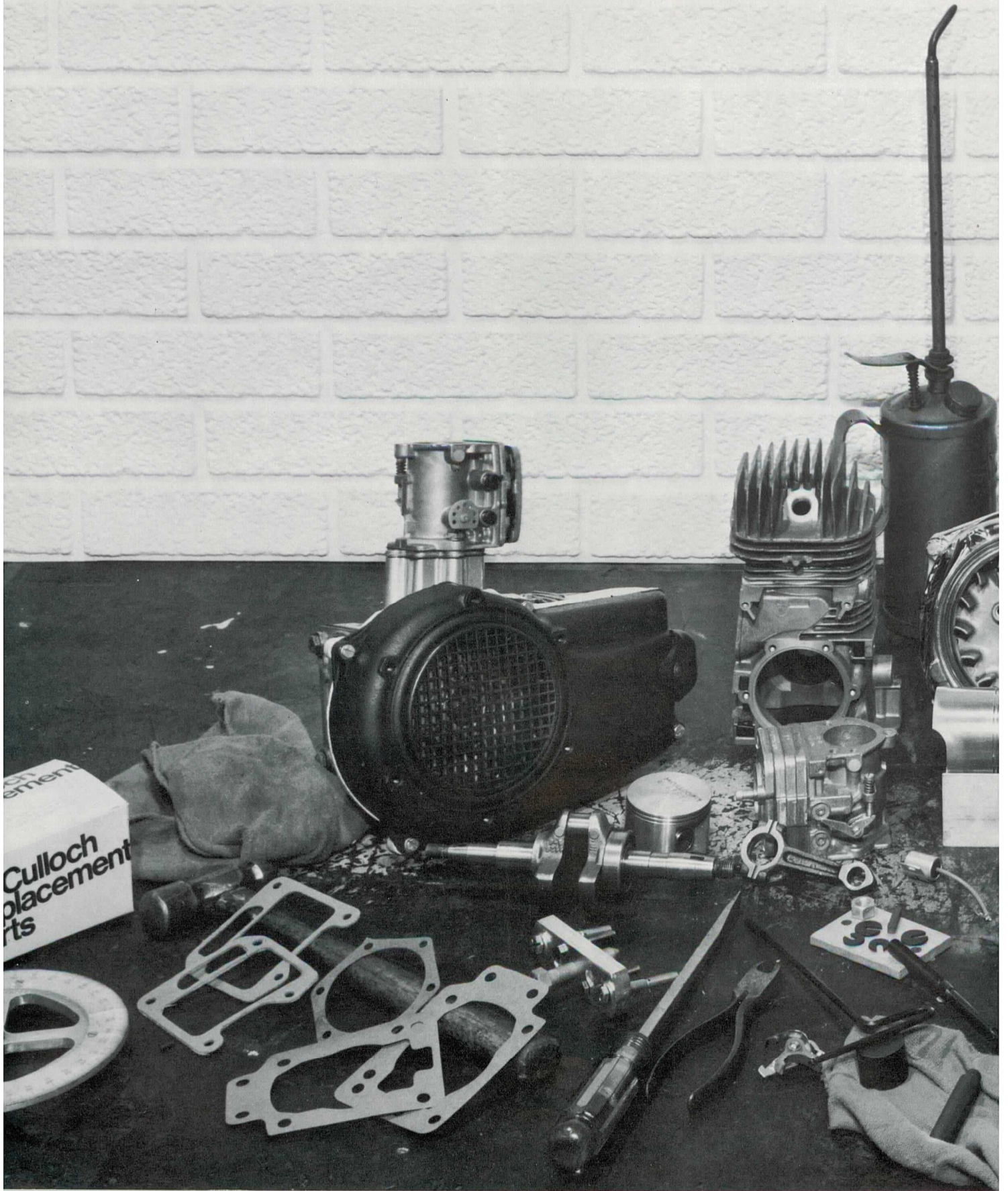




Racing. And the incredible will to win.

Winning begins here.



In your garage. In your basement. Wherever you spend the long hours checking and rechecking, adjusting and readjusting, timing and tuning.

