

Installation Instruction

High-Pressure
Switch Kit

KSAHI0101HPS
KHAHI0101HPS

NOTE: Read the entire instruction manual before starting the installation.
This symbol → indicates a change since last issue.

SAFETY CONSIDERATIONS

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

Untrained personnel can perform basic maintenance functions, such as cleaning coils, and cleaning and replacing filters. All other operations should be performed by trained service personnel. When working on split system 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.

⚠ WARNING: Before beginning any modification be sure main electrical disconnect switch is in the OFF position. TAG DISCONNECT SWITCH WITH A SUITABLE WARNING LABEL. Electrical shock can cause personal injury or death.

INTRODUCTION

These instructions cover installation of High-Pressure Switch Kit KSAHI0101HPS on split-system air conditioners and KHAHI0101HPS on heat pumps.

→ The High-Pressure Switch Kit includes the following items:

High-Pressure Switch	1
Adapter Tee	1
Extender Tube	1
Wirenut	2
Pressure Switch Adapter (heat pump)	1
Installation Instructions	1
DD24FA051 Flare Gaskets	2

INSTALLATION

⚠ CAUTION: When making flare connections, use one of the flare gaskets provided in the kit to ensure a leak-tight refrigerant connection. Use a backup wrench to avoid breaking connection or splitting flare.

NOTE: The liquid- and vapor-service valves are located outside of the unit at the rear. The smaller valve is the liquid-service valve; the larger valve is the vapor-service valve.

PROCEDURE 1—HIGH-PRESSURE SWITCH INSTALLATION (FOR PROTECTION IN COOLING ONLY)

Refer to Fig. 1 and proceed as follows to install the high-pressure switch.

NOTE: Make sure the liquid-service valve is in the fully back seated (counterclockwise) position before installation (Back seating service valves have no valve core in the service port).

NOTE: When installing both high- and low-pressure switches on liquid- service valve, connect second tee to service fitting of first tee.

1. Remove knockout in service panel next to service valves.
2. Carefully uncoil extender tube; tube must not be kinked. Securely connect extender tube flare nut to side of adapter tee without valve core.
3. Route extender tube completely through knockout so that tee can be attached to liquid-service valve later.
4. Securely connect pressure switch flare nut to male flare fitting on extender tube inside unit. (Using backup wrench, torque to 140 in. lb.)
5. Remove seal cap from service fitting on liquid-service valve and securely connect to remaining male flare fitting on adapter tee.
6. Securely connect flare nut on adapter tee to service fitting on liquid-service valve.
7. On back seating valves, remove liquid-service valve stem cap and open valve 3/4 turn.

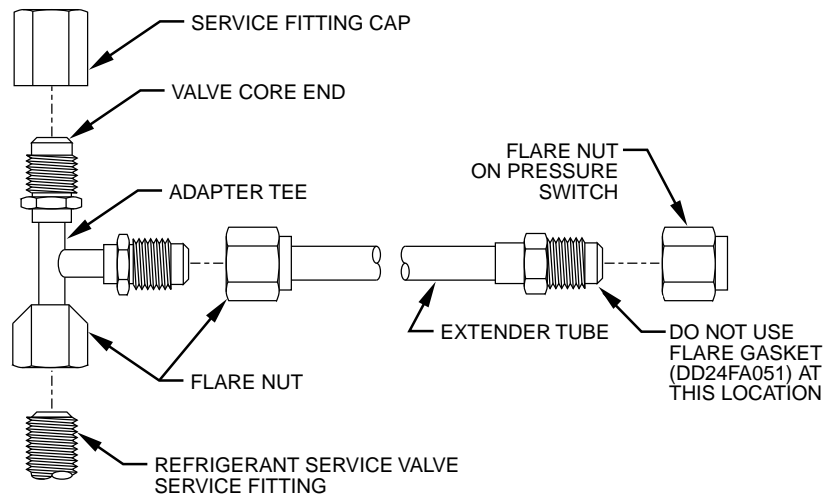


Fig. 1—High-Pressure Switch Refrigerant Connections

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8. Replace liquid-service valve stem cap fingertight and further tighten cap 1/12 turn.
9. Check all refrigerant connections for leaks and repair if necessary.

PROCEDURE 2—HIGH-PRESSURE SWITCH INSTALLATION (FOR PROTECTION IN BOTH HEATING AND COOLING MODES)

Refer to Fig. 2 and proceed as follows to install the high-pressure switch.

NOTE: When installing the pressure switch adaptor to a previously installed unit, the unit must be pumped down and the field-installed liquid line disconnected. Refer to Pumpdown Procedure in the Split System Residential Air Conditioning and Heat Pump Service Manual.

1. Remove knockout in service panel next to liquid-service valve.
2. Partially straighten 3/16-in. OD tube portion and route flare fitting end through knockout hole.
3. Securely connect pressure switch flare nut to male flare fitting on 3/16-in. OD tube inside unit. (Using backup wrench, torque to 140 in. lb.)
4. Remove sweat adapter from field liquid line fitting on service fitting on liquid-service valve and securely connect 3/8-in. tube portion of pressure switch adaptor.
5. Braze interconnecting liquid line to belled end of pressure switch adaptor.

CAUTION: To prevent melting of the 3/16-in. OD tube joint, place a wet cloth at the joint area.

6. Check all refrigerant connectors for leaks and repair if necessary.
7. Evacuate indoor coil and refrigerant lines.
8. Open service valves and let charge back into system.
9. Make pressure switch electrical connection per Procedure 3.

