How to install a Ford Fuel Computer into a Mk1 Focus with no wiring loom

- **Items you will need before starting**

  Ford OE (Original Equipment) Fuel Computer
  Ford OE Indicator stalk with INFO button.
  Ford OE Exterior Temperature Sensor (Optional)
  Ford OE Washer fluid switch and bottle (Optional)
  Spare donor Instrument cluster connector block[1] c/w approx 6" of cable.
  Spare donor Indicator stalk connector block[1] c/w approx 6" of cable.
  Soldering Iron
  Insulation Tape
  Heat Shrink tubing
  Scotch Loc connectors (5 amp Red)
  A Little Patience.

  [1]) These connectors can be from any variant of Focus, not just a Ghia.

- There are 15 Cables to connect up, most are very easy and straightforward, some require a little dexterity. Firstly refer to the attached overall wiring diagram and Wire connection list at the end of this document. We will deal with the easiest first, to the slightly more difficult last.

  1. The first cable is the one to the computer connector at pin no 4. This is a white cable and is to be connected to the white/green stripe cable from the Radio remote connector at the back of the radio. This is the smallest of the 2 block connectors and contains only 3 wires. This tells the computer how fast the vehicle is travelling.

  2. Connect the Orange/Yellow stripe wire from pin 17 on the fuel computer, to the Orange/Yellow strip wire going to the Dash Clock multi connector. This is accessible if the radio and then the centre dash panel (containing the heater controls) is released. This is the switched live from the ignition.

  3. Connect the Green/Yellow wire from Pin 18 on the fuel computer, to the Green/Yellow wire at the clock connector again (see above). This is the permanent Live connection.

  4. Connect Black wire at Pin 20 of the Fuel computer to a suitable earth. The correct location from Ford is the base of the "A" pillar on the drivers side, behind the ECU, but any good earth point will do.

  5. Connect the Orange/Yellow wire at Pin 21 of the fuel computer, to the orange/black wire going to the radio Power connector. This is the connector for the computer back lighting.

  6. Connect the Brown/Red stripe wire from Pin 23 of the computer to the brown Red/Stripe wire of the Instrument panel connector – this is at Pin 15 of this connector. This gives the computer details on fuel flow to the engine.

  7. Connect the White/Red stripe wire from Pin 23 of the computer to the brown White/Stripe wire of the Instrument panel connector – this is at Pin 8 of this connector. This gives the computer details on fuel return to the tank.

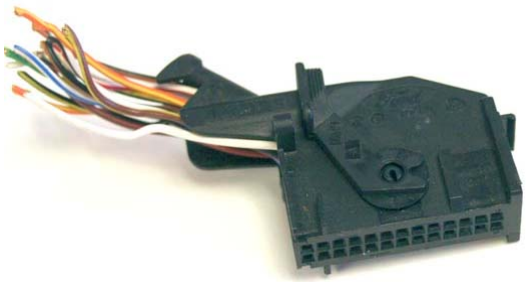
  8. Connect the white *or* black/orange cable (the colour seems to vary) at Pin 26 of the fuel computer to the cable going to Pin no 7 of the diagnostic connector located in the driver lower dash panel tray.

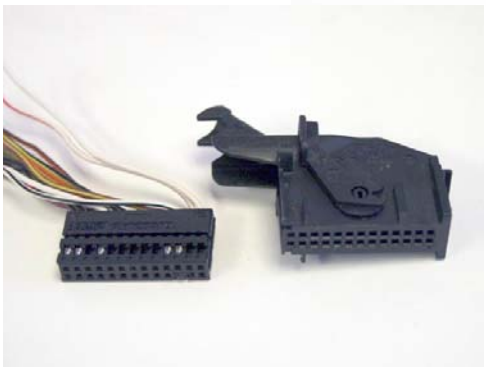
9. If the outside air temperature connector is to be fitted, fit it now and run the cable into the car. A convenient method seems to be to firstly remove the nearside wheel and wheel arch liner. From the door end of the wing, insert the cable into the wing between the inner and outer skins and retrieve it under the wing near the washer bottle. From under the arch, near where the cable for the washer pump goes through the inner wing, there is another hole quite neat it. Route your cable through this hole and into the engine bay. Route the cable around the left side of the engine bay following the route of the existing large wiring loom. Mount the sensor in the front slam panel (behind and below the bonnet lock assembly). Connect a cable to each of the 2 wires for the sensor, noting which colour cable has been connected to each of the 2 black wires of the connector. At the door hinges, there are 2 blank grommets into the car. Using the lower one (below the upper hinge) remove it and drill a small pilot hole into it. Push your cable through and retrieve it from the passenger foot well (you will need to remove the foot well trim and possibly the glove box). Route the cable across the car to near the computer connector. Replace the grommet and seal the hole with silicone sealant. Connect the cable the came from the bottom pin of the sensor connector (i.e. the one furthest away from the release catch) to the Brown/Yellow wire at Pin 10 of the fuel computer. Connect the other cable to the White/Black stripe cable at Pin 11 of the fuel computer.

