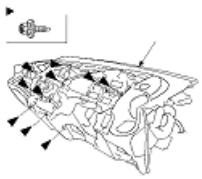
Dashboard/Steering Hanger Beam Disassembly/Reassembly

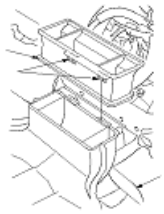
NOTE:

- Put on gloves to protect your hands.
- Take care not to scratch the dashboard, the body and the other related parts.
- Take care not to bend the brackets.
- When removing components, use the trim tools or equivalent.
- RHD model is shown; LHD model is symmetrical.

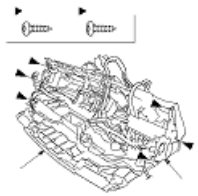


1. Remove the dashboard/steering hanger beam.
2. Remove these items from the dashboard:
   - Instrument panel
   - Gauge control module
   - Driver's dashboard undercover
   - Center panel (without audio system)
   - Audio unit (with audio system)
   - Center lower cover
   - Center lower trim
   - Passenger's tray lid
   - Side vent
   - Passenger's airbag
3. From the front of the dashboard (A), remove the screws.

4. From the back of the dashboard (A), release the hooks (B), and remove the center joint duct (C).

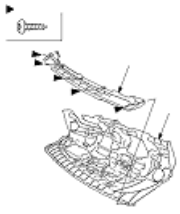


5. From the back of the dashboard (A), remove the screws (B, C), then separate the dashboard from the steering hanger beam (D).

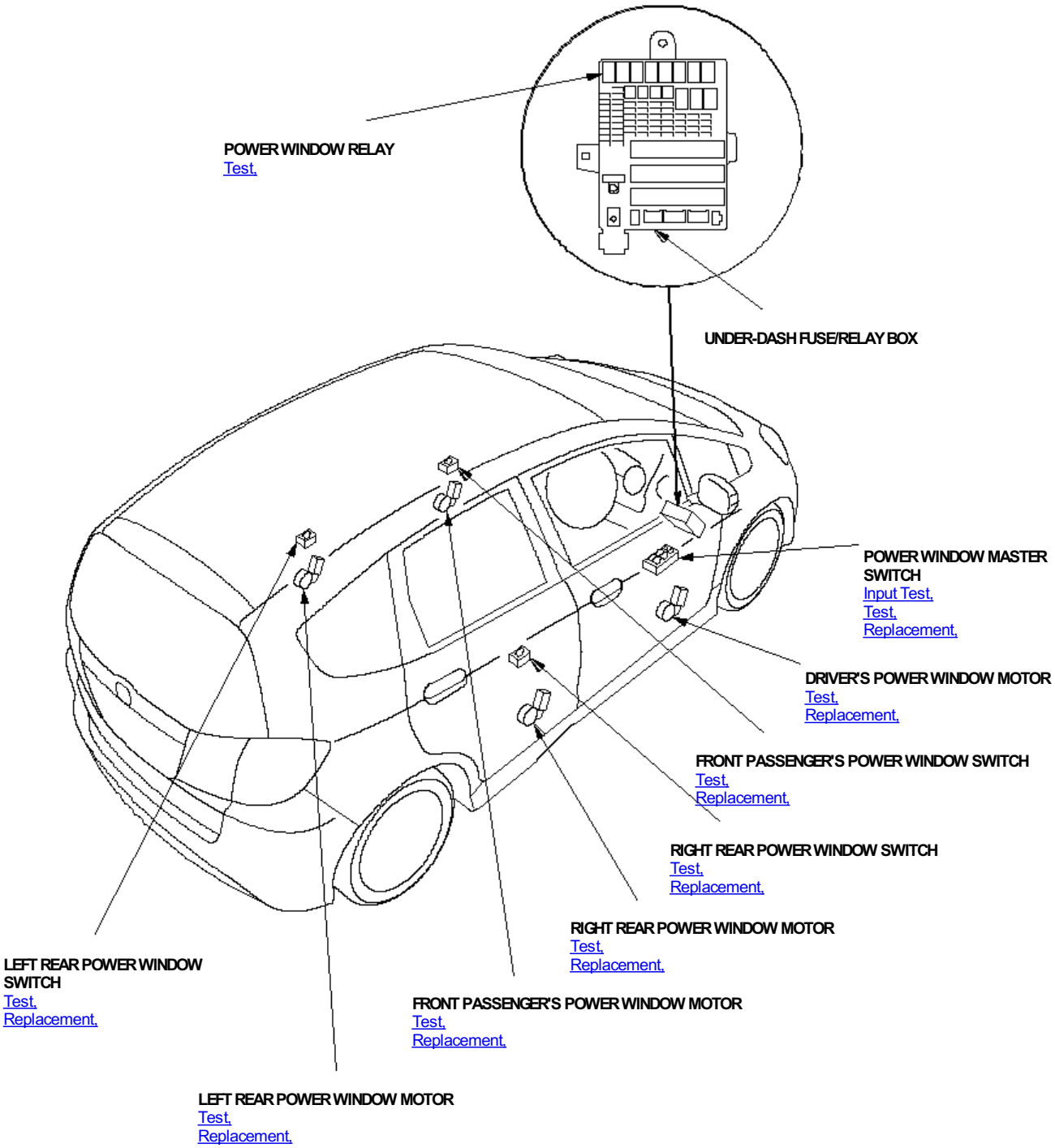


6. Remove the screws, then remove the dashboard duct (A) from the dashboard (B).

7. If necessary, remove the screws, then remove the front def trim (A) from the dashboard (B).
8. Assemble the dashboard and steering hanger beam in the reverse order of removal. Make sure the dashboard wire harness is not pinched.



