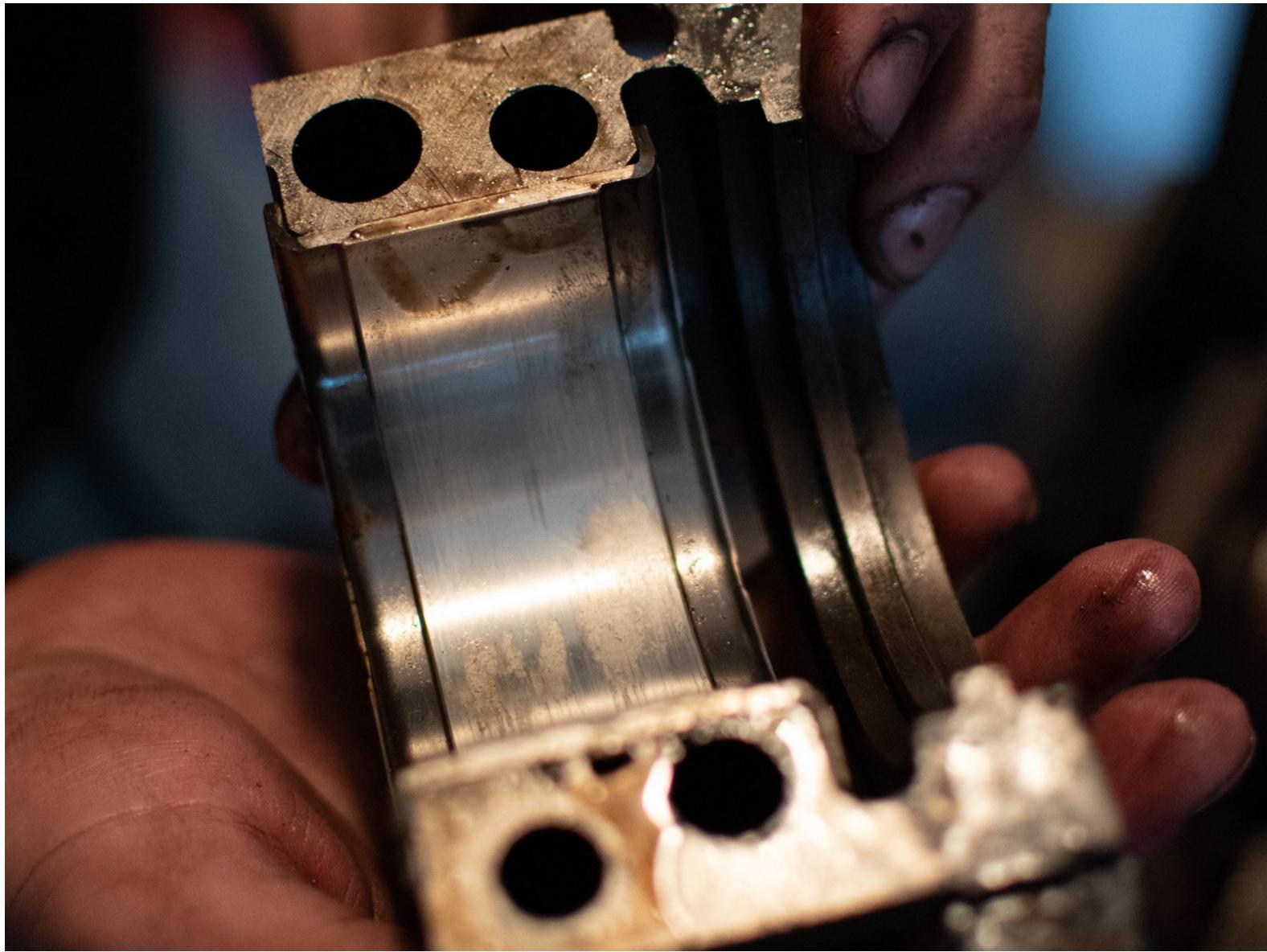




# Chevy 305 Engine Rear Main Bearing Replacement

This guide is to assist you in replacing the rear main bearing on a small block 305 Chevrolet engine.

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## INTRODUCTION

This guide is intended for use on engines already removed from the vehicle. While this kind of work may be possible to complete with the engine still in the car, it will be much easier with the engine removed.

The rear main bearing is located under the same cap as the rear main seal. This rear main bearing goes between the cap and the crank case in order to ensure a smooth, frictionless surface to the crankcase to rotate inside of.

## TOOLS:

- 3/8 inch Drive Socket Ratchet Extension (1)
- Large Needle Nose Pliers (1)
- 3/8" Socket (1)
- 1/2" Socket (1)
- 9/16" Socket (1)
- beer (12)

