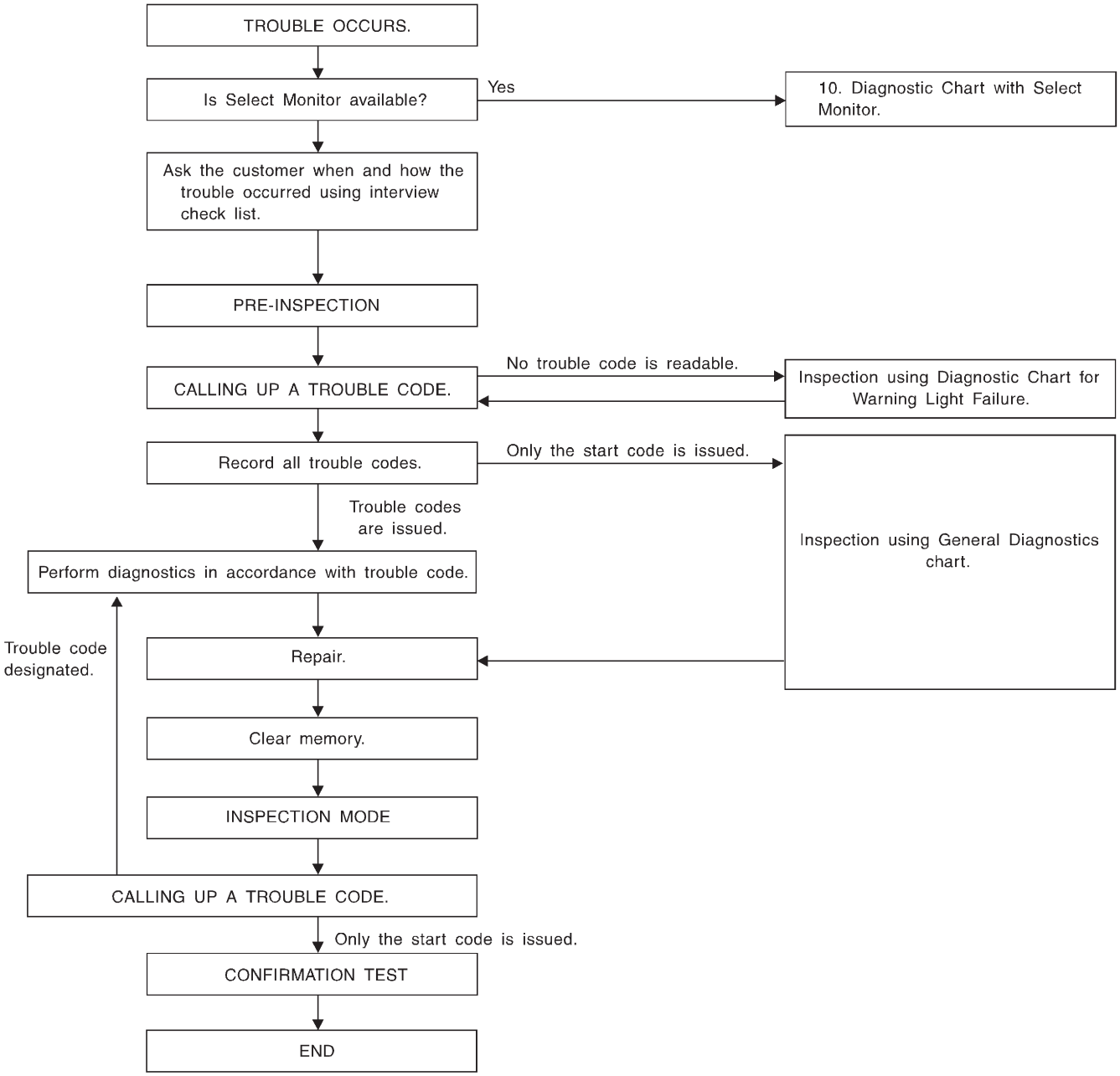
6. Diagnostics Chart for On-board Diagnosis System

A: BASIC DIAGNOSTICS PROCEDURE



B4M1051A

CAUTION:
Remove foreign matter (dust, water, etc.) from the ABSCM&H/U connector during removal and installation.

NOTE:
● To check harness for broken wires or short circuits, shake it while holding it or the connector.

● When ABS warning light illuminates, read and record trouble code indicated by ABS warning light.

B: CHECK LIST FOR INTERVIEW

Check the following items about the vehicle's state.

