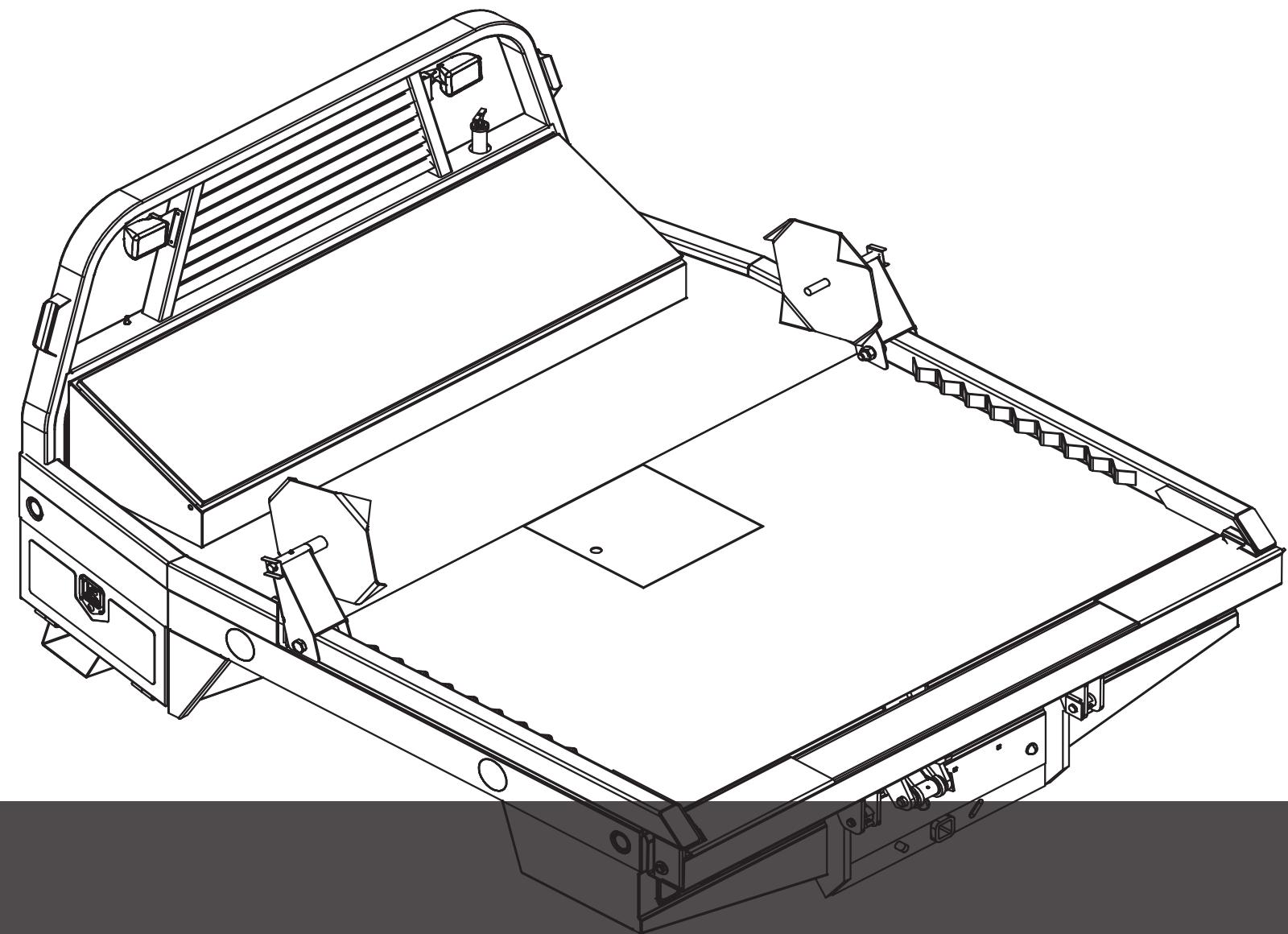


400/500 SERIES



DewEZE®

Thank you for purchasing a DewEze Flatbed.

TO THE OWNER OR OPERATOR:

As with all Harper products, the 400 and 500 Series Flatbeds have been thoroughly tested and built to provide a sturdy, dependable product. The Flatbed is equipped with live hydraulics, which allows it to be used for a wide range of lifting and hauling tasks. This manual is written as an aid to operating and maintaining the DewEze Flatbed. Read and understand the manual thoroughly before operation to avoid damage to the unit or injury to the operator or bystanders.

A Flatbed can present hazards to an operator who follows unsafe procedures in either the operation or maintenance of the unit. Therefore, **SAFETY WARNINGS** are present at certain locations in the text. Harper Industries is not responsible for accidents or injuries that result from the misuse or lack of maintenance of the Flatbed.

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 for clarification.

||||HARPER[®]INDUSTRIES, INC.

151 E. HWY. 160 Harper, KS 67058
(620) 896-7381 • **Fax** (620) 896-7129

Toll Free 800-835-1042
Email info@deweze.com
Website www.deweze.com

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Statement of Warranty

Harper Industries warrants to each purchaser of a new DewEze Flatbed from an authorized dealer or representative, that such equipment is free of manufacturer's defects which appear while in normal service for a period of TWO YEARS commencing with delivery to the original user. The Flatbed hydraulic and electrical systems are warranted for a period of one year.

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

Harper Industries shall not be liable for the consequential damages of any kind, including but not limited to consequential labor costs or transportation charges in connection with replacement or repair of defective parts.

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

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

For further information please contact your nearest DewEze dealer.

RECORDS

Date of Purchase _____ / _____ / _____

Dealer's Name _____

Dealer's Phone _____

Serial Number Machine _____

Serial Number Engine _____

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Specifications

DewEze flatbeds are specifically designed to transport and feed round hay bales.

MODEL IDENTIFICATION

MODEL	470	470W	475	477	478	480	482	485	487	578	582	587
WIDTH	7'	7' 8"	7'	7'	7' 8"	7' 8"	7' 8"	7' 8"	7' 8"	8'	8'	8'
LENGTH	7'	7'	8' 6"	9' 4"	8' 6"	9' 2"	9' 4"	10'6"	11'6"	8' 6"	9' 4"	11'6"
WEIGHT	1830	1860	1880	2000	1960	2020	2040	2220	2260	2060	2180	2400

*Add 100 lbs. for extendible arm option.

FLATBED SPECIFICATIONS

HYDRAULIC SYSTEM	Powered by engine driven pump or self-contained battery-powered electric/hydraulic unit
SYSTEM PRESSURE	2450 psi
OIL RESERVOIR CAPACITY	10 Gallons
OIL FILTER	DewEze 720043, WIX 51551 (10 micron)
CYLINDER, LIFT	4.50" x 16.64"
CYLINDER, SQUEEZE	2.00" x 34.00" (400 Series) 2.00" x 39.25" (500 Series & all XRM)
CYLINDER, EXTENDIBLE*	2.00" x 20.0" (left side)
CYLINDER, EXTENDIBLE*	2.50" x 20.0" (right side)

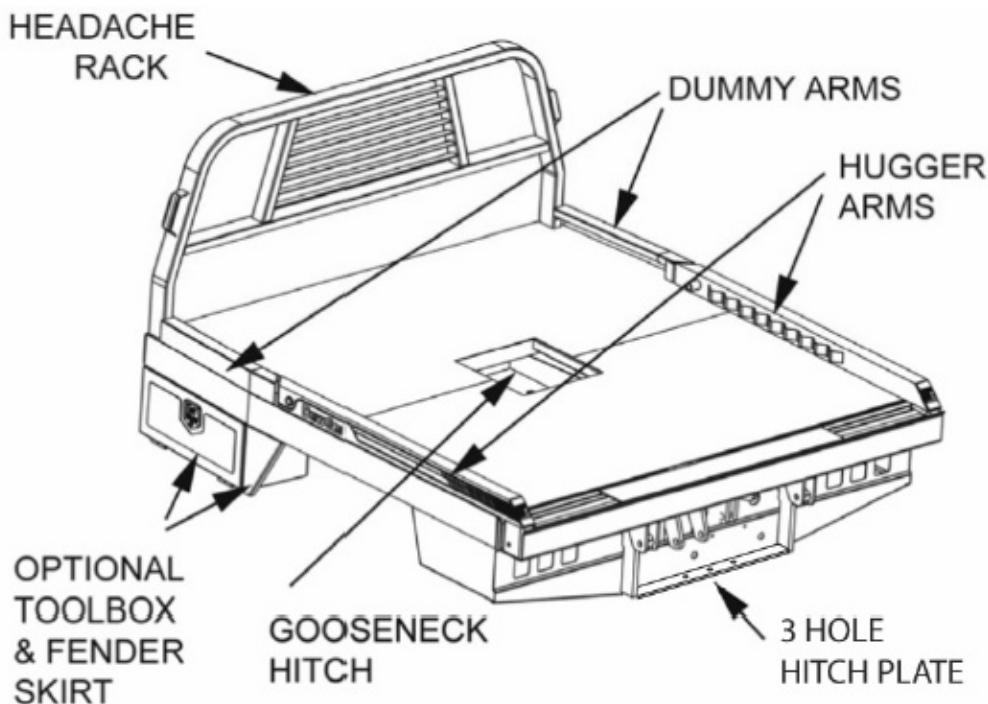
*Cylinders used for extendible arm are optional.

BOLT TORQUE SPECIFICATIONS (UNLESS SPECIFIED ELSEWHERE)

BOLT DIAMETER	BOLT TORQUE (ft-lb)
5/16"	19
3/8"	33
5/8"	160
1"	630

Note:
Specifications are for No. 5 bolts with no lubricant.

Feature Identification



Dummy Arms - serve as side rails, along with the hugger arms, for the flatbed.

Hugger Arms - squeeze together to grip the bale and lift it onto the flatbed. When the arms are stored they serve as side rails for the flatbed.

Headache Rack - protects the rear pickup window. The hydraulic fluid tank and the valve are also located in the bottom, left side of the headache rack.

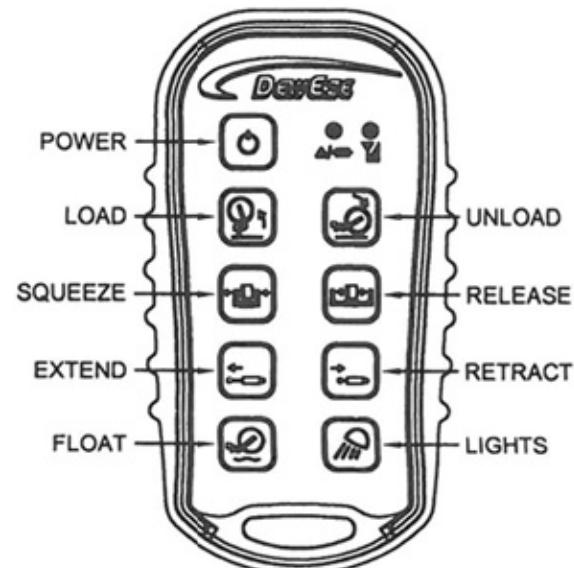
Gooseneck Hitch - is located under a door in the middle of the bed.

Hitch Plate - has three holes for towing.

SAFETY WARNING!
Do not exceed chassis manufacturer's recommended towing capacity.

Optional Toolbox & Fender Skirt - mount under the bed on both sides. The Electric/Hydraulic power unit mounts inside of the toolbox on the left.

Remote Hand Control - operates the functions of the flatbed. Uses two AA batteries.



Safety Guidelines

Equipment Safety

Safety of the operator is one of the main concerns in designing and developing a new piece of equipment. Designers and manufacturers build in as many safety features as possible. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. Many accidents can be avoided by observing the precautions in this section. To avoid personal injury, study the precautions listed in this manual and follow them.

- Do no attempt to operate this equipment under the influence of drugs or alcohol.
- Review the safety instructions with all users annually.
- This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with farm machinery and trained in this equipment's operation.
- Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.

If you have any questions not answered in this manual or require additional copies, please contact your dealer or DewEze manufacturing.

General Flatbed Safety

SAFETY WARNING!

Do not stand under the hugger arms when operating the bale pickup unit, even when arms are empty.

- Replace any CAUTION, WARNING, DANGER or instructional decal that is not readable or is missing.
- Make sure all safety pins are in place and flatbed mounting bolts are secure to the truck frame.
- Make sure hinges, joints, and sliding parts are well greased, especially during off season to prevent rusting and binding.
- Check with truck dealer for any load limits, additional suspension or tire requirements. The flatbed's carrying capability may exceed the truck's GVRW, especially on a 3/4 ton truck.

Hydraulic Safety

SAFETY WARNING!

Hydraulic system operates under high pressure and escaping fluid can penetrate the skin.

- Do no operate hydraulic system with hood open.
- Do not activate electric clutch unless truck engine is at idle. Switching the clutch on at road speeds can seriously damage your hydraulic system.

Operating Instructions

Beginning Operation

- Turn pump switch to the “on” position while engine is idling. (Red light will indicate that pump is on).

IMPORTANT: In cold weather, allow the engine to idle for 5-10 minutes with the pump on before operating the arms. This will allow the oil to warm up and flow more freely. Neglecting to do this may cause hydraulic pump failure.

Loading

- Back truck against bale with arms wide apart and tilted slightly upward.
- Close the arms firmly against the bale.
- Lift the bale onto the truck.
- Release the bale and repeat the operation for the second bale.

IMPORTANT: When hauling one bale, make sure it is resting on the bed. When hauling two bales make sure the second bale is as far forward as it will go (Fig. 1). Carrying a bale behind the bed, as shown in Fig 2, places excessive stress on the cylinder, linkage, and pins.

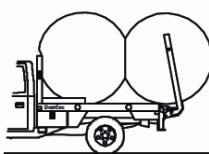


Fig. 1

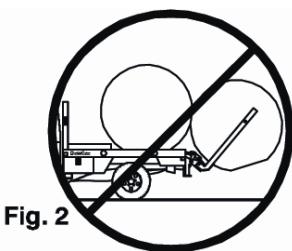


Fig. 2

NOTE: Spinners may be necessary to grip the front bale for unloading.

Unloading

- To unload, do the reverse of the loading operation.

Unrolling

NOTE: Risers and spinners must be installed to unroll bales.

- Position the arms over the bale so the spinner is at the center of the bale.
- Close the arms and pick up the bale.
- To unroll, lower the bale to the ground.
- Turn the pump off and push the FLOAT switch on the hand control.
- Drive forward slowly. Bale will gradually unroll.
- When finished, touch FLOAT or an other function to disengage.

CAUTION: Failure to engage FLOAT function while unrolling a bale may damage lift cylinder rod.

Storing the Arms

- Close arms partially and lay them on bed.
- Open arms until they are flush with sides of bed. They now function with the dummy arms as the bed's side rails.

Turning the System Off

- Turn the pump off and release pressure in the system by stroking one of the function switches when flatbed is not in use.

CAUTION: Operating truck at road speeds, or above 2,000 RPM, with pump engaged, may cause hydraulic pump failure.

Maintenance

Check Daily or Before Use

- Check hydraulic oil level. Keep level between "add" and "full" on dipstick.
- Check belt tension and idler pulleys on engine clutch pump system.
- Examine hydraulic hoses for cracks or leaks.

SAFETY WARNING!

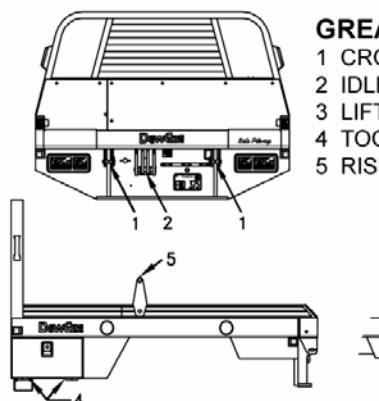
Do not check for hydraulic leaks with your hands while the system is operating. Use a piece of wood or cardboard. Hydraulic fluid escaping under pressure can penetrate the skin and may cause death if not treated immediately.

Grease

- Grease the locations indicated in the illustration below once per week.

Hydraulic Pressure

- Hydraulic system pressure should be 2450 psi.
- To check pressure, hook a test gauge to the quick-couplers.



Hydraulic Oil

- Change hydraulic oil when it is milky in appearance, or annually.
- Change hydraulic oil filter after the first 40 hours of use and then every 250 hours, or annually thereafter.
In Cold Weather (below 10° F)
 - Fill with hydraulic oil specifically rated for cold weather.
 - Do not attach other hydraulic equipment to the bed. The oil will intermix and the cold weather viscosity will be lost.

Other Maintenance Notes

- If the quick-couplers leak, the o-rings inside may need to be replaced.
- High heat, 190° or greater, can be damaging to the hydraulic system. Feel various parts of the system to make sure there are no "hot spots" which may indicate a problem.
- For easy hookup of the couplers, shut switch "off" and activate control valve switches with the ignition "on". This will release the pressure in the lines.
- In the off season, run the bed at least twice a month to prevent valve condensation.

Troubleshooting

Problem	Symptom	Possible Solutions
Hydraulic Pump	No Oil Flow	<ul style="list-style-type: none"> • CHECK OIL LEVEL IN RESERVOIR. If oil level is low, check for leaks in system. • CHECK BELT TENSION. Tighten if needed. Replace belt if necessary. • CHECK FOR SHEARED KEY ON PUMP SHAFT. Replace key. • CLUTCH NOT FUNCTIONING. See clutch section. • INTERNAL PUMP DAMAGE. Have pump repaired or replaced. • CHECK PRESSURE LINE AT PUMP TO SEE IF OIL IS MOVING. • CHECK TO SEE IF SUCTION HOSE COLLAPSES IN SUCTION
Hydraulic Pump	No Oil Pressure	<ul style="list-style-type: none"> • VALVE NOT FUNCTIONING. Check for disconnected wires at solenoid. • CHECK FOR POSSIBLE LEAKS IN SYSTEM. Repair blown hoses. • CHECK FOR MALFUNCTIONING SWITCH. Replace broken switches. • PRESSURE RELIEF IS BROKEN ALLOWING OIL TO BYPASS SYSTEM. Replace pressure relief. • PRESSURE SEAL ON PUMP IS BROKEN OR WORN. Replace. • BELTS OR CLUTCH MAY BE SLIPPING. Tighten belts. • PRESSURE RELIEF MAY BE SET TOO LOW. <p>CAUTION: PRESSURE EXCEEDING 2,600 PSI CAN DAMAGE THE PUMP.</p>
Clutch	Does Not Engage	<ul style="list-style-type: none"> • CHECK FOR BLOWN FUSE. Replace. CAUTION: FUSE SHOULD NOT EXCEED 30 AMPS • CHECK WIRE TO CLUTCH. Insure there are no breaks or shorts. • CHECK FOR BAD SWITCHES IN SYSTEM. Replace. • CHECK FOR BAD MAGNETIC COIL. Use jumper from positive battery terminal to check coil. Replace coil if necessary.
Belt(s)	Jumps Off Pulley	<ul style="list-style-type: none"> • BELTS TOO LOOSE. Tighten belts. • CHECK FOR EXCESSIVE BELT WEAR. Replace worn belts. • CHECK FOR LOOSE PUMP BRACKET. Tighten loose bolts. Replace broken bolts. • CHECK ALIGNMENT OF CLUTCH AND CRANKSHAFT PULLEYS. Re-align pulleys. • CHECK CRANKSHAFT PULLEY FOR LOOSE OR BROKEN BOLTS. Tighten loose bolts. Replace broken bolts. • CHECK ALIGNMENT OF IDLER PULLEY AND THE CONDITION OF IDLER PULLEY BEARINGS. Re-align idler pulley. Replace worn or broken bearings. • MAKE SURE THAT BELTS ARE NOT CRACKED OR WORN.

DewEze®

**400/500
SERIES**

PARTS

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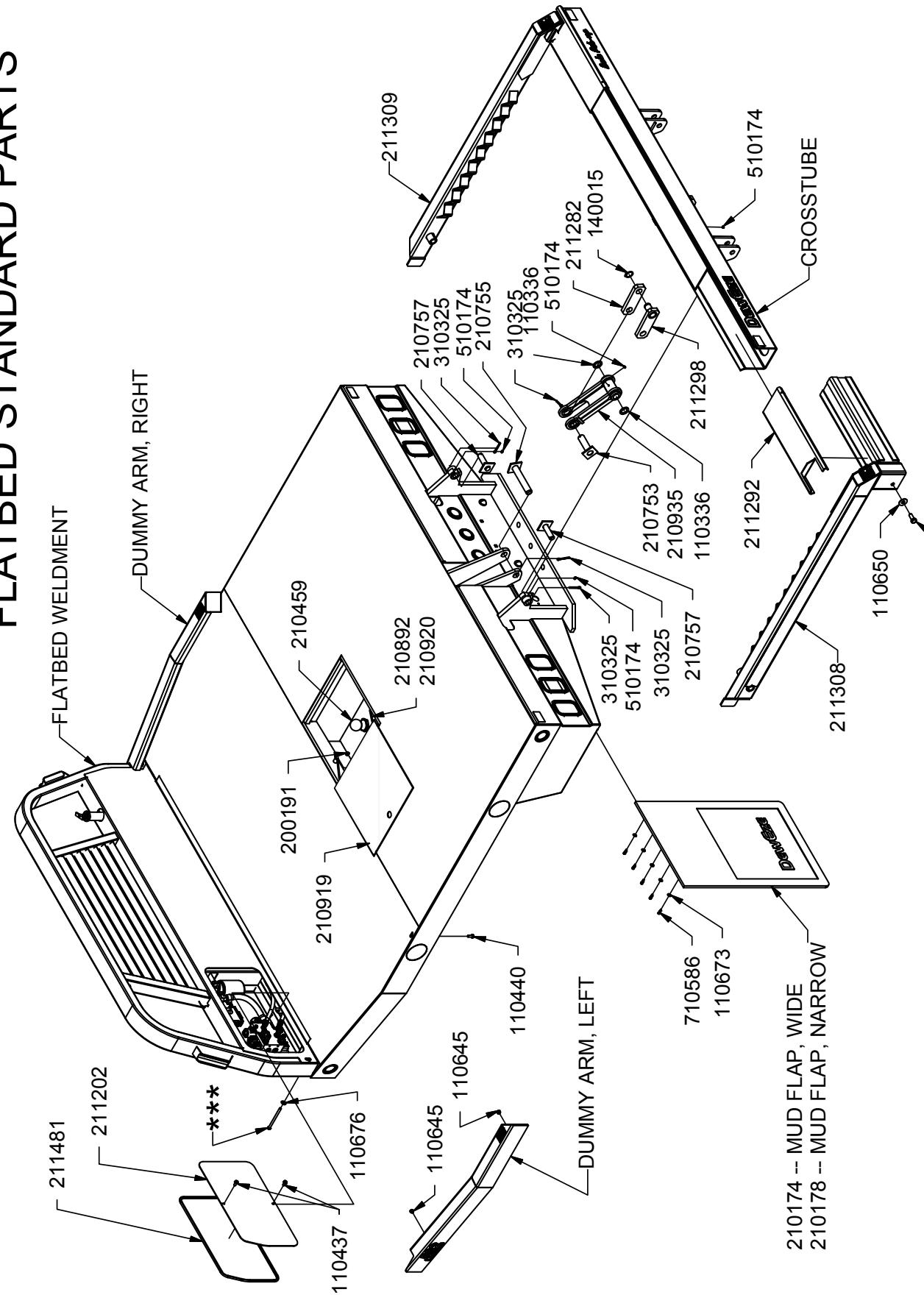
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FLATBED STANDARD PARTS



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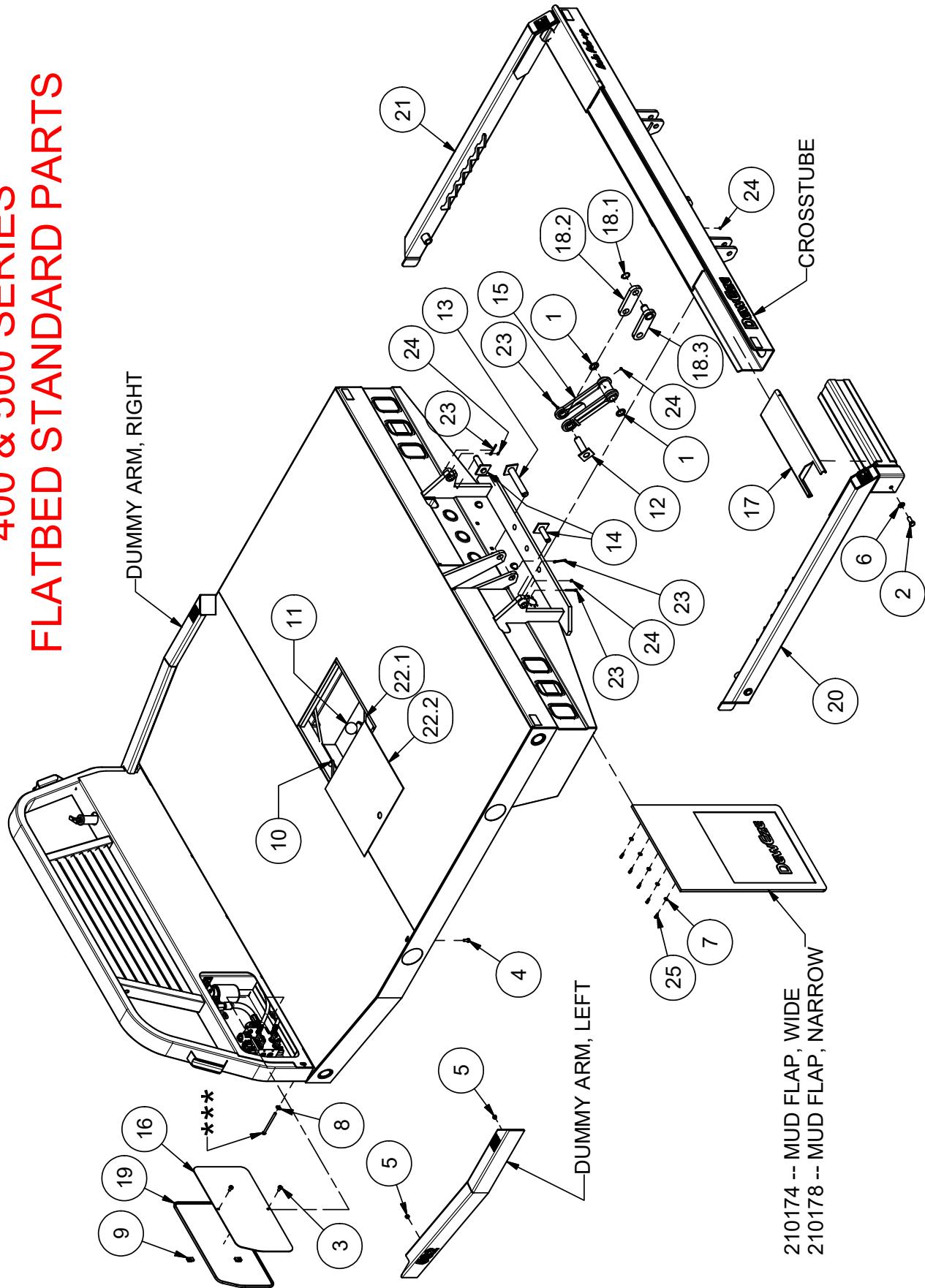
FLATBED STANDARD PARTS

				Parts List		
STANDARD	FLATBED WELDMENT	CROSSTUBE	DUMMYY ARM	PART #	QUANTITY	DESCRIPTION
470	211230	211311	RIGHT	110336	2	WASHER, 1-1/4 FLAT MACHINE 10GA
470W	211470	211310	LEFT	110365	2	BOLT, 5/8-18 X 1.5 GR 5
475	211232	211311		110437	2	BOLT, 3/8-16 X 0.75, WIZ FLANGE
478	211233	211310		110440	2	BOLT, 3/8-16 X 1, WIZ FLANGE
477	211231	211311		110645	2	NUT, 3/8-16 WIZ FLANGE
480	211234	211310		110650	2	WASHER, 5/8" FLAT STANDARD
482	211235	211310		110673	10	WASHER, 1/4" FLAT STANDARD
485	211236	211310		110676	2	WASHER, 3/8" FLAT STANDARD
487	211237	211310		200191	2	BUSHING, .5 X .375 X .500 W/FLING
				210459	1	HITCH BALL AND NUT
				210753	1	PIN ASSY, LIFT CYLINDER ROD END
				210755	1	PIN ASSY, IDLER ARM
				210757	2	PIN ASSY, CROSSARM PIVOT
				210892	1	HINGE ROD / RECESSED WELL
				210919	1	LID / RECESSED WELL
				210920	2	HINGE CLIP
				210935	1	IDLER ARM, MACHINE DWG.
				211202	1	VALVE COVER
				211292	2	SHIELD, CROSSTUBE
				211297	--	PUSH ARM KIT
				211298	1	PUSH ARM WELDMENT
				140015	1	SNAP RING
				211282	1	PUSH ARM
				211481	1	EDGE TRIM
				310325	4	COTTER PIN, 1/4 X 2
				510174	4	GREASE ZERK, 1/4-28 ST
				710586	10	SCREW, 1/4 X 1 TEK SELF-TAP

*** 400 SERIES
2ea 110533 -- BOLT, 3/8-16 X 5.0

500 SERIES
2ea 110542 -- BOLT, 3/8-16 X 5.5

400 & 500 SERIES FLATBED STANDARD PARTS



7/23/2012

400 & 500 SERIES FLATBED STANDARD PARTS

Parts List			
ITEM	PART #	QUANTITY	DESCRIPTION
1	110336	2	WASHER, 1-1/4 FLAT MACHINE 10GA
2	110365	2	BOLT, 5/8-18 X 1.5 GR 5
3	110437	2	BOLT, 3/8-16 X 0.75, WIZ FLANGE
4	110440	2	BOLT, 3/8-16 X 1, WIZ FLANGE
5	110645	2	NUT, 3/8-16 WIZ FLANGE
6	110663	2	WASHER, 5/8" FLAT SAE
7	110673	10	WASHER, 1/4" FLAT STANDARD
8	110676	2	WASHER, 3/8" FLAT STANDARD
9	110804	2	NUT, 3/8-16 U-TYPE .75L
10	200191	2	BUSHING, .5 X .375 X .500 W/FNLG
11	210459	1	HITCH BALL AND NUT
12	210753	1	PIN ASSY, LIFT CYLINDER ROD END
13	210755	1	PIN ASSY, IDLER ARM
14	210757	2	PIN ASSY, CROSSARM PIVOT
15	210935	1	IDLER ARM, MACHINE DWG.
16	211202	1	VALVE COVER
17	211292	2	SHIELD, CROSSARM
18	211297	--	PUSH ARM KIT
18.1	140015	1	SNAP RING
18.2	211282	1	PUSH ARM
18.3	211298	1	PUSH ARM WELDMENT
19	211481	1	EDGE TRIM, VALVE COVER
20	211965	1	SQUEEZE ARM LEFT, GRAY
21	211966	1	SQUEEZE ARM RIGHT, GRAY
22	215069	--	LID ASSEMBLY
22.1	210892	1	HINGE ROD, LID RECESSED WELL
22.2	210919	1	LID, RECESSED WELL
23	310325	4	COTTER PIN, 1/4 X 2
24	510174	4	GREASE ZERK, 1/4-28 ST
25	710586	10	SCREW, 1/4 X 1 TEK SELF-TAP

