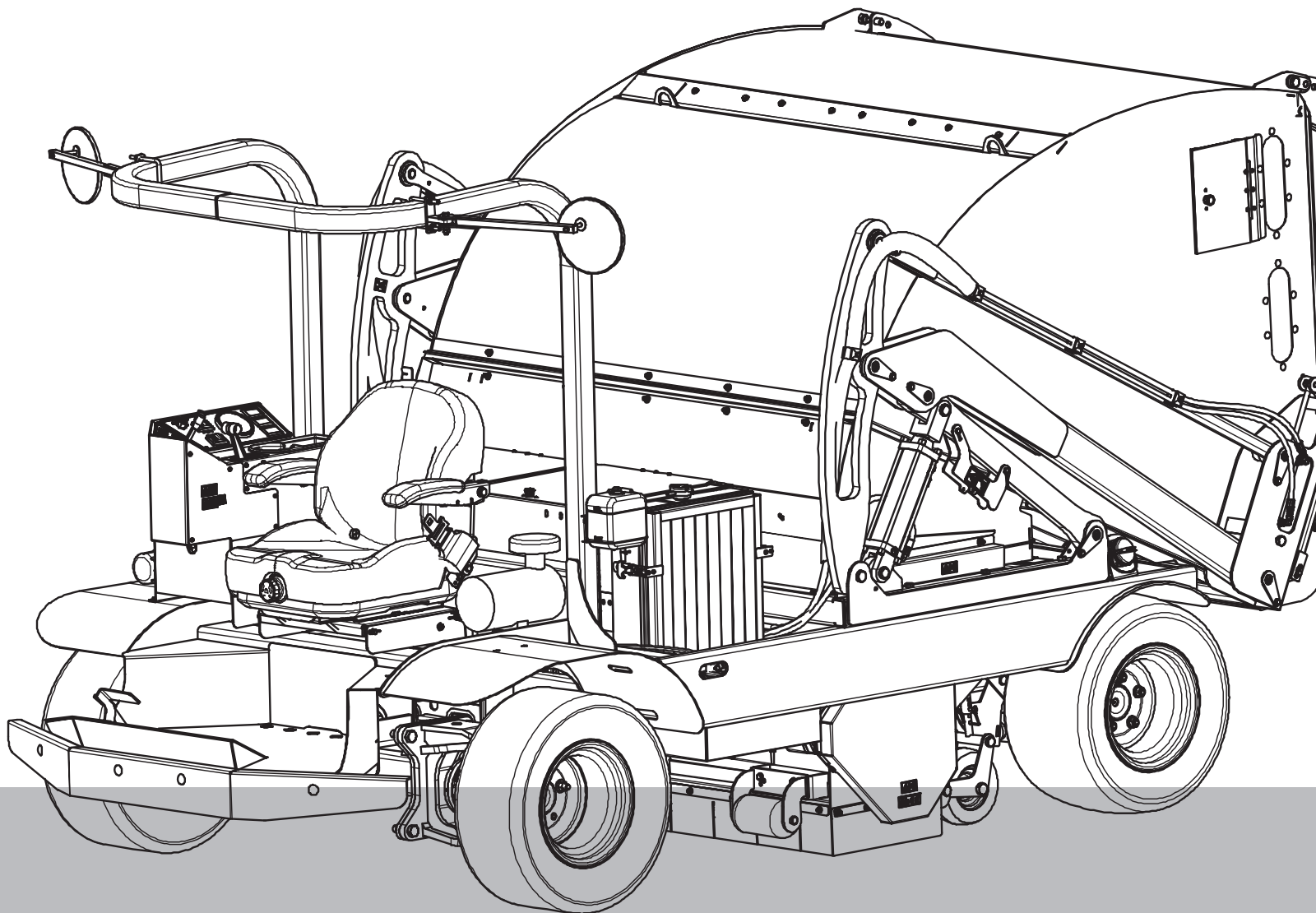


HK 4400

Serial Number: 22A10 +
Part # 301011



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 HK4400 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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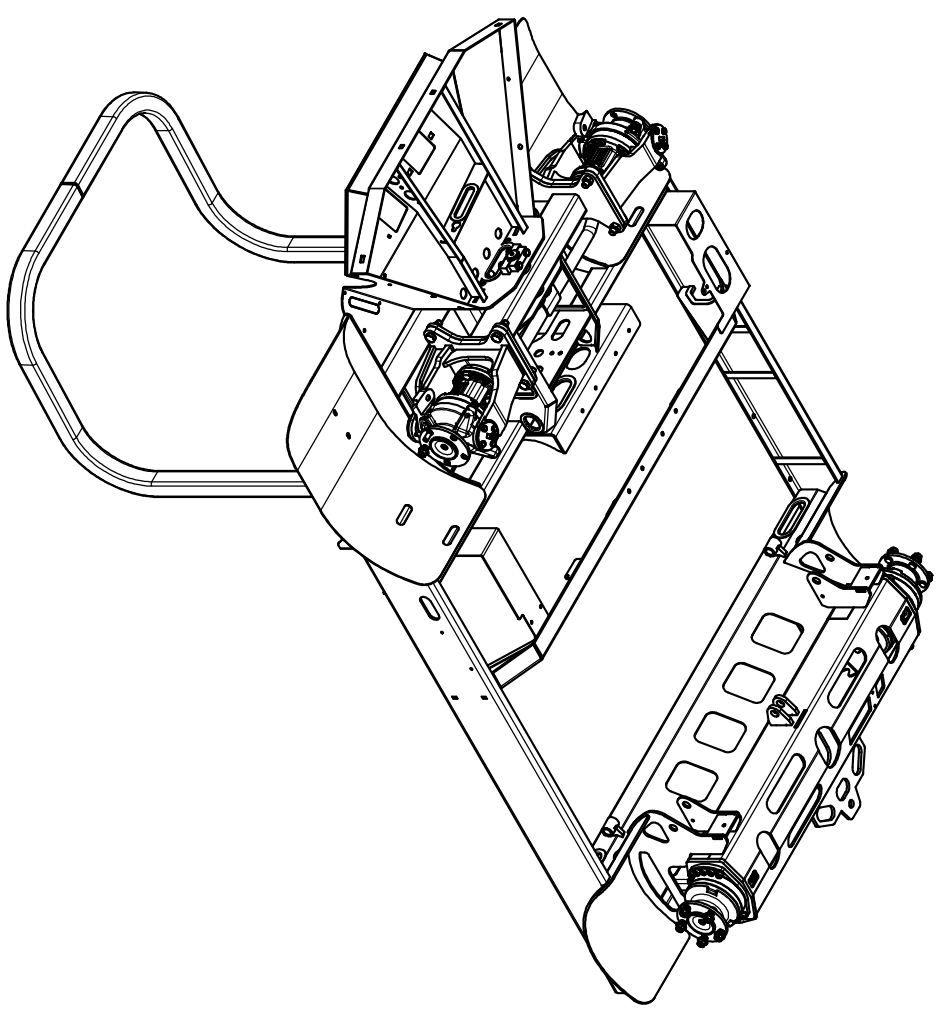
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WHEEL MOTOR & AXLE INSTALLATION

Parts List		
ITEM	QTY	PART # DESCRIPTION
1	10'	100365 MOLDING - EDGE GUARD, 5/32
2	1	102136 Clevis Pin, 5/8 x 1.5
3	2	110053 Hex Nut M12 X 1.75 Thd
4	4	110129 BOLT, 1/2-13 X 2.75 HEX
5	20	110244 BOLT, 1/2-13 X 1.5 SHCS
6	2	110347 BOLT, M12x1.75 x 25 Gr 10.9
7	8	110454 BOLT, 3/4-10 X 2.5
8	1	110600 NUT, 5/16-18, UNITORQUE LOCK
9	4	110610 NUT, 1/2-13
10	8	110625 NUT, 3/4-10, UNITORQUE LOCK
11	1	110665 WASHER, 5/16" FLAT STANDARD
12	24	110666 WASHER, 1/2" LOCK
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	13'	112084 Rubber Seal, .625 X .25
17	2	120235 ADAPTER, 4MJ-4MB90
18	10	120249 ADAPTER, 4MJ-6MB
19	8	120446 ADAPTER, 8MJ-10MB
20	2	120732 ADAPTER, 4MJ-6MB 45
21	1	200029 COTTER PIN, 5/32 X 1
22	2	302129 NUT, 7/8-18 HEX JAM GR 2
23	2	311459 KEEPER - AXLE PIVOT, LOWER
24	2	312032 Tie Rod End, RH
25	1	315338 WELDMENT, FRONT AXLE
26	1	315350 FRAME WELDMENT, SWEEPER
27	1	315367 WELDMENT, ROUND STEERING LINK
28	1	317174 PIN, FRONT AXLE
29	1	323010 CYLINDER - STEERING, 1-3/4 X 6
30	1	323055 MOTOR, LH FRONT WHEEL, 24.3 CI, 2-SPD
31	1	323056 MOTOR, RH FRONT WHEEL, 24.3 CI, 2-SPD
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	1	510174 GREASE ZERK, 1/4-28 ST

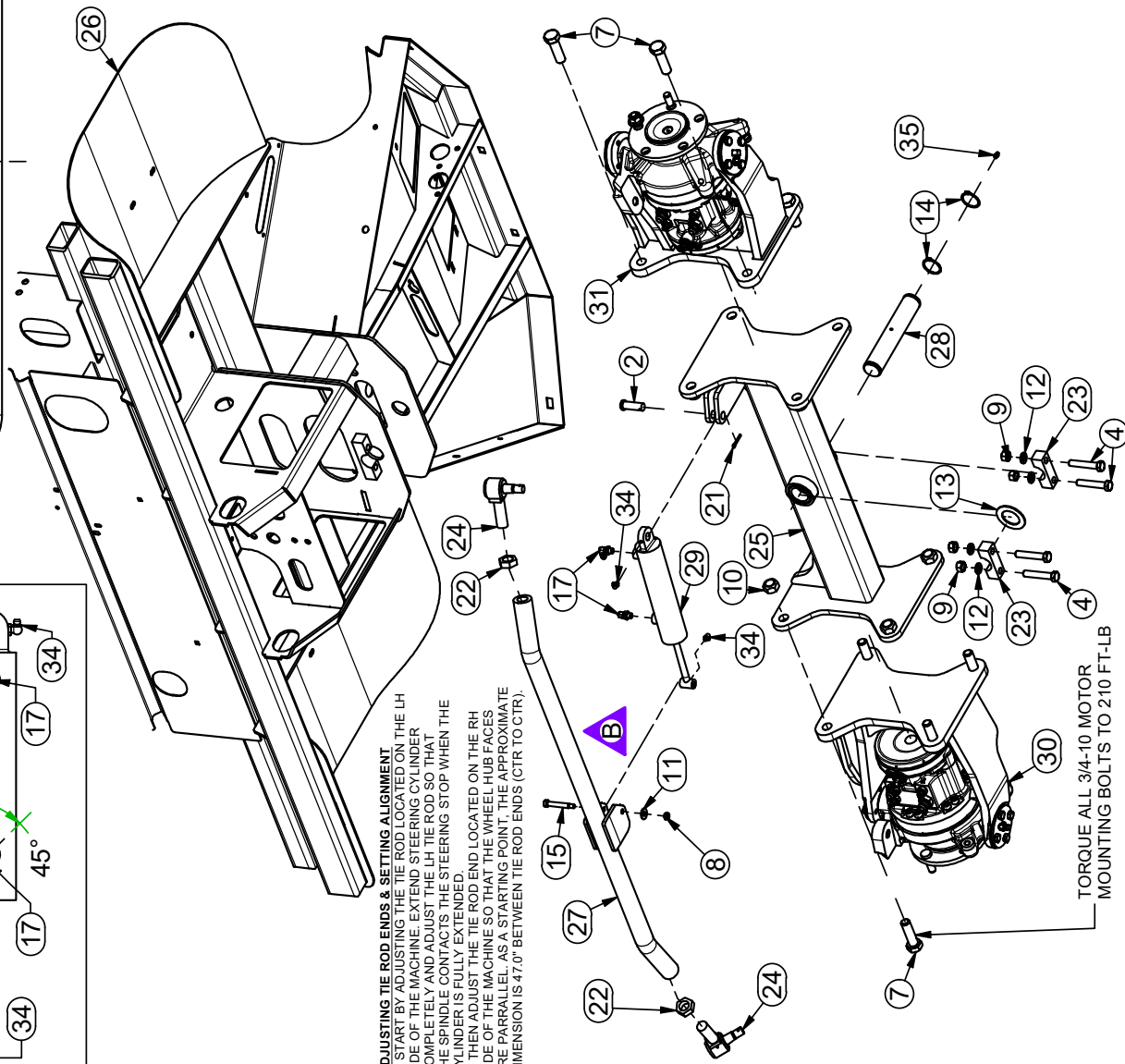
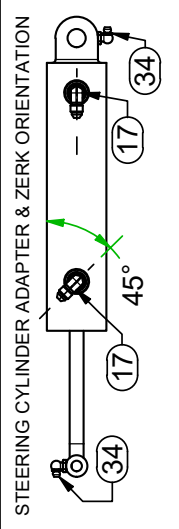


10-27-2021

305081 REV: C

FRONT AXLE INSTALLATION

LEFT STEERING BAR ORIENTATION RIGHT



ADJUSTING TIE ROD ENDS & SETTING ALIGNMENT
1. START BY ADJUSTING THE TIE ROD LOCATED ON THE LH SIDE OF THE MACHINE. EXTEND STEERING CYLINDER COMPLETELY AND ADJUST THE LH 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 RH SIDE OF THE MACHINE SO THAT THE WHEEL HUB FACES ARE PARALLEL AS A STARTING POINT. THE APPROXIMATE DIMENSION IS 47.0" BETWEEN TIE ROD ENDS (CTR TO CTR).

Parts List			DESCRIPTION
ITEM	QTY	PART #	
2	1	102136	Clevis Pin, 5/8 x 1.5
3	2	110053	Hex Nut M12 X 1.75 Thd
4	4	110129	BOLT, 1/2-13 X 2.75 HEX
6	2	110347	BOLT, M12X1.75 x 25 Gr 10.9
7	8	110454	BOLT, 3/4-10 X 2.5
8	1	110600	NUT, 5/16-18, UNITORQUE LOCK
9	4	110610	NUT, 1/2-13
10	8	110625	NUT, 3/4-10, UNITORQUE LOCK
11	1	110665	WASHER, 5/16" FLAT STANDARD
12	24	110666	WASHER, 1/2" LOCK
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
17	2	120235	ADAPTER, 4MJ-4MB90
18	10	120249	ADAPTER, 4MJ-6MB
19	8	120446	ADAPTER, 8MJ-10MB
20	2	120732	ADAPTER, 4MJ-6MB 45
21	1	200029	COTTER PIN, 5/32 X 1
22	2	302129	NUT, 7/8-18 HEX JAM GR 2
23	2	311459	KEEPER - AXLE PIVOT, LOWER
24	2	312032	Tie Rod End, RH
25	1	315338	WELDMENT, FRONT AXLE
26	1	315350	FRAME WELDMENT, SWEEPER
27	1	315367	WELDMENT, ROUND STEERING LINK
28	1	317174	PIN, FRONT AXLE
29	1	323010	CYLINDER - STEERING, 1-3/4 X 6
30	1	323055	MOTOR, LH FRONT WHEEL, 24.3 CI, 2-SPD
31	1	323056	MOTOR, RH FRONT WHEEL, 24.3 CI, 2-SPD
34	2	500230	GREASE ZERK, 1/4-28 90deg
35	1	510174	GREASE ZERK, 1/4-28 ST

10-27-2021

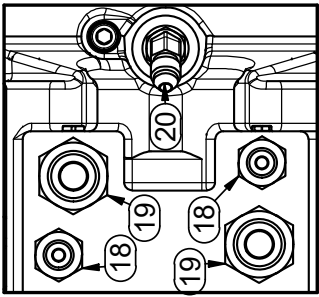
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WHEEL MOTOR INSTALLATION

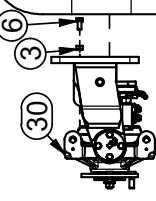
Front Left Wheel Motor:

Model Code: MGE02-2-**G**1A-W10-A121-Y8JM



Steering Stop Bolts - Tighten jam nut so that it is against head of bolt.

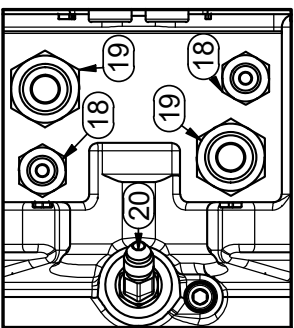
(.69) → 110347 → 110053



Steering Stop

Front Right Wheel Motor:

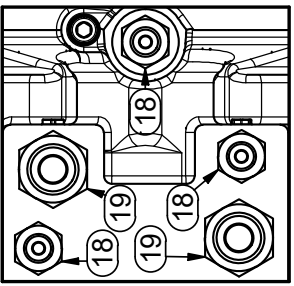
Model Code: MGE02-2-**D**1A-W20-C121-Y8JM



ITEM		QTY	PART #	DESCRIPTION
3	2	110053	Hex Nut M12 X 1.75 Thd	
5	20	110244	BOLT, 1/2-13 X 1.5 SHCS	
6	2	110347	BOLT, M12x1.75 x 25 Gr 10.9	
18	10	120249	ADAPTER, 4MJ-6MB	
19	8	120446	ADAPTER, 8MJ-10MB	
20	2	120732	ADAPTER, 4MJ-6MB 45	
21	1	200029	COTTER PIN, 5/32 X 1	
30	1	323055	MOTOR, LH FRONT WHEEL, 24.3 CI, 2-SPD	
31	1	323056	MOTOR, RH FRONT WHEEL, 24.3 CI, 2-SPD	
32	1	323057	MOTOR, LH REAR WHEEL, 24.3 CI, 2-SPD	
33	1	323058	MOTOR, RH REAR WHEEL, 24.3 CI, 2-SPD	

Left Rear Wheel Motor:

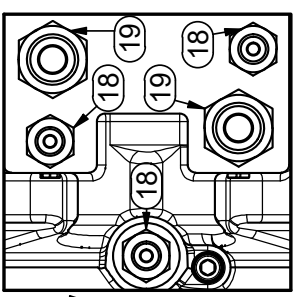
Model Code: MSE02-2-**G**2A-F03-1120-Y8JM



APPLY BLUE LOCTITE TORQUE TO 75 ft-lb

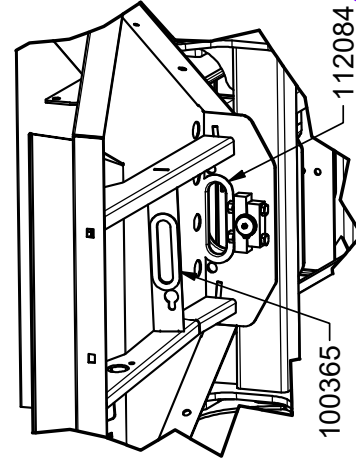
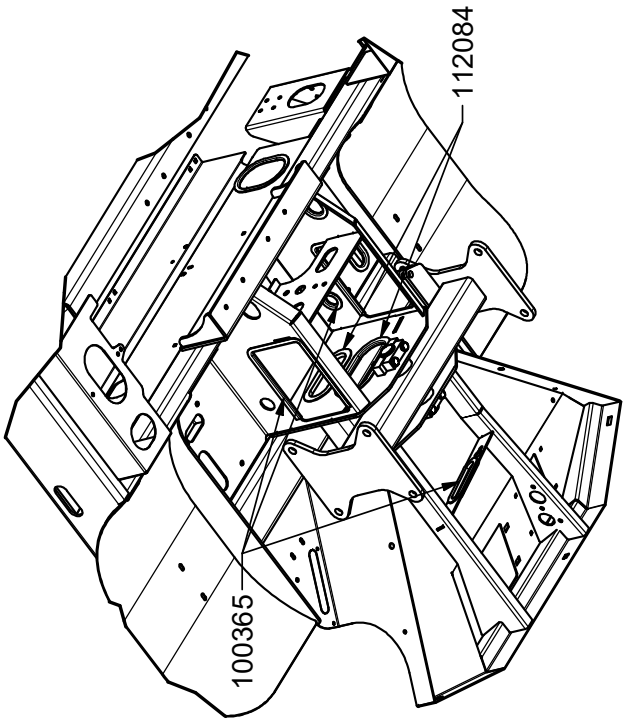
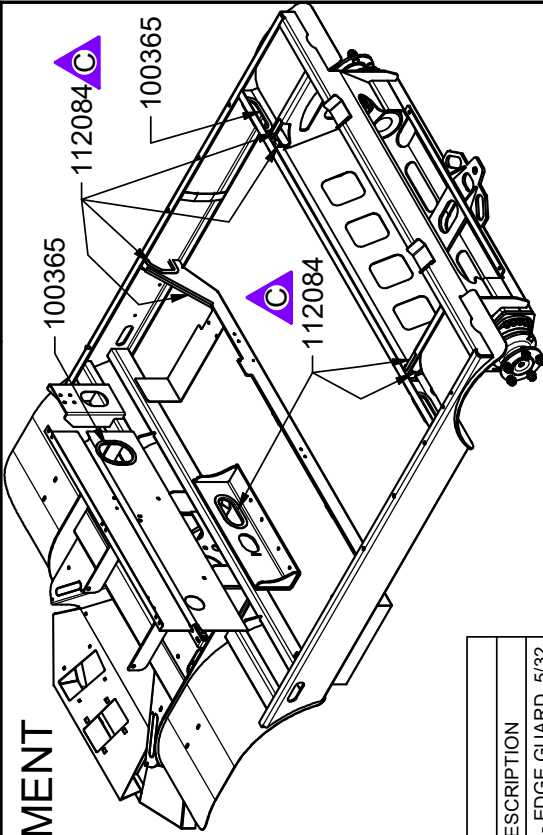
Right Rear Wheel Motor:

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



APPLY BLUE LOCTITE TORQUE TO 75 ft-lb

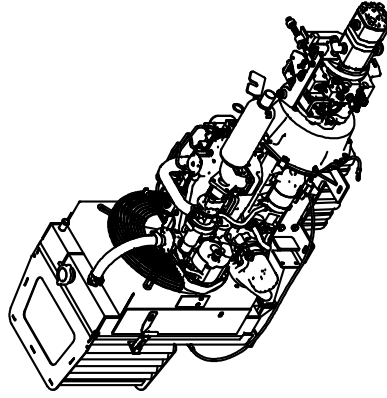
EDGE TRIM PLACEMENT



Parts List			DESCRIPTION
ITEM	QTY	PART #	
1	10'	100365	MOLDING - EDGE GUARD, 5/32
16	13'	112084	Rubber Seal, .625 X .25

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

Parts List				Parts List			
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION
1	1	102074	Clamp, Adel .75w x 1.25id x .406 Hole	33	1	120319	ADAPTER, 6MJ-6MB
2	4	110001	BOLT, 1/2-13 X 1.25, WIZ FLANGE	34	1	120546	ADAPTER, 20BH-16MB90
3	2	110020	Bolt, 5/16-18 X 0.75 in Carriage	35	1	120705	STEP AP203
4	6	110069	WASHER, 5/16" FLAT SAE	36	1	120740	Adapter, 20mj-12mb
5	3	110074	Hex Nut M6 X 1.0 Thd	37	1	120754	Adapter, 6fx-6mj, -4fb Gage Port
6	1	110141	NUT, M8 X 1.25 WIZFLANGE	38	2	132014	INSULATOR CAP, (ALTERNATOR)
7	2	110155	WASHER, 3/8" FLAT SAE	39	1	132092	FUSE COVER, BUSS CFCOVER-1R
8	2	110176	BOLT, M10x1.5 x 35 SHCS	40	1	132093	FUSE HOLDER, BUSS CFBAR1-M8XSP
9	4	110220	BOLT, 1/2-13 X 1, WIZ FLANGE	41	1	132150	FUSE, 50 AMP
10	1	110300	COTTER PIN, 3/32 X 0.75	42	1	302161	COLLAR, TAPERED SPRING TENSIONER
11	2	110419	BOLT, 1/2-13 X 1.75	43	1	302162	COLLAR, SPRING TENSIONER
12	2	110422	BOLT, 5/16-18 X .75	44	1	305112	ASSY, RADIATOR SCREEN
13	1	110459	BOLT, 5/16-18 X 1, WIZ FLANGE	45	1	315186	Weldment, Kubota Throttle Mnt
14	5	110469	BOLT, M8x1.25 x 20 Gr 10.9	46	1	315379	WELDMENT, RADIATOR MOUNT
15	9	110560	BOLT, M10-1.25 X 20 HHCS 8.8 PLAIN	47	1	315417	WELDMENT, NEUTRAL CENTERING
16	4	110588	NUT, 1/2-13 WIZ FLANGE	48	2	317301	CATCH, LATCH
17	3	110606	NUT, 5/16-18 WIZ FLANGE	49	1	317303	BRKT, NEUTRAL SAFETY SW
18	3	110623	NUT, 5/16-24	50	1	317304	LEVER, PROPULSION PUMP
19	2	110666	WASHER, 1/2" LOCK	51	1	317305	BRKT, PUSH/PULL CABLE
20	7	110674	WASHER, 5/16" LOCK	52	1	317316	BOLT, NEUTRAL CENTERING PIVOT
21	11	110689	Washer, M10, Lock	53	1	317421	BRKT, NEUTRAL SPRING
22	2	110692	WASHER, 6mm LOCK	54	1	323054	Pump, PM30 Propulsion, 1.53 CI / .49 CI Charge
23	1	110728	CLAMP, ADEL DOUBLE .75WX.5IDX.406HOLE	55	1	323063	PUMP, DOUBLE GEAR 1.16 / .24 CI
24	2	110931	BOLT, M6x1 x 25 Gr 8.8	56	1	332004	Sender, Water, 3/8 Npt
25	1	111196	Connecting Rod, 5/16-24 X 5/16-24 X 6.0, ZINC	57	1	332066	SWITCH, 221 F TEMP, 6MP, N.O. RISING
26	1	111197	Spring, Compression 5.12 L X .54 OD X .049 Wire	58	1	342011	ADAPTER - PUMP, KUBOTA 1505, KIT
27	4	112101	CLAMP, 1.50", T-BOLT	59	1	342067	MANIFOLD, TOP OUTLET EXHAUST
28	1	120144	ADAPTER, 6MJ-10MB	60	2	540079	BEARING, BALL, 1620RS
29	1	120224	ADAPTER, 10MJ-10MB90	61	1	550046	CLEVIS, 5/16-24 X 1.5
30	2	120249	ADAPTER, 4MJ-6MB	62	1	550048	CLEVIS PIN, 5/16"
31	1	120254	ADAPTER, 12MJ-12MB	63	1	801002	HOSE, UPPER RADIATOR
32	2	120256	ADAPTER, 12MJ-16MB	64	1	801003	HOSE, LOWER RADIATOR



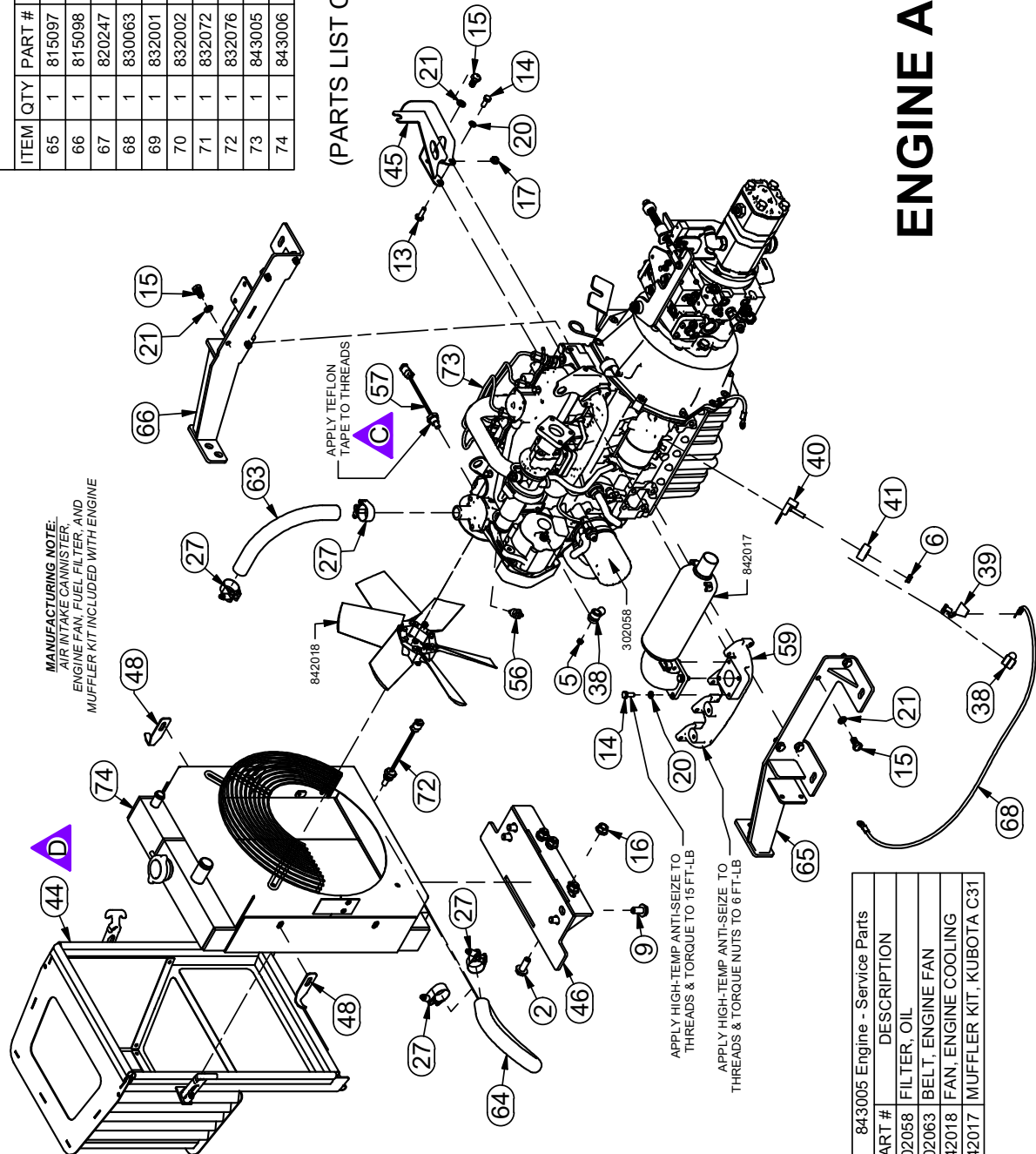
ENGINE ASSEMBLY

(PARTS LIST CONTINUED
ON PAGE 2)

6-24-2021

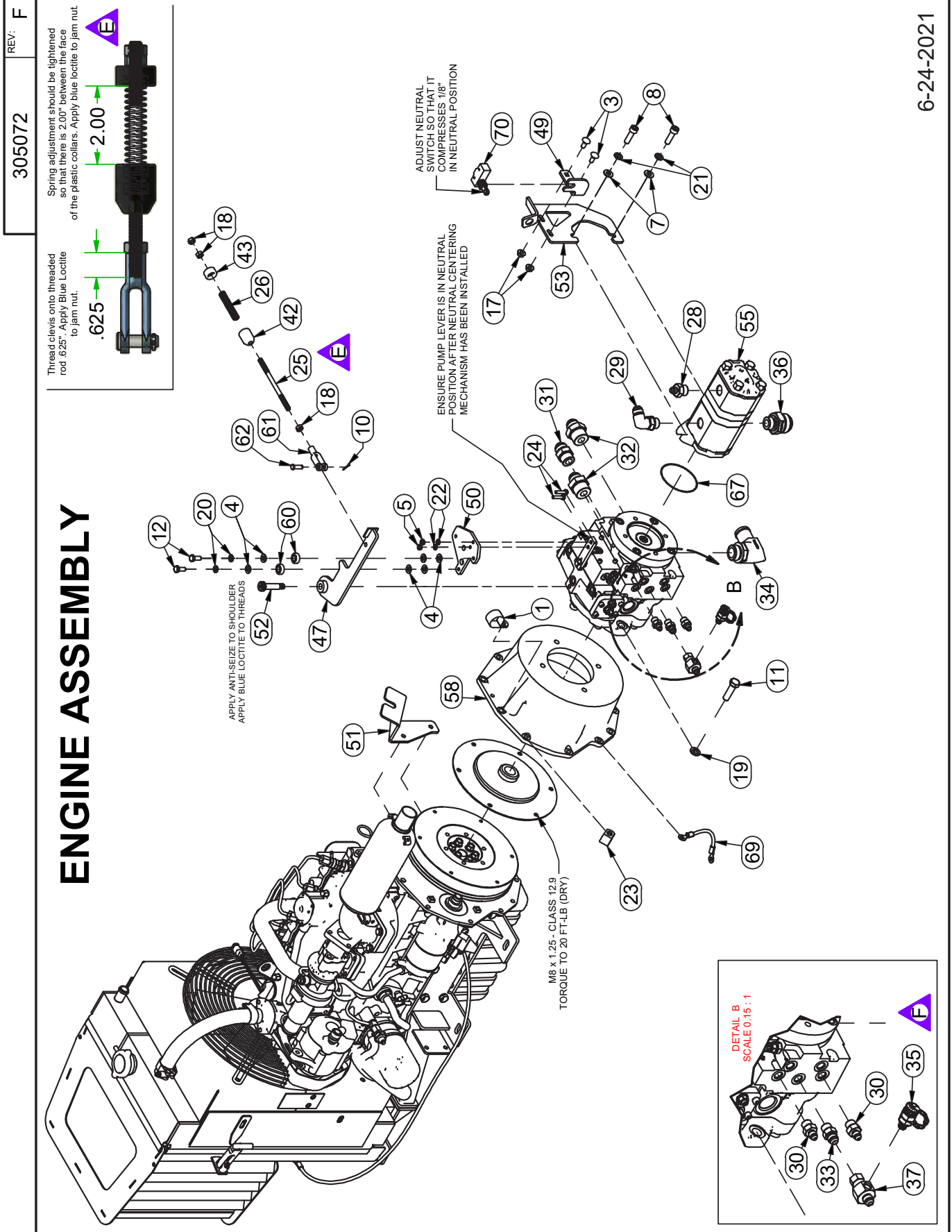
Parts List		
ITEM	QTY	PART # DESCRIPTION
65	1	815097 WELDMENT, LH ENG/RAD MOUNT
66	1	815098 WELDMENT, RH ENG/RAD MOUNT
67	1	820247 O'RING 2-042 1/16" BUNA
68	1	830063 CABLE, POSITIVE BATTERY
69	1	832001 CABLE, GROUND
70	1	832002 SWITCH ROLLER PLUNGER
71	1	832072 HARNESS, 72LC ENGINE
72	1	832076 Switch, 190 F Temp, 8MB, N.C. Rising
73	1	843005 ENGINE, KUBOTA V1505 TIER 4F (25HP)
74	1	843006 COOLING PACKAGE, RADIATOR & OIL

(PARTS LIST CONTINUED FROM PAGE 1)

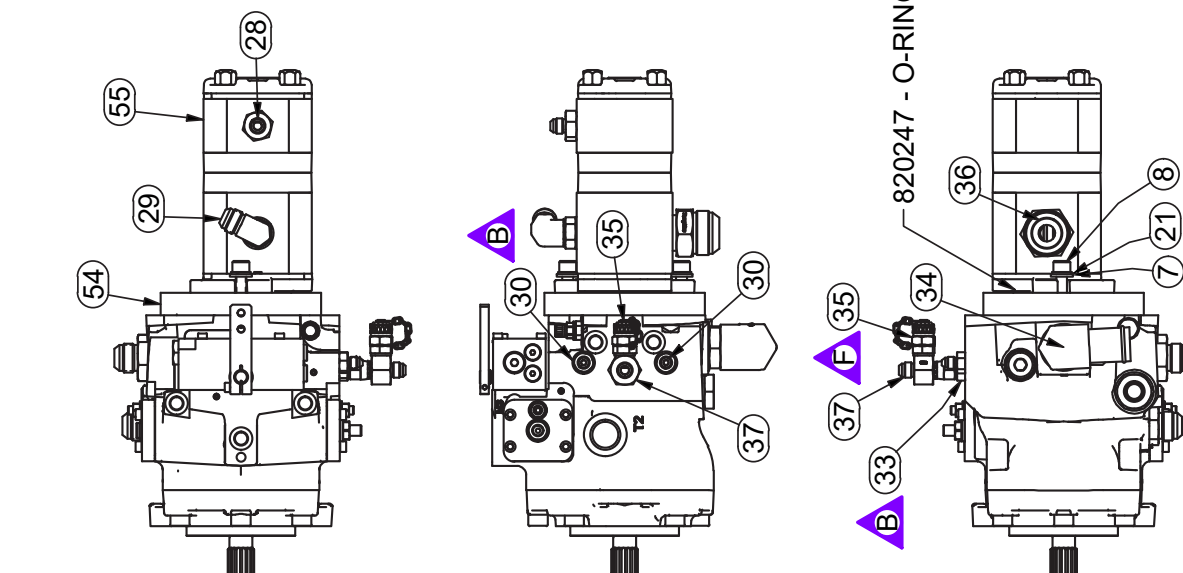


ENGINE ASSEMBLY

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



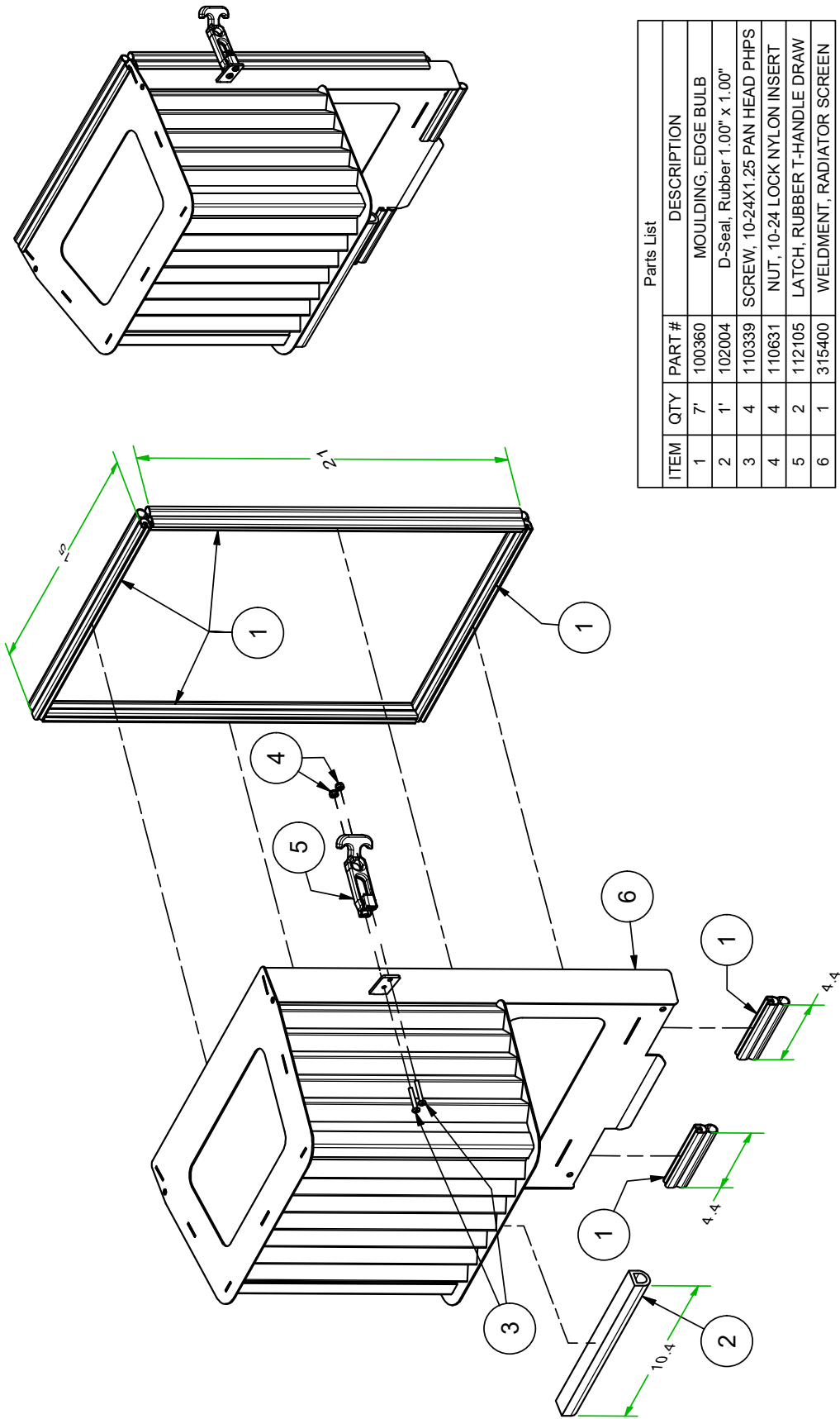
6-24-2021



Parts List				Parts List			
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION
7	2	110155	WASHER, 3/8" FLAT SAE	34	1	120546	ADAPTER, 20BH-16MB90
8	2	110176	BOLT, M10x1.5 x 35 SHCS	35	1	120705	STEP AP203
21	11	110689	Washer, M10, Lock	36	1	120740	Adapter, 20mj-12mb
28	1	120144	ADAPTER, 6MJ-10MB	37	1	120754	Adapter, 6fjx-6mj, -4fb Gage
29	1	120224	ADAPTER, 10MJ-10MB90				Port
30	2	120249	ADAPTER, 4MJ-6MB	54	1	323054	Pump, PM30 Propulsion, 1.53 CI / .49 CI Charge
31	1	120254	ADAPTER, 12MJ-12MB				
32	2	120256	ADAPTER, 12MJ-16MB	55	1	323063	PUMP, DOUBLE GEAR 1.16 / .24 CI
33	1	120319	ADAPTER, 6MJ-6MB				
				67	1	820247	O'RING 2-.042 1/16" RUINA

HYDRAULIC PUMP ASSEMBLY

6-24-2021

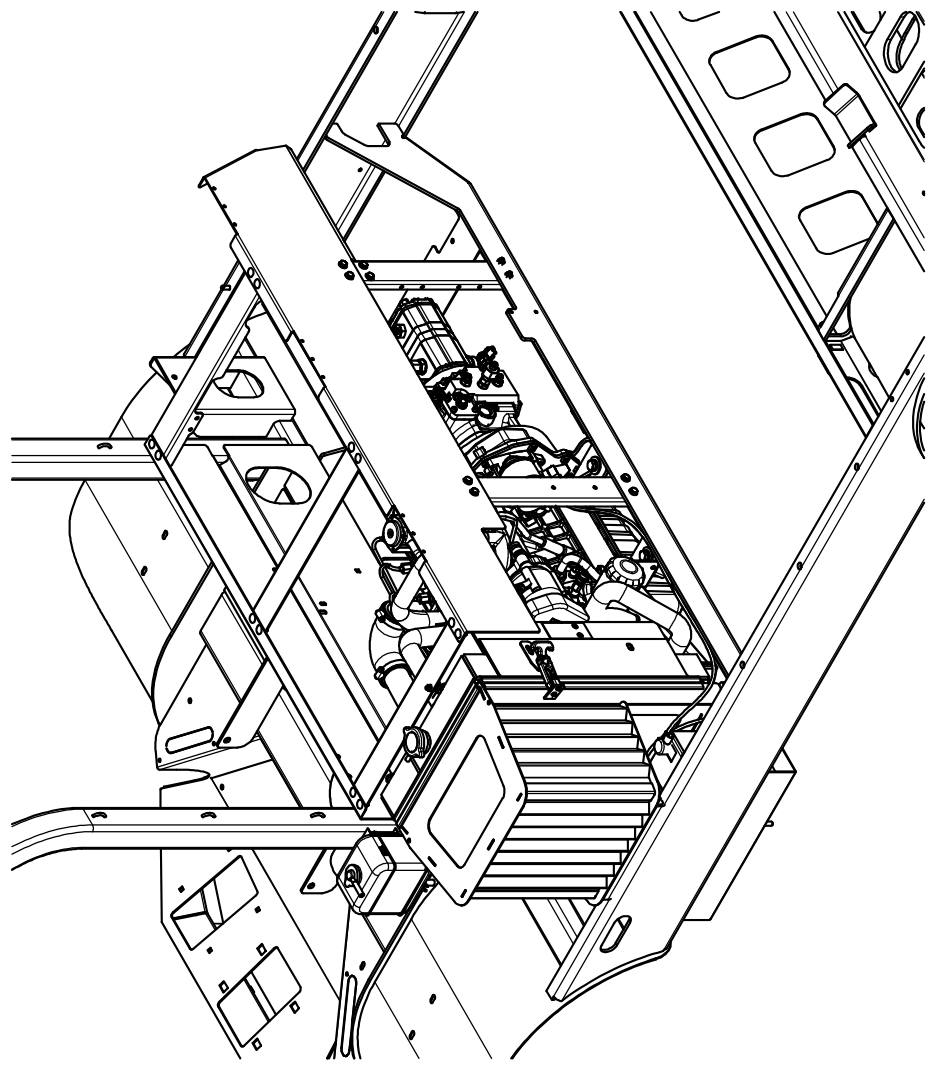


Parts List		
ITEM	QTY	PART # DESCRIPTION
1	7'	100360 MOULDING, EDGE BULB
2	1'	102004 D-Seal, Rubber 1.00" x 1.00"
3	4	110339 SCREW, 10-24X1.25 PAN HEAD PHPS
4	4	110631 NUT, 10-24 LOCK NYLON INSERT
5	2	112105 LATCH, RUBBER T-HANDLE DRAW
6	1	315400 WELDMENT, RADIATOR SCREEN

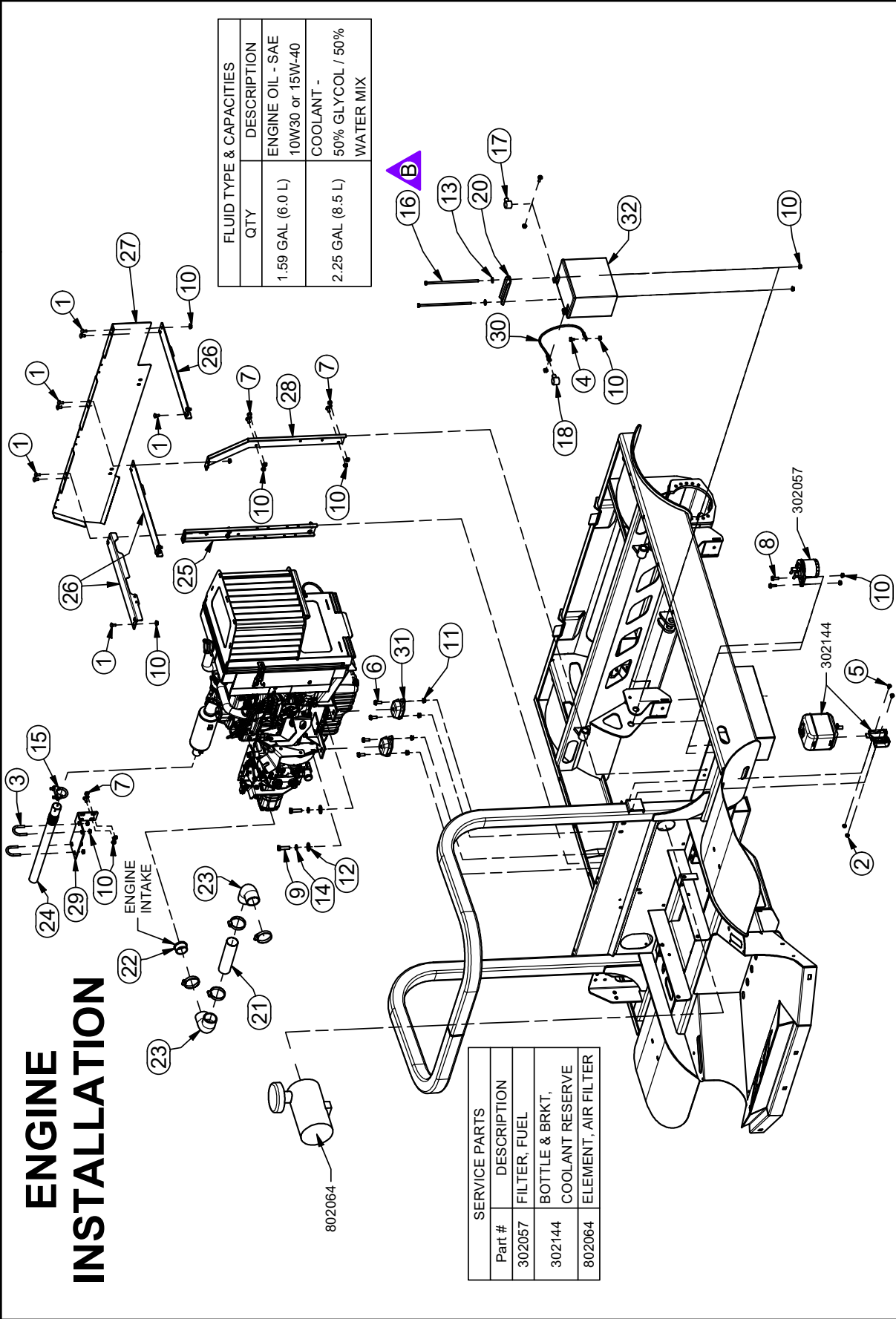
REPLACES 305073

RADIATOR SCREEN ASSEMBLY

ENGINE INSTALLATION

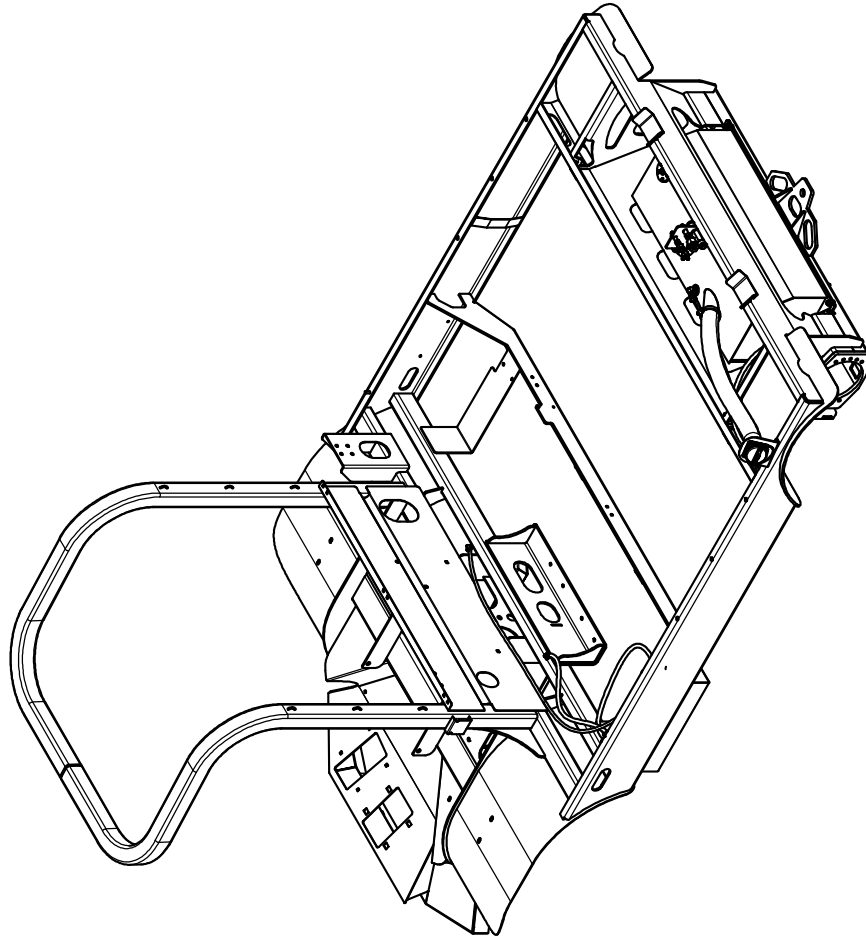


Parts List			DESCRIPTION
ITEM	QTY	PART #	
1	12	110020	Bolt, 5/16-18 X 0.75 in Carriage
2	2	110290	NUT, 1/4-20 WIZ FLANGE
3	2	110362	U-BOLT, 5/16
4	1	110426	BOLT, 5/16-18 X 0.5, WIZ FLANGE
5	2	110434	BOLT, 1/4-20 X 0.5, WIZ FLANGE
6	8	110440	BOLT, 3/8-16 X 1, WIZ FLANGE
7	10	110444	BOLT, 5/16-18 X 0.75, 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	WELDMNT, 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	832011	BATTERY, SEALED GEL W/L TERMINAL



