MILITARY STANDARD

ENGINE, GASOLINE, AIR-COOLED, 6 BHP, MILITARY DESIGN, MODEL 4A032, INSTALLATION PROCEDURES

TO ALL HOLDERS OF MIL-STD-1300A

1. THE FOLLOWING PAGES OF MIL-STD-1300A HAVE BEEN REVISED AND SUPERSEDE THE PAGES LISTED:

NEW PAGE	DATE	SUPERSEDED PAGE	DATE
1	24 February 1976	1	22 January 1970
2	24 February 1976	2	22 January 1970
2a	24 February 1976		
Figure 3	24 February 1976	Figure 3	22 January 1970
Figure 4	22 January 1970	(REPRINTED WITHOUT CHANGE)	

2. MAKE THE FOLLOWING PEN AND INK CHANGES:

(a) Page 14, under C, last line, delete "MIL-L-10295" and substitute "MIL-L-46167".

3. RETAIN THIS NOTICE PAGE AND INSERT BEFORE THE TABLE OF CONTENTS.

4. Holders of MIL-STD-1300A will verify that page changes indicated above have been entered. The notice page will be retained as a check sheet. This issuance, together with appended pages, is a separate publication. Each notice is to be retained by stocking points until the Military Standard is completely revised or canceled.

Custodians:

Army - ME
Navy - MC
Air Force - 82

Review activities:

Army - EA, AT
Navy - YD
DSA - CS

User activity:

Army - EL

Preparing activity:

Army - ME

Project No. 2805-0518

FSC 2805

1. SCOPE

1.1 Coverage. This standard covers the recommended installation procedures for the Model 4A032, 6-bhp military design engine.

1.2 Objective. The objective of this standard is to insure compatibility of the engine and the end item of equipment.

2. REFERENCED DOCUMENTS

2.1 Governmental. The issues of the following documents in effect on the date of invitation for bids form a part of this standard to the extent specified herein:

SPECIFICATIONS

Military

MIL-V-173	- Varnish, Moisture-and-Fungus-Resistant (for Treatment of Communications, Electronic, and Associated Equipment).
MIL-L-2104	- Lubricating Oil, Internal Combustion Engine, Tactical Service.
MIL-G-3056	- Gasoline, Automotive, Combat.
MIL-B-11040	- Belt, V; Engine Accessory Drive.
MIL-I-24092	- Insulating Varnish, Electrical, Impregnating.
MIL-L-46167	- Lubricating Oil, Internal Combusion Engine, Arctic.
MIL-E-46717	- Engines, Gasoline: Air-Cooled, Industrial-Type, 4-Cycle, Military-Design.

STANDARDS

Military

MIL-STD-461	- Electromagnetic Interference Characteristics Requirements for Equipment.
MS35802	- Filter Elements, Fluid, Pressure-Oil, Full-Flow.
MS35876	- Generator, Engine Accessory, D.C., 28-Volt, 5-Ampere.
MS51009	- Spark Plug, Shielded, 18 MM, 1-1/4 Inch Well (Other Than Aircraft).

MS51086 - Strainer, Sediment, Automotive Fuel (10 GPH).
MS53013 - Starter, Engine, Electrical, 24-Volt D.C., 3-Inch Frame Diameter, Solenoid-Actuated, Light-Duty.

DRAWINGS

ME

TA13206E0000 - Engine, Gasoline, 6 HP, Military Design, Model 4A032.

(Copies of specifications, standards, and drawings required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Nongovernmental. The issues of the following documents in effect on the date of invitation for bids form a part of this standard to the extent specified herein:

SOCIETY OF AUTOMOTIVE ENGINEERS

SAE Handbook.

(Application for copies should be addressed to the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096.)

3. DEFINITIONS

3.1 Definitions. For the purpose of this standard, the following definitions shall apply.

3.1.1 Military design engine, Model 4A032. A horizontally-opposed, 4-cylinder, air-cooled, overhead-valve, 32-cubic-inch-displacement gasoline engine having a rating of 6 net continuous horsepower at 3,600 rpm (see Figures 1, 2, 3, and 4).