Winning begins here... if you start with the only replacement parts that are manufactured to the exact blueprint tolerances and specifications of your McCulloch American Racing engine. The parts that have gone

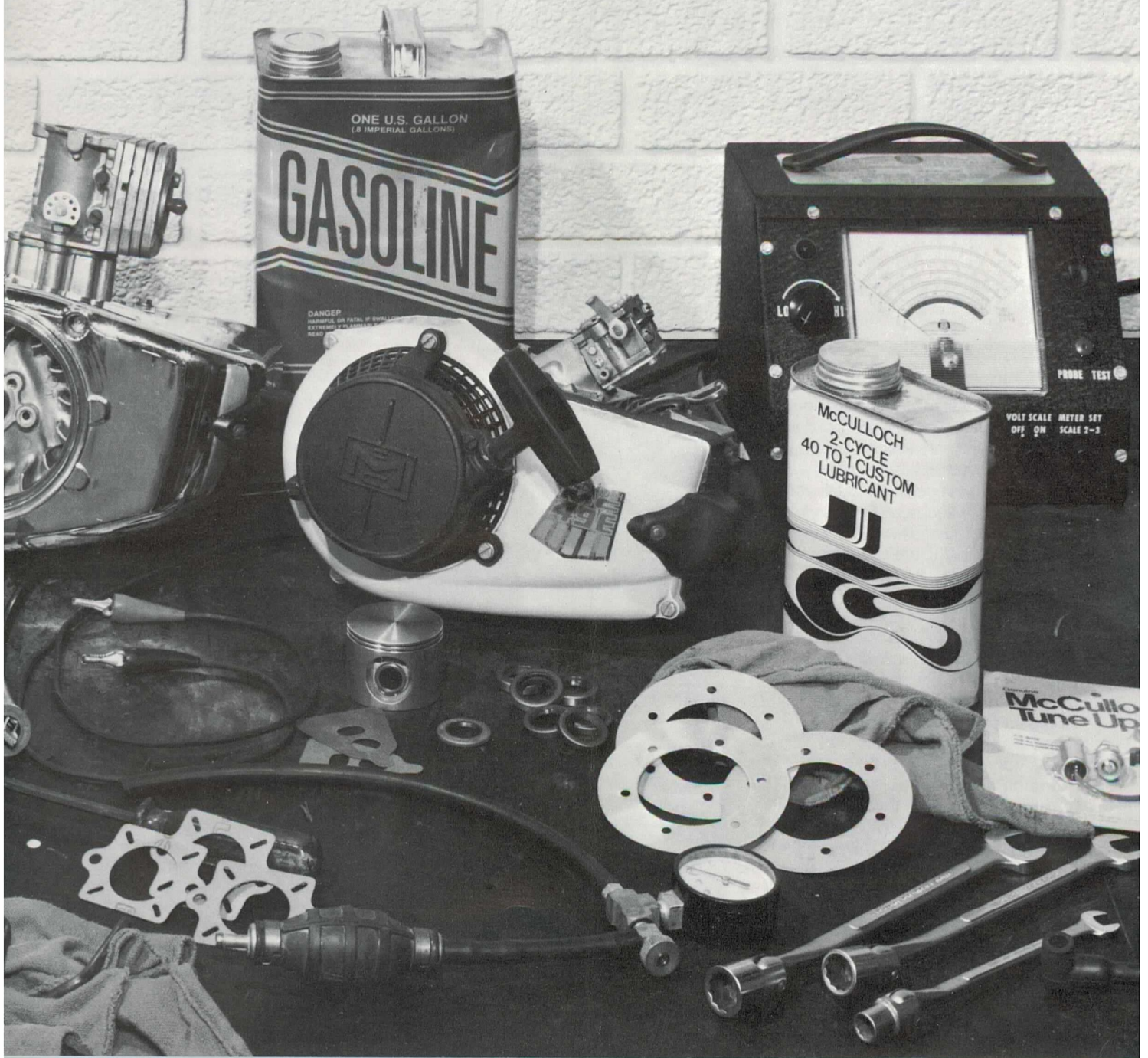
through the testing cells. That have been proven on the dynamometers and the test tracks. That have been perfected in the X-ray chambers, under the microscopes, and within the electronic measuring devices.