*** 400 SERIES
2ea 110533 -- BOLT, 3/8-16 X 5.0

500 SERIES
2ea 110542 -- BOLT, 3/8-16 X 5.5

7/23/2012

FLATBED XRM PARTS

XRM	FLATBED WELDMNT	CROSSTUBE	DUMMY ARM LEFT	DUMMY ARM RIGHT
470	211366	211402	211406	211405
475	211367	211402	211408	211407
478	211369	211403	211412	211411
477	211368	211402	211410	211409
480	211370	211403	211414	211413
482	211371	211403	211416	211415
485	211372	211403	211418	211417
487	211373	211403	211420	211419

Parts List		
PART #	QUANTITY	DESCRIPTION
200150	2	ROLL PIN, 1/4 X 2
210941	2	CYLINDER PIN
210942	2	FLOATING PIN
211355	1	HUGGER ARM, LEFT
211434	1	EXTENSION ARM, LEFT
211433	1	EXTENSION ARM, RIGHT
211755	2	CROSSTUBE END CAP
215086	1	SQUEEZE ARM XRM, RIGHT
110794	16	BOLT, 5/16-18 X 0.75, GR8 BLK

FLATBED WELDMENT

DUMMY ARM, RIGHT

210941
200150

211433

210942

215086

CROSSTUBE

211755
110794
211155

DUMMY ARM, LEFT

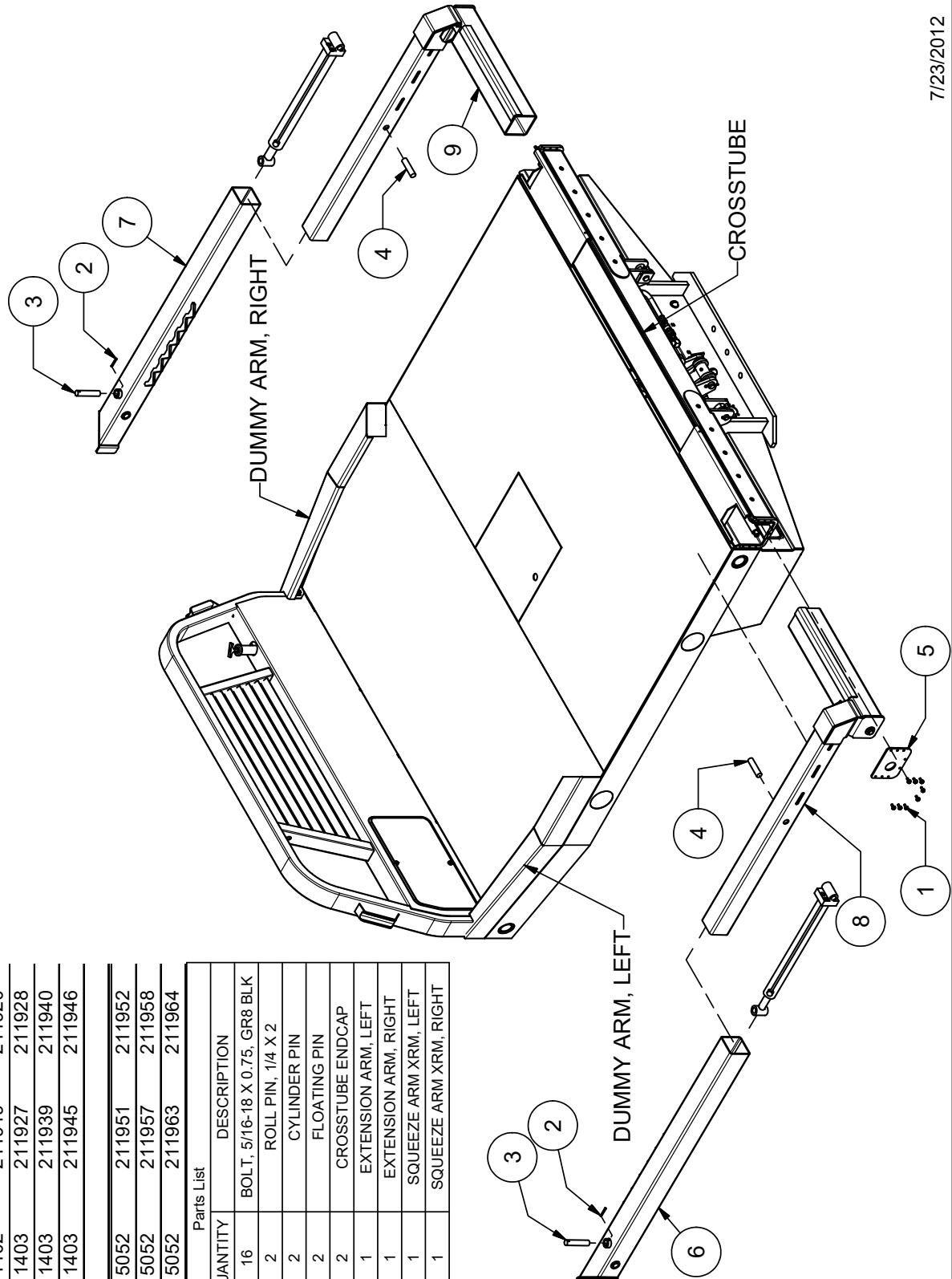
210941
200150

210942
215085
110794

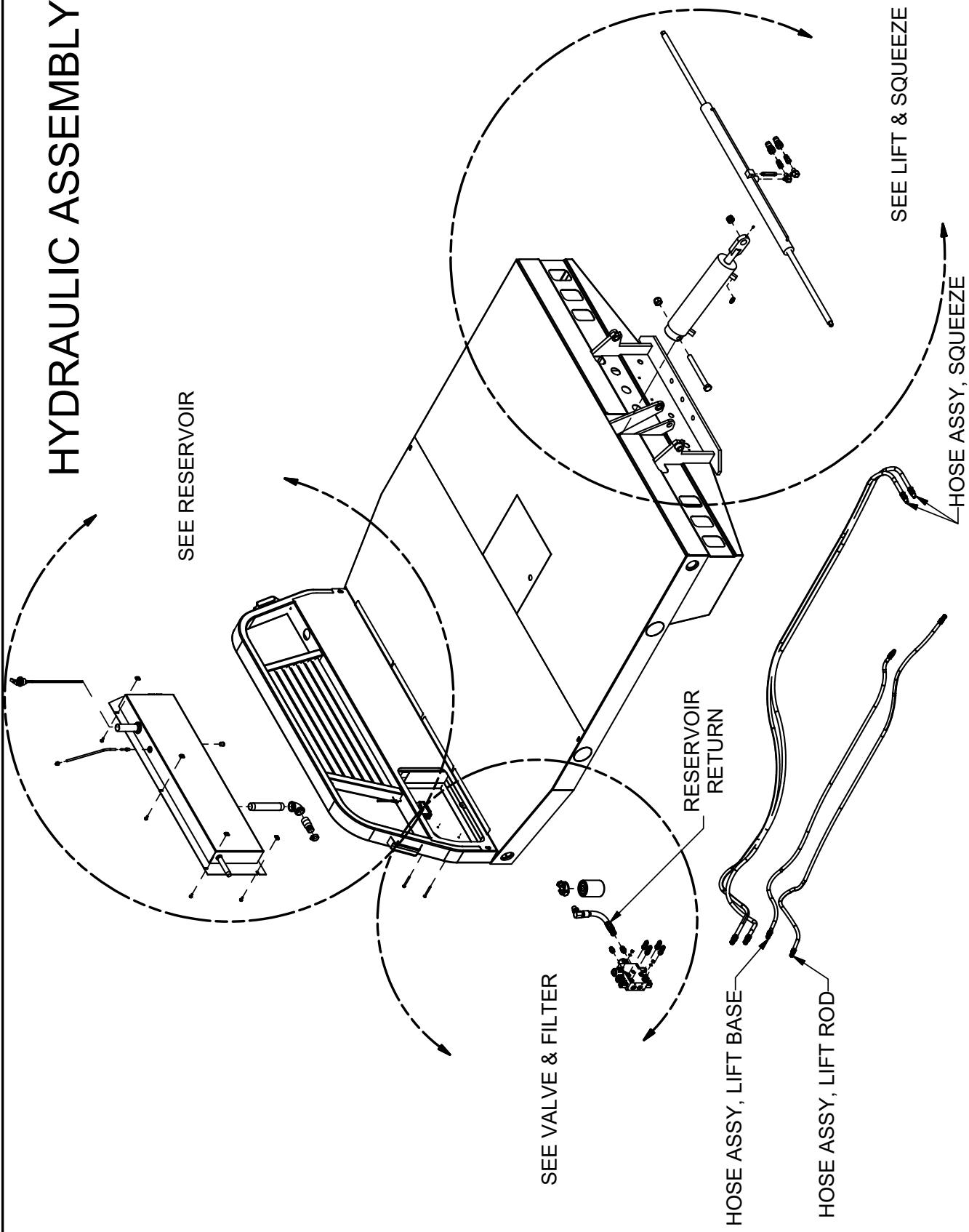
400 & 500 SERIES FLATBED XRM PARTS

XRM	CROSSTUBE	DUMMY ARM	
		LEFT	RIGHT
470	211402	211901	211902
475	211402	211907	211908
477	211402	211913	211914
479	211402	211919	211920
482	211403	211927	211928
487	211403	211939	211940
488	211403	211945	211946

Parts List			
ITEM	PART #	QUANTITY	DESCRIPTION
1	110794	16	BOLT, 5/16-18 X 0.75, GR8 BLK
2	200150	2	ROLL PIN, 1/4 X 2
3	210941	2	CYLINDER PIN
4	210942	2	FLOATING PIN
5	211755	2	CROSSTUBE END CAP
6	211967	1	EXTENSION ARM, LEFT
7	211968	1	EXTENSION ARM, RIGHT
8	215085	1	SQUEEZE ARM XRM, LEFT
9	215086	1	SQUEEZE ARM XRM, RIGHT

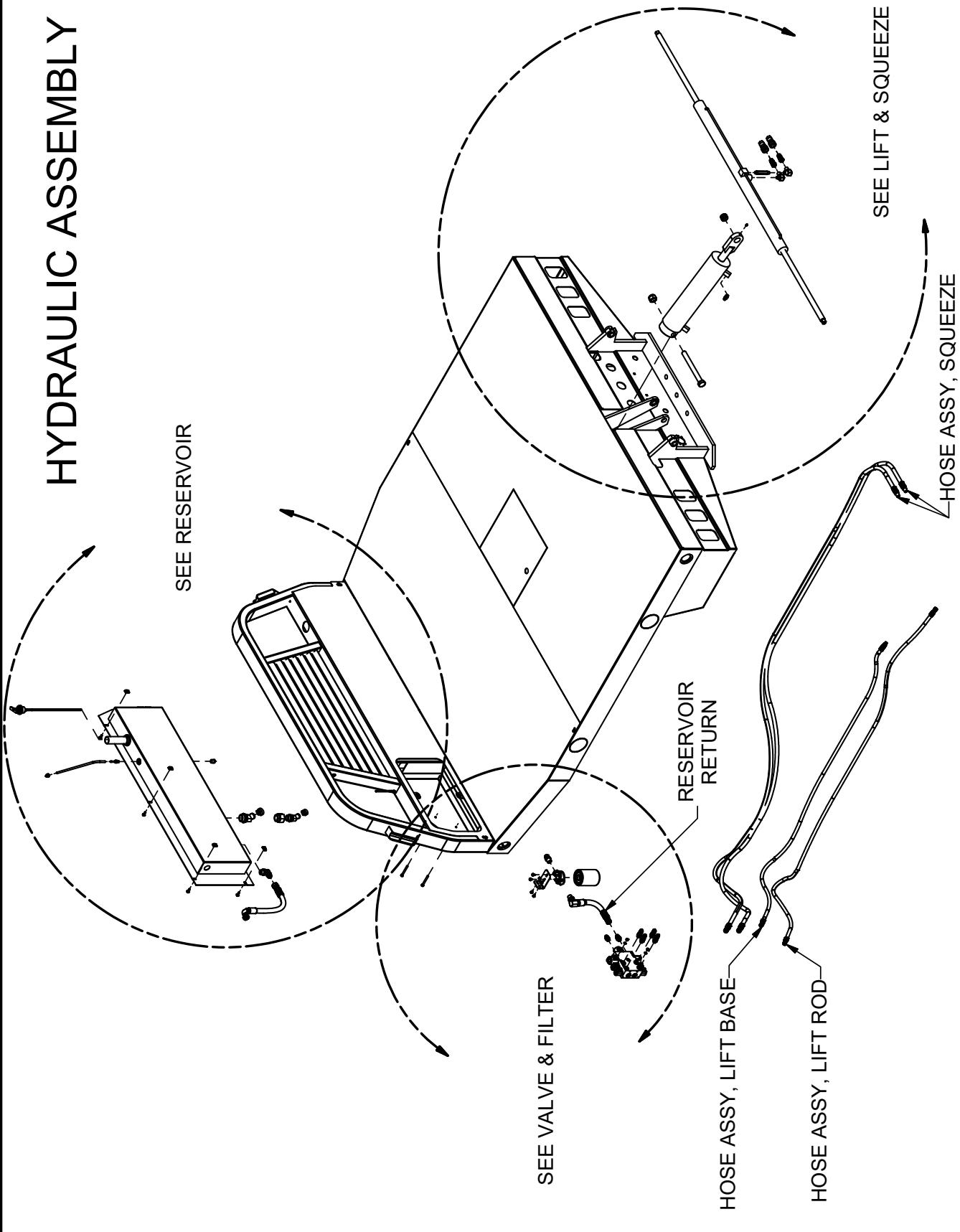


HYDRAULIC ASSEMBLY



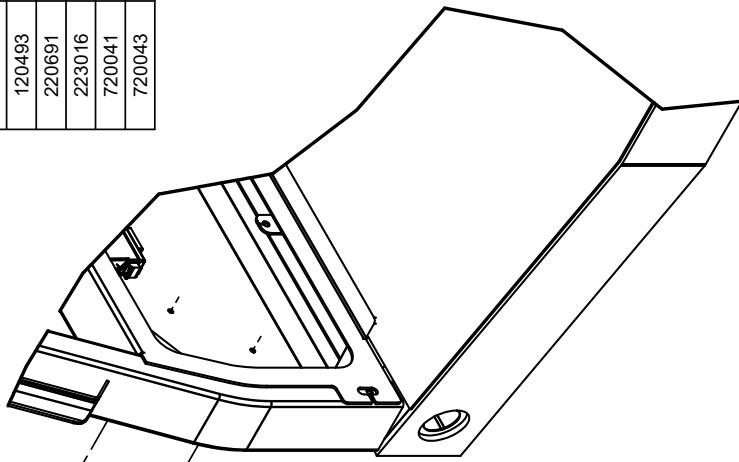
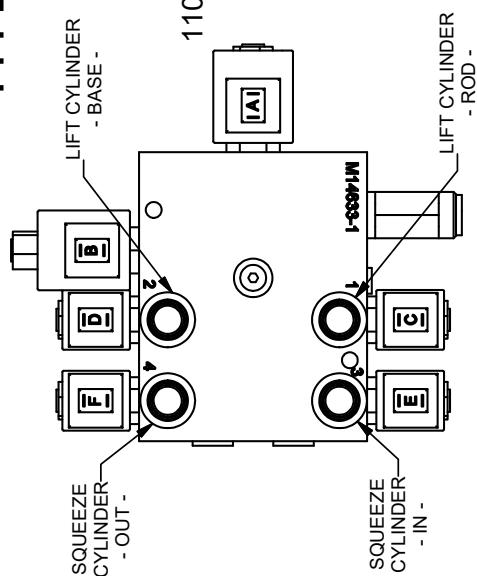
4/30/2009

HYDRAULIC ASSEMBLY



HYDRAULIC ASSEMBLY VALVE & FILTER

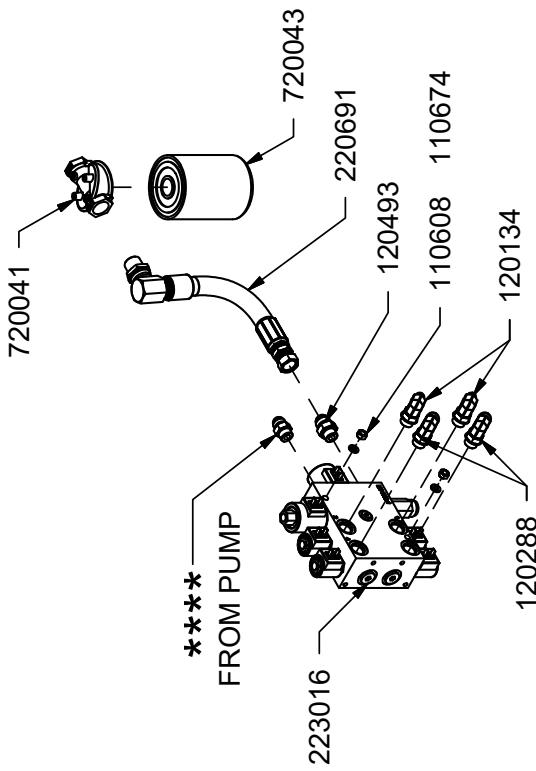
RETURN HOSE CHANGED 2009



Parts List

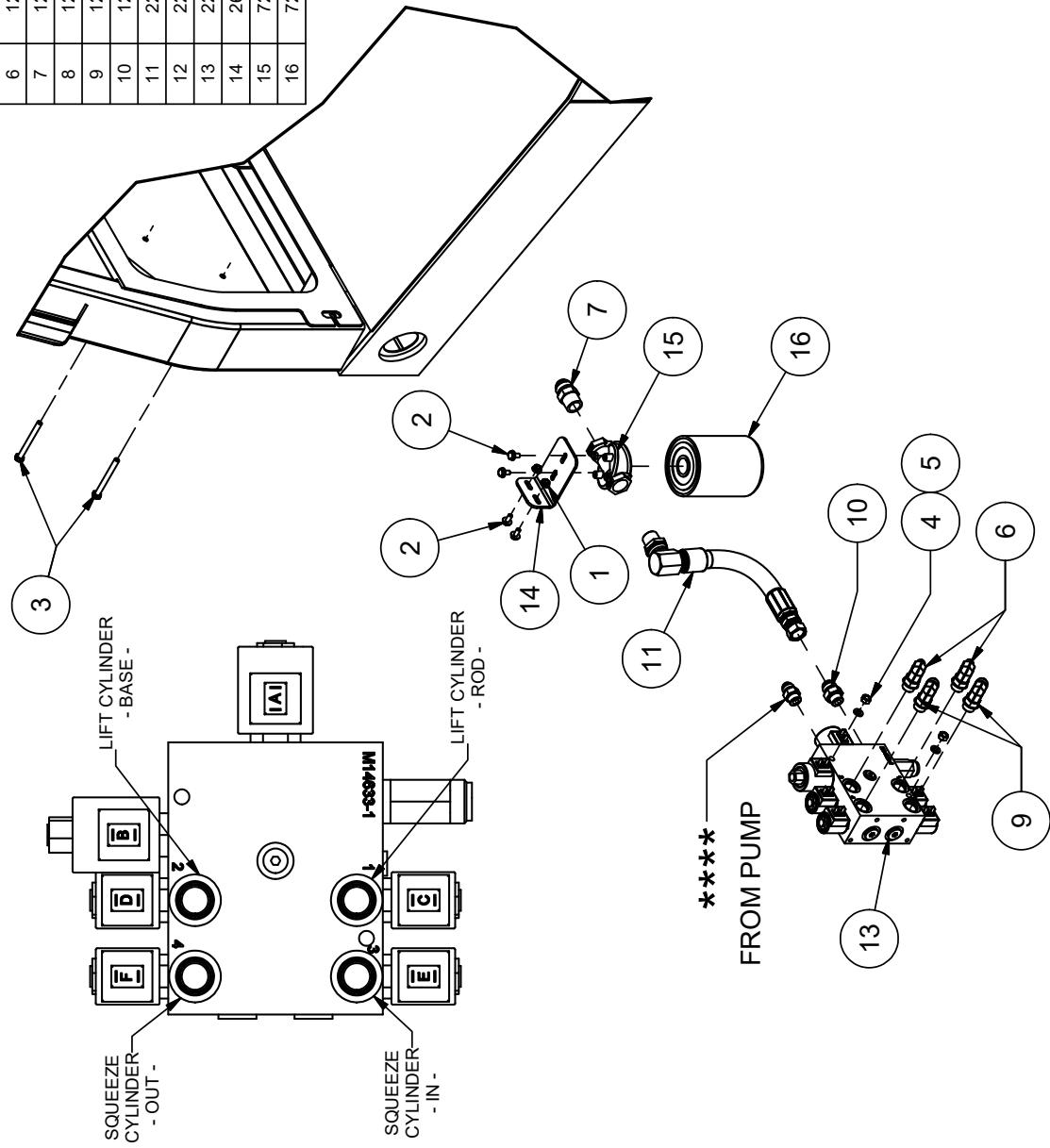
PART #	QTY	DESCRIPTION
110538	2	BOLT, 5/16-18 X 3.0
110608	2	NUT, 5/16-18
110674	2	WASHER, 5/16" LOCK
120134	2	ADAPTER, 6MJ-8MB90
120288	2	ADAPTER, 8MJ-8MB90
120493	1	ADAPTER, 10MJ-8MB
220691	1	RESERVOIR RETURN
223016	1	VALVE, FLATBED MONOBLOCK
720041	1	FILTER HEAD
720043	1	FILTER, 10 MICRON

***** 5, 7& 9 GALLON SYSTEM
 120277 -- ADAPTER 8MJ-8MB
 120174 -- ADAPTER, 8MB-12FPX

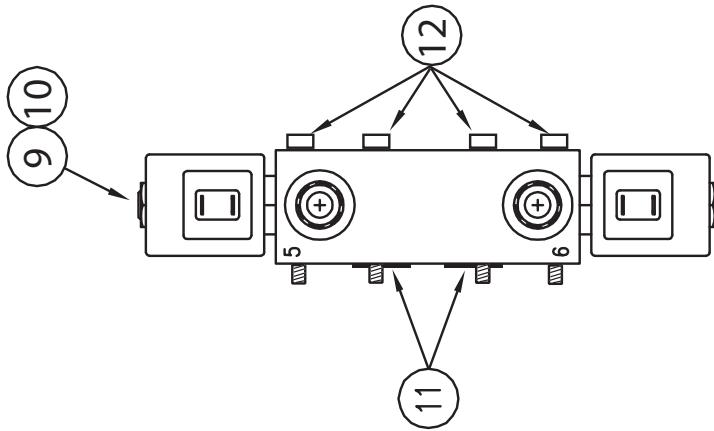
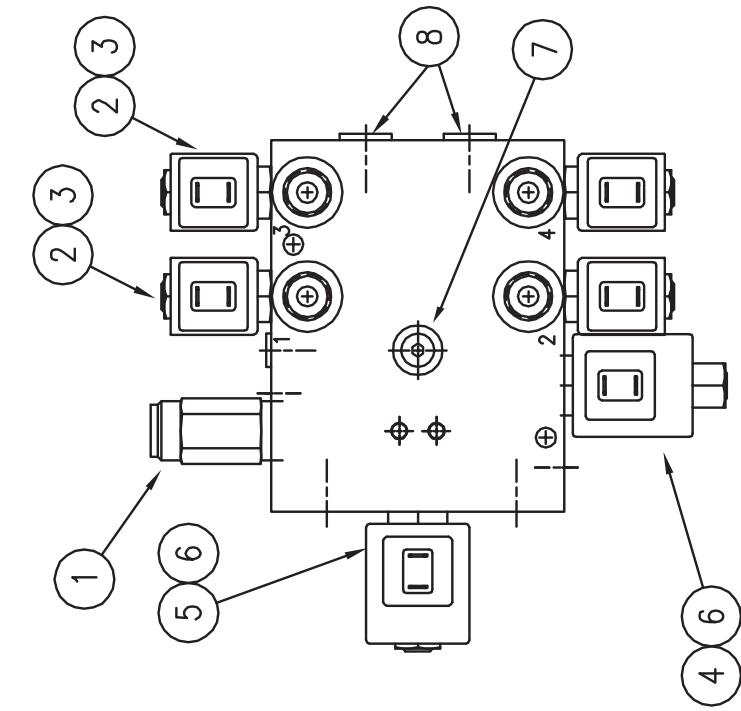


HYDRAULIC ASSEMBLY VALVE & FILTER

RETURN HOSE CHANGED 2009
FILTER BRACKET LATE 2012



GEN 2 VALVE - SERVICE PARTS



ITEM NO	DESCRIPTION	PART NO.	QUAN
1	VALVE, PRESSURE RELIEF	2222004	1
2	CARTRIDGE, #8 VALVE, W/O COIL	7200115	4
3	COIL, #8 VALVE, 12 VOLT	820143	4
4	SPOOL, #10 VALVE	820232	1
5	VALVE, DIRECTIONAL, 4-WAY	222002	1
6	COIL, #10 VALVE, 12 VOLT	820229	2
7	O-RING, ADAPTER #4 7/16-20	120062	2
8	O-RING, ADAPTER #8 3/4-16	720164	2
	VALVE, MONOBLOCK, COMPLETE	223016	1

VALVE FOR ADDITIONAL THIRD BANK

ITEM NO	DESCRIPTION	PART NO.	QUAN
9	VALVE, POPPET FOR 223017	222003	2
10	COIL, #10 VALVE, 12 VOLT	820229	2
11	O-RING, -219, 90 DURO	120376	2
12	BOLT, 5/16-18 X 2 SHCS	110168	4
	VALVE, 3RD BANK ADD ON (223016)	223017	1

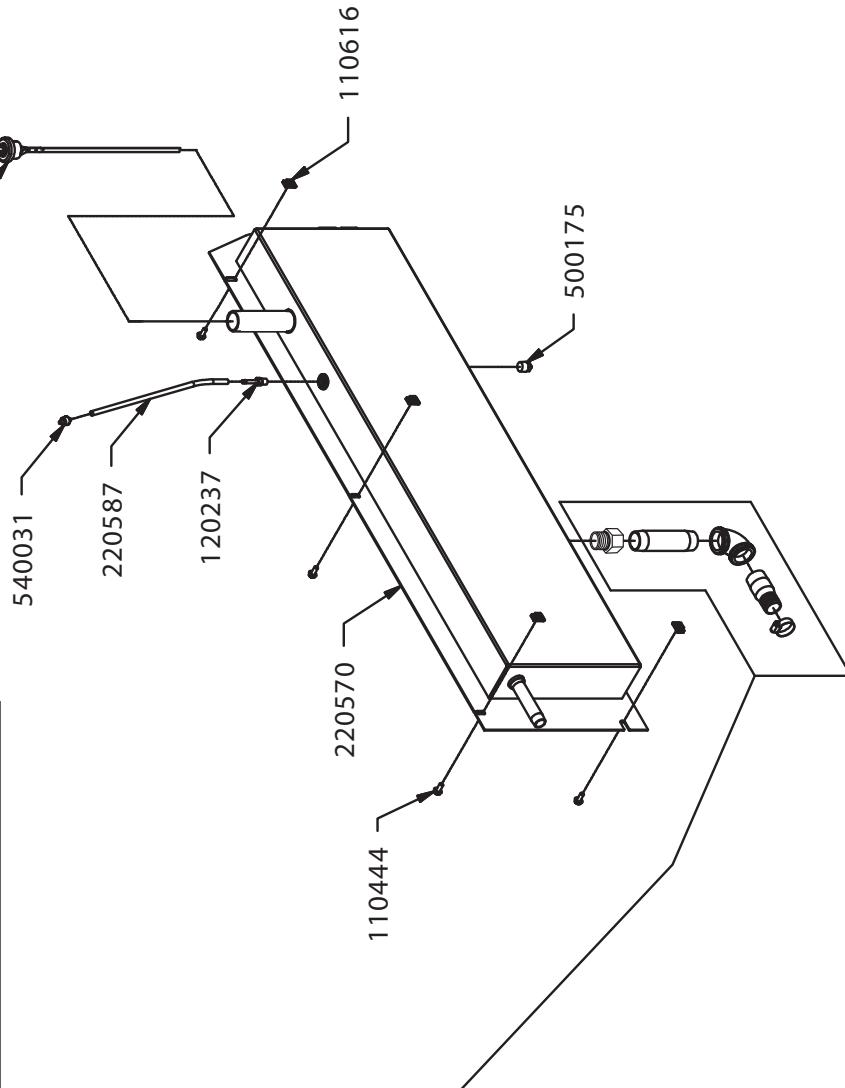
HYDRAULIC ASSEMBLY RESERVOIR

IMPORTANT:

The hydraulic reservoir has an O-ring fitting in the bottom where the suction line is connected. Be sure to use the correct adapter (120015) before attaching the 6" nipple.

