

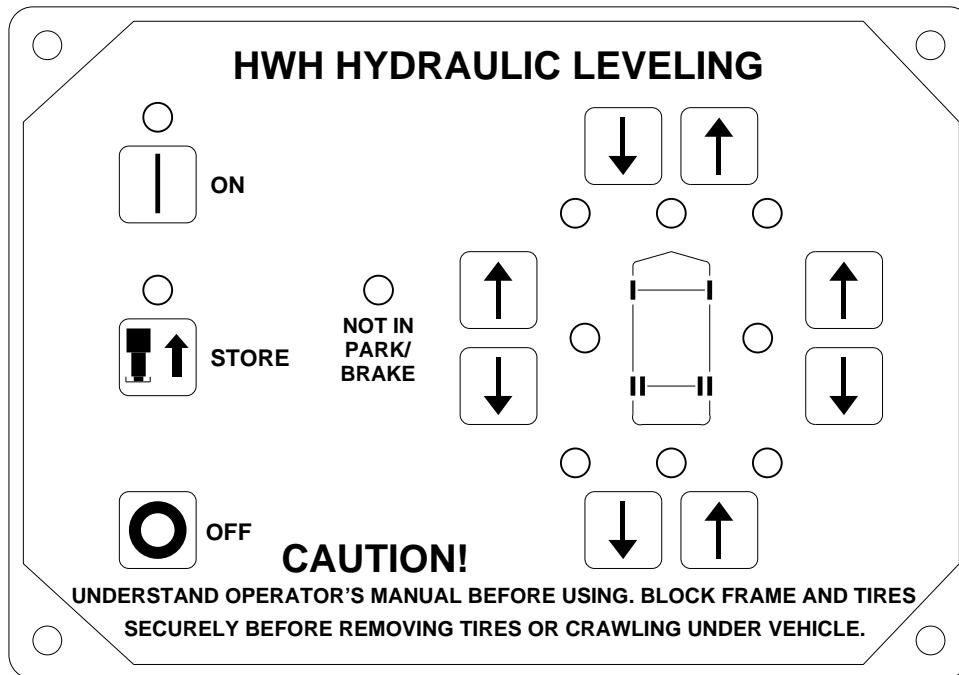


# OPERATOR'S MANUAL

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

### FEATURING:

*Touch Panel Leveling Control  
BI-AXIS® Hydraulic Leveling  
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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# OPERATOR'S MANUAL

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## CAUTION !

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

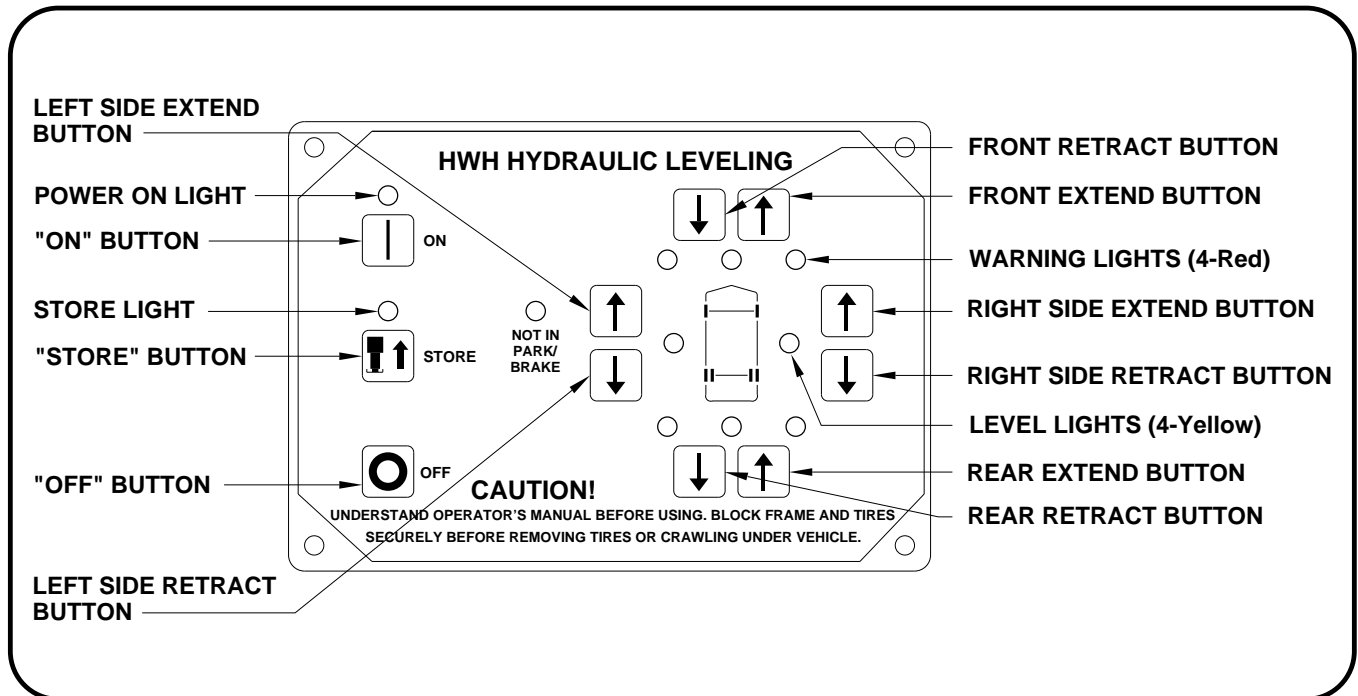
HWH CORPORATION strives to maintain the highest level of customer satisfaction. Therefore, if you discover a defect or problem, please do the following:

**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.

## 325 - CONTROL IDENTIFICATION



## CONTROL FUNCTIONS

### CONTROL BUTTONS

**"ON" BUTTON:** This is the ON button for the leveling system.

**"OFF" BUTTON:** This button turns off control power to the leveling system.

**"STORE" BUTTON:** This button will retract all four jacks.

**EXTEND BUTTONS (UP ARROWS):** These buttons will extend their respective jack pairs to lift the vehicle.

**RETRACT BUTTONS (DOWN ARROWS):** These buttons will retract their respective jack pairs to lower the vehicle.

### INDICATOR LIGHTS

**POWER ON LIGHT:** This light indicates the system is on.

**STORE LIGHT:** This light will be on when the system is in the store mode.

**"NOT IN PARK/BRAKE" LIGHT:** This indicator light will light when the hand/auto brake is not set and the "ON" button is being pushed.

**LEVELING LIGHTS:** If a yellow LEVELING light is on, that indicates a side, corner, or end of the vehicle is low. Extend the appropriate jack pairs to put out the yellow light. One or two yellow LEVELING lights can be on at a time. The vehicle is level when all yellow lights are out.

**WARNING LIGHTS:** The four red lights surrounding the yellow level indicators are jacks down WARNING lights. They are functional only when the ignition is in the "ON" or "ACC" position, the system is on and the corresponding jack is extended 1/4 to 1/2 of an inch.

**MASTER "JACKS DOWN" WARNING LIGHT:** This is a light mounted separate from the touch panel. It will be lit when any one or more jacks are extended and the ignition is "ON".

**WARNING BUZZER:** A buzzer will sound if a jack is extended approximately 1/2 inch or more and the ignition switch is in the "ON" position.

