

North American 1600- -A Air Motor with Auxiliary Switch

Bulletin 1600-A

1600- -A Air Motors are available for control systems that require auxiliary switches on the air motor or on the valve it drives. Such switches are used, for example, to prove air valve position for high flow purge and low fire start. 1600- -A Air Motors have two SPDT limit switches mounted in a NEMA 1 general-purpose enclosure. Each switch is actuated by a pair of manually adjustable cams driven off the end of the Air Motor shaft. One cam determines the "on" position of the switch; the other determines the "off" position.

SETTING PROCEDURE

1. Remove the rear access cover from the switch housing.
2. With the burner on low fire, set Cam A (Fig. 1) to actuate the outer switch, closing the normally open circuit (Leads 1 and 2).
3. As the burner proceeds to high fire, adjust Cam A to open the circuit after about 5° of travel.
4. Cams B and C must be adjusted to avoid actuating their switches as the burner approaches high fire. Cams B and C can be used for other purposes, providing an adjustable dwell for each switch.
5. When the burner reaches high fire, adjust Cam D to actuate the inner switch, closing the normally open circuit (Leads 4 and 5). This switch should be actuated about 5° before the burner reaches high fire.

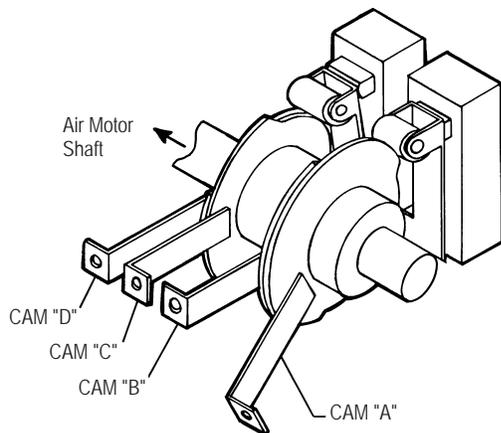


Fig. 1. Adjustable cams and limit switches on Series 1600- -A Air Motor

WIRING INSTRUCTIONS

Leads 1 and 2 (Fig. 2) of the outer switch are used as the normally open circuit to prove low fire. When this switch is actuated, the normally open circuit closes, proving low fire.



Leads 4 and 5 of the inner switch are used as a normally open circuit to prove high fire. When this switch is actuated, the normally open circuit closes, proving high fire.

Leads 3 and 6, when used with their respective common leads, provide a normally closed circuit in each switch for other application.

