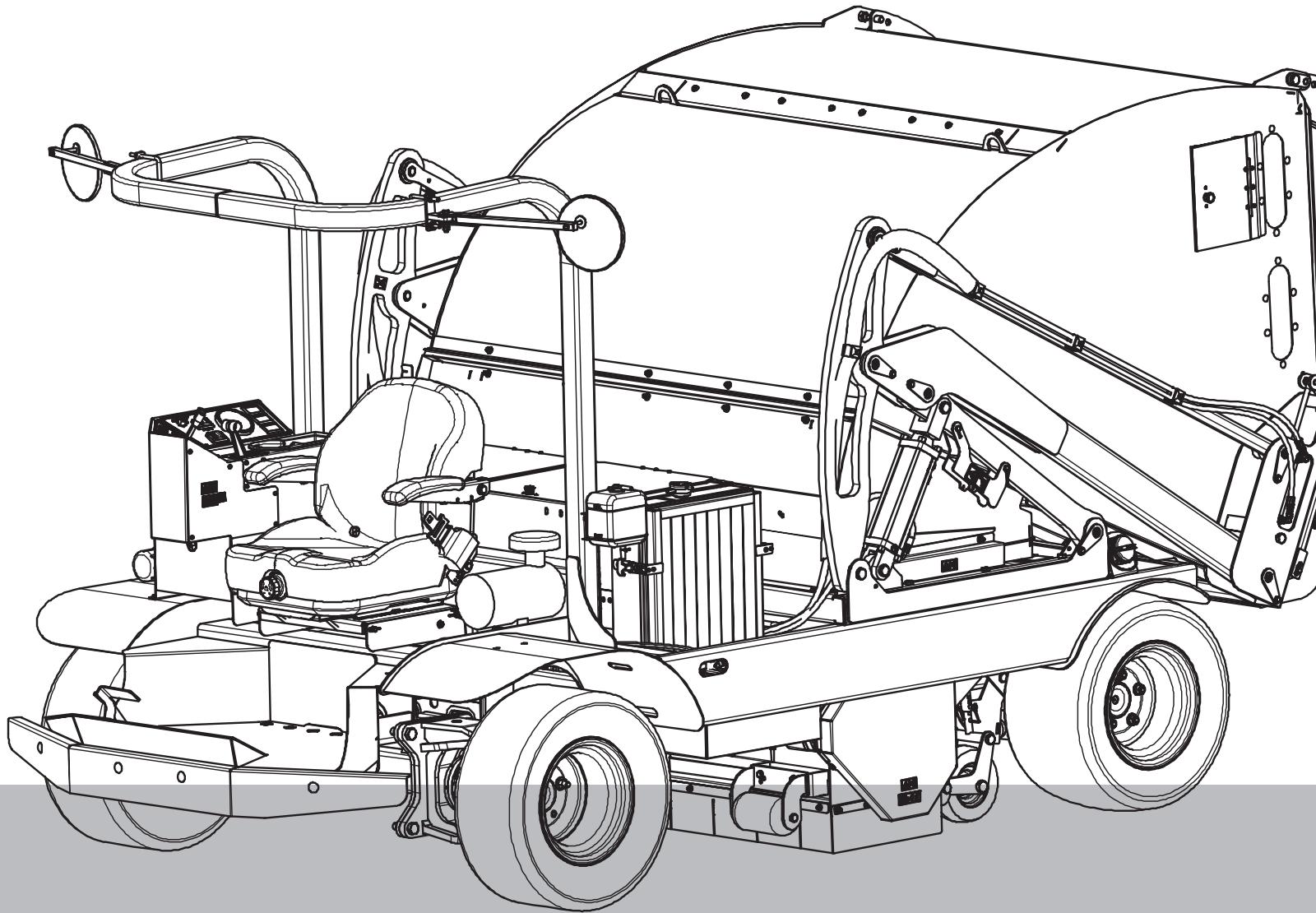


HK 4400

Serial Number: 21A01-22A03
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.

HK4400

HARPER
TURF EQUIPMENT

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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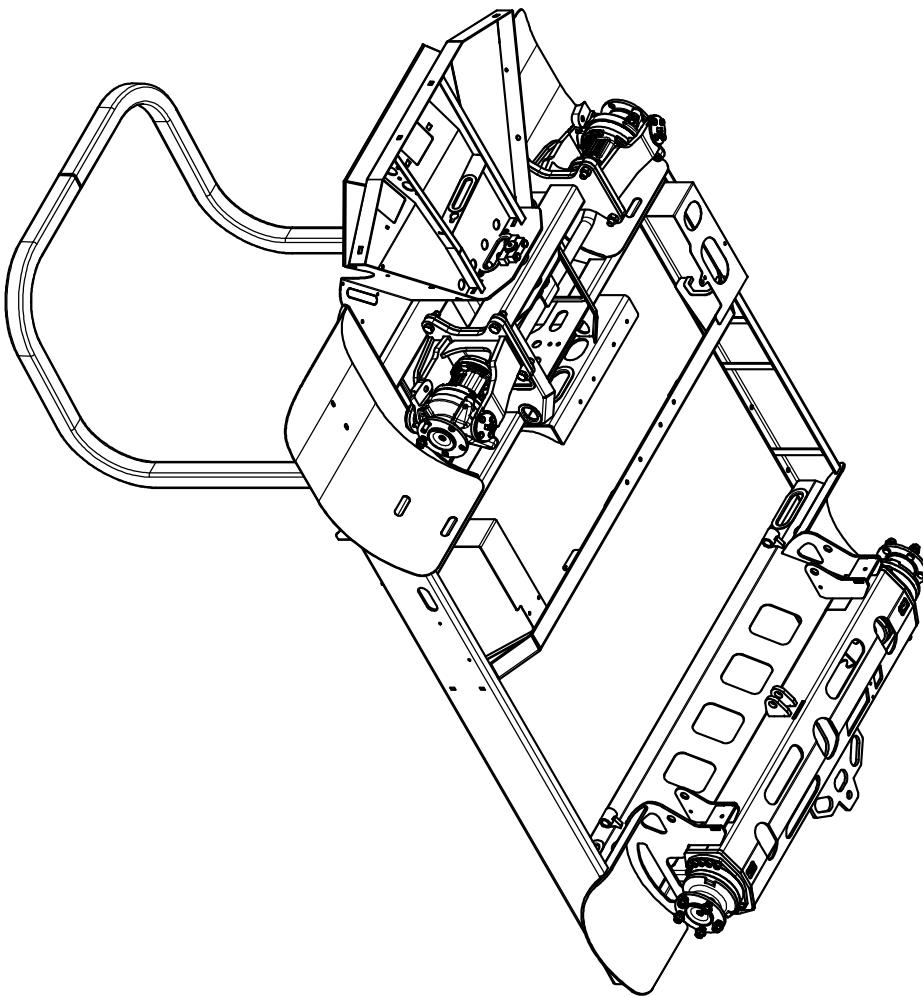
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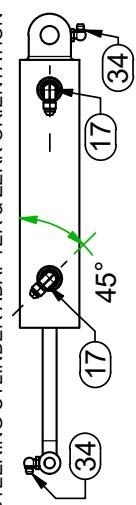
WHEEL MOTOR & AXLE INSTALLATION



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, 7/18 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

RIGHT FRONT AXLE INSTALLATION

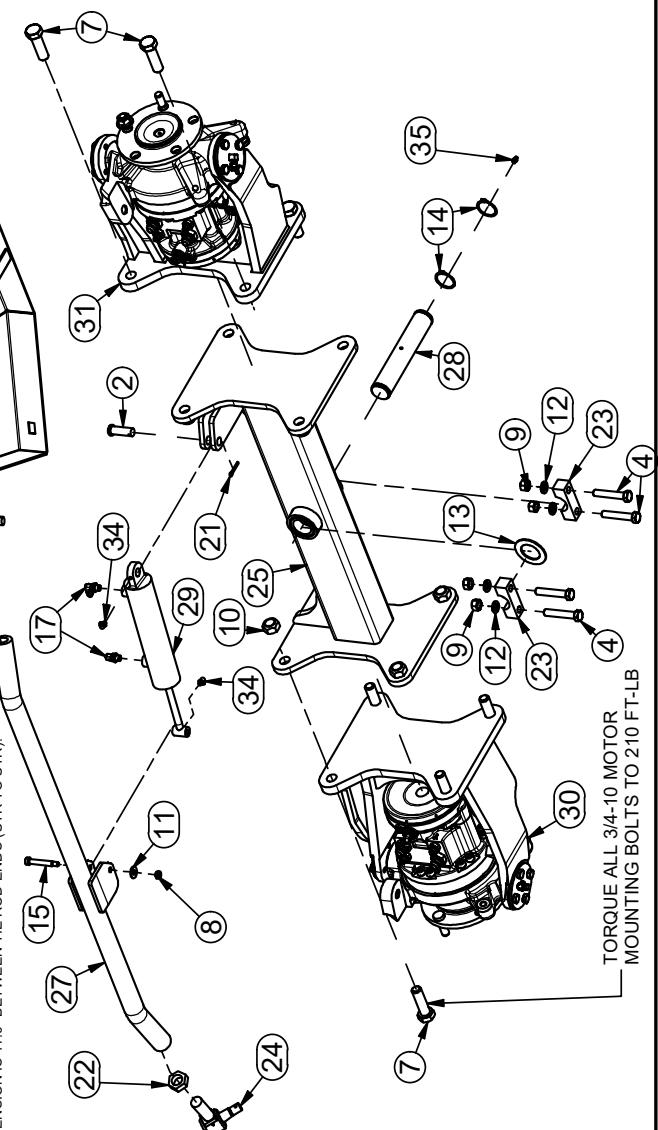
LEFT STEERING BAR ORIENTATION



Parts List

ITEM	QTY	PART #	DESCRIPTION
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, UNI TORQUE LOCK
9	4	110610	NUT, 1/2-13
10	8	110625	NUT, 3/4-10, UNI TORQUE LOCK
11	1	110685	WASHER, 5/16" FLAT STANDARD
12	24	110686	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	323035	MOTOR, LH FRONT WHEEL, 24.3 Cl, 2-SPD
31	1	323036	MOTOR, RH FRONT WHEEL, 24.3 Cl, 2-SPD
34	2	500230	GREASE ZERK, 1/4-28 90deg
35	1	510174	GREASE ZERK, 1/4-28 ST

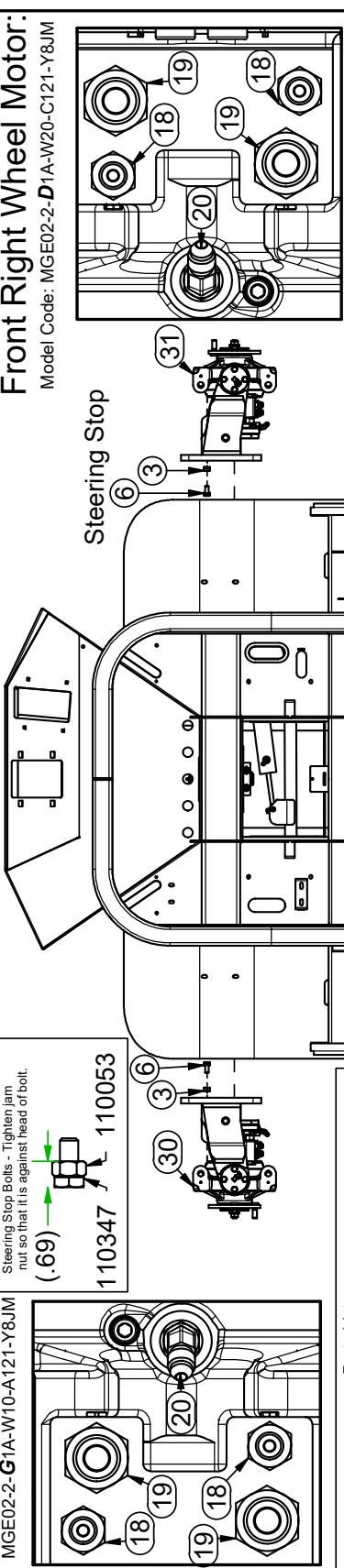
ADJUSTING THE ROD ENDS & SETTING ALIGNMENT
 1. START BY ADJUSTING THE TIE ROD LOCATED ON THE LH SIDE OF THE MACHINE. EXTEND STEERING CYLINDER COMPLETELY AND ADJUST THE LH TIE ROD SO THAT THE SPINDLE CONTACTS THE STEERING STOP WHEN THE CYLINDER IS FULLY EXTENDED.
 2. THEN ADJUST THE TIE ROD END LOCATED 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).



Front Left Wheel Motor: WHEEL MOTOR INSTALLATION

Model Code: MGE02-2-G1A-W10-A121-Y8-JM

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

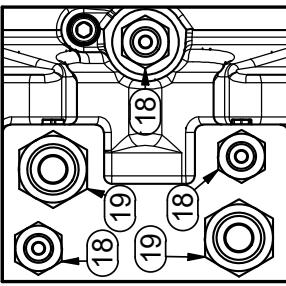
(.69)
110347
110053

Parts List

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, M12x1.75x25 Gr-10.9
18	10	120249	ADAPTER, 4M1-6MB
19	8	120446	ADAPTER, 8M1-10MB
20	2	120732	ADAPTER, 4M1-6MB 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

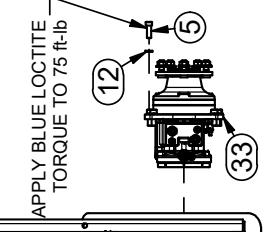
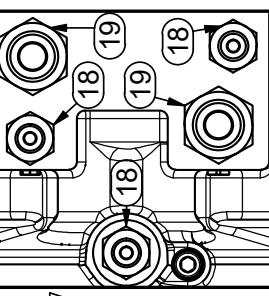
Left Rear Wheel Motor:

Model Code: MSE02-2-G2A-F03-1120-Y8-JM

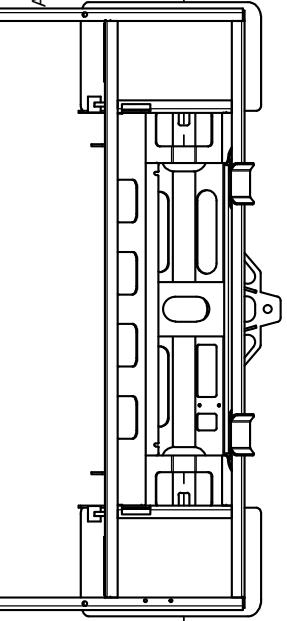


Front Right Wheel Motor:

Model Code: MGE02-2-D1A-W20-C121-Y8-JM

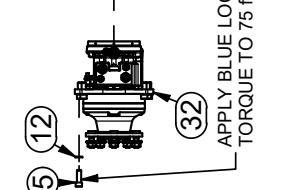


APPLY BLUE LOCTITE TORQUE TO 75 ft-lb

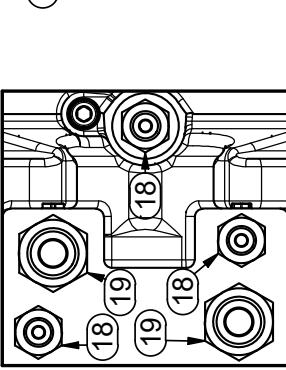


Right Rear Wheel Motor:

Model Code: MSE02-2-D2A-F03-1120-Y8-JM

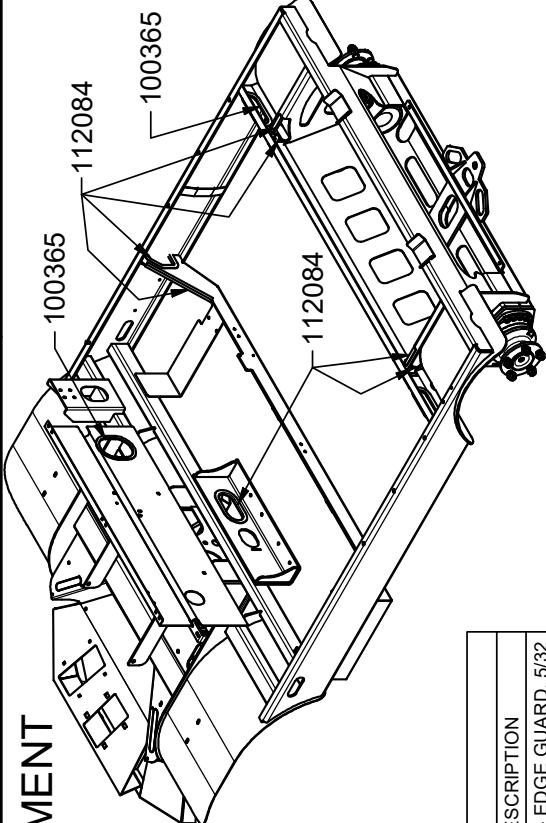
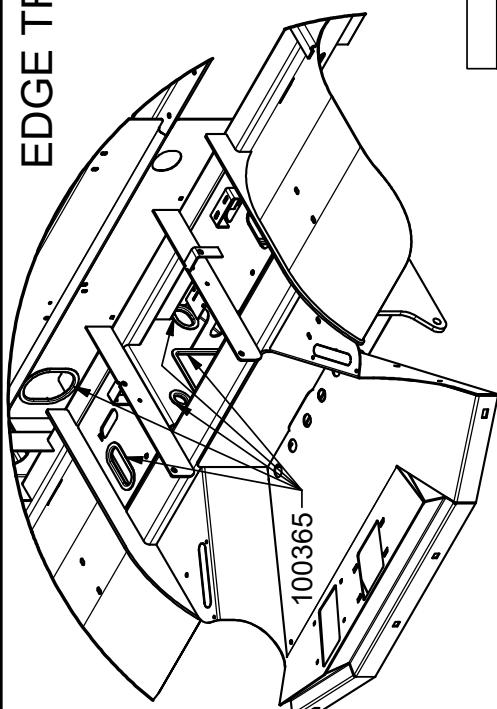


APPLY BLUE LOCTITE TORQUE TO 75 ft-lb



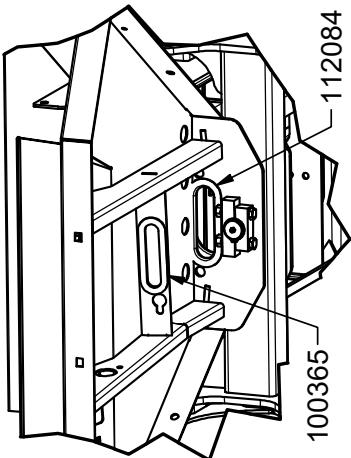
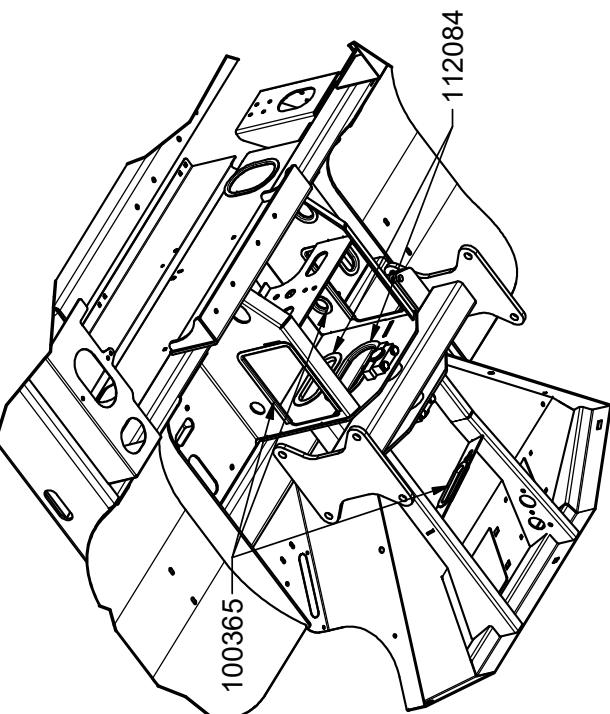
APPLY BLUE LOCTITE TORQUE TO 75 ft-lb

EDGE TRIM PLACEMENT

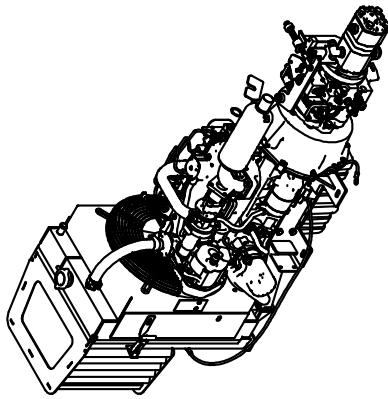


Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	10'	100365	MOLDING - EDGE GUARD, 5/32
16	13'	112084	Rubber Seal, .625 X .25

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



305072	REV: F
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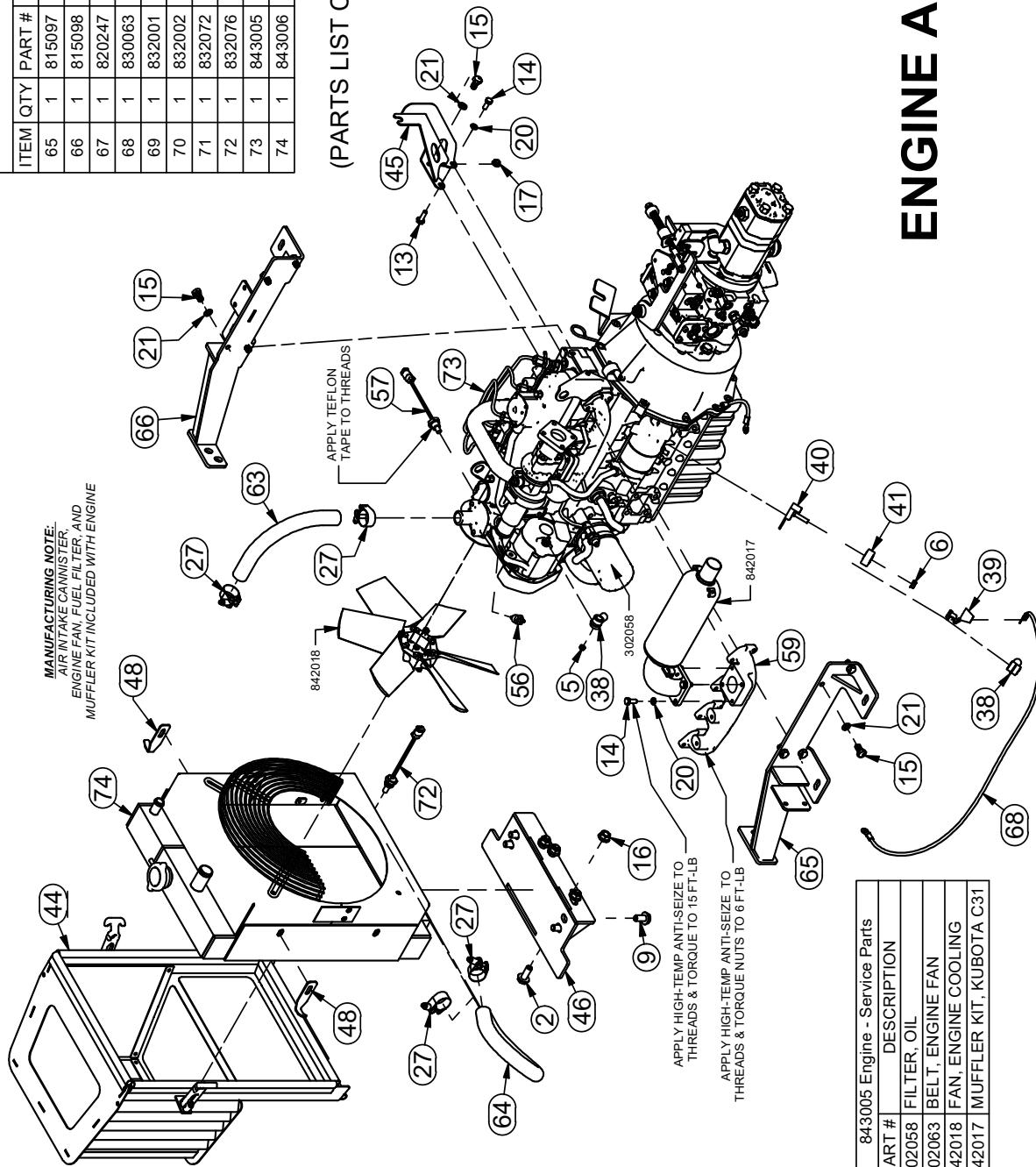
Parts List				Parts List			
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION
1	1	102074	Clamp, Adel .75w x 1.25id x .406 Hole	33	1	120319	ADAPTER, 6MJ-6MB
2	4	110001	BOLT, 1/2-.13 X 1.25, WIZ FLANGE	34	1	120546	ADAPTER, 20BH-16MB90
3	2	110020	Bolt, 5/16-18 X 0.75, in Carriage	35	1	120705	STEP 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 Cl / .49 C1 Charge
23	1	110728	CLAMP, ADEL DOUBLE .75W/X.5IDX.406HOLE	55	1	323063	PUMP, DOUBLE GEAR 1.16 / .24 Cl
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 LL X .54 OD X 0.49 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, 10M-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)

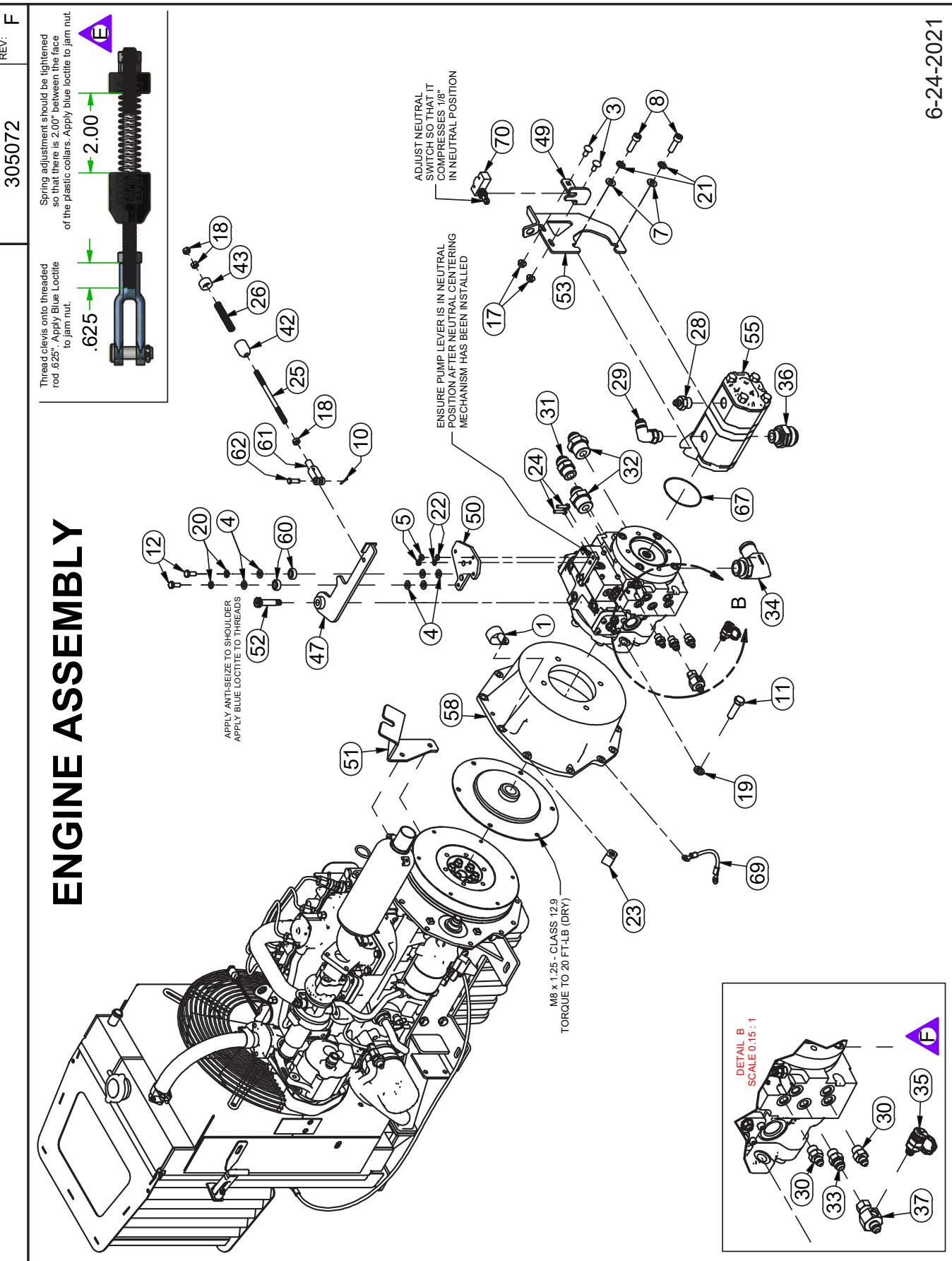
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ITEM	QTY	PART #
65	1	815097
66	1	815098
67	1	820247
68	1	830063
69	1	832001
70	1	832002
71	1	832072
72	1	832076
73	1	843005
74	1	843006

(PARTS LIST CONTINUED FROM PAGE 1)

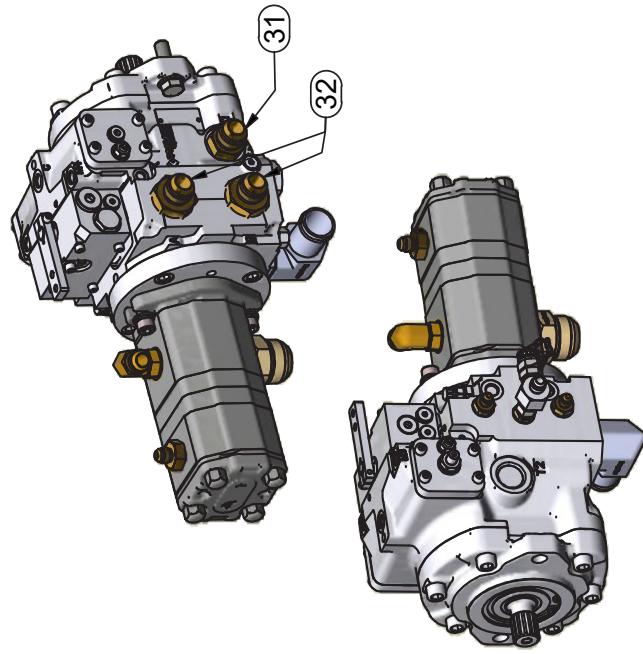


ENGINE ASSEMBLY

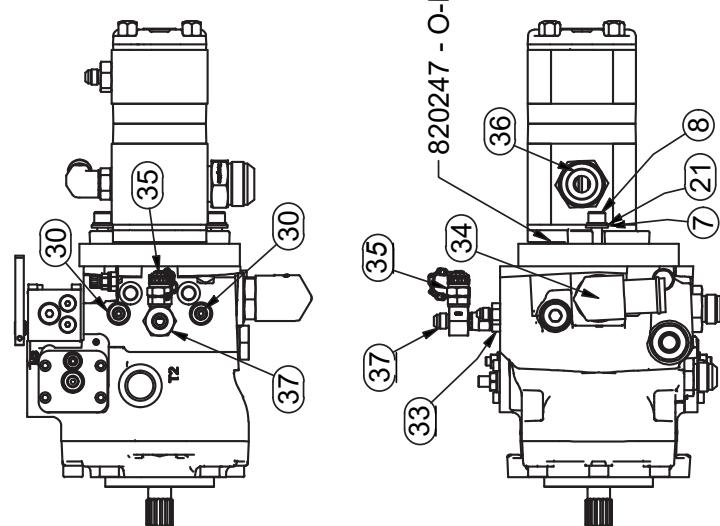
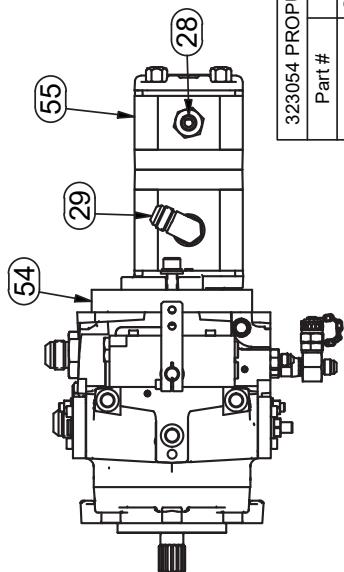
ENGINE ASSEMBLY



6-24-2021



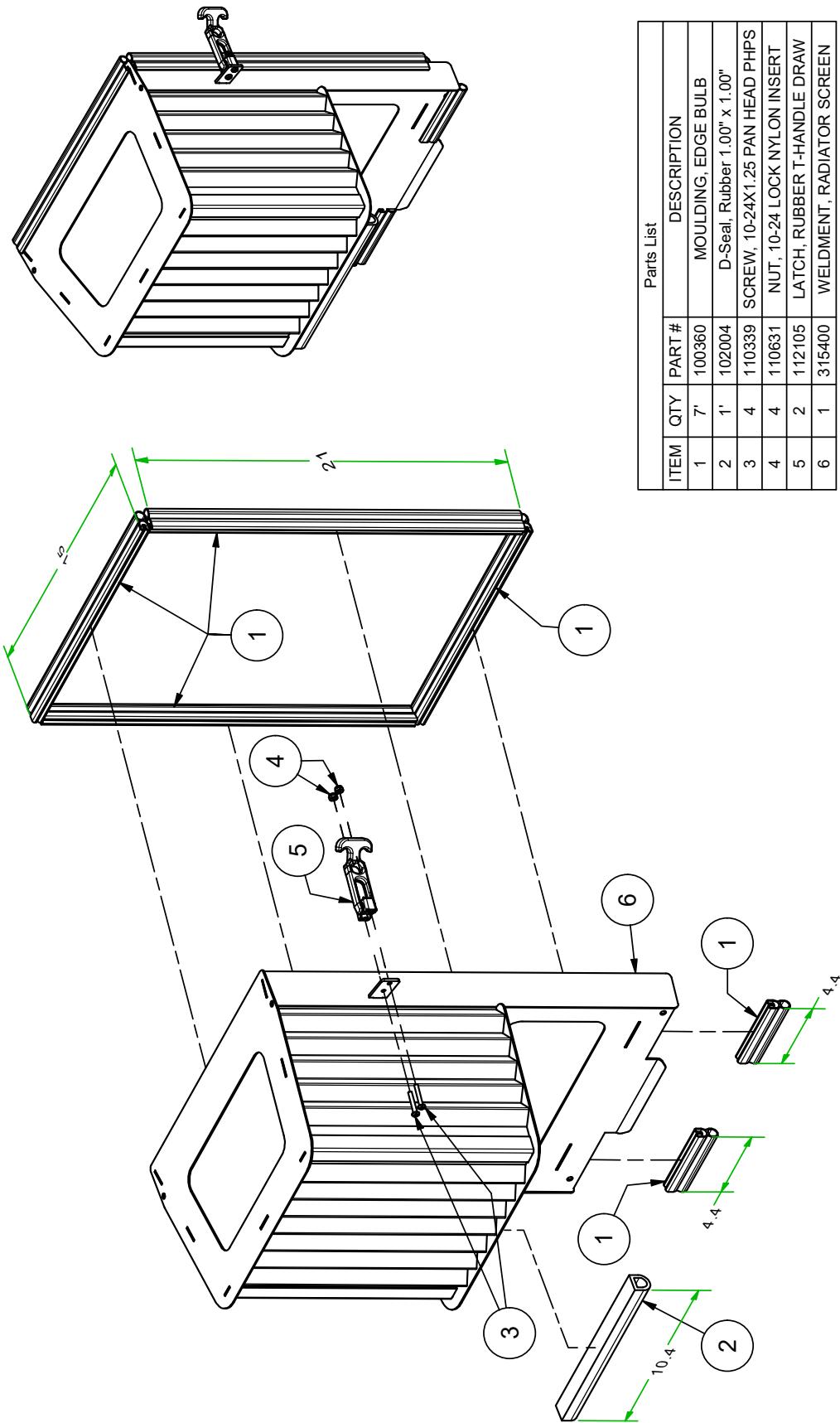
323054 PROPULSION PUMP - SERVICE PARTS
Part # DESCRIPTION
325013 SEAL KIT, PM30 SERVO CONTROL



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, 6jx-6mj, -4fb Gage Port
29	1	120224	ADAPTER, 10M-J-10MB90				
30	2	120249	ADAPTER, 4M-J-6MB	54	1	323054	Pump, PM30 Propulsion, 1.53 CI / .49 CI Charge
31	1	120254	ADAPTER, 12M-J-12MB				
32	2	120256	ADAPTER, 12M-J-16MB	55	1	323063	PUMP, DOUBLE GEAR 1.16 / .24 CI
33	1	120319	ADAPTER, 6M-J-6MB	67	1	820247	ORING 2-042 1/16" BUNA

HYDRAULIC PUMP ASSEMBLY

305112 REV: NC



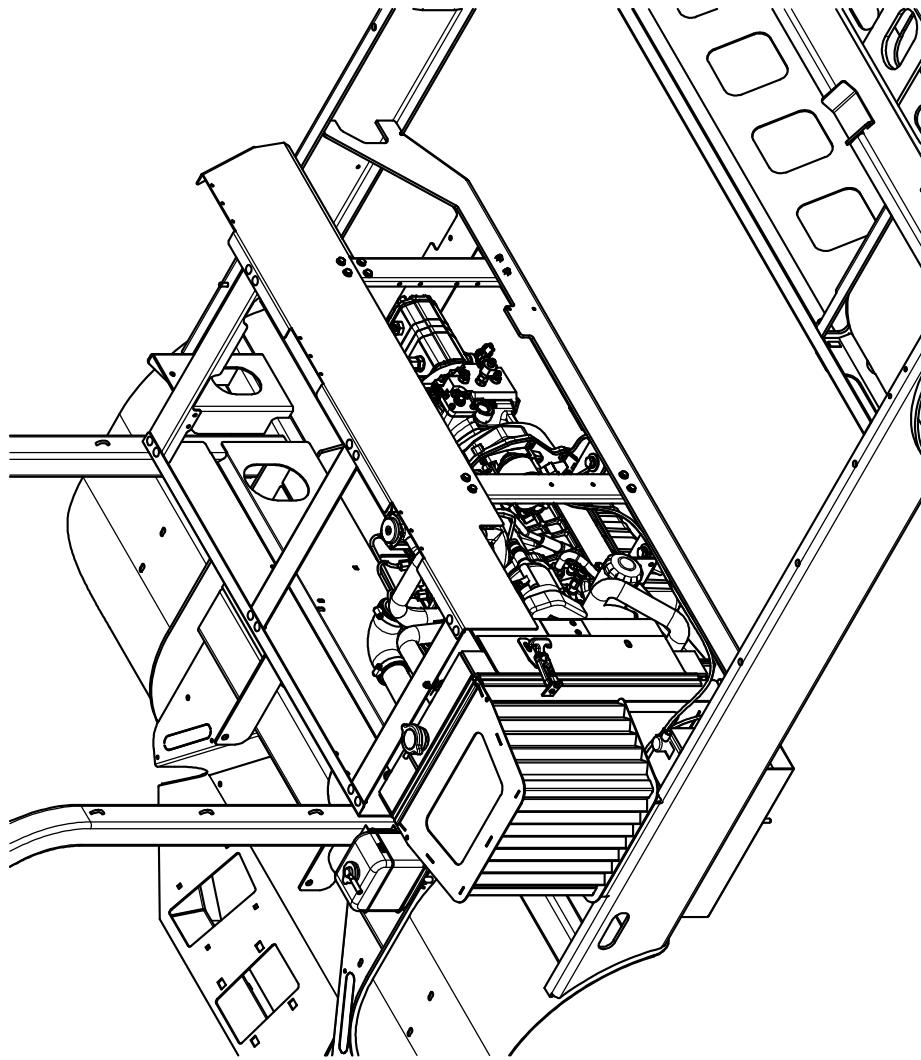
RADIATOR SCREEN ASSEMBLY

ENGINE INSTALLATION

305082

REV: B

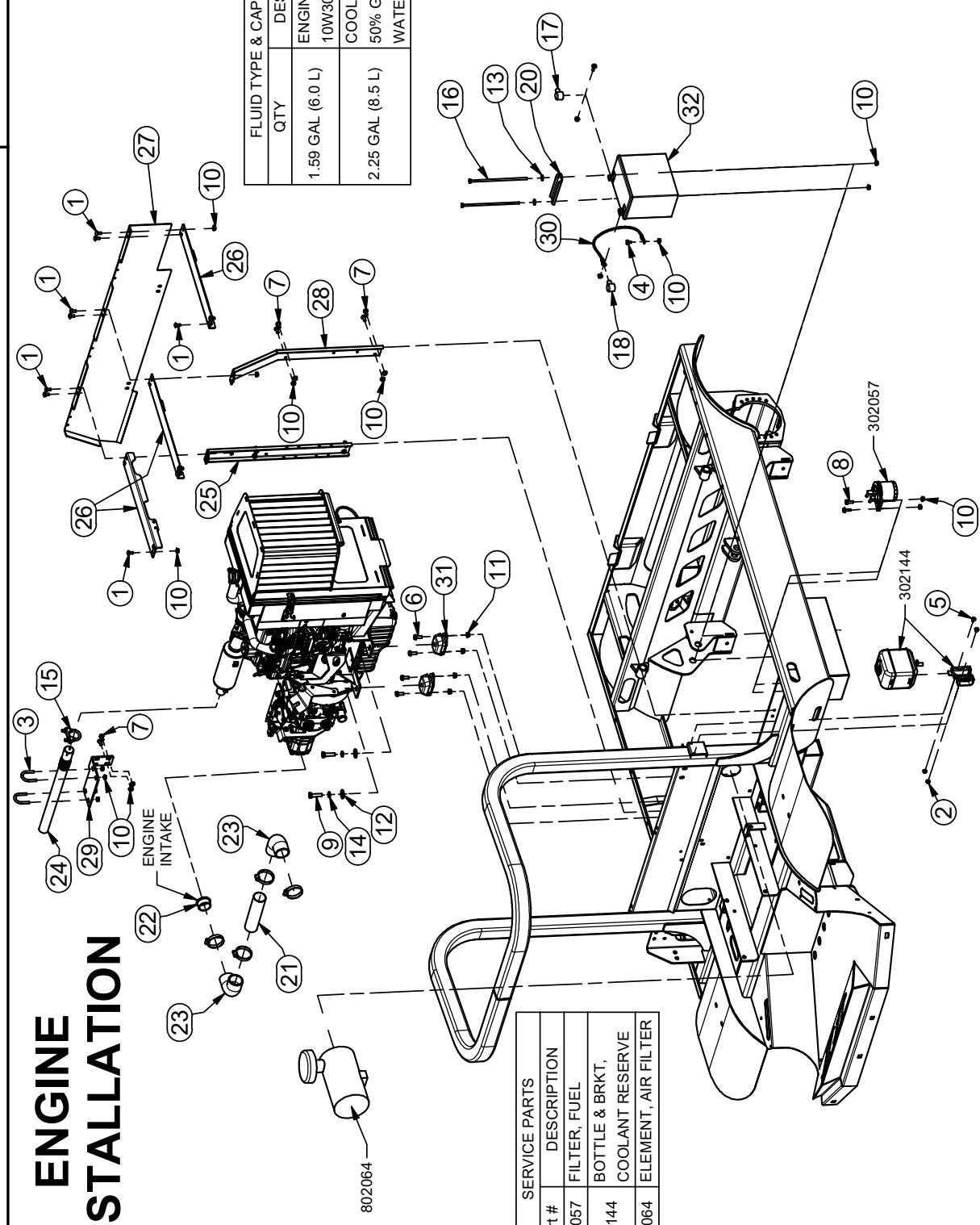
Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	12	110020	Bolt, 5/16-18 X 0.75 in Carriage
2	2	110290	NUT, 1/4-20 WIZ FLANGE
3	2	110362	U-BOLT, 5/16
4	1	110426	BOLT, 5/16-18 X 0.5, WIZ FLANGE
5	2	110434	BOLT, 1/4-20 X 0.5, WIZ FLANGE
6	8	110440	BOLT, 3/8-16 X 1, WIZ FLANGE
7	10	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
8	2	110459	BOLT, 5/16-18 X 1, WIZ FLANGE
9	4	110577	BOLT, M12x1.75 x 45 Gr 109
10	31	110606	NUT, 5/16-18 WIZ FLANGE
11	8	110645	NUT, 3/8-16 WIZ FLANGE
12	4	110658	WASHER, 1/2" FLAT STANDARD
13	2	110665	WASHER, 5/16" FLAT STANDARD
14	4	110666	WASHER, 1/2" LOCK
15	1	110779	CLAMP, 1 1/2" EXHAUST
16	2	111198	BOLT, 5/16-18 X 9.5 Zinc Full Thread
17	1	132069	BATTERY TERMINAL COVER, POSITIVE
18	1	132070	BATTERY TERMINAL COVER, NEGATIVE
19	1	305072	ASSY, ENGINE
20	1	311603	BRACKET - HOLD DOWN BATTERY
21	1	311941	TUBE, AIR INTAKE
22	1	312036	REDUCER, 2.0" TO 1.75"
23	2	312037	ELBOW, 2.0" 90 DEG
24	1	315389	WELDMENT, HAWK EXHAUST
25	1	317205	SUPPORT, REAR SHIELD
26	3	317206	SUPPORT, UPPER SHIELD
27	1	317235	SHIELD, REAR ENGINE
28	1	317236	SUPPORT, VERTICAL REAR SHIELD
29	1	317248	BRKT, EXHAUST SUPPORT
30	1	530051	CABLE, BATTERY/GND 16" BLACK
31	4	800021	MOTOR MOUNT
32	1	832011	BATTERY, SEALED GEL W/L TERMINAL



