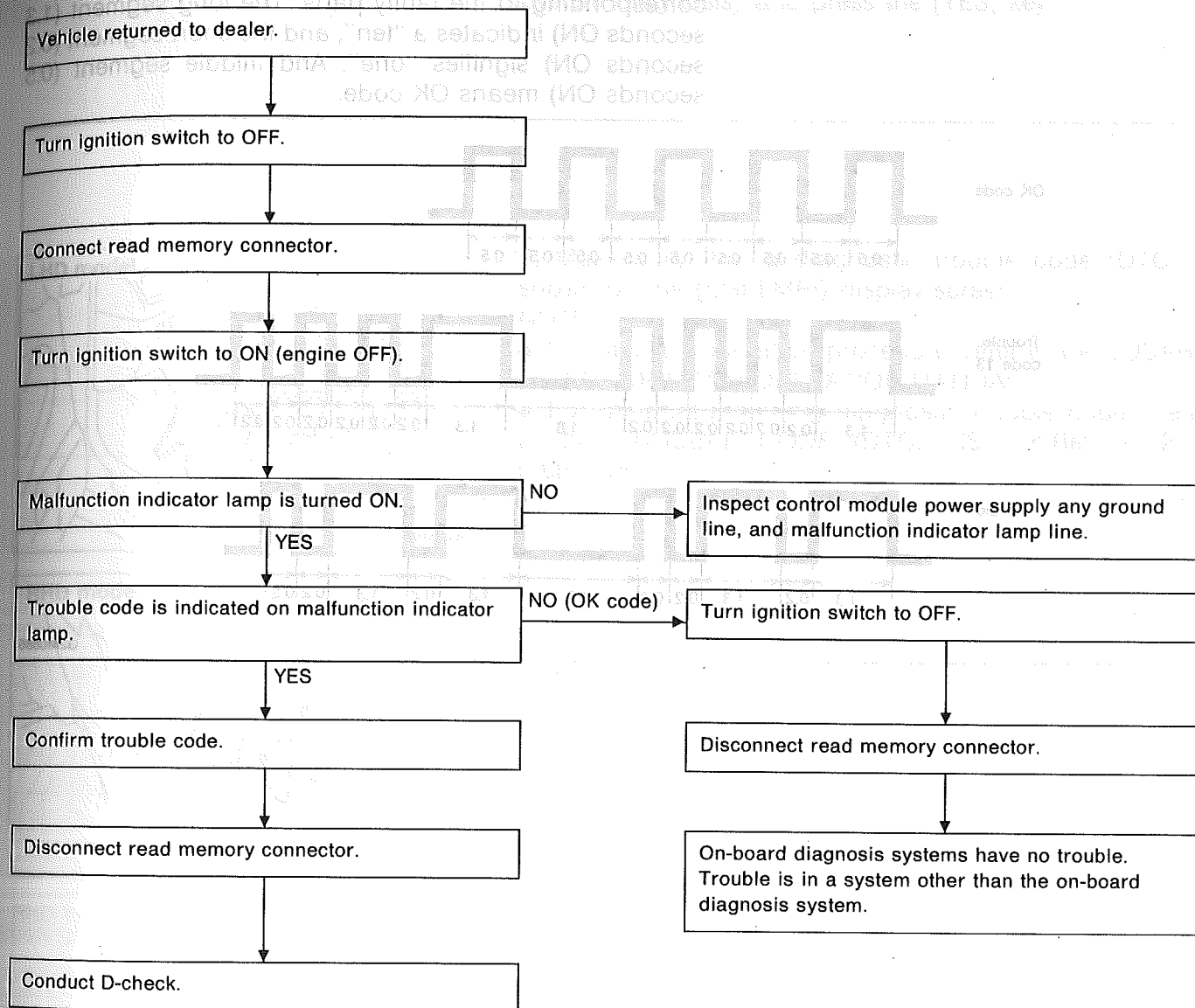


6. Diagnostics Chart for On-board Diagnosis System

1. LIST OF TROUBLE CODE

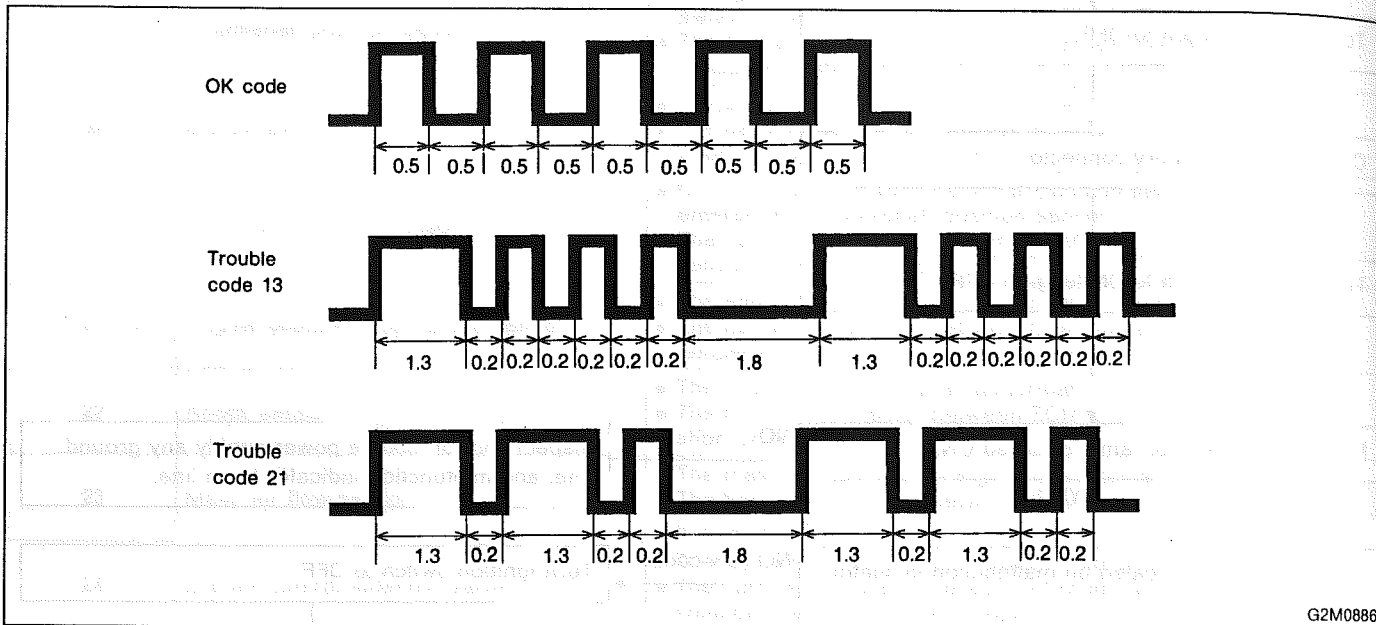
Trouble code	Item	Contents of diagnosis
11	Crankshaft position sensor	<ul style="list-style-type: none"> ● No signal entered from crankshaft position sensor when starter switch is ON. ● The harness connector between ECM and crankshaft position sensor is in short or open.
12	Starter switch	<ul style="list-style-type: none"> ● The starter switch signal is abnormal. ● The harness connector between ECM and starter switch is in short or open.
13	Camshaft position sensor	<ul style="list-style-type: none"> ● No signal entered from camshaft position sensor, but signal entered from crankshaft position sensor. ● The harness connector between ECM and camshaft position sensor is in short or open.
21	Engine coolant temperature sensor	<ul style="list-style-type: none"> ● The engine coolant temperature sensor signal is abnormal. ● The harness connector between ECM and engine coolant temperature sensor is in short or open.
22	Knock sensor	<ul style="list-style-type: none"> ● The knock sensor signal is abnormal. ● The harness connector between ECM and knock sensor is in short or open.
23	Mass air flow sensor	<ul style="list-style-type: none"> ● The mass air flow sensor signal is abnormal. ● The harness connector between ECM and mass air flow sensor is in short or open.
24	Idle air control solenoid valve	<ul style="list-style-type: none"> ● The idle air control solenoid valve is not in function. ● The harness connector between ECM and idle air control solenoid valve is in short or open.
31	Throttle position sensor	<ul style="list-style-type: none"> ● The throttle position sensor signal is abnormal. ● The throttle position sensor is installed abnormally. ● The harness connector between ECM and throttle position sensor is in short or open.
