OPERATOR’S MANUAL

HWH® TOUCH PANEL-CONTROLLED
325 SERIES LEVELING SYSTEM

FEATURING:
- Touch Panel Leveling Control
- BI-AXIS® Hydraulic Leveling
- Straight-Acting Jacks
- Suspension Air Dump

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

HWH HYDRAULIC LEVELING

LEVEL

STORE

OFF

CAUTION!

UNDERSTAND OPERATOR’S MANUAL BEFORE USING. BLOCK FRAME AND TIRES SECURELY BEFORE REMOVING TIRES OR CRAWLING UNDER VEHICLE.
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.
CONTROL IDENTIFICATION

CONTROL FUNCTIONS

CONTROL BUTTONS

"LEVEL" BUTTON: This button places the system in leveling mode.

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

"STORE" BUTTON: This button will retract all four jacks. (The panel must be off before pressing the "STORE" button)

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

LEVEL MODE LIGHT: This light indicates the system is in the leveling mode.

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

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: A red WARNING light will be on whenever the corresponding jack is extended approximately 1/2 inch, provided the ignition is in the "ACC" or "ON" position. Some vehicles are equipped with a dash mounted master "JACKS DOWN" light which will be on when one or more jacks are extended approximately 1/2 inch and the ignition is in the "ON" position.

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.
OPERATING PROCEDURES

SITE SELECTION

Maintain adequate clearance in all directions for vehicle, room extensions, awnings, doors, steps, etc. Vehicle may move in any direction due to jack extension or retraction, settling of jacks or vehicle, equipment malfunction, etc. If parking on soft ground or asphalt paving, wood blocks or pads should be placed under the jacks.

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. Do NOT operate any room extension until the leveling and stabilizing procedure is complete. Do NOT retract the leveling system until all room extensions are retracted. NEVER operate the leveling system when any room extensions are extended.

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

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.

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.

2. Turn ignition switch to "ACCESSORY". The engine must be off.

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

NOTE: The air will start to dump from the suspension when the "LEVEL" button is pushed. Allow the air to exhaust completely before leveling the vehicle.

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 BEFORE LEVELING THE VEHICLE FRONT TO REAR. One or two yellow LEVEL light 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.
OPERATING PROCEDURES

RETRACT PROCEDURE

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

NOTE: If the Leveling Mode light is on, the "STORE" button will not function.

NORMAL RETRACT PROCEDURE

1. Start engine. Immediately store the jacks.

NOTE: The vehicle suspension will start to inflate when the engine is running. The jacks should be retracted as soon as the engine is started.

2. Press OFF.

3. Press STORE. The "STORE" light will come on. As each jack retracts it’s red warning light will go out.

4. Do not turn off.

NOTE: When traveling, with rising temperatures a jack may extend slightly turning on the warning light and buzzer. If the unit is left in STORE mode the system will automatically retract the jack and turn off the light and buzzer.

5. The system will stay in the STORE mode until the "OFF" button is pushed or the ignition key is turned.

IMPORTANT: If a red Warning Light will not go out in a reasonable time, 5 minutes or less, push the "OFF" button to turn the system off. Have the system serviced.

**CAUTION:** DO NOT MOVE THE VEHICLE WHILE THE JACKS ARE STILL IN CONTACT WITH THE GROUND OR IN THE EXTENDED POSITION. THIS VEHICLE IS EQUIPPED WITH STRAIGHT-ACTING JACKS. MOVING THE VEHICLE WITH THE JACKS EXTENDED CAN CAUSE SEVERE DAMAGE TO THE JACKS AND/OR THE VEHICLE AND CREATE A DRIVING HAZARD. DO NOT RELY SOLELY UPON THE WARNING LIGHTS. IT IS THE OPERATOR’S RESPONSIBILITY TO CHECK THAT ALL JACKS ARE RETRACTED INTO THE STORE/TRAVEL POSITION.

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

See TRAVEL PROCEDURES before moving the vehicle and traveling.

