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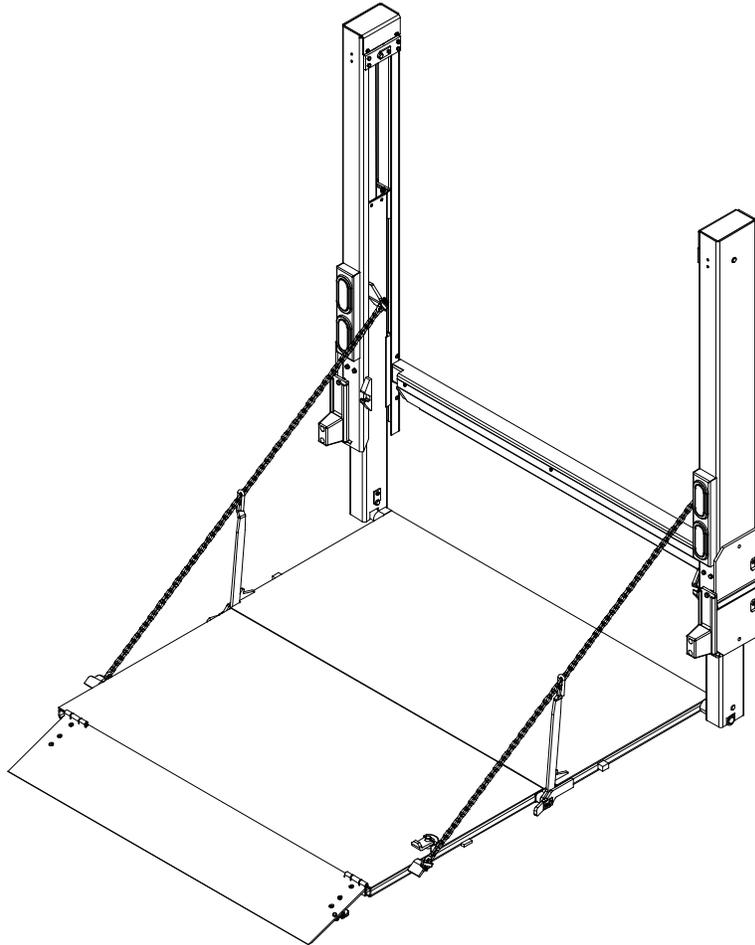
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# Tech Manual

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## WDV & WDVBG

3500 - 6600 lb. Capacity Rail Liftgates



This manual covers: **WDV GEN 1 & GEN 2**  
See note in RED

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Generation 1 models have the Break-Away not Wrap Around Dock Bumper Plates

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# Introduction



**Improper operation and maintenance of this liftgate could result in severe personal injury or death.**

**Read and understand the contents of the owner's manual and all warning and operation decals before operating and/or performing maintenance on this liftgate.**

Each Waltco liftgate is manufactured to stringent quality standards for years of reliable service. To ensure maximum performance of your Waltco liftgate, always specify and use "OEM Parts" from Waltco.

This manual does not provide procedures for the servicing and repair of Waltco liftgates. Service and repair should only be performed by an authorized Waltco distributor. For information on the nearest authorized Waltco distributor contact:

## **Waltco Lift Corp.**

285 Northeast Avenue

Tallmadge, OH 44278

Phone: 800.411.5685

Fax: 800.411.5684

E-mail: [parts@waltco.com](mailto:parts@waltco.com)



**This is the safety alert symbol. This manual uses this symbol to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid personal injury or death.**



**The use of non-standard or makeshift parts can be extremely hazardous and result in serious injury or death.**

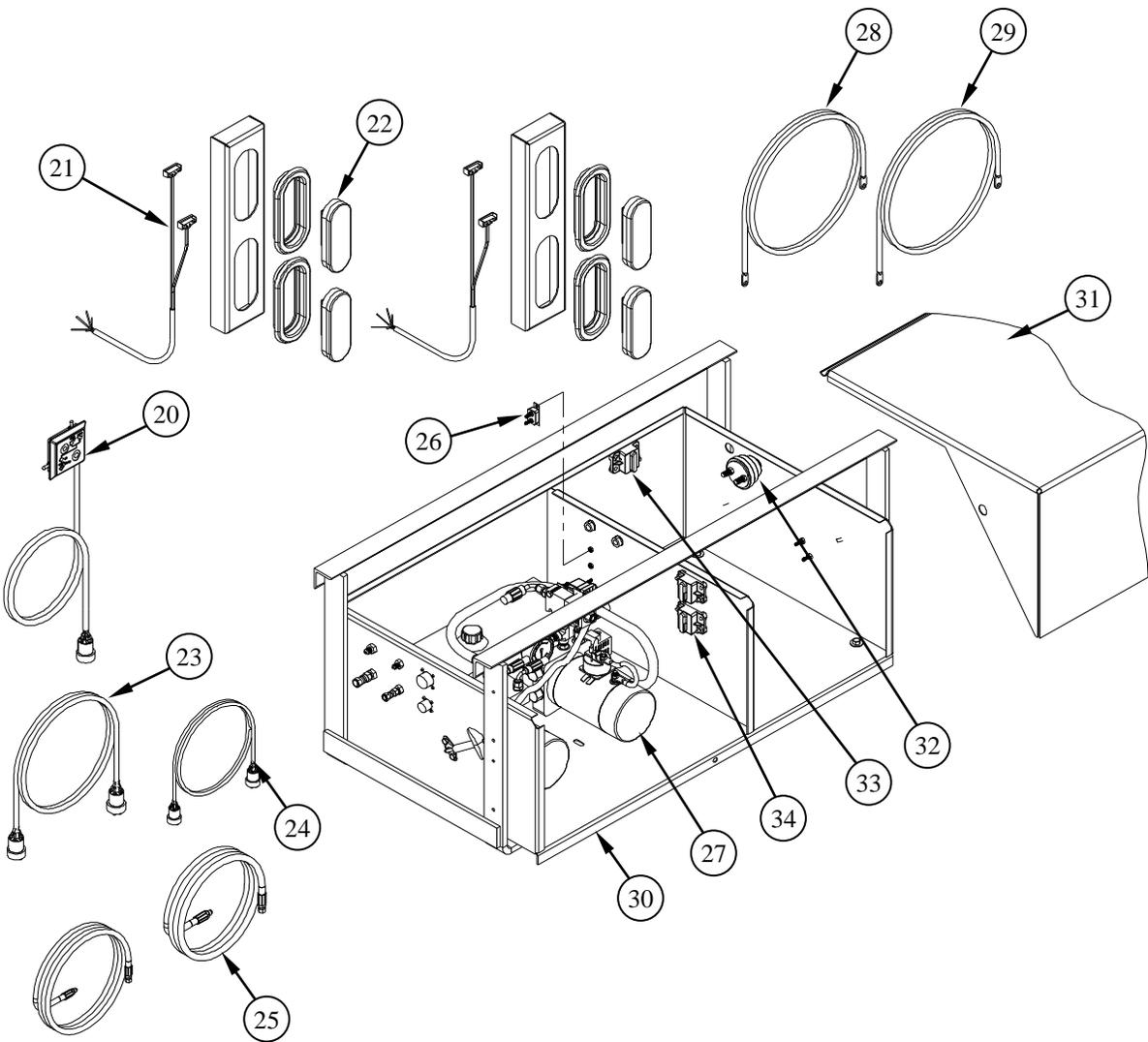


**Every vehicle that has a WALTCO Liftgate must have legible WARNING AND OPERATION DECALS clearly posted on the vehicle and an OWNER'S MANUAL in the vehicle at all times as a guide for proper operation and maintenance.**



# Liftgate Terminology

- 20. Control Switch
- 21. Light Wiring Harness
- 22. Lights
- 23. Control Switch Extension Wires (Optional)
- 24. Inside Switch Extension Wires (Optional)
- 25. Extension Hoses (Optional)
- 26. Circuit Breaker, 15A Control Switches
- 27. Power Unit Motor
- 28. Charging Battery Cable
- 29. Grounding Battery Cable
- 30. Power Unit/Battery Box
- 31. Box Cover
- 32. Master Disconnect
- 33. Circuit Breaker, Charge Line
- 34. Circuit Breakers, 150A



# Liftgate Terminology

35. Side Rail Assembly

36. Outer Guard Rail Assembly

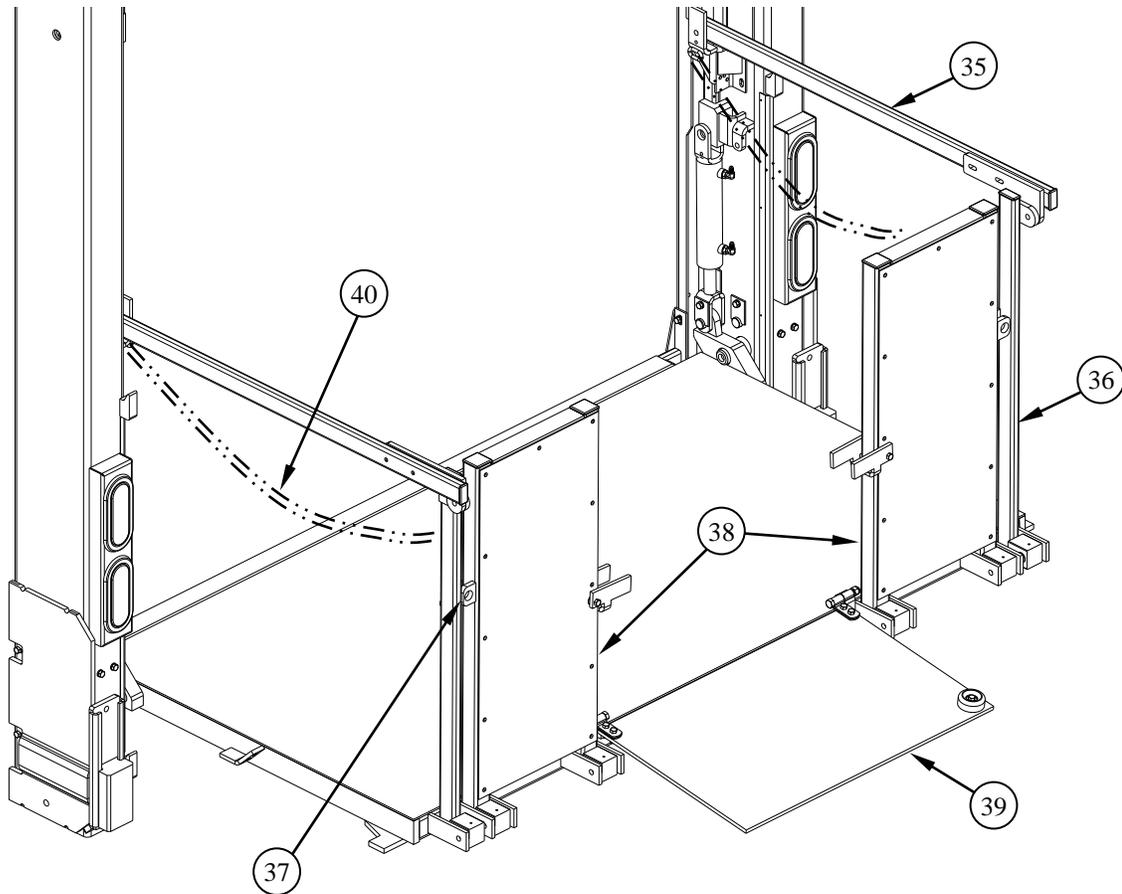
37. Guard Rail Latch Assembly

38. Inner Guard Rail Assembly

39. Ramp Assembly

40. Gas Bottle Retention Chain

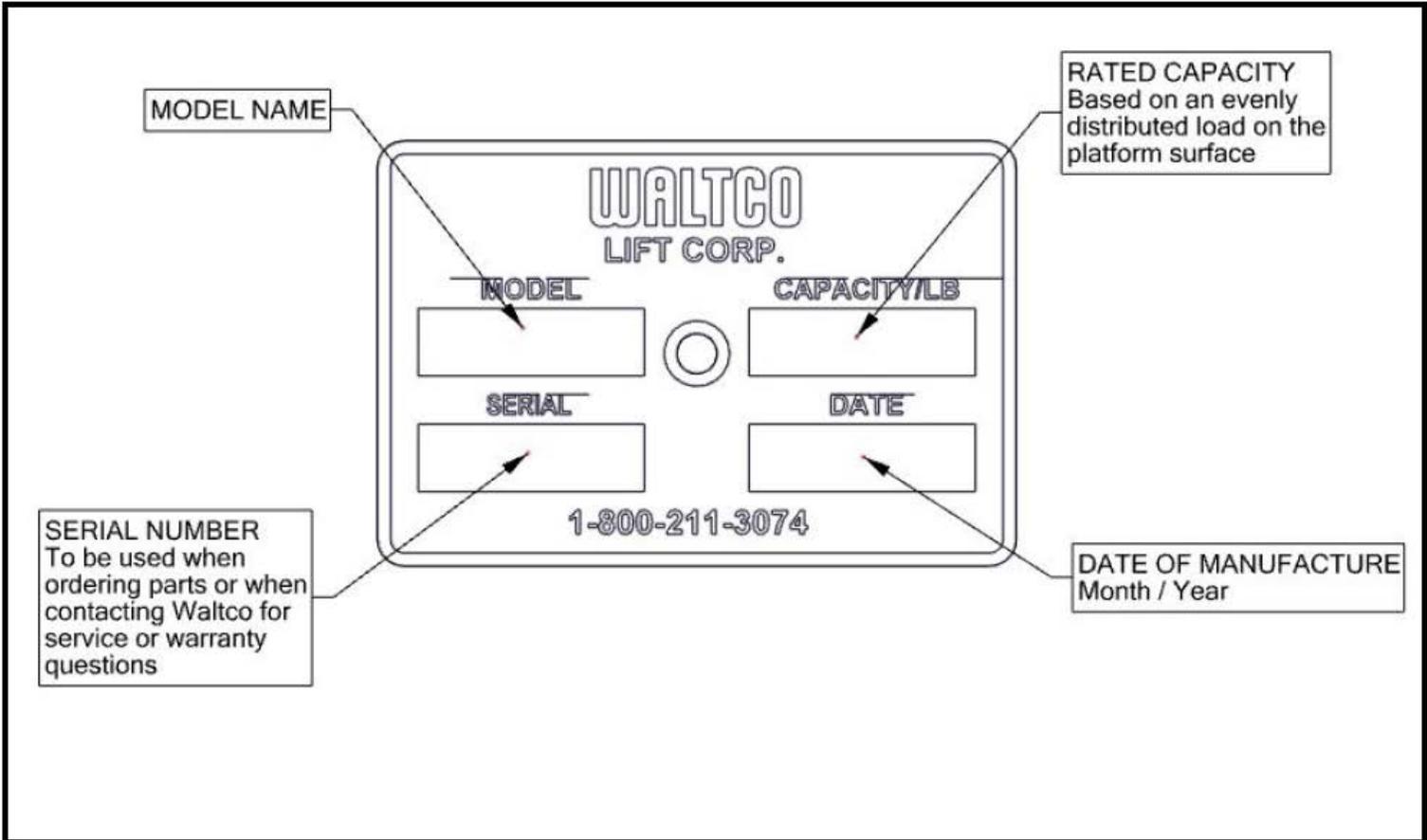
## WDVBG



GR02366

# Liftgate Terminology

EXPLANATION OF SPECIFICATION TAG		
MODEL No.	DESCRIPTION	CAPACITY
WDVBG45	WDVBG-45 Series	4500 lb.
WDV35	WDV-35 Series	3500 lb.
WDV45	WDV-45 Series	4500 lb.
WDV55	WDV-55 Series	5500 lb.
WDV66	WDV-66 Series	6600 lb.