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-4F JX-4MJ
16	1	120216	ADAPTER, 6MJ-6F JX-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



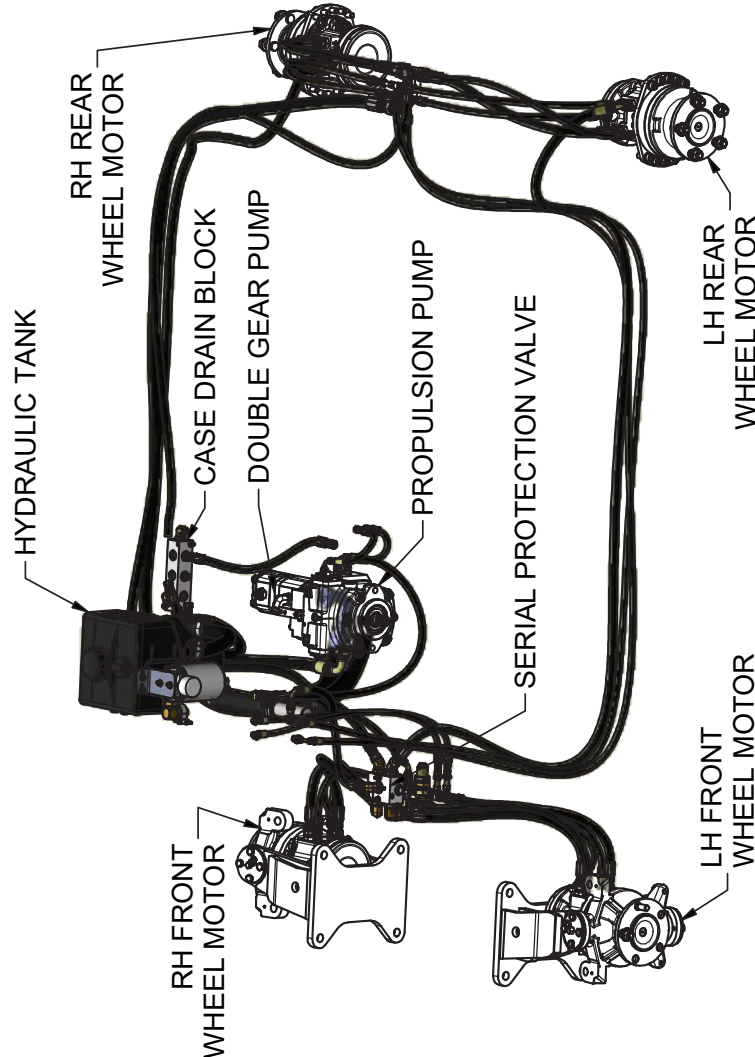
7-23-2020

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



PROPULSION HYDRAULIC INSTALLATION

Parts List				Parts List				Parts List			
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION
1	6	110290	NUT, 1/4-20 WIZ FLANGE	11	6	112008	CLAMP, 1.25", T-BOLT	21	5	120222	ADAPTER, 6MJ-6MB90
2	4	110410	BOLT, 1/4-20 X 2.5	12	2	112101	CLAMP, 1.50", T-BOLT	22	2	120226	ADAPTER, 12BH-12MB90
3	4	110434	BOLT, 1/4-20 X 0.5, WIZ FLANGE	13	2	112137	CLAMP, 2.00", T-BOLT	23	2	120245	ADAPTER, 8MJ-10MB90
4	4	110440	BOLT, 3/8-16 X 1, WIZ FLANGE	14	1	120057	ADAPTER, 6MJ-6MJ-6FJX	24	4	120249	ADAPTER, 4MJ-6MB
5	2	110529	BOLT, 5/16-18 X 4.5	15	1	120102	ADAPTER, BULKHEAD, 6MJ-6MJ	25	1	120291	CAP, 6FJ
6	2	110606	NUT, 5/16-18 WIZ FLANGE	16	2	120126	ADAPTER, BULKHEAD, 4MJ-4MJ	26	1	120292	NUT, BULKHEAD LOCKNUT, -6
7	2	111011	Bolt, M5-.80 X 55, SHCS, Stainless	17	3	120134	ADAPTER, 6MJ-8MB90	27	1	120303	ADAPTER, 12MB-16HB
8	2	111012	STEP AP203	18	2	120139	ADAPTER, 8MJ-10MB 45	28	3	120319	ADAPTER, 6MJ-6MB
9	2	111013	WASHER, M5, Flat, Stainless	19	1	120187	ADAPTER, 12BH-8MB90	29	1	120495	Nut, Lock, Bulkhead, -12
10	3	112007	CLAMP, 1.75", T-BOLT	20	2	120216	ADAPTER, 6MJ-6FJX-6MJ	30	1	120516	Adapter, 12fx-12mj90tube
								31	1	120663	ADAPTER, BULKHEAD, 12MJ-12MJ
								32	2	120739	ADAPTER, 4MJ-8MB
								33	2	120741	ADAPTER, 4MJ-4MJ-4FJX
								34	1	120742	ADAPTER, 12MB-12FB-12FB
								35	1	122016	ADAPTER, 12MJ-12MJ-12FJX
								36	1	122034	HEAD, SPIN-ON FILTER, -12SAE
								37	1	260265	MOUNTING BRACKET, FILTER
								38	1	305087	Assy, Hydraulic Tank, ISO
								39	1	322095	BLOCK, CASE DRAIN
								40	1	322096	TEE, 1.5 x 1.25 x 1.25 BH
								41	1	322098	GAUGE, PRESSURE, 600 PSI, 4MB
								42	1	323059	VALVE, SERIAL PROTECTION
								43	1	323060	VALVE, LOOP FLUSH
								44	1	323064	HOSE KIT, 4WD HAWK GROUND DRIVE
								45	1	323067	VALVE, BRAKE RELEASE & HI GEAR
								46	1	822044	FILTER, 3 MICRON
								47	1	822045	GAUGE, OIL FILTER

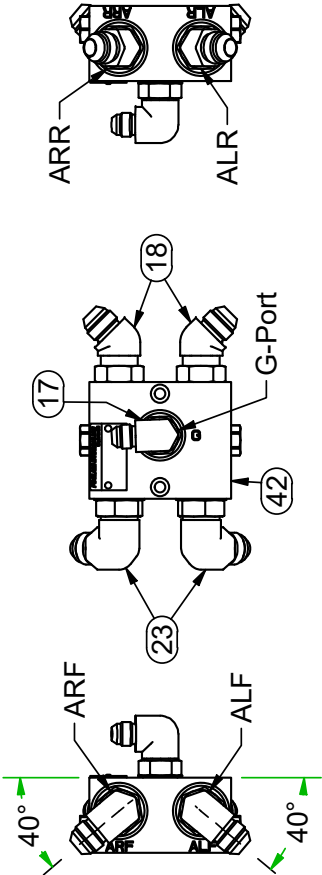


VALVE ASSEMBLIES

305097 REV: B

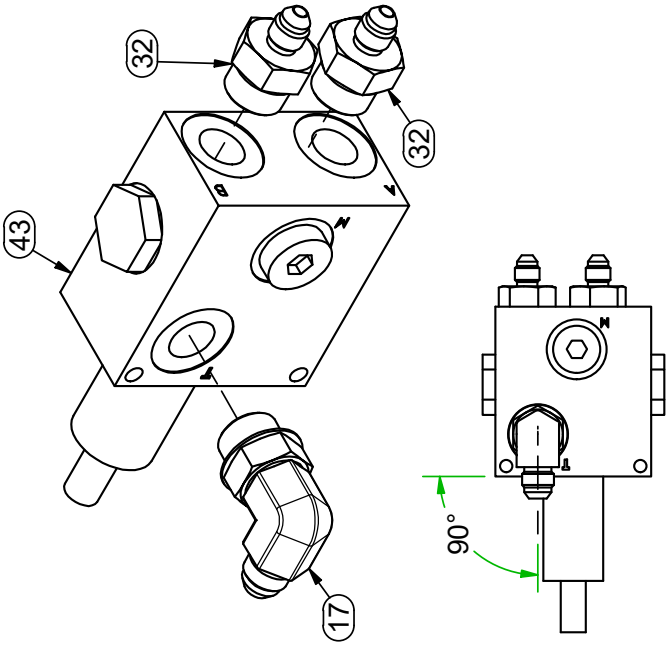
Serial Protection Valve

Parts List		
ITEM	QTY	DESCRIPTION
17	1	ADAPTER, 6MJ-8MB90
18	2	ADAPTER, 8MJ-10MB 45
23	2	ADAPTER, 8MJ-10MB90
42	1	VALVE, SERIAL PROTECTION

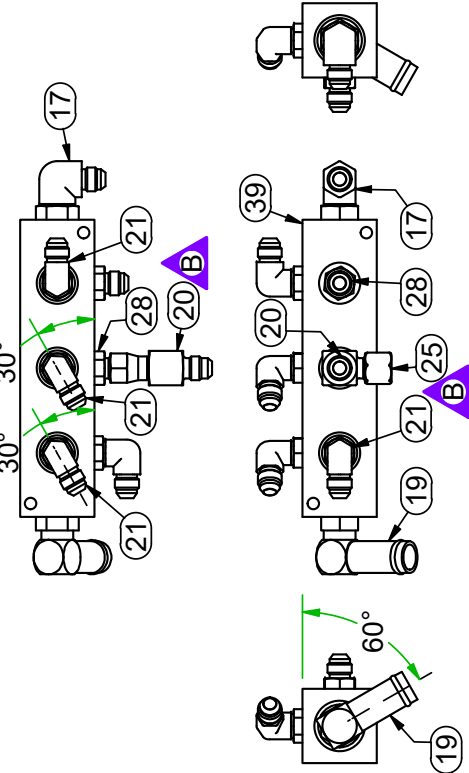


Loop Flush Valve

Parts List		
ITEM	QTY	DESCRIPTION
17	1	ADAPTER, 6MJ-8MB90
32	2	ADAPTER, 4MJ-8MB
43	1	VALVE, LOOP FLUSH

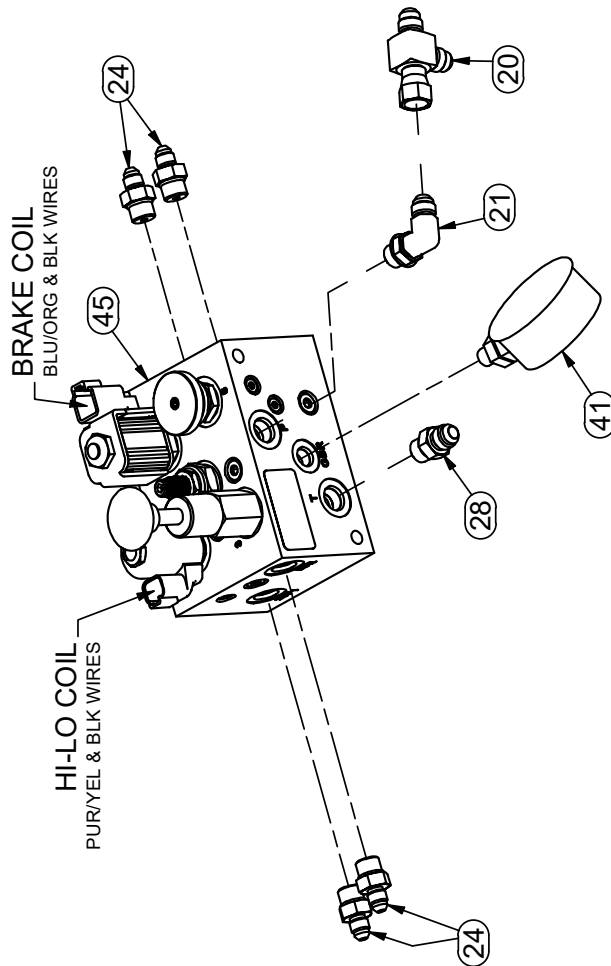
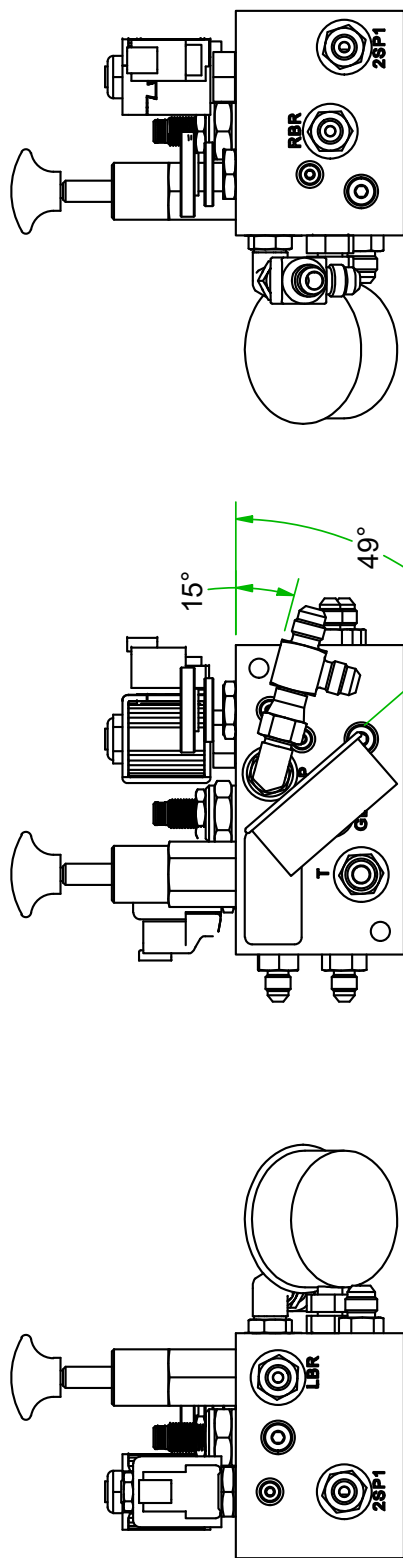


Case Drain Block



Parts List		
ITEM	QTY	DESCRIPTION
17	1	ADAPTER, 6MJ-8MB90
19	1	ADAPTER, 12BH-8MB90
20	1	ADAPTER, 6MJ-6FJX-6MJ
21	4	ADAPTER, 6MJ-6MB90
28	2	ADAPTER, 6MJ-6MB
39	1	BLOCK, CASE DRAIN
25	1	CAP, 6FJ

BRAKE RELEASE / HI GEAR VALVE ASSEMBLY



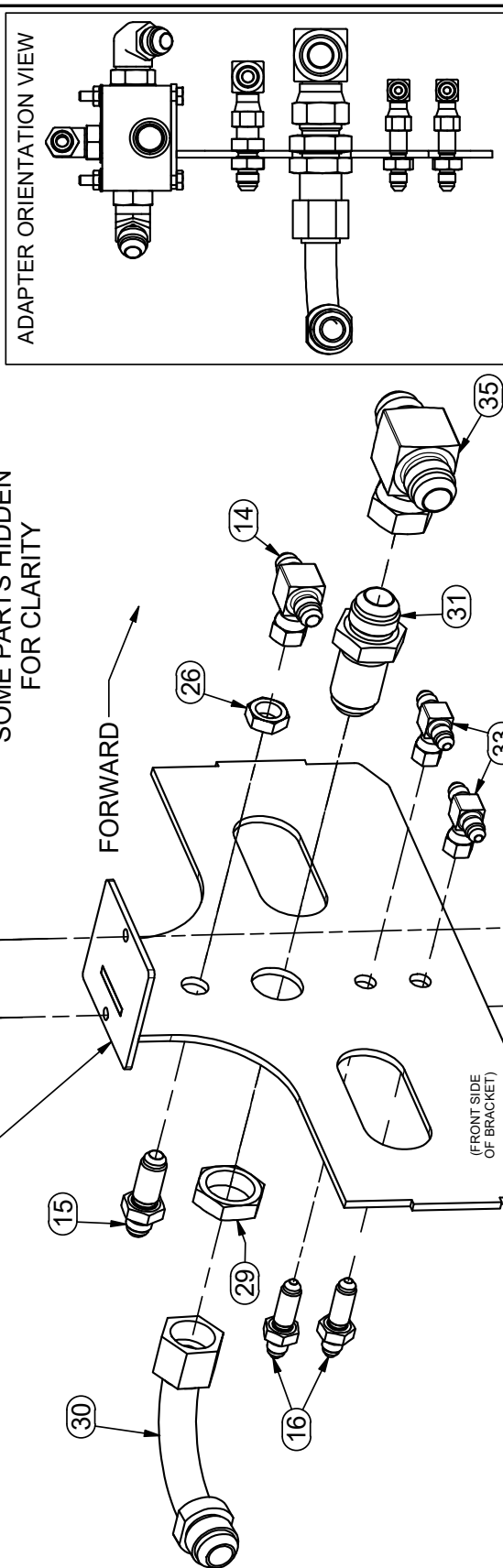
Parts List		
ITEM	QTY	PART # DESCRIPTION
20	2	120216 ADAPTER, 6MJ-6FJX-6MJ
21	5	120222 ADAPTER, 6MJ-6MB90
24	4	120249 ADAPTER, 4MJ-6MB
28	3	120319 ADAPTER, 6MJ-6MB
41	1	322098 GAUGE, PRESSURE, 600 PSI, 4MB
45	1	323067 VALVE, BRAKE RELEASE & HI GEAR

305097		REV: B
Parts List		
ITEM	QTY	PART # DESCRIPTION
2	4	110410 BOLT, 1/4-20 X 2.5
14	1	120057 ADAPTER, 6MJ-6MJ-6FJX
15	1	120102 ADAPTER, BULKHEAD, 6MJ-6MJ
16	2	120126 ADAPTER, BULKHEAD, 4MJ-4MJ
26	1	120292 NUT, BULKHEAD LOCKNUT, -6
29	1	120495 Nut, Lock, Bulkhead, -12
30	1	120516 Adapter, 12fjx-12mj90tube
31	1	120663 ADAPTER, BULKHEAD, 12MJ-12MJ
33	2	120741 ADAPTER, 4MJ-4MJ-4FJX
35	1	122016 ADAPTER, 12MJ-12MJ-12FJX
42	1	323059 VALVE, SERIAL PROTECTION

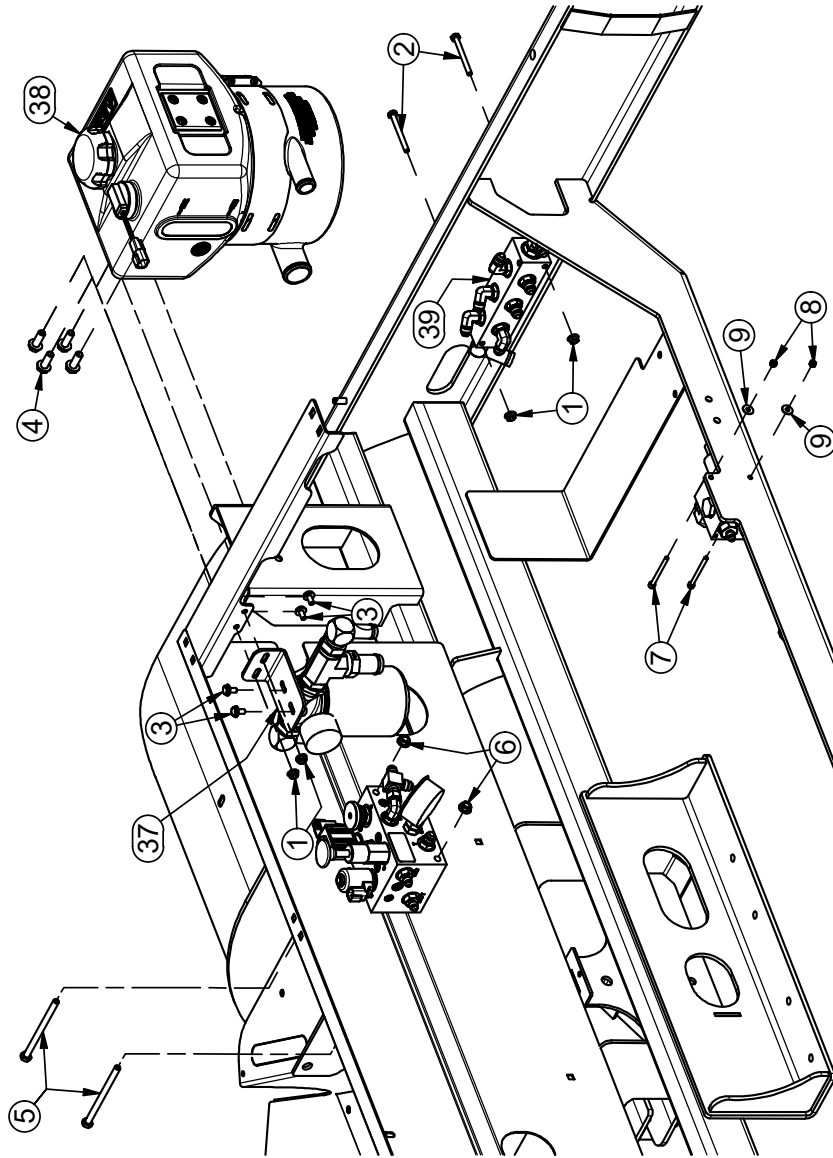
SERIAL PROTECTION VALVE & BULKHEAD ADAPTER INSTALL

THIS BRACKET WELDMENT IS LOCATED BELOW THE SEAT MOUNTING POINT. IT IS PART OF THE FRAME WELDMENT.

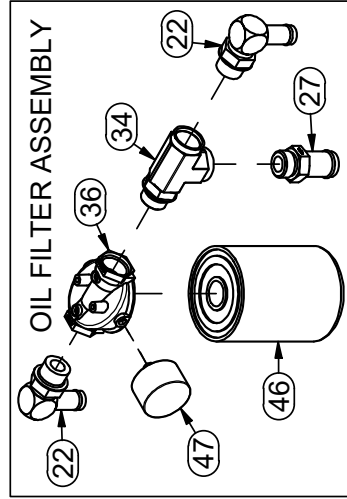
SOME PARTS HIDDEN FOR CLARITY



TANK, FILTER, & VALVE INSTALLATION



SOME PARTS HIDDEN
FOR CLARITY

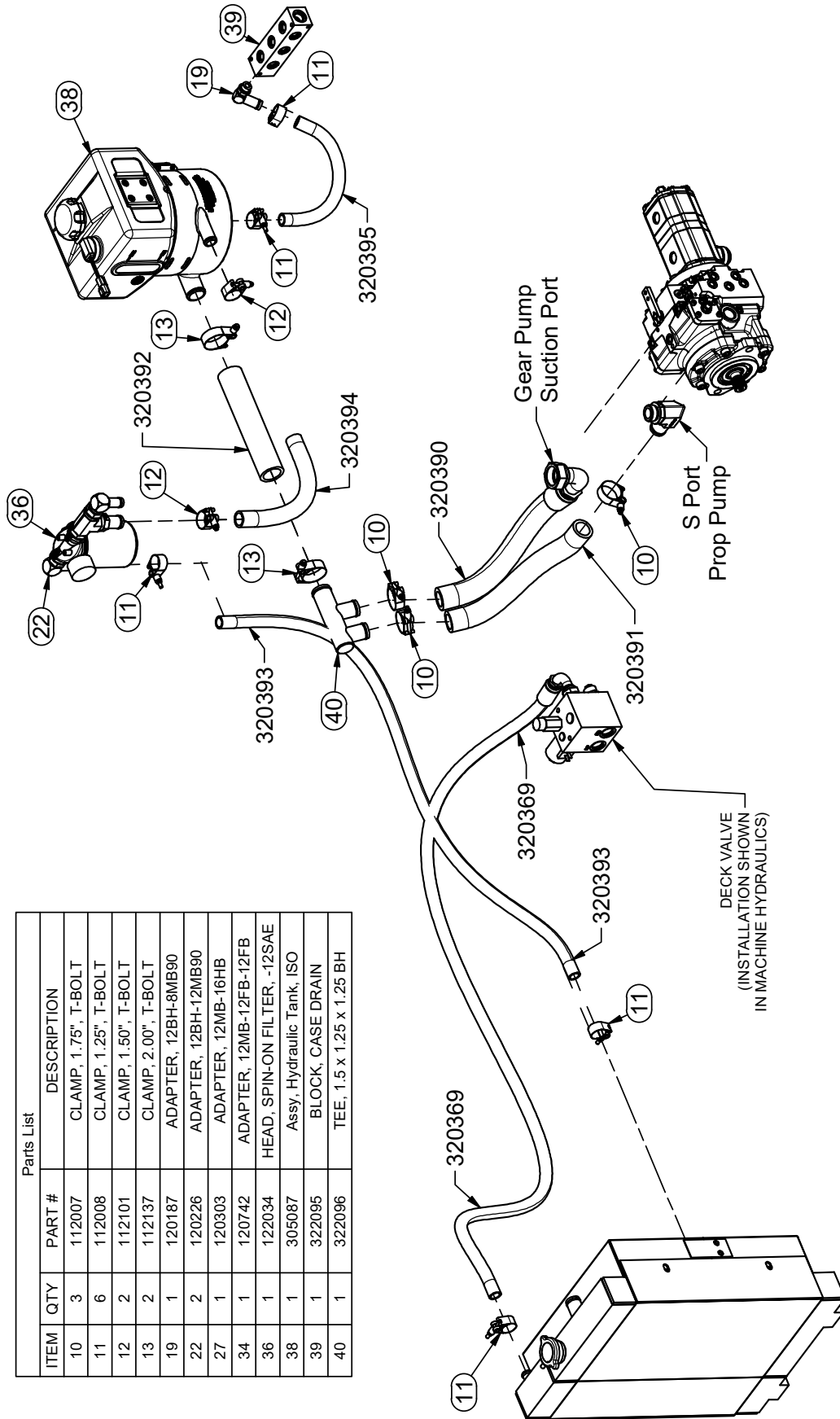


1-5-2022

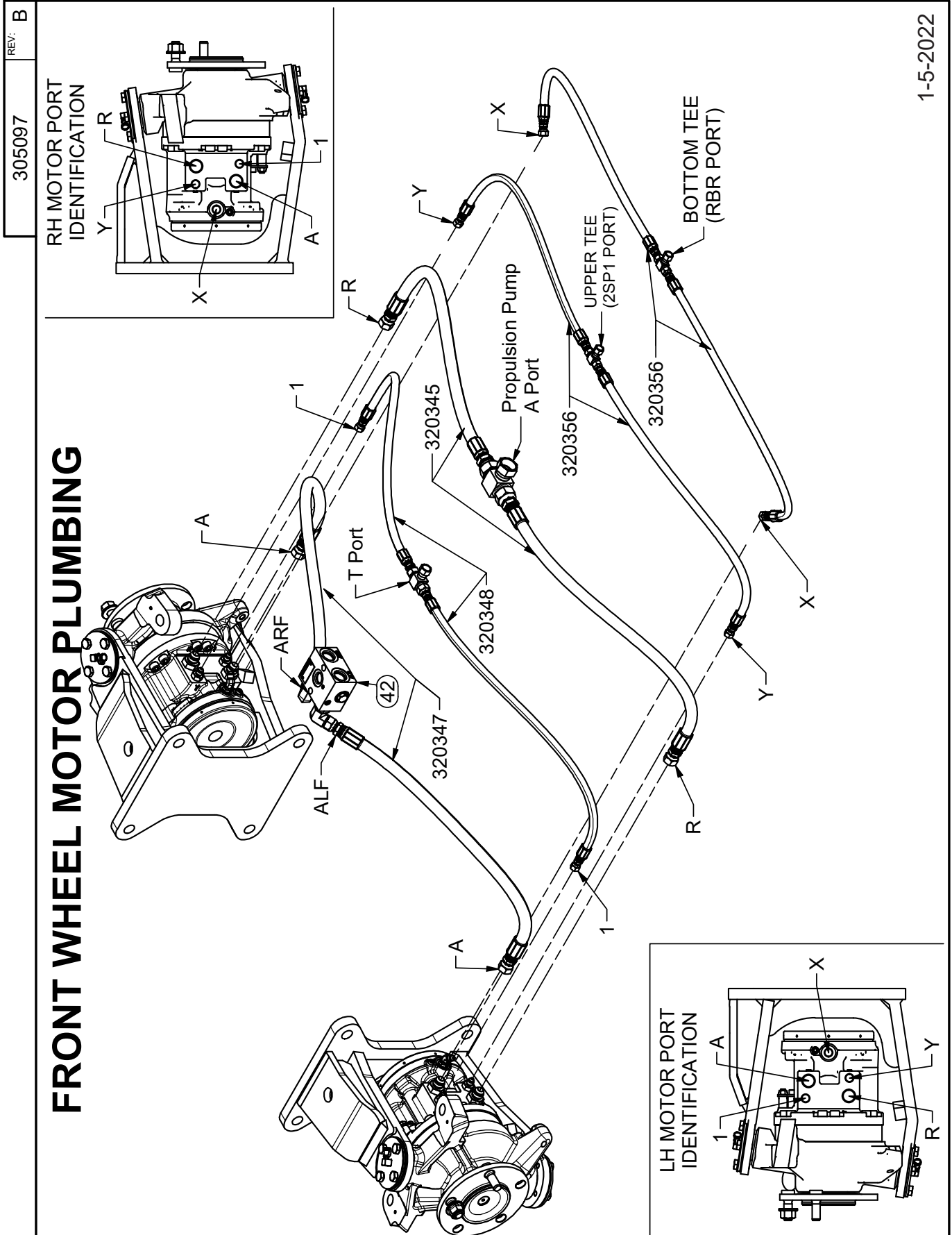
305097		REV: B
Parts List		
ITEM	QTY	PART # DESCRIPTION
1	6	110290 NUT, 1/4-20 WIZ FLANGE
2	4	110410 BOLT, 1/4-20 X 2.5
3	4	110434 BOLT, 1/4-20 X 0.5, WIZ FLANGE
4	4	110440 BOLT, 3/8-16 X 1, WIZ FLANGE
5	2	110529 BOLT, 5/16-18 X 4.5
6	2	110606 NUT, 5/16-18 WIZ FLANGE
7	2	111011 Bolt, M5-.80 X 55, SHCS, Stainless
8	2	111012 STEP AP203
9	2	111013 Washer, M5, Flat, Stainless
22	2	120226 ADAPTER, 12BH-12MB90
27	1	120303 ADAPTER, 12MB-16HB
32	2	120739 ADAPTER, 4MJ-8MB
34	1	120742 ADAPTER, 12MB-12FB-12FB
36	1	122034 HEAD, SPIN-ON FILTER, -12SAE
37	1	260265 MOUNTING BRACKET, FILTER
38	1	305087 Assy, Hydraulic Tank, ISO
39	1	322095 BLOCK, CASE DRAIN
41	1	322098 GAUGE, PRESSURE, 600 PSI, 4MB
43	1	323060 VALVE, LOOP FLUSH
45	1	323067 VALVE, BRAKE RELEASE & HI GEAR
46	1	822044 FILTER, 3 MICRON
47	1	822045 GAUGE, OIL FILTER

PROPULSION SUCTION & DRAIN PLUMBING

Parts List		
ITEM	QTY	PART # DESCRIPTION
10	3	112007 CLAMP, 1.75", T-BOLT
11	6	112008 CLAMP, 1.25", T-BOLT
12	2	112101 CLAMP, 1.50", T-BOLT
13	2	112137 CLAMP, 2.00", T-BOLT
19	1	120187 ADAPTER, 12BH-8MB90
22	2	120226 ADAPTER, 12BH-12MB90
27	1	120303 ADAPTER, 12MB-16HB
34	1	120742 ADAPTER, 12MB-12FB
36	1	122034 HEAD, SPIN-ON FILTER, -12SAE
38	1	305087 Assy, Hydraulic Tank, ISO
39	1	322095 BLOCK, CASE DRAIN
40	1	322096 TEE, 1.5 x 1.25 x 1.25 BH

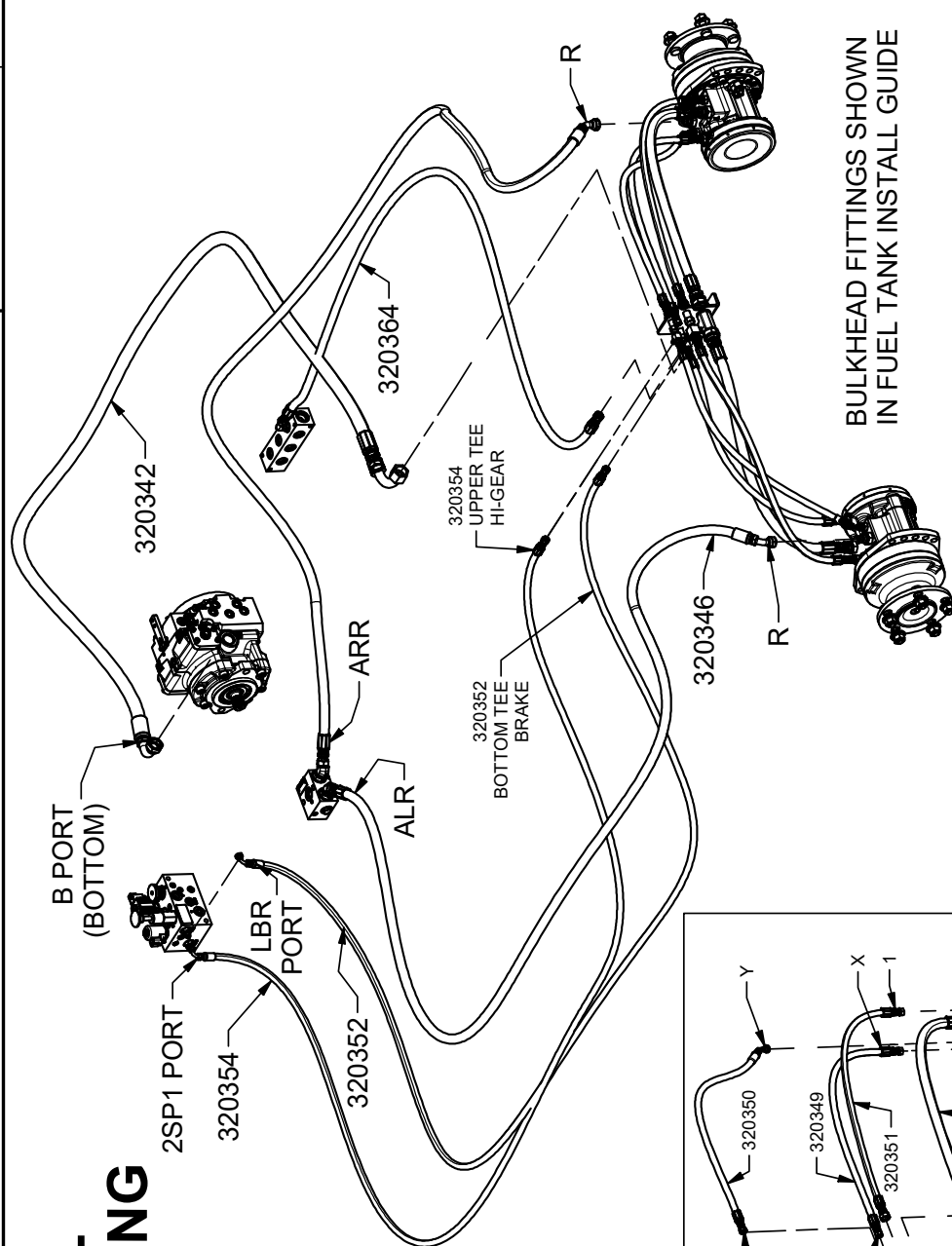


FRONT WHEEL MOTOR PLUMBING

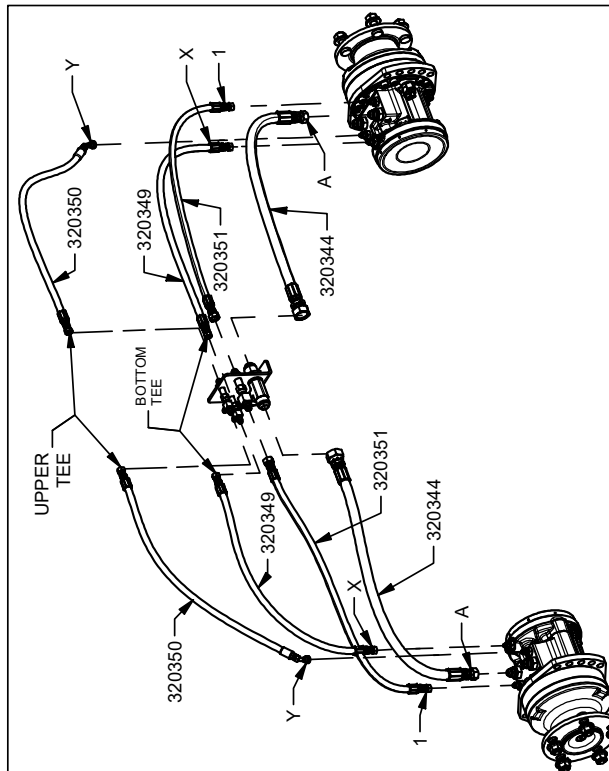
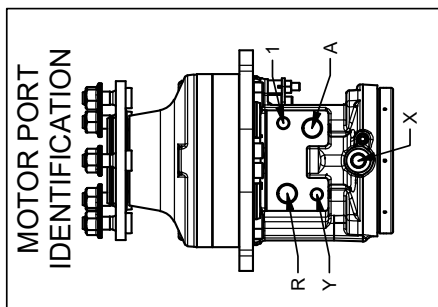


1-5-2022

REAR WHEEL MOTOR PLUMBING

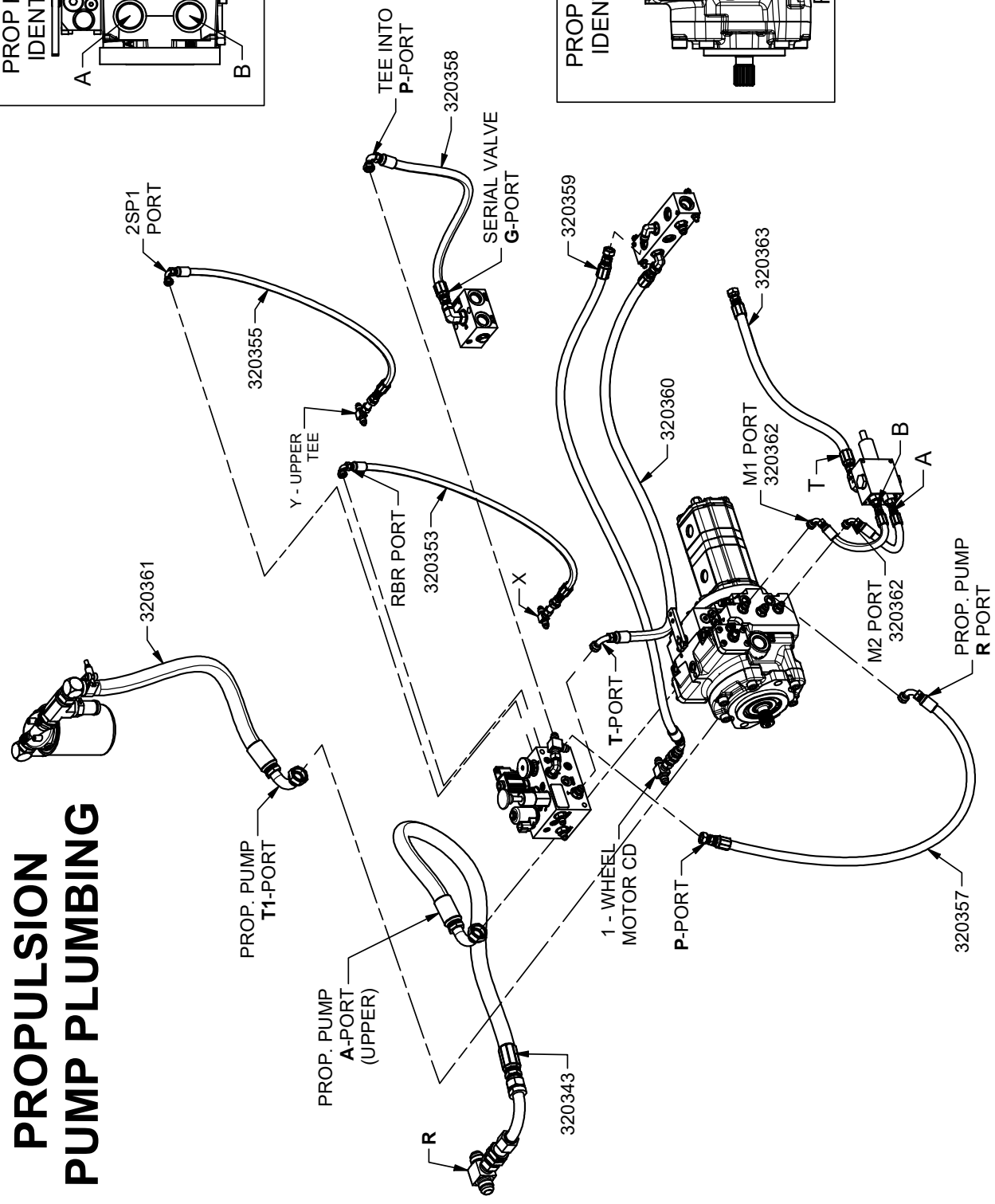
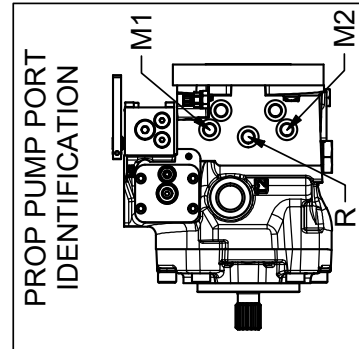
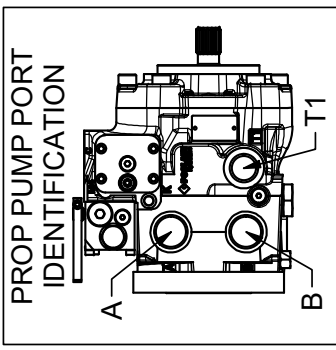


BULKHEAD FITTINGS SHOWN IN FUEL TANK INSTALL GUIDE

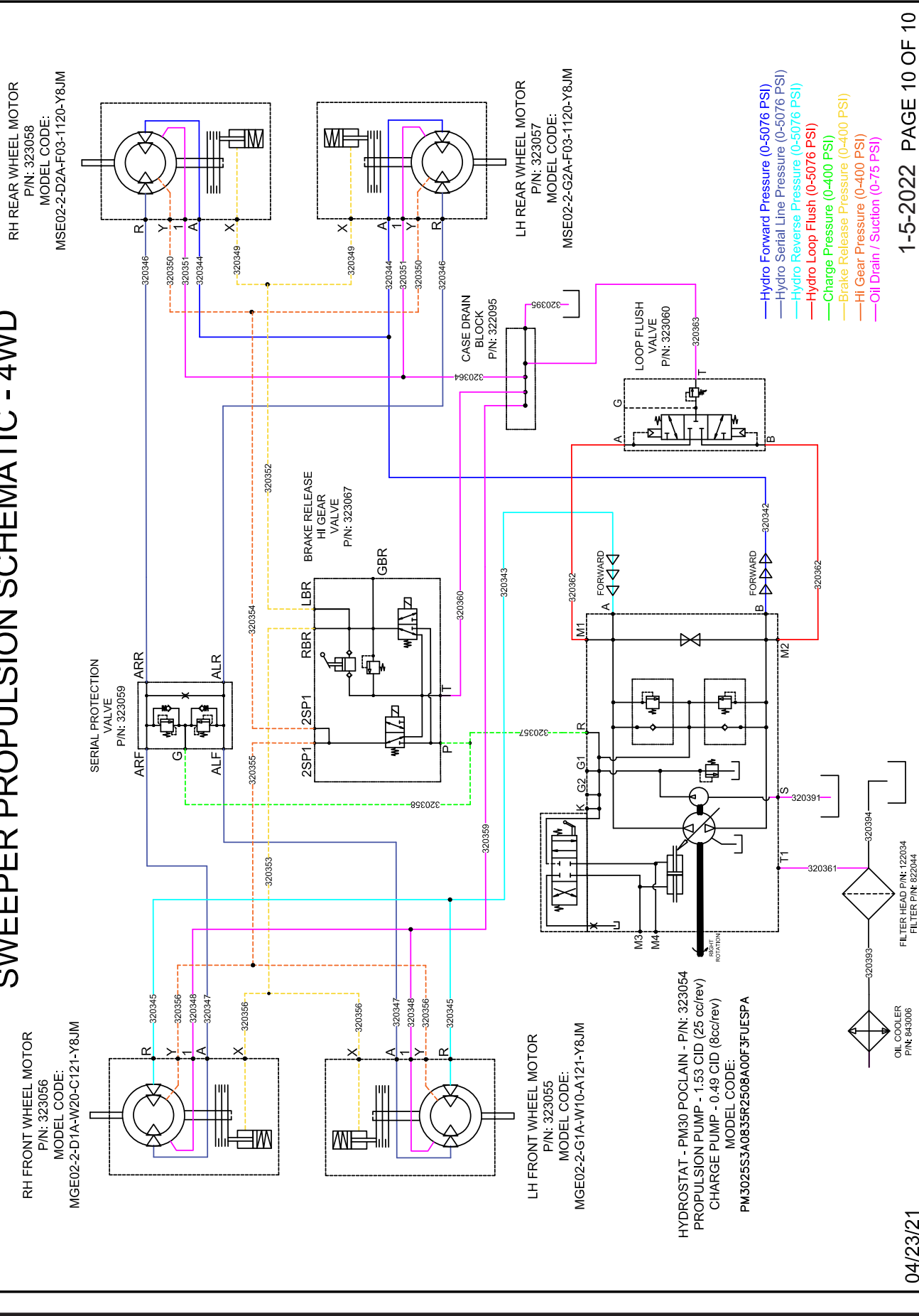


1-5-2022

PROPULSION PUMP PLUMBING



SWEEPER PROPULSION SCHEMATIC - 4WD



305098

REV: A

Parts List			Parts List				
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION
1	8	110264	BOLT, 10-24 X .5 STAINLESS, PHILLIPS	39	1	502087	Cap, Center Steering
2	6	110290	NUT, 1/4-20 WIZ FLANGE	40	1	502088	Nut, Steering Wheel, 13/16-20 UNEF
3	2	110434	BOLT, 1/4-20 X 0.5, WIZ FLANGE	41	1	552002	STEERING WHEEL
4	4	110437	BOLT, 3/8-16 X 0.75, WIZ FLANGE	42	1	820158	DECK VALVE
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-6FJX-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				

