

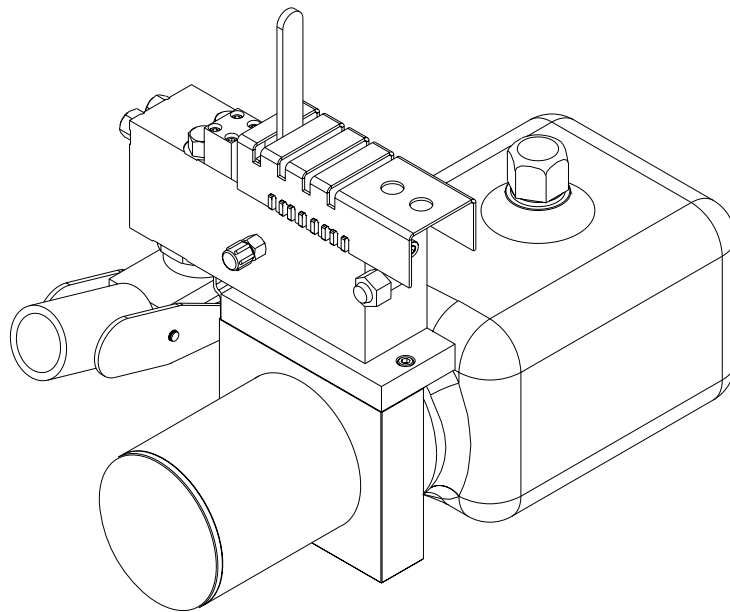


OPERATOR'S MANUAL

HWH® HYDRAULIC ROOM LIFT SYSTEM

FEATURING:

*Hydraulic Switch and Auxiliary Hand Pump
One Universal Vertical Room Lift
115 Volt Pump Motor*



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

OPERATOR'S MANUAL

WARNING !

READ THE ENTIRE OPERATOR'S MANUAL BEFORE OPERATING.

KEEP PEOPLE AND OBSTRUCTIONS CLEAR OF ROOM OR STEP WHEN OPERATING. ANY OBJECT OBSTRUCTING ROOM OR STEP MOVEMENT MAY BE CRUSHED CAUSING INJURY OR DEATH AND VEHICLE DAMAGE.

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.

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

PUMP RUN TIME

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.**

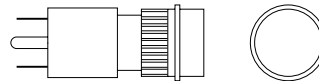
Some systems can be turned back on immediately after the processor turns the pump off. **DO NOT turn the system back on or run the pump without allowing the pump motor to cool for thirty minutes.**

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

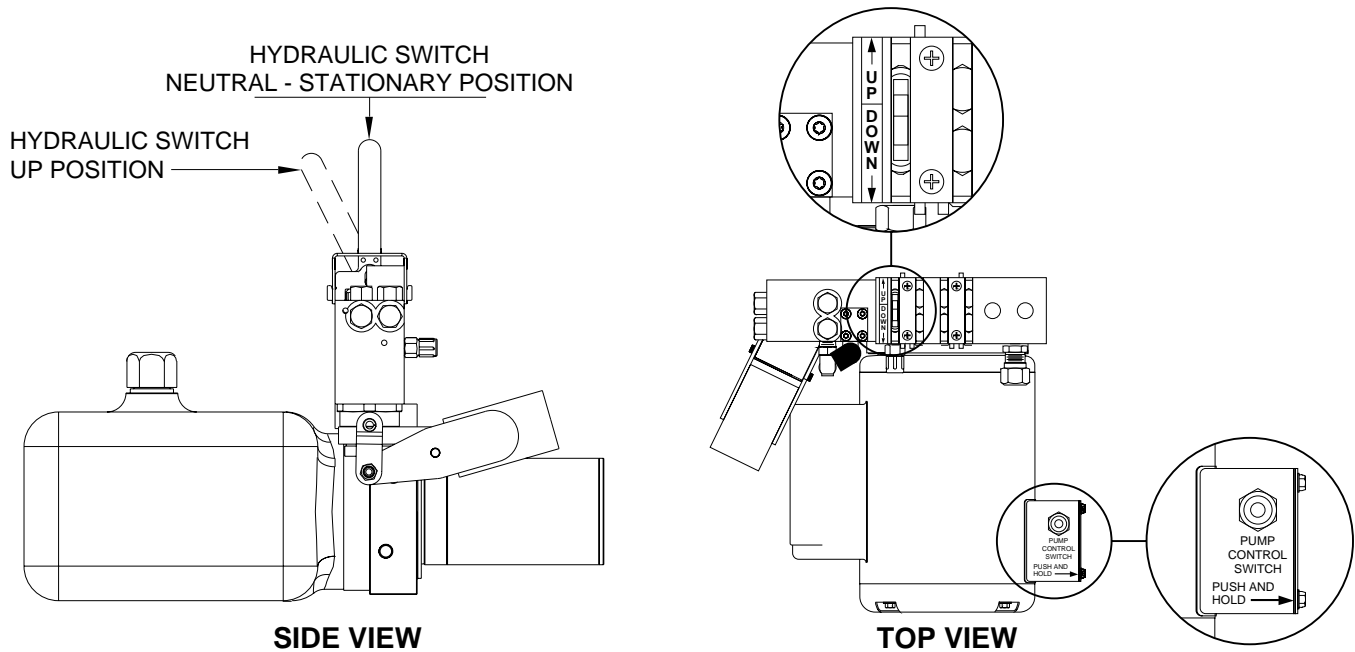
HWH leveling and room extension systems are designed to function in cold weather down to 0 degrees Fahrenheit. Below freezing (32 degrees Fahrenheit) the jacks or rooms will operate slower than usual.

