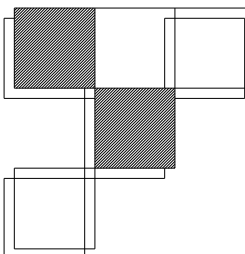


The Godwin Group



HIGHWAY 421 SOUTH
P.O. BOX 1147
DUNN, N.C. 28334
1-800-892-0181
PHONE (910) 892-0141 FAX (919) 892-7402

Training School Manual with 752 & 811 Valve

Release 1 - September 2007
Release 2 - April 2008
Release 3 - October 2008
Release 4 - October 2010
Release 5 - November 2011

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Page 34	P20 Series Pump Rotation and Porting		

GODWIN MANUFACTURING COMPANY, INC.

HIGHWAY 421 SOUTH

P.O. BOX 1147

DUNN, N.C. 28334

Phone# 910-892-0141

910-892-1153

fax# 910-892-7402

When calling, specify parts - service - sales

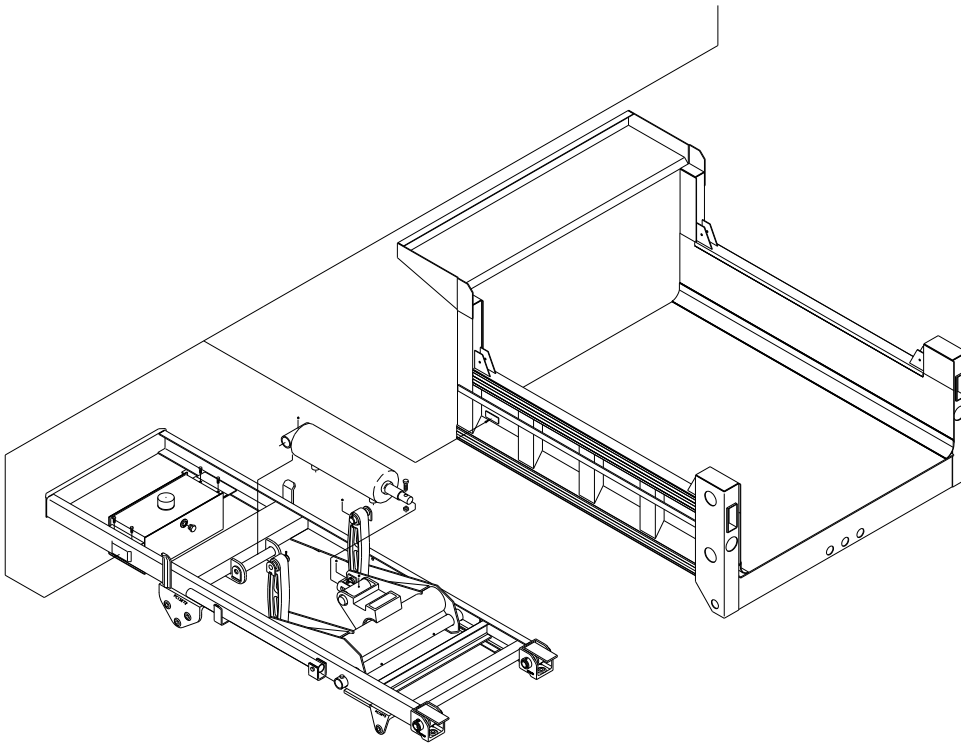
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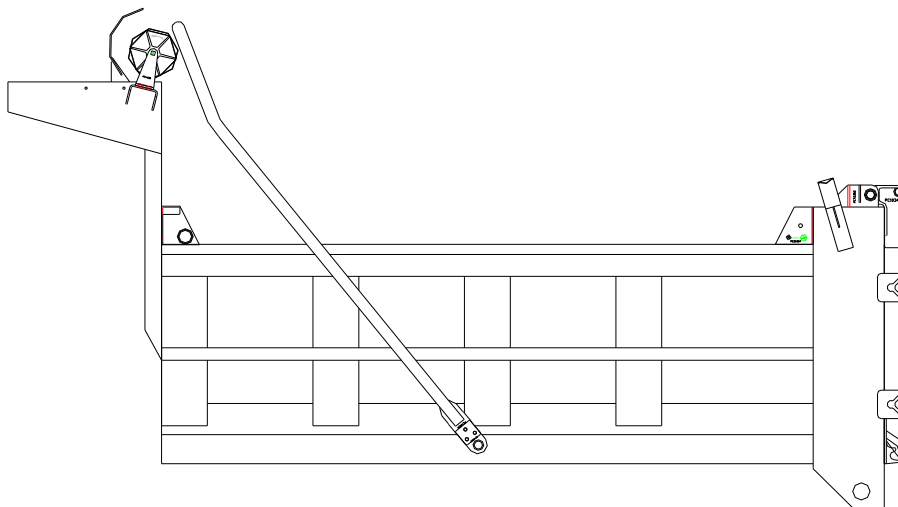
faster service: body model # & serial #

hoist model # & serial #

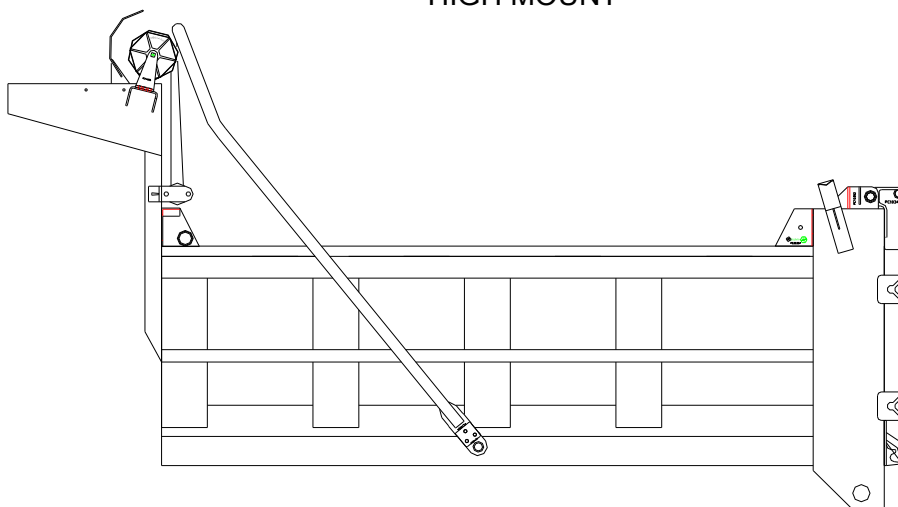
year, make, type of truck.

this information is provided as indicated

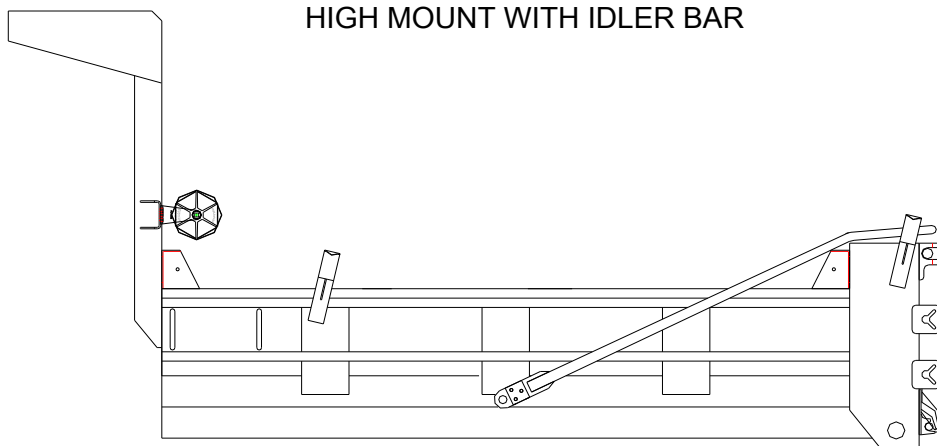




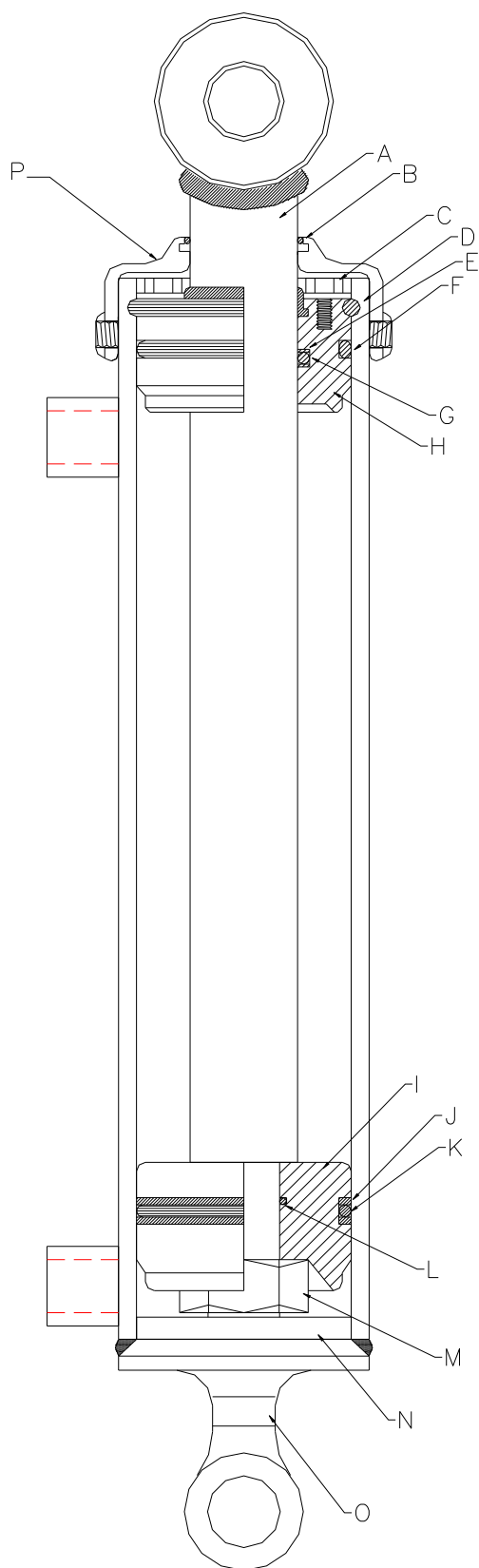
HIGH MOUNT



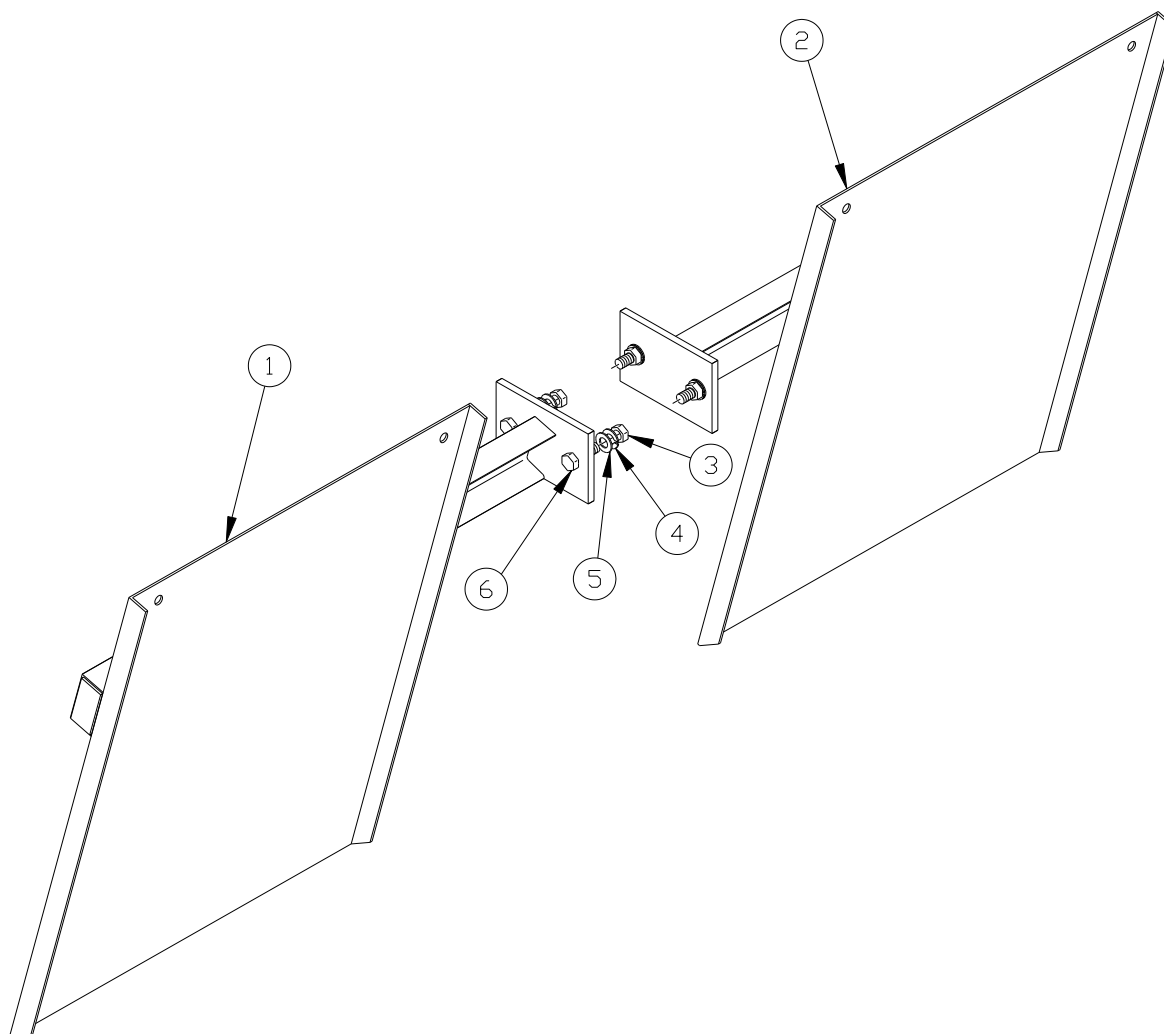
HIGH MOUNT WITH IDLER BAR



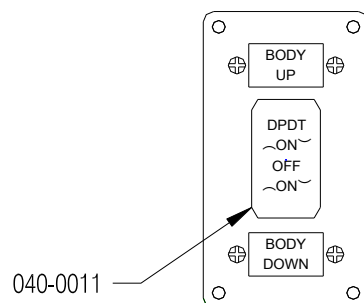
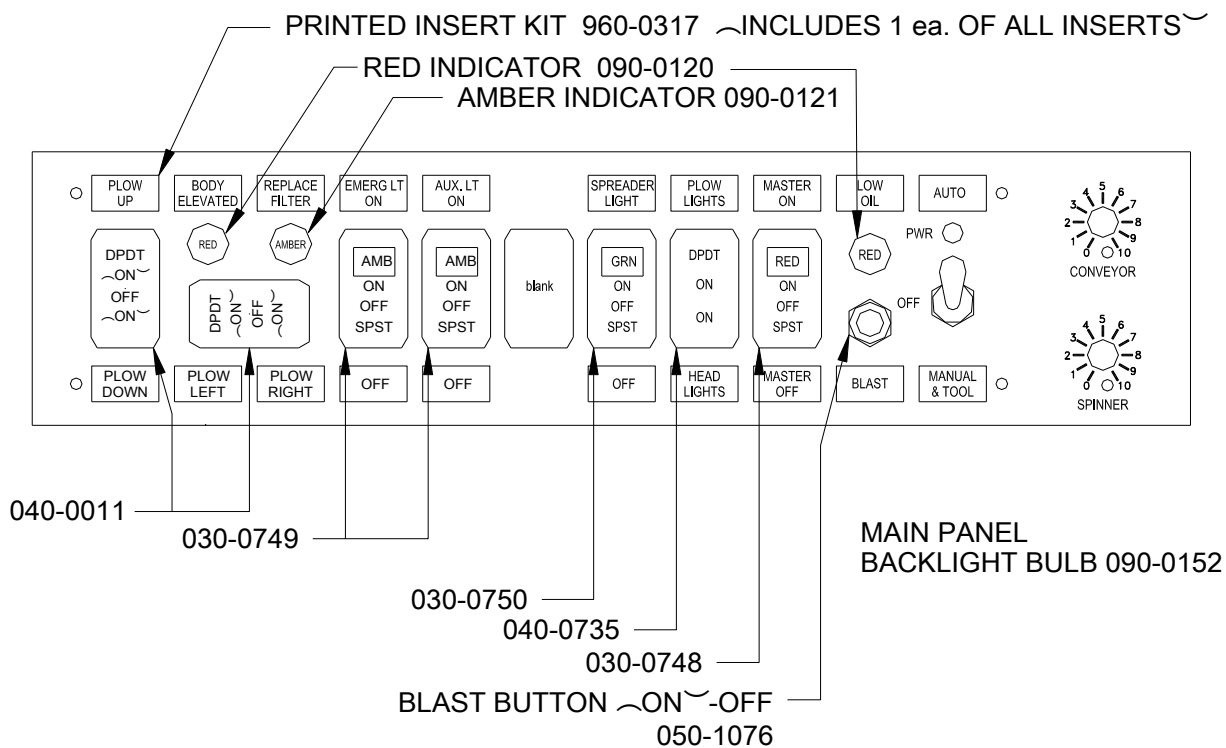
LOW MOUNT

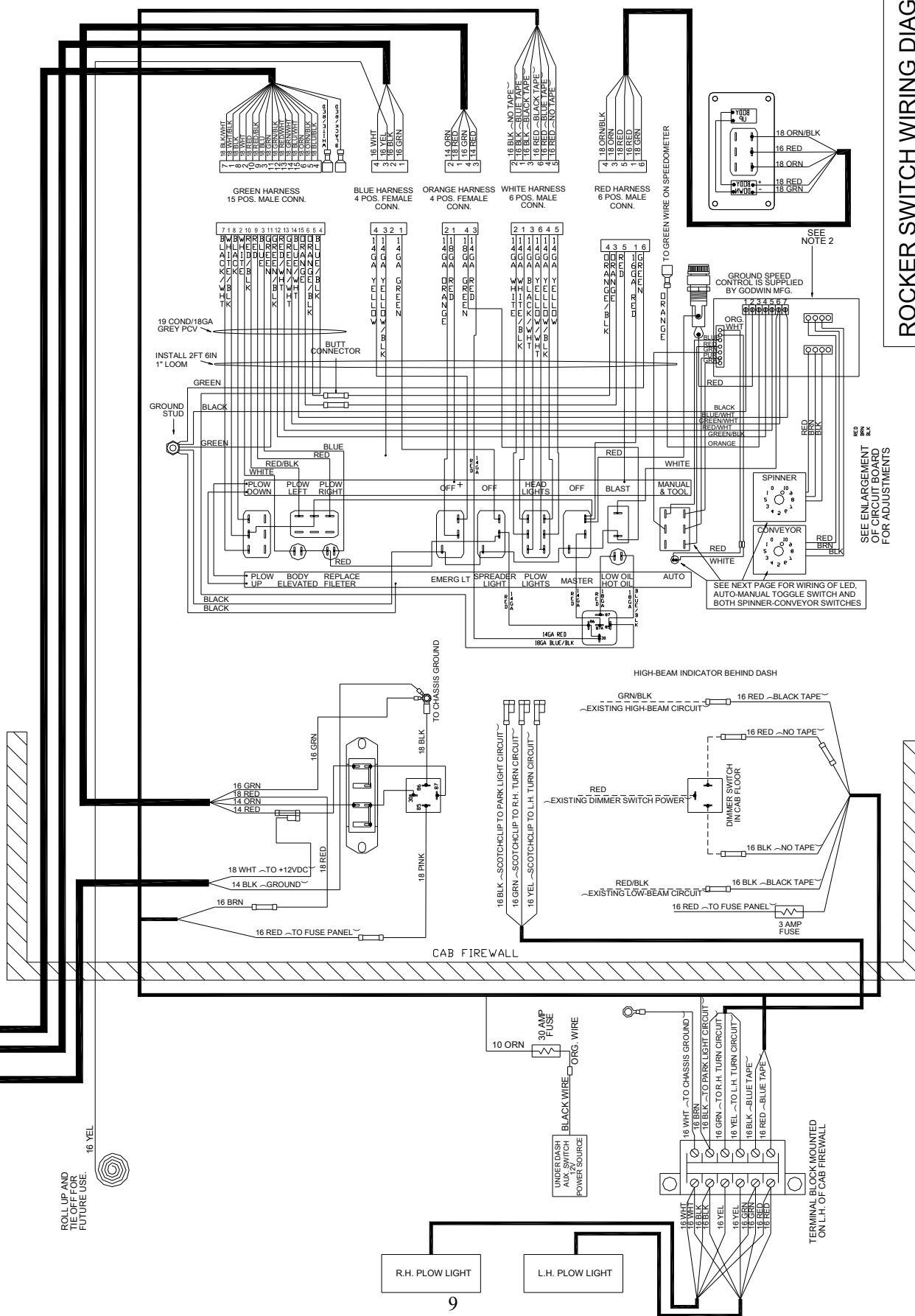


SYM.	PART NUMBER	QTY.	DESCRIPTION
A		1	Chrome Shaft
B	940-17	2	Shaft Wiper Seal
C	1/4" x 1/2".G5-1/4" FWS	2	Lock Ring Bolt, Flat Washer
D	1875-325	1	Lock Ring
E	8-325	1	Gland Inner O-Ring Back-Up
F	2-334	1	Gland Outer O-Ring
G	2-325	1	Gland Inner O-Ring
H	PC21117	1	Gland
I	PC21118	1	Piston
J	8-334	2	Piston Outer O-Ring Back-Up
K	2-334	1	Piston Outer O-Ring
L	1" O-RING	1	Piston-Shaft Inner O-Ring Seal
M	1", 14 TPI	1	Shaft Nut
N	3-1350	1	Cylinder Tube Assembly
O	PC21048	1	Atmosphere Cap
P	PC14057	1	Cylinder End Cap



NO.	PART NUMBER	QTY.	DESCRIPTION
1	W18112	1	WELDMENT, L/H 24" SPLASH GUARD
2	W18113	1	WELDMENT, R/H 24" SPLASH GUARD
1	W18118	1	WELDMENT, L/H 30" SPLASH GUARD
2	W18119	1	WELDMENT, R/H 30" SPLASH GUARD
3	116-5-A1	4	HEX NUT 1/2"
4	118-5-A1	4	LOCK WASHER 1/2"
5	119-5	4	FLAT WASHER 1/2"
6	102-407-A1	4	CAP SCREW 1/2" X 1-1/2" LG