MACHINE HYDRAULIC INSTALLATION

3-SPOOL CYLINDER CONTROL VALVE

STEERING ORBITAL MOTOR

DOUBLE GEAR PUMP

STEERING CYLINDER

CASE DRAIN BLOCK

DECK CONTROL VALVE

HOPPER DOOR PO CHECK VALVE

HOPPER LIFT PO CHECK VALVE

DECK LIFT

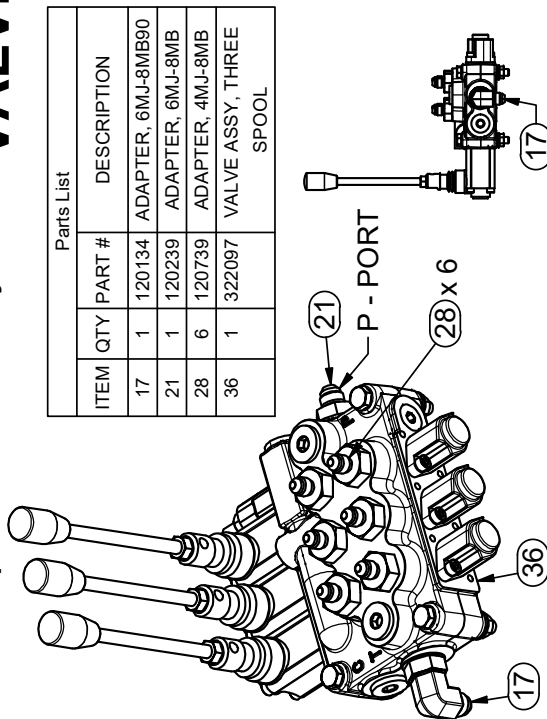
HYDRAULIC SCHEMATIC SHOWN ON PAGE 10

7-23-2020

VALVE ASSEMBLIES

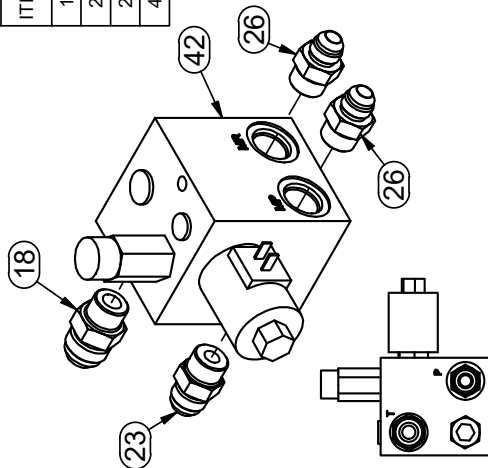
Three Spool Valve Assembly

Deck 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

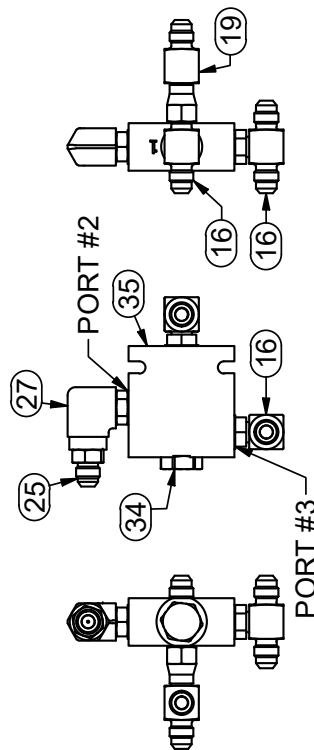
Parts List		
ITEM	QTY	DESCRIPTION
18	1	ADAPTER, 12MJ-10MB
23	1	ADAPTER, 10MJ-10MB
26	2	ADAPTER, 8MJ-10MB
42	1	DECK VALVE



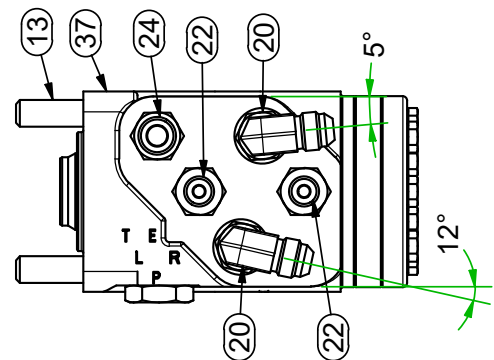
820158 - SERVICE PARTS	
PART #	DESCRIPTION
522163	COIL, 12VDC DEUTSCH
820230	VALVE, COUNTER BALANCE
820231	RELIEF, 3000 PSI PRESSURE
820232	VALVE, N.O. SOLENOID CARTRIDGE

P.O. Check Valve Assembly X 2

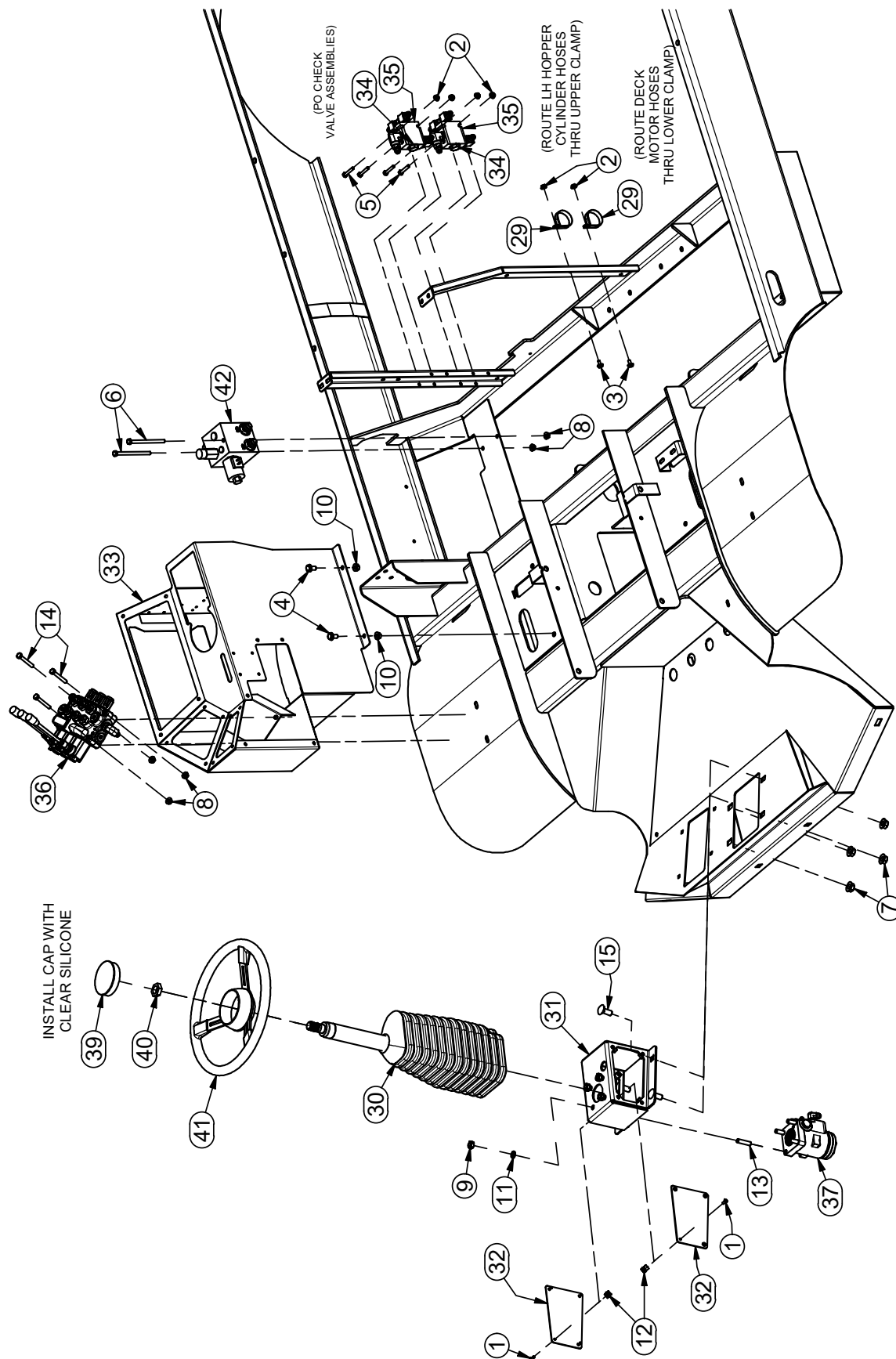
Steering Orbital Assembly



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

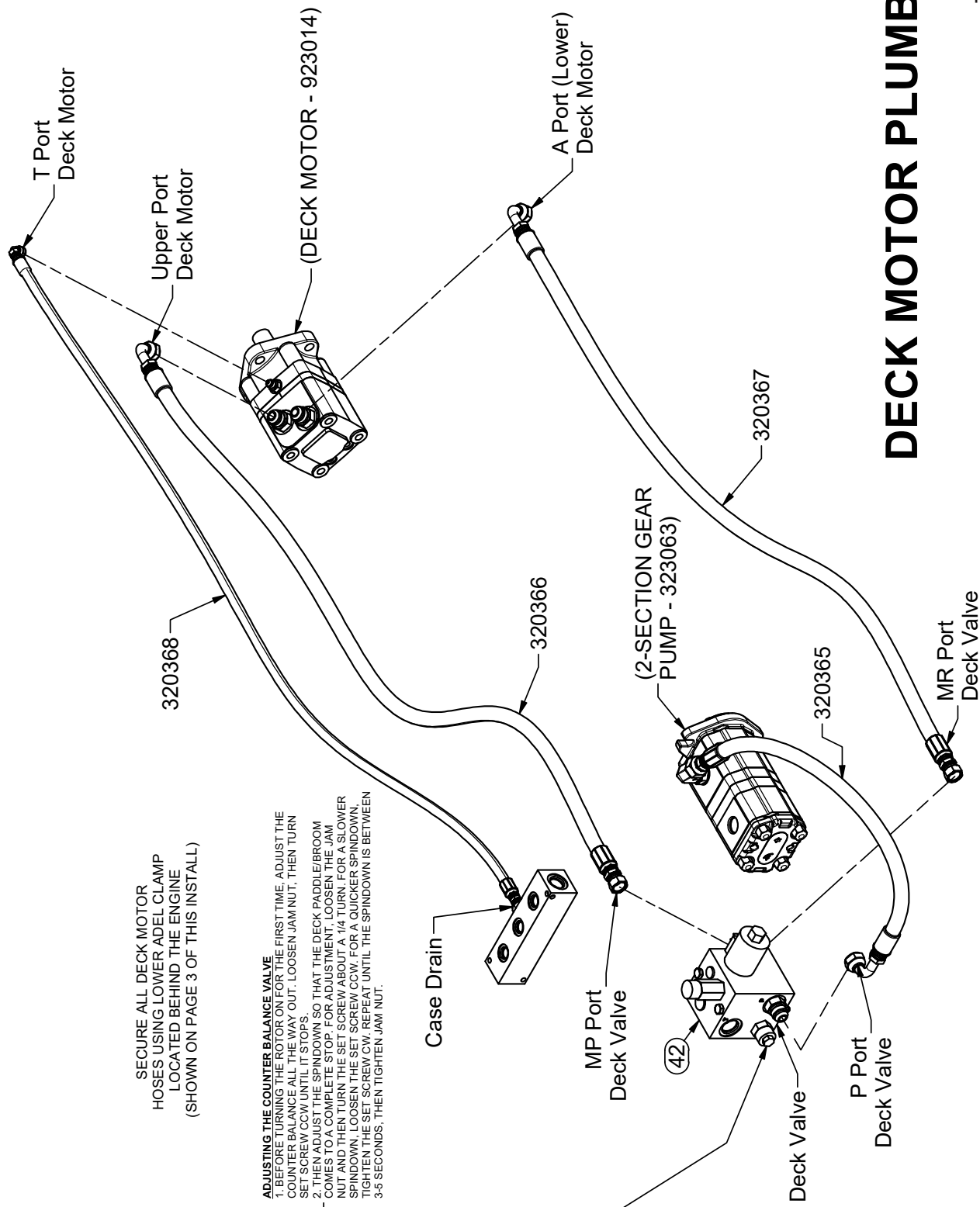


Parts List		
ITEM	QTY	DESCRIPTION
13	4	STUD, M10 X 1.5 X 42 GRADE 8.8
20	2	ADAPTER, 6MJ-6MB90
22	2	ADAPTER, 4MJ-6MB
24	1	ADAPTER, 6MJ-6MB
37	1	MOTOR, STEERING ORBITAL

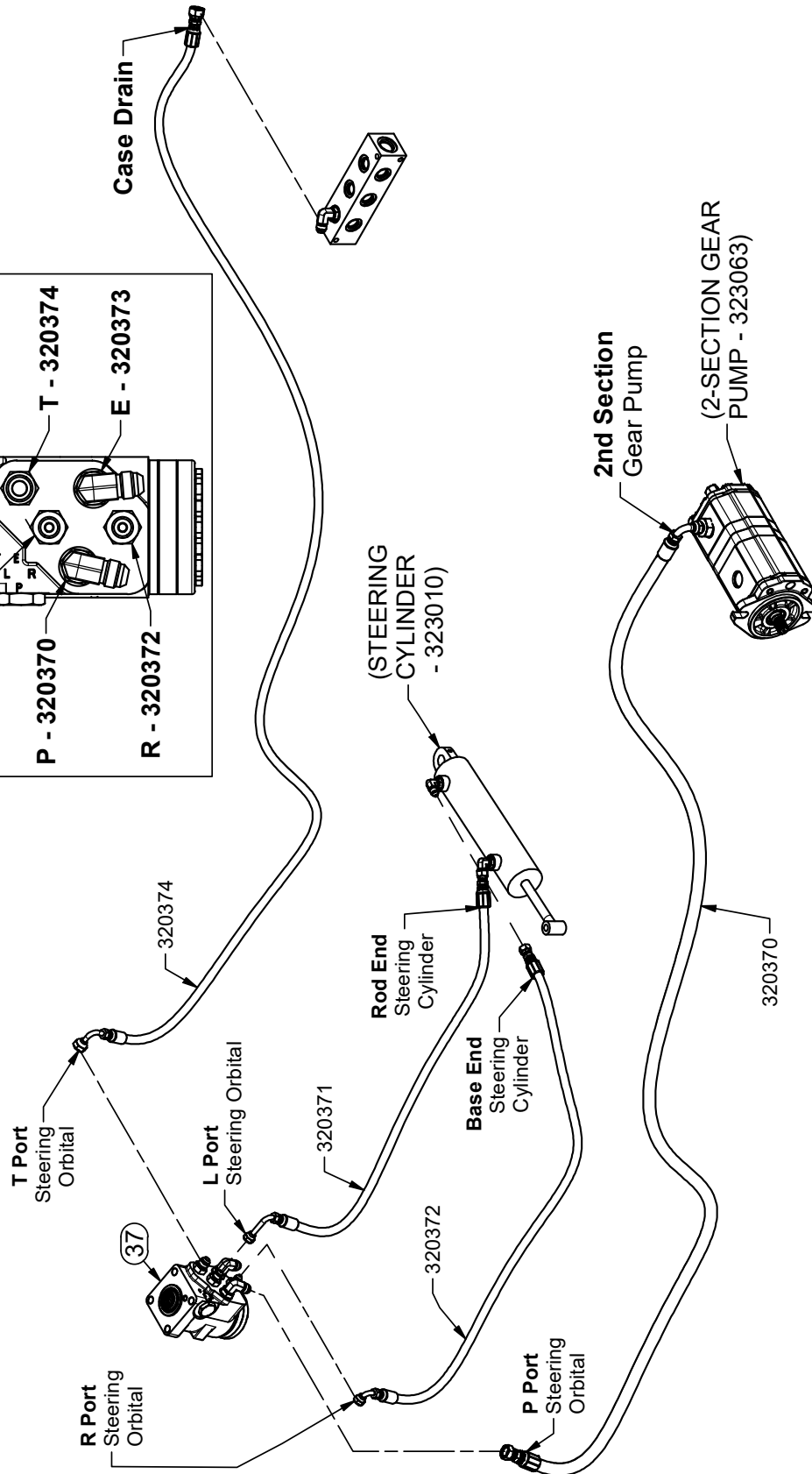
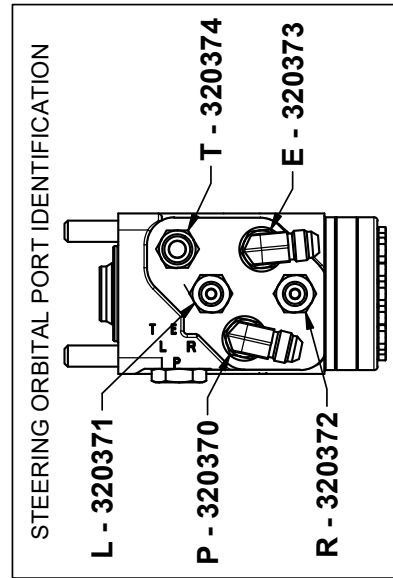


VALVE INSTALLATION

7-23-2020



DECK MOTOR PLUMBING

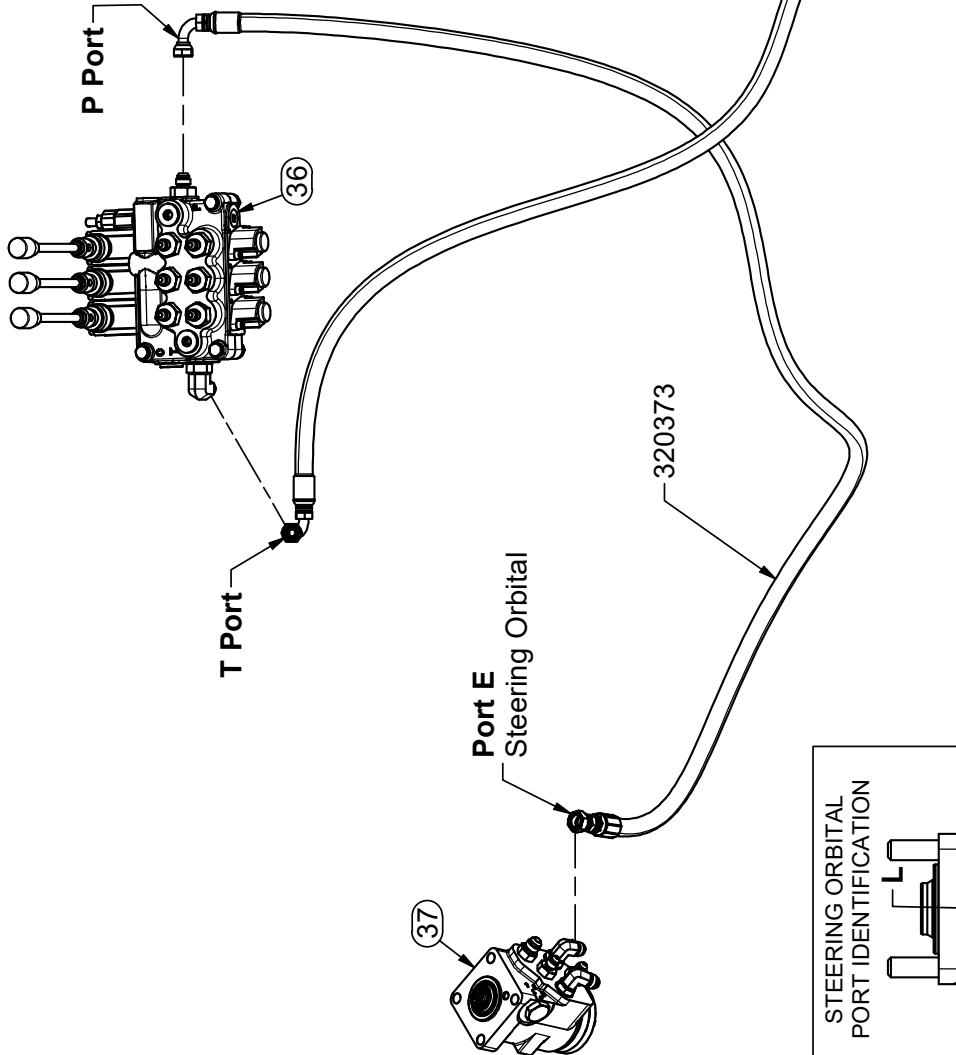
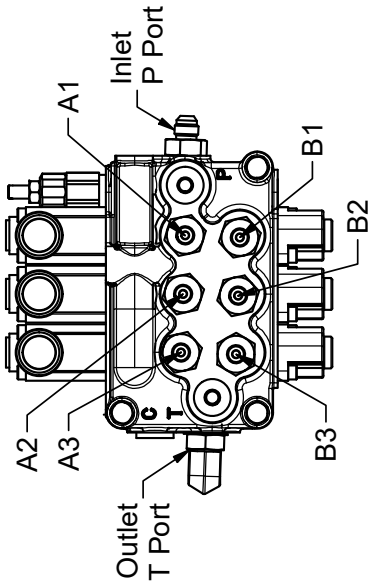


STEERING PLUMBING

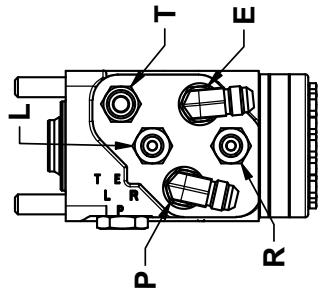
7-23-2020

305098 REV: A

THREE SPOOL VALVE
PORT IDENTIFICATION

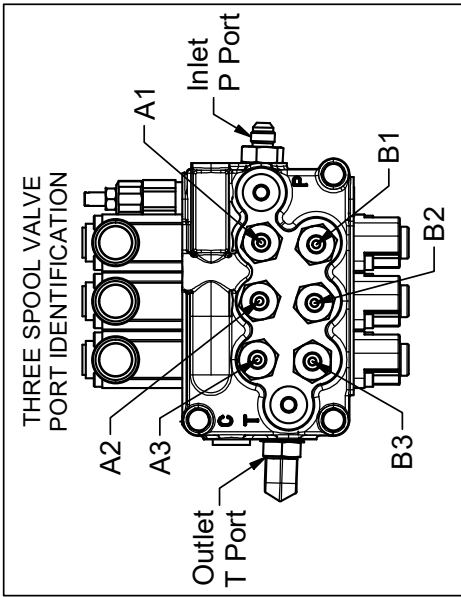
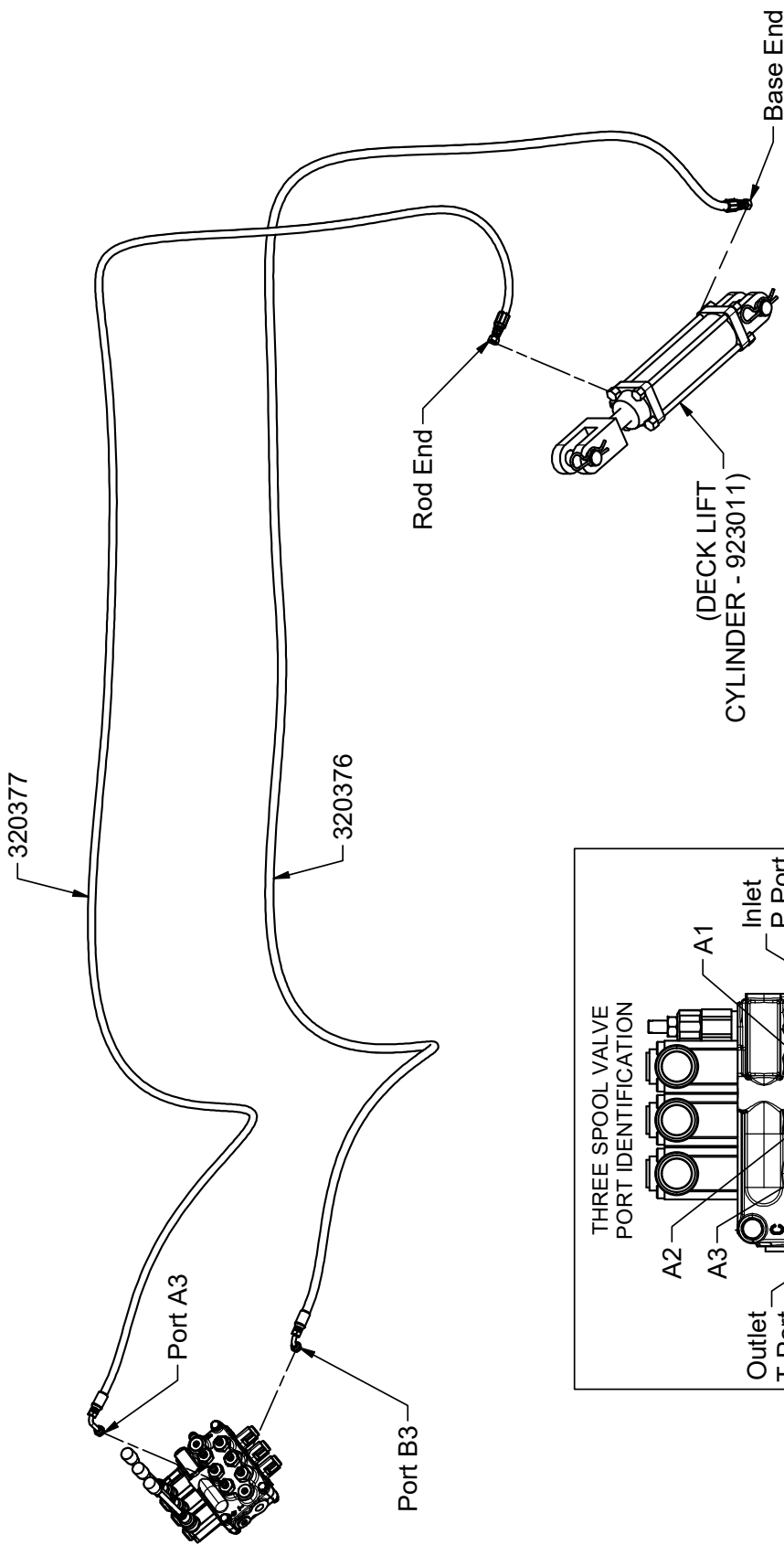


STEERING ORBITAL
PORT IDENTIFICATION



**THREE SPOOL
VALVE PLUMBING**

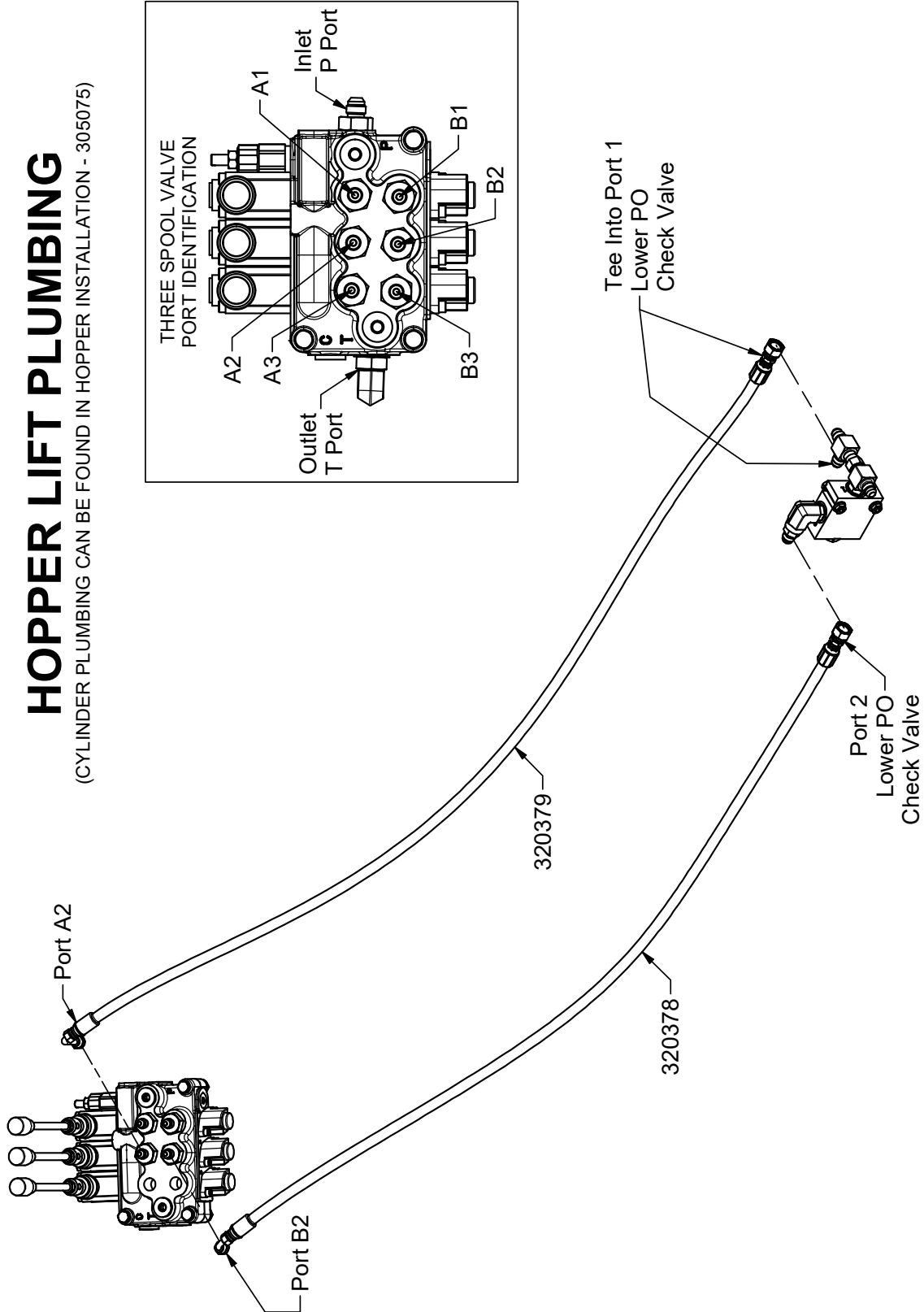
DECK LIFT PLUMBING



7-23-2020

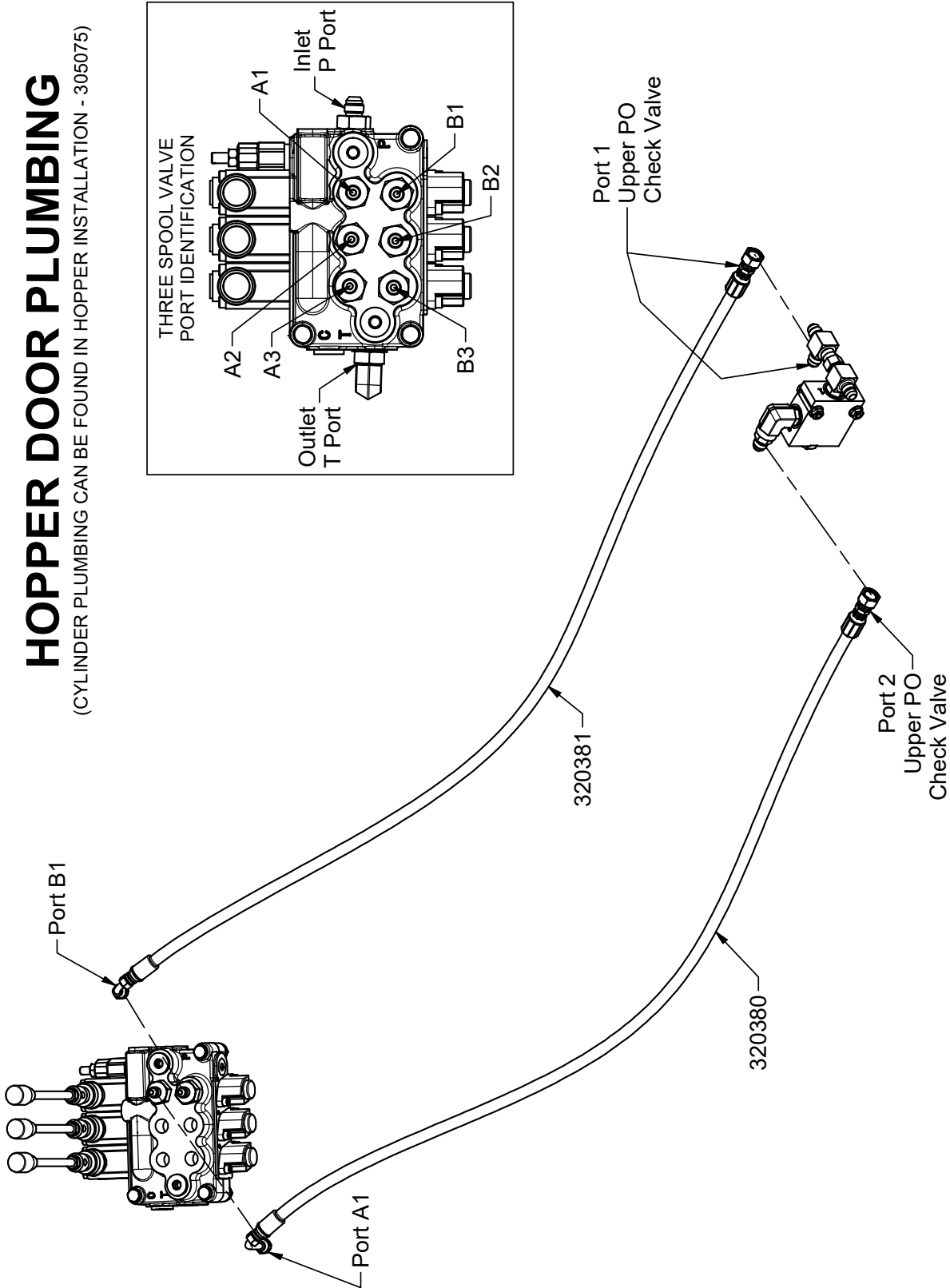
HOPPER LIFT PLUMBING

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



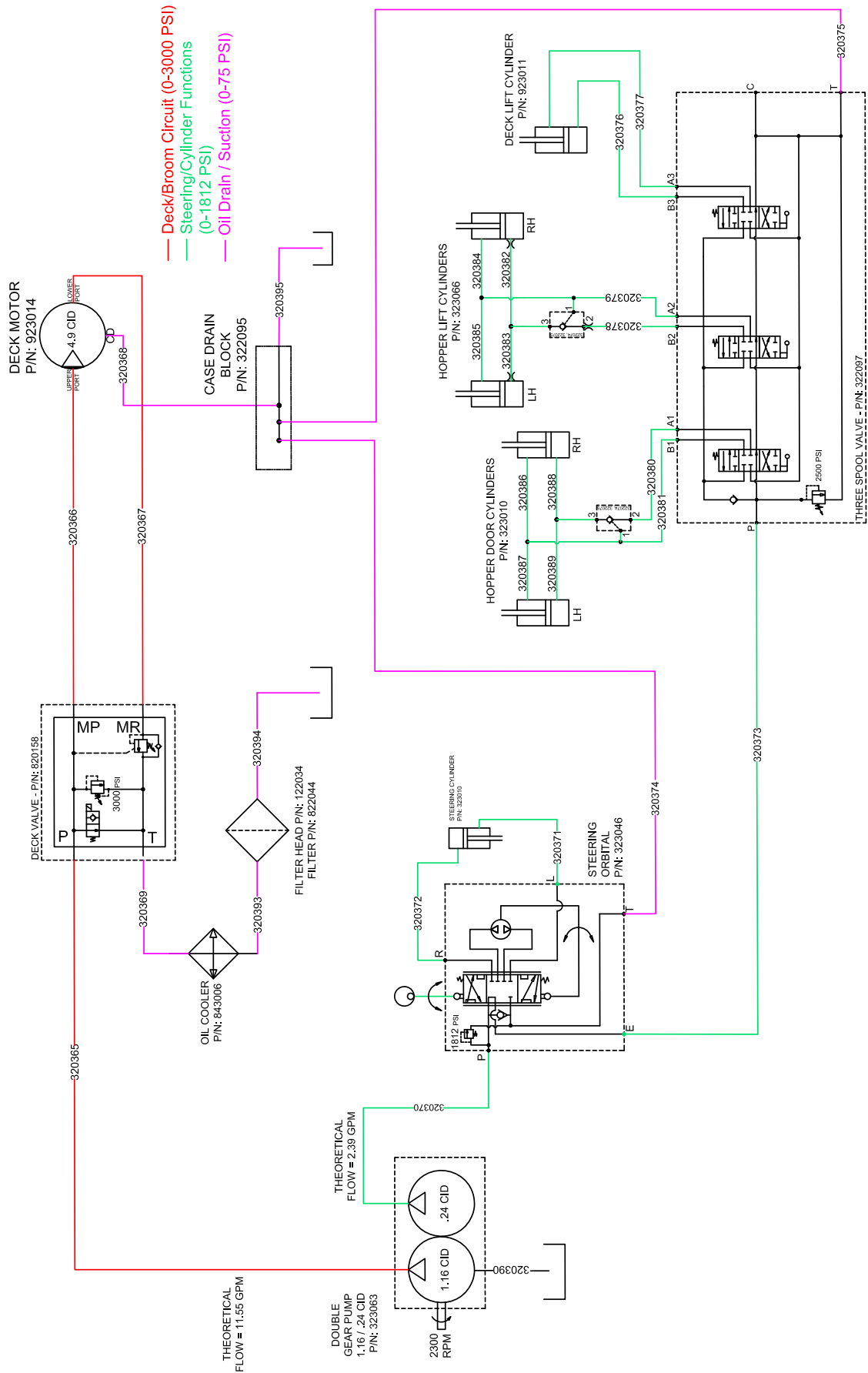
HOPPER DOOR PLUMBING

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

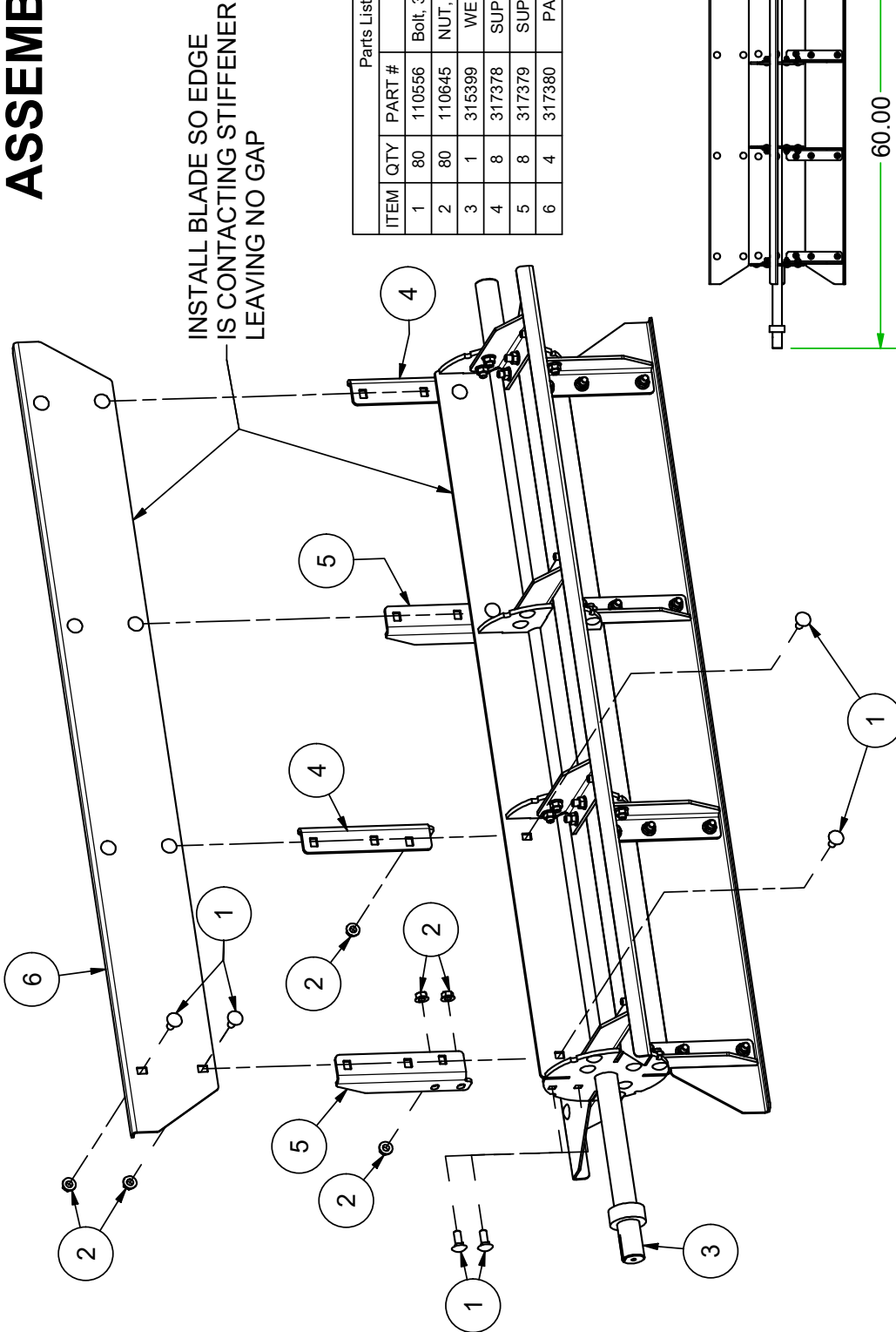


7-23-2020

SWEEPER MACHINE HYDRAULIC SCHEMATIC



PADDLE ASSEMBLY

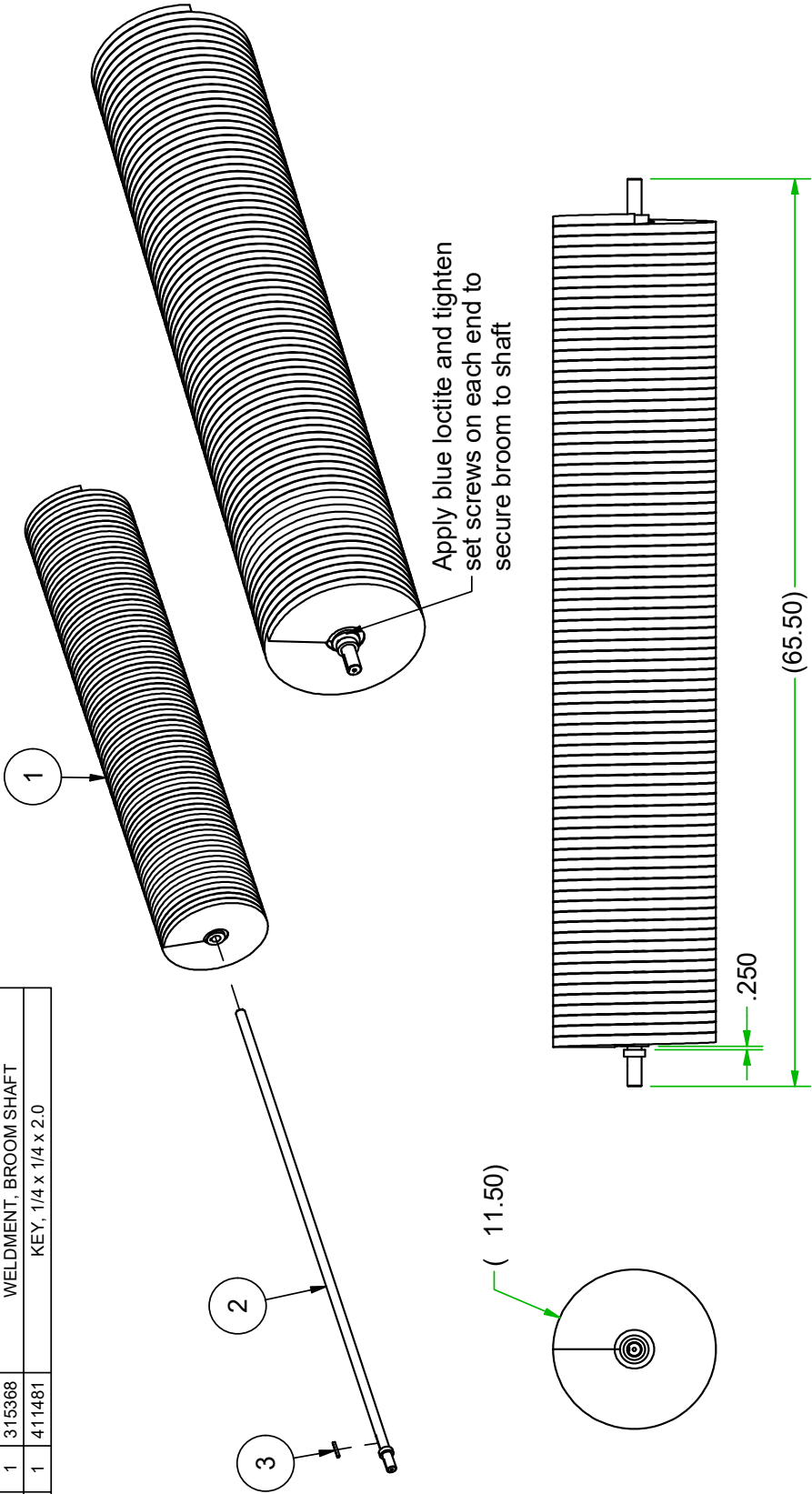


Parts List		
ITEM	QTY	PART # DESCRIPTION
1	80	110556 Bolt, 3/8-16 X 1 in Carriage
2	80	110645 NUT, 3/8-16 W/IZ FLANGE
3	1	315399 WELDMENT, PADDLE
4	8	317378 SUPPORT, RH PADDLE
5	8	317379 SUPPORT, LH PADDLE
6	4	317380 PADDLE, SWEEPER

12-28-2020

Brush Assembly

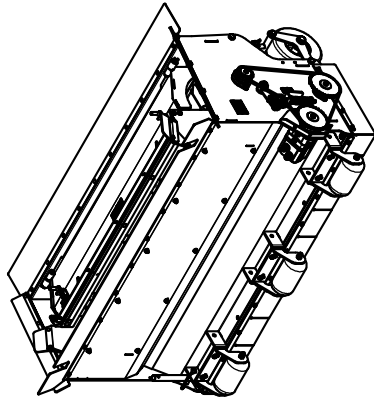
Parts List		
ITEM	QTY	PART # DESCRIPTION
1	1	302170 Brush, Spiral Wound, 60 x 1.50 OD, .030 Poly
2	1	315368 WELDMENT, BROOM SHAFT
3	1	411481 KEY, 1/4 x 1/4 x 2.0



INSTALLED ON THE FOLLOWING
PRODUCTION MACHINES
- HK4200 - S/N: 22A05 TO 22A99
- HK4400 - S/N: 22A04 TO 22A99

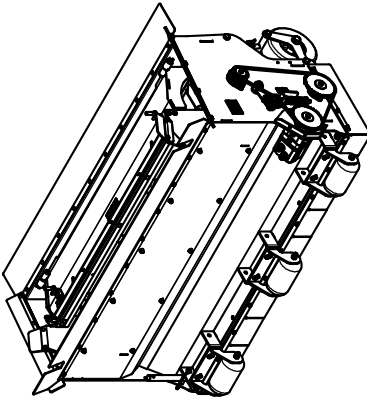
305125			REV. NC								
Parts List				Parts List				Parts List			
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION
1	1	102133	Decal, ISO, FOOT CRUSH	41	1	142002	SPRING, COMP 1 1/4 x 4 x .148	75	1	317261	TENSIONER, GEAR MOUNT
2	3	110010	BOLT, 1/2-13 X 9.0	42	1	142013	Sprocket, 4017 Idler, 5/8	76	2	317289	RETAINER, UPPER SIDE SEAL
3	19	110020	Bolt, 5/16-18 X 0.75 in Carriage	43	4	142019	Flange, 52mm, 2 Bolt	77	1	317295	COLLAR, SPRING TENSIONER
4	2	110023	BOLT, 5/8-11 X 6.5	44	2	142023	SPROCKET, 40BS35 X 1.0	78	1	317337	Shield, Broom Bearing
5	4	110024	BOLT, 5/8-11 X 8.0	45	1	142024	SPORCKET, 40BS17 X 1.25	79	1	317365	ROD, DECK PROP
6	2	110086	BOLT, 1/2-13 X 1.0	46	2	142025	Bearing, 52mm Spherical O.D., 1.0 ID	80	1	317424	LINER, DECK
7	56	110154	Bolt, 1/4-20 X 0.75 in Carriage	47	2	142026	Bearing, 62mm Spherical O.D., 1.25 ID	81	2	317428	RETAINER, SIDE CHUTE
8	2	110272	BOLT, 3/4-10 X 6.75, Hhcs Gr 5 Zinc	48	4	142027	Flange, 62mm, 2 Bolt	82	1	317441	RETAINER, FRONT DECK
9	62	110290	NUT, 1/4-20 WIZ FLANGE	49	2	200029	COTTER PIN, 5/32 X 1	83	1	317448	BRKT, FRONT DECK SEAL
10	2	110304	PIN, LOCK 3/8 X 2.5 SQ	50	1	302112	SKIRT, FRONT DECK	84	1	340013	ROLLER CHAIN, #40 DECK (53")
11	1	110335	WASHER, 1" FLAT MACHINE	51	1	302113	SKIRT, REAR DECK	85	3	510047	Roller, Anti-Scalp
12	6	110358	Bolt, 1/4-20 X 0.625 in Carriage	52	1	302116	SEAL, REAR TRANSITION	86	2	510228	KEY, 1/4 X 1/4 X 1.0 UNDER
13	1	110403	BOLT, 1/2-13 X 2.5	53	2	302117	SEAL, SIDE DECK	87	2	510237	CASTER WHEEL ASSY, 9 X 3.5-4
14	4	110419	BOLT, 1/2-13 X 1.75	54	1	302146	Decal, Tension Adjustment	88	1	510249	COTTER PIN, 1/8 X 0.75
15	8	110437	BOLT, 3/8-16 X 0.75, WIZ FLANGE	55	1	302165	CUTOFF, AIR FLOW	89	4	800128	BUSHING, IGUS, FOOT PEDAL
16	6	110440	BOLT, 3/8-16 X 1, WIZ FLANGE	56	1	302166	SEAL, FRONT DECK	90	1	902228	Decal, Do Not Remove Shield
17	2	110459	BOLT, 5/16-18 X 1, WIZ FLANGE	57	2	302168	SEAL, SIDE CHUTE	91	1	902230	Decal, Shaft Hazard
18	1	110513	BOLT, 5/8-11 X 2.5	58	2	302169	SKIRT, SIDE DECK	92	1	902232	Decal, High Pressure Injection
19	4	110556	Bolt, 3/8-16 X 1 in Carriage	59	1	305111	ASSY, PADDLE	93	4	910865	SPACER, 1.125 X .812 X .9375
20	1	110597	NUT, 5/8-11 HEX	60	1	305123	ASSY, PADDLE SHIELD	94	1	923014	MOTOR, 4.9 CID
21	19	110606	NUT, 5/16-18 WIZ FLANGE	61	1	305134	ASSY, FULL BRUSH, SPIRAL WOUND				
22	6	110610	NUT, 1/2-13	62	2	312015	PIN, 5/8" x 3.5"				
23	4	110615	NUT, 1/2-13, UNITORQUE LOCK	63	2	315339	WELDMENT, UPPER WHEEL ADJUST				
24	2	110625	NUT, 3/4-10, UNITORQUE LOCK	64	2	315340	WELDMENT, LOWER WHEEL ADJUST				
25	6	110639	NUT, 5/8-11, UNITORQUE LOCK	65	2	315341	WELDMENT, GAUGE WHEEL BRKT				
26	18	110645	NUT, 3/8-16 WIZ FLANGE	66	1	315377	WELDMENT, SWEEPER DRIVE IDLER				
27	1	110655	WASHER, 5/8" LOCK	67	1	315378	WELDMENT, IDLER ADJUSTMENT				
28	8	110658	WASHER, 1/2" FLAT STANDARD	68	1	315418	WELDMENT, REAR CHUTE SUPPORT				
29	1	110663	WASHER, 5/8" FLAT SAE	69	1	315424	WELDMENT, SWEEPER DECK, U.S.				
30	6	110666	WASHER, 1/2" LOCK	70	3	315425	WELDMENT, ANTI-SCALP WHEEL MOUNT				
31	4	110678	WASHER, 3/4 FLAT SAE	71	4	317252	RETAINER, FRONT DECK				
32	2	110826	NUT, 3/8-16 GR 5	72	2	317253	RETAINER, SIDE DECK				
33	1	110929	BOLT, M8-1.25 X 20 WIZ FLNG	73	1	317256	SPACER, KEYWAY, 1.625 X .5 X .909				
34	1	110987	Pin, Square Retainer, .50 X 3.00 Pin Dia	74	3	317258	WASHER, 2.0 X .344 X .12				
35	2	111033	WASHER, 1/4" X 1" OD, Plain								
36	1	111186	WASHER, 1.50 x .406 x .125, FLAT								
37	1	111188	WASHER, 1.25 x 1.875 x .047, FLAT								
38	1	112130	Clevis Pin, 3/8" x 3/4", ZINC								
39	1	120233	ADAPTER, 4MJ-4MB								
40	2	120251	ADAPTER, 10MJ-10MB								

