

2012 - Mazda6 - General Information

HOW TO USE THIS MANUAL

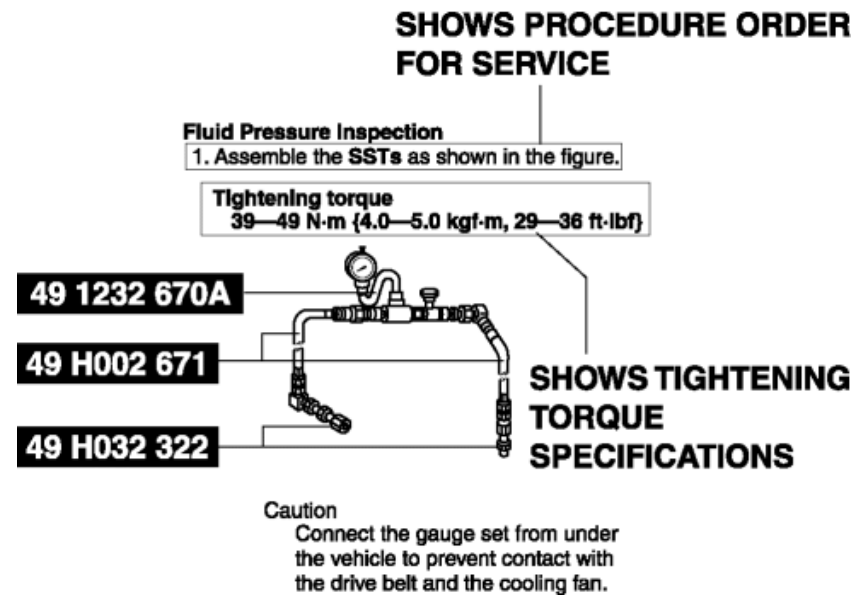
Range of Topics

- This manual contains procedures for performing all required service operations. The procedures are divided into the following five basic operations:
 - Removal/Installation
 - Disassembly/Assembly
 - Replacement
 - Inspection
 - Adjustment
- Simple operations which can be performed easily just by looking at the vehicle (i.e., removal/installation of parts, jacking, vehicle lifting, cleaning of parts, and visual inspection) have been omitted.

Service Procedure

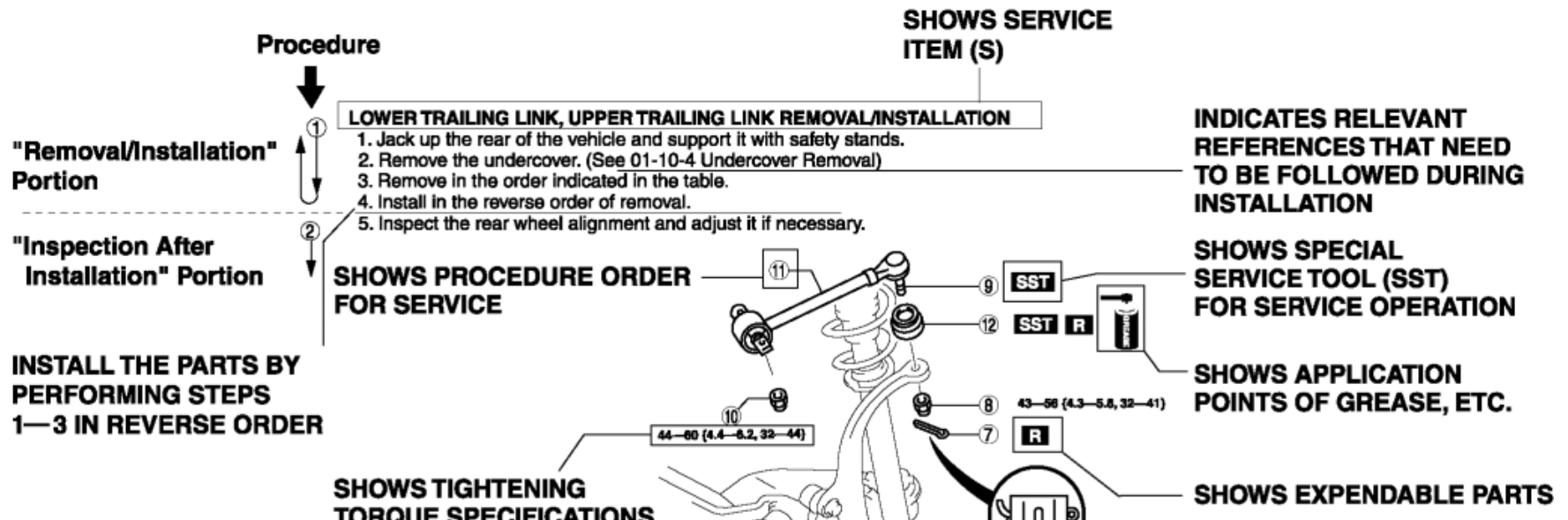
Inspection, adjustment

- Inspection and adjustment procedures are divided into steps. Important points regarding the location and contents of the procedures are explained in detail and shown in the illustrations.

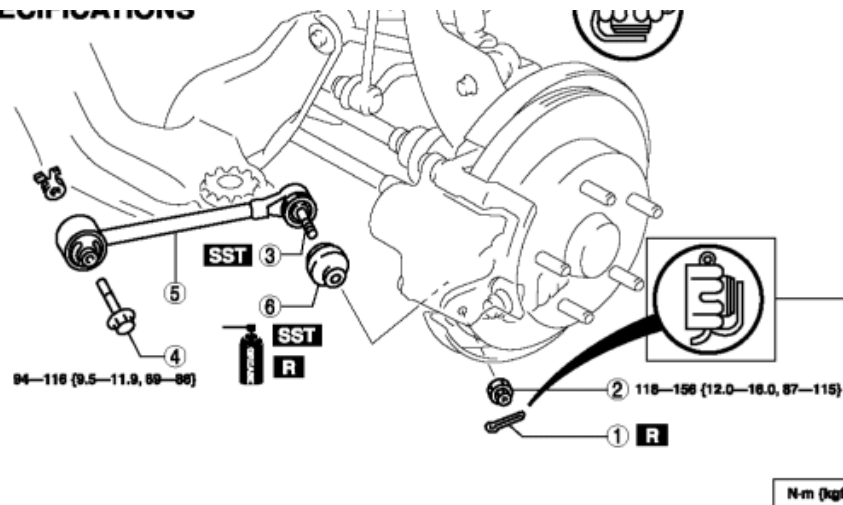


Repair procedure

1. Most repair operations begin with an overview illustration. It identifies the components, shows how the parts fit together, and describes visual part inspection. However, only removal/installation procedures that need to be performed methodically have written instructions.
2. Expendable parts, tightening torques, and symbols for oil, grease, and sealant are shown in the overview illustration. In addition, symbols indicating parts requiring the use of special service tools or equivalent are also shown.
3. Procedure steps are numbered and the part that is the main point of that procedure is shown in the illustration with the corresponding number. Occasionally, there are important points or additional information concerning a procedure. Refer to this information when servicing the related part.



