

PARTS & ACCESSORIES BULLETIN

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PERFORMANCE PARTS

EVOLUTION 1340 MODELS

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V² EVOLUTION™ ENGINE PISTON TO VALVE CLEARANCE

CAPITOL DRIVE DID NOT KEEP TRACK UP VIN NUMBERS FOR ENGINES THAT REQUIRE PISTON NOTCHING. THUS, SERVICE TELLS DEALERS →

In the past several months the V² Evolution™ engine package has undergone a number of refinements. Among these are two that should concern those preparing to hop-up an Evolution:

1. The overall height of the cylinder was reduced .010" for a slight increase in compression.
2. The valve relief notches were eliminated from the piston crown. These were found to be unnecessary for production engines.

The E-1 cam in the 25490-84 hop-up kit has greater lift and much longer duration than does the stock cam. Designed as a bolt-in cam, there were no interference problems, even with short cylinders and milled heads. The elimination of the valve relief notches changed this. Our layouts show that in most cases the exhaust cam will have 0.070" - 0.080" piston-to-valve clearance. The intake, however, will have only 0.020" - 0.030" piston-to-valve clearance; this allows little margin for valve bounce, tolerance stack-up or carbon build-up.

When installing non-stock cams, it is common practice to put clay on the pistons, assemble the heads and valve train, and turn the engine through by hand. The heads are then removed and the clay measured at its thinnest point. If not at least .080" thick, then notches should be cut into the piston crown to obtain that dimension. The depth of the notches must not exceed 0.135". It is strongly recommended that this practice be followed when installing the 25490-84 kit into one of these later engines.

If you plan to mill the heads and/or remove the base gaskets, determine how much may be removed as follows:

1. Install the camshaft and pushrods. Do any porting work desired and assemble the valves, springs, collars and keepers.
2. Clay the pistons, install the heads and turn the engine through by hand. Remove the heads and measure the clay at the thinnest point.

3. Determine the amount that may be removed from the heads/cylinders. As an example, suppose the clay measured 0.018" under the front intake.

0.080"	required clearance
<u>0.018"</u>	clay thickness
0.062"	minimum depth of piston notch
0.135"	maximum depth of piston notch
<u>0.062"</u>	minimum depth of piston notch
0.073"	Maximum amount to be removed from heads/cylinders.

Notify your Service Department and make your customers aware of this when selling the hop-up kit.

Sincerely,



Tony Grygera
Product Manager
Screamin'Eagle/Mechanical Accessories

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