

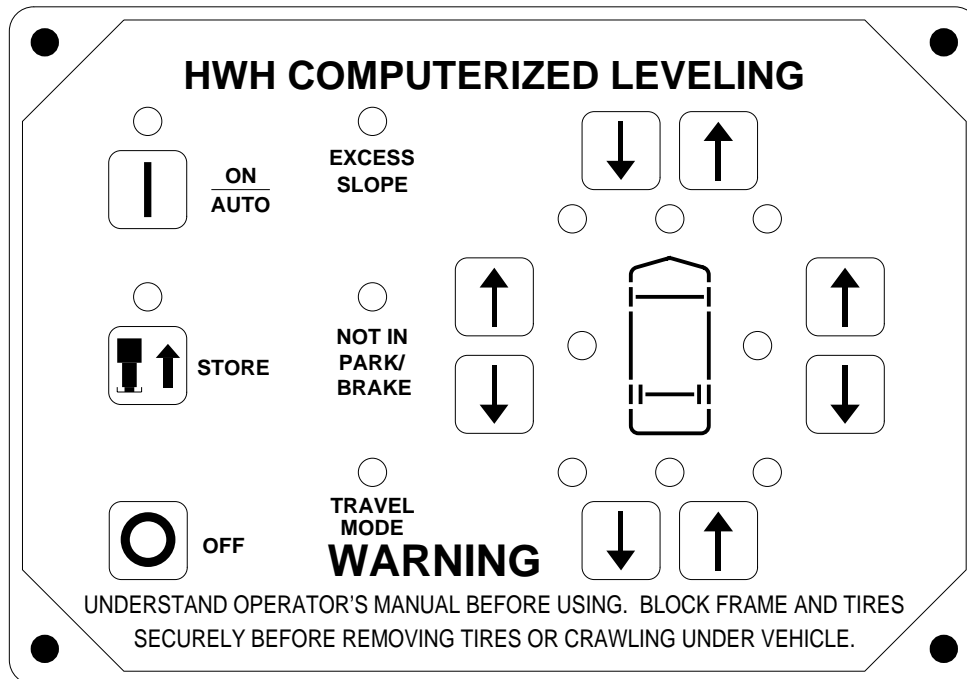


OPERATOR'S MANUAL

HWH® COMPUTER-CONTROLLED 725 SERIES LEVELING SYSTEM

FEATURING:

*Touch Panel Leveling Control
BI-AXIS® Hydraulic Leveling
Kick-Down 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

OPERATOR'S MANUAL

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 THE VEHICLE WHILE LEVELING SYSTEM AND ROOM EXTENSIONS ARE BEING OPERATED.

KICK-DOWN JACKS MAY ABRUPTLY SWING UP WHEN THE FOOT OF THE JACK CLEARS THE GROUND OR WHEN THE JACK REACHES FULL EXTENSION.

NEVER PLACE HANDS OR OTHER PARTS OF THE BODY NEAR HYDRAULIC LEAKS. OIL MAY PENETRATE THE 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.

IF THE VEHICLE IS EQUIPPED WITH KICK-DOWN STYLE JACKS, DO NOT OVER EXTEND THE REAR JACKS. IF THE WEIGHT OF THE VEHICLE IS REMOVED FROM ONE OR BOTH REAR WHEELS, THE VEHICLE MAY ROLL FORWARD OR BACKWARD OFF OF THE JACKS.

IMPORTANT: IF VEHICLE 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

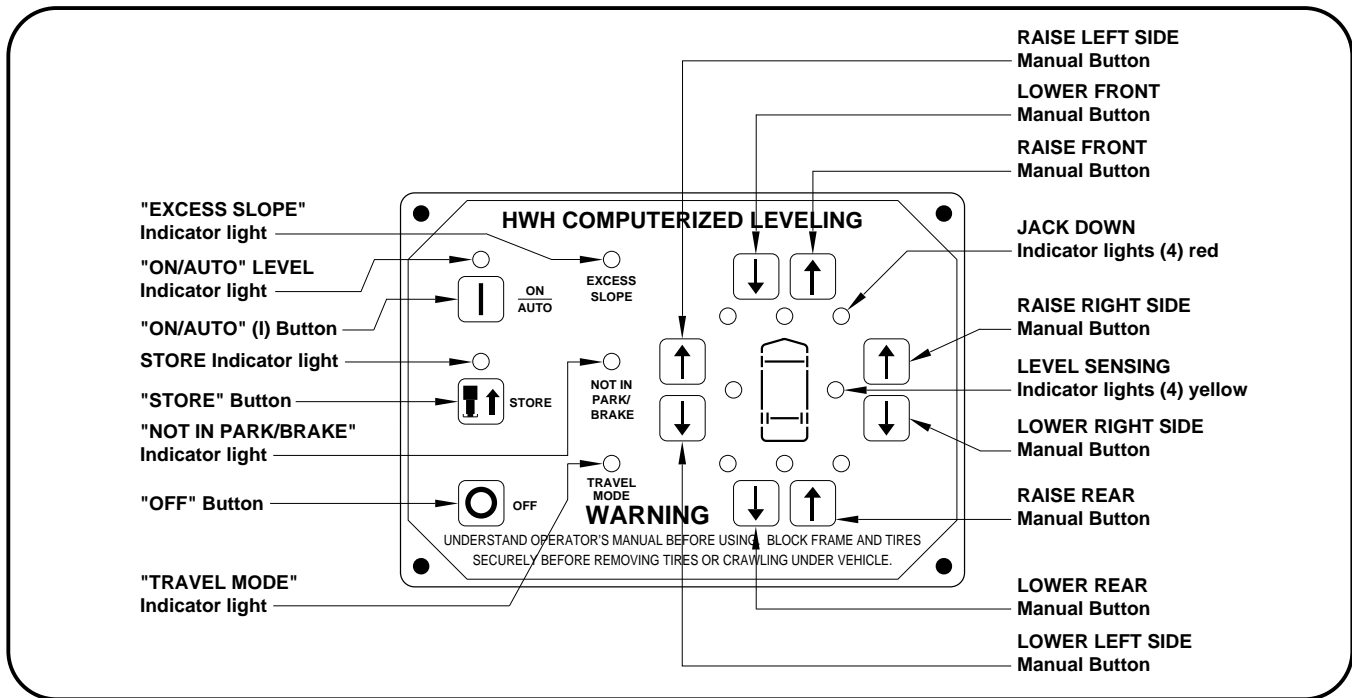
HWH CORPORATION strives to maintain the highest level of customer satisfaction. Therefore, if you discover a defect or problem, please do the following:

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

CONTROLS

"OFF" BUTTON: Push the "OFF" button to stop hydraulic operation.

"ON/AUTO" (I) BUTTON: This is the on button and automatic operation button. The on indicator light is above the "I" button.

"STORE" BUTTON: The store indicator light is above the "STORE" button. This button is used to automatically retract the jacks.

UP (RAISE) AND DOWN (LOWER) ARROWS: These buttons are for manually controlling jacks. They will operate the jacks in pairs, right side, left side, front and rear. Pushing UP arrows will cause the jacks to extend and raise the vehicle. DOWN arrows will cause the jacks to retract.

INDICATOR LIGHTS

"ON/AUTO" LEVEL LIGHT: This light is on when the system is on and flashes when the system is operating.

LEVELING LIGHTS: The four yellow indicating lights are level sensing indicators. When a yellow light is on, it indicates that its side or end of the vehicle is low. No more than two lights should be on at the same time.

STORE LIGHT: This light will flash when the system is in the STORE mode.

WARNING LIGHTS: The four red lights surround the yellow level indicators are jack WARNING lights. They are functional only when the ignition is in the "ON" or "ACC" position, the system is on, and the jacks are in the vertical position.

"EXCESS SLOPE" LIGHT: This indicator will light when the leveling system cannot level the vehicle.

"NOT IN PARK/BRAKE" LIGHT: This indicator will light be on while the "I" button is being pushed if the hand/auto brake is not set. It will go out when the "I" button is released.

"TRAVEL MODE" LIGHT: This indicator light will be on when the ignition is on, when the jacks are retracted and there are no red WARNING lights on.

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

CONTROL IDENTIFICATION

PUMP RUN TIME

PUMP RUN TIME

Pump motors used with HWH leveling systems and room extension systems come in 3 different diameters; 3", 3.7" and 4.5". Contact the vehicle manufacturer or HWH for help with identifying the motor size. **It is important that any time the pump runs for more than three minutes with a 3" motor; or six minutes with a 3.7" or 4.5" motor that the motor is allowed to cool for thirty minutes before continuing. Continuous operation of the pump motor without allowing the motor to cool can damage the motor.** For cold weather information see "COLD WEATHER OPERATIONS" below.

