HARPER®

TURBO VAC

Turf Sweeper

Parts Manual

TURBO VAC 30

TV30D

HARPER INDUSTRIES, INC.

7/14

Thank you for purchasing a Harper Turf Vac.

As with all Harper products, the Turf Vac 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 TV30 Turf Vac. Please read and understand all instructional material included with the Turf Vac or its components before assembling and operating the equipment.

A Turf Vac 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.

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

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

LIMITED WARRANTY

The Harper TV30 Turf Vac is warranted against defects in workmanship and materials for a period of TWELVE MONTHS from the original date of retail purchase to the original purchaser.

Harper Industries will repair or replace, at our option, any part which our examination shows to be defective. Warranty is limited to parts, labor and ground freight delivery of replacement parts. The user will pay freight charges for parts submitted under this warranty.

No product or part may be returned for warranty consideration without prior approval from Harper Industries.

This warranty does not apply to parts subjected to misuse, abuse, alteration, improper or inadequate maintenance, or normal wear (including belts 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.

RECORDS

Date of Purchase _____ / _____ / _____

Dealer's Name _____

Dealer's Phone _____

Serial Number Machine _____

Serial Number Engine _____

Table of Contents

PARTS SECTION
Table of Contents
Frame and Engine

Frame Assembly..... 1.1
Control Arm Assembly..... 1.2
Front Axle Assembly..... 1.3
Engine and Tank Installation..... 1.4
Diesel Engine Assembly..... 1.5
Fuel Tank Assembly..... 1.6
Engine Shield Assembly..... 1.7
Electrical Assemblies..... 1.8
Deck Assembly..... 1.9
Fan Housing & Hydraulic Cooler Assy..... 1.10
Fan Housing Installation..... 1.11
Hopper and Door Assembly..... 1.12
Hopper Installation..... 1.13
Operator Station..... 1.14
Decals..... 1.15
Broom Kit..... 1.16
Finger Kit..... 1.17
Verticut/Dethatch Kit..... 1.18
Remote Hose Option..... 1.19
Light Package Installation Optional..... 1.20
Curb Brush Option..... 1.21
Canopy Option..... 1.22
Hopper Dump Extension Option..... 1.23

Hydraulic

Propulsion System..... 2.1
Propulsion Circuit..... 2.2
Propulsion Plumbing..... 2.3
Propulsion Pump Assembly..... 2.4
Propulsion Valve Assembly..... 2.5
Hydraulic Reservoir Assembly..... 2.6
Propulsion, Suction & Drain Plumbing..... 2.7
Steering System..... 2.8
Wheel Motor Plumbing..... 2.9
Wheel Motor Assembly..... 2.10
Machine System & Circuits..... 2.11
Triple Section Pump Plumbing..... 2.12
Triple Section Pump Assembly..... 2.13
Master Valve Assembly..... 2.14
Deck Plumbing..... 2.15
Fan Motor Plumbing..... 2.16
Hopper Plumbing..... 2.17
Hydraulic Cylinder Service Parts..... 2.18
Port Label Abbreviations..... 2.19

Electrical

Wiring Schematic Diagram Overview..... 3.1
Master Harness..... 3.2
Gauge Harness/Ignition Harness..... 3.3
Relay Harness..... 3.4
Engine & Hydraulic Cooler Fan Harnesses..... 3.5

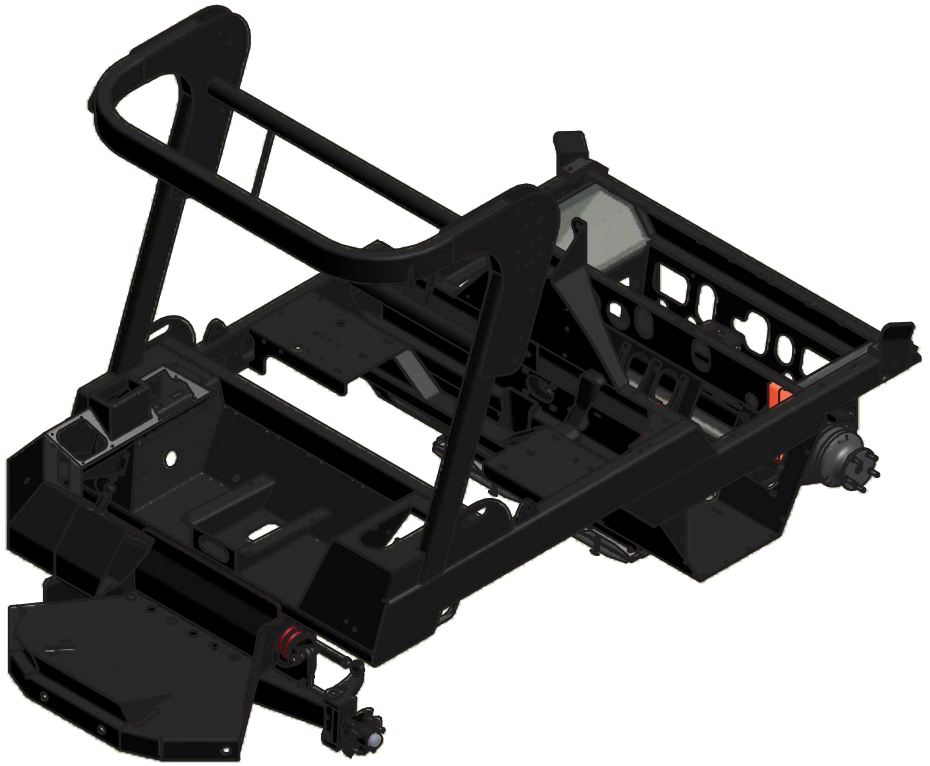
STRUCTURE SECTION

TURBO VAC 30

FRAME ASSEMBLY

PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	4	110017	BOLT, 5/16-18 X 1.75
2	53	110020	Bolt, 5/16-18 X 0.75 in Carriage
3	4	110129	BOLT, 1/2-13 X 2.75 HEX
4	16	110290	NUT, 1/4-20 WIZ FLANGE
5	24	110299	BOLT, 1/4-20 X .625 HEX GR 5
6	16	110358	Bolt, 1/4-20 X 0.625 in Carriage
7	20	110419	BOLT, 1/2-13 X 1.75
8	2	110437	BOLT, 3/8-16 X 0.75, WIZ FLANGE
9	8	110556	Bolt, 3/8-16 X 1 in Carriage
10	4	110603	NUT, 5/16-18 LOCK (NYLON)
11	78	110606	NUT, 5/16-18 WIZ FLANGE
12	24	110610	NUT, 1/2-13
13	10	110645	NUT, 3/8-16 WIZ FLANGE
14	8	110665	WASHER, 5/16" FLAT STANDARD
15	24	110666	WASHER, 1/2" LOCK
16	2	110678	WASHER, 3/4" FLAT SAE
17	1	110862	WASHER - THRUST, IGUS MTI-24
18	1	110871	Bolt, 5/16-18 X 1 in Carriage
19	2	110888	SNAP RING - EXT, 1-1/2
20	2	110889	CLEVIS PIN - 3/4 X 3.75
21	8	112051	POP RIVET, 1/8 X .275
22	2	200029	COTTER PIN, 5/32 X 1
23	6	302019	PAD - LIFT ARM
24	1	302053	FILLER - FRONT RADIATOR
25	1	302054	FILLER - REAR RADIATOR
26	1	305060	SEAL, BELLY SCREEN (11FT - 100613)
27	1	311189	GUIDE - LINKAGE, HOPPER, LH
28	1	311190	GUIDE - LINKAGE, HOPPER, RH
29	1	311363	BRACKET - SUPPORT, RETURN AIR
30	2	311459	KEEPER - AXLE PIVOT, LOWER
31	1	311462	PIN - FRONT AXLE, TV30
32	1	311521	SCREEN - SIDE, REAR BELLY, LH
33	1	311522	SCREEN - SIDE, REAR BELLY, RH
34	1	311569	SCREEN - REAR AXLE
35	2	311680	HINGE, BELLY SCREEN
36	2	311681	BRKT, BELLY SCREEN LATCH
37	1	315106	FRAME - WELDED, TV30
38	2	315180	MOUNT - ENGINE, FRONT, WELDMENT

PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
39	1	315181	MOUNT - ENGINE, REAR, LH, WELDMENT
40	1	315182	MOUNT - ENGINE, REAR, RH, WELDMENT
41	1	315209	FRAME - BELLY INTAKE SCREEN, WLDMNT
42	2	315210	SCREEN - BELLY, INTAKE, WELDMENT
43	2	315252	WELDMENT, BELLY SCREEN LATCH
44	1	510174	GREASE ZERK, 1/4-28 ST
45	4	810127	LATCH, MALE



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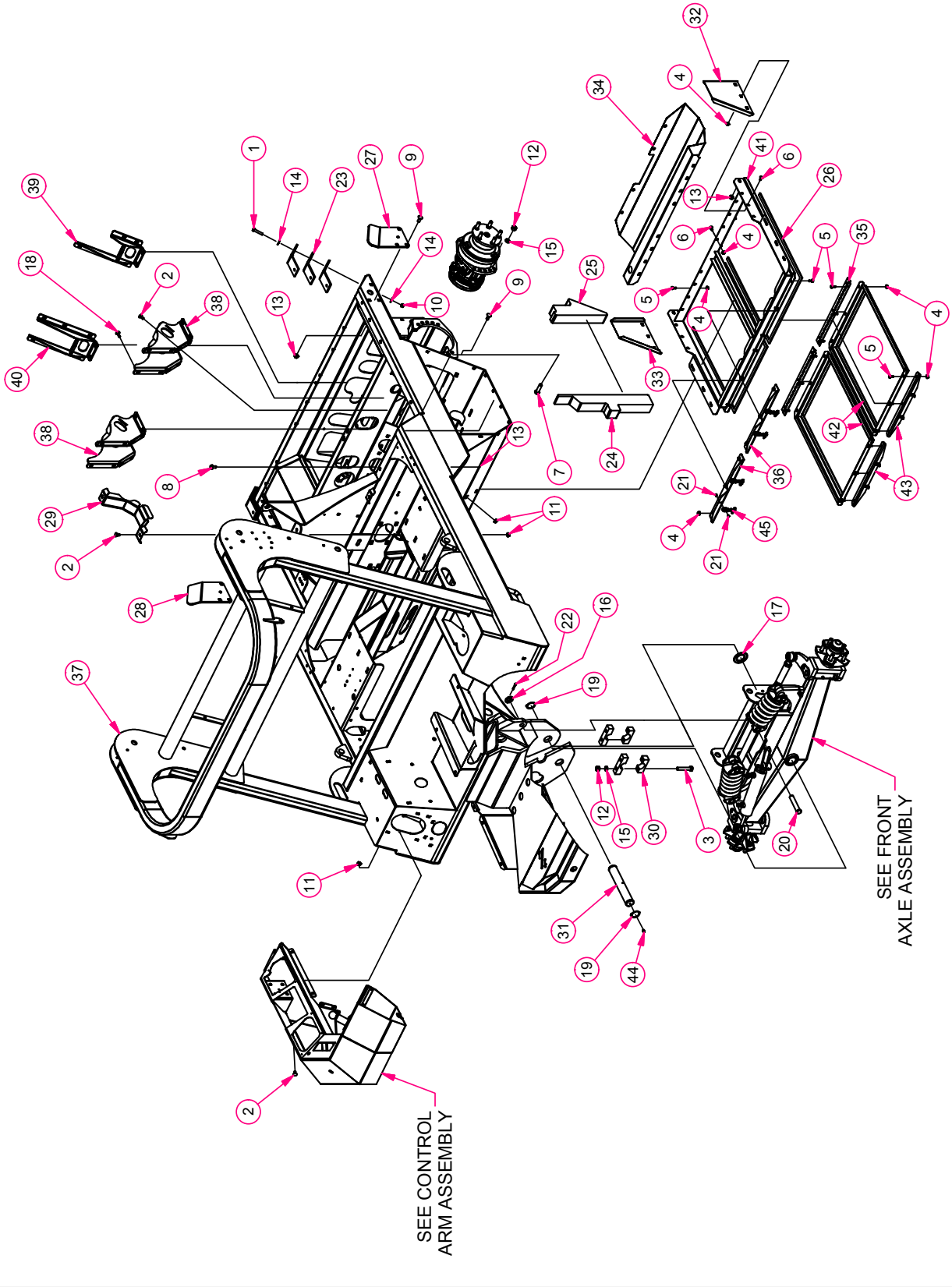
FRAME ASSEMBLY



CONTROL ARM ASSEMBLY

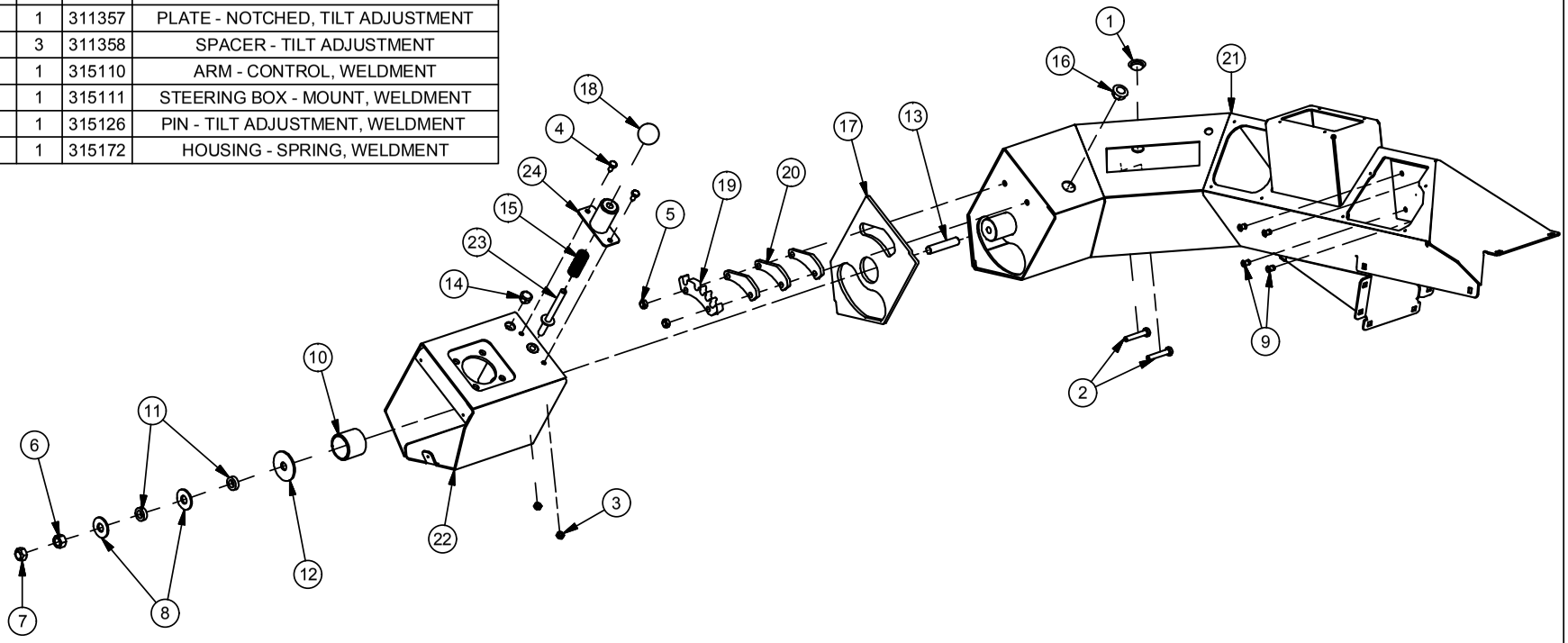
PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	1	102062	PLUG, .75" RECESSED BUTTON
2	2	110017	BOLT, 5/16-18 X 1.75
3	2	110174	NUT, 1/4-20, UNITORQUE LOCK
4	2	110515	BOLT, 1/4-20 X .50
5	2	110600	NUT, 5/16-18, UNITORQUE LOCK
6	1	110610	NUT, 1/2-13
7	1	110615	NUT, 1/2-13, UNITORQUE LOCK
8	2	110658	WASHER, 1/2" FLAT STANDARD
9	4	110835	NUT, 10-24 RIVET ALUMINUM
10	1	110852	BUSHING - IGUS, 1 3/4 x 1 1/2 x 1 1/2
11	2	110855	SPRING - POLYURETHANE DISC, 1/2" FLAT
12	1	110856	WASHER - .531 X 2.0, FENDER, CS HRD
13	1	110860	STUD - 1/2-13 X 2-1/2
14	1	110884	PLUG - 11/16", NON-VENTED
15	1	110886	SPRING - COMPRESSION, 3/4 X 2.0
16	1	110922	PLUG - 7/8", LOCKING, NON-VENTED
17	1	302004	PLATE - THRUST, PIVOT, STEERING BOX
18	1	302014	KNOB - TILT ADJUSTMENT
19	1	311357	PLATE - NOTCHED, TILT ADJUSTMENT
20	3	311358	SPACER - TILT ADJUSTMENT
21	1	315110	ARM - CONTROL, WELDMENT
22	1	315111	STEERING BOX - MOUNT, WELDMENT
23	1	315126	PIN - TILT ADJUSTMENT, WELDMENT
24	1	315172	HOUSING - SPRING, WELDMENT

ASSEMBLY NOTES:

– SECURE ITEM No. 12, HARPER PRT No. 110860
1) WITH LOCTITE RED
2) LEAVE 1-5/8" to 1-3/4" PROTRUDING

–TIGHTEN ITEM No. 5, HARPER PRT No. 110610
1) UNTIL THE STEERING BOX IS SNUG
2) CAN ROTATE BOX ASSY WITH EASE

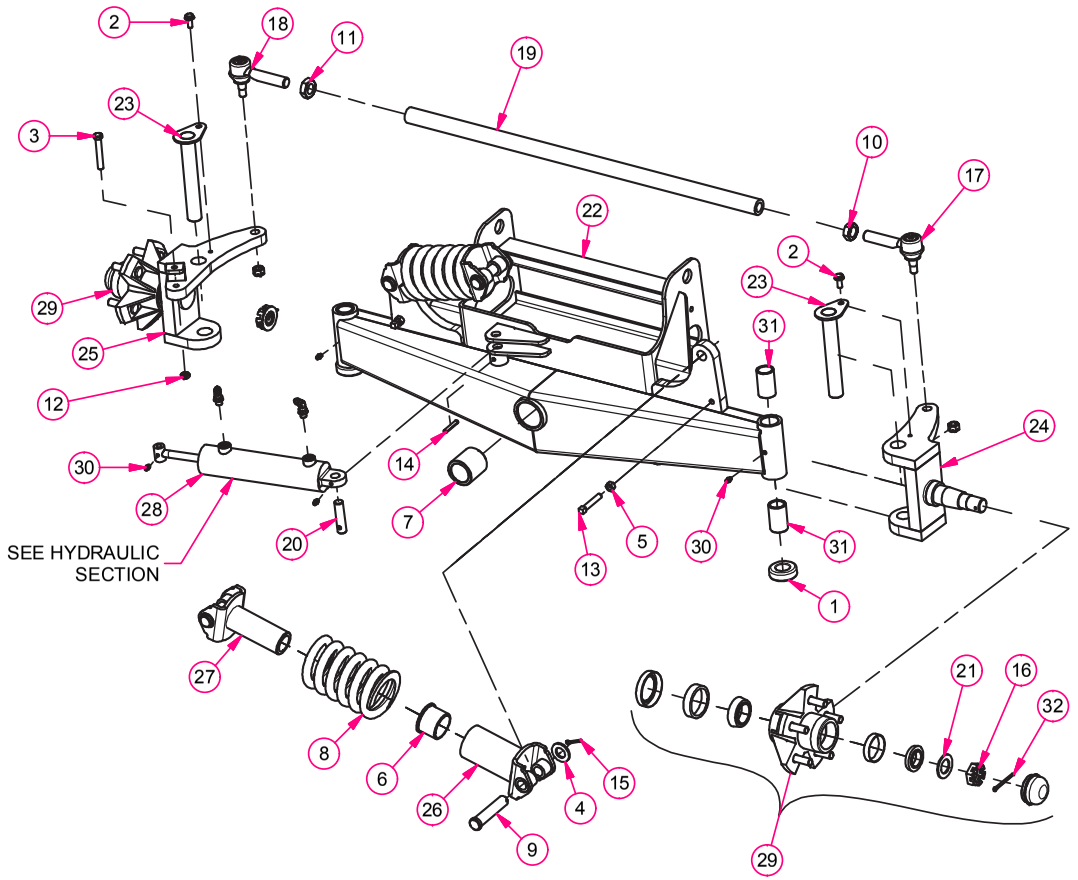
–SECURE ITEM No. 6, HARPER PRT No. 110615
1) AGAINST ITEM No. 5, HARPER PRT No. 110610
2) WITH LOCTITE BLUE



7/26/2013

FRONT AXLE ASSEMBLY

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	2	102043	BEARING - THRUST, 1.0 ID X 5/8 T
2	2	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
3	1	110497	BOLT, 3/8-24 X 2.5
4	4	110678	WASHER, 3/4" FLAT SAE
5	2	110826	NUT, 3/8-16 GR 5
6	2	110853	BUSHING - IGUS MFI2832-24
7	2	110857	BUSHING - 2.0 OD X 1.5 ID x 2.0, 660 BRNZ
8	2	110858	SPRING - COMPRESSION, 6 X 4 X .625
9	4	110889	CLEVIS PIN - 3/4 X 3.5
10	1	110891	NUT - JAM, 3/4-16 UNF, LH
11	1	110892	NUT - JAM, 3/4-16 UNF, RH
12	1	110897	NUT - JAM, 3/8-24 UNF
13	2	110921	SET SCREW - 3/8 X 2, SQU HD
14	1	200028	ROLL PIN, 1/4 X 1.5
15	4	200029	COTTER PIN, 5/32 X 1
16	2	310261	NUT - CROWN, 1-14
17	1	311011	TIE ROD END - LH
18	1	311012	TIE ROD END - RH
19	1	311254	TIE ROD - TV30
20	1	311406	PIN - STEERING CYLINDER
21	2	312009	WASHER, 1" PLAIN
22	1	315117	AXLE - FRONT, WELDMENT
23	2	315136	KINGPIN - TV30, WELDMENT
24	1	315137	SPINDLE - TV30, LH, WELDMENT
25	1	315138	SPINDLE - TV30, RH, WELDMENT
26	2	315139	MOUNT - SUSPENSION, LOWER, WELDMENT
27	2	315140	MOUNT - SUSPENSION, UPPER, WELDMENT
28	1	323010	CYLINDER - STEERING, 1-3/4 X 6
29	2	342004	HUB - 5 ON 4-1/2, 1750 Lbs
30	4	510174	GREASE ZERK, 1/4-28 ST
31	4	510821	BUSHING - 1-1/4 OD X 1.0 ID
32	2	510993	COTTER PIN, 5/32 X 2



HUB ASSEMBLY SERVICE PARTS		
QTY	PART #	DESCRIPTION
1	312001	GREASE CAP
1	312002	GREASE SEAL
5	312003	STUD - WHEEL, 1/2 - 20 NF
1	312004	HUB - 5 ON 4-1/2, 1750 Lbs
1	312005	OUTTER RACE
1	312006	OUTER BEARING
1	312007	INNER RACE
1	312008	INNER BEARING

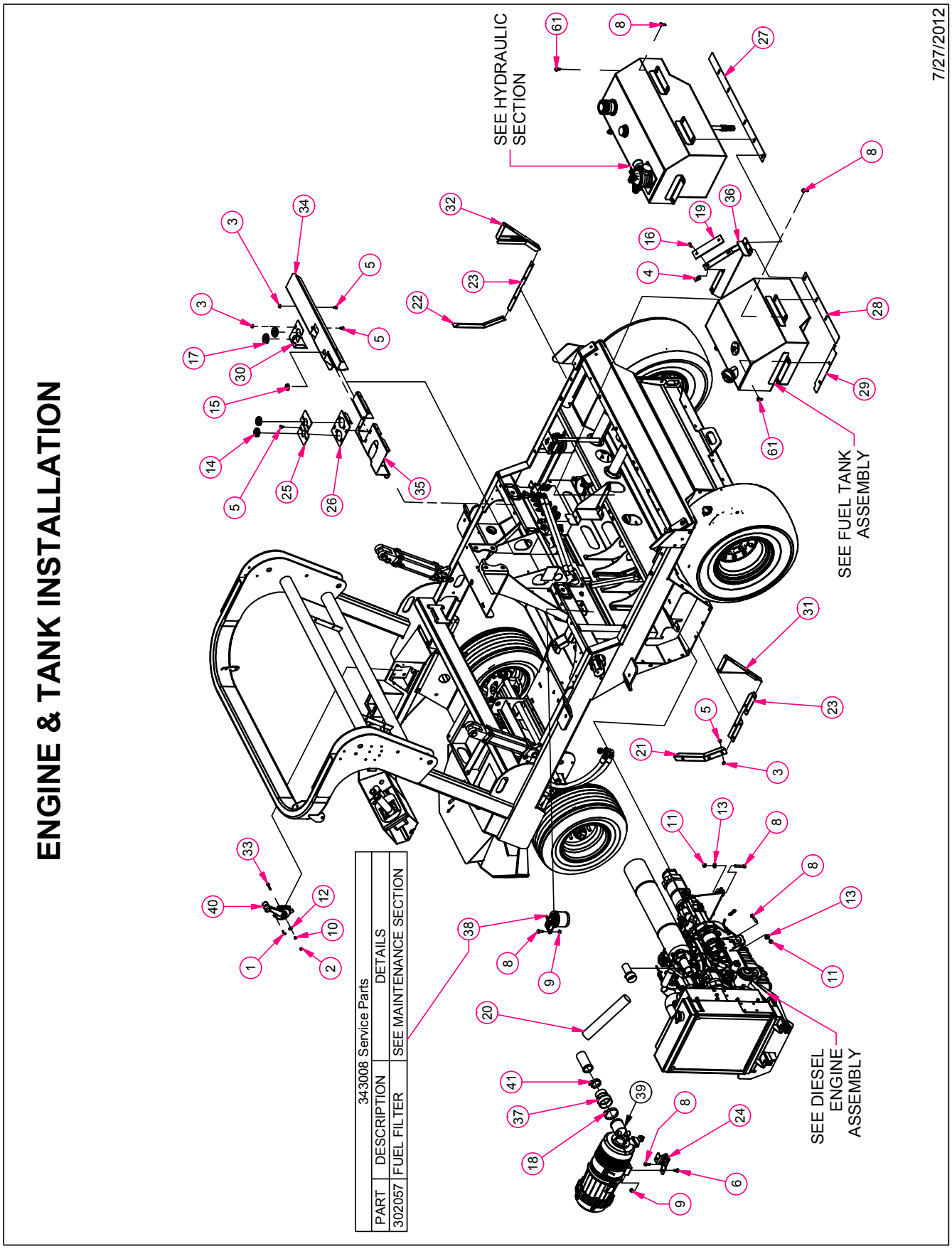
7/25/2012

ENGINE & TANK INSTALLATION

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	4	110082	SCREW, 10-24 X 0.75, HEX, FLG
2	1	110174	NUT, 1/4-20, UNITORQUE LOCK
3	21	110290	NUT, 1/4-20 WIZ FLANGE
4	4	110319	NUT, 5/16-18 U-TYPE .75L
5	21	110358	Bolt, 1/4-20 X 0.625 in Carriage
6	3	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
8	2	110459	BOLT, 5/16-18 X 1, WIZ FLANGE
8	6	110493	BOLT, 3/8-16 X 2.25
9	5	110606	NUT, 5/16-18 WIZ FLANGE
10	1	110609	NUT, 1/4-20
11	6	110618	NUT, 3/8-16 LOCK NYLON INSERT
12	1	110673	WASHER, 1/4" FLAT STANDARD
13	6	110676	WASHER, 3/8" FLAT STANDARD
14	2	110939	GROMMET - 1.0 ID X 1-3/4 OD, 1/16 X 1-3/8
15	1	110942	GROMMET - 3/8 ID X 1-1/4 OD, 1/16 X 1
16	2	110986	SCREW, 5/16-18 UNCX1 FH
17	2	112033	GROMMET - 1/2 ID X 1-1/4 OD, 1/16 X 1
18	1	112035	CLAMP, HOSE #40 2.375"
19	1	302019	PAD - LIFT ARM
20	1	302040	INTAKE TUBE ASSEMBLY
21	1	311319	STOP - SCREEN, FRONT, LH
22	1	311320	STOP - SCREEN, FRONT, RH
23	2	311325	STOP - SCREEN, LOWER
24	1	311476	MOUNT - AIR CLEANER
25	2	311533	ESCUTCHEON - RETURN OIL
26	1	311558	MOUNT - ESCUTCHEON
27	1	311584	FILLER - HYDRAULIC TANK REAR
28	1	311585	FILLER - REAR FUEL TANK
29	1	311586	FILLER - TANK SIDE
30	1	311619	HOSE SHIELD, FAN MOTOR
31	1	315165	STOP - SCREEN, REAR, LH
32	1	315166	STOP - SCREEN, REAR, RH WELDMENT
33	1	315218	BOLT - THROTTLE PIVOT, WELDMENT
34	1	315220	ENCLOSURE - FRONT ENGINE, RH
35	1	315221	ENCLOSURE - FRONT ENGINE, LH
36	1	315225	WELDMENT, TANK BRACKET
37	1	342036	REDUCER - SILICONE, 2-1/2 x 2
38	1	343008	FILTER - FUEL
39	1	343009	AIR CLEANER - 2-1/2", ENGINAIRE
40	1	353001	CONTROL - PUSH, LEVER, THROTTLE
41	1	500107	CLAMP, HOSE #32 2.00"

7/27/2012

ENGINE & TANK INSTALLATION



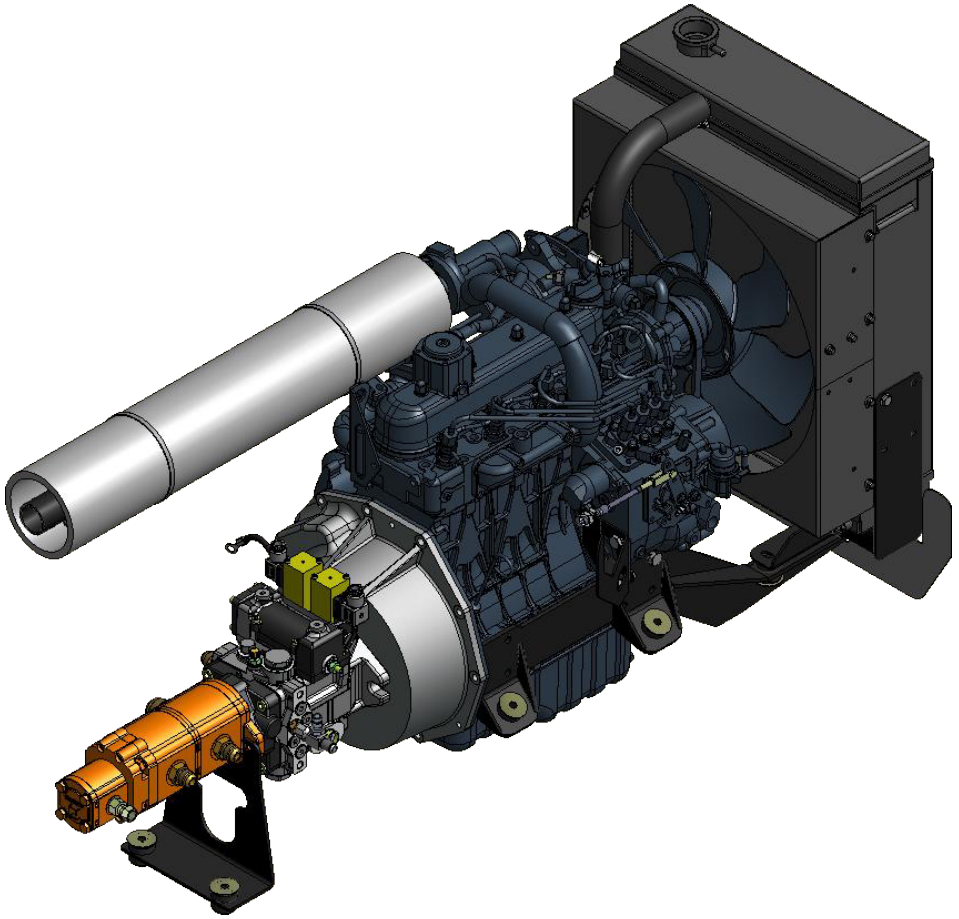
343008 Service Parts	
PART	DESCRIPTION
302057	FUEL FILTER

DETAILS

SEE MAINTENANCE SECTION

DIESEL ENGINE ASSEMBLY

PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	2	110155	WASHER, 3/8" FLAT SAE
2	2	110178	BOLT, 3/8-16 X 1.5 SHCS
3	2	110419	BOLT, 1/2-13 X 1.75
4	8	110426	BOLT, 5/16-18 X 0.5, WIZ FLANGE
5	1	110459	BOLT, 5/16-18 X 1, WIZ FLANGE
6	1	110469	BOLT, M8x1.25 x 20 Gr 10.9
7	4	110493	BOLT, 3/8-16 X 2.25
8	17	110560	BOLT, M10x1.25 x 20 Gr 10.9
9	1	110606	NUT, 5/16-18 WIZ FLANGE
10	4	110618	NUT, 3/8-16 LOCK NYLON INSERT
11	2	110658	WASHER, 1/2" FLAT STANDARD
12	2	110666	WASHER, 1/2" LOCK
13	2	110672	WASHER, 3/8" LOCK
14	1	110674	WASHER, 5/16" LOCK
15	4	110676	WASHER, 3/8" FLAT STANDARD
16	17	110689	WASHER, 10mm LOCK
17	4	110692	WASHER, 6 mm LOCK
18	4	110932	BOLT, M6x1 x 30 Gr 10.9
19	1	120128	ADAPTER, 2MBSPP-2FP
20	1	302017	CLEVIS - THROTTLE
21	10	302041	ISOLATOR - MOUNT
22	1	302052	SLEEVE - EXHAUST, TV30
23	2	302056	TIE, STAINLESS STEEL ZIP
24	1	311474	BAFFLE - LOWER RADIATOR
25	1	311683	SUPPORT, TRIPLE SECTION PUMP
26	1	315183	MOUNT - MOTOR, LH, WELDMENT
27	1	315184	MOUNT - MOTOR, RH, WELDMENT
28	1	315185	MOUNT - RADIATOR, WELDMENT
29	1	315186	MOUNT - KUBOTA THROTTLE, WELDMENT
30	1	332004	SENDER-WATER TEMP,3/8 NPT,HGH RNG
31	1	342011	ADAPTER - PUMP, KUBOTA 1505, KIT
32	1	342012	MUFFLER - KUBOTA 1505
33	1	342034	HOSE - RADIATOR, LOWER, TV30
34	1	342035	HOSE - RADIATOR, UPPER, TV30
35	1	343002	ENGINE - DIESEL, KUBOTA, 1505
36	1	343005	RADIATOR - TV30 DIESEL
37	1	343034	FAN, RADIATOR PUSHER
38	1	353001	CABLE - THROTLE
39	1	530068	OIL PRESSURE SENDER
40	4	720107	CLAMP, HOSE #20 1.25"
41	1	832001	STARTER GROUND