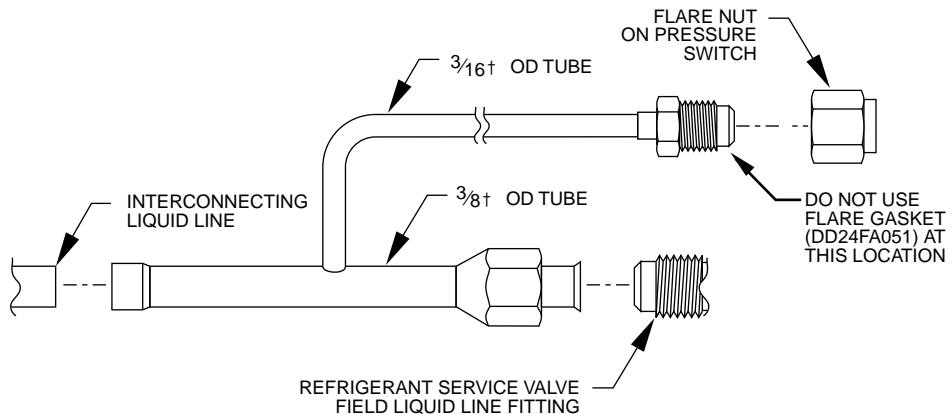


Fig. 2—High-Pressure Switch Adaptor Connections

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PROCEDURE 3—ELECTRICAL CONNECTION

(See Fig. 3 for Heat Pump and Fig. 4 for Air Conditioner.)

NOTE: In some instances it may be necessary to clip the quick-connect terminals from the wire leads and strip the insulation from the end of the lead to make an electrical connection. Wirenuts have been provided for this purpose.

1. Locate unit contactor coil terminals or, if equipped, compressor time delay terminal T1.
2. On units without compressor time delay, make electrical connections as follows:
 - a. One pressure switch in unit: Cut Y lead approximately 4 in. from contactor coil terminal. Connect 1 pressure switch lead to 1 cut lead. Connect other pressure switch lead to other cut lead.
 - b. Both high- and low-pressure switches in unit: Cut Y lead approximately 4 in. from contactor coil terminal. Connect 1 high pressure switch lead to 1 cut lead, then connect other high-pressure lead to 1 low-pressure lead. Connect remaining low-pressure lead to other cut lead.
3. On units with compressor time delay, make electrical connections as follows:
 - a. One pressure switch in unit: Cut wire leading to T1 on time delay board. Connect 1 pressure switch lead to 1 cut lead. Connect other pressure switch lead to other cut lead.
 - b. Both high- and low-pressure switches in unit: Cut wire leading to T1 on time delay board. Connect 1 high-pressure lead to 1 cut lead, then connect other high-pressure lead to 1 low-pressure lead. Connect remaining low-pressure lead to other cut lead.
4. Restore power and check unit operation.

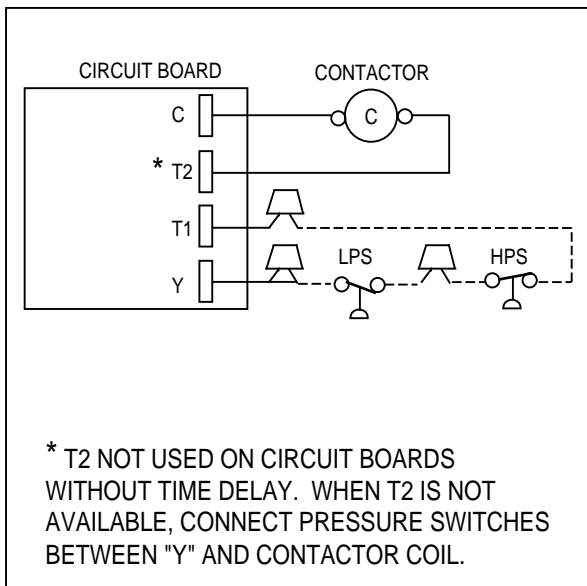


Fig. 3—Heat Pump Electrical Connections

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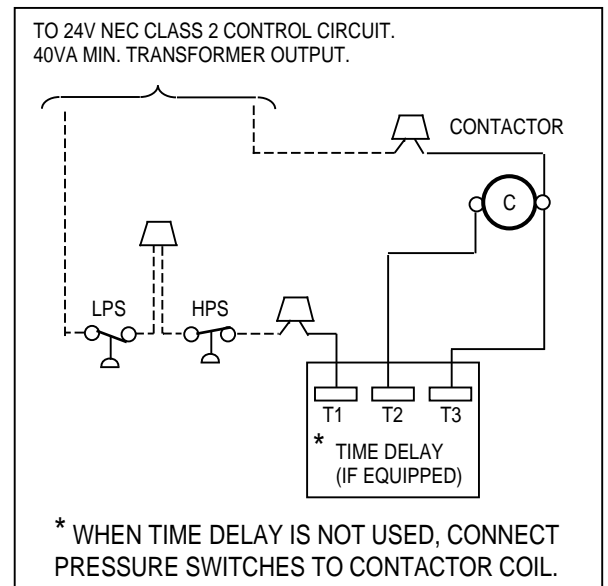


Fig. 4—Air Conditioner Electrical Connections

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SERVICE TRAINING

Packaged Service Training programs are an excellent way to increase your knowledge of the equipment discussed in this manual, including:

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- Maintenance
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