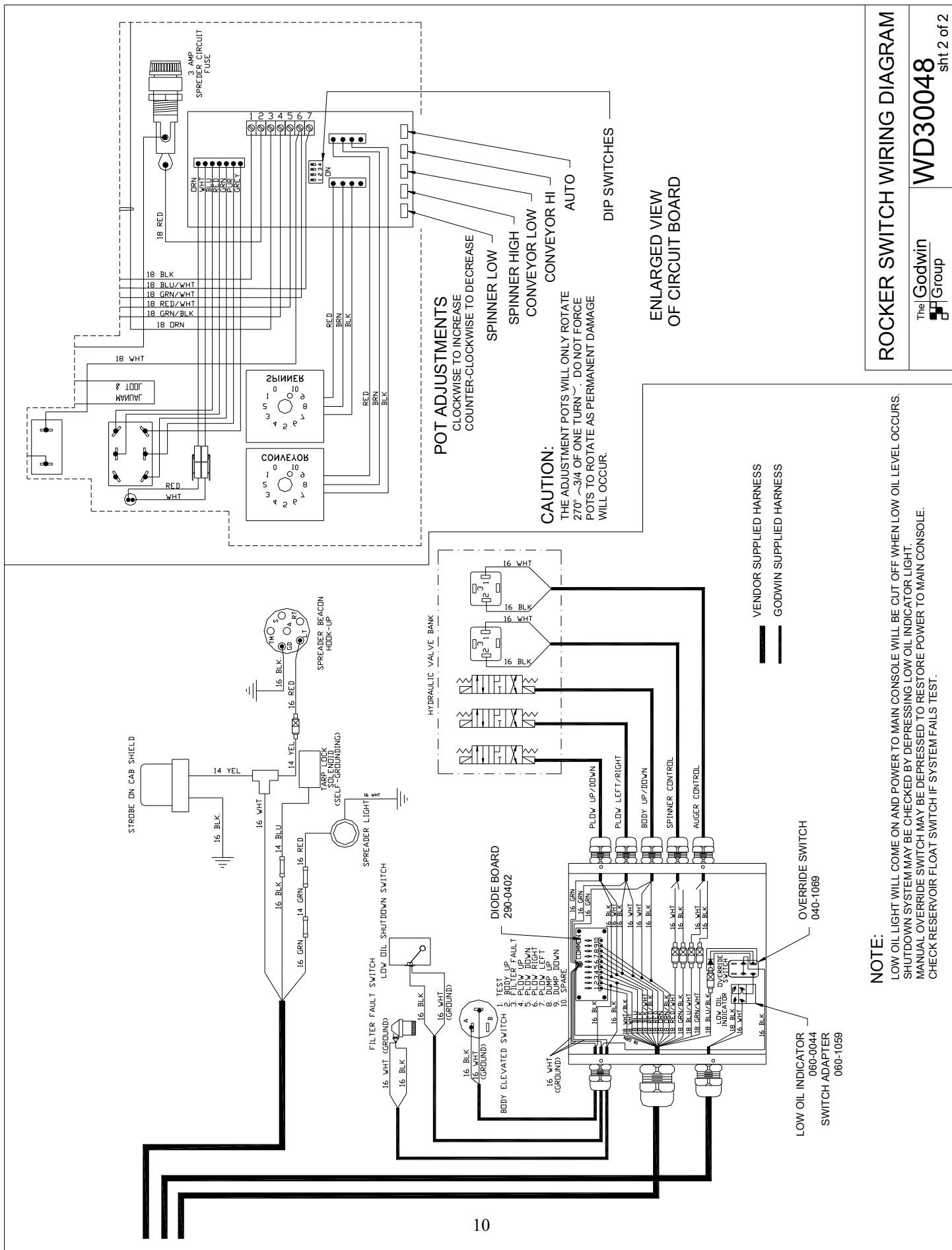


ROCKER SWITCH WIRING DIAGRAM

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WD30048 sht 1 of 2

VENDOR SUPPLIED HARNESS



ROCKER SWITCH WIRING DIAGRAM

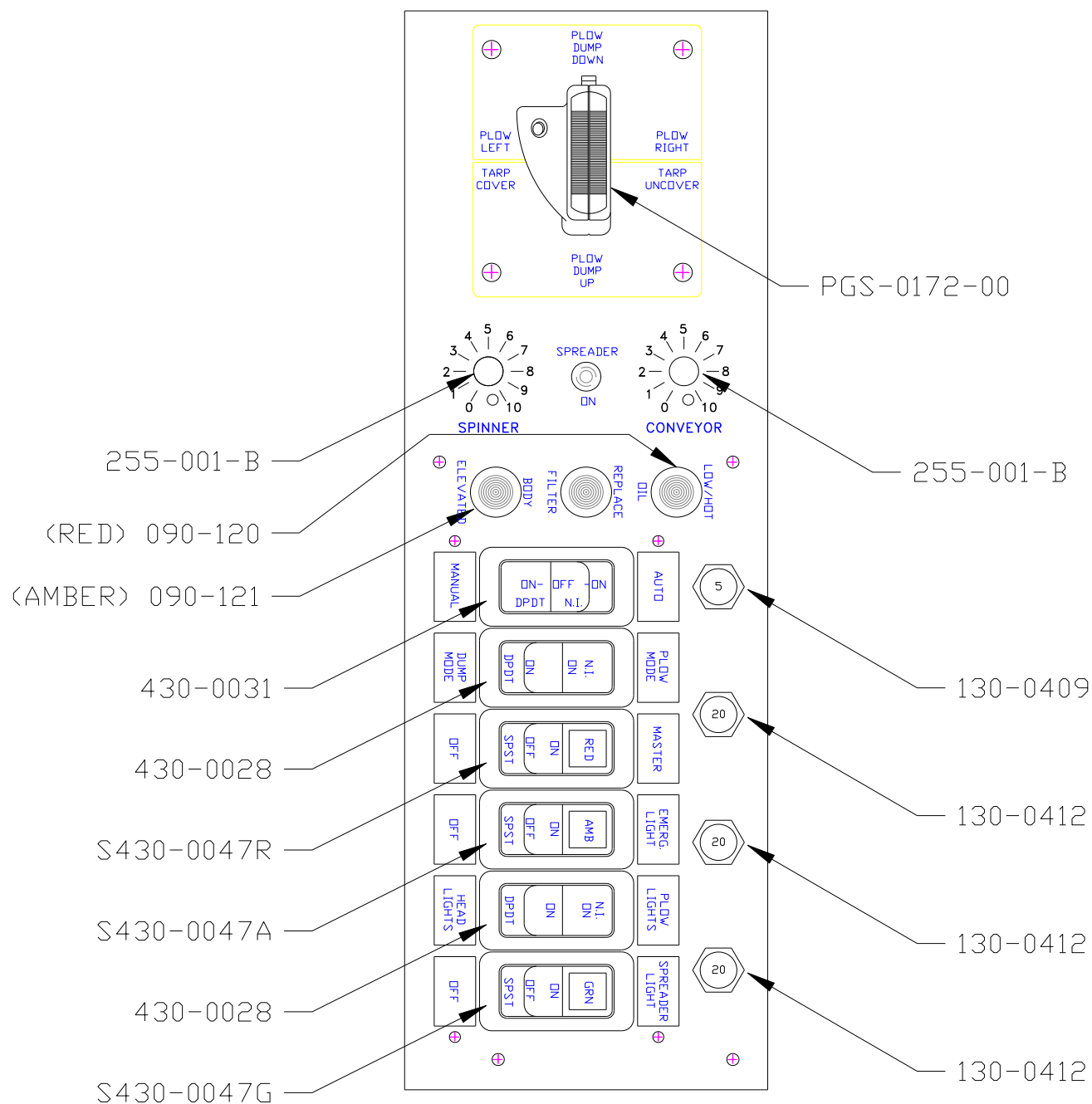
The Godwin Group

WD30048
 sht 2 of 2

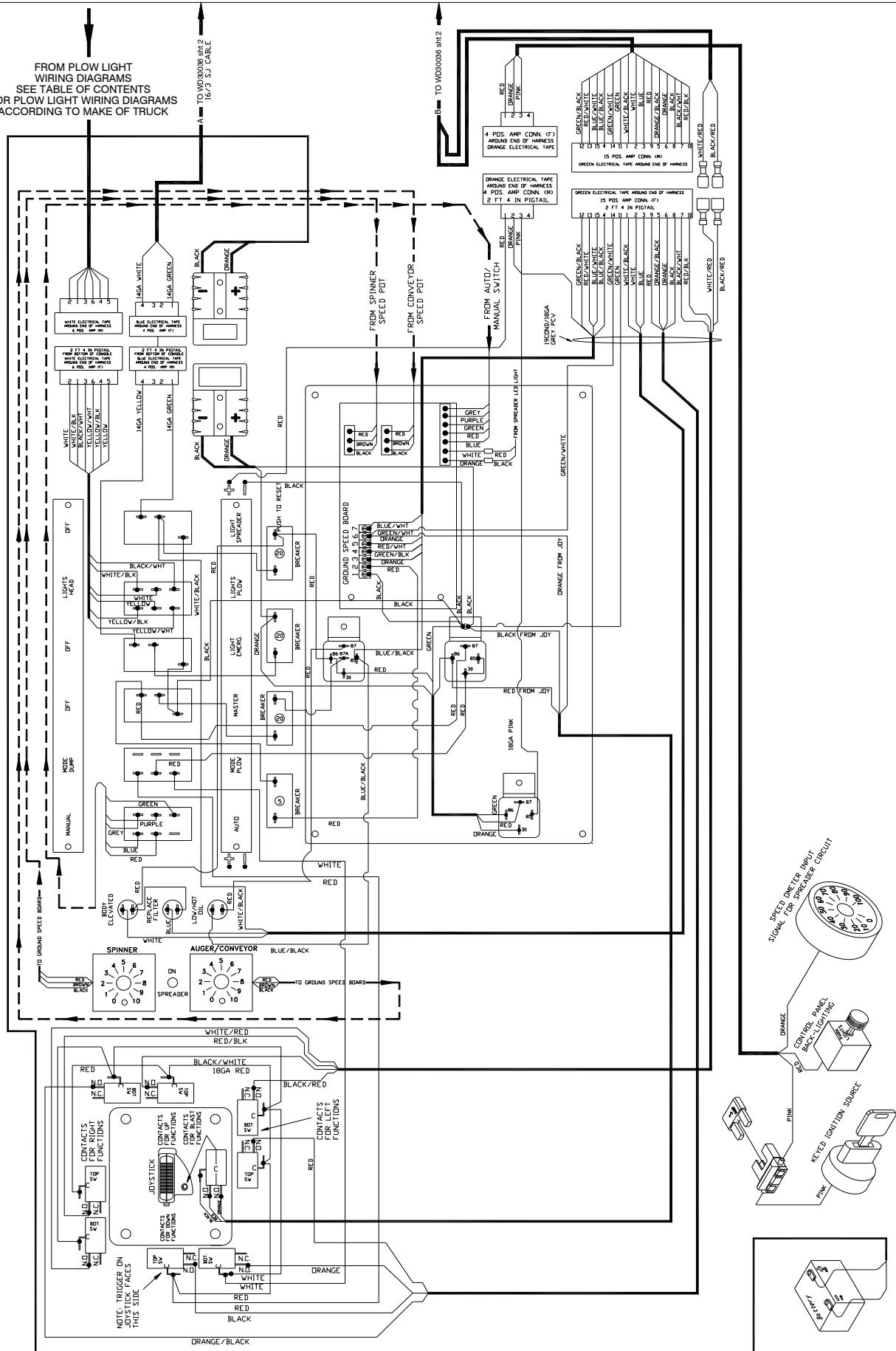
Sheet 2 of 2

NOTE:

LOW OIL LIGHT WILL COME ON AND POWER TO MAIN CONSOLE WILL BE CUT OFF WHEN LOW OIL LEVEL OCCURS. SHUTDOWN SYSTEM MAY BE CHECKED BY DEPRESSING LOW OIL INDICATOR LIGHT. MANUAL OVERRIDE SWITCH MAY BE DEPRESSED TO RESTORE POWER TO MAIN CONSOLE. CHECK RESERVOIR FLOAT SWITCH IF SYSTEM FAILS TEST.



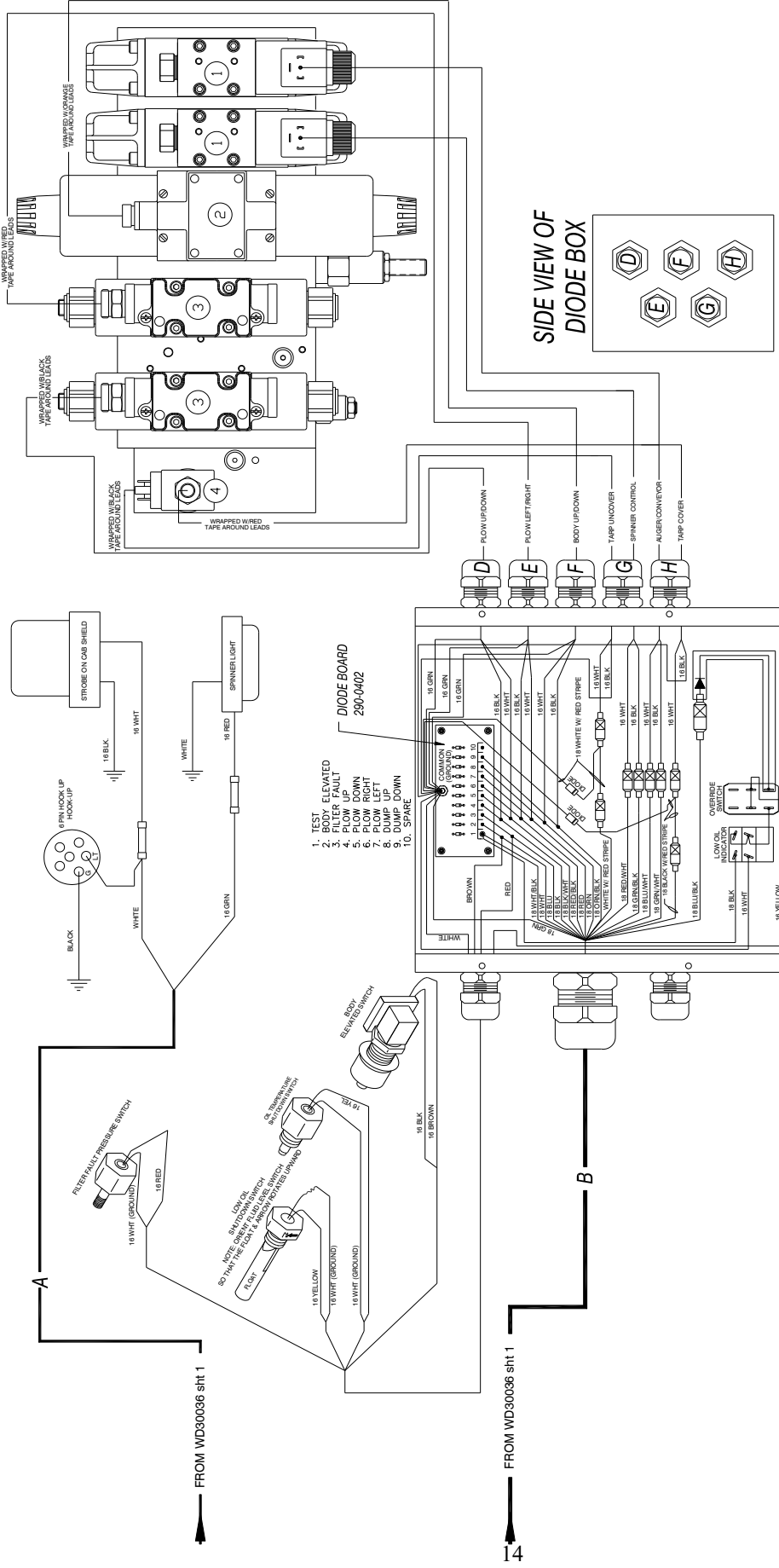
FROM PLOW LIGHT
WIRING DIAGRAMS
SEE TABLE OF CONTENTS
FOR PLOW LIGHT WIRING DIAGRAMS
ACCORDING TO MAKE OF TRUCK



STANDARD JOY STICK CONTRACT DIAGRAM
WITH HYDRA-MAX T

WD30036

sh 1 of 2

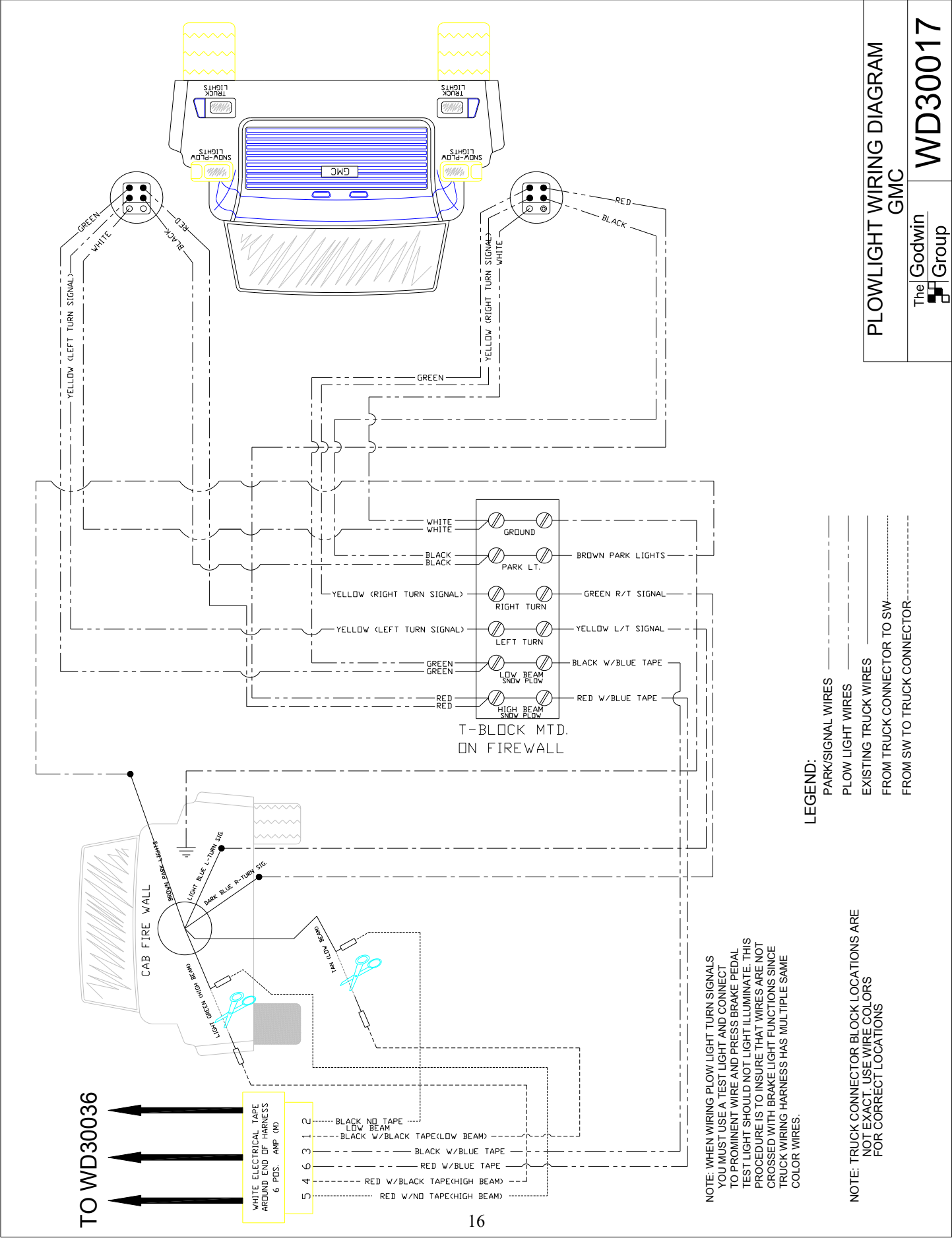


STANDARD JOY STICK CONTRACT DIAGRAM
WITH HYDRA-MAX T

NOTE:

LOW OIL LIGHT WILL COME ON AND POWER TO MAIN CONSOLE WILL BE CUT OFF WHEN HOT OIL OR LOW OIL LEVEL OCCURS. SHUTDOWN SYSTEM MAY BE CHECKED BY DEPRESSING LOW OIL INDICATOR LIGHT. MANUAL OVERRIDE SWITCH MAY BE DEPRESSED TO RESTORE POWER TO MAIN CONSOLE. CHECK RESERVOIR FLOAT SWITCH IF SYSTEM FAILS TEST.

STANDARD JOY STICK CONTRACT DIAGRAM
WITH HYDRA-MAX T



FLOWLIGHT WIRING DIAGRAM

GMC

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WD30017

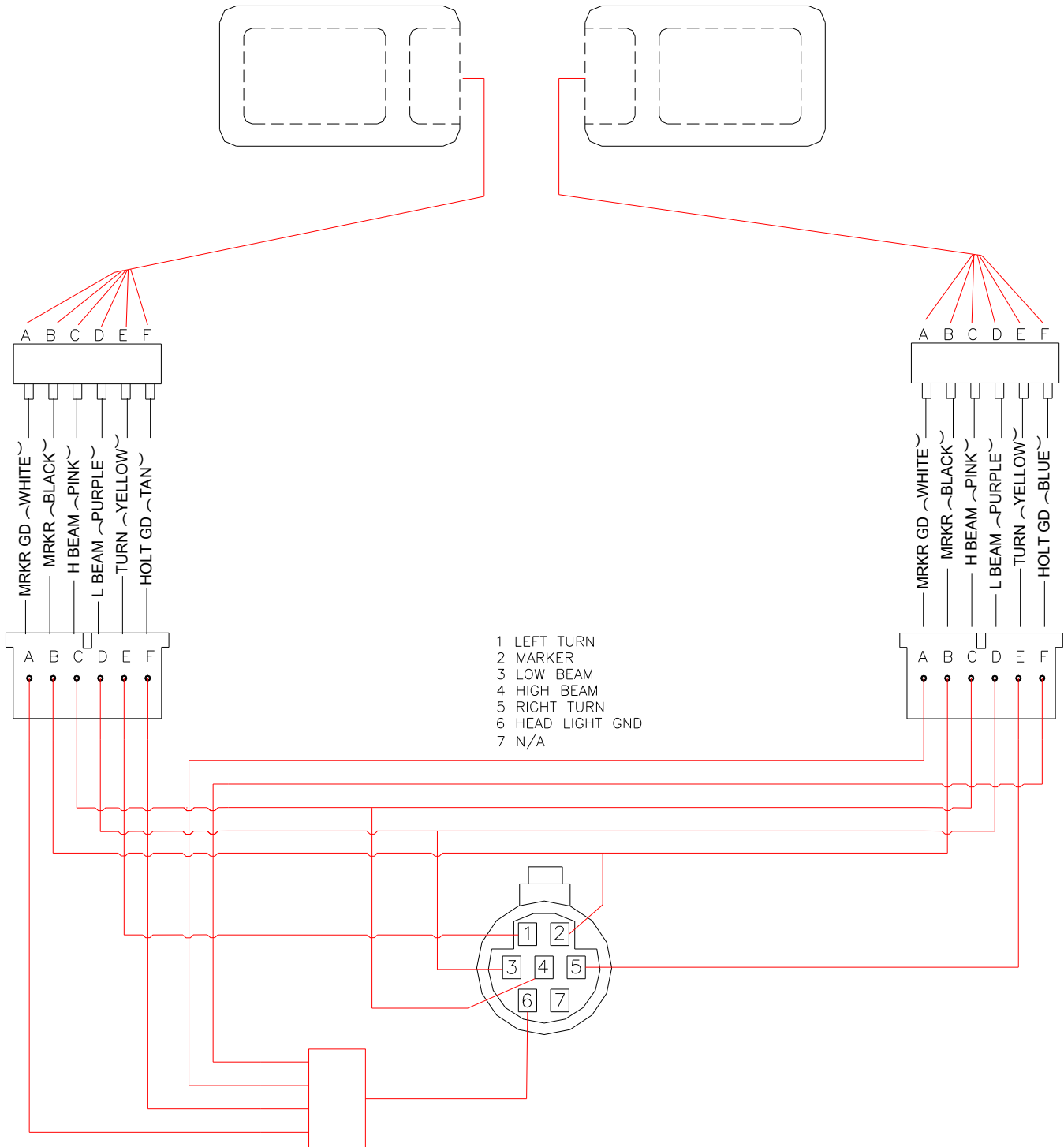
- LEGEND:
- PARK/SIGNAL WIRES
 - FLOW LIGHT WIRES
 - EXISTING TRUCK WIRES
 - FROM TRUCK CONNECTOR TO SW
 - FROM SW TO TRUCK CONNECTOR

NOTE: TRUCK CONNECTOR BLOCK LOCATIONS ARE NOT EXACT. USE WIRE COLORS FOR CORRECT LOCATIONS

NOTE: WHEN WIRING PLOW LIGHT TURN SIGNALS YOU MUST USE A TEST LIGHT AND CONNECT TO PROMINENT WIRE AND PRESS BRAKE PEDAL TEST LIGHT SHOULD NOT LIGHT ILLUMINATE. THIS PROCEDURE IS TO INSURE THAT WIRES ARE NOT CROSSED WITH BRAKE LIGHT FUNCTIONS SINCE TRUCK WIRING HARNESS HAS MULTIPLE SAME COLOR WIRES.

80910
LEFT PLOW LIGHT ASM

80920
RIGHT PLOW LIGHT ASM

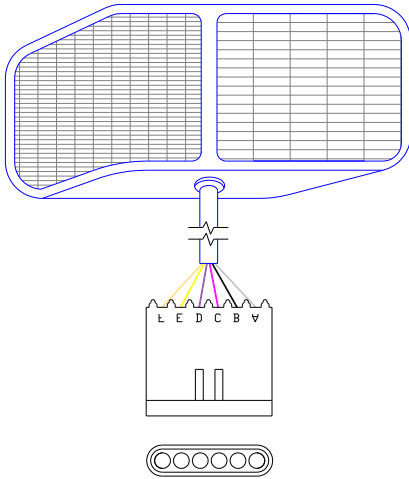


OEM SUPPLIED 7 PIN CONN.
AT LEFT FRONT INNER
FENDER BEHIND BUMPER
~IN OPTION # 08THJ~

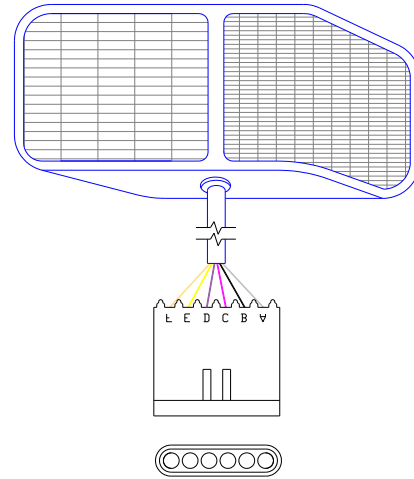
PLOWLIGHT WIRING DIAGRAM
INTERNATIONAL TRUCKS ~NEW~

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Group

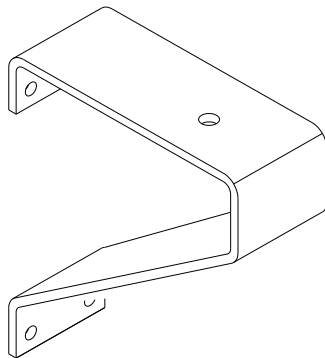
WD30061



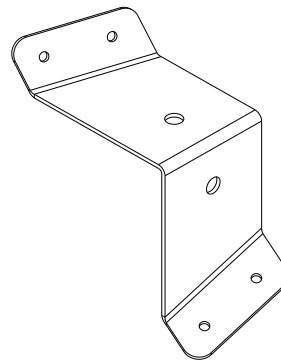
LEFT SIDE PART #P80920



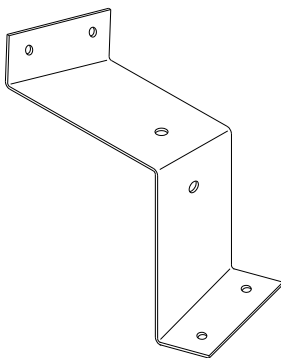
RIGHT SIDE PART #P80910



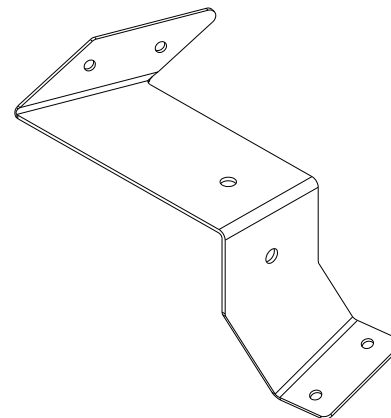
PART #F18474 ~STEEL, STERLING~
PART #F18433 ~ALUMINUM~



PART #F101061
~FREIGHTLINER - SHORT HOOD~



PART #F18195 ~STEEL, FORD~
PART #F18196 ~STEEL, INTERNATIONAL~
PART #F18450 ~ALUMINUM~

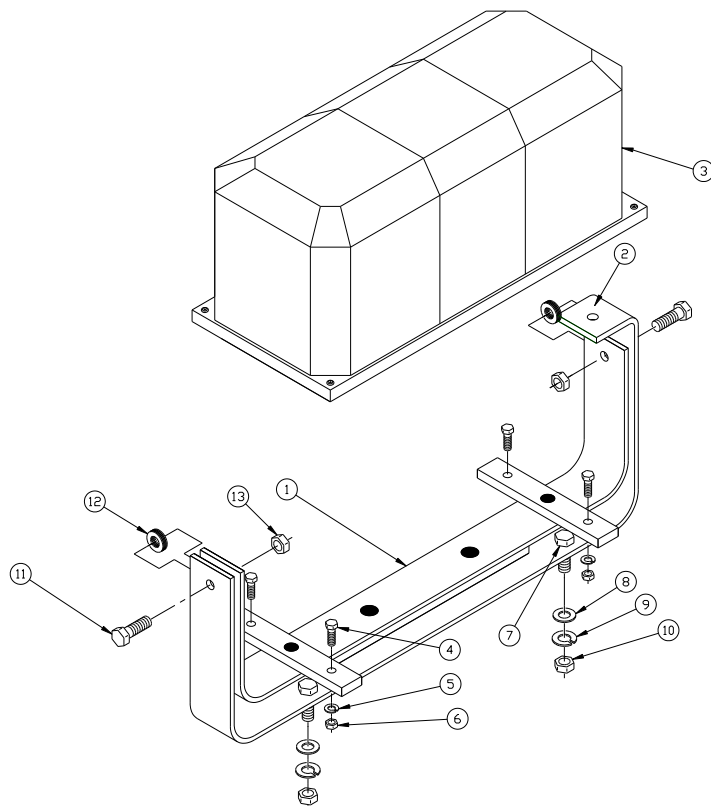


PART #F18831-32 ~MACK~

PLOWLIGHT BRACKETS, LIGHTS
AND CONNECTORS

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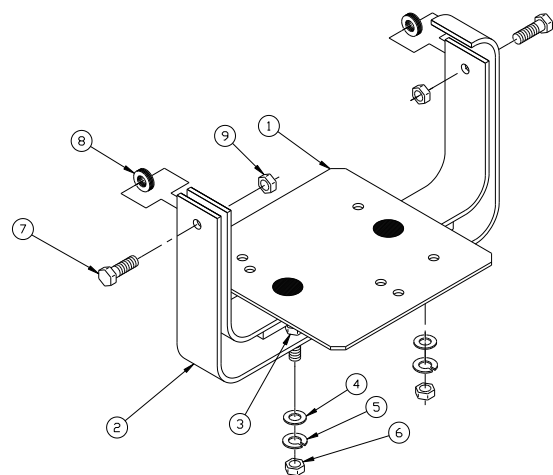
MP50320



LARGE A181203

LIGHT NOT INCLUDED IN ASSEMBLY

NO.	PART NUMBER	QTY.	DESCRIPTION
1	W18205	11	WELDMENT, SWING LIGHT BKRT.
2	F18204	12	OUTSIDE "U", SWING LIGHT
3	P18208	13	BEACON, TWIN LIGHT
4	102-5-A1	44	CAP SCREW 1/4" X 1"
5	118-1-A1	45	LOCK WASHER 1/4"
6	116-1-A1	46	HEX NUT 1/4"
7	102-107-A1	27	CAP SCREW 5/16 X 1-1/2"
8	119-2-A1	28	FLAT WASHER 5/16
9	118-2-A1	29	LOCK WASHER 5/16
10	116-2-A1	2	HEX NUT 5/16
11	102-207-A1	211	CAP SCREW 3/8 X 1-1/2"
12	123-3-B	8	BRASS WASHERS 3/8
13	162-8-S	2	HEX LOCKING NUT STOVER 3/8
NOT SHOWN	F18769	1	OPTIONAL BRUSH GUARD



