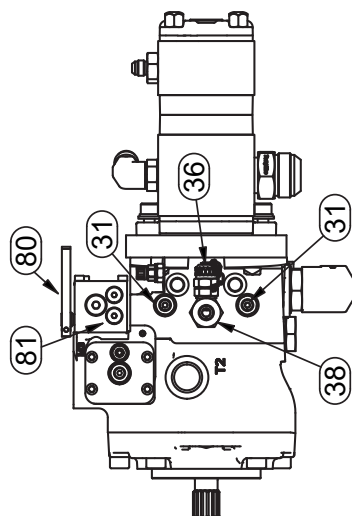
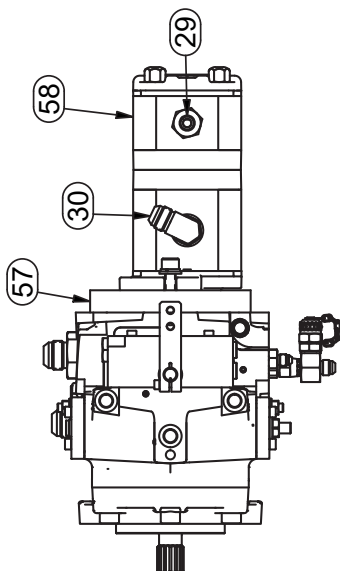
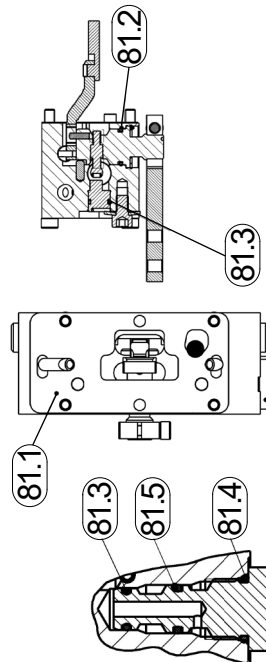
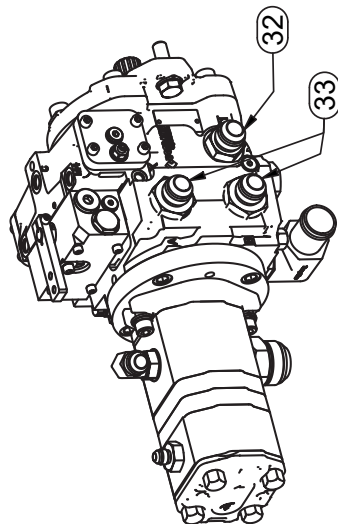
ENGINE ASSEMBLY

MANUFACTURING NOTE:
 AIR INTAKE CANNISTER,
 ENGINE FAN, FUEL FILTER, AND
 MUFFLER KIT INCLUDED WITH ENGINE

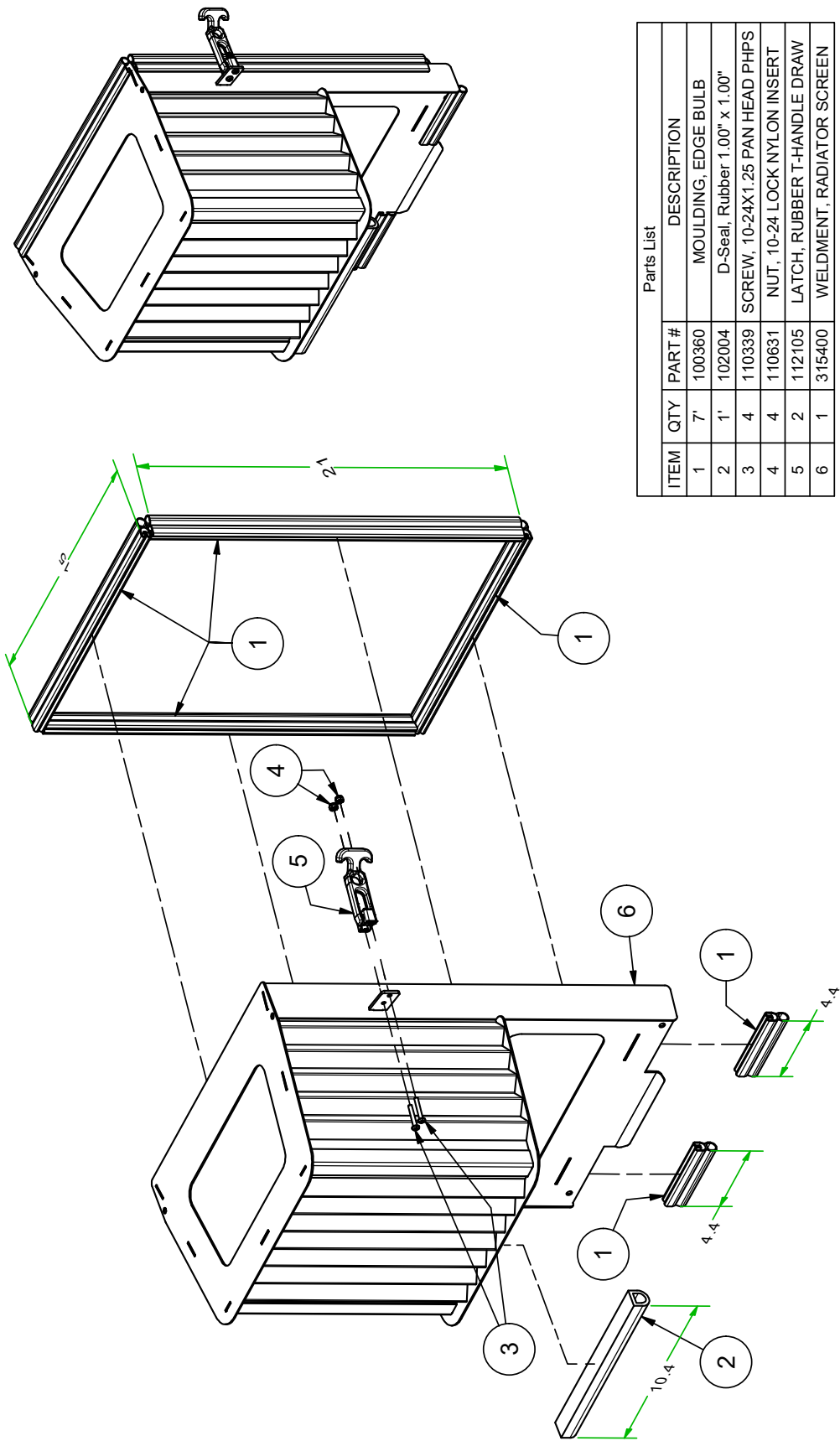
843005 Engine - Service Parts	
PART #	DESCRIPTION
302058	FILTER, OIL
802063	BELT, ENGINE FAN
842018	FAN, ENGINE COOLING
842017	MUFFLER KIT, KUBOTA C31



HYDRAULIC PUMP ASSEMBLY



Parts List			Parts List		
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY
7	2	110155	Washer, 3/8" Flat Sae	38	1
8	2	110176	Bolt, M10x1.5 X 35 Shcs	12075	
21	11	110689	Washer, M10, Lock	323054	
29	1	120144	Adapter, 6mj-10mb	323063	
30	1	120224	Adapter, 10mj-10mb90	820247	
31	2	120249	Adapter, 4mj-6mb	322111	
32	1	120254	Adapter, 12mj-12mb	325013	
33	2	120256	Adapter, 12mj-16mb	322104	
34	1	120319	Adapter, 6mj-6mb	322105	
35	1	120546	Adapter, 20bh-16mb90	322106	
36	1	120705	Test Port, M16, 4mb	322107	
37	1	120740	Adapter, 20mj-12mb	322108	
			DESCRIPTION		
			Adapter, 6fx-6mj, -4fb Gage Port		
			Pump, Pm30 Propulsion, 1.53ci/.49ci Charge		
			Pump, Double Gear 1.16 / .24 Ci		
			O'ring 2-042 1/16" Buna		
			Servo Controller, PM30		
			Seal Kit, PM30 Servo Control		
			GASKET-CONT-PM50		
			OR-1.78-15.60-X		
			OR-1.78-7.65-NBR70		
			OR-1.78-14-NBR70		
			OR-1.78-9.25-NBR90		



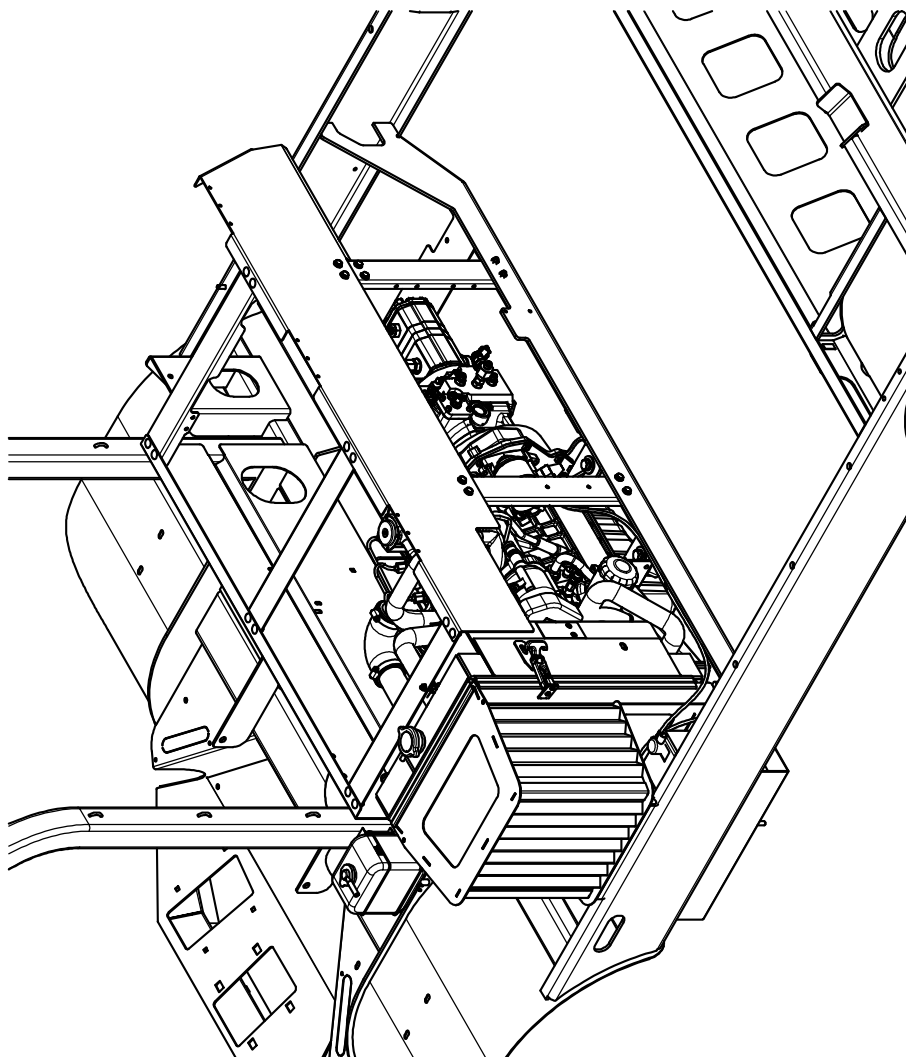
Parts List			DESCRIPTION
ITEM	QTY	PART #	
1	7'	100360	MOULDING, EDGE BULB
2	1'	102004	D-Seal, Rubber 1.00" x 1.00"
3	4	110339	SCREW, 10-24X1.25 PAN HEAD PHPS
4	4	110631	NUT, 10-24 LOCK NYLON INSERT
5	2	112105	LATCH, RUBBER T-HANDLE DRAW
6	1	315400	WELDMENT, RADIATOR SCREEN

REPLACES 305073

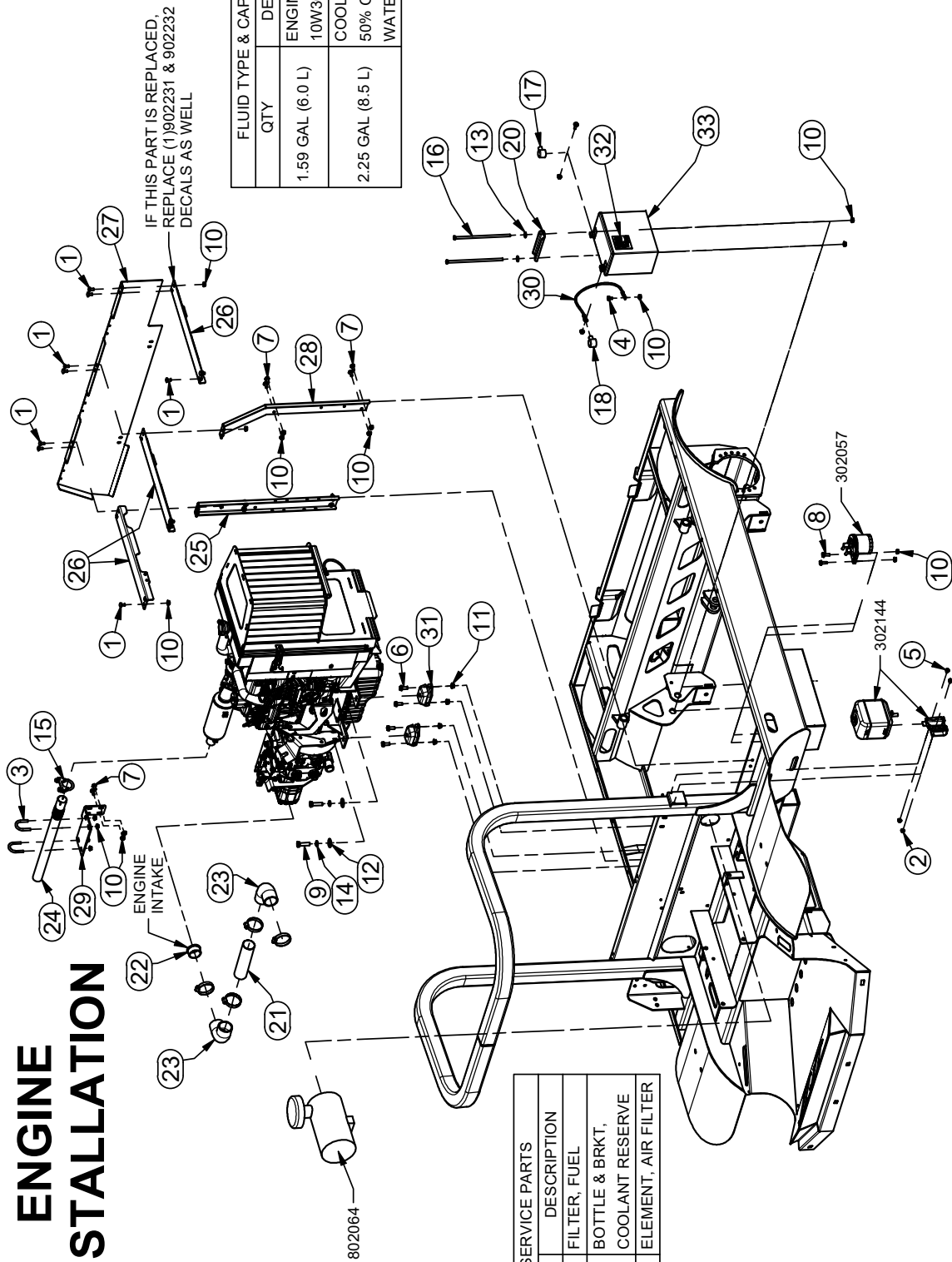
RADIATOR SCREEN ASSEMBLY

ENGINE INSTALLATION

Parts List			DESCRIPTION
ITEM	QTY	PART #	
1	12	110020	Bolt, 5/16-18 X 0.75 in Carriage
2	2	110290	NUT, 1/4-20 WIZ FLANGE
3	2	110362	U-BOLT, 5/16
4	1	110426	BOLT, 5/16-18 X 0.5, WIZ FLANGE
5	2	110434	BOLT, 1/4-20 X 0.5, WIZ FLANGE
6	8	110440	BOLT, 3/8-16 X 1, WIZ FLANGE
7	10	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
8	2	110459	BOLT, 5/16-18 X 1, WIZ FLANGE
9	4	110577	BOLT, M12x1.75 x 45 Gr 10.9
10	31	110606	NUT, 5/16-18 WIZ FLANGE
11	8	110645	NUT, 3/8-16 WIZ FLANGE
12	4	110658	WASHER, 1/2" FLAT STANDARD
13	2	110665	WASHER, 5/16" FLAT STANDARD
14	4	110666	WASHER, 1/2" LOCK
15	1	110779	CLAMP, 1 1/2" EXHAUST
16	2	111198	BOLT, 5/16-18 X 9.5 Zinc Full Thread
17	1	132069	BATTERY TERMINAL COVER, POSITIVE
18	1	132070	BATTERY TERMINAL COVER, NEGATIVE
19	1	305072	ASSY, ENGINE
20	1	311603	BRACKET - HOLD DOWN, BATTERY
21	1	311941	TUBE, AIR INTAKE
22	1	312036	REDUCER, 2.0" TO 1.75"
23	2	312037	ELBOW, 2.0" 90 DEG
24	1	315389	WELDMENT, HAWK EXHAUST
25	1	317205	SUPPORT, REAR SHIELD
26	3	317206	SUPPORT, UPPER SHIELD
27	1	317235	SHIELD, REAR ENGINE
28	1	317236	SUPPORT, VERTICAL REAR SHIELD
29	1	317248	BRKT, EXHAUST SUPPORT
30	1	530051	CABLE, BATTERY/GND 16" BLACK
31	4	800021	MOTOR MOUNT
32	1	800195	DECAL, RECYCLE BATTERY
33	1	832011	BATTERY, SEALED GEL W/ L TERMINAL

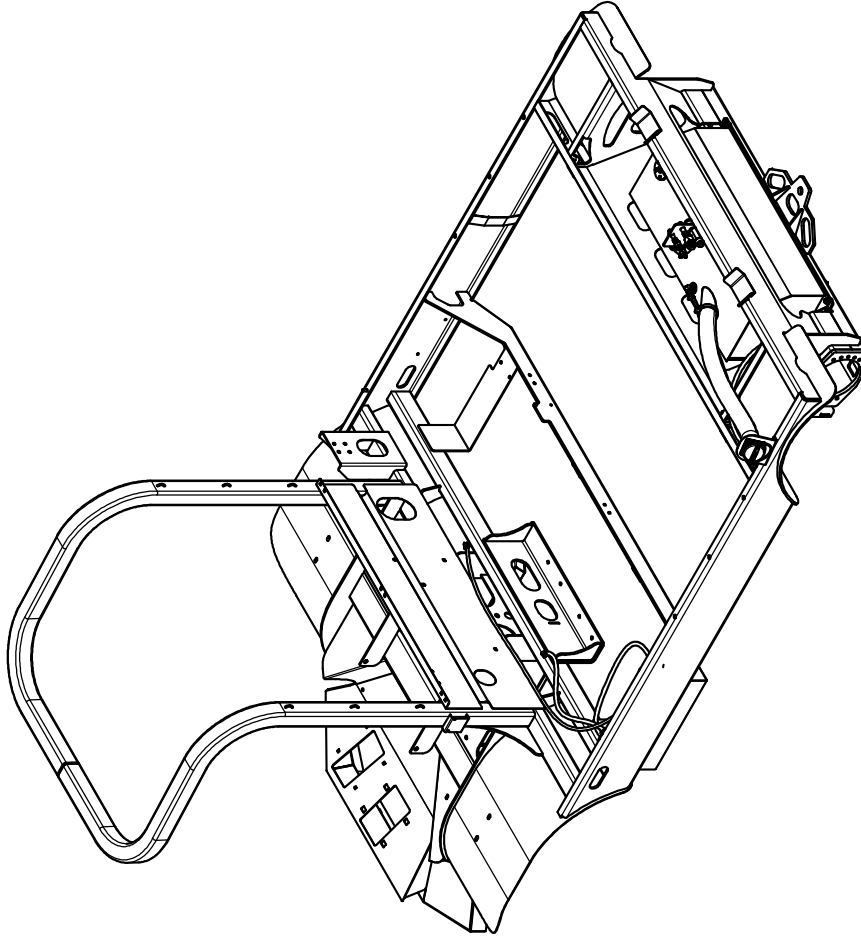


ENGINE INSTALLATION



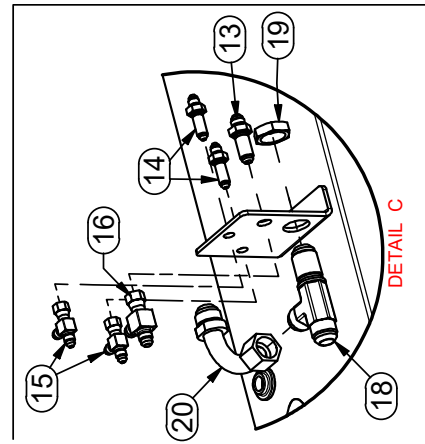
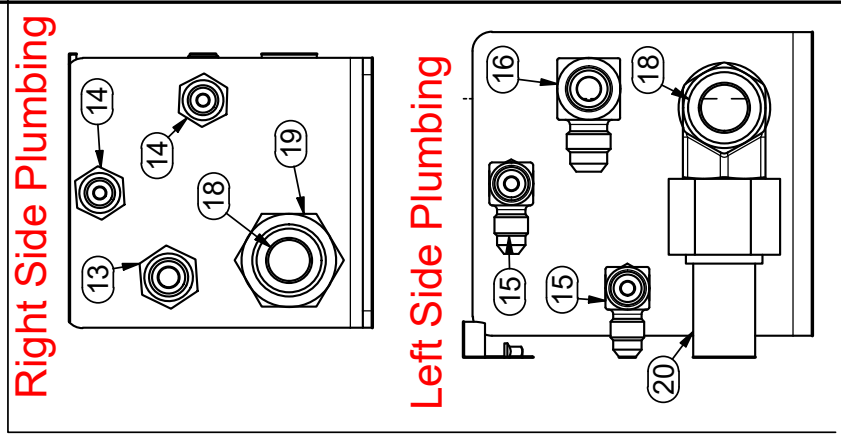
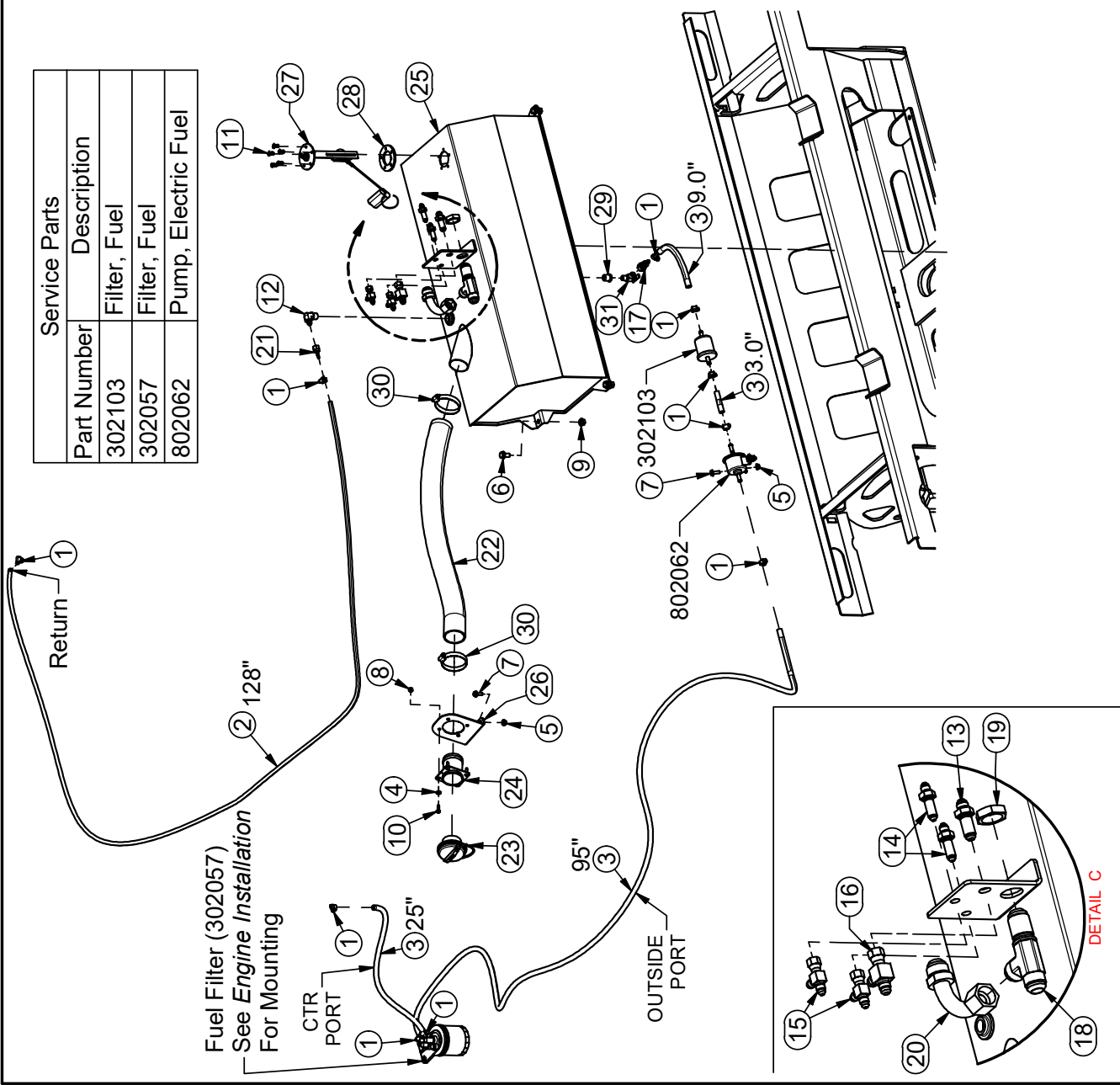
FUEL TANK INSTALLATION

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	10	100361	CLAMP, HOSE #4 .25 MINI
2	128"	100708	Hose, 3/16 High Pressure Fuel
3	132"	100756	Hose, 5/16 High Pressure Fuel
4	1	110090	WASHER, #10 FLAT STANDARD
5	4	110290	NUT, 1/4-20 WIZ FLANGE
6	4	110437	BOLT, 3/8-16 X 0.75, WIZ FLANGE
7	4	110468	BOLT, 1/4-20 X 0.75, WIZ FLANGE
8	4	110631	NUT, 10-24 LOCK NYLON INSERT
9	4	110645	NUT, 3/8-16 WIZ FLANGE
10	4	110709	SCREW, 10-24 X 0.75, RHMS
11	5	112053	SCREW, 10-32 X 1/2 MACH SEAL
12	1	120040	ADAPTER, 4MJ-6MP90
13	1	120102	ADAPTER, BULKHEAD, 6MJ-6MJ
14	2	120126	ADAPTER, BULKHEAD, 4MJ-4MJ
15	2	120215	ADAPTER, 4MJ-4FJX-4MJ
16	1	120216	ADAPTER, 6MJ-6FJX-6MJ
17	1	120378	ADAPTER, 5HB-6FBX
18	1	120487	ADAPTER, 12MJ-12MJ-12MJ BULKHEAD
19	1	120495	Nut, Lock, Bulkhead, -12
20	1	120516	Adapter, 12fjx-12mj90tube
21	1	120655	Adapter, 3hb-4fj
22	1	301010	HOSE, FUEL FILL
23	1	302137	FUEL CAP, 2" DIESEL, GREEN
24	1	315301	WELDMENT, DIESEL FILLER NECK
25	1	315342	WELDMENT, FUEL TANK
26	1	317175	BRKT, FUEL FILL
27	1	332058	Fuel Level Sender, 9.5" Depth
28	1	500172	GASKET, FUEL SENDER
29	1	500209	FITTING, REDUCER 3/8 X 1/4 NPT
30	2	511003	CLAMP, HOSE #36 2.25"
31	1	802023	VALVE, FUEL SHUT OFF 6MB-4MP



FUEL TANK INSTALLATION

Service Parts	
Part Number	Description
302103	Filter, Fuel
302057	Filter, Fuel
802062	Pump, Electric Fuel



Parts List

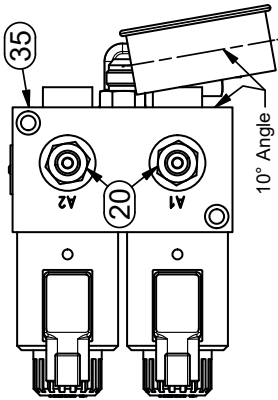
ITEM	QTY	PART #	DESCRIPTION
1	2	110053	Hex Nut M12 X 1.75 Thd
2	6	110290	NUT, 1/4-20 WIZ FLANGE
3	2	110410	BOLT, 1/4-20 X 2.5
4	4	110434	BOLT, 1/4-20 X 0.5, WIZ FLANGE
5	4	110440	BOLT, 3/8-16 X 1, WIZ FLANGE
6	2	110844	BOLT, 1/4-20 X 3
7	2	110845	BOLT, M12x1.75 x 60 Gr 10.9
8	2	111011	BOLT, M5-.80 x 55, SHCS, STAINLESS
9	2	111012	Nut, M5-.80, Nylock, Stainless
10	2	111013	WASHER, M5, FLAT, STAINLESS
11	2	111101	Nut, M12-1.75, Nylock Gr 10.9 ZY
12	3	112007	CLAMP, 1.75", T-BOLT
13	6	112008	CLAMP, 1.25", T-BOLT
14	2	112101	CLAMP, 1.50", T-BOLT
15	2	112137	CLAMP, 2.00", T-BOLT
16	2	120134	ADAPTER, 6MJ-8MB90
17	1	120187	ADAPTER, 12BH-8MB90
18	4	120222	ADAPTER, 6MJ-6MB90
19	2	120226	ADAPTER, 12BH-12MB90
20	2	120249	ADAPTER, 4MJ-6MB
21	1	120303	ADAPTER, 12MB-16HB
22	2	120319	ADAPTER, 6MJ-6MB
23	2	120728	PLUG, 6MB HEX
24	2	120739	ADAPTER, 4MJ-8MB
25	1	120742	ADAPTER, 12MB-12FB-12FB
26	1	120754	Adapter, 6fjx-6mj, -4fb Gage Port
27	1	122016	ADAPTER, 12MJ-12MJ-12F-JX
28	1	122034	HEAD, SPIN-ON FILTER, -12SAE
29	1	260265	MOUNTING BRACKET, FILTER
30	1	305087	Assy, Hydraulic Tank, ISO
31	1	322095	BLOCK, CASE DRAIN
32	1	322096	TEE, 1.5 x 1.25 x 1.25 BH
33	1	322098	GAUGE, PRESSURE, 600 PSI, 4MB
34	1	323060	VALVE, LOOP FLUSH
35	1	323061	VALVE, BRK RELEASE & HI GEAR
36	1	323068	HOSE KIT, 2WD HAWK GROUND DRIVE
37	2	570483	TOOL, BRAKE RELEASE
38	1	822044	FILTER, 3 MICRON
39	1	822045	GAUGE, OIL FILTER

PROPULSION HYDRAULIC INSTALLATION

The diagram illustrates the hydraulic system for the HK4200. It features a central hydraulic tank with an oil filter. A brake release & high gear valve is connected to the tank. A case drain block is also shown. The system includes a double gear pump, a loop flush valve, and a propulsion pump. Two rear wheel motors, labeled LH REAR WHEEL MOTOR and RH REAR WHEEL MOTOR, are connected to the system via hoses.

VALVE ASSEMBLIES

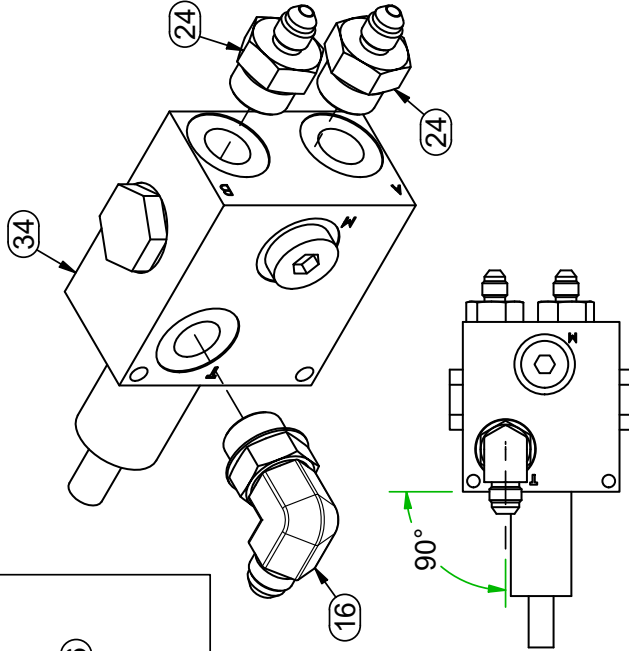
Parts List		
ITEM	QTY	DESCRIPTION
18	1	ADAPTER, 6MJ-6MB90
20	2	ADAPTER, 4MJ-6MB
22	1	ADAPTER, 6MJ-6MB
26	1	Adapter, 6fjx-6mj, -4fb Gage Port
33	1	GAUGE, PRESSURE, 600 PSI, 4MB
35	1	VALVE, BRK RELEASE & HI GEAR



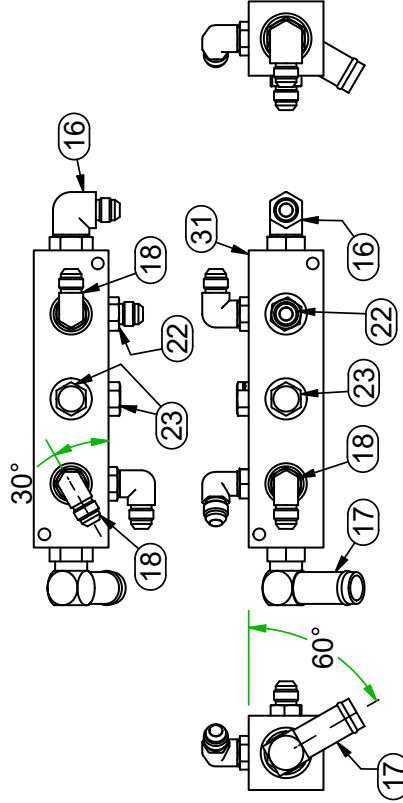
Brake Release & High Gear Valve

Parts List		
ITEM	QTY	DESCRIPTION
16	1	ADAPTER, 6MJ-8MB90
24	2	ADAPTER, 4MJ-8MB
34	1	VALVE, LOOP FLUSH

Loop Flush Valve



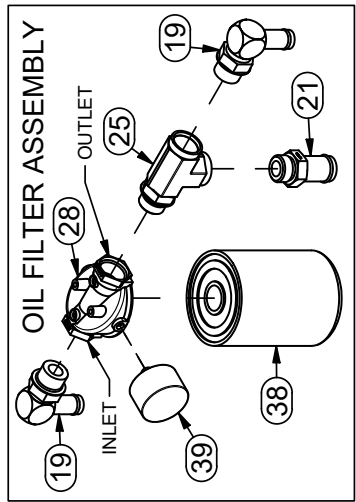
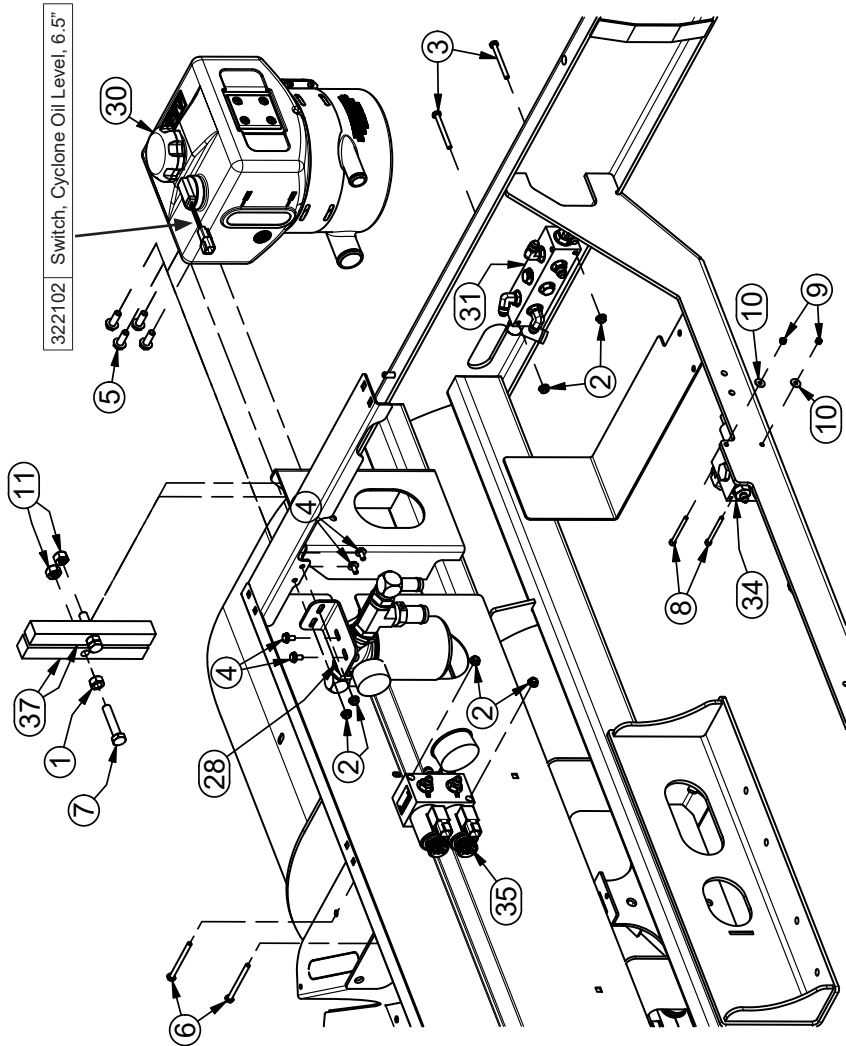
Case Drain Block



Parts List		
ITEM	QTY	DESCRIPTION
16	1	ADAPTER, 6MJ-8MB90
17	1	ADAPTER, 12BH-8MB90
18	3	ADAPTER, 6MJ-6MB90

Parts List		
ITEM	QTY	DESCRIPTION
22	1	ADAPTER, 6MJ-6MB
23	2	PLUG, 6MB HEX
31	1	BLOCK, CASE DRAIN

TANK, FILTER, & VALVE INSTALLATION

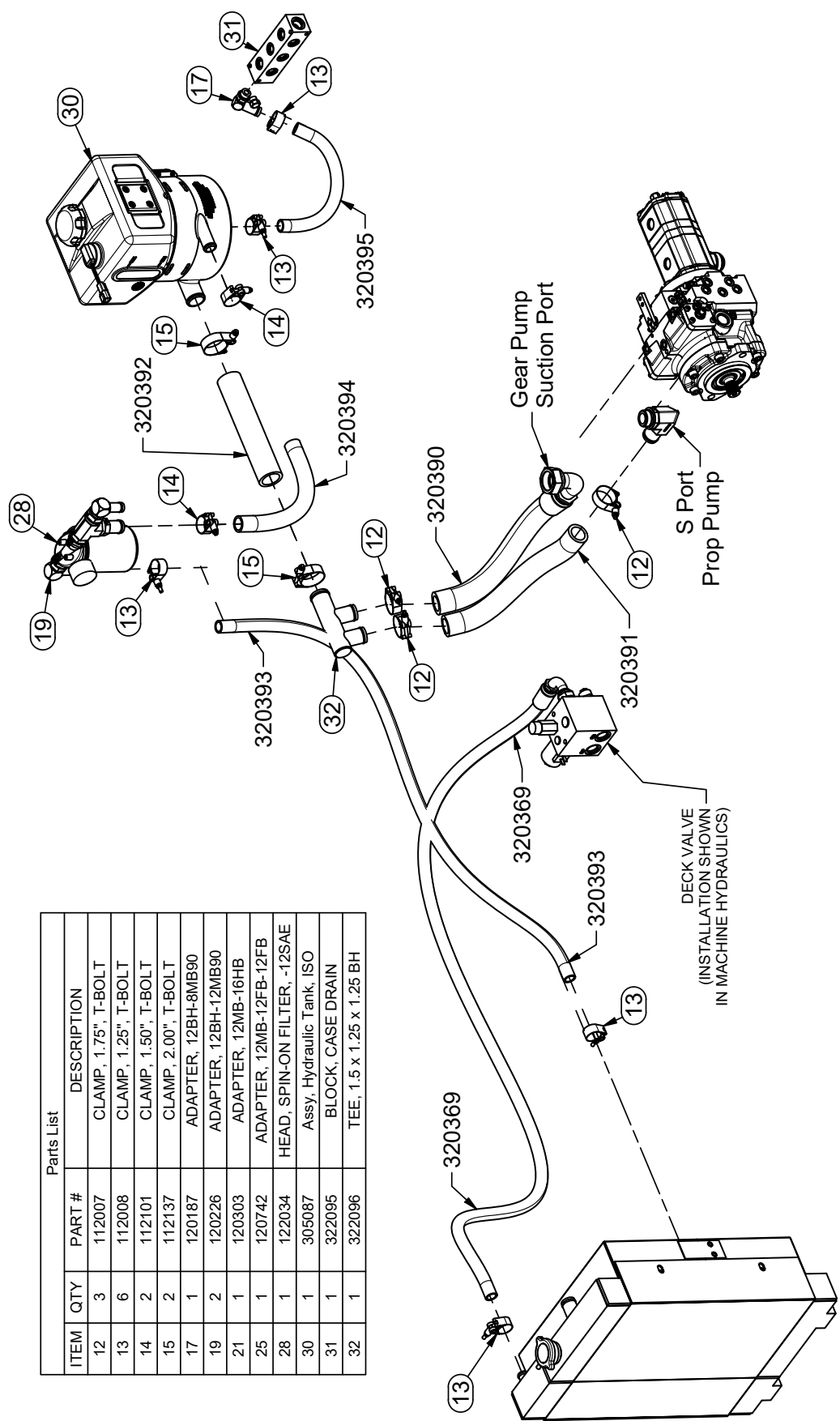


SOME PARTS HIDDEN FOR CLARITY

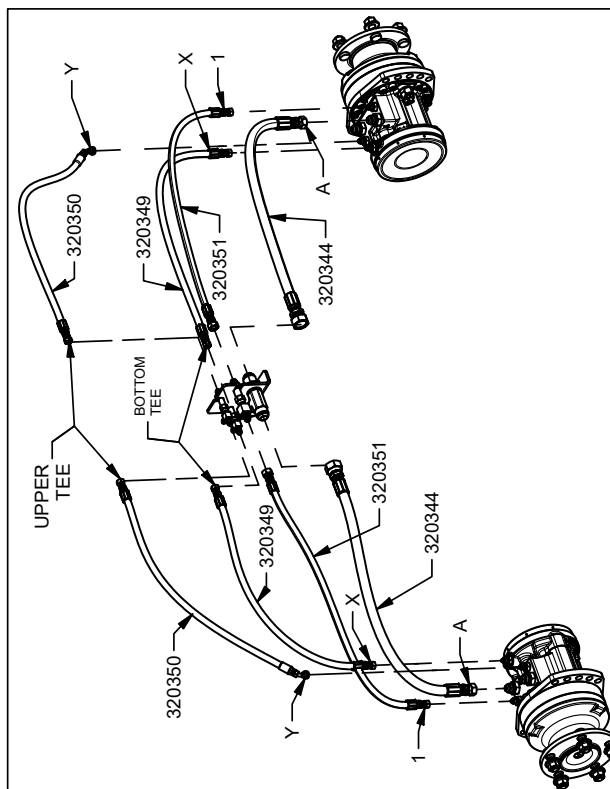
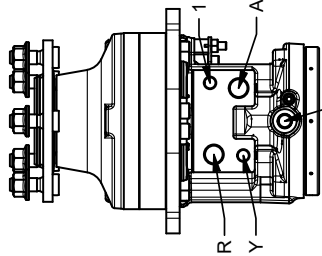
Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	2	110053	Hex Nut M12 X 1.75 Thd
2	6	110290	NUT, 1/4-20 WIZ FLANGE
3	2	110410	BOLT, 1/4-20 X 2.5
4	4	110434	BOLT, 1/4-20 X 0.5, WIZ FLANGE
5	4	110440	BOLT, 3/8-16 X 1, WIZ FLANGE
6	2	110844	BOLT, 1/4-20 X 3
7	2	110845	BOLT, M12x1.75 x 60 Gr 10.9
8	2	111011	BOLT, M5x.80 x 55, SHCS, STAINLESS
9	2	111012	Nut, M5-.80, Nylock, Stainless
10	2	111013	WASHER, M5, FLAT, STAINLESS
11	2	111101	Nut, M12-1.75, Nylock Gr 10.9 ZY
19	2	120226	ADAPTER, 12BH-12MB90
21	1	120303	ADAPTER, 12MB-16HB
23	2	120728	PLUG, 6MB HEX
24	2	120739	ADAPTER, 4MJ-8MB
25	1	120742	ADAPTER, 12MB-12FB-12FB
26	1	120754	Adapter, 6fix-6mj, -4fb Gage Port
28	1	122034	HEAD, SPIN-ON FILTER, -12SAE
30	1	305087	Assy, Hydraulic Tank, ISO
31	1	322095	BLOCK, CASE DRAIN
33	1	322098	GAUGE, PRESSURE, 600 PSI, 4MB
34	1	323060	VALVE, LOOP FLUSH
35	1	323061	VALVE, BRK RELEASE & HI GEAR
37	2	570483	TOOL, BRAKE RELEASE
38	1	822044	FILTER, 3 MICRON
39	1	822045	GAUGE, OIL FILTER

PROPULSION SUCTION & DRAIN PLUMBING

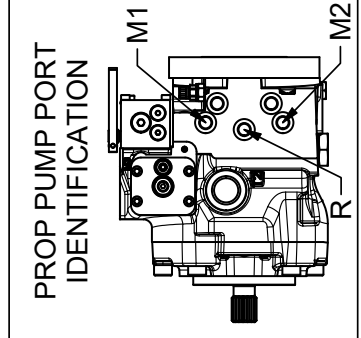
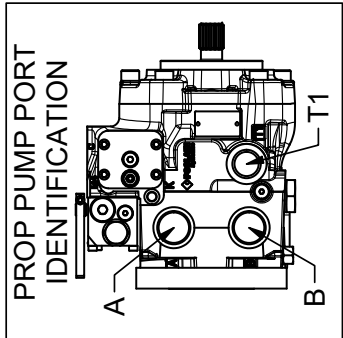
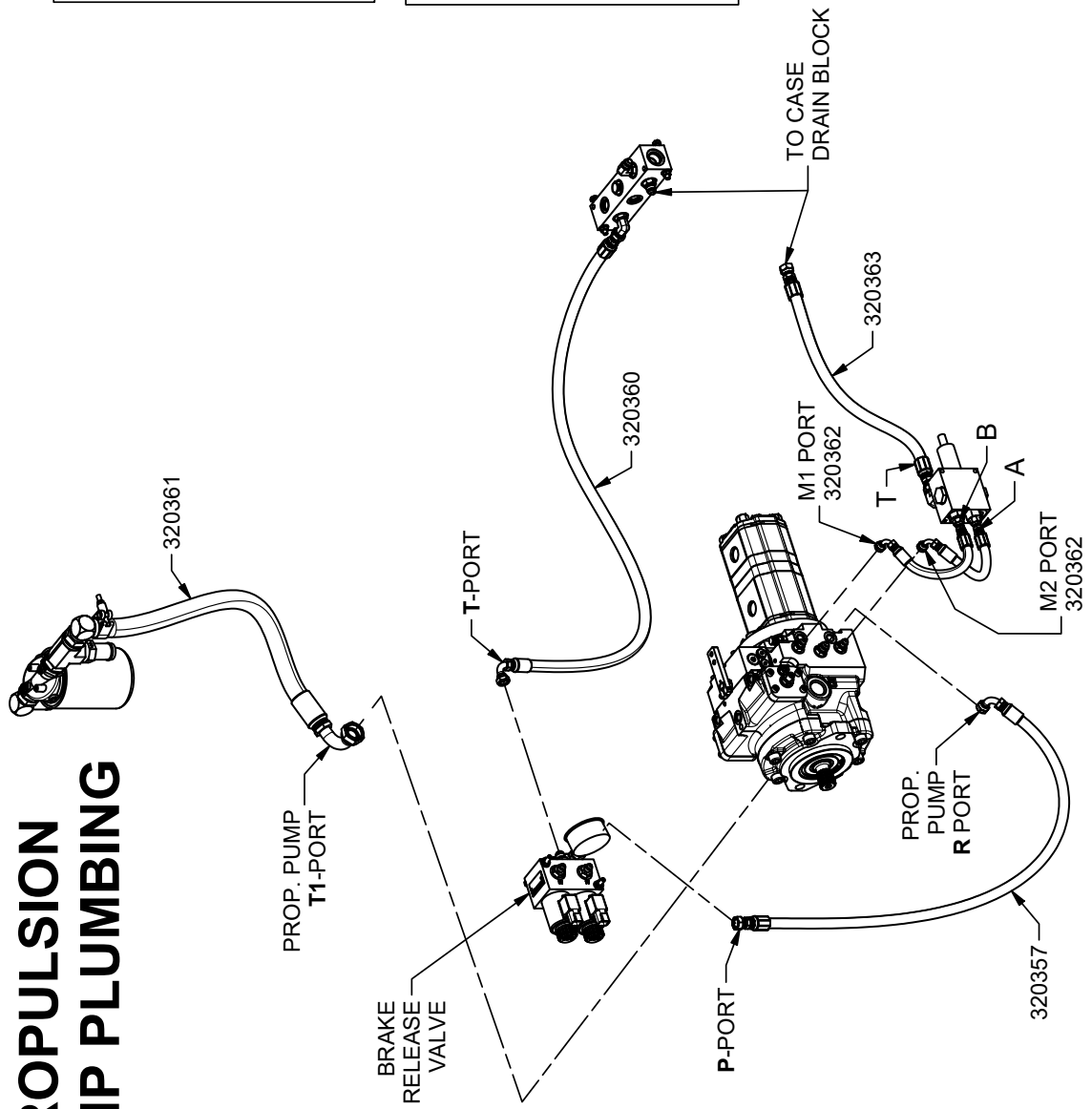
Parts List		
ITEM	QTY	PART # DESCRIPTION
12	3	112007 CLAMP, 1.75", T-BOLT
13	6	112008 CLAMP, 1.25", T-BOLT
14	2	112101 CLAMP, 1.50", T-BOLT
15	2	112137 CLAMP, 2.00", T-BOLT
17	1	120187 ADAPTER, 12BH-8MB90
19	2	120226 ADAPTER, 12BH-12MB90
21	1	120303 ADAPTER, 12MB-16HB
25	1	120742 ADAPTER, 12MB-12FB-12FB
28	1	122034 HEAD, SPIN-ON FILTER, -12SAE
30	1	305087 Assy, Hydraulic Tank, ISO
31	1	322095 BLOCK, CASE DRAIN
32	1	322096 TEE, 1.5 x 1.25 x 1.25 BH



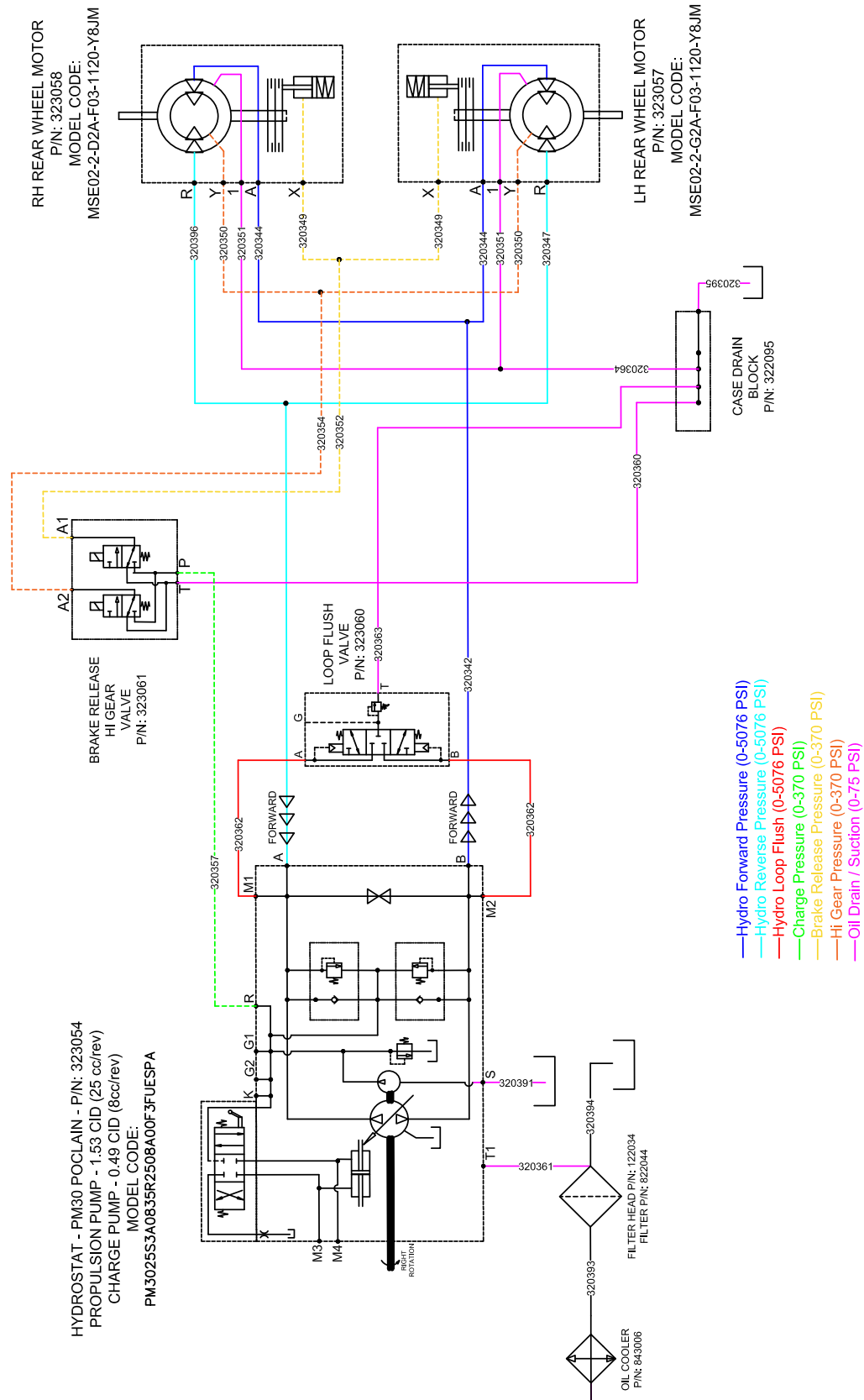
MOTOR PORT IDENTIFICATION



PROPULSION PUMP PLUMBING



SWEEPER PROPULSION SCHEMATIC - 2WD



305098

REV: A

HYDRAULIC SCHEMATIC
SHOWN ON PAGE 5.10

ITEM		QTY		PART #		DESCRIPTION	
1	8	110264				BOLT, 10-24 X .5 STAINLESS, PHILLIPS	
2	6	110290				NUT, 1/4-20 WIZ FLANGE	
3	2	110434				BOLT, 1/4-20 X 0.5, WIZ FLANGE	
4	4	110437				BOLT, 3/8-16 X 0.75, WIZ FLANGE	
5	4	110474				BOLT, 1/4-20 X 1-1/2	
6	2	110529				BOLT, 5/16-18 X 4.5	
7	4	110588				NUT, 1/2-13 WIZ FLANGE	
8	5	110606				NUT, 5/16-18 WIZ FLANGE	
9	4	110640				Hex Nut M10	
10	4	110645				NUT, 3/8-16 WIZ FLANGE	
11	4	110689				WASHER, 10mm LOCK	
12	8	110999				Nut, 10-24 U-Type, .025"- .125" panel	
13	4	111055				STUD, M10 X 1.5 X 42 GRADE 8.8	
14	3	111151				Hex Cap 5-16x2_1-4 UNC	
15	4	112070				Bolt, 1/2-13 X 1.25 in Carriage	
16	4	120092				ADAPTER, 6MJ-6MJ-6MB	
17	1	120134				ADAPTER, 6MJ-8MB90	
18	1	120143				ADAPTER, 12MJ-10MB	
19	2	120216				ADAPTER, 6MJ-6F JX-6MJ	
20	2	120222				ADAPTER, 6MJ-6MB90	
21	1	120239				ADAPTER, 6MJ-8MB	
22	2	120249				ADAPTER, 4MJ-6MB	
23	1	120251				ADAPTER, 10MJ-10MB	
24	1	120319				ADAPTER, 6MJ-6MB	
25	2	120398				ADAPTER, REST 6MJ-6MB, .047	
26	2	120446				ADAPTER, 8MJ-10MB	
27	2	120689				Adapter, 6MB90-6FB	
28	6	120739				ADAPTER, 4MJ-8MB	
29	2	130012				CLAMP, ADEL AC28 .265 HOLE	
30	1	302079				COLUMN ASSY, TILT STEERING	
31	1	311726				MOUNT, STEERING COLUMN	
32	2	311737				PLATE, ORBITAL COVER	
33	1	315353				WELDMENT, OPERATOR CONSOLE	
34	2	322074				VALVE, PO CHECK	
35	2	322075				VALVE BODY, 3-WAY SAE-6	
36	1	322097				VALVE ASSY, THREE SPOOL	
37	1	323046				MOTOR, STEERING ORBITAL	
38	1	323062				HOSE KIT, HAWK MACHINE HYDRAULIC	

Parts List

ITEM	QTY	PART #	DESCRIPTION
39	1	502087	Cap, Center Steering
40	1	502088	Nut, Steering Wheel, 13/16-20 UNEF
41	1	552002	STEERING WHEEL
42	1	820158	DECK VALVE

Parts List

STEERING ORBITAL MOTOR

3-SPOOL CYLINDER CONTROL VALVE

DOUBLE GEAR PUMP

STEERING CYLINDER

CASE DRAIN BLOCK

DECK CONTROL VALVE

HOPPER DOOR PO CHECK VALVE

HOPPER LIFT PO CHECK VALVE

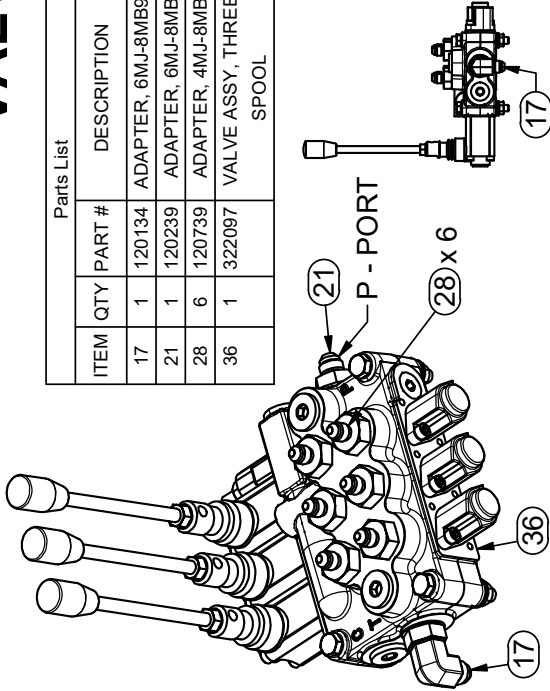
DECK LIFT CYLINDER

MACHINE HYDRAULIC INSTALLATION

VALVE ASSEMBLIES

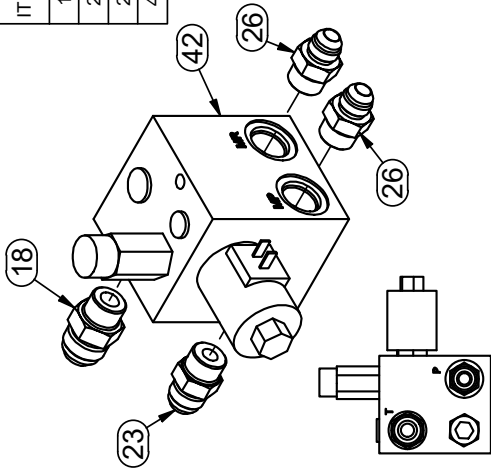
Three Spool Valve Assembly

Parts List		
ITEM	QTY	DESCRIPTION
17	1	ADAPTER, 6MJ-8MB90
21	1	ADAPTER, 6MJ-8MB
28	6	ADAPTER, 4MJ-8MB
36	1	VALVE ASSY, THREE SPOOL



