

BASIC INSPECTION

When the malfunction code is not confirmed in the diagnostic trouble code check, troubleshooting should be performed in the order for all possible circuits to be considered as the causes of the problems.

In many cases, by carrying out the basic engine check shown in the following flow chart, the location causing the problem can be found quickly and efficiently. Therefore, use of this check is essential in engine troubleshooting.

1

Is battery positive voltage 11 V or more when engine is stopped?

YES**NO**

Charge or replace battery.

2

Is engine cranked?

YES**NO**

Proceed to page [ST-11](#) and continue to troubleshoot.

3

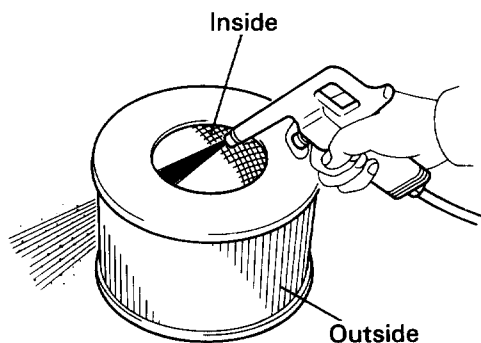
Does engine start?

YES**NO**

Go to step **7** .

4

Check air filter.

**P**

Remove air filter.

C

Visually check that the air cleaner element is not dirty or excessively oily.

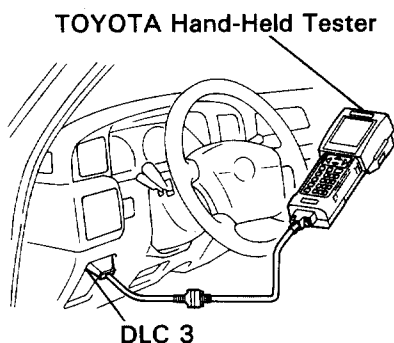
HINT: If necessary, clean element with compressed air. First blow from inside thoroughly, then blow from outside of element.

P04771

OK**NG**

Repair or replace.

Go to step **5** .

5**Check idle speed.**

P22892

OK

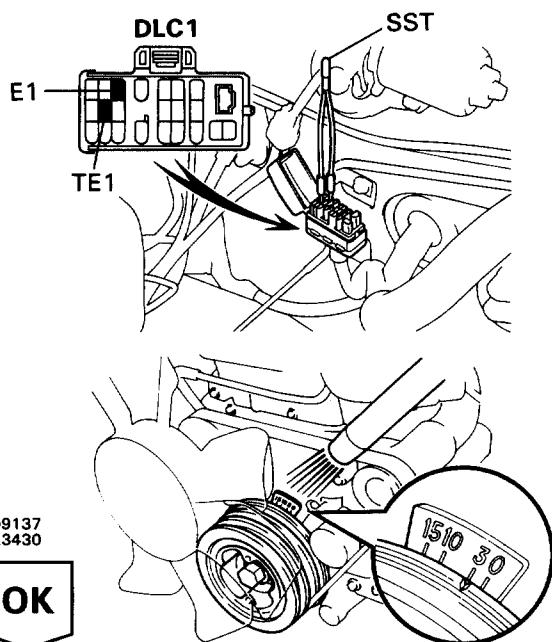
- P** (1) Warm up engine to normal operating temperature.
 (2) Switch off all accessories.
 (3) Switch off air conditioning.
 (4) Shift transmission into "N" position.
 (5) Connect the OBD II scan tool or TOYOTA hand-held tester to DLC 3 on the vehicle.

C Use CURRENT DATA to check the engine idle speed.

OK Idle speed: 650 ± 50 rpm

NG

Proceed to matrix chart of problem symptoms on page EG-243.

6**Check ignition timing.****OK**

- P** (1) Warm up engine to normal operating temperature.
 (2) Switch transmission into "N" position.
 (3) Keep the engine speed at idle.
 (4) Using SST, connect terminals TE1 and E1 of DLC 1.
 SST 09843-18020
 (5) Connect a timing light probe to a high-tension cord.

C Check ignition timing

OK Ignition timing: 3° BTDC at idle

NG

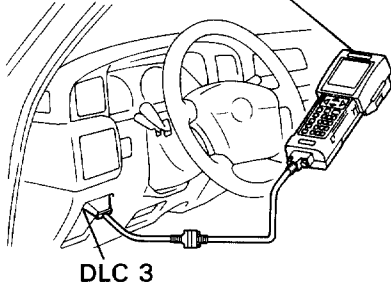
Proceed to ignition system and continue to troubleshoot.

Proceed to matrix chart of problem symptoms on page EG-243.

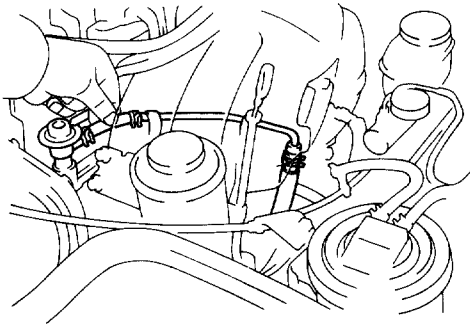
7

Check fuel pressure.

TOYOTA Hand-Held Tester



DLC 3

P22892
P09401

OK

- P**
- (1) Be sure that enough fuel is in the tank.
 - (2) Turn ignition switch ON.
 - (3) Connect the TOYOTA hand-held tester to DLC 3 on the vehicle.
 - (4) Use ACTIVE TEST mode to operate the fuel pump.
 - (5) If you have no TOYOTA hand-held tester, connect the positive (+) and negative (-) leads from the battery to the fuel pump connector (See page [EG-137](#)).

- C** Check for fuel pressure in the fuel return hose when it is pinched off.

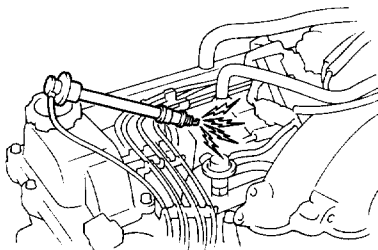
HINT: At this time, you will hear a fuel flowing noise.

NG

Proceed to page [EG-135](#) and continue to troubleshoot.

8

Check for spark.



P22893

OK

- P**
- (1) Remove No. 2 and No. 3 cylinder head cover.
 - (2) Disconnect high-tension cord from spark plug.
 - (3) Remove spark plug.
 - (4) Install the spark plug to the high-tension cord.
 - (5) Ground the spark plug.
 - (6) Disconnect injector connector.

- C** Check if spark occurs while engine is being cranked.

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

NG

Proceed to page [EG-3](#) and continue to troubleshoot.

Proceed to matrix chart of problem systems on page [EG-243](#).