

HEADLIGHT LEVELING ACTUATOR

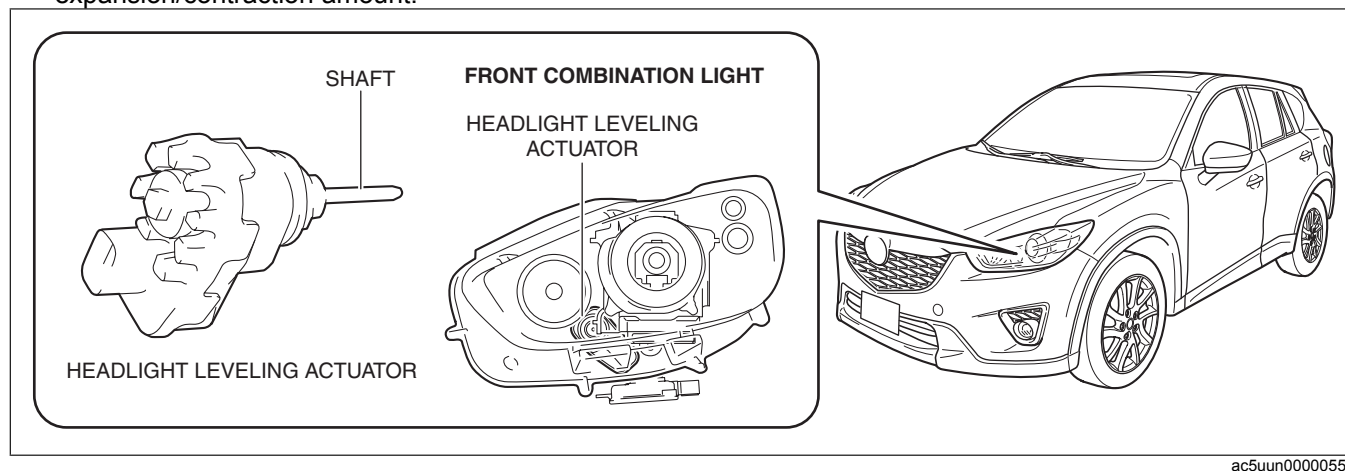
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Purpose, Function

- The headlight leveling actuator drives the motor based on the target optical axis voltage, which is input from the AFS control module, to change the optical axis of the headlights.

Construction

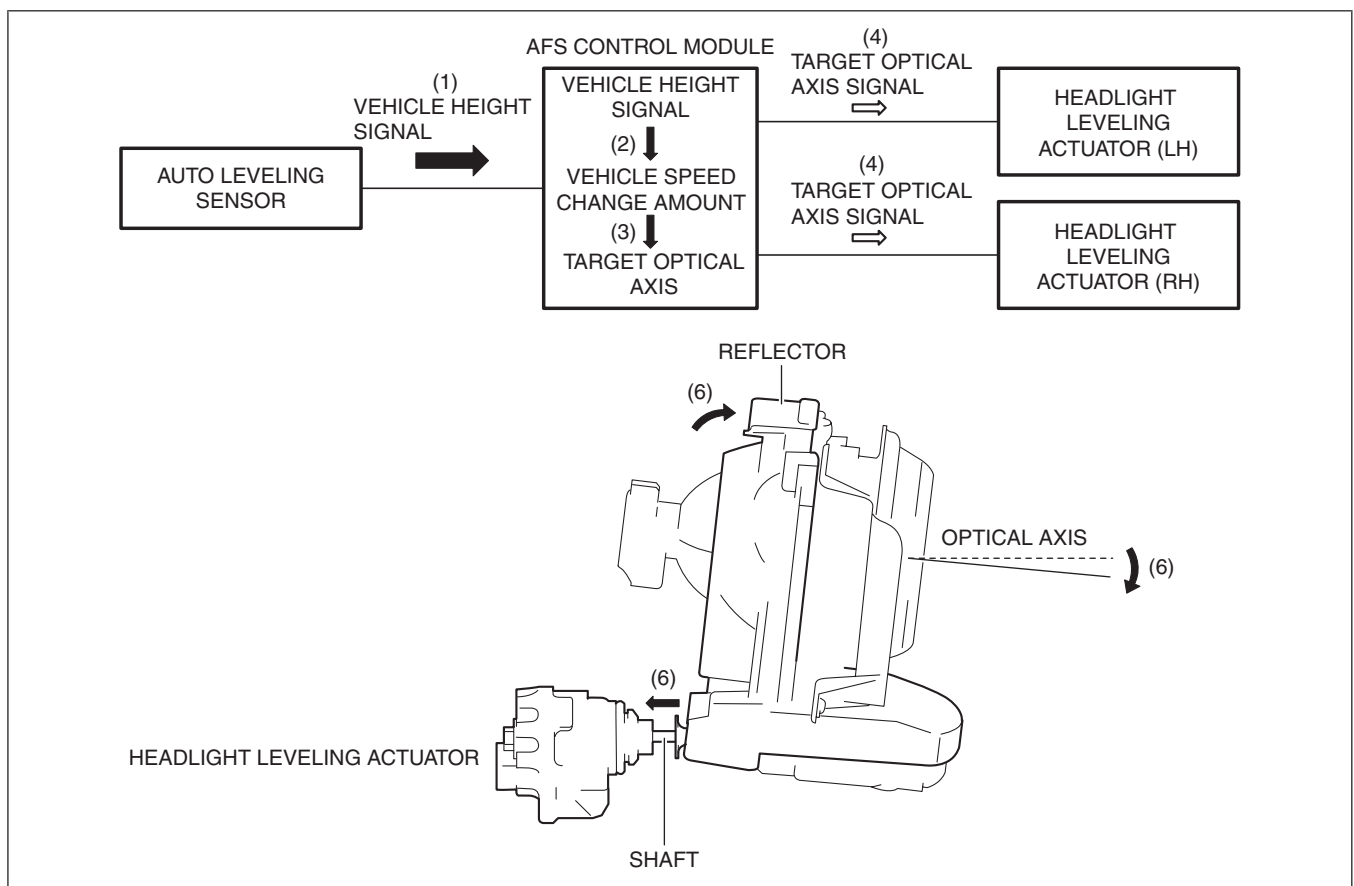
- Built into the front combination lights.
- Consists of a motor which expands/retracts the shaft, a shaft, and a microcomputer which calculates the shaft expansion/contraction amount.



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Operation

1. When the ignition is switched on (engine on or off), the auto leveling sensor inputs a vehicle height signal to the AFS control module.
2. When the headlights (LO) turn on, the AFS control module calculates the amount of change in vehicle height * based on the vehicle height signal.
3. If the operation conditions are met, the AFS control module calculates a target optical axis based on the calculated change in vehicle height *. For details on the operation conditions, refer to the headlight auto leveling system. (See HEADLIGHT AUTO LEVELING SYSTEM.)
4. The AFS control module outputs the calculated target optical axis signal to the headlight leveling actuator.
5. The headlight leveling actuator drives the motor based on the input target optical axis.
6. When the motor is driven, the shaft expands/contracts and the reflector shifts to move the optical axis.



* : The amount of change in vehicle height is the calculated 1 s average value of the detected vehicle body angle which the AFS control module detects every 0.1 s.

Fail-safe

- Function not equipped.