VERTICAL EXPRESS

Overspeed Adjustable Valve

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Vertical Express • P.O. Box 2019 • Memphis, Tennessee 38101

Published November, 2011
Seventh Edition
Printed in the United States of America

Manual Number: 89139 v.1.1

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Safety Precautions

IMPORTANT! **Read this page before any work is performed on elevator equipment. The procedures contained in this manual are intended for the use of qualified elevator personnel. In the interest of your personal safety and the safety of others, do not attempt any procedure that you are not qualified to perform.**

All procedures must be accomplished in accordance with the applicable rules in the latest edition of the National Electrical Code, the latest edition of ASME A17.1, and any governing local codes.

Terms in This Manual

CAUTION statements identify conditions that may result in damage to the equipment or other property if improper procedures are followed.

WARNING statements identify conditions that may result in personal injury if improper procedures are followed.

General Safety

Before applying power to the controller, check that all factory wire connections are tight on relays, contactors, fuse blocks, resistors, and terminals on cards and DIN rail terminals. Connections loosened during shipment may cause damage or intermittent operation.

Other specific warnings and cautions are found where applicable and do not appear in this summary. See *Elevator Industry Field Employees' Safety Handbook* for electrical equipment safety information on installation and service.

Electrical Safety

All wiring must be in accordance with the National Electrical Code and be consistent with all state and local codes.

Use the Proper Fuse

To avoid fire hazards, use only a fuse of the correct type, voltage, and current rating. See the job specific drawings sheet (Power Supplies) for fusing information.

Electric shocks can cause personal injury or loss of life. Circuit breakers, switches, and fuses may not disconnect all power to the equipment. Always refer to the wiring diagrams. Whether the AC supply is grounded or not, high voltage will be present at many points.

Printed Circuit Cards

Printed circuit boards may be damaged if removed or installed in the circuit while applying power. Before installation and/or removing printed circuit boards, secure all power.

Always store and ship printed circuit cards in separate static bags.

Electrical Safety
(continued)

Mainline Disconnect

Unless otherwise directed, always Turn OFF, Lock, and Tag out the mainline disconnect to remove power from elevator equipment. Before proceeding, confirm that the equipment is de-energized with a volt meter. Refer to the *Elevator Industry Field Employees' Safety and Accident Prevention Program Manual* for the required procedure.

Test Equipment Safety

Always refer to manufacturers' instruction book for proper test equipment operation and adjustments.

Megger or buzzer-type continuity testers can damage electronic components. Connection of devices such as voltmeters on certain low level analog circuits may degrade electronic system performance. Always use a voltmeter with a minimum impedance of 1M Ohm/Volt. A digital voltmeter is recommended.

When Power Is On

To avoid personal injury, do not touch exposed electrical connections or components while power is ON.

Mechanical Safety

See the *Elevator Industry Field Employees' Safety Handbook* for mechanical equipment safety information on installation and service.

Static Protection Guidelines

IMPORTANT! **Read this page before working with electronic circuit boards.**

Elevator control systems use a number of electronic cards to control various functions of the elevator. These cards have components that are extremely sensitive to static electricity and are susceptible to damage by static discharge.

Immediate and long-term operation of an electronic-based system depends upon the proper handling and shipping of its cards. For this reason, the factory bases warranty decisions on the guidelines below.

Handling

- Cards shipped from the factory in separate static bags must remain in the bags until time for installation.
- Anti-static protection devices, such as wrist straps with ground wire, are required when handling circuit boards.
- Cards must not be placed on any surface without adequate static protection.
- Only handle circuit cards by their edges, and only after discharging personal static electricity to a grounding source. DO NOT touch the components or traces on the circuit card.
- Extra care must be taken when handling individual, discrete components such as EPROMS (which do not have circuit card traces and components for suppression).

Shipping

- Complete the included board discrepancy sheet.
- Any card returned to the factory must be packaged in a static bag designed for the card.
- Any card returned to the factory must be packaged in a shipping carton designed for the card.
- “Peanuts” and styrofoam are unacceptable packing materials.

Note: Refer to the *Vertical Express Replacement Parts Catalog* to order extra static bags and shipping cartons for each card.

Failure to adhere to the above guidelines will VOID the card warranty!