Only McCulloch can make these parts, because only McCulloch has the blueprints. Only McCulloch parts are tested and proven to be in com-

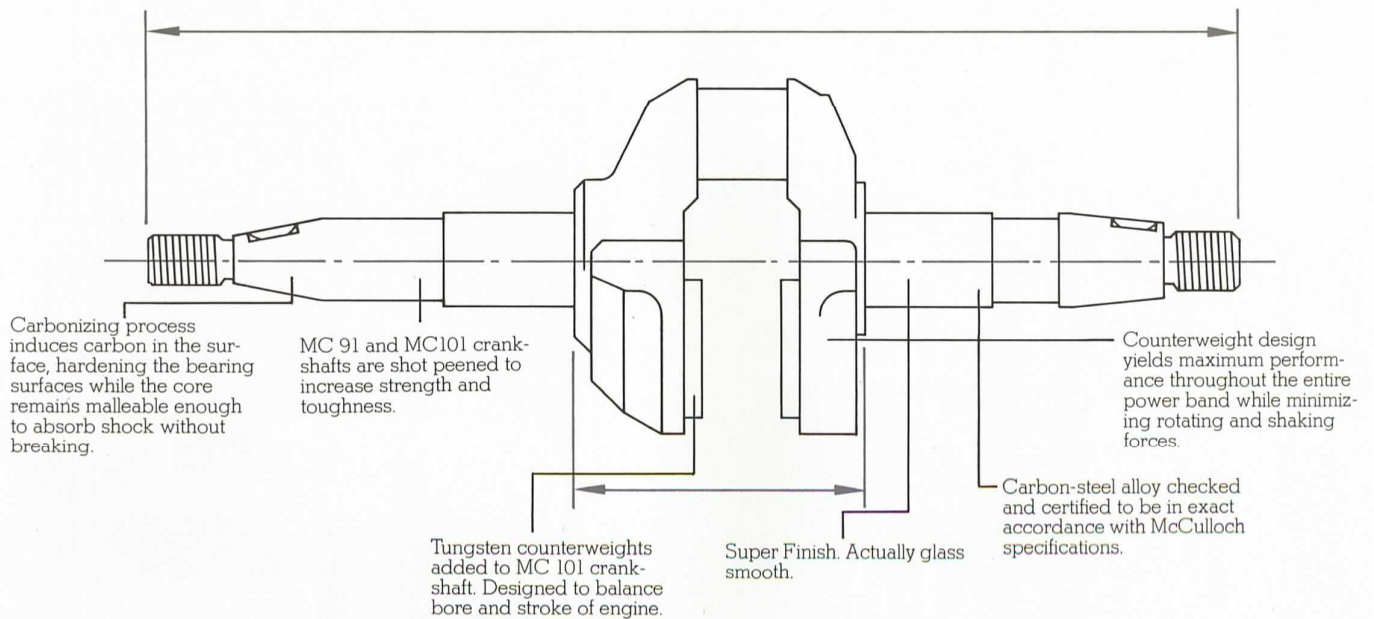
plete compliance with every tolerance and specification of your McCulloch engine. Winning begins when you start with the best. Insist on genuine McCulloch replacement parts because:

Nobody but McCulloch makes genuine McCulloch replacement parts. Nobody.

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The crankshaft: Many a race has hung on its balance.



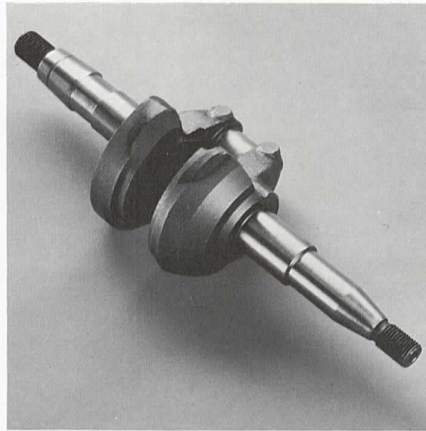
Always look for the McCulloch part number. Why gamble? Insist on genuine McCulloch parts.