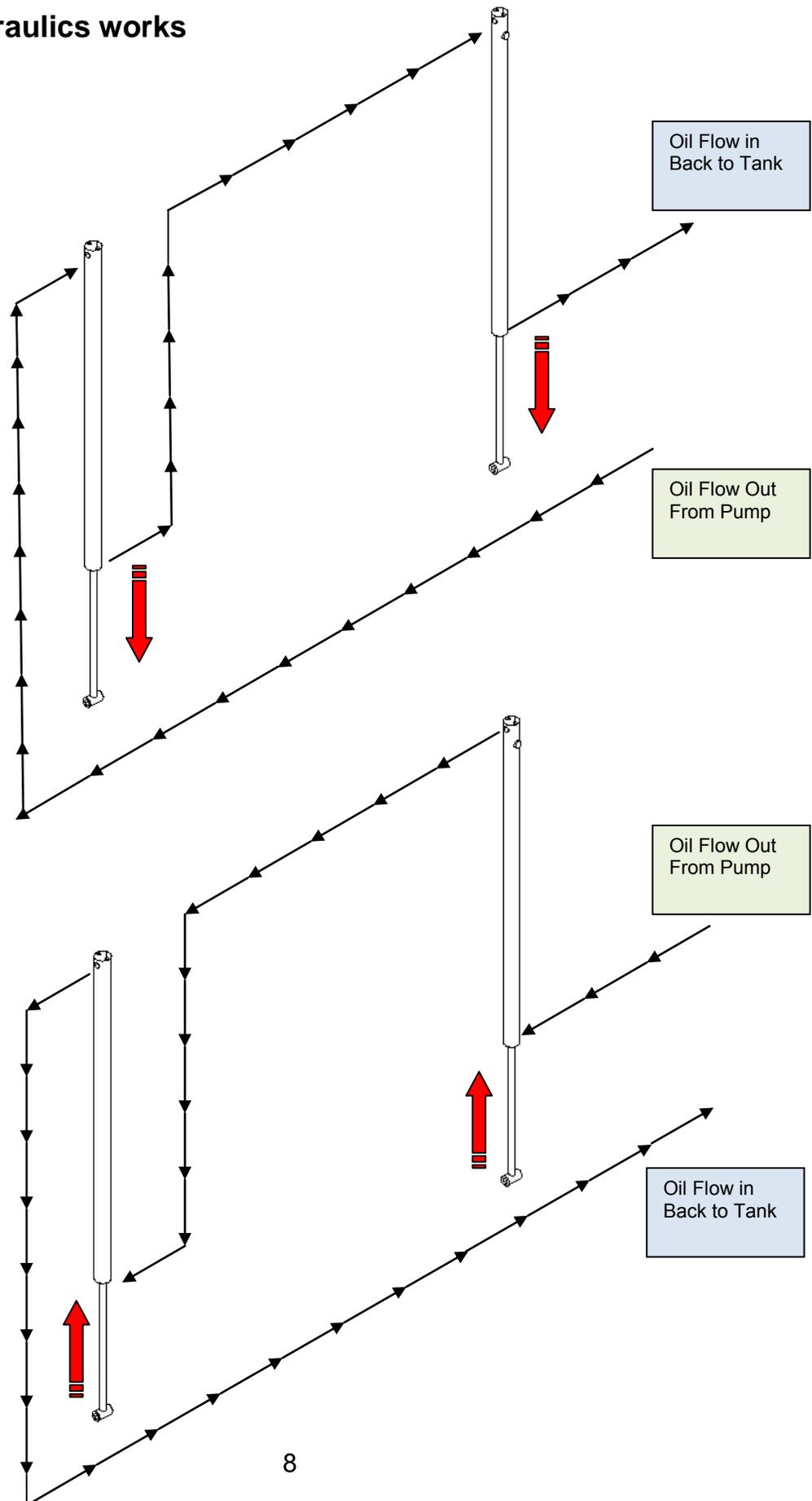
# Series Hydraulic Circuit Diagram

## How the Series Hydraulics works

### Series hydraulic circuit diagrams

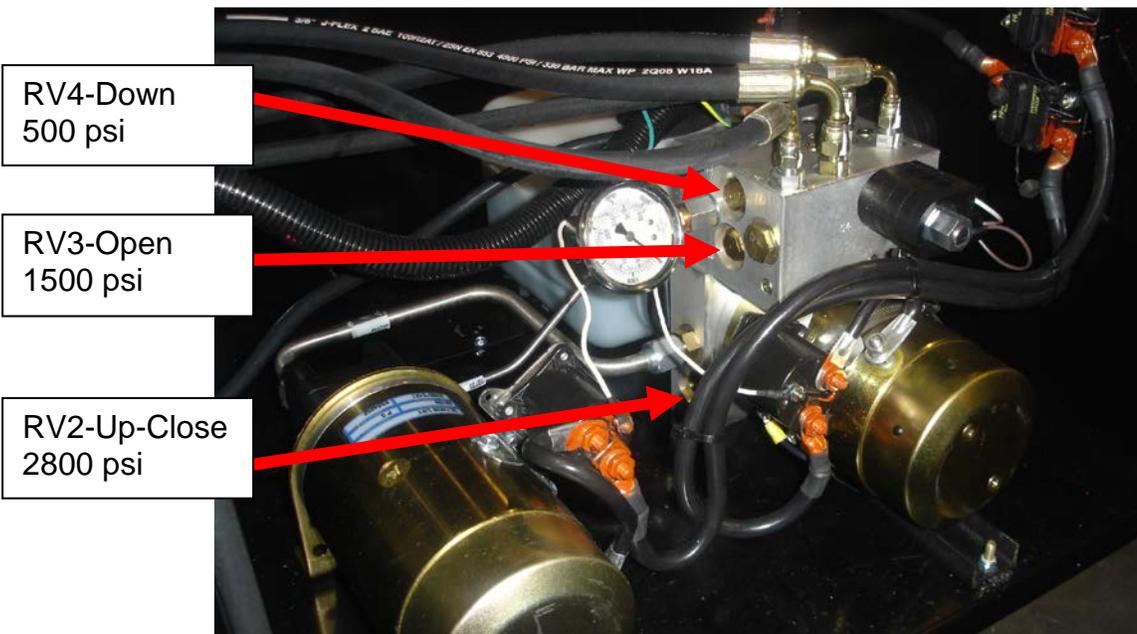
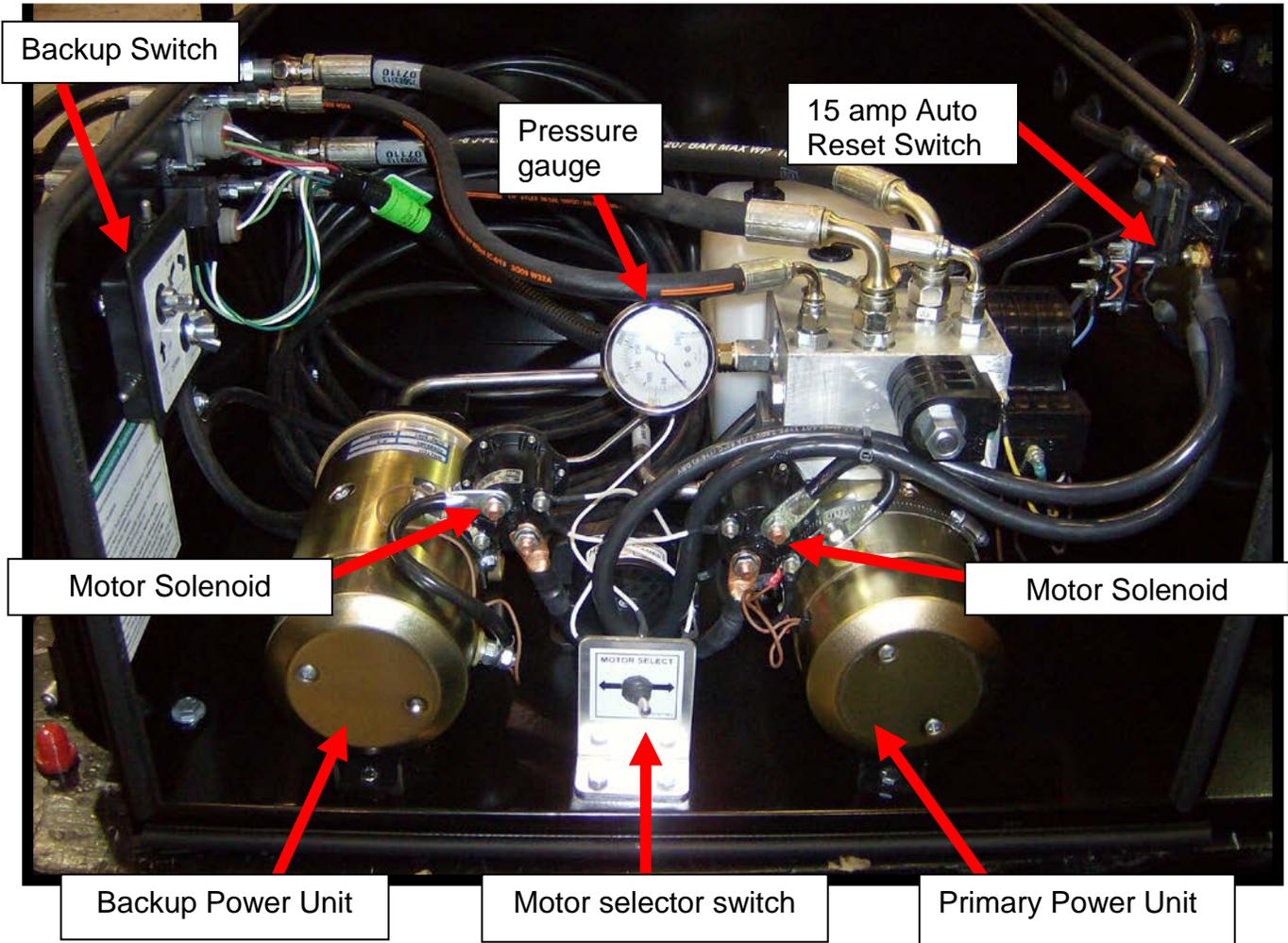
Oil is pumped into one cylinder, and the oil displaced from the other end feeds the second cylinder. When platform is at floor level, the oil bypasses to the tank and the platform always self levels to the floor.

Note: Left side cylinder is larger than right side cylinder.



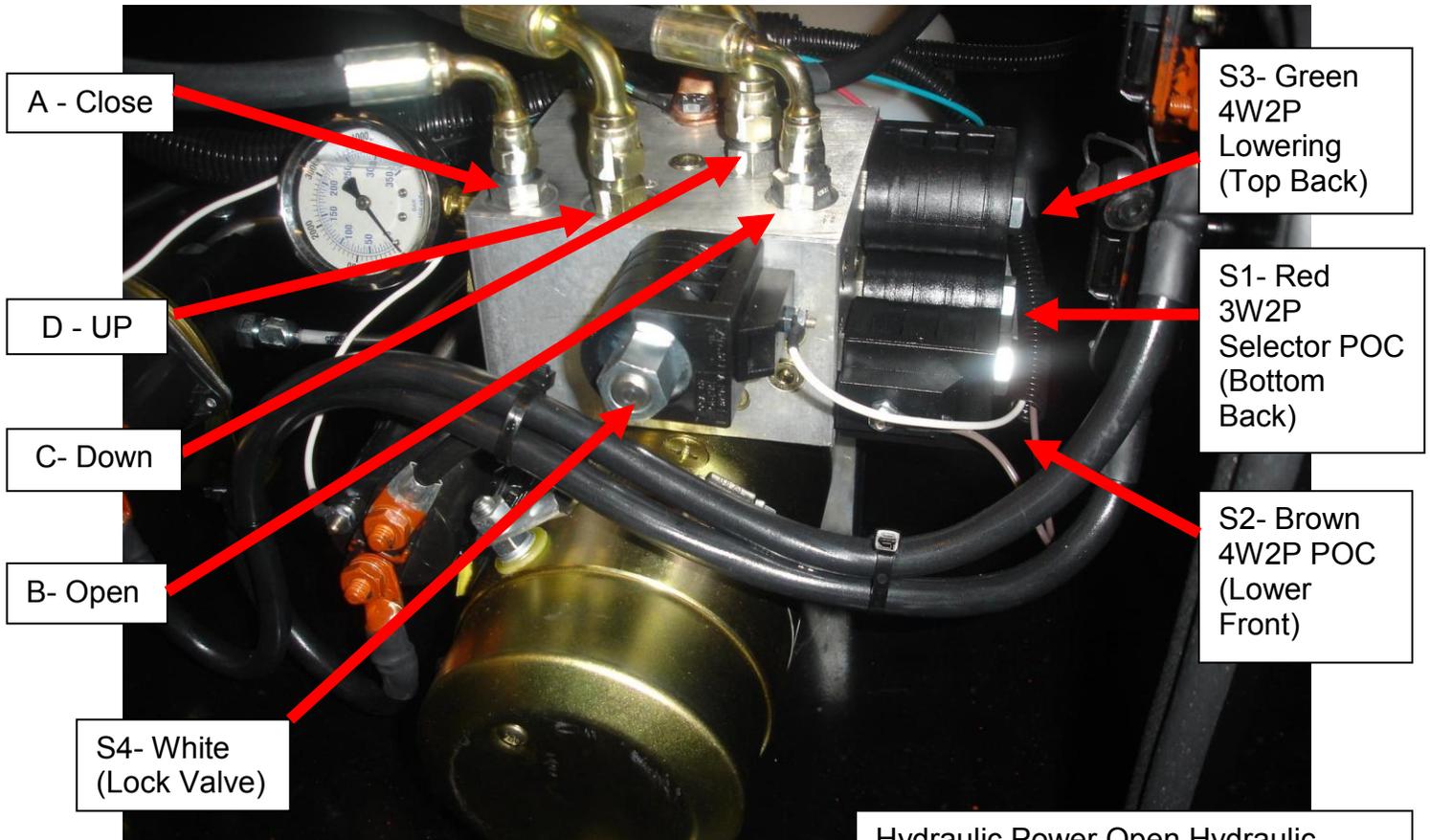
# Key Components For General 1 liftgates

Call out of MTE Main & Auxiliary Power Unit



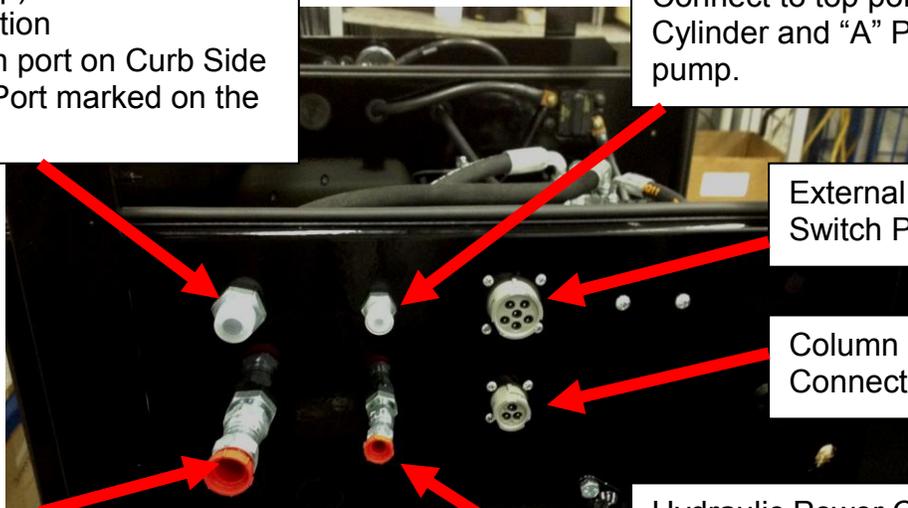
# Key Components

## Call Out of Main & Auxiliary Power Unit Continued



Platform Raise (Up)  
Hydraulic Connection  
Connect to bottom port on Curb Side Cylinder and "D" Port marked on the pump.

Hydraulic Power Open Hydraulic Connection  
Connect to top port on Power Close Cylinder and "A" Port marked on pump.



External Double Toggle Switch Point Connection

Column Switch Point Connection

Platform Lower (Down)  
Hydraulic Connection  
Connect to top port on Driver Side Cylinder and "C" Port marked on the pump.

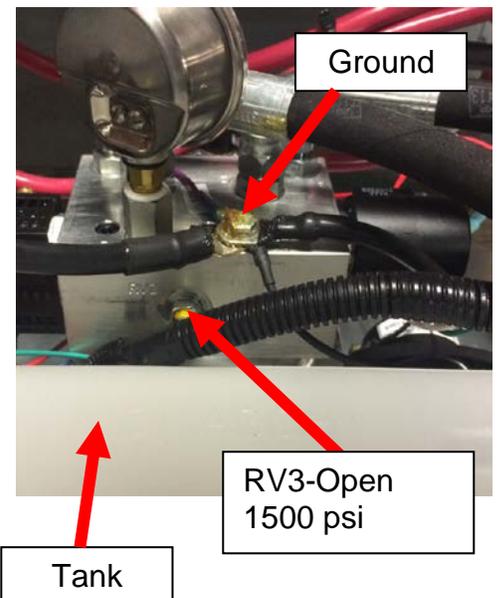
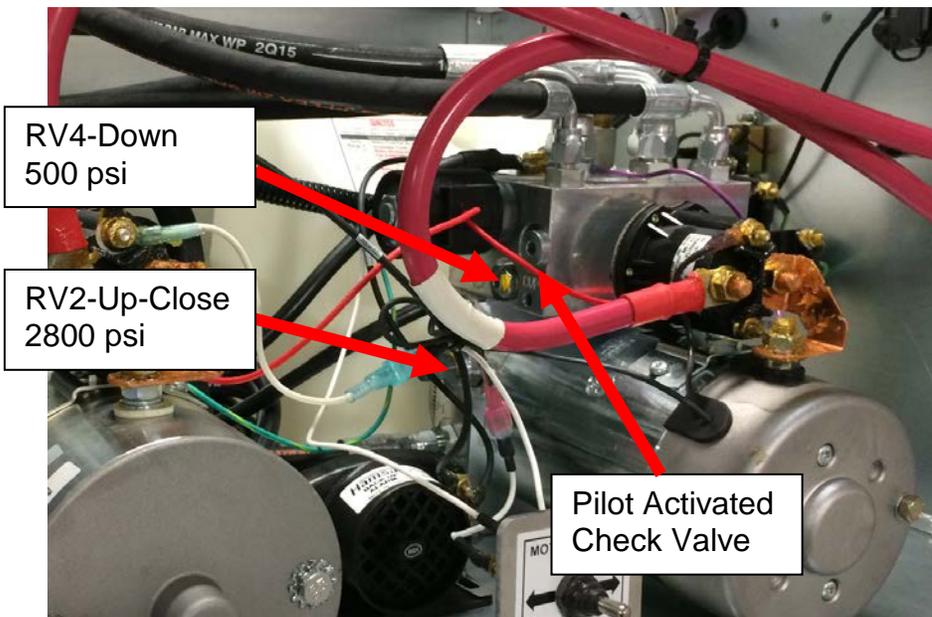
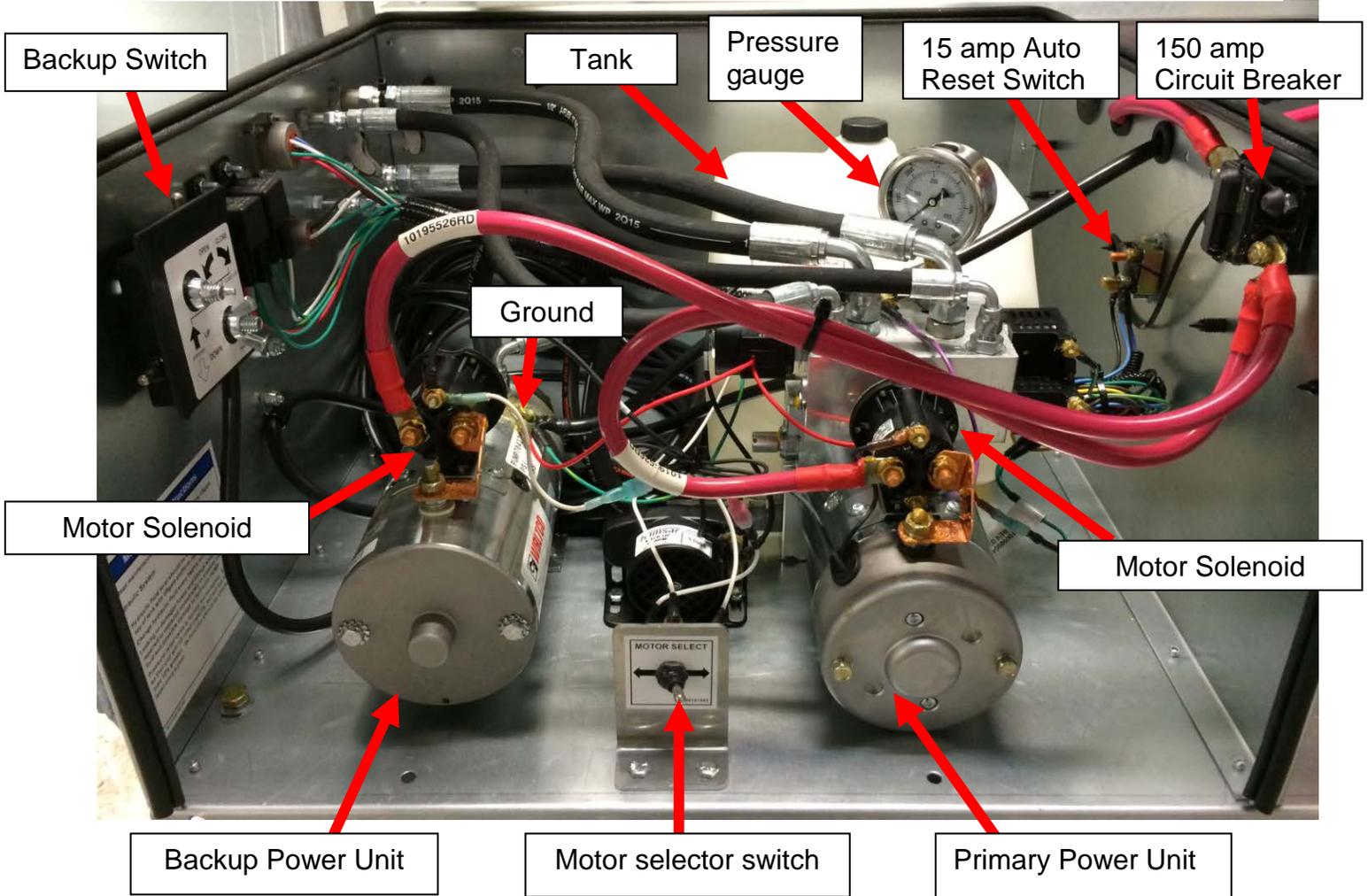
Hydraulic Power Close Hydraulic Connection  
Connect to Bottom port on Power Close Cylinder and "B" Port marked on pump.