ENGINE INSTALLATION

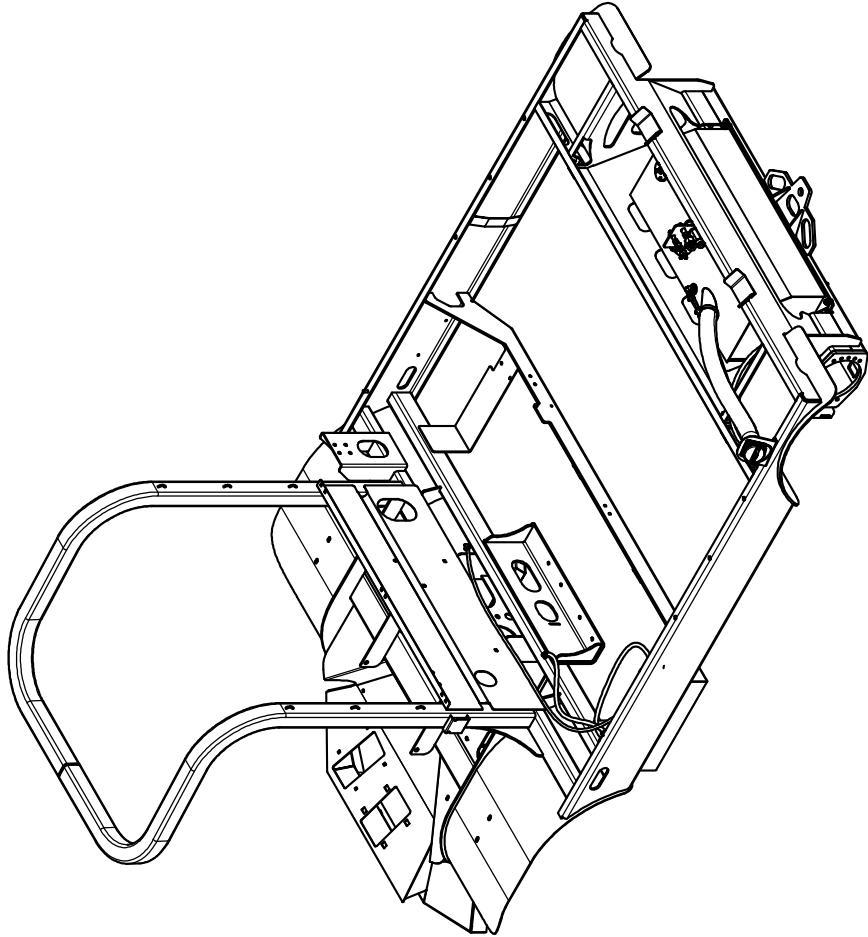
305082

REV. B



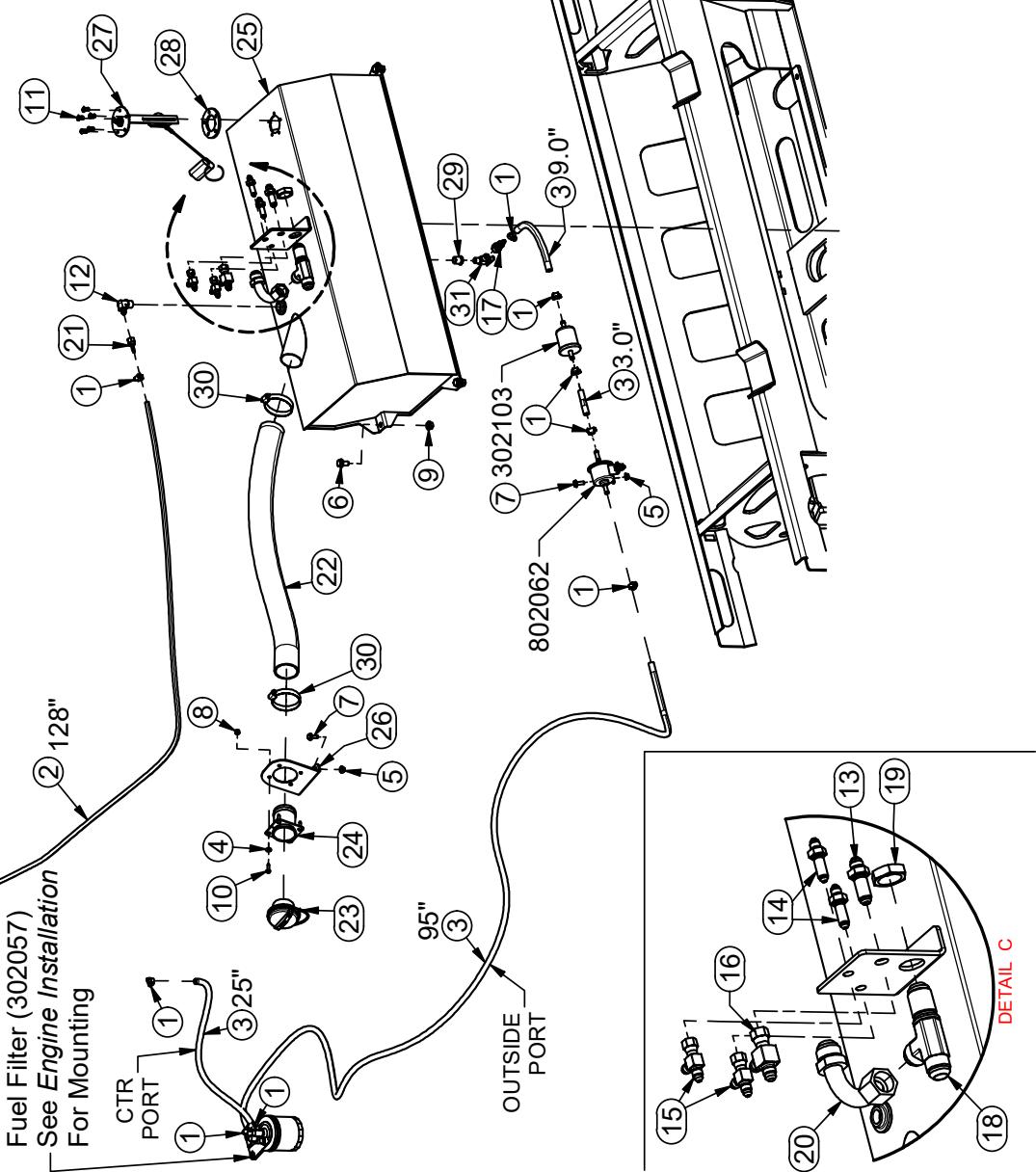
FUEL TANK INSTALLATION

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



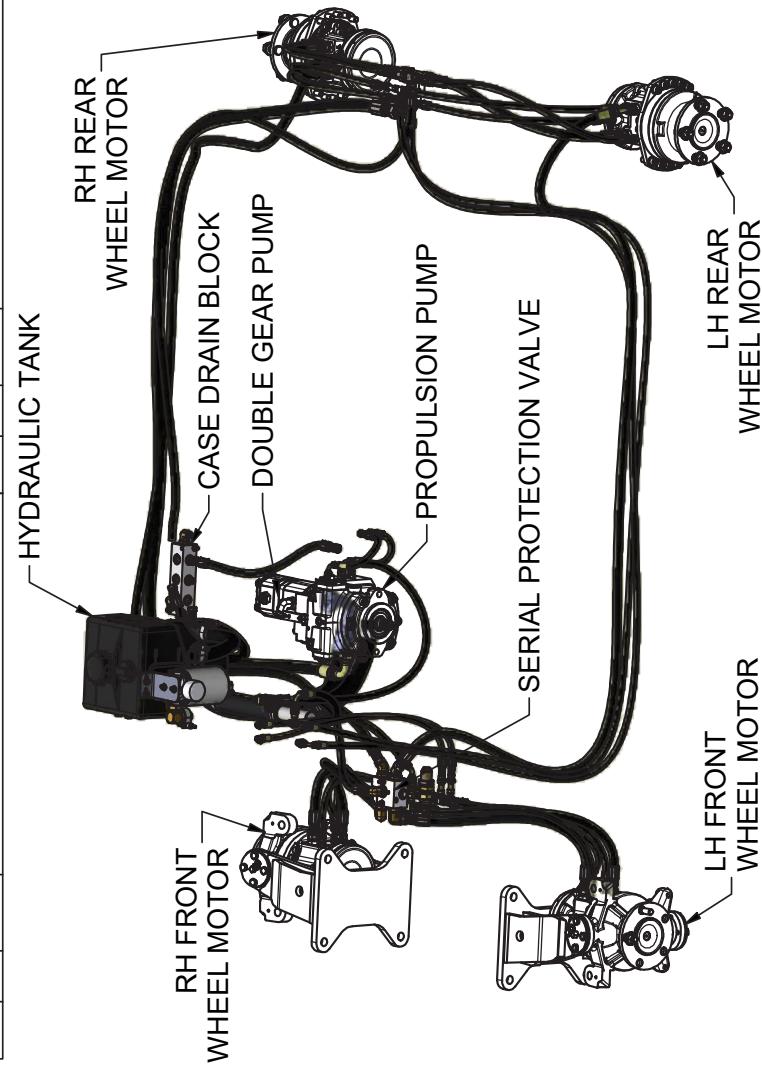
7-23-2020

FUEL TANK INSTALLATION



PROPELLION HYDRAULIC INSTALLATION

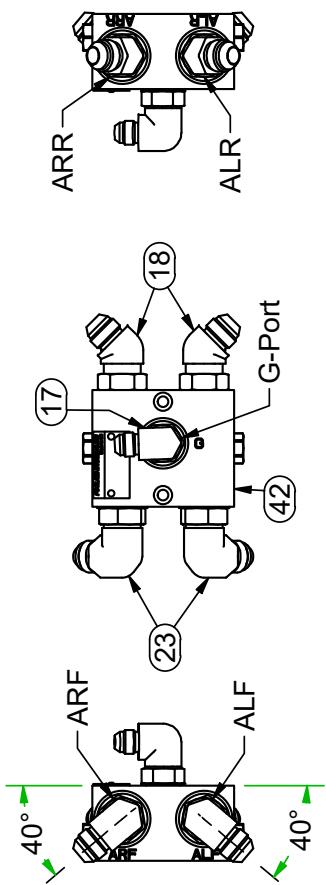
Parts List				Parts List				Parts List			
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION
1	6	110290	NUT, 1/4-20 WIZ FLANGE	11	6	112008	CLAMP, 1.25", T-BOLT	21	5	120222	ADAPTER, 6MJ-6MB90
2	4	110410	BOLT, 1/4-20 X 2.5	12	2	112101	CLAMP, 1.50", T-BOLT	22	2	120226	ADAPTER, 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	120281	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, 12FJX-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

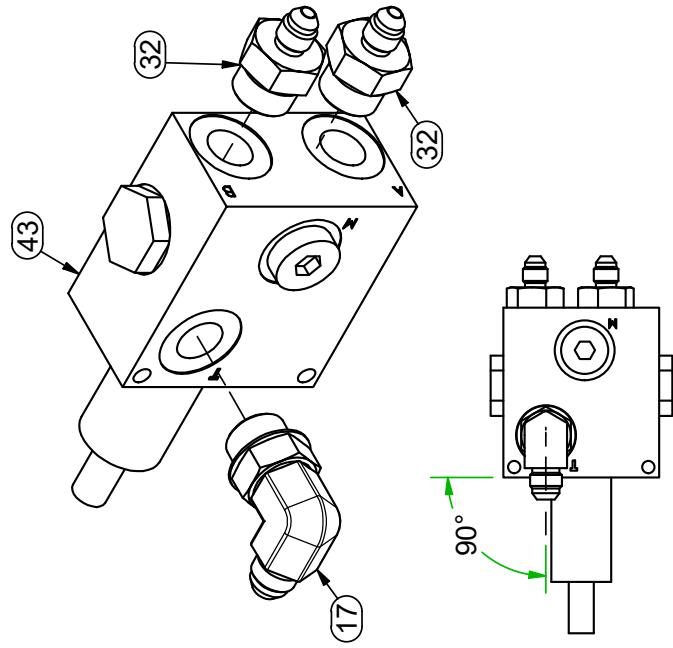
Parts List			
ITEM	QTY	PART #	DESCRIPTION
17	1	120134	ADAPTER, 6MJ-8MB90
18	2	120139	ADAPTER, 8MJ-10MB 45
23	2	120245	ADAPTER, 8MJ-10MB90
42	1	322059	VALVE, SERIAL PROTECTION

Serial Protection Valve

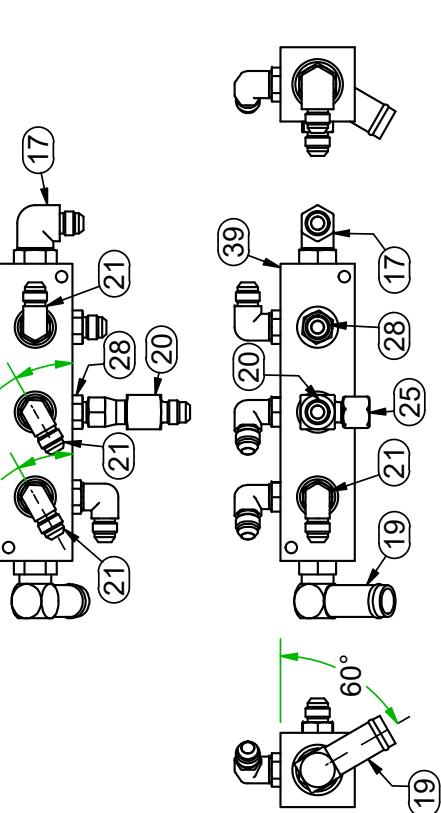


Loop Flush Valve

Parts List			
ITEM	QTY	PART #	DESCRIPTION
17	1	120134	ADAPTER, 6MJ-8MB90
32	2	120739	ADAPTER, 4MJ-8MB
43	1	323060	VALVE, LOOP FLUSH

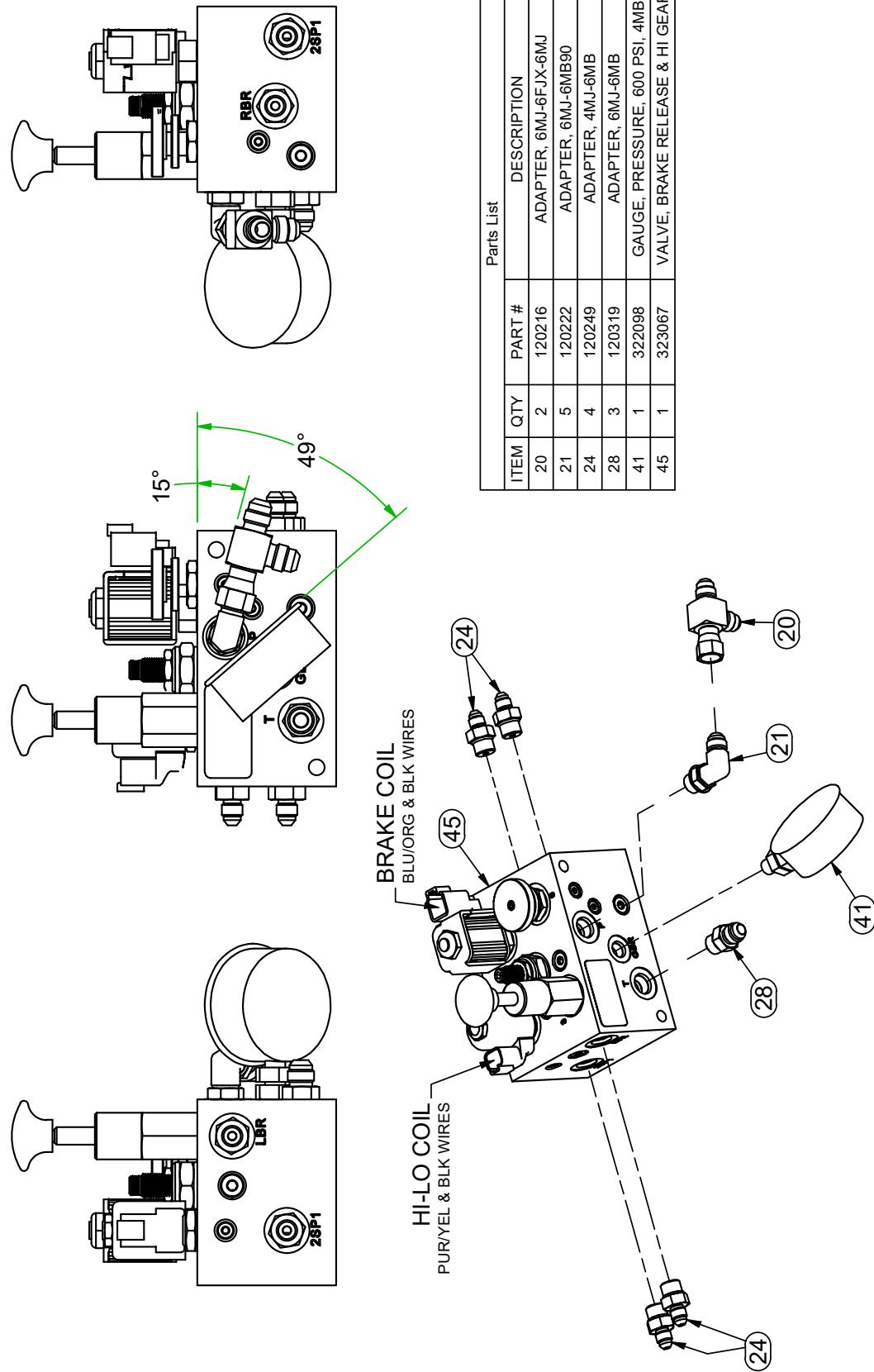


Case Drain Block



Parts List			
ITEM	QTY	PART #	DESCRIPTION
17	1	120134	ADAPTER, 6MJ-8MB90
19	1	120187	ADAPTER, 12BH-8MB90
20	1	120216	ADAPTER, 6MJ-6F JX-6MJ
21	4	120222	ADAPTER, 6MJ-6MB90

BRAKE RELEASE / HI GEAR VALVE ASSEMBLY

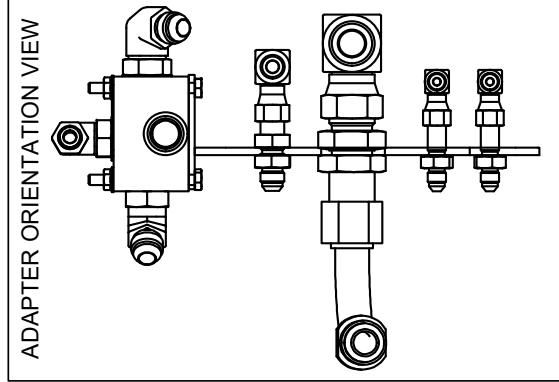
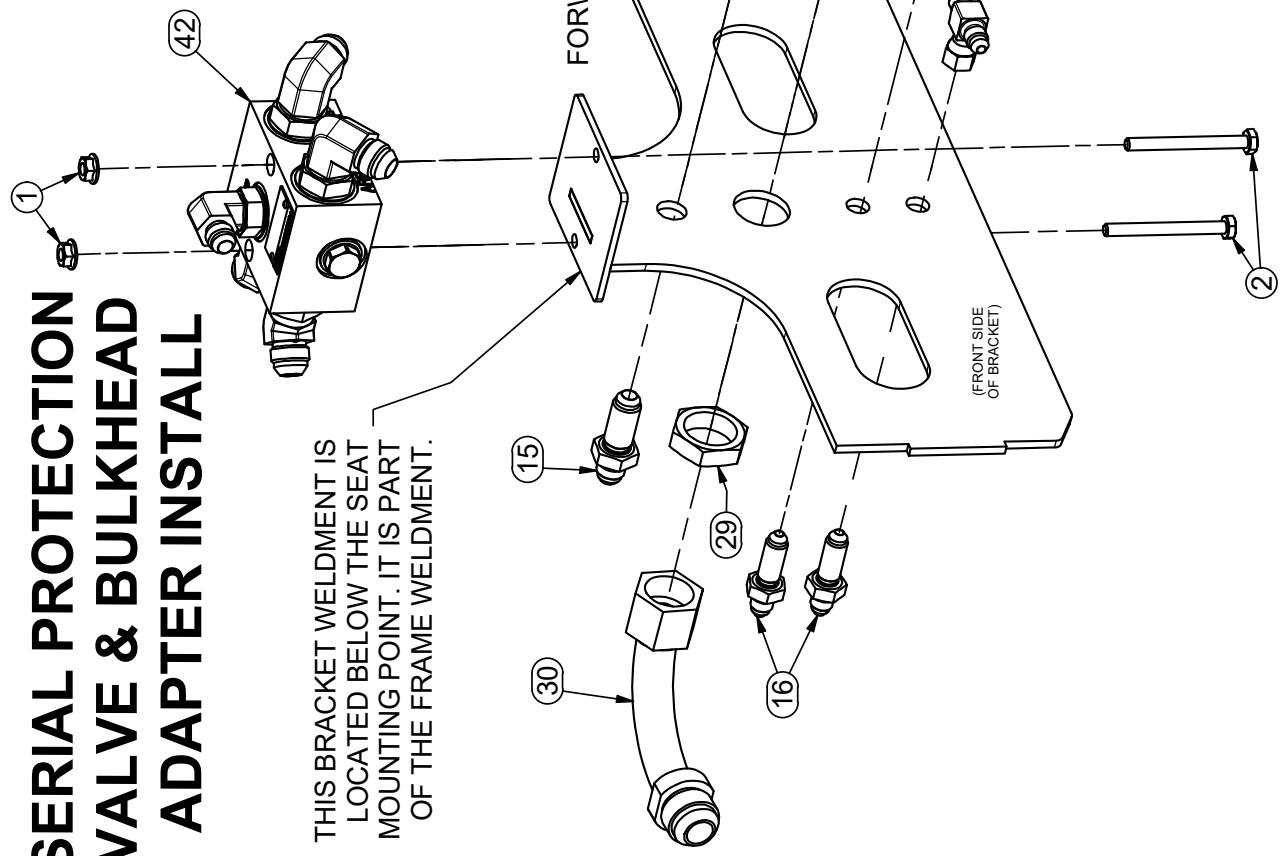


305097

REV: B

SERIAL PROTECTION VALVE & BULKHEAD ADAPTER INSTALL

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

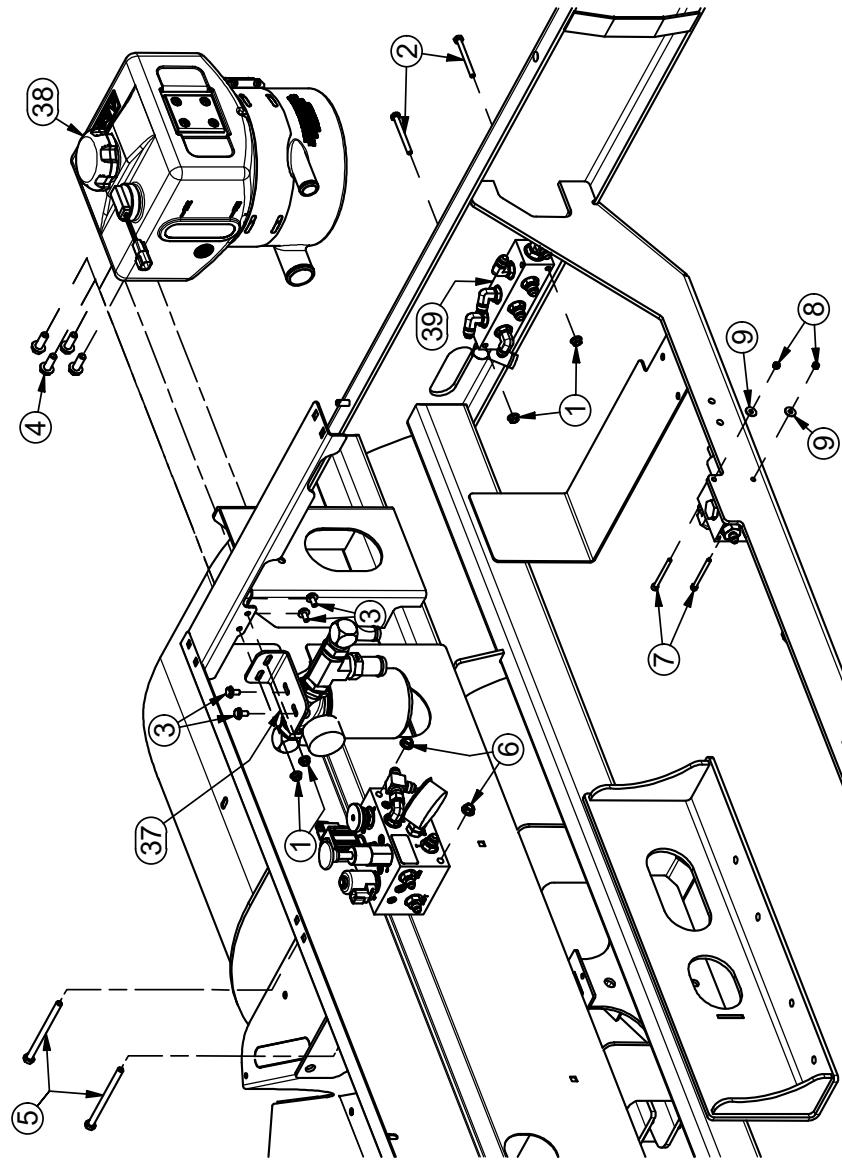


ITEM	QTY	PART #	DESCRIPTION
2	4	110410	BOLT, 1/4-20 X 2.5
14	1	120057	ADAPTER, 6MJ-6MJ-6FJX
15	1	120102	ADAPTER, BULKHEAD, 6MJ-6MJ
16	2	120126	ADAPTER, BULKHEAD, 4MJ-4MJ
26	1	120292	NUT, BULKHEAD LOCKNUT, -6
29	1	120495	Nut, Lock, Bulkhead, -12
30	1	120516	Adapter, 12Jx-12mj90tube
31	1	120663	ADAPTER,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

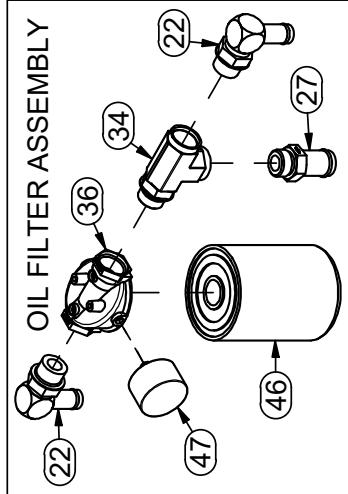
305097

REV: B

TANK, FILTER, & VALVE INSTALLATION



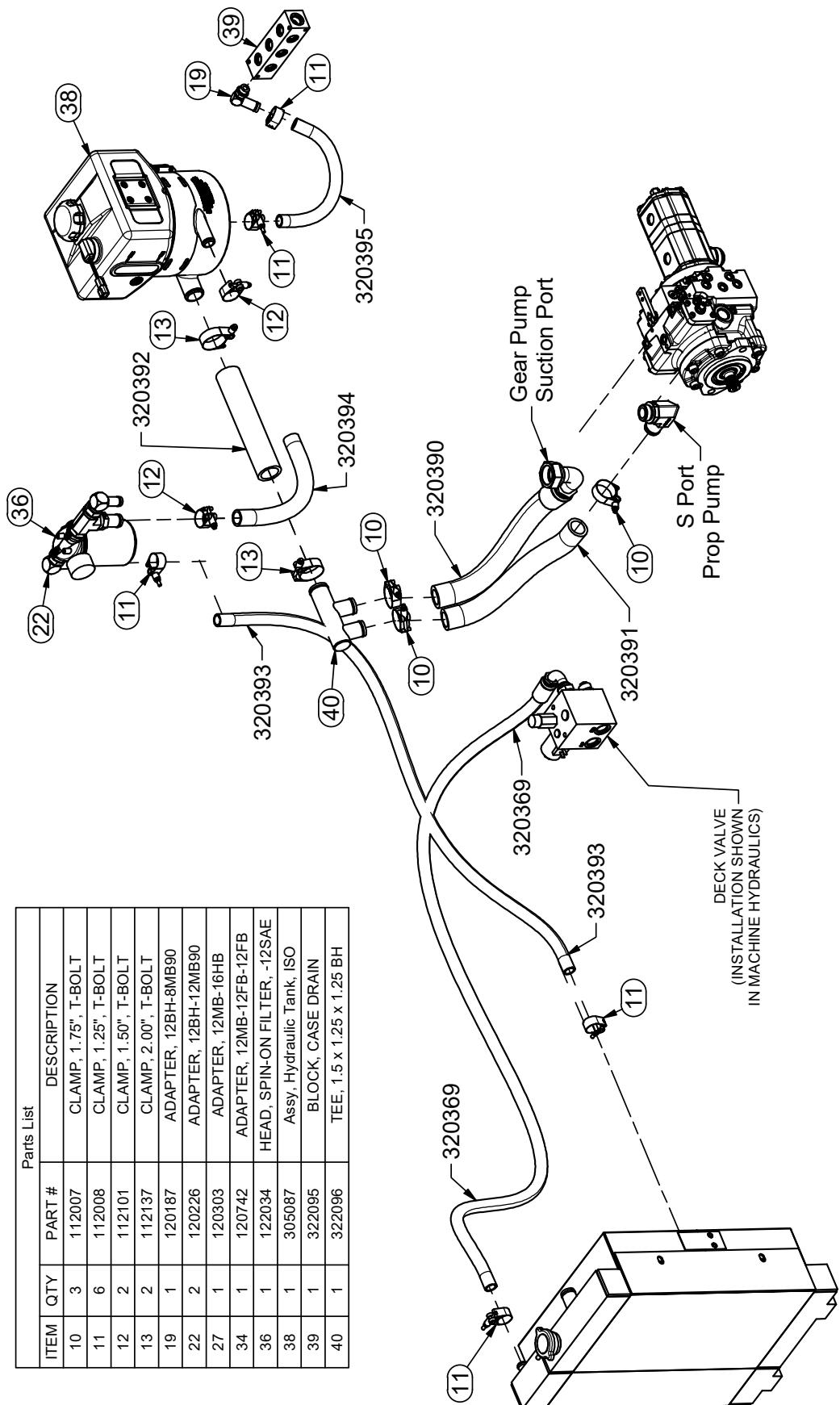
SOME PARTS HIDDEN
FOR CLARITY

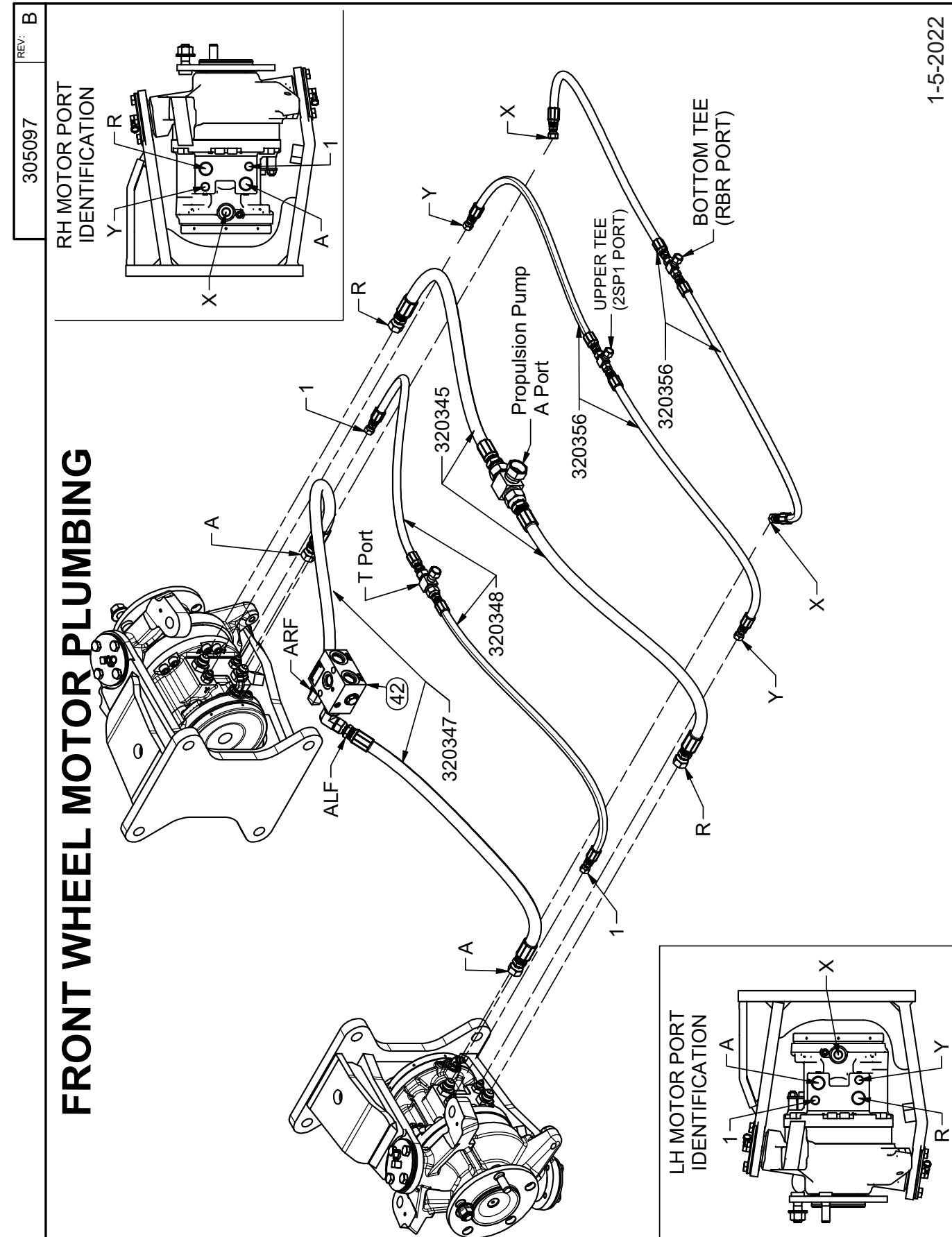


Parts List		
ITEM	QTY	PART #
1	6	110290 NUT, 1/4-20 WIZ FLANGE
2	4	110410 BOLT, 1/4-20 X 2.5
3	4	110434 BOLT, 1/4-20 X 0.5, WIZ FLANGE
4	4	110440 BOLT, 3/8-16 X 1, WIZ FLANGE
5	2	110529 BOLT, 5/16-18 X 4.5
6	2	110606 NUT, 5/16-18 WIZ FLANGE
7	2	111011 Bolt, M5-.80 X 55, SHCS, Stainless
8	2	111012 STEP AP203
9	2	111013 Washer, M5, Flat, Stainless
22	2	120226 ADAPTER, 12BH-12MB90
27	1	120303 ADAPTER, 12MB-16HB
32	2	120739 ADAPTER, 4M4-8MB
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

PROPELLION SUCTION & DRAIN PLUMBING

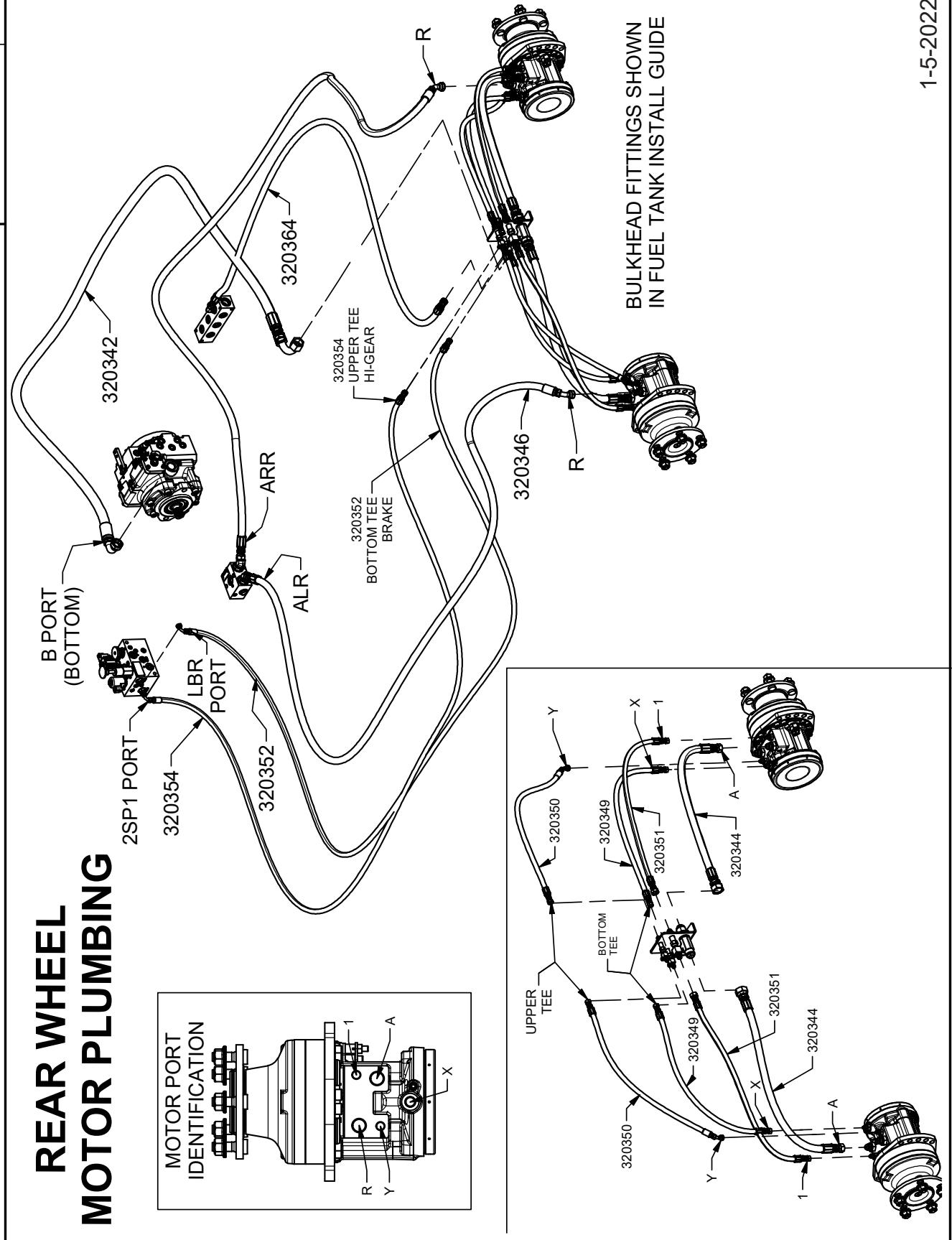
Parts List			
ITEM	QTY	PART #	DESCRIPTION
10	3	112007	CLAMP, 1.75", T-BOLT
11	6	112008	CLAMP, 1.25", T-BOLT
12	2	112101	CLAMP, 1.50", T-BOLT
13	2	112137	CLAMP, 2.00", T-BOLT
19	1	120187	ADAPTER, 12BH-8MB90
22	2	120226	ADAPTER, 12BH-12MB90
27	1	120303	ADAPTER, 12MB-16HB
34	1	120742	ADAPTER, 12MB-12FB-12FB
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



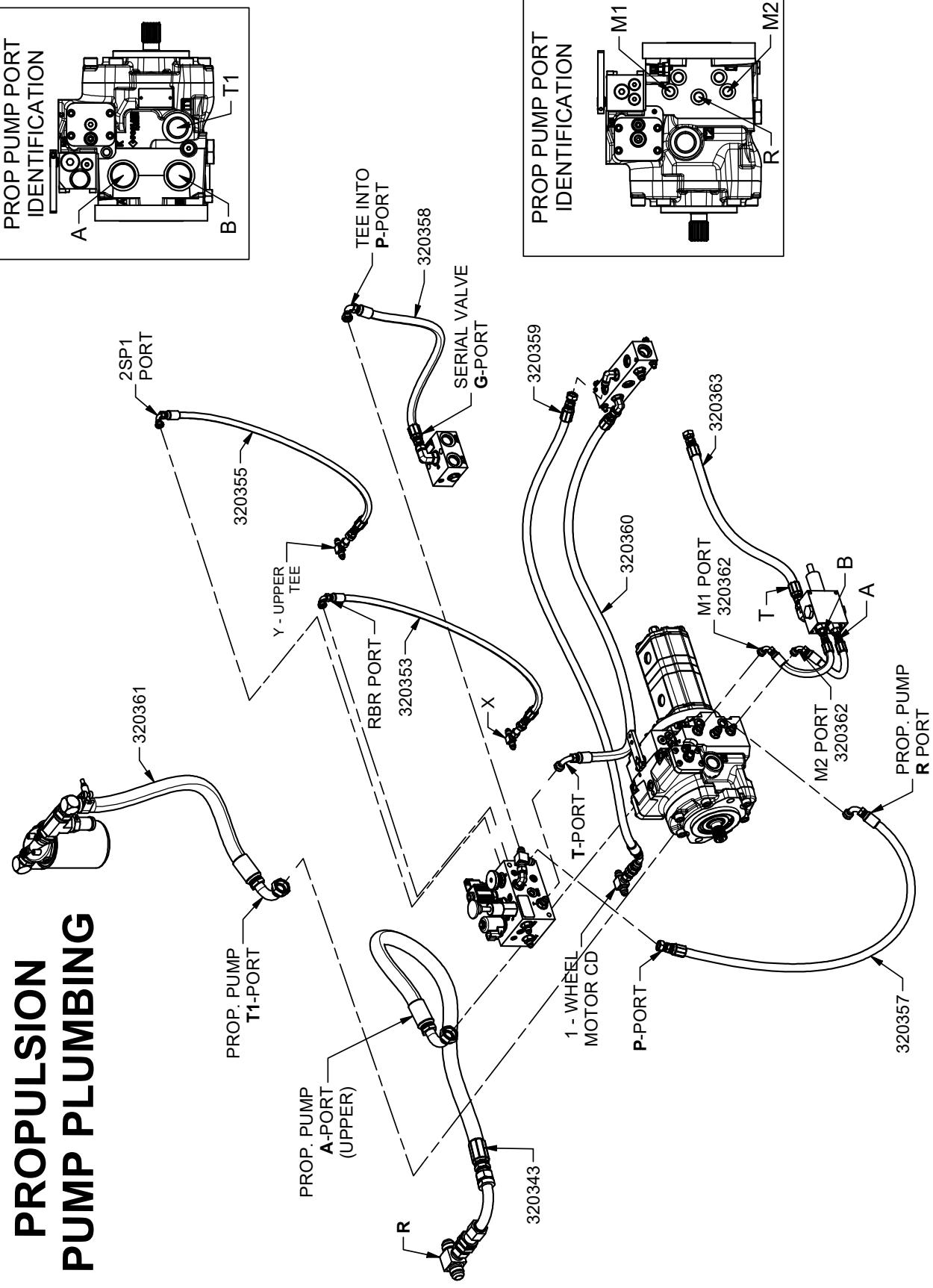


305097 REV: B

REAR WHEEL MOTOR PLUMBING



PROPELLION PUMP PLUMBING



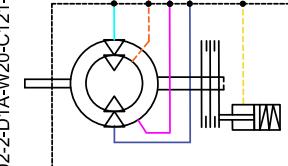
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REV: B

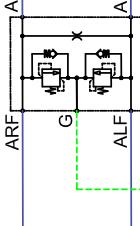
1-5-2022

SWEeper PROPULSION SCHEMATIC - 4WD

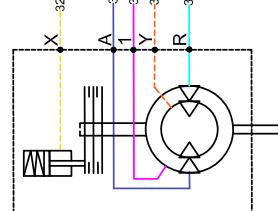
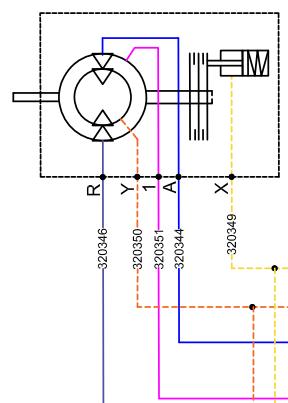
RH FRONT WHEEL MOTOR
PIN: 323056
MODEL CODE:
MGE02-2-D1A-W20-C121-Y8JM



SERIAL PROTECTION
VALVE
PIN: 323059



RH REAR WHEEL MOTOR
PIN: 323058
MODEL CODE:
MSE02-2-D2A-F03-1120-Y8JM

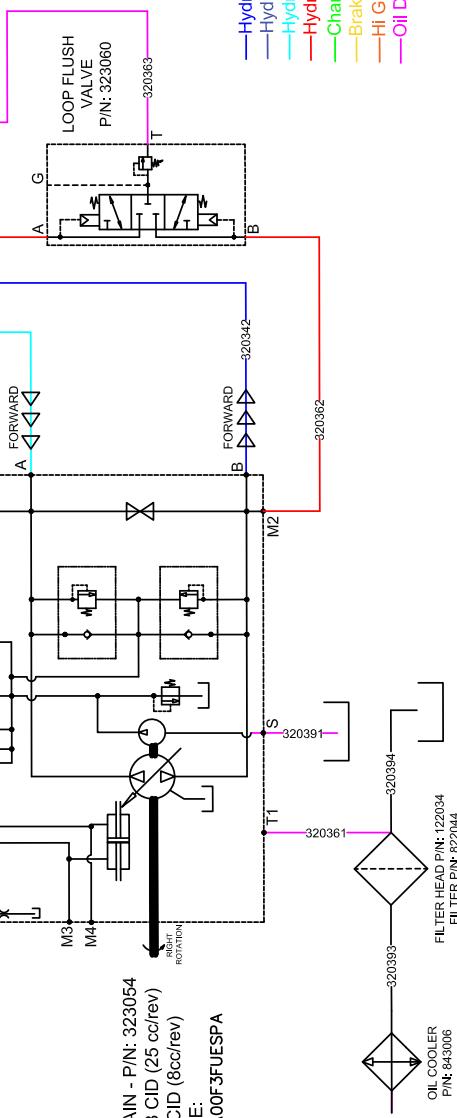


LH FRONT WHEEL MOTOR
PIN: 323055
MODEL CODE:
MGE02-2-G1A-W10-A121-Y8JM

LH REAR WHEEL MOTOR
PIN: 323057
MODEL CODE:
MSE02-2-G2A-F03-1120-Y8JM

LH REAR WHEEL MOTOR
PIN: 323057
MODEL CODE:
MSE02-2-G2A-F03-1120-Y8JM

LH REAR WHEEL MOTOR
PIN: 323057
MODEL CODE:
MSE02-2-G2A-F03-1120-Y8JM

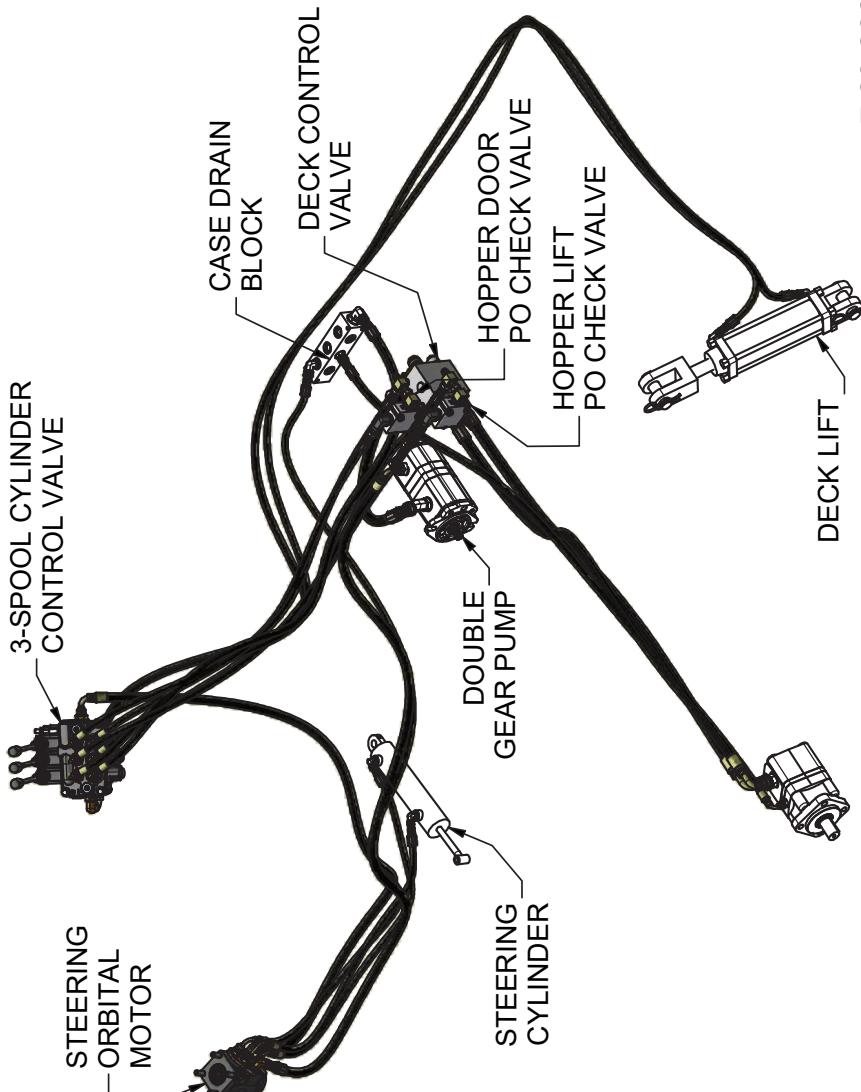


HYDROSTAT - PM30 POCLAIN - PIN: 323054
PROPULSION PUMP - 1.53 CID (25 cc/rev)
CHARGE PUMP - 0.49 CID (8cc/rev)
MODEL CODE:
PM302553A0B35R2508A00f3FUESPA

HARPER
TURF EQUIPMENT

HK4400

MACHINE HYDRAULIC INSTALLATION



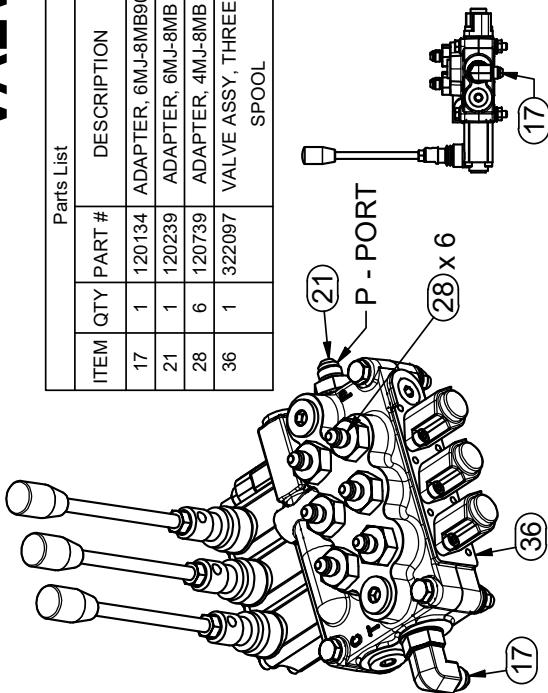
Parts List				Parts List			
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION
1	8	110264	BOLT, 10-24 X .5 STAINLESS, PHILLIPS	39	1	502087	Cap, Center Steering
2	6	110290	NUT, 1/4-20 WIZ FLANGE	40	1	502088	Nut, Steering Wheel, 13/16-20 UNEF
3	2	110434	BOLT, 1/4-20 X 0.5, WIZ FLANGE	41	1	552002	STEERING 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 UL-Type, 025"-125" panel				
13	4	111055	STUD, M10 X 1.5 X 42 GRADE 8.8				
14	3	111151	Hex Cap 5-16x2_1.4 UNC				
15	4	112070	Bolt, 1/2-13 X 1.25 in Carriage				
16	4	120092	ADAPTER, 6MJ-6MJ-6MB				
17	1	120134	ADAPTER, 6MJ-8MB90				
18	1	120143	ADAPTER, 12MJ-10MB				
19	2	120216	ADAPTER, 6MJ-6F-JX-6MJ				
20	2	120222	ADAPTER, 6MJ-6MB90				
21	1	120239	ADAPTER, 6MJ-8MB				
22	2	120249	ADAPTER, 4MJ-6MB				
23	1	120251	ADAPTER, 10MJ-10MB				
24	1	120319	ADAPTER, 6MJ-6MB				
25	2	120398	ADAPTER REST 6MJ-6MB, .047				
26	2	120446	ADAPTER, 8MJ-10MB				
27	2	120689	Adapter, 6MB90-6FB				
28	6	120739	ADAPTER, 4MJ-8MB				
29	2	130012	CLAMP, ADEL AC28-265 HOLE				
30	1	302079	COLUMN ASSY, TILT STEERING				
31	1	311726	MOUNT, STEERING COLUMN				
32	2	311737	PLATE, ORBITAL COVER				
33	1	315353	WELDMENT, OPERATOR CONSOLE				
34	2	322074	VALVE, PO CHECK				
35	2	322075	VALVE BODY, 3-WAY SAE-6				
36	1	322097	VALVE ASSY, THREE SPOOL				
37	1	323046	MOTOR, STEERING ORBITAL				
38	1	323062	HOSE KIT, HAWK MACHINE HYDRAULIC				

