

Going Single

By RYAN SCOTT

Photos By RYAN SCOTT



OWNER: MIKE BRANDT
LOCATION: ST LOUIS, MO

DaVinci AF61R Tested

JUST ABOUT EVERY FD owner at some point contemplates replacing the stock twin-turbo setup with a single. But single turbo options for RX-7 owners are many, and the choices can be very confusing. Prices can vary greatly, as can the turbos themselves. In researching what turbo in right for your application, you might find your head spinning from the seemingly endless array of options. The cost of the upgrade can also be prohibitively expensive. Typical turbo kits alone cost in excess of \$3000, and many ancillary systems such as fuel and engine management must also be upgraded to support the extra power.

Is there such a thing as an inexpensive way to go single and still get great results? DaVinci Motorworks of Belleville, IL gives us an answer. Their recently released turbo-kit, dubbed the AF61R could be just what many RX-7 owners have been looking for. The turbo itself was a joint effort between DaVinci and Garret, aimed specifically at the unique requirements of a rotary. Utilizing high a efficiency 61mm GT style compressor wheel and a 1.00 A/R divided housing, the turbo is claimed to flow enough for upwards of 500 horsepower. Yet because DaVinci buys the turbo direct, and makes most of the components in-house, they are able to keep the costs low. Also helping to keep the costs down was the decision to use bushings instead of ball-bearings. The final result is a tidy package complete with Stainless Steel exhaust manifold, 3" downpipe, and Tial 40mm wastegate for \$2250.

While it sounds great on paper, the only thing that matter is results. So I gave Ron at DaVinci a call to see if there was anybody in the area that had the turbo installed and tuned. Turns out there is, Mike Brandt had recently installed the kit and taken it to A-Spec in Chicago to have his Apex'i Power FC tuned. The results of the tuning session were even better than expected with the car making 393 horsepower at only 12-13 psi of boost. What makes that number even more impressive is that the power was made on a stock, un-ported motor with over 50,000 miles. So I decided to meet with Mike and feel for myself just how the turbo performs.



It was a cool Autumn day when I met with Mike, perfect for making good power. We hopped in the car and after a short learning curve, hammered the throttle. Immediately obvious was how quick and hard this turbo hits. Well before 4000 rpm's we were at a full 13psi, and shortly after rear tires were broken lose in a futile effort to get traction. Even with 275 width Yokohama rear skins, 2nd and 3rd gear under boost might as well have been on a frozen lake. Most impressive was the near total lack of turbo lag, with full boost by 3700 rpm to be precise. Also apparent was that this turbo has loads more un-tapped potential. At 13psi it pulls like a bull from 3700 rpm all the way to redline, and certainly would benefit from a few more psi which would put it closer to it's efficiency maximum of 82% at 18psi.

When asked if he'd be turning up the boost soon, Mike said that he didn't want to push his luck at the moment. With 50K+ miles on a stock block, you have to believe that the apex seals could let go at any time. But with already a few months of driving in the books, you'd have to say any prior expectations have already been surpassed. Still Mike says that he has a spare block that he plans to rebuild and keep as a spare, and if that happens he'll be trying out 18psi.

For sure, if you're considering going single, the DaVinci AF61R should be on your short list. I can't think of any other kit on the market that offers this high of a price to performance ratio. It's another example of the exciting changes that have taken place with turbo technology in recent years. **RX**