2017-2021 Honda CR-V - Head Gasket Replacement

2017-2021 Honda CR-V | Expert | 13-16 hours

TOOLS

OBD-II scanner Cooling system pressure tester Borescope with 90-degree camera (5.5 mm) Torque wrench (beam-type preferred for the 30 Nm pass) Torque angle gauge 18-inch straight edge and feeler gauge set Engine support hanger Socket set, ratchet, and extensions Breaker bar Gasket scraper Red Scotch-Brite pads Brake cleaner Drain pans Jack and jack stands Shop towels

PARTS

Cylinder Head Gasket (2017-2020: 12251-59B-A01; 2021: 12251-67A-H01) $58.00
Head Cover Gasket 12341-59B-013 $31.00
Intake Manifold Gasket Set (4 gaskets) 17105-5AA-004 $51.00
Turbocharger Inlet Gasket 17285-5AA-A01 $15.00
Turbocharger Outlet Gasket 17286-5AA-A01
Fuel Joint Pipe Set 16012-5PA-315 $30.00
Engine Oil Filter 15400-RTA-003 $11.00
Long Life Antifreeze/Coolant Type 2 (2 gallons) 08CLA-P99-0F0A8 $44.00
0W-20 Full Synthetic Engine Oil (4 quarts) $34.00

STEPS

1. **Check warranty coverage before you spend a dollar - Honda extended cylinder head gasket coverage on the** 1.5L turbo CR-V to 10 years or 150,000 miles (Service Bulletin 26-016 covers 2017-2022; Bulletin...
2. **Confirm the diagnosis - A blown head gasket on this engine typically shows up as a cold-start misfire that** clears after 15-30 seconds, coolant that keeps dropping with no pu...
3. **Prepare the car - Work on a cold engine only. Disconnect the 12-volt battery. Relieve the fuel system** pressure before touching any fuel line. Drain the coolant from th...
4. **Remove the intake, turbocharger, and fuel rail - Remove the intake manifold, the turbocharger assembly,** and the exhaust components blocking the head, following the 1.5L service manual Cylinder Head...
5. **Remove the timing chain and valve cover - Remove the head cover and timing chain cover, then the timing** chain, keeping the crankshaft at top dead center. Do not remove the camshafts and rocke...
6. **Loosen the head bolts in sequence and lift the head - Loosen the ten cylinder head bolts in factory** sequence, turning each only 1/3 of a turn at a time, repeating the sequence until every bolt is loose....
7. **Clean the mating surfaces by hand - Put a clean shop towel in each cylinder to catch debris. Remove gasket** material and carbon from the head and block surfaces with brake cleaner, using...
8. **Check the head and block for warpage - Lay an 18-inch straight edge across the cylinder head mating** surface and check the gap with a feeler gauge in several directions, then do the same on...
9. **Install the new head gasket and set the head - Install the new head gasket and dowel pins on the block,** gasket facing the right way up, then set the head down. Use the updated gasket for your year...
10. **Torque the head bolts to 30 Nm, then angle-tighten - Visually inspect every cylinder head bolt for damage;** if any bolt is damaged, replace all of them. Apply new engine oil to the threads and under the...
11. **Reassemble in reverse order - Reinstall the timing chain and covers, the head cover with its new gasket,** the intake manifold with four new gaskets, and the turbocharger with new i...
12. **Refill oil and coolant - Install a new oil filter and fill with 3.7 US quarts of 0W-20 engine oil. Refill** the cooling system with Honda Long Life Antifreeze/Coolant Type 2 (a...
13. **Reset the PCM and relearn idle - Do a PCM reset, then the CKP pattern clear and CKP pattern learn** procedure, then the PCM idle learn procedure. These are required after this repair s...
14. **Verify the repair - Start the engine and let it reach operating temperature. Re-check with the cooling** system pressure tester and look for any external leaks at the head...

TORQUE

Cylinder head bolts (10x M10, torque-to-yield) 30 Nm + 165 deg (new) or + 140 deg (reused) Nm 22 ft-lb + 165 deg (new bolts) or + 140 deg (reused bolts) ft-lbs
VTC oil control solenoid valve B 12 Nm Nm 9 ft-lb ft-lbs