US ENGINE PRODUCTION INC

PUSH BUTTON SHIFT

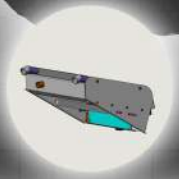
TRANSMISSION

ARMOR

TERRAIN TRAINING

H.O. ENGINE

US ENGINE PRODUCTION INC



COOLING SYSTEM

SUSPENSION

HMMWV

COBRA EXTREME PERFORMANCE™

REPOWER AND UPGRADE PACKAGE

www.USEPINC.com

155 RAYNOR AVE, RONKONKOMA, NY 11779

555 E. HURON AVE, VASSAR, MI 48768

US ENGINE PRODUCTION INC

COBRA EXTREME PERFORMANCE™

HMMWV Performance Upgrade Package Kit

U.S. Engine Production has created the ultimate power, performance and protection upgrade package for any HMMWV model. It provides a cost efficient and very impressive MRO solution to modernize HMMWV fleets. Everything required for installation is included in this packaged kit.

- » Much Faster
- » Greater Load Capacity
- » More Durable and Reliable
- » Safer Operation
- » Maintenance Costs Reduced
- » Increased Fuel Economy
- » Performs in Extreme Conditions
- » In-Country Installation Training

"It easily outperforms the OEM version"

1

H.O. ENGINE

High Output Engine Upgrade

An improved and redesigned engine based on the standard HMMWV that will drop-in and bolt-up to any HMMWV with no modification to the vehicle. Custom horsepower and torque range tailored to any unique application, terrain and operating environment.

Standard Horsepower to 140 hp @ 3400 RPM

Optional Horsepower Upgrade to **270hp** @ 3600 RPM & **300 HP** @ 3600 RPM
42 - 50% increase in horsepower over standard OEM 6.5L engine
93 - 103% increase in horsepower over standard OEM 6.2L engine

Standard Torque 285 lbft @ 2000 RPM

Optional Torque Upgrade to **570 lbft** @ 2000 RPM & **600 lbft** @ 2000 RPM
42 - 50%% increase in torque over standard OEM 6.5L engine
93 - 103% increase in torque over standard OEM 6.2L engine

Features & Benefits

- Engine will drop-in and bolt-up to any HMMWV with NO Modifications needed
- Mechanical Fuel Injection (easier to repair and diagnose especially in a field environment)
- Compatible with existing spares inventory and most drive train components can be re-utilized
- Better fuel economy reduces fleet fuel logistics

ENGINE SPEED PERFORMANCE COMPARISON			
Unarmored	COBRA EXTREME™	Std 6.5L	Std 6.2L
Acceleration 0-60	9 seconds	13.5 seconds	26 seconds
Max Speed	87mph	65mph	55mph

Engine Design Improvements

- High Strength Forged Steel Crankshaft
- Forged Carbonized Steel Camshaft
- Cross Section Forged Steel Connecting Rods
- Grey Iron/Molybdenum Engine Block
- Increased Cylinder Wall Thickness
- Increased Crank Journal Depth
- Grey Iron With High Chrome Content Cylinder Heads
- Higher Turbo Boost Pressure With Improved Flow Outlet
- Cast Aluminum Intake Manifold
- Cast Nodular Iron Exhaust Manifolds
- New Cast Alloy Structural Oil Pan

www.USEPINC.com
info@usepinc.com

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TRANSMISSION

Transmission Upgrade

The 4L85E Transmission has proven reliability for nearly 2 decades and it is recommended due to the increase in engine power. The benefit of an additional gear increases fuel economy and vehicle flexibility.

Features & Specifications

- Proven reliability for nearly 2 decades
- 885 lb. ft. maximum gear box torque rating
- 18,000 lb. maximum GVW rating
- 22,000 lb. maximum towing capacity

Close ration gears:

First: 2.48

Second: 1.48

Third: 1.0

Fourth: 0.75

Reverse: 2.07

HMMWV 6.2L FLEETS:
It is recommended to upgrade the transmission to the venerable 4L85E as offered with the H.O. power pack due to the increase in power and the benefit of an additional gear, this increases fuel economy at road speeds and vehicle flexibility.