TORQUE SPECIFICATIONS



SHOWS DETAILS

SHOWS TIGHTENING
TORQUE UNITS

SHOWS REFERRAL
NOTES FOR SERVICE

1	Split pin
2	Nut
3	Lower trailing link ball joint (See 02-14-5 Lower Trailing Link Ball Joint Removal Note)
4	Bolt
5	Lower trailing link
6	Dust boot (lower trailing link)

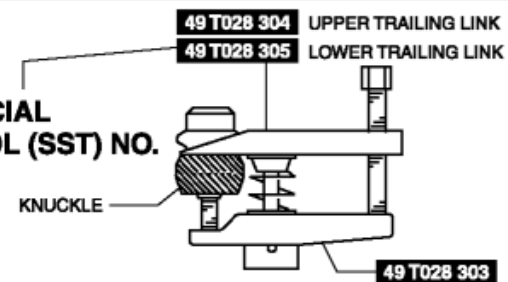
7	Split pin
8	Nut
9	Upper trailing link ball joint (See 02-14-5 Upper Trailing Link Ball Joint Removal Note)
10	Nut
11	Upper trailing link
12	Dust boot (upper trailing link)

SHOWS REFERRAL
NOTES FOR SERVICE

Lower Trailing Link Ball Joint, Upper Trailing Link Ball Joint Removal Note

- Remove the ball joint using the SSTs.

SHOWS SPECIAL
SERVICE TOOL (SST) NO.



Symbols

- There are eight symbols indicating oil, grease, fluids, sealant, and the use of **SST** or equivalent. These symbols show application points or use of these materials during service.

Symbol	Meaning	Kind
	Apply oil	New appropriate engine oil or gear oil

	Apply brake fluid	New appropriate brake fluid
	Apply automatic transmission/transaxle fluid	New appropriate automatic transmission/transaxle fluid
	Apply continuously variable transaxle fluid	New appropriate continuously variable transaxle fluid
	Apply grease	Appropriate grease
	Apply sealant	Appropriate sealant
	Apply petroleum jelly	Appropriate petroleum jelly
	Replace part	O-ring, gasket, etc.
	Use SST or equivalent	Appropriate tools

Advisory Messages

- You will find several **Warnings, Cautions, Notes, Specifications** and **Upper and Lower Limits** in this manual.

Warning

- A Warning indicates a situation in which serious injury or death could result if the warning is ignored.

Caution

- A Caution indicates a situation in which damage to the vehicle or parts could result if the caution is ignored.

Note

- A Note provides added information that will help you to complete a particular procedure.

Specification

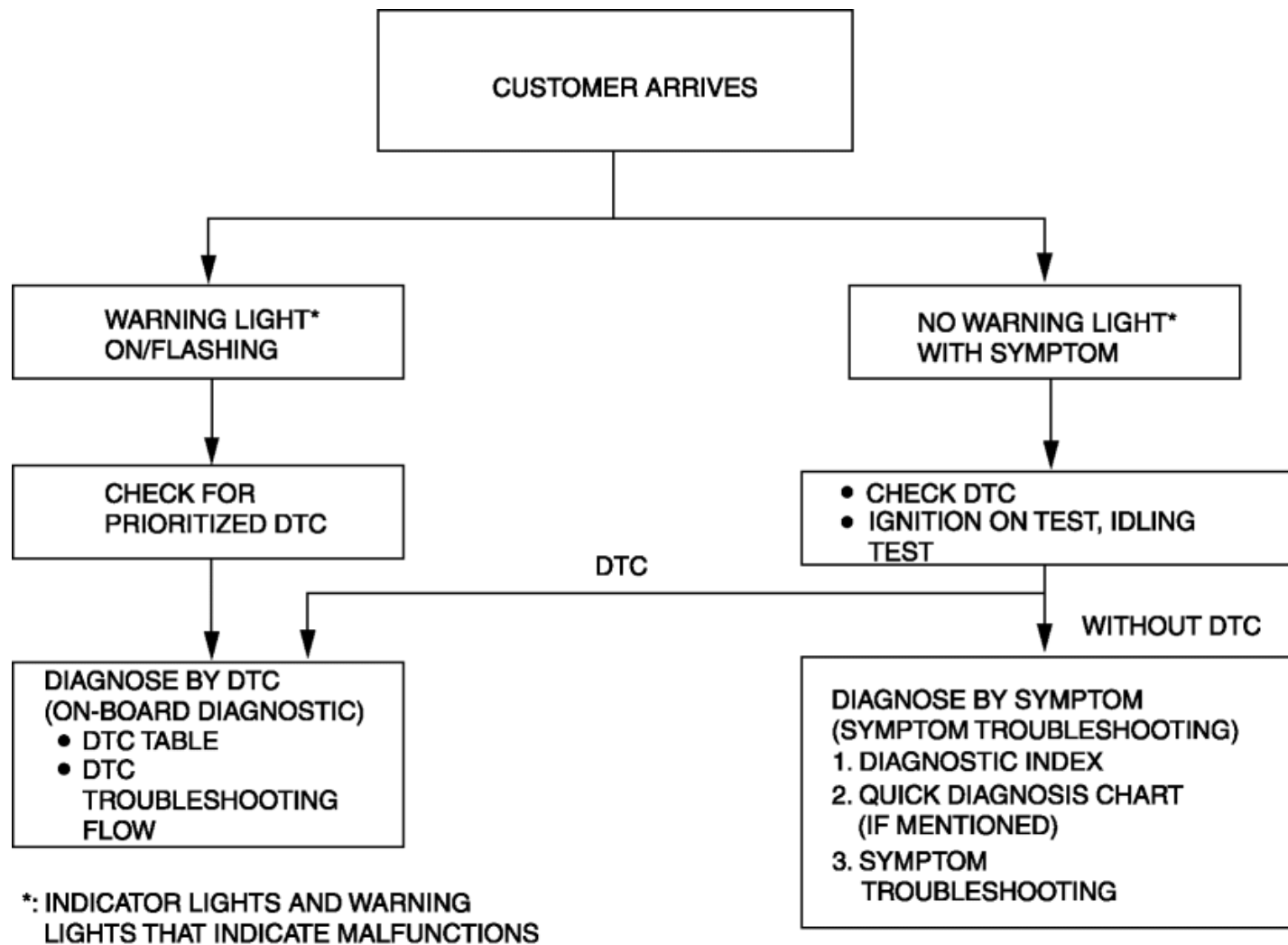
- The values indicate the allowable range when performing inspections or adjustments.