5, 7 & 9 GALLON SYSTEM		
PART #	QTY	DESCRIPTION
120015	1	ADAPTER, 20MB-20FP
200083	1	FITTING, NIPPLE, 1-1/4 X 6
220107	1	FITTING, REDUCER, 1-1/4 - 1.0 ELL
720075	1	HOSE BARB, 1
720107	1	HOSE CLAMP, #20

12 & 17 GALLON SYSTEM		
PART #	QTY	DESCRIPTION
120015	1	ADAPTER, 20MB-20FP
200083	1	FITTING, NIPPLE, 1-1/4 X 6
720158	1	FITTING, ELL, 1-1/4
220217	1	HOSE BARB, 1-1/4
511002	1	HOSE CLAMP, #24



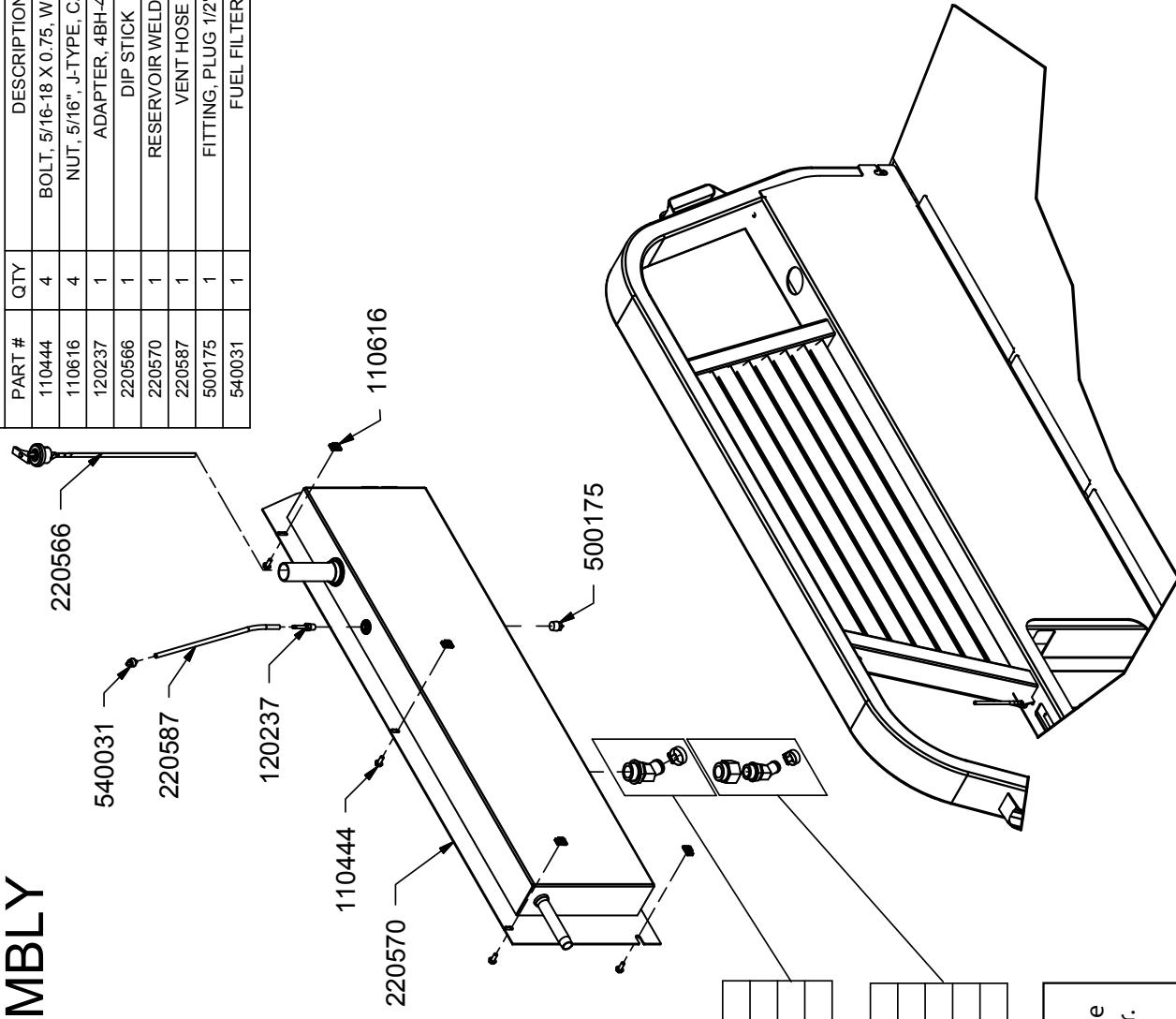
2003 DODGE DUALLY, 5, 7 & 9		
PART #	QTY	DESCRIPTION
120015	1	ADAPTER, 20MB-20FP
720070	1	FITTING, REDUCER, 1-1/4 - 1.0
720075	1	HOSE BARB, 1
720107	1	HOSE CLAMP, #20

RUNNING CHANGE		
The above fittings were phased out of usage at the beginning of the 2010 model year. See following page for new fittings.		

HYDRAULIC ASSEMBLY RESERVOIR

Parts List

PART #	QTY	DESCRIPTION
110444	4	BOLT, 5/16-18 X 0.75, WIZ FLANGE NUT, 5/16", L-TYPE, CAGE, .5C
110616	4	ADAPTER, 4BH-4MP
120237	1	DIP STICK
220566	1	RESERVOIR WELDMENT
220570	1	VENT HOSE
220587	1	FITTING, PLUG 1/2" PIPE
500175	1	FUEL FILTER
540031	1	



12 & 17 GALLON SYSTEM		
PART #	QTY	DESCRIPTION
120189	1	ADAPTER, 20MB-20BH 45°
511002	1	HOSE CLAMP, #24

5, 7 & 9 GALLON SYSTEM		
PART #	QTY	DESCRIPTION
120188	1	ADAPTER, 16MB-16BH 45°
120511	1	ADAPTER, 20MB-16FOR
720107	1	HOSE CLAMP, #20

RUNNING CHANGE

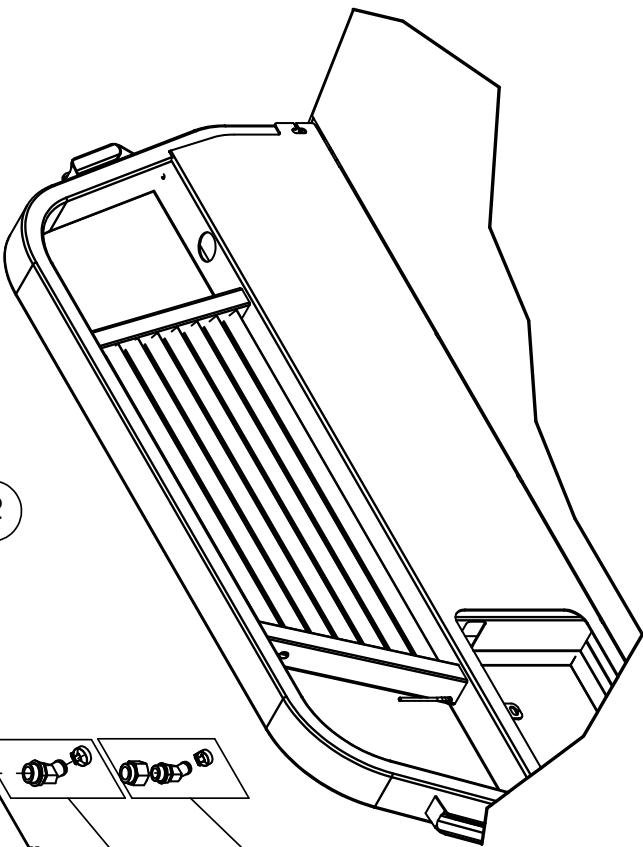
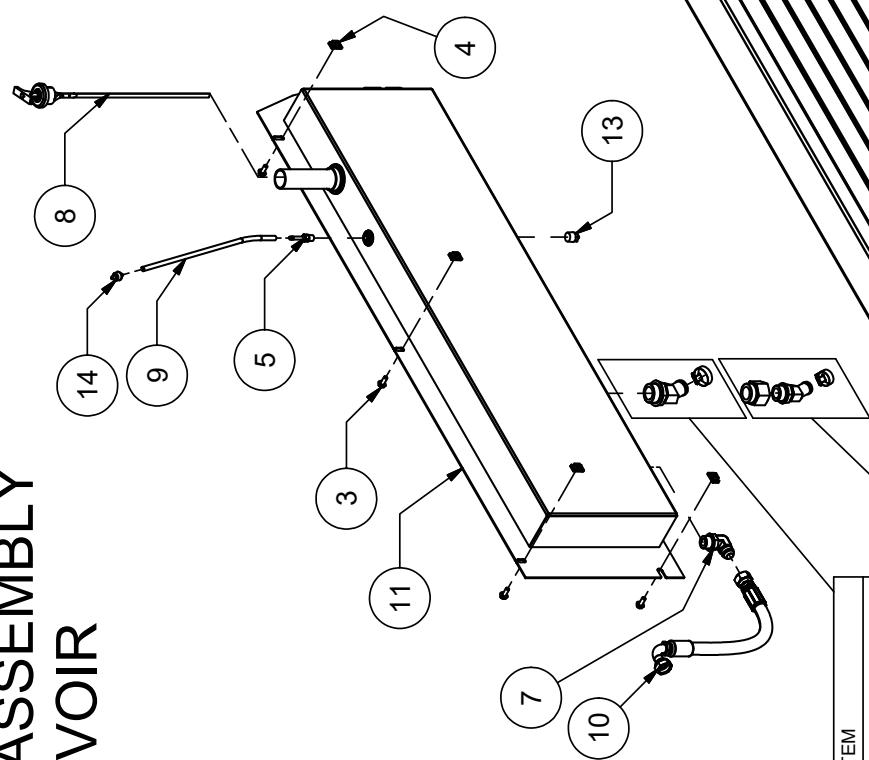
The above fittings were phased into usage at the beginning of the 2010 model year. See previous page for old fittings.

11/25/2009

HYDRAULIC ASSEMBLY RESERVOIR

Parts List

ITEM	PART #	QTY	DESCRIPTION
1	110290	2	NUT, 1/4-20 WIZ FLANGE
2	110434	4	BOLT, 1/4-20 X 0.5, WIZ FLANGE
3	110444	4	BOLT, 5/16-18 X 0.75, WIZ FLANGE
4	110616	4	NUT, 5/16" J-TYPE, CAGE, .5C
5	120237	1	ADAPTER, 4BH-4MP
6	120244	1	ADAPTER, 12MJ-12MP
7	120257	1	ADAPTER, 12MJ-12MB90
8	220566	1	DIP STICK
9	220587	1	VENT HOSE
10	220700	1	FILTER TO RESERVOIR HOSE
11	225012	1	Reservoir, Flatbed, Remote Filter
12	260265	1	MOUNTING BRACKET, FILTER
13	500175	1	FITTING, PLUG 1/2" PIPE
14	540031	1	FUEL FILTER



12 & 17 GALLON SYSTEM

PART #	QTY	DESCRIPTION
120189	1	ADAPTER, 20MB-20BH 45°
511002	1	HOSE CLAMP, #24

5, 7 & 9 GALLON SYSTEM

PART #	QTY	DESCRIPTION
120188	1	ADAPTER, 16MB-16BH 45°
120511	1	ADAPTER, 20MB-16FOR
720107	1	HOSE CLAMP, #20

HOSE CHART

400 & 500 SERIES WITH GENERATION 2 VALVES

FLATBED SERIES	SQUEEZE HOSES 8M3K - 8MP / 8FJX IN (BLUE) OUT (ORANGE)	LIFT HOSES 6M3K - 6MB / 6FJX BASE (BROWN)	RESERVOIR RETURN 6M3K - 6FJX / 6FJX ROD (GREEN)	HYDRAULIC HOSE KIT #
470	220610 (129in)	220610 (129in)	220611 (65in)	220646 (84in)
470W	220610 (129in)	220610 (129in)	220611 (65in)	220646 (84in)
475	220613 (152in)	220613 (152in)	220614 (88in)	220642 (107in)
478	220613 (152in)	220613 (152in)	220614 (88in)	220642 (107in)
477	220616 (164in)	220616 (164in)	220617 (100in)	220643 (119in)
480	220616 (164in)	220616 (164in)	220617 (100in)	220643 (119in)
482	220616 (164in)	220616 (164in)	220617 (100in)	220643 (119in)
485	220622 (182in)	220622 (182in)	220623 (118in)	220644 (137in)
487	220622 (182in)	220622 (182in)	220623 (118in)	220644 (137in)
578	220613 (152in)	220613 (152in)	220614 (88in)	220642 (107in)
582	220616 (164in)	220616 (164in)	220617 (100in)	220643 (119in)
587	220622 (182in)	220622 (182in)	220623 (118in)	220644 (137in)

HOSE CHART

RETURN HOSE CHANGED 2009

400 & 500 SERIES WITH GENERATION 2 VALVES

FLATBED SERIES	SQUEEZE HOSES 8M3K - 8MP / 8FJX IN (BLUE) OUT (ORANGE)	LIFT HOSES 6M3K - 6MB / 6FJX BASE (BROWN)	RESERVOIR RETURN 6M3K - 6FJX / 6FJX ROD (GREEN)	HYDRAULIC HOSE KIT #
470	220610 (129in)	220610 (129in)	220611 (65in)	220646 (84in) 220691 (12.25in)
470W	220610 (129in)	220610 (129in)	220611 (65in)	220646 (84in) 220691 (12.25in)
475	220613 (152in)	220613 (152in)	220614 (88in)	220642 (107in) 220691 (12.25in)
478	220613 (152in)	220613 (152in)	220614 (88in)	220642 (107in) 220691 (12.25in)
477	220616 (164in)	220616 (164in)	220617 (100in)	220643 (119in) 220691 (12.25in)
480	220616 (164in)	220616 (164in)	220617 (100in)	220643 (119in) 220691 (12.25in)
482	220616 (164in)	220616 (164in)	220617 (100in)	220643 (119in) 220691 (12.25in)
485	220622 (182in)	220622 (182in)	220623 (118in)	220644 (137in) 220691 (12.25in)
487	220622 (182in)	220622 (182in)	220623 (118in)	220644 (137in) 220691 (12.25in)
578	220613 (152in)	220613 (152in)	220614 (88in)	220642 (107in) 220691 (12.25in)
582	220616 (164in)	220616 (164in)	220617 (100in)	220643 (119in) 220691 (12.25in)
587	220622 (182in)	220622 (182in)	220623 (118in)	220644 (137in) 220691 (12.25in)

400 SERIES WITH LARGE AND SMALL FPS VALVES

FLATBED SERIES	SQUEEZE HOSES		LIFT HOSES		RESERVOIR RETURN 8M3K - 8MP / 8FJX	HYDRAULIC HOSE KIT #
	IN (BLUE)	OUT (ORANGE)	6M3K - 6MB / 6FJX	BASE (BROWN) ROD (GREEN)		
470	220610 (129in)	220610 (129in)	220611 (65in)	220612 (84in)	220422 (26.75in)	223002
470W	220610 (129in)	220610 (129in)	220611 (65in)	220612 (84in)	220422 (26.75in)	223002
475	220613 (152in)	220613 (152in)	220614 (88in)	220615 (107in)	220422 (26.75in)	223003
478	220613 (152in)	220613 (152in)	220614 (88in)	220615 (107in)	220422 (26.75in)	223003
477	220616 (164in)	220616 (164in)	220617 (100in)	220618 (119in)	220422 (26.75in)	223004
480	220616 (164in)	220616 (164in)	220617 (100in)	220618 (119in)	220422 (26.75in)	223004
482	220616 (164in)	220616 (164in)	220617 (100in)	220618 (119in)	220422 (26.75in)	223004
485	220619 (176in)	220619 (176in)	220620 (112in)	220621 (131in)	220422 (26.75in)	223005
487	220622 (182in)	220622 (182in)	220623 (118in)	220624 (137in)	220422 (26.75in)	223006

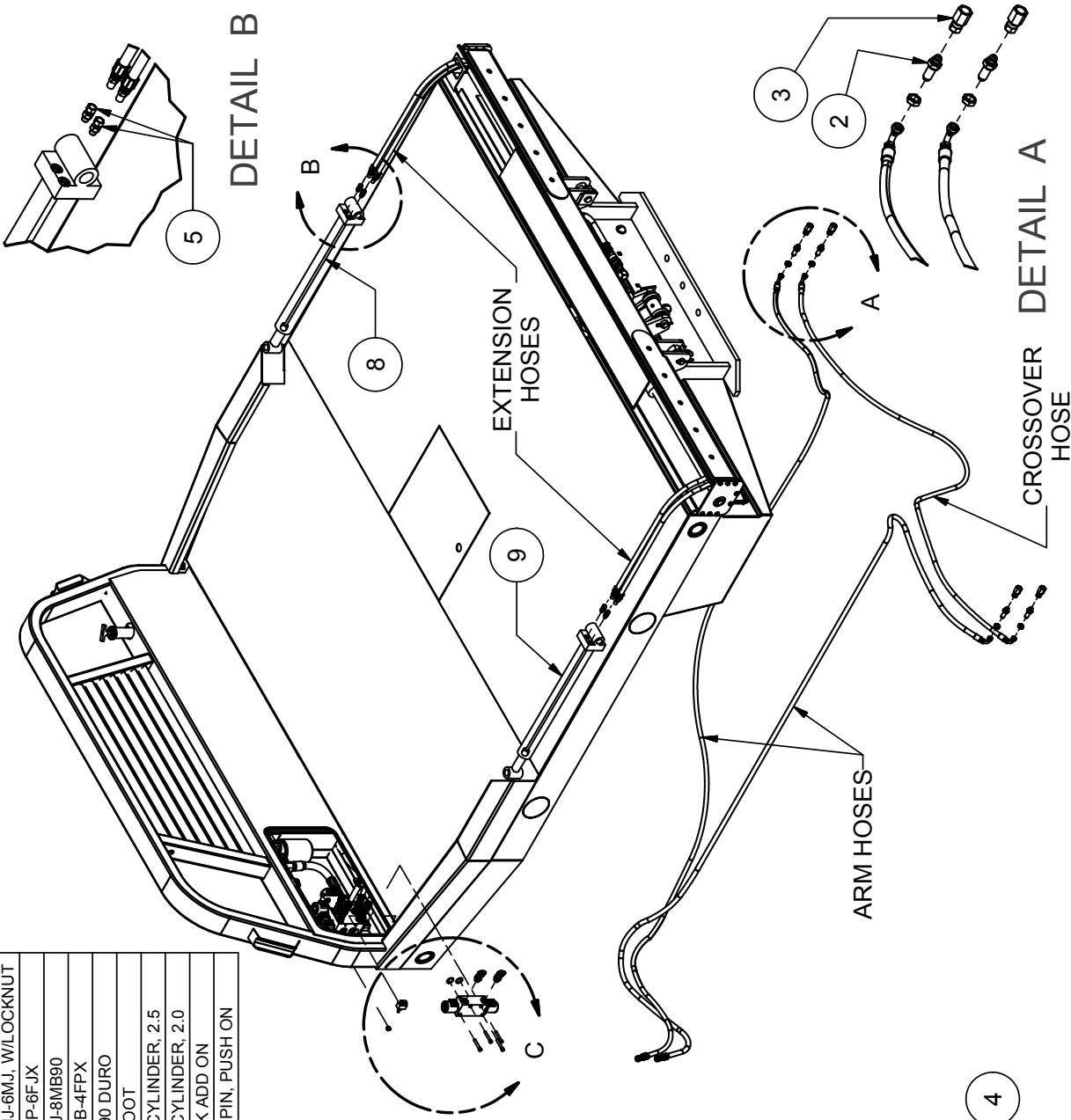
XRM HYDRAULICS

Parts List			
ITEM	PART #	QTY	DESCRIPTION
1	110168	4	BOLT, 5/16-18 X 2.0 SHCS
2	120102	4	ADAPTER, BULKHEAD, 6MJ-6MJ, W/LOCKNUT
3	120123	4	ADAPTER, 6FP-6FJX
4	120134	2	ADAPTER, 6MJ-8MB90
5	120186	4	ADAPTER, 4MB-4FPX
6	120376	2	O-RING, -119, 90 DURO
7	132035	1	SWITCH BOOT
8	220455	1	EXTENDABLE ARM CYLINDER, 2.5
9	220456	1	EXTENDABLE ARM CYLINDER, 2.0
10	223017	1	VALVE, 3rd BANK ADD ON
11	232086	1	SWITCH, DPDT, M, 6 PIN, PUSH ON

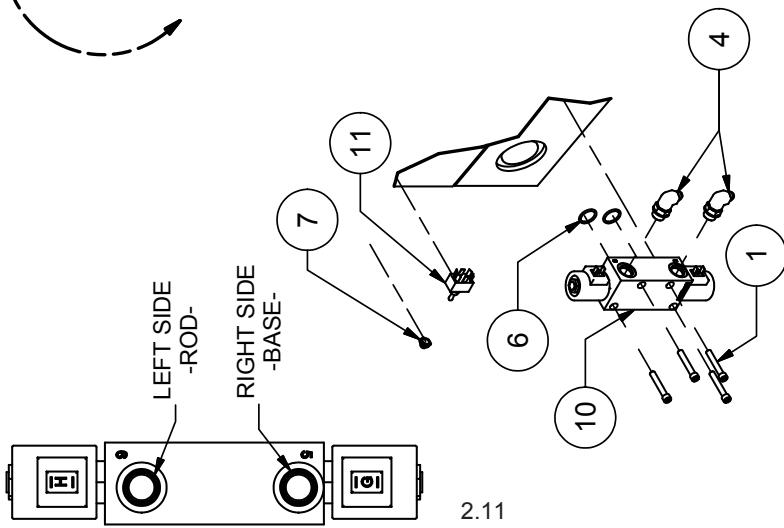
SEAL KITS

2.5 CYLINDER	220532
2.0 CYLINDER	220533

DETAIL B

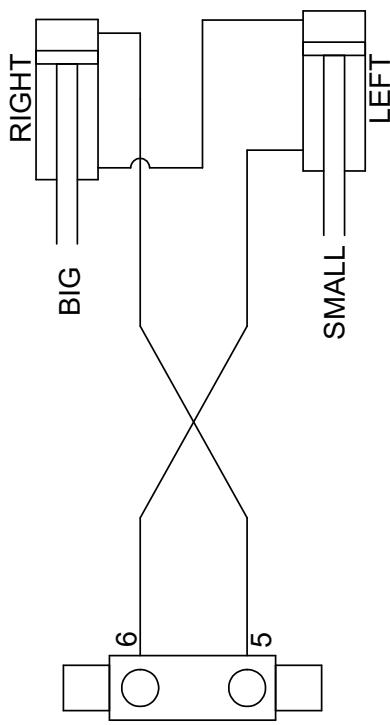


DETAIL C



3/2/2011

XRM HYDRAULICS



XRM SERIES	ARM HOSES 6M3K - 6FJX90M / 6FJX	EXTENSION HOSES 6M3K - 6MPX	CROSSOVER HOSE 6M3K - 6FJX90M	HYDRAULIC HOSE KIT #
470, 670	220625 (165in)	2ea 220605 (54.3in)	2ea 220605 (54.3in)	220601 (79.6in)
475, 675	220626 (188in)	2ea 220605 (54.3in)	2ea 220605 (54.3in)	223010
477, 479, 482, 484, 677, 679	220627 (200in)	2ea 220605 (54.3in)	2ea 220605 (54.3in)	220601 (79.6in)
487, 488	220629 (218in)	2ea 220605 (54.3in)	2ea 220605 (54.3in)	223009
578, 770, 778	220626 (188in)	2ea 220605 (54.3in)	2ea 220605 (54.3in)	223007
582, 682, 684, 782, 784	220627 (200in)	2ea 220605 (54.3in)	2ea 220605 (54.3in)	223021
587, 687, 688, 787, 788	220629 (218in)	2ea 220605 (54.3in)	2ea 220605 (54.3in)	223022
				220645 (94.0in)
				223023

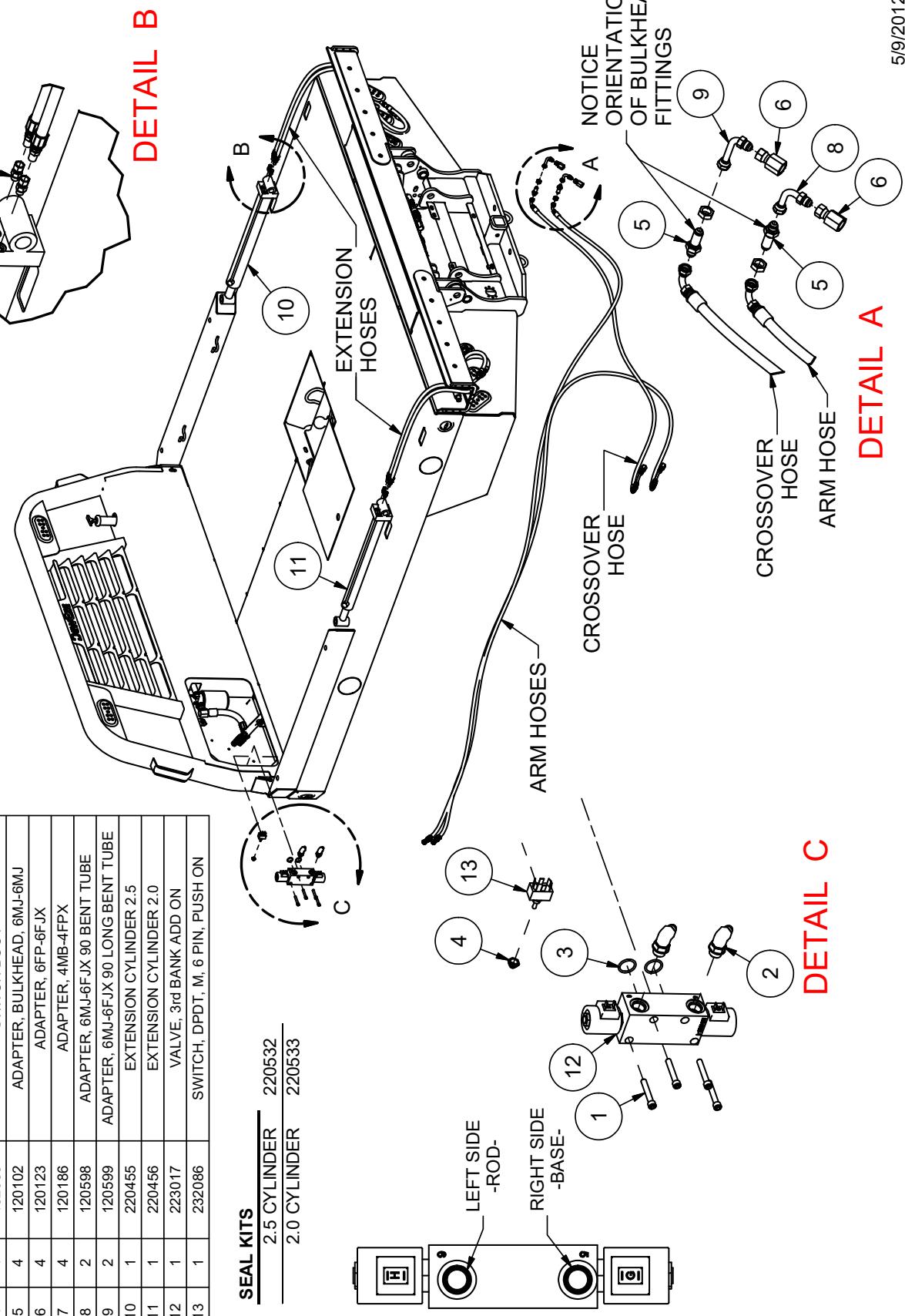
XRM Hydraulics

update 2012

Parts List		
ITEM	QTY	PART #
1	4	110168
		BOLT, 5/16-18 X 2.0 SHCS
2	2	120134
		ADAPTER, 6MJ-8MB90
3	2	120376
		O-RING, -119, 90 DUR-O
4	1	132035
		SWITCH BOOT
5	4	120102
		ADAPTER, BULKHEAD, 6MJ-6MJ
6	4	120123
		ADAPTER, 6FP-6F-JX
7	4	120186
		ADAPTER, 4MB-4FPX
8	2	120598
		ADAPTER, 6MJ-6F-JX 90 BENT TUBE
9	2	120599
		ADAPTER, 6MJ-6F-JX 90 LONG BENT TUBE
10	1	220455
		EXTENSION CYLINDER 2.5
11	1	220456
		EXTENSION CYLINDER 2.0
12	1	223017
		VALVE, 3rd BANK ADD ON
13	1	232086
		SWITCH, DPDT, M, 6 PIN, PUSH ON

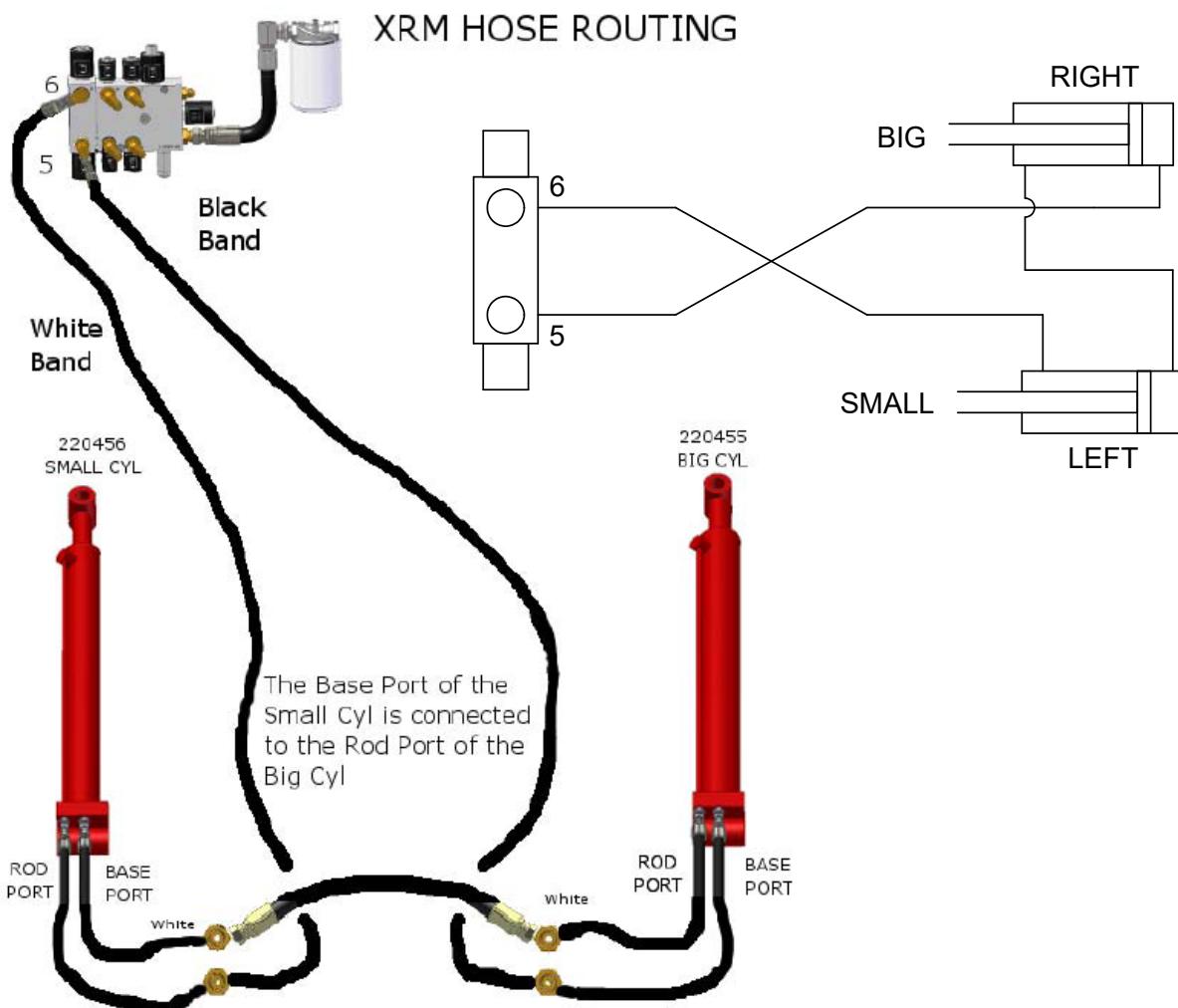
SEAL KITS

2.5 CYLINDER	220532
2.0 CYLINDER	220533



XRM HYDRAULICS

XRM SERIES	ARM HOSES 6M3K - 6FJX90M / 6FJX	EXTENSION HOSES 6M3K - 6-4MP / 6MPX	CROSSOVER HOSE 6M3K - 6FJX90M	HYDRAULIC HOSE KIT #
470, 670	2ea 220625 (148in)	4ea 220605 (54.3in)	220601 (79.6in)	223011
475, 675	2ea 220626 (164in)	4ea 220605 (54.3in)	220601 (79.6in)	223010
477, 479, 482, 484, 677, 679	2ea 220627 (174in)	4ea 220605 (54.3in)	220601 (79.6in)	223009
487, 488	2ea 220629 (200in)	4ea 220605 (54.3in)	220601 (79.6in)	223007
578, 770, 778	2ea 220626 (164in)	4ea 220605 (54.3in)	220645 (94.0in)	223021
582, 682, 684, 782, 784	2ea 220627 (174in)	4ea 220605 (54.3in)	220645 (94.0in)	223022
587, 687, 688, 787, 788	2ea 220629 (200in)	4ea 220605 (54.3in)	220645 (94.0in)	223023



