

All other vehicles	B	5 2 1 3	FANPWR GND VPWR B+
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PINPOINT TEST KN: VARIABLE SPEED ELECTRIC COOLING FAN MOTOR > INTRODUCTION > POWERTRAIN CONTROL MODULE (PCM) CONNECTOR

For PCM connector views or reference values, refer to REFERENCE VALUES .

Vehicle	Connector	Pin	Circuit
Escape/Kuga 2.5L, MKX, Transit Connect 2.5L	190-PIN	B34	FCV
Fiesta, Focus 1.0L	198 PIN	B5	FCV
Focus GDI 2.0L	198 PIN	B8	FCV
All other vehicles	198 PIN	B4	FCV

PINPOINT TEST KN: VARIABLE SPEED ELECTRIC COOLING FAN MOTOR > TEST PROCEDURE

KN1 CHECK FOR DIAGNOSTIC TROUBLE CODES (DTCS)

Is DTC P0480 present?

Yes	No
GO to KN3.	For symptoms without DTCS. GO to KN2 . For all others, RETURN to SYMPTOM CHARTS for further direction.

KN2 VERIFY A/C STATUS

Verify the A/C system is OFF.

Ignition ON, engine running.

Access the PCM and monitor the AC_REQ (MODE) PID.

Is A/C being requested?

Yes	No
REFER to the service information , Climate Control System, to diagnose the A/C system.	GO to KN3 .

KN3 COMMAND THE COOLING FAN ON TO CHECK OPERATION

Rotate the cooling fan by hand. The cooling fan should rotate freely, with no abnormal binding. If binding is present, remove any foreign materials or install a new cooling fan as required.

Ignition ON, engine OFF.

Access the PCM and control the FAN_DSD (PER) PID.

Command the fan to full ON.

Does the cooling fan operate when commanded ON?

Yes	No
The concern is elsewhere. RETURN to NO DIAGNOSTIC TROUBLE CODES (DTCs) PRESENT SYMPTOM CHART INDEX for further direction.	GO to KN4 .

KN4 CHECK THE VOLTAGE TO THE COOLING FAN MODULE

Ignition OFF.

CF Module connector disconnected.

Ignition ON, engine OFF.

Measure the voltage between:

(+) CF Module Connector, Harness Side	(-)
FANPWR - Pin 1	Ground

Is the voltage greater than 10.5 V?

Yes	No
GO to KN8.	For MKX, REPAIR the open circuit. Clear the PCM DTCs. REPEAT the self-test. For all others, GO to KN5 .

KN5 CHECK FOR VOLTAGE TO THE RELAY

Ignition OFF.

FC Relay connector disconnected.

Ignition ON, engine OFF.

Measure the voltage between:

(+) FC Relay Connector, Harness Side	(-)
B+	Ground

VPWR	Ground
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Are the voltages greater than 10.5 V?

Yes	No
GO to KN6 .	REPAIR the open circuit. Clear the PCM DTCs. REPEAT the self-test.

KN6 CHECK THE RELAY

Carry out the Relay Component Test. Refer to Wiring Diagrams Cell 149.

Is a concern present?

Yes	No
INSTALL a new FC relay. Clear the PCM DTCs. REPEAT the self-test.	GO to KN7 .

KN7 CHECK THE FC RELAY GROUND

Ignition OFF.

Measure the resistance between:

(+) FC Relay Connector, Harness Side	(-)
GND	Ground

Is the resistance less than 5 ohms?

Yes	No
GO to KN8 .	REPAIR the open circuit. Clear the PCM DTCs. REPEAT the self-test.

KN8 CHECK FOR AN OPEN CIRCUIT

Ignition OFF.

PCM connector disconnected.

Measure the resistance between:

(+) CF Module Connector, Harness Side	(-)
GND - Pin 2	Ground

Measure the resistance between:

(+) CF Module Connector, Harness Side	(-) PCM Connector, Harness Side
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FCV - Pin 4	FCV
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For Escape and Focus,

Measure the resistance between:

(+) FC Relay Connector, Harness Side	(-) CF Module Connector, Harness Side
FANPWR	FANPWR - Pin 1

Are the resistances less than 5 ohms?

Yes	No
GO to KN9 .	REPAIR the open circuit. Clear the PCM DTCs. REPEAT the self-test.

KN9 CHECK THE FCV CIRCUIT FOR A SHORT TO GROUND

Measure the resistance between:

(+) CF Module Connector, Harness Side	(-)
FCV - Pin 4	Ground

Is the resistance greater than 10K ohms?

Yes	No
GO to KN10 .	REPAIR the short circuit. Clear the PCM DTCs. REPEAT the self-test.

KN10 CHECK THE FCV CIRCUIT FOR A SHORT TO VOLTAGE

Ignition ON, engine OFF.

Measure the voltage between:

(+) CF Module Connector, Harness Side	(-)
FCV - Pin 4	Ground

Is any voltage present?

Yes	No
REPAIR the short circuit. Clear the PCM DTCs. REPEAT the self-test.	GO to KN11 .

KN11 CHECK THE FCV CIRCUIT(S) FOR INTERMITTENT CONCERNS