You hit the last turn together. You pull in under and push hard. Your ears pound with the screaming of engines straining for that last ounce of power.

Power you'll receive because your genuine McCulloch crankshaft yields a ratio of minimum crankshaft weight to power output. There's no finer crankshaft made. The carbon-steel alloy forging is metallurgically checked, then magna fluxed to check for cracks, inclusions, forging laps and impurities. After the preliminary grind comes carbonization of the surface and heat treating to insure even case hardening. At the finish grind straightness and parallelism are achieved.

The counterweight design yields maximum performance throughout the entire power band while minimizing rotating and shaking forces. On the bigger bore MC 101, tungsten counterweights are used to effectively balance the bore and stroke of the engine.

The high horsepower MC 91/B1 and MC 101/AA crankshafts are shot peened to increase strength and tough-



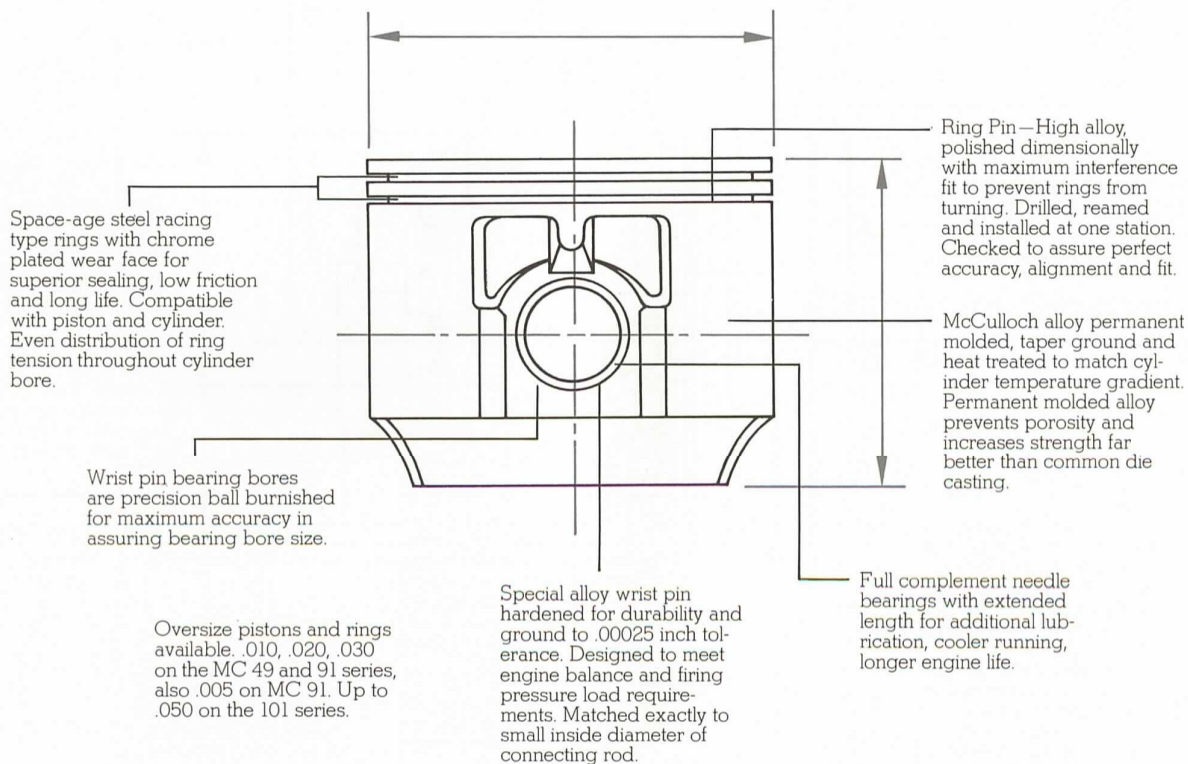
ness by making the surface dense to resist wear and fractures. Then a Super Finish leaving the critical crankshaft diameters glass smooth. And finally submersion in a 350° Soaking Pit. This normalizing process releases all remaining tensions and strains in the metal.