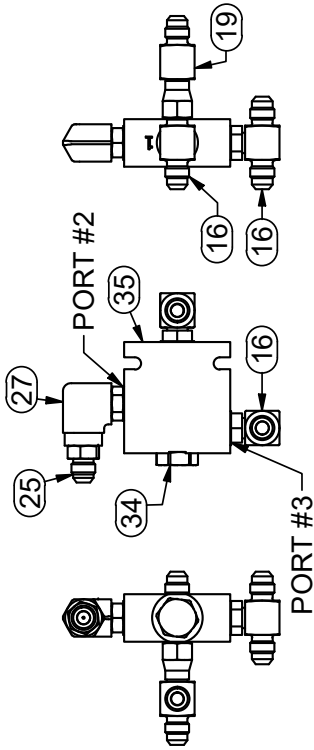
Deck Valve Assembly

Parts List		
ITEM	QTY	DESCRIPTION
18	1	ADAPTER, 12MJ-10MB
23	1	ADAPTER, 10MJ-10MB
26	2	ADAPTER, 8MJ-10MB
42	1	DECK VALVE



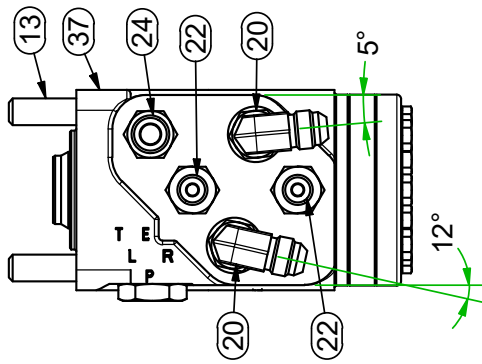
820158 - SERVICE PARTS	
PART #	DESCRIPTION
522163	COIL, 12VDC DEUTSCH
820230	VALVE, COUNTER BALANCE
820231	RELIEF, 3000 PSI PRESSURE
820232	VALVE, N.O. SOLENOID CARTRIDGE

P.O. Check Valve Assembly X 2

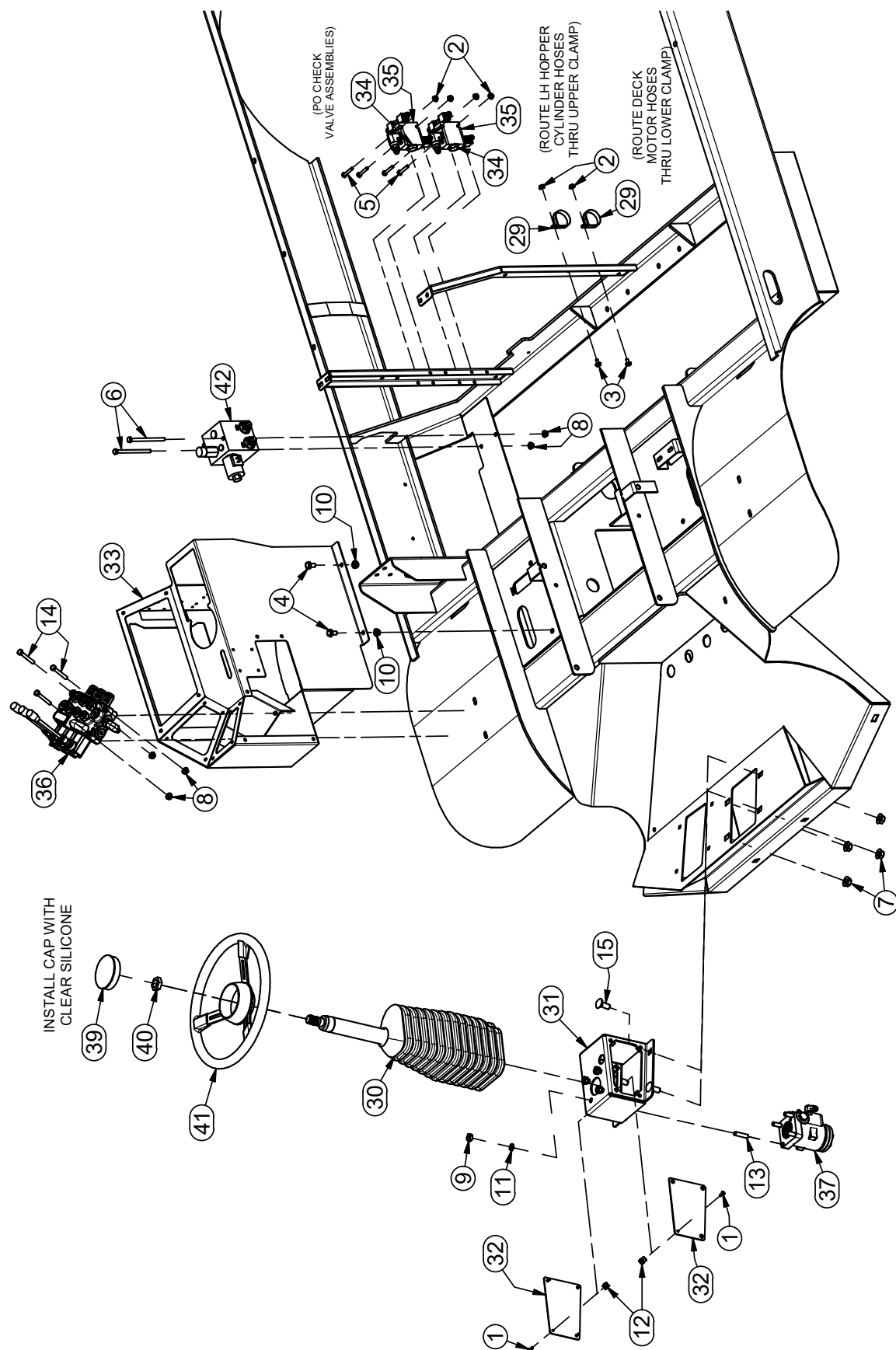


Parts List		
ITEM	QTY	DESCRIPTION
16	4	ADAPTER, 6MJ-6MJ-6MB
19	2	ADAPTER, 6MJ-6FJX-6MJ
25	2	ADAPTER, REST 6MJ-6MB, .047
27	2	Adapter, 6MB90-6FB
34	2	VALVE, PO CHECK
35	2	VALVE BODY, 3-WAY SAE-6

Steering Orbital Assembly

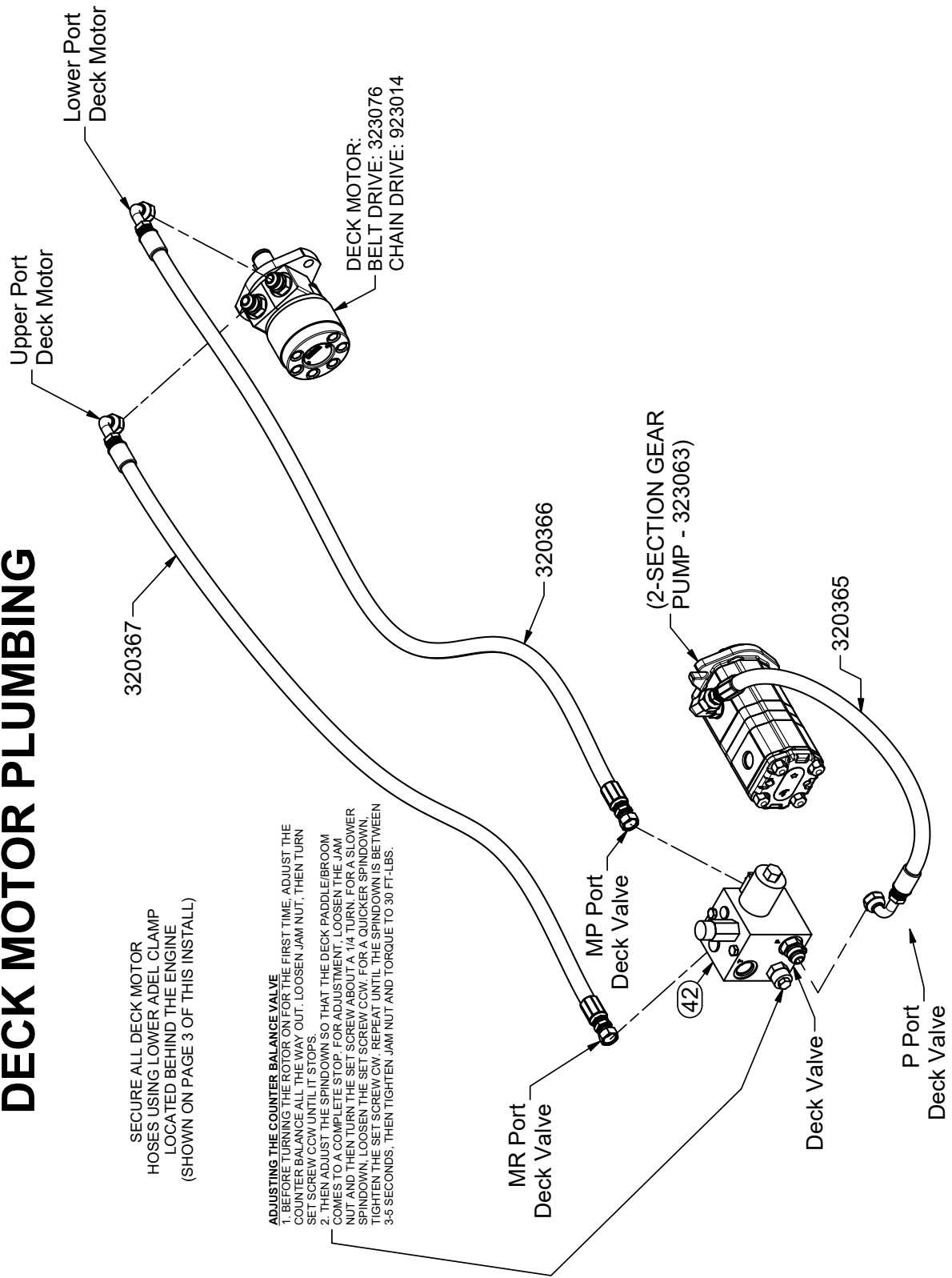


Parts List		
ITEM	QTY	DESCRIPTION
13	4	STUD, M10 X 1.5 X 42 GRADE 8.8
20	2	ADAPTER, 6MJ-6MB90
22	2	ADAPTER, 4MJ-6MB
24	1	ADAPTER, 6MJ-6MB
37	1	MOTOR, STEERING ORBITAL

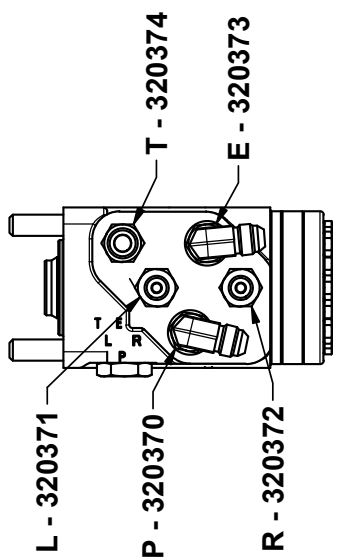


VALVE INSTALLATION

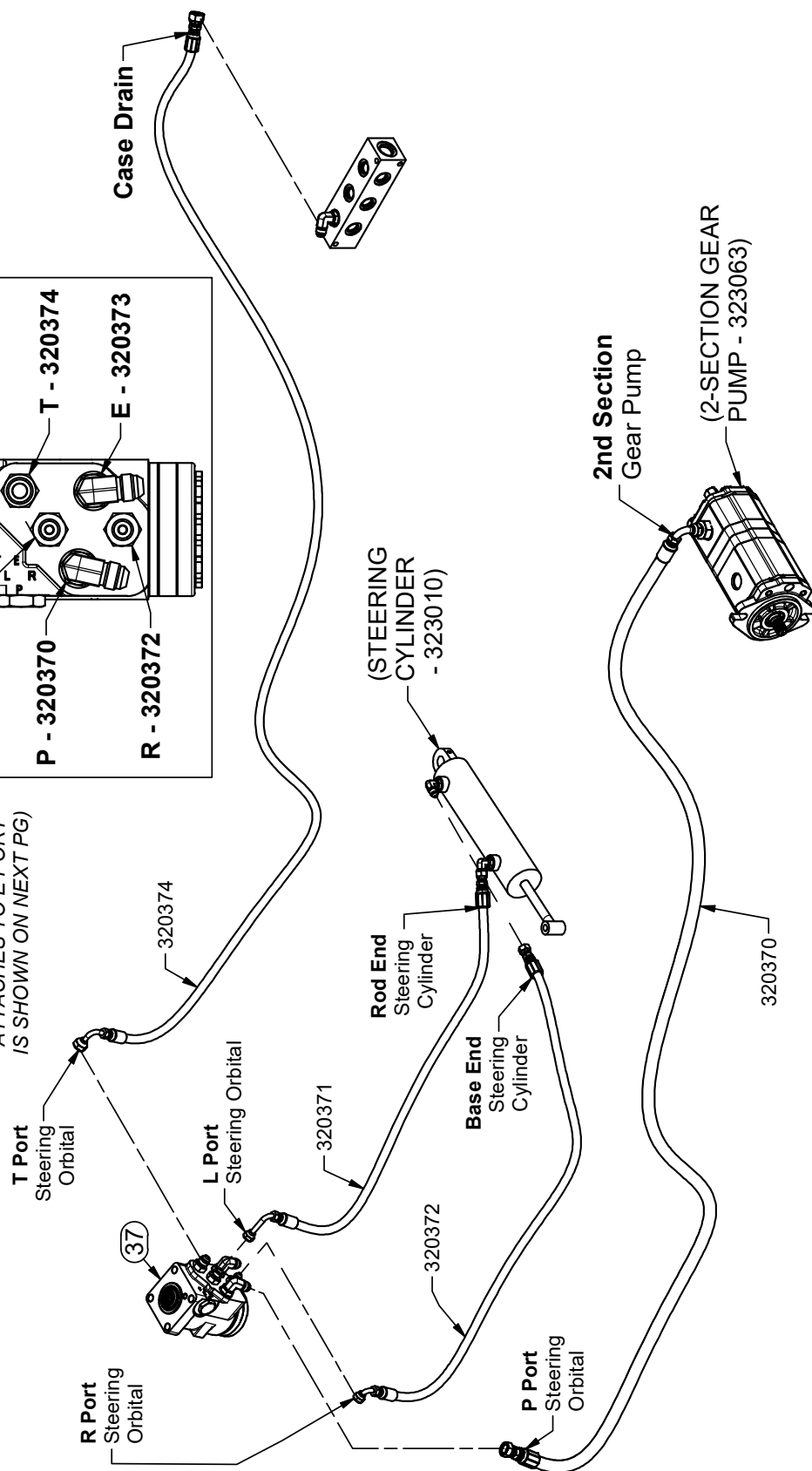
DECK MOTOR PLUMBING



STEERING ORBITAL PORT IDENTIFICATION



(HOSE 320373 THAT ATTACHES TO E PORT IS SHOWN ON NEXT PG)

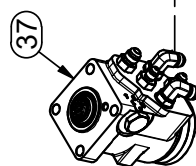
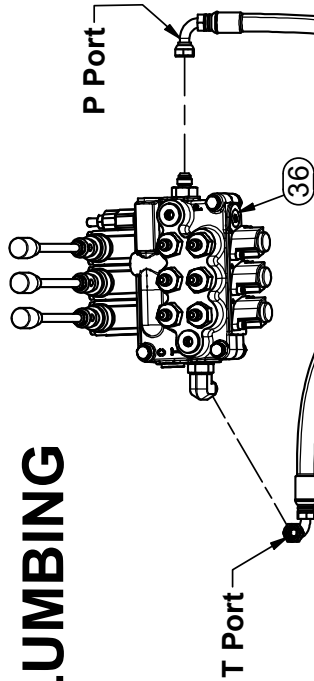
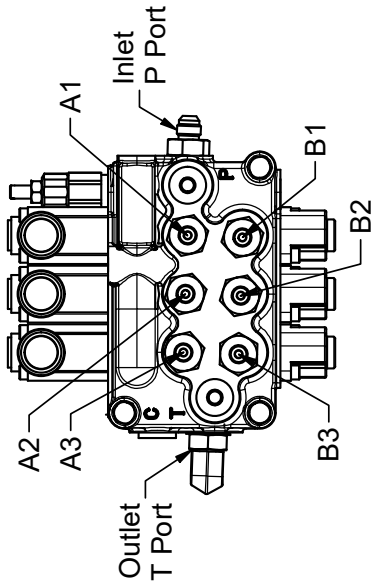


STEERING PLUMBING

THREE SPOOL VALVE VALVE PLUMBING

305098 REV: A

THREE SPOOL VALVE PORT IDENTIFICATION



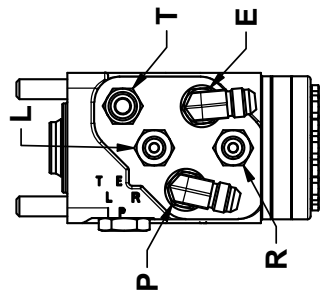
Port E
Steering Orbital

320373

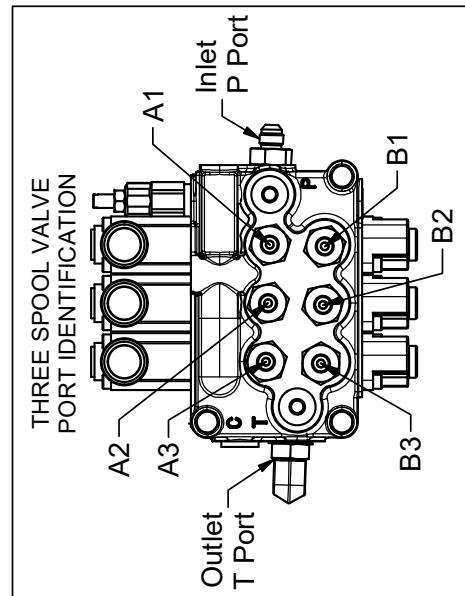
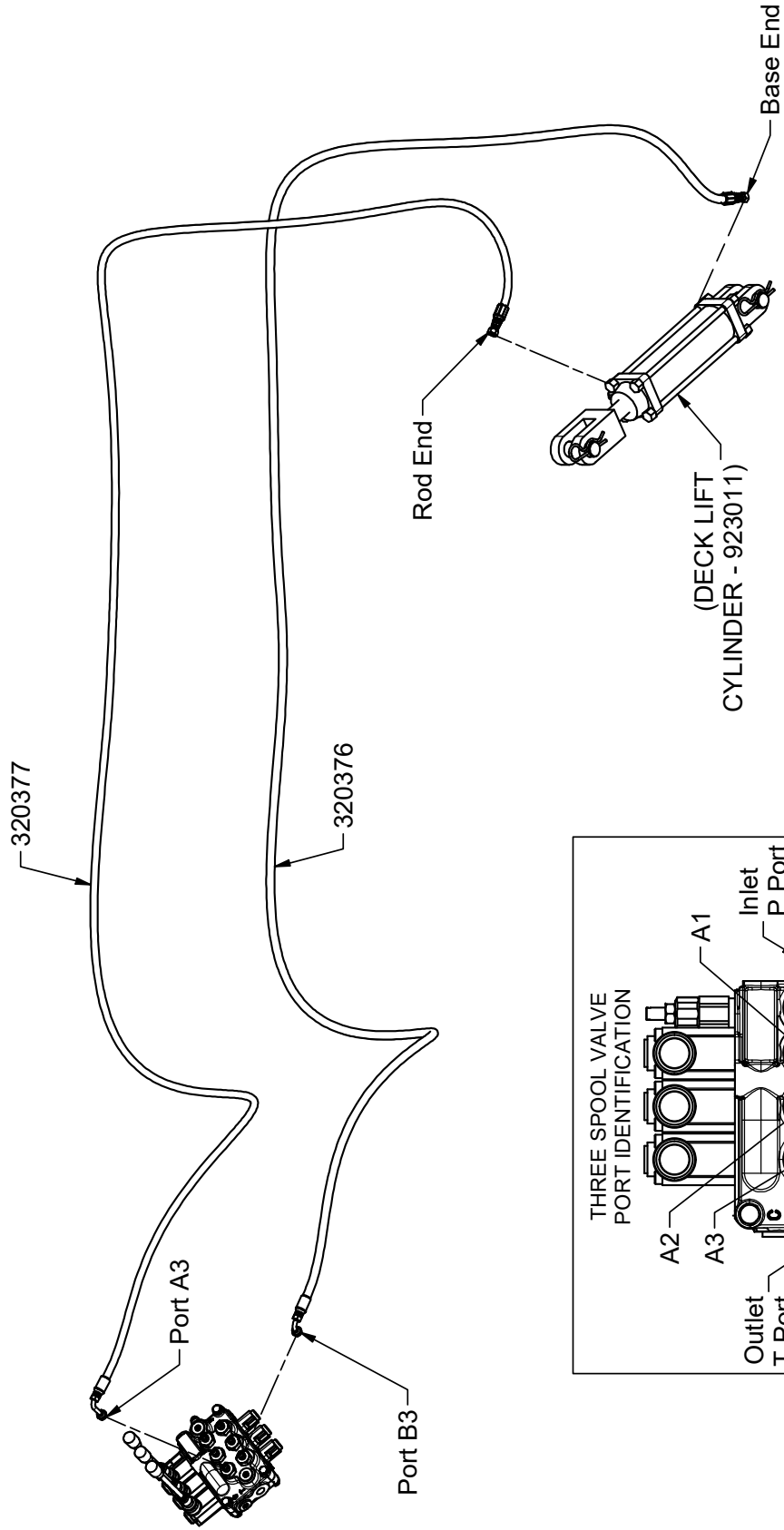
320375

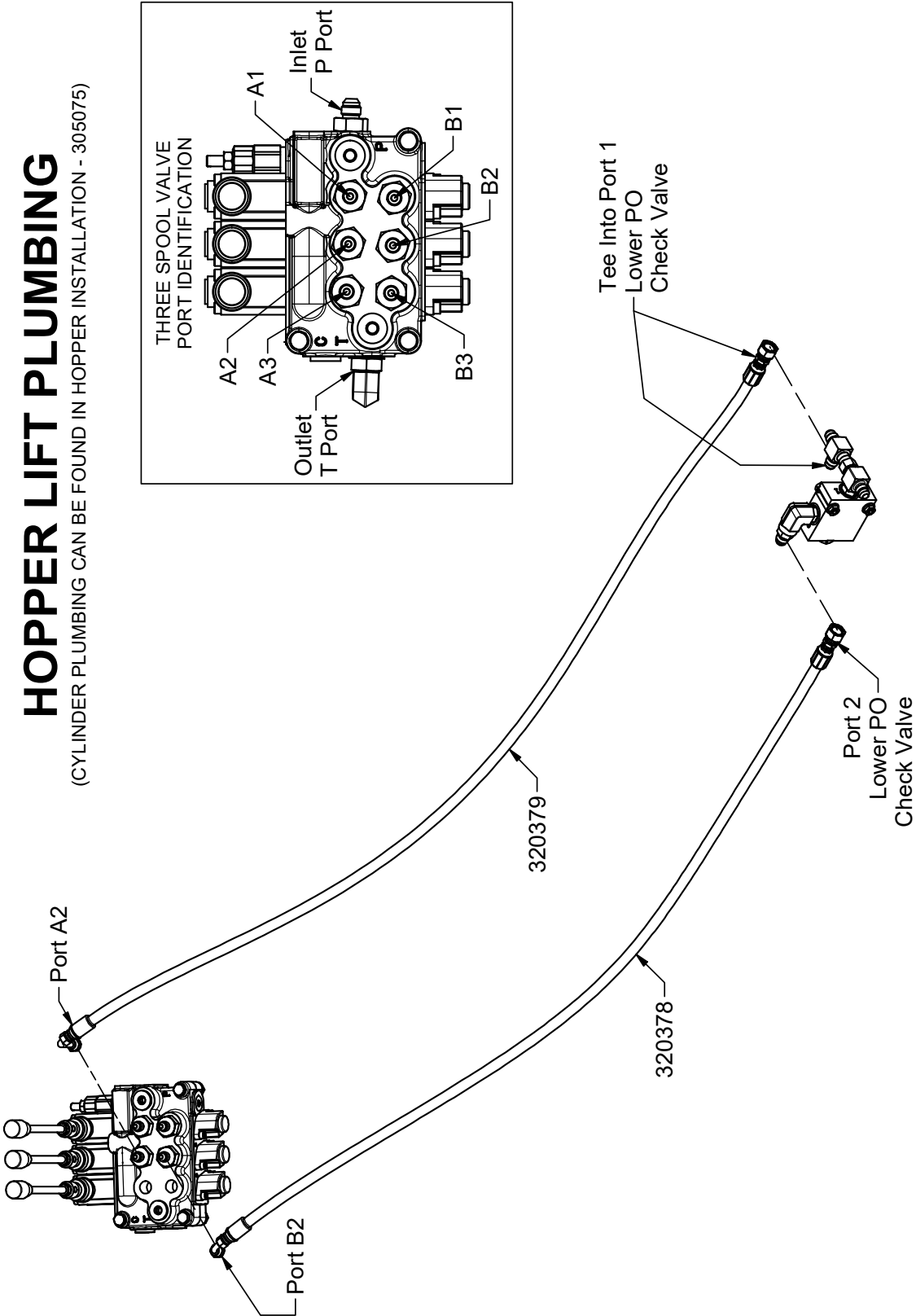
Case Drain

STEERING ORBITAL PORT IDENTIFICATION



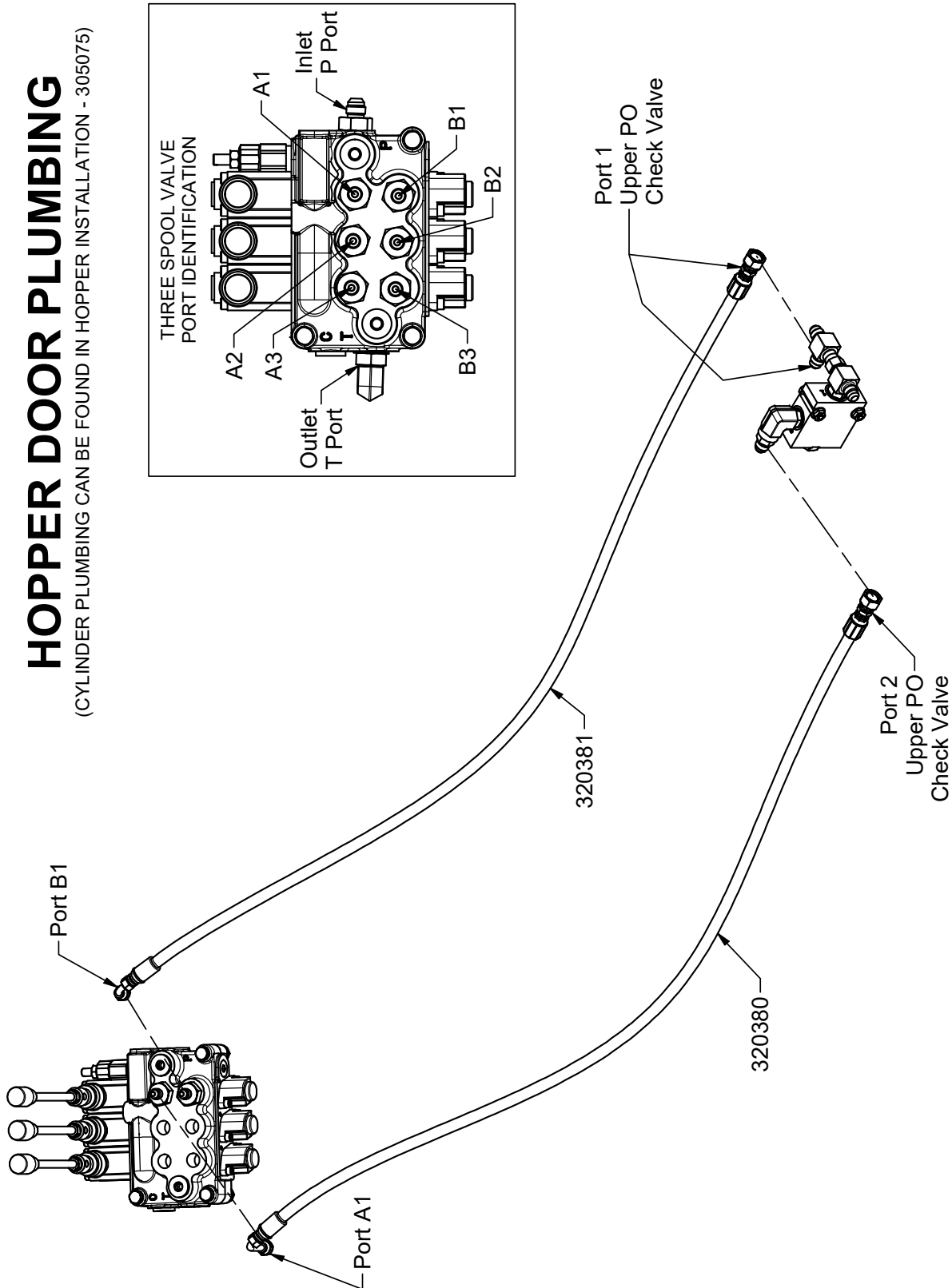
DECK LIFT PLUMBING



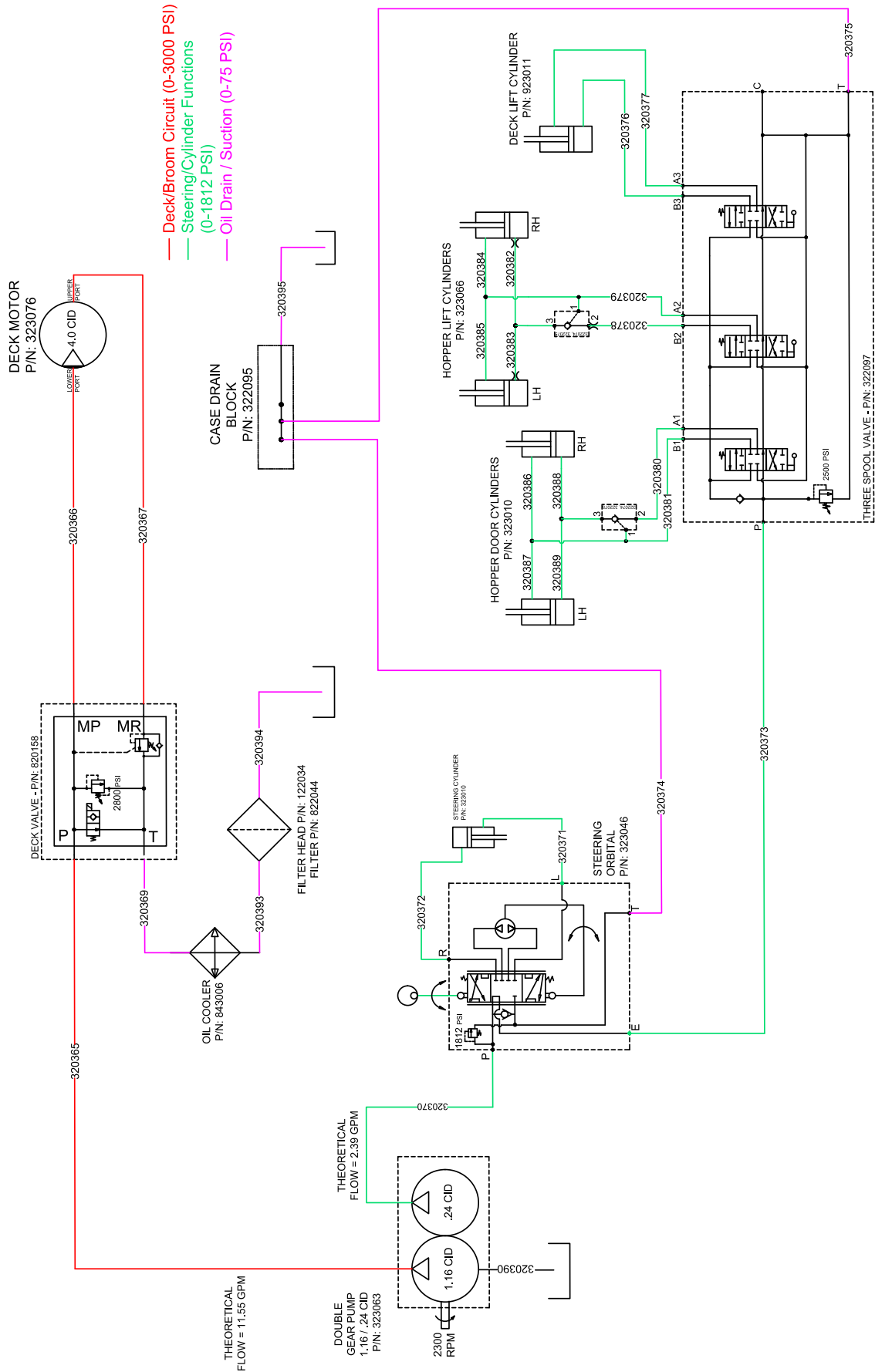


HOPPER DOOR PLUMBING

(CYLINDER PLUMBING CAN BE FOUND IN HOPPER INSTALLATION - 305075)



SWEEPER MACHINE HYDRAULIC SCHEMATIC



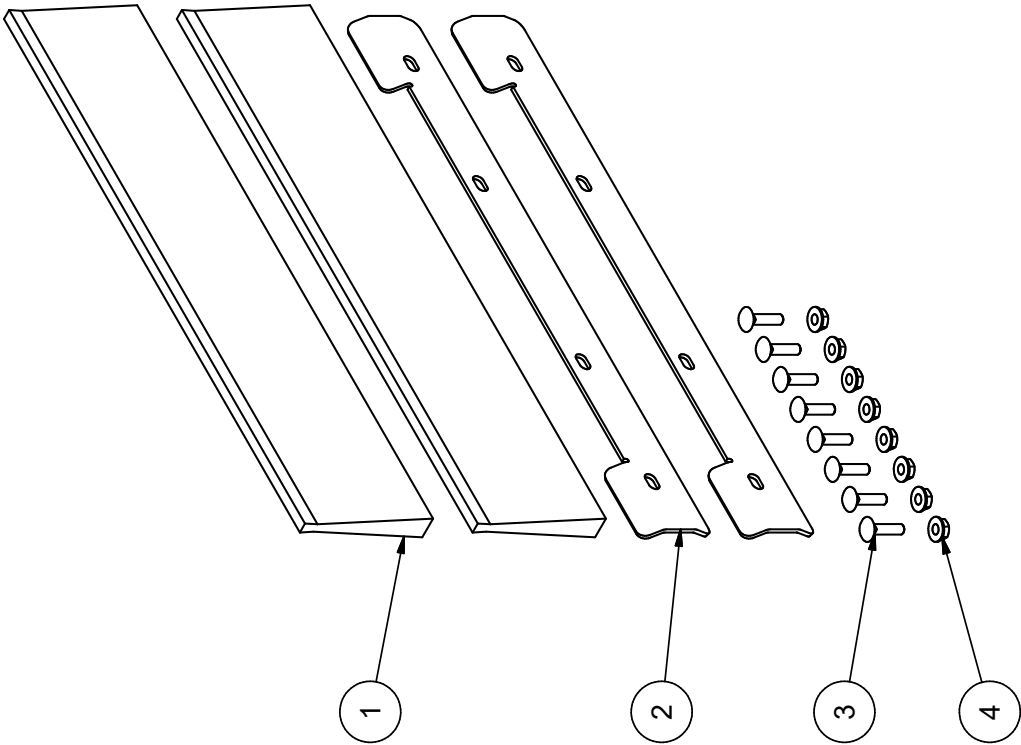
SIDE SKIRT UPDATE KIT

Parts List

ITEM	QTY	PART #	DESCRIPTION
1	2	302183	Brush, Side Skirt
2	2	317567	RETAINER, SIDE SKIRT
3	8	110326	Bolt, 1/4-20 X 1 in Carriage
4	8	110290	NUT, 1/4-20 W/ Z FLANGE

305189

REV: NC



DECK ASSEMBLY

CHAIN DRIVEN: 24A45 - OLDER

BELT DRIVEN: 24A46 - 26A01

BELT DRIVEN W/HD PADDLE: 26A01 +

Parts List				Parts List				Parts List				305125	REV: F
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION		
1	1	102133	Decal, ISO, FOOT CRUSH	36	2	110826	NUT, 3/8-16 GR 5	70	2	315340	WELDMENT, LOWER WHEEL ADJUST		
2	3	110010	BOLT, 1/2-13 X 9.0	37	1	110929	BOLT, M8-1.25 X 20 WIZ FLNG	71	2	315341	WELDMENT, GAUGE WHEEL BRKT		
3	19	110020	Bolt, 5/16-18 X 0.75 in Carriage	38	1	110987	Pin, Square Retainer, .50 X 3.00 Pin Dia	72	1	315377	WELDMENT, SWEEPER DRIVE IDLER		
4	2	110023	BOLT, 5/8-11 X 6.5	39	2	111033	WASHER, 1/4" X 1" OD, Plain	73	1	315378	WELDMENT, IDLER ADJUSTMENT		
5	4	110024	BOLT, 5/8-11 X 8.0	40	2	111186	WASHER, 1.50 x .406 x .125, FLAT	74	1	315418	WELDMENT, REAR CHUTE SUPPORT		
6	2	110086	BOLT, 1/2-13 X 1.0	41	1	112130	Clevis Pin, 3/8" x 3/4", ZINC	75	1	315424	WELDMENT, SWEEPER DECK, U.S.		
7	48	110154	Bolt, 1/4-20 X 0.75 in Carriage	42	2	112147	U-BOLT, 1/4-20 X 1.25, ZINC PLATED	76	3	315425	WELDMENT, ANTI-SCALP WHEEL MOUNT		
8	12	110174	NUT, 1/4-20, UNITORQUE LOCK	43	1	120233	ADAPTER, 4MJ-4MB	77	4	317252	RETAINER, FRONT DECK		
9	2	110272	BOLT, 3/4-10 X 6.75, Hhcs Gr 5 Zinc	44	2	120251	ADAPTER, 10MJ-10MB	78	1	317256	SPACER, KEYWAY, 1.625 X .5 X .909		
10	62	110290	NUT, 1/4-20 WIZ FLANGE	45	1	142002	SPRING, COMP 1 1/4 x 4 x .148	79	2	317258	TENSIONER, GEAR MOUNT		
11	2	110304	PIN, LOCK 3/8 X 2.5 SQ	46	1	142013	Sprocket, 4017 Idler, 5/8	80	1	317261	RETAINER, UPPER SIDE SEAL		
12	8	110326	Bolt, 1/4-20 X 1 in Carriage	47	4	142019	Flange, 52mm, 2 Bolt	81	2	317289	COLLAR, SPRING TENSIONER		
13	1	110335	WASHER, 1" FLAT MACHINE	48	2	142025	Bearing, 52mm Spherical O.D., 1.0 ID	82	1	317295	Shield, Broom Bearing		
14	6	110358	Bolt, 1/4-20 X 0.625 in Carriage	49	2	142026	Bearing, 62mm Spherical O.D., 1.25 ID	83	1	317337	ROD, DECK PROP		
15	1	110403	BOLT, 1/2-13 X 2.5	50	4	142027	Flange, 62mm, 2 Bolt	84	1	317365	LINER, DECK		
16	4	110419	BOLT, 1/2-13 X 1.75	51	1	142029	SPROCKET, 40BS15 X 1.25	85	1	317424	RETAINER, SIDE CHUTE		
17	8	110437	BOLT, 3/8-16 X 0.75, WIZ FLANGE	52	2	142030	SPROCKET, 40BS38 X 1.0	86	2	317428	BRKT, FRONT DECK SEAL		
18	6	110440	BOLT, 3/8-16 X 1, WIZ FLANGE	53	2	200029	COTTER PIN, 5/32 X 1	87	1	317441	RETAINER, SIDE SKIRT		
19	2	110459	BOLT, 5/16-18 X 1, WIZ FLANGE	54	1	302112	SKIRT, FRONT DECK	88	1	317448	Plate, Debris Spinner Mnt		
20	8	110464	BOLT, 1/4-20 X 1.0	55	1	302113	SKIRT, REAR DECK	89	2	317567	PLATE, DEBRIS SPINNER RETAINER		
21	1	110513	BOLT, 5/8-11 X 2.5	56	1	302116	SEAL, REAR TRANSITION	90	2	317621	SPACER, 1.25 X 1.875 X .179		
22	4	110556	Bolt, 3/8-16 X 1 in Carriage	57	2	302117	SEAL, SIDE DECK	91	2	317622	ROLLER CHAIN, #40 DECK (63")		
23	1	110597	NUT, 5/8-11	58	1	302146	Decal, Tension Adjustment	92	1	317639	Roller, Anti-Scalp		
24	19	110606	NUT, 5/16-18 WIZ FLANGE	59	1	302165	CUTOFF, AIR FLOW	93	1	340013	KEY, 1/4 X 1/4 X 1.0 UNDER		
25	6	110610	NUT, 1/2-13	60	1	302166	SEAL, FRONT DECK	94	3	510047	CASTER WHEEL ASSY, 9 X 3.5-4		
26	4	110615	NUT, 1/2-13, UNITORQUE LOCK	61	2	302168	SEAL, SIDE CHUTE	95	1	510228	COTTER PIN, 1/8 X 0.75		
27	2	110625	NUT, 3/4-10, UNITORQUE LOCK	62	2	302183	Brush, Side Skirt	96	2	510237	BUSHING, IGUS, FOOT PEDAL		
28	6	110639	NUT, 5/8-11, UNITORQUE LOCK	63	1	302202	DECAL, DECK HEIGHT ADJUSTMENT	97	1	510249	Decal, Do Not Remove Shield		
29	18	110645	NUT, 3/8-16 WIZ FLANGE	64	1	305068	ASSY, BRUSH	98	4	800128	Decal, Shaft Hazard		
30	1	110655	WASHER, 5/8" LOCK	65	1	305111	ASSY, PADDLE	99	1	902228	Decal, High Pressure Injection		
31	8	110658	WASHER, 1/2" FLAT STANDARD	66	1	305123	ASSY, PADDLE SHIELD	100	1	902230	SPACER, 1.125 X .812 X .9375		
32	1	110663	WASHER, 5/8" FLAT SAE	67	2	311608	FINGER, 12" RUBBER	101	1	902232	MOTOR, 4.9 CID		
33	6	110666	WASHER, 1/2" LOCK	68	2	312015	PIN, 5/8" x 3.5"	102	4	910865			
34	4	110673	WASHER, 1/4" FLAT STANDARD	69	2	315339	WELDMENT, UPPER WHEEL ADJUST	103	1	923014			
35	1	110771	KEY, 1/4 X 1/4 X .625 in										

CHAIN DRIVEN

Serial Number: 24A45 & Older

(May have upgraded to optional Speed Increaser Kit.)

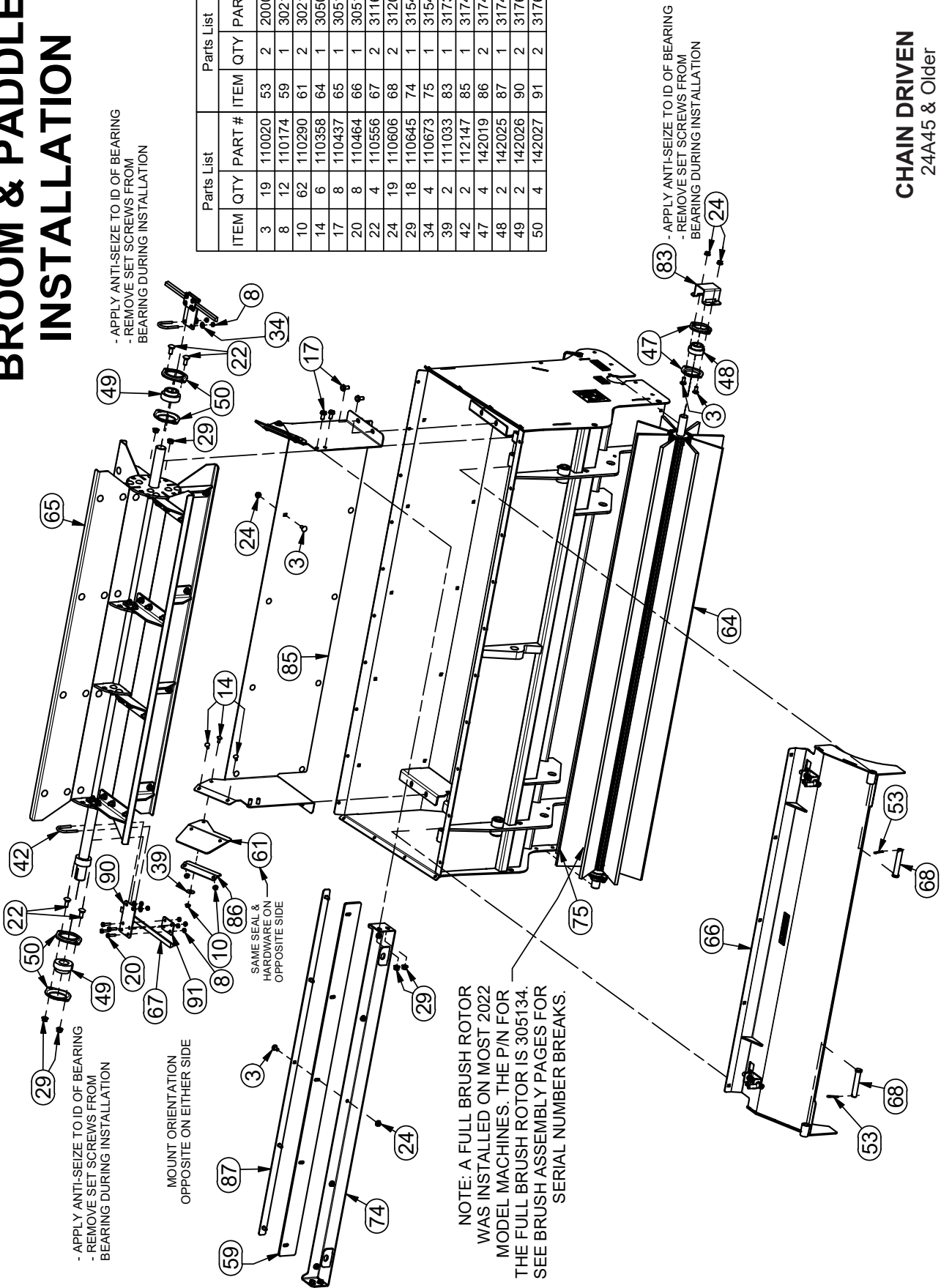
DECK ASSEMBLY

SIMILAR TO 305130

BROOM & PADDLE INSTALLATION

- APPLY ANTI-SEIZE TO ID OF BEARING
- REMOVE SET SCREWS FROM BEARING DURING INSTALLATION

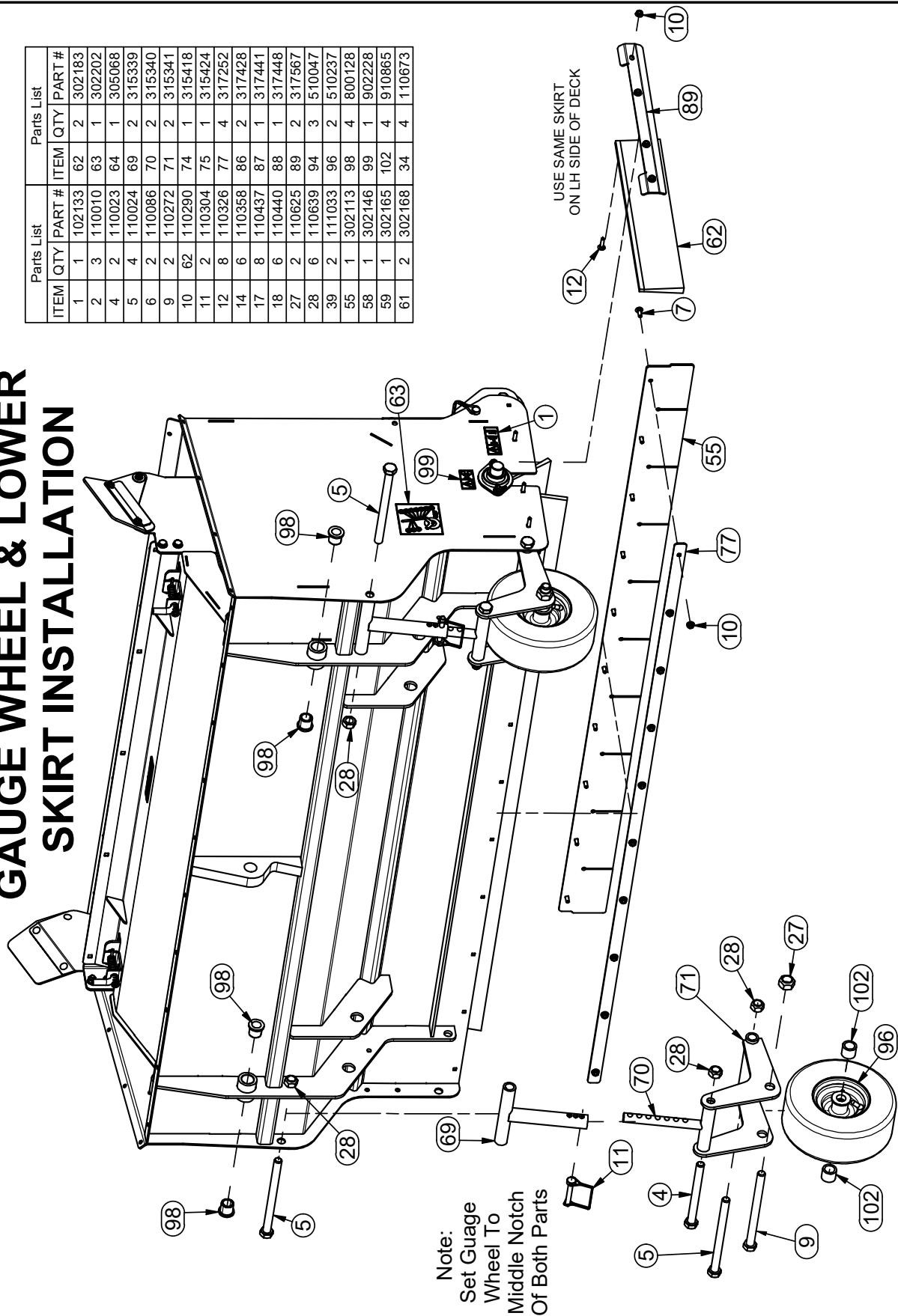
Parts List			Parts List		
ITEM	QTY	PART #	ITEM	QTY	PART #
3	19	110020	53	2	200029
8	12	110174	59	1	302165
10	62	110290	61	2	302168
14	6	110358	64	1	305068
17	8	110437	65	1	305111
20	8	110464	66	1	305123
22	4	110556	67	2	311608
24	19	110606	68	2	312015
29	18	110645	74	1	315418
34	4	110673	75	1	315424
39	2	111033	83	1	317337
42	2	112147	85	1	317424
47	4	142019	86	2	317428
48	2	142025	87	1	317441
49	2	142026	90	2	317621
50	4	142027	91	2	317622



CHAIN DRIVEN
24A45 & Older

GAUGE WHEEL & LOWER SKIRT INSTALLATION

Parts List		Parts List	
ITEM	QTY	PART #	PART #
1	1	102133	62
2	3	110010	63
4	2	110023	64
5	4	110024	69
6	2	110086	70
9	2	110272	71
10	62	110290	74
11	2	110304	75
12	8	110326	77
14	6	110358	86
17	8	110437	87
18	6	110440	88
27	2	110625	89
28	6	110639	94
39	2	111033	96
55	1	302113	98
58	1	302146	99
59	1	302165	102
61	2	302168	34



CHAIN DRIVEN
24A45 & Older

HYDRAULIC MOTOR, SCALP WHEELS & LOWER SKIRT INSTALLATION

Parts List			Parts List		
ITEM	QTY	PART #	ITEM	QTY	PART #
2	3	110010	61	2	302168
6	2	110086	62	2	302183
10	62	110290	64	1	305068
12	8	110326	67	2	311608
14	6	110358	71	2	315341
16	4	110419	74	1	315418
17	8	110437	75	1	315424
18	6	110440	76	3	315425
25	6	110610	77	4	317252
33	6	110666	84	1	317365
34	4	110673	86	2	317428
38	1	110987	87	1	317441
39	2	111033	88	1	317448
43	1	120233	92	1	317639
44	2	120251	94	3	510047
54	1	302112	100	1	902230
58	1	302146	101	1	902232
59	1	302165	103	1	923014

CHAIN DRIVEN

24A45 & Older

305164		REV: A
PARTS LIST		
Item	Qty	Part # DESCRIPTION
1	12	110174 Nut, 1/4-20, Unitorque Lock
2	8	110464 Bolt, 1/4-20 X 1.0
3	4	110673 Washer, 1/4" Flat Standard
4	2	112147 U-Bolt, 1/4-20 X 1.25, Zinc Plated
5	2	311608 Finger, 12" Rubber
6	2	317621 Plate, Debris Spinner Mnt
7	2	317622 Plate, Debris Spinner Retainer

SIDE PLATES
TOWARD BEARINGS

LEFT SIDE DETAIL

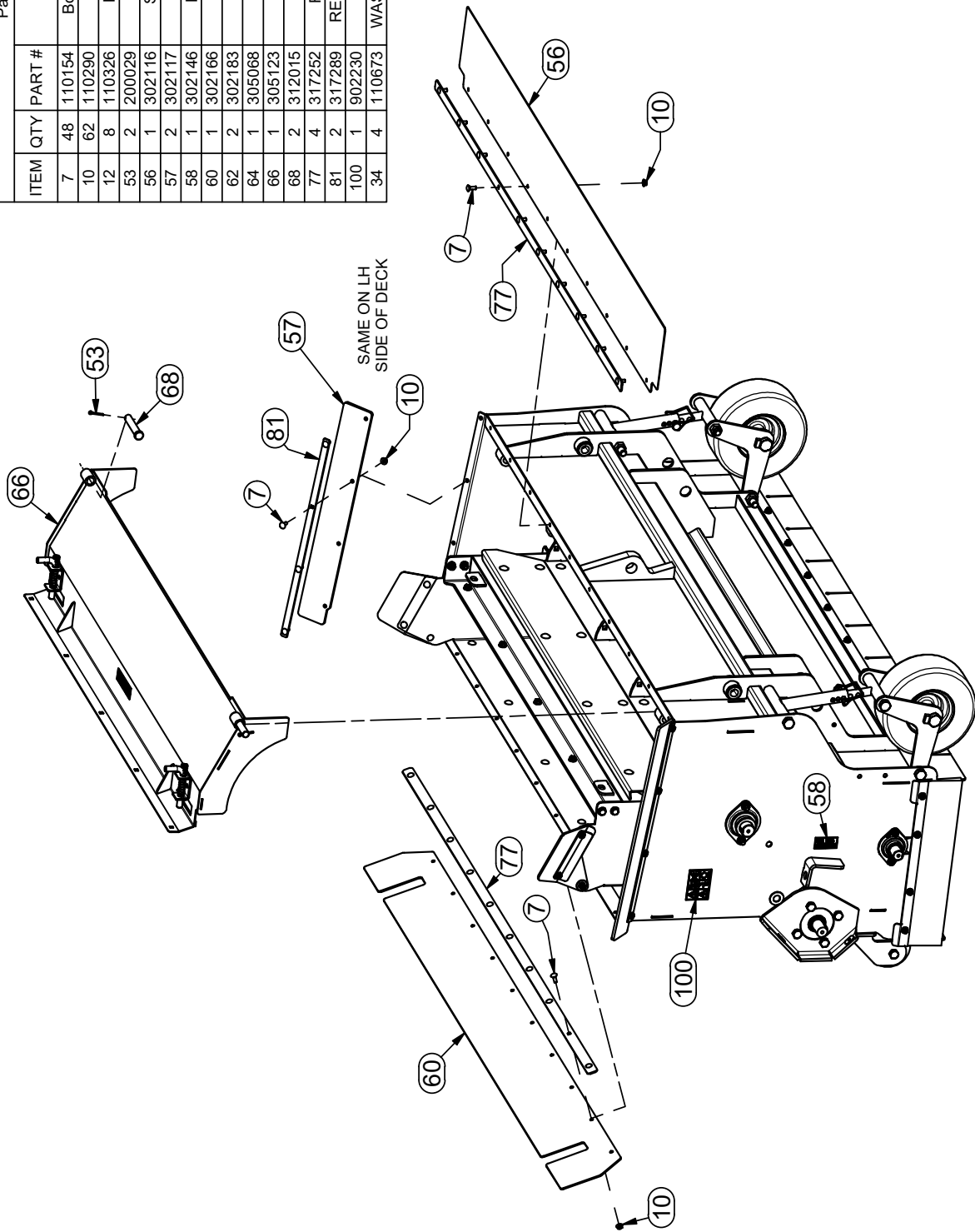
RIGHT SIDE DETAIL

RETURN AIR DEBRIS CLEANER KIT

Standard on S/N: 24A04+ Optional for S/N: 24A03 & older

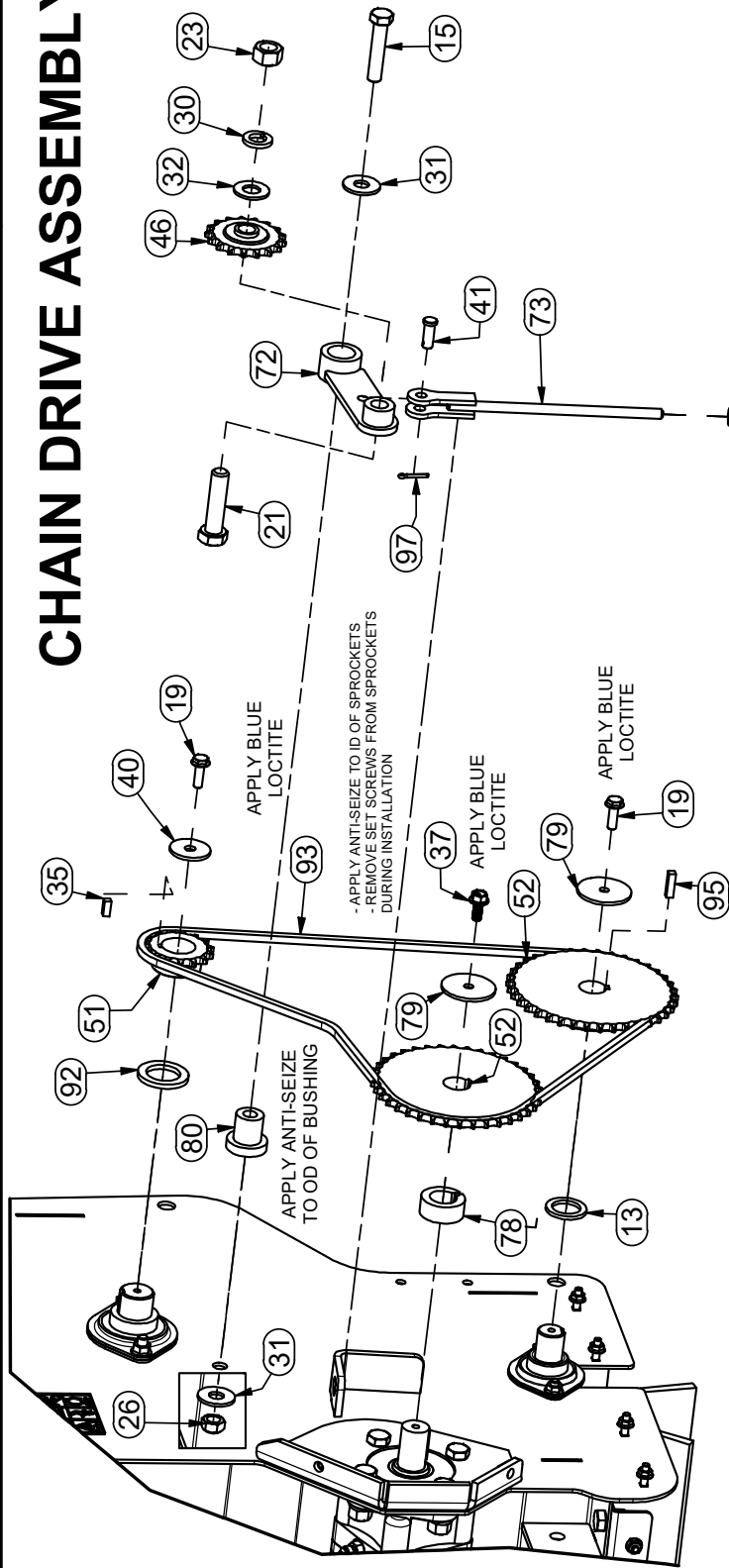
UPPER DECK SEAL & PADDLE SHIELD INSTALLATION

Parts List			
ITEM	QTY	PART #	DESCRIPTION
7	48	110154	Bolt, 1/4-20 X 0.75 in Carriage
10	62	110290	NUT, 1/4-20 W/IZ FLANGE
12	8	110326	Bolt, 1/4-20 X 1 in Carriage
53	2	200029	COTTER PIN, 5/32 X 1
56	1	302116	SEAL, REAR TRANSITION
57	2	302117	SEAL, SIDE DECK
58	1	302146	Decal, Tension Adjustment
60	1	302166	SEAL, FRONT DECK
62	2	302183	Brush, Side Skirt
64	1	305068	ASSY. BRUSH
66	1	305123	ASSY. PADDLE SHIELD
68	2	312015	PIN, 5/8" x 3.5"
77	4	317252	RETAINER, FRONT DECK
81	2	317289	RETAINER, UPPER SIDE SEAL
100	1	902230	Decal, Shaft Hazard
34	4	110673	WASHER, 1/4" FLAT STANDARD



