

Field Installation Instructions for 316SS Extension Pin, Extension Pin Kit & Manual Quadrant Operators on VCD-40 Dampers

NOTE: FOR DAMPERS INSTALLED IN DUCTS

Extended Control Shaft is installed from outside of duct after damper is installed. Install as shown below.

TOOLS REQUIRED:

- 5/16 in. Hex Nut Driver
- 3/8 in. Electric Drill
- 1/2 in. Open End Wrench

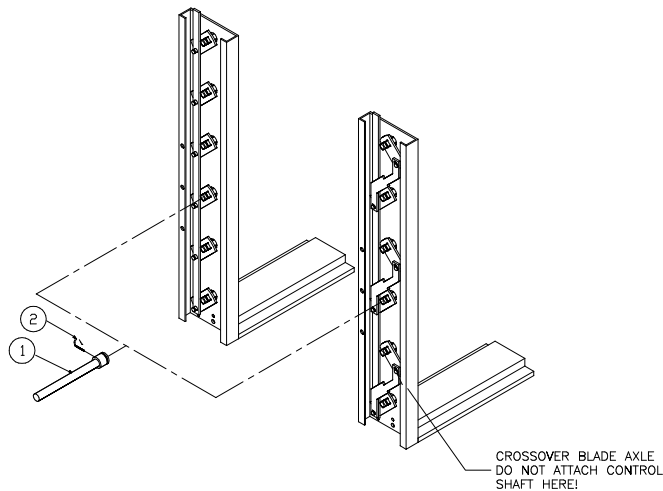
Before Installing Damper in the Duct

1. If damper has more than one blade, determine which blade axle will be driven by the extended control shaft. Always attach extended control shaft to a blade axle which is directly connected to the main linkage tiebar. **DO NOT** attach extended control shaft to a crossover blade axle.
2. Cut hole approximately 1 in. (25mm) diameter in duct where damper drive blade axle will be located. Hole must provide clearance for enlarged portion of extended control shaft.

After Damper Is Installed in Duct

1. Push extended control shaft through hole in duct and onto drive blade axle. Retainer clip should "click" into groove on drive blade axle and hold shaft into place.

Standard Control Shaft location is the third blade from the bottom on dampers with three or more blades. Control Shaft location is the first blade from the bottom on dampers with one or two blades.



Part Number 846032 316SS Extension Pin with Clip			
No.	Qty	Description	Part Number
1	1	Extended Control Shaft	463921
2	1	Retaining Clip	454204

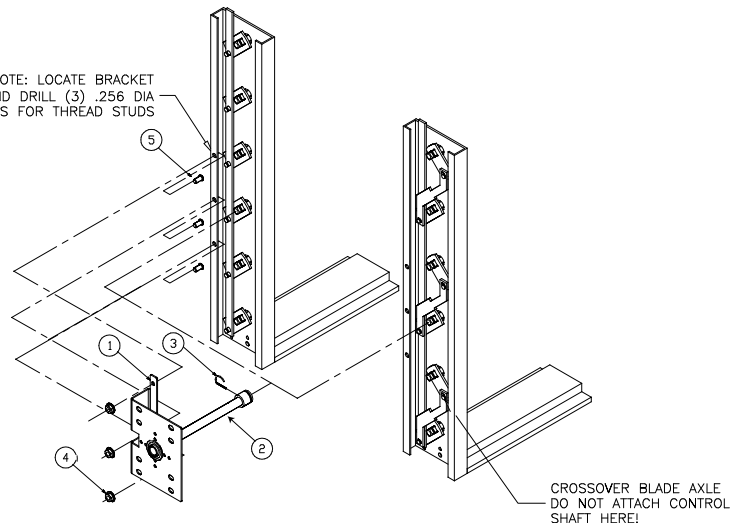
Before Installing Damper in the Duct

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After Damper Is Installed in Duct

1. Push extended control shaft through hole in duct and onto drive blade axle. Retainer clip should "click" into groove on drive blade axle and hold shaft into place. Standard Control Shaft location is the third blade from the bottom on dampers with three or more blades. Control Shaft location is the first blade from the bottom on dampers with one or two blades.
2. Install the stand off bracket with extruded over the extended control shaft and screw bracket to duct. Make sure screws (provided by others) do not interfere with damper linkage or blade movement.