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.

OPERATING PROCEDURES

ROOM LIFT PROCEDURE



WARNING: MAKE SURE ALL PEOPLE AND OBJECTS ARE CLEAR OF THE ROOM BEFORE RAISING THE ROOM. MAKE SURE THERE IS ADEQUATE CLEARANCE TO FULLY RAISE THE ROOM.

WARNING: OPERATING A ROOM WITH ANY ROOM LOCKING, CLAMPING OR MANUAL RETRACTING DEVICES ATTACHED OR ENGAGED CAN CAUSE PERSONAL INJURY AND VEHICLE DAMAGE. IT IS THE OPERATOR'S RESPONSIBILITY TO ENSURE THAT ALL ROOM LOCKING, CLAMPING OR MANUAL RETRACTING DEVICES ARE DETACHED OR DISENGAGED BEFORE OPERATING THE ROOM.

1. If applicable, turn in the Master Power switch for the room lift system.
2. Move the hydraulic switch to the "UP" position.
3. Push and hold the "PUMP CONTROL SWITCH"

NOTE: Hold the "PUMP CONTROL SWITCH" three or four seconds after the room is fully extended. This assures proper pressurization of the cylinders. **During normal operation of the room, do not reverse direction of the room until the room is fully extended. If necessary, the direction of the room may be reversed, but watch for binding of the room. If the direction of the room has been reversed, DO NOT re-extend the room until the room has been fully retracted.**

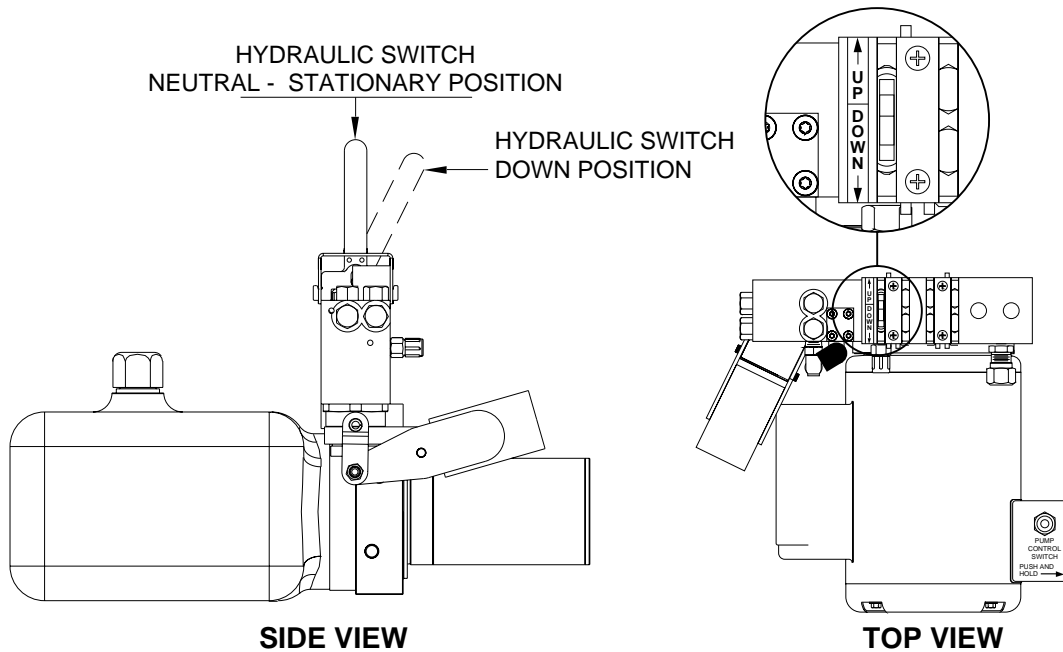
IMPORTANT: Do not hold the "PUMP CONTROL SWITCH" in the on position for more than ten seconds after the room is fully extended or stops moving. **If either side of the room stops moving, release the room control switch immediately. DO NOT force the room. DO NOT reverse direction of the room, contact HWH Customer Service for assistance 1-800-321-3494.**

