

# INSTALLATION MANUAL

F O R D Focus  
RHD  
1.6 i



# INSTALLATION INSTRUCTIONS

## ELECTRICAL CONNECTIONS



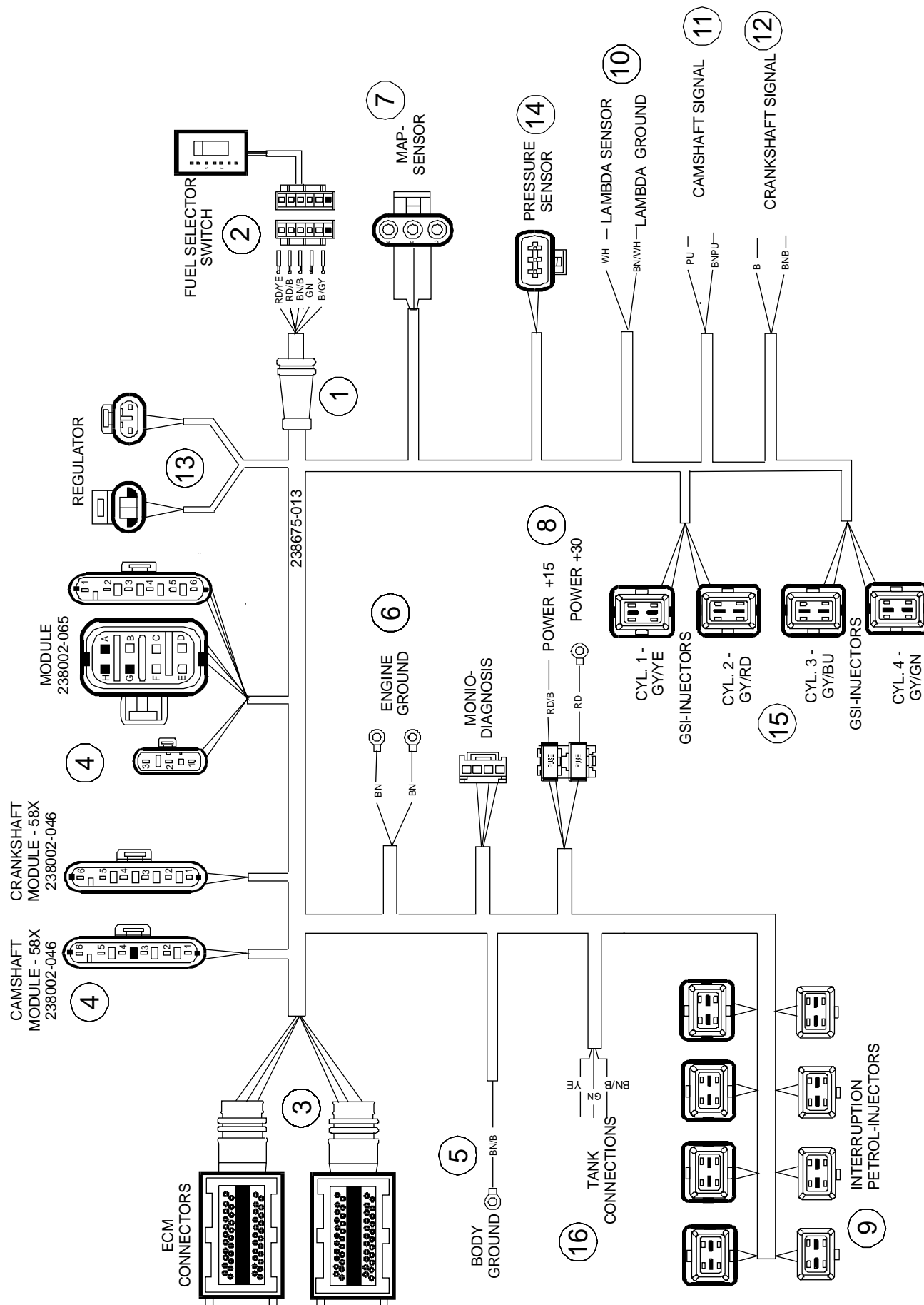
Brand : Ford - RHD

Instr. no : 265000-739

Type : Focus 1.6i

Page no : 1/8

Engine set no : 260100-598



# INSTALLATION INSTRUCTIONS INJECTOR ASSEMBLY



Brand : Ford - RHD

Instr. no : 265000-739

Type : Focus 1.6i

Page no : 2/8

Engine set no : 260100-598

- Remove the air intake hose with the air filter, the complete throttle body with accessories and the vacuum hoses which are linked to the inlet manifold.
- Remove the inlet manifold. Take away the fuel rail at the moment when the manifold is tilted away. Ensure you use suitable spanners, so that the bolt heads cannot be damaged!
- Mount drilling jig 241505-301 using 2 M8-bolts placed against the flange of the inlet manifold. Drill all holes  $\varnothing 8$  mm. See fig.1. Use a drill bushing in the drilling jig when drilling.
- Mount the injector holders in the hex adapters. Mount the hex adapters plus the brass cups with O-rings in between on the manifold. See fig.2. The tape on the adapter sets into the plastic wall on tightening. Mount the couplings and holders with a sealinglocking compound. Clean the manifold.
- Fasten the hoses on the GSI injectors. All hose lengths: 75 cm. Mount the injectors on the injector holders. Use a lubricant when mounting the injectors in order to avoid damaging the O rings in the adapters. Place the injector hoses along the intake pipes towards the back. Fix the hoses with cable ties. See fig.3.
