

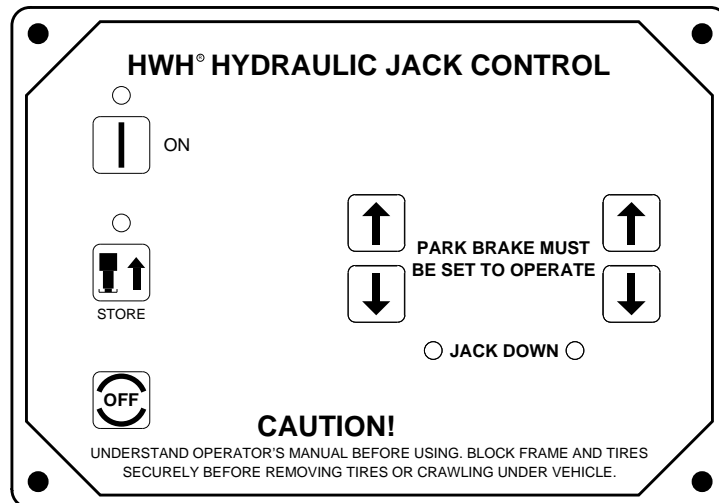


# OPERATOR'S MANUAL

## HWH® TOUCH PANEL-CONTROLLED 325 SERIES STABILIZING SYSTEM

### **FEATURING:**

*Touch Panel Control  
Hydraulic Stabilizing  
Two Straight-Acting Jacks*



**HWH CORPORATION**  
(On I-80, Exit 267 South)  
2096 Moscow Road | Moscow, Iowa 52760  
Ph: 800/321-3494 (or) 563/724-3396 | Fax: 563/724-3408  
[www.hwh.com](http://www.hwh.com)

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# OPERATING MANUAL

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## WARNING !

**READ THE ENTIRE OPERATOR'S MANUAL BEFORE OPERATING.**

**BLOCK FRAME AND TIRES SECURELY BEFORE CRAWLING UNDER VEHICLE. DO NOT USE LEVELING JACKS OR AIR SUSPENSION TO SUPPORT VEHICLE WHILE UNDER VEHICLE OR CHANGING TIRES. VEHICLE MAY DROP AND/OR MOVE FORWARD OR BACKWARD WITHOUT WARNING CAUSING INJURY OR DEATH.**

**KEEP ALL PEOPLE CLEAR OF VEHICLE WHILE LEVELING SYSTEM AND ROOM EXTENSION ARE BEING OPERATED.**

**NEVER PLACE HANDS OR OTHER PARTS OF THE BODY NEAR HYDRAULIC LEAKS. OIL MAY PENETRATE SKIN CAUSING INJURY OR DEATH.**

**WEAR SAFETY GLASSES WHEN INSPECTING OR SERVICING THE SYSTEM TO PROTECT EYES FROM DIRT, METAL CHIPS, OIL LEAKS, ETC. FOLLOW ALL OTHER APPLICABLE SHOP SAFETY PRACTICES.**

**IMPORTANT: IF COACH IS EQUIPPED WITH A ROOM EXTENSION, READ ROOM EXTENSION SECTION BEFORE OPERATING LEVELING SYSTEM.**

## HOW TO OBTAIN WARRANTY SERVICE

### THIS IS NOT TO BE INTERPRETED AS A STATEMENT OF WARRANTY

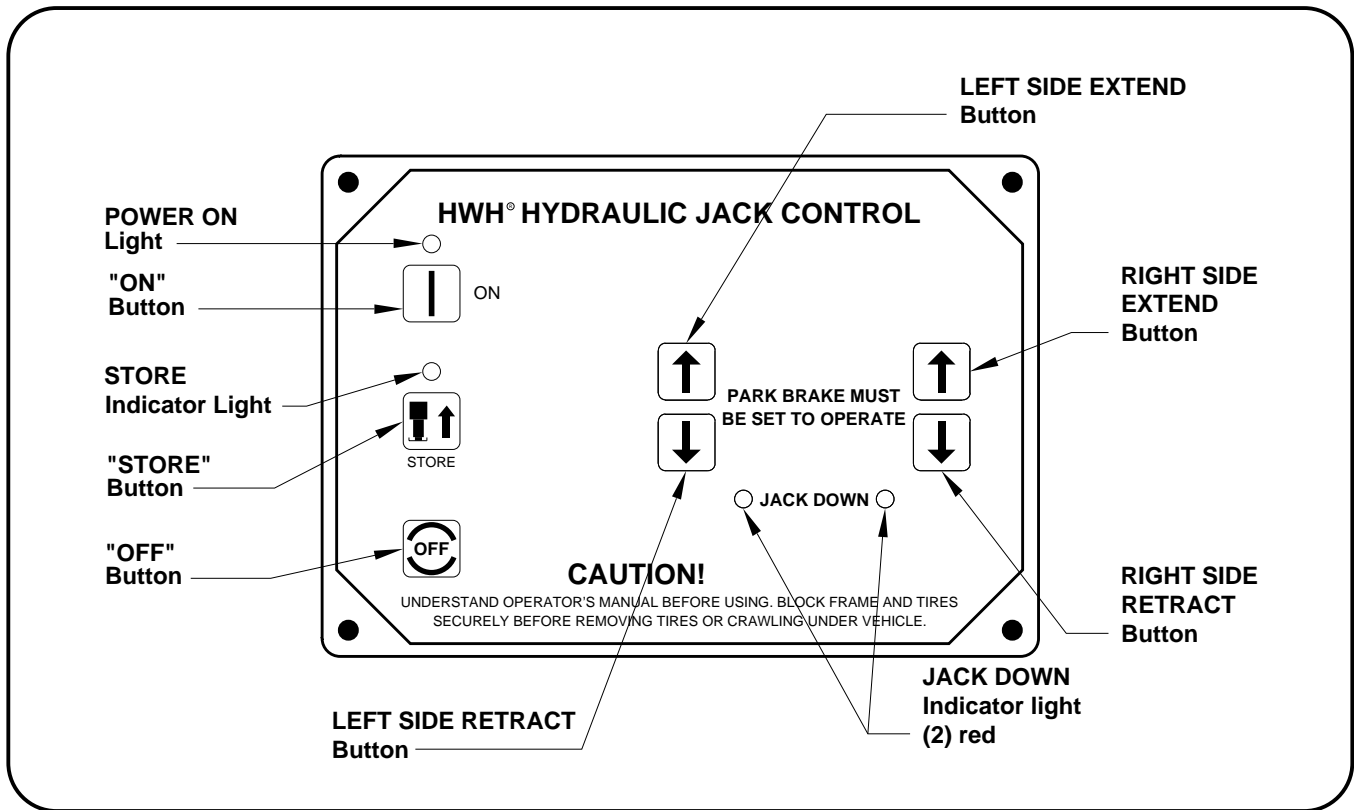
HWH CORPORATION strives to maintain the highest level of customer satisfaction. Therefore, if you discover a defect or problem, please do the following:

**FIRST:** Notify the dealership where you purchased the vehicle or had the leveling system installed. Dealership management people are in the best position to resolve the problem quickly. If the dealer has difficulty solving the problem, he should immediately contact the Customer Service Department, at HWH CORPORATION.