SMALL A18176

LIGHT NOT INCLUDED IN ASSEMBLY

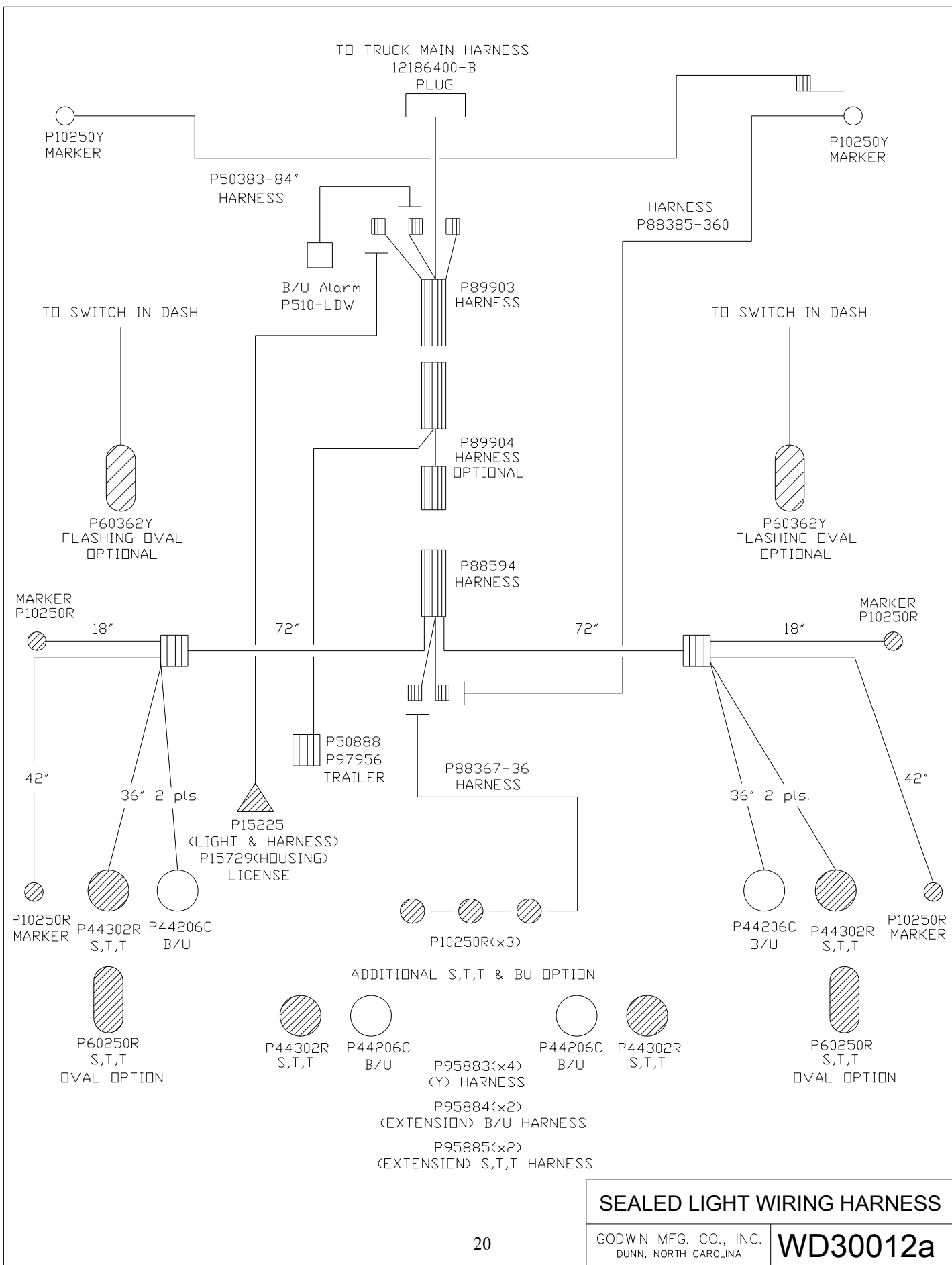
NO.	PART NUMBER	QTY.	DESCRIPTION
1	W18172	1	WELDMENT, SWING LT.-INSIDE
2	F18174	1	OUTSIDE "U", SWING LIGHT
3	102-107-A1	2	CAPSCREW, 5/16-18 X 1-1/2"
4	119-2-A1	2	FLAT WASHER, 5/16"
5	118-2-A1	2	LOCK WASHER, 5/16"
6	116-2-A1	2	HEX NUT, 5/16-18 UNC
7	102-207-A1	2	CAPSCREW, 3/8-16 X 1-1/2"
8	123-3-B	8	WASHER, BRASS 3/8"
9	162-8-S	2	HEX LOCKNUT, 3/8"
NOT SHOWN	F18447	1	OPTIONAL BRUSH GUARD

Strobe Light Target Tech 420-400-02

SWING LIGHT STYLES

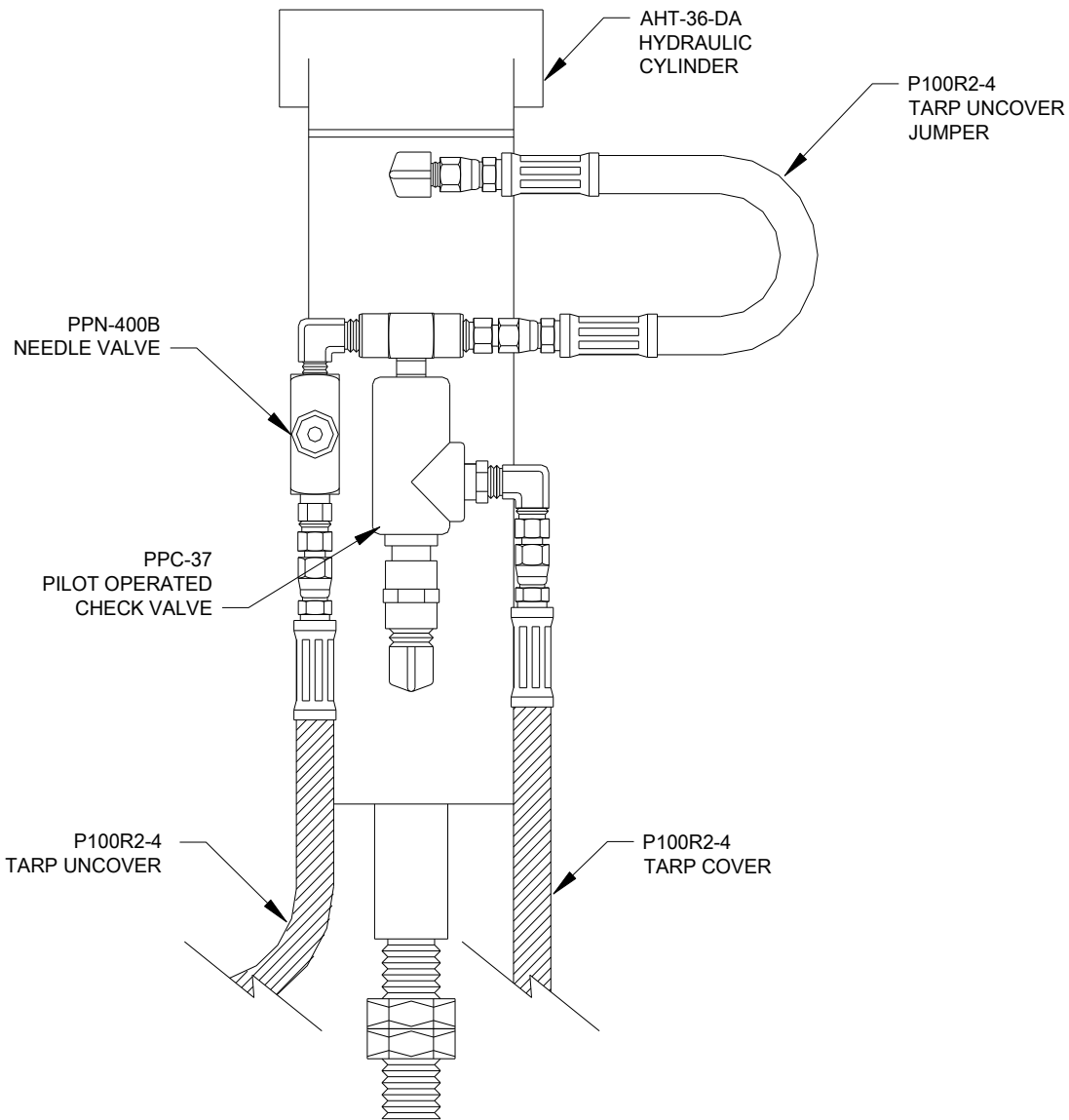
GODWIN MFG. CO., INC.
DUNN, NORTH CAROLINA

MP50000



LED LIGHTING & WIRING PARTS LIST

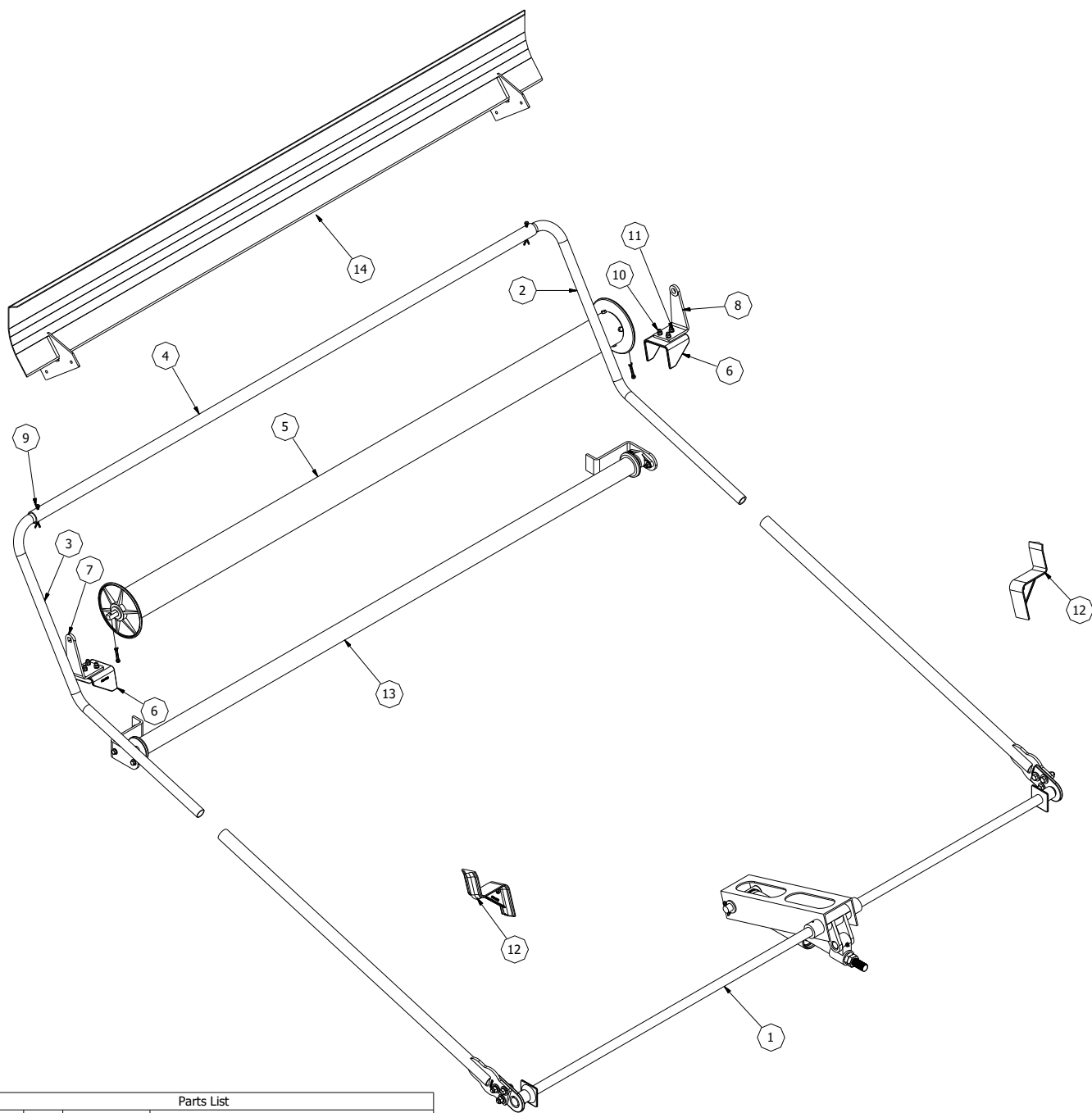
QTY.	DESCRIPTION	PART NO.
1	Power Feed Cable w/ M/C Outlets	89903
1	Rear ST/T, B/U and M/C Harness	88594
1	Rear 6 Way Feed Cable	89904
1	Front M/C Harness w/Jumper	88385 0360
1	Front M/C Jumper Harness	50383 0084
1	3 Lamp ID Harness	88367 0036
5	Mdl. 10 2-1/2" LED M/C Lamp-Red	10250R
2	Mdl. 10 2-1/2" LED M/C Lamp-Amber	10250Y
2	Mdl. 10 Closed Back Mounting Grommet 	10702
5	Mdl. 10 Open Back Mounting Grommet 	10700
1	Mdl. 15 LED License Lamp	15225
1	Mdl. 15 Mounting Bracket	15729
2	Mdl. 44 LED B/U Lamp	44206C
2	Mdl. 44 LED ST/T Lamp	44302R
4	Mdl. 44 Mounting Grommet	40700
1	1" x 12" Shrink Tube 	97956
1	Diecast 6 Way Plug	50888



HYDRA-TARP ADJUSTMENT

A NEEDLE VALVE IS USED TO ADJUST TARP ARM SPEED. CLOCKWISE/FASTER, COUNTER CLOCKWISE/SLOWER. THE PILOT OPERATED CHECK VALVE IS TO HYDRAULICALLY LOCK THE TARP IN THE COVERED POSITION TO PREVENT UNWANTED UNCOVERING OF THE BED. NO ADJUSTMENTS ARE NEEDED FOR THIS VALVE.

HYDRA-TARP P.O.C. & NEEDLE VALVE



Parts List

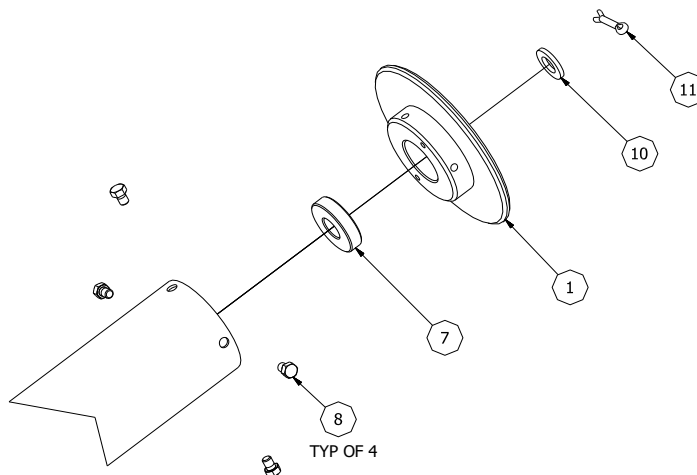
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	A14080	SWING ARM, ASSEMBLY SHORT HYDRA-TARP
2	1	SF14047	ELBOW, LINK R/H SWING ARM HYDRA-TARP
3	1	SF14046	ELBOW, LINK L/H SWING ARM HYDRA-TARP
4	1	S14038	ROD, CANOPY HYDRA-TARP
5	1	MP50120	DRUM ASSEMBLY HYDRA-TARP
6	2	PC14055	BRACKET, DRUM MOUNTING HYDRA-TARP
7	1	PC14065	BRACKET HYDRA-TARP, SQUARE HOLE
8	1	PC14064	BRACKET HYDRA-TARP, ROUND HOLE
9	2	125-260	COTTER PIN
10	6	102-207-A1	BOLT
11	6	143-3	LOCKNUT
12	2	PC14145	BRACKET, TOP RAIL REST HYDRA-TARP 500U
		PC14146	BRACKET, TOP RAIL REST HYDRA-TARP 300U
13	1	A14155	IDLER BAR ASSEMBLY (OPTIONAL)
NOT SHOWN	1	P8915	TARP, NEOPRENE FABRIC/15' x 89"
		P8920	TARP, NEOPRENE FABRIC/20' x 89"
NOT SHOWN	1	SF14048	STRAP, DRUM TARP
14	1	W14099	WIND DEFLECTOR WELMENT
NOT SHOWN	1	P8915MESH	TARP, MESH FABRIC/15' x 89"
		P8920MESH	TARP, MESH FABRIC/20' x 89"

NOTE:
WIND DEFLECTOR WELDMENT (W14099) IS
NOT PART OF HYDRA-TARP ASSEMBLY (A14034).

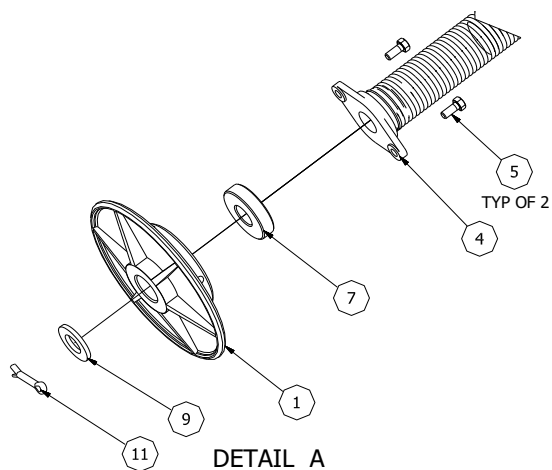
HYDRA-TARP ASSEMBLY

GODWIN MFG. CO., INC.
DUNN, NORTH CAROLINA

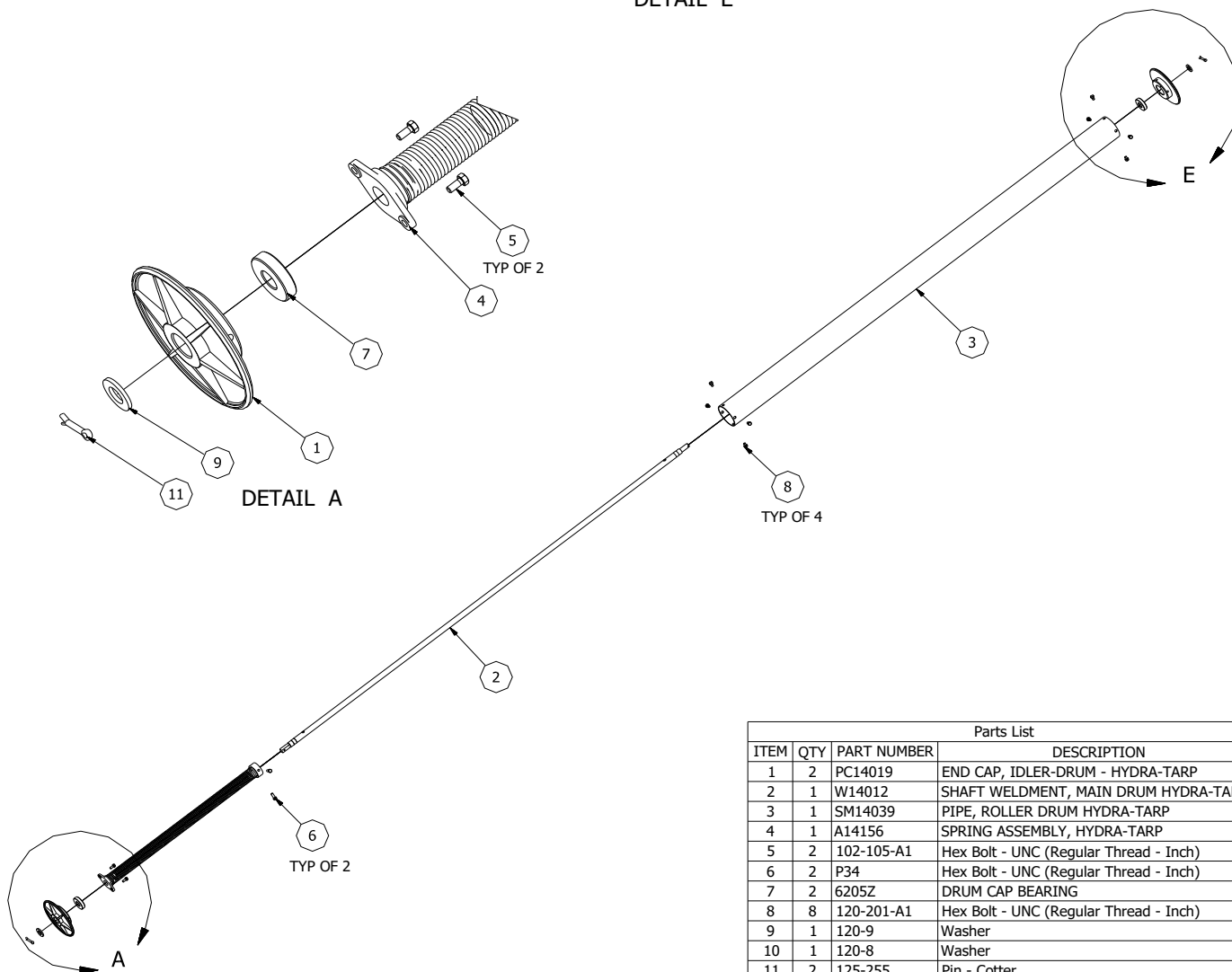
MP50126



DETAIL E



DETAIL A



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	PC14019	END CAP, IDLER-DRUM - HYDRA-TARP
2	1	W14012	SHAFT WELDMENT, MAIN DRUM HYDRA-TARP
3	1	SM14039	PIPE, ROLLER DRUM HYDRA-TARP
4	1	A14156	SPRING ASSEMBLY, HYDRA-TARP
5	2	102-105-A1	Hex Bolt - UNC (Regular Thread - Inch)
6	2	P34	Hex Bolt - UNC (Regular Thread - Inch)
7	2	6205Z	DRUM CAP BEARING
8	8	120-201-A1	Hex Bolt - UNC (Regular Thread - Inch)
9	1	120-9	Washer
10	1	120-8	Washer
11	2	125-255	Pin - Cotter

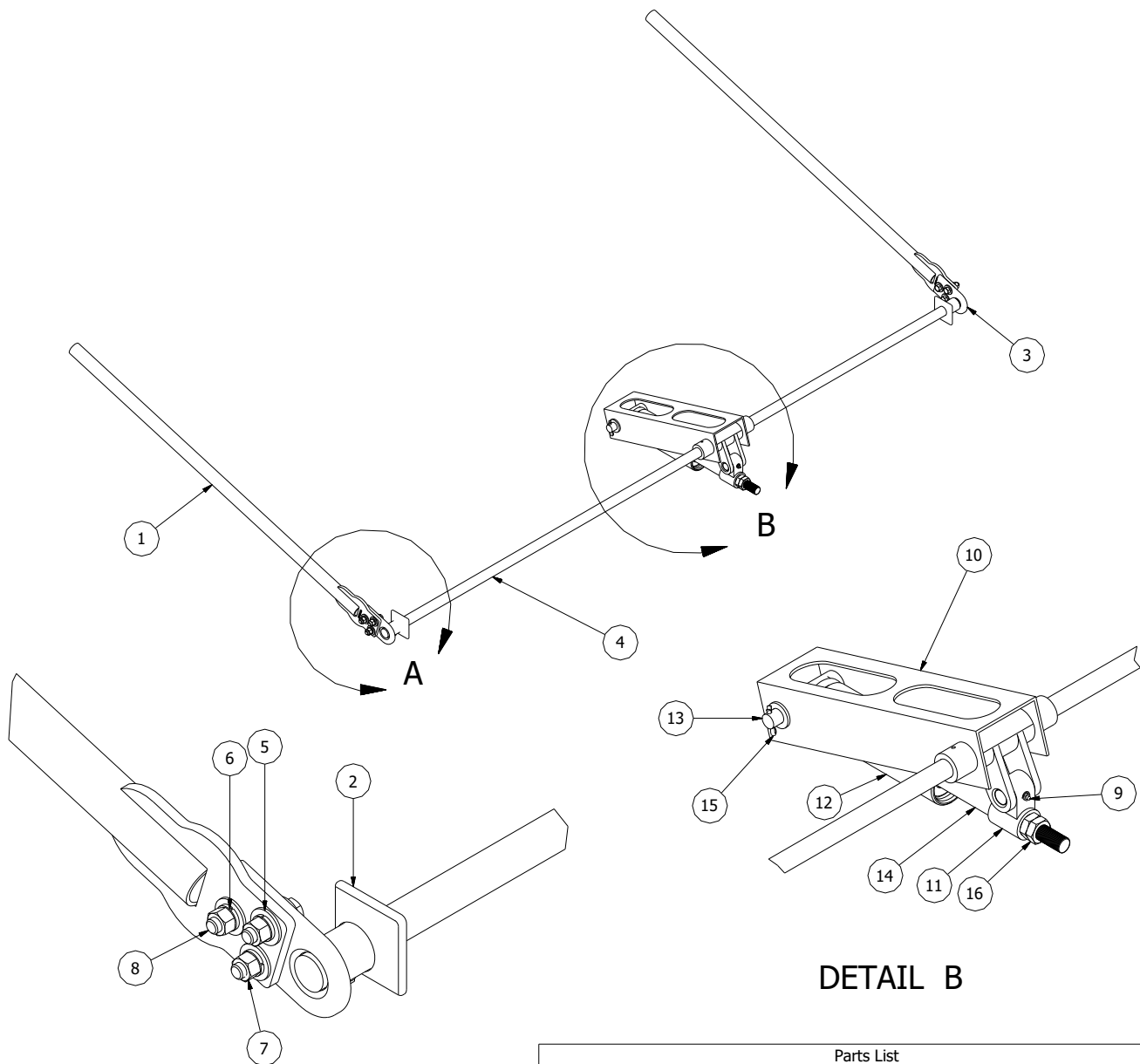
HYDRA-TARP DRUM ASSEMBLY

Instructions for Changing Main Drum Spring Assembly

1. Remove bolts from end caps.
2. Pull out inner shaft with springs from square shaft end.
3. Remove spring and install new one with two bolts on square end of shaft.
4. Stretch spring from end to end 43 inches and install two bolts in spring torque collar.
5. Install spring assembly in drum and install bolts in both end caps.
6. If load cover comes off top of drum assembly, main drum shaft square end bracket goes on passenger side of truck.
7. If load cover comes off bottom of drum assembly, main drum shaft square bracket goes on drivers side of truck.
8. Install drum assembly with cover wrapped on drum on truck.

Instructions for Putting Tension on Drum Assembly

1. Turn drum assembly with cover installed in direction tarp comes off of drum to rear of truck.
2. Turn drum by hand (6) complete turns and install vise clamps on end cap to keep drum from turning.
3. Move swing arms to front of truck and back arms to rear about (10) inches. Unwind cover of drum (1) turn and put canopy rod thru four inch pocket in rear of cover and cotter key ends.
4. Remove vise clamp and put truck in service.
5. spring should have (5) turns of preload, more will break spring and less will keep tarp from retracting properly.
6. Turning spring in wrong direction will unwind spring ends and lose all tension.