3

PUSH BUTTON SHIFT

Push-Button Shift Upgrade

This upgrade provides simplicity with the push of a button to automatically select the right gear. The system prevents shifting errors and reduces maintenance. The compact design increases cabin space and is compatible with existing transfer cases.

Approved Technology on MRAP

4

COOLING SYSTEM

Cooling Pack Upgrade (PATENT PENDING)

Designed for extreme conditions, towing and heavy loads. This redesigned and improved cooling system ensures optimal performance in the harshest and hottest environments up to 145°F (62°C).

Features & Specifications

- Coolers are based on a lighter aluminum structure of plate & bar design considered the most durable in the industry (Standard HMMWVs are copper and brass)

Testing has shown:
overall engine temperature to be 30° cooler providing more durability and reliability of the engine and drive train components.

5

SUSPENSION

Suspension System Upgrade

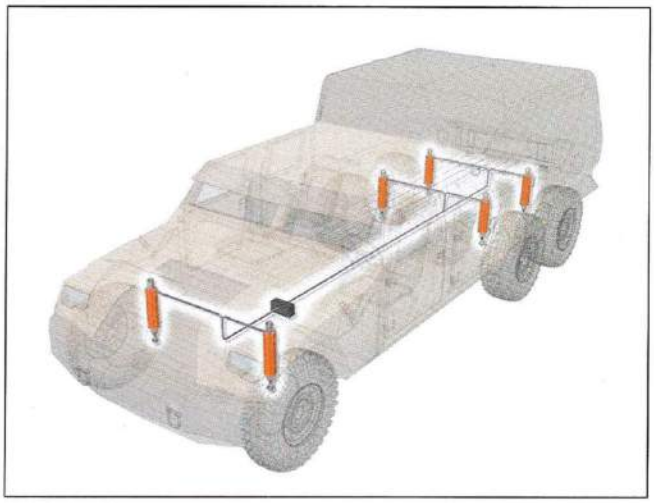
LORD® Magneto-Rheological (MR) Active Suspension System upgrade allows for a controlled, safe ride at higher speeds off-road, with greatly improved stability on-road. The MR Suspension System keeps the vehicle body steady, minimizing over-travel and keeping the passengers safe and comfortable.

- Patented Technology of LORD Corporation
- More Effective Combat Performance
- LORD® Magneto-Rheological (MR) Technology
- Active Vehicle Body Stability Control
- Reduced Wear on Drive Train & Body

LORD MR Suspension System

For Military Tactical and Combat Vehicles

Military tactical and combat vehicles are being used in more demanding conditions than ever before and traditional suspensions are struggling to keep up with changing conditions. LORD Corporation's Magneto-Rheological (MR) Suspension System provides a solution to these challenges, enabling new levels of performance in military primary suspension systems.



LORD MR Suspension System replaces conventional shocks

Features & Benefits

Unlike traditional passive suspensions with fixed characteristics, LORD Corporation's Controllable MR Suspensions react to vehicle and terrain conditions thousands of times per second, allowing the suspension to adapt its characteristics to the situation. This provides improved dynamic stability over passively damped systems, which can provide significant benefits:

Adaptable – With a simple retrofit, the system is able to react to vehicle and terrain conditions thousands of times per second, allowing the suspension to adapt its characteristics to the situation.

Improves Safety – Reduces risk of roll over; improves maneuverability and safe driving speed; provides improved dynamic stability over passively damped systems.

Increases Component Life – Reduces wear and tear on suspension and drive train components (particularly in applications where the vehicle is loaded at or beyond the design Gross Vehicle Weight).

Commercially Proven Technology

LORD MR Suspensions are enabled by our remarkably versatile MR fluid technology, which allows systems to respond instantly and controllably to varying levels of vibration, shock or motion. When exposed to a magnetic field, the behavior of MR fluids reversibly and instantaneously changes from a free-flowing liquid to a semi-solid with controllable yield strength – perfectly suited for controllable suspension dampers.