**CAUTION:** THIS VEHICLE IS EQUIPPED WITH AN AIR SUSPENSION. THE SUSPENSION MUST BE AT THE PROPER RIDE HEIGHT BEFORE TRAVELING, IT IS THE OPERATOR’S RESPONSIBILITY TO CHECK THAT THE SUSPENSION IS AT THE PROPER RIDE HEIGHT FOR TRAVELING.
OPERATING PROCEDURES

TRAVEL PROCEDURES

Always start the vehicle engine before retracting the jacks. Push the "STORE" button to retract the jacks, the STORE light will come on. Do not push the "OFF" button or interrupt power to the system.

It is important when traveling that the STORE light is on and the system left in the store mode. This allows a jack that extends due to thermal expansion to automatically retract.

CAUTION: A WARNING LIGHT OR BUZZER COMING ON BRIEFLY WHILE TRAVELING DOES NOT INDICATE A DRIVING HAZARD. IF THE "STORE" LIGHT IS ON AND THE WARNING LIGHT AND BUZZER COME ON, STAYING ON MORE THAN 30 SECONDS, THE JACKS SHOULD BE CHECKED.

Due to thermal expansion of the hydraulic fluid in the Leveling System, at times the jacks will extend slightly. The system will automatically retract the jacks, if the STORE light is on when this happens.

Any time the vehicle engine is stopped during traveling, such as for refueling, the STORE button should be pushed after the engine is started again before continuing to travel.

During traveling if the STORE light is not on and the Jacks Down Warning Buzzer comes on, push the "STORE" button and leave the system in the STORE mode.

MANUAL JACK RETRACTION

(4 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 (4) 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 front jacks by opening the two center valves. Slowly turn the valve release nuts counter clockwise using the 1/4" nut driver supplied.

4. Retract the rear jacks by opening the two outer 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 all four 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.
MAINTENANCE

OIL LEVEL

It is important that the four leveling jacks and all room extensions are fully retracted before checking the hydraulic oil level. To check the oil supply, remove the breather cap from the top of the hydraulic reservoir. The oil level should be approximately one inch below the top of the reservoir when adequately filled.

**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.

UNUSUAL CONDITIONS

If driving conditions are unusually muddy, the jacks may become caked or clogged with mud. This condition may hamper the proper operation of the leveling system. This problem may be prevented or remedied by cleaning off each leveling jack if they become excessively muddy.

In wet or icy weather leveling jacks may become encrusted with ice. This may cause the leveling system to function improperly. To eliminate this problem, periodically check the leveling jacks and break loose any ice which may be causing improper operation.

Do not move the vehicle while the leveling jacks are still in contact with the ground. Retract the jacks according to the "JACK RETRACTION" section and then visually check to see if the leveling jacks have returned to the STORE/TRAVEL position.

**NOTE:** All major components of the system can be replaced with rebuilt parts or can be sent to HWH CORPORATION to be rebuilt, when the system is out of warranty.

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SENSING UNIT MAINTENANCE/SERVICE

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

To adjust the sensing unit, first the vehicle must be level. Either position the vehicle on a level surface or use the leveling system to manually level the vehicle. It is recommended to use the vehicle trim line to determine level. An alternative would be to use a small bubble level. If using a bubble level, the level should be placed on a flat surface close to the mounting location of the control box/sensing unit.

With the vehicle level, if there are no yellow light 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.
NOTE: BEFORE OPERATING ANY MANUAL VALVE RELEASE
READ AND UNDERSTAND PROCEDURE FOR MANUAL JACK
RETRACTION IN OPERATOR’S INSTRUCTIONS. THIS MANIFOLD
IS SHOWN WITH (1) LARGE VALVE WITH A VALVE RELEASE
"T" HANDLE, (2) SMALL VALVES WITH VALVE RELEASE NUTS
AND (1) LARGE VALVE WITH A VALVE RELEASE NUT.