5/9/2012

HYDRAULIC ASSEMBLY LIFT & SQUEEZE

Parts List			
ITEM	PART #	QTY	DESCRIPTION
1	110352	1	BOLT, 1-8 X 10, GR8
2	110602	1	NUT, 1-8 LOCK NYLON INSERT
3	120145	1	ADAPTER, 6MB-6MP (3/8 X 4)
4	120146	1	ADAPTER, 8MP-6FP90
5	120147	1	ADAPTER, 6MB-8MP90
6	220084	2	COUPLER, PIONEER FEMALE
7	220452	1	LIFT CYLINDER
8	200129	1	BUSHING, 1.5 X 1.25 X 1.0 SPLIT GG/GH
9	510174	1	GREASE ZERK, 1/4-28 ST
10	222001	1	VALVE, CHECK W/.063 ORIFICE
11	420005	2	COUPLER, PIONEER MALE

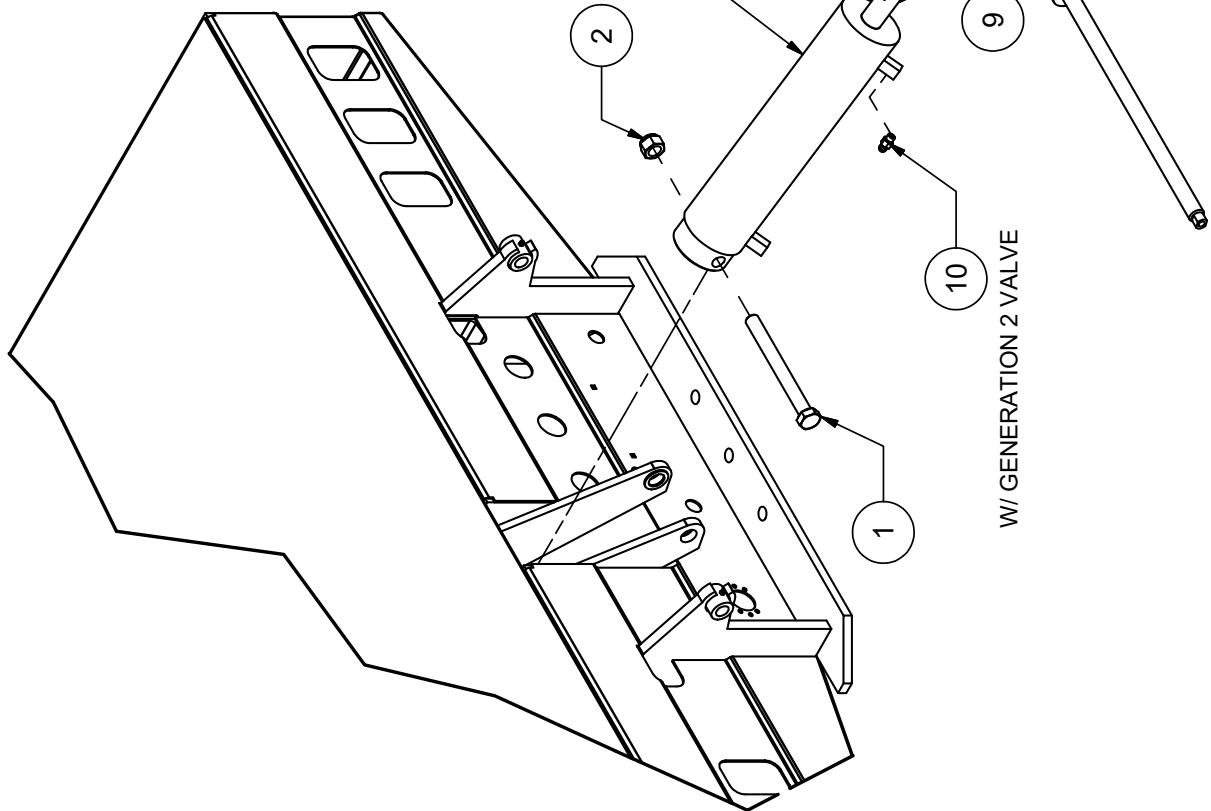
SQUEEZE CYLINDER

400 SERIES 220002
500 SERIES 223001

SEE CHART FOR MORE DETAILS

SEAL KITS

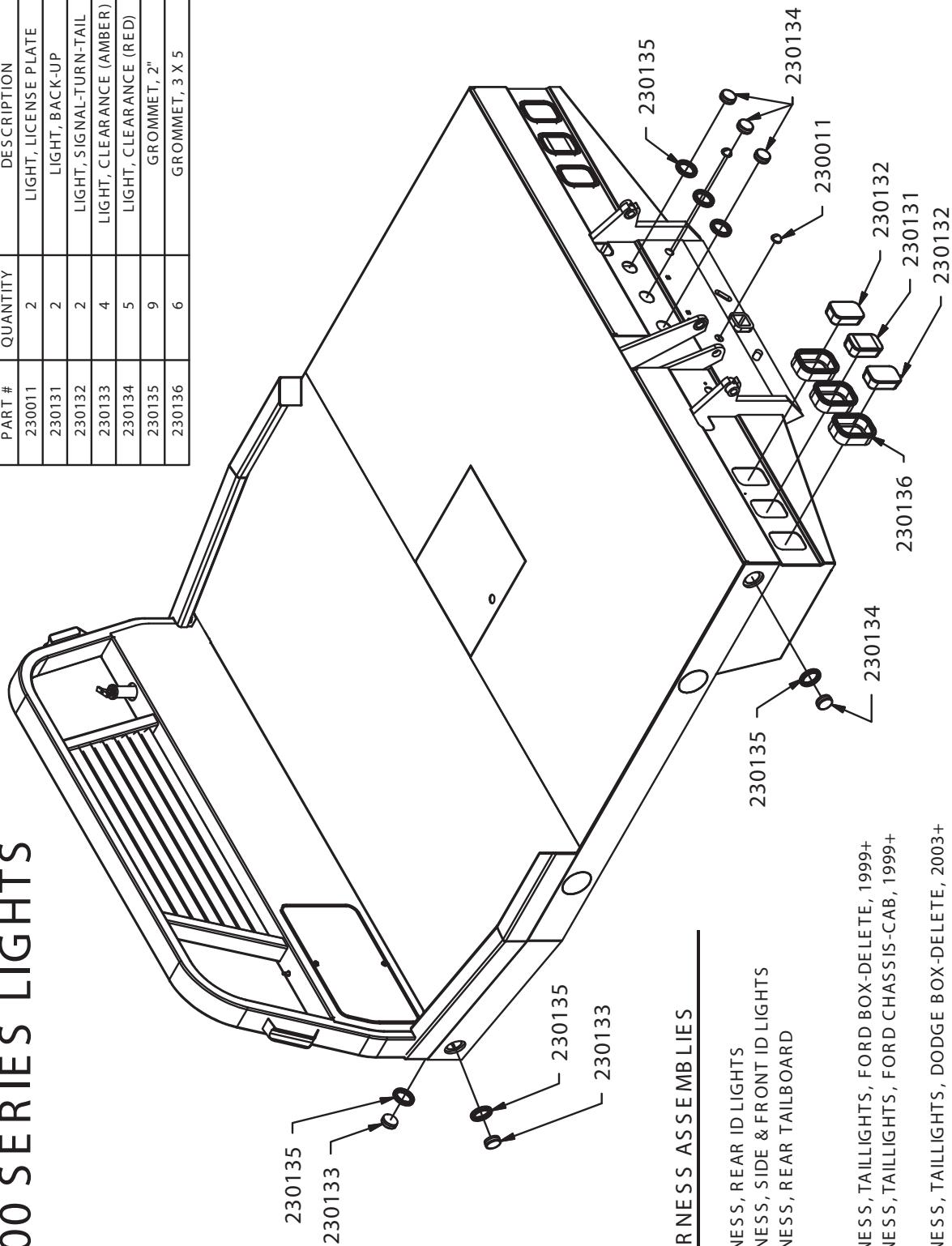
SQUEEZE CYLINDER 220056
LIFT CYLINDER 220464



Flatbed Squeeze Cylinders					
Bed Width	Model #	Squeeze Cylinder	Model #		
85.375"	670	220002	470		
	675		475		
	677		477		
	679		479		
91.375"			482		
			482	XRM	
			484		
			484	XRM	
			487		
			487	XRM	
			488		
			488	XRM	
93.0"	682	223032			
	682				
	684				
	684				
	687				
	687				
	688				
	688				
96.5"	770	223001			
	770				
	778		578		
	778		578	XRM	
	782		582		
	782		582	XRM	
	784				
	784		587		
	787		587	XRM	
	787				
	788				
	788				
85.375	670	223001	470	XRM	
	675		475	XRM	
	677		477	XRM	
	679		479	XRM	
A Synchronized Squeeze Cylinder					
Part # 223026					
is available as an option for all beds.					
This cylinder is the same length as # 223001 .					
Squeeze Cylinder Seal Kit Part # 220056					

400 / 500 SERIES LIGHTS

Parts List		
PART #	QUANTITY	DESCRIPTION
230011	2	LIGHT, LICENSE PLATE
230131	2	LIGHT, BACK-UP
230132	2	LIGHT, SIGNAL-TURN-TAIL
230133	4	LIGHT, CLEARANCE (AMBER)
230134	5	LIGHT, CLEARANCE (RED)
230135	9	GROMMET, 2"
230136	6	GROMMET, 3 X 5



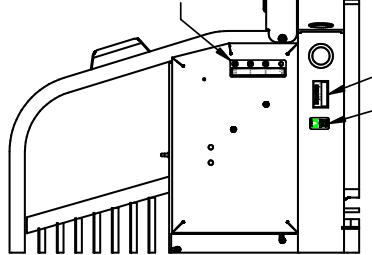
WIRING HARNESS ASSEMBLIES

MODEL SPECIFIC:

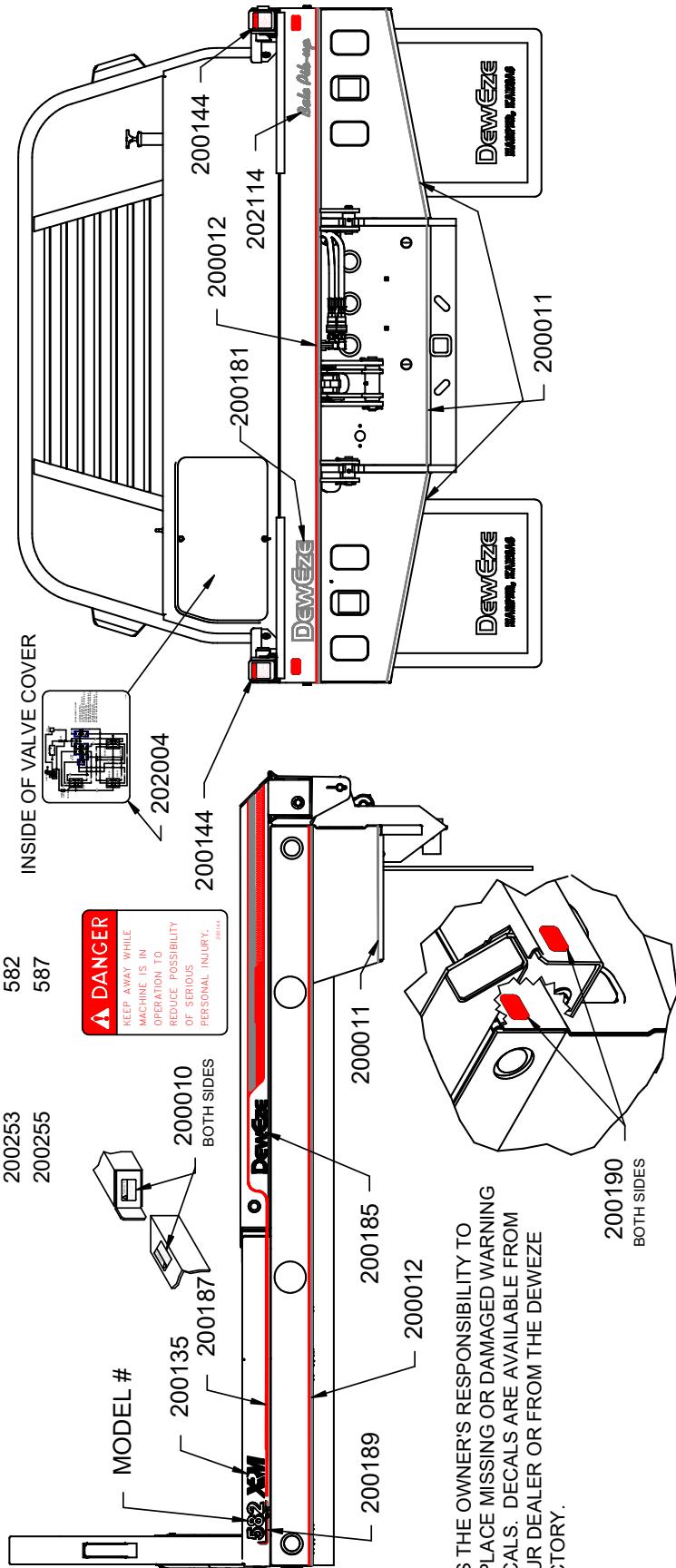
<u>FORD</u>	232046 HARNESS, TAILLIGHTS, FORD BOX-DELETE, 1999+
	232047 HARNESS, TAILLIGHTS, FORD CHASSIS-CAB, 1999+
<u>DODGE</u>	
	232049 HARNESS, TAILLIGHTS, DODGE BOX-DELETE, 2003+

GM 232050 HARNESS, TAILLIGHTS, GM BOX-DELETE, 2002+
 232050 HARNESS, TAILLIGHTS, GM CHASSIS-CAB, 2002+
ALL OTHER TRUCKS

DECALS



PART #	DESCRIPTION	PART #	QTY	DESCRIPTION
100205	SERIAL NUMBER PLATE	200010	4	DANGER DECAL, HORIZONTAL
DECAL KITS		200011	--	SILVER PINSTRIPE
200211	400 SERIES	200012	--	RED/SILVER PINSTRIPE
200140	400 SERIES XRM	200135	2	XRM DECAL
205001	500 SERIES	202114	1	BALE PIK-UP, SILVER SCRIPT
205002	500 SERIES XRM	200144	2	DANGER DECAL, VERTICAL
MODEL NUMBER SETS		200181	1	DEWEZE, SILVER
200193	470	200185	1	HUGGER ARM DECAL, LT-RT STRIPING
200195	475	200187	--	STRIPPING, MODEL #
200197	477	200189	1	REFLECTIVE DECAL
200199	478	200190	4	DECAL, SWITCH IDENTIFICATION
200201	480	202003	1	DECAL, RF SCHEMATIC
200203	482	202004	1	FEMA DECAL
200205	485	300002	1	



IT IS THE OWNER'S RESPONSIBILITY TO
REPLACE MISSING OR DAMAGED WARNING
DECALS. DECALS ARE AVAILABLE FROM
YOUR DEALER OR FROM THE DEWEZE
FACTORY.

400 & 500 Series Decals



200135

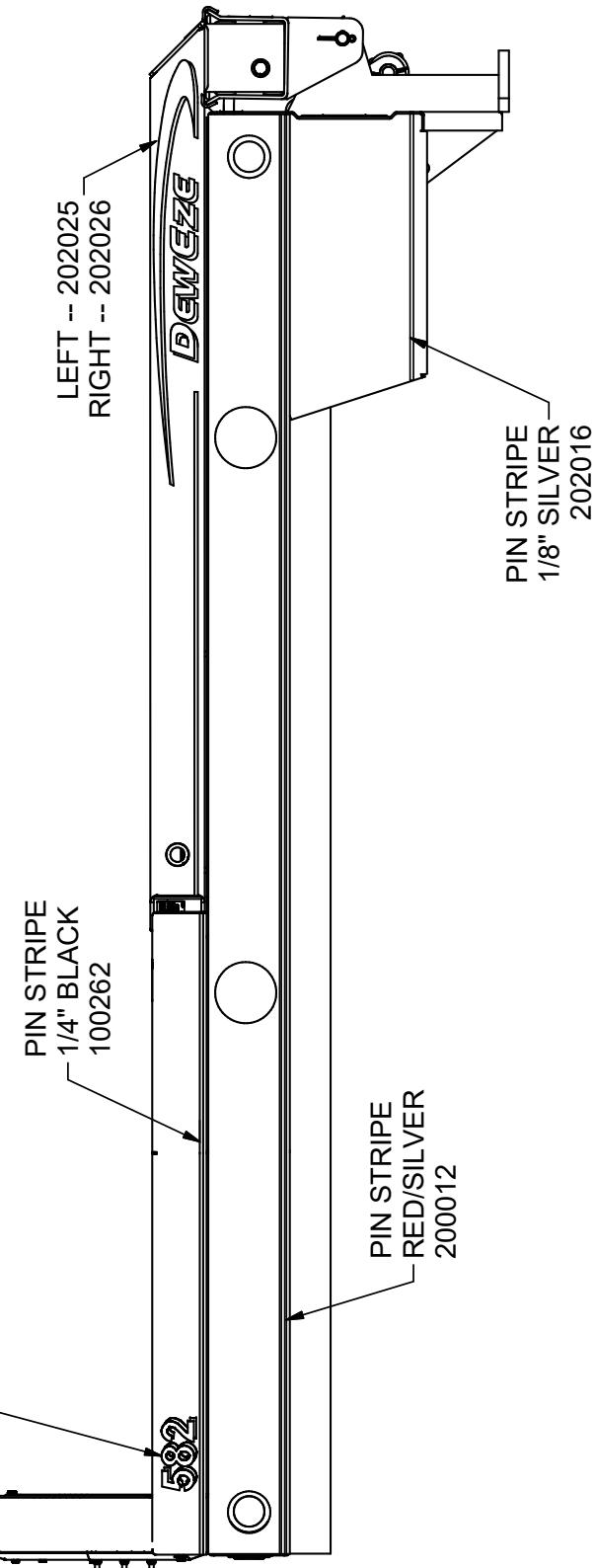
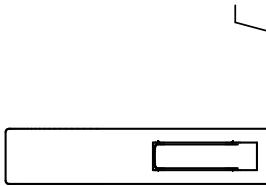
SSQ
202006



200248

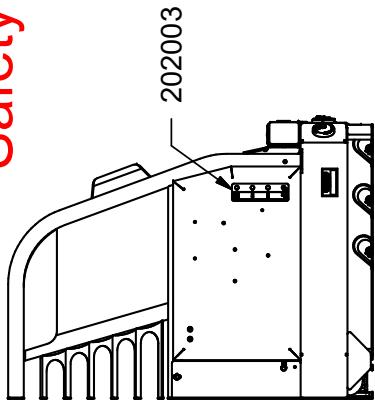
Decal Kit, 4-500 Series Part # 205074		
Part #	Qty	Description
100262	20 ft.	Decal, Striping, .25 Black
200010	4	Decal, Danger Red On White
200012	30	Decal, Red/Silver Stripe-bulk
202114	1	Decal, Bale Pik-up, Warm Silver
200144	2	Decal, Danger Vertical
200181	1	Decal, Deweze Silver Outline
200190	4	Decal, Red Reflector, Rectangle
200216	34 ft.	Decal, 1/8" StripeSilver
200225	1	Decal, Squeeze Arm, Left
200226	1	Decal, Squeeze Arm, Right

Model # Decals		
Left & Right	Part #	Qty
470	200193	2
475	200195	2
477	200197	2
479	202015	2
482	200203	2
484	202013	2
487	200207	2
488	202014	2
578	200252	2
582	200253	2
587	200255	2

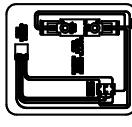


Decals Safety & Operation

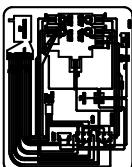
PART #	QTY	DESCRIPTION
2000010	4	DANGER DECAL, HORIZONTAL
202114	1	BALE PIK-UP, SCRIPT, WARM SILVER
200144	2	DANGER DECAL, VERTICAL
202118	1	DEWEZE, OUTLINE, WARM SILVER
200190	6	REFLECTIVE DECAL
202003	1	DECAL, SWITCH IDENTIFICATION
202052	1	DECAL, DOUBLE POPPET VALVE
202053	1	DECAL, WIRING DIAGRAM, KAR-TECH REMOTE
202054	1	DECAL, 3rd BANK OPTION, KAR-TECH REMOTE



INSIDE OF VALVE COVER
2 BANK
3rd BANK



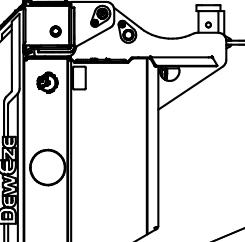
202054



202053

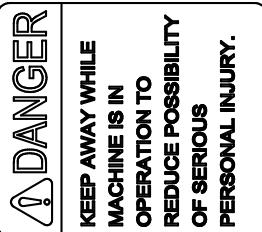
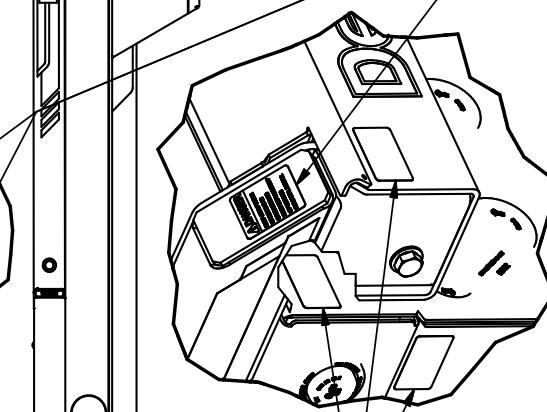
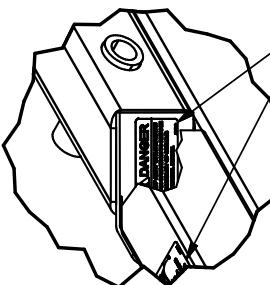


202052



200010
BOTH SIDES
200144

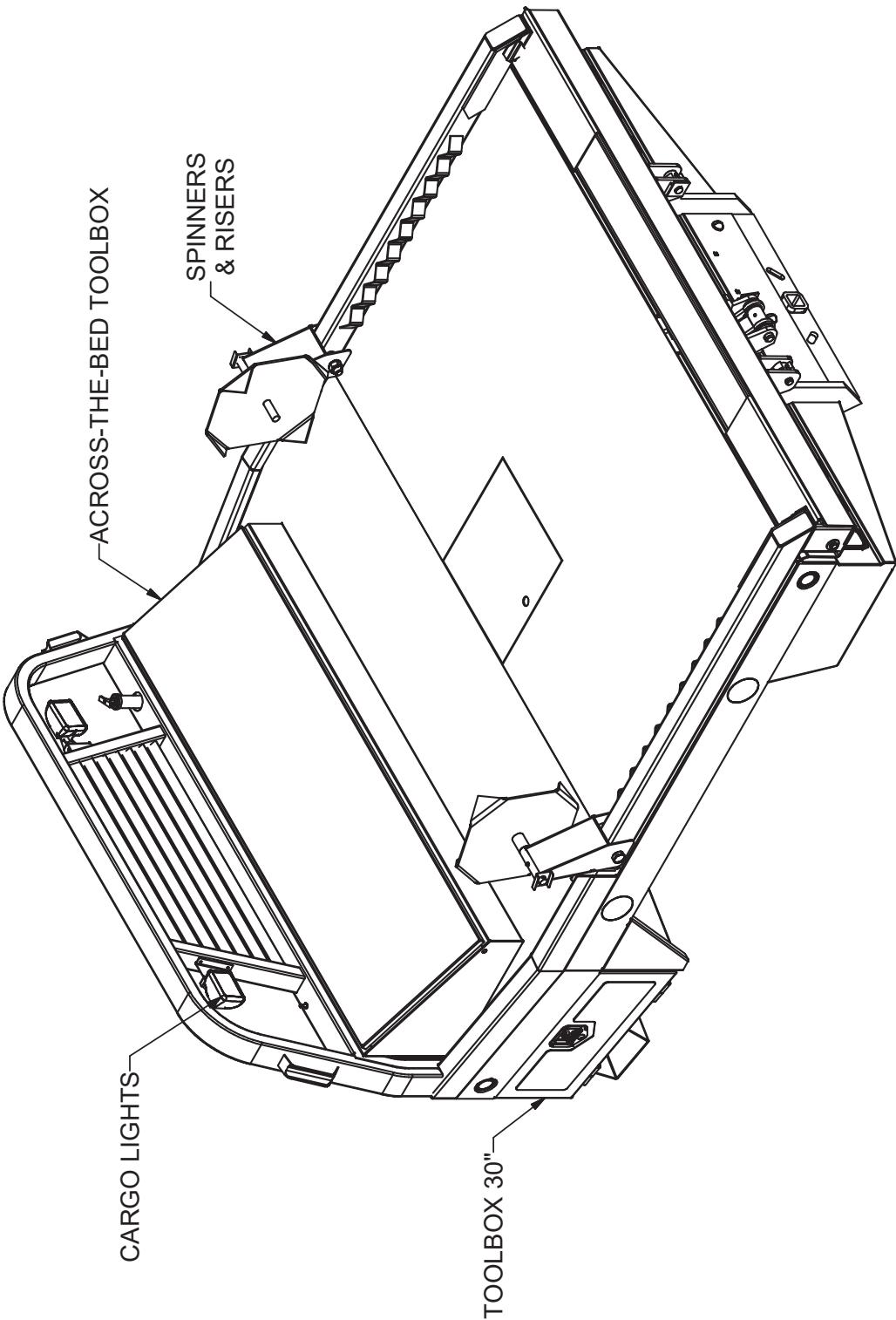
200190



IT IS THE OWNER'S RESPONSIBILITY
TO REPLACE MISSING OR DAMAGED
WARNING DECALS. DECALS ARE
AVAILABLE FROM YOUR DEALER OR
FROM THE DEWEZE FACTORY.