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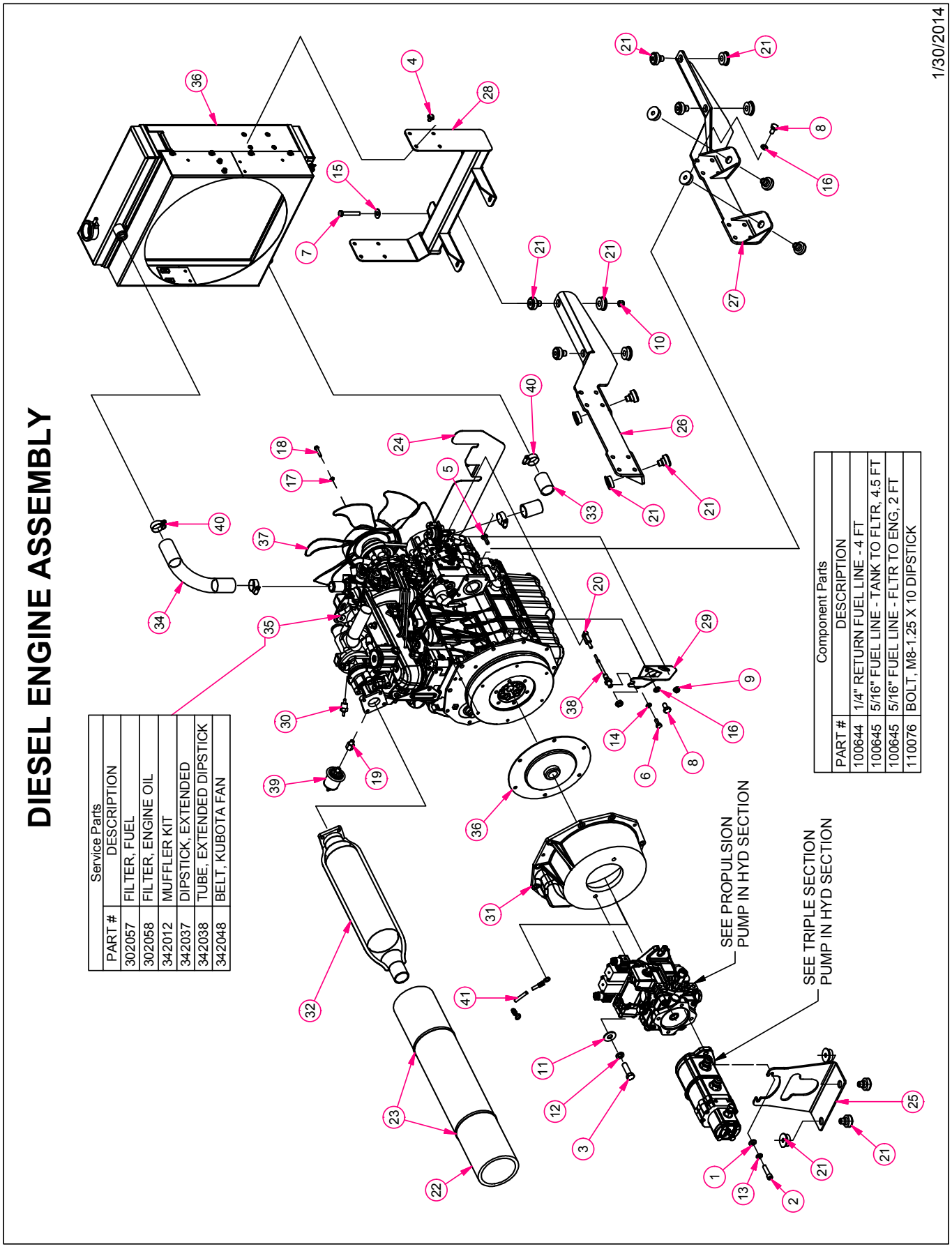
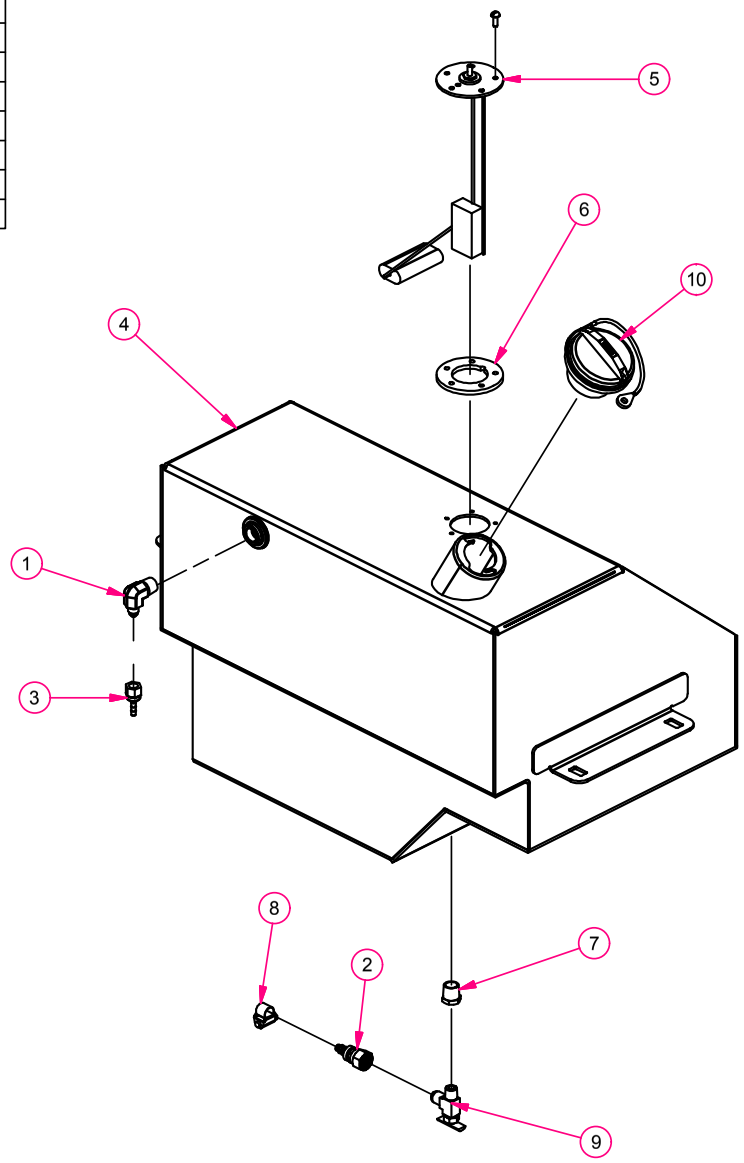

DIESEL ENGINE ASSEMBLY
1/30/2014
Service Parts
PART # DESCRIPTION
302057 FILTER, FUEL
302058 FILTER, ENGINE OIL
342012 MUFFLER KIT
342037 DIPSTICK, EXTENDED
342038 TUBE, EXTENDED DIPSTICK
342048 BELT, KUBOTA FAN
Component Parts
PART # DESCRIPTION
100644 1/4" RETURN FUEL LINE - 4 FT
100645 5/16" FUEL LINE - TANK TO FLTR, 4.5 FT
100645 5/16" FUEL LINE - FLTR TO ENG, 2 FT
110076 BOLT, M8-1.25 X 10 DIPSTICK
SEE PROPULSION PUMP IN HYD SECTION
SEE TRIPLE SECTION PUMP IN HYD SECTION

FUEL TANK ASSEMBLY

PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	1	120040	ADAPTER, 4MJ-6MP90
2	1	120378	ADAPTER, 5HB-6FBX
3	1	120655	Adapter, 3hb-4fj
4	1	315141	TANK - FUEL, WELDMENT
5	1	332005	SENDER - FUEL LEVEL, ELECTRIC
6	1	500172	GASKET, FUEL SENDER
7	1	500209	FITTING, REDUCER 3/8 X 1/4 NPT
8	1	520098	CLAMP, HOSE #10 .50"
9	1	802023	VALVE, FUEL SHUT OFF 6MB-4MP
10	1	970788	FUEL CAP, 2"



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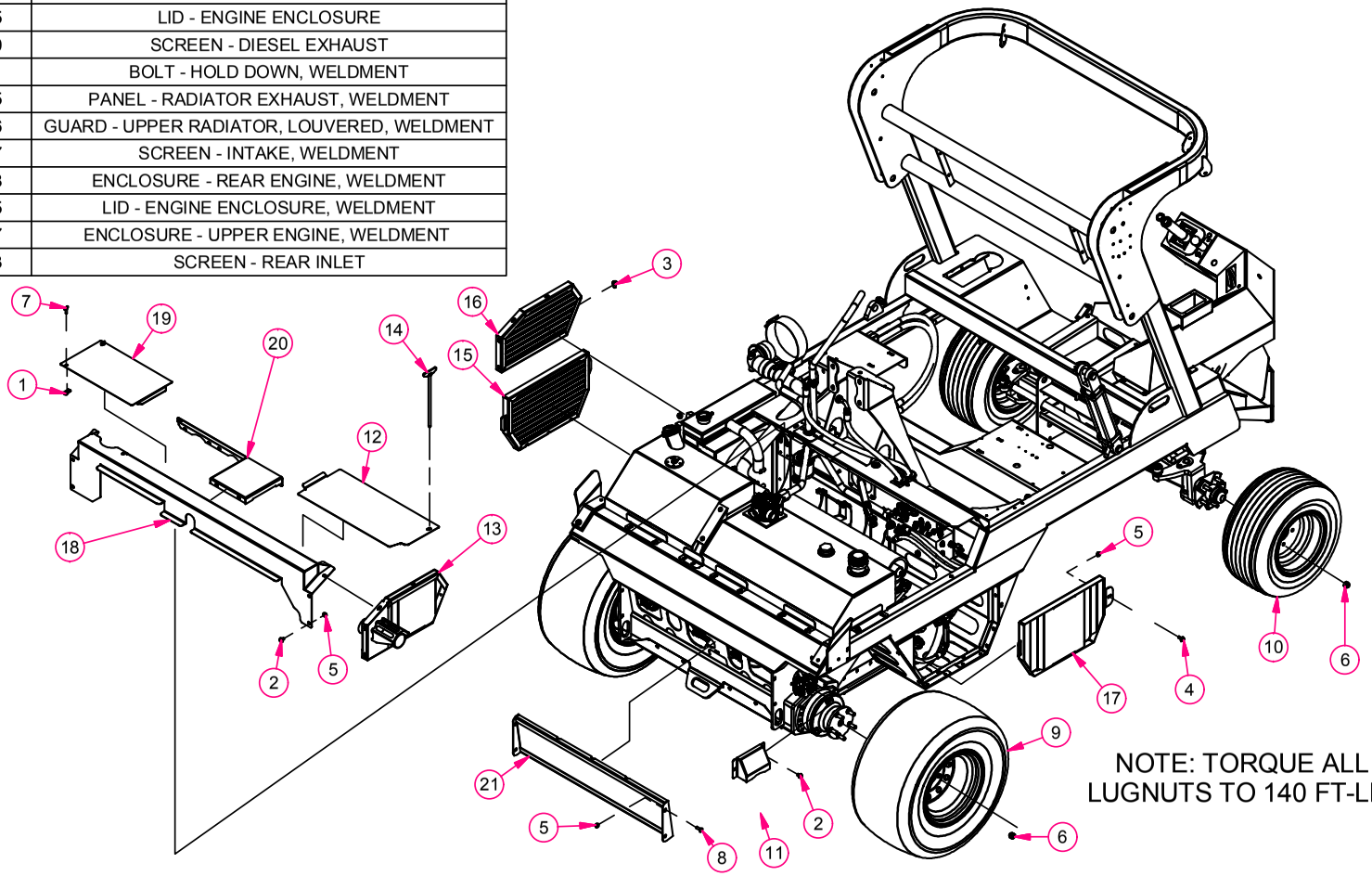
ENGINE SHIELD ASSEMBLIES

PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	2	110071	1/4-20 U-TYPE TAPPED HOLE
2	10	110426	BOLT, 5/16-18 X 0.5, WIZ FLANGE
3	1	110437	BOLT, 3/8-16 X 0.75, WIZ FLANGE
4	2	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
5	12	110606	NUT, 5/16-18 WIZ FLANGE
6	20	110617	NUT - LUG 1/2-20
7	2	110842	Screw, 1/4-20 X 3/4 Wing Head
8	4	110871	Bolt, 5/16-18 X 1 in Carriage
9	2	302008	26" MULTI-TRACK TIRE & WHEEL
10	2	302011	10x20 TIRE & WHEEL ASSEM - FRONT
11	2	311561	COVER - WHEEL MOTOR
12	1	311565	LID - ENGINE ENCLOSURE
13	1	315190	SCREEN - DIESEL EXHAUST
14	1	315191	BOLT - HOLD DOWN, WELDMENT
15	1	315205	PANEL - RADIATOR EXHAUST, WELDMENT
16	1	315206	GUARD - UPPER RADIATOR, LOUVERED, WELDMENT
17	1	315207	SCREEN - INTAKE, WELDMENT
18	1	315208	ENCLOSURE - REAR ENGINE, WELDMENT
19	1	315215	LID - ENGINE ENCLOSURE, WELDMENT
20	1	315217	ENCLOSURE - UPPER ENGINE, WELDMENT
21	1	315223	SCREEN - REAR INLET



3/11/2014

PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	1	110020	Bolt, 5/16-18 X 0.75 in Carriage
2	4	110441	BOLT, 5/16-18 X 4.0
3	2	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
4	2	110459	BOLT, 5/16-18 X 1, WIZ FLANGE
5	2	110515	BOLT, 1/4-20 X .50
6	4	110603	NUT, 5/16-18 LOCK (NYLON)
7	3	110606	NUT, 5/16-18 WIZ FLANGE
8	8	110631	NUT, 10-24 LOCK NYLON INSERT
9	5	110665	WASHER, 5/16" FLAT STANDARD
10	2	110674	WASHER, 5/16" LOCK
11	4	110709	SCREW, 10-24 X 0.75, RHMS
12	14	110788	BOLT, 10-24 X .375 STAINLESS, PHILLIPS
13	1	110867	GROMMET - 2 ID X 1/8 X 2-5/8
14	2	110896	GROMMET - 1-1/2 ID X 1/4 X 2-1/8 OD
15	1	110922	PLUG - 7/8", LOCKING, NON-VENTED
16	2	111016	BOLT, 5/16-18 X 9.0
17	1	132069	BATTERY TERMINAL COVER, POSITIVE
18	1	132070	BATTERY TERMINAL COVER, NEGATIVE
19	1	311395	PLATE - MOUNT, GAUGE
20	1	311397	PAD - SWITCH
21	1	311454	COVER - RELAY, TV30
22	1	311603	BRACKET - HOLD DOWN, BATTERY
23	1	311604	BATTERY ENCLOSURE
24	1	311660	MOUNT, SWITCH AND HOUR METER
25	1	332005	SENDER - FUEL LEVEL, ELECTRIC
26	1	332005	GASKET
27	1	332028	BATTERY CABLE , POSITIVE
28	1	332031	SWITCH, IGNITION
29	1	332036	Inclinometer Switch, Solid-State 5 deg
30	1	333002	CONTROLLER - FOOT PEDAL, OEM
31	4	510960	SCREW, 10-24 X 0.5, RHMS
32	1	530009	HOUR METER
33	1	530051	BATTERY CABLE, NEGATIVE
34	1	530064	OIL PRESSURE GAUGE
35	1	530065	GAUGE, FUEL
36	1	532007	GAUGE, WATER TEMP
37	2	730006	INDICATOR LIGHT
38	1	810747	SWITCH SHIM
39	1	830002	VOLT METER
40	1	832003	SWITCH, PADDLE, CARLING (280063)
41	3	832004	SWITCH, PADDLE, CARLING (29261)
42	2	832005	SWITCH, PADDLE, CARLING (29253)
43	2	832007	SWITCH MOUNT, END

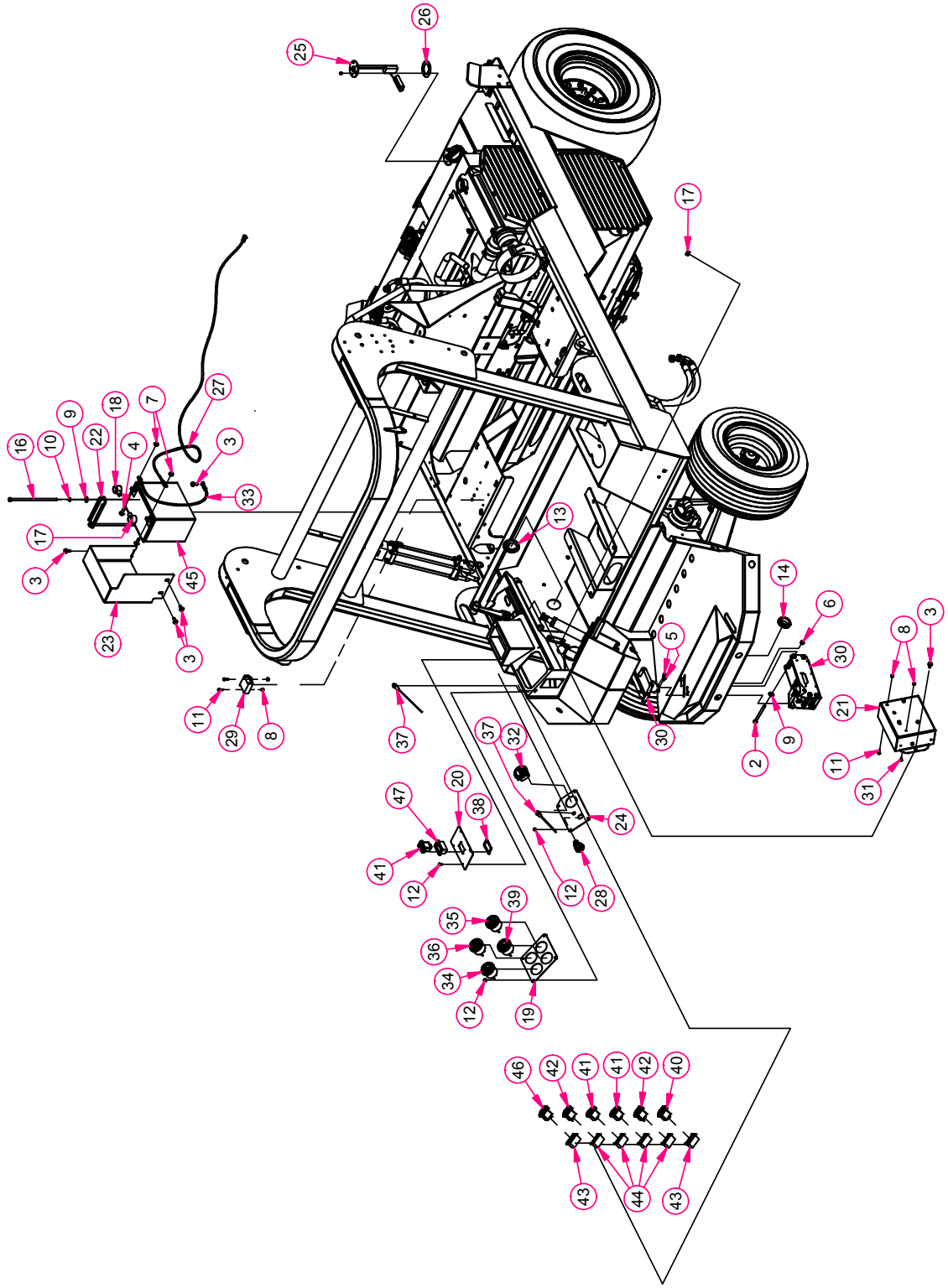
PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
44	4	832008	SWITCH MOUNT, MIDDLE
45	1	832011	BATTERY
46	1	832018	SWITCH, SPDT, ON-ON
47	1	832024	MOUNT, SWITCH (VMS)

ELECTRICAL ASSEMBLIES

7/26/2013

ELECTRICAL ASSEMBLIES

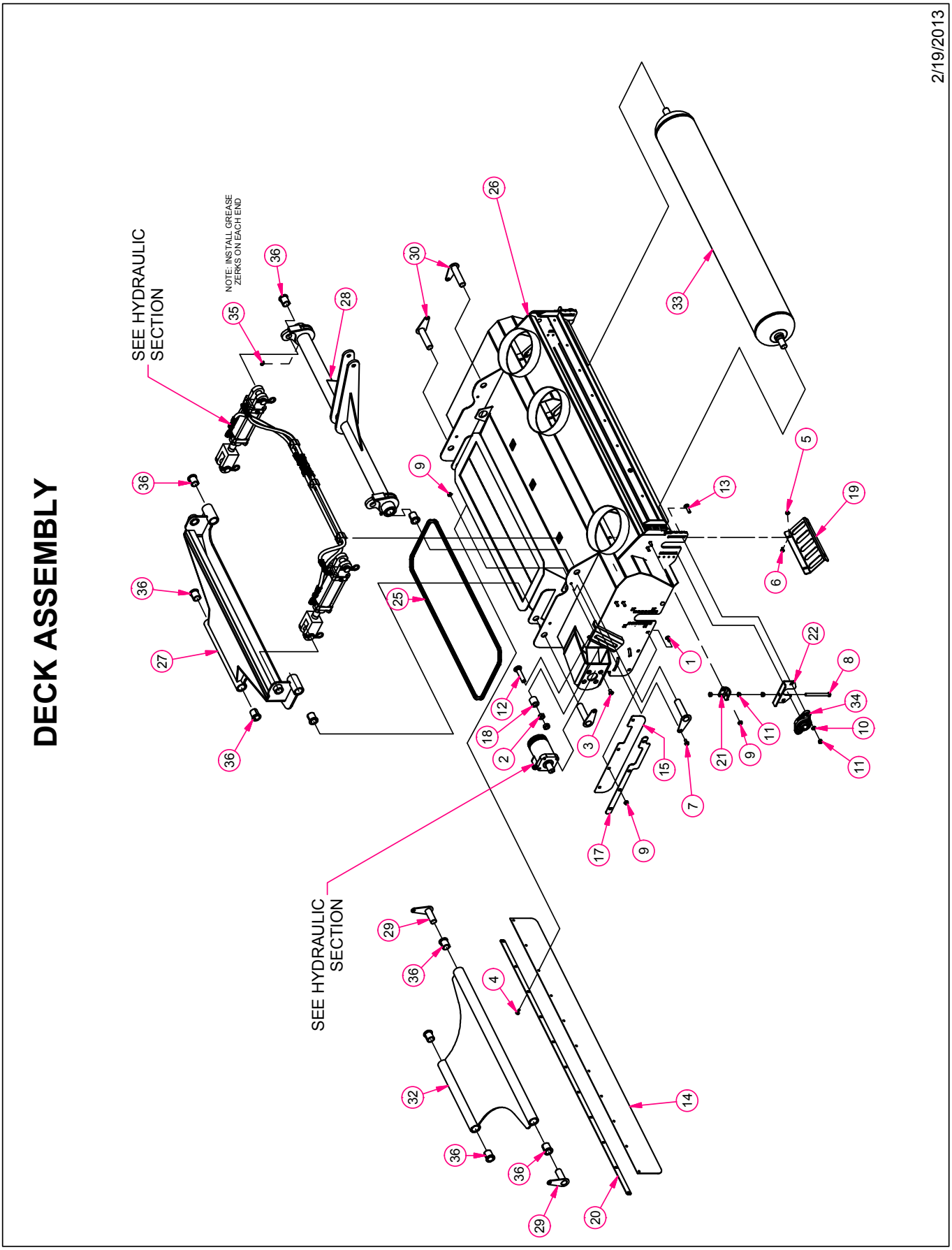
7/26/2013



DECK ASSEMBLY

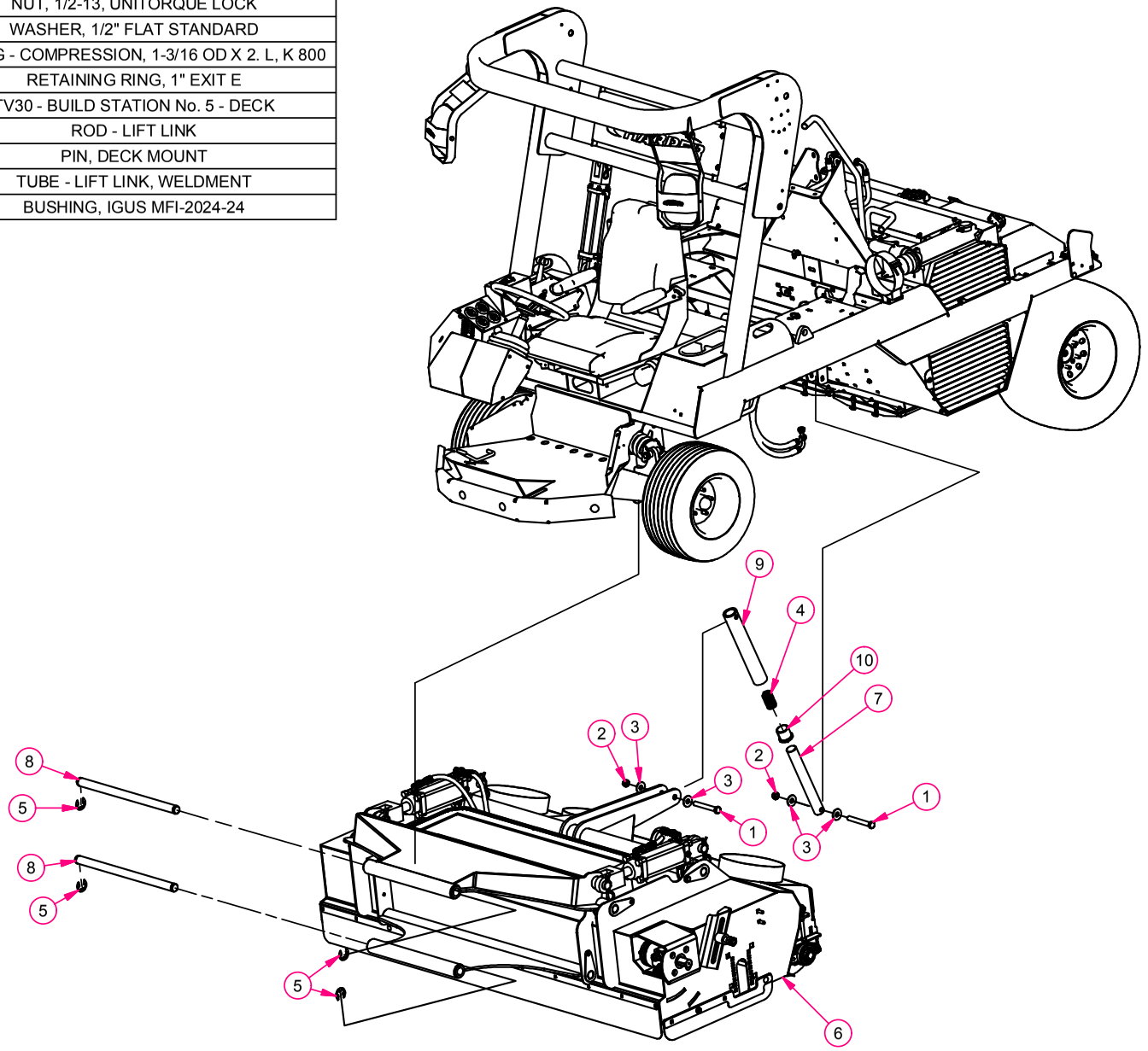
PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	8	110020	Bolt, 5/16-18 X 0.75 in Carriage
2	2	110039	NUT, 5/8-11 JAM
3	4	110126	BOLT, 3/8-16 X .75 FLT HD SKT HD
4	23	110154	Bolt, 1/4-20 X 0.75 in Carriage
5	23	110290	NUT, 1/4-20 WIZ FLANGE
6	12	110358	Bolt, 1/4-20 X 0.625 in Carriage
7	6	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
8	2	110581	BOLT, 3/8-16 X 4.5 TAP
9	14	110606	NUT, 5/16-18 WIZ FLANGE
10	4	110672	WASHER, 3/8" LOCK
11	10	110826	NUT, 3/8-16 GR 5
12	1	110895	Bolt, 5/8-11 X 3 in Carriage
13	4	110916	Bolt, 3/8-16 X 1.5 in Carriage
14	1	302018	SKIRT - DECK, RUBBER, FRONT
15	2	302034	SKIRT - DECK, RUBBER, SIDE
16	1	302049	SCRAPPER - DECK ROLLER, RUBBER
17	2	311335	RETAINER - DECK SKIRT
18	1	311370	SPACER - IDLER
19	3	311382	BAFFLE - DECK, RETURN AIR
20	1	311383	RETAINER - DECK SKIRT, FRONT
21	2	311389	BRACKET - ROLLER ADJUSTMENT, DECK
22	2	311391	BRACKET - ROLLER ADJUSTMENT, BEARING
23	1	311505	BRACKET - ROLLER ADJUSTMENT, DECK
24	1	311528	RETAINER - SCRAPPER, DECK ROLLER
25	1	311587	CANVAS RING - EDGE GUARD, 5/32
26	1	315100	DECK WELDMENT
27	1	315108	LINKAGE - DECK MOUNT, UPPER, WELDMENT
28	1	315112	LIFT - DECK, REAR, WELDMENT
29	2	315160	PIN - DECK, LOWER, WELDMENT
30	4	315161	PIN - DECK, WELDMENT
31	1	315177	MOUNT - SCRAPPER, DECK ROLLER, WELDMENT
32	1	315193	LINKAGE - DECK MOUNT, LOWER, WELDMENT
33	1	315197	ROLLER - TV30 DECK, WELDMENT
34	2	342008	BEARING - 1", 2 - BOLT FLNG, MED DUTY
35	2	500231	GREASE ZERK, 1/4-28 45deg
36	10	800124	BUSHING, MFI-1620-24

2/19/2013


DECK ASSEMBLY
2/19/2013
SEE HYDRAULIC SECTION
NOTE: INSTALL GREASE ZERKS ON EACH END
SEE HYDRAULIC SECTION

DECK INSTALLATION

PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	2	110003	BOLT, 1/2-13 X 4.0
2	2	110615	NUT, 1/2-13, UNITORQUE LOCK
3	4	110658	WASHER, 1/2" FLAT STANDARD
4	1	110861	SPRING - COMPRESSION, 1-3/16 OD X 2. L, K 800
5	4	110913	RETAINING RING, 1" EXIT E
6	1	305045	TV30 - BUILD STATION No. 5 - DECK
7	1	311133	ROD - LIFT LINK
8	2	311679	PIN, DECK MOUNT
9	1	315113	TUBE - LIFT LINK, WELDMENT
10	1	800129	BUSHING, IGUS MFI-2024-24

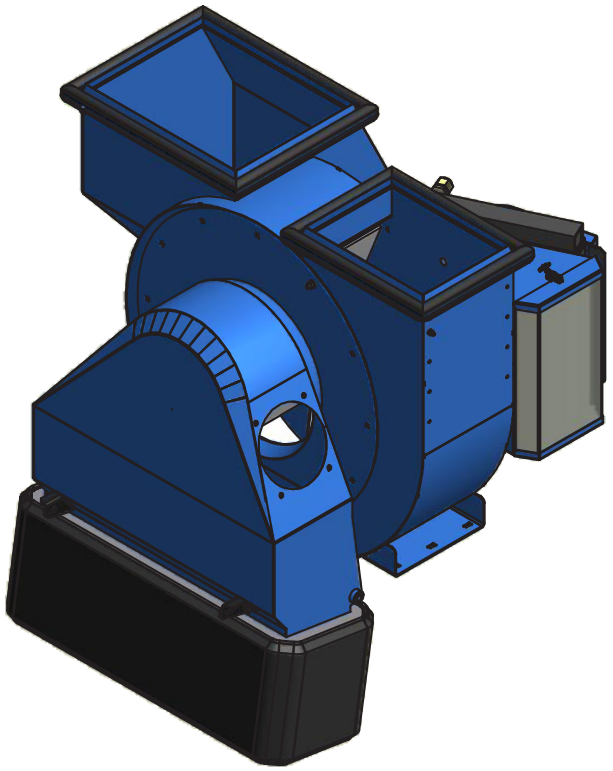


1/31/2014

FAN HOUSING & HYDRAULIC COOLER ASSEMBLY

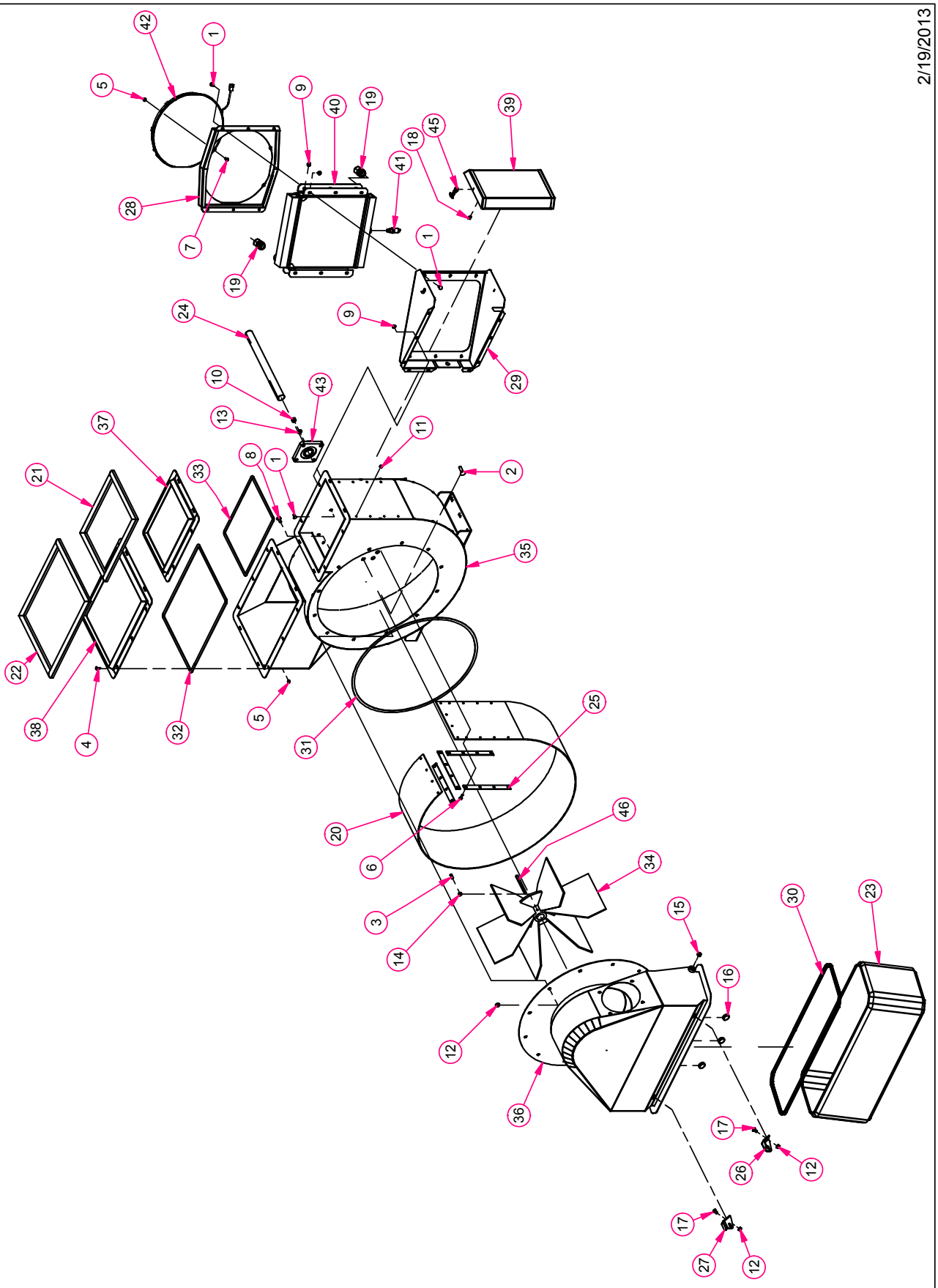
PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	17	110020	Bolt, 5/16-18 X 0.75 in Carriage
2	4	110042	Bolt, 1/2-13 X 1.75 in Carriage
3	4	110093	SetScrew, 3/8-16 X 1.25
4	18	110154	Bolt, 1/4-20 X 0.75 in Carriage
5	22	110290	NUT, 1/4-20 WIZ FLANGE
6	16	110326	Bolt, 1/4-20 X 1 in Carriage
7	4	110468	BOLT, 1/4-20 X 0.75, WIZ FLANGE
8	12	110556	Bolt, 3/8-16 X 1 in Carriage
9	21	110606	NUT, 5/16-18 WIZ FLANGE
10	4	110610	NUT, 1/2-13
11	16	110630	NUT, 1/4-20 LOCK (NYLON INSERT)
12	12	110645	NUT, 3/8-16 WIZ FLANGE
13	4	110666	WASHER, 1/2" LOCK
14	4	110826	NUT, 3/8-16 GR 5
15	2	110884	PLUG - 11/16", NON-VENTED
16	3	110890	PLUG - 1-1/4", FINISHING
17	2	110894	Bolt, 3/8-16 X 0.75 in Carriage
18	4	112051	POP RIVET, 1/8 X .275
19	2	120515	ADAPTER - TUBING CONNECTOR, 1", 16MB
20	1	302001	LINER - FAN, TV30
21	1	302021	GASKET - FAN EXHAUST
22	1	302022	GASKET - RETURN AIR
23	1	302023	RING - CANVAS, TV30
24	1	311188	SHAFT - IMPELLER, TV30
25	4	311380	STRAP - HOLD DOWN, LINER
26	1	311385	BRACKET - MOUNT, FRONT FUNNEL, LH
27	1	311386	BRACKET - MOUNT, FRONT FUNNEL, RH
28	1	311493	SHROUD - COOLER FAN
29	1	311494	MOUNT - CORE, HYDRAULIC COOLER
30	1	311587	CANVAS RING - EDGE GUARD, 5/32
31	1	311588	AIR FUNNEL FLANGE SEAL - RUBBER, TRIMLOK
32	1	311589	HOPPER INLET SEAL - RUBBER, TRIMLOK
33	1	311590	RETURN AIR SEAL - RUBBER, TRIMLOK
34	1	315114	IMPELLER WELDMENT
35	1	315115	FAN - HOUSING WELDMENT
36	1	315122	FUNNEL - WELDMENT
37	1	315158	ADAPTER - FAN EXHAUST, WELDMENT
38	1	315159	ADAPTER - RETURN AIR, WELDMENT

PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
39	1	315198	BREATHER - HYDRAULIC COOLER, WELDMENT
40	1	322028	COOLER - HYDRAULIC, TV30
41	1	332019	SWITCH - TEMP, HYDRAULIC OIL
42	1	333003	FAN - 16", 12V, 20A, HYDRAULIC COOLER
43	1	342009	BEARING, 4FNG 1 1/2", HD
44	2	810126	LATCH, FEMALE
45	2	810127	LATCH - RUBBER
46	1	940113	KEY, 3/8 X 5