DECK
ASSEMBLY



SIMILAR TO 305130

3-25-2022



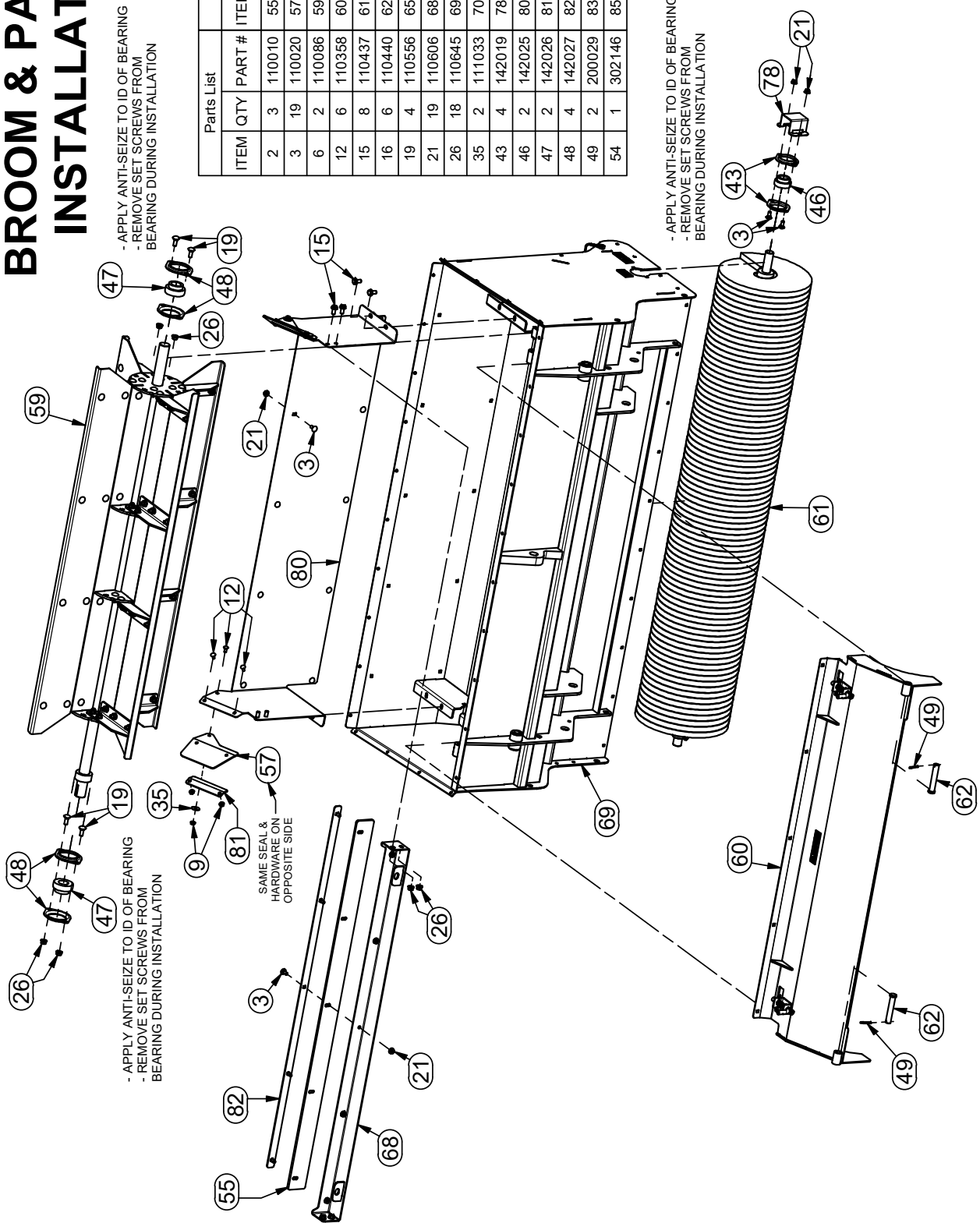
SIMILAR TO 305130

DECK ASSEMBLY

3-25-2022

305125 REV: NC

BROOM & PADDLE INSTALLATION



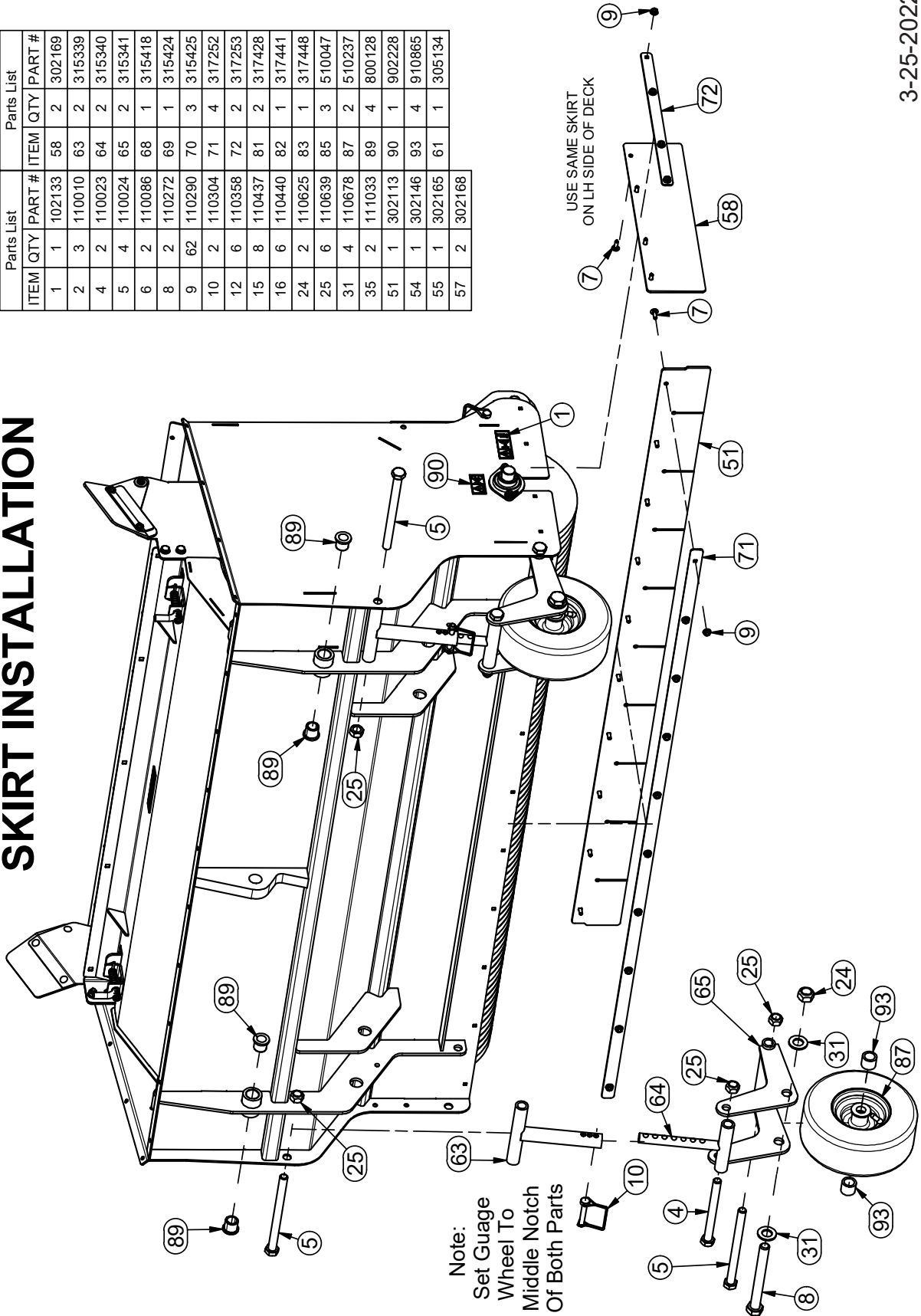
Parts List			Parts List		
ITEM	QTY	PART #	ITEM	QTY	PART #
2	3	110010	55	1	302165
3	19	110020	57	2	302168
6	2	110086	59	1	305111
12	6	110358	60	1	305123
15	8	110437	61	1	305134
16	6	110440	62	2	312015
19	4	110556	65	2	315341
21	19	110606	68	1	315418
26	18	110645	69	1	315424
35	2	111033	70	3	315425
43	4	142019	78	1	317337
46	2	142025	80	1	317424
47	2	142026	81	2	317428
48	4	142027	82	1	317441
49	2	200029	83	1	317448
54	1	302146	85	3	510047

GAUGE WHEEL & LOWER SKIRT INSTALLATION

305125

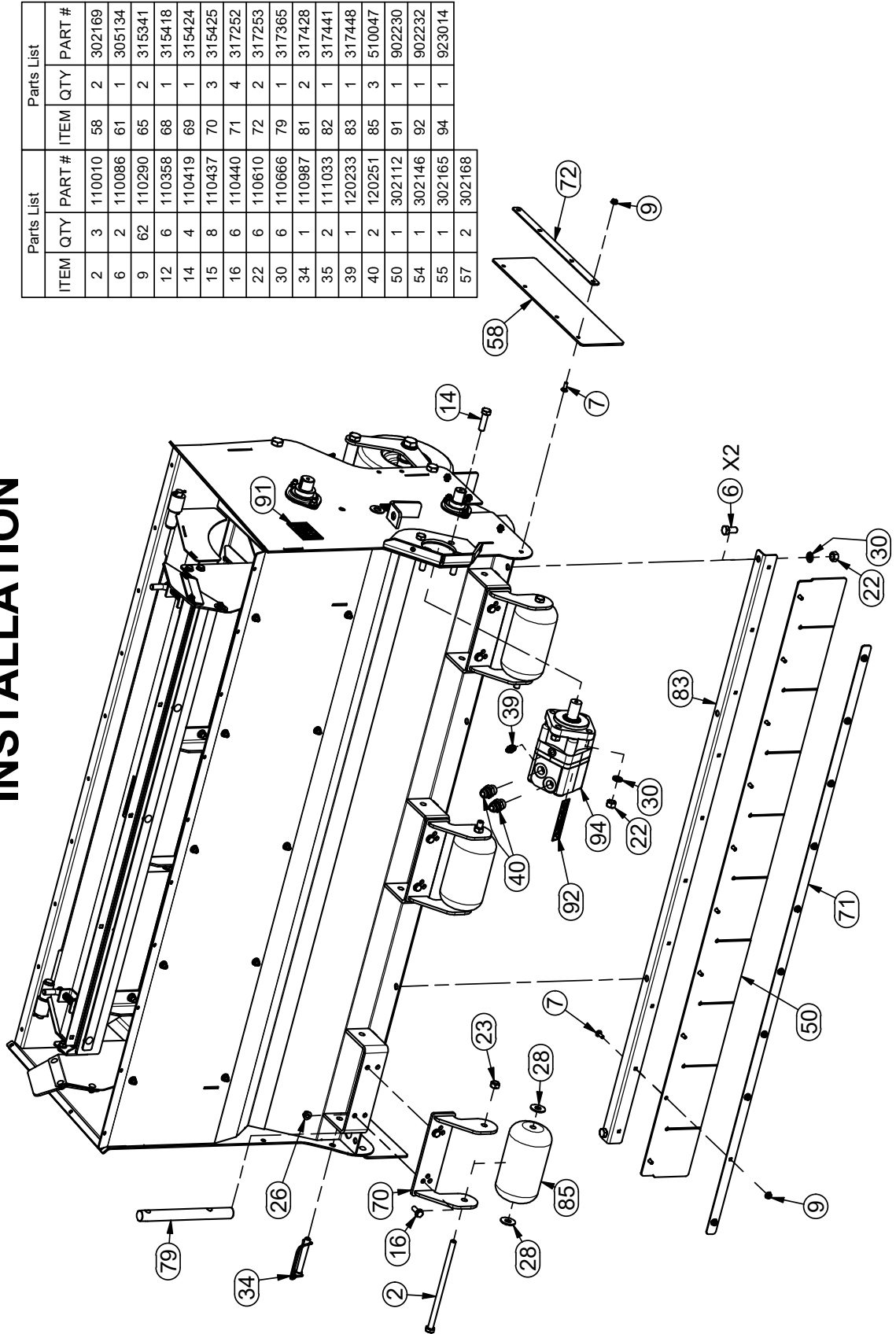
REV: NC

Parts List			Parts List		
ITEM	QTY	PART #	ITEM	QTY	PART #
1	1	102133	58	2	302169
2	3	110010	63	2	315339
4	2	110023	64	2	315340
5	4	110024	65	2	315341
6	2	110086	68	1	315418
8	2	110272	69	1	315424
9	62	110290	70	3	315425
10	2	110304	71	4	317252
12	6	110358	72	2	317253
15	8	110437	81	2	317428
16	6	110440	82	1	317441
24	2	110625	83	1	317448
25	6	110639	85	3	510047
31	4	110678	87	2	510237
35	2	111033	89	4	800128
51	1	302113	90	1	902228
54	1	302146	93	4	910865
55	1	302165	61	1	305134
57	2	302168			



3-25-2022

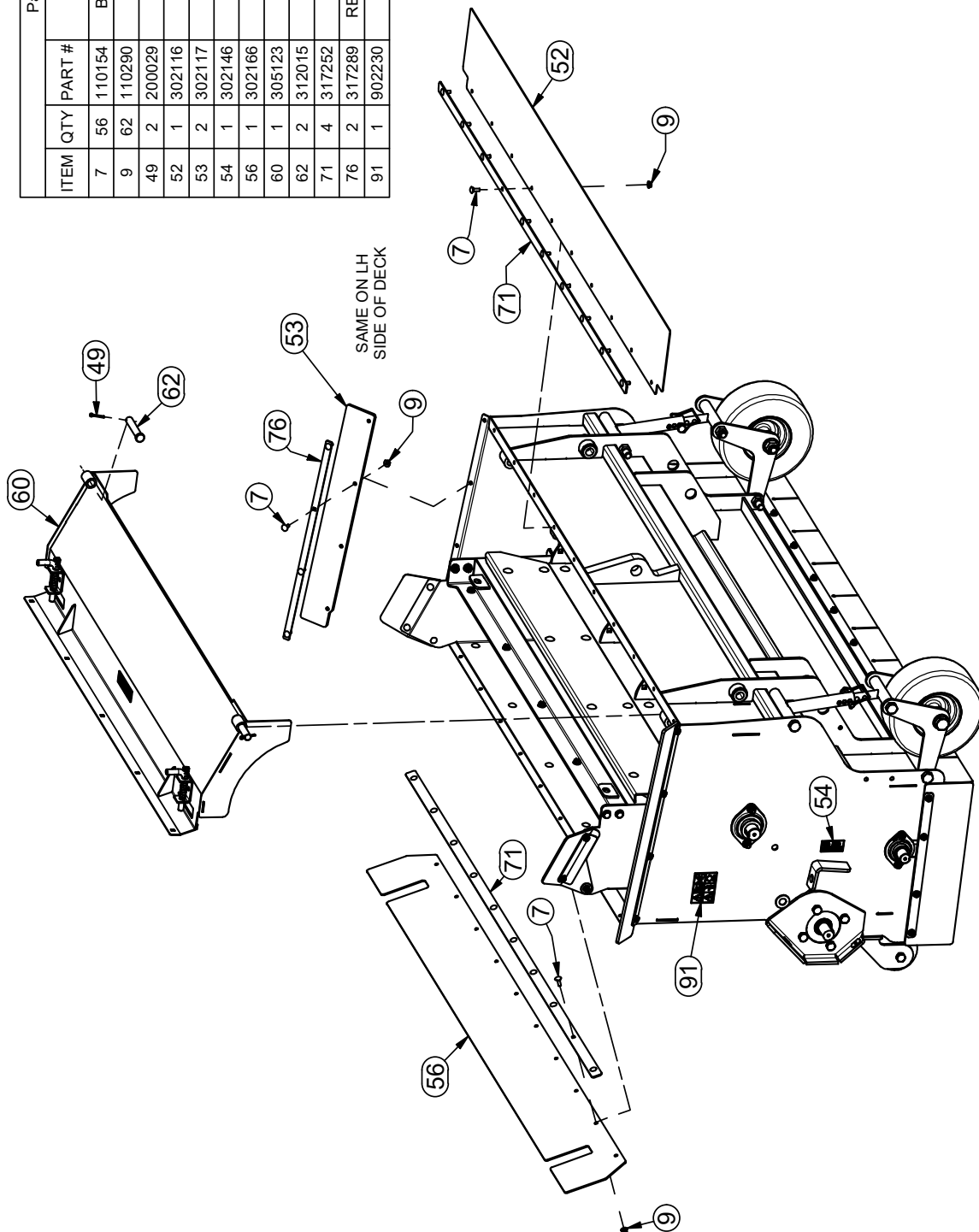
HYDRAULIC MOTOR, SCALP WHEELS & LOWER SKIRT INSTALLATION



Parts List		Parts List	
ITEM	QTY	PART #	PART #
2	3	110010	58
6	2	110086	61
9	62	110290	65
12	6	110358	68
14	4	110419	69
15	8	110437	70
16	6	110440	71
22	6	110610	72
30	6	110666	79
34	1	110987	81
35	2	111033	82
39	1	120233	83
40	2	120251	85
50	1	302112	91
54	1	302146	92
55	1	302165	94
57	2	302168	

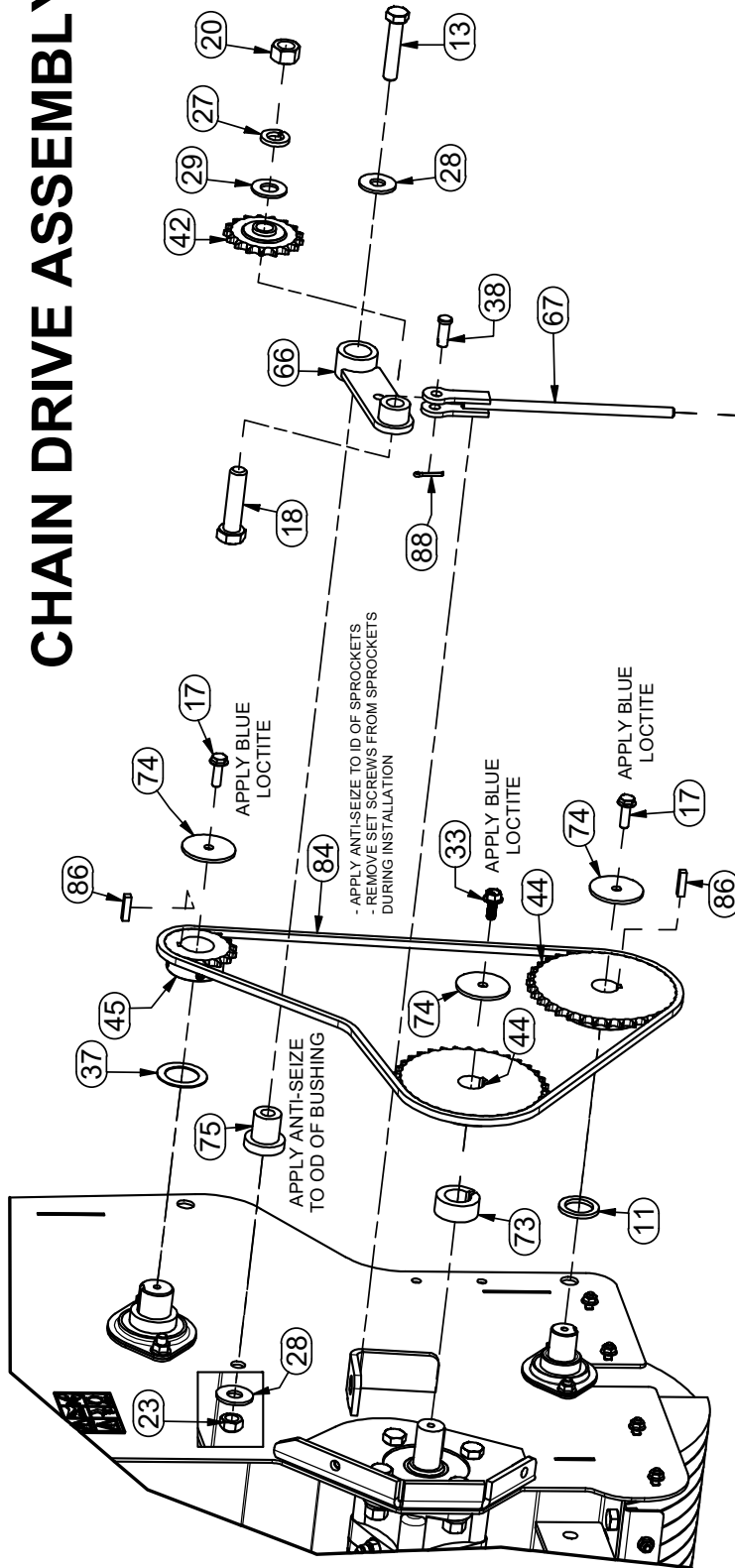
UPPER DECK SEAL & PADDLE SHIELD INSTALLATION

Parts List			
ITEM	QTY	PART #	DESCRIPTION
7	56	110154	Bolt, 1/4-20 X 0.75 in Carriage
9	62	110290	NUT, 1/4-20 WIZ FLANGE
49	2	200029	COTTER PIN, 5/32 X 1
52	1	302116	SEAL, REAR TRANSITION
53	2	302117	SEAL, SIDE DECK
54	1	302146	Decal, Tension Adjustment
56	1	302166	SEAL, FRONT DECK
60	1	305123	ASSY, PADDLE SHIELD
62	2	312015	PIN, 5/8" x 3.5"
71	4	317252	RETAINER, FRONT DECK
76	2	317289	RETAINER, UPPER SIDE SEAL
91	1	902230	Decal, Shaft Hazard



3-25-2022

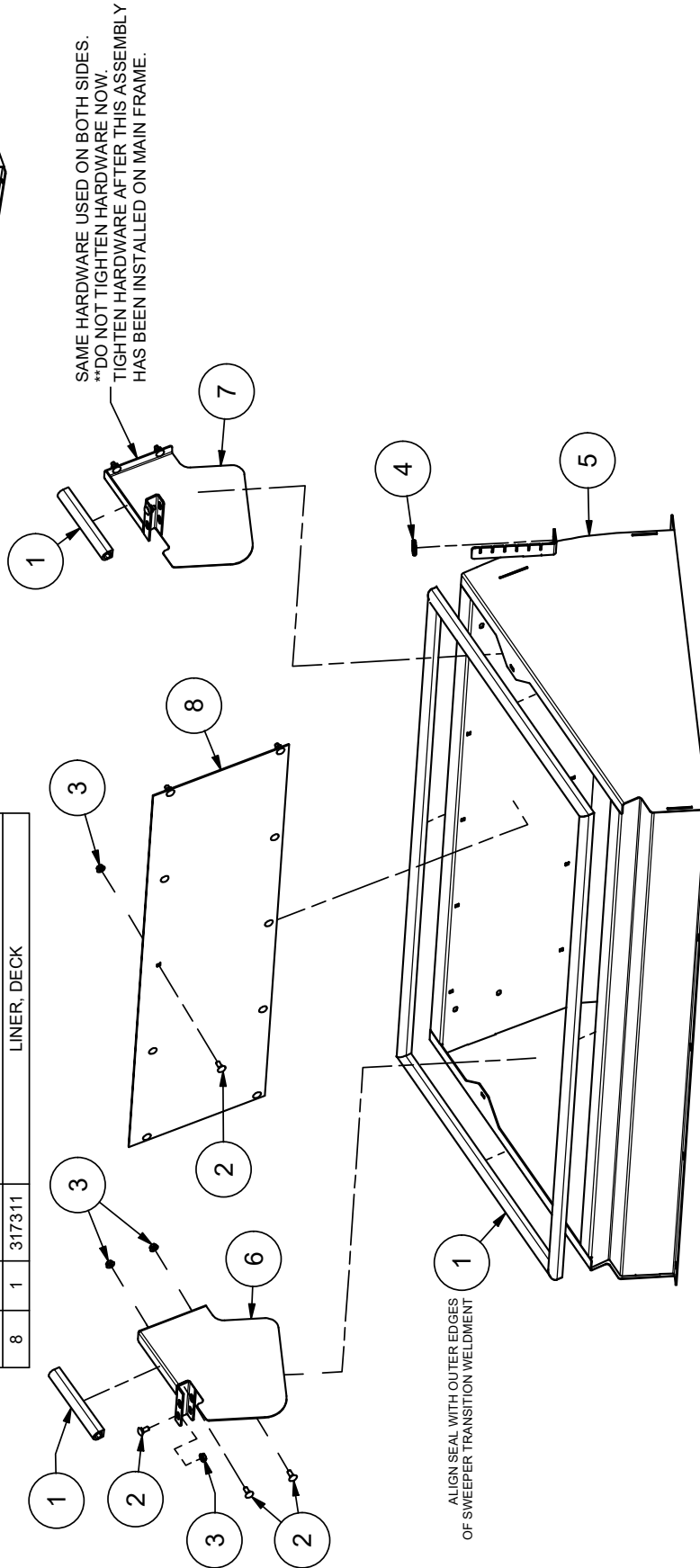
CHAIN DRIVE ASSEMBLY



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

Parts List		Parts List	
ITEM	PART #	DESCRIPTION	DESCRIPTION
11	110335	WASHER, 1" FLAT MACHINE	41 142002 SPRING, COMP 1 1/4 x 4 x .148
13	110403	BOLT, 1/2-13 X 2.5	42 142013 Sprocket, 4017 Idler, 5/8
17	110459	BOLT, 5/16-18 X 1, WIZ FLANGE	44 142023 SPROCKET, 40BS35 X 1.0
18	110513	BOLT, 5/8-11 X 2.5	45 142024 SPROCKET, 40BS17 X 1.25
20	110597	NUT, 5/8-11 HEX	66 315377 WELDMENT, SWEEPER DRIVE IDLER
23	110615	NUT, 1/2-13, UNITORQUE LOCK	67 315378 WELDMENT, IDLER ADJUSTMENT
27	110655	WASHER, 5/8" LOCK	73 317256 SPACER, KEYWAY, 1.625 X .5 X .909
28	110658	WASHER, 1/2" FLAT STANDARD	74 317258 WASHER, 2.0 X .344 X .12
29	110663	WASHER, 5/8" FLAT SAE	75 317261 TENSIONER, GEAR MOUNT
32	110826	NUT, 3/8-16 GR 5	77 317295 COLLAR, SPRING TENSIONER
33	110929	BOLT, M8-1.25 X 20 WIZ FLNG	84 340013 ROLLER CHAIN, #40 DECK (53")
36	111186	WASHER, 1.50 x .406 x .125, FLAT	86 510228 KEY, 1/4 X 1/4 X 1.0 UNDER
37	111188	WASHER, 1.25 x 1.875 x .047, FLAT	88 510249 COTTER PIN, 1/8 X 0.75
38	112130	Clevis Pin, 3/8" x 3/4", ZINC	

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 W/IZ 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

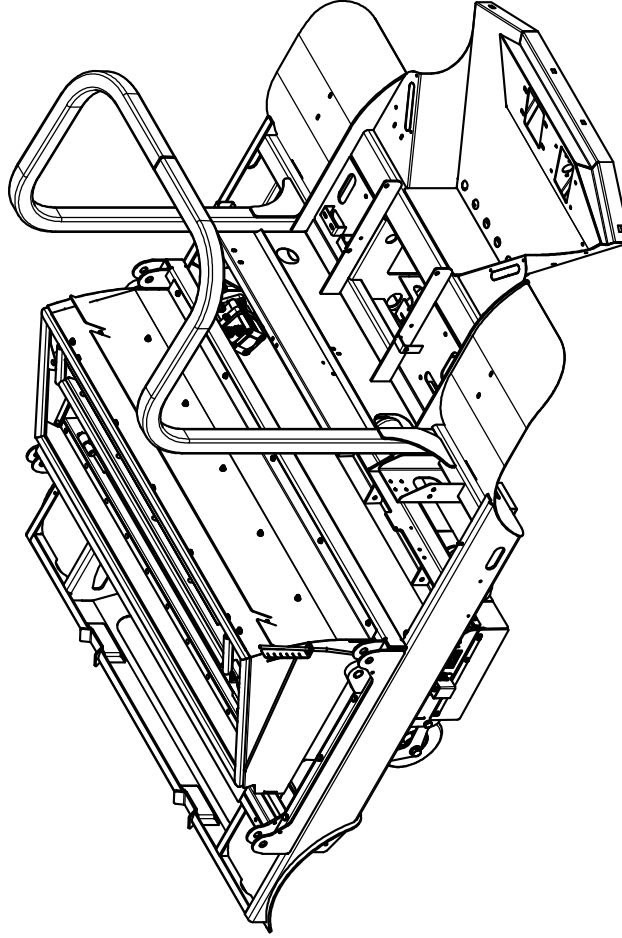


DECK TRANSITION ASSEMBLY

3-25-2022

DECK INSTALLATION

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	2	100465	COTTER PIN, 3/16 X 1.75
2	4.4 FT	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 fng
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	305125	ASSY, DECK, 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

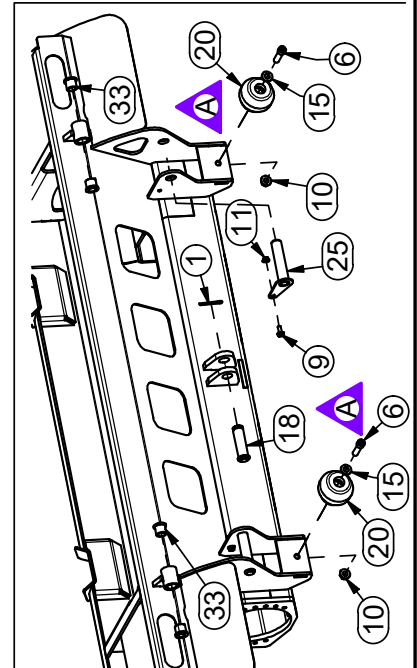
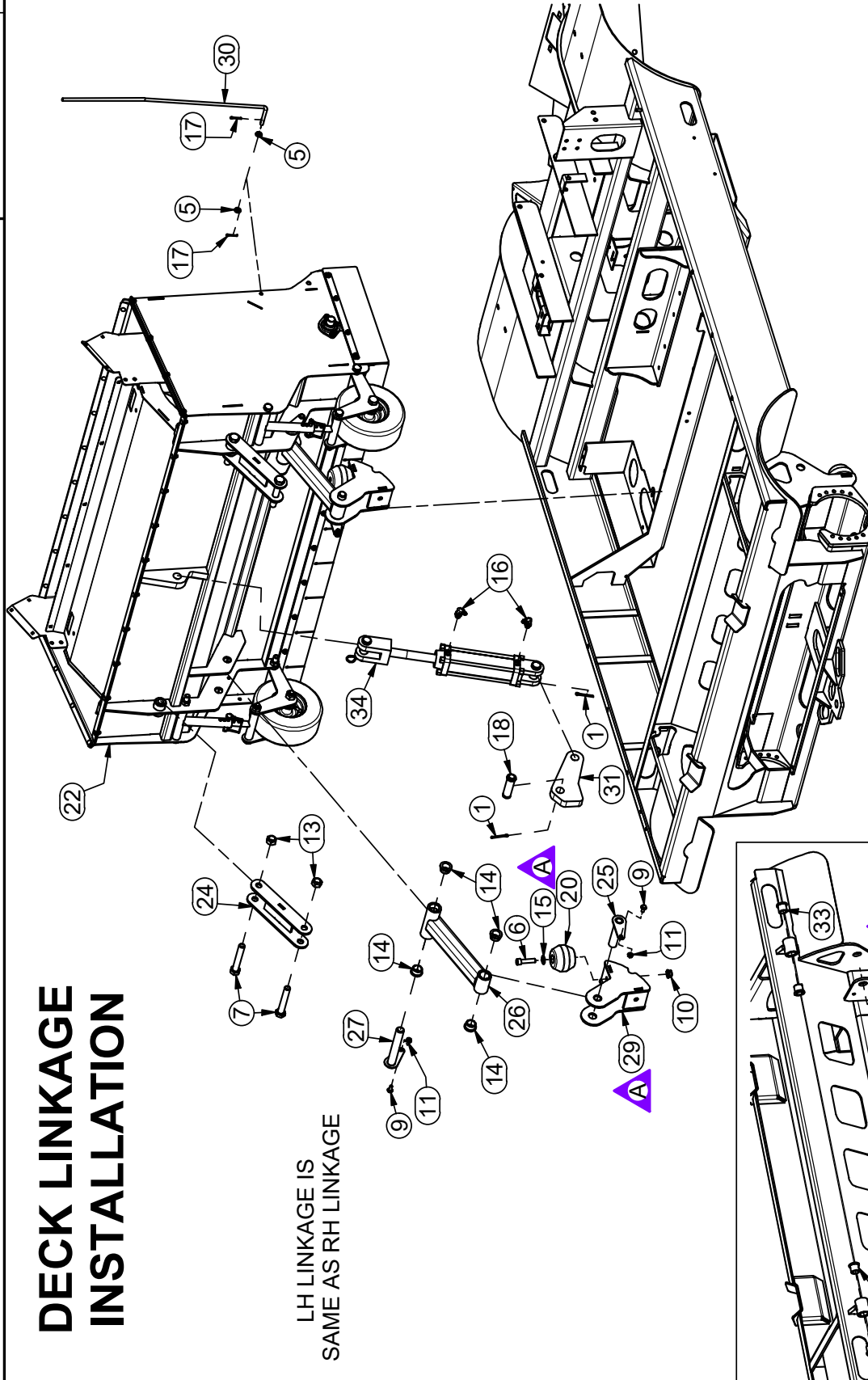


SIMILAR TO 305131

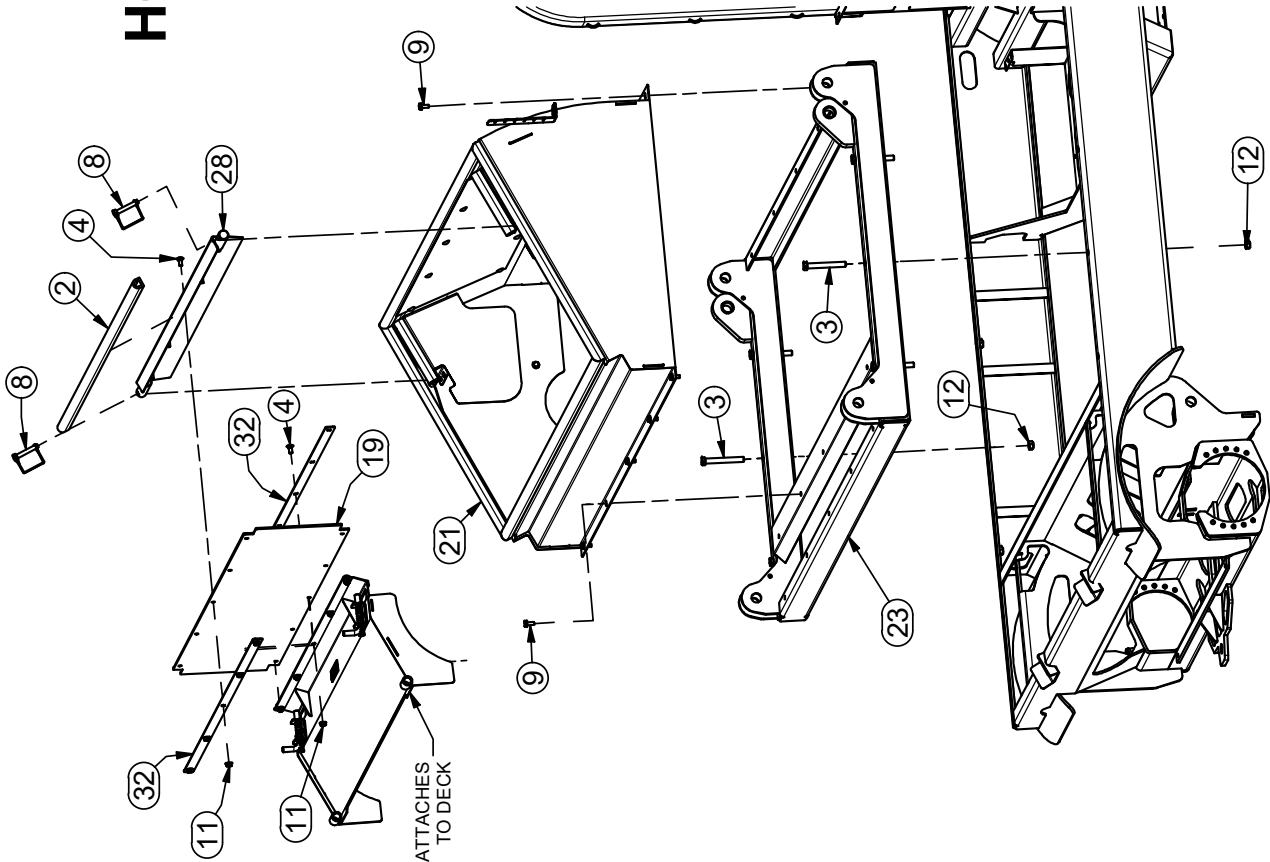
3-30-2022

DECK LINKAGE INSTALLATION

LH LINKAGE IS
SAME AS RH LINKAGE

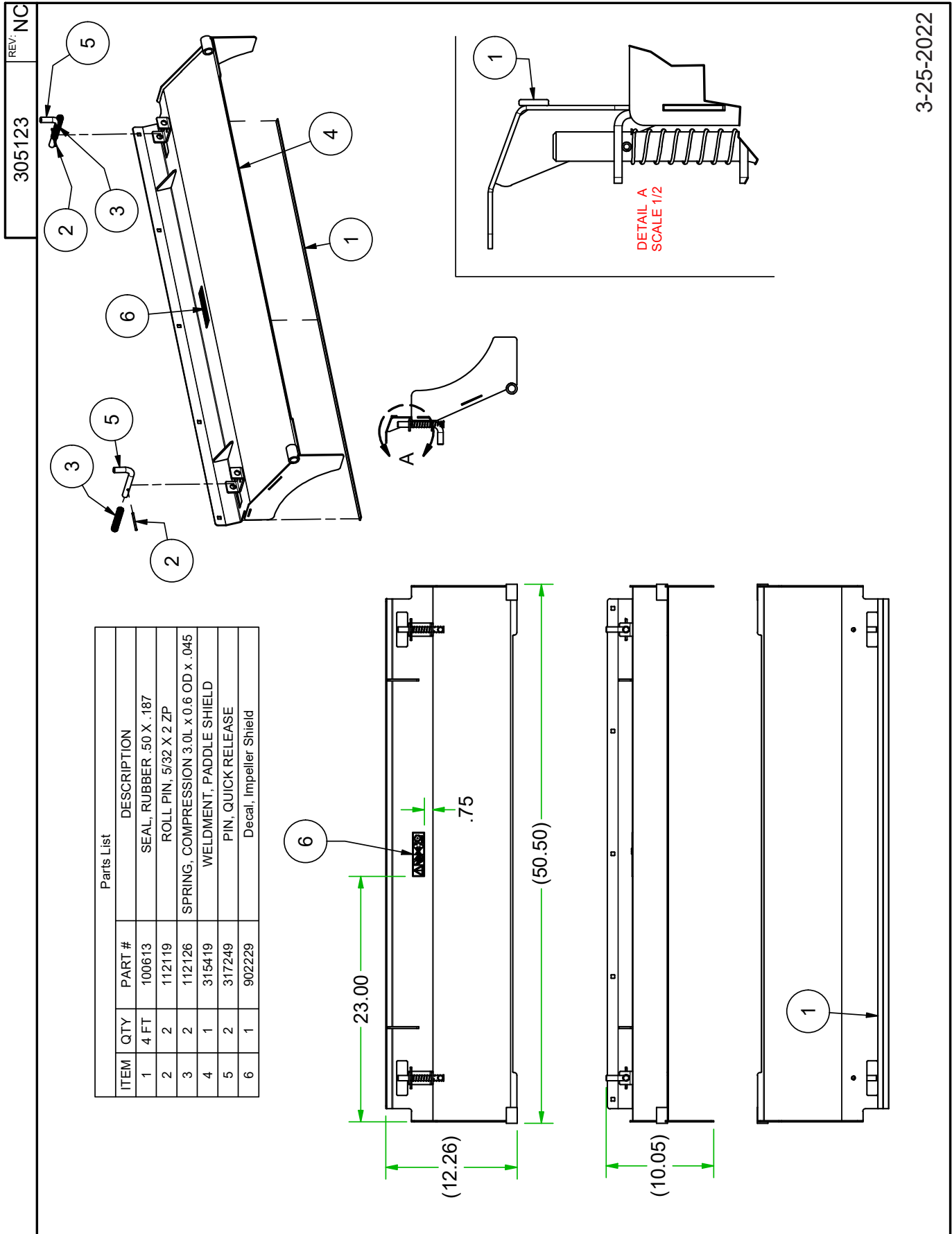


HOPPER TRANSITION & HOPPER MOUNT INSTALLATION



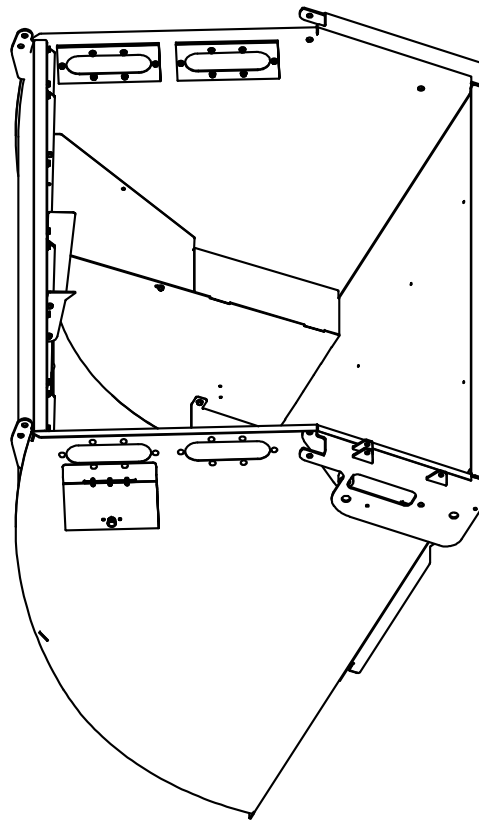
Parts List			
ITEM	QTY	PART #	DESCRIPTION
2	4.4 FT	102004	D-Seal, Rubber 1.00" x 1.00"
3	6	110003	BOLT, 1/2-13 X 4.0
4	10	110020	Bolt, 5/16-18 X 0.75 in Carriage
8	2	110304	PIN, LOCK 3/8 X 2.5 SQ
9	14	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
11	14	110606	NUT, 5/16-18 WIZ FLANGE
12	6	110615	NUT, 1/2-13, 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

3-30-2022



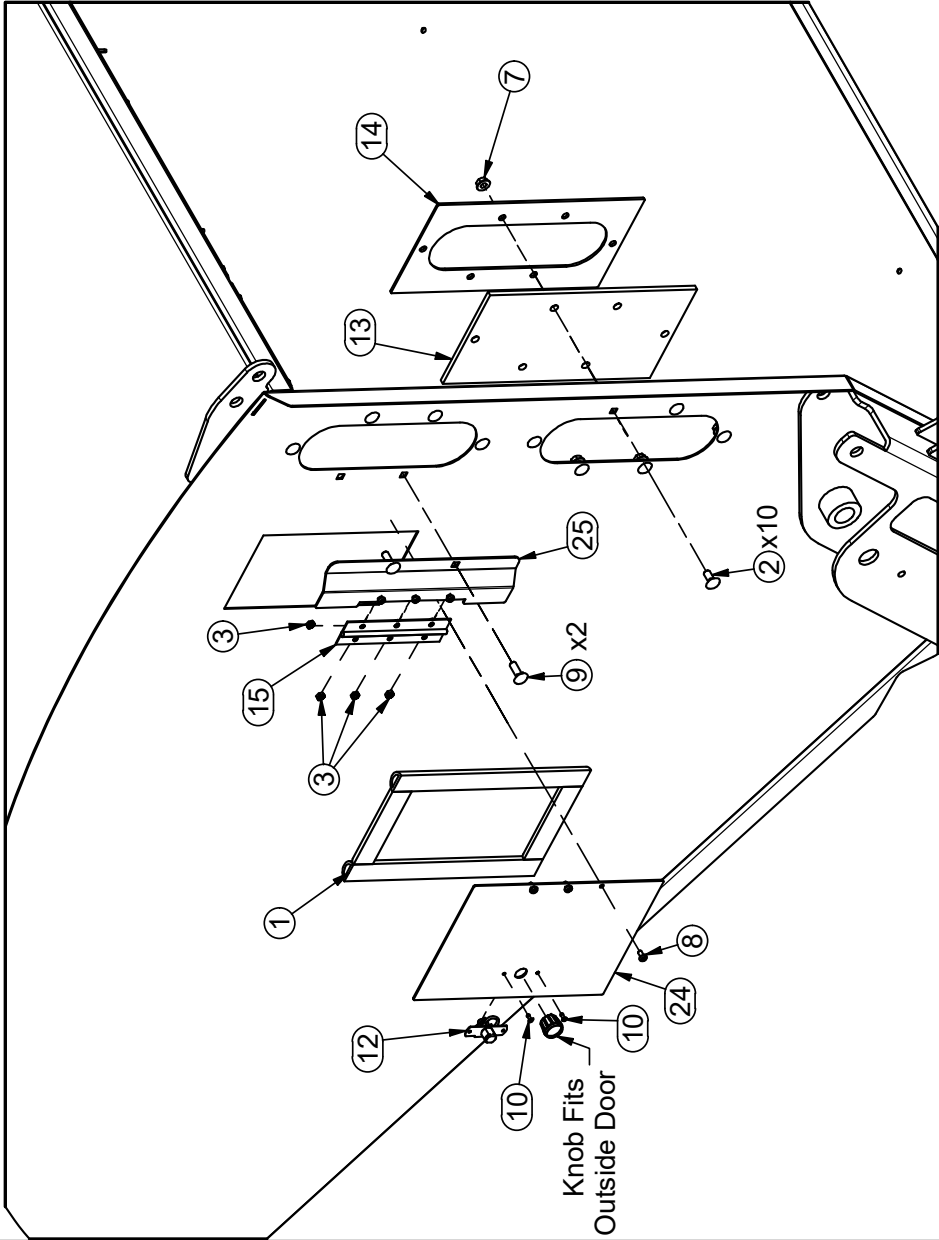
Parts List		
ITEM	QTY	PART # DESCRIPTION
1	2	102075 SEAL
2	32	110020 Bolt, 5/16-18 X 0.75 in Carriage
3	6	110119 NUT, 10-24 LOCK
4	26	110319 NUT, 5/16-18 U-TYPE .75L
5	8	110444 BOLT, 5/16-18 X 0.75, WIZ FLANGE
6	24	110459 BOLT, 5/16-18 X 1, WIZ FLANGE
7	45	110606 NUT, 5/16-18 WIZ FLANGE
8	6	110788 BOLT, 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

