

|            |              |                                             |
|------------|--------------|---------------------------------------------|
| <b>DTC</b> | <b>P1520</b> | <b>Stop Light Switch Signal Malfunction</b> |
|------------|--------------|---------------------------------------------|

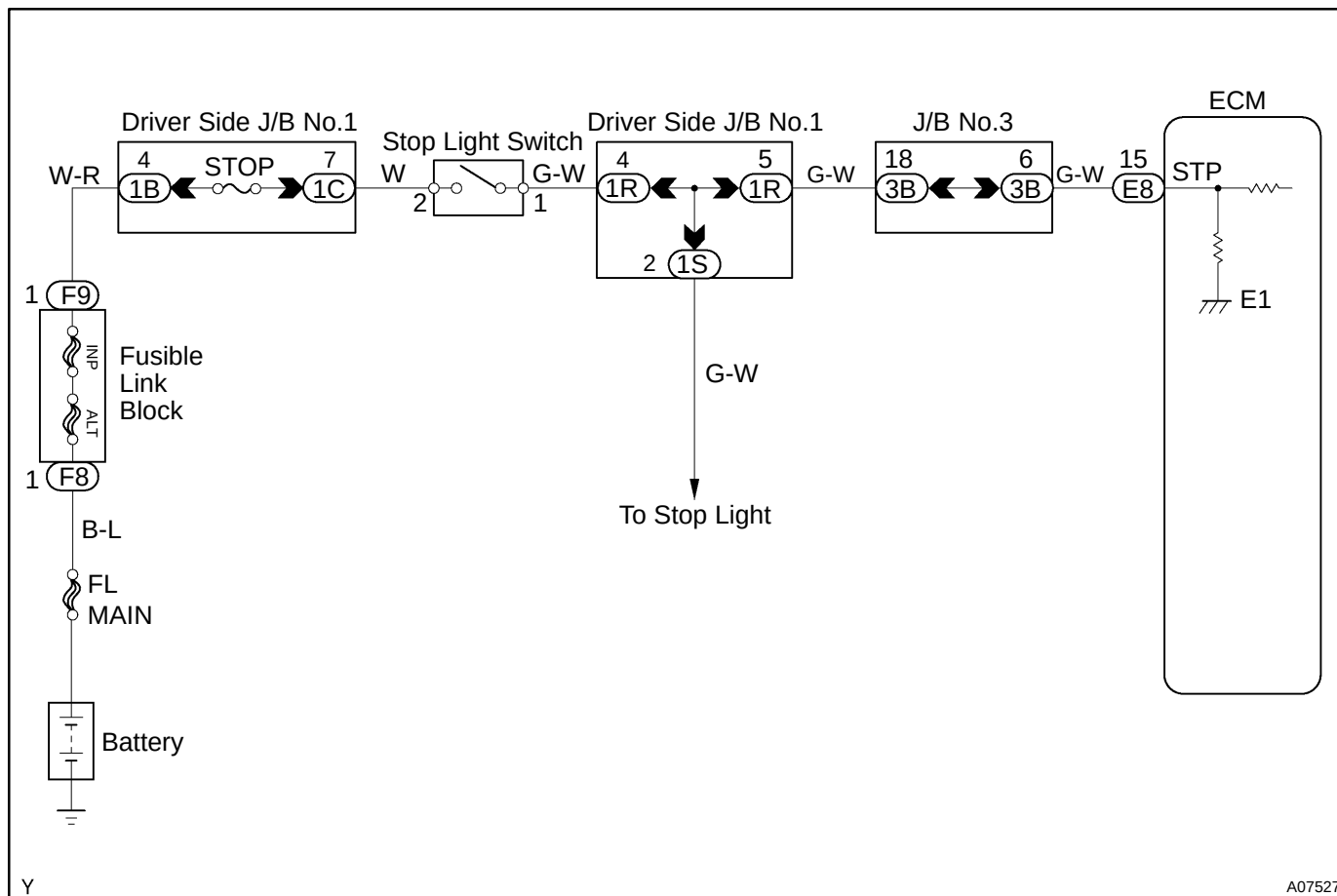
## CIRCUIT DESCRIPTION

This signal is used to detect when the brakes have been applied. The STP signal voltage is the same as the voltage supplied to the stop lights.

