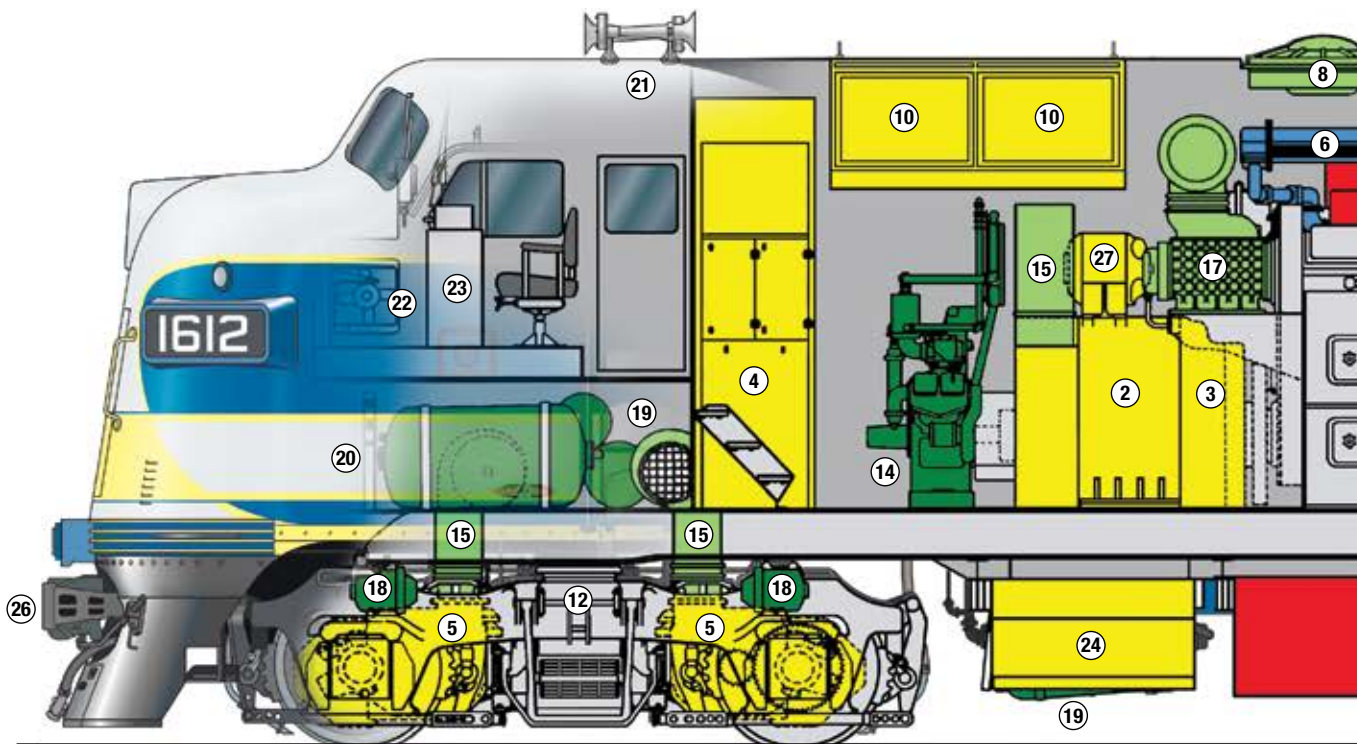


# Inside an F unit

EMD built more than 1,100 F3As; here's what was under their streamlined skin



## F3A carbody styles, and how to tell an F3 from an F7



The F3 underwent several external changes. The first F3 carbody style (unofficially dubbed "Phase I") mimicked that of the F2, with three portholes on each side and wire mesh screening above.

Louis A. Marre collection



Second style ("Phase II"): two portholes, with wire screening above and between them, followed by a switch from high- to low-profile rooftop fan housings. B units of all F models had three portholes.