**SECOND:** If your dealer cannot or will not solve the problem, notify the Customer Service Department:  
HWH CORPORATION 2096 Moscow Rd. Moscow IA. 52760  
(563) 724-3396 OR (800) 321-3494. Give your name and address, coach manufacturer and model year, date the coach was purchased, or the date of system installation,

description of the problem, and where you can be reached during business hours (8:00 a.m. till 5:00 p.m. c.s.t.). HWH CORPORATION personnel will contact you to determine whether or not your claim is valid. If it is, HWH CORPORATION will authorize repair or replacement of the defective part, either by appointment at the factory or by the authorization of an independent service facility, to be determined by HWH CORPORATION. All warranty repairs must be performed by an independent service facility authorized by HWH CORPORATION, or at the HWH CORPORATION factory, unless prior written approval has been obtained from proper HWH CORPORATION personnel.

# CONTROL IDENTIFICATION



## CONTROL FUNCTIONS

### CONTROL BUTTONS

- "ON" BUTTON** : Push this button any time to start the auto stabilize function.
- "STORE" BUTTON** : This button will retract both jacks at the same time.
- "OFF" BUTTON** : This button turns off control power to the stabilizing system.
- EXTEND BUTTONS (UP ARROWS)** : These buttons will extend their respective jack to lift the vehicle.
- RETRACT BUTTONS (DOWN ARROWS)** : These buttons will retract their respective jack to lower the vehicle.

### INDICATOR LIGHTS

- POWER ON LIGHT** : This light indicates the system is active.
- STORE INDICATOR LIGHT** : This light will be on when the system is in the store mode.
- "JACK DOWN"** : These lights are functional only when the ignition is in the "ON" or "ACC" position, and the jacks are extended 1/4 to 1/2 inch.
- MASTER "JACKS DOWN" WARNING LIGHT** : This is a light mounted in the dash separate from the touch panel. If equipped, it will be on when any one or more jacks are extended and the ignition is in the "ON" position and the park brake is off.

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# OPERATING PROCEDURES

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## SITE SELECTION

Choose a fairly level area for parking as leveling capabilities with a two jack system is very limited. Maintain adequate clearance in all directions for vehicle, specialty equipment, room extensions, awnings, doors steps, etc. Vehicle may

move in any direction due to jack extending or retracting, settling of jacks or vehicle, equipment malfunction, etc. If parking on soft ground or asphalt paving, a wood block or pad should be placed under each jack.

## ROOM EXTENSION PROCEDURES

**IMPORTANT: If the vehicle is equipped with a room extension read this section carefully.**

Refer to the vehicle owner's manual for proper operation of room extensions.

If the vehicle is equipped with kick down jacks, the wheels MUST be blocked securely.

**IMPORTANT: Do not use a room extension support when the vehicle is supported by the stabilizing system.**

**NOTE: It is recommended to complete the Stabilizing Procedure before operating room extensions. It is recommended to retract room extensions before retracting jacks.**

## STABILIZING PROCEDURE

1. Place gear selector in the parking position, apply park brake and block tires securely.

**NOTE: Lifting the vehicle more with one jack than the other may cause twisting stress on the vehicle.**

**NOTE: If the hand/auto park brake is not set, the panel will turn on, but the system will not operate.**

7. Push the "OFF" button on the touch panel.

2. Turn ignition switch to "ON" or "ACCESSORY".

8. Turn the ignition switch off.

3. Push the "ON" button on the touch panel. The POWER ON light will be lit.

**NOTE: The leveling system should be cycled once a month or whenever the vehicle is used, to keep the system in operating condition.**

4. Place pads under the jacks at this time if necessary.

5. Use EXTEND buttons to extend both jacks to the ground. Each jack should lift the vehicle 1/2 to 1 inch to ensure proper stabilizing. As each jack, extends 1/4 to 1/2 inch, the corresponding red WARNING light on the touch panel will come on.

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# OPERATING PROCEDURES

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## RETRACT PROCEDURES

**IMPORTANT:** It is recommended to not retract the stabilizing system until all rooms are fully retracted and any specialty equipment is stored.

**CAUTION:** THE OPERATOR MUST BE SURE THAT THERE ARE NO OBJECTS UNDER THE VEHICLE AND THAT ALL PEOPLE ARE CLEAR OF THE VEHICLE.

1. Turn the ignition switch "ON" and press the "ON" button one time. The ON indicator light will glow steady.

2. Press the "STORE" button. As each jack retracts, its red WARNING light will go out. The vehicle can be moved as soon as the red WARNING lights are out, provided the jacks are in the STORE/TRAVEL position.

**IMPORTANT:** DO NOT interrupt power to the stabilizing system while it is in the STORE mode. DO NOT push the "OFF" button or turn the ignition key. The system must be allowed to completely finish the STORE mode. If the engine was started before putting the system in the STORE mode, the vehicle may be moved when the jacks are in the "STORE" position. This will not interrupt the store procedure.

**CAUTION:** DO NOT MOVE THE VEHICLE WHILE THE LEVELING JACKS ARE STILL IN CONTACT WITH THE GROUND OR IN THE EXTEND POSITION. THIS VEHICLE IS EQUIPPED WITH STRAIGHT-ACTING JACKS. MOVING THE VEHICLE WITH THE LEVELING JACKS EXTENDED CAN CAUSE SEVERE DAMAGE TO THE JACKS AND OR THE VEHICLE AND CREATE A DRIVING HAZARD.

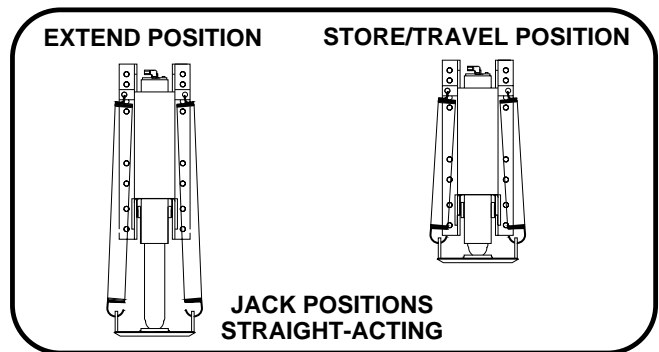
**DO NOT RELY SOLELY UPON WARNING LIGHTS. IT IS THE OPERATOR'S RESPONSIBILITY TO CHECK THAT ALL JACKS ARE FULLY RETRACTED INTO THE STORE/TRAVEL POSITION.**

3. The system will automatically shut down approximately two minutes after the two red WARNING lights are out.

**IMPORTANT:** If any one red WARNING light does not go out the system will continue to store. Push the "OFF" button and have the system serviced.

4. Turn the ignition switch to the "OFF" position or proceed to travel.

**NOTE:** If jacks cannot be retracted by the above procedure see MANUAL JACK RETRACTION Section.



# OPERATING PROCEDURES

## MANUAL JACK RETRACTION (2 Jack Systems with Valve Release Nuts)

**NOTE:** Use the Valve Release Nuts for retracting only if the "STORE" button on the control panel will not retract the jacks for travel.

