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## INFORMATION BULLETIN

**ISSUE DATE:** April, 2009

**TO:** Service Centers

**FROM:** HWH Corporation

**RE:** 325 series leveling systems, solenoid valve replacement and the "STORE" mode.

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### SOLENOID VALVE REPLACEMENT AND THE "STORE" MODE.

**Situation:**

When replacing a valve because the valve will not function at all to extend or retract the jack, especially if the fuse protecting that valve is blown, the jacks must be checked for proper retract operation after the valve replacement. Valve failure may be due to one or more jacks that retract slowly or that may not retract completely.

**Procedure:**

The reverse side of this sheet is MI9553, "JACK RETRACTION TIMES". This contains allowable jack retraction times under different temperature conditions and diagnostic information. Extend the jacks and check the retraction times according to MI9553. Sometimes, the jacks will retract properly if retracted immediately after extending them. If so, the vehicle may need to be left on the jacks for several days and then the retract times should be checked. Slow retracting jacks can be an intermittent problem. If a problem is not found, discuss this with the vehicle operator. Ask if there has been any problem with one or more slow retracting jacks or if the "STORE" cycle must be repeated when trying to store the jacks. If there is a problem or the vehicle operator indicates an intermittent problem, this should be repaired immediately. **Failure to resolve a jack issue may result in premature valve failure.** This may void the warranty on the replacement valve.

**WARNING: THE VEHICLE MUST BE PROPERLY SUPPORTED BEFORE PERFORMING THESE DIAGNOSTICS. DO NOT CRAWL UNDER THE VEHICLE IF IT IS SUPPORTED ON THE JACKS. WHEN A JACK HOSE IS REMOVED, THE JACK CAN RETRACT, ALLOWING THE VEHICLE TO DROP SUDDENLY CAUSING SEVERE INJURY OR DEATH.**

**Diagnostics-slow or non-retracting jacks:**

If a jack will not retract or is slow to retract, the problem is the jack, solenoid valve, velocity valve (if so equipped) or the hose. Slowly remove the hose from the jack. If the jack does not retract properly, replace the jack. If the jack starts to retract properly, tighten the hose and loosen the hose at the manifold. If the jack does not retract, there is a problem with the hose, such as a kink. If the jack retracts and the manifold is equipped with a velocity valve, the velocity valve is most likely the problem. If there is no velocity valve, there may be a problem with the solenoid valve or possibly the outer check valve. Contact HWH technical service.

**IMPORTANT: FOR THE VEHICLE OPERATOR.** The system will automatically shut off in the STORE mode approximately 2 minutes after the last red jack down warning light goes out. If one or more red jack down warning lights do not turn off, the store mode has a timer to shut the leveling system off 20 minutes after the "STORE" button is pushed. **Allow the system to stay off at least 30 minutes before pushing the store button again.** Recycling the STORE mode immediately after the touch panel turns off may overheat the solenoid valves. If it is necessary to eliminate the 30 minute waiting period, open the manual valve release to allow the jack to retract fully. The system should be serviced as soon as possible.



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### INFORMATION BULLETIN

REVISED: Sep 06, 2007

#### JACK RETRACTION TIMES

Due to many factors involved such as jack size, hose length and size, installation and hose routings, manufacturing tolerances and temperature, jacks, even of the same size, will not retract at the same speed. In seal design, there is a relationship between seal pressure and the ability to seal. Seal pressure is the amount of "squeeze" the seal exerts on the parts it is assembled into. The greater the seal pressure, the better the sealing capability. A tighter seal will cause a jack to retract slower. As long as all four jacks are fully retracted within the times listed below, service is not necessary when one or more jack(s) retract slower than the others.

The following are allowable retraction times for different temperature ranges and conditions.

**NOTE: The temperatures noted are for the jacks and the oil in the hoses, not air temperature.** Early in the day, especially in colder weather, the temperature of the jacks is probably lower than the air temperature. Even when the vehicle is brought into a heated building, it may take several hours for the jacks and oil to warm up to air temperature. An infrared temperature gun can be used to check the jack temperature.

**DO NOT ESTIMATE TIMES. USE SOME TYPE OF WATCH TO DETERMINE THE RETRACTION TIME OF THE JACKS.**

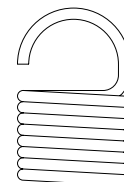
TEMPERATURE RANGE (FAHRENHEIT)	JACK SIZE	ALLOWABLE RETRACTION TIME
1. ABOVE 60 DEGREES	6,000 and 9,000# JACKS	FOUR (4) MINUTES
	12,000 and 16,000# JACKS	FIVE (5) MINUTES
	24,000# JACKS	SEVEN (7) MINUTES
2. BETWEEN 30 DEGREES AND 60 DEGREES	6,000 and 9,000# JACKS	SEVEN (7) MINUTES
	12,000 and 16,000# JACKS	NINE (9) MINUTES
	24,000# JACKS	THIRTEEN (13) MINUTES
3. BETWEEN 0 DEGREES AND 30 DEGREES	6,000 and 9,000# JACKS	FOURTEEN (14) MINUTES
	12,000 and 16,000# JACKS	EIGHTEEN (18) MINUTES
	24,000# JACKS	TWENTY SIX (26) MINUTES

When temperatures are below 0 degrees Fahrenheit, there are no allowable retraction times given. Times for complete jack retraction can exceed the times given for temperatures between 0 and 30 degrees Fahrenheit.

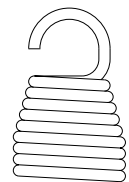
If the jacks will retract completely but exceed the allowable retraction times, replacing the return springs will in most cases resolve the problem. In normal conditions above freezing, if a jack will retract with a little assistance, replacing the springs may resolve the problem. If a jack has to be forced up, as with a pry bar, the cylinder will most likely have to be replaced. If replacing the springs does not solve the problem, the cylinder must be replaced. **NOTE: If the jack is equipped with the new style tapered springs, do not replace the springs, replace or repair the cylinder.**

If a vehicle is parked or stored 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. If the jacks do not retract completely without assistance, replace the springs. The following are the correct replacement part numbers for return spring kits. There are two (2) springs included in each spring kit. The correct spring kit must be used.

- All 6,000 and 9,000# jacks with 13" or 15" stroke R3847
- All 6,000 and 9,000# jacks with 16" stroke R3848
- All 12,000# jacks with 13" stroke R91642
- All 12,000# jacks with 16" stroke R91933
- All 16,000# jacks with 13" or 16" stroke R2365
- All 24,000# jacks with 13" or 16" stroke R2365



**OLD STYLE  
OBSOLETE**



**NEW STYLE  
TAPERED**

It is possible a customer may experience a situation where a jack needs assistance when retracting that cannot be duplicated in the shop. If this occurs, contact HWH Corporation technical assistance.