INSTALLATION INSTRUCTIONS

Katech TrackFlow™ Dry Sump Oil Pumps

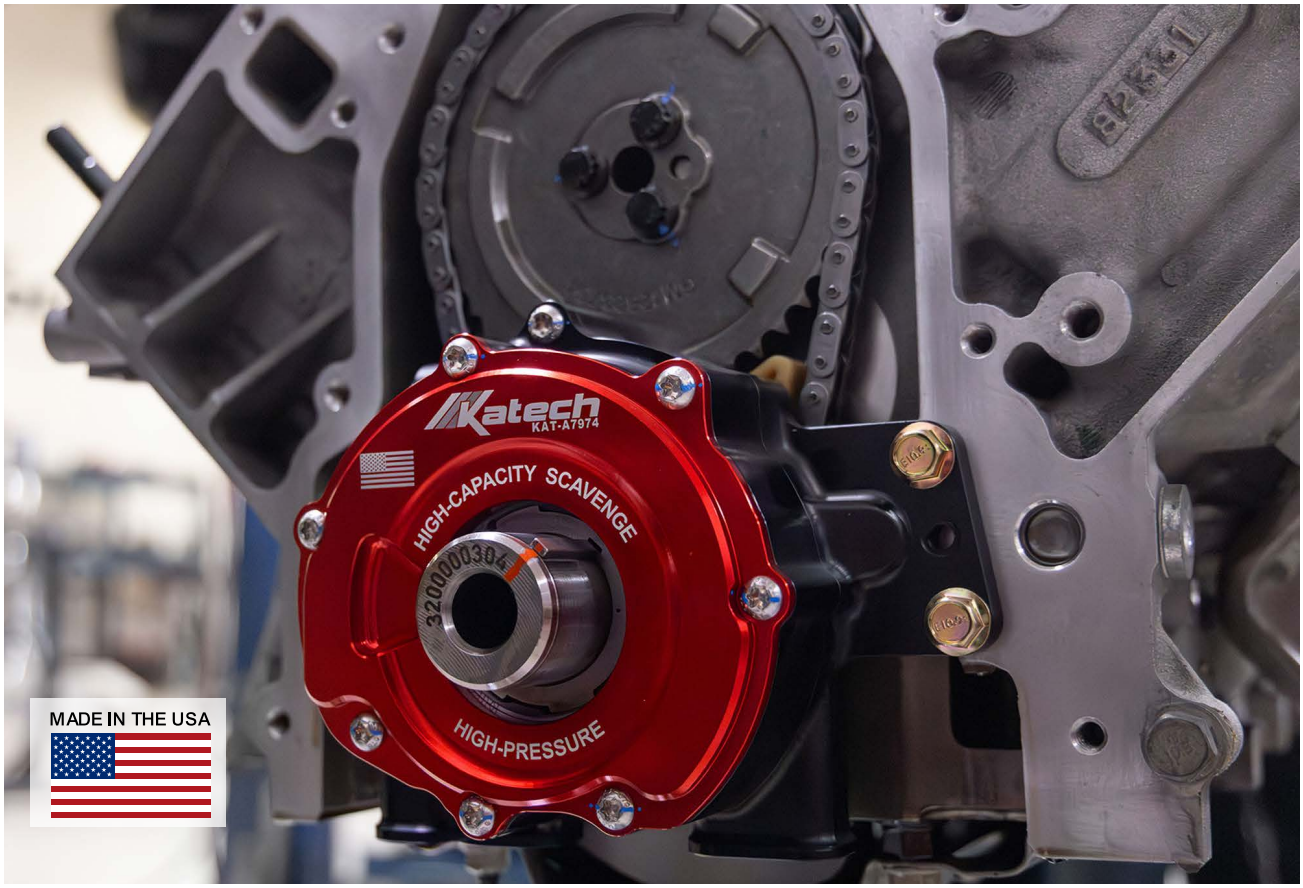
LS7/LS3 & LS9 Applications

LS9

KAT-A7974

LS7 / LS3

KAT-A7936



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INCLUDED IN THE BOX

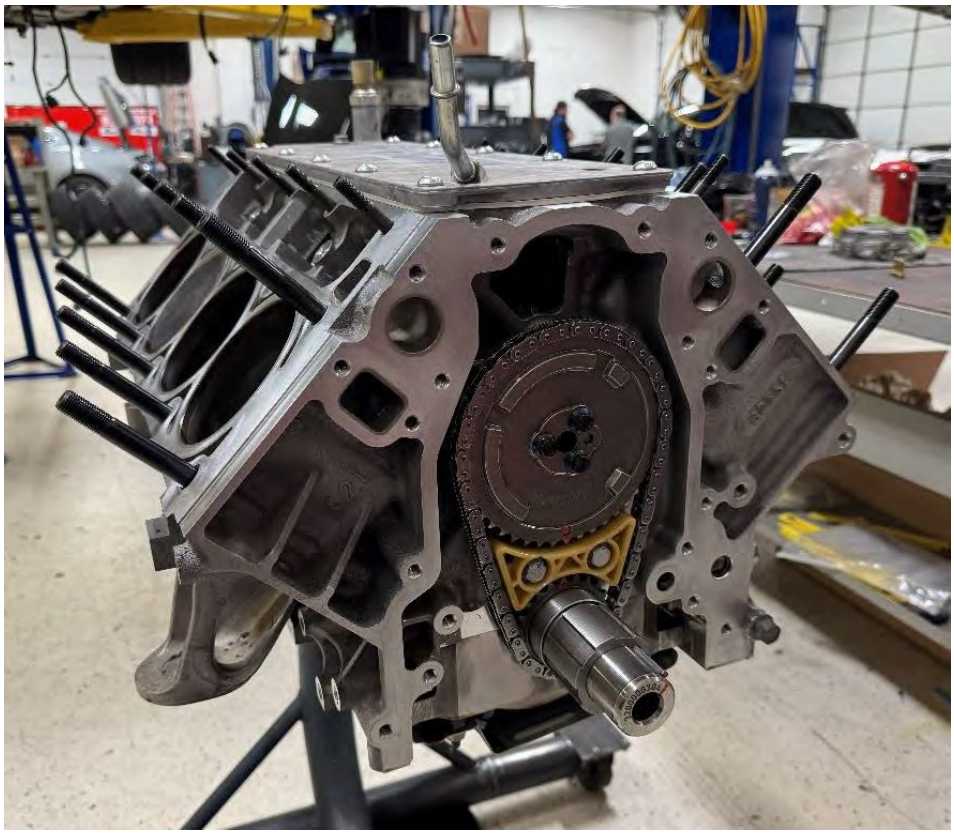
- Katech TrackFlow LS7/LS3 Billet High-Capacity Scavenge Dry Sump Oil Pump | KAT-A7936
  OR
- Katech TrackFlow LS9 Billet High-Pressure High-Capacity Scavenge Dry Sump Oil Pump | KAT-A7974
- M8 x 1.25 Bolts (qty 4)

REQUIARED FOR INSTALLATION

- Rigid Straight Edge
- Metric Socket Set
- Torque Wrench
- Blue Loctite
- Flashlight
- Calipers
- 2009+ GM LS9 Crankshaft Sprocket PN GMP-12622539
  (If not already installed)

PROCEDURE

This procedure is intended to be followed at the point of the engine assembly process where the camshaft, cam thrust plate, timing set, and chain tensioner have been installed per manufacturer's specifications, with no oil pan on the engine.

