

centerline products

Spica Thermostatic Actuator

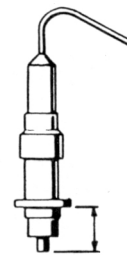
The function of the thermostatic actuator is fairly simple. The Spica fuel injection is a mechanical system that uses a series of levers to vary mixture according to temperature and demand. The thermostatic actuator is the temperature sensor.

The temperature sensor that is most familiar is a thermometer. As the temperature goes up, mercury in the glass bulb expands and is forced up the graduated tube. The higher the temperature, the higher the mercury. When temperature falls, mercury contracts and falls. The thermostatic actuator works the same way.

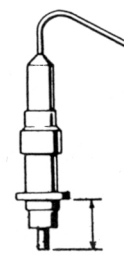
The actuator reservoir located in the intake manifold serves the same purpose as the thermometer bulb. As the motor warm up, the fluid in the reservoir expands. Instead of pushing liquid up a glass tube, it pushes through the metal tube against a piston at the other end of the actuator. By operating on the levers inside the Spica pump, the actuator varies the mixture to suit engine temperature.

To check the actuator, remove it from the car. At room temperature, or 70 degrees, the piston-to-mounting flange depth should be 23mm +/- 1 mm. With the bulb end of the actuator held in hot water at 175 degrees F., the piston should protrude to 29mm +/-1 mm. Check for consistency of these reading by repeating the measurements. Let the actuator cool back to room temperature for at least 15 minutes each time. Usually, a bad actuator will fail these tests dramatically. If the amount of movement is consistent but the protrusion of the piston a little high, the actuator can be shimmed out from the pump to compensate.

When working smoothly, properly installed and adjusted, the Spica Injection will start immediately and give the best mixture for any given engine temperature. The disadvantage of the less expensive manual "actuator" is that it offers no intermediate settings, being either too rich or too leans until the car is thoroughly warm.



23± 1 mm @ 70° F



29± 1 mm @ 175° F

Dummy Actuator Lengths

Application	Length
Montreal & early 1969	29 mm
Late 1969 – 74	27 mm
1975 all & 1976 49 state	27.8 mm
1976 Calif. & 1977 – 79	29 mm

Emission Mixture Specifications

Application	CO%
1969–71	0.8 – 2.2%
1972–74	0.8 – 2.0%
1975–79	0.8 – 1.2%
Montreal	6.0 – 7.0%

CENTERLINE PRODUCTS
PO BOX 1466, BOULDER, CO 80306
PH: 303.447.0239 FAX: 303.447.0257
WWW.CENTERLINEALFA.COM