

Select Vehicle | New TSBs | Technician's Reference

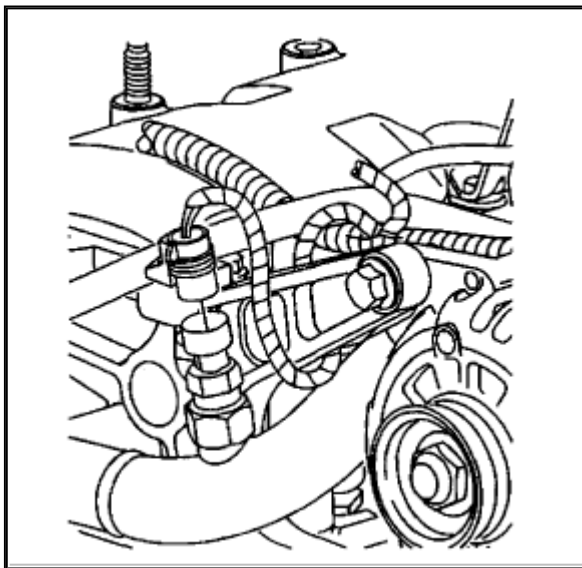
Component Search:

OK

Conversion Calculator

2001 Pontiac Sunfire L4-2.2L VIN 4[Vehicle Level](#) → [Engine, Cooling and Exhaust](#) → [Engine](#) → [Cylinder Head Assembly](#) → [Service and Repair](#) ←**Service and Repair**[Notes](#)**Cylinder Head Replacement**

- **Tools Required**
- J28467-360 Engine Support Fixture
- J36660-A Torque Angle Meter.

Removal Procedure

Zoom

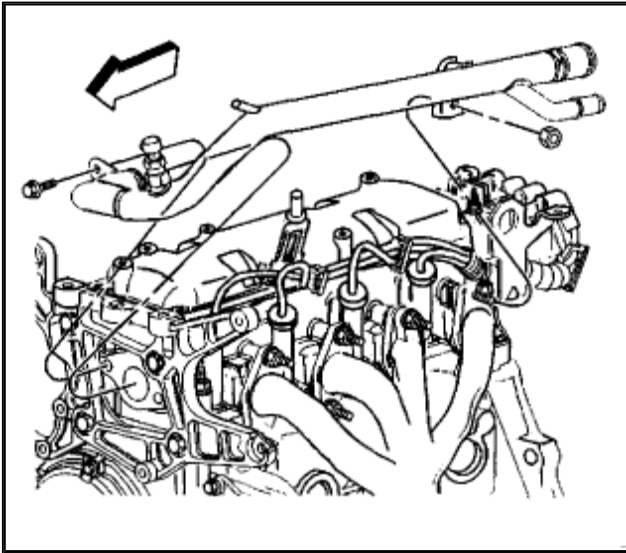
Sized for Print

1. Disconnect the negative battery cable.
2. Relieve the fuel system pressure.
3. Drain [cooling system](#).
4. Remove the alternative fuel module assembly. Remove the [drive belt](#).
5. Remove the air cleaner outlet duct and resonator assembly.
6. Support engine using floor jack and block of wood.
7. Remove the [engine mount](#).

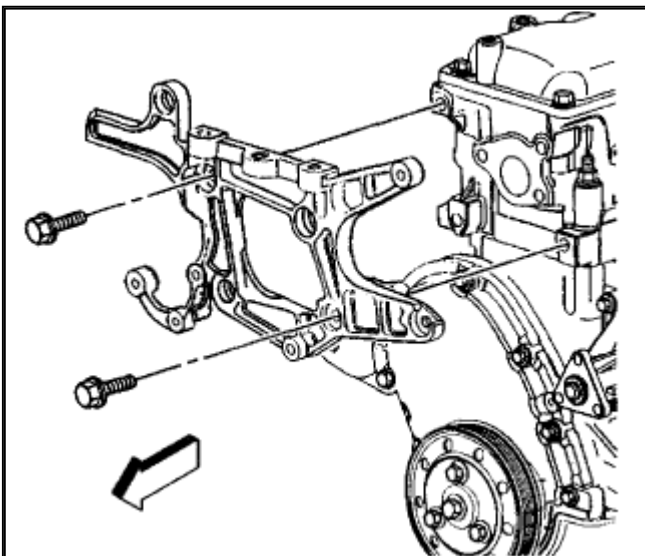
3. Remove the [intake manifold](#).

