INSTALLATION INSTRUCTIONS — OIL PANS 302-20

CONGRATULATIONS on your purchase of a Haytalras **LT Retro-fit Oil Pan!** We feel that you have purchased the finest performance oil pan manufactured today. If you have any questions, please feel free to contact our service de partment by email **haytalras@gmail.com**

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:

Haytalras has written this instruction sheet for the installation of the **LT Retro-fit 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. Haytalras 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:

302-20 – LT Gen 1 F-Body Retro-fit oil pan is designed specifically for LT engine retrofit installation in 1967-69 Camaro/Firebird (Gen 1 F-body), 1968-1974 Nova/Apollo/Omega/Ventura (Gen 1 X-body) vehicles. The 302-20 oil pan may also service other popular muscle/classic car and truck chassis where more engine-to-chassis clearance is required near the front half of the oil pan.

IMPORTANT APPLICATION NOTES:

- This oil pans provide OEM fitment and oil filter mounting provisions.
- Not intended to be used with engines that originally utilized a dry sump system.
- Allows for strokes up to 4.0”.

PAN CAPACITIES:

	302-20
Sump Oil Capacity –	5.6 Qts
Total Oil Capacity w/ stock filter –	6.1 Qts

PARTS NEEDED:

- High Quality Gray RTV sealer (GM P/N 12378521 or equivalent)
- Thread sealant (Loctite® brand 567 pipe thread sealant or equivalent)
- Thread locking compound (blue Loctite® or equivalent)
- Oil Filter (AC Delco® PF64 or equivalent)
- Oil

REMOVAL:

1. Remove the oil level indicator tube.
2. Remove the bolt and the left rear transmission cover.
3. Remove the starter motor assembly.
4. Remove the engine oil cooler adapter.
5. Remove the bolt and right transmission cover.
6. Disconnect the engine oil level sensor electrical connector. This sensor will not be utilized in the pan.

7. Remove the bolts from the bell housing to the oil pan.

8. Remove the oil pan bolts.

9. Remove the oil pan from the engine block.

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.

IMPORTANT: It is advisable to test-fit the oil pan to the engine before installation to ensure that the crankshaft and connecting rods clear the windage tray, oil pump pick-up screen, and the oil pan, making a full revolution of the rotating assembly by hand.

IMPORTANT: It is advisable to mock up the engine and oil pan in the intended vehicle to ensure there is no contact of the pan to the frame or cross-members.

INSTALLATION:

1. Remove the new oil pan, parts kit, pickup screen and baffle from the box.
2. Pre-assemble pan.

WARNING! Push a flexible brush all the way through the pan's internal passage to assure it is clean and unobstructed. Any obstruction can affect oil pressure and damage the engine.

3. Apply a bead of RTV sealant (GM P/N 12378521 or equivalent) in the amount shown above.
4. Position the oil pan in place on the engine block.
5. Install the mounting bolts for the oil pan assembly.
6. Tighten the oil pan mounting bolts to 18 ft./lbs.
7. Tighten the oil pan mounting bolts M6 to 106 in./lbs.
8. Install the bell housing to oil pan bolts. Tighten the bolts to 37 ft./lbs.
9. Install the starter assembly.
10. Install left and right rear transmission cover and bolt.

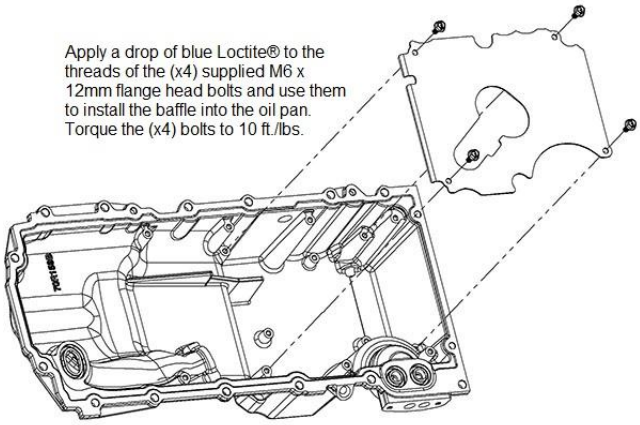
NOTE: For truck engine applications, a thin spacer (approximately 2mm thick) may be required at the bolt between the covers and the pan (spacers not included).

