Removing Old Cone or Vane

1. Shut off fan and lock out electrical power.
2. Remove inlet screens if applicable.
3. **For Old Inlet Cone Removal** — Loosen fasteners at periphery of inlet cone and remove old cone.
3. **For Old Inlet Vane Removal** — Loosen hex nut (item 10 and 13 in Figure 2) and remove vane handle, and control linkage and oilite bearings.
4. Loosen fasteners which hold old inlet vane to fan housing, and remove the vane and control linkage.
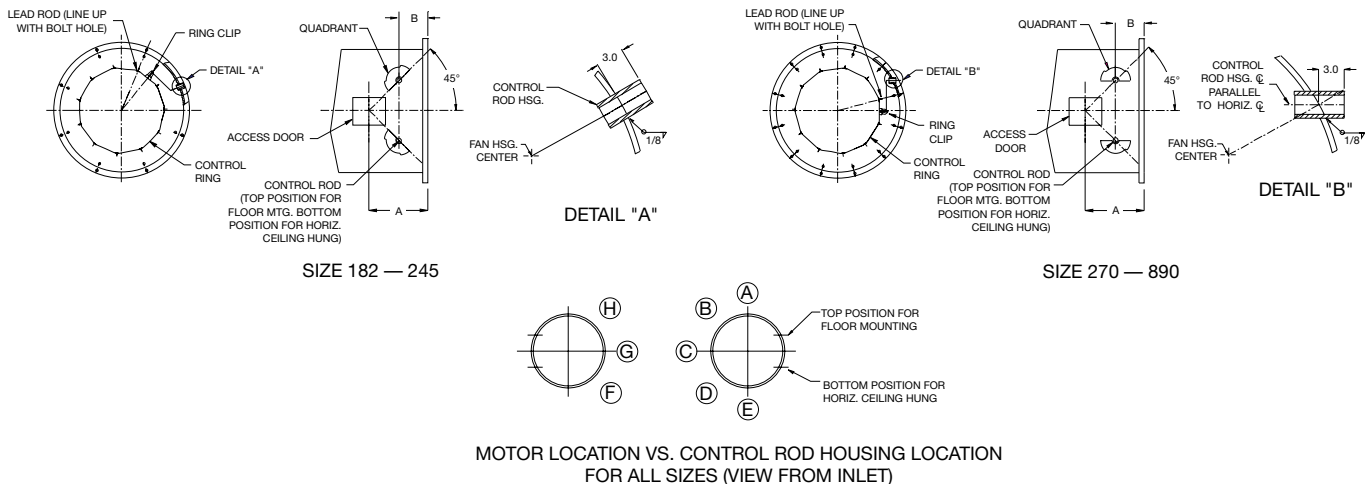
Assembling Nested Inlet Vane

For New Installation

1. Using Figure 2 as a guide, assemble items 5 through 16 to the new inlet vane, measuring threaded linkage rod length to fit. For fan sizes 182 through 245, the control linkage bar (item 5) has a 15-degree right-hand twist to allow the inlet vane to fully open and close.
2. Center the inlet vane in location of old inlet funnel and rotate the inlet vane to position the control ring clip as shown in Figure 1.
3. Using dimensions in Figure 1, cut a hole in the fan housing for attaching control rod.
4. Install all remaining parts to the inlet vane according to Figure 2, using the setscrews to hold the control rod to vane handle and control linkage bar.

5. Adjust position of connecting links as required to allow vane to open and close smoothly. The length of threaded linkage rod (item 6) may have to be adjusted as necessary.
6. Tack weld the control rod to vane handle and control linkage bar. Using dimensions in Figure 1 weld the quadrant (item 2) and control rod housing (item 4) to the fan housing.
7. Reinstall inlet screening if applicable.

For Replacement

1. Using Figure 2 as a guide, assemble items 5 through 16 to the new inlet vane, measuring threaded linkage rod length to fit. For fan sizes 182 through 245, the control linkage bar (item 5) has a 15-degree right-hand twist to allow the inlet vane to fully open and close.
2. Center the inlet vane in location of the old inlet vane, and rotate until the hole on the control linkage bar is lined up with the hole on the fan housing.
3. Install all remaining parts to the inlet vane according to Figure 2, using setscrews to hold control rod to the vane handle and control linkage bar.
4. Adjust position of connecting links as required to allow vane to open and close smoothly. The length of the threaded linkage rod (item 6) may have to be adjusted as necessary.
5. Tack weld control to the vane handle and linkage bar.
6. Reinstall inlet screening if applicable.

