

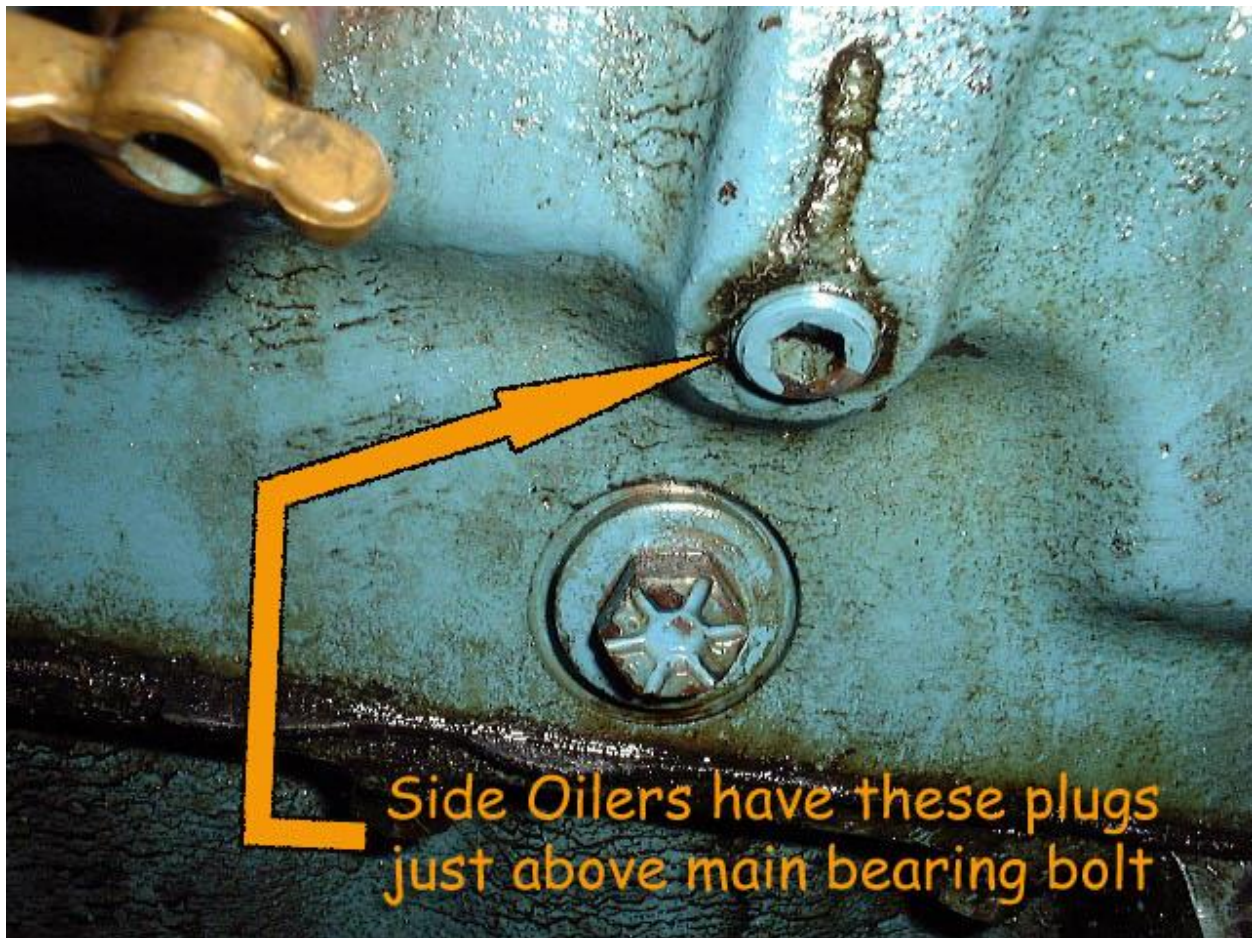
Difference between a 427 Side Oiler and Top Oiler  
A Forum Discussion  
April, 2016

Kevin Mueller asked:

How do you tell the difference between a side-oiler and top oiler 427?

Reply by Dick Morland

Went to my Bible (SuperDisc 11.0). Took me 30 seconds to find a picture. There were some genuine side oilers installed in a very few boats. Our 38 had them. Side oilers have plugs in the side of the block just above the main bearing cross bolt.



Mike H asked: What's the big deal about side oilers?

Reply by Ronald Zick:

The big deal about the side oiler blocks was that it was an excellent method for Ford to get the FE engines to be reliable at the high rpms that they were running them at. The side oiler moved the main oil supply down to the main bearing area. That's why the plugs are there from the drilled passage to the main bearing. The none side oiler versions, which was the majority of FE blocks, had the main oil supply go up by the camshaft and then back down to the mains. This caused a differential in oil pressure

between the main bearings which actually feed the rod bearings and the camshaft- lifter area. The cam shafts, lifters, and rocker arms got plenty of oil in these engines. The issue is most pronounced at high rpms, ie. above 4000rpm.

Before the side oiler blocks, increasing the oil pump pressure or flow did not increase the oil flow proportionately to critical areas in the bottom end to the levels needed. The side oiler blocks also introduced the cross bolted main caps which dramatically increased the rigidity of the block assembly. This was particularly critical for high rpm applications.

