LEVEL BEST
Winnebago Hydraulic Leveling Systems by Kwikee Products

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The Level Best leveling and stabilizing system is an electronically controlled/hydraulically operated unit that consists of a 12 volt DC powered motor/pump/manifold assembly with fluid reservoir, hydraulic hoses, four hydraulically operated jacks, a control unit with switch panel, and optional level sensor unit and pressure sensor. It is designed to meet the varying requirements of vehicles ranging from class “C” motorhomes to the large class “A” motorhome.

If, after thoroughly reading this manual, you still have questions about the operation and maintenance of the Level Best system, please contact the Kwikee Service Dept. at 1-800-736-9961.

The Level Best system performs the dual function of leveling the vehicle and, once a level plane has been achieved, stabilizing the vehicle. When leveling the vehicle, it may not be necessary to use all of the leveling jacks however, to stabilize the vehicle, all jacks should be extended to contact the ground.

NOTE: To prevent improper operation of the leveling system - which could result in damage to the levelers and/or the vehicle itself, read the following operating instructions carefully before using the leveling jacks.

SITE SELECTION
1. When selecting a site for parking the vehicle, choose a spot that is as flat as possible - this will minimize the extent of leveling.
2. Check that the area under the vehicle is free from any obstacles that might interfere with the operation of the levelers. Check the ground surface to assure the leveler feet have a flat solid surface for contact. When parking on grass, soft dirt and/or uneven terrain, it is advisable to extend the surface area of the leveler feet by using pads. These pads can be from 3/4” plywood, cut into 12” squares.

NOTE: Occasionally, in adverse driving conditions, it is possible for mud, ice and other debris to accumulate around the leveler units. This debris may interfere with the operation and should be cleaned off prior to using the system.

LEVEL BEST CONTROL PANEL LAYOUT
The control panel consists of six switches and eight light emitting diode indicators (See Figure 1). The six switches include main power on/off, all jacks retract, and a diamond shaped switch for bi-lateral leveling.

IN THE EVENT OF ACCIDENTAL EXTENSION
1. Bring the vehicle to a safe and complete stop as soon as possible.
2. Turn the leveling systems power switch on and press the all up switch.
3. Visually inspect the vehicle undercarriage for any problems.

Figure 1
OPERATION

LEVEL BEST CONTROL PANEL FUNCTIONS
The "ON/OFF" switch, located in the upper left hand corner, controls the supply of power for all panel functions, activation of this switch is indicated by its green LED.

The "ALL UP" (leg retract) switch is located in the lower left hand corner of the control panel. Activation of this switch causes all legs to retract to the travel position. When the retract sequence is completed the all up LED will turn green and the dash indicator light will go out to indicate that it is now safe to move the motor home.

The diamond shaped "BI-LEVEL" leveling switch, located in the center of the panel, activates the extension of the leveling jacks in pairs. Use of this switch greatly simplifies the leveling process and significantly reduces the amount of stress created by the leveling process on the motor home. Operation of this switch illuminates the yellow LED's corresponding to the jacks that are being activated.

The control has an automatic shut-off feature. Following the last operation, the control will automatically shut off in 60 seconds.

LEVELING AND STABILIZING YOUR MOTOR HOME
Observing the precautions set forth on the previous pages of this manual, you are now ready to begin leveling your motor home. With the vehicle engine running, place the transmission in park and set the parking brake. Securely block the wheels using wheel chocks.

Start the chassis engine or turn the key to the accessory position. Locate the "ON/OFF" button on the upper left of the control panel. Momentarily depress this switch to activate the leveling system. The LED will light up and be a steady green, which indicates that the system is ready. If the LED lights up and is flashing, it is an indication that the parking brake is not completely engaged.

Reference you're leveling tool and determine which corner of the motor home is the lowest. Now using one of the "BI-LEVEL" switches which represent the front and rear of the motor home, (use the switch, which corresponds to the low end of the motor home), depress and hold the switch to raise the sides of the motor home until level. Now find and depress the "BI-LEVEL" switch which represents the low side of the motor home, and hold it until the front and rear of the motor home are level.

Your motor home should now be in a level plane.

STABILIZING
To stabilize the vehicle once it has been leveled, any unused leveler must be extended into firm contact with the ground. Accomplish this by using the "BI-LEVEL" switch on the front or rear corresponding with the jack that is not down.