# Key Components

All Generation 2 models

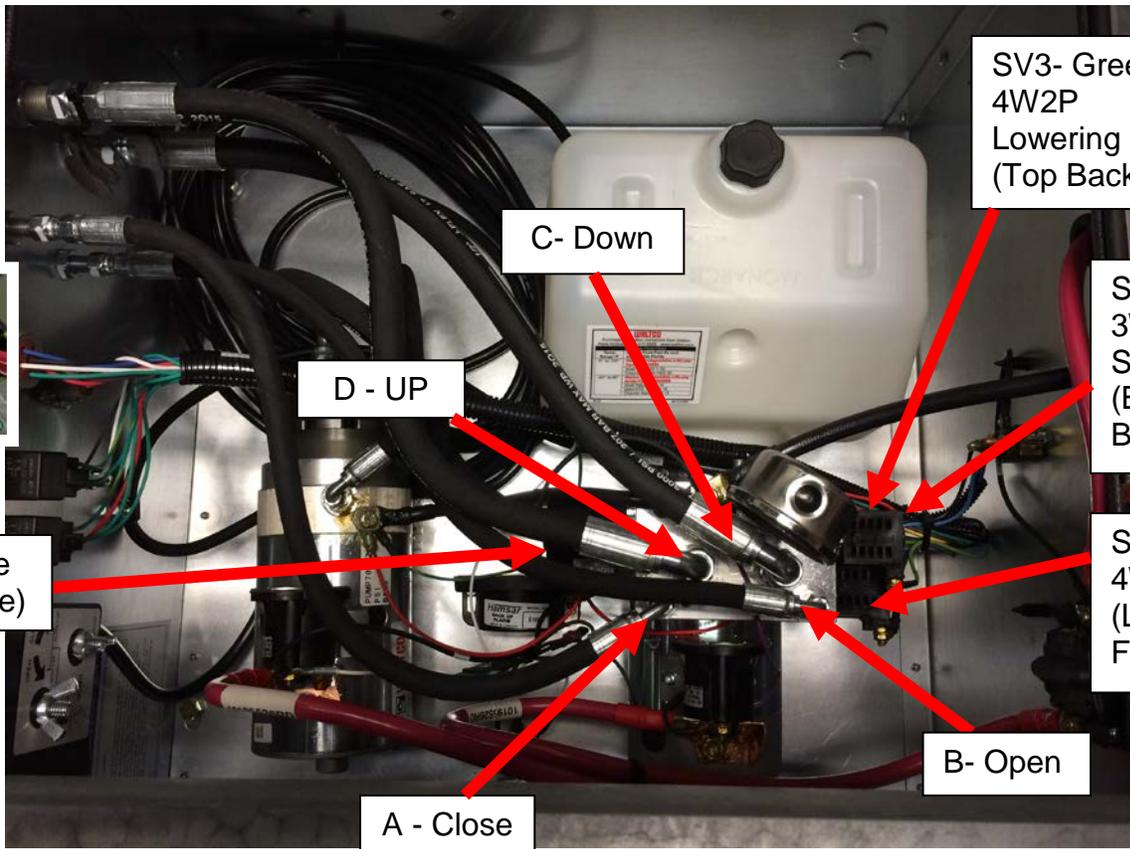
will have the Bucher units

Call out of Bucher Replacement Main & Auxiliary Power Unit



# Key Components

Call Out of Bucher Replacement Main & Auxiliary Power Unit Continued



SV3- Green  
4W2P  
Lowering  
(Top Back)

C- Down

SV1- Red  
3W2P  
Selector POC  
(Bottom  
Back)

D - UP

SV2- Brown  
4W2P POC  
(Lower  
Front)

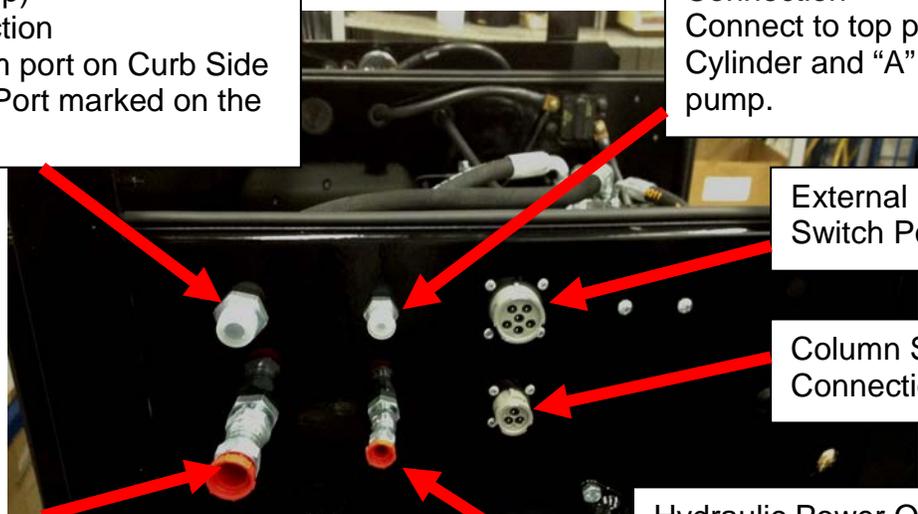
SV4- White  
(Lock Valve)

B- Open

A - Close

Platform Raise (Up)  
Hydraulic Connection  
Connect to bottom port on Curb Side  
Cylinder and "D" Port marked on the  
pump.

Hydraulic Power Close Hydraulic  
Connection  
Connect to top port on Power Close  
Cylinder and "A" Port marked on  
pump.



External Double Toggle  
Switch Point Connection

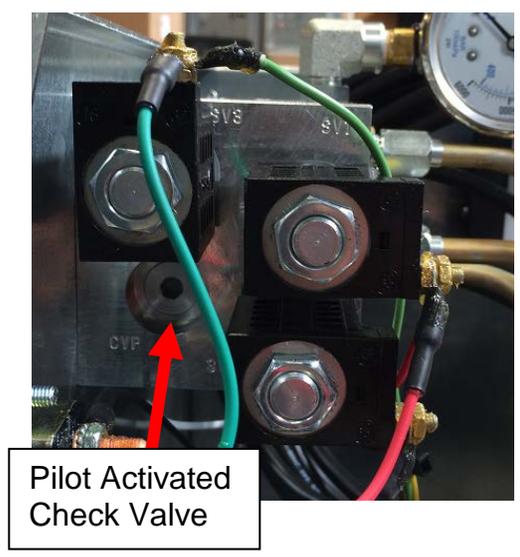
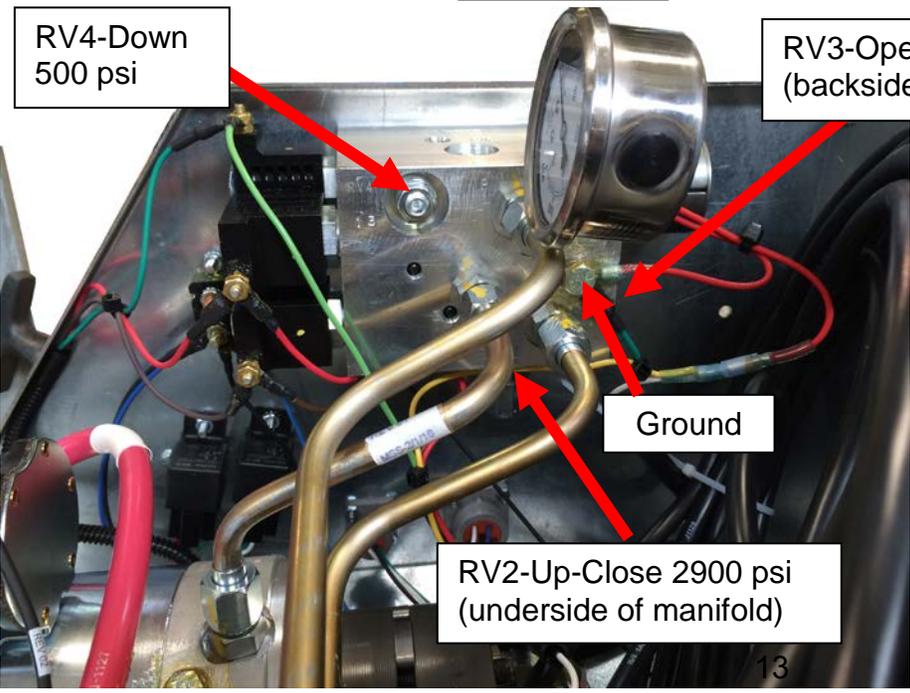
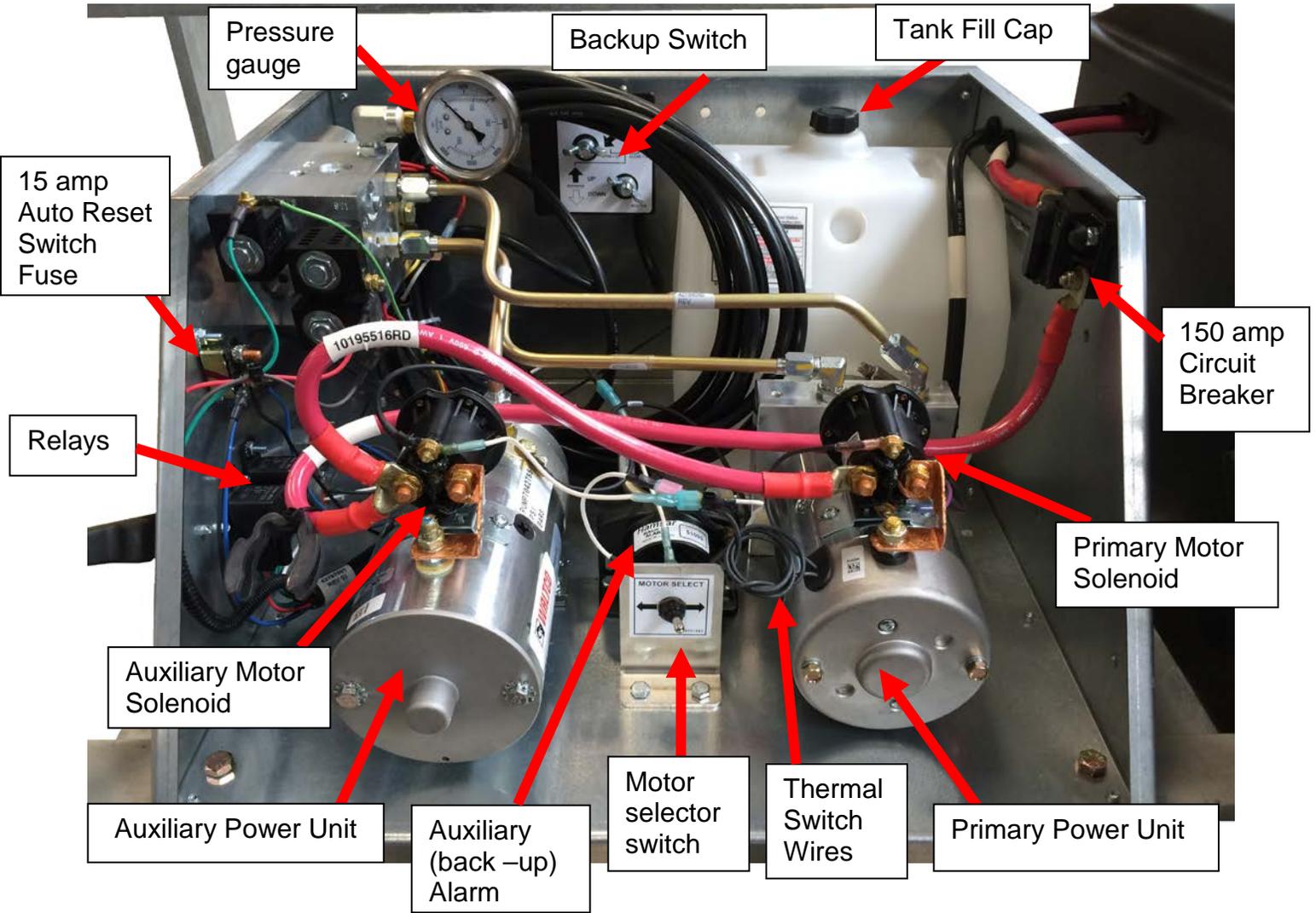
Column Switch Point  
Connection

Platform Lower (Down)  
Hydraulic Connection  
Connect to top port on Driver Side Cylinder  
and "C" Port marked on the pump.

Hydraulic Power Open Hydraulic  
Connection  
Connect to Bottom port on Power  
Close Cylinder and "B" Port marked  
on pump.

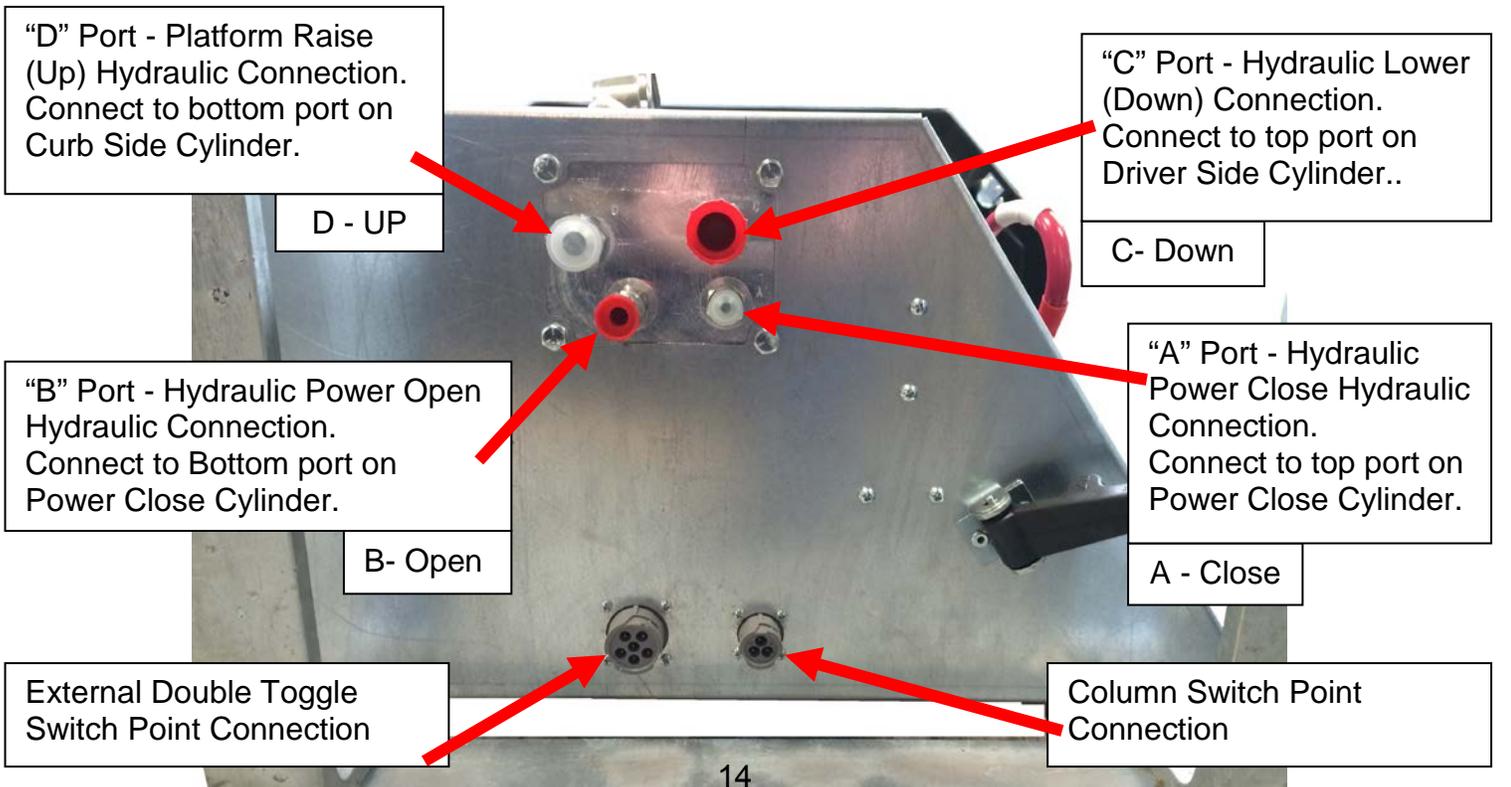
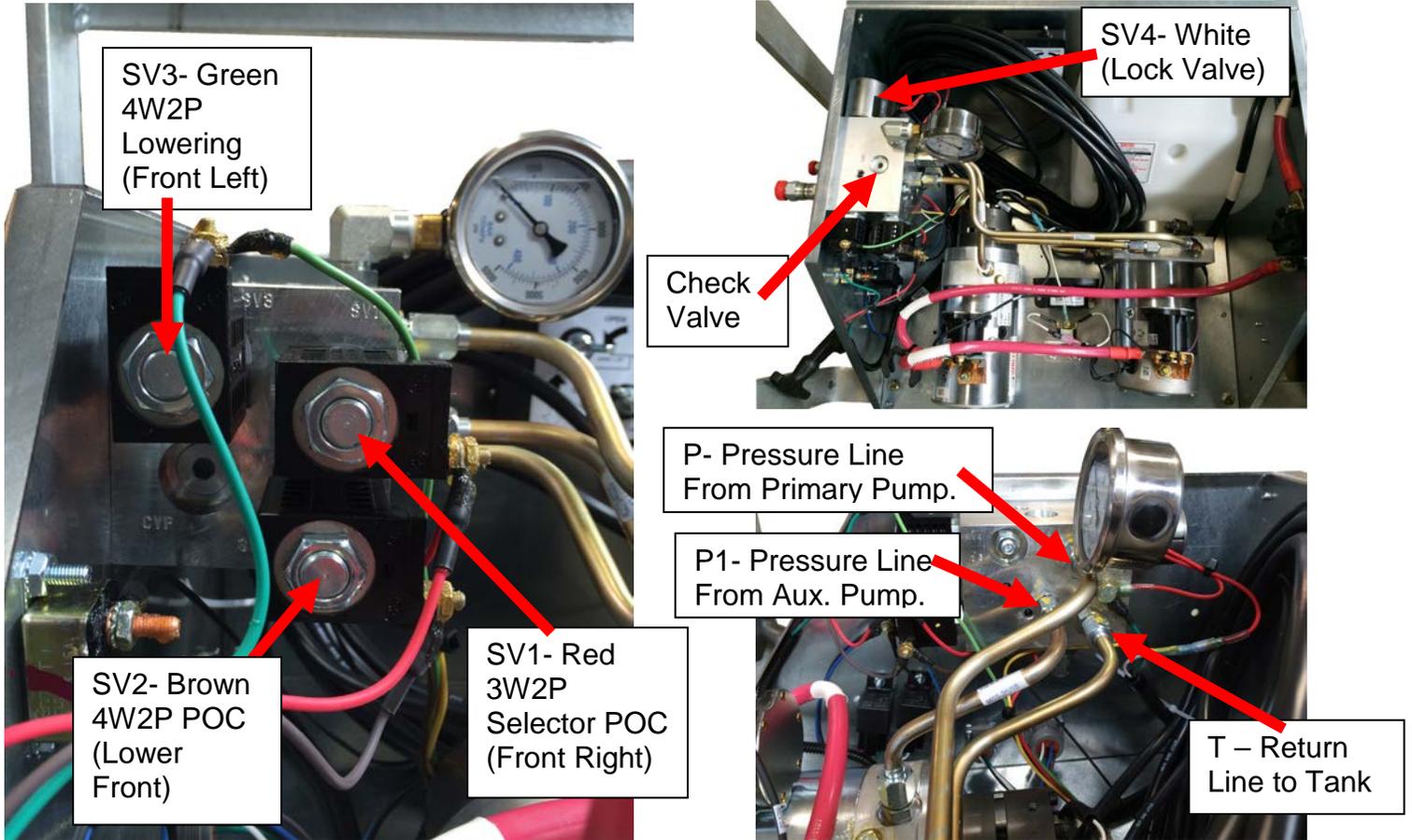
# Key Components

