FD117 Tip Installed On Short Tip Rotor

Some may have considered the possibility of a FD117 Tip installed on a Short Tip Rotor. The simple answer is yes with good Secondary Voltage (SV) results……but not the best results. It’s all in the numbers. The max gap between terminal and rotor tip is likely to climb to near .030” when all cap machining is completed.

The below pictures show the attempt and controlling variable……the hole that must be drilled has a too tight a range on required versus allowed location.

1. Picture 1 shows what happens if the rivet is pried off the short tip rotor and the FD117 rotor tip is simply installed with the rivet thru the FD117 original hole; the comparison between the ends of the short tip & the FD117 shows the FD117 tip to extend 3/16” beyond the short tip. What is wanted is 3/32” = the 1/16” that a longer rotor tip has to offer and 1/32” to give an added length to allow machining the cap.
2. Picture 2 illustrates what happens if the short tip template is placed in a location to give that required 3/32” (.093”) FD117 tip overhang; the holes intersect slightly. Said a different way if a hole is drilled in the FD117 to place it in the correct location on the short rotor then the holes will break into each other. The centerline of each hole needed to be 3/32” apart (3/16 – 3/32= .093”)……but each 7/64” diameter hole has a radius of .055 ” so the holes would have to be .109” apart just to be edge to edge.
3. Picture 3 illustrates what happens if the short tip template is placed in a location to give a 1/16” extension of the FD117 beyond the short tip: the holes are now close to being edge to edge ….. there is no extra 1/32” to allow for machining out a large gap that an excessively eccentric cap might contain.
4. Picture 4 shows the results of drilling the FD117 with the holes edge to edge.
5. Picture 5 shows the FD117 tip installed on a BlueStreak short tip rotor.

Results after machining the cap will vary depending on how eccentric the cap was to begin with before machining. In this example the cap started out with a .034” max gap with a MO3000 rotor and changed to a max gap of .028 after installing the FD117 tipped BlueStreak rotor & machining the cap……essentially the triple wide FD117 tip ending up being installed about .006 longer than a stock MO3000 rotor as limited by the hole placement. Eccentricity for the cap originally was .010” and when completed fell to .005”. The improvement was good.

This BlueStreak Rotor & cap will be installed on my daughter’s 65 Dart with HEI ignition and the SV before and after will be posted. At this point readers should be able to predict SV might drop to as low as 3000 volts with those final gaps and triple rotor width combination. SV test data will not be added to the existing data chart since too many variables are changing when the engine changes and the ignition system associated with that engine change.