Upper and lower limits

- The values indicate the upper and lower limits that must not be exceeded when performing inspections or adjustments.

Troubleshooting Procedure

Basic flow of troubleshooting



DTC troubleshooting flow (on-board diagnostic)

- Diagnostic trouble codes (DTCs) are important hints for repairing malfunctions that are difficult to simulate. Perform the specific DTC diagnostic inspection to quickly and accurately diagnose the malfunction.
- The on-board diagnostic function is used during inspection. When a DTC is shown specifying the cause of a malfunction, continue the diagnostic inspection according to the items indicated by the on-board diagnostic function.

Diagnostic index

- The diagnostic index lists the symptoms of specific malfunctions. Select the symptoms related or most closely relating to the malfunction.

Quick diagnosis chart (If mentioned)

- The quick diagnosis chart lists diagnosis and inspection procedures to be performed specifically relating to the cause of the malfunction.

Symptom troubleshooting

- Symptom troubleshooting quickly determines the location of the malfunction according to symptom type.

Procedures for Use

Using the basic inspection (section 05)

- Perform the basic inspection procedure before symptom troubleshooting.
- Perform each step in the order shown.
- The reference column lists the location of the detailed procedure for each basic inspection.
- Although inspections and adjustments are performed according to the reference column procedures, if the cause of the malfunction is discovered during basic inspection, continue the procedures as indicated in the action column.

SHOWS INSPECTION ORDER		SHOWS ITEM NAMES FOR DETAILED PROCEDURES		SHOW POINTS REQUIRING ATTENTION BASED ON INSPECTION RESULTS
BASIC INSPECTION				
STEP	INSPECTION		ACTION	
1	Perform the mechanical system test. (See 05-13-3 MECHANICAL SYSTEM TEST.) Is mechanical system normal?	Yes	Go to the next step.	
		No	Repair or replace any malfunctioning parts according to the inspection result.	
2	Turn the ignition switch to the ON position. When the selector lever is moved, does the selector illumination indicate synchronized position to the lever location? Also, when other ranges are selected from N or P during idling, does the vehicle move within 1—2 s?	Yes	Go to the next step.	
		No	Inspect the selector lever and TR switch. Repair or replace malfunctioning parts. (See 05-14-5 SELECTOR LEVER INSPECTION.) (See 05-13-10 TRANSMISSION RANGE (TR) SWITCH INSPECTION.) If the selector lever and TR switch are normal, go to the next step.	
3	Inspect the ATF color condition. (See 05-13-8 AUTOMATIC TRANSMISSION FLUID (ATF) INSPECTION.) Are ATF color and odor normal?	Yes	Go to the next step.	
		No	Repair or replace any malfunctioning parts according to the inspection result. Flush ATX and cooler line as necessary.	
4	Perform the line pressure test. (See 05-13-3 Line Pressure Test.) Is the line pressure normal?	Yes	Go to the next step.	
		No	Repair or replace any malfunctioning parts according to the inspection result.	
5	Perform the stall test. (See 05-13-4 Stall Speed Test.) Is the stall speed normal?	Yes	Go to the next step.	
		No	Repair or replace any malfunctioning parts according to the inspection result.	
	Inspect the voltage at the following TCM terminals. (See 05-13-29 TCM INSPECTION.) • Terminal 2J (TFT sensor) • Terminals 1D, 2B, 2C, 2E (TR switch) • Terminal 2G (turbine sensor) • Terminal 2D (down switch) • Terminal 2I (up switch) • Terminal 1E (M range switch) • Terminal 1W (steering shift switch) Is the voltage normal?	Yes	Go to the next step.	
		No	Repair or replace any malfunctioning parts according to the inspection result.	

REFERENCE
COLUMN

Using the DTC troubleshooting flow

- DTC troubleshooting flow shows diagnostic procedures, inspection methods, and proper action to take for each DTC.

TROUBLE CONDITION		DETECTION CONDITION describes the condition under which the DTC is detected.
DTC P0103		
DTC P0103	MAF circuit high input	

POSSIBLE CAUSE describes possible point(s) of malfunction

Indicates the inspection step No. to be performed (01 and 05 section)

STEP shows the order of troubleshooting

INSPECTION describes the method to quickly determine the malfunctioning part(s).

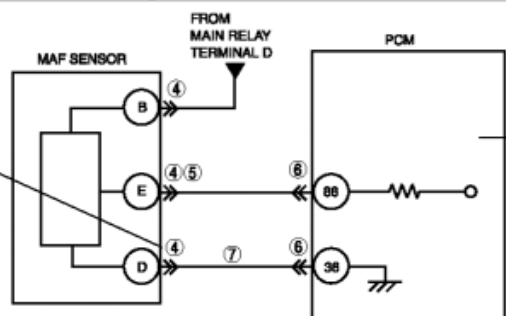
DETECTION CONDITION

Diagnostic support note

- This is a continuous monitor (CCM).
- MIL illuminates if PCM detects the above malfunction during first drive cycle. Therefore, PENDING CODE is not available.
- FREEZE FRAME DATE is available.
- DTC is stored in the PCM memory.