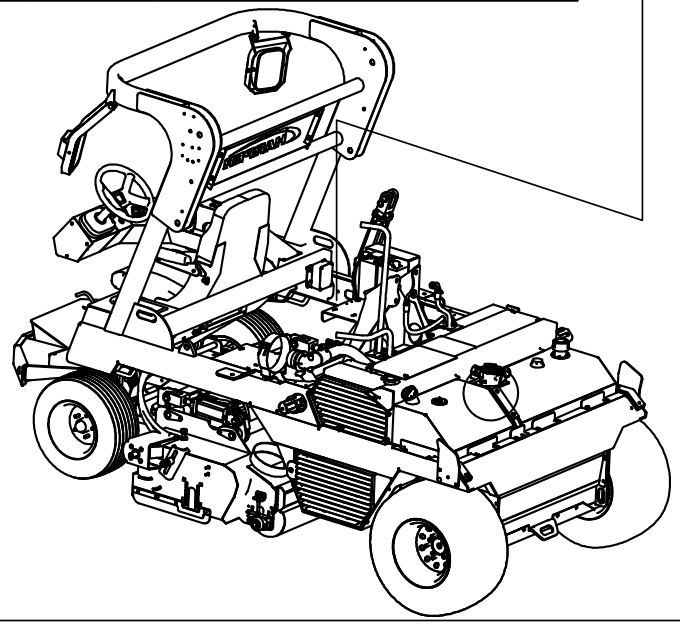
FAN HOUSING & HYDRAULIC COOLER ASSEMBLY

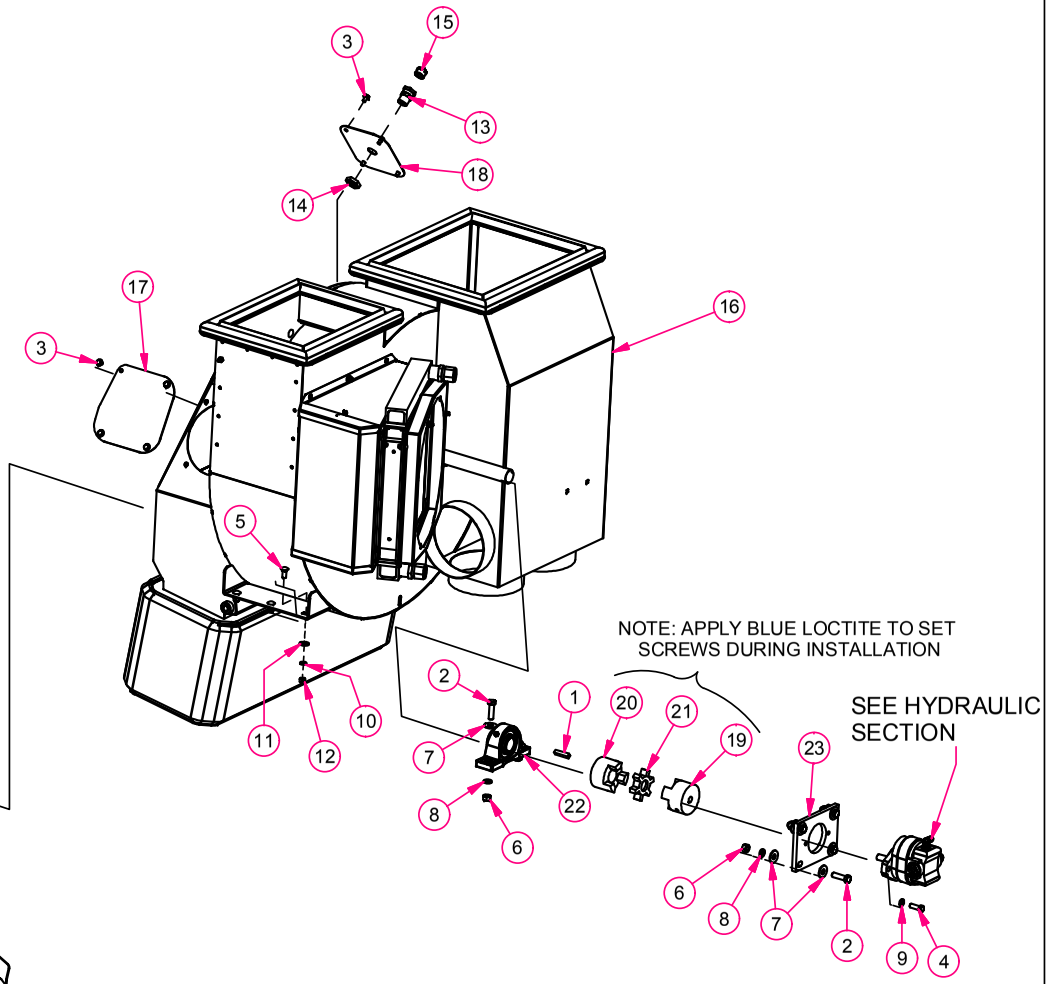
2/19/2013



FAN HOUSING INSTALLATION

PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	1	100567	KEY, 3/8 X 3/8 X 1.75 in
2	6	110419	BOLT, 1/2-13 X 1.75
3	8	110426	BOLT, 5/16-18 X 0.5, WIZ FLANGE
4	2	110539	BOLT, 7/16-14 X 1.25
5	6	110556	Bolt, 3/8-16 X 1 in Carriage
6	6	110610	NUT, 1/2-13
7	10	110658	WASHER, 1/2" FLAT STANDARD
8	6	110666	WASHER, 1/2" LOCK
9	2	110671	WASHER, 7/16" LOCK
10	6	110672	WASHER, 3/8" LOCK
11	6	110676	WASHER, 3/8" FLAT STANDARD
12	6	110826	NUT, 3/8-16 GR 5
13	1	302060	SWIVEL, GARDEN HOSE-TO-PIPE
14	1	302061	LOCKNUT, 3/4 NPT
15	1	302062	PLUG, GARDEN HOSE
16	1	305044	TV30 - BUILD STATION No. 4 - FAN HOUSING
17	1	311212	COVER - HOSE PORT, FUNNEL
18	1	311649	COVER, HOSE CLEANOUT ACCESS
19	1	922067	COUPLING, 5/8" BORE
20	1	922068	HUB, COUPLING 1-1/2" BORE
21	1	922069	LOVEJOY COUPLER SPIDER
22	1	940103	PILLOW BLOCK BEARING, (1.5)
23	1	970291	ADAPTER PLATE

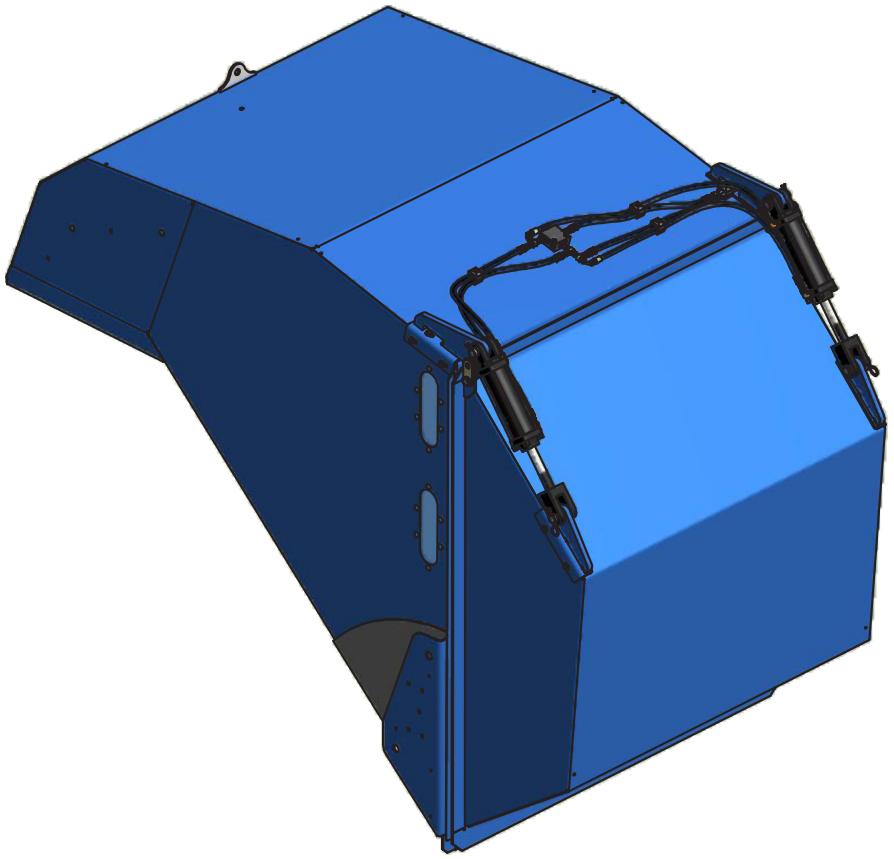


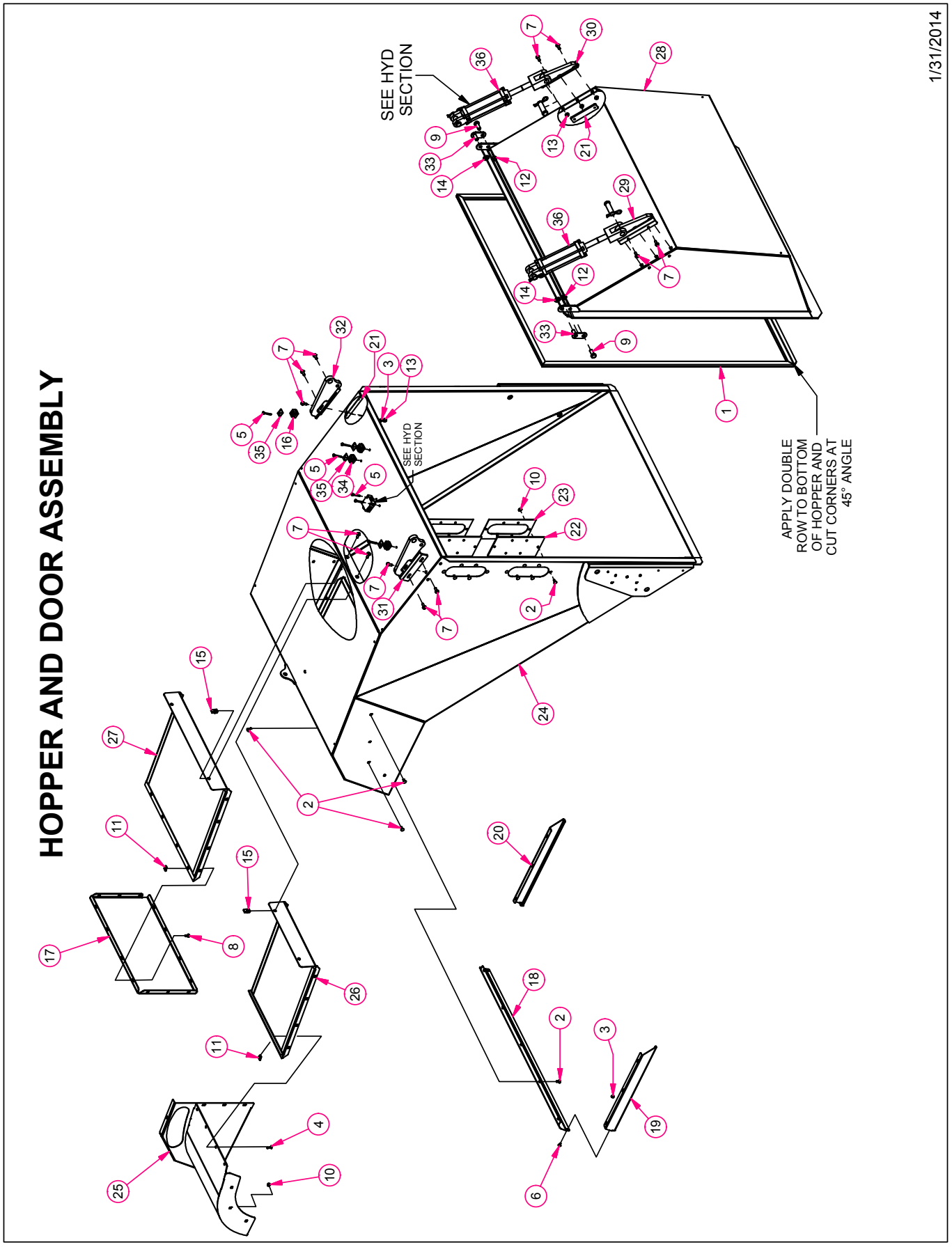


2/19/2013

HOPPER AND DOOR ASSEMBLY

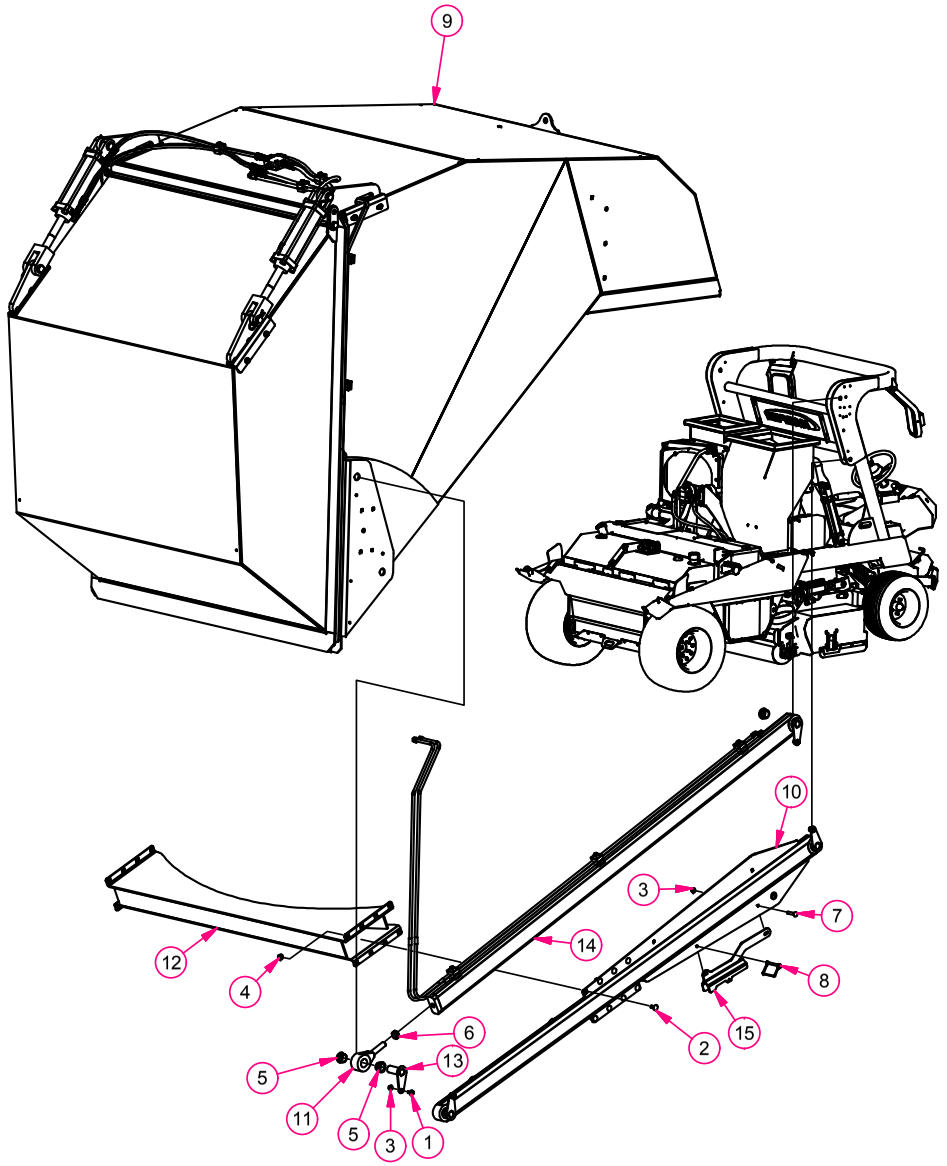
PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	5	102004	D-Seal, Rubber 1.00" x 1.00"
2	53	110020	Bolt, 5/16-18 X 0.75 in Carriage
3	17	110290	NUT, 1/4-20 WIZ FLANGE
4	4	110328	BOLT, 5/16-18 X 1 FLT HD SKT
5	6	110354	BOLT, 1/4-20 X 2.0 HEX HEAD
6	2	110358	Bolt, 1/4-20 X 0.625 in Carriage
7	6	110440	BOLT, 3/8-16 X 1, WIZ FLANGE
8	4	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
9	2	110576	BOLT, 5/8-11 X 1.5 GR 5
10	36	110606	NUT, 5/16-18 WIZ FLANGE
11	8	110616	NUT, 5/16", J-TYPE, CAGE, .5C
12	2	110639	NUT, 5/8-11, UNITORQUE LOCK
13	8	110645	NUT, 3/8-16 WIZ FLANGE
14	2	110663	WASHER, 5/8" FLAT SAE
15	4	110804	NUT, 3/8-16 U-TYPE .75L
16	3	122003	DOUBLE HOSE CLAMP
17	1	311248	BAFFLE - RETURN AIR, TV30
18	1	311286	SKIRT - HOPPER, FRONT
19	1	311287	SKIRT - HOPPER, LH
20	1	311288	SKIRT - HOPPER, RH
21	4	311657	PLATE, HINGE
22	2	311691	SIGHT GLASS, HOPPER
23	2	311692	Backing Plate, Sight Glass
24	1	315125	HOPPER WELDMENT
25	1	315131	DEFLECTOR - DEBRIS, HOPPER, WELDMENT
26	1	315132	SCREEN -PRIMARY, WELDMENT
27	1	315133	SCREEN -SECONDARY, WELDMENT
28	1	315134	DOOR - TV30, WELDMENT
29	1	315253	LUG WELDMENT, LH DOOR
30	1	315254	LUG WELDMENT, RH DOOR
31	1	315255	LUG WELDMENT, LH HOPPER
32	1	315256	LUG WELDMENT, RH HOPPER
33	2	315257	PIN WELDMENT, HOPPER DOOR
34	3	522104	DOUBLE HOSE CLAMP
35	4	522105	DOUBLE COVERPLATE
36	2	923011	Cylinder, 2 X 6, -6 SAE Cross




HOPPER AND DOOR ASSEMBLY
1/31/2014
SEE HYD SECTION
SEE HYD SECTION
APPLY DOUBLE ROW TO BOTTOM OF HOPPER AND CUT CORNERS AT 45° ANGLE

PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	8	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
2	16	110556	Bolt, 3/8-16 X 1 in Carriage
3	9	110606	NUT, 5/16-18 WIZ FLANGE
4	16	110645	NUT, 3/8-16 WIZ FLANGE
5	16	110851	BUSHING - IGUS, 1-1/4 x 1 x 3/4 fng (RFI-1620-12)
6	2	110892	JamHexNut 3_4-16 UNF
7	2	110972	Bolt, 5/16-18 X 1.75 in Carriage
8	2	140016	PIN, LOCK, 1/4 X 2-1/4, SQ WIRE
9	1	314002	HOPPER ASSEMBLY
10	2	315154	LIFT ARM - HOPPER, LOWER, WELDMENT
11	2	315156	END - LIFT ARM, HOPPER, WELDMENT
12	1	315157	BRACE - LIFT ARM, HOPPER, WELDMENT
13	8	315160	PIN - DECK, LOWER, WELDMENT
14	1	315176	LIFT ARM - HOPPER, UPPER, RH, WELDMENT
15	2	315196	STOP - HOPPER LIFT CLINDER, WELDMENT

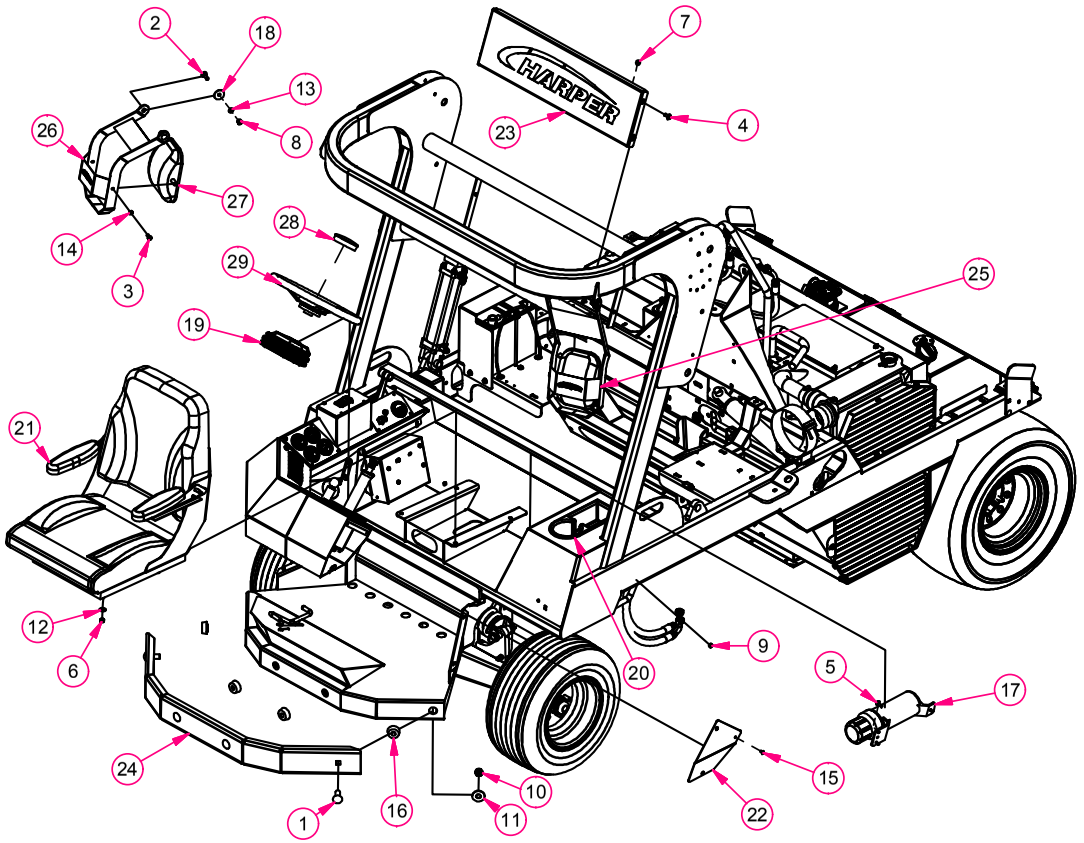
HOPPER INSTALLATION



1/31/2014

PART LIST			
ITEM	QTY	PART #	DESCRIPTION
1	4	110391	Bolt, 5/8-11 X 2 in Carriage
2	4	110402	Bolt, 3/8-16 X 1.25 in Carriage
3	2	110422	BOLT, 5/16-18 X .75
4	4	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
5	3	110468	BOLT, 1/4-20 X 0.75, WIZ FLANGE
6	4	110603	NUT, 5/16-18 LOCK (NYLON)
7	4	110606	NUT, 5/16-18 WIZ FLANGE
8	4	110618	NUT, 3/8-16 LOCK NYLON INSERT
9	3	110630	NUT, 1/4-20 LOCK (NYLON INSERT)
10	4	110639	NUT, 5/8-11, UNITORQUE LOCK
11	4	110650	WASHER, 5/8" FLAT STANDARD
12	4	110665	WASHER, 5/16" FLAT STANDARD
13	4	110672	WASHER, 3/8" LOCK
14	2	110674	WASHER, 5/16" LOCK
15	3	110788	BOLT, 10-24 X .375 STAINLESS, PHILLIPS
16	4	110850	ISOLATOR - BUMPER, 64865K1, 250 LB
17	1	152004	HOLDER, MANUAL
18	4	211747	FRICTION WASHER 1.5"
19	1	302002	BOOT - STEERING, TV30
20	1	302015	HOLDER - CUP, MOLDED
21	1	302016	SEAT
22	1	311129	CAP - END, STEERING BOX
23	1	311195	SHIELD - ROPS, TV30
24	1	311372	BUMPER - TV30
25	1	315173	BASE -MIRROR, LH, WELDMENT
26	1	315174	BASE -MIRROR, RH, WELDMENT
27	2	502027	MIRROR
28	1	502087	Cap, Center Steering
29	1	552002	STEERING WHEEL

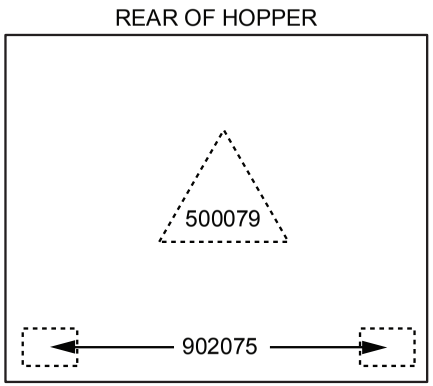
OPERATOR STATION

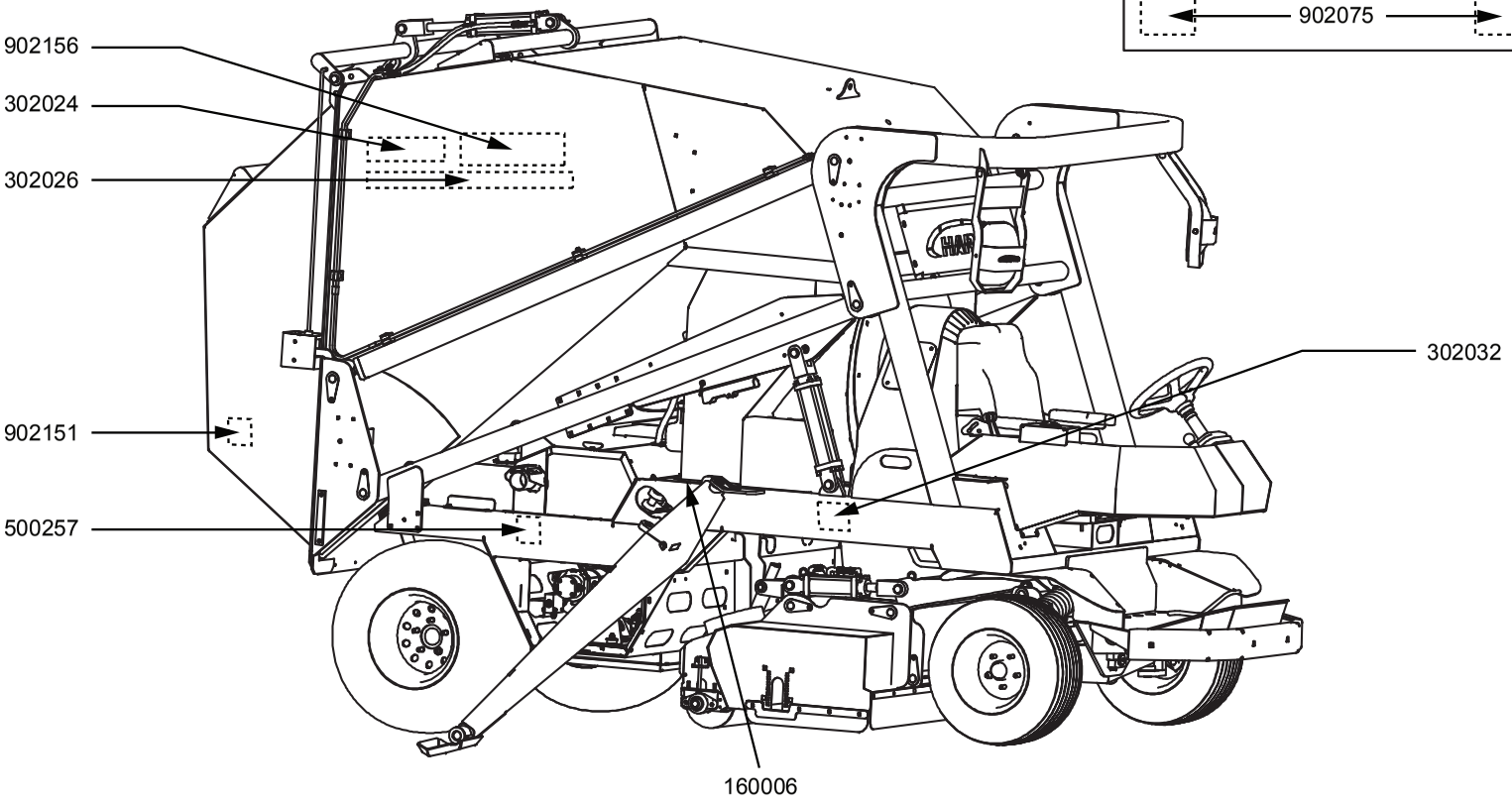


2/19/2013

Parts List		
Part #	Qty	Description
160006	1	Decal
302024	1	Decal, Turf Vac High Dump
302026	1	Decal, Stripe Right TV30
302032	1	Decal, Safety Latch
500079	1	Decal, Slow Moving Vehicle
500257	1	Decal, Hot Muffler
902075	2	Decal, Keep Clear
902156	1	Decal, Harper Black 2.40”
902151	1	Decal, Door Safety Lock

RH & REAR DECALS

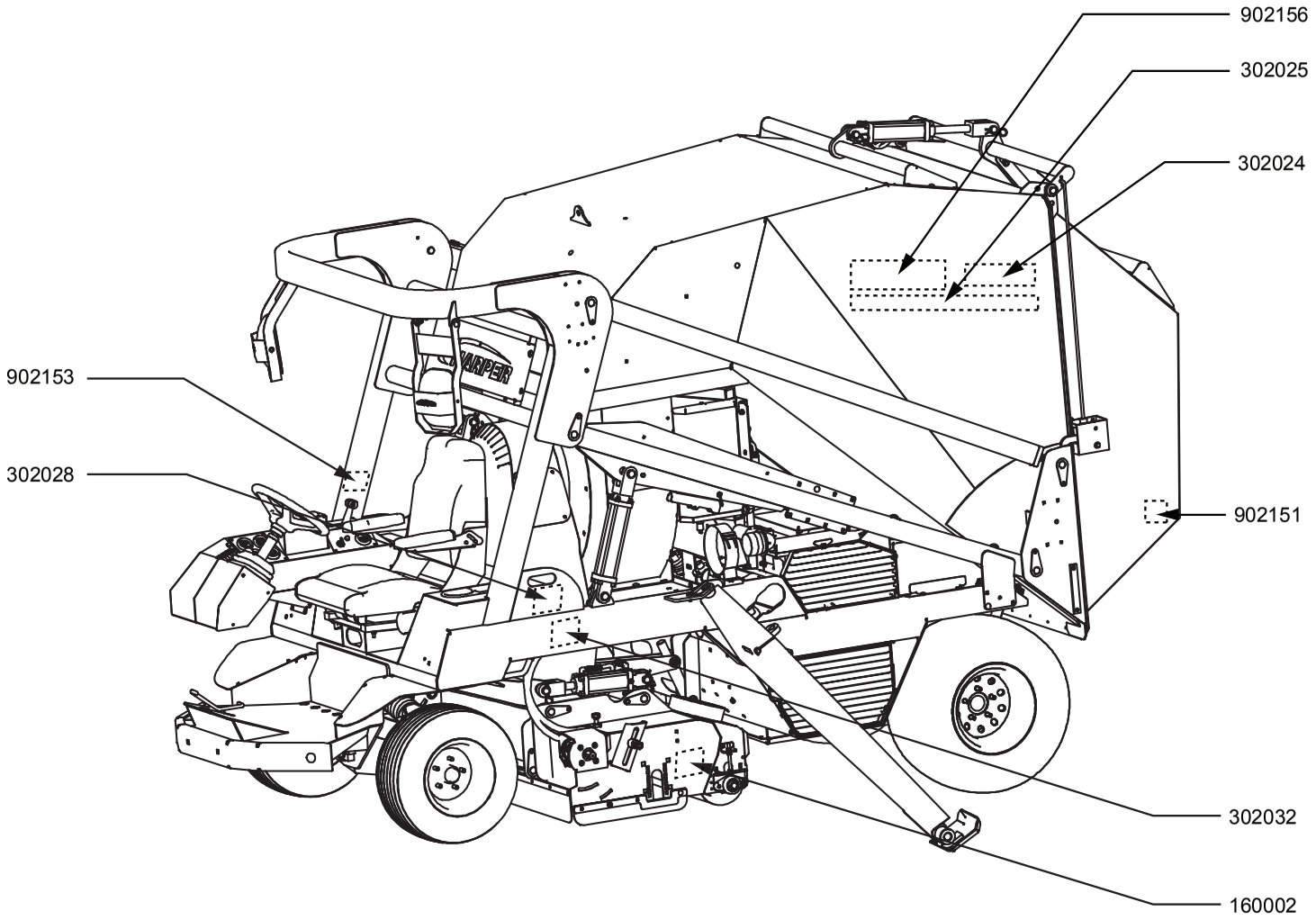




3/12/2012

Parts List		
Part #	Qty	Description
160002	1	Decal, Guard Removed, Graphic
302024	1	Decal, Turf Vac High Dump
302025	1	Decal, Stripe Left TV30
302032	1	Decal, Safety Latch
902151	1	Decal, Door Safety Lock
902153	1	Decal, Rollover
902156	1	Decal, Harper Black 2.40”

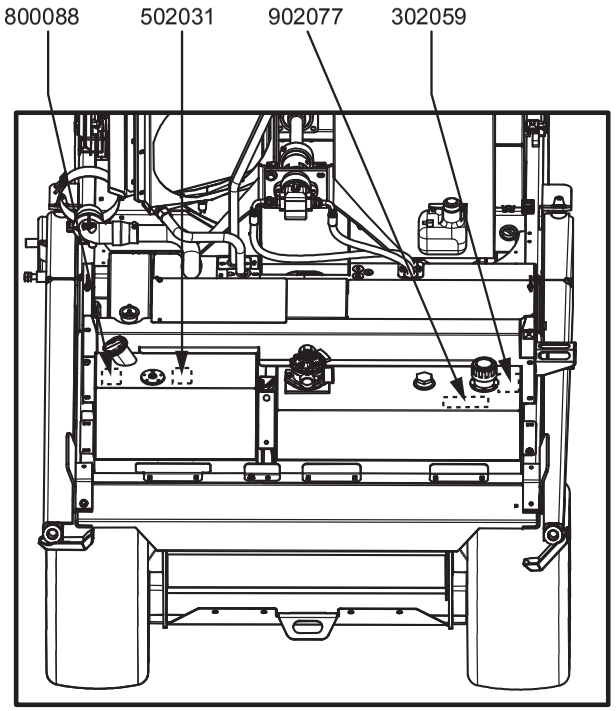
LH DECALS

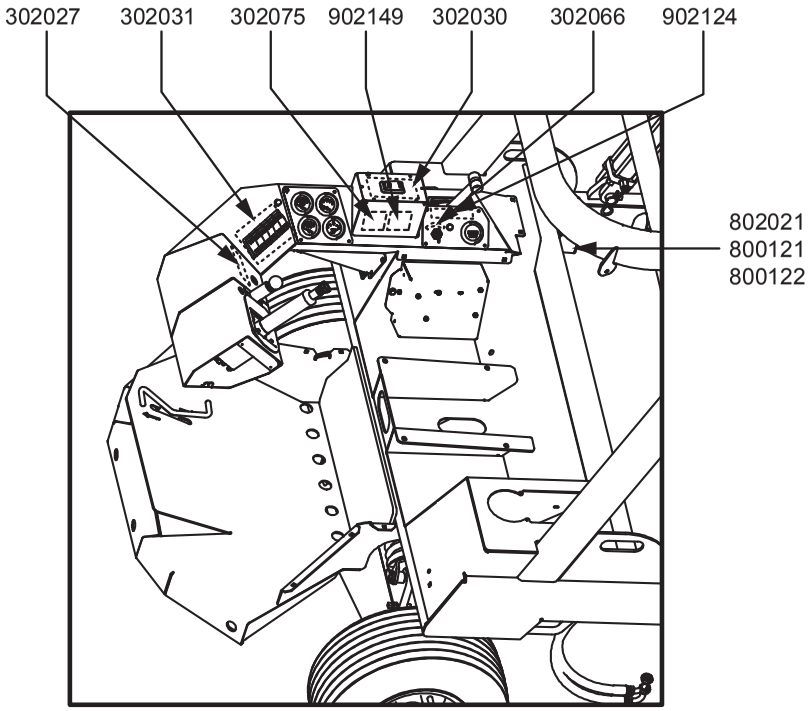


2/25/2012

Parts List		
Part #	Qty	Description
302027	1	Decal, Overhead Clearance
302030	1	Decal, Deck Lift
302031	1	Decal, Switches TV30
302059	1	Decal, Use only Envirologic
302075	1	Decal, Hopper Lift
502031	1	Decal, EPA Fuel
800088	1	Decal, Diesel
800121	1	Decal, Mercury Switch
800122	1	Decal, Level Adjustment
302066	1	Decal, Ignition
802021	2	Decal, Sealed
902077	1	Decal, Biodegradable Oil
902124	1	Decal, Throttle, SB4000 & TV30
902149	1	Decal, Read Operators Manual