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# OPERATING PROCEDURES

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## GENERAL INSTRUCTIONS

**Site selection** - Maintain adequate clearance in all directions for vehicle, room extensions, awnings, doors, steps, etc. Vehicle may move in any direction due to jacks 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.

Press the "OFF" button or turn the ignition OFF at any time to stop the operation of the system.

Read all room extension operating procedures before before extending or retracting any room.

It is the operator's responsibility to check that the jacks are completely retracted and any room extension or generator slide is completely retracted before moving the vehicle.

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

## LEVELING PROCEDURE

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

2. Turn ignition switch to "ACCESSORY".

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

**NOTE: If the park brake is not set the panel will have power but the pump will not run. The jacks can not be extended until the park brake is set.**

4. Place a pad under each jack, if needed, at this time.

5. A lit yellow LEVEL light indicates that end, side or corner is low. Push an EXTEND (up arrow) button to extend jack pairs according to a lit yellow light.

**ALWAYS LEVEL THE VEHICLE FROM SIDE TO SIDE IF NEEDED BEFORE LEVELING THE VEHICLE FRONT TO REAR.** One or two yellow LEVEL lights can be on at one time. Extend jack pairs accordingly until all yellow lights are out.

**NOTE: If the ground is too uneven, the jacks may not have enough stroke to level the vehicle. The vehicle may have to be moved.**

6. After the vehicle is level, the jacks not used for leveling may be extended until they touch the ground. The remaining jacks used to stabilize the vehicle should lift the vehicle slightly after touching the ground. This provides additional stability against wind and activity in the vehicle. Do this by pushing the front and/or rear EXTEND buttons as needed to extend any remaining jacks. Do not use the right or left EXTEND buttons.

7. Push the "OFF" button on the Touch Panel.

8. Turn the ignition switch off.

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# OPERATING PROCEDURES

## 325 SERIES LEVELING SYSTEM

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### JACK RETRACTION

**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 to "ON" or "ACC" or start the engine.

**NOTE:** When the jacks are stored with the ignition in the ON position, the warning buzzer will sound until the jacks have retracted to the STORE position. If desired, the jacks can be stored with the ignition key in the accessory position. This will eliminate the warning buzzer while the jacks are retracting.

2. Press the "STORE" button. The store indicator light will flash. As each jack retracts, its red WARNING light will go out. The system will automatically shut down two minutes after the four individual red "WARNING" lights are out. If any one red "WARNING" light does not go out, the system will continue to store for thirty minutes, then shut down regardless of the "WARNING" lights condition. **If this occurs, do not push the "STORE" button again for at least 30 minutes. The system should be serviced.**

**NOTE:** When traveling thermal expansion may cause a jack to extend slightly. When the "STORE" button has been used to retract the jacks, the system will automatically retract any jack that extends due to thermal expansion.

**IMPORTANT:** Pushing the "OFF" button or turning the ignition key will stop the STORE procedure. Any time the STORE procedure is stopped before all 4 red Warning Lights go out, the jacks should be completely retracted by pushing the "STORE" button before traveling.

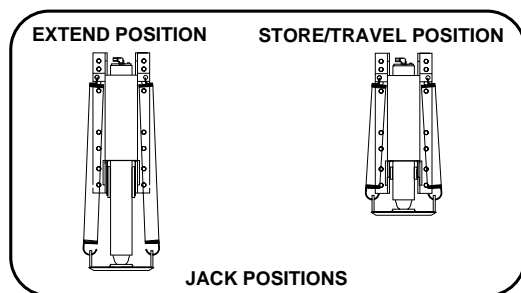
**CAUTION:** DO NOT MOVE THE VEHICLE WHILE THE LEVELING JACKS ARE STILL IN CONTACT WITH THE GROUND OR IN THE EXTEND POSITION. THIS VEHICLE IS EQUIPPED WITH STRAIGHT-ACTING JACKS. MOVING THE VEHICLE WITH THE LEVELING JACKS EXTENDED CAN CAUSE SEVERE DAMAGE TO THE JACKS AND OR THE VEHICLE AND CREATE A DRIVING 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 vehicle can be moved as soon as the red warning lights are out, the jacks are in the STORE/TRAVEL position.

**IMPORTANT:** If a red warning light and buzzer come on while traveling, the jacks should be checked as soon as a safe parking location is found.

4. If jacks cannot be retracted by the above procedure see MANUAL JACK RETRACTION Section.

**NOTE:** If the vehicle is parked or stored with the jacks extended for an extended period of time and the jacks fail to retract completely, extend the jacks back down to the ground then retract the jacks again.



# OPERATING PROCEDURES

## MANUAL JACK RETRACTION

### MANUAL JACK RETRACTION

**WARNING:** 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.

**IMPORTANT:** HWH recommends that all HWH room extensions are fully retracted prior to performing manual jack retraction procedures.

Use the manual valve release for retracting the jacks only if the STORE feature on the HWH control panel will not retract the jacks.

1. Locate your power unit-manifold assembly. (The diagram below represents a typical Power Unit-Manifold Assembly it may not be an exact match to yours).

**NOTE:** Multiple manifolds may be present on the power unit. The upper most manifold should control jack functions. (Valve styles and arrangements will vary)

2. Allow clearance for the vehicle to lower.

3. Using the diagram below identify the style of your two center valves.

**NOTE:** As of APRIL 2002 a 1/4" Nut Driver has been incorporated into the Breather Cap. Before using read and understand the last page of this manual.

**Large style with T-Handle valve release:** The T-Handle will turn several turns easily. As the valve starts to open, the T-Handle will turn harder. Make sure the valves have been opened far enough to allow the jacks to retract.

**Small style with Valve Release Nut:** DO NOT turn the 1/4" valve release nut more than **4 and 1/2 turns**. Turning the nut more could damage the valve.

**Large style with Valve Release Nut:** The 1/4" Valve release nut is located under a plastic plug that must be removed to gain access. DO NOT turn the 1/4" valve release nut more than **1 full turn**. Turning the nut more could damage the valve.

4. Retract the front jacks by opening the two center valves. Slowly turn the manual valve releases counter clockwise until the jacks start to retract.

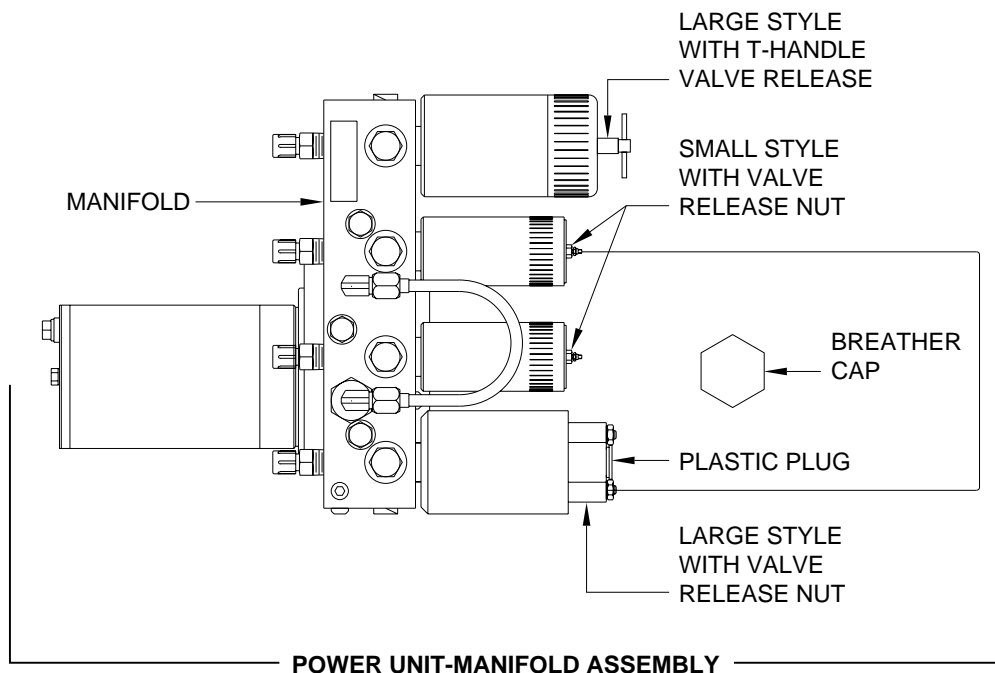
5. Repeat the process by identifying then opening the two outer valves.