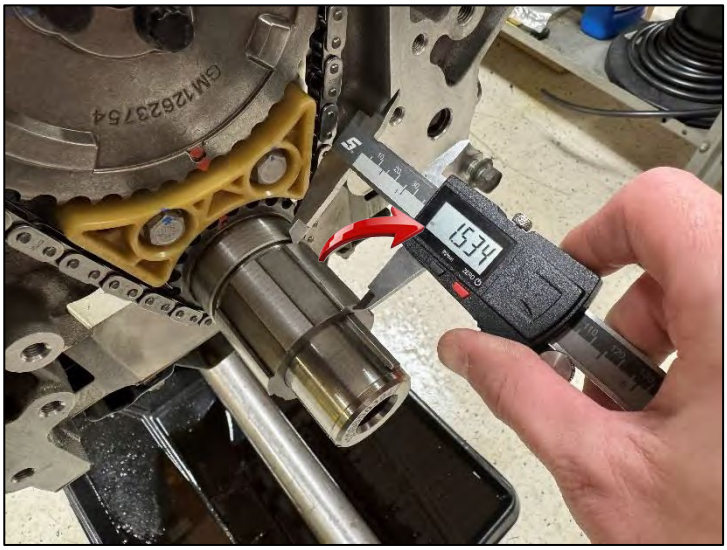


WARNING! FAILURE TO USE THE CORRECT GM LS9 CRANK SPROCKET WILL RESULT IN PUMP DAMAGE AND POSSIBLE ENGINE DAMAGE

IMPORTANT! Measure and verify that the crank sprocket is the correct **2009+ GM LS9 Crankshaft Sprocket** version as shown.

The teeth of the crank sprocket MUST measure at least **1.53”** with calipers as demonstrated.

[Genuine GM LS9 Crankshaft Sprocket PN #GMP-12622539]



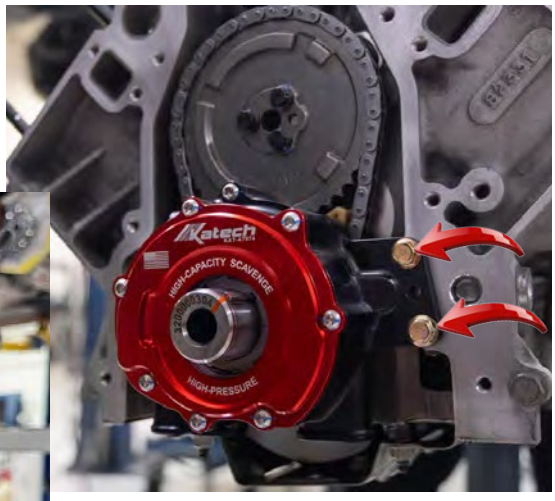
This verification is necessary for **BOTH the KAT-A7936 and KAT-A7974 pumps.**

INSTALLATION INSTRUCIONS

STEP 1 | Slide the oil pump onto the crank sprocket, ensuring that the inner pressure and scavenge gears align with the sprocket.

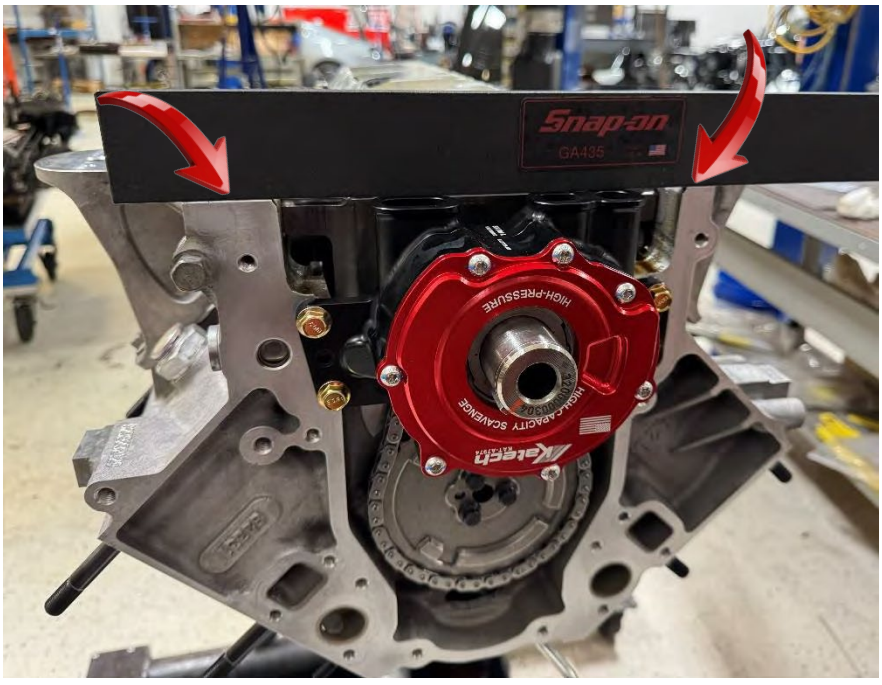
NOTE The inner lugs of the scavenge gear are rounded while those on the crank sprocket are squared off, this is normal and due to the scavenge gear machining process.

