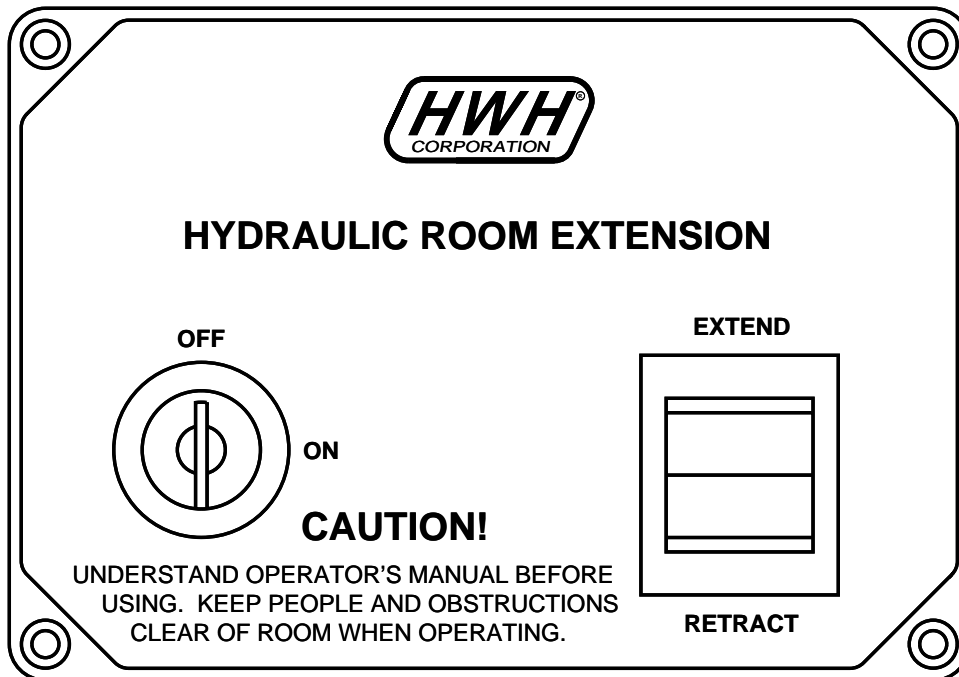




OPERATOR'S MANUAL

HWH® HYDRAULIC SPACEMAKER® STAIRWAY SYSTEMS

FEATURING:
*Platform Extension
With Step Extension*



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

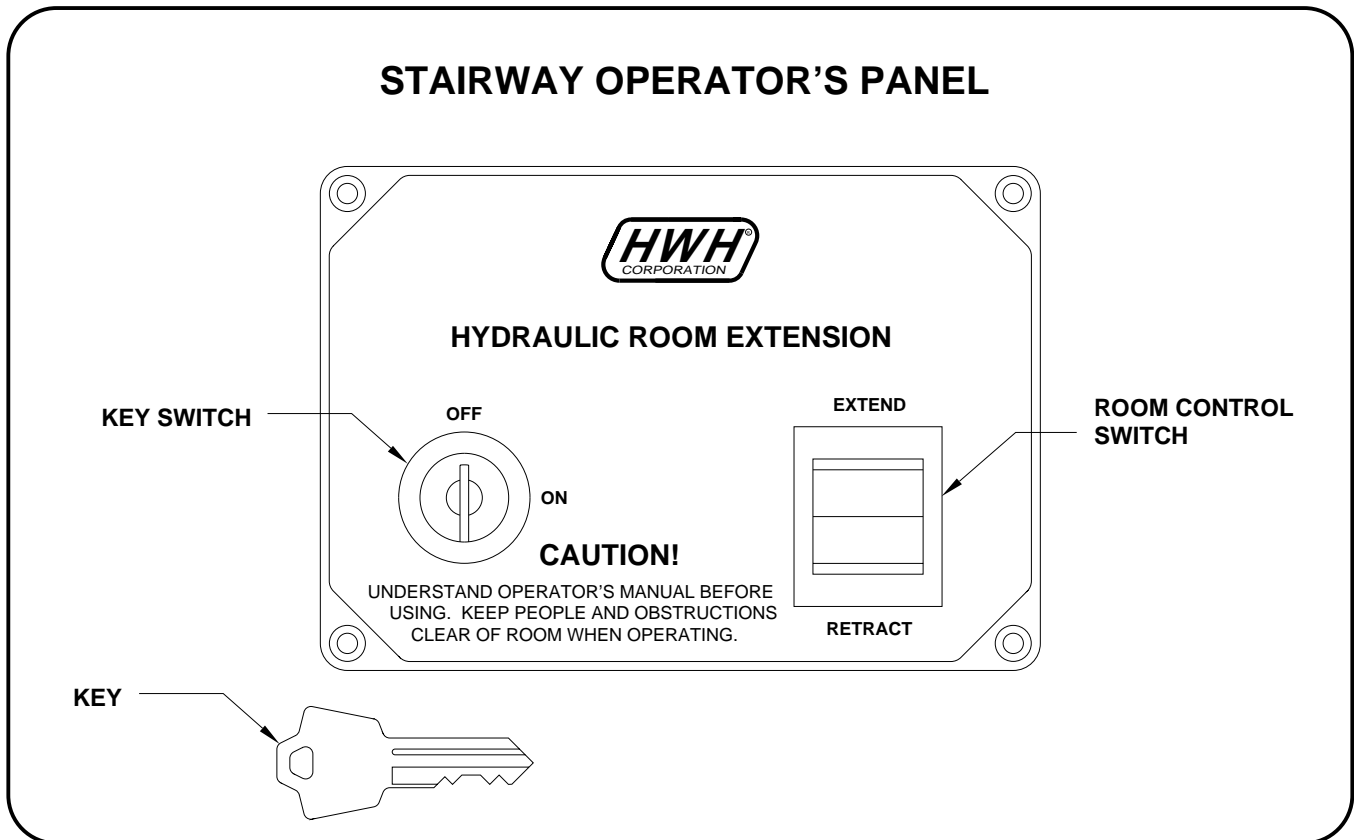
HWH CORPORATION strives to maintain the highest level of customer satisfaction. Therefore, if you discover a defect or problem, please do the following:

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



CONTROL FUNCTIONS

KEY SWITCH: The KEY SWITCH controls power to the STAIRWAY CONTROL SWITCH. When the KEY SWITCH is in the "ON" POSITION the stairway can be operated, and the key cannot be removed. When the KEY SWITCH is in the "OFF" position the stairway cannot be operated, and the key can be removed.

STAIRWAY CONTROL SWITCH: The STAIRWAY CONTROL SWITCH is a two position momentary switch. Press and hold the switch in the EXTEND POSITION. After the platform is completely extended, the step will extend. Press and hold the switch in the RETRACT POSITION. After the step has retracted completely, the platform will retract. Releasing the STAIRWAY CONTROL SWITCH will halt the operation of the stairway.

OPERATING PROCEDURES

GENERAL INSTRUCTIONS

Maintain adequate clearance in all directions for vehicle, room extensions, awnings, doors, steps, etc. Vehicle may move in any direction due to jacks extending or retracting, settling of the jacks or the vehicle, equipment malfunction, etc..

Install the railing on the stairway system anytime the stairway is extended.

WARNING: ANYTIME THE STAIRWAY IS EXTENDED. THE RAILING MUST BE SECURELY INSTALLED ACCORDING TO RAILING INSTALLATION INSTRUCTIONS BEFORE THE VEHICLE IS PUT INTO SERVICE.

PREPARATION FOR TRAVEL

Any room extension or stairway system should be fully retracted before traveling.

WARNING: THE VEHICLE SHOULD NOT BE MOVED IF ONE OR MORE ROOMS OR THE STAIRWAY SYSTEMS ARE EXTENDED.

IMPORTANT: The stairway railing must be removed before retracting the stairway. Damage to the railing, stairway or vehicle will occur if not removed.

