

General Engine Products, Inc.



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OPTIMIZER 6500 V8 DIESEL

General Engine Products, Inc.

A Subsidiary of AM General Corporation

General Engine Products (GEP), is the producer of the OPTIMIZER 6500 V8 Diesel Engine, a "drop in" high performance replacement for older General Motors diesel V8s. GEP's new 92,000 square foot production facility, located in Franklin, Ohio, began production in July of 2000 and became QS 9000 certified in February 2001. The OPTIMIZER 6500 is a new diesel engine from the block up, and is available in Naturally Aspirated and Turbo-Charged versions. Available today, the OPTIMIZER 6500 is the perfect replacement for marine, military, commercial and industrial applications. From boating to genpacs, the OPTIMIZER 6500 is today's answer for affordable, reliable and durable diesel power with performance to match.

AM General Corporation, Parent Company-South Bend, Indiana
Manufacturer of Postal Vehicles, Busses, **HUMMER® H1**,
HUMMER® H2, and over 1 million Tactical Wheeled Trucks including
the **HUMVEE®** (Currently in production)

General Engine Products Engineering and Sales Livonia, Michigan

General Engine Products Assembly Facility-Franklin, Ohio

- Start Of Production July 2000; full production rate capability - January 2001.
- QS 9000 Certified - February 2001.
- Major Products: OPTIMIZER 6500 (6.5L) diesel engines & 6.5/6.2L diesel heads.
- '04' emission compliant.
- Capability to supply the full powertrain (engine/transmission).
- A full service Supplier.
- Euro III certified.

OPTIMIZER 6500 Marine Applications

The OPTIMIZER 6500 is used in Marine applications throughout Europe and the United States. Whatever the requirement the OPTIMIZER 6500 can be tailored to meet most applications.

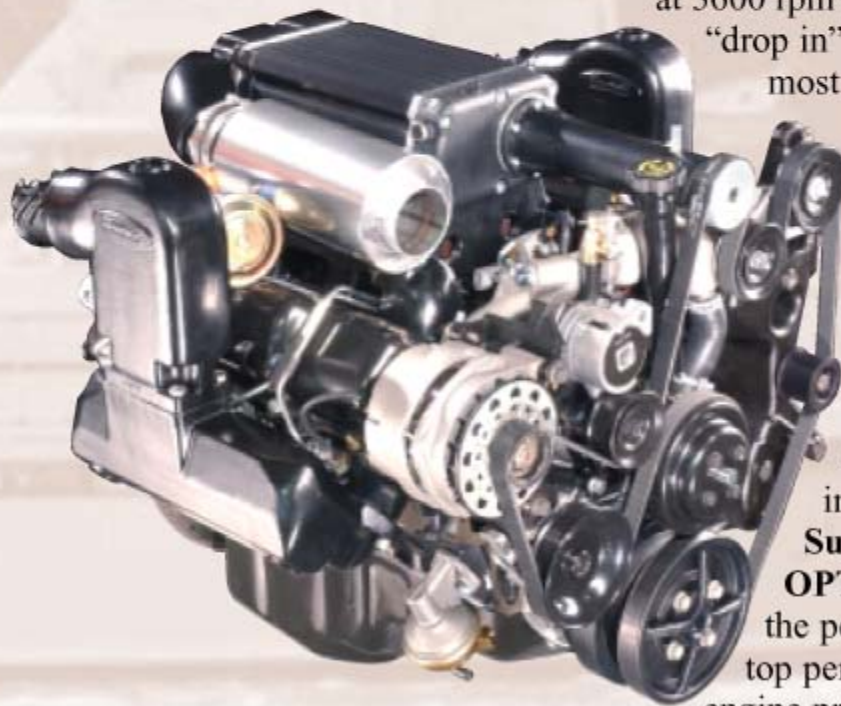
The Naturally Aspirated OPTIMIZER 6500 is the economical choice for marine applications. This durable engine produces over 165 Horsepower at 3500 rpm and is the base engine used in both the Turbo and Super charged versions.

The Turbo-Charged OPTIMIZER 6500 produces up to 300 Horsepower at 3600 rpm and is a virtual

"drop in" replacement for most gasoline V8s. The Turbo-Charged OPTIMIZER 6500 is the perfect choice for those who desire greater performance.

For those who demand the ultimate in horsepower, the **Super-Charged OPTIMIZER 6500** is the perfect answer. This top performing diesel engine provides better fuel