POSSIBLE CAUSE

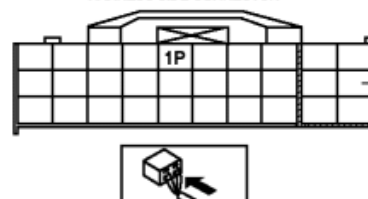
- MAF sensor malfunction
- Connector or terminal malfunction
- Open circuit in wiring between MAF sensor terminal D and PCM terminal 36
- Open circuit in MAF sensor ground circuit



MAF SENSOR HARNESS SIDE CONNECTOR



PCM HARNESS SIDE CONNECTOR



Indicates the circuit to be inspected

Indicates the connector related to the inspection

Diagnostic procedure

STEP	INSPECTION		ACTION
1	VERIFY FREEZE FRAME DATA HAS BEEN RECORDED • Has FREEZE FRAME DATA been recorded?	Yes	Go to next step.
		No	Record FREEZE FRAME DATA on repair order, then go to next step.
2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY • Are related Service Bulletins and/or on-line repair information available?	Yes	Perform repair or diagnosis according to available repair information. If vehicle is not repaired, then go to next step.
		No	Go to next step.
3	VERIFY CURRENT INPUT SIGNAL STATUS IS CONCERN INTERMITTENT OR CONSTANT • Connect diagnostic tool to DLC-2. • Start engine. • Access MAF V PID using diagnostic tool. • Is MAF V PID within 0.2 - 8.3 V?	Yes	Intermittent concern is existing. Go to INTERMITTENT CONCERNS TROUBLESHOOTING procedure. (See 01-03-33 INTERMITTENT CONCERN TROUBLESHOOTING)
		No	Go to next step.
4	INSPECT POOR CONNECTION OF MAF SENSOR CONNECTOR • Turn Ignition key to OFF. • Disconnect MAF sensor connector. • Check for poor connection (damaged, pulled-out terminals, corrosion etc.).	Yes	Repair or replace terminals, then go to Step 8.

ACTION describes the appropriate action to be taken according to the result (Yes/No) of the INSPECTION.

Reference item(s) to perform

[illegible]

1 SELECT MALFUNCTION SYMPTOM

Troubleshooting Item			Starter motor malfunction (Mechanical or electrical)	Starter circuit including ignition switch	Improper engine oil level	Low or dead battery	Charging system malfunction	Improper engine compression	Improper valve timing	Hydrolocked engine	Improper engine oil viscosity	Improper dipstick	Base engine malfunction	Drive plate or flywheel seized	Improper tension or damaged drive belt	Improper engine coolant level	Water and anti-freeze mixture improper	Cooling system malfunction (Radiators, hoses, overflow system, thermostat, etc.)	Cooling fan system malfunction	Engine or transaxle mounts improper or installed	Cooling fan or condenser fan seat in	Accelerator cable free play mis-adjusted	Fuel quality
1	Melts of main or other fuse		x	x																			
2	MIL comes on																						
3	Will not crank		x	x		x	x			x				x									
4	Hard to start/long crank/erratic start/erratic crank																						x
5	Engine stalls	After start/at idle						x	x	x													x
6	Crankes normally but will not start							x	x	x													x
7	Slow return to idle																		x				
8	Engine runs rough/rolling idle							x	x														x
9	Fast idle/runs on																					x	
10	Low idle/stalls during deceleration																						
11	Engine stalls/quits	Acceleration/cruise						x	x														x
	Engine runs rough	Acceleration/cruise						x	x														x
	Misses	Acceleration/cruise						x	x														x
	Buck/jerk	Acceleration/cruise/deceleration						x	x														x
	Hesitation/stumble	Acceleration						x	x														x
	Surges	Acceleration/cruise						x	x														x
12	Lack/loss of power	Acceleration/cruise						x	x														x
13	Knocking/pinging	Acceleration/cruise						x										x					
14	Poor fuel economy							x	x							x		x	x				x
15	Emissions compliance							x	x				x					x					
16	High oil consumption/leakage									x	x	x											
17	Cooling system concerns	Overheating													x	x	x	x	x				
18	Cooling system concerns	Runs cold																x	x				
19	Exhaust smoke												x					x					
20	Fuel odor (in engine compartment)																						
21	Engine noise				x								x		x								
22	Vibration concerns (engine)														x					x	x		
23	A/C does not work sufficiently																						
24	A/C always on/ A/C compressor runs continuously																						
25	A/C does not cut off under wide open throttle conditions																						
26	Exhaust sulphur smell																						x
27	Fuel refill concerns																						
28	Fuel filling shut off issues																						
29	Intermittent concerns					x																	
30	Constant voltage																						
31	Spark plug condition							x			x		x				x						x
32	Automatic transaxle	Upshift/downshift/																					

Using the symptom troubleshooting

- Symptom troubleshooting shows diagnostic procedures, inspection methods, and proper action to be taken for each trouble symptom.

DESCRIPTION describes what kind of TROUBLE SYMPTOM

TROUBLE SYMPTOM

POSSIBLE CAUSE describes possible point of malfunction

STEP shows the order of troubleshooting.

Reference item(s) for additional information to perform INSPECTION.

INSPECTION

14	Engine flares up or slips when upshifting or down shifting
DESCRIPTION	- When accelerator pedal is depressed for driveway, engine speed increase but vehicle speed increase slowly. - When accelerator is depressed while driving, engine speed increases but vehicle not. - There is clutch slip because clutch is stuck or line pressure is low. - Clutch stuck, slippage (forward clutch, 3-4 clutch, 2-4 brake band, one-way clutch 1, one-way clutch 2) - Line pressure low - Malfunction or mis-adjustment of TP sensor - Malfunction of VSS - Malfunction of input/turbine speed sensor - Malfunction of sensor ground - Malfunction of shift solenoid A, B or C - Malfunction of TCC solenoid valve - Malfunction of body ground - Malfunction of throttle cable - Malfunction of throttle valve body - Poor operating of mechanical pressure - Selector lever position disparity - TR switch position disparity
POSSIBLE CAUSE	Note Before following troubleshooting steps, make sure that Automatic Transaxle On-board Diagnostic and Automatic Transaxle Basic Inspection are conducted.

Diagnostic procedure

STEP	INSPECTION	ACTION
1	• Is line pressure okay?	Yes Go to next step.
		No Repair or replace any defective parts according to inspection results.
2	• Is shift point okay? (See 05-17-5 ROAD TEST)	Yes Go to next step
		No Go to symptom troubleshooting No.9 "Abnormal shift".
3	- Stop engine and turn ignition switch on. - Connect diagnostic tool to DLC-2. - Simulate SHIFT A, SHIFT B and SHIFT C PIDs for ON. - Is operating sound of shift solenoids heard?	- Overhaul control valve body and repair or replace any defective parts. (See ATX Workshop Manual GF4A-EL (1666-1A-99F)) - If problem remains, replace or overhaul transaxle and repair or replace defective parts. (See 05-17-15 AUTOMATIC TRANSAXLE REMOVEVAL/INSTALLATION)

ACTION describes the appropriate action to be taken according to the result (Yes/No) of the INSPECTION.

How to perform ACTION is described in the relative

describes the method to quickly determine the malfunctioning part(s).