If the stairway cannot be retracted according to the "STAIRWAY RETRACT PROCEDURE" Section. refer to "MANUAL STAIRWAY RETRACTION PROCEDURES".

STAIRWAY WARNING LIGHT

There is a red warning light on the dash dedicated to the stairway system.

This light will be on anytime the stairway control panel key switch is on or the vehicle ignition switch is on and the platform in limit switch is on or step in limit switch is not on.

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 HWH low temperature oil.

OPERATING PROCEDURES

STAIRWAY EXTEND PROCEDURE

IMPORTANT: It is recommended to level the vehicle before extending the steps.

1. The park brake must be set for the stairway to be operated. The ignition can be in the "ON" or "OFF" position.

WARNING: KEEP PEOPLE AND OBSTRUCTIONS CLEAR OF STAIRWAY WHEN OPERATING.

NOTE: Make sure there is adequate clearance to fully extend the stairway platform and step.

2. Insert the KEY into the KEY SWITCH on the stairway operator's panel and turn it to the "ON" position.

Do not operate the stairway while the leveling system is active.

NOTE: If the Leveling System is being operated, pushing the stairway control switch will interrupt the leveling system operations, AUTO LEVEL or AUTO STORE. When the stairway control switch is released, the automatic leveling system function will resume.

3. To extend the stairway, push and hold the STAIRWAY CONTROL SWITCH in the extend position. When the platform is fully extended, the step will start to extend. When the step is fully extended, the pump and valve will shut off.

4. Turn the KEY SWITCH to the "OFF" position and remove the key.

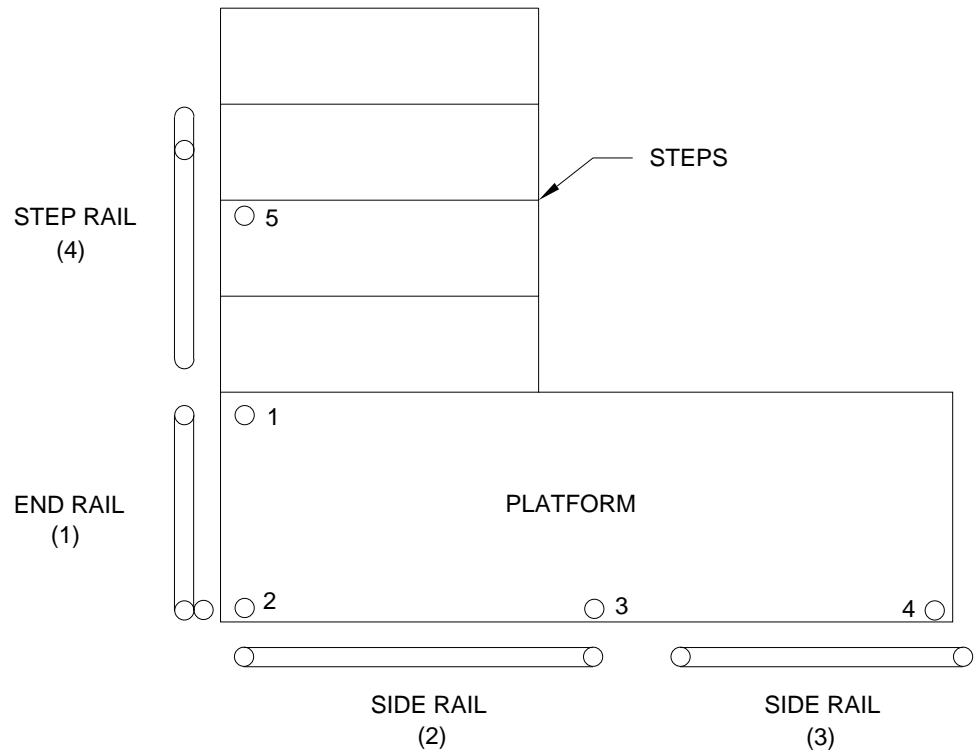
5. Install the railing according to the Railing Installation Instructions in this manual.

