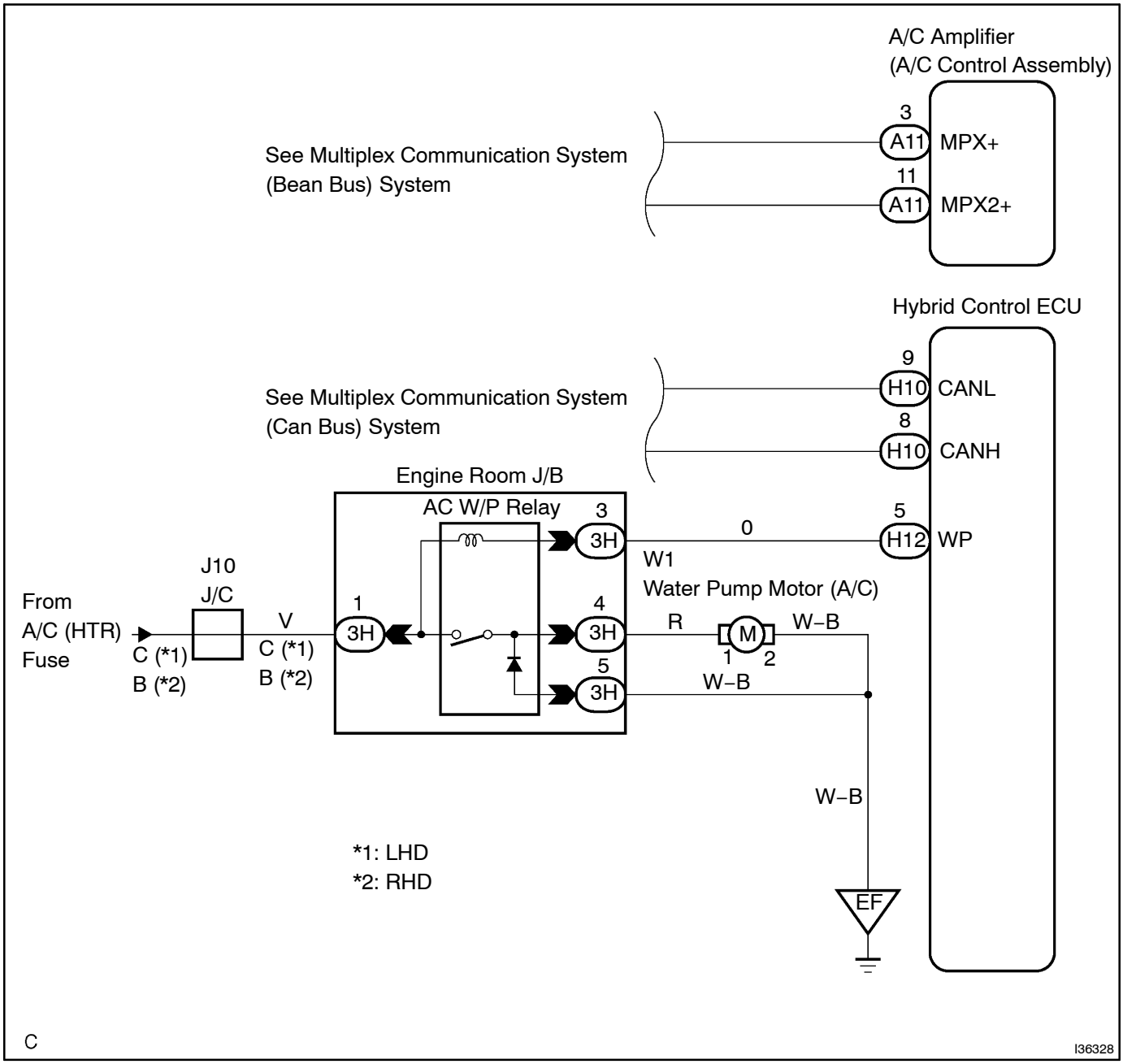
# HEATER WATER PUMP CIRCUIT

## CIRCUIT DESCRIPTION

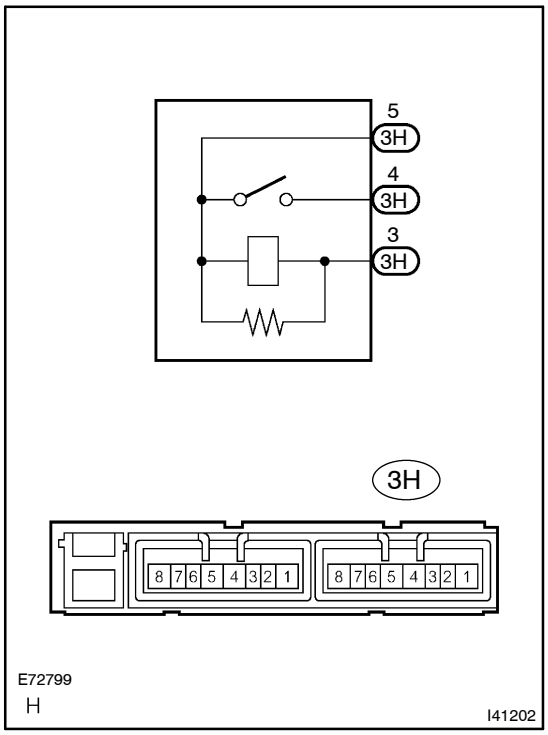
The heater water pump assy sends engine coolant to the heater core assy while the engine is stopped to prevent heater effectiveness from becoming low.
Directed by the air conditioner amplifier assy, Hybrid control ECU operates the water pump relay and drives the heater water pump assy.

## WIRING DIAGRAM



# INSPECTION PROCEDURE

| 1 | INSPECT INTEGRATION RELAY |
|---|---|




(a) Remove the integration relay from the engine room J/B.

**NOTICE:**

**As the integration relay is connected to the relays and fuses in the other systems, remove it with the power switch off. (A DTC may be output if the power switch is on.)**

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

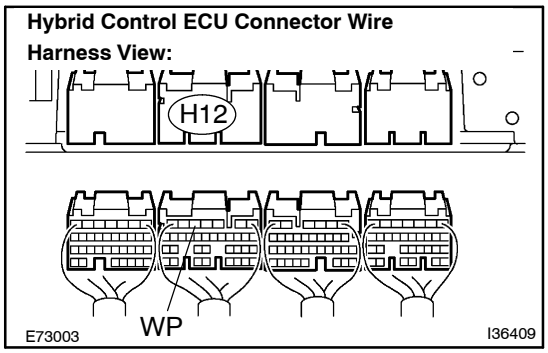
**Standard:**

| Terminal No. | Condition | Specified condition |
|---|---|---|
| 3H–4 – 3H–5 | Always | Below 1 Ω |
| 3H–4 – 3H–5 | When battery voltage applied to terminals 3h–5 and 3H–3 | Below 1 Ω |

**NG** → **REPLACE INTEGRATION RELAY**

**OK**

| 2 | CHECK HARNESS AND CONNECTOR (SEE PAGE 01–46) |
|---|---|




(a) Install the integration relay.

(b) Disconnect the hybrid control ECU connectors.

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