Power Windows Component Location Index



RHD model is shown, LHD model is similar.

VSA DTC Troubleshooting: 61-01, 61-21, 61-22, 61-23

DTC 61-01:
VSA Modulator-control Unit Initial IG Low Voltage
DTC 61-21:
VSA Modulator-control Unit Power Source Low Voltage 1
DTC 61-22:
VSA Modulator-control Unit Power Source Low Voltage 2
DTC 61-23:
VSA Modulator-control Unit Power Source Low Voltage 3

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Turn the ignition switch to LOCK (0), then start the engine.
4. Check for DTCs with the HDS.

   Is DTC 61-01, 61-21, 61-22, or 61-23 indicated?
   YES - Go to Step 5 .
   NO - Intermittent failure, the system is OK at this time. Check for loose terminals at the VSA modulator-control unit 36P connector. Refer to intermittent failures troubleshooting. ■
5. Check and note BATTERY voltage in the VSA DATA LIST with the HDS.
6. Using a voltmeter, measure and note the voltage between the battery terminals.
   NOTE: If the voltage is below 9.5 V, check the battery, and troubleshoot the alternator regulator circuit.
7. Compare the voltage noted in Step 5 to the voltage in Step 6 .

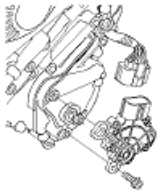
   Is the difference between the two voltage readings less then 3 V?
   YES - Intermittent failure, the system is OK at this time. Check for loose terminals at the VSA modulator-control unit 36P connector. Refer to intermittent failures troubleshooting. If the code resets after clearing, go to Step 8 .
   NO - Go to Step 8 .
8. Update the VSA modulator-control unit if it does not have the latest software. If the unit already has the latest software, substitute a known-good VSA modulator-control unit.
9. Turn the ignition switch to LOCK (0), then start the engine.
10. Check for DTCs with the HDS.

    Is DTC 61-01, 61-21, 61-22, or 61-23 indicated?
    YES - Check for loose terminals in the VSA modulator-control unit 36P connector. If the VSA modulator-control unit was updated, substitute a known-good VSA modulator-control unit, then retest. If the VSA modulator-control unit was substituted, go to Step 1 .
    NO - If the VSA modulator-control unit was updated, troubleshooting is complete. If the VSA modulator-control unit was substituted, replace the original VSA modulator-control unit. If any other DTCs are indicated, go to the indicated DTCs troubleshooting.■

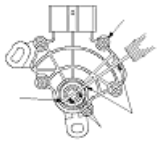
Transmission Range Switch Replacement

1. Raise the vehicle on a lift, or apply the parking brake, block the rear wheels, and raise the front of the vehicle. Make sure it is securely supported.
2. Shift to N.
3. Remove the transmission range switch cover.

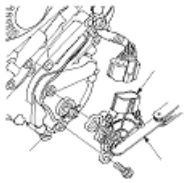
4. Remove the transmission range switch.
5. Make sure the shift position is in N. If necessary, put the shift lever into N.
   NOTE: Do not use the selector control shaft to adjust the shift position. If the control shaft tips are squeezed together it will cause a faulty signal or position due to play between the selector control shaft and switch.



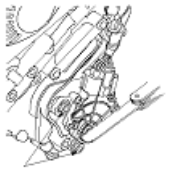
6. Align the cutouts (A) on the rotary-frame with the neutral positioning cutouts (B) on the transmission range switch (C), then put a 2.0 mm (0.08 in.) feeler gauge blade (D) in the cutouts to hold the switch in the N position.
   NOTE: Be sure to use a 2.0 mm (0.08 in.) blade or equivalent to hold the switch in the N position.



7. Install the transmission range switch (A) gently on the selector control shaft (B) while holding it in the N position with the 2.0 mm (0.08 in.) blade (C).



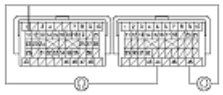
8. Tighten the bolts on the transmission range switch while you continue to hold the N position. Do not move the transmission range switch when tightening the bolts. Remove the feeler gauge.
9. Check the connectors for rust, dirt, or oil, clean or repair if necessary, then connect the connector securely.
10. Turn the ignition switch to ON (II). Move the shift lever through all positions, and check the transmission range switch synchronization with the A/T gear position indicator.
11. Check that the engine starts in P and N, and does not start in any other shift lever position.
12. Check that the back-up lights come on when the shift lever is in R.
13. Allow the front wheels to rotate freely, then start the engine, and check the shift lever operation.