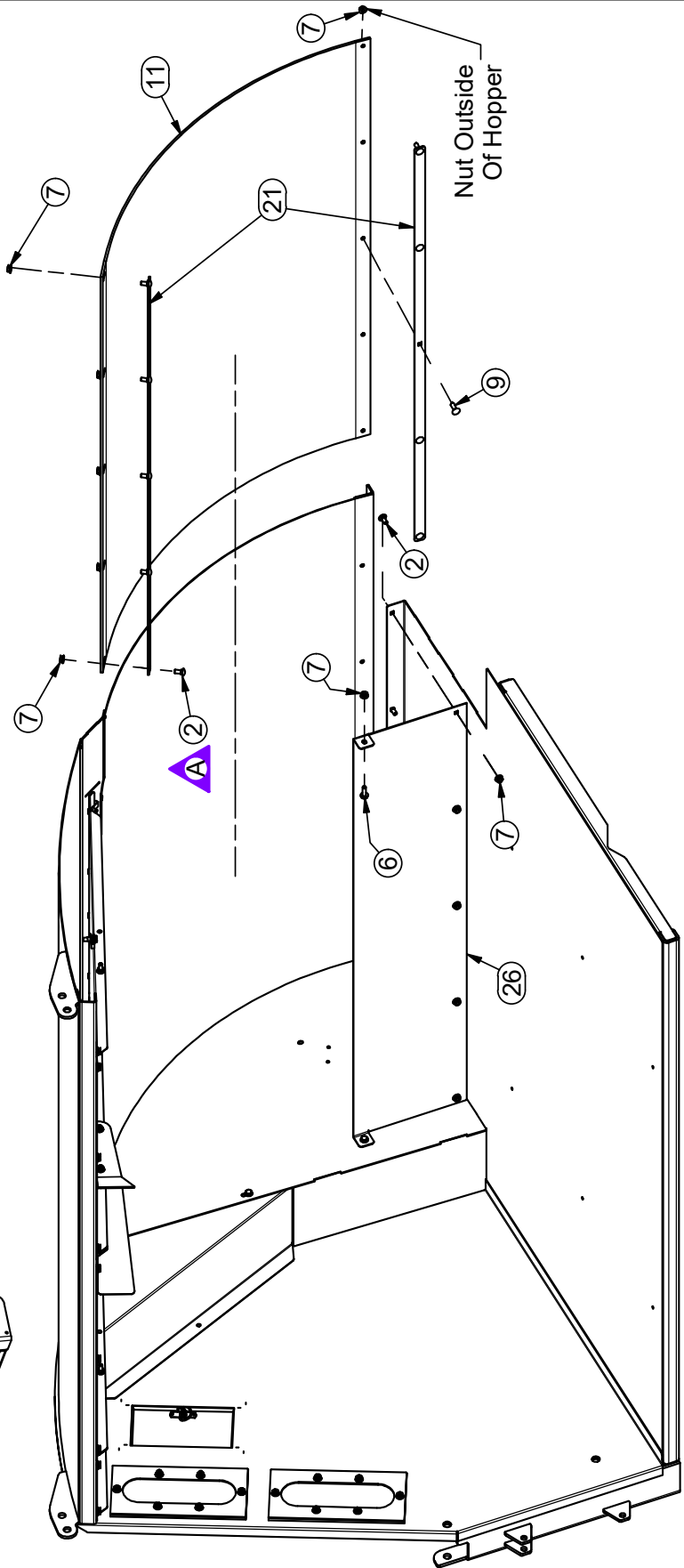
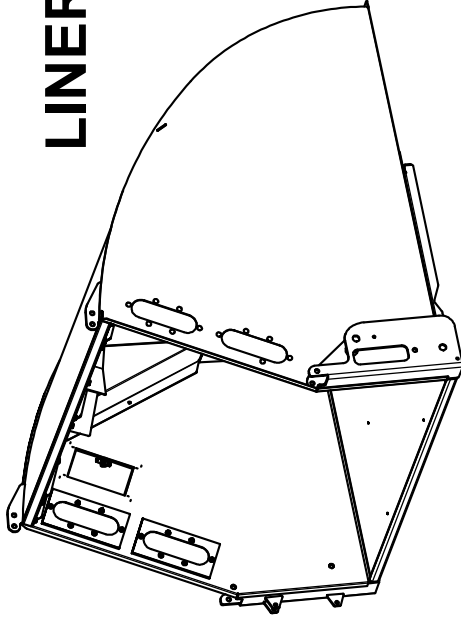


Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	2' 8"	102075	SEAL
2	32	110020	Bolt, 5/16-18 X 0.75 in Carriage
3	6	110119	NUT, 10-24 LOCK
12	1	302131	LATCH, SPRING
13	4	311691	SIGHT GLASS, HOPPER
14	4	311692	Backing Plate, Sight Glass
15	1	311729	HINGE, 6" ALUMINUM W/ HOLES
24	1	317413	DOOR, HOPPER DEBRIS, US
25	1	317414	BRKT, HOPPER DEBRIS DOOR, US
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

LINER & SHIELD INSTALL

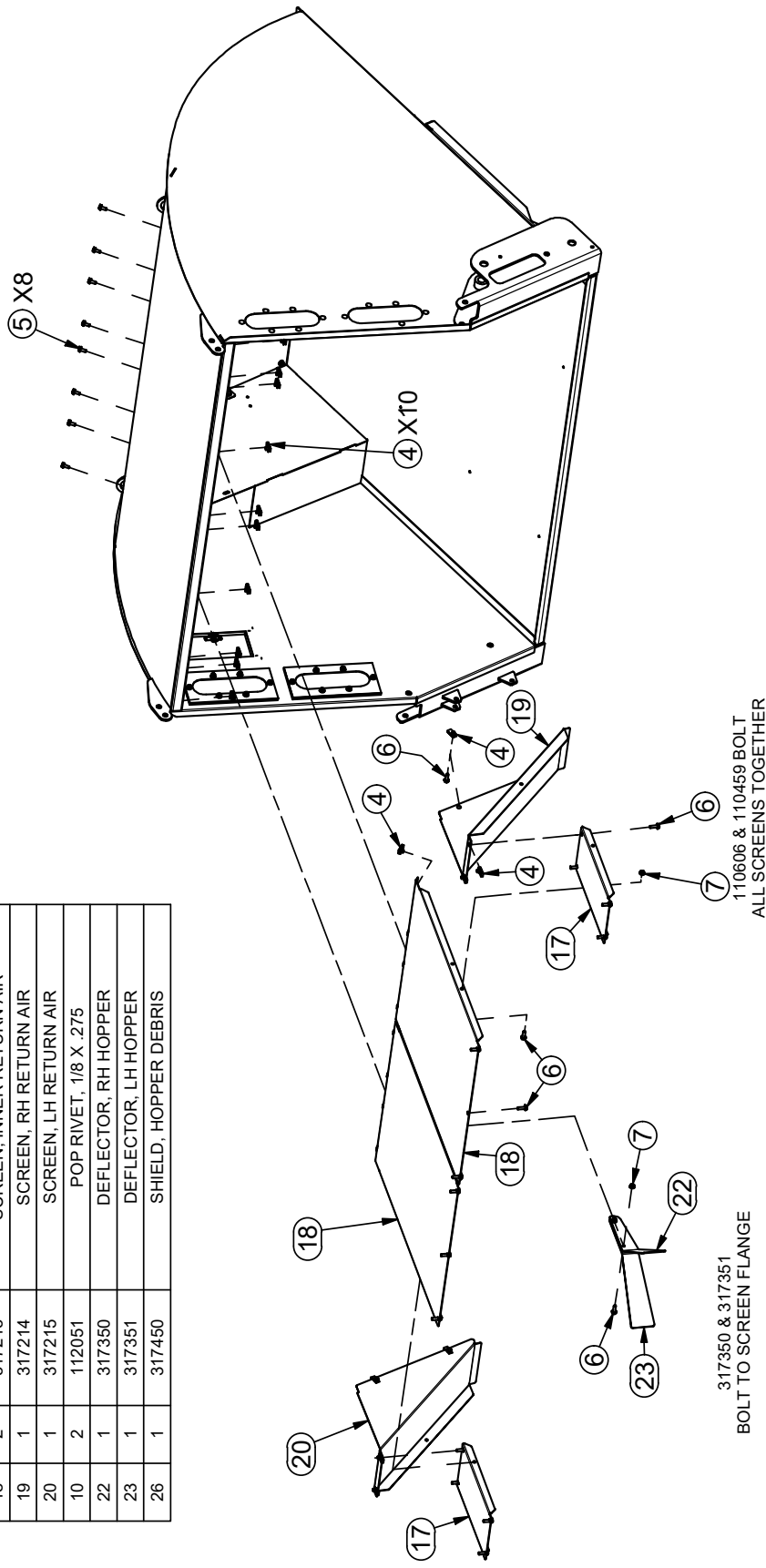
305127 REV: A

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

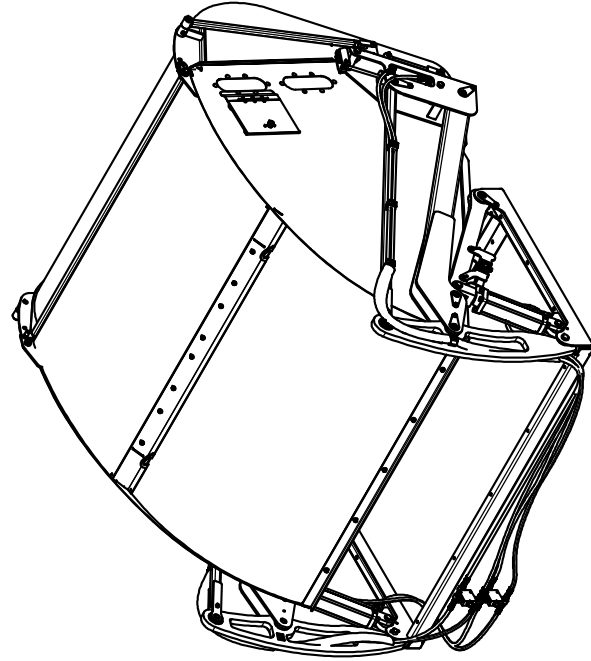


305128

REV: NC

Parts List				Parts List			
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION
1	8.75'	100354	WEBBING, NYLON 1.50ID, SHEATH	37	2	315412	WELDMENT, LOWER LIFT LINK, US
2	2	102137	CLEVIS PIN, 1/2 X 1.75	38	2	315413	WELDMENT, UPPER LIFT LINK, US
3	4	110025	BOLT, 5/8-11 X 5.5	39	2	315416	WELDMENT, DOOR LIFT LINK, US
4	4	110378	BOLT, 5/16-18 X 2.0	40	2	317216	CLEVIS PIN, 3/4 X 3.75, W/ HOLE
5	2	110396	BOLT, 5/16-18 X 2.5	41	4	317320	SPACER, CYLINDER
6	8	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE	42	2	323010	CYLINDER - STEERING, 1-3/4 X 6
7	8	110474	BOLT, 1/4-20 X 1-1/2	43	1	323065	HOSE KIT, HAWK HOPPER HYDRAULIC
8	2	110536	BOLT, 5/16-18 X 3.25	44	2	323066	Cylinder, 2.5 X 8, -6 SAE, Hopper
9	2	110576	BOLT, 5/8-11 X 1.5 GR 5	45	2	500184	COTTER PIN, 3/16 X 1.25
10	10	110600	NUT, 5/16-18, UNITORQUE LOCK	46	2	500230	GREASE ZERK, 1/4-28 90deg
11	8	110606	NUT, 5/16-18 WIZ FLANGE	47	14	510174	GREASE ZERK, 1/4-28 ST
12	6	110639	NUT, 5/8-11, UNITORQUE LOCK	48	8	522104	DOUBLE HOSE CLAMP
13	2	110665	WASHER, 5/16" FLAT STANDARD	49	8	522105	DOUBLE COVERPLATE
14	8	110667	WASHER, 1/4" LOCK				
15	2	111190	Bolt, 3/8 x 2 Shoulder				
16	2	112131	Clevis Pin, 1/2" x 1-1/2", ZINC-PLATED STEEL				
17	2	112133	Clevis Pin, 1" x 2-3/16", ZINC-PLATED STEEL				
18	2	120222	ADAPTER, 6MJ-6MB90				
19	4	120233	ADAPTER, 4MJ-4MB				
20	4	120266	ADAPTER, 4MJ-4FJX90				
21	2	120398	ADAPTER, REST 6MJ-6MB, .047				
22	2	140016	PIN, LOCK, 1/4 X 2-1/4, SQ WIRE				
23	4	200029	COTTER PIN, 5/32 X 1				
24	2	305103	Assy, Safety Latch, ISO				
25	1	305113	Assy, Hopper Door, ISO, US				
26	1	305127	ASSY, HOPPER, U.S.				
27	1	312022	CLIP, HAIRPIN 3/32 x 1.625				
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	1	315393	WELDMENT, DOOR STOP				
35	2	315410	WELDMENT, VERTICAL LIFT LINK, US				
36	2	315411	WELDMENT, CYLINDER LIFT LINK, US				

HOPPER INSTALLATION



SIMILAR TO 305133

3-25-2022

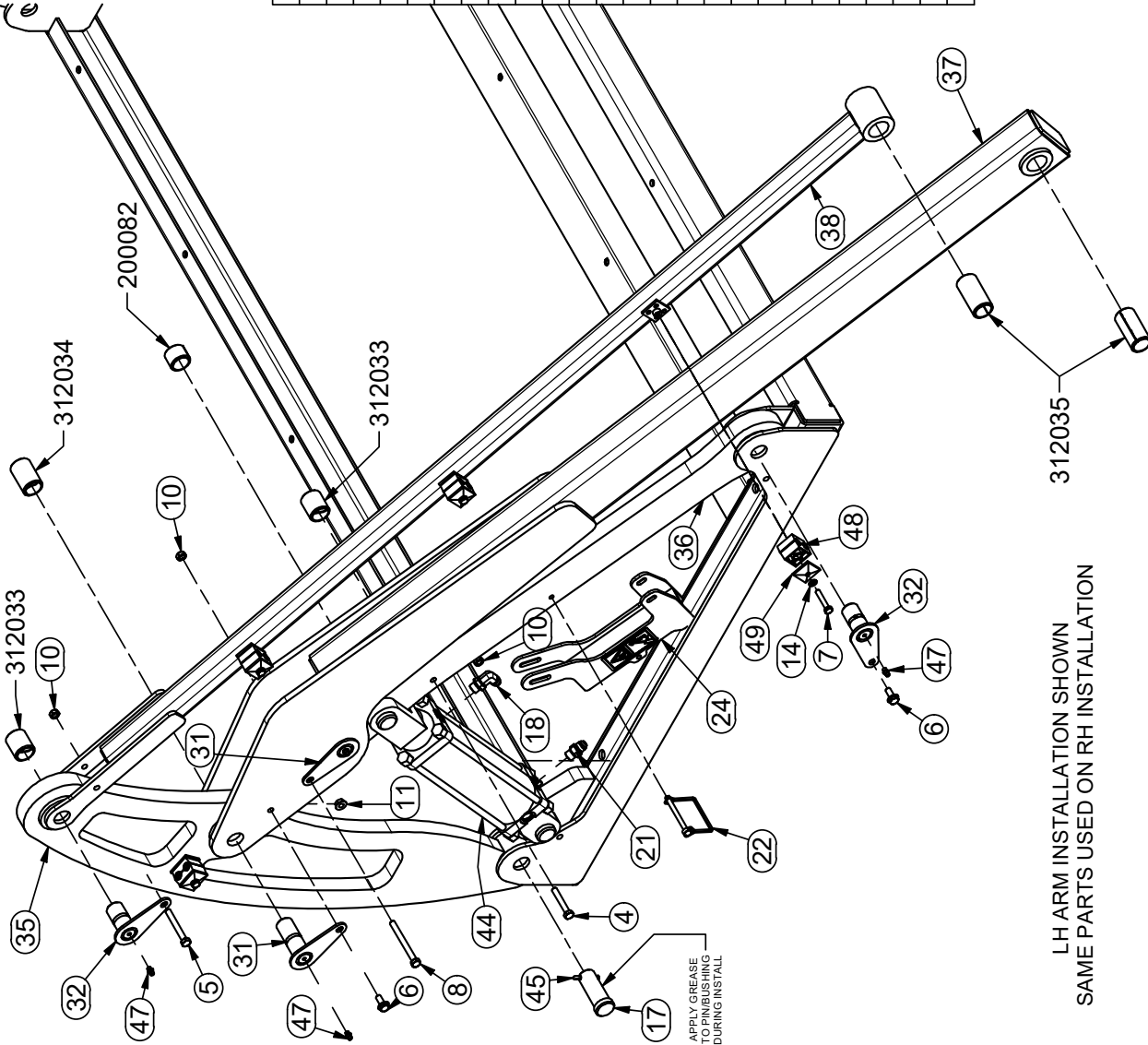
305128

REV: NC

LIFT ARM ASSEMBLY

Service Parts	
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, w/
1	312034 Bushing, 1.25 X 1 X 1.938, Split, w/
2	312035 Bushing, 1.25 X 1 X 2.5, Split, w/

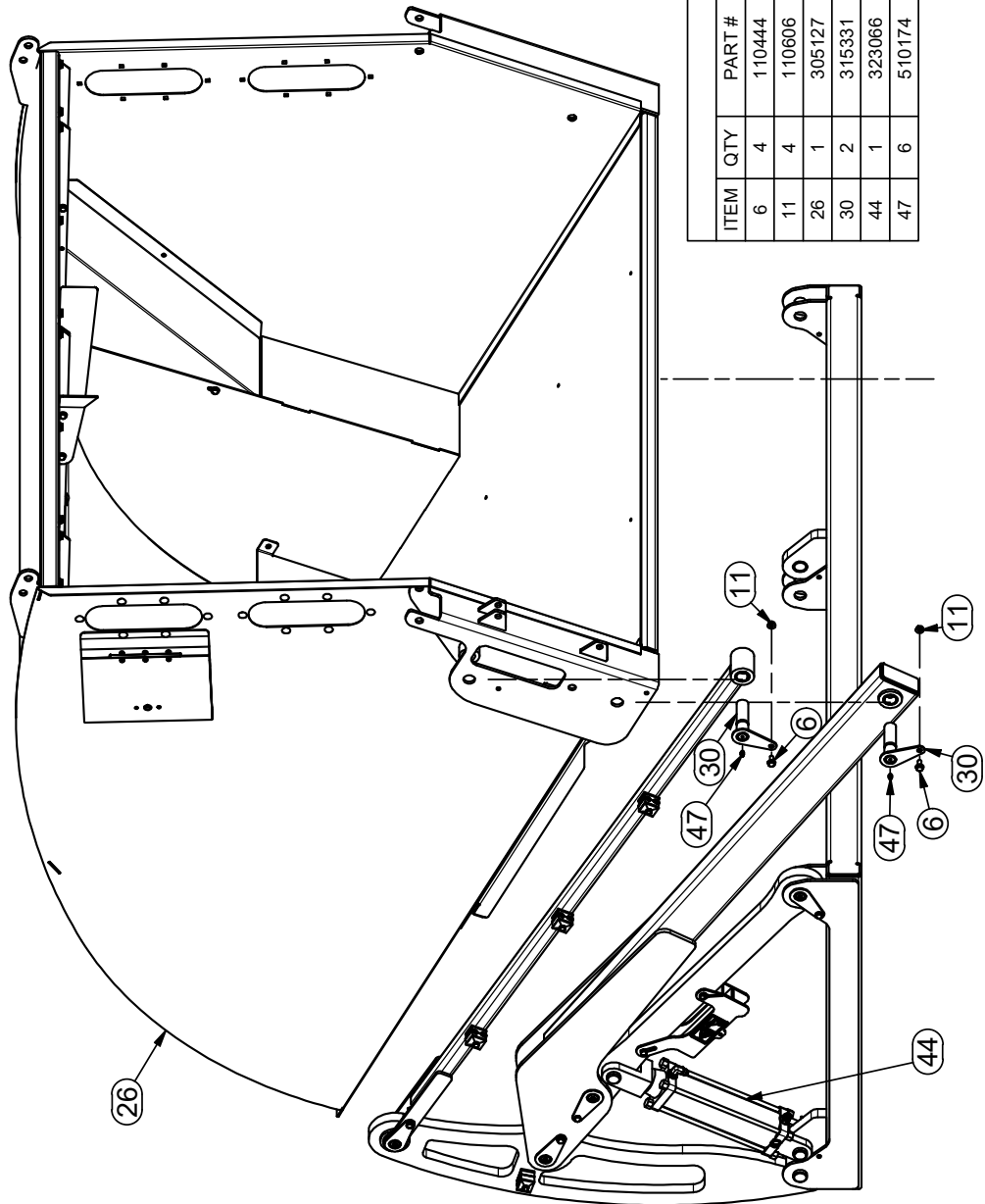
Parts List	
ITEM	QTY PART # DESCRIPTION
4	1 110378 BOLT, 5/16-18 X 2.0
5	1 110396 BOLT, 5/16-18 X 2.5
6	2 110444 BOLT, 5/16-18 X 0.75, WIZ FLANGE
7	4 110474 BOLT, 1/4-20 X 1-1/2
8	1 110536 BOLT, 5/16-18 X 3.25
10	3 110600 NUT, 5/16-18, UNITORQUE LOCK
11	2 110606 NUT, 5/16-18 WIZ FLANGE
14	4 110667 WASHER, 1/4" LOCK
17	1 112133 Clevis Pin, 1" x 2-3/16", ZINC-PLATED STEEL
18	1 120222 ADAPTER, 6MJ-6MB90
21	1 120398 ADAPTER, REST 6MJ-6MB, .047
22	1 140016 PIN, LOCK, 1/4 X 2-1/4, SQ WIRE
24	1 305103 Assy, Safety Latch, ISO
31	2 315332 WELDMENT, LIFT LINK PIN - 2.87"
32	2 315333 WELDMENT, LIFT LINK PIN - 2.12"
35	1 315410 WELDMENT, VERTICAL LIFT LINK, US
36	1 315411 WELDMENT, CYLINDER LIFT LINK, US
37	1 315412 WELDMENT, LOWER LIFT LINK, US
38	1 315413 WELDMENT, UPPER LIFT LINK, US
44	1 323066 Cylinder, 2.5 X 8, -6 SAE, Hopper
45	1 500184 COTTER 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

3-25-2022

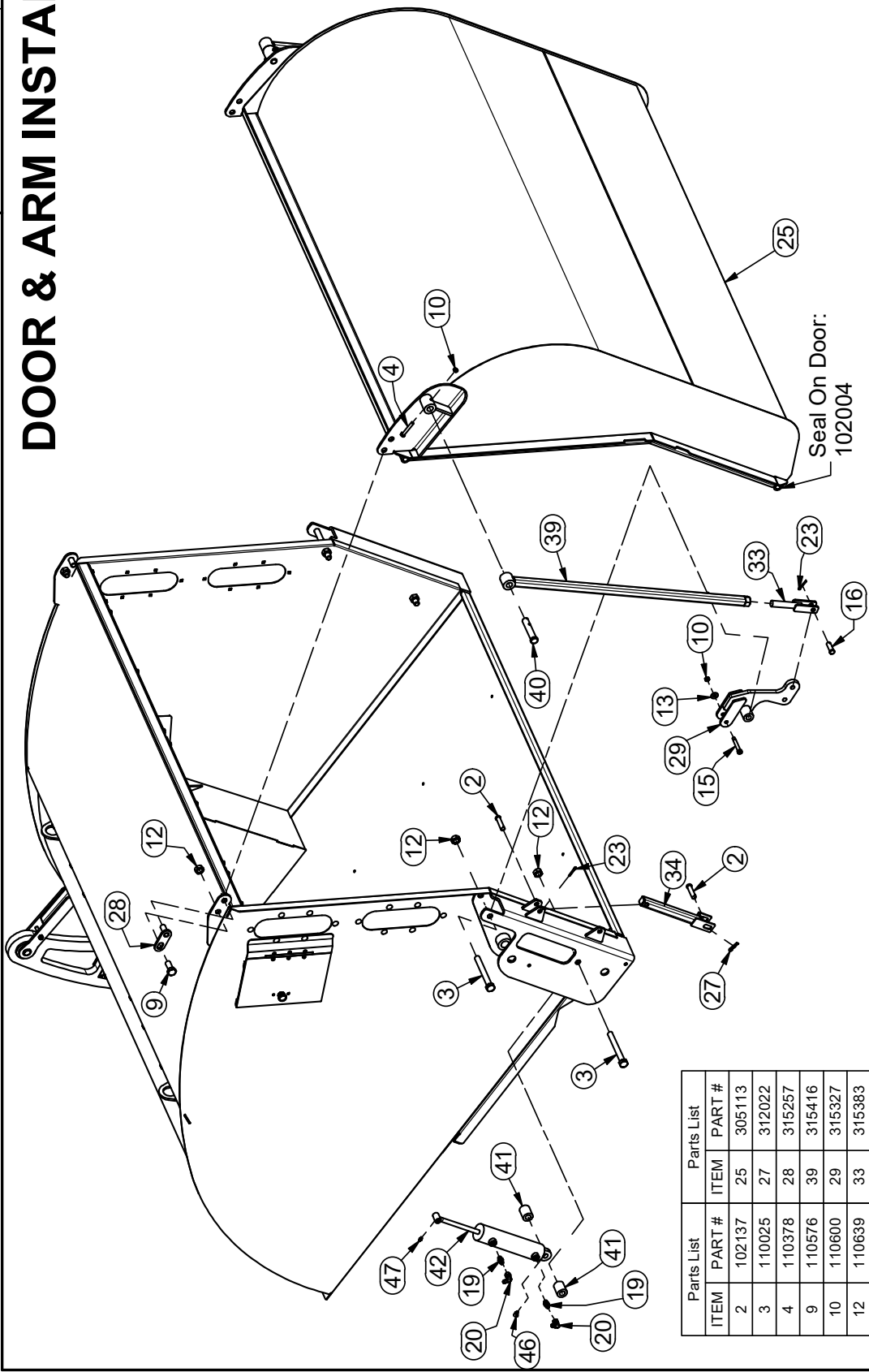
HOPPER INSTALL



LH INSTALLATION SHOWN
SAME PARTS USED ON RH INSTALLATION

Parts List			
ITEM	QTY	PART #	DESCRIPTION
6	4	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
11	4	110606	NUT, 5/16-18 WIZ FLANGE
26	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

DOOR & ARM INSTALL

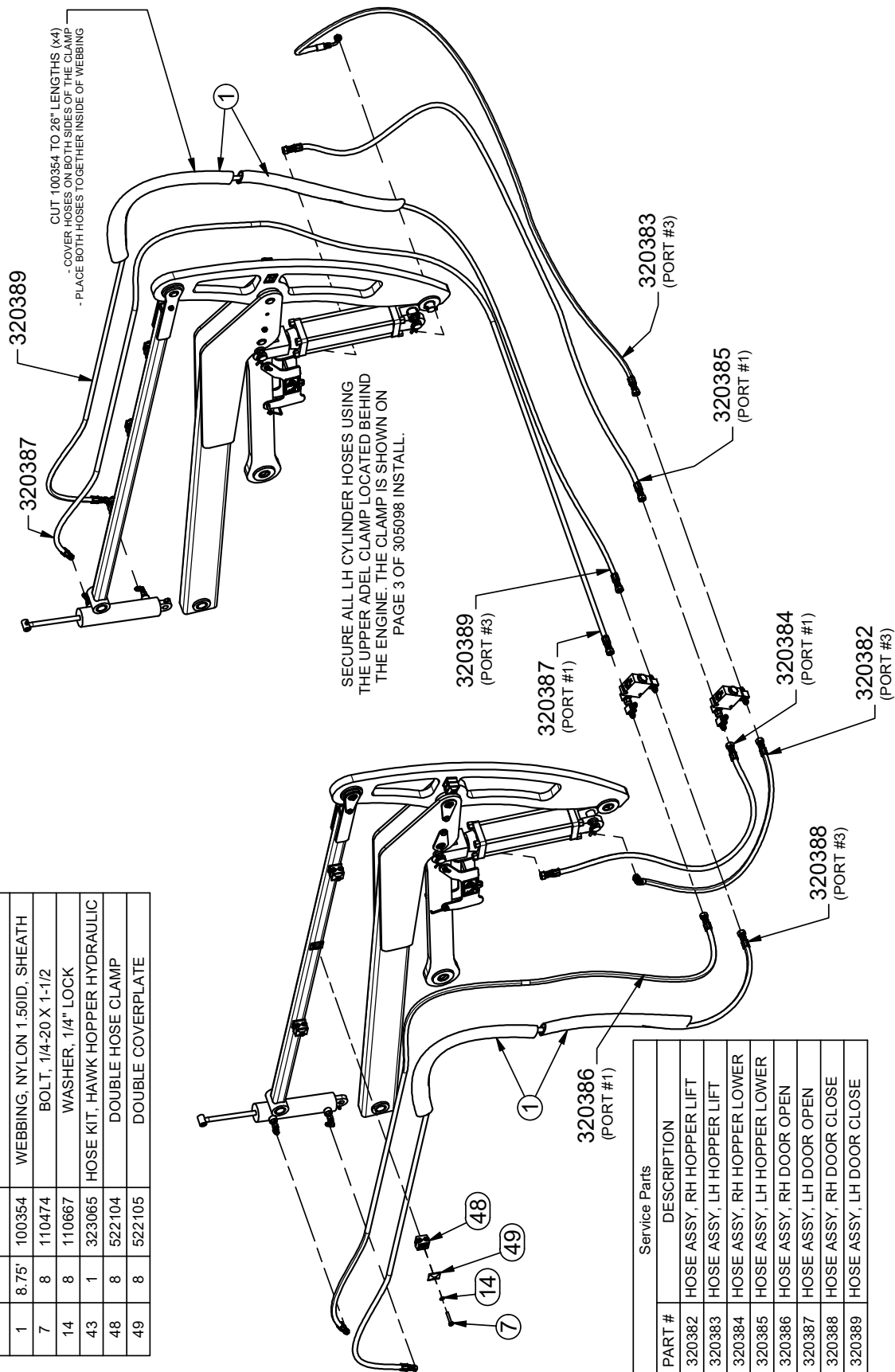


1. INITIALLY SET THE HOPPER DOOR LIFT LINK TO 36.5" (CTR TO CTR)
2. ADJUST AS NEEDED TO COMPRESS THE DOOR SEAL TO 0.5" AT THE BOTTOM OF THE DOOR

Parts List		Parts List	
ITEM	PART #	ITEM	PART #
2	102137	25	305113
3	110025	27	312022
4	110378	28	315257
9	110576	39	315416
10	110600	29	315327
12	110639	33	315383
13	110665	34	315393
15	111190	40	317216
16	112131	41	317320
19	120233	42	323010
20	120266	46	500230
23	200029	47	510174

HOPPER CYLINDER PLUMBING

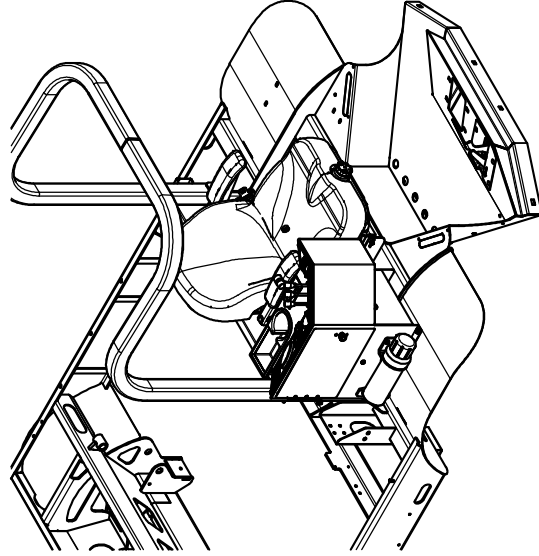
Parts List		
ITEM	QTY	PART # DESCRIPTION
1	8.75'	100354 WEBBING, NYLON 1.50ID, SHEATH
7	8	110474 BOLT, 1/4-20 X 1-1/2
14	8	110667 WASHER, 1/4" LOCK
43	1	323065 HOSE KIT, HAWK HOPPER HYDRAULIC
48	8	522104 DOUBLE HOSE CLAMP
49	8	522105 DOUBLE COVERPLATE



Service Parts	
PART #	DESCRIPTION
320382	HOSE ASSY, RH HOPPER LIFT
320383	HOSE ASSY, LH HOPPER LIFT
320384	HOSE ASSY, RH HOPPER LOWER
320385	HOSE ASSY, LH HOPPER LOWER
320386	HOSE ASSY, RH DOOR OPEN
320387	HOSE ASSY, LH DOOR OPEN
320388	HOSE ASSY, RH DOOR CLOSE
320389	HOSE ASSY, LH DOOR CLOSE

Parts List			Parts List			Parts List			Parts List		
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION
1	4'	100613	SEAL, RUBBER .50 X .187	37	1	305064	Assy, Console Panel, ISO	52	1	332063	HARNESS, INSTRUMENT PANEL
2	2.5'	102072	TAPE, DOUBLE-SIDED AUTO, 1/2"x.045	38	1	311729	HINGE, 6" ALUMINUM W/ HOLES	53	1	332064	HARNESS, RELAY
3	4	110020	Bolt, 5/16-18 X 0.75 in Carriage	39	1	315349	WELDMENT, FOOT PEDAL MOUNT	54	2	510112	COTTER PIN, 3/16 X 1
4	12	110103	WASHER, #10 LOCK	40	1	315355	WELDMENT, FOOT PEDAL PIVOT	55	2	540075	BEARING, ROD END 1/4-28 W/STUD
5	6	110119	NUT, 10-24 LOCK	41	1	317102	PANEL, LEVER	56	4	800128	BUSHING, IGUS, FOOT PEDAL
6	17	110264	BOLT, 10-24 X .5 STAINLESS, PHILLIPS	42	1	317103	PANEL, DECK SWITCH	57	1	810886	LINKAGE, 1/4-28 FOOT PEDAL
7	2	110404	BOLT, 3/8-16 X 1.75	43	1	317172	BASE, SEAT MOUNT	58	1	815094	WELDMENT, REV FOOT PEDAL PIVOT
8	3	110437	BOLT, 3/8-16 X 0.75, WIZ FLANGE	44	1	317173	PIN, SEAT MOUNTING	59	2	832005	SWITCH, PADDLE, CARLING (29253)
9	4	110488	BOLT, 1/4-20 X 0.75, WIZ FLANGE	45	1	317186	COVER, FOOT PEDAL	60	1	832018	SWITCH, SPDT, ON-ON
10	10	110606	NUT, 5/16-18 WIZ FLANGE	46	1	317193	DOOR, CONSOLE ACCESS	61	6	832024	MOUNT, SWITCH (VMS)
11	2	110621	NUT, 3/8-16, UNITORQUE LOCK	47	1	317195	PANEL, GAUGE & SWITCH	62	3	832033	HOLE PLUG (VHP)
12	4	110630	NUT, 1/4-20 LOCK (NYLON INSERT)	48	2	317249	PIN, QUICK RELEASE	63	1	832068	MODULE, TIME DELAY, 1.75 SEC, 1804
13	10	110631	NUT, 10-24 LOCK NYLON INSERT	49	1	332031	SWITCH, IGNITION	64	2	832082	ALARM, PANEL MOUNT, CONTINUOUS
14	2	110632	NUT, 1/4-28, UNITORQUE LOCK	50	1	332059	DISPLAY, MACHINE				TONE
15	3	110645	NUT, 3/8-16 WIZ FLANGE	51	1	332060	HARNESS, MASTER				

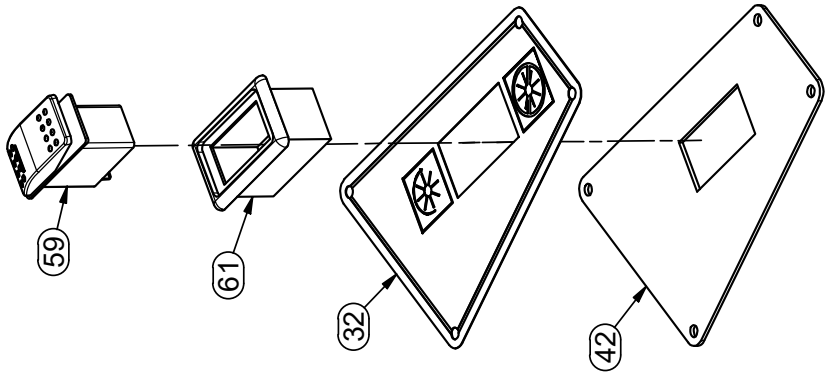
OPERATOR STATION & ELECTRICAL ASSEMBLY



10-27-2021

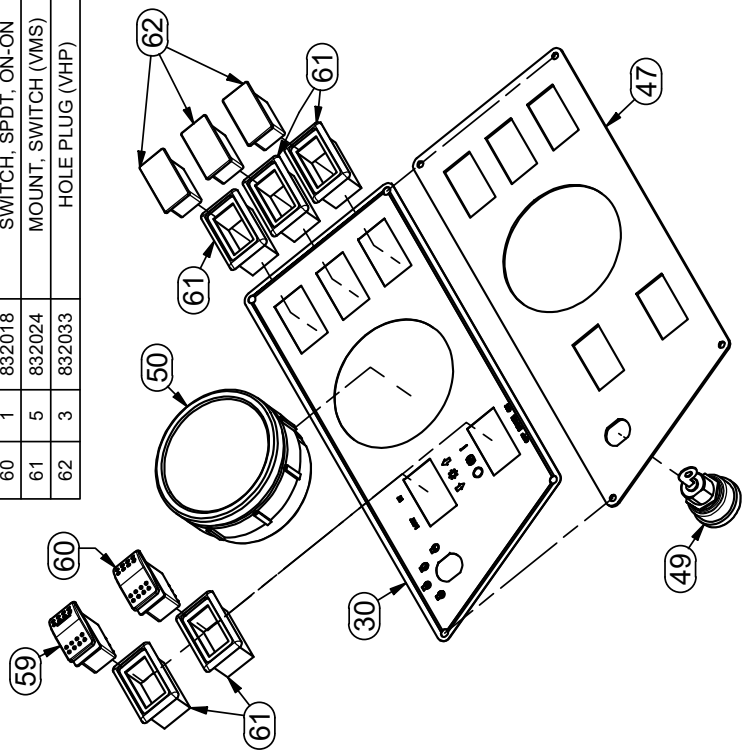
DECK SWITCH PANEL ASSEMBLY

Parts List		
ITEM	QTY	PART # DESCRIPTION
32	1	302134 DECAL, BROOM PANEL
42	1	317103 PANEL, DECK SWITCH
59	1	832005 SWITCH, PADDLE, CARLING (29253)
61	1	832024 MOUNT, SWITCH (VMS)

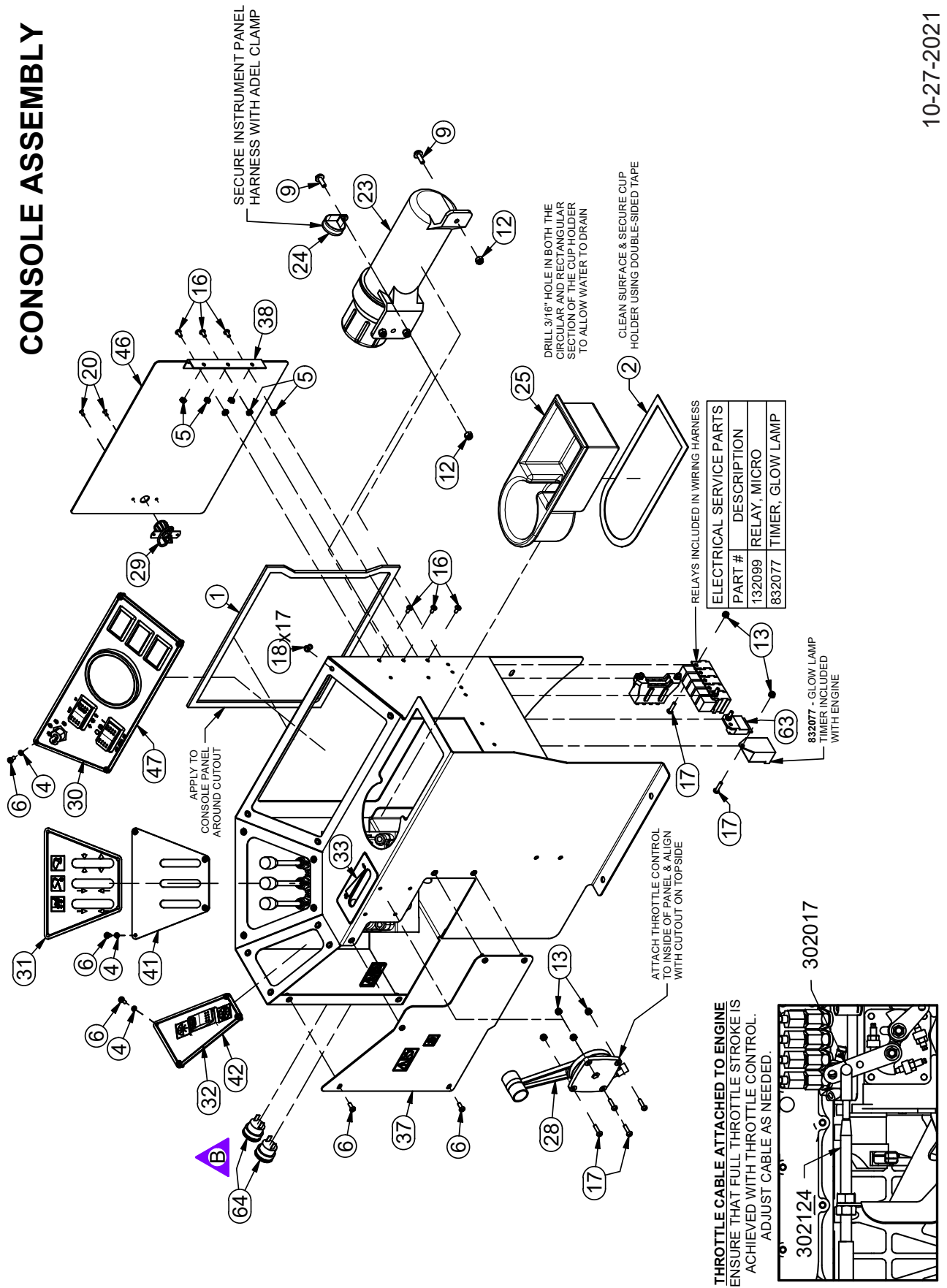


INSTRUMENT PANEL ASSEMBLY

Parts List		
ITEM	QTY	PART # DESCRIPTION
30	1	302132 DECAL, MAIN CONSOLE
47	1	317195 PANEL, GAUGE & SWITCH
49	1	332031 SWITCH, IGNITION
50	1	332059 DISPLAY, MACHINE
59	1	832005 SWITCH, PADDLE, CARLING (29253)
60	1	832018 SWITCH, SPDT, ON-ON
61	5	832024 MOUNT, SWITCH (VMS)
62	3	832033 HOLE PLUG (VHP)



CONSOLE ASSEMBLY

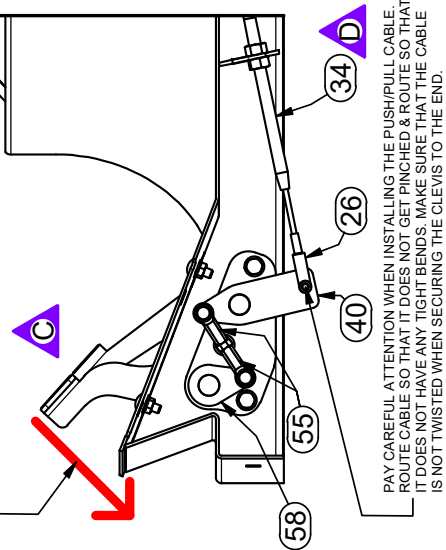


10-27-2021

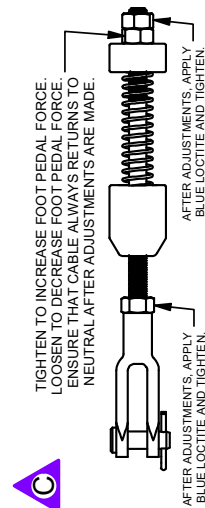
FOOT PEDAL ASSEMBLY

FOOT PEDAL ASSEMBLY SIDE VIEW

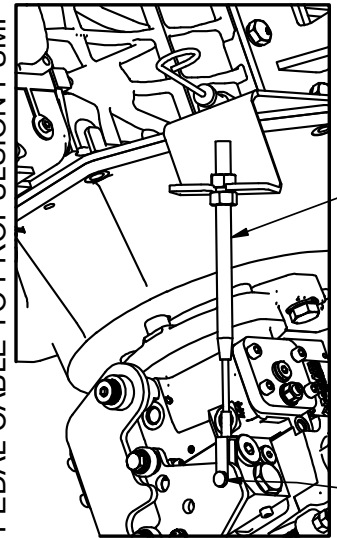
MEASURE FORWARD FOOT PEDAL FORCE USING A FISH SCALE OR SPRING SCALE. ENSURE THAT THE FORCE IS BETWEEN 20 - 35 LBS WHEN MACHINE IS OFF. SEE INSTRUCTIONS BELOW FOR ADJUSTING THE NEUTRAL SPRING.