Some 726 inspections on each crankshaft and McCulloch's 28 years in building engines mean you can count on our balanced crankshaft to tough it out. Genuine McCulloch crankshaft, pistons, con rods, wrist pins, etc., function as a perfectly balanced unit. The quality controls, tests and engineering skills that go into every McCulloch crankshaft are an example of the care that goes into every McCulloch part. So whenever a race hangs on the balance of your genuine McCulloch crankshaft, that race is as good as won.

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Nobody but McCulloch makes genuine McCulloch replacement parts. Nobody.

The piston: Keeping cool in a tight spot.



Always look for the
McCulloch part number.
Why gamble? Insist on
genuine McCulloch parts.

You stand there strapping on your helmet, eyeing the competition, sizing up the field. It's gonna be a rough one but you're ready. The cylinders are true, the pistons and rings are genuine McCulloch. The best you can put in a McCulloch engine. You wouldn't settle for less.

Neither would McCulloch. That's why McCulloch specifies an exclusive alloy for McCulloch pistons. To match the cylinder temperature gradient, the pistons are taper ground. Because an aluminum piston expands at a different rate than the cylinder's cast iron liner with the rate of expansion being greater at the top near combustion. Tapering reduces uneven expansion and the friction it causes. The full



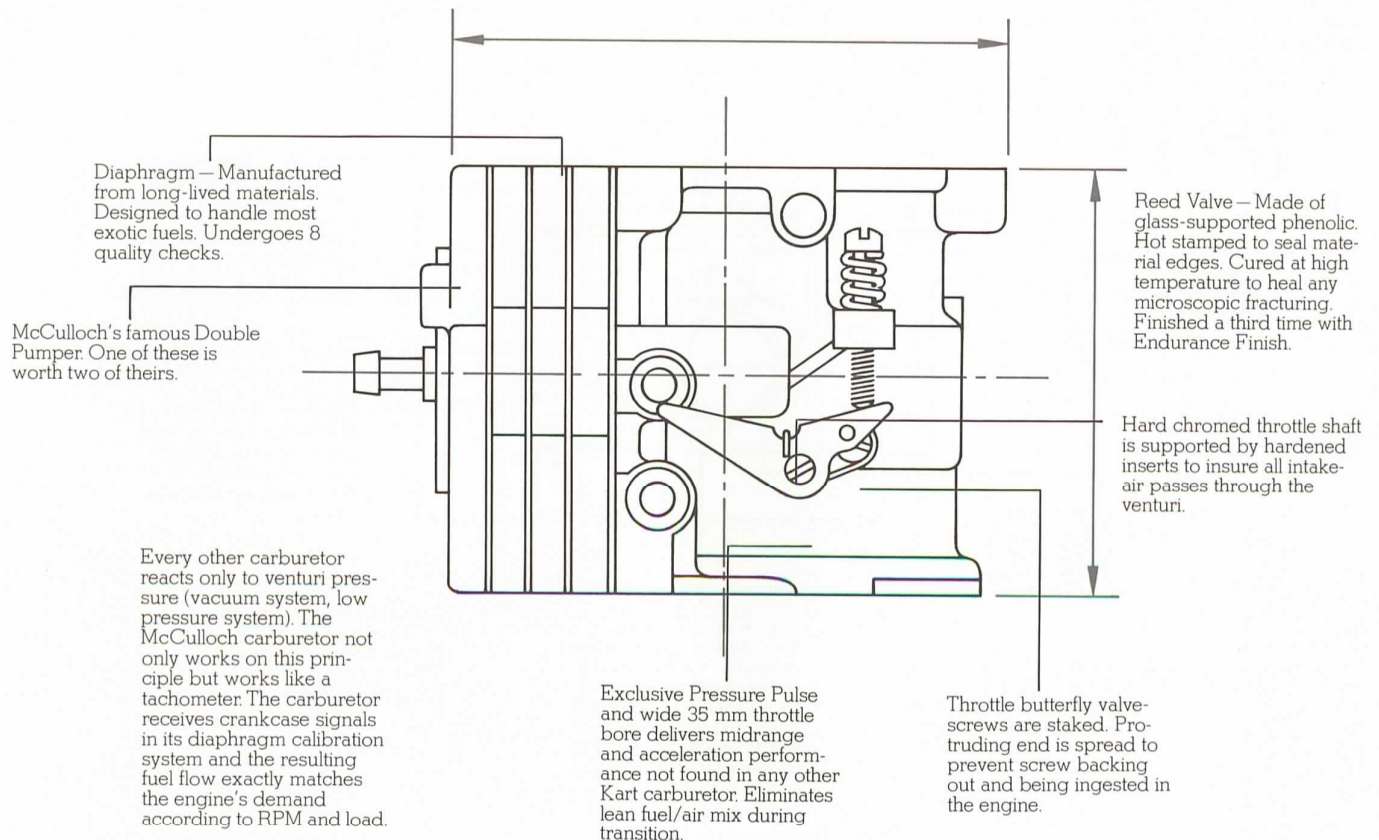
complement wrist pin needle bearings with extended length contribute to cooler running. Like every other genuine McCulloch part, the piston is checked by each operator in each area of manufacture. This Barrier Inspection is a McCulloch tradition.