CHAIN DRIVEN
24A45 & Older

CHAIN DRIVE ASSEMBLY

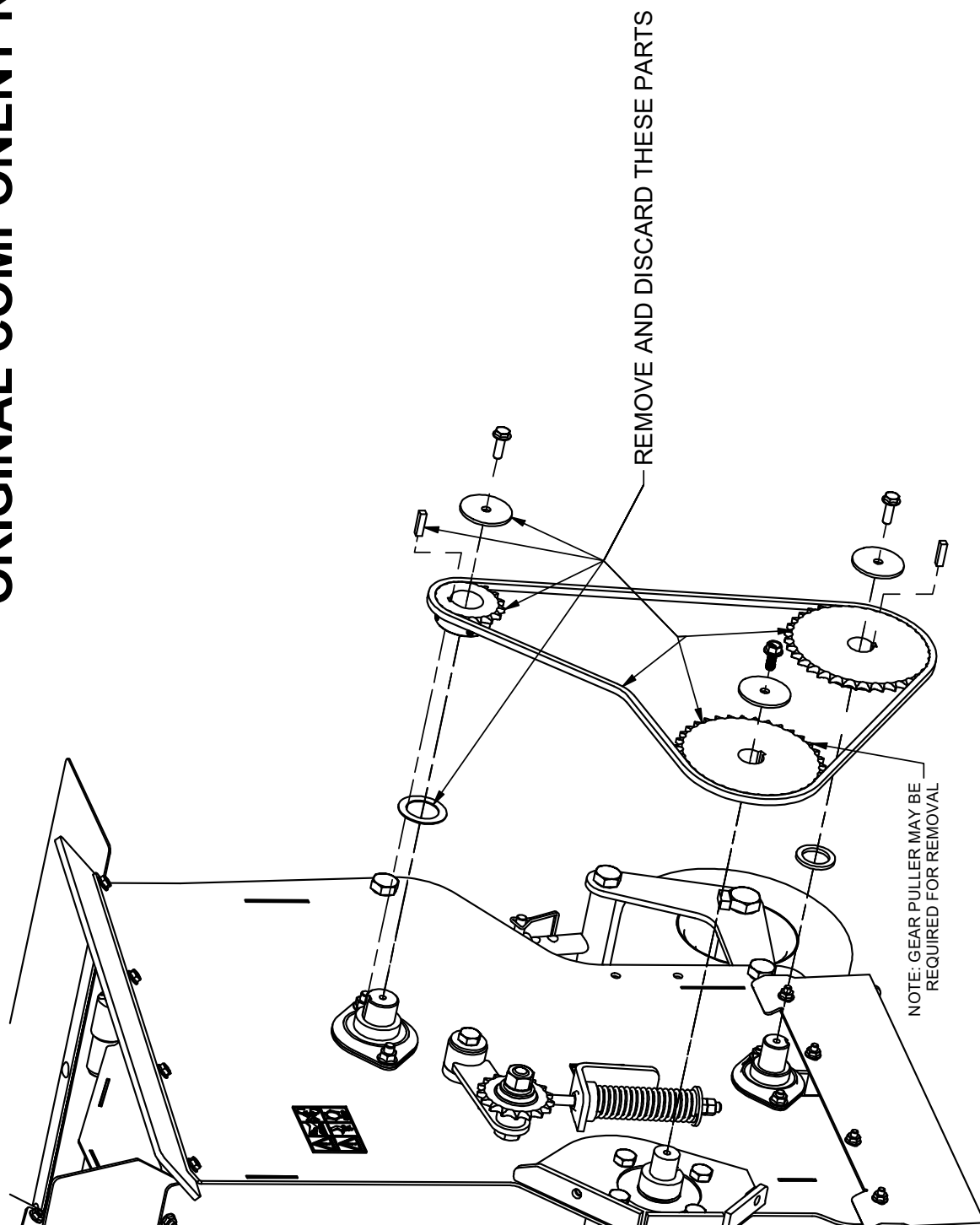


INSTALLATION: TIGHTEN
NUT UNTIL FLAT WASHER
CONTACTS COLLAR, THEN
TIGHTEN JAM NUT

CHAIN DRIVEN
24A45 & Older

Parts List			Parts List		
ITEM	PART #	DESCRIPTION	ITEM	PART #	DESCRIPTION
13	110335	WASHER, 1" FLAT MACHINE	46	142013	Sprocket, 4017 Idler, 5/8
15	110403	BOLT, 1/2-13 X 2.5	51	142029	SPROCKET, 40BS15 X 1.25
19	110459	BOLT, 5/16-18 X 1, WIZ FLANGE	52	142030	SPROCKET, 40BS38 X 1.0
21	110513	BOLT, 5/8-11 X 2.5	62	302183	Brush, Side Skirt
23	110597	NUT, 5/8-11	64	305068	ASSY, BRUSH
26	110615	NUT, 1/2-13, UNITORQUE LOCK	72	315377	WELDMENT, SWEEPER DRIVE IDLER
30	110655	WASHER, 5/8" LOCK	73	315378	WELDMENT, IDLER ADJUSTMENT
31	110658	WASHER, 1/2" FLAT STANDARD	78	317256	SPACER, KEYWAY, 1.625 X .5 X .909
32	110663	WASHER, 5/8" FLAT SAE	79	317258	WASHER, 2.0 X .344 X .12
34	110673	WASHER, 1/4" FLAT STANDARD	80	317261	TENSIONER, GEAR MOUNT
35	110771	KEY, 1/4 X 1/4 X .625 in	82	317295	COLLAR, SPRING TENSIONER
36	110826	NUT, 3/8-16 GR 5	92	317639	SPACER, 1.25 X 1.875 X .179
37	110929	BOLT, M8-1.25 X 20 WIZ FLNG	93	340013	ROLLER CHAIN, #40 DECK (53")
40	111186	WASHER, 1.50 x .406 x .125, FLAT	95	510228	KEY, 1/4 X 1/4 X 1.0 UNDER
41	112130	Clevis Pin, 3/8" x 3/4", ZINC	97	510249	COTTER PIN, 1/8 X 0.75

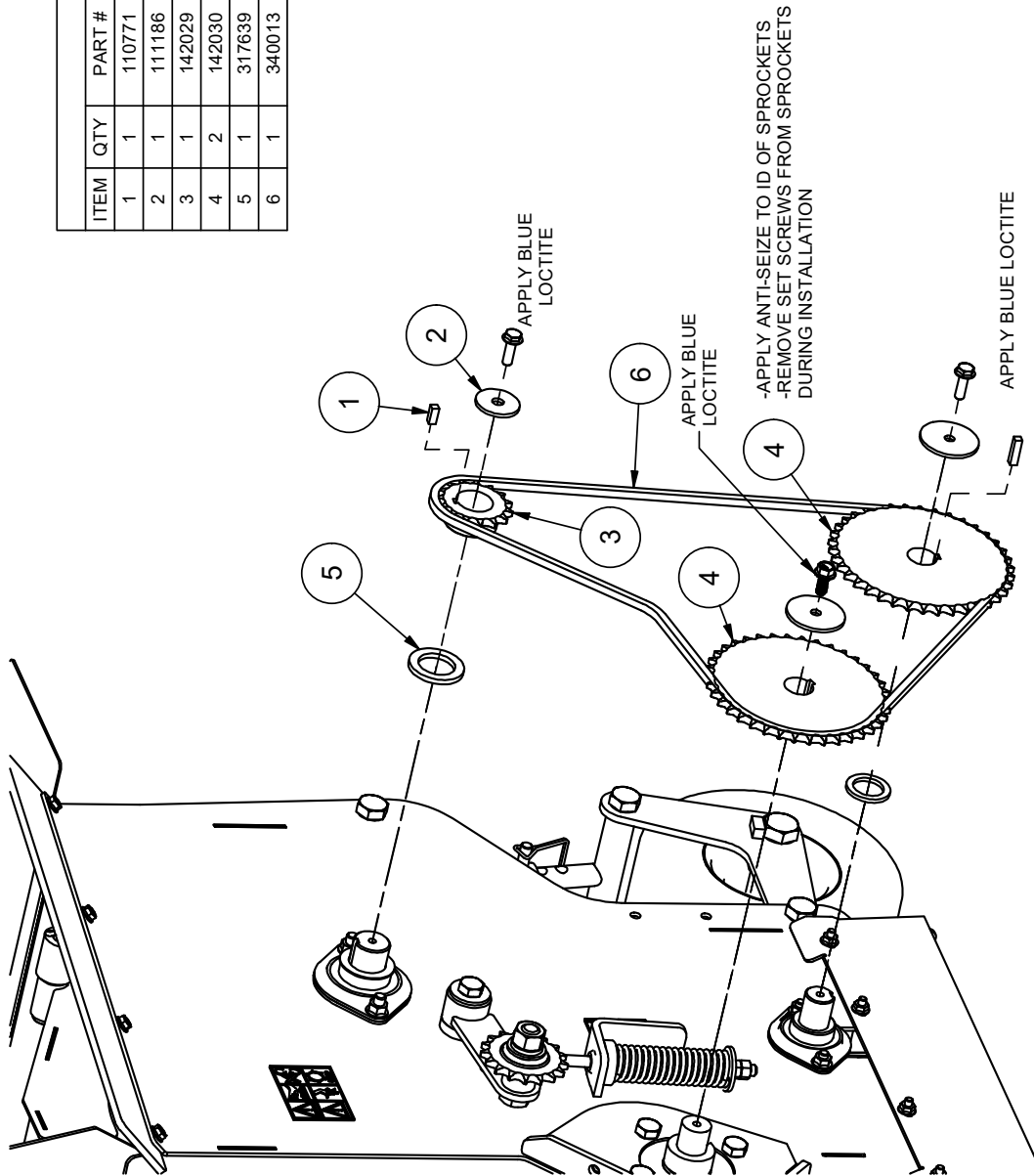
ORIGINAL COMPONENT REMOVAL



SPEED INCREASER KIT

Standard on S/N: 24A04 - 24A45 Optional for S/N: 24A03 & older

UPDATED COMPONENT INSTALL

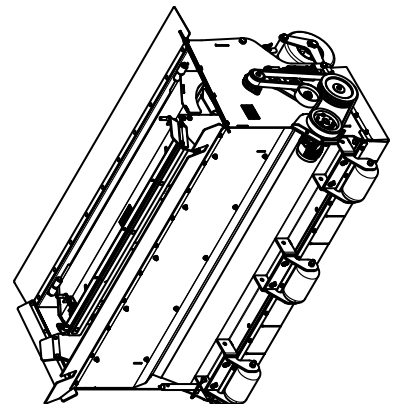


Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	1	110771	KEY, 1/4 X 1/4 X .625 in
2	1	111186	WASHER, 1.50 x .406 x .125, FLAT
3	1	142029	SPROCKET, 40BS15 X 1.25
4	2	142030	SPROCKET, 40BS38 X 1.0
5	1	317639	SPACER, 1.25 X 1.875 X .179
6	1	340013	ROLLER CHAIN, #40 DECK DRIVE

SPEED INCREASER KIT

Standard on S/N: 24A04 - 24A45 Optional for S/N: 24A03 & older

Parts List			Parts List			Parts List			305184			REV: A		
Item	Qty	Part #	DESCRIPTION	Item	Qty	Part #	DESCRIPTION	Item	Qty	Part #	DESCRIPTION			
1	1	102133	Decal, Iso, Foot Crush	33	1	110987	Pin, Square Retainer, .50 X 3.00 Pin Dia	65	1	315458	Weldment, Deck Belt Tensioner			
2	3	110010	Bolt, 1/2-13 X 9.0	34	2	111033	Washer, 1/4" X 1" Od, Plain	66	1	315467	Weldment, Tensioner Adjustment			
3	19	110020	Bolt, 5/16-18 X 0.75 In Carriage	35	2	112147	U-Bolt, 1/4-20 X 1.25, Zinc Plated	67	1	315470	Weldment, Sweeper Deck, Belt, Us			
4	2	110023	Bolt, 5/8-11 X 6.5	36	2	120251	Adapter, 10mj-10mb	68	4	317252	Retainer, Front Deck			
5	4	110024	Bolt, 5/8-11 X 8.0	37	4	142019	Flange, 52mm, 2 Bolt	69	2	317258	Washer, 2.0 X .344 X .12			
6	2	110086	Bolt, 1/2-13 X 1.0	38	2	142025	Bearing, 52mm Spherical O.d., 1.0 Id	70	2	317289	Retainer, Upper Side Seal			
7	2	110122	Bolt, 5/16-18 X 1.25, Wiz Flange	39	2	142026	Bearing, 62mm Spherical O.d., 1.25 Id	71	1	317337	Shield, Broom Bearing			
8	1	110125	Bolt, 1/2-13 X 2.25 Gr 5 Zinc Plate	40	4	142027	Flange, 62mm, 2 Bolt	72	1	317365	Rod, Deck Prop			
9	48	110154	Bolt, 1/4-20 X 0.75 In Carriage	41	1	142031	Spring, Compression, 1.5x4.5x.75, 257lbs	73	1	317424	Liner, Deck			
10	12	110174	Nut, 1/4-20, Unitorque Lock	42	2	200029	Colter Pin, 5/32 X 1	74	2	317428	Retainer, Side Chute			
11	2	110272	Bolt, 3/4-10 X 6.75, Hncs Gr 5 Zinc	43	1	302112	Skirt, Front Deck	75	1	317441	Retainer, Front Deck			
12	62	110290	Nut, 1/4-20 Wiz Flange	44	1	302113	Skirt, Rear Deck	76	1	317448	Brkt, Front Deck Seal			
13	1	110300	Colter Pin, 3/32 X 0.75	45	1	302116	Seal, Rear Transition	77	2	317567	Retainer, Side Skirt			
14	2	110304	Pin, Lock 3/8 X 2.5 Sq	46	2	302117	Seal, Side Deck	78	2	317621	Plate, Debris Spinner Mnt			
15	8	110326	Bolt, 1/4-20 X 1 In Carriage	47	1	302165	Cutoff, Air Flow	79	2	317622	Plate, Debris Spinner Retainer			
16	6	110358	Bolt, 1/4-20 X 0.625 In Carriage	48	1	302166	Seal, Front Deck	80	1	323076	Motor, Deck Drive, 4.0 Cid			
17	3	110419	Bolt, 1/2-13 X 1.75	49	2	302168	Seal, Side Chute	81	1	342077	Belt, Sweeper Deck Drive, Brush			
18	8	110437	Bolt, 3/8-16 X 0.75, Wiz Flange	50	2	302183	Brush, Side Skirt	82	1	342078	Sheave, 3/3v5.60 Sds-Qd			
19	6	110440	Bolt, 3/8-16 X 1, Wiz Flange	51	1	302202	Decal, Deck Height Adjustment	83	1	342079	Sheave, 3/3v6.50 X 1.0			
20	8	110464	Bolt, 1/4-20 X 1.0	52	1	302203	Decal, Deck Belt Tensioning	84	1	342080	Sheave, 3/3v2.50 X 1.25			
21	4	110556	Bolt, 3/8-16 X 1 In Carriage	53	1	305068	Assy, Brush	85	1	342081	Pulley, Idler, 4" Flat X 1.56"			
22	1	110588	Nut, 1/2-13 Wiz Flange	54	1	305111	Assy, Paddle	86	1	500274	Clevis Pin, 3/8 X 7/8			
23	19	110606	Nut, 5/16-18 Wiz Flange	55	1	305123	Assy, Paddle Shield	87	3	510047	Roller, Anti-Scalp			
24	6	110610	Nut, 1/2-13	56	2	311608	Finger, 12" Rubber	88	1	510055	Washer, 1.5 X 1.0 X 14ga Mach			
25	3	110615	Nut, 1/2-13, Unitorque Lock	57	2	312015	Pin, 5/8" X 3.5"	89	2	510228	Key, 1/4 X 1/4 X 1.0 Under			
26	4	110621	Nut, 3/8-16, Unitorque Lock	58	1	312060	Collar, Belt Spring Tensioner	90	2	510237	Caster Wheel Assy, 9 X 3.5-4			
27	2	110625	Nut, 3/4-10, Unitorque Lock	59	2	312061	Bushing, .75 X .875 X .375, Fing	91	1	510241	Bushing, Qd 1" Sds			
28	6	110639	Nut, 5/8-11, Unitorque Lock	60	2	315339	Weldment, Upper Wheel Adjust	92	4	800128	Bushing, Igus, Foot Pedal			
29	18	110645	Nut, 3/8-16 Wiz Flange	61	2	315340	Weldment, Lower Wheel Adjust	93	1	902228	Decal, Do Not Remove Shield			
30	8	110658	Washer, 1/2" Flat Standard	62	2	315341	Weldment, Gauge Wheel Brkt	94	1	902230	Decal, Shaft Hazard			
31	4	110666	Washer, 1/2" Lock	63	1	315418	Weldment, Rear Chute Support	95	1	902232	Decal, High Pressure Injection			
32	4	110673	Washer, 1/4" Flat Standard	64	3	315425	Weldment, Anti-Scalp Wheel Mount	96	4	910865	Spacer, 1.125 X .812 X .9375			



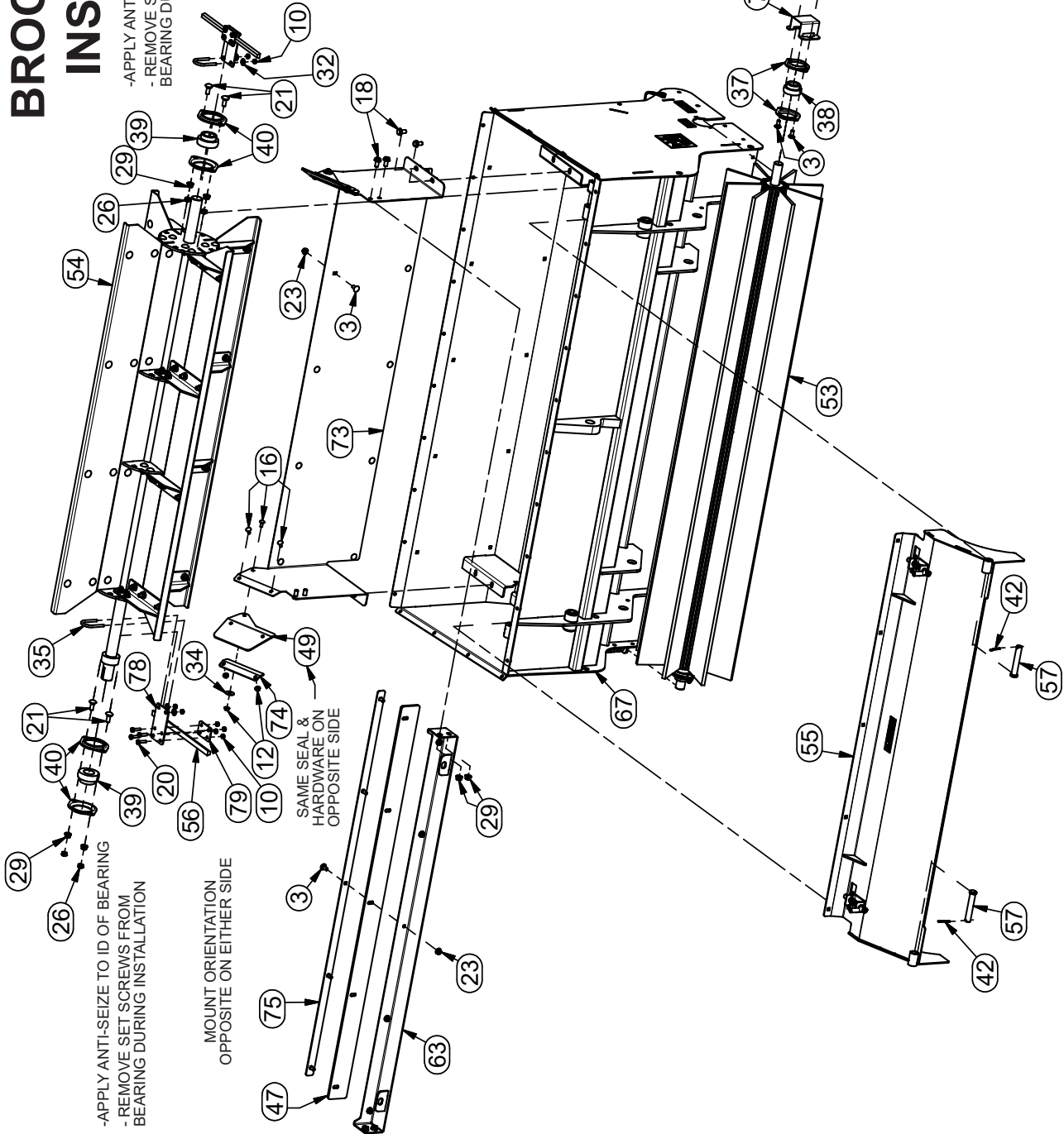
DECK ASSEMBLY

BELT DRIVEN

Serial Number: 24A46 - 26A01

BROOM & PADDLE INSTALLATION

-APPLY ANTI-SEIZE TO ID OF BEARING
-REMOVE SET SCREWS FROM
BEARING DURING INSTALLATION

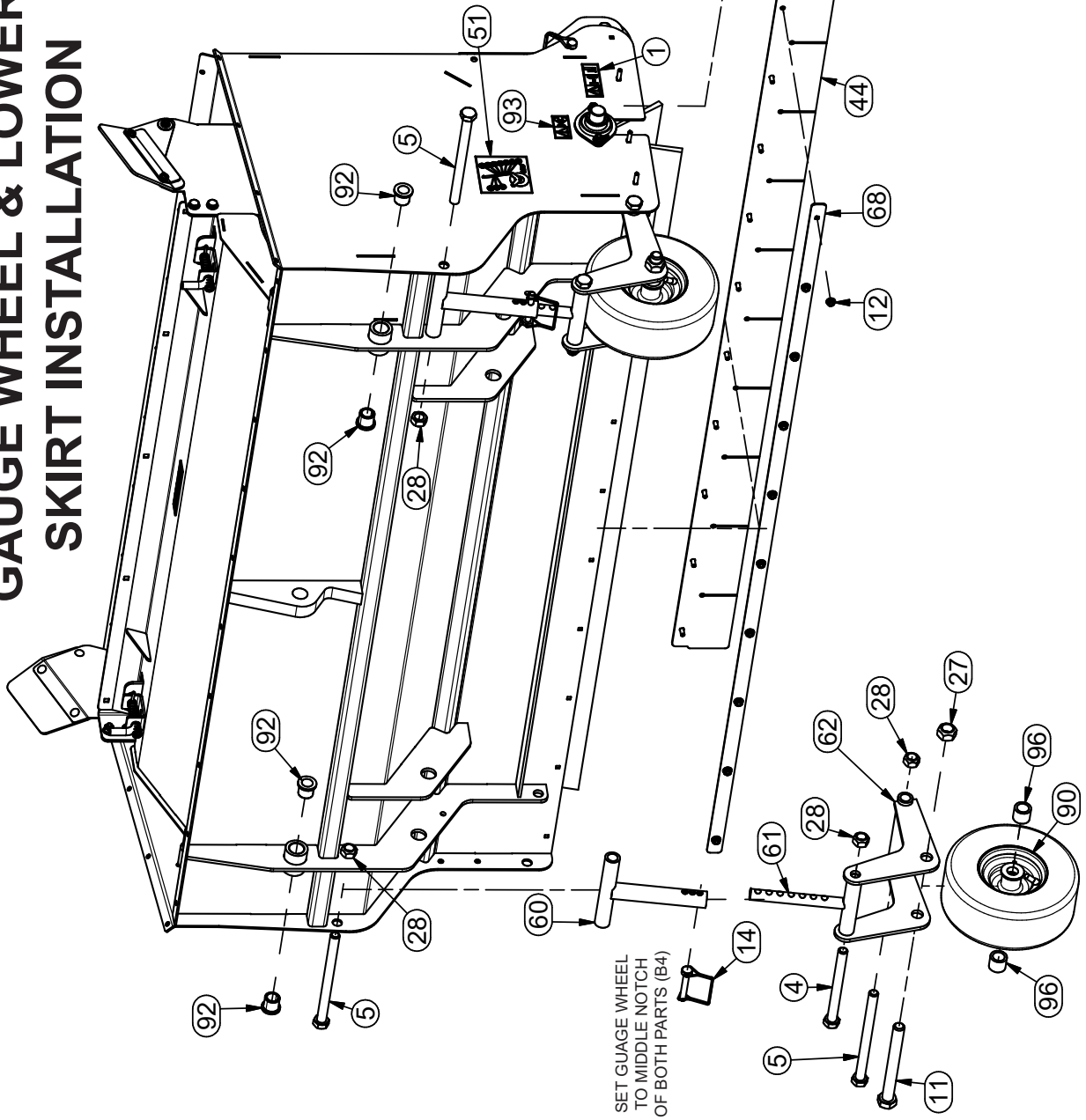


Parts List		Parts List	
Item	Qty	Part #	Part #
3	19	110020	42
10	12	110174	47
12	62	110290	49
16	6	110358	53
18	8	110437	54
20	8	110464	55
21	4	110556	56
23	19	110606	57
29	18	110645	63
32	4	110673	67
34	2	111033	71
35	2	112147	73
37	4	142019	74
38	2	142025	75
39	2	142026	78
40	4	142027	79

BELT DRIVEN
24A46 - 26A01

GAUGE WHEEL & LOWER SKIRT INSTALLATION

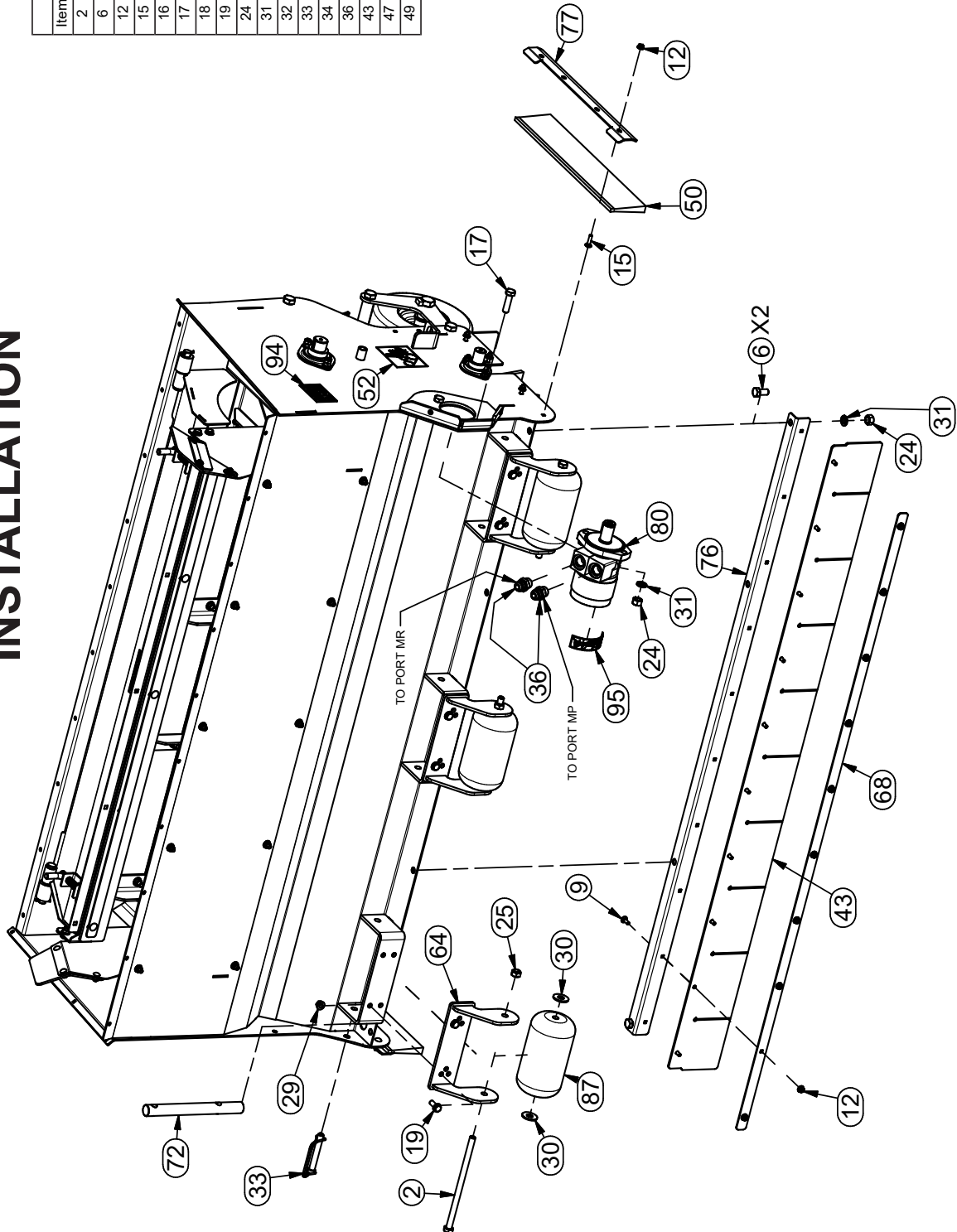
Parts List			Parts List		
Item	Qty	Part #	Item	Qty	Part #
1	1	102133	49	2	302168
2	3	110010	50	2	302183
4	2	110023	51	1	302202
5	4	110024	53	1	305068
6	2	110086	60	2	315339
11	2	110272	61	2	315340
12	62	110290	62	2	315341
14	2	110304	63	1	315418
15	8	110326	68	4	317252
16	6	110358	74	2	317428
18	8	110437	75	1	317441
19	6	110440	76	1	317448
27	2	110625	77	2	317567
28	6	110639	87	3	510047
32	4	110673	90	2	510237
34	2	111033	92	4	800128
44	1	302113	93	1	902228
47	1	302165	96	4	910865



BELT DRIVEN
24A46 - 26A01

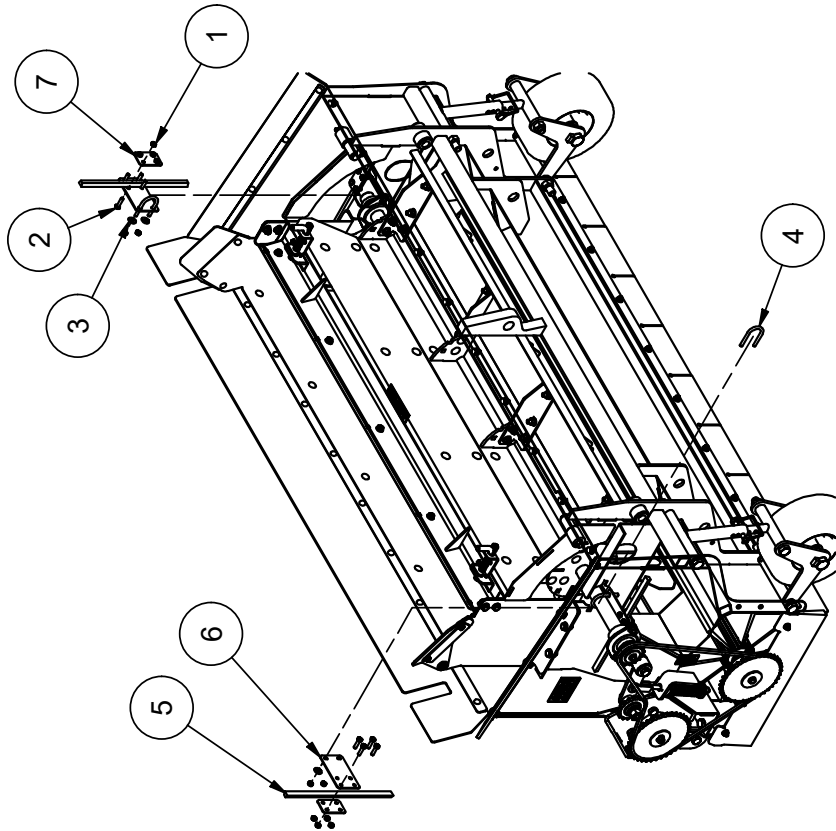
HYDRAULIC MOTOR, SCALP WHEELS & LOWER SKIRT INSTALLATION

Parts List			Parts List		
Item	Qty	Part #	Item	Qty	Part #
2	3	110010	50	2	302183
6	2	110086	52	1	302203
12	62	110290	53	1	305068
15	8	110326	56	2	311608
16	6	110358	62	2	315341
17	3	110419	63	1	315418
18	8	110437	64	3	315425
19	6	110440	68	4	317252
24	6	110610	72	1	317365
31	4	110666	74	2	317428
32	4	110673	75	1	317441
33	1	110987	76	1	317448
34	2	111033	80	1	323076
36	2	120251	87	3	510047
43	1	302112	94	1	902230
47	1	302165	95	1	902232
49	2	302168			

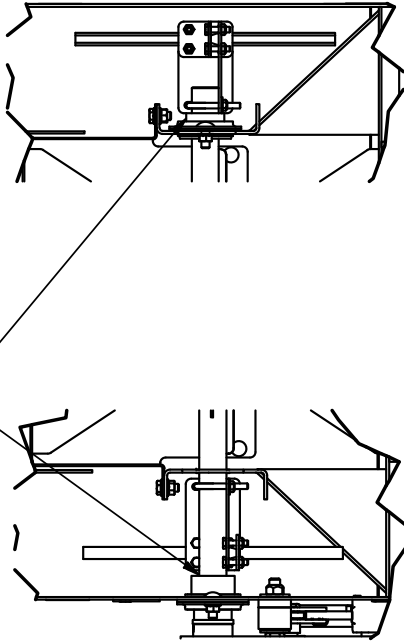


BELT DRIVEN
24A46 - 26A01

Parts List		
Item	Qty	Part # DESCRIPTION
1	12	110174 Nut, 1/4-20, Unitorque Lock
2	8	110464 Bolt, 1/4-20 X 1.0
3	4	110673 Washer, 1/4" Flat Standard
4	2	112147 U-Bolt, 1/4-20 X 1.25, Zinc Plated
5	2	311608 Finger, 12" Rubber
6	2	317621 Plate, Debris Spinner Mnt
7	2	317622 Plate, Debris Spinner Retainer



SIDE PLATES
TOWARD BEARINGS



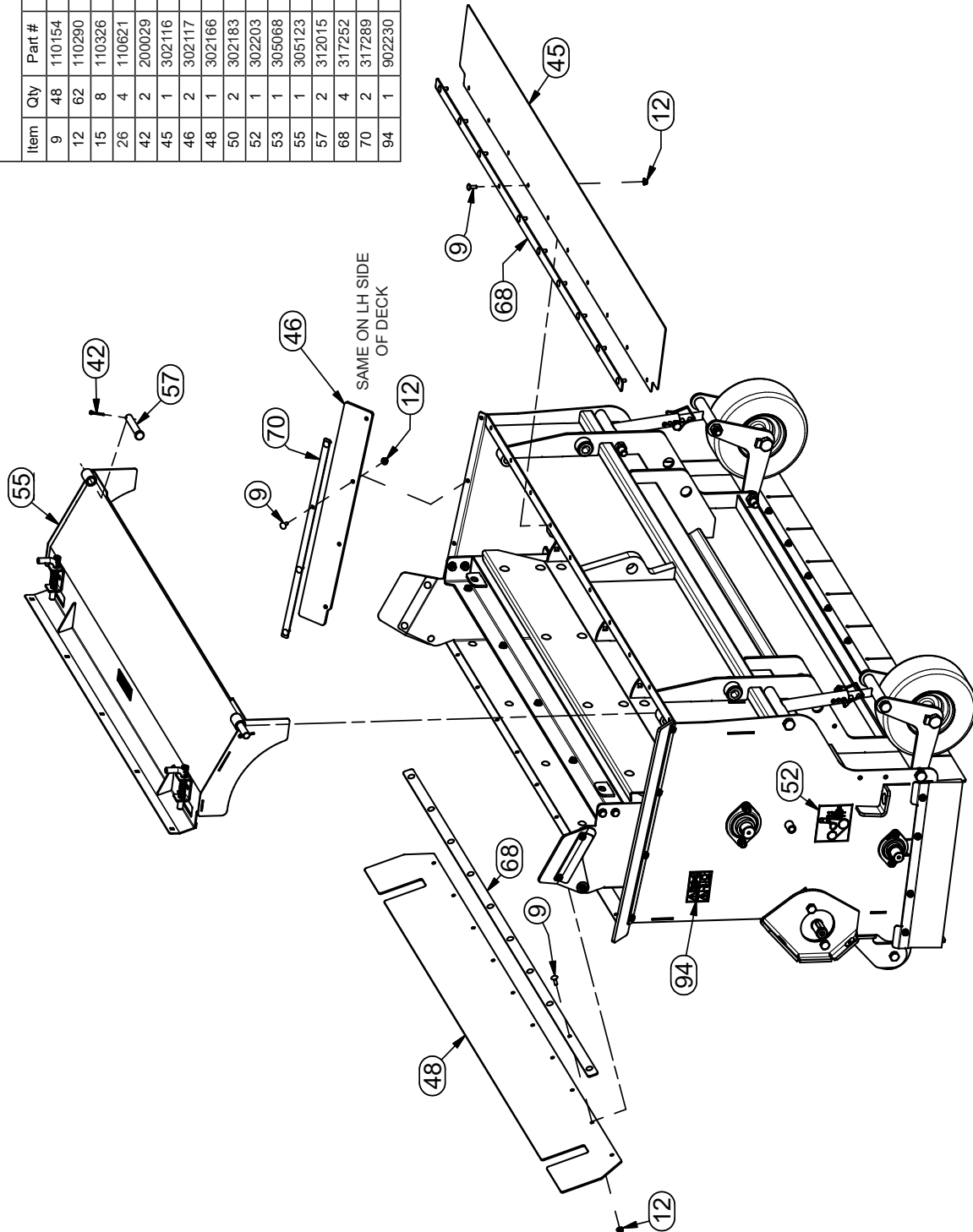
LEFT SIDE DETAIL

RIGHT SIDE DETAIL

RETURN AIR DEBRIS CLEANER KIT
Standard on S/N: 24A04+ Optional for S/N: 24A03 & older

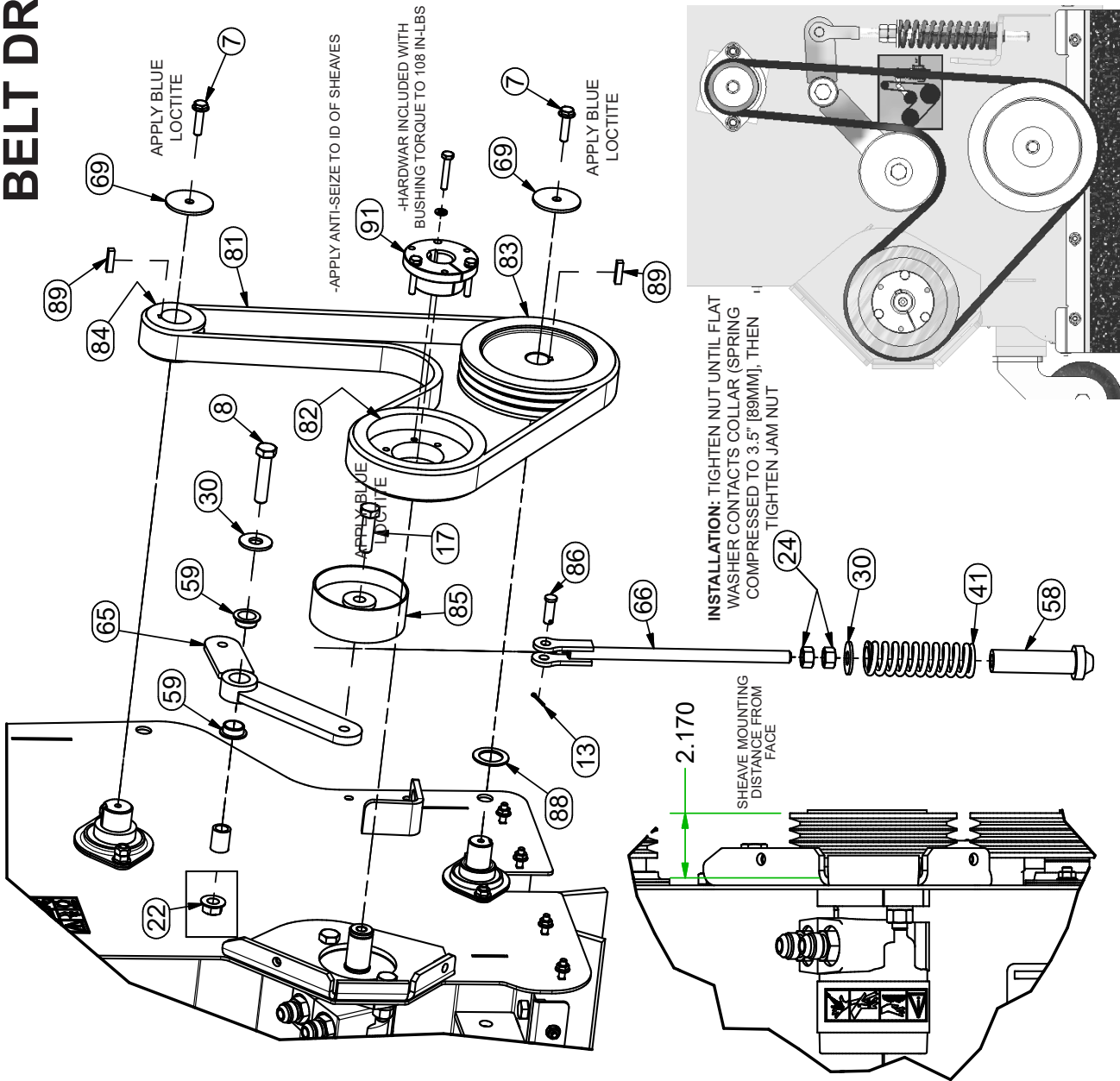
UPPER DECK SEAL & PADDLE SHIELD INSTALLATION

Parts List		
Item	Qty	Part # DESCRIPTION
9	48	110154 Bolt, 1/4-20 X 0.75 In Carriage
12	62	110290 Nut, 1/4-20 W/ Flange
15	8	110326 Bolt, 1/4-20 X 1 In Carriage
26	4	110621 Nut, 3/8-16, Unitorque Lock
42	2	200029 Cotter Pin, 5/32 X 1
45	1	302116 Seal, Rear Transition
46	2	302117 Seal, Side Deck
48	1	302166 Seal, Front Deck
50	2	302183 Brush, Side Skirt
52	1	302203 Decal, Deck Belt Tensioning
53	1	305068 Assy, Brush
55	1	305123 Assy, Paddle Shield
57	2	312015 Pin, 5/8" X 3.5"
68	4	317252 Retainer, Front Deck
70	2	317289 Retainer, Upper Side Seal
94	1	902230 Decal, Shaft Hazard



BELT DRIVEN
24A46 - 26A01

BELT DRIVE ASSEMBLY



Parts List		
Item	Qty	Part # DESCRIPTION
7	2	110122 Bolt, 5/16-18 X 1.25, Wiz Flange
8	1	110125 Bolt, 1/2-13 X 2.25 Gr 5 Zinc Plate
13	1	110300 Cotter Pin, 3/32 X 0.75
17	3	110419 Bolt, 1/2-13 X 1.75
22	1	110588 Nut, 1/2-13 Wiz Flange
24	6	110610 Nut, 1/2-13
25	3	110615 Nut, 1/2-13, Unitorque Lock
30	8	110658 Washer, 1/2" Flat Standard
32	4	110673 Washer, 1/4" Flat Standard
41	1	142031 Spring, Compression, 1.5x4.5x.75, 257/lbs
50	2	302183 Brush, Side Skirt
52	1	302203 Decal, Deck Belt Tensioning
53	1	305068 Assy, Brush
58	1	312060 Collar, Belt Spring Tensioner
59	2	312061 Bushing, .75 X .875 X .375, Flng
65	1	315458 Weldment, Deck Belt Tensioner
66	1	315467 Weldment, Tensioner Adjustment
69	2	317258 Washer, 2.0 X .344 X .12
80	1	323076 Motor, Deck Drive, 4.0 Cld
81	1	342077 Belt, Sweeper Deck Drive, Brush
82	1	342078 Sheave, 3/3v5.60 Sds-Qd
83	1	342079 Sheave, 3/3v6.50 X 1.0
84	1	342080 Sheave, 3/3v2.50 X 1.25
85	1	342081 Pulley, Idler, 4" Flat X 1.56"
86	1	500274 Clevis Pin, 3/8 X 7/8
88	1	510055 Washer, 1.5 X 1.0 X 14ga Mach
89	2	510228 Key, 1/4 X 1/4 X 1.0 Under
91	1	510241 Bushing, Qd 1" Sds

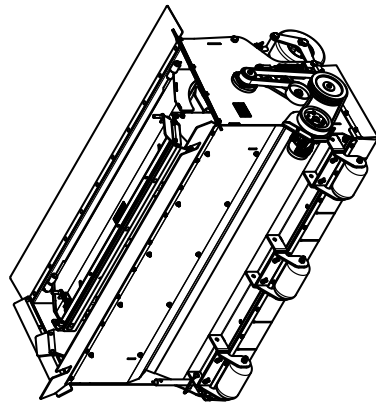
BELT DRIVEN

24A46 - 26A01

Parts List				Parts List				Parts List			
Item	Qty	Part #	DESCRIPTION	Item	Qty	Part #	DESCRIPTION	Item	Qty	Part #	DESCRIPTION
1	1	102133	Decal, Iso, Foot Crush	33	1	110987	Pin, Square Retainer, .50 X 3.00 Pin Dia	65	1	315458	Weldment, Deck Belt Tensioner
2	3	110010	Bolt, 1/2-13 X 9.0	34	2	111033	Washer, 1/4" X 1" Od, Plain	66	1	315467	Weldment, Tensioner Adjustment
3	19	110020	Bolt, 5/16-18 X 0.75 In Carriage	35	2	112147	U-Bolt, 1/4-20 X 1.25, Zinc Plated	67	1	315470	Weldment, Sweeper Deck, Belt, Us
4	2	110023	Bolt, 5/8-11 X 6.5	36	2	120251	Adapter, 10mj-10mb	68	4	317252	Retainer, Front Deck
5	4	110024	Bolt, 5/8-11 X 8.0	37	4	142019	Flange, 52mm, 2 Bolt	69	2	317258	Washer, 2.0 X .344 X .12
6	2	110086	Bolt, 1/2-13 X 1.0	38	2	142025	Bearing, 52mm Spherical O.d., 1.0 Id	70	2	317289	Retainer, Upper Side Seal
7	2	110122	Bolt, 5/16-18 X 1.25, Wiz Flange	39	2	142026	Bearing, 62mm Spherical O.d., 1.25 Id	71	1	317337	Shield, Broom Bearing
8	1	110125	Bolt, 1/2-13 X 2.25 Gr 5 Zinc Plate	40	4	142027	Flange, 62mm, 2 Bolt	72	1	317365	Rod, Deck Prop
9	48	110154	Bolt, 1/4-20 X 0.75 In Carriage	41	1	142031	Spring, Compression, 1.5x4.5x.75, 257lbs	73	1	317424	Liner, Deck
10	12	110174	Nut, 1/4-20, Unitorque Lock	42	2	200029	Colter Pin, 5/32 X 1	74	2	317428	Retainer, Side Chute
11	2	110272	Bolt, 3/4-10 X 6.75, Hncs Gr 5 Zinc	43	1	302112	Skirt, Front Deck	75	1	317441	Retainer, Front Deck
12	62	110290	Nut, 1/4-20 Wiz Flange	44	1	302113	Skirt, Rear Deck	76	1	317448	Brkt, Front Deck Seal
13	1	110300	Colter Pin, 3/32 X 0.75	45	1	302116	Seal, Rear Transition	77	2	317567	Retainer, Side Skirt
14	2	110304	Pin, Lock 3/8 X 2.5 Sq	46	2	302117	Seal, Side Deck	78	2	317621	Plate, Debris Spinner Mnt
15	8	110326	Bolt, 1/4-20 X 1 In Carriage	47	1	302165	Cutoff, Air Flow	79	2	317622	Plate, Debris Spinner Retainer
16	6	110358	Bolt, 1/4-20 X 0.625 In Carriage	48	1	302166	Seal, Front Deck	80	1	323076	Motor, Deck Drive, 4.0 Cid
17	3	110419	Bolt, 1/2-13 X 1.75	49	2	302168	Seal, Side Chute	81	1	342077	Belt, Sweeper Deck Drive, Brush
18	8	110437	Bolt, 3/8-16 X 0.75, Wiz Flange	50	2	302183	Brush, Side Skirt	82	1	342078	Sheave, 3/3v5.60 Sds-Qd
19	6	110440	Bolt, 3/8-16 X 1, Wiz Flange	51	1	302202	Decal, Deck Height Adjustment	83	1	342079	Sheave, 3/3v6.50 X 1.0
20	8	110464	Bolt, 1/4-20 X 1.0	52	1	302203	Decal, Deck Belt Tensioning	84	1	342080	Sheave, 3/3v2.50 X 1.25
21	4	110556	Bolt, 3/8-16 X 1 In Carriage	53	1	305068	Assy, Brush	85	1	342081	Pulley, Idler, 4" Flat X 1.56"
22	1	110588	Nut, 1/2-13 Wiz Flange	54	1	305111	Assy, Paddle	86	1	500274	Clevis Pin, 3/8 X 7/8
23	19	110606	Nut, 5/16-18 Wiz Flange	55	1	305123	Assy, Paddle Shield	87	3	510047	Roller, Anti-Scalp
24	3	110610	Nut, 1/2-13	56	2	311608	Finger, 12" Rubber	88	1	510055	Washer, 1.5 X 1.0 X 14ga Mach
25	3	110615	Nut, 3/8-16, Unitorque Lock	57	2	312015	Pin, 5/8" X 3.5"	89	2	510228	Key, 1/4 X 1/4 X 1.0 Under
26	4	110621	Nut, 3/8-16, Unitorque Lock	58	1	312060	Collar, Belt Spring Tensioner	90	2	510237	Caster Wheel Assy, 9 X 3.5-4
27	2	110625	Nut, 3/4-10, Unitorque Lock	59	2	312061	Bushing, .75 X .875 X .375, Fing	91	1	510241	Bushing, Qd 1" Sds
28	6	110639	Nut, 5/8-11, Unitorque Lock	60	2	315339	Weldment, Upper Wheel Adjust	92	4	800128	Bushing, Igus, Foot Pedal
29	18	110645	Nut, 3/8-16 Wiz Flange	61	2	315340	Weldment, Lower Wheel Adjust	93	1	902228	Decal, Do Not Remove Shield
30	8	110658	Washer, 1/2" Flat Standard	62	2	315341	Weldment, Gauge Wheel Brkt	94	1	902230	Decal, Shaft Hazard
31	4	110666	Washer, 1/2" Lock	63	1	315418	Weldment, Rear Chute Support	95	1	902232	Decal, High Pressure Injection
32	4	110673	Washer, 1/4" Flat Standard	64	3	315425	Weldment, Anti-Scalp Wheel Mount	96	4	910865	Spacer, 1.125 X .812 X .9375

DECK ASSEMBLY BELT DRIVEN W/HD PADDLE

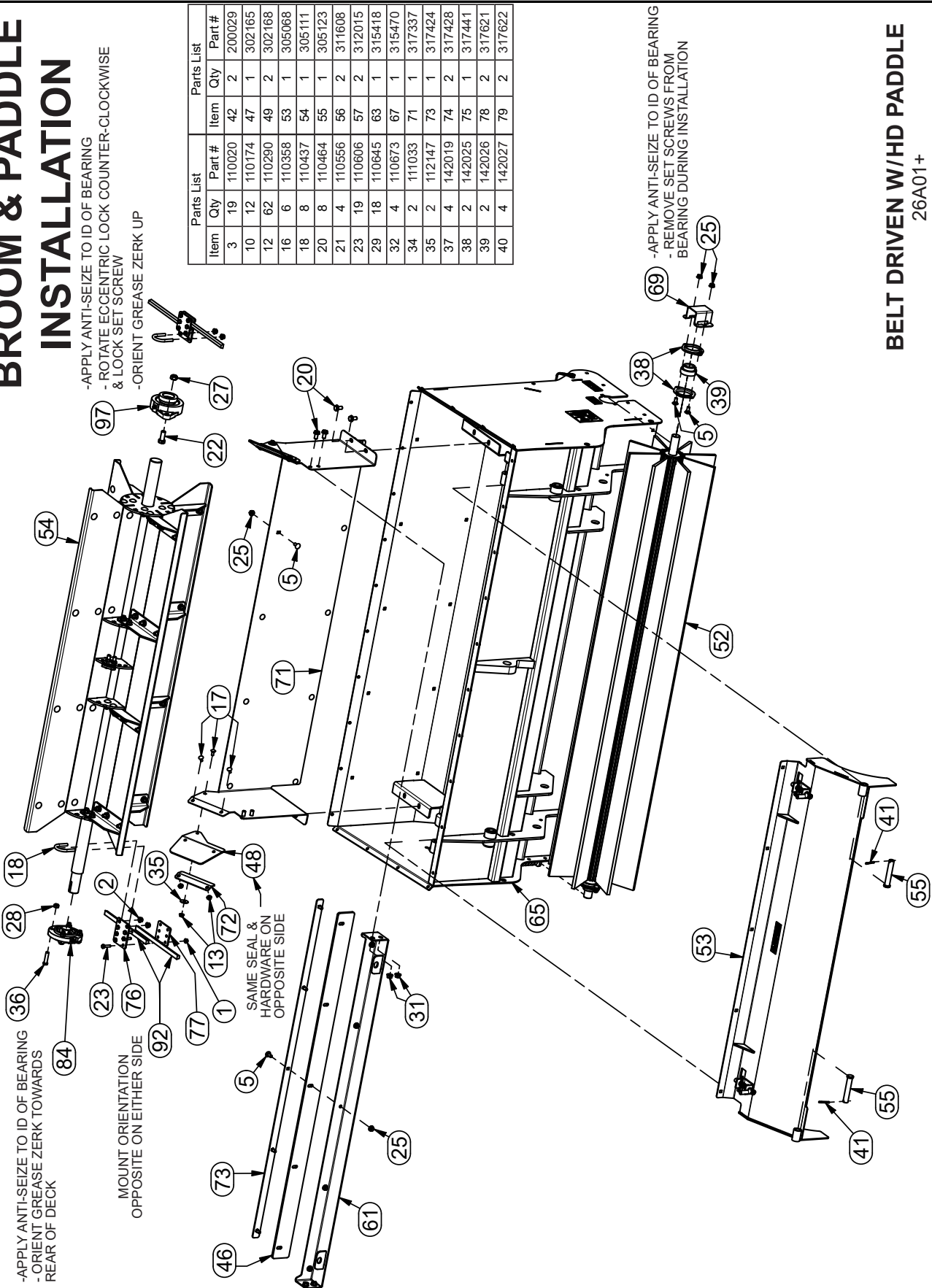
Serial Number: 26A01+



BROOM & PADDLE INSTALLATION

- APPLY ANTI-SEIZE TO ID OF BEARING
- ROTATE ECCENTRIC LOCK COUNTER-CLOCKWISE & LOCK SET SCREW
- ORIENT GREASE ZERK UP

Parts List			Parts List		
Item	Qty	Part #	Item	Qty	Part #
3	19	110020	42	2	200029
10	12	110174	47	1	302165
12	62	110290	49	2	302168
16	6	110358	53	1	305068
18	8	110437	54	1	305111
20	8	110464	55	1	305123
21	4	110556	56	2	311608
23	19	110606	57	2	312015
29	18	110645	63	1	315418
32	4	110673	67	1	315470
34	2	111033	71	1	317337
35	2	112147	73	1	317424
37	4	142019	74	2	317428
38	2	142025	75	1	317441
39	2	142026	78	2	317621
40	4	142027	79	2	317622



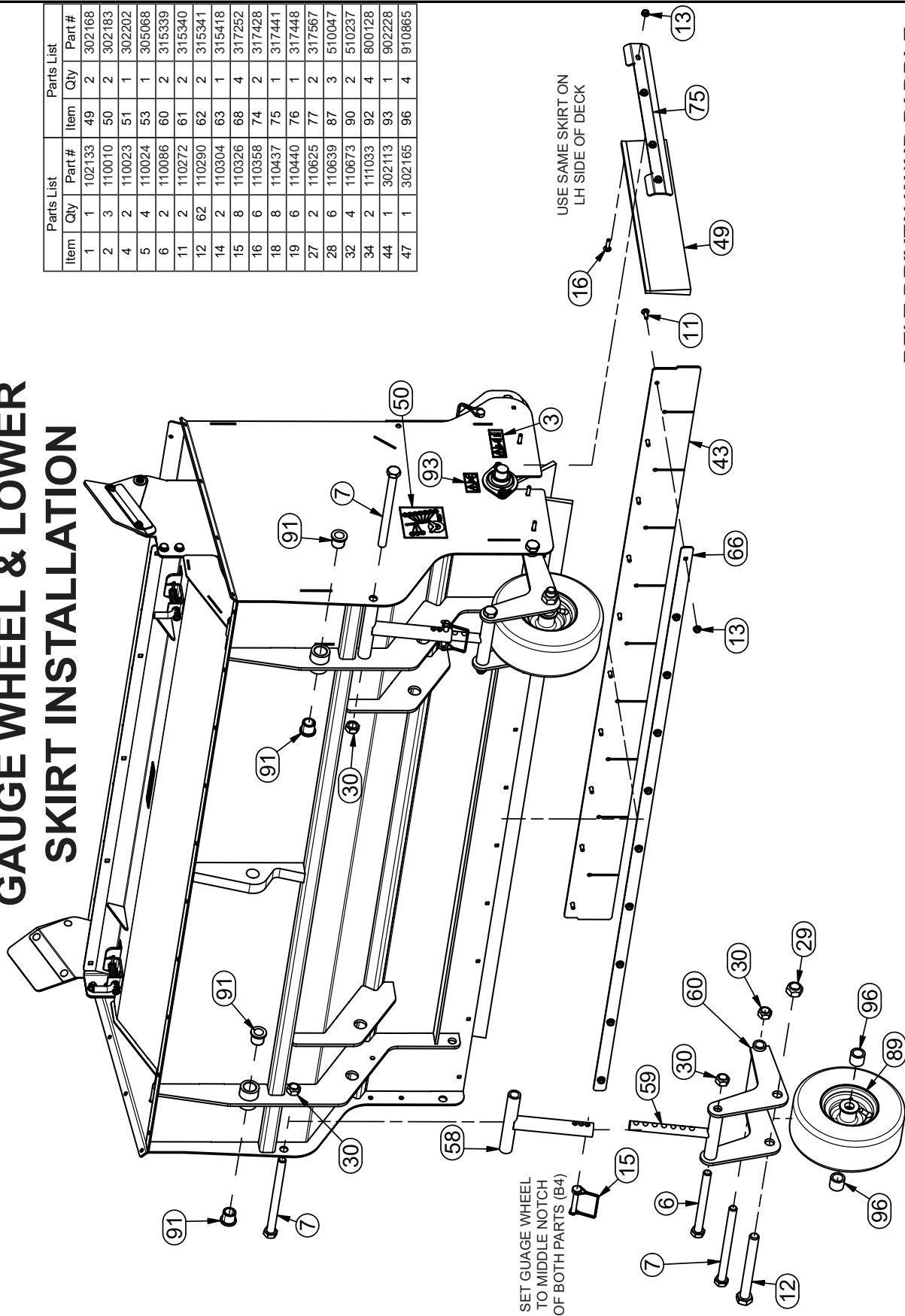
BELT DRIVEN W/HD PADDLE
26A01+

305197

REV. NC

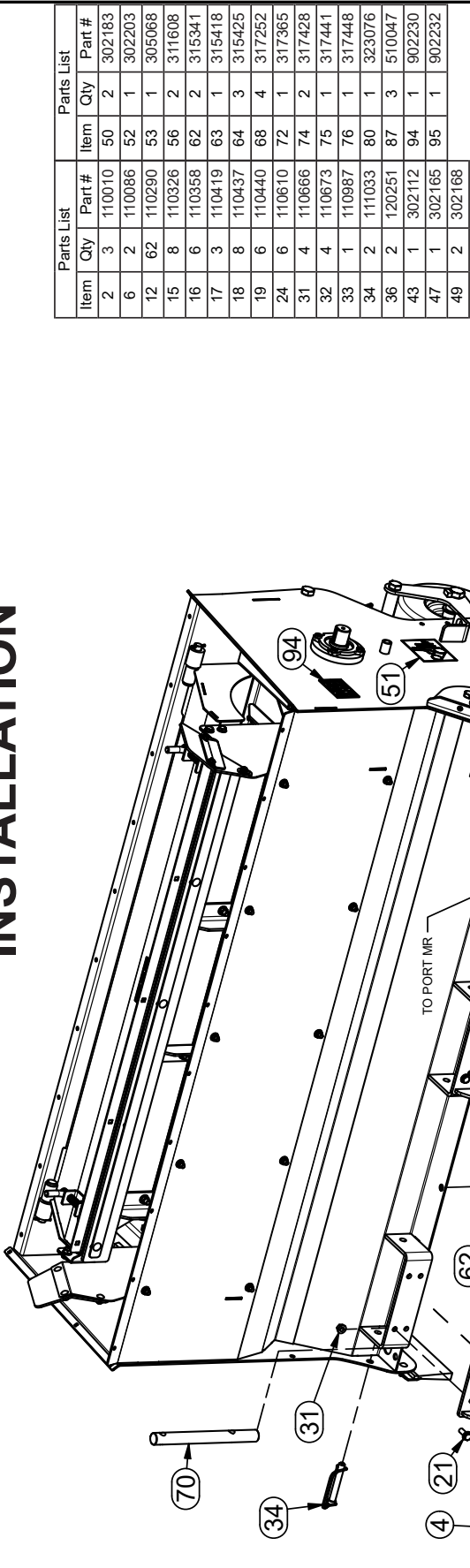
GAUGE WHEEL & LOWER SKIRT INSTALLATION

Parts List			Parts List		
Item	Qty	Part #	Item	Qty	Part #
1	1	102133	49	2	302168
2	3	110010	50	2	302183
4	2	110023	51	1	302202
5	4	110024	53	1	305068
6	2	110086	60	2	315339
11	2	110272	61	2	315340
12	62	110290	62	2	315341
14	2	110304	63	1	315418
15	8	110326	68	4	317252
16	6	110358	74	2	317428
18	8	110437	75	1	317441
19	6	110440	76	1	317448
27	2	110625	77	2	317567
28	6	110639	87	3	510047
32	4	110673	90	2	510237
34	2	111033	92	4	800128
44	1	302113	93	1	902228
47	1	302165	96	4	910865