- Mount the assembled inlet manifold. Use a new inlet manifold gasket if it is damaged.



fig. 1.



fig. 2.



fig. 3.

# INSTALLATION INSTRUCTIONS ENGINE SET



Brand : Ford - RHD

Instr. no : 265000-739

Type : Focus 1.6i

Page no : 3/8

Engine set no : 260100-598

- Vaporiser/pressure regulator. Fasten the 3 blind riveted nuts with the designated tool in the holes on the interior of the right chassis beam. See fig.4. Mount the support (244305-486) with 3 M8-bolts and lock washers against the chassis beam.
- Mount the water elbows and the LPG valve with a 90° fitting into the regulator. Ensure that you have the correct position for the elbows. See fig. 6. Use Omnifit H50 for the sealing. Mount the regulator on the regulator support (244305-485). Fasten this support with M6-bolts and lock washers against the support that is already mounted on the chassis beam. See fig 5.
- Vacuum connection. Interrupt the vacuum hose from the throttle body housing to the fuel-pressure regulator. See fig.7. Insert a T-piece and connect this to the vaporiser. Also interrupt this vacuum hose with a T-piece to connect the MAP sensor.



fig. 4.

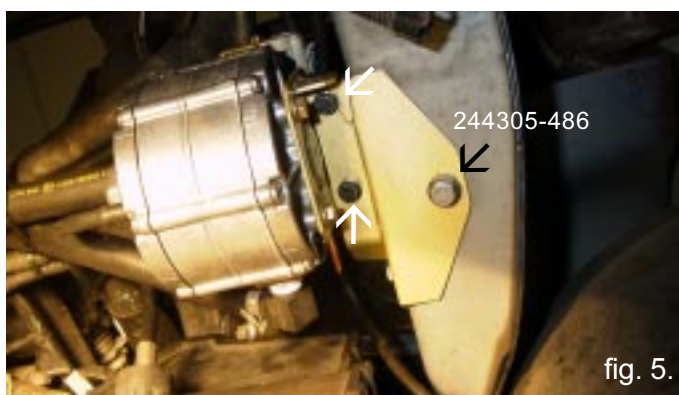


fig. 5.



fig. 6.

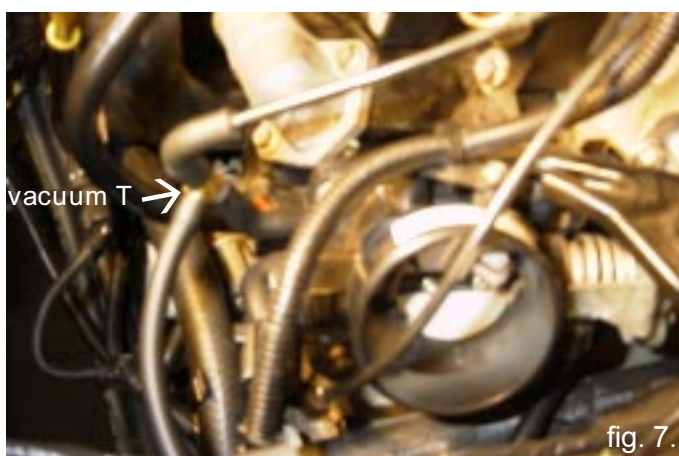


fig. 7.