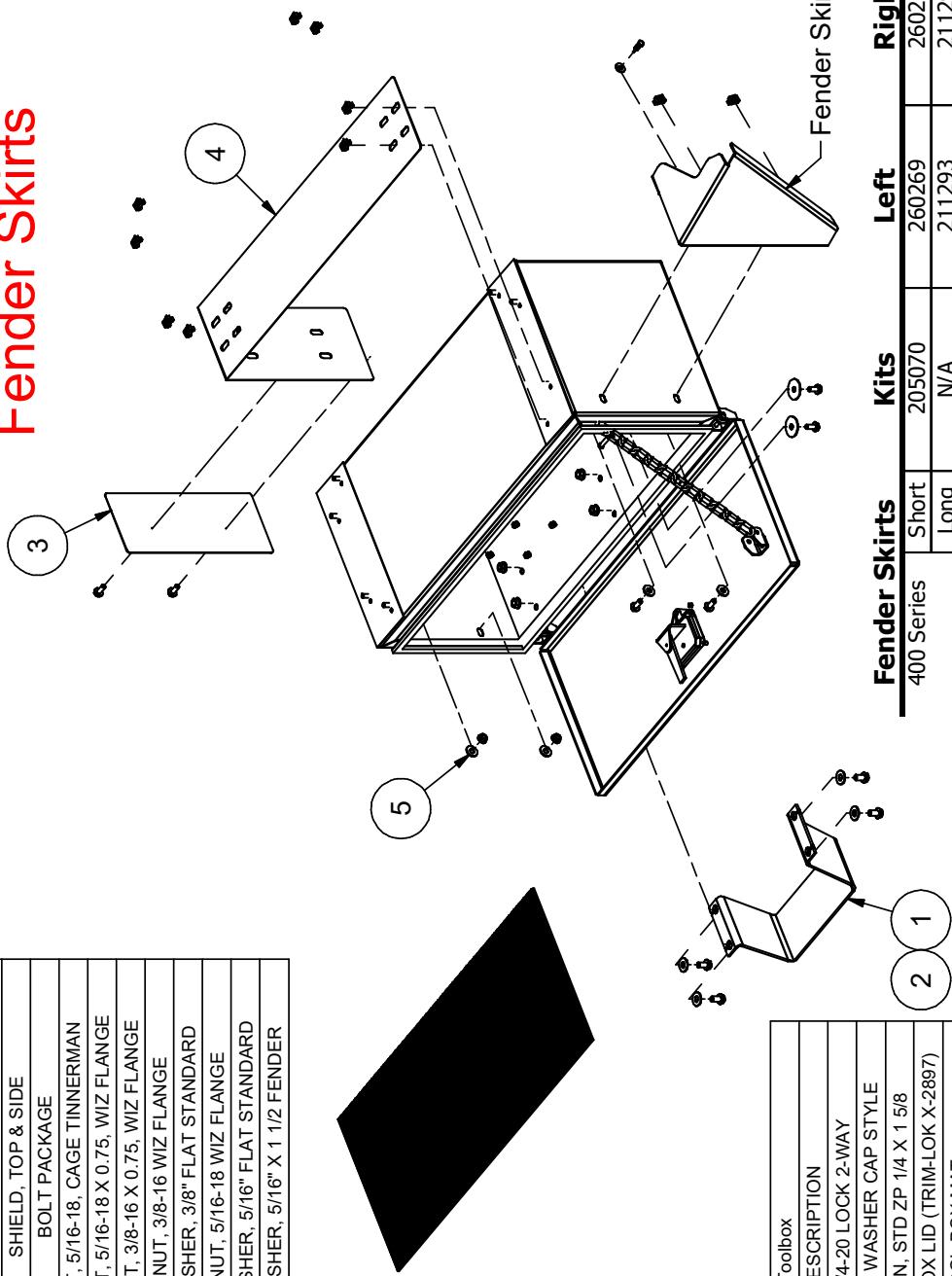
6/29/2021

FLATBED ACCESSORIES



Flatbed Accessories

30" Toolbox Fender Skirts



Toolbox Complete W/Step, Part# 205011		
ITEM	Q'TY	PART #
1	1	211109 STEP, TOOLBOX
2	.7ft	100449 Traction Pad
3	1	202001 DECAL, CHIP GUARD
4	1	211684 SHIELD, TOP & SIDE
5	1	205012 BOLT PACKAGE
10	110258 NUT, 5/16-18, CAGE TINNERMAN	
12	110444 BOLT, 5/16-18 X 0.75, WIZ FLANGE	
4	110437 BOLT, 3/8-16 X 0.75, WIZ FLANGE	
4	110645 NUT, 3/8-16 WIZ FLANGE	
4	110676 WASHER, 3/8" FLAT STANDARD	
2	110606 NUT, 5/16-18 WIZ FLANGE	
4	110665 WASHER, 5/16" FLAT STANDARD	
8	110049 WASHER, 5/16" X 1 1/2 FENDER	

Service Parts for Toolbox		
Q'TY	PART #	DESCRIPTION
4	110174	NUT, 1/4-20 LOCK 2-WAY
3	112011	PUSH NUT, WASHER CAP STYLE
3	112095	CLEVIS PIN, STD ZP 1/4 X 1 5/8
1	202010	SEAL, TOOLBOX LID (TRIM-LOK X-2897)
1	211119	TOOL BOX MAT
2	212003	Gasket, Toolbox Mount use DK111 Foam
1	212017	Latch, Toolbox w/Studs, Key & Gasket
1	212015	Gasket, Toolbox Latch
1	212016	Key, Toolbox Latch
1	205014	Door, Toolbox, Service Part

Fender Skirts	Kits	Left	Right
400 Series	Short	205070	260269
	Long	N/A	211293
500 Series	Short	205071	260271
	Long	N/A	211587
600 Series	Short	205070	260269
	Long	205072	260273
700 Series	Short	205071	260271
	Long	205073	260275

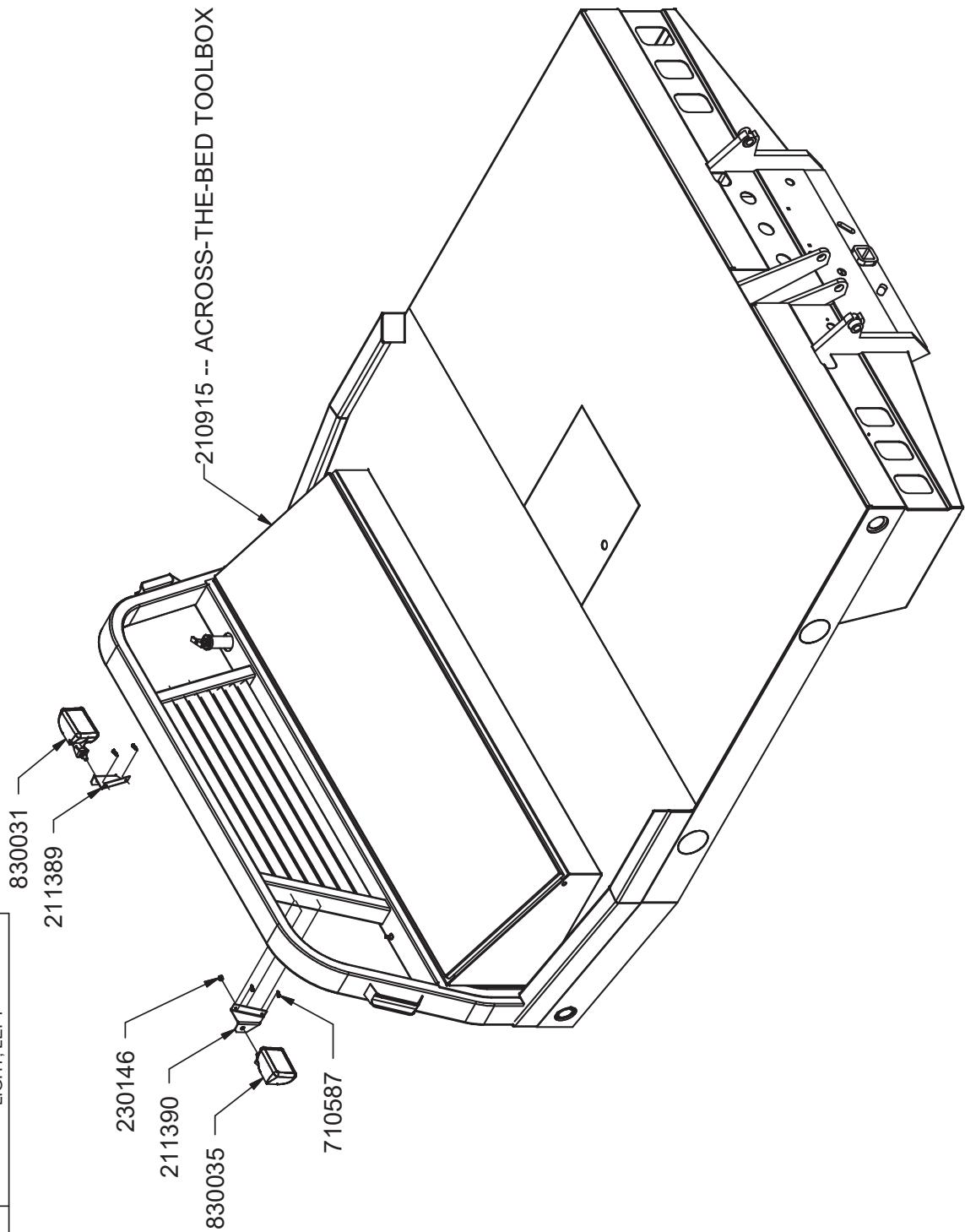
7/19/2023

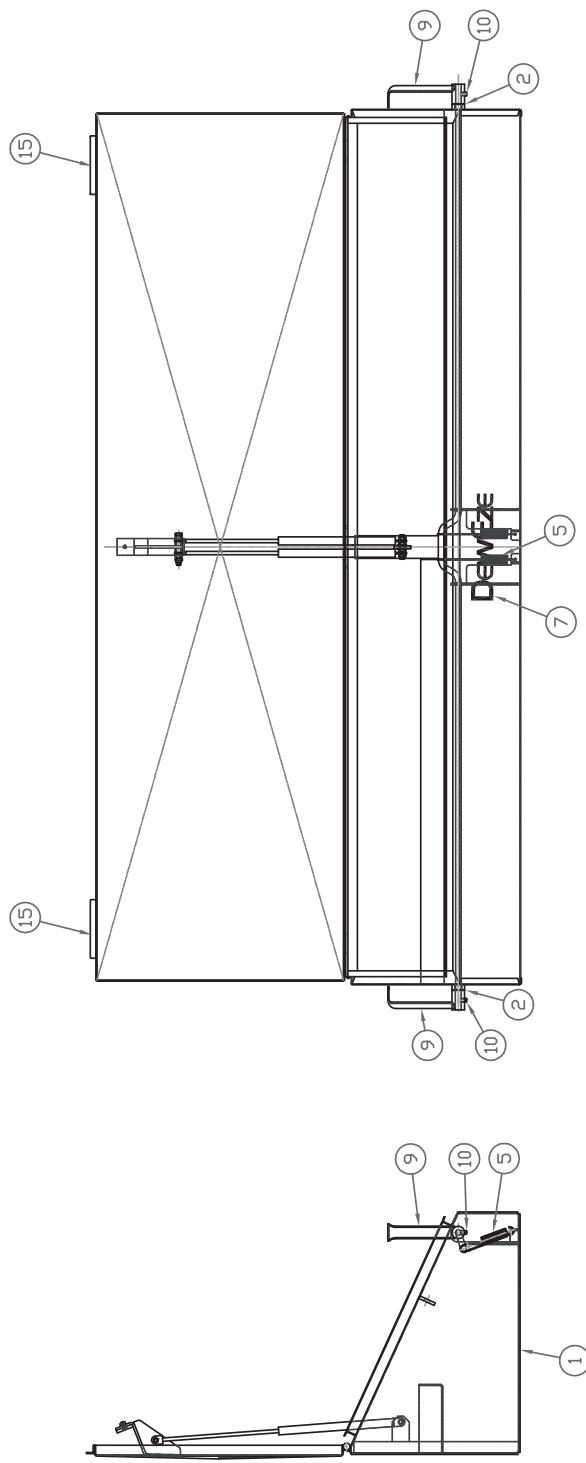
FLATBED ACCESSORIES

CARGO LIGHTS &

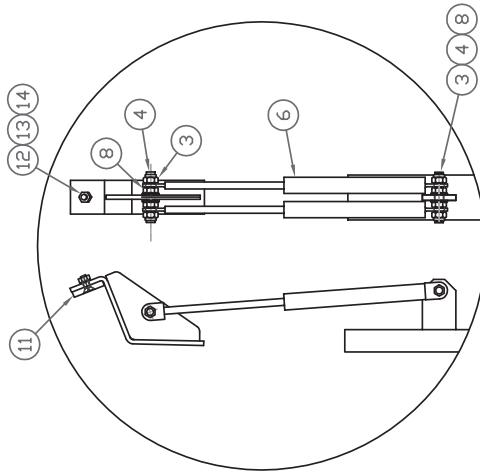
ACROSS THE BED TOOLBOX

CARGO LIGHT ASSY, PART#211391		
PART #	QUANTITY	DESCRIPTION
211389	1	LIGHT BRACKET, RIGHT
211390	1	LIGHT BRACKET, LEFT
230146	1	GROMMET, 3/16 ID X 9/16 OD
710587	4	SCREW, 3/16 X .75 TEK SELF-TAP
830031	1	LIGHT, RIGHT
830035	1	LIGHT, LEFT





ITEM QTY	NUMBER	DESCRIPTION
1	210914	TOOL BOX WA
2	211132	FLANGE BEARING/OUTER
3	110618	NUT .375-16 LOCK NUT
4	210908	ALL THREAD
5	211134	SPRING
6	500078	GAS SHOCK
7	400010	DEWEZE DECAL - WHITE
8	110645	NUT .375-16 WIZ NUT
9	2	HANDLE WELD ASSY
10	2	5/16-18 X 5/16 SET SCREW
11	1	211138
12	1	WEAR PAD/PLASTIC
13	1	110238
14	1	1/4-20 X .75 FLAT C/SUNK SCREW
		1/4-20 X .75 FLAT C/SUNK SCREW
		1/4 LOCK WASHER
		1/4-20 NUT



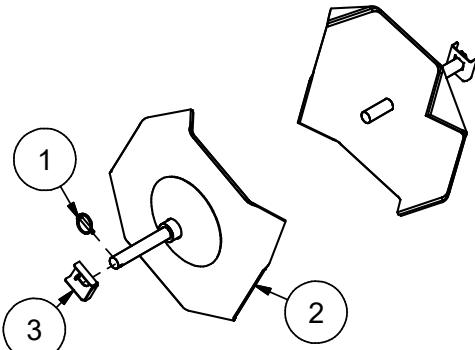
DETAIL SCALE 2:1

Flatbed Accessories

Spinners & Risers

Spinner Assy 16" Pair, Part# 210008

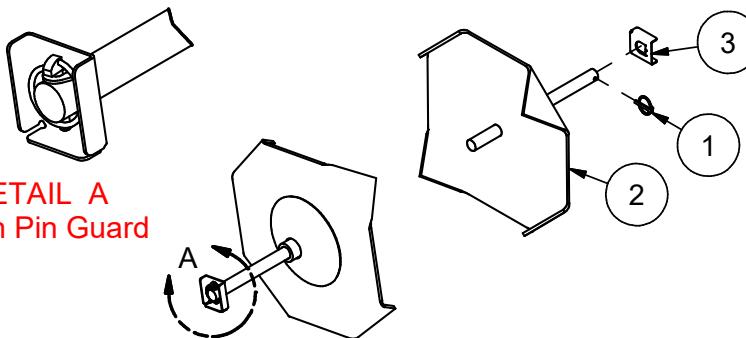
ITEM	QTY	PART #	DESCRIPTION
1	2	210006	Pin, Lynch 1/4 x 1 1/2
2	2	210007	WELDMENT, SPINNER 16"
3	2	211513	LYNCH PIN GUARD



DETAIL A
Lynch Pin Guard

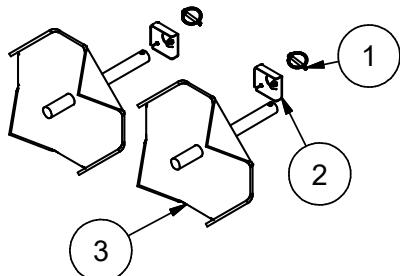
Spinner Assy 16" Pair, XRM, Part #215007

ITEM	QTY	PART #	DESCRIPTION
1	2	210006	Pin, Lynch 1/4 x 1 1/2
2	2	211509	WELDMENT, SPINNER 16" XRM
3	2	211513	LYNCH PIN GUARD



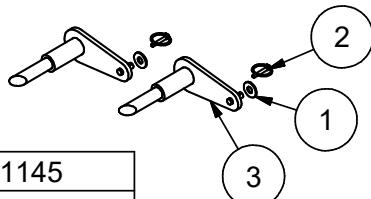
Spinner Assy 12" Pair, Part# 215081

ITEM	QTY	PART #	DESCRIPTION
1	2	210006	Pin, Lynch 1/4 x 1 1/2
2	2	211513	LYNCH PIN GUARD
3	2	215080	WELDMENT, SPINNER 12"



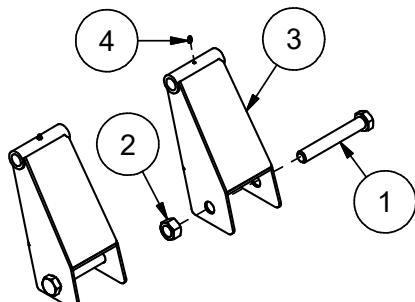
Spinner Extension Pair, Part # 205076

ITEM	QTY	PART #	DESCRIPTION
1	2	110658	Washer, 1/2 Flat
2	2	210006	Pin, Lynch 1/4 x 1 1/2
3	2	215235	Spinner Extension Pin



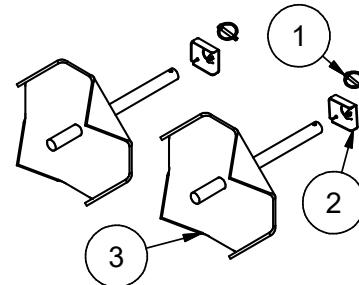
Riser, Offset Pair, Part# 211145

ITEM	QTY	PART #	DESCRIPTION
1	2	110364	BOLT, 1-8 X 7.0
2	2	110601	NUT, 1-8
3	2	211125	RISER WELD ASSY
4	2	510174	GREASE ZERK, 1/4-28 ST



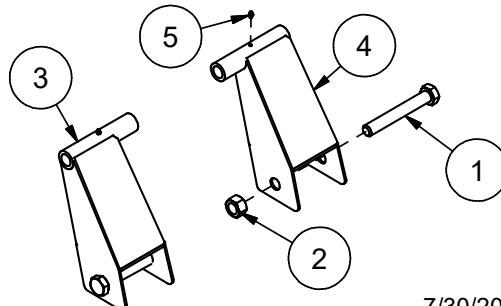
Spinner Assy 12" Pair, XRM, Part# 215234

ITEM	QTY	PART #	DESCRIPTION
1	2	210006	Pin, Lynch 1/4 x 1 1/2
2	2	211513	LYNCH PIN GUARD
3	2	215233	WELDMENT, SPINNER 12" XRM



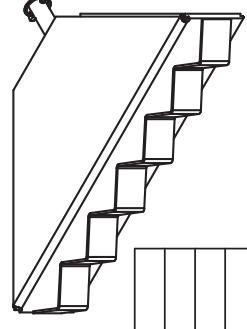
Riser, Offset Pair, XRM, Part# 215006

ITEM	QTY	PART #	DESCRIPTION
1	2	110364	BOLT, 1-8 X 7.0
2	2	110601	NUT, 1-8
3	1	211507	LEFT RISER WELD ASSY
4	1	211508	RIGHT RISER WELD ASSY
5	2	510174	GREASE ZERK, 1/4-28 ST



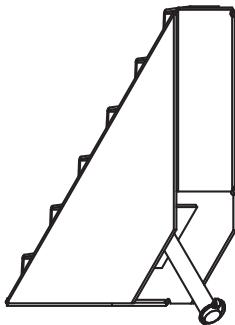
7/30/2013

OTHER ACCESSORIES

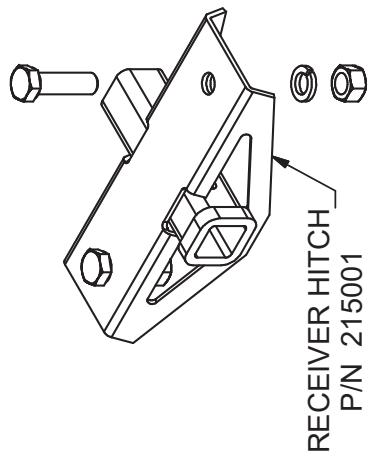


ADAPTER ASSY 210933

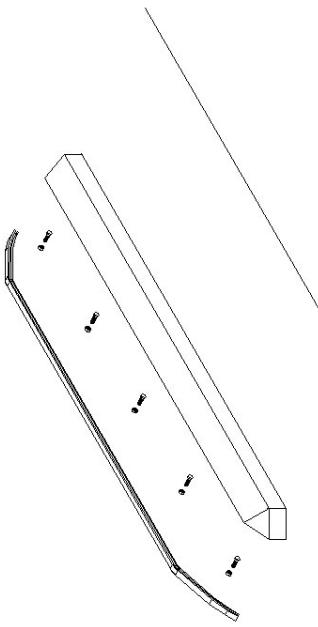
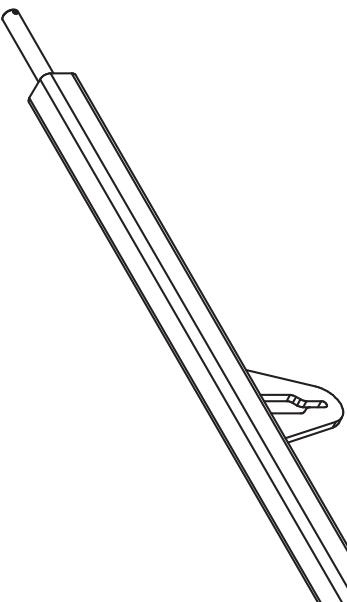
PART #	QTY	DESCRIPTION
210929	2	4' BALE ADAPTER
210006	2	Pin, Lynch 1/4 x 1 1/2



LIFT BAR
P/N 210426



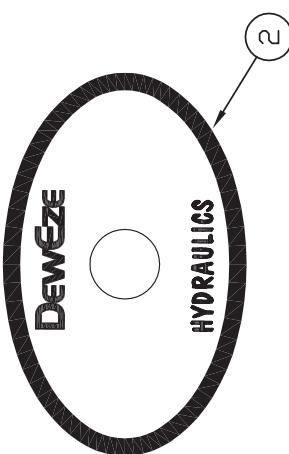
RECEIVER HITCH
P/N 215001



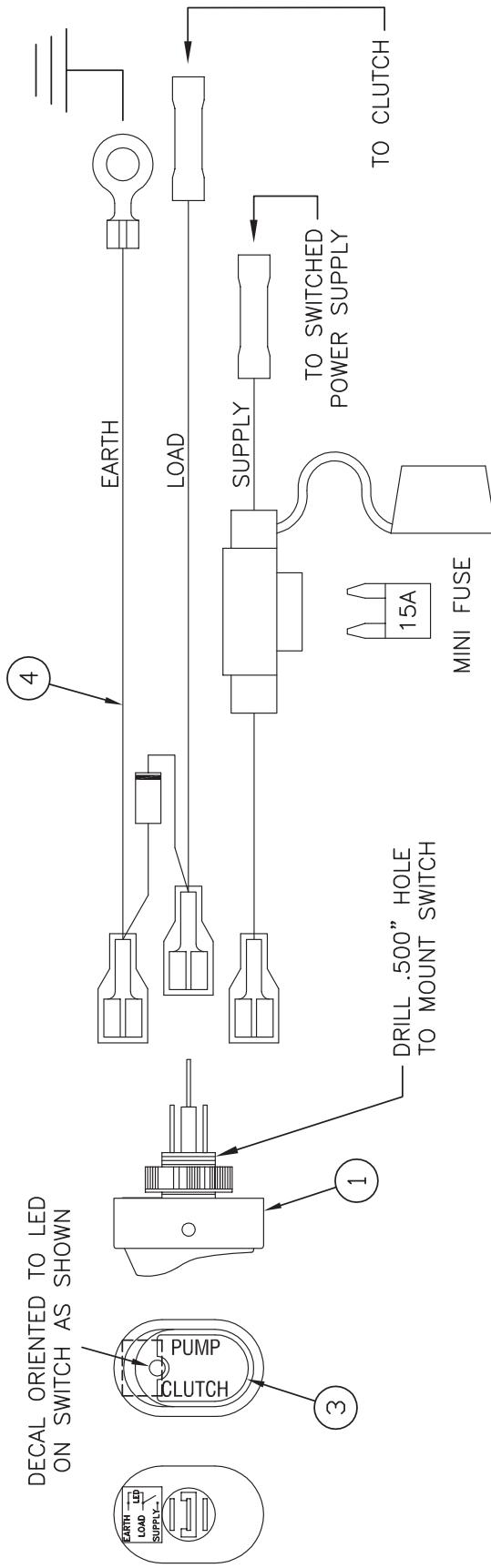
211480 FENDER KIT
211439 FENDER WELDMENT
211481 EDGE TRIM

9/24/03

ITEM	QUAN	PART #	NAME
1	1	132044	SWITCH, SPST ROCKER LED
2	1	702002	DECAL, DEWEZE HYDRAULICS
3	1	702061	DECAL, PUMP CLUTCH
4	1	732002	HARNESS, CLUTCH CONTROL



DECAL ORIENTED TO LED
ON SWITCH AS SHOWN



SWITCH, CLUTCH CONTROL ASSY 735001

HARPER
Deweze
Grainger
HARPER, KANSAS

Front Skirt Toolbox Replacement

215116
Bolt Kit
1ea Required
Per Fenderskirt



260268

Fits Tapered Beds
500 & 700 Series
30" Toolbox
Replacement

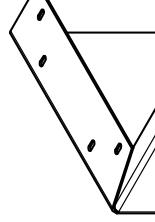


260267

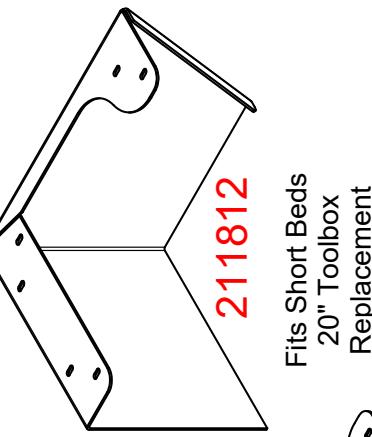


211828

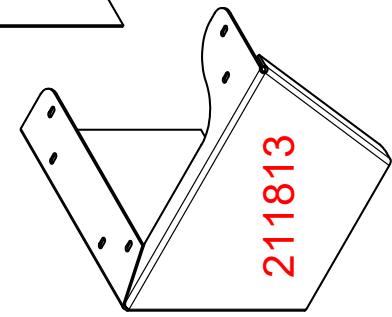
Fits Straight Beds
400 & 600 Series
30" Toolbox
Replacement



211829

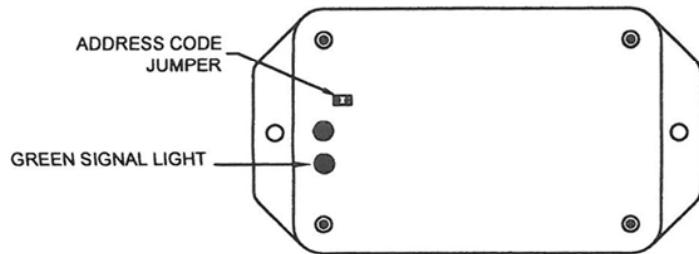


Fits Short Beds
20" Toolbox
Replacement



Appendix I

Remote Control

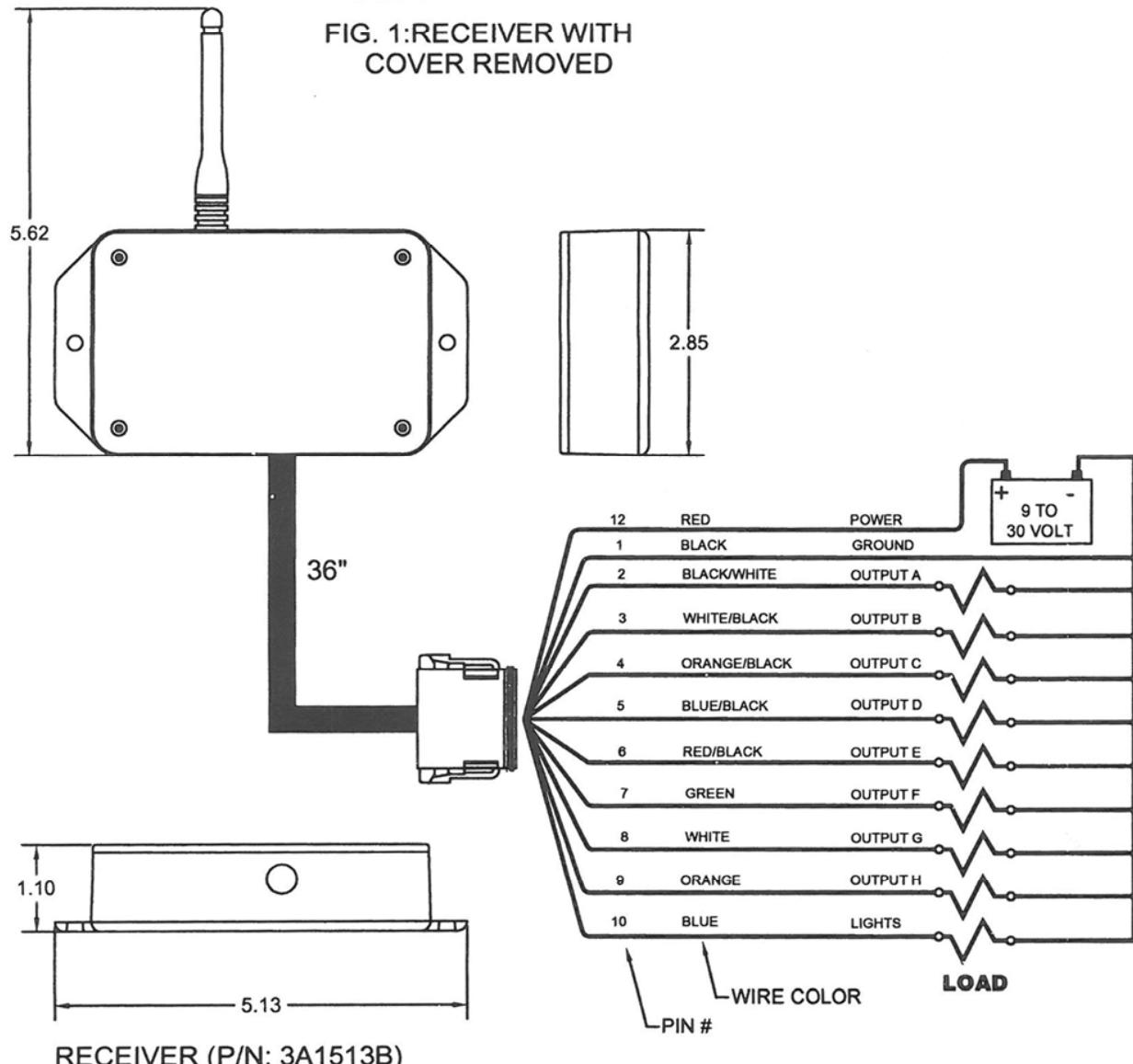


TRANSMITTER ERROR CODE CHART

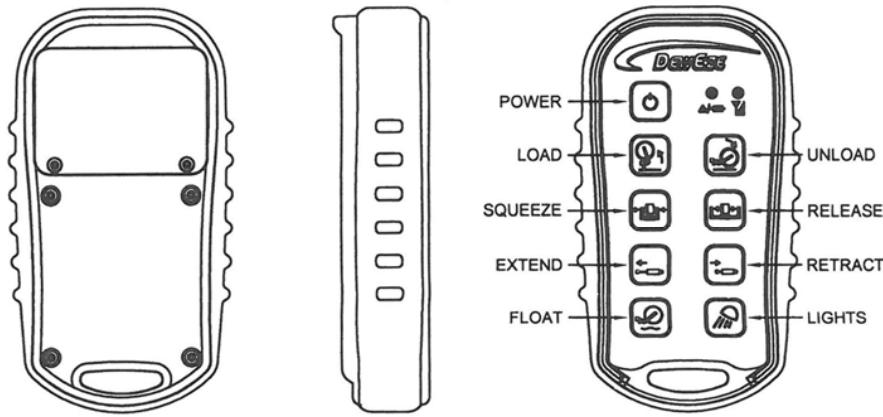
ERROR CODE	PROBABLE CAUSE
1	LOW BATTERY
2	FAULTY CIRCUIT TO OUTPUT A
3	FAULTY CIRCUIT TO OUTPUT B
4	FAULTY CIRCUIT TO OUTPUT C
5	FAULTY CIRCUIT TO OUTPUT D
6	FAULTY CIRCUIT TO OUTPUT E
7	FAULTY CIRCUIT TO OUTPUT F
8	FAULTY CIRCUIT TO OUTPUT G
9	FAULTY CIRCUIT TO OUTPUT H
10	FAULTY CIRCUIT TO LIGHT OUTPUT

ERROR CODE NUMBER IS THE NUMBER OF RED LIGHT BLINKS BETWEEN EVERY PAGE.

FIG. 1: RECEIVER WITH COVER REMOVED



RECEIVER (P/N: 3A1513B)



TRANSMITTER (P/N: 3A1518A)

Uses 2 AA
Alkaline batteries.

SYSTEM OPERATION:

Press and hold the power button on the transmitter until both LEDs turn on, then release. The green LED will flash rapidly when communication has been established. When the receiver is off, the red LED will flash slowly indicating this. With the receiver on, press the corresponding buttons on the transmitter keypad to turn on and off each of the outputs.

INDICATOR LIGHTS:

The transmitter has two LED indicators, the red **BATTERY/DIAGNOSTIC** indicator and the green **TRANSMIT** indicator.

The green **TRANSMIT** indicator flashes rapidly whenever there is communication between the transmitter and the receiver.

The red **BATTERY/DIAGNOSTIC** indicator starts blinking once every second when the battery voltage is low and requires replacement. It also blinks when there is a problem with the system in the form of an error code. Refer to the **ERROR CODE CHART** tables for more information.

Note: To check for low battery, turn the receiver off and leave the transmitter on. If the transmitter red LED continues to blink, the battery is low and requires replacement. If the red LED blinks only when the receiver is on, count the number of blinks and refer to ERROR CODE CHART tables for additional information.