The HWH systems with a computer processor monitor the pump run time and will turn the pump off if the run time exceeds a specified time. This time can vary with different systems. Due to available electronics or system design, the pump run time programs will also vary. Leveling systems and room extensions that are not controlled by a system processor have no pump run time protection. **DO NOT run the pump more than three or six minutes without allowing the pump motor to cool for thirty minutes.**

SYSTEM VARIATIONS FOR PUMP RUN TIME

Some systems with rooms run the rooms separate from the system processor. These systems do not monitor pump run time when operating the rooms. **DO NOT run the pump more than three or six minutes without allowing the pump motor to cool for thirty minutes.**

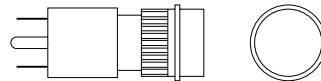
Some systems can be turned back on immediately after the processor turns the pump off. **DO NOT turn the system back on or run the pump without allowing the pump motor to cool for thirty minutes.**

When operating some leveling systems manually or operating the room extensions, the pump will turn off and back on while pushing the control button when the pump run time has been exceeded. **DO NOT continue without allowing the pump motor to cool for thirty minutes.**

With some systems, when the processor has turned the pump off because the run time has been exceeded, power to the HWH system must be turned off and back on before the system will operate. With motorized vehicles, turn the ignition off and back on. With non-motorized vehicles, turn the master power switch for the HWH system off and back on. **DO NOT continue without allowing the pump motor to cool for thirty minutes.**

Some HWH systems are equipped with a lighted reset switch. If the processor turns the pump off because the run time has been exceeded, the light in the reset switch will turn on. The system will not operate until the reset switch is pushed.

DO NOT continue without allowing the pump motor to cool for thirty minutes.



LIGHTED RESET SWITCH

No matter what HWH system is on the vehicle, the pump should not be ran for more than three minutes (3" motors) or six minutes (3.7" or 4.5" motors) without allowing the pump motor to cool for thirty minutes. Continuous operation of the pump motor without allowing the motor to cool can damage the pump motor.

Contact HWH corporation to get specific information about the system in this vehicle.

COLD WEATHER OPERATIONS

HWH leveling and room extension systems are designed to function in cold weather down to 0 degrees Fahrenheit. Below freezing (32 degrees Fahrenheit) the jacks or rooms will operate slower than usual.

For operation in temperatures dropping below -20 degrees Fahrenheit, it is necessary that the system is equipped with oil designed for extreme cold weather application such as a synthetic oil. (Contact HWH for recommendations.)

DO NOT run the pump motor continuously. It is important that any time the pump runs for more than three minutes with a 3" motor; or six minutes with a 3.7" or 4.5" motor that the motor is allowed to cool for thirty minutes before continuing. Continuous operation of the pump motor without allowing the motor to cool can damage the motor. Continuous operation of the pump with slow moving jacks or rooms in cold weather, without allowing the pump motor to cool will cause the pump motor to burn up and damage the pump assembly.

OPERATING PROCEDURES

GENERAL INSTRUCTIONS

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 the jacks or the 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 and turn the ignition switch "OFF" at any time to stop the operation of the system.

Any time a hydraulic leveling process is interrupted, retract the jacks according to the JACK RETRACTION Section and then restart the leveling process.

If the hand / auto brake is not set when the "ON/AUTO" (I) button is pressed, the "NOT IN PARK/BRAKE" light will come on. When the "ON/AUTO" (I) button is released the "NOT IN PARK/BRAKE" light will go out. The panel will NOT turn on.

WARNING: DO NOT MOVE THE VEHICLE IF ONE OR MORE JACKS ARE EXTENDED TO THE GROUND.

PREPARATION FOR TRAVEL

IMPORTANT: Before traveling, the red jack warning lights must be off and the "TRAVEL MODE" light must be on. If lights are not correct for travel, retract jack as described in the JACK RETRACTION Section.

If the jacks are retracted but a red "WARNING" light is lit or the green "TRAVEL MODE" light is not lit, the system needs to be serviced.

Any room extension should be fully retracted before traveling.

WARNING: 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 BEFORE TRAVELING.

Any time the "ON/AUTO" (I) button has been pushed, push the "STORE" button before traveling.

If the jacks cannot be retracted according to the JACK RETRACTION Section, retract the jacks according to the MANUAL JACK RETRACTION Section. The system should then be checked.

ROOM EXTENSION PROCEDURES

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

If the vehicle is equipped with kick-down jacks, the wheels MUST be blocked securely. It is recommended that the vehicle is leveled and stabilized before any rooms are extended. It is recommended all rooms are retracted before the leveling system is retracted. It is recommended the leveling system is not operated when any room extension is extended.

Refer to the vehicle owners manual for proper operation of room extensions.

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

OPERATING PROCEDURES

725 SERIES LEVELING SYSTEM

AUTOMATIC HYDRAULIC LEVELING

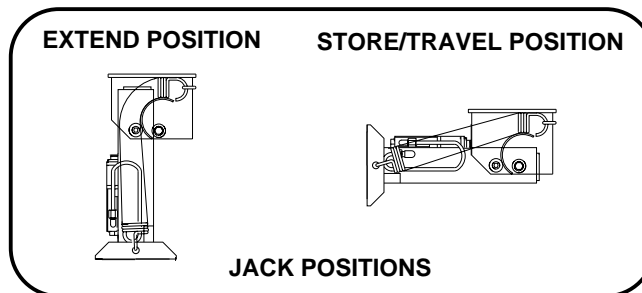
1. Place transmission in the recommended position for parking vehicle and set parking brake. Turn the coach engine off. Turn the ignition to the "ACCESSORY" position.
2. Press the "ON/AUTO" (I) button to enter the hydraulic operation mode. The ON light will glow steady.
3. Press the "ON/AUTO" (I) button a second time. The ON/AUTO indicator light will start to flash. One at a time the jacks will swing to the vertical position. The red WARNING light for each jack will come on as it's respective jack becomes vertical. At this time, the operator may want to check the jacks and place a pad under each jack if the ground will not support the vehicle.
4. Press the "ON/AUTO" (I) button a third time. The ON/AUTO light will start to flash.

The system will automatically extend the jacks to level the vehicle and then extend any remaining jacks for stabilizing. After the system has finished leveling and stabilizing, it will automatically shut off.

EXCESS SLOPE SITUATION: In the event the jacks are unable to level the coach, the "EXCESS SLOPE" light will come on. Excess slope is two jacks fully extending without turning the yellow level light out. The system will not stabilize the vehicle if the "EXCESS SLOPE" light comes on. One or more jacks may not be extended. The system will shut off leaving the "EXCESS SLOPE" light on. The "EXCESS SLOPE" light will remain on if the ignition is in the "ON" or "ACC" position, until the jacks have been fully retracted turning the red warning lights out. Push the "STORE" button to retract the jacks. Move the vehicle to a more level position or level the vehicle as close as possible according to the MANUAL HYDRAULIC OPERATION section.

5. Turn the ignition switch to the "OFF" position.

JACK RETRACTION



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

1. Start the engine. Store the jacks immediately.
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 six 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 fifty minutes, then shut down regardless of the "WARNING" lights condition.

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: DO NOT interrupt power to the leveling system while the "STORE" indicator light is blinking. DO NOT push the "OFF" button or turn the ignition key. The system must be allowed to completely finish the STORE mode.

WARNING: 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 BEFORE TRAVELING.

3. The vehicle can be moved as soon as the red warning lights are out, the jacks are in the STORE/TRAVEL position and the green "TRAVEL" light is on.

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.

OPERATING PROCEDURES

MANUAL HYDRAULIC OPERATION

1. Place transmission in the recommended position for parking the vehicle, and set the parking brake. Turn the ignition to the "ACCESSORY" position.
2. Press the "ON/AUTO" (I) button.
The ON/AUTO indicator light will glow steady.
3. Press the "ON/AUTO" (I) button a second time. The ON/AUTO indicator light will start to flash. One at a time, the jacks will swing to the vertical position. The four red WARNING lights will be on. Place a pad under each jack foot if the ground will not support the vehicle on the jacks.
4. The vehicle may be leveled using the manual RAISE (UP ARROW) buttons on the right half of the panel. If a yellow LEVEL SENSING light is on, that side, end or corner of the vehicle is low. **Put out any side yellow light before leveling the vehicle from front to rear.**

Jacks will extend (or retract) in pairs to raise (or lower) a side or end of the vehicle. Any jack not used for leveling can be extended to the ground. This provides additional stability against wind and activity in the vehicle.

IMPORTANT: Do not continue to push a RAISE (UP ARROW) button for more than ten (10) seconds after that pair of jacks are fully extended.

5. When leveling is completed, push the "OFF" button on the touch panel and turn the ignition switch to the "OFF" position.

MANUAL JACK RETRACTION

NOTE: Use the valve release nuts for retracting only if the "STORE" button on the control panel will not retract the jacks for travel.

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

1. Locate the 4 valve release nuts on the solenoid valves
The solenoid valves are located on the pump/valve assembly
See the "HYDRAULIC LINE CONNECTION DIAGRAM LEVELING SYSTEM."