CAUTION: Overextending the levelers during stabilizing will cause the vehicle to become unlevel and result in a loss of stability. If a leveler has been overextended, press the "ALL UP" switch. Let the jacks retract and start the leveling sequence again. Do not attempt to use the other levelers to raise the vehicle to a higher level plane.

RETRACTING THE LEVELERS
1. Start the chassis engine or turn the key to the accessory position and turn the control panel power switch on. If any levelers are extended, the "ALL UP" LED will light up and flash and the dash warning light will illuminate.

2. To retract all levelers simultaneously, press "ALL UP" switch.

3. When all leveler legs retract to the travel position, the red "ALL UP" LED will turn green, the dash warning light will go out, and the pump will shut off. You can now turn off the power switch and the vehicle is ready to travel.

CARE AND MAINTENANCE
NOTE: To prevent the possibility of damaging the leveler(s) and/or the vehicle, it is good common sense to confirm the retracted position by visual inspection.

The Level Best hydraulic leveling system should be routinely checked as part of a regular periodic vehicle maintenance program. Kwikee recommends checking the system twice a year: in the spring prior to the heavy travel season and in the winter, prior to storage. The following checklist has been provided as a guideline for maintenance:

NOTE: During periods of vehicle inactivity and/or storage, the leveling system should be activated and cycled through the leveling/retracting procedures on a monthly basis to keep the levelers in good operating condition.

1. Be sure the leveling jacks are in the retracted position, remove the breather cap on the reservoir and check the fluid level in the reservoir. The fluid level should be approximately 1" below the top of the reservoir. This standard provides an adequate amount of fluid for the levelers to operate efficiently.

If the fluid is below this level, add a sufficient amount to bring the level up to the operating standard. When filling the reservoir with fluid, use transmission fluid only. We recommend Dexron III; do not mix fluids.
2. Check the wire connections at the motor and valve manifold; these should be tight and secure.
3. Check the valve manifold for any evidence of hydraulic fluid leakage. Replace any seals as necessary.
4. Examine the Hydraulic hoses for any damage and/or leakage. Replace and resecure as necessary.
5. Check the hydraulic cylinders and leg assemblies for any damage and/or leakage. Replace and/or repair as necessary. Verify that all mounting bolts have been tightened to 80 ft/lbs.

**TROUBLE SHOOTING GUIDE**

1. Panel does not function (buttons and lights on panel do not work and system is not responding).
   - Ignition needs to be on with engine running or the key needs to be turned to the accessory mode.
   - Transmission needs to be in park and parking brake applied.
   - Use the Control Jumper Cable. See instructions on the next page.
2. Red indicator light will not go out when legs are retracted.
   - Reed switch(es) not grounded.
   - Reed switch is defective.
3. The action of one cylinder will not operate in one direction (i.e., it will go down, but not up, or vice versa).
   - Hydraulic hoses are crossed
   - Wiring connections are crossed
   - Valve not operating.
4. Jacks won’t extend after they had been working previously
   - Directional valve is not shifting positions - possibly due to foreign object obstructing the valve itself, or the solenoid is not working properly.
5. Pump continues to run after switch is released.
   - Pump motor solenoid is stuck - tap solenoid to unstick it or replace the solenoid.

This list represents a cross section of some possible problems and their corresponding solutions. If, after reviewing this manual, you still have problems or questions in regard to the operation of the Level Best system, please contact the Kwikee Service Department at 1-800-736-9961.

**CONTROL PANEL JUMPER INSTRUCTIONS**

1. Remove the control panel from the bezel and disconnect the wire harness (Figure 1).
2. Make sure the area around and below the motorhome is clear of all obstructions and that no personnel are under the vehicle.
3. Plug the large connector of the jumper assembly into the wire harness (Figure 2).
4. Plug the 4-way connector into the wire harness, Caution pump will start immediately and the jacks will begin to retract (Figure 2).
5. After jacks have been fully retracted, immediately disconnect the 4-way connector on the jumper assembly from the wire harness to shut off the pump (Figure 2). Failure to immediately remove the 4-way connector can cause overheating of the pump motor and permanent damage to the system.
6. Remove the large connector of the jumper assembly from the wire harness.
7. Have jack system serviced at a qualified service center prior to using the jack system.

If after using your manual retract harness your jacks have not retracted fully, contact your local Winnebago dealer or call Kwikee Products Company at 1-800-736-9961 to speak to the Service Department.