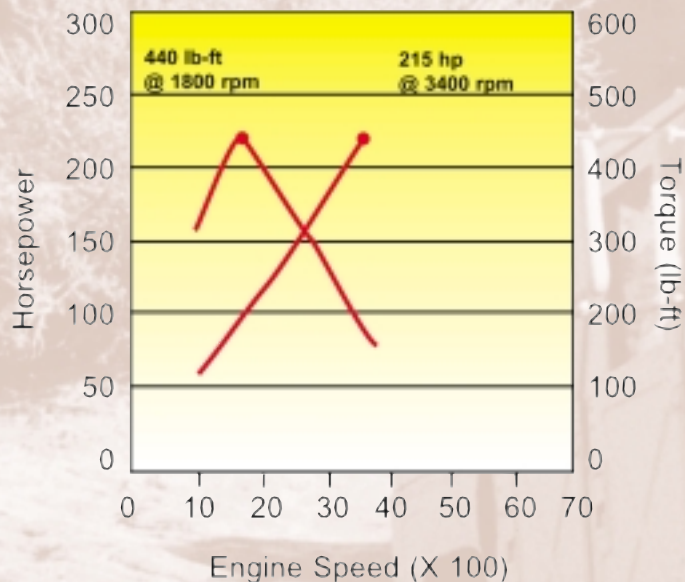
economy than most "big block" gasoline V8s, while producing over 300 horsepower at 3500 rpm. The Super-Charged OPTIMIZER 6500 is also an easy replacement for most gasoline V8s with better performance, reliability and durability.



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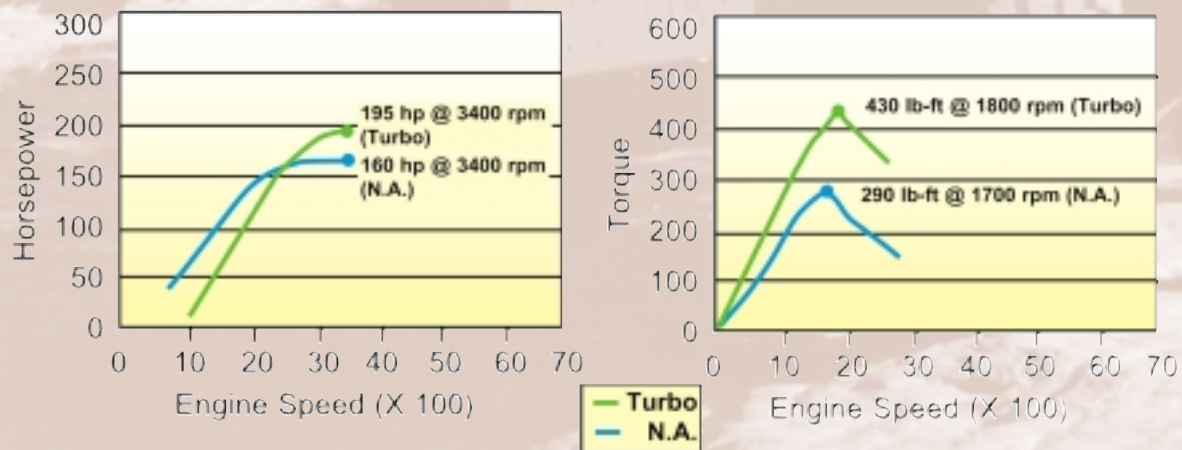
Performance Specifications

OPTIMIZER 6500 V8 Turbo Diesel



GEP's engineering team is quickly moving the OPTIMIZER 6500 to higher horsepower with greater torque. Stronger cast iron "Moly" engine blocks, combined with taller-wider bearing caps and improved head bolt bosses will provide increased performance to satisfy customer's future demands.

OPTIMIZER 6500 V8 Turbo & N.A. Diesel



Today's engine optimizes the torque to 430 lb-ft at 1800 rpm, and to 195 horsepower at 3400 rpm in a 756 lb engine, yielding one of the best horsepower to weight ratios on the market.

OPTIMIZER 6500 Military Turbo & Naturally Aspirated

The OPTIMIZER 6500 military focused engine is both reliable and durable. In fact, since mid year of 2000, AM General Corporation has replaced the General Motors diesel engine, used in the **HUMVEE®**, with a combination of Turbo-Charged and Naturally Aspirated OPTIMIZER 6500s. Currently, General Engine Products is under contract to produce over 27,000 OPTIMIZER 6500 engines for the U.S. Army through the year 2007. In addition, as the engines in older **HUMVEEs** and Civilian Utility Cargo Vehicles (CUCVs) are discarded, they also will be replaced with the more reliable and durable OPTIMIZER 6500.



World Class Standards

The OPTIMIZER 6500 is manufactured to strict QS 9000 procedures. World Class internal cleanliness helps to increase the life cycle of the OPTIMIZER 6500.

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Product Specifications

Type	6.5L V8 Diesel or Naturally Aspirated (N.A.)
Displacement	6468 cc
Compression Ratio	20.2:1 & 18:1 (Marine)
Valve Configuration.....	Overhead
Valve Lifters	Hydraulic Roller
Firing Order	1-8-7-2-6-5-4-3
Bore x Stroke	103 X 97.03mm
Fuel System	Indirect Electronic or Mechanical Fuel Injection Turbo or Naturally Aspirated
Horsepower.....	195/190 @ 3400 rpm-T 160 @ 3400 rpm-N.A.
Torque	430/380 @ 1800 rpm-T 290 @ 1800 rpm-N.A.
Max Governed Engine Speed	3400 rpm
Emissions Control	Positive Crankcase Ventilation, Catalyst

