

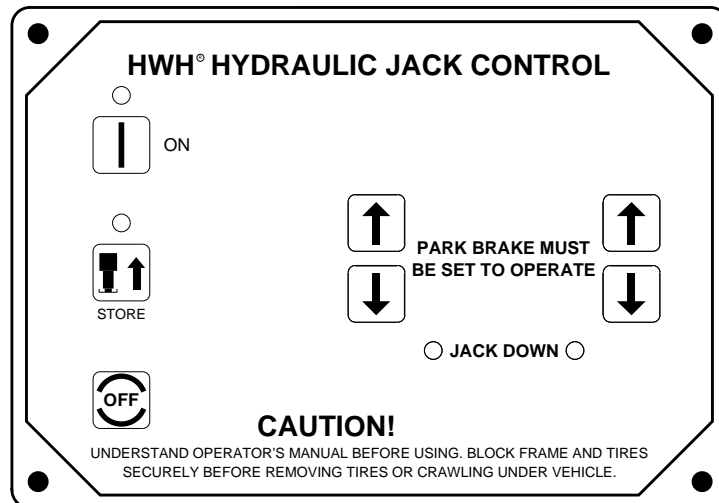


# OPERATOR'S MANUAL

## HWH® TOUCH PANEL-CONTROLLED 325 SERIES STABILIZING SYSTEM

### FEATURING:

*Touch Panel Control  
Hydraulic Stabilizing  
Two Straight-Acting 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](http://www.hwh.com)

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# OPERATING MANUAL

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## 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 VEHICLE WHILE LEVELING SYSTEM, ROOM EXTENSIONS AND OTHER MOVABLE MECHANISMS 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

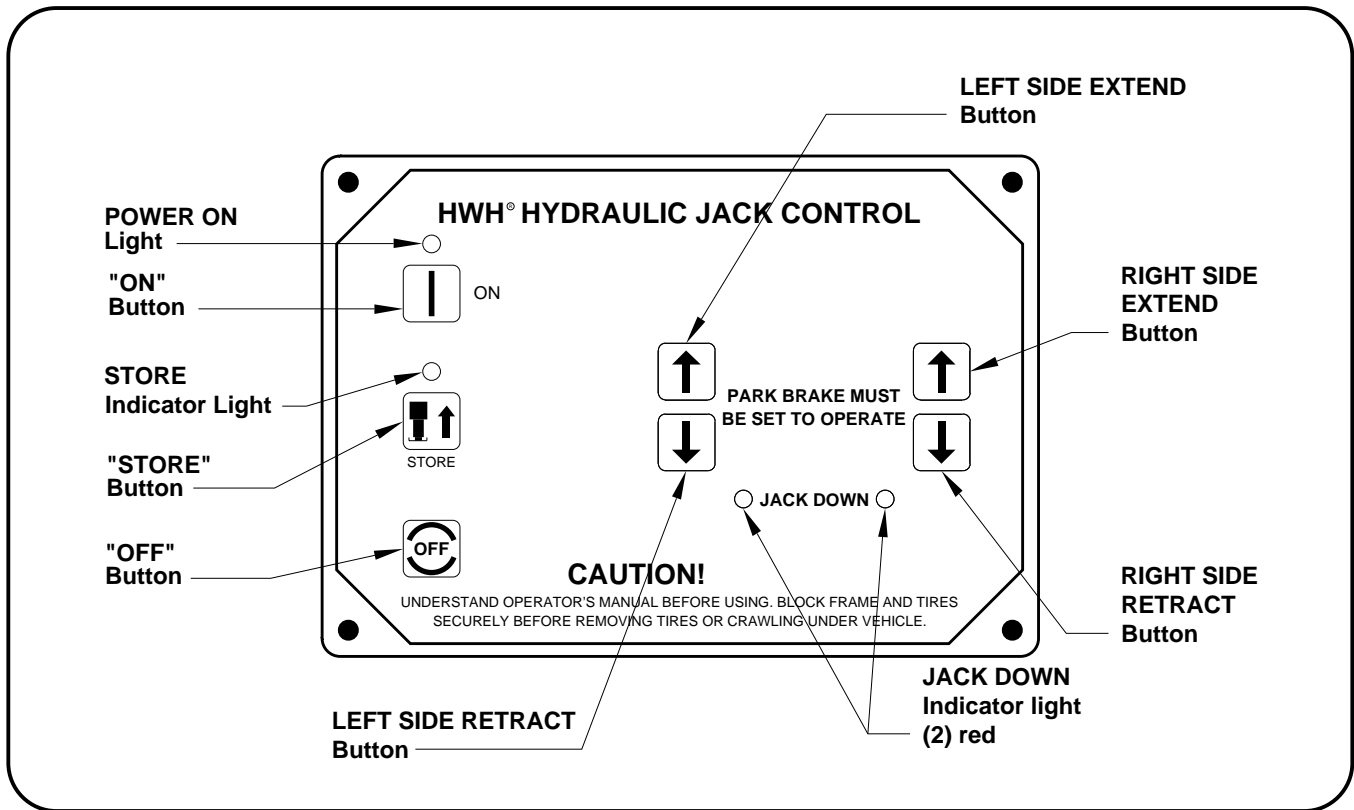
HWH CORPORATION strives to maintain the highest level of customer satisfaction. Therefore, if you discover a defect or problem, please do the following:

**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

- "ON" BUTTON :** Push this button any time to start the auto stabilize function.
- "STORE" BUTTON :** This button will retract both jacks at the same time.
- "OFF" BUTTON :** This button turns off control power to the stabilizing system.
- EXTEND BUTTONS (UP ARROWS) :** These buttons will extend their respective jack to lift the vehicle.
- RETRACT BUTTONS (DOWN ARROWS) :** These buttons will retract their respective jack to lower the vehicle.

### INDICATOR LIGHTS

- POWER ON LIGHT :** This light indicates the system is active.
- STORE INDICATOR LIGHT :** This light will be on when the system is in the store mode.
- "JACK DOWN" :** These lights are functional only when the ignition is in the "ON" or "ACC" position, and the jacks are extended 1/4 to 1/2 inch.
- MASTER "JACKS DOWN" WARNING LIGHT :** This is a light mounted in the dash separate from the touch panel. If equipped, it will be on when any one or more jacks are extended and the ignition is in the "ON" position and the park brake is off.

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# CONTROL IDENTIFICATION

## PUMP RUN TIME

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### 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.**

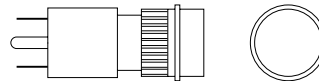
Some systems can be turned back on immediately after the processor turns the pump off. **DO NOT turn the system back on or run the pump without allowing the pump motor to cool for thirty minutes.**

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.

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# OPERATING PROCEDURES

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## SITE SELECTION

Choose a fairly level area for parking as leveling capabilities with a two jack system is very limited. Maintain adequate clearance in all directions for vehicle, specialty equipment, room extensions, awnings, doors steps, etc. Vehicle may

move in any direction due to jack extending or retracting, settling of jacks or vehicle, equipment malfunction, etc. If parking on soft ground or asphalt paving, a wood block or pad should be placed under each jack.

## 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.

**NOTE: It is recommended to complete the Stabilizing Procedure before operating room extensions. It is recommended to retract room extensions before retracting jacks.**

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 stabilizing system.**

## STABILIZING PROCEDURE

1. Place gear selector in the parking position, apply park brake and block tires securely.

**NOTE: If the hand/auto park brake is not set, the panel will turn on, but the system will not operate.**

2. Turn ignition switch to "ON" or "ACCESSORY".

3. Push the "ON" button on the touch panel. The POWER ON light will be lit.

4. Place pads under the jacks at this time if necessary.

5. Use EXTEND buttons to extend both jacks to the ground. Each jack should lift the vehicle 1/2 to 1 inch to ensure proper stabilizing. As each jack, extends 1/4 to 1/2 inch, the corresponding red WARNING light on the touch panel will come on.

**NOTE: Lifting the vehicle more with one jack than the other may cause twisting stress on the vehicle.**

7. Push the "OFF" button on the touch panel.

8. Turn the ignition switch off.

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# OPERATING PROCEDURES

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## RETRACT PROCEDURES

**IMPORTANT:** It is recommended to not retract the stabilizing system until all rooms are fully retracted and any specialty equipment is stored.

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

1. Turn the ignition switch "ON" and press the "ON" button one time. The ON indicator light will glow steady.

2. Press the "STORE" button. As each jack retracts, its red WARNING light will go out. The vehicle can be moved as soon as the red WARNING lights are out, provided the jacks are in the STORE/TRAVEL position.

**IMPORTANT:** DO NOT interrupt power to the stabilizing system while it is in the STORE mode. DO NOT push the "OFF" button or turn the ignition key. The system must be allowed to completely finish the STORE mode. If the engine was started before putting the system in the STORE mode, the vehicle may be moved when the jacks are in the "STORE" position. This will not interrupt the store procedure.