**CAUTION:** KEEP AWAY FROM THE WHEELS, DO NOT CRAWL UNDER THE VEHICLE, KEEP A SAFE DISTANCE IN FRONT AND REAR OF THE VEHICLE. THE VEHICLE MAY DROP AND/OR MOVE FORWARD OR BACKWARD WITHOUT WARNING AS THE VALVE RELEASE IS OPERATED.

1. Locate the (2) valve release nuts on the solenoid valves. The solenoid valves are located on the power unit/valve assembly.
2. Allow clearance for the vehicle to lower.
3. Retract the jacks by opening the two solenoid valves. Slowly turn the valve release nuts counter clockwise using the 1/4" nut driver supplied.

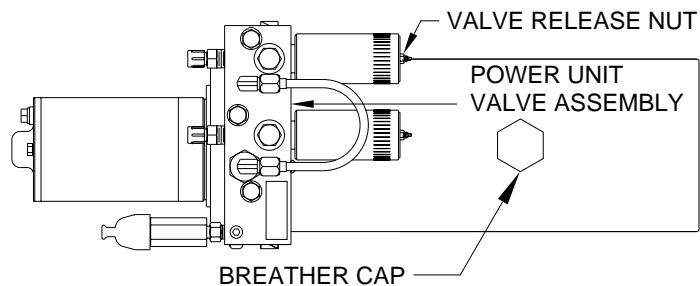
**IMPORTANT:** Only open the valves enough to retract the jacks. DO NOT turn the release nuts more than 4 and 1/2 turns. Turning the nuts more could damage the valves.

**NOTE:** Prior to APRIL 2002 a 1/4" Nut Driver was sent with the Operators Manual. As of APRIL 2002 the 1/4" Nut Driver has been incorporated into the Breather Cap. See the back page of this manual for further info.

5. Check that both jacks are now retracted.
6. Close the valves by turning the valve release nuts clockwise.

**IMPORTANT:** Once the valve release nuts are snug, DO NOT tighten the nuts past this point as internal damage may occur to the solenoid.

7. The system should now be repaired before using again.



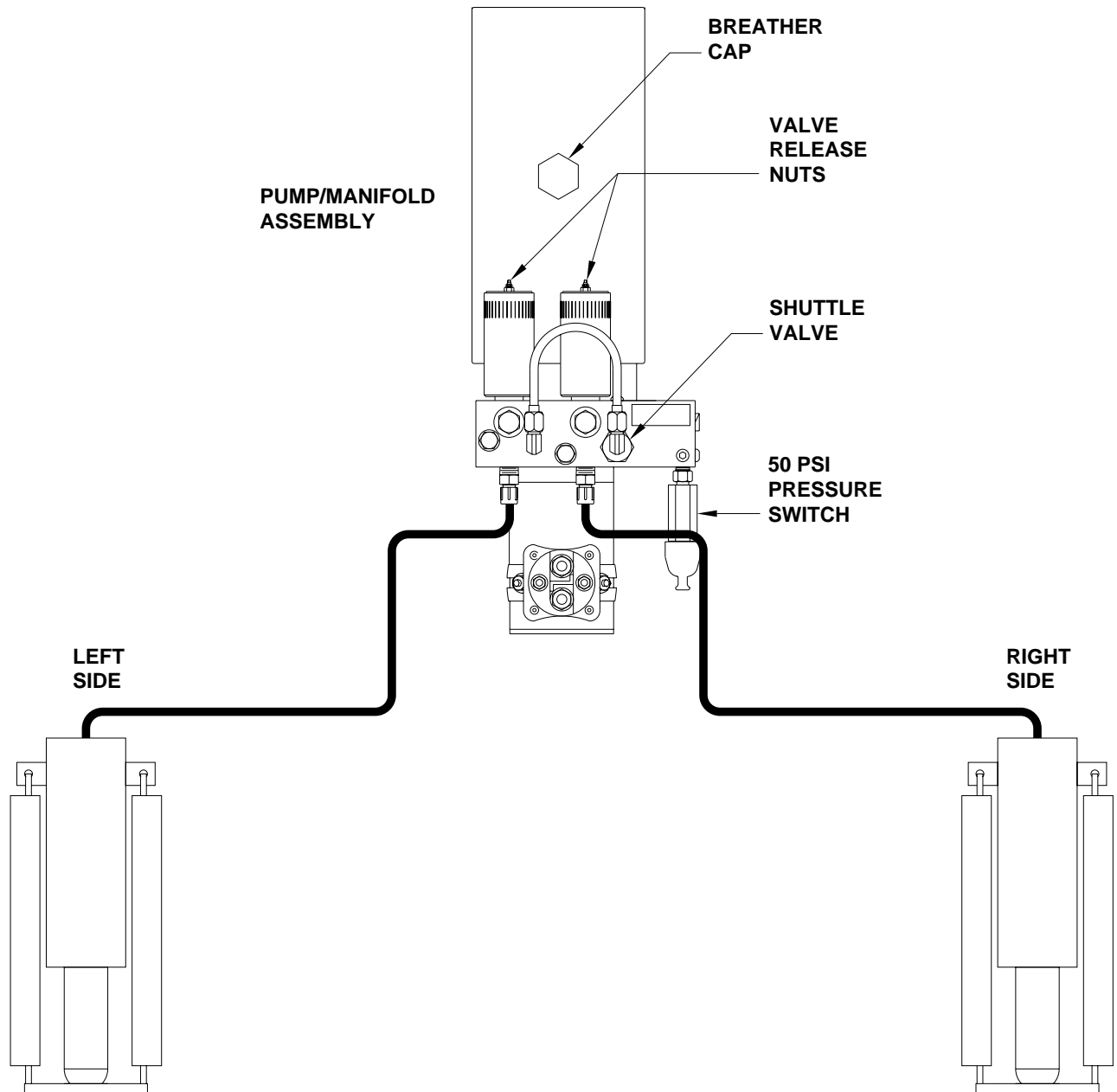
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# HYDRAULIC LINE CONNECTION DIAGRAM WITH 2 STRAIGHT-ACTING JACKS

