### U.S. ARMY Tank Automotive Research, Development and Engineering Center (TARDEC)

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Standard Form 298 (Rev. 8-98)  
Prescribed by ANSI Std Z39-18
Mission and Vision

- Provides full life-cycle engineering support and is provider-of-first-choice for all DOD ground combat and combat support vehicle systems.

- Develops and integrates the right technology solutions to improve Current Force effectiveness and provide superior capabilities for the Future Force.

Responsible for Research, Development and Engineering Support to 3,300 Army systems and many of the Army’s and DOD’s Top Joint Warfighter Development Programs
Ground Systems Enterprise

Department of the Army (DA)

Army Materiel Command (AMC) (ASA(ALT))

Research, Development and Engineering Command (RDECOM)

Armament Research, Development and Engineering Center (ARDEC)

Edgewood Chemical and Biological Center (ECBC)

Natick Soldier Research, Development and Engineering Center (NSRDEC)

Simulation and Training Technology Center (STTC)

Aviation and Missile Research, Development and Engineering Center (AMRDEC)

Communications-Electronic Research, Development and Engineering Center (CERDEC)

Department of the Navy

Research, Development & Acquisition

Office of Naval Research

MARCORSYSCOM

PEO Land Systems

Joint Center for Ground Vehicles
Exploiting Strategic Relationships is Key to Innovation

Geographic Benefits

- Connected to World-Class Automotive Engineering Universities at our doorstep
- Defense Industry Ground Systems Hub
- Direct Linkage to World-Class Automotive Research and Development Centers
- Strategic Engagement with 1st, 2nd, and 3rd Tier Automotive Supplier Network

Most Robust Automotive Engineering Expertise & Academic Institutions in the World
### TARDEC Personnel

#### Total Workforce
- **Military**: 11
- **Contractors**: 211
- **Civilians***: 1582

**Total: 1804**

#### Education
- **Some College**: 214
- **High School Graduate**: 72
- **Bachelors**: 682
- **Masters**: 575
- **Doctorate**: 39

*Includes permanent/term employees, local interns, STEPs, and local SCEPs (in a pay status).

As of 25JAN11
Robust Technology Development & Integration

Ground Vehicle Survivability

Vehicle Electronics & Robotics

Ground Vehicle Power & Mobility

Ground Vehicle Engineering Technical Support

Ground Vehicle Force Sustainment Technology

Systems Engineering & Integration Excellence Across the Life Cycle

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.
TARDEC’s Warren, MI operations have a resource value of over $1.1B and occupy 12 facilities on the Detroit Garrison totaling over 936,000 square feet of laboratory space.
Providing Rapid Assessment and Integration Services throughout the Life Cycle of both Technology and System/Platform Development Programs.
Increasing Demands and Operational Flexibility Require Strategic Investments in Key Areas

10

Unclassified
Increasing Demands and Operational Flexibility Require Strategic Investments in Key Areas

- Energy Storage
- Power Generation & Control
- Thermal Management
- Track & Suspension

Excellence in Vehicle Mobility & Energy Efficiency

Weight

Threat

Fuel & Power Demand

Capability

Environmental Complexity

Terrain

JLTV
MRAP
M1A2
Stryker
M1
M47
HMMWV
Up Armored HMMWV

Jungle/Mountains
Urban
Desert
HMMWV
Excellence in Vehicle Mobility & Energy Efficiency

Unclassified
Excellence in Vehicle Electronics & Software

Increasing Demands and Operational Flexibility Require Strategic Investments in Key Areas

Vehicle Networks  Architectures  Computers  Software

Requirements  Capability  Level of Integration

Ground Combat Vehicle  MRAP  Netcentric Warfare

Software LOC  CPU Density  Logistics

Situational Awareness  Command & Control  Radios

Unclassified

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.
Excellence in Force Projection Technology

Potential Applications
- Preservation
- Combustion
- Axles
- Transmissions
- Hydraulics
- Condition Based Maintenance
- Engines
- Radiators

Water Supply
- TWPS
- ROWPU
- Erdiator
- Mobile Purification Unit

Mechanical Countermine
Petroleum Supply
Water Supply
Bridging
- Basic Building Blocks (Optimum Design)
- Overload and Rollover Prevention Sensors
- Semi-autonomous control
- Hydraulic Hybrid Regeneration

Combat Engineering and Material Handling Equipment
Excellence in Robotics

Increasing Demands and Operational Flexibility Require Strategic Investments in Key Areas

- Reliable operations
- Intelligent Control
- Lighten the Load
- Collaborative Interoperability

Since 2008:
- RSJPO UGVs: 162 in 2004, 8,000 in 2010
- ICDs/CDDs: 162 in 2004, 8,000 in 2010
- Mission Complexity
- Autonomy

Unclassified