

ROUSH PERFORMANCE ENGINES

# 427R



*Paul Powell*



550 HP / 535 ft. lbs.

In the history of hot rods and muscle cars, "427" is a memorable number. In the mid-1960s, the Ford 427 "side oiler" was the king. Today, the Roush Performance 427R has this legendary displacement, with all the benefits of the Windsor engine. Using the "Dart Iron Eagle" 4-bolt main block, we accomplish the best of both worlds: big cubic inches and dependability. This is our Thoroughbred, with forged pistons, rods and crank in a race-ready block. The 427R is the perfect choice for any project car, and performs great on premium unleaded pump fuel. This engine, like the others offered, is *hot-tested*, then *dyno-tested* to verify power. It is shipped with documentation and *carries a warranty*.

The engine department at Roush Performance has been assembling engines for more than 25 years. They have built thousands of engines that have competed and won in drag racing, road racing, oval-track racing and land-speed record attempts. Those same experienced engine builders inspect, assemble and test every engine offered.

Roush Performance  
28156 Plymouth Rd.  
Livonia, MI 48150

**800-59-ROUSH**

**ROUSH**  
*Performance*

Technical Performance Solutions.

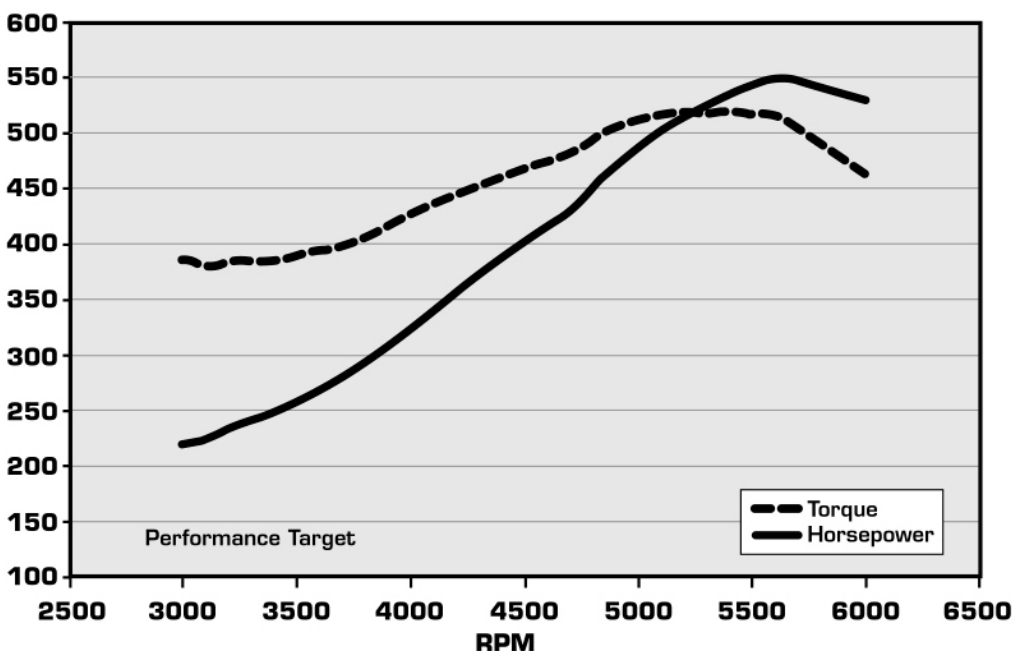
327R 342R 402R 427R

"R" SERIES

# 427R Engine Features

- 1. Base Engine:** New Dart 4-bolt main iron block, **4340 forged crank**, **4340 forged "H" beam connecting rods** with 3/8" high-strength bolts, **forged crankshaft** and **pistons** with a 10.25:1 compression ratio.
- 2. Cylinder Heads:** Roush aluminum with premium stainless steel valves; 2.08" intake and 1.60" exhaust.
- 3. Camshaft:** Hydraulic roller cam (Roush proprietary) with a double roller timing chain and gear set.
- 4. Valve Train:** 1.6:1 roller rocker arms with dual valve springs mounted on 7/16" studs.
- 5. Intake Manifold:** Single-plane aluminum (dual-plane available).
- 6. Carburetor:** Roush "tuned", Holley 770 CFM with vacuum secondaries and electric choke.
- 7. Air Cleaner:** 14" Chrome (standard, others available).
- 8. Valve Covers:** Polished, tall aluminum covers engraved with the **POWERED BY ROUSH logo** and **your engine's Serial Number** are standard (others are available).
- 9. Oil Pan:** Powder-coated, 8-quart "T" style, front sump ROUSH pan is standard. Adjustable Melling and heavy-duty shaft.
- 10. Accessory Drive:** Roush aluminum under-drive V-belt pulley system, billet aluminum mounting bracket and spacers with 90-amp, single-wire alternator.