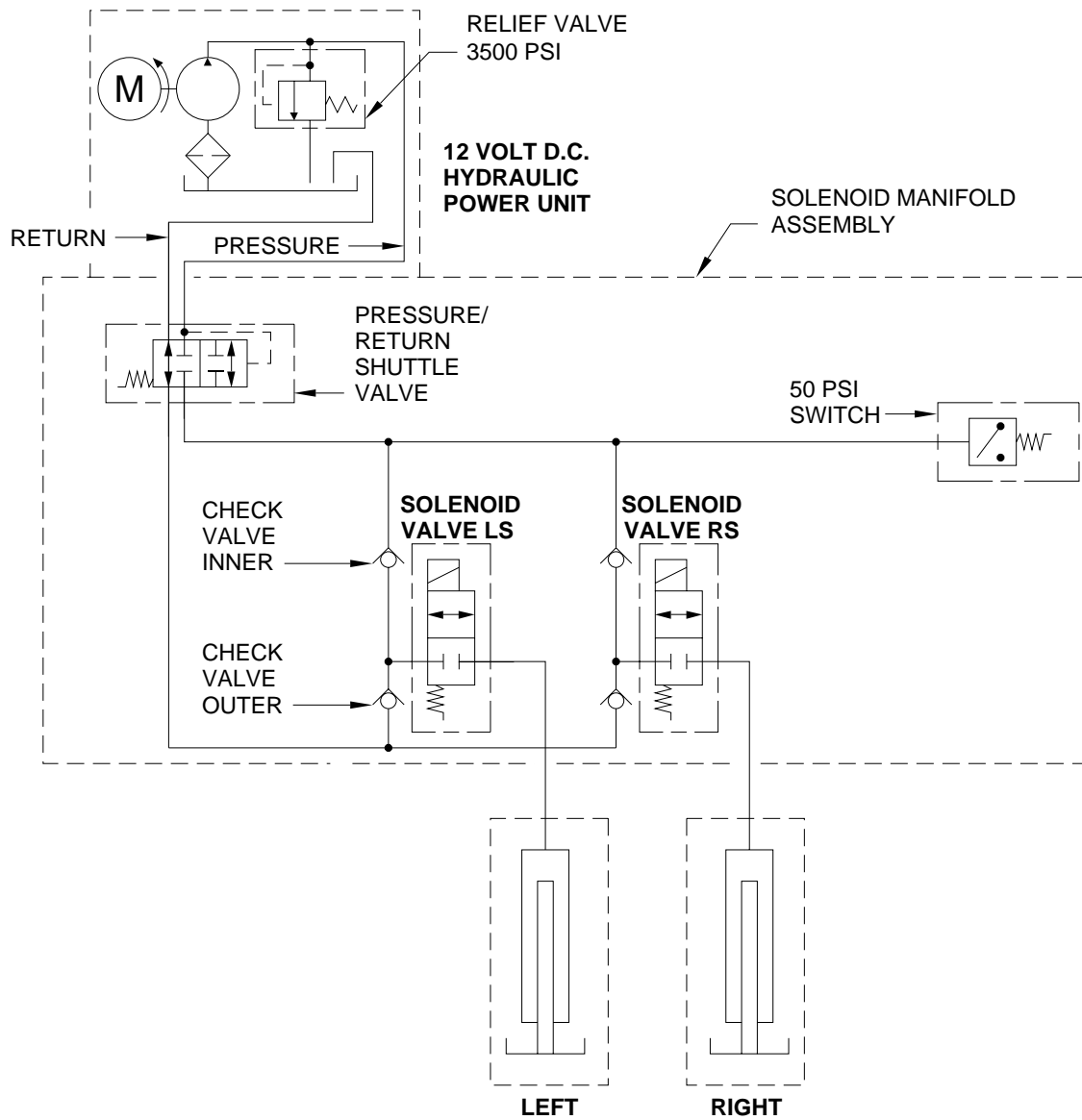
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↑  
FRONT

**NOTE:** BEFORE OPERATING  
VALVE RELEASE NUTS, READ AND UNDERSTAND  
PROCEDURE FOR MANUAL JACK RETRACTION  
IN OPERATOR'S INSTRUCTIONS.



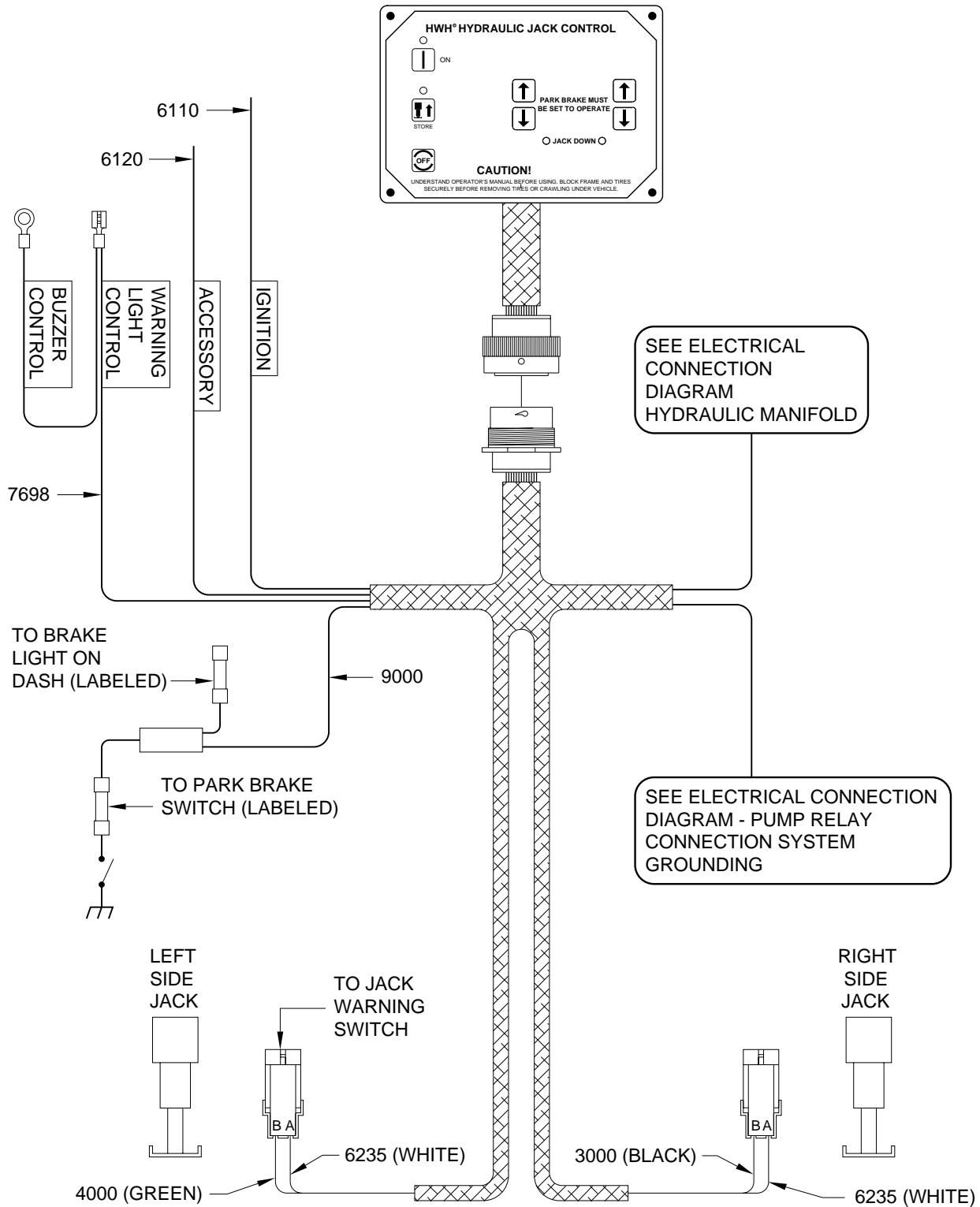
# HYDRAULIC SCHEMATIC TOUCH-PANEL CONTROLLED LEVELING SYSTEM WITH 2 STRAIGHT-ACTING JACKS