Call out of Generation 2 Main & Auxiliary Power Unit with Divorced Manifold



# Key Components

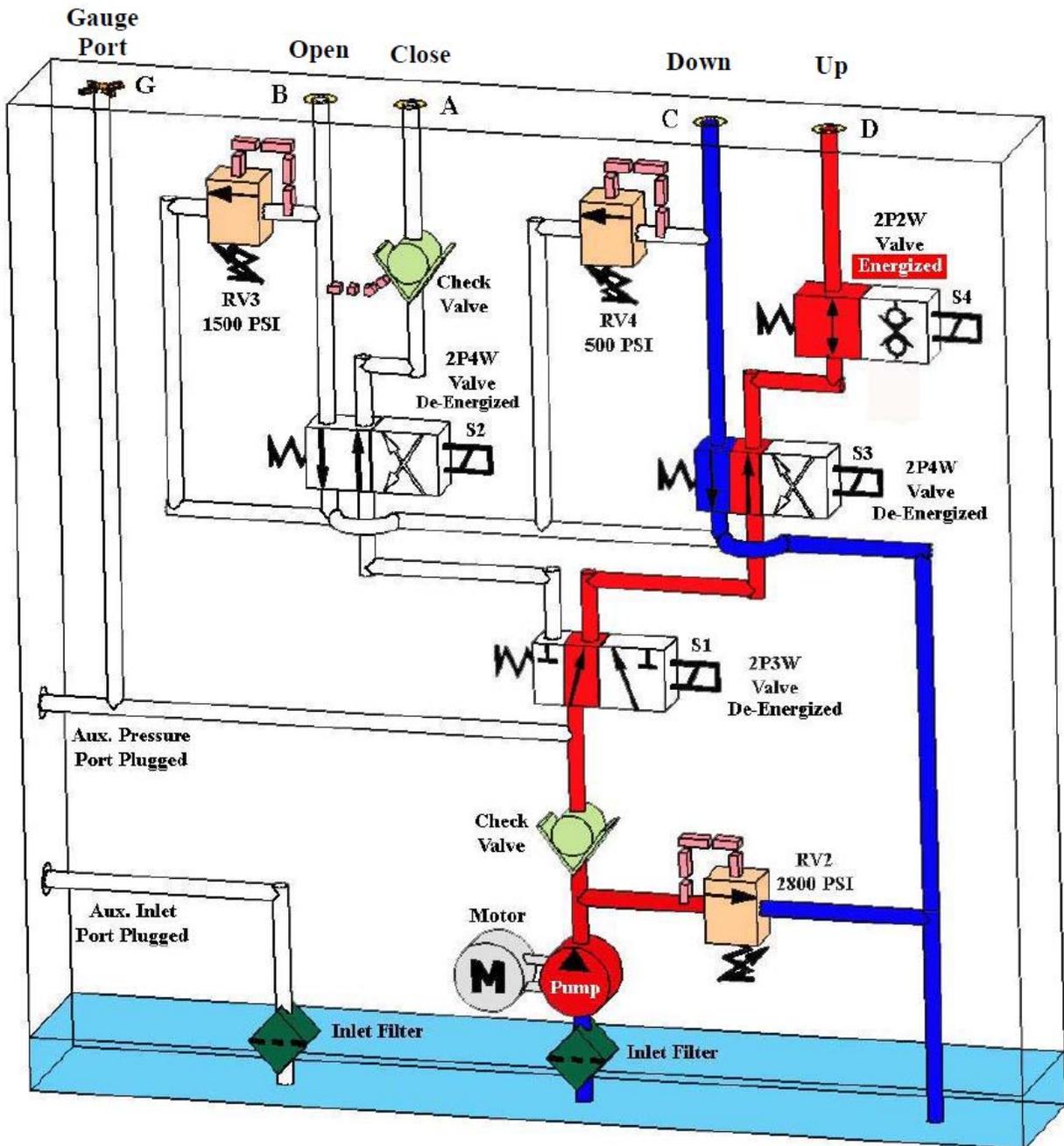
## Call Out of Generation 2 Main & Auxiliary Power Unit Continued



# Electric / Hydraulic Flow Schematics

Power Up

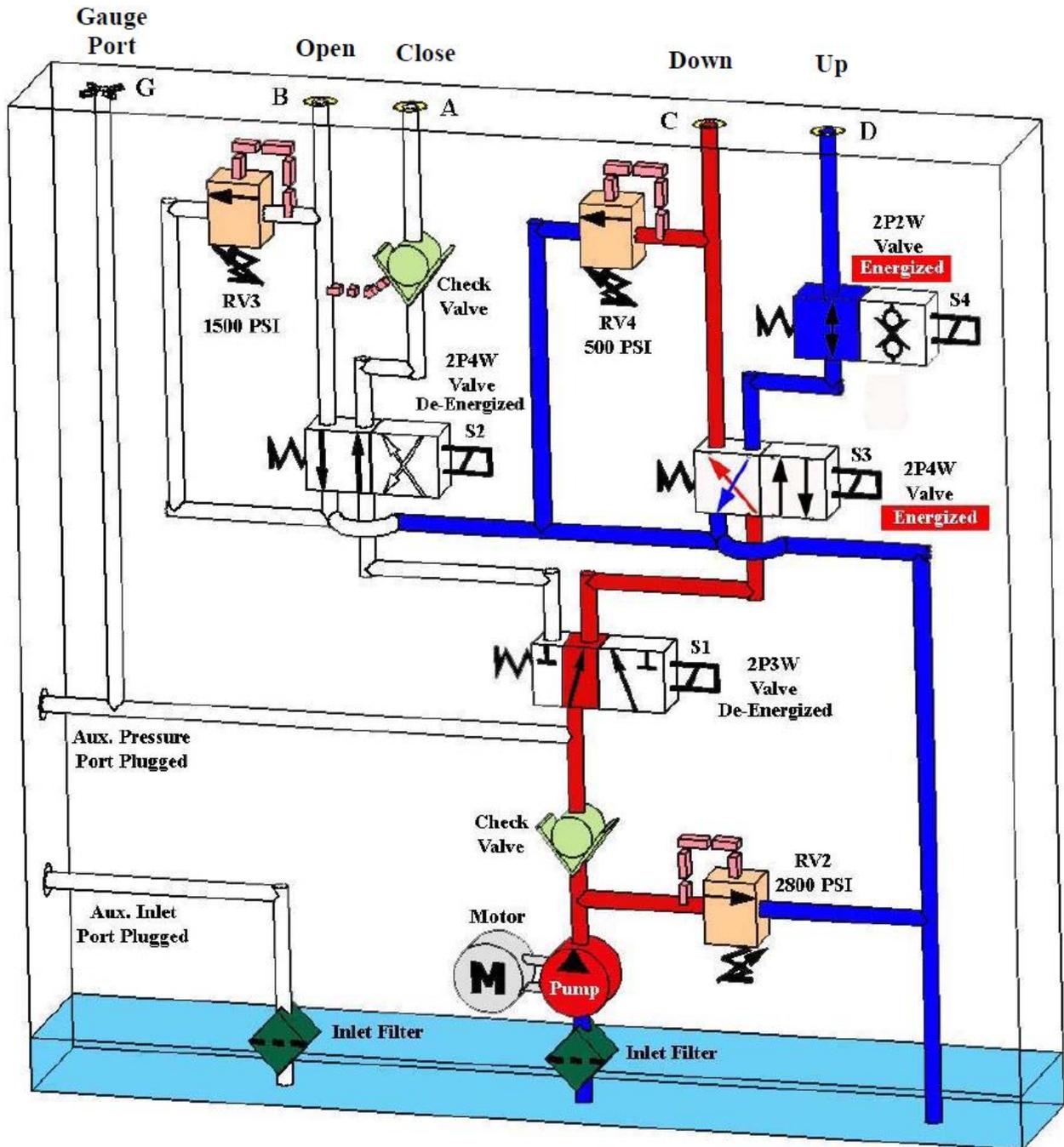
S4 Valve/Coil activated for Up function



# Electric / Hydraulic Flow Schematics

Power Down

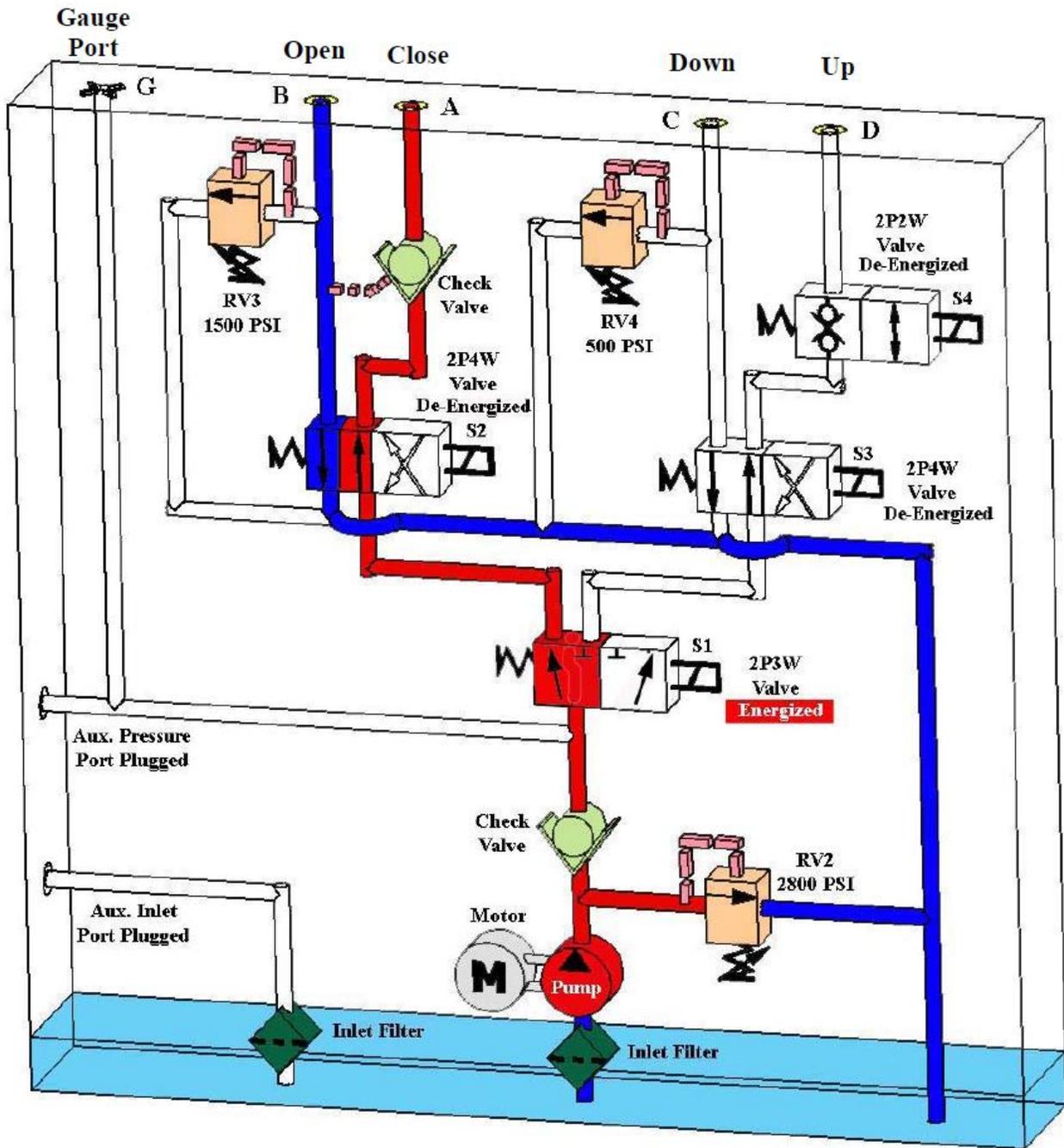
S3 & S4 Valve/Coil activated for the Down function



# Electric / Hydraulic Flow Schematics

## Power Close

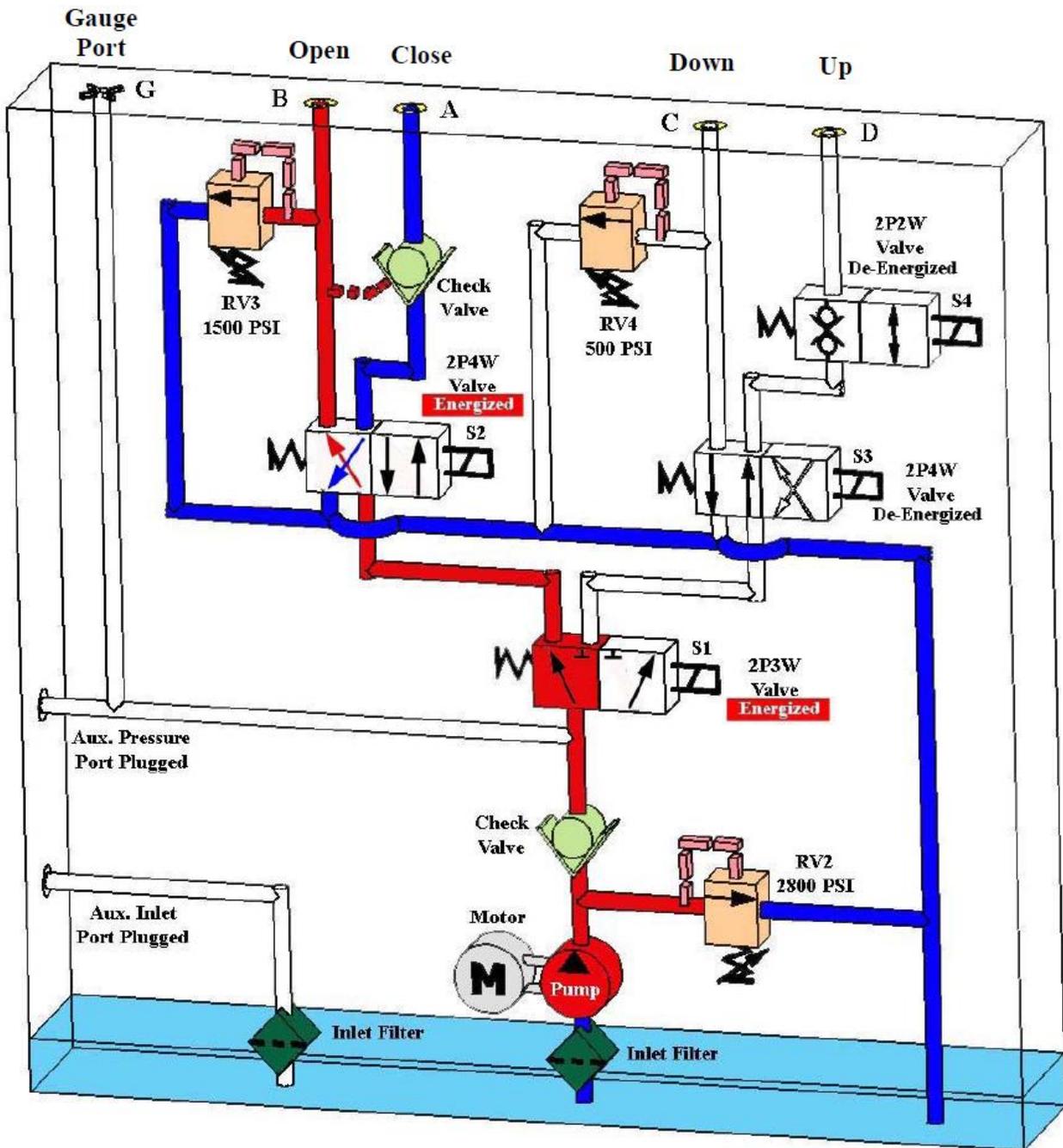
S1 Valve/Coil activated for the Close function