# INSTALLATION INSTRUCTIONS ENGINE SET



Brand : Ford - RHD

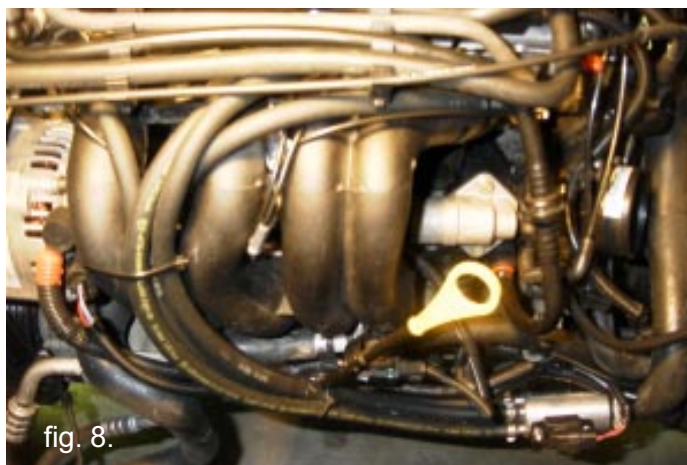
Instr. no : 265000-739

Type : Focus 1.6i

Page no : 4/8

Engine set no : 260100-598

- Splitter. Make the injector hoses the correct length and fasten them to the splitter. Connect the splitter with a 16mm gas hose to the regulator's output coupling. Attach the entire structure with cable ties. See fig. 8.
- Water connections. Interrupt the 16mm water hose between the heater connection and the waterpump at approximately 5 cm after the taper from thick to thin. Free the hose clip from the original link pipe. Turn the water hose 180° on this connection pipe. Connect the hose to the topmost water elbow in the regulator. Connect the other water elbow, with the waterhose and connection pipe from the kit, to the hose end from the waterpump. Attach the water hoses to the lowest radiator hose with cable ties.
- ECM and modules. Mount the ECM (MR140) using spread nuts and plate screws on the support (244304-673). Mount the -065 module on this support. Mount the 2 -046 modules on the 244304-688 support. Mount this support on the ECM. See fig. 9. Free the fuse box from the fixation points and tilt it away. Mount the complete assembled support on the studs on the left chassis beam. See fig.10. NB. Mount the fuse box when the power connections are made.
- LPG supply line. Route the LPG supply line from the regulator across the chassis beam towards the back. Route the LPG supply line across the chassis rail towards the ring tank vapour box.



# INSTALLATION INSTRUCTIONS ELECTRICAL CONNECTIONS



Brand : Ford - RHD

Instr. no : 265000-739

Type : Focus 1.6i

Page no : 5/8

Engine set no : 260100-598

1. Cable lead-through. Drill a Ø 17mm hole in the bulkhead to the left of the centre console. See fig. 11. Watch out for the components behind when drilling. Feed the bundle of wires for the switch from the engine compartment inwards. Place a grommet in the hole, so that the harness cannot be damaged!



2. Switch. The fuel selection switch/gauge is mounted in the centre console to the left of the gear lever. See fig. 12. Make a 23x36 mm hole for the switch. Place the wiring in the correct positions with the corresponding wire colours in the switch block connector. See fig. 13. Place the connector on the switch.

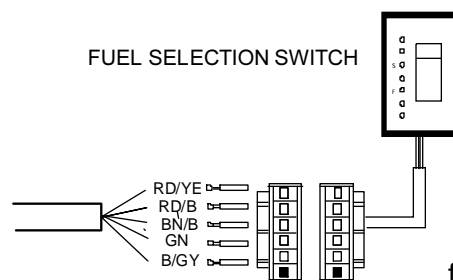


- 3-4. ECM and modules. See fig. 10. Place the connectors in the ECM and on the modules.

5. Bodywork earth. The brown/black earth with a cable eye is to be mounted on the left interior shield between the battery and air filter.

6. Engine earth. The brown earth wires with a cable eye are mounted on a bolt on the inlet manifold.

7. MAP sensor. Mount the MAP sensor with holder on the left side against the battery tray. See fig. 14. Connect the green 3-pin connector to the MAP sensor.





