



PRODUCT/SERVICE BULLETIN

ISSUE DATE: March 16, 2001

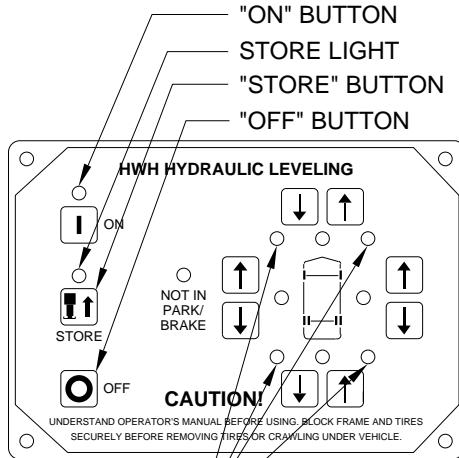
TO: Sales and Service Personal
FROM: HWH CORPORATION
RE: Jacks down Warning Light and Buzzer

A complaint received by many service people is that the "JACKS DOWN" warning light and buzzer will come ON while traveling. This seems to happen more often in the first hour of traveling.

This is very often misdiagnosed as an electrical problem with the CONTROL BOX or WARNING SWITCH on the jack. Sometimes the jack cylinder is changed.

The most common cause of this problem is OPERATOR ERROR. The LEVELING SYSTEM is turned OFF while the "STORE" light on the touch panel is still ON. This happens with any 310 or 610 series leveling systems. The jacks are then left partially extended even though the warning lights have gone out.

The 310 systems will automatically turn OFF two minutes after the last red WARNING light on the touch panel goes out. The 610 systems will automatically turn OFF six minutes after the last red WARNING light on the touch panel goes out.

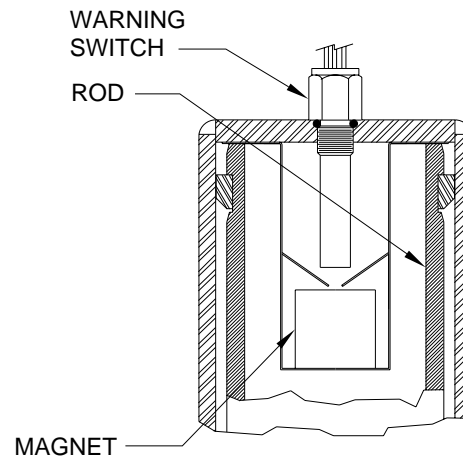


WARNING LIGHTS
(4 - RED)

When a jack is retracting its red WARNING light will go out when a magnet in the jack opens the warning switch as it gets close to the switch. A jack will be extended at least 1 inch when the warning light goes out and will continue to retract until the solenoid valve closes. When the system is turned OFF, the solenoid valves for the jacks close. This locks the fluid in the jacks and the hoses. As a vehicle travels the temperature under the vehicle will increase, this can cause THERMAL EXPANSION of the fluid in the leveling system making one or more jacks extend slightly. If the jack is not fully retracted, thermal expansion of the fluid can extend the jack far enough to turn the MASTER WARNING light and buzzer ON.

Please contact HWH CORPORATION at 1-800-321-3494 for technical advice or assistance.

The leveling system must be allowed to complete the STORE cycle to keep this from happening. Pushing the "OFF" button or turning the ignition key while the STORE light is ON will interrupt the STORE cycle closing the solenoid valves. This will usually result in the MASTER WARNING light and buzzer coming ON.



If a customer complains of this problem, level the vehicle then have him/her show you how he/she operates the system to store the jacks. Explain the importance of not interrupting the STORE cycle. Review the owners manual with the customer. It explains how to properly STORE the jacks and points out that the system should not be interrupted during the STORE cycle.

If it is evident that the operator is using the correct procedures for storing the jacks. Then the system should be checked for a possible problem. Take an ACCURATE measurement of each jack to see how far it extends before the WARNING light comes on. A problem with the jack may not let it fully retract. If a jack will not fully retract, the cylinder should be replaced. If the jack fully retracts, but extends less than one inch before the WARNING light comes on, replace the warning switch. If the jack is retracting fully and the warning switch is working properly, there may be an excessive heat problem somewhere on the system. Make sure hoses are not routed near heat sources, between frame rails on front engine vehicles, over transmission cross members or anywhere excessive heat may build up. Make sure a jack is not in an enclosed area where lack of air movement may allow excessive heat build up.

200 Series Joystick: This should never be a problem as long as the STORE LEVERS are in the STORE position, pulled to the center with the Joystick lever.