### Miller Light

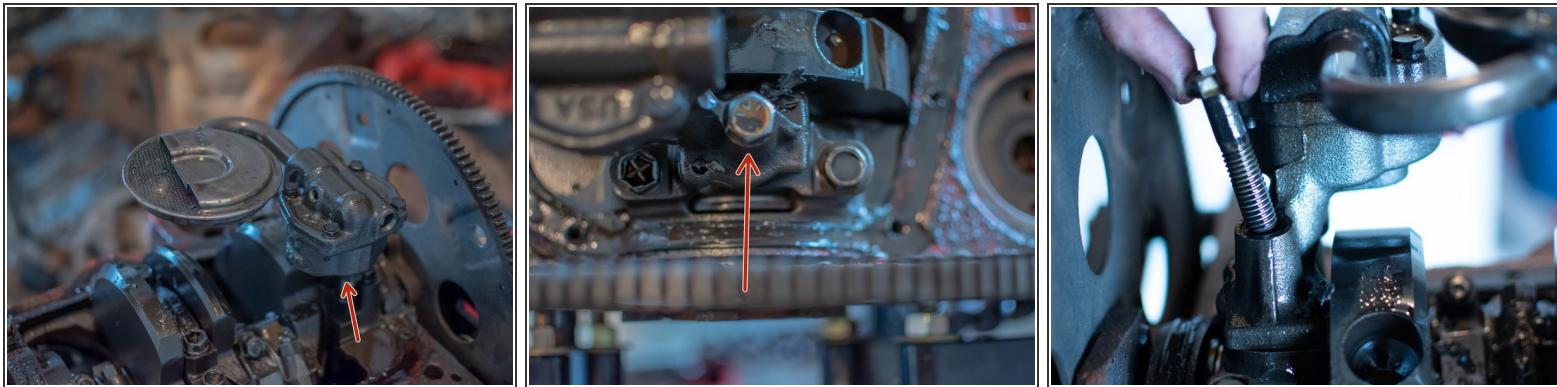
- 5/8" Socket (1)
- 3/8-Inch Drive Extension Bar (1)
- 3/8" Drive Ratchet (1)
- 11 16 Socket (1)
- 1/2" Drive Breaker Bar (1)

## Step 1 — Rear Main Seal



- Remove the 18 bolts holding the oil pan in place using the 3/8 and 1/2 sockets, 6 inch extension and 3/8 ratchet.
  - ⓘ Fourteen 3/8 bolts around the perimeter and four 1/2 bolts on each corner.
- Lift the oil pan up and forward so the oil pump pick up will clear the baffle.
  - ⓘ Do not remove the oil pan gasket yet.

## Step 2



- Remove the single 9/16 bolt holding the oil pump in place and pull straight up from the base of the oil pump to remove.

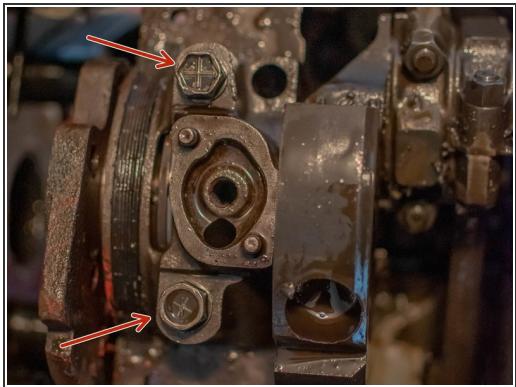
**⚠** Using a rubber mallet to break loose, gently tap on the side of the base of the pump indicated by the arrow. DO NOT HIT THE TOP OF THE PICK UP TUBE AND SCREEN. This can potentially damage the pick up tube or screen.

## Step 3



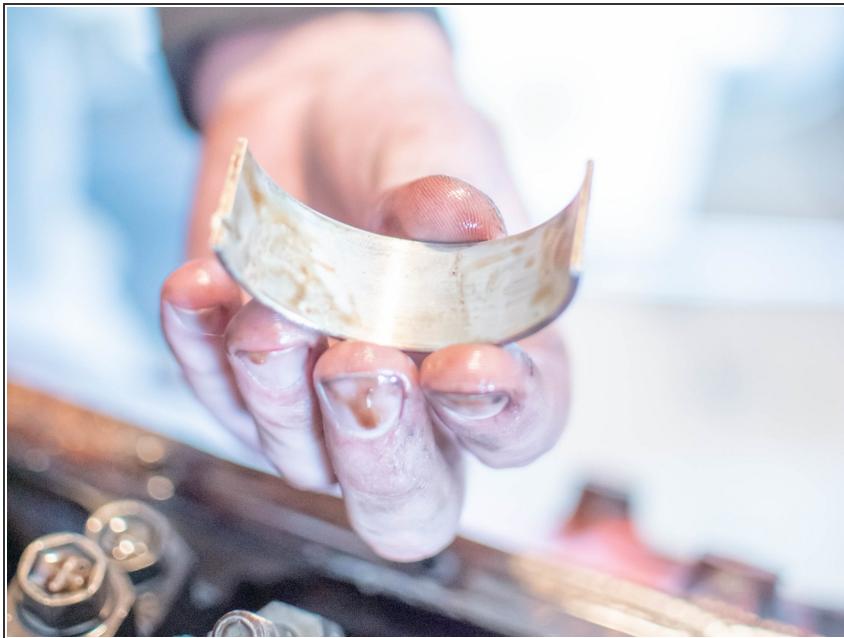
- Remove the six 11/16 flywheel bolts using the 11/16 socket.
  - (i)** The breaker bar may be needed to break these bolts loose
  - (i)** This provides more room to access the rear main cap.

## Step 4



- Remove the two 5/8 rear main cap bolts. Gently tap the side of cap with a rubber mallet if needed to break free.
- Remove the rear main seal. The upper half of the seal can easily be removed by hand.
- Loop the new bottom half of the seal through the slot indicated in picture.
  - ⓘ Needle nose pliers may make this easier but be cautious not to handle the new seal too aggressively so you do not damage it .
- Put the rear main cap back and torque to specs (65 ft.-lbs.) followed by the oil pump and torque to specs (60-70 ft.-lbs.)

## Step 5 — Rear Main Bearing



- Remove the rear main bearing and replace.
- Liberally apply assembly lubricant/oil to the new bearing surfaces and crankshaft journal.

**i** Gently tap the cap against the engine block or use thin flathead to remove.

To reassemble your device, follow these instructions in reverse order. Torque rear main cap bolts to 65ft.-lbs. Torque oil pump bolt to 60-70ft.-lbs. Torque oil pan bolts to 12ft.-lbs.