		No	• Inspect for bend, damage, corrosion or loose connection if shift solenoid A, B, or C terminal on ATX. • Inspect for shift solenoid mechanical stuck. (See 05-17-14 Inspection of Operation) • If shift solenoids are okay, inspect for open or short circuit between PCM connector terminal A, B or C.
4	• Verify test results. — If okay, return to diagnostic index to service any additional symptoms. — If malfunction remains, inspect related Service Bulletins and/or On-line Repair Information and perform repair or diagnosis. — If vehicle is repaired, troubleshooting completed. — If vehicle is not repaired or additional diagnostic information is not available, replace or reprogram PCM.		

the relative material shown.

Reference item(s) to perform ACTION.

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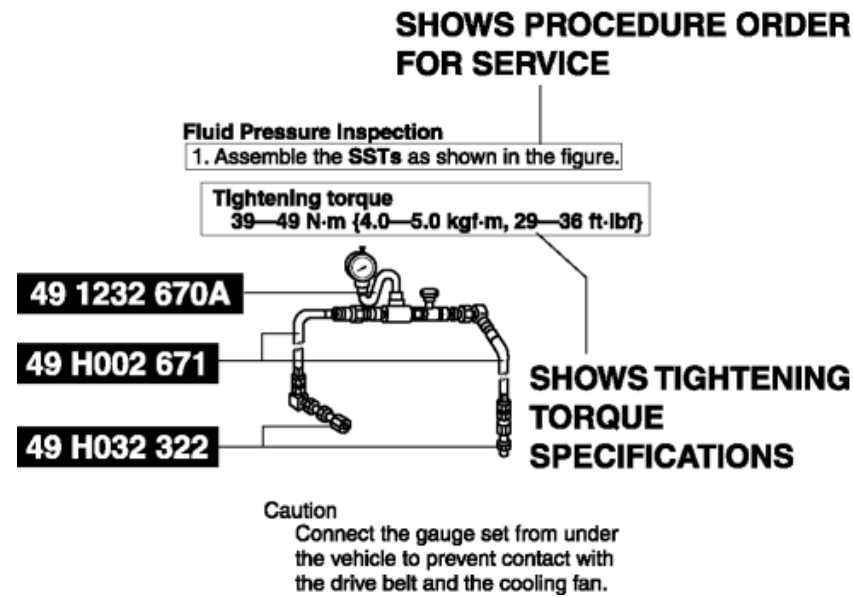
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Service Procedure

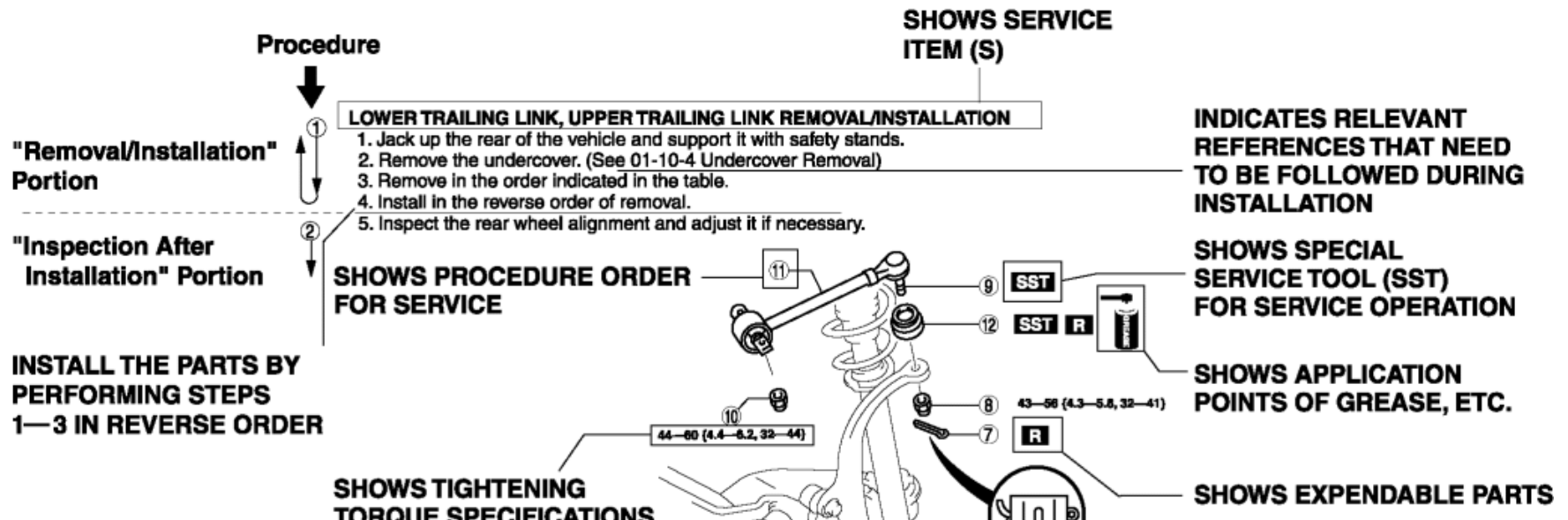
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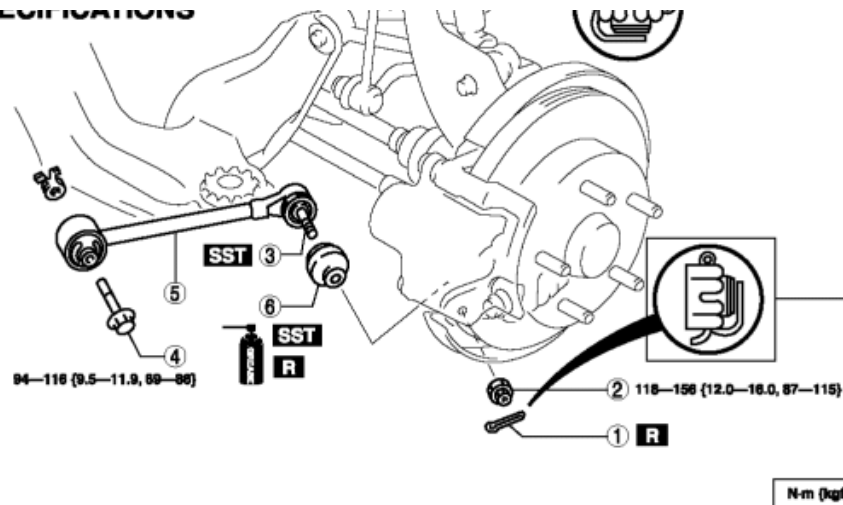