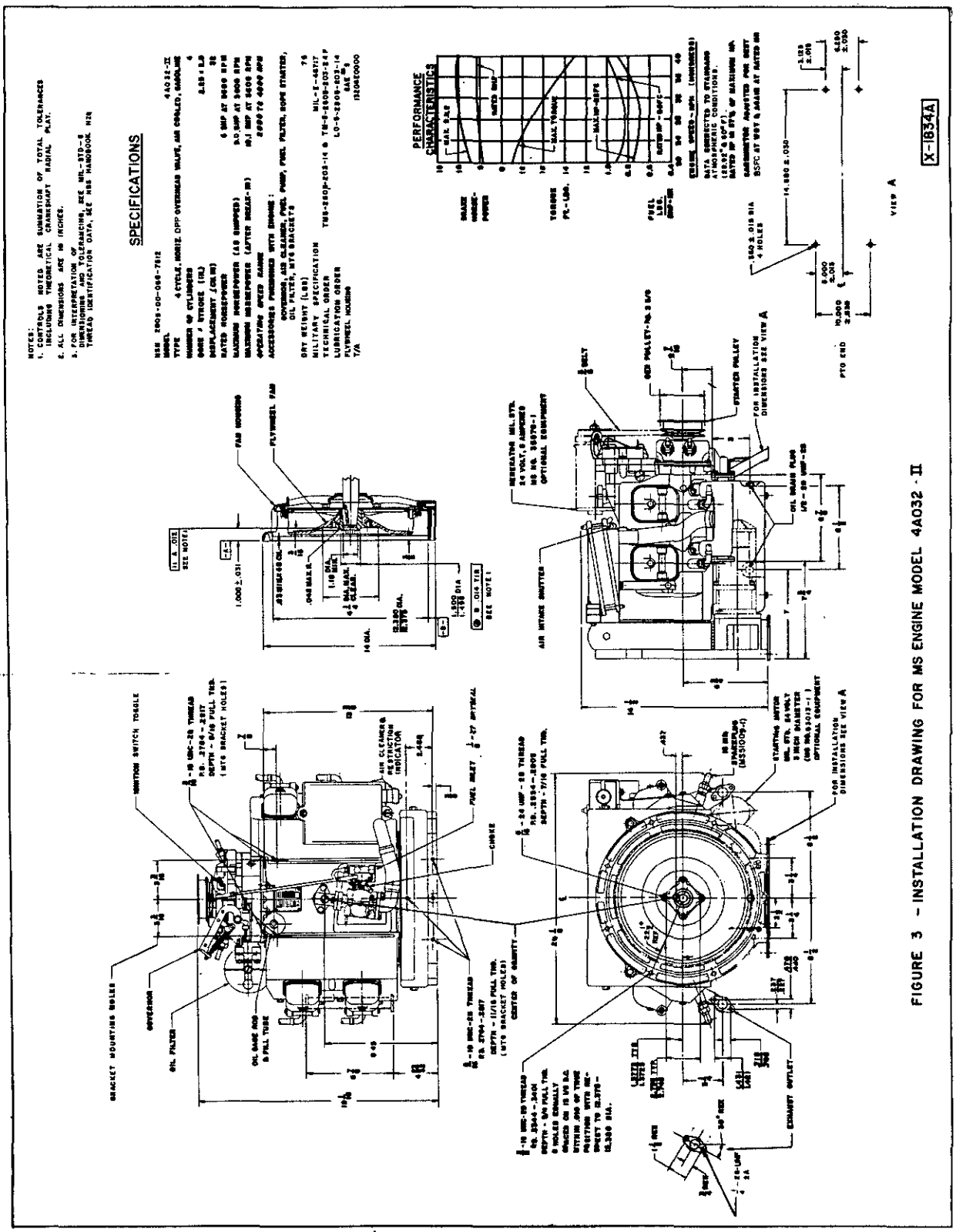
3.1.2 Maximum net corrected brake horsepower. The maximum net corrected brake horsepower rating is the maximum observed horsepower available from the engine at wide-open-throttle conditions at all engine speeds within the operating range with all accessories (including fan, air cleaner, and exhaust system) corrected to standard atmospheric conditions.