# Electric / Hydraulic Flow Schematics

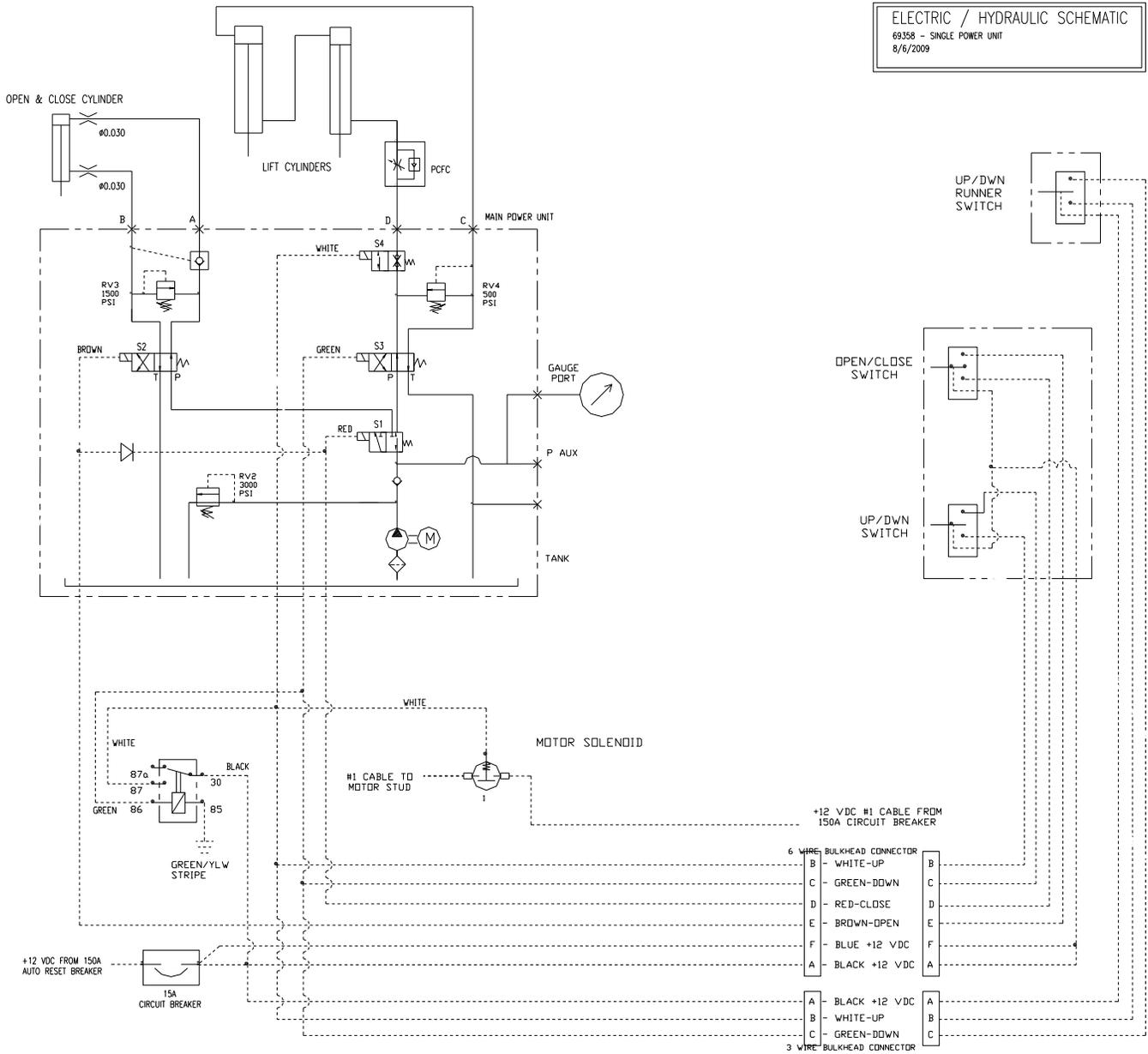
Power Open

S1 & S2 Valve/Coil activated for the Open function



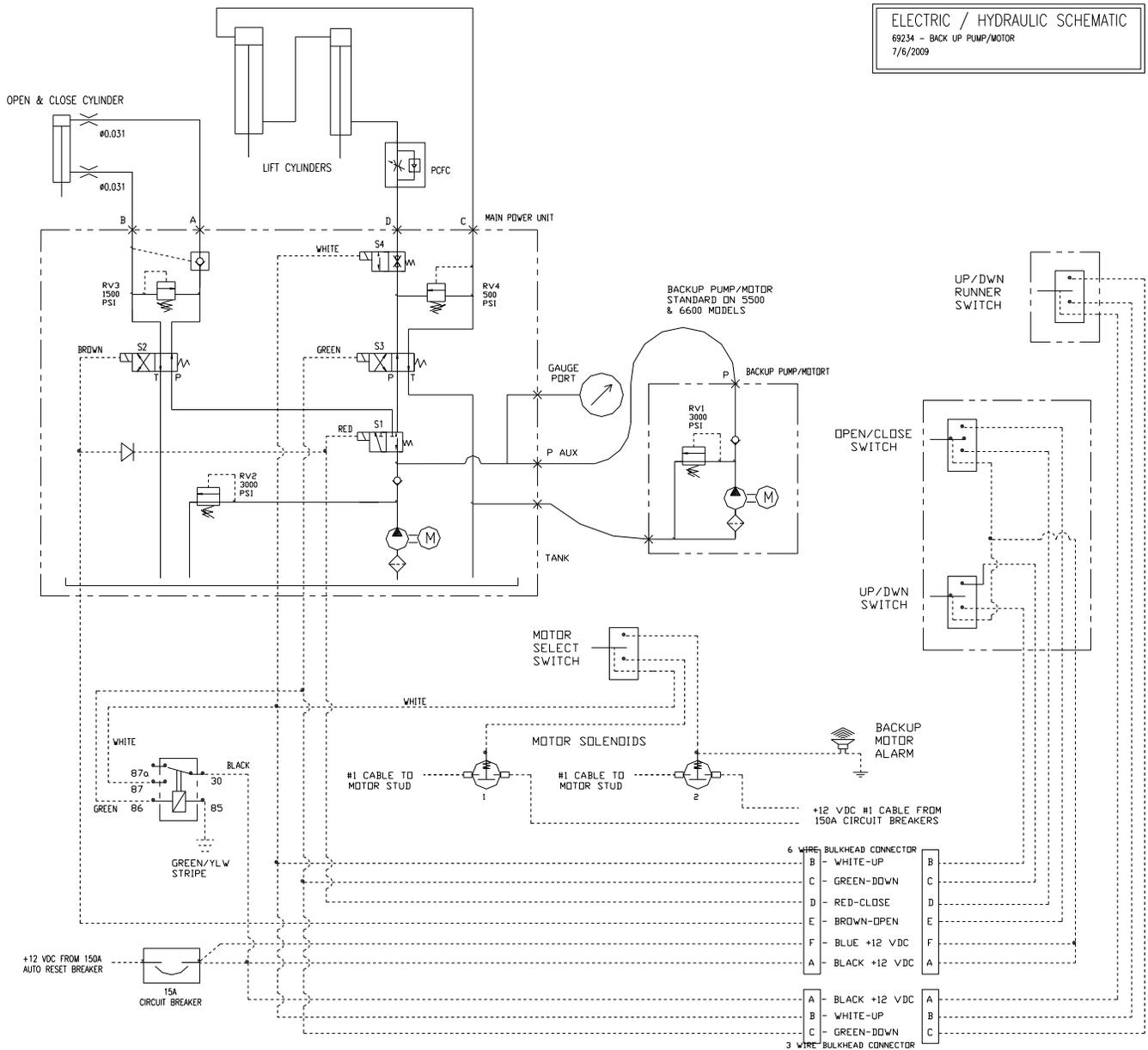
# Electric / Hydraulic Schematics

Built from 4/09  
 thru 10/11  
 Single pump  
 Motor  
 Single Relay



# Electric / Hydraulic Schematics

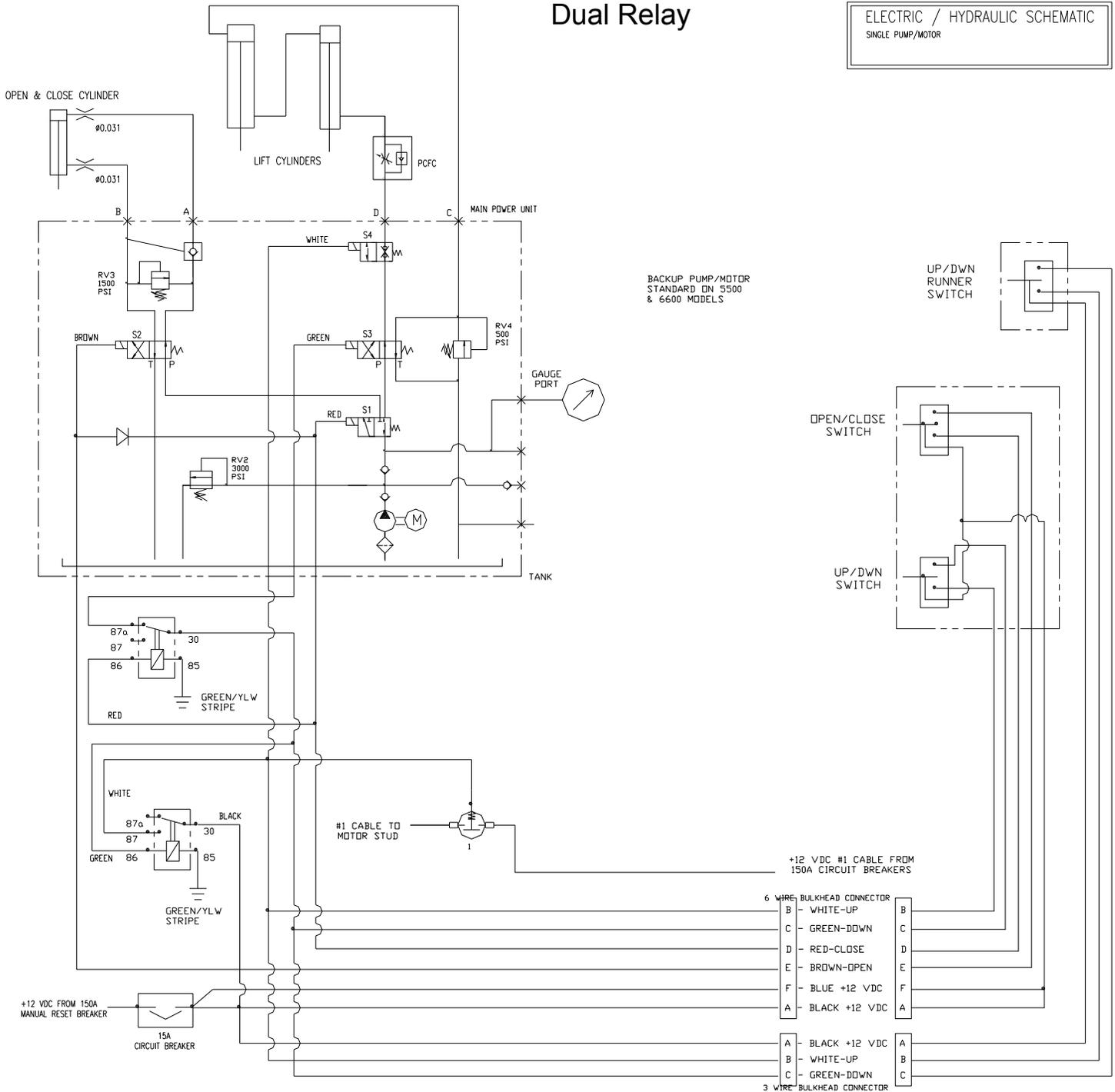
Built from 4/09 thru 10/11  
 Dual Pump Motor with  
 Back Up/Auxiliary  
 Single Relay



# Electric / Hydraulic Schematics

Built from 10/11  
Single Pump  
Motor  
Dual Relay

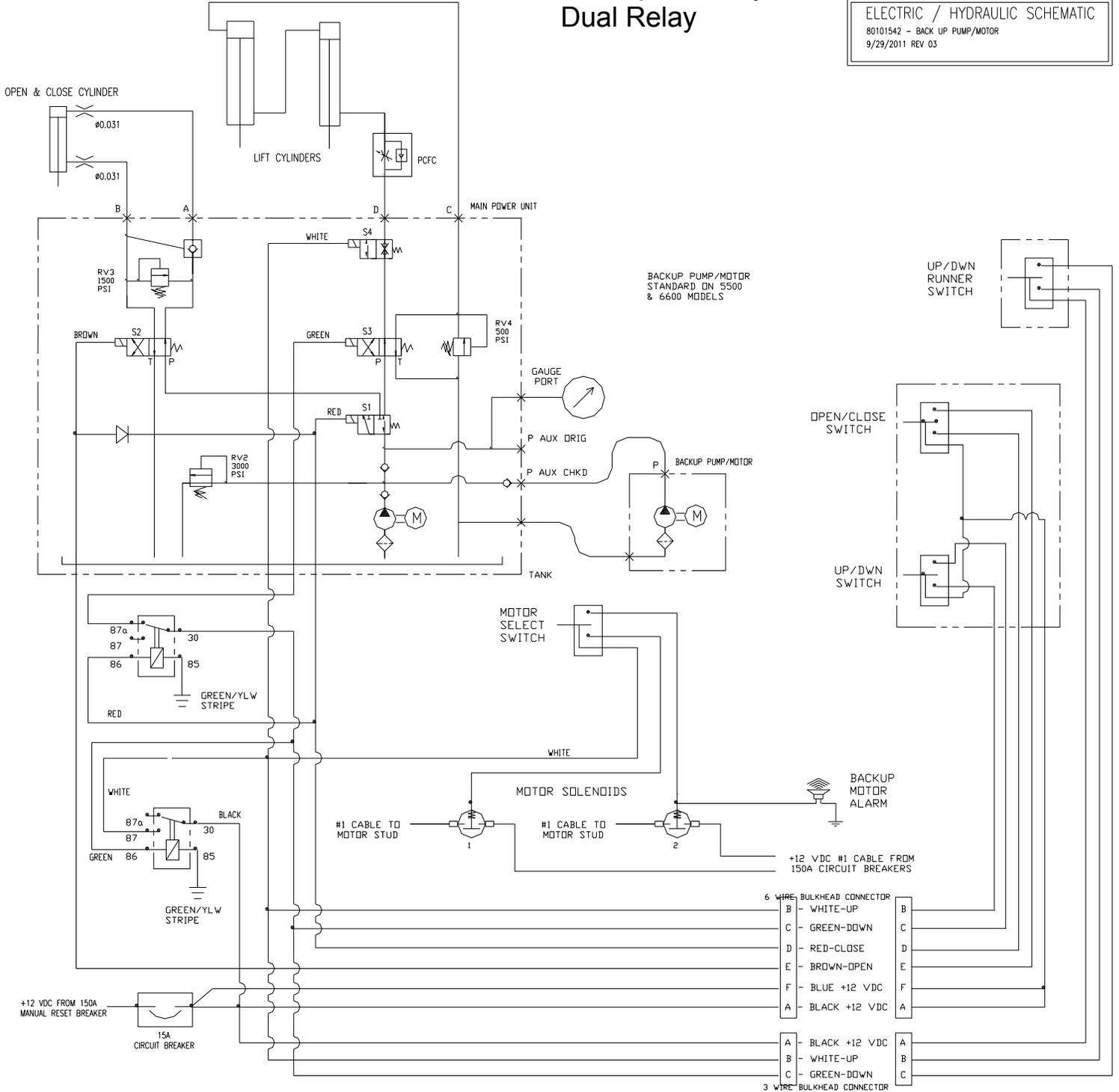
ELECTRIC / HYDRAULIC SCHEMATIC  
SINGLE PUMP/MOTOR



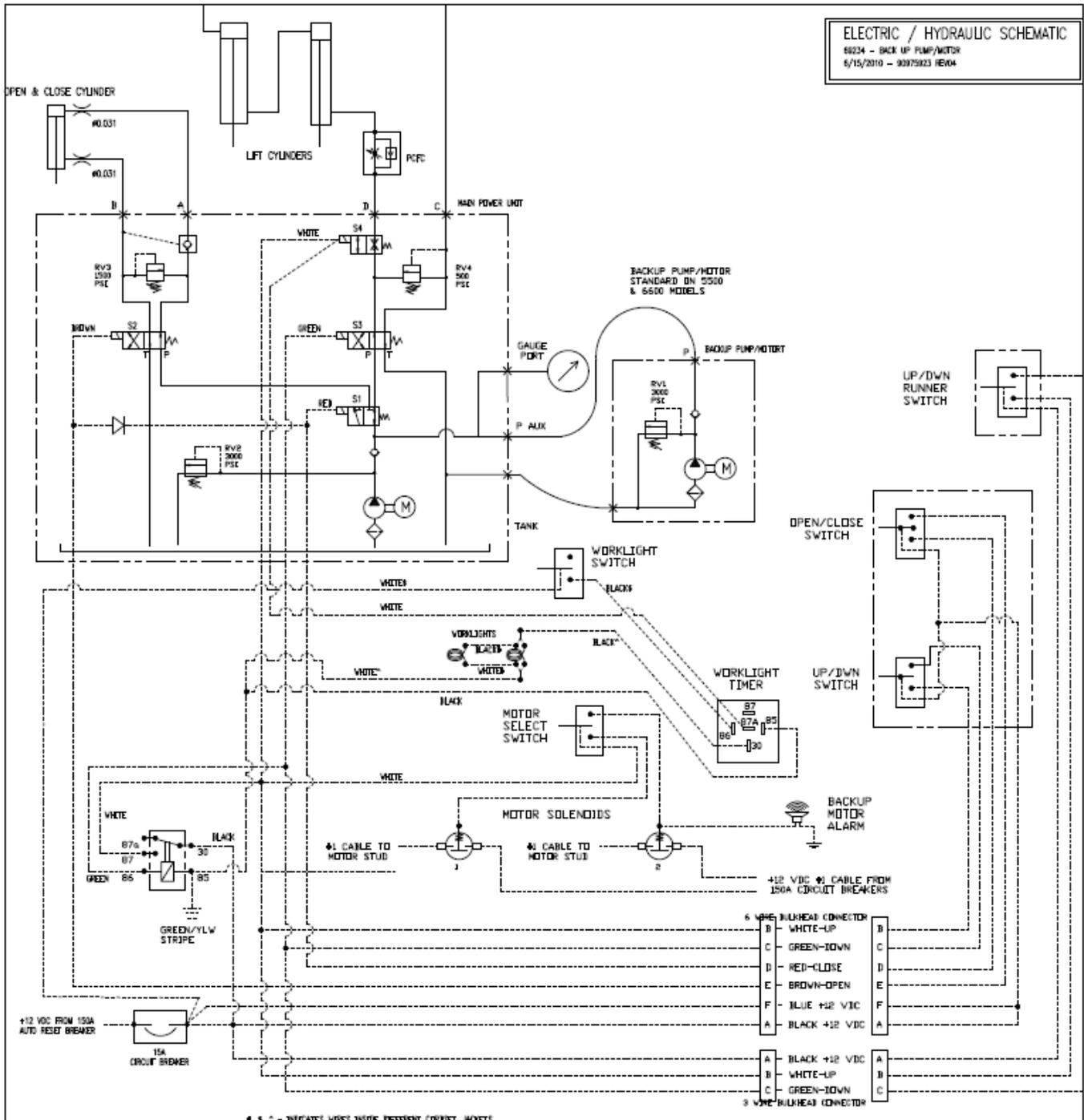
# Electric / Hydraulic Schematics

Built from 10/11  
Dual Pump Motor with  
Backup/Auxiliary  
Dual Relay

ELECTRIC / HYDRAULIC SCHEMATIC  
80101542 - BACK UP PUMP/MOTOR  
9/29/2011 REV 03



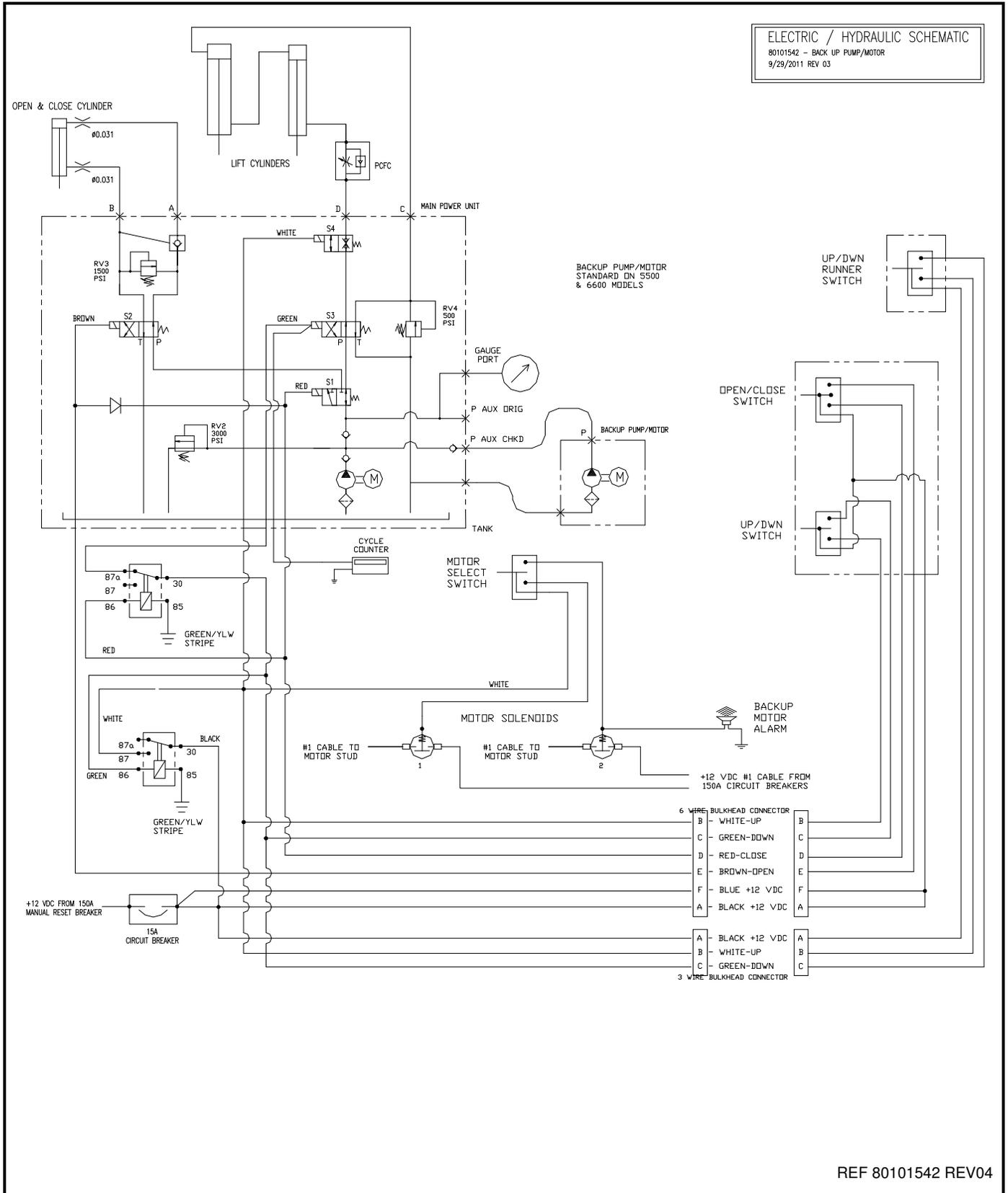
# Work Light Electrical / Hydraulic Schematic