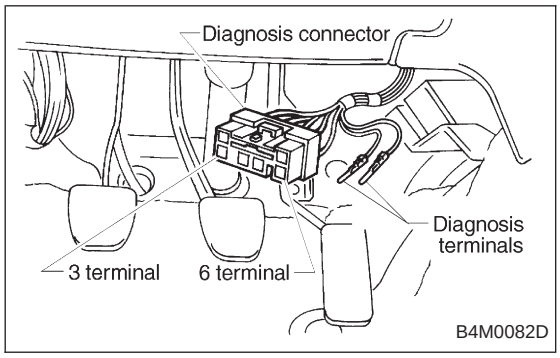
<table>
<tr><td colspan="4">1. THE STATE OF THE ABS WARNING LIGHT</td></tr>
<tr><td>ABS warning light comes on.</td><td colspan="3">☐ Always
☐ Sometimes
☐ Only once
☐ Does not come on
● When /how long does it come on?:</td></tr>
<tr><td>Ignition key position</td><td colspan="3">☐ LOCK
☐ ACC
☐ ON (before starting engine)
☐ START
☐ On after starting (Engine is running)
☐ On after starting (Engine is stop)</td></tr>
<tr><td rowspan="11">Timing</td><td colspan="3">☐ Immediately after ignition is ON.
☐ Immediately after ignition starts.</td></tr>
<tr><td rowspan="2">☐ When advancing</td><td>km/h to</td><td>km/h</td></tr>
<tr><td>MPH to</td><td>MPH</td></tr>
<tr><td>☐ While traveling at a constant speed</td><td>km/h</td><td>MPH</td></tr>
<tr><td rowspan="2">☐ When decelerating</td><td>km/h to</td><td>km/h</td></tr>
<tr><td>MPH to</td><td>MPH</td></tr>
<tr><td rowspan="2">☐When turning to right</td><td>Steering angle :</td><td>deg</td></tr>
<tr><td>Steering time :</td><td>sec</td></tr>
<tr><td rowspan="2">☐ When turning to left</td><td>Steering angle :</td><td>deg</td></tr>
<tr><td>Steering time :</td><td>sec</td></tr>
<tr><td colspan="3">☐ When moving other electrical parts</td></tr>
<tr><td colspan="3">● Parts name :
● Operating condition :</td></tr>
<tr><td colspan="4">2. SYMPTOMS</td></tr>
<tr><td rowspan="8">ABS operating condition</td><td colspan="3">☐ Performs no work.</td></tr>
<tr><td rowspan="2">☐ Operates only when abruptly applying brakes.</td><td rowspan="2">Vehicle speed :</td><td>km/h</td></tr>
<tr><td>MPH</td></tr>
<tr><td colspan="3">● How to step on brake pedal :</td></tr>
<tr><td>a) Operating time :</td><td colspan="2">sec</td></tr>
<tr><td colspan="3">b) Operating noise : ☐ Produce / ☐ Does not produce</td></tr>
<tr><td>● What kind of noise?</td><td colspan="2">☐ Knock
☐ Gong gong
☐ Bong
☐ Buzz
☐ Gong gong buzz
☐ Others :</td></tr>
<tr><td colspan="3">c) Reaction force of brake pedal</td></tr>
<tr><td></td><td colspan="2">☐ Stick
☐ Press down once with a clunk
☐ Press and released
☐ Others :</td></tr>
</table>

Behavior of vehicle	a) Directional stability cannot be obtained or steering arm refuses to work when applying brakes : ☐ Yes / ☐No	
	● When :	☐ Vehicle turns to right ☐ Vehicle turns to left ☐ Spins ☐ Others :
	b) Directional stability cannot be obtained or steering arm refuses to work when accelerating : ☐ Yes / ☐No	
	● When :	☐ Vehicle turns to right ☐ Vehicle turns to left ☐ Spins ☐ Others :
	c) Brakes are out of order : ☐ Yes / ☐No	
	● What :	☐ Braking distance is long ☐ Brakes lock or drag ☐ Pedal stroke is long ☐ Pedal sticks ☐ Others :
	d) Poor acceleration : ☐ Yes / ☐No	
	● What :	☐ Fails to accelerate ☐ Engine stalls ☐ Others :
	e) Occurrence of vibration : ☐ Yes / ☐No	
	● Where ● What kind :	
	f) Occurrence of abnormal noise : ☐ Yes / ☐No	
	● Where ● What kind :	
	g) Occurrence of other phenomena : ☐ Yes / ☐No	
	● What kind :	
3. CONDITIONS UNDER WHICH TROUBLE OCCURS		
Environment	a) Weather	☐ Fine ☐ Cloudy ☐ Rainy ☐ Snowy ☐ Various/Others :
	b) Ambient temperature	F(°C)
	c) Road	☐ Urban area ☐ Suburbs ☐ Highway ☐ General road ☐ Ascending slope ☐ Descending slope ☐ Paved road ☐ Gravel road ☐ Muddy road ☐ Sandy place ☐ Others :
	d) Road surface	☐ Dry ☐ Wet ☐ New-fallen snow ☐ Compressed snow ☐ Frozen slope ☐ Others :

