

## **Ford FE Casting Marks – Understanding the hieroglyphics of FE engine “haruspicy”**

The purpose of this TRL entry is twofold. First, provide Bird owners equipped with FE engines with a repository of engine casting information for FORD FE engines. Second, provide them with a better understanding and interpretation of what may be residing in their Bird engine bay.

Why should this subject be of interest?

Casting marks can provide information without having to tear an engine apart. While they may not always be definitive, they can provide guidance.

For example, the previous owner of my '60 Bird was under the impression that the engine was a 352, as it had a “352” number casting on the block.

As I wrote in a forum posting on bell cranks, the engine did not have an OEM throttle connection, but one that was used on Galaxie FEs of the later 1960s.

It was actually one of jopizz's earlier postings that got me wondering. He pointed out that one could determine the difference between a 352 FE and a 390 FE by measuring the difference in height between the #4 and #1 cylinders at TDC.

Bottom line? It strongly appears from measurement and the block and head casting marks that the engine is a 390 FE, not a 352 FE.

I do not hold myself out as a Ford FE casting mark expert. Also, I encourage any interested reader to search FE engine forum sites to learn more.

Finally, in an age when websites come and websites go, a TRL listing can help all Birders with an FE engine know a little bit more about what is under the hood.

So, here we go.

(This entry assumes one appreciates the existence of two main FE family branches, the car engines and the truck engines.)

## FE Block Casting Marks

A majority of FE blocks have either a '352' or a backwards '501' cast into the front of the block. With the exception of a few hi-performance 428 blocks, most all other FE blocks are identical externally. Thus, you generally cannot tell what CID an FE engine is simply by looking at casting numbers or marks.

For example, here are the cylinder dims:

CID	Stroke	Bore
330 (T)	3.50"	3.875"
332	3.30"	4.00"
352	3.50"	4.00"
359 (T)	3.50"	4.05"
360 (T)	3.50"	4.05"
361 (E, PI, & T)	3.30"	4.05"
389 (T)	3.78"	4.05"
390	3.78"	4.05"
391 (T)	3.79"	4.05"
406	3.78"	4.13"
410	3.98"	4.05"
427	3.78"	4.23"
428	3.98"	4.13"

(T= truck; PI=Police Interceptor; and E=Edsel)

From the above table, one can begin to see how mixing and matching the strokes and the bores allowed such a variety of displacements, all from the basic FE block.

As explained on this forum, and on other forums, the best way of differentiating within the FE family is to measure the stroke. One rotates the crankshaft around until the #1 cylinder is at TDC (top dead center) as indicated at the timing mark. Remove the spark plug and insert a wooden dowel into the cylinder until you hit the top of the piston and make a mark on the dowel. (Use the valve cover lip as a constant reference source.) Then remove the spark plug from the #4 cylinder (when #1 is TDC, #4 is BDC) and make another mark on the dowel. Then measure the difference to get the engine stroke.

Of course, that does not tell you the bore dimension.

The bore may be inferred (but not necessarily confirmed) by combining the stroke information with the cylinder head casting mark information, as well as other indicia that may assign at least an age range to the engine.

Again, given the age of these engines, you could have an engine with achronological parts that can mislead one as to the bore.

Here is a table of block casting marks for FE engines. (It is not verified as being complete and may have some errors):

