

# Norvel BigMig .074 Revlite

*Power to please*

The bolt-on muffler is sealed with a gasket, and this ensures a cleaner running engine with improved muffler pressure to the fuel tank.



PHOTOS BY RANDY RANDOLPH

by Randy Randolph

It was the sort of news that makes an engine guy smile, particularly one who's a big 1/2A fan. Norvel\*, a company with a reputation for exceeding expectations, promised that its new .074 would have the power of a .10 at only half the weight. The .074 has all-aluminum piston and cylinder technology and special oxide ceramic coatings. My anticipation grew with the hope that my previous, disappointing .074 experiences would be distant memories.

I had been flying a square and simple 1/2A control-line model with a rather tired Spitfire .045 engine. The airplane flew with very little enthusiasm. When the OK Cub .074 burst onto the modeling scene at a most attractive price, I decided it was just the engine to add zest to my airplane. Unfortunately, my airplane didn't gain the performance I had hoped it would.

Fifty years later, along came the Queen Bee .074. The Queenie looked good and ran well and was stronger than the poor old Cub at 1/3 throttle, but it still left me looking for something more.

My close encounter of the third kind was with the Norvel BigMig .074 RC. This engine is truly an improvement over previous 1/2As and actually gives the .09s good competition in the power department. Although the engine's larger size necessitates the use of an .09-size mount, the power available is well worth an extra 10 or 12 grams.

One of the noteworthy refinements in this BigMig is the bolt-on muffler with a gasket between the muffler and exhaust stack. This is a real improvement over the spring arrangement on smaller engines because the seal provides good muffler pressure to the tank through the provided tap. Also of interest is the fact that the carburetor can be rotated 180 degrees so the



The larger cooling fins and markings are unique to the .074, but the case appears to be an enlarged version of Norvel's popular .061. By removing the nut just below the fuel intake, the carburetor can be rotated 180 degrees.

fuel and throttle connections can be aligned with any previously installed engine. Be careful when you're adjusting the needle valve in this transposed orientation because it does move the needle valve closer to the muffler. The engine has a slightly larger bore so it comes with the Freedom 7L glow plug, which is slightly different from those used on Norvel's smaller engines.

I mounted the engine on my test stand and installed a light-load Cox\* gray 6x3 break-in prop. After filling the fuel tank with 15 percent nitro and 18 percent oil (a percentage of which is castor), I opened the needle two turns. I placed my finger over the carb and turned the propeller three revolutions to prime the engine. With one flip, the engine started immediately. I left the needle on the rich side for three tanks of fuel before leaning it out. After an hour of break-in with the muffler in place, the .074 twisted that 6x3 prop up to a little over 19,000rpm—a pretty nice number! By far the most impressive num-

## SPECIFICATIONS

<b>Model:</b> BigMig .074
<b>Manufacturer:</b> Norvel
<b>Part no.:</b> NVLB7R
<b>Displacement:</b> .074ci (1.2cc)
<b>Bore:</b> 0.46 in. (11.75mm)
<b>Stroke:</b> 0.43 in. (11mm)
<b>Weight:</b> 2.65 oz. (75g), including muffler
<b>Height:</b> 2 <sup>15</sup> / <sub>16</sub> in. (74.61mm)
<b>Horsepower:</b> 0.38 at 22,000rpm
<b>Case length:</b> 2 <sup>5</sup> / <sub>8</sub> in. (66.67mm)
<b>Case width:</b> 1 <sup>3</sup> / <sub>16</sub> in. (20.63mm)
<b>Muffler:</b> rotating bolt-on with gasket and pressure tap
<b>Glow plug:</b> Freedom 7L (included)
<b>Piston/sleeve:</b> Revlite AAO (aluminum piston, nickel-plated, aluminum cylinder, oxide ceramic coating)
<b>Carburetor:</b> single needle
<b>Fuel used:</b> 15 percent nitro; 18 percent oil
<b>Rpm:</b> 19,000 w/Cox 6x3; 15,500 w/Cox 7x3
<b>Price:</b> \$49.99
<b>Comments:</b> powerful output comparable to .10-size engines but weighs 50 percent less. A reversible carb and gasket-sealed muffler are just two of this engine's highlights.

ber was the 15,500rpm finally achieved with a Cox gray 7x3 I will use when flying. By the way, the Cox prop must be drilled out with a 5/32-inch bit to fit the BigMig .074 shaft. Both the Graupner\* and APC\* 7x3s required shims to fit the shaft, and the engine lost about 800 or so rpm with each of those props. In all cases, the lowest reliable idle was just a shade below 5,000rpm, and throttle response was excellent!

A lot of BigMig .074 RCs are going to be sold, and they will make a lot of people very happy. This is an easy engine to handle; the needle is not critical, and starting is a snap. This is a modern engine with all the refinements that current technology has to offer at a price that's sure to please.

\*Addresses are listed alphabetically in the Index of Manufacturers on page 142. †