# ELECTRICAL CONNECTION DIAGRAM

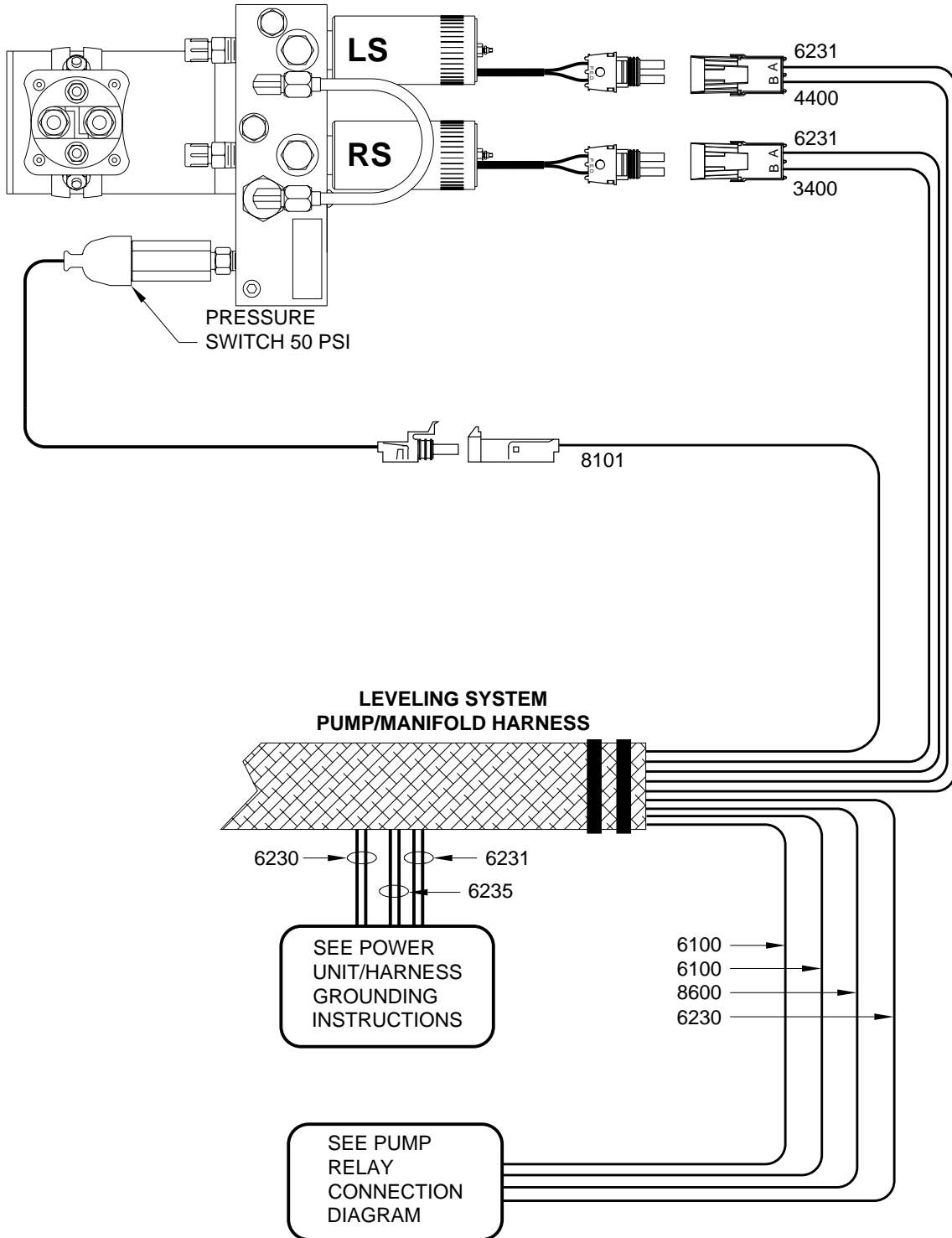
## 2 JACK STABILIZING SYSTEM



# ELECTRICAL CONNECTION DIAGRAM HYDRAULIC MANIFOLD TWO JACK STABILIZING

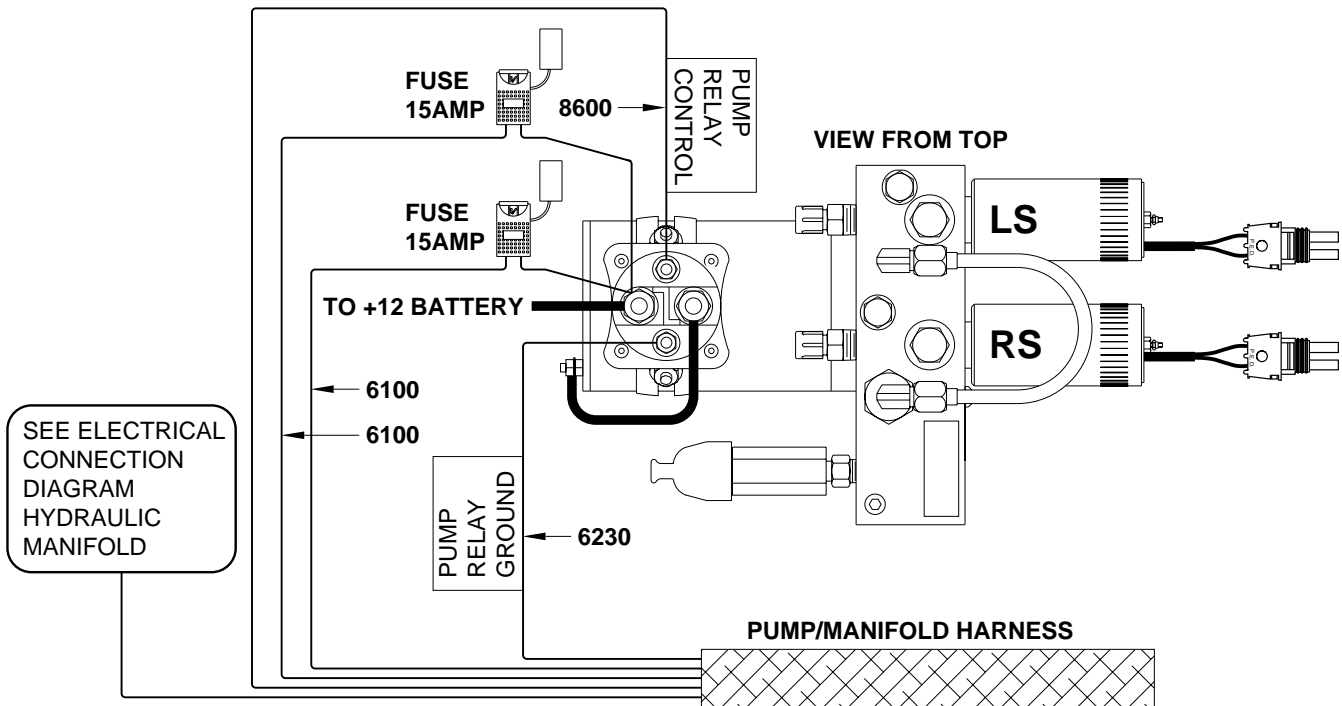
## MANIFOLD DIAGRAM

VIEW FROM TOP

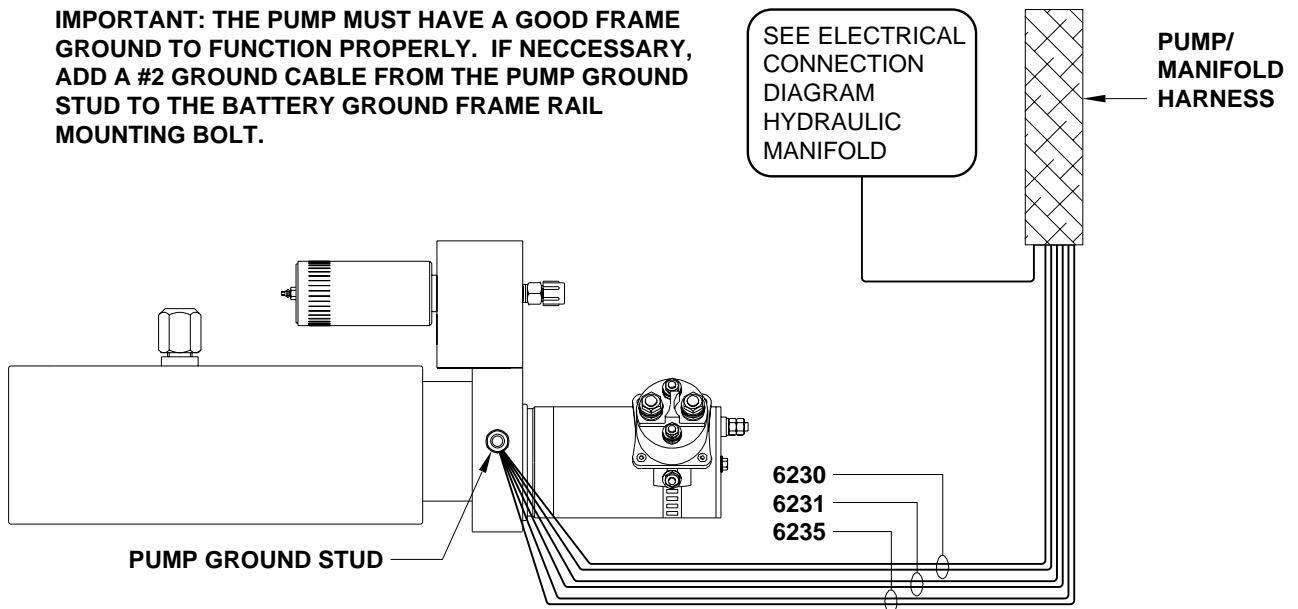


# ELECTRICAL CONNECTION DIAGRAM PUMP RELAY CONNECTIONS SYSTEM GROUNDING

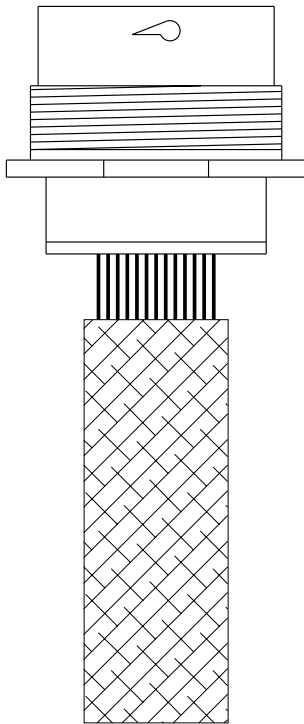
## PUMP RELAY CONNECTIONS



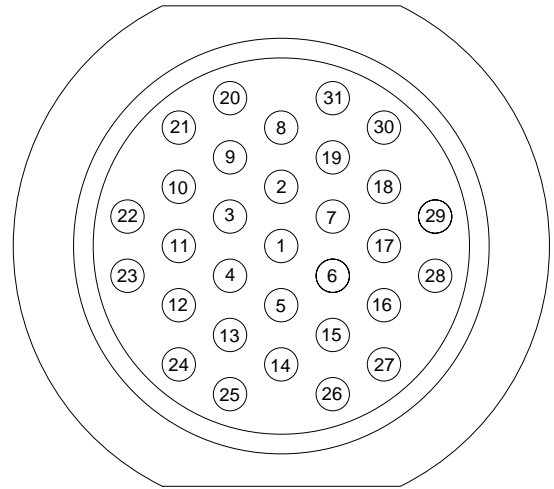
## SYSTEM GROUNDING



# ELECTRICAL CONNECTION DIAGRAM CONNECTOR AND WIRE INFORMATION



**PUMP/MANIFOLD  
HARNESS  
CONNECTOR**

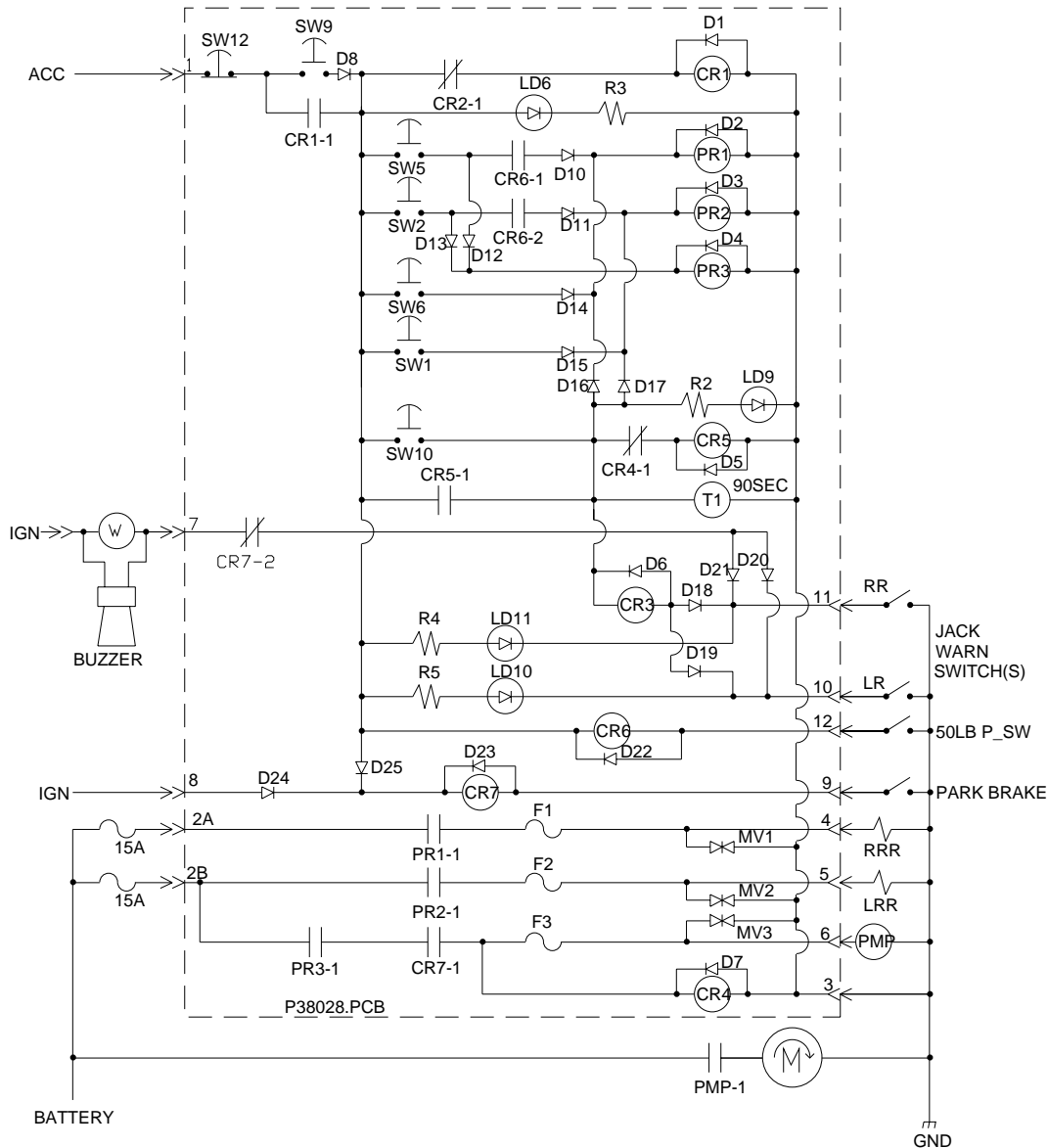


PIN	WIRE COLOR	WIRE NUMBER	WIRE DESCRIPTION
1	BLACK	8600	SWITCHED +12 TO CONTROL PUMP RELAY
2	BLACK	7698	SWITCHED GRND FROM TOUCH PANEL TO CNTL MASTER WARNING LIGHT/BUZZER
3	BLACK	3000	SWITCHED GROUND FROM RIGHT REAR WARNING SWITCH WITH JACK EXTENDED
4	BLACK	4400	SWITCHED +12 TO LEFT REAR SOLENOID VALVE
5	BLACK	3400	SWITCHED +12 TO RIGHT REAR SOLENOID VALVE