HYDRAULIC SCHEMATIC
SHOWN ON PAGE 10

7-23-2020

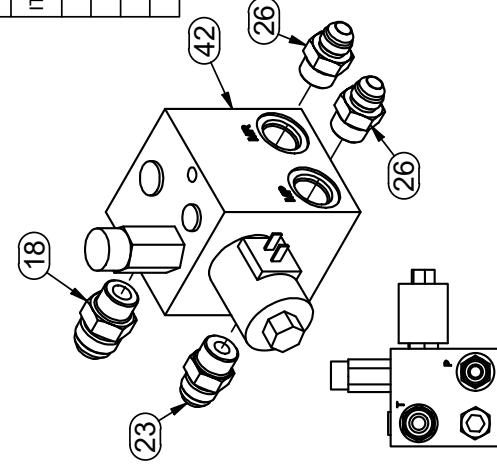
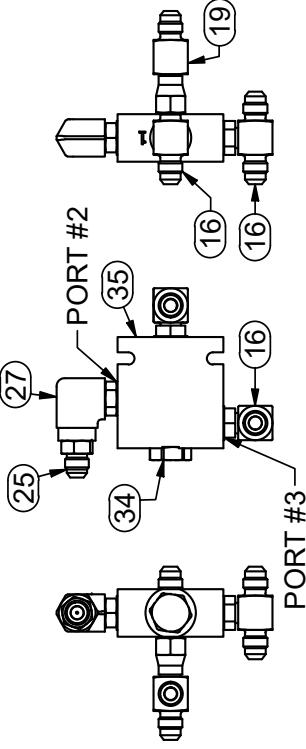
Three Spool Valve Assembly**VALVE ASSEMBLIES**

Parts List			
ITEM	QTY	PART #	DESCRIPTION
17	1	120134	ADAPTER, 6MJ-8MB90
21	1	120239	ADAPTER, 6MJ-8MB
28	6	120739	ADAPTER, 4MJ-8MB
36	1	3222097	VALVE ASSY, THREE SPOOL

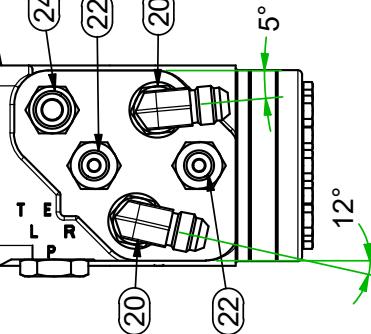
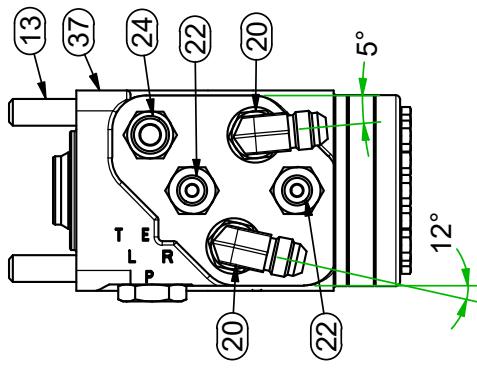
**Deck Valve Assembly**

Parts List			
ITEM	QTY	PART #	DESCRIPTION
18	1	120143	ADAPTER, 12MJ-10MB
23	1	120251	ADAPTER, 10MJ-10MB
26	2	120446	ADAPTER, 8MJ-10MB
42	1	820158	DECK VALVE

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

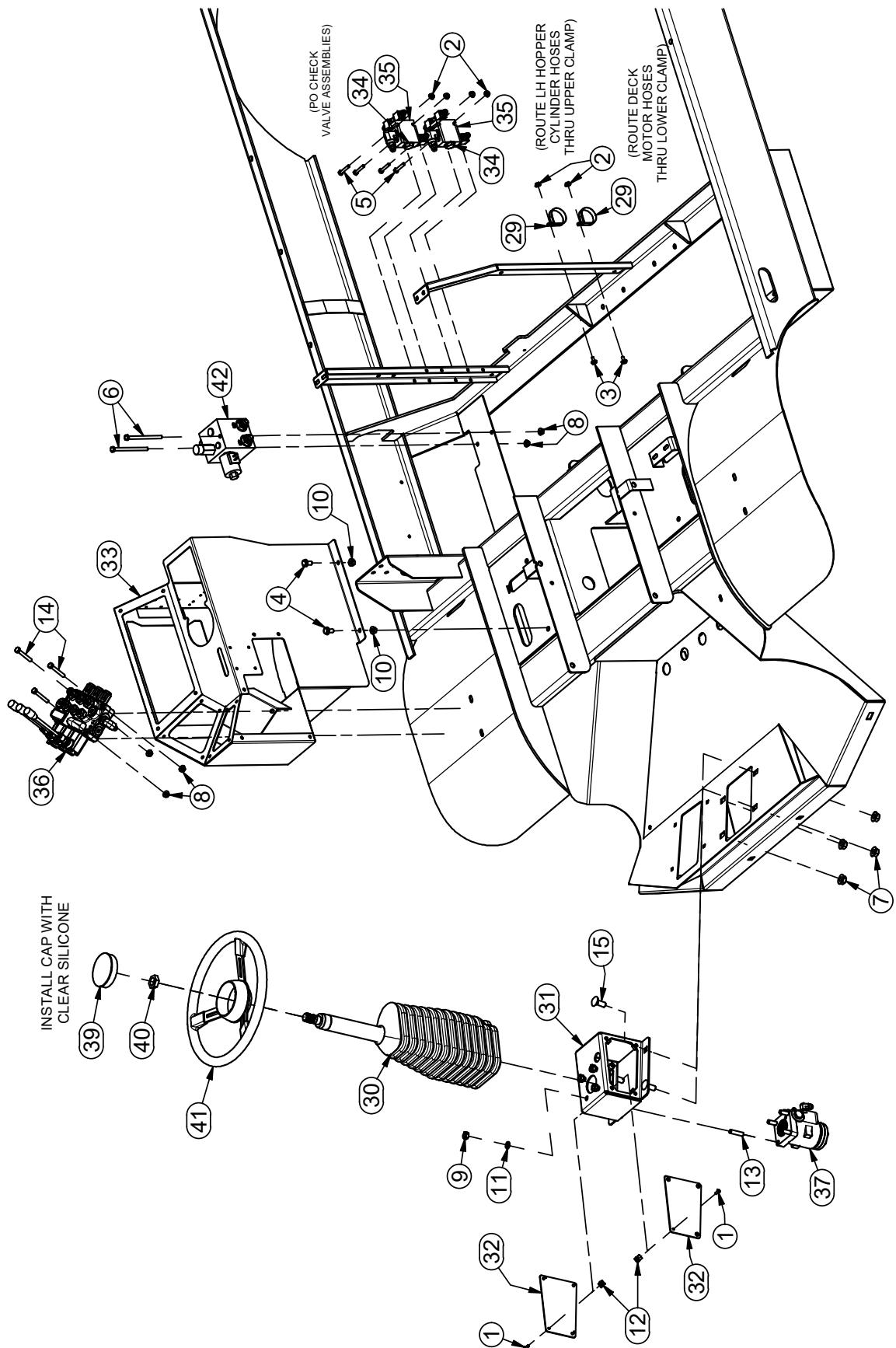
**P.O. Check Valve Assembly X 2**

Parts List			
ITEM	QTY	PART #	DESCRIPTION
16	4	120092	ADAPTER, 6MJ-6MJ-6MB
19	2	120216	ADAPTER, 6MJ-6FJX-6MJ
25	2	120398	ADAPTER, REST 6MJ-6MB, .047
27	2	120689	Adapter, 6MB90-6FB
34	2	3222074	VALVE, PO CHECK
35	2	3222075	VALVE BODY, 3-WAY SAE-6

Steering Orbital Assembly

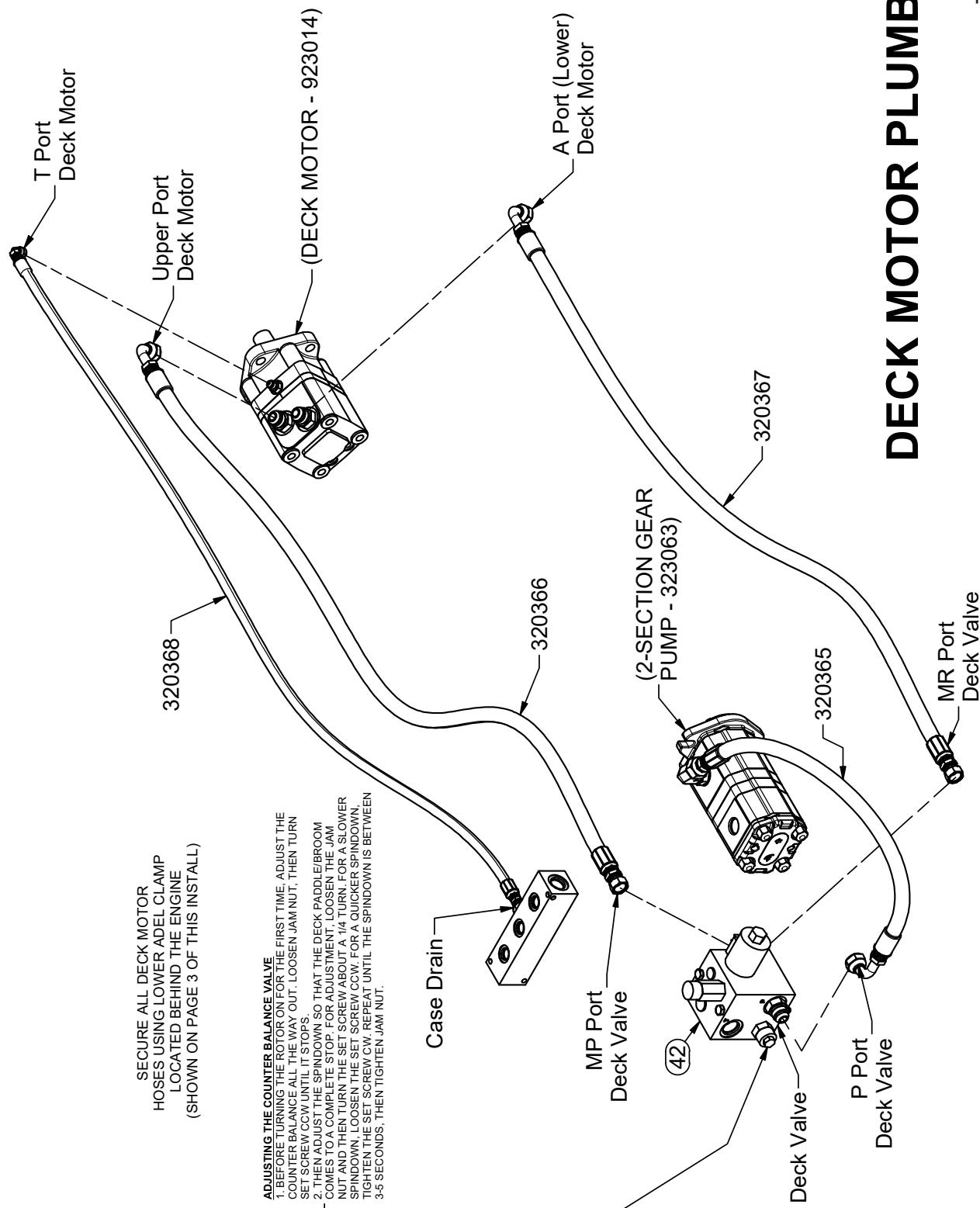
Parts List			
ITEM	QTY	PART #	DESCRIPTION
13	4	111055	STUD, M10 X 1.5 X 42 GRADE 8.8
20	2	120222	ADAPTER, 6MJ-6MB90
22	2	120249	ADAPTER, 4MJ-6MB
24	1	120319	ADAPTER, 6MJ-6MB
37	1	323046	MOTOR, STEERING ORBITAL

7-23-2020



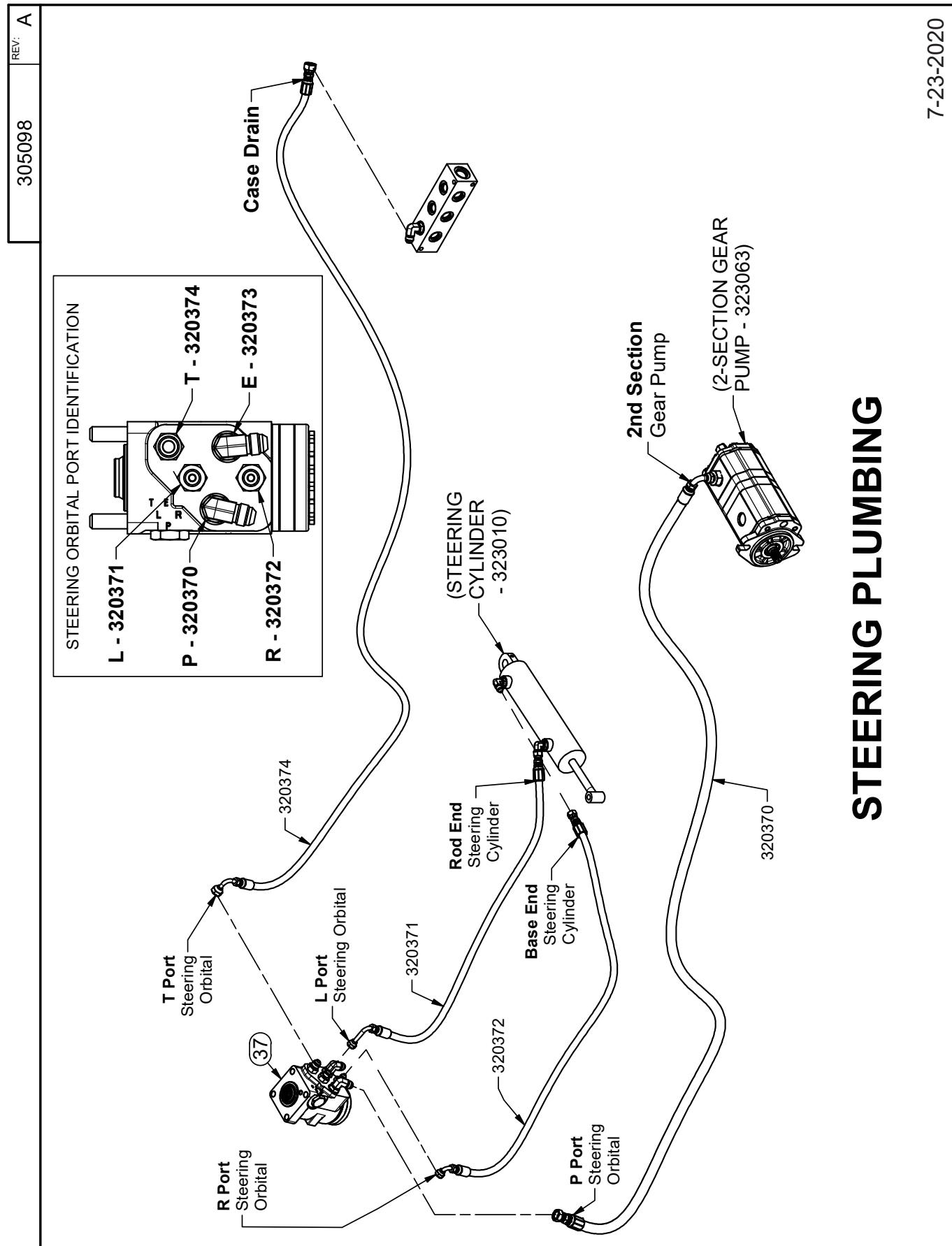
VALVE INSTALLATION

7-23-2020



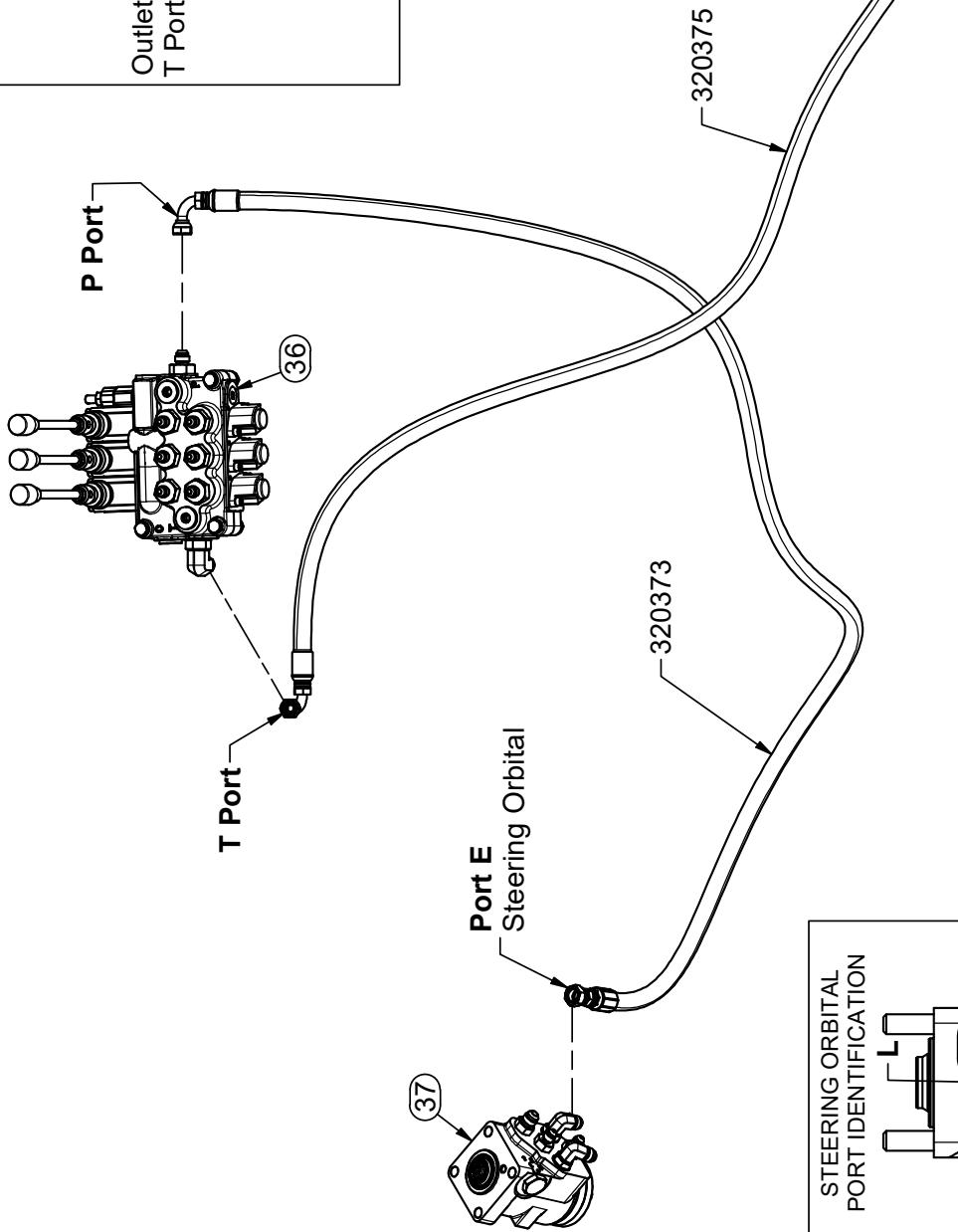
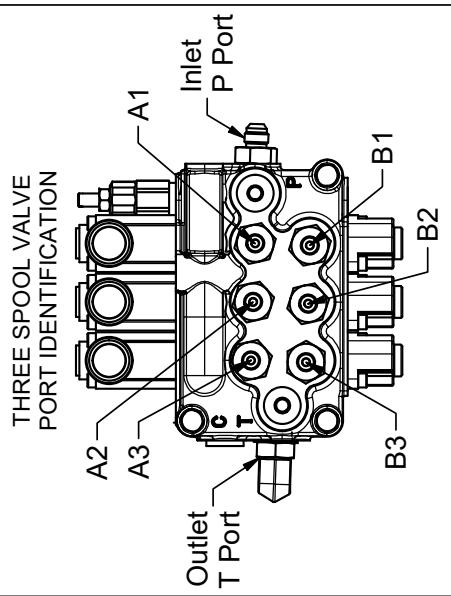
DECK MOTOR PLUMBING

7-23-2020

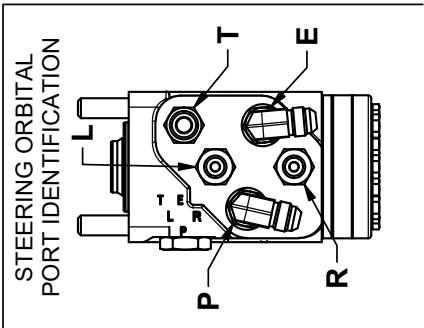


305098

REV: A



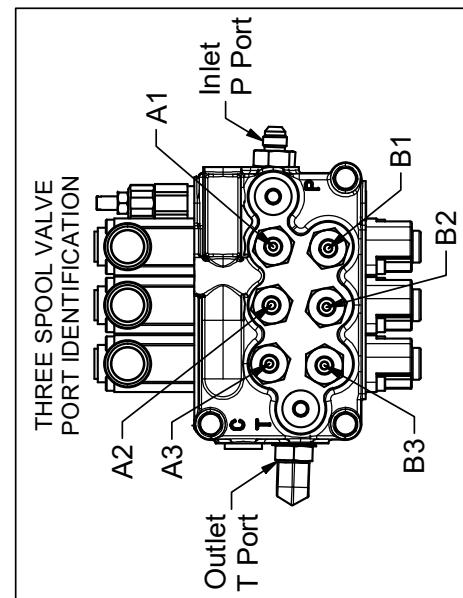
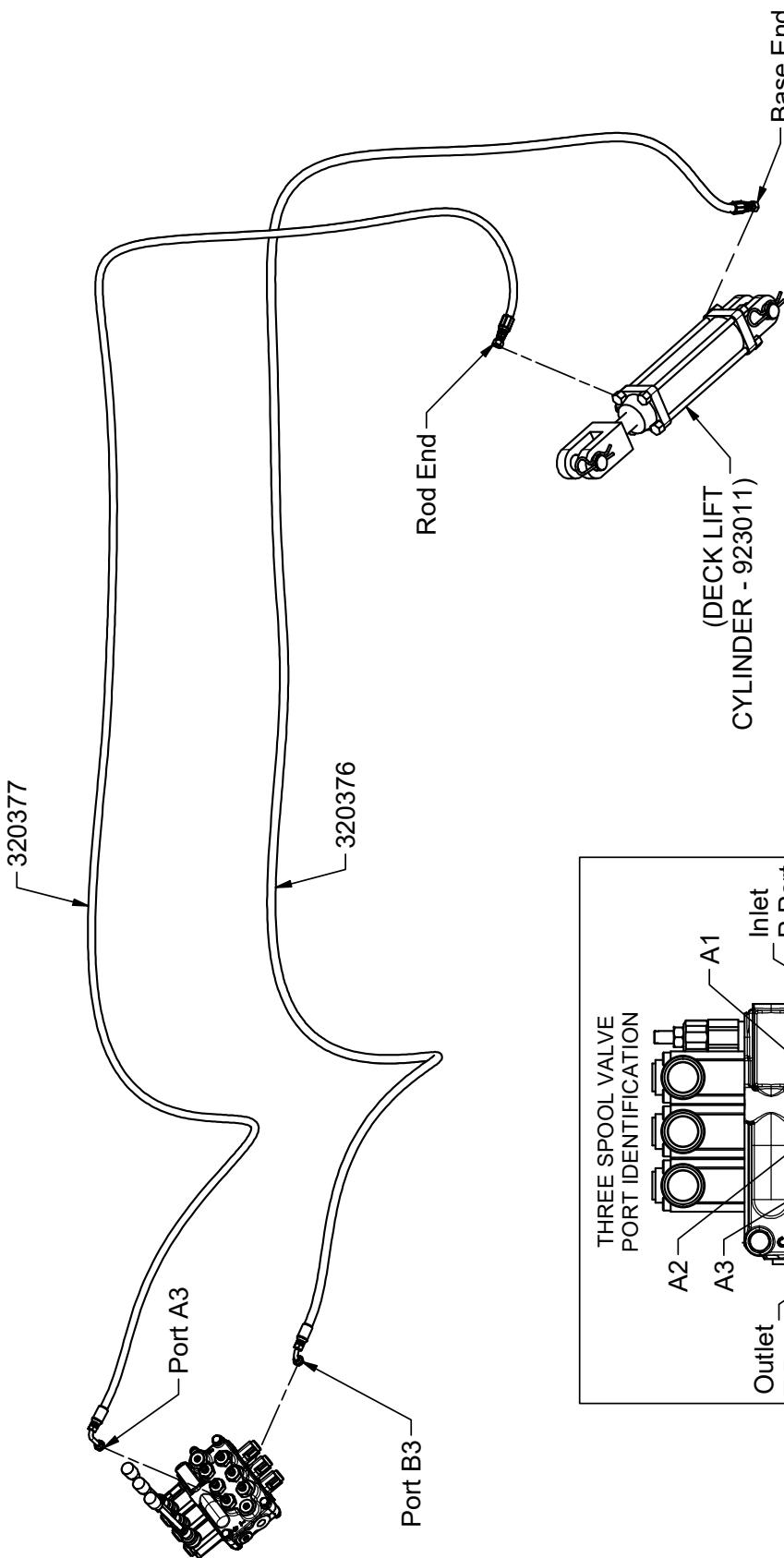
THREE SPOOL VALVE PLUMBING



DECK LIFT PLUMBING

305098

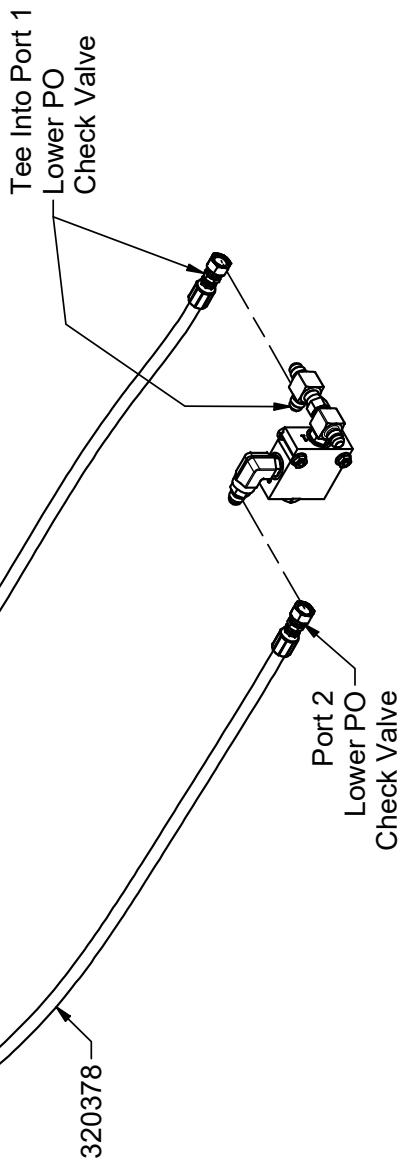
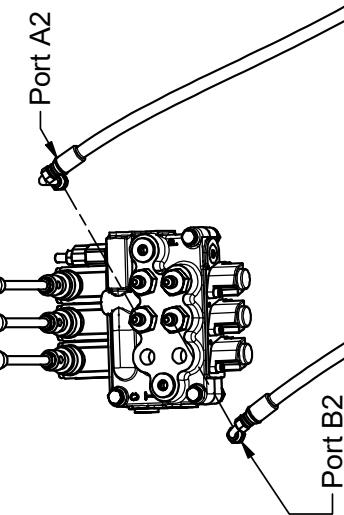
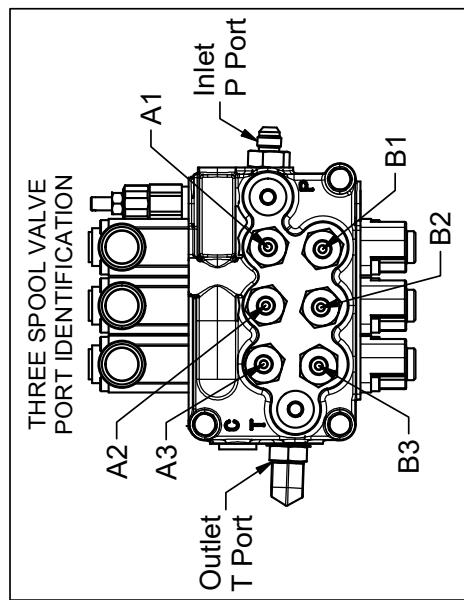
REV: A



7-23-2020

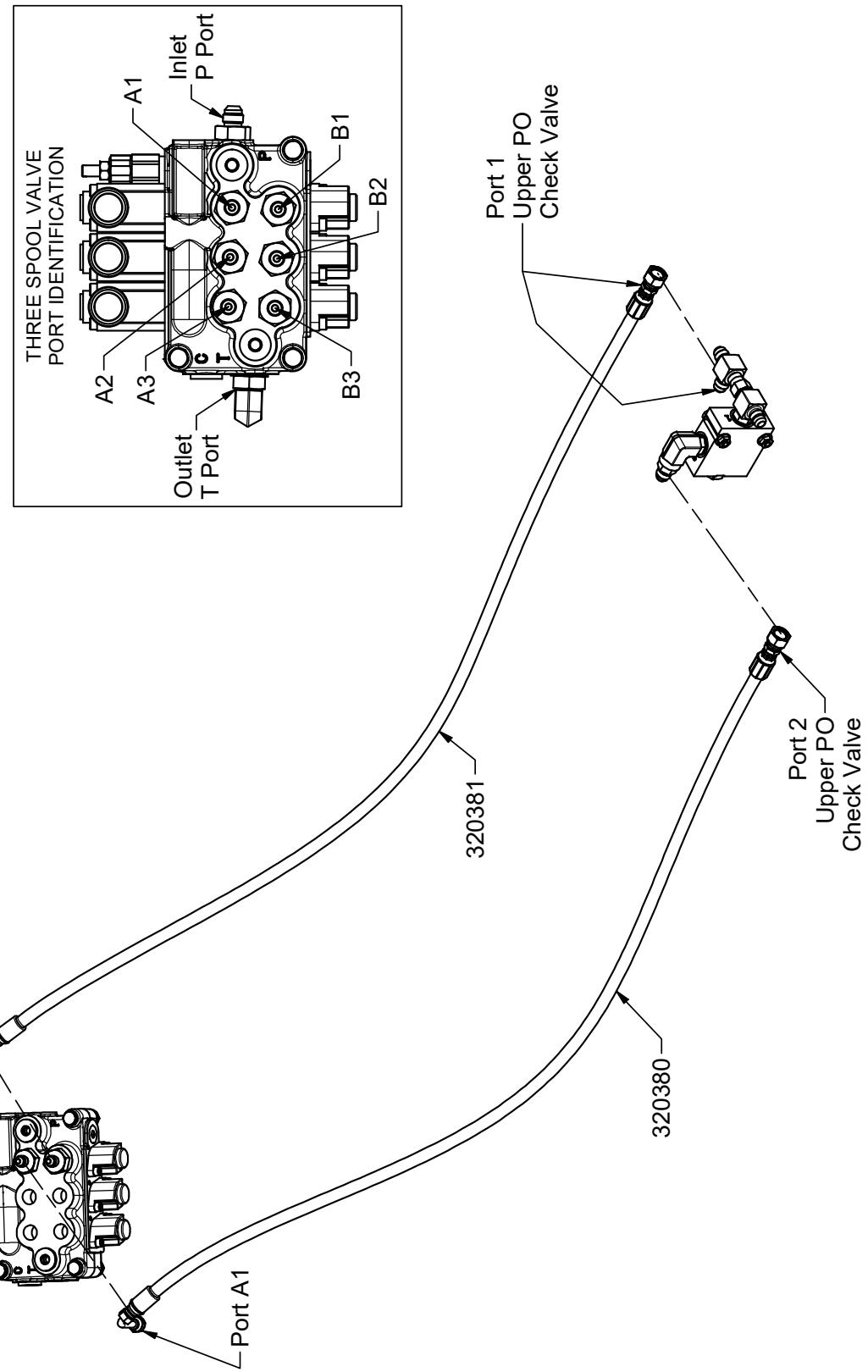
HOPPER LIFT PLUMBING

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



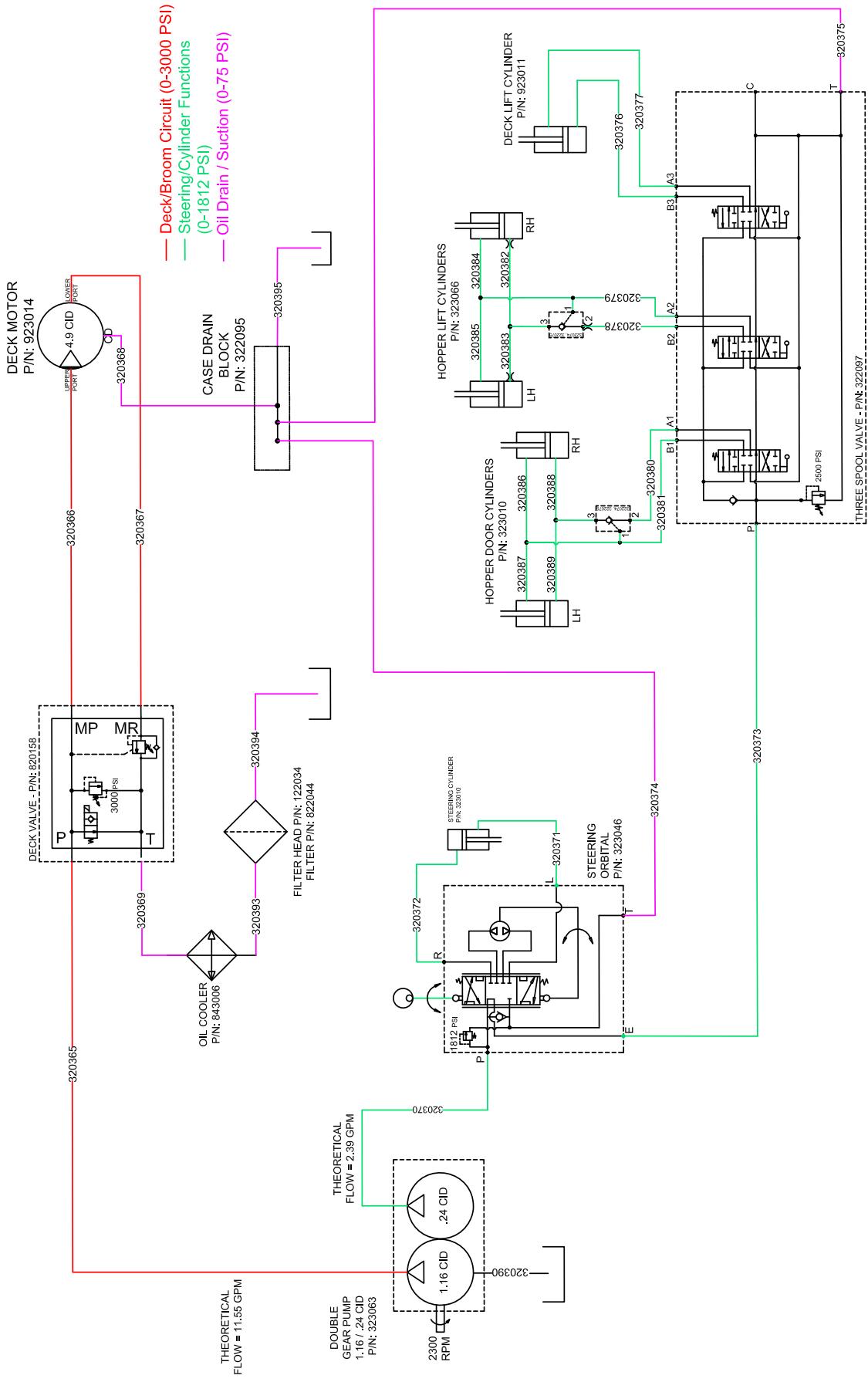
HOPPER DOOR PLUMBING

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



7-23-2020

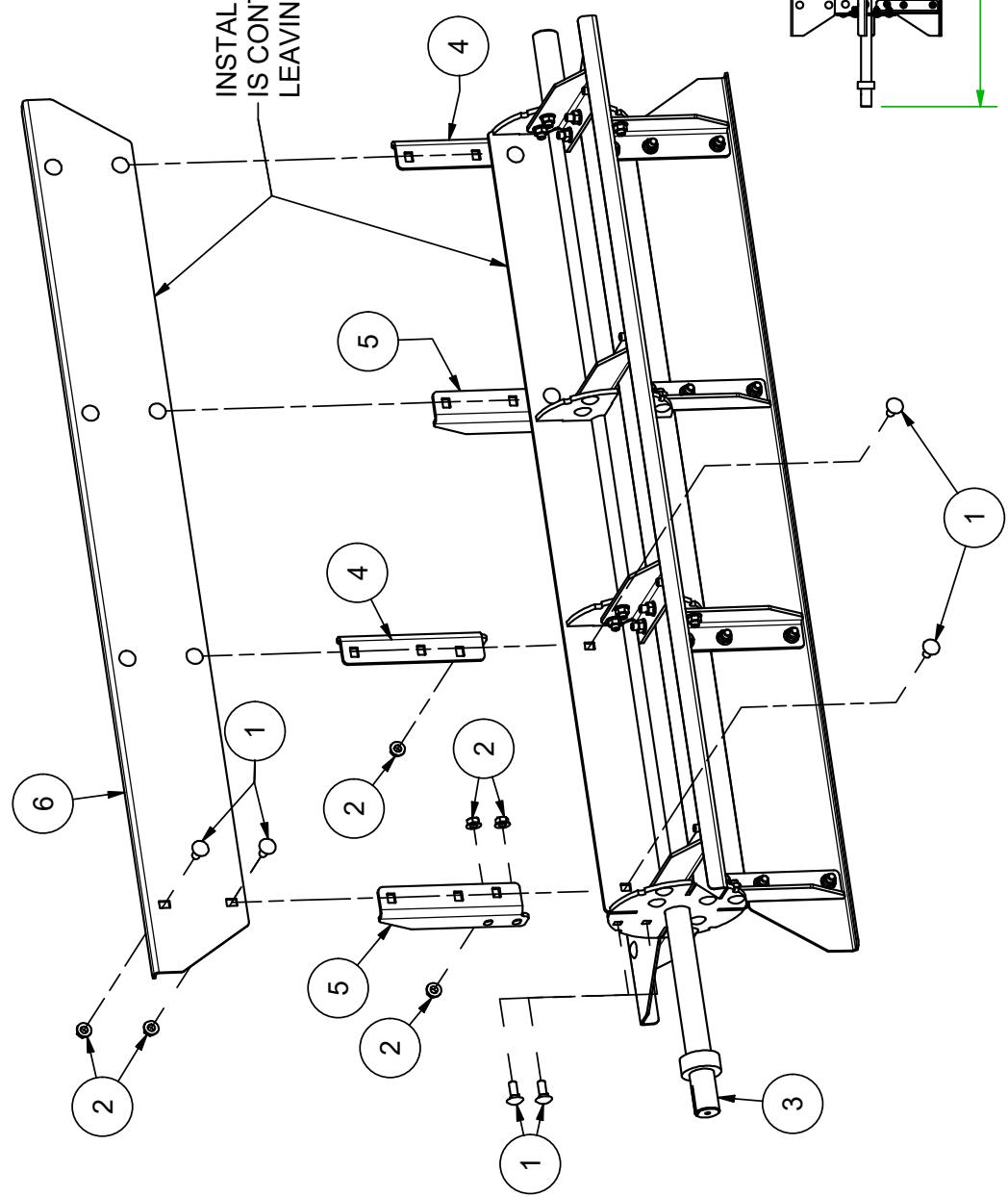
SWEEPER MACHINE HYDRAULIC SCHEMATIC



06/03/20

PADDLE ASSEMBLY

INSTALL BLADE SO EDGE
IS CONTACTING STIFFENER
LEAVING NO GAP

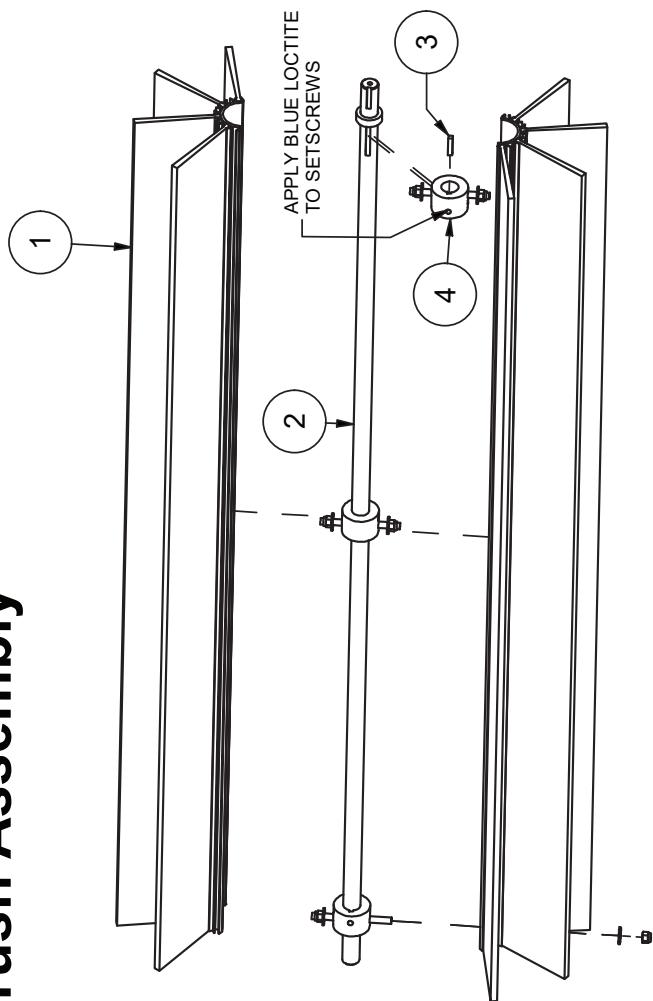


12-28-2020

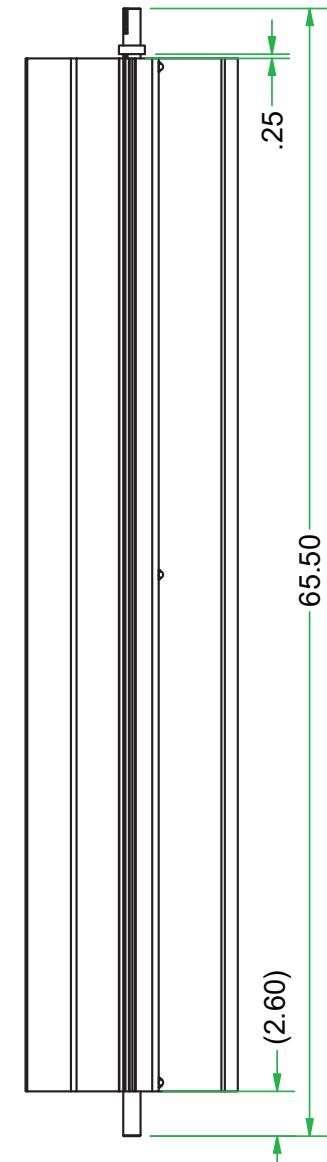
Brush Assembly

305068

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	1	302003	BRUSH, 60 in
2	1	315368	WELDMENT, BROOM SHAFT
3	1	510089	Key, 1/4 X 1/4 X 1.25, Under
4	3	973002	FLANGE, 2 1/8 X 1, TJ-16



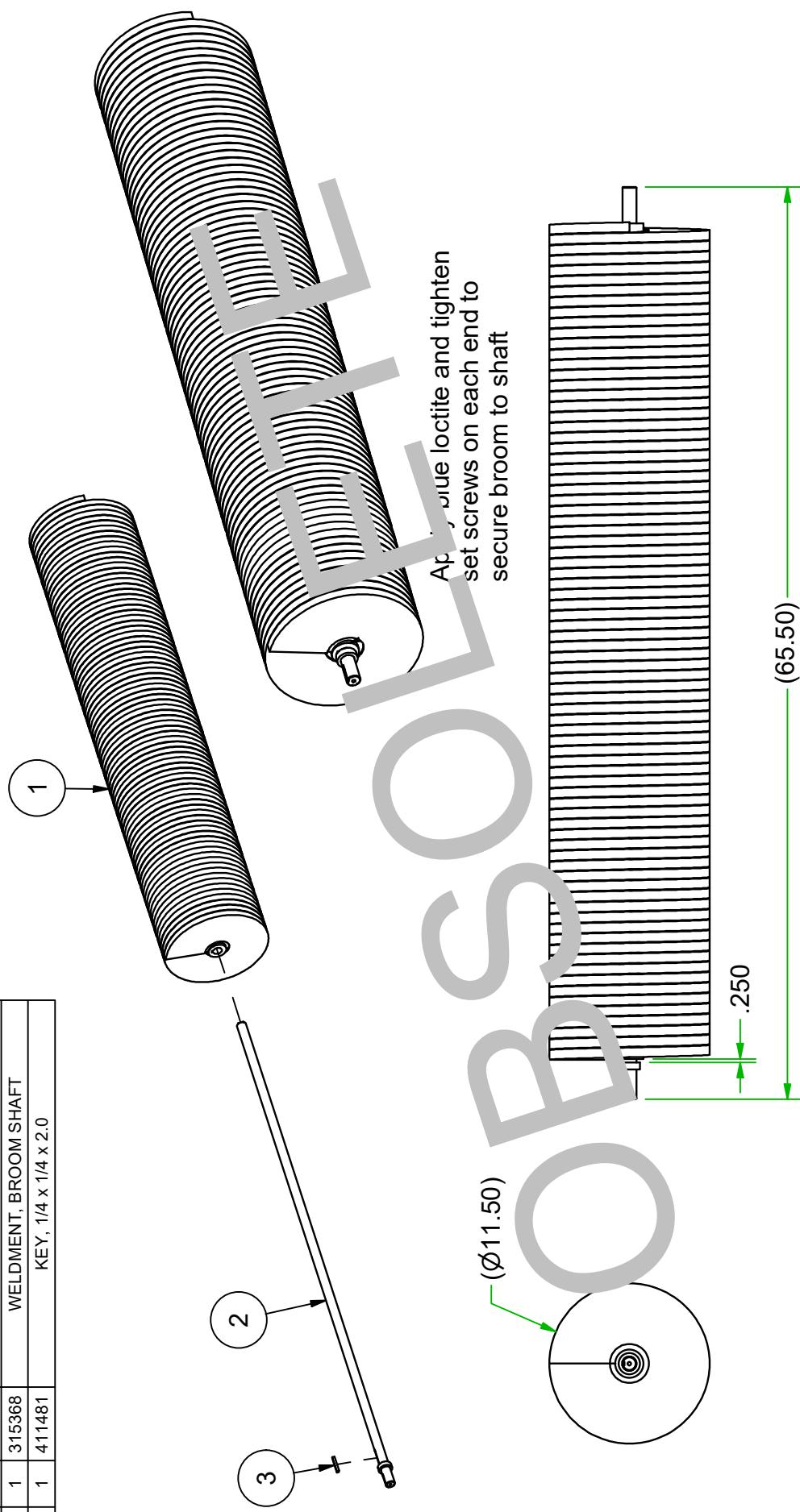
ASSEMBLY NOTE: ENSURE
BRISTLES ARE ALIGNED
WHEN ASSEMBLING TWO HALVES



302003 has been replaced by 302170 & 411481.
See the following page for replacement information.

