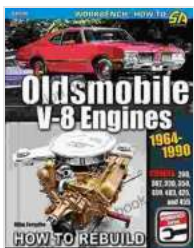


# Oldsmobile Engines 1964-1990: A Comprehensive Guide to Rebuilding

Oldsmobile, a legendary American automotive brand, has a rich history spanning over a century. Known for its innovation and performance, Oldsmobile produced numerous iconic vehicles throughout its existence. The engines used in these vehicles played a crucial role in shaping their performance and reputation.

This comprehensive guide delves into the world of Oldsmobile engines from 1964 to 1990, providing a detailed overview of their specifications, variations, and rebuilding procedures. Whether you're an experienced mechanic or an enthusiast looking to embark on a restoration project, this article will serve as an invaluable resource.

Oldsmobile offered a wide range of engine configurations during the 1964-1990 period, catering to various performance and fuel efficiency requirements. The following is a summary of the key engine specifications and variations:



## Oldsmobile V-8 Engines 1964–1990: How to Rebuild

by Mike Forsythe

★★★★☆ 4.5 out of 5

Language	: English
File size	: 43775 KB
Text-to-Speech	: Enabled
Screen Reader	: Supported
Enhanced typesetting	: Enabled
Print length	: 262 pages
Hardcover	: 202 pages
Item Weight	: 12.8 ounces

Dimensions : 6 x 0.65 x 9 inches



## 1964-1979 Rocket V8

- **Displacement:** 330 cu in to 455 cu in
- **Valve Configuration:** Overhead Valve (OHV)
- **Cylinder Heads:** Aluminum or Cast Iron
- **Fuel System:** Rochester Quadrajets carburetor or Holley double-pumper carburetor
- **Output:** 300-425 horsepower

## 1966-1974 442 W-30

- **Displacement:** 455 cu in
- **Valve Configuration:** Overhead Valve (OHV)
- **Cylinder Heads:** Aluminum
- **Fuel System:** Holley double-pumper carburetor
- **Output:** 370 horsepower

## 1977-1980 350 Diesel

- **Displacement:** 350 cu in
- **Valve Configuration:** Overhead Valve (OHV)
- **Fuel System:** Bosch rotary injection pump

- **Output:** 120 horsepower

### **1981-1990 307 Oldsmobile V8**

- **Displacement:** 307 cu in
- **Valve Configuration:** Overhead Valve (OHV)
- **Cylinder Heads:** Cast Iron
- **Fuel System:** Throttle-body fuel injection (TBI)
- **Output:** 180-210 horsepower

### **1985-1990 4.3 Liter Diesel**

- **Displacement:** 4.3 liters
- **Valve Configuration:** Overhead Valve (OHV)
- **Fuel System:** Bosch rotary injection pump
- **Output:** 105 horsepower

Rebuilding an Oldsmobile engine requires meticulous attention to detail, precision, and a comprehensive understanding of engine mechanics. The following is a step-by-step guide to guide you through the rebuilding process:

#### **1. Disassembly**

- Drain the engine oil and coolant.
- Remove the intake and exhaust manifolds.
- Disconnect the fuel system and ignition system.

- Unbolt the oil pan and remove it.
- Carefully remove the cylinder heads.
- Extract the pistons and connecting rods.
- Remove the crankshaft and camshaft.

## **2. Inspection and Cleaning**

- Thoroughly inspect all engine components for wear and damage.
- Measure the cylinder bores for wear and determine the necessary overbore.
- Clean all components thoroughly using an engine degreaser and compressed air.

## **3. Machining and Preparation**

- Resurface the cylinder heads and block deck.
- Bore the cylinders to the desired overbore size.
- Hone the cylinders to create cross-hatching for oil retention.
- Replace the valve guides and seals.

## **4. Assembly**

- Assemble the piston rings on the pistons.
- Install the pistons and connecting rods into the block.
- Install the crankshaft and camshaft.
- Install the cylinder heads and torque them to specification.

- Install the intake and exhaust manifolds.
- Connect the fuel system and ignition system.
- Install the oil pan and fill it with oil.

## 5. Start-Up and Break-In

- Ensure all fluids are filled properly (engine oil, coolant, transmission fluid).
- Start the engine and let it idle for 20-30 minutes.
- Gradually increase the engine speed and load over several short drives.
- Avoid high RPMs and heavy loads during the break-in period.

## Tips

- Use high-quality parts and components.
- Measure and check all clearances carefully.
- Torque all bolts and nuts to specification.
- Use a torque wrench to avoid overtightening.
- Clean all mating surfaces thoroughly.
- Label all parts and components to avoid confusion.

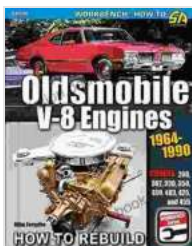
## Troubleshooting

- **Engine won't start:** Check for spark, fuel, and compression.
- **Engine runs rough:** Check for vacuum leaks, faulty spark plugs, or a clogged fuel filter.

- **Engine overheating:** Check for coolant leaks, a faulty thermostat, or a clogged radiator.
- **Excessive oil consumption:** Check for worn piston rings, valve guides, or a leaking oil pan gasket.

Rebuilding an Oldsmobile engine can be a challenging but rewarding task. By following the outlined steps, using high-quality parts, and paying attention to detail, you can restore an Oldsmobile engine to its former glory. Whether you're a seasoned mechanic or an enthusiast embarking on a restoration project, this comprehensive guide will prove invaluable in your pursuit of automotive excellence.

By embracing the rich history of Oldsmobile engines, we not only preserve a piece of automotive heritage but also experience the thrill and satisfaction of driving a truly classic vehicle.



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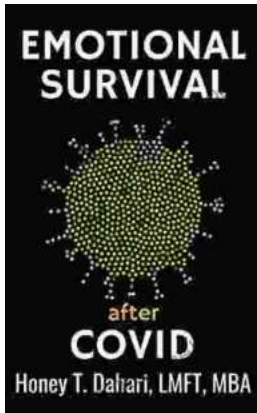
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