LORD Corporation's MR technology has been proven through the licensing and broad intellectual property portfolio used in developing BWI Group's MagneRide™ suspension system. First introduced on the 2002 Cadillac Seville, the system now appears on more than 500,000 devices in more than a dozen models from multiple automotive OEMs including Audi, Ferrari, GM, and Holden Special Vehicles. The rapid acceptance of the technology by a wide range of manufacturers, from high-performance sports cars to SUVs, demonstrates the confidence the automotive industry has in the performance, reliability and durability of LORD MR technology.

LORD MR Controller

LORD MR Dampers

The rapid acceptance of the technology by a wide range of manufacturers, from high-performance sports cars to SUVs, demonstrates the confidence the industry has in LORD MR technology's performance, flexibility and reliability.

System Flexibility

LORD Corporation's MR Suspension Systems are incredibly flexible and well-suited to a wide range of military applications, from lightweight tactical vehicles to line-haul tractors and combat vehicles. MR dampers do not need more space than conventional passive shock absorbers. Therefore, LORD MR Suspension Systems can be a simple retrofit to existing vehicles or easily integrated into new production vehicles.

Every LORD MR Suspension has three key components: dampers, sensors and a controller. These components can be configured in a variety of ways so as to serve all of our customer's requirements.

LORD Suspension and MR Experience

LORD has extensive experience with controllable damping and vibration control. In the 1970s, due to our work on semi-active suspensions, LORD received one of the first patents on 'skyhook' control. This innovation is now incorporated into nearly every controllable suspension.

In addition to MR suspensions, LORD has also worked extensively with passive dampers, electro-rheological (ER) suspensions, servo-valve semi-active suspensions, and linear actuator fully-active suspensions.

Due to MR controllable damping system's many advantages, LORD is focusing exclusively on MR Suspension Systems for military vehicles.

LORD has production capability in place with a fully operational manufacturing facility in Cambridge Springs, PA.

LORD Corporation's MR experience is unparalleled. As the only provider of commercial MR fluids with more than 110 MR fluid patents worldwide, LORD is the largest manufacturer of MR devices and systems. Much more on our capabilities can be found at www.lord.com.

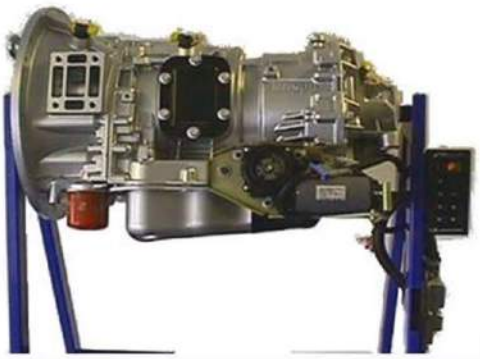
Push-Button Shift Upgrade

This upgrade provides simplicity with the push of a button to automatically select the right gear. The system prevents shifting errors and reduces maintenance. The compact design increases cabin space and is compatible with existing transfer cases.