7-23-2020

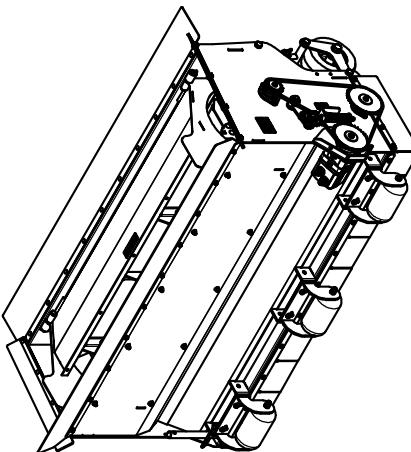
Brush Assembly



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

305114 REV. NC

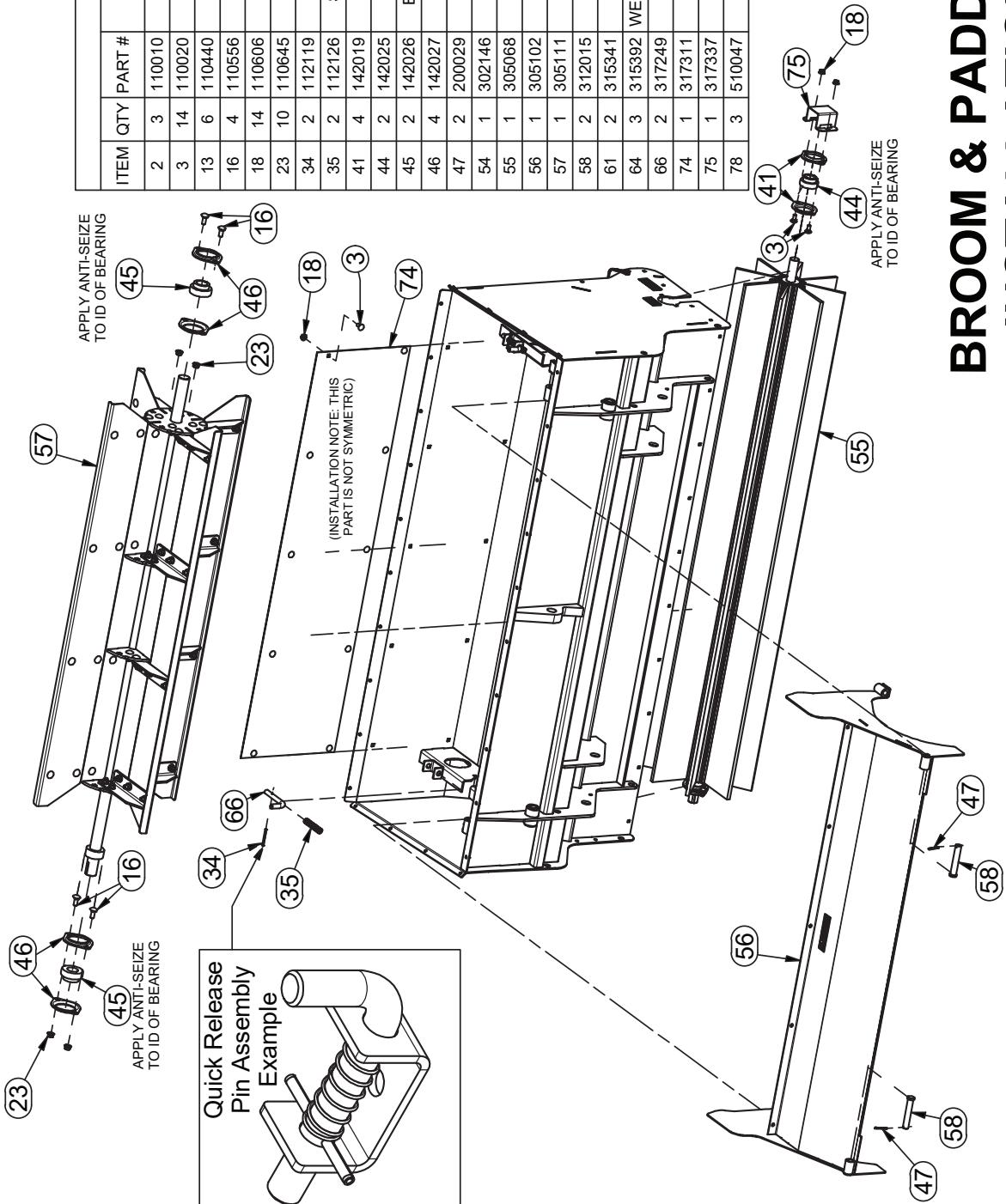
Parts List				Parts List				Parts List			
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION
1	1	102133	Decal, ISO, FOOT CRUSH	36	1	112130	Clevis Pin, 3/8" x 3/4", ZINC	70	3	317258	WASHER, 2.0 X .344 X .12
2	3	110010	BOLT, 1/2-13 X 9.0	37	1	120233	ADAPTER, 4MU-4MB	71	1	3117261	TENSIONER, GEAR MOUNT
3	14	110020	Bolt, 5/16-18 X 0.75 in Carriage	38	2	120251	ADAPTER, 10MU-10MB	72	2	3117289	RETAINER, UPPER SIDE SEAL
4	2	110023	BOLT, 5/8-11 X 6.5	39	1	142002	SPRING, COMP 1.1/4 X 4 x .148	73	1	3117295	COLLAR, SPRING TENSIONER LINER, DECK
5	4	110024	BOLT, 5/8-11 X 8.0	40	1	142013	Sprocket, 4017 Idler, 5/8	74	1	3117311	Roller, Anti-Scalp
6	56	110154	Bolt, 1/4-20 X 0.75 in Carriage	41	4	142019	Flange, 52mm, 2 Bolt	75	1	3117337	Shield, Broom Bearing
7	2	110272	BOLT, 3/4-10 X 6.75, Hhcs Gr 5 Zinc	42	2	142023	SPROCKET, 40BS35 X 1.0	76	1	3117365	ROD, DECK PROP
8	56	110290	NUT, 1/4-20 WIZ FLANGE	43	1	142024	SPROCKET, 40BS17 X 1.25	77	1	340013	ROLLER CHAIN #40 DECK (53")
9	2	110304	PIN, LOCK 3/8 X 2.5 SQ	44	2	142025	Bearing, 52mm Spherical O.D., 1.0 ID	78	3	510047	COTTER PIN, 1/8 X 0.75
10	1	110335	WASHER, 1" FLAT MACHINE	45	2	142026	Bearing, 62mm Spherical O.D., 1.25 ID	79	2	510228	KEY, 1/4 X 1/4 X 1.0 UNDER
11	1	110403	BOLT, 1/2-13 X 2.5	46	4	142027	Flange, 62mm, 2 Bolt	80	2	510237	CASTER WHEEL ASSY, 9 X 3.54
12	4	110419	BOLT, 1/2-13 X 1.75	47	2	200029	COTTER PIN, 5/32 X 1	81	1	510249	DECAL, HIGH PRESSURE INJECTION
13	6	110440	BOLT, 3/8-16 X 1, WIZ FLANGE	48	1	302112	SKIRT, FRONT DECK	82	4	800128	BUSHING, IGUS, FOOT PEDAL
14	2	110459	BOLT, 5/16-18 X 1, WIZ FLANGE	49	1	302113	SKIRT, REAR DECK	83	1	902228	DECAL, DO NOT REMOVE SHIELD
15	1	110513	BOLT, 5/8-11 X 2.5	50	2	302114	SKIRT, SIDE DECK	84	1	902230	DECAL, SHAFT HAZARD
16	4	110556	Bolt, 3/8-16 X 1 in Carriage	51	1	302115	SEAL, FRONT DECK	85	1	902232	DECAL, HIGH PRESSURE INJECTION
17	1	110597	NUT, 5/8-11 HEX	52	1	302116	SEAL, REAR TRANSITION	86	4	910865	SPACER, 1.125 X .812 X .9375
18	14	110606	NUT, 5/16-18 WIZ FLANGE	53	2	302117	SEAL, SIDE DECK	87	1	923014	MOTOR, 4.9 CID
19	4	110610	NUT, 1/2-13	54	1	302146	DECAL, TENSION ADJUSTMENT				
20	4	110615	NUT, 1/2-13, UNITORQUE LOCK	55	1	305068	ASSY, BRUSH				
21	2	110625	NUT, 3/4-10, UNITORQUE LOCK	56	1	305102	ASSY, Transition Shield, ISO				
22	6	110639	NUT, 5/8-11, UNITORQUE LOCK	57	1	305111	ASSY, PADDLE				
23	10	110645	NUT, 3/8-16 WIZ FLANGE	58	2	312015	PIN, 5/8" x 3.5"				
24	1	110655	WASHER, 5/8" LOCK	59	2	315339	WELDMENT, UPPER WHEEL ADJUST				
25	8	110658	WASHER, 1/2" FLAT STANDARD	60	2	315340	WELDMENT, LOWER WHEEL ADJUST				
26	1	110663	WASHER, 5/8" FLAT SAE	61	2	315341	WELDMENT, GAUGE WHEEL BRKT				
27	4	110666	WASHER, 1/2" LOCK	62	1	315377	WELDMENT, SWEEPER DRIVE IDLER				
28	4	110678	WASHER, 3/4 FLAT SAE	63	1	315378	WELDMENT, IDLER ADJUSTMENT				
29	2	110826	NUT, 3/8-16 GR 5	64	3	315392	WELDMENT, ANTI-SCALP WHEEL MOUNT				
30	1	110929	BOLT, M8-1.25 X 20 WIZ FLNG	65	1	315408	WELDMENT, SWEEPER DECK, US				
31	1	110987	Pin, Square Retainer, .50 X 3.00 Pin Dia	66	2	317249	PIN, QUICK RELEASE				
32	1	111186	WASHER, 1.50 X .406 X .125, FLAT	67	4	317252	RETAINER, FRONT DECK				
33	1	111188	WASHER, 1.25 X 1.875 X .047, FLAT	68	2	317253	RETAINER, SIDE DECK				
34	2	112119	ROLL PIN, 5/32 X 2 ZP	69	1	317256	SPACER, KEYWAY, 1.625 X .5 X .909				
35	2	112126	SPRING, COMP 3.0L X 0.6 OD x .045								



SIMILAR TO 305066

DECK ASSEMBLY

3-18-2021



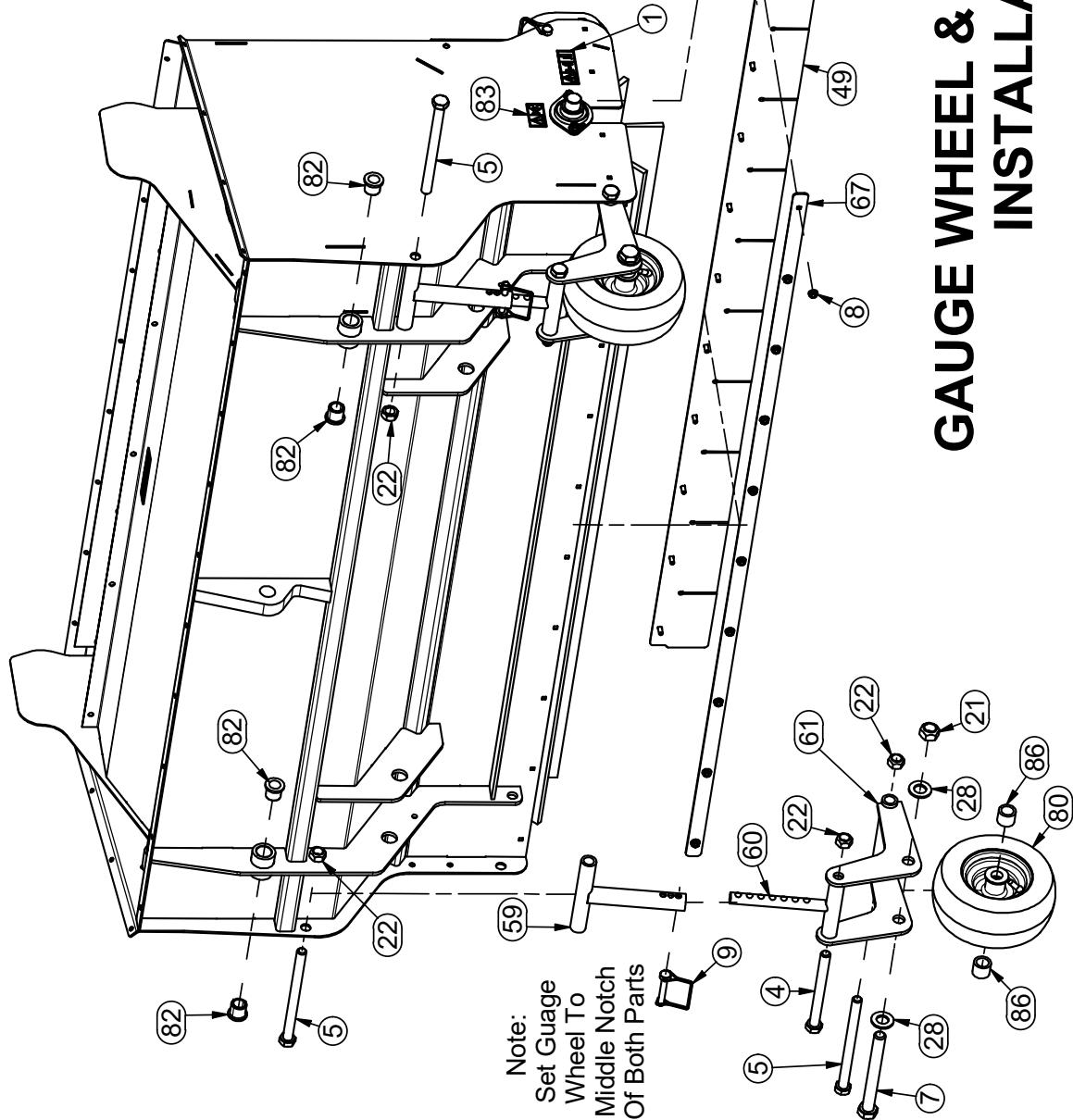
BROOM & PADDLE INSTALLATION

305068 has been replaced by 305134.
See "Brush Assembly" for reference.

3-18-2021

Parts List

ITEM	QTY	PART #	DESCRIPTION
1	1	102133	Decal, ISO, FOOT CRUSH
2	3	110010	BOLT, 1/2-13 X 9.0
4	2	110023	BOLT, 5/8-11 X 6.5
5	4	110024	BOLT, 5/8-11 X 8.0
7	2	110272	BOLT, 3/4-10 X 6.75, Hlcs Gr 5 Zinc
8	56	110290	NUT, 1/4-20 WIZ FLANGE
9	2	110304	PIN, LOCK 3/8 X 2.5 SQ
13	6	110440	BOLT, 3/8-16 X 1, WIZ FLANGE
21	2	110625	NUT, 3/4-10, UNITORQUE LOCK
22	6	110639	NUT, 5/8-11, UNITORQUE LOCK
28	4	110678	WASHER, 3/4 FLAT SAE
49	1	302113	SKIRT, REAR DECK
50	2	302114	SKIRT, SIDE DECK
54	1	302146	Decal, Tension Adjustment
59	2	315339	WELDMENT, UPPER WHEEL ADJUST
60	2	315340	WELDMENT, LOWER WHEEL ADJUST
61	2	315341	WELDMENT, GAUGE WHEEL BRKT
64	3	315392	WELDMENT, ANTI-SCALP WHEEL MOUNT
67	4	317252	RETAINER, FRONT DECK
68	2	317253	RETAINER, SIDE DECK
78	3	510047	Roller, Anti-Scalp
80	2	510237	CASTER WHEEL ASSY, 9 X 3.5-4
82	4	800128	BUSHING, IGUS, FOOT PEDAL
83	1	902228	Decal, Do Not Remove Shield
86	4	910865	SPACER, 1.125 X .812 X .9375



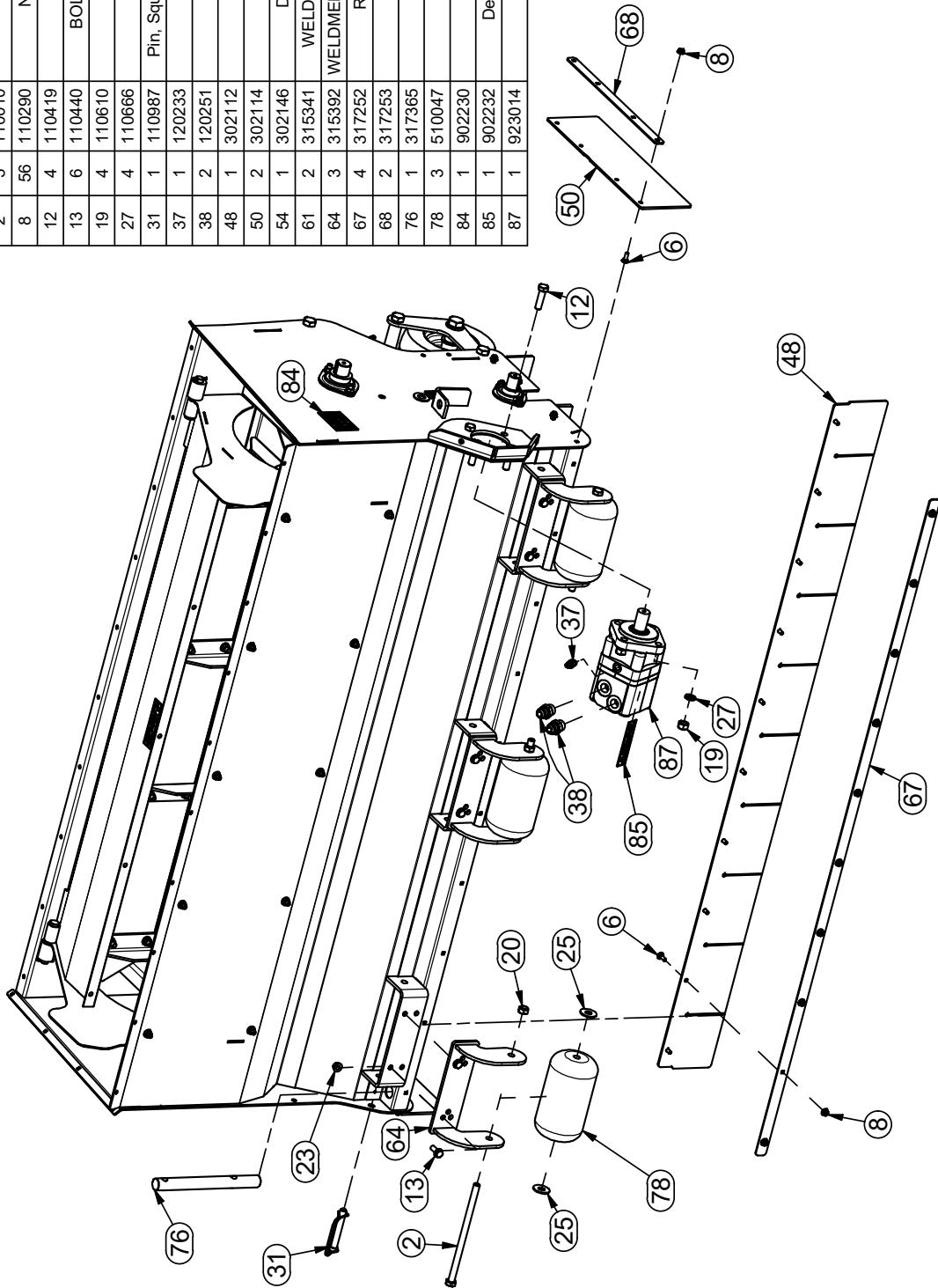
GAUGE WHEEL & LOWER SKIRT INSTALLATION

3-18-2021

HYDRAULIC MOTOR, SCALP WHEELS & LOWER SKIRT INSTALLATION

Parts List		DESCRIPTION
ITEM	QTY	PART #

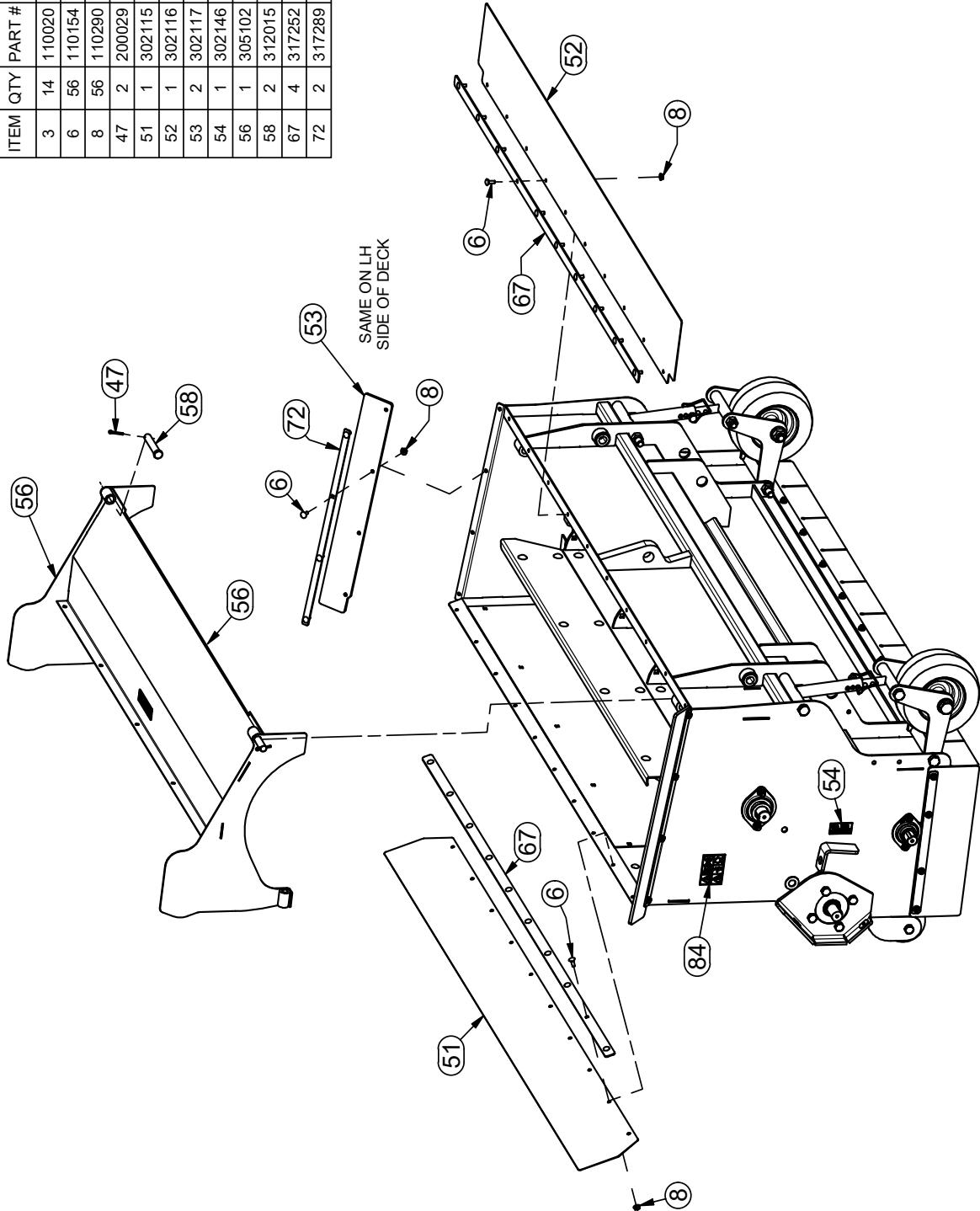
Parts List			
ITEM	QTY	PART #	DESCRIPTION
2	3	110010	BOLT, 1/2-13 X 9.0
8	56	110290	NUT, 1/4-20 WIZ FLANGE
12	4	110419	BOLT, 1/2-13 X 1.75
13	6	110440	BOLT, 3/8-16 X 1, WIZ FLANGE
19	4	110610	NUT, 1/2-13
27	4	110666	WASHER, 1/2" LOCK
31	1	110987	PIN, Square Retainer .50 X 3.00 Pin Dia
37	1	120233	ADAPTER, 4MJ-4MB
38	2	120251	ADAPTER, 10MJ-10MB
48	1	302112	SKIRT, FRONT DECK
50	2	302114	SKIRT, SIDE DECK
54	1	302146	Decal, Tension Adjustment
61	2	315341	WEIDMENT, GAUGE WHEEL BRKT
64	3	315392	WEIDMENT, ANTI-SCALP WHEEL MOUNT
67	4	317252	RETAINER, FRONT DECK
68	2	317253	RETAINER, SIDE DECK
76	1	317365	ROD, DECK PROP
78	3	510047	Roller, Anti-Scalp
84	1	902230	Decal, Shaft Hazard
85	1	902232	Decal, High Pressure Injection
87	1	923014	MOTOR, 4.9 CID



UPPER DECK SEAL & PADDLE SHIELD INSTALLATION

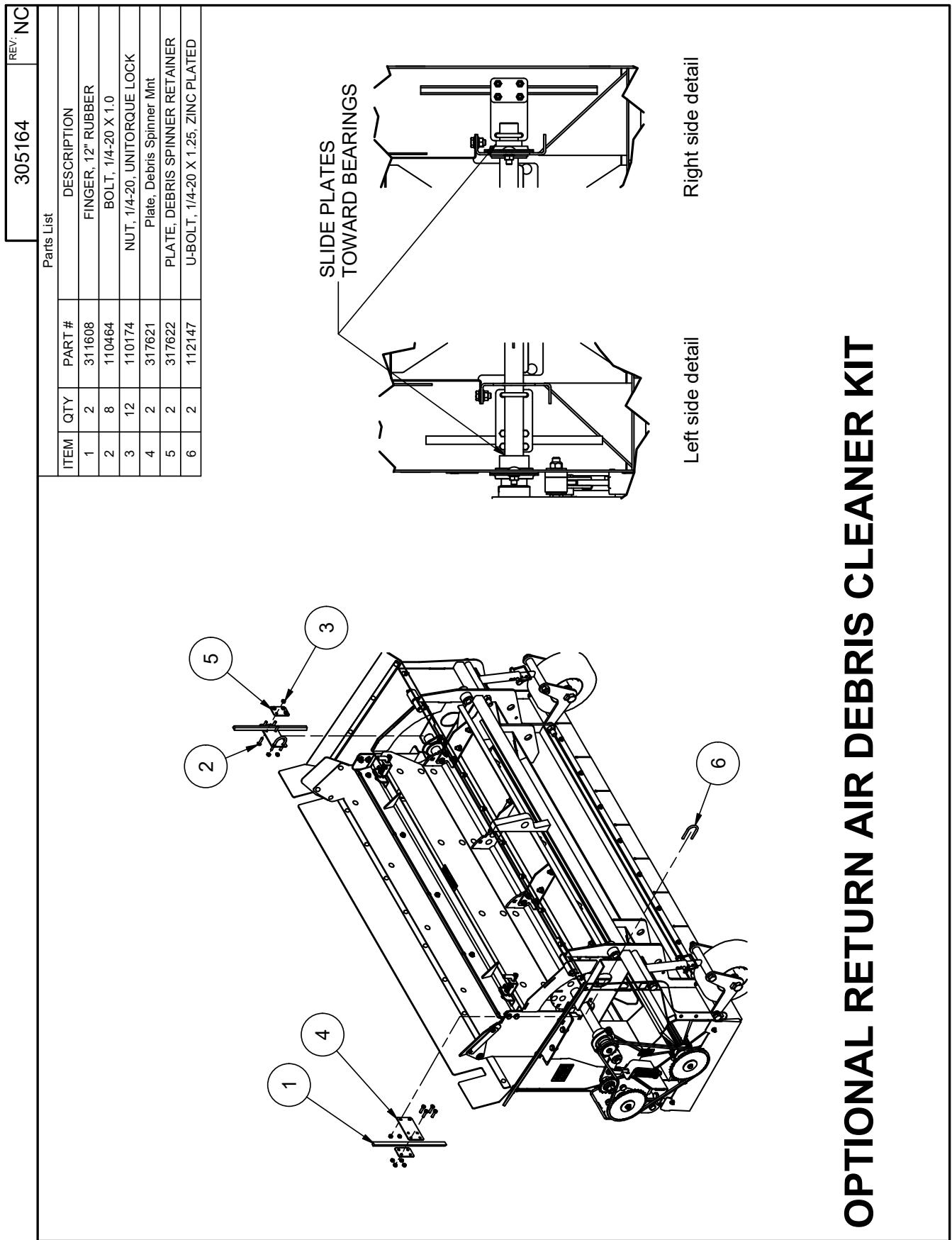
Parts List

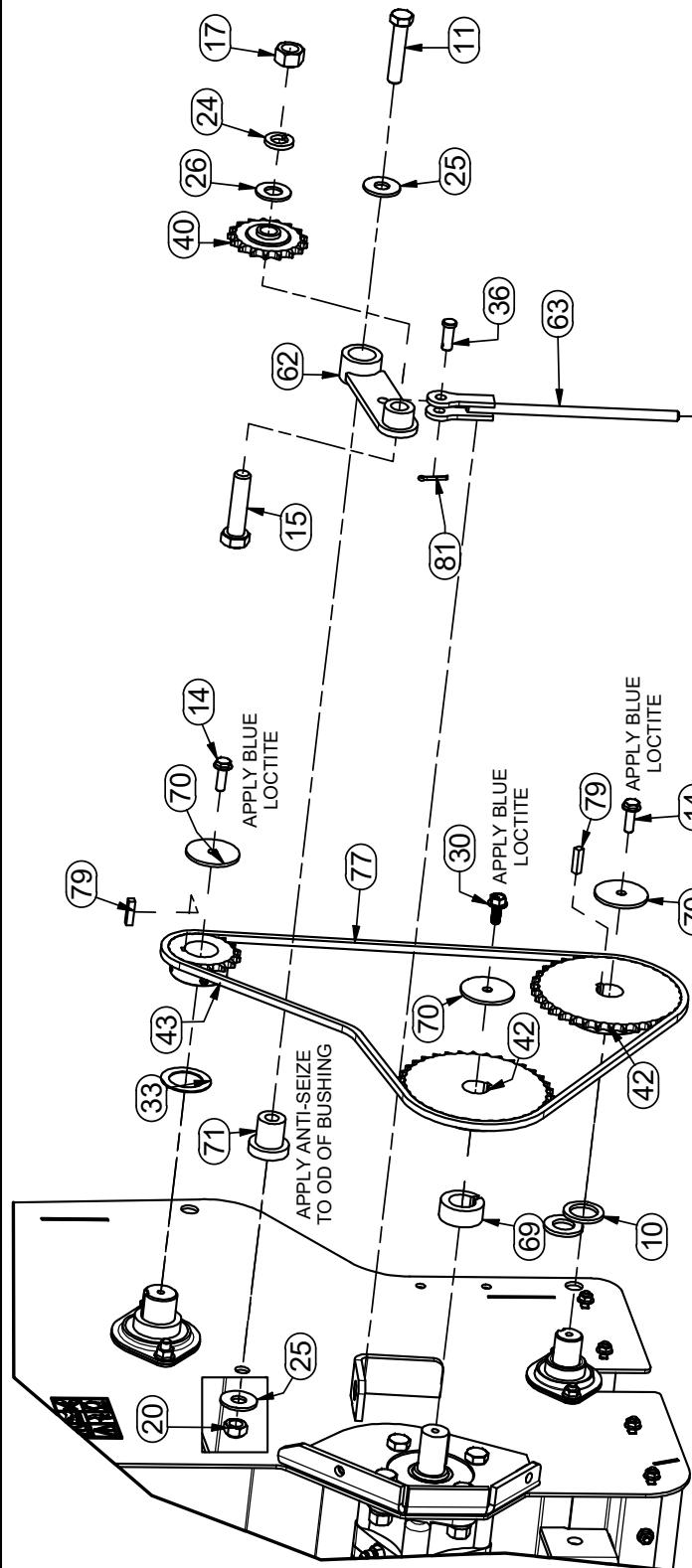
ITEM	QTY	PART #	DESCRIPTION
3	14	110020	Bolt, 5/16-18 X 0.75 in Carriage
6	56	110154	Bolt, 1/4-20 X 0.75 in Carriage
8	56	110290	NUT, 1/4-20 WIZ FLANGE
47	2	200029	COTTER PIN, 5/32 X 1"
51	1	302115	SEAL, FRONT DECK
52	1	302116	SEAL, REAR TRANSITION
53	2	302117	SEAL, SIDE DECK
54	1	302146	Decal, Tension Adjustment
56	1	305102	Assy, Transition Shield, ISO
58	2	312015	PIN, 5/8" x 3.5"
67	4	317252	RETAINER, FRONT DECK
72	2	317289	RETAINER, UPPER SIDE SEAL



3-18-2021

OPTIONAL RETURN AIR DEBRIS CLEANER KIT



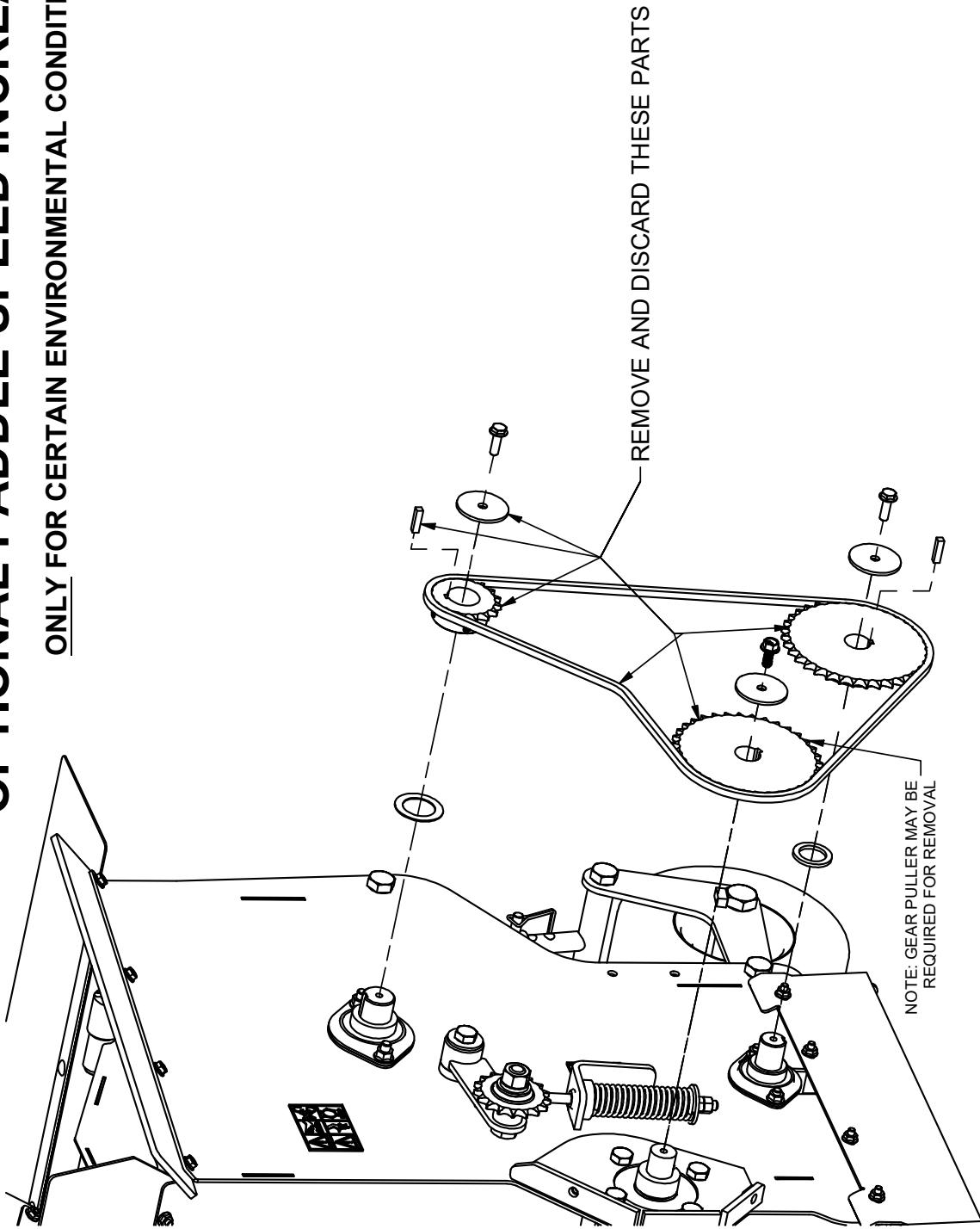


Parts List		Parts List			
ITEM	PART #	DESCRIPTION	ITEM	PART #	DESCRIPTION
1	102133	Decal, ISO, FOOT CRUSH	36	112130	Clevis Pin, 3/8" x 3/4", ZINC
2	110010	BOLT, 1/2-13 X 9.0	39	142002	SPRING, COMP 1 1/4 x 4 x .148
10	110335	WASHER, 1" FLAT MACHINE	40	142013	Sprocket, 4017 idler, 5/8
11	110403	BOLT, 1/2-13 X 2.5	42	142023	SPROCKET, 40BS35 X 1.0
13	110440	BOLT, 3/8-16 X 1, WIZ FLANGE	43	142024	SPORCKET, 40BS17 X 1.25
14	110559	BOLT, 5/16-18 X 1, WIZ FLANGE	54	302146	Decal, Tension Adjustment
15	110513	BOLT, 5/8-11 X 2.5	62	315377	WELDMENT, SWEEPER DRIVE IDLER
17	110597	NUT, 5/8-11 HEX	63	315378	WELDMENT, IDLER ADJUSTMENT
20	110615	NUT, 1/2-13, UNITORQUE LOCK	64	315392	WELDMENT, ANTI-SCALP WHEEL MOUNT
24	110655	WASHER, 5/8" LOCK	70	317258	WASHER, 2.0 X 344 X .12
25	110658	WASHER, 1/2" FLAT STANDARD	71	317261	TENSIONER, GEAR MOUNT
26	110653	WASHER, 5/8" FLAT SAE	73	317295	COLLAR, SPRING TENSIONER
28	110678	WASHER, 3/4 FLAT SAE	77	340013	ROLLER CHAIN #40 DECK (53")
29	110826	NUT, 3/8-16 GR 5	78	510047	Roller, Anti-Scalp
30	110829	BOLT, M8-1.25 X 20 WIZ FLNG	79	510228	KEY, 1/4 X 1/4 X 1.0 UNDER
32	111186	WASHER, 1.50 X .406 X 125, FLAT	81	510249	COTTER PIN, 1/8 X 0.75
33	111188	WASHER, 1.25 X 1.875 X .047, FLAT			

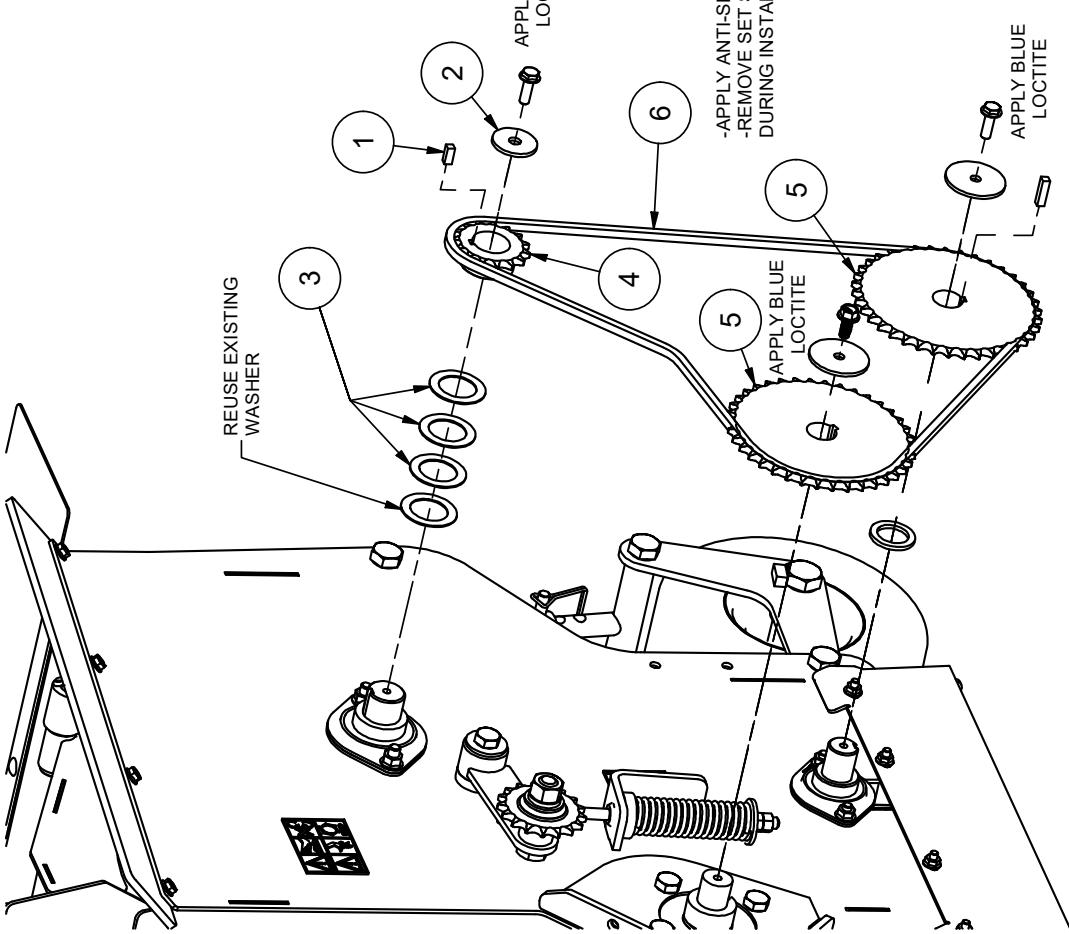
CHAIN DRIVE ASSEMBLY

OPTIONAL PADDLE SPEED INCREASER KIT

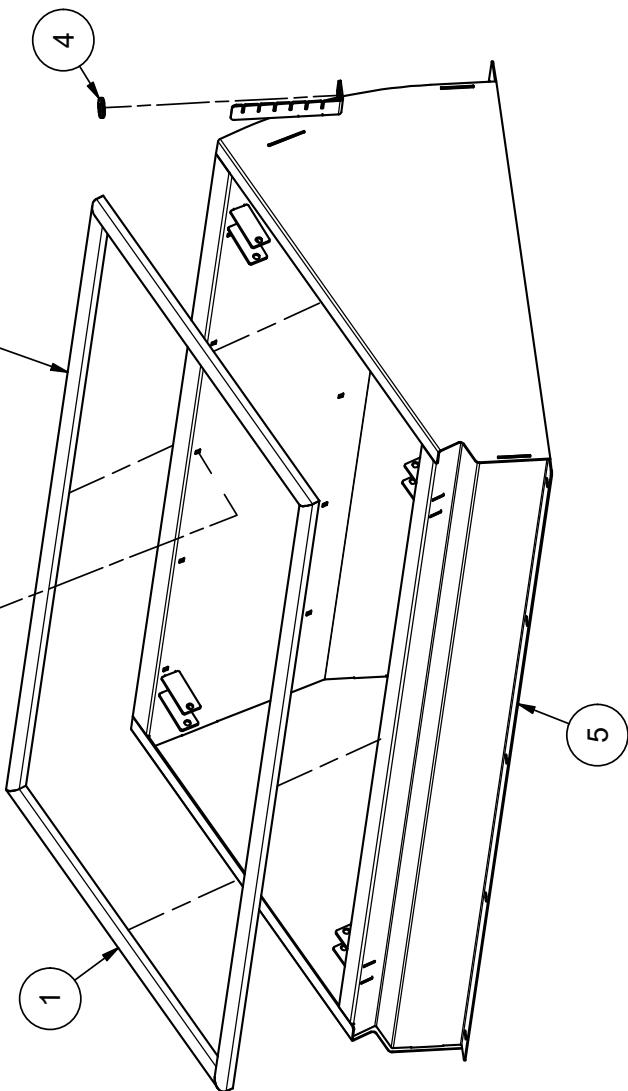
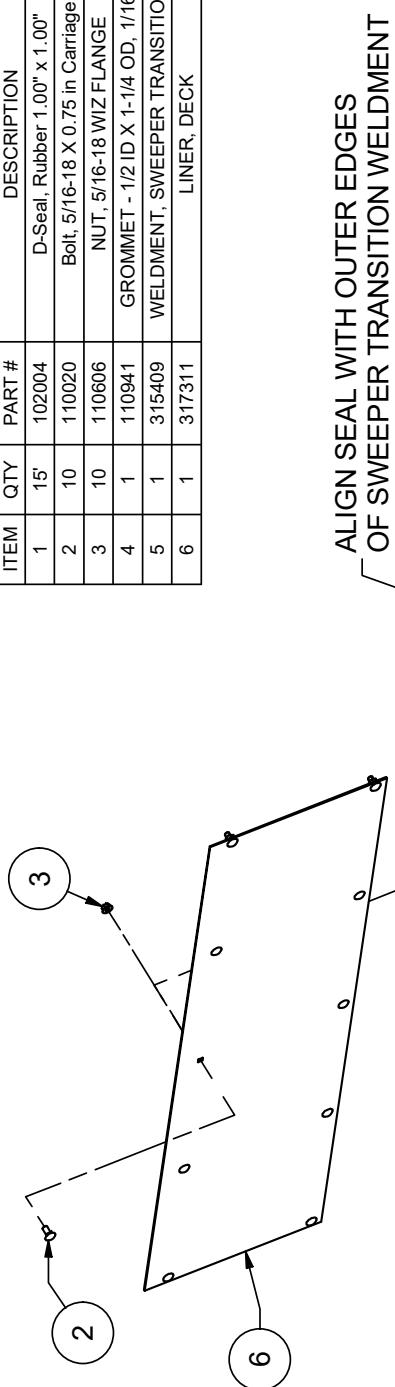
ONLY FOR CERTAIN ENVIRONMENTAL CONDITIONS



UPDATED COMPONENT INSTALL



Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	15'	102004	D-Seal, Rubber 1.00" x 1.00"
2	10	110020	Bolt, 5/16-18 X 0.75 in Carriage
3	10	110606	NUT, 5/16-18 WIZ FLANGE
4	1	110941	GROMMET - 1/2 ID X 1-1/4 OD, 1/16 X 1
5	1	315409	WELDMENT, SWEEPER TRANSITION, US
6	1	317311	LINER, DECK