2. Allow clearance for vehicle to lower.

3. Use the 1/4" nut driver in the end of the breather cap.
(A deeper 1/4" socket may be needed for the large valves.)
Clean around the cap before removing and cover the hole after removing the cap.

4. Retract the rear jacks by opening the two outer valves.
Slowly turn the release nuts counter clockwise. The nuts may turn easily at first but as an internal spring is compressed, turning may become more difficult. The valves need only to be opened enough to retract the jack.

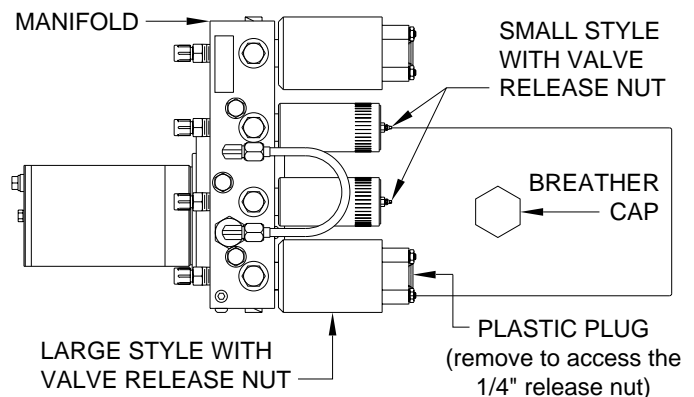
5. Retract the front jacks by opening the two center valves as described in Step 3.

**IMPORTANT: THE VALVE RELEASE NUT FOR THE SMALL VALVE SHOULD NOT BE TURNED MORE THAN 4 & 1/2 TURNS.
THE VALVE RELEASE NUT FOR THE LARGE VALVE SHOULD NOT BE TURNED MORE THAN 2 FULL TURNS.**

6. Check that all four jacks are now retracted.
7. Close the valves by turning the nuts clockwise.

Once the internal spring tension has been released, the release nuts will turn free for several turns. Once the release nuts are snug, DO NOT tighten the nuts past this point as internal damage may occur to the solenoid.

8. Replace the breather cap.
9. The system should now be repaired before using again.
10. Push the "STORE" button before traveling.



MAINTENANCE

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 four jacks 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.

LEVELING JACKS

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

The jack rods do not need to be oiled or sprayed with anything. See maintenance, SYSTEM ADJUSTMENT.

VISUAL INSPECTION

Periodically inspect the leveling 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 (LEVELING) Section. Note any abnormal operation.

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

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.

WINTER WEATHER DRIVING

Anti-icing / deicing agents when splashed on your vehicle, continue to absorb moisture from the air even after they have dried. This can facilitate corrosion of metallic components, such as HWH jacks.

To help reduce the corrosion of jacks after exposure to anti-icing / deicing agents, thoroughly wash jacks with warm soapy water.

MAINTENANCE

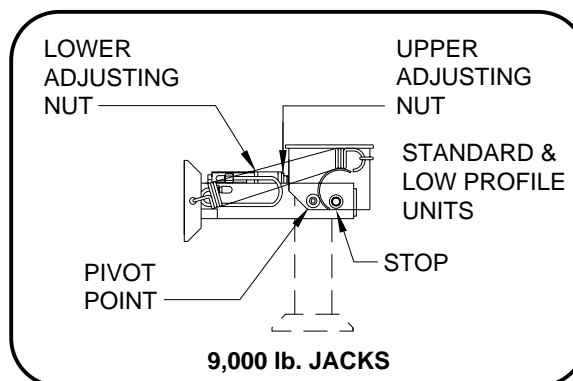
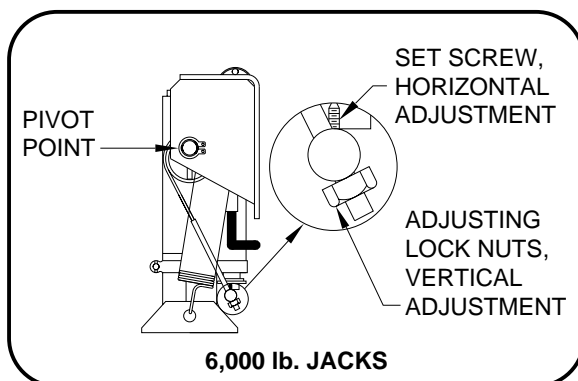
NOT IN PARK/BRAKE CHECK

WARNING: 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.

SYSTEM ADJUSTMENT



JACK ADJUSTMENT

There are two basic adjustments which are made at the time of installation. However, when adjustment of a leveling unit is needed, the following procedures are recommended.

1. 6,000 lb. JACKS: Always make vertical adjustment first. If the vertical adjustment is changed at anytime, be sure to check the horizontal adjustment. Vertical position is changed by adjusting the lock nuts on the actuator cable. If the jack stopped short of vertical, tighten the lock nuts. If the jack goes past vertical, back the lock nuts off. Be sure to adjust each nut the same number of turns.

NOTE: The two front jacks should be adjusted to the same horizontal position.

Horizontal stop is adjusted by turning the set screws located just inside the cable locknuts. The jack can be adjusted down to provide clearance for objects which may interfere with the operation of the jacks. The horizontal stop must be adjusted to provide clearance between the hat bracket and mounting bolts; and the actuator and hose fittings, when the jack is in the STORE POSITION. The jack must be able to fully extend in the horizontal position without interfering with suspension components, tanks, etc.

The only maintenance is to keep the jacks clean by washing and oiling the pivot points several times a year when doing general maintenance on the vehicle.

2. 9,000 lb. JACKS: Each jack should be checked to be sure that it is vertical when it swings down. To do this, retract all jacks, then extend each jack until it is close to, but not touching the ground. If the jack stopped short of being vertical, it can be adjusted by loosening the lower adjusting nut and tightening the upper nut.

The horizontal stop can be adjusted up or down in the slot to provide clearance for objects which may interfere with operation of the jack. The stop must be adjusted so that the jack can be fully extended in the horizontal position without interfering with suspension components, tanks, etc.

The 9000# jack has a roller bearing on the opposite side from the stop. It needs to roll freely. Oiling the roller bearing whenever general vehicle maintenance is done is a good idea. Also oil the pivot point at the same time. The only other maintenance to the jack is to keep it clean by washing.

INSTRUCTION SHEET

SENSING UNIT MAINTENANCE/SERVICE

REMOTE MOUNTED "POTTED" ELECTRONIC SENSING UNIT

SENSING UNIT ACCURACY TOLERANCE

The sensing unit has an accuracy tolerance of ± 5.4 inches front to rear and ± 1 inch side to side on a 36 foot vehicle. Typical leveling results will be better.

SENSING UNIT ADJUSTMENT / WITH ADJUSTING ENHANCEMENT

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. It is best if the level is placed close to the mounting area of the sensing unit. 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.

The ignition (motorized units) or master power switch (towable units) must be on. Remove the "Adjusting Enhancement Cap". **DO NOT LOSE THIS CAP.** There is a small pin beneath the cap. Use a jumper wire with an alligator clip to apply a ground to the pin. This will make the sensing unit very sensitive. The yellow lights may "jump" around while adjusting the sensing unit. Let the lights settle down after each adjustment. Small, gentle turns will work best. Turn mounting screws 1 and 3 to adjust the sensing unit. Turn screws as instructed to turn out all the yellow LEDs. When all the LEDs are out, remove the jumper wire and replace the adjusting enhancement cap. **DO NOT** over tighten.

Move the vehicle to an unlevel position and level the vehicle according to the yellow level sensing lights on the touch panel. Readjust if necessary.

IMPORTANT: THE SENSING UNIT MOUNTING SPRINGS SHOULD BE COMPRESSED ABOUT 1/2 THEIR FREE LENGTH. SCREW NUMBER 2 SHOULD NOT BE TURNED WHILE ADJUSTING THE SENSING UNIT. AFTER ADJUSTING THE SENSING UNIT, BUMP THE SENSING UNIT TO SEE THAT IT IS SETTLED TIGHT AGAINST ALL THREE SCREW HEADS AND STILL INDICATES THAT THE UNIT IS LEVEL.

