

FORD · POWERTRAIN

P1284

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1284 · Ford

Aborted KOER ICP Failure

P1284 on Ford vehicles means the Key On Engine Running (KOER) self-test was aborted because the Powertrain Control Module (PCM) detected an Injection Control Pressure (ICP) circuit or pressure fault before the test could finish. The PCM never completed its functional checks of the ICP sensor and injection pressure regulator, so the code flags the aborted test rather than a single failed component.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Ford specific	Medium	Intermediate	Fuel and air metering (injector circuits)

Symptoms you may notice

- The check engine light comes on after a KOER self-test attempt, often with no other symptoms besides the warning light.
- Rough idle, hard starting, or a stumble when the engine is cold, especially on 7.3L Power Stroke diesels.
- Reduced power or limp-mode behavior when injection pressure cannot be controlled during the test.
- A scan tool shows the KOER test aborting early with an ICP-related message instead of completing all cylinders.
- Occasional white smoke or poor throttle response if the injection pressure regulator is sticking.
- No drivability complaint at all when the fault is a marginal ICP sensor signal that only trips during the test.

Common causes, most likely first

- Faulty Injection Control Pressure (ICP) sensor sending an erratic or out-of-range signal during the KOER test.
- Damaged or chafed ICP sensor wiring harness, especially where it routes near the valve cover and exhaust.
- Sticking or failed injection pressure regulator (IPR) valve that cannot hold commanded pressure.
- Low or aerated engine oil, since the 7.3L Power Stroke uses engine oil to actuate the injectors and low oil pressure aborts the test.
- Clogged or restricted oil passage to the high-pressure oil pump, reducing available injection pressure.
- A weak high-pressure oil pump that cannot build enough pressure for the KOER test routine.
- Loose or corroded ICP sensor connector pins causing an intermittent signal the PCM interprets as a failure.



How to diagnose and fix it

- 1 Check engine oil level and condition first, then top off or change oil if it is low or contaminated.
- 2 Connect a scan tool and command the KOER self-test while watching live ICP and IPR data to see where the test aborts.
- 3 Inspect the ICP sensor connector and harness for chafing, corrosion, or pushed-back pins, and repair as needed.
- 4 Measure ICP sensor reference voltage and signal return with a multimeter to confirm the sensor is reporting correctly.
- 5 Test the injection pressure regulator for coil resistance and verify it moves freely when commanded.
- 6 Verify high-pressure oil pump output with a mechanical gauge if ICP readings stay low despite good sensor and regulator readings.
- 7 Clear the code and rerun the KOER self-test to confirm the repair, then road-test to check for drivability issues.

Why the KOER test aborts on P1284

- Many technicians replace the ICP sensor first, but a low oil level or a clogged oil passage will abort the KOER test and set P1284 even with a new sensor.
- The code often appears after an oil change where the wrong viscosity or a dry filter start-up caused a momentary pressure drop during the test.
- A marginal IPR valve that works fine at cruise can still fail the KOER test because the test commands rapid pressure changes the valve cannot follow.
- P1284 does not always mean the ICP sensor is bad; a loose connector or a chafed wire near the exhaust can mimic a failed sensor only during the test.
- On 7.3L Power Stroke engines, a weak high-pressure oil pump may set P1284 without any other codes until the pump fails completely.

Can I keep driving with P1284?

You can usually drive the vehicle short distances if it runs normally, but avoid heavy throttle or towing until the fault is diagnosed because injection pressure control may be compromised. If the engine runs rough, smokes, or enters limp mode, park it and arrange a diagnostic scan before driving further.

Tools that help

- OBD-II scan tool with Ford KOER self-test and live data capability
- Digital multimeter for checking ICP sensor and IPR circuits
- Mechanical oil pressure gauge for high-pressure oil pump testing
- Basic hand tools for connector and harness inspection
- Oil level dipstick and fresh engine oil for top-off



Reading P1284

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Ford): its meaning depends on the make.
- 2** Fuel and air metering (injector circuits).
- 84** The exact fault within that area.

Often seen with

P1280 Fuel Injection Air Control Valve Circuit Flow Too Low · **P1211** Intake Valves For Cylinder Shut-Off Open Circuit · **P1211** ABS TCS Control Unit · **P1212** ABS TCS Communication Line · **P1212** Mass Airflow Circuit Intermittent Low · **P1281** Accelerator Pedal Position (APP) Sensor 2 Performance · **P1280** Accelerator Pedal Positioning Sensor 2 Circuit · **P1211** Mass Airflow Circuit Intermittent High · **P1212** Injector Control Pressure Not Detected During Crank · **P1280** Injection Control Pressure Out Of Range Low · **P1211** Injector Control Pressure Sensor Above Below Desired · **P1281** Injection Control Pressure Out Of Range High · **P1212** Mass Air Flow Circuit Intermittent Low · **P1280** Open Or Shorted Condition Detected In The Fuel System Relay · **P1281** Engine Operating Temp Below Acceptable Range · **P1211** Mass Air Flow Circuit Intermittent High · **P0237** Turbocharger Boost Sensor A Circuit Low

See it working

Watch the animated explainer [How a Six-Speed Manual Gearbox Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1284/>