6	BLACK	4000	SWITCHED GROUND FROM LEFT REAR WARNING SWITCH WITH JACK EXTENDED
7	WHITE	6230	GROUND FOR TOUCH PANEL
8	RED	6100	+12 BATTERY FROM PUMP RELAY FOR HYD SOLENOID VALVE
9	RED	6100	+12 BATTERY FROM PUMP RELAY FOR HYD SOLENOID VALVE
10	BLACK	8101	SWITCHED GROUND FROM 50 PSI PRESSURE SWITCH
11	BLACK	9000	SWITCHED GROUND WHEN PARK BRAKE IS SET
12	RED	6110	+12 VOLTS FROM IGNITION TO TOUCH PANEL
13	RED	6120	+12 VOLTS FROM ACCESSORY TO TOUCH PANEL
14 THRU 31 - NO CONNECTION			

### WIRES NOT FOUND IN THE ROUND CONNECTOR

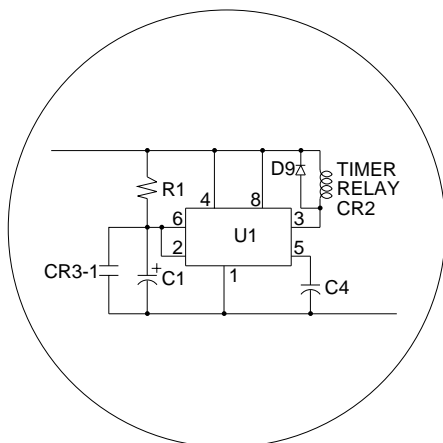
N/A	WHITE	6230	GROUND FOR PUMP RELAY FROM HWH GROUND STUD
N/A	WHITE	6231	GROUND FOR SOLENOID VALVES FROM HWH GROUND STUD
N/A	WHITE	6235	GROUND FOR JACK WARNING SWITCHES FROM HWH GROUND STUD

# ELECTRICAL CONNECTION DIAGRAM TOUCH PANEL SCHEMATIC



1. PARK BRAKE MUST BE SET BEFORE SYSTEM WILL OPERATE.
2. IF PARK BRAKE IS RELEASED WITH IGNITION ON AND JACKS EXTENDED, WARNING BUZZER WILL SOUND.
3. PUSHING "STORE" BUTTON WILL STORE JACKS AUTOMATICALLY THEN TURN SYSTEM OFF.

T1



- |                                |                                 |
|--------------------------------|---------------------------------|
| 1 - RED(W6120)                 | CR1 - LATCH UP                  |
| 2A - BAT RED(W6100)            | CR2 - T1 AUTO OFF AFTER STORE   |
| 2B - BAT RED(W6100)            | CR3 - 1 RESET                   |
| 3 - GND WHT(W6230)             | CR4 - STORE LATCH PUMP INTERUPT |
| 4 - RR JACK BLK(W3400)         | CR5 - TORE LATCH UP             |
| 5 - LR JACK BLK(W4400)         | CR6 - 50 LB P_SW                |
| 6 - PUMP BLK(W8600)            | CR7 - PARK BRAKE                |
| 7 - BZR/WRN CONTROL BLK(W7698) | PR1 - RR JACK                   |
| 8 - IGN RED(W6110)             | PR2 - LR JACK                   |
| 9 - PARK BRAKE BLK(W9000)      | PR3 - PUMP                      |
| 10 - LR WRN SW BLK(W4000)      |                                 |
| 11 - RR WRN SW BLK(W3000)      |                                 |

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# MASTER LIGHT/BUZZER CONNECTION DIAGRAM

