Operation and Maintenance Instructions for HS & HSE Power Roof Ventilators

Installation Instructions—Other Side

Cleaning and Adjustments. The entire fan should be cleaned as necessary to remove accumulated dust, dirt and other debris that may collect on the blades and other parts. Belts should be inspected and tension adjusted (see below). Check for belt misalignment that will cause excessive wear and premature failure. This same inspection of belts and adjustment of tension should be made frequently during the first 24-48 hours of operation after installation. If rust or corrosion are found anywhere on the fan, the affected area should be thoroughly cleaned and refinished. When cleaning and servicing the PRV, removal of the shroud assembly is necessary for access to the propeller. Motor and belts are accessible by removal of the motor

Speed and Air Volume Adjustment. Any reduction in the air volume will reduce the air velocity. This in turn may affect all-weather operation and proper opening of the damper doors. With this limitation, fan speed may be adjusted through the use of variable pitch motor pulleys on units supplied as such. Motor capacity must be carefully checked before any increase in fan speed is made.

Belt Replacement and Tensioning.

a) To change the belt(s), loosen the bracket bolts and tension adjustment bolts. Remove belt(s) from the motor and fan pulleys. Install the new belt(s) and adjust as indicated below. When replacing belt(s), do not roll over the pulleys, as this will damage the belt(s) and cause premature failure.

b) To check the belt tension, place a finger midway between the motor pulley and the fan pulley. Push the belt enough to deflect the belt approximately 1/64" for every inch of center distance while applying approximately, 5 lbs of force. Ideal tension is the lowest tension at which the belt will not slip under peak load conditions. Keep belts free from foreign material that may cause slippage. Make V-Drive inspection on a periodic basis. Re-tension when slippage is detected.

c) To adjust tension, loosen the motor bracket bolts and use tension adjustment bolts to obtain the correct belt tension. Be sure to re-tighten the motor bracket bolts after making adjustments. Check the belt alignment at the same time.

CAUTION : Use of the tension adjustment bolt makes it easy to over tighten the belt. If this occurs, belts and bearings can fail in a short period of time. Do not over tension.

Lubrication. On the belt drive models, fan bearings are factory lubricated for extended service and operation. Normal maintenance would call for annual lubrication of the fan bearings. For lubrication of the electric motor, see motor manufacturer instruction manual.

Repair Parts.

Belts. Belts are standard V-Belts used on industrial machines and replacements can be obtained through local industrial supply houses. If more than one belt is used on the fan, be sure to purchase a matching set of replacement belts. To install replacement belt(s), see instructions above.

Blade Assembly. If one or more of the blades of the blade assembly is damaged, it is recommended that the entire propeller be removed and returned to the factory for repairs. If an unbalanced condition develops, thoroughly clean the blades to remove dirt and other build up. If unbalance persists, contact American Coolair.

Bearings. Bearings are standard, commercially available pillow block bearings and may be purchased at any industrial supply house.

Motor. Repairs should only be performed by an authorized motor repair facility. Contact either the motor manufacturer or American Coolair Corp for locations.

Periodic Fan Activation. If the HS / HSE PRV is used for emergency heat and smoke removal only (not used for general building ventilation) then a routine, periodic activation of the fan is recommended to ensure reliable operation. The fan should be activated at least annually and allowed to run for a minimum one-hour duration. During this time, cleaning, adjustment and lubrication as described above should be performed.

Notice : Do not return damaged or defective parts to American Coolair Corp without prior authorization. If repairs under warranty are claimed, see warranty terms on the reverse. Claims for warranty repairs regarding the motor should be made directly wit the motor manufacturer.