BELT DRIVEN W/HD PADDLE
26A01+

HYDRAULIC MOTOR, SCALP WHEELS & LOWER SKIRT INSTALLATION



BELT DRIVEN W/HD PADDLE
26A01+

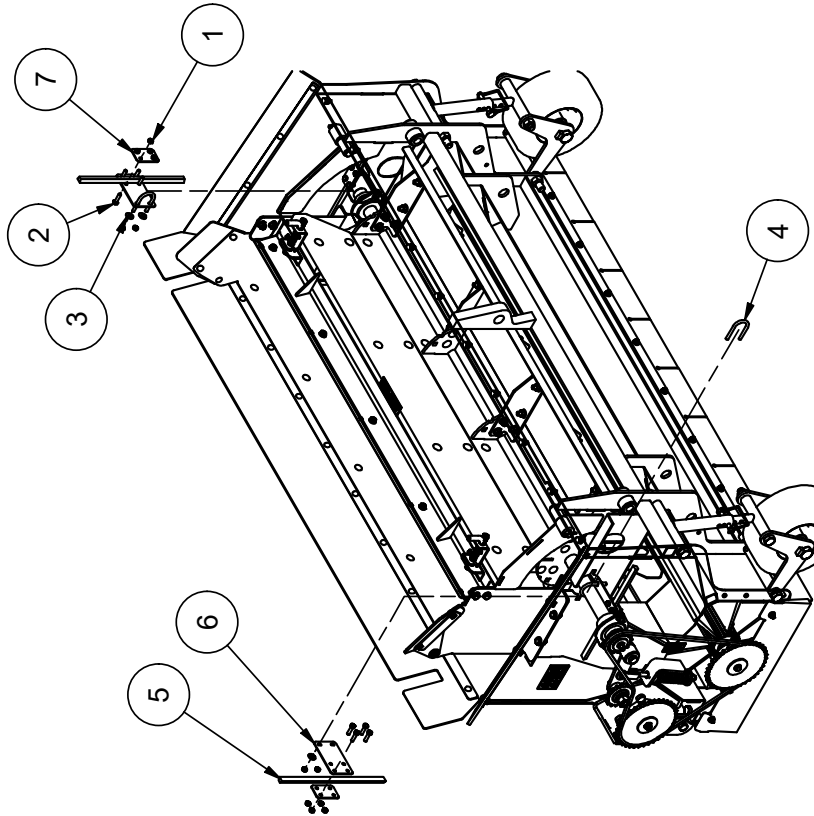
Copy 2 for belt drive

305164

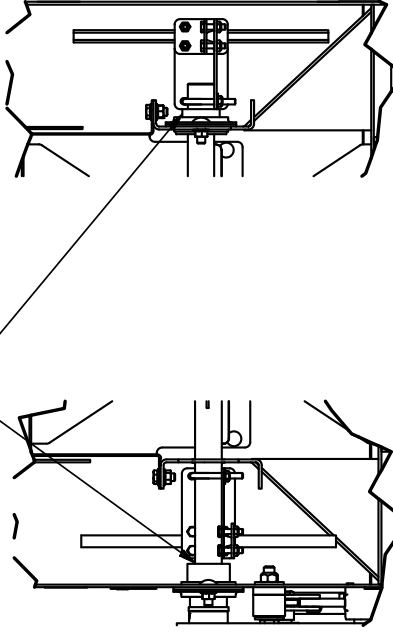
REV: A

Parts List

Item	Qty	Part #	DESCRIPTION
1	12	110174	Nut, 1/4-20, Unitorque Lock
2	8	110464	Bolt, 1/4-20 X 1.0
3	4	110673	Washer, 1/4" Flat Standard
4	2	112147	U-Bolt, 1/4-20 X 1.25, Zinc Plated
5	2	311608	Finger, 12" Rubber
6	2	317621	Plate, Debris Spinner Mint
7	2	317622	Plate, Debris Spinner Retainer



SIDE PLATES
TOWARD BEARINGS



LEFT SIDE DETAIL

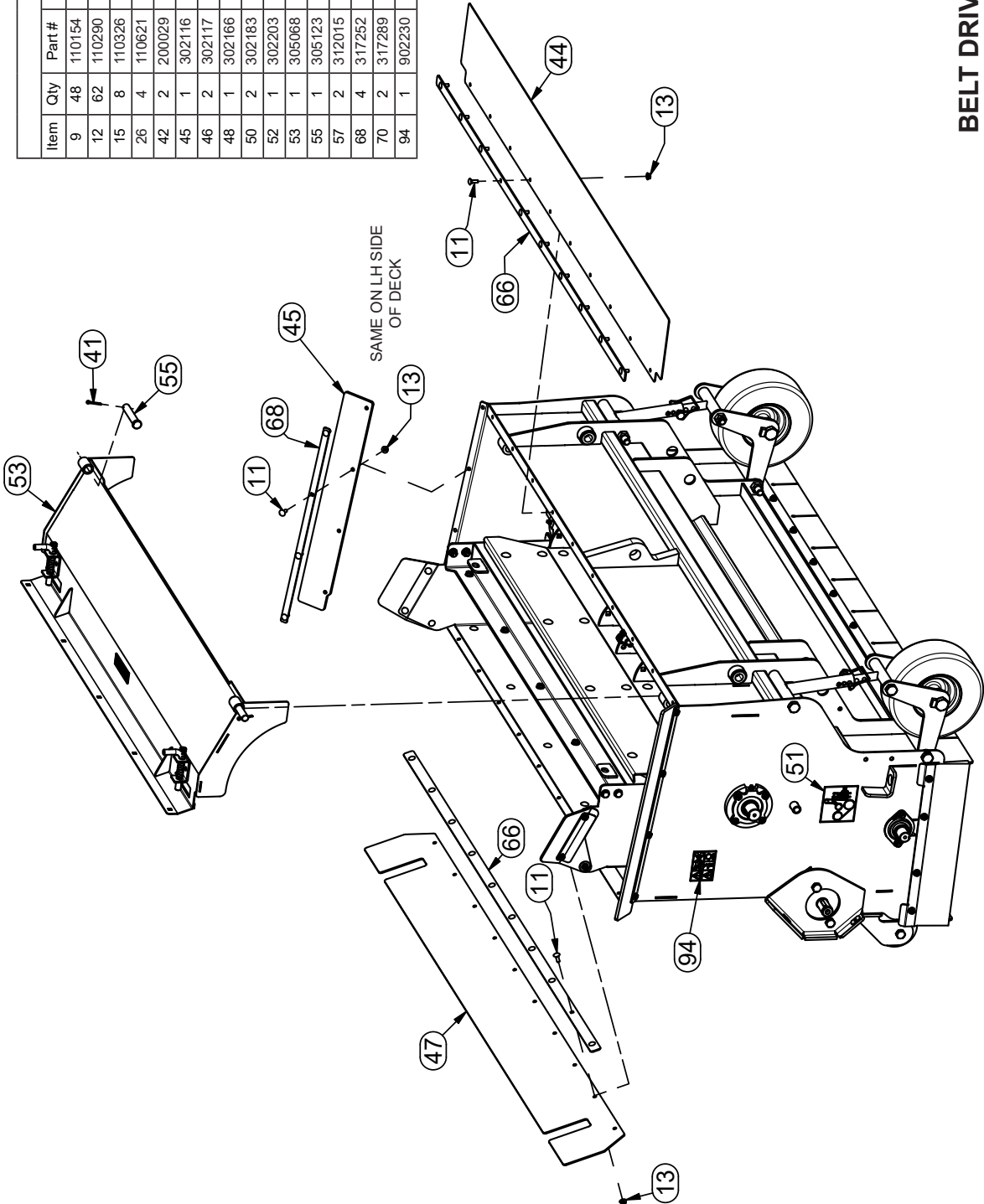
RIGHT SIDE DETAIL

RETURN AIR DEBRIS CLEANER KIT

Standard on S/N: 24A04+ Optional for S/N: 24A03 & older

UPPER DECK SEAL & PADDLE SHIELD INSTALLATION

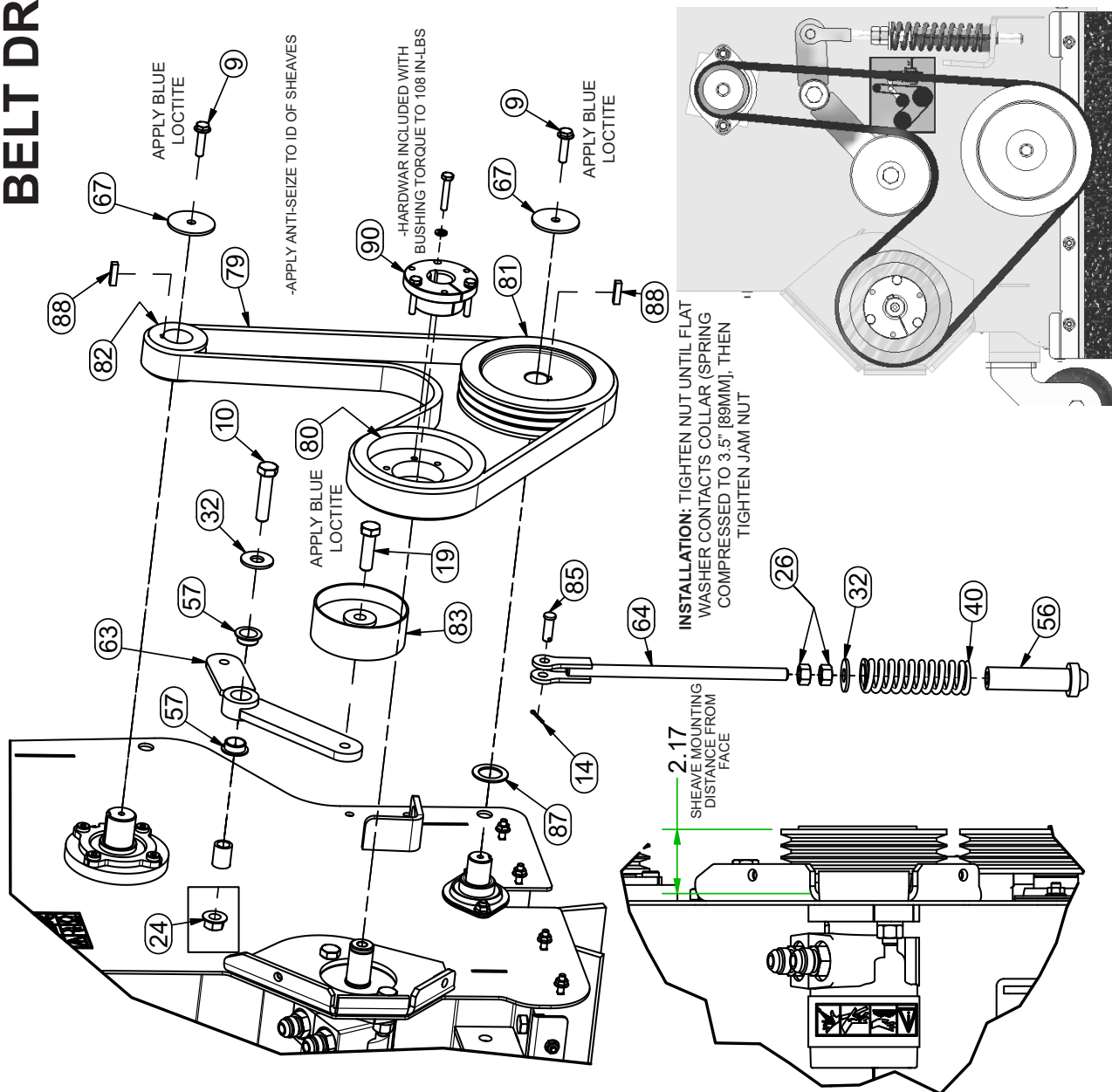
Parts List			
Item	Qty	Part #	DESCRIPTION
9	48	110154	Bolt, 1/4-20 X 0.75 In Carriage
12	62	110290	Nut, 1/4-20 W/ Flange
15	8	110326	Bolt, 1/4-20 X 1 In Carriage
26	4	110621	Nut, 3/8-16, Unitorque Lock
42	2	200029	Cotter Pin, 5/32 X 1
45	1	302116	Seal, Rear Transition
46	2	302117	Seal, Side Deck
48	1	302166	Seal, Front Deck
50	2	302183	Brush, Side Skirt
52	1	302203	Decal, Deck Belt Tensioning
53	1	305068	Assy, Brush
55	1	305123	Assy, Paddle Shield
57	2	312015	Pin, 5/8" X 3.5"
68	4	317252	Retainer, Front Deck
70	2	317289	Retainer, Upper Side Seal
94	1	902230	Decal, Shaft Hazard



BELT DRIVEN W/HD PADDLE
26A01+

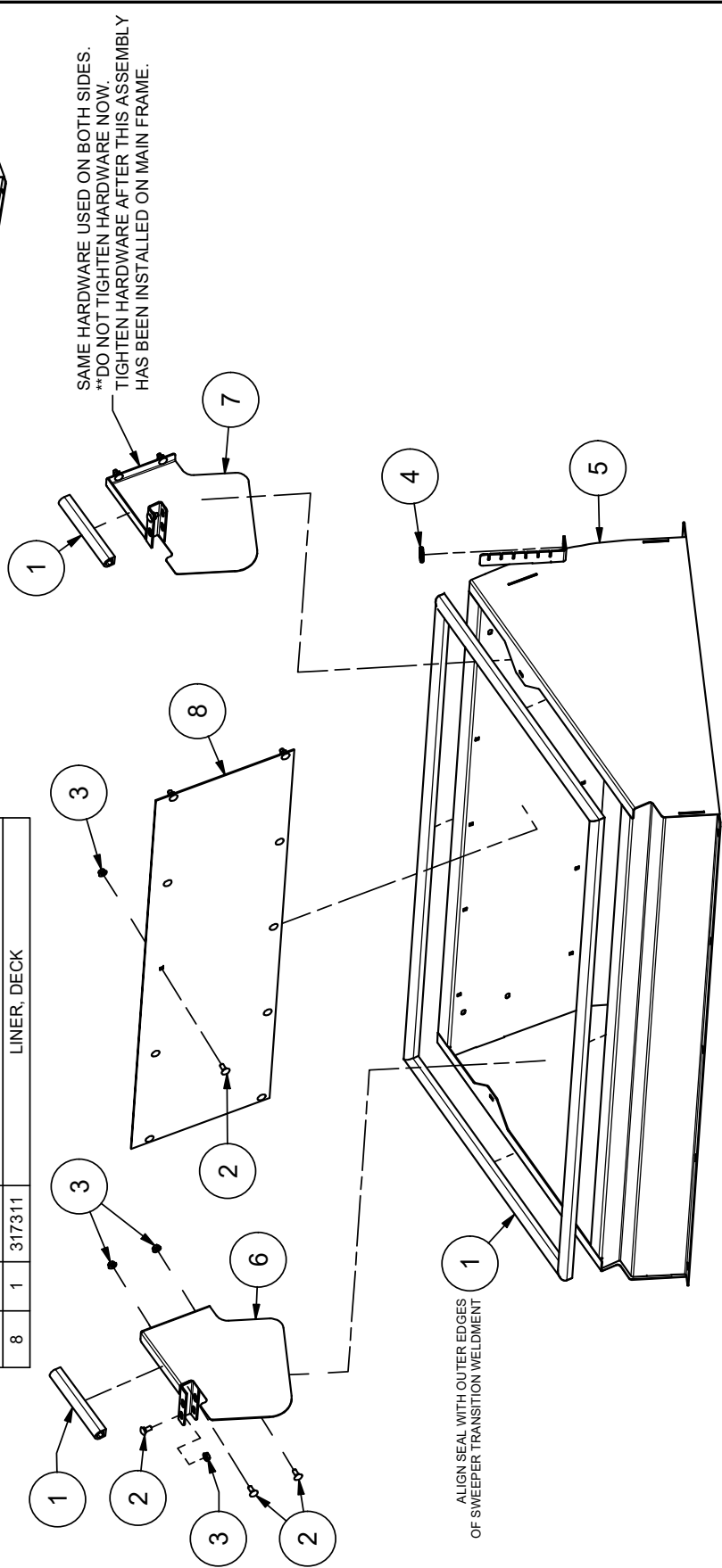
BELT DRIVE ASSEMBLY

Parts List		DESCRIPTION
Item	Qty	Part #
7	2	110122
8	1	110125
13	1	110300
17	3	110419
22	1	110588
24	6	110610
25	3	110615
30	8	110658
32	4	110673
41	1	142031
50	2	302183
52	1	302203
53	1	305068
58	1	312060
59	2	312061
65	1	315458
66	1	315467
69	2	317258
80	1	323076
81	1	342077
82	1	342078
83	1	342079
84	1	342080
85	1	342081
86	1	500274
88	1	510055
89	2	510228
91	1	510241



BELT DRIVEN W/HD PADDLE
26A01+

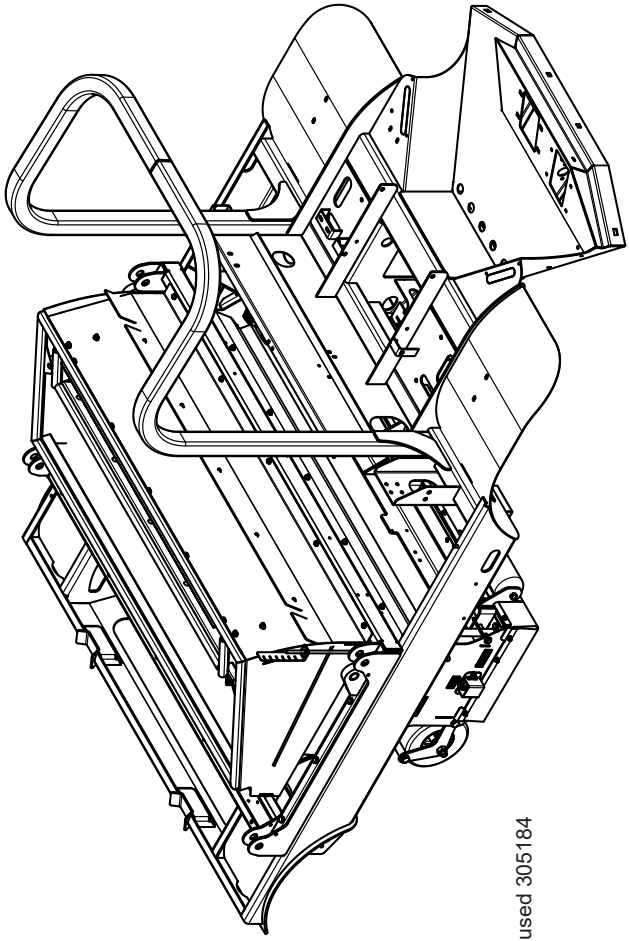
Parts List			DESCRIPTION
ITEM	QTY	PART #	
1	17'	102004	D-Seal, Rubber 1.00" x 1.00"
2	16	110020	Bolt, 5/16-18 X 0.75 in Carriage
3	16	110606	NUT, 5/16-18 WIZ FLANGE
4	1	110941	GROMMET - 1/2 ID X 1-1/4 OD, 1/16 X 1
5	1	315420	WELDMENT, SWEEPER TRANSITION, US
6	1	315421	WELDMENT, LH CHUTE
7	1	315422	WELDMENT, RH CHUTE
8	1	317311	LINER, DECK



DECK TRANSITION ASSEMBLY

DECK INSTALLATION

Parts List			DESCRIPTION
Item	Qty	Part #	
1	2	100465	COTTER PIN, 3/16 X 1.75
2	4.4'	102004	D-Seal, Rubber 1.00" x 1.00"
3	6	110003	BOLT, 1/2-13 X 4.0
4	10	110020	Bolt, 5/16-18 X 0.75 in Carriage
5	2	110155	WASHER, 3/8" FLAT SAE
6	4	110166	BOLT, 1/2-13 X 2.0 SHCS
7	4	110170	BOLT, 3/4-10 X 4.5
8	2	110304	PIN, LOCK 3/8 X 2.5 SQ
9	14	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
10	4	110588	NUT, 1/2-13 WIZ FLANGE
11	14	110606	NUT, 5/16-18 WIZ FLANGE
12	6	110615	NUT, 1/2-13, UNITORQUE LOCK
13	4	110625	NUT, 3/4-10, UNITORQUE LOCK
14	8	110851	BUSHING - IGUS, 1-1/4 x 1 x 3/4 fmg
15	4	111119	WASHER, 1/2" FLAT SAE
16	2	120220	ADAPTER, 4MJ-6MB90
17	2	200029	COTTER PIN, 5/32 X 1
18	1	220480	PIN
19	1	302167	SEAL, REAR CHUTE
20	4	302171	Spring, 500lb Rubber
21	1	305124	ASSY, DECK TRANSITION, U.S.
22	1	305197	ASSY, DECK, BELT DRIVE, US
23	1	315315	WELDMENT, HOPPER MOUNT
24	2	315346	WELDMENT, UPPER DECK LINK
25	2	315373	WELDMENT, LOWER DECK PIN, 4.50
26	2	315375	WELDMENT, LOWER DECK LINK
27	2	315376	WELDMENT, LOWER DECK PIN, 6.25
28	1	315423	WELDMENT, UPPER CHUTE RETAINER
29	2	315430	WELDMENT, RUBBER SPRING
30	1	317267	ROD, DECK HEIGHT INDICATOR
31	1	317282	LINK, DECK LIFT
32	2	317441	RETAINER, FRONT DECK
33	4	800128	BUSHING, IGUS, FOOT PEDAL
34	1	923011	Cylinder, 2 X 6, -6 SAE Cross

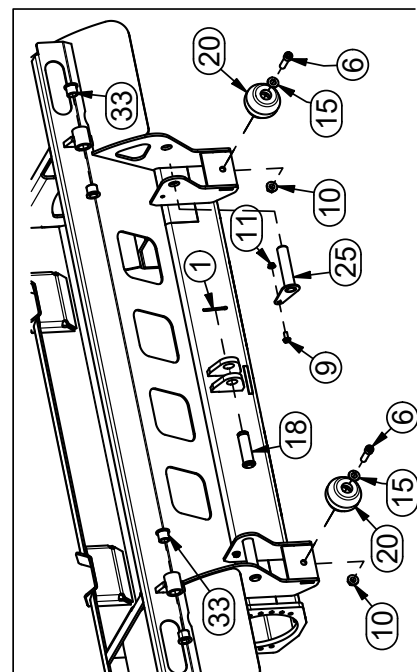
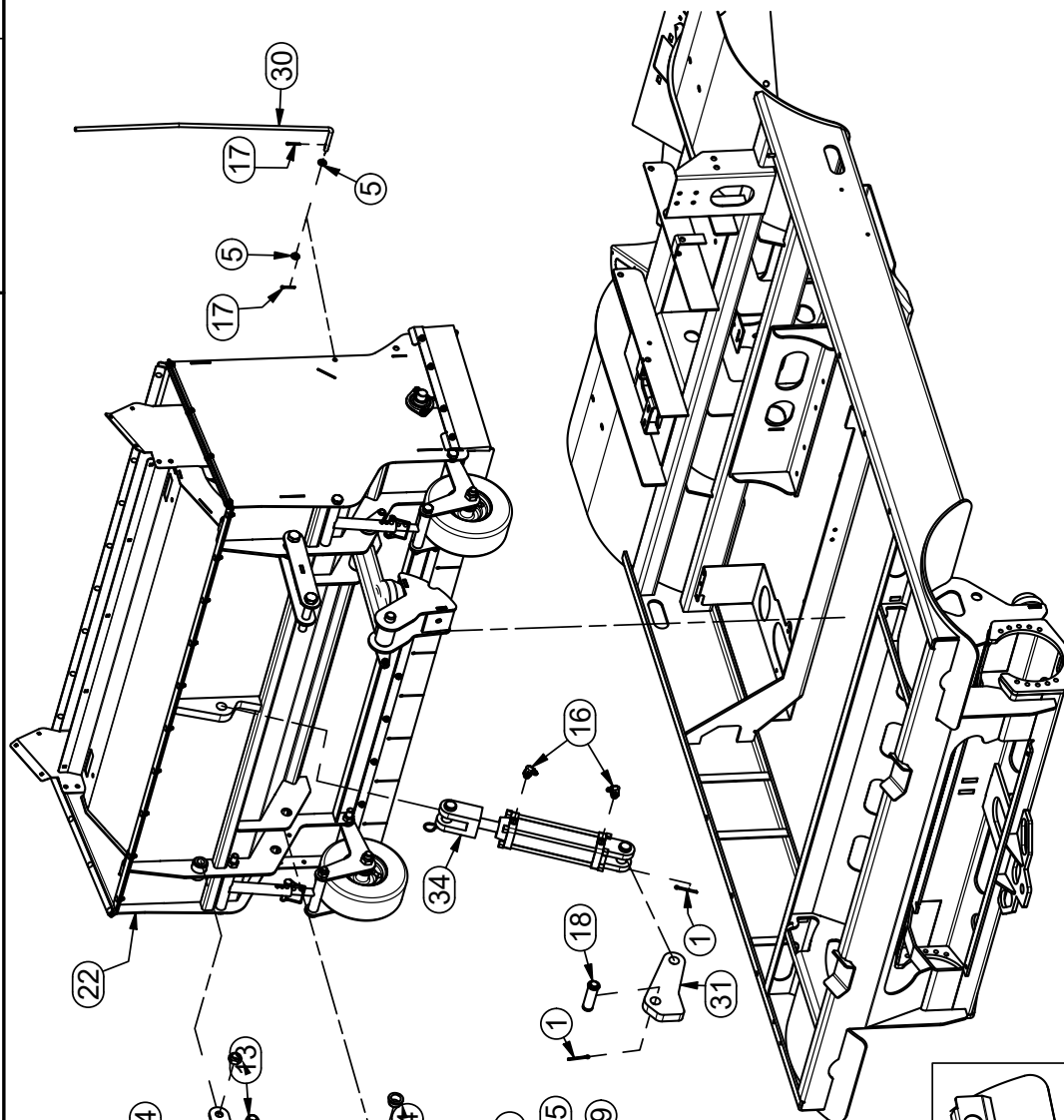


25A99 & older used 305184

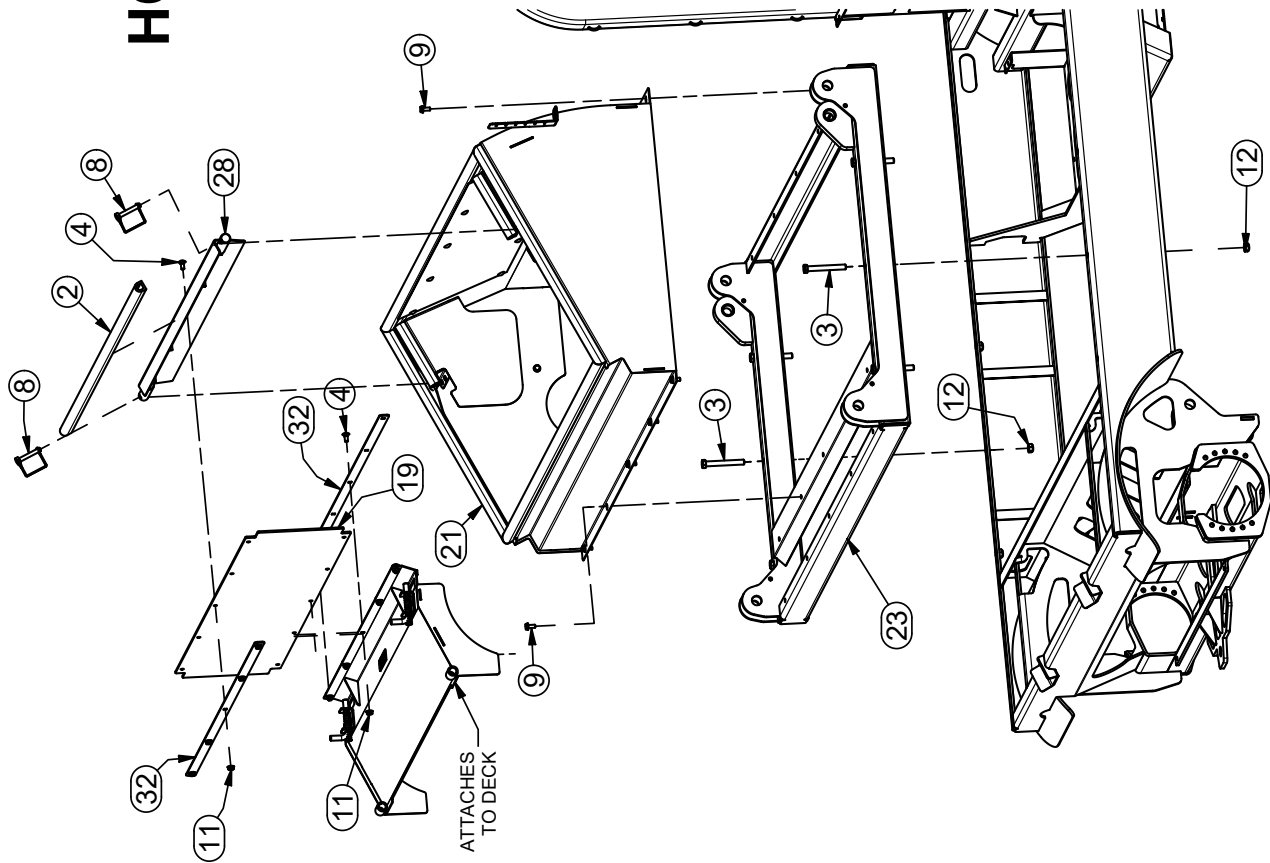
SIMILAR TO 305131

DECK LINKAGE INSTALLATION

LH LINKAGE IS
SAME AS RH LINKAGE

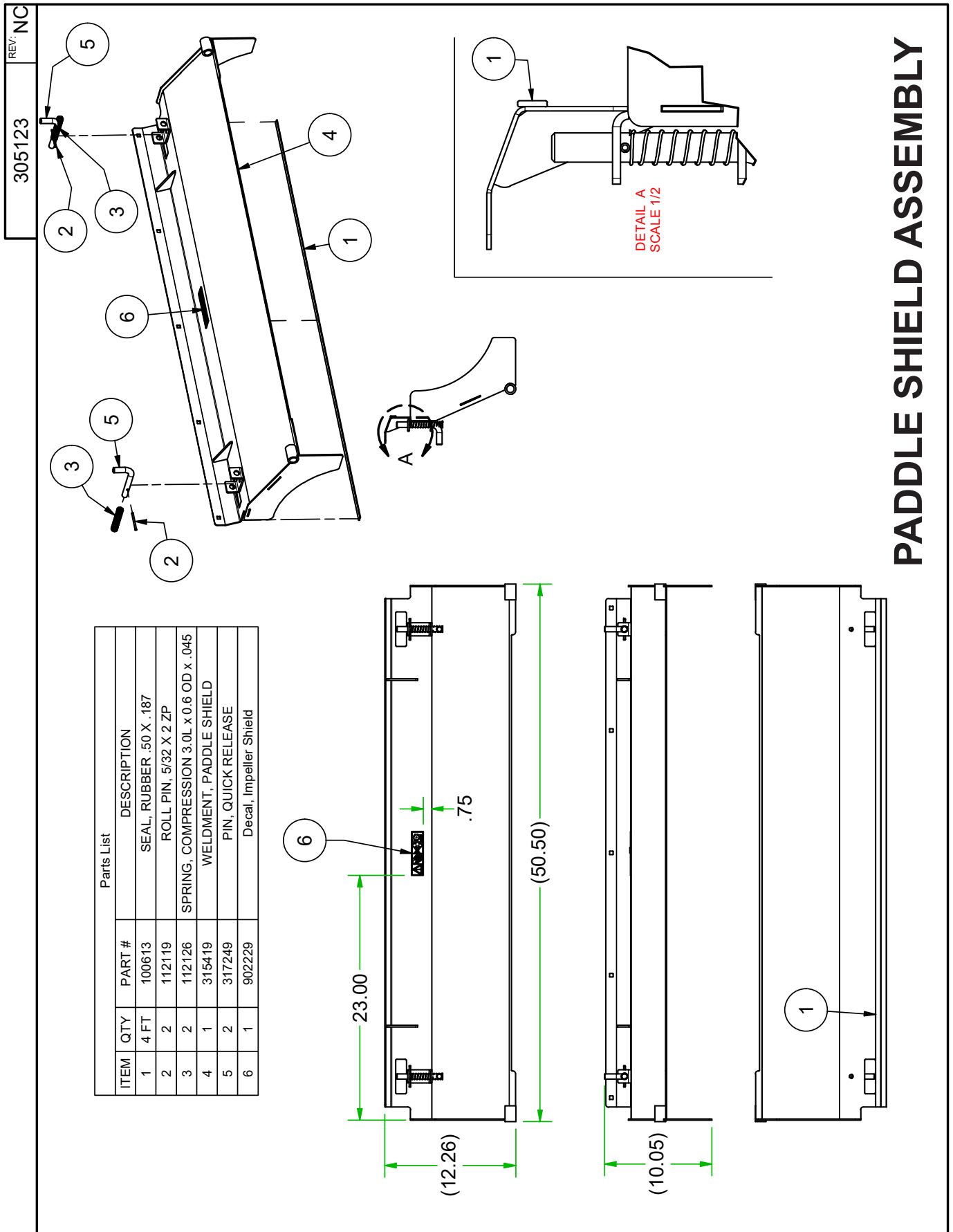


HOPPER TRANSITION & HOPPER MOUNT INSTALLATION

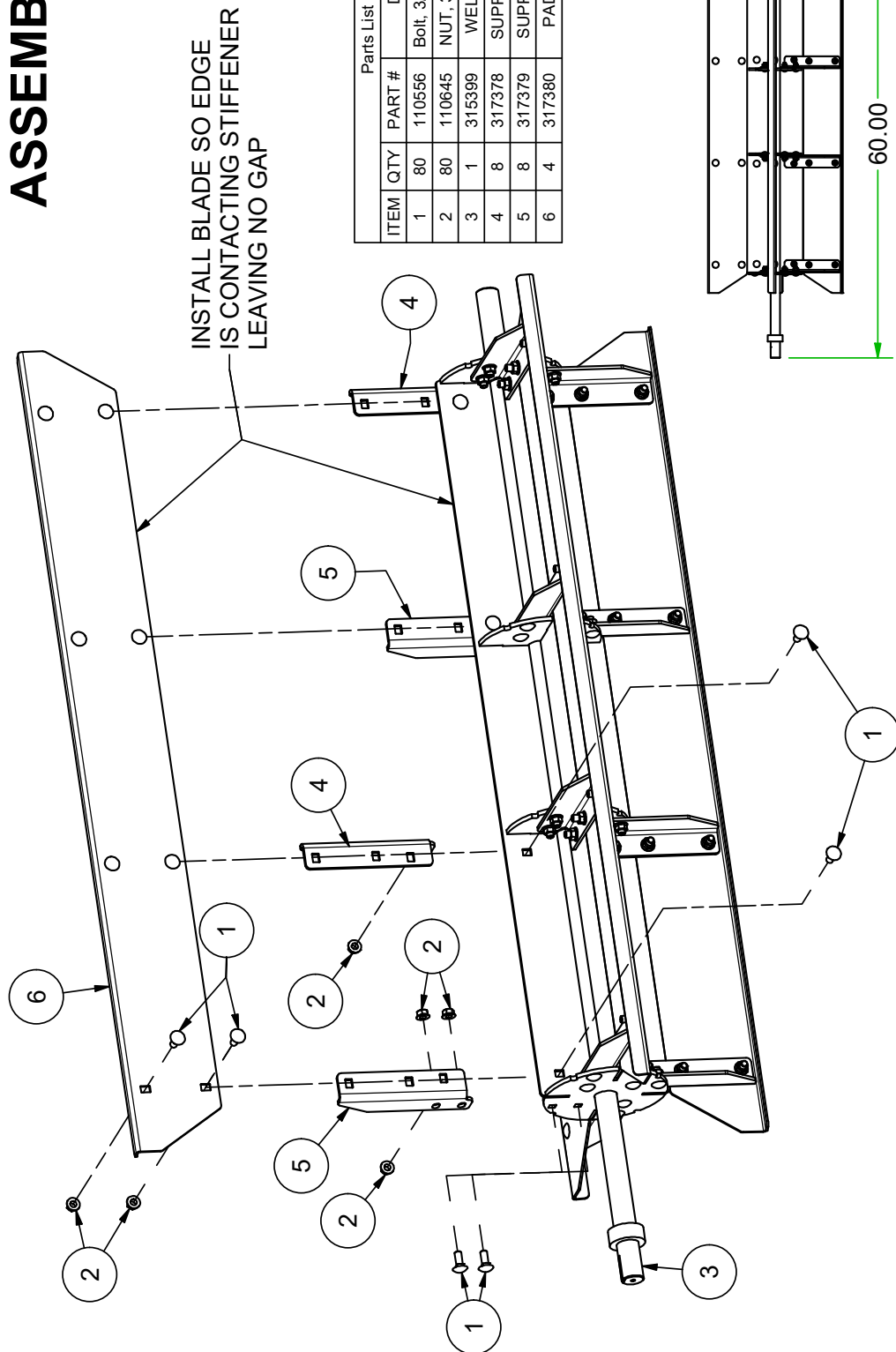


Parts List

Item	Qty	Part #	DESCRIPTION
2	4,4'	102004	D-Seal, Rubber 1.00" x 1.00"
3	6	110003	BOLT, 1/2-13 X 4.0
4	10	110020	Bolt, 5/16-18 X 0.75 in Carriage
8	2	110304	PIN, LOCK 3/8 X 2.5 SQ
9	14	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
11	14	110606	NUT, 5/16-18 WIZ FLANGE
12	6	110615	NUT, 1/2-13, UNITORQUE LOCK
19	1	302167	SEAL, REAR CHUTE
21	1	305124	ASSY, DECK TRANSITION, U.S.
23	1	315315	WELDMENT, HOPPER MOUNT
28	1	315423	WELDMENT, UPPER CHUTE RETAINER
32	2	317441	RETAINER, FRONT DECK



PADDLE ASSEMBLY

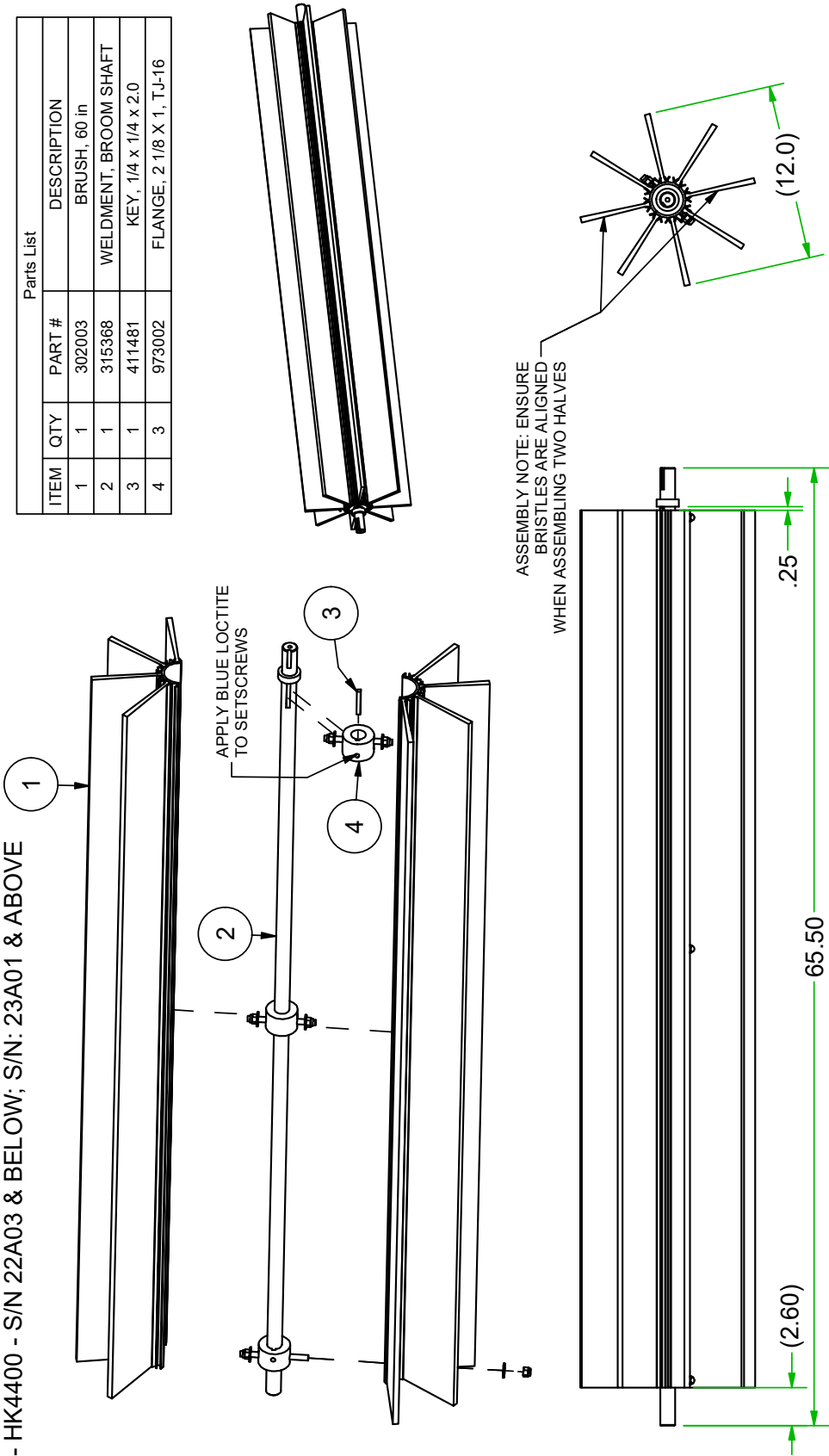


Parts List		
ITEM	QTY	DESCRIPTION
1	80	Bolt, 3/8-16 X 1 in Carriage
2	80	NUT, 3/8-16 W/IZ FLANGE
3	1	WELDMENT, PADDLE
4	8	SUPPORT, RH PADDLE
5	8	SUPPORT, LH PADDLE
6	4	PADDLE, SWEEPER

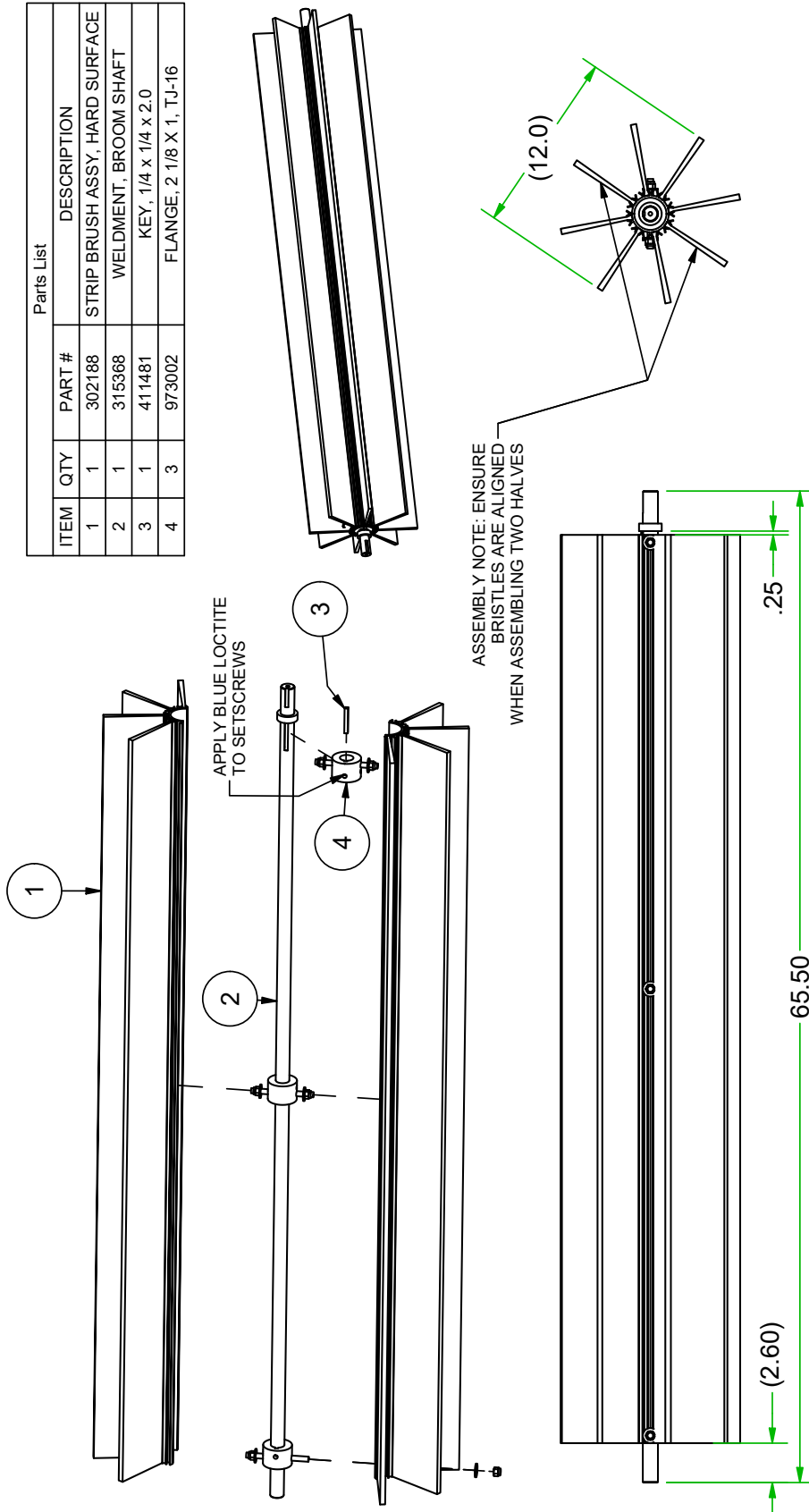
Brush Assembly

INSTALLED ON THE FOLLOWING
PRODUCTION MACHINES.
- HK4200 - S/N 22A04 & BELOW; S/N: 23A01 & ABOVE
- HK4400 - S/N 22A03 & BELOW; S/N: 23A01 & ABOVE

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	1	302003	BRUSH, 60 in
2	1	315368	WELDMENT, BROOM SHAFT
3	1	411481	KEY, 1/4 x 1/4 x 2.0
4	3	973002	FLANGE, 2 1/8 X 1, T-J-16

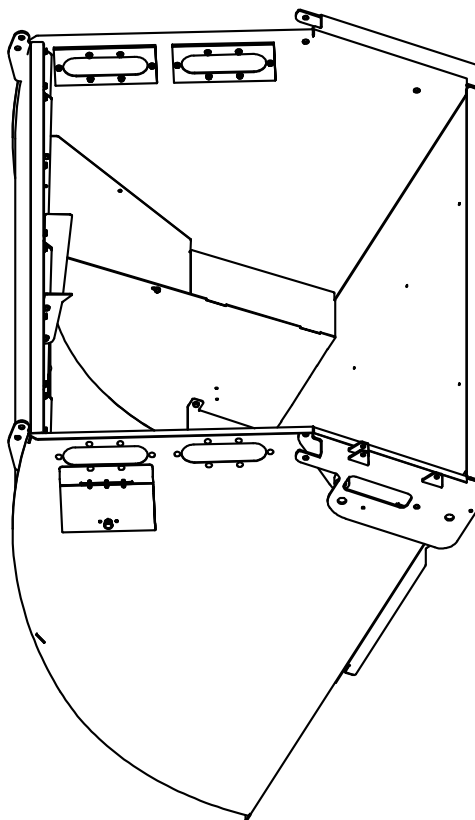


Hard Surface Brush Assembly



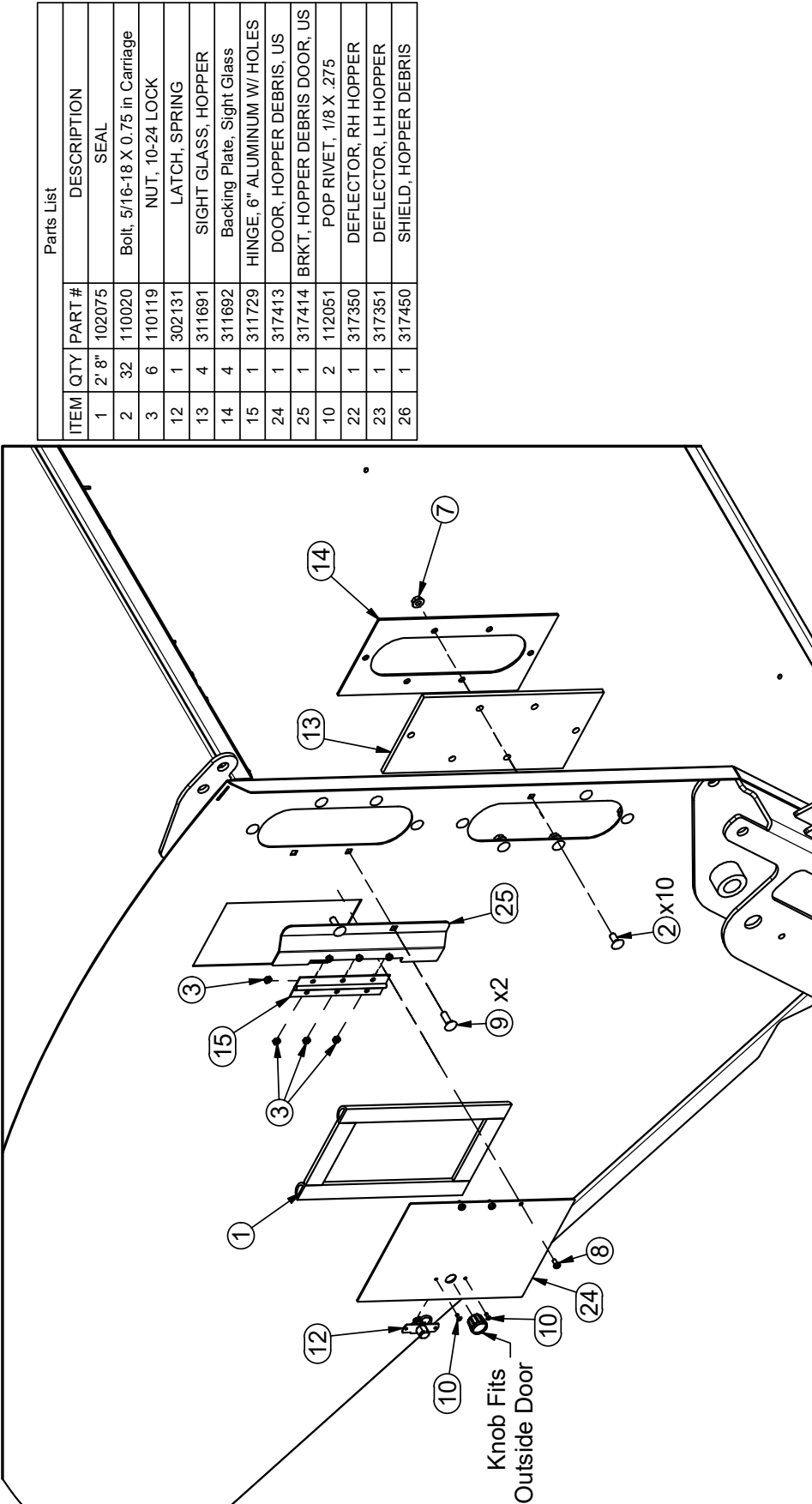
Parts List		
ITEM	QTY	PART # DESCRIPTION
1	2' 8"	102075 SEAL
2	32	110020 Bolt, 5/16-18 X 0.75 in Carriage
3	6	110119 NUT, 10-24 LOCK
4	26	110319 NUT, 5/16-18 U-TYPE .75L
5	8	110444 BOLT, 5/16-18 X 0.75, WIZ FLANGE
6	24	110459 BOLT, 5/16-18 X 1, WIZ FLANGE
7	45	110606 NUT, 5/16-18 WIZ FLANGE
8	6	110788 BOLT, 10-24 X .375 STAINLESS, PHILLIPS
9	7	110871 Bolt, 5/16-18 X 1 in Carriage
10	2	112051 POP RIVET, 1/8 X .275
11	1	302121 LINER, SWEEPER HOPPER
12	1	302131 LATCH, SPRING
13	4	311691 SIGHT GLASS, HOPPER
14	4	311692 Backing Plate, Sight Glass
15	1	311729 HINGE, 6" ALUMINUM W/ HOLES
16	1	315428 WELDMENT, HOPPER, U.S.
17	2	317212 SCREEN, OUTER RETURN AIR
18	2	317213 SCREEN, INNER RETURN AIR
19	1	317214 SCREEN, RH RETURN AIR
20	1	317215 SCREEN, LH RETURN AIR
21	2	317245 RETAINER, LINER
22	1	317350 DEFLECTOR, RH HOPPER
23	1	317351 DEFLECTOR, LH HOPPER
24	1	317413 DOOR, HOPPER DEBRIS, US
25	1	317414 BRKT, HOPPER DEBRIS DOOR, US
26	1	317450 SHIELD, HOPPER DEBRIS

HOPPER ASSEMBLY



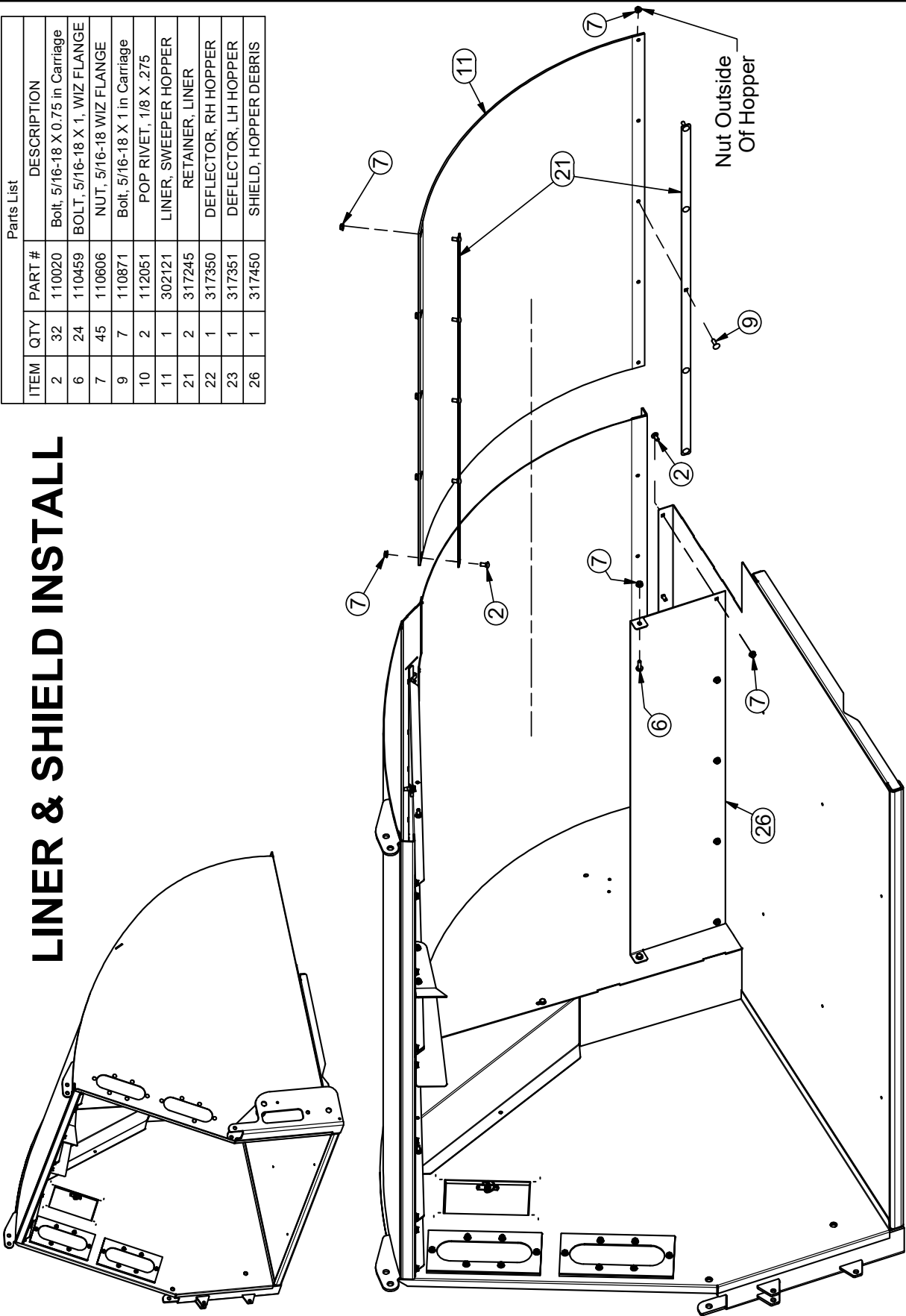
SIMILAR TO 305132

WINDOW AND DOOR INSTALL



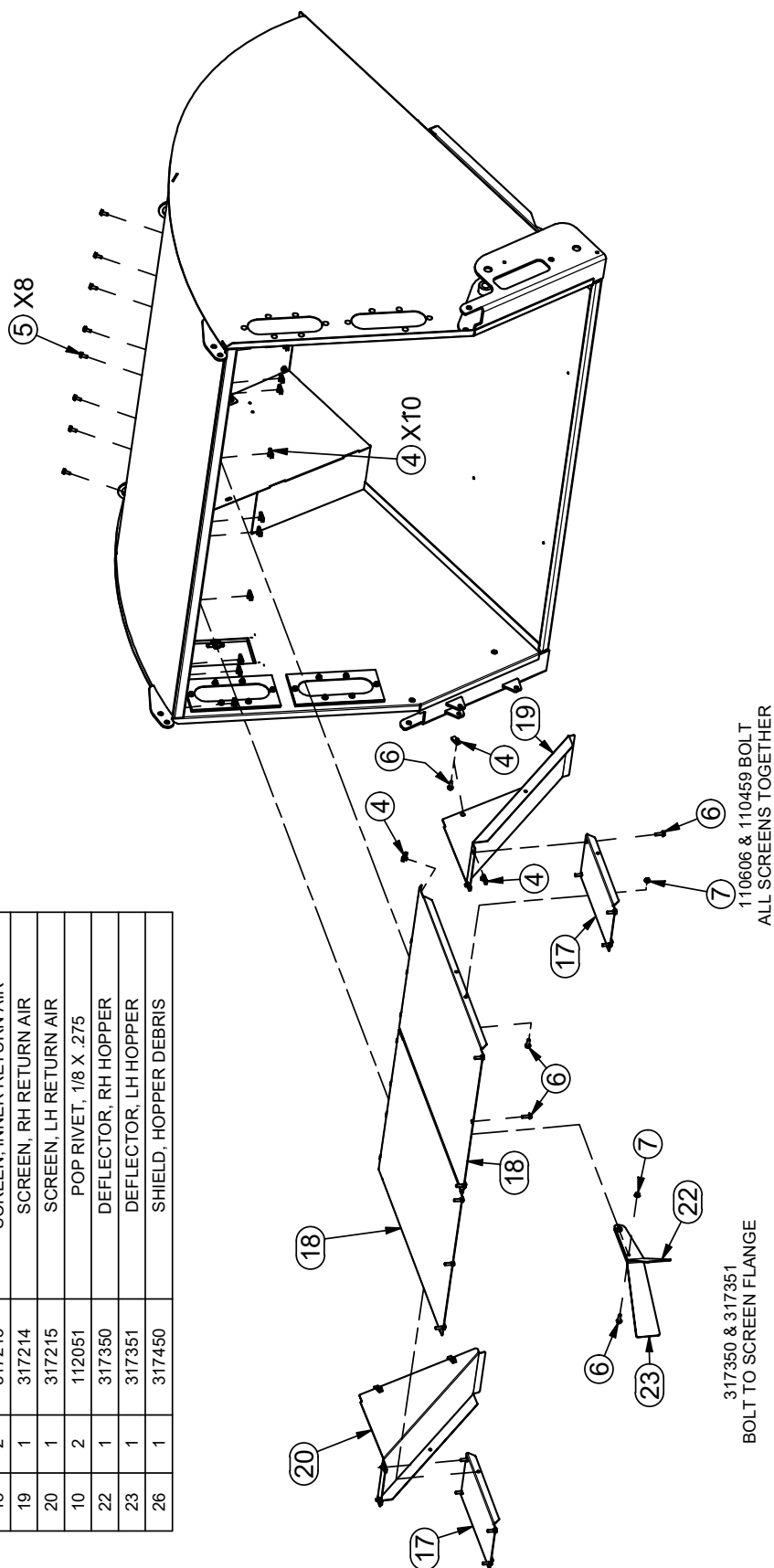
LINER & SHIELD INSTALL

Parts List		
ITEM	QTY	PART # DESCRIPTION
2	32	110020 Bolt, 5/16-18 X 0.75 in Carriage
6	24	110459 BOLT, 5/16-18 X 1, WIZ FLANGE
7	45	110606 NUT, 5/16-18 WIZ FLANGE
9	7	110871 Bolt, 5/16-18 X 1 in Carriage
10	2	112051 POP RIVET, 1/8 X .275
11	1	302121 LINER, SWEEPER HOPPER
21	2	317245 RETAINER, LINER
22	1	317350 DEFLECTOR, RH HOPPER
23	1	317351 DEFLECTOR, LH HOPPER
26	1	317450 SHIELD, HOPPER DEBRIS