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Specifications

2” Overspeed Valve

- Print Number: 886AH1 (90°)
- Print Number: 886AH3 (In-Line)
- Minimum Flow: 50 GPM
- Maximum Flow: 230 GPM
- Maximum working pressure: 600 PSI
- Line Connections: Threaded/90°, Victaulic/In-line

3” Overspeed Valve

- Print Number: 886AM1 (90°)
- Print Number: 886AM3 (In-Line)
- Minimum Flow: 150 GPM
- Maximum Flow: 500 GPM
- Maximum working pressure: 600 PSI
- Line Connections: Threaded/90°, Victaulic/In-line

2” Overspeed Valve 90° Threaded

3” Overspeed Valve 90° Threaded

2” Overspeed In-line Valve Victaulic

3” Overspeed In-line Valve Victaulic

Installation

1. Install the valve within 12 inches of the jack(s) or the tee connecting multiple jacks. See Figure 1 or Figure 2 for proper orientation of the valve.

2. Turn the adjustment screw out (counterclockwise) to ensure that the valve does not set during construction and adjustment of the control valve.

Note: This valve is directional. The jack must be connected to the outlet designated for the jack

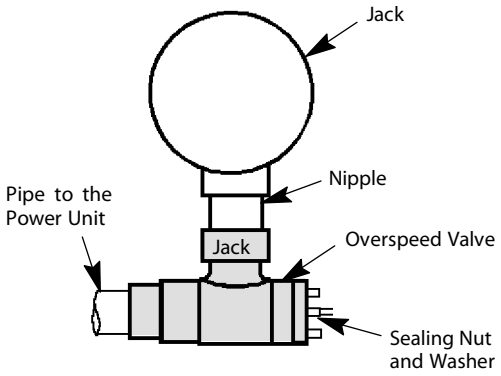


Figure 1 - 90° Overspeed Valve

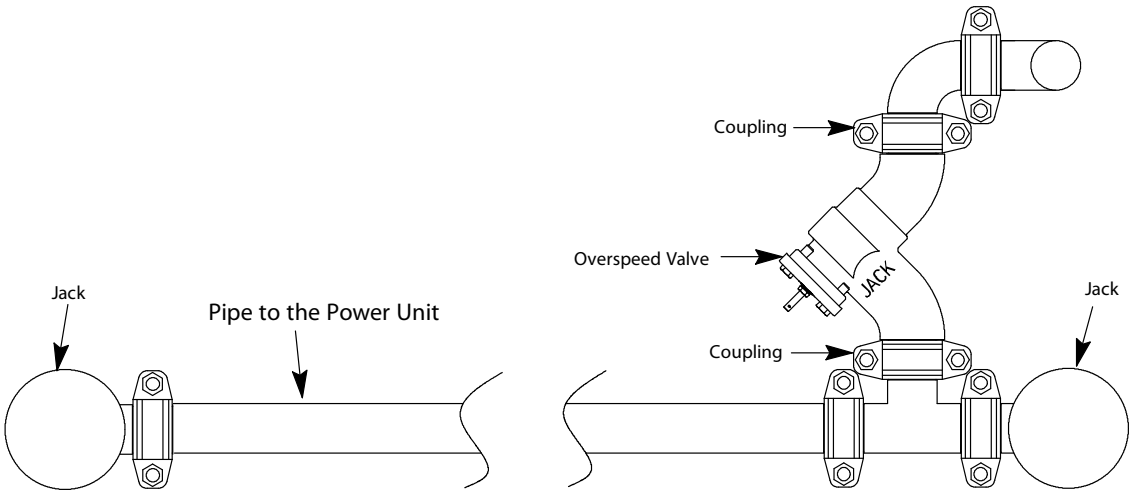


Figure 2 - 3" Dual Jack Overspeed In-Line Valve Installation

Adjustment

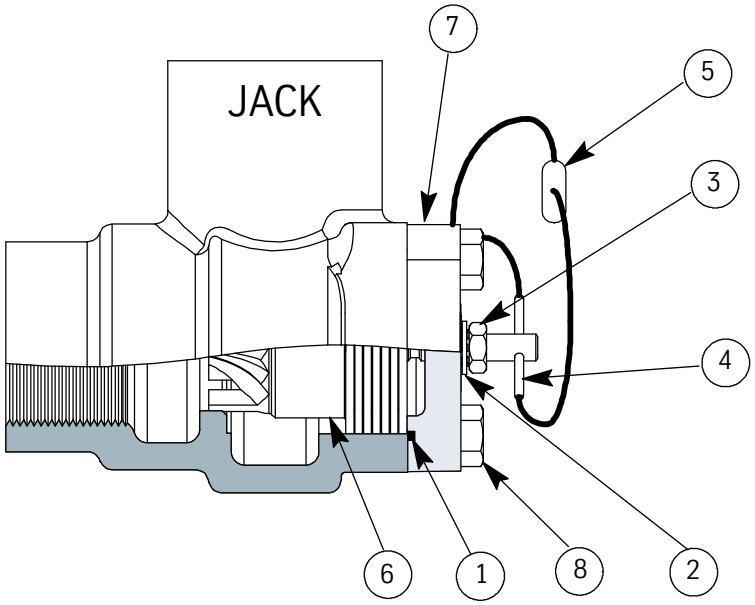
WARNING **During this procedure, do not allow personnel to remain in the pit when the car is running.**

1. Verify that the job is complete and all of the cab weight is final.
2. Place a full load on the car.
3. Turn the adjustment screw on the valve clockwise a small amount and run the car down. Repeat this process until the overspeed valve sets.

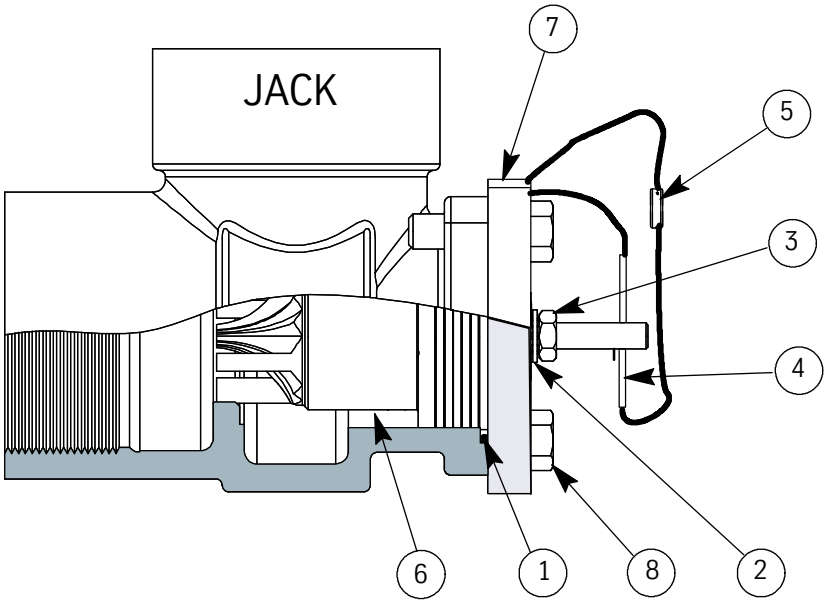
Note: During this procedure it may be necessary to make multiple down runs, especially if the travel is short.

4. Turn the adjustment screw OUT (counterclockwise) one-half turn and tighten the locknut.
5. Run the car down from the top landing to the bottom landing at full speed to ensure that the valve does not set with a full load and full travel.
6. Tighten the .375" nut against the sealing washer to seal the adjustment screw.
7. Drill the nut and install a lead seal.

