

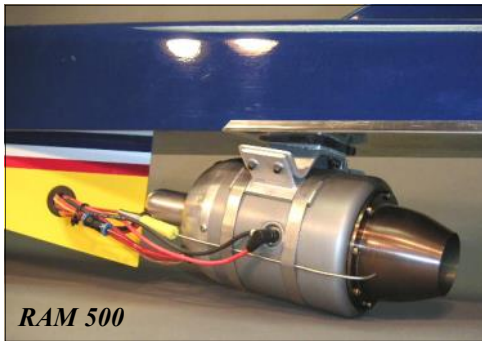
12 TURBINE INSTALLATION

This will be a brief overview of the turbine installation on the Reaction 54. You really need to consult the instructions that came with your turbine for detailed information on hooking up your turbine.

Turbine Mount - BTE offers several types of aluminum mounting brackets for this model. The RAM-style bracket is the smallest and lightest, but requires a set of straps and tabs like the ones shown in the photo below (straps and tabs available from DreamworksRC.com). The PST-style bracket was designed specifically for the PST J600R turbine and the mounting straps that are normally provided with that turbine. The PST-style bracket also works with other turbines using spacers (provided by BTE). Also available are brackets for the JetCat P60-SE and the Artes Super Bee. I can work with builders to develop special mounts as needed. Give me a call and we can work out the dimensions.



Thrust Angle - During flight testing of the R54, it became evident that a significant nose-up angle on the turbine engine was needed to provide trim-free response to changes in throttle setting. The proper angle eventually worked out to be 6-1/2 degrees in relation to the stabilizer/fuselage top. The kit includes a hardwood wedge that will set your turbine mount at the proper thrust angle. For balance purposes, the turbine should be mounted as far forward as possible. In fact, a neatly-done notch in the rear edge of the boat tail may allow you to move the turbine forward an extra half inch or more. Use four #6 x 1" stainless steel sheet metal screws to hold the aluminum mount and thrust wedge in place.



Heat Shield - The hot exhaust stream from the turbine doesn't even come close to the bottom of the fuselage or stabilizer. The turbine itself, however, gets very hot and can radiate heat for some time after shutdown. For this reason, the kit includes a thin sheet of stainless steel to protect the bottom of the fuselage above where the turbine will be mounted. I suggest buying

an expendable pair of scissors to cut the material to the fuselage shape. Holes for the turbine mount screws can be drilled or punched. Once it is epoxied in place, use the aluminum tape (cut into 3/8"-wide strips) to hide the edges.

Fuel Lines and Wiring - All of the wiring and fuel/propane lines going to the turbine need to be routed through a hole in the side of the boat tail. The kit includes a rubber grommet to protect the wires and fuel lines from chafing. The grommet fits a 3/4" diameter hole. Larger grommets can be found at your local hardware store if needed.

ECU Position - You have probably figured out that the ECU should be mounted on the ECU shelf, right? Most ECUs have LEDs and/or plug-in receptacles for hand-held data terminals, so it's important to keep it visible and accessible. The thing to keep in mind is that ECUs are known to emit their own RF noise, so try to keep it as far from the radio receiver and antenna as possible. Use Velcro, rubber bands, or tie wraps to hold the ECU in place.

ECU Battery - Typically, the ECU battery is a 6-cell NiCad, otherwise known as "useful nose weight". There's no sense substituting a lighter Li-Po battery, because the weight is needed in the nose. The battery doesn't need to be wrapped in foam, but I like to wrap it up to help protect it in case of a crash. Depending on your turbine, you may need a custom extension for the battery to reach the ECU.