Russell L. Wilcox

- ① 16-567B engine, 1,500 h.p.
- ② Main generator
- ③ Companion alternator
- ④ Electrical cabinet
- ⑤ Traction motors
- ⑥ Radiator sections
- ⑦ Lube oil cooler
- ⑧ Engine cooling fans
- ⑨ Lube oil filter tank
- ⑩ Dynamic brake (optional)
- ⑪ Fuel oil tank
- ⑫ Truck assembly
- ⑬ Steam generator (optional)
- ⑭ Air compressor

- ⑮ Generator and motor blowers
- ⑯ Coolant tank
- ⑰ Engine Roots blower
- ⑱ Brake cylinders
- ⑲ Air reservoirs
- ⑳ Sand boxes (on side walls)
- ㉑ Air horns
- ㉒ Cab heater
- ㉓ Operator's controls
- ㉔ Battery compartment
- ㉕ Exhaust manifolds
- ㉖ Couplers
- ㉗ Auxiliary generator
- ㉘ Lube oil strainers

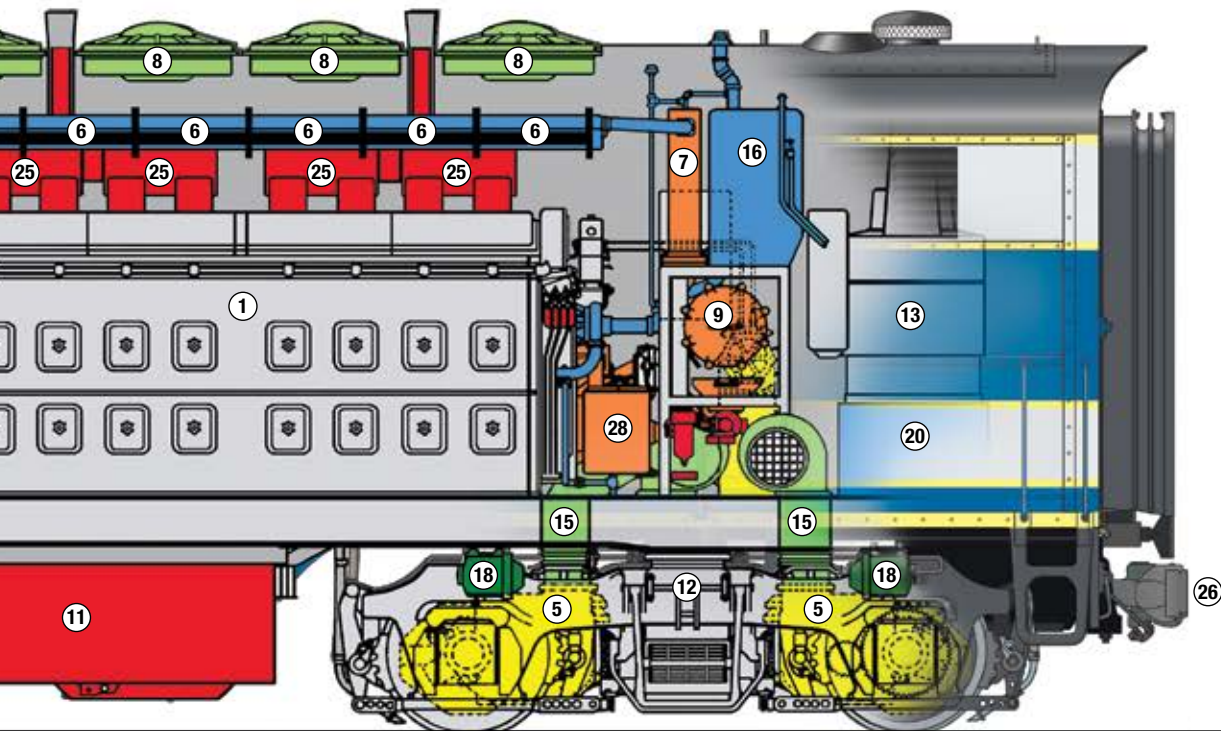
- Yellow = Electrical
- Blue = Water and cooling
- Orange = Lube oil system
- Red = Fuel and exhaust
- Light green = Blowers and fans
- Dark green = Air brake system



**F3A specifications**

- Length over couplers** ..... 50 feet 8 inches
- Width over grab irons** ..... 10 feet 7 inches
- Height above rail** ..... 15 feet 0 inches (top of air horns)
- Wheel diameter** ..... 40 inches
- Fuel oil capacity** ..... 1,200 gallons
- Total loaded weight**..... 230,000 lbs.

**F3A illustration by Preston Cook**



NOTE: The combination of equipment is selected to illustrate the available options, not to represent any specific locomotive.

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Next the wire mesh between portholes was replaced by sheet metal with louvers ("Phase III," right above). In the final version ("Phase IV," left), a grille replaced the wire mesh along the top of the side panels, a feature shared with early F7s.

R. D. Sharpless



F3 vs. F7: F3s (and F2s) with dynamic brakes had two rectangular openings aft of the air horns (right above); on F7s and F9s with dynamics there was a fan (left). Units without dynamics had plain sheet metal there.

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