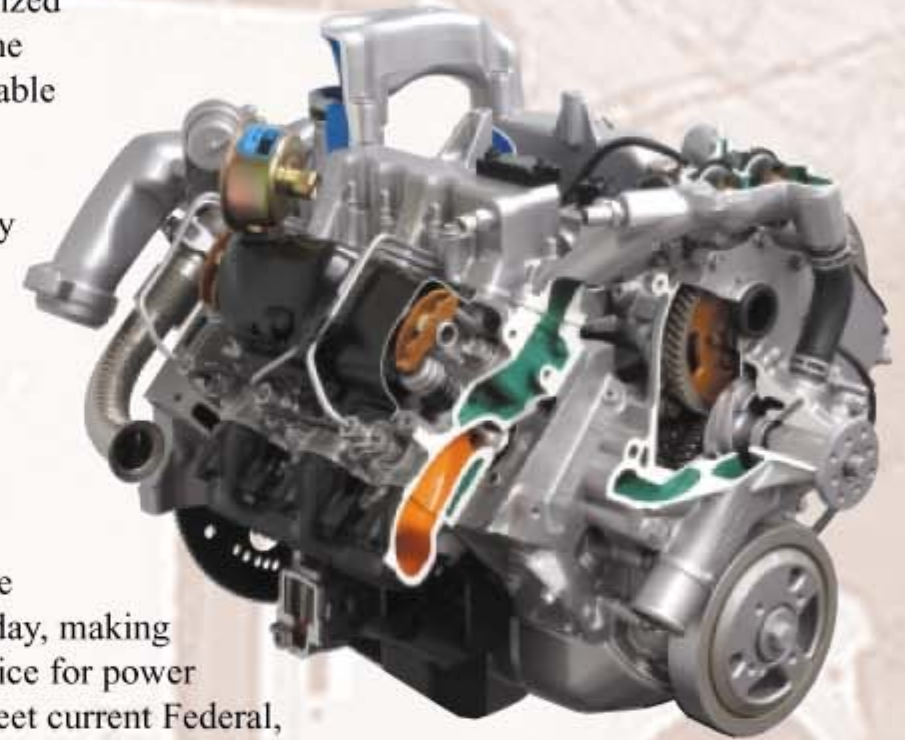
Materials

Block.....	Grey Iron/Molybdenum (Nov. 2001)
Cylinder Head.....	Grey Iron with high chrome
Intake Manifold	Cast Aluminum
Exhaust Manifold	Cast Nodular Iron
Main Bearing Caps	Cast Nodular Iron
Crankshaft.....	Cast Nodular Iron
Camshaft	Forged Carbonized Steel
Connecting Rods.....	Forged Steel

Information may vary with application. All specifications listed are based on the latest product information available at the time of publication. The right is reserved to make changes at any time without notice. **HUMMER®** is the registered trademark of General Motors Corporation. **HUMVEE®** is the registered trademark of AM General Corporation.

OPTIMIZER 6500 Turbo & Naturally Aspirated

The OPTIMIZER 6500 is the engine of choice for the **HUMMER® H1**, the benchmark for off-road recreational vehicles. It is also used to power postal vehicles, transit busses, delivery vans, box vans, motor homes, industrial generators, compressors and medium sized construction equipment. The OPTIMIZER 6500 is available Naturally Aspirated and Turbo-Charged and can be fitted with a flex plate or fly wheel depending on the transmission it is to be mated to. It is a “drop in” replacement for many V8 and V6 applications. The OPTIMIZER 6500 diesel engines are the most compact and easy to service diesel engines available today, making it the most economical choice for power plant replacement. They meet current Federal, California and CFF emission requirements and best of all, the OPTIMIZER 6500 series of engines are durable and affordable.



Computer Numerically Controlled Accuracy

The improved accuracy and fit that results from CNC machined major components, coupled with the quality and functional inspections this engine receives throughout the assembly process, is the reason the OPTIMIZER 6500 is a first class power plant.

Complete Powertrain Sales Support



New "Moly" CNC machined engine blocks



Ergonomically designed assembly process



Automatic torque sensing head tool

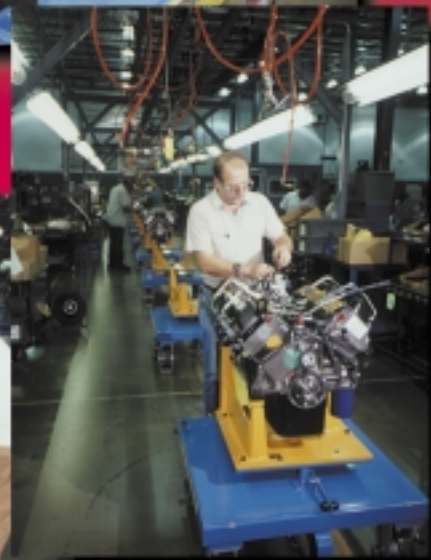
From start to finish, GEP adheres to strict QS 9000 procedures in the manufacturing of the OPTIMIZER 6500.



Total engine quality
"Hot Test"



Computerized engine pressure check system



Precision matched injection pumps

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