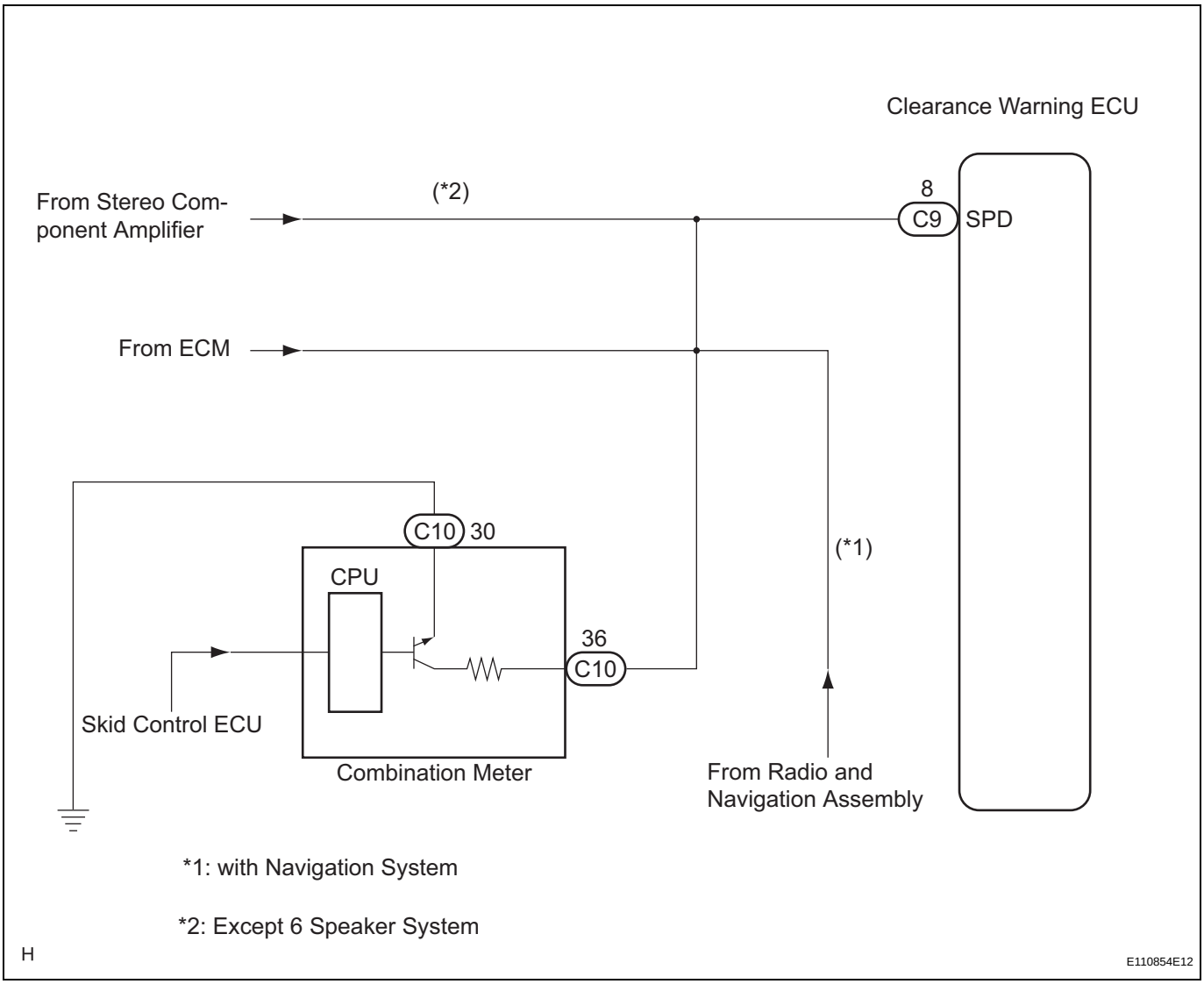
# Speed Signal Circuit

## DESCRIPTION

The clearance warning ECU receives the vehicle speed signal from the combination meter.
HINT:

- A voltage of 12 V or 5 V is output from each ECU and then input to the combination meter. The signal is changed to a pulse signal at the transistor in the combination meter. Each ECU controls the respective system based on the pulse signal.
- If a short occurs in an ECU, all systems in the diagram below will not operate normally.

## WIRING DIAGRAM




PM

## INSPECTION PROCEDURE

| 1 | CHECK OPERATION OF SPEEDOMETER |
|---|---|

(a) Drive the vehicle and check if the function of the speedometer in the combination meter is normal.