9. Remove the [exhaust manifold](#).

10. Disconnect the Engine Coolant Temperature Sensor ([ECT](#)) electrical connection.

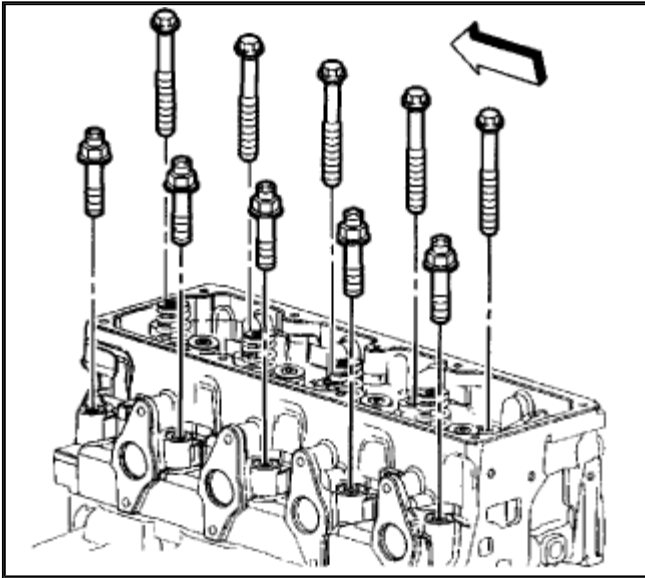
[Zoom](#)[Sized for Print](#)

11. Remove the valve rocker arm cover. **Important:** When removing valve train components keep them in order. Do this to ensure that the components are installed in the same locations and with the same mating surfaces as when removed.
12. Remove the rocker arms and pushrods.
13. Remove the generator.
14. Remove the generator rear brace.
15. Remove the power steering pump. Position the pump aside with the lines attached.
16. Remove the [radiator](#) inlet pipe.
17. Remove the ignition coil assembly.



[Zoom](#)[Sized for Print](#)

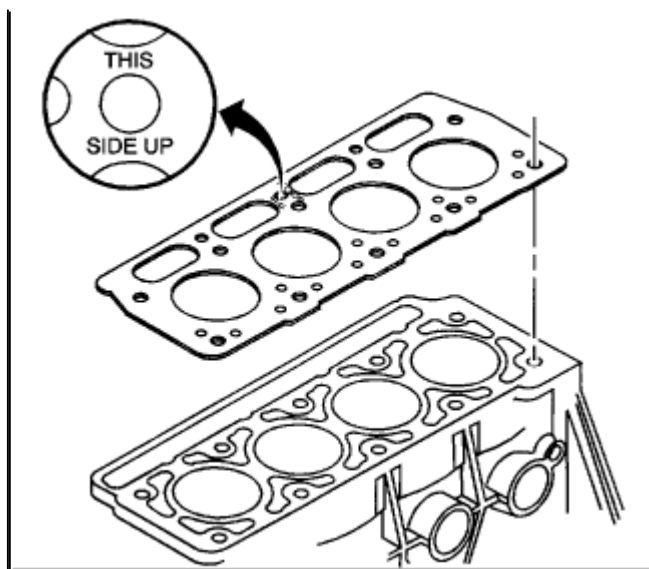
18. Remove the accessory bracket.
19. Disconnect the secondary ignition wires from the [spark plugs](#).