DETAIL A

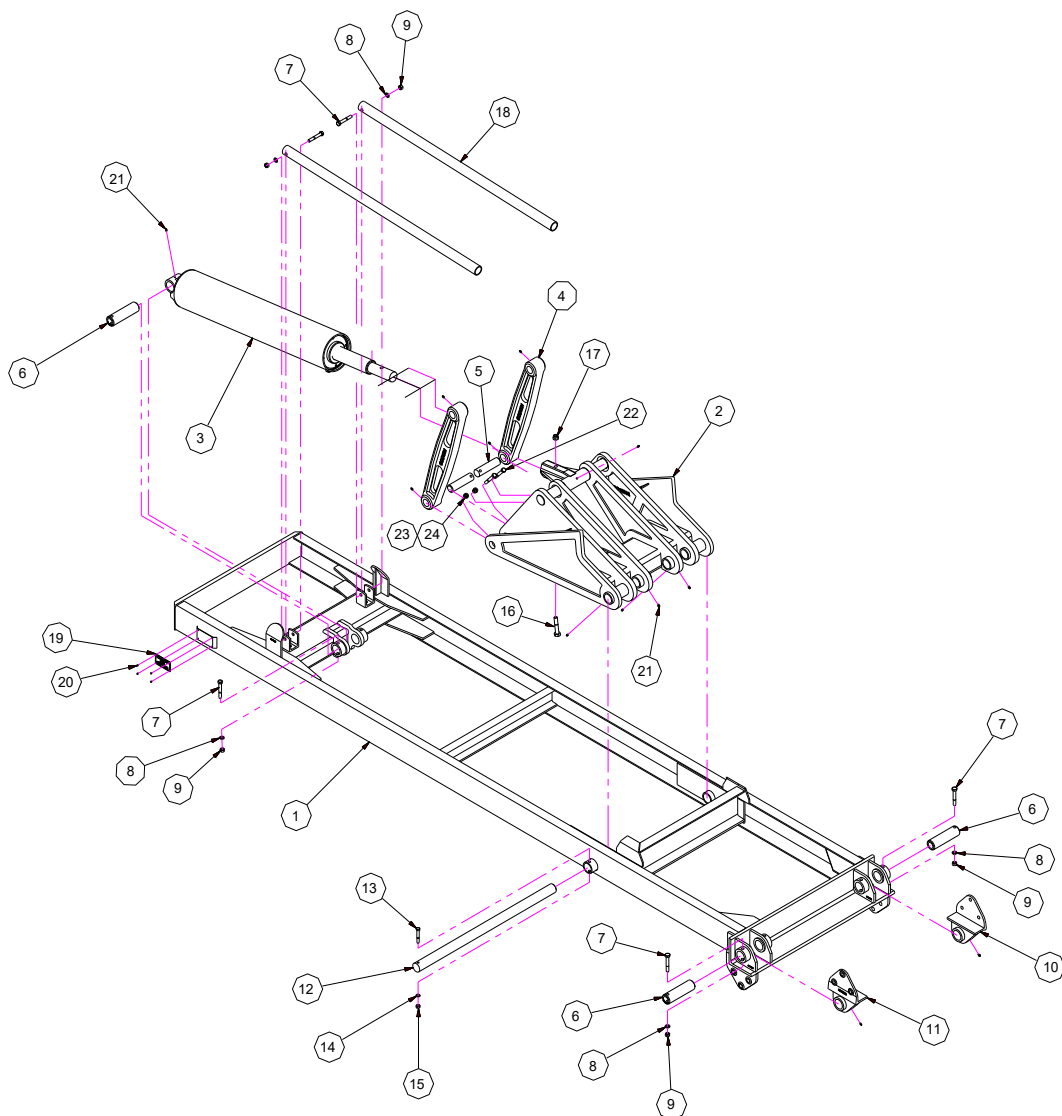
DETAIL B

Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	W14008	SWING ARM WELDMENT
2	2	PC14075	SWING ARM PIVOT - HYDRA -TARP
3	2	PC14053	TORQUE ARM BRACKET - HYDRA-TARP
4	1	SM14049	SHAFT, INSIDE - HYDRA-TARP - SHOWN
		SM14050	SHAFT, OUTSIDE - HYDRA-TARP
		SM14153	SHAFT, INSIDE - HYDRA-TARP - TUB BODY
		SM14161	SHAFT, OUTSIDE - HYDRA-TARP 600U 11" MAIN RUNNER
5	12	120-5	Plain Washer
6	6	120-5	Lock Washers
7	6	143-5	Lock Nut
8	6	100-406-A1	Hex Bolt
9	4	P853	GREASE FITTING
10	1	PC14084	HYDRA-TARP CYLINDER BOX
11	1	PC14042	Trunion, Torque (Casting)
12	1	AHT-36-DA	CYLINDER, HYDRA-TARP
13	1	W14006	PIN, WELDMENT, TARP CYLINDER ATTACHMENT
14	1	SM14052	SHAFT, HYDRA-TARP CYLINDER
15	1	125-255	Pin - Cotter
16	2	116-10-1-14	Hex Nuts (Inch Series) Hex Jam Nut

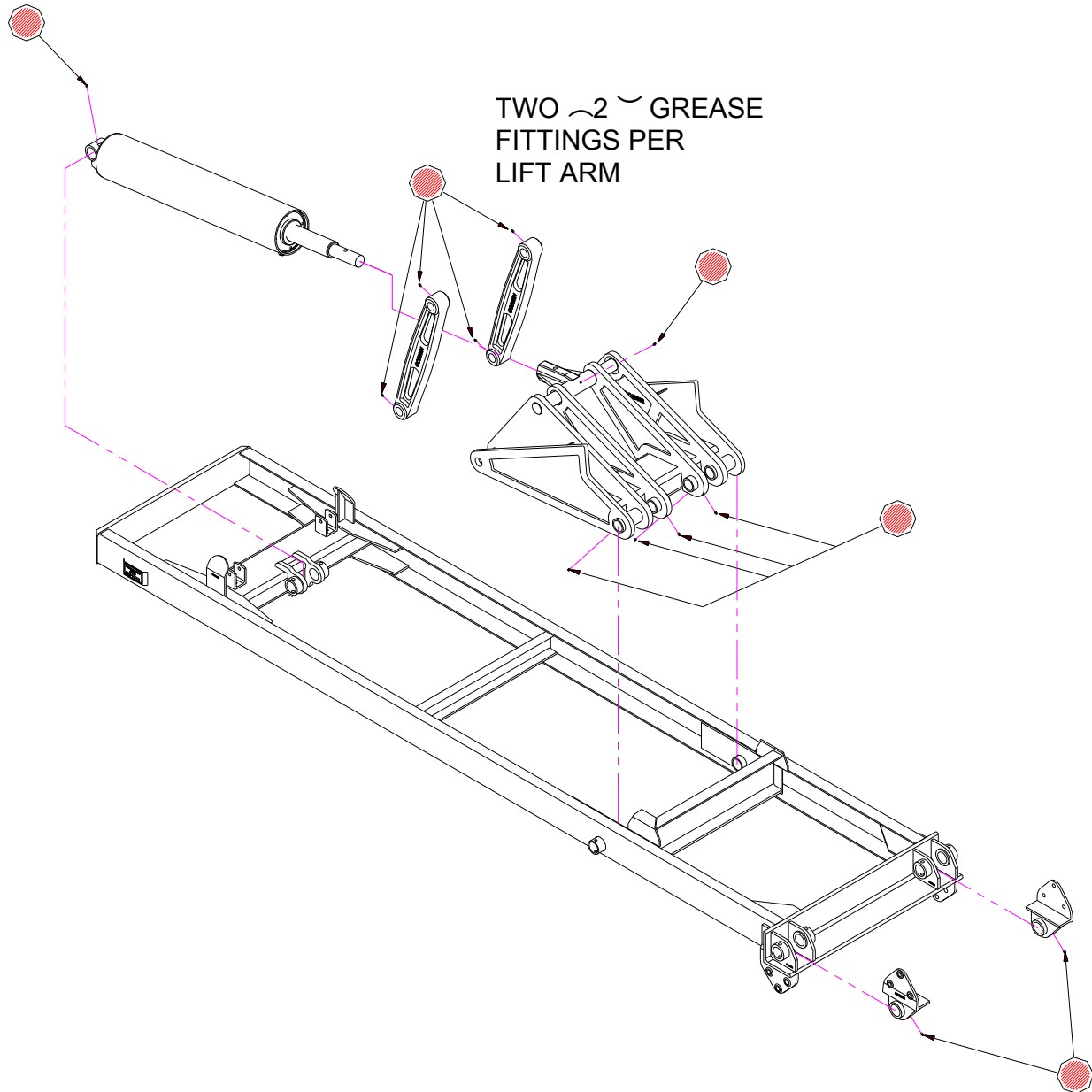
HYDRA-TARP SWING ARM ASSEMBLY

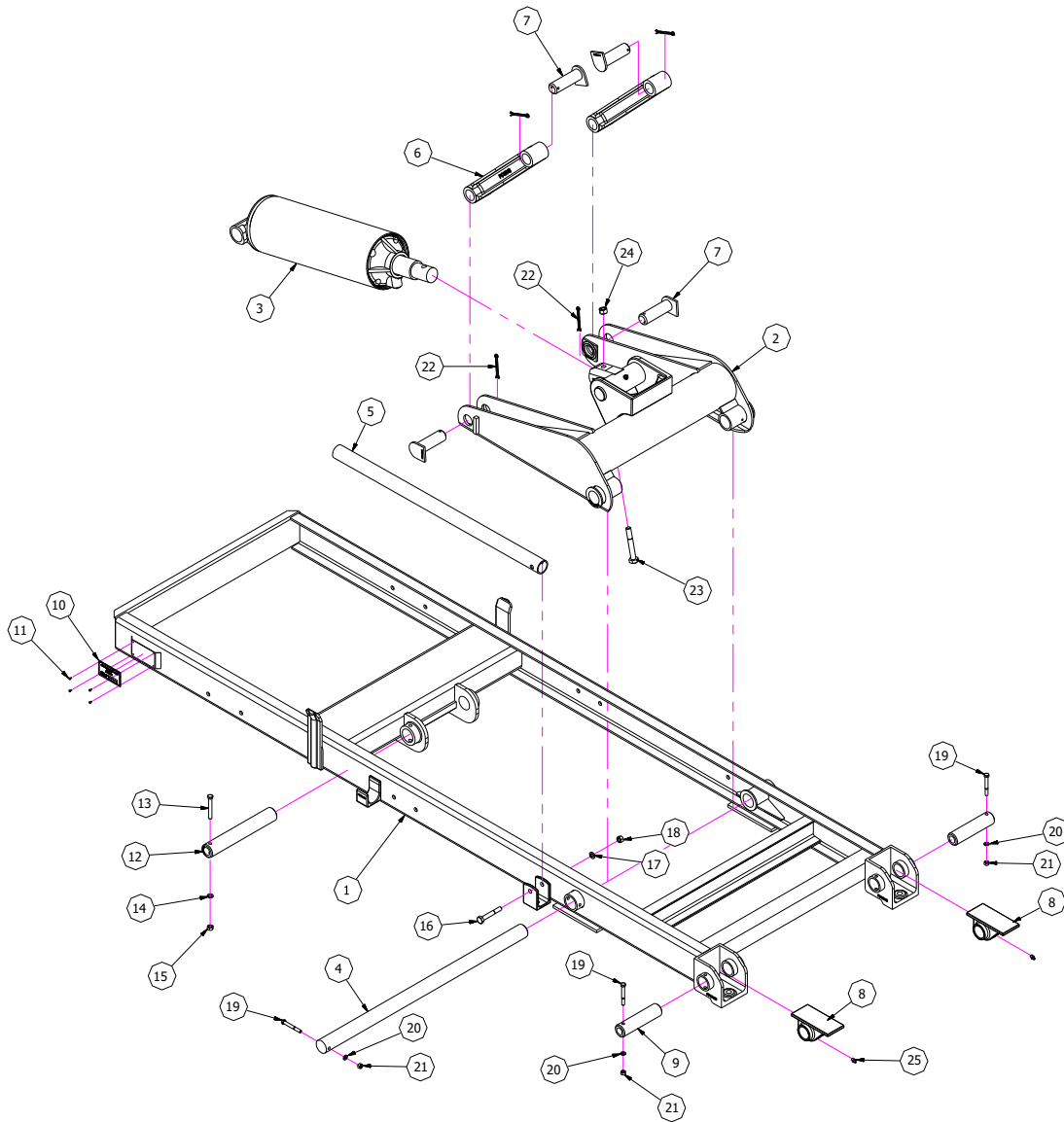
26 GODWIN MFG. CO., INC.
DUNN, NORTH CAROLINA

MP50305



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	W13438	WELDMENT SUBFRAME
2	1	W13409	WELDMENT TORQUE ARM
3	1	834-DA	CYLINDER, UNDERBODY
4	2	PC10365	LIFT ARM
5	2	SM13104	PIN, LIFT ARM
6	3	PC10523	PIN 2"
7	5	102-415-A1	HEX BOLT, 1/2 -13 UNC X 3 1/2, GR 8
8	5	118-5-A1	LOCK WASHER, 1/2
9	5	116-5-A1	HEX NUT, 1/2
10	1	PC10543	2" BOLT ON REAR HINGE, RIGHT
11	1	PC10544	2" BOLT ON REAR HINGE, LEFT
12	1	SM13018	SHAFT, TORQUE ARM PIVOT
13	1	102-313-A1	HEX BOLT, 7/16-14 UNC X 3
14	1	118-4-A1	LOCK WASHER, 7/16
15	1	116-4-A1	HEX NUT, 7/16-14 UNC
16	1	102-617-L	HEX BOLT, 5/8-11 UNC X 4, GR 9
17	1	162-12-S	LOCK NUT, 5/8
18	1	SM13208	STAND, SAFETY
19	1	P10200	SERIAL PLATE
20	4	PAAP43	POP RIVET, 1/8
21	13	PT7608	GREASE FITTING
22	5	102-215-A1	HEX BOLT, 3/8-16 UNC X 3 1/2
23	5	118-3-A1	LOCK WASHER, 3/8
24	5	116-3-A1	HEX NUT, 3/8-16 UNC

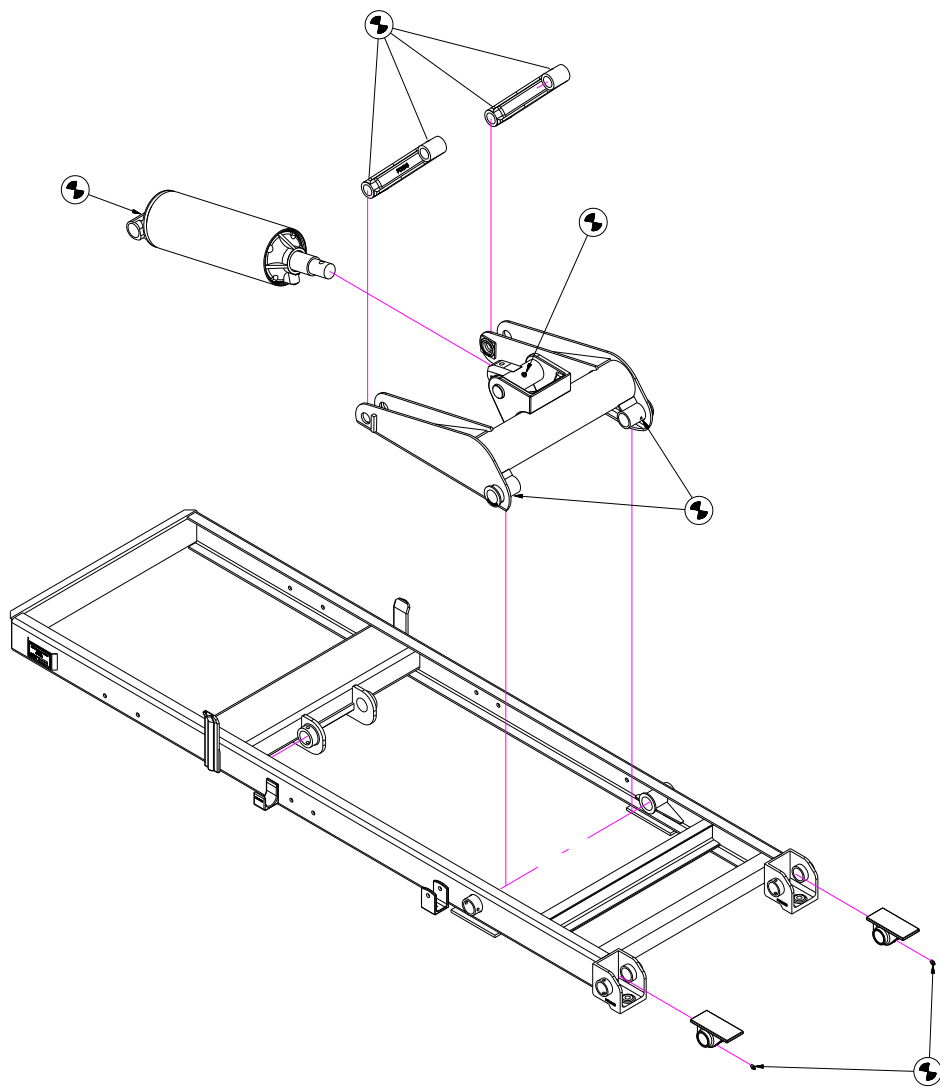




Parts List

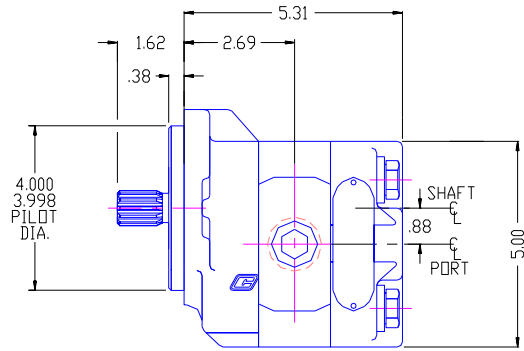
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	W13429	WELDMENT SUBFRAME
2	1	W12134	WELDMENT TORQUE ARM
3	1	816CYLINDER	CYLINDER, UNDERBODY
4	1	SM13018	SHAFT, TORQUE ARM PIVOT
5	1	SM13033	STAND, SAFETY
6	2	PC10340	LIFT ARM, 16"
7	4	PC10345	PIN, LIFT ARM
8	2	PC10463	REAR HINGE BLOCK
9	2	PC10525	PIN, REAR HINGE
10	1	P10100	SERIAL PLATE
11	4	PAAP43	RIVET
12	1	PC10559	PIN, CYLINDER
13	1	102-313-A1	HEX BOLT, 7/16-14 UNC X 3
14	1	118-4-A1	LOCK WASHER, 7/16
15	1	116-4-A1	HEX NUT, 7/16-14 UNC
16	1	102-415-A1	HEX BOLT, 1/2-13 UNC X 3 1/2 GR8
17	1	118-5-A1	LOCK WASHER, 1/2
18	1	116-5-A1	HEX NUT, 1/2-13 UNC
19	3	102-213-A1	HEX BOLT, 3/8-16 UNC X 3
20	3	118-3-A1	LOCK WASHER, 3/8
21	3	116-3-A1	HEX NUT, 3/8-16 UNC
22	4	125-260	COTTER PIN, 1/4 X 3
23	1	102-617-L	HEX BOLT, 5/8-11 UNC X 4, GR 9
24	1	162-12-S	LOCK NUT, 5/8
25	9	PT7608	GREASE FITTING

LUBRICATION INSTRUCTIONS
FOR HOIST MODELS 820-816

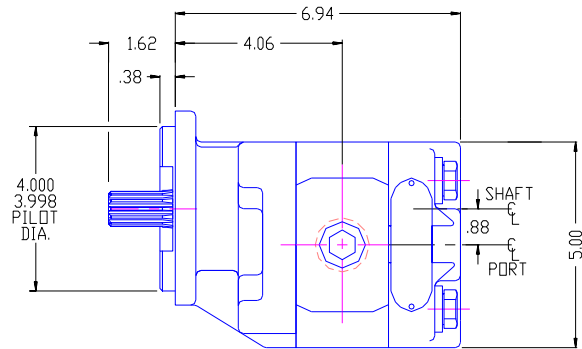


 - INDICATES GREASE FITTING LOCATIONS THAT MUST BE LUBRICATED
DEPENDENT ON USAGE, LOAD, ENVIRONMENT AND CLIMATE.
LUBRICATE ALL PIVOT POINTS USING EP-2 CHASSIS GREASE
OR EQUAL.

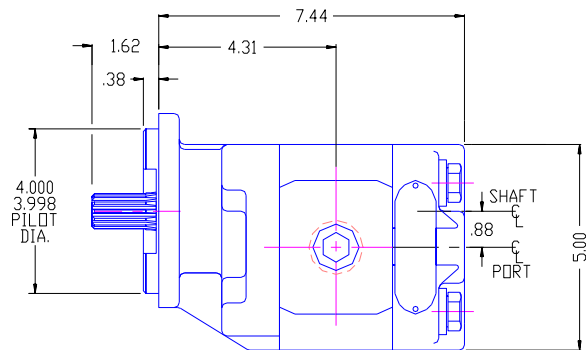
- * Grease hoist and rear hinge assembly each time truck is serviced.
NOTE: USE GENERAL PURPOSE CHASSIS GREASE



P21 PUMP

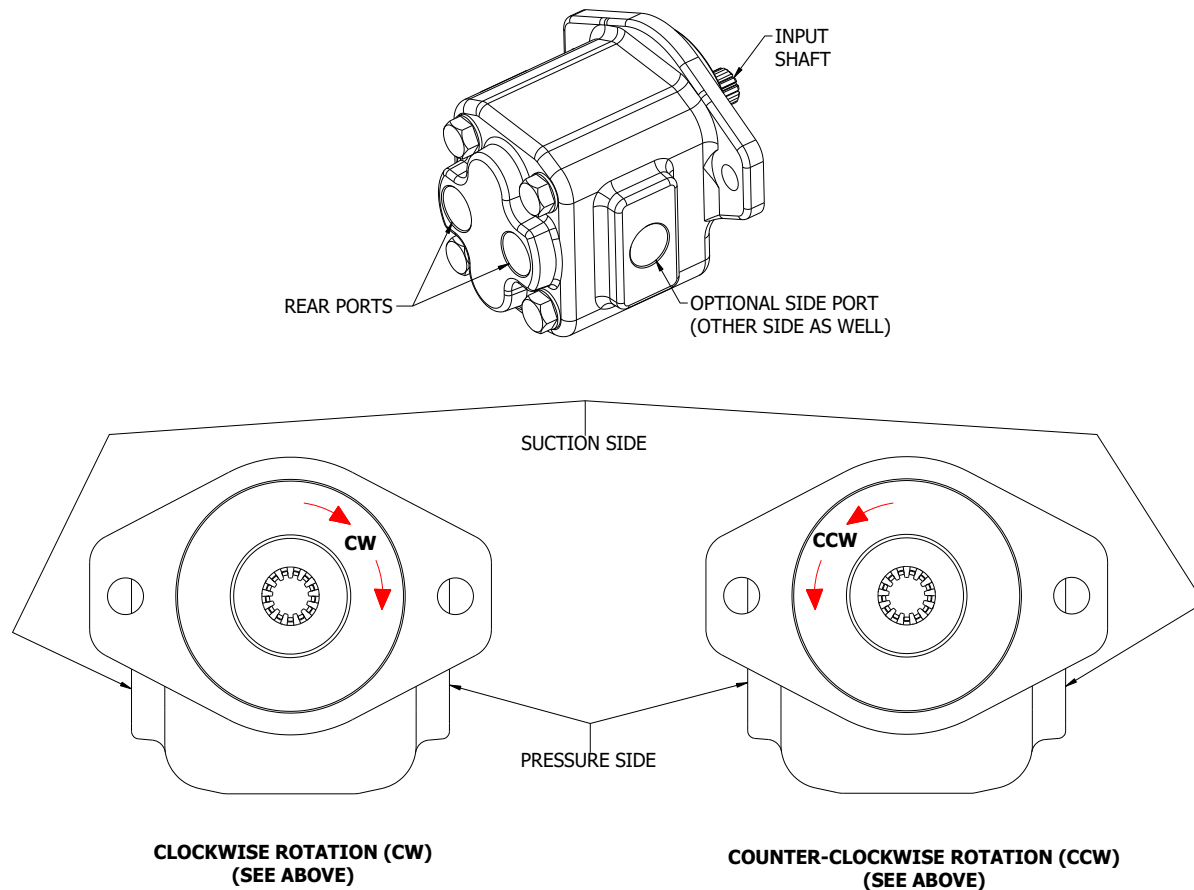


P22 PUMP



P23 PUMP

PUMP ROTATION AND PORTING



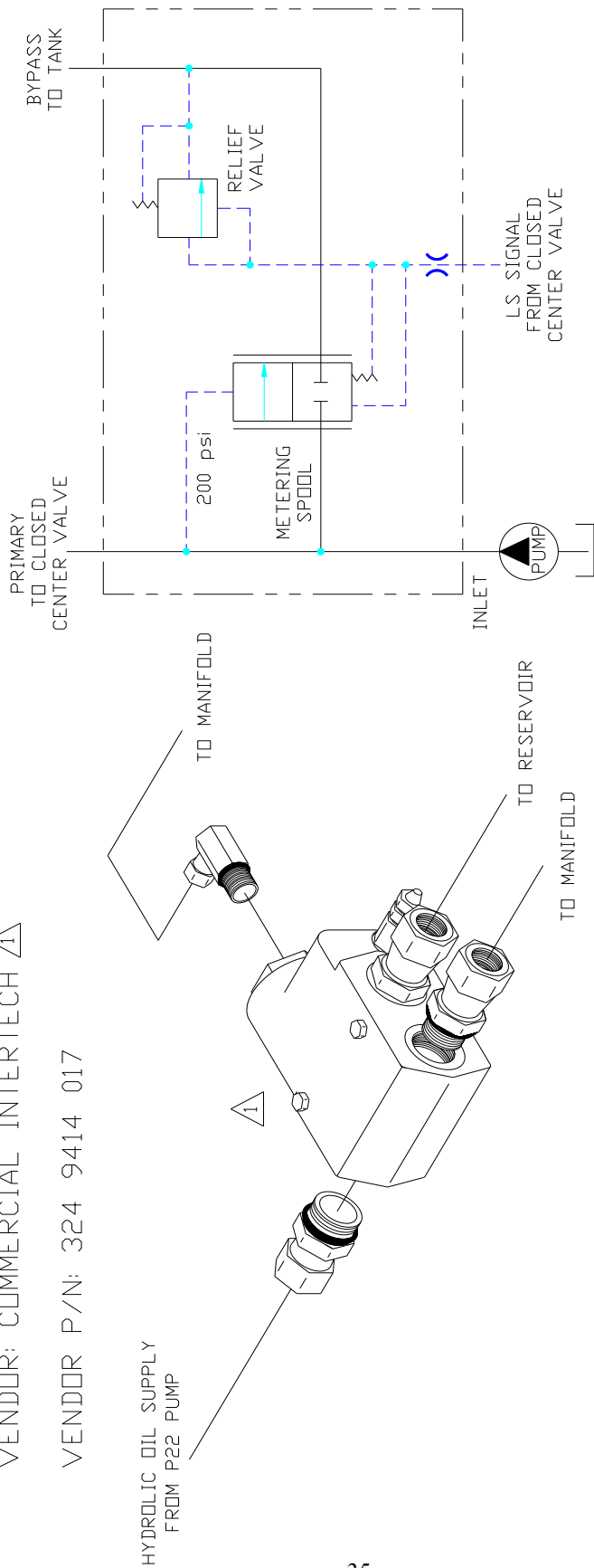
THE P22 PUMP IS BI-DIRECTIONAL AND OFFER SIDE AND REAR (NPT) PORTING. THE PUMPS ARE SHIPPED WITH THE SIDE PORTS PLUGGED. TO UTILIZE SIDE PORTING MOVE THE STEEL PLUGS FROM THE SIDE PORTS TO THE REAR PORTS AND PLUMB ACCORDINGLY. USE THE ILLUSTRATION ABOVE FOR PORT DESIGNATION BASED ON PUMP ROTATION.

