

## 1997 MY for Transmission Range Sensor Circuit Malfunction (PRNDL Input) Monitor (P1780)

## 1997 MY for Park/Neutral Switch Input Circuit Monitor (P1780)

To return to monitor description, see page [Ct-2](#).

### MONITOR STRATEGY

| Required sensors/Components | Main             | Park/Neutral position switch |
|-----------------------------|------------------|------------------------------|
|                             | Sub              | None                         |
| Frequency of operation      | (A)              | Continuous                   |
|                             | (B)              | Continuous                   |
| Duration                    | (A)              | Less than 10 sec.            |
|                             | (B)              | 30 sec.                      |
| MIL operation               | 2 driving cycles |                              |
| Sequence of operation       | None             |                              |

### TYPICAL ENABLING CONDITIONS

| Item                                                              | Specification        |                                     |           |
|-------------------------------------------------------------------|----------------------|-------------------------------------|-----------|
|                                                                   | Minimum              | Maximum                             |           |
| The monitor will run whenever the following DTCs are not present. |                      | See page <a href="#">In-39</a>      |           |
| Engine family                                                     | Item                 | Specification                       |           |
|                                                                   |                      | Minimum                             | Maximum   |
| All models Except 5E-FE (TER-CEL)                                 | <b>Condition (A)</b> |                                     |           |
|                                                                   | None                 | –                                   | –         |
| 1UZ-FE (SC400)                                                    | <b>Condition (B)</b> |                                     |           |
|                                                                   | Vehicle speed        | 40 km/h (25 mph) or more            | –         |
|                                                                   | Engine speed         | 1,500 rpm                           | 2,500 rpm |
|                                                                   | G/N                  | 0.6 g/rev. or more                  | –         |
| 2JZ-GTE, 2RZ-FE                                                   | <b>Condition (B)</b> |                                     |           |
|                                                                   | Vehicle speed        | 70 km/h (43 mph) or more            | –         |
|                                                                   | Engine speed         | 1,200 rpm                           | 2,500 rpm |
|                                                                   | G/N                  | 0.6 g/rev. or more                  | –         |
| 5S-FE                                                             | <b>Condition (B)</b> |                                     |           |
|                                                                   | Vehicle speed        | 70 km/h (43 mph) or more            | –         |
|                                                                   | Engine speed         | 1,200 rpm                           | 2,500 rpm |
|                                                                   | PM                   | 60 kPa (450 mmHg, 18 in.Hg) or more | –         |

|                                                    |                      |                                     |           |
|----------------------------------------------------|----------------------|-------------------------------------|-----------|
| 1MZ-FE, 1UZ-FE, 2TZ-FZE,<br>3RZ-FE, 5VZ-FE, 1FZ-FE | <b>Condition (B)</b> |                                     |           |
|                                                    | Vehicle speed        | 70 km/h (43 mph) or more            | –         |
|                                                    | Engine speed         | 1,500 rpm                           | 2,500 rpm |
|                                                    | G/N                  | 0.6 g/rev. or more                  | –         |
| 2JZ-GE                                             | <b>Condition (B)</b> |                                     |           |
|                                                    | Vehicle speed        | 70 km/h (43 mph) or more            | –         |
|                                                    | Engine speed         | 2,000 rpm                           | 2,500 rpm |
|                                                    | G/N                  | 0.7 g/rev. or more                  | –         |
| 3S-FE                                              | <b>Condition (B)</b> |                                     |           |
|                                                    | Vehicle speed        | 80 km/h (50 mph) or more            | –         |
|                                                    | Engine speed         | 1,500 rpm                           | 3,000 rpm |
|                                                    | PM                   | 60 kPa (450 mmHg, 18 in.Hg) or more | –         |
| 5E-FE                                              | <b>Condition (B)</b> |                                     |           |
|                                                    | Vehicle speed        | 80 km/h (50 mph) or more            | –         |
|                                                    | Engine speed         | 2,000 rpm                           | 3,000 rpm |
|                                                    | PM                   | 60 kPa (450 mmHg, 18 in.Hg) or more | –         |
| 4A-FE, 7A-FE                                       | <b>Condition (B)</b> |                                     |           |
|                                                    | Vehicle speed        | 80 km/h (50 mph) or more            | –         |
|                                                    | Engine speed         | 1,500 rpm                           | 5,000 rpm |
|                                                    | PM                   | 40 kPa (300 mmHg, 12 in.Hg) or more | –         |

## TYPICAL MALFUNCTION THRESHOLDS

| Engine family         | Detection criteria                       | Threshold           |
|-----------------------|------------------------------------------|---------------------|
| 5E-FE (TERCEL)        | <b>Condition (B)</b>                     |                     |
|                       | PNP signal                               | ON                  |
| Except 5E-FE (TERCEL) | <b>Condition (A)</b>                     |                     |
|                       | Shift lever position signal (N, 2, L, R) | Any 2 or more input |
|                       | <b>Condition (B)</b>                     |                     |
|                       | PNP signal                               | ON                  |