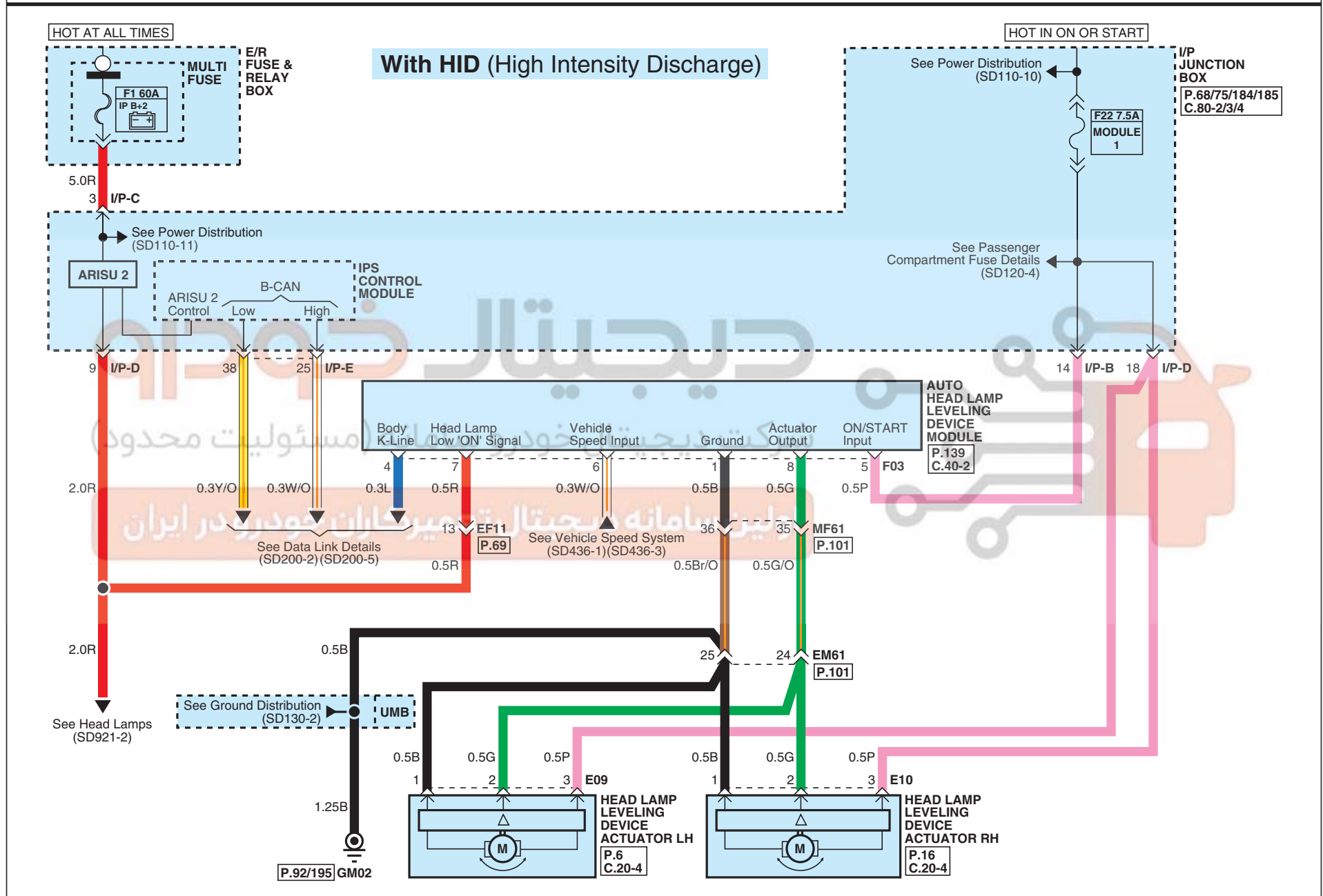


Auto Head Lamp Leveling System (AHLS) (1)

SD922-3



Auto Head Lamp Leveling System (AHLS)**Service Tips (1)****Circuit Description**

Auto head lamp leveling device module is controlled by the head lamp LOW signal and powered by IG1. It automatically adjusts the lighting direction (up/down) of the headlamp according to the driving environment and load condition of the vehicle to provide the visibility range and driving safety. If the position of vehicle is out of its setting level as multiple passengers get on or off, or when the a vehicle is being loaded with a cargo, it adjusts the lighting angle of the headlamp to return to normal. Auto head lamp leveling control module is located on rear suspension to send signal to actuator mounted on head lamp to compensate for the height changes of the vehicle.

• Height Sensor

It consists with auto head lamp leveling device module. The height sensor measures the angular displacement of lever by measuring the magnetic field of stator parts formed by rotation of rotor, and send signal to auto head lamp leveling device module.

• Vehicle Speed Signal

The auto head lamp leveling device module detects the vehicle speed to use it as a compensation factor for the actuator control. In other words, when the vehicle speed is low the actuator needs to respond slowly. But when the vehicle speed is high, AHLS ECU operates the actuator quickly in proportion to the height sensor variation.

• Body K-Line

Auto head lamp leveling device module sends trouble code through the body k-line during the diagnosis.

• Operation Sequence.

1. Suspension angle change resulted from vehicle's load change.
2. Sensor angle change.
3. Microprocessor calculates necessary head lamp angle change amount.
4. Sending a proper signal to head lamp leveling device and driving actuator.

• Operation Condition

1. IGN1 ON & Head lamp low beam ON.
2. On stop : If sensor lever change is 2° and above, head lamp is operated after max. 1.5 sec.
3. On driving : If vehicle velocity is over 4km/h(2.48mile/h), velocity change is not over 0.8-1.6km/h(0.5 ~ 1.0mile/h) per second, and loading condition is changed, then head lamp is operated.