



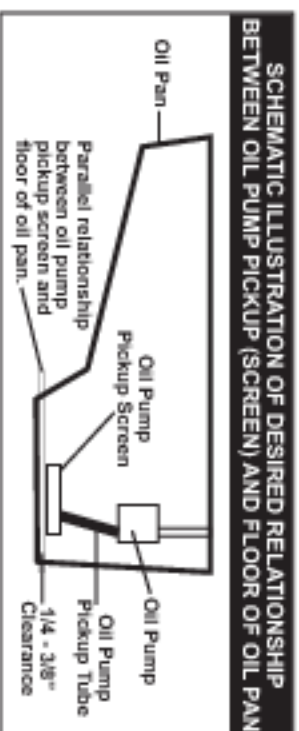
OIL PAN INSTRUCTIONS INSTALLATION

1. If you are installing a Hamburger's oil pan on an operating engine, remove all old gasket material from the cylinder block's side rails, making certain no residue is left in the tapped bolt-holes in the block. For best installation results, run a bottoming tap into each threaded hole and clean out with compressed air. Also, remove the rear main bearing pan seal and pan seal located in the timing gear cover. Clean away any residual gasket cement.
2. If installing a Hamburger's oil pan on an engine being built, make certain all appropriate gasket surfaces (as outlined above) are properly cleaned and prepared for new gaskets and seals.
3. Install the Hamburger's oil pump pickup in oil pump housing. Trial-fit the pump into the engine to check if the base of the pump pickup is parallel to the floor of the oil pan (**see illustration**). In rare cases, it may be necessary to adjust the pickup to provide correct alignment with the oil pan floor.
NOTE: Some engine builders tack-weld the pickup tube to the pump housing, to prevent pump/tube separation during severe use or vibration.
4. With the oil pump temporarily installed and no gaskets or seals in place, trial-fit the oil pan to make certain there is clearance for all components (oil pump pickup, pan baffles, etc.). If no adjustments are required, remove the oil pan and permanently install oil pump. Measure the distance between the oil pump pickup screen and the pan floor. It **MUST** be between 1/4" - 3/8" with the Hamburger's oil pan gasket installed. **If you are using a high volume pump, you may need to modify the pickup.**
5. Using some form of gasket cement, position and glue side rail gaskets to the cylinder block. Make certain all appropriate bolt holes between the block and gaskets are properly aligned.
NOTE: Only use Genuine Hamburger's oil pan gasket sets! The use of other gaskets, such as 1 piece or extra thick, will cause major engine damage due to oil pressure loss cause by the increased distance between pickup and pan floor. Pan warping and oil leaks may also occur. Use of a non Hamburger's pan gasket will void your Hamburger's oil pan Warranty. See gasket chart below to ensure correct gasket usage.
6. Install oil pan seals in the rear main bearing cap and timing gear cover.
NOTE: Some engine builders prefer to use a RTV or "room temperature vulcanizing" gasket sealer between the end seals and grooves into which the seals are seated.
7. Apply a thin coat of RTV (type gasket sealer) to the "pan" side of the siderail gaskets and "pan" side of the end seals.
8. Position pan onto the side rails and over end seals, install all oil pan bolts, making certain that each can be started into its respective threaded holes before tightening all fasteners. Tighten fasteners to 12-ft. lbs. by working from the center of the pan rails out toward the end seals. Take care not to over-tighten fasteners.
9. Before operating engine, re-install any applicable dipstick holders, dipsticks, temperature sending bulbs and all other components that are part of the overall oil pan installation.
10. Once the engine has been brought up to operating temperature and allowed to cool, re-torque all fasteners to compensate for gasket compression after it's first heat cycle. Over-tightening of oil pan fasteners produces excessive rail gasket compression in the area of the fastener, leading to the potential for future oil leaks. **Do not over-tighten oil pan fasteners!** For best results use Hamburger's oil pan spreader bars (see catalog or website).

HAMBURGER'S OIL PAN GASKET SETS (For use with Hamburger's Oil Pans only)

PART#	DESCRIPTION
3001	Fils 1088 & 3047 Hamburger Oil Pans
3002	Fils 1078 & 3037 Hamburger Oil Pans
3003	Fils 1098 & 3057 Hamburger Oil Pans
3004	Fils 1488 & 1498 Hamburger Oil Pans
3005	Fils 3054 & 3064 Hamburger Oil Pans
3006	Fils 3044 & 3074 Hamburger Oil Pans

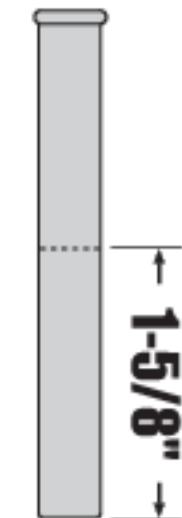
PART#	DESCRIPTION
3007	Fils 0218 Hamburger Oil Pans
4340	Fils 0168, 0178 & 0238 Hamburger Oil Pans
4341	Fils 0428 Hamburger Oil Pans
4342	Fils 3080 & 3090 Hamburger Oil Pans
4347	Fils 0777 Hamburger Oil Pans
9164	Fils 0170 & 0198 Hamburger Oil Pans



DIPSTICK TUBE MODIFICATION

The GM factory utilized two dipstick tube designs in the manufacture of this engine. One tube is longer than the other, causing it to interfere with the oil pan rails.

To clear the pan rails using the longer tube, carefully remove 1-5/8" from the bottom most section of the dipstick tube.



Bottom of
Dipstick Tube

www.hamburgersperformance.com

Tech Support (562)921-0404 (M-F 7-5pm)