[Zoom](#)[Sized for Print](#)

20. Remove the cylinder head bolts.
21. Remove the cylinder head.
22. Clean the following components:
 - Head gasket surface
 - Valve rocker arm cover gasket surface
 - Threads

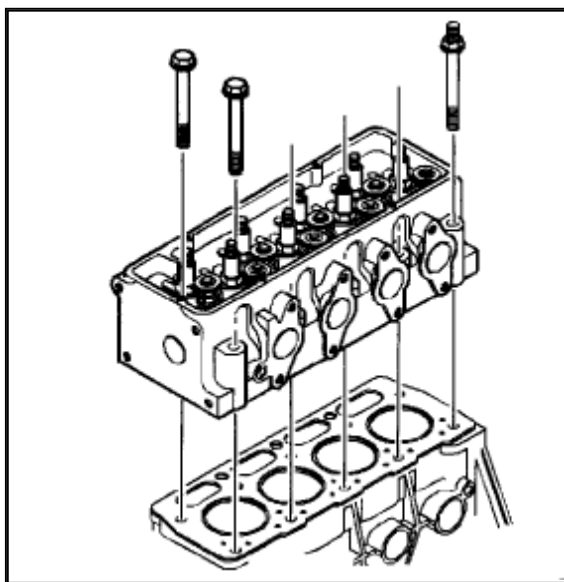
Installation Procedure



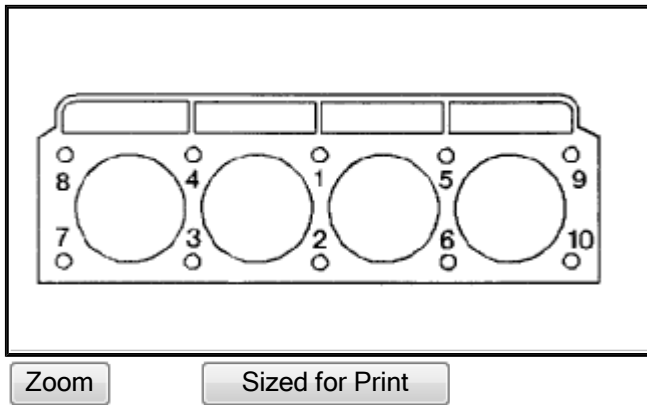
[Zoom](#)[Sized for Print](#)

Important: Install the [cylinder head gasket](#) with the words THIS SIDE UP showing. Do not use sealer on the gasket.

1. Install the [cylinder head gasket](#) to the block.
2. Use a socket in order to push the [cylinder head gasket](#) over the rear dowel pin.

[Zoom](#)[Sized for Print](#)

3. Carefully guide the cylinder head into place over the dowel pins. This operation may require an assistant. **Notice:** Refer to Fastener Notice in Service Precautions. **Important:** Use J36660-A in order to tighten all the cylinder head bolts an additional 90 degrees in sequence.