10. Run the cable for the low washer switch in the same way and connect it to the Black/Orange cable at pin 1 of the fuel computer. If this connection is not being done, then connect this cable to a convenient earth point to extinguish the light which otherwise would be permanently on.

11. The black/Yellow wire from Pin No 2 of the fuel computer, needs to go to indicator stalk connector wire at pin 10. Many Foci do not have a cable at this position. If this is the case, using your donor connector, cut the connector and remove any cable(complete with the pin) from it. Insert the pin into *your* connector using pliers. It will need to go fully home so that the little catch on the pin is fully home. With this done, connect the above cable to the computer cable. This cable controls the various display modes from the "INFO" button on the indicator stalk.

12. The yellow cable from Pin 24 of the fuel computer, needs to be connected to the Yellow cable from Pin 12 of the instrument cluster connector. Many Foci do not have this connector and this will need to be made. Firstly using your second donor connector, you will notice that at the end where the cables come out, there is a small panel which can be slid down and out of the connector. With this removed, cut the tie wrap that clamps the cables to the connector, and slid the connector internals out of the moulded plug. (See photos below). With the internals exposed, cut out any cable and pin (as before) from the connector. Disassemble your connector as above, and insert the pin and cable into the spare position at location 12 of the Instrument connector. Reassemble and connect to the fuel computer cable.





This wire sends information on the fuel remaining to the computer.

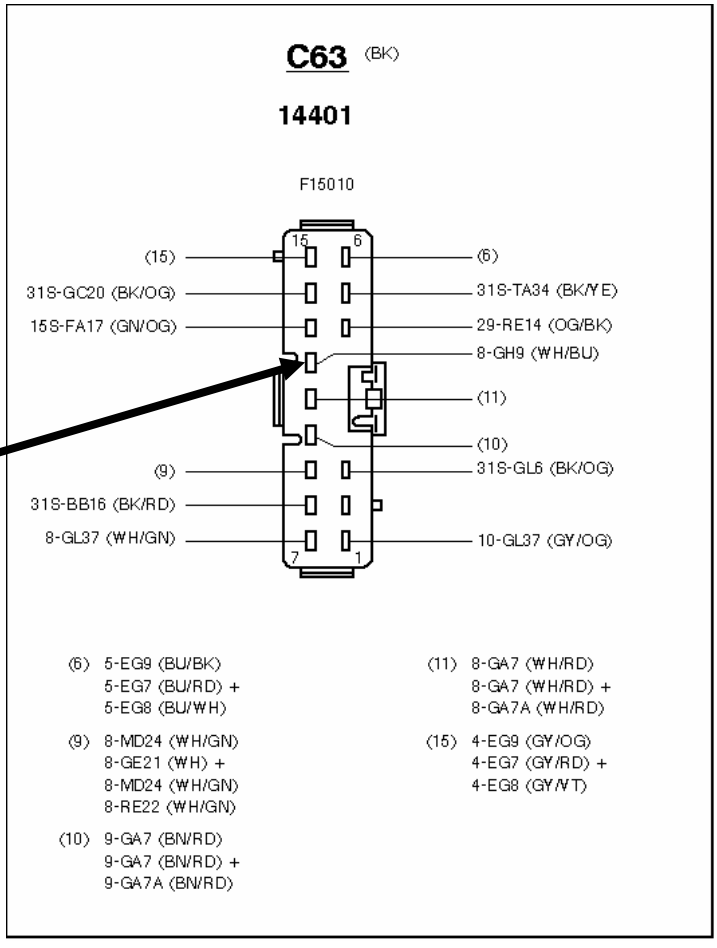
13. WARNING – for the following 2 connections, the battery MUST be disconnected for at least 30-40 minutes prior to commencing the following. Failure to observe this could result in Airbag failure or premature firing and ECU damage.

14. Connect the black/orange stripe cable from pin 16 of the computer to the black green wire of the Airbag control module at pin 11. This is located beneath the centre console and before the handbrake. When looking from above and toward the front of the car, unplug the connector which is on the left side (passenger side) of the Airbag module (there are 2 connectors.) Locate the correct wire at pin 11 and spice into your new wire from pin 16 of the fuel computer. This connection gives the audible beeps when the into button is pressed and also for the low fuel warning.

