

Reliable and **MAN Asset+** smokeless start

Reduction of visible smoke during start up

With years of experience and advancements in control systems and component technologies, we now achieve an improved startup behavior. This improvement is achieved by precisely adjusting the startup parameters. This reduces visible smoke emissions due to a more efficient startup process. Previously, unadjusted parameters could cause ignition delays, especially if mechanical components like turbochargers, injectors, pumps, or speed controllers were not optimally configured. These delays often resulted in excessive fuel consumption relative to air intake, leading to black smoke at startup.



Enhanced reliability in engine starting



Elimination of complaints from port authorities and negative media exposure



Substantial reduction in smoke emission



Decreased soot and fouling in exhaust gas systems

Two main updates

MAN Asset+

The engine's startup is enhanced by two main updates: tuning the engine speed and fuel control ratio, and refining the electronic speed actuator with Proportional Integral Derivative (PID) techniques. This process, supervised by a specialized engineer, typically requires 5 to 8 hours. Costs include a fixed service fee, labor, and any travel and lodging for the engineer.

Reliable and smokeless start helps make your engine more ...



Emission friendly

Old startup procedure



Proportional Integral derivativ startup procedure



Benefits

- Enhanced reliability in engine starting
- Substantial reduction in smoke emission
- Elimination of complaints from port authorities and negative media exposure
- Decreased soot and fouling in exhaust gas systems

Applicability

- All engines on HFO/Diesel/DF with electronic governor
- Applicable on Woodward PG-EG, Heinzmann or EM-300
- Combination with other services possible

For personalized quotes, please contact:

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