- 11. Fuel Pump:** Mechanical high-performance pump with braided line and fittings from pump to carburetor w/fuel log.
- 12. Flywheel:** SFI-approved 157-tooth billet steel flywheel installed (balanced to 28.2 in.-oz. factor). Aluminum flywheel available as an option.
- 13. Ignition:** MSD distributor with Ford Racing 10 mm plug wires and wire looms.
- 14. Starter:** New, super high torque starter (1.6kw) with cable.
- 15. Water Pump:** New Ford production or equivalent, standard rotation for V-belt applications under 6,000 rpm.
- 16. Testing and Documentation:** Each engine is "hot-tested" and then subjected to several "dyno pulls" to verify power. Each engine is shipped with a copy of the results along with "fender and firewall badges".

**Options:** McLeod clutch (and installation), "Polished-Package" and others are available.



## Technical Information

**Engine Model:** 427R

**Horsepower (maximum):** 550 hp (with Victor Jr. intake and 8 qt. Oil Pan)

**Torque (maximum):** 535 ft. lbs.

**Displacement:** 427 cu. in.

**Block:** 9.5" deck, Dart 4-bolt main

**Crankshaft Type:** Forged 4340 Steel

**Crankshaft Stroke:** 4.00"

**Connecting Rod Type:** Forged 4340 Steel "H-Beam"

**Compression Ratio:** 10.25:1

**Pistons:** Forged

**Timing Chain:** Double Roller

**Camshaft Info:** Roush Proprietary

**Lifter Type:** Hydraulic Roller

**Cylinder Heads:** Aluminum

**Intake Runner Volume:** 205 cc, fully CNC-ported

**Combustion Chamber Volume:** 61 cc

**Valve Sizes:** 2.08" Intake 1.60" Exhaust

**Rocker Arm Ratio:** 1.6:1

**Spark Plugs:** Autolite 3923 (or comparable)

**Intake Manifold:** Single- or Dual-Plane available

**Fuel System:** Holley 770 CFM Carburetor with vacuum secondaries and electric choke

**Fuel Requirements:** Premium Unleaded (minimum)

**Max. Recommended RPM:** 6,250

**Firing Order:** 1-3-7-2-6-5-4-8

**Timing:** 31 to 34 degrees @ 4,000 rpm (not to exceed 35)

**Oil Pump:** High Output — Adjustable

**Oil Pan:** Powder-Coated 8 qt. Front Sump — Baffled or Dual-Sump (Mustang) available

\*Horsepower output can be reduced when engine is equipped with the Dual-Sump pan.

**Oil Filter:** Motorcraft FL1 (or comparable)

**Oil Weight:** 10w30 — non-synthetic for first 3,000 miles

**Flywheel:** Steel, 157 tooth (balanced to 28.2 oz.)

**Starter:** Ford Motorsports Super High Torque (1.6kw) (or equivalent)

\*Size specifications may vary. Stated horsepower are averaged and can vary ± 5%. Details available.

Specifications and content subject to change.

**ROUSH**  
*Performance*