NOTE: Releasing the "PUMP CONTROL SWITCH" will halt the operation of the room.

4. When the room is completely raised, release the "PUMP CONTROL SWITCH".
5. Move the hydraulic switch to the neutral position.

OPERATING PROCEDURES

ROOM LOWERING PROCEDURE



WARNING: KEEP PEOPLE AND OBSTRUCTIONS CLEAR OF ROOM WHEN LOWERING THE ROOM.

NOTE: Running the pump while lowering the room will NOT help the room come down. The pump would just bog down and go to relief.

1. To lower the room, pull the hydraulic switch to the "DOWN" position. The switch can be "feathered" to the "DOWN" position to control the speed that the room lowers.

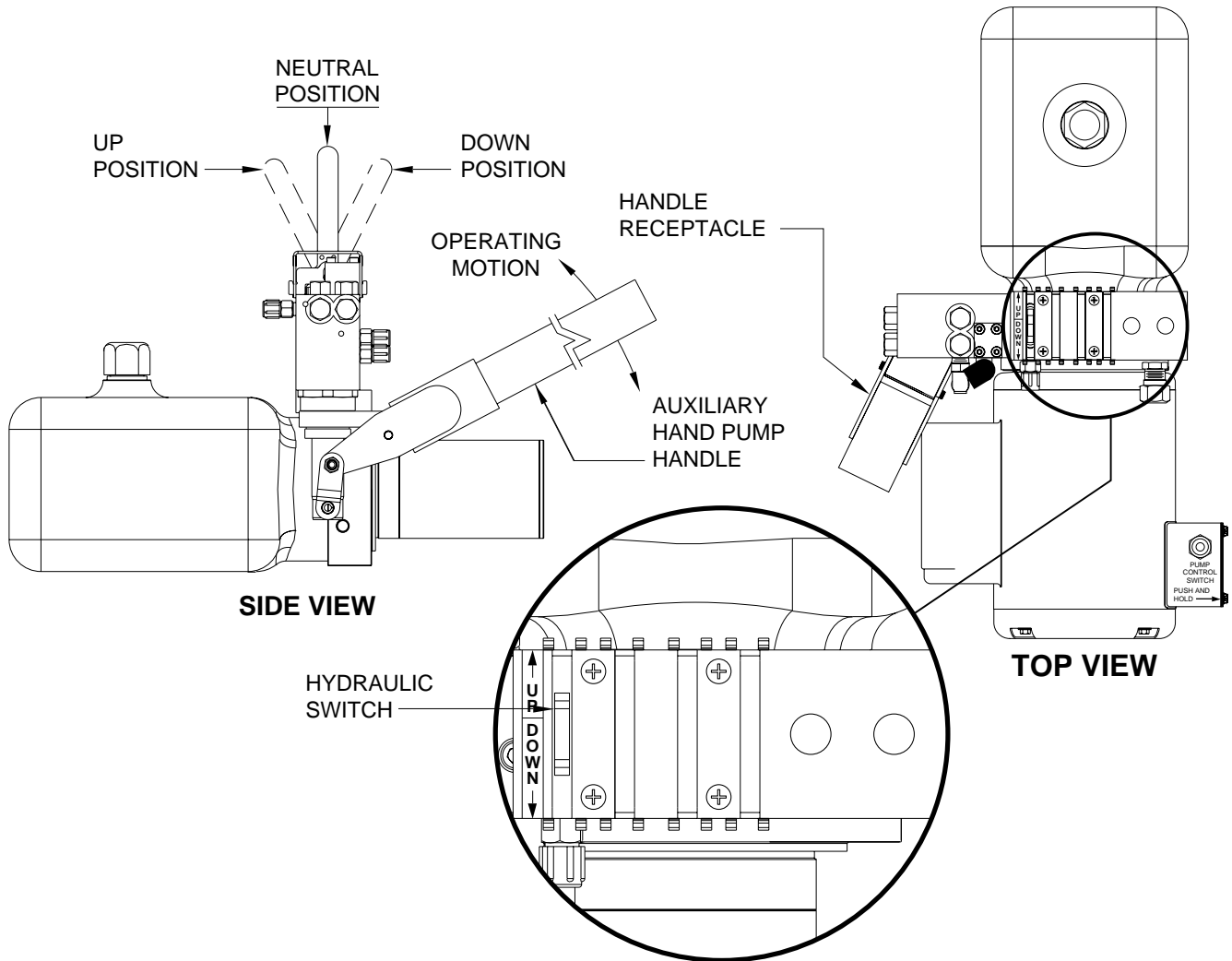
2. When the room is completely lowered, move the hydraulic switch to the NEUTRAL position.