B9AE-B	'59-'60 352 c.i.d.	
	'59 332 c.i.d.	
C1AE-C	'61-'62 390 c.i.d.	
C1AE-G	'61-'62 352 & 390 c.i.d.	
C1AE-V	'61 390 c.i.d.	Police Interceptor, High Performance, Solid Lifters, Oil Pressure Relief Valve At Rear Of Block
C2AE-BC	'62 390 c.i.d.	Police Interceptor, High Performance, Solid Lifters, Oil Pressure Relief Valve At Rear Of Block
C2AE-BD	'62-'63 406 c.i.d.	Cross Bolted Mains, Solid Lifters, Oil Pressure Relief Valve At Rear Of Block
C2AE-BE	'62 390 c.i.d.	Police Interceptor, High Performance, Solid Lifters, Oil Pressure Relief Valve At Rear Of Block
C2AE-BR	'62 390 c.i.d.	Police Interceptor, High Performance, Solid Lifters, Oil Pressure Relief Valve At Rear Of Block
C2AE-BS	'62 390 c.i.d.	Police Interceptor, High Performance, Solid Lifters, Oil Pressure Relief Valve At Rear Of Block
C2AE-J	'62 406 c.i.d.	Solid Lifters, Oil Pressure Relief Valve At Rear Of Block
C2AE-K	'?? 406 c.i.d.	
C2AE-V	'?? 406 c.i.d.	
C2SE	'62 390 c.i.d.	
C3AE	'?? 360 c.i.d.	
C3AE-A	'63 352 c.i.d.	
C3AE-AB	'63 427 c.i.d.	Top Oiler
C3AE-AY	'65 390 c.i.d.	
C3AE-D	'63 406 c.i.d.	Has Bosses But No Cross Bolts
C3AE-F	'63 352 c.i.d.	
C3AE-G	'64 352 c.i.d.	
C3AE-KY	'63 390 c.i.d.	Police Interceptor, High Performance, Solid Lifters
C3AE-M	'63 427 c.i.d.	Top Oiler
C3AE-V	'63 406 c.i.d.	Solid Lifters, Oil Pressure Relief Valve At Rear Of Block
C3AE-Z	'65 427 c.i.d.	Top Oiler
C3ME-B	'63 390 c.i.d.	Police Interceptor, High Performance, Solid Lifters
C3SE-A	'63 390 c.i.d.	
C4AE	'?? 359, 361, 389, & 391 c.i.d.	
	'64 427 c.i.d.	Top Oiler

C4AE-A	'64 427 c.i.d.	Top Oiler
	'64-'78 330HD c.i.d.	Heavy Duty Truck, Has Bosses For Cross Bolted Mains; Partially Cast From 427 Molds, Reinforcement Webs
	'64 352 c.i.d.	
	'64-'78 359, 361, 389, & 391 c.i.d.	Has Bosses For Cross Bolted Mains Partially Cast From 427 Molds, Reinforcement Webs
C4AE-D	'64 390 c.i.d.	
C4AE-F	'64 390 c.i.d.	Police Interceptor, High Performance, Solid Lifters
C4ME-F	'64 390 c.i.d.	Police Interceptor, High Performance
C4TE-A	'?? 330HD c.i.d.	Heavy Duty Truck, Reinforcement Webs
C4TE-B	'?? 359, 361, 389, & 391 c.i.d.	Reinforcement Webs
C4TE-C	'64-'77 330MD c.i.d.	Medium Duty Truck
C4TE-D	'?? 359, 361, 389, & 391 c.i.d.	Reinforcement Webs
C4TE-F	'64-'77 330MD c.i.d.	Medium Duty Truck
C4TE-G	'?? 330HD c.i.d.	Heavy Duty Truck, Reinforcement Webs
C5AE-A	'65 390 c.i.d.	
	'?? 330HD c.i.d.	Heavy Duty Truck
	'65 427 c.i.d.	Top Oiler
C5AE-B	'65 390 c.i.d.	Police Interceptor, High Performance, Solid Lifters
C5AE-C	'65 352 c.i.d.	
C5AE-D	'65 427 c.i.d.	Side Oiler
C5AE-E	'65 427 c.i.d.	Top Oiler
C5AE-H	'65-'66 427 c.i.d.	To 12-9-65, Side Oiler
C5JE-D	'66 427 c.i.d.	Irrigation
C6AE-A	'66-'67 428 c.i.d.	CobraJet
C6AE-B	'65-'66 427 c.i.d.	To 12-9-65, Side Oiler
	'66 428 c.i.d.	Police Interceptor, Cobra Jet, Solid Lifters
C6AE-C	'65-'66 427 c.i.d.	Side Oiler
C6AE-D	'66-'67 427 c.i.d.	Side Oiler
C6AE-F	'66 428 c.i.d.	Police Interceptor, Cobra Jet, Solid Lifters
C6JE-B	'66 427 c.i.d.	Marine
C6ME	'66-'70 428 c.i.d.	Cobra Jet
	'?? 359, 361, 389, & 391 c.i.d.	
	'?? 330MD c.i.d.	Medium & Heavy Duty Truck
	'68-'76 360 & 390 c.i.d.	
	'66-'67 410 c.i.d.	
C6ME-A	'66-'67 410 c.i.d.	