McCulloch makes more pistons than any other Kart part supplier in the world, some 600,000 a year. When you make that many pistons, you can't afford any mistakes. So don't take chances. Get the pistons that keep cool in tight spots. Genuine McCulloch pistons.

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The carburetor: One of these is worth two of theirs.

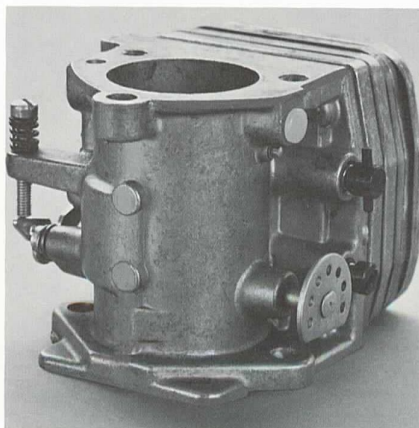


Always look for the McCulloch part number. Why gamble? Insist on genuine McCulloch parts.

The engines whine, the field is ready. Green. Moving from midrange to race-winning speed. Your genuine McCulloch carburetor turns fuel to horsepower in smooth, rapid acceleration.

McCulloch invented and designed its exclusive Pressure Pulse System for this moment of transition. When other carburetors tend to run lean, you're flying with a 35 mm throttle bore. This carburetor was specially designed with McCulloch's Pressure Pulse System to deliver the precise fuel/air ratio mix at all engine loads and speeds.

To check for distortion and deterioration test carburetors are chosen at random and soaked 24 hours in iso-octane. The resulting wear is equivalent



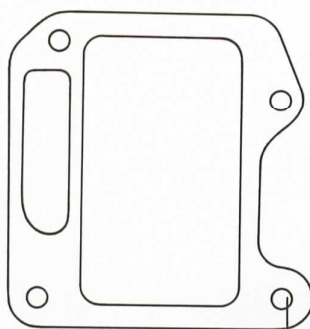
to many racing hours running exotic fuels. Air is then induced to 5 lbs. pressure to expose any leaks. If the test carb flunks, the entire lot is rejected.

This genuine McCulloch carburetion system is designed specifically for McCulloch engines. Close attention to metals and materials means you can run most exotic fuels. The same attention is paid MC 49 and 91 systems. And of course McCulloch specifications are accepted by the governing kart bodies.

