

6. Basic Diagnostic Procedure

A: BASIC DIAGNOSTIC PROCEDURE FOR ENGINE

6A1 : CHECK ENGINE START FAILURE.

1) Ask the customer when and how the trouble occurred using the interview check list. <Ref. to 2-7 [T6C0].>

2) Start the engine.

CHECK : ***Does the engine start?***

YES : Go to step **6A2**.

NO : Inspection using "8. Diagnostics for Engine Start Failure". <Ref. to 2-7 [T800].>

6A2 : CHECK ILLUMINATION OF CHECK ENGINE MALFUNCTION INDICATOR LAMP (MIL).

CHECK : ***Does CHECK ENGINE malfunction indicator lamp illuminate?***

YES : Go to step **6A3**.

NO : Inspection using "9. General Diagnostics Table". <Ref. to 2-7 [T900].>

6A3 : CHECK INDICATION OF DTC ON DISPLAY.

1) Turn ignition switch to OFF.

2) Connect the Subaru Select Monitor or the OBD-II general scan tool to data link connector.

3) Turn ignition switch to ON and the Subaru Select Monitor or OBD-II general scan tool switch to ON.

4) Read DTC on the Subaru Select Monitor or OBD-II general scan tool.

NOTE:

If DTC is not shown on display although the MIL illuminates, perform diagnostics of MIL (CHECK ENGINE malfunction indicator lamp) circuit or combination meter. <Ref. to 2-7 [T700].>

CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC?***

YES : Go to step **6A4**.

NO : Repair the related parts.

6A4 : PERFORM THE DIAGNOSIS.

1) Inspect using "10. Diagnostics Chart with Trouble Code (DTC)". <Ref. to 2-7 [T10A0].>

NOTE:

Carry out the basic check, only when DTC about automatic transmission is shown on display. <Ref. to 2-7 [T6B0].>

2) Repair the trouble cause.

3) Perform the clear memory mode. <Ref. to 2-7 [T3D0].>

4) Perform the inspection mode. <Ref. to 2-7 [T3E0].>

CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC?***

YES : Inspect using "10. Diagnostics Chart with Trouble Code (DTC)". <Ref. to 2-7 [T10A0].>

NO : Complete the diagnosis.

B: BASIC CHECK ITEMS FOR AT

When trouble code about automatic transmission is shown on display, carry out the following basic check. After that, carry out the replacement or repair work.

1) ATF level check <Ref. to 3-2 [W1B1].>

2) Differential gear oil level check <Ref. to 3-2 [W1B2].>

3) ATF leak check <Ref. to 3-2 [W1B3].>

4) Differential gear oil leak check <Ref. to 3-2 [W1B3].>

5) Brake band adjustment <Ref. to 3-2 [W2B0].>

6) Stall test <Ref. to 3-2 [W8A0].>

7) Line pressure test <Ref. to 3-2 [W10A0].>

8) Transfer clutch pressure test <Ref. to 3-2 [W11A0].>

9) Time lag test <Ref. to 3-2 [W9A0].>

10) Road test <Ref. to 3-2 [W7A0].>

11) Shift characteristics <Ref. to 3-2 [W7A0].>

C: CHECK LIST FOR INTERVIEW**1. CHECK LIST NO. 1**

Check the following items when problem has occurred.

NOTE:

Use copies of this page for interviewing customers.

Customer's name		Engine no.	
Date of sale		Fuel brand	
Date of repair		Odometer reading	km
Vin no.			miles
Weather	☐ Fine ☐ Cloudy ☐ Rainy ☐ Snowy ☐ Various/Others:		
Outdoor temperature	F(°C)		
	☐ Hot ☐ Warm ☐ Cool ☐ Cold		
Place	☐ Highway ☐ Suburbs ☐ Inner city ☐ Uphill ☐ Downhill ☐ Rough road ☐ Others:		
Engine temperature	☐ Cold ☐ Warming-up ☐ After warming-up ☐ Any temperature ☐ Others:		
Engine speed	rpm		
Vehicle speed	MPH		
Driving conditions	☐ Not affected ☐ At starting ☐ While idling ☐ At racing ☐ While accelerating ☐ While cruising ☐ While decelerating ☐ While turning (RH/LH)		
Headlight	☐ ON/ ☐ OFF	Rear defogger	☐ ON/ ☐ OFF
Blower	☐ ON/ ☐ OFF	Radio	☐ ON/ ☐ OFF
A/C compressor	☐ ON/ ☐ OFF	CD/Cassette	☐ ON/ ☐ OFF
Cooling fan	☐ ON/ ☐ OFF	Car phone	☐ ON/ ☐ OFF
Front wiper	☐ ON/ ☐ OFF	CB	☐ ON/ ☐ OFF
Rear wiper	☐ ON/ ☐ OFF		

2. CHECK LIST NO. 2

Check the following items about the vehicle's state when MIL turns on.

NOTE:

Use copies of this page for interviewing customers.

a) Other warning lights or indicators turn on. ☐ Yes/ ☐ No
☐ Low fuel warning light ☐ Charge indicator light ☐ AT diagnostics indicator light ☐ ABS warning light ☐ Engine oil pressure warning light
b) Fuel level
● Lack of gasoline: ☐ Yes/☐ No ● Indicator position of fuel gauge:
c) Intentional connecting or disconnecting of harness connectors or spark plug cords: ☐ Yes/ ☐ No
● What:
d) Intentional connecting or disconnecting of hoses: ☐ Yes/ ☐ No
● What:
e) Installing of parts other than genuine parts: ☐ Yes/ ☐ No
● What: ● Where:
f) Occurrence of noise: ☐ Yes/ ☐ No
● From where: ● What kind:
g) Occurrence of smell: ☐ Yes/ ☐ No
● From where: ● What kind:
h) Intrusion of water into engine compartment or passenger compartment: ☐ Yes/ ☐ No
i) Troubles occurred
☐ Engine does not start. ☐ Engine stalls during idling. ☐ Engine stalls while driving. ☐ Engine speed decreases. ☐ Engine speed does not decrease. ☐ Rough idling ☐ Poor acceleration ☐ Back fire ☐ After fire ☐ No shift ☐ Excessive shift shock