Maintenance

⚠ WARNING

Hazardous Voltage w/Capacitors!

Failure to disconnect power and discharge capacitors before servicing could result in death or serious injury.

Disconnect all electric power, including remote disconnects and discharge all motor start/run capacitors before servicing. Follow proper lockout/tagout procedures to ensure the power cannot be inadvertently energized. For variable frequency drives or other energy storing components provided by Trane or others, refer to the appropriate manufacturer's literature for allowable waiting periods for discharge of capacitors. Verify with an appropriate voltmeter that all capacitors have discharged.

For additional information regarding the safe discharge of capacitors, see PROD-SVB06A-EN.

NOTICE

Operating Under Vacuum!

Failure to follow these instructions will result in compressor failure.

Do not operate or apply power to the compressor while under a vacuum.

Perform all of the indicated maintenance procedures at the intervals scheduled. This will prolong the life of the unit and reduce the possibility of costly equipment failure.

Monthly

Conduct the following maintenance inspections once per month.

- ☐ Check unit wiring to ensure all connections are tight and that the wiring insulation is intact.
- ☐ Inspect the condenser coils for dirt and debris. If the coils appear dirty, clean them.
- ☐ With the unit operating in the cooling mode, check the suction and discharge pressures and compare them with Pressure Curve values in unit Service Facts. Record these readings on the "Maintenance Log," p. 44.

Annually (Cooling Season)

The following maintenance procedures must be performed at the beginning of each cooling season to ensure efficient unit operation.

- ☐ Perform all of the monthly maintenance inspections.
- ☐ With the unit operating, check unit superheat and record the reading in the "Maintenance Log," p. 44.
- ☐ Remove any accumulation of dust and/or dirt from the unit casing.
- ☐ Remove corrosion from any surface and repaint. Check the gasket around the control panel door to ensure it fits correctly and is in good condition to prevent water leakage.
- ☐ Inspect the control panel wiring to ensure that all connections are tight and that the insulation is intact.

  Note: *Condenser fan motors are permanently lubricated.*
- ☐ Check refrigerant piping and fittings for leaks
- ☐ Inspect the condenser coils for dirt and debris. If the coils appear dirty, clean them.

Coil Cleaning

Regular coil maintenance, including annual cleaning-enhances the unit's operating efficiency by minimizing:

- compressor head pressure and amperage draw
- water carryover
- fan brake horsepower
- static pressure losses

At least once each year — or more often if the unit is located in a "dirty" environment — clean the coil using the instructions outlined below. Be sure to follow these instructions as closely as possible to avoid damaging the coils.

Tube and Fin

Note: *To clean refrigerant coils, use a soft brush and a sprayer. Contact your local Parts Center for appropriate detergents.*

1. Remove enough panels from the unit to gain safe access to coil.
2. Straighten any bent coil fins with a fin comb.
3. Remove loose dirt and debris from both sides of the coil with a soft brush.
4. Mix the detergent with water according to the manufacturer's instructions. If desired, heat the solution to 150° F maximum to improve its cleansing capability.
5. Pour the cleaning solution into the sprayer.
6. Spray the leaving-airflow side of the coil first; then spray the opposite side of the coil. Allow the cleaning solution to stand on the coil for five minutes.
7. Rinse both sides of the coil with cool, clean water.
8. Inspect both sides of the coil; if it still appears to be dirty, repeat Step 7 and 8.
9. Reinstall all of the components and panels removed

in Step 1; then restore power to the unit.

10. Using a fin comb, straighten any coil fins that were inadvertently bent during the cleaning process.

Maintenance Log

Date	Ambient Temp. (°F)	Evaporator Entering Air		Compressor				Superheat (°F) (at compressor)		Subcooling (°F) (at service valve)	
		Dry Bulb	Wet Bulb	Suction Pressure		Discharge Pressure					
				(C1)	(C2)	(C1)	(C2)	Circuit #1	Circuit #2	Circuit #1	Circuit #2

Note: *Perform each inspection once per month (during cooling season) while unit is operating*

Wiring Diagram Matrix

Table 17. Wiring schematics R-410A heat pump

Model Number	Ton	Refrigerant Circuit	Voltage	Hz	Ph	Schematics	Connection Diagrams
						ReliaTel	ReliaTel
TWA061DD	5	Single	380-415	50	3	23130406	23130419
TWA073D3	6	Single	208-230	60	3	23130406	23130419
TWA073D4	6	Single	460	60	3	23130406	23130419
TWA073DW	6	Single	575	60	3	23130406	23130419
TWA073DK	6	Single	380	60	3	23130406	23130419
TWA076DD	6.25	Single	380-415	50	3	23130406	23130419
TWA090D3	7.5	Single	208-230	60	3	23130406	23130419
TWA090D4	7.5	Single	460	60	3	23130406	23130419
TWA090DW	7.5	Single	575	60	3	23130406	23130419
TWA090DK	7.5	Single	380	60	3	23130406	23130419
TWA101DD	8.33	Single	380-415	50	3	23130406	23130419
TWA120D3	10	Single	208-230	60	3	12131689	23130420DRW
TWA120D4	10	Single	460	60	3	23130406	23130419
TWA120DW	10	Single	575	60	3	23130406	23130419
TWA120DK	10	Single	380	60	3	23130406	23130419
TWA156ED	13	Dual	380-415	50	3	23130406	23130429
TWA180E3	15	Dual	208-230	60	3	23130406	23130429
TWA180E4	15	Dual	460	60	3	23130406	23130429
TWA180EW	15	Dual	575	60	3	23130406	23130429
TWA180EK	15	Dual	380	60	3	23130406	23130429
TWA201ED	16.7	Dual	380-415	50	3	23130406	23130429
TWA240E3	20	Dual	208-230	60	3	12131689	12131702
TWA240E4	20	Dual	460	60	3	23130406	23130429
TWA240EW	20	Dual	575	60	3	23130406	23130429
TWA240EK	20	Dual	380	60	3	23130406	23130429

Notes

The manufacturer optimizes the performance of homes and buildings around the world. A business of Ingersoll Rand, the leader in creating and sustaining safe, comfortable and energy efficient environments, the manufacturer offers a broad portfolio of advanced controls and HVAC systems, comprehensive building services, and parts. For more information, visit www.IRCO.com.

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