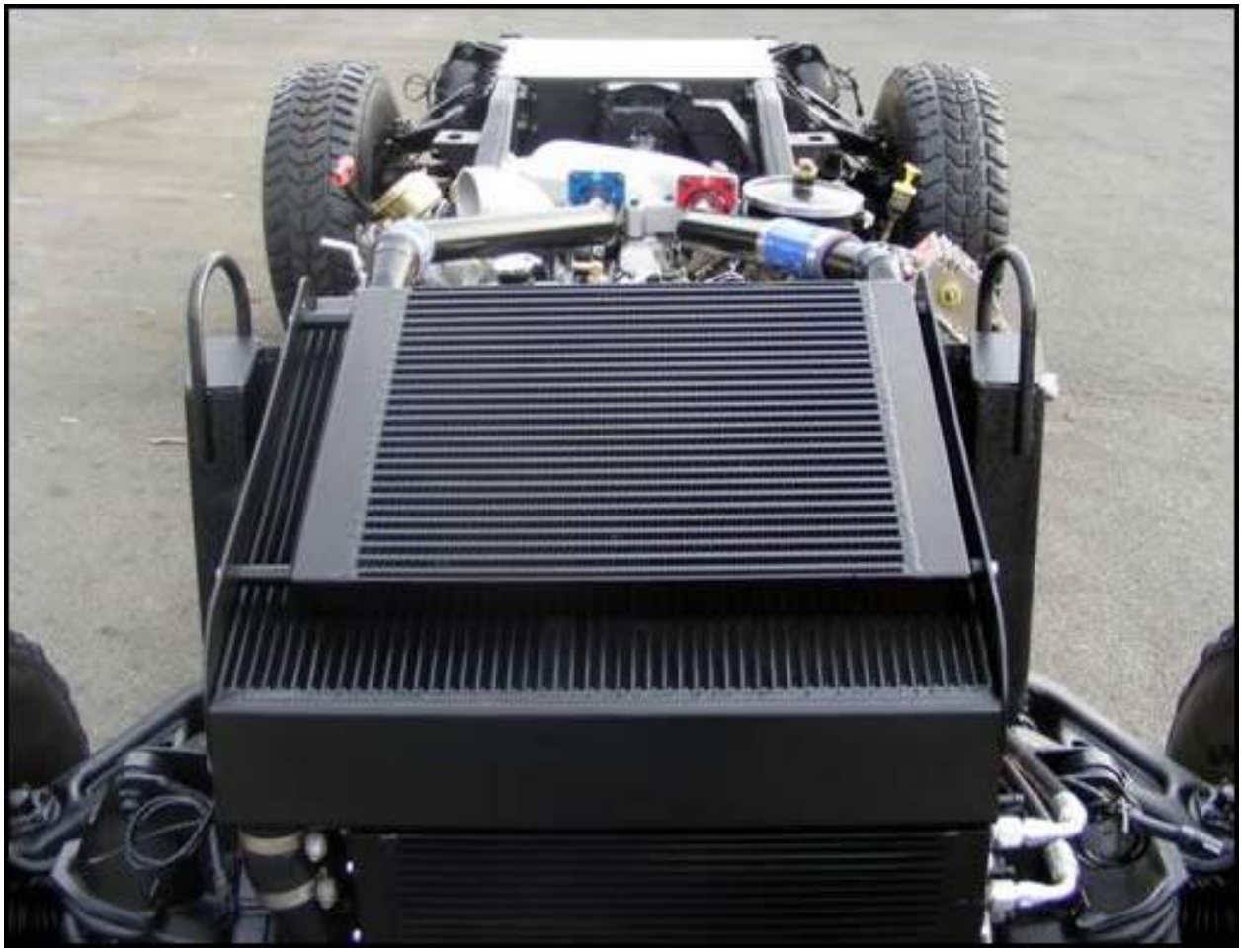
Approved Technology on MRAP

Shift-By-Wire System

- Replaces cable shifter mechanisms
- Value over cable shifters
  - Introduces electronic control capability
    - Enhances driver experience
  - Interlock capability
  - Simplifies shift system design of specialty vehicles
  - Improves "survivability" of military vehicles
  - Allows for access to all transmission gears
  - Improves reliability
    (*no mechanical system failures*)
  - Reduces maintenance
- Transmission and Transfer Case compatible
- Compatible with various transmissions
- Direct or Remote mount
- Redundant electrical system
- Shift-on-the-fly T-Case range selection
- Mechanical override feature
- CAN J1939 protocol capable
- Durability Tested
  - 1.5 Million cycles simulated park pull-out of a fully loaded (36k lbs) truck on a 30% grade
  - 3 Million cycles submerged
- IP 67 Rated
- Temperature Rated -40C / +150C



