



New Vehicle | **New TSBs** |
Toolbox

Vehicle | **Quotes** | **Library Request** | **Vehicle Information** | **SEE WHAT'S NEW**
DTC) » Testing and Inspection » P Code
Charts » P0302 » Troubleshooting

 SEARCH [Advanced](#)

2000 Toyota Truck 4 Runner Limited 4WD
V6-3.4L (5VZ-FE)

[Save Article](#)[Select Print Option](#)

CIRCUIT DESCRIPTION

Misfire: The ECM uses the crankshaft position sensor and camshaft position sensor to monitor changes in the crankshaft rotation for each cylinder. The ECM counts the number of times the engine speed change rate indicates that misfire has occurred~ When the misfire rate equals or exceeds the count indicating that the engine condition has deteriorated, the MIL lights up

If the misfire rate is high enough and the driving conditions will cause catalyst overheating, the MIL blinks when misfiring occurs.



Zoom and Print Options

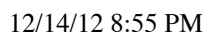
DTC No.	DTC Detecting Condition	Trouble Area
P0300	Misfiring of random cylinders is detected during any particular 200 or 1,000 revolutions	• Open or short in engine wire • Connector connection • Vacuum hose connector
P0301	For any particular 200 revolutions for engine, misfiring is detected which can cause catalyst overheating (This causes MIL to blink)	• Ignition system • Injector • Fuel pressure • Mass air flow meter
P0302		
P0303		
P0304	For any particular 1,000 revolutions of engine, misfiring is detected which causes a deterioration in emission (2 trip detection logic)	• Engine coolant temp. sensor • Compression pressure • Valve clearance • Valve timing • ECM
P0305		
P0306		

DETECTING CONDITIONS

HINT: When the 2 or more codes for a misfiring cylinder are recorded repeatedly but no random misfire code is recorded, it indicates that the misfires were detected and recorded at different times.



Zoom and Print Options





New Vehicle | New TSBs | Toolbox

1 | Quotes | Library Request | Vehicle Information | SEE WHAT'S NEW

CHECK:
(a) Check the connection conditions of wire harness and connector.
(b) Check the disconnection, piping and break of vacuum hose.

NG

Repair or replace, then confirm that there is no misfire (See confirmation drive pattern).

OK

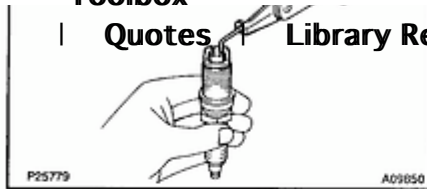
Step 1

Zoom and Print Options

New Vehicle | **New TSBs** | **Toolbox**

Quotes | **Library Request** | **Vehicle Information** |

SEE WHAT'S NEW



CHECK:

- (a) Check the spark plug type.
- (b) Check the electrode for carbon deposits.
- (c) Check the electrode gap.

OK:

- (a) Twin ground electrodes type.

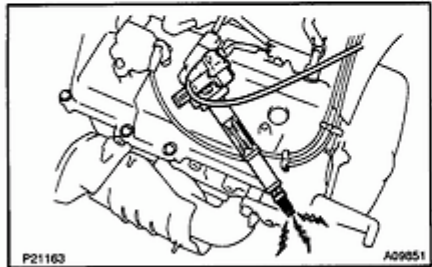
Recommended spark plug:

DENSO made: K16TR11

NGK made: BKR5EKB-11

- (b) No large carbon deposit present.

- (c) Electrode gap: 1.0 – 1.1 mm (0.039 – 0.043 in.)



PREPARATION:

- (a) Install the spark plug to the ignition coil or high-tension cord.
- (b) Disconnect the injector connector.
- (c) Ground the spark plug.

CHECK:

Check if spark occurs while the engine is being cranked.

NOTICE:

To prevent excess fuel from being injected from the injectors during this test, don't crank the engine for more than 5 – 10 sec. at a time.

OK:

Spark jumps across electrode gap.

NG

Replace or check ignition system.

OK

Step 2



Zoom and Print Options



New Vehicle | New TSBs | Toolbox



CHECK:

Measure the voltage between applicable terminals of the ECM connector and body ground.

OK:

Voltage: 9 – 14 V

Vehicle Information

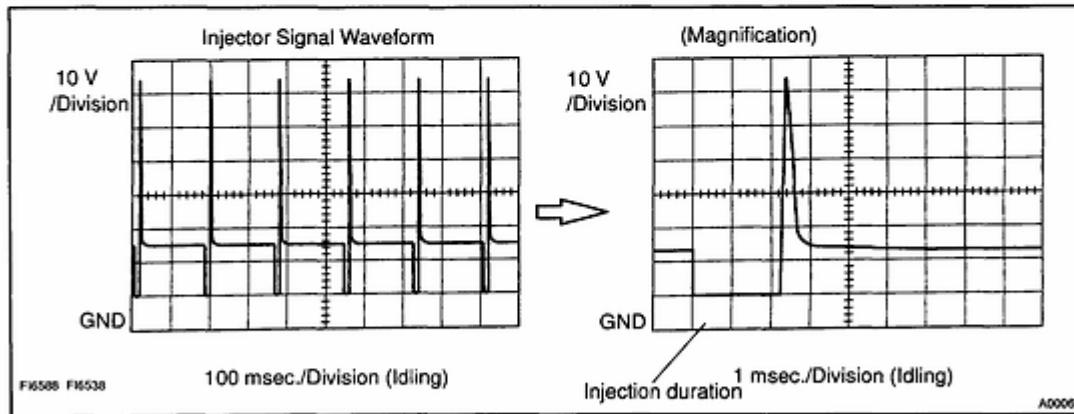
SEE WHAT'S NEW

Reference: INSPECTION USING OSCILLOSCOPE

With the engine idling, check the waveform between terminals #10 – #60 and E01 of the ECM connector.

HINT:

The correct waveform is as shown.



OK

Go to step 4.

NG

Step 3

Zoom and Print Options

4

Check resistance of injector of misfiring cylinder.

NG

Replace injector.

OK

Check for open and short in harness and connector between injector and ECM.

Step 4



New Vehicle | **New TSBs** | **Toolbox**

Quotes | **Library Request**

NG

Check and replace fuel pump, pressure regulator, fuel pipe line and filter.

SEE WHAT'S NEW

OK

Step 5

Zoom and Print Options

6

Check injector injection.

NG

Replace injector.

OK

Step 6

Zoom and Print Options

7

Check mass air flow meter and engine coolant temperature sensor.

NG

Repair or replace.

OK

Check compression pressure, valve clearance and valve timing.

Step 7

INSPECTION PROCEDURE

HINT:

- if is case that DTC besides misfire is memorized simultaneously, first perform the troubleshooting for them.



New Vehicle | **New TSBs** |

Toolbox

by reproducing the condition or freeze frame data. Also, after finishing the repair, confirm that there is no misfire.

Quotes |

Library Request |

Vehicle Information |

SEE WHAT'S NEW

- When either of the SHORT FT #1, LONG FT #1, SHORT FT #2 or LONG FT #2 in the freeze frame data is besides the range of $\pm 20\%$, there is a possibility that the air-fuel ratio is inclining either to RICH (-20% or less) or LEAN ($+20\%$ or more).
- When the COOLANT TEMP in the freeze frame data is less than **80°C (176°F)**, there is a possibility or misfire only during warming up.
- In the case that misfire cannot be reproduced, the reason may be because of the driving with lack or fuel, the use of improper fuel, a stain of ignition plug, and etc.

© 2012 ALLDATA, LLC. All Rights Reserved. [Terms of Use](#) (Version 2.0.13469)