14. Install the transmission range switch cover.

DTC Troubleshooting: P0973 (7)

DTC P0973:
Shift Solenoid Valve A (Short)
NOTE:



- Before you troubleshoot, record all freeze data and any on-board snapshot, and review General Troubleshooting Information.
- This code is caused by an electrical circuit problem and cannot be caused by a mechanical problem in the transmission.

1. Clear the DTC with the HDS.
2. Start the engine, and test-drive the vehicle:
   - Seven-position transmission: Drive the vehicle in 2nd gear in D, D3, or 2 for at least 1 second, then slow down to a stop.
   - Five-position transmission: Drive the vehicle in 2nd gear in the sequential shift mode in S for at least 1 second, or in D, then slow down to a stop.
3. Check that DTC P0973 recurs.

   Is DTC P0973 indicated?
   YES - Go to Step 7 .
   NO - Go to Step 4 .
4. Select Shift Solenoid A in the Miscellaneous Test Menu, and test the shift solenoid valve A with the HDS.

   Is a clicking sound heard?
   YES - Go to Step 5 .
   NO - Go to Step 7 .
5. Test-drive the vehicle:
   - Seven-position transmission: Drive the vehicle in 2nd gear in D, D3, or 2 for at least 1 second. Slow down to a stop, and wait for at least 1 second.
   - Five-position transmission: Drive the vehicle in 2nd gear in the sequential shift mode in S for at least 1 second, or in D. Slow down to a stop, and wait for at least 1 second.
6. Monitor the OBD status for P0973 in the DTCs/Freeze Data in A/T Mode Menu for a pass/fail.

   Does the HDS indicate FAILED?
   YES - Go to Step 7 .
   NO - Intermittent failure, the system is OK at this time. Check the SH A wire for an intermittent short to ground between shift solenoid valve A and the PCM. If the HDS indicates NOT COMPLETED, return to Step 4 and recheck.
7. Turn the ignition switch to LOCK (0).
8. Jump the SCS line with the HDS.
9. Disconnect PCM connectors B (49P) and C (49P).
10. Measure the resistance between PCM connector terminals B11 and C44 or C48.

    Is there less than 12 Ω?
    YES - Go to Step 11 .
    NO - Go to Step 17 .
11. Disconnect the shift solenoid harness connector.

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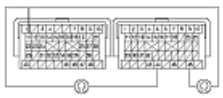
12. Check for continuity between PCM connector terminals B11 and C44 or C48.

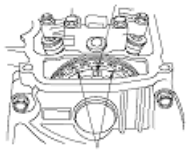


    Is there continuity?
    YES - Repair short in the wire between PCM connector terminal B11 and the shift solenoid harness connector, then go to Step 22 .
    NO - Go to Step 13 .
13. Inspect shift solenoid valve A.

    Is shift solenoid valve A OK?
    YES - Go to Step 14 .
    NO - Replace shift solenoid valve A or the shift solenoid harness, then go to Step 22 .
14. Disconnect PCM connector A (49P).
15. Turn the ignition switch to ON (II).

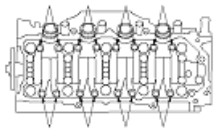
Cylinder Head Valve Clearance Adjustment

NOTE: Adjust the valves only when the cylinder head temperature is less than 38 °C (100 °F).



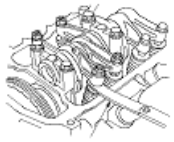
1. Remove the cylinder head cover.
2. Set the No. 1 piston at top dead center (TDC). The ‘‘UP" mark (A) on the camshaft sprocket should be at the top, and the TDC grooves (B) on the camshaft sprocket should line up with the top edge of the head.

L15A8, L13Z3 engines



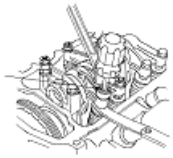
3. Select the correct thickness feeler gauge for the valves you are going to check.
   Valve Clearance
   Intake: 0.15–0.19 mm (0.006–0.007 in.)
   Exhaust: 0.26–0.30 mm (0.010–0.012 in.)

L15A8, L13Z3 engines

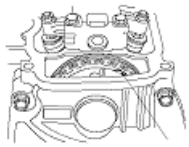


4. Insert the feeler gauge (A) between the adjusting screw and the end of the valve stem on No. 1 cylinder and slide it back and forth; you should feel a slight amount of drag.

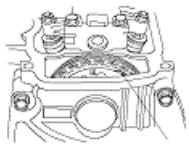
L15A8, L13Z3 engines



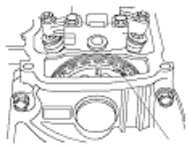
5. If you feel too much or too little drag, loosen the locknut, and turn the adjusting screw (A) until the drag on the feeler gauge is correct.
6. Tighten the locknut and recheck the clearance. Repeat the adjustment, if necessary.
7. Tighten the locknut to the specified torque, and recheck the valve clearance. Repeat the adjustment if necessary.
   Specified Torque
   7 x 0.75 mm 14 N·m (1.4 kgf·m, 10 lbf·ft)
   Apply new engine oil to the nut threads.