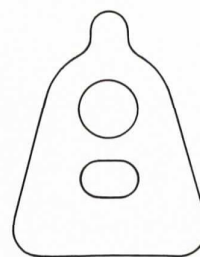
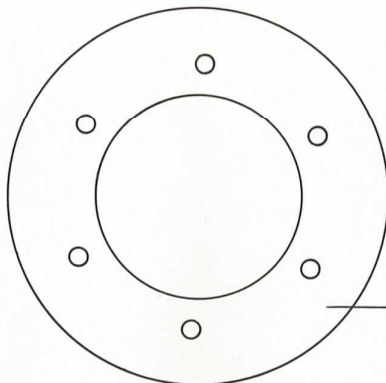
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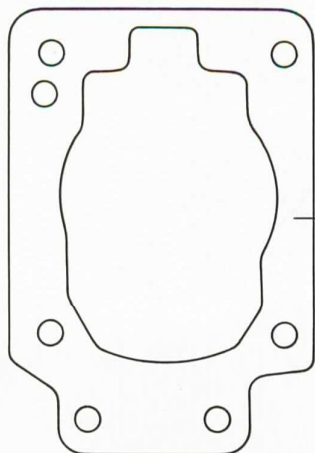
The gaskets and the seals: To blow or not to blow.



Compressibility checked and verified. Screws remain tight at proper torque.

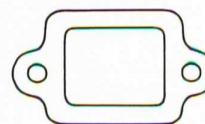


Head gaskets maintain precise form and thickness, resist distortion even under high compression.

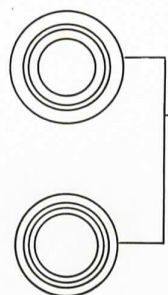


Holes cleanly punched, not just perforated. This precision cutting assures proper Pressure Pulse System operation. (Note: Some non-McCulloch gaskets can actually block out the Pressure Pulse System through sloppy or inaccurate cutting and/or gasket expansion.)

Seals are high quality, long lived and tight sealing. Materials designed for compatibility with new and exotic fuels. Selected and tested to insure performance in a McCulloch engine.



Materials tested to insure compatibility with mating parts.

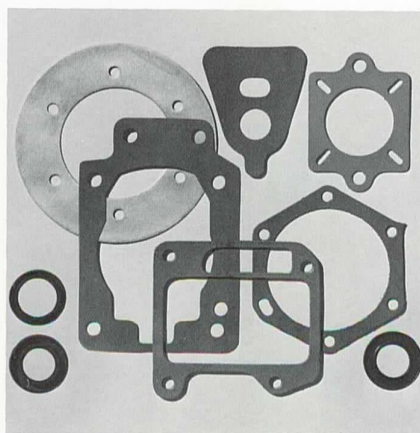


Seal retaining spring is non-corrosive material designed to create maximum seal with minimum lip drag. Outside diameter is precisely held to insure tight casting fit and to maintain contact area and alignment.

Always look for the McCulloch part number. Why gamble? Insist on genuine McCulloch parts.

It's the last lap of a long race. Everybody is praying his seals hold and his gaskets don't blow. You've got the confidence that comes from using genuine McCulloch seals and gaskets.

Like everybody else, McCulloch had its wear problems. The removal of lead from gasolines and the new exotic fuel mixtures attacked materials that for years had been durable and dependable. Seals were highly susceptible to the added phosphates. Thus, gaskets which once held their shape weakened under continual compression and heat. This eventually caused loose screws, improper torque and finally air leaks. Some manufacturers turned to compounds containing various chemicals. But many of these chemicals attacked engine castings



and components, so we looked elsewhere.

