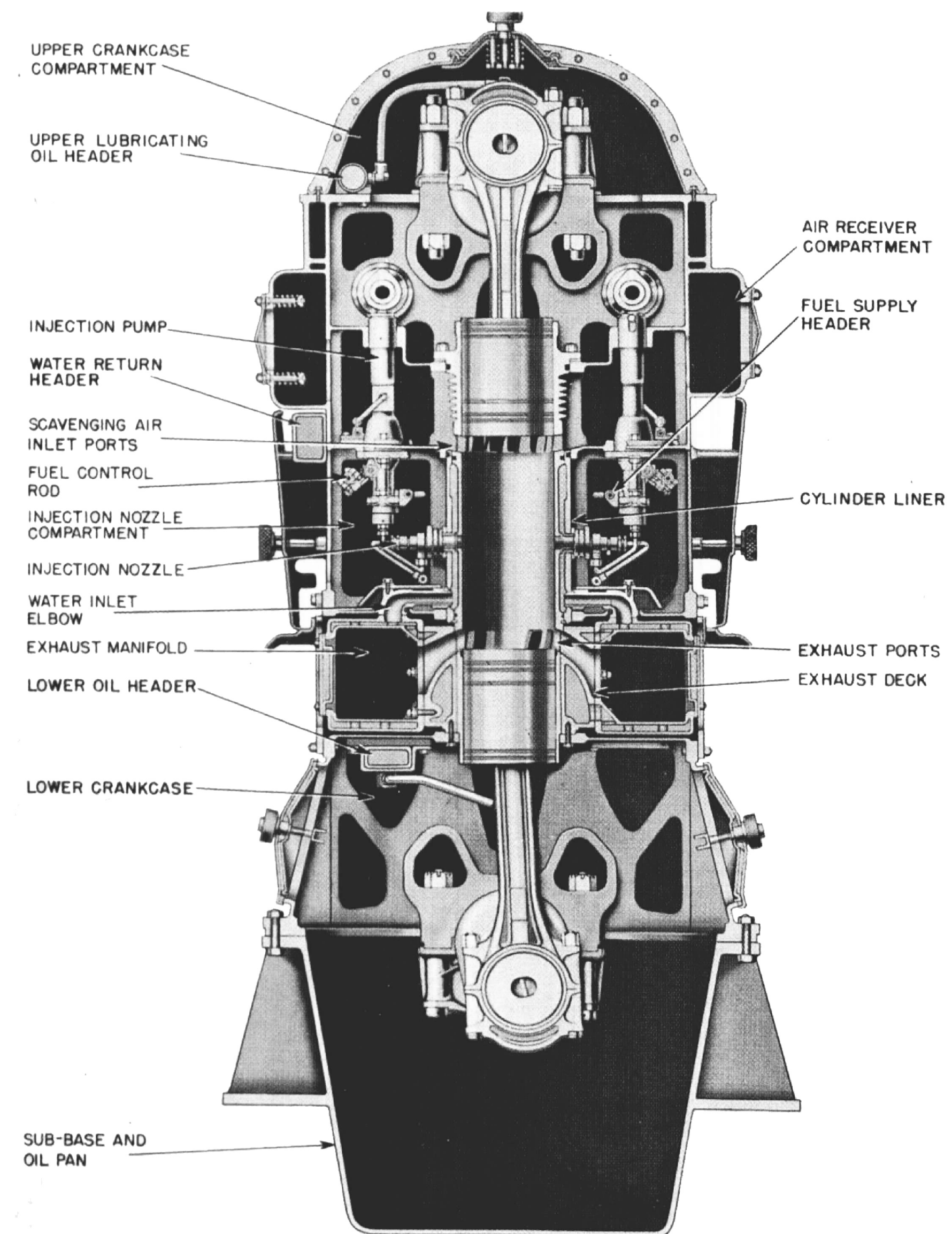


United States Army 1857

Opposed Piston Prime Mover

When discussing diesel locomotives, the term “prime mover” refers to the diesel fueled engine that provides the primary power for the locomotive. While in automotive terms, we would refer to this component as a “motor” or “engine”, on the railroads, those words refer to the complete locomotive, not just that one component.

The maker of this locomotive, the Fairbanks-Morse Company of Beloit, Wisconsin, was unusual among locomotive builders as they used OPPOSED PISTON prime movers, where two pistons share a common cylinder chamber and push toward each other. You can see the arrangement in the diagram at left. Their prime movers were efficient and powerful, but required more maintenance than other company’s designs. While Fairbanks-Morse did not succeed in the locomotive field, these prime movers were a success in ships and submarines and they are still in production today, 77 years after they were introduced, for ships, subs and stationary power generators. A small number of Fairbanks-Morse locomotives still operate today, including this one.



SECTION VIEW OF FAIRBANKS-MORSE 38D8-1/8 OPPOSED PISTON PRIME MOVER