8. Rotate the crankshaft clockwise. Align the No. 3 piston TDC groove (A) on the camshaft sprocket with the top edge of the head.
9. Check, and if necessary, adjust the valve clearance on the No. 3 cylinder.

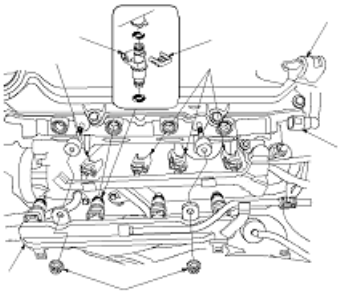


10. Rotate the crankshaft clockwise. Align the No. 4 piston TDC groove (A) on the camshaft sprocket with the top edge of the head.
11. Check, and if necessary, adjust the valve clearance on the No. 4 cylinder.

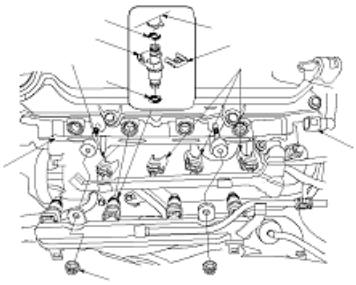


12. Rotate the crankshaft clockwise. Align the No. 2 piston TDC groove (A) on the camshaft sprocket with the top edge of the head.
13. Check, and if necessary, adjust the valve clearance on the No. 2 cylinder.
14. Install the cylinder head cover.

Injector Replacement



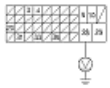
1. Relieve the fuel pressure.
2. Remove the intake manifold, and intake manifold chamber.
3. Remove the cover (A), then disconnect the quick-connect fitting (B).
4. Disconnect the injector connectors (C).
5. Remove the fuel rail mounting nuts (D) from the fuel rail (E).
6. Remove the fuel rail and the injectors from the cylinder head.
7. Remove the injector clips (F) from the fuel rail.
8. Remove the injectors (G) from the fuel rail.



9. Coat the new O-rings (black) (A) with clean engine oil, and insert the injectors (B) into the fuel rail (C).
10. Install the injector clips (D).
11. Coat the new injector O-rings (brown) (E) with clean engine oil.
12. Install the fuel rail and the injectors in the cylinder head (F).
13. Install the fuel rail mounting nuts (G).
14. Connect the injector connectors (H).
15. Connect the quick-connect fitting (I).
16. Turn the ignition switch to ON (II), but do not operate the starter. After the fuel pump runs for about 2 seconds, the fuel rail will be pressurized. Repeat this two or three times, then check for fuel leakage.
17. Reinstall the intake manifold, and intake manifold chamber.

DTC Troubleshooting: U0101

DTC U0101:
F-CAN Malfunction (ECM-TCM)
NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information.



1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Check for Temporary DTCs or DTCs in the DTCs MENU with the HDS.

   Is DTC U0101 indicated?
   YES - Go to Step 4 .
   NO - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the gauge control module, the TCM, and the ECM.■
4. Turn the ignition switch to LOCK (0).
5. Check the No. 60 AMT (40 A) fuse in the under-dash fuse/relay box.

   Is the fuse OK?
   YES - Go to Step 6 .
   NO - Repair short in the wire between the No. 60 AMT +B (40 A) fuse and the TCM. Also replace the No. 60 AMT +B (40 A) fuse, then go to Step 19 .
6. Remove the TCM.
7. Check for poor connections at TCM connector A (37P).

   Are the connections OK?
   YES - Go to Step 8 .
   NO - Repair the poor connections or loose terminals at TCM connector A (37P), then go to Step 19 .
8. Disconnect TCM connector A (37P).
9. Reconnect the engine compartment wire harness 10P connector; LHD model, RHD model.
10. Reconnect the ground cable of the TCM to the body ground.
11. Turn the ignition switch to ON (II).
12. Measure the voltage between TCM connector A (37P) terminal No. 28 and body ground.

    Is there battery voltage?
    YES - Go to Step 13 .
    NO - Repair open in the wire between the No. 60 AMT (40 A) fuse and the TCM, then go to Step 19 .
13. Turn the ignition switch to LOCK (0).

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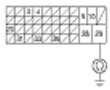
14. Check for continuity between TCM connector A (37P) terminal No. 29 and body ground.



    Is there continuity?
    YES - Go to Step 15 .
    NO - Repair open in the wire between the TCM and body ground (G151), then go to Step 19 .
15. Jump the SCS line with the HDS.
16. Disconnect ECM connector A (49P).

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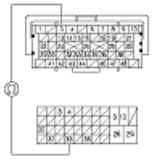
17. Check for continuity between ECM connector terminal A3 and TCM connector A (37P) terminal No. 33.



    Is there continuity?
    YES - Go to Step 18 .
    NO - Repair open in the wire between the ECM (A3) and the TCM, then go to Step 19 .

Maintenance Schedule for Normal and Severe Conditions - Except Australia

This maintenance schedule outlines the minimum required maintenance that you should perform to ensure the trouble-free operation of the vehicle. Due to regional and climatic differences, some additional service may be required. Please consult the warranty booklet for a more detailed description.
The following items must be used for ‘‘severe conditions" indicated on schedule, if the vehicle is driven MAINLY under the specified conditions A to F.

