CLARKE®

From Inspection to Action:
Your Complete Guide to Fire Pump Engine Maintenance & Readiness

Fire pump engines need consistent maintenance to function properly. Don't risk the failure of this essential part of your building's sprinkler system when you need it most — during an emergency!

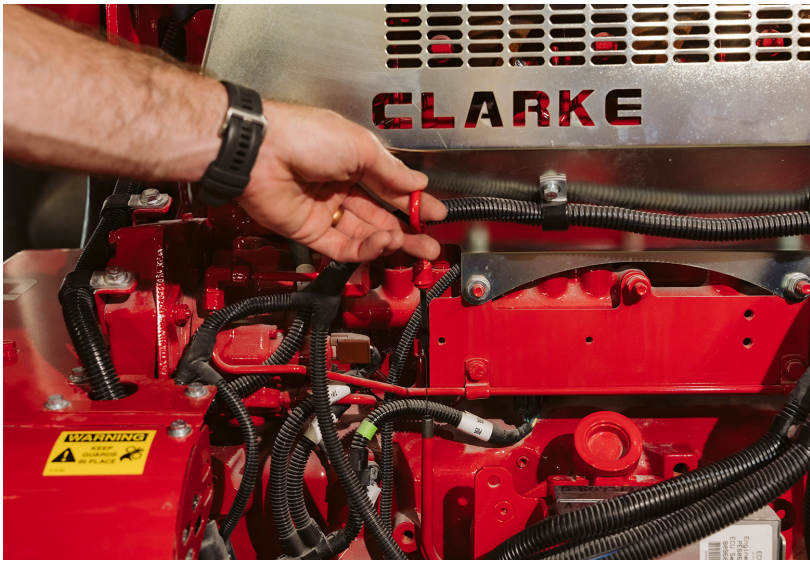
Find out about the necessity of regular maintenance and what tools and resources can keep your fire pump engine running smoothly.

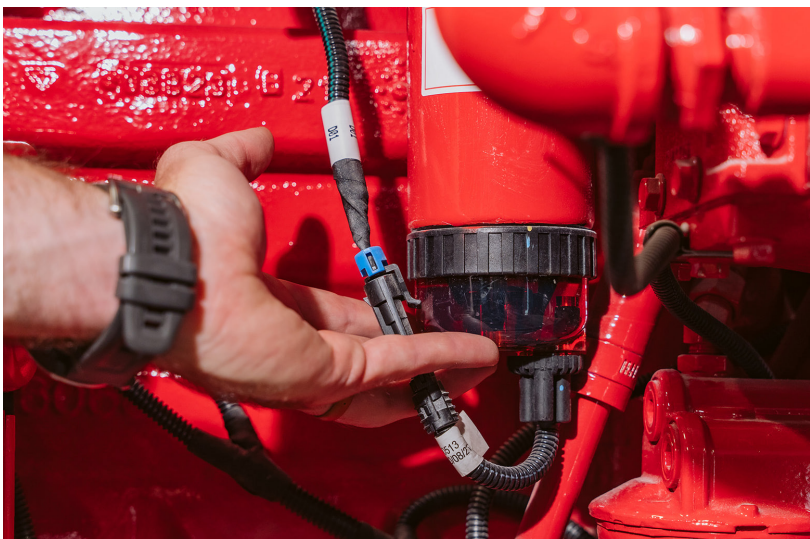
Ignorance is Not Bliss With Fire Pump Rooms

A surprising number of facility managers and business owners are unaware of the fire pump room's existence, let alone how to properly maintain its components. Fire pump engines are sometimes acquired, installed and then left untouched for years due to budget constraints, turnover in personnel or simple unawareness.

"Five or six years after acquisition, the engine will only have been run two hours total," says Bryan Griffin, training manager for Clarke Fire. "A fire pump engine needs to be run for a half hour a week, two hours a month, and 24 hours a year, plus the annual flow test."

This pattern of neglect can result in issues that decrease engine performance and increase the risk of catastrophic failure.





Issues Arise Without Regular Engine Maintenance

Neglecting engine maintenance endangers lives and entire businesses. Here are the most common consequences of deferred maintenance:

Engine Failure
Fire pump engines operate much like any internal combustion engine. Internal components will seize or break down without routine service, oil changes or system checks. The failure of individual parts will bring the whole system down.