BACK & FRONT DECALS

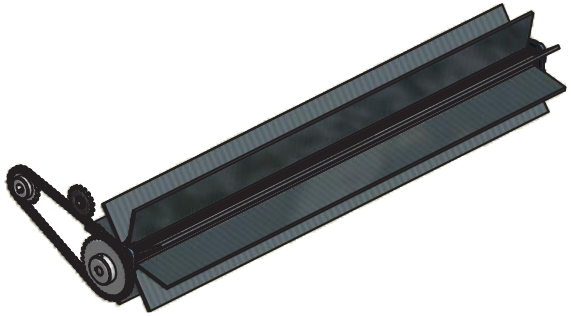




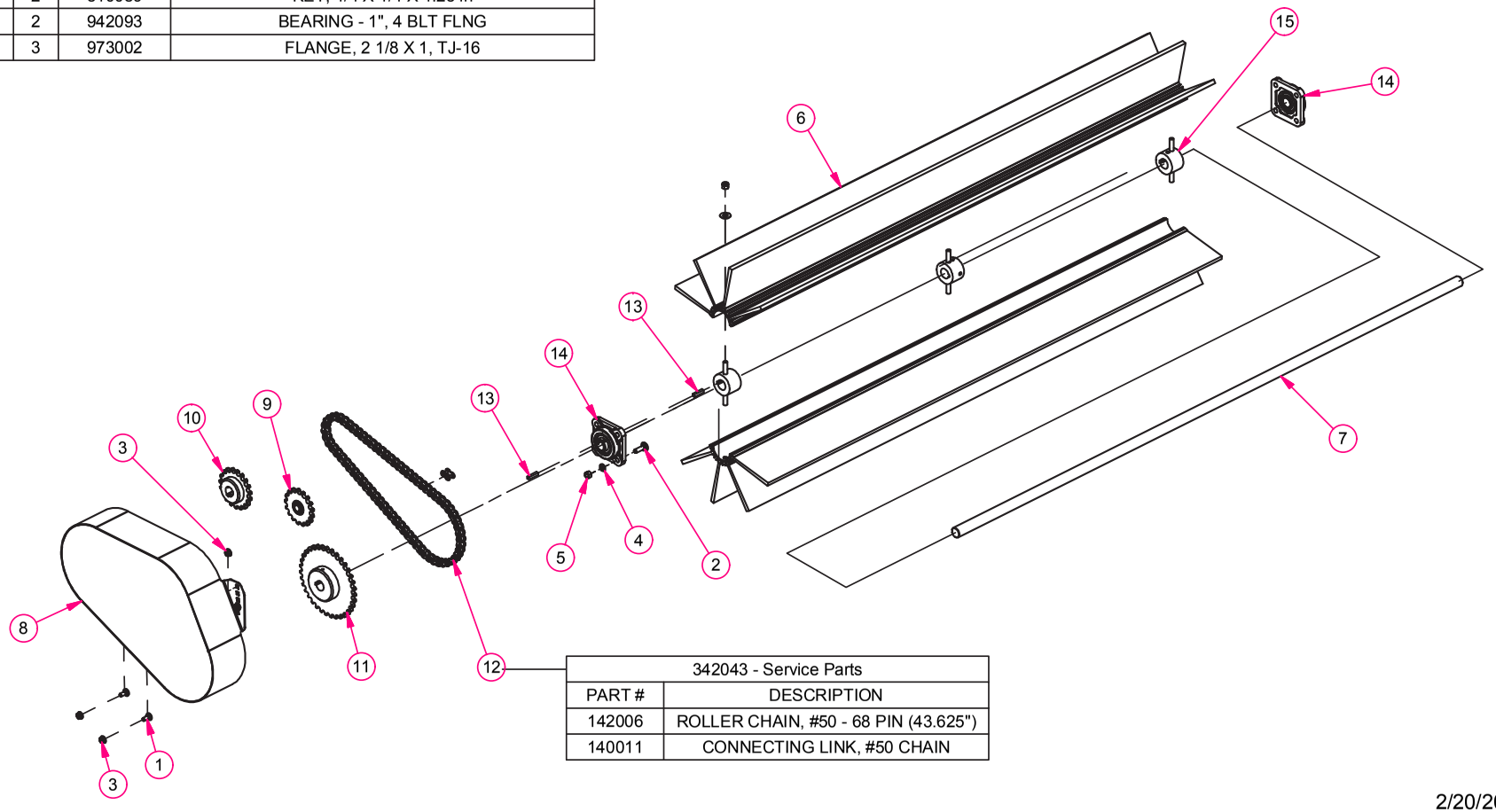
2/25/2013

KIT - ROTOR, BROOM, TV30

HARPER PRT No. 300044



Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	2	110020	Bolt, 5/16-18 X 0.75 in Carriage
2	8	110402	Bolt, 3/8-16 X 1.25 in Carriage
3	4	110606	NUT, 5/16-18 WIZ FLANGE
4	8	110672	WASHER, 3/8" LOCK
5	1	110826	NUT, 3/8-16 GR 5
6	1	302003	BROOM, 60 in, TV30
7	1	311369	SHAFT - BROOM, DECK
8	1	315167	SHIELD - DECK BRUSH DRIVE, WELDMENT
9	1	342007	SPROCKET - IDLER, 5017
10	1	342016	SPROCKET - 50B19 X 1
11	1	342017	SPROCKET - 50B35 X 1
12	1	342043	CHAIN, #50 - 68 PIN W/ CONNECTOR (43.625")
13	2	510089	KEY, 1/4 X 1/4 X 1.25 in
14	2	942093	BEARING - 1", 4 BLT FLNG
15	3	973002	FLANGE, 2 1/8 X 1, TJ-16



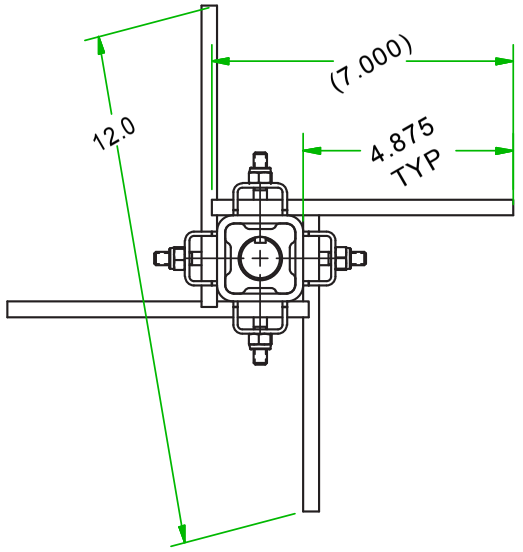
342043 - Service Parts	
PART #	DESCRIPTION
142006	ROLLER CHAIN, #50 - 68 PIN (43.625")
140011	CONNECTING LINK, #50 CHAIN

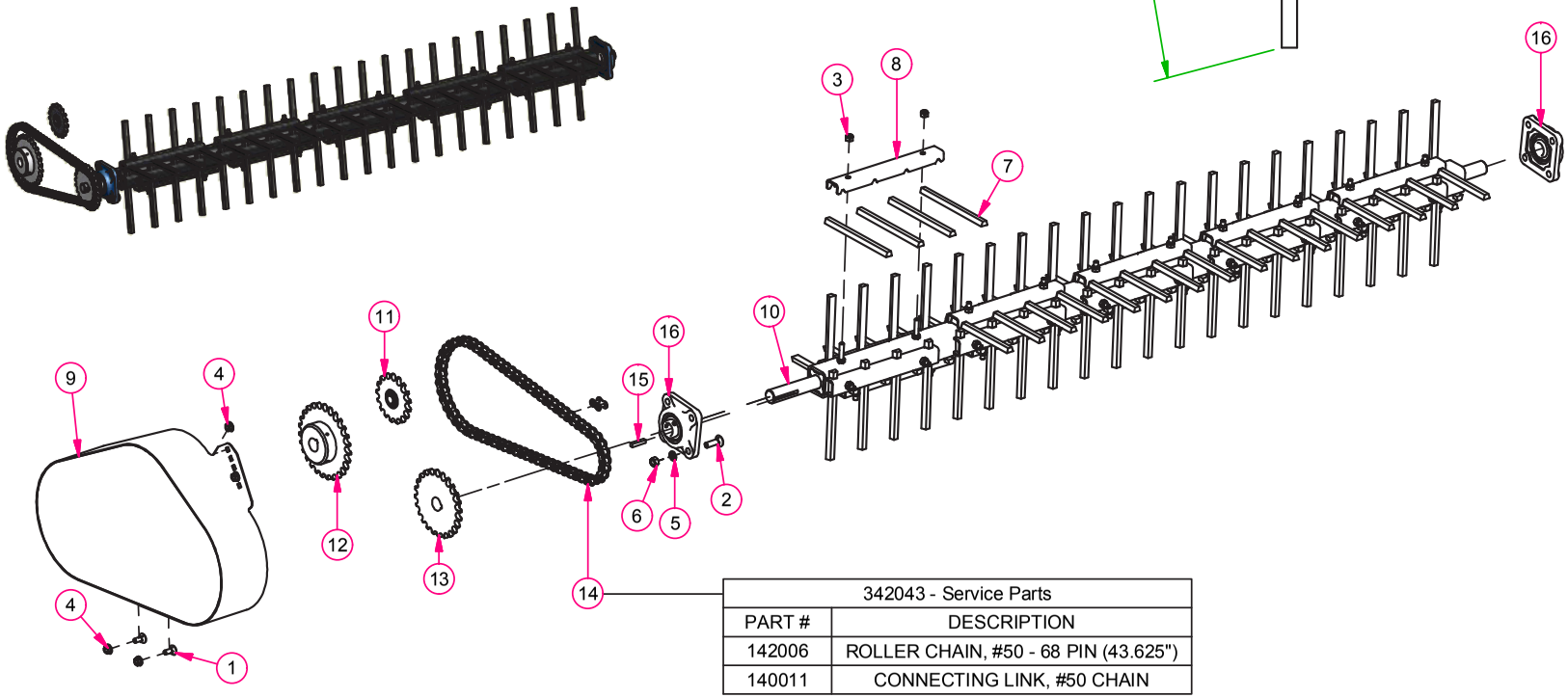
2/20/2013

KIT - ROTOR, FINGER, TV30

HARPER PRT No. 300040

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	2	110020	Bolt, 5/16-18 X 0.75 in Carriage
2	8	110402	Bolt, 3/8-16 X 1.25 in Carriage
3	40	110603	NUT, 5/16-18 LOCK (NYLON)
4	4	110606	NUT, 5/16-18 WIZ FLANGE
5	8	110672	WASHER, 3/8" LOCK
6	8	110826	NUT, 3/8-16 GR 5
7	80	302042	FINGER - RUBBER
8	20	311403	CLAMP - RUBBER FINGER
9	1	315167	SHIELD - DECK BRUSH DRIVE, WELDMENT
10	1	315179	SHAFT - FINGER ROTOR, WELDMENT
11	1	342007	SPROCKET - IDLER, 5017
12	1	342026	SPROCKET - 50B27 X 1
13	1	342030	SPROCKET - 50B24 X 1
14	1	342043	CHAIN, #50 - 68 PIN W/ CONNECTOR (43.625")
15	1	510089	1/4" KEYSTOCK
16	2	942093	BEARING - 1", 4 BLT FLNG





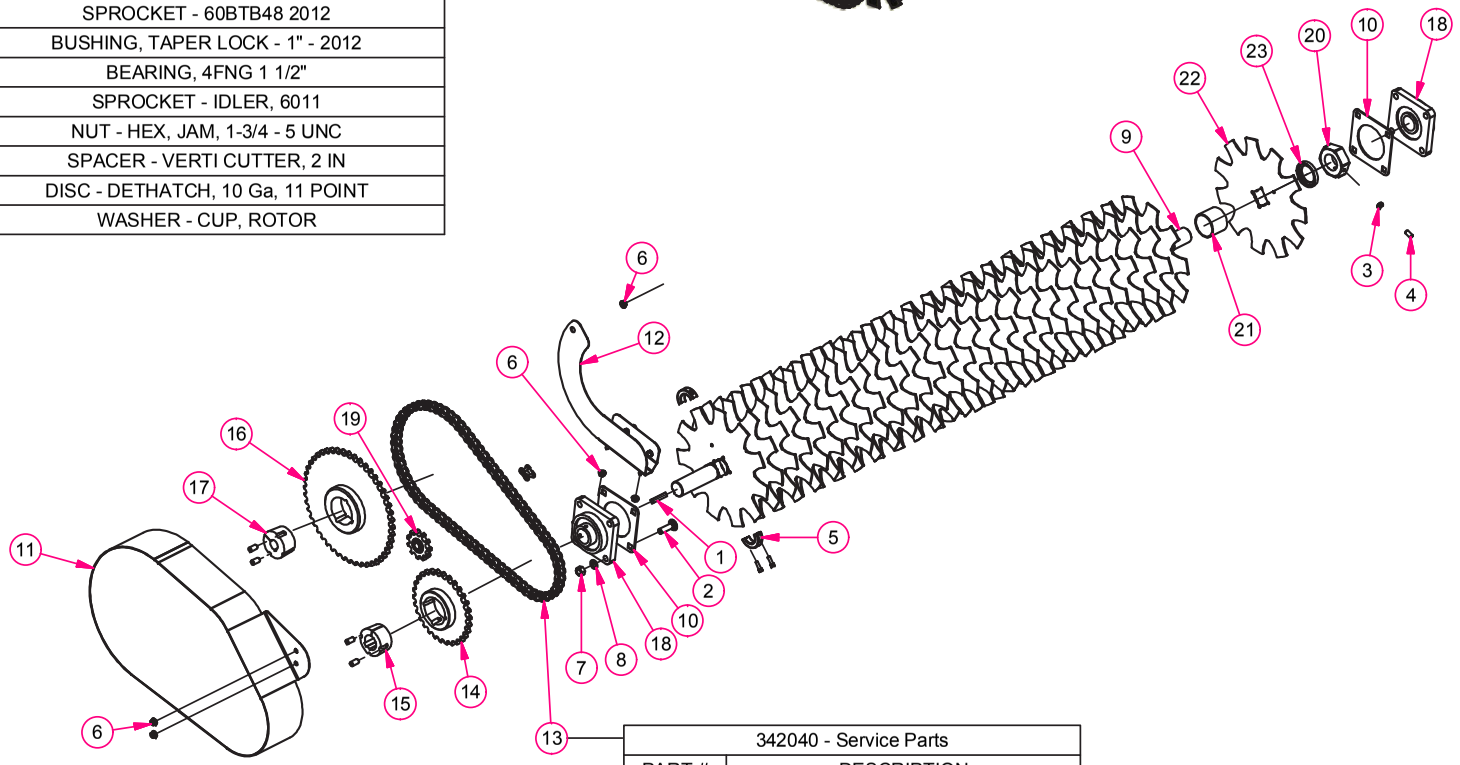
342043 - Service Parts	
PART #	DESCRIPTION
142006	ROLLER CHAIN, #50 - 68 PIN (43.625")
140011	CONNECTING LINK, #50 CHAIN

1/11/2012

KIT - ROTOR, VERTICUT/DETHATCH, TV30D

HARPER PRT No. 300033

PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	1	100567	KEY, 3/8 X 3/8 X 1.75 in
2	8	110042	Bolt, 1/2-13 X 1.75 in Carriage
3	2	110107	NUT, 3/8-16 HEX JAM GR 2
4	2	110325	SetScrew, 3/8-16 X 0.75
5	1	110332	COLLAR - 1-1/2" SPLIT
6	7	110606	NUT, 5/16-18 WIZ FLANGE
7	8	110610	NUT, 1/2-13
8	8	110666	WASHER, 1/2" LOCK
9	1	311400	SHAFT - VERTICUTTER, TV30
10	2	311607	SPACER, TV30 VERTICUTTER BEARING
11	1	315194	SHIELD - DETHATCH ROTOR DRIVE
12	1	315195	GUARD - SHIELD SUPPORT, WELDMENT
13	1	342040	ROLLER CHAIN - #60, 72 PIN W/ CNCTR (55.375")
14	1	342044	SPROCKET - 60BTB30 2012
15	1	342045	BUSHING, TAPER LOCK - 1.5" - 2012
16	1	342046	SPROCKET - 60BTB48 2012
17	1	342047	BUSHING, TAPER LOCK - 1" - 2012
18	2	410851	BEARING, 4FNG 1 1/2"
19	1	942102	SPROCKET - IDLER, 6011
20	1	970475	NUT - HEX, JAM, 1-3/4 - 5 UNC
21	29	970803	SPACER - VERTI CUTTER, 2 IN
22	30	970804	DISC - DETHATCH, 10 Ga, 11 POINT
23	1	970805	WASHER - CUP, ROTOR



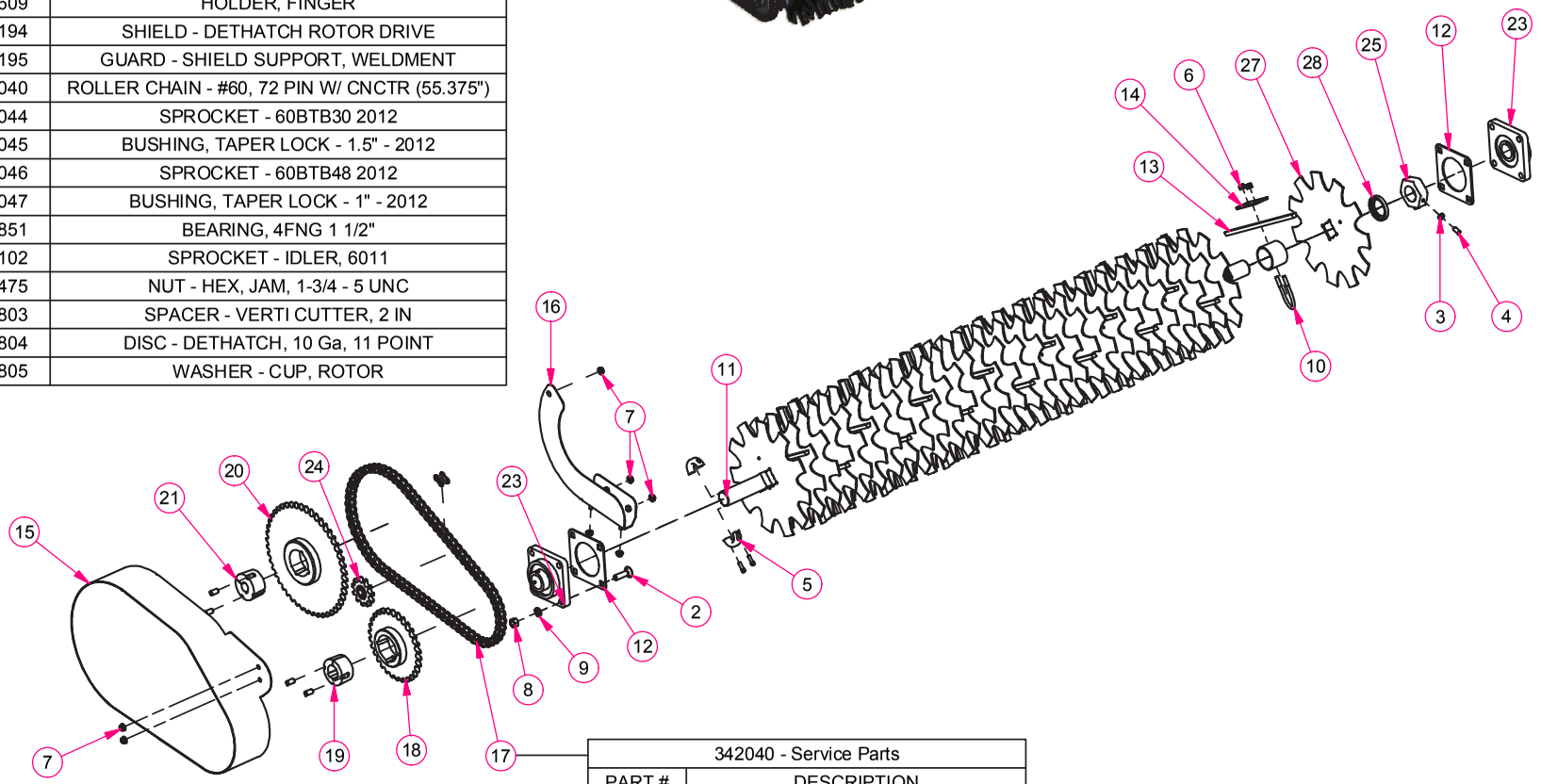
342040 - Service Parts	
PART #	DESCRIPTION
140002	ROLLER CHAIN - #60, 72 PIN (55.375")
410442	CONNECTING LINK, #60 CHAIN

1/20/2012

KIT - ROTOR, VERTICUT/DETHATCH W/ FINGERS, TV30

HARPER PRT No. 300046

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	1	100567	KEY, 3/8 X 3/8 X 1.75 in
2	8	110042	Bolt, 1/2-13 X 1.75 in Carriage
3	2	110107	NUT, 3/8-16 HEX JAM GR 2
4	2	110325	SetScrew, 3/8-16 X 0.75
5	1	110332	COLLAR - 1-1/2" SPLIT
6	58	110603	NUT, 5/16-18 LOCK (NYLON)
7	7	110606	NUT, 5/16-18 WIZ FLANGE
8	8	110610	NUT, 1/2-13
9	8	110666	WASHER, 1/2" LOCK
10	29	110824	BOLT, U-, 5/16-18 X 2-1/2 X 3-3/16
11	1	311400	SHAFT - VERTICUTTER, TV30
12	2	311607	SPACER, TV30 VERTICUTTER BEARING
13	29	311608	FINGER, 12" RUBBER
14	29	311609	HOLDER, FINGER
15	1	315194	SHIELD - DETHATCH ROTOR DRIVE
16	1	315195	GUARD - SHIELD SUPPORT, WELDMENT
17	1	342040	ROLLER CHAIN - #60, 72 PIN W/ CNCTR (55.375")
18	1	342044	SPROCKET - 60BTB30 2012
19	1	342045	BUSHING, TAPER LOCK - 1.5" - 2012
20	1	342046	SPROCKET - 60BTB48 2012
21	1	342047	BUSHING, TAPER LOCK - 1" - 2012
23	2	410851	BEARING, 4FNG 1 1/2"
24	1	942102	SPROCKET - IDLER, 6011
25	1	970475	NUT - HEX, JAM, 1-3/4 - 5 UNC
26	29	970803	SPACER - VERTI CUTTER, 2 IN
27	30	970804	DISC - DETHATCH, 10 Ga, 11 POINT
28	1	970805	WASHER - CUP, ROTOR



342040 - Service Parts	
PART #	DESCRIPTION
140002	ROLLER CHAIN - #60, 72 PIN (55.375")
410442	CONNECTING LINK, #60 CHAIN

1/27/2012

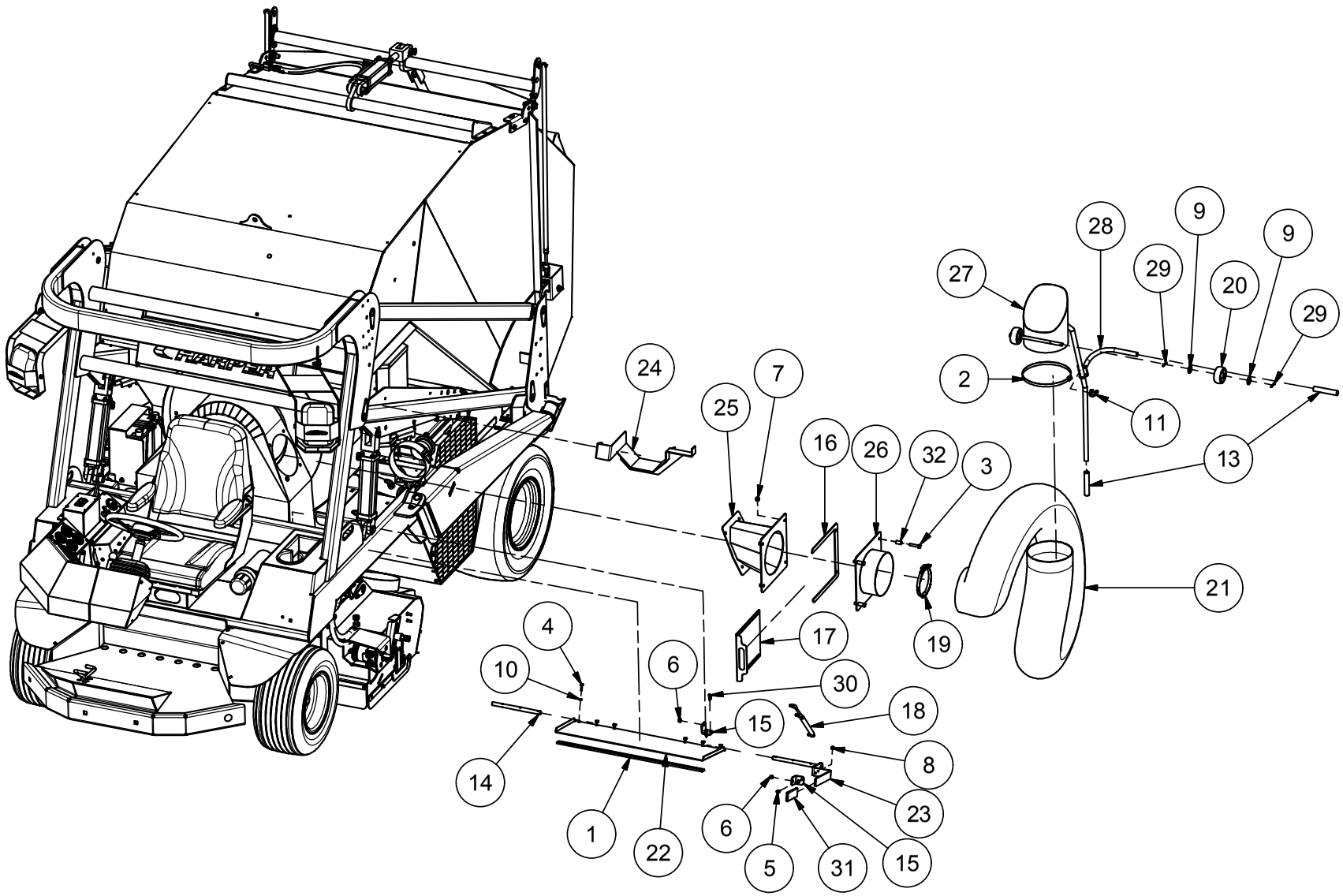
REMOTE HOSE OPTION

HARPER PRT NO. 300048 - FACTORY INSTALL
HARPER PRT NO. 300049 - CUSTOMER INSTALL

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	2.5'	102055	SEAL, RUBBER .5 x .3 Double
2	1	110311	CLAMP, HOSE #912 8.00"
3	4	110404	BOLT, 3/8-16 X 1.75
4	6	110464	BOLT, 1/4-20 X 1.0
5	2	110561	BOLT, 1/4-20 X .75
6	2	110603	NUT, 5/16-18 LOCK (NYLON)
7	4	110618	NUT, 3/8-16 LOCK NYLON INSERT
8	2	110630	NUT, 1/4-20 LOCK (NYLON INSERT)
9	4	110658	WASHER, 1/2" FLAT STANDARD
10	6	110667	WASHER, 1/4" LOCK
11	2	112057	U-BOLT, 1/4-20 X .75
12	1	132098	QUICK SPLICER, 18-14 GA
13	2	310029	HANDLE GRIP, RUBBER
14	1	311208	SHAFT - CONTROL, FUNNEL DOOR
15	2	311626	BRACKET, SPRING
16	1	311631	GUIDE, DOOR
17	1	311632	DOOR, SLIDING
18	1	312010	SHOCK, GAS 8.27"-12.2"
19	1	312011	CLAMP, 8" ADJUSTABLE HOSE
20	2	312012	ROLLER, 3"
21	12.5'	312013	HOSE, 8" REMOTE
22	1	315234	WELDMENT, FUNNEL DOOR
23	1	315235	LEVER, FUNNEL DOOR
24	1	315236	WELDMENT, REMOTE HOSE SUPPORT
25	1	315237	WELDMENT, REMOTE HOSE FUNNEL
26	1	315238	ADAPTER, REMOTE HOSE 8"
27	1	315239	WELDMENT, NOZZLE HANDLE
28	1	315240	WELDMENT, ADJUSTABLE HANDLE
29	4	510112	COTTER PIN, 3/16 X 1
30	2	710586	SCREW, 1/4 X 1 TEK SELF-TAP
31	1	910044	COVER, VINYL .25 X 1.5 X 4 GRIP
32	4	972018	SPRING, COMPRESSION

REMOTE HOSE OPTION

HARPER PRT NO. 300048 - FACTORY INSTALL
HARPER PRT NO. 300049 - CUSTOMER INSTALL

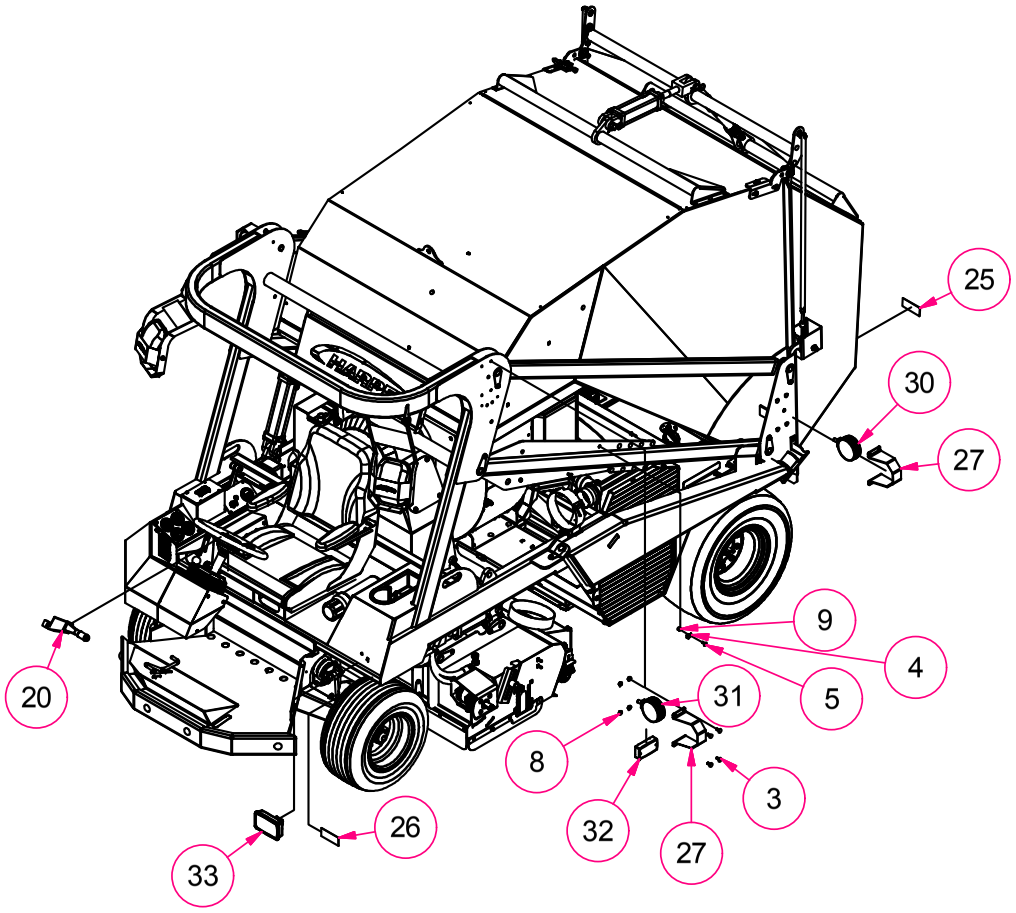


2/20/2013

LIGHT KIT OPTION

HARPER PRT NO. 300036 - FACTORY INSTALL
HARPER PRT NO. 300037 - CUSTOMER INSTALL

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	10	100578	CABLE TIE, 14" BLACK
2	1	102078	GROMMET, 3/8" ID X 7/8" OD
3	16	110020	Bolt, 5/16-18 X 0.75 in Carriage
4	4	110117	CLAMP, ADEL AC4 .265 HOLE
5	4	110154	Bolt, 1/4-20 X 0.75 in Carriage
6	2	110345	NUT, 8-32 LOCK NYLON
7	1	110444	BOLT, 5/16-18 X 3/4 WIZ FLNG
8	17	110606	NUT, 5/16-18 WIZ FLANGE
9	4	110630	NUT, 1/4-20 LOCK (NYLON INSERT)
10	8	110631	NUT, 10-24 LOCK NYLON
11	2	110709	SCREW, 10-24 X 3/4 MACHINE RND HD SLT
12	1	110728	CLAMP, ADEL DOUBLE .75 X .5 X .406
13	4	110914	SCREW, 10-24 X 1 1/2 RND PHLP
14	6"	130004	WIRE, 14GA BLACK
15	7	130059	CONNECTOR, 2 CAVITY DEUTSCH
16	7	130061	SECONDARY LOCK, DEUTSCH PLUG
17	25	132055	TERMINAL, CLOSED BARREL 18-16
18	3	132057	CONNECTOR, 3 CAVITY DEUTSCH
19	3	132058	SECONDARY LOCK, DEUTSCH
20	1	132072	SWITCH - TURN SIGNAL
21	1	132073	SWITH - HAZARD
22	1	132074	FUSE BLOCK, MINI FUSE STYLE
23	4	132075	DIODE, MINI FUSE 1-AMP
24	1	302035	DECAL, HAZARD LIGHTS
25	2	302037	REFLECTOR - TAPE, RED
26	2	302038	REFLECTOR TAPE, YELLOW
27	4	311440	GUARD - LIGHT
28	1	332007	HARNESS, LIGHT KIT RELAY
29	1	332008	HARNESS, LIGHT KIT ELECTRICAL
30	2	332009	LIGHT - STT/WARNING, RED/AMBER, LED
31	2	332010	LIGHT - WARNING, AMBER, LED
32	2	332011	LIGHT - WARNING, AMBER, RECT, LED
33	2	332012	LIGHT - WORK LAMP, RECT, ASSEM
34	2	510960	SCREW, 10-24 X 1/2 RHSS
35	2	511102	SCREW, 8-32 X 3/4 SLOTTED



3/28/2013

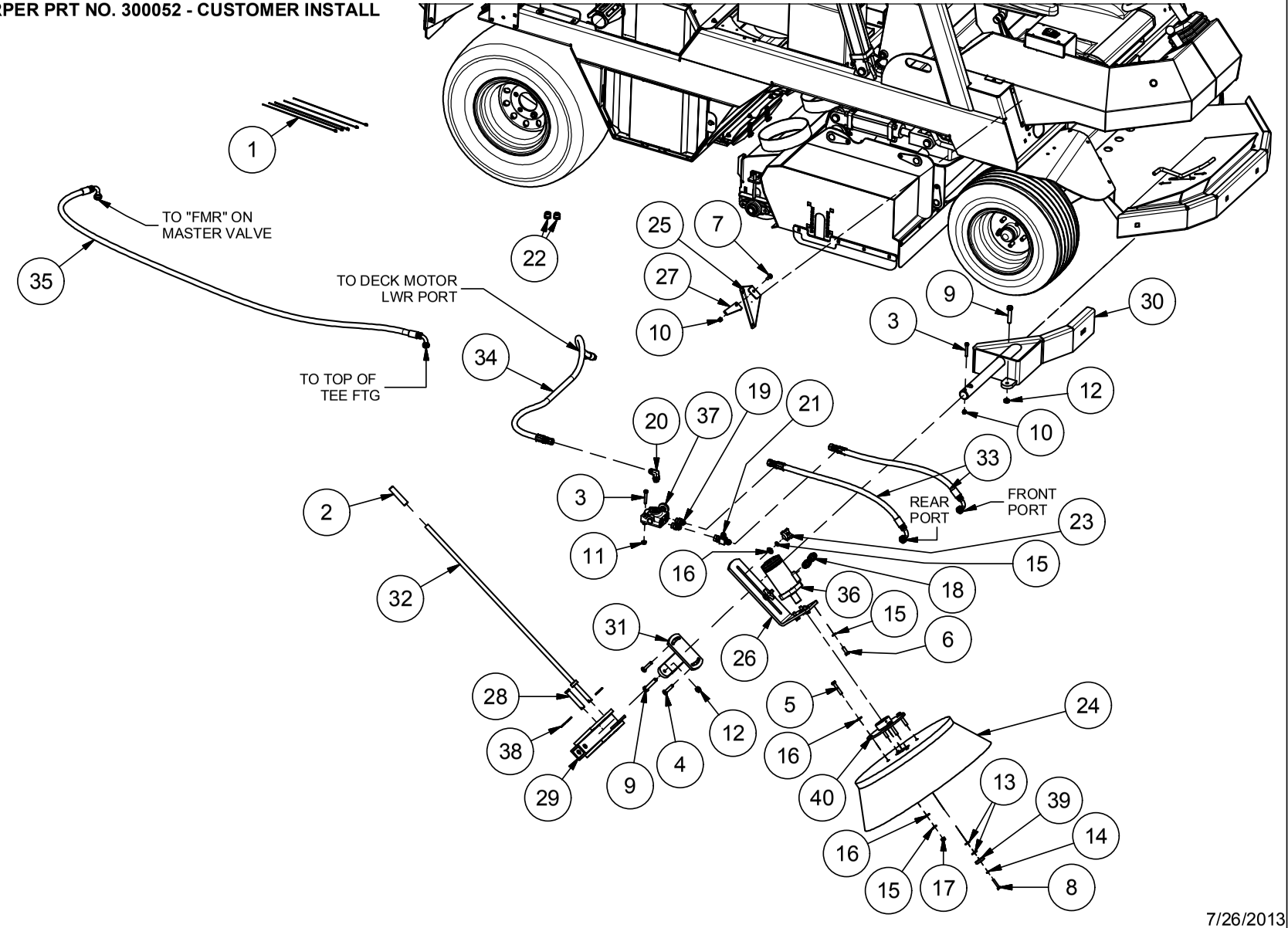
CURB BRUSH OPTION

HARPER PRT NO. 300051 - FACTORY INSTALL
HARPER PRT NO. 300052 - CUSTOMER INSTALL

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	5	100578	CABLE TIE 14" BLACK 50 Lb Tens
2	1	102022	GRIP, VINLY 5/8"ID x 4.75"
3	3	110378	BOLT, 5/16-18 X 2.0
4	2	110392	Bolt, 3/8-16 X 2 in Carriage
5	4	110400	BOLT, 3/8-16 X 2.0
6	4	110420	BOLT, 3/8-16 X 1.0
7	1	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
8	1	110474	BOLT, 1/4-20 X 1-1/2
9	2	110553	BOLT, 1/2-13 X 2.5 TAP
10	2	110603	NUT, 5/16-18 LOCK (NYLON)
11	2	110606	NUT, 5/16-18 WIZ FLANGE
12	2	110642	NUT, 1/2-13 HEX JAM GR 2
13	2	110665	WASHER, 5/16" FLAT STANDARD
14	1	110667	WASHER, 1/4" LOCK
15	10	110672	WASHER, 3/8" LOCK
16	10	110676	WASHER, 3/8" FLAT STANDARD
17	4	110826	NUT, 3/8-16 GR 2
18	2	120251	ADAPTER, 10MJ-10MB
19	2	120277	ADAPTER, 8MJ-8MB
20	1	120288	ADAPTER, 8MJ-8MB90
21	1	120427	ADAPTER, 8MJ-8FJX-8MJ
22	2	120638	PLUG, 10MJ
23	2	302063	KNOB, ALUMINUM 3/8-16
24	1	302064	BRUSH, 24" x 6" x 40 DEG
25	1	311640	BRACKET, LATCH
26	1	311647	MOUNT, CURB BRUSH MOTOR
27	1	311648	LATCH, HANDLE
28	1	312015	PIN, 5/8" x 3.5"
29	1	315241	MOUNT, CURB BRUSH PIVOT
30	1	315242	MOUNT, CURB BRUSH FRAME
31	1	315243	MOUNT, CURB BRUSH TILT
32	1	315244	WELDMENT, CURB BRUSH HANDLE
33	2	320272	HOSE, VALVE TO CURB BRUSH
34	1	320273	HOSE, CURB BRUSH SUPPLY
35	1	320274	HOSE, CURB BRUSH RETURN
36	1	322064	MOTOR, EATON 101-1016-009 (22.1 CI)
37	1	323035	VALVE, CIRCUIT SELECTOR
38	2	500156	PIN, 1/8 x 2.375 COTTER
39	1	970763	WASHER, 1.50 X .320
40	1	975128	BRUSH ADAPTOR WELDMENT