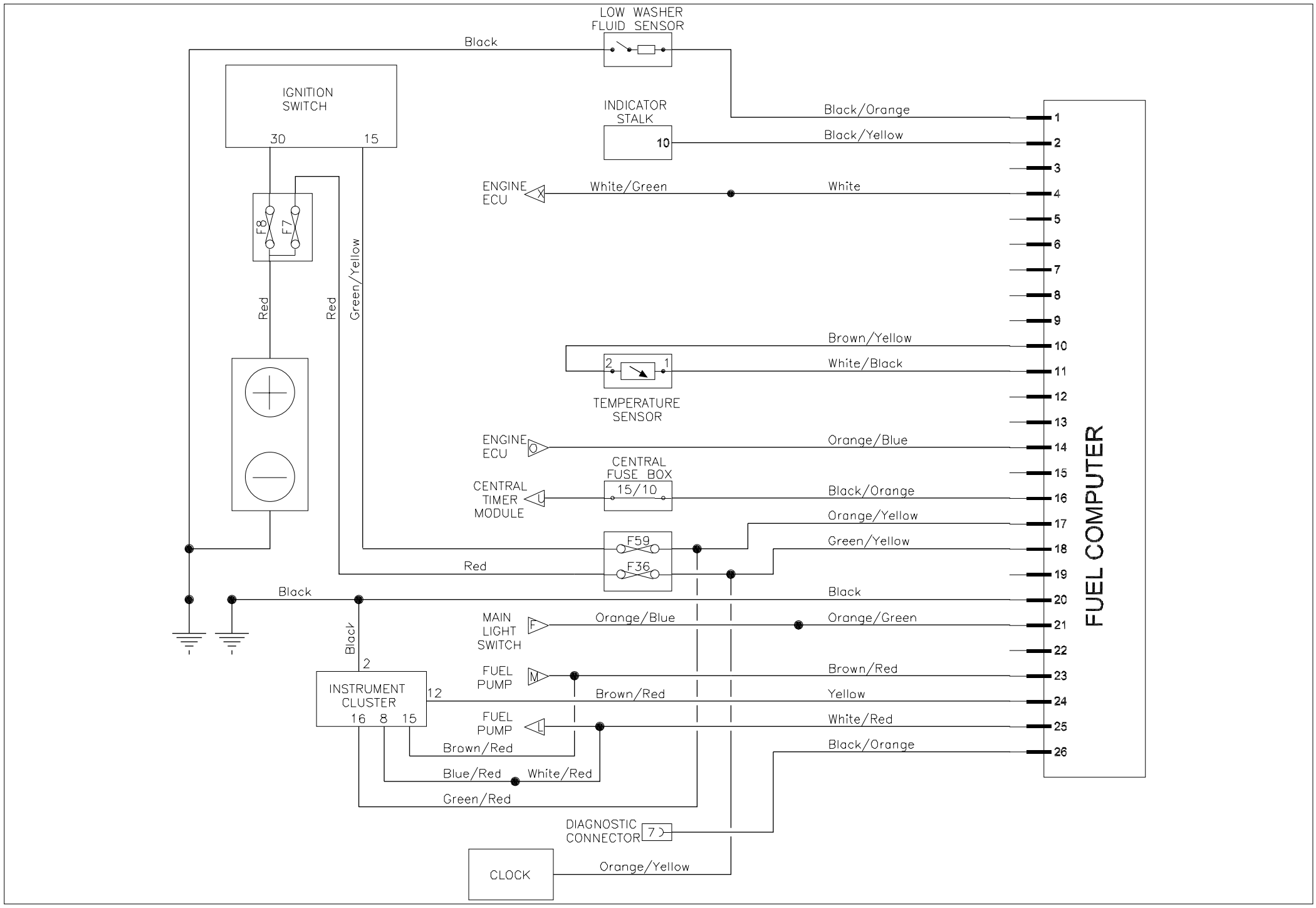
15. The final connection is from the White/Blue cable at Fuel computer position no 14. This is to be connected to a small multi plug mounted in the drivers foot well behind the trim panel. Remove the panel and in the bottom of the inner wing, you will see a large black plastic moulding containing 2 multi-plugs. The central one is coloured black and one to the rear of the car (nearest the seat) is white. The one we are interested in is the black one (Connector C63 – see below) Run a wire from the fuel computer and then tin the end with solder to make the wire stiff and prevent and stray wires coming loose. Carefully insert this wire into the vacant pin location in C63 at pin location 12 and push fully home ensuring that it doesn't protrude any further than the bottom of the connection. Carefully push the plug connection back in whilst holding the new cable in place in the connector. When the plug is fully home check to ensure that the wire has been properly gripped.