IMPORTANT: DO NOT RUN THE PUMP WHILE THE ROOM IS LOWERING OR IF THE ROOM WILL NOT LOWER WITH THE HYDRAULIC SWITCH IN THE "DOWN" POSITION. DAMAGE TO THE PUMP CAN OCCUR.

If the room will not lower with the hydraulic switch in the "DOWN" position, contact HWH Customer Service for assistance - 1-800-321-3494.

OPERATING PROCEDURES

AUXILIARY HAND PUMP OPERATION



The auxiliary hand pump can be used to lift the room anytime the pump will not function.

IMPORTANT: DO NOT USE THE HAND PUMP IF THE FLUID LEVEL IN THE TANK IS LESS THAN ONE HALF FULL.

The auxiliary hand pump is a two stage pump that will produce enough pressure to lift the room. When lift the trailer as well as retract the landing gear. When operating the auxiliary pump to lift the room, the pump handle will seem to "snap" as the pump goes to the second stage. The pumping action will be easier at first as the second stage starts to create more pressure.

To operate the auxiliary hand pump, move the hydraulic switch to the desired position. Insert the hand pump handle into the handle receptacle and move the handle in an up and down motion.

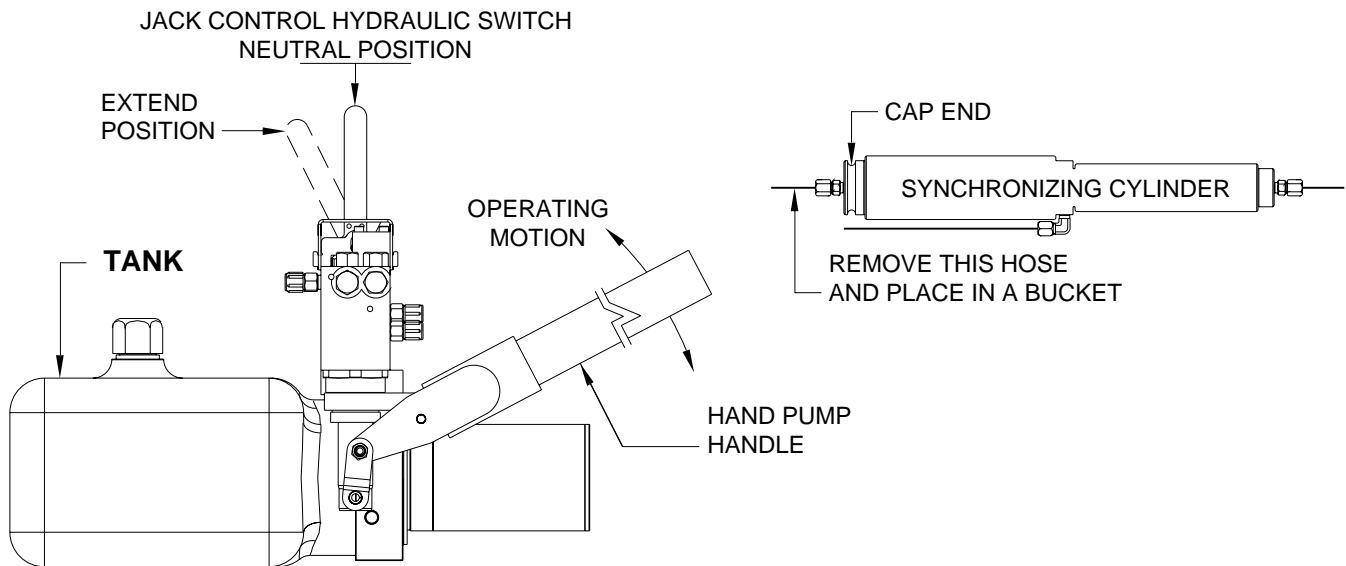
NOTE: The auxiliary hand pump is not needed to lower the room.

