Maintenance

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.

Fan Belt Adjustment

⚠ WARNING

Rotating Components!

Failure to disconnect power before servicing could result in rotating components cutting and slashing technician which could result in death or serious injury.

Disconnect all electric power, including remote disconnects before servicing. Follow proper lockout/tagout procedures to ensure the power can not be inadvertently energized.

The fan belts must be inspected periodically to assure proper unit operation. Replacement is necessary if the belts appear frayed or worn.

When removing or installing the new belts, do not stretch them over the sheaves. Loosen the belts using the belt tension adjustment bolts on the motor mounting base.

Once the new belts are installed, using a Browning or Gates tension gauge (or equivalent), adjust the belt tension as follows:

1. To determine the appropriate belt deflection:
   a. Measure the center-to-center shaft distance (in inches) between the fan and motor sheaves.
   b. Divide the distance measured in Step 1a by 64; the resulting value represents the amount of belt deflection that corresponds to the proper belt tension.
2. Set the large O-ring on the belt tension gauge at the deflection value determined in Step 1b.
3. Set the small O-ring at zero on the force scale of the gauge plunger.
4. Place the large end of the gauge at the center of the belt span; then depress the gauge plunger until the large O-ring is even with the top of the next belt or even with a straightedge placed across the fan and motor sheaves.
5. Remove the belt tension gauge. The small O-ring now indicates a number other than zero on the plunger's force scale. This number represents the force (in pounds) required to give the needed deflection.
6. Compare the "force" scale reading (Step 5) with the appropriate "force" value listed in the Belt tension table. If the "force" reading is outside the range, readjust the belt tension.

   Note: *Actual belt deflection "force" must not exceed the maximum "force" value shown in Figure 27, p. 35.*

   Recheck the belt tension at least twice during the first 2 to 3 days of operation. Belt tension may decrease until the new belts are "run in".

Figure 27. Belt tension gauge

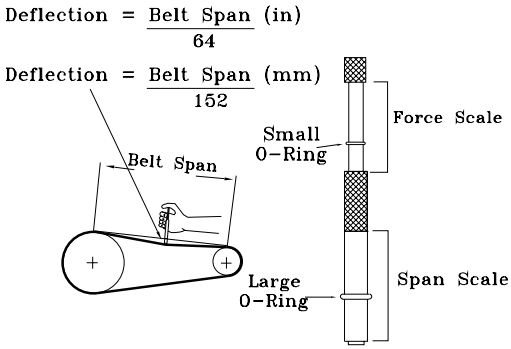

Table 11. Belt tension measurement and deflection

Belts Cross Section	Small Pitch Diameter Range	Deflection Force (Lbs.)			
		Standard V-Belt		V-Belt with Molded Notches	
		Min.	Max.	Min.	Max.
A	3.0 - 3.6	3	4-1/2	3-7/8	5-1/2
	3.8 - 4.8	3-1/2	5	4-1/2	6-1/4
	5.0 - 7.0	4	5-1/2	5	6-7/8
B	3.4 - 4.2	4	5-1/2	5-3/4	8
	4.4 - 5.6	5-1/8	7-1/8	6-1/2	9-1/8
	5.8 - 8.8	6-3/8	8-3/4	7-3/8	10-1/8

Monthly

The following warning complies with State of California law, Proposition 65.

⚠ 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-SVB06*-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.

⚠ WARNING

Fiberglass Wool!

Exposition to glass wool fibers without all necessary PPE equipment could result in cancer, respiratory, skin or eye irritation, which could result in death or serious injury. Disturbing the insulation in this product during installation, maintenance or repair will expose you to airborne particles of glass wool fibers and ceramic fibers known to the state of California to cause cancer through inhalation.

You MUST wear all necessary Personal Protective Equipment (PPE) including gloves, eye protection, a NIOSH approved dust/mist respirator, long sleeves and pants when working with products containing fiberglass wool.

Precautionary Measures:

- **Avoid breathing fiberglass dust.**
- **Use a NIOSH approved dust/mist respirator.**
- **Avoid contact with the skin or eyes. Wear long-sleeved, loose-fitting clothing, gloves, and eye protection.**
- **Wash clothes separately from other clothing; rinse washer thoroughly.**
- **Operations such as sawing, blowing, tear-out, and spraying may generate fiber concentrations requiring additional respiratory protection. Use the appropriate NIOSH approved respirator.**

First Aid Measures:

- **Eye Contact - Flush eyes with water to remove dust. If symptoms persist, seek medical attention.**
- **Skin Contact - Wash affected areas gently with soap and warm water after handling.**

Conduct the following maintenance inspections once per month:

- ☐ Inspect air filters and clean (or replace) if necessary.
- ☐ Check unit wiring to ensure all connections are tight and that the wiring insulation is intact.
- ☐ Check drain pans and condensate piping to insure they are free of obstacles.
- ☐ Manually rotate the indoor fan to ensure proper operation.
- ☐ Inspect the evaporator coils for dirt and debris. If the coils appear dirty, clean them.
- ☐ Observe indoor fan operation and correct any unusual or excessive vibration. Clean blower wheels as needed.

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. 38
- ☐ 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 evaporator fan belt. If it is worn or frayed, replace it.
- ☐ Inspect the control panel wiring to ensure that all connections are tight and that the insulation is intact.
- ☐ Check refrigerant piping and fittings for leaks.
- ☐ Inspect the evaporator 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.