Figure 1. Control Ring and Quadrant Position

SIZE 182 — 245

SIZE 270 — 890

MOTOR LOCATION VS. CONTROL ROD HOUSING LOCATION
FOR ALL SIZES (VIEW FROM INLET)

SIZE	182	200	222	245	270	300	330	365	402	445	490	542	600	660	730	807	890
A	10.25	11.25	12.50	13.75	15.25	16.75	18.50	20.50	22.50	25.00	27.50	30.25	33.50	37.00	40.75	45.00	49.75
B	4.25	4.25	4.75	5.25	5.25	5.75	6.37	6.50	8.00	7.75	8.62	9.50	10.25	11.12	12.00	12.87	13.75

Figure 2. Nested Inlet Vane Control System For TSL Fan

FAN HOUSING
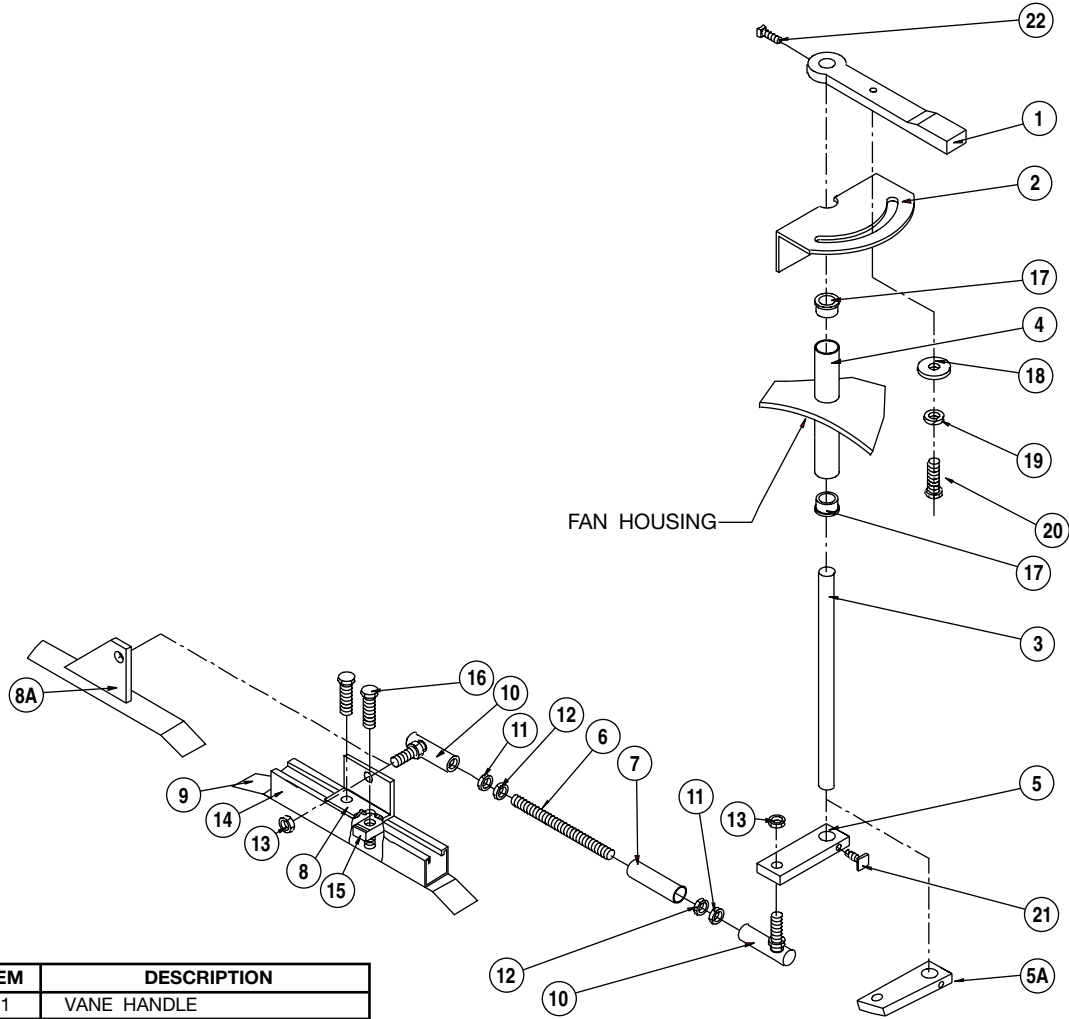
ITEM	DESCRIPTION
01	VANE HANDLE
02	QUADRANT
03	CONTROL ROD
04	CONTROL ROD HOUSING
05	CONTROL LINKAGE BAR
06	THREADED LINKAGE ROD
07	THREADED LINKAGE ROD HSG.
08	CONTROL RING CLIP
09	CONTROL RING
10	BALL JOINT
11	HEX NUT
12	HEX NUT
13	HEX NUT
14	UNISTRUT
15	UNISTRUT CLAMPING NUT
16	HEX SCREW
17	OILITE BEARING
18	FLAT WASHER
19	SPRING LOCK WASHER
20	HEX HEAD SCREW
21	SQUARE HEAD SETSCREW
22	SQUARE HEAD SETSCREW

NOTES:
1. Items 8, 14, 15 and 16 are used for fan sizes 245 through 890.
2. Items 7 and 12 are used on fan size 600 and larger.
3. Item 8A is used for fan sizes 182 through 222.
4. Measure threaded linkage rod length to fit; maximum 10" and minimum 4".
5. Quadrant and control rod housing is to be welded to the fan housing.
6. Twisted control linkage bar (item 5A) is used for fan sizes 182 through 245.

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