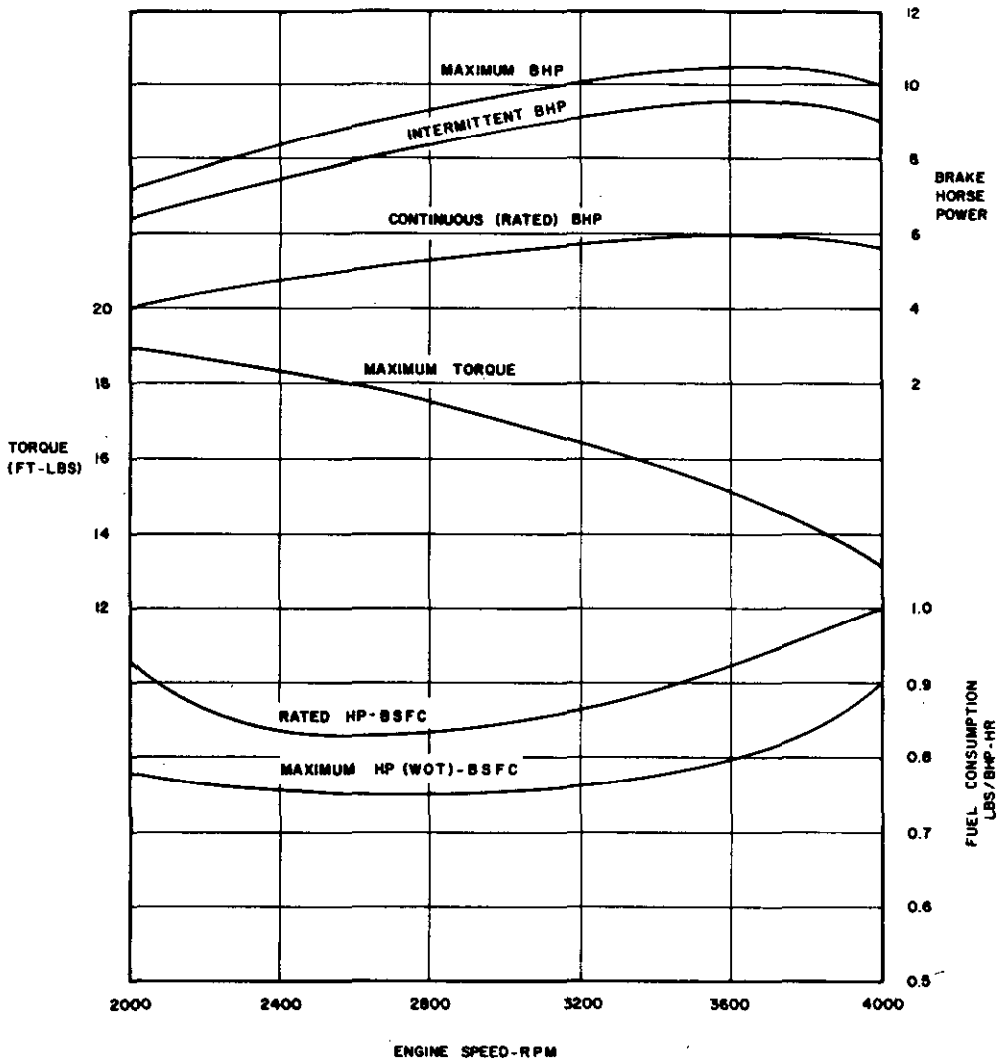
3.1.3 Intermittent net brake horsepower. The intermittent net brake horsepower rating is 90 percent of maximum net corrected brake horsepower and intermittent duty is defined as 1 hour at intermittent horsepower followed by 15 minutes at rated load or less.

3.1.4 Continuous net brake horsepower. The continuous net brake horsepower rating is 6 observed horsepower at 3,600 rpm.

4. GENERAL REQUIREMENTS

4.1 Safety. When installed in the end item, rotating, reciprocating, and high-temperature parts so located as to become a hazard to operating personnel and equipment shall be insulated or guarded. Exhaust mufflers and piping shall be located to minimize hazard to operating personnel.





MAXIMUM BHP CURVE DEVELOPED BY LABORATORY TEST ENGINES. PRODUCTION ENGINES DEVELOP NOT LESS THAN 85% MAXIMUM BHP WHEN SHIPPED, AND NOT LESS THAN 95% MAXIMUM BHP AFTER RUN-IN TO REDUCE FRICTION.

INTERMITTENT HORSEPOWER RATING OF EACH ENGINE IS APPROXIMATELY 90% OF MAXIMUM HORSEPOWER WHICH THE ENGINE WILL PRODUCE FOR SHORT PERIODS OF CONTINUOUS OPERATION.

CONTINUOS HORSEPOWER RATING OF EACH ENGINE IS APPROXIMATELY 57% OF MAXIMUM HORSEPOWER RATING AT ANY GIVEN SPEED IN OPERATING SPEED RANGE. THIS POWER RESERVE PROVIDES AGAINST LOSSES RESULTING FROM ALTITUDE AND HIGH TEMPERATURE OPERATION, NORMAL WEAR AND MANUFACTURING TOLERANCES.

DATA CORRECTED TO STANDARD ATMOSPHERIC CONDITIONS (29.92" HG & 60° F)

FIGURE 4
PERFORMANCE CHARACTERISTICS

☆U.S. GOVERNMENT PRINTING OFFICE: 1976-603-766/3226