	'?? 390 c.i.d.	
	'68 - '76 360 c.i.d.	
	'?? 359, 361, 389, & 391 c.i.d.	
	'66-'67 352 c.i.d.	
	'?? 330MD c.i.d.	Medium & Heavy Duty Truck
	'66-'70 428 c.i.d.	428-4V, Police Interceptor, Cobra Jet, May Or May Not Be Drilled For Hydraulic Lifters... Look For Oil Galleries
C6TE-C	'66 352 c.i.d.	
C6TE-L	'66 352 c.i.d.	
C7AE	'67 352 c.i.d.	
C7AE-A	'67 427 c.i.d.	Side Oiler
	'68 427 c.i.d.	Marine
C7AE-J	'68 427 c.i.d.	Irrigation
C7JE-A	'67 427 c.i.d.	Marine
C7JE-E	'67 427 c.i.d.	Industrial Engine
C7ME	'?? 359, 361, 389, & 391 c.i.d.	
	'?? 330HD c.i.d.	Heavy Duty Truck
C7ME-A	'?? 330MD c.i.d.	Medium Duty Truck
	'67-'70 428 c.i.d.	428-4V, Police Interceptor, Cobra Jet
C8AE-A	'68-'76 360 & 390 c.i.d.	
	'68 427 c.i.d.	Hydraulic Lifters, Side Oiler
C8AE-B	'68 427 c.i.d.	Hydraulic Lifters, Side Oiler
C8AE-C	'68-'76 360 & 390 c.i.d.	
C7ME-C	'67 428 c.i.d.	428-4V, Police Interceptor, Cobra Jet
C8AE-E	'68-'76 360 & 390 c.i.d.	
C8AE-H	'68 427 c.i.d.	Hydraulic Lifters, Side Oilier
C8ME	'?? 359, 361, 389, & 391 c.i.d.	
	'?? 330HD c.i.d.	Heavy Duty Truck
	'68-'70 428 c.i.d.	Cobra Jet
D1TE-AA	'?? 359, 361, 389, & 391 c.i.d.	
D2TE-C	'?? 359, 361, 389, & 391 c.i.d.	
D3TE	'?? 359, 361, 389, & 391 c.i.d.	Reinforcement Webs
	'73-'76 360 c.i.d.	Reinforcement Webs
	'?? 330MD c.i.d.	Medium Duty Truck, Reinforcement Webs