HELPFUL HINT:

TO DETERMINE PUMP ROTATION, DO NOT REMOVE THE PLASTIC SHIPPING PLUGS. TEMPORARILY BOLT PUMP TO THE MOUNTED PTO. START TRUCK ENGINE AND ENGAGE PTO FOR APPROXIMATELY (3) SECONDS AND SHUT-OFF. THE PLASTIC SHIPPING PLUG ON THE PRESSURE PORT SHOULD HAVE POPPED OUT OF THE PUMP HOUSING.

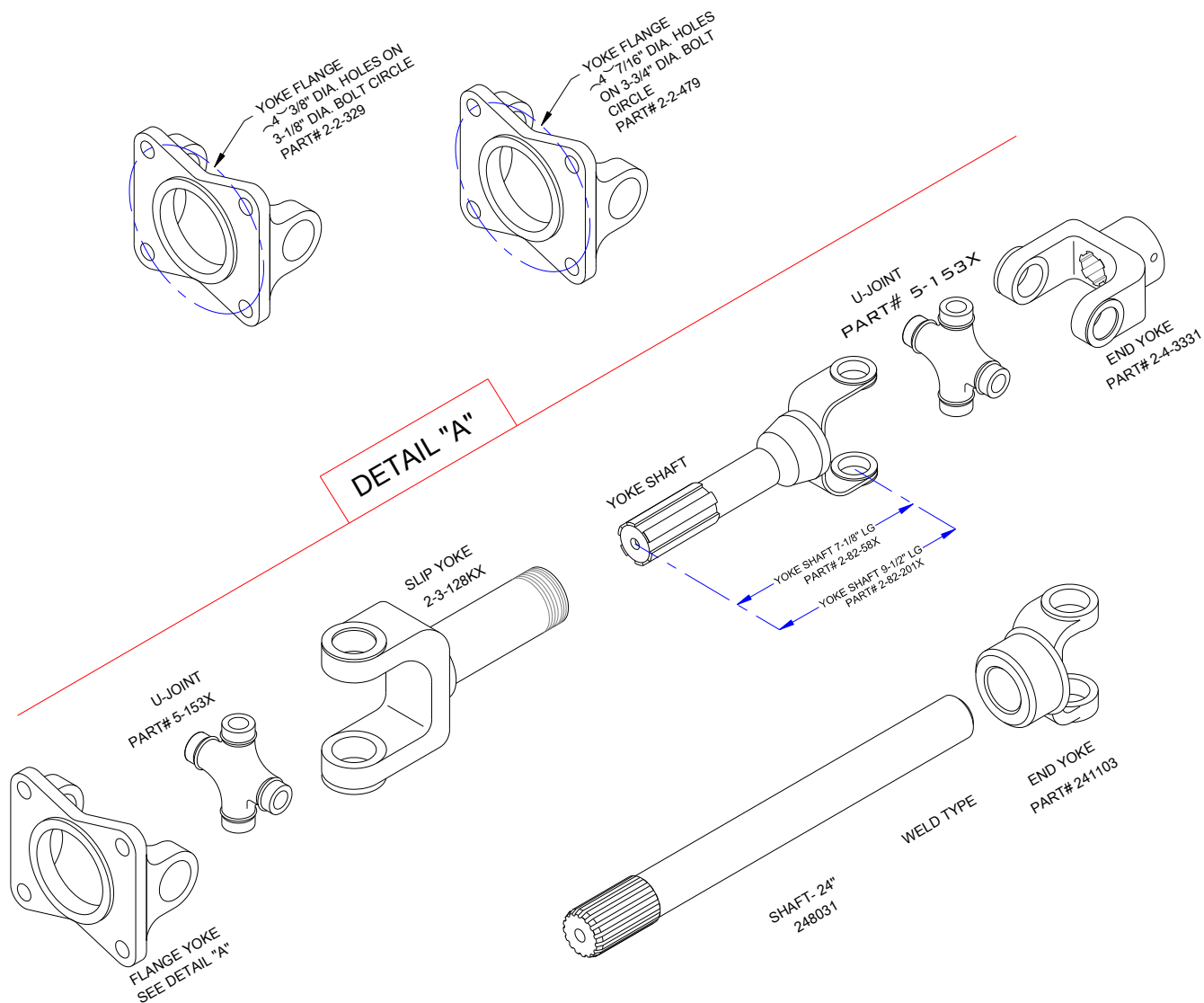
DESCRIPTION: FULLY ASSEMBLED UNLOADING VALVE,
R/V PRESSURE SET @ 2000 psi +/- 100 psi,
THREE 3/4" O-RING PORTS & ONE 3/8" O-RING PORT.

VENDOR P/N: 324 9414 017

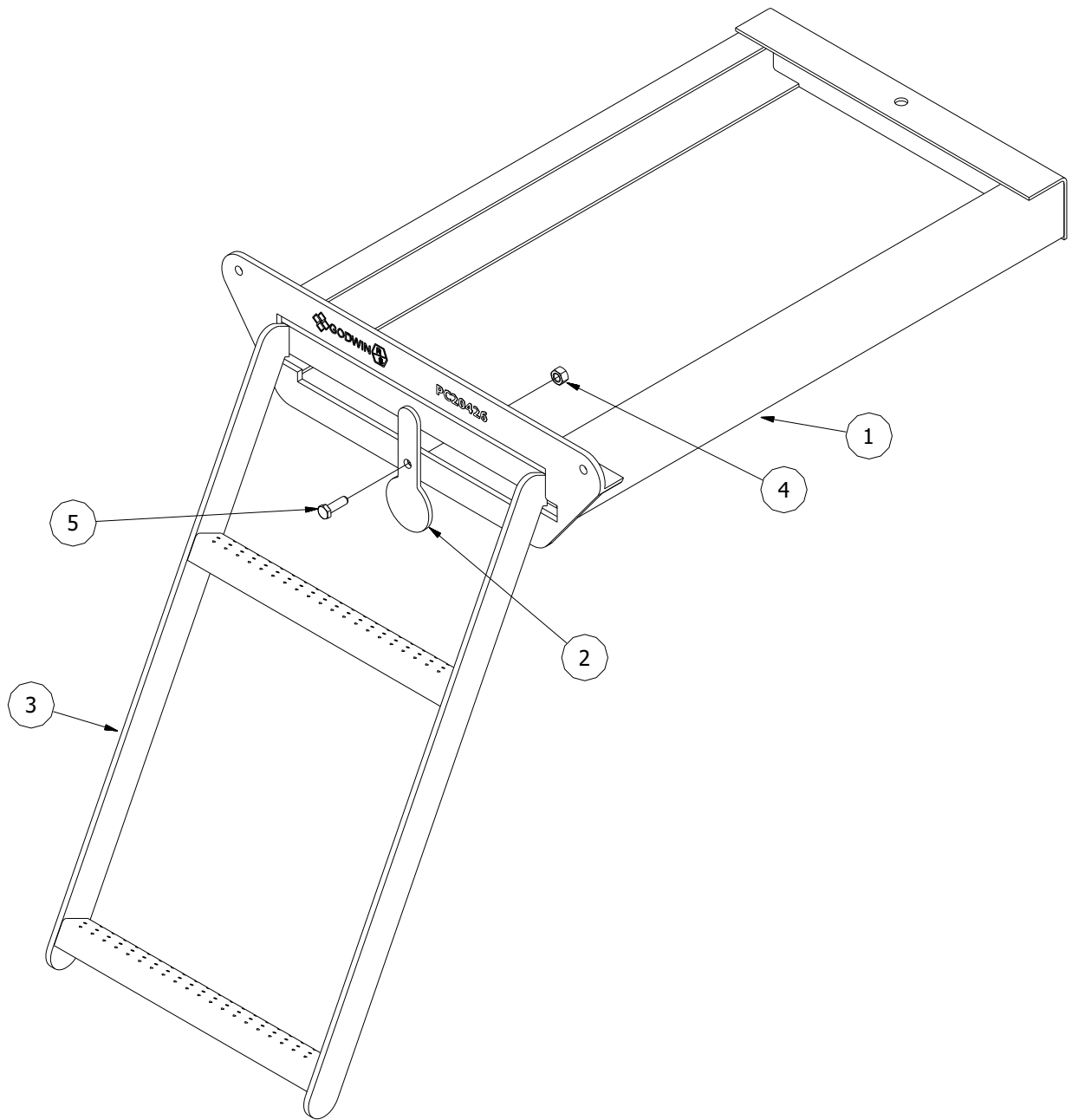


UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ON STRUCTURAL AND FABRICATED PARTS MUST BE HELD TO A TOLERANCE OF ± 0.06 [1.58mm] FOR TWO PLACE DECIMALS, AND ± 0.10 [2.54mm] FOR THREE PLACE DECIMALS. DIMENSIONS WITHIN BRACKETS [] ARE MILLIMETERS. WELD SIZES ARE MINIMUM. USE IDENTICAL WELDS ON SIMILAR ITEMS. ✓ INDICATES MACHINED SURFACES REQUIRING NO FINISH CONTROL. BREAK ALL SHARP CORNERS AND EDGES. DEBURR ALL HOLES. DO NOT SCALE THIS DRAWING FOR DIMENSIONS!

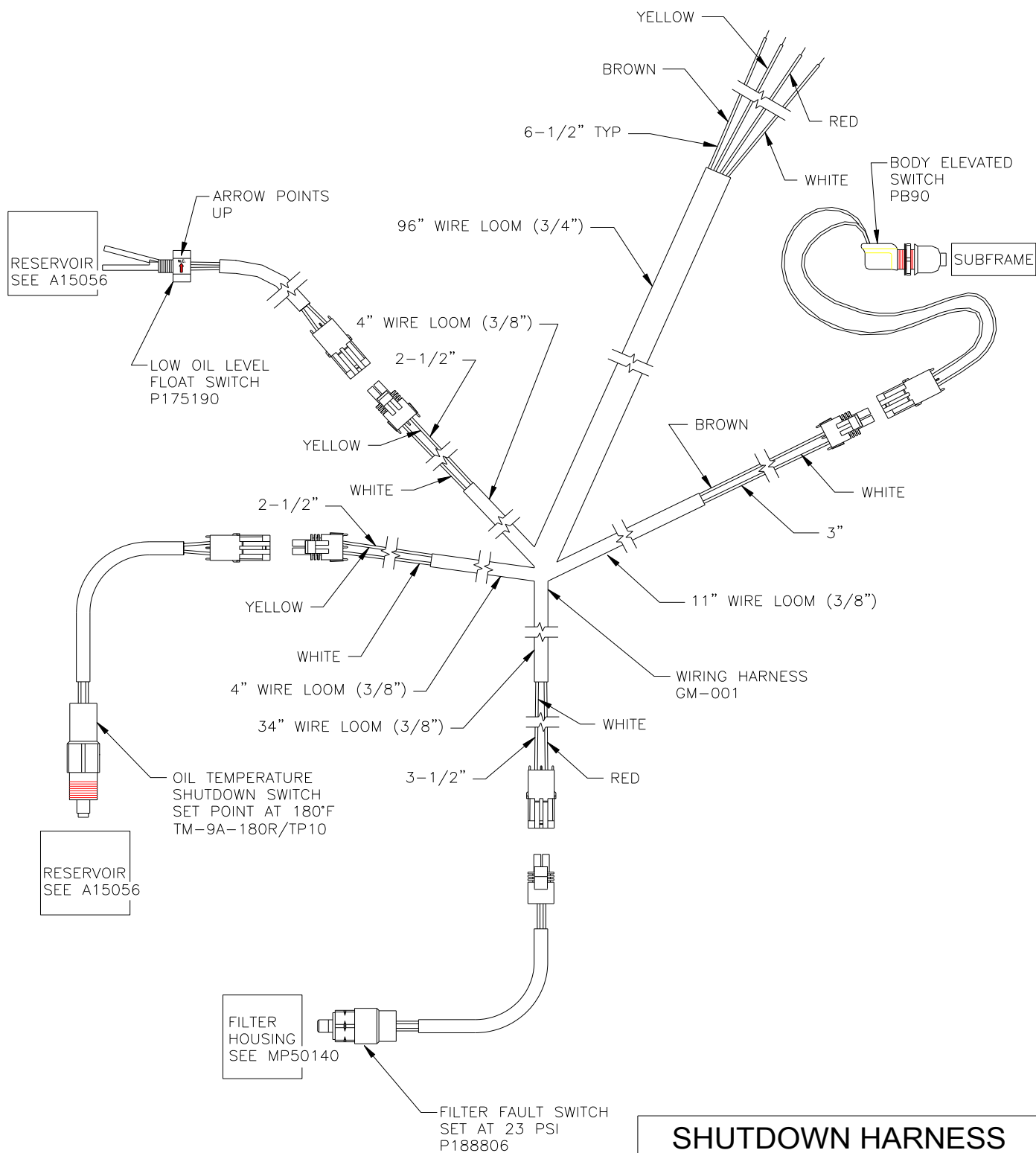
UPDATED VENDOR INFORMATION				NAME		WELD CODE	
					UNLOADER VALVE		
					SPECIFICATIONS		
					PURCHASED		
					SEE ABOVE		
					DRAWN BY	DATE	DATE
					T. FAISON	8/30/96	8/30/96
						DWG. SIZE	SCALE
						A	NONE
					GODWIN MANUFACTURING CO., INC.		
					DUNN, NORTH CAROLINA		
					P10302		



NOTE: WHEN ORDERING REPLACEMENT PARTS THERE ARE THREE DIFFERENT LENGTHS ON THE YOKE SHAFT. USE YOUR OLD PART & THIS SKETCH TO DETERMINE THE CORRECT PART# FOR YOUR APPLICATION. ALSO THERE ARE TWO DIFFERENT FLANGE YOKES SEE DETAIL "A" FOR YOUR APPLICATION.

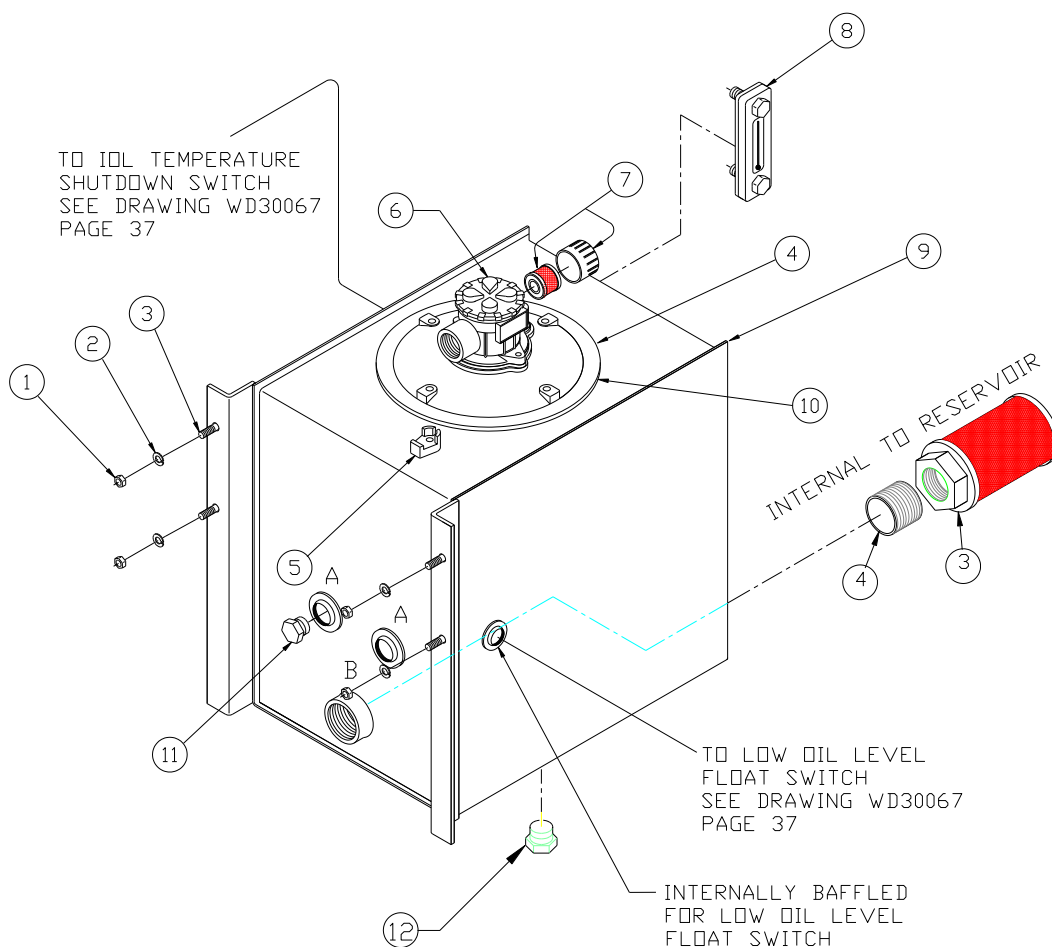


PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	W201312	LADDER HIDEAWAY WELDMENT
2	1	F20429	OFF CENTER LATCH FOR HIDEAWAY LADDER
3	1	162-7-S	LOCK NUT, 5/16"
4	1	102-105-A1	HEX HEAD BOLT, 5/16 - 18 UNC X 1
5	1	W181224	WELDMENT, HIDE-A-WAY LADDER; (FAB FROM PC20428)



SIZE	WIDTH	HEIGHT	DEPTH
30 GAL.	16"	22"	22"
40 GAL.	22"	22"	21"

PORT	SIZE	DESCRIPTION
A	1"	PLUGGED
B	2"	SUCTION PORT



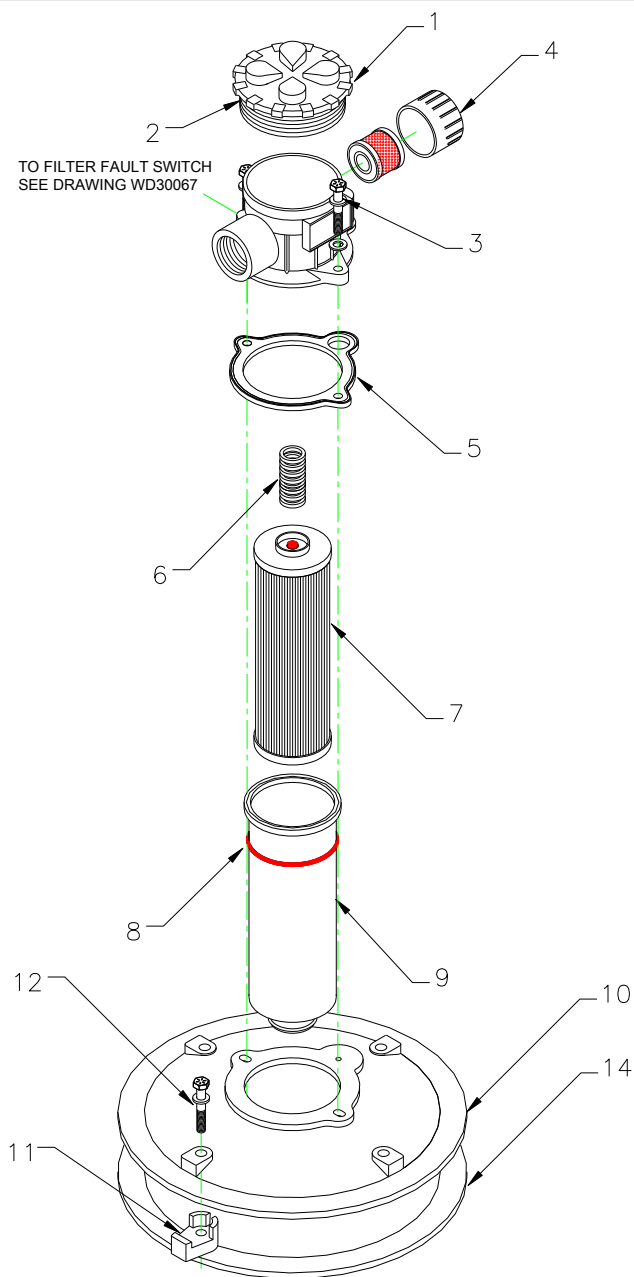
NO.	PART NUMBER	QTY.	DESCRIPTION
1	116-5-A1	4	HEX NUT, 1/2"
2	118-5-A1	4	LOCK WASHER, 1/2"
3	102-409	4	CAP SCREW, 1/2" x 2'
4	PC10371	1	ALUMINUM RESERVOIR COVER
5	PC10372	4	KEEPER NUTS
6		1	INTANK FILTER ASSEMBLY SEE DRAWING MP50140 PAGE 39
7	P2031001	4	BREATHER CAP & FILTER ASSEMBLY
8	P10224	1	TEMPERATURE GAUGE
9	W15046	1	WELDMENT, RESV. 30 GAL. (STD.)
9	W15048	1	WELDMENT, RESV. 40 GAL.
10		1	GASKET
11	23-4	2	PLUG, PIPE 1"
12	P10237	1	MAGNETIC PLUG
** 13	P10225	1	SUCTION STRAINER
14	22-790	1	2" NPT CLOSE NIPPLE

****MUST BE SERVICED ANNUALLY-**

30/40 GALLON RESERVOIR STANDARD FLOW

GODWIN MFG. CO., INC.
DUNN, NORTH CAROLINA

A15056

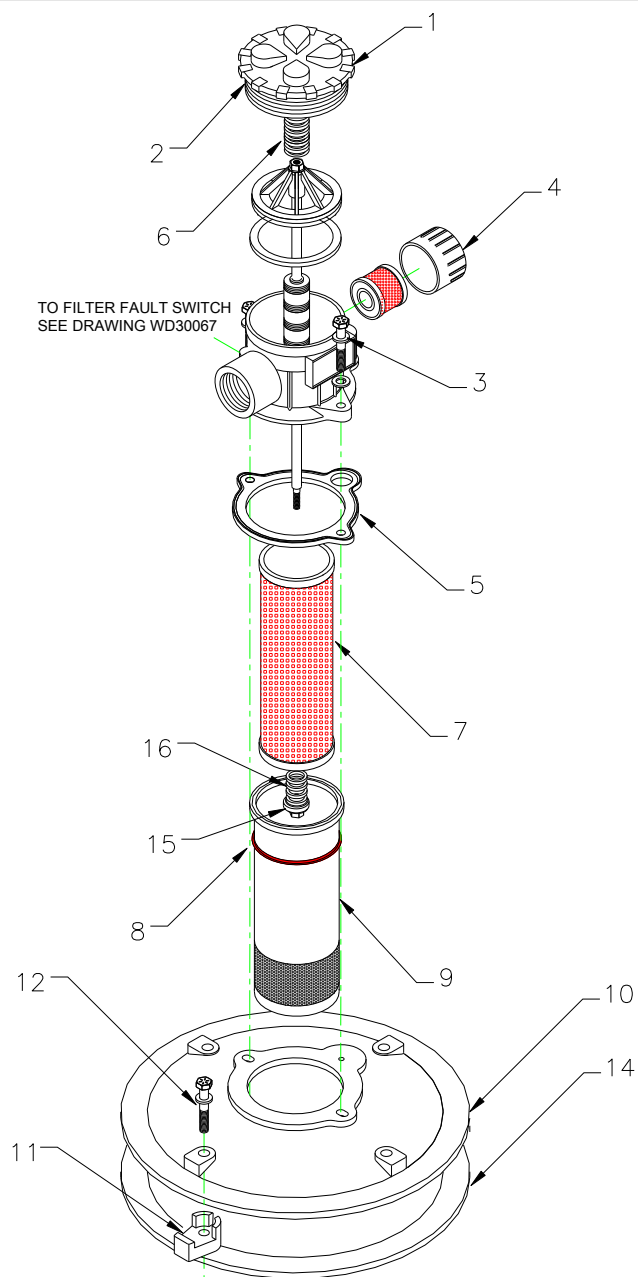


STANDARD FLOW

NO.	PART NUMBER	QTY.	DESCRIPTION
1	P2007331	1	CAP
2		1	O-RING
3		2	BOLT/WASHER/NUT ASM.
4	P2031001	1	BREATHER CAP & FILTER ASM.
5		1	SEAL
6		1	SPRING
7	PRFC310	1	RETURN FILTER CARTRIDGE
8		1	O-RING
9		1	FILTER BASKET
10	PC10371	1	ALUM. RESERVOIR COVER
11	PC10372	4	KEEPER NUTS
12		4	BOLT/WASHER/NUT ASM.
13	PMPT1003MAG	1	ITEMS 1-9 ITF-310 FILTER ASSEMBLY
14	PD14131	1	GASKET

NOTE:

1. SYSTEM BYPASS SET AT 25 PSI. ~TYP~



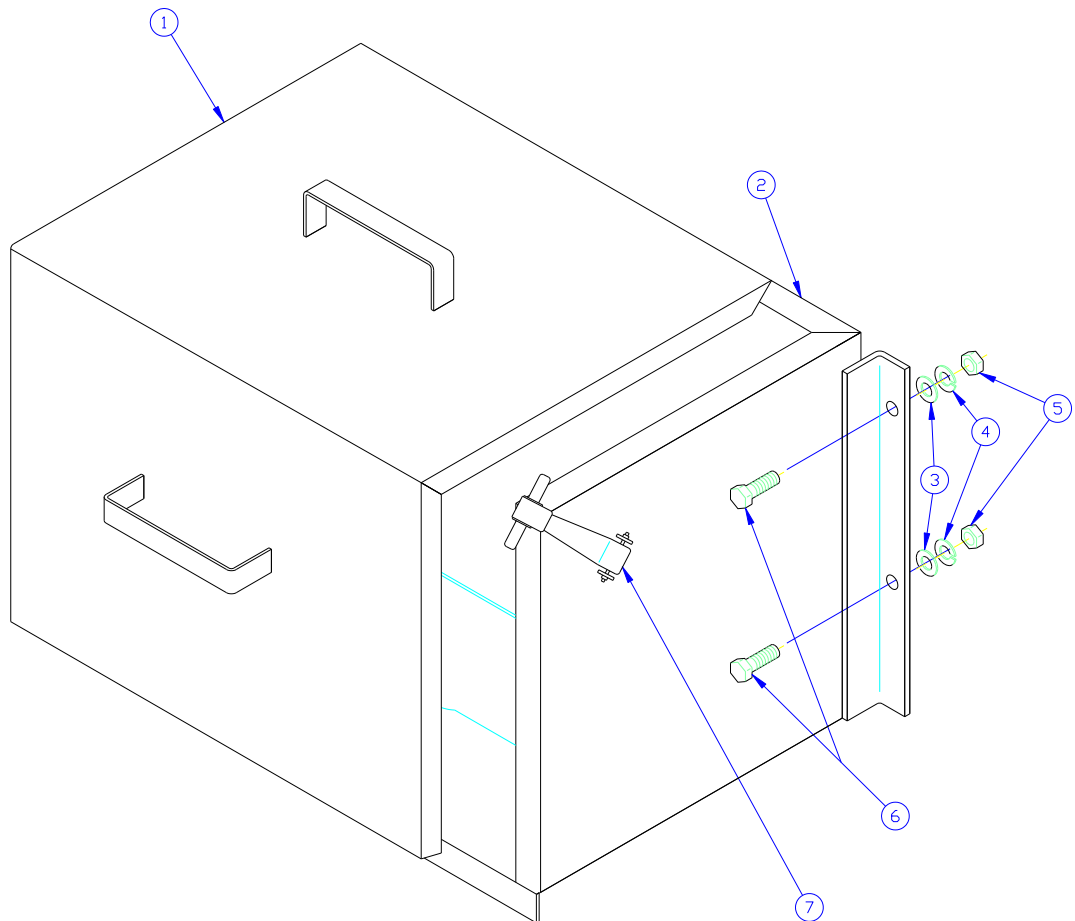
HIGH FLOW

NO.	PART NUMBER	QTY.	DESCRIPTION
1	P2007331	1	CAP
2		1	O-RING
3		2	BOLT/WASHER/NUT ASM.
4	P2031001	1	BREATHER CAP & FILTER ASM.
5		1	SEAL
6		1	CARTIDGE RETAINER SPRING
7	PMR1004P10A	1	RETURN FILTER CARTRIDGE
8		1	O-RING
9		1	FILTER BASKET
10	PC10371	1	ALUM. RESERVOIR COVER
11	PC10372	4	KEEPER NUTS
12		4	BOLT/WASHER/NUT ASM.
13	PMPH1004CDMA	1	ITEMS 1-9 ITF-410 FILTER ASSEMBLY
14	PD14131	1	GASKET
15		1	SPRING NUT
16		1	BYPASS SPRING