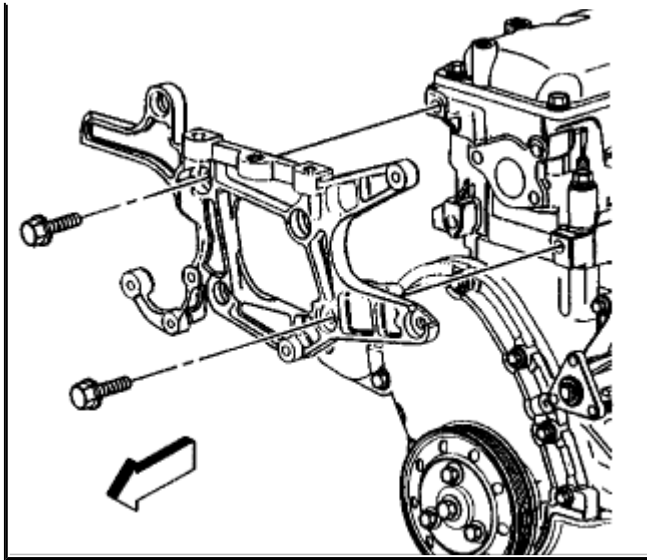


4. Use the following sequence in order to tighten the cylinder head bolts:

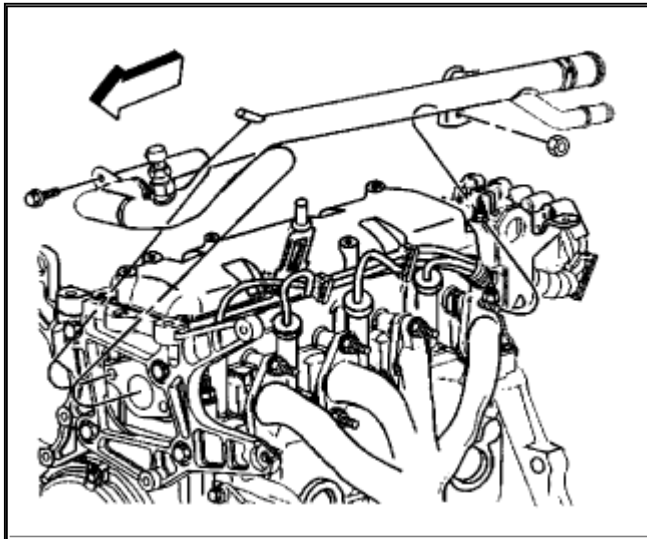
- 4.1. Tighten bolt 1 to **63 Nm (46 ft. lbs.)**.
- 4.2. Tighten bolt 2 to **58 Nm (43 ft. lbs.)**.
- 4.3. Tighten bolt 3 to **58 Nm (43 ft. lbs.)**.
- 4.4. Tighten bolt 4 to **63 Nm (46 ft. lbs.)**.
- 4.5. Tighten bolt 5 to **63 Nm (46 ft. lbs.)**.
- 4.6. Tighten bolt 6 to **58 Nm (43 ft. lbs.)**.
- 4.7. Tighten bolt 7 to **58 Nm (43 ft. lbs.)**.
- 4.8. Tighten bolt 8 to **63 Nm (46 ft. lbs.)**.
- 4.9. Tighten bolt 9 to **63 Nm (46 ft. lbs.)**.
- 4.10. Tighten bolt 10 (stud bolt) to **58 Nm (43 ft. lbs.)**.
- 4.11. Then tighten all bolts an additional **90 degrees**.

5. Install the rocker arms and [push rods](#).
6. Install the valve rocker arm cover.
7. Connect the secondary ignition wires to the [spark plugs](#).

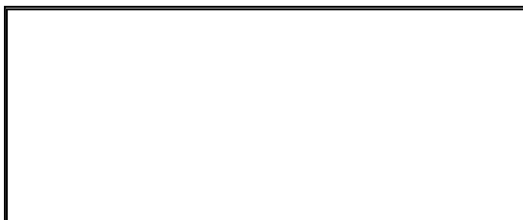


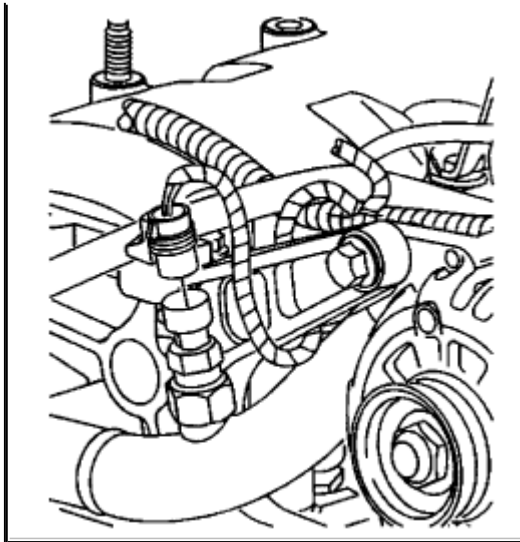
[Zoom](#)[Sized for Print](#)

8. Install the accessory bracket.
9. Install the ignition coil assembly.

[Zoom](#)[Sized for Print](#)

10. Install the [radiator](#) inlet pipe.
11. Install the power steering pump.



[Zoom](#)[Sized for Print](#)

12. Connect the Engine Coolant Temperature Sensor ([ECT](#)) electrical connection.
13. Install the [exhaust manifold](#).
14. Install the generator rear brace.
15. Install the generator.
16. Install the [intake manifold](#).
17. Install the [engine mount](#).
18. Remove floor jack supporting engine.
19. Install the air cleaner outlet duct and resonator assembly.
20. Install the alternative fuel module assembly.
21. Install the accessory drive belt.
22. Connect the negative battery cable. Tighten the bolt to **16 Nm (12 ft. lbs.)**.
23. Refill the [cooling system](#).

© 2009 ALLDATA LLC. All rights reserved.

[Terms of Use](#)