6. Check that all jacks are now retracted. If yes, continue. If no, notify the dealership where you purchased the vehicle or had the leveling system installed or contact HWH Corporation customer service.

7. Close the valves by turning each valve release clockwise.

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

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



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# MAINTENANCE

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## OIL LEVEL

All maintenance should be done as part of the normal servicing of the coach.

The oil level should be checked when the vehicle is first purchased and then once every two years. More often if there is an oil leak in the system.

All jacks and any HWH room extension cylinders should be completely retracted before checking the oil level. The oil reservoir is part of the pump/manifold assembly. The oil level is checked and filled through the breather cap. Clear any dirt away from the breather/filler cap before removing. The oil level should be within one inch of the top of the reservoir. Most breather caps have a dipstick.

**NOTE: Overfilling the tank can cause leakage of oil through the breather cap.**

**FLUID:** HWH Specialty Hydraulic Oil is recommended. In an emergency Dexron automatic transmission fluid can be used. **NOTE:** Dexron automatic transmission fluid contains red dye and can cause staining should a leak occur. **DO NOT USE** brake fluid or hydraulic jack fluid. Use of these can damage seals.

## ELECTRICAL SYSTEM

The batteries should be in good condition and fully charged. Weak batteries can cause erratic operation. Battery cable terminals and battery posts and connections should be kept clean.

All electrical connections, especially ground connections, should be clean, tight, free from corrosion and protected from weathering.

## JACKS

There are very few user serviceable parts on the jacks. The jacks require very little maintenance. If the jacks are extremely dirty with caked on mud they should be washed.

The jack rods should NOT be wiped and do not need to be oiled or sprayed with anything.

## ROOM EXTENSIONS

The HWH room mechanisms need no maintenance. **DO NOT** grease or lubricate any parts of the HWH mechanism.

Any visible mechanism can be kept clean by washing with water. Refer to the vehicle manufacturer for correct maintenance of the room seals.

## VISUAL INSPECTION

Periodically inspect the system for oil leaks and damaged or missing parts, such as pivot bolts or springs. Check the hydraulic lines and wiring for damage and wear. Check that the jacks do not interfere with any parts of the vehicle when they are in the "STORE" position.

The system will operate better if kept clean and free from caked on mud or ice.

## OPERATIONAL CHECK

Review the OPERATOR MANUAL. Run the system according to the SYSTEM OPERATION Section. Note any abnormal operation.

Review the "JACK RETRACTION" Section. Make sure the jacks will fully retract to the "STORE" position. Jacks should not interfere with any of the coach when in the "STORE" position.

Check that all lights work according to the "INDICATOR LIGHT" Section. Correct function of the red "WARNING" light is important.

# SENSING UNIT MAINTENANCE/SERVICE

## SENSING UNIT ADJUSTMENT

Level the vehicle by placing a bubble level in the center of the freezer floor or upon whichever surface within the vehicle that is to be level. Using the Leveling System and the bubble level, ignoring the yellow LEVEL lights on the Touch Panel, level the vehicle until the bubble is centered.

With the vehicle level according to the bubble level, if there are no yellow lights lit on the Touch Panel, the sensing unit is properly adjusted. If there are yellow LEVEL lights lit on the Touch Panel, manual adjustments to the Sensing Unit are needed. A Phillips screw driver or sockets w/driver or box end wrenches of 7/8, 3/4, 1/2, 5/16 or 1/4 sizes will be needed.

The Sensing Unit is mounted inside the Control Box. The Control Box is mounted to the power unit/valve assembly.

There are four LED's on the Sensing Unit, A,B,C and D. Refer to the drawing below. The Sensing Unit is adjusted by turning the adjustment nut to turn out LED's B and D. The adjustment screw will turn out LED's A and C. If the adjustment nut has to be turned more than 1/2 flat or the adjustment screw has to be turned more than 3/4 turn to turn the LED out, there may be a problem with the Sensing Unit or the mounting of the Control Box. If two LED's are on, it is best to make the B-D adjustments first, then hold the adjustment nut from moving while making the A-C adjustment.

**NOTE:** If opposing LED's are lit, there is a problem with the Sensing Unit.

If LED (A) is lit: Turn the adjustment screw **COUNTER CLOCKWISE** until the LED is off.

If LED (C) is lit: Turn the adjustment screw **CLOCKWISE** until the LED is off.

If LED (B) is lit: Turn the adjustment nut **COUNTER CLOCKWISE** until the LED is off.

If LED (D) is lit: Turn the adjustment nut **CLOCKWISE** until the LED is off.

**IMPORTANT:** When all 4 LED's are off, move the vehicle to an unlevel position so one or two yellow lights are on. Level the vehicle according to the yellow LEVEL lights. Recheck the level. If more adjustment is needed, **DO NOT** try to adjust the sensing unit until the yellow level lights go out, instead just "tweak" the sensing unit, ignoring the LED's on the sensing unit.

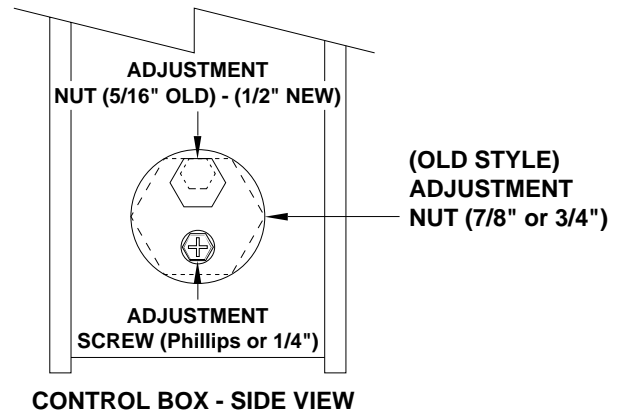
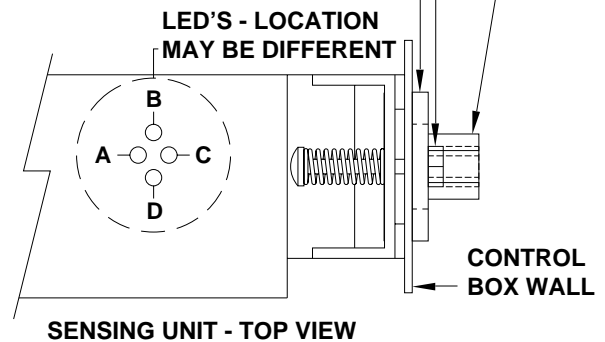
**Example:** After the initial adjustment and releveling the vehicle, the front is still low. This means the front yellow level light is turning off too soon. Determine which sensing unit light is the front light, A-B-C or D. Move the adjustment for that light very, very, slightly in the **OPPOSITE** direction that is given in the above instructions for LED's A, B, C, and D. This will allow

the front yellow light to stay on slightly longer to bring the front up more. Again, unlevel the vehicle then relevel the vehicle using the yellow level lights on the touch panel. Recheck with a level. Repeat the "tweaking" process until the system levels the vehicle properly.

