

# **Component Procedures: Engine Oil Pressure**

## **Table of Contents**

1. Oil Pressure Diagnosis and Testing (Article 12040)

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## Oil Pressure Diagnosis and Testing (Article 12040)

### Tools Required

- J 21867 Pressure Gauge
- J-21867-6 Oil Pressure Adapter Fitting
- With the vehicle on a level surface, run the vehicle for a few minutes, allow adequate drain down time, 2–3 minutes, and measure for a low oil level.
- If required, add the recommended grade engine oil and fill the crankcase until the oil level measures full on the oil level indicator.
- Run the engine briefly, 10–15 seconds, and verify low or no oil pressure on the vehicle gauge or light.
- Listen for a noisy valve train or a knocking noise.
- Inspect for the following:
  - Foamy oil
  - Slow idle speed
  - Plugged oil filter
  - Oil diluted by the following:
    - Water
    - Engine coolant
    - Unburned fuel mixtures
  - Malfunctioning oil filter bypass valve
  - Incorrect or faulty oil pressure gauge
  - Incorrect or faulty oil pressure gauge sensor
  - Improper engine oil viscosity for the expected temperature
  - Disconnect the oil pressure sensor wiring harness. [Click for full-size image](#)
  - Remove the oil pressure sensor. [Click for full-size image](#)
  - Install the J 21867 - Pressure Gauge with the J-21867-6 - Oil Pressure Adapter Fitting .
  - Measure the engine oil pressure .
  - Compare the readings to the Engine Mechanical Specifications .
- If the engine oil pressure is below specifications, inspect the engine for one or more of the following:
  - Loose oil filter adapter bolts
  - Missing or damaged oil filter adapter O-ring seal or seals
  - Worn or dirty oil pump
  - Loose oil pump-to- engine block bolts
  - Loose, plugged or damaged oil pump screen
  - Missing or damaged oil pump screen O-ring seal
  - Damage or leak in the oil pump screen suction tube
  - Malfunctioning oil pump pressure regulator valve
  - Missing or incorrectly installed oil gallery plugs
  - Loose camshaft intermediate drive shaft bolts
  - Excessive bearing clearance for the following:
    - Connecting rod or rods
    - Crankshaft
    - Camshaft or camshafts
    - Camshaft intermediate drive shaft sprocket
  - Cracked, porous or restricted oil galleries
  - Broken valve lifter s
- Repair or replace components as necessary.