



RDECOM



GROUND VEHICLE **POWER & MOBILITY**

DRIVING THE **ARMY** FORWARD



Prime Power Team

The TARDEC Ground Vehicle Power and Mobility Prime Power Team **MISSION** is to:

- Pursue engine development by identifying customer needs and technology barriers and by developing technical solutions.
- Be recognized as the team of experts in engine operation and design.
- Provide technical support to customers, other teams and government agencies in all engine-related matters.
- Be an unsurpassed technical information resource for ground vehicle engines for the Army and be the customer's first choice for prime power systems research, development, test and evaluation (RDT&E).
- Support production engineering with engine and transmission parts sustainment and field issues.

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.



Application Areas

The TARDEC Ground Vehicle Power and Mobility Prime Power Team is responsible for RDT&E as well as engine and transmission/component sustainment and field support.

- Advanced High-Power Density Engines.
- Commercial Engine Modifications for Military Use.
- Engine Performance and Durability Test and Evaluation.
- Engine Field Support and Parts Sustainment.

Services

The TARDEC Ground Vehicle Power and Mobility Prime Power Team provides the following technical expertise:

- Identify problem areas and understand requirements.
- Satisfy all customers within DOD by being a superior technical information resource for ground vehicle engines.
- Conduct research on the enabling technologies for advanced propulsion systems. Publish papers on in-house as well as managed contract work.
- Satisfy all customers for whom the team evaluates propulsion component concepts and proposals.
- Provide engine technical and program support for the Future Combat Systems (FCS) office and TARDEC FCS Ground Vehicle Power and Mobility points of contact, as well as ground vehicle Product/Project Managers (PMs).
- Continue to interact with other technical working groups including DOD, Department of Energy, Army Research Laboratory (ARL) and Automotive Research Center (ARC).
- ARL, ARC and RDECOM Power and Energy Integrated Process/Product Team.
- Serve as engine focal point for support to fuels and lubricants R&D.
- Provide engine consulting support to other DOD activities, other government agencies, RDECOM and TACOM Life Cycle Management Command.
- Serve as North Atlantic Treaty Organization (NATO) 400-hour durability test focal point.

The team also provides field support to:

- Satisfy all customers with field engine problems, offering them assistance and providing solutions.

- Assist other vehicle offices by bringing their attention to various engine products, which could improve performance, readiness and cost effectiveness.

Finally, the team ensures engine sustainment by:

- Providing on-time delivery of quality products that meet Operations and Maintenance Army customer engineering support needs.
- Providing engineering guidance/direction for depot-level overhaul/upgrade/conversion programs.
- Providing technical/PM support as requested to all relevant DOD agencies.
- Supporting technology insertion and operations and support cost reduction projects by using the modernization through spares improvement strategy.
- Supporting the Value Engineering program.
- Supporting in-house test programs in the technical areas of engine, fuel, lubrication and cooling systems, air and fluid filtration, exhaust and electrical systems, transmissions, clutches, transfer cases, final drives, brakes and propulsion-related accessories.
- Investigating and providing corrective actions for Product Quality Deficiency Reports (PQDRs).

Major Programs & Initiatives

The TARDEC Ground Vehicle Power and Mobility Prime Power Team is engaged in the following major programs and initiatives:

- Diesel Engine High-Power Density for Future Systems.
- High-Speed Diesel Combustion Research.
- Opposed Piston Opposed Cylinder High-Power Density Engine.
- DDC/MTU Engine – 440kW and Advanced Turbo-charger Technologies.
- AGT-1500 Durability Test.
- Family of Medium Tactical Vehicles Full Load Cooling Test.
- M88 Repower Engine NATO Durability Test.
- HMMWV 6.5 I Engine Turbo Wastegate Optimization Study.
- HMMWV 6.5 I Engine NATO Durability Test.
- Armored Vehicle Light Single Cylinder Engine Combustion Research.