	'73-'76 390 c.i.d.	Reinforcement Webs
D3TE-AE	'73-'76 390 c.i.d.	Reinforcement Webs
D3TE-HA	'73-'76 390 c.i.d.	Reinforcement Webs
D3TE-1	'?? 359, 361, 389, & 391 c.i.d.	Reinforcement Webs
	'?? 330MD c.i.d.	Medium Duty Truck, Reinforcement Webs
	'73-'76 360 & 390 c.i.d.	Some Have "SPECIAL" Cast Below Number
D3TE-AC	'73-'76 360-390 c.i.d.	Reinforcement Webs
D3TE-BA	'?? 330MD c.i.d.	Medium Duty Truck, Reinforcement Webs
D3TE-BC	'?? 330MD c.i.d.	Medium Duty Truck, Reinforcement Webs
D3TE-EA	'?? 359, 361, 389, & 391 c.i.d.	Reinforcement Webs
D3TE-EB	'?? 359, 361, 389, & 391 c.i.d.	Reinforcement Webs
D3TE-EC	'?? 359, 361, 389, & 391 c.i.d.	Reinforcement Webs
D3TE-HA	'73-'76 360 & 390 c.i.d.	Reinforcement Webs
D4TE	'?? 330MD c.i.d.	Medium & Heavy Duty Truck, Reinforcement Webs
	'?? 359, 361, 389, & 391 c.i.d.	Reinforcement Webs
D4TE-1	'?? 330MD c.i.d.	Medium & Heavy Duty Truck, Reinforcement Webs
	'?? 359, 361, 389, & 391 c.i.d.	Reinforcement Webs
D4TE-AC	'74-'76 360 & 390 c.i.d.	Reinforcement Webs
D4TE-BC	'?? 330HD c.i.d.	Heavy Duty Truck, Reinforcement Webs
	'?? 359, 361, 389, & 391 c.i.d.	Reinforcement Webs
D4TE-CC	'?? 359, 361, 389, & 391 c.i.d.	Reinforcement Webs
D7TE	'?? 359, 361, 389, & 391 c.i.d.	
D7TE-AC	'?? 359, 361, 389, & 391 c.i.d.	
D7TE-BA	'?? 360 & 390 c.i.d.	Service Block

D7TE-DC	'?? 359, 361, 389, & 391 c.i.d.	
D7TE-GA	'?? 330HD c.i.d.	Heavy Duty Truck
EDC	'58 332, 352 c.i.d.	Solid lifters, two core plugs at front of block, four in rear, and three on each side.
	'58-'59 361 c.i.d.	
EDC-B	'60 352 c.i.d.	High Performance
EDC-C	'60 352 c.i.d.	High Performance
575063	'58 332 c.i.d.	Hydraulic Lifters
5751091	'58-'59 332 c.i.d.	
5750603	'58 352 c.i.d.	Hydraulic Lifters
5751091	'58-'59 352 c.i.d.	
5AE-D	'65 427 c.i.d.	Side Oiler
6AE-C	'65-'66 427 c.i.d.	Side Oiler

The above information is courtesy of these sites –

[Ford FE Engine Block Casting Numbers - FORDification.com](#) and [Ford block identification numbers location \(automotorpad.com\)](#).

A site with more general Ford engine castings is [A Guide To Ford V8 Engine Block Casting Numbers, 1952-1996 \(fordmuscle.com\)](#).

### FE Block Casting Mark Locations

So, where does one find the above block casting marks?

One more easily readable site is here on the front passenger side of the block near the #1 cylinder.:



(Casting from a FE 390 engine. Yes, it is upside down.)

## FE Cylinder Head Casting Marks

If the number of FE block casting marks is confusing, then sit down for the alphabet soup of FE cylinder head marks. No one seems to have a verifiably accurate and complete listing of all FE cylinder heads. One may simply have to read what you have and search online for your particular marks.

Here is one attempt at cataloguing the heads:

### Cylinder Heads

#### FE (330-428 SCJ)

C0AE-D	'60/ 352 c.i.d.	2.02" Intake Valve, 1.55" Exhaust Valve, 59-62cc Chamber
C2SE-A	'61-63/ 390 c.i.d. High Performance	2.02" Intake Valve, 1.55" Exhaust Valve, 65-68cc Chamber
C2SE-B	'62-'63/ 406 c.i.d. High Performance	2.02" Intake Valve, 1.55" Exhaust Valve, 64-67cc Chamber
C2SE-C	'62-'63/ 406 c.i.d. High Performance	2.02" Intake Valve, 1.55" Exhaust Valve, 64-67cc Chamber
C3AE-C	'63/ 406 c.i.d. High Performance	2.02" Intake Valve, 1.55" Exhaust Valve, 64-67cc Chamber
C3AE-D	'63/ 427 c.i.d. High Performance Low Riser	2.08" Intake Valve, 1.64" Exhaust Valve, 64-67cc Chamber
C3AE-G	'63/ 427 c.i.d. High Performance Low Riser	2.08" Intake Valve, 1.64" Exhaust Valve, 73-76cc Chamber
C3AE-H	'63/ 427 c.i.d. High Performance Low Riser	2.08" Intake Valve, 1.64" Exhaust Valve, 73-76cc Chamber
C3AE-J	'63/ 427 c.i.d. High Performance Low Riser	2.08" Intake Valve, 1.64" Exhaust Valve, 73-76cc Chamber
C3AE-K	'63/ 427 c.i.d. High Performance High Riser	2.18" Intake Valve, 1.72" Exhaust Valve, 73-76cc Chamber



