

LSK02* & LSK03*

LIQUID LINE SOLENOID KIT INSTALLATION INSTRUCTIONS

ATTENTION INSTALLING PERSONNEL

As a professional installer you have an obligation to know the product better than the customer. This includes all safety precautions and related items.

Prior to actual installation, thoroughly familiarize yourself with this Instruction Manual. Pay special attention to all safety warnings. Often during installation or repair it is possible to place yourself in a position which is more hazardous than when the unit is in operation.

Remember, it is **your** responsibility to install the product safely and to know it well enough to be able to instruct a customer in its safe use.

Safety is a matter of common sense...a matter of thinking before acting. Most dealers have a list of specific good safety practices...follow them.

The precautions listed in this Installation Manual are intended as supplemental to existing practices. However, if there is a direct conflict between existing practices and the content of this manual, the precautions listed here take precedence.

DESCRIPTION

This kit is for use with remote outdoor units installed with an indoor coil that uses either a fixed orifice or TXV expansion device. The purpose of this kit is to prevent refrigerant migration back to the compressor in the off cycle.

The solenoid valve is installed in the liquid line of the system at either the outdoor unit or the indoor coil. We recommend installation near the outdoor unit. The normally closed solenoid valve operates on 24 volt AC power and is intended to cycle with the outdoor unit.

Outdoor units that contain reciprocating compressors will require installation of a hard-start kit along with the liquid line solenoid kit.

WARNING

HIGH VOLTAGE

DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS KIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.



WARNING

ONLY PERSONNEL THAT HAVE BEEN TRAINED TO INSTALL, ADJUST, SERVICE OR REPAIR (HEREINAFTER, "SERVICE") THE EQUIPMENT SPECIFIED IN THIS MANUAL SHOULD SERVICE THE EQUIPMENT. THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR ANY INJURY OR PROPERTY DAMAGE ARISING FROM IMPROPER SERVICE OR SERVICE PROCEDURES. IF YOU SERVICE THIS UNIT, YOU ASSUME RESPONSIBILITY FOR ANY INJURY OR PROPERTY DAMAGE WHICH MAY RESULT. IN ADDITION, IN JURISDICTIONS THAT REQUIRE ONE OR MORE LICENSES TO SERVICE THE EQUIPMENT SPECIFIED IN THIS MANUAL, ONLY LICENSED PERSONNEL SHOULD SERVICE THE EQUIPMENT. IMPROPER INSTALLATION, ADJUSTMENT, SERVICING OR REPAIR OF THE EQUIPMENT SPECIFIED IN THIS MANUAL, OR ATTEMPTING TO INSTALL, ADJUST, SERVICE OR REPAIR THE EQUIPMENT SPECIFIED IN THIS MANUAL WITHOUT PROPER TRAINING MAY RESULT IN PRODUCT DAMAGE, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

WARNING

TO AVOID POSSIBLE INJURY FROM REFRIGERANT, WEAR GLOVES AND GOGGLES WHILE INSTALLING THIS KIT.

KIT CONTENTS

- (1) Normally Closed Liquid Line Solenoid Valve
- (2) Wire Nuts
- (1) Wire Bushing
- (1) Installation Instruction Sheet
- (3) Wire Ties

INSTALLATION INSTRUCTIONS

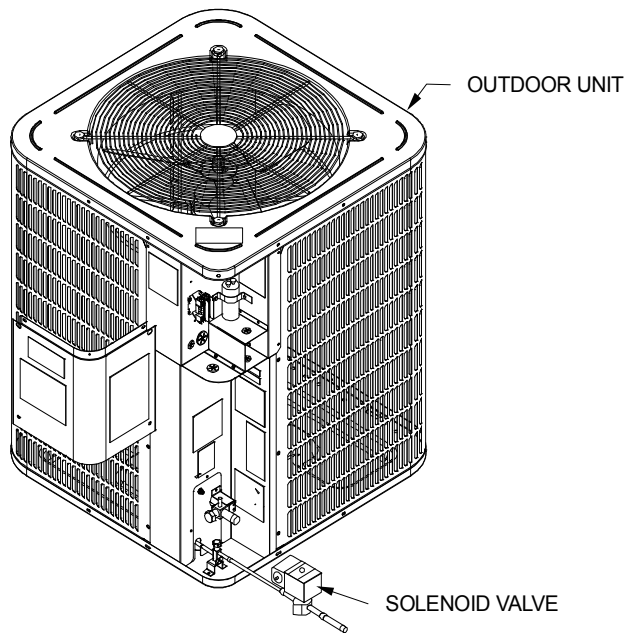
NOTE: The refrigerant must be reclaimed from the system before attempting installation of the solenoid valve.

WARNING

TO AVOID POSSIBLE INJURY, EXPLOSION OR DEATH, PRACTICE SAFE HANDLING OF REFRIGERANTS.

1. Disconnect all electrical power.
2. Remove and save the control box cover from the unit. Save the screws that held it in place.
3. The solenoid valve can be installed in the liquid line at either the indoor or outdoor unit. We recommend installation near the outdoor unit for convenience. Locate the solenoid valve where it will not interfere with access to service valves when installed near the outdoor unit.





4. The ends of the refrigerant lines must be cut square, deburred, cleaned and be round and free from nicks and dents. Any other condition increases the chances of a refrigerant leak.
5. "Sweep" the refrigerant line with nitrogen or inert gas during the brazing to prevent the formation of copper-oxide inside the refrigerant line. The POE oils used in R-410A applications will clean any copper-oxide present from the inside of the refrigerant lines and spread it throughout the system. This may cause blockage or failure of the valve.
6. Remove the solenoid coil from the valve. Note the arrow on the valve body of the valve and orient it according to the appropriate application below. Braze the valve into the liquid line.
 - For all air conditioner applications (cooling only), the arrow points away from the outdoor unit.
 - For heat pump applications that have TXV in the outdoor, the arrow points away from the outdoor unit.
 - For heat pump applications that have a flowrator/piston in the outdoor, the arrow points **TOWARD** the outdoor unit.

IMPORTANT: To avoid overheating the valve while brazing, wrap the component with a wet rag, or use a thermal heat trap compound as recommended by the compound manufacturer. Use a brazing alloy of 2% minimum silver content. Do not use flux.

7. Allow the valve to cool or cool it with a wet rag before reinstalling the solenoid coil.
8. For proper leak test, evacuation, and charging procedures, see the outdoor unit installation manual or service manual.

WIRING

1. Remove one of the knockouts from the solenoid valve wire connection box.
2. Install the wire bushing from the kit into the hole.
3. Use two conductor thermostat wires (supplied by the installer) to connect the solenoid valve to the condensing unit low voltage connection. Use the wire nuts from the kit to connect the thermostat wire to the solenoid valve. Route the thermostat wire along the liquid line and into the low voltage grommet and connection box. Connect one lead of the thermostat wire to the Y terminal or yellow wire and the other lead of the thermostat wire to the C/X terminal or black wire. Polarity is not important. It is not necessary to install a ground wire because grounding is provided through the valve and liquid line.
4. Secure the thermostat wire to the liquid line with the wire ties provided.
5. If required, install the hard start kit at this time.
6. Inspect all wiring and connections for proper installation before turning on the power.
7. Reinstall the control box cover.
8. Reconnect the electrical power.

OPERATION

The solenoid valve will be closed when the outdoor unit is off. The solenoid valve should open immediately when the outdoor unit comes on. Cycle the unit off and on to verify proper operation.

NOTE: SPECIFICATIONS AND PERFORMANCE DATA LISTED HEREIN ARE SUBJECT TO CHANGE WITHOUT NOTICE

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