NOTE: LOCATE BRACKET AND DRILL (3) .256 DIA HOLES FOR THREAD STUDS



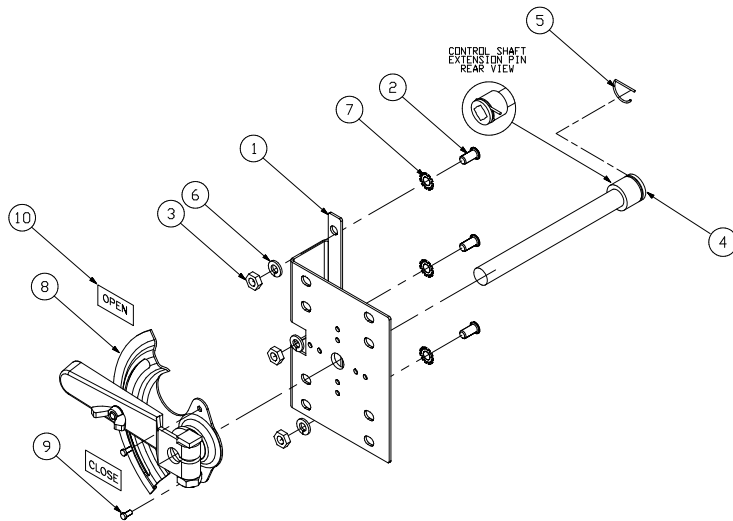
Part Number 865084 316SS 1/2 in. Extension Pin Kit			
No.	Qty	Description	Part Number
1	1	Standoff Bracket	910930
2	3	1/4-20 x 1/2 316SS Weld Stud	416335
3	3	1/4-20 Hex Nut	415835
4	1	316SS Extension Pin	463291
5	1	Retaining Clip 316SS	454204
6	3	Lock Washer 316SS	415837
7	3	1/4 in. Washer	416204

Non-Jackshafted Dampers

Control damper should be mounted in the duct and the shaft extension mounted onto the correct blade of the damper before continuing with these instructions.

After Extended Shaft is Installed

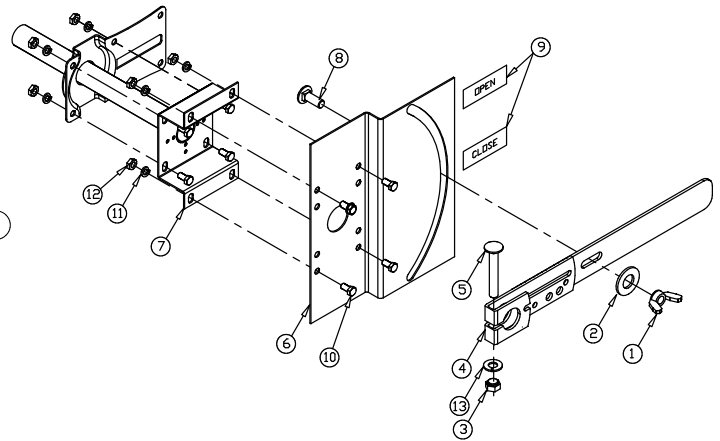
1. Assemble Manual Quadrant to extension bracket assembly (rivets provided).
2. With damper either fully open or closed, lock manual quadrant to extended control shaft so manual quadrant can move damper between open and closed. Note: Tighten down bolt on manual quadrant to 250 in. lb. of torque. Apply "OPEN" and "CLOSED" labels if damper movement is opposite to that engraved in the manual quadrant.
3. Set damper to desired position and tighten wing nut on manual quadrant to hold damper in place.



Part Number 865086 316SS 1/2 in. Extension Pin Kit with Manual Quadrant			
No.	Qty	Description	Part Number
1	1	Standoff Bracket	910930
2	3	1/4-20 x 1/2 Weld Stud	416335
3	3	1/4-20 Hex Nut	415835
4	1	Extension Pin	463921
5	1	Retaining Clip	454204
6	3	1/4 Lock Washer	415837
7	3	1/4 Washer	416204
8	1	1/2 in. Manual Quadrant	464699
9	2	.125 in. Rivet	416308
10	1	Label, Open/Close	452690

Jackshafted Dampers

1. The jackshaft is, either, 1/2 in. diameter or 1 in. diameter depending upon the size of the damper. The manual quadrant kit for the 1/2 in. diameter jackshaft is Part #865086 and the manual quadrant kit for a 1 in. diameter jackshaft is Part #862239.
2. With damper either fully open or closed, lock manual quadrant to jackshaft so manual quadrant can move damper between open and closed. Note: Tighten down bolt on manual quadrant to 250 in. lb. of torque. Apply "OPEN" and "CLOSED" labels if damper movement is opposite to that engraved in the manual quadrant.
3. Set damper to desired position and tighten wing nut on manual quadrant to hold damper in place.



Part Number 862239 316SS 1 in. Manual Quadrant Kit			
No.	Qty	Description	Part Number
1	1	Wingnut	416132
2	1	1/2 in. 316SS Washer	415401
3	1	.375 -16 316SS Hex Nut	415799
4	1	1 in. Quadrant Lever Arm	827734
5	1	3/8 -16 x 2.5 316SS Bolt	415944
6	1	Manual Quadrant Bracket	687407
7	4	Standoff Bracket	687405
8	1	3/8-16 x 1.25 316SS Bolt	415780
9	1	Label, Open/Close	452690
10	8	1/4-20 x 1/2 316SS Bolt	415868
11	8	1/4 in. 316SS Locking Washer	415837
12	8	1/4-20 316SS Nut	415835
13	1	3/8 in. 316SS Locking Washer	415810

