## 8. Diagnostic Chart with Select Monitor <br> B: LIST OF OUTPUT MODES <br> 1. FUNCTION MODE

| Mode | Contents | Abbr. | Unit | Contents of display | Page |
| :---: | :---: | :---: | :---: | :---: | :---: |
| FOO | Mode display | - | - | AT or EGI mode (when monitor is connected.) | - |
| F01 | Battery voltage | VB | V | Battery voltage applied to control unit. | - |
| F02 | Vehicle speed sensor 1 | VSP1 | $\mathrm{m} / \mathrm{h}$ | Vehicle speed (miles/h) sent from vehicle speed sensor 1. | - |
| F03 | Vehicle speed sensor 1 | VSP1 | km/h | Vehicle speed (km/h) sent from vehicle speed sensor 1. | - |
| F04 | Vehicle speed sensor 2 | VSP2 | $\mathrm{m} / \mathrm{h}$ | Vehicle speed (miles/h) sent from vehicle speed sensor 2. | - |
| F05 | Vehicle speed sensor 2 | VSP2 | km/h | Vehicle speed (km/h) sent from vehicle speed sensor 2. | - |
| F06 | Engine speed | EREV | rpm | Engine speed sent from ECM. | - |
| F07 | ATF temperature sensor | ATFT | ${ }^{\circ} \mathrm{F}$ | ATF temperature ( ${ }^{\circ} \mathrm{F}$ ) sent from ATF temperature sensor. | - |
| F08 | ATF temperature sensor | ATFT | ${ }^{\circ} \mathrm{C}$ | ATF temperature ( ${ }^{\circ} \mathrm{C}$ ) sent from ATF temperature sensor. | - |
| F09 | Throttle position sensor | THV | V | Voltage sent from throttle position sensor. | 15 |
| F10 | Gear position | GEAR | - | Transmission gear position | - |
| F11 | Line pressure duty | PLDTY | \% | Duty ratio flowing through duty solenoid A . | 16 |
| F12 | Lock-up duty | LUDTY | \% | Duty ratio flowing through duty solenoid B. | 17 |
| F13 | AWD duty | 4WDTY | \% | Duty ratio flowing through duty solenoid C . | 18 |
| F14 | Throttle position sensor power supply | THVCC | V | Power supply voltage to throttle position sensor | 19 |
| F15 | Mass air flow signal | AFM | V | Output voltage from air flow sensor | 19 |



## I: MODE F09 <br> - THROTTLE POSITION SENSOR (THV) CONDITION:

- Ignition switch ON (with engine OFF)
- Measure voltage while operating throttle valve from a fully closed position to a fully open position.


## SPECIFIED DATA:

- Fully closed position: $0.5 \pm 0.2 \mathrm{~V}$
- Fully open position: $4.6 \pm 0.3 \mathrm{~V}$
- From fully closed to fully open position:

Voltage must smoothly decrease.

- Open harness: $5.0 \pm 0.3 \mathrm{~V}$
- Shorted harness: 0.00 V

Probable cause (if outside "specified data")


| PLDTY |  | (F11) |
| :---: | :---: | :---: |
|  |  |  |
|  | $50 \%$ |  |
|  |  |  |
|  |  |  |

Probable cause (if outside "specified data')



| 4WDTY |  |  |
| :---: | :---: | :---: |
|  |  |  |
|  | (F13) |  |
|  | $95 \%$ |  |
|  |  |  |
|  |  |  |
|  |  |  |

## M: MODE F13 - AWD DUTY (4WDTY) —

 CONDITION:- After sufficient warm-up
- Ignition switch ON (engine OFF)
- FWD mode
- AWD mode, D range, full throttle

SPECIFIED DATA:

- 95\% (FWD mode)
- $25 \%$, max. (vehicle speed $0 \mathrm{~m} / \mathrm{h}$ ) (AWD mode)

Probable cause (if outside "specified data")


| THVCC | (F14) |
| ---: | ---: |
|  |  |
| 5.2 V |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## N: MODE F14

- THROTTLE POSITION SENSOR POWER SUPPLY (THVCC) CONDITION:

Ignition switch ON (engine OFF)
SPECIFIED DATA:
$5.12 \pm 0.1 \mathrm{~V}$

Probable cause (Item outside 'specified data')


| AFM | (F15) |
| :---: | :---: |
| 0.6 V |  |
|  | взмозт |

## O: MODE F15 <br> - MASS AIR FLOW SIGNAL (AFM) CONDITION: <br> - Ignition switch ON (engine ON) <br> - N range <br> - Idling <br> SPECIFIED DATA: <br> Engine warm-up: $0.5-1.22 \mathrm{~V}$

Probable cause (if outside 'specified data')

1. Mass alr flow signal

Check performance characteristics of mass air flow signal. <Ref. to 3-2 [T7H0].ひ2>


## DISPLAY

| LED No. | Signal name | Symbol |
| :---: | :---: | :---: |
| 1 | FWD switch | FF |
| 2 | Kick-down switch | KD |
| 3 | - | - |
| 4 | - | - |
| 5 | Brake | BR |
| 6 | ABS switch | AB |
| 7 | Cruise control set | CR |
| 8 | Power switch | PW |
| 9 | - | - |
| 10 | - | - |


| FF | KD | - | - | BR |
| :--- | :--- | :--- | :--- | :--- |
| AB | CR | PW | - | - |


| 1 | 2 | 3 |
| :--- | :--- | :--- |
| 6 | 7 | 5 |
|  | 9 | 9 |

DISPLAY

| LED No. | Signal name | Symbol |
| :---: | :---: | :---: |
| 1 | N/P range switch | NP |
| 2 | R range switch | RR |
| 3 | D range switch | RD |
| 4 | 3 range switch | R3 |
| 5 | 2 range switch | R2 |
| 6 | 1 range switch | R1 |
| 7 | Diagnosis switch | SS |
| 8 | - | - |
| 9 | - | - |
| 10 | - | - |


| NP | RR | RD | R3 | R2 |
| :--- | :--- | :--- | :--- | :--- |
| R1 | SS | - | - | - |


| 1 | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: |
| 6 | 7 | 8 | 9 | 10 |

## P: MODE FAO

- SWITCH 1 (SW1) —


## Reference values

- Lights up when the fuse is installed in FWD switch (No.1).
- Lights up when the brake pedal is depressed (No. 5)
- Lights up when the ABS signal is entered (No. 6).
- Lights up when the cruise control is set (No. 7).

NOTE:
LED Nos. 2 and 8 do not come on.

## Q: MODE FA1

— SWITCH 2 (SW2) —

## Reference values

- Lights up when the N or P range is selected (No. 1).
- Lights up when the R range is selected (No. 2).
- Lights up when the D range is selected (No. 3).
- Lights up when the 3 range is selected (No. 4).
- Lights up when the 2 range is selected (No. 5).
- Lights up when the 1 range is selected (No. 6).
- Lights up when the diagnosis switch is connected (No. 7).
NOTE:
If each LED does not illuminate in the above conditions, inhibitor switch malfunction may occur. Perform diagnostics on inhibitor switch. <Ref. to 2-7 [T10ANO]. \&2>

