

FORD Injector Programming (TDCi Engines)

This function is required by service centres when an Injector needs to be replaced, or there is a driveability problem.

For 1.8 TDCi and 2.0 TDCi engines the each injector has a 16-digit calibration code stamped on the body.

For 1.6 TDCi engines the each injector has an 8-digit calibration code stamped on the body.

These codes relate to the electrical and structural characteristics of each injector, which are defined during production. The PCM must know the calibration codes for each injector in order to treat and operate the injectors in the correct manner. This helps to reduce emissions and improve performance. The code must be programmed in by communicating and downloading the code into the PCMs memory.

There are three common situations which demand this function.

1. After Injector replacement.
2. Fuel injection system 'calibration'.
3. To cure drivability problems. Lack of power, black smoke and the presence of DTC's P2336, P2337, P2338 can often be fixed by re-entering the existing 4 injector codes.

Injector Programming is used on the following vehicles:

Model Engine MY

Fiesta 1.6 TDCi 2004 -

Focus 1.8 TDCi 2001 - 2005

Focus (new shape) 1.6 TDCi 2005 -

Focus C-Max 1.6 TDCi 2005 -

Mondeo 2.0 TDCi 2000 - 2006

Mondeo 2.2 TDCi 2005 - 2006

Transit 2.0 TDCi 2000 - 2005

Transit 2.4 TDCi 2000 - 2005

Transit Connect 1.8 TDCi 2002 - 2006

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NOTE:

- On earlier model years (approx pre-2003) it is not possible to read the actual injector codes. On these vehicles you will see '00 00 00 00 00 00 00 00' or 'FF FF FF FF FF FF FF FF' or a

mixture.

- After entering an injector code the fuel system will initially run without any pilot injection sequence. The car must be driven for a few miles to correct this.
The codes of the ORIGINAL injectors fitted to vehicle can be found on a label, which is fitted to the side of the engine or on the engine rocker top (if it has not yet been removed)

1.6 TDCi Engines:

Injector label arrowed in illustration

OM1349

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1.6 TDCi Engines:

Injector codes arrowed in illustration

The codes on the label are in the following format:

Where:

11111111 is the code for injector 1,

22222222 is the code for injector 2,

33333333 is the code for injector 3,

44444444 is the code for injector 4.

NOTE: The injectors are in the physical order, NOT firing order.

(1&2) X1111111122222222X

(3&4) X3333333344444444X

OM1350

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Injector codes can also be read from the injectors fitted as the codes are stamped on a ring attached to the head of the injector, underneath the connector.

1.8 TDCi Engines:

Injector label arrowed in illustration - Side view

OM1357

TRANSMISSION

INJ:

OM1352

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Injector label & Injector head arrowed in illustration - Front view

Injector label - gives four 16 digit numbers

NOTE: The injectors on the label are in physical order, NOT firing order.

OM1351

OM1353

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Injector codes can be also be read from the injectors fitted as the codes are stamped on a ring attached to the head of the injector, underneath the connector.

2.0 TDCi Engines:

Injector label arrowed in illustration - Side view

OM1356

TRANSMISSION

INJ:

OM1354

Ford

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Injector label - gives four 16 digit numbers

NOTE: The injectors on the label are in firing order, NOT physical order. The top left code is Injector 1 (Cyl.1), the top right code is Injector 2 (Cyl.3), the bottom left is Injector 3 (Cyl.4) and the bottom right is Injector 4 (Cyl.2). Where Injector is the firing number, Cylinder is the physical number.

When replacing an Injector the code stamped on the body of the new Injector must be programmed into the PCM, NOT the code on the label.

WARNING: Before attempting Injector Programming it is necessary for the vehicle to be left stationary with the Engine off for at least 8 hours. This is to ensure that the engine is stone cold before Injector Programming is performed. Failure to follow these instructions may result in failure of the Injector Programming function and/or drive ability problems.

OM1355

Comments (0)

Ford S-Max/Galaxy Electronic Parking Brake (EPB) – Manual release/Service mode

Filed under: X431 Diagnostic skills for car makes — admin @ 9:59 am

Ford S-Max/Galaxy Electronic Parking Brake (EPB) – Manual release/Service mode

The following procedures should be followed before service work is carried out on the electronic

Parking brake system fitted to the Ford S-max/Galaxy models 2006-2008.

The following pre-requisites should be met before commencing:

- Vehicle on level ground

- Ensure vehicle battery is fully charged
- Service mode activation (EPB off)
- Release the parking brake

- Switch ignition ON (pos 2)

- Press and hold down throttle pedal

- Press and hold down the parking brake switch

- Switch ignition Off (pos 0)
- Switch ignition ON (pos 2) within 5 seconds
- When the parking brake has fully actuated (off) switch ignition OFF (pos 0)
- Release throttle pedal
- Release parking brake switch

Service mode de-activation (EPB on)

- Switch ignition ON (pos 2)
- Press and hold down throttle pedal
- Lift and hold the parking brake switch
-
- Switch ignition Off (pos 0)
- Switch ignition ON (pos 2) within 5 seconds
- When the parking brake has fully actuated (on) switch ignition OFF (pos 0)
- Release throttle pedal
- Release parking brake switch