**CAUTION:** DO NOT MOVE THE VEHICLE WHILE THE LEVELING JACKS ARE STILL IN CONTACT WITH THE GROUND OR IN THE EXTEND POSITION. THIS VEHICLE IS EQUIPPED WITH STRAIGHT-ACTING JACKS. MOVING THE VEHICLE WITH THE LEVELING JACKS EXTENDED CAN CAUSE SEVERE DAMAGE TO THE JACKS AND OR THE VEHICLE AND CREATE A DRIVING HAZARD.

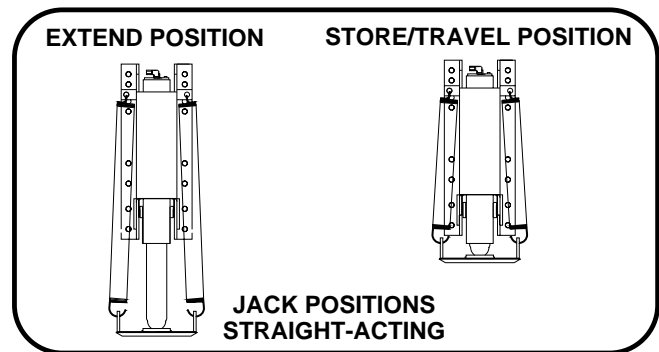
**DO NOT RELY SOLELY UPON WARNING LIGHTS. IT IS THE OPERATOR'S RESPONSIBILITY TO CHECK THAT ALL JACKS ARE FULLY RETRACTED INTO THE STORE/TRAVEL POSITION.**

3. The system will automatically shut down approximately two minutes after the two red WARNING lights are out.

**IMPORTANT:** If any one red WARNING light does not go out the system will continue to store. Push the "OFF" button and have the system serviced.

4. Turn the ignition switch to the "OFF" position or proceed to travel.

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



# OPERATING PROCEDURES

## MANUAL JACK RETRACTION (2 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 (2) 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 jacks by opening the two solenoid 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.

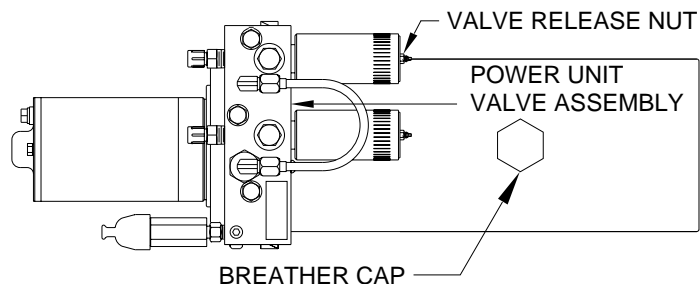
**NOTE:** Prior to APRIL 2002 a 1/4" Nut Driver was sent with the Operators Manual. As of APRIL 2002 the 1/4" Nut Driver has been incorporated into the Breather Cap. See the back page of this manual for further info.