TEACH ID CODE:

To synchronize a new transmitter and receiver together, refer to Fig. 1 and use the following procedure:

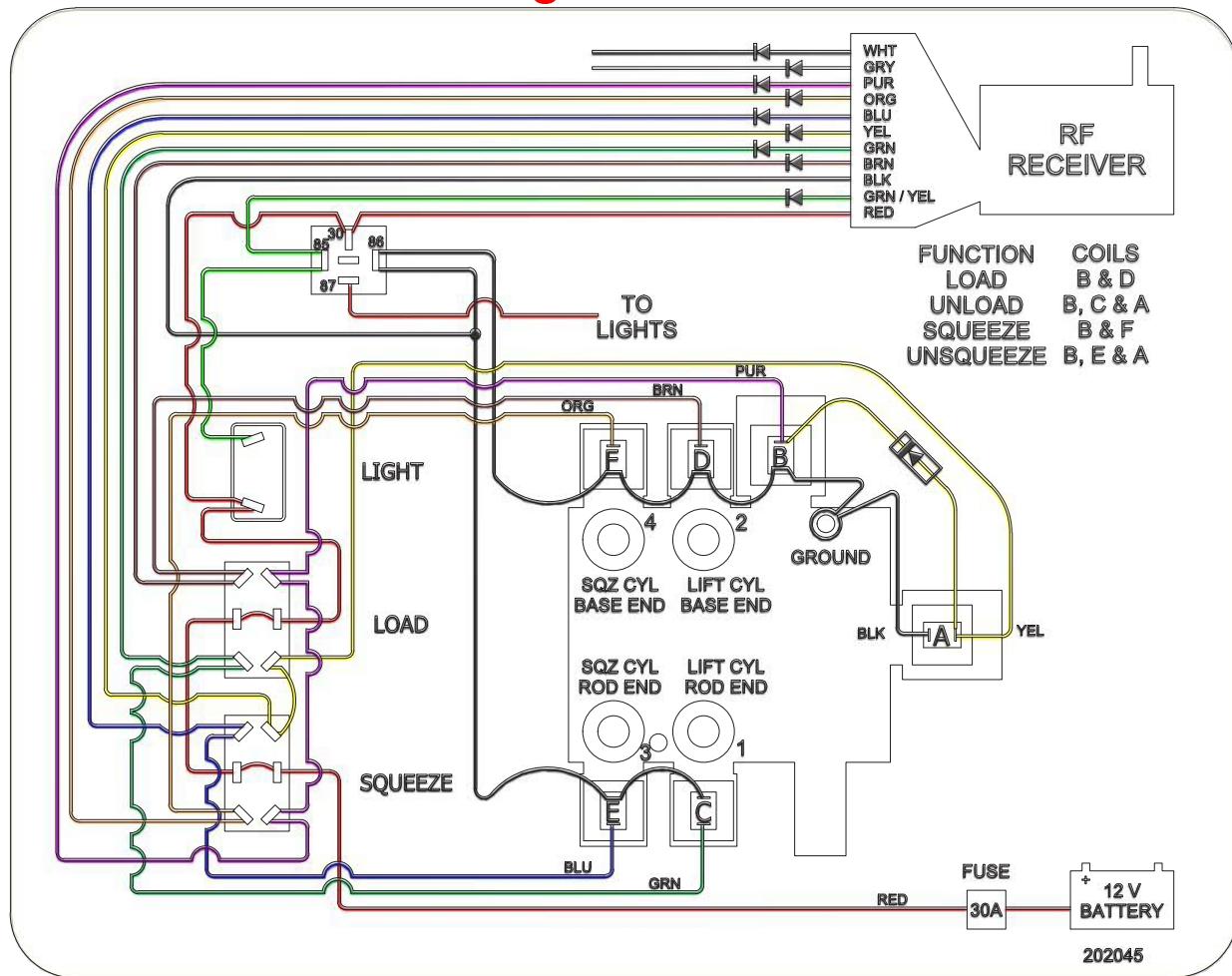
1. Remove receiver cover
2. Apply power to the receiver
3. Place a jumper across the TEACH ID jumper inside the receiver. green LED will go steady inside the receiver. Remove the jumper and store it on one pin
4. To get the transmitter into TEACH ID mode, press and hold the POWER button, UNLOAD and FLOAT
5. Release the POWER button and wait for 1 second or until the green LED goes from steady to blinking in the receiver. Release the other buttons
6. Teach complete
7. Replace the cover on the receiver

SPECIFICATIONS:

RF Transmit power (EIRP): 10 mW
 RF Frequency: 902-928 MHz
 Operating temperature - Radio: -40C to +85C
 Battery life (min): 30 hours continuous.
 Vibration: 3G to 200Hz
 Outputs: 5A max each (20A system max)

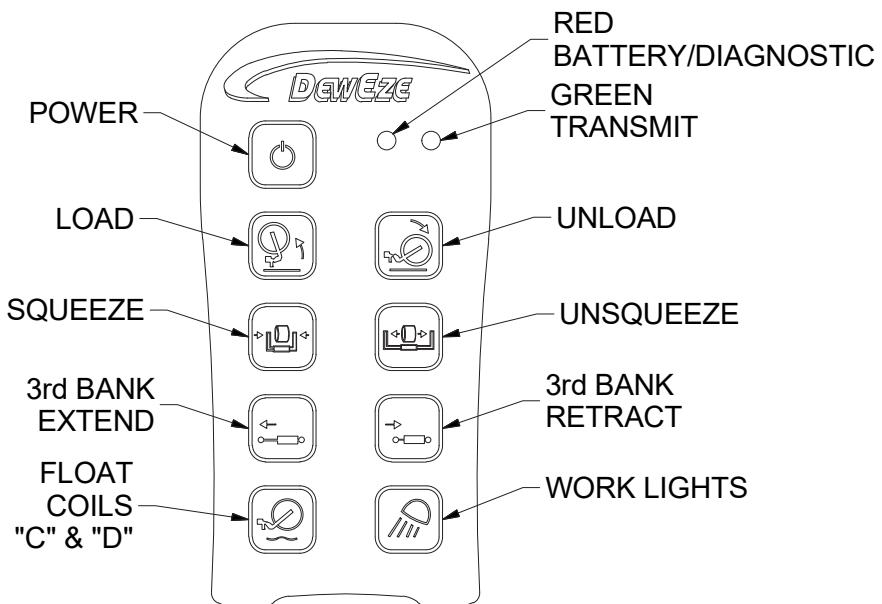
Courtesy of KAR-TECH Delafield, WI

2 Bank Wiring, Kar-Tech Remote

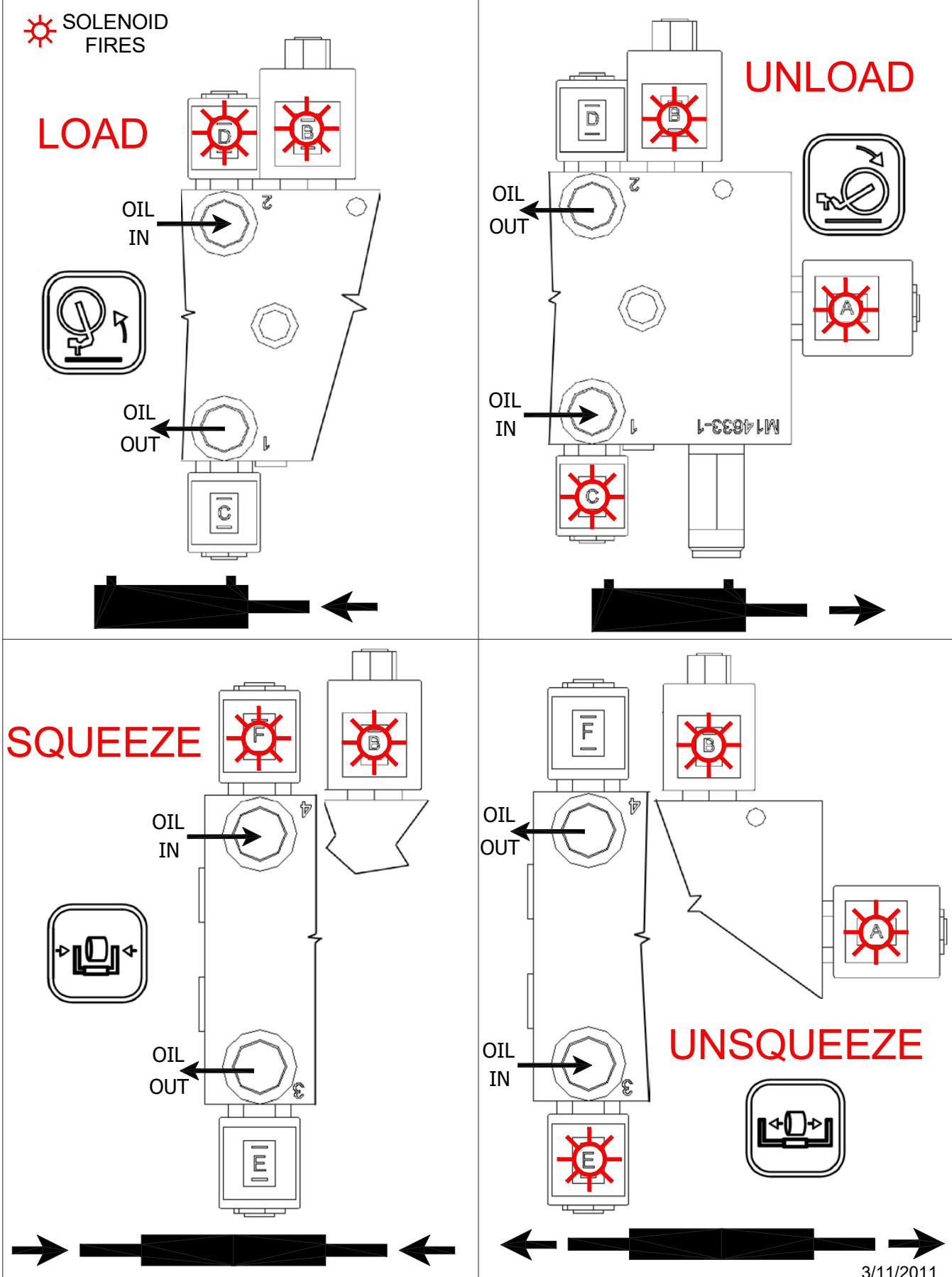


Decal Part# 202045

Harness Part# 232087



3/11/2011



- Wiring for Gen II Valve**
1. Install ground wire 232039 as shown on coils (A,B,C,D,E,F)
 2. Install diode harness 232038 (harness has piggy back connectors) per table 1.
 3. Install harness 150006 from control handle into back of piggy back connectors per table 1.

4. The red wire from harness 150006 goes the supplied fuse. The fuse wire is connected to the + terminal on battery.
5. The black wire from harness 150006 is spliced into the clutch wire.

Connection	232038	150006
A	Green/Blue	
B	Orange	Orange
C	Green/Green	Green
D	Brown	Brown
E	Blue/Blue	Blue
F	Yellow	Yellow
CLUTCH		Black
BATTERY (+)		Red

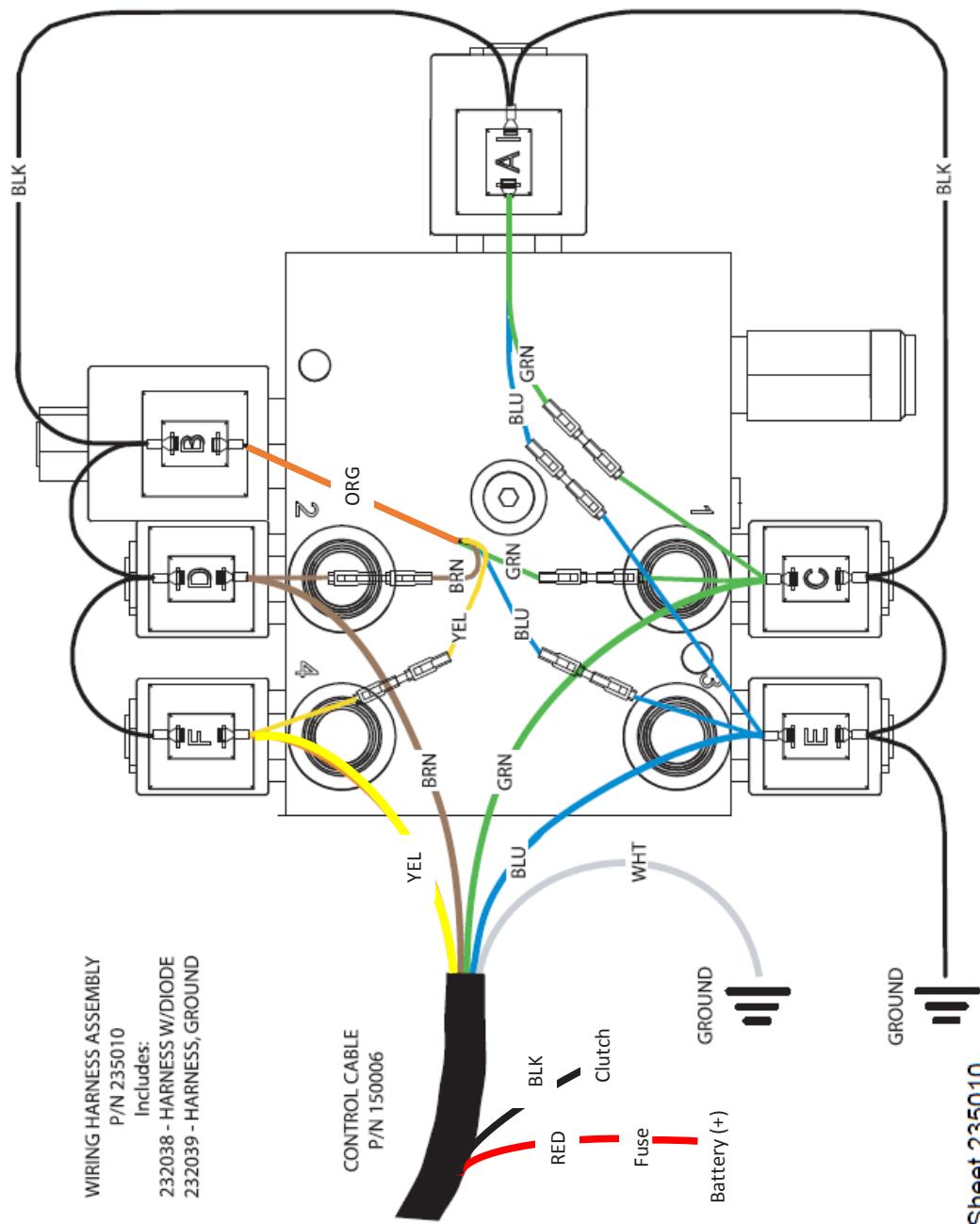
Table 1



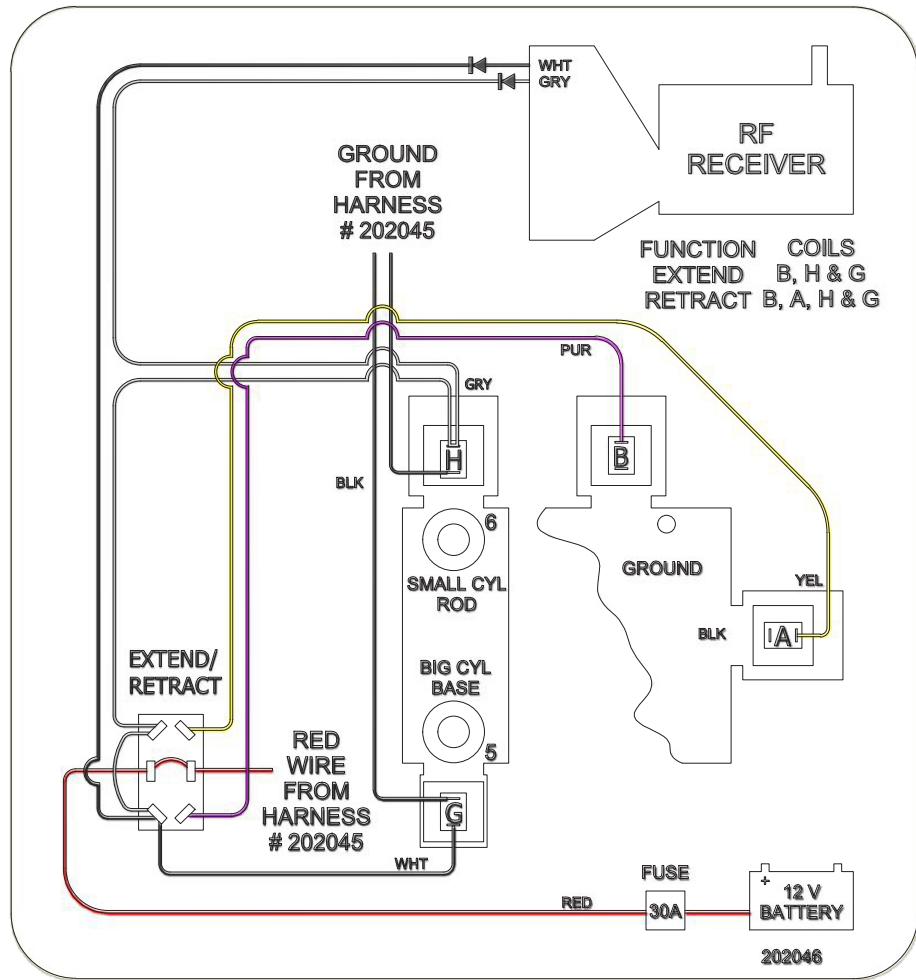
Deweze

WIRING DIAGRAM - GEN II VALVE

MANUAL CONTROL CABLE - WIRING HARNESS WITH DIODES

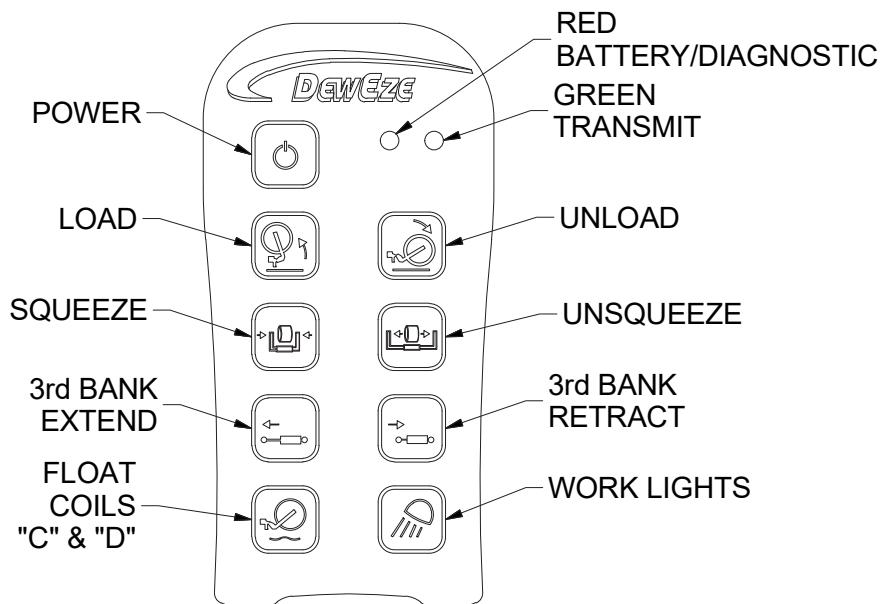


3rd Bank Wiring, Kar-Tech Remote

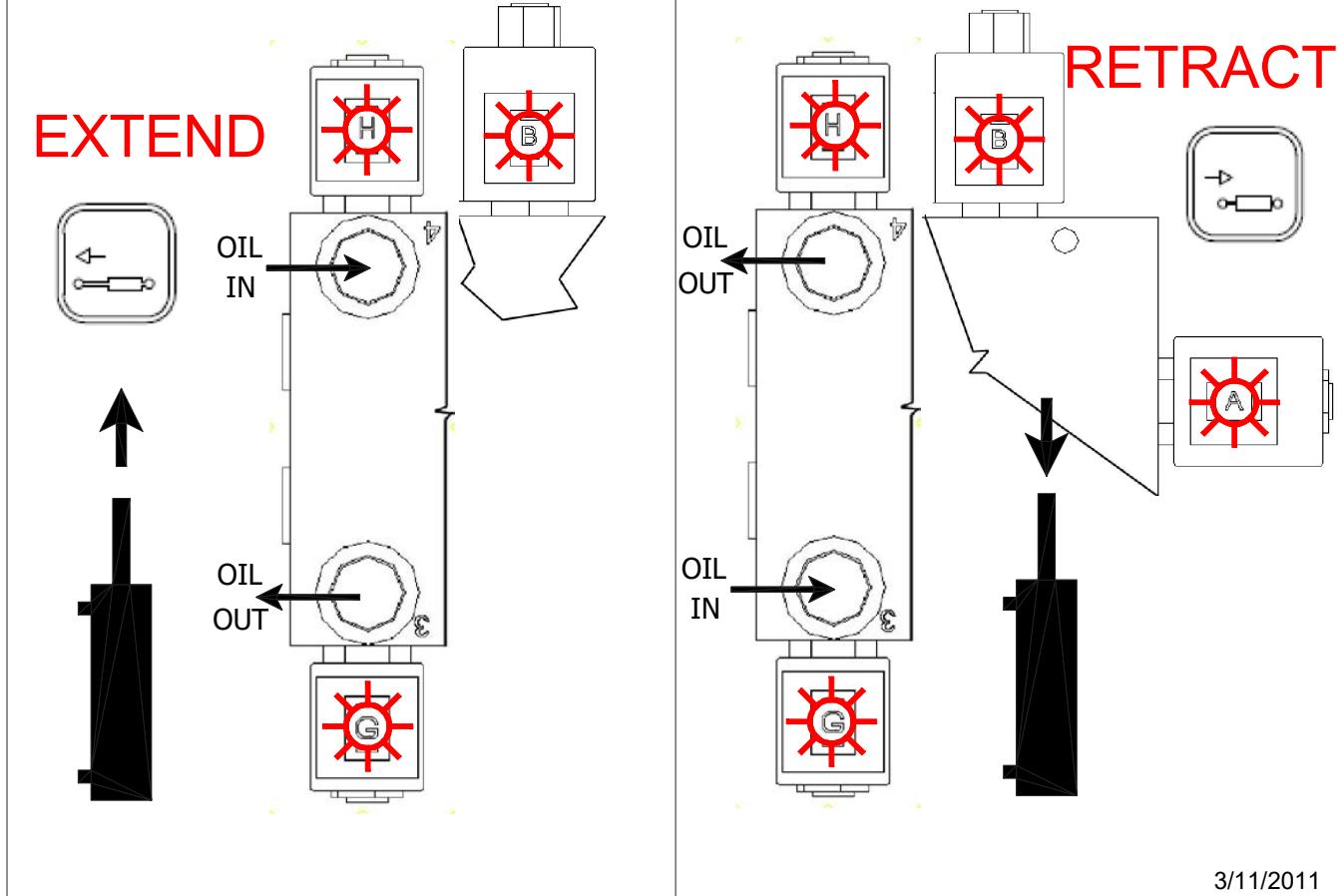
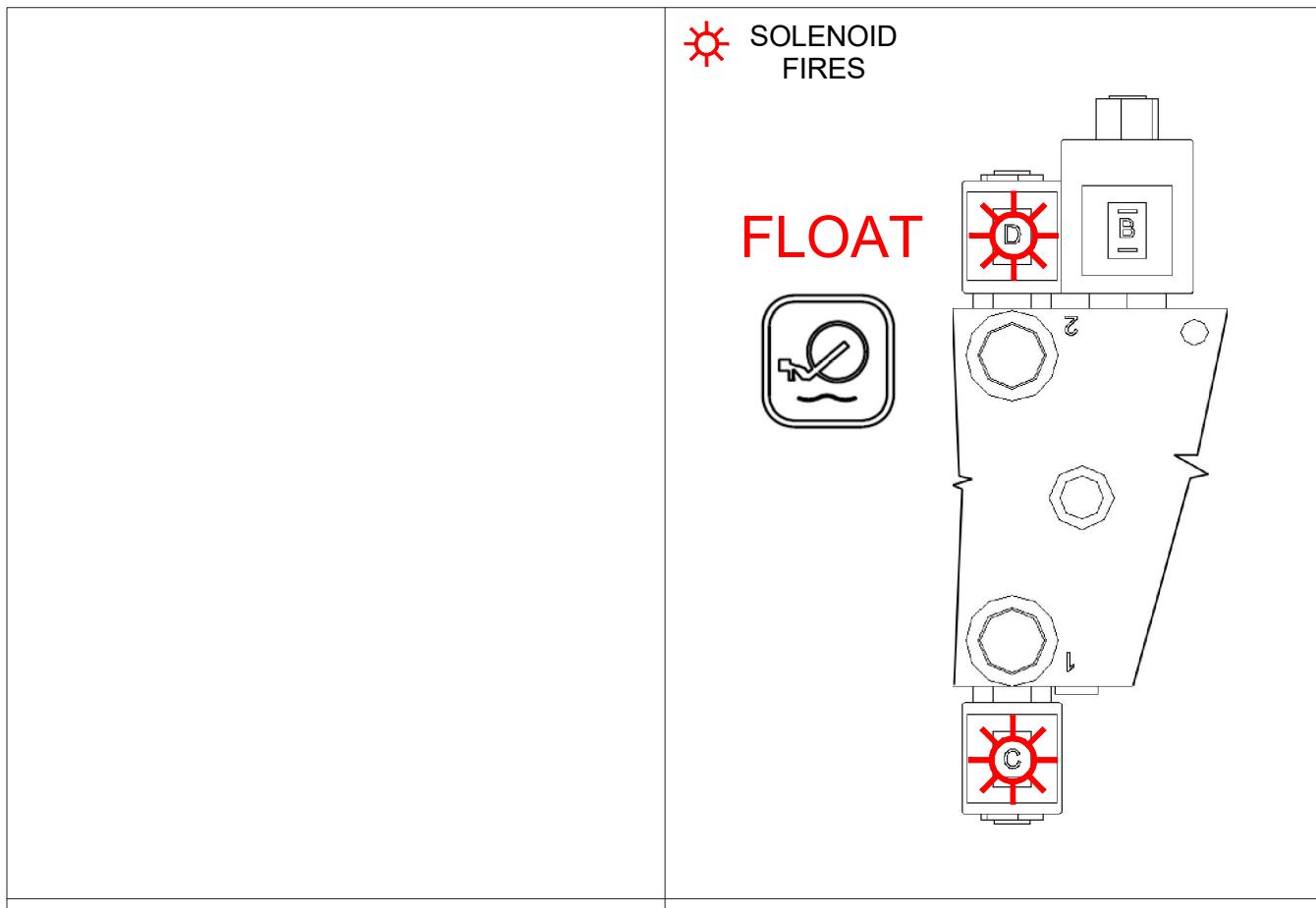


Decal Part# 202046

Harness Part# 232088



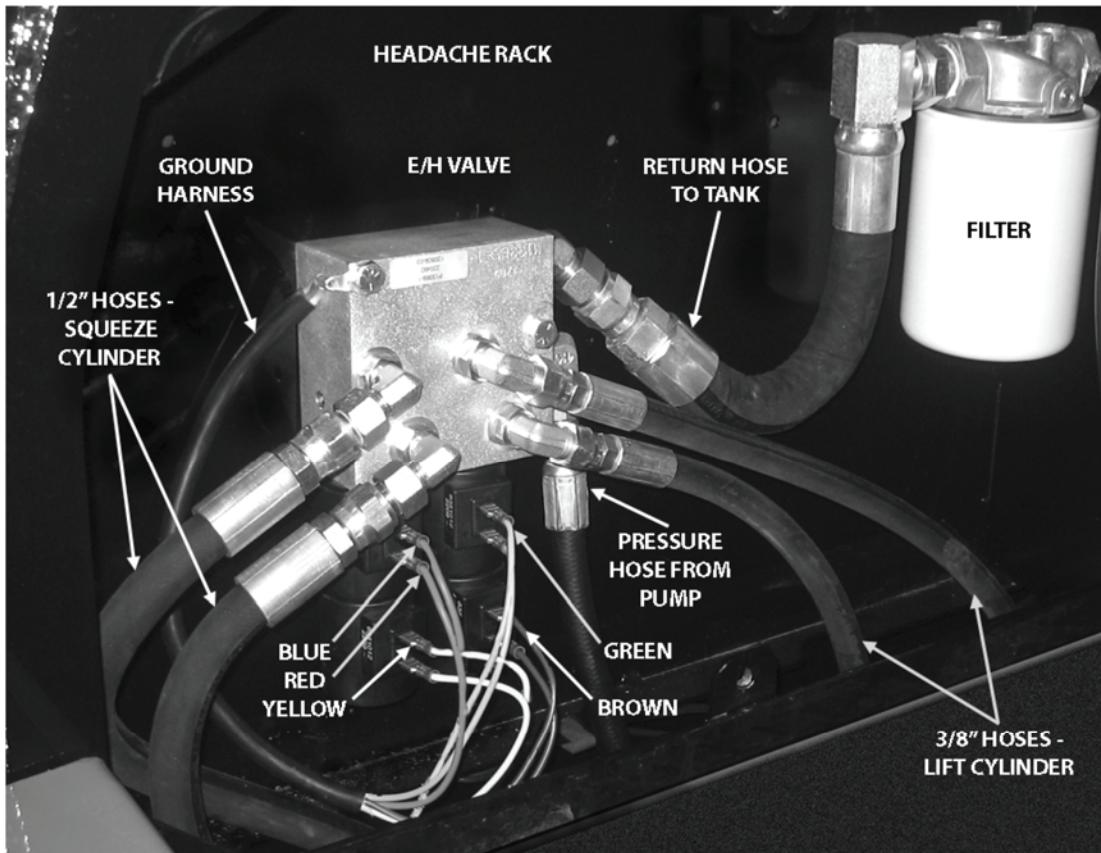
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Appendix II

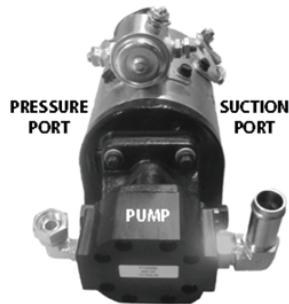
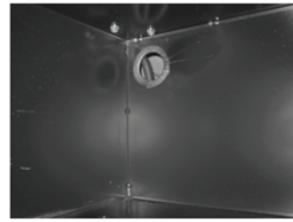
Standard E/H Power Kit

E / H KIT INSTALLATION INSTRUCTIONS

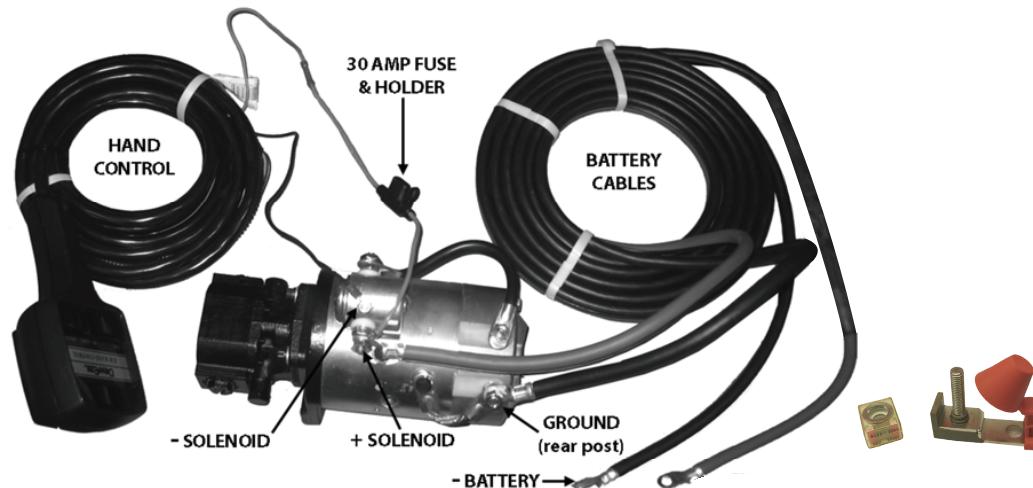
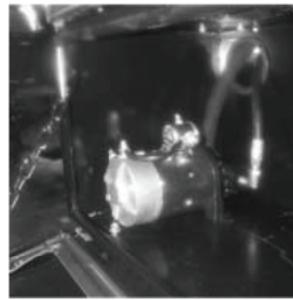


- 1) Attach adapters to E/H valve and install inside cavity on headache rack.
- 2) Attach return hose to valve and filter housing. Attach pressure hose from pump.
- 3) Attach blue and yellow wires from hand control to valve cartridge that controls squeeze cylinder as indicated.
- 4) Attach green and brown wires from hand control to valve cartridge that controls lift cylinder as indicated.
- 5) Attach ground harness to valve coils with similar color wires (yellow, brown and green). Blue and red wires are on same coil.
- 6) Attach 1/2" hoses from squeeze cylinder to side of valve controlled by blue and yellow wires. If hand control does not respond as desired, pioneer couples on rear of bed may be reversed or blue and yellow wires may be reversed.
- 7) Attach 3/8" hoses from lift cylinder side of valve controlled by green and brown wires. If hand control does not respond as desired, green and brown wires may be reversed.