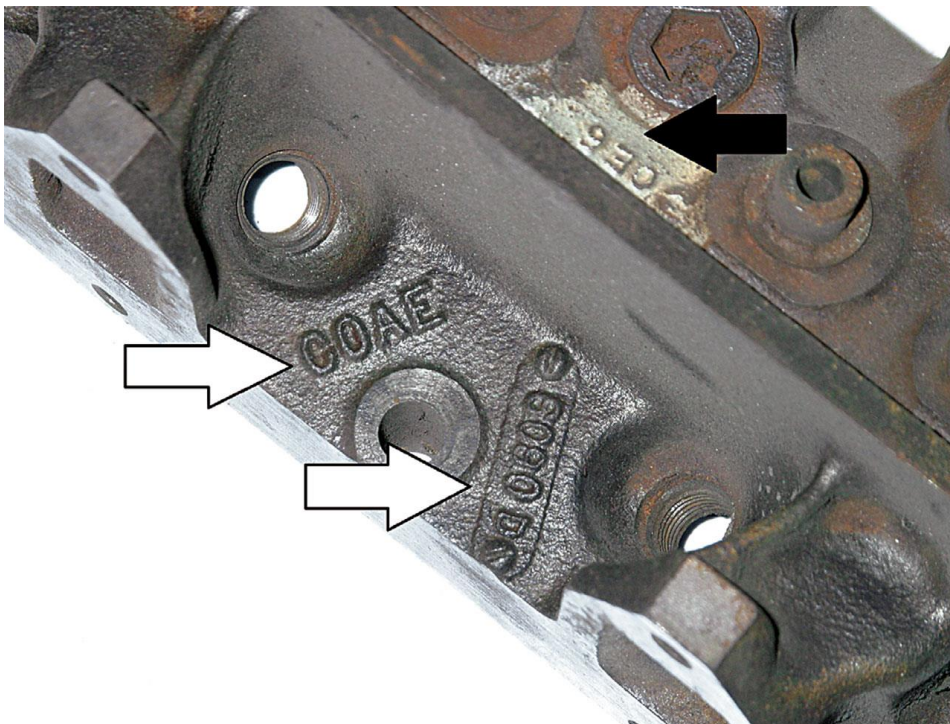
C4AE-F	'64-'65/ 427 c.i.d. High Performance High Riser	2.18" Intake Valve, 1.72" Exhaust Valve, 73-76cc Chamber
C5AE-F	'65-'67/ 427 c.i.d. High Performance Medium Riser	2.18" Intake Valve, 1.72" Exhaust Valve, 88-91cc Chamber
C5AE-R	'65-'67/ 427 c.i.d. High Performance Medium Riser	2.18" Intake Valve, 1.72" Exhaust Valve, 88-91cc Chamber
C6AE-F Aluminum Head	'66-'67/ 427 c.i.d. High Performance	2.18" Intake Valve, 1.72" Exhaust Valve, 88-91cc Chamber
C60E-AC	'66-'68/ 390 c.i.d. GT	2.02" Intake Valve, 1.55" Exhaust Valve, 67-70cc Chamber
C60E-Y	'66-'68/ 390 c.i.d. GT	2.02" Intake Valve, 1.55" Exhaust Valve, 67-70cc Chamber
C8AE-F	'68-'70/ 428 c.i.d. Cobra Jet	2.02" Intake Valve, 1.55" Exhaust Valve, 68-71cc Chamber
C8AE-J	'68/ 427 c.i.d. Low Riser High Performance w/ Thermactor	2.08" Intake Valve, 1.65" Exhaust Valve, 88-91cc Chamber
C8AE-N	'68/ 427 c.i.d. Low Riser High Performance w/ Thermactor	2.08" Intake Valve, 1.65" Exhaust Valve, 88-91cc Chamber
C80E-B	'68/ 390 c.i.d. GT	2.02" Intake Valve, 1.55" Exhaust Valve, 67-70cc Chamber
C80E-F	'69/ 390 c.i.d. GT	2.02" Intake Valve, 1.55" Exhaust Valve, 68-71cc Chamber
C80E-XX	'69/ 390 c.i.d. GT	2.02" Intake Valve, 1.55" Exhaust Valve, 68-71cc Chamber