Condition	a) Brakes	Deceleration :	g
		☐ Continuous / ☐Intermittent	
	b) Accelerator	Acceleration :	g
		☐ Continuous / ☐ Intermittent	
	c) Vehicle speed	km/h	MPH
		☐ Advancing ☐ Accelerating ☐ Reducing speed ☐ Low speed ☐ Turning ☐ Others :	
	d) Tire inflation pressure	Front RH tire :	kPa
		Front LH tire :	kPa
		Rear RH tire :	kPa
		Rear LH tire :	kPa
	e) Degree of wear	Front RH tire :	
		Front LH tire :	
		Rear RH tire :	
		Rear LH tire :	
	f) Genuine parts are used. : ☐Yes / ☐No		
	g) Chain is passed around tires. : ☐Yes / ☐No		
	h) T tire is used. : ☐Yes / ☐No		
	i) Condition of suspension alignment :		
	j) Loading state :		
	k) Repair parts are used. : ☐Yes / ☐No		
	● What :		
	l) Others :		

C: INSPECTION MODE

Reproduce the condition under which the problem has occurred as much as possible.
Drive the vehicle at a speed more than 40 km/h (25 MPH) for at least one minute.



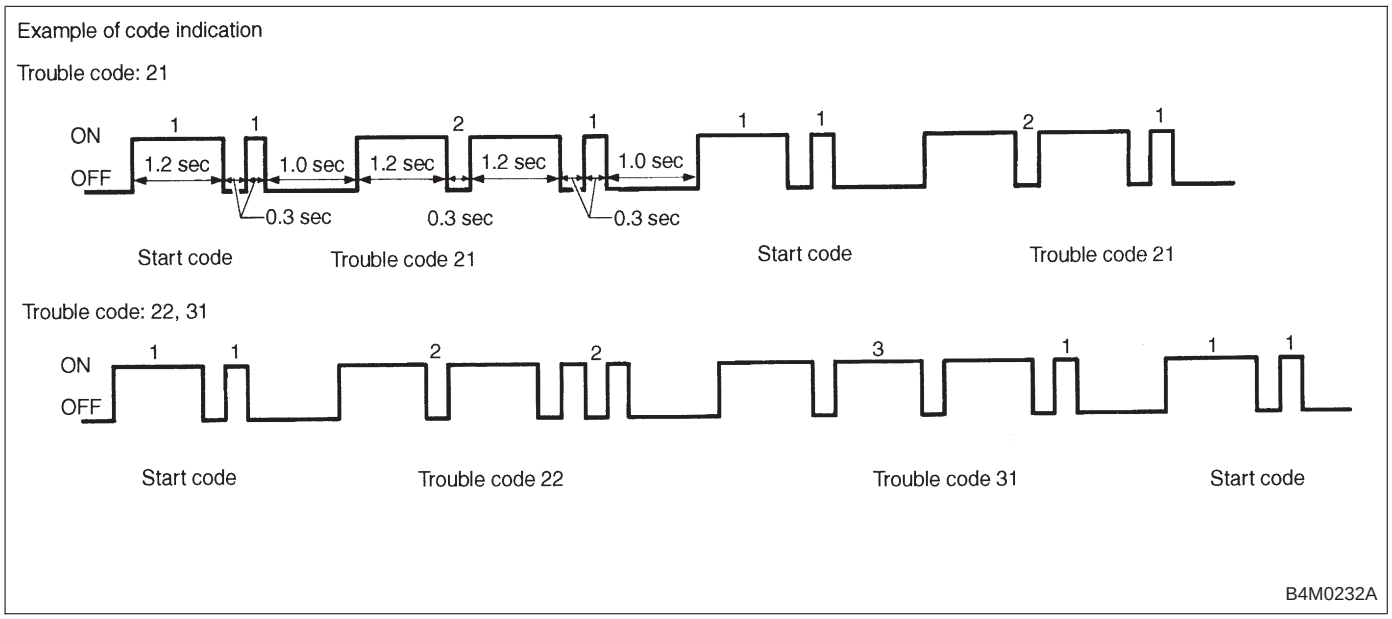
D: TROUBLE CODES

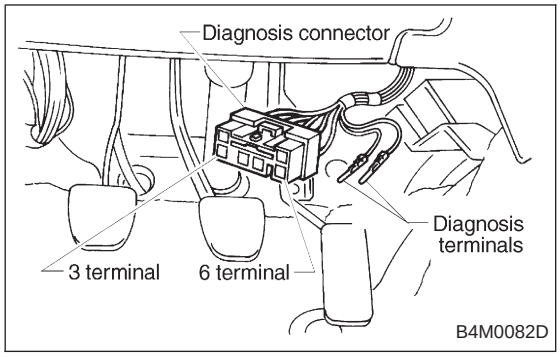
When on-board diagnosis of the ABS control module detects a problem, the information (up to a maximum of three) will be stored in the EEP ROM as a trouble code. When there are more than three, the most recent three will be stored. (Stored codes will stay in memory until they are cleared.)