STEP 2 | Apply Blue Loctite to the 4 included pump bolts. Install the bolts into the block as shown, and tighten them by hand so that the back of the pump is flush with the block but can rotate freely about the crank.

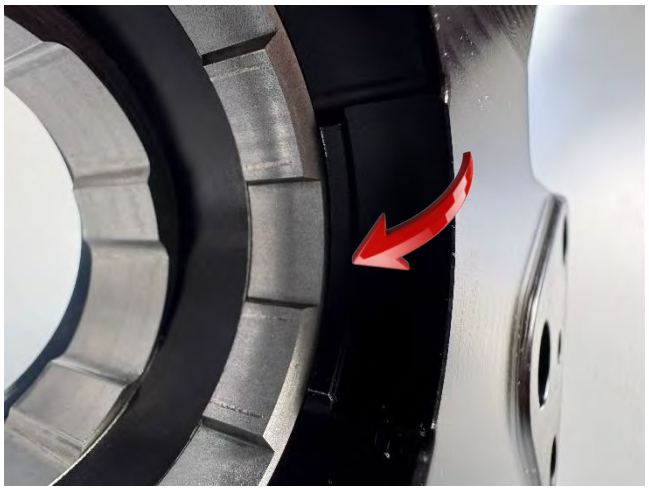


STEP 3 | Rotate the engine over on the engine stand so that the block is upside down.

STEP 4 | Place a straight edge across the front of the block, above the oil pump, extending from one block skirt to the other.



STEP 5 | Position the pump firmly against the straight edge to verify that the pump is level and flush with the bottom of the block, then secure the bolts using a 13mm socket.The photograph illustrates the internal centering tabs



- Ensure the straight edge remains in contact with the block during this procedure.
- Utilize a flashlight to confirm that the straight edge is flush against both the pump and the block.
- There must be no air gap between the straight edge and either the pump or the block.
- **Failure to correctly levelthe pump WILL RESULT IN DAMAGE TO THE PUMP AND POTENTIAL ENGINE DAMAGE.**
- This procedure establishes the pump's vertical and rotational positioning, while the internal centering tabs provide horizontal alignment by riding concentrically to the round section of the crank sprocket.
- This design approach is consistent with the OEM LS7/LS9 pumps.

STEP 6 | Once the pump is positioned correctly and bolts tightened, torque the bolts to 18 ft-lbs.

- Using the crank bolt or a crank snout socket, turn the engine over to ensure that the pump does not bind or have any resistance.
- The pump should spin freely with the crank and add no additional drag or resistance when spinning the engine over.

If you feel any resistance, follow the below steps:

1. Inspect the installation
2. Ensure that the pump alignment process was followed correctly.
3. Ensure that the straight edge used during install is truly straight and flat.
4. Ensure that the pump did not move before torquing the bolts.

If the engine turns over smoothly with no issues, you may proceed with engine assembly.

NEED ASSISTANCE?

Call (586) 791-4120 or
Email Sales@KatechEngines.com

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