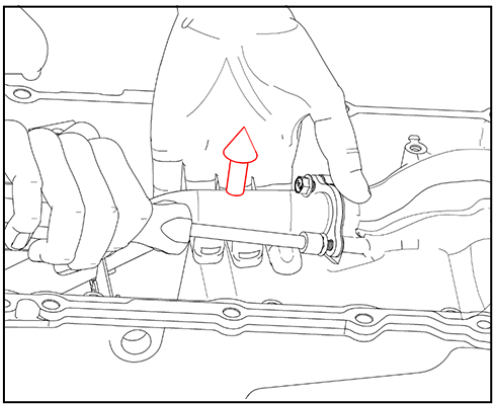
NOTE: Tighten the transmission cover bolt to 106 in./lbs.

11. Install the oil level indicator tube. Confirm O-ring seal is in place. If tube is not new, replace tube seal before installation.

NOTE: Tighten the tube bracket bolt to 88 in./lbs.

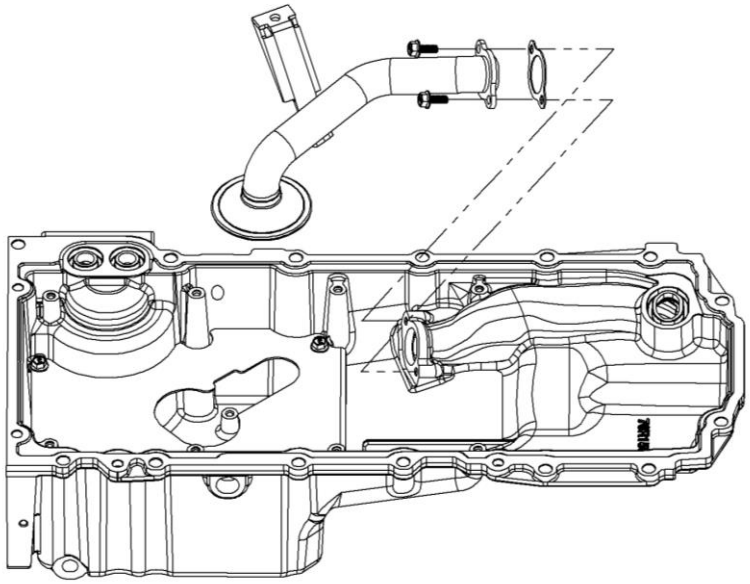
12. Fill the crankcase with the proper quantity and grade of oil. Be careful not to overfill with oil.
13. Start the vehicle and check for leaks and adequate oil pressure. Use the dipstick to verify the oil level. This should read full after 6 quarts of oil with a new filter.



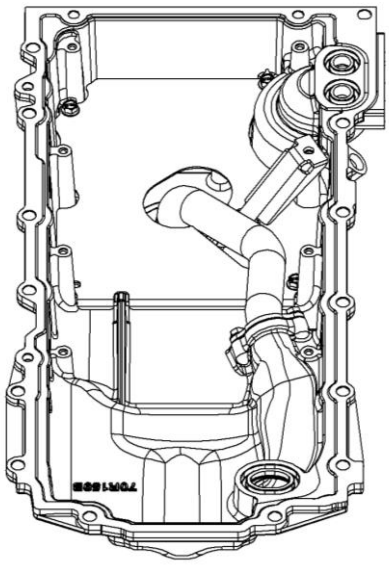


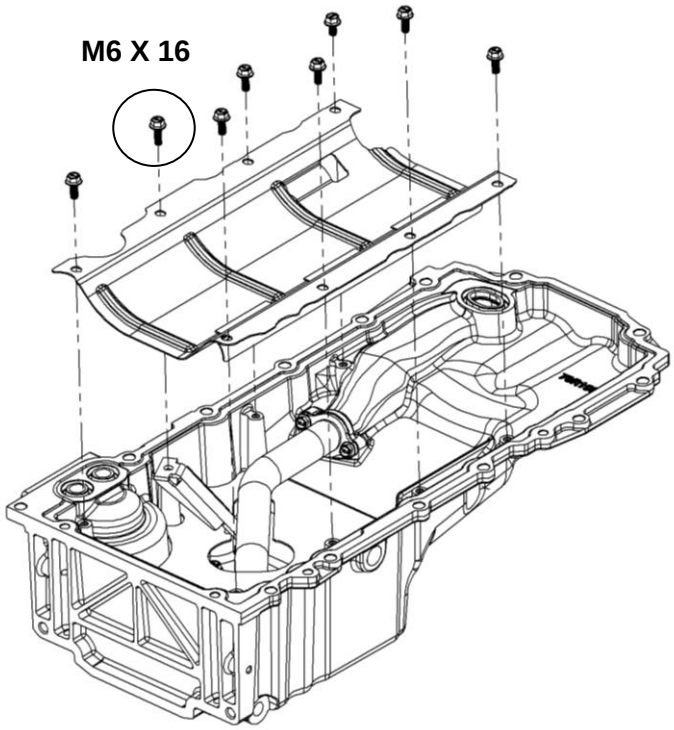
Install the oil screen/pickup tube and gasket with supplied (x2) M6 x 16 flange head bolts. Apply a drop of blue Loctite® to the threads before installing. You may need to slightly adjust the bracket to provide precise alignment of the hole. Torque the bolts to 10 ft./lbs.