Repair procedure

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TORQUE SPECIFICATIONS



SHOWS DETAILS

SHOWS TIGHTENING TORQUE UNITS

SHOWS REFERRAL NOTES FOR SERVICE

1	Split pin
2	Nut
3	Lower trailing link ball joint (See 02-14-5 Lower Trailing Link Ball Joint Removal Note)
4	Bolt
5	Lower trailing link
6	Dust boot (lower trailing link)

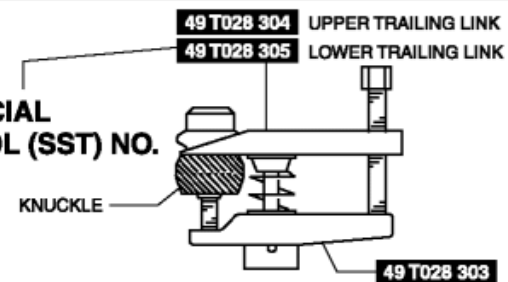
7	Split pin
8	Nut
9	Upper trailing link ball joint (See 02-14-5 Upper Trailing Link Ball Joint Removal Note)
10	Nut
11	Upper trailing link
12	Dust boot (upper trailing link)

SHOWS REFERRAL NOTES FOR SERVICE

Lower Trailing Link Ball Joint, Upper Trailing Link Ball Joint Removal Note

- Remove the ball joint using the SSTs.

SHOWS SPECIAL SERVICE TOOL (SST) NO.



Symbols

- There are eight symbols indicating oil, grease, fluids, sealant, and the use of SST or equivalent. These symbols show application points or use of these materials during service.

Symbol	Meaning	Kind
	Apply oil	New appropriate engine oil or gear oil

	Apply brake fluid	New appropriate brake fluid
	Apply automatic transmission/transaxle fluid	New appropriate automatic transmission/transaxle fluid
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	Apply grease	Appropriate grease
	Apply sealant	Appropriate sealant
	Apply petroleum jelly	Appropriate petroleum jelly
	Replace part	O-ring, gasket, etc.
	Use SST or equivalent	Appropriate tools

Advisory Messages

- You will find several **Warnings, Cautions, Notes, Specifications** and **Upper and Lower Limits** in this manual.

Warning

- A Warning indicates a situation in which serious injury or death could result if the warning is ignored.

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- A Caution indicates a situation in which damage to the vehicle or parts could result if the caution is ignored.

Note

- A Note provides added information that will help you to complete a particular procedure.

Specification

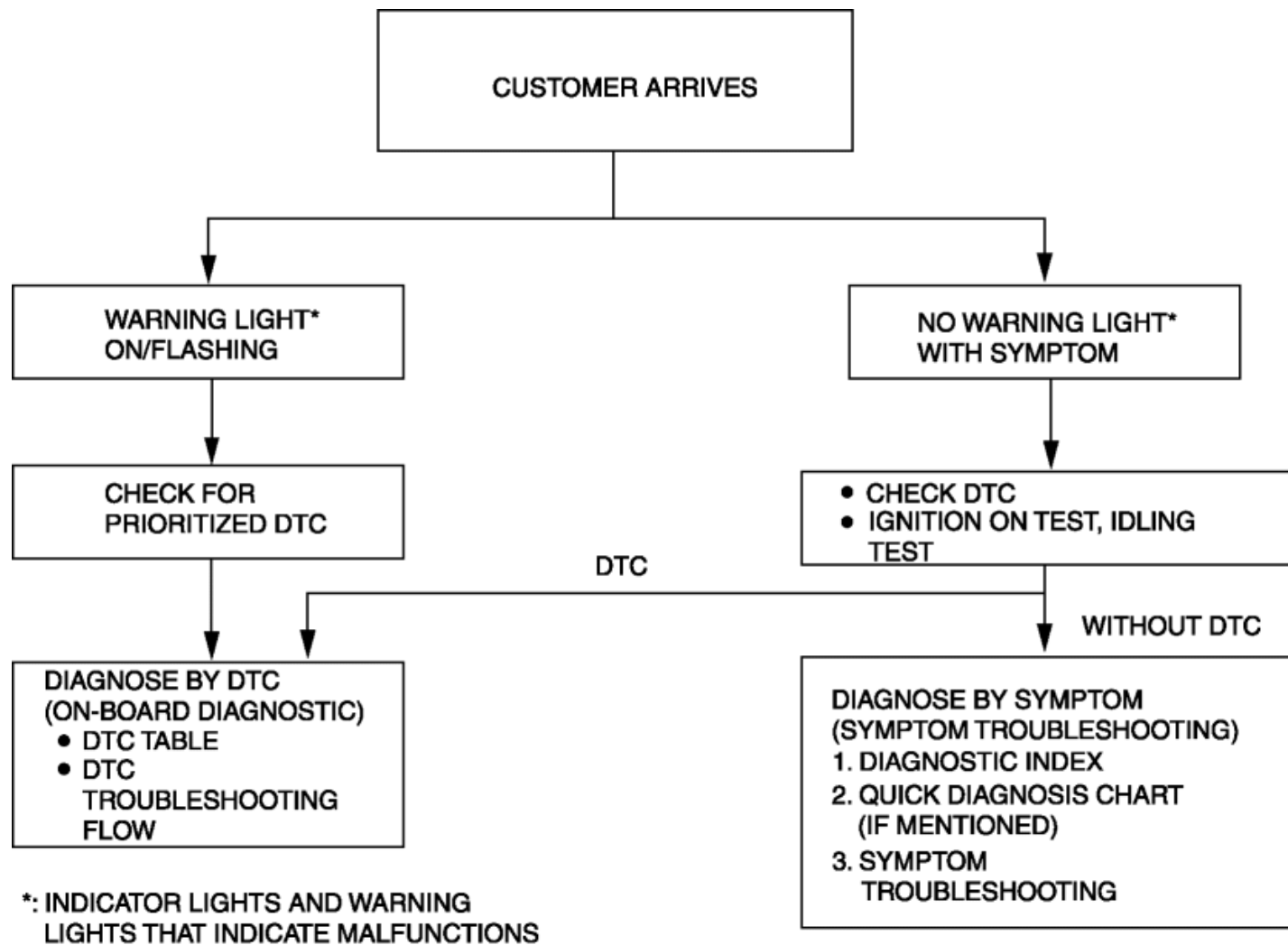
- The values indicate the allowable range when performing inspections or adjustments.