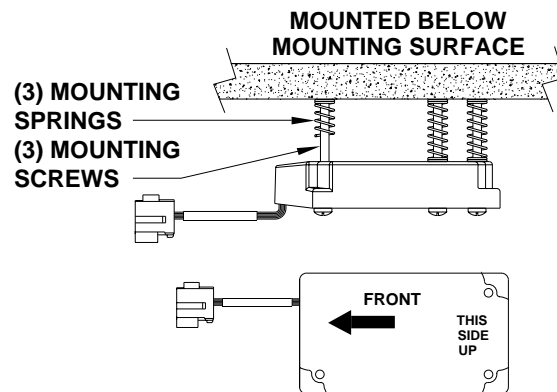
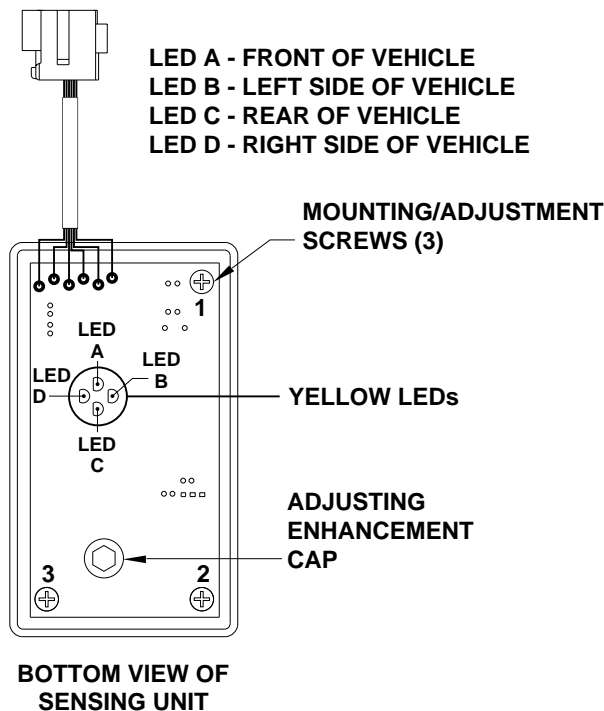
NOTE: If opposing LED's are lit, there is a problem with the Sensing Unit.

If LED (A) is lit: Tighten adjustment screw number 1 until the LED is off.

If LED (C) is lit: Loosen adjustment screw number 1 until the LED is off.

If LED (B) is lit: Loosen adjustment screw number 3 until the LED is off.

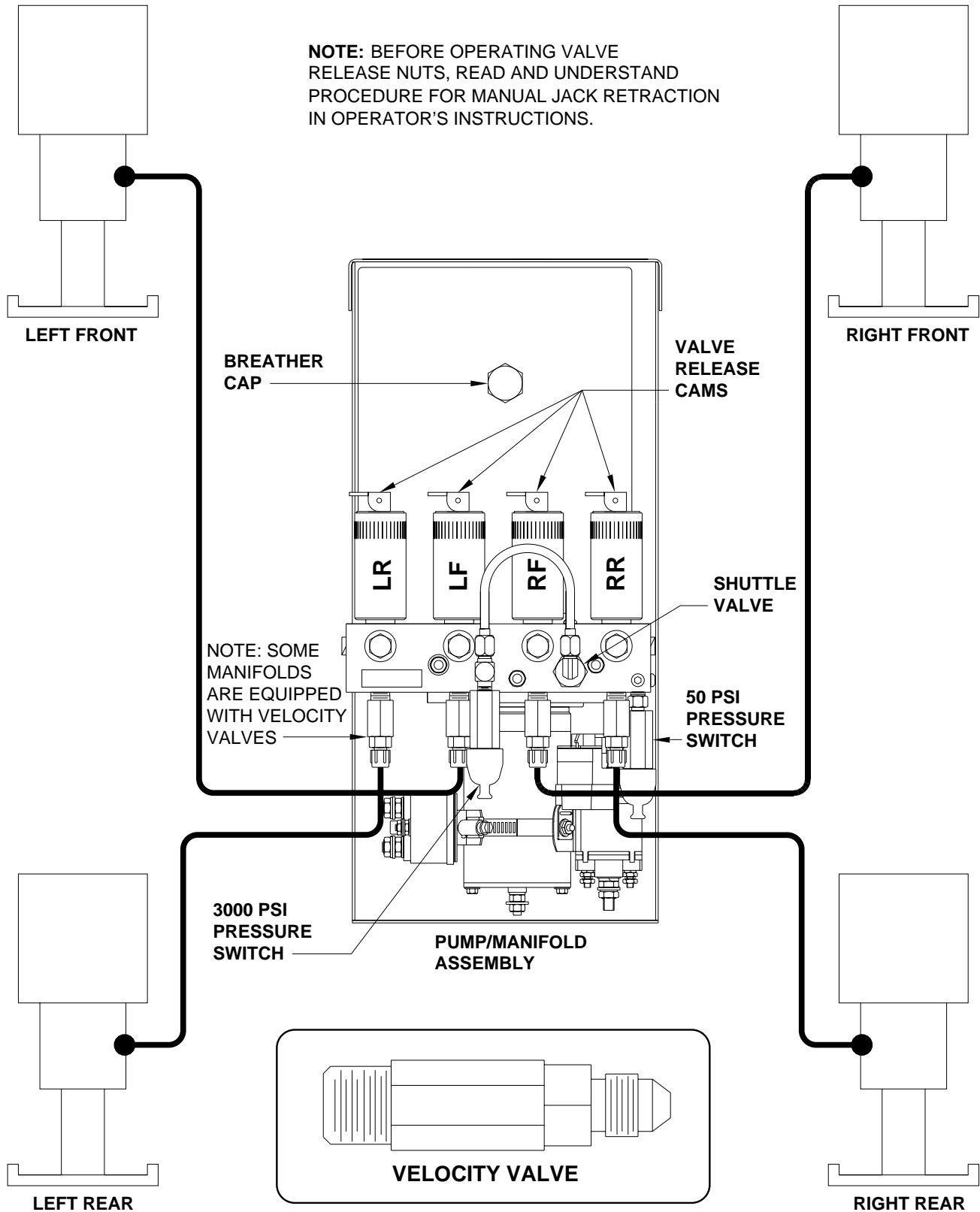
If LED (D) is lit: Tighten adjustment screw number 3 until the LED is off.



HYDRAULIC LINE CONNECTION DIAGRAM

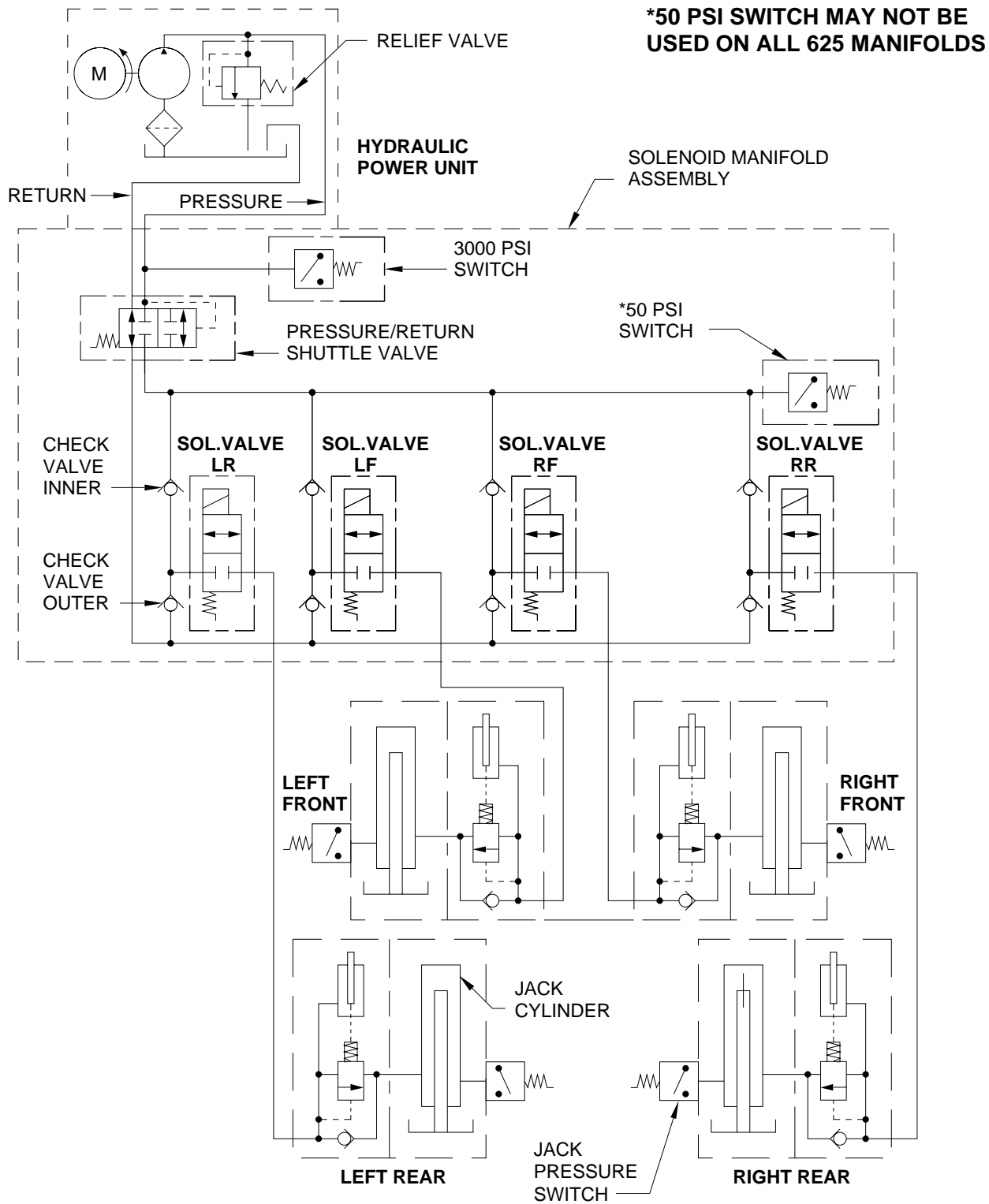
725 SERIES LEVELING SYSTEM

(WITH 4 KICK-DOWN JACKS)