CORBA EXTREME ™ PERFORMANCE COOLING PACK UPGRADE

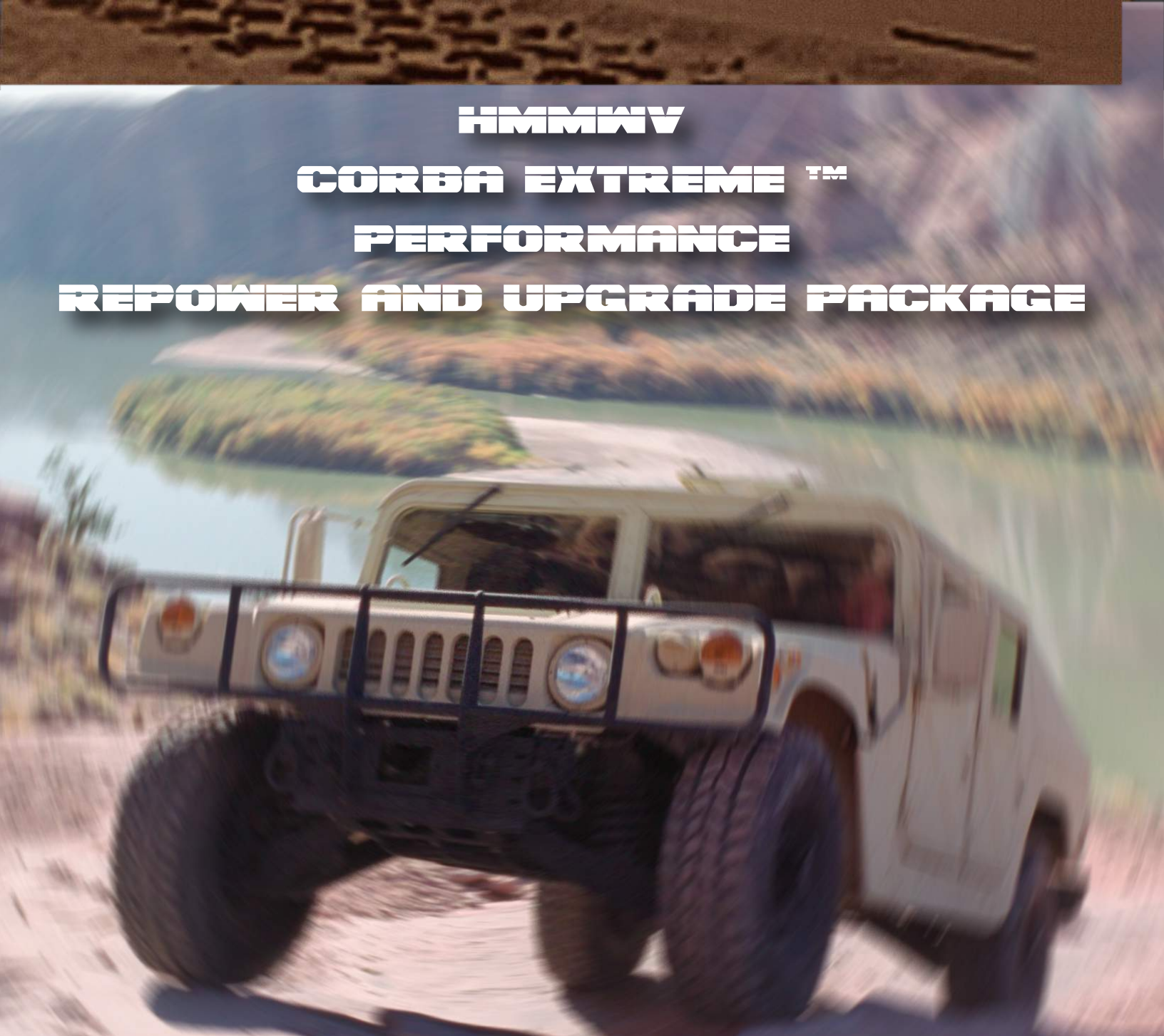


Designed for extreme performance in areas where most cooling systems fail. Never be forced to stop a mission because of cooling system failure.

DEMAND THE BEST.

Only available from US ENGINE PRODUCTION, INC.

HMMWV
CORBA EXTREME ™
PERFORMANCE
REPOWER AND UPGRADE PACKAGE



HMMWV HIGH OUTPUT ENGINE UPGRADE
US ENGINE PRODUCTION INC

NEW YORK LOCATION
155 RAYNOR AVE
RONKONKOMA, NY 11779
p. 631-737-7050 f. 631-737-7057

MICHIGAN LOCATION
555 E. HURON AVE
VASSAR, MI 48768
p. 989-823-3800 f. 989-823-3811

w. usepinc.com e. info@usepinc.com

US ENGINE PRODUCTION INC