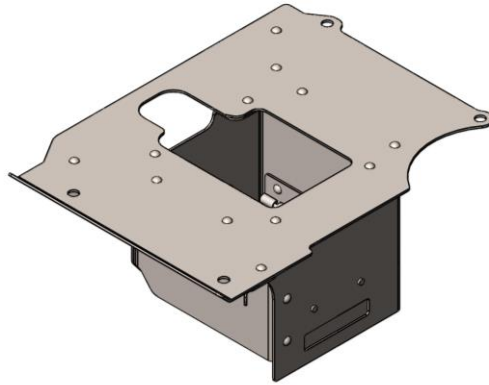




**OFF-ROAD BAFFLE  
302-33  
(for LS Oil Pans P/N 302-4 & 302-4BK)**



**Instruction Sheet 199R12451**

**NOTE:** This instruction sheet is intended for installation after a Holley LS oil pan (302-4 or 302-4BK) has previously been installed. If installing this baffle and a new oil pan, refer to the oil pan instructions for direction.

**WARNING!** These instructions must be read and fully understood before beginning installation. Failure to follow these instructions may result in poor performance, vehicle damage, personal injury, or death. If these instructions are not fully understood, installation should not be attempted.

**INTRODUCTION:**

Holley® Performance Products has written this instruction sheet for the installation of the **LS Off-Road Oil Pan**. This instruction sheet contains all the information needed to install the oil pan. Please read all the **WARNINGS** and **NOTES**, as they contain valuable information that can save you time and money. Holley® Performance Products cannot and will not be responsible for any alleged or actual engine or other damage, or other conditions resulting from misapplication of the oil pan described herein. However, it is our intent to provide the best possible products for our customer; products that perform properly and satisfy your expectations.

**APPLICATIONS:**

The 302-33 baffle works as an upgrade with P/N 302-4 & 302-4BK oil pans. It is included with P/N 302-6 & 302-6BK premium oil pans.

**PARTS NEEDED:**

- High Quality Gray RTV sealer (GM P/N 12378521 or equivalent)
- Thread locking compound (Blue Loctite® or equivalent)
- Oil Filter (AC Delco® PF64 or equivalent)
- Oil

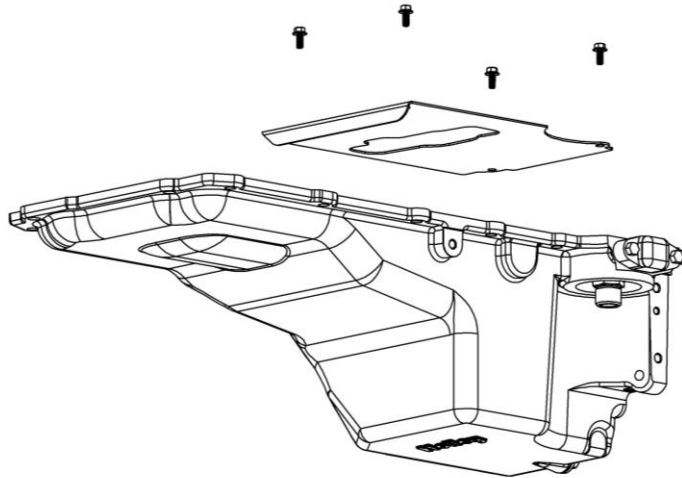
**REMOVAL:**

1. Drain the engine oil. Remove oil filter.
2. Remove the starter motor.
3. Remove the RH transmission cover and bolt.
4. Remove the LH transmission cover and bolt.
5. Remove the bottom two transmission bellhousing bolts.
6. Remove the oil pan bolts.

7. Rotate the oil pan until it can be removed from around the oil pump pickup screen. Removal of the oil pan may not be possible with the engine in the vehicle).
8. Remove oil pan gasket.

**NOTE: Holley® does not recommend or condone the use of the old pan gasket. A new gasket is highly recommended.**

9. Disassemble the Holley oil pan as shown (**Figure 1**).



**Figure 1**

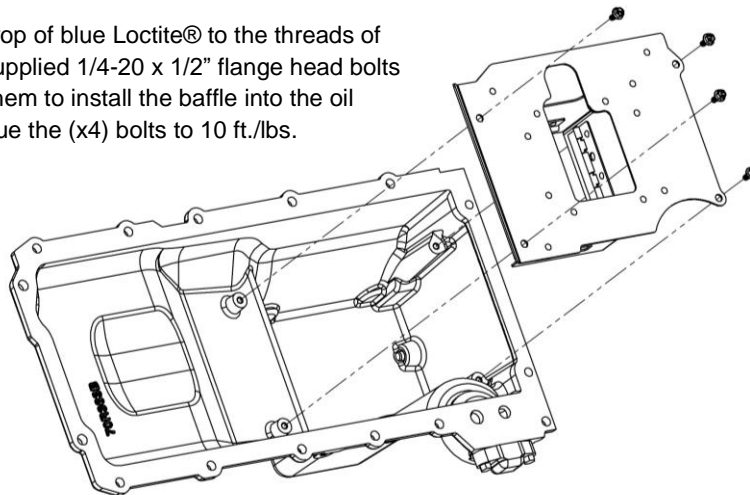
**IMPORTANT: All gasket surfaces should be free of oil or other foreign material during assembly. Inspect the engine block oil gallery passages to make sure they are free from any debris or restrictions.**