- 8) Use diagram to locate holes in driver's side toolbox.
- 9) Drill 2.5" hole with hole saw and use molding to protect hoses from rough edges.
- 10) Drill 3/8" holes for pump as indicated and bolt pump to inside of toolbox.



- 11) Attach suction hose and pressure hose to pump with adapters provided.
- 12) Attach suction hose to bottom of reservoir as indicated in diagram.
- 13) Attach black wire from hand control to negative terminal on solenoid.

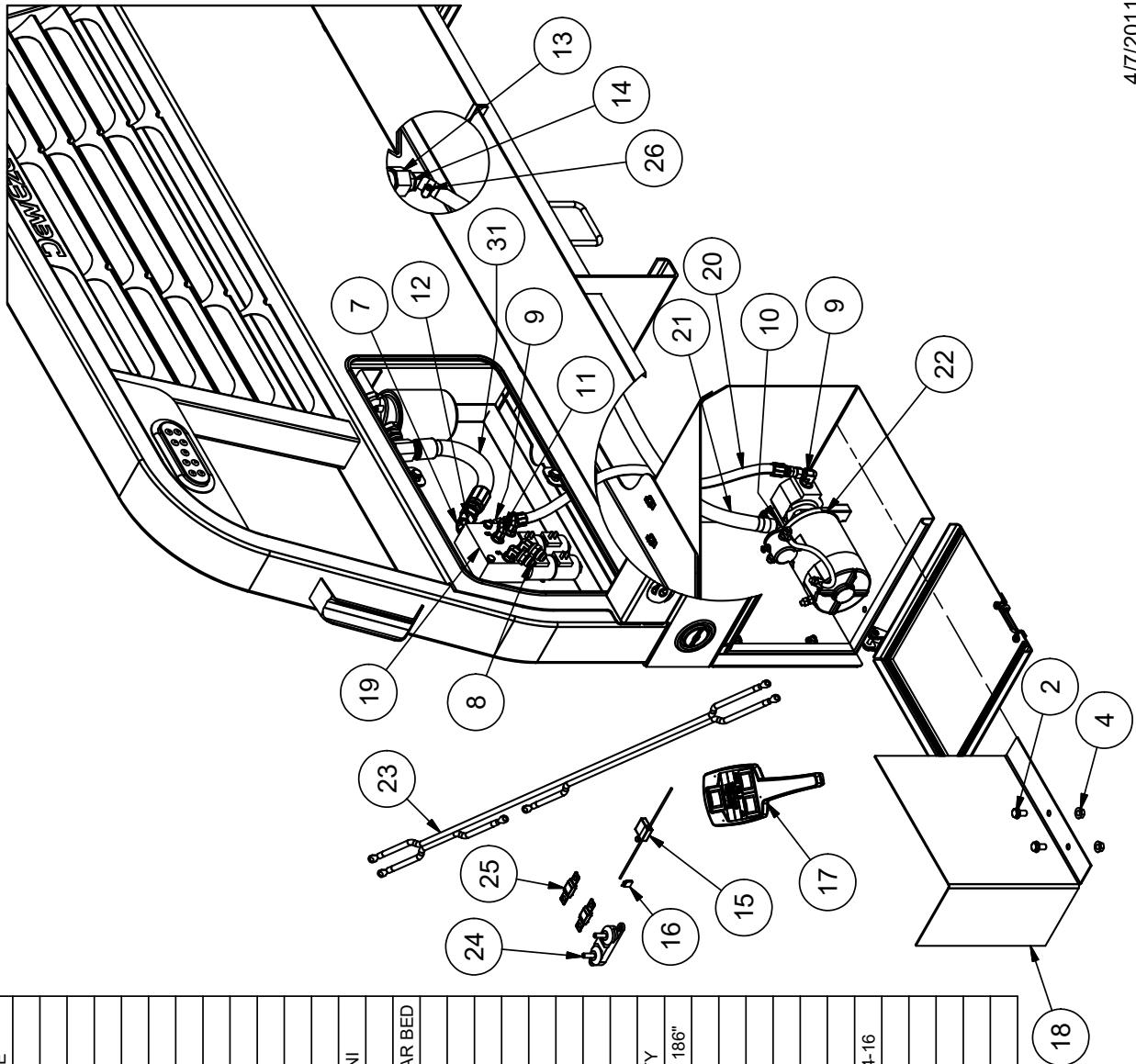


- 14a) Attach 30-amp fuse holder to positive terminal on solenoid and then to red wire from hand control.
- 14b) Attach 30-amp fuse holder to positive terminal on battery, run wire thru switch on dash. Then to red wire on valve harness for wireless remote.
- 15) Run battery cables through hold in toolbox and attach to E/H motor as indicated (black cable to rear post).
- 16) Run battery cables along frame rail and attach black cable to negative terminal on battery.
- 17) Attach 200-amp fuse holder to positive battery terminal.
- 18) Insert 200-amp fuse.
- 19) Attach red cable from E/H ontop of "ice cube" fuse. Install rubber cap.

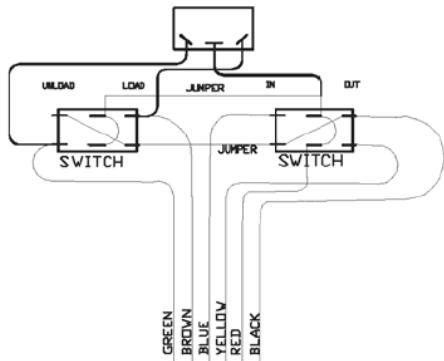


Kit E/H Power, Part# 215005

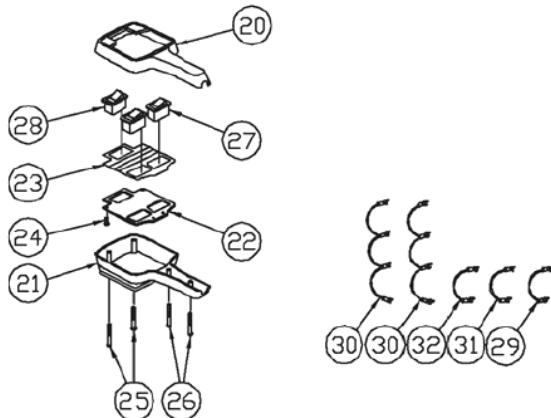
E/H Power Kit



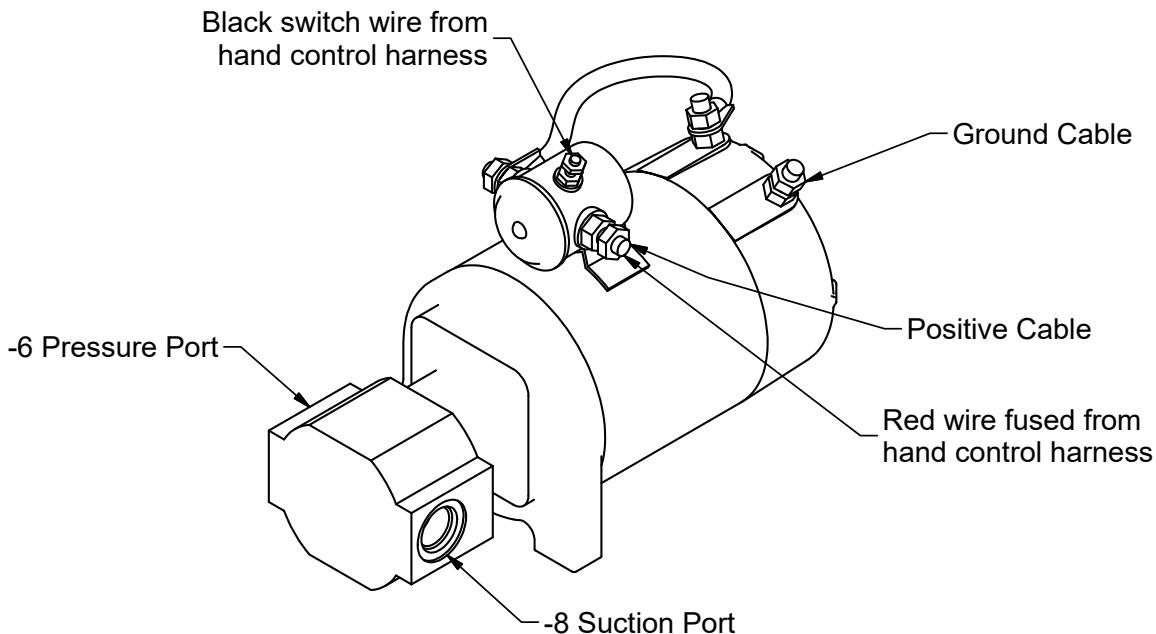
E/H Power Kit



WIRING DIAGRAM
SWITCHES SHOWN FROM BOTTOM



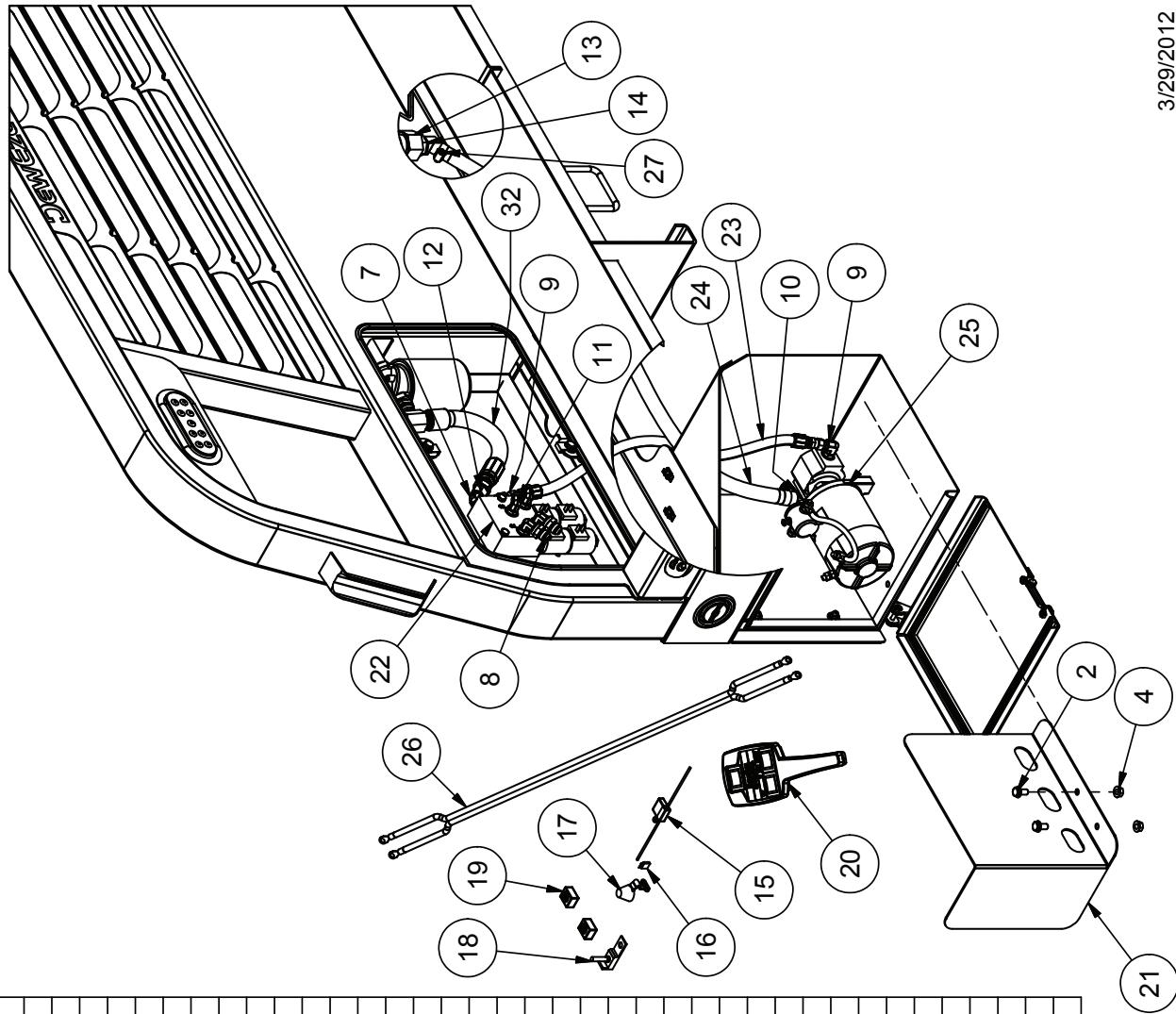
20	150001	TOP HOUSING (1)
21	150003	BOTTOM HOUSING (1)
22	150002	SWITCH PLATE (1)
23	150004	DECAL (1)
24	150013	SCREW (4)
25	150015	SCREW (2)
26	150014	SCREW (2)
27	130029	SWITCH DPDT (2)
28	130002	MOMENTARY SWITCH (1)
29	150029	JUMPER WIRE/HOT (1)
30	150030	JUMPER WIRE/HOT (2)
31	150031	JUMPER WIRE/GRN. (1)
32	150032	JUMPER WIRE/BRN. (1)



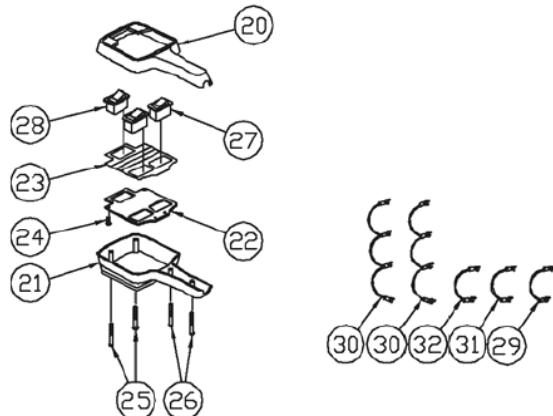
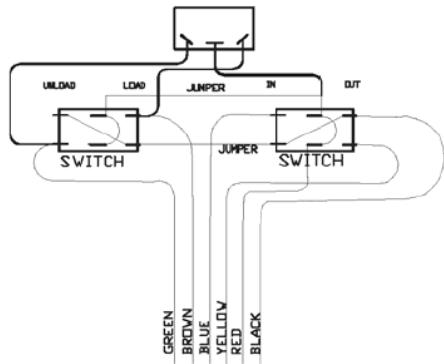
4/7/2011

Kit E/H Power, Part# 215005

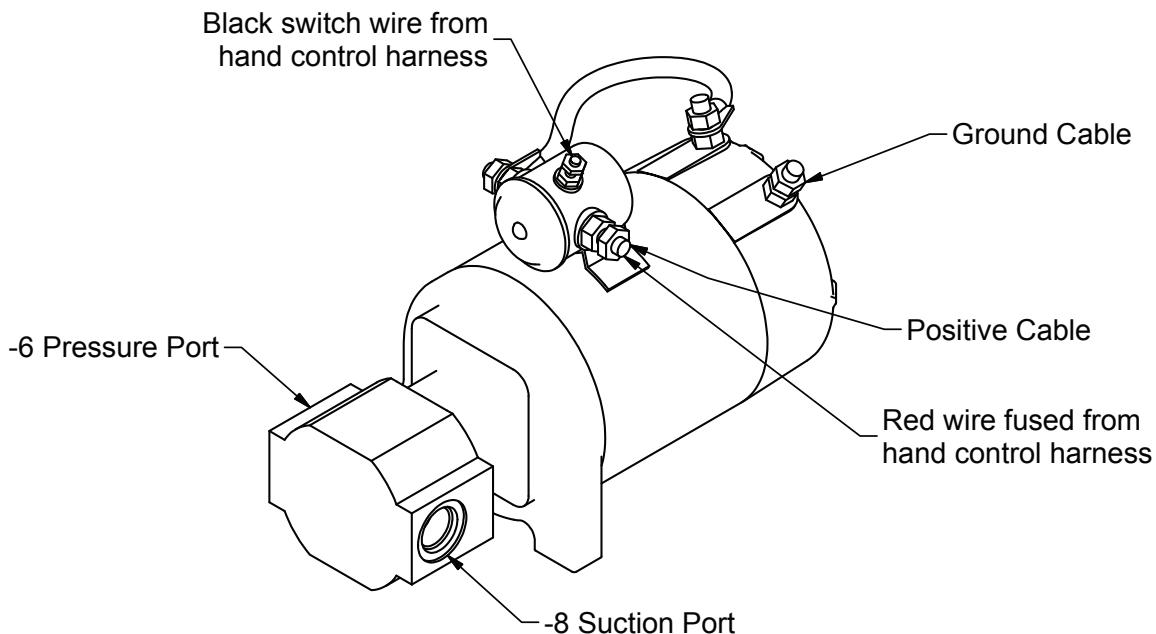
E/H Power Kit



E/H Power Kit

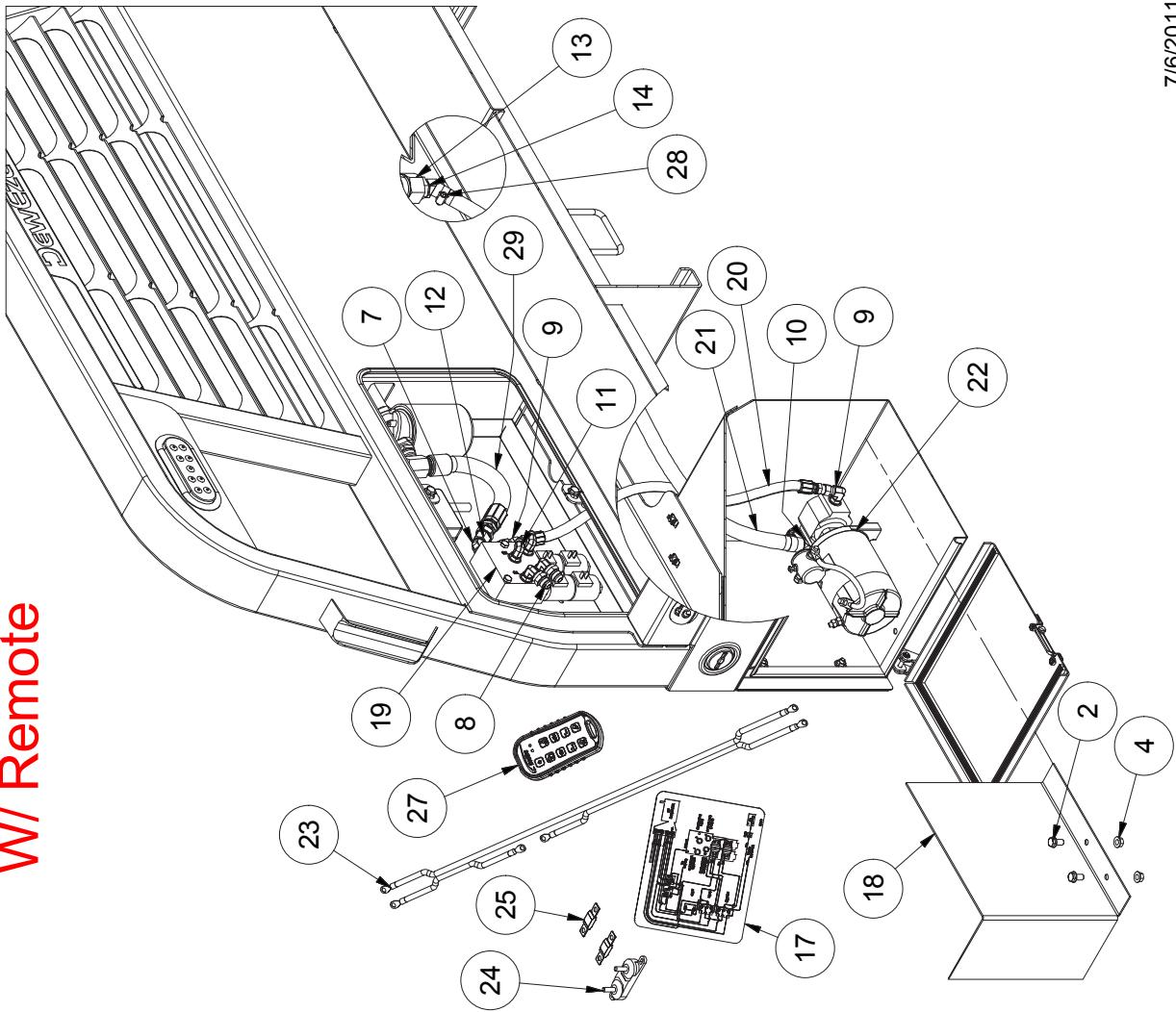


20	150001	TOP HOUSING (1)
21	150003	BOTTOM HOUSING (1)
22	150002	SWITCH PLATE (1)
23	150004	DECAL (1)
24	150013	SCREW (4)
25	150015	SCREW (2)
26	150014	SCREW (2)
27	130029	SWITCH DPDT (2)
28	130002	MOMENTARY SWITCH (1)
29	150029	JUMPER WIRE/HOT (1)
30	150030	JUMPER WIRE/HOT (2)
31	150031	JUMPER WIRE/GRN. (1)
32	150032	JUMPER WIRE/BRN. (1)



3/29/2012

E/H Power Kit W/ Remote

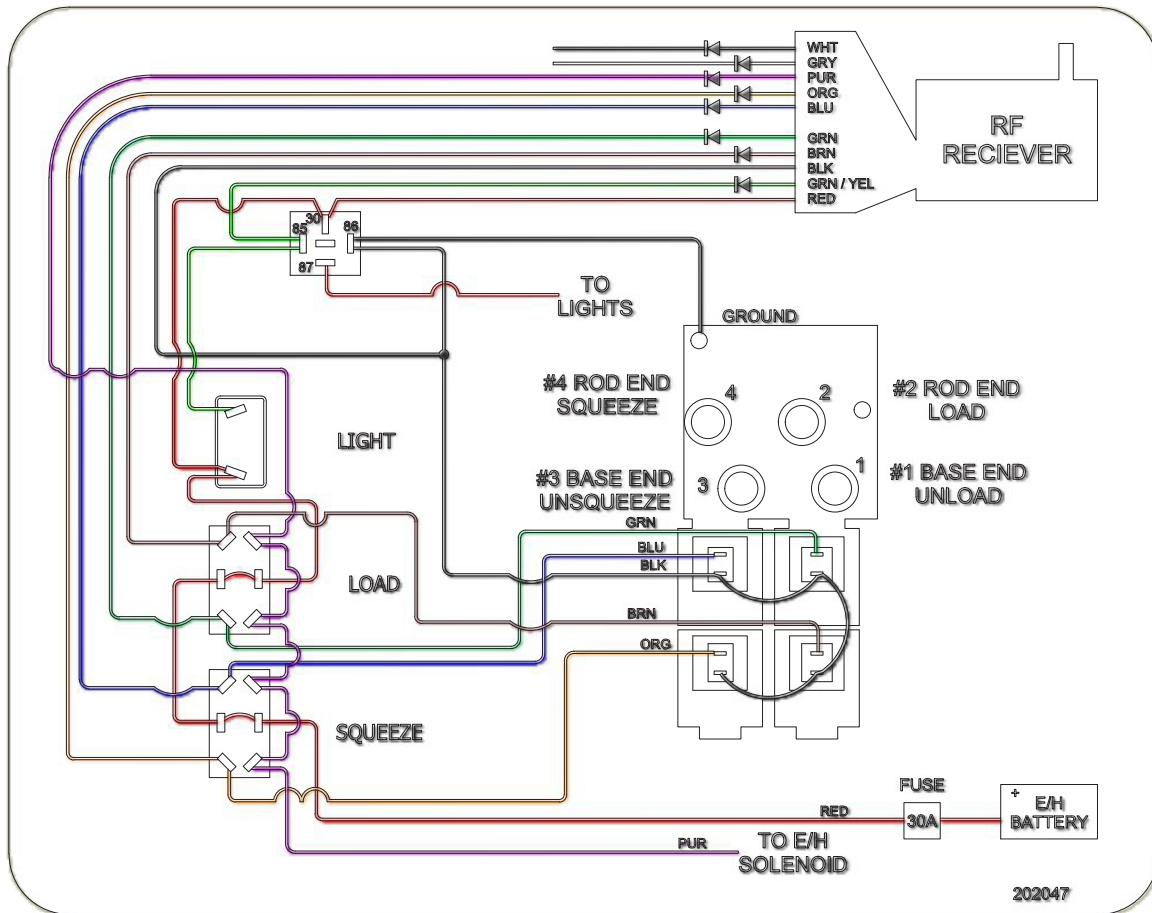


Kit E/H Power, W/Remote Part# 205053

ITEM	QTY	PART #	DESCRIPTION
1	2	110396	BOLT, 5/16-18 X 2.5
2	4	110437	BOLT, 3/8-16 X 0.75, WIZ FLANGE
3	2	110608	NUT, 5/16-18
4	2	110645	NUT, 3/8-16 WIZ FLANGE
5	2	110674	WASHER, 5/16" LOCK
6	2	110753	PLUG, 1/2" BUTTON PLASTIC
7	1	120087	ADAPTER, 6MB-8MJ45
8	2	120142	ADAPTER, 8MJ-6FJ
9	2	120149	ADAPTER, 6MB-6FPX90
10	1	120187	ADAPTER, 12BH-8MB90
11	4	120222	ADAPTER, 6MJ-6MB90
12	1	120457	ADAPTER, 8FJ-10MJ
13	1	120544	ADAPTER, 20MB-12FOR
14	1	120545	ADAPTER, 12BH-12MB 45°
15	2	132035	SWITCH BOOT
16	1	202003	DECAL, SWITCH IDENTIFICATION
17	1	202047	DECAL, E/H WIRING DIAGRAM, KAR-TECH
18	1	211353	E/H SHIELD
19	1	220492	VALVE, E/H FLATBED
20	1	220508	HOSE, .375 X 50 44.6MP - 6MP
21	1	220603	HOSE, SUCTION, .75 X 54
22	1	230140	E/H MOTOR PUMP/UNIT
	1	210884	MOTOR
	1	220651	PUMP
	1	222006	SEAL KIT, PUMP
	1	232089	SOLENOID, 3 POLE, HEAVY DUTY
23	1	230153	BATTERY CABLE, 2GA TWIN LEAD, 186"
24	1	232001	FUSE BLOCK, AMG
25	2	232002	FUSE, 200 AMP
26	2	232066	SWITCH, DPDT, 1M, 6 PIN, PUSH ON
27	1	233003	Transmitter & Receiver, Kar-Tech
28	2	520099	CLAMP, HOSE #12.75"
	3	110119	NOT SHOWN
	3	110264	NUT, 10-24 LOCK
	3	110284	BOLT, 10-24 X .5 STAINLESS, PHILLIPS
	1	211387	EDGE MOLDING, REAR PLATE
	1	232090	HARNESS, E/H WIRELESS, KAR-TECH
			NOT IN KIT
29	1	220691	RESERVOIR RETURN
	1	720041	FILTER HEAD
	1	720043	FILTER (WIX 51551)