INTANK FILTER ASSEMBLY ITF-320/410

The Godwin
Group

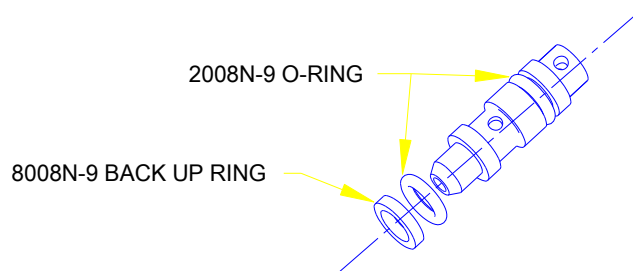
MP50140



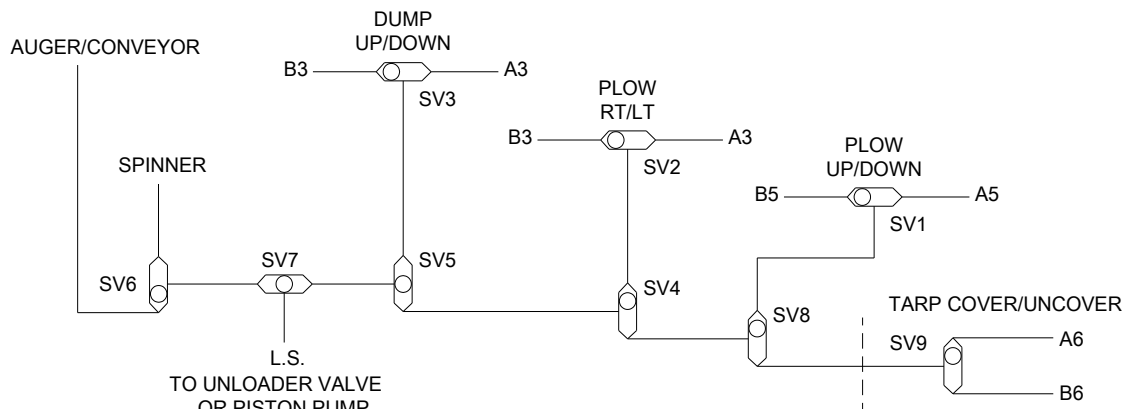
NO.	PART NUMBER	QTY.	DESCRIPTION
1	W18025	1	LID, CONTROL VALVE BOX WELDMENT
2	W18003	1	BOX, CONTROL VALVE WELDMENT
3	119-5	4	FLAT WASHER, 1/2"
4	118-5	4	LOCK WASHER, 1/2"
5	116-5-1A	4	HEX NUT, 1/2"
6	102-409-A1	4	CAPSCREW, 1/2-13 X 2"
7	PWJ206	2	STRAP

SHUTTLE VALVE INSTALLATION/REMOVAL

- STEP #1** LOCATE SUSPECT SHUTTLE VALVE ON MANIFOLD BY REFERRING TO HYDRA-MAX 005 VALVE ASSEMBLY DIAGRAM. REFER TO TABLE OF CONTENTS FOR PAGE#. REMOVE SOCKET PLUG THAT COVERS SHUTTLE VALVE ASSY.
- STEP #2** WITH A SHUTTLE VALVE REMOVAL TOOL, (OBTAINED FROM GODWIN MFG.) OR A #4 SCREW 40 TPI APPROX. 1-1/2" LG., THREAD INTO END OF SHUTTLE VALVE. (NOTE: WHEN USING A #4 SCREW USE PLIERS OR LOCKING PLIERS TO GRIP SCREW HEAD FIRMLY WHILE INSTALLING OR REMOVING SHUTTLE VALVE.
- STEP #3** USING A FIRM STEADY MOTION PULL THE SHUTTLE VALVE OUT. IF THE END O-RING AND BACK-UP RING DO NOT COME OUT USE A PICK OR BENT WIRE TO RETRIEVE IT.
- STEP #4** INSPECT BOTH O-RINGS AND THE BACK UP RING FOR DAMAGE, REPLACE AS NECESSARY. ALSO INSPECT SHUTTLE VALVE BALL INSIDE SHUTTLE VALVE TO MAKE SURE IT MOVES FREELY, AND HOLES IN BODY ARE NOT FILLED WITH DEBRIS.
- STEP #5** INSTALL O-RINGS AND BACK-UP RINGS ONTO SHUTTLE VALVE PAYING CLOSE ATTENTION TO INSTALL THEM IN THE RIGHT CONFIGURATION AS ILLUSTRATED IN DETAIL. USING CHASSIS GREASE, WHEEL BEARING GREASE AND OR LITHIUM GREASE, LUBRICATE RINGS AND SHUTTLE VALVE ASSEMBLY. INSERT VALVE ASSEMBLY INTO CAVITY USING A FIRM, STEADY MOTION TO AVOID CUTTING RINGS. WHEN INSTALLED CORRECTLY, SHUTTLE VALVE WILL BE APPROX. 1/4" BELOW MANIFOLD SURFACE, GIVING ENOUGH ROOM TO INSTALL PLUG. AFTER REMOVING TOOL, INSTALL PLUG AND CHECK FOR HYDRAULIC FUNCTION.



DETAIL 1
75146-01 SHUTTLE SUB ASS'Y

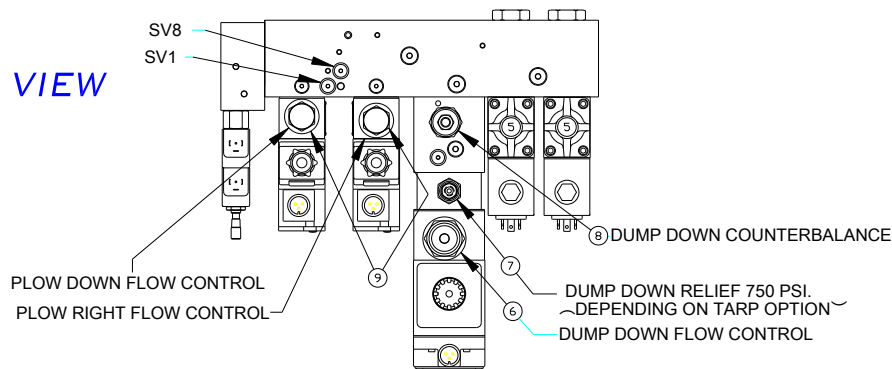


SHUTTLE VALVE NETWORK
HYDRA-MAX 005-HFC32752

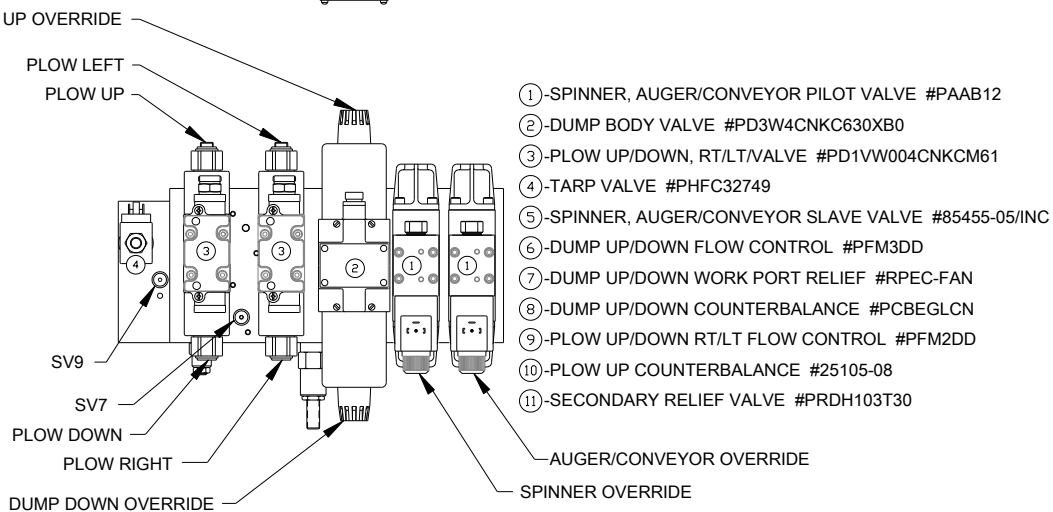
The Godwin
Group

MP50038

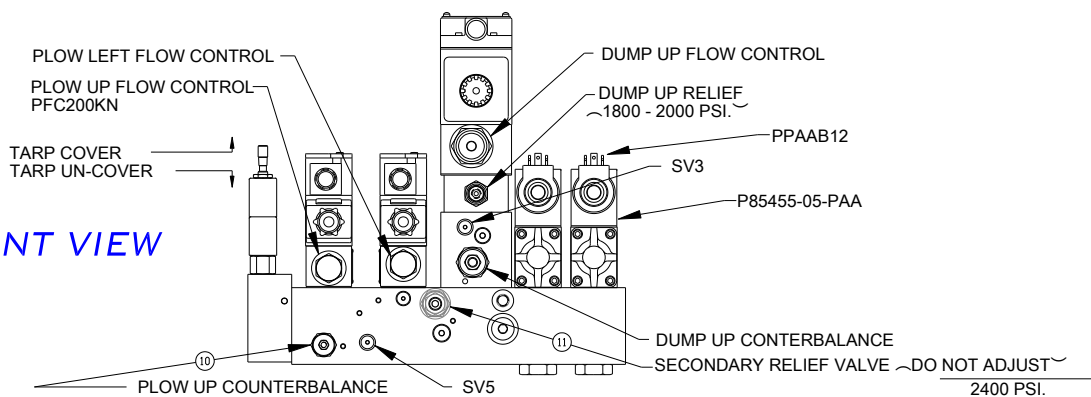
REAR VIEW



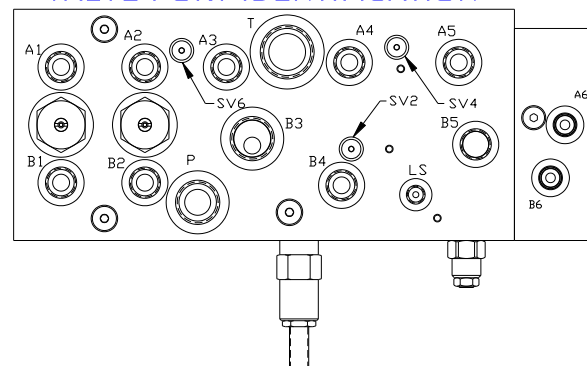
TOP VIEW



FRONT VIEW



VALVE PORT IDENTIFICATION



A1 - AUG/CONVEYOR REVERSE ~OPTIONAL~.

B1 - AUG/CONVEYOR/TOOL

A2 - PORT NOT USED ~PLUGGED~

B2 - SPINNER PRESSURE

A3 - DUMP DOWN

B3 - DUMP UP

A4 - PLOW RIGHT

B4 - PLOW LEFT

A5 - PLOW DOWN

B5 - PLOW UP

A6 - TARP UN-COVER

B6 - TARP COVER

P - MAIN PRESS. FROM UNLOADER VALVE/PUMP

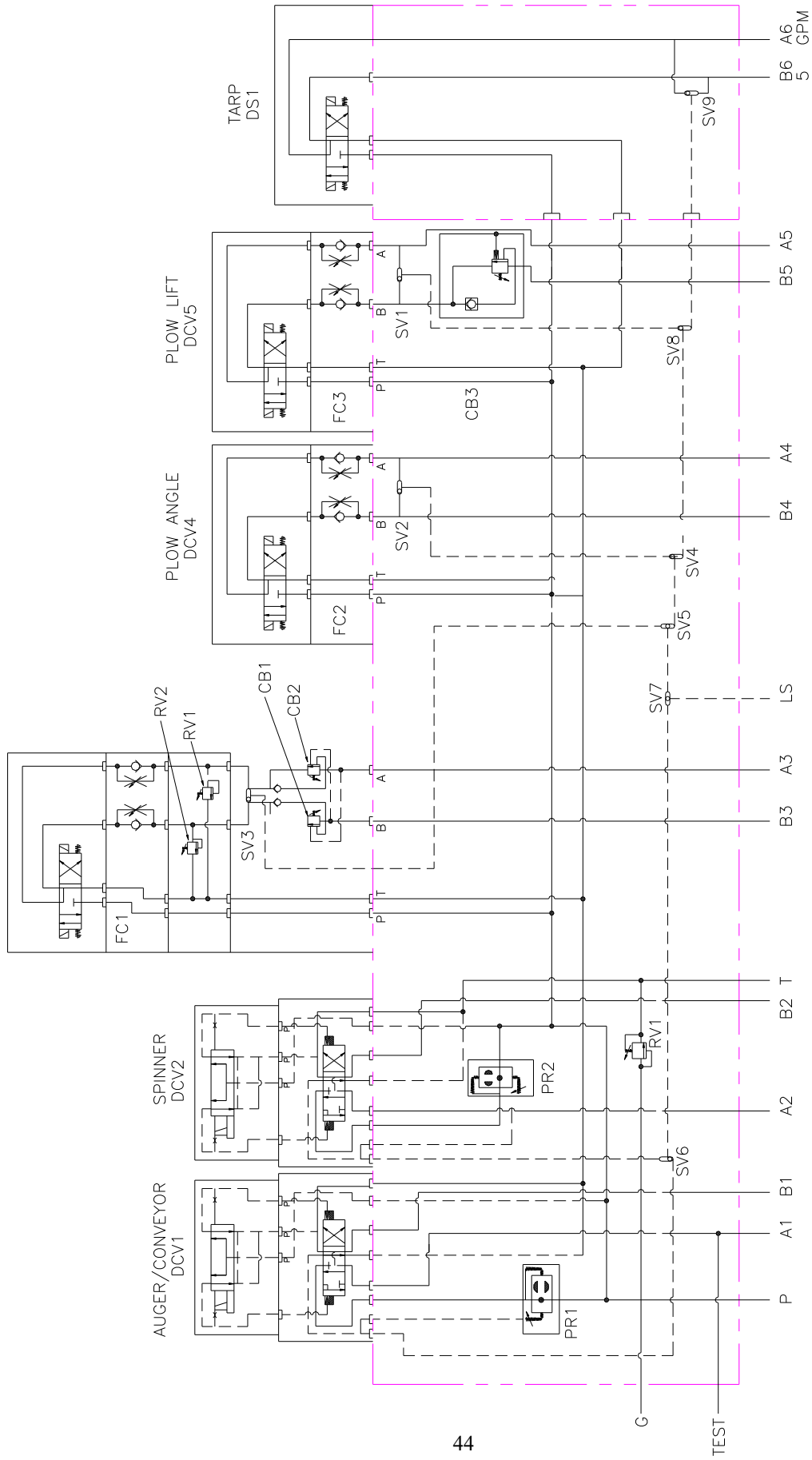
T - RETURN TO FILTER

GAUGE - 0-3000 PSI GAUGE

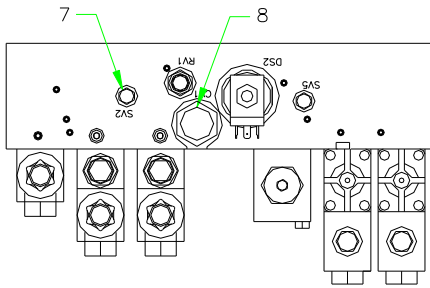
TEST - PORT NOT USED ~PLUGGED~

L.S. - LOAD SENSE TO UNLOADER VALVE

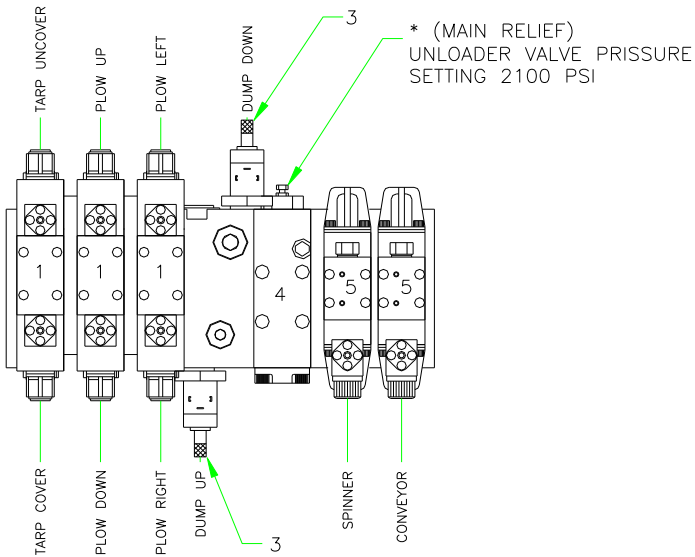
HOIST
DCV3



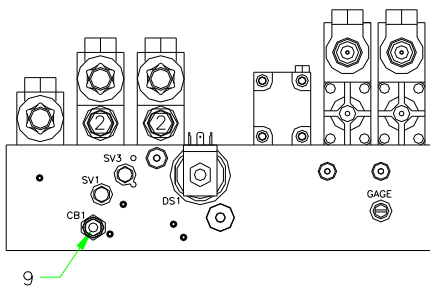
REAR VIEW (CHASSIS SIDE)



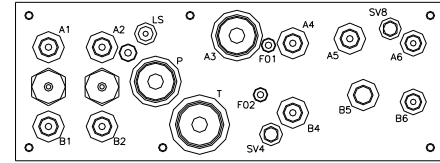
TOP VIEW



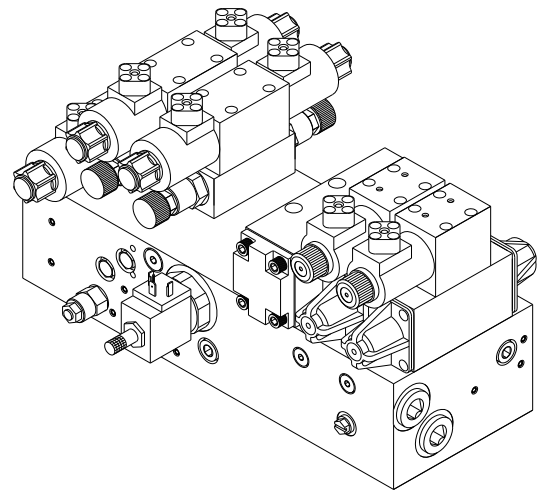
FRONT VIEW (OUTSIDE)



VALVE PORT IDENTIFICATION



PORT	
A1	AUG/CONVEYOR
B1	AUG/CONVEYOR REVERSE <OPTIONAL>
A2	SPINNER PRESSURE
B2	PORT NOT USED <PLUGGED>
A3	DUMP UP/DOWN
A4	PLOW RIGHT
B4	PLOW LEFT
A5	PLOW DOWN
B5	PLOW UP
A6	TARP UNCOVER
B6	TARP COVER
P	MAIN PRESSURE FROM PUMP
T	RETURN TO FILTER
GAUGE	0-3000 PSI GAUGE
TEST	PORT NOT USED <PLUGGED>
L.S.	LOAD SENSE <PLUGGED>



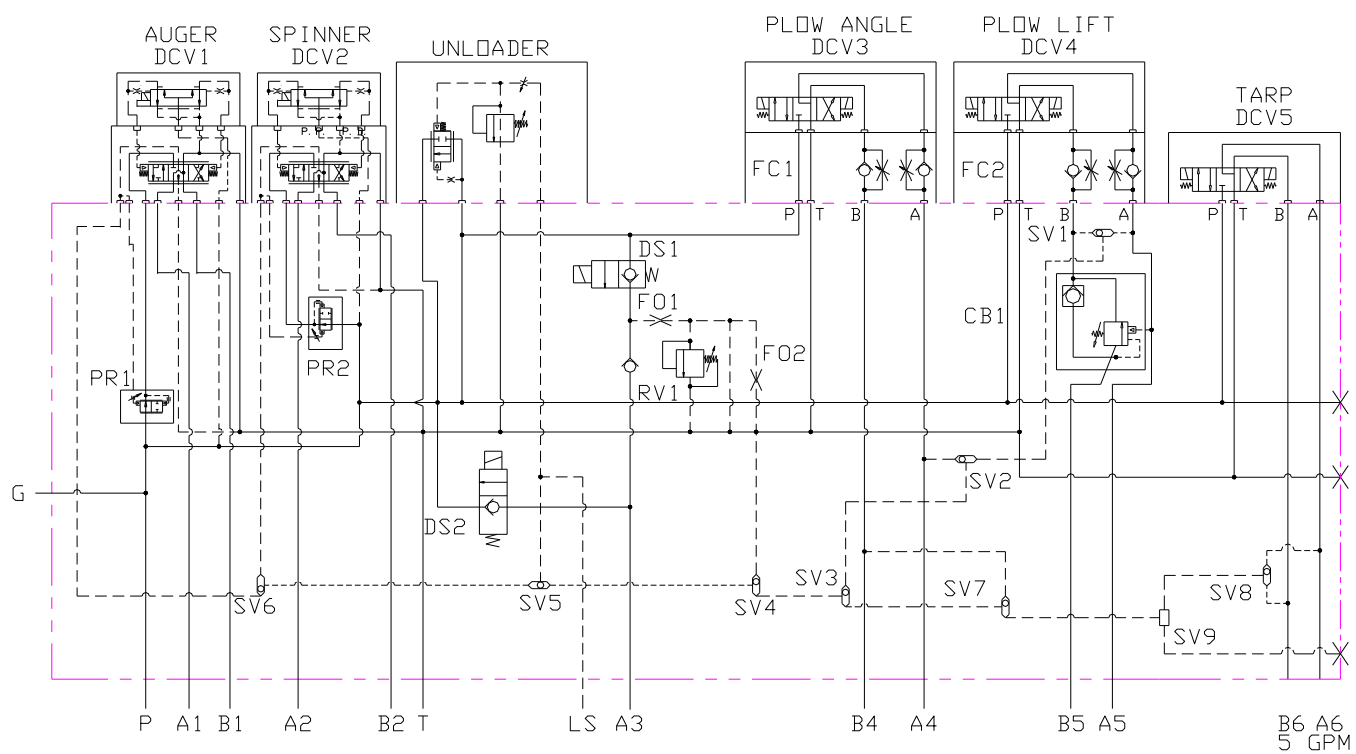
NO.	PART NUMBER	MANIFOLD ID NUMBER	DESCRIPTION
1	D1VW4CNKWF		TARP, PLOW UP/DN, PLOW RT/LT <VALVES>
2	FM2DDKN		PLOW UP/DN, RT/LT, <FLOW CONTROL VALVE>
3	DS201CPD012LD	UP-DS1 DN-DS2	DUMP UP/DN <VALVES>
4	MUV12C-LGS		LOAD SENSE UNLOADER VALVE
5	PAAB12		SPIINNER/CONVEYOR PILOT VALVE
6	MEV10C-LFFC4		SPINNER/CONVEYOR SLAVE VALVE
7	RD083S30	RV1	DUMP UP RELIEF <LOAD LIMITER VALVE>
8	CV161P	CV1	DUMP CHECK VALVE PART #CV161P
9	CBCH-LDN	CB1	PLOW UP COUNTERBALANCE VALVE
10	CDM10C-3		CDM VALVES
11	CS041B	SV-1 - SV-8	SHUTTLE VALVE <SV1 THRU SV8>

* WHEN SETTING/CHECKING MAIN PRESSURE, BOTTOM OUT AND HOLD A PLOW FUNCTION. DO NOT USE THE DUMP FUNCTION TO CHECK MAIN PRESSURE, IT HAS ITS OWN LOAD LIMITED RELIEF SET AT 1600-1800 PSI (ITEM #7).

HYDRA-MAX VALVE PORT I.D.
HFC32811

GODWIN MFG. CO., INC.
DUNN, NORTH CAROLINA

MP50190



HYDRAULIC SYSTEM SCHEMATIC HFC32811

GODWIN MFG. CO., INC.
DUNN, NORTH CAROLINA

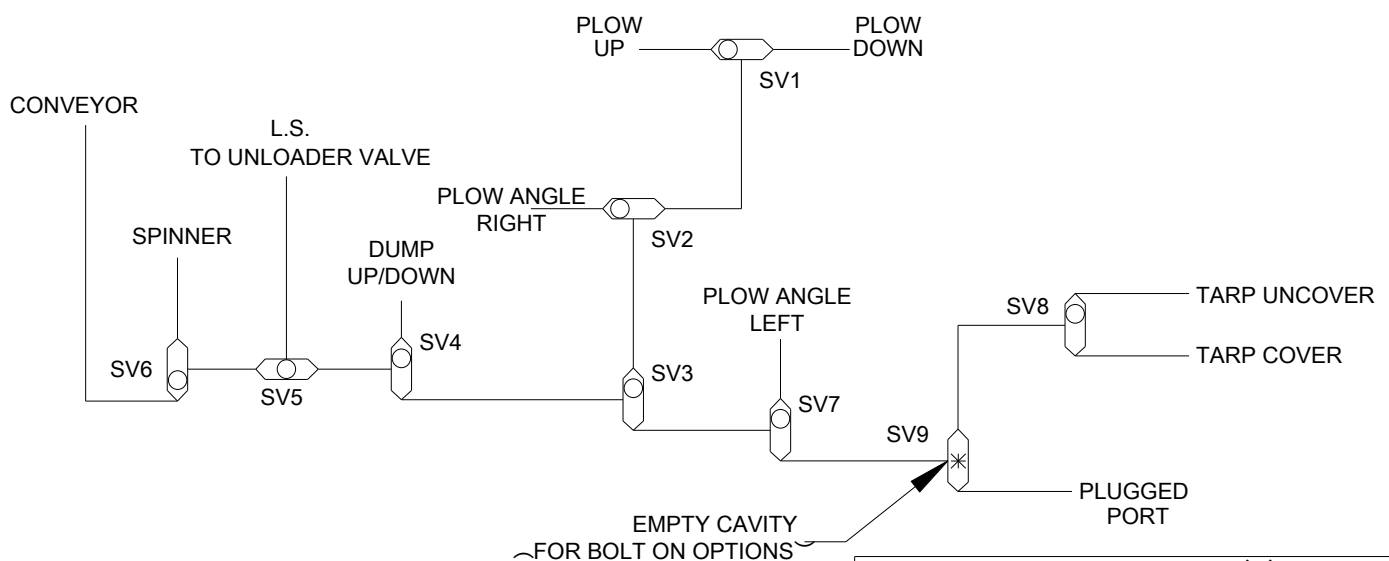
PD40034

SHUTTLE VALVE INSTALLATION/REMOVAL

- STEP #1** LOCATE SUSPECT SHUTTLE VALVE ON MANIFOLD BY REFERRING TO HYDR-MAX 005 VALVE ASSY. DIAGRAM. (REFER TO TABLE OF CONTENTS FOR PAGE#). REMOVE SOCKET HEAD PLUG THAT COVERS SHUTTLE VALVE ASSY.
- STEP #2** USING A FIRM STEADY MOTION PULL THE SHUTTLE VALVE OUT. IF THE END O-RING AND BACK-UP RING DO NOT COME OUT USE A PICK OR BENT WIRE TO RETRIEVE.
- STEP #3** INSPECT BOTH O-RINGS AND THE BACK UP RING FOR DAMAGE, REPLACE AS NECESSARY. ALSO INSPECT SHUTTLE VALVE BALL INSIDE SHUTTLE VALVE TO MAKE SURE IT MOVES FREELY AND HOLES IN BODY ARE NOT FILLED WITH DEBRIS.
- STEP #4** INSTALL O-RINGS AND BACK UP RINGS ONTO SHUTTLE VALVE PAYING CLOSE ATTENTION TO INSTALL THEM IN THE RIGHT CONFIGURATION AS ILLUSTRATED IN DETAIL "1". USING CHASSIS GREASE, WHEEL BEARING GREASE AND OR LITHIUM GREAS, LUBRICATE RINGS AND SHUTTLE VALVE ASSY. INSET VALVE ASSEMBLY INTO CAVITY USING A FIRM STEADY MOTION TO AVOID CUTTING RINGS. WHEN INSTALLED CORRECTLY SHUTTLE VALVE WILL BE APPROX. 1/4" BELOW MANIFOLD SURFACE GIVING ENOUGH ROOM TO INSTALL PLUG. AFTER REMOVING TOOL, INSTALL PLUG AND CHECK FOR HYDRAULIC FUNCTION.