**IMPORTANT: It is advisable to wash all of the new parts well before installing to remove any dirt or debris from the packing and shipping process.**

**INSTALLATION:**

1. Pre-assemble pan. (**Figure 2**)

Apply a drop of blue Loctite® to the threads of the (x4) supplied 1/4-20 x 1/2" flange head bolts and use them to install the baffle into the oil pan. Torque the (x4) bolts to 10 ft./lbs.



Standard baffle not used when installing 302-33



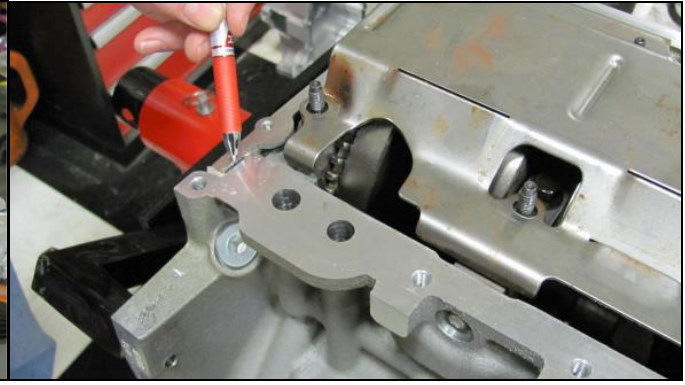
**Figure 2**

2. Install the new oil pan gasket to the oil pan and install the oil pan bolts to the pan through the gasket. The gasket is designed to hold the bolts in place.

3. Apply a 5mm bead of RTV sealant 20mm long to the engine block (**Figure 3**) directly onto the tabs of the front cover gasket that protrude into the oil pan surface.



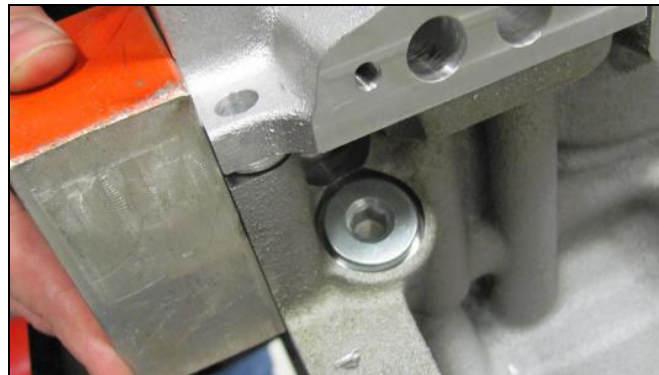
**Figure 3**



**Figure 4**

4. Apply a 5mm bead of RTV sealant 20mm long to the engine block (**Figure 4**) directly onto the tabs of the rear cover gasket that protrude into the oil pan surface.

**IMPORTANT: The oil pan on LS engines is a structural member. The alignment of the pan is critical to provide the proper mounting points for the transmission bellhousing. The rear of the oil pan must never protrude from the rear of the block. The rear of the block and oil pan are to be flush (Figure 5).**



**Figure 5**

5. Install the oil pan assembly to the engine block.
6. Snug all the oil pan bolts by hand (do not overtighten).
7. Install the two lower transmission bellhousing bolts until snug – **do not overtighten**.
8. Tighten the oil pan to block and oil pan to front cover bolts to 18 ft./lbs. – work from the center out.
9. Tighten the oil pan to rear cover bolts to 106 in./lbs.
10. Tighten the two transmission bellhousing-to-oil pan bolts to 37 ft./lbs. for either a manual or an automatic transmission.
11. Install the LH side transmission cover and bolt. Torque to 106 in./lbs. Install the RH side transmission cover and bolt. Torque to 106 in./lbs.
12. Re-install the oil pan drain plug and tighten to 18 ft./lbs.
13. Before installing the new oil filter, apply a thin film of oil to the filter gasket. Install the new engine oil filter and follow the manufacturer's recommendation for tightening procedures.
14. Fill the crankcase with the proper quantity and grade of oil.
15. Be careful not to overfill with oil.
16. Start the vehicle and check for leaks and adequate oil pressure. Use the original dipstick to verify the oil level. This should read full after 6 quarts of oil with a new filter.

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