C8WE-A	'68/ 427 c.i.d. Low Riser High Performance w/ Thermactor	2.08" Intake Valve, 1.65" Exhaust Valve, 88-91cc Chamber
C80E-H	'68-'70/ 428 c.i.d. Cobra Jet w/ Thermactor/ Air Pump	2.08" Intake Valve, 1.65" Exhaust Valve, 73-76cc Chamber
C80E-N	'68-'70/ 428 c.i.d. Cobra Jet w/ Thermactor/ Air Pump	2.08" Intake Valve, 1.65" Exhaust Valve, 73-76cc Chamber
SK35369 Canadian Head	'65-'67/ 427 c.i.d. High Performance	2.18" Intake Valve, 1.72" Exhaust Valve, 88-91cc Chamber
XE Aluminum Head	'65-'67/ 427 c.i.d. High Performance	2.18" Intake Valve, 1.72" Exhaust Valve, 88-91cc Chamber

Information is from this site - <https://www.erareplicas.com/427man/engine/partnums.htm>.

### FE Cylinder Head Casting Mark Locations

At least the head casting marks are easier to find than the block casting marks. One looks on the head surface situated between the middle two (#2-#3 or #6-#/7) cylinder spark plug ports,



This above image shows a C0AE-6090-D cylinder head originally for either a 1960 352 FE engine or a 1961–1962 390 FE engine. (Please note, the casting number (bottom arrows) is almost never the same as the Ford part number. The alphanumeric casting date code of “0E6” (top arrow) indicates the exact date the part was cast: May 6, 1960.)

The image came from a great site for FE engine information - [How to Easily Identify Ford Big-Block Cylinder Heads - DIY Ford](#).

### Practical Application

In the introduction, the Bird engine in question was believed from anecdotal attribution to be a 352 FE engine. However, it had an achronological FE throttle connection from a later period. Even further confusion stemmed from the front engine accessories and the fuel pump, as they all were vintage FE 352 circa 1960.

A block inspection revealed a front passenger block casting mark of “C6ME-A”. The above block casting mark table tells one that the block could have been in a 352 (T), a 360 (T), a 390, a 410, or a 428 FE engine. But it at least dates the block to being cast after the date of manufacture for the car. So, the engine is not original to the car.

A head inspection revealed the head casting marks to be “C7AE-A”. These marks are NOT in the table above. However, a quick search online ([C7AE-A heads what they where used on? - 332-428 Ford FE Engine Forum](#) and [C7AE-A heads - 332-428 Ford FE Engine Forum](#)) reveals the heads to belong to either 1967/1968 390 FE or a 1967/1968 428, FE medium-block engine, comprising 2.02”/1.55” valves, and a 68cc chamber. (These heads were even found on the Shelby GT Mustang version.)

A stroke measurement confirmed a 390 FE stroke. Is it definitive for a 390 FE engine being in the Bird, and not for, say, a slightly bigger bored 406 FE engine? No. But the odds are highly in favor of the heads and block being an original pair on a basic cruiser FE engine obtained from a different source vehicle.

In this example, if and when the heads are removed, then one can get further confirmatory information.

In many ways, divining the past of your FE engine from examining casting marks is akin to divining the future from examining animal entrails.

Feel free to provide additional content by contacting forum member [Voyce](#) by PM.