# INSTALLATION INSTRUCTIONS ELECTRICAL CONNECTIONS



Brand : Ford - RHD

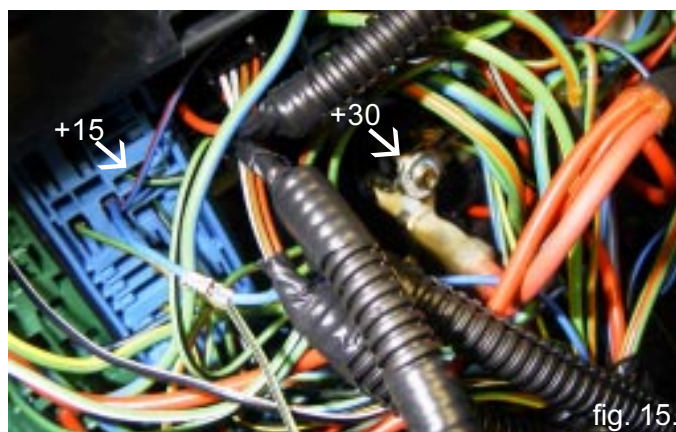
Instr. no : 265000-739

Type : Focus 1.6i

Page no : 6/8

Engine set no : 260100-598

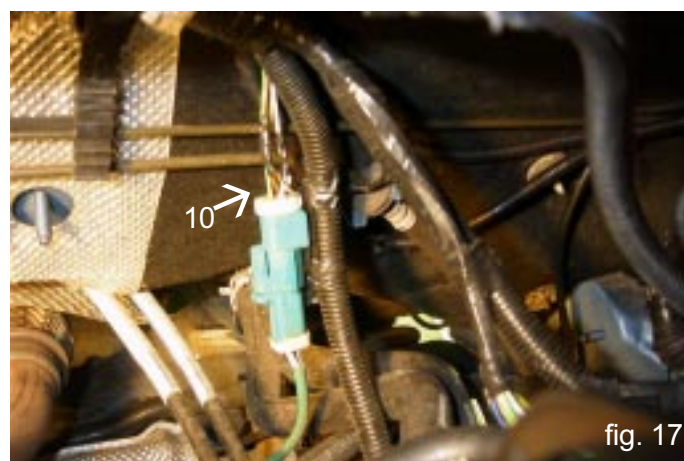
8. Power. Connect the green/black power lead (+15) with the blue wire on the underside of the R13 relay on the underside of the fuse box. See fig.15. Connect the red power lead (+30) with a cable eye on the M8 bolt on the underside of the fuse box. Place the fuses in the holders (+30=7,5A, +15=3A). Place these in the fusebox together with the Monio connector.



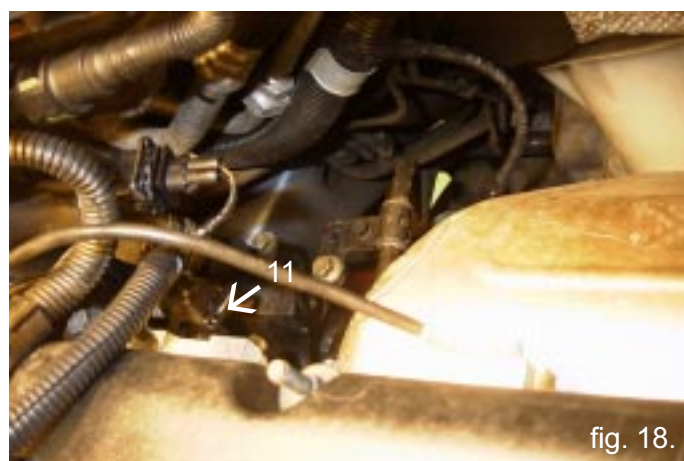
9. Injector interruption. Free the connectors for the petrol injectors. Connect the connectors for the GSI harness to the fuel injectors and the associated counter-connectors in the direction of the ECU. See fig.16. Mount the conduit and fasten it with cable ties.