32	Oxygen sensor	<ul style="list-style-type: none"> ● The oxygen sensor is not in function. ● The harness connector between ECM and oxygen sensor is in short or open.
33	Vehicle speed sensor 2	<ul style="list-style-type: none"> ● The vehicle speed sensor 2 is not in function. ● The harness connector between ECM and vehicle speed sensor 2 is in short or open.
38	Torque control signal (AT vehicles only)	<ul style="list-style-type: none"> ● Abnormal signal is entered from TCM. ● The harness connector between ECM and TCM is in short or open.
44	Wastegate control solenoid valve	<ul style="list-style-type: none"> ● The wastegate control solenoid valve is not in function. ● The harness connector between ECM and wastegate control solenoid valve is in short or open.
45	<ul style="list-style-type: none"> ● Pressure sensor ● Pressure sources switching solenoid valve 	<ul style="list-style-type: none"> ● The pressure sensor signal is abnormal. ● The pressure sources switching solenoid valve is not in function. ● The intake manifold pressure is not transmitted to pressure sensor. ● The harness connector between ECM and pressure sensor, and pressure sources switching solenoid valve is in short or open.
51	Neutral position switch (MT vehicles only)	<ul style="list-style-type: none"> ● The neutral position switch signal is abnormal. ● The harness connector between ECM and neutral position switch is in short or open.
	Park/Neutral position switch (AT vehicles only)	<ul style="list-style-type: none"> ● The park/neutral position switch signal is abnormal. ● The shift cable is connected abnormally. ● The harness connector between ECM and inhibitor switch is in short or open.
53*	Immobiliser system	Faulty immobiliser system. < Refer to 6-2b [T100]. ☆1 >

