Exhaust Gas Recirculation: Testing and Inspection
Pinpoint Tests

TEST STEP	RESULT ▶	ACTION TO TAKE
EEGR1 CHECK SYSTEM INTEGRITY		
• Check vacuum hoses and connections for looseness, pinching, leakage, splitting, blockage, and proper routing. • Inspect EGR valve for loose attaching bolts or damaged flange gasket. • **Does system appear to be in good condition and vacuum hoses properly routed?**	Yes ▶ No ▶	GO to EEGR2. SERVICE EGR system as required. RE-EVALUATE symptom.

Diagnostic Test EEGR1

TEST STEP	RESULT ▶	ACTION TO TAKE
EEGR2 CHECK EGR VACUUM AT IDLE		
• Run engine until normal operating temperature is reached. • With engine running at idle, disconnect EGR vacuum supply at the EGR valve and check for a vacuum signal. NOTE: **The EVR solenoid has a constant internal leak. You may notice a small vacuum signal. This signal should be less than 3.4 kPa (1.0 in-Hg) at idle.** • **Is EGR vacuum signal less than 3.4 kPa (1.0 in-Hg) at idle?**	Yes ▶ No ▶	GO to EEGR3. RECONNECT EGR vacuum hose. INSPECT EVR solenoid for leakage. RUN EEC-IV Quick Test.

Diagnostic Test EEGR2

TEST STEP	RESULT ▶	ACTION TO TAKE
EEGR3 CHECK EGR VALVE FUNCTION		
• Install a tachometer, Rotunda 059-00010 or equivalent. • Disconnect the Idle Air Bypass Valve (9F715) electrical connector. • Remove and plug the vacuum supply hose from the EGR valve nipple. • Start engine, idle with transmission in NEUTRAL and observe idle speed. If necessary, adjust idle speed. • Slowly apply 5-10 inches of vacuum to the EGR valve nipple using a hand vacuum pump, Rotunda 021-00014 or equivalent. • **Does idle speed drop more than 100 rpm with vacuum applied and return to normal (± 25 rpm) after the vacuum is removed?**	Yes ▶ No ▶	The EGR valve is OK. UNPLUG and RECONNECT the EGR valve vacuum supply hose. RECONNECT the idle air bypass valve connector. EGR testing complete. INSPECT the EGR valve for blockage or contamination. CLEAN the valve using Rotunda 021-80056 EGR valve cleaner or equivalent. INSPECT valve for vacuum leakage. REPLACE if necessary.

Diagnostic Test EEGR3

TEST STEP	RESULT ▶	ACTION TO TAKE
PEV1 CHECK SYSTEM INTEGRITY		
• Check vacuum hoses and connections for looseness, pinching, leakage, splitting, blockage and proper routing. • Inspect EGR valve for loose attaching bolts or damaged flange gasket. • **Does system appear to be in good condition and vacuum hoses properly routed?**	Yes ▶ No ▶	GO to PEV2. SERVICE EGR system as required. RE-EVALUATE symptom.

Diagnostic Test PEV1

TEST STEP	RESULT ▶	ACTION TO TAKE
PEV2 CHECK EGR VACUUM AT IDLE		
• Run engine until normal operating temperature is reached. • With engine running at idle, disconnect EGR vacuum supply at the EGR valve and check for a vacuum signal. NOTE: **The EVR solenoid has a constant internal leak. You may notice a small vacuum signal. This signal should be less than 3.4 kPa (1.0 in-Hg) at idle.** • **Is EGR vacuum signal less than 3.4 kPa (1.0 In-Hg) at idle?**	Yes ▶ No ▶	GO to PEV3. RECONNECT EGR vacuum hose. INSPECT EVR solenoid for leakage. RUN EEC-IV Quick Test.

Diagnostic Test PEV2

TEST STEP	RESULT ▶	ACTION TO TAKE
PEV3 CHECK EGR VALVE FUNCTION		
• Install a tachometer, Rotunda 059-00010 or equivalent. • Disconnect the Idle Air Bypass Valve (9F715) electrical connector. • Remove and plug the vacuum supply hose from the EGR valve nipple. • Start engine, idle with transmission in NEUTRAL, and observe idle speed. If necessary, adjust idle speed. • Slowly apply 5-10 inches of vacuum to the EGR valve nipple using a hand vacuum pump, Rotunda 021-00014 or equivalent. • **Does idle speed drop more than 100 rpm with vacuum applied and return to normal (± 25 rpm) after the vacuum is removed?**	Yes ▶ No ▶	The EGR valve is OK. UNPLUG and RECONNECT the EGR valve vacuum supply hose. RECONNECT the idle air bypass valve connector. EGR testing complete. INSPECT the EGR valve for blockage or contamination. CLEAN the valve using Rotunda 021-80056 EGR valve cleaner. INSPECT valve for vacuum leakage. REPLACE if necessary.

Diagnostic Test PEV3