NEUTRAL RETURN SPRING ON PUMP

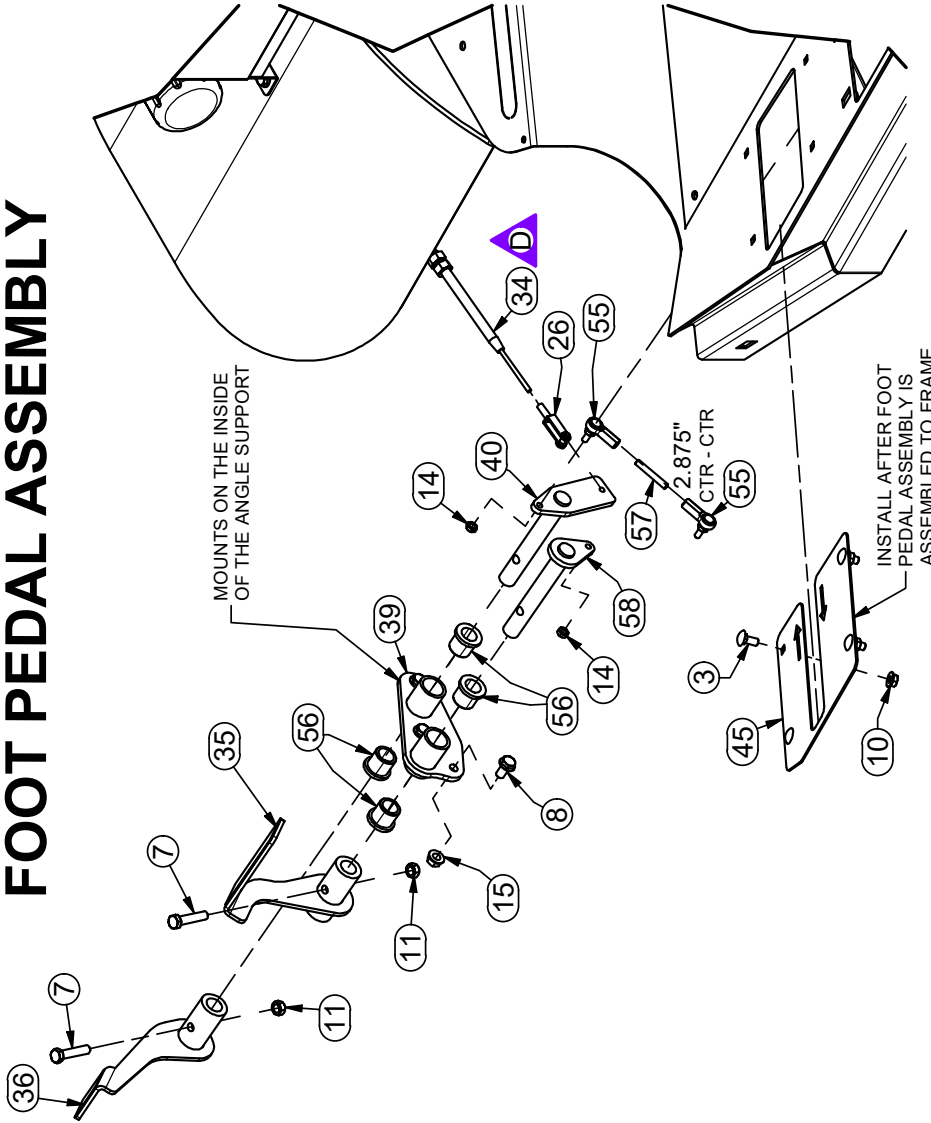


PEDAL CABLE TO PROPULSION PUMP



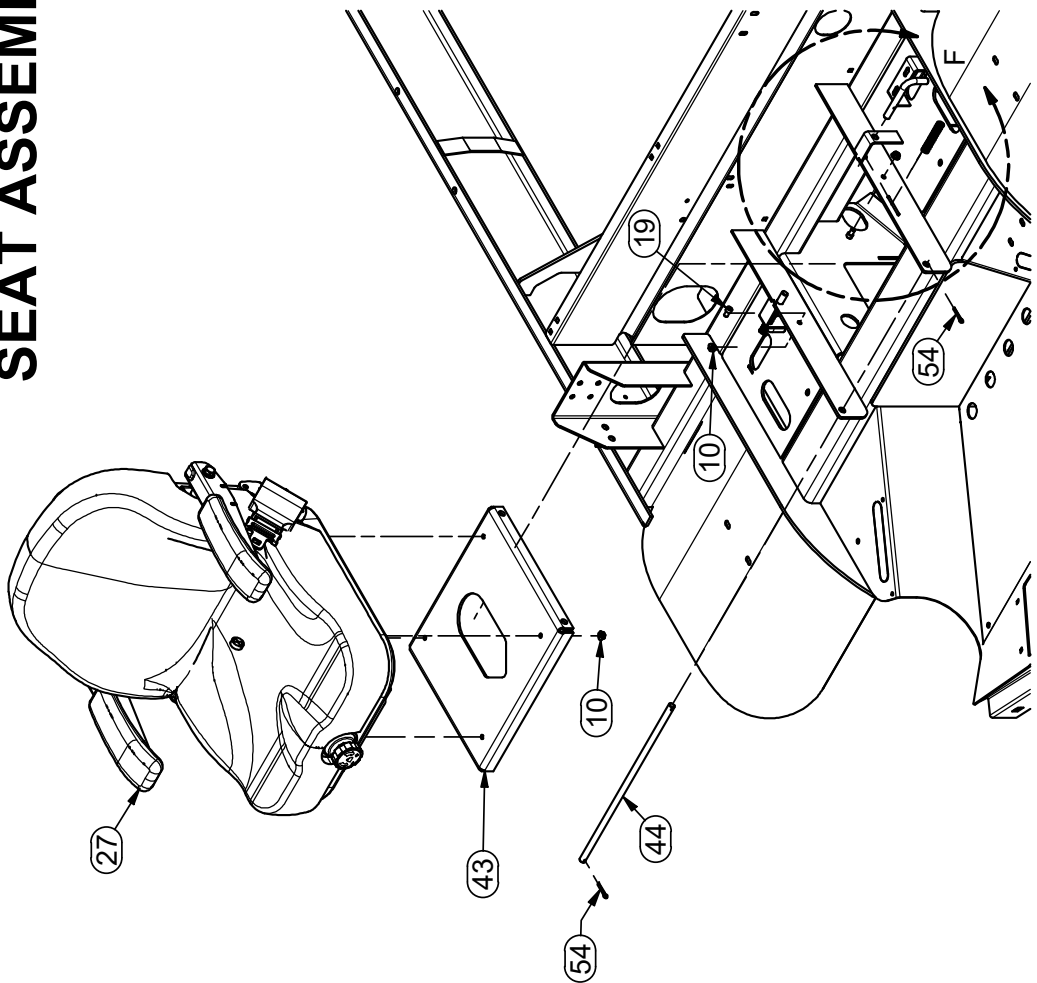
302017

302164 D

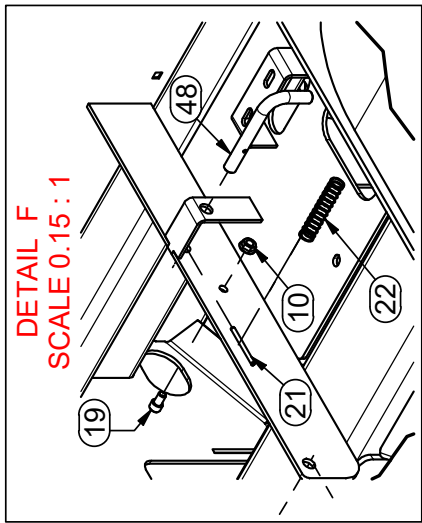
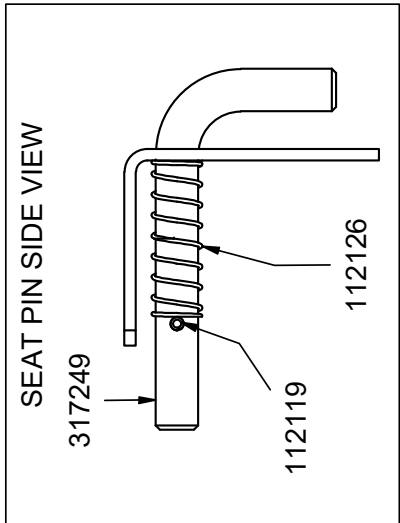


10-27-2021

SEAT ASSEMBLY

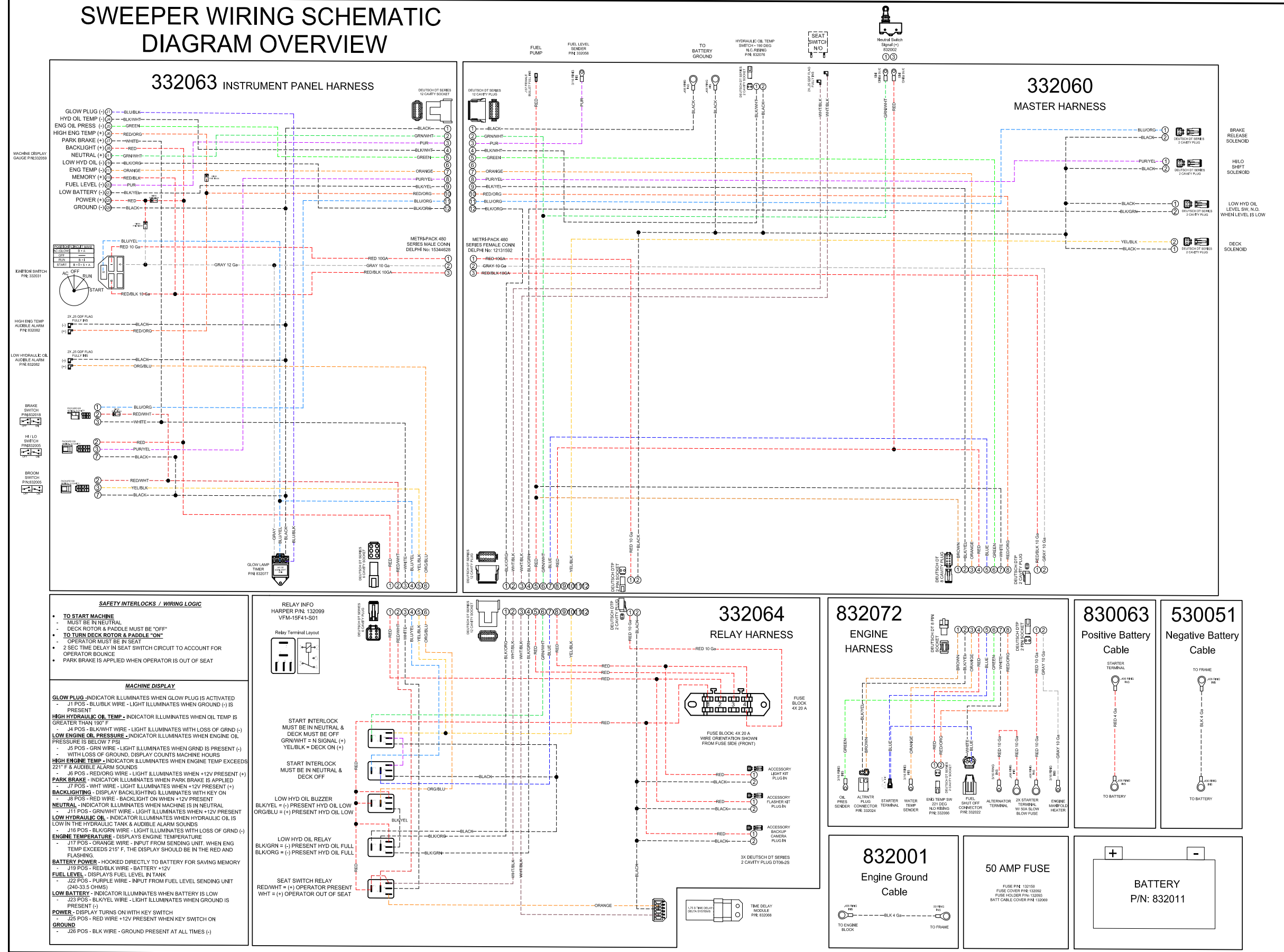


Parts List		
ITEM	QTY	PART # DESCRIPTION
10	6	110606 NUT, 5/16-18 WIZ FLANGE
19	2	110971 BOLT, 5/16-18 X .50 SHCS
21	2	112119 ROLL PIN, 5/32 X 2 ZP
22	2	112126 SPRING, COMP 3.0L x 0.6 OD x .045
27	1	302078 SEAT, 13M SUSPENSION
43	1	317172 BASE, SEAT MOUNT
44	1	317173 PIN, SEAT MOUNTING
48	2	317249 PIN, QUICK RELEASE
54	2	510112 COTTER PIN, 3/16 X 1

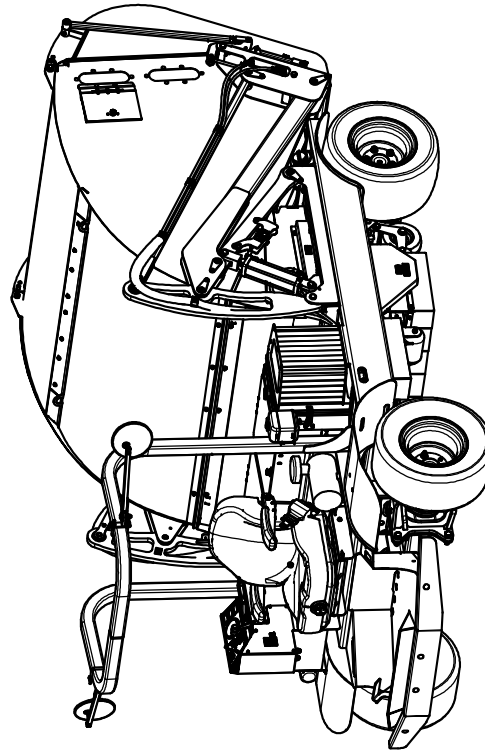


10-27-2021

SWEEPER WIRING SCHEMATIC DIAGRAM OVERVIEW



Parts List		
ITEM	QTY	PART # DESCRIPTION
1	15 FT	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	2	305083 ASSY, FRONT TIRE
21	2	305084 ASSY, REAR TIRE
22	1	305101 ASSY, RH ENGINE SHIELD
23	1	305119 ASSY, LOWER DECK SHIELD, US
24	1	305120 ASSY, UPPER 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

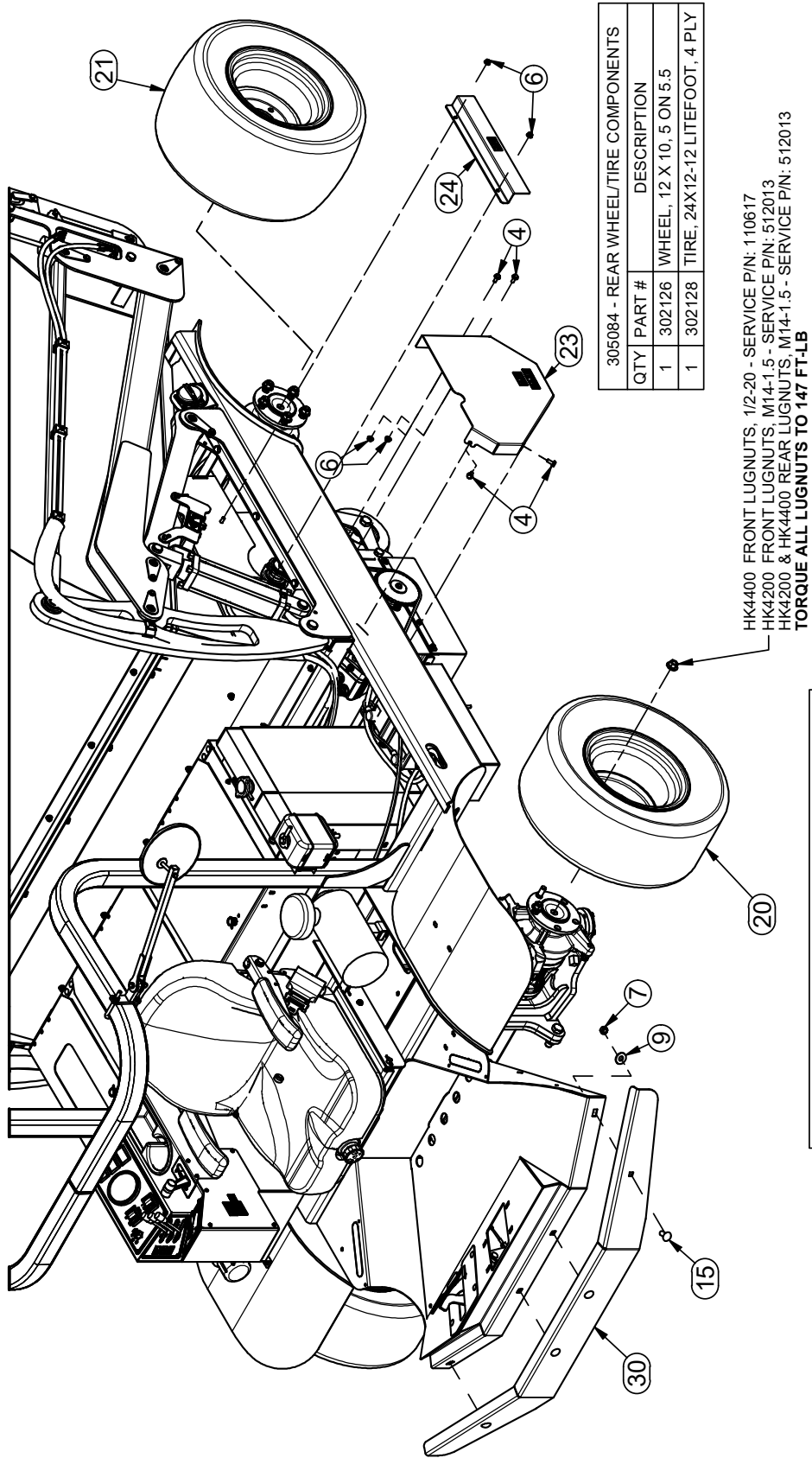


MIRROR, TIRE, & SHIELD INSTALLATION

SIMILAR TO 305095

3-18-2021

BUMPER, DECK SHIELDS, & WHEEL/TIRE ASSEMBLY

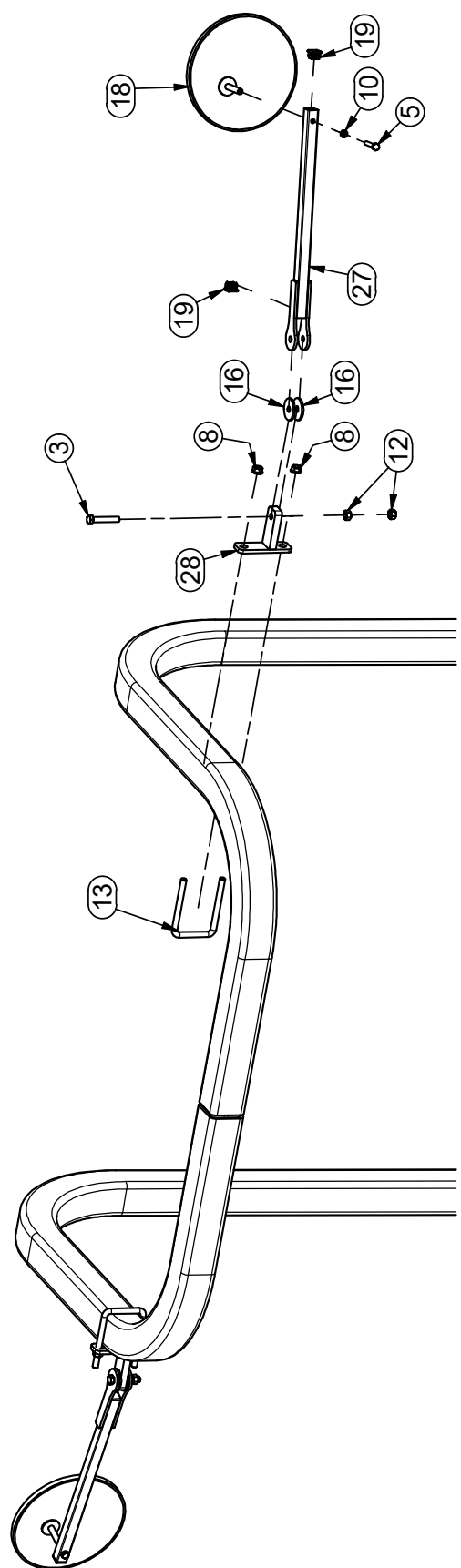


3-18-2021

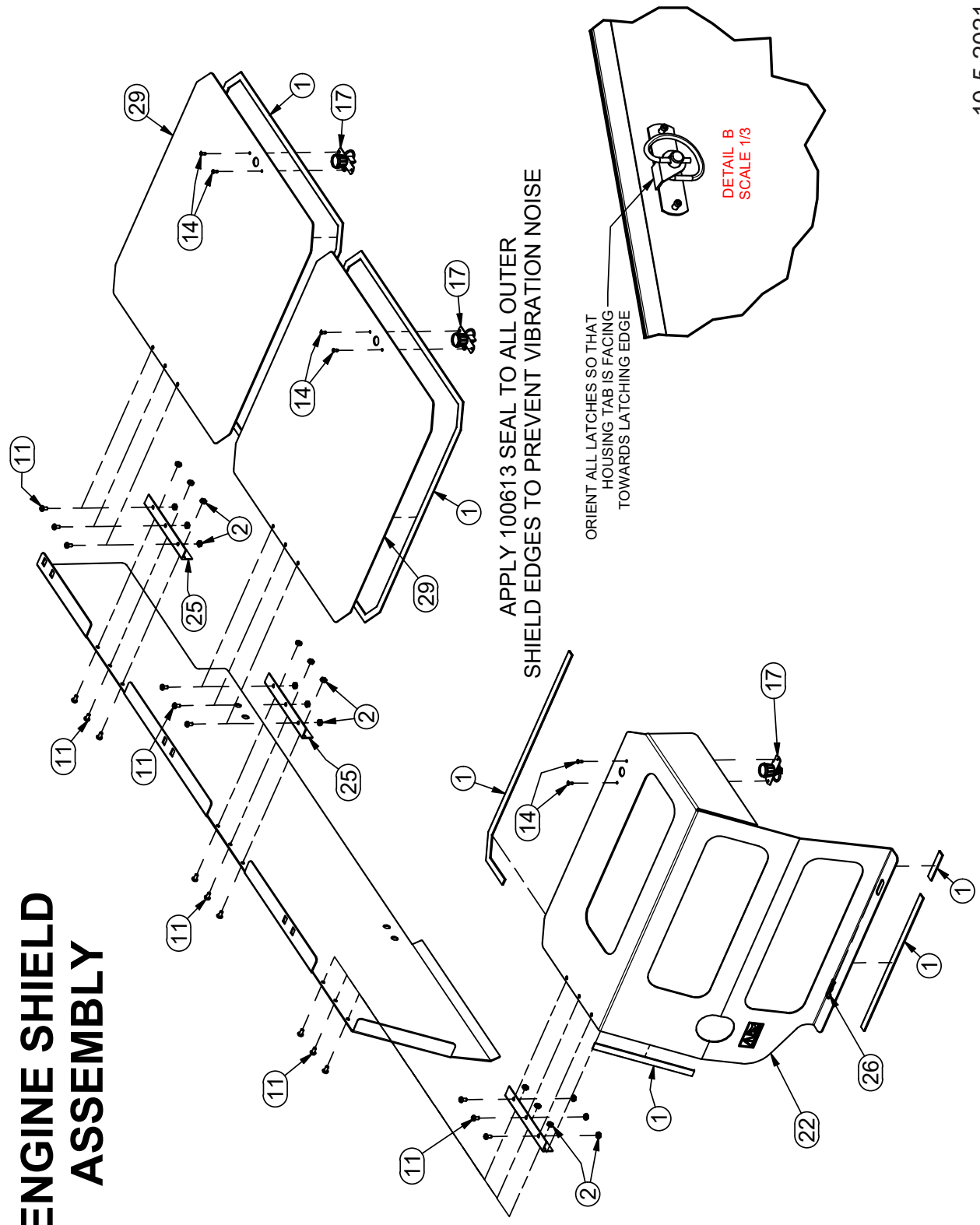
Parts List		
ITEM	QTY	PART # DESCRIPTION
3	2	110400 BOLT, 3/8-16 X 2.0
5	2	110474 BOLT, 1/4-20 X 1-1/2
8	4	110645 NUT, 3/8-16 W/IZ FLANGE
10	2	110667 WASHER, 1/4" LOCK
12	4	110826 NUT, 3/8-16 GR 5
13	2	111185 BOLT, SQUARE U, 3/8-16 x 2.50 x 4.0
16	4	211747 FRICTION WASHER 1.5"
18	2	302139 Convex Mirror, 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

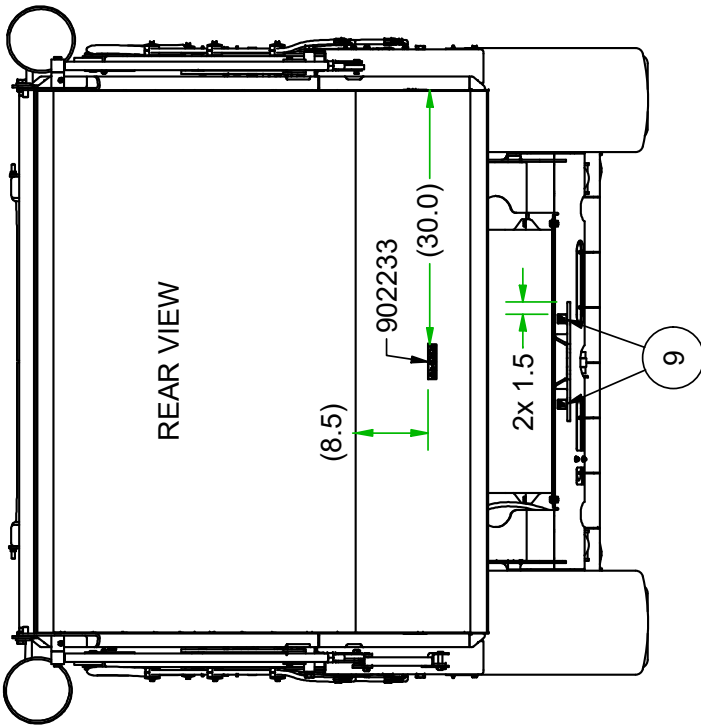
SAME PARTS USED ON OPPOSITE SIDE



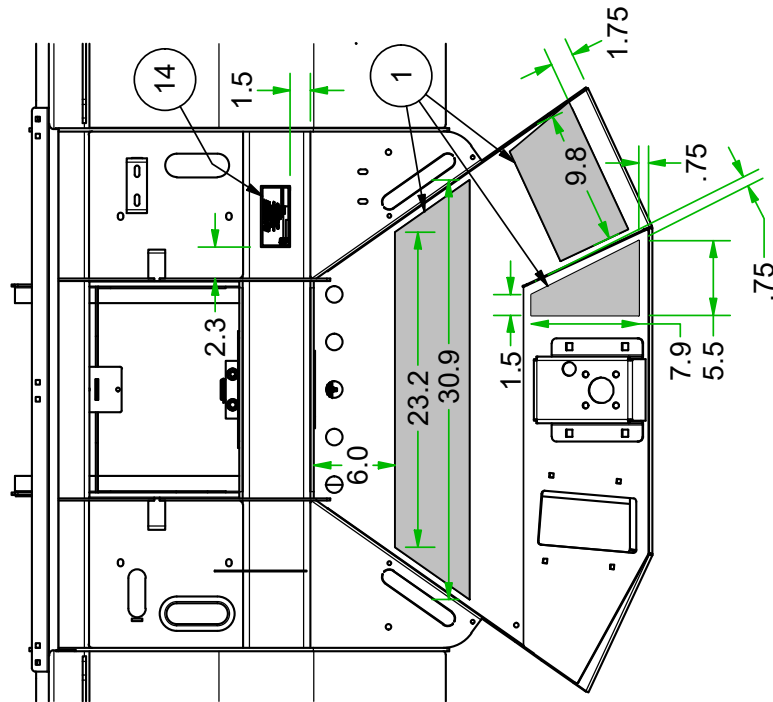
ENGINE SHIELD ASSEMBLY



10-5-2021



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	800195 DECAL, RECYCLE BATTERY
9	4	802067 Decal, Tie Down Point
10	1	902186 DECAL, EPA STANDARDS
11	1	902231 Decal, Hot Surface, Oil Cooler
12	1	902232 Decal, High Pressure Injection
13	2	902234 Decal, No Lift
14	1	902240 Plate, Serial Number, Harper Turf, Blue
15	1	902242 Decal, Harper Turf Equipment, 30"

Technical drawing of a truck chassis, showing dimensions and part numbers. The drawing includes a side view of the chassis with various components labeled with dimensions and part numbers.

Dimensions and Part Numbers:

- 18.0
- 1.25
- 2.5
- 2X (3.0)
- 902233
- 2X (10.0)
- 902228
- 1.0
- 102133
- 902239
- 2X .75
- 1.5
- 5
- 2X
- 9
- 102134
- 6

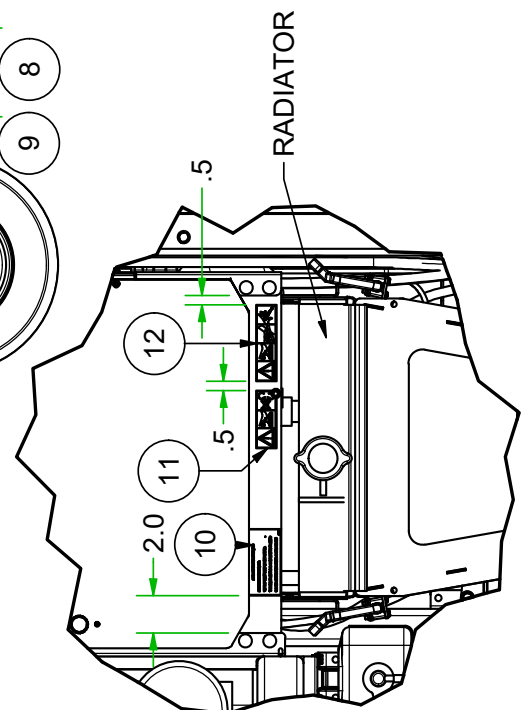
Text: SAME DIMS ON BOTH SIDES

Text: LAWK HARPER

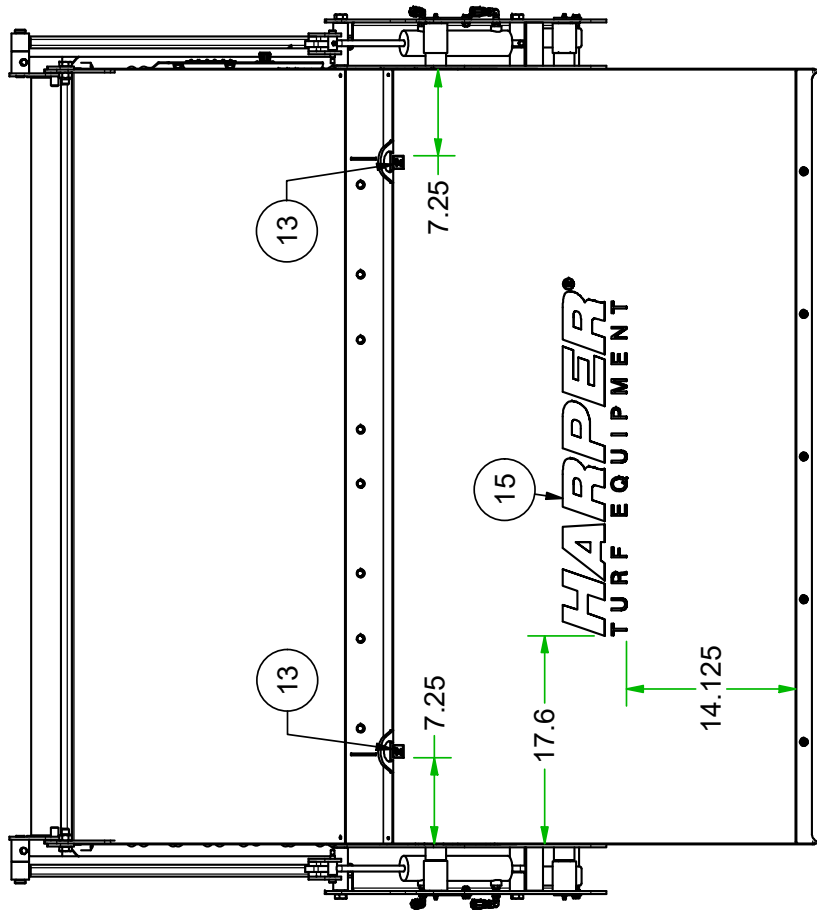
5-2-2022

[illegible]

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



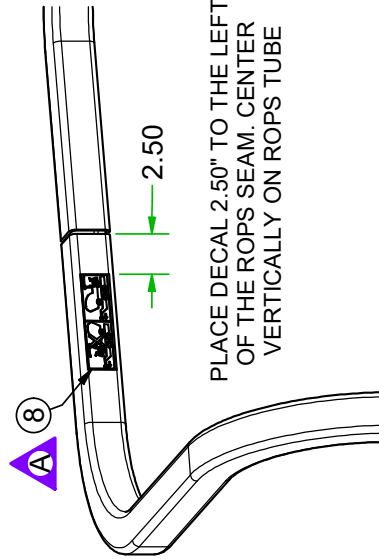
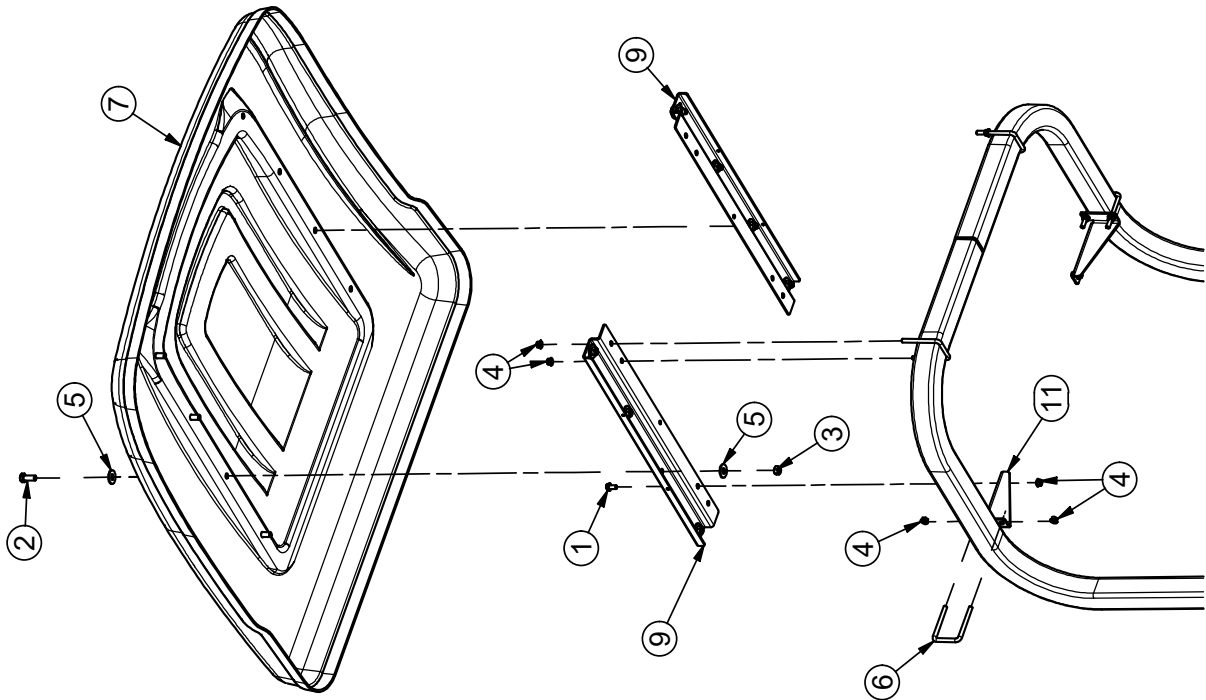
HOPPER DECAL INSTALLATION



CANOPY

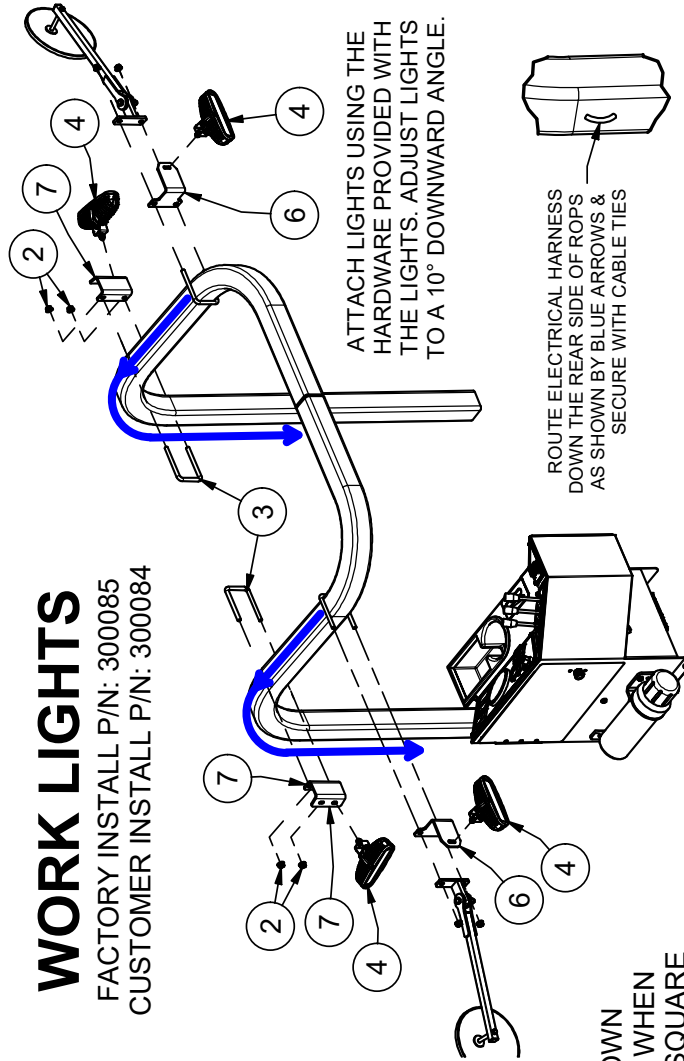
FACTORY INSTALL P/N: 300083
CUSTOMER INSTALL P/N: 300082

Parts List		
ITEM	QTY	DESCRIPTION
1	2	BOLT, 3/8-16 X 0.75, WIZ FLANGE
2	8	BOLT, 1/2-13 X 1.25
3	8	NUT, 1/2-13, UNITORQUE LOCK
4	10	NUT, 3/8-16 WIZ FLANGE
5	16	WASHER, 1/2" FLAT STANDARD
6	4	BOLT, SQUARE U, 3/8-16 x 2.50 x 4.0
7	1	CANOPY, BLACK ABS PLASTIC
8	1	DECAL, HAWK CANOPY TRANSPORT
9	2	BRKT, CANOPY SUPPORT
10	1	BRKT, LH CANOPY MOUNT
11	1	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)

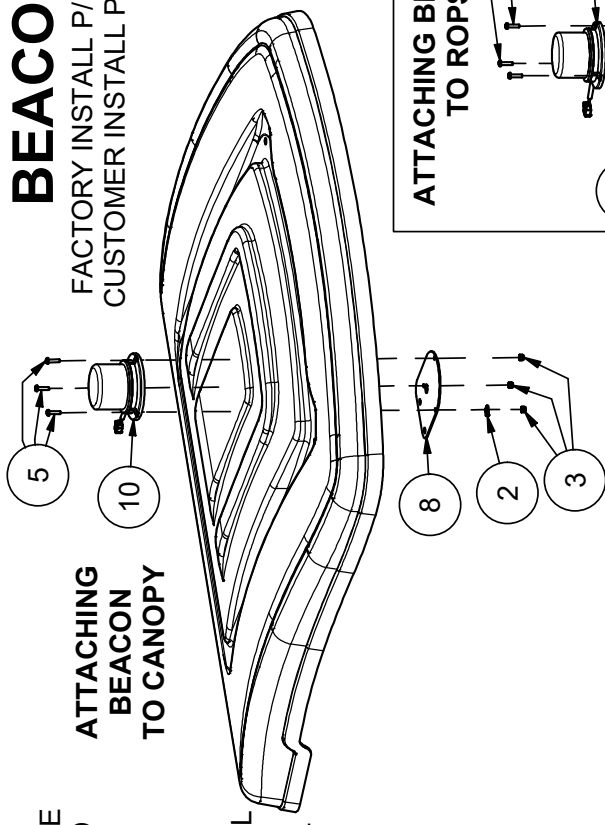
SWEEPER WORK LIGHT WIRING SCHEMATIC

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.

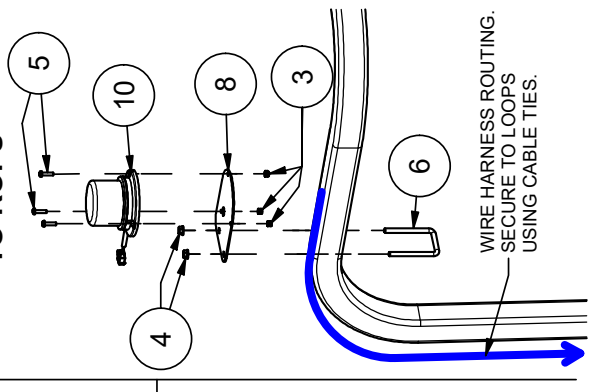
BEACON

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

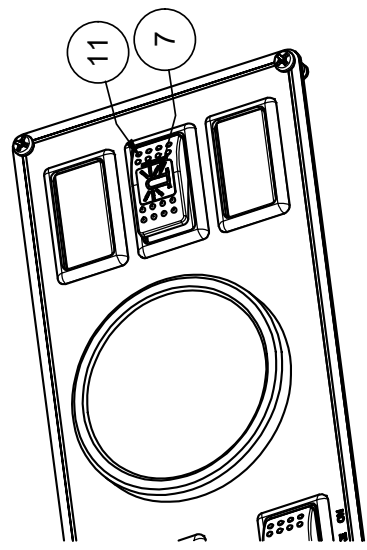


**ATTACHING
BEACON
TO CANOPY**

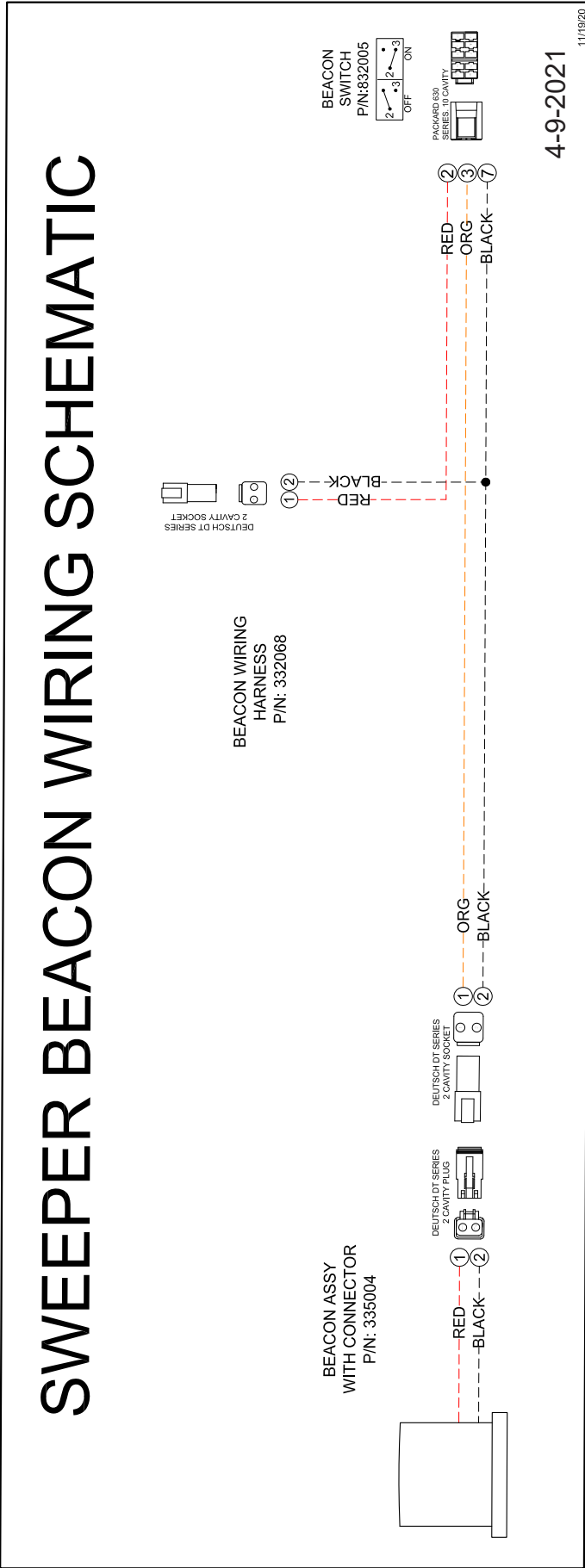
**ATTACHING BEACON
TO ROPS**



WIRE HARNESS ROUTING.
SECURE TO LOOPS
USING CABLE TIES.



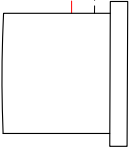
Parts List		
ITEM	QTY	PART # DESCRIPTION
1	5	100578 CABLE TIE 14" BLACK 50 Lb Tens
2	1	110117 CLAMP, ADEL AC4 .265 HOLE
3	3	110630 NUT, 1/4-20 LOCK (NYLON INSERT)
4	2	110645 NUT, 3/8-16 WIZ FLANGE
5	3	110973 SCREW, 1/4-20 X 1 SS PHILLIPS PAN HEAD
6	1	111185 BOLT, SQUARE U, 3/8-16 x 2.50 x 4.0
7	1	302157 DECAL, BEACON
8	1	317394 BRKT. BEACON MOUNTING
9	1	332068 HARNESS, BEACON
10	1	335004 BEACON ASSY, LED
11	1	832005 SWITCH, PADDLE, CARLING (29253)



DEUTSCH DT SERIES
2 CAVITY SOCKET

BEACON WIRING
HARNESS
P/N: 332068

BEACON ASSY
WITH CONNECTOR
P/N: 335004



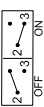
DEUTSCH DT SERIES
2 CAVITY PLUG

DEUTSCH DT SERIES
2 CAVITY SOCKET

DEUTSCH DT SERIES
2 CAVITY SOCKET

PACKARD 630
SERIES 10 CAVITY

BEACON
SWITCH
P/N: 832005



REV: C

REV: C

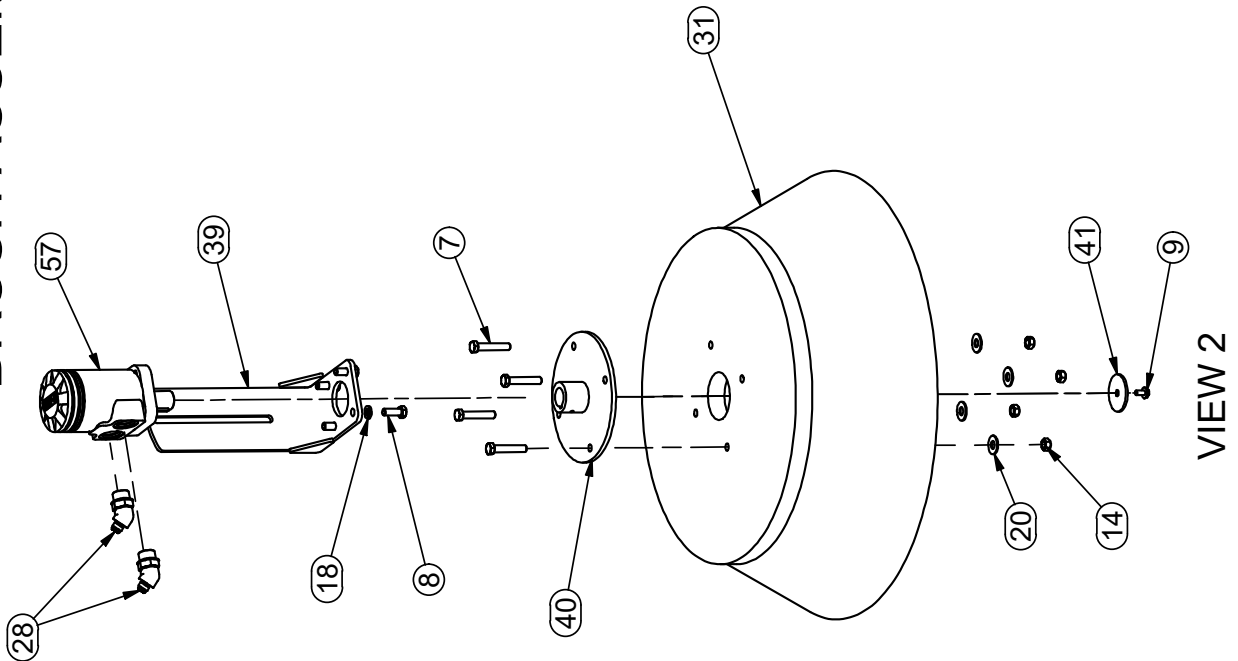
REV: C

REV: C

REV: C

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)



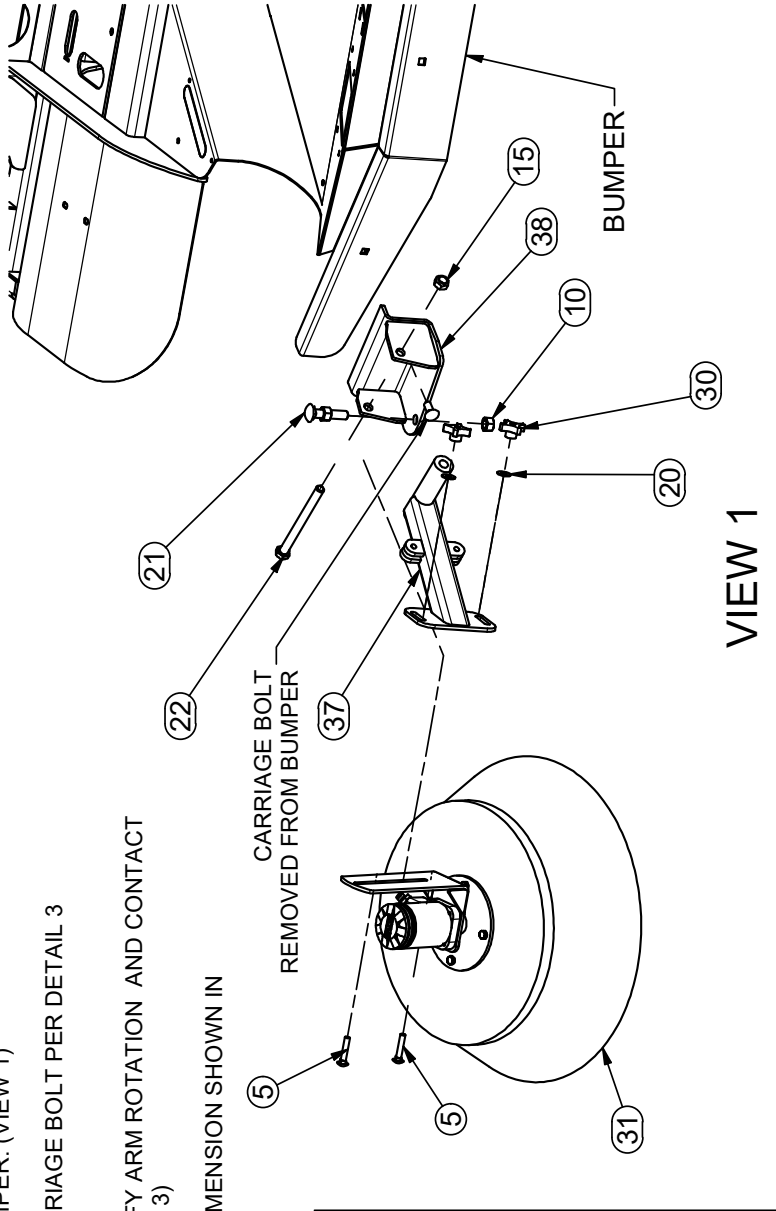
BRUSH & ARM ASSEMBLY

1) ATTACH MOUNT BRACKET TO BUMPER USING (112070) CARRIAGE BOLT, ALREADY INSTALLED IN BUMPER. (VIEW 1)

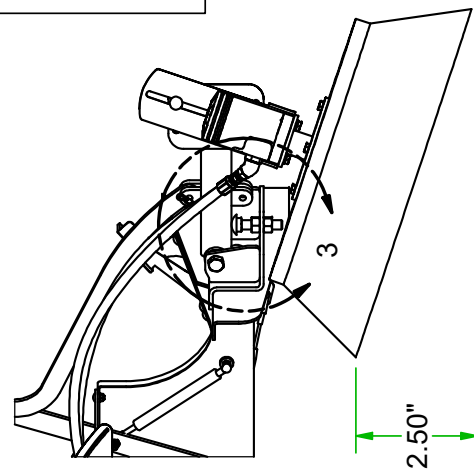
2) INSTALL & ADJUST ARM STOP CARRIAGE BOLT PER DETAIL 3 BELOW

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.



