

Installation Instructions

Procedure for Injecting MJX Oil Additive 12½ - 25 Ton Cooling and Gas/Electric Units with Short Orifice Metering Device

Used With:
T/YC*150-301

SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

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RT-SVN22A-EN

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Cautions, Warnings and Notices

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury

CAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE

Indicates a situation that could result in equipment or property-damage only accidents.

Important: Environmental Concerns! Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants-including industry replacements for CFCs such as HCFCs and HFCs.

Important: Responsible Refrigerant Practices! Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified. The Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

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WARNING

Personal Protective Equipment Required!

Installing/servicing this unit could result in exposure to electrical, mechanical and chemical hazards. Before installing/servicing this unit, technicians MUST put on all Personal Protective Equipment (PPE) recommended for the work being undertaken. ALWAYS refer to appropriate MSDS sheets and OSHA guidelines for proper PPE. When working with or around hazardous chemicals, ALWAYS refer to the appropriate MSDS sheets and OSHA guidelines for information on allowable personal exposure levels, proper respiratory protection and handling recommendations. If there is a risk of arc or flash, technicians MUST put on all necessary Personal Protective Equipment (PPE) in accordance with NFPA70E for arc/flash protection PRIOR to servicing the unit. Failure to follow recommendations could result in death or serious injury.

General Information

This is a functional description of how to inject "MJ/X" R-410A oil additive (CHM01005) with a Yellow Jacket or similar oil injection tool to open restricted short orifice metering devices in Alliance compressor (orange-red) systems. If other injection methods and equipment are to be used, these instructions should only be a guideline. Refer to specific instructions from the manufacturer of your oil injection device for details.

This process is only approved for R-410A circuits with Alliance (orange-red) compressors. This oil additive and procedure is not approved for R-410A circuits with Trane (greenish) compressors, Danfoss (blue) compressors or in any R-22 system.

NOTICE

Compressor Damage!

Do not inject more than 4 oz of oil additive. Adding more additive than recommended will not speed up the process and could result in compressor damage. Allow up to one week of run time to clear restricted orifices.

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Description of Yellow Jacket Oil Injector used in this example procedure:

- Part number #69562 4 oz. oil injector (TOL01532)
- Replacement O-ring for cap #69564 (5 pk) (RNG02044)

Note: For purposes of this procedure the top of the injector will be the short process hose and the bottom will be the removable cap with the service port as shown in [Figure 1](#).

Figure 1. Yellow Jacket oil injector

Low pressure outlet with removable cap, ball valve, and hose with female swivel nut end with depressor

Ball valve – Shown in the closed position

Inside of vessel is graduated with grooves for one ounce. 4 ounces is just under the threads for cap.

Outside is graduated as well for reference

High pressure inlet ¼" male service port w/ core (at bottom of vessel)

Bottom of injector

Other equipment required

- MJX oil additive
- Manifold gage set for R-410A
- Safety glasses and gloves
- Clean rag for setting top cap aside

Procedure

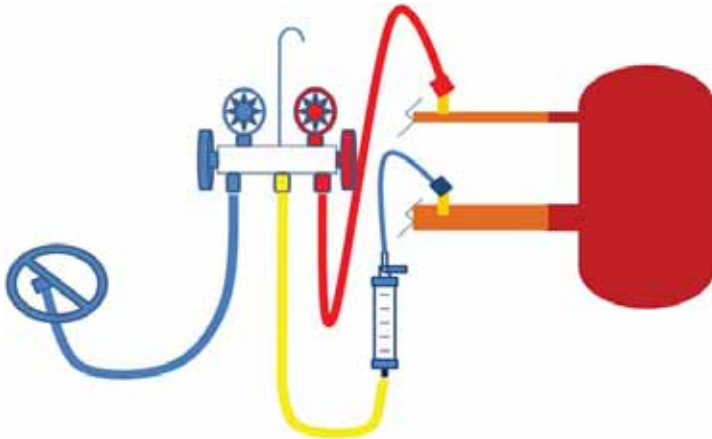
CAUTION

Hazardous Pressure!

The following procedure involves working with gas under pressure. Always keep the injector and hose fitting pointed in a safe direction. For [Step 13](#) and [Step 20](#), allow gas to escape at a low rate. Failure to follow instructions could result in minor to moderate injury.

When injecting the oil additive it is necessary to connect the injector to the high side through the pressure gauge, purge the gauge lines and injector, then after the injector is filled with oil additive, purge again. After purging the injector, the injector hose is connected to the suction line for injection into the system. Detailed instructions are listed below.

