

INSTALLATION INSTRUCTIONS

Liquid Line Solenoid Valve

NASA001LS, NASA201LS, NASA401LS

These instructions must be read and understood completely before attempting installation.

Safety Considerations:

Installing and servicing of air conditioning equipment can be hazardous due to system pressure and electrical components. Only trained personnel should install or service air conditioning equipment.

Untrained personnel can perform basic maintenance functions such as cleaning coils or cleaning and replacing filters. All other operations should be performed by trained service personnel. When working on air conditioning equipment observe precautions in the literature and on tags and labels attached to the unit.

Follow all safety codes. Wear safety glasses and work gloves. Use a quenching cloth for brazing operations. Have a fire extinguisher available.

Safety Labeling and Signal Words

DANGER, WARNING, CAUTION, and NOTE

The signal words **DANGER**, **WARNING**, **CAUTION**, and **NOTE** are used to identify levels of hazard seriousness. The signal word **DANGER** is only used on product labels to signify an immediate hazard. The signal words **WARNING**, **CAUTION**, and **NOTE** will be used on product labels and throughout this manual and other manuals that may apply to the product.

DANGER – Immediate hazards which **will** result in severe personal injury or death.

WARNING – Hazards or unsafe practices which **could** result in severe personal injury or death.

CAUTION – Hazards or unsafe practices which **may** result in minor personal injury or product or property damage.

NOTE – Used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

Signal Words in Manuals

The signal word **WARNING** is used throughout this manual in the following manner:



The signal word **CAUTION** is used throughout this manual in the following manner:



Signal Words on Product Labeling

Signal words are used in combination with colors and/or pictures on product labels.

ELECTRICAL SHOCK HAZARD

Failure to turn off electric power could result in personal injury or death.

Before installing or servicing system, turn off main power to the system. There may be more than one disconnect switch, including accessory heater(s).

INTRODUCTION

This instruction covers the installation of Liquid-Line Solenoid Valve kit Part No. NASA201LS (R-22) and NASA401LS (R-410A) for Air Conditioners and Part No. NASA001LS (R-22 or R-410A) for Heat Pumps.

The Liquid-Line Solenoid Valve holds refrigerant in the liquid line when the system is not running.

DESCRIPTION AND USAGE

The liquid-line solenoid valve closes when the thermostat demand is satisfied to prevent liquid refrigerant migration. This device is for use in long-line applications.

The liquid-line solenoid valve is open any time there is a demand signal from the thermostat.

NOTE: Refer to condensing unit or heat pump Installation Instructions for detailed control wiring.

NOTE: An accessory start capacitor and relay are required when using the liquid-line solenoid valve with single-phase, single speed compressors.

	AC	HP
R-22	NASA201LS	NASA001LS
R-410A	NASA401LS	NASA001LS

The air conditioner solenoid valve is single flow. The heat pump solenoid valve is bi-flow. Do not use the air conditioner solenoid valve on heat pumps.

NOTE: The installation of some split systems requires the use of a hard shut-off TXV on the indoor coil. In these applications, a solenoid valve may or may not be necessary. Refer to the equipment Installation Instructions and the Long Line Application Guideline.

INSTALLATION

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CAUTION

UNIT DAMAGE HAZARD

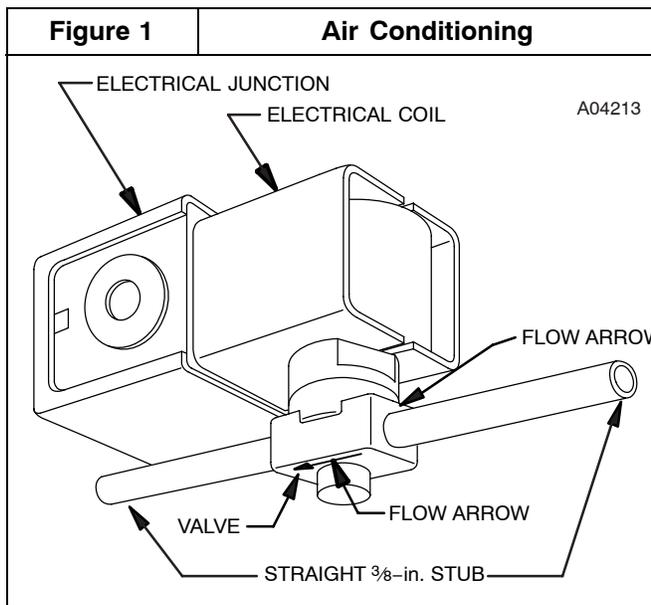
Failure to follow this caution may result in unit damage

A field-supplied 60 VA control power source may be necessary when adding the solenoid valve. Determine transformer loading prior to installation. Wiring must comply with local and National Electrical Code (NEC) requirements.

NOTE: For use in long-line applications, refer to the Long-Line Application Guideline for locations and flow arrow direction.

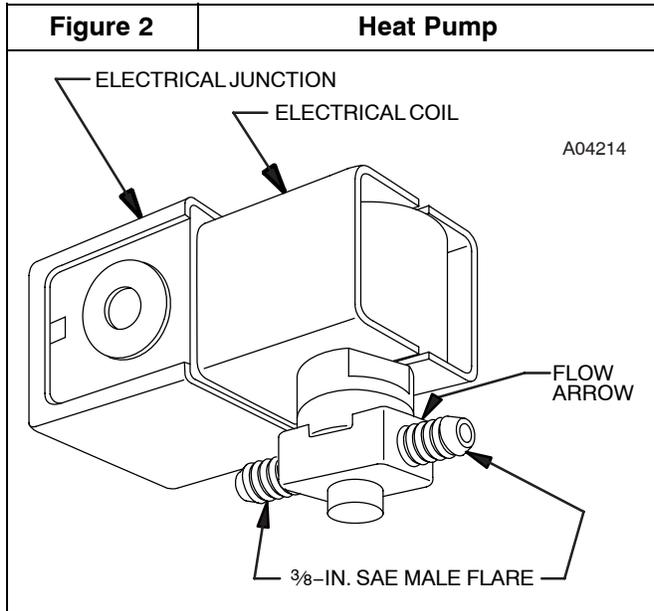
AIR CONDITIONING APPLICATION

1. Remove clip holding solenoid coil on valve assembly and slide coil off valve stem.
2. Wrap solenoid valve body with wet cloth to prevent distortion from heat.
3. Remove and discard solenoid valve end caps. Braze solenoid valve in liquid line within 2 ft. of indoor coil. Solenoid valve **flow arrow must point toward indoor coil.**
4. Reinstall solenoid coil and retainer clip. Solenoid valve must be mounted with coil above valve body. (Refer to Figure 1.)



HEAT PUMP APPLICATION

1. Cut liquid line within 2 ft. of **outdoor** unit.
2. Place 3/8-in. flare nuts on cut ends of liquid line and flare both ends.
3. Remove and discard solenoid valve end caps. Connect flare nuts to solenoid valve assembly. Solenoid valve must be mounted with coil above valve body. Arrow on valve body must point toward **outdoor** unit. (Refer to Figure 2.)



ELECTRICAL CONNECTIONS

Solenoid coil must be wired into 24-v control circuit so coil is energized (valve open) when outdoor unit is running.

For single-speed units, wire solenoid coil between Y (contactor) and C (common) terminals (refer to Figures 3 and 4).

For two-speed units, two single-pole, single throw relays (field supplied) are required to be wired per Figure 5. The liquid line solenoid valve must be wired between relay contacts and C (common) terminals. (Refer to Figure 5.)