## MANUAL STABILIZING SYSTEMS

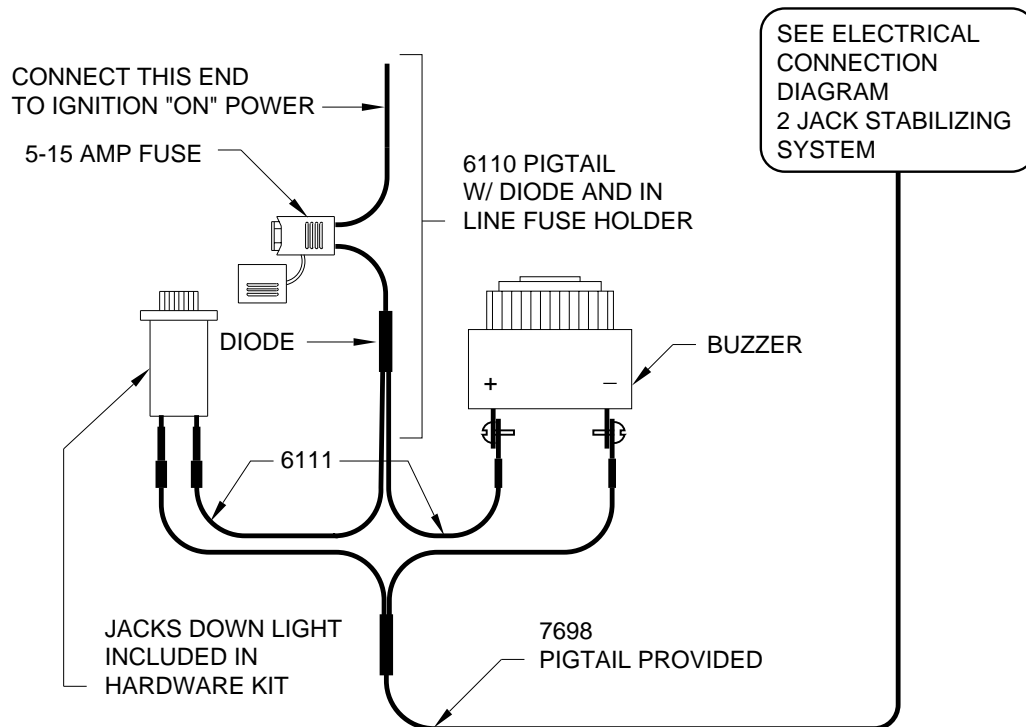
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A MASTER WARNING INDICATOR SHOULD ALWAYS BE USED. WHEN THE LEVELING SYSTEM HAS STRAIGHT ACTING JACKS A WARNING BUZZER MUST BE USED.

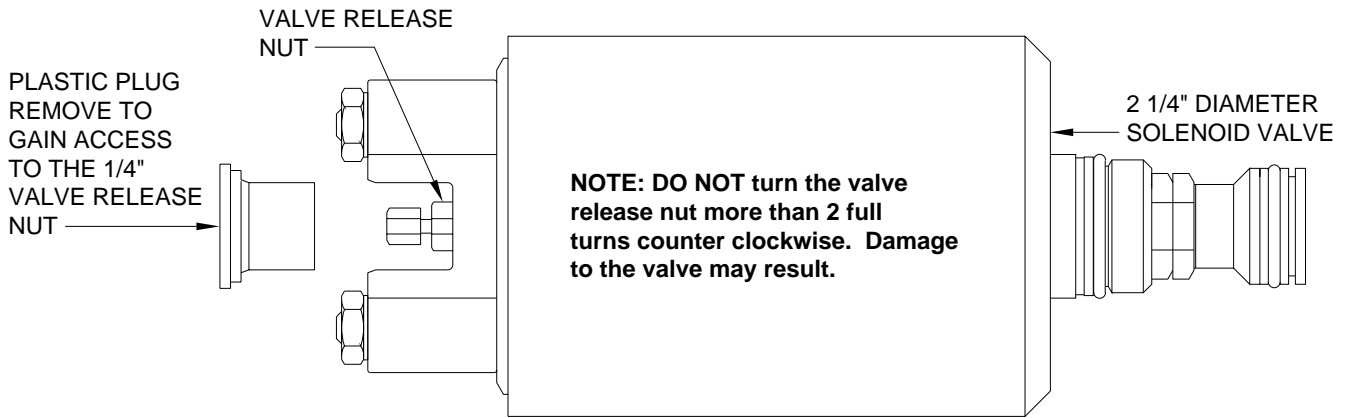
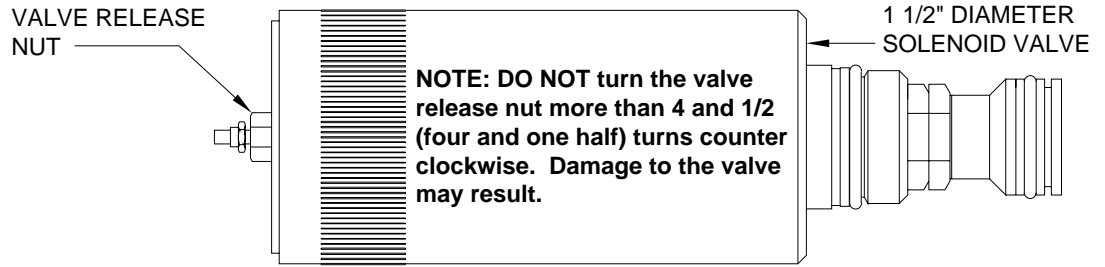
WHEN BOTH A RED LIGHT AND WARNING BUZZER ARE USED THE +12 POWER FOR BOTH INDICATORS IS SUPPLIED BY THE IGNITION SWITCH. THE POWER MUST COME FROM THE "ON" SIDE OF THE IGNITION SWITCH, NOT THE "ACC" SIDE. (SEE FIGURE BELOW)

**NOTE: BY SUPPLYING IGNITION POWER TO THE WARNING BUZZER AND LIGHT, AND "ACC" POWER TO THE CONTROL BOX, THE SYSTEM MAY BE OPERATED IN ACCESSORY WITHOUT THE BUZZER SOUNDING. THE NEGATIVE SIGNAL FOR THE WARNING INDICATORS MUST ALWAYS COME FROM THE TOUCH PANEL.**

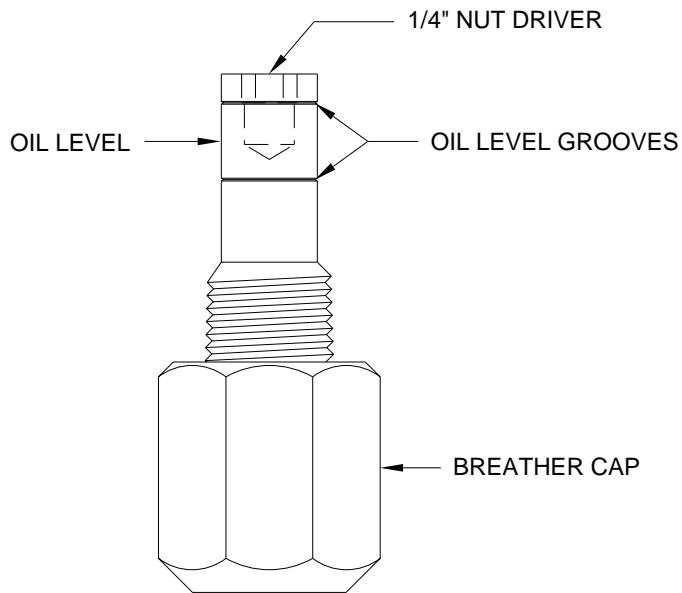
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# BREATHER CAP - DIPSTICK - 1/4" NUT DRIVER



**NOTE: THE BREATHER CAP IS LOCATED ON THE TOP SIDE OF THE POWER UNIT RESERVOIR.**



**IMPORTANT: PRIOR TO REMOVING THE BREATHER CAP, EITHER TO CHECK THE OIL LEVEL OR TO USE THE 1/4" NUT DRIVER, CLEAN ANY DEBRIS FROM THE TOP OF THE RESERVOIR. BEFORE RETURNING THE BREATHER CAP TO THE RESERVOIR, REMOVE ANY PAINT CHIPS OR OTHER DEBRIS FROM THE DIPSTICK INCLUDING DEBRIS INSIDE THE 1/4" NUT DRIVER.**