5. Check that both 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.



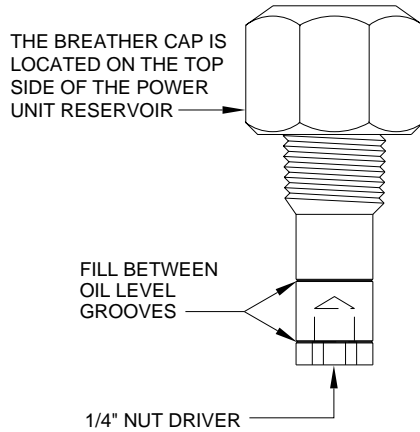
# INFORMATION/INSTRUCTION SHEET

## HYDRAULIC SOLENOID VALVE

### IDENTIFICATION - MANUAL OPERATIONS - REPLACEMENT

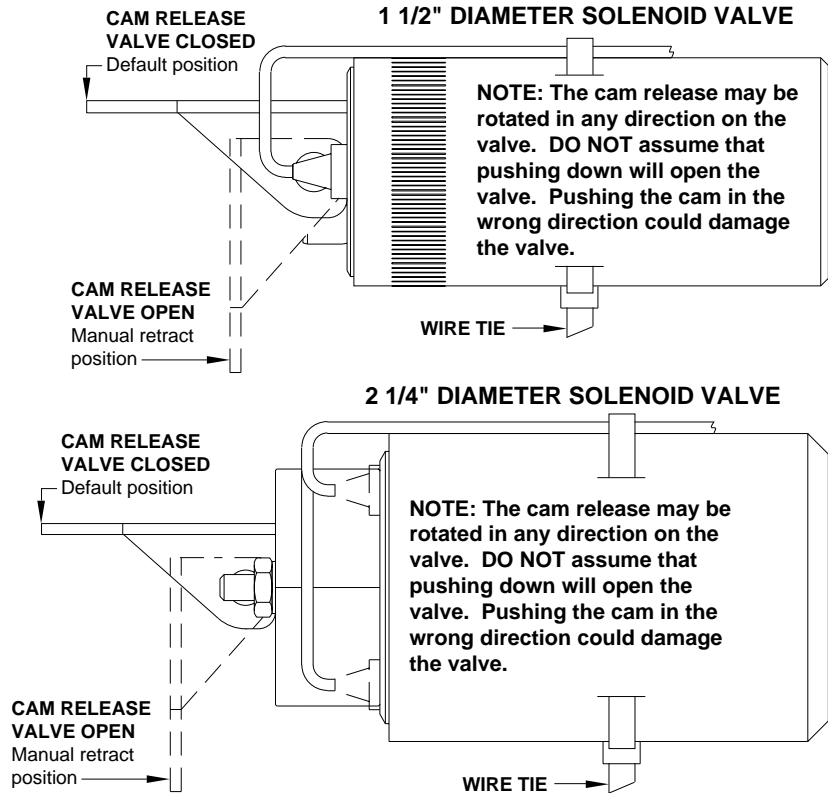
REPLACEMENT VALVES WILL HAVE A VALVE RELEASE CAM

#### BREATHER CAP W/NUT DRIVER

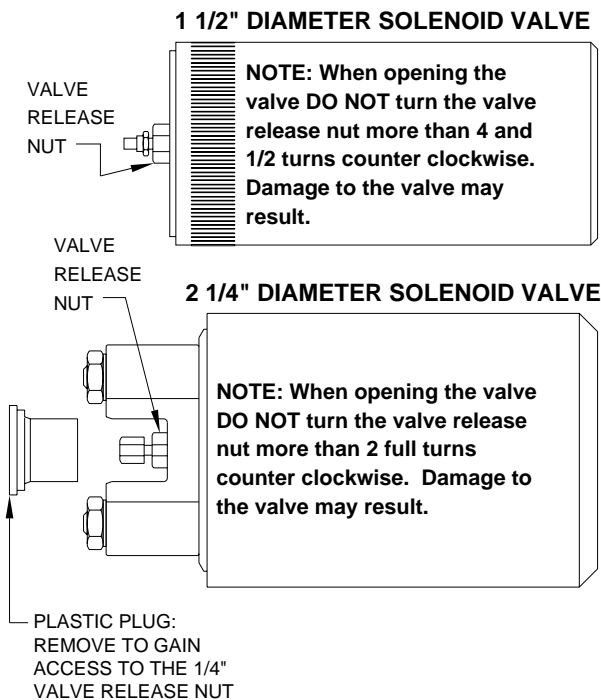


**IMPORTANT:** PRIOR TO REMOVING THE BREATHER CAP, EITHER TO CHECK THE OIL LEVEL OR TO USE 1/4" NUT DRIVER, CLEAN ANY DEBRIS FROM THE TOP OF THE RESERVOIR. BEFORE RETURNING THE BREATHER CAP TO THE RESERVOIR, REMOVE ANY PAINT CHIPS OR OTHER DEBRIS FROM THE DIPSTICK INCLUDING DEBRIS INSIDE THE 1/4" NUT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

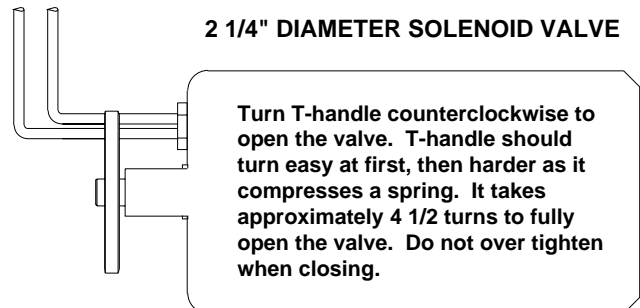
#### SOLENOID VALVES WITH CAM RELEASE



#### 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.**