Upper and lower limits

- The values indicate the upper and lower limits that must not be exceeded when performing inspections or adjustments.

Troubleshooting Procedure

Basic flow of troubleshooting



DTC troubleshooting flow (on-board diagnostic)

- Diagnostic trouble codes (DTCs) are important hints for repairing malfunctions that are difficult to simulate. Perform the specific DTC diagnostic inspection to quickly and accurately diagnose the malfunction.
- The on-board diagnostic function is used during inspection. When a DTC is shown specifying the cause of a malfunction, continue the diagnostic inspection according to the items indicated by the on-board diagnostic function.

Diagnostic index

- The diagnostic index lists the symptoms of specific malfunctions. Select the symptoms related or most closely relating to the malfunction.

Quick diagnosis chart (If mentioned)

- The quick diagnosis chart lists diagnosis and inspection procedures to be performed specifically relating to the cause of the malfunction.

Symptom troubleshooting

- Symptom troubleshooting quickly determines the location of the malfunction according to symptom type.

Procedures for Use

Using the basic inspection (section 05)

- Perform the basic inspection procedure before symptom troubleshooting.
- Perform each step in the order shown.
- The reference column lists the location of the detailed procedure for each basic inspection.
- Although inspections and adjustments are performed according to the reference column procedures, if the cause of the malfunction is discovered during basic inspection, continue the procedures as indicated in the action column.

SHOWS INSPECTION ORDER		SHOWS ITEM NAMES FOR DETAILED PROCEDURES		SHOW POINTS REQUIRING ATTENTION BASED ON INSPECTION RESULTS
BASIC INSPECTION				
STEP	INSPECTION		ACTION	
1	Perform the mechanical system test. (See 05-13-3 MECHANICAL SYSTEM TEST.) Is mechanical system normal?	Yes	Go to the next step.	
		No	Repair or replace any malfunctioning parts according to the inspection result.	
2	Turn the ignition switch to the ON position. When the selector lever is moved, does the selector illumination indicate synchronized position to the lever location? Also, when other ranges are selected from N or P during idling, does the vehicle move within 1—2 s?	Yes	Go to the next step.	
		No	Inspect the selector lever and TR switch. Repair or replace malfunctioning parts. (See 05-14-5 SELECTOR LEVER INSPECTION.) (See 05-13-10 TRANSMISSION RANGE (TR) SWITCH INSPECTION.) If the selector lever and TR switch are normal, go to the next step.	
3	Inspect the ATF color condition. (See 05-13-8 AUTOMATIC TRANSMISSION FLUID (ATF) INSPECTION.) Are ATF color and odor normal?	Yes	Go to the next step.	
		No	Repair or replace any malfunctioning parts according to the inspection result. Flush ATX and cooler line as necessary.	
4	Perform the line pressure test. (See 05-13-3 Line Pressure Test.) Is the line pressure normal?	Yes	Go to the next step.	
		No	Repair or replace any malfunctioning parts according to the inspection result.	
5	Perform the stall test. (See 05-13-4 Stall Speed Test.) Is the stall speed normal?	Yes	Go to the next step.	
		No	Repair or replace any malfunctioning parts according to the inspection result.	
	Inspect the voltage at the following TCM terminals. (See 05-13-29 TCM INSPECTION.) • Terminal 2J (TFT sensor) • Terminals 1D, 2B, 2C, 2E (TR switch) • Terminal 2G (turbine sensor) • Terminal 2D (down switch) • Terminal 2I (up switch) • Terminal 1E (M range switch) • Terminal 1W (steering shift switch) Is the voltage normal?	Yes	Go to the next step.	
		No	Repair or replace any malfunctioning parts according to the inspection result.	

REFERENCE
COLUMN

Using the DTC troubleshooting flow

- DTC troubleshooting flow shows diagnostic procedures, inspection methods, and proper action to take for each DTC.

TROUBLE CONDITION		DETECTION CONDITION describes the condition under which the DTC is detected.
DTC P0103		
DTC P0103	MAF circuit high input	

POSSIBLE CAUSE describes possible point(s) of malfunction

Indicates the inspection step No. to be performed (01 and 05 section)

STEP shows the order of troubleshooting

INSPECTION describes the method to quickly determine the malfunctioning part(s).

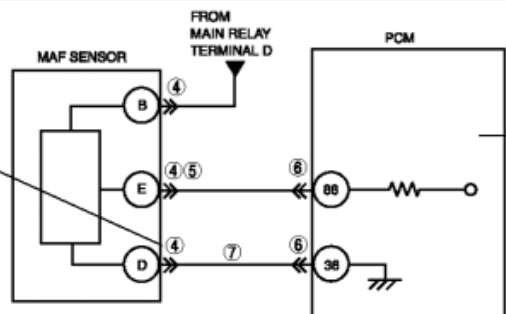
DETECTION CONDITION

Diagnostic support note

- This is a continuous monitor (CCM).
- MIL illuminates if PCM detects the above malfunction during first drive cycle. Therefore, PENDING CODE is not available.
- FREEZE FRAME DATE is available.
- DTC is stored in the PCM memory.

POSSIBLE CAUSE

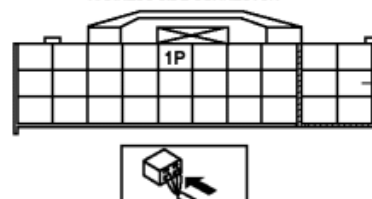
- MAF sensor malfunction
- Connector or terminal malfunction
- Open circuit in wiring between MAF sensor terminal D and PCM terminal 36
- Open circuit in MAF sensor ground circuit



MAF SENSOR HARNESS SIDE CONNECTOR



PCM HARNESS SIDE CONNECTOR



Indicates the circuit to be inspected

Indicates the connector related to the inspection

Diagnostic procedure

STEP	INSPECTION		ACTION
1	VERIFY FREEZE FRAME DATA HAS BEEN RECORDED • Has FREEZE FRAME DATA been recorded?	Yes	Go to next step.
		No	Record FREEZE FRAME DATA on repair order, then go to next step.
2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY • Are related Service Bulletins and/or on-line repair information available?	Yes	Perform repair or diagnosis according to available repair information. If vehicle is not repaired, then go to next step.
		No	Go to next step.
3	VERIFY CURRENT INPUT SIGNAL STATUS IS CONCERN INTERMITTENT OR CONSTANT • Connect diagnostic tool to DLC-2. • Start engine. • Access MAF V PID using diagnostic tool. • Is MAF V PID within 0.2 - 8.3 V?	Yes	Intermittent concern is existing. Go to INTERMITTENT CONCERNS TROUBLESHOOTING procedure. (See 01-03-33 INTERMITTENT CONCERN TROUBLESHOOTING)
		No	Go to next step.
4	INSPECT POOR CONNECTION OF MAF SENSOR CONNECTOR • Turn Ignition key to OFF. • Disconnect MAF sensor connector. • Check for poor connection (damaged, pulled-out terminals, corrosion etc.).	Yes	Repair or replace terminals, then go to Step 8.