- Engine oil and engine oil filter: A/B/C/D/E
- Transmission fluid
  M/T: B/D
  A/T: B/C/D/F

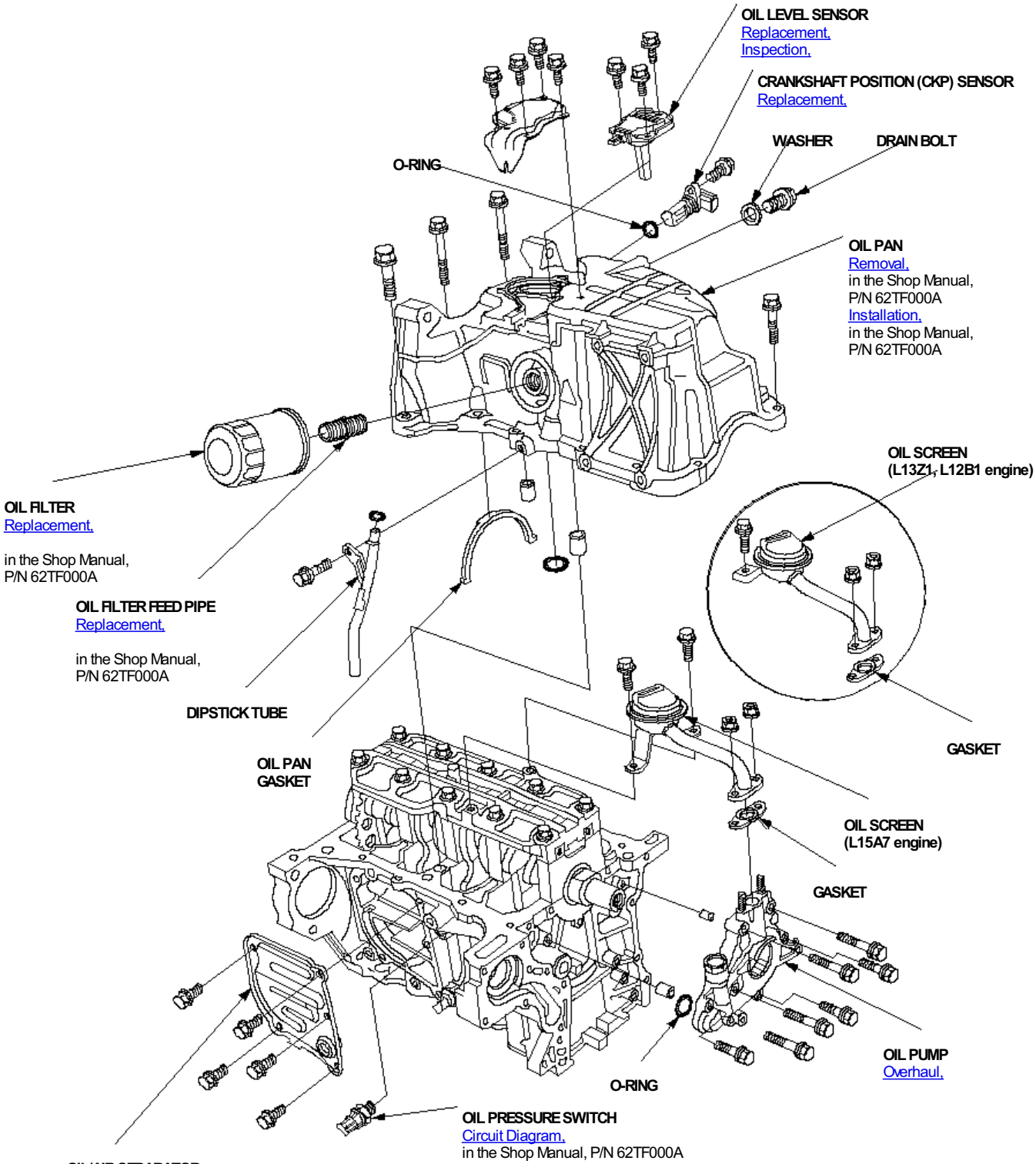
A: Driving less than 8 km (5 miles) per trip or, in freezing temperatures, driving less than 16 km (10 miles) per trip.
B: Driving in extremely hot over 35 °C (95 °F) conditions.
C: Extensive idling, or long periods of stop-and-go driving.
D: Towing trailer, driving with a loaded roof rack, or driving in mountainous conditions.
E: Driving on muddy, dusty, or de-iced roads.
F: Driving more than 20,000 km (12,500 miles) per year, or driving at high speed frequently.