AMERICAN Coolair®

P.O. Box 2300 | Jacksonville, FL 32203
Ph 904-389-3646
Fax 904-387-3449 | 904-381-7560
www.coolair.com

Member AMCA

Form No. 510-40-5 (August, 2014)

Installation Instructions
for HS & HSE Power Roof Ventilators

Operation & Maintenance Instructions —Other Side

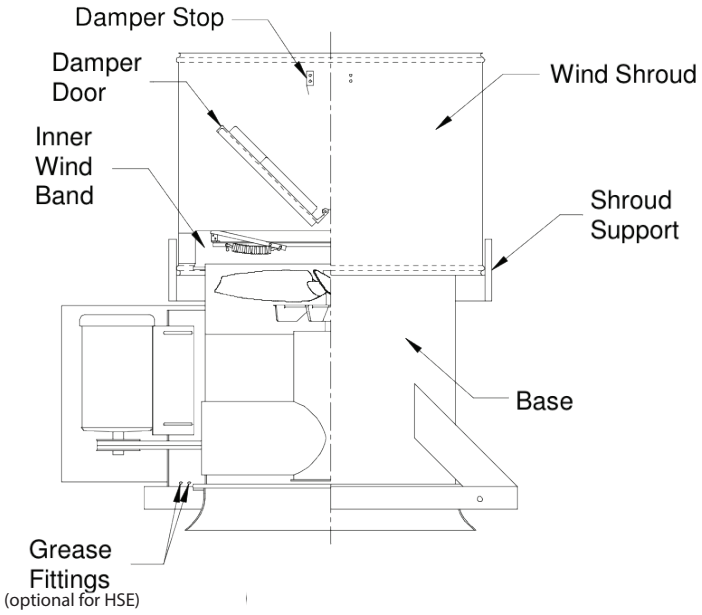
Pre-Installation Check of PRV. Before installation of an American Coolair PRV, a careful check should be made for shipping damage which may affect operation of the unit. Concealed damage to the wind shroud damper assembly is a possibility. If damage is found, file a claim immediately with delivering carrier. On belt drive units, pulley alignment and belt tension should be checked (see paragraph 2 under Operation and Maintenance). Before connecting to power source, make sure propeller turns freely without striking frame or any foreign object. Check motor nameplate to be sure correct phase and voltage are being used. Note direction arrow adjacent to propeller and make sure rotation is correct when power is applied.

Installation Procedures. Types HS / HSE PRV are shipped in two packages for quick assembly and installation on roof curb.

a) Installation of Base of PRV. The major component of the Type HS / HSE PRV is the base section made up of curb cap, fan and motor. Verify curb dimensions and securely attach base to curb.

b) Installation of Wind Shroud Assembly. The wind shroud assembly consists of wind shroud and counterbalanced dampers. Wind shroud assembly should be attached to shroud supports on base of PRV. Bolts for this purpose are in a bag tied to the damper stop inside the wind shroud. Metal clips holding dampers in closed position for shipment should be removed and discarded. Manually operate dampers to be sure they open freely and close snugly over inner ring of shroud.

c) Magnetic Latches (Optional Accessory). If magnetic latches are provided, check adjustment of latches to insure proper contact with butterfly damper when closed.



HS / HSE Power Roof Ventilator
(Cutaway View)

Note : All local, state and federal codes should be checked to make sure all wiring, guarding and intended usage of the PRV unit(s) comply with all applicable codes. The proper type and class of PRV and motor should be used for air being handled such as explosive or other hazardous air mixtures.

WARNING **CAUTION**

DO NOT INSTALL FAN WITH MOVING PARTS WITHIN 8 FEET OF FLOOR OR GRADE LEVEL WITHOUT A GUARD THAT COMPLIES WITH OSHA REGULATIONS. **DO NOT** USE UNLESS ELECTRICAL WIRING COMPLIES WITH ALL APPLICABLE CODES. **DO NOT** WIRE WITHOUT PROVIDING FOR A POWER SOURCE DISCONNECT AT THE FAN ITSELF. **DO NOT** SERVICE EXCEPT BY A QUALIFIED MAINTENANCE TECHNICIAN AND ONLY AFTER DISCONNECTING THE POWER SOURCE. FAILURE TO OBSERVE THESE PRECAUTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.

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