CURB BRUSH OPTION

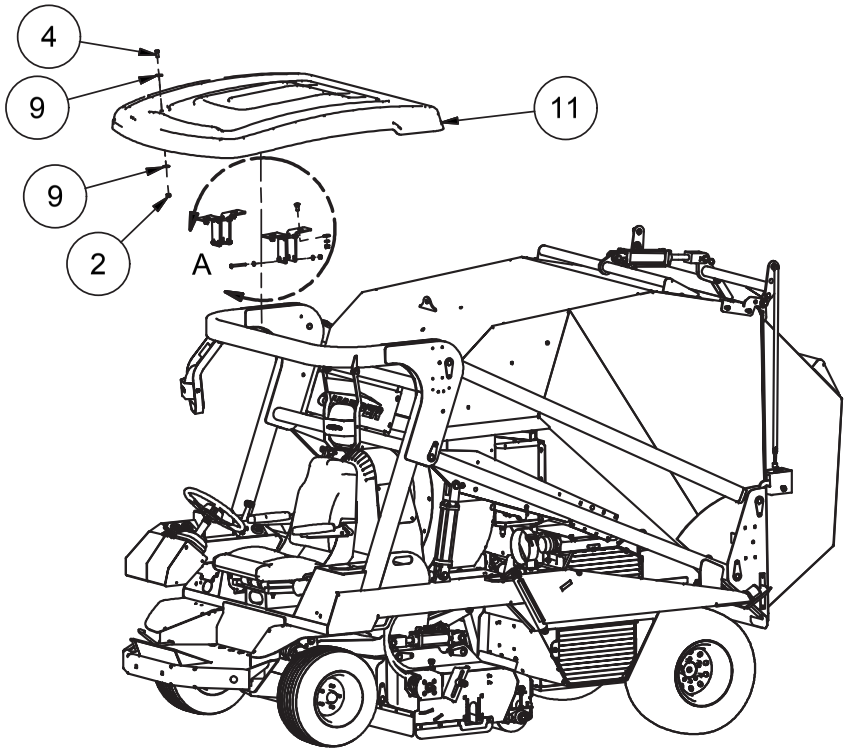
HARPER PRT NO. 300051 - FACTORY INSTALL
HARPER PRT NO. 300052 - CUSTOMER INSTALL

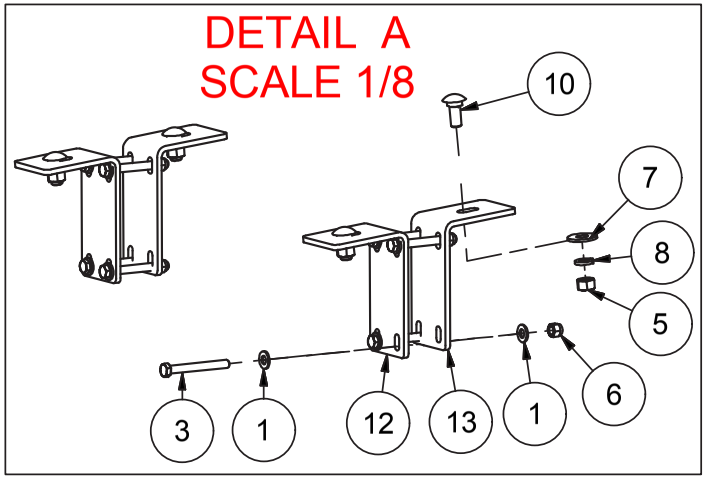


7/26/2013

CANOPY OPTION

HARPER PRT NO. 300056 - FACTORY INSTALL
HARPER PRT NO. 300057 - CUSTOMER INSTALL

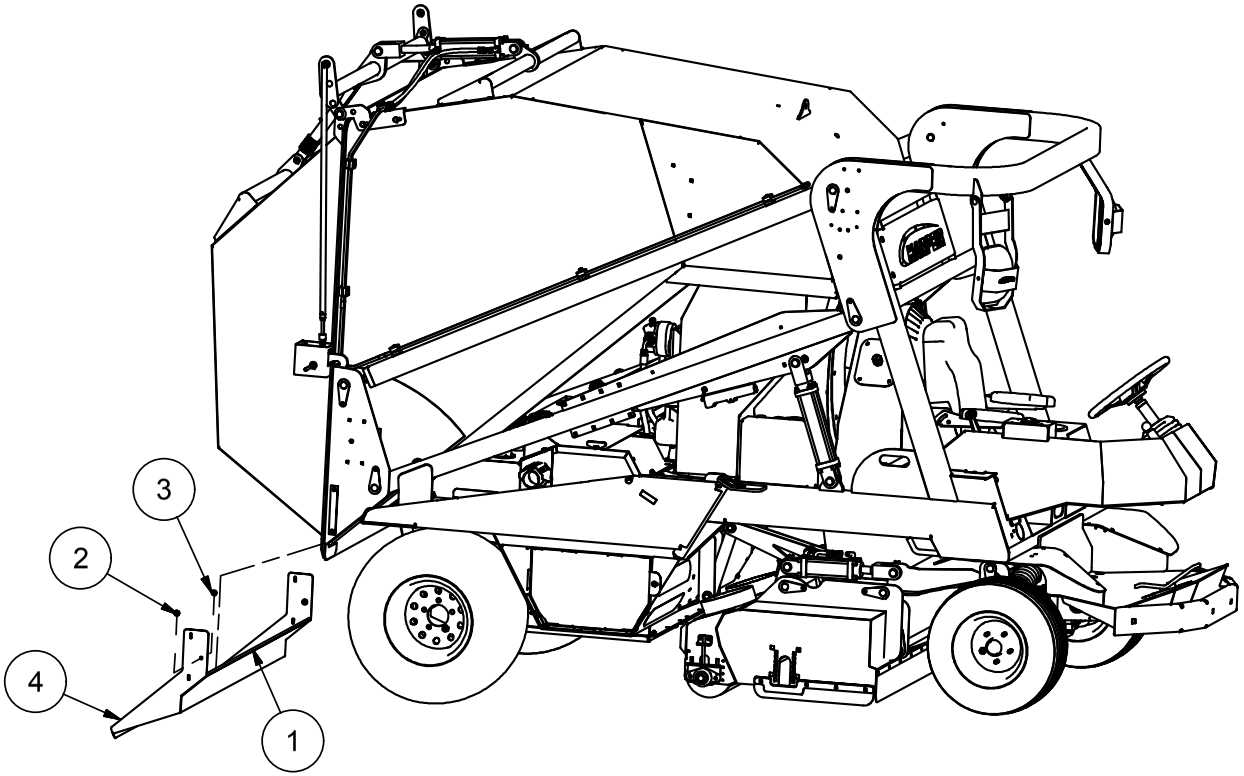




Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	16	110155	WASHER, 3/8" FLAT SAE
2	8	110219	NUT, 7/16-14 LOCK NYLON INSERT
3	8	110494	BOLT, 3/8-16 X 3.25
4	8	110528	BOLT, 7/16-14 X 1.0
5	4	110610	NUT, 1/2-13
6	8	110618	NUT, 3/8-16 LOCK NYLON INSERT
7	4	110658	WASHER, 1/2" FLAT STANDARD
8	4	110666	WASHER, 1/2" LOCK
9	16	110670	WASHER, 7/16" FLAT STANDARD
10	4	112070	Bolt, 1/2-13 X 1.25 in Carriage
11	1	302067	CANOPY W/ BRACKETS, TV30
12	2	311658	BRACKET, FRONT CANOPY MOUNTING
13	2	311659	BRACKET, REAR CANOPY MOUNTING

HOPPER DUMP EXTENSION OPTION

HARPER PRT NO. 300053 - FACTORY INSTALL
HARPER PRT NO. 300054 - CUSTOMER INSTALL



Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	57.5"	102055	SEAL, RUBBER .5 x .3 DOUBLE
2	2	110437	BOLT, 3/8-16 X 0.75, WIZ FLANGE
3	2	110645	NUT, 3/8-16 WIZ FLANGE
4	1	311654	EXTENSION, HOPPER DUMP

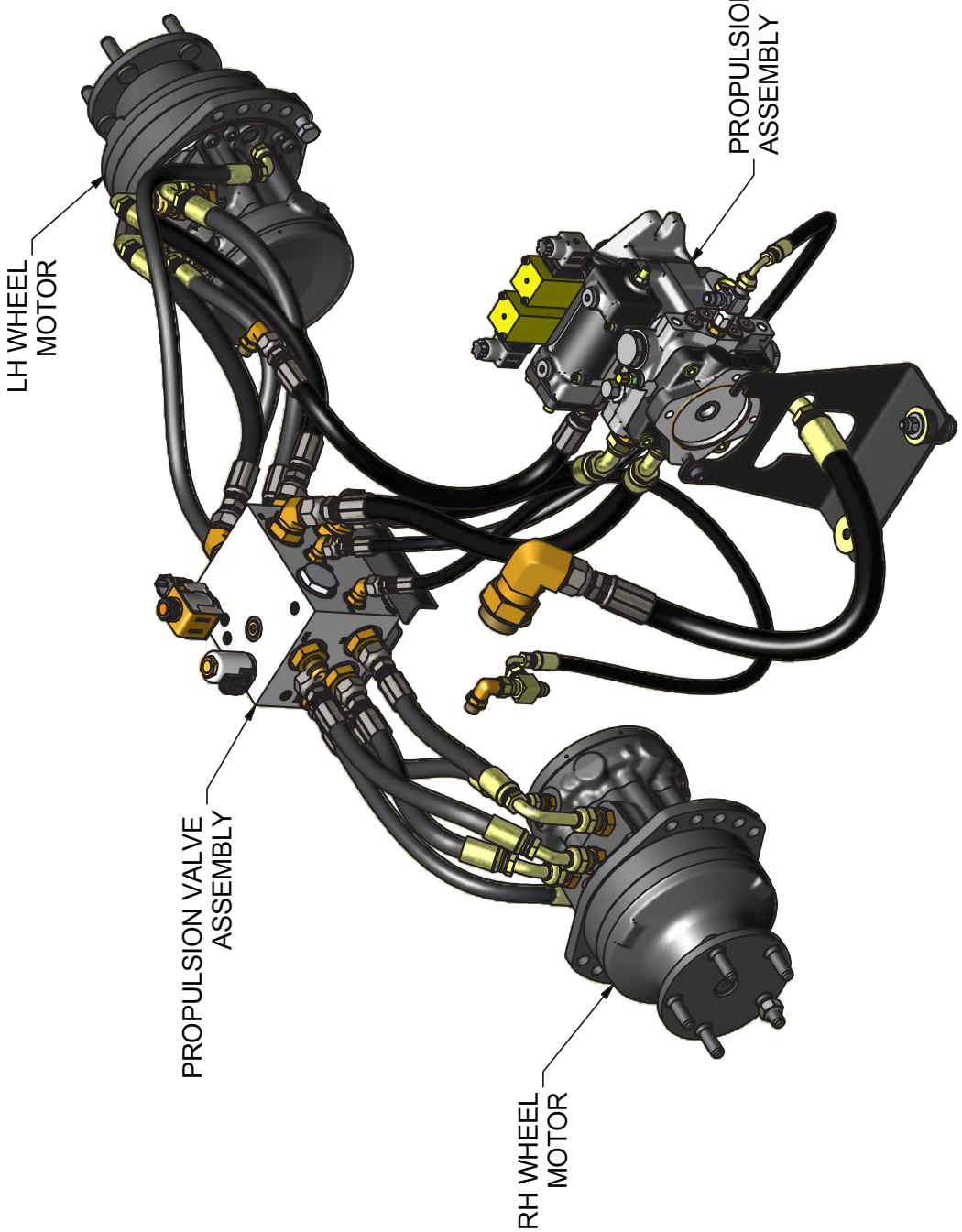
2/20/2013

PARTS

HYDRAULIC SECTION

TURBO VAC 30

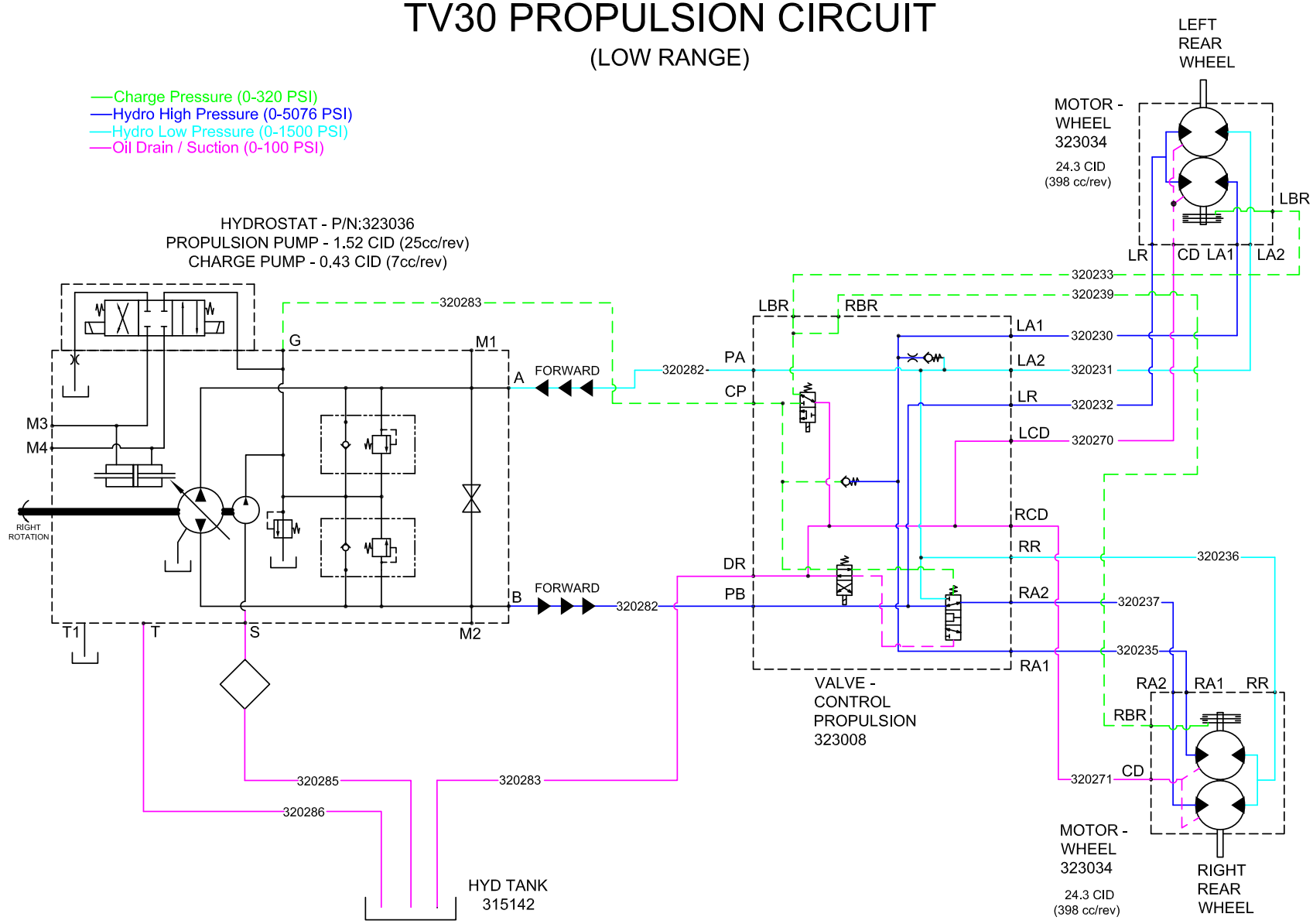
PROPULSION SYSTEM



2/4/2014

TV30 PROPULSION CIRCUIT

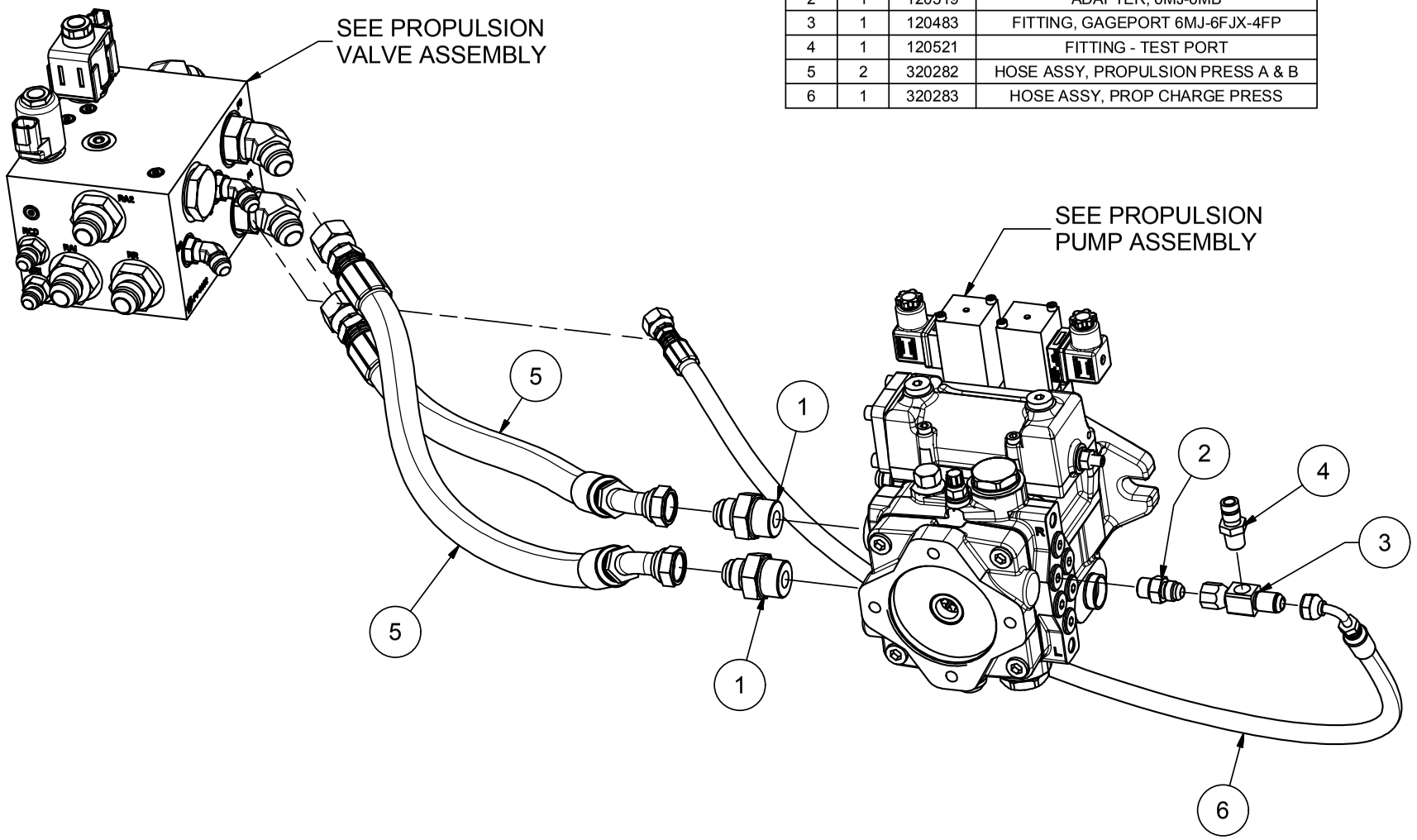
(LOW RANGE)



02/03/14

PROPULSION PRESSURE PLUMBING

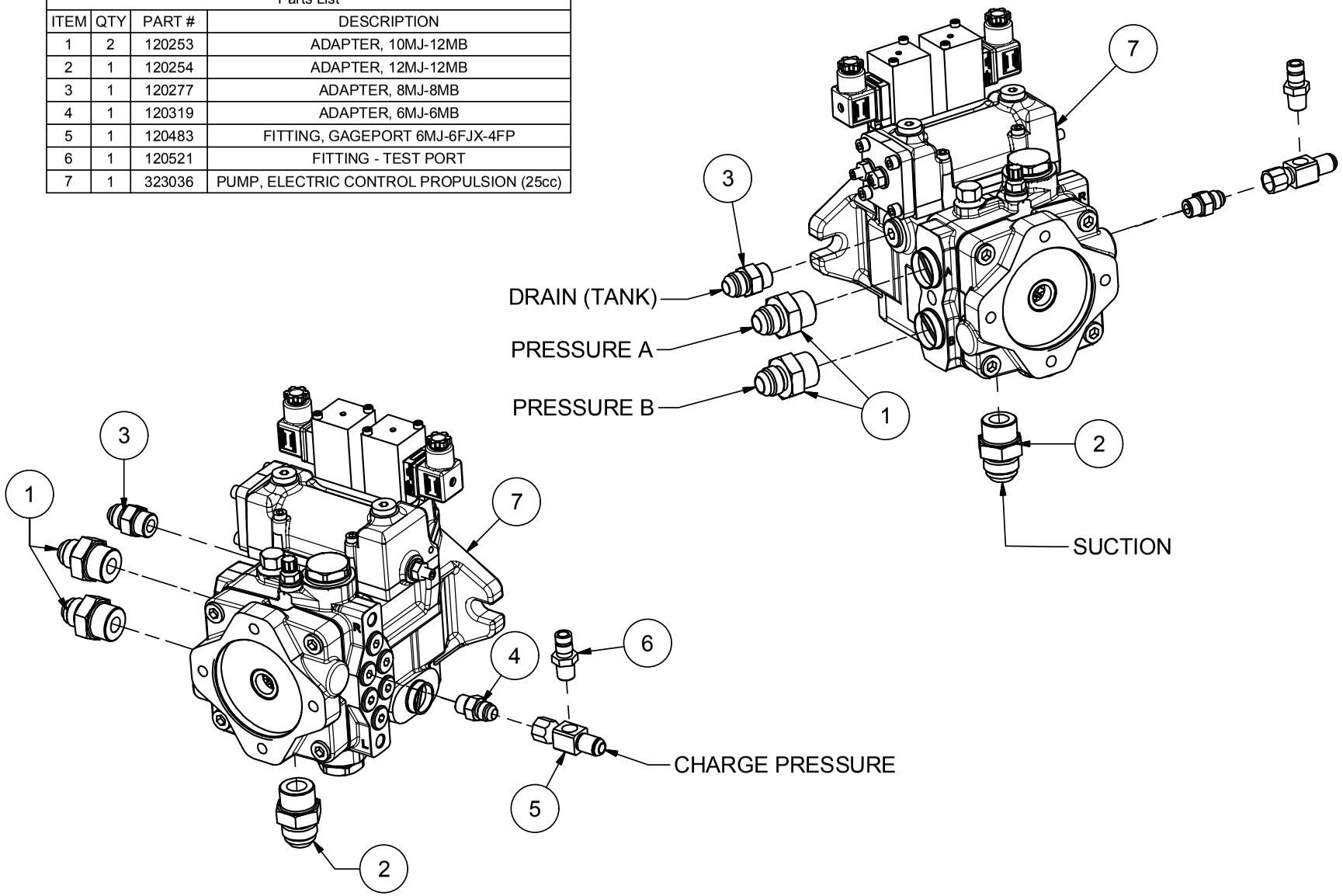
Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	2	120253	ADAPTER, 10MJ-12MB
2	1	120319	ADAPTER, 6MJ-6MB
3	1	120483	FITTING, GAGEPORT 6MJ-6FJX-4FP
4	1	120521	FITTING - TEST PORT
5	2	320282	HOSE ASSY, PROPULSION PRESS A & B
6	1	320283	HOSE ASSY, PROP CHARGE PRESS



2/4/2014

PROPULSION PUMP ASSEMBLY

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	2	120253	ADAPTER, 10MJ-12MB
2	1	120254	ADAPTER, 12MJ-12MB
3	1	120277	ADAPTER, 8MJ-8MB
4	1	120319	ADAPTER, 6MJ-6MB
5	1	120483	FITTING, GAGEPORT 6MJ-6FJX-4FP
6	1	120521	FITTING - TEST PORT
7	1	323036	PUMP, ELECTRIC CONTROL PROPULSION (25cc)

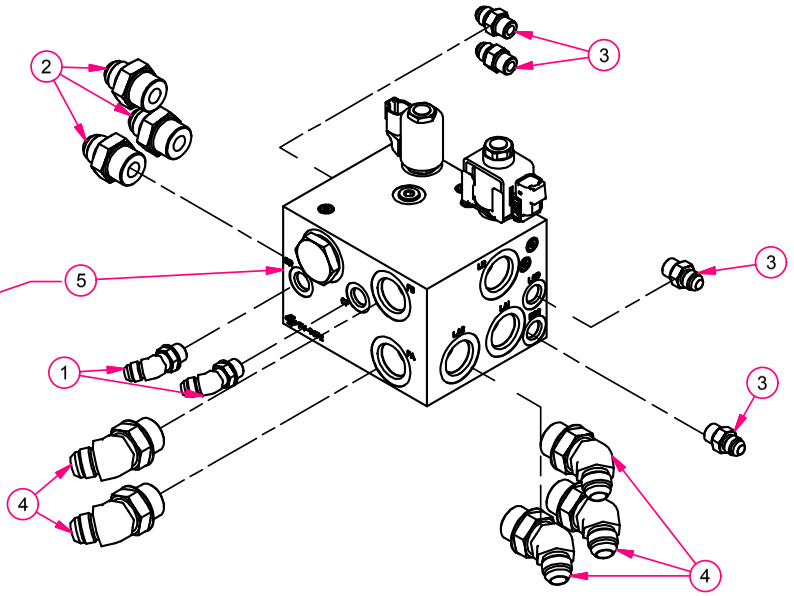


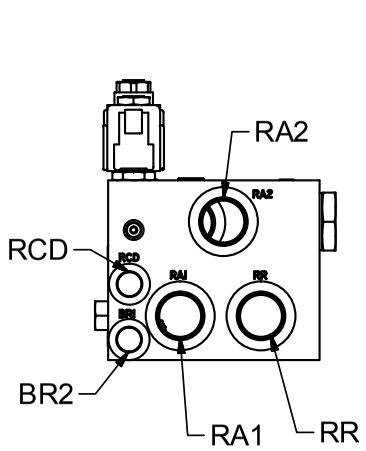
2/10/2014

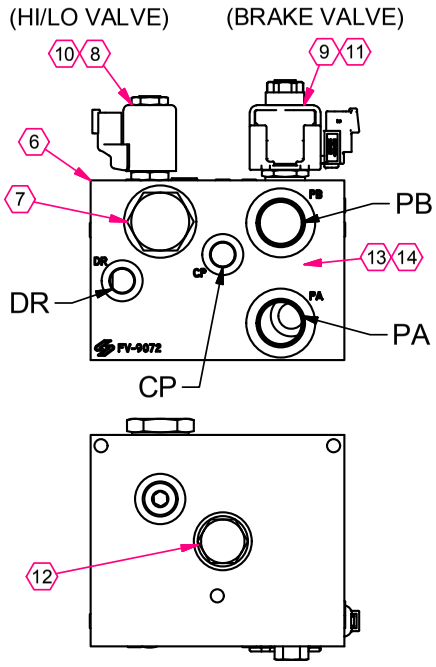
PROPULSION VALVE ASSEMBLY

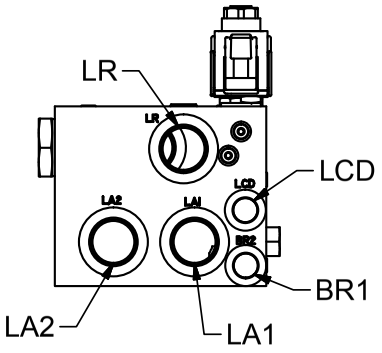
PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	2	120219	ADAPTER, 6MJ-6MB 45
2	3	120253	ADAPTER, 10MJ-12MB
3	4	120319	ADAPTER, 6MJ-6MB
4	5	120410	Jic(-10) to Male O-ring (-12), 45 degrees
5	1	323008	VALVE, TV30 PROPULSION CONTROL

323008 Service Parts		
ITEM	PART #	DESCRIPTION
6	322049	MANIFOLD BODY
7	522157	DIVERTER VALVE, 100PSI SPRING
8	522119	3POS 4WAY SOLENOID VALVE
9	322052	12VDC DEUTSCH COIL
10	322053	12VDC DEUTSCH COIL S SERIES
11	322054	2POS 3WAY SOLENOID VALVE
12	322055	CHECK VALVE
13	322056	REMOVABLE ORIFICE
14	322057	CHECK VALVE 3PSI SPRING





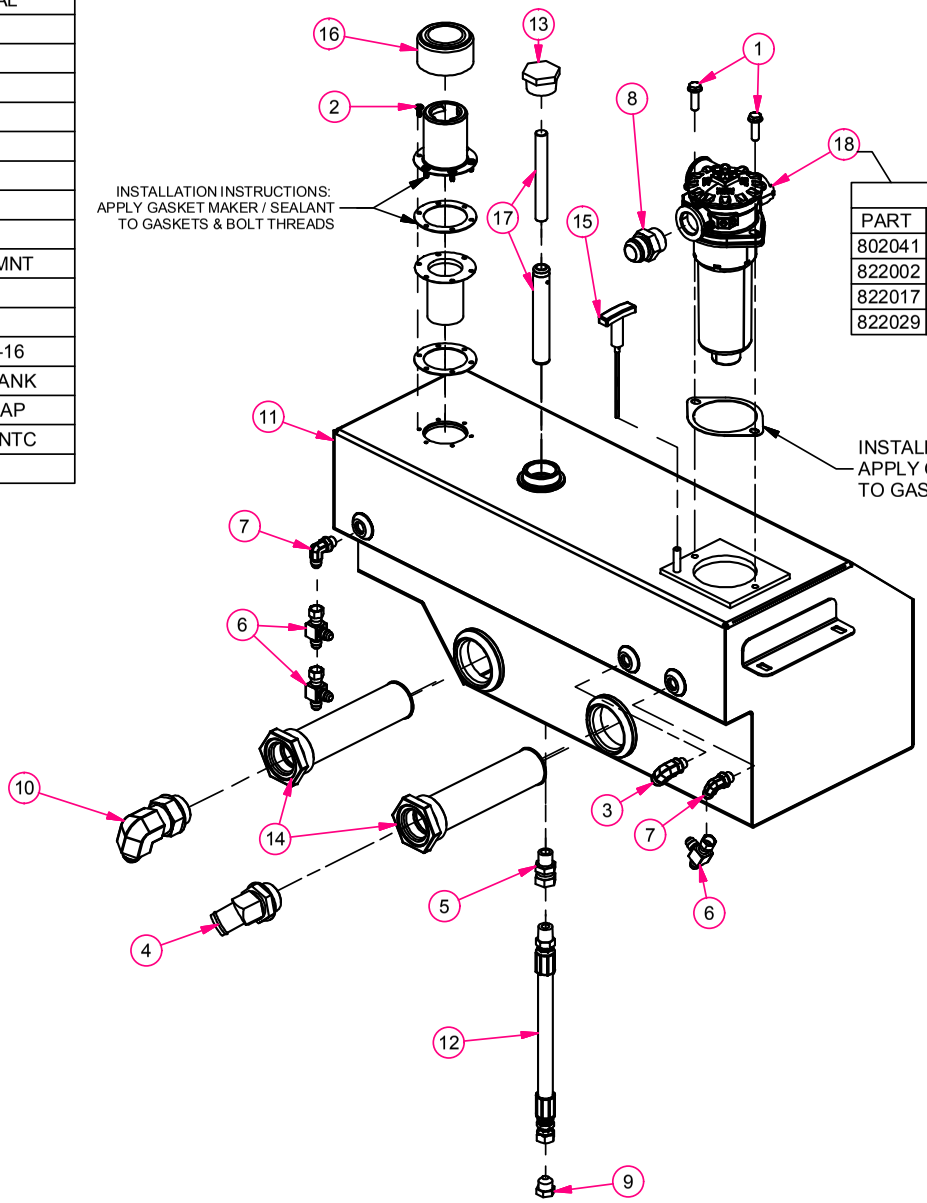




10/29/2013

HYDRAULIC RESERVOIR ASSEMBLY

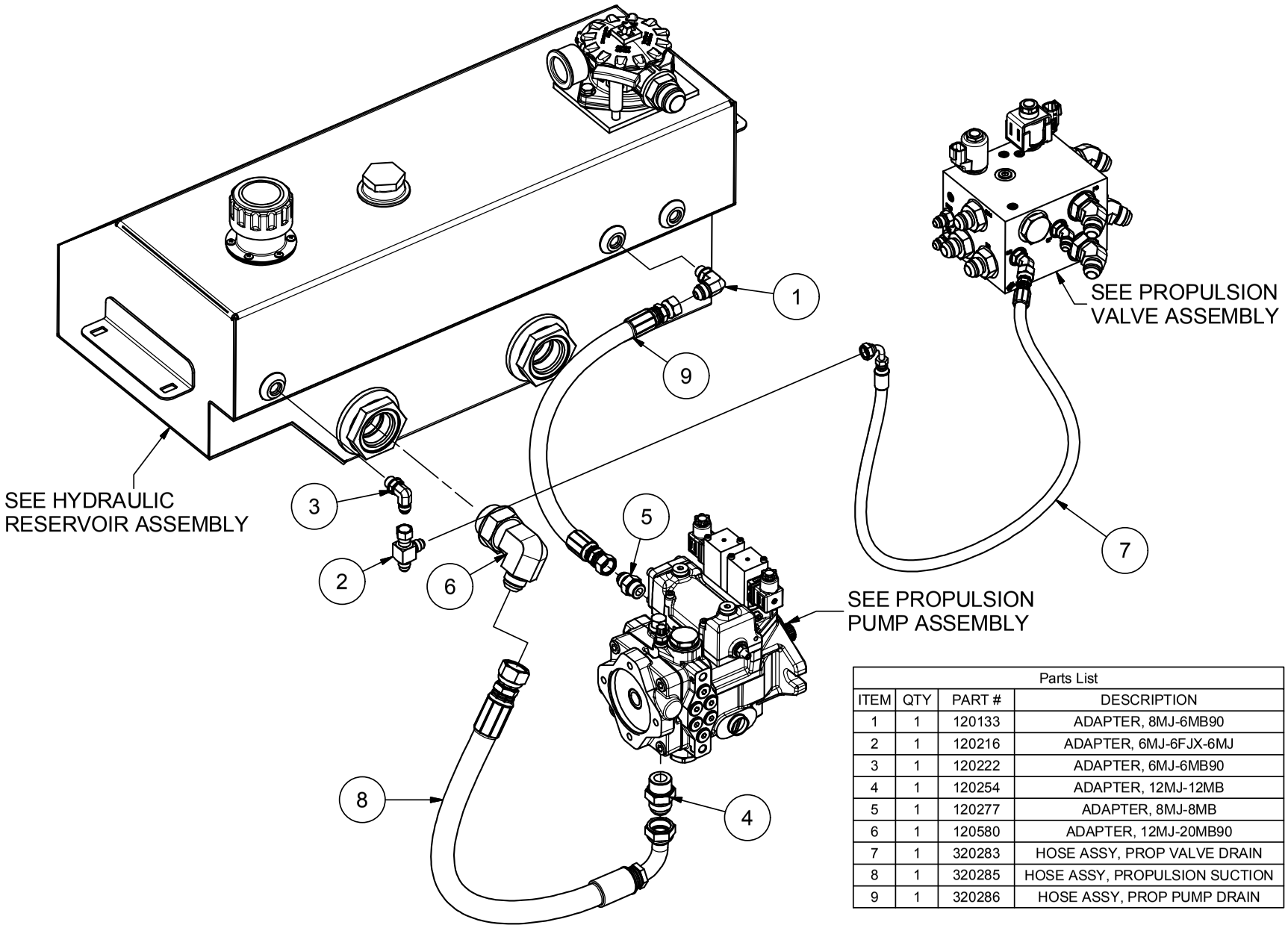
PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	2	110161	BOLT, 3/8-16 X 1.25, WIZ FLANGE
2	6	112053	SCREW, 10-32 X 1/2 MACH SEAL
3	1	120133	ADAPTER, 8MJ-6MB90
4	1	120189	ADAPTER, 20BH-20MB 45°
5	1	120191	ADAPTER, 8MB-8FPX
6	3	120216	ADAPTER, 6MJ-6FJX-6MJ
7	2	120222	ADAPTER, 6MJ-6MB90
8	1	120355	ADAPTER, 16MJ-16MB
9	1	120549	PLUG - 8-MJ
10	1	120580	ADAPTER, 12MJ-20MB90
11	1	315142	TANK - HYDRAULIC, TV30, WLDMNT
12	1	320264	HOSE - RESERVOIR DRAIN
13	1	322010	PLUG - TANK CLEANER
14	2	322012	STRAINER - SUCTION, SAE-20/-16
15	1	322025	DIP STICK - TV30, HYDRAULIC TANK
16	1	322073	FILL NECK ASSY, BREATHER CAP
17	1	323006	CLEANER - HYDRAULIC OIL, MGNTC
18	1	723014	FILTER ASSY



