1) Connect projection side of charging hose (which comes from gauge manifold) to gas stop valve's service port.
2) Fully open gauge manifold's low-pressure valve (Lo) and completely close its high-pressure valve (Hi). (High-pressure valve subsequently requires no operation.)
3) Do vacuum pumping and make sure that the compound pressure gauge reads –0.1MPa (–76cmHg). (The vacuum pump should run for at least 10 minutes.)
4) Close gauge manifold's low-pressure valve (Lo) and stop vacuum pump. (Keep this state for a few minutes to make sure that the compound pressure gauge pointer does not swing back.)*1
5) Remove covers from liquid stop valve and gas stop valve.
6) Turn the liquid stop valve's rod 90° counterclockwise with a hexagonal wrench to open valve. Close it after 5 seconds, and check for gas leakage. Using soapy water, check for gas leakage from indoor unit's fl are and outdoor unit's fl are and valve rods. After the check is complete, wipe all soapy water off.
7) Disconnect charging hose from gas stop valve's service port, then fully open liquid and gas stop valves. (Do not attempt to turn valve rod beyond its stop.)
8) Tighten valve caps and service port caps for the liquid and gas stop valves with a torque wrench at the specified torques.

*1 If the compound pressure gauge pointer swings back, refrigerant may have water content or a loose pipe joint may exist. Check all pipe joints and retighten nuts as needed, then repeat steps 2 through

MITSUBISHI

PURGING PROCEDURES AND LEAK TEST

1) Remove service port cap of stop valve on the side of the outdoor unit gas pipe. (The stop valves are fully closed and covered in caps in initial state.)

2)) Connect gauge manifold valve and vacuum pump to service port of stop valve on the gas pipe side of the outdoor unit.

3) Run the vacuum pump. (Vacuumize for more than 15 minutes.)

4) Check the vacuum with gauge manifold valve, then close gauge manifold valve, and stop the vacuum pump.

5) Leave as it is for one or two minutes. Make sure pointer gauge manifold valve remains in the same position. Confirm that pressure gauge shows –0.101 MPa [Gauge] (–760 mmHg).

6) Remove gauge manifold valve quickly from service port of stop valve.

7) After refrigerant pipes are connected and evacuated, fully open all stop valves on both sides of gas pipe and liquid pipe. Operating without fully opening lowers the performance and this causes trouble.

8) Refer to 1-3., and charge the prescribed amount of refrigerant if needed. Be sure to charge slowly with liquid refrigerant. Otherwise, composition of the refrigerant in the system may be changed and affect performance of the air conditioner

9) Tighten cap of service port to obtain the initial status.

10) Leak test.

TRANE

Vacuum action

1. Remove caps from the liquid valve, the gas valve, and from the service port.

2. Connect the hose, from the low pressure side of the manifold, to the service port of the unit's gas valve. Both gas and liquid valves must be kept closed to prevent any possible refrigerant leaks.

3. Connect the hose used for the pulldown, to the vacuum pump.

4. Continue with the purge until the gauge reaches a value not to exceed 350 microns; close the valve going towards the vacuum pump. Important: Do not open the service valves until the purge procedure has terminated and leak verification has been performed on the refrigerant lines and on the indoor coil.

5. Observe the vacuum gauge. Pulldown will be complete if the micron gauge does not rise above 500 microns in one (1) minute lapse.

6. Once the vacuum has ended, close the vacuum pump and the micro gauge and close all manifold valves.

7. Open the liquid valve slightly, in such a way, as to allow the flow of a small amount of refrigerant towards the connection in order to balance the pressure inside and outside of said piping, and thus avoiding the entry of air into the piping connection when removing the hose.

8. Place the caps back on the liquid valve, the gas valve, and the service port.

Leak detection

1. Using a leak detector, verify the presence of any leaks at all connection points.

2. If you do not have a detector at hand, use soapy water. Apply the soapy water on each joint and wait a few minutes. If bubbles appear, it will indicate a leak which must be immediately repaired.

TOSIPAHA

1. Connect the charge hose from the manifold valve to the service port of the packed valve at gas side.

2. Connect the charge hose to the port of the vacuum pump.

3. Open fully the low pressure side handle of the gauge manifold valve.

4. Operate the vacuum pump to start evacuating. Perform evacuating for about 15 minutes if the piping length is 20 meters. (15 minutes for 20 meters) (assuming a pump capacity of 27 liters per minute) Then confirm that the compound pressure gauge reading is –101 kPa (–76 cmHg).

5. Close the low pressure side valve handle of the gauge manifold valve.

6. Open fully the valve stem of the packed valves (both gas and liquid sides).

7. Remove the charging hose from the service port.

8. Securely tighten the caps on the packed valves.