# Cycle Counter Schematics

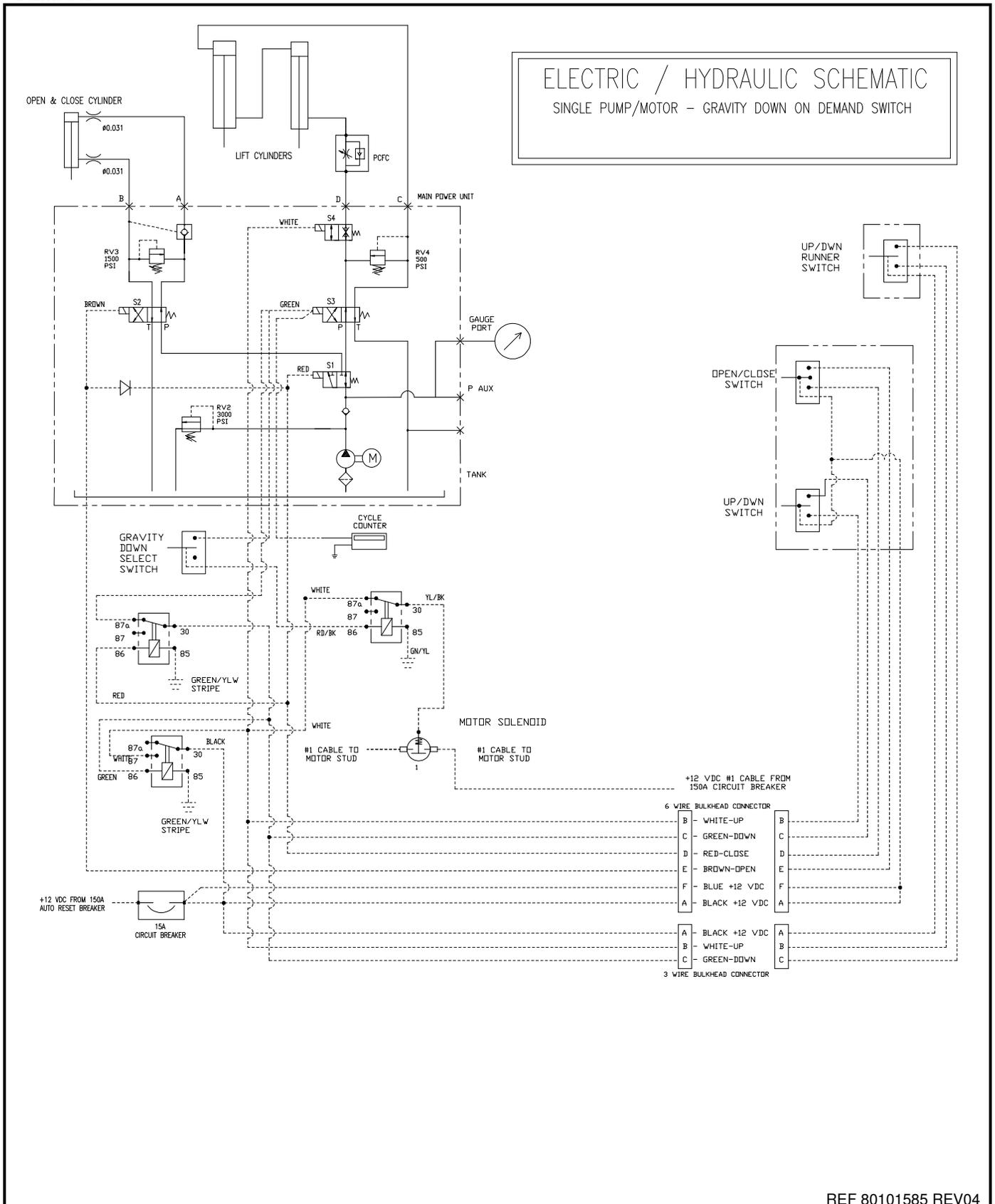
## POWER UNIT HYDRAULIC/ELECTRICAL SCHEMATIC - DUAL PUMP MOTOR WITH BACKUP/AUXILLARY - POWER DOWN



REF 80101542 REV04

# Gravity Down On Demand Schematics

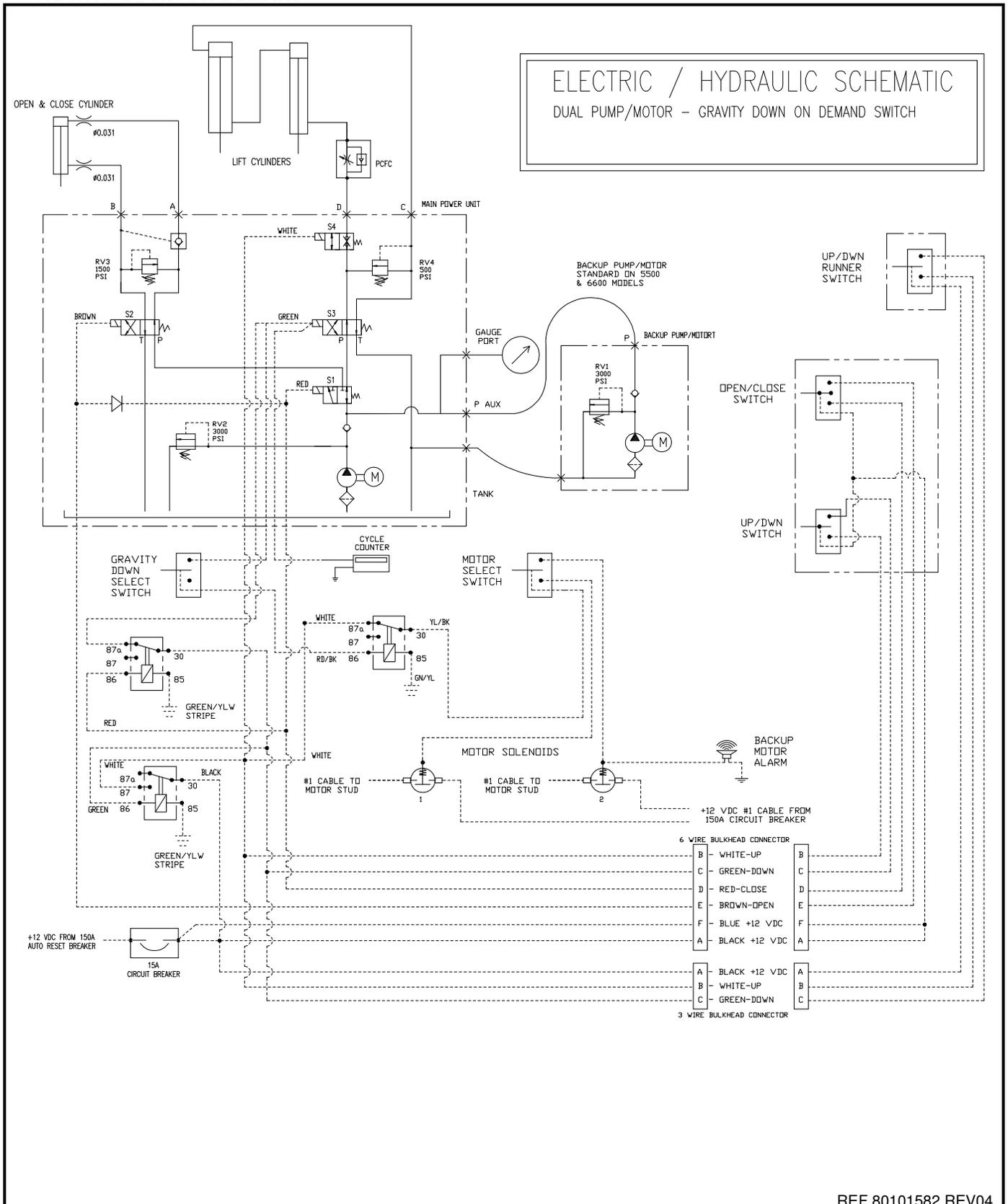
POWER UNIT HYDRAULIC/ELECTRICAL SCHEMATIC - SINGLE POWER UNIT – GRAVITY DOWN ON DEMAND



REF 80101585 REV04

# Gravity Down On Demand Schematics

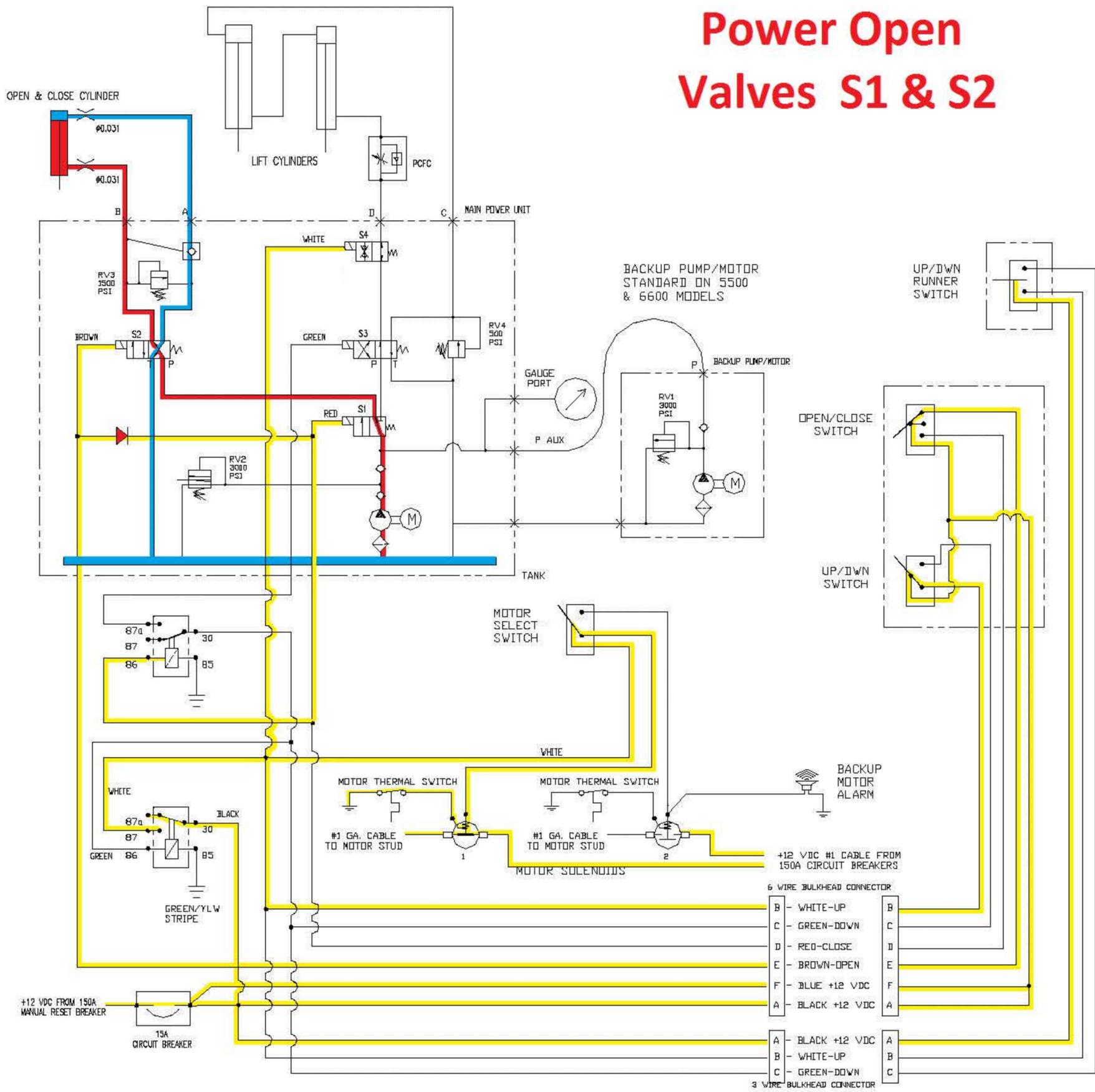
POWER UNIT HYDRAULIC/ELECTRICAL SCHEMATIC - DUAL PUMP MOTOR WITH BACKUP/AUXILLARY  
 - GRAVITY DOWN ON DEMAND