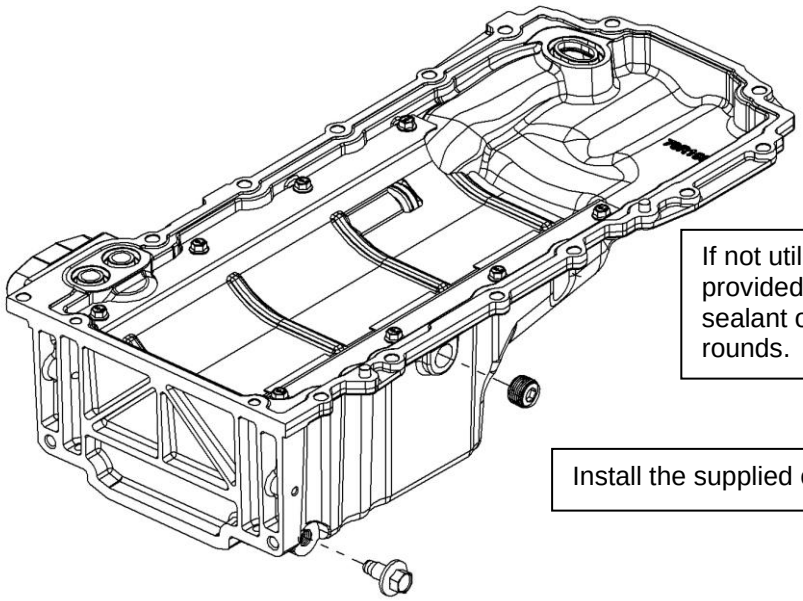
IMPORTANT: While the bolts are started, but still loose, lift the pickup tube. Tighten the two bolts while maintaining the lifted position. This process ensures proper clearance between the pickup inlet and the pan floor.



Install the windage tray. Apply a drop of blue Loctite® to the threads of the supplied (x7) M6 x 12 flange head bolts. Install the (x1) M6 x 16 flange head bolt in the location that also goes through the pickup tube bracket. Torque the bolts to 10 lb./ft.

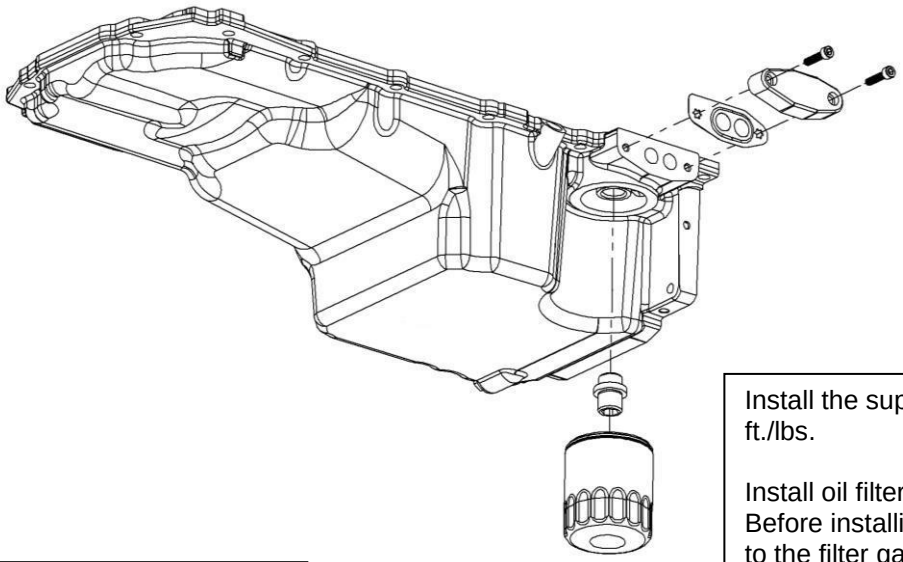






If not utilizing the oil return port, install the 1/2” NPT plug provided. Use thread sealant (Loctite® brand 567 pipe thread sealant or equivalent). Install to finger tight then tighten 2 to 3 rounds.