BREATHER CAP

SMALL VALVES WITH RELEASE NUTS

LARGE VALVE WITH RELEASE "T" HANDLE

CHECK PUMP PRESSURE HERE

CHECK VALVES (4)

NOTE: SOME MANIFOLDS ARE EQUIPPED
WITH VELOCITY VALVES

LARGE VALVE WITH RELEASE NUT LOCATED UNDER PLASTIC PLUG

SHUTTLE VALVE

50 PSI PRESSURE SWITCH

PUMP/MANIFOLD ASSEMBLY

(ROOM EXTENSION MANIFOLD NOT SHOWN)

VELOCITY VALVE
TO PARK BRAKE SWITCH

NOTE: THERE MAY BE A CONNECTOR BETWEEN THE PARK BRAKE HARNESS AND THE TOUCH PANEL.

SEE ELECTRICAL CONNECTION DIAGRAM 305 AND 325 SERIES LEVELING SYSTEM TOUCH PANEL FOR TOUCH PANEL CONNECTION INFORMATION

SEE ELECTRICAL CONNECTION DIAGRAMS CONTROL BOX/PUMP/MANIFOLD CONNECTION INFORMATION
ELECTRICAL CONNECTION DIAGRAM
305 AND 325 SERIES LEVELING SYSTEM TOUCH PANEL

NOTE: FOR WIRE FUNCTION INFORMATION SEE ELECTRICAL CONNECTION DIAGRAM - TOUCH PANEL WIRE LEGEND.
### ELECTRICAL CONNECTION DIAGRAM

**TOUCH PANEL WIRE LEGEND**

<table>
<thead>
<tr>
<th>PIN #</th>
<th>WIRE COLOR</th>
<th>WIRE NUMBER</th>
<th>WIRE DESCRIPTION AND FUNCTION</th>
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<td>CN1</td>
<td></td>
<td></td>
<td>5 PIN CONNECTOR</td>
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<tr>
<td>1</td>
<td>RED</td>
<td>6120</td>
<td>+12V ACC. POWER</td>
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<td>KEY PIN - NO CONNECTION</td>
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<td>GROUND FOR JACK WARNING SWITCHES</td>
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<td>SWITCHED GROUND FOR LF WARNING LIGHT</td>
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<td>CHASSIS GROUND FROM CONTROL BOX</td>
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<td>SWITCHED GROUND TO CONTROL BOX FOR PUMP RELAY</td>
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<td>ORANGE</td>
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<td>SWITCHED GROUND FOR REAR LEVEL LIGHT</td>
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<td>WHITE</td>
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<td>GROUND FOR LEVEL SENSING UNIT (MAY NOT BE USED)</td>
</tr>
</tbody>
</table>
### ELECTRICAL CONNECTION DIAGRAM

