

Diesel Power



As you walked back to the Aft Torpedo Room, which was the largest crew berthing space, you passed through and between (and above one) of the engines in the Engine Room. Two ten-cylinder Fairbanks Morse Engines ran down both sides of the passageway and one below. You will note that each cylinder has individual gauges and are virtually identical in the way it is laid out.

Riding submarines you are on your own. There are no repair shops nearby. If something fails you must work around it, and due to size constraints, there is no such thing as “pulling the engine”. Now then I am no “engine guy”, but I am familiar with the basics. And in this case, there was one “basic” that was totally new to me.

On one of the boats I rode we had a bearing failure on one of the cylinders and what I witnessed was truly remarkable. They were almost done with the “repair” when I saw what I saw. And I say “repair” in quotes, because in this case the failure was NOT repairable. We did not have the required parts on board.

SO, in this case they disconnected the pushrod from the crankshaft and removed the loose parts along with the failed bearing. Then they pushed the pushrod up the cylinder to the top of its stroke. Then from above they tied off the piston there at the top of its stroke with some cord looped through where the intake and exhaust valves had been (also removed).

Presto-chango, we now had two 10-cylinder engines and one 9-cylinder diesel engine. What surprised me more is that we could make do with just one engine by itself as long as it had at least 5 cylinders capable of producing power – all it had to do was drive its generator to charge the batteries.

In a subsequent conversation about the cylinder failure, I learned that the bearing had failed because of the lack of oil from the oil pan. And the reason for that lack of oil was the fact that we had pulled some pretty radical “angles and dangles” on that run. Sometimes having the crankshaft splashing oil around was not enough – forced oil into the bearings would be vastly superior.