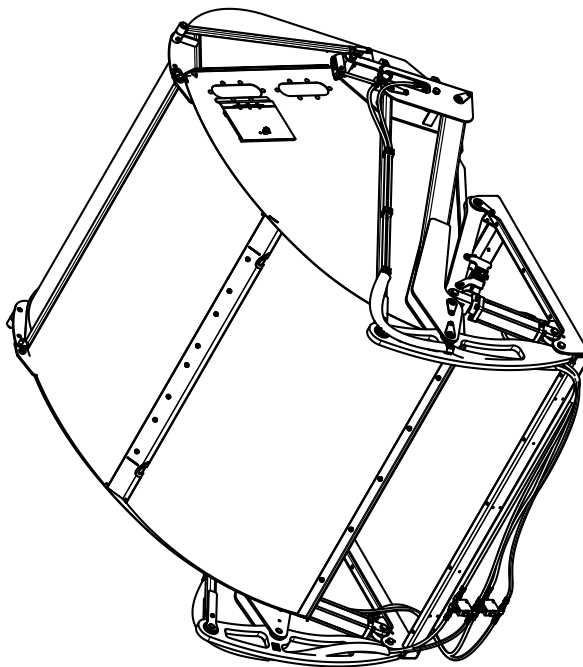
SCREEN ASSEMBLY AND INSTALL

Parts List			
ITEM	QTY	PART #	DESCRIPTION
4	26	110319	NUT, 5/16-18 U-TYPE .75L
5	8	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
6	24	110459	BOLT, 5/16-18 X 1, WIZ FLANGE
7	45	110606	NUT, 5/16-18 WIZ FLANGE
17	2	317212	SCREEN, OUTER RETURN AIR
18	2	317213	SCREEN, INNER RETURN AIR
19	1	317214	SCREEN, RH RETURN AIR
20	1	317215	SCREEN, LH RETURN AIR
10	2	112051	POP RIVET, 1/8 X .275
22	1	317350	DEFLECTOR, RH HOPPER
23	1	317351	DEFLECTOR, LH HOPPER
26	1	317450	SHIELD, HOPPER DEBRIS



Parts List				Parts List			
Item	Qty	Part #	DESCRIPTION	Item	Qty	Part #	DESCRIPTION
1	8.75'	100354	WEBBING, NYLON 1.50ID, SHEATH	41	2	322110	Ball Valve, -4 Sae O-Ring, 7350 Psi
2	4	110025	BOLT, 5/8-11 X 5.5	42	2	323010	Cylinder - Steering, 1-3/4 X 6
3	4	110378	BOLT, 5/16-18 X 2.0	43	1	323065	Hose Kit, Hawk Hopper Hydraulic
4	2	110396	BOLT, 5/16-18 X 2.5	44	2	323066	Cylinder, 2.5 X 8, -6 Sae, Hopper
5	8	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE	45	2	500184	Cotter Pin, 3/16 X 1.25
6	8	110474	BOLT, 1/4-20 X 1-1/2	46	2	500230	Grease Zerk, 1/4-28 90deg
7	2	110536	BOLT, 5/16-18 X 3.25	47	14	510174	Grease Zerk, 1/4-28 St
8	2	110576	BOLT, 5/8-11 X 1.5 GR 5	48	8	522104	Double Hose Clamp
9	10	110600	NUT, 5/16-18, UNITORQUE LOCK	49	8	522105	Double Coverplate
10	8	110606	NUT, 5/16-18 WIZ FLANGE				
11	6	110639	NUT, 5/8-11, UNITORQUE LOCK				
12	2	110665	WASHER, 5/16" FLAT STANDARD				
13	8	110667	WASHER, 1/4" LOCK				
14	2	111190	Bolt, 3/8 x 2 Shoulder				
15	2	112131	Clevis Pin, 1/2" x 1-1/2", ZINC-PLATED STEEL				
16	2	112133	Clevis Pin, 1" x 2-3/16", ZINC-PLATED STEEL				
17	2	120222	ADAPTER, 6MJ-6MB90				
18	4	120233	ADAPTER, 4MJ-4MB				
19	2	120266	ADAPTER, 4MJ-4FJX90				
20	2	120398	ADAPTER, REST 6MJ-6MB, .047				
21	2	120770	ADAPTER, 4MB-4FB, EXTENDER				
22	2	120771	ADAPTER, 4MB-4MB90				
23	2	140016	PIN, LOCK, 1/4 X 2-1/4, SQ WIRE				
24	3	200029	COTTER PIN, 5/32 X 1				
25	2	305103	Assy, Safety Latch, ISO				
26	1	305113	Assy, Hopper Door, ISO, US				
27	1	305127	ASSY, HOPPER, U.S.				
28	2	315257	PIN WELDMENT, HOPPER DOOR				
29	2	315327	WELDMENT, DOOR LIFT PIVOT LINK				
30	4	315331	WELDMENT, HOPPER LIFT - 4.00"				
31	4	315332	WELDMENT, LIFT LINK PIN - 2.87"				
32	4	315333	WELDMENT, LIFT LINK PIN - 2.12"				
33	2	315383	Weldment, Door Arm End				
34	2	315410	WELDMENT, VERTICAL LIFT LINK, US				
35	2	315411	WELDMENT, CYLINDER LIFT LINK, US				
36	2	315412	WELDMENT, LOWER LIFT LINK, US				
37	2	315413	WELDMENT, UPPER LIFT LINK, US				
38	2	315416	WELDMENT, DOOR LIFT LINK, US				
39	2	317216	CLEVIS PIN, 3/4 X 3.75, W/ HOLE				
40	4	317320	SPACER, CYLINDER				

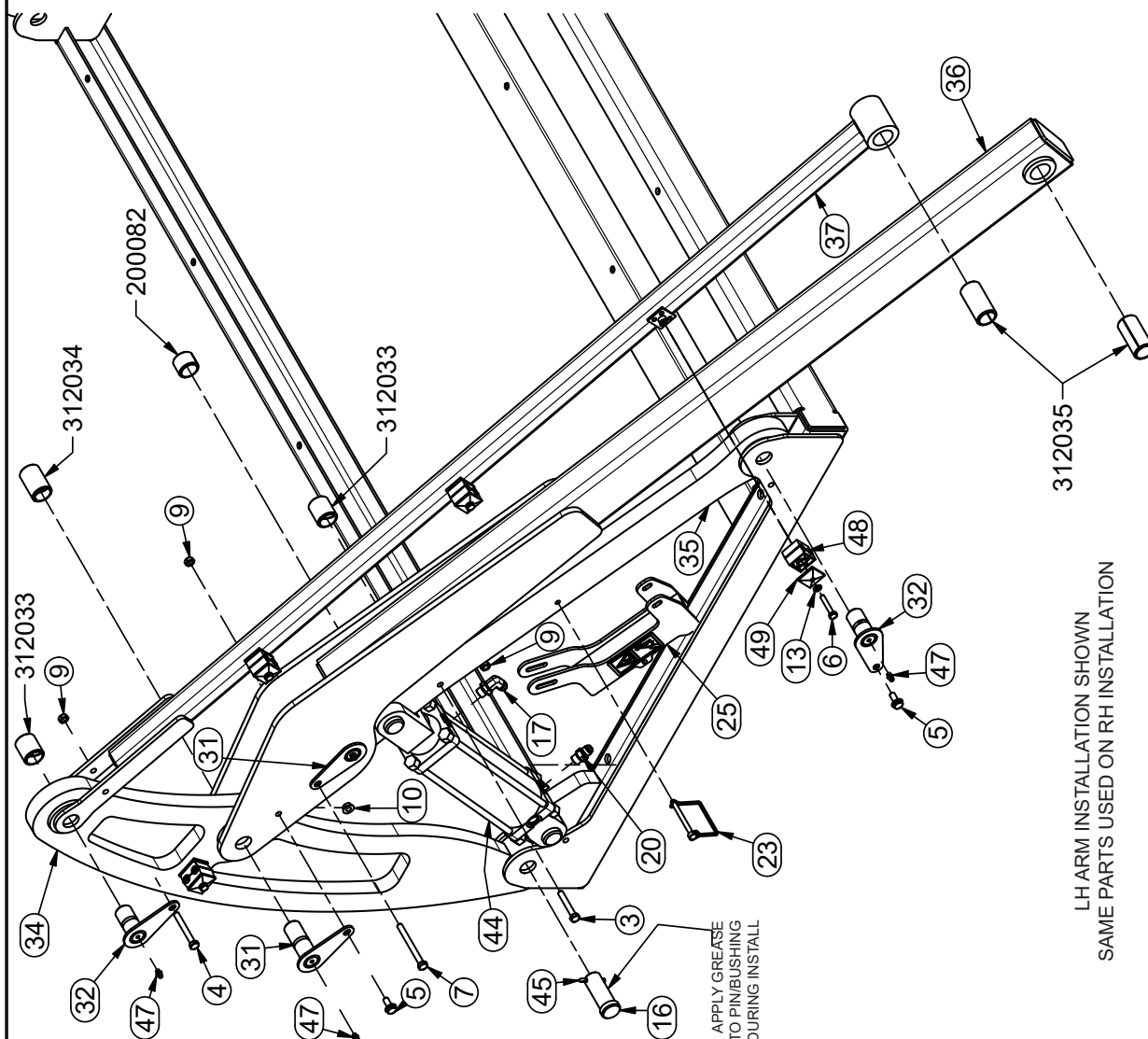
HOPPER INSTALLATION



LIFT ARM ASSEMBLY

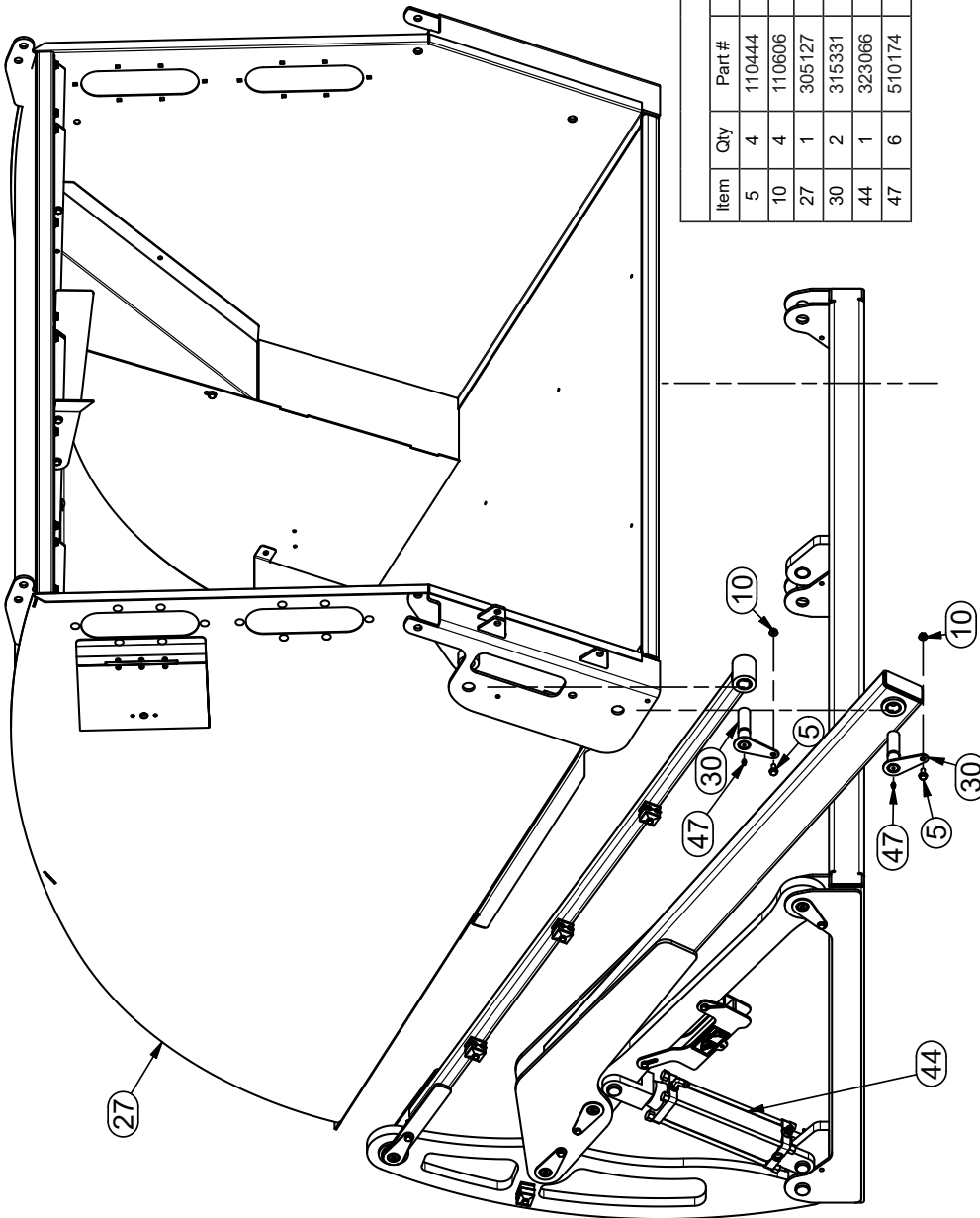
Qty	Part #	DESCRIPTION
1	200082	Bushing, 1.25 x 1 x 1 Split Steel
2	312033	Bushing, 1.25 x 1 x 1.438 Split Steel, w/
1	312034	Bushing, 1.25 x 1 x 1.938 Split Steel, w/
2	312035	Bushing, 1.25 x 1 x 2.5 Split Steel, w/

Parts List				
Item	Qty	Part #	DESCRIPTION	
3	1	110378	BOLT, 5/16-18 X 2.0	
4	1	110396	BOLT, 5/16-18 X 2.5	
5	2	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE	
6	4	110474	BOLT, 1/4-20 X 1-1/2	
7	1	110536	BOLT, 5/16-18 X 3.25	
9	3	110600	NUT, 5/16-18, UNITORQUE LOCK	
10	2	110606	NUT, 5/16-18 WIZ FLANGE	
13	4	110667	WASHER, 1/4" LOCK	
16	1	112133	Clevis Pin, 1" x 2-3/16", ZINC-PLATED STEEL	
17	1	120222	ADAPTER, 6MJ-6MB90	
20	1	120398	ADAPTER, REST 6MJ-6MB, .047	
23	1	140016	PIN, LOCK, 1/4 X 2-1/4, SQ WIRE	
25	1	305103	Assy, Safety Latch, ISO	
31	2	315332	WELDMENT, LIFT LINK PIN - 2.87"	
32	2	315333	WELDMENT, LIFT LINK PIN - 2.12"	
34	1	315410	WELDMENT, VERTICAL LIFT LINK, US	
35	1	315411	WELDMENT, CYLINDER LIFT LINK, US	
36	1	315412	WELDMENT, LOWER LIFT LINK, US	
37	1	315413	WELDMENT, UPPER LIFT LINK, US	
44	1	323066	Cylinder, 2.5 X 8, -6 Sae, Hopper	
45	1	500184	Collter Pin, 3/16 X 1.25	
47	4	510174	Grease Zerk, 1/4-28 St	
48	4	522104	Double Hose Clamp	
49	4	522105	Double Coverplate	



LH ARM INSTALLATION SHOWN
SAME PARTS USED ON RH INSTALLATION

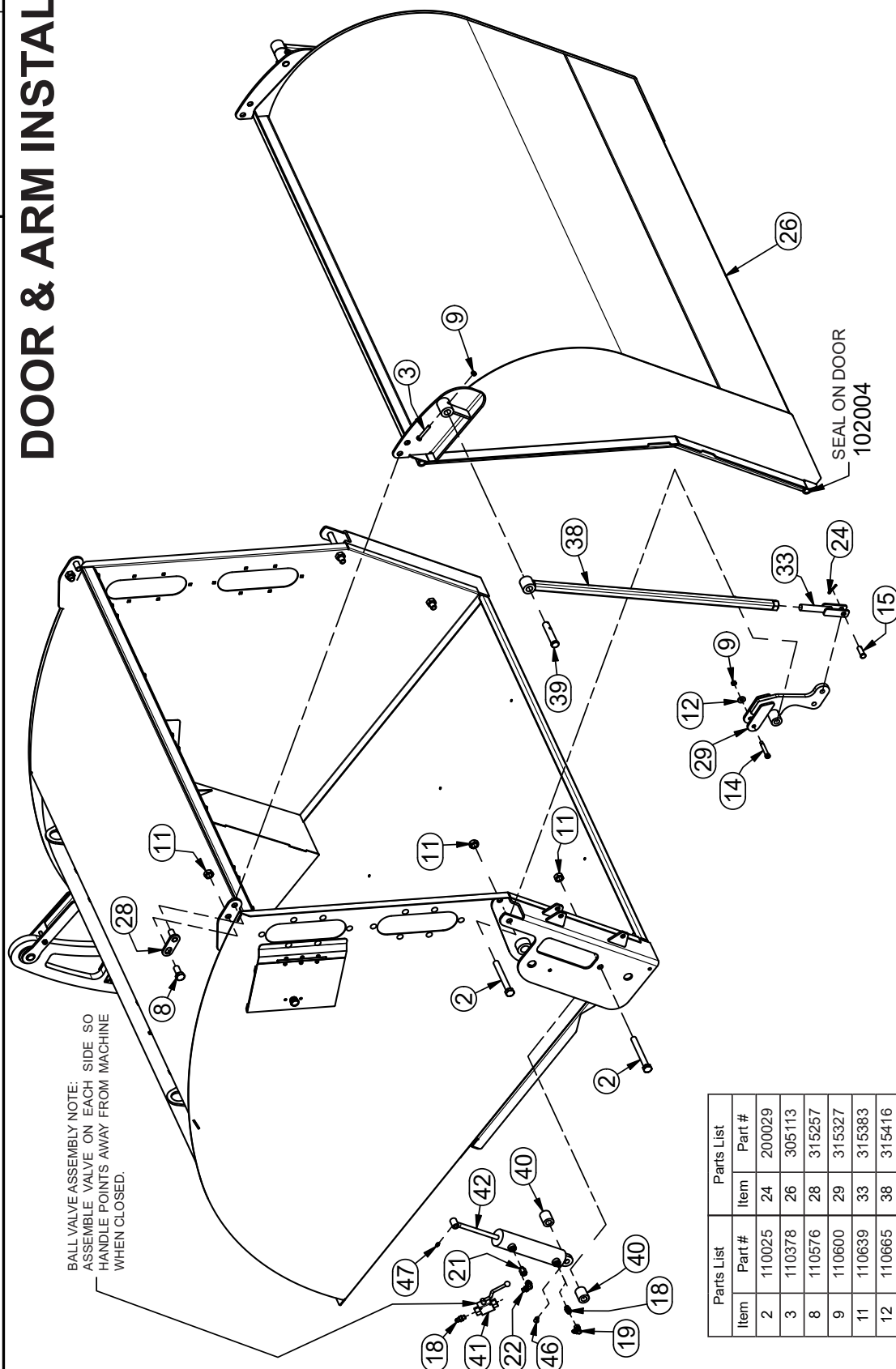
HOPPER INSTALL



Parts List			
Item	Qty	Part #	DESCRIPTION
5	4	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
10	4	110606	NUT, 5/16-18 WIZ FLANGE
27	1	305127	ASSY, HOPPER, U.S.
30	2	315331	WELDMENT, HOPPER LIFT - 4.00"
44	1	323066	Cylinder, 2.5 X 8, -6 Sae, Hopper
47	6	510174	Grease Zerk, 1/4-28 St

LH ARM INSTALLATION SHOWN
SAME PARTS USED ON RH INSTALLATION

DOOR & ARM INSTALL

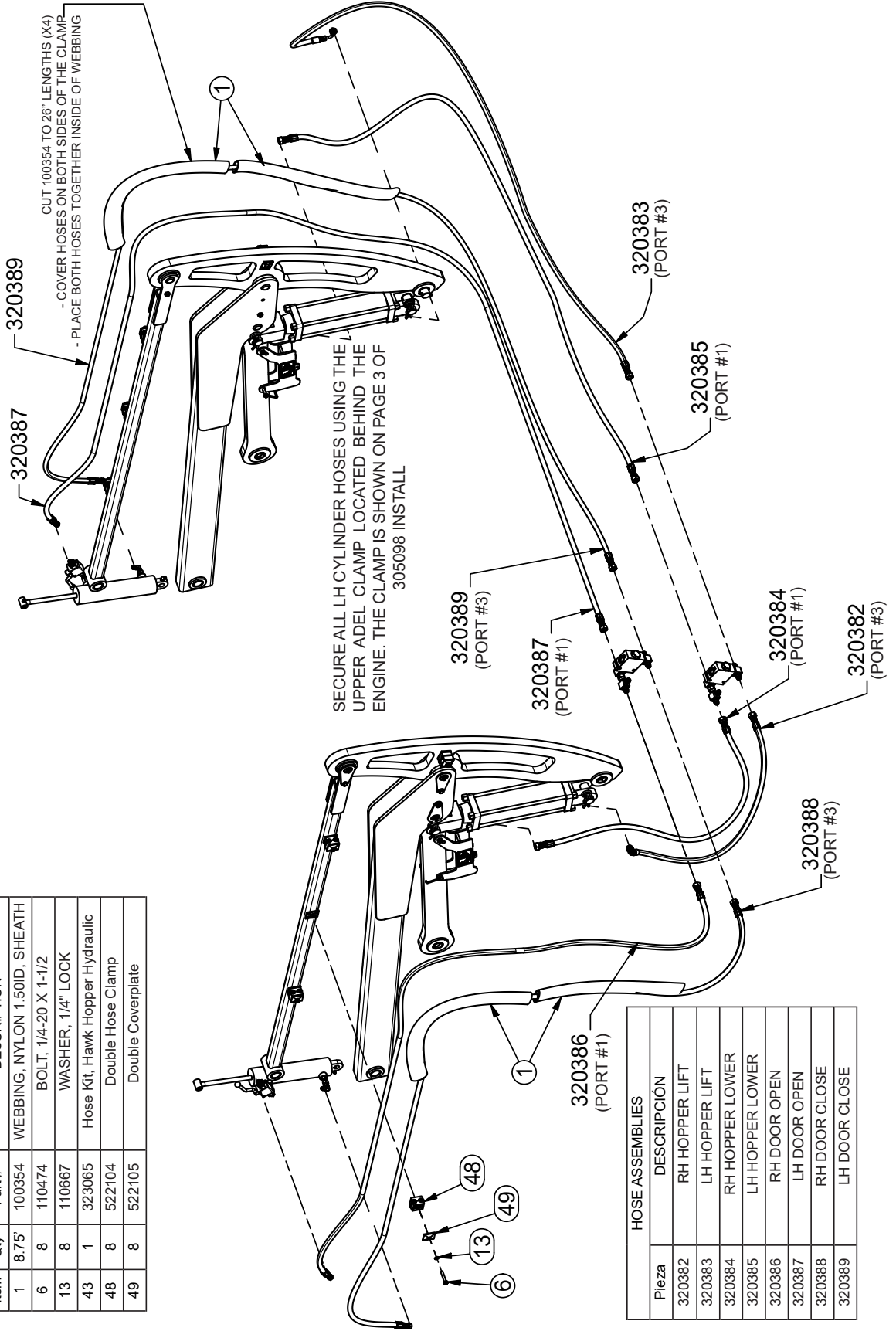


1. INITIALLY SET THE HOPPER DOOR LIFT LINK TO 36.5" (CTR TO CTR)
2. ADJUST AS NEEDED TO COMPRESS THE DOOR SEAL TO .5" AT THE BOTTOM OF THE DOOR

Parts List		Parts List	
Item	Part #	Item	Part #
2	110025	24	200029
3	110378	26	305113
8	110576	28	315257
9	110600	29	315327
11	110639	33	315383
12	110665	38	315416
14	111190	39	317216
15	112131	40	317320
18	120233	41	322110
19	120266	42	323010
21	120770	46	500230
22	120771	47	510174

HOPPER CYLINDER PLUMBING

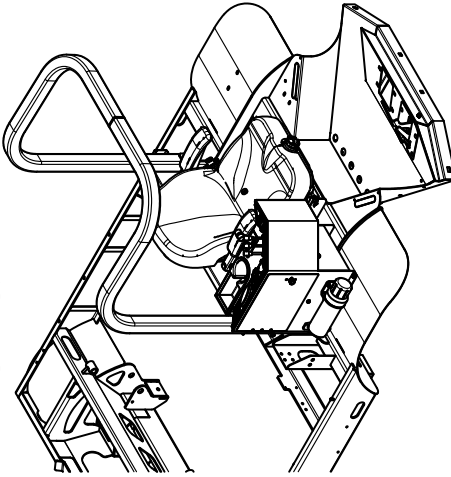
Parts List		
Item	Qty	Part # DESCRIPTION
1	8.75'	100354 WEBBING, NYLON 1.50ID, SHEATH
6	8	110474 BOLT, 1/4-20 X 1-1/2
13	8	110667 WASHER, 1/4" LOCK
43	1	323065 Hose Kit, Hawk Hopper Hydraulic
48	8	522104 Double Hose Clamp
49	8	522105 Double Coverplate



HOSE ASSEMBLIES	
Pieza	DESCRIPCIÓN
320382	RH HOPPER LIFT
320383	LH HOPPER LIFT
320384	RH HOPPER LOWER
320385	LH HOPPER LOWER
320386	RH DOOR OPEN
320387	LH DOOR OPEN
320388	RH DOOR CLOSE
320389	LH DOOR CLOSE

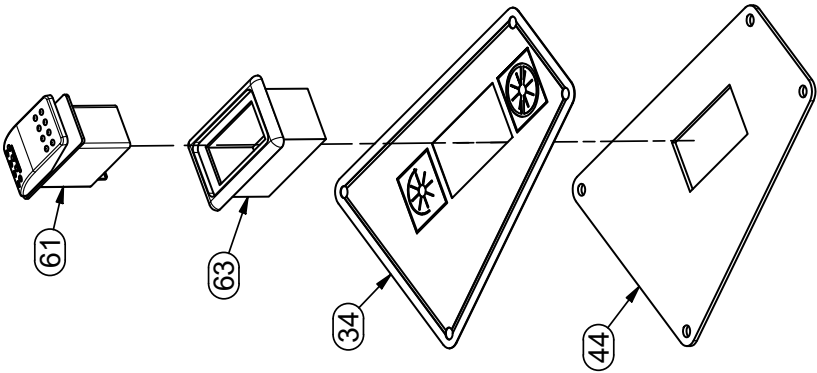
Parts List			Parts List			Parts List			305090			REV: E
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION	
1	4'	100613	SEAL, RUBBER .50 X .187	36	1	302164	CABLE, PUSH/PULL 60"	52	1	332059	DISPLAY, MACHINE	
2	2.5'	102072	TAPE, DOUBLE-SIDED AUTO, 1/2"x.045	37	1	305061	Assy, Forward Foot Pedal	53	1	332060	HARNESS, MASTER	
3	4	110020	Bolt, 5/16-18 X 0.75 in Carriage	38	1	305062	Assy, Reverse Foot Pedal	54	1	332063	HARNESS, INSTRUMENT PANEL	
4	12	110103	WASHER, #10 LOCK	39	1	305064	Assy, Console Panel, ISO	55	1	332064	HARNESS, RELAY	
5	6	110119	NUT, 10-24 LOCK	40	1	311729	HINGE, 6" ALUMINUM W/ HOLES	56	2	510112	COTTER PIN, 3/16 X 1	
6	17	110264	BOLT, 10-24 X .5 STAINLESS, PHILLIPS	41	1	315349	WELDMNT, FOOT PEDAL MOUNT	57	2	540075	BEARING, ROD END 1/4-28 W/STUD	
7	2	110404	BOLT, 3/8-16 X 1.75	42	1	315355	WELDMNT, FOOT PEDAL PIVOT	58	4	800128	BUSHING, IGUS, FOOT PEDAL	
8	1	110425	BOLT, 3/8-16 X 1.25	43	1	317102	PANEL, LEVER	59	1	810886	LINKAGE, 1/4-28 FOOT PEDAL	
9	3	110437	BOLT, 3/8-16 X 0.75, WIZ FLANGE	44	1	317103	PANEL, DECK SWITCH	60	1	815094	WELDMNT, REV FOOT PEDAL PIVOT	
10	4	110488	BOLT, 1/4-20 X 0.75, WIZ FLANGE	45	1	317172	BASE, SEAT MOUNT	61	2	832005	SWITCH, PADDLE, CARLING (29253)	
11	10	110606	NUT, 5/16-18 WIZ FLANGE	46	1	317173	PIN, SEAT MOUNTING	62	1	832018	SWITCH, SPDT, ON-ON	
12	2	110621	NUT, 3/8-16, UNITORQUE LOCK	47	1	317186	COVER, FOOT PEDAL	63	6	832024	MOUNT, SWITCH (VMS)	
13	4	110630	NUT, 1/4-20 LOCK (NYLON INSERT)	48	1	317193	DOOR, CONSOLE ACCESS	64	3	832033	HOLE PLUG (VHP)	
14	10	110631	NUT, 10-24 LOCK NYLON INSERT	49	1	317195	PANEL, GAUGE & SWITCH	65	1	832068	MODULE, TIME DELAY, 1.75 SEC, 1804	
15	2	110632	NUT, 1/4-28, UNITORQUE LOCK	50	2	317249	PIN, QUICK RELEASE	66	2	832082	ALARM, PANEL MOUNT, CONTINUOUS	
16	3	110645	NUT, 3/8-16 WIZ FLANGE	51	1	332031	SWITCH, IGNITION				TO NE	
17	6	110788	BOLT, 10-24 X .375 STAINLESS, PHILLIPS									
18	2	110826	NUT, 3/8-16 GR 5									
19	10	110834	SCREW, 10-24 X 3/4 SS PAN HEAD									
20	17	110835	NUT, 10-24 RIVET ALUMINUM									
21	2	110971	BOLT, 5/16-18 X .50 SHCS									
22	2	112051	POP RIVET, 1/8 X .275									
23	2	112119	ROLL PIN, 5/32 X 2 ZP									
24	2	112126	SPRING, COMP 3.0L x 0.6 OD x .045									
25	1	152004	HOLDER, MANUAL									
26	1	200020	CLAMP, ADEL AC22 .265 HOLE									
27	1	302015	HOLDER - CUP, MOLDED									
28	3	302017	CLEVIS - THROTTLE									
29	1	302078	SEAT, 13M SUSPENSION									
30	1	302124	CABLE, THROTTLE 60"									
31	1	302131	LATCH, SPRING									
32	1	302132	DECAL, MAIN CONSOLE									
33	1	302133	Decal, Hydraulics Panel									
34	1	302134	DECAL, BROOM PANEL									
35	1	302135	Decal, Throttle Panel									

OPERATOR STATION & ELECTRICAL ASSEMBLY



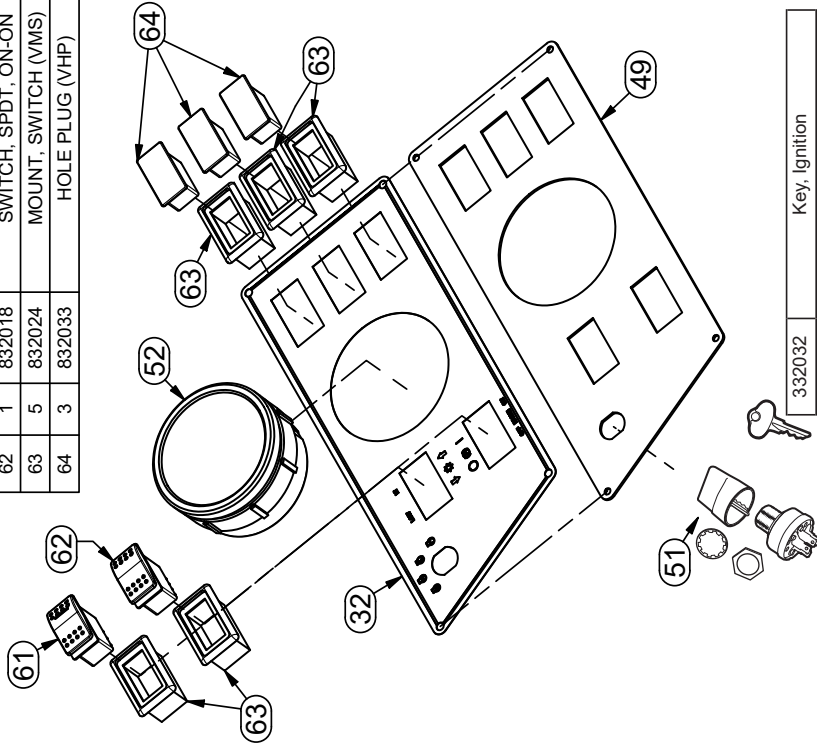
DECK SWITCH PANEL ASSEMBLY

Parts List		
ITEM	QTY	PART # DESCRIPTION
34	1	302134 DECAL, BROOM PANEL
44	1	317103 PANEL, DECK SWITCH
61	1	832005 SWITCH, PADDLE, CARLING (29253)
63	1	832024 MOUNT, SWITCH (VMS)

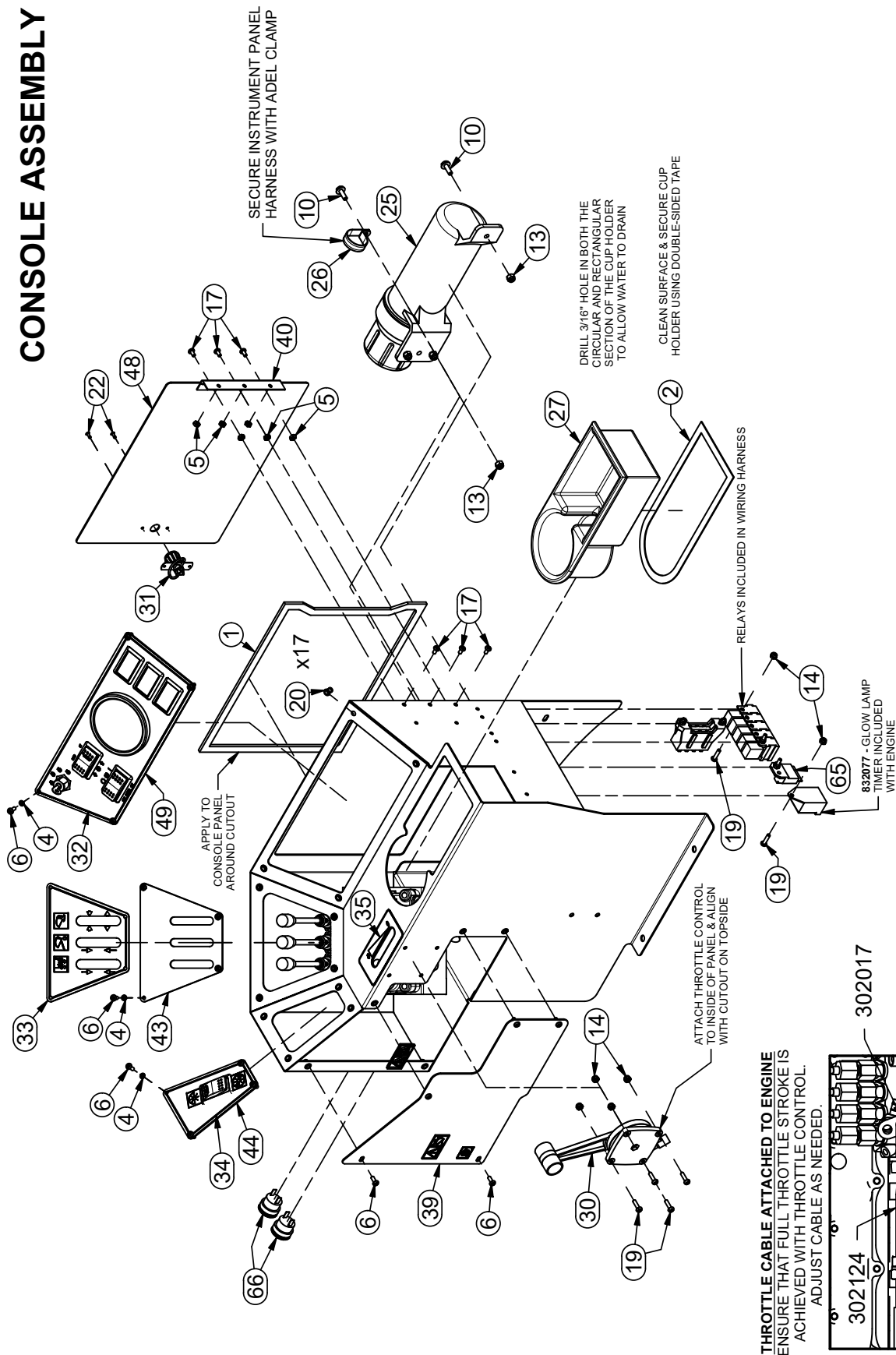


INSTRUMENT PANEL ASSEMBLY

Parts List		
ITEM	QTY	PART # DESCRIPTION
32	1	302132 DECAL, MAIN CONSOLE
49	1	317195 PANEL, GAUGE & SWITCH
51	1	332031 SWITCH, IGNITION
52	1	332059 DISPLAY, MACHINE
61	1	832005 SWITCH, PADDLE, CARLING (29253)
62	1	832018 SWITCH, SPDT, ON-ON
63	5	832024 MOUNT, SWITCH (VMS)
64	3	832033 HOLE PLUG (VHP)

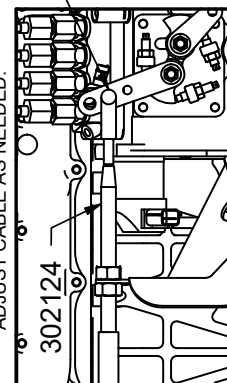


CONSOLE ASSEMBLY



ELECTRICAL SERVICE PARTS		
PART #	DESCRIPTION	
132099	RELAY, MICRO	
832077	TIMER, GLOW LAMP	

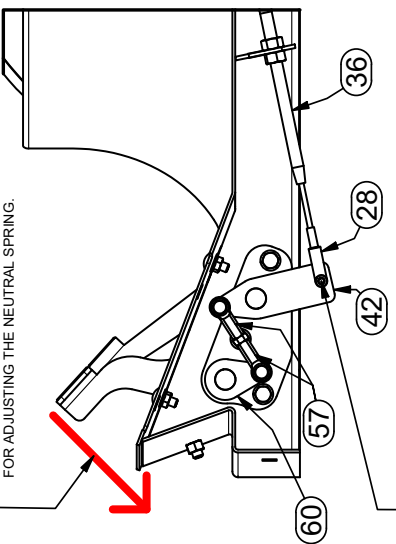
THROTTLE CABLE ATTACHED TO ENGINE
 ENSURE THAT FULL THROTTLE STROKE IS
 ACHIEVED WITH THROTTLE CONTROL.
 ADJUST CABLE AS NEEDED.



FOOT PEDAL ASSEMBLY

FOOT PEDAL ASSEMBLY SIDE VIEW

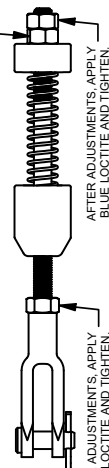
MEASURE FORWARD FOOT PEDAL FORCE USING A FISH SCALE OR SPRING SCALE. ENSURE THAT THE FORCE IS BETWEEN 20 - 35 LBS WHEN MACHINE IS OFF. SEE INSTRUCTIONS BELOW FOR ADJUSTING THE NEUTRAL SPRING.



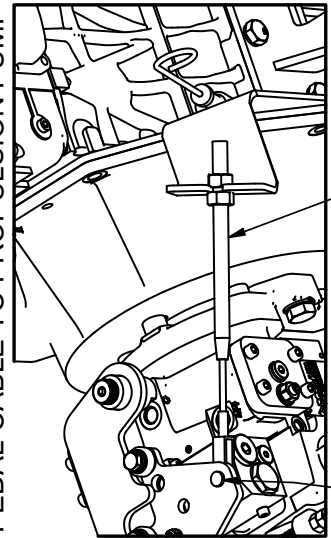
PAY CAREFUL ATTENTION WHEN INSTALLING THE PUSH/PULL CABLE. ROUTE CABLE SO THAT IT DOES NOT GET PINCHED & ROUTE SO THAT IT DOES NOT HAVE ANY TIGHT BENDS. MAKE SURE THAT THE CABLE IS NOT TWISTED WHEN SECURING THE CLEVIS TO THE END.

NEUTRAL RETURN SPRING ON PUMP

TIGHTEN TO INCREASE FOOT PEDAL FORCE.
LOOSEN TO DECREASE FOOT PEDAL FORCE.
ENSURE THAT CABLE ALWAYS RETURNS TO NEUTRAL AFTER ADJUSTMENTS ARE MADE.



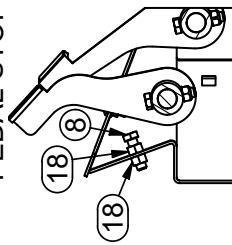
PEDAL CABLE TO PROPULSION PUMP



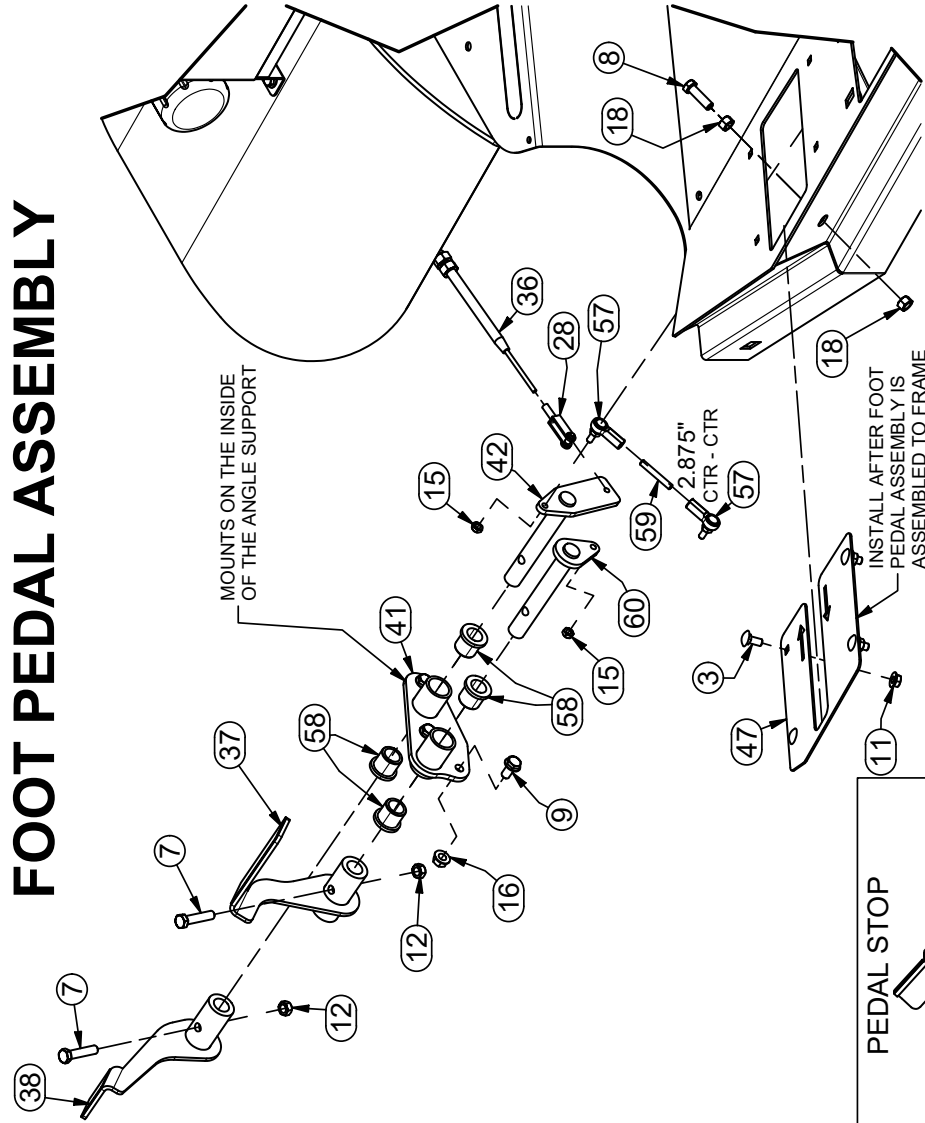
302017

302164

PEDAL STOP

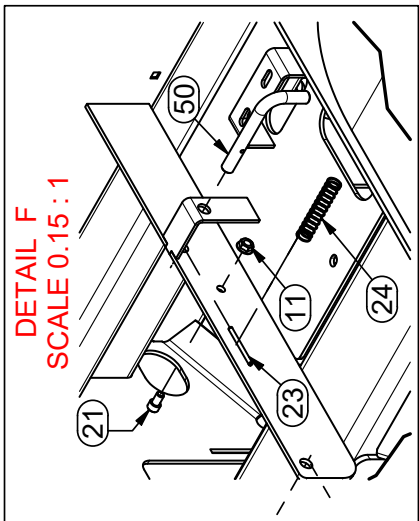
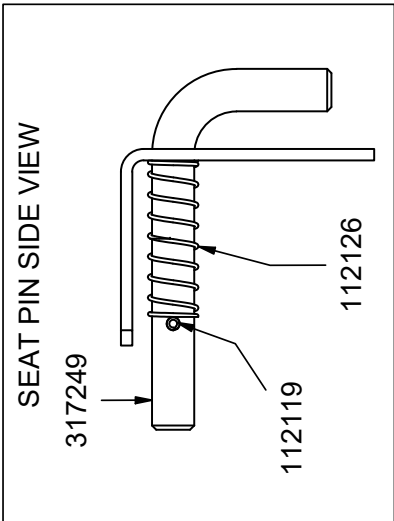
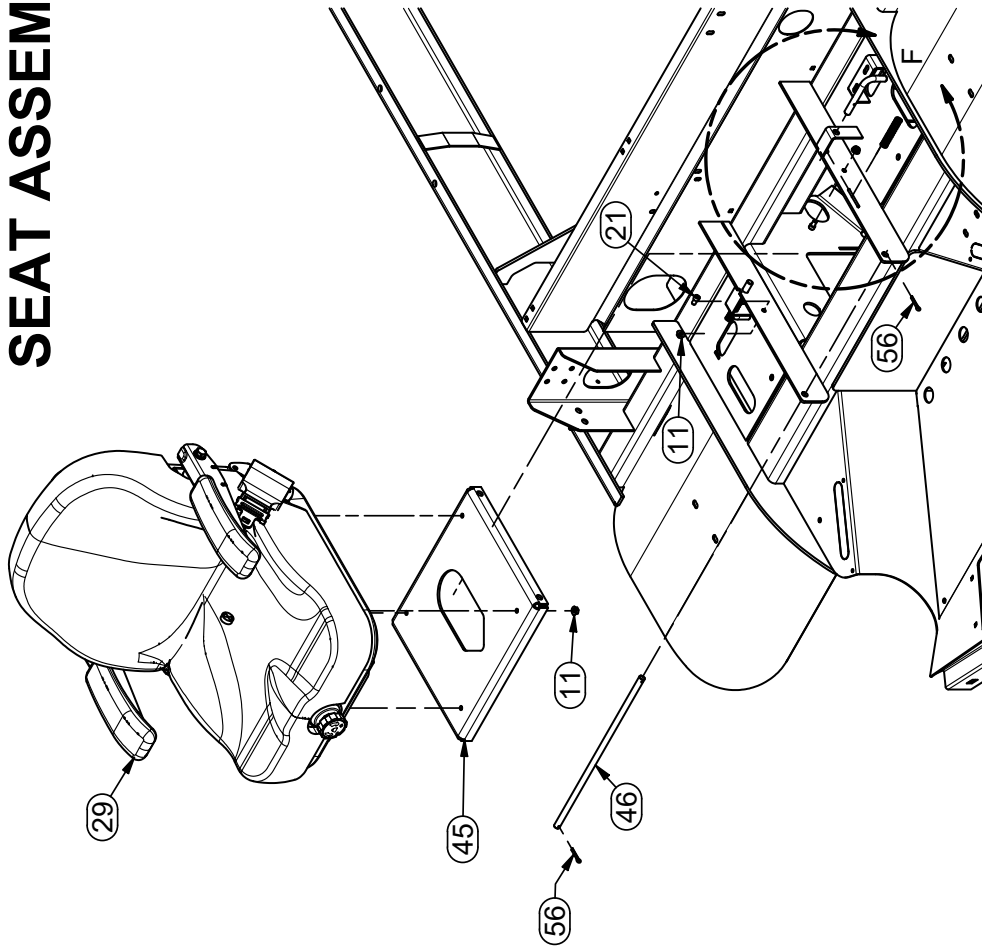


1. AFTER FOOT PEDAL ASSEMBLY AND LINKAGE IS INSTALLED AND ADJUSTED, INSTALL PEDAL STOP IN FRAME AS SHOWN ABOVE AND PUSH FORWARD PEDAL TO MAX STROKE.
2. ADJUST PEDAL STOP BOLT UNTIL HEAD CONTACTS PEDAL.
3. RETURN PEDAL TO NEUTRAL AND ADJUST BOLT TOWARDS PEDAL 1/4 TURN.
4. LOCK BOLT LOCATION BY TIGHTENING LOCKNUTS

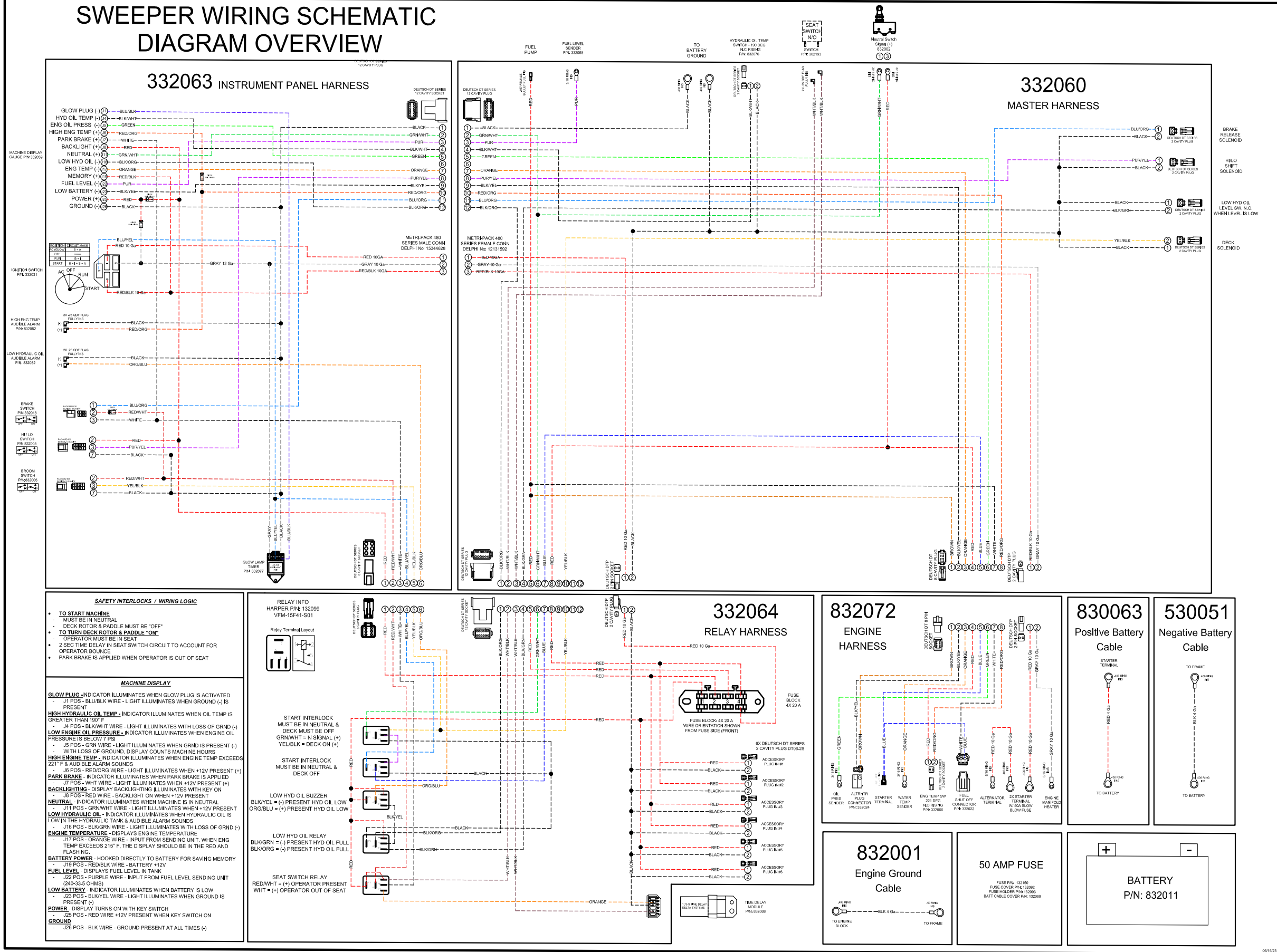


SEAT ASSEMBLY

Parts List			
ITEM	QTY	PART #	DESCRIPTION
11	6	110606	NUT, 5/16-18 WIZ FLANGE
21	2	110971	BOLT, 5/16-18 X .50 SHCS
23	2	112119	ROLL PIN, 5/32 X 2 ZP
24	2	112126	SPRING, COMP 3.0L x 0.6 OD x .045
29	1	302078	SEAT, 13M SUSPENSION
45	1	317172	BASE, SEAT MOUNT
46	1	317173	PIN, SEAT MOUNTING
50	2	317249	PIN, QUICK RELEASE
56	2	510112	COTTER PIN, 3/16 X 1



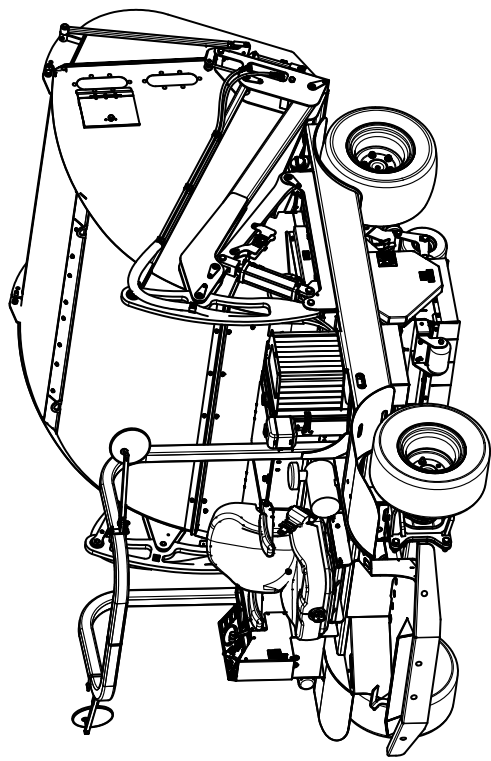
SWEEPER WIRING SCHEMATIC DIAGRAM OVERVIEW



Parts List

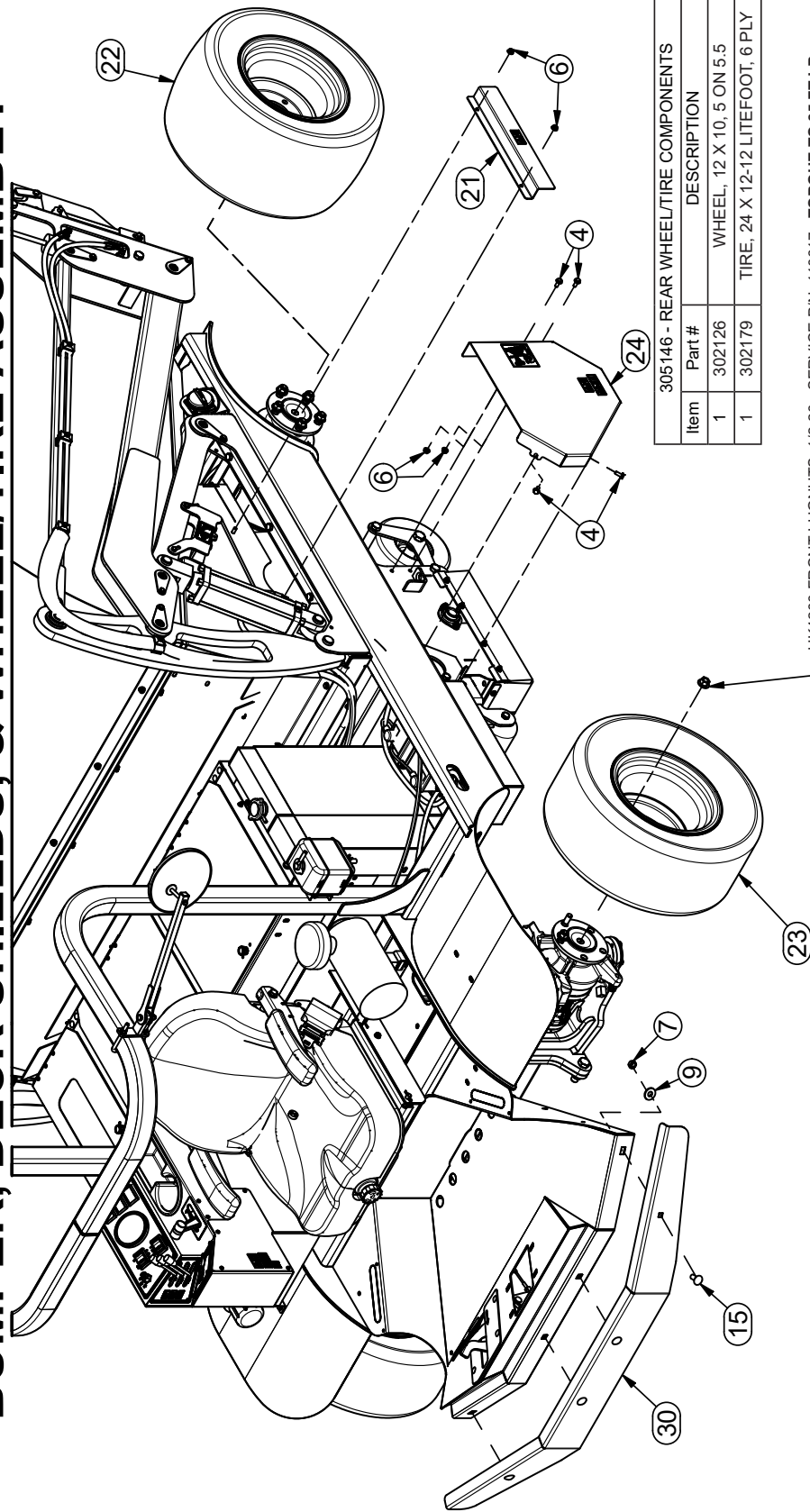
Item	Qty	Part #	DESCRIPTION
1	15'	100613	SEAL, RUBBER .50 X .187
2	18	110119	NUT, 10-24 LOCK
3	2	110400	BOLT, 3/8-16 X 2.0
4	4	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
5	2	110474	BOLT, 1/4-20 X 1-1/2
6	4	110606	NUT, 5/16-18 WIZ FLANGE
7	4	110615	NUT, 1/2-13, UNITORQUE LOCK
8	4	110645	NUT, 3/8-16 WIZ FLANGE
9	4	110658	WASHER, 1/2" FLAT STANDARD
10	2	110667	WASHER, 1/4" LOCK
11	18	110788	BOLT, 10-24 X .375 STAINLESS, PHILLIPS
12	4	110826	NUT, 3/8-16 GR 5
13	2	111185	BOLT, SQUARE U, 3/8-16 x 2.50 x 4.0
14	6	112051	POP RIVET, 1/8 X .275
15	4	112070	Bolt, 1/2-13 X 1.25 in Carriage
16	4	211747	FRICTION WASHER 1.5"
17	3	302131	LATCH, SPRING
18	2	302139	Convex Mirror, 8" Round, Offset Ball-Stud
19	4	302140	Plug, Snap-In Square, 3/4"
20	1	305101	ASSY, RH ENGINE SHIELD
21	1	305120	ASSY, UPPER DECK SHIELD, US
22	2	305146	ASSY, REAR TIRE, 6 PLY
23	2	305147	ASSY, FRONT TIRE, 6 PLY
24	1	305187	ASSY, LOWER DECK SHIELD, US
25	3	311729	HINGE, 6" ALUMINUM W/ HOLES
26	1	312022	CLIP, HAIRPIN 3/32 x 1.625
27	2	315385	WELDMENT, SWINGING MIRROR
28	2	315391	WELDMENT, MIRROR UBOLT MOUNT
29	2	317237	SHIELD, UPPER ENGINE
30	1	317244	BUMPER, FRONT