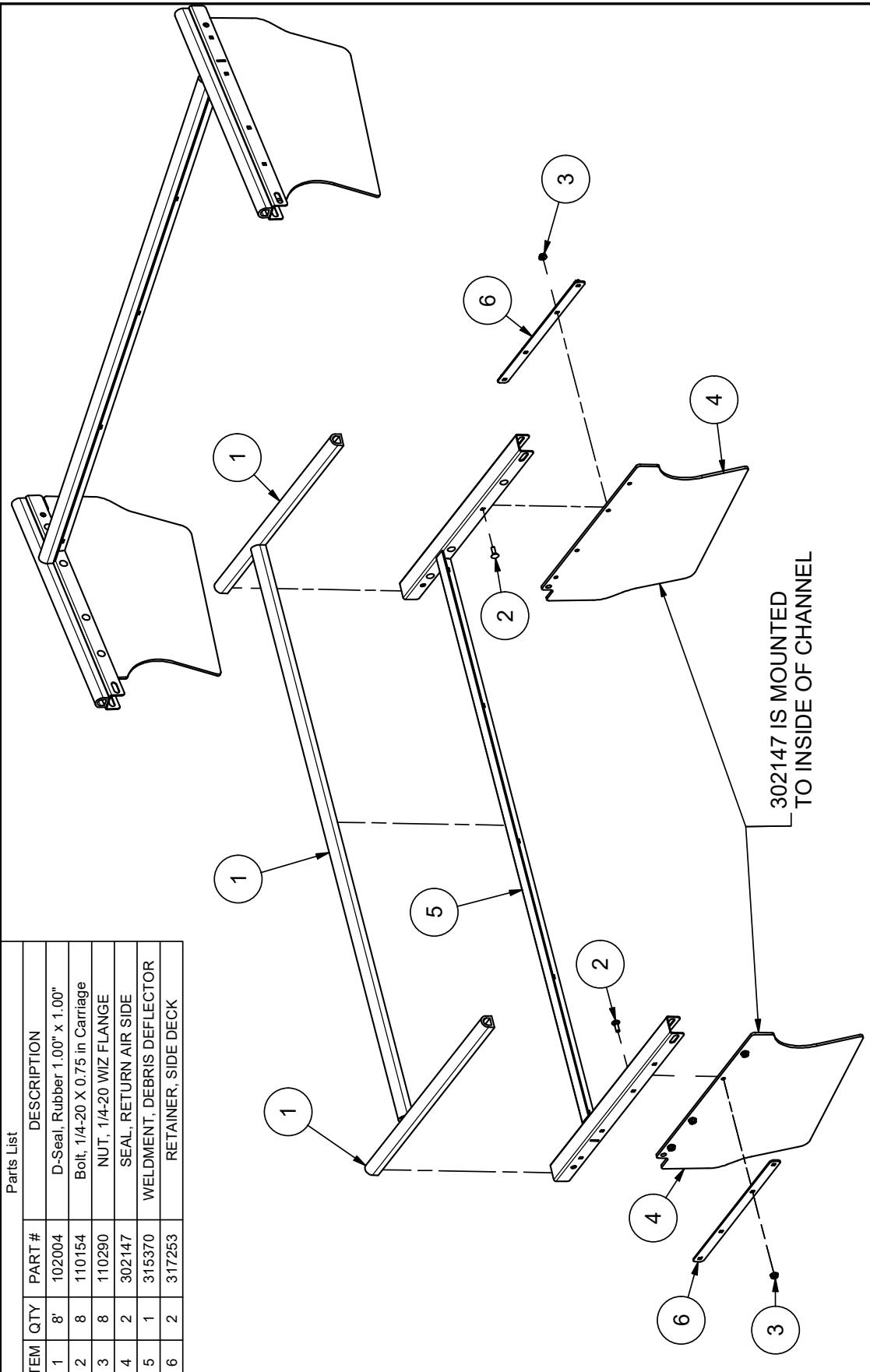
SIMILAR TO 305069

DECK TRANSITION ASSEMBLY

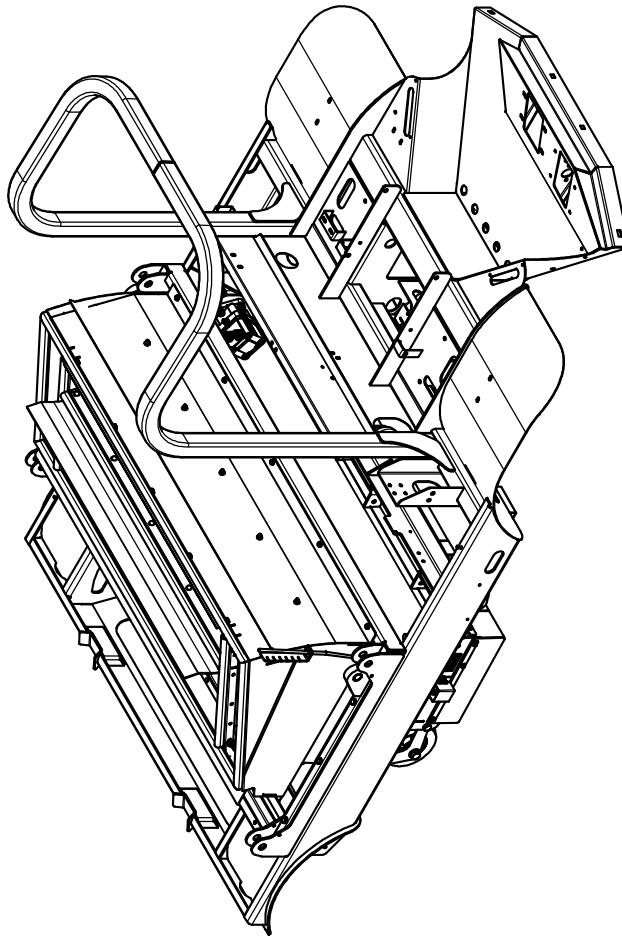
3-18-2021

305070

REV: B



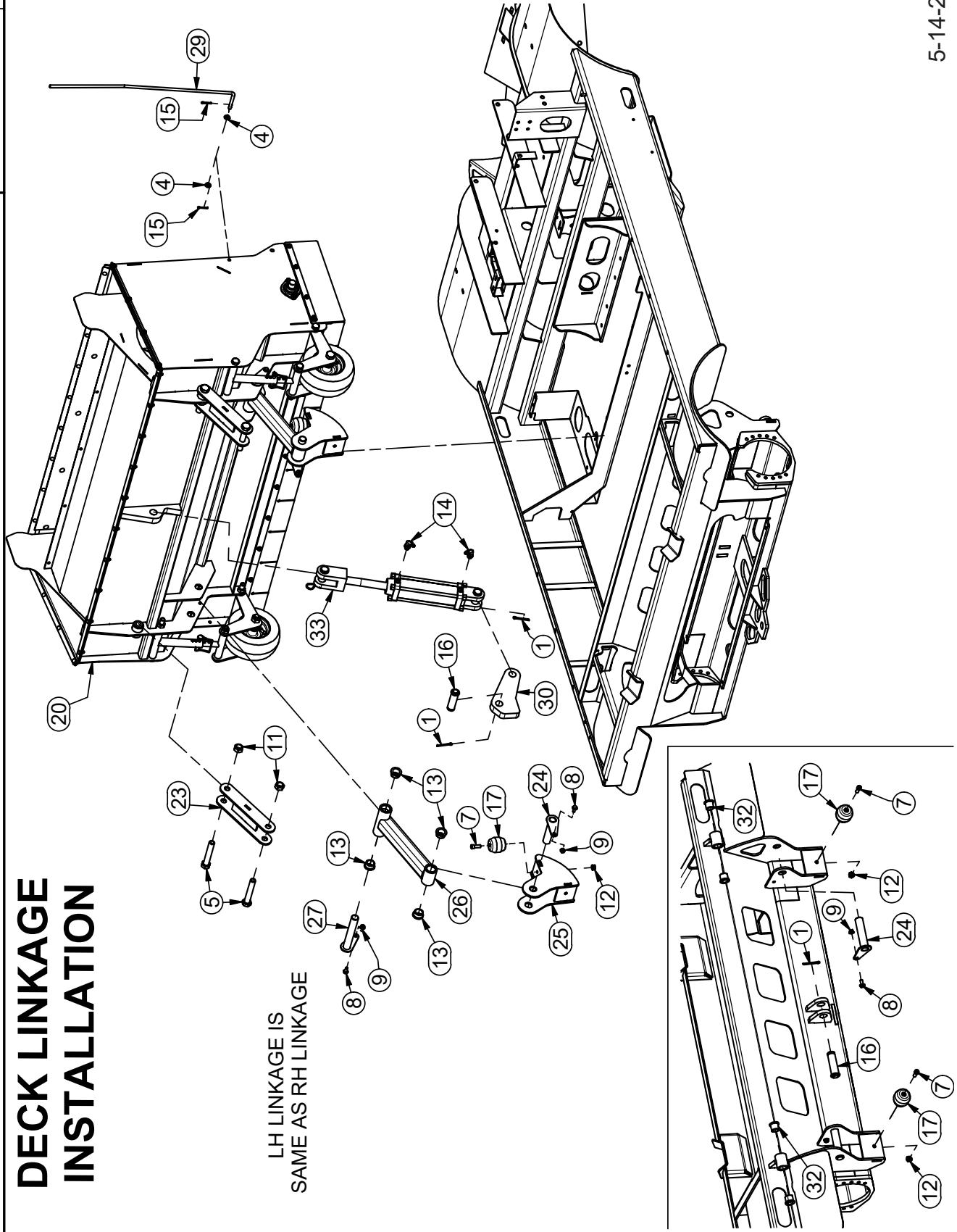
DECK INSTALLATION



SIMILAR TO 305085

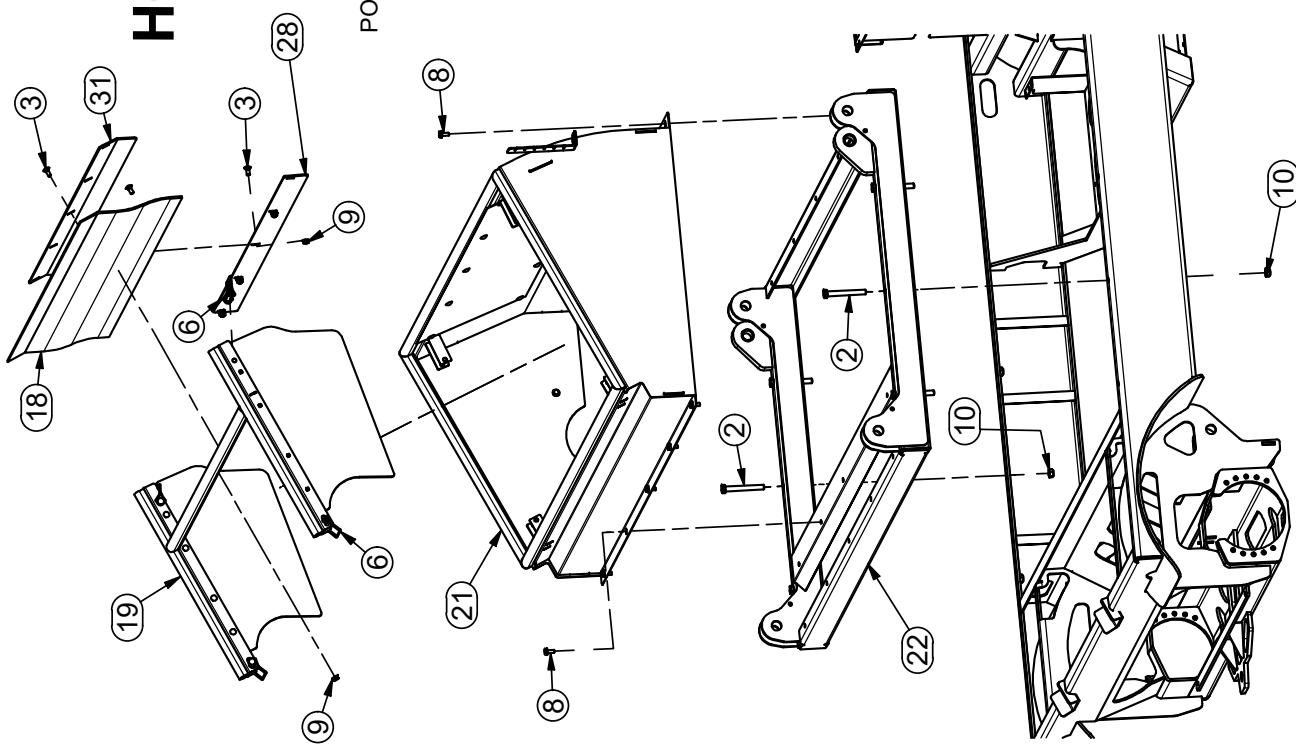
Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	2	100465	COTTER PIN, 3/16 X 1.75
2	6	110003	BOLT, 1/2-13 X 4.0
3	10	110020	Bolt, 5/16-18 X 0.75 in Carriage
4	2	110155	WASHER, 3/8" FLAT SAE
5	4	110170	BOLT, 3/4-10 X 4.5
6	4	110304	PIN, LOCK 3/8 X 2.5 SQ
7	4	110395	BOLT, 3/8-16 X 1.0 SHCS
8	14	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
9	14	110606	NUT, 5/16-18 WIZ FLANGE
10	6	110615	NUT, 1/2-13, UNITORQUE LOCK
11	4	110625	NUT, 3/4-10, UNITORQUE LOCK
12	4	110645	NUT, 3/8-16 WIZ FLANGE
13	8	110851	BUSHING - IGUS, 1-1/4 x 1 x 3/4 fng
14	2	120220	ADAPTER, 4MJ-6MB90
15	2	200029	COTTER PIN, 5/32 X 1
16	1	220480	PIN
17	4	302130	Spring, 300lb Rubber
18	1	302148	Seal, Loop
19	1	305070	ASSY, DECK CHUTE
20	1	305114	ASSY, DECK, US
21	1	305115	ASSY, DECK TRANSITION, US
22	1	315315	WELDMENT, HOPPER MOUNT
23	2	315346	WELDMENT, UPPER DECK LINK
24	2	315373	WELDMENT, LOWER DECK PIN, 4.50
25	2	315374	WELDMENT, RUBBER SPRING
26	2	315375	WELDMENT, LOWER DECK LINK
27	2	315376	WELDMENT, LOWER DECK PIN, 6.25
28	1	317179	CUTOFF, AIR FLOW
29	1	317267	ROD, DECK HEIGHT INDICATOR
30	1	317282	LINK, DECK LIFT
31	1	317357	Guide, Loop Seal
32	4	800128	BUSHING, IGUS, FOOT PEDAL
33	1	923011	Cylinder, 2 X 6, -6 SAE Cross

DECK LINKAGE INSTALLATION



HOPPER TRANSITION & HOPPER MOUNT INSTALLATION

NOTE: 28 MOUNTS TO PADDLE SHIELD
POSITION CUTOFF POINT $\frac{1}{4}$ " ABOVE PADDLES



Parts List			
ITEM	QTY	PART #	DESCRIPTION
2	6	110003	BOLT, 1/2-13 X 4.0
3	10	110020	Bolt, 5/16-18 X 0.75 in Carriage
6	4	110304	PIN, LOCK 3/8 X 2.5 SQ
8	14	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
9	14	110606	NUT, 5/16-18 WIZ FLANGE
10	6	110615	NUT, 1/2-13, UNITORQUE LOCK
18	1	302148	Seal, Loop
21	1	305115	ASSY, DECK TRANSITION, US
19	1	305070	ASSY, DECK CHUTE
22	1	315315	WELDMENT, HOPPER MOUNT
28	1	317179	CUTOFF, AIR FLOW
31	1	317357	Guide, Loop Seal

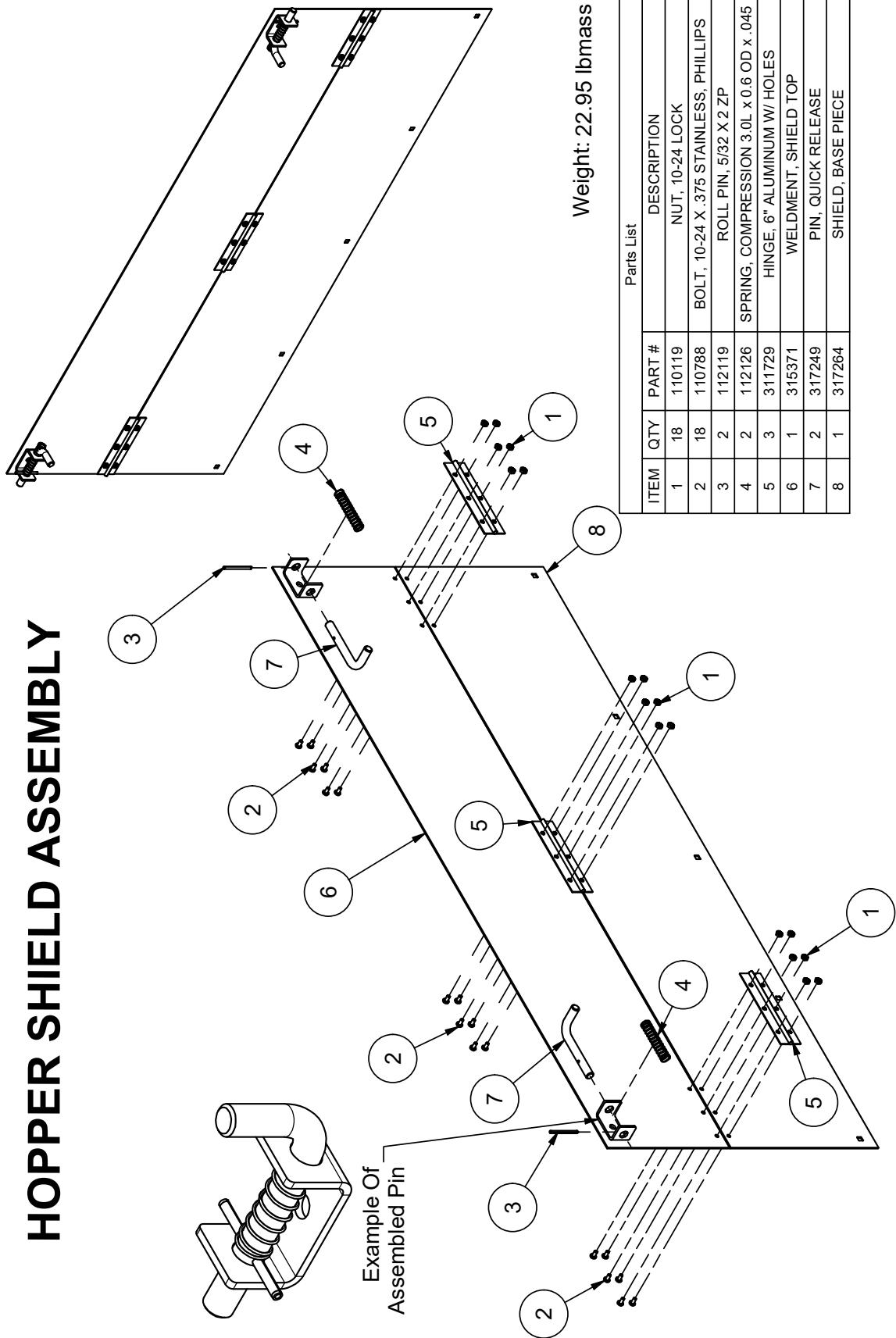
5-14-2021

HK4400

HARPER®
TURF EQUIPMENT

HOPPER SHIELD ASSEMBLY

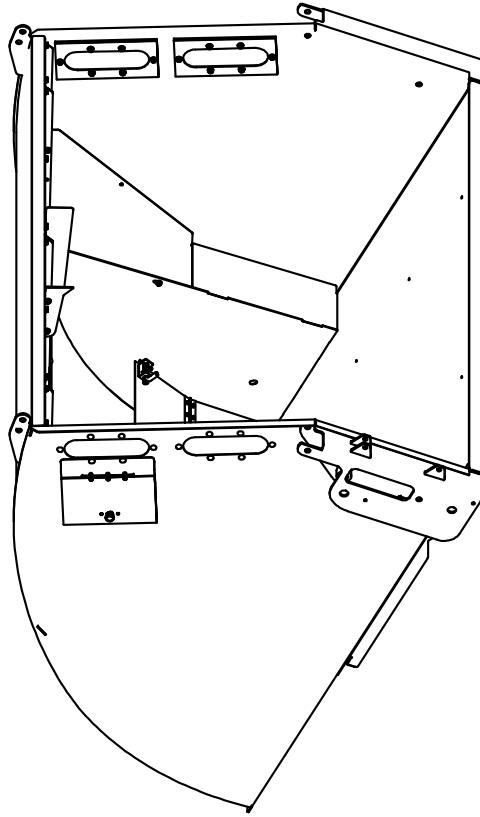
305065



12-28-2020

305116

REV. NC



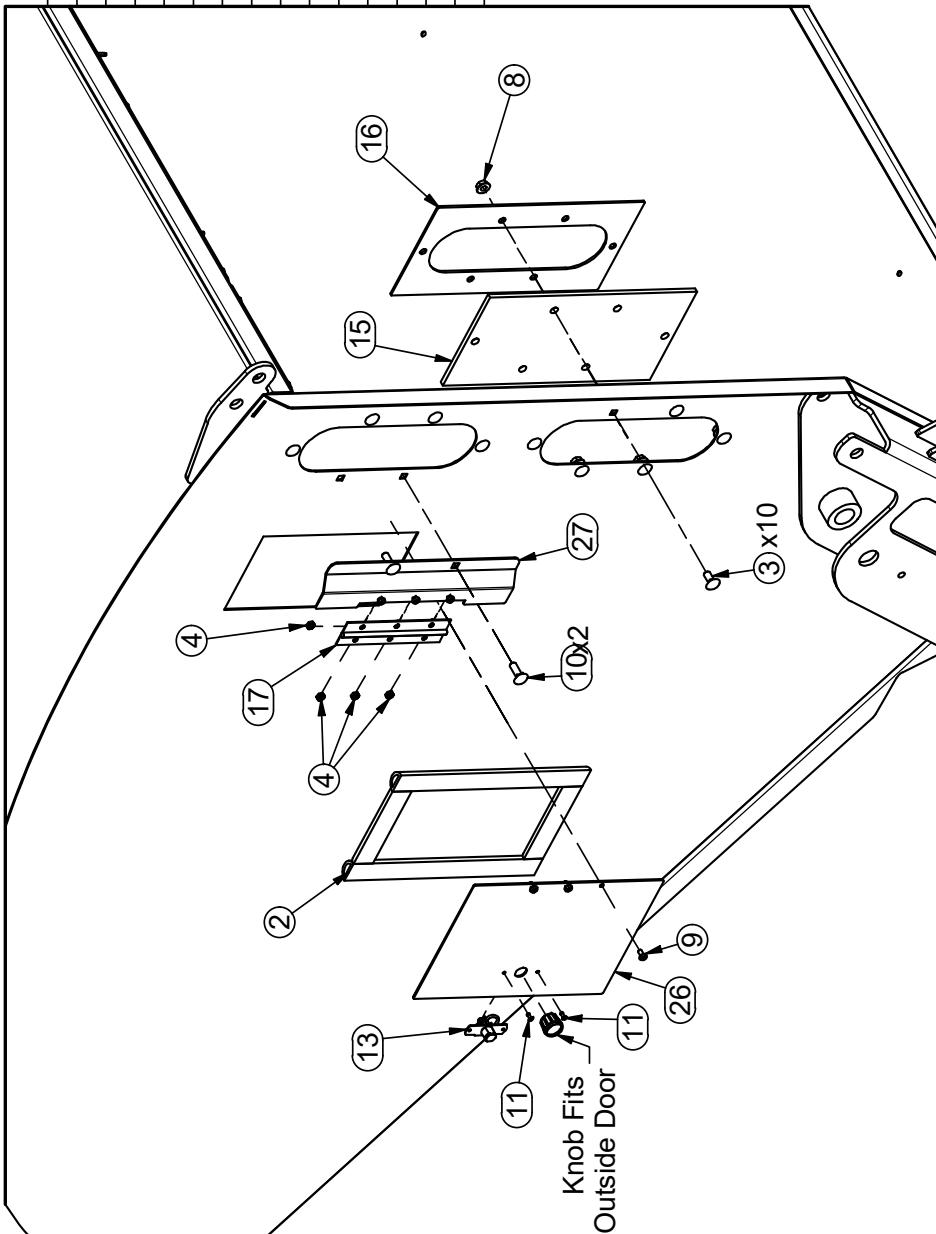
Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	3/2"	102004	D-Seal, Rubber 1.00" x 1.00"
2	2'8"	102075	SEAL
3	27	110020	Bolt, 5/16-18 X 0.75 in Carriage
4	6	110119	NUT, 10-24 LOCK
5	26	110319	NUT, 5/16-18 U-TYPE .75L
6	8	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
7	22	110459	BOLT, 5/16-18 X 1, WIZ FLANGE
8	43	110606	NUT, 5/16-18 WIZ FLANGE
9	6	110788	BOLT, 10-24 X .375 STAINLESS, PHILLIPS
10	12	110871	Bolt, 5/16-18 X 1 in Carriage
11	2	112051	POP RIVET, 1/8 X .275
12	1	302121	LINER, SWEEPER HOPPER
13	1	302131	LATCH, SPRING
14	1	305065	ASSY, SHIELD, HOPPER
15	4	311691	SIGHT GLASS, HOPPER
16	4	311692	Backing Plate, Sight Glass
17	1	311729	HINGE, 6" ALUMINUM W/HOLES
18	1	315414	WELDMENT, HOPPER, US
19	2	317212	SCREEN, OUTER RETURN AIR
20	2	317213	SCREEN, INNER RETURN AIR
21	1	317214	SCREEN, RH RETURN AIR
22	1	317215	SCREEN, LH RETURN AIR
23	2	317245	RETAINER, LINER
24	1	317350	DEFLECTOR, RH HOPPER
25	1	317351	DEFLECTOR, LH HOPPER
26	1	317413	DOOR, HOPPER DEBRIS, US
27	1	317414	BRKT, HOPPER DEBRIS DOOR, US

SIMILAR TO 305074

HOPPER ASSEMBLY

Parts List

ITEM	QTY	PART #	DESCRIPTION
2	2' 8"	102075	SEAL
3	27	110020	Bolt, 5/16-18 X 0.75 in Carriage
4	6	110119	NUT, 10-24 LOCK
13	1	302131	LATCH, SPRING
15	4	311691	SIGHT GLASS, HOPPER
16	4	311692	Backing Plate, Sight Glass
17	1	311729	HINGE, 6" ALUMINUM W/ HOLES
26	1	317413	DOOR, HOPPER DEBRIS, US
27	1	317414	BRKT, HOPPER DEBRIS DOOR, US
11	2	112051	POP RIVET, 1/8 X 275
24	1	3117350	DEFLECTOR, RH HOPPER
25	1	3117351	DEFLECTOR, LH HOPPER
1	3' 2"	102004	D-Seal, Rubber 1.00" x 1.00"



WINDOW AND DOOR INSTALL

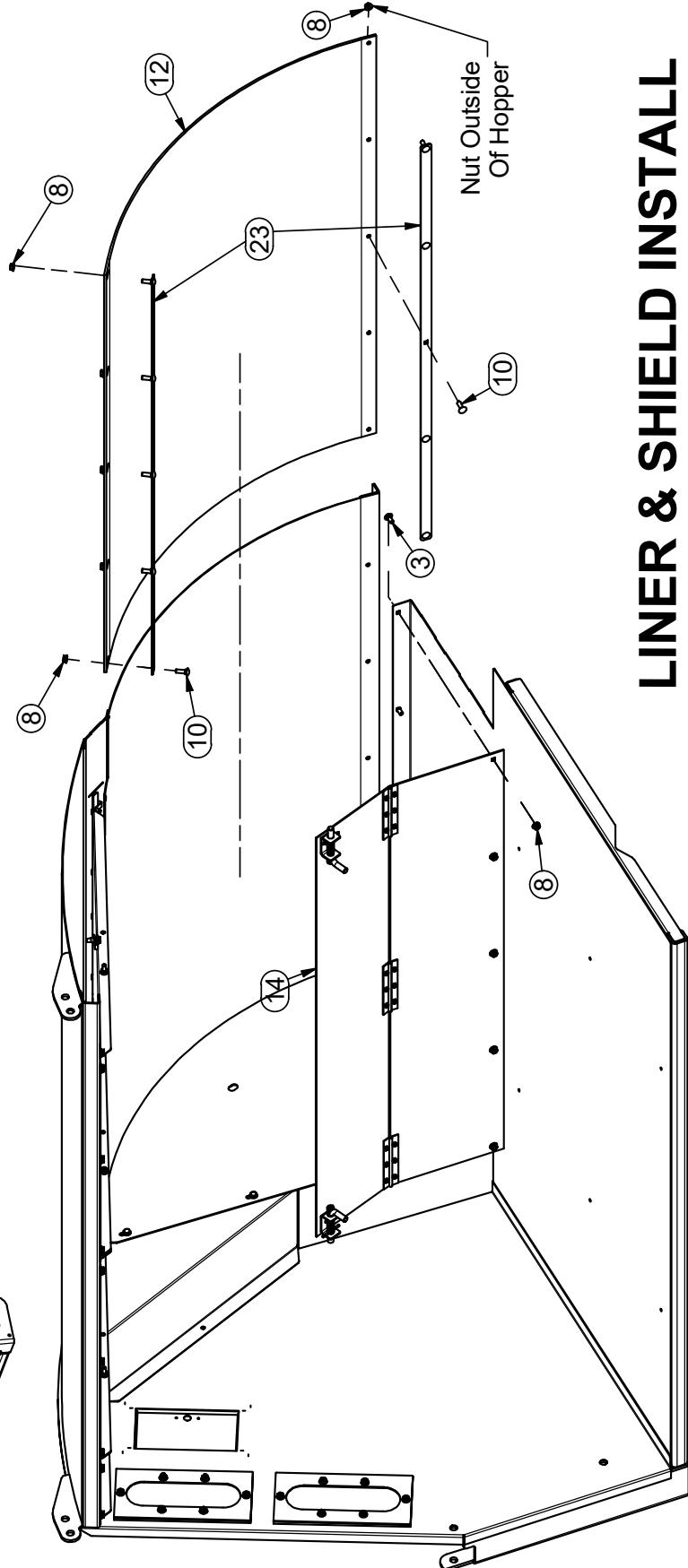
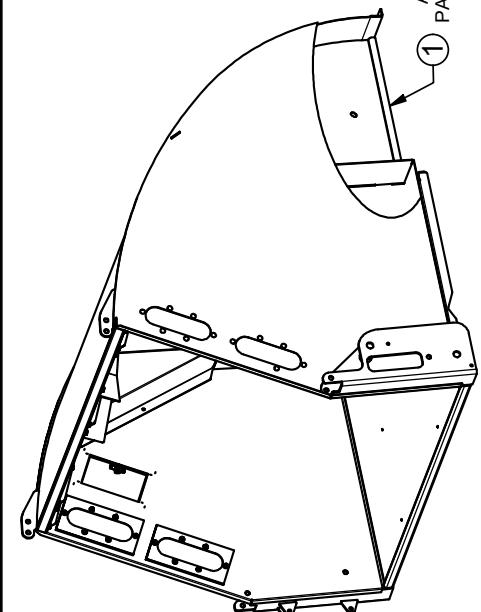
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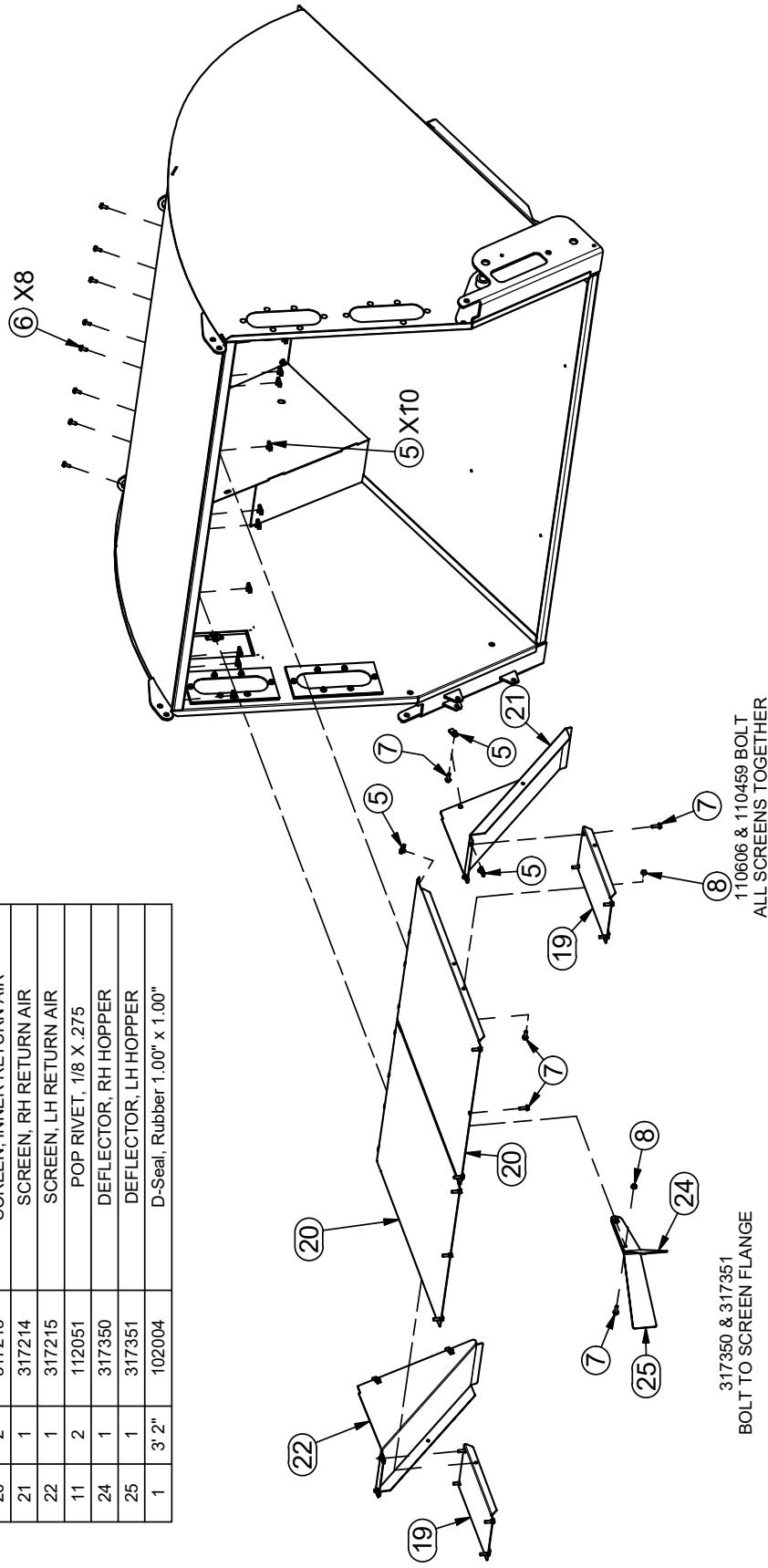
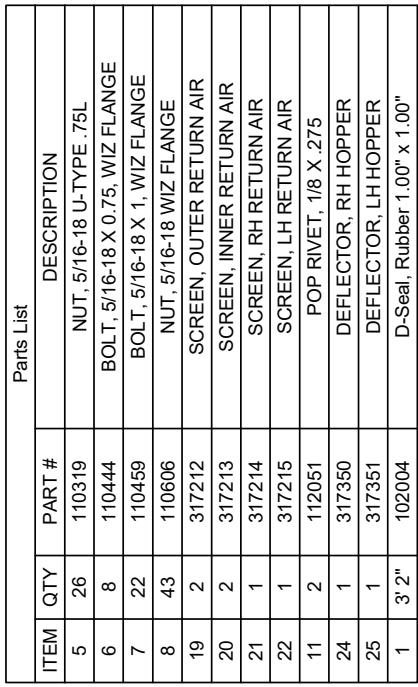
305116

REV. NC

Parts List

ITEM	QTY	PART #	DESCRIPTION
1	3' 2"	102004	D-Seal, Rubber 1.00" x 1.00"
3	27	110020	Bolt, 5/16-18 X 0.75 in Carriage
8	43	110606	NUT, 5/16-18 WIZ FLANGE
10	12	110871	Bolt, 5/16-18 X 1 in Carriage
11	2	112051	POP RIVET, 1/8 X .275
12	1	302121	LINER, SWEEPER HOPPER
14	1	305065	ASSY, SHIELD, HOPPER
23	2	317245	RETAINER, LINER
24	1	3117350	DEFLECTOR, RH HOPPER
25	1	3117351	DEFLECTOR, LH HOPPER

**LINER & SHIELD INSTALL**



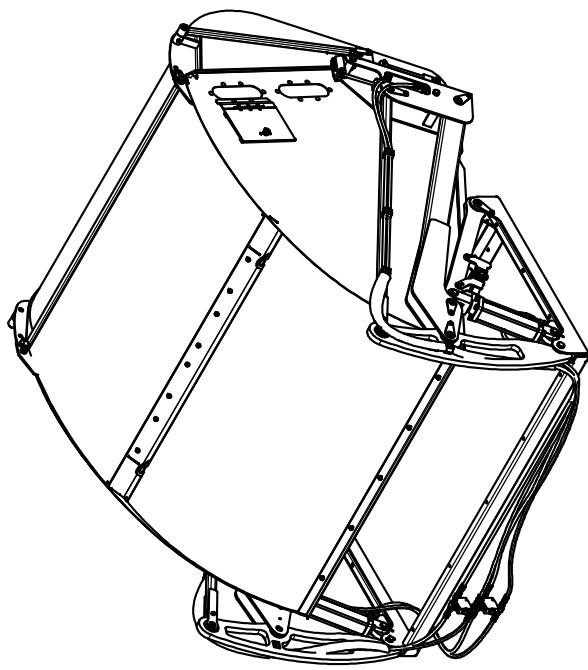
SCREEN ASSEMBLY AND INSTALLATION

3-18-2021

305117

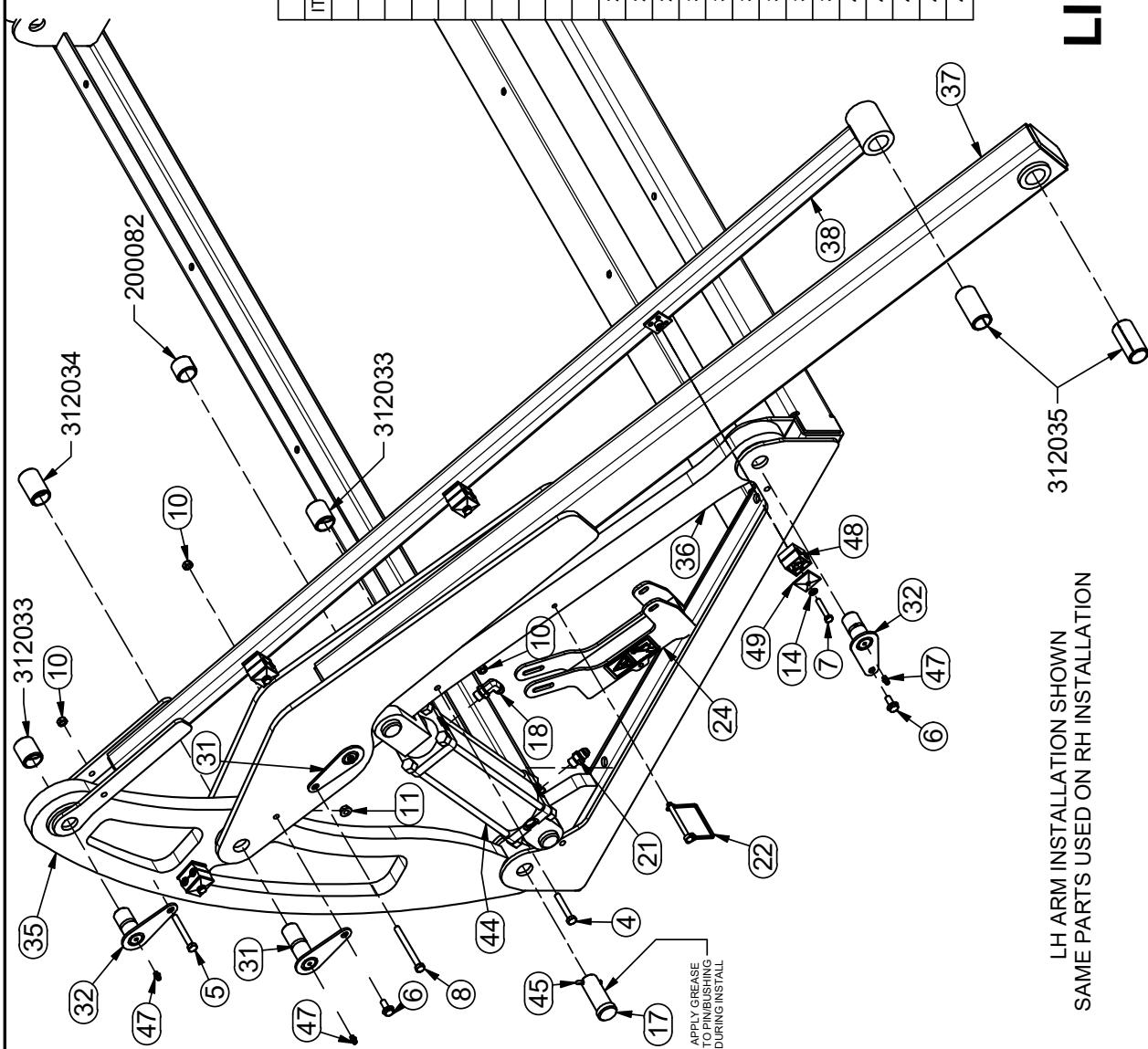
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Parts List				Parts List			
ITEM	Q'TY	PART #	DESCRIPTION	ITEM	Q'TY	PART #	DESCRIPTION
1	8.75'	100354	WEBBING, NYLON 1.50ID, SHEATH	37	2	315412	WELDMENT, LOWER LIFT LINK, US
2	2	102137	CLEVIS PIN, 1/2 X 1.75	38	2	315413	WELDMENT, UPPER LIFT LINK, US
3	4	110025	BOLT, 5/16-11 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, UNI TORQUE 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, UNI TORQUE 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, REST6MJ-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	305116	ASSY, HOPPER, US				
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, VERTICAL LIFT LINK, US				SIMILAR TO 305075
35	2	315410	WELDMENT, CYLINDER LIFT LINK, US				
36	2	315411	WELDMENT, CYLINDER LIFT LINK, US				



HOPPER INSTALLATION

3-18-2021



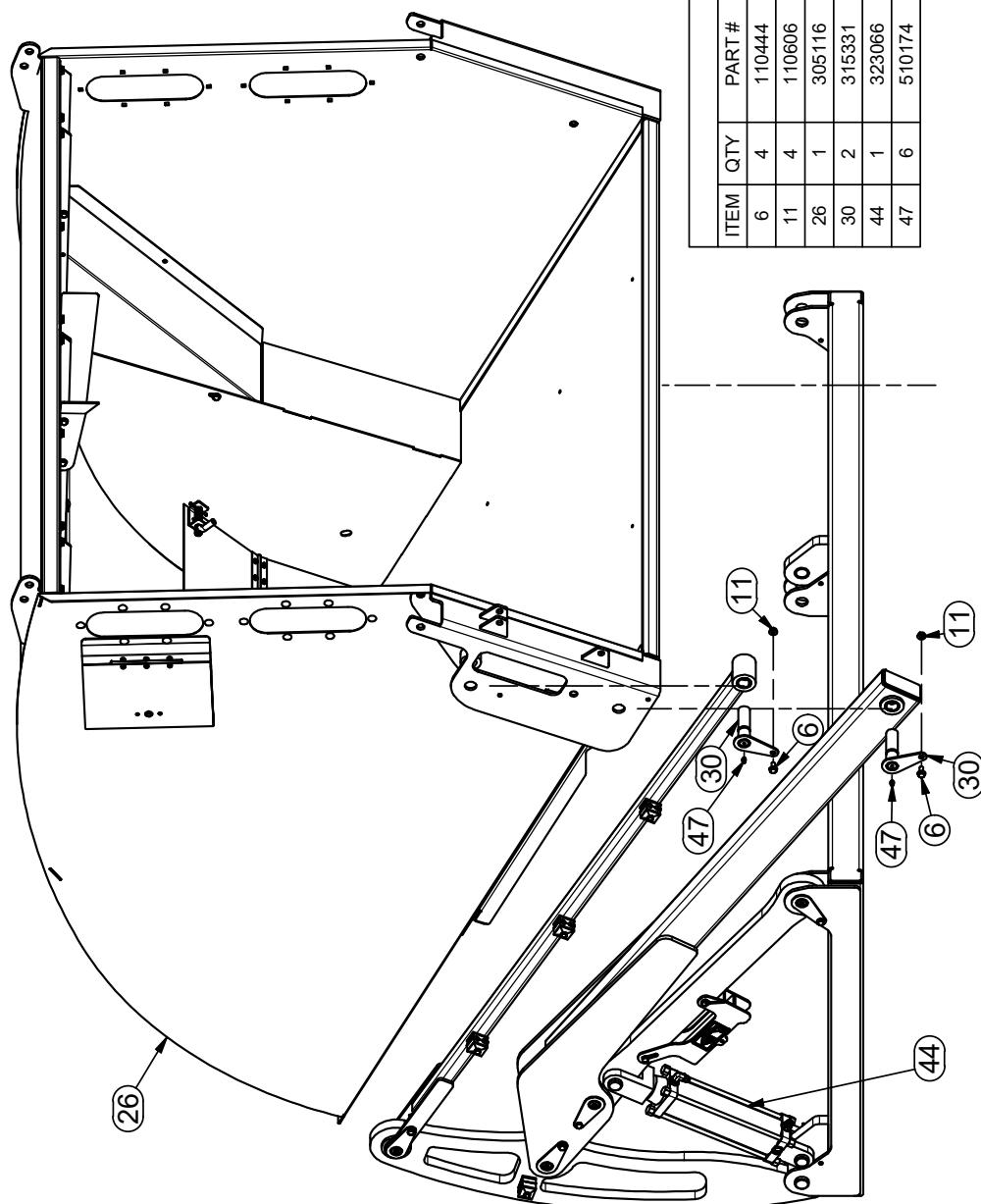
LH ARM INSTALLATION SHOWN
SAME PARTS USED ON RH INSTALLATION

3-18-2021

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	Q'TY	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, UNIT TORQUE 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

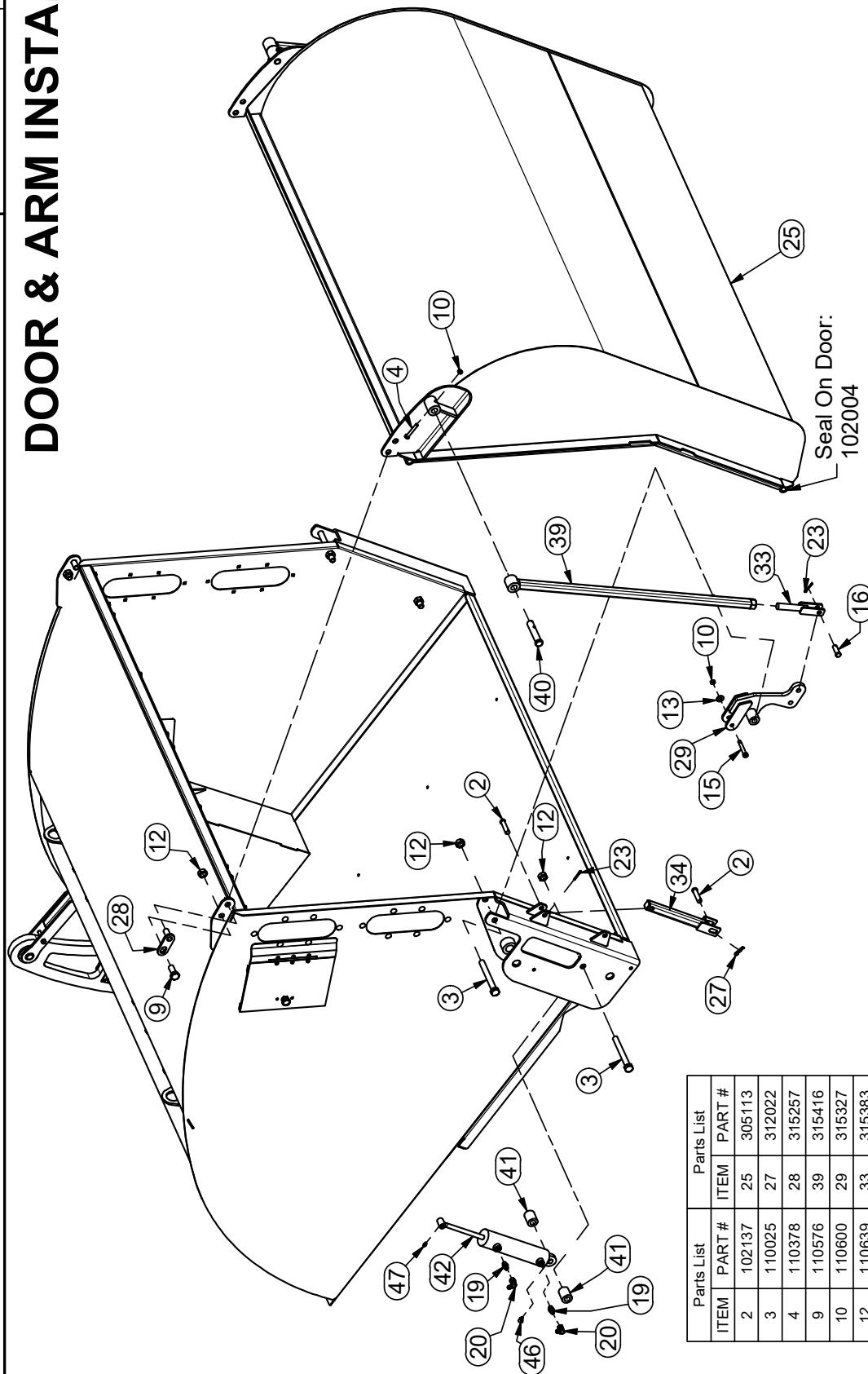


Parts List			
ITEM	QTY	PART #	DESCRIPTION
6	4	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
11	4	110606	NUT, 5/16-18 WIZ FLANGE
26	1	305116	ASSY, HOPPER, US
30	2	315331	WELDMENT, HOPPER LIFT - 4.00"
44	1	323066	Cylinder, 2.5 X 8, -6 SAE, Hopper
47	6	510174	GREASE ZERK, 1/4-28 ST

LH INSTALLATION SHOWN
SAME PARTS USED ON RH INSTALLATION

HOPPER INSTALL

DOOR & ARM INSTALL

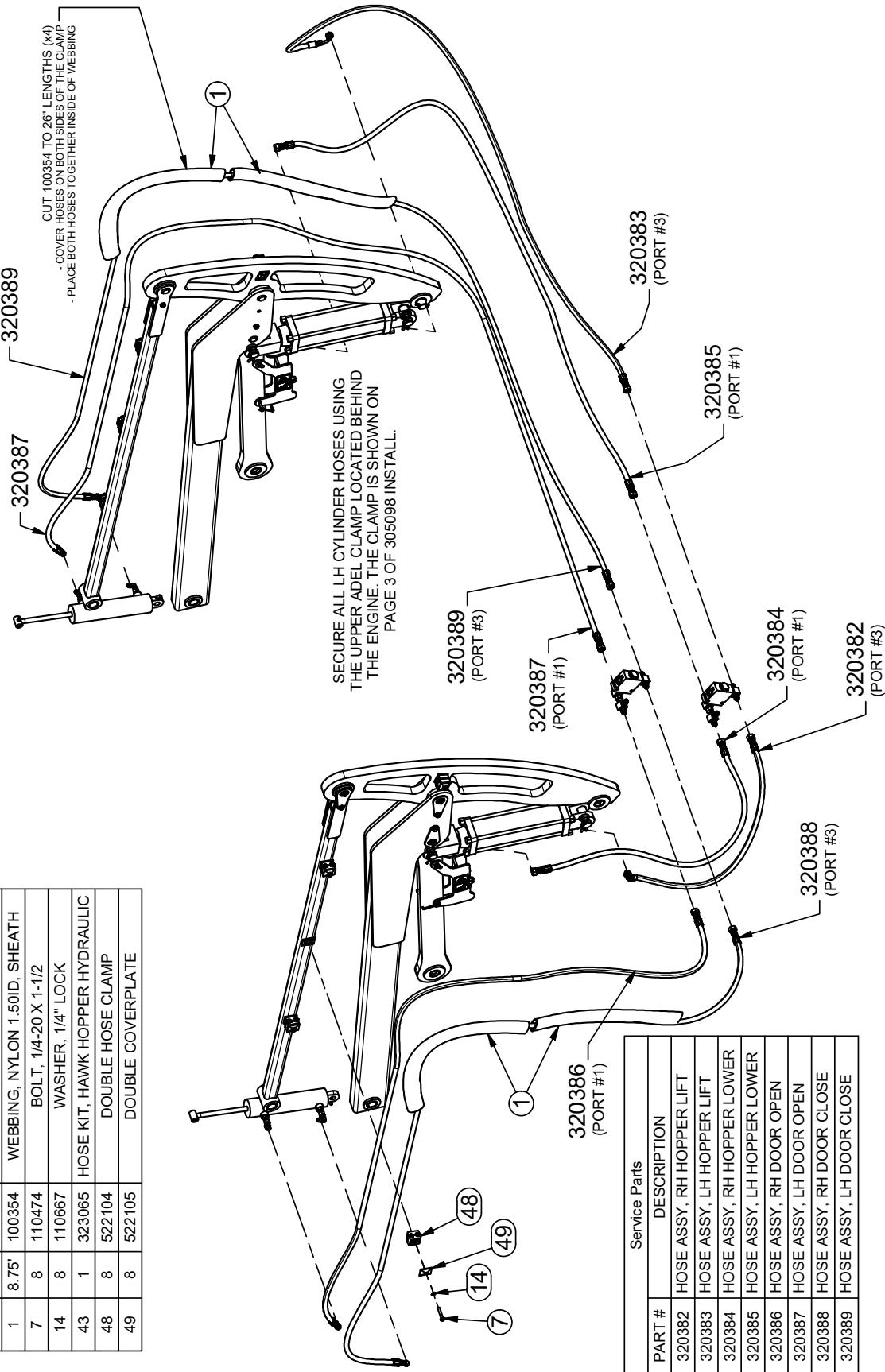


1. INITIALLY SET THE HOPPER DOOR LIFT LINK TO 36.5" (CTR TO CTR)
2. ADJUST AS NEEDED TO COMPRESS THE DOOR SEAL TO 0.5" AT THE BOTTOM OF THE DOOR

