

Section : Body  
Electrical

Ref. No. : BE-1041

Date : Aug., 2001

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Area Application : Others(Hong Kong)

Model Name : HIACE

Model Code : LH172 (5L-E Engine)

**Subject : REPAIR MANUAL SUPPLEMENT (For 5L-E engine)**

This Service Bulletin is to inform you of the repair procedure for the Heater Amplifier due to the change from 5L engine to 5L-E engine.

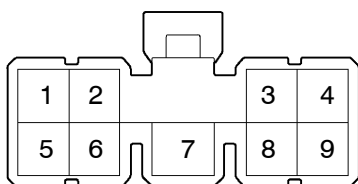
The attached pages are to be used with the following manuals.

Pub. No.	Publication Name
RM156E	HIACE Chassis & Body Repair Manual
RM471E	HIACE Chassis & Body Repair Manual Supplement
RM670E	HIACE Chassis & Body Repair Manual Supplement
RM709E	HIACE Chassis & Body Repair Manual Supplement

Production Effective :

VIN	Production Date
—	From Augst, 2001

## Wire harness side



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## HEATER AMPLIFIER (5L-E) ON-VEHICLE INSPECTION

### 1. INSPECT AMPLIFIER CIRCUIT (Single A/C)

- (a) Disconnect the amplifier connector and inspect the connector on wire harness side, as shown in the chart below.

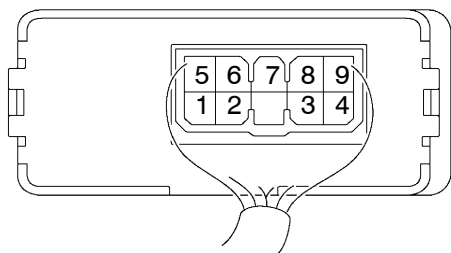
Test conditions:

- Ignition switch ON
- Blower speed switch HI
- Temperature control lever Max. Cool

Tester connection	Condition	Specified condition
6 – Body ground	Constant	Continuity
9 – 8	Constant	Continuity
5 – 8	Evaporator temperature at 25°C (77°F)	Approx. 1.5 KΩ
2 – Body ground	A/C switch ON	Battery positive voltage
	AC switch OFF	No voltage

If circuit is as specified, try replacing the amplifier with a new one. If the circuit is not as specified, inspect the circuits connected to other parts.

## From back side



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- (b) Connect the connector to amplifier and inspect wire harness side connector from the back side, as shown in the chart below.

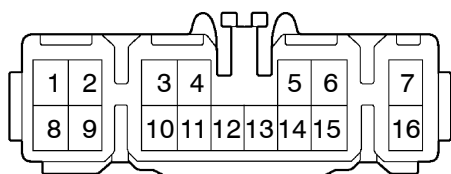
Test conditions:

- Running engine at idle speed
- Blower speed switch HI
- A/C switch ON
- Temperature control lever Max Cool
- Set on manifold gauge set

Tester connection	Condition	Specified condition
1 – 6	Magnetic clutch is not engaged	Below 1.0 V
	Magnetic clutch is engaged	No voltage
4 – 6	Magnetic clutch is not engaged	Below 0.7 V
	Magnetic clutch is engaged	No voltage
3 – 6	Refrigerant pressure 196 – 3,140 Kpa	10 – 16 V
	Refrigerant pressure less than 196 or more than 3,140 Kpa	No voltage
7 – 6	Magnetic clutch is not engaged	Below 1.0 V
	Magnetic clutch is engaged	(+B -1.5V) MIN
5 – Body ground	Constant	Continuity

If circuit is as specified, try replacing the amplifier with a new one. If the circuit is not as specified, inspect the circuits connected to other parts.

## Wire harness side



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## 2. INSPECT AMPLIFIER CIRCUIT (Dual A/C)

- (a) Disconnect the amplifier connector and inspect the connector on wire harness side, as shown in the chart below.

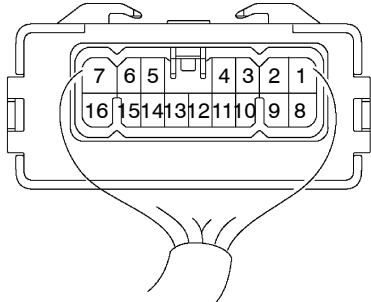
Test conditions:

- Ignition switch ON
- Blower speed switch HI
- Temperature control lever Max. Cool

Tester connection	Condition	Specified condition
6 – Body ground	Constant	Continuity
4 – 11	Constant	Continuity
15 – 11	Front evaporator temperature at 25°C (77°F)	Approx. 1.5 KΩ
15 – 16	Rear evaporator temperature at 25°C (77°F)	Approx. 1.5 KΩ
12 – Body ground	A/C switch ON	Battery positive voltage
	AC switch OFF	No voltage

If circuit is as specified, try replacing the amplifier with a new one. If the circuit is not as specified, inspect the circuits connected to other parts.

## From back side



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- (b) Connect the connector to amplifier and inspect wire harness side connector from the back side, as shown in the chart below.

Test conditions:

- Running engine at idle speed
- Blower speed switch HI
- A/C switch ON
- Temperature control lever Max Cool
- Set on manifold gauge set

Tester connection	Condition	Specified condition
9 – 6	Magnetic clutch is not engaged	Below 1.0 V
	Magnetic clutch is engaged	No voltage
13 – 6	Magnetic clutch is not engaged	No voltage
	Magnetic clutch is engaged	Below 1.0 V
3 – 6	Refrigerant pressure 196 – 3,140 Kpa	Below 10 – 16 V
	Refrigerant pressure less than 196 or more than 3,140 Kpa	No voltage
14 – 6	Magnetic clutch is not engaged	(+B – 1.5 V) MIN
	Magnetic clutch is engaged	Below 1.0 V
15 – 6	Constant	Continuity

If circuit is as specified, try replacing the amplifier with a new one. If the circuit is not as specified, inspect the circuits connected to other parts.