*: Immobiliser system equipped model only

C: READ MEMORY MODE**1. WITHOUT SUBARU SELECT MONITOR**

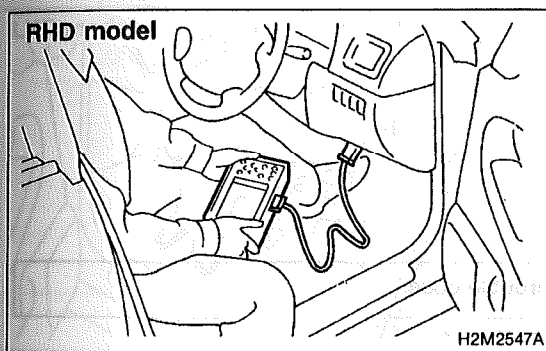
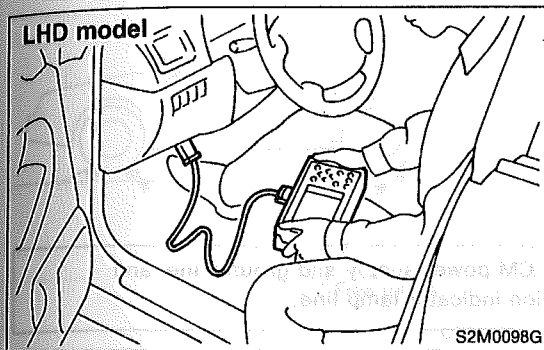
2. HOW TO READ TROUBLE CODE ON MIL

The malfunction indicator lamp (MIL) flashes the code corresponding to the faulty parts. The long segment (1.3 seconds ON) indicates a "ten", and the short segment (0.2 seconds ON) signifies "one". And middle segment (0.5 seconds ON) means OK code.



3. WITH SUBARU SELECT MONITOR

1) On the 「Main Menu」 display screen, select the {1. All System Diagnosis} and press the [YES] key.