**Standard:**

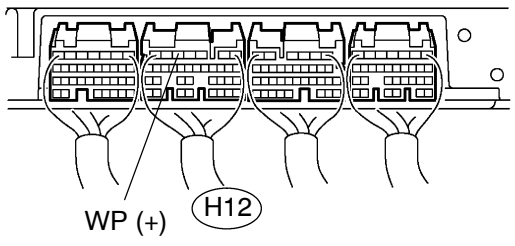
| Tester connection | Condition | Specified condition |
|---|---|---|
| H12–5 (WP) – Body ground | Power switch ON | 10 to 14 V |

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

**OK**

## 3 INSPECT HYBRID CONTROL ECU

**Hybrid Control ECU**
**Connector Wire Harness View:**




H E73004 I36410

(a) Connect the hybrid control ECU connectors.
(b) Measure voltage according to the value(s) in the table below.

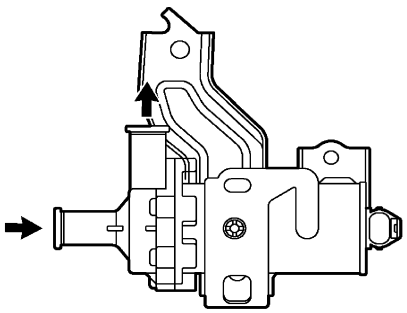
**Standard:**

| Tester connection | Condition | Specified condition |
|---|---|---|
| H12–5 (WP) – Body ground | Not operate the heater water pump | 10 to 14 V |
| H12–5 (WP) – Body ground | Operate the heater water pump | Below 1 V |

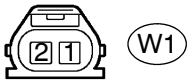
**NG** → **REPLACE HYBRID CONTROL ECU**

**OK**

## 4 INSPECT HEATER WATER PUMP ASSY



**Heater Water Pump Assy Connector Front View:**




C I36418

(a) Remove the heater water pump.
(b) Connect positive (+) lead to terminal 1 of the heater water pump connector and negative (–) lead to terminal 2.
**Standard: Heater water pump operates smoothly.**

**NOTICE:**
**Complete operation within 10 seconds if there is no water in the heater water pump.**

**NG** → **REPLACE HEATER WATER PUMP ASSY**

**OK**

**REPAIR OR REPLACE HARNESS OR CONNECTOR**