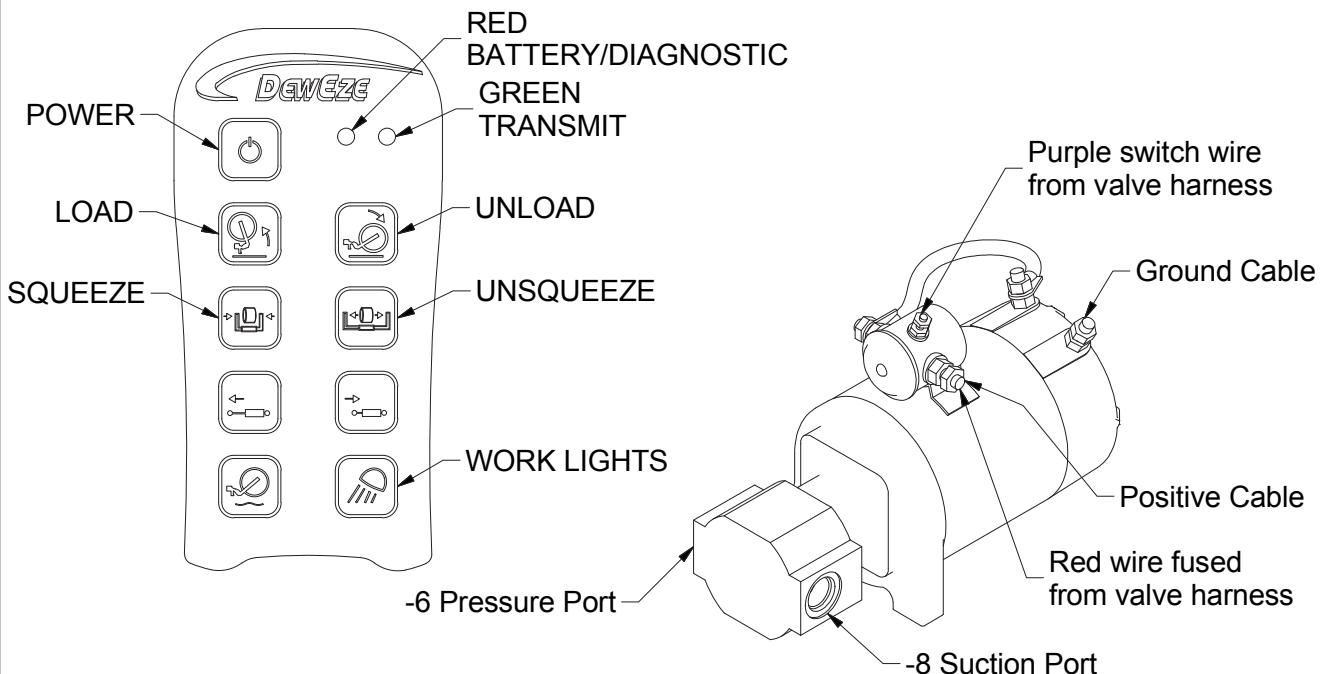
7/6/2011

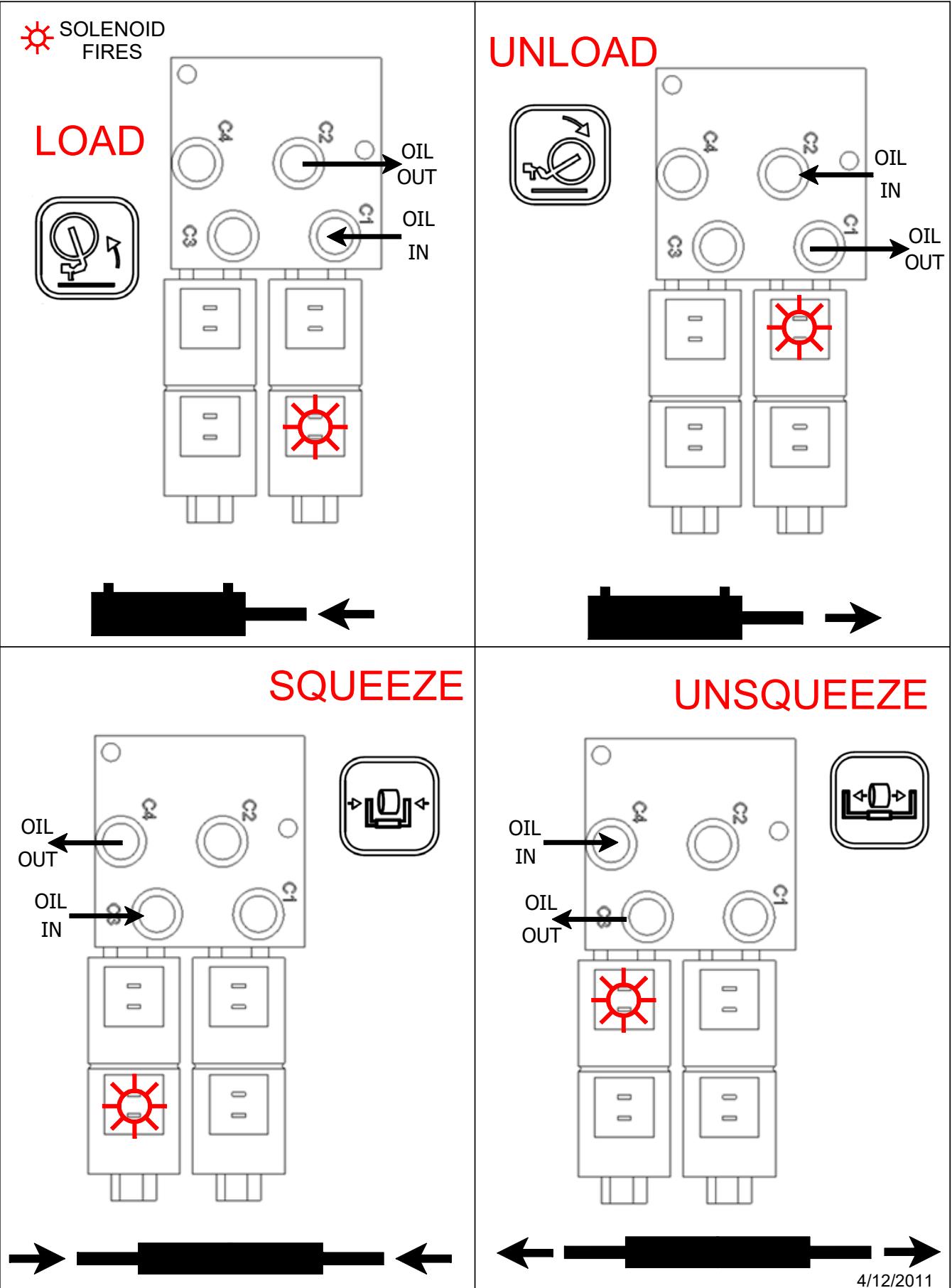
E/H Wiring, Kar-Tech Remote



Decal Part# 202047

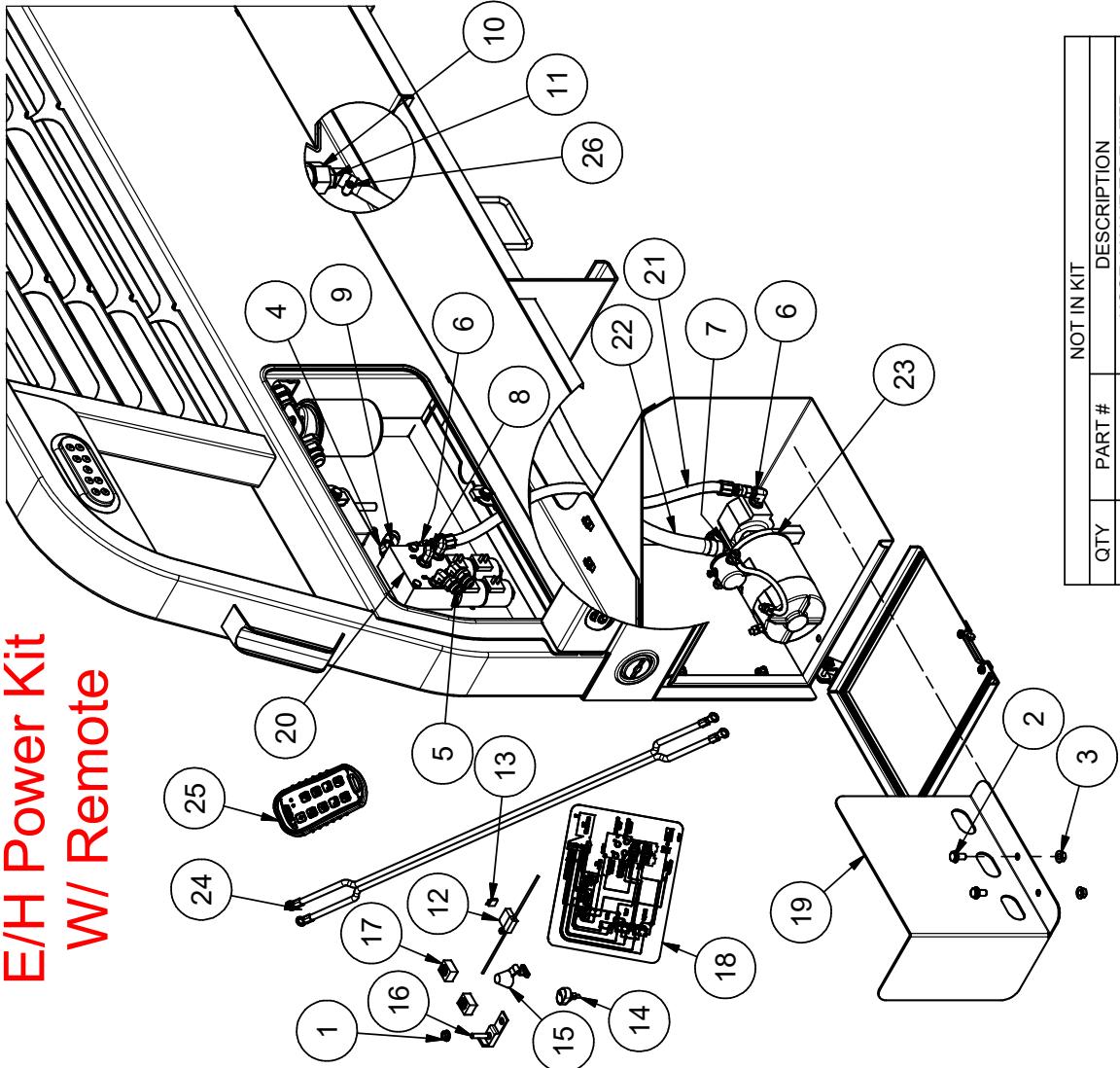
Harness Part# 232090





Kit E/H Power, W/Remote Part# 205053			
ITEM	QTY	PART #	DESCRIPTION
1	1	110141	NUT, M8 X 1.25 WIZFLANGE
2	4	110437	BOLT, 3/8-16 X 0.75, WIZ FLANGE
3	2	110645	NUT, 3/8-16 WIZ FLANGE
4	1	120087	ADAPTER, 6MB-8MJ45
5	2	120142	ADAPTER, 8MJ-6FJ
6	2	120149	ADAPTER, 6MB-6FPX90
7	1	120187	ADAPTER, 12BH-8MB90
8	4	120222	ADAPTER, 6MJ-6MB90
9	1	120457	ADAPTER, 8FJ-10MJ
10	1	120544	ADAPTER, 20MB-12FOR
11	1	120545	ADAPTER, 12BH-12MB 45°
12	1	132001	FUSE HOLDER, ATC, 14 GA., MINI
13	1	132002	FUSE, MINI 30 AMP
14	1	132044	Switch, Spst, Rocker Led
15	1	132092	FUSE COVER, BUSS CFCOVER-1R
16	1	132093	FUSE HOLDER, BUSS CFBAR1-M8XSP
17	2	132094	FUSE 200 AMP, BUSS MRBF-200
18	1	202047	DECAL, E/H WIRING DIAGRAM, KAR-TECH
19	1	211353	E/H SHIELD
20	1	220492	VALVE, E/H FLATBED
21	1	220508	HOSE, .375 X 50.44, 6MP - 6MP
22	1	220603	HOSE, SUCTION, .75 X 54
23	1	230140	E/H MOTOR PUMP/UNIT
1	1	210884	MOTOR
1	1	220651	PUMP
1	1	222006	SEAL KIT, PUMP
1	1	232089	SOLENOID, 3 POLE, HEAVY DUTY
24	1	230155	BATTERY CABLE, 2GA TWIN LEAD, 186"
25	1	233003	Transmitter & Receiver, Kar-Tech
26	2	520099	CLAMP, HOSE #12-.75"
			NOT SHOWN
3	1	110119	NUT, 10-24 LOCK
3	3	110264	BOLT, 10-24 X 5 STAINLESS, PHILLIPS
	2	110396	BOLT, 5/16-18 X 2.5
	2	110608	NUT, 5/16-18
	2	110674	WASHER, 5/16" LOCK
	2	110753	PLUG, 1/2" BUTTON PLASTIC
	2	132035	SWITCH BOOT
	1	202003	DECAL, SWITCH IDENTIFICATION
	1	211387	EDGE MOLDING, REAR PLATE
	2	232086	SWITCH, DPDT, M, 6 PIN, PUSH ON
	1	232090	HARNESS, EH WIRELESS, KAR-TECH

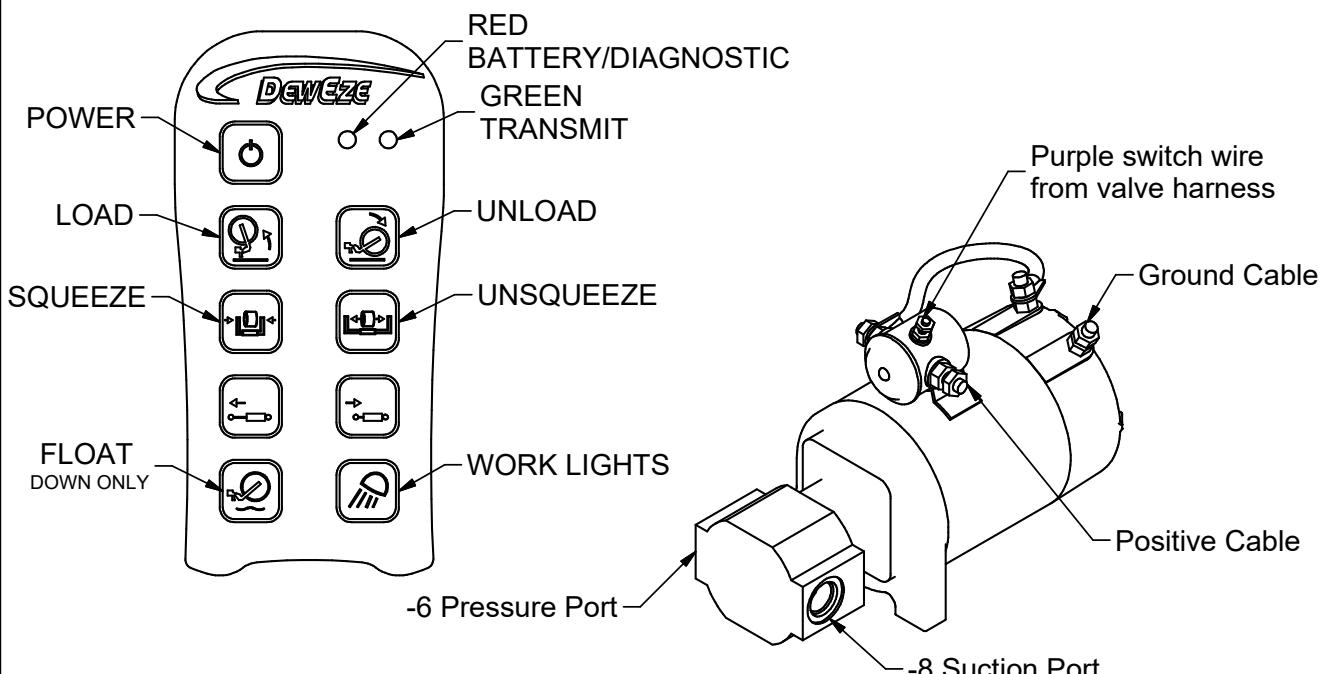
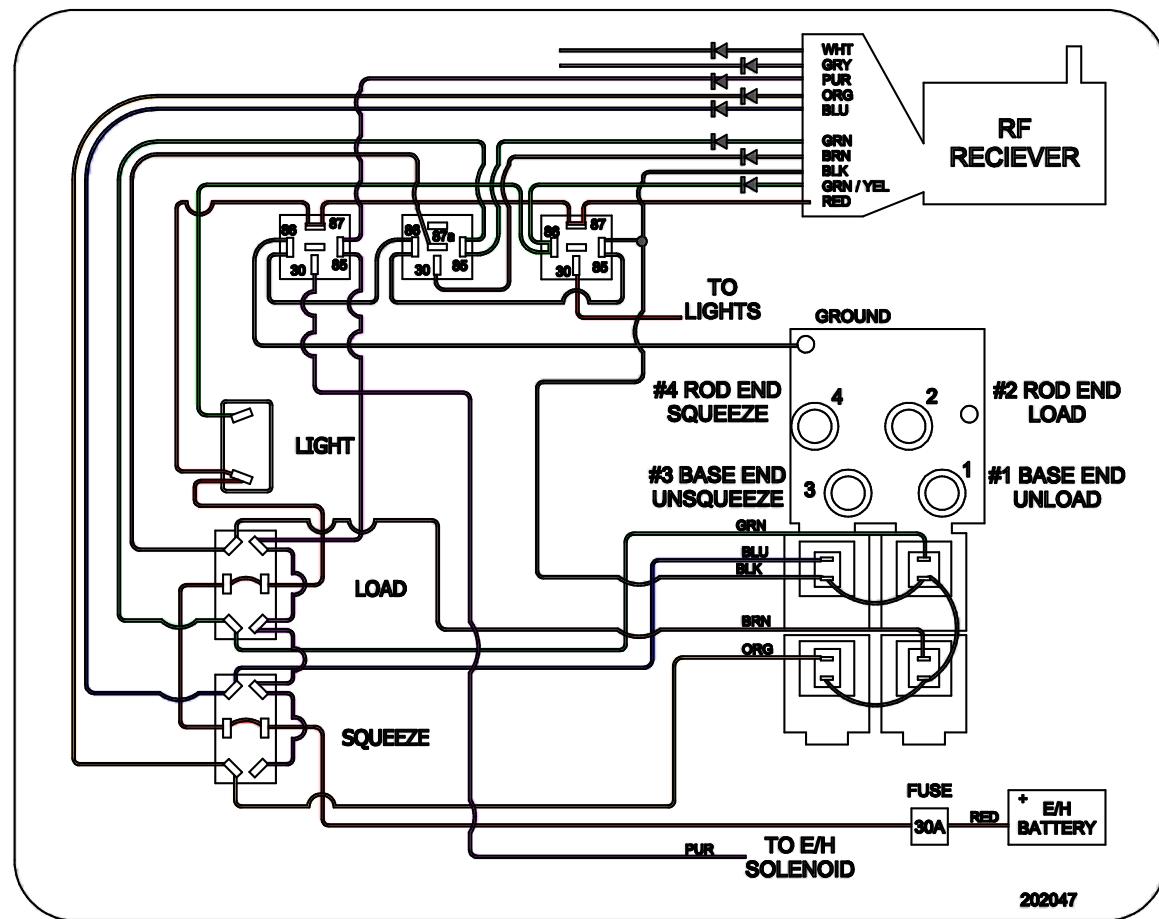
Standard E/H Power Kit W/ Remote



QTY	PART #	DESCRIPTION
1	220723	HOSE, VALVE TO FILTER
1	720041	FILTER HEAD
1	720043	FILTER (WIX 51551)

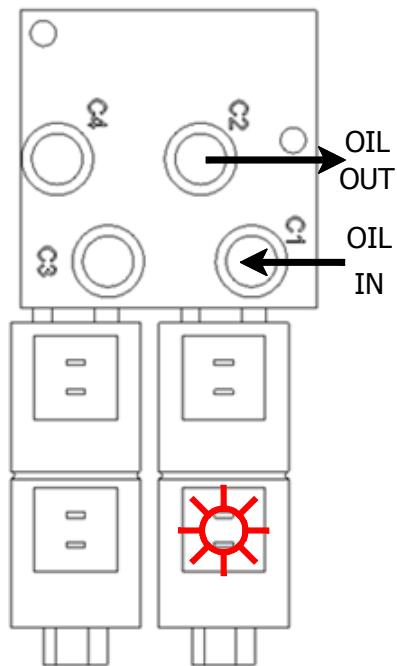
2/20/2015

E/H Wiring, Kar-Tech Remote

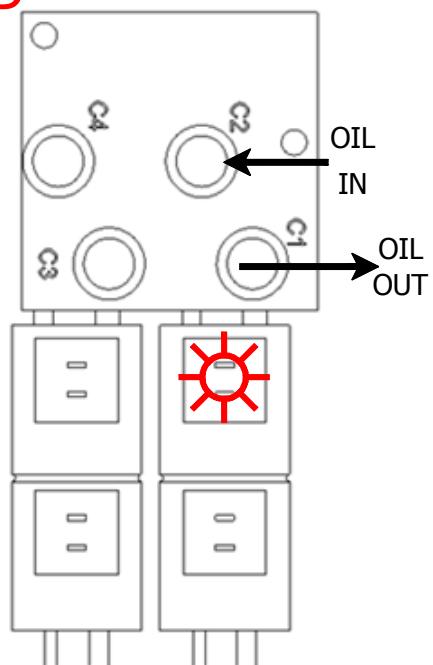


 SOLENOID FIRES

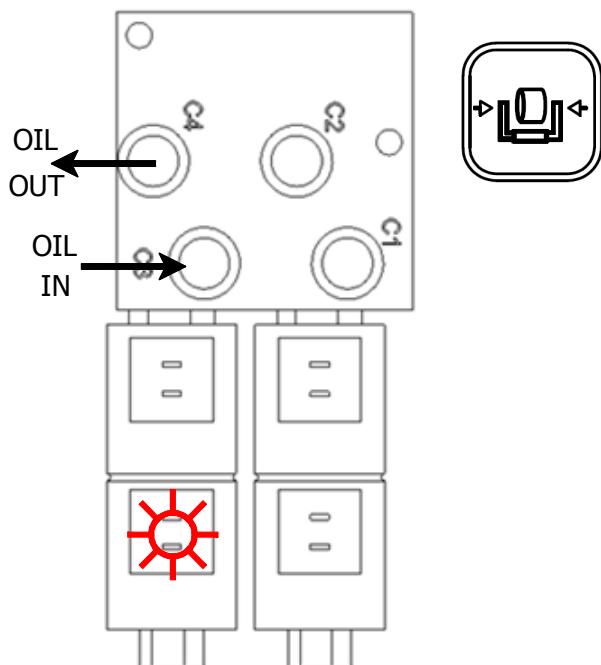
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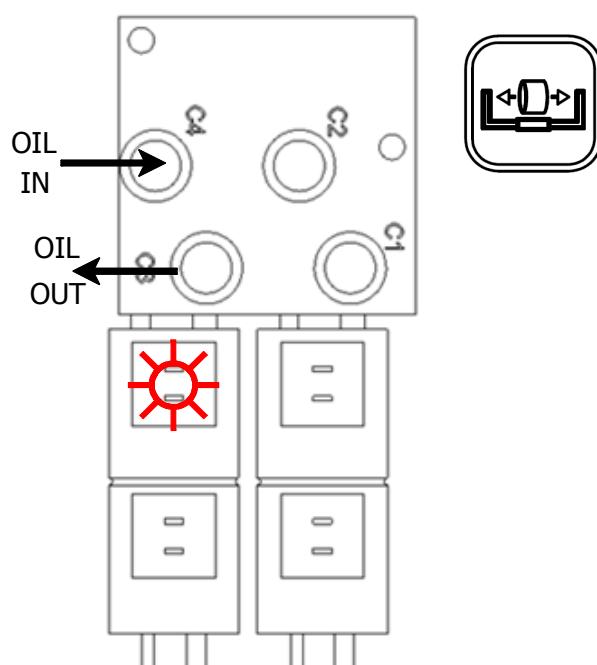
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SQUEEZE

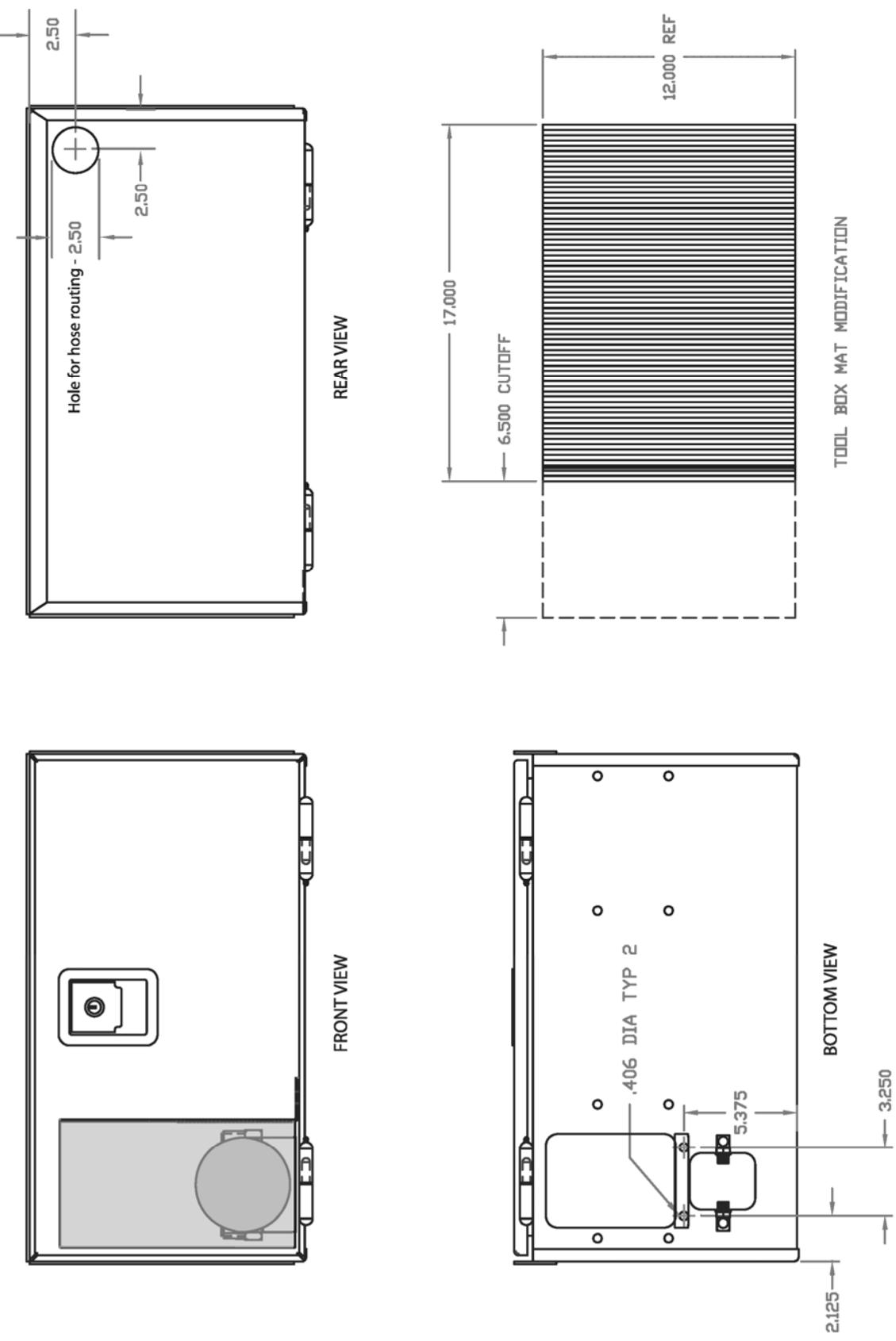


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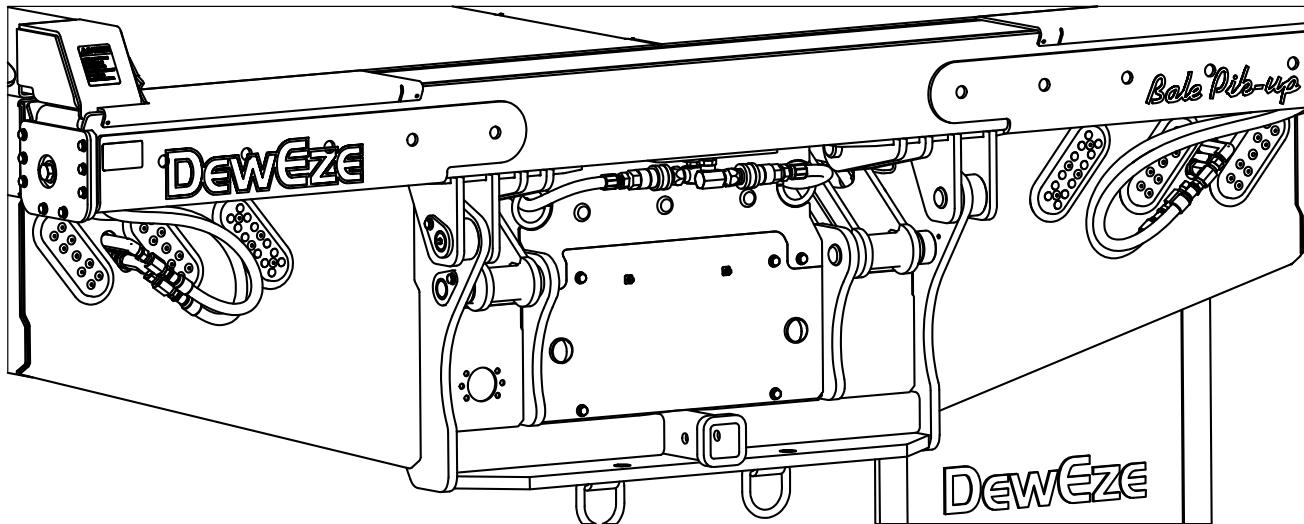
2/20/2015

DEWEZE E/H KIT - 30" TOOLBOX MODIFICATION

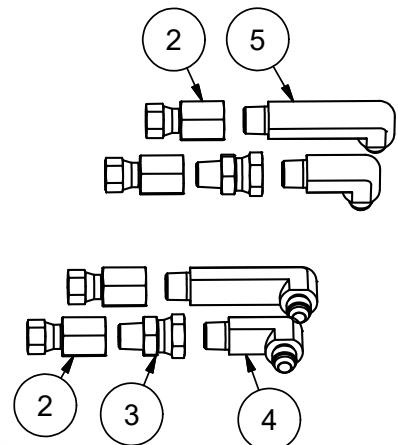
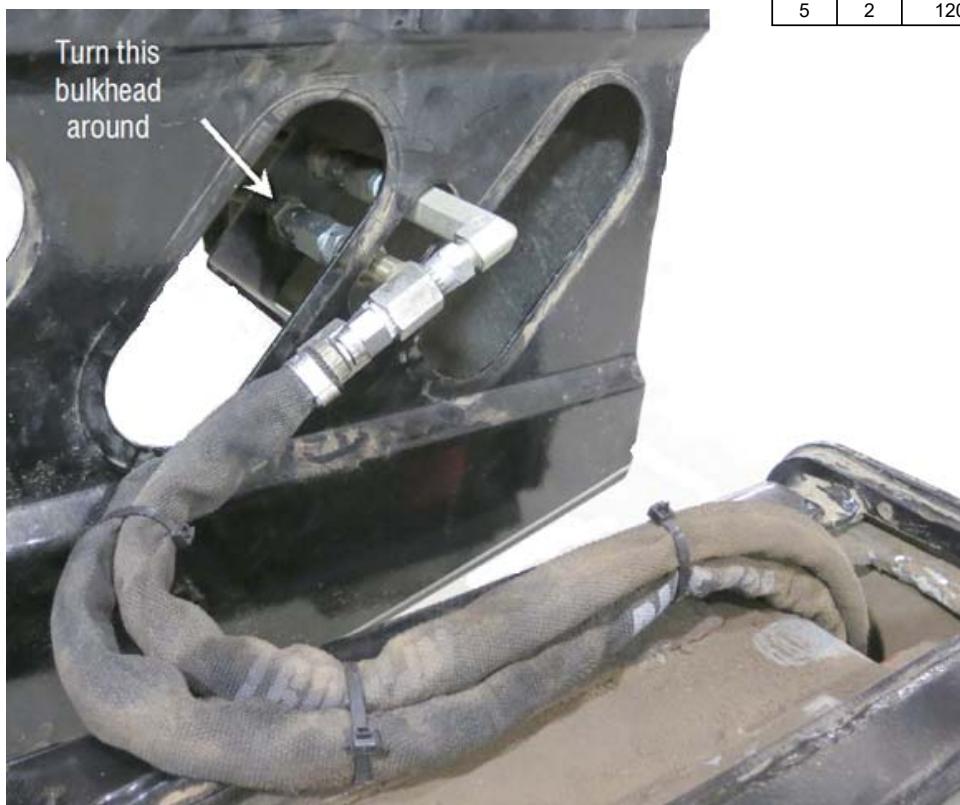


XRM Adapter Update

Kit # 205068



Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	6	100578	Cable Tie 14" Black 50 Lb Tens
2	4	120123	ADAPTER, 6FP-6FJX
3	2	120271	ADAPTER, 6MP-6FPX
4	2	120596	ADAPTER, 6MJ-6MP LONG 90
5	2	120597	ADAPTER, 6MJ-6MP XX-LONG 90



5/11/2012

NOTES

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