Service at the indicated distance or time whichever comes first		km x 1,000	20	40	60	80	100	120	140	160	180	200
		miles x 1,000	12.5	25.0	37.5	50.0	62.5	75.0	87.5	100.0	112.5	125.0
		months	12	24	36	48	60	72	84	96	108	120
Replace engine oil *	Normal Conditions		Every 10,000 km (6,250 miles) or 1 year									
	Severe Conditions		Every 5,000 km (3,125 miles) or 6 months									
Replace engine oil filter *	Normal Conditions		●	●	●	●	●	●	●	●	●	●
	Severe Conditions		Every 10,000 km (6,250 miles) or 6 months									
Replace air cleaner element			Every 30,000 km (18,750 miles)									
Inspect valve clearance			Every 40,000 km (25,000 miles)									
Replace fuel filter						●				●		
Replace spark plugs			Every 100,000 km (62,500 miles)									
Inspect and adjust drive belt Look for cracks and damage, then check the deflection and tension.				●		●		●		●		●
Inspect idle speed								●				
Replace engine coolant Use genuine Honda All Season Antifreeze/Coolant Type 2.			At 200,000 km (120,000 miles) or 10 years, then every 100,000 km (60,000 miles) or 5 years									
Replace Manual Transmission Fluid Use genuine Honda MTF.	Normal Conditions							●				
	Severe Conditions				●			●			●	
Replace Automatic Transmission Fluid Use genuine Honda ATF-Z1.	Normal Conditions							●				●
	Severe Conditions				●		●		●		●	

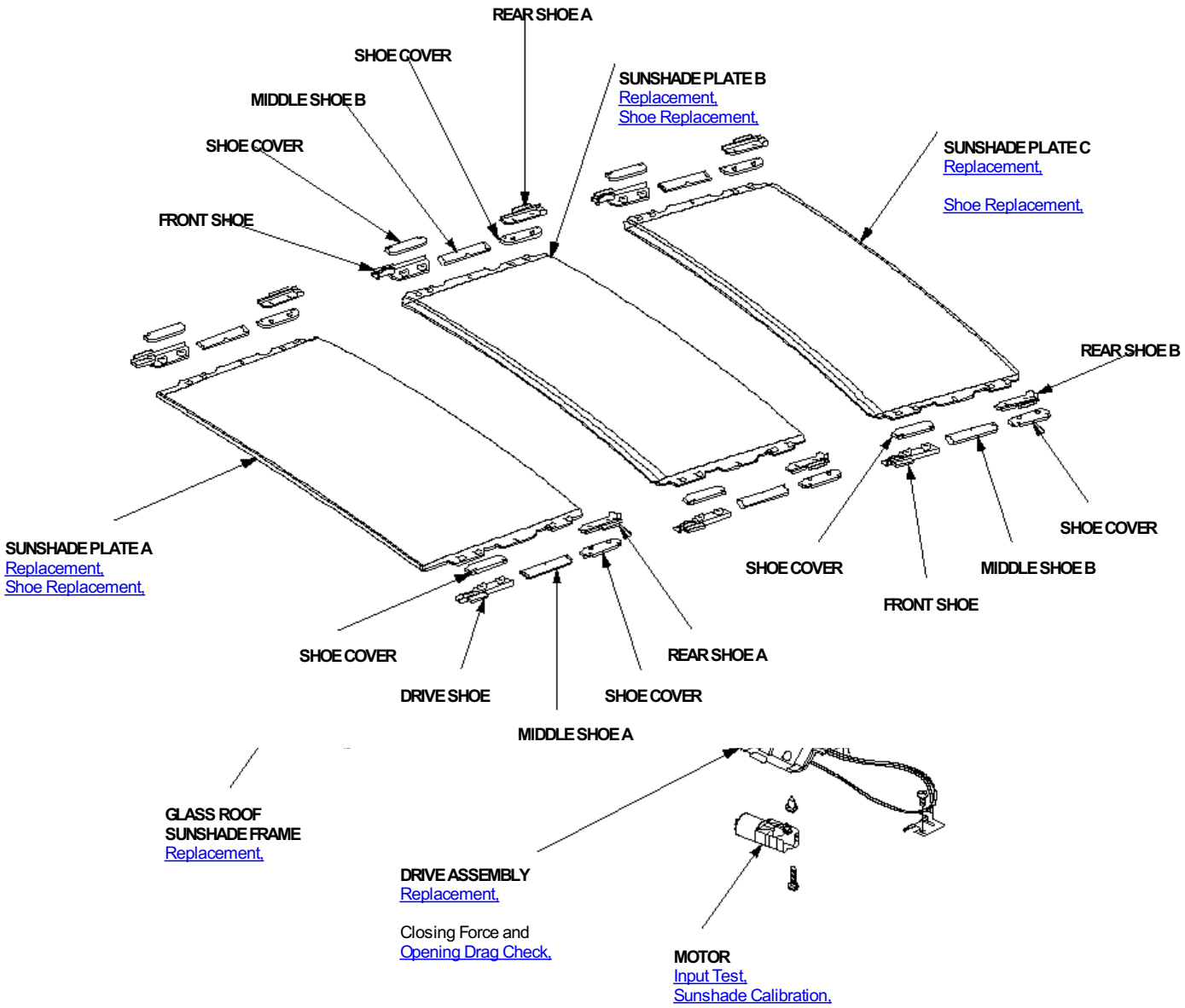
*: Only severe schedule is required in some countries, refer to local warranty booklet.

