



5.7/6.4 HELLCAT FRONT DRIVE SWAP

***Note – The Passenger side cylinder head will have to have a boss removed and a boss welded up to mount the supercharger tensioner bracket to. You will need a head gasket for the passenger side and bolts (Head gasket and bolts will depend on engine build. A picture is attached to the bottom of this write up.) If you are running “Thitek” brand heads this will not be an issue for your build as they are drilled for all bolt patterns on the front of the head.**

***Note – The Head bolt pattern for the intake is different from the Hellcat to the 5.7/6.4. This will require adapter plates that are made by several different companies or “Thitek” heads. There is also the option of drilling and tapping the head to accept the outside bolt pattern of the Hellcat S/C.**

Parts needed:

- Timing Cover – 68165888AE
- Oil Pan – 53010814AA
- Oil Pan Gasket – 68165605AA
- Dipstick Tube – 68195711AE
- Dipstick- 53010823AD
- Water Pump – 68165882AD
- Thermostat Housing – 68185117AC
- Balancer- 53010831AD
- Bolt – 06502929 Qty. 2
- Coolant Tube – 68165893AD
- Coolant Tube – 68165894AD
- Tensioner Bracket – 68217886AB (*See Note Above)
- Bracket Bolts – 06104221AA Qty. 3
- S/C Tensioner – 53011558AA
- Tensioner Bolt – 06102382AA
- S/C Idler w/bolt - 53011557AA Qty. 2
- Upper Radiator Hose – 68662784AA
- Lower Radiator Hose – 05181877AH

*The above list is minus the front cover bolts that will be reused from the original setup on the 5.7/6.4.

There are some other differences that will need to be addressed as well



- Air conditioner / trans cooler lines on the drivers' side coming off the compressor are different to allow for the different location of the radiator hose. These lines can be bent to accommodate the necessary room, or you can install the Hellcat AC line to give yourself more room. P/N 68158886AC
- PCV system – The PCV system for the Hellcat is entirely different from the 5.7/6.4 which runs entirely through the intake manifold. The Hellcat PCV runs through both valve covers. You will either need aftermarket valve covers with PCV provisions, or Hellcat valve covers with the PCV hoses. (If you choose to go to the hellcat valve cover option, keep in mind the coils face down, and if using a 5.7/6.4 harness you will need to extend the wires.)
- Belt sizing – The belt sizing will depend entirely on the pulley setup you plan to run on the car.
- S/C Heat Exchanger – This is a given for the swap. There are several ways to solve this with either OEM parts, aftermarket coolant tank in the trunk or a Whipple supercharger setup. Or a complete custom setup. We can assist with the options of this. The OEM setup is quite expensive with all the lines, tank, heat exchanger, brackets, tank and pump.
- Oil cooler. The oil cooler on the 5.7/6.4 utilizes a stacked plate oil cooler on the oil filter housing that is tied into the radiator hoses, and there are no provisions for this type of cooler on the Hellcat front drive. The Hellcat uses a stand-alone oil cooler behind the passenger side of the bumper. If you choose to go no oil cooler you can just use an oil filter adapter from a pickup P/N 04892338AC. With no oil cooler we would recommend for drag racing or short course racing only, as oil temps will get into the 230–240-degree range on a 100 degree day just cruising down the highway. With that being said we highly recommend the Hellcat oil cooler setup with lines, adapter and all. These parts are the same for Charger/Challenger

Hellcat oil cooler parts list:

- Oil filter adapter – 68166516AF
- Inlet Hose – 05181869AD
- Return Hose – 05181876AE
- Cooler – 05181879AD
- Bracket – 68205006AE
- Duct – 68205062AE
- Push Pins – 06509590AA Qty. 6
- Push Pins – 06505411AA Qty. 11
- Body Nut – 06501260
- Bolt – 06506733AA
- Nut – 06104709AA Qty. 5
- Nut – 06104709AA Qty. 4



With the swap being done there are some electronic differences as well

- Boost bypass – The factory Hellcat supercharger utilizes a throttle body for the boost bypass. There is no provision in the harness for this, so you would need a Hellcat harness and PCM from a Hellcat to make this work, as there is no driver in the 5.7/6.4 PCM for this throttle body. As of the time of this writeup, there is no vacuum bypass option for the OEM supercharger. (Aftermarket EFI Management systems such as Holley can control this as well). Another solution is to order a Gen 3 Whipple with a Hellcat head unit with a 5.7/6.4 head bolt pattern. This will utilize a custom vacuum bypass to allow this to work without any electrical changes
- MAP sensor(s) – The Hellcat uses 4 x 4 wire MAP Sensors to monitor IAT and Pressure, where the 5.7/6.4 uses a 3 wire and a separate IAT sensor.