BLOCKS

The Oldsmobile DRCE (Drag Race Competition Engine) has rocketed to the top in championship drag racing. This purebred competition powerplant was designed to be the premier motor in Pro Stock. Since its debut in 1983, the Olds DRCE has set performance standards in professional and sportsman classes. The big-block Oldsmobile’s horsepower potential and outstanding durability have also attracted the attention of serious boat racers and truck and tractor pullers.

The Oldsmobile DRCE shares many internal components with the Mark IV Chevrolet big-block V8. Crankshafts, connecting rods, camshafts, timing gears, and many external accessories are interchangeable between Olds DRCE engines and big-block Chevy V8s. Oldsmobile DRCE blocks and cylinder heads are not interchangeable with Chevrolet components, however. The Oldsmobile DRCE was specifically designed to meet the specialized needs of competition engine builders, and is therefore not compatible with production-based engines.

NOTE: All parts for 8.2-liter (500-cubic-inch) DRCE off-highway engines are now available only from your local GM dealer. (Attention Dealer: Order directly from GM-SPO)

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NEW 12480027 — Oldsmobile High Performance Manual
This is a must-have book for the serious Oldsmobile enthusiast. Oldsmobile V8 high performance manual covers proven engine building tricks covering block, heads, intakes, etc. It has a complete listing of casting numbers for most Oldsmobile V8 engines.

24502500 — “Gen VI” CNC Machined Short Deck Racing Bow Tie Pro Stock Block
This bare block is the same as P/N 10185049 except it has all 8620 steel main caps and all are CNC machined with standard 9.80" deck. The Gen V CNC machined race prepared short deck Bow Tie block starts with the same casting used in the P/N 10185049 production machined block. All of these blocks feature blind head and accessory mounting bolt holes, a deck configuration that enables the use of any big block Chevrolet cylinder head, and cylinder bores that may be bored to 4.600" diameter while maintaining a minimum wall thickness of .250". In addition, the new castings design improves engine block life and build ability of the previous generation of Mark IV big block Chevrolet blocks.

CNC machined race prepared Bow Tie blocks differ from the production machined Gen V Bow Tie versions in certain areas. CNC race prepared blocks start from a raw casting and are not “conversions” and use a rear seal adapter to convert the Gen V production type one piece rear main seal to a Mark IV type two-piece seal that facilitates the use of a widely available Mark IV style crankshaft. In addition, 8620 steel bearing caps are put in all locations to further increase the integrity of the bottom end. The intermediate caps also feature 16° splayed outer bolts which anchor the caps into the strongest section of the block and prevent bearing cap movement under high loads.

Bow Tie race prepared, as well as production Gen V blocks use priority main style oiling, in which the oil flows from the main gallery near the cam, oiling the cam via a small hole, and directly to the main journals. The main oil gallery on these blocks is relocated and enlarged to ¾" diameter to allow increase oil flow through the block. The oil cooler provisions found on all Gen V production machined blocks is eliminated so that plugging of this boss is not required when preparing for a racing style oiling system. CNC race prepared Bow Tie blocks have inner head bolt bosses which allow better retention of cylinder heads in high horsepower applications due to cylinder head “lifting” from the block due to high cylinder pressures. The tall and short deck race prepared blocks weigh 288 and 278 pounds respectively which is at least 12 pounds lighter than imitation Bow Tie aftermarket blocks.
24502572 — Bare Block - GMPP/DRCE “2”  
This GM performance parts DRCE2 Bare Block is a redesigned Old’s DRCE.  
This block was designed for competition in 500ci Pro Stock Drag Racing or similar type usage.  
Use with cylinder heads P/N 24502585 or P/N 12480010 only.  
The main differences between the Old’s DRCE and these semi-finished GMPP “2” blocks are the camshaft has raised to 5.750”, the deck height is a 9.300” and can be reduced to approximately 9.000”, the distributor hole is moved rearward on the block, and the overall weight has been reduced approximately 11 pounds.  
The cylinder bore centerline spacing has been increased from 4.840” to 4.900”, the maximum legal bore spacing for NHRA Pro Stock competition.  
With the new bore spacing of 4.900” it will allow the use of big bore with short stroke piston and crank shaft combinations to enhance performance.  
The increase in cylinder bore spacing reduces valve shrouding and permits the use of larger valves to improve air flow.  
The semi finished cylinder is bored to 4.500” dia. maximum recommended bore dia is 4.700”.  
New elliptical siamese cylinder barrels maximize wall thickness on the major and minor thrust axes.  
This allows lighter weight piston and rod combinations and improves carburetor, manifold port alignment with pro stock type induction systems.  
This block’s cam tunnel will accommodate a 2.166” cam bearing.  
Other improvements are No. 2 and No. 4 main bearing bulkheads are relocated .060” to distribute crankshaft loads evenly.  
The lifter bosses have been replaced with solid bar, and the lifter holes are not drilled to allow engine builders to position them for there own valve train geometry.  
The head bolt holes are not drilled, so the engine builder can accommodate Pontiac SD, Oldsmobile DRCE, or Chevrolet bolt patterns.  
The rear flange has a hybrid bolt pattern that accommodates Oldsmobile, Pontiac, or Chevrolet bellhousing.  
They use new four-bolt 8620 steel main bearing caps with splayed outer bolts to improve main bearing bulkhead durability and resist bearing bore distortion under high load.  
The oil pan rails have been spread .400 per side to provide room for longer stroke crankshafts.  
The starter motor can be mounted on either side of the GMPP/DRCE Block.  