WARNING: ANYTIME THE STAIRWAY IS EXTENDED, THE RAILING MUST BE SECURELY INSTALLED ACCORDING TO RAILING INSTALLATION INSTRUCTIONS BEFORE THE VEHICLE IS PUT INTO SERVICE.

OPERATING PROCEDURES

RAILING INSTALLATION INSTRUCTIONS

IMPORTANT: TO EASE INSTALLATION AND ELIMINATE BINDING WHILE INSTALLING, THE 4 RAILING SECTIONS MUST BE INSTALLED IN THE PROPER SEQUENCE AS SHOWN IN THE DIAGRAM.



1. Insert the posts of End Rail 1 into platform holes 1 & 2. The short tube welded to the main tube on one end goes to the inside of the platform as shown.

2. Install Side Rail 2. Insert the main long tube into platform hole 3. Insert the round weldment on the top of Side Rail 2 into the main tube of the End Rail 1. The C channel goes around the short tube of End Rail 1.

3. Install side rail 3. Insert the main long tube into platform hole 4. Insert the round weldment on the top of Side Rail 3 into the main tube of Side Rail 2. The C channel goes around the main tube of Side Rail 2.

4. Install Step Rail 4 (angled rail). Insert the main long tube of the Step Rail into the step hole 5. Insert the round weldment on the top of the Step Rail into the main tube of the End Rail. The C channel goes around the main tube of the End Rail.

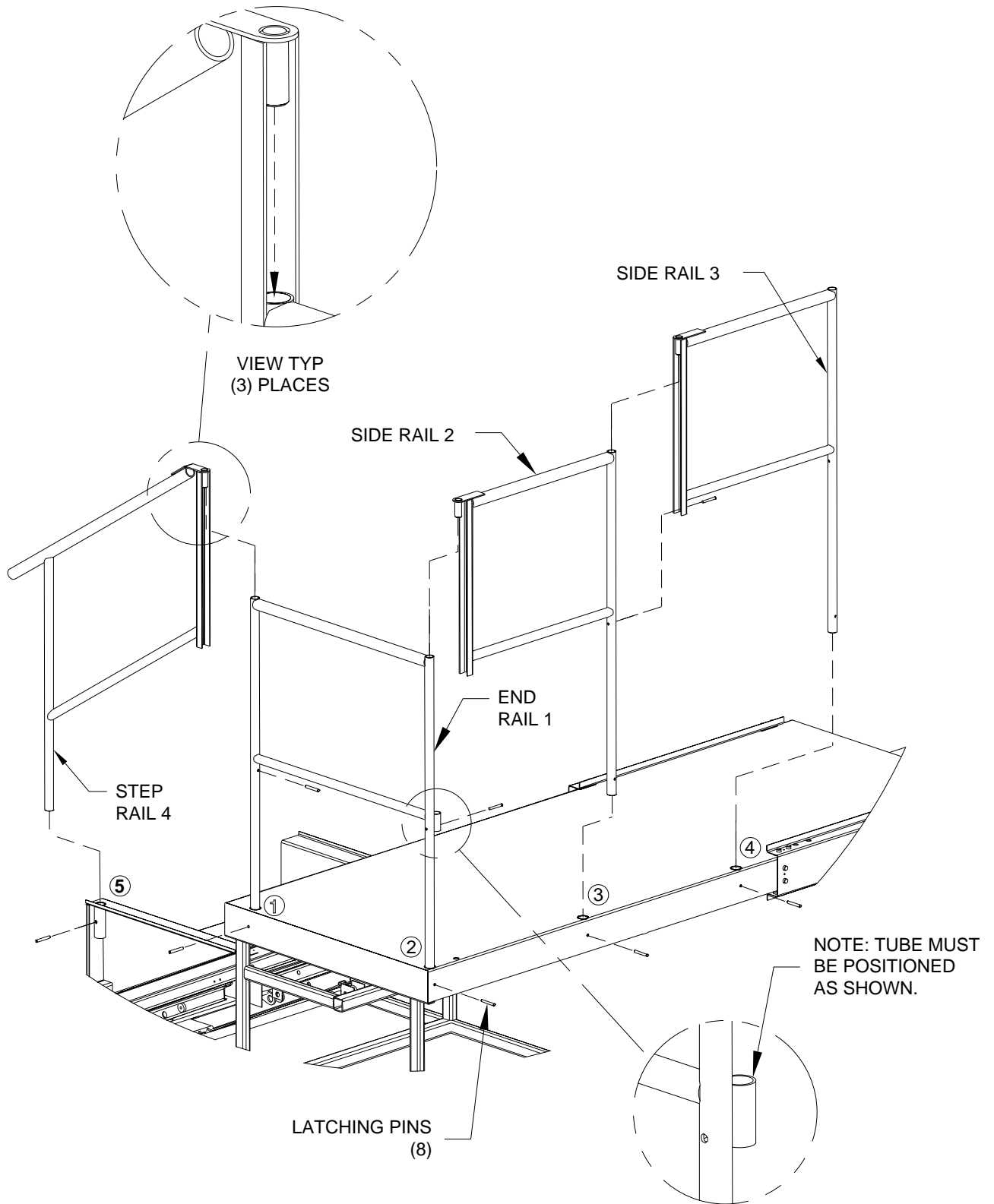
IMPORTANT: The locking pins must be installed to properly secure the stairway railing.

