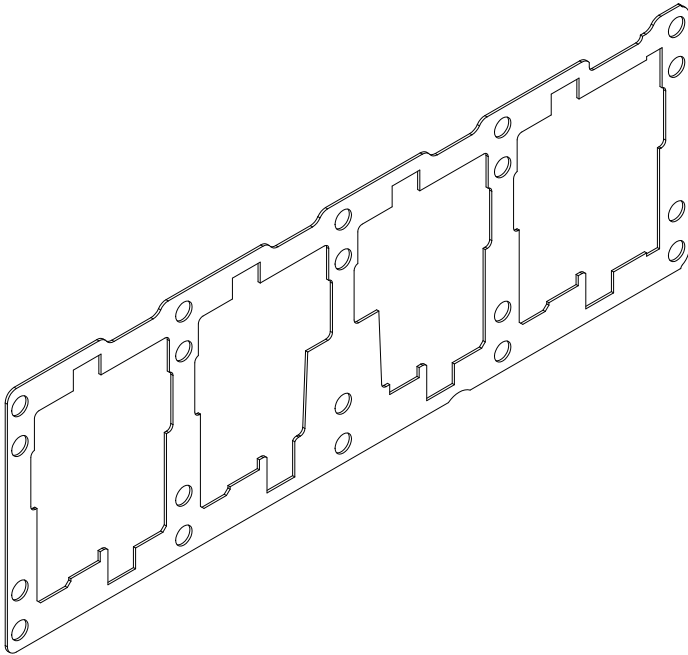




**Crank Scraper for 4.000" Stroke
GM LS & Vortec Engines with ARP
Main Studs**

Part No. EGM-305

Made in USA



**Important: Read these instructions
in their entirety prior to installation.**

For contact information, visit www.improvedracing.com
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Applications

- This product is designed for direct installation in all 4.000" stroke Gen III and IV GM LS and Vortec family engines with ARP main cap studs installed.
- This product will not work with the factory main studs.
- This product is compatible with most aftermarket rods and rod bolts. Minor notching may be required for some aftermarket rods.

Installation Instructions

⚠ Warning: This product should only be installed by a qualified mechanic. Improper installation could result in severe engine damage.

1. Drain the engine oil and remove the oil filter.
2. Refer to the instructions in the vehicle's factory service manual to remove the oil pan.
3. Unbolt the oil pickup tube and set aside.
4. Unbolt the windage tray and set aside.
5. Secure the crank scraper to the main caps using the windage tray nuts temporarily to check clearances.
⚠ Important: Note the correct crank scraper orientation. The arrow should be pointing towards the front (accessory drive) of the engine and the text should face down (readable when crank scraper is secured to engine).
6. Use a wrench to slowly turn the crankshaft manually while checking carefully for interference between the crankshaft and the crank scraper. If any interference is observed, adjust the crank scraper's position to eliminate the interference. In rare instances it may be necessary to use a hand file to remove some material from the crank scraper to eliminate interference. Ideally, there should be between 0.020" to 0.060" of clearance between the crank scraper and the crankshaft.
7. Note the position of the crank scraper. Remove the windage tray nuts, position the windage tray over the crank scraper, and secure with the windage tray nuts. Torque to 18 lb-ft.
8. Once again, use a wrench to turn the crankshaft manually while checking carefully for interference between the crankshaft and the crank scraper. If any interference is observed, return to Step 6 and adjust as necessary.
⚠ Warning: Be absolutely sure no physical contact occurs between the crankshaft and the crank scraper as this will result in severe

engine damage.

9. Optional but recommended: Clean the oil pan thoroughly to remove any oil residue and sludge buildup.
10. Optional but recommended: Replace the oil pan gasket and pickup tube O-ring with new components.
11. Reinstall the oil pickup tube, taking extra care to ensure the O-ring is correctly seated during installation, as failure to do so can lead to engine failure. Torque the pickup tube to oil pump bolt to 106 lb-in (8-9 lb-ft). Torque the pickup tube bracket to windage tray nut to 18 lb-ft.
12. Refer to the instructions in the vehicle's factory service manual to reinstall the oil pan.
13. Replace the oil filter, tighten the drain plug and refill the sump with oil to the factory-recommended level.

Congratulations! Installation is now complete. You can now benefit from improved oil control and a typical power gain of 2-3% at the wheels.

Lifetime Warranty

All products manufactured by Improved Racing are covered by a lifetime warranty. This means that we guarantee our products for as long as the original purchaser owns it. Proof of purchase is required.

Warranty covers:

1. Manufacturing and material defects.
2. Product or material failure occurring during normal use.

Warranty does not cover:

1. Any damage to the product, unless caused by a manufacturing or material defect.
2. Any failure or damage due to normal wear and tear.
3. Products modified in any way.
4. Products which have been discontinued for longer than 1 year and for which no replacement is available.
5. Products sold, but not manufactured, by Improved Racing. For assistance with these products, please refer to the original manufacturer's warranty.

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We offer a 30-day money-back guarantee. If you are unsatisfied with our product for any reason, you may return it within 30 days of purchase for a full refund. Returns must be pre-approved. Damaged items are not returnable, unless the product exhibits a manufacturing defect or is damaged during shipping. To request a return, please visit our contact page on our website at <http://www.improvedracing.com>. Shipping costs are non-refundable and returned items must be shipped at customer's expense.

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