Great Planes Escapade .40-.55 52.5”

The Escapade is a nice Sport Flying plane that does very well electric powered. They list the flying weight of the plane at 5 to 5.5 pounds. For general sport flying, 100 watts per pound is adequate, which would be 500-550 watts, but if you would want a little bit peppier pattern level performance, 150 watts per pound is good and that would require 750 to 825 watts of power.

For this size plane, you can use a 4-cell or 5-cell LiPo battery A 4-cell 4000mah battery will weigh about 16 ounces, and a 5-cell 4000mah battery will weigh about 20 ounces. If you wanted to have a wide range of power options available, then going with the 5-cell battery would let you fly with several different props to tailor the power output to your desired power level. For use on either 4 or 5 cells, the BadAss 3520-790 motor would be a great choice. If you run it on 5 cells, with 10-11 inch props, it will behave like a .45 to .55 2-stroke engine, and if you run it on 4 cells with 12-13 inch props, it will behave like a .70 4-stroke engine.

For example, running on 5 cells, a 10x7 prop will make the power of a .45 2-stroke and an 11x7 prop will make the power of a .55 2-stroke. Here are the full throttle performance numbers for those 2 props.

With the 10x7-E Prop

Volts – 18.5
Amps – 47.8
Watts – 885
RPM – 12,409
Thrust – 90 ounces (5 pounds 10 ounces)
Speed – 82 MPH

With the 11x7-E prop

Volts – 18.5
Amps – 62.6
Watts – 1158
RPM – 11,867
Thrust – 119 ounces (7 pounds 7 ounces)
Speed – 79 MPH

Running on 4 cells with a 12x8-E prop, you would get these performance numbers.

Volts – 14.8
Amps – 56.1
Watts – 830
RPM – 9438
Thrust – 92 ounces
Speed – 72 MPH

So you can see that this is a very versatile motor, that can give you many power options. This motor has a maximum current rating of 70 amps, so it is best to team it up with an 80-amp ESC, like the BadAss Rebel V2 80-amp unit.

For batteries, depending on the desired power level, you could use a 4-cell or a 5-cell battery with a 4000 to 5000mah capacity. Flying times would be in the 7-10 minute range, depending on the battery and power level you typically fly at.

I would start with the 10x7 prop and a 5-cell 4000mah battery, and then if you want better performance try the 11x7 prop.

Below are links to the items described above.

BadAss 3520-790 Motor: https://innov8tivedesigns.com/badass-3520-790kv-brushless-motor.html

BadAss Rebel V2 80-amp ESC: https://innov8tivedesigns.com/badass-rebel-v2-series-brushless-esc-80a.html

BadAss 5S-4000mah LiPo Battery: https://innov8tivedesigns.com/badass-45c-4000mah-5s-lipo-battery.html

APC 10x7-E Prop: https://innov8tivedesigns.com/apc-b10x7e-propeller.html

APC 11x7-E Prop: https://innov8tivedesigns.com/apc-b11x7e-propeller.html