1. CALLING UP A TROUBLE CODE

1) Take out diagnosis connector from side of driver's seat heater unit.
2) Turn ignition switch OFF.
3) Connect diagnosis connector terminal 6 to diagnosis terminal.
4) Turn ignition switch ON.
5) ABS warning light is set in the diagnostic mode and blinks to identify trouble code.
6) After the start code (11) is shown, the trouble codes will be shown in order of the last information first.
These repeat for a maximum of 5 minutes.

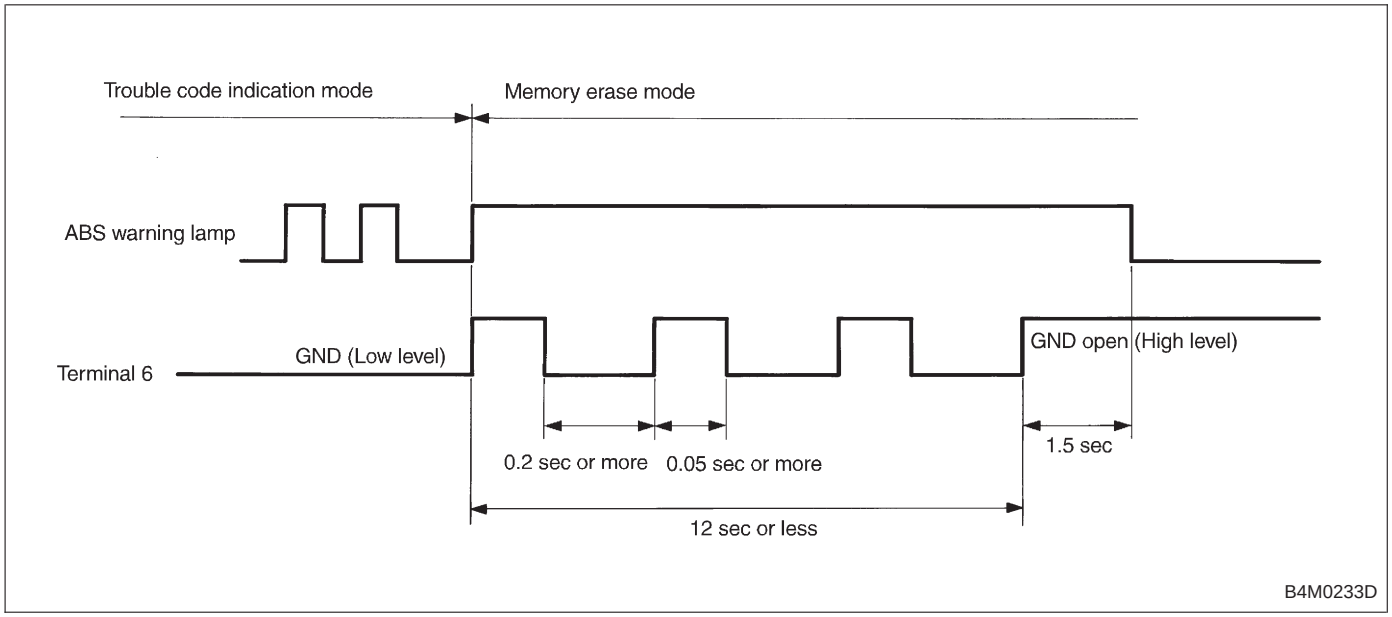
NOTE:
When there are no trouble codes in memory, only the start code (11) is shown.





2. CLEARING MEMORY

1) After calling up a trouble code, disconnect diagnosis connector terminal 6 from diagnosis terminal.
2) Repeat 3 times within approx. 12 seconds; connecting and disconnecting terminal 6 and diagnosis terminal for at least 0.05 seconds each time.



NOTE:
After diagnostics is completed, make sure to clear memory. Make sure only start code (11) is shown after memory is cleared.