MIRROR, TIRE, & SHIELD INSTALLATION



SIMILAR TO 305095

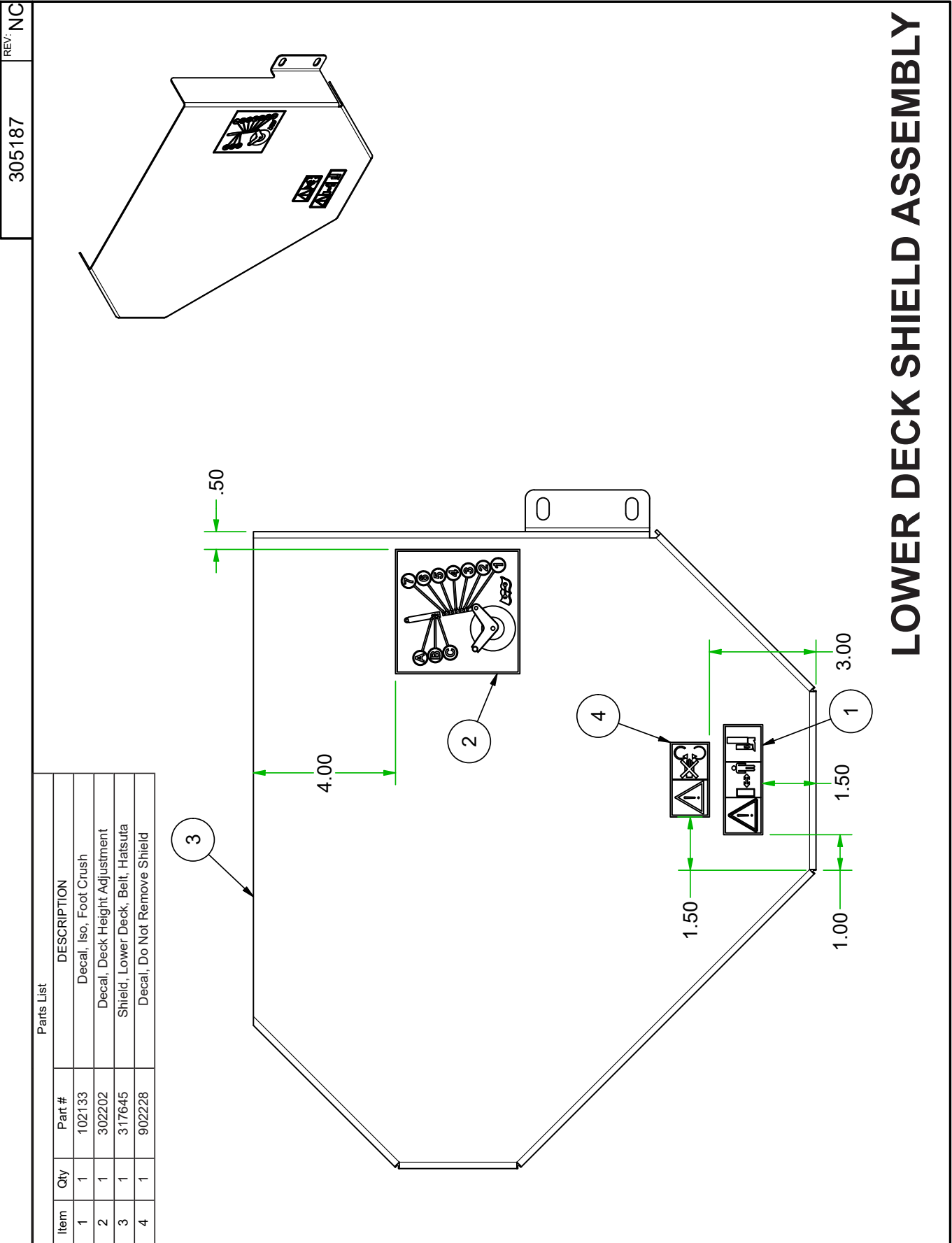
BUMPER, DECK SHIELDS, & WHEEL/TIRE ASSEMBLY



305146 - REAR WHEEL/TIRE COMPONENTS		
Item	Part #	DESCRIPTION
1	302126	WHEEL, 12 X 10, 5 ON 5.5
1	302179	TIRE, 24 X 12-12 LITEFOOT, 6 PLY

-HK4200 FRONT LUGNUTS, 1/2-20 - SERVICE P/N: 110617 - **TORQUE TO 85 FT-LB**
 -HK4400 FRONT LUGNUTS, M14x1.5 - SERVICE P/N: 512013 - **TORQUE TO 147 FT-LB**
 -HK4200 & HK4400 REAR LUGNUTS, M14x1.5 - SERVICE P/N: 512013 - **TORQUE TO 147 FT-LB**

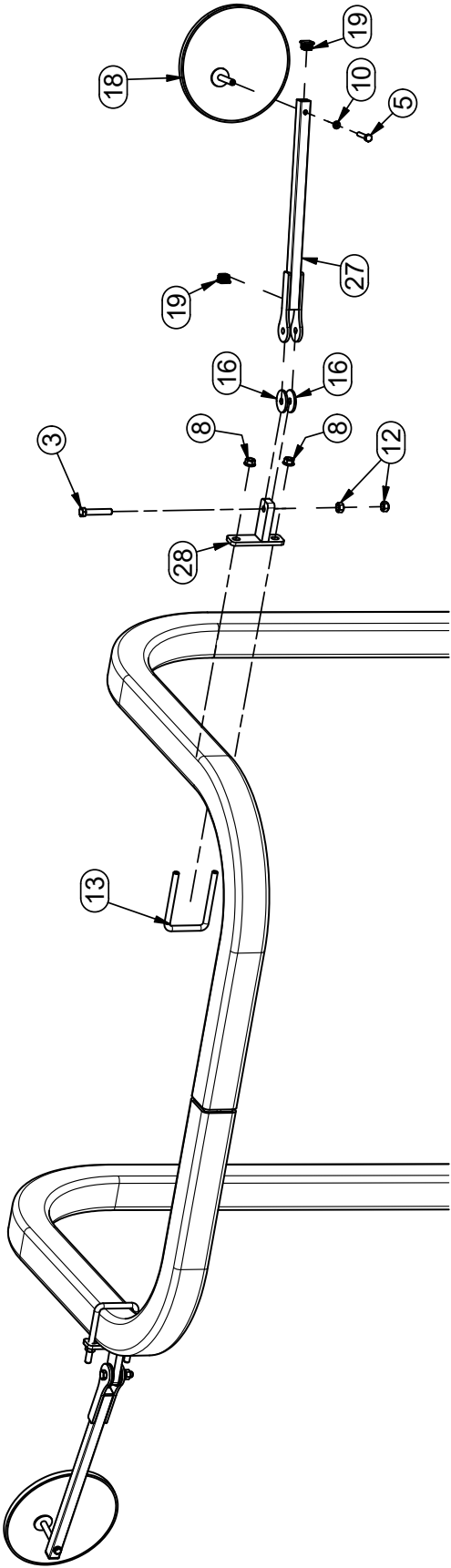
305147 - FRONT WHEEL/TIRE COMPONENTS		
Item	Part #	DESCRIPTION
1	302125	WHEEL, 12 X 7, 5 ON 5.5 W/-3.25 OFFSET
1	302178	TIRE, 24 X 9.5-12 LITEFOOT, 6 PLY



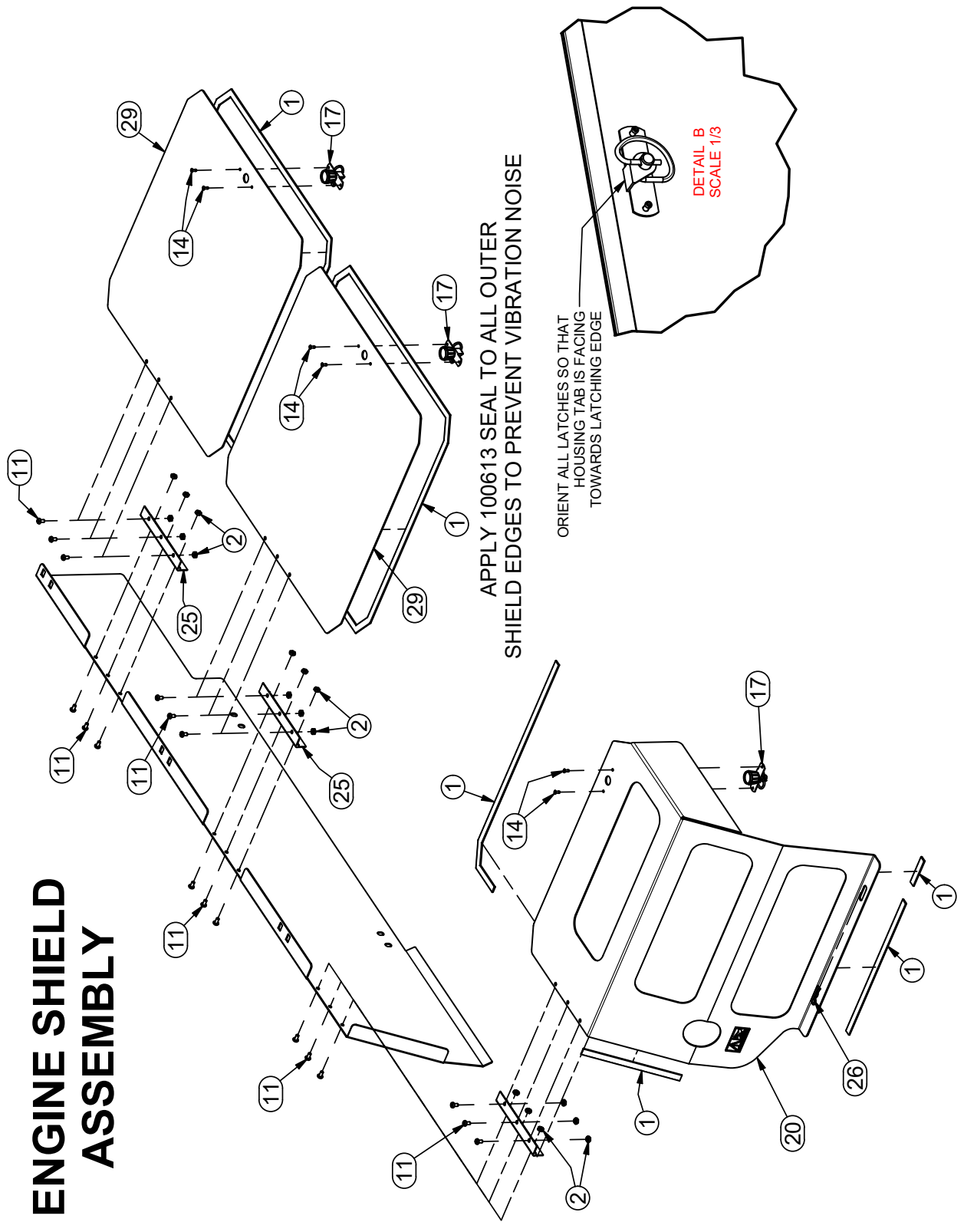
Parts List		
Item	Qty	Part # DESCRIPTION
3	2	110400 BOLT, 3/8-16 X 2.0
5	2	110474 BOLT, 1/4-20 X 1-1/2
8	4	110645 NUT, 3/8-16 W/IZ FLANGE
10	2	110667 WASHER, 1/4" LOCK
12	4	110826 NUT, 3/8-16 GR 5
13	2	111185 BOLT, SQUARE U, 3/8-16 x 2.50 x 4.0
16	4	211747 FRICTION WASHER 1.5"
18	2	302139 Convex Mirror, 8" Round, Offset Ball-Stud
19	4	302140 Plug, Snap-In Square, 3/4"
27	2	315385 WELDMENT, SWINGING MIRROR
28	2	315391 WELDMENT, MIRROR UBOLT MOUNT

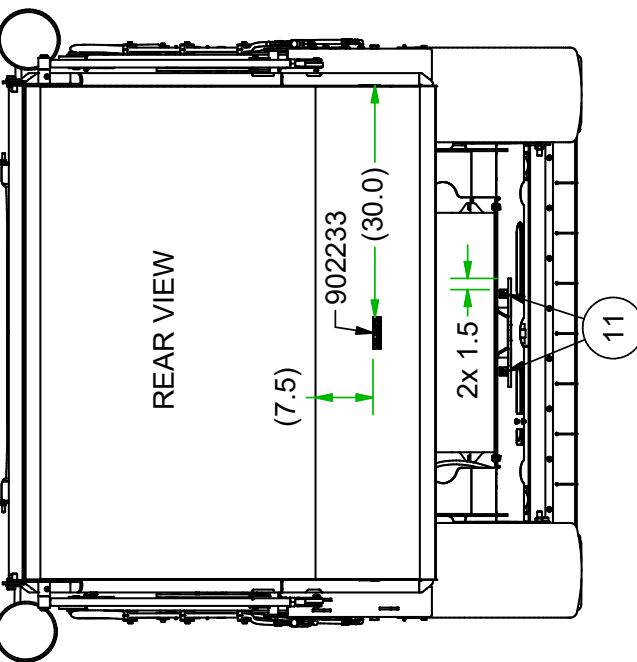
MIRROR
ASSEMBLY

SAME PARTS USED ON OPPOSITE SIDE

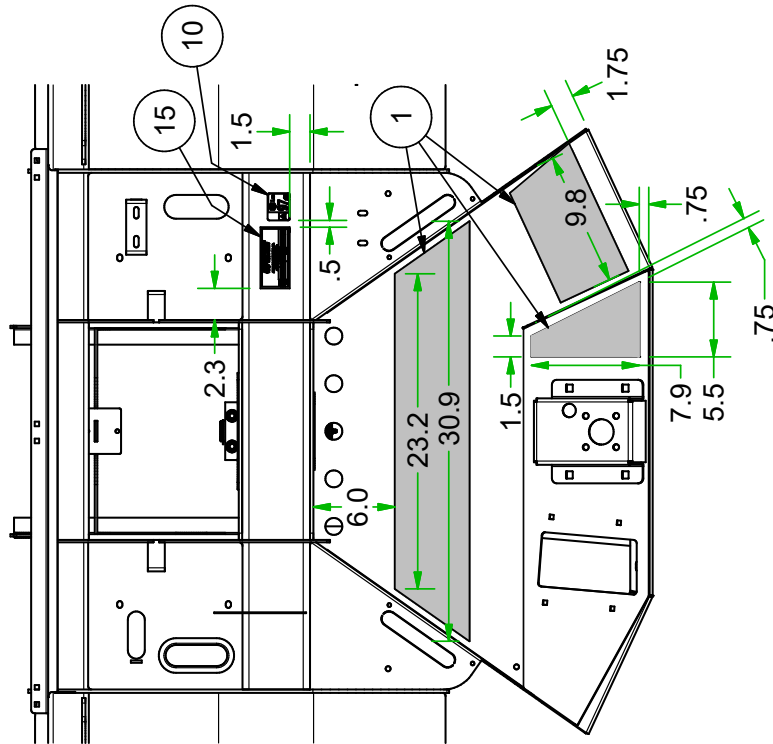


ENGINE SHIELD ASSEMBLY





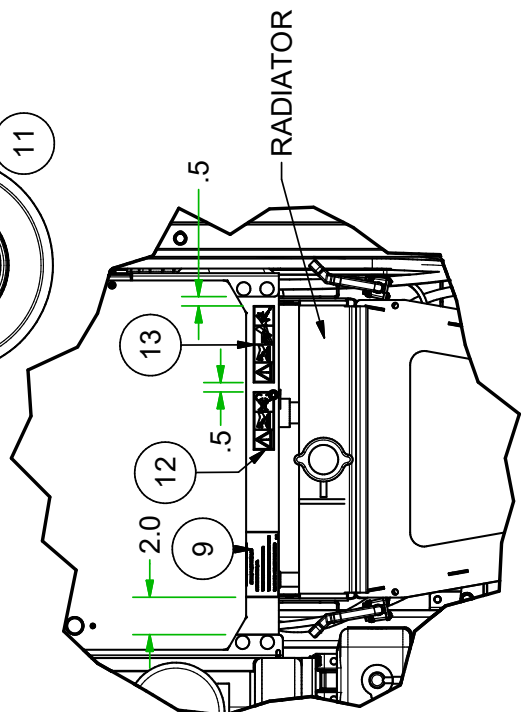
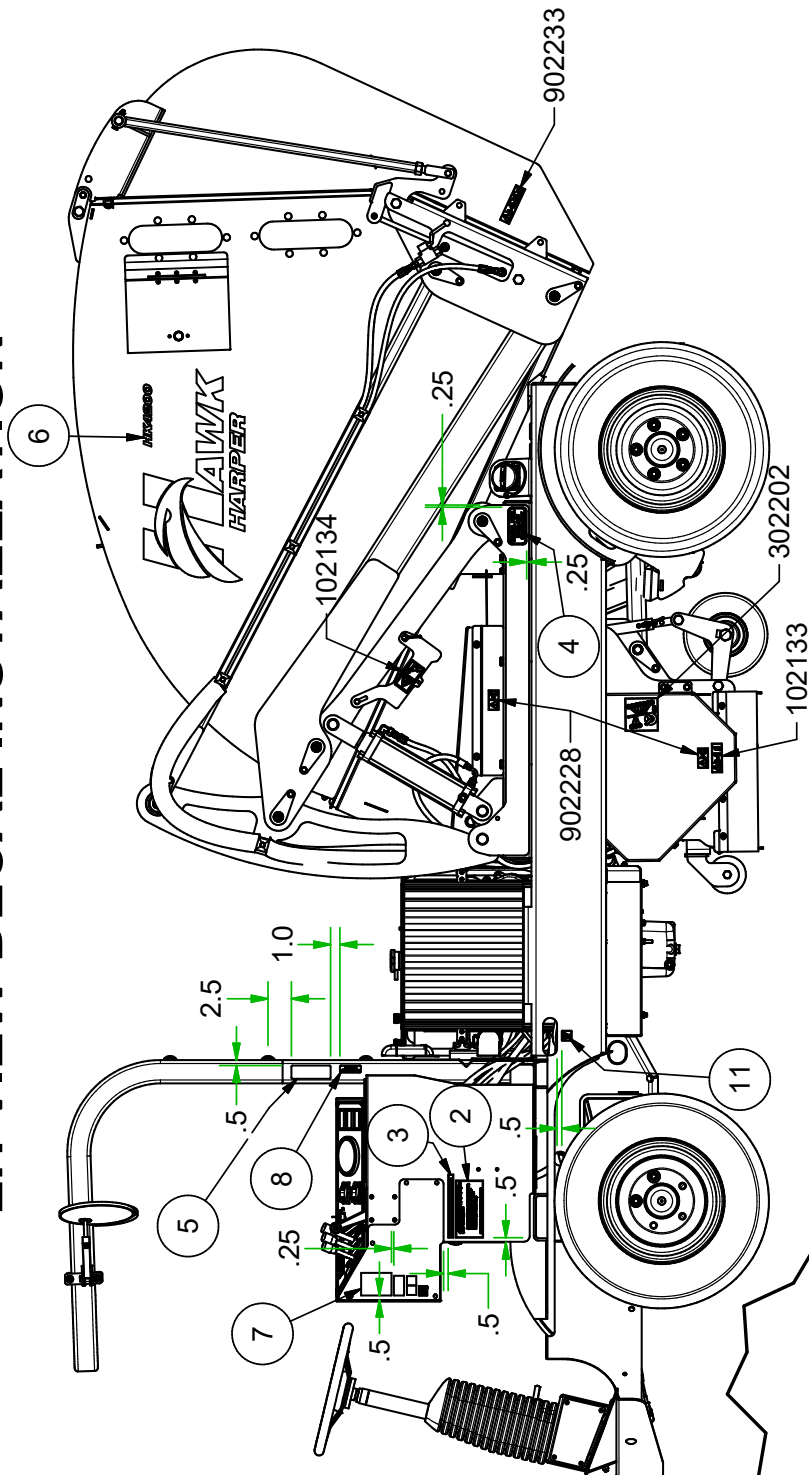
DECAL INSTALLATION



TRACTION PAD INSTALLATION

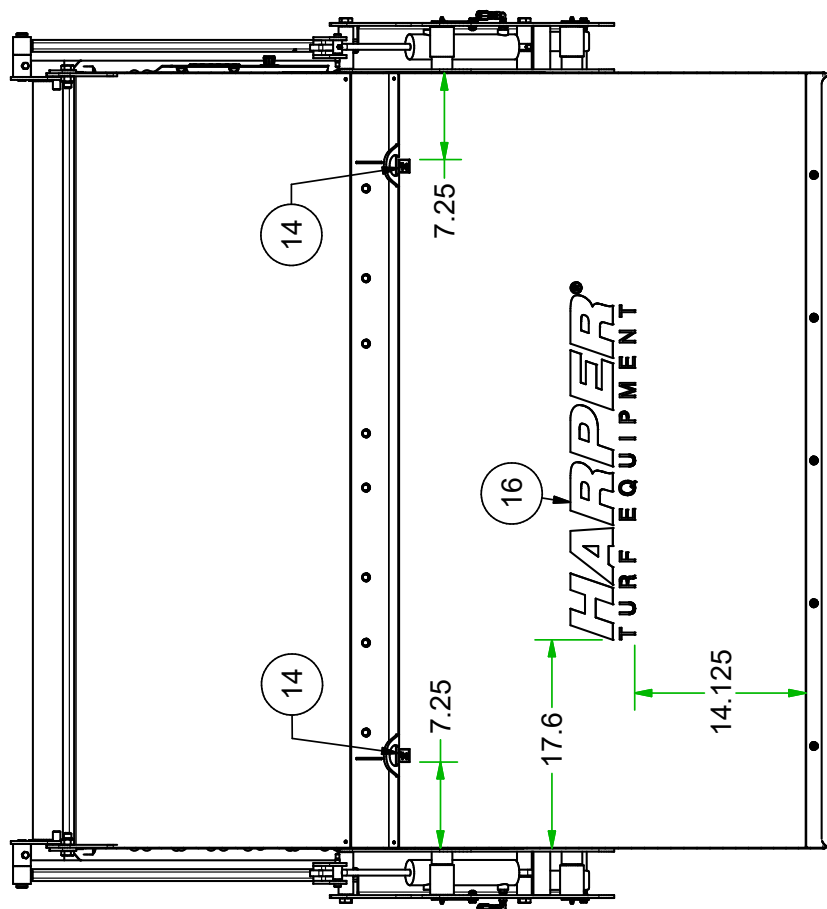
Parts List		
ITEM	QTY	PART # DESCRIPTION
1	46"	100373 Traction Pad, Flex-tread, 5.5
2	1	202133 Decal, Prop 65, Diesel
3	1	202134 DECAL, PROP 65, SHORT FORM
4	1	302106 DECAL, DIESEL FUEL
5	1	302150 Decal, HK Rops Certification
6	2	302155 Decal, Hawk
7	1	302172 Decal, QR Code, Hawk Tutorial
8	1	302204 DECAL, HAWK ROPS CERT
9	1	302205 DECAL, EPA STANDARDS TIER 4
10	1	302208 DECAL, SOUND LEVEL HAWK
11	4	802067 Decal, Tie Down Point
12	1	902231 Decal, Hot Surface, Oil Cooler
13	1	902232 Decal, High Pressure Injection
14	2	902234 Decal, No Lift
15	1	902240 Plate, Serial Number, Harper Turf, Blue
16	1	902242 Decal, Harper Turf Equipment, 30"

LH VIEW DECAL INSTALLATION



NOTE: ALL DIMENSIONS FOR REFERENCE, PLACE AS CLOSE TO AS SHOWN AND FOR FULL VISIBILITY

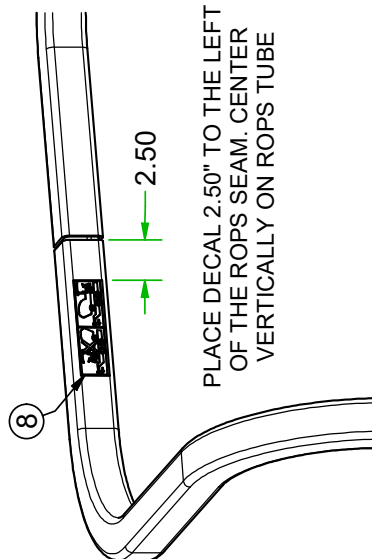
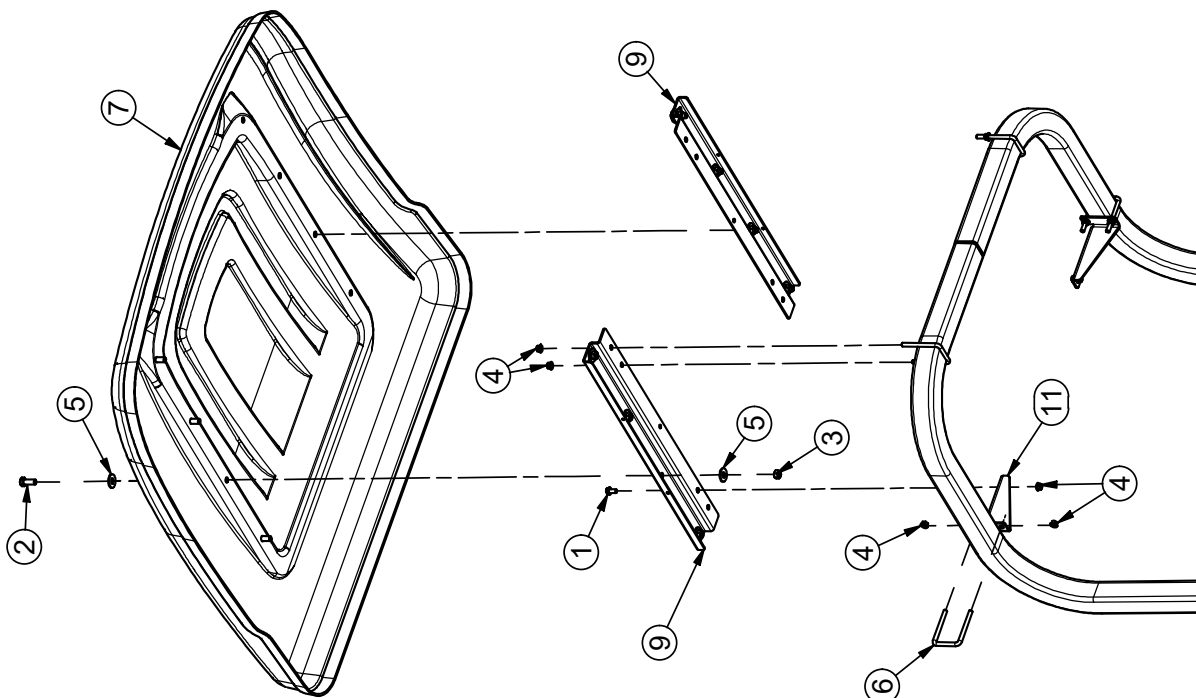
HOPPER DECAL INSTALLATION



CANOPY

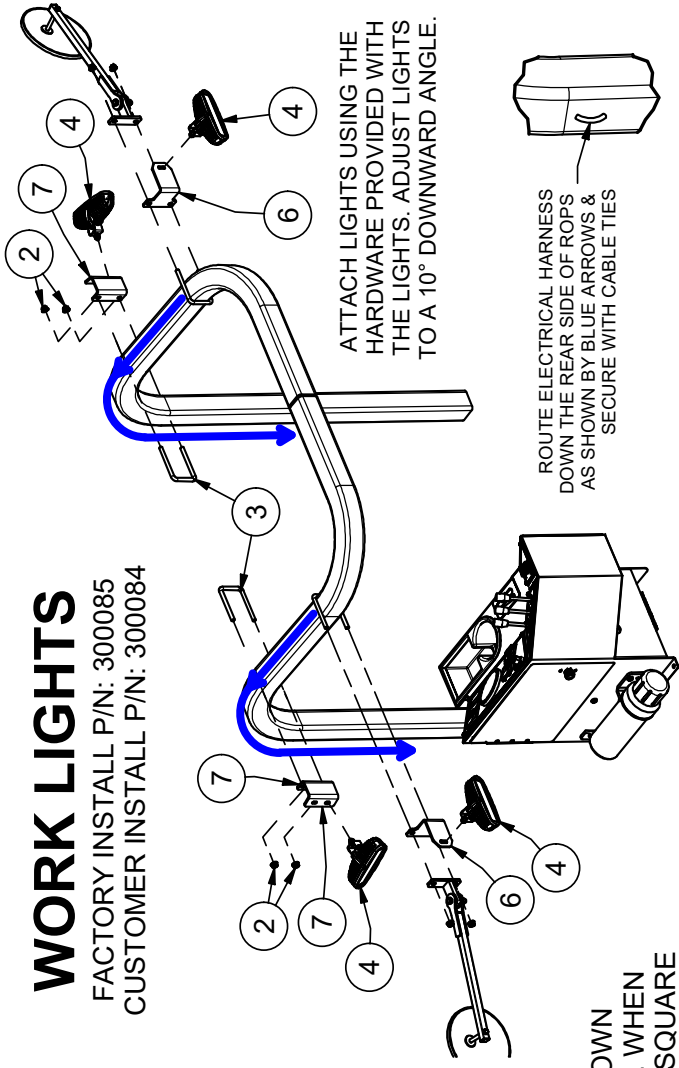
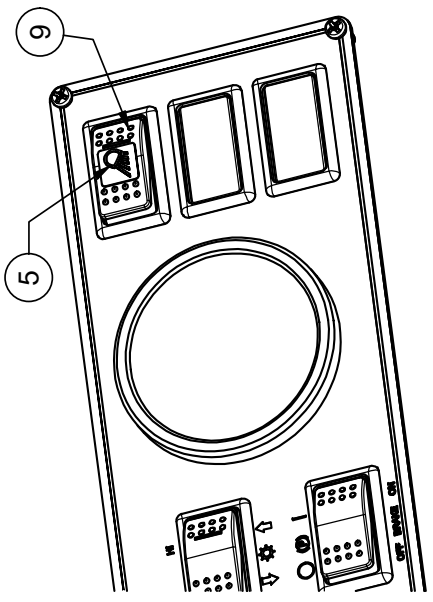
FACTORY INSTALL P/N: 300083
CUSTOMER INSTALL P/N: 300082

Parts List			DESCRIPTION
ITEM	QTY	PART #	
1	2	110437	BOLT, 3/8-16 X 0.75, WIZ FLANGE
2	8	110442	BOLT, 1/2-13 X 1.25
3	8	110615	NUT, 1/2-13, UNITORQUE LOCK
4	10	110645	NUT, 3/8-16 WIZ FLANGE
5	16	110658	WASHER, 1/2" FLAT STANDARD
6	4	111185	BOLT, SQUARE U, 3/8-16 x 2.50 x 4.0
7	1	302142	CANOPY, BLACK ABS PLASTIC
8	1	302173	DECAL, HAWK CANOPY TRANSPORT
9	2	317332	BRKT, CANOPY SUPPORT
10	1	317333	BRKT, LH CANOPY MOUNT
11	1	317334	BRKT, RH CANOPY MOUNT



WORK LIGHTS

FACTORY INSTALL P/N: 300085
CUSTOMER INSTALL P/N: 300084

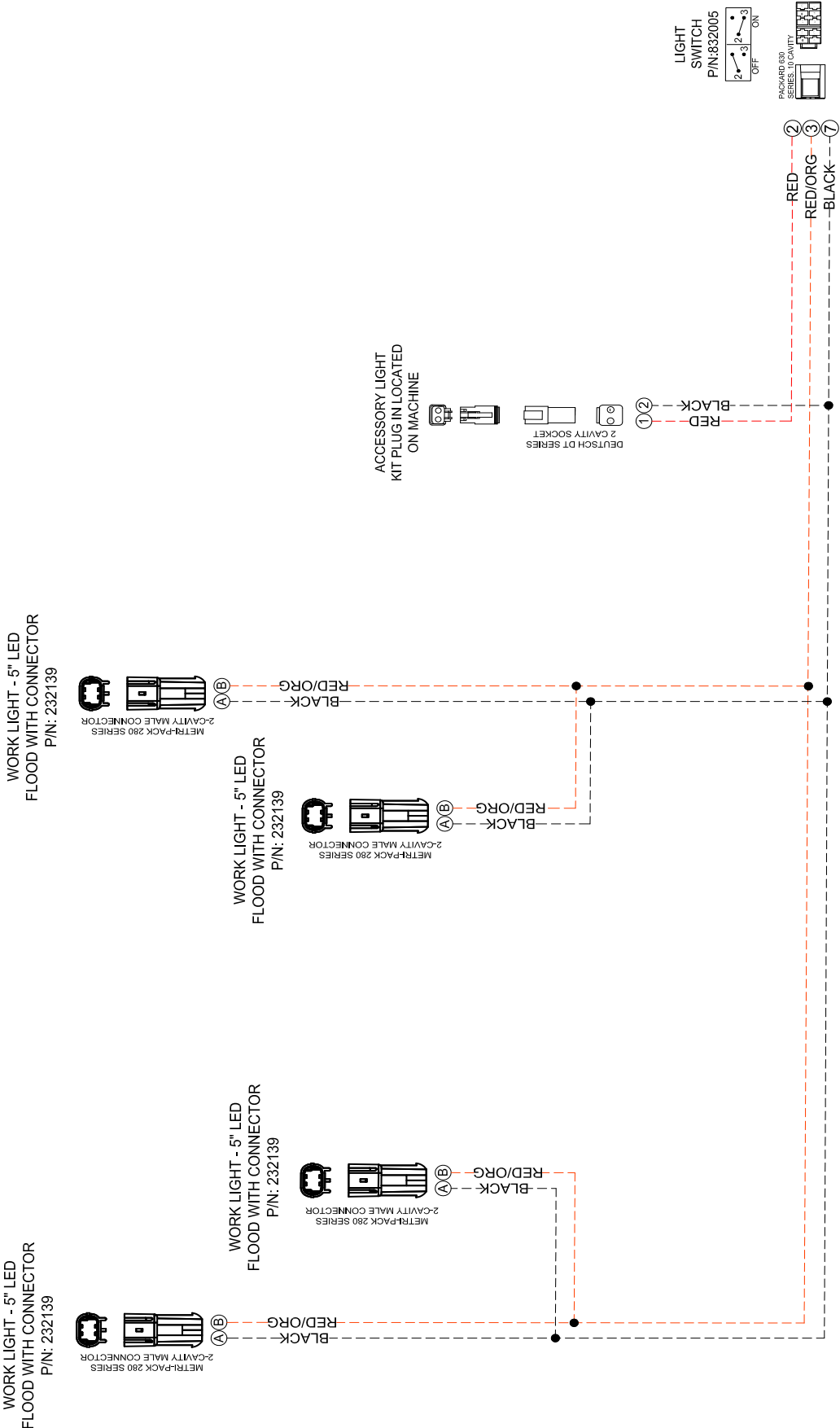


INSTALLATION

- MOUNT WORK LIGHTS TO ROPS AS SHOWN IN THE EXPLODED DIAGRAM TO THE RIGHT. WHEN MOUNTING FRONT LIGHTS, USE THE SAME SQUARE U-BOLT THAT IS USED TO ATTACH THE MIRROR BRACKETS. POSITION WORK LIGHTS AND MIRRORS SO THERE IS NO INTERFERENCE. IF A CANOPY IS INSTALLED, MOUNT THE WORK LIGHTS TO THE REAR SIDE OF THE REAR CANOPY BRACKETS.
- THE CONSOLE CONTAINS 3 OPEN POSITIONS TO INSTALL THE ROCKER SWITCH. REMOVE 1 OF THE PLUGS TO INSTALL THE SWITCH.
- THE MACHINE IS ALSO EQUIPPED WITH 3 EXTRA CONNECTORS BELOW THE CONSOLE THAT PROVIDE +12V POWER / GROUND FOR THIS KIT. SEE ELECTRICAL SCHEMATIC ON PAGE 2.
- ROUTE THE WIRING HARNESS DOWN THE BACKSIDE OF THE ROPS AND SECURE USING THE CABLE TIES. ROUTE THE HARNESS FROM THE LH ROPS TO THE CONSOLE BY ROUTING THROUGH THE ENGINE COMPARTMENT.

Parts List		
ITEM	QTY	PART # DESCRIPTION
1	12	100578 CABLE TIE 14" BLACK 50 Lb Tens
2	4	110645 NUT, 3/8-16 WIZ FLANGE
3	2	111185 BOLT, SQUARE U, 3/8-16 x 2.50 x 4.0
4	4	232139 Light, 5" Rectangle, Flood w/Connector
5	1	302158 DECAL, WORK LIGHT SWITCH
6	2	317395 BRKT, FRONT WORK LIGHT
7	2	317412 BRKT, REAR WORK LIGHT
8	1	332069 HARNESS, WORK LIGHT
9	1	832005 SWITCH, PADDLE, CARLING (29253)

SWEEPER WORK LIGHT WIRING SCHEMATIC



2-25-2021

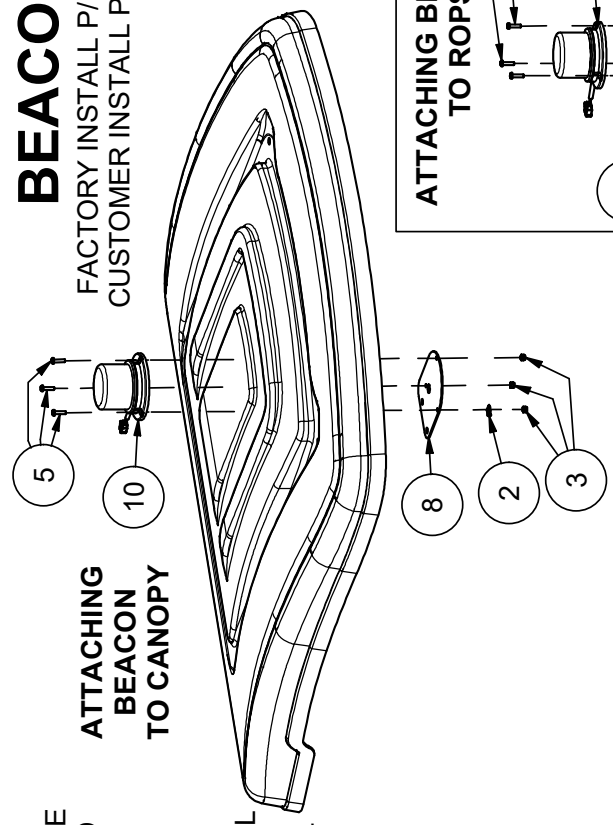
INSTALLATION

- FOR MOUNTING THE BEACON, USE THE HARDWARE INCLUDED IN THIS KIT (NOT THE HARDWARE INCLUDED WITH THE BEACON)
- IF THE CANOPY OPTION IS INSTALLED, THEN MOUNT THE BEACON TO THE TOP OF THE CANOPY AS SHOWN IN THE EXPLODED VIEW. POSITION THE BEACON IN THE CENTER OF THE CANOPY & THEN DRILL 3 - 9/32" HOLES IN THE PLASTIC CANOPY. DRILL A 3/4" HOLE TO ROUTE THE WIRE THROUGH (USE THE 317394 BRACKET TO LOCATE THE 3/4" HOLE).
- IF A CANOPY IS NOT INSTALLED, THEN MOUNT THE BEACON TO THE ROPS USING THE U-BOLT AS SHOWN IN THE EXPLODED VIEW.
- THE CONSOLE CONTAINS 3 OPEN POSITIONS TO INSTALL THE ROCKER SWITCH. REMOVE ONE OF THE PLUGS TO INSTALL THE SWITCH.
- THE MACHINE IS ALSO EQUIPPED WITH 3 EXTRA CONNECTORS BELOW THE CONSOLE THAT PROVIDE +12V POWER / GROUND FOR THIS KIT. SEE ELECTRICAL SCHEMATIC ON PAGE 2.
- ROUTE THE WIRING HARNESS ALONG THE BACKSIDE OF THE ROPS AND SECURE USING THE CABLE TIES.

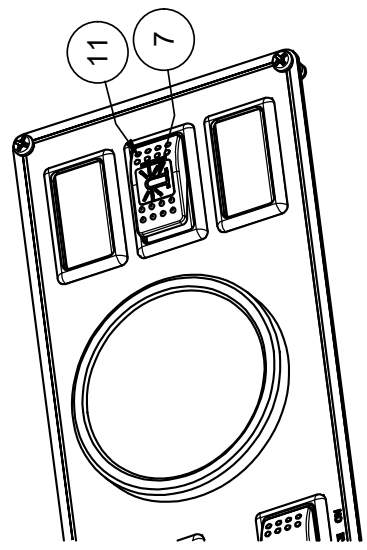
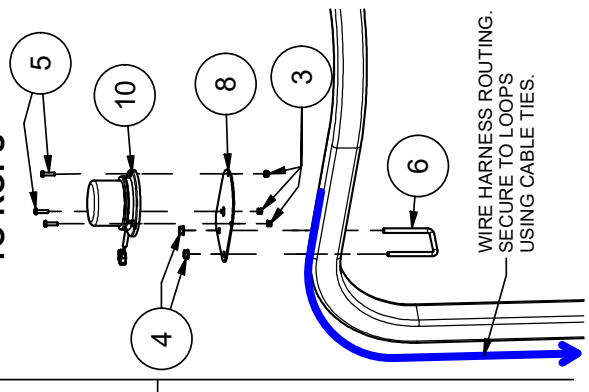
BEACON

FACTORY INSTALL P/N: 300089
CUSTOMER INSTALL P/N: 300088

**ATTACHING
BEACON
TO CANOPY**



**ATTACHING BEACON
TO ROPS**



WIRE HARNESS ROUTING.
SECURE TO LOOPS
USING CABLE TIES.

Parts List		
ITEM	QTY	DESCRIPTION
1	5	CABLE TIE 14" BLACK 50 Lb Tens
2	1	CLAMP, ADEL AC4 .265 HOLE
3	3	NUT, 1/4-20 LOCK (NYLON INSERT)
4	2	NUT, 3/8-16 WIZ FLANGE
5	3	SCREW, 1/4-20 X 1 SS PHILLIPS PAN HEAD
6	1	BOLT, SQUARE U, 3/8-16 x 2.50 x 4.0
7	1	DECAL, BEACON
8	1	BRKT, BEACON MOUNTING
9	1	HARNESS, BEACON
10	1	BEACON ASSY, LED
11	1	SWITCH, PADDLE, CARLING (29253)

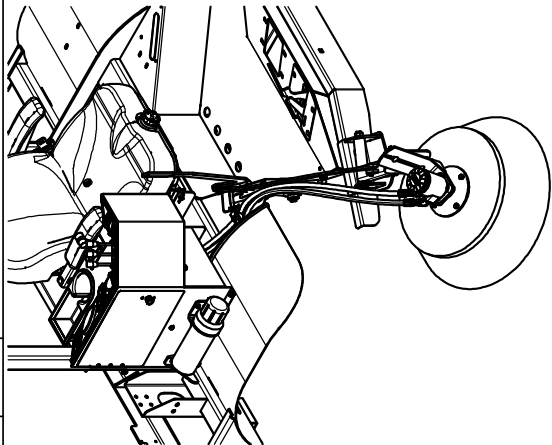
SWEEPER BEACON WIRING SCHEMATIC

The diagram illustrates the wiring for a Sweeper Beacon system. It shows the following components and their connections:

- BEACON ASSY WITH CONNECTOR** (P/N: 335004): A rectangular unit with a connector on the left. It has two output wires: a red wire labeled "RED" and a black wire labeled "BLACK".
- BEACON WIRING HARNESS** (P/N: 332068): A central component with two input wires from the Beacon Assy (red and black) and two output wires (red and black). It also has two additional output wires labeled "ORG" (orange) and "BLACK".
- BEACON SWITCH** (P/N: 832005): A switch with three terminals. The red wire from the harness connects to terminal 1, the black wire from the harness connects to terminal 2, and the orange wire from the harness connects to terminal 3. The switch is labeled "OFF" and "ON".
- PACKARD 630 SERIES 10 CAVITY**: A multi-pin connector with 10 pins. The red wire from the harness connects to pin 1, the black wire from the harness connects to pin 2, the orange wire from the harness connects to pin 3, and the black wire from the harness connects to pin 4.
- DEUTSCH DT SERIES 2 CAVITY SOCKET**: A two-pin connector. The red wire from the harness connects to pin 1, and the black wire from the harness connects to pin 2.
- DEUTSCH DT SERIES 2 CAVITY PLUG**: A two-pin plug. The red wire from the harness connects to pin 1, and the black wire from the harness connects to pin 2.

The wiring connections are as follows:

- Red wire from Beacon Assy connects to Red wire in Beacon Wiring Harness.
- Black wire from Beacon Assy connects to Black wire in Beacon Wiring Harness.
- Red wire from Beacon Wiring Harness connects to terminal 1 of Beacon Switch.
- Black wire from Beacon Wiring Harness connects to terminal 2 of Beacon Switch.
- Orange wire from Beacon Wiring Harness connects to terminal 3 of Beacon Switch.
- Red wire from Beacon Wiring Harness connects to pin 1 of Packard 630 Series 10 Cavity connector.
- Black wire from Beacon Wiring Harness connects to pin 2 of Packard 630 Series 10 Cavity connector.
- Orange wire from Beacon Wiring Harness connects to pin 3 of Packard 630 Series 10 Cavity connector.
- Black wire from Beacon Wiring Harness connects to pin 4 of Packard 630 Series 10 Cavity connector.
- Red wire from Beacon Wiring Harness connects to pin 1 of Deutsch DT Series 2 Cavity Socket.
- Black wire from Beacon Wiring Harness connects to pin 2 of Deutsch DT Series 2 Cavity Socket.
- Red wire from Beacon Wiring Harness connects to pin 1 of Deutsch DT Series 2 Cavity Plug.
- Black wire from Beacon Wiring Harness connects to pin 2 of Deutsch DT Series 2 Cavity Plug.

300090				REV: D			
Parts List				Parts List			
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION
1	1	110125	BOLT, 1/2-13 X 2.25 GR 5 ZINC PLATE	17	2	110665	WASHER, 5/16" FLAT STANDARD
2	4	110290	NUT, 1/4-20 WIZ FLANGE	18	4	110672	WASHER, 3/8" LOCK
3	2	110354	BOLT, 1/4-20 X 2.0 HEX HEAD	19	1	110674	WASHER, 5/16" LOCK
4	2	110358	Bolt, 1/4-20 X 0.625 in Carriage	20	6	110675	WASHER, 3/8" FLAT STANDARD
5	2	110392	Bolt, 3/8-16 X 2 in Carriage	21	1	110895	Bolt, 5/8-11 X 3 in Carriage
6	1	110396	BOLT, 5/16-18 X 2.5	22	1	111189	Bolt, 5/8-11 X 7.5, HHCS Gr 5 Zinc
7	4	110400	BOLT, 3/8-16 X 2.0	23	1	111199	BOLT, 3/8 X .625 SHOULDER SHCS, ZINC
8	4	110420	BOLT, 3/8-16 X 1.0	24	1	111208	Pin, Lock 3/8 x 3.00" Usable Length, Sq Wire
9	1	110434	BOLT, 1/4-20 X 0.5, WIZ FLANGE	25	1	120216	ADAPTER, 6MJ-6F-JX-6MJ
10	2	110597	NUT, 5/8-11 HEX	26	1	120239	ADAPTER, 6MJ-8MB
11	3	110600	NUT, 5/16-18, UNITORQUE LOCK	27	4	120319	ADAPTER, 6MJ-6MB
12	1	110606	NUT, 5/16-18 WIZ FLANGE	28	2	120753	Jic(-6) to Male O-ring (-10), 45 degrees
13	1	110615	NUT, 1/2-13, UNITORQUE LOCK	29	1	211747	FRICTION WASHER 1.5"
14	4	110621	NUT, 3/8-16, UNITORQUE LOCK	30	2	302063	KNOB, ALUMINUM 3/8-16
15	1	110639	NUT, 5/8-11, UNITORQUE LOCK	31	1	302064	BRUSH, 24" x 6" x 40 DEG
16	2	110658	WASHER, 1/2" FLAT STANDARD	32	1	302160	DECAL, CURB BRUSH
				33	1	312022	CLIP, HAIRPIN 3/32 x 1.625
				34	1	312039	GAS SPRING
				35	1	312041	CLEVIS PIN, 3/8 X 1.5, ZINC
				36	1	315401	WLDMT, CURB BRUSH HANDLE RIGHT
				37	1	315403	WELDMENT, CURB BRUSH ARM, SWPR
				38	1	315404	WLDMT, CURB BRUSH BASE RIGHT, SWPR
				39	1	315406	WELDMENT, CURB BRUSH MOUNT, SWPR
				40	1	315407	WELDMENT, BRUSH ADAPTER, SWPR
				41	1	317258	WASHER, 2.0 X .344 X .12
				42	1	317261	TENSIONER, GEAR MOUNT, BUSHING
				43	1	317398	LINK, CURB BRUSH LIFT
				44	1	317458	BRKT, RH CURB BRUSH RETAINING
				45	1	317459	SHIM, CURB BRUSH MOTOR VALVE
				46	2	320400	HOSE ASSY, RH CURB BRUSH
				47	1	320402	HOSE ASSY, CURB BRUSH INLET
				48	1	320403	HOSE ASSY, CURB BRUSH RETURN
				49	1	322099	HIGH PRESSURE CARRYOVER PLUG
				50	1	323069	VALVE ASSEMBLY, 2-WAY/4 POSITION
				51	1	332070	HARNESSE, CURB BRUSH
				52	1	820097	CLAMP BODY
				53	1	820098	COVER PLATE
				54	1	832005	SWITCH, PADDLE, CARLING (29253)
				55	1	910044	COVER, VINYL .25 X 1.5 X 4 GRIP
				56	1	922004	MOTOR, EATON 101-1009

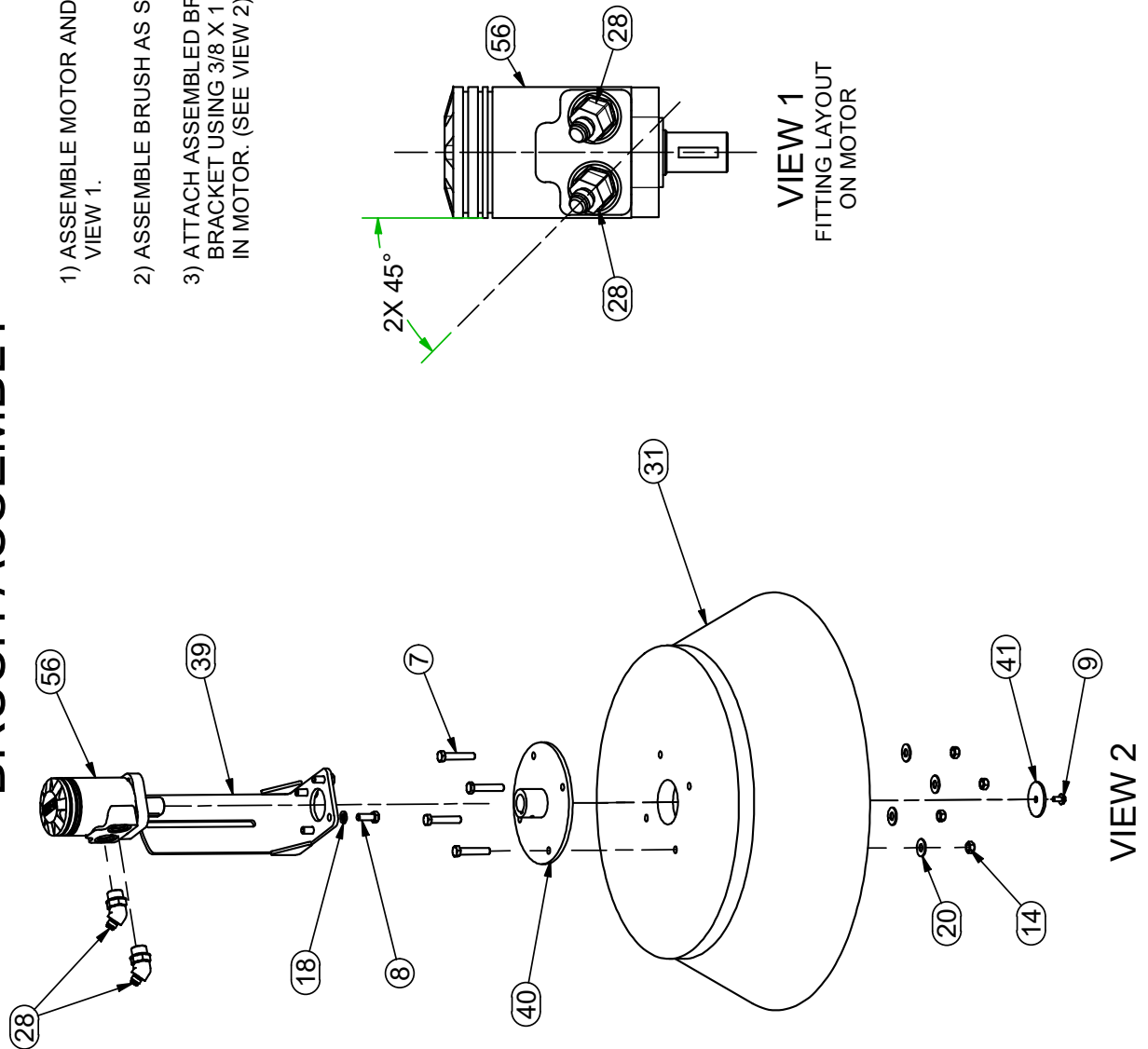
FOR SERIAL NUMBERS 21A11 AND PRIOR,
SEE PAGES 11 & 12 FOR DETAILS ON
UPDATES NEEDED FOR CURB BRUSH
INSTALLATION

CUSTOMER INSTALL: 300090
FACTORY INSTALL: 300091

HAWK RIGHT CURB BRUSH INSTALL

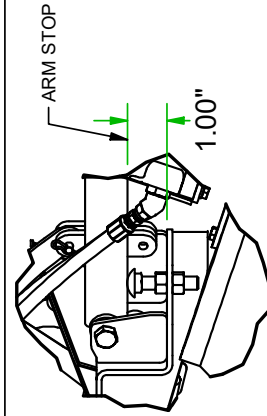
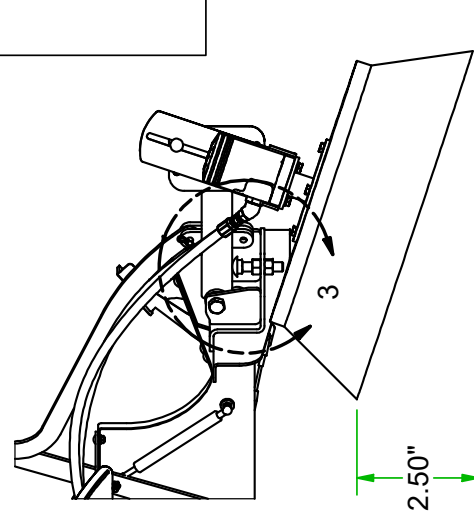
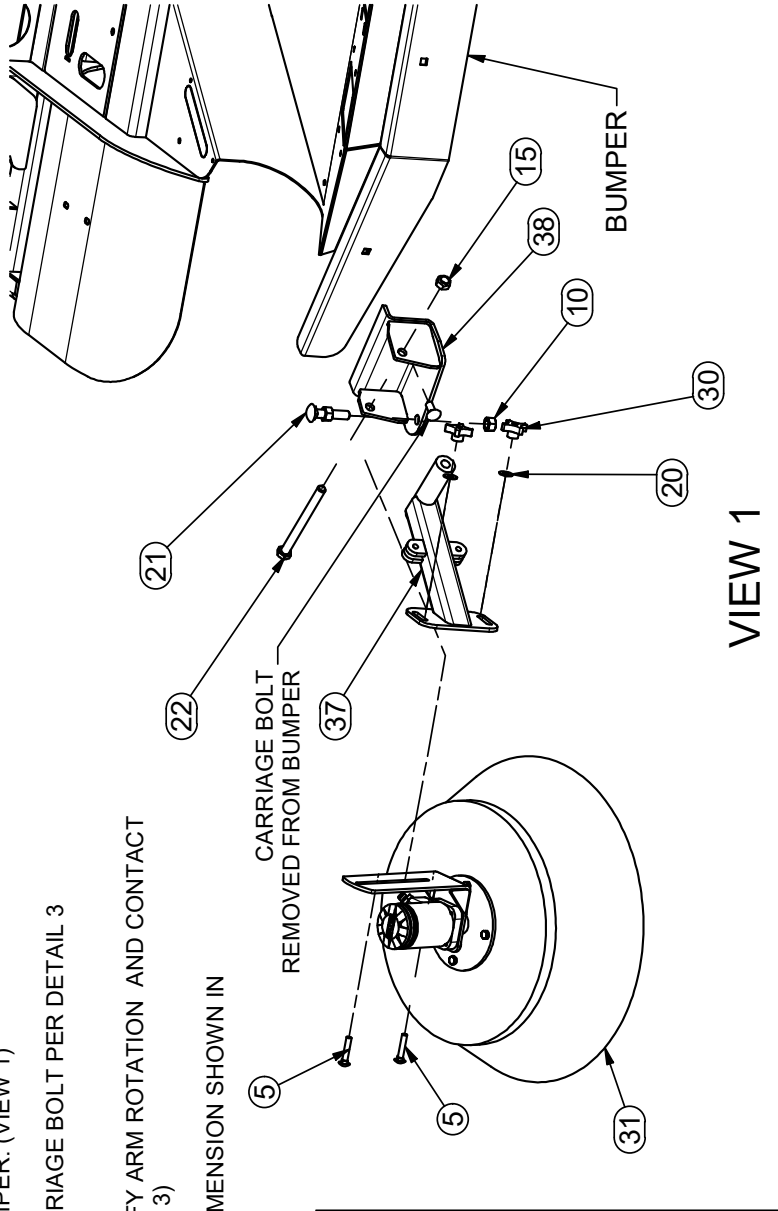
BRUSH ASSEMBLY

- 1) ASSEMBLE MOTOR AND FITTINGS PER VIEW 1.
- 2) ASSEMBLE BRUSH AS SHOWN IN VIEW 2.
- 3) ATTACH ASSEMBLED BRUSH & MOTOR TO BRACKET USING 3/8 X 1 BOLTS, INTO THREADED HOLE IN MOTOR. (SEE VIEW 2)



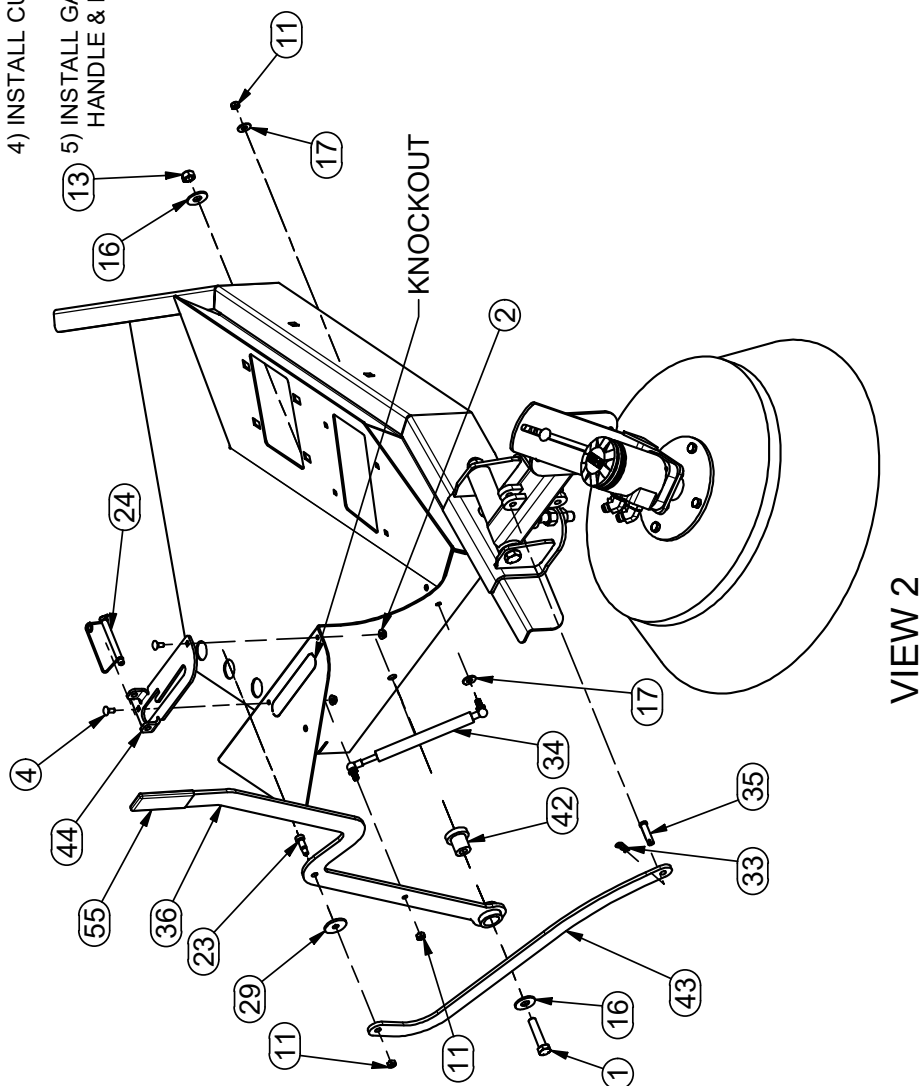
BRUSH & ARM ASSEMBLY

- 1) ATTACH MOUNT BRACKET TO BUMPER USING (112070) CARRIAGE BOLT, ALREADY INSTALLED IN BUMPER. (VIEW 1)
- 2) INSTALL & ADJUST ARM STOP CARRIAGE BOLT PER DETAIL 3 BELOW
- 3) ATTACH ARM TO BRACKET & VERIFY ARM ROTATION AND CONTACT WITH ARM STOP. (VIEW 1 & DETAIL 3)
- 4) INSTALL BRUSH ON ARM AT 2.5" DIMENSION SHOWN IN VIEW 2 BELOW.