The STP signal is used mainly to control the fuel cut-off engine speed (The fuel cut-off engine speed is reduced slightly when the vehicle is braking.).

| DTC No. | DTC Detecting Condition                                                                                                                          | Trouble Area                                                                                                                              |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| P1520   | Stop light switch does not turn off when repeating the driving at 30 km or more 10 times or more after depressing brake (2 trip detection logic) | <ul style="list-style-type: none"> <li>• Short in stop light switch signal circuit</li> <li>• Stop light switch</li> <li>• ECM</li> </ul> |

## WIRING DIAGRAM



Y

A07527

## INSPECTION PROCEDURE

### HINT:

Read freeze frame data using TOYOTA hand-held tester or OBD II scan tool. Because freeze frame records the engine conditions when the malfunction is detected, when troubleshooting it is useful for determining whether the vehicle was running or stopped, the engine warmed up or not, the air-fuel ratio lean or rich, etc. at the time of the malfunction.

### 1 Check operation of stop light.

#### CHECK:

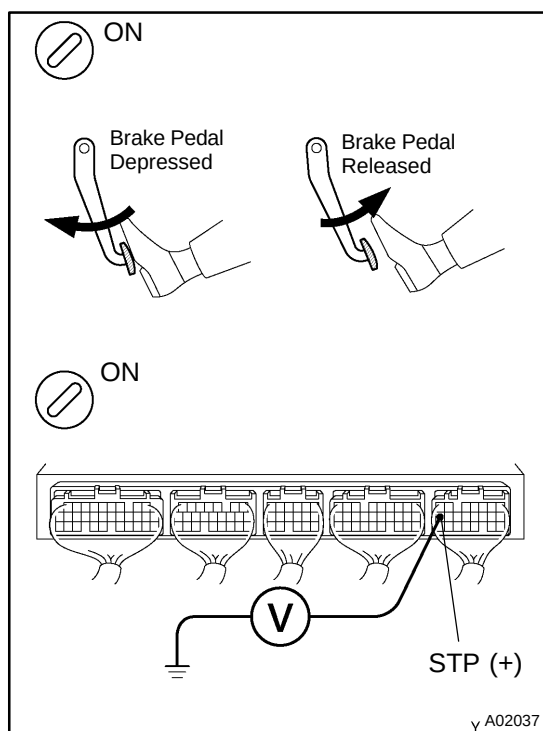
Check if the stop lights go on and off normally when the brake pedal is operated and released.

NG

Check and repair stop light circuit.

OK

### 2 Check STP signal.



When using TOYOTA hand-held tester:

#### PREPARATION:

- Connect the TOYOTA hand-held tester to the DLC3.
- Turn the ignition switch ON and push the TOYOTA hand-held tester main switch ON.

#### CHECK:

Read the STP signal on the TOYOTA hand-held tester.

#### OK:

Brake pedal is depressed: STP ..... ON

Brake pedal is released: STP ..... OFF

When not using TOYOTA hand-held tester:

#### PREPARATION:

Turn the ignition switch ON.

#### CHECK:

Check voltage between terminal STP of the ECM connector and body ground.

#### OK:

| Brake pedal | Voltage     |
|-------------|-------------|
| Depressed   | 7.5 ~ 14 V  |
| Released    | Below 1.5 V |

OK

Check for intermittent problems  
(See page [DI-3](#)).

NG

|   |                                                                                                     |
|---|-----------------------------------------------------------------------------------------------------|
| 3 | Check harness and connector between ECM and stop light switch<br>(See page <a href="#">IN-31</a> ). |
|---|-----------------------------------------------------------------------------------------------------|

NG

Repair or replace harness or connector.

OK

Check and replace ECM (See page [IN-31](#) ).