Fuel Contamination
Diesel fuel degrades over time. Without annual testing, fuel can become contaminated with water, microbes or particulates. This contamination leads to clogging in the fuel delivery system and reduced engine efficiency.

Battery Failure
Dual battery banks that are constantly charged but never discharged will degrade over time. Lack of cycling leads to decreased battery life and potential failure during start-up.

Worn Rubber Components
Hoses and belts age, crack and become brittle. A failed coolant hose or worn belt can result in overheating or shutdown. These components should be inspected and replaced at regular intervals to avoid failure during operation.

Accelerated Engine Wear
Engines that are not routinely lubricated or inspected for filtration and cooling issues experience rapid internal degradation. Small issues become major mechanical problems over time that require costly repairs or total replacement.

Reap the Benefits of a Regularly Maintained Fire Pump Engine

Common wear-and-tear on parts, such as hoses and belts, should be visually inspected on an annual basis for rips, tears, excessively worn edges and cracks. This consistent maintenance schedule keeps fire pump engines dependable, compliant and cost-effective.

The key benefits include:

Operational Reliability
Perform regular inspections and scheduled servicing so you can rely on your fire pump engine. This readiness guarantees peace of mind while saving lives and property.

Enhanced Safety Outcomes
According to the National Fire Protection Association (NFPA):

92%
of reported structure fires large enough to activate fire sprinklers had them operate successfully.

87%
lower death rates are observed in structures with sprinklers compared to those without.

97%
of fires were successfully controlled when sprinklers were activated.

A working fire pump engine enables sprinkler systems to function properly during a fire.

Regulatory Compliance
NFPA 25 mandates routine inspection, testing and maintenance of water-based fire protection systems. Failing to comply with these standards and local code compliance can result in legal penalties, increased liability and denial of insurance claims.

Equipment Longevity
Routine maintenance extends the life of fire pump engines by reducing wear and preventing corrosion and overheating. Replacing belts, gaskets and filters proactively will prevent avoidable damage.

Cost Savings
Early detection of issues — like fuel degradation or battery fatigue — can prevent expensive repairs. Avoiding emergency breakdowns or last-minute service calls helps control maintenance budgets.

Risk Mitigation for Businesses
In addition to life safety, maintaining fire pump engines helps businesses avoid severe financial and operational consequences. FEMA reports:

40%
of SMBs never reopen after disasters (including fire)

25%
of them fail within a year.

1.3%
is the minimal loss reported in sprinkler-controlled fires.

Insurance Incentives
Many insurance providers offer premium discounts for buildings with well-maintained fire protection systems. Investing in maintenance pays off not only in preparedness but in concrete financial savings.

Clarke Maintenance Kits Simplify Service

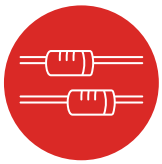
Clarke's maintenance philosophy is that our engines are built to last — but only with proper upkeep. We understand that maintaining a fire pump engine is daunting, so we've made straightforward, compliant and effective servicing solutions.

Annual Maintenance Kit
Designed around a two-year replacement schedule in accordance with NFPA 25 guidelines, the Annual Maintenance Kit includes:


Oil filter


Fuel filter


Air filter


Zinc Anode

These components ensure the engine runs cleanly and efficiently all year long.

Second-Year Supplemental Kit
Targeting wear-and-tear and coolant systems, the second-year supplemental kit includes:


Belts


Heat exchanger hoses


Heater hoses

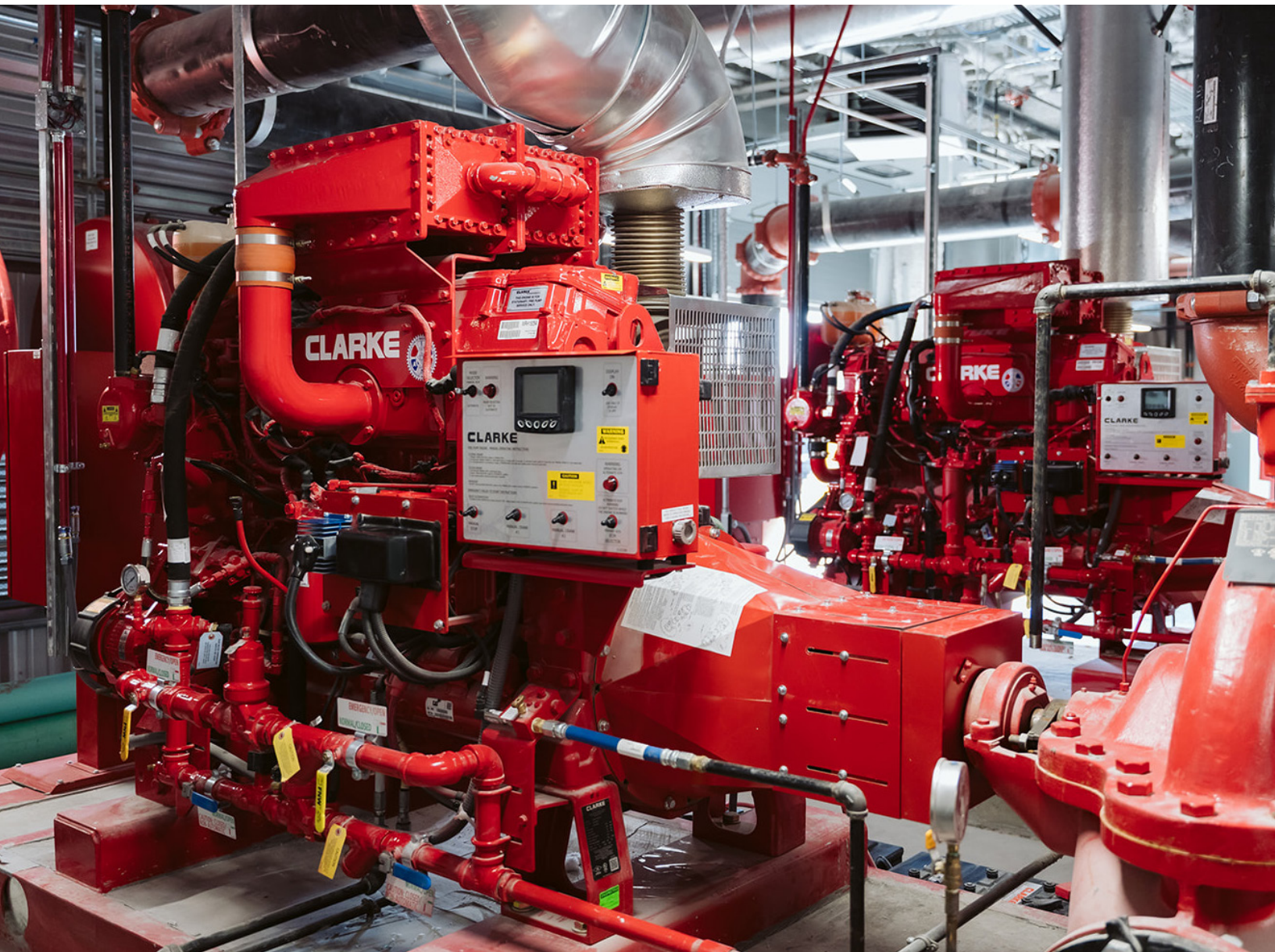

Gaskets

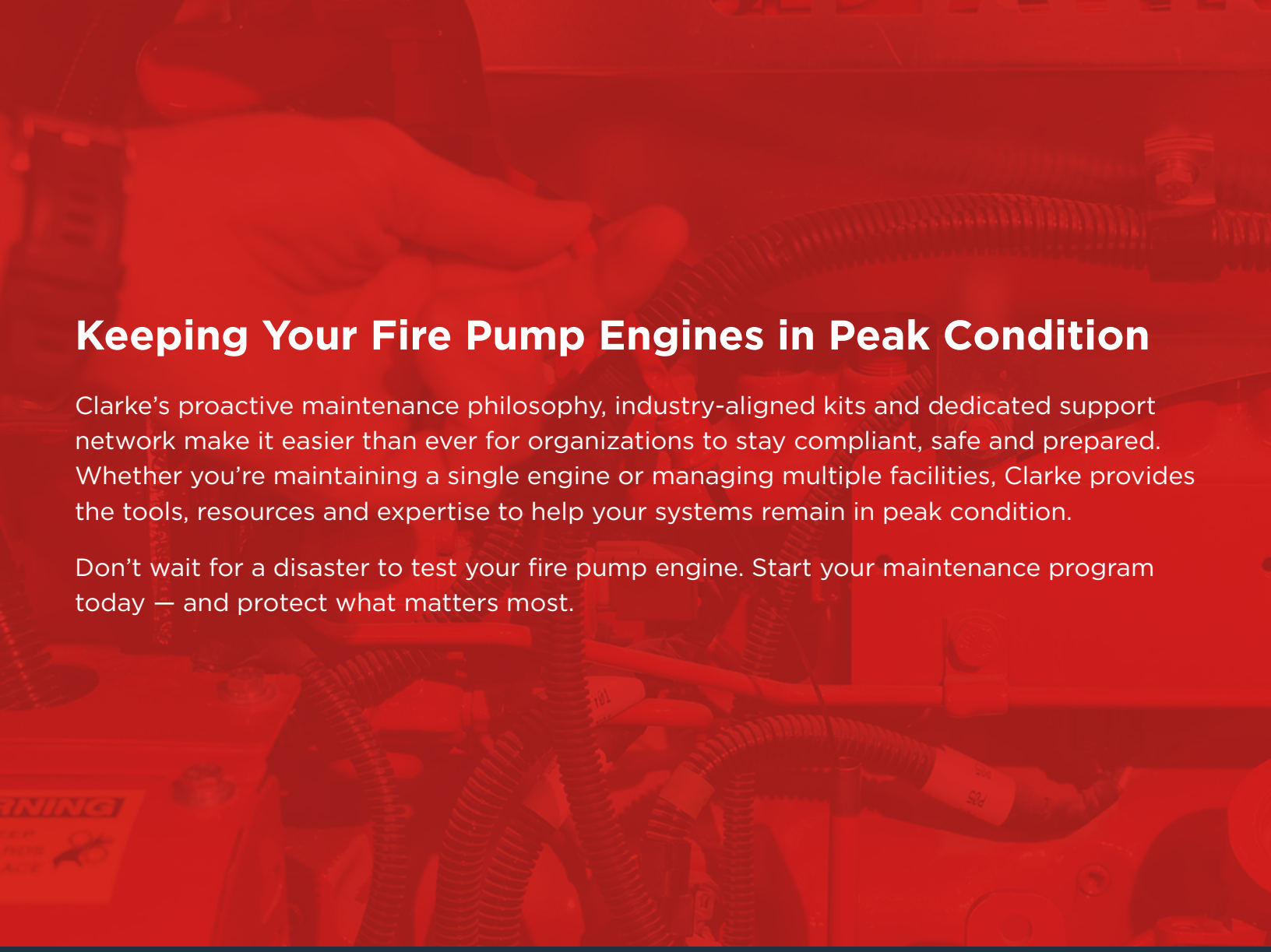
We'll Find the Right Parts for Your Engine

Due to different engine bill of materials, a Clarke fire pump engine's original purchase date and serial number is required to order a two-year maintenance kit. However, while the kit will have all the necessary components at the point of purchase of a Clarke engine, they will not always have every component for an already-purchased engine.

Some parts will have to be purchased a la carte. But you don't need to rely on aftermarket brands! Clarke's team will work with customers to track down every part.

> We're always ready to answer the customer's request for maintenance kit parts. We support engines globally and will utilize our extensive service dealer network and local distributors.
>
> — Bryan Griffin





Keeping Your Fire Pump Engines in Peak Condition

Clarke's proactive maintenance philosophy, industry-aligned kits and dedicated support network make it easier than ever for organizations to stay compliant, safe and prepared. Whether you're maintaining a single engine or managing multiple facilities, Clarke provides the tools, resources and expertise to help your systems remain in peak condition.

Don't wait for a disaster to test your fire pump engine. Start your maintenance program today — and protect what matters most.

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