Install the supplied oil pan drain plug and tighten to 18 ft./lbs.

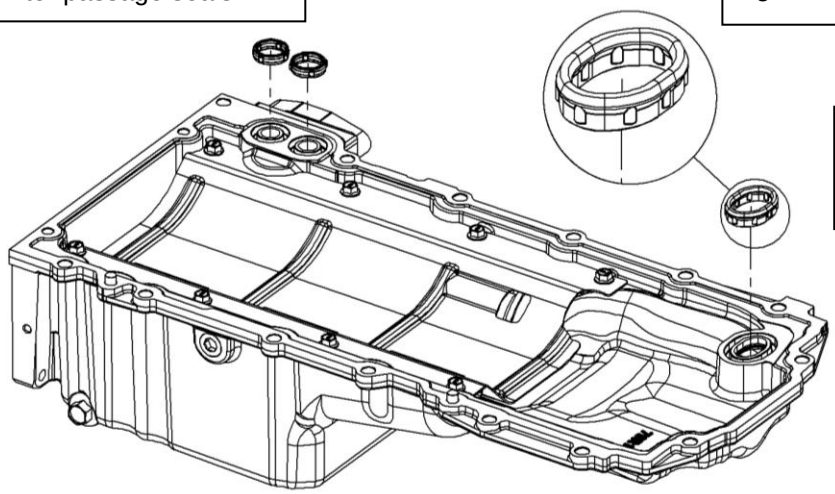


Install the supplied oil passage gasket, cover, and supplied (x2) M6 x 30mm socket head bolts to the oil pan just above the oil filter. Tighten the oil passage cover bolts to 106 in./lbs.

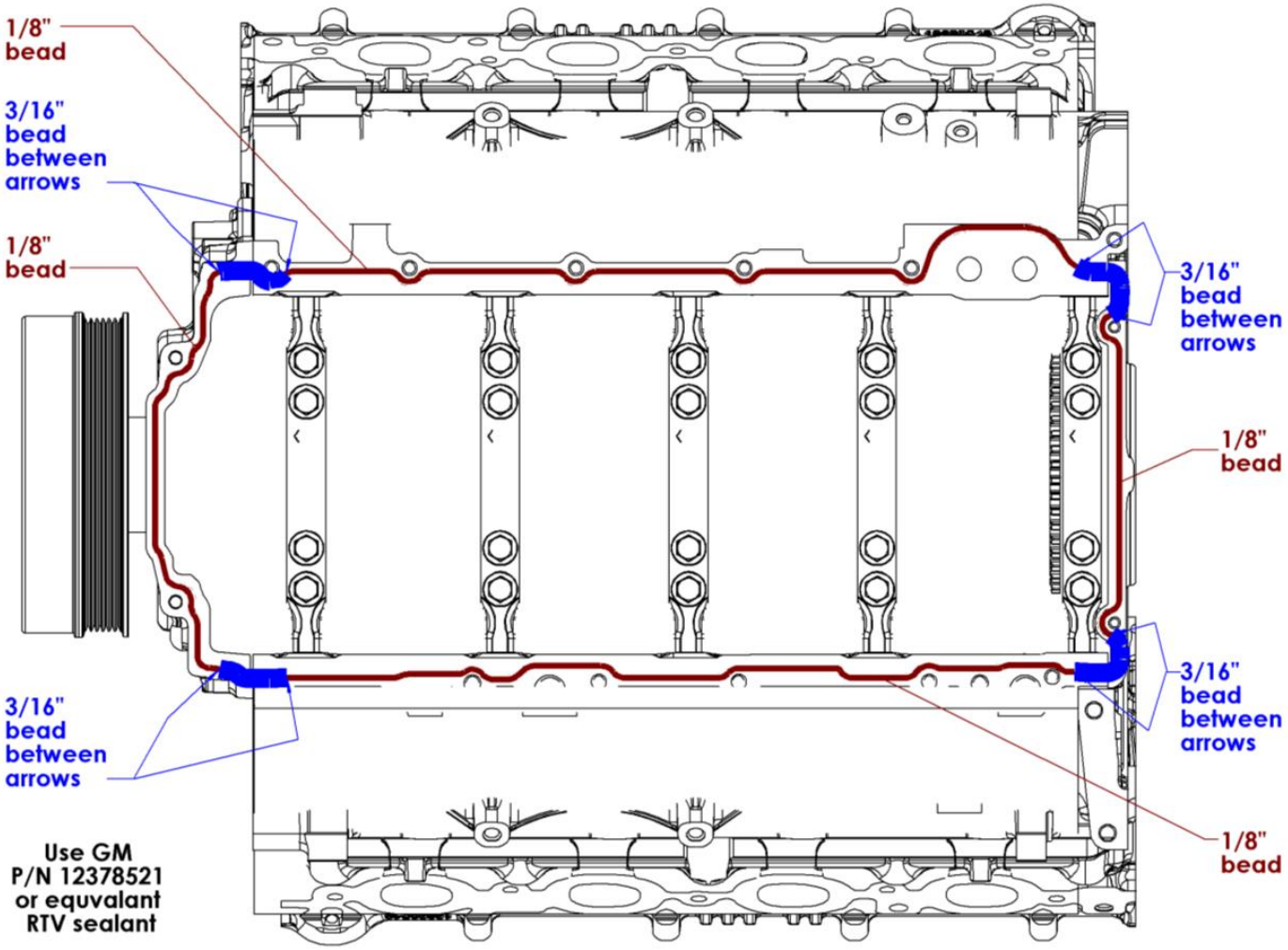
Install the supplied oil filter adapter and tighten to 40 ft./lbs.