723014 Service Parts	
PART	DESCRIPTION
802041	O-RING, CAP
822002	FILTER REPLACEMENT
822017	GUAGE, OIL FILTER
822029	GASKET, RETURN OIL FILTER

6/13/2014

PROPULSION SUCTION & DRAIN PLUMBING

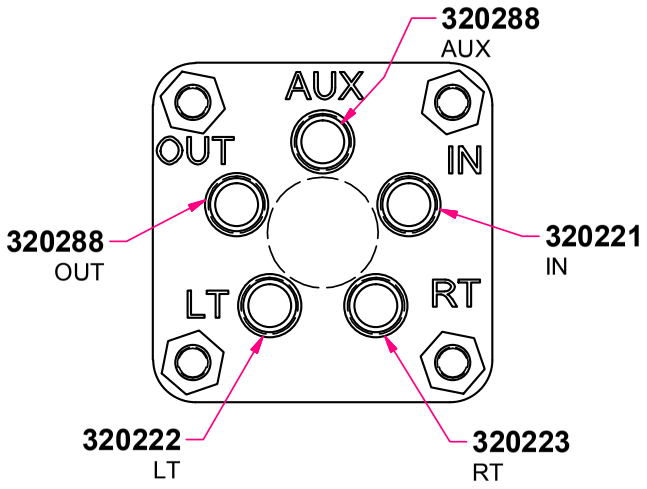


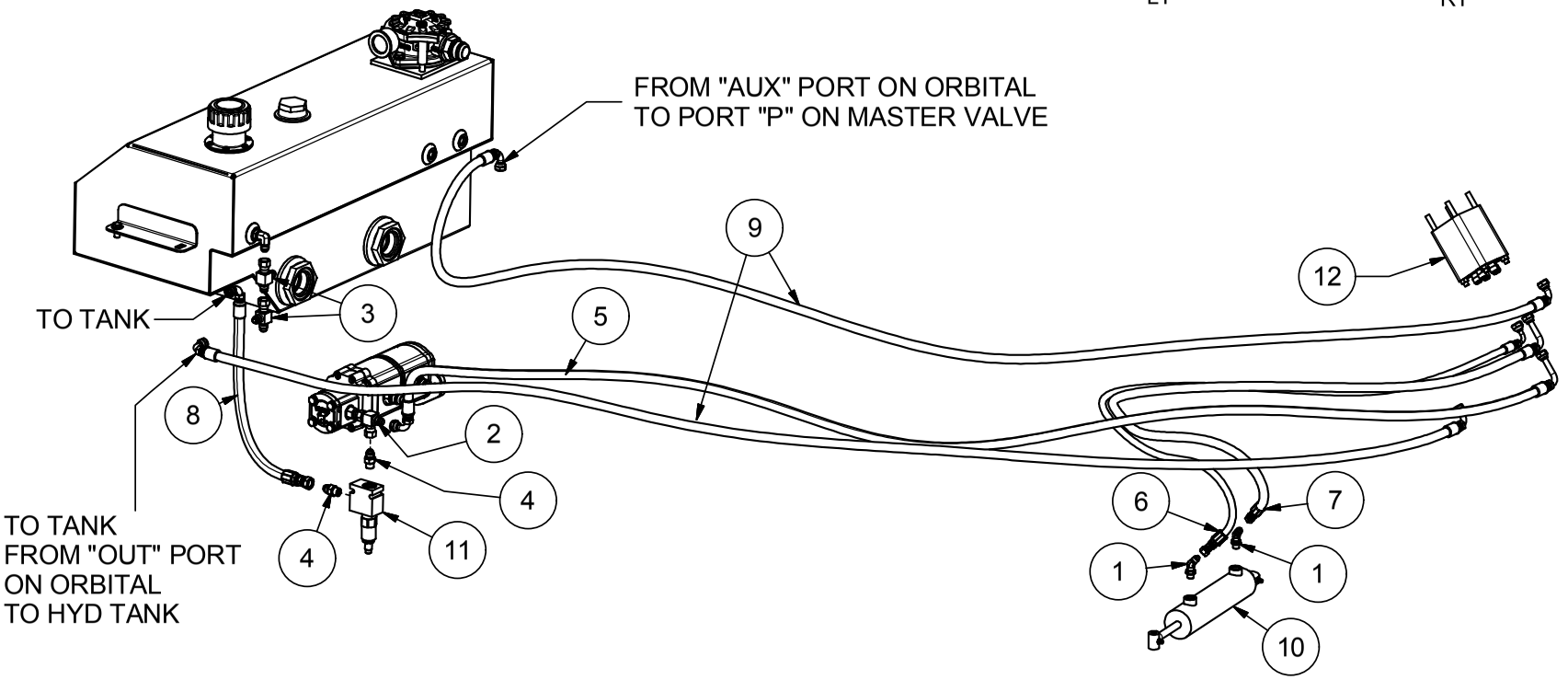
Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	1	120133	ADAPTER, 8MJ-6MB90
2	1	120216	ADAPTER, 6MJ-6FJX-6MJ
3	1	120222	ADAPTER, 6MJ-6MB90
4	1	120254	ADAPTER, 12MJ-12MB
5	1	120277	ADAPTER, 8MJ-8MB
6	1	120580	ADAPTER, 12MJ-20MB90
7	1	320283	HOSE ASSY, PROP VALVE DRAIN
8	1	320285	HOSE ASSY, PROPULSION SUCTION
9	1	320286	HOSE ASSY, PROP PUMP DRAIN

2/4/2014

STEERING SYSTEM

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	2	120027	ADAPTER, 4MB-4MJ 45
2	1	120057	ADAPTER, 6MJ-6MJ-6FJX
3	3	120216	ADAPTER, 6MJ-6FJX-6MJ
4	6	120319	ADAPTER, 6MJ-6MB
5	1	320221	HOSE ASSY, STEERING INLET
6	1	320222	HOSE ASSY, LEFT STEERING
7	1	320223	HOSE ASSY, RIGHT STEERING
8	1	320284	HOSE ASSY, STEERING RELIEF RETURN
9	2	320288	HOSE ASSY, STEERING OUT & AUX
10	1	323010	CYLINDER - STEERING, 1-3/4 X 6
11	1	323043	RELIEF, 1800 PSI PO PRESSURE
12	1	520163	STEERING PUMP

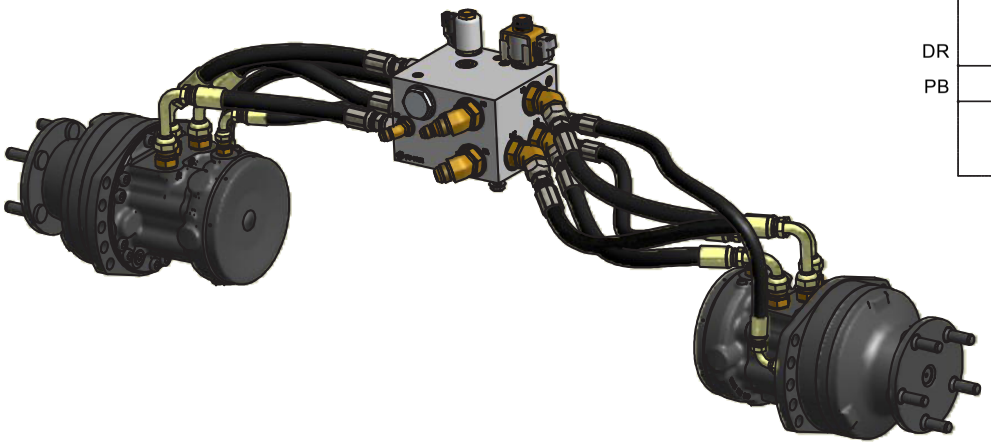


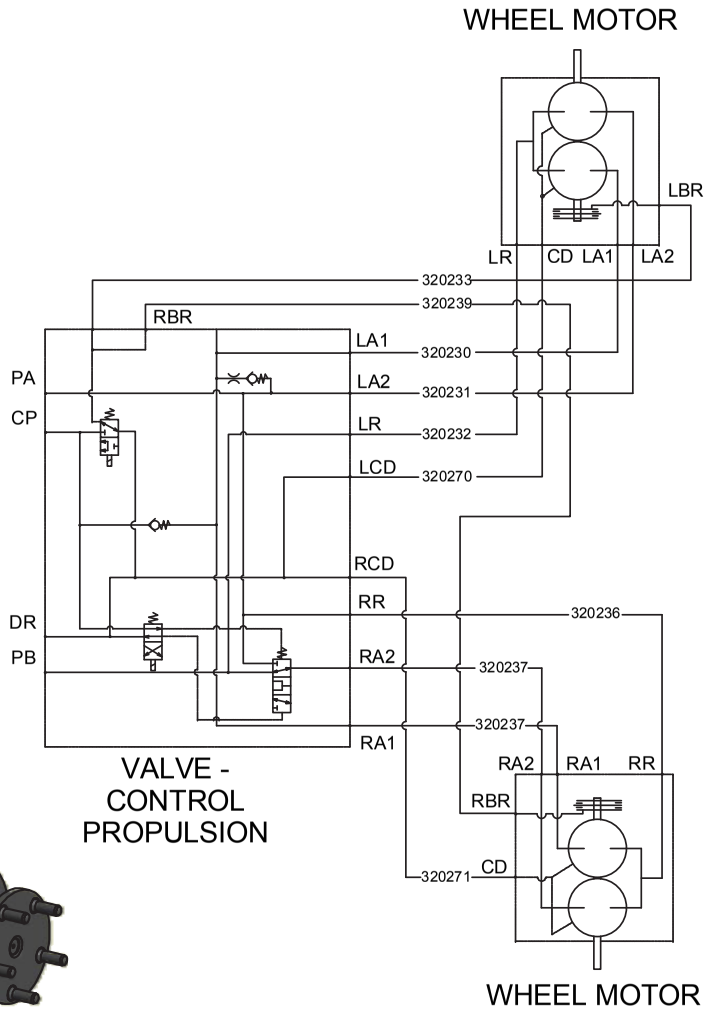


6/13/2014

WHEEL MOTOR PLUMBING

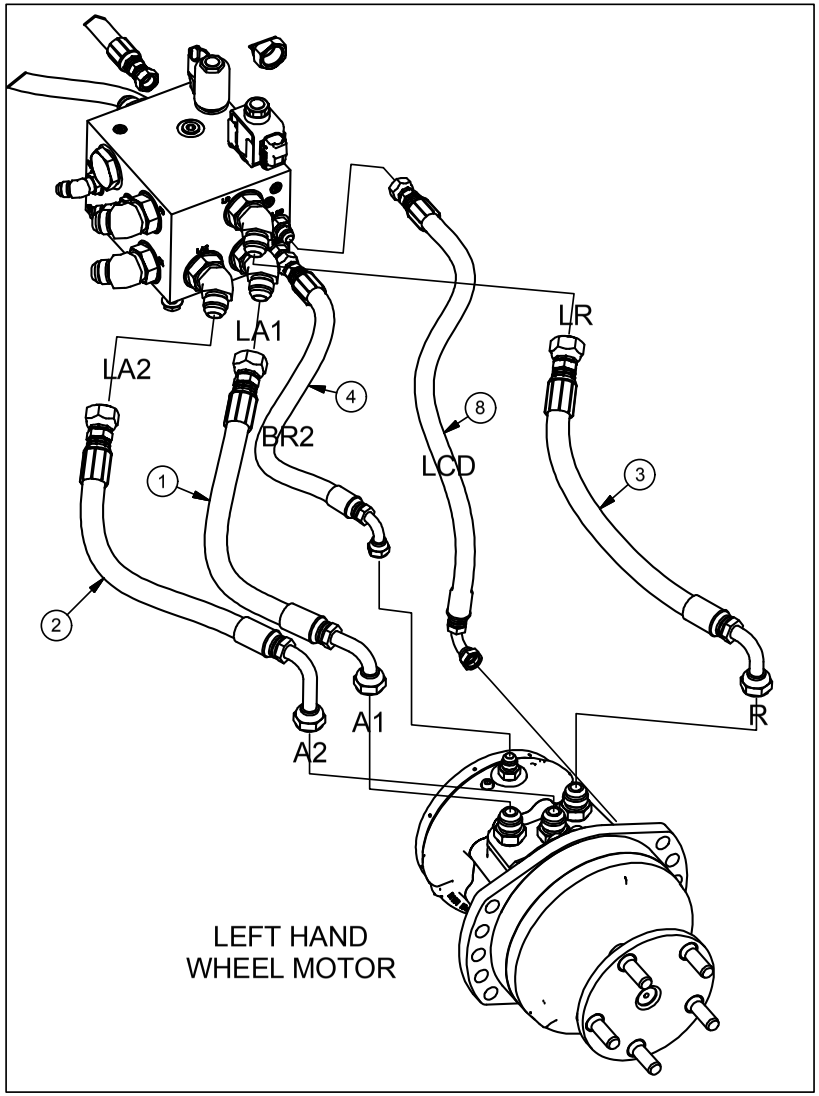
Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	1	320230	HOSE, LEFT WHEEL MOTOR A1 PRES
2	1	320231	HOSE, LEFT WHEEL MOTOR A2 PRESS
3	1	320232	HOSE, LEFT WHEEL MOTOR RETURN
4	1	320233	HOSE, LEFT WHEE MOTOR BRAKE RELEASE
5	1	320236	HOSE, RIGHT WHEEL MOTOR RETURN
6	2	320237	HOSE, RIGHT WHEEL MOTOR A1 & A2 PRES
7	1	320239	HOSE, RIGHT WHEEL MOTOR BRAKE RELEASE
8	1	320270	HOSE, LEFT WHEEL MOTOR CASE DRAIN
9	1	320271	HOSE, RIGHT WHEEL MOTOR CASE DRAIN

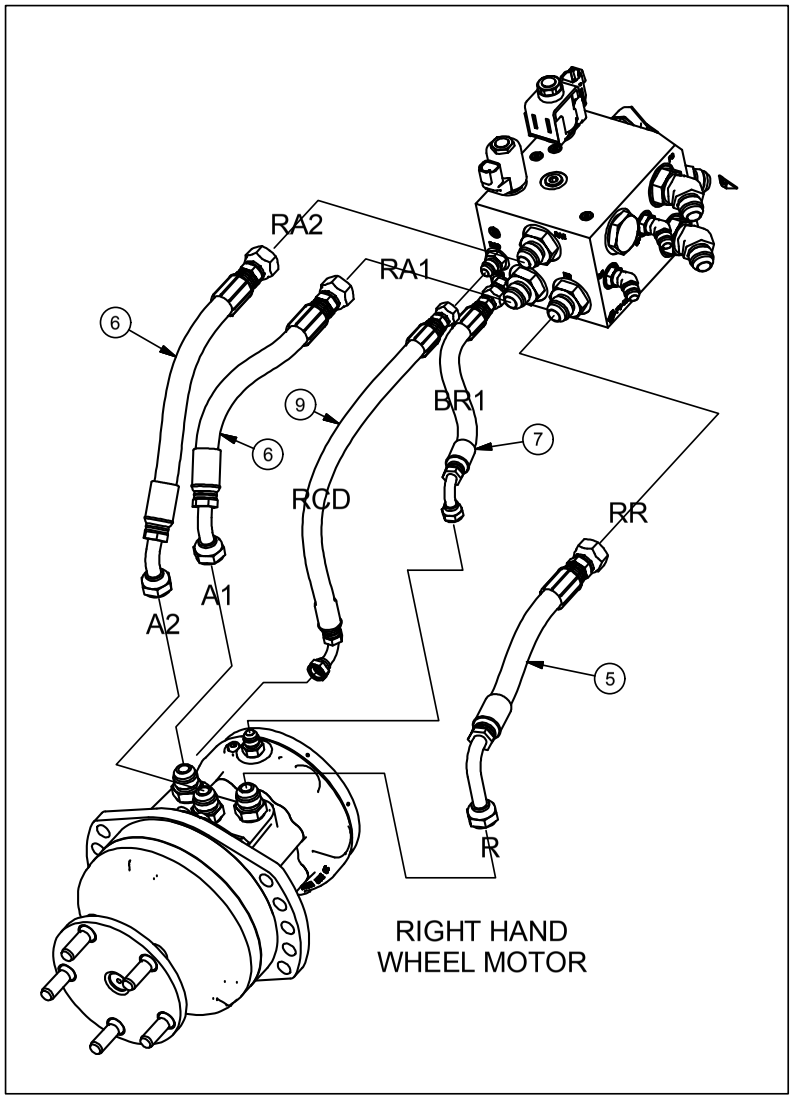




10/29/2013

WHEEL MOTOR PLUMBING

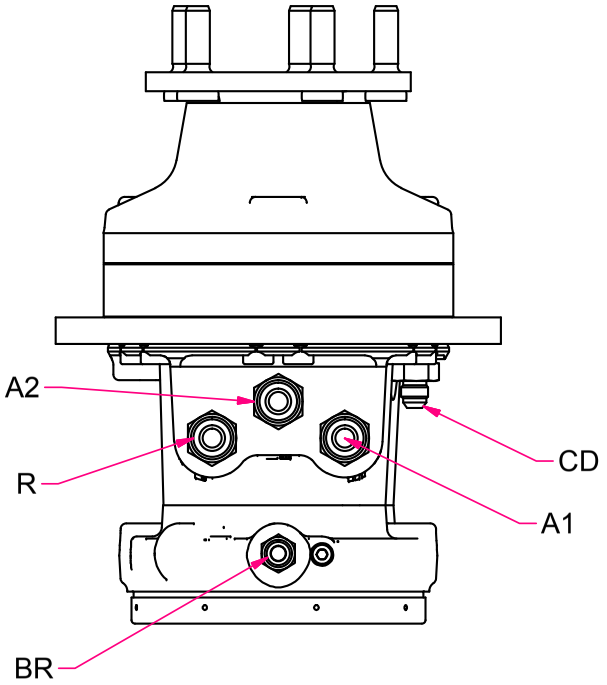


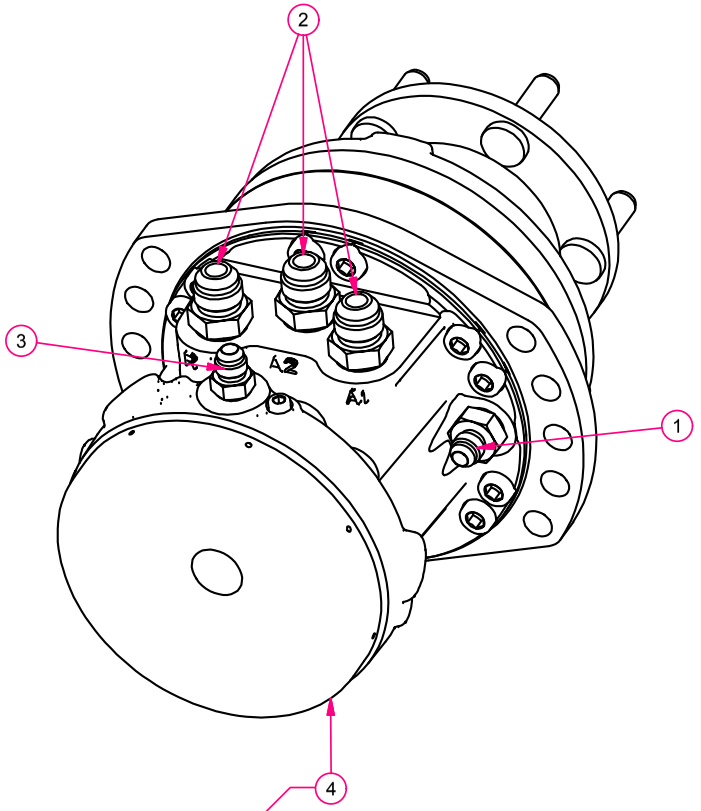


10/29/2013

WHEEL MOTOR ASSEMBLY

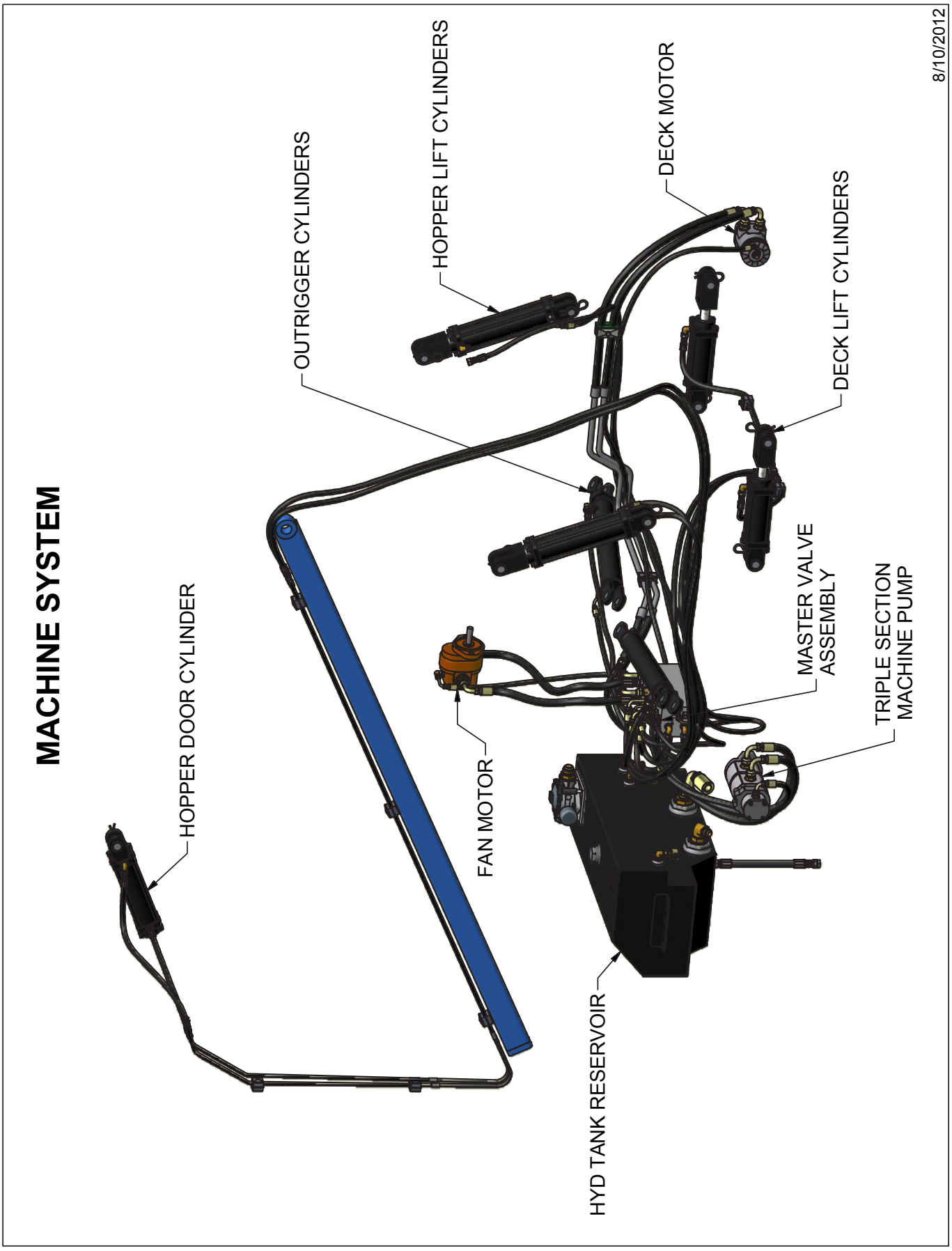
Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	1	120239	ADAPTER, 6MJ-8MB
2	3	120251	ADAPTER, 10MJ-10MB
3	1	120319	ADAPTER, 6MJ-6MB
4	1	323034	MOTOR, POCLAIN HYD WHEEL



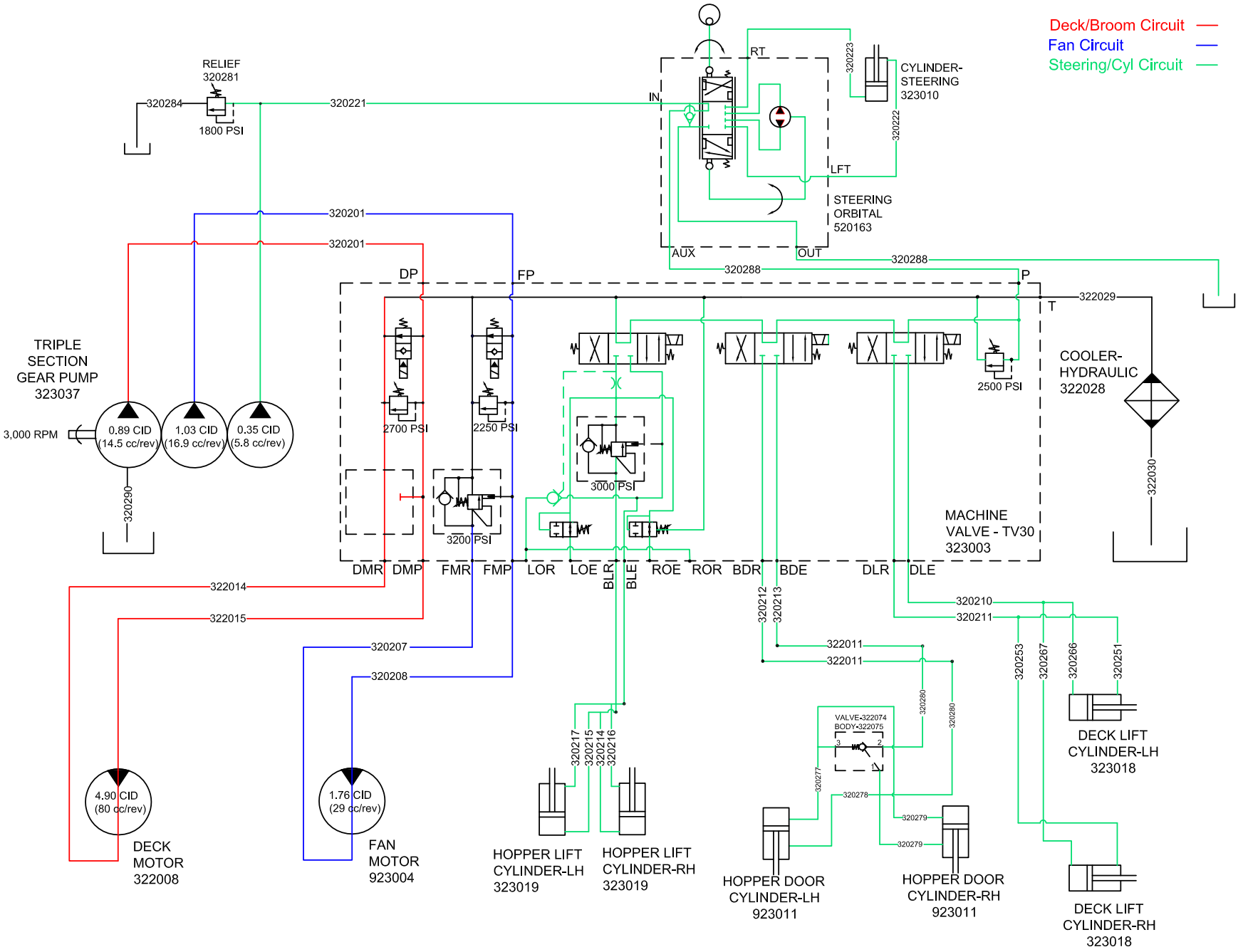


323034 Service Parts		
PART #	QTY	DISCRIPTION
311013	5	STUD, WHEEL MOTOR
322072	1	SEAL KIT, WHEEL MOTOR

7/29/2013


MACHINE SYSTEM
HOPPER DOOR CYLINDER
OUTRIGGER CYLINDERS
HOPPER LIFT CYLINDERS
DECK MOTOR
DECK LIFT CYLINDERS
FAN MOTOR
MASTER VALVE ASSEMBLY
TRIPLE SECTION MACHINE PUMP
HYD TANK RESERVOIR
8/10/2012

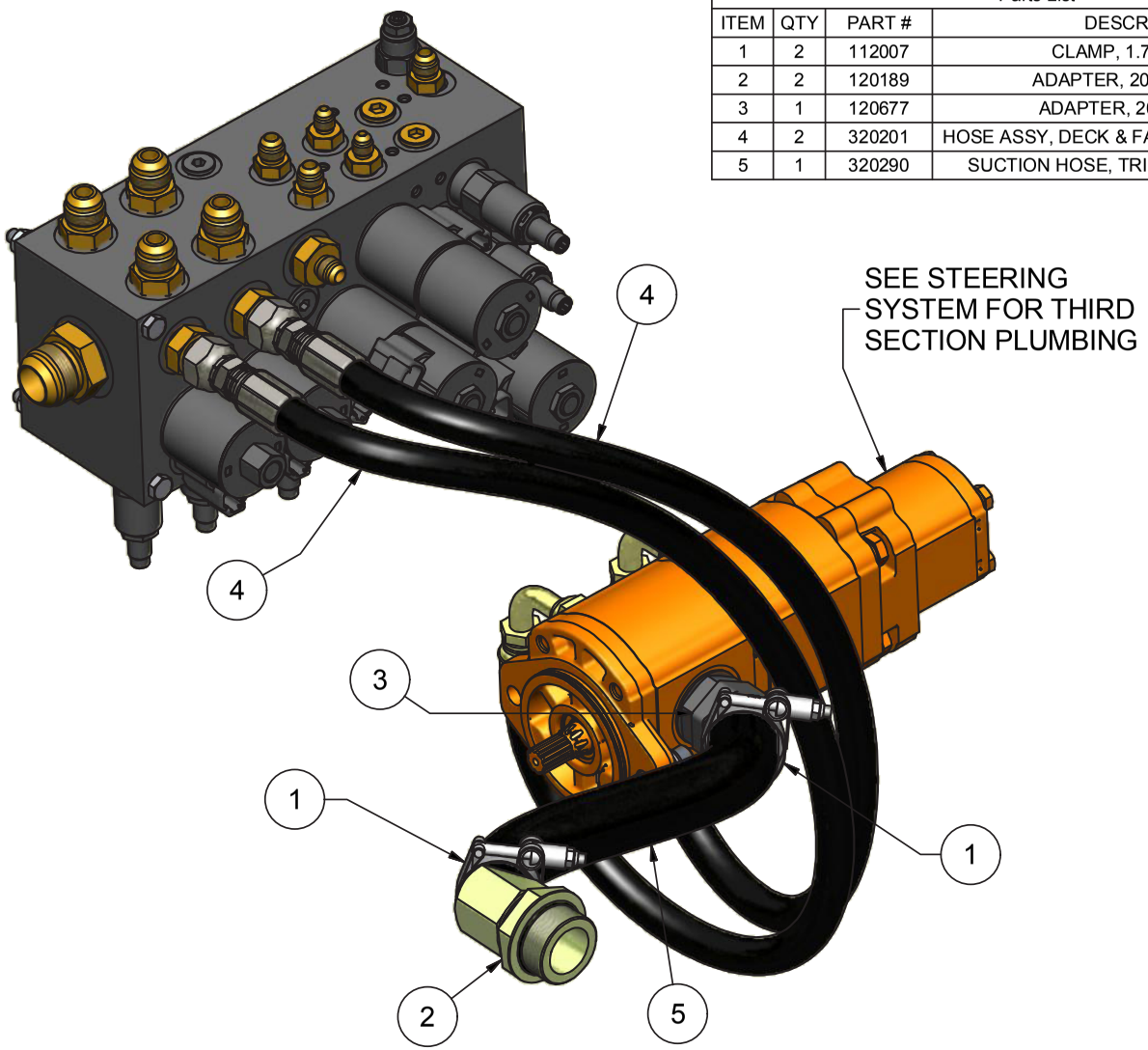
TV30 MACHINE CIRCUITS (DECK & FAN DRIVES, CYLINDER FUNCTIONS)



06/13/14

TRIPLE SECTION (MACHINE) PUMP PLUMBING

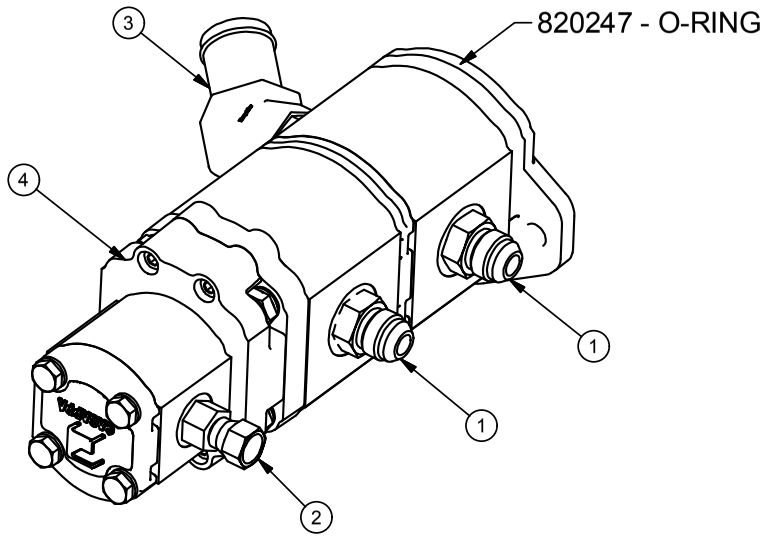
Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	2	112007	CLAMP, 1.75", T-BOLT
2	2	120189	ADAPTER, 20BH-20MB 45°
3	1	120677	ADAPTER, 20BH-16MB45
4	2	320201	HOSE ASSY, DECK & FAN PRESSURE SUPPLY
5	1	320290	SUCTION HOSE, TRIPLE SECTION PUMP