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

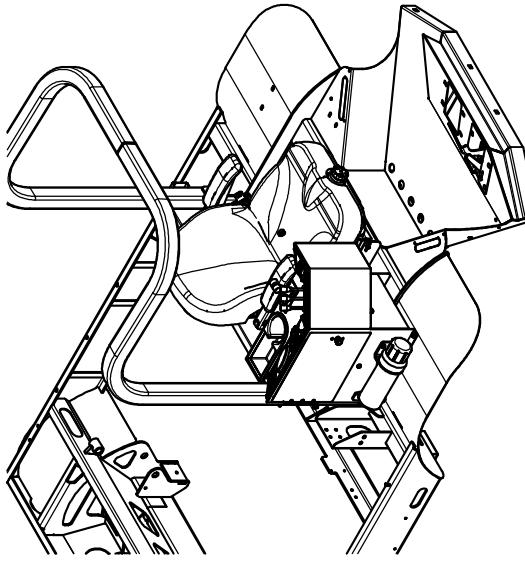
HOPPER CYLINDER PLUMBING

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	110687	WASHER, 1/4" LOCK
43	1	323065	HOSE KIT, HAWK HOPPER HYDRAULIC
48	8	522104	DOUBLE HOSE CLAMP
49	8	522105	DOUBLE COVERPLATE



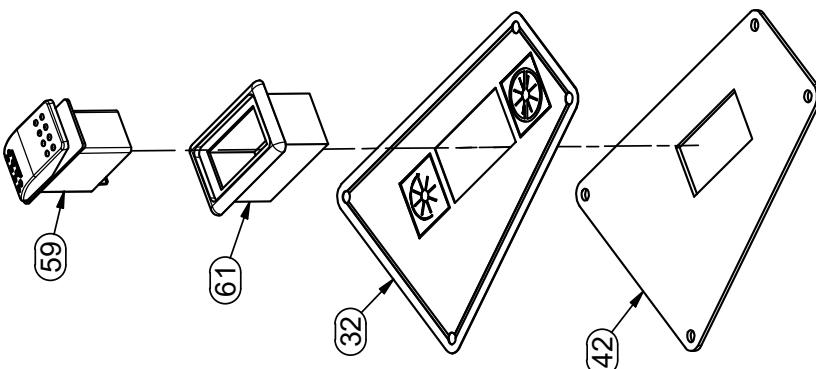
Parts List						Parts List						Parts List					
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION						
1	4'	100613	SEAL, RUBBER .50 X 187	37	1	305064	Assy, Console Panel, ISO	52	1	332063	HARNESS, INSTRUMENT PANEL						
2	2.5'	102072	TAPE, DOUBLE-SIDED AUTO, 1/2"x.045	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	110468	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, UNTORQUE 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	832088	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 TONE						
14	2	110632	NUT, 1/4-28, UNTORQUE LOCK	50	1	332059	DISPLAY, MACHINE										
15	3	110645	NUT, 3/8-16 WIZ FLANGE	51	1	332060	HARNESS, MASTER										
16	6	110788	BOLT, 10-24 X .375 STAINLESS, PHILLIPS														
17	10	110834	SCREW, 10-24 X 3/4 SS PAN HEAD														
18	17	110835	NUT, 10-24 RIVET ALUMINUM														
19	2	110971	BOLT, 5/16-18 X .50 SHCS														
20	2	112051	POP RIVET, 1/8 X .275														
21	2	112119	ROLL PIN, 5/32 X 2 ZP														
22	2	112126	SPRING, COMP 3.0L X 0.6 OD X 045														
23	1	152004	HOLDER, MANUAL														
24	1	200020	CLAMP, ADEL AC22, 265 HOLE														
25	1	302015	HOLDER - CUP, MOLDED														
26	3	302017	CLEVIS - THROTTLE														
27	1	302078	SEAT, 13M SUSPENSION														
28	1	302124	CABLE, THROTTLE 60"														
29	1	302131	LATCH, SPRING														
30	1	302132	DECAL, MAIN CONSOLE														
31	1	302133	Decal, Hydraulics Panel														
32	1	302134	DECAL, BROOM PANEL														
33	1	302135	Decal, Throttle Panel														
34	1	302164	CABLE, PUSH/PULL 60"														
35	1	305061	Assy, Forward Foot Pedal														
36	1	305062	Assy, Reverse Foot Pedal														

OPERATOR STATION & ELECTRICAL ASSEMBLY



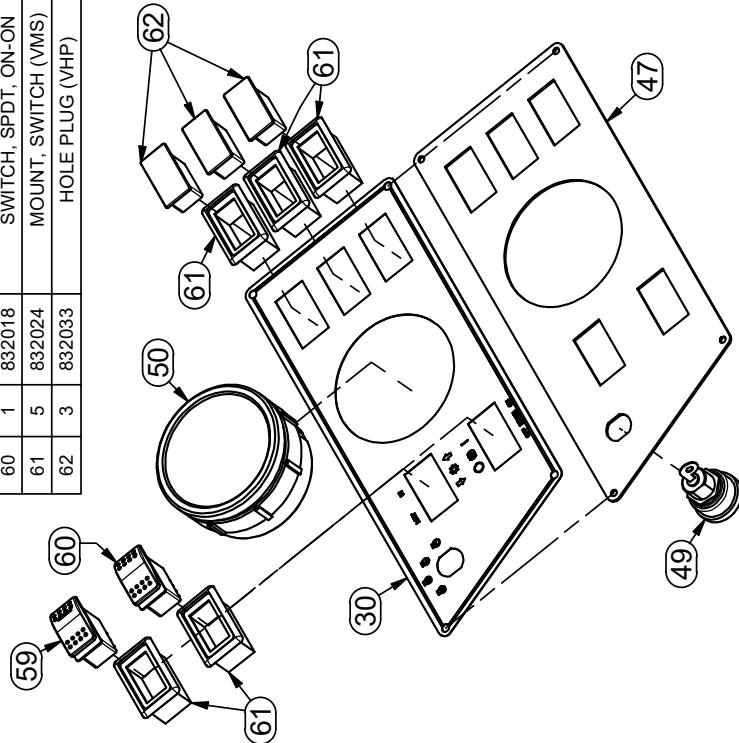
DECK SWITCH PANEL ASSEMBLY

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)

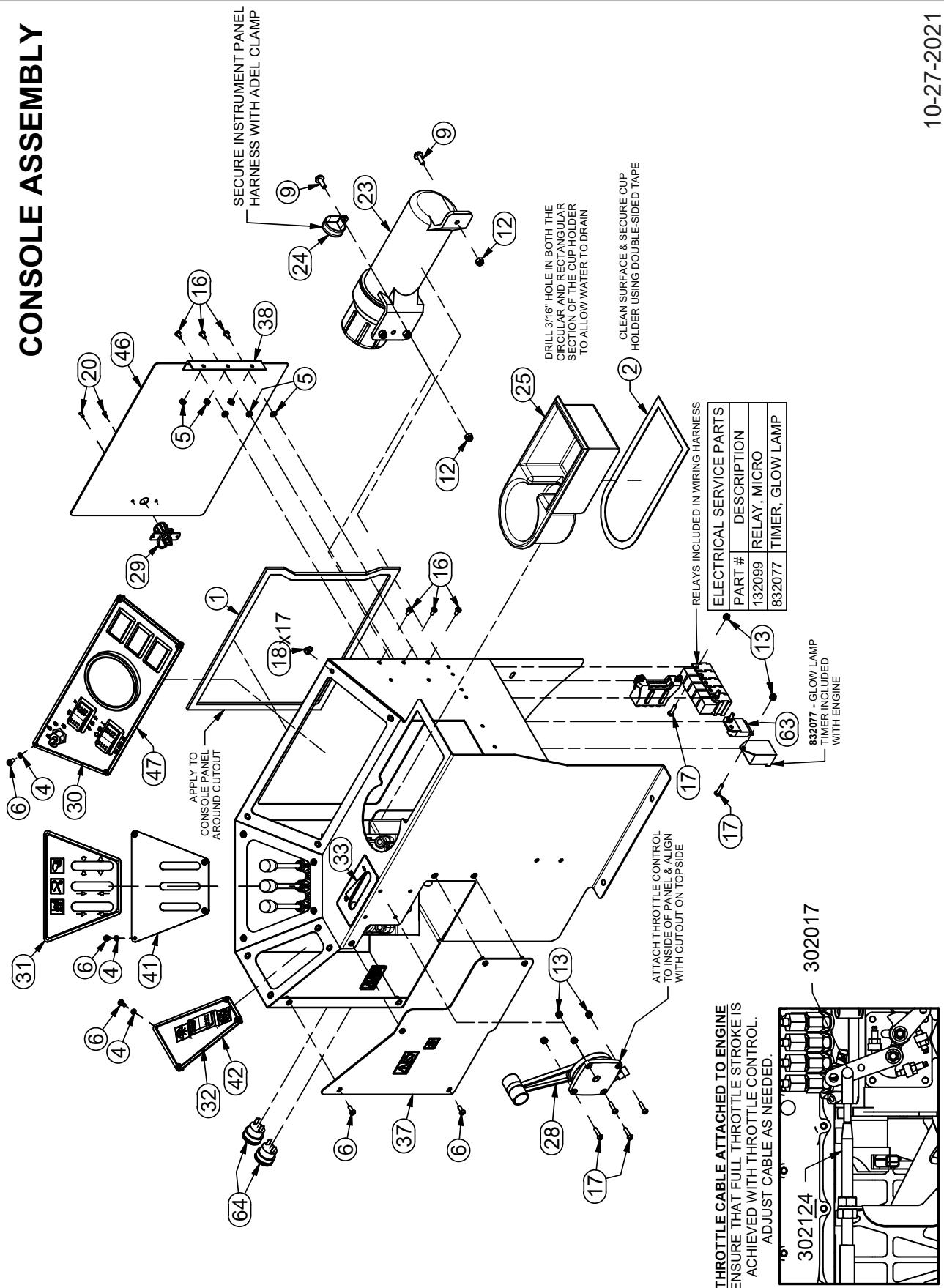


INSTRUMENT PANEL ASSEMBLY

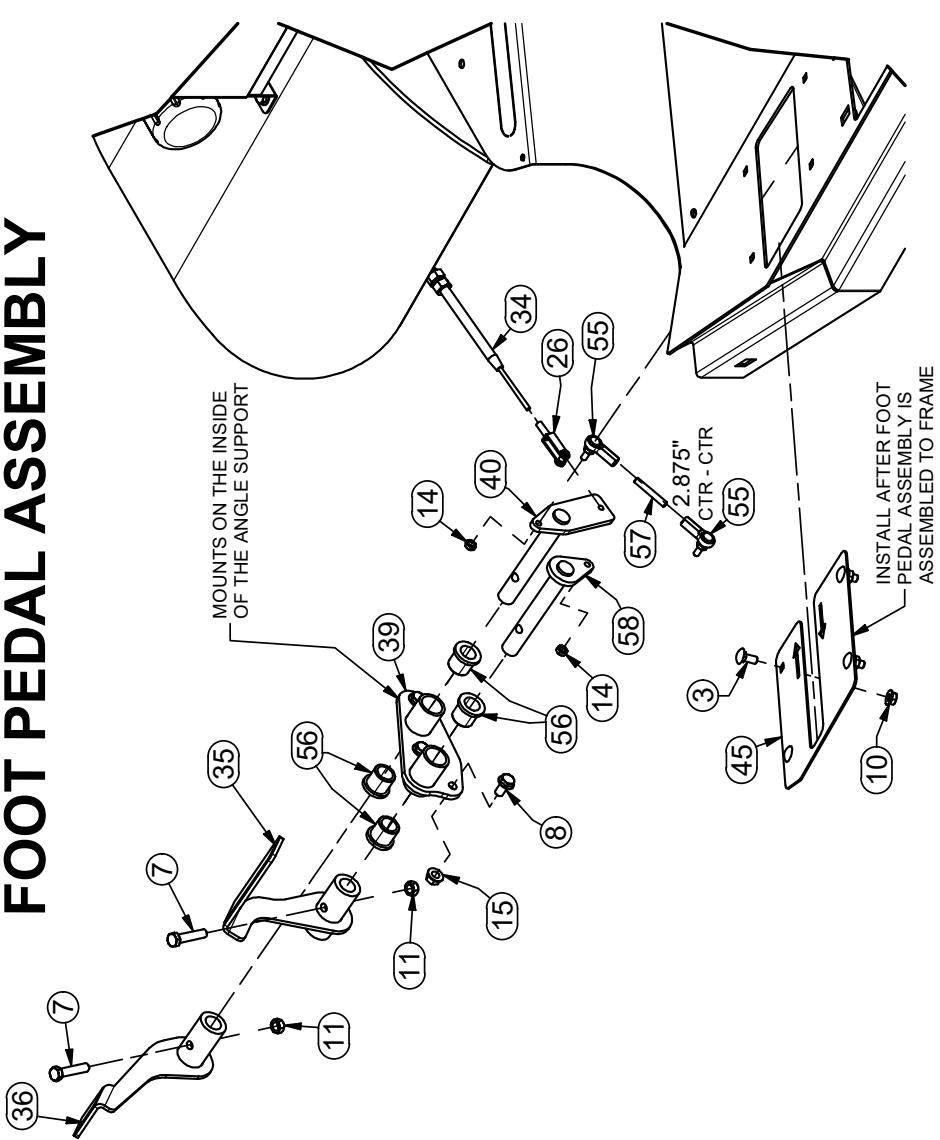
Parts List		
ITEM	QTY	PART #
DESCRIPTION		
30	1	302132
		DECAL, MAIN CONSOLE
47	1	317195
		PANEL, GAUGE & SWITCH
49	1	332031
		SWITCH, IGNITION
50	1	332059
		DISPLAY, MACHINE
59	1	832005
		SWITCH, PADDLE, CARLING (29253)
60	1	832018
		SWITCH, SPDT, ON-ON
61	5	832024
		MOUNT, SWITCH (VMS)
62	3	832033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



CONSOLE ASSEMBLY

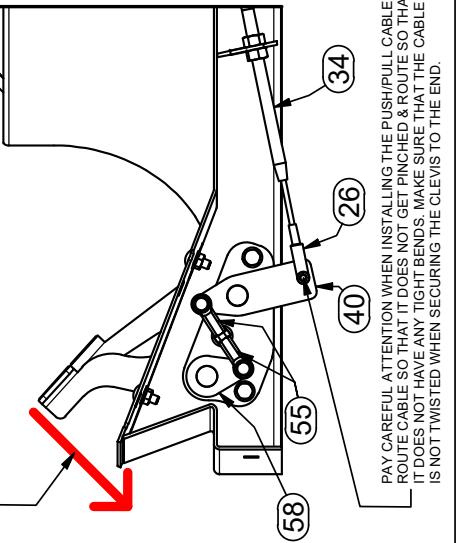


FOOT PEDAL ASSEMBLY

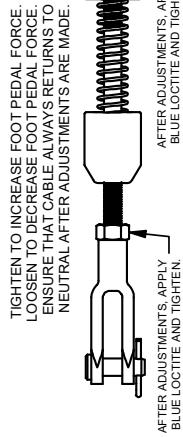


FOOT PEDAL ASSEMBLY SIDE VIEW

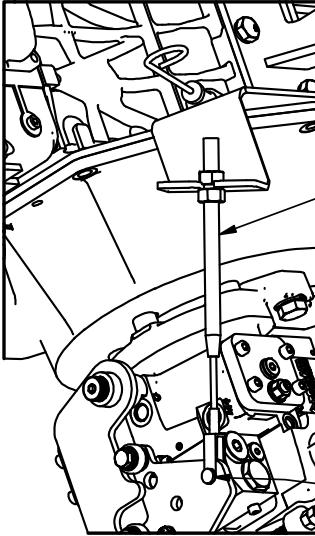
MEASURE FORWARD FOOT PEDAL FORCE USING A FISH SCALE OR SPRING SCALE. ENSURE THAT THE FORCE IS BETWEEN 20 - 25 LBS WHEN MACHINE IS OFF. SEE INSTRUCTIONS BELOW FOR ADJUSTING THE NEUTRAL SPRING.



NEUTRAL RETURN SPRING ON PUMP



PEDAL CABLE TO PROPULSION PUMP

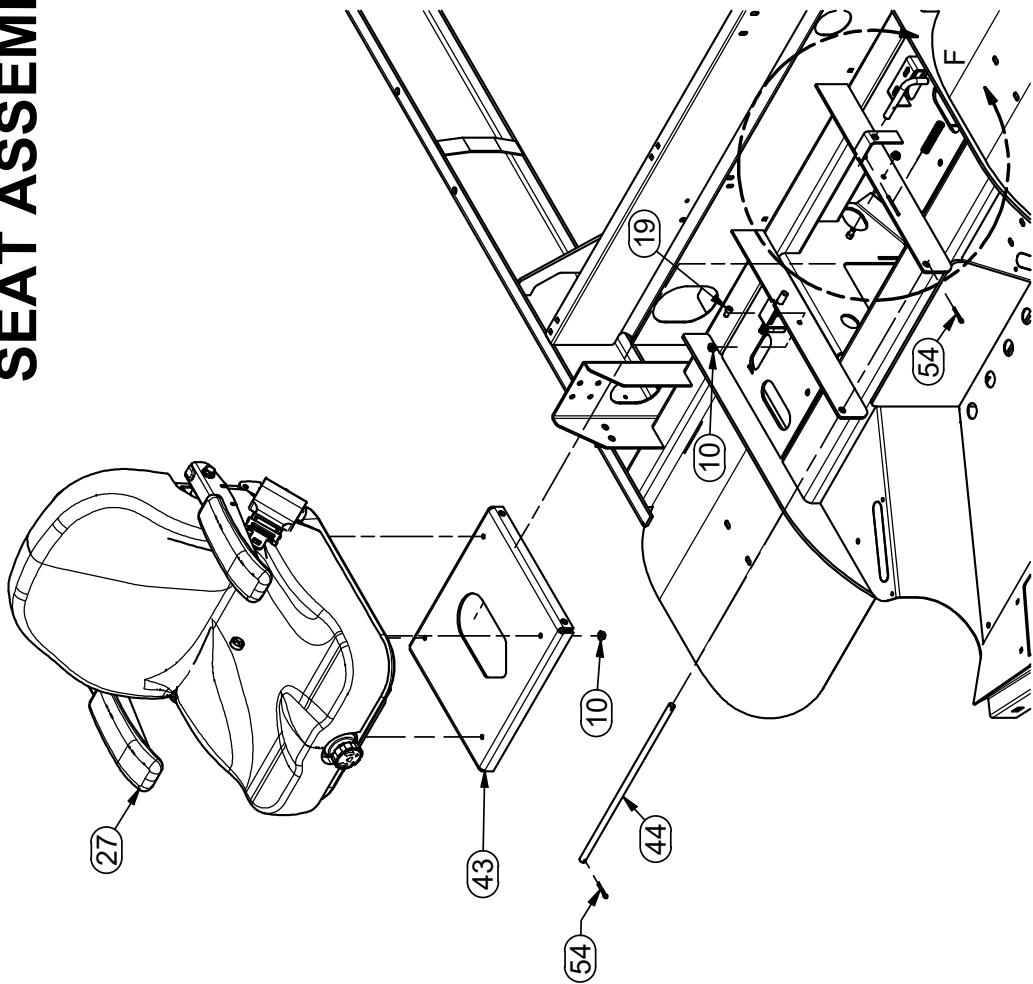


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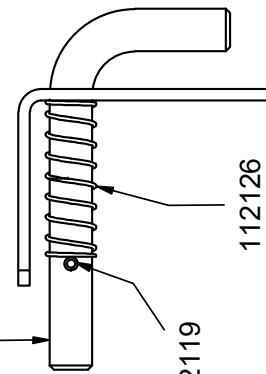
SEAT ASSEMBLY



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

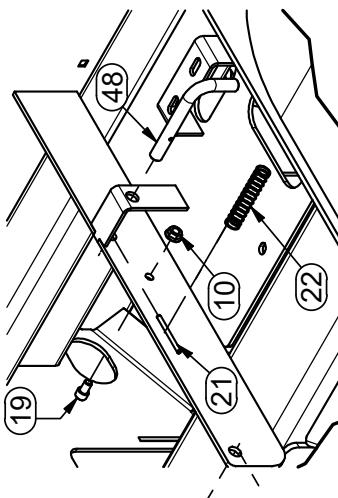
SEAT PIN SIDE VIEW

317249

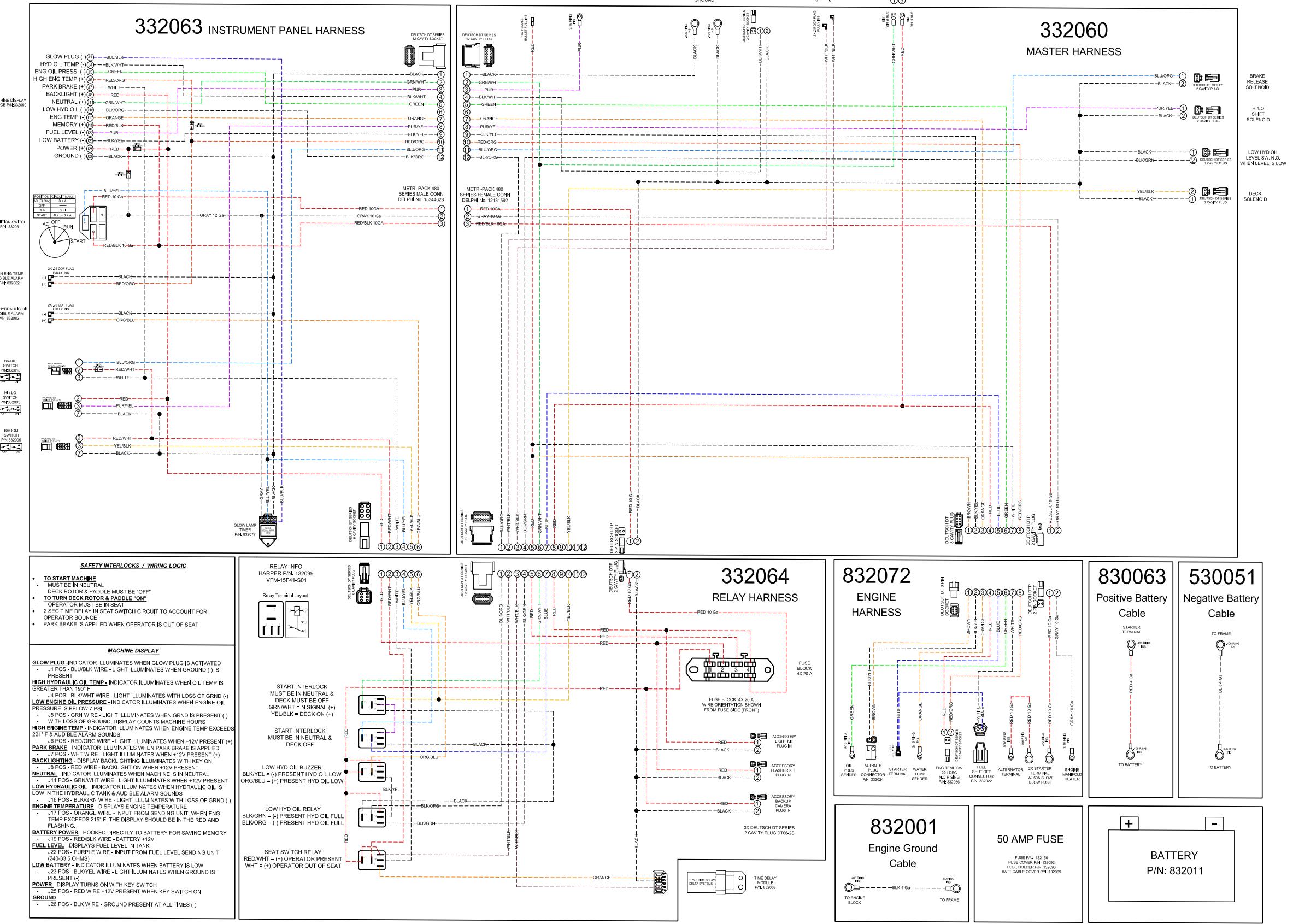


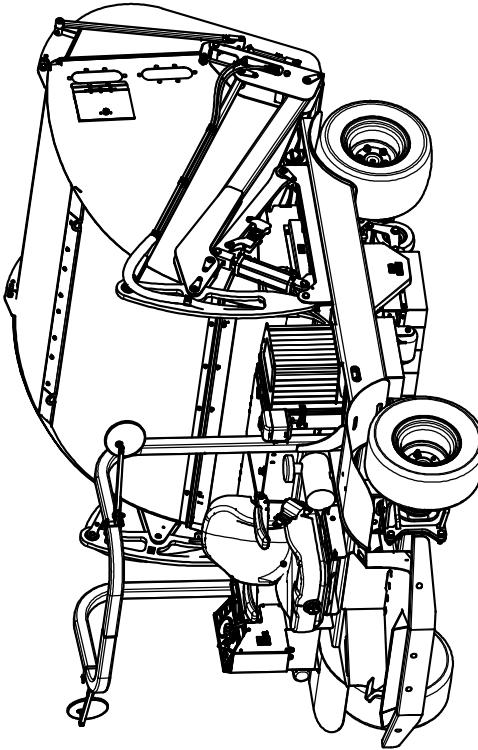
112119
112126

DETAIL F
SCALE 0.15 : 1

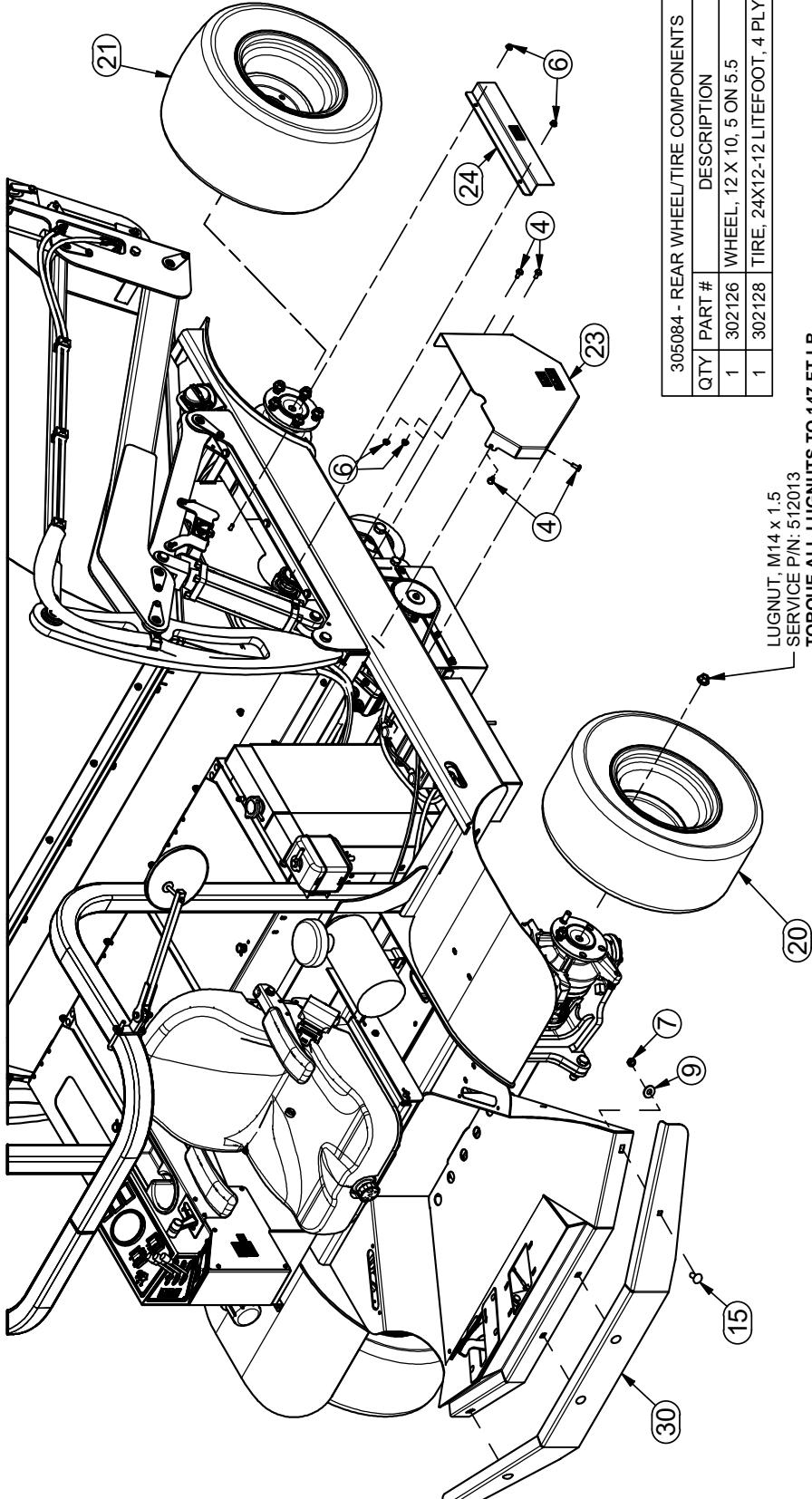


SWEEPER WIRING SCHEMATIC DIAGRAM OVERVIEW





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, UNI TORQUE 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	FRICITION 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	WEILDMENT, SWINGING MIRROR
28	2	315391	WEILDMENT, MIRROR U BOLT MOUNT
29	2	317237	SHIELD, UPPER ENGINE
30	1	317244	BUMPER, FRONT



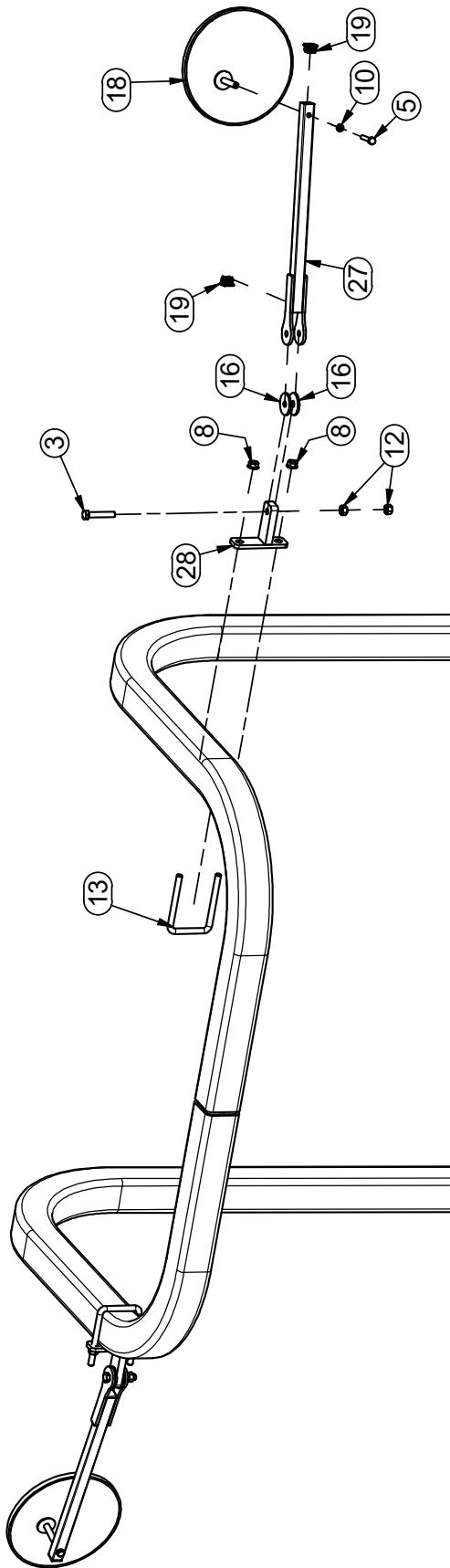
BUMPER, DECK SHIELDS, & WHEEL/TIRE ASSEMBLY

3-18-2021

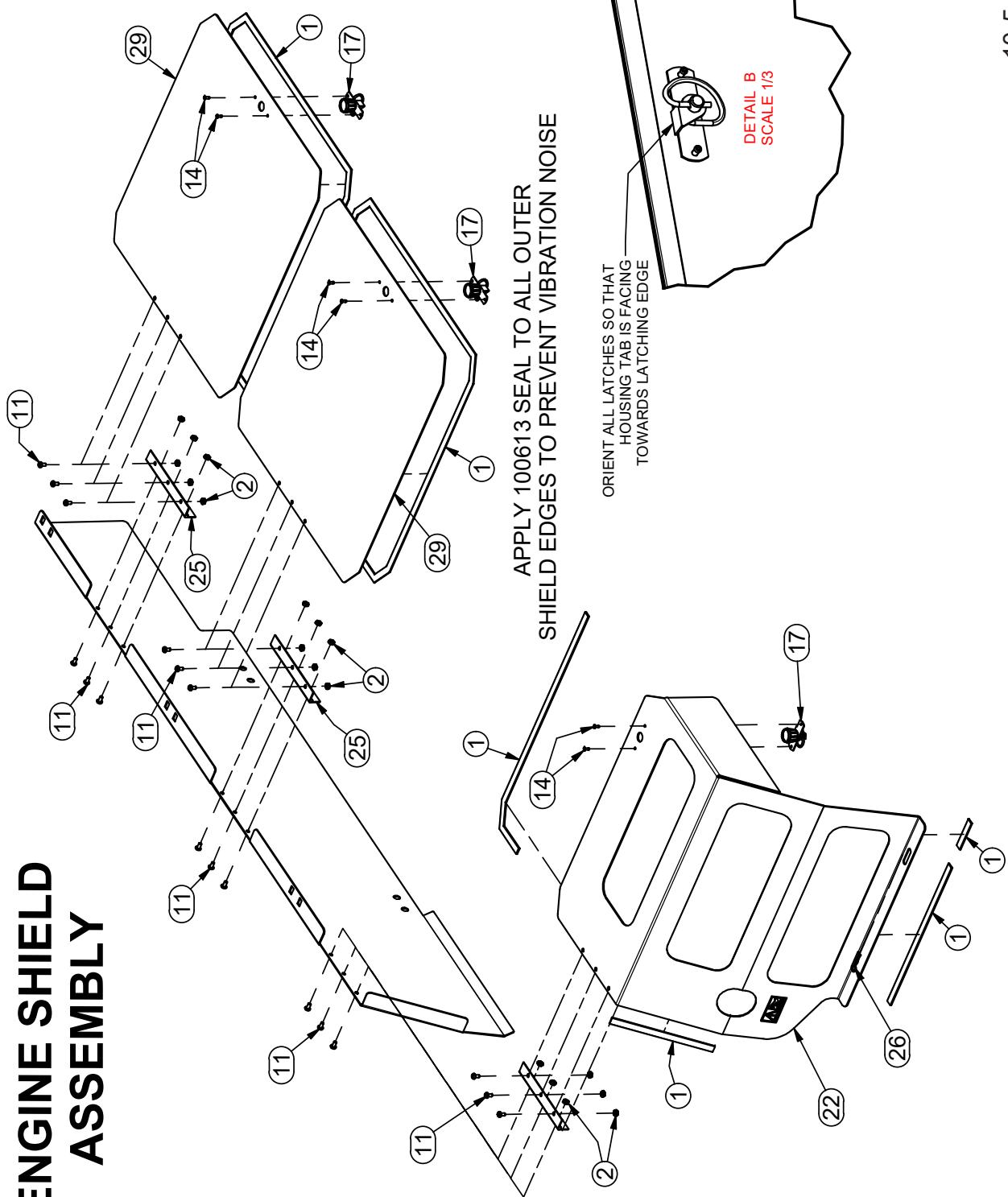
MIRROR ASSEMBLY

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 WIZ 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	FRICITION 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 UBLT MOUNT

SAME PARTS USED ON OPPOSITE SIDE

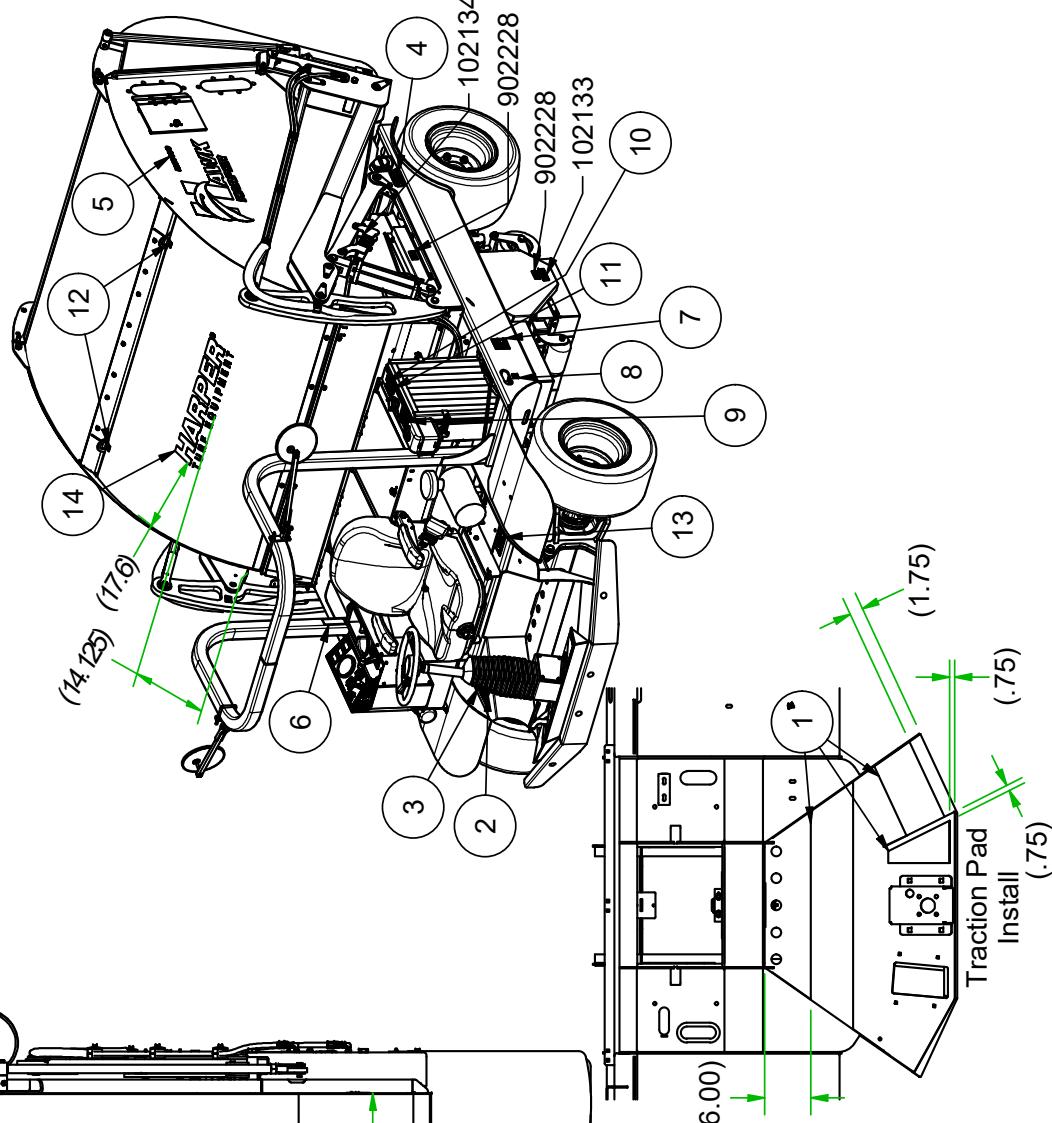
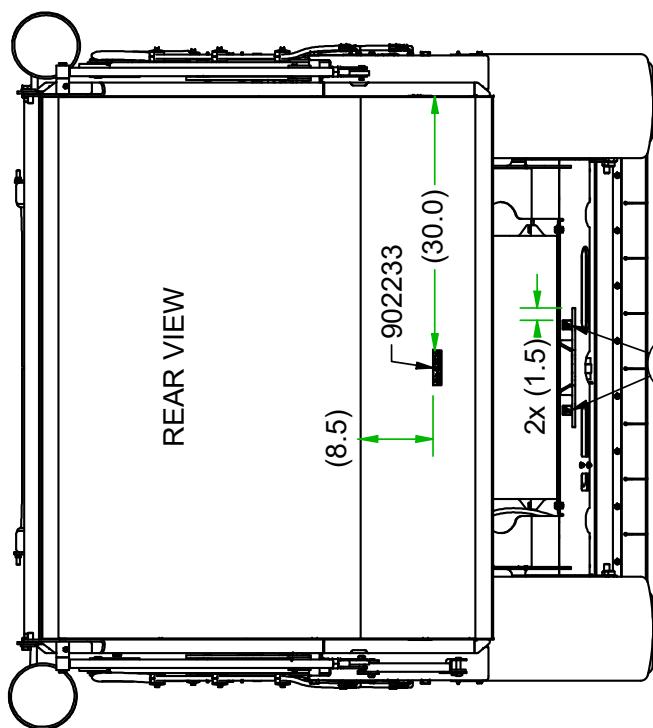


ENGINE SHIELD ASSEMBLY



HK4400

HARPER®
TURF EQUIPMENT



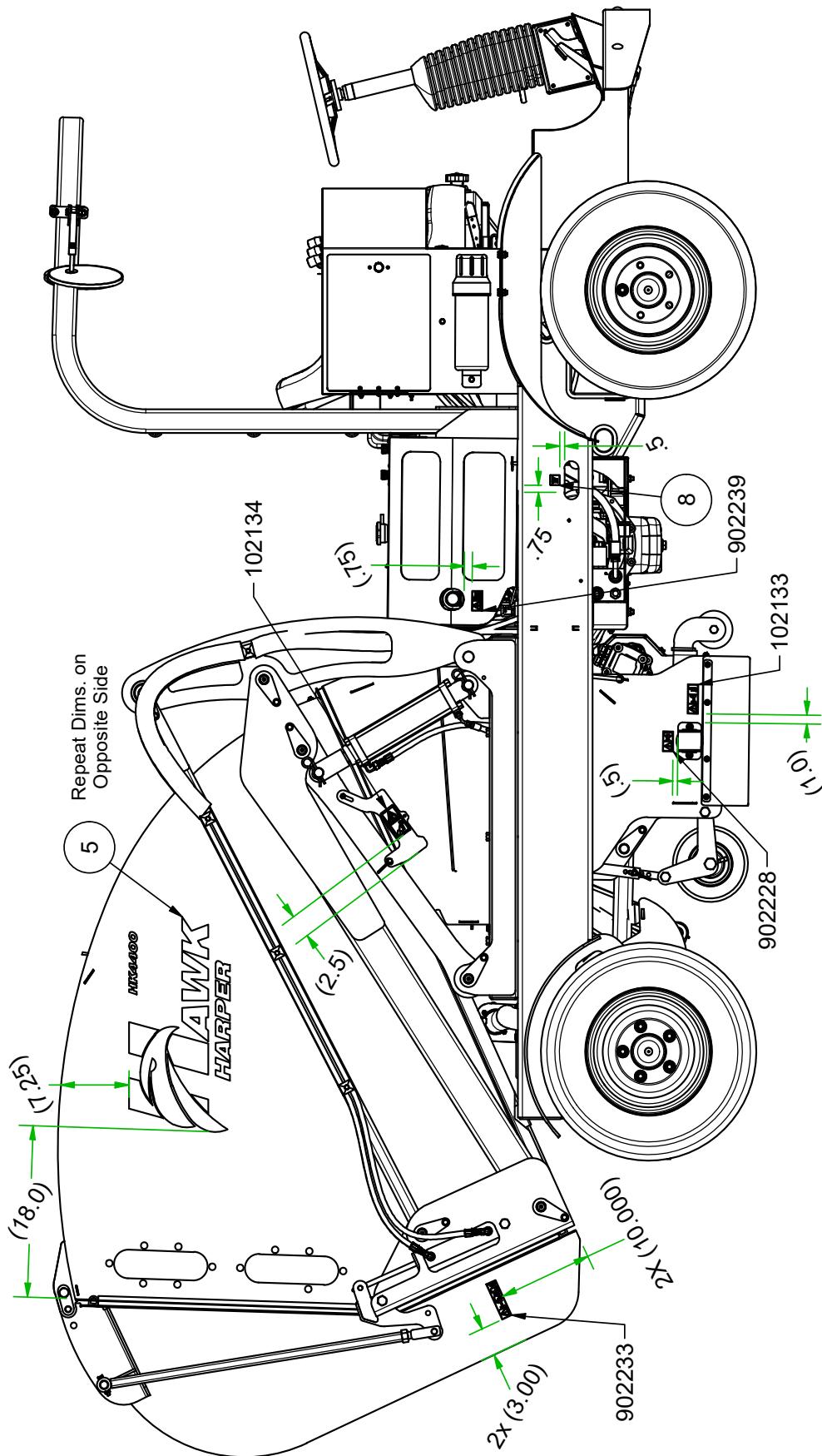
Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	46"	100373	Traction Pad, Flex-tread, 5.5
2	1	202133	Decal, Prop 65, Diesel
3	1	202134	Decal, Prop 65, Short Form
4	1	302106	DECAL, DIESEL FUEL
5	2	302136	Decal, Hawk
6	1	302150	Decal, HK Rops Certification
7	1	800195	DECAL, RECYCLE BATTERY
8	4	802067	Decal, Tie Down Point
9	1	902186	DECAL, EPA STANDARDS
10	1	902231	Decal, Hot Surface, Oil Cooler
11	1	902232	Decal, High Pressure Injection
12	2	902234	Decal, No Lift
13	1	902240	Plate, Serial Number, Harper Turf, Blue
14	1	902242	Decal, Harper Turf Equipment, 30"

DECAL INSTALLATION

7-23-2020

305093

REV: A

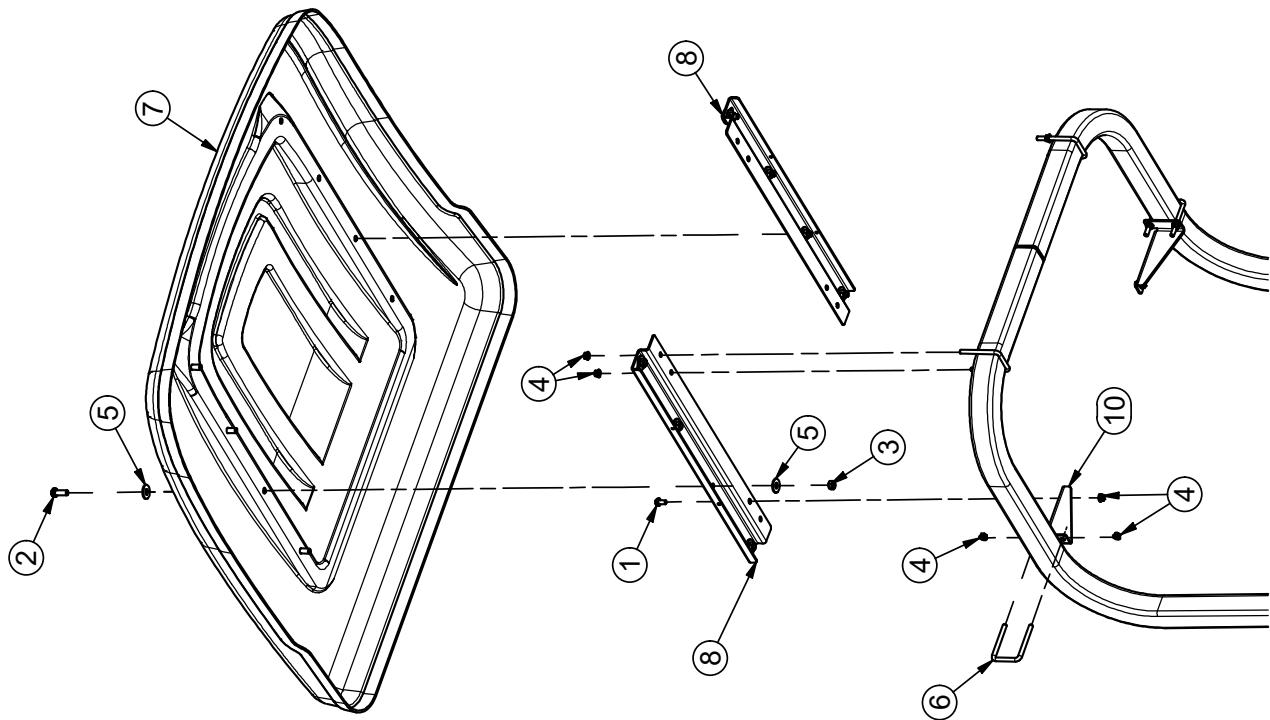


NOTE: ALL DIMENSIONS FOR REFERENCE, PLACE AS CLOSE TO AS SHOWN AND FOR FULL VISIBILITY

CANOPY

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

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	2	110437	BOLT, 3/8-16 X 0.75, WIZ FLANGE
2	8	110442	BOLT, 1/2-13 X 1.25
3	8	110615	NUT, 1/2-13, UNITORQUE LOCK
4	10	110645	NUT, 3/8-16 WIZ FLANGE
5	16	110658	WASHER, 1/2" FLAT STANDARD
6	4	111185	BOLT, SQUARE U, 3/8-16 X 2.50 X 4.0
7	1	302142	CANOPY, BLACK ABS PLASTIC
8	2	3117332	BRKT, CANOPY SUPPORT
9	1	3117333	BRKT, LH CANOPY MOUNT
10	1	3117334	BRKT, RH CANOPY MOUNT



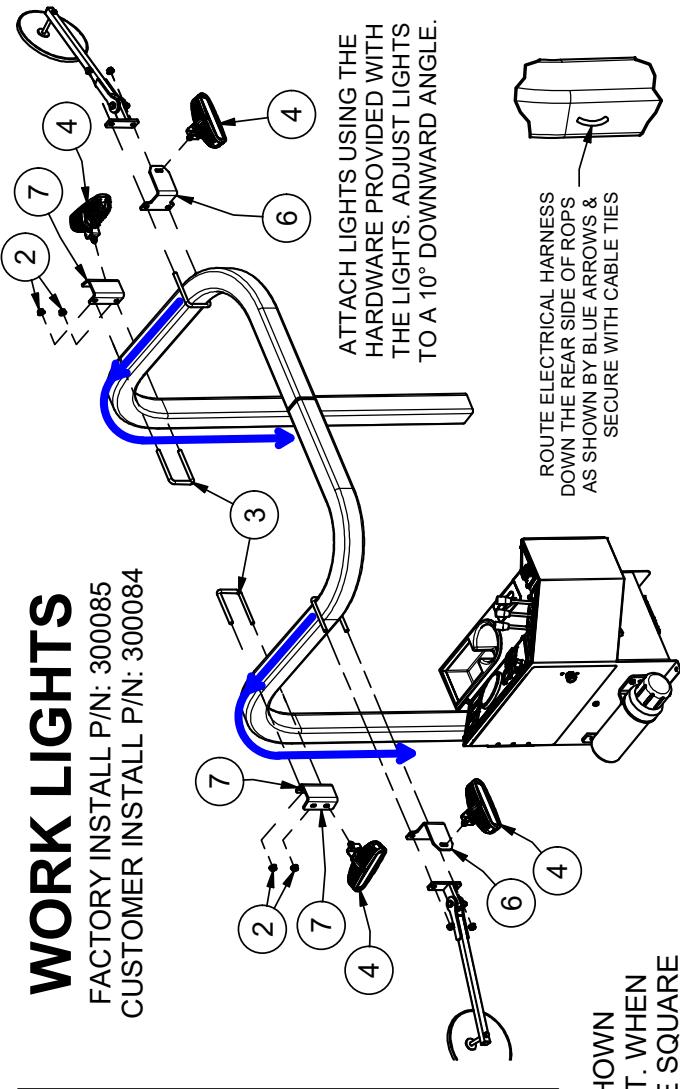
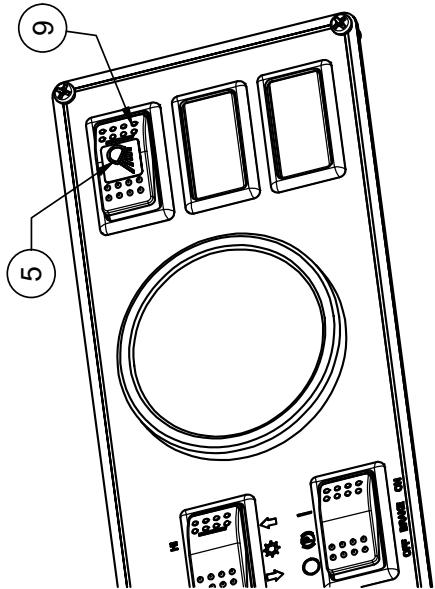
7-23-2020

HK4400

HARPER®
TURF EQUIPMENT

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.