Note: It is recommended to NOT insert locking pins until all 4 rail sections are properly installed.

The locking pins are 1/4 inch spring loaded pins. Eight (8) pins are needed. There is one pin for each main post. The pin inserts from the outside of the platform thru the main tube. There is a lock pin hole beneath the center horizontal tube where each section joins to the next.

OPERATING PROCEDURES

STAIRWAY RAILING ASSEMBLY DIAGRAM



OPERATING PROCEDURES

STAIRWAY RETRACT PROCEDURE

WARNING: KEEP PEOPLE AND OBSTRUCTIONS CLEAR OF STAIRWAY WHEN OPERATING.

1. The park brake must be set for the stairway to be operated. The ignition can be in the "ON" or "OFF" position.
2. Remove the railing from the stairway before retracting the stairway.
3. Insert the KEY into the KEY SWITCH on the stairway extension operator's panel and turn it to the "ON" position.
4. To retract the stairway, push and hold the STAIRWAY CONTROL SWITCH in the "RETRACT" position. First, the step will retract. When the step is fully retracted, the platform will start to retract. When the platform is fully retracted, the pump and valves will shut off.

NOTE: If the leveling system is being operated, pushing the stairway control switch will interrupt leveling system operations, AUTO LEVEL or AUTO STORE. When the stairway control switch is released, the automatic leveling system function will resume.

Do not operate the stairway if the leveling system is active.

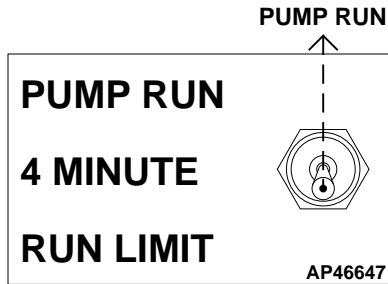
5. Turn the KEY SWITCH to the "OFF" position and remove the key.

IN THE EVENT OF THE FAILURE OF THE STAIRWAY TO RETRACT, REFER TO THE "MANUAL STAIRWAY RETRACT PROCEDURE" SECTION IN THIS MANUAL OR CONTACT HWH CORPORATION CUSTOMER SERVICE AT 1-800-321-3494 FOR ASSISTANCE.

OPERATING PROCEDURES

AUXILIARY PUMP RUN SWITCH OPERATION

The auxiliary pump run switch will be located on the hydraulic control unit. Contact the vehicle manufacturer for the location of the hydraulic control. This switch will run the pump with the ignition on or off.



IMPORTANT: DO NOT hold the pump toggle switch to "PUMP RUN" for more than 4 minutes without allowing the pump motor to cool.

The pump run switch can be used to extend or retract the stairway.