Service at the indicated distance or time whichever comes first	km x 1,000	20	40	60	80	100	120	140	160	180	200
	miles x 1,000	12.5	25.0	37.5	50.0	62.5	75.0	87.5	100.0	112.5	125.0
	months	12	24	36	48	60	72	84	96	108	120
Check front and rear brakes • Check the brake pad and disc thickness. Check for damage. • Check the calipers for damage, leaks, and tightness.	Every 10,000 km (6,250 miles)										
Replace brake fluid • Use only DOT 3 or DOT 4 brake fluid. We recommend genuine Honda Brake Fluid. • Check the brake fluid level is between upper and lower marks on the reservoir.	Every 3 years										
Check parking brake adjustment Check the parking brake operation.		●	●		●		●		●		●
Replace dust and pollen filter		●	●	●	●	●	●	●	●	●	●
Rotate tyres Check tyre inflation and condition at least once per month.	Every 10,000 km (6,250 miles)										
Visually inspect the following items: • Check for correct installation and position, check for cracks, deterioration, rust, and leaks. • Check tightness of screws, nuts, and joints. If necessary, retighten.											
Tie-rod ends, steering gearbox, and boots • Check rack grease and steering linkage. • Check the boot for damage and leaking grease.	Every 10,000 km (6,250 miles) or 6 months										
Suspension components • Check the bolts for tightness. • Check all dust covers for deterioration and damage.											

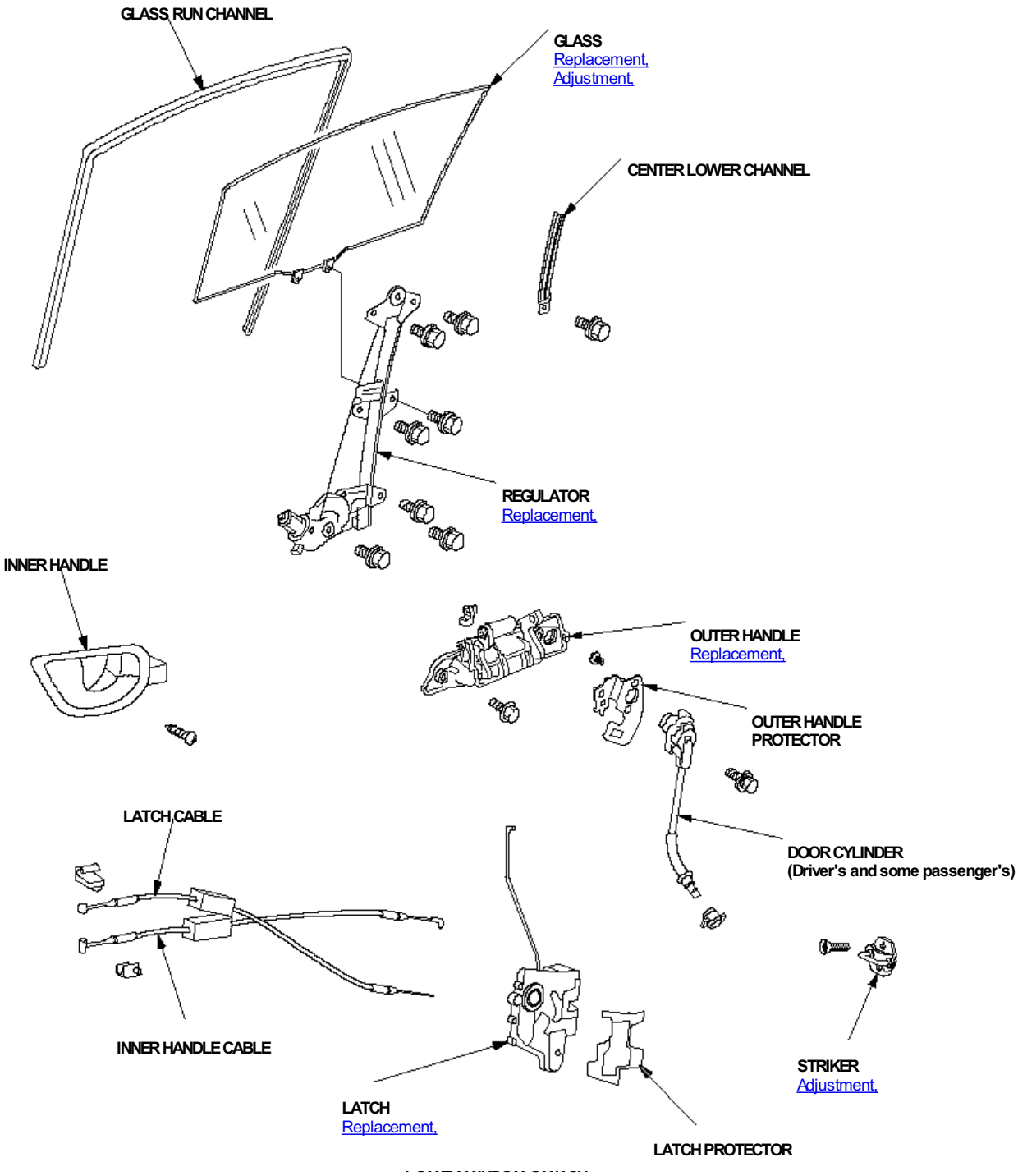
Engine Lubrication Component Location Index