NEW HYDRA-MAX T
SHUTTLE VALVE ASS'Y
PART# HFC32811
DETAIL 1



HYDRA-MAX T (811)
SHUTTLE VALVE NETWORK

GODWIN MFG. CO., INC.
DUNN, NORTH CAROLINA

MP50178

TAILGATE TENSION ADJUSTMENT

THE TENSION ADJUSTMENT VARIES THE AMOUNT OF PULL ON EACH OF THE LOWER TAILGATE PINS, THEREFORE MAKING THE PROPER SEAL BETWEEN FLOOR AND TAILGATE. TOO MUCH TENSION CAN CAUSE THE TAILGATE TO BE HARD TO LATCH, TOO LITTLE TENSION WILL CAUSE A GAP BETWEEN FLOOR AND TAILGATE CAUSING IT NOT TO SEAL PROPERLY. TO SET THE TENSION PROPERLY, FOLLOW THESE STEPS.

STEP #1 UN-LATCH TAILGATE, MAKING SURE NO ONE OPERATES TAILGATE CONTROLS WHETHER BEING A MANUAL & OR AIR TAILGATE!!

NOTE: IF EQUIPPED WITH AN AIR OPERATED TAILGATE SYSTEM, RELIEVE AIR PRESSURE ON AIR TAILGATE CYLINDER.

STEP #2 REMOVE TENSION CLEVIS COTTER PIN (ITEM 4), ALSO REMOVE PIN AT THIS TIME.

STEP #3 LOOSEN JAM NUT (ITEM 2) TO DECREASE OR LOOSEN TENSION, ROTATE TENSION CLEVIS (ITEM 3) COUNTER CLOCKWISE.
TO TIGHTEN TENSION FOLLOW INSTRUCTIONS LISTED ABOVE BUT ROTATE TENSION CLEVIS COUNTER CLOCK WISE OR ONTO SLACK ADJUSTER ROD.

STEP #4 TIGHTEN JAM NUT, REASSEMBLE AND TEST.

OVERCENTER ADJUSTMENT

THE OVERCENTER ACTION OF A LATCHED TAILGATE HELPS KEEP THE LATCH MECHANISM PRONE TO STAY LATCHED. THEREFORE ON AN AIR TAILGATE SYSTEM, IF THE AIR LEAKS DOWN, OR AIR LINES ARE CUT, IT WILL REMAIN LATCHED UNTIL IT IS OPERATIONAL AGAIN. IF MECHANISM IS SET TOO LOOSE, IT WILL UN-LATCH AT WILL, OR WITH A LOAD AGAINST TAILGATE. IF SET TOO TIGHT IT MAY GO OVERCENTER TOO FAR AND TAILGATE WILL NOT UNLATCH WITH A LOAD AGAINST IT, OR BE DIFFICULT TO LATCH AND UNLATCH. TO PROPERLY ADJUST TAILGATE OVERCENTER FOLLOW THESE STEPS.

STEP #1 UNLATCH TAILGATE AND LOOSEN JAM NUT (ITEM 1). IF EQUIPPED WITH AN AIR OPERATED TAILGATE SYSTEM, RELIEVE AIR PRESSURE ON AIR TAILGATE CYLINDER.

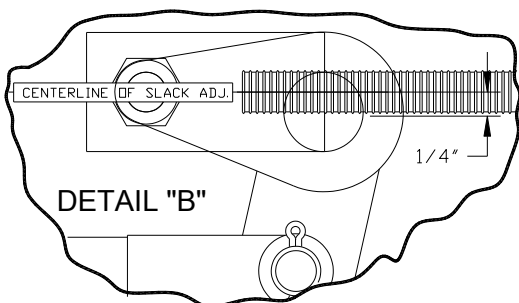
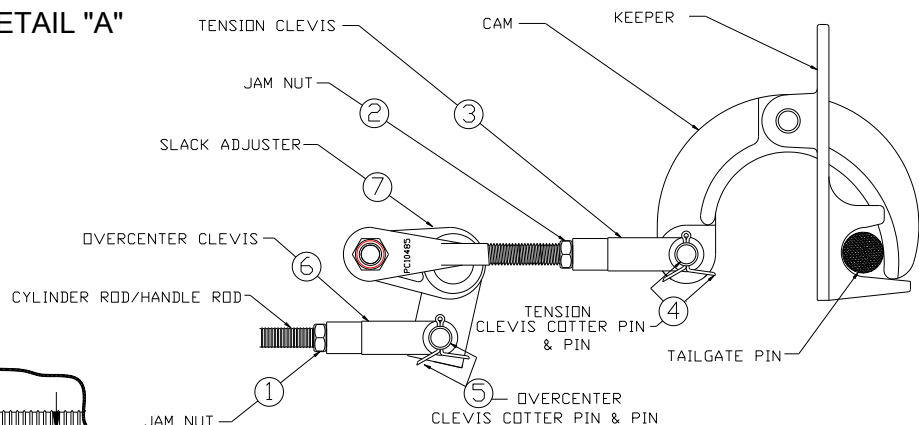
STEP #2 REMOVE OVERCENTER CLEVIS PIN AND COTTER PIN (ITEM 5).

STEP #3 ROTATE OVERCENTER CLEVIS (ITEM 6) CLOCK WISE TO CREATE A MORE OVERCENTER POSITION, AND ROTATE COUNTER CLOCK WISE TO CREATE LESS OF AN OVERCENTER POSITION.

STEP #4 TIGHTEN JAM NUT, REASSEMBLE AND TEST.

WHEN PROPERLY ADJUSTED AND TAILGATE LATCHED, THE CENTERS OF THE SLACK ADJUSTER (ITEM 7), SHOULD BE APPROX. 1/4" ABOVE CENTER OF THE CAM ROD THAT EXTENDS FROM SIDE TO SIDE. SEE DETAIL "B" FOR EXAMPLE.

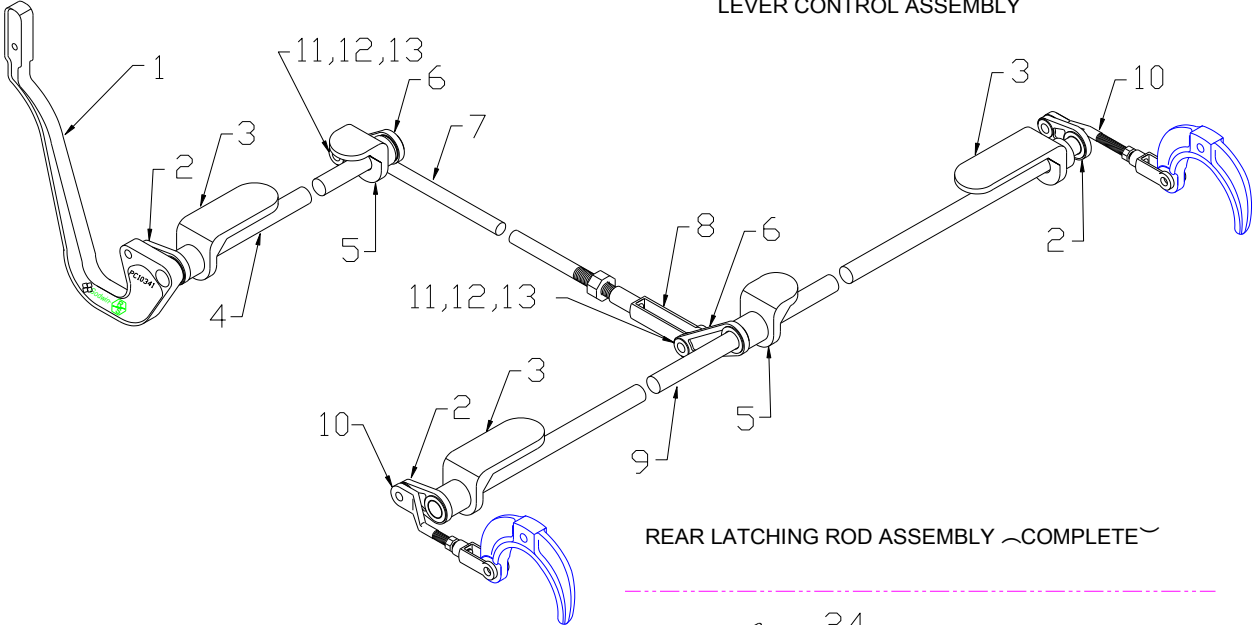
DETAIL "A"



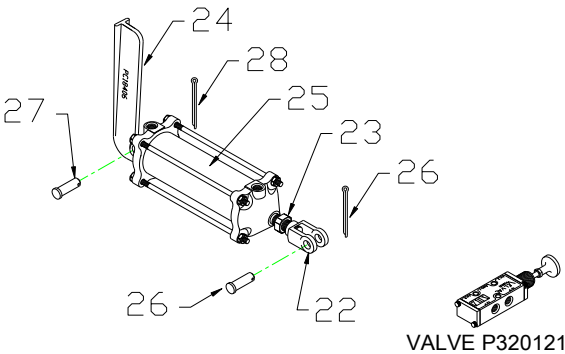
TAILGATE LATCHING SYSTEM ~COMPLETE~
CONSISTS OF:

LEVER CONTROL ASSEMBLY ~COMPLETE~
ITEMS 1-8 OMITTED FOR AIR TAILGATE OPTION

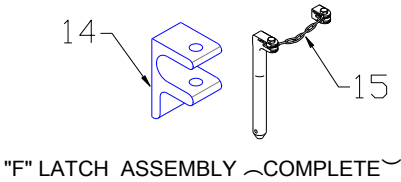
CAM LATCH ASSEMBLY
REAR LATCHING ROD ASSEMBLY
LEVER CONTROL ASSEMBLY



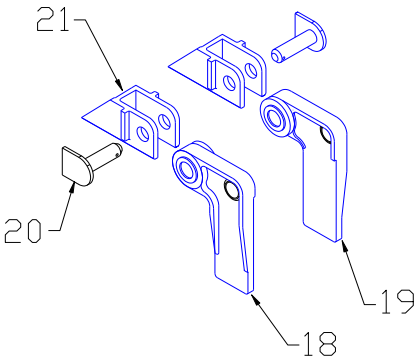
REAR LATCHING ROD ASSEMBLY ~COMPLETE~



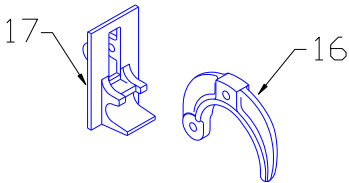
AIR TAILGATE ASSEMBLY



"F" LATCH ASSEMBLY ~COMPLETE~



OFFSET HINGE ASSEMBLY ~COMPLETE~



CAM LATCH ASSEMBLY ~COMPLETE~

NOTE: REFER TO MP5007 FOR PARTS LIST.

TAILGATE LATCHING SYSTEM

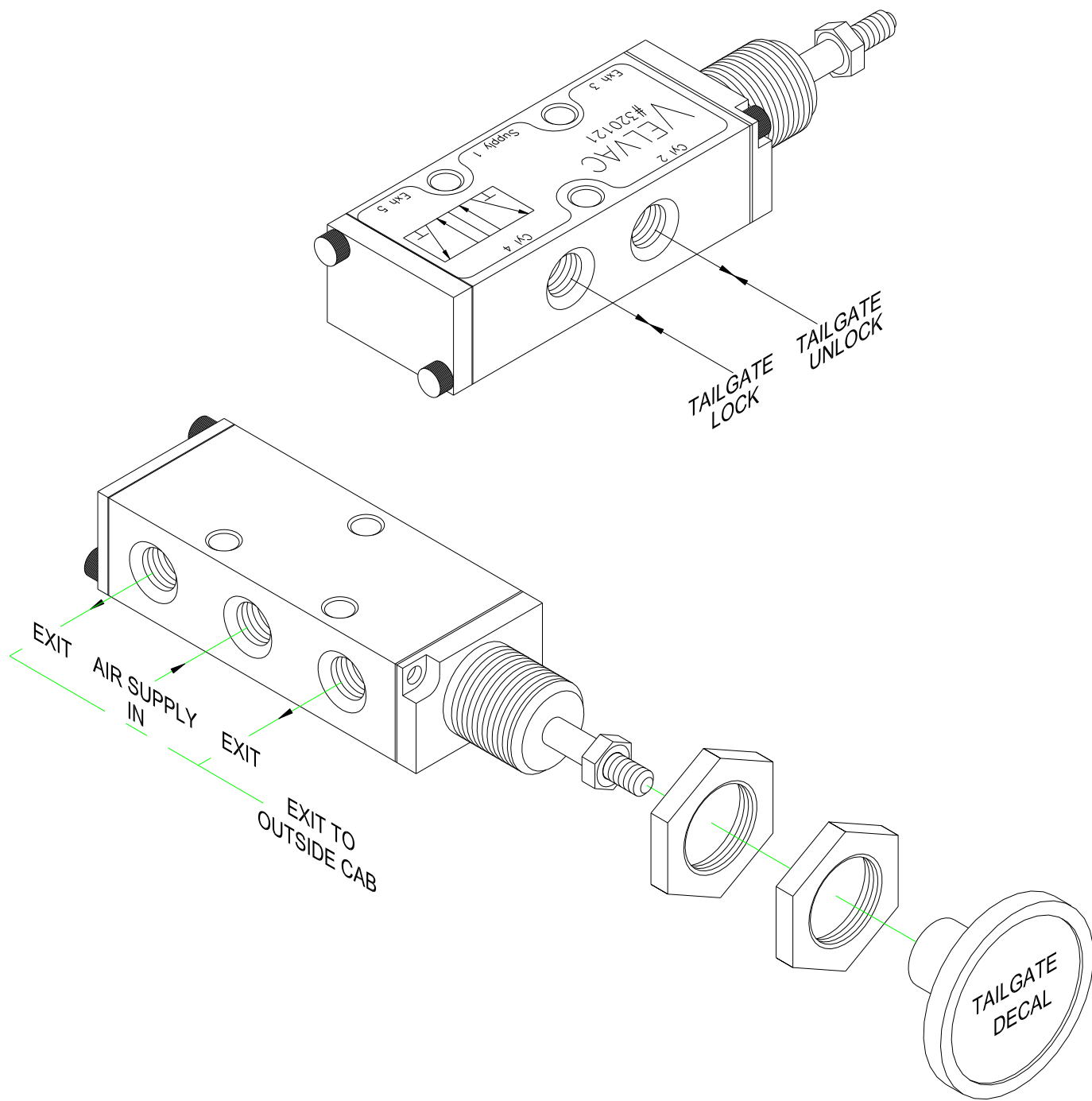


MP50008

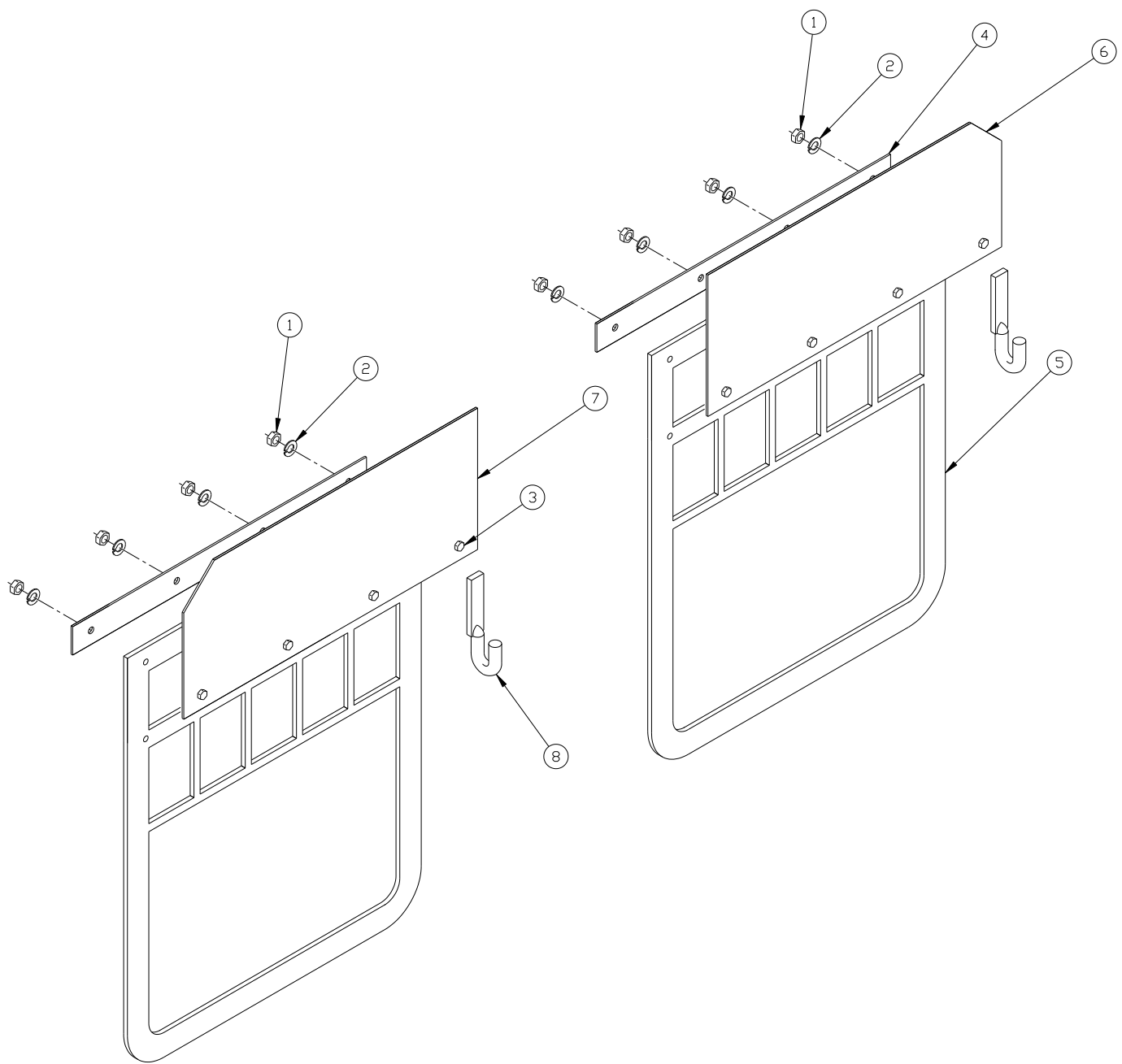
COMPONENT PARTS LIST

REF.	DESCRIPTION	QTY.	PART NUMBER
LATCHING ROD ASSEMBLY			
1	LATCH HANDLE	1	PC10341
2	SHORT CAM	2	PC20241
3	LONG HANGER	2	PC10348
4	FRONT CROSSBAR	1	S20344
5	SHORT HANGER	2	PC10349
6	LONG CAM	1	PC20240
7	LINKAGE ROD, 1/2" OR 5/8" THREADED SHACKLE	1	W20969-BODY LENGTH ~1/2" W20970-BODY LENGTH ~5/8"
8	ADJUSTABLE END YOKE	1	PC60042
9	REAR CROSSBAR	1	S20345
10	ADJUSTABLE END YOKE	2	PC10485
11	HEX BOLT 1/2-13 UNC	2	102-409-A1
12	HEX NUT 1/2-13 UNC	4	115-5-A
13	FLAT WASHER 1/2	2	120-5
"F" LATCH ASSEMBLY			
14	"F" LATCH	2	PC10334
15	KEEPER PIN ASSEMBLY	2	A10971
CAM LATCH ASSEMBLY			
16	REPLACEMENT CAM	2	PC10338
17	CAM PIVOT	2	PC10339
OFFSET HINGE ASSEMBLY			
18	OFFSET TAILGATE HINGE ~L~	1	PC10346
19	OFFSET TAILGATE HINGE ~R~	1	PC10347
20	OFFSET TAILGATE HINGE PIN	2	PC10344
21	OFFSET TAILGATE HINGE BRACKET	2	PC10352
AIR TAILGATE LATCHING COMPONENTS			
22	CYLINDER CLEVIS	1	GM-4B-019011-.5-1.5-.125-1
23	CYLINDER SHAFT JAMB NUT	1	GM-4B-625 X 18 TP 1
24	AIR CYLINDER DEAD MOUNT	1	PC18406
25	AIR CYLIINDER	1	GM-4B-10004-12H X 6
26	CYLINDER CLEVIS PIN & COTTER KEY	1	GM-4B-019067
27	CYLINDER DEAD MOUNT PIN	1	GM-4B-B2708.1/2.6A
28	DEAD MOUNT COTTER KEY	1	GM-4B-1/8" X 1"

P100147



VELVAC 3201212 ASSEMBLY



NO.	PART NUMBER	QTY.	DESCRIPTION
1	116-3-A1	8	HEX NUT 3/8"
2	118-3-A1	8	LOCK WASHER 3/8"
3	102-207-A1	8	CAP SCREW 3/8" X 1-1/2" LG.
4	F10265	2	BRKT, MUD FLAP BACK
5	F10270	2	MUD FLAP, BLANK 30" LG.
6	W10288	2	BRKT, MUD FLAP W/HOOK
7	W10287	2	BRKT, MUD FLAP W/HOOK
8	PB24217NHP	2	HOOK

BLANK MUD FLAP ASSEMBLY
WITH TARP HOOK

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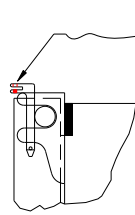
A10301

ITEM NO.	QTY	PART#	DESCRIPTION	
1	1	PC10821	HINGE, UPPER, BARN DOOR	
2	1	PC10366	HINGE, LOWER, BARN DOOR	
3	2	A10379	ASSEMBLY, UPPER BARN DOOR PIN	
4	2	PC10357	STRAP, BARN DOOR TAILGATE	
5	2	PC10334	LATCH BLOCK, BARNDOR BIG "F" 'CASTING'	
6	2	PC10350	SLEEVE PIN, BARNDOR BIG "F" LATCH 'CASTING'	
7	2	PC10386	BUSHING, BARNDOR TAILGATE PIN	
8	2	A10971	PIN ASSEMBLY, BARN DOOR BIG "F" LATCH	
9	2	PC10343	BANJO EYE, CONTRACTOR BODY	
10	2	S20239	PIN, TAILGATE	
11	2	F20238	END CAP, TAILGATE PIN	
12	2	PHP10	COTTER PIN, TAILGATE "F" LATCH	
13	1	PC10388	OFFSET PIVOT ARM	

BARNDOR & ACCESSORY PARTS LIST

NOTE:

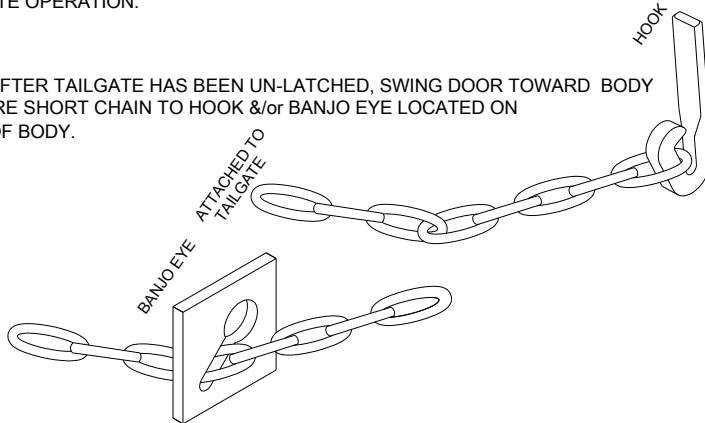
1st STEP FOR BARN DOOR OPERATION REMOVE PINS FROM THE TOP OF TAILGATE



2nd STEP- MAKE SURE THAT EVERYBODY IS AWARE THAT THE TAILGATE WILL BE OPENED, AND EVERY BODY IS TO BE A MINIMUM OF A 50 FOOT RADIUS AWAY FROM THE DUMP BODY.

3rd STEP- DOUBLE CHECK TO MAKE SURE EVERYBODY IS AT LEAST OUT OF THE 50 FOOT RADIUS, AND IS AWARE THAT THE DOOR IS TO BE OPENED. THEN, AND ONLY THEN, MAY YOU OPERATE THE TAILGATE LATCH HANDLE/ AIR TAILGATE OPERATION.

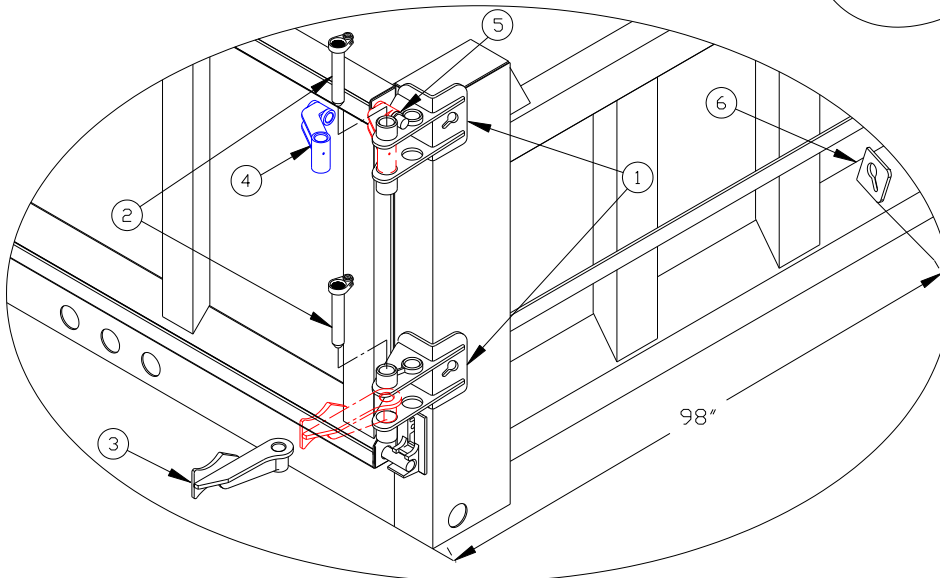
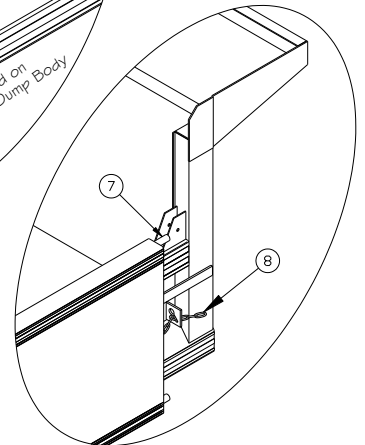
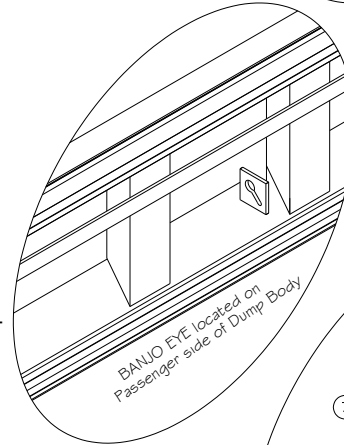
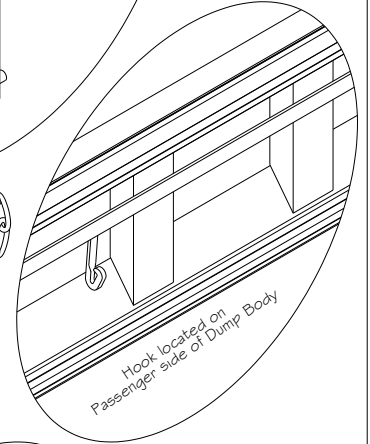
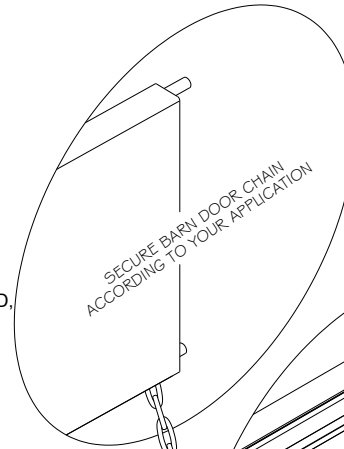
4th STEP- AFTER TAILGATE HAS BEEN UN-LATCHED, SWING DOOR TOWARD BODY AND SECURE SHORT CHAIN TO HOOK &/or BANJO EYE LOCATED ON THE SIDE OF BODY.