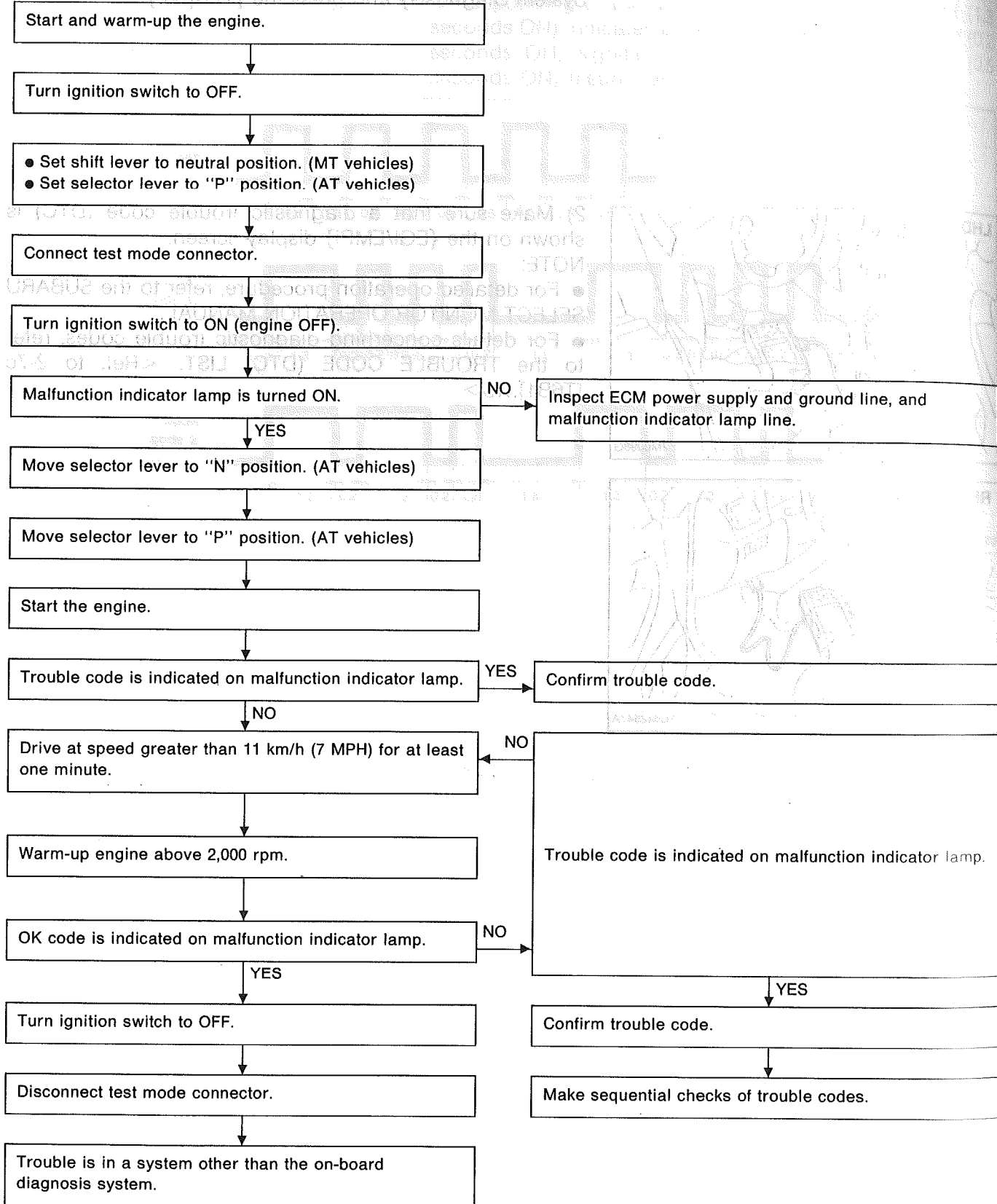
2) Make sure that a diagnostic trouble code (DTC) is shown on the {EGI/EMPi} display screen.

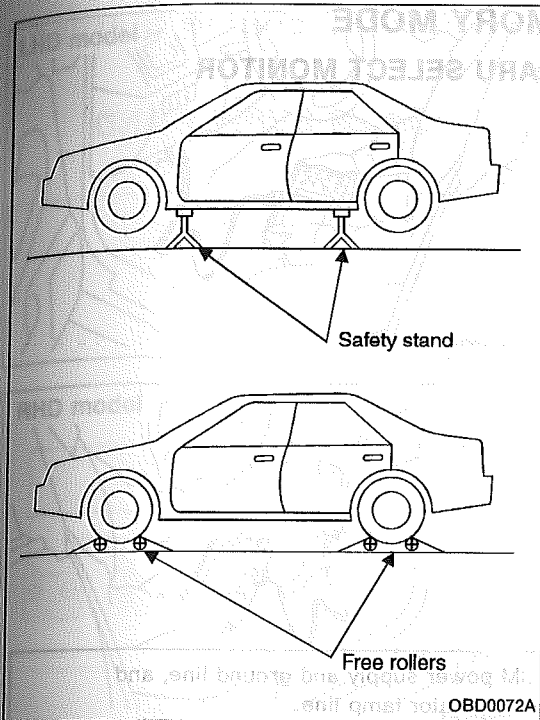
NOTE:

- For detailed operation procedure, refer to the SUBARU SELECT MONITOR OPERATION MANUAL.
- For details concerning diagnostic trouble codes, refer to the TROUBLE CODE (DTC) LIST. <Ref. to 2-7c [T6B1].☆5>