**ADJUSTMENT NUT (5/16" OLD) - (1/2" NEW)**

**ADJUSTMENT SCREW (Phillips or 1/4") (OLD STYLE)**

**ADJUSTMENT NUT (7/8" or 3/4")**



## NOT IN PARK/BRAKE CHECK

**CAUTION:** WHEN MAKING THIS CHECK, BLOCK THE COACH WHEELS SECURELY SO THE COACH CANNOT ROLL FORWARD OR BACKWARD.

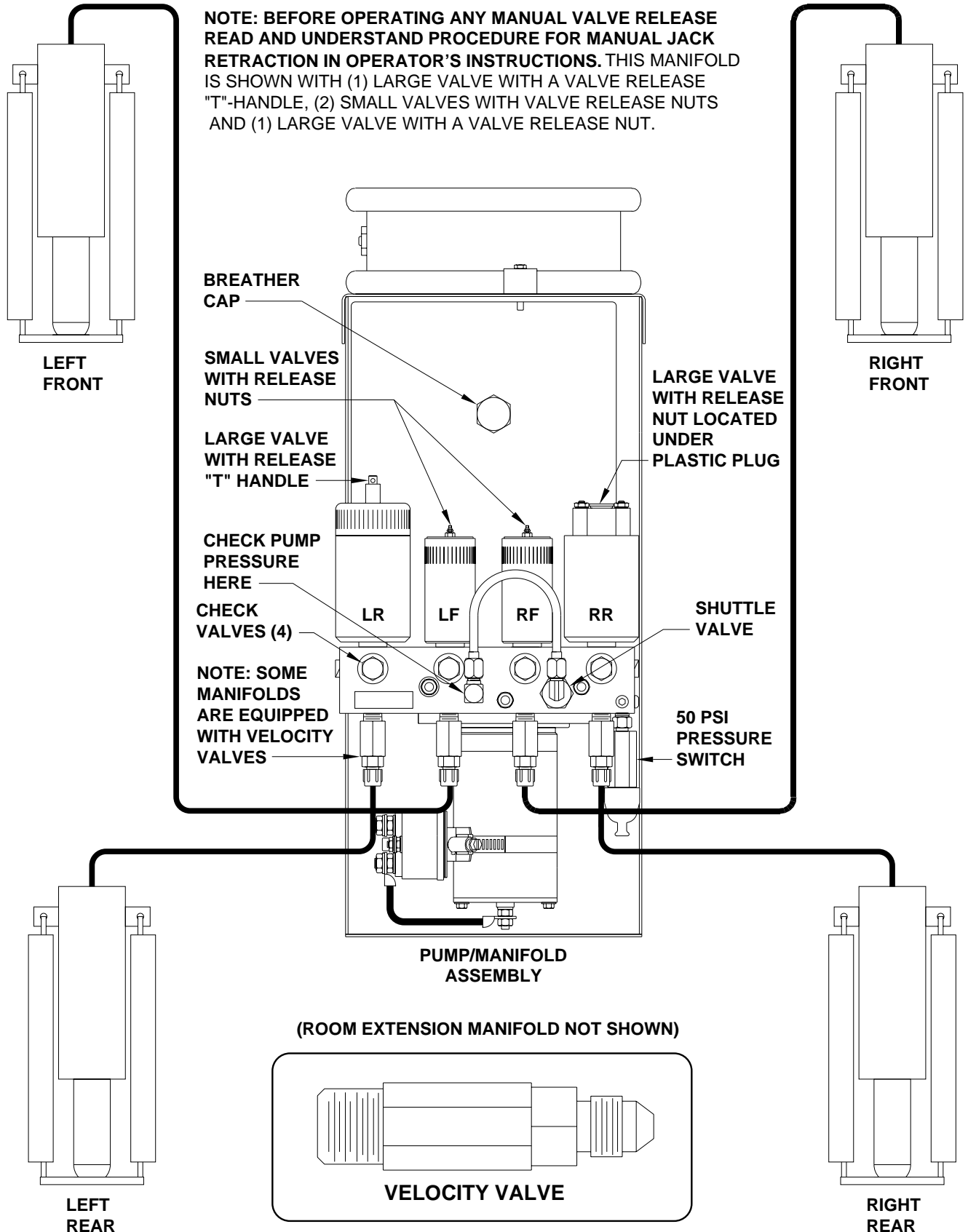
Set the park/brake. Switch the ignition to the "ACC" or "ON" position. Push the "ON/OFF" switch toward "ON". Release the parking brake and confirm that the "PARK" indicator light comes on. Reset the parking brake. The "PARK" indicator light should go out. Switch the ignition to "OFF".

If any of the above checks or inspections reveal a problem or if there are other problems or questions, consult a qualified RV repair center, your vehicle or coach manufacturer, or HWH CORPORATION for service or repair.

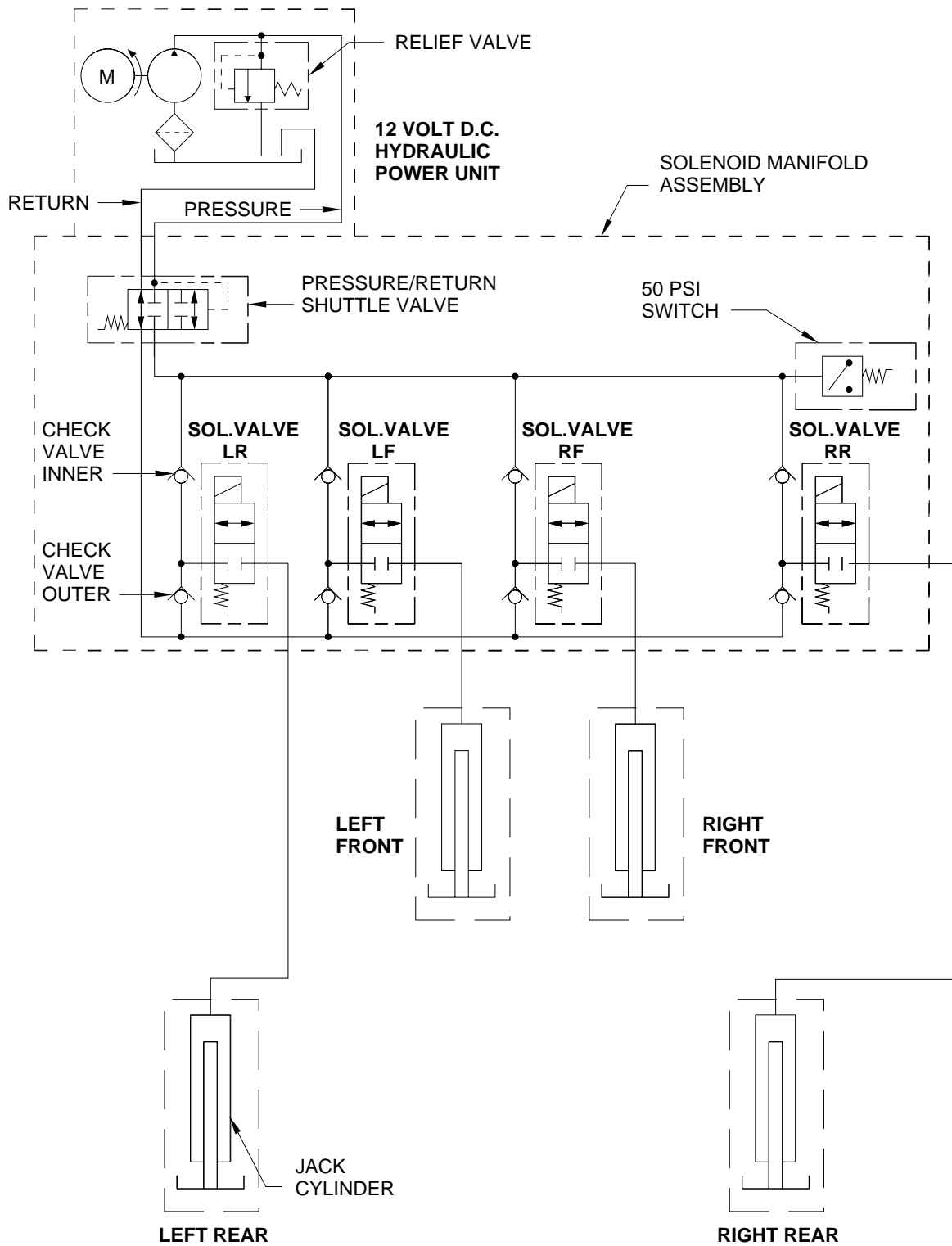
# HYDRAULIC LINE CONNECTION DIAGRAM

## 305/325 SERIES LEVELING SYSTEM

### (WITH 4 STRAIGHT-ACTING JACKS)



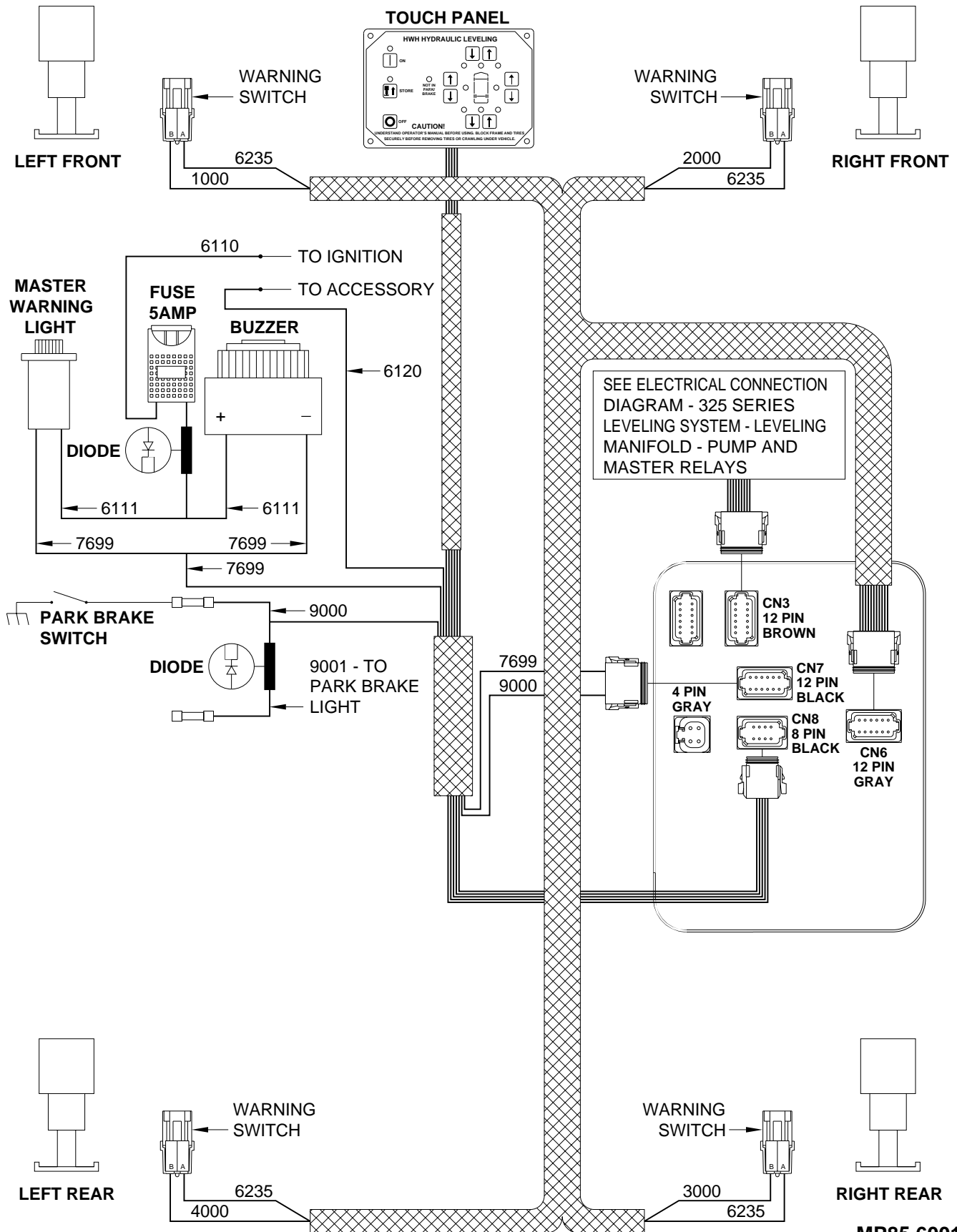
**HYDRAULIC SCHEMATIC**  
**305/310/325 SERIES LEVELING SYSTEM**  
**WITH STRAIGHT-ACTING JACKS**



# ELECTRICAL CONNECTION DIAGRAM

## 325 SERIES LEVELING SYSTEM

### PARK BRAKE - MASTER WARNING LIGHT AND BUZZER TOUCH PANEL AND JACK WARNING LIGHTS

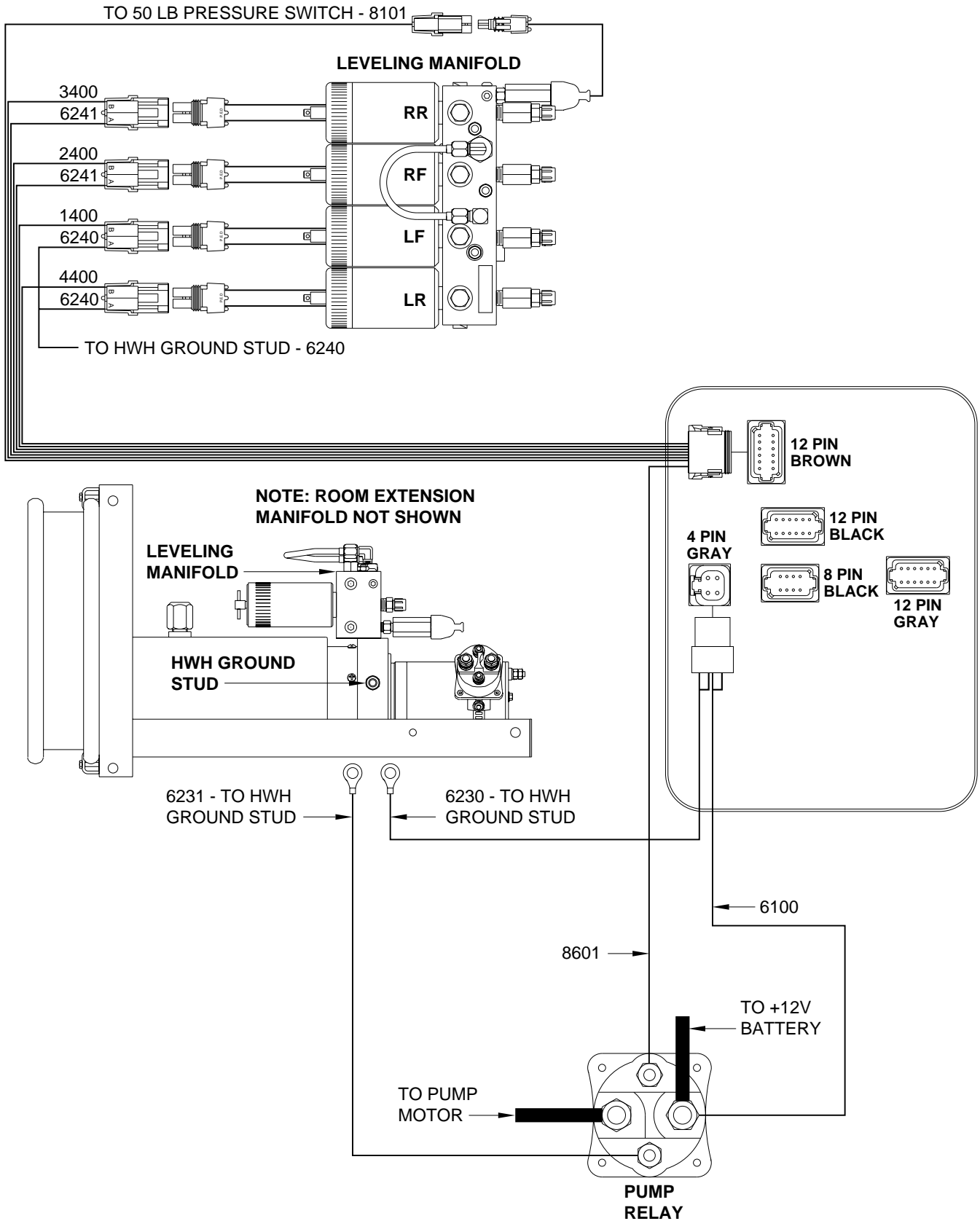


# ELECTRICAL CONNECTION DIAGRAM

## 325 SERIES LEVELING SYSTEM

### LEVELING MANIFOLD

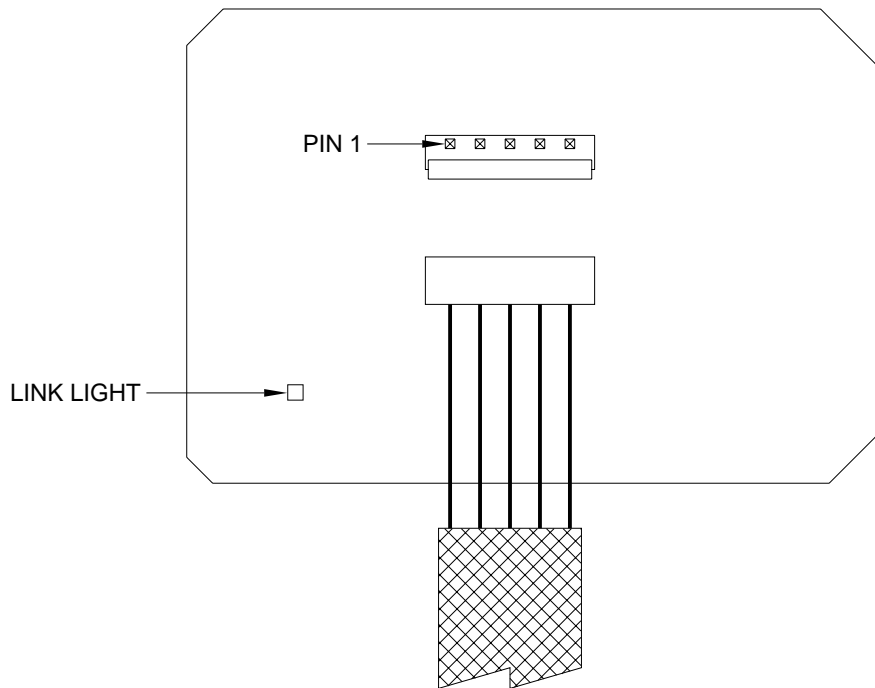
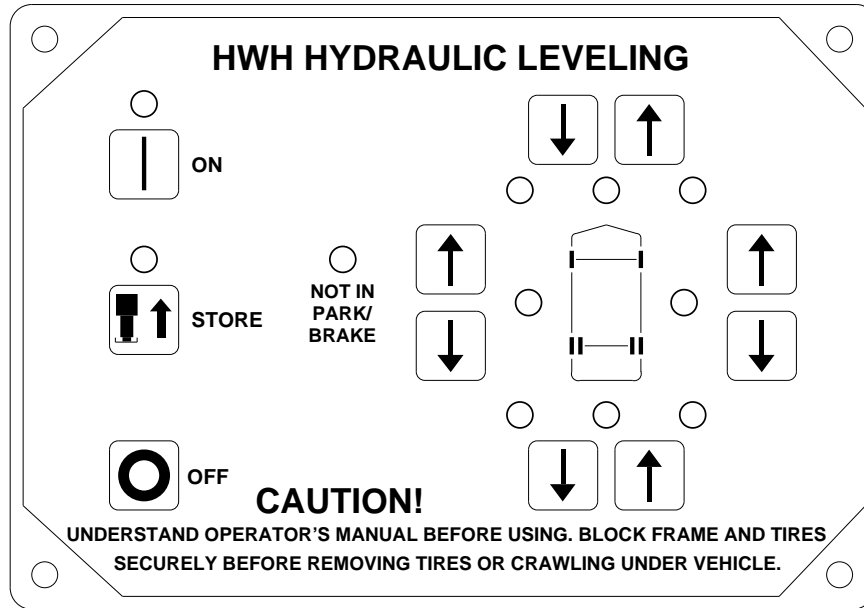
### PUMP RELAY



# ELECTRICAL CONNECTION DIAGRAM

## 325 SERIES LEVELING SYSTEM

### TOUCH PANEL CONNECTIONS

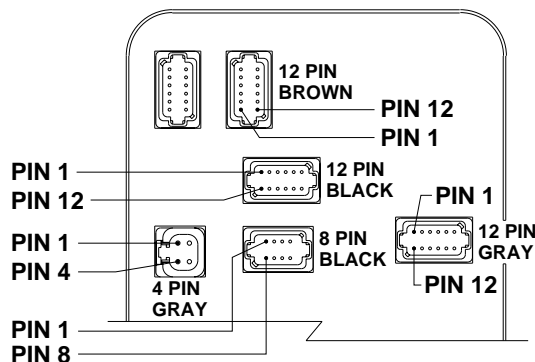


PIN #	WIRE COLOR	WIRE NUMBER	WIRE DESCRIPTION AND FUNCTION
1	YELLOW		CAN HIGH
2	GREEN		CAN LOW
3			CAN SHEILD
4	WHITE	6230	GROUND FROM CONTROL BOX
5	RED	6800	SWITCHED BATTERY FROM CONTROL BOX

# ELECTRICAL CONNECTION DIAGRAM

## 325 SERIES LEVELING SYSTEM

### CONTROL BOX CONNECTION INFORMATION

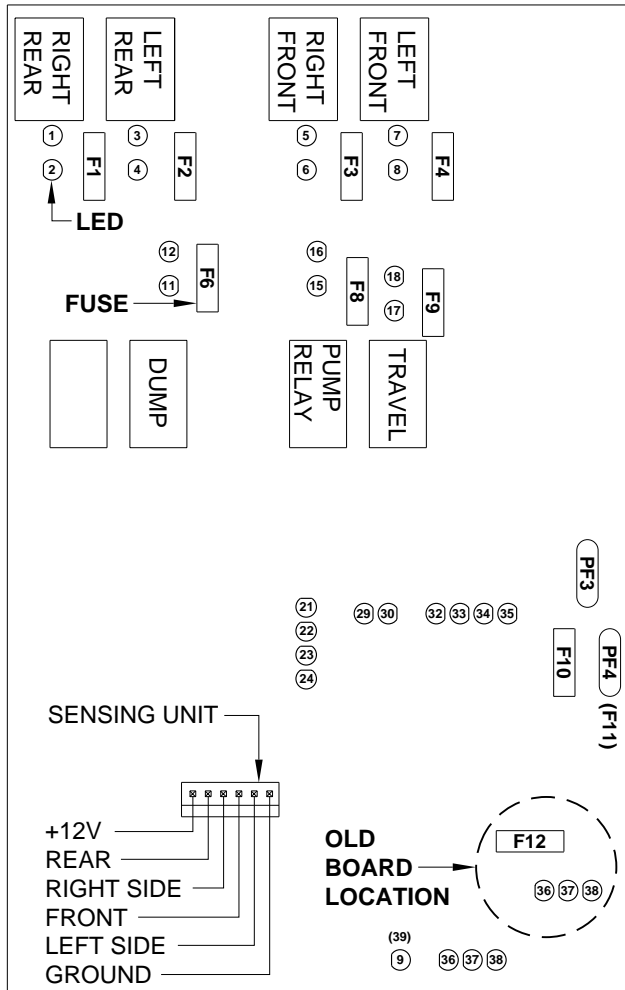


PIN #	WIRE COLOR	WIRE NUMBER	WIRE DESCRIPTION AND FUNCTION
<b>4 PIN GRAY CONNECTOR</b>			
1	RED	6100	+12V BATTERY POWER FROM PUMP RELAY
2	RED	6100	+12V BATTERY POWER FROM PUMP RELAY
3	WHITE	6230	GROUND FROM HWH GROUND STUD
4	WHITE	6230	GROUND FROM HWH GROUND STUD
<b>12 PIN BROWN CONNECTOR</b>			
1 & 2			NO CONNECTION
3	BLACK	8101	50 LB PRESSURE SWITCH - SWITCHED GROUND
4			NO CONNECTION
5	BLACK	1400	SWITCHED +12 FOR LEFT FRONT SOLENOID VALVE
6 & 7			NO CONNECTION
8	BLACK	4400	SWITCHED +12 FOR LEFT REAR SOLENOID VALVE
9	BLACK	3400	SWITCHED +12 FOR RIGHT REAR SOLENOID VALVE
10	BLACK	2400	SWITCHED +12 FOR RIGHT FRONT SOLENOID VALVE
11			NO CONNECTION
12	BLACK	8600	PUMP RELAY CONTROL - SWITCHED +12
<b>12 PIN BLACK CONNECTOR</b>			
1 THRU 6			NO CONNECTION
7	BLACK	9000	SWITCHED GROUND FROM PARK BRAKE SWITCH
8 THRU 10			NO CONNECTION
11	BLACK	7699	BUZZER & MASTER WARNING LIGHT CONTROL - SWITCHED GROUND
12			NO CONNECTION
<b>8 PIN BLACK CONNECTOR</b>			
1 & 2			NO CONNECTION
3	RED	6800	SWITCHED BATTERY
4	WHITE	6230	GROUND
5			CAN SHIELD
6	RED	6120	SWITCHED +12 ACCESSORY
7	GREEN		CAN LOW
8	YELLOW		CAN HIGH
<b>12 PIN GRAY CONNECTOR</b>			
1 & 2			NO CONNECTION
3	BLACK	1000	SWITCHED GROUND FROM LEFT FRONT WARNING SWITCH
4	BLACK	2000	SWITCHED GROUND FROM RIGHT FRONT WARNING SWITCH
5 THRU 8			NO CONNECTION
9	BLACK	3000	SWITCHED GROUND FROM RIGHT REAR WARNING SWITCH
10	BLACK	4000	SWITCHED GROUND FROM LEFT REAR WARNING SWITCH
11			NO CONNECTION
12	WHITE	6235	SHARED GROUND FOR WARNING SWITCHES

# ELECTRICAL CONNECTION DIAGRAM

## 325 SERIES LEVELING SYSTEM

### CONTROL BOX - LED - FUSE LOCATION AND DESCRIPTION



LED	RELAY DESCRIPTION	FUSE
1-YELLOW	RIGHT REAR COIL	F1 - 15 AMP
2-RED	RIGHT REAR OUTPUT	
3-YELLOW	LEFT REAR COIL	F2 - 15 AMP
4-RED	LEFT REAR OUTPUT	
5-YELLOW	RIGHT FRONT COIL	F3 - 15 AMP
6-RED	RIGHT FRONT OUTPUT	
7-YELLOW	LEFT FRONT COIL	F4 - 15 AMP
8-RED	LEFT FRONT OUTPUT	
11-YELLOW	DUMP - NOT USED	F6 - 5 AMP
12-RED	DUMP - NOT USED	
15-YELLOW	PUMP COIL	F8 - 5 AMP
16-RED	PUMP OUTPUT	
17-YELLOW	TRAVEL - NOT USED	F9 - 5 AMP
18-RED	TRAVEL - NOT USED	
21-YELLOW	LEFT FRONT WARN SW	F10 - 5 AMP PF4 (F11)
22-YELLOW	RIGHT FRONT WARN SW	
23-YELLOW	RIGHT REAR WARN SW	
24-YELLOW	LEFT REAR WARN SW	
29-RED	NOT USED	F10 - 5 AMP PF4 (F11)
30-YELLOW	NOT USED	
32-RED	MASTER WARN CONTROL	F10 - 5 AMP PF4 (F11)
33-GREEN	50 LB PRESS SW INPUT	
34-RED	JACK INTERRUPT	F10 - 5 AMP PF4 (F11)
35-RED	PARK BRAKE	
36-RED	BOARD ENABLE	F10 - 5 AMP PF4 (F11)
37-RED	ACCESSORY IN	
38-RED	ACCESSORY OUT	F10 - 5 AMP PF4 (F11)
(39) 9-RED	LINK LIGHT	

**NOTE: FOR DETAILED INPUT / OUTPUT INFORMATION ABOUT PIN CONNECTIONS SEE ELECTRICAL CONNECTION DIAGRAM - CONTROL BOX CONNECTION INFORMATION.**

**NOTE: A LIT YELLOW LED INDICATES THERE IS A GROUND SIGNAL TO TURN THE CORRESPONDING RELAY ON.**

**A LIT RED LED INDICATES THERE IS VOLTAGE ON IT'S CORRESPONDING OUTPUT PIN.**

**IF A YELLOW LED IS LIT AND THE CORRESPONDING RED LED IS OFF, EITHER IT'S FUSE IS BLOWN OR THE RELAY IS BAD.**

**IF THE YELLOW LED'S ARE WORKING BUT NO RED LED IS COMING ON THERE MAY BE PROBLEM WITH INPUT VOLTAGE IN THE 4-PIN CONNECTOR.**

**IF A YELLOW LED IS NOT LIT, THERE IS A PROBLEM WITH THE CONTROL BOX, TOUCH PANEL OR CONNECTION CABLE**

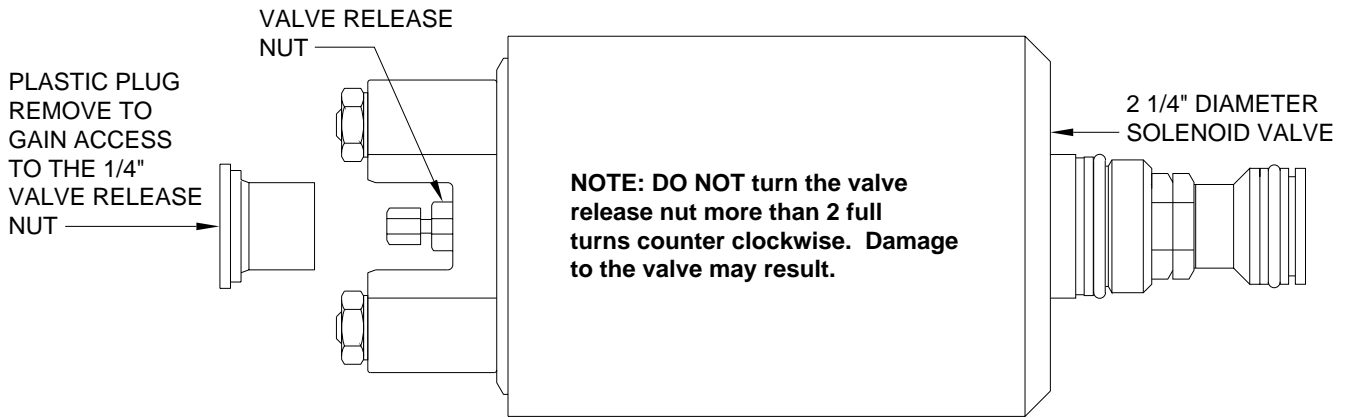
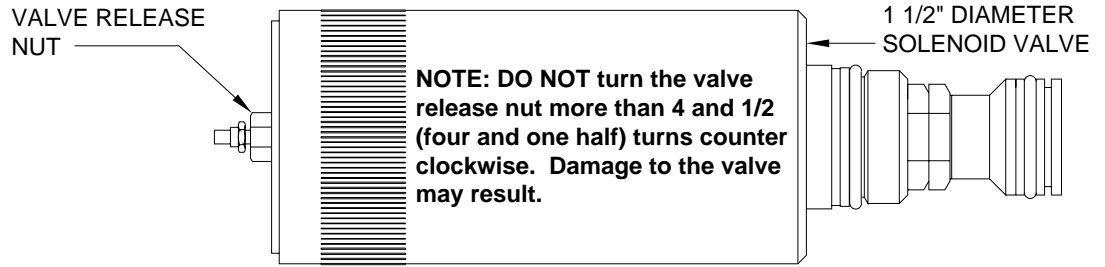
**NOTE: THE TRAVEL RELAY IS WIRED AS A NORMALLY CLOSED RELAY. WHEN THE YELLOW LED (17) IS ON THE RELAY CONTACTS WILL OPEN. THE RED LED (18) WILL NOT BE ON. THE RED LED WILL BE ON IF THE LEVELING SYSTEM IS IN THE TRAVEL MODE AND THE IGNITION IS ON.**

CN1 - SENSING UNIT CONNECTIONS  
 PIN1 - RED - (+12 ACC) FOR SENSING UNIT  
 PIN2 - RED - GROUND FOR REAR YELLOW LEVEL LIGHT  
 PIN3 - GREEN - GROUND FOR RIGHT SIDE YELLOW LEVEL LIGHT  
 PIN4 - BLACK - GROUND FOR FRONT YELLOW LEVEL LIGHT  
 PIN5 - YELLOW - GROUND FOR LEFT SIDE YELLOW LEVEL LIGHT  
 PIN6 - WHITE - GROUND FOR SENSING UNIT

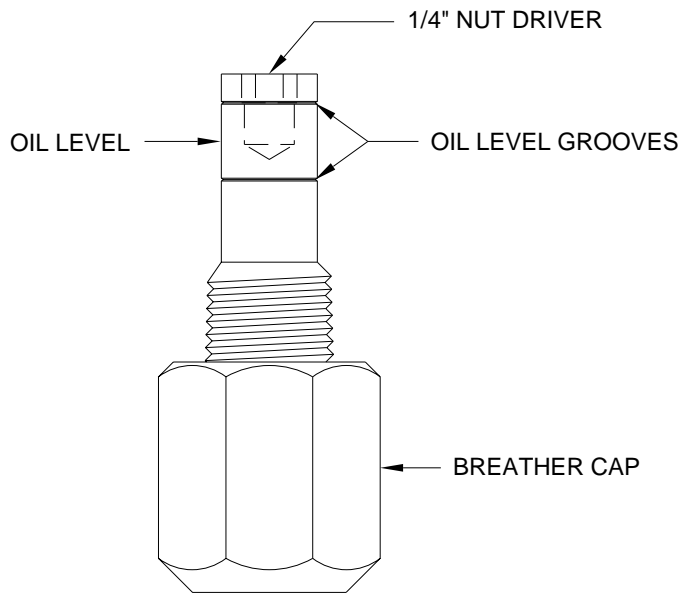
**NOTE: ON NEWER CONTROL BOXES, FUSE F11 AND FUSE F12 HAVE BEEN REPLACED WITH POLY SWITCHES PF4 AND PF3. POLY SWITCHES PROTECT A COMPONENT OR WIRE AS A FUSE DOES EXCEPT THE POLY SWITCH WILL ALLOW CURRENT THROUGH WHEN THE OVERLOAD OR SHORT IS REMOVED. POLY SWITCHES ARE NOT REPLACEABLE.**



# 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.**