It is recommended to operate the auxiliary hand pump occasionally to check it's operation.

The hand pump should not lose it's prime, but if it does, see MAINTENANCE - PRIMING THE HAND PUMP.

MAINTENANCE

PRIMING THE HAND PUMP



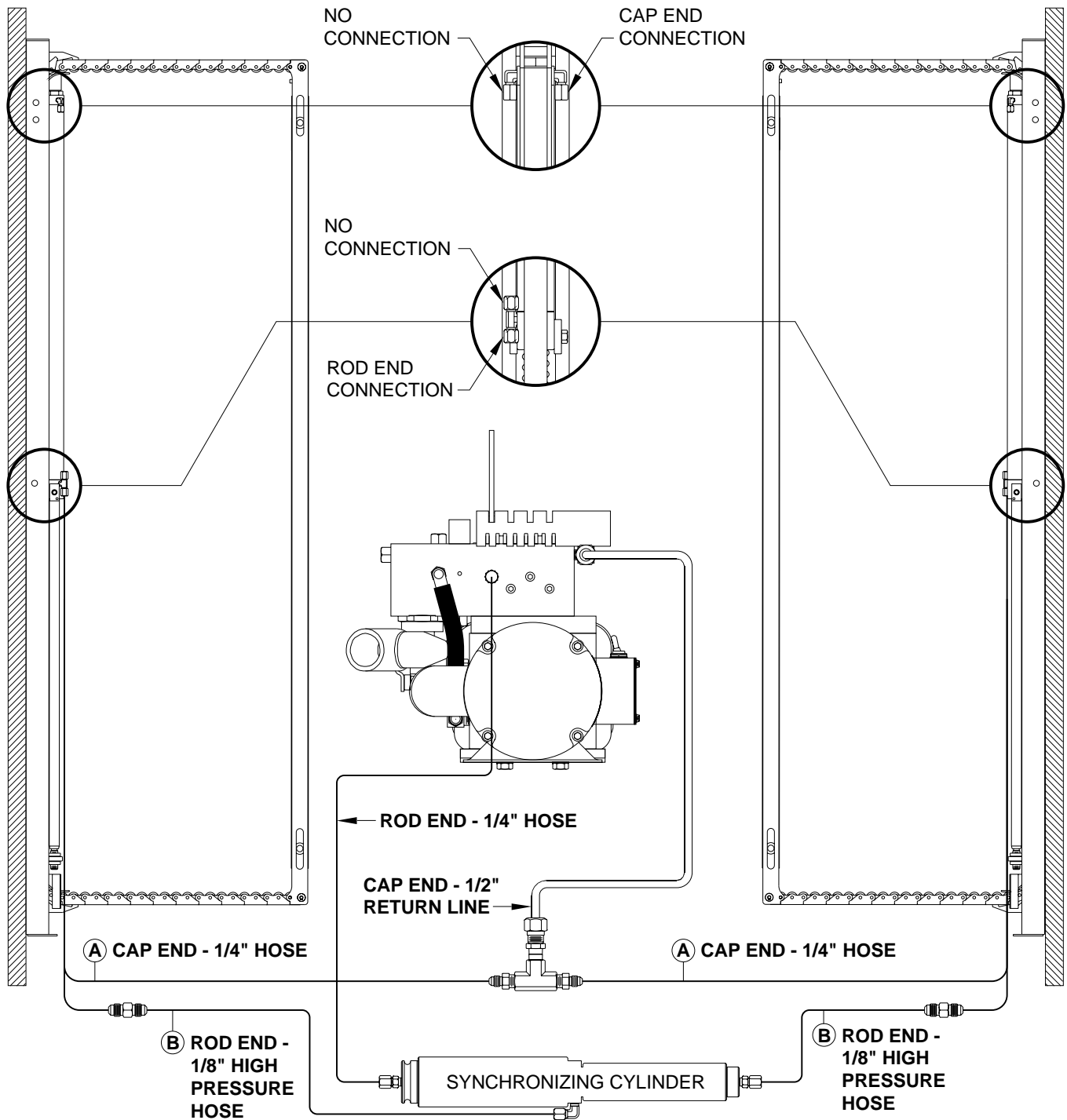
To prime the hand pump, it will be necessary to remove a hose from the cap end of the synchronizing cylinder and place the hose in a bucket.