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		Circuit #1	Circuit #2	Circuit #1	Circuit #2
				(C1)	(C2)	(C1)	(C2)				

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

Wiring Diagram Matrix

Table 12. Wiring schematics for TWE air handlers

Model No.	Ton	Circuit	Volts	Hz	Ph	Electrome-chanical (Std)	Electromechanical (2 speed)		Reliatel	
						Schematic/ Connection	Schematic	Connection	Schematic	Connection
TWE0514DA	4.6	Single	380-415	50	3	12132178	N/A	N/A	N/A	N/A
TWE06041A	5	Single	208-230	60	1	12132179	N/A	N/A	N/A	N/A
TWE06043A	5	Single	208-230	60	3	12132178	N/A	N/A	N/A	N/A
TWE06044A	5	Single	460	60	3	12132178	N/A	N/A	N/A	N/A
TWE0604WA	5	Single	575	60	3	12132178	N/A	N/A	N/A	N/A
TWE0604KA	5	Single	380	60	3	12132178	N/A	N/A	N/A	N/A
TWE06043B	5	Dual	208-230	60	3	12132176	N/A	N/A	N/A	N/A
TWE06044B	5	Dual	460	60	3	12132176	N/A	N/A	N/A	N/A
TWE06041B	5	Dual	208-230	60	1	12132177	N/A	N/A	N/A	N/A
TWE0724DB	6	Dual	380-415	50	3	12132176	N/A	N/A	N/A	N/A
TWE07243B	6	Dual	208-230	60	3	12132176	23130450	23130452	12131400	12131401
TWE07244B	6	Dual	460	60	3	N/A	23130450	23130452	12131400	12131401
TWE0724WB	6	Dual	575	60	3	12132176	23130450	23130452	12131400	12131401
TWE0724KB	6	Dual	380	60	3	12132176	N/A	N/A	N/A	N/A
TWE0764DA	6.25	Single	380-415	50	3	12132178	N/A	N/A	N/A	N/A
TWE0764DB	6.25	Dual	380-415	50	3	12132176	N/A	N/A	N/A	N/A
TWE09041A	7.5	Single	208-230	60	1	12132179	N/A	N/A	N/A	N/A
TWE09043A	7.5	Single	208-230	60	3	12132178	N/A	N/A	N/A	N/A
TWE0904WA	7.5	Single	575	60	3	12132178	N/A	N/A	N/A	N/A
TWE0904KA	7.5	Single	380	60	3	12132178	N/A	N/A	N/A	N/A
TWE09041B	7.5	Dual	208-230	60	1	12132177	N/A	N/A	N/A	N/A
TWE09043B	7.5	Dual	208-230	60	3	12132176	23130450	23130452	12131400	12131401
TWE09044B	7.5	Dual	460	60	3	N/A	23130450	23130452	12131400	12131401
TWE0904WB	7.5	Dual	575	60	3	12132176	23130450	23130452	12131400	12131401
TWE0904KB	7.5	Dual	380	60	3	12132176	N/A	N/A	N/A	N/A
TWE1014DA	8.33	Single	380-415	50	3	12132178	N/A	N/A	N/A	N/A
TWE1014DB	8.33	Dual	380-415	50	3	12132176	N/A	N/A	N/A	N/A
TWE12041A	10	Single	208-230	60	1	12132179	N/A	N/A	N/A	N/A
TWE12043A	10	Single	208-230	60	3	12132178	23130450	23130452	12131400	12131401
TWE12044A	10	Single	460	60	3	N/A	23130450	23130452	12131400	12131401
TWE1204WA	10	Single	575	60	3	12132178	23130450	23130452	12131400	12131401
TWE1204KA	10	Single	380	60	3	12132178	N/A	N/A	N/A	N/A
TWE12043B	10	Dual	208-230	60	3	12132176	23130450	23130452	12131400	12131401
TWE12044B	10	Dual	460	60	3	N/A	23130450	23130452	12131400	12131401
TWE1204WB	10	Dual	575	60	3	12132176	23130450	23130452	12131400	12131401
TWE1204KB	10	Dual	380	60	3	12132176	N/A	N/A	N/A	N/A
TWE12041B	10	Dual	208-230	60	1	12132177	N/A	N/A	N/A	N/A
TWE1264DB	10.4	Dual	380-415	50	3	12132176	N/A	N/A	N/A	N/A
TWE15043B	12.5	Dual	208-230	60	3	12132176	23130450	23130452	12131400	12131401
TWE15044B	12.5	Dual	460	60	3	N/A	23130450	23130452	12131400	12131401
TWE1504WB	12.5	Dual	575	60	3	12132176	23130450	23130452	12131400	12131401
TWE1504KB	12.5	Dual	380	60	3	12132176	N/A	N/A	N/A	N/A
TWE1564DB	13	Dual	380-415	50	3	12132176	N/A	N/A	N/A	N/A
TWE18043B	15	Dual	208-230	60	3	12132176	23130450	23130452	12131400	12131401
TWE18044B	15	Dual	460	60	3	N/A	23130450	23130452	12131400	12131401
TWE1804WB	15	Dual	575	60	3	12132176	23130450	23130452	12131400	12131401