REF 80101582 REV04

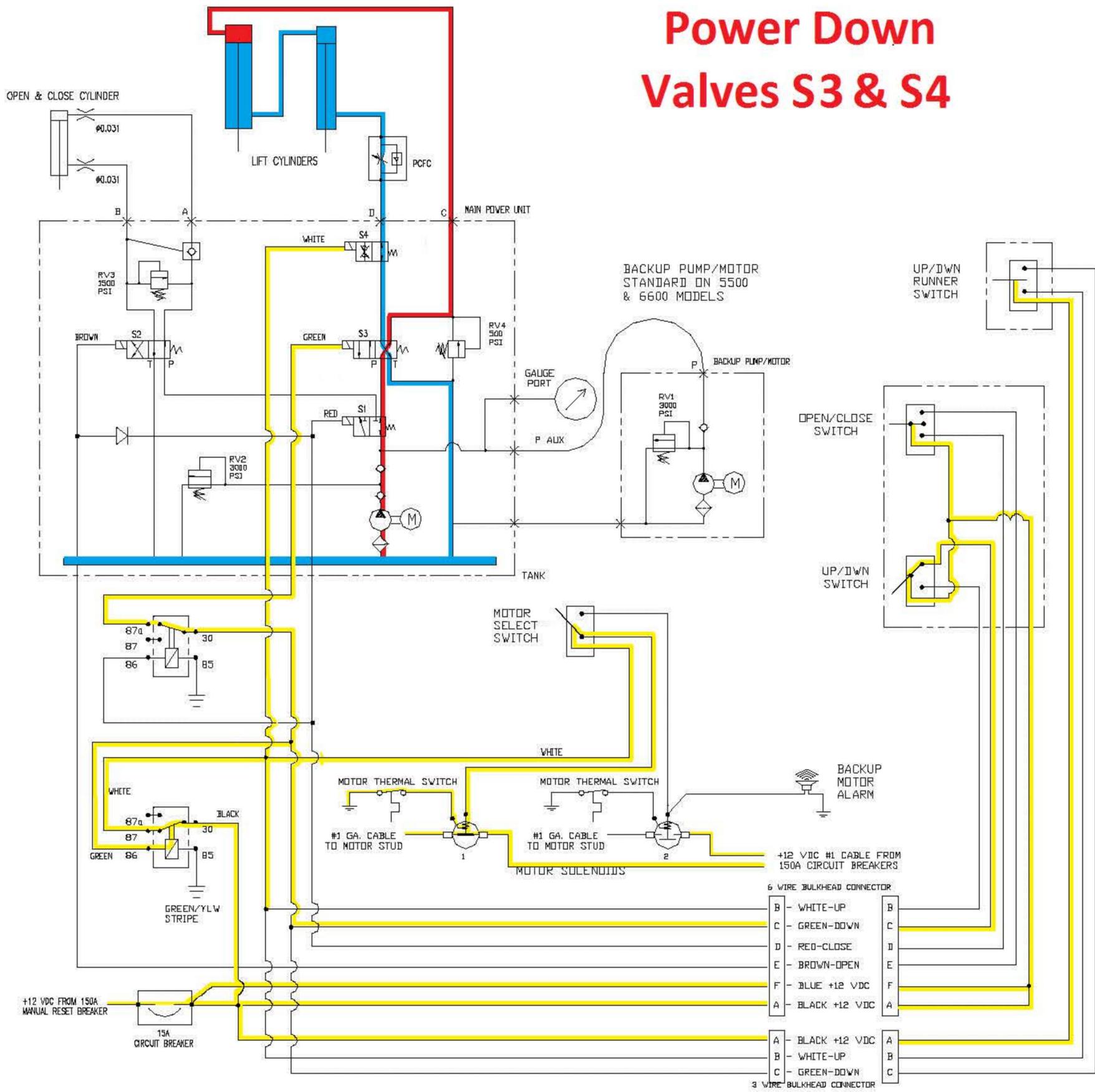
# Power Open Color Schematic

## Power Open Valves S1 & S2



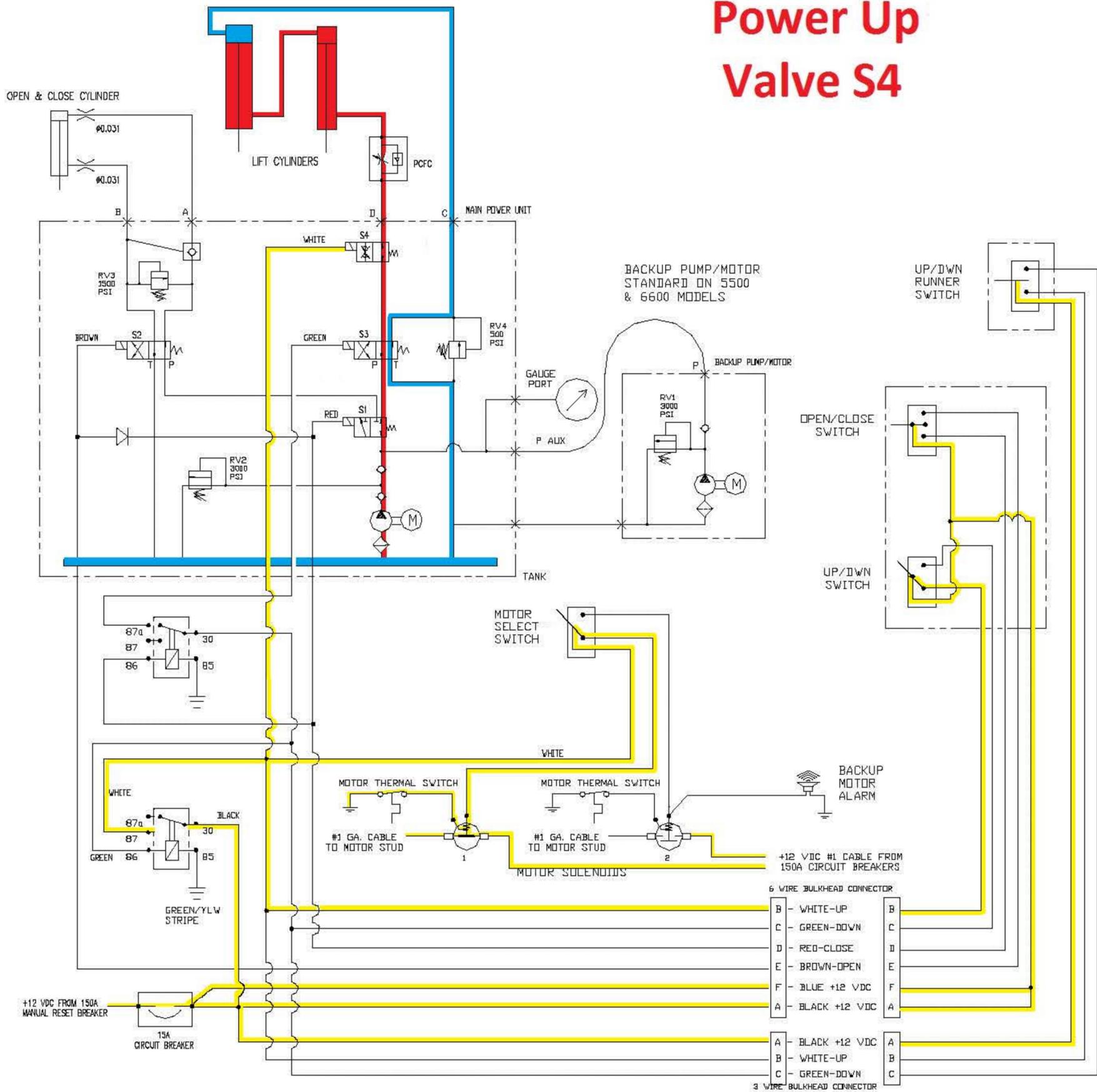
# Power Down Color Schematic

## Power Down Valves S3 & S4



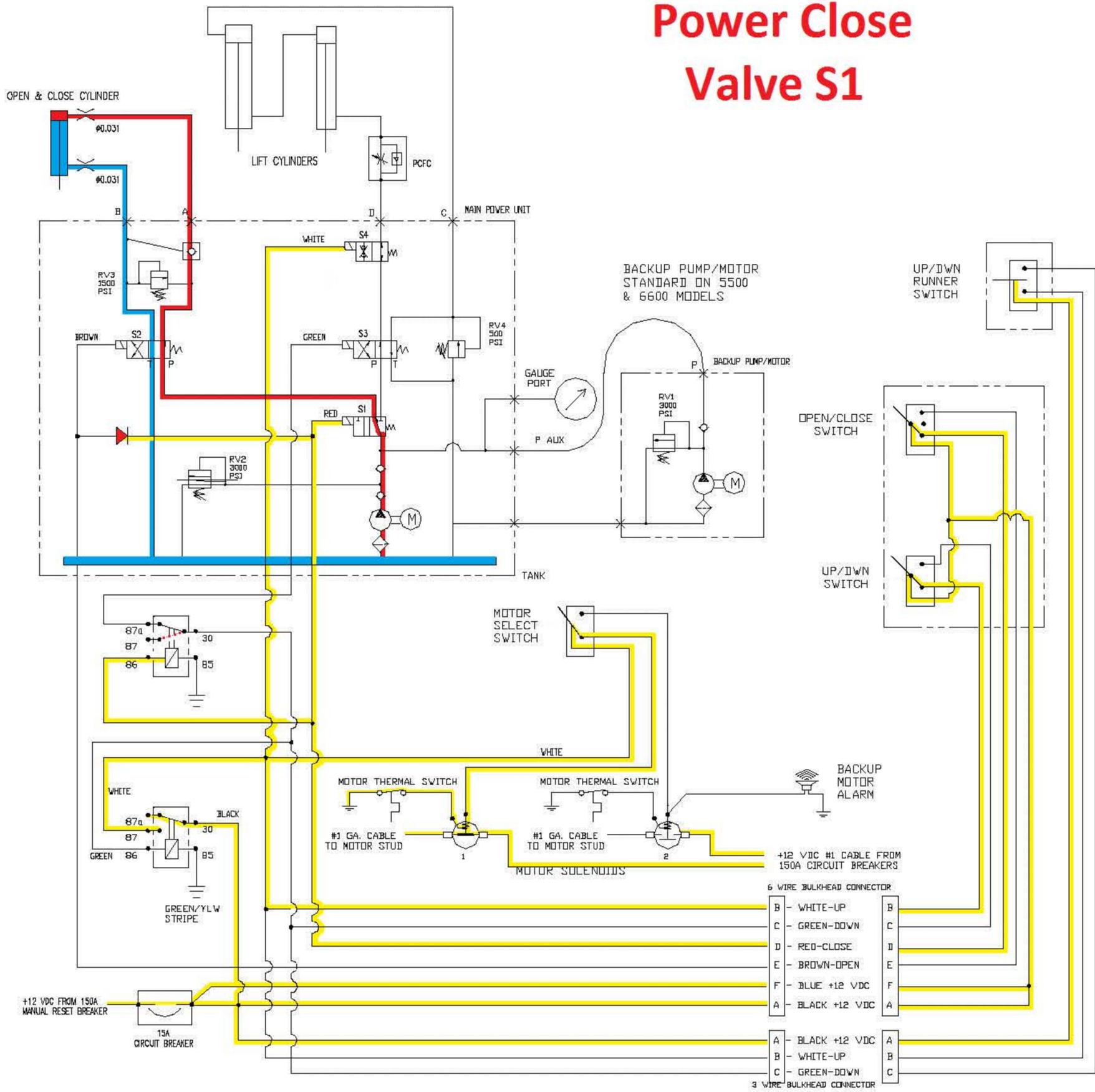
# Power Up Color Schematic

## Power Up Valve S4



# Power Close Color Schematic

## Power Close Valve S1



# Troubleshooting Guide

## CHECKING THE OIL LEVEL IN THE RESERVOIR

Check the oil with the platform fully raised and in the open position. Oil should be within 3" below the top of the reservoir. The liftgate is shipped with Shell Tellus 15. Check the owner's manual for additional recommended oils. Fill as required with the specified fluid in the owner's manual. Do not overfill the reservoir.

## OIL OVERFLOWS FROM THE RESERVOIR

Confirm that the operator is operating the liftgate properly. Check and inspect the oil level in the reservoir. It could be overfilled.

## RECOMMENDED LIFTGATE BATTERY(S)

The recommended lift gate battery(s) should be **Dual Purpose Group 31**. The battery(s) should have **650-750** cold cranking amps and at least **180 minutes** of reserve capacity. When replacing the liftgate battery inspect the cables and wires for corrosion.

## LIFTGATE WILL NOT RAISE – MOTOR DOES NOT RUN

- Check the cab shut off switch confirm that the switch is on and functional\*
- Check the master disconnect switch located on the pump box. Confirm that the switch is turned on.
- Check 150 amp circuit breaker located in pump box
- Check for voltage at the motor solenoid. If you have at least **10.5 volts** at the solenoid when the switch is activated and you have no power to the motor then replace the motor solenoid. Check the pump motor for battery voltage. Confirm by checking voltage on the motor post. If the motor does not run after confirming battery voltage at the terminal on the motor, replace the defective motor.
- Check the battery(s) for a full state of charge. Load test the lift gate battery(s). Replace any batteries that cannot be fully charged.
- Check the 15 amp circuit breaker located in pump box.
- Check the cables for damages clean any dirty connections and tighten any loose connections.

# Troubleshooting Guide

## **PLATFORM DOES NOT RAISE OR RAISES SLOW- MOTOR RUNS**

- Check and inspect the oil level in the reservoir. Check the fluid viscosity. **See Checking the oil level in the reservoir**
- Check the battery(s) for full state of charge. Replace any batteries that cannot be fully charged.
- Check for voltage at the motor solenoid. If you have at least **10.5 volts** at the solenoid when the switch is activated and you have no power to the motor then replace the motor solenoid. Check the pump motor for battery voltage. Confirm by checking voltage on the motor post. If the motor does not run after confirming battery voltage at the terminal on the motor, replace the defective motor.
- Check for any mechanical obstructions or any mechanical damage. Look for any broken or bent parts that could interfere with normal operation. Look at the runners, columns and wear pads.
- Check voltage on **(S4)** valve while the up button is activated. Check for **10.5 volts** at the coil. Test the coil **(4.5ohms)** Confirm that the valve is magnetizing. If the coil is working the valve may need to be replaced. If the valve is not getting voltage, check all cables and wires for shorts and poor connections.
- Check the pressure at the gauge. It should 600-1000psi to raise an empty platform.

## **PLATFORM GOES DOWN WHEN THE UP BUTTON IS PRESSED- MOTOR RUNS**

- Check and inspect the hose connections. The hoses could potentially be reversed where they connect to the power unit box.
- Check **(S3)** valve for mechanical binding or possible short. **(S3)** may be getting power when it should not be getting power

## **PLATFORM DOES NOT LOWER OR LOWERS SLOW**

- Check and inspect the oil level in the reservoir. Check the fluid viscosity. See owner's manual for substitute oils.
- Check the battery(s) for a full state of charge. Load test the lift gate battery(s). Replace any batteries that cannot be fully charged.
- On a power down unit, check for voltage at the pump motor. The voltage should be at least **10.5 volts**.
- Check for mechanical binding. Check the underside of the bed extension for binding. Check for obstructions in the path of travel.
- Check voltage on **(S4) & (S3)** valve while the switch is activated. The voltage should be at least **10.5 volts**. Feel for a pulse on the valve. Test the coil **(4.5ohms)**. Confirm that the valve is magnetizing. If the coil is good the valve may need to be replaced. If the coils are not getting power, check all cables and wires for shorts and poor connections.
- Check the pressure compensating valve. It's located on the passenger side cylinder at the top. Inspect the valve for restrictions or contaminants.

# Troubleshooting Guide

## PLATFORM WILL NOT LIFT TO FULL CAPACITY

- Check the fluid in the reservoir, fill with correct fluid. **See Checking the oil level in the reservoir**
- Check for any mechanical obstructions or any mechanical damage. Look for any broken or bent parts that could interfere with normal operation.
- Check the cables for damages, clean dirty connections and tighten any loose connections
- Check the voltage at the pump motor. The voltage should be at least **10.5 volts**.
- Determine whether or not this happens with the platform loaded or unloaded? If the gate will not lift to full height loaded,
- Check the charge of the batteries. Confirm that the lift gate has a dedicated ground. Check the battery(s) for full state of charge. Replace any batteries that cannot be fully charged.
- Check for leaking hoses and lines. Replace any leaking lines or lines.

## CONTROL SWITCH FUSE BLOWN

- Check the wiring for damages, clean dirty connections and tighten any loose connections
- Check and inspect for a short in switch control wire.
- Check for a defective switch.
- Check for defective coils on valves Check for **10.5 volts** at the coil. Test the coils (**4.5ohms**) Confirm that the valve is magnetizing.
- Check and inspect the motor solenoid

## BLEEDING INSTRUCTIONS FOR THE LIFT CYLINDERS

- 1) Turn on vehicle or apply battery charger to the lift gate batteries.
- 2) With Platform open run the power unit until the platform is stopped at its maximum lifting height.
- 3) With the platform at the maximum lifting height continue to run the power unit for 35 seconds. **(Do Not Lower the platform at this time)**
- 4) Let the power unit rest for 5 minutes (or switch to auxiliary pump) and run power unit for 35 seconds again with the platform at the maximum lifting height. Leave the platform open for ½ hour at floor height to see if the platform remains level or drifts down. If platform drifts down repeat bleeding procedure.
- 5) The lifting cylinders are now bled.

# Troubleshooting Guide

## PLATFORM WILL NOT OPEN OR CLOSE

*\*To open press open and up, to close press close and up.*

### IF MOTOR DOES NOT RUN: SEE MOTOR DOES NOT RUN

- Check voltage on **(S1 & S2 for power open function / S1 only for power close function)** valves while the controls are activated. Check for 10.5 volts at the coil. Test the coils (**4.5ohms**) Confirm that the valve is magnetizing. If coils are working the valve may need to be replaced
- If there is no voltage to the coils, check all cables and wires for shorts and poor connections.
- Low Pressure If platform does not close, check pressure on gauge. **Open pressure should be 1600 – Close pressure should be 2700 psi**
- Check for any mechanical obstructions or any mechanical damage. Look for any broken or bent parts that could interfere with normal operation.
- Orifice in Power close cylinder is clogged or POC cylinder is bypassing
- Pilot activated check valve in power unit may be faulty. (OPENING ISSUE ONLY)

### **\*IF THE PLATFORM WILL ONLY OPEN OR ONLY CLOSE**

- Check power on valve **(S1)** and **(S2)** while the up button is activated. Feel for a pulse on the valve and listen for the clicking noise. Confirm that the valve is receiving at least 10.5 volts and magnetizing. If both coils are magnetizing, the valve maybe faulty.
- If you are getting power to both coils and you have checked that the valve is working fine, the orifice built into the open and close cylinder may be blocked. The orifice is a small hole that restricts the oil flow. Remove cylinder and try cleaning ports. The hole in the orifice should be no larger than 1/64". A welding tip cleaner can be used to clean the hole if it is contaminated.

## PLATFORM OPENS OR CLOSES TOO SLOW

*\*Correct speed is 10s-13s open and close*

1. The hydraulic cylinder that power closes and opens the platform has orifices. Platform should be lowered to the ground and the cylinder removed for inspection. The hole in the orifice should be no larger than 1/64".

## PLATFORM WILL NOT LOCK PROPERLY ON BOTH SIDES

1. Raise the liftgate platform to the top before locking the platform. Hold the button at the top for 5-10 seconds to re level the platform. Sometimes if the platform goes out of sync it may need to be re leveled at the top before it goes into the locks properly.
2. The upper stop on the driver side runner may need to be adjusted
3. Check and confirm the travel latch engagement. If the travel ear engages the passenger side cam less than 3/8 add the retaining ring (**75001012**) to the driver side hinge pin.

# Troubleshooting Guide

## PLATFORM LEAKS DOWN

Run platform to the top and hold the button for 30 seconds to bleed the system through before determining if there is any leakage.

Does only one side leak down?

- **If Yes:** Replace cylinder on that one side where it is leaking.
- **If both sides leak down:** Check lock valve (S4). Lock valve may have dirt or contamination causing it to leak down. Clean the valve and reinstall. If it still leaks down replace the lock valve.

## THE CIRCUIT BREAKER RESETS

- Check for a direct short in power cable. Inspect for damaged or cut cable. Also check for improperly size battery cable.
- A defective motor may draw too much current. Check amperage draw from lift gate motor. At 700 psi the motor should draw 80-100 amps.
- Defective circuit breaker. If the breaker is suspected it should be replaced.
- Defective circuit breaker. If the breaker is suspected it should be replaced. This condition can occur also if the platform overloaded (if it has a load on it)

## PUMP MOTOR IS GETTING HOT

- This condition may be normal if the liftgate motor experiences high cycles of operation in a short period of time without cooling. The Thermal switch will reset after the motor cools down.
- Check for low voltage. The voltage should be at least **10.5 volts** at the motor solenoid.
- Check batteries are fully charged, load test batteries. Check the cables for damages, clean dirty connections and tighten any loose connections
- Thermal switch maybe defective or bypassed. The Thermal sensor is set to activate at 240 F degrees.

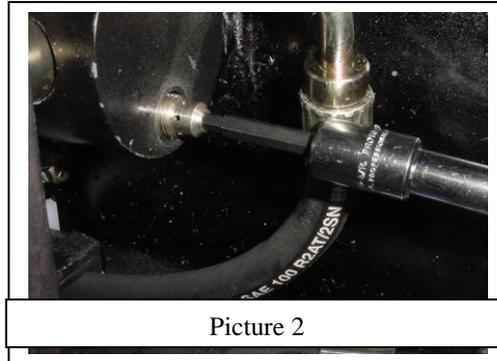
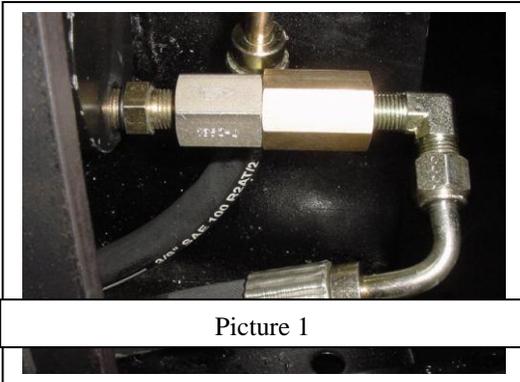
## LIFTGATE MAKES A SQUEALING NOISE

- Check the gate for proper lubrication. Inspect the wear pads and grease points on the platform including hinges and pins.
- Noise happens in both raising and lowering. Check power open hose guard for interference when the platform moves up and down.
- If the guard is not rubbing add Caterpillar additive. (**1U9891** / 4-6 ounces) Engage up switch to by-pass and hold for 30 seconds then cycle liftgate 4-5 times or until noise stops.
- If the noise only happens when lowering, the pressure comp valve in the cylinder may be defective or the down pressure may be set too high. The down pressure should be **500 maximum** psi

# Lift Cylinder Replacement

## Supplement to WDV Cylinder Replacement Instructions for Passengers Side Cylinder Only

When replacing the passengers side cylinder on an WDV liftgate please note there is a pressure compensating flow control valve located at the top of the passengers side cylinder. Older models liftgates have external Pressure compensating flow valves, as seen in photo 1, and newer liftgates have internal flow valves as seen in photo 2.



On all 3500 lb and 4400 lb liftgates the internal pressure compensating valve is already installed on your cylinder. You do not need to install the external flow control valve. Attach the hoses directly to the 3/8 JIC fitting on the cylinder. Use the adaptor provided in the kit to screw into the cylinder and attach the hose directly back to the adaptor on the cylinder.

On 5500 lb and 6600 lb models the flow control valve is not pre installed. Please note that on these models we have provided fitting so that you can incorporate either pressure compensating valve.

Internal valve note: If you have the internal compensating valve, you will need to use a 3/16 allen wrench to remove the old pressure compensating valve from the cylinder and insert it into the new cylinder. Install the fittings from the old cylinder on the new cylinder.

External Valve note: With the external pressure compensating valves you will need to use one of the adaptors provided in the kit to re-use the external valve. The adapter used on the old cylinder may not be the same thread as the new one. Install the adapter provided in the cylinder kit into the cylinder port and install the flow control and 3/8 JIC fitting onto the adapter. Reattach hoses.

# Lift Cylinder Replacement

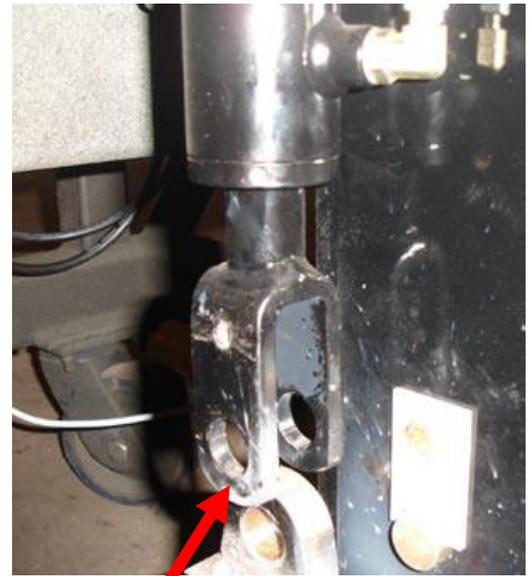
## Lift Cylinder Replacement Instructions

### Replace:

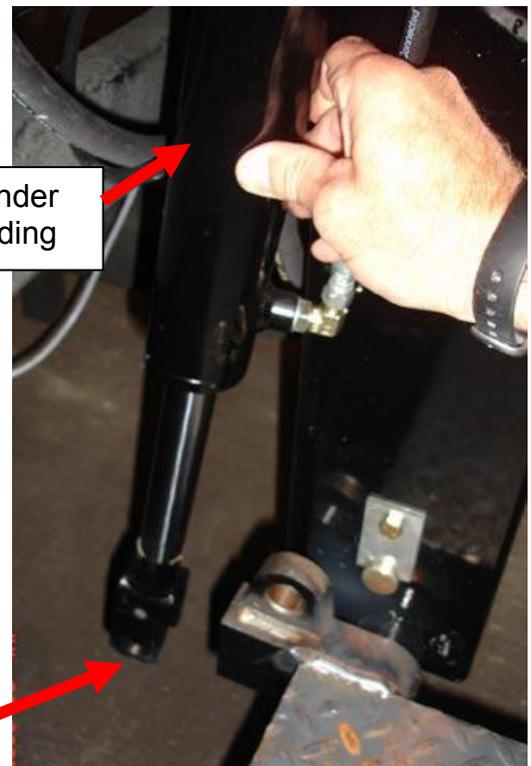
1. Lower platform to the ground.
2. Remove lower cylinder pin on both cylinders.
3. Run liftgate up until both cylinders are fully retracted. (Approx. 20 seconds)
4. Disconnect both hoses from top of defective cylinder.
5. Remove top cylinder pin and lift defective cylinder up and out of slider and track.
6. Place new, fully retracted cylinder into lift and reattach top cylinder pin.
7. Reattach all hoses to the new cylinder.
8. Fill hydraulic reservoir to ½" from top.
9. Activate the UP switch for 35 seconds. Wait 5 minutes activate the UP switch for another 35 seconds. (70 seconds total) This will bleed the cylinders.
10. Activate the DOWN switch until the passenger side rod cross tube aligns with the lower cylinder mount hole in the slider.
11. Align rod cross tube with hole in slider, insert and reattach lower cylinder pin.
12. Repeat for driver's side.
13. Make certain the all cylinder pins are fully inserted and secured with retainers.
14. Run liftgate up and check that platform is level with threshold. If platform raises out of level repeat step 9 to bleed the cylinder again.

# Closing Cylinder Bleeding Procedure

1. Open Platform.
2. Lower Platform to 10" above the ground.
3. Remove pin retainer from lower closing cylinder pin.
4. Remove lower closing cylinder pin from Cylinder and platform clevis.
5. Fully retract closing cylinder using switch.
6. Remove hose from upper fitting of closing cylinder.
7. Run fluid through hose by operating switch as if trying to close platform. (Run for approximately 3 seconds)
  - Stop when fluid is exiting the hose in a clear stream.
8. Reattach hose to upper fitting of closing cylinder.
9. Fully extend closing cylinder using switch. Hold body of cylinder back while extending to clear Platform clevis.
10. Remove hose from lower fitting of closing cylinder.
11. Run fluid through hose by operating switch as if trying to open platform.  
(Run for approximately 3 seconds)
  - Stop when fluid is exiting the hose in a clear stream.
12. Reattach hose to lower fitting of closing cylinder.
13. Align closing cylinder clevis with bracket on platform.
14. Replace the lower closing cylinder pin and pin retainer.
15. Check pump fluid level. Fluid should be visible in tank site glass with platform fully raised. Add fluid if needed.