IMPORTANT: DO NOT ALLOW THE FLUID LEVEL IN THE TANK TO LOWER MORE THAN 1 INCH BEFORE ADDING FLUID.

Move the room control hydraulic switch to "UP". Make sure the tank is at least half full. Pump the hand pump until a healthy flow of fluid comes from the hose.

Reattach the hose and retry the hand pump. Repeat the procedure if the hand pump does not move the room.

HYDRAULIC LINE CONNECTION DIAGRAM UNIVERSAL (USO) ROOM EXTENSION / HORIZONTAL MOUNT (WITH SYNCHRONIZING CYLINDER)

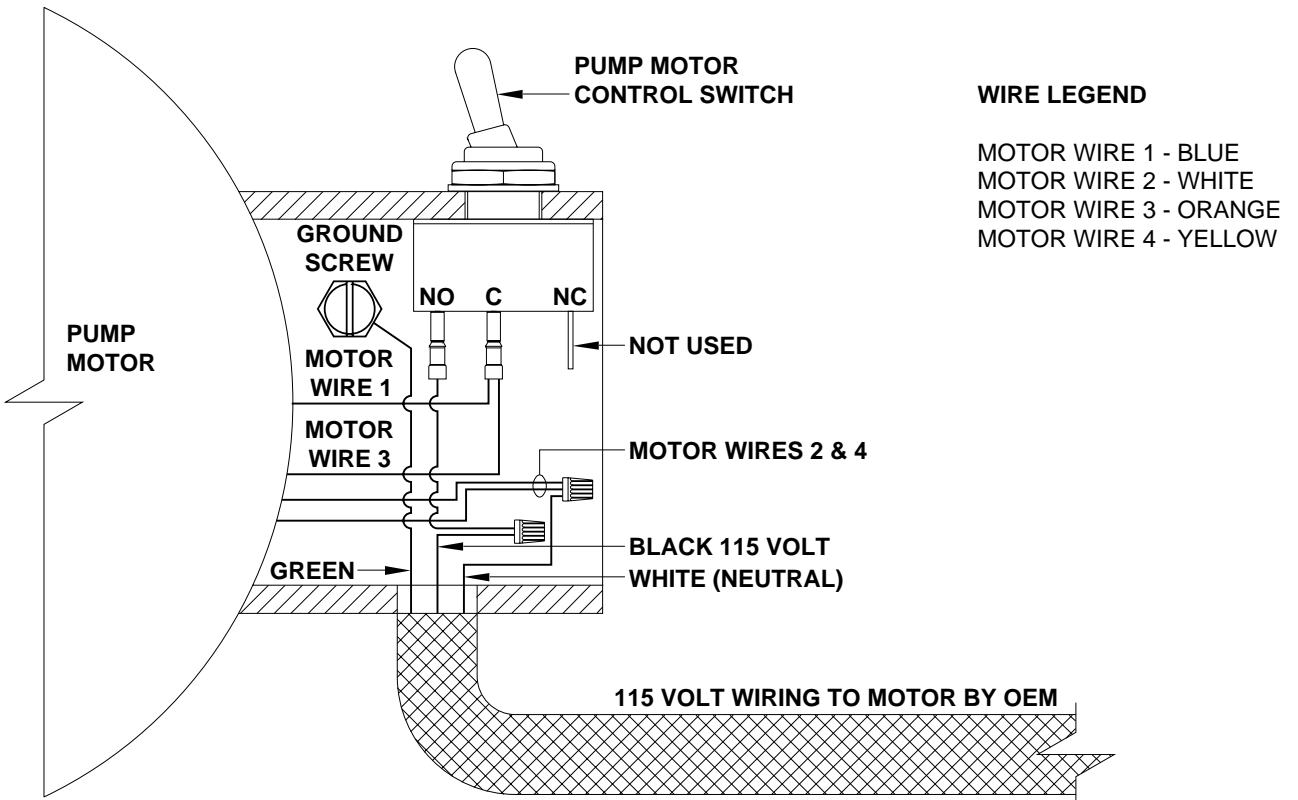
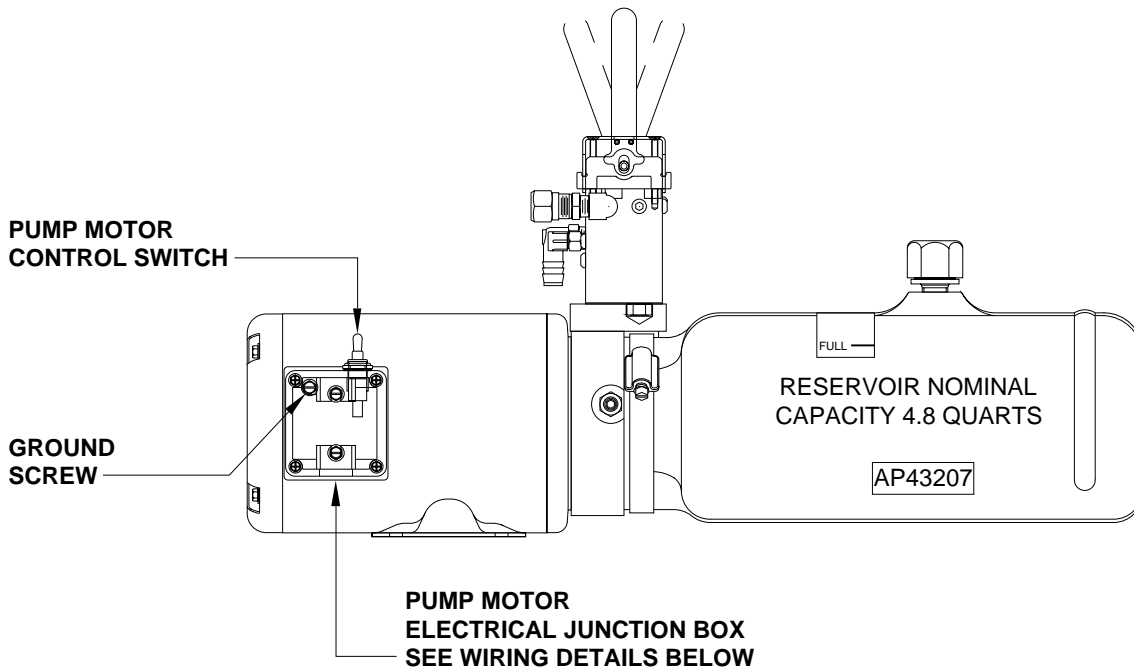


- Ⓐ HOSES MUST MAINTAIN EQUAL LENGTH AND DIAMETER.
- Ⓑ HOSES MUST BE HIGH PRESSURE HOSES OF EQUAL LENGTH AND DIAMETER.

**CYLINDER EXTEND - ROOM DOWN
CYLINDER RETRACT - ROOM UP
CHECK OIL LEVEL WITH ROOM UP**

ELECTRICAL CONNECTION DIAGRAM

115 VOLT PUMP MOTOR CONTROL SWITCH



WIRE LEGEND

- MOTOR WIRE 1 - BLUE
- MOTOR WIRE 2 - WHITE
- MOTOR WIRE 3 - ORANGE
- MOTOR WIRE 4 - YELLOW