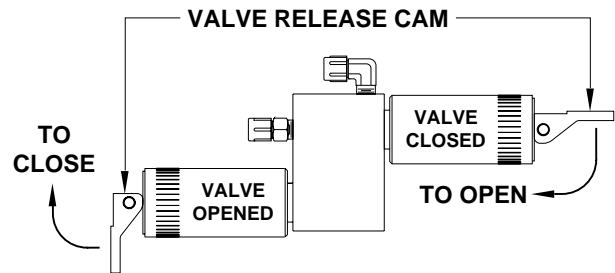
The remote hydraulic control unit with the stairway valves is located under the outside corner of the stairway platform. The manifold is labeled "Step" Extend or Retract and "Platform" Extend or Retract.

WARNING: KEEP PEOPLE AND OBJECTS CLEAR OF STAIRWAY WHEN OPERATING.

IMPORTANT: Always extend the platform completely before extending the step. Always retract the step completely before retracting the platform.

Locate and open the appropriate solenoid valve. Only one valve should be open at a time.

IMPORTANT: MAKE SURE TO MOVE THE RELEASE CAMS IN THE CORRECT DIRECTION. INCORRECT MOVEMENT OF THE CAMS CAN DAMAGE THE VALVES.

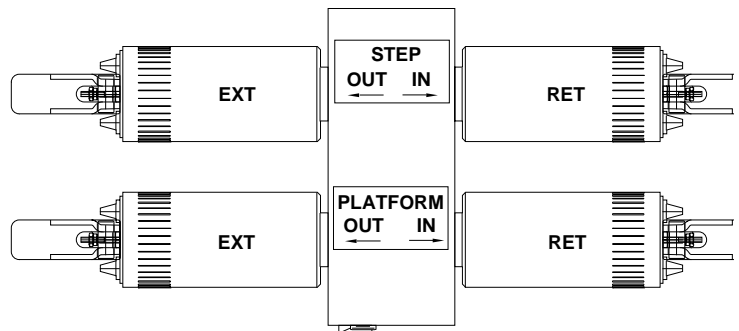


EXTEND STAIRWAY

1. Open platform extend valve and hold pump run switch until platform is fully extended.
2. Close platform extend valve and open step extend valve. Hold pump run switch until step is fully extended.
3. Install railing according to RAILING INSTALLATION page.

RETRACT STAIRWAY

1. Remove railing.
2. Open step retract valve. Push and hold the pump run switch until the step is fully retracted. Close the valve before releasing the pump run switch.
3. Open the platform retract valve. Push and hold the pump run switch until the platform is completely retracted. Close the valve before releasing the switch.



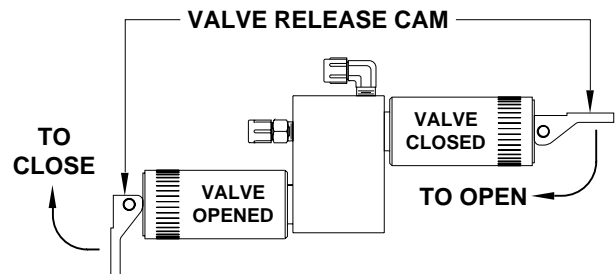
OPERATING PROCEDURES

MANUAL STAIRWAY RETRACTION PROCEDURE

If the stairway cannot be retracted with the stairway control panels or with the auxiliary pump run switch, the stairway will have to be pushed in manually.

The remote hydraulic control unit is located under the outer corner of the platform. There are 4 valves on the manifold. Open all 4 valves.

IMPORTANT: MAKE SURE TO MOVE THE RELEASE CAMS IN THE CORRECT DIRECTION. INCORRECT MOVEMENT OF THE CAMS CAN DAMAGE THE VALVES.



1. Locate the remote control unit.
2. Open all 4 solenoid valves.
3. Push the step in. A slight lift while pushing can help. The step will push in fairly easy.
4. When the step is fully retracted, push the platform in. The platform will push quite hard. It may take 4 or 5 people to push it in.
5. When the step and platform are fully retracted, close all of the valves.