D: D-CHECK MODE

1. WITHOUT SUBARU SELECT MONITOR



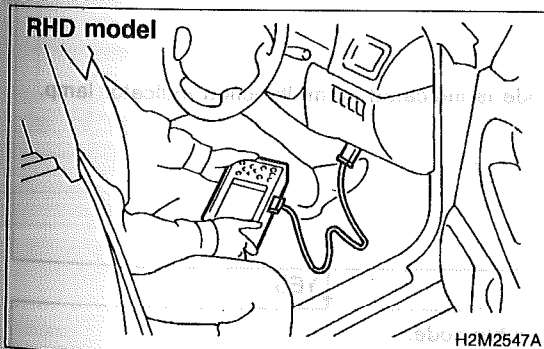
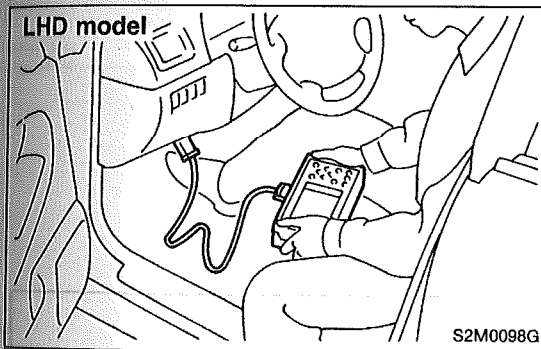


2. WITH SUBARU SELECT MONITOR

1) Raise the vehicle using a garage jack and place on safety stands or drive the vehicle onto free rollers.

WARNING:

- Before raising the vehicle, ensure parking brakes are applied.
- Do not use a pantograph jack in place of a safety stand.
- Secure a rope or wire to the front and rear towing or tie-down hooks to prevent the lateral runout of front wheels.
- Do not abruptly depress/release clutch pedal or accelerator pedal during works even when engine is operating at low speeds since this may cause vehicle to jump off free rollers.
- In order to prevent the vehicle from slipping due to vibration, do not place any wooden blocks or similar items between the safety stands and the vehicle.
- Since the rear wheels will also rotate, do not place anything near them. Also, make sure that nobody goes in front of the vehicle.



2) On the "Main Menu" display screen, select the {2. Each System Check} and press the [YES] key.

3) On the "System Selection Menu" display screen, select the {EGI/EMPi} and press the [YES] key.

4) Press the [YES] key after displayed the information of engine type.

5) On the "EGI/EMPI Diagnosis" display screen, select the {6. Dealer Check Mode Procedure} and press the [YES] key.

6) When the "Perform Inspection (Dealer Check) Mode?" is shown on the display screen, press the [YES] key.

7) Perform subsequent procedures as instructed on the display screen.

- If trouble still remains in the memory, the corresponding diagnostic trouble code (DTC) appears on the display screen.

NOTE:

- For detailed operation procedure, refer to the SUBARU SELECT MONITOR OPERATION MANUAL.