16. Finally reassemble everything and reconnect the battery. After a few minutes if all went well the computer learn its value within a minute or so and start to perform. The outside air temperature sensor may take a few minutes to stabilise and give a true reading

This connector (Pin 12)



Please note that I do not accept any responsibility for any damage that may be caused using these instructions. They are written in good faith and worked exactly as described above on my car. Use at your own risk.


LOW WASHER FLUID SENSOR
Black
IGNITION SWITCH
30
15
INDICATOR STALK
10
Black/Orange
Black/Yellow
ENGINE ECU
X
White/Green
White
F8
F7
Red
Red
Green/Yellow
Brown/Yellow
2
1
White/Black
TEMPERATURE SENSOR
ENGINE ECU
O
Orange/Blue
CENTRAL FUSE BOX
15/10
CENTRAL TIMER MODULE
U
Black/Orange
Orange/Yellow
F59
F36
Green/Yellow
Red
Black
Black
MAIN LIGHT SWITCH
F
Orange/Blue
Orange/Green
FUEL COMPUTER
Black
2
INSTRUMENT CLUSTER
16 8 15
12
FUEL PUMP
M
Brown/Red
Brown/Red
Yellow
FUEL PUMP
L
White/Red
Brown/Red
Black/Orange
Blue/Red
White/Red
Green/Red
DIAGNOSTIC CONNECTOR
7
CLOCK
Orange/Yellow
1
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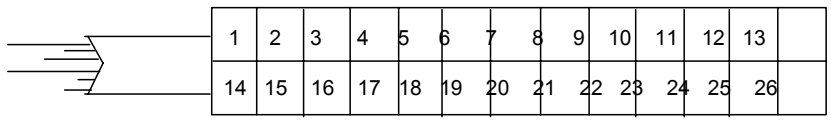
Ford Focus 98-01 Mk1* Trip Computer
Connector Wiring for retro-fit if not currently in the vehicle.
***Mk2 Models for MY02 onwards is completely different.**



PIN	Cable Colour	Purpose	Connection
1	Black, Orange Stripe	Output to low washer fluid switch on washer bottle	Run this cable to the washer bottle and connect to the **top** pin of the connector (nearest the connector release catch).
2	Black, Yellow Stripe	Signal from INFO button on indicator stalk to change function	Splice into the Black, Yellow stripe cable on the connector for the indicator stalk (PIN 10)
3	-		
4	White	Speed signal input	Splice into white/green stripe cable going to the radio remote connector on the back of the radio.
5	-		
6	-		
7	-		
8	-		
9	-		
10	Brown, Yellow Stripe	Output to outside air temperature sensor	Run this cable to the temperature sensor location and connect to the **bottom** pin of the connector (farthest the connector release catch).
11	White, Black Stripe	Input from outside air temperature sensor	Run this cable to the temperature sensor location and connect to the **top** pin of the connector (nearest the connector release catch).
12	-		
13	-		
14	White, Blue Stripe	ECU	Run this cable to the base of the driver side windscreen pillar where it meets the floorpan, and splice this cable into the XXXX (TBC) cable that goes to the rear part of the large multi-connector.
15	-		
16	Black, Orange Stripe	Central Timer Module (CTM) (Ground signal).	Splice into Black, Green stripe wire going to the air bag diagnostic connector (PIN11) located under the centre console behind the handbrake.
17	Orange, Yellow Stripe	Power feed from Fuse 36	Splice into the Orange/Yellow stripe wire going to the Clock connector
18	Green, Yellow Stripe	Power feed from Fuse 59	Splice into the Green/Yellow stripe wire going to the Clock connector
19	-		
20	Black, Yellow Stripe	Ground	Use any suitable ground point. (Two points are located on inner sill at the base of the driver side 'A' pillar).
21	Orange, Yellow Stripe	Back lighting at night	Splice into the Orange, Black stripe cable going to the radio power connector.
22	-		
23	Brown, Red Stripe	Input from fuel pump	Splice into Brown, Red stripe cable going to the instrument cluster connector.
24	Yellow	Input/Output from Instrument Cluster	Splice into the Yellow cable going to the instrument cluster connector.
25	White, Red Stripe	Output to fuel pump	Splice into the White, Red stripe cable going to the instument cluster connector
26	White	Diagnostic connector link	Splice into the cable going to diagnostic connector PIN 7 on the back of the drivers lower dash trim panel.

Additional Connections

1. Connect the **bottom** pin of the washer bottle level switch connector (farthest from the connector release catch) to a suitable ground point.
   (Suggest using on of the washer bottle mounting bolts.)