

|            |           |                                       |
|------------|-----------|---------------------------------------|
| <b>DTC</b> | <b>22</b> | <b>Compressor Lock Sensor Circuit</b> |
|------------|-----------|---------------------------------------|

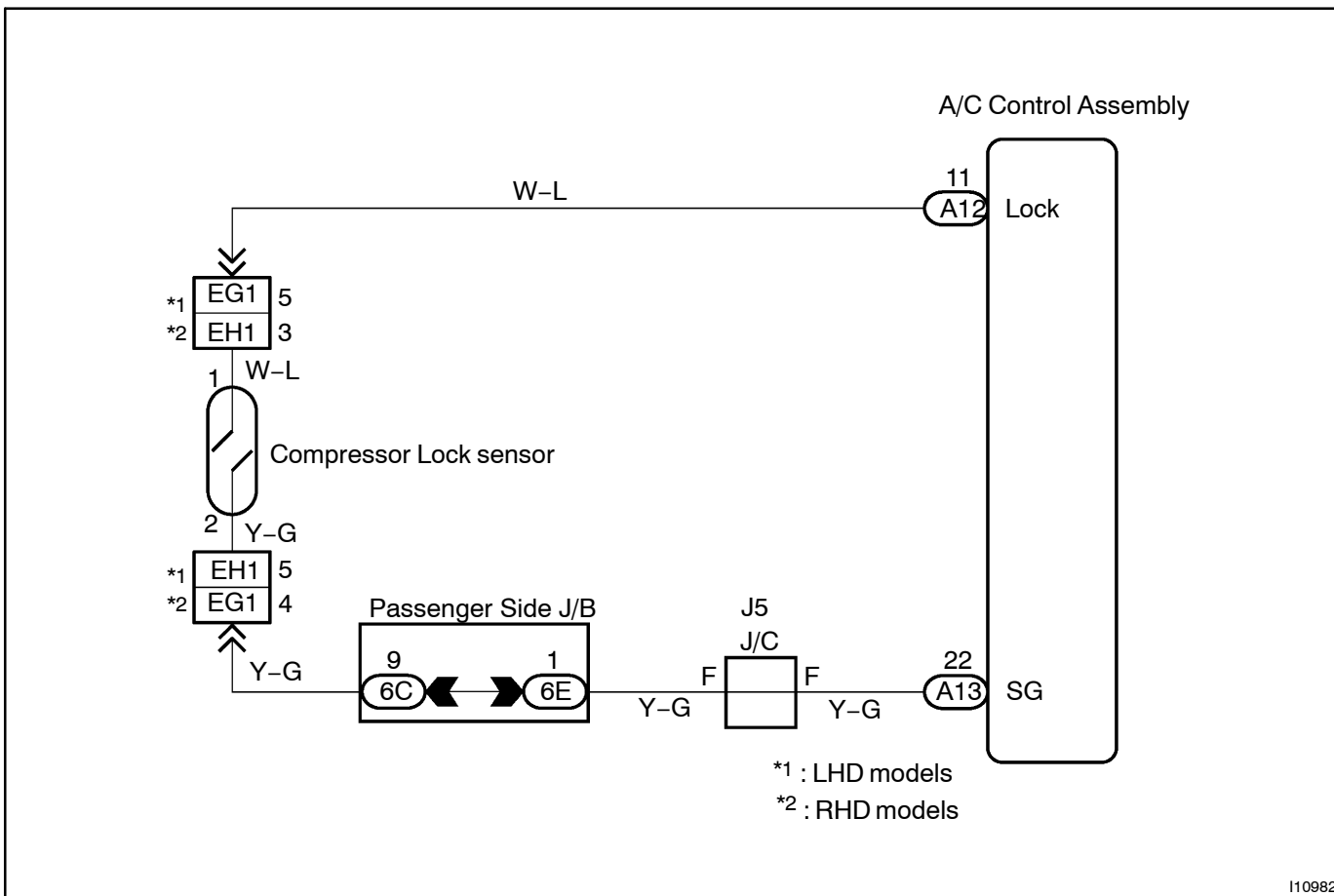
**CIRCUIT DESCRIPTION**

This sensor sends 4 pluses per engine revolution to the A/C control assembly.

If the number ratio of the compressor speed divided by the engine speed is smaller than a predetermined value, the A/C control assembly turns the compressor off. And the indicator flashes at about 1 second intervals.

| DTC No. | Detection Item                                                                                                                                                                                      | Trouble Area                                                                                                                                                                                                                                   |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 22      | All conditions below are detected for 3 secs. or more<br>(a) Engine speed: 450 rpm or more<br>(b) Ratio between engine and compressor speed deviates 20% or more in comparison to normal operation. | <ul style="list-style-type: none"> <li>• Compressor</li> <li>• Compressor drive belt</li> <li>• Compressor lock sensor</li> <li>• Harness and connector between compressor and A/C control assembly</li> <li>• A/C control assembly</li> </ul> |

**WIRING DIAGRAM**



## INSPECTION PROCEDURE

## 1 Check compressor.

**PREPARATION:**

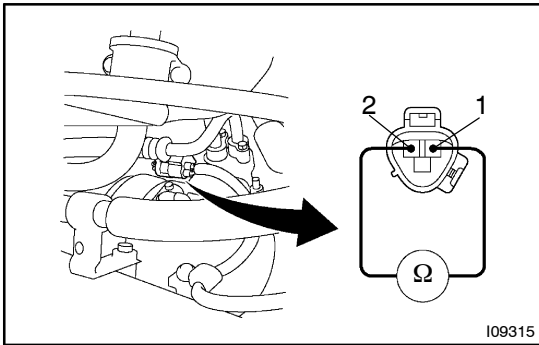
- (a) Check compressor drive belt tension (See page AC-15).  
 (b) Check if the compressor does not lock during operation with engine started and blower switch and A/C switch ON.

NG

Adjust drive belt tension or repair compressor.

OK

## 2 Check compressor lock sensor.

**PREPARATION:**

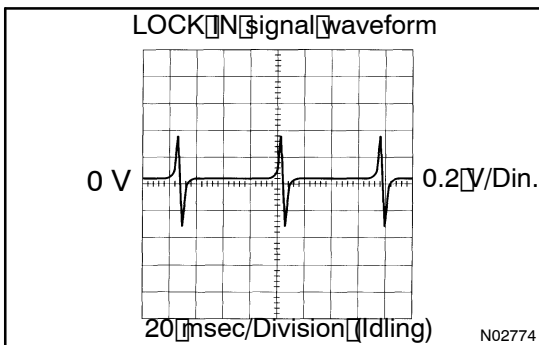
- (a) Jack up the vehicle.  
 (b) Disconnect compressor connector.

**CHECK:**

Measure resistance between terminals 1 and 2 of compressor lock sensor connector.

**OK:**

**Resistance: at 20 °C (68 °F): 570–1,050 Ω**

**Reference : Inspection using oscilloscope**

During cranking or idling, measure voltage between terminals LOCK and SG of A/C control assembly.

**HINT:**

The correct waveform appears as shown in the illustration on the left.

NG

Replace compressor.

OK

3 Check harness and connector between A/C control assembly and compressor lock sensor (See page IN-30).

NG

Repair or replace harness or connector.

OK

Proceed to next circuit inspection shown on problem symptoms table (See page DI-780). However, if DTC 22 is displayed, check and replace A/C control assembly.