Technical Notes:  
This high-strength iron block has brinell hardness of 210 to 230 and requires a camshaft with distributor gear behind the rear bearing.  
The balance of parts to complete this engine are Chevrolet Big Block (water pumps, crank, cam, balancers, flywheel, and manifolds).  
This block is cast with the GM Performance Parts logo on it.

22536161 — Aluminum DRCE Engine Block  
This lightweight version of the Oldsmobile DRCE block incorporates many of the features of its cast iron counterpart.  
It is manufactured from 356-T6 aluminum by Keith Black Racing Engines.  
The aluminum DRCE block accepts all big-block Chevrolet V8 internal components (crankshaft, rods, camshaft, etc.).  
The head bolt pattern is designed specifically for Oldsmobile DRCE cylinder heads.  
The aluminum block’s crankcase extends below the crankshaft centerline.  
This “Y-block” design accommodates cross-bolted ductile steel main bearing caps on the three intermediate main bearings.  
The ductile iron cylinder barrels are relieved and the camshaft bore repositioned .250” upward to provide clearance for a long-stroke crankshaft.  
The block’s 1/2” diameter cylinder head studs extend to the bottom of the cylinder bores.  
The aluminum DRCE block has provisions for an internal oil pump.  
A short-deck aluminum block weights 157 pounds.  

Technical Notes:  
Aluminum DRCE blocks are available with 9.925", 10.50", and 10.70" deck heights.  
Two cylinder bore sizes are offered; 4.250” and 4.500”.  
The cylinder bores are finished with either 280 grit or 400 grit honing stones.  
All orders for aluminum DRCE engine blocks must specify the desired block height, cylinder bore, and cylinder wall finish.  

This Block is to be ordered direct from the manufacturer at (562) 869-1518 or FAX (562) 869-2544.
12480010 — DRCE Racing Head Semi-Finished
This new DRCE semi-finished head is for the new 4.900" bore center blocks. For raw casting see P/N 234502585.

24502585 — DRCE2 Cylinder Head
This GM Performance / DRCE2 Cylinder head was designed specifically for the DRCE2 block P/N 24502572. It is intended for professional competition applications. It is designed to comply with NHRA Pro-Stock rules for 500 cu. in. engines with 4.900" cylinder bore spacing. The DRCE2 heat treated head casting is sold as P/N 24502585 or as a semi-finished “cube” with bolt holes as P/N 12480010. Special DRCE2 cylinder head features include: High capacity water jacket that is self purging, symmetrical port layout with ample wall material for custom porting designs, thick deck (.850") surface without cast-in combustion chambers to facilitate “angle milling” without weakening the deck. Reduced weight casting to minimize CNC machine time. The DRCE2 cylinder head casting is produced from 357-T6 aluminum with provisions for intake valve angles of 10-14° and canted 5°. The exhaust valve angles of 9-5° with a 2.5° cant. The casting is “robust” to provide adequate cylinder head clamping. A typical CNC prepared cylinder head without valves and valve train has a weight of 40 lbs.