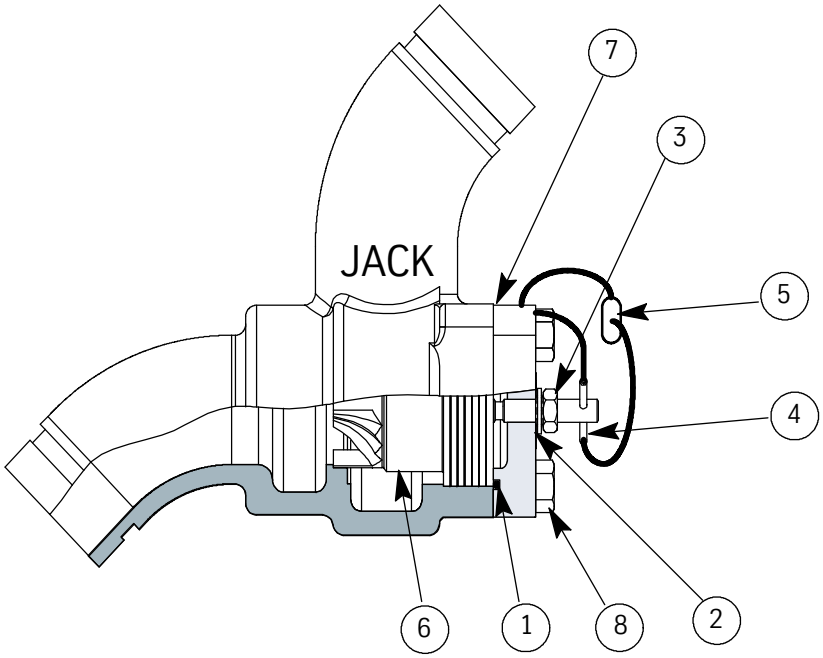
Replacement Parts



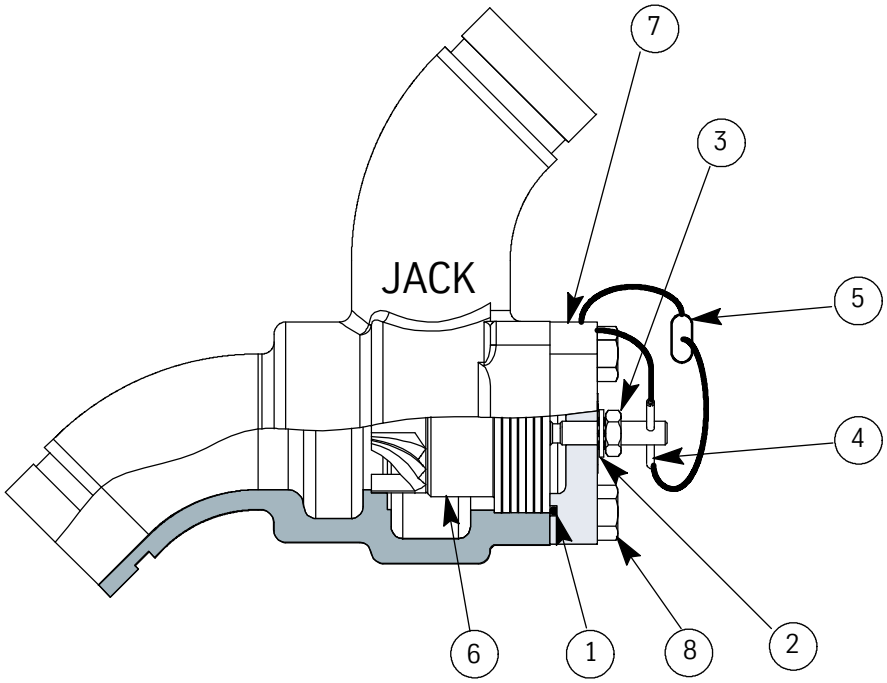
2” Overspeed Valve 90°



3” Overspeed Valve 90°



2" Overspeed In-line Valve



3" Overspeed In-line Valve

Replacement Parts List

ITEM	PART NO.	PRINT NO.	DESCRIPTION
1	9709836	75478	O-ring (2” valve)
	9754702	75480	O-ring (3” valve)
2	9748477	148477	Washer, sealing
3	9719386	100746	Nut, .375” Z
4		394AD2	Pin
5	9804559	70455	Seal, lead
6		886AK2	Piston assembly 2” valve (Includes adjusting screw)
		886AP1	Piston assembly 3” valve (Includes adjusting screw)
7		232BD1	Cap, regulator (2” valve)
		232BJ1	Cap, regulator (3” valve)
8		150319	Screw, FS, CSH .500-13 x 1.250 UH
9	9767034		Kit, overspeed 90° valve, 2”(Includes overspeed valve, 2 threaded- to-victaulic nipples, and one victaulic coupling)
10	9764076		Kit, overspeed 90° valve, 3”(Includes overspeed valve, 2 threaded- to-victaulic nipples, and one victaulic coupling)
11		200RR5	Kit, overspeed in-line valve, 2”(Includes overspeed in-line valve, and one victaulic coupling)
12		200RR6	Kit, overspeed in-line valve, 3”(includes overspeed in-line valve, and one victaulic coupling)

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