5th STEP- AFTER TAILGATE HAS BEEN UN-LATCHED AND THE BARN DOOR HAS BEEN SECURED TO THE SIDE OF BODY THEN YOU CAN START YOUR DUMP OPERATION.

WARNING !!

ANY ALTERATION OF THE BARN DOOR OPERATION COULD RESULT IN BODILY INJURY!!!

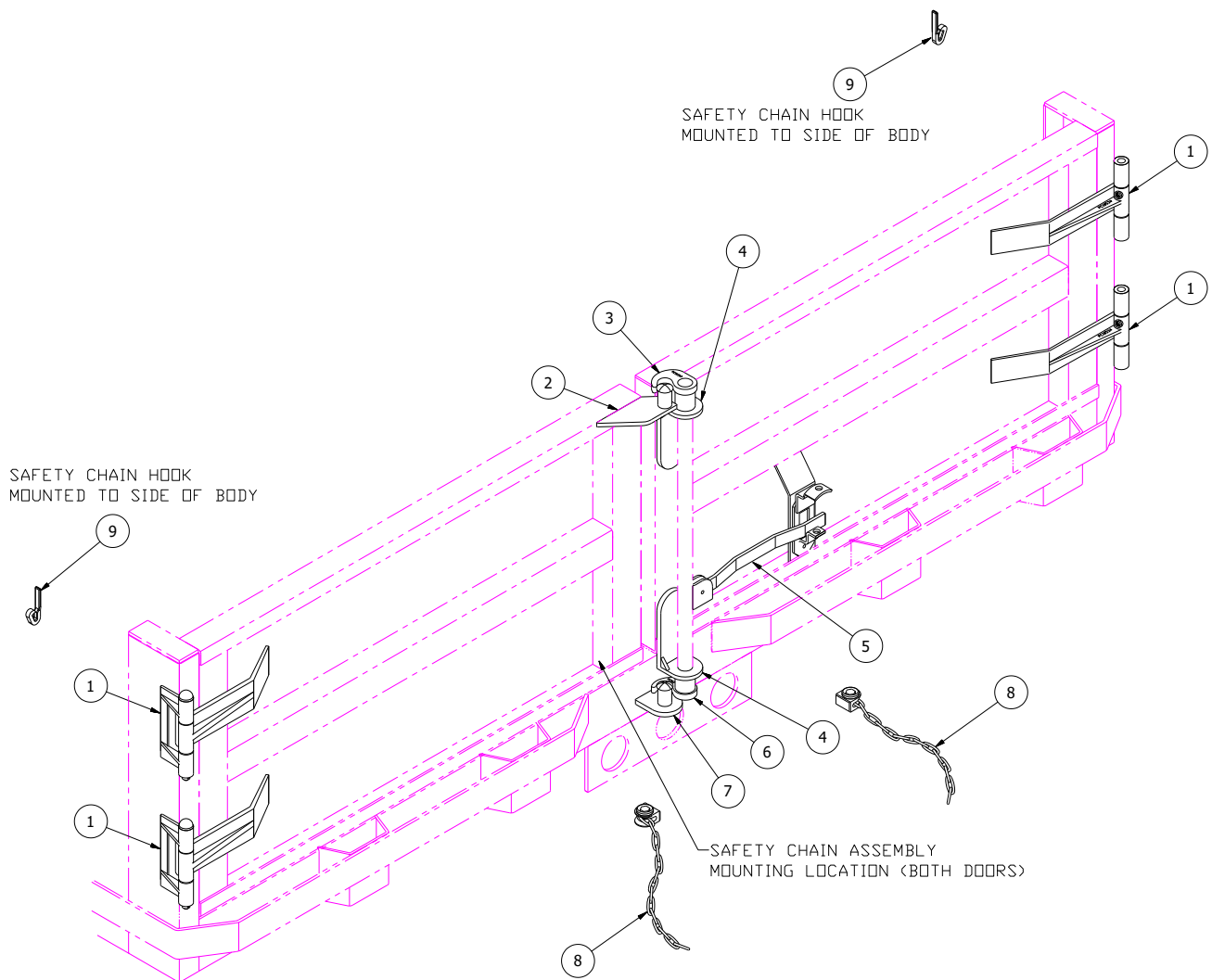


NO.	DESCRIPTION	QTY.
1	10-1/2" HINGE	2
2	HINGE PIN	2
3	TAILGATE STRAP	1
4	OFFSET PIVOT HINGE	1
5	1-1/4" X 7" PIN	1
6	BANJO EYE	4
7	1-1/4" X 7-1/2" PIN	1
8	5/16" X 10" LINK CHAIN	1

BARNDOR OPERATION INSTRUCTIONS

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MP50010



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	A19103	HINGE ASSEMBLY
2	1	PC10398	BRACKET, UPPER CAM LATCH
3	1	PC10397	UPPER CAM
4	1	PC10348	OUTER SUPPORT, 1" TAILGATE LINKAGE
5	1	A19104	LATCH ASSEMBLY
6	1	PC10396	LOWER CAM
7	1	PC10395	BRACKET, LOWER CAM LATCH
8	2	A19105	SAFETY CHAIN ASSEMBLY
9	2	PC10418	SAFETY CHAIN HOOK

ELECTRO/HYDRAULIC SPREADER POT ADJUSTMENT

- A✓ Attach spreader to truck or install flow meter to observe speed or flow.
 - B✓ Remove the rear drive shaft of the truck so that vehicle speed may be simulated for the automatic mode.
 - C✓ When making adjustments, it would be best to be grounded so as not to emit a static discharge into the circuitry.
-
- 1✓ Start truck, turn on "Master Switch", select "Manual" on the spreader selector switch. Both dials should be on "0".

NOTE: For circuit board adjustments and identification of each pot, refer to Spreader Control Circuit and Speed Pot Identification Chart.

CAUTION: Speed pots have 270° maximum rotation, do not force the adjustments!!

- 2✓ Turn spinner dial to 6 or 7, and operate until oil temperature on sight gauge of reservoir reaches at least 70°F. This is important so as to accurately set adjustments. This usually takes about 20 minutes depending on outside temperature. Then turn the spinner dial back to "0".
- 3✓ Start by turning the "Spinner Low" pot fully clockwise to increase current flow to valve. If spinner does not operate, turn spinner dial up until you see a response, then turn back to "0". As the spinner function creeps slowly, turn the pot counter-clockwise to just stop the spinner.
- 4✓ Next, turn the spinner dial to "10", and observe spinner speed or flow. Turn the "spinner High" pot clockwise for more, or counter-clockwise for less speed or flow.

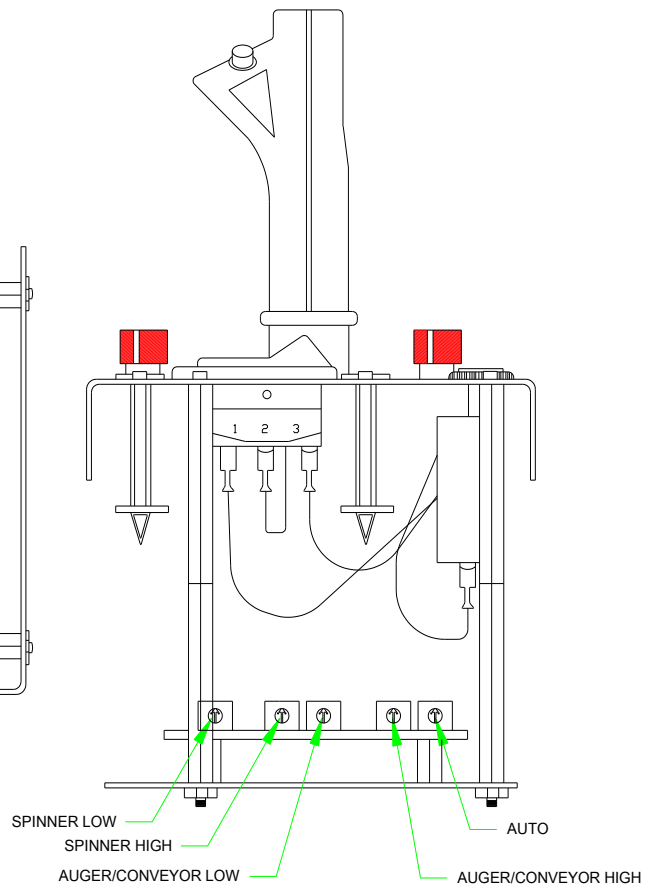
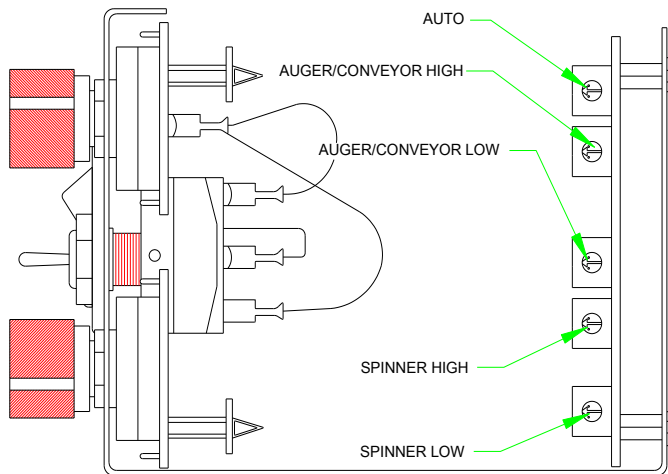
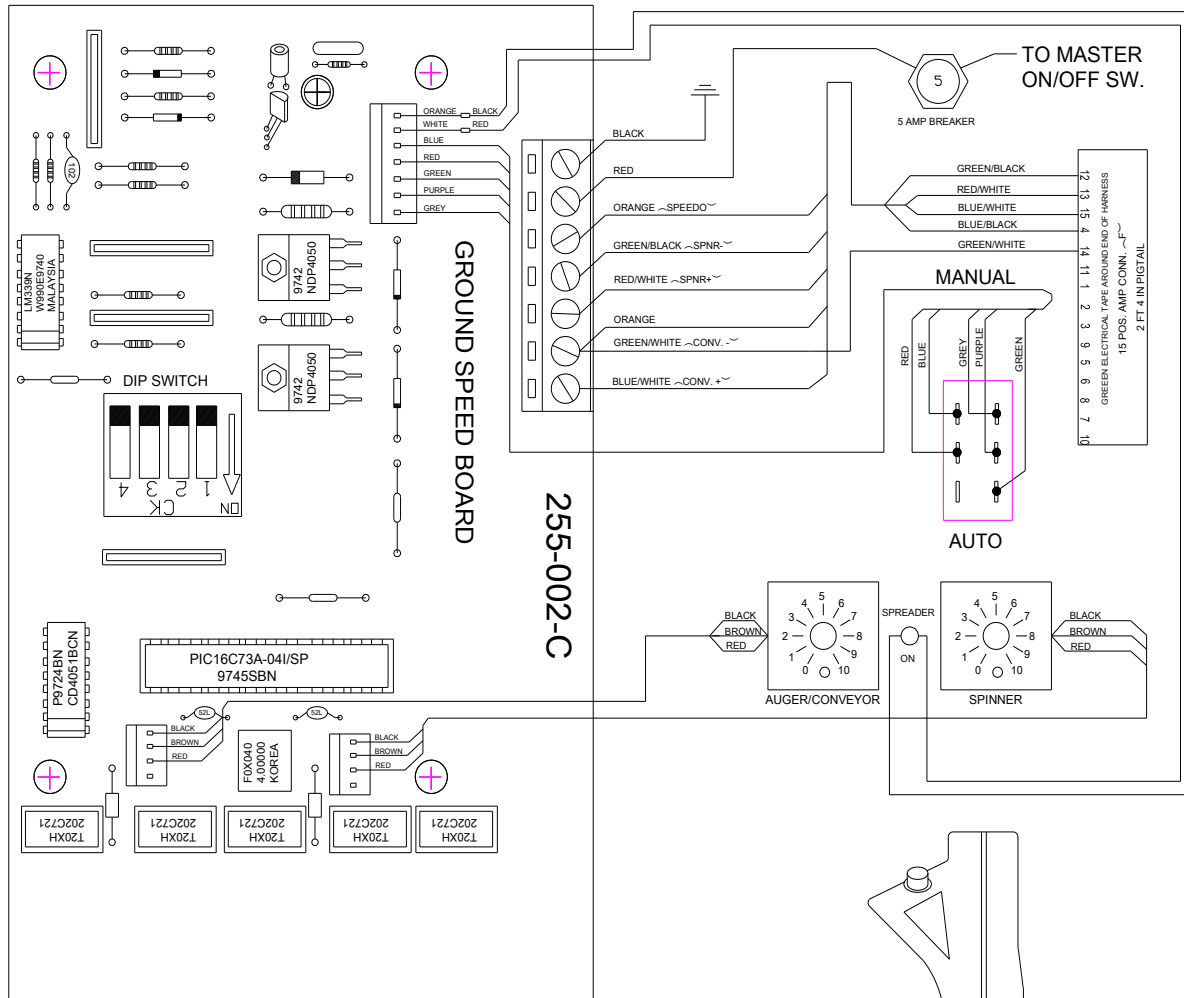
NOTE: This adjustment is usually set at 7GPM at the factory.

- 5✓ The same procedure is to be done for the auger/conveyor, as was the spinner in steps 1 and 2 using the "Auger/Conveyor Low" and "High" adjustments respectively. The factory setting for auger/conveyor high is typically 15 GPM.
- 6✓ To set the "Auto Adjust", preset the auger/conveyor dial on "5" with the selector switch on "Manual". Count the number of revolutions the conveyor sprocket or auger makes in 15 seconds, or check flow with a meter. Place truck in gear and hold steady at 30 MPH. Flip the selector switch to "Auto", and count the sprocket or auger again or check flow as before. Turn the "Auto Adjust" pot up or down to match the sprocket revolution count or flow as you did earlier in "Manual".
- 7✓ Once these adjustments are made, they are permanent and need no other attention unless parts are changed in the system, such as valves, motors, electronic parts, etc.

SPREADER POT ADJ. PROCEDURE



MP50121



NOTE:
ADJUSTMENT POTS HAS A 270° MAXIMUM ROTATION
~DO NOT FORCE~!!!!

**SPEED POT IDENTIFICATION
SPREADER CONTROL CIRCUIT**

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MP50181

MATERIAL CALIBRATION PROCEDURES

- A✓ Install spreader, except for spinner assembly if practical.
- B✓ Load material to be calibrated into spreader and "prime" spreader to achieve an even flow of material through opening. Set aside material discharged during "priming" procedure.
- C✓ Put tarp or container under discharge chute to catch material.
- D✓ Run spreader for 12 seconds manual to collect material, equal to 1/10 mile @ 30mph✓.
- E✓ Weigh material and subtract container weight, if appropriate.
- F✓ Using the formula, multiply the weight by 10 to determine how many pounds per mile the spreader is putting out per lane.
- G✓ Make a copy of the blank calibration weight chart and record the weight in the proper column.
- H✓ Repeat steps C, D, E, and F, recording the information on the chart for each dial setting on the auger/conveyor dial 1-10✓.

NOTE: When setting or otherwise using the auger/conveyor and spinner at dial settings above 4, the engine should be at 1200 RPM or higher to pump the amount of flow required for the higher settings.

SPINNER/LANE SETTING

With material in spreader and spreader "primed", select manual, set auger/conveyor dial to a medium discharge rate, about 4 or 5✓. Gradually turn spinner dial up to acquire a one-lane broadcast of material. Record this dial setting on the chart. Repeat these steps to get a broadcast width for 2 & 3 lanes, and record on the chart.

You will need the following items:

- 1✓ Watch with second hand
- 2✓ Container to catch material (IE: bucket, box, tarp, etc.)✓

CALIBRATION PROCEDURES

SPREADER CALIBRATION

The spreader has been factory tested and set prior to being delivered and should require no further adjustments. If it does need adjusting, this procedure is described in the parts and maintenance manual.

Before you begin, you will need:

- 1[✓] Spreader fully installed, except for spinner disabled.
- 2A[✓] Material loaded and auger/conveyor chain primed at desired gate height;
- 2B[✓] Material loaded and auger primed for tailgate type spreader.
- 3[✓] Approximately 6' x 6' heavy tarp or other device to catch discharged material from conveyor chain;
- 4[✓] Container to weigh material, (record container weight as needed[✓]).
- 5[✓] Scales to weigh material caught, (no smaller than 250 lbs., preferably up to 500 lbs.[✓]).
- 6[✓] Watch with a second hand.

The procedure for calibrating hopper type or tailgate type spreaders are the same. The only difference is being able to adjust the gate height on the hopper type. The "auto" and "manual" mode have been synchronized at 30 MPH, meaning that if you were discharging a certain amount of material per mile in "auto", the same amount would be discharged if you switched to "manual" with the truck going 30 MPH. The following formula can be used when recording information on the calibration.

Formula: $MD \times 10 = PPM$

Example: $52 \times 10 = 520$

MD = Material discharged in pounds every 12 seconds, (or 1/10 mile[✓]).

10 = The number of 12 second units it takes to go 1 mile with truck speed at 30 MPH.

PPM = Pounds per lane mile of material at a given dial setting and speed.

REMEMBER SAFETY FIRST!!

**DO NOT ALLOW UNAUTHORIZED PERSONNEL TO OPERATE THIS EQUIPMENT.
NEVER GO UNDERNEATH A TRUCK WITH ENGINE RUNNING AND STAY CLEAR
OF ROTATING PARTS.**

CALIBRATION WEIGHT CHART

Truck Number: _____

Spreader Number: _____

Operator Name: _____

Spinner/Lane Setting: 1 Lane: _____ 2 Lanes: _____ 3 Lanes: _____

Material Type: _____

Dial Setting:

1	2	3	4	5	6	7	8	9	10

Material Type: _____

Dial Setting:

1	2	3	4	5	6	7	8	9	10

Material Type: _____

Dial Setting:

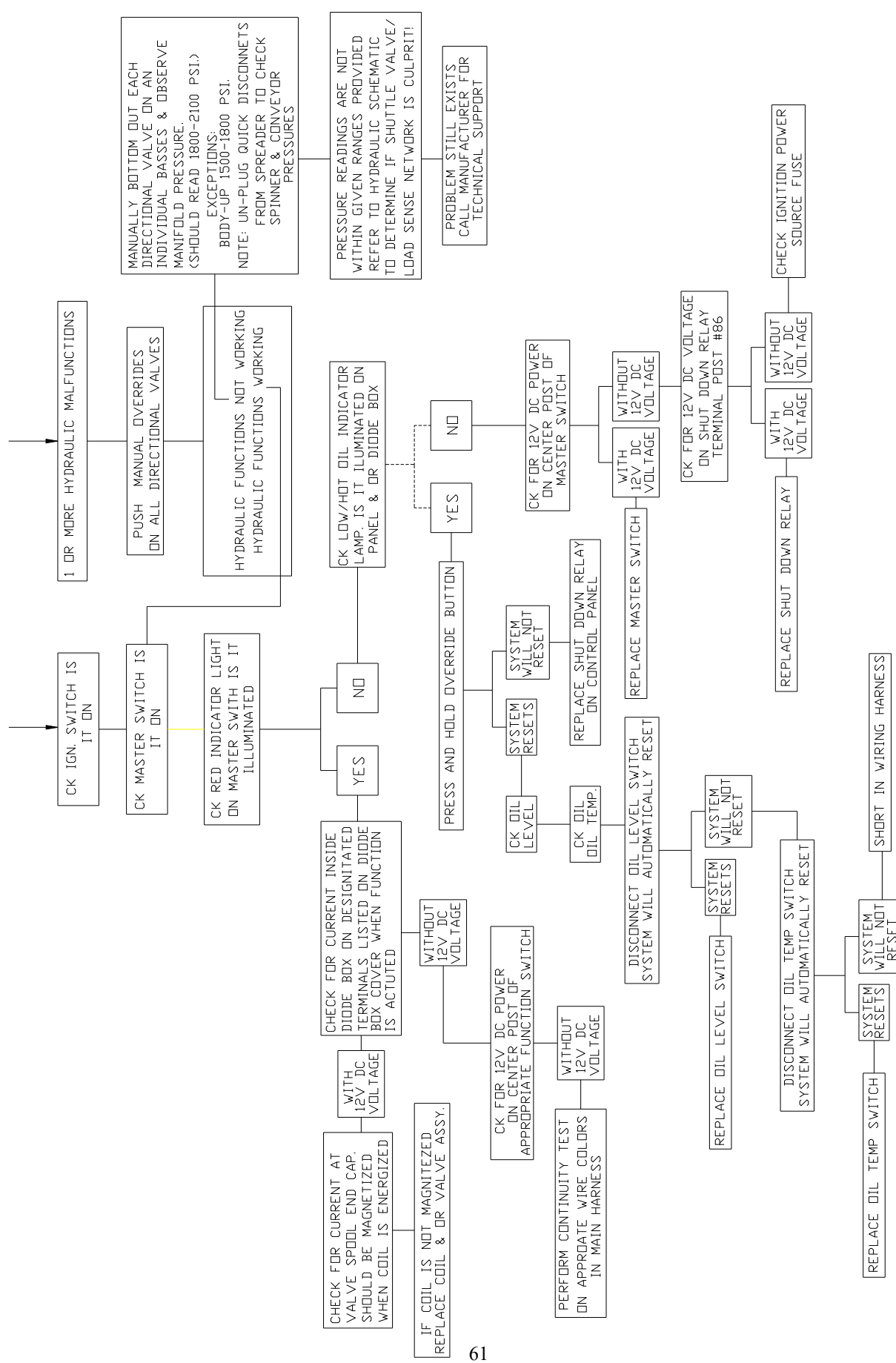
1	2	3	4	5	6	7	8	9	10

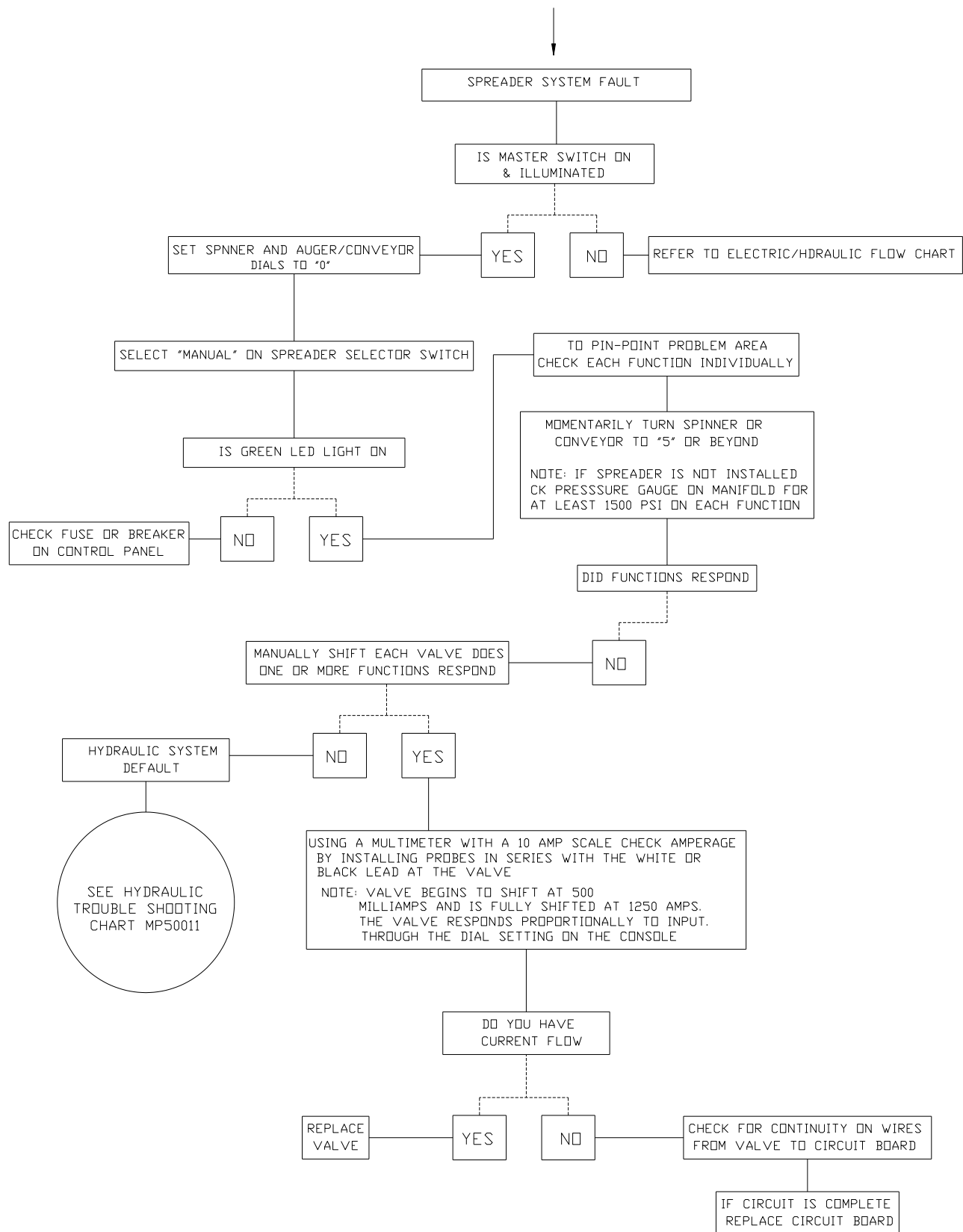
Material Type: _____

Dial Setting:

1	2	3	4	5	6	7	8	9	10

NOTE: To use the above chart for more than one lane, divide the weight recorded on the chart by the number of lanes to be spread. Set spinner dial for desired number of lanes to be spread.





TROUBLE SHOOTING FLOW CHART SPREADER SYSTEM