



Troubleshooting Rear Blend Door Actuators on 2003–2014 Ford Expedition

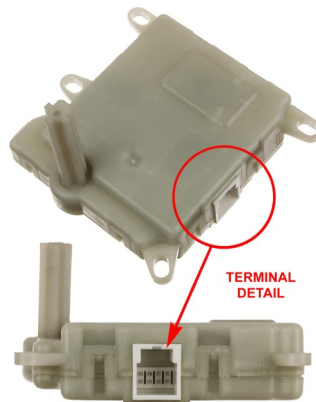
Have you experienced repeated failures on rear blend door actuators for a 2003–2014 Ford Expedition? After replacement, customers may return with complaints of hearing the same “click, click”, that initially prompted the replacement.

Troubleshooting a rear blend door actuator:

- Use a multimeter tool to diagnose the system. First, check the ground. When the rear system is covered in plastic, and hard to get to, grounding issues from previous repairs may be the problem.
- Check the voltage supplied by the control head to the blend door. Refer to the manufacturer’s wiring diagram. The wires should carry 12V. If the voltage is less than 12V, the control head may be the issue rather than the actuator motor.
- Check the door. Is it stuck? Debris may have found its way into the blend door and wedged itself in between the door and housing, causing it to stick and burn out the motor.



gpd #1711895
2002–2006 Ford Expedition



gpd #1712306
2007–2014 Ford Expedition
119” Wheel Base



gpd #1712295
2007–2014 Ford Expedition
131” Wheel Base



Actuators

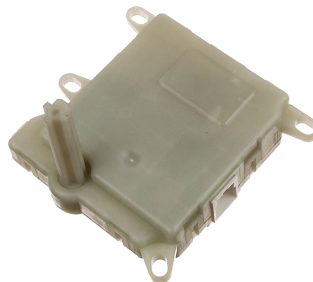
Today's HVAC systems have evolved into sophisticated electronically controlled systems. The days of doors inside the temperature control assembly being controlled by pull cables and vacuum motors are gone. Electronically controlled actuator motors now operate the temperature control doors. They travel as short as 90° and up to 180° rotation. They can move in 1° increments providing heating and cooling changes on demand in single degree increment changes. This means the actuator motors are moving constantly to accommodate temperature setting and mode demands. The actuator motors are essentially duty cycle demand for HVAC climate control to maintain temperature, mixing inside/outside air and floor/defrost/vent distribution all at the same time.

The actuators are designed with plastic housings with nylon gears rotated by a small electric motor controlled by a printed circuit board and position potentiometer. These tend to be somewhat fragile. Gear strip and circuit boards burn out, particularly when debris in the duct-ways causes the air doors to stick. Most units are not sealed so they pull in dust that coats the inside and contaminates the lubricant. This results in wear to the motor, gears and potentiometer contacts.

gpd actuator motors are improved by using higher strength nylon gears coated with superior lubricant, heavier duty motors and redesigned circuit boards to prevent burnouts. All units are precision replacements that mount in the existing position without modification. All gpd actuator motors are plug and play and do not require any programming. The gpd actuator motor design exceeds the design of OEM motors. The design has been life cycle tested in excess of 10 thousand hours. gpd actuator motors will provide a more durable service life in the HVAC temperature control system.



gpd #1712305



gpd #1712306



gpd #1712307