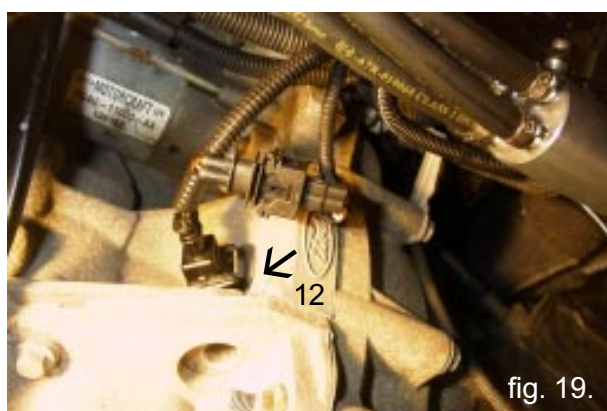
10. Lambda signal. Connect the signal wires to the harness going to the lambda probe connector. See fig. 17. Connect the white wire to the white wire. Connect the brown/white wire to the brown wire.



11. Camshaft signal. Connect the wiring-harness to the camshaft connector right behind the valve cover. See fig. 18. The purple wire (cam-hi) to pos.1-white/purple; brown/purple (cam-lo) to pos.2-brown/white.



12. Crankshaft signal. Connect the wiring-harness to the crankshaft connector on the left front-side of the engine block. See fig. 19. The black wire (crank-hi) to pos.2-brown/red; brown/black (crank-lo) to pos.1-white/red.



# INSTALLATION INSTRUCTIONS ELECTRICAL CONNECTIONS



Brand : Ford - RHD

Instr. no : 265000-739

Type : Focus 1.6i

Page no : 7/8

Engine set no : 260100-598

13. Vaporiser. The 2-pole plug with yellow and brown/black wire is attached to the LPG valve. Attach the other connector to the temperature sensor.

14. Pressure sensor. The 3-pole plug is connected to the GSI-splitter pressure sensor.

15. GSI-injectors. Place the cable markers – for cyl.1 up to cyl.4 inclusive on the wiring for the GSI-injector concerned. Connect the 4 connectors to the GSI injectors. Ensure that the connectors with the correct wire colours (and numbers) are connected to the designated cylinders. See table in fig. 20.

wire-color GSI-injector		cylinder no.
1-grey/yellow	→	cyl. 1
2-grey red	→	cyl. 2
3-grey/blue	→	cyl. 3
4-grey/green	→	cyl. 4

fig. 20.

16. Vapour box. Route the 3-core harness with the green, yellow and brown/black wire along with the LPG supply line towards the vapour box. Connect them to the solenoid (yellow), the tank transmitter (green) and ground (brown/black). See fig.21.

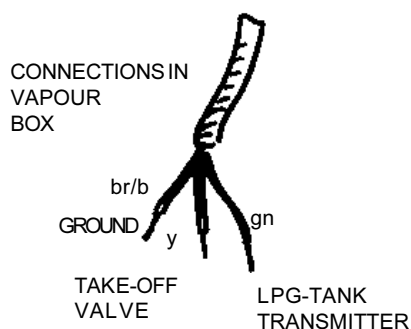


fig. 21.

## Control / adjustment

1/ When the installation is ready, check the entire LPG installation for leaks!

2/ Adjust the working pressures of the vaporiser/pressure regulator when the engine is at operating temperature:

1st stage: 1400 mbar

2nd stage: 1000 mbar

Important: point 1 and 2 must always be executed directly after the installation of the LPG installation. This also applies when the car is being run in during the first kilometres on petrol.



# WIRING DIAGRAM



Brand : Ford - RHD

Instr. no : 265000-739

Type : Focus 1.6i

Page no : 8/8

Engine set no : 260100-598

## CODES WIRING DIAGRAM

### COMPONENT DESCRIPTION

DC diagnosis connector  
ECM electronic control module - MR140  
F1 fuse 3.0 A ign. voltage  
F2 fuse 7.5 A batt. Voltage  
FS fuel selection switch  
I1 injector cil.1  
I2 injector cil.2  
I3 injector cil.3  
I4 injector cil.4  
IM1/3 interface module  
IM4 module 58X-crankshaft  
IM5 module 58X-crankshaft  
LS levelsensor LPG fuel tank  
PS1 MAP-sensor  
PS2 GAP-sensor  
TS coolant sensor  
V1 shut-off valve vaporisor  
V2 shut-off valve LPG fuel tank

### SIGNAL DESCRIPTION

15 ignition voltage  
30 battery voltage  
31B body ground  
31E engine ground  
A crankshaft - high  
B crankshaft - low  
C camshaft - high  
D camshaft - low  
E O2-signal - high  
F O2-signal - low  
G ECU petrol injector  
H petrolinjector 1-2-3  
I petrolinjector 4  
J ECU petrol injector (inj.time)

