

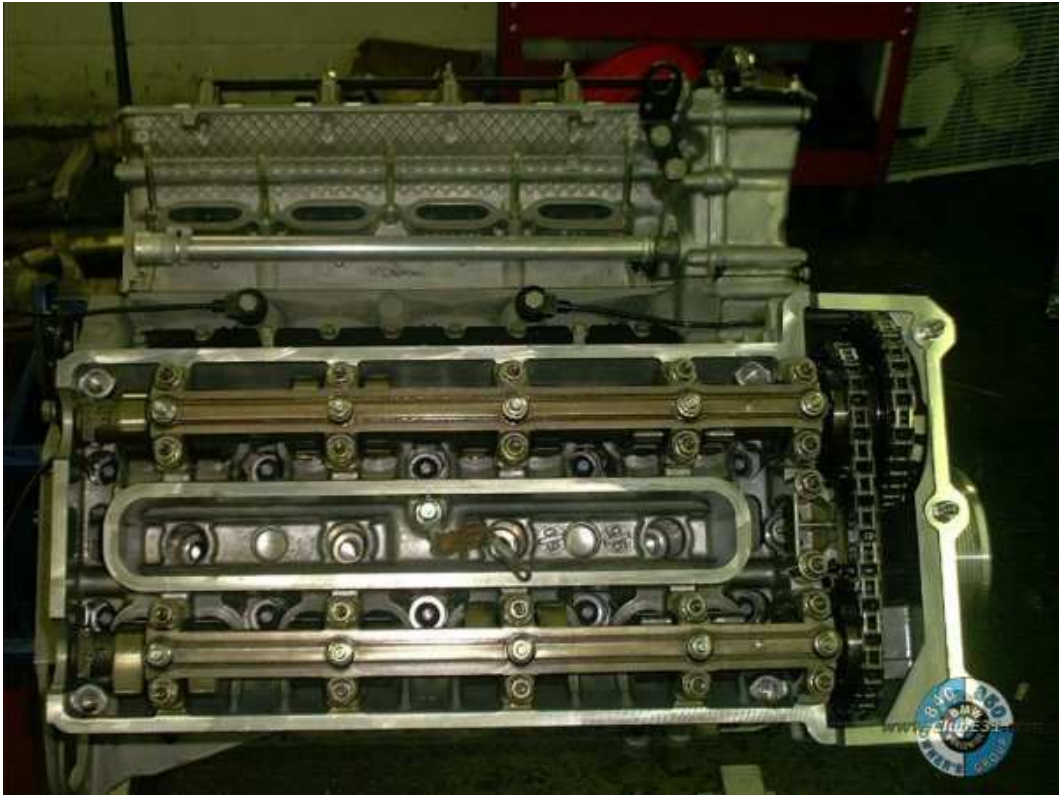
Hey I finally got the 840 done. If it's ok I am sending you some technical pictures first and then I will send you pictures of the car. The photos are the ones I sent to ESS superchargers per our agreement to try and build a kit for these cars. This is the first in the US. Thank you for your response. I am going to list the modifications and my cost which does not include labor.



My original 4.4litre motor blew up by melting a piston during a lean condition using nitrous. The kit is not necessarily at fault, but when I hit the button off the line it spun out very hard and automatically shifted into second. To soften the shift the ECU reduced timing and fuel and leaned out cylinder number two. Unless someone can alter the programming for nitrous oxide I do not recommend this as a reliable method of power. In the process my block was scored and ruined by the piston breaking. We bored the block one millimeter and used US CHROME to re-impregnate it with Nikasil, a better performance option.

