

Smart Start System (S3)

Smarter starts. Integrated control. Mission readiness.

The Smart Start System (S3) is a fully integrated electronic engine starting system designed for military and heavy-duty diesel platforms. It consolidates engine starting, glow plug control, charging management, and power distribution into a single rugged unit, transforming complex architectures into a streamlined integrated vehicle power control system.

Traditional systems rely on multiple modules that introduce failure points, inconsistent performance, and unnecessary wiring complexity. S3 replaces this fragmented approach with a centralized diesel engine start control system, delivering consistent cold starts, improved electrical stability, and a significant reduction in maintenance risk.

The Smart Start System consolidates and enhances vehicle starting performance:

Key Benefits & Performance

- Integrated control of start, glow plug, charging, and power systems
- Optimized diesel cold weather start system performance
- Advanced electrical protection and fault resilience
- Reduced wiring complexity and fewer failure points
- Improved diagnostics and long-term reliability

Operational Capability

S3 functions as a complete vehicle power distribution control system, coordinating multiple subsystems through one intelligent platform. Glow plug timing is precisely managed to ensure reliable ignition, even in extreme cold, while charging and power distribution are stabilized to prevent voltage-related failures.

This system-level integration allows operators to rely on faster, more consistent starts while reducing workload and improving overall mission readiness. As a multi function vehicle control module, S3 simplifies both operation and serviceability across the vehicle.

Technical Overview

Engineered as an EESS military starting system, S3 meets or exceeds military performance standards while delivering proven durability in harsh environments.

- Nartron Part Number: 1310009
- NSN: 6110-01-542-7901
- Meets / exceeds military specification 12480779
- Designed for extreme temperature, vibration, and electrical conditions

S3 turns complexity into control.

Applications

S3 is deployed across a wide range of military vehicle electrical control system platforms, including tactical vehicles such as HMMWVs, MRAPs, MRUVs, and FMTVs. It is also ideal for fleet modernization programs and heavy-duty diesel systems requiring a dependable extreme environment engine start system.

S3 Outperforms Still Delivering

By consolidating multiple legacy components into one high reliability engine start module, S3 reduces system complexity while increasing performance. It delivers faster starts, fewer failures, and greater protection compared to traditional designs.

In real-world scenarios – from cold starts at -20°F to high-vibration combat environments – S3 maintains stability and control. Its field-proven performance, with zero reported failures, reinforces its position as a trusted advanced vehicle start system for mission-critical applications.

Integrated Engine Start & Power Control System for Military Vehicles

Compared to Conventional Systems:

Feature	Traditional System	S3 System
Architecture	Multiple modules	Integrated system
Cold Start Performance	Inconsistent	Optimized
Reliability	Moderate	High
Protection	Limited	Advanced
Maintenance	High	Reduced

S3 Part numbers

- 3311269
- 3311630
- 3311759

Replacement for multiple legacy components **Cost reduction + reliability increase**

Connect With Our Team

Upgrade to a proven electronic engine starting system that transforms complexity into control and delivers reliable performance when it matters most.