#### 325 SERIES LEVELING SYSTEM

**CONTROL BOX CONNECTION INFORMATION**

**PAGE 1 OF 2**

<table>
<thead>
<tr>
<th>PIN #</th>
<th>WIRE COLOR</th>
<th>WIRE NUMBER</th>
<th>WIRE DESCRIPTION AND FUNCTION</th>
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<td></td>
<td>12 PIN GRAY CONNECTOR</td>
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<td>2</td>
<td>BLACK</td>
<td>3400</td>
<td>SWITCHED GROUND FROM TOUCH PANEL RIGHT REAR CONTROL</td>
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<td>SWITCHED GROUND FROM TOUCH PANEL FOR TRAVEL</td>
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<td>GROUND FOR TOUCH PANEL</td>
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<td>BLACK</td>
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<td>SWITCHED GROUND FROM TOUCH PANEL FOR PRESS SW OVERRIDE</td>
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<td>BLACK</td>
<td>9300</td>
<td>SWITCHED GROUND FROM TOUCH PANEL FOR DUMP</td>
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<td>SWITCHED GROUND FROM PARK BRAKE SWITCH</td>
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<td>BLACK</td>
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<td>SWITCHED GROUND FROM TOUCH PANEL PUMP RELAY CONTROL</td>
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<table>
<thead>
<tr>
<th>CN2</th>
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<th>12 PIN BROWN CONNECTOR</th>
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</thead>
<tbody>
<tr>
<td>2</td>
<td>WHITE</td>
<td>6243</td>
<td>GROUND FOR LEFT FRONT SOLENOID VALVE</td>
</tr>
<tr>
<td>3</td>
<td>WHITE</td>
<td>6242</td>
<td>GROUND FOR RIGHT FRONT SOLENOID VALVE</td>
</tr>
<tr>
<td>4</td>
<td>WHITE</td>
<td>6241</td>
<td>GROUND FOR RIGHT REAR SOLENOID VALVE</td>
</tr>
<tr>
<td>5</td>
<td>WHITE</td>
<td>6240</td>
<td>GROUND FOR LEFT REAR SOLENOID VALVE</td>
</tr>
<tr>
<td>6</td>
<td>BLACK</td>
<td>8100</td>
<td>SWITCHED GROUND FROM MANIFOLD PRESSURE SWITCH</td>
</tr>
<tr>
<td>7</td>
<td>BLACK</td>
<td>9000</td>
<td>GROUND FROM PARK BRAKE SWITCH TO PUMP RELAY</td>
</tr>
<tr>
<td>8</td>
<td>BLACK</td>
<td>4400</td>
<td>SWITCHED +12 FOR LEFT REAR SOLENOID VALVE</td>
</tr>
<tr>
<td>9</td>
<td>BLACK</td>
<td>2400</td>
<td>SWITCHED +12 FOR RIGHT FRONT SOLENOID VALVE</td>
</tr>
<tr>
<td>10</td>
<td>BLACK</td>
<td>1400</td>
<td>SWITCHED +12 FOR LEFT FRONT SOLENOID VALVE</td>
</tr>
<tr>
<td>11</td>
<td>BLACK</td>
<td>3400</td>
<td>SWITCHED +12 FOR RIGHT REAR SOLENOID VALVE</td>
</tr>
<tr>
<td>12</td>
<td>BLACK</td>
<td>8600</td>
<td>SWITCHED +12 FOR PUMP RELAY</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CN3</th>
<th></th>
<th></th>
<th>8 PIN GRAY CONNECTOR - SENSING UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BLACK</td>
<td>0400</td>
<td>REAR - SWITCHED GROUND</td>
</tr>
<tr>
<td>2</td>
<td>BLACK</td>
<td>0300</td>
<td>RIGHT SIDE - SWITCHED GROUND</td>
</tr>
<tr>
<td>3</td>
<td>BLACK</td>
<td>0200</td>
<td>FRONT - SWITCHED GROUND</td>
</tr>
<tr>
<td>4</td>
<td>BLACK</td>
<td>0100</td>
<td>LEFT SIDE - SWITCHED GROUND</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td>NO CONNECTION</td>
</tr>
<tr>
<td>8</td>
<td>BLACK</td>
<td>6122</td>
<td>ACCESSORY</td>
</tr>
</tbody>
</table>