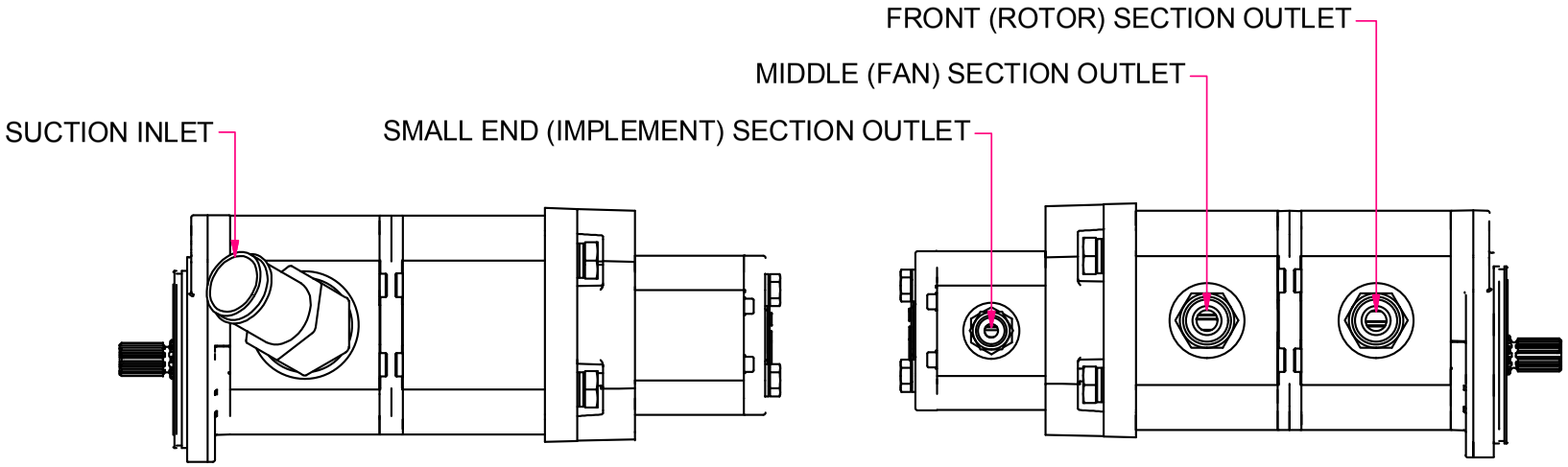


6/13/2014

TRIPLE SECTION PUMP ASSEMBLY

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	2	120251	ADAPTER, 10MJ-10MB
2	1	120411	ADAPTER, 6MB-6FJX
3	1	120677	ADAPTER, 20BH-16MB45
4	1	323037	PUMP, TRIPLE SECTION (14.5, 16.8, 5.8 cc)
		325007	SEAL KIT, TRIPLE SECTION PUMP

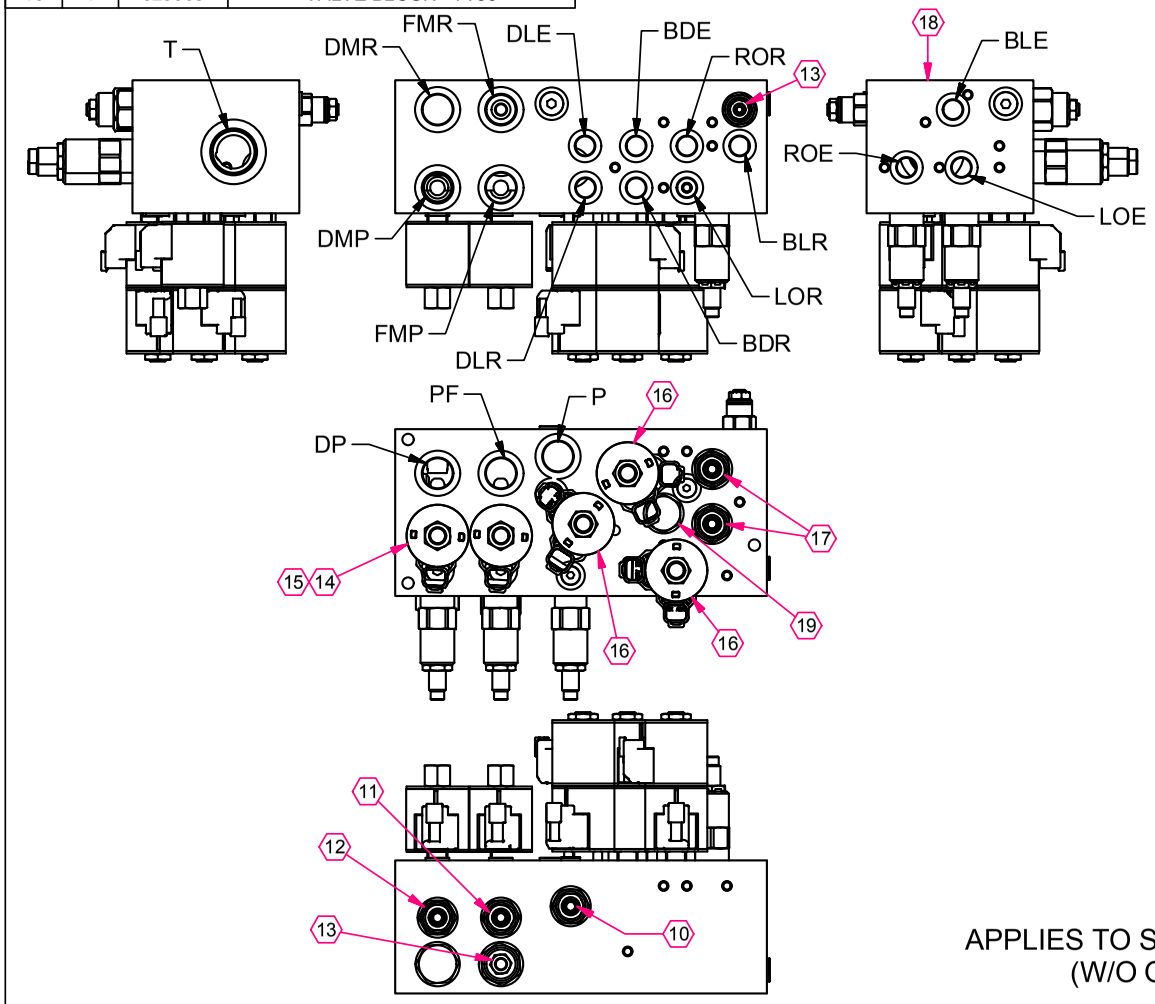


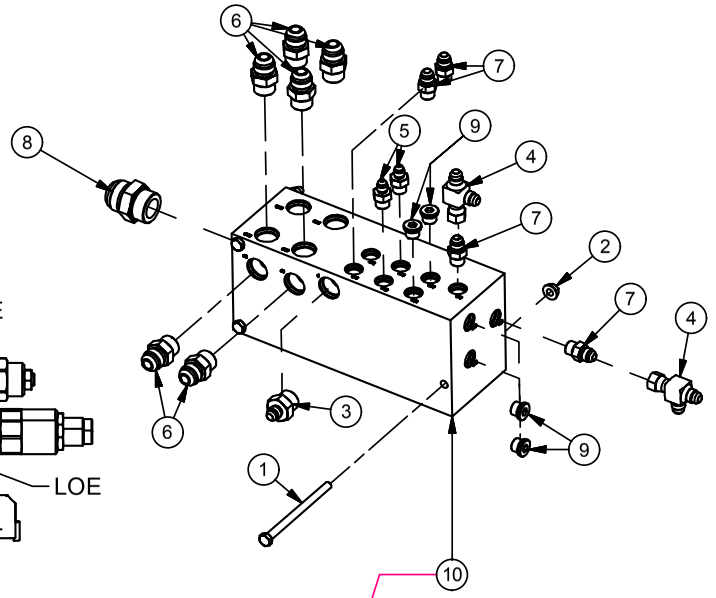


6/9/2014

MASTER VALVE ASSEMBLY

PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	3	110529	BOLT, 5/16-18 X 4.5
2	3	110606	NUT, 5/16-18 WIZ FLANGE
3	1	120144	ADAPTER, 6MJ-10MB
4	2	120216	ADAPTER, 6MJ-6FJX-6MJ
5	2	120249	ADAPTER, 4MJ-6MB
6	6	120251	ADAPTER, 10MJ-10MB
7	4	120319	ADAPTER, 6MJ-6MB
8	1	120355	ADAPTER, 16MJ-16MB
9	4	120490	Plug, 6mb Hollow Hex
10	1	323003	VALVE BLOCK - TV30





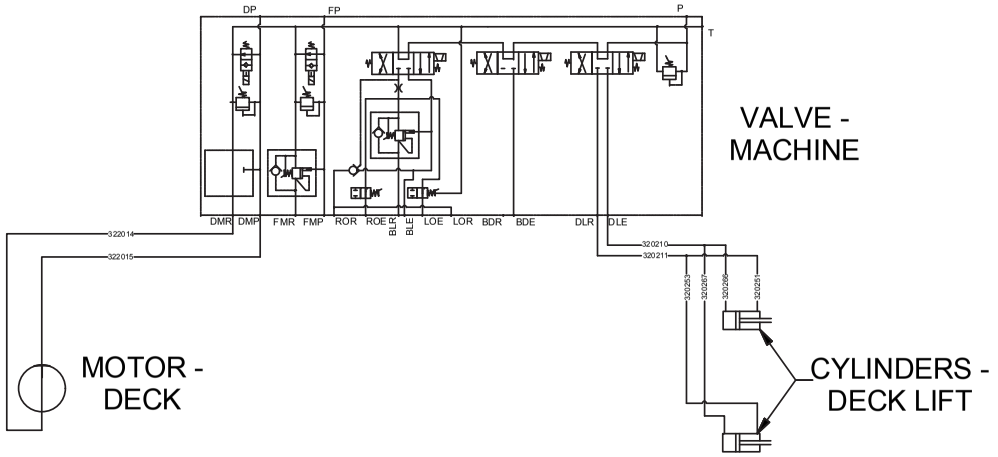
323003 Service Parts		
ITEM	PART #	DESCRIPTION
10	322032	25.0 RELIEF VALVE
11	322033	22.5 RELIEF VALVE
12	322034	27.0 RELIEF VALVE
13	322035	C'BALANCE VALVE
14	820232	N.O. SOL VALVE
15	522163	VDC ER COIL
16	322038	3P 4W SOL VALVE
17	322071	CAVITY PLUG
18	322040	VALVE BODY
19	522160	PILOT CHECK VALVE

APPLIES TO S/N 13A21 AND ABOVE
(W/O OUTRIGGERS)

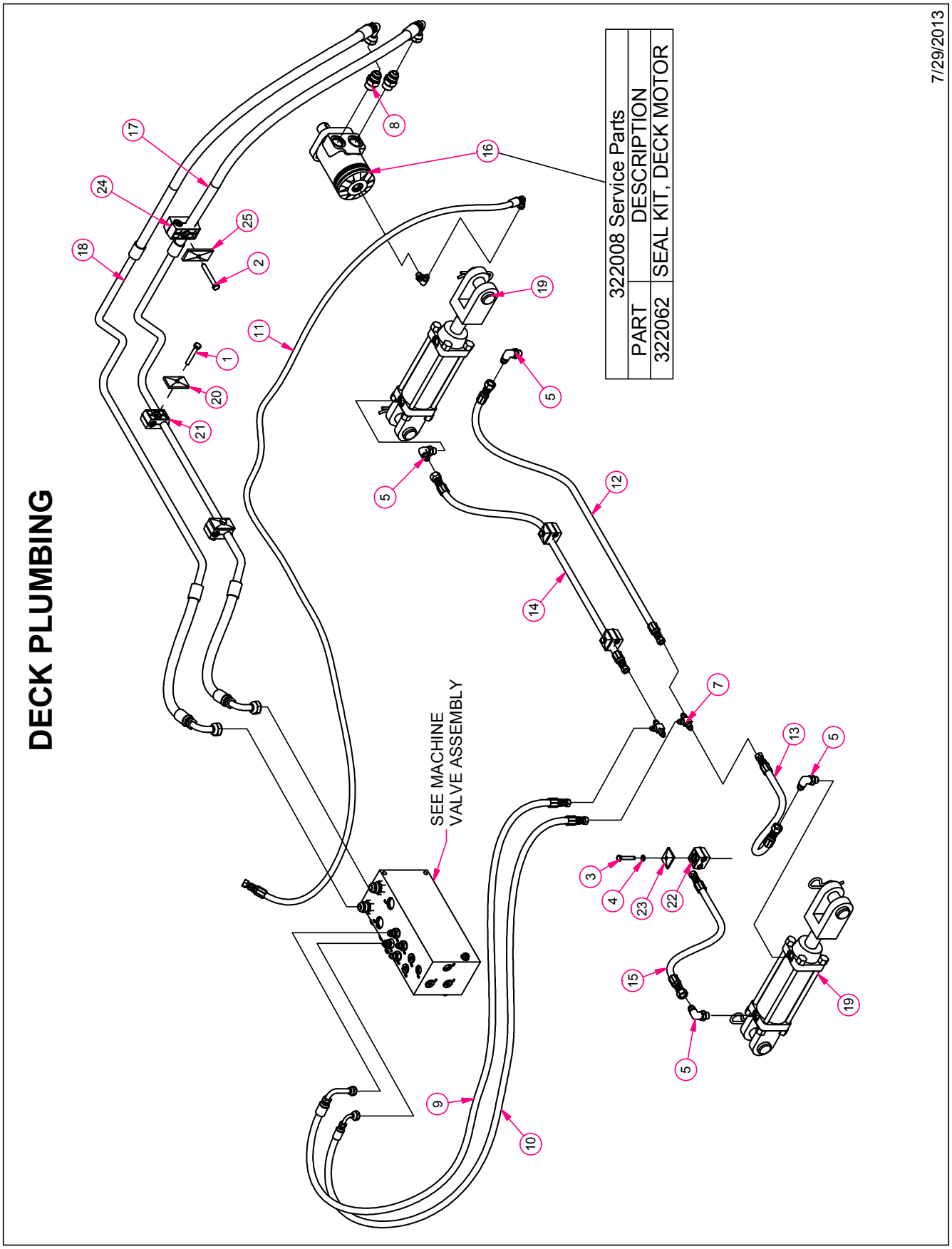
7/26/2013

DECK PLUMBING

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	2	110378	BOLT, 5/16-18 X 2.0
2	1	110396	BOLT, 5/16-18 X 2.5
3	3	110474	BOLT, 1/4-20 X 1-1/2
4	3	110667	WASHER, 1/4" LOCK
5	4	120222	ADAPTER, 6MJ-6MB90
6	1	120235	ADAPTER, 4MJ-4MB90
7	2	120241	ADAPTER, 4MJ-4MJ-4MJ
8	2	120251	ADAPTER, 10MJ-10MB
9	1	320210	HOSE - DECK LIFT EXTEND
10	1	320211	HOSE - DECK LIFT RETRACT
11	1	320247	HOSE - DECK MOTOR CASE DRAIN
12	1	320251	HOSE - DECK, LEFT FRONT
13	1	320253	HOSE - DECK, RIGHT FRONT
14	1	320266	HOSE - DECK, LEFT REAR
15	1	320267	HOSE DECK, RIGHT REAR
16	1	322008	MOTOR, 4.9 CID, 1" SHFT
17	1	322014	HOSE - DECK DRIVE, LOWER ASSEMBLY
18	1	322015	HOSE - DECK DRIVE, UPPER ASSEMBLY
19	2	323018	CYLINDER - 2 x 4, SAE-6, TIE ROD
20	4	522083	COVER PLATE
21	4	522098	CLAMP BODY
22	3	522104	DOUBLE HOSE CLAMP
23	3	522105	DOUBLE COVERPLATE
24	2	820097	CLAMP BODY
25	2	820098	COVER PLATE

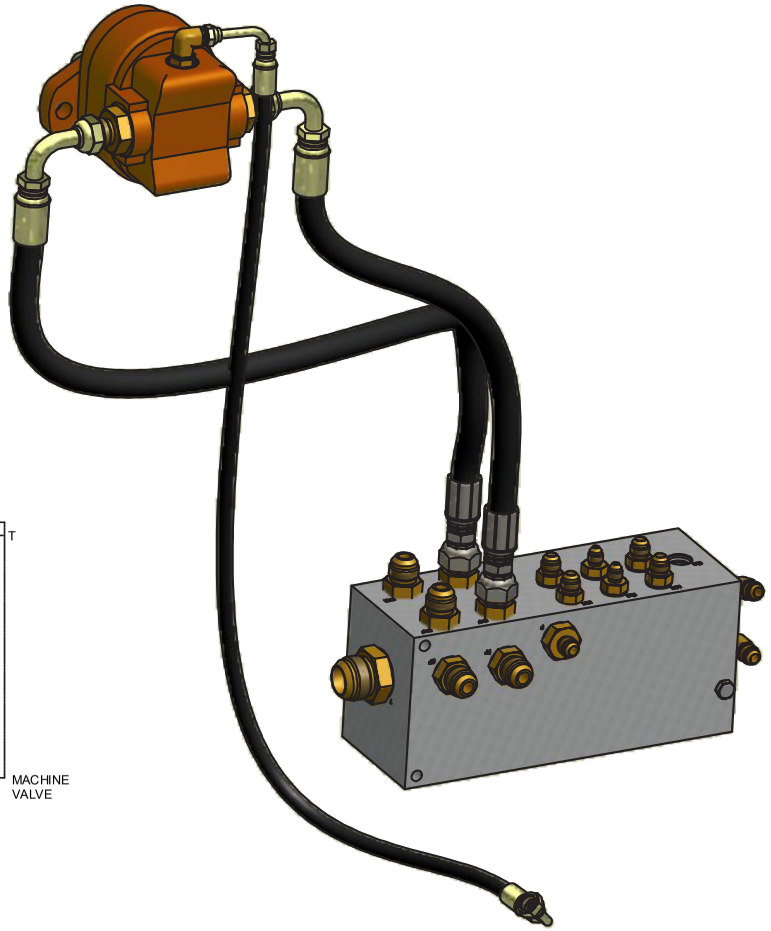


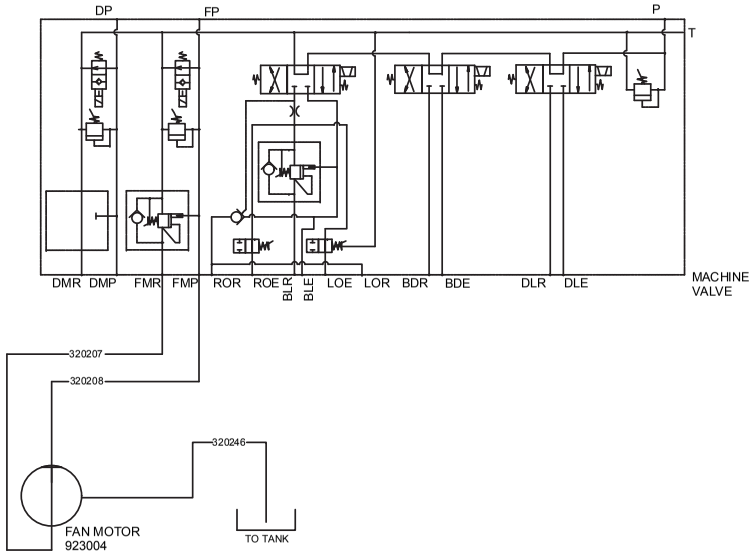
7/29/2013


DECK PLUMBING
7/29/2013
322008 Service Parts
PART
DESCRIPTION
322062
SEAL KIT, DECK MOTOR
SEE MACHINE
VALVE ASSEMBLY

FAN MOTOR PLUMBING

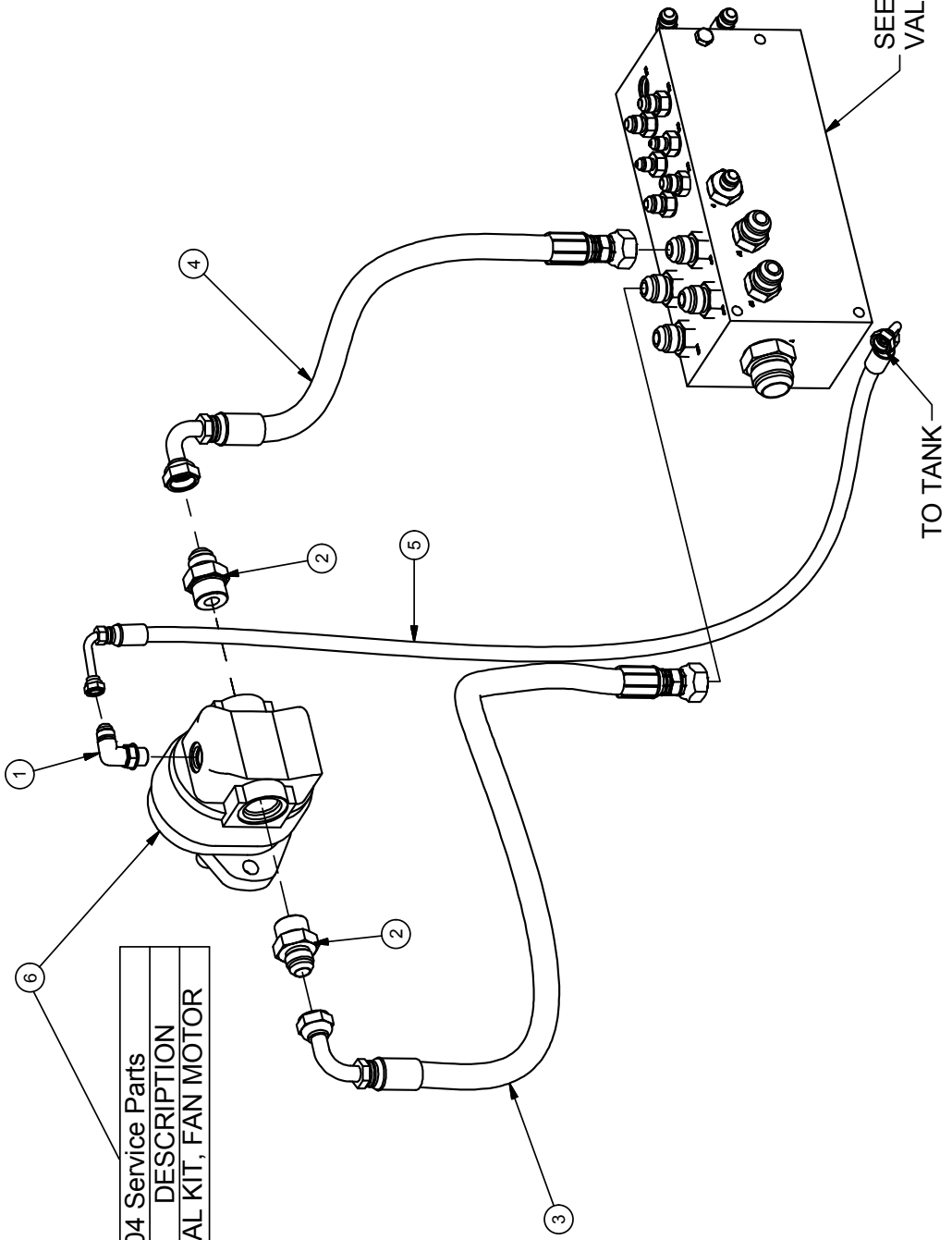
Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	1	120222	ADAPTER, 6MJ-6MB90
2	2	120253	ADAPTER, 10MJ-12MB
3	1	320207	HOSE ASSY, FAN RETURN
4	1	320208	HOSE ASSY, FAN PRESSURE
5	1	320246	HOSE - FAN MOTOR CASE DRAIN
6	1	923004	MOTOR, 1.71 CI, FAN DRIVE





3/30/2012

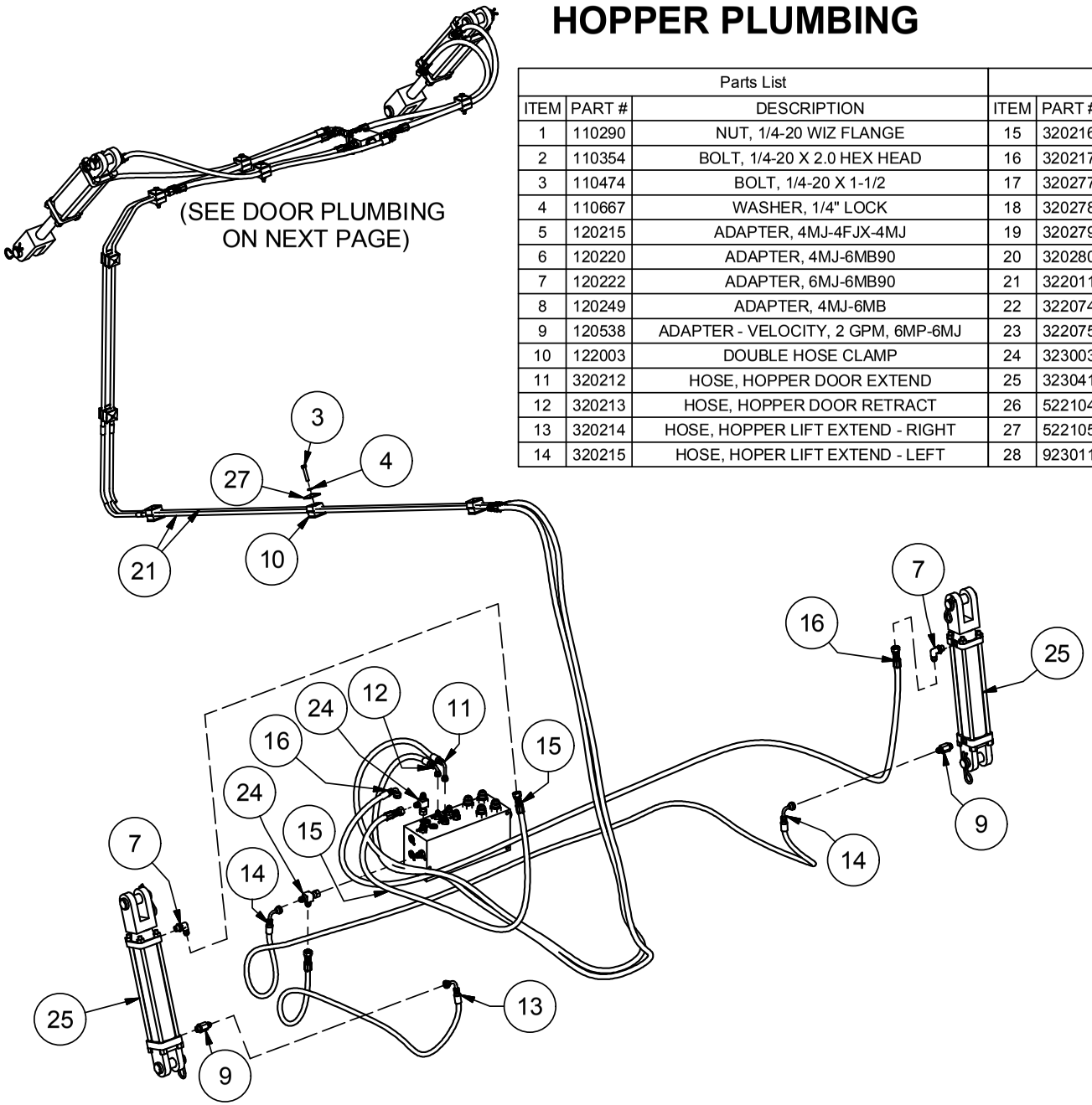
FAN MOTOR PLUMBING



923004 Service Parts	
PART	DESCRIPTION
922078	SEAL KIT, FAN MOTOR

3/30/2012

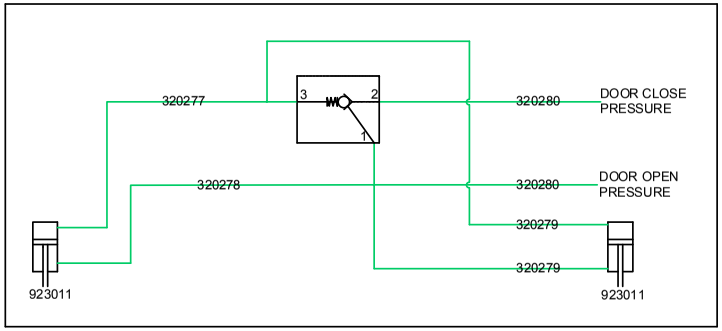
HOPPER PLUMBING

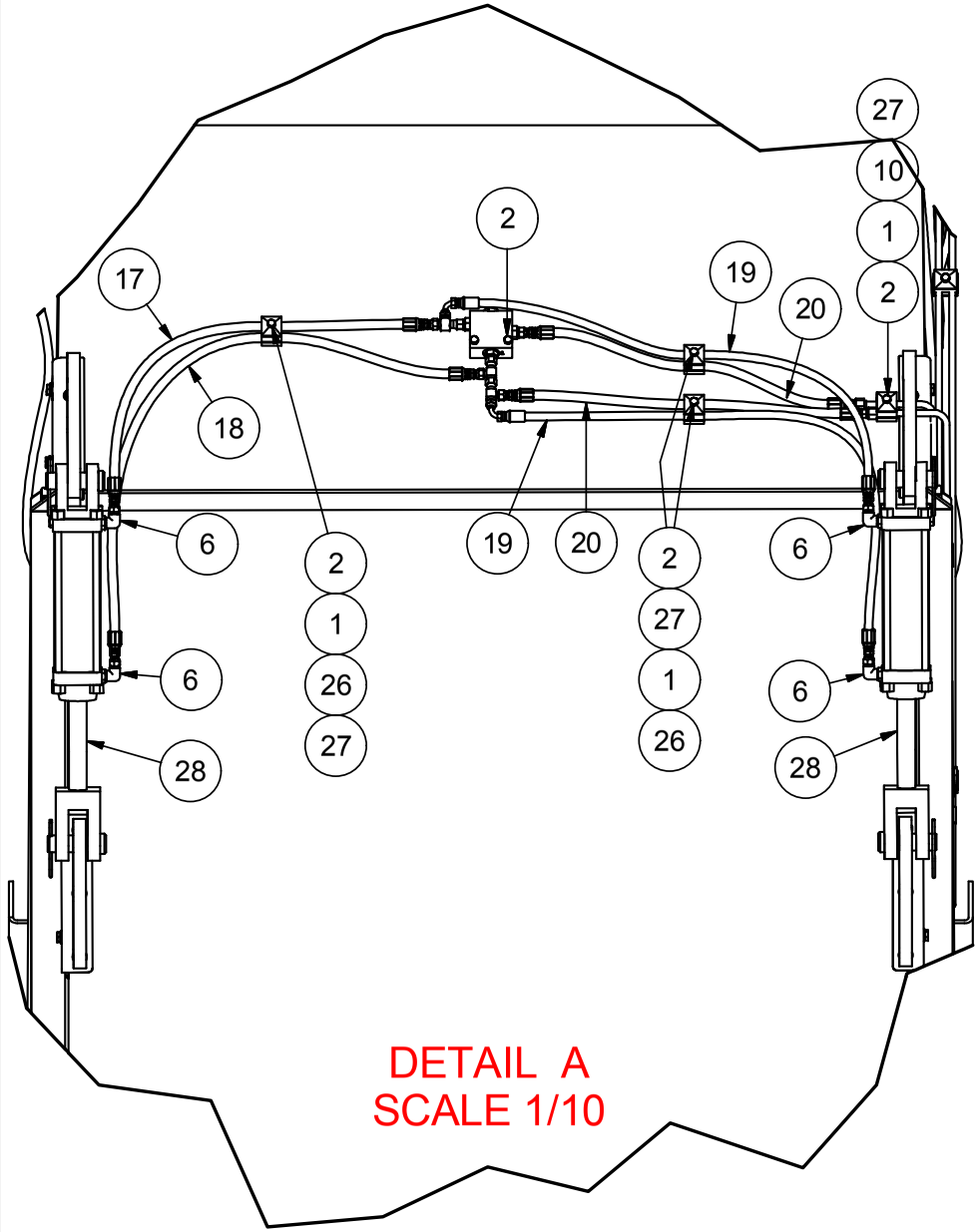


Parts List			Parts List		
ITEM	PART #	DESCRIPTION	ITEM	PART #	DESCRIPTION
1	110290	NUT, 1/4-20 WIZ FLANGE	15	320216	HOSE, HOPPER LIFT RETRACT - RIGHT
2	110354	BOLT, 1/4-20 X 2.0 HEX HEAD	16	320217	HOSE, HOPPER LIFT RETRACT - LEFT
3	110474	BOLT, 1/4-20 X 1-1/2	17	320277	HOSE, LH HOPPER CYL EXTEND
4	110667	WASHER, 1/4" LOCK	18	320278	HOSE, LH HOPPER CYL RETRACT
5	120215	ADAPTER, 4MJ-4FJX-4MJ	19	320279	HOSE, RH CYL EXTEND / RETRACT
6	120220	ADAPTER, 4MJ-6MB90	20	320280	Hose, Hopper Door Press / Return
7	120222	ADAPTER, 6MJ-6MB90	21	322011	HOSE-TUBE ASSY, HOPPER DOOR
8	120249	ADAPTER, 4MJ-6MB	22	322074	VALVE, PO CHECK
9	120538	ADAPTER - VELOCITY, 2 GPM, 6MP-6MJ	23	322075	VALVE BODY, 3-WAY SAE-6
10	122003	DOUBLE HOSE CLAMP	24	323003	VALVE - MACHINE, MASTER, TV30
11	320212	HOSE, HOPPER DOOR EXTEND	25	323041	CYLINDER - 2.5 X 8, SAE-6
12	320213	HOSE, HOPPER DOOR RETRACT	26	522104	DOUBLE HOSE CLAMP
13	320214	HOSE, HOPPER LIFT EXTEND - RIGHT	27	522105	DOUBLE COVERPLATE
14	320215	HOSE, HOPER LIFT EXTEND - LEFT	28	923011	Cylinder, 2 X 6, -6 SAE Cross

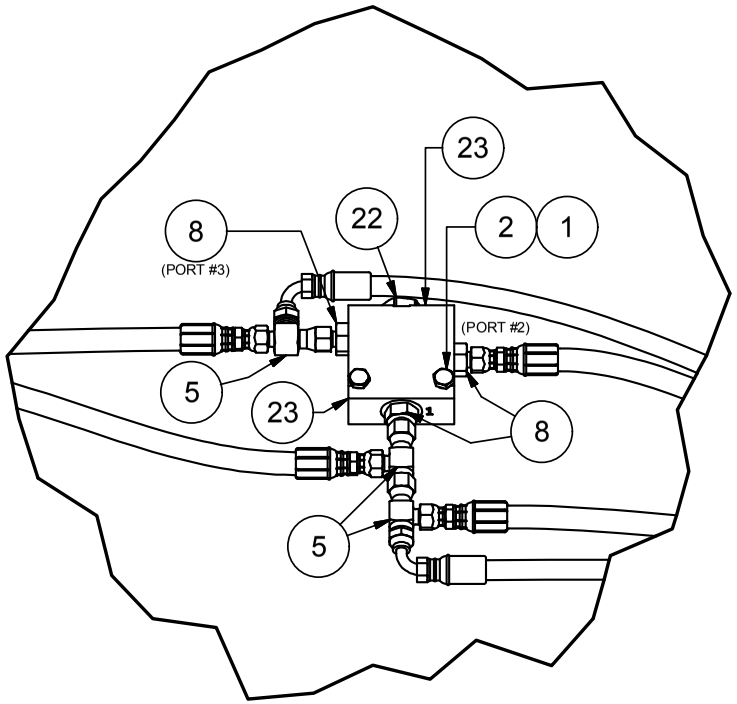
3/11/2014

HOPPER PLUMBING



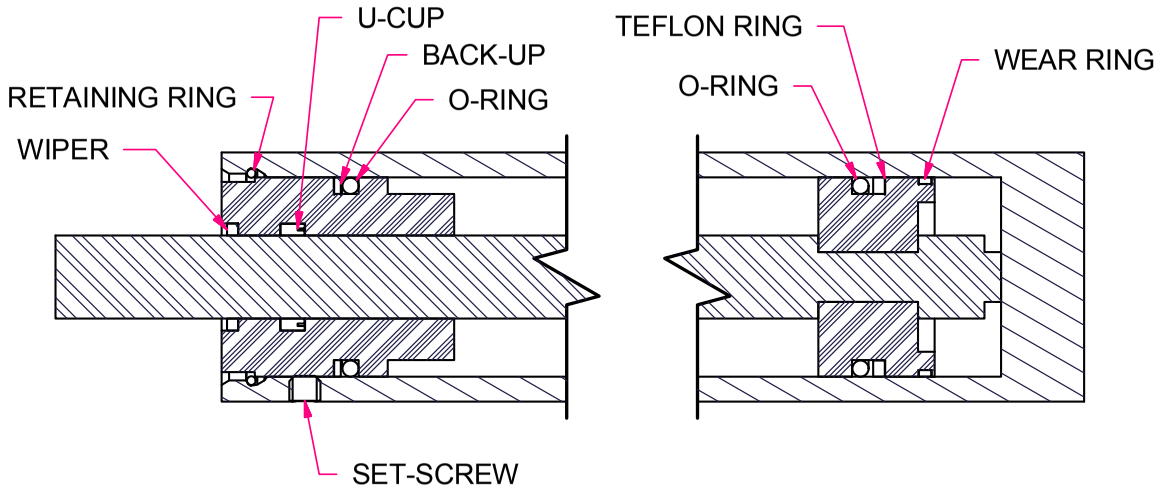


DETAIL A
SCALE 1/10

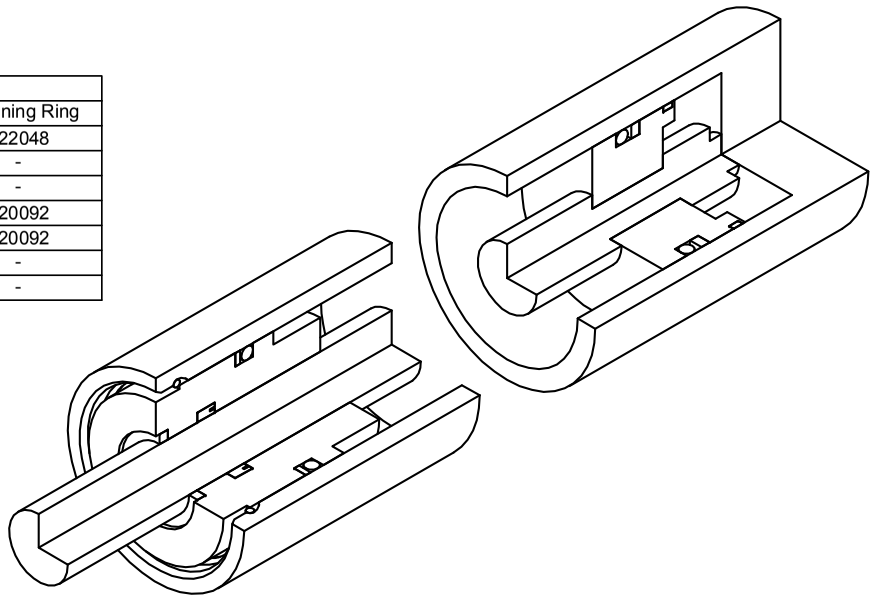


DETAIL B
SCALE 1/4

HYDRAULIC CYLINDER SERVICE PARTS



	Service Parts		
	Cylinder Part #	Seal Kit	Retaining Ring
Steering	323010	322047	322048
LH Deck Lift	323018	220387	-
RH Deck Lift	323033	220387	-
LH Outrigger	323032	220534	220092
RH Outrigger	323031	220534	220092
Hopper Lift	323019	220387	-
Hopper Door	923011	220387	-