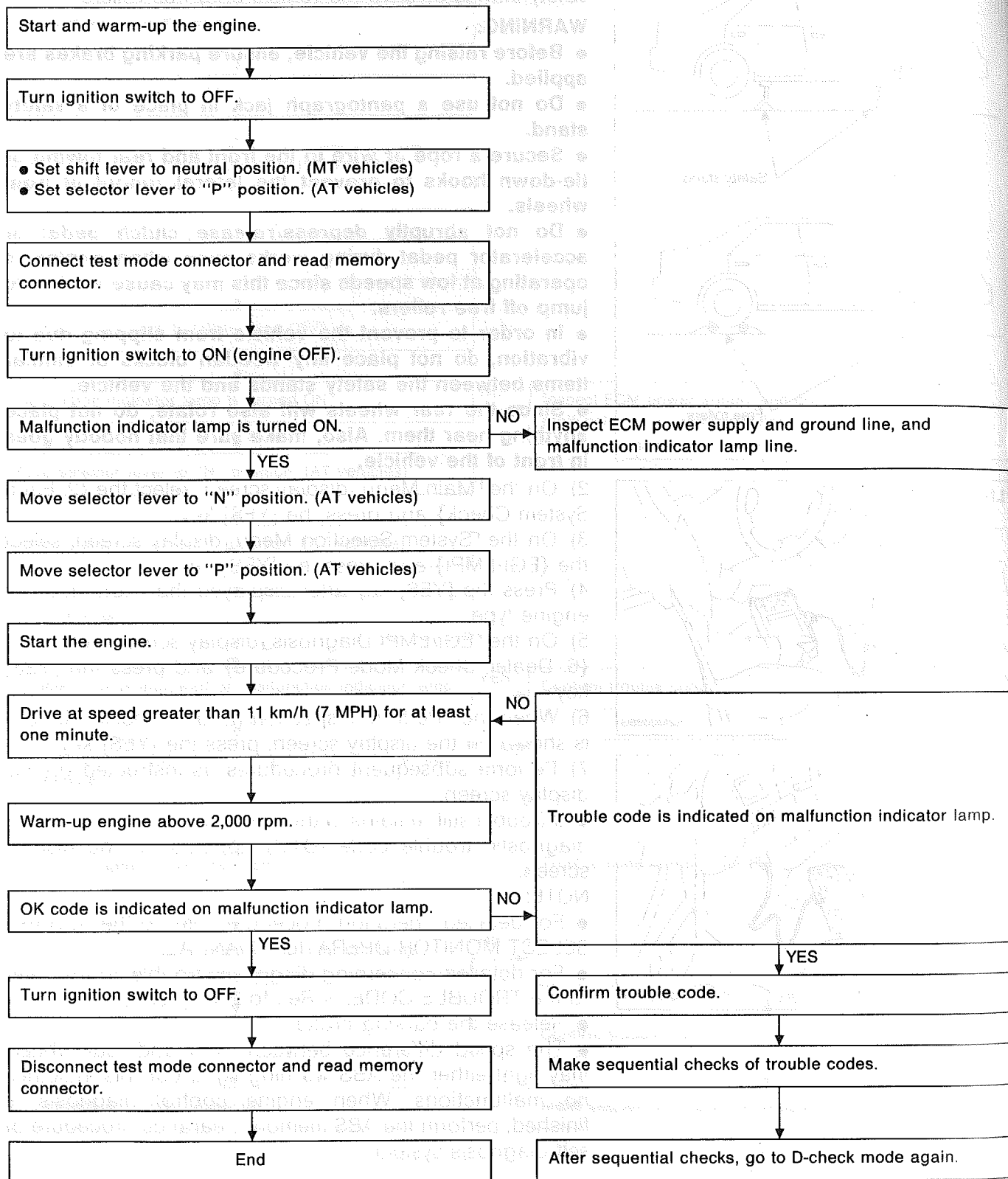
- For detailed concerning diagnostic trouble codes, refer to the TROUBLE CODE. <Ref. to 2-7c [T6B1].☆5>

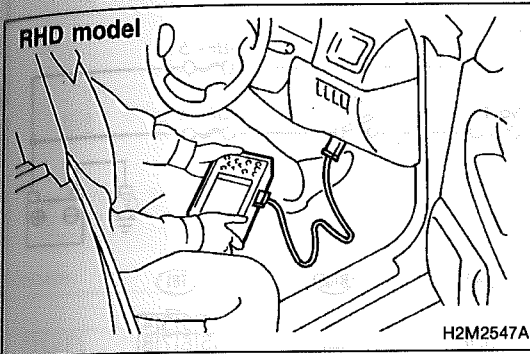
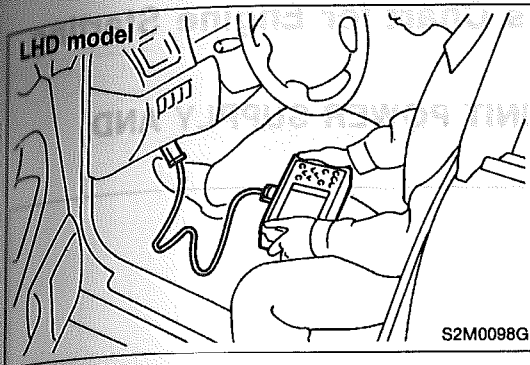
- Release the parking brake.

- The speed difference between front and rear wheels may light either the ABS warning light, but this indicates no malfunctions. When engine control diagnosis is finished, perform the ABS memory clearance procedure of self-diagnosis system.

E: CLEAR MEMORY MODE

1. WITHOUT SUBARU SELECT MONITOR





2. WITH SUBARU SELECT MONITOR

- 1) On the 'Main Menu' display screen, select the {2. Each System Check} and press the [YES] key.
- 2) On the 'System Selection Menu' display screen, select the {EGI/EMPI} and press the [YES] key.
- 3) Press the [YES] key after displayed the information of engine type.
- 4) On the 'EGI/EMPI Diagnosis' display screen, select the {3. Clear Memory} and press the [YES] key.
- 5) When the 'Done' and 'Turn Ignition Switch OFF' are shown on the display screen, turn the Subaru select monitor and ignition switch to OFF.

NOTE:

For detailed operation procedure, refer to the SUBARU SELECT MONITOR OPERATION MANUAL.