22551672 — Rocker Cover, Aluminum, Small-block V8 with Chevrolet/Pontiac/Brodix Heads
Oldsmobile cast aluminum rocker covers are available for GM small-block V8s equipped with factory and aftermarket cylinder heads. These extra-tall rocker covers will clear stud girdles and aftermarket shaft rocker arm systems. One cover per package.

24502555 — Oldsmobile Rocker Cover
This small-block Chevrolet V8 rocker cover has the Oldsmobile logo. Its overall height is 2.625" and its weight is 2.25 lbs. One cover per package. Technical Note: Only used on V8 Chevrolet splayed cylinder head P/N 10185040 or P/N 24502517.

2253733 — DRCE Aluminum Rocker Cover
This lightweight cast aluminum valve cover fits the Oldsmobile DRCE cylinder head’s unique bolt pattern. One per package. Use with cylinder heads P/N 24502585 or P/N 12480010 only. Technical Note: First design DRCE heads can be modified to fit this cover by drilling two holes on the rocker cover rail.
GROUP 0.519A CAMSHAFT KITS

12364048 — Camshaft Kit
Applicable to all 1967-84 Oldsmobile V8 engines, this camshaft kit significantly improves mid-range torque and performance while still retaining a relatively smooth idle for daily usage. The duration at .050" lift (intake/exhaust) is 204°/216°; while the valve lift is .456"/.484". The basic RPM range is 1500-4500 with 6500 RPM attainable using proper valve springs. Cruise RPM is 2000-2600, and a compression ratio of 8.0-9.5 to 1 is recommended. This kit is not legal for pollution-controlled vehicles.

Technical Notes: There are 16 hydraulic flat tappets included in these kits.

12364049 — Camshaft Kit
Applicable to all 1967-84 Oldsmobile V8 engines, this performance oriented camshaft kit is designed to improve mid to upper range torque and top-end performance while providing a fair idle quality. The duration at .050" lift (intake/exhaust) is a healthy 222°/230°; while the valve lift is .480"/.496". The basic RPM range is 2500-5500 with 6500 RPM attainable using proper valve springs. Cruise RPM is 3200-3600, and a compression ratio of 9.5-11.0 to 1 is recommended. This kit is not legal for pollution-controlled vehicles.

Technical Note: There are 16 hydraulic flat tappets included in these kits.

GROUP 1.069 WATER PUMPS

22526206 — Aluminum Water Pump
This lightweight aluminum alloy casting features a reinforced snout and a stamped impeller. It can be used on all off-highway 307-455ci production Oldsmobile V8 engines.

GROUP 1.652 OIL PUMPS

22532198 — High Volume Oil Pump
For all 307-455 production Oldsmobile V8 engines, except Toronado. Includes screen.

GROUP 0.033 ENGINE BLOCKS

22551536 — Engine Block, Semi-Finished, Production
A Rocketparts cylinder block provides a solid foundation for any Quad 4 engine building project. The semi-finished production block has cylinders that are rough-bored to approximately 90.2mm diameter. All other machining is done to regular production dimensions. The Rocketparts semi-finished heavy-duty block is strengthened in several critical areas. This cast iron engine block has provisions for piston oil cooling, thicker main bearing bulkheads, and thicker cylinder walls. The cylinder bores are structurally tied to the block walls at the deck surface, and the main oil passage is relocated to accommodate a long-stroke crankshaft.

GROUP 0.096 ENGINE BEARINGS

22551537 — Bearing Set, Main, .0005" Undersize
22551538 — Bearing Set, Main, .001" Undersize
22551539 — Bearing Set, Main, .010" Undersize
Correct bearing clearances are critical in a competition engine. Rocketparts precision bearing inserts make it easy to blueprint a Quad 4 engine. These premium quality main and connecting rod bearings can be used in all Quad 4 engines.

GROUP 0.269 HEADS

22551535 — Cylinder Head, Semi-Finished
The Quad 4’s sophisticated four-valve cylinder head offers superior breathing and outstanding combustion efficiency. A semi-finished head is the ideal starting point for cylinder head specialists seeking further improvements in engine airflow. This Rocketparts head is fully machined except for the valve seats and valve guides.