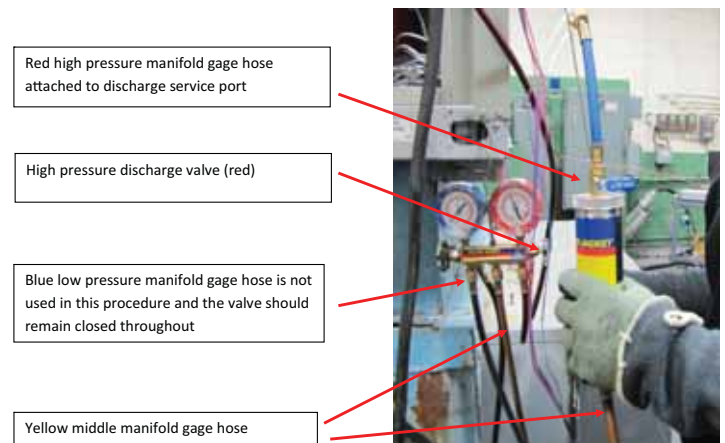
Figure 2. Connecting the injector to the high side



1. Make sure the evaporator coil is clear of ice. Allow the indoor fan to

- run to melt it quicker if necessary but do not run the compressors while ice is present.
2. Allow the circuit in which the oil additive will be injected to run a minimum of 5 minutes. The following procedure must be performed while the compressor is running. The unit does not need to be turned off if it is already operating but it does need to remain running.
3. Verify that both valves of the R-410A manifold gage set are closed.

Figure 3. Set up



4. Connect the high pressure line (red) to the compressor discharge service port of the circuit that the oil additive will be injected into.
5. Connect the middle manifold hose (yellow) to the bottom (inlet) port of the injector.
6. With the injector upright, remove the cap with the valve and short hose.
7. Slowly and slightly open the manifold gage discharge valve to purge the hoses up to the injector.
8. Pour in the prescribed amount of oil additive using the 1 oz graduations as a guide.

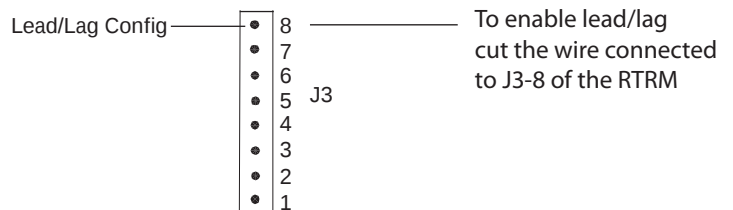
Important: Always remove the cap with the valve and short hose with the valve in the open position. Once the cap is seated hand tight, the valve should then be closed.

9. With the ball valve still open, replace the cap with the ball valve and hose.

Important: Make sure the cap O-ring slides into place (keep ball valve open).

10. When the cap with the ball valve and hose is fully threaded in hand tight close the ball valve.
11. While keeping the injector upright, slightly and slowly open the manifold gage discharge valve (red hose) to pressurize the gage hoses and the injector.
12. Close the manifold gage discharge valve (red hose).
13. Slightly and slowly open the ball valve to allow a small amount of gas pressure to escape the injector. This effectively purges the hoses and injector of any air. Once any fluid escapes quickly close the ball valve again to seal it.
14. With the ball valve closed connect the hose of the injector to the suction service port of the circuit that the oil additive will be injected into.
15. Turn the injector upside down so that the ball valve and hose are at the bottom, and fully open the ball valve.
16. Open the high pressure discharge valve (red hose) of the manifold gage set slightly for approximately 1 minute. The yellow gage hose should warm up indicating the flow of hot gas.
17. After approximately 1 minute close the high pressure discharge valve (red hose) of the manifold gage set.
18. Once the high pressure discharge valve (red hose) of the manifold gage set is closed wait an additional 1 minute for the injector to equalize with the suction pressure of the unit.
19. Fully close the ball valve of the injector and remove the injector process hose from the suction service port.
20. Open the ball valve slightly to allow it to equalize with the atmosphere.
21. After the oil additive injection, configure the unit for "lead/lag" compressor operation by cutting the wire on J3-8 of the RTRM. This is done to ensure operation of both compressors while the orifices are clearing out. Failure to do this may require longer operation to clear orifices.

Figure 4. Cut the wire on J3-8 of the RTRM



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