Glass Roof Sunshade Mechanical Component Location Index



Front Door Component Location Index



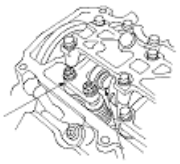
VTEC Rocker Arm Test

Special Tools Required

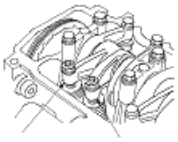
Air supply, 3/8
07LAJ-PR30102

Air adapter, M10 x 1.0
070AJ-0010101

L15A7 engine

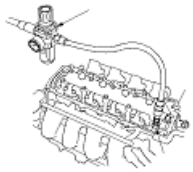


L13Z1 engine

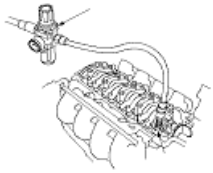


1. Start the engine, and let it run for 5 minutes, then turn the ignition switch to LOCK (0).
2. Remove the cylinder head cover.
3. Rotate the crankshaft clockwise, and visually check that all the primary rocker arms (A) and secondary rocker arms (B) move freely.
   - If the primary rocker arm and secondary rocker arm move together, remove the primary and secondary rocker arms as an assembly, and check that the pistons in the primary and secondary rocker arms move smoothly. If any rocker arm needs replacing, replace the primary and secondary rocker arms as an assembly, then retest.
   - If all the primary rocker arms and secondary rocker arms move freely, go to Step 4 .
4. Check that the air pressure on the shop air compressor gauge indicates over 400 kPa (4 kgf/cm ^{2}, 57 psi).
5. Inspect the valve clearance.

L15A7 engine

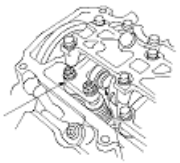


L13Z1 engine

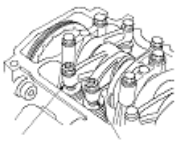


6. Install the air adapter (A) to the inspection hole, then connect the valve inspection set (B).
7. Loosen the valve on the regulator, and apply the specified air pressure.
   Specified Air Pressure:
   340 kPa (3.5 kgf/cm ^{2}, 50 psi)

L15A7 engine



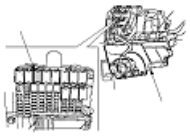
L13Z1 engine



8. With the specified air pressure applied, rotate the crankshaft clockwise, and visually check that all the primary rocker arms (A) and secondary rocker arms (B) move together.
   If the primary rocker arm and secondary rocker arm move freely and independently of each other, remove the primary and secondary rocker arms as an assembly, and check that the pistons in the primary and secondary rocker arms move smoothly. If any rocker arm needs replacing, replace the primary and secondary rocker arms as an assembly, and test.
9. Remove the air supply and the VTEC adapter.
10. Install the cylinder head cover.

DTC Troubleshooting: P0135 (41)

DTC P0135:
A/F Sensor (Sensor 1) Heater Circuit Malfunction
NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information.



1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm (min $^{-1}$) without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
4. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0135 indicated?
   YES - Go to Step 5 .
   NO - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the A/F sensor (Sensor 1), A/F sensor relay, and the ECM/PCM.■
5. Turn the ignition switch to LOCK (0).
6. Check the No. 26 A/F SENSOR (10A) fuse in the under-dash fuse/relay box.

   Is the fuse OK?
   YES - Go to Step 7 .
   NO - Go to Step 21 .
7. Open the fuse lid (A), then remove the A/F sensor relay (B) from the under-dash fuse/relay box.
8. Test the A/F sensor relay.

   Is the A/F sensor relay OK?
   YES - Go to Step 9 .
   NO - Replace the A/F sensor relay, then go to Step 25 .
9. Disconnect the A/F sensor (Sensor 1) 4P connector.

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10. At sensor side, measure the resistance between A/F sensor (Sensor 1) 4P connector terminals No. 3 and No. 4.

    Is there 1.9–2.7 Ω at room temperature?
    YES - Go to Step 11 .
    NO - Go to Step 24 .

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11. At sensor side, check for continuity between A/F sensor (Sensor 1) 4P connector terminals No. 2 and No. 3, and between terminals No. 2 and No. 4 individually.

    Is there continuity?
    YES - Go to Step 24 .
    NO - Go to Step 12 .

12. Jump the SCS line with the HDS.
13. Disconnect ECM/PCM connector C (49P).

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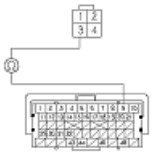
14. Check for continuity between A/F sensor (Sensor 1) 4P connector terminal No. 3 and ECM/PCM connector terminal C9.

    Is there continuity?
    YES - Go to Step 15 .
    NO - Repair open in the wire between the ECM/PCM (C9) and the A/F sensor (Sensor 1), then go to Step 25 .



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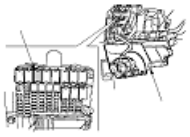
15. Open the fuse lid (A), then remove the A/F sensor relay (B) from the under-dash fuse/relay box.



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16. Connect A/F sensor (Sensor 1) 4P connector terminal No. 4 to body ground with a jumper wire.

Wiring Diagram