Now keep in perspective that the side oilers were designed specifically for a high performance application such as auto racing to solve a very common problem. The Pontiacs, Buicks, and Oldsmobile were notorious for suffering from this same issue and some jokes were made about these three not getting any oil at all.

Now if I were to have the standard non-side oiler blocks in my boat, I wouldn't worry about it. Crusader used both or it might be more correct to say that Ford supplied both, seemingly at will. Maybe someone else knows some more about the internal reasons but I suspect it was a matter of what was available.

If you have side oilers great, you have something to brag about. The side oiler blocks are made out of a slightly better alloy but I doubt most boat owners would notice an actual significant difference in life of the engines. Other issues in the marine environment are usually the limiting factor such as maintenance and usage.

One thing I do see people make the mistake of is that assuming all Crusader Ford FE engines were side oilers and are extremely valuable. Only some Crusader Ford 427s were side oilers.

If I were to be looking for a block to rebuild, I would prefer the side oiler, only if it was in equal or superior condition to the other non-side oiler blocks that are around. I would not be paying a very big premium for it for just a marine application unless it was going to be a stroked version. If I were going to be going to a stroker engine in an FE Ford, I would be looking into aftermarket blocks.

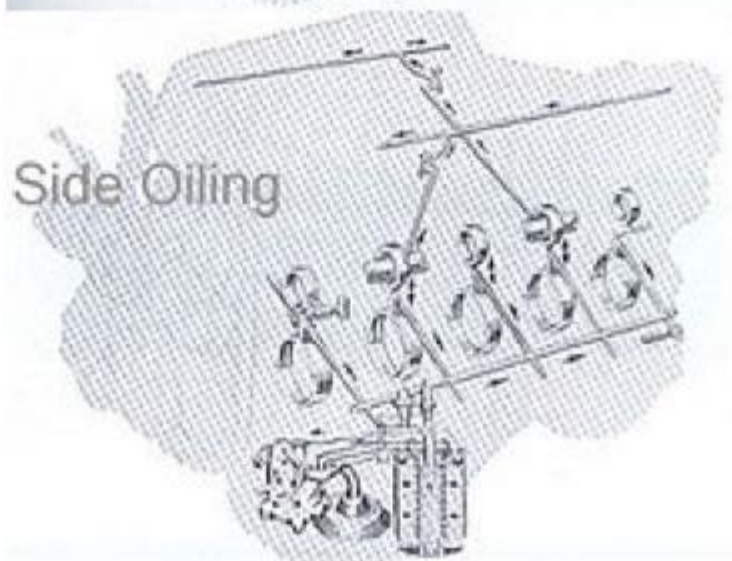
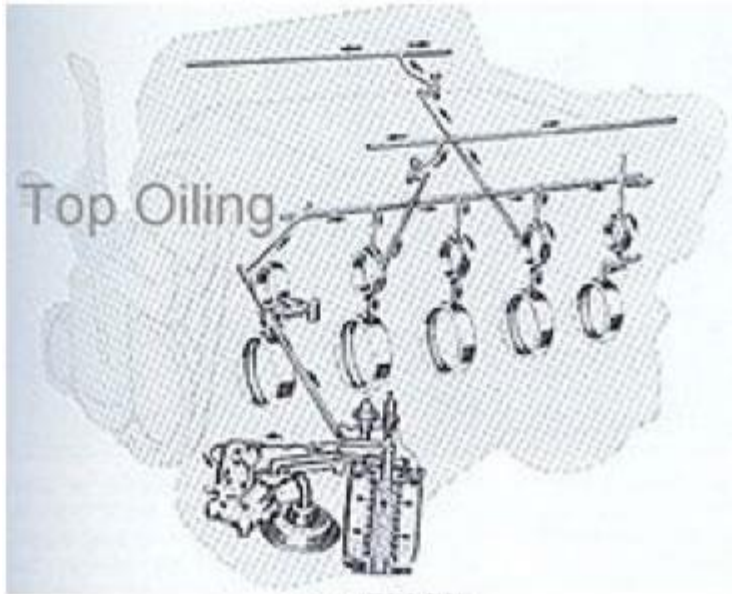
I think the primary driving force of the desire for the side oiler blocks are from the Cobra crowd wanting original stuff for their cars.

Hope this helps answer your question.

Kevin Mueller asked:

So this is how to tell if the engine is a "side-oiler" which is good. I'm more interested in knowing what the actually mechanical difference is in the engines themselves. Is there a difference in performance?

Reply by Ronald Zick Here is a diagram of the two Ford FE oil path methods used.



As you can see, the side oiler puts the oil supply down at the mains and the top oiler feeds from the top down to the camshaft bearings and then to the mains. This did create problems at high rpms were the rods would get starved on the top oiler engines and why Ford spent the money for a race engine design.

As for performance between the two engines, what exactly do you mean by that? The two versions used identical parts. The side oiler did have some extra stuff like a different windage try and scrapers, but these are minor additions and do not effect normal sub 4000rpm horsepower.

If you were to put the two Crusader versions on a dyno, there wouldn't be any difference. The heads, intake manifold, and camshaft are were the big horsepower came from and these modifications would not work very well in most situations. Unless you want to go racing, these modifications only make for poor low end torque. Not what we want in a marine engine.

The Chris-Craft version used the low performance stuff which make gobs of torque, exactly what we need.

Hope this makes everything a little more clear.