CURB BRUSH LIFT HANDLE INSTALLATION

- 1) REMOVE BRUSH HANDLE SLOT KNOCKOUT (VIEW 2)
(IF MODEL S/N PRIOR TO 21A11, MAKE CUTOUT &
DRILL HOLES PER SHT 11)
- 2) INSTALL HANDLE THRU SLOT, ATTACH TO FRAME. (VIEW 2)
- 3) ATTACH CURB BRUSH PLATE USING (2) 1/4 X 5/8
CARRIAGE BOLTS.(VIEW 2)
- 4) INSTALL CURB BRUSH LIFT LINK TO HANDLE & BRUSH ARM (VIEW 2)
- 5) INSTALL GAS SPRING TO LOWER HOLE IN LIFT
HANDLE & FRAME. (VIEW 2)



300090

REV: D

CURB BRUSH HYDRAULICS

MOTOR VALVE INSTALLATION

1) INSTALL FITTINGS (120319) IN VALVE (323069) PER VIEW 1

2) ATTACH MOTOR VALVE (323069) TO INSIDE OF CONSOLE, USING HOLES ON SIDE OF PANEL. (VIEW 2, 3 & 4)

NOTE: IF UNIT S/N IS 21A11 OR PRIOR, SEE SHEET 12 FOR INSTALLATION HOLE DIMENSIONS

CONSOLE SIDE PANEL (317188)

2

2

2

2

3

3

50.2

45

2

3

45

50.2

50

DETAIL 3

VIEW 4

SHOWING SHIMMED VALVE MOUNTED INSIDE CONSOLE

VIEW 2

VIEW OF CONTROL PANEL

VIEW 1

323069 VALVE LAYOUT VIEW

ITEM

QTY

PART #

DESCRIPTION

2

4

110290

NUT, 1/4-20 WIZ FLANGE

3

2

110354

BOLT, 1/4-20 X 2.0 HEX HEAD

27

4

120319

ADAPTER, 6MJ-6MB

45

1

317459

SHIM, CURB BRUSH MOTOR VALVE

50

1

323069

VALVE ASSEMBLY, 2-WAY/4 POSITION

50.1

1

222052

Valve, #8 Spool, 4-Way 2-Position

50.2

1

322100

BODY, 8 SIZE, 4 WAY, SAE-6

50.3

1

322101

COIL, 12V ERZ

HARPER
TURF EQUIPMENT

100

HK4200

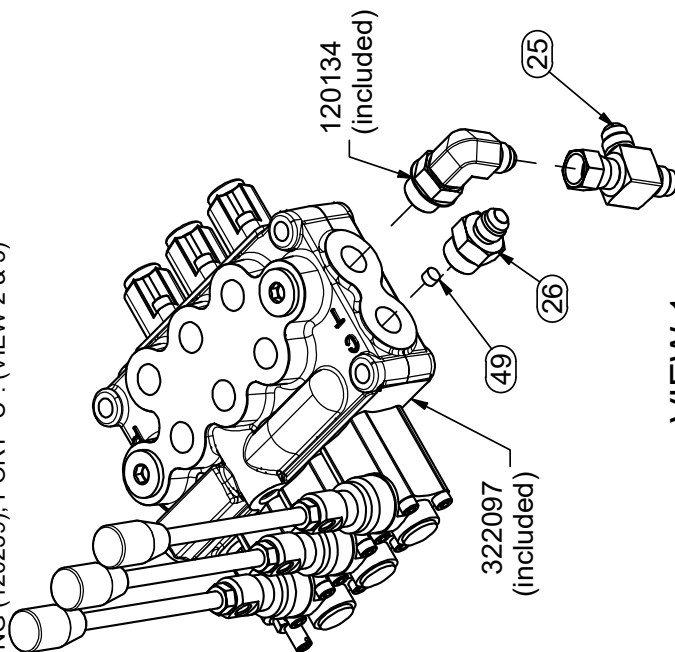
CURB BRUSH HYDRAULICS

CONTROL VALVE CONFIGURATION

1) REMOVE PLUG FROM POWER BEYOND PORT, PORT "C" SHOWN IN VIEW 1.

2) INSTALL HIGH PRESSURE CARRYOVER PLUG (322099) AND FITTING (120239) IN PORT "C". (VIEW 1)

3) INSTALL MOTOR VALVE PRESSURE HOSE (320402) ON FITTING (120239), PORT "C". (VIEW 2 & 3)

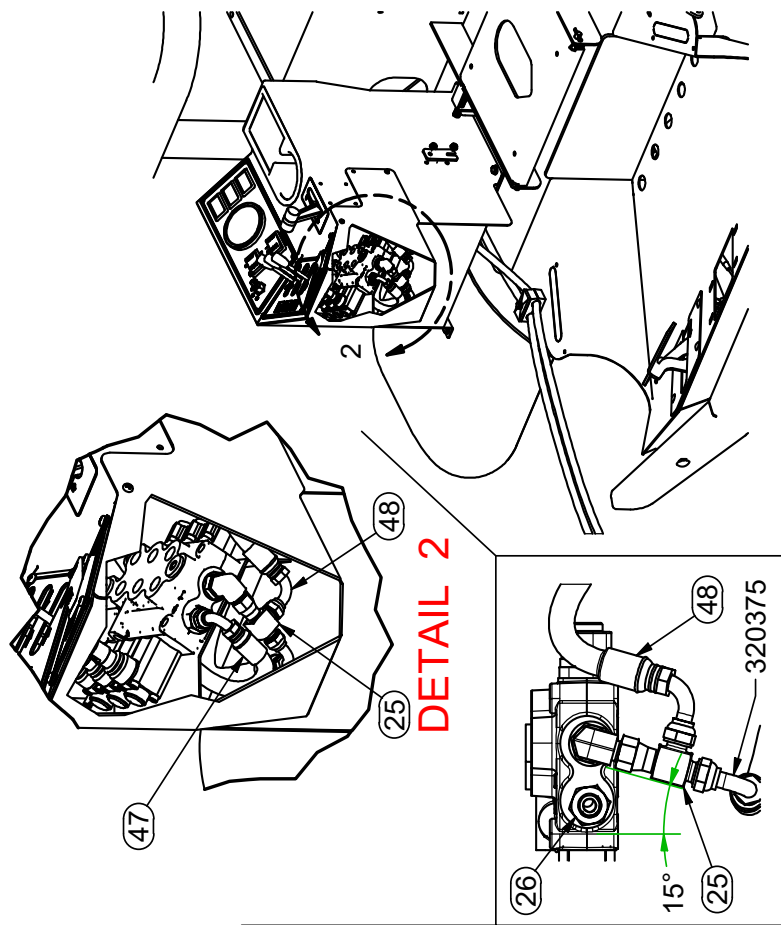


VIEW 1

4) REMOVE HOSE ASSY (320375) FROM ELBOW (120134) ON PORT "T"

5) ADD TEE (120216) TO ELBOW (120134) ALREADY INSTALLED ON CONTROL VALVE (322087), THEN RE-INSTALL HOSE (320375) TO OPEN END OF TEE. (VIEW 1,2 & 3)

6) ATTACH CURB BRUSH MOTOR VALVE HOSE (320403) TO OPEN SIDE PORT OF TEE (120216). (VIEW 2 & 3)



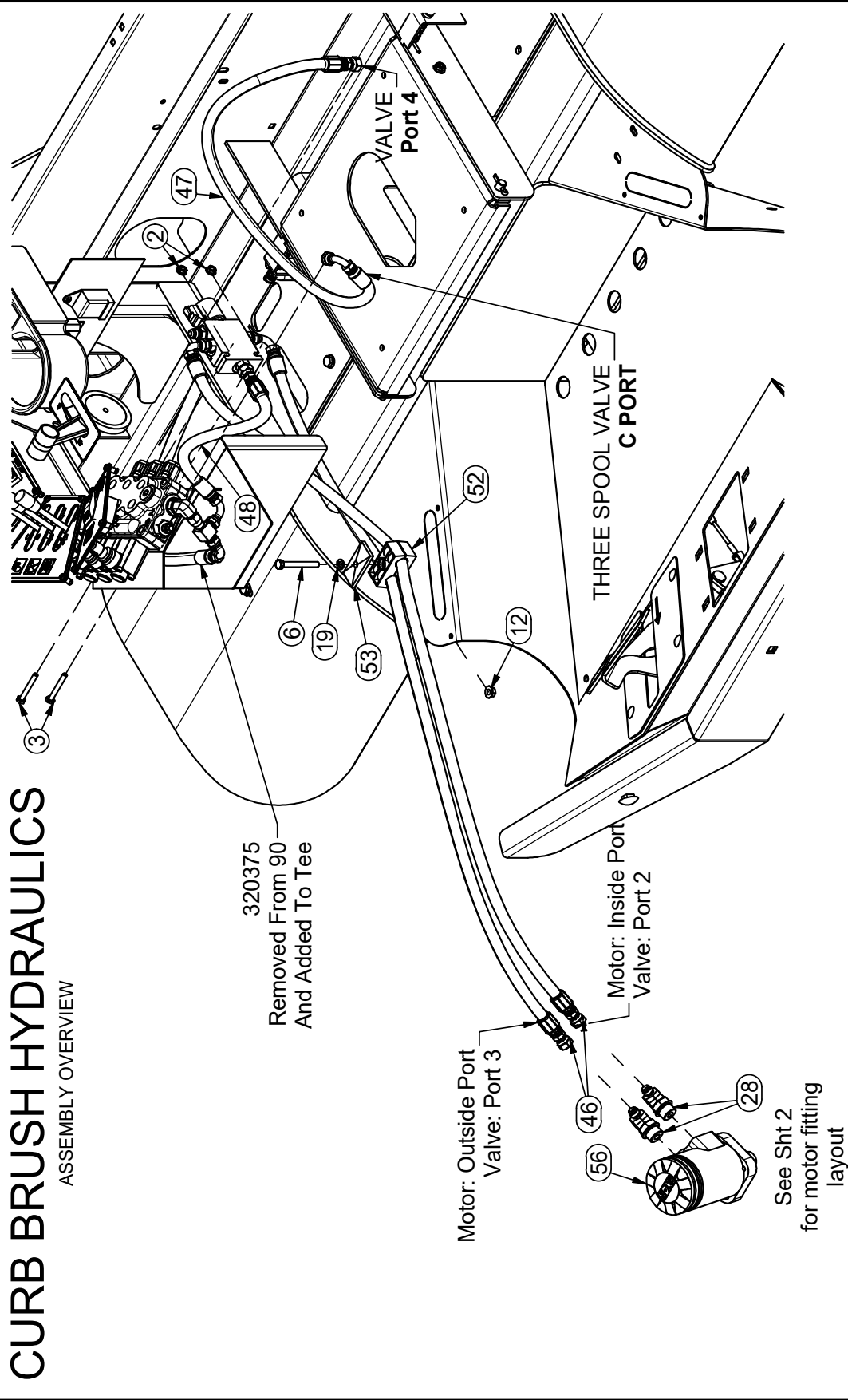
DETAIL 2

VIEW 3
TEE LAYOUT VIEW

VIEW 4
VIEW OF CONTROL PANEL

CURB BRUSH HYDRAULICS

ASSEMBLY OVERVIEW

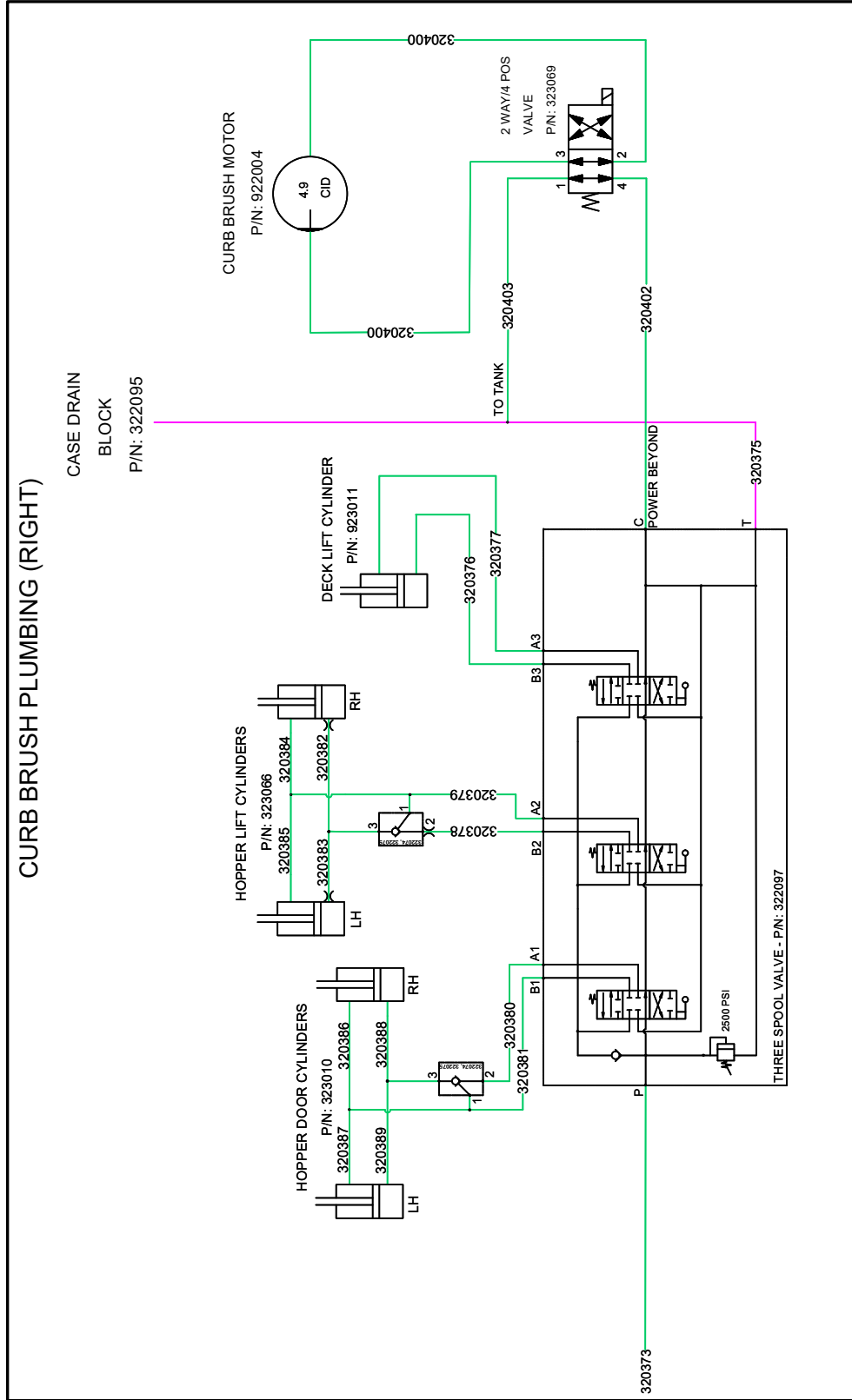


REV: D

300090

CURB BRUSH HYDRAULICS

CURB BRUSH PLUMBING (RIGHT)



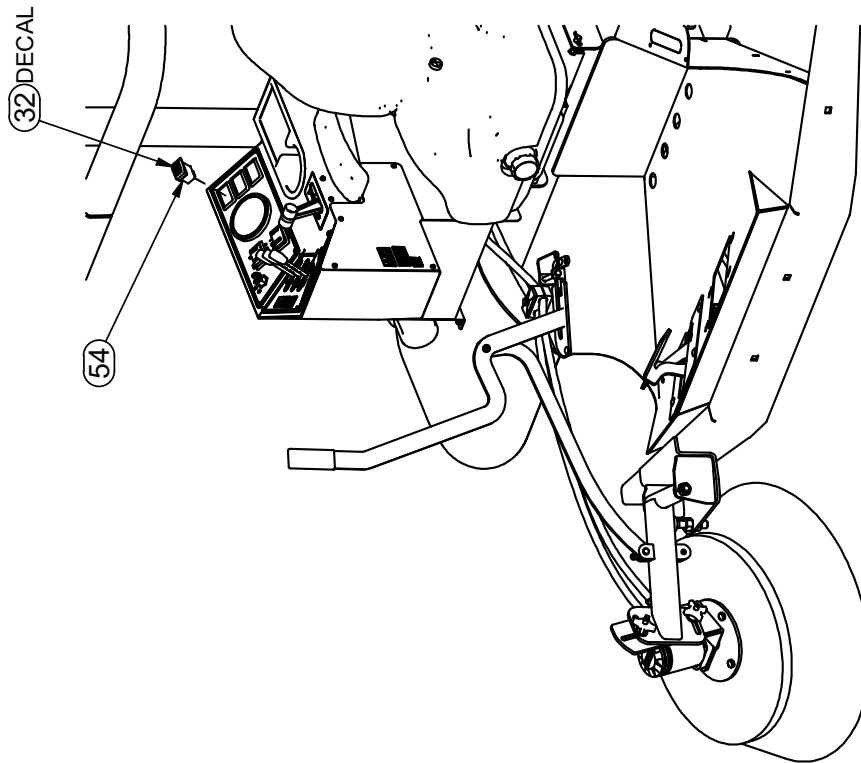
2-20-2023

CURB BRUSH SWITCH & ELECTRICAL INSTALLATION

To Install Wiring Harness (332070):

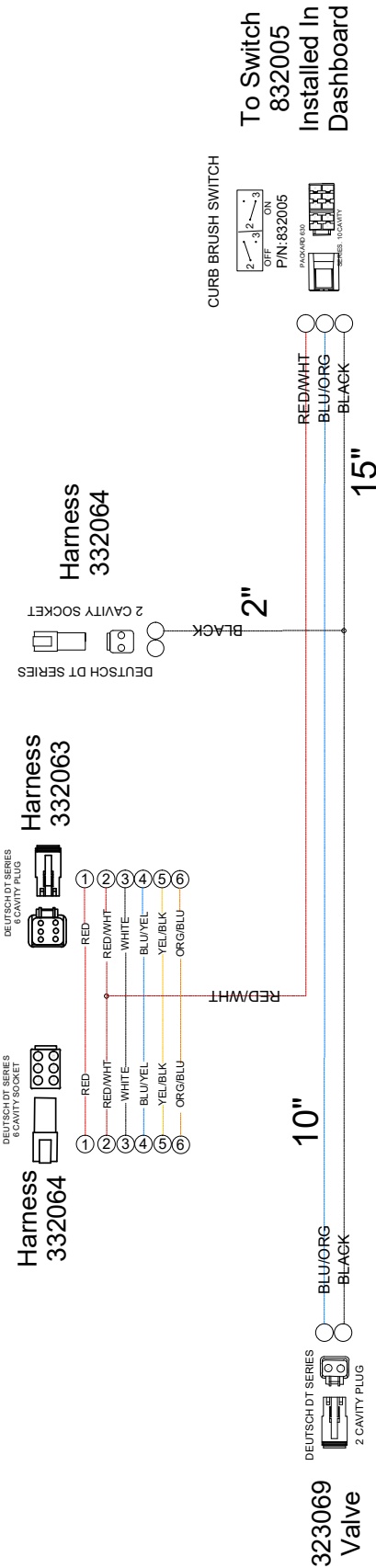
- 1) Disconnect harness 332064 & 332063 at the 6 cavity Deutsch connector. This plug is located inside operator's console. It is the only 6 cavity Deutsch connector in the console. Connect harness 332064 and 332063 to the harness included with this kit (332070)
- 2) Connect 2 cavity Deutsch, black wire only, to one of the 3 available accessory plugs (harness 332064). These 2 cavity plugs should be located near the fuse block inside the console.
- 3) Remove the plastic plug located on the console, insert the Packard 10 cavity switch (832005) into this cavity and attach the wiring harness on the back side (VIEW 1)
- 4) Connect 2 cavity Deutsch, Blu/Org & Blk, to 323069 valve.

wiring harness on next page for reference



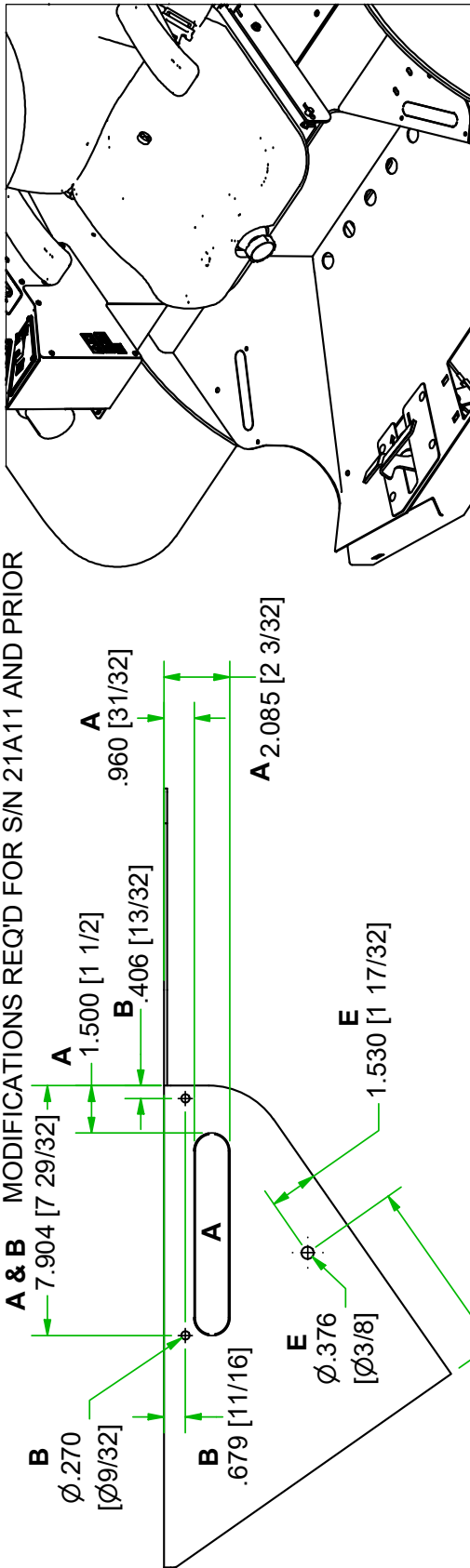
VIEW 1

SWEEPER CURB BRUSH WIRING SCHEMATIC



CURB BRUSH ASSEMBLY

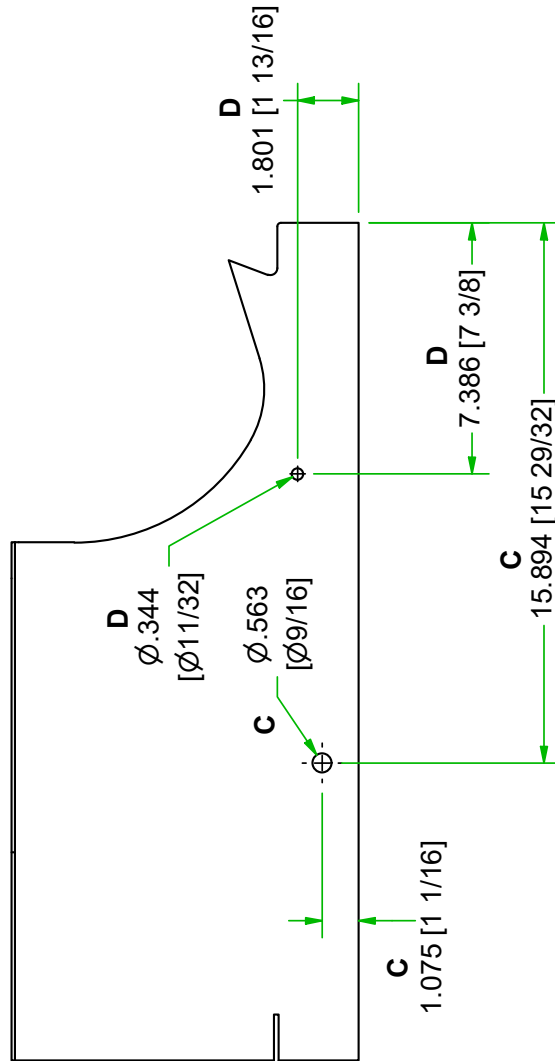
A & B MODIFICATIONS REQ'D FOR S/N 21A11 AND PRIOR



FOR S/N 21A11 AND PRIOR

For Right Hand Curb Brush, The Following Cutouts Will Need To Be Made.

- A. Cutout For Handle Mount (1X)
- B. Holes For Curb Brush Plate Mount (2X)
- C. Pivot Hole For Curb Brush Handle (1X)
- D. Gas Spring Mount Hole (1X)
- E. Hose Clamp Hole Mount

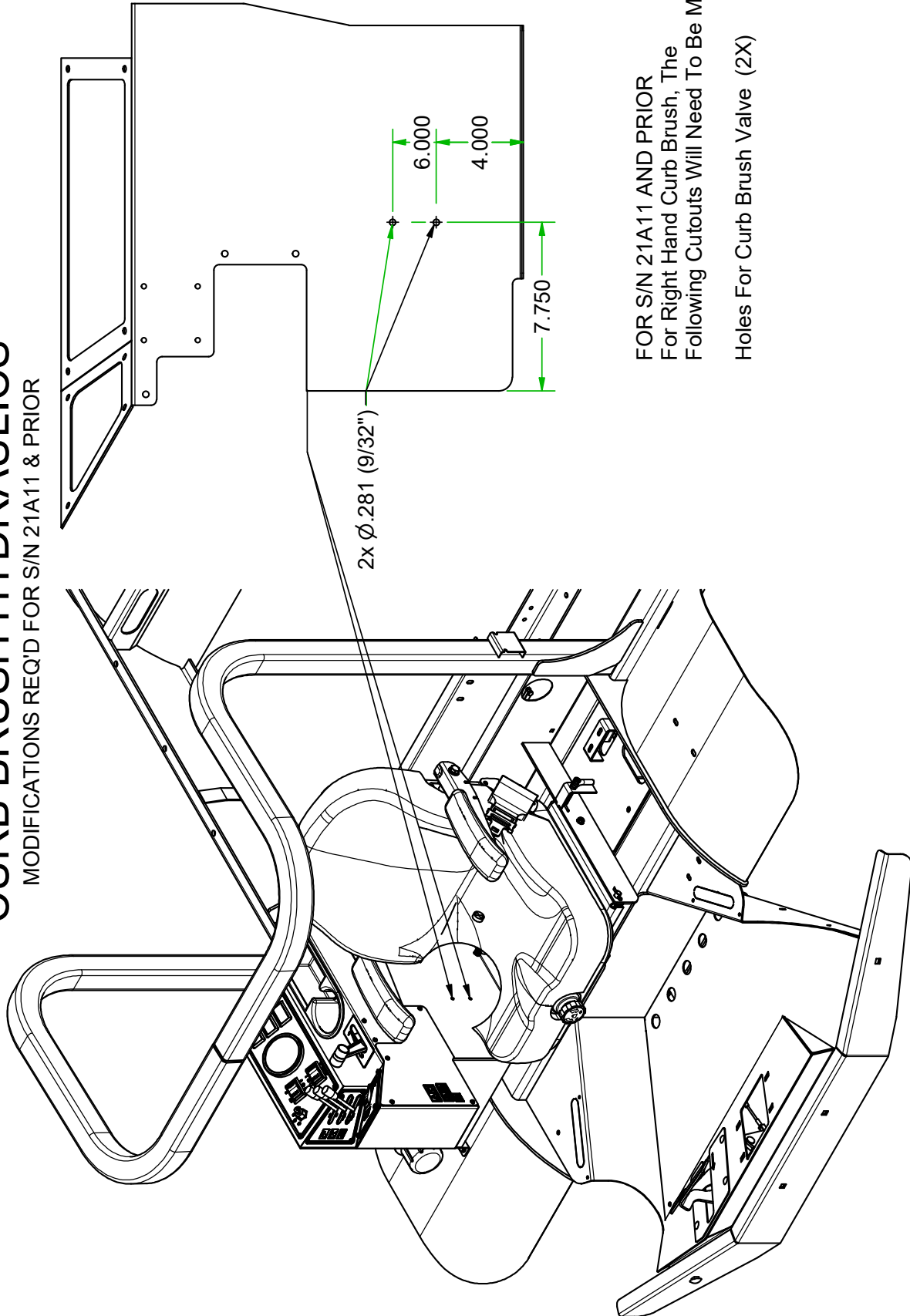


CURB BRUSH HYDRAULICS

MODIFICATIONS REQ'D FOR S/N 21A11 & PRIOR

300090

REV: D



FOR S/N 21A11 AND PRIOR
For Right Hand Curb Brush, The
Following Cutouts Will Need To Be Made:
Holes For Curb Brush Valve (2X)

A detailed technical line drawing of a mechanical assembly, possibly a pump or motor component. The drawing shows a complex arrangement of parts, including a central cylindrical component, various mounting brackets, and a large circular flange on the right side. The assembly is shown in a perspective view, highlighting the intricate details of the mechanical design.

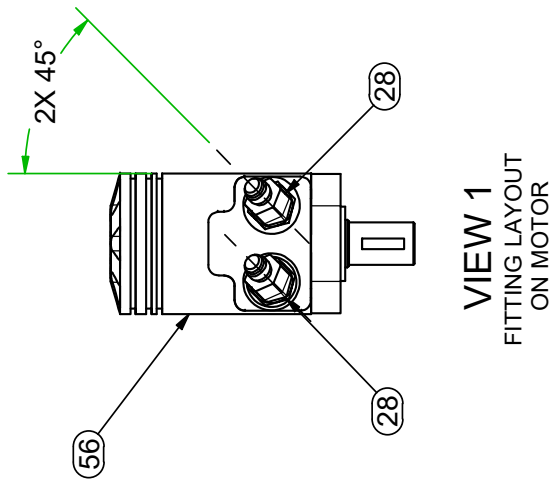
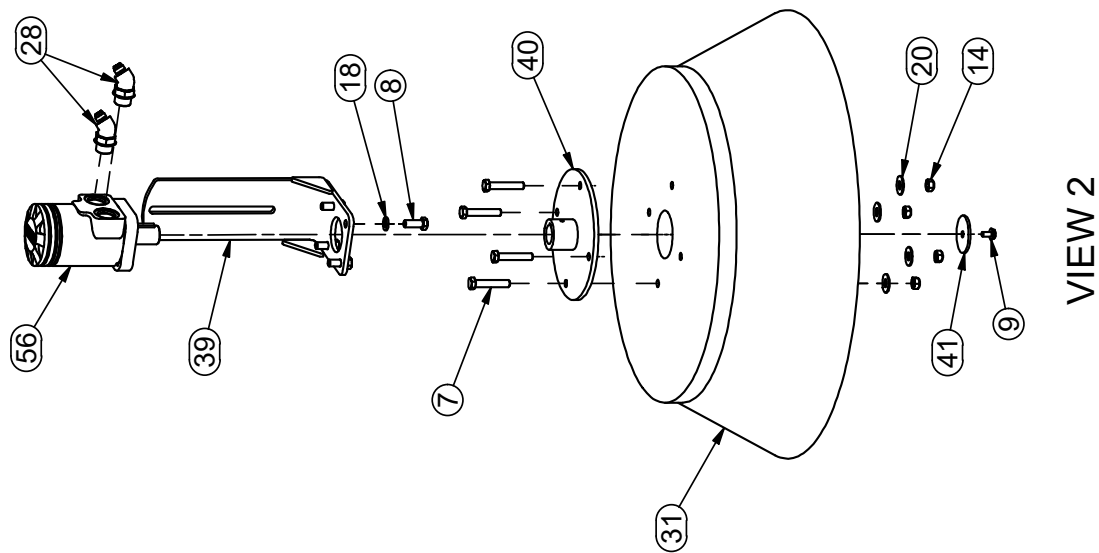
FOR SERIAL NUMBERS **21A11** AND PRIOR,
SEE PAGES **11-12** FOR DETAILS ON
UPDATES NEEDED FOR CURB BRUSH
INSTALLATION

CUSTOMER INSTALL: 300092
FACTORY INSTALL: 300093

HAWK LEFT CURB BRUSH INSTALL

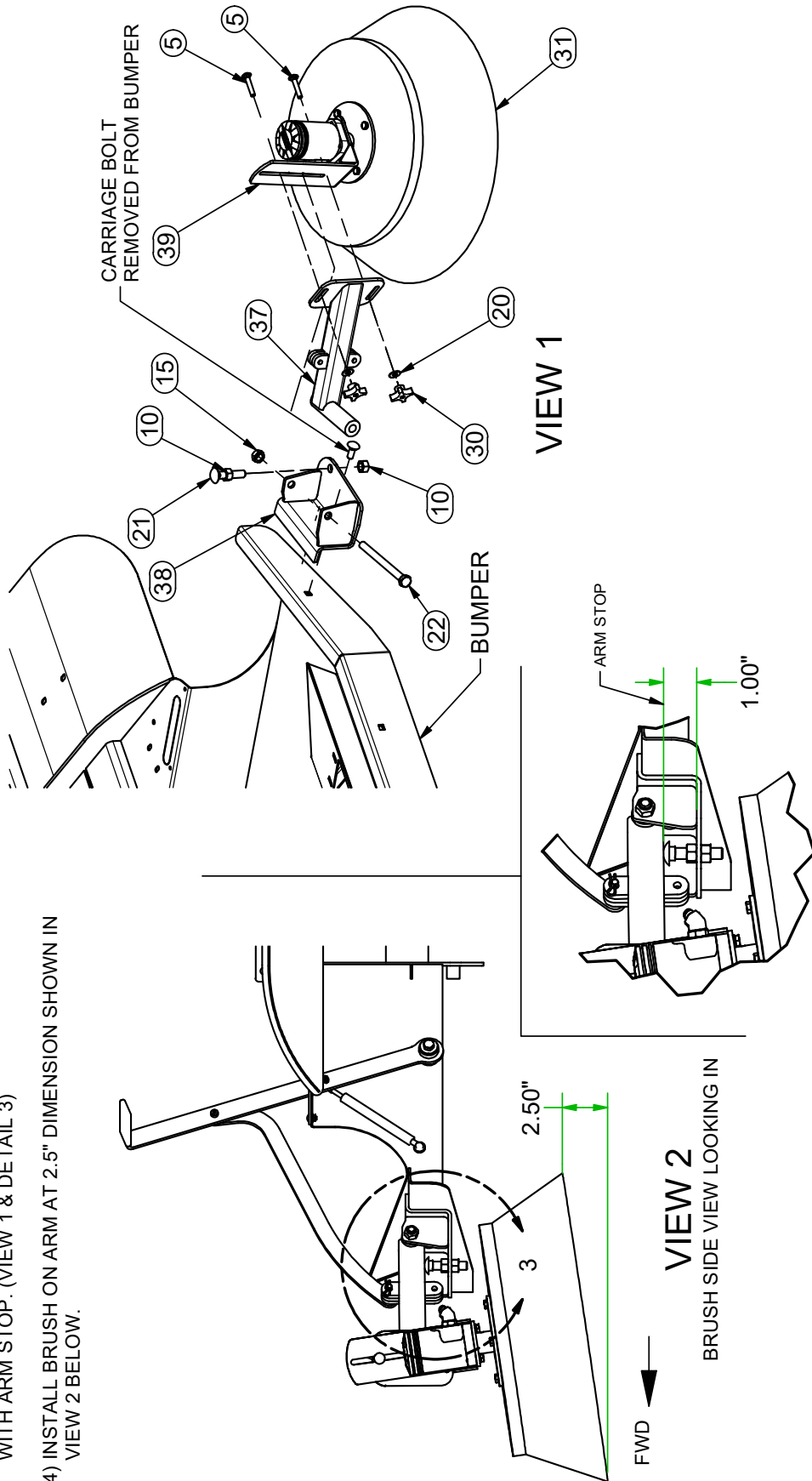
BRUSH ASSEMBLY

- 1) ASSEMBLE MOTOR AND FITTINGS PER VIEW 1.
- 2) ASSEMBLE BRUSH AS SHOWN IN VIEW 2.
- 3) ATTACH ASSEMBLED BRUSH & MOTOR TO BRACKET USING 3/8 X 1 BOLTS, INTO THREADED HOLE IN MOTOR. (SEE VIEW 2)



BRUSH & ARM ASSEMBLY

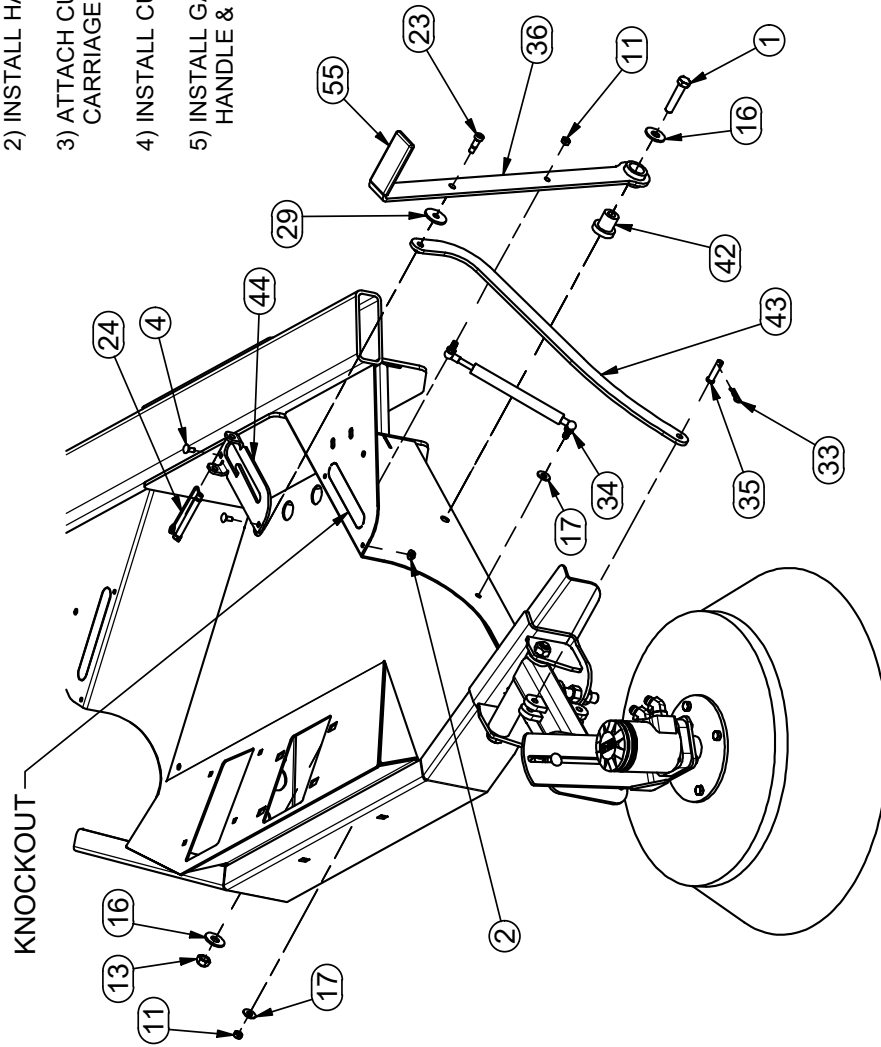
- 1) ATTACH MOUNT BRACKET TO BUMPER USING (112070) CARRIAGE BOLT, ALREADY INSTALLED IN BUMPER. (VIEW 1)
- 2) INSTALL & ADJUST ARM STOP CARRIAGE BOLT PER DETAIL 3 BELOW
- 3) ATTACH ARM TO BRACKET & VERIFY ARM ROTATION AND CONTACT WITH ARM STOP. (VIEW 1 & DETAIL 3)
- 4) INSTALL BRUSH ON ARM AT 2.5" DIMENSION SHOWN IN VIEW 2 BELOW.



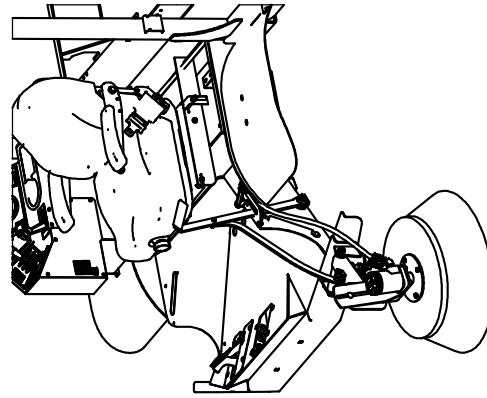
DETAIL 3

CURB BRUSH LIFT HANDLE INSTALLATION

- 1) REMOVE BRUSH HANDLE SLOT KNOCKOUT (VIEW 2)
(IF MODEL S/N PRIOR TO 21A11, MAKE CUTOOUT &
DRILL HOLES PER SHT 11)
- 2) INSTALL HANDLE THRU SLOT, ATTACH TO FRAME. (VIEW 2)
- 3) ATTACH CURB BRUSH PLATE USING (2) 1/4 X 5/8
CARRIAGE BOLTS.(VIEW 2)
- 4) INSTALL CURB BRUSH LIFT LINK TO HANDLE & BRUSH ARM (VIEW 2)
- 5) INSTALL GAS SPRING TO LOWER HOLE IN LIFT
HANDLE & FRAME. (VIEW 2)



VIEW 2

VIEW 1
CURB BRUSH
HANDLE INSTALLED

CURB BRUSH HYDRAULICS

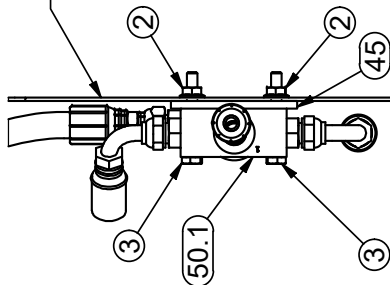
MOTOR VALVE INSTALLATION

1) INSTALL FITTINGS (120319) IN VALVE (323069) PER VIEW 1

2) ATTACH MOTOR VALVE (323069) TO INSIDE OF CONSOLE, USING HOLES ON SIDE OF PANEL. (VIEW 2,3 & 4)

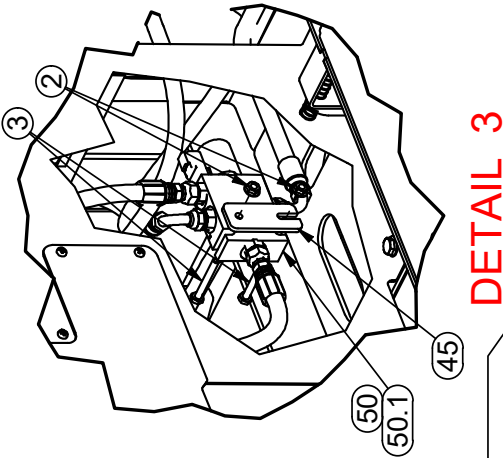
NOTE: IF UNIT SN IS 21A11 OR PRIOR, SEE SHEET 12 FOR INSTALLATION HOLE DIMENSIONS

CONSOLE
SIDE PANEL
(317188)



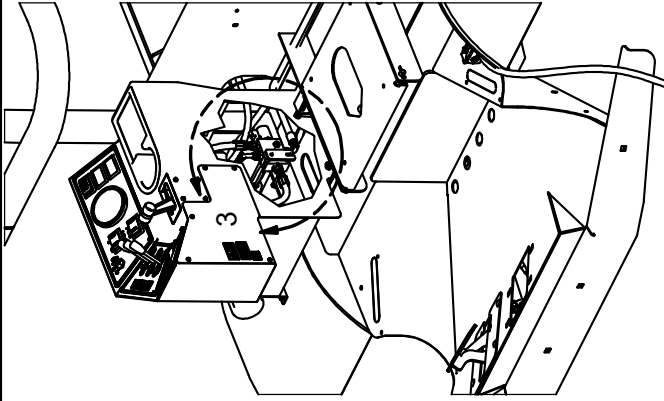
VIEW 4

SHOWING SHIMMED
VALVE MOUNTED
INSIDE CONSOLE

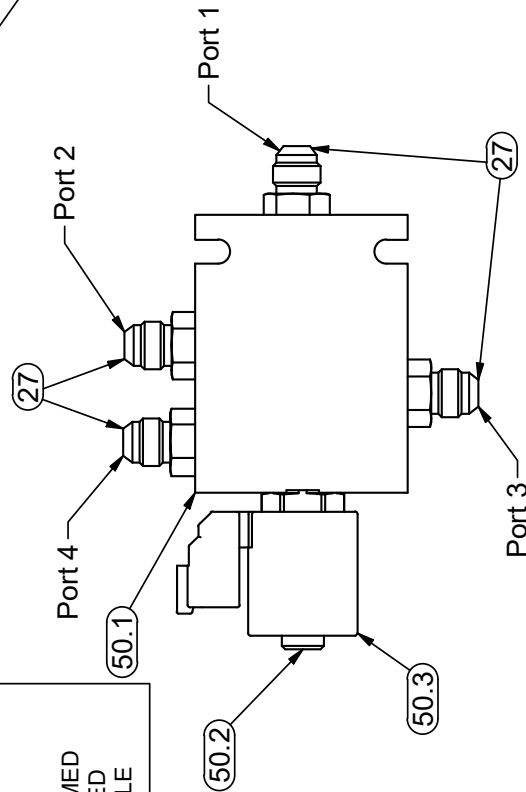


DETAIL 3

VIEW 2
VIEW OF CONTROL PANEL



Parts List		
ITEM	QTY	PART # DESCRIPTION
2	4	110290 NUT, 1/4-20 WIZ FLANGE
3	2	110354 BOLT, 1/4-20 X 2.0 HEX HEAD
27	4	120319 ADAPTER, 6MJ-6MB
45	1	317459 SHIM, CURB BRUSH MOTOR VALVE
50	1	323069 VALVE ASSEMBLY, 2-WAY/4 POSITION
50.2	1	222052 Valve, #8 Spool, 4-Way 2-Position
50.1	1	322100 BODY, 8 SIZE, 4 WAY, SAE-6
50.3	1	322101 COIL, 12V ERZ



VIEW 1

323069 VALVE LAYOUT VIEW

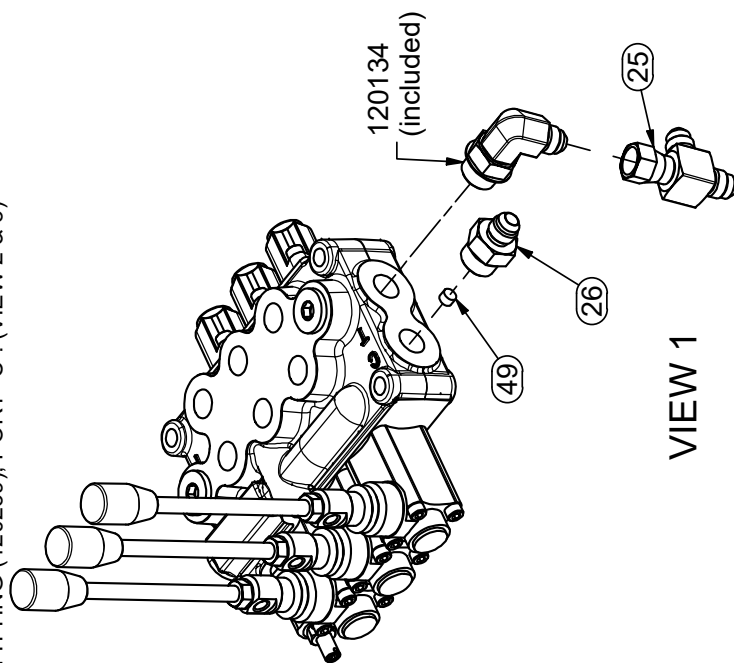
CURB BRUSH HYDRAULICS

CONTROL VALVE CONFIGURATION

1) REMOVE PLUG FROM POWER BEYOND PORT, PORT "C" SHOWN IN VIEW 1.

2) INSTALL HIGH PRESSURE CARRYOVER PLUG (322099) AND FITTING (120239) IN PORT "C". (VIEW 1)

3) INSTALL MOTOR VALVE PRESSURE HOSE (320402) ON FITTING (120239), PORT "C". (VIEW 2 & 3)

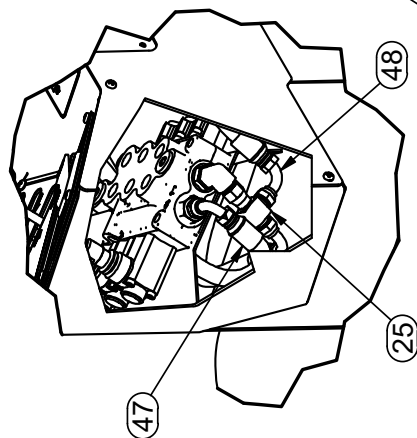


VIEW 1

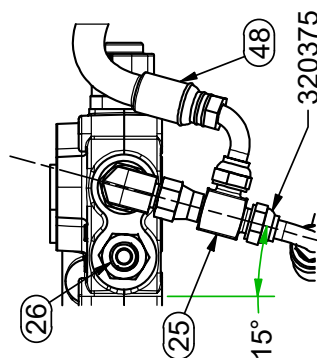
4) REMOVE HOSE ASSY (320375) FROM ELBOW (120134) ON PORT "T"

5) ADD TEE (120216) TO ELBOW (120134) ALREADY INSTALLED ON CONTROL VALVE (322087), THEN RE-INSTALL HOSE (320375) TO OPEN END OF TEE. (VIEW 1, 2 & 3)

6) ATTACH CURB BRUSH MOTOR VALVE HOSE (320403) TO OPEN SIDE PORT OF TEE (120216). (VIEW 2 & 3)

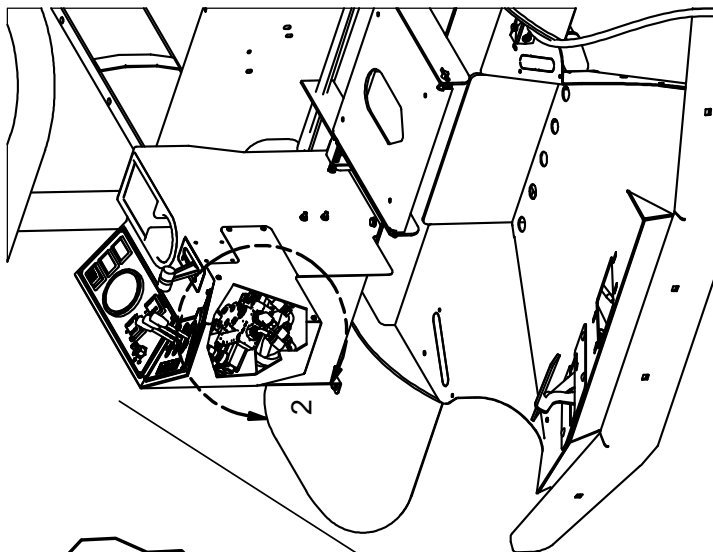


DETAIL 2



VIEW 3

TEE LAYOUT VIEW

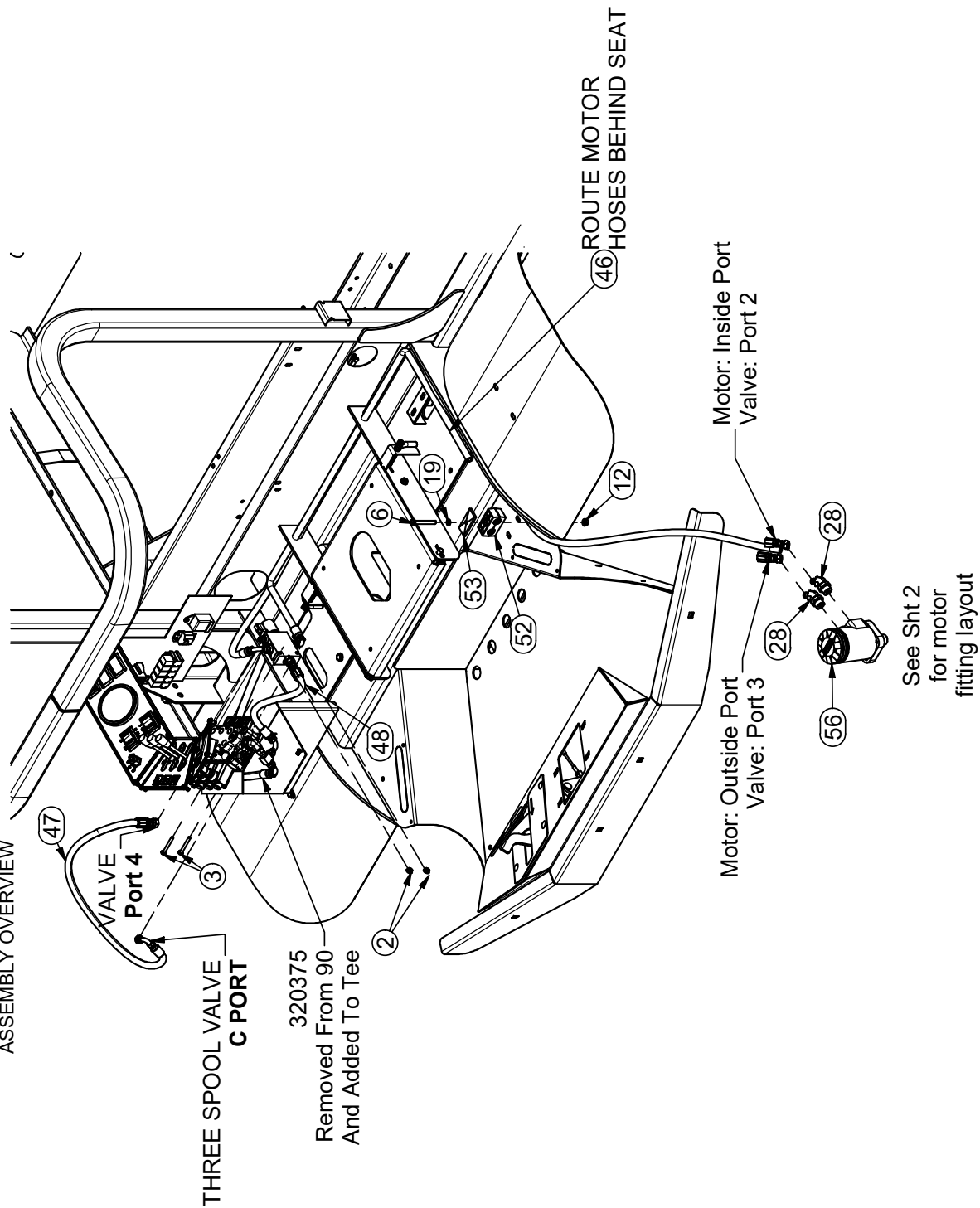


VIEW 4

VIEW OF CONTROL PANEL

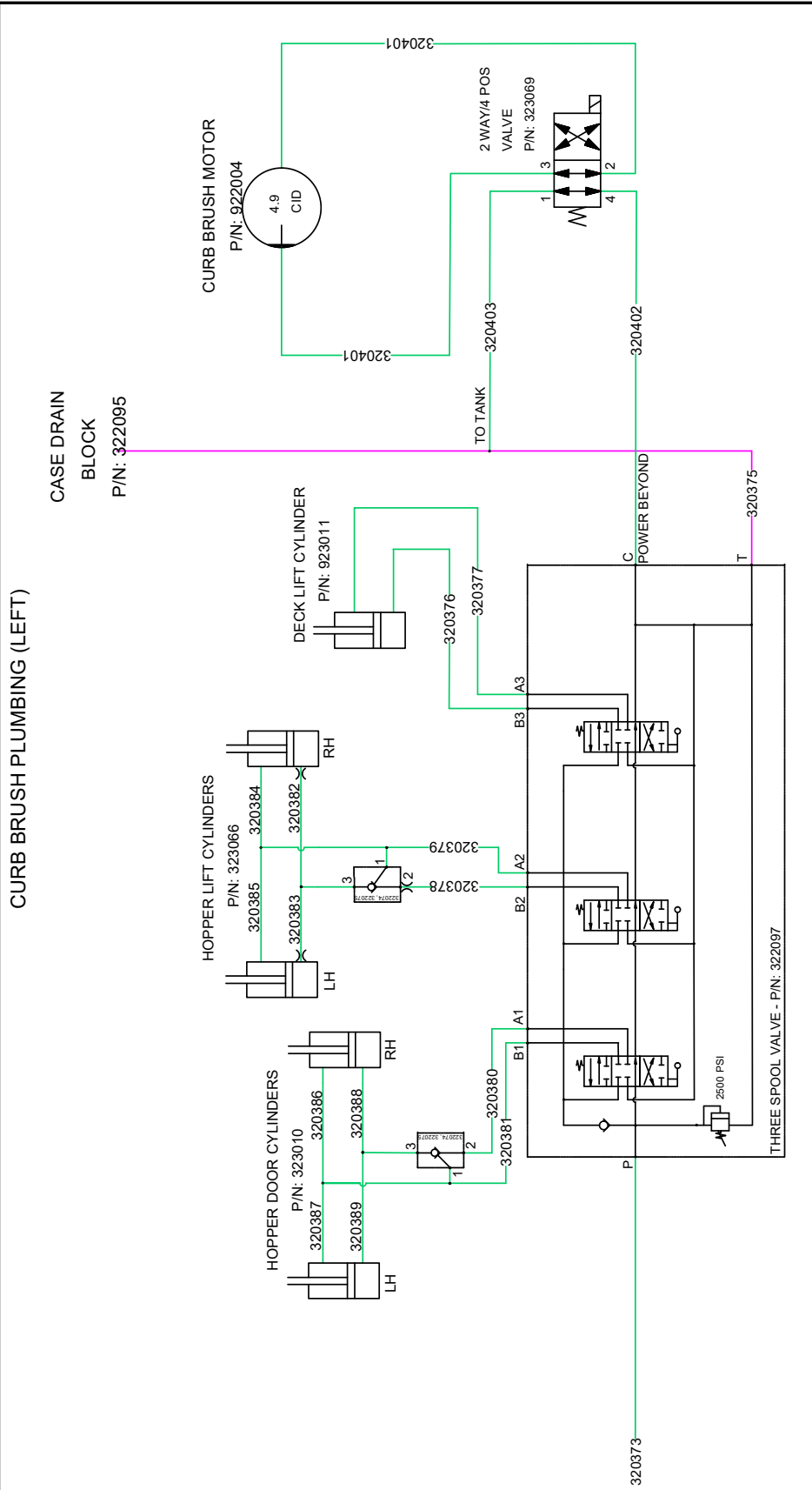
CURB BRUSH HYDRAULICS

ASSEMBLY OVERVIEW

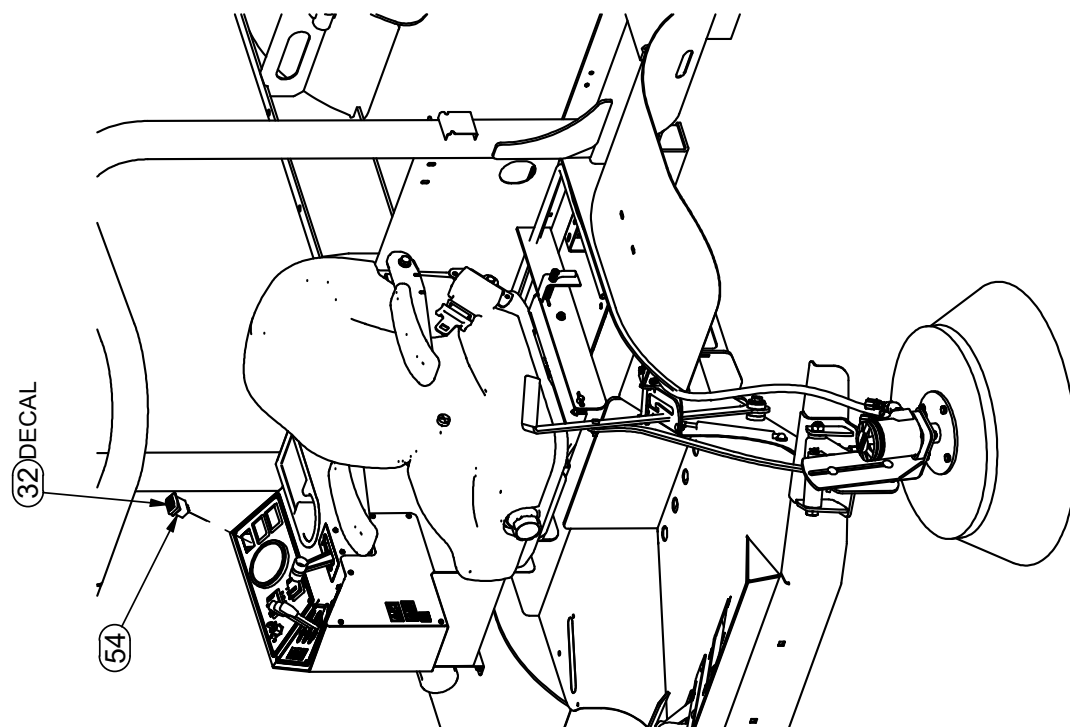


300092 REV: C

CURB BRUSH HYDRAULICS



CURB BRUSH SWITCH & ELECTRICAL INSTALLATION

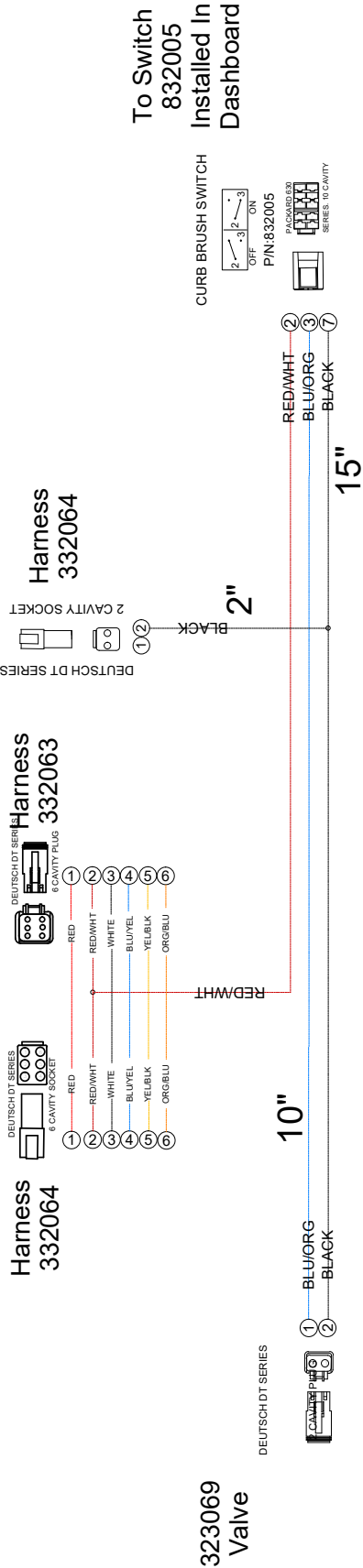


To Install Wiring Harness (332070):