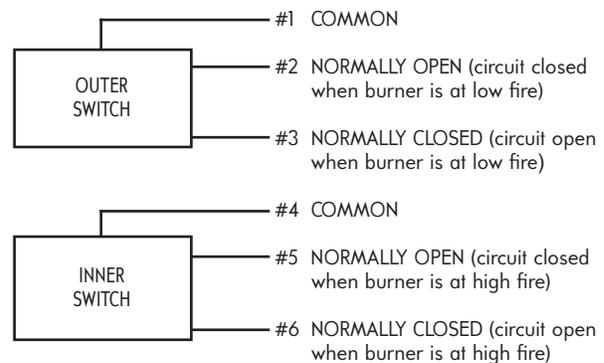
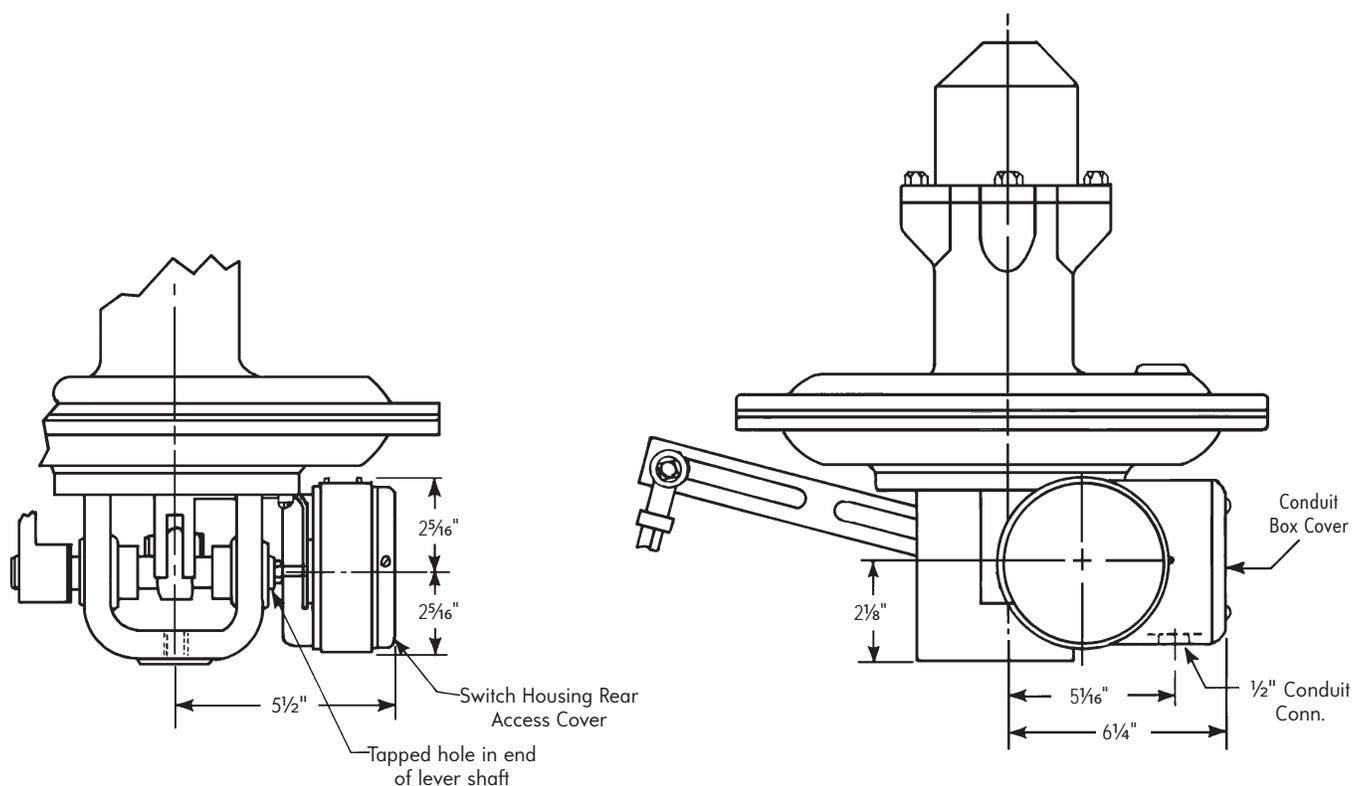


Fig. 2. Switch Wiring Diagram

SWITCH RATINGS: 10 amp with 125 or 250 V ac; ½ amp with 125 V dc; ¼ amp with 250 V dc. Switch is UL and CSA listed.

SWITCH WIRE is suitable for 105 C temperature and is UL listed. Switch leads are 12" long.

DIMENSIONS 1600- -A Air Motor. (For detail dimensions of 1600 Air motor, see Bulletin 1600.)



DIMENSIONS SHOWN ARE SUBJECT TO CHANGE. PLEASE OBTAIN CERTIFIED PRINTS FROM FIVES NORTH AMERICAN COMBUSTION, INC. IF SPACE LIMITATIONS OR OTHER CONSIDERATIONS MAKE EXACT DIMENSION(S) CRITICAL.

1600- -A Switch Kit Assemblies are available for field assembly to 1600 Air Motors (built since 1972--such motors can be identified by a drilled and tapped hole in the end of the lever shaft opposite the lever (see sketch)).

To Order, Specify: 1600- -A Air Motor with 2-2207-6 lever arm (for 1136, 1146, and 1156 Wafer Valves).
1600- -A Air Motor with 2-2207-5 lever arm (for all other valves).

To order the switch kit only, specify, 1600A-ASK Auxiliary Switch Kit only.

WARNING: Situations dangerous to personnel and property may exist with the operation and maintenance of any combustion equipment. The presence of fuels, oxidants, hot and cold combustion products, hot surfaces, electrical power in control and ignition circuits, etc., are inherent with any combustion application. Parts of this product may exceed 160F in operation and present a contact hazard. Fives North American Combustion, Inc. urges compliance with National Safety Standards and Insurance Underwriters' recommendations, and care in operation.



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