Cost \$1800

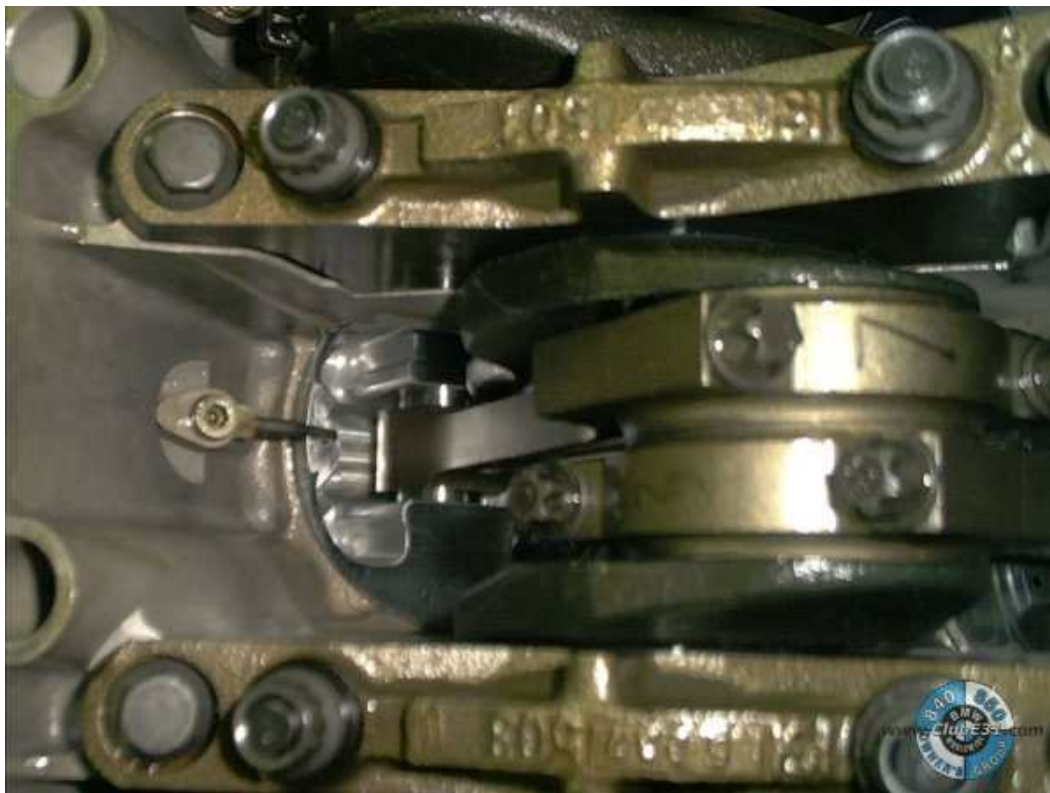






The pistons were one off and built by WISECO for this application. They are forged and have ceramic coated tops as well as poly-di-sulfide coated skirts. These pistons reduced rotating mass by almost one pound and are superior to the cast original pistons. All rod and main bearings were also coated with poly-di-sulfide compound for reliability and friction reduction.
Cost \$1300





We have found that under high loads the crankshaft of a 4.4 has a tendency to shift back and forth due to the main bolts used by BMW. We have corrected this by using RACE WEAR STUDS to hold the crank in place.

Cost \$300

The heads were sent to EXTRUDE HONE where there process takes all the imperfections out and makes them as smooth as glass for high flow. 4.4 heads are very efficient except for the exhaust ports which we increased by 6 millimeters. Furthermore, we installed a set of M60 cams which have 9.6 millimeter lift. The cams required some machining to fit.

Cost \$800





The exhaust was treated to Supersprint Mufflers and all headers were radiused for increase flow.
Cost \$1200

The supercharger kit was from a 540 application and was done by ESS in Norway.

The kit required custom mounts as well as plumbing to fit under the 8 series. This was very involved and included re-routing the AC hoses as well. ESS custom programmed our car for optimum performance by addressing all the parameters provided.

Cost \$6000



The transmission ECU was reprogrammed for a 6200 rpm shift. The stock 5 speed Steptronic is bullet proof and is rated for 550 horsepower. To get all that weight rolling quickly we had LEVEL 10 Performance increase the stall speed to 2600 rpm and used aluminum internals to reduce reciprocating weight. This was a huge improvement and makes the car a lot more fun being able to launch the way it does.

Cost \$400

The stock gears were exchanged from 2.81 to 3.64. I drove the car with the gears before the modifications and it helped it out a lot. I think this is the most aggressive gear any one should use as the drivability has changed to a more hyper type car.

The gears were done by METRIC MECHANIC.

Cost \$1400











I will dyno the car in about a month after break in and inform you on specs. We estimate 460-475 crank horsepower without nitrous. I will tell you though; it is a real fun car now. The pull in the midrange to redline is astonishing compared to stock. 0-60 should be in the high 4 second range and quarter mile times of 13 seconds at 112 mph. 0-100 mph should take high 10 seconds. That is a six second improvement over stock.

Thank again,

Tom Georgalis
840 Hellraiser

The above mentioned vendors have web sites so look them up if you wish. Let me know what you think, and if you need any help I will be happy to assist you and get your 840 embarrassing some 850CSi's.