- 1) Disconnect harness 332064 & 332063 at the 6 cavity Deutsch connector. This plug is located inside operator's console. It is the only 6 cavity Deutsch connector in the console. Connect harness 332064 and 332063 to the harness included with this kit (332070)
- 2) Connect 2 cavity Deutsch, black wire only, to one of the 3 available accessory plugs (harness 332064). These 2 cavity plugs should be located near the fuse block inside the console.
- 3) Remove the plastic plug located on the console, insert the Packard 10 cavity switch (832005) into this cavity and attach the wiring harness on the back side (VIEW 1)
- 4) Connect 2 cavity Deutsch, Blu/Org & Blk, to 323069 valve.

wiring harness on next page for reference

SWEEPER CURB BRUSH WIRING SCHEMATIC

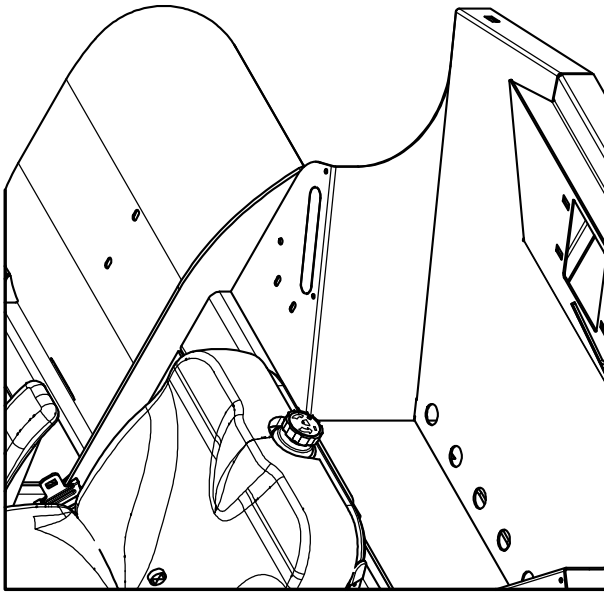
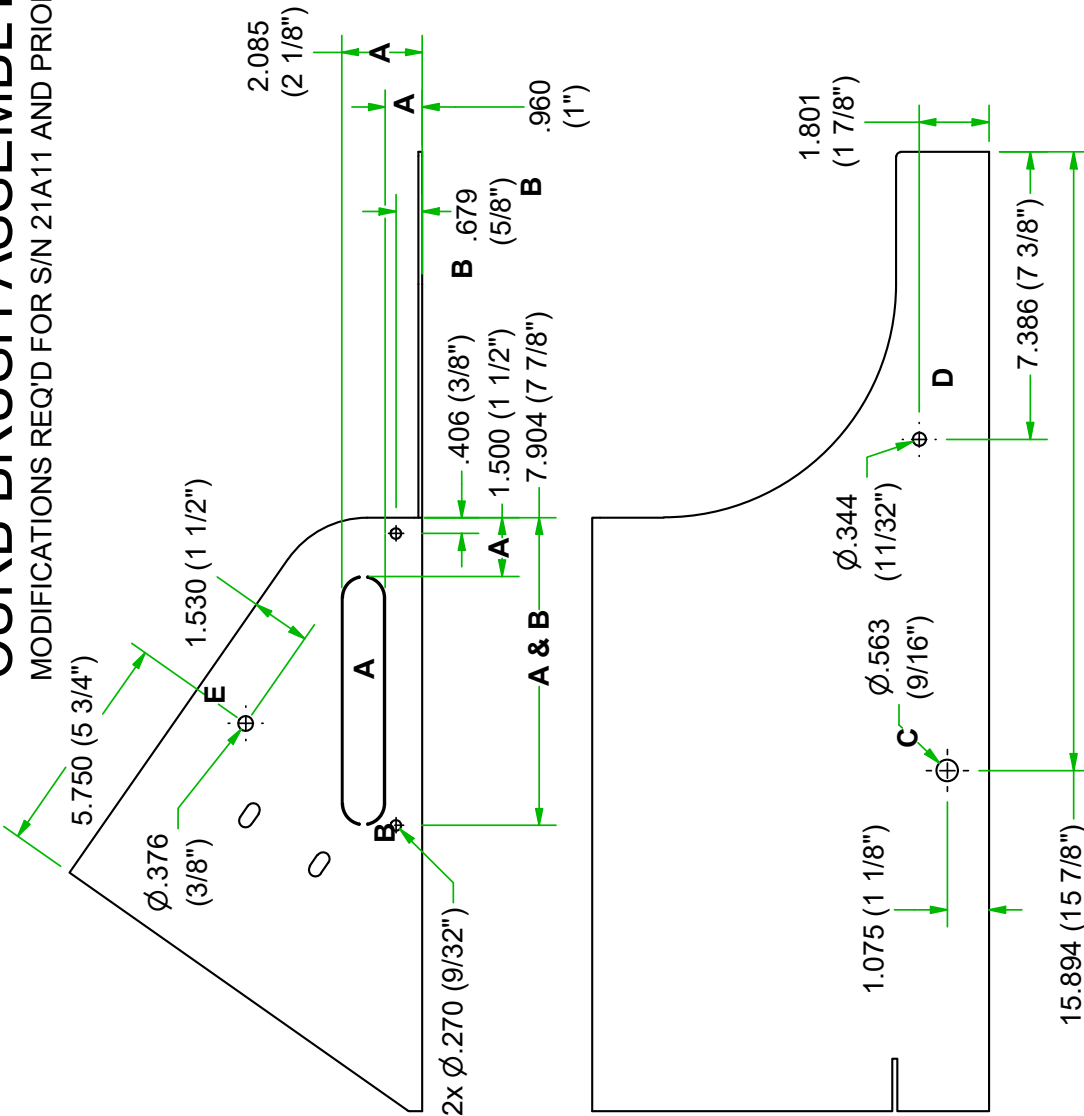


300092

REV: C

CURB BRUSH ASSEMBLY

MODIFICATIONS REQ'D FOR S/N 21A11 AND PRIOR

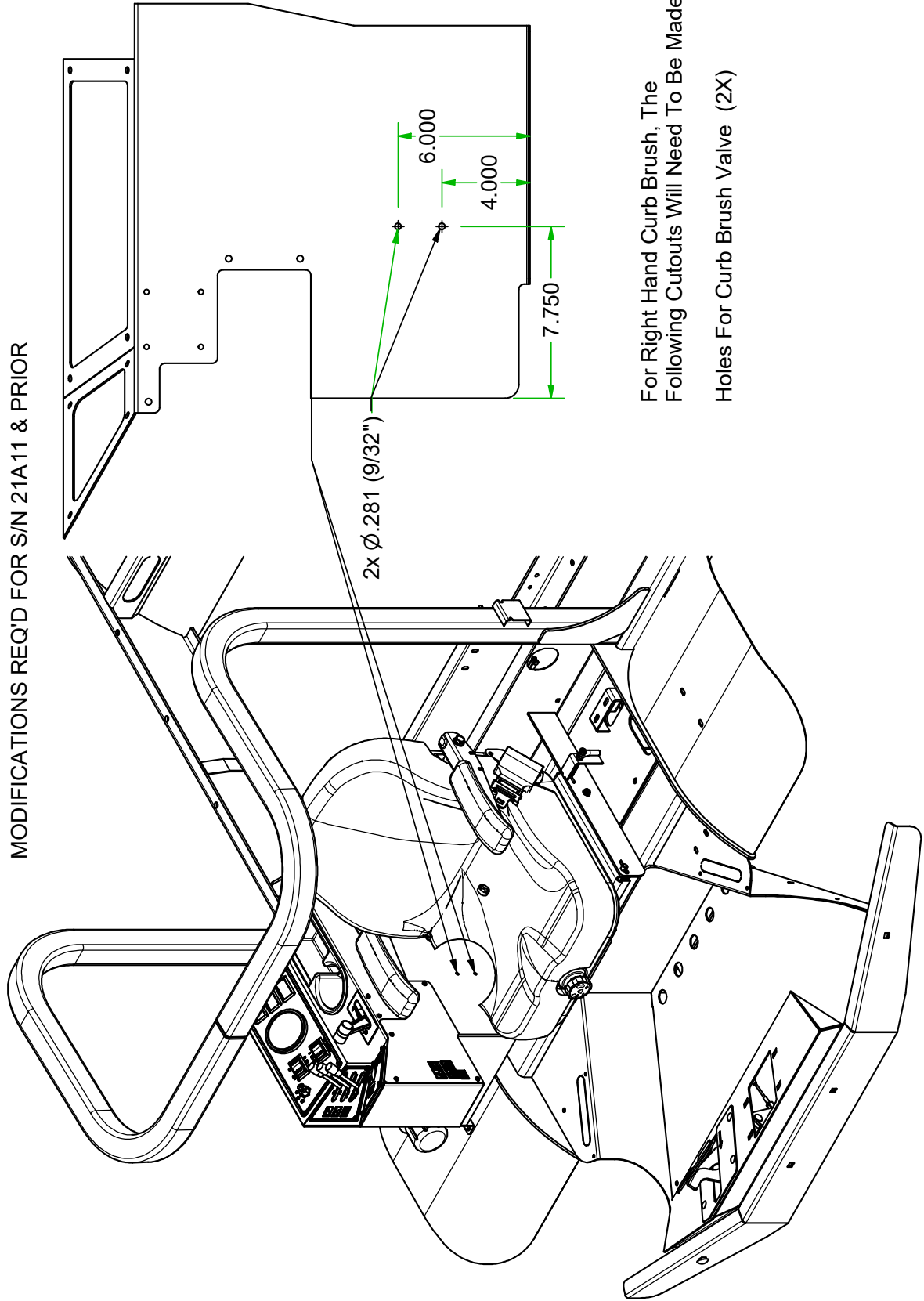


For Left Hand Curb Brush, The Following Cutouts Will Need To Be Made.

- A. Cutout For Handle Mount (1X)
- B. Holes For Curb Brush Plate Mount (2X)
- C. Pivot Hole For Curb Brush Handle (1X)
- D. Gas Spring Mount Hole (1X)
- E. Hose Clamp Hole Mount

CURB BRUSH HYDRAULICS

MODIFICATIONS REQ'D FOR S/N 21A11 & PRIOR

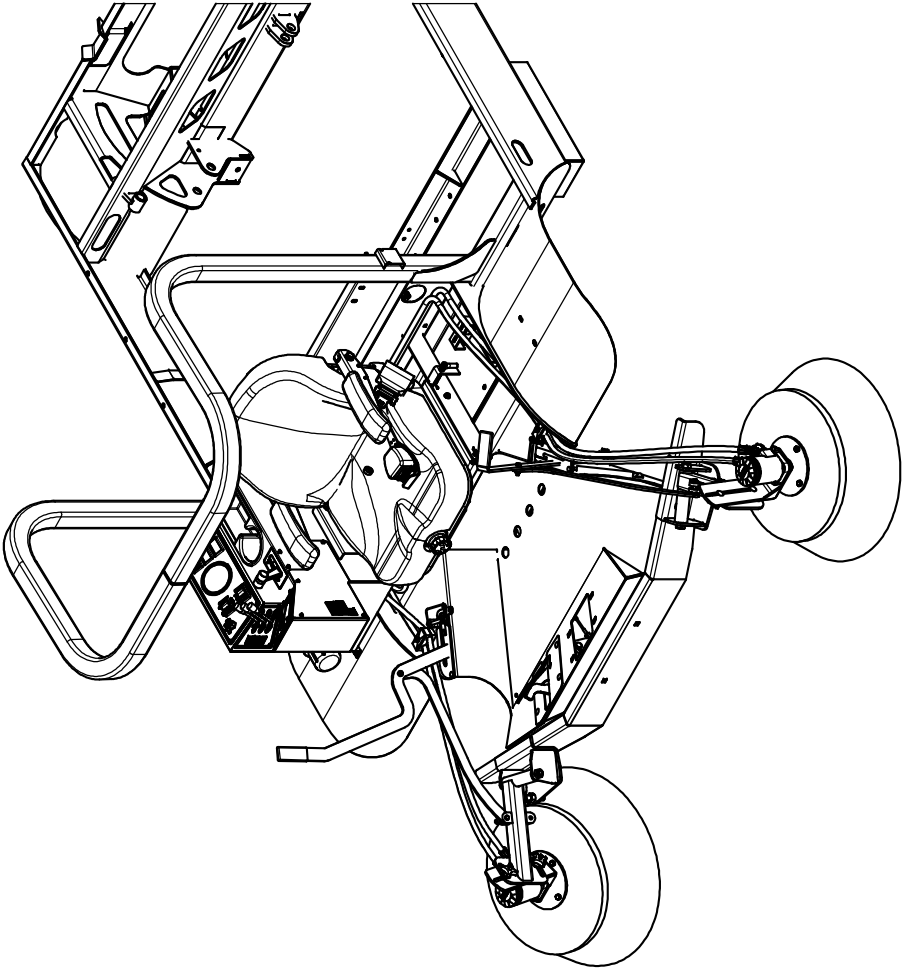


For Right Hand Curb Brush, The
Following Cutouts Will Need To Be Made:
Holes For Curb Brush Valve (2X)

HAWK DUAL CURB BRUSH INSTALL

USE ASSEMBLY INSTRUCTIONS INCLUDED WITH 300090 AND 300092 FOR ASSEMBLING BRUSH MOUNTS AND LINKAGE.

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	4	110290	NUT, 1/4-20 W/IZ FLANGE
2	2	110412	BOLT, 1/4-20 X 3.5
3	4	110788	BOLT, 10-24 X .375 STAINLESS, PHILLIPS
4	1	120219	ADAPTER, 6MU-6MB 45
5	1	317423	SHIELD, DUAL CB VALVE
6	1	320404	HOSE ASSY, CB DUAL INLET
7	1	332071	HARNESS, CURB BRUSH DUAL
8	1	802035	BOX, PLASTIC, MANUAL OVERRIDE
9	1	810747	SWITCH SHIM
10	1	810818	MOUNT, ARM REST SWITCH



CURB BRUSH HYDRAULICS

MOTOR VALVE INSTALLATION

- 1) INSTALL FITTINGS PER 300090 & 300092, EXCEPT INSTALL 120219 IN PLACE OF (1) 120319, IN RH VALVE, AS SHOWN IN VIEW 1
- 2) ATTACH RH VALVE (323069) TO INSIDE OF CONSOLE, AND LH VALVE TO OUTSIDE OF CONSOLE. SEE VIEW 3 & 4
- 3) INSTALL SHIELD (317423). SEE VIEW 3 & 4

CONSOLE PANEL

317188

317423

(1)

(5)

(2)

(4)

120219

(30°)

320403

(1)

(2)

(3)

(4)

(5)

(1)

(2)

(3)

(4)

(5)

(1)

(2)

(3)

(4)

(5)

(1)

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(5)

(1)

(2)

(3)

(4)

(5)

(1)

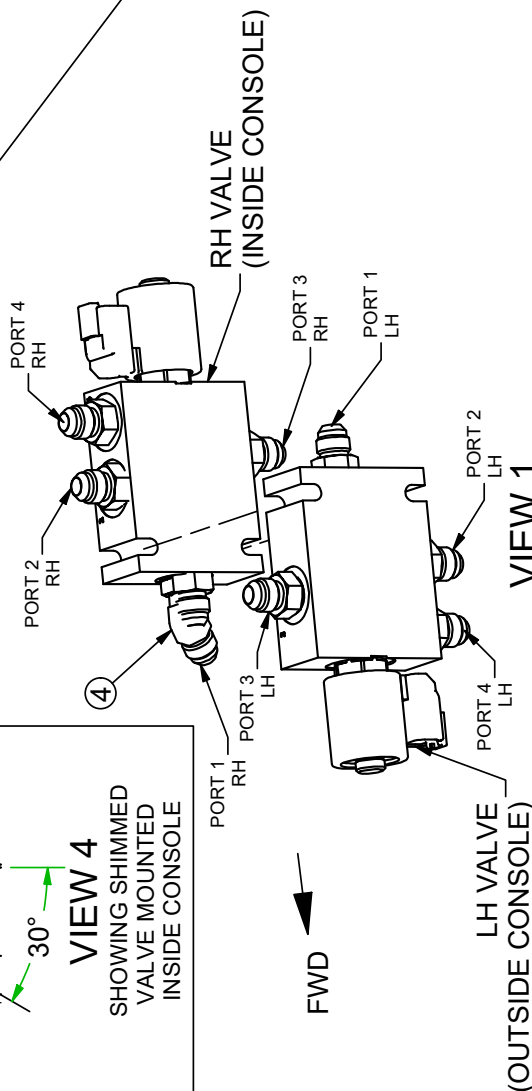
(2)

(3)

(4)

(5)

DETAIL 3



VIEW 1

323069 VALVE LAYOUT VIEW

VIEW 2

VIEW OF CONTROL PANEL

VIEW 3

VIEW 4

SHOWING SHIMMED VALVE MOUNTED INSIDE CONSOLE

30°

FWD

300094

REV: A

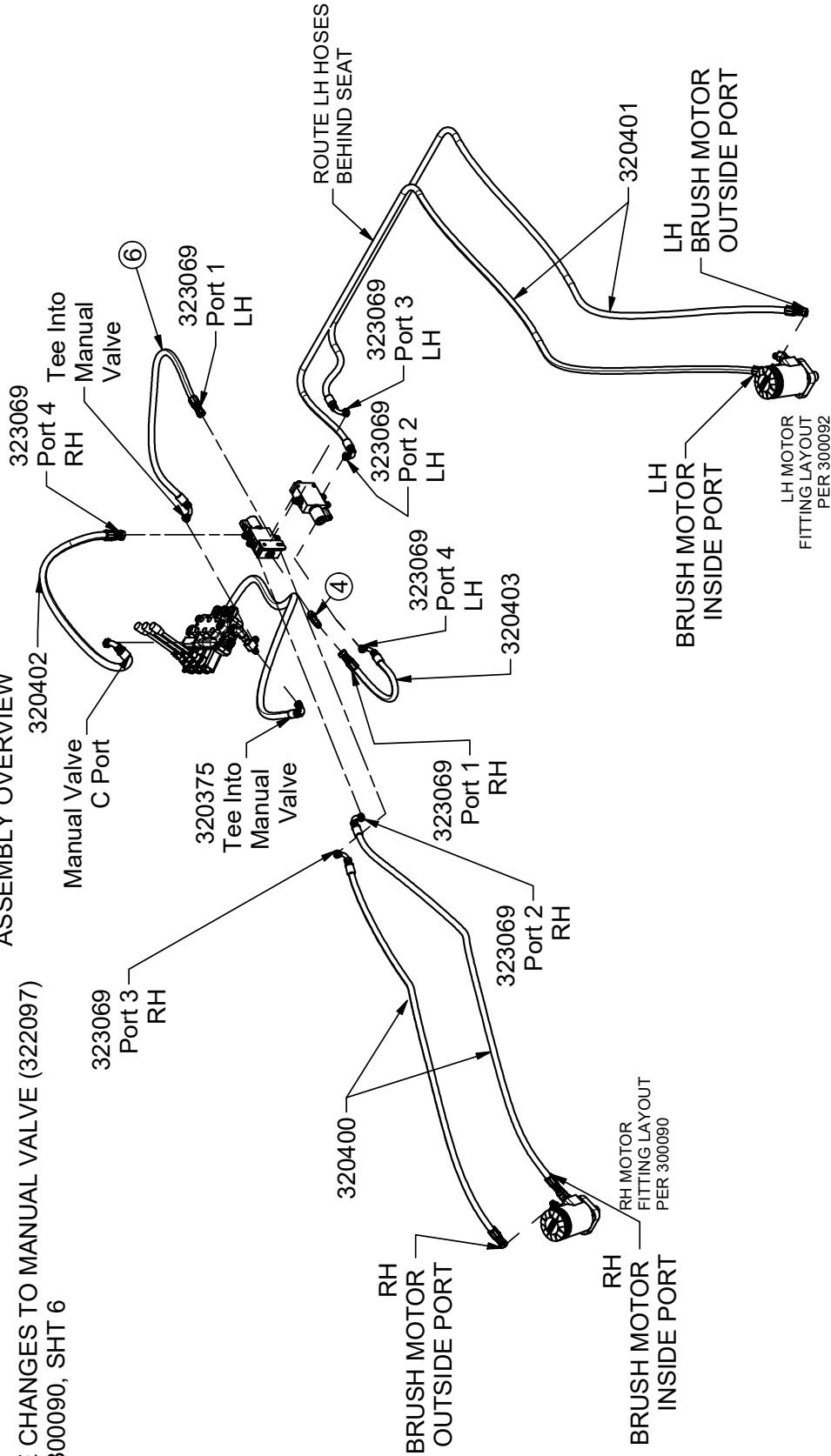
REV: A

300094

CURB BRUSH HYDRAULICS

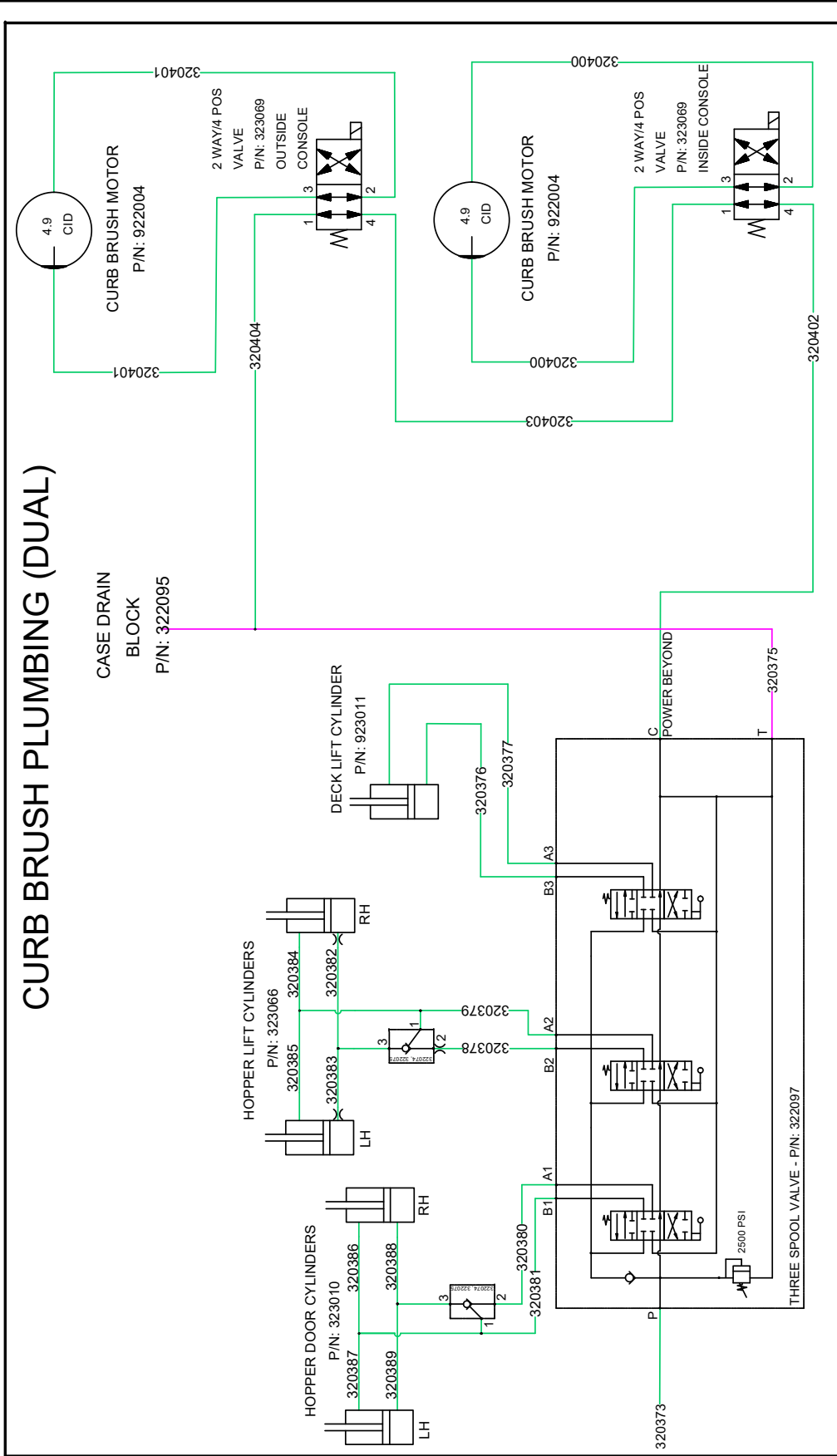
ASSEMBLY OVERVIEW

MAKE CHANGES TO MANUAL VALVE (322097)
PER 300090, SHT 6



300094
REV: A

CURB BRUSH PLUMBING (DUAL)



8-11-2022

CURB BRUSH SWITCH & ELECTRICAL INSTALLATION

To Install Wiring Harnesses (332070 & 332071):

1) Disconnect harness 332064 & 332063 at the 6 cavity Deutsch connector. This plug is located inside operator's console. It is the only 6 cavity Deutsch connector in the console. Connect harness 332064 and 332063 to the harnesses included with this kit (332070 & 332071)

2) Connect two, 2 cavity Deutsch, (Black Wire Only) to 2 of the 3 available accessory plugs (Harness 332064). These 2 cavity plugs should be located near the fuse block inside the console.

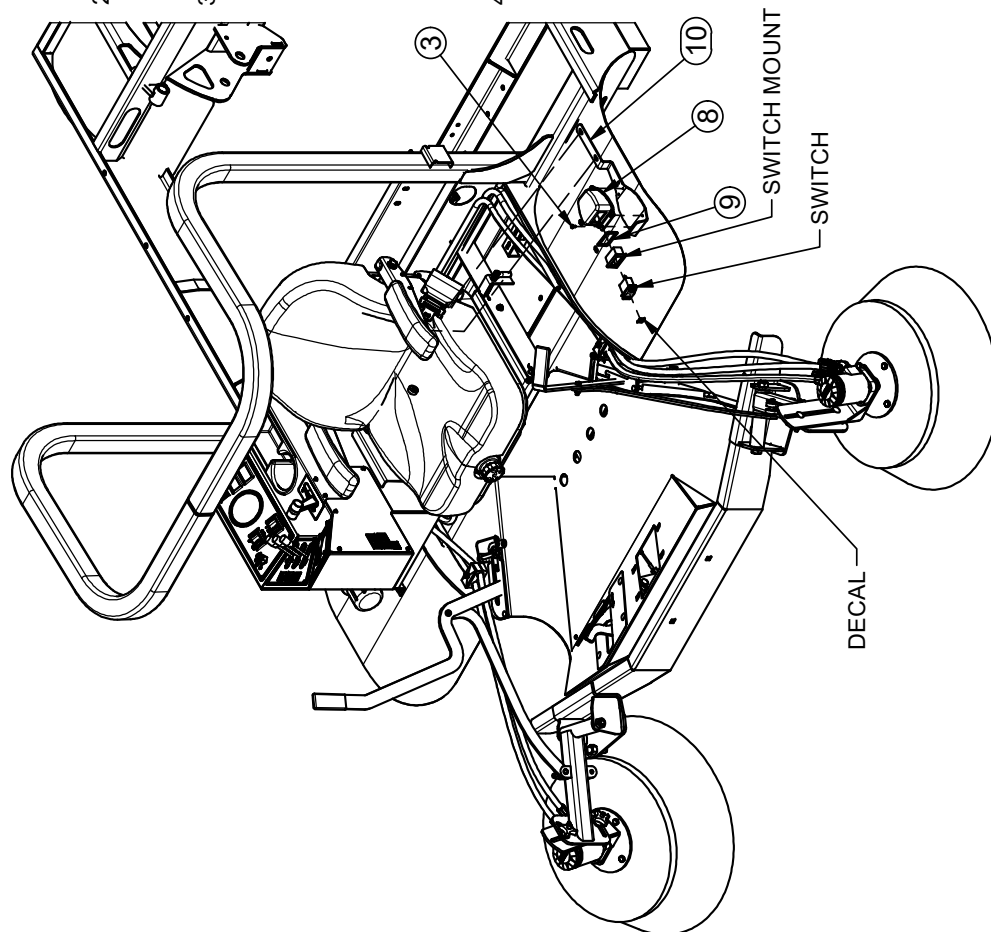
3) Remove the plastic plug(s) located on the console, insert the Packard 10 cavity switch (832005) into this cavity(s) and attach the wiring harness on the back side. 332070 to RH brush switch and 332071 to LH brush switch. (VIEW 1)

If no open socket is available for the LH switch, use the arm switch mount, provided with kit, to install LH switch on LH arm of operator's seat, as shown in VIEW 1.

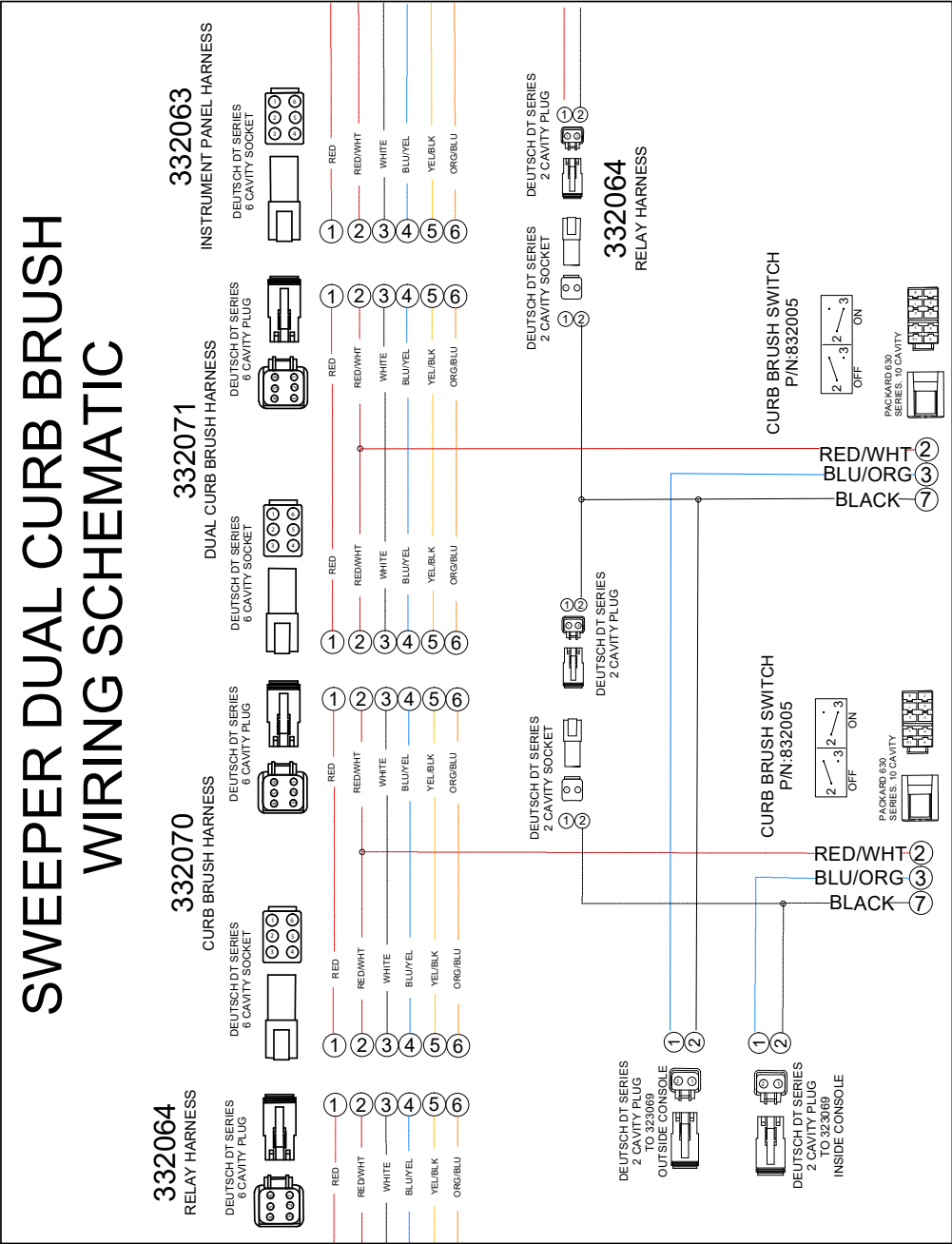
Note: route LH switch harness through seat back cover, to ensure harness is secure during seat movement

4) Connect 2 cavity Deutsch, Blu/Org & Blk, on 332070 harness to 332069 valve installed inside of console. Connect 2 cavity Deutsch, Blu/Org & Blk, on 332071 harness to 332069 valve installed outside of console.

wiring harness on next page for reference



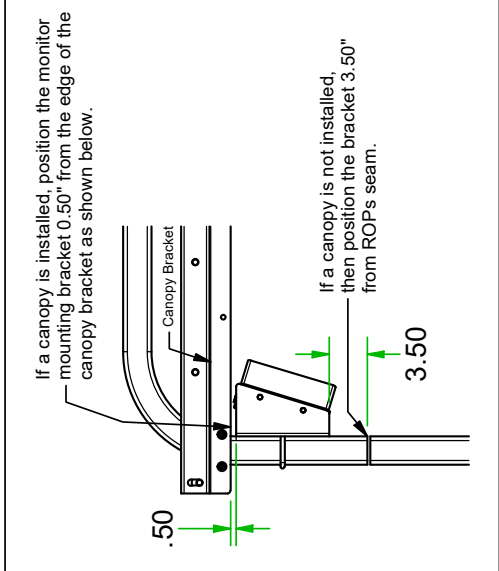
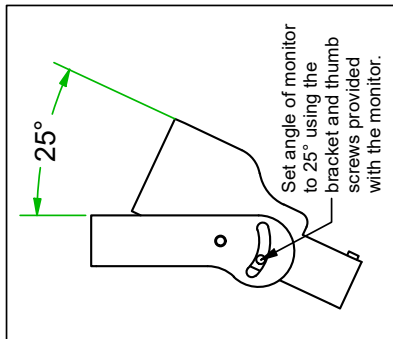
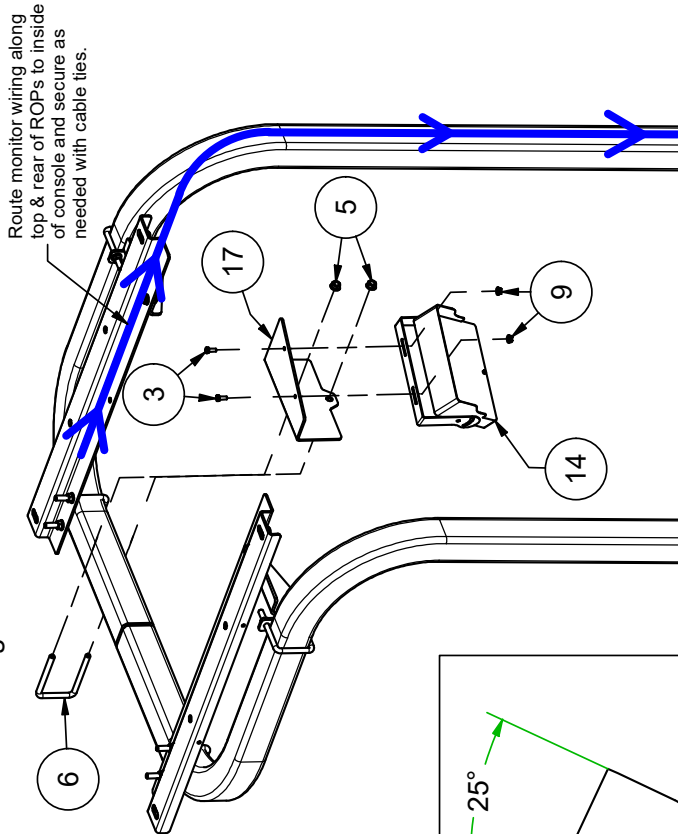
VIEW 1



1. Attach the monitor to the ROPs and route the monitor wiring as shown in the images below.

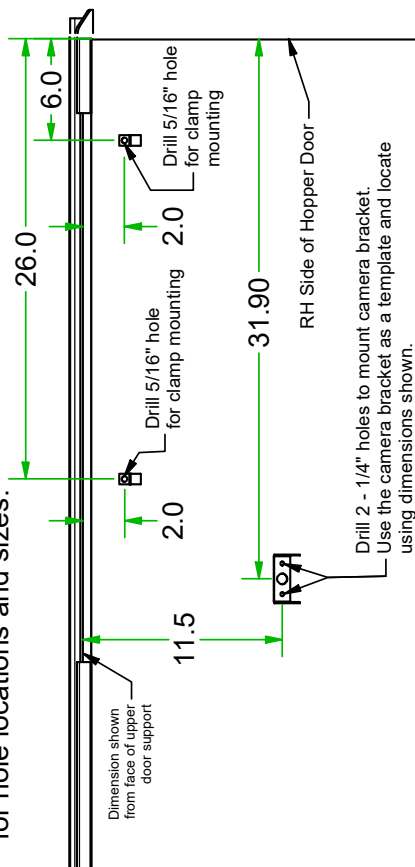
BACKUP CAMERA

FACTORY INSTALL P/N: 300096
CUSTOMER INSTALL: 300095

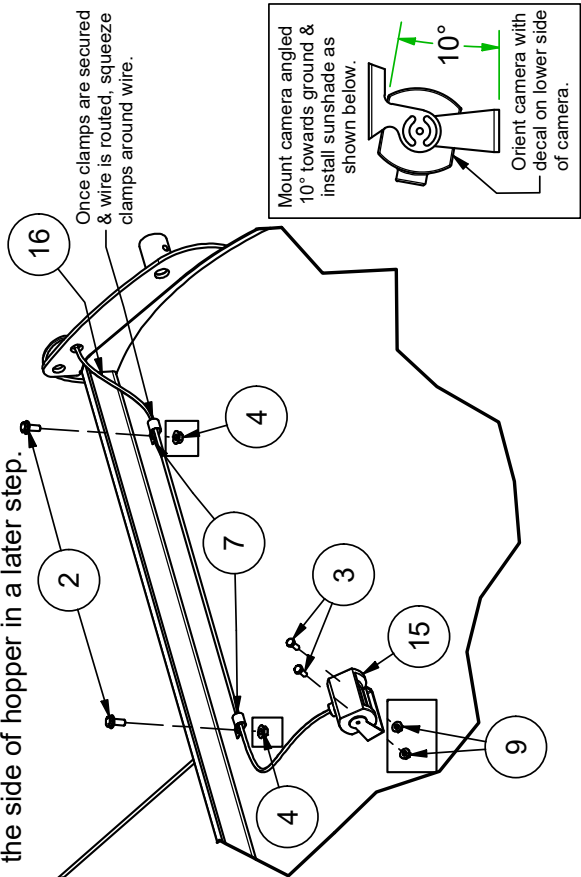


Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	20	100578	CABLE TIE 14" BLACK 50 Lb Tens
2	5	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
3	6	110484	BOLT, M6x1 x 16 Gr 10.9
4	2	110606	NUT, 5/16-18 WIZ FLANGE
5	2	110645	NUT, 3/8-16 WIZ FLANGE
6	1	111185	BOLT, SQUARE U, 3/8-16 x 2.50 x 4.0
7	11	111206	Clamp, 1/2" Open Cable, .344 Mounting Hole
8	1	111207	GROMMET, 3/16" ID X 5/8" OD X .063
			PANEL
9	6	112074	NUT, M6-1, FLANGE, GR. 8.8, ZINC
10	15 ft	130014	LOOM, 3/8 FLEX GUARD
11	1	130047	CONNECTOR, 2 CAVITY, DEUTSCH DT (DT-04-2P)
12	1	130048	SECONDARY LOCK, DEUTSCH DT (W2P)
13	2	132096	Terminal, Solid Pin, 18-16 Deutsch
14	1	302076	MONITOR, BACKUP CAMERA
15	2	302077	CAMERA, BACKUP
16	2	302109	CABLE, BACKUP CAMERA, 21'
17	1	317456	BRKT, MONITOR MOUNTING

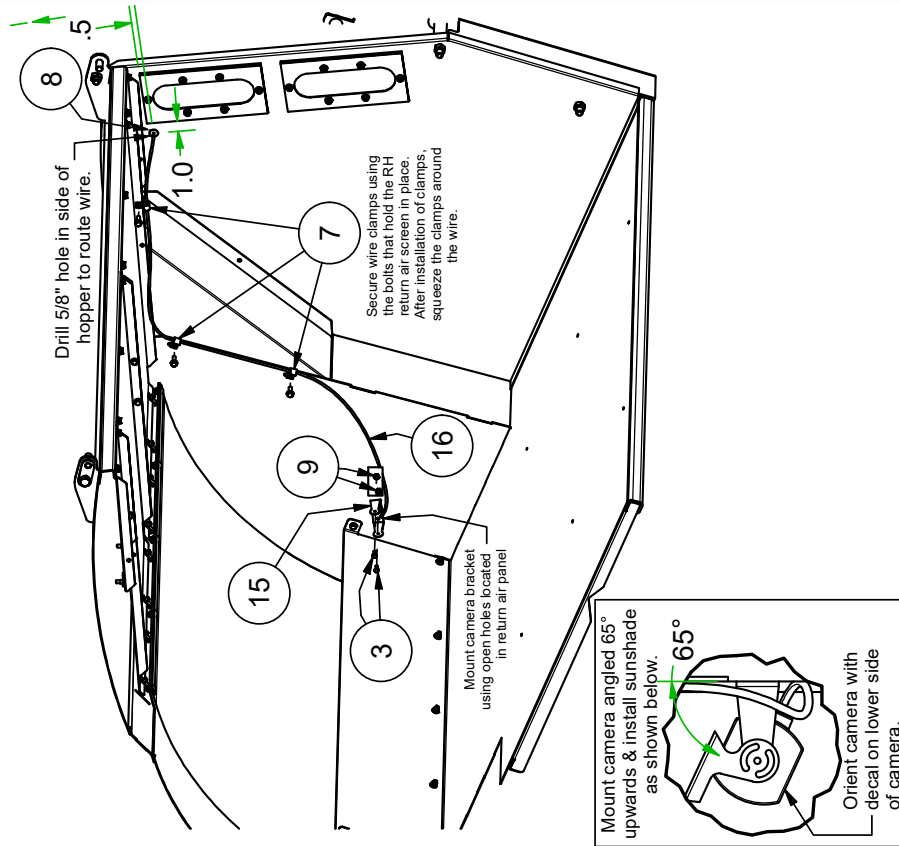
2. Drill holes into the top of the hopper door to mount the backup camera and the clamps to secure the wiring. See diagram below for hole locations and sizes.



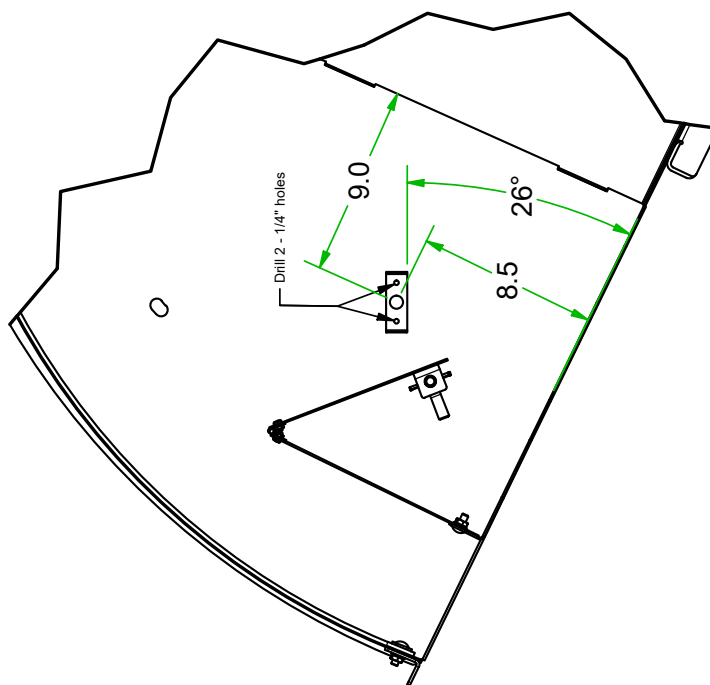
3. Attach camera to hopper door, route wire, and secure wire using the hardware shown in the diagram. Route wire through hole on RH side of hopper door. The wire will be secured on the side of hopper in a later step.



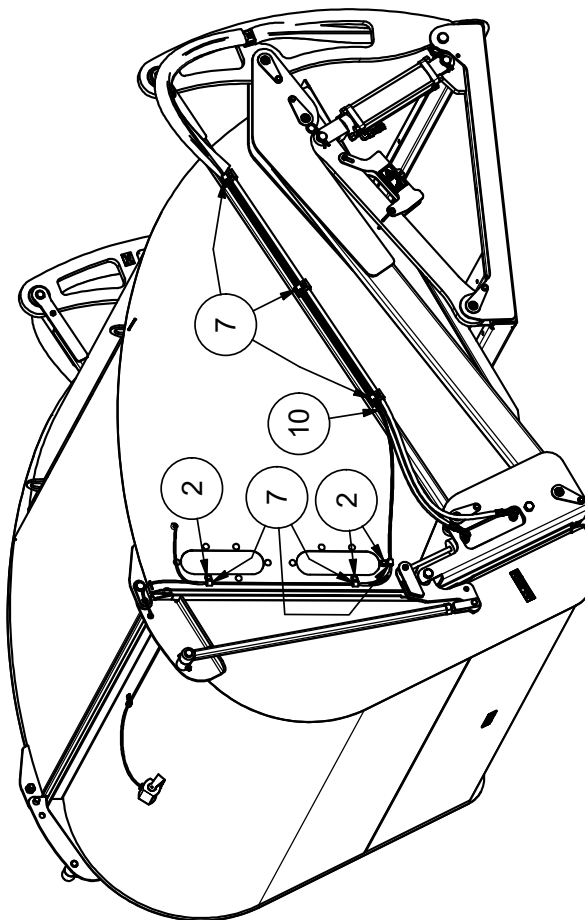
4a. Next, install the second camera on the inside of the hopper. This camera is used to show when the hopper is full. If the machine serial number is 22A10 or greater, then install as shown in the diagram below. If serial number is prior to 22A10, proceed to 4b for camera mounting.



4b. For machines with serial number prior to 22A10, place the debris door in the down position. The door will be remain in the down position after the installation of the camera. It is unnecessary for it to be in the up position. Place the camera mounting bracket at the following location and mark the two bolt holes. Then drill 2 - 1/4" holes for mounting bracket. Refer to 4a for attaching camera and routing wire.



5. Install remaining wire clamps at the locations identified below. Remove carriage bolts on side of hopper arm and replace with the 110444 bolts. To attach the clamps on the upper arm, use the hardware installed. Route the two camera wires at the clamp locations and then through the engine compartment to below the console. Combine the two camera wires and place into 130014 corrugated loom where routed together. Secure wires in clamps located on the hopper by squeezing the clamps around the wires. Then raise the hopper to ensure that enough slack is left in the wires for the rotation of the hopper when in the UP position. When in the UP position, secure the camera wires to the hopper arm by squeezing the clamps and using cable ties as needed. Also secure the wires through the engine compartment using cable ties.

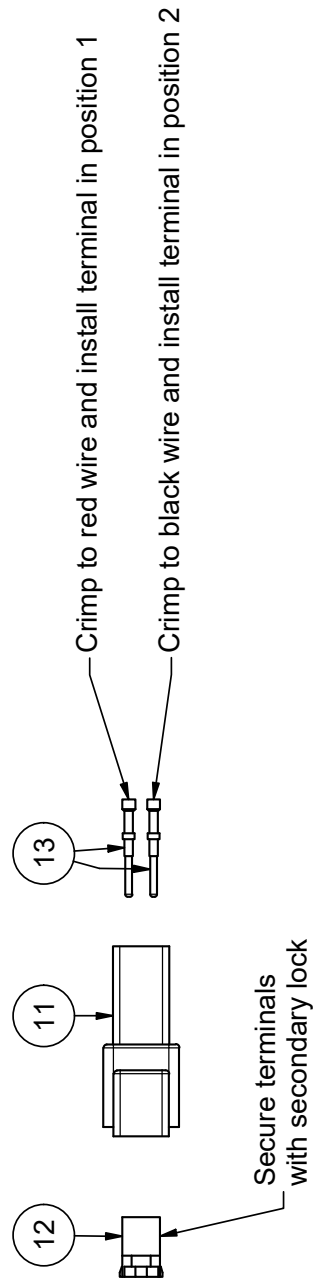


300095

REV: NC

6. Now that all wires are routed below the console, the wires can be connected. Connect the camera wire installed on the hopper door to the monitor harness connector labeled "CAM1." Then, connect the camera wire installed inside the hopper to the monitor harness labeled "CAM2." Next, install the connector and terminals to the red (power) and black (ground) wires on the monitor harness. This connector can then be plugged into 1 of the 3 open mating connectors located below the console. This will power up the backup camera system when the key is turned on. Secure all wires using the remaining cable ties.

***If 3 attachments are already installed on the machine, then an additional harness can be added to the machine to add additional connectors to supply power. The part number for this harness is 332072.

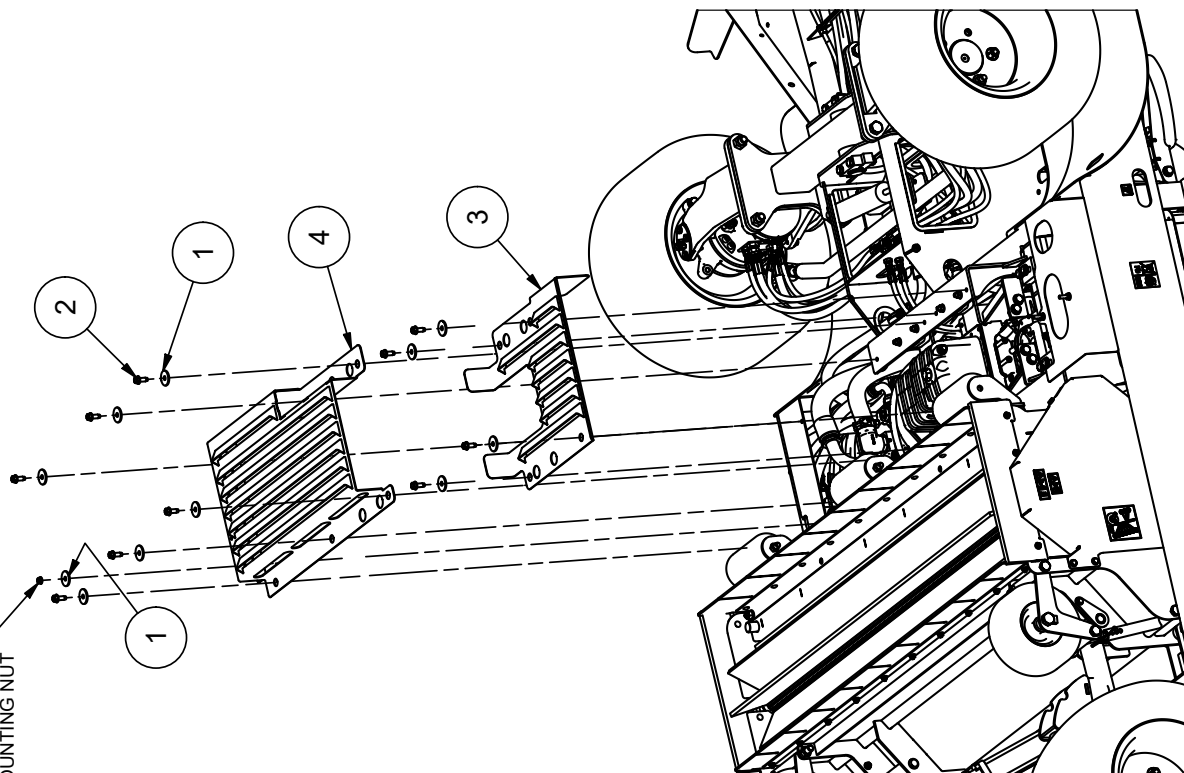


7. Turn ON monitor to verify that both cameras are working properly. Adjust camera angles as needed for the best view.

ENGINE AIR DEFLECTOR KIT INSTALLATION

MOUNTING INSTRUCTIONS ON PAGE 2

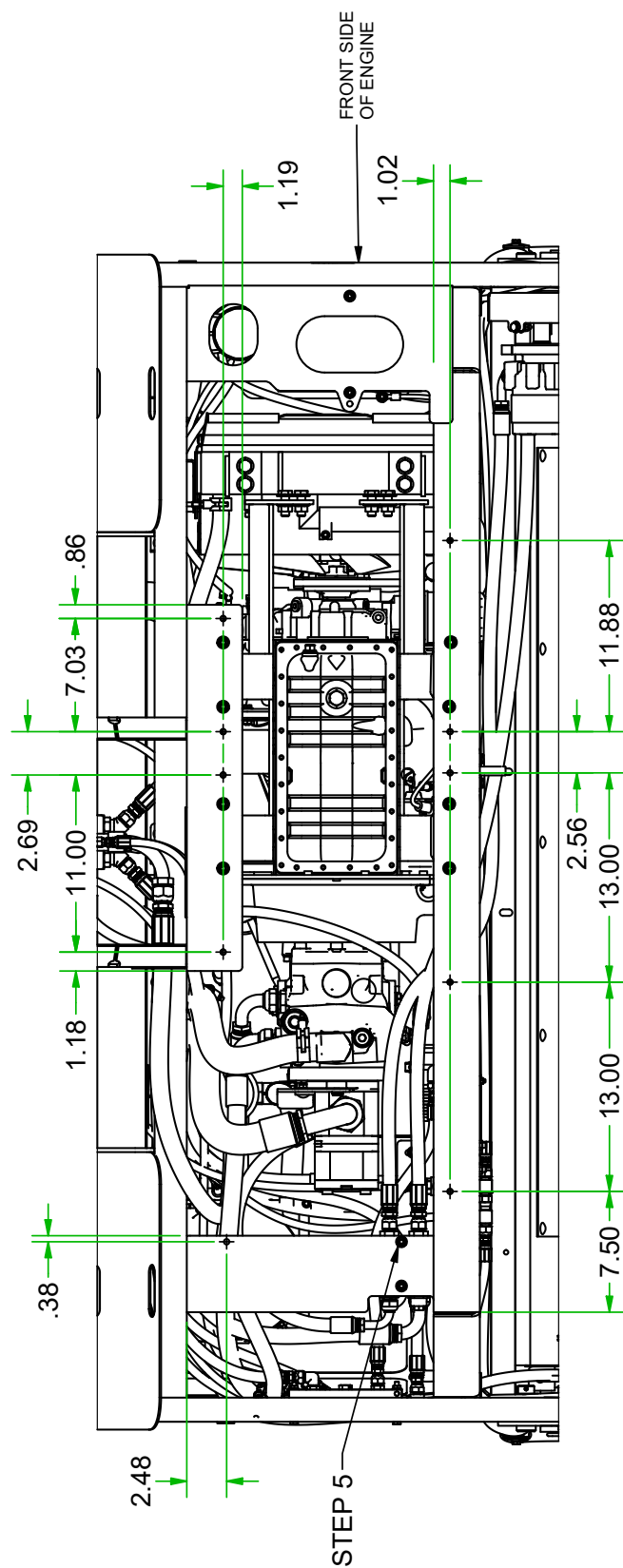
USE EXISTING DECK
VALVE MOUNTING NUT



Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	11	111186	WASHER, 1.50 x .406 x .125, FLAT
2	10	111269	BOLT, 3/8-16 X 1.0, THREAD CUT, WIZ FLNG, ZINC
3	1	315474	WELDMENT, FRONT ENGINE AIR DEFLECTOR
4	1	315475	WELDMENT, REAR ENGINE FAN DEFLECTOR

ENGINE AIR DEFLECTOR SHIELDS MOUNTING INSTRUCTIONS

1. FOR MACHINE SERIAL NUMBERS BEFORE 25A25, MARK THE 10 LOCATIONS BELOW. FOR SERIAL NUMBERS 25A25+, SKIP TO STEP 4
2. MOCK UP FITMENT OF DEFLECTOR SHIELDS TO CHECK HOLE LOCATIONS ARE CORRECT.
3. USING A DRILL BIT SIZE R (0.339"), DRILL HOLES AT THE 10 MARKED LOCATIONS.



4. USING THE SUPPLIED THREAD CUTTING SCREWS (111269), USE AN IMPACT DRIVER TO PRE THREAD THE 10 HOLES IN THE FRAME.
5. REMOVE THE INSIDE DECK VALVE MOUNTING NUT, AND THE THREAD CUTTING SCREWS.
6. INSTALL THE TWO SHIELDS AT THE 11 MOUNTING LOCATIONS USING THE SUPPLIED HARDWARE. REUSE THE NUT.
7. CHECK FOR HYDRAULIC HOSE CLEARANCE SO THAT NO HOSES ARE RUBBING THE SHIELD.
8. START ENGINE AND CHECK FOR EXCESSIVE SHIELD VIBRATION AND REPOSITION AS NECESSARY.

NOTES

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