Component Location



General Description

This switch is mounted on the pedal assembly and is used to send the status of the brake pedal to the HECU.
The switch is turned on when the brake pedal is pressed. The brake light switch is a normally-open contact type which runs to battery voltage when it is active (this means that the brake pedal is pressed). When it is passive (this means that the brake pedal is released), the line is grounded via the brake light bulb.

DTC Description

The brake light signal is a reference to judge driver's intention for braking.
The HECU checks open or short circuit of brake light switch for normal ESP control.
If an error is present, the warning lamp will illuminate.

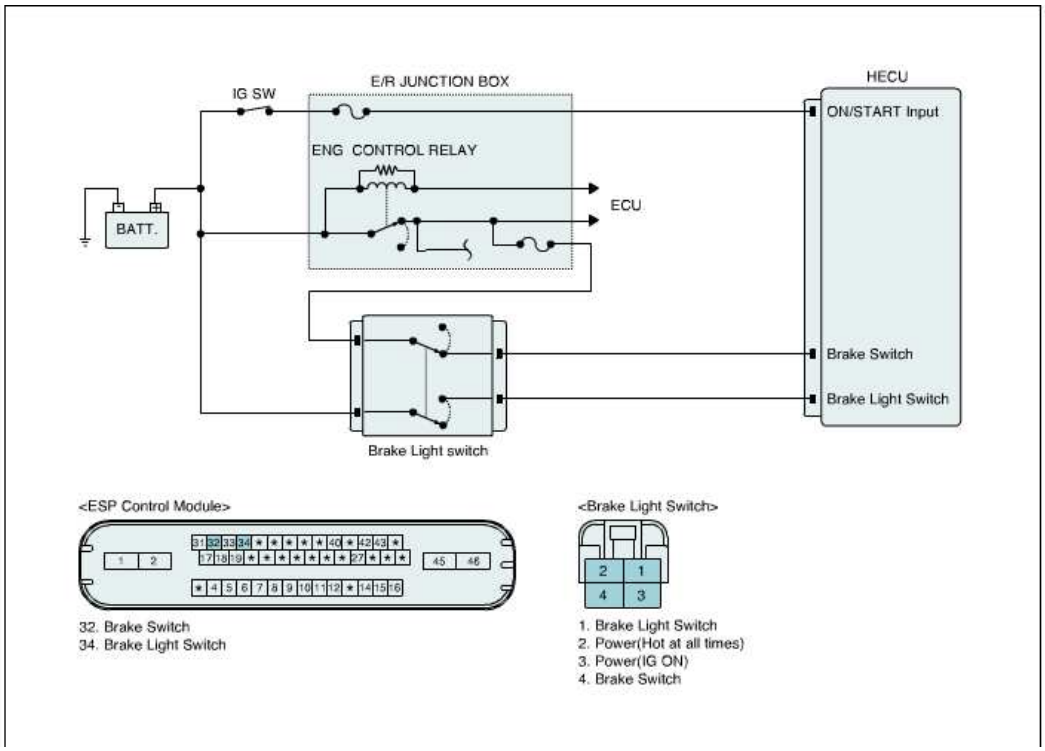
DTC Detecting Condition

Item	Detecting Condition	Possible cause
DTC Strategy	• Open circuit monitoring	• Open circuit in brake switch line • Faulty brake light switch • Faulty input stage in HECU
Enable Conditions	• If both BLS(brake lamp switch) and BS(brake switch) have a same state and MCP (Master Cylinder Pressure) > 20bar for 500ms. • Outside an ABS/ESP control, and after normal operation of MCP, If the pressure sensor signal is higher than 20bar and BLS is low for 3sec. • If the BLS/BS changed more than 40times and MCP > 20bar for 5sec. • While Vehicle speed > 10km/h, TPS > 5%, MCP < 7bar, if BLS is high over 1min.	
Fail Safe	• Inhibit the ESP control and allow the ABS/EBD control. • The ESP warning lamp is activated.	

Specification

Brake Light Switch	Voltage Range of "High"	Voltage Range of "Low"
	7.0V ~ 16.0V	0V ~ 3V

Diagnostic Circuit Diagram



<ESP Control Module>

32. Brake Switch
34. Brake Light Switch

<Brake Light Switch>

1. Brake Light Switch
2. Power(Hot at all times)
3. Power(IG ON)
4. Brake Switch