ACTION describes the appropriate action to be taken according to the result (Yes/No) of the INSPECTION.

Reference item(s) to perform

[illegible]

1 SELECT MALFUNCTION SYMPTOM

Troubleshooting Item			Starter motor malfunction (Mechanical or electrical)	Starter circuit including ignition switch	Improper engine oil level	Low or dead battery	Charging system malfunction	Improper engine compression	Improper valve timing	Hydrolocked engine	Improper engine oil viscosity	Improper dipstick	Base engine malfunction	Drive plate or flywheel seized	Improper tension or damaged drive belt	Improper engine coolant level	Water and anti-freeze mixture improper	Cooling system malfunction (Radiators, hoses, overflow system, thermostat, etc.)	Cooling fan system malfunction	Engine or transaxle mounts improper or installed	Cooling fan or condenser fan seat in	Accelerator cable free play mis-adjusted	Fuel quality
1	Melts of main or other fuse		x	x																			
2	MIL comes on																						
3	Will not crank		x	x		x	x			x				x									
4	Hard to start/long crank/erratic start/erratic crank																						x
5	Engine stalls	After start/at idle						x	x	x													x
6	Crankes normally but will not start							x	x	x													x
7	Slow return to idle																		x				
8	Engine runs rough/rolling idle							x	x														x
9	Fast idle/runs on																					x	
10	Low idle/stalls during deceleration																						
11	Engine stalls/quits	Acceleration/cruise						x	x														x
	Engine runs rough	Acceleration/cruise						x	x														x
	Misses	Acceleration/cruise						x	x														x
	Buck/jerk	Acceleration/cruise/deceleration						x	x														x
	Hesitation/stumble	Acceleration						x	x														x
	Surges	Acceleration/cruise						x	x														x
12	Lack/loss of power	Acceleration/cruise						x	x														x
13	Knocking/pinging	Acceleration/cruise						x										x					
14	Poor fuel economy							x	x							x		x	x				x
15	Emissions compliance							x	x				x					x					
16	High oil consumption/leakage										x	x	x										
17	Cooling system concerns	Overheating													x	x	x	x	x				
18	Cooling system concerns	Runs cold																x	x				
19	Exhaust smoke												x					x					
20	Fuel odor (in engine compartment)																						
21	Engine noise				x								x		x								
22	Vibration concerns (engine)														x					x	x		
23	A/C does not work sufficiently																						
24	A/C always on/ A/C compressor runs continuously																						
25	A/C does not cut off under wide open throttle conditions																						
26	Exhaust sulphur smell																						x
27	Fuel refill concerns																						
28	Fuel filling shut off issues																						
29	Intermittent concerns					x																	
30	Constant voltage																						
31	Spark plug condition							x			x		x				x						x
32	Automatic transaxle	Upshift/downshift/																					

Using the symptom troubleshooting

- Symptom troubleshooting shows diagnostic procedures, inspection methods, and proper action to be taken for each trouble symptom.

DESCRIPTION describes what kind of TROUBLE SYMPTOM

TROUBLE SYMPTOM

POSSIBLE CAUSE describes possible point of malfunction

STEP shows the order of troubleshooting.

Reference item(s) for additional information to perform INSPECTION.

INSPECTION

14	Engine flares up or slips when upshifting or down shifting
DESCRIPTION	- When accelerator pedal is depressed for driveway, engine speed increase but vehicle speed increase slowly. - When accelerator is depressed while driving, engine speed increases but vehicle not. - There is clutch slip because clutch is stuck or line pressure is low. - Clutch stuck, slippage (forward clutch, 3-4 clutch, 2-4 brake band, one-way clutch 1, one-way clutch 2) - Line pressure low - Malfunction or mis-adjustment of TP sensor - Malfunction of VSS - Malfunction of input/turbine speed sensor - Malfunction of sensor ground - Malfunction of shift solenoid A, B or C - Malfunction of TCC solenoid valve - Malfunction of body ground - Malfunction of throttle cable - Malfunction of throttle valve body - Poor operating of mechanical pressure - Selector lever position disparity - TR switch position disparity
POSSIBLE CAUSE	Note Before following troubleshooting steps, make sure that Automatic Transaxle On-board Diagnostic and Automatic Transaxle Basic Inspection are conducted.

Diagnostic procedure

STEP	INSPECTION	ACTION
1	• Is line pressure okay?	Yes Go to next step.
		No Repair or replace any defective parts according to inspection results.
2	• Is shift point okay? (See 05-17-5 ROAD TEST)	Yes Go to next step
		No Go to symptom troubleshooting No.9 "Abnormal shift".
3	- Stop engine and turn ignition switch on. - Connect diagnostic tool to DLC-2. - Simulate SHIFT A, SHIFT B and SHIFT C PIDs for ON. - Is operating sound of shift solenoids heard?	- Overhaul control valve body and repair or replace any defective parts. (See ATX Workshop Manual GF4A-EL (1666-1A-99F)) - If problem remains, replace or overhaul transaxle and repair or replace defective parts. (See 05-17-15 AUTOMATIC TRANSAXLE REMOVEVAL/INSTALLATION)

ACTION describes the appropriate action to be taken according to the result (Yes/No) of the INSPECTION.

How to perform ACTION is described in the relative

describes the method to quickly determine the malfunctioning part(s).

		No	• Inspect for bend, damage, corrosion or loose connection if shift solenoid A, B, or C terminal on ATX. • Inspect for shift solenoid mechanical stuck. (See 05-17-14 Inspection of Operation) • If shift solenoids are okay, inspect for open or short circuit between PCM connector terminal A, B or C.
4	• Verify test results. — If okay, return to diagnostic index to service any additional symptoms. — If malfunction remains, inspect related Service Bulletins and/or On-line Repair Information and perform repair or diagnosis. — If vehicle is repaired, troubleshooting completed. — If vehicle is not repaired or additional diagnostic information is not available, replace or reprogram PCM.		

the relative material shown.

Reference item(s) to perform ACTION.

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