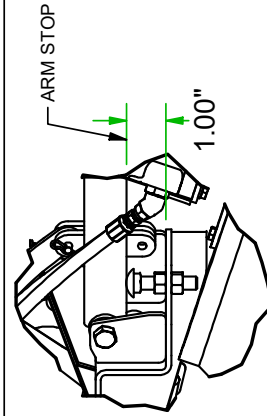
VIEW 1



→ FWD

VIEW 2

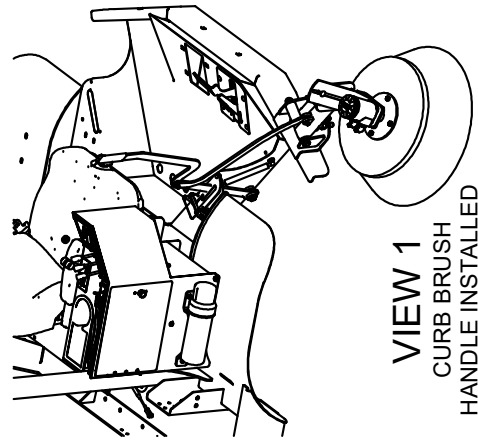
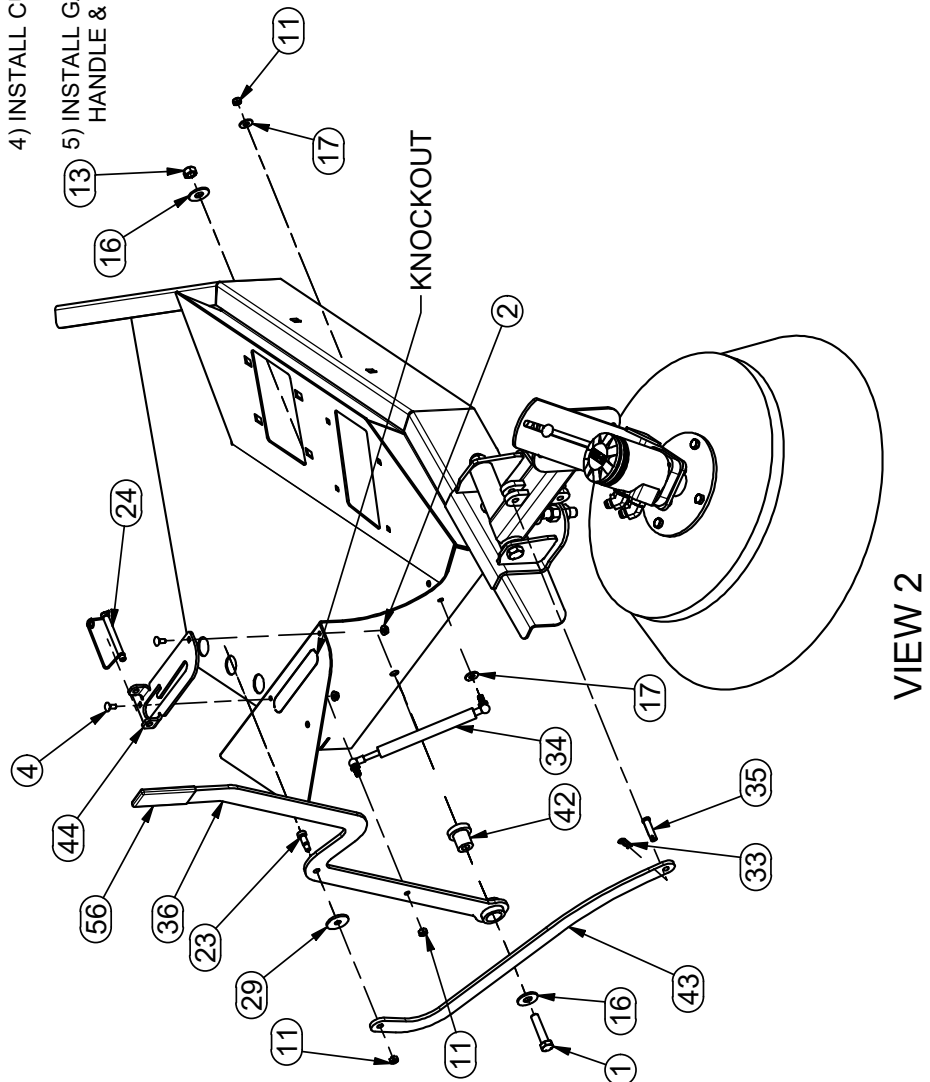
BRUSH SIDE VIEW LOOKING IN



DETAIL 3

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)



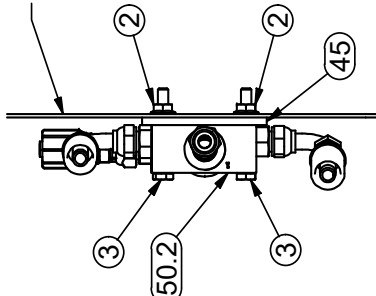
CURB BRUSH HYDRAULICS

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)

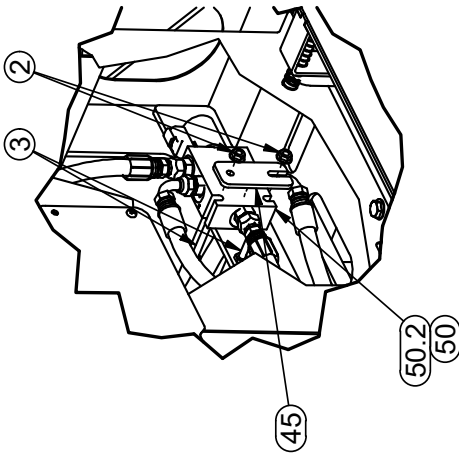
NOTE: IF UNIT S/N IS 21A11 OR PRIOR, SEE SHEET 12 FOR INSTALLATION HOLE DIMENSIONS

CONSOLE
SIDE PANEL
(317188)

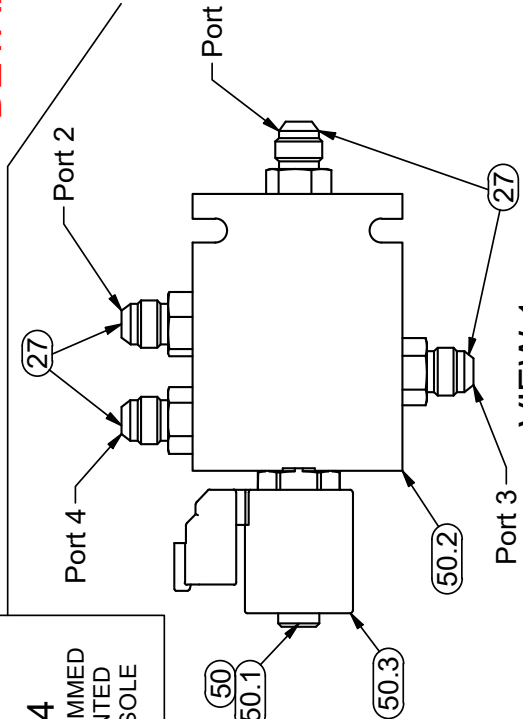


VIEW 4

SHOWING SHIMMED
VALVE MOUNTED
INSIDE CONSOLE

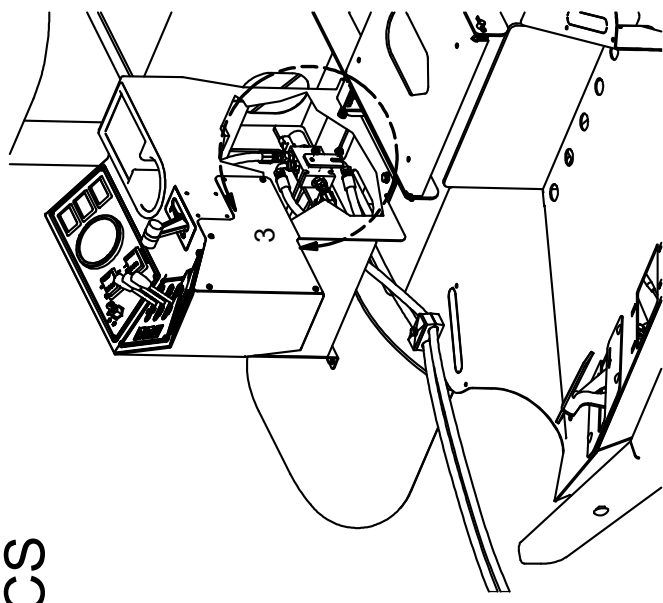


DETAIL 3



VIEW 1

323069 VALVE LAYOUT VIEW



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
50.1	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

8-11-2022

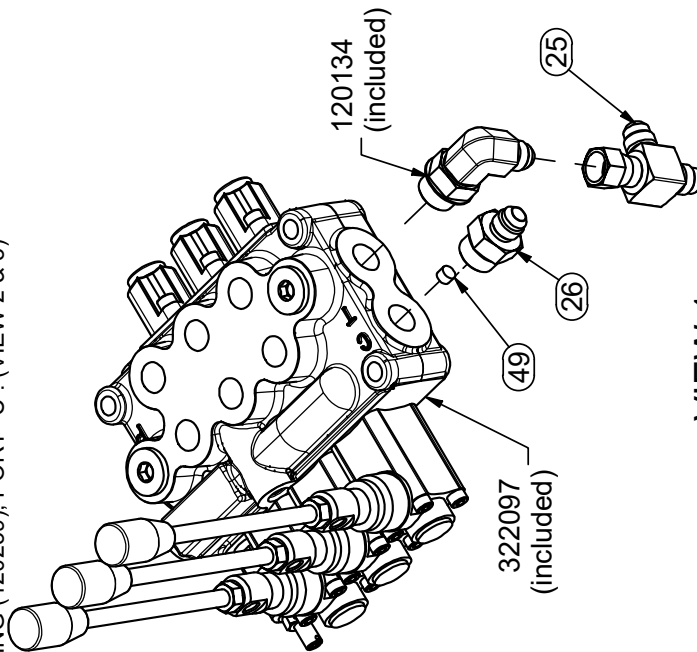
CURB BRUSH HYDRAULICS

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)

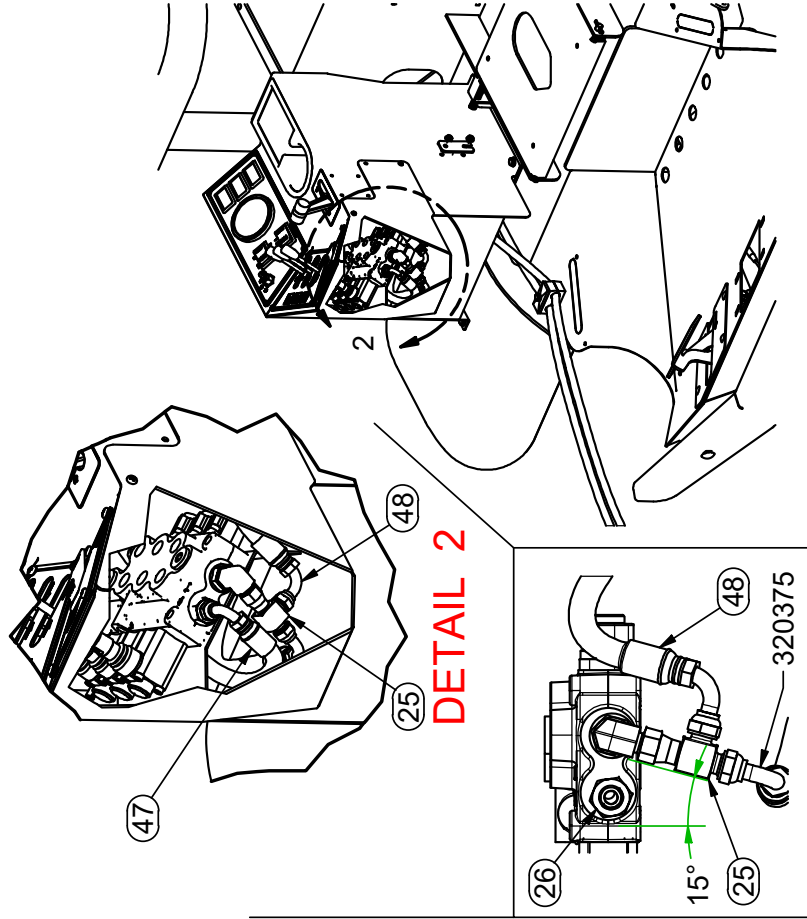


VIEW 1

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)



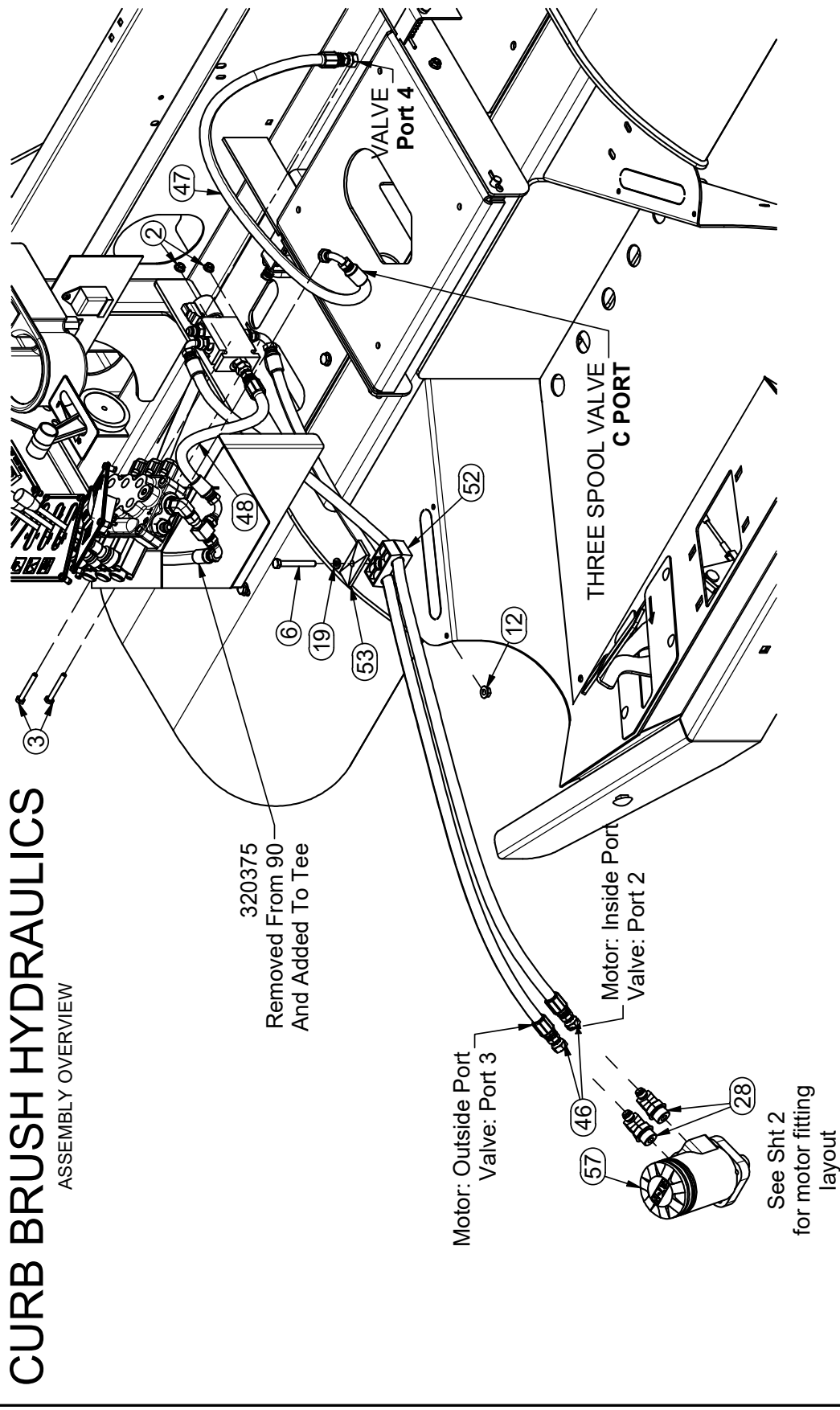
DETAIL 2

VIEW 3
TEE LAYOUT VIEW

VIEW 4
VIEW OF CONTROL PANEL

CURB BRUSH HYDRAULICS

ASSEMBLY OVERVIEW



See Sht 2
for motor fitting
layout

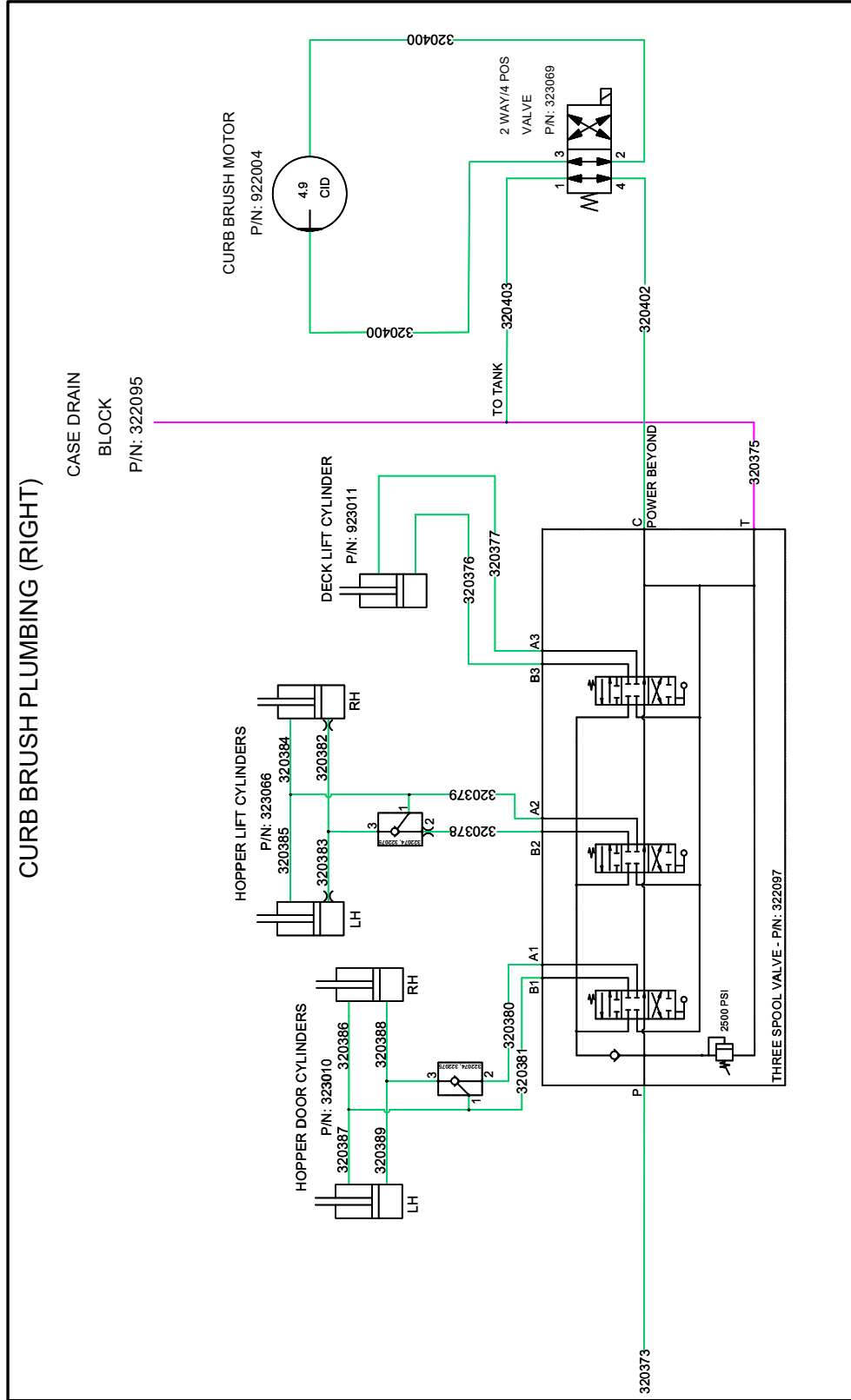
8-11-2022

REV: C

300090

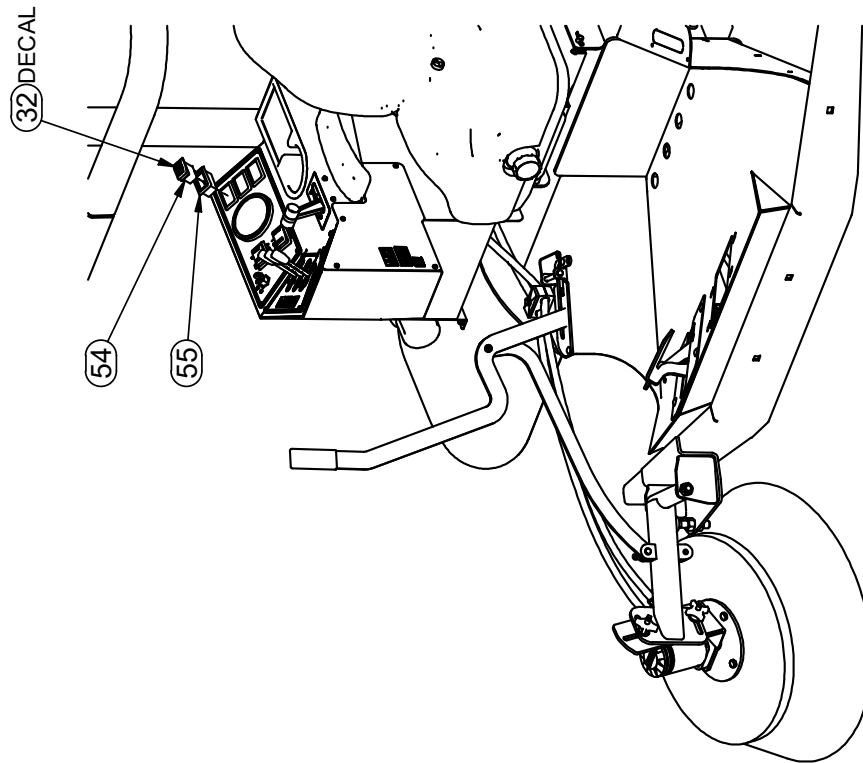
CURB BRUSH HYDRAULICS

CURB BRUSH PLUMBING (RIGHT)



8-11-2022

CURB BRUSH SWITCH & ELECTRICAL INSTALLATION

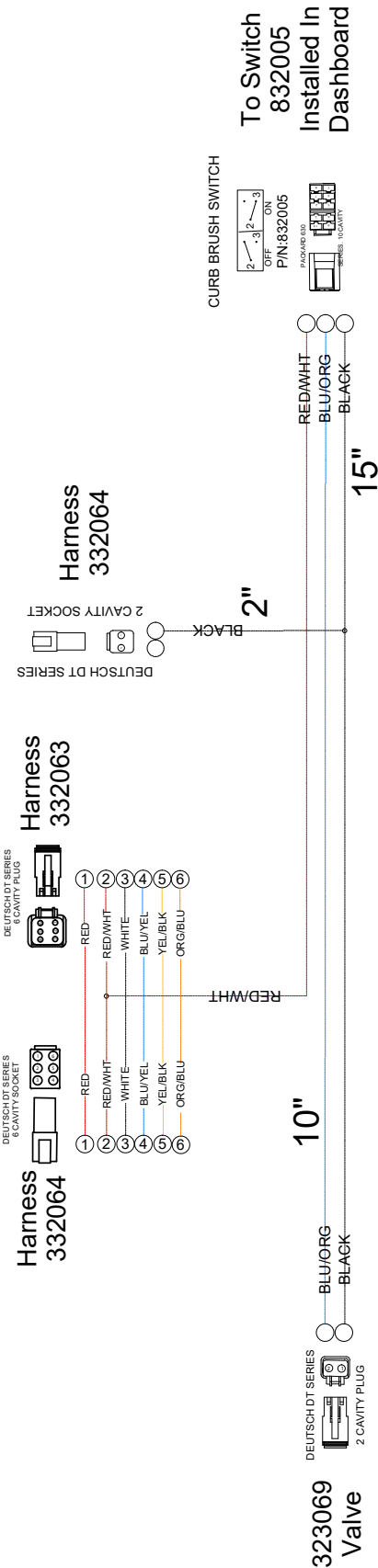


VIEW 1

To Install Wiring Harness (332070):

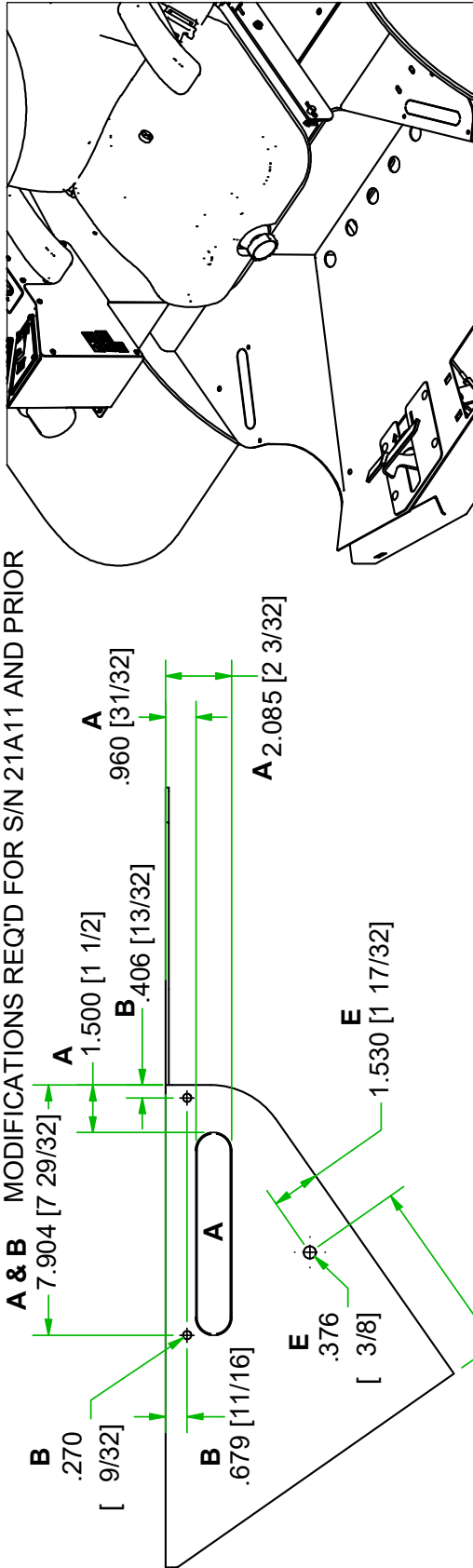
- 1) Disconnect harness 332064 & 332063 at the 6 cavity Deutsch connector. This plug is located inside operator's console. It is the only 6 cavity Deutsch connector in the console. Connect harness 332064 and 332063 to the harness included with this kit (332070)
- 2) Connect 2 cavity Deutsch, black wire 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



CURB BRUSH ASSEMBLY

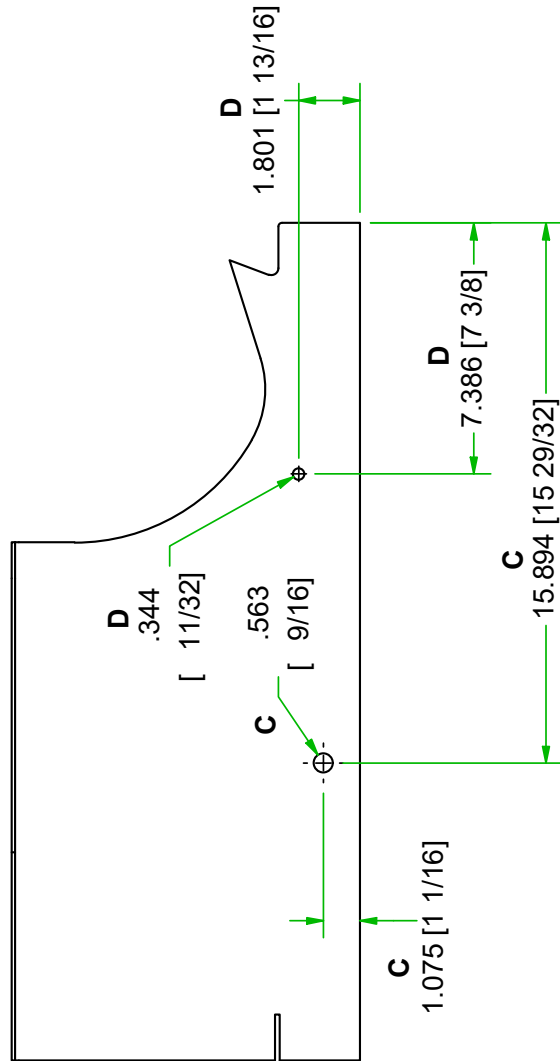
A & B MODIFICATIONS REQ'D FOR S/N 21A11 AND PRIOR



FOR S/N 21A11 AND PRIOR

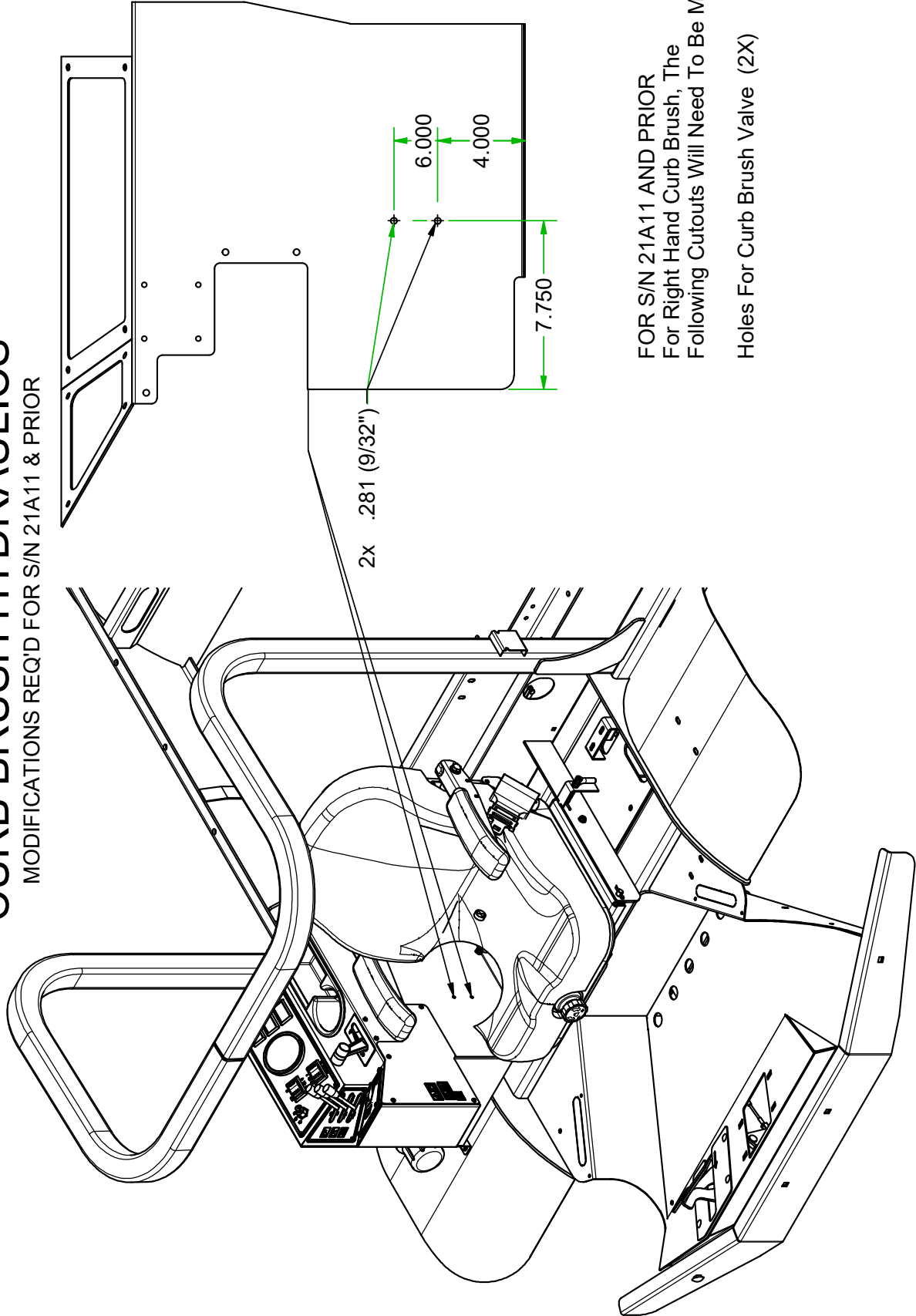
For Right Hand Curb Brush, The Following Cutouts Will Need To Be Made.

- 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



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)

HAWK LEFT CURB BRUSH INSTALL
CUSTOMER INSTALL: 300092
FACTORY INSTALL: 300093

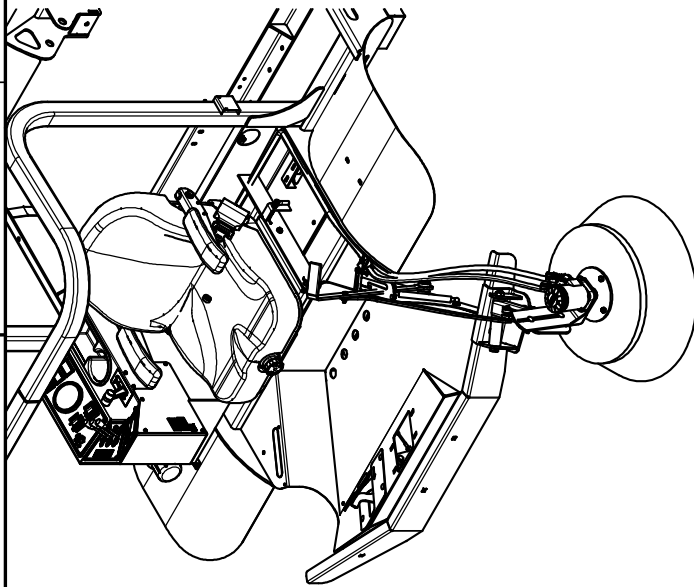
Parts List				Parts List			
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION
1	1	110125	BOLT, 1/2-13 X 2.25 GR 5 ZINC PLATE	32	1	302160	DECAL, CURB BRUSH
2	4	110290	NUT, 1/4-20 WIZ FLANGE	33	1	312022	CLIP, HAIRPIN 3/32 x 1.625
3	2	110358	Bolt, 1/4-20 X 0.625 in Carriage	34	1	312039	GAS SPRING, 4" STROKE, 120LBS
4	2	110392	Bolt, 3/8-16 X 2 in Carriage	35	1	312041	CLEVIS PIN, 3/8 X 1.5, ZINC
5	1	110396	BOLT, 5/16-18 X 2.5	36	1	315402	WLDMNT, CURB BRUSH HANDLE LEFT, SWPR
6	4	110400	BOLT, 3/8-16 X 2.0				
7	4	110420	BOLT, 3/8-16 X 1.0	37	1	315403	WELDMENT, CURB BRUSH ARM, SWPR
8	1	110434	BOLT, 1/4-20 X 0.5, WIZ FLANGE	38	1	315405	WELDMENT, CURB BRUSH BASE LEFT, SWPR
9	2	110474	BOLT, 1/4-20 X 1-1/2				
10	2	110597	NUT, 5/8-11 HEX	39	1	315406	WELDMENT, CURB BRUSH MOUNT, SWPR
11	3	110600	NUT, 5/16-18, UNITORSQUE LOCK	40	1	315407	WELDMENT, BRUSH ADAPTER, SWPR
12	1	110606	NUT, 5/16-18 WIZ FLANGE	41	1	317258	WASHER, 2.0 X .344 X .12
13	1	110615	NUT, 1/2-13, UNITORSQUE LOCK	42	1	317261	TENSIONER, GEAR MOUNT, BUSHING
14	4	110621	NUT, 3/8-16, UNITORSQUE LOCK	43	1	317398	LINK, CURB BRUSH LIFT
15	1	110639	NUT, 5/8-11, UNITORSQUE LOCK	44	1	317457	BRKT, LH CURB BRUSH RETAINING
16	2	110658	WASHER, 1/2" FLAT STANDARD	45	2	320401	HOSE ASSY, LH CURB BRUSH
17	2	110665	WASHER, 5/16" FLAT STANDARD	46	1	320402	HOSE ASSY, CURB BRUSH INLET
18	4	110672	WASHER, 3/8" LOCK	47	1	320403	HOSE ASSY, CURB BRUSH RETURN
19	1	110674	WASHER, 5/16" LOCK	48	1	322099	HIGH PRESSURE CARRYOVER PLUG
20	6	110676	WASHER, 3/8" FLAT STANDARD	49	1	323069	VALVE ASSEMBLY, 2-WAY/4 POSITION
21	1	110895	Bolt, 5/8-11 X 3 in Carriage	50	1	332070	HARNESS, CURB BRUSH
22	1	111189	Bolt, 5/8-11 X 7.5, HHCS Gr 5 Zinc	51	1	820097	CLAMP BODY
23	1	111199	BOLT, 3/8 X .625 SHOULDER SHCS	52	1	820098	COVER PLATE
24	1	111208	Pin, Lock 3/8 x 3.00" Usable Length, Sq Wire	53	1	832005	SWITCH, PADDLE, CARLING (29253)
25	1	120216	ADAPTER, 6MJ-6F JX-6MJ	54	1	832024	MOUNT, SWITCH (VMS)
26	1	120239	ADAPTER, 6MJ-8MB	55	1	910044	COVER, VINYL .25 X 1.5 X 4 GRIP
27	4	120319	ADAPTER, 6MJ-6MB	56	1	922004	MOTOR, EATON 101-1009
28	2	120753	Jic(-6) to Male O-ring (-10), 45 degrees				
29	1	211747	FRICTION WASHER 1.5"				
30	2	302063	KNOB, ALUMINUM 3/8-16				
31	1	302064	BRUSH, 24" x 6" x 40 DEG				

FOR SERIAL NUMBERS **21A11** AND PRIOR
SEE PAGES **8-9** FOR DETAILS ON
UPDATES NEEDED FOR CURB BRUSH
INSTALLATION

8-11-2022

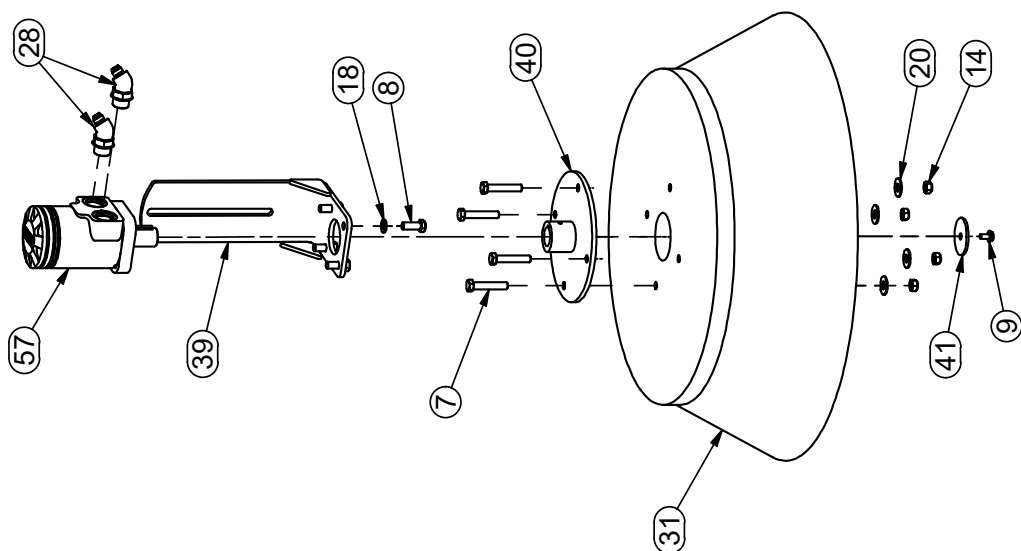
300092

REV: A

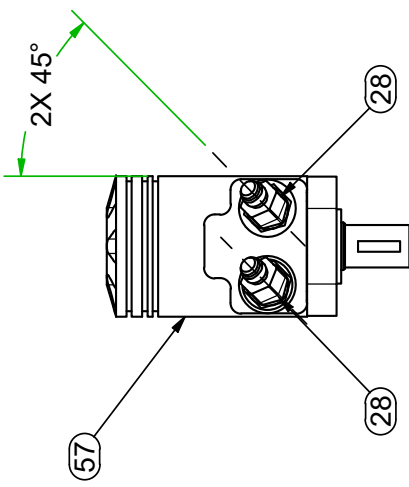


BRUSH ASSEMBLY

- 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)



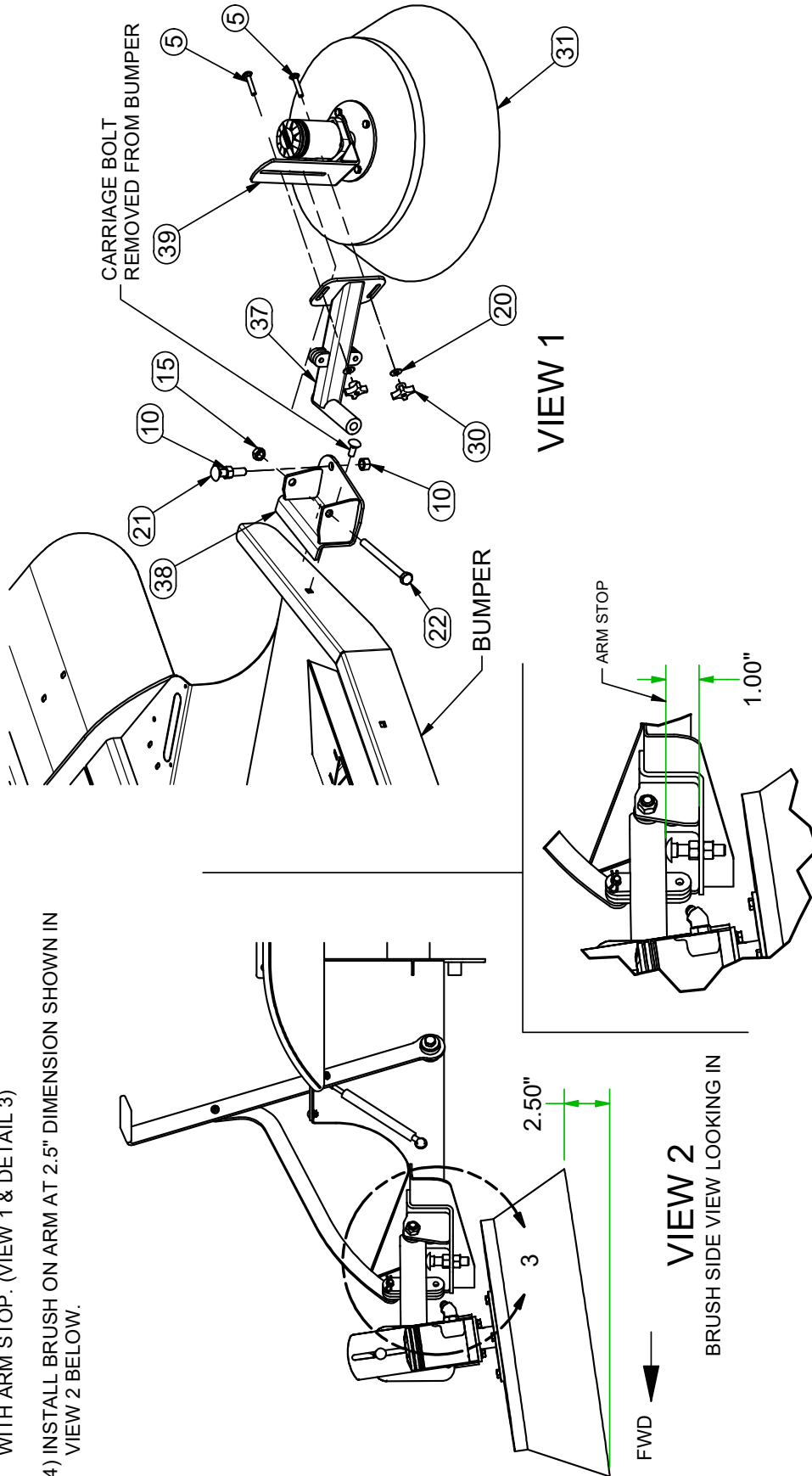
VIEW 2



VIEW 1
FITTING LAYOUT
ON MOTOR

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.

