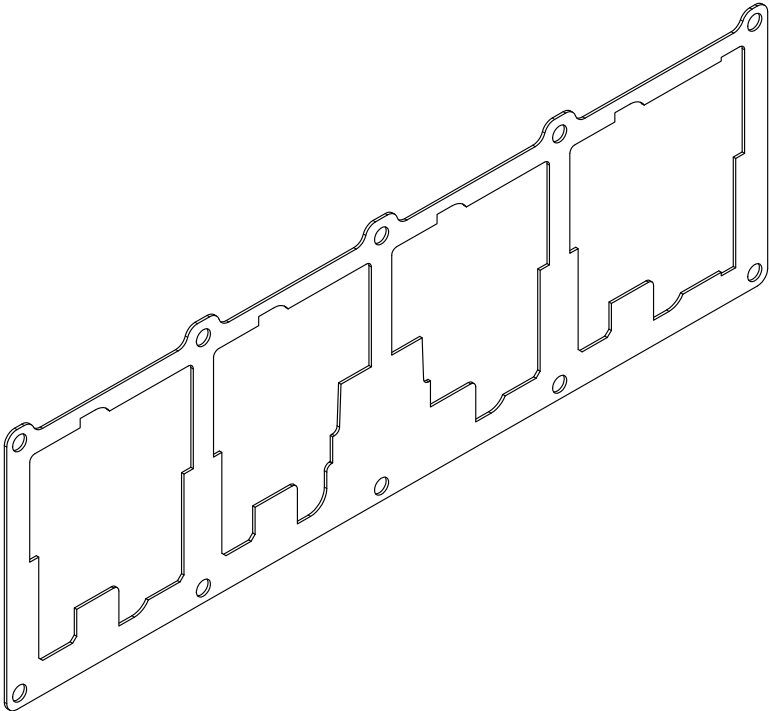




## **Crank Scraper for 3.622" Stroke GM LS & Vortec Engines**

**Part No. EGM-301**

Made in USA



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

For contact information, visit [www.improvedracing.com](http://www.improvedracing.com)  
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## Applications

This product is designed for direct installation in the following engines, in their factory configuration (stock crank and rods, 3.622" (92 mm) stroke):

- LS1 / LS6
- LS2 / L77 / L98
- LS3 / L99
- LS9 / LSA
- Gen III Vortec 5300 (LM7 / L59 / LM4 / L33)
- Gen IV Vortec 5300 (LH6 / LY5 / LMG / LC9 / LH8)
- Gen III Vortec 6000 (LQ4 / LQ9)
- Gen IV Vortec 6000 (LY6 / L76 / LFA / LZ1)
- Gen IV Vortec 6200 (L92)

## 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 windage tray 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 2-4 horsepower at the wheels.

## **Lifetime Warranty**

All products manufactured by Improved Racing are covered by 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.

To file a claim, visit [www.improvedracing.com](http://www.improvedracing.com) and use the Contact Form. Once a claim is filed, product will be either repaired or replaced by the manufacturer. Product must be shipped at customer's expense.

## **Returns**

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- This product is intended for off-road use only and does not necessarily meet required federal regulations for road-going vehicles.
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