**OK:**

**Actual vehicle speed and the speed indicated on the speedometer are the same.**

HINT:

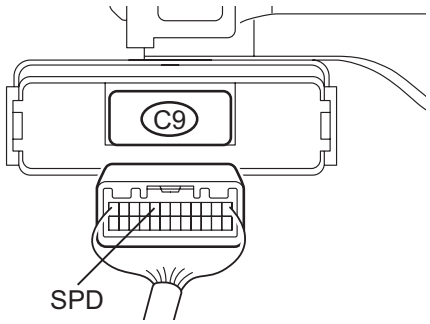
The vehicle speed signal is normal when the indication on the speedometer is normal.

NG → **CHECK COMBINATION METER**

OK

| 2 | INSPECT CLEARANCE WARNING ECU |
|---|---|

**Wire Harness View:**




N E124033E12

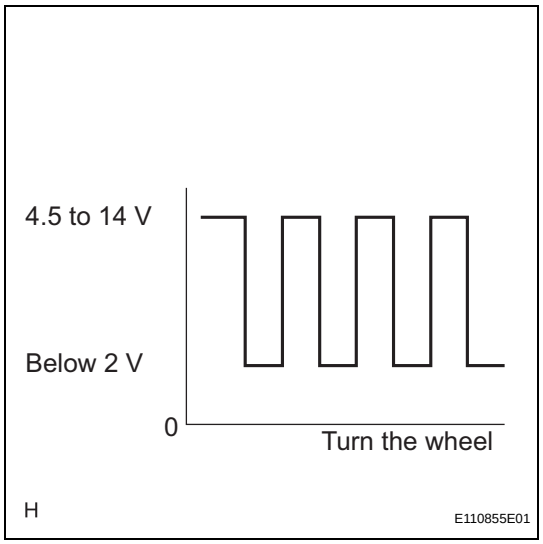
(a) Disconnect the clearance warning ECU connector C9.

(b) Measure the voltage.

(1) Jack up either one of the drive wheels.

(2) Move the shift lever to the neutral position.

(3) Turn the ignition switch to the ON position.




H E110855E01

(4) Measure the voltage between terminal SPD of the clearance warning ECU and body ground when a drive wheel is turned slowly.

**OK:**

**Voltage pulses as shown.**

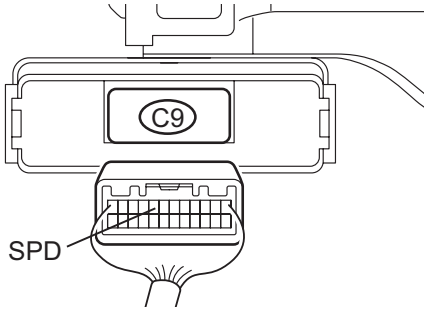
OK → **REPLACE CLEARANCE WARNING ECU**

NG

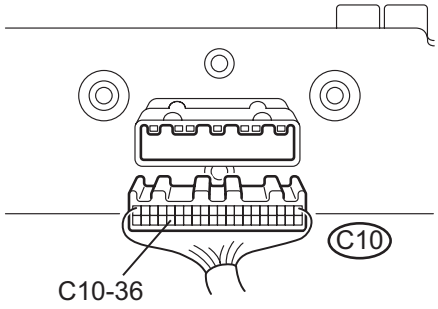
PM

| 3 | CHECK HARNESS AND CONNECTOR (COMBINATION METER - CLEARANCE WARNING ECU) |
|---|---|

**Clearance Warning ECU Wire Harness View:**




**Combination Meter Wire Harness View:**




N

E124034E02

(a) Disconnect the combination meter C10 connector.
(b) Measure the resistance according to the value(s) in the table below.

**Standard resistance**

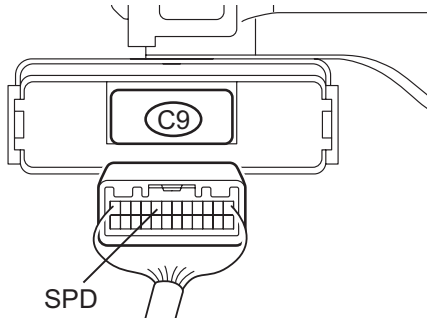
| Tester connection | Condition | Specified condition |
|---|---|---|
| SPD - C10-36 | Ignition switch off | Below 1 Ω |

**NG** → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

**OK**

| 4 | CHECK HARNESS AND CONNECTOR (COMBINATION METER AND EACH ECU - BODY GROUND) |
|---|---|

**Clearance Warning ECU Wire Harness View:**




N

E124033E03

(a) Measure the resistance according to the value(s) in the table below.

**Standard resistance**

| Tester connection | Condition | Specified condition |
|---|---|---|
| SPD - Body ground | Ignition switch off | 10 kΩ or higher |

HINT:
If the resistance between terminal SPD and body ground is less than 10 kΩ, there may be a short in a wire harness, connector, or ECU.

**NG** → **REPAIR OR REPLACE HARNESS OR CONNECTOR OR CHECK EACH ECU**

PM

OK

REPLACE COMBINATION METER