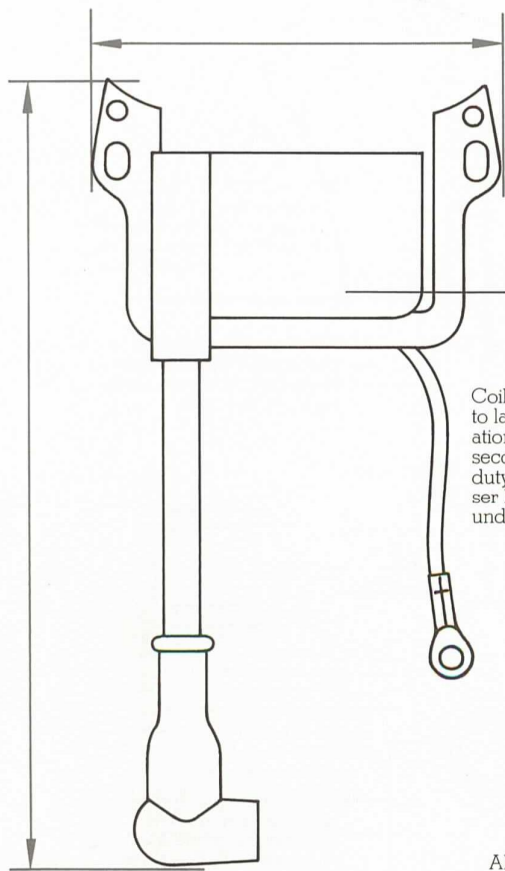
McCulloch engineers, lab experts and mechanics worked non-stop. Created new compounds, tested and re-tested. Now, not only do the compounds used in genuine McCulloch gaskets and seals withstand the new fuels, they do not harm the engine metals. We guarantee it.

Let the other guy worry about blowing a gasket. You concentrate on winning the race.

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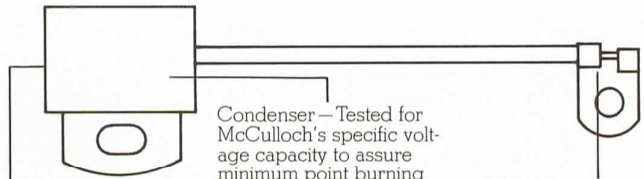
Nobody but McCulloch makes genuine McCulloch replacement parts. Nobody.

The ignition system: When it rains, it runs.



Coil—Centrifuge bonded to lamination for total insulation of all primary and secondary windings. Heavy duty insulation on condenser lead wire. Even fires underwater.

Steel body rather than aluminum for extra strength.

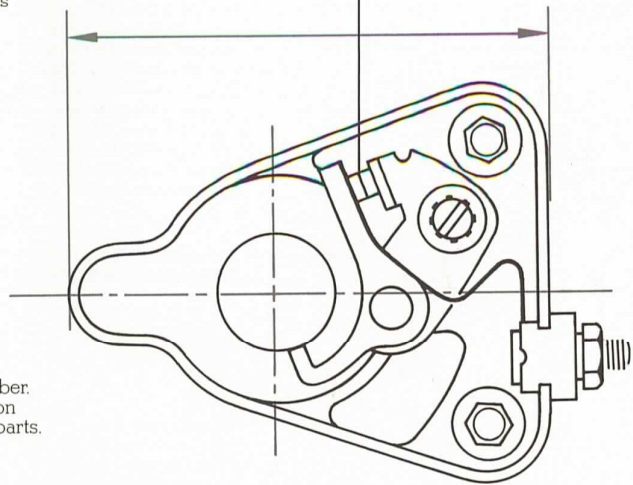


Condenser—Tested for McCulloch's specific voltage capacity to assure minimum point burning and maximum secondary voltage. (Note: Although similar looking, other condensers may have differing voltage capacity.)

Welded mounting bracket rather than lead soldered. Less chance of vibrating loose.

Moisture resistant, air-tight sealing throughout.

Ignition points—Tungsten contacts horizontally and vertically aligned. Controlled spring load. Lubricated with special lubricant that cannot harm metals. Scrutinized for burrs on the finish and cam follower.



Always look for the McCulloch part number. Why gamble? Insist on genuine McCulloch parts.

You're lined up. You feel a drop, then another. You're using a genuine McCulloch coil. So you just can't keep from laughing as panicked drivers cover their ignition systems with helmets, gloves, newspapers, anything.

Somebody once bet that a wet McCulloch coil wouldn't fire. Genuine McCulloch coils fire perfectly when totally submerged in water. So you know it'll run right in any season. The entire ignition system is completely moisture resistant from condenser to points to coil.



Of course the best reason to insist on a genuine McCulloch ignition system is that it maintains the perfect, delicate balance a McCulloch engine needs for top performance. But it sure is nice to know that when it rains, it runs.

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