Fully retracted with lower pin removed

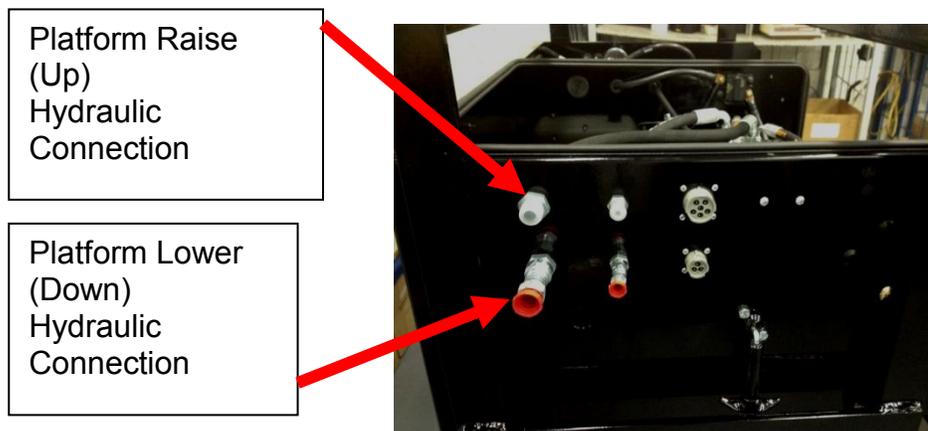


Hold body of cylinder back while extending

Fully extended with lower pin removed

# Hydraulic Oil Changing Procedure

1. Position liftgate platform open and on the ground.
2. Remove oil from tank:
  - SPX dual power units remove the drain plug on the bottom of the tank and drain.
  - All other units siphon oil from tank.
3. Fill tank to top with new oil
4. Remove the outside lower 3/8" hose (return line) from the power unit box and hold it in a container for used oil.



5. While keeping return line inside container press the up toggle switch to run liftgate until it fully raised. Be sure to watch oil level while raising and add new oil if needed.
6. Continue running the liftgate for 40 seconds when it is fully raised to flush old oil trapped between the cylinders.
7. Reconnect lower 3/8" hose and fill tank to proper level (Visible in site glass) Power units with plastic tanks should be filled to 1" from the top.

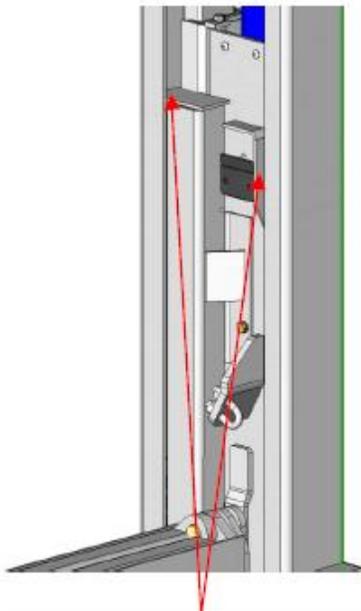
WALTCO	
Purchase in 1 gallon containers from Waltco Parts Hotline 1-800-411-5685 www.waltco.com	
Hydraulic Fluid Chart	
Temp Range °F	Waltco Fluid Part #s and Acceptable Fluids
0 <sup>U</sup> to 120 <sup>U</sup>	<b>Waltco Biodegradable LiftLube Part # 85803860</b> Shell Tellus S2 V 32 Chevron Rando HDZ 32
-20 <sup>U</sup> to 90 <sup>U</sup>	<b>Waltco Biodegradable LiftLube Arctic Part # 85803866</b> Shell Tellus S2 V 15 Mobil DTE 10 Excell 15 Chevron Rando HDZ 15

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# High Pitch Noise Repair

A high pitch squealing noise can be caused by the following:

- 1: Tight cylinder seal. Noise happens in both raising and lowering. Use Caterpillar additive 1U-9891. Start with 2 ounces, engage up switch to bypass, Hold for 30 seconds then cycle liftgate 4-5 times or until noise stops. Add about two ounces more at a time, until noise stops. A maximum of eight ounces only. If after 8 ounces the noise does not stop or diminish contact factory.
- 2: Defective Flow valve. Noise would happen mostly in the lowering cycle. (See procedure for flow valve replacement)
- 3: Hose guard and column switch guard interference. Noise would happen in both raise and lowering at certain stage on the cycle only. Inspect locations and grind edges as required to stop interference. See picture below.
- 4: Platform hinge pins interference. Noise would happen in both raise and lowering at about 10 to 14 inches from bed level only. Inspect location and grind as required to stop interference. See picture below.



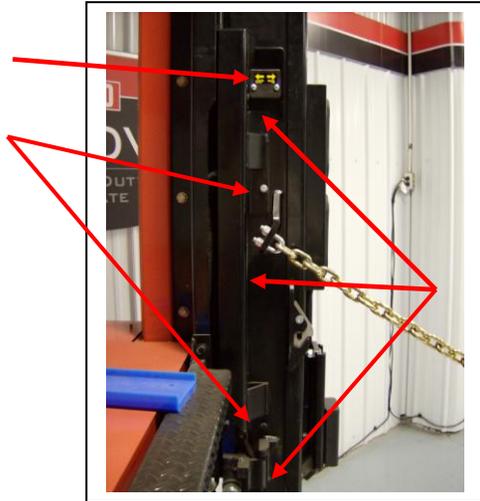
#3: Hose guard and column switch guard interference.



#4: Platform hinge pins interference.

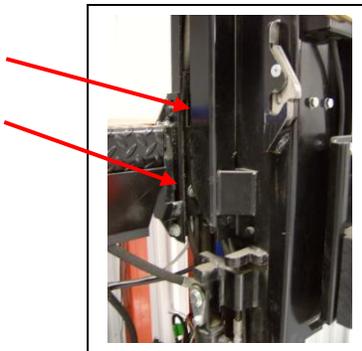
# Replacing Switch and Power Close Hoses

1. Lower the platform in the open position to the ground and cut power to the liftgate. Unbolt the switch from the runner.
2. Remove the hose cover by removing the 2 bolts and cutting the 3 wire ties that hold the switch wire in place.
3. On the cover you also need to remove the bolt holding the bracket securing hose to the cover.



4. With cover removed, disconnect the hoses from the cylinder and disconnect the bolts holding the brackets that secure the hose to the inside guard.

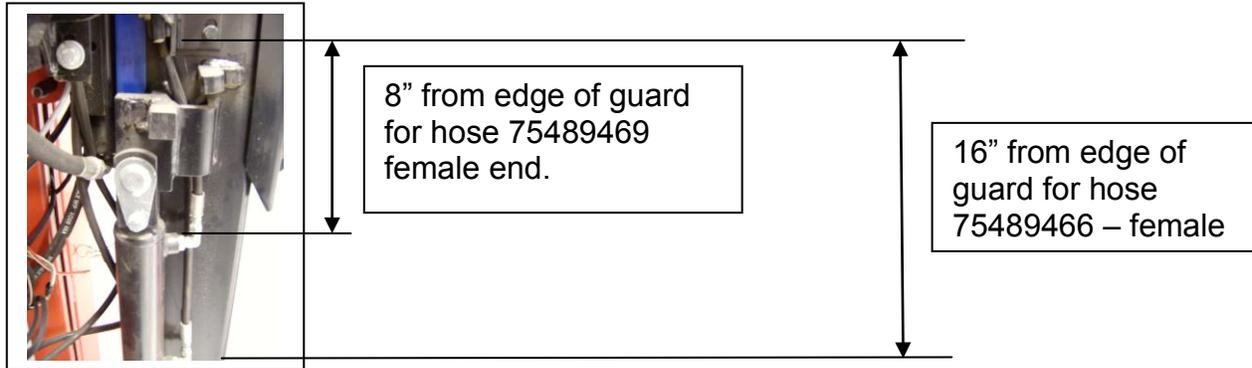
Bolts  
securing  
brackets



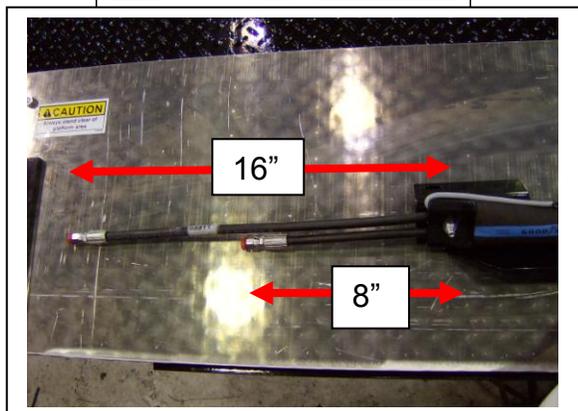
5. Disconnect hoses and wire connection under the trailer. The new switch or hoses or combination of both are ready to install.

# Replacing Switch and Power Close Hoses

6. Secure the hoses to the front cover leaving 8" and 16" of hose exposed from the edge of the lower guard.



7. Secure the switch wire to the outside guard using the holes provided using wire ties.
8. Secure the other end of the hose with shield to the inside guard using bolts and brackets removed in step 4.
9. Install outside guard back in place using the two bolts.
10. Refasten the switch to the column using the two bolts.



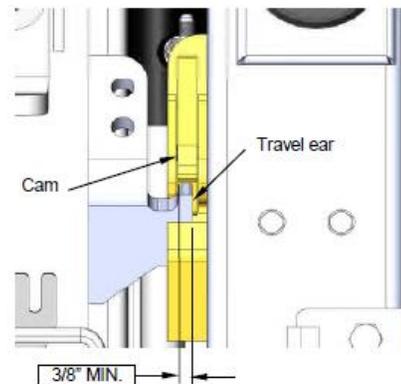
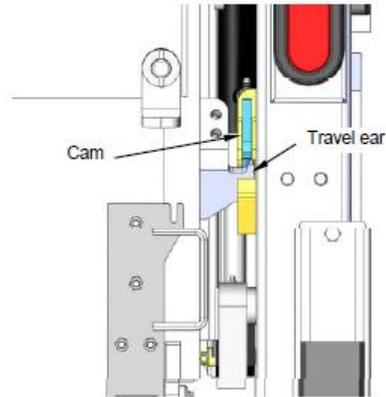
# Travel Latch Engagement

## CHECK TRAVEL LATCH ENGAGEMENT

Store platform in travel latch.

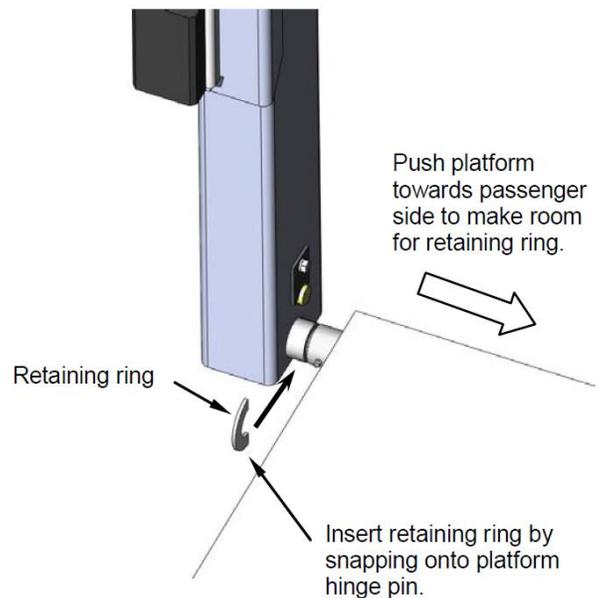
Check that travel ear engages the cam by 3/8" minimum.

If travel ear engages cam less than 3/8" add retaining ring to drivers side hinge pin between platform and runner hinge tube. See INSTALLING PLATFORM SHIM instructions below.



## INSTALLING PLATFORM RETAINING RING

- Retaining rings should be zip tied to one of the hydraulic hoses inside the pumpbox. Two are included if necessary.
- Lower platform to 20" above ground.
- Push platform towards passenger side to make room for retaining ring.
- Insert retaining ring between platform and runner hinge tube by snapping onto platform hinge pin.
- If travel ear engagement distance is still less than 3/8" add second retaining ring if platform can be moved towards curb side to make a gap greater than 1/8".



# Quarterly Preventive Maintenance

Waltco recommends that the WDV / WDVBG liftgate be inspected at 6 month or 3000 cycle intervals to help assure proper function and operation of the liftgate.

Note: Photocopy the following PM Checklist to help keep track of periodic maintenance on the liftgate. Keep completed form with maintenance records.

For more detailed instructions on the following checklist items, refer to the appropriate sections in this Owner's Manual.

Date: \_\_\_\_\_

1/9/2009

Inspection/PM performed by: \_\_\_\_\_

Trailer/Truck #: \_\_\_\_\_

Liftgate Serial #: \_\_\_\_\_ Liftgate Model #: \_\_\_\_\_

Check appropriate boxes below

Quarterly Inspection/PM Procedure				
<b>Inspect Liftgate columns:</b>				
OK	Repair Needed	Corrected	1	Inspect for any physical damage, twisted, bend, spreading, broken welds, top and bottom.
OK	Repair Needed	Corrected	2	Inspect for loose or missing bolts.
OK	Repair Needed	Corrected	3	Inspect that travel ear properly engages autolatch cam.
<b>Inspect Liftgate dock bumpers:</b>				
OK	Repair Needed	Corrected	4	Check for bent or broken steel bumper plates.
OK	Repair Needed	Corrected	5	Inspect that dock bumpers are tight against columns and break away welds are in tact.
OK	Repair Needed	Corrected	6	Inspect for missing or damaged slide pad.
<b>Inspect Liftgate platform:</b>				
OK	Repair Needed	Corrected	7	Inspect for loose nuts, bolts and roll pins (Main hinge pin bolt, folding hinge bolt, roll stop and flip ramp bolts.)
OK	Repair Needed	Corrected	8	<b>ALUMINUM PLATFORM ONLY:</b> Inspect that aluminum platform side plate bolts are tightened to 30 ft-lbs.
OK	Repair Needed	Corrected	9	Inspect for any signs of overload damage, cracked or broken welds.
OK	Repair Needed	Corrected	10	Inspect platform side chains, side chain hardware, side arm assembly, side attachment assembly for bent or missing parts.
OK	Repair Needed	Corrected	11	Inspect that platform is level with the vehicle floor in the fully raised position.
OK	Repair Needed	Corrected	12	Inspect folding hinges on platform and ramp for wearing. Platform should open flat with no dipping at center.
OK	Repair Needed	Corrected	13	On liftgates with roll stops, inspect that roll stop opens when retainer is disengaged. Clean out roll stop hinge and lubricate with silicon spray.
<b>Inspect Liftgate runner assembly</b>				
OK	Repair Needed	Corrected	14	Inspect for cracked or broken welds on hinge tube.
OK	Repair Needed	Corrected	15	Inspect that pins are secure by making sure the pin retainers are in place and the retainer bolts are not loose or missing.
OK	Repair Needed	Corrected	16	Inspect wear pads for wear and bracket for missing or broken bolts.
OK	Repair Needed	Corrected	17	Inspect runner for physical damage.

# Quarterly Preventive Maintenance

<b>Inspect Hydraulic and Electrical Components</b>				
OK	Repair Needed	Corrected	18	Inspect for hydraulic leaks on cylinders, hoses and fittings
OK	Repair Needed	Corrected	19	Inspect hoses for fraying or cracking (especially where hoses enter or exit the housing cover and hose extension cover).
OK	Repair Needed	Corrected	20	Inspect that closing hoses are tracking properly and secured to liftgate column.
OK	Repair Needed	Corrected	21	Remove power unit enclosure cover and inspect that electrical connections are clean and secure – spray connections with dielectric coating.
OK	Repair Needed	Corrected	22	Inspect that fluid level in tank is 1" from the top with platform fully raised and open.
OK	Repair Needed	Corrected	23	Inspect for any visible oil leaks inside the power unit enclosure. (valves, hoses, and fittings.)
OK	Repair Needed	Corrected	24	Inspect power unit to make sure mounting is secure.
OK	Repair Needed	Corrected	25	Inspect that master disconnects switch works properly and battery connection are secure. Spray terminals with dielectric coating.
OK	Repair Needed	Corrected	26	Inspect circuit breaker for visual damage and ensure both motor and charge line circuit breakers are engaged. Spray terminals with dielectric coating.
OK	Repair Needed	Corrected	27	Inspect that battery connections including grounds are secure and clean. Spray terminals and connections with dielectric coating.
OK	Repair Needed	Corrected	28	Inspect entire length of battery cable (positive and ground) and exposed switch wires for chaffing.
OK	Repair Needed	Corrected	29	Load test battery and perform battery maintenance as needed.
OK	Repair Needed	Corrected	30	Inspect that battery hold downs are in place and properly tightened.
OK	Repair Needed	Corrected	31	Inspect toggle switches for damage to 1/2 rubber boot.
OK	Repair Needed	Corrected	32	Toggle to backup pump-motor and run liftgate through five complete up/down, open/close cycles to verify proper operation of backup system. Alarm should sound when running on backup motor.
<b>Final Inspection</b>				
OK	Repair Needed	Corrected	33	Run gate through two entire cycles with platform open to make sure there is no unusual noise.
OK	Repair Needed	Corrected	34	Inspect that raising and lower speeds are within 15-22 seconds (Based on a 50" bed height.)
OK	Repair Needed	Corrected	35	Run gate through one cycle of the power open and close operation.
OK	Repair Needed	Corrected	36	Inspect that opening and closing speeds are within 6-9 seconds.
OK	Repair Needed	Corrected	37	Run gate up to stored position, make sure platform lock works properly.
OK	Repair Needed	Corrected	38	Inspect that all decals are in legible and in the correct location.

<b>Annual Inspection/PM Procedure (Includes items 1-36 in Quarterly Inspection/PM procedure)</b>				
OK	Repair Needed	Corrected	39	Inspect platform hinge block/tube bushing (removal of platform required).
OK	Repair Needed	Corrected	40	Replace Motor Solenoid(s) every two years.
OK	Repair Needed	Corrected	41	Change hydraulic fluid.

Notes:

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# How To Order Parts

**Repairs should be made only by authorized mechanics using WALTCO Replacement parts.**

When ordering repair or replacement parts, please include all the information asked for below. If this information is not available, a complete written description or sketch of the required part will help WALTCO identify and deliver the needed part to you.

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## THE FOLLOWING INFORMATION MUST BE INCLUDED:

1. SERIAL NUMBER - [WALTCO liftgate serial numbers can be found on the Specification Tag attached to the mount frame.]
2. MODEL NUMBER
3. CAPACITY
4. PLATFORM SIZE

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## THEN INCLUDE THE FOLLOWING INFORMATION:

5. PART NUMBERS
6. DESCRIPTION
7. QUANTITY REQUIRED

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## MAIL, E-MAIL OR PHONE YOUR REQUEST TO:

**Waltco Lift Corp**  
285 Northeast Avenue  
Tallmadge, OH 44278  
1-800-411-5685  
FAX: 1-800-411-5684  
E-MAIL: [parts@waltco.com](mailto:parts@waltco.com)

**ALL PARTS ARE F.O.B. FROM THE SHIPPING FACTORY**

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## PLEASE NOTE:

To assure you of continuing and effective quality control, our warranty policy permits replacement of hydraulic cylinders, valves and motor pump units when their factory seals are intact. Parts under warranty will be exchanged promptly after careful inspection of the returned assemblies.

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# Notes