



**E9  
OVERHAUL  
PROCEDURES**

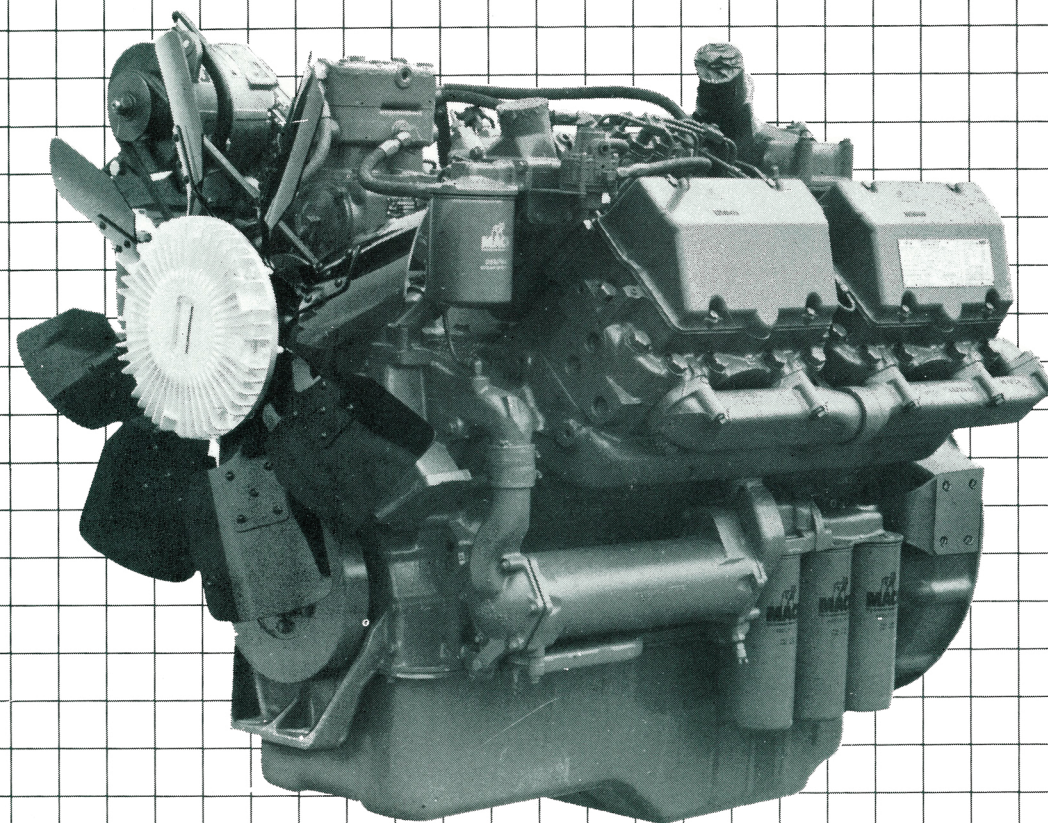
**E9 OVERHAUL PROCEDURES**

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**E9**

**MACK V-8 ENGINE**

**OVERHAUL PROCEDURES**



**ENGINE**

**MARCH 1993**

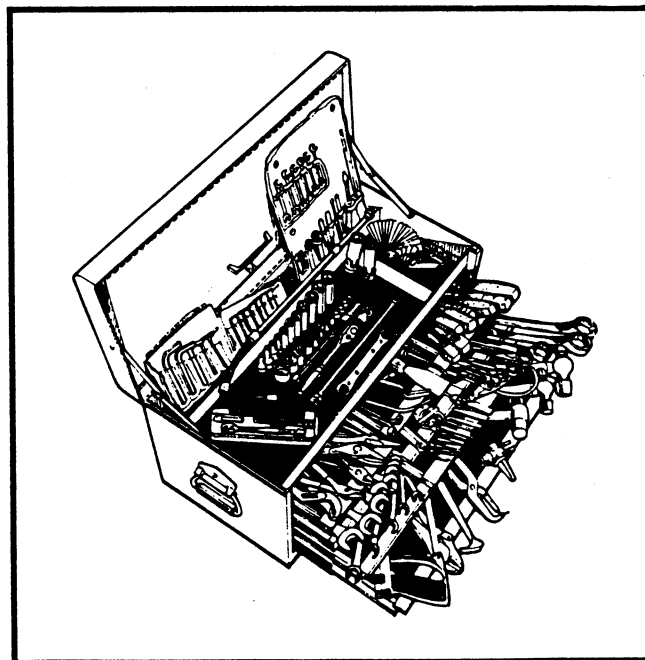
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# OVERHAUL PROCEDURES



## E9 MACK V8-998 SERIES ENGINES OVERHAUL PROCEDURES



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# NOTES





# ADVISORY LABELS



## ATTENTION

Correctly performed service procedures are critical for technician safety and consequent safe, reliable operation of the vehicle.

Cautionary signal words (Danger—Warning—Caution) may appear in various locations throughout this manual. Information accented by one of these "signal words" must be observed to minimize the risk of personal injury to service personnel, or the possibility of improper service methods which may damage the vehicle or render it unsafe. Additional Notes and Service Hints are utilized to emphasize areas of procedural importance and provide suggestions for ease of repair. The following definitions indicate the use of these advisory words as they appear throughout the manual:



### CAUTION



*Directs attention to unsafe practices which could result in damage to equipment and possible subsequent personal injury or death if proper precautions are not taken.*



### WARNING



*Directs attention to unsafe practices which could result in personal injury or death if proper precautions are not taken.*



### DANGER



*Directs attention to unsafe practices and/or existing hazards which will result in personal injury or death if proper precautions are not taken.*

### NOTE

*An operating procedure, practice, condition, etc. which is essential to emphasize.*

### SERVICE HINT

*A helpful suggestion which will make it quicker and/or easier to perform a certain procedure, while possibly reducing overhaul cost.*

Also note that particular service operations may require the use of special tool(s) designed for a specific purpose. These special tools should be used in the manner described, whenever specified in the instructions.

Anyone using a service procedure or tool not recommended in this manual must first satisfy himself thoroughly that neither his safety nor vehicle safety will be jeopardized by the service method he selects. Individuals deviating in any manner from the instructions provided, assume all risks of consequential personal injury or damage to equipment involved.



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# NOTES

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# INTRODUCTION



The Mack V8-998 series diesel engine is a 998 cu. in. high speed, V-8 diesel, four-stroke, open combustion chamber, charge air cooling, direct fuel injection engine. The eight cylinders are divided into two banks in a 90° vee angle cylinder block. Replaceable wet-type sleeves are provided. Buttress screws are used on all main bearing caps. These are installed from the outside of the block and are threaded into the main bearing cap. (They must be removed before caps can be disassembled.)

Four cylinder heads are used; each head covering two cylinder bores. To provide better performance, there are two inlet and two exhaust valves for each cylinder. This arrangement provides increased breathing capability, thereby supplying more air to the combustion chamber.

The injection nozzles are located in the center of the combustion chamber, and is perpendicular to the fire deck. The high pressure fuel line connection to the nozzle holder is within the cylinder head. The nozzle leak-off passages are also drilled within the head.

Starting in 1990, E9 engines are equipped with Bosch fuel injection systems. In 1989, both fuel vendors; Bosch or AMBAC were available. Prior to 1989, E9 engines were equipped with AMBAC fuel