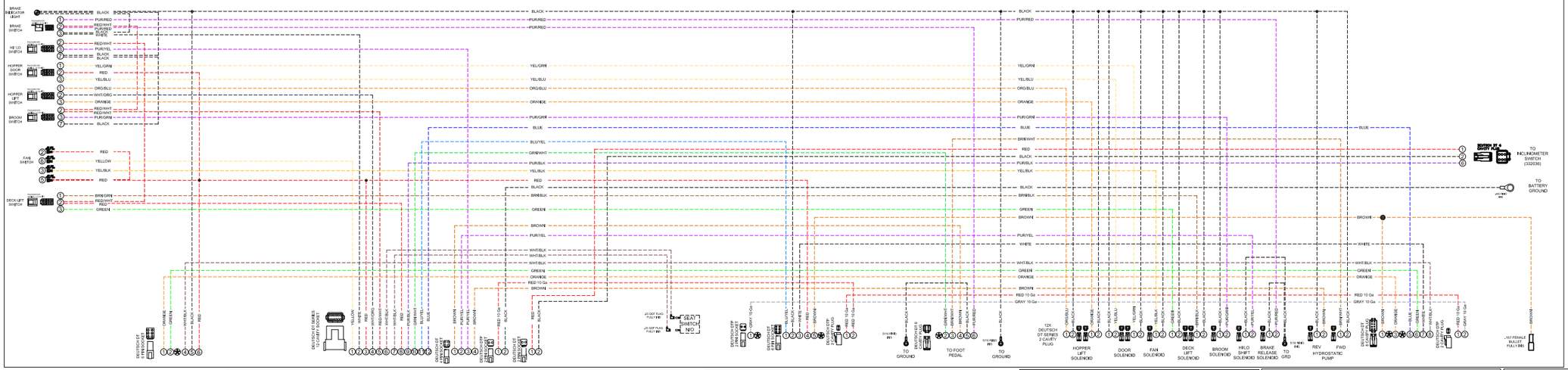


3/28/2012

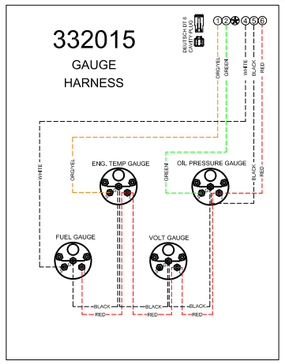
PORT LABEL ABBREVIATIONS	
ABBREVIATION	DESCRIPTION
AUX	AUXILIARY
BDE	BOX/HOPPER DOOR EXTEND (CLOSE)
BDR	BOX/HOPPER DOOR RETRACT (OPEN)
BLE	BOX/HOPPER LIFT EXTEND (UP)
BLR	BOX/HOPPER LIFT RETRACT (DOWN)
CD	CASE DRAIN
CP	CHARGE PRESSURE
CR	CHARGE RETURN
CS	CASE SUCTION
DLE	DECK LIFT EXTEND (DOWN)
DLR	DECK LIFT RETRACT (UP)
DMP	DECK MOTOR PRESSURE
DMR	DECK MOTOR RETURN
DP	DECK PRESSURE
DR	DRAIN
FMP	FAN MOTOR PRESSURE
FMR	FAN MOTOR RETURN
FP	FAN PRESSURE
IN	INLET
LA1	LEFT A1 PRESURE
LA2	LEFT A2 PRESSURE
LBR	LEFT BRAKE RELEASE
LCD	LEFT CASE DRAIN
LFT	LEFT TURN
LOE	LEFT OUTRIGGER EXTEND (OUT)
LOR	LEFT OUTRIGGER RETRACT (IN)
LR	LEFT RETURN
OUT	OUTLET
P	PRESSURE (IMPLEMENT)
PA	PRESSURE A
PB	PRESSURE B
RA1	RIGHT A1 PRESSURE
RA2	RIGHT A2 PRESSURE
RBR	RIGHT BRAKE RELEASE
RCD	RIGHT CASE DRAIN
ROE	RIGHT OUTRIGGER EXTEND (OUT)
ROR	RIGHT OUTRIGGER RETRACT (IN)
RR	RIGHT RETURN
RT	RIGHT TURN
T	TANK

TV30 DIESEL WIRING SCHEMATIC DIAGRAM OVERVIEW

332034
MASTER HARNESS



332015
GAUGE HARNESS



332035
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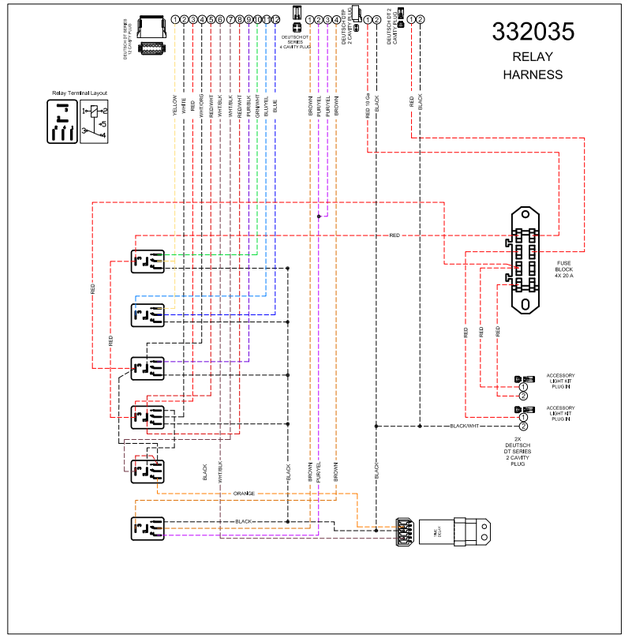

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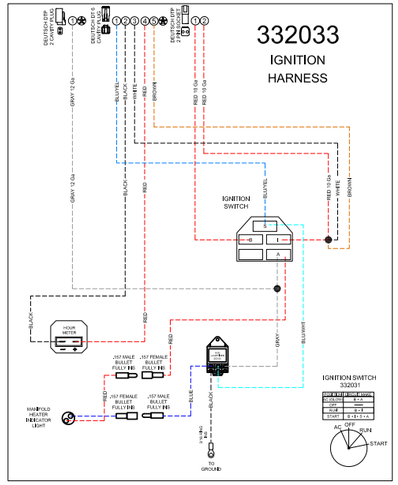
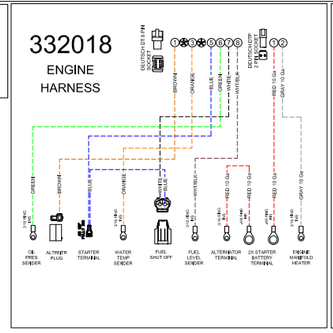
IGNITION HARNESS

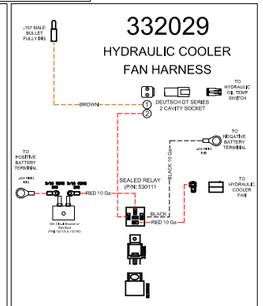


HYDRAULIC VALVES

332018
ENGINE HARNESS

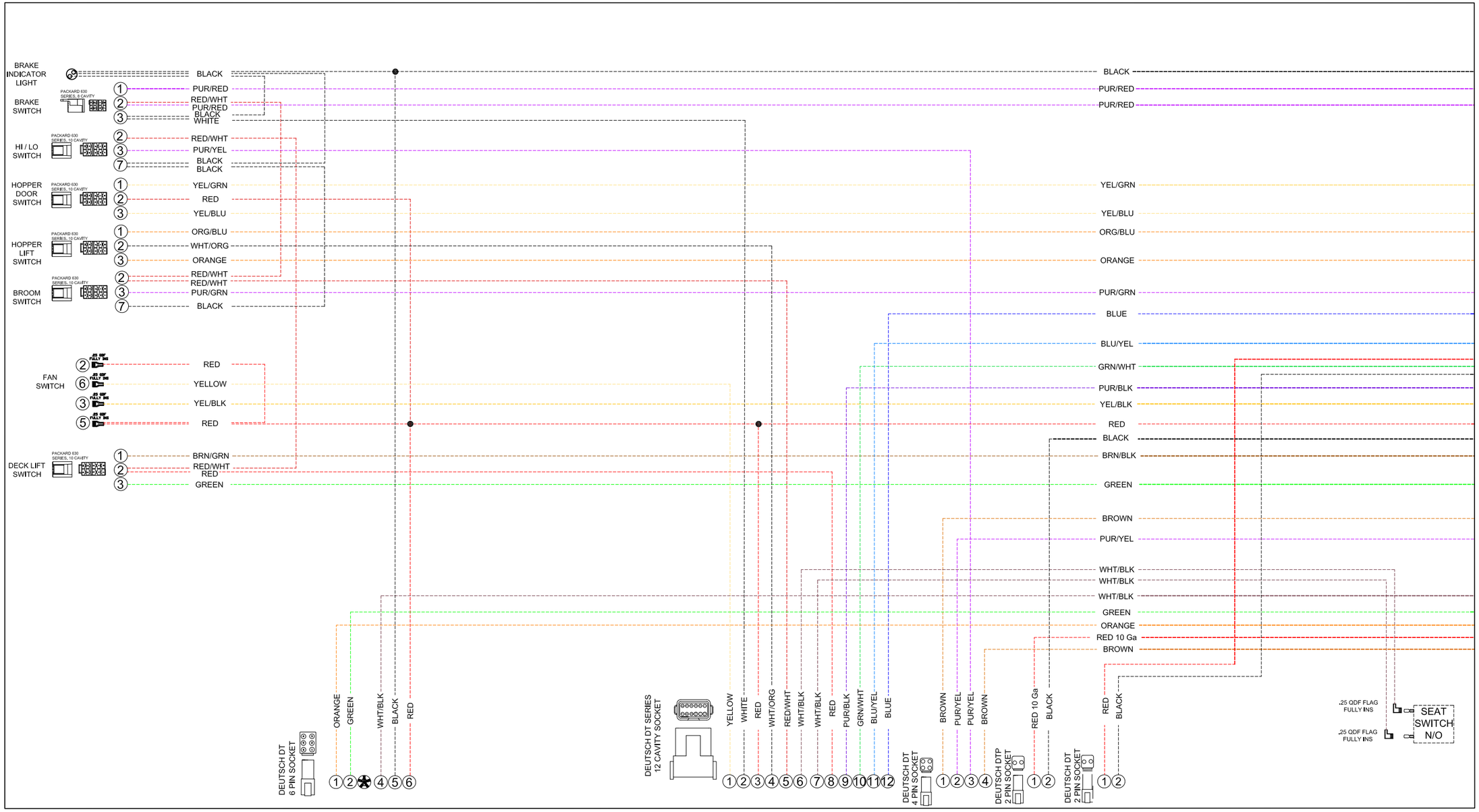


332029
HYDRAULIC COOLER FAN HARNESS



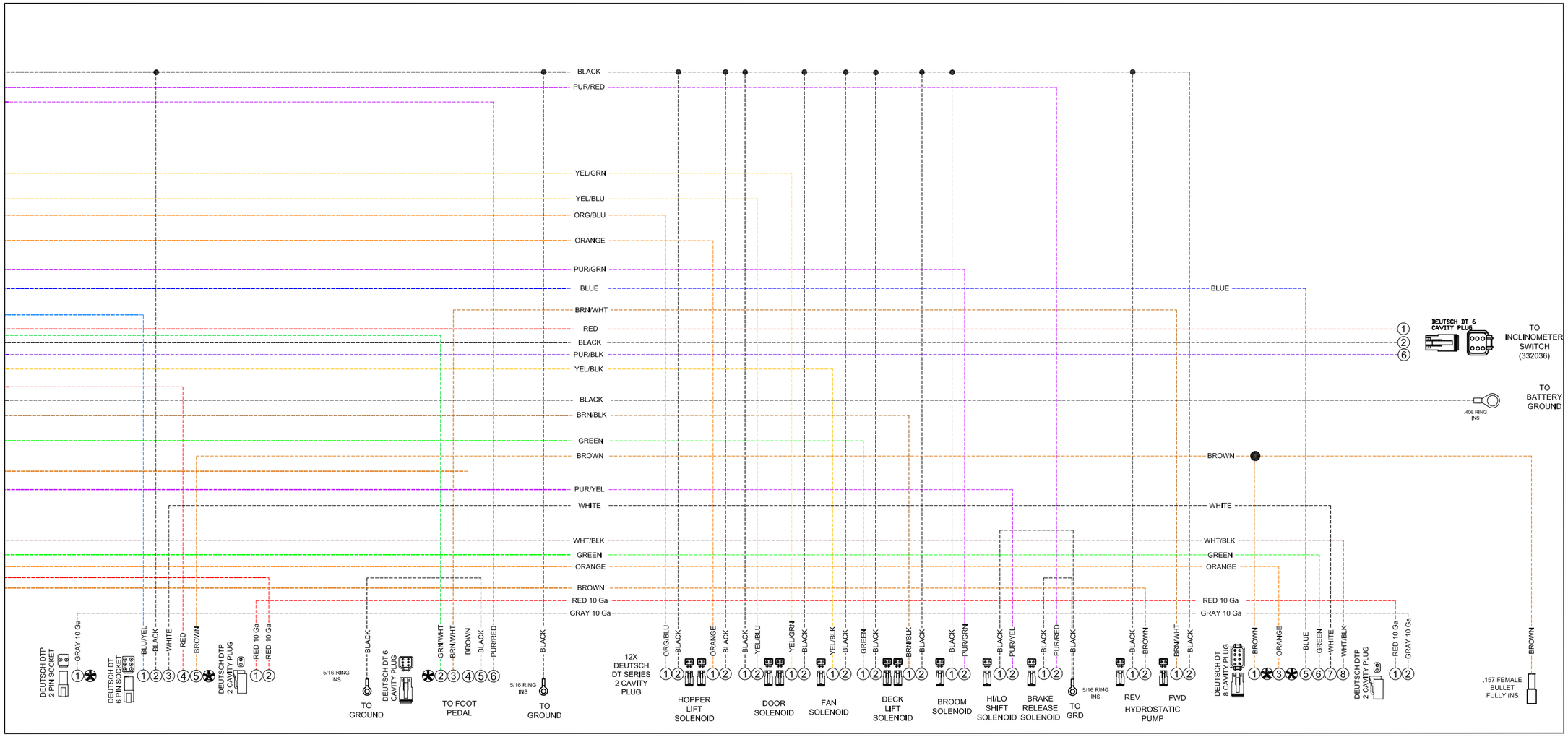
12/17/2013

MASTER HARNESS 332034 - PART 1



07/29/2013

MASTER HARNESS 332034 - PART 2

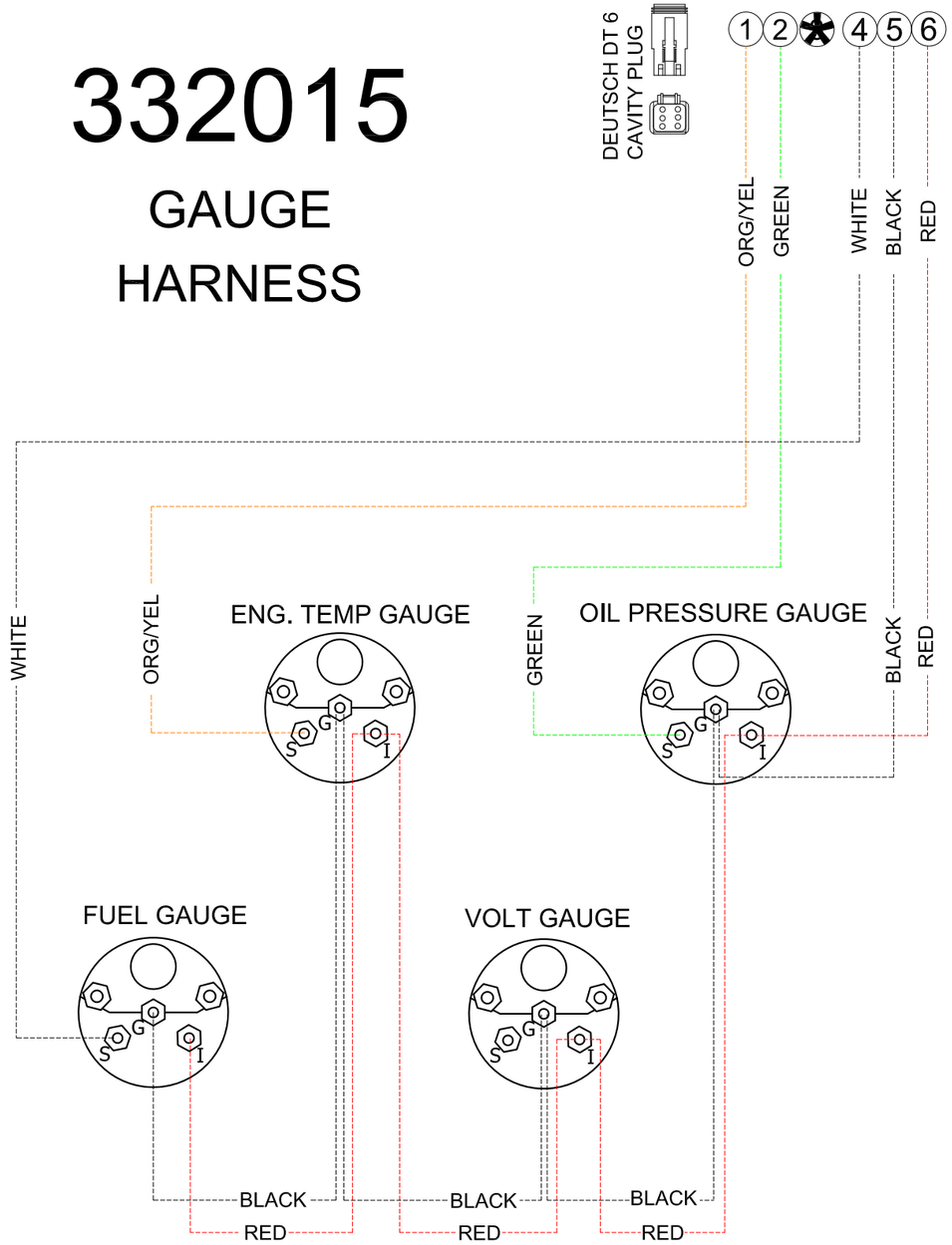


Return to Overview

12/17/2013

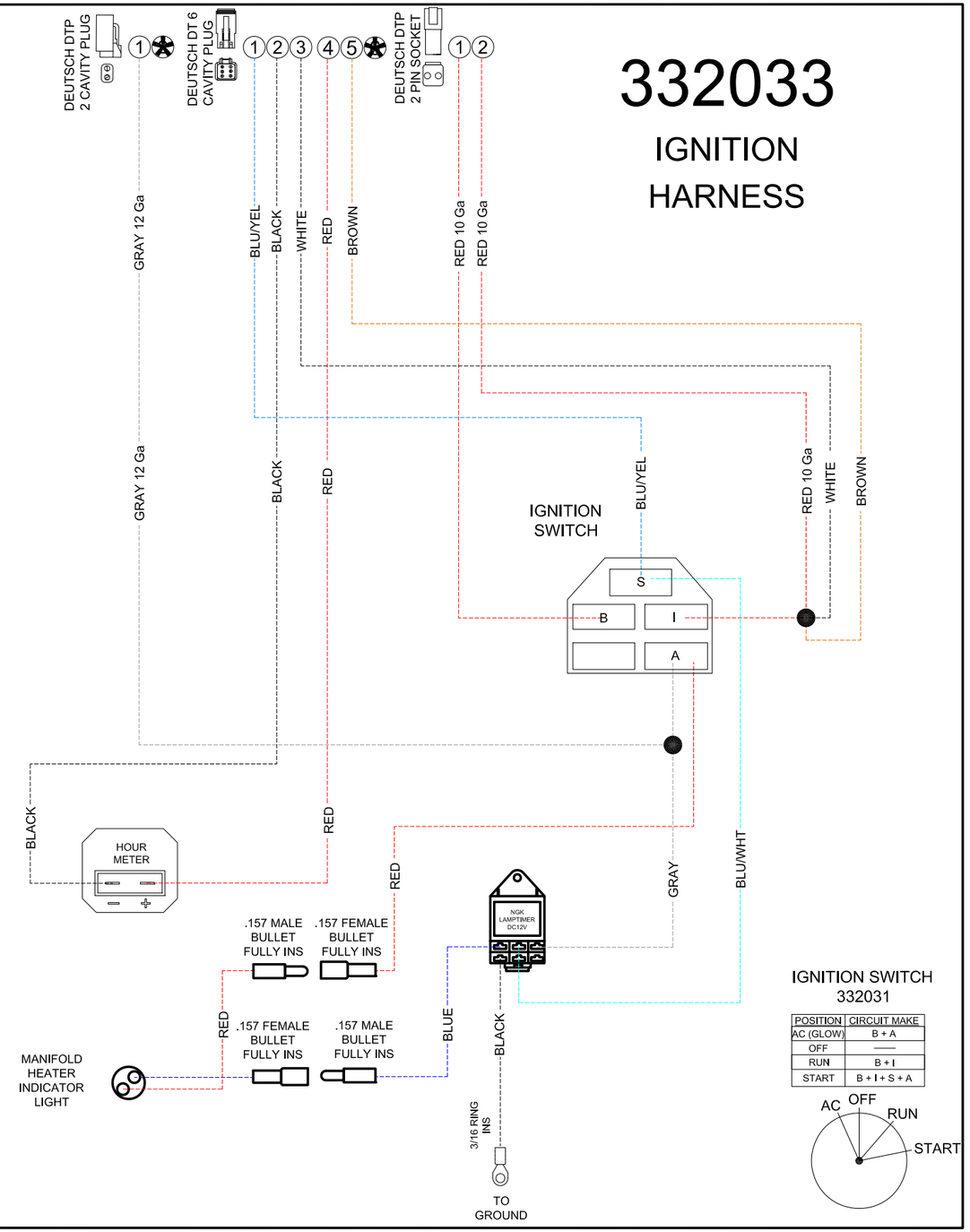
332015

GAUGE HARNESS



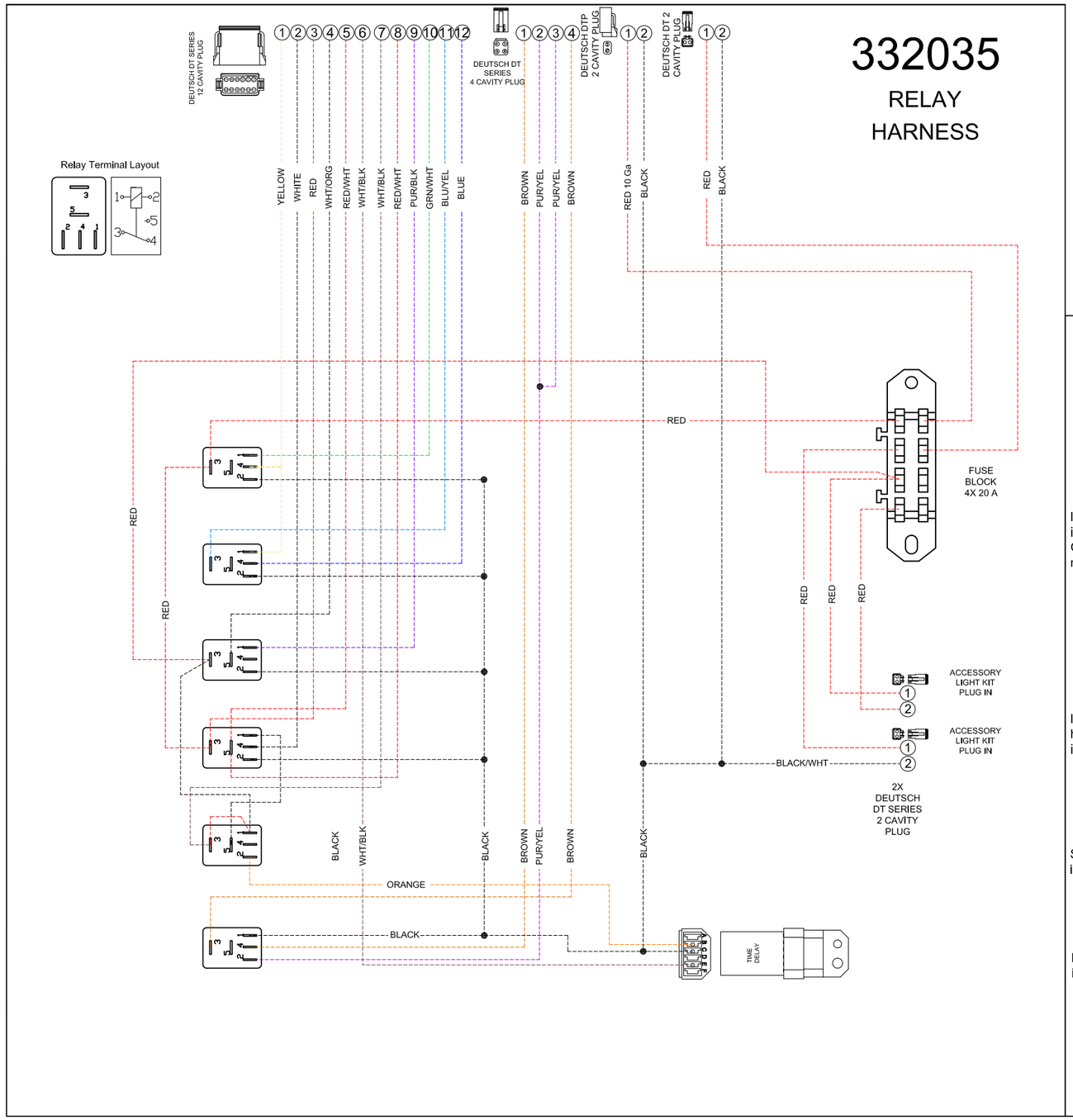
332033

IGNITION HARNESS



Return to Overview

02/20/2013



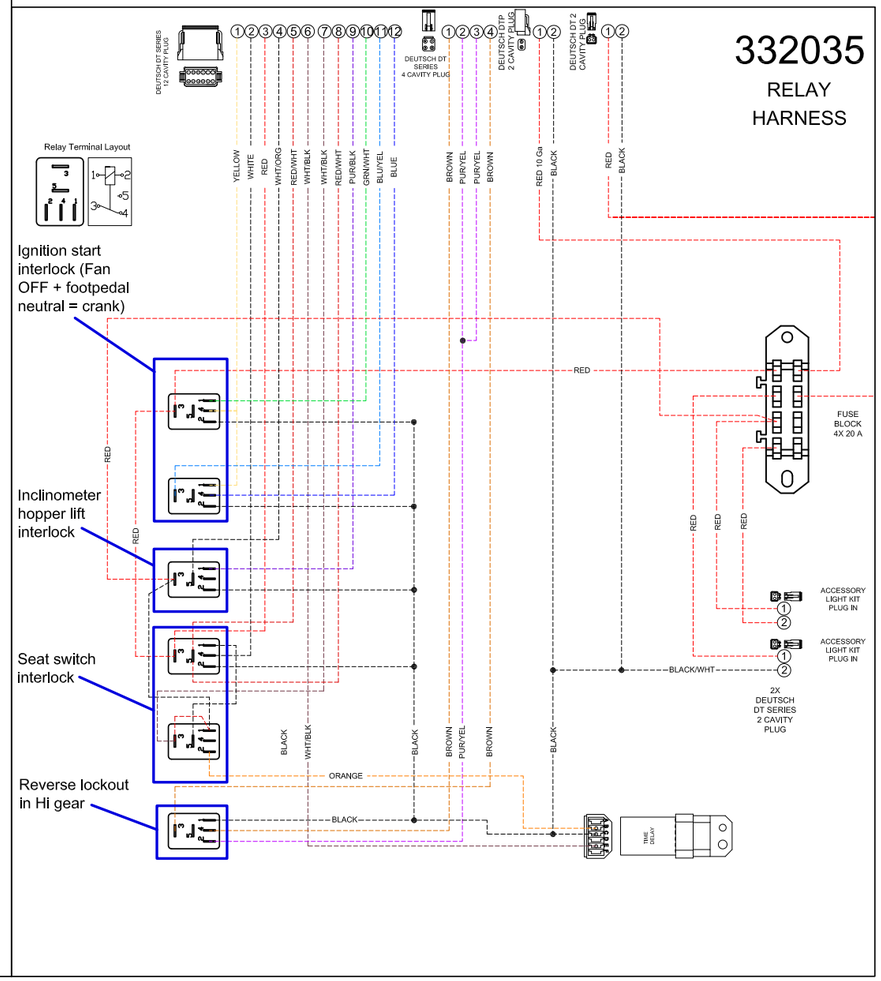
Electrical Safety Features

Ignition Start Interlock - The machine will not start if the foot pedal is not in the neutral position or if the fan/blower switch is in the “on” position.

Inclinometer Hopper Lift Interlock - This interlock prevents the hopper from lifting if the machine is on a slope greater than 5°.

Seat Switch Interlock - This function prevents the broom and deck lift from working if the operator is not present in the seat. This function also automatically sets the park brake when the operator is not present.

HI-Reverse Lockout - The machine will not reverse if it is in HI gear.

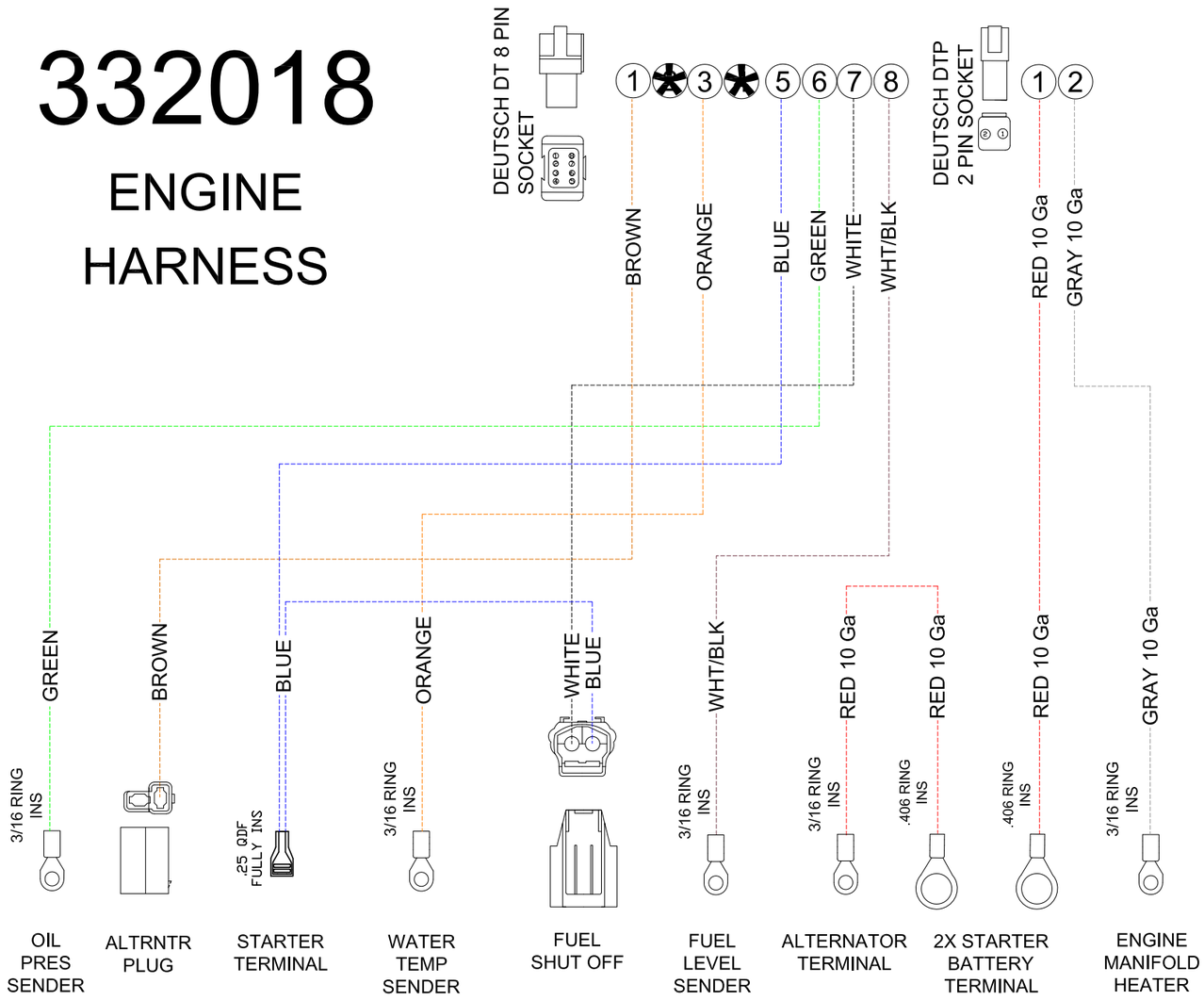


Return to Overview

12/17/2013

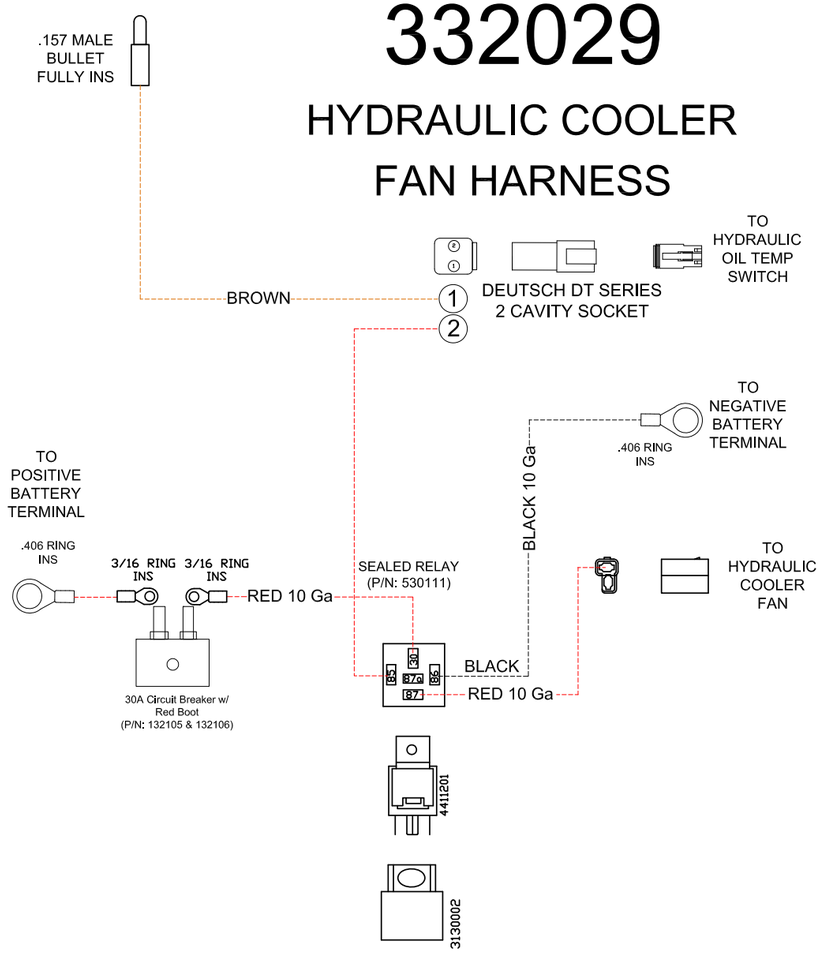
332018

ENGINE HARNESS



332029

HYDRAULIC COOLER FAN HARNESS



07/29/2013

PARTS

ELECTRICAL SECTION

TURBO VAC 30

NOTES

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TURBO VAC 30