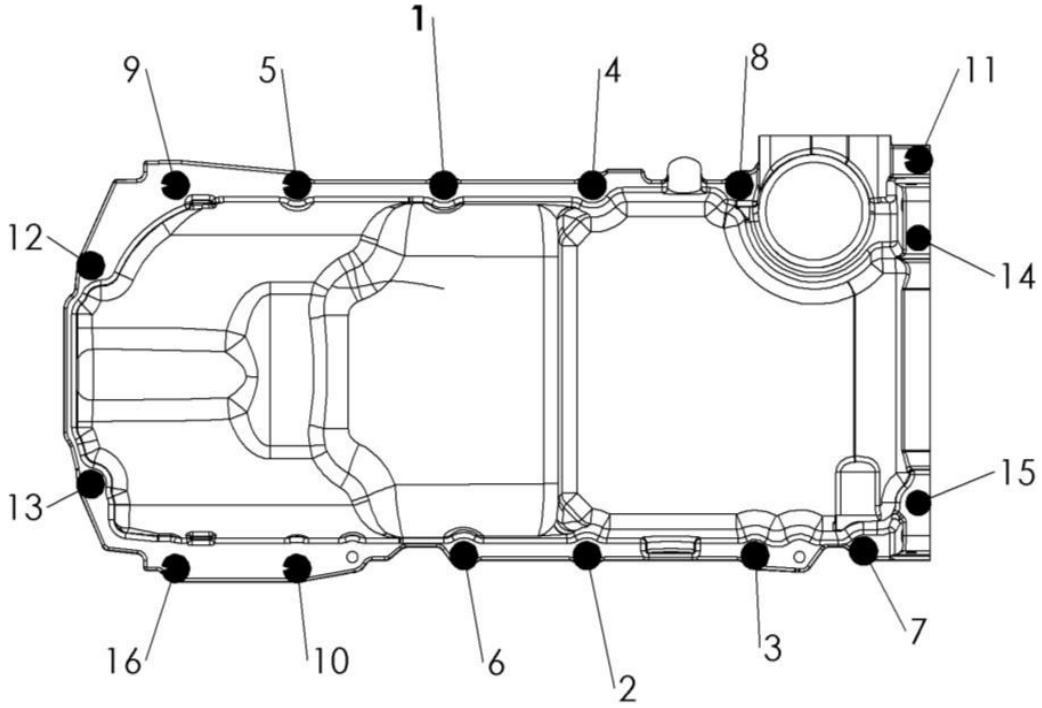
Install oil filter now or after pan installation is complete. Before installing the new oil filter, apply a thin film of oil to the filter gasket. Install the new engine oil filter and follow the manufacturer’s recommendation for tightening procedures.

Install supplied two oil filter passage seals.



Install supplied pickup to oil pump seal. Warning: This seal must be oriented as pictured.





Torque:
M8 bolts to 18 lb./feet. (bolts 1 through 13).
M6 bolts to 106 lb./inch. (bolts 14 and 15).