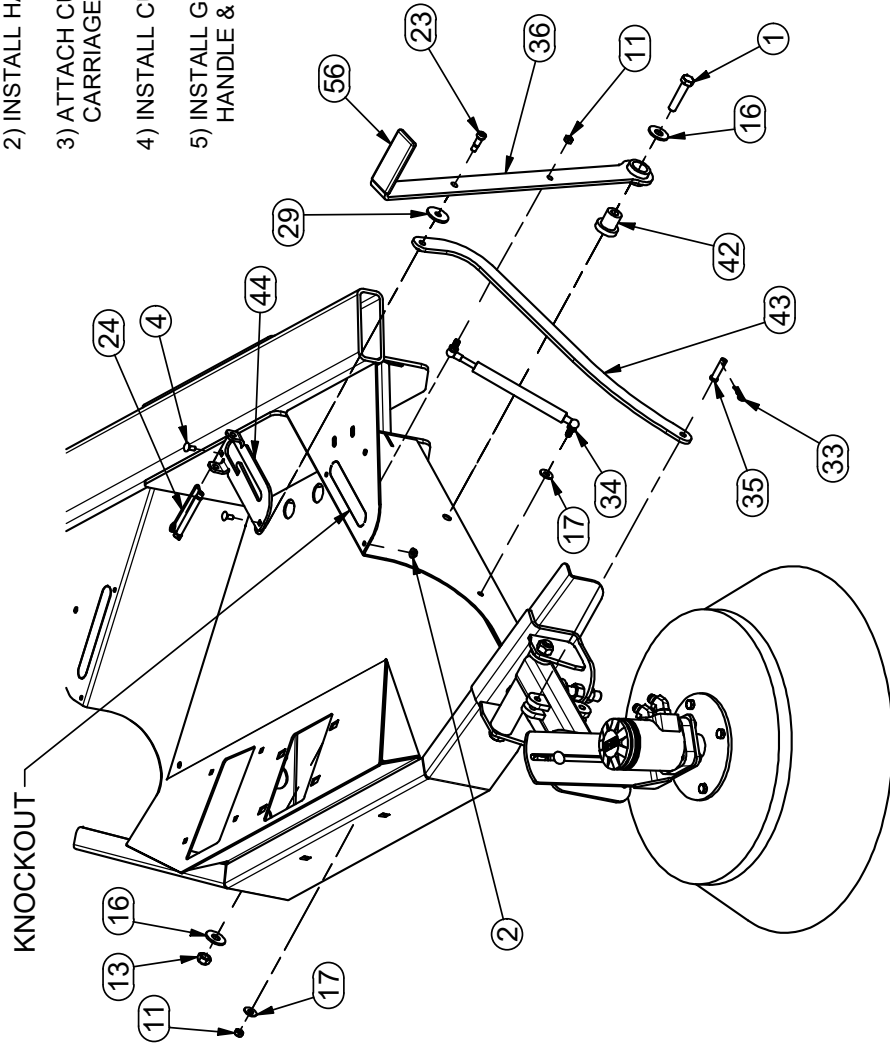


300092

REV: B

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)



VIEW 1
CURB BRUSH
HANDLE INSTALLED

VIEW 2

8-11-2022

CURB BRUSH HYDRAULICS

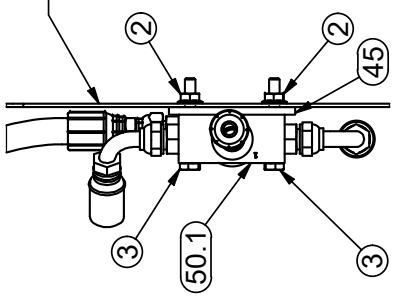
300092 REV: B

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)

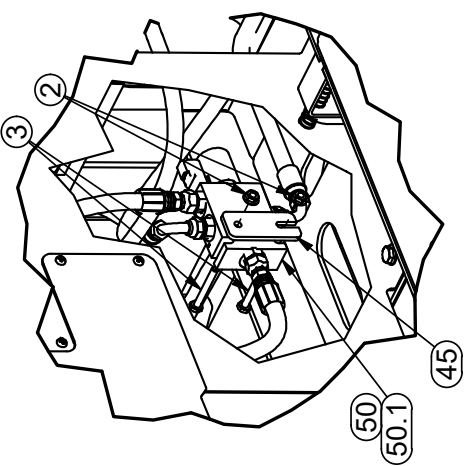
NOTE: IF UNIT SN IS 21A11 OR PRIOR, SEE SHEET 12 FOR INSTALLATION HOLE DIMENSIONS

CONSOLE
SIDE PANEL
(317188)



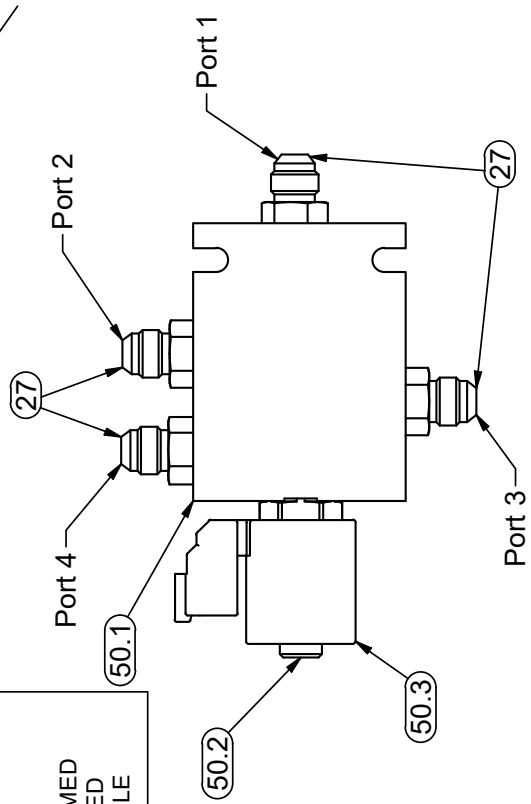
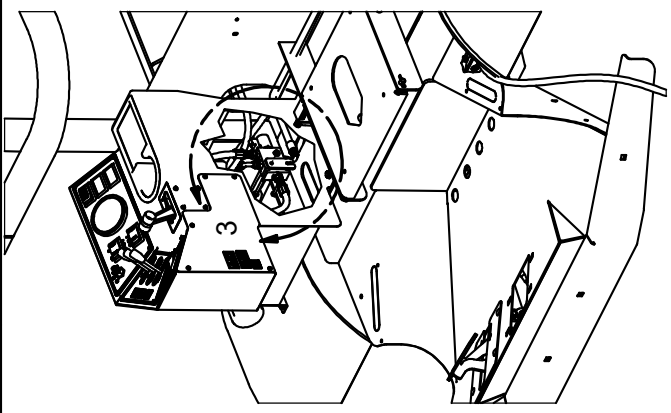
VIEW 4

SHOWING SHIMMED
VALVE MOUNTED
INSIDE CONSOLE



DETAIL 3

VIEW 2
VIEW OF CONTROL PANEL



VIEW 1

323069 VALVE LAYOUT VIEW

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	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

8-11-2022

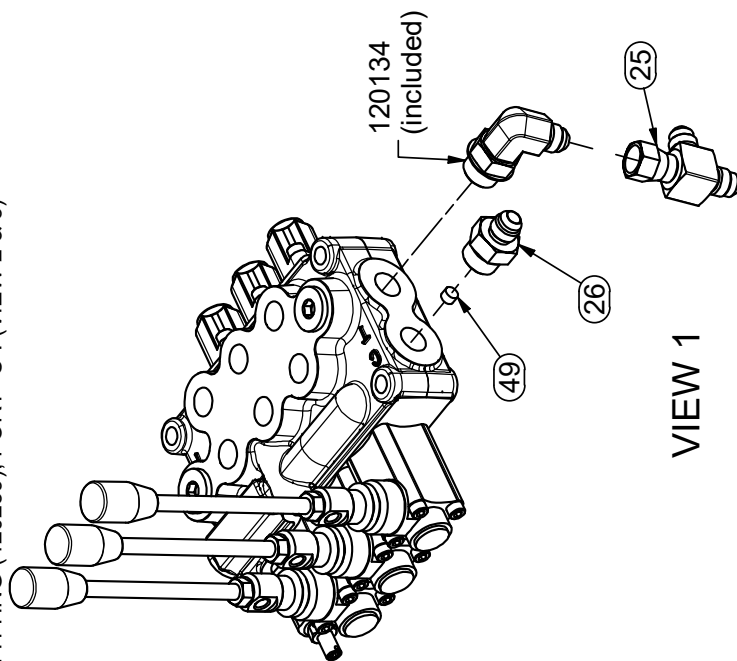
CURB BRUSH HYDRAULICS

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)

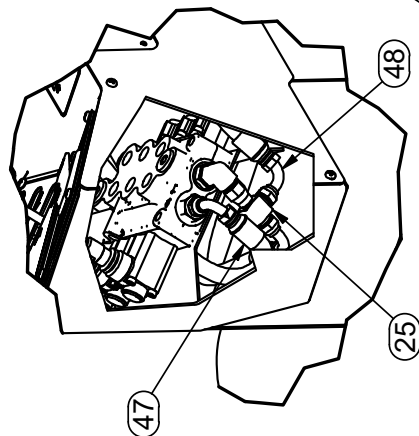


VIEW 1

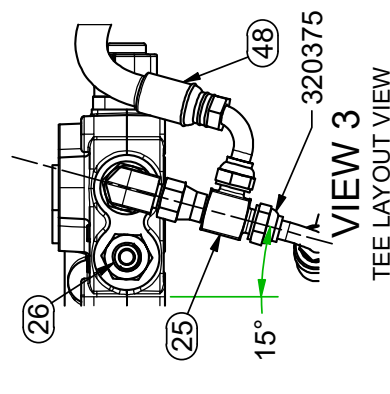
4) REMOVE HOSE ASSY (320375) FROM ELBOW (120134) ON PORT "T"

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)

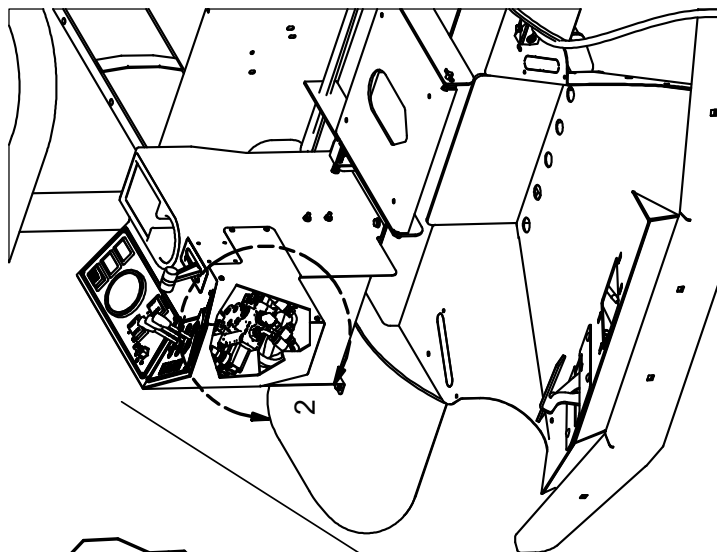


DETAIL 2



VIEW 3

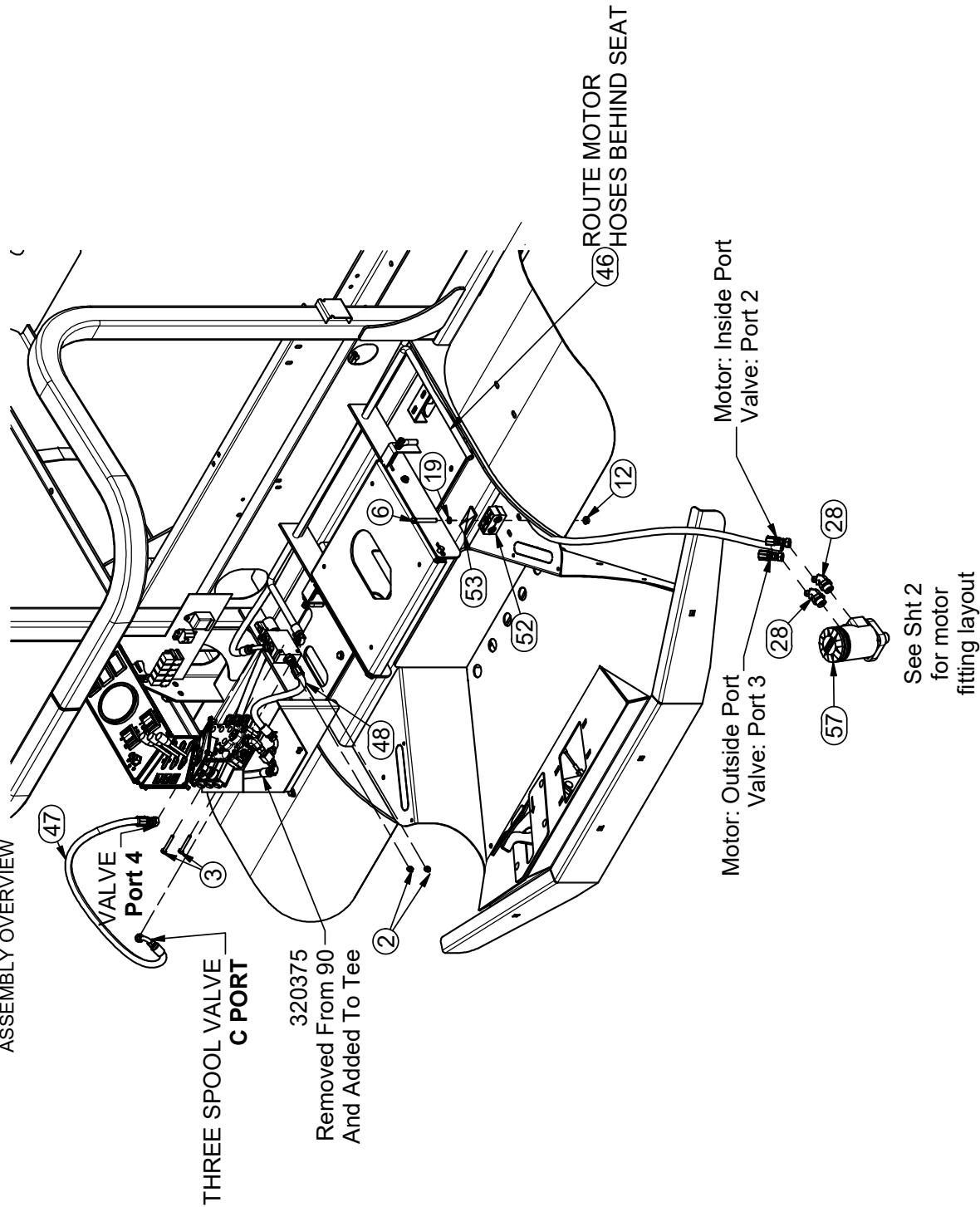
TEE LAYOUT VIEW



VIEW 4
VIEW OF CONTROL PANEL

CURB BRUSH HYDRAULICS

ASSEMBLY OVERVIEW

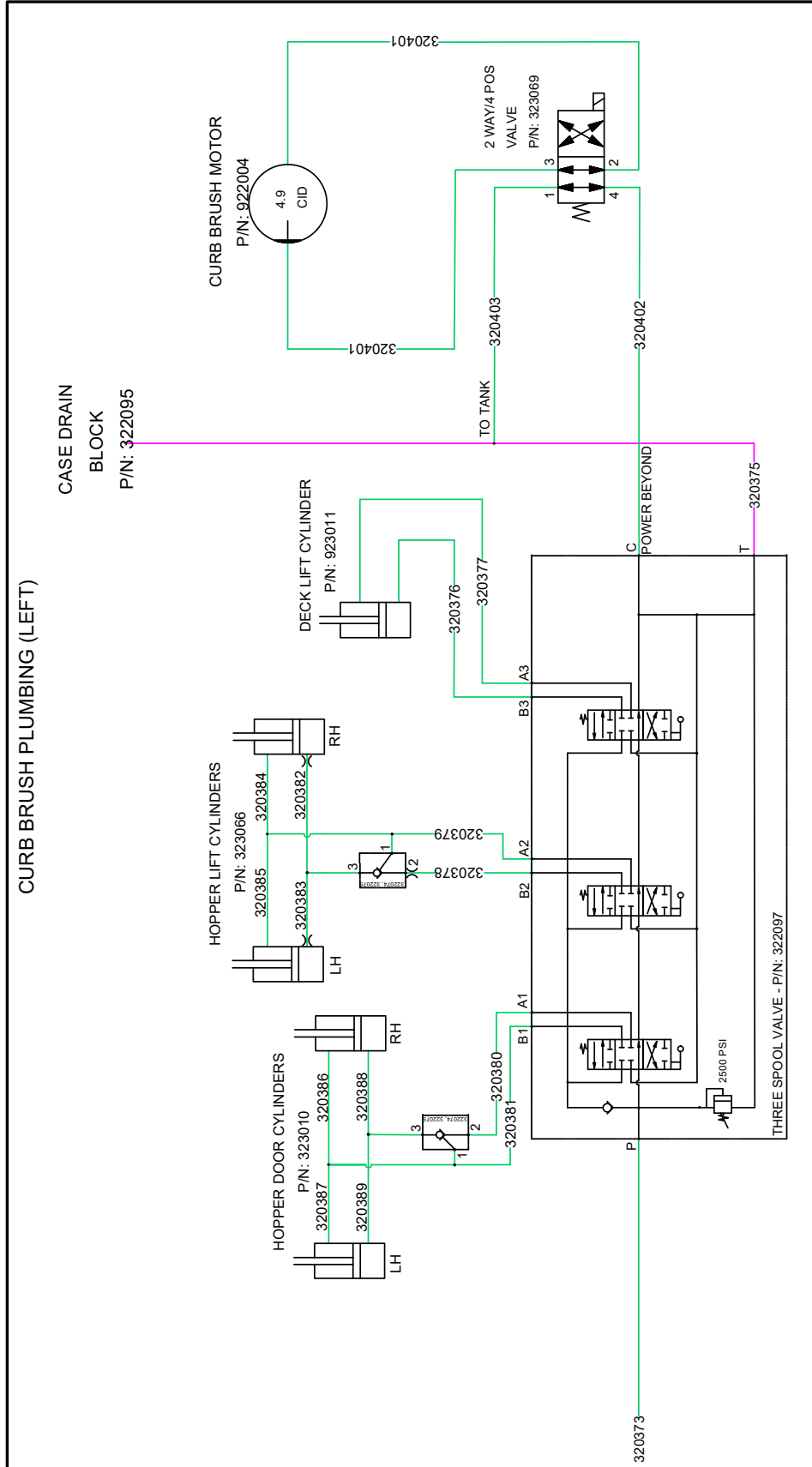


300092

REV: B

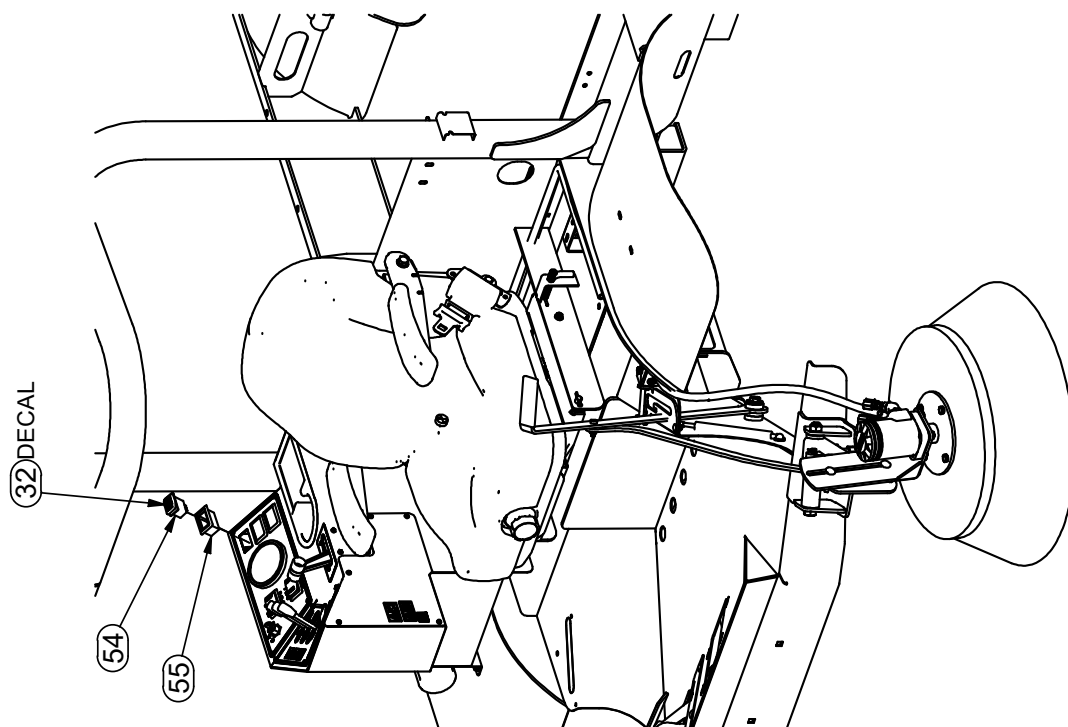
CURB BRUSH HYDRAULICS

CURB BRUSH PLUMBING (LEFT)



8-11-2022

CURB BRUSH SWITCH & ELECTRICAL INSTALLATION



VIEW 1

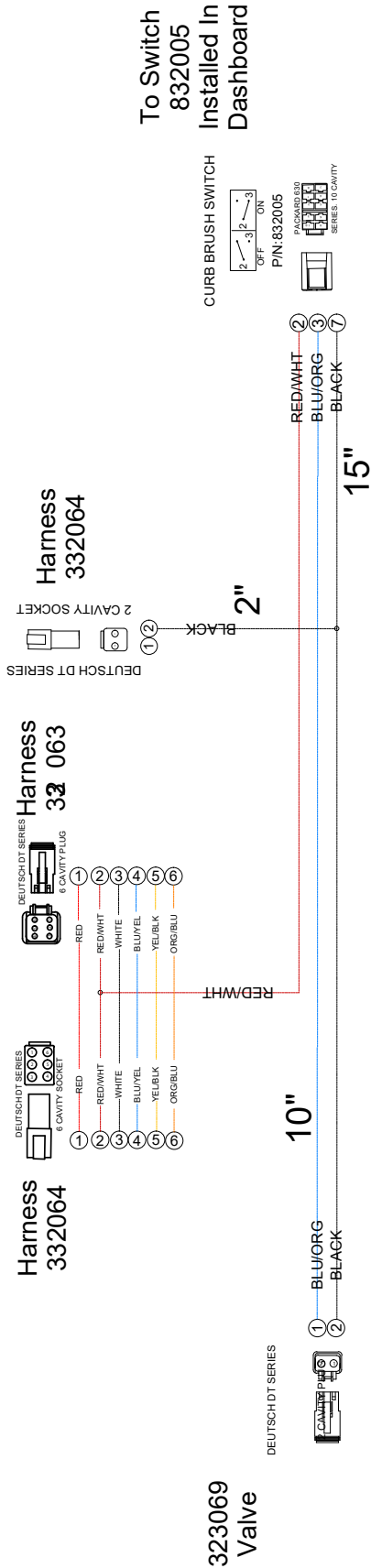
To Install Wiring Harness (332070):

- 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

8-11-2022

SWEEPER CURB BRUSH WIRING SCHEMATIC

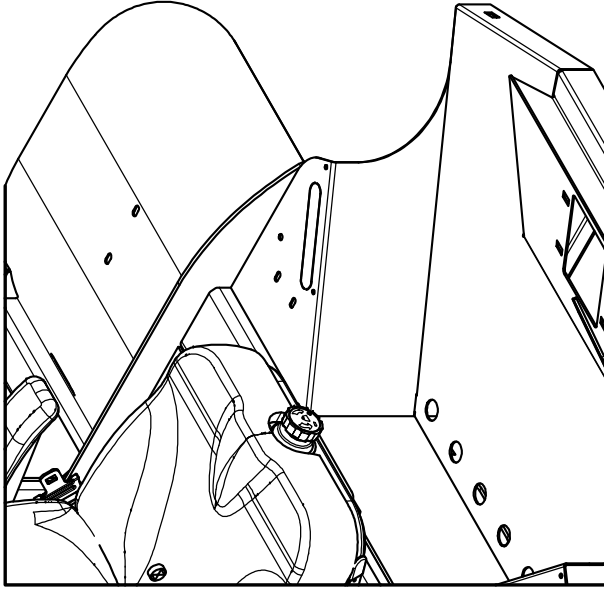
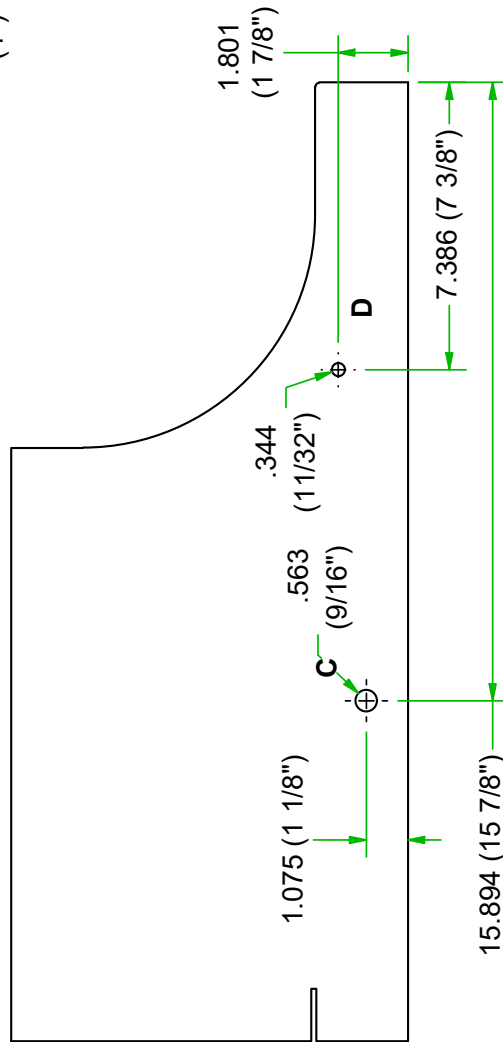
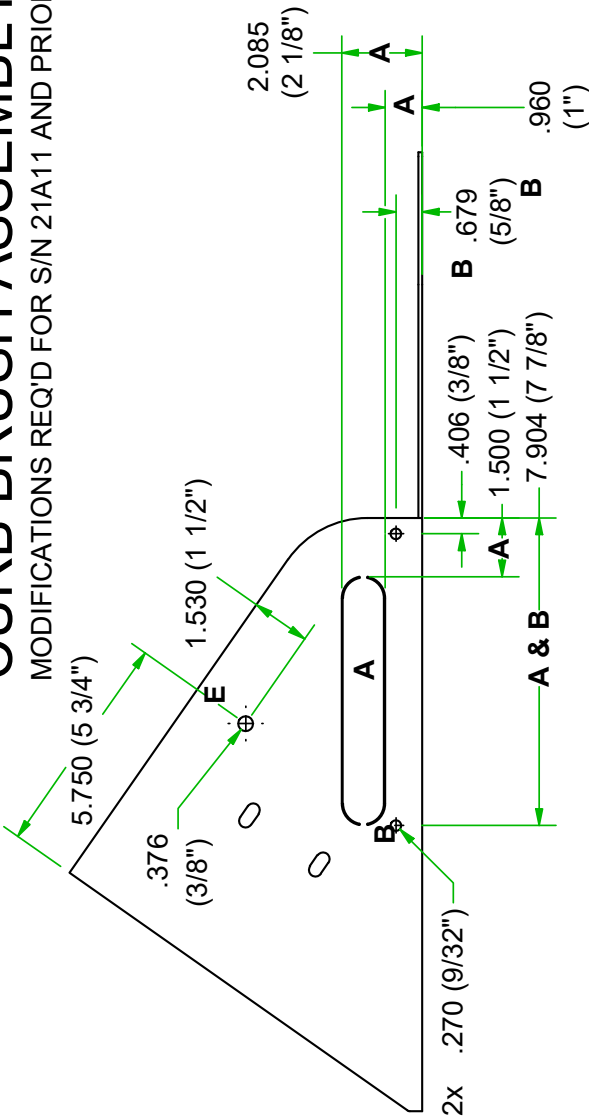


300092

REV: B

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

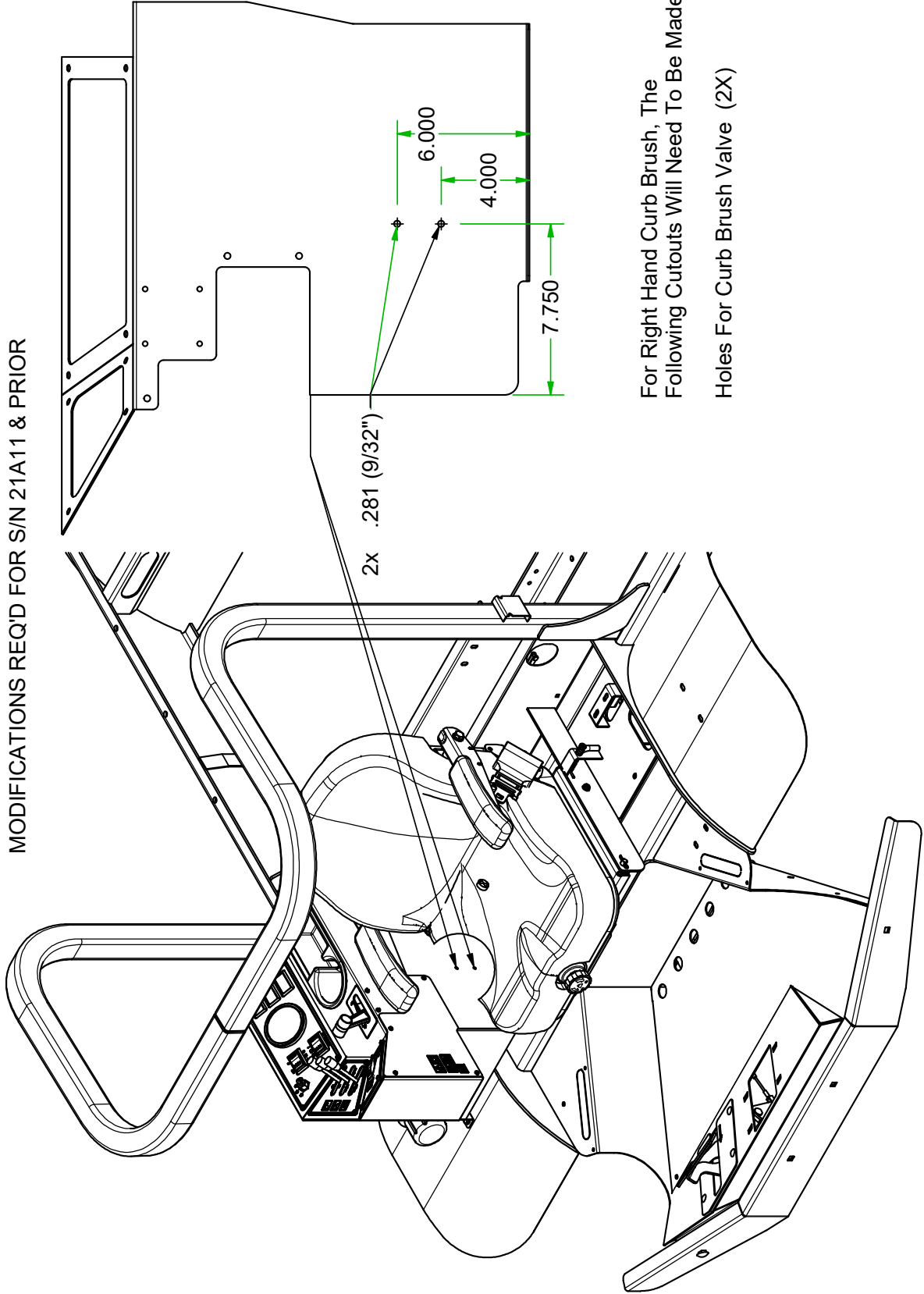
8-11-2022

300092

REV: B

CURB BRUSH HYDRAULICS

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

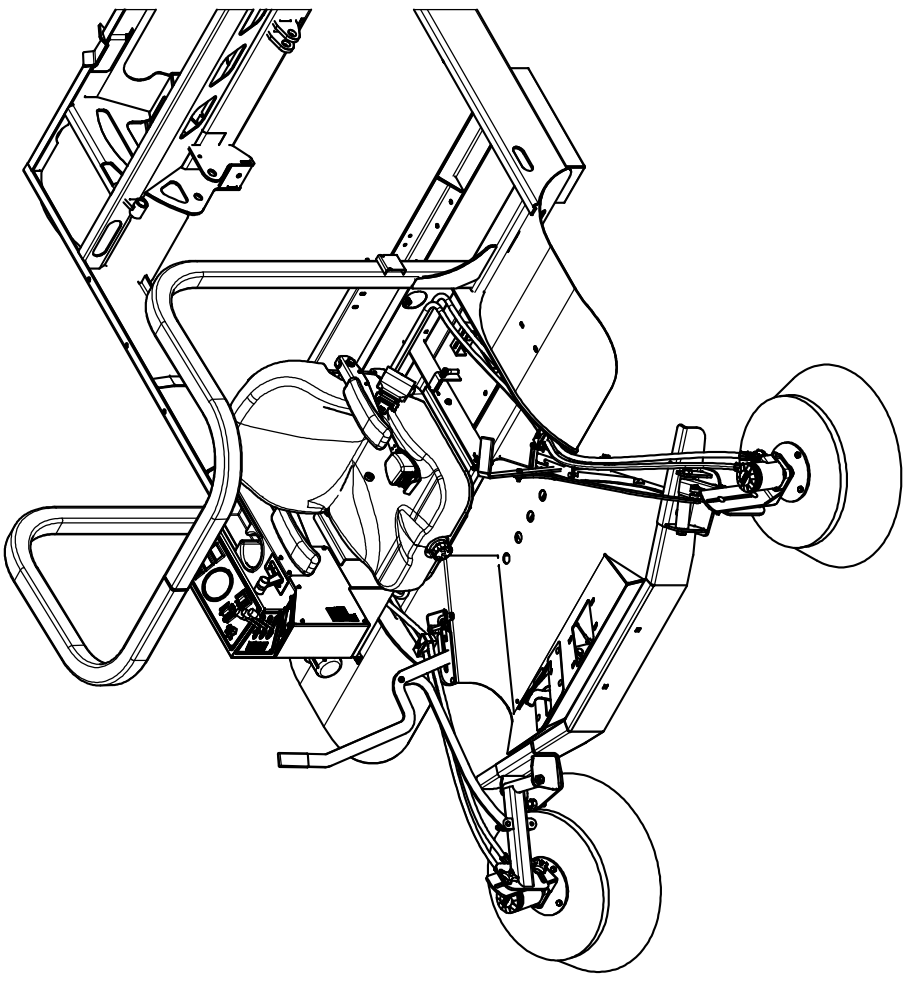


For Right Hand Curb Brush, The
Following Cutouts Will Need To Be Made:
Holes For Curb Brush Valve (2X)

8-11-2022

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 WIZ 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

320403

2

4

120219

30°

VIEW 4

SHOWING SHIMMED
VALVE MOUNTED
INSIDE CONSOLE

DETAIL 3

PORT 4
RH

PORT 2
RH

PORT 3
LH

PORT 1
RH

PORT 3
LH

PORT 4
LH

PORT 2
LH

PORT 1
LH

PORT 3
RH

PORT 4
RH

PORT 2
RH

PORT 1
RH

PORT 3
LH

PORT 4
LH

PORT 2
LH

PORT 1
LH

PORT 3
RH

PORT 4
RH

PORT 2
RH

PORT 1
RH

PORT 3
LH

PORT 4
LH

PORT 2
LH

PORT 1
LH

LH VALVE
(OUTSIDE CONSOLE)

FWD

VIEW 1

323069 VALVE LAYOUT VIEW

VIEW 2

VIEW OF CONTROL PANEL

8-11-2022

300094

REV: A

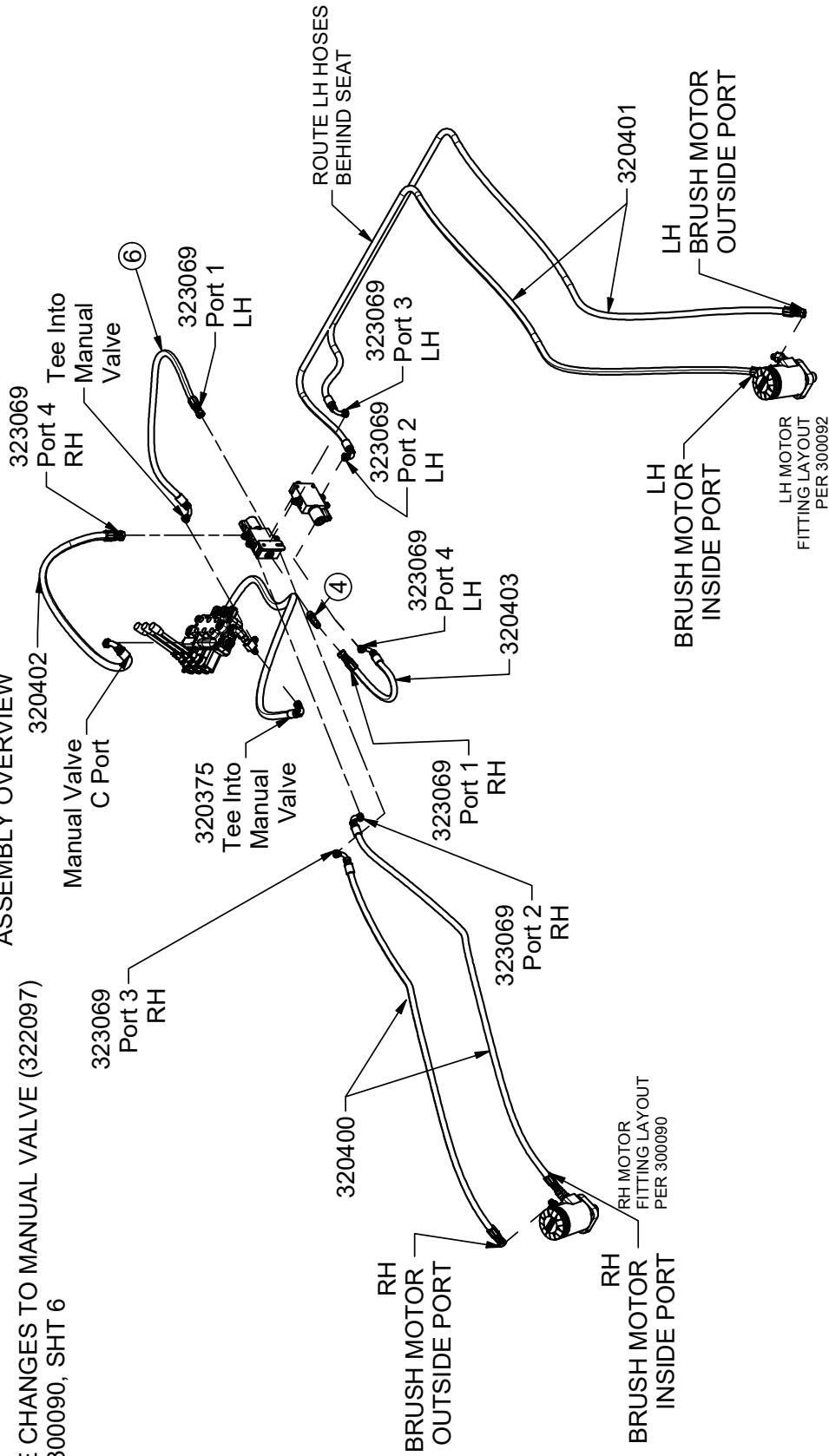
300094

REV: A

CURB BRUSH HYDRAULICS

ASSEMBLY OVERVIEW

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



8-11-2022

REV: A

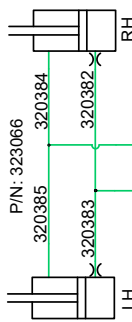
300094

CURB BRUSH PLUMBING (DUAL)

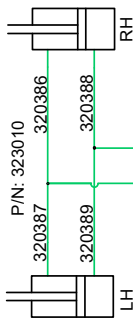
CASE DRAIN
BLOCK
P/N: 322095

11.6

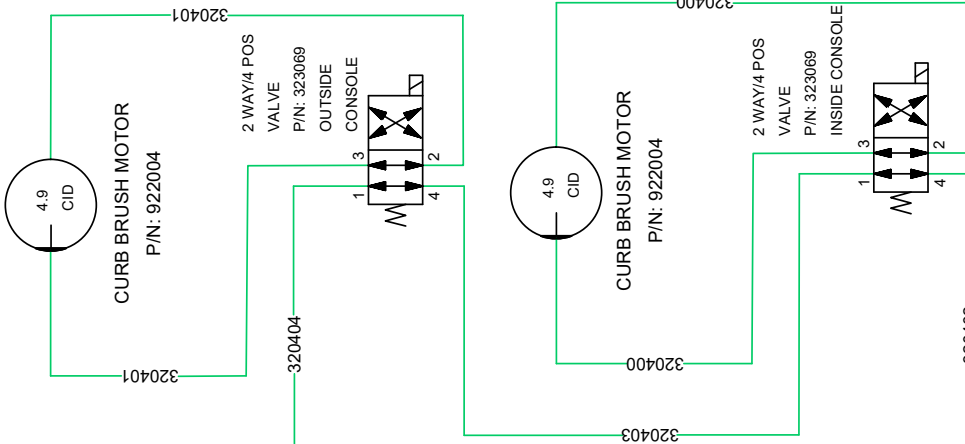
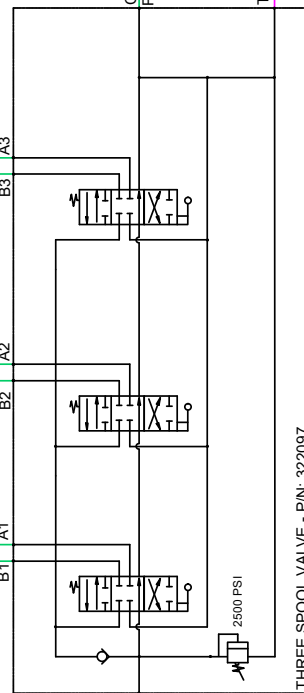
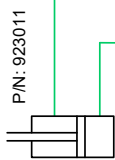
HOPPER LIFT CYLINDERS



HOPPER DOOR CYLINDERS



DECK LIFT CYLINDER



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)

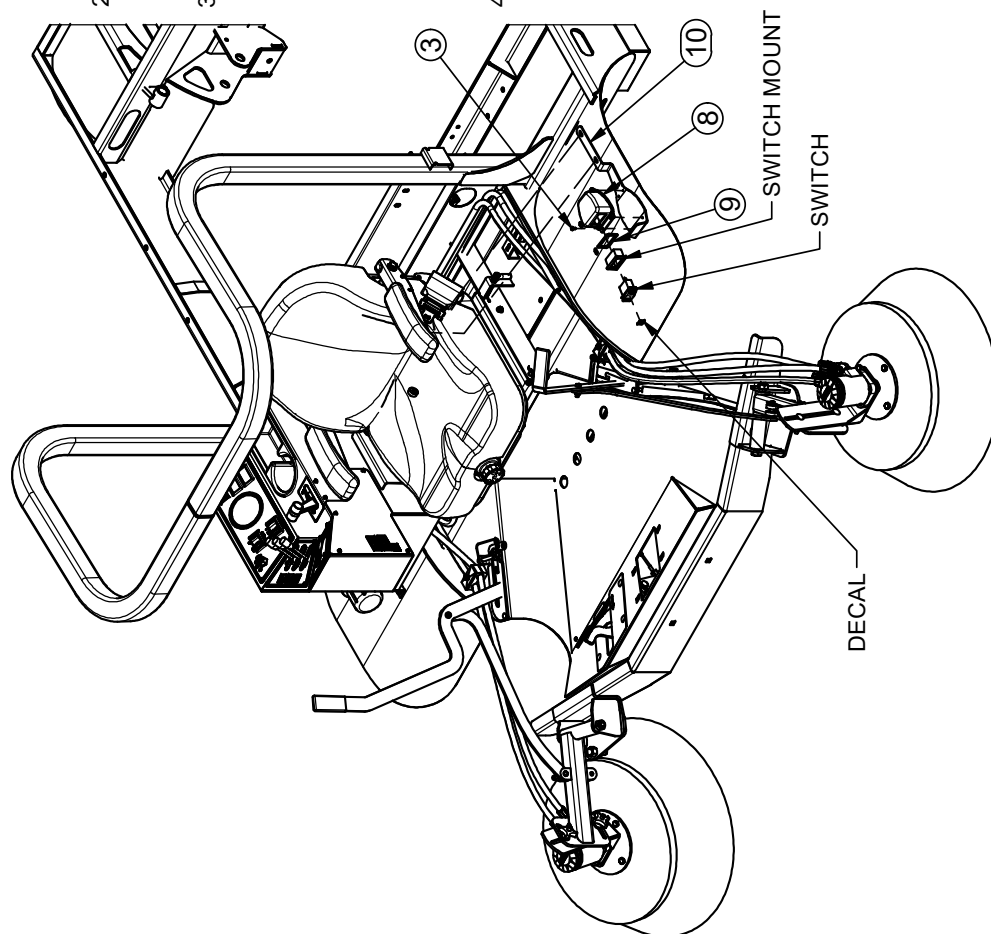
2) Connect two, 2 cavity Deutsch, (Black Wire Only) to 2 of the 3 available accessory plugs (Harness 332064). These 2 cavity plugs should be located near the fuse block inside the console.

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

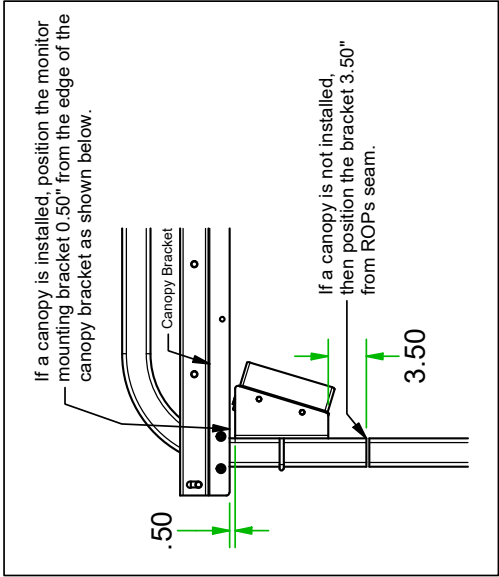
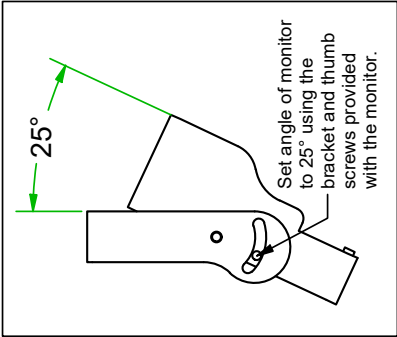
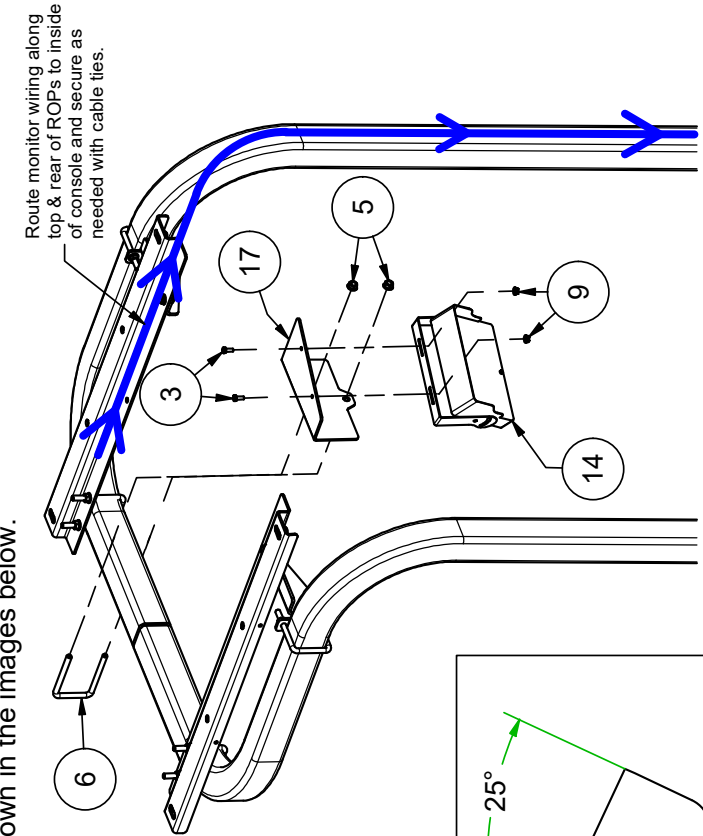


VIEW 1

8-11-2022

[illegible]

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

for hole locations and sizes.

Dimension shown from face of upper door support

11.5

26.0

6.0

2.0

2.0

31.90

Drill 5/16" hole for clamp mounting

Drill 5/16" hole for clamp mounting

RH Side of Hopper Door

Drill 2 - 1/4" holes to mount camera bracket. Use the camera bracket as a template and locate using dimensions shown.

the side of hopper in a later step:

16

2

4

7

3

15

9

4

Once clamps are secured & wire is routed, squeeze clamps around wire.

Mount camera angled 10° towards ground & install sunshade as shown below.

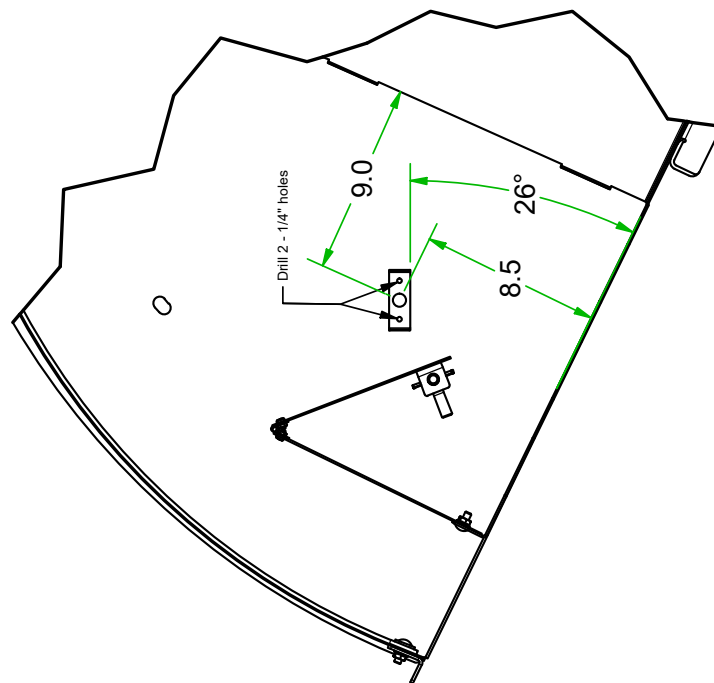
10°

Orient camera with decal on lower side of camera.

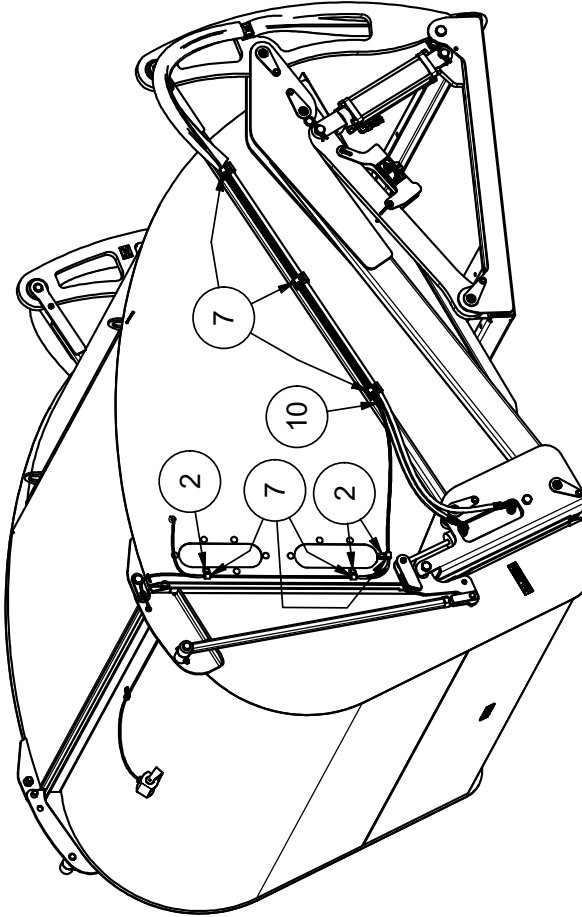
This diagram illustrates the final steps of the installation process:

- Return Air Screen Installation:** The screen is secured by clamping it to the return air panel using bolts (7). A note specifies: "Secure wire clamps using the bolts that hold the RH return air screen in place. After installation of clamps, squeeze the clamps around the wire." Dimensions shown include 1.0 inch between clamps and 5 inches from the top edge.
- Camera Mounting:** The camera is mounted on the lower side of the unit using a bracket (15) and screws (9). The mounting holes are located in the return air panel. The camera is oriented at a 65° angle upwards and angled 65° towards the sunshade.
- Drill Hole:** A 5/8" hole is drilled in the side of the hopper to route the wire (8).

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.

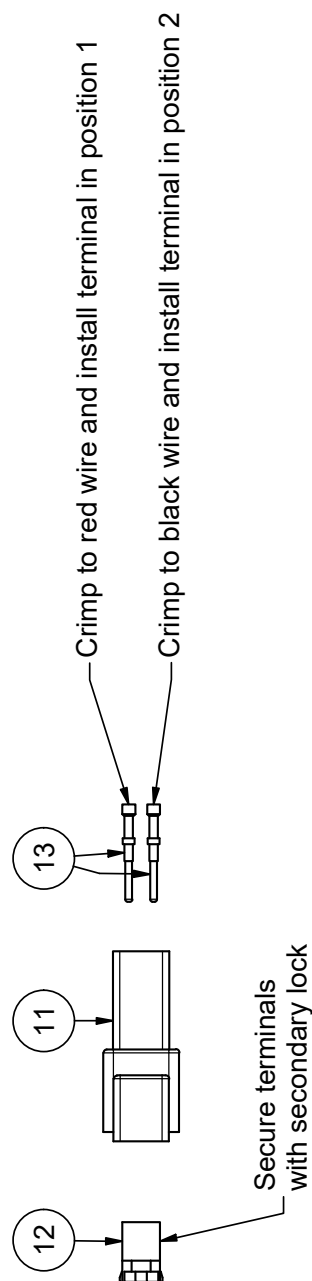


5. Install remaining wire clamps at the locations identified below. Remove carriage bolts on side of hopper and replace with the 110444 bolts. To attach the clamps on the upper arm, use the hardware installed. Route the two camera wires at the clamp locations and then through the engine compartment to 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.



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.

NOTES

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Toll-Free: 800-835-1042
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HK4400

HARPER
TURF EQUIPMENT