---

**TO LEVELING SYSTEM MANIFOLD**

**GROUND FOR TOUCH PANEL**

**SWITCHED GROUND FROM TOUCH PANEL FOR TRAVEL**

**SWITCHED GROUND FROM TOUCH PANEL RIGHT REAR CONTROL**

**SWITCHED GROUND FROM TOUCH PANEL LEFT FRONT CONTROL**

**12 PIN GRAY CONNECTOR**

**FROM TOUCH PANEL**

**BROWN - CN2**

**BLACK - CN5**

**GRAY - CN3**

**GRAY - CN1**

---

**12 PIN BROWN CONNECTOR**

**8 PIN GRAY CONNECTOR - SENSING UNIT**

---

**MP85.206C**

**09JUN04**
<table>
<thead>
<tr>
<th>PIN #</th>
<th>WIRE COLOR</th>
<th>WIRE NUMBER</th>
<th>WIRE DESCRIPTION AND FUNCTION</th>
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</thead>
<tbody>
<tr>
<td>GRAY CONNECTOR</td>
<td>4 PIN GRAY CONNECTOR</td>
<td>6100</td>
<td>+12V BATTERY POWER FROM PUMP RELAY</td>
</tr>
<tr>
<td>1 THRU 5</td>
<td>RED</td>
<td>6100</td>
<td>NO CONNECTION</td>
</tr>
<tr>
<td>6</td>
<td>WHITE</td>
<td>6230</td>
<td>GROUND FOR AIR DUMP VALVES</td>
</tr>
<tr>
<td>7</td>
<td>BLACK</td>
<td>9300</td>
<td>SWITCHED +12 TO AIR DUMP VALVES</td>
</tr>
<tr>
<td>8 THRU 12</td>
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<td></td>
<td>NO CONNECTION</td>
</tr>
<tr>
<td>CN5</td>
<td>12 PIN BLACK CONNECTOR</td>
<td>6230</td>
<td>NO CONNECTION</td>
</tr>
<tr>
<td>1 THRU 5</td>
<td></td>
<td></td>
<td>NO CONNECTION</td>
</tr>
<tr>
<td>6</td>
<td>WHITE</td>
<td>6230</td>
<td>GROUND FOR AIR DUMP VALVES</td>
</tr>
<tr>
<td>7</td>
<td>BLACK</td>
<td>9300</td>
<td>SWITCHED +12 TO AIR DUMP VALVES</td>
</tr>
<tr>
<td>8 THRU 12</td>
<td></td>
<td></td>
<td>NO CONNECTION</td>
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</tbody>
</table>
ELECTRICAL CONNECTION DIAGRAM
LED - FUSE LOCATION AND DESCRIPTION
305/325 CONTROL BOX

<table>
<thead>
<tr>
<th>LED</th>
<th>RELAY DESCRIPTION</th>
<th>FUSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-YELLOW</td>
<td>LEFT REAR</td>
<td>F1-15 AMP</td>
</tr>
<tr>
<td>2-RED</td>
<td>LEFT REAR</td>
<td>F2-15 AMP</td>
</tr>
<tr>
<td>3-YELLOW</td>
<td>RIGHT FRONT</td>
<td>F3-15 AMP</td>
</tr>
<tr>
<td>4-RED</td>
<td>RIGHT FRONT</td>
<td>F4-15 AMP</td>
</tr>
<tr>
<td>5-YELLOW</td>
<td>LEFT FRONT</td>
<td>F5-5 AMP</td>
</tr>
<tr>
<td>6-RED</td>
<td>LEFT FRONT</td>
<td>F6-5 AMP</td>
</tr>
<tr>
<td>7-YELLOW</td>
<td>RIGHT REAR</td>
<td>F7-5 AMP</td>
</tr>
<tr>
<td>8-RED</td>
<td>RIGHT REAR</td>
<td>F8-5 AMP</td>
</tr>
<tr>
<td>9-YELLOW</td>
<td>PUMP</td>
<td>F9-5 AMP</td>
</tr>
<tr>
<td>10-RED</td>
<td>PUMP</td>
<td>F10-3 AMP</td>
</tr>
<tr>
<td>11-YELLOW</td>
<td>DUMP</td>
<td>F11-3 AMP</td>
</tr>
<tr>
<td>12-RED</td>
<td>DUMP</td>
<td>F12-3 AMP</td>
</tr>
<tr>
<td>13-YELLOW</td>
<td>TRAVEL</td>
<td>F13-3 AMP</td>
</tr>
<tr>
<td>14-RED</td>
<td>TRAVEL</td>
<td>F14-3 AMP</td>
</tr>
<tr>
<td></td>
<td>PARK BRAKE</td>
<td>F15-3 AMP</td>
</tr>
</tbody>
</table>

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.

CN4 - 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
A master warning indicator should always be used. When the leveling system has straight-acting jacks a warning buzzer must be used.

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

NOTE: DO NOT turn the valve release nut more than 4 and 1/2 (four and one half) turns counterclockwise. Damage to the valve may result.

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.