ATTACH LIGHTS USING THE HARDWARE PROVIDED WITH THE LIGHTS. ADJUST LIGHTS TO A 10° DOWNWARD ANGLE.



ROUTE ELECTRICAL HARNESS DOWN THE REAR SIDE OF ROPS AS SHOWN BY BLUE ARROWS & SECURE WITH CABLE TIES

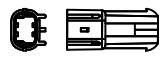
Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	12	100578	CABLE TIE 14" BLACK 50 Lb Tens
2	4	110645	NUT, 3/8-16 WIZ FLANGE
3	2	111185	BOLT, SQUARE U, 3/8-16 x 2.50 x 4.0
4	4	232139	Light, 5" Rectangle, Flood w/Connector
5	1	302158	DECAL, WORK LIGHT SWITCH
6	2	317395	BRKT, FRONT WORK LIGHT
7	2	317412	BRKT,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

SWEEPER WORK LIGHT WIRING SCHEMATIC

WORK LIGHT - 5" LED
FLOOD WITH CONNECTOR
P/N: 232139

WORK LIGHT - 5" LED
FLOOD WITH CONNECTOR
P/N: 232139

WORK LIGHT - 5" LED
FLOOD WITH CONNECTOR
P/N: 232139



WORK LIGHT - 5" LED
FLOOD WITH CONNECTOR
P/N: 232139

WORK LIGHT - 5" LED
FLOOD WITH CONNECTOR
P/N: 232139



ACCESSORY LIGHT
KIT PLUG IN LOCATED
ON MACHINE

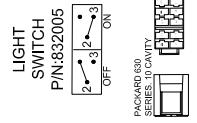


DEUTSCH DT SERIES

2 CAVITY SOCKET

(1) BLACK

(2) RED



P/N 1432005

OFF

ON

2

3

7

RED

RED/ORG

BLACK

INSTALLATION

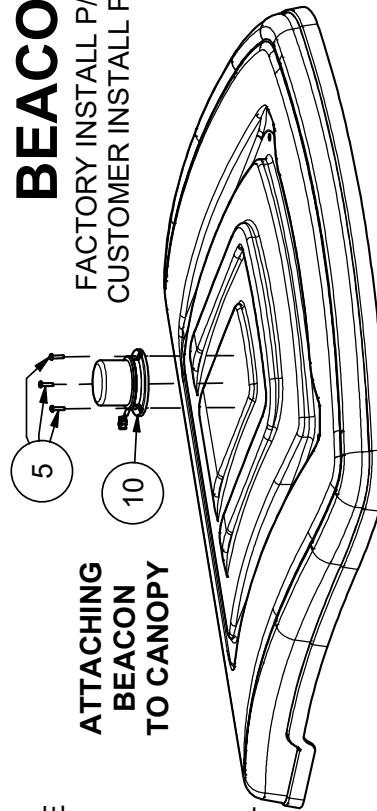
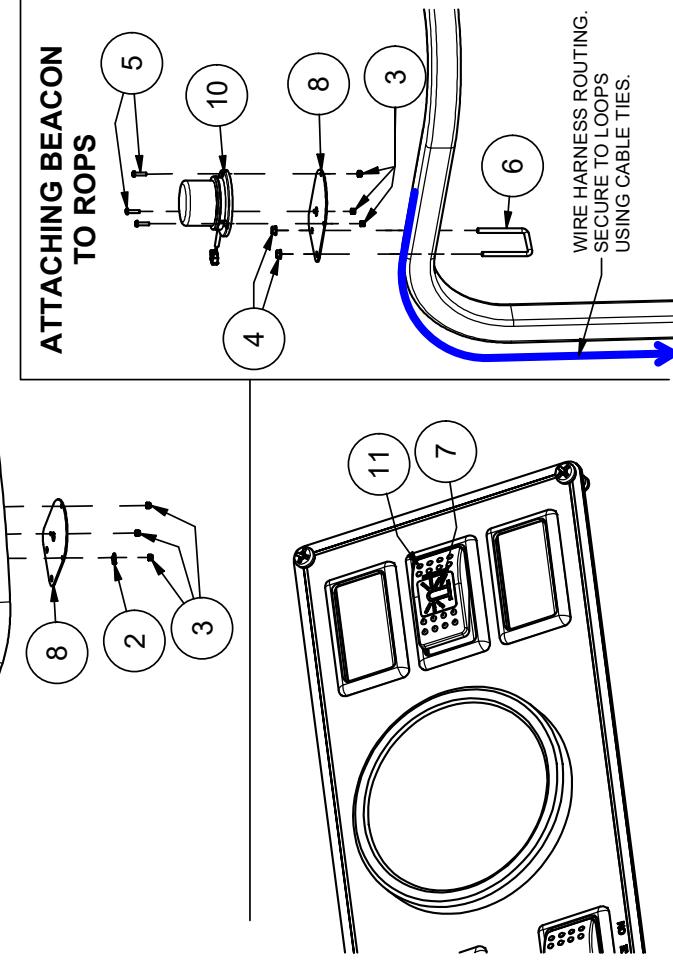
- FOR MOUNTING THE BEACON, USE THE HARDWARE INCLUDED IN THIS KIT (NOT THE HARDWARE INCLUDED WITH THE BEACON)
- IF THE CANOPY OPTION IS INSTALLED, THEN MOUNT THE BEACON TO THE TOP OF THE CANOPY AS SHOWN IN THE EXPLODED VIEW. POSITION THE BEACON IN THE CENTER OF THE CANOPY & THEN DRILL 3 - 9/32" HOLES 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.

ATTACHING BEACON TO CANOPY**ATTACHING BEACON TO ROPS**

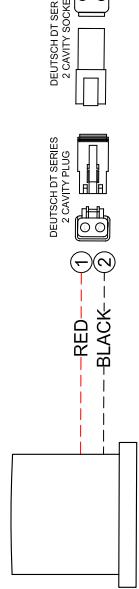
FACTORY INSTALL P/N: 300089
CUSTOMER INSTALL P/N: 300088

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)

SWEEPER BEACON WIRING SCHEMATIC

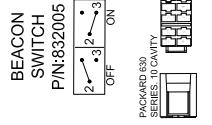
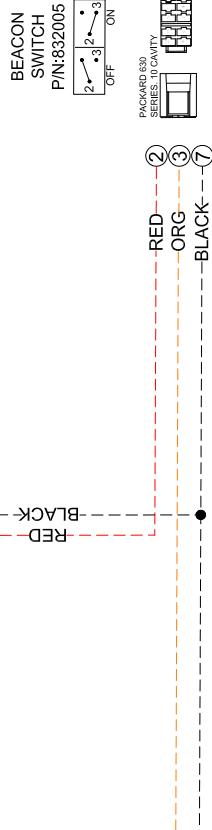
BEACON ASSY
WITH CONNECTOR
P/N: 335004



ii 11.3

HK4400

HARPER
TURF EQUIPMENT

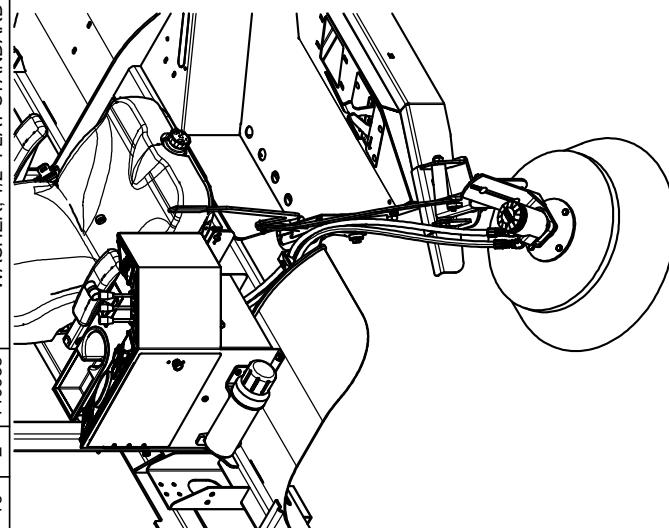


4-9-2021

11/19/20

HAWK RIGHT CURB BRUSH INSTALL

Parts List				Parts List				Parts List			
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION
1	1	110125	BOLT, 1/2-13 X 2.25 GR 5 ZINC PLATE	17	2	110665	WASHER, 5/16" FLAT STANDARD	36	1	315403	WELDMENT, CURB BRUSH ARM, SWPR
2	4	110290	NUT, 1/4-20 WIZ FLANGE	18	4	110672	WASHER, 3/8" LOCK	37	1	315404	WLDMT, CURB BRUSH BASE RIGHT, SWPR
3	2	110358	Bolt, 1/4-20 X 0.625 in Carriage	19	1	110674	WASHER, 5/16" LOCK	38	1	315406	WELDMNT, CURB BRUSH MOUNT, SWPR
4	2	110392	Bolt, 3/8-16 X 2 in Carriage	20	6	110676	WASHER, 3/8" FLAT STANDARD	39	1	315407	WELDMNT, BRUSH ADAPTER, SWPR
5	1	110396	BOLT, 5/16-18 X 2.5	21	1	110895	Bolt, 5/8-11 X 3 in Carriage	40	1	317268	WASHER, 2.0 X 344 X .12
6	4	110400	BOLT, 3/8-16 X 2.0	22	1	111189	Bolt, 5/8-11 X 7.5, HHCS Gr 5 Zinc	41	1	317261	TENSIONER, GEAR MOUNT, BUSHING
7	4	110420	BOLT, 3/8-16 X 1.0	23	1	111199	BOLT, 3/8 X 625 SHOULDER SHCS, ZINC	42	1	317398	LINK, CURB BRUSH LIFT
8	1	110434	BOLT, 1/4-20 X 0.5, WIZ FLANGE	24	1	120216	ADAPTER, 6MJ-6FJX-6MJ	43	1	317411	PLATE, CURB BRUSH NOTCH
9	2	110474	BOLT, 1/4-20 X 1-1/2	25	1	120239	ADAPTER, 6MJ-8MB	44	2	320400	HOSE ASSY, RH CURB BRUSH
10	2	110597	NUT, 5/8-11 HEX	26	4	120319	ADAPTER, 6MJ-6MB	45	1	320402	HOSE ASSY, CURB BRUSH INLET
11	3	110600	NUT, 5/16-18, UNITORQUE LOCK	27	2	120753	JIC(-6) to Male O-ring (-10), 45 degrees	46	1	320403	HOSE ASSY, CURB BRUSH RETURN
12	1	110606	NUT, 5/16-18 WIZ FLANGE	28	1	211747	FRiction WASHER 1.5"	47	1	322099	HIGH PRESSURE CARRYOVER PLUG
13	1	110615	NUT, 1/2-13, UNITORQUE LOCK	29	2	302063	KNOB, ALUMINUM 3/8-16	48	1	323069	VALVE ASSEMBLY, 2-WAY/4 POSITION
14	4	110621	NUT, 3/8-16, UNITORQUE LOCK	30	1	302064	BRUSH, 24" X 6" X 40 DEG	49	1	332070	HARNESS, CURB BRUSH
15	1	110639	NUT, 5/8-11, UNITORQUE LOCK	31	1	302160	DECAL, CURB BRUSH	50	1	820097	CLAMP BODY
16	2	110658	WASHER, 1/2" FLAT STANDARD	32	1	312022	CLIP, HAIRPIN 3/32 X 1.625	51	1	820098	COVER PLATE
				33	1	312039	GAS SPRING, 4" STROKE, 120LBS	52	1	832005	SWITCH, PADDLE, CARLING (29253)
				34	1	312041	CLEVIS PIN, 3/8 X 1.5, ZINC	53	1	832024	MOUNT, SWITCH (VMS)
				35	1	315401	WLDMT, CURB BRUSH HANDLE RIGHT	54	1	910044	COVER, VINYL .25 X 1.5 X 4 GRIP
								55	1	922004	MOTOR, EATON 101-1009

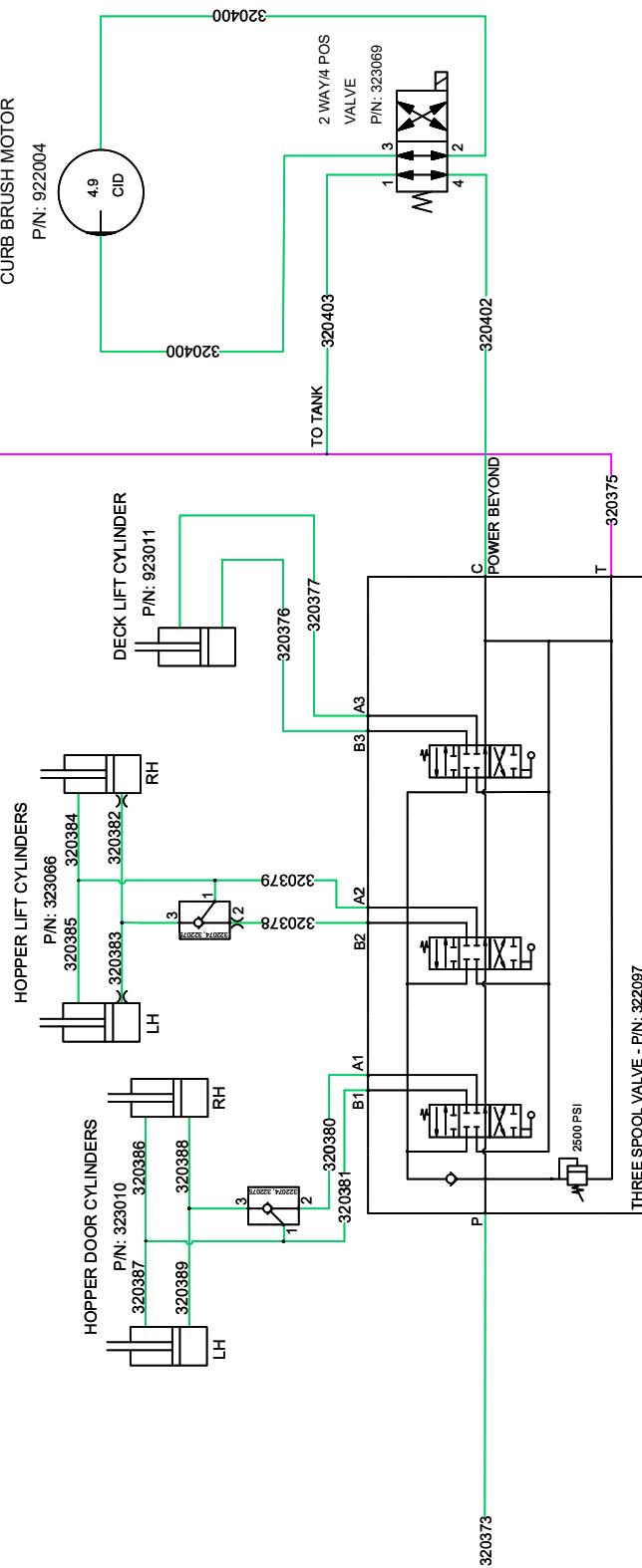


FOR SERIAL NUMBERS **21A11** AND PRIOR,
SEE PAGES **8-9** FOR DETAILS ON
UPDATES NEEDED FOR CURB BRUSH
INSTALLATION

CUSTOMER INSTALL: 300090
FACTORY INSTALL: 300091

CURB BRUSH PLUMBING (RIGHT)

CASE DRAIN
BLOCK
P/N: 3222095

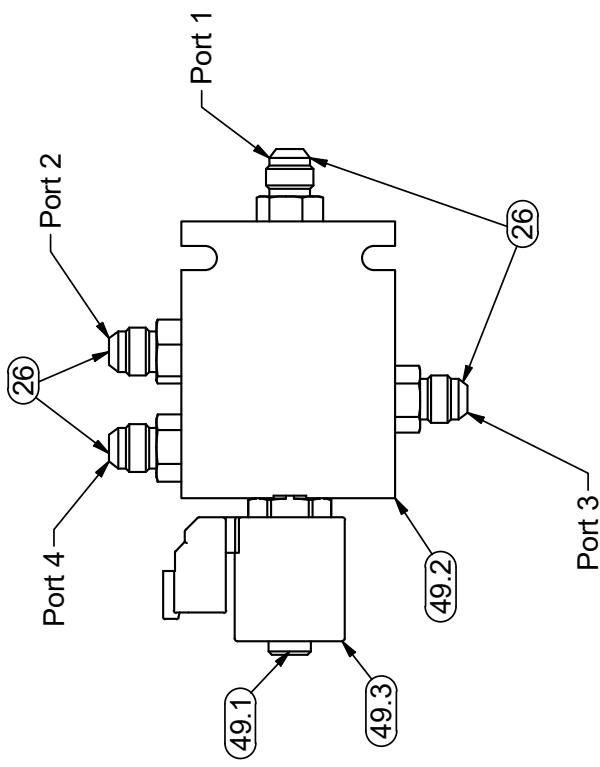
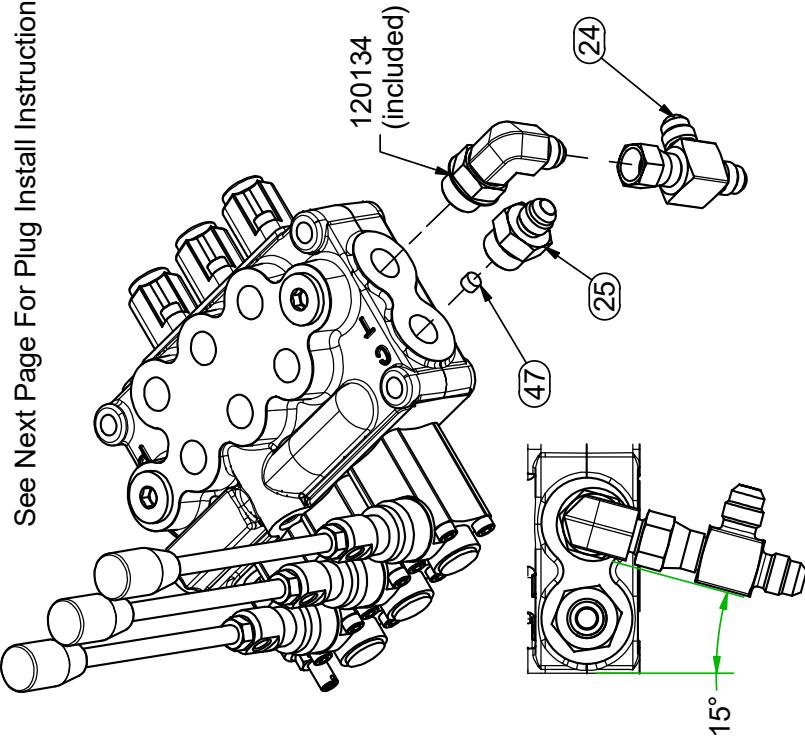


VALVE ASSEMBLIES

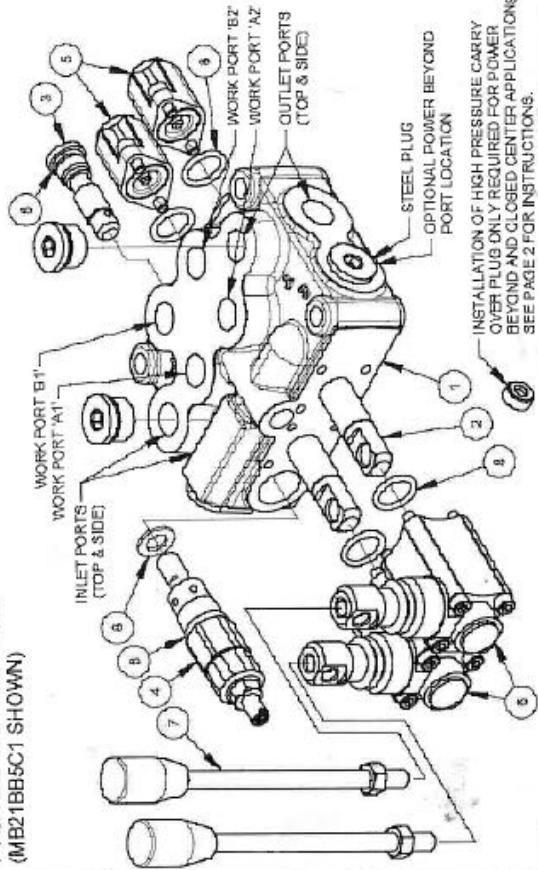
300090

REV. A

Parts List			Parts List				
ITEM	QTY	PART #	DESCRIPTION	ITEM	QTY	PART #	DESCRIPTION
26	4	120319	ADAPTER, 6MJ-6FJX	24	1	120216	ADAPTER, 6MJ-6FJX-6MJ
48	1	323069	VALVE ASSEMBLY, 2-WAY/4 POSITION	25	1	120239	ADAPTER, 6MJ-8MB
49.1	1	222052	Valve, #8 Spool, 4-Way 2-Position	47	1	322099	HIGH PRESSURE CARRYOVER PLUG
49.2	1	322100	BODY, 8 SIZE, 4 WAY, SAE-6				
49.3	1	322101	COIL, 12V ERZ				



PRINCE 'MB' MODELS
(MB21BB5C1 SHOWN)



NOTE: INTERNAL H.P. CARRY OVER PLUG IS NOT INSTALLED. EXTERNAL STEEL PORT PLUG IS REQUIRED. DISCARD H.P. CARRY OVER PLUG.

OPTIONAL POWER BEYOND OPERATION: INSTALL THE HIGH PRESSURE CARRY OVER PLUG (1/4-18 BSPT) INTO THE HIGH INTERNAL THREADS TO THE INSIDE OF THE "C" PORT. CONNECT A HYDRAULIC LINE FROM THE "C" PORT TO A DOWN STREAM FUNCTION AND THE "T" PORT TO TANK. WITH ALL SPOOLS CENTERED, OIL FLOW IS DIRECTED TO THE POWER BEYOND PORT 'C' FOR USE BY THE DOWNSTREAM FUNCTION. WHEN A SPOOL IS SHIFTED, OIL WILL BE DIRECTED TO A WORK PORT AND THE RETURN FLOW TO TANK.

NOTE: INTERNAL H.P. CARRY OVER PLUG MUST

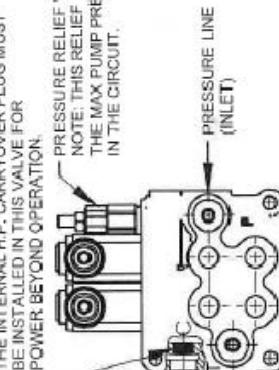
BE INSTALLED IN THIS VALVE FOR POWER BEYOND OPERATION.

PRESSURE RELIEF VALVE
NOTE: THIS RELIEF IS OPTIONAL. IT CANNOT BE SET HIGHER THAN THE FIRST VALVE'S RELIEF, BUT MAY BE SET LOWER.

PRESSURE RELIEF VALVE

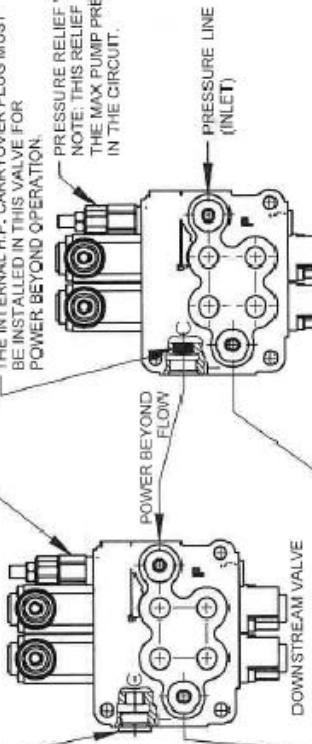
NOTE: THIS RELIEF LIMITS THE MAX PUMP PRESSURE

IN THE CIRCUIT.



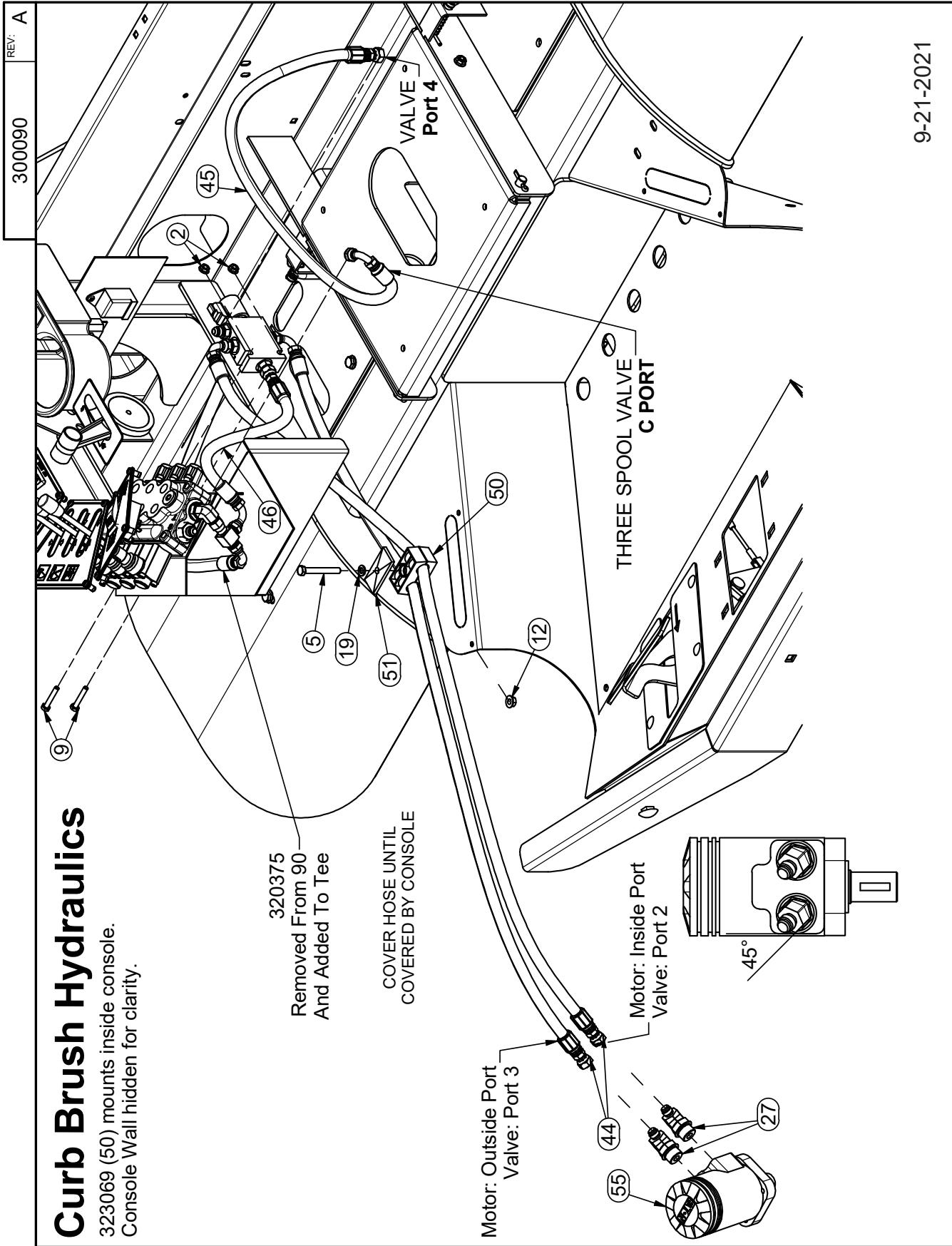
RETURN LINE (OUTLET)
NOTE: THIS PORT MUST RETURN TO TANK.

VALVE WITH POWER BEYOND CONFIGURATION



Curb Brush Hydraulics

323069 (50) mounts inside console.
Console Wall hidden for clarity.



CURB BRUSH HANDLE AND BRUSH INSTALL

To Install Wiring Harness (332070):

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).

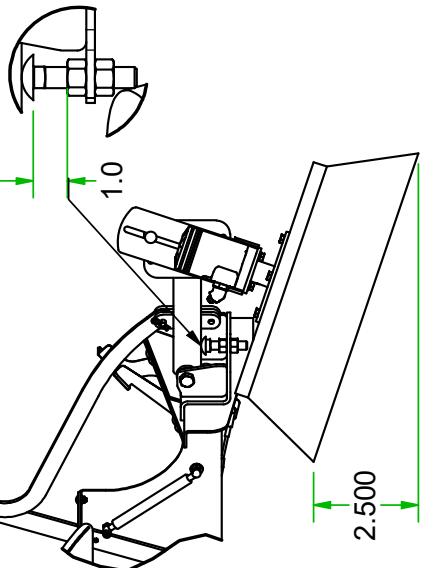
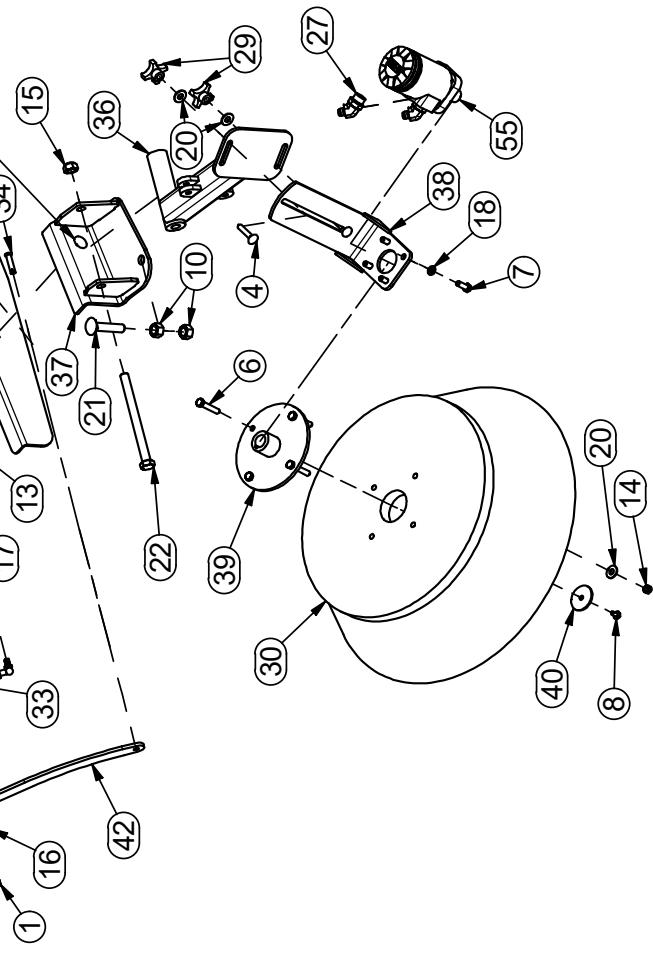
Connect 2 Cavity Deutsch, Black Wire Only, To One Of The 3 Available Accessory Plugs (Harness 332064). These 2 Cavity Plugs Should Be Located Near The Fuse Block Inside The Console.

Connect Packard 10 Cavity Switch To 832005 (P# 52 Shown To The Left). Connect 2 Cavity Deutsch, Blu/Org & Blk, To 323069 Valve.

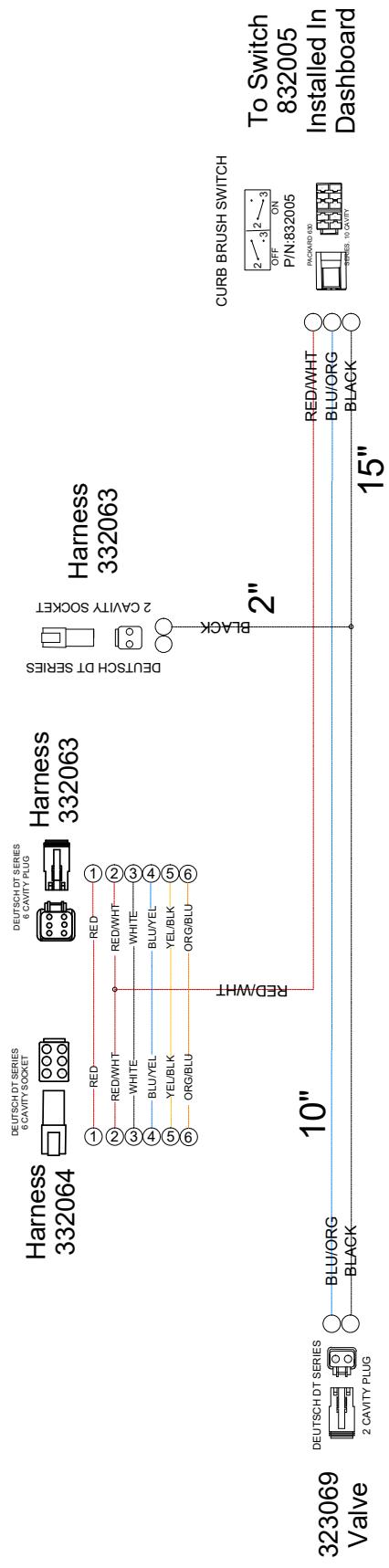
wiring harness on next page for reference

FACTORY SUGGESTED SETTINGS

Mounts Using
112070 installed
with machine



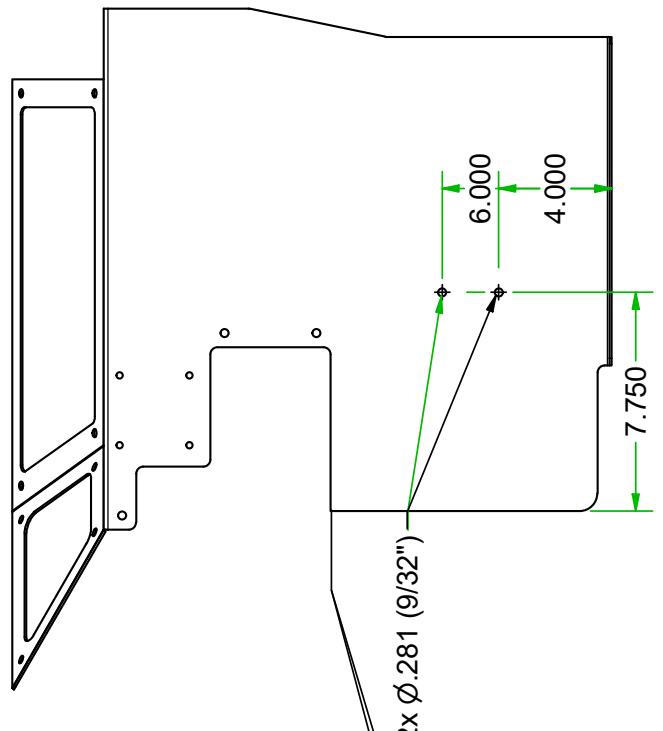
SWEeper CURB BRUSH WIRING SCHEMATIC



MODIFICATION INSTRUCTIONS (HYDRAULICS INSTALL)

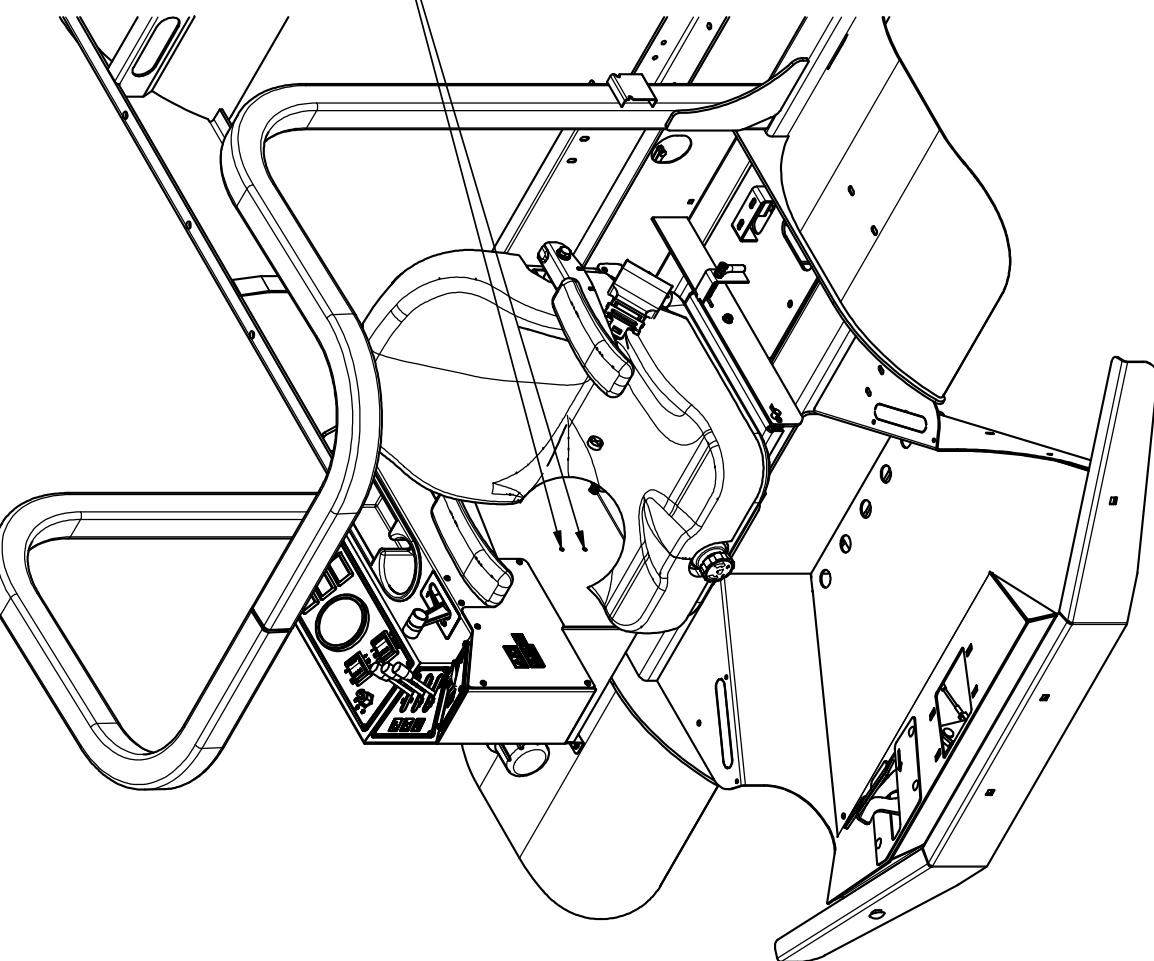
300090

REV: A

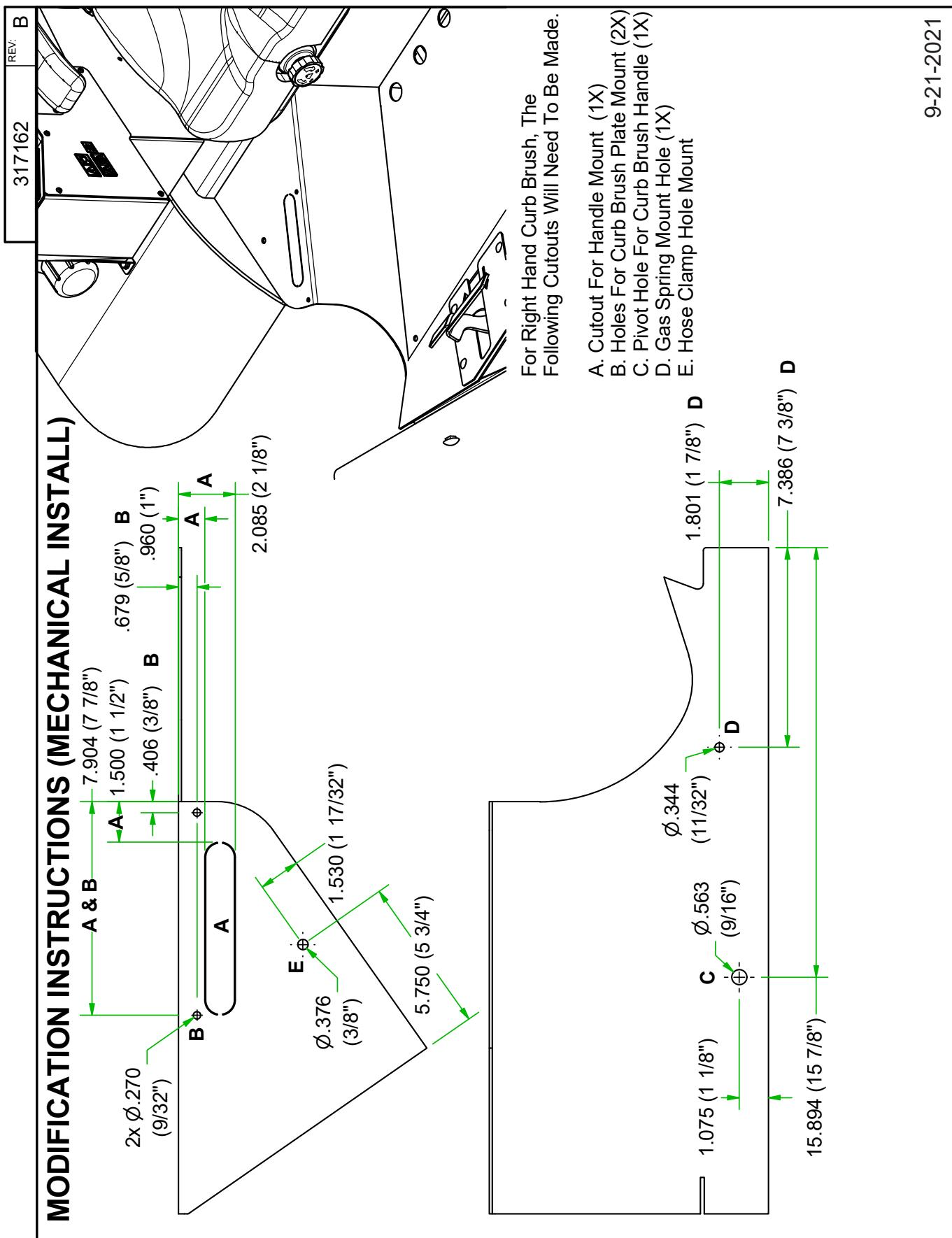


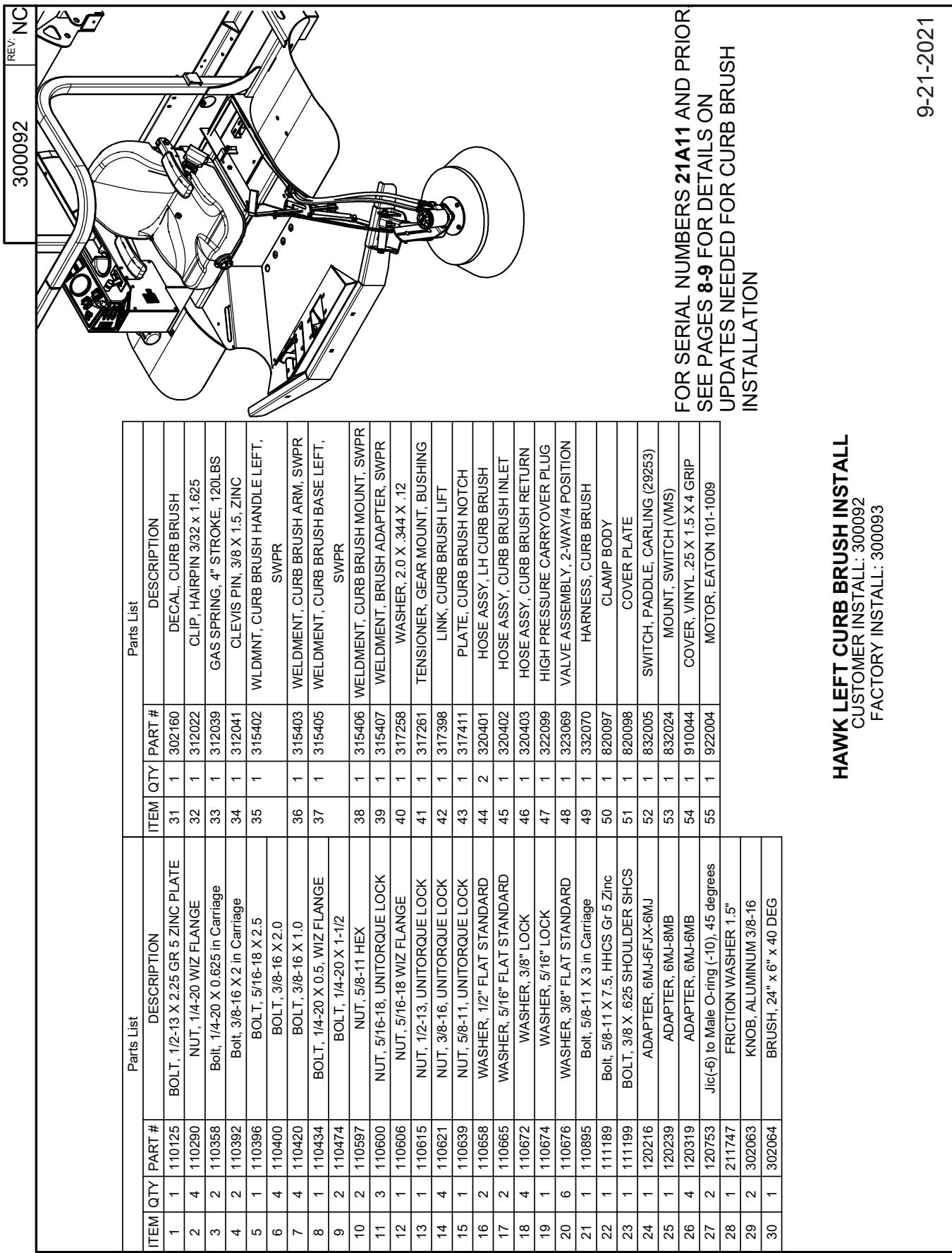
For Right Hand Curb Brush, The
Following Cutouts Will Need To Be Made:

Holes For Curb Brush Valve (2X)



MODIFICATION INSTRUCTIONS (MECHANICAL INSTALL)





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

FACTORY INSTALL: 300093
SOCIETY FOR THE
ADVANCEMENT OF SCIENCE

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HK4400

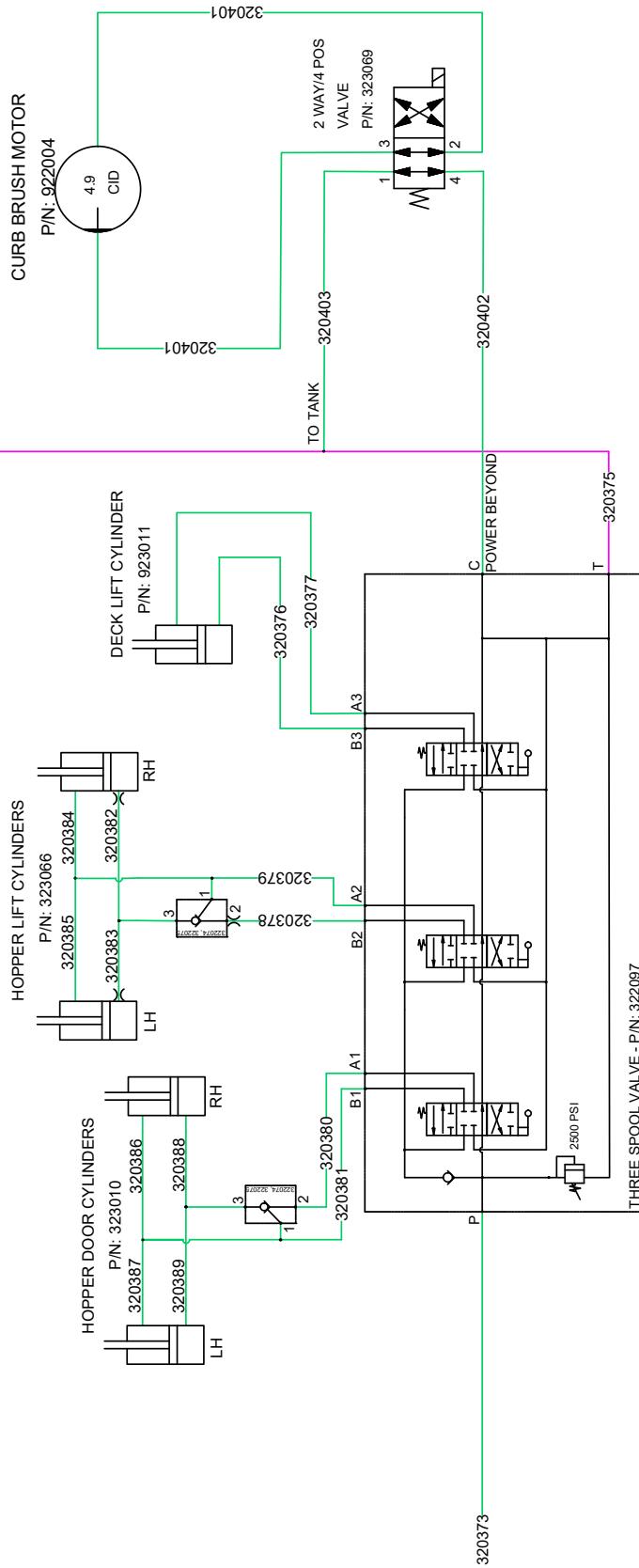
11.5

HARPER®
TURF EQUIPMENT

300092 | REV. NC

CURB BRUSH PLUMBING (LEFT)

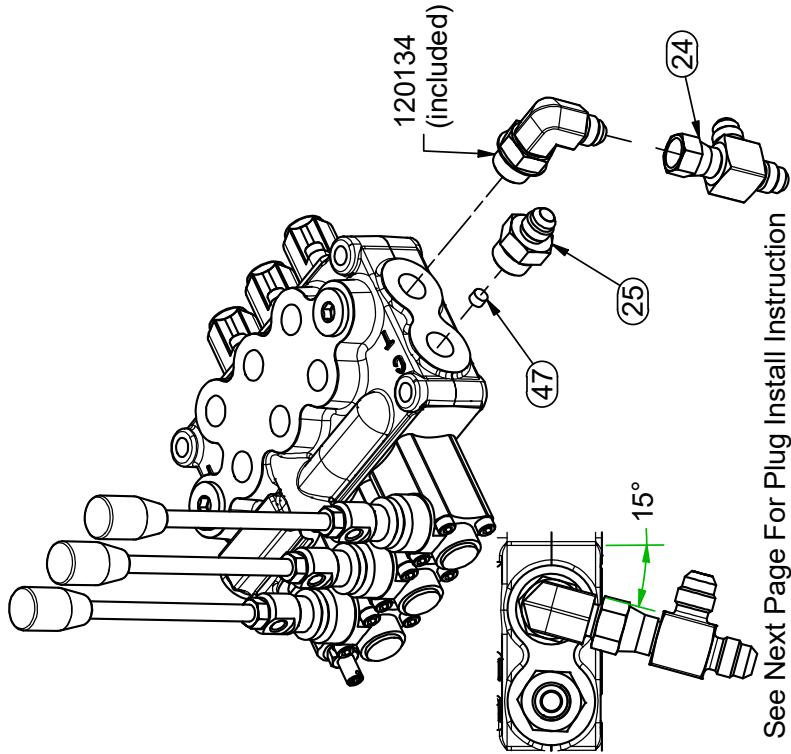
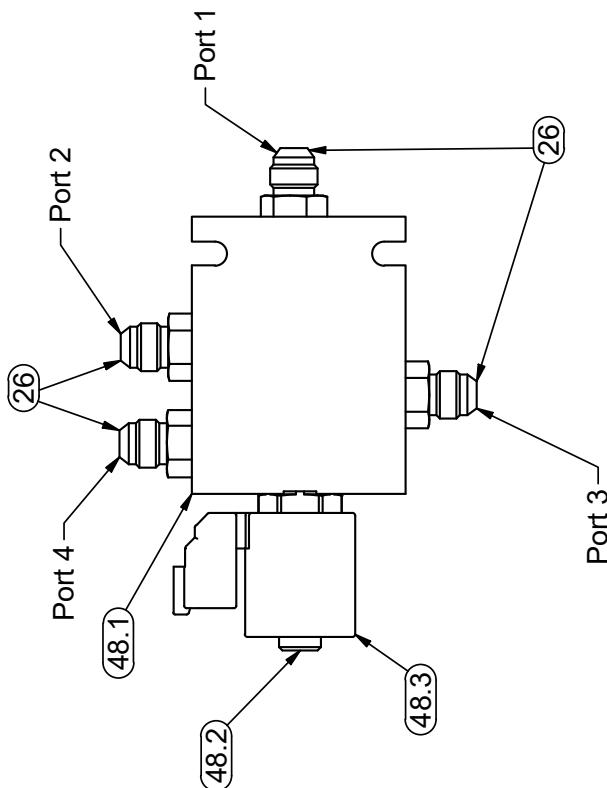
CASE DRAIN
BLOCK
P/N: 3222095



9-21-2021

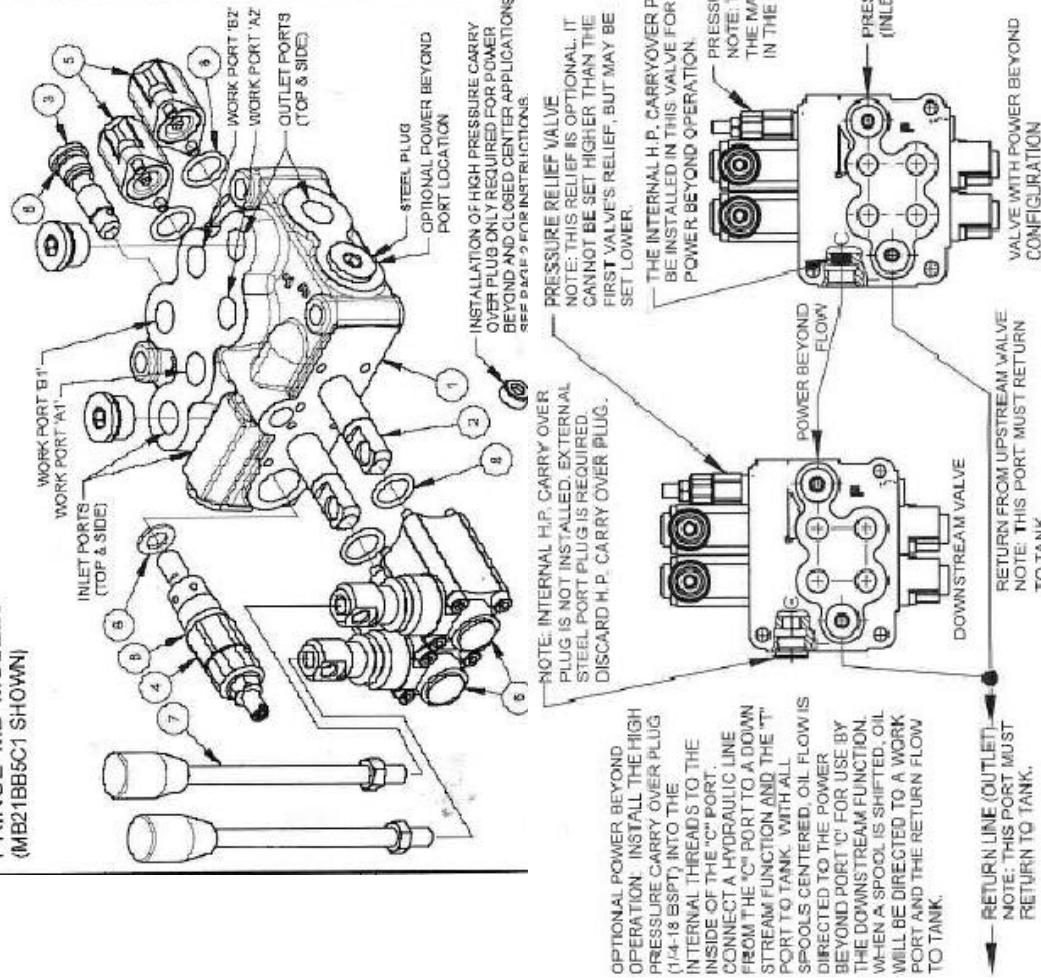
VALVE ASSEMBLIES

Parts List			
ITEM	QTY	PART #	DESCRIPTION
26	4	120319	ADAPTER, 6MJ-6MB
48	1	323069	VALVE ASSEMBLY, 2-WAY/4 POSITION
48.1	1	322100	BODY, 8 SIZE, 4 WAY, SAE-6
48.2	1	222052	Valve, #8 Spool, 4-Way 2-Position
48.3	1	322101	COIL, 12V ERZ



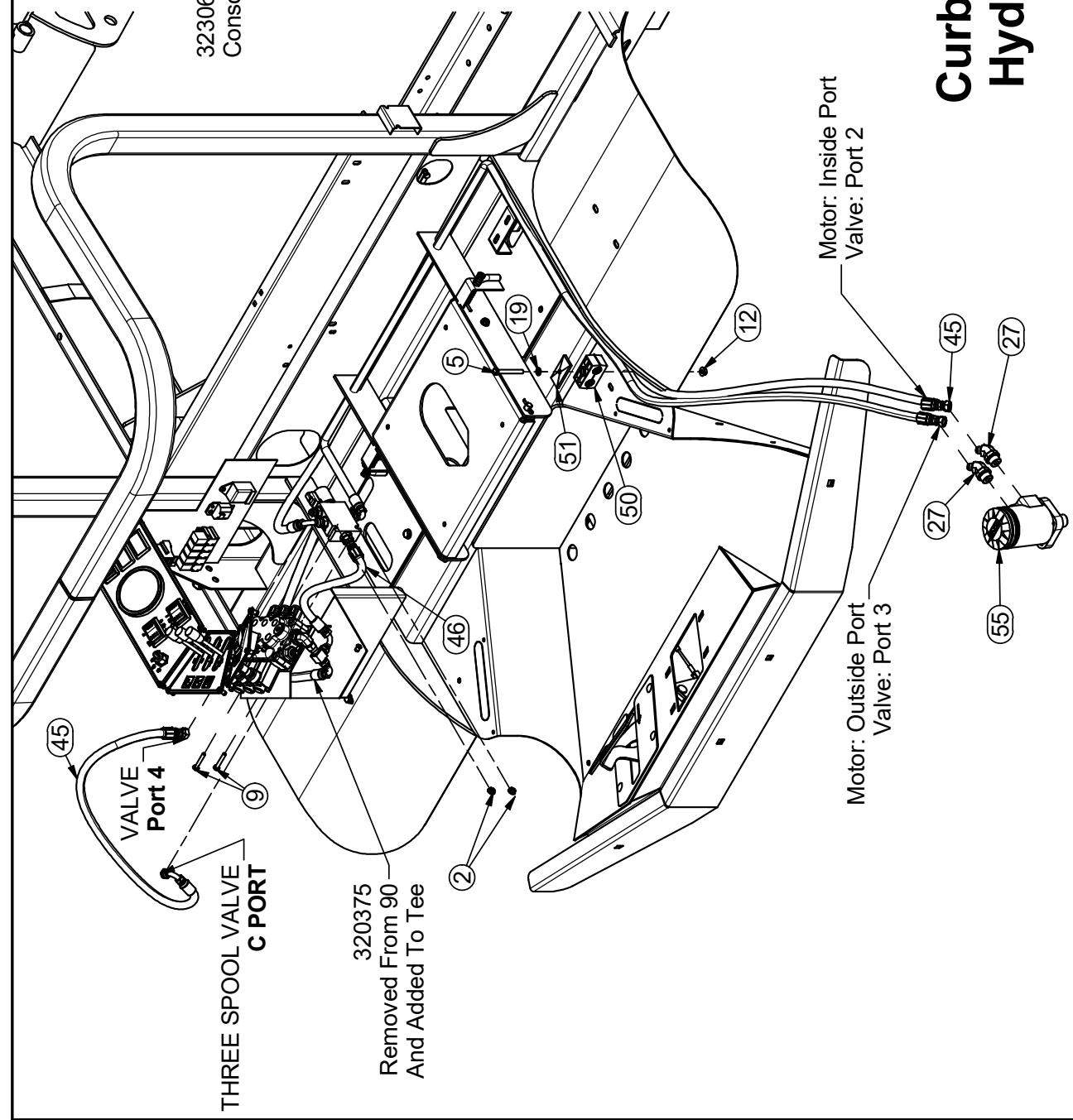
See Next Page For Plug Install Instruction

PRINCE™ MB MODELS
(MB21BB5C1 SHOWN)



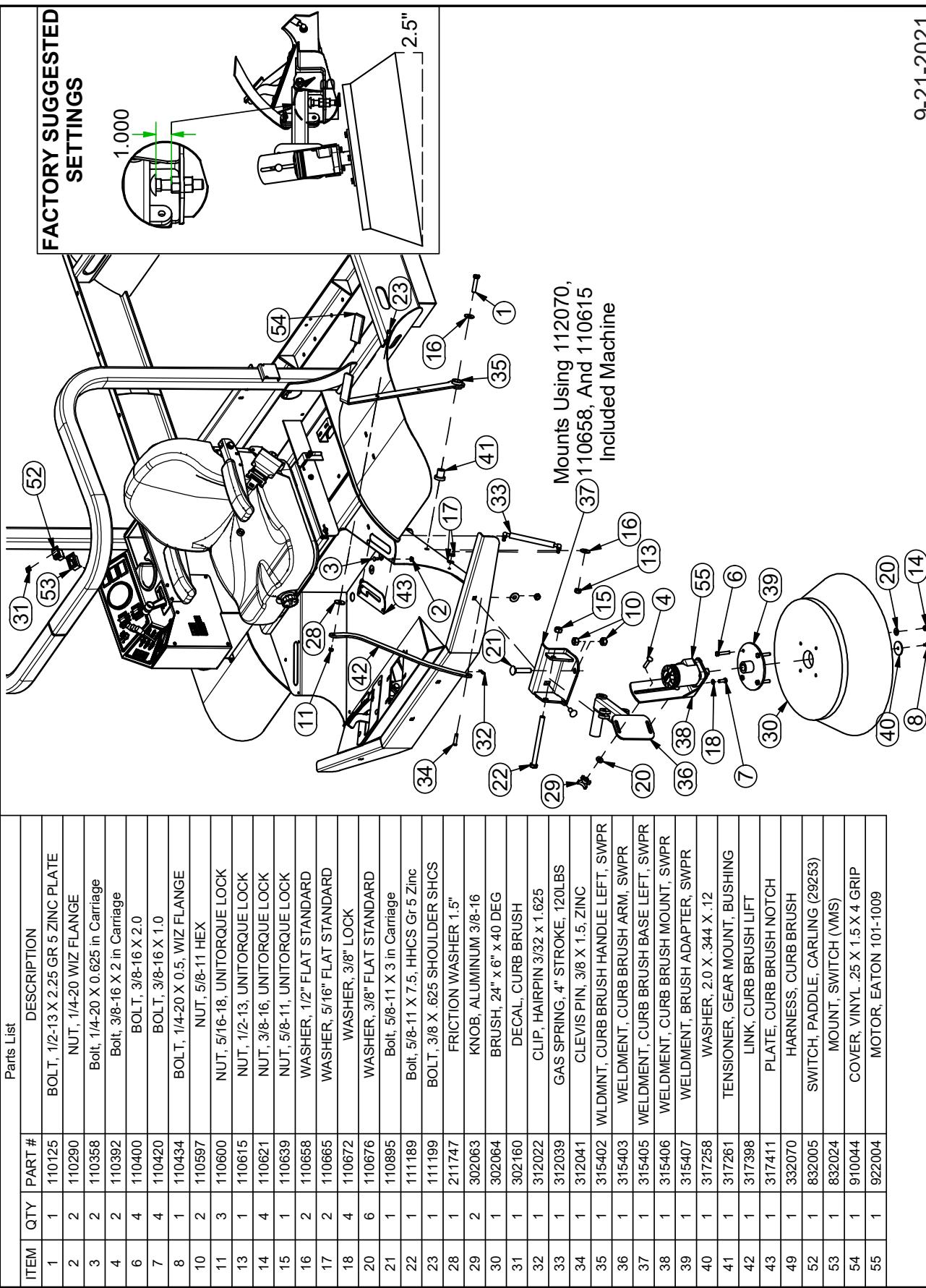
300092

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Curb Brush Hydraulics

9-21-2021



To Install Wiring Harness (332070):

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).

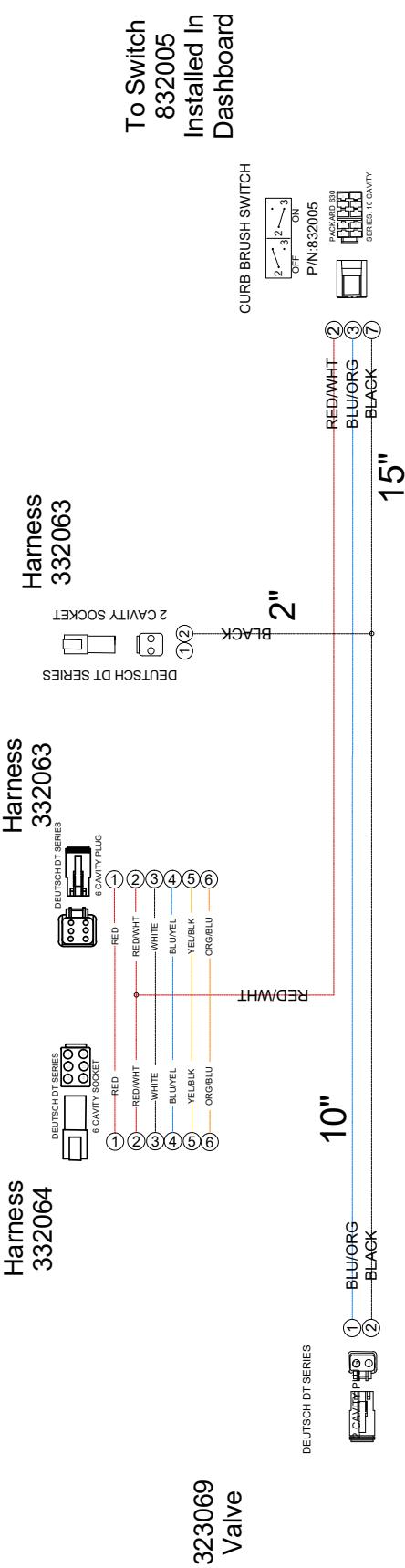
Connect 2 Cavity Deutsch, Black Wire Only, To One Of The 3 Available Accessory Plugs (Harness 332064). These 2 Cavity Plugs Should Be Located Near The Fuse Block Inside The Console.

Connect Packard 10 Cavity Switch To 832005 (P# 52 Shown To The Left).

Connect 2 Cavity Deutsch, Blu/Org & Blk, To 323069 Valve.

wiring harness below for reference

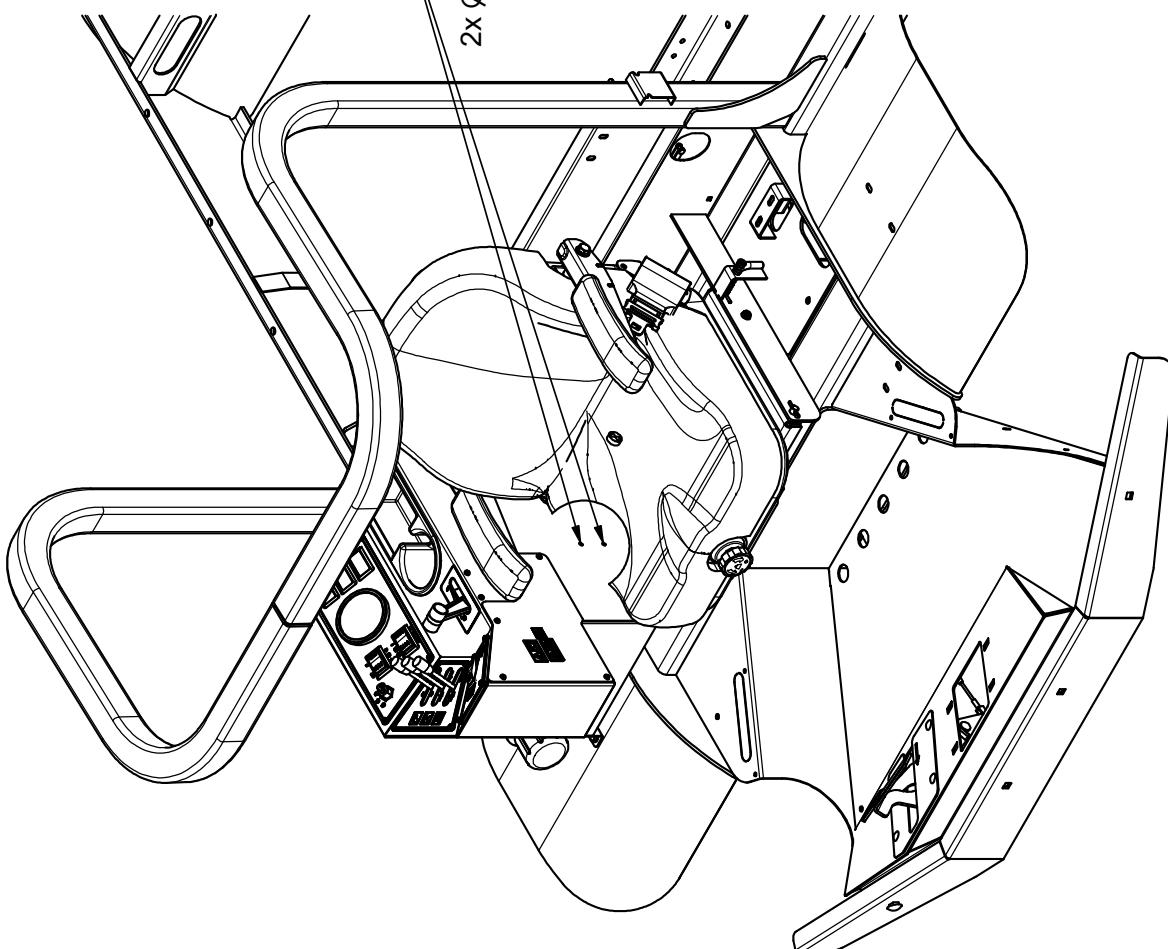
SWEeper CURB BRUSH WIRING SCHEMATIC



MODIFICATION INSTRUCTIONS (HYDRAULICS INSTALL)

300092

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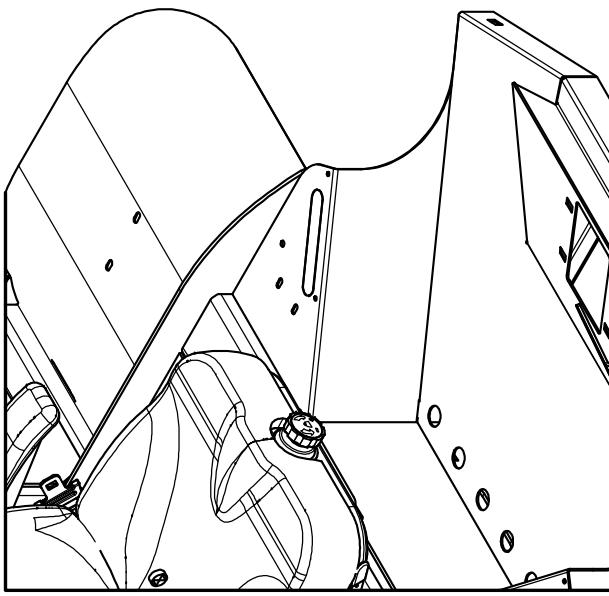
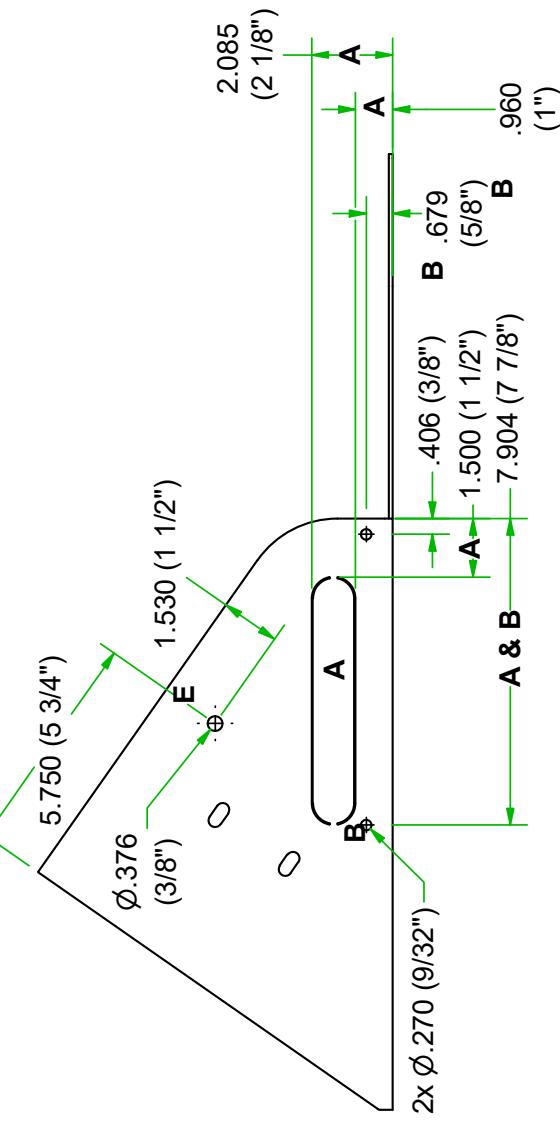


For Right Hand Curb Brush, The
Following Cutouts Will Need To Be Made:

Holes For Curb Brush Valve (2X)

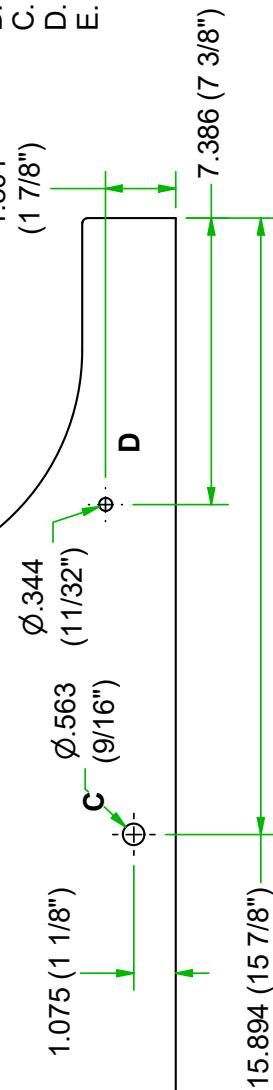
9-21-2021

MODIFICATION INSTRUCTIONS (MECHANICAL INSTALL)

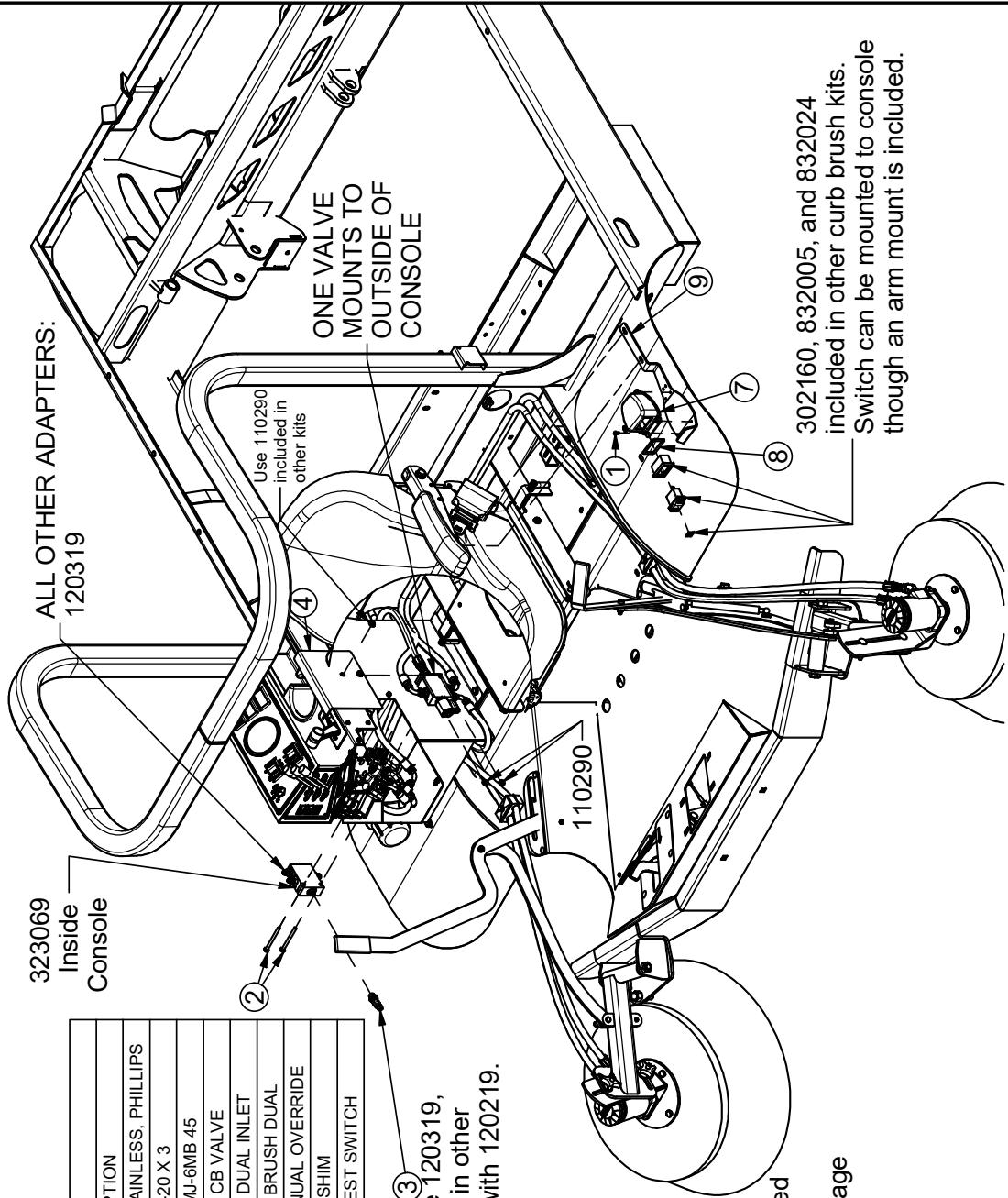


For Left Hand Curb Brush, The Following Cutouts Will Need To Be Made.

- 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



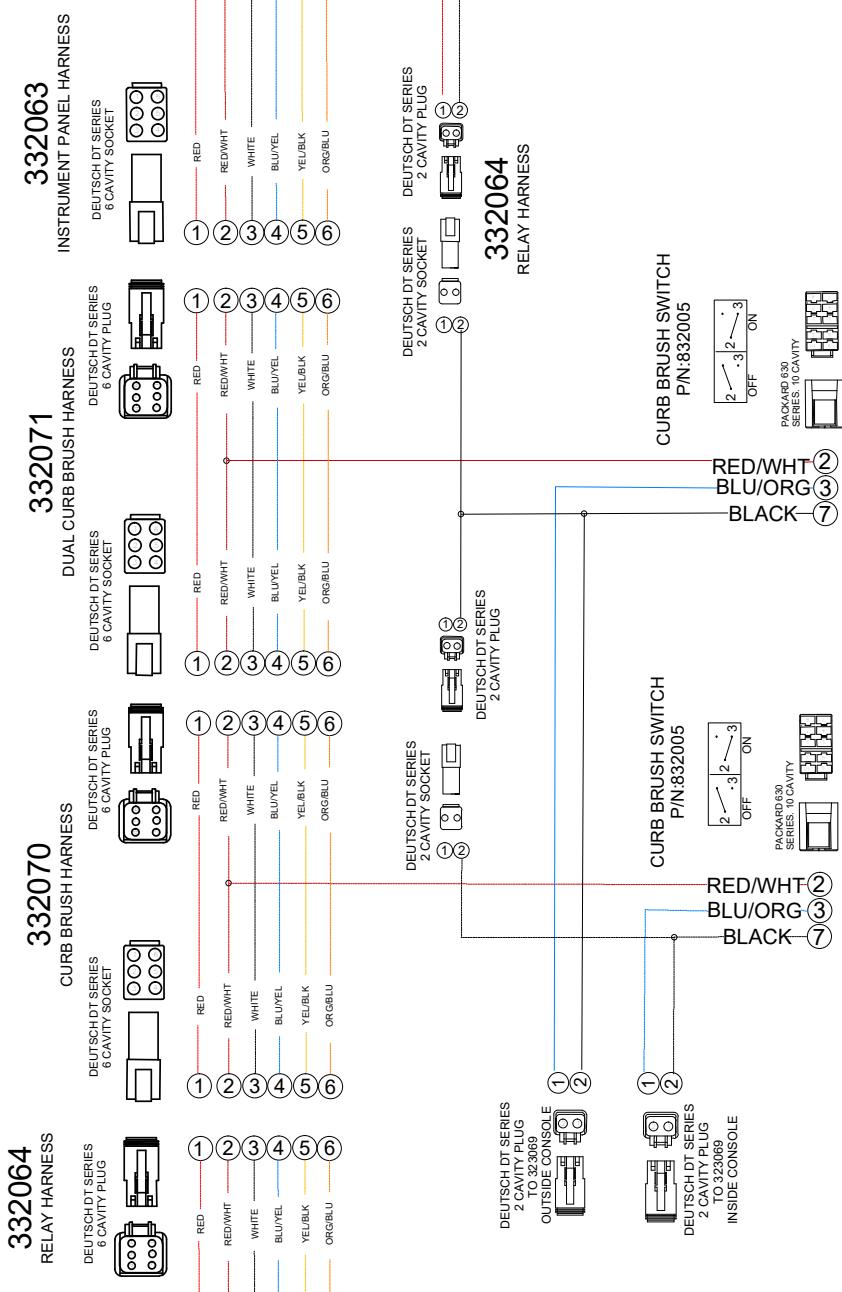
HAWK DUAL CURB BRUSH INSTALL



Use Assembly Instructions Included With 300090 And 300092 For Assembling Brush Mounts And Linkage

302160, 832005, and 832024 included in other curb brush kits. Switch can be mounted to console though an arm mount is included.

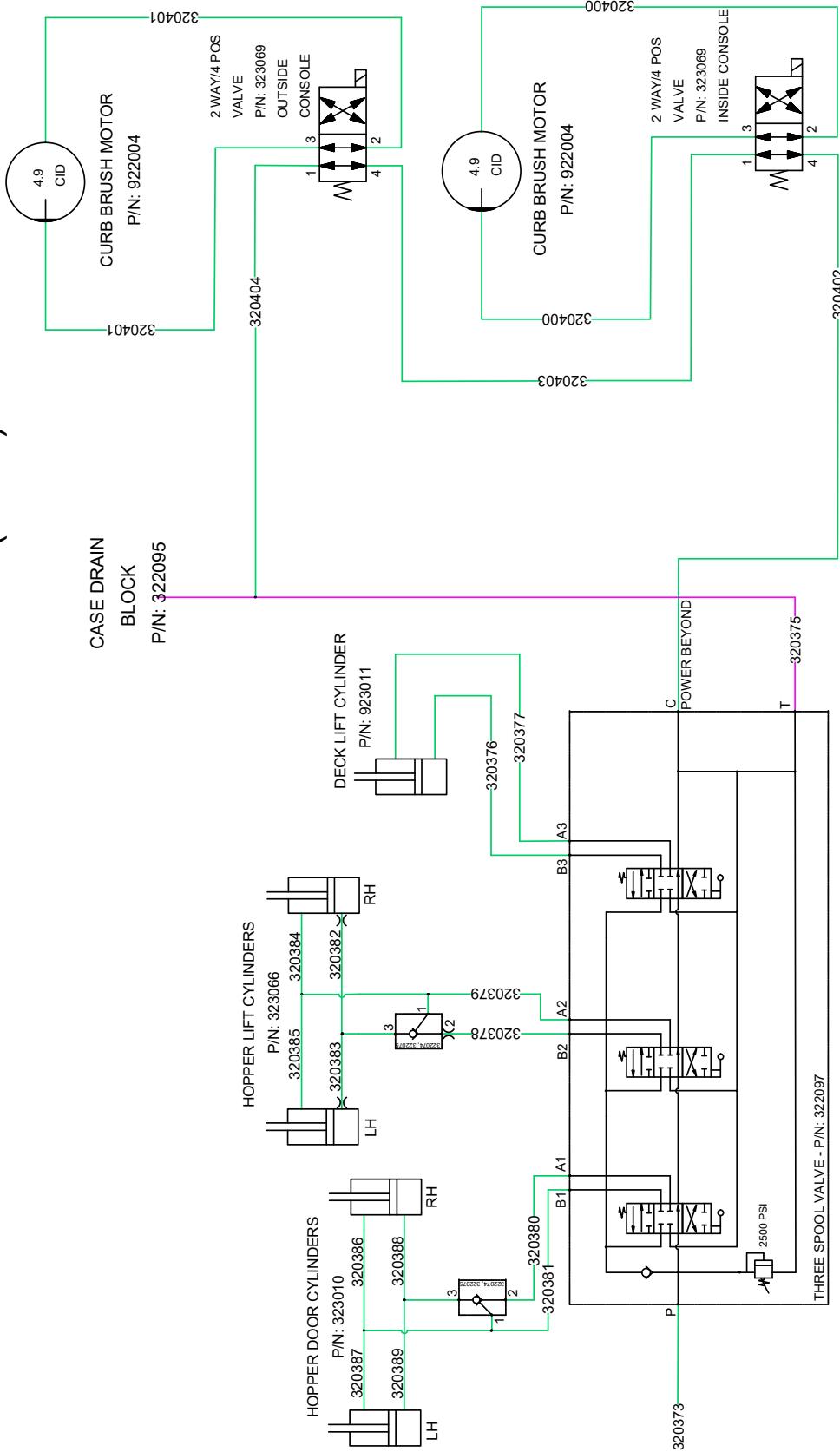
SWEeper DUAL CURB BRUSH WIRING SCHEMATIC



300094

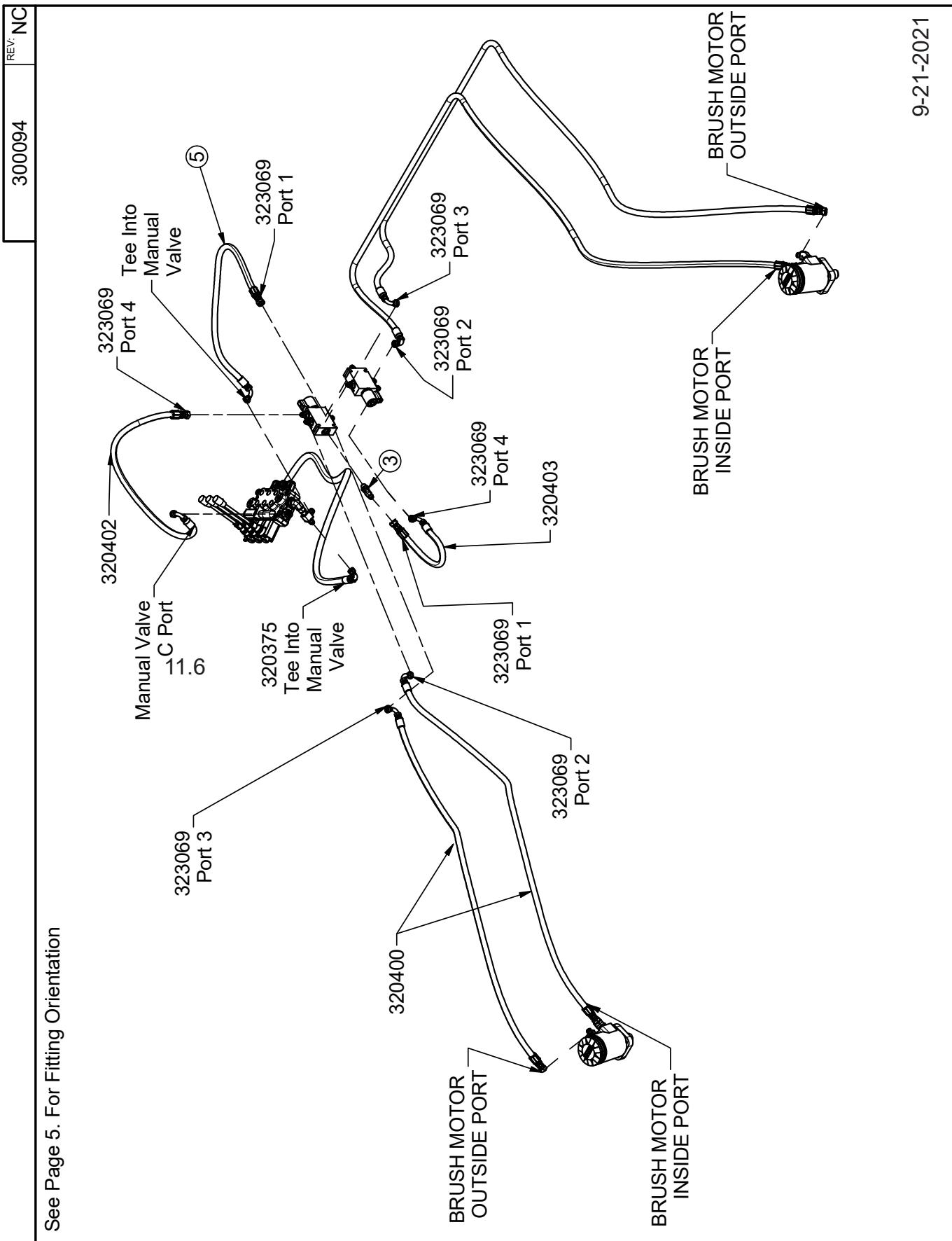
REV. NC

CURB BRUSH PLUMBING (DUAL)



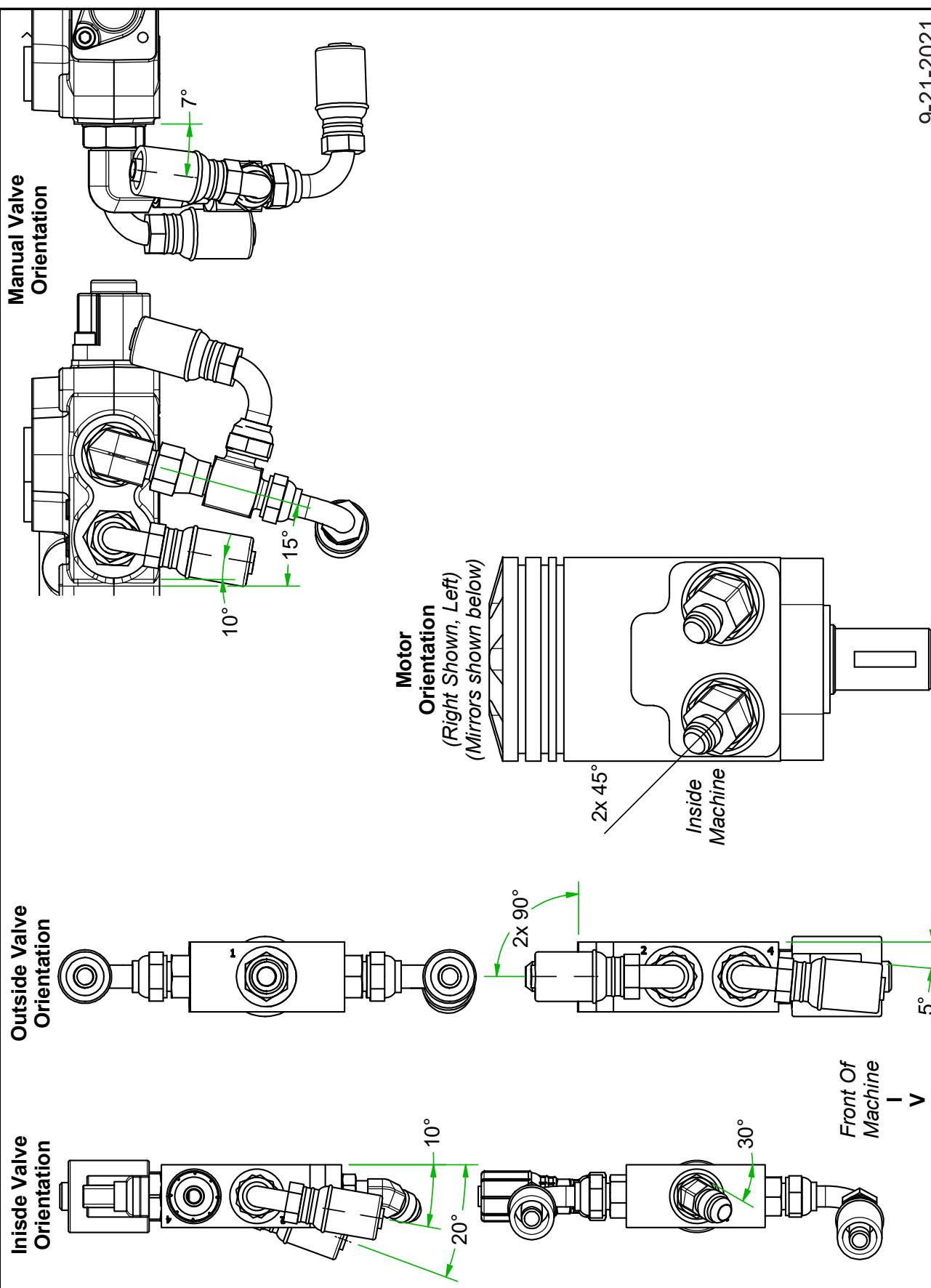
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See Page 5. For Fitting Orientation



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9-21-2021



NOTES

Harper Industries, Inc.
151 E. Highway 160
Harper, KS 67058

Website: www.harperindustries.com

Telephone: 620-896-7381
Toll-Free: 800-835-1042
Fax: 620-896-7129

E-mail: info@harperindustries.com

HK4400

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TURF EQUIPMENT