HYDRAULIC SCHEMATIC

BI-AXIS LEVELING WITH KICK-DOWN JACKS

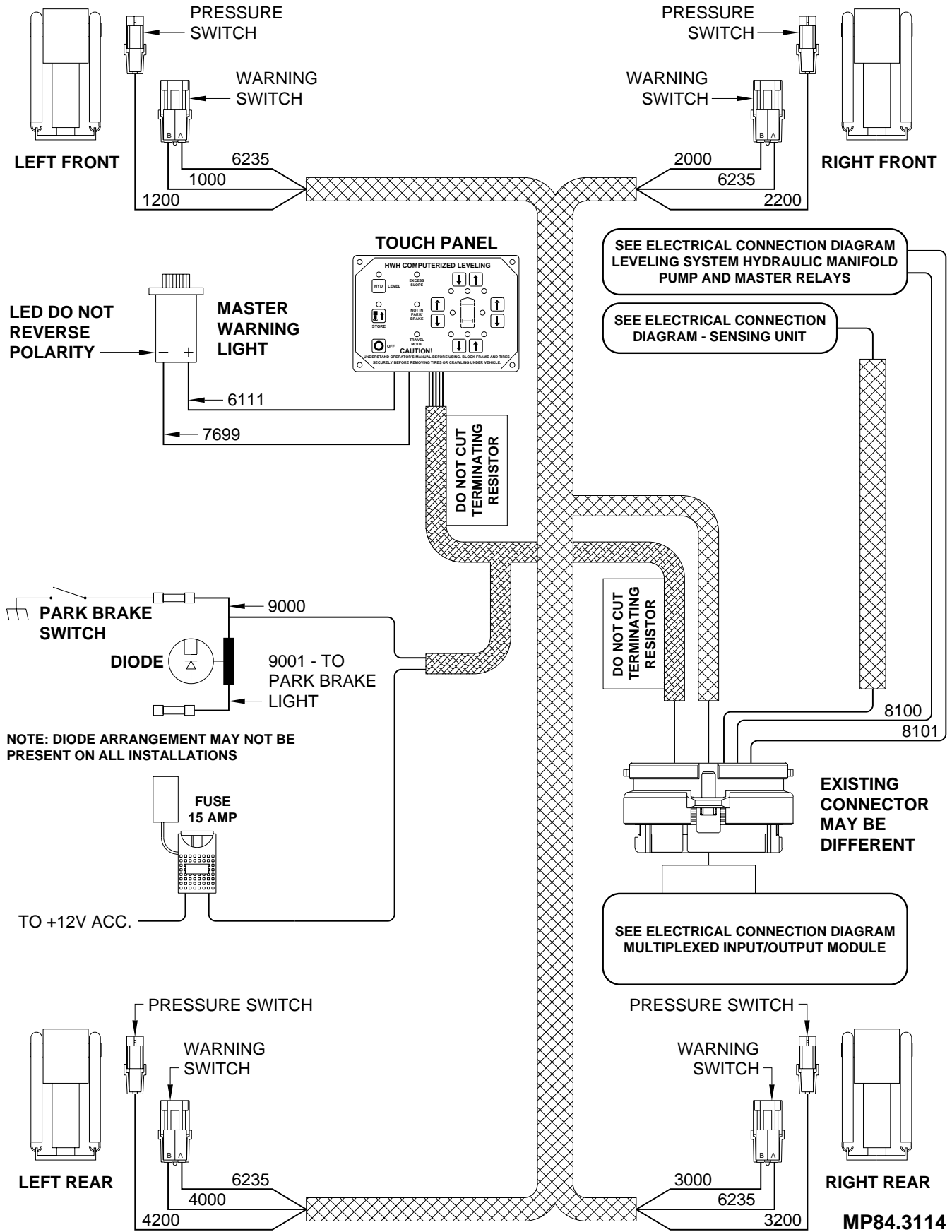


ELECTRICAL CONNECTION DIAGRAM

725 SERIES SINGLE STEP LEVELING SYSTEM

PARK BRAKE - MASTER WARNING LIGHT - TOUCH PANEL

JACK WARNING LIGHTS AND PRESSURE SWITCHES

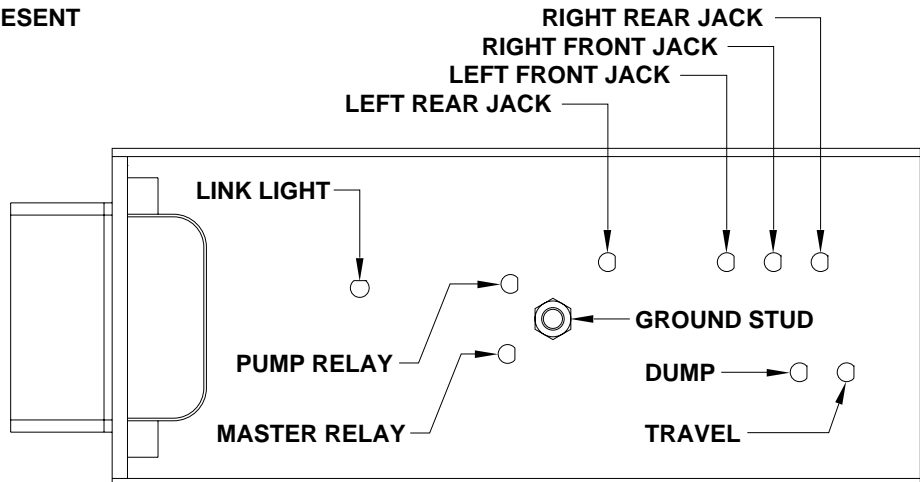


ELECTRICAL CONNECTION DIAGRAM

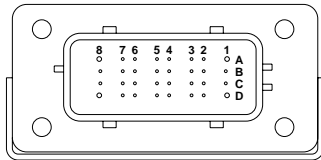
MULTIPLEXED INPUT/OUTPUT MODULE - BLACK STRIKE CONNECTOR

LED AND WIRE/CONNECTION INFORMATION

NOTE: DUMP AND TRAVEL LEDS PRESENT BUT NOT ALWAYS USED



FRONT VIEW OF I/O MODULE CONNECTOR



A LIT RED LED INDICATES THERE SHOULD BE +12 VOLTS ON THE CORRESPONDING WIRE.

LINK LIGHT: LINK LIGHT FLASHING INDICATES PROPER COMMUNICATION BETWEEN THE I/O MODULE AND THE TOUCH PANEL. LINK LIGHT ON SOLID OR OFF INDICATES A FAILURE.

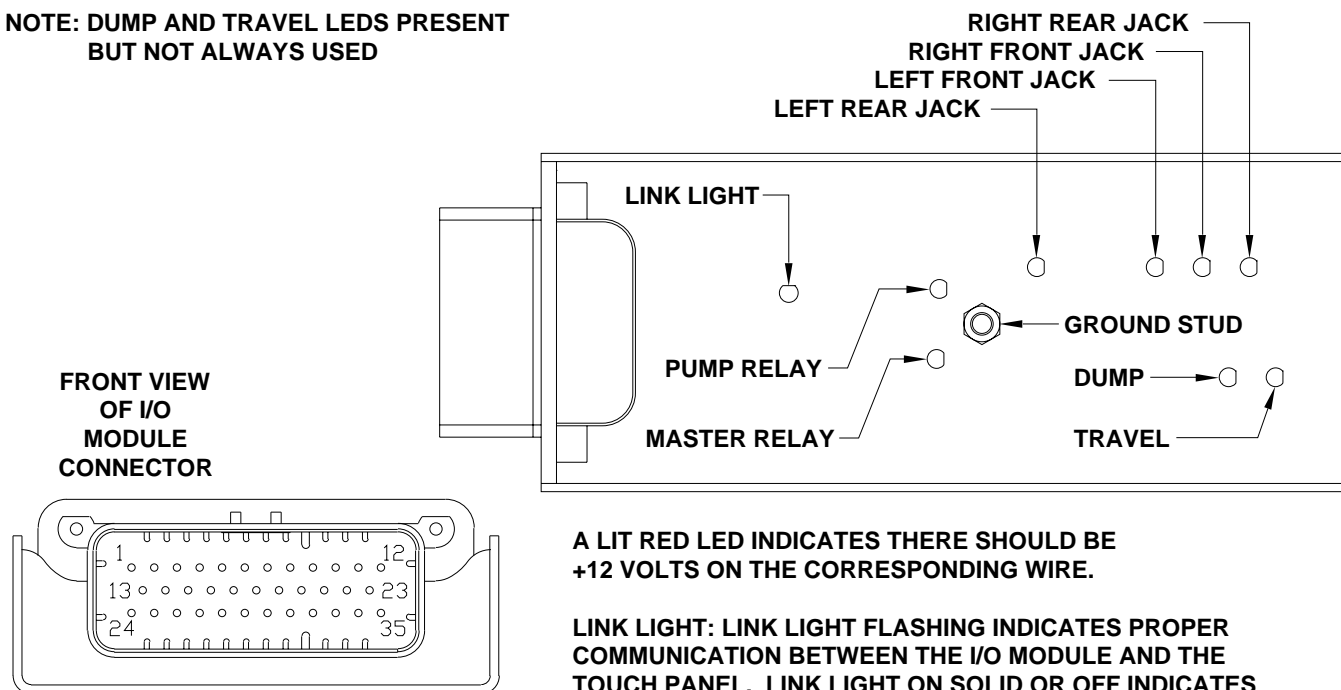
PIN #	WIRE COLOR	WIRE NUMBER	WIRE DESCRIPTION AND FUNCTION
A1	(+12 BLACK WIRE 8601)	INPUT WHEN EXTENSION DEVICES ROOMS, GEN SLIDE, STEP COVER, ETC. ARE USED	
A2	YELLOW	N/A	CAN HIGH COMMUNICATION WIRE
A3 AND A4			NO CONNECTION
A5	BLACK	2000	SWITCHED GROUND FROM RIGHT FRONT JACK WARNING SWITCH
A6	BLACK	2200	SWITCHED GROUND FROM RIGHT FRONT JACK PRESSURE SWITCH
A7	BLACK	3200	SWITCHED GROUND FROM RIGHT REAR JACK PRESSURE SWITCH
A8	BLACK	8101	SWITCHED GROUND FROM 50 PSI MANIFOLD PRESSURE SWITCH
B1	RED	6800	+12 VOLT POWER TO THE TOUCH PANEL
B2	GREEN	N/A	CAN LOW COMMUNICATION WIRE
B3	WHITE	6230	GROUND TO THE TOUCH PANEL
B4			NO CONNECTION
B5	BLACK	3000	SWITCHED GROUND FROM RIGHT REAR JACK WARNING SWITCH
B6	BLACK	4200	SWITCHED GROUND FROM LEFT REAR JACK PRESSURE SWITCH
B7			NO CONNECTION
B8	BLACK	8100	SWITCHED GROUND FROM 3000 PSI MANIFOLD PRESSURE SWITCH
C1	RED	6121	+12 VOLT POWER FOR LEVEL SENSING UNIT
C2	N/A	N/A	SHIELD WIRE FOR GREEN & YELLOW CAN COMMUNICATION WIRES
C3	WHITE	6231	GROUND FOR LEVEL SENSING UNIT
C4	BLACK	0400	SWITCHED GROUND FROM SENSING UNIT - REAR
C5	BLACK	4000	SWITCHED GROUND FROM LEFT REAR JACK WARNING SWITCH
C6 AND C7			NO CONNECTION
C8	BLACK	0300	SWITCHED GROUND FROM SENSING UNIT - RIGHT SIDE
D1	RED	6120	+12 VOLT ACCESSORY POWER FOR I/O MODULE
D2	WHITE	6235	GROUND FOR JACK WARNING SWITCHES
D3			NO CONNECTION
D4	BLACK	1000	SWITCHED GROUND FROM LEFT FRONT JACK WARNING SWITCH
D5	BLACK	1200	SWITCHED GROUND FROM LEFT FRONT JACK PRESSURE SWITCH
D6	BLACK	0100	SWITCHED GROUND FROM SENSING UNIT - LEFT SIDE
D7	BLACK	0200	SWITCHED GROUND FROM SENSING UNIT - FRONT
D8	BLACK	9000	GROUND FROM PARK BRAKE SWITCH

ELECTRICAL CONNECTION DIAGRAM

MULTIPLEXED INPUT/OUTPUT MODULE - GRAY AMPSEAL CONNECTOR

LED AND WIRE/CONNECTION INFORMATION

NOTE: DUMP AND TRAVEL LEDS PRESENT BUT NOT ALWAYS USED

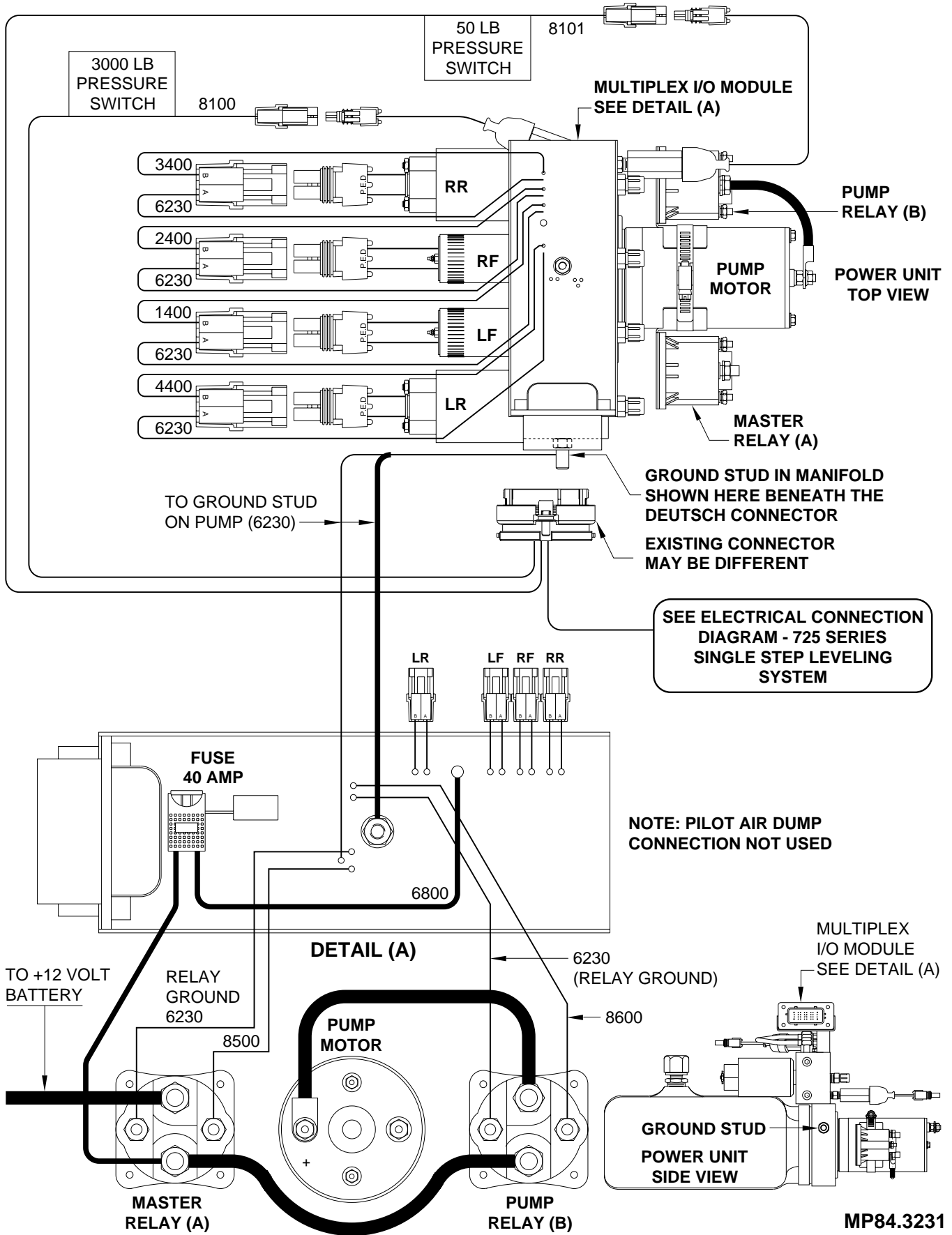


PIN #	WIRE COLOR	WIRE NUMBER	WIRE DESCRIPTION AND FUNCTION
1	BLACK	9000	GROUND FROM PARK BRAKE SWITCH
2			NO CONNECTION
3	BLACK	8101	SWITCHED GROUND FROM 50 PSI MANIFOLD PRESSURE SWITCH
4	BLACK	0100	SWITCHED GROUND FROM SENSING UNIT - LEFT SIDE
5	BLACK	0400	SWITCHED GROUND FROM SENSING UNIT - REAR
6	BLACK	3000	SWITCHED GROUND FROM RIGHT REAR JACK WARNING SWITCH
7	BLACK	2200	SWITCHED GROUND FROM RIGHT FRONT JACK PRESSURE SWITCH
8			NO CONNECTION
9	BLACK	8601	+12 FOR PUMP REQUEST - SLIDE-OUTS, GEN SLIDE, STEP, ETC.
10			NO CONNECTION
11	WHITE	6235	GROUND FOR JACK DOWN WARNING SWITCHES
12 THRU 15			NO CONNECTION
16	BLACK	0300	SWITCHED GROUND FROM SENSING LIGHT - RIGHT SIDE
17	BLACK	2000	SWITCHED GROUND FROM RIGHT FRONT JACK WARNING SWITCH
18	BLACK	1200	SWITCHED GROUND FROM LEFT FRONT JACK PRESSURE SWITCH
19			NO CONNECTION
20	WHITE	6230	GROUND TO THE TOUCH PANEL
21	N/A	N/A	SHIELD WIRE FOR GREEN & YELLOW CAN COMMUNICATION WIRES
22	YELLOW		CAN HIGH COMMUNICATION WIRE
23	GREEN		CAN LOW COMMUNICATION WIRE
24			NO CONNECTION
25	BLACK	4200	SWITCHED GROUND FROM LEFT REAR JACK PRESSURE SWITCH
26	BLACK	8100	SWITCHED GROUND FROM 3000 PSI MANIFOLD PRESSURE SWITCH
27	BLACK	0200	SWITCHED GROUND FROM SENSING UNIT - FRONT
28	BLACK	1000	SWITCHED GROUND FROM LEFT FRONT JACK WARNING SWITCH
29	BLACK	4000	SWITCHED GROUND FROM LEFT REAR JACK WARNING SWITCH
30	BLACK	3200	SWITCHED GROUND FROM RIGHT REAR JACK PRESSURE SWITCH
31			NO CONNECTION
32	WHITE	6231	GROUND FOR LEVEL SENSING UNIT
33	RED	6121	+12 VOLT POWER FOR LEVEL SENSING UNIT
34	RED	6800	+12 VOLT POWER TO THE TOUCH PANEL
35	RED	6120	+12 VOLT ACCESSORY POWER FOR THE I/O MODULE

ELECTRICAL CONNECTION DIAGRAM

725 LEVELING SYSTEM HYDRAULIC LEVELING MANIFOLD

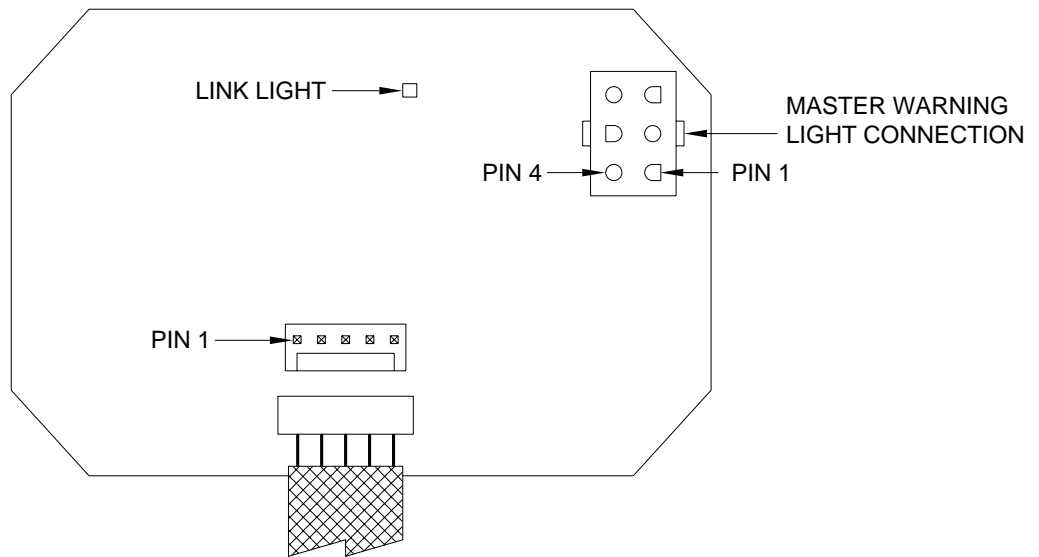
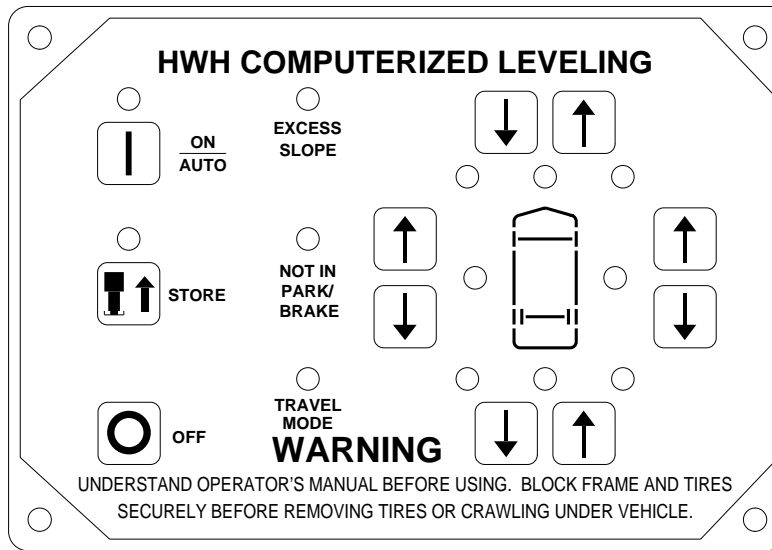
PUMP AND MASTER RELAYS



ELECTRICAL CONNECTION DIAGRAM

725 SERIES LEVELING SYSTEM

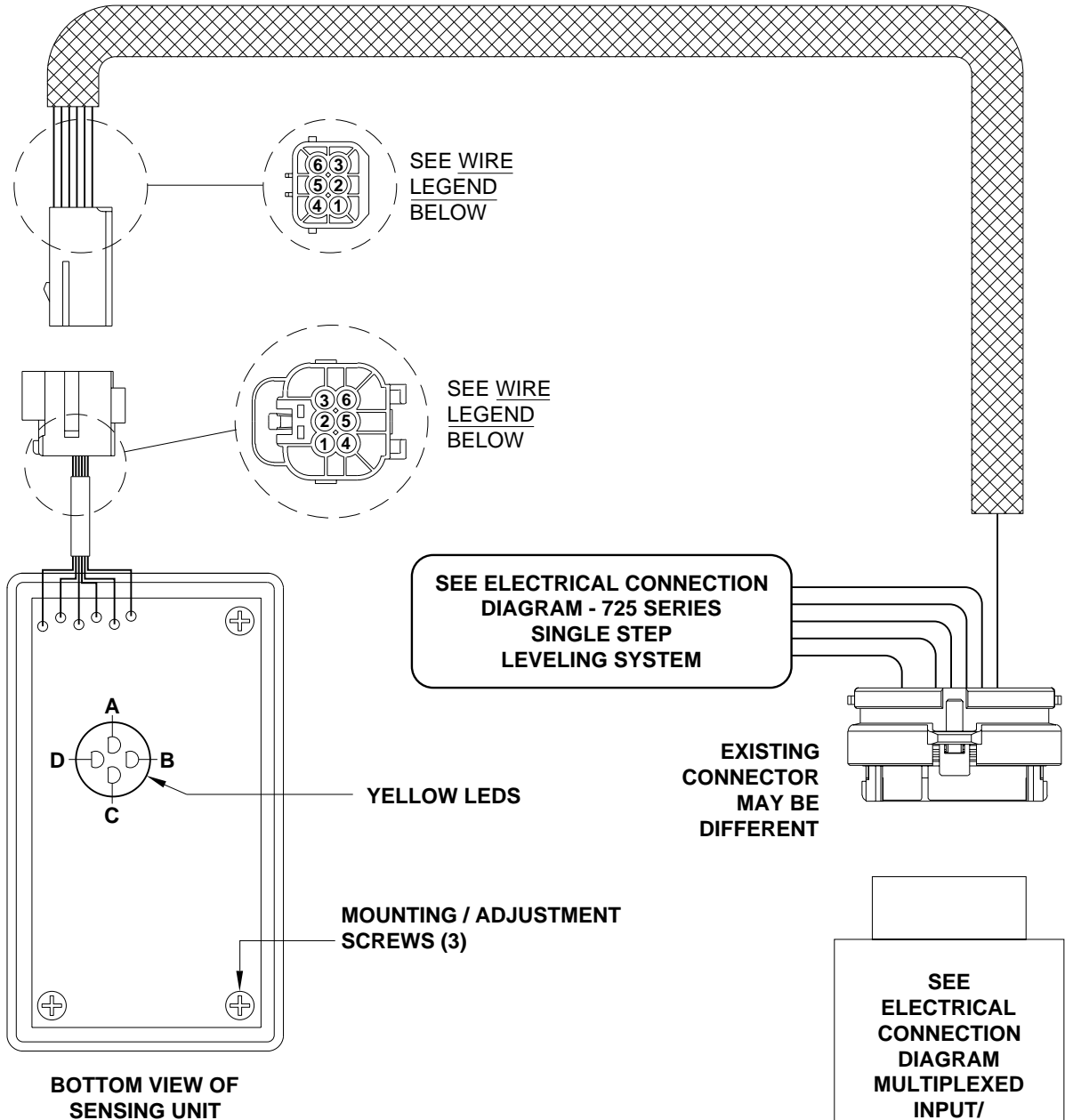
TOUCH PANEL CONNECTIONS



PIN #	WIRE COLOR	WIRE NUMBER	WIRE DESCRIPTION AND FUNCTION
5 PIN MTA CONNECTOR			
1	YELLOW	---	CAN HIGH
2	GREEN	---	CAN LOW
3	---	---	CAN SHIELD
4	WHITE	6230	GROUND FROM CONTROL BOX
5	RED	6800	+12 VOLTS FROM INPUT/OUTPUT MODULE
6 PIN UML CONNECTOR			
1	---	---	NO CONNECTION
2	RED	6110	+12 SUPPLY FOR MASTER WARNING
3	---	---	NO CONNECTION
4	---	---	NO CONNECTION
5	BLACK	7699	SWITCHED GROUND FOR MASTER WARNING
6	---	---	NO CONNECTION

ELECTRICAL CONNECTION DIAGRAM

LEVEL SENSING UNIT



BOTTOM VIEW OF SENSING UNIT

- LED A - FRONT OF VEHICLE
- LED B - LEFT SIDE OF VEHICLE (DRIVER SIDE)
- LED C - REAR OF VEHICLE
- LED D - RIGHT SIDE OF VEHICLE (PASSENGER SIDE)

WIRE LEGEND -

SENSING UNIT PLUG	HARNESS PLUG
PIN 1 - ORANGE	BLACK - 0400 - SWITCHED GROUND WHEN REAR IS LOW
PIN 2 - WHITE - - -	WHITE - 6231 - GROUND FROM SENSING UNIT
PIN 3 - RED - - - - -	RED - 6121 - +12 VOLT FOR SENSING UNIT
PIN 4 - YELLOW	BLACK - 0100 - SWITCHED GROUND WHEN LEFT SIDE IS LOW
PIN 5 - BLACK - - -	BLACK - 0200 - SWITCHED GROUND WHEN FRONT IS LOW
PIN 6 - GREEN - -	BLACK - 0300 - SWITCHED GROUND WHEN RIGHT SIDE IS LOW

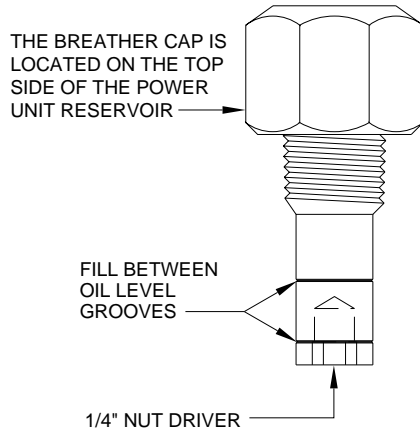
INFORMATION/INSTRUCTION SHEET

HYDRAULIC SOLENOID VALVE

IDENTIFICATION - MANUAL OPERATIONS - REPLACEMENT

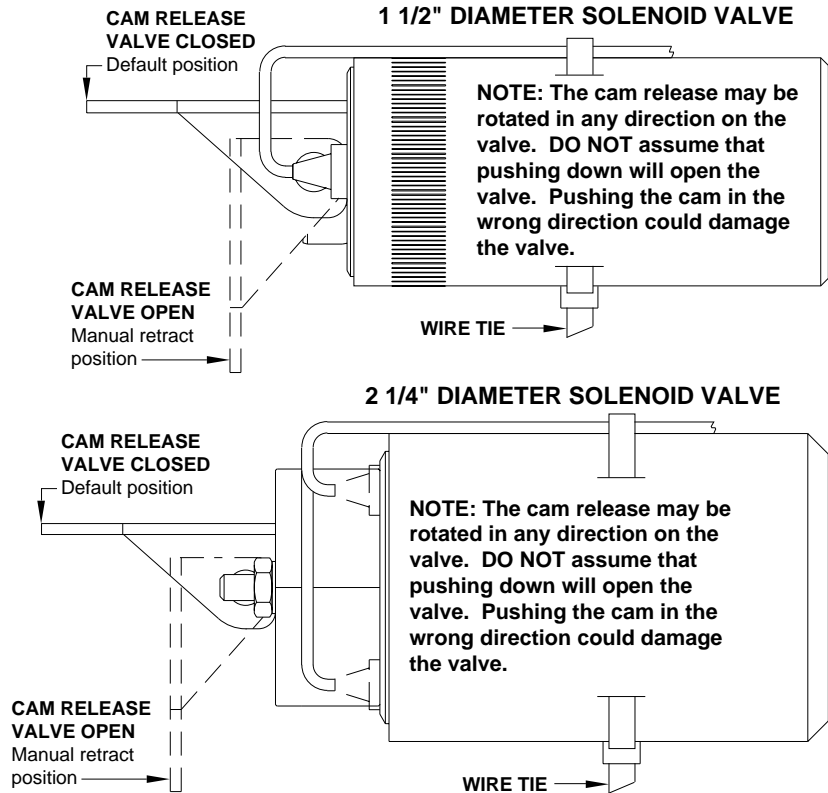
REPLACEMENT VALVES WILL HAVE A VALVE RELEASE CAM

BREATHER CAP W/NUT DRIVER

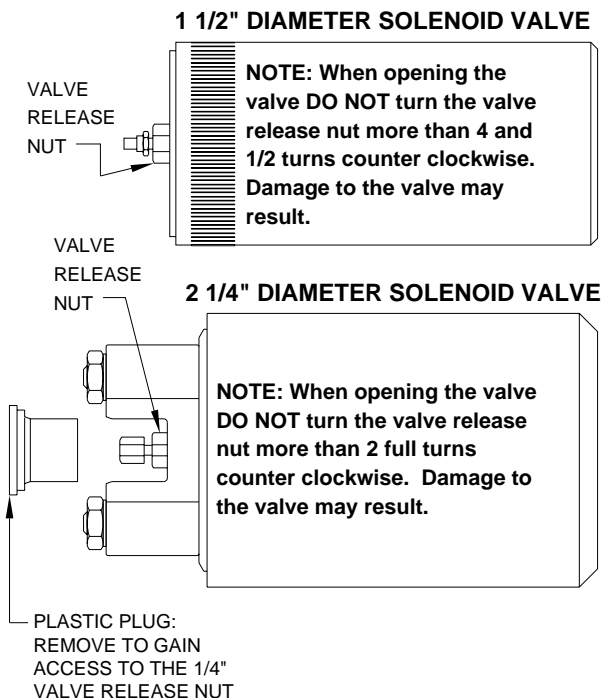


IMPORTANT: PRIOR TO REMOVING THE BREATHER CAP, EITHER TO CHECK THE OIL LEVEL OR TO USE 1/4" NUT DRIVER, CLEAN ANY DEBRIS FROM THE TOP OF THE RESERVOIR. BEFORE RETURNING THE BREATHER CAP TO THE RESERVOIR, REMOVE ANY PAINT CHIPS OR OTHER DEBRIS FROM THE DIPSTICK INCLUDING DEBRIS INSIDE THE 1/4" NUT DRIVER.

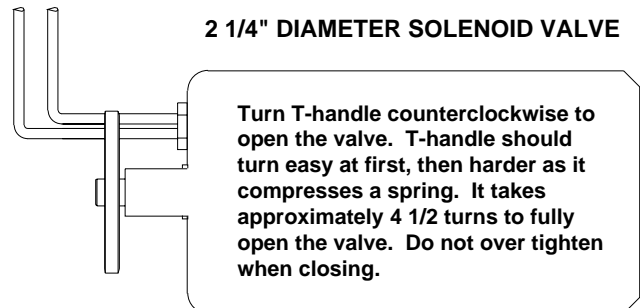
SOLENOID VALVES WITH CAM RELEASE



SOLENOID VALVES WITH 1/4" NUT RELEASE



SOLENOID VALVES WITH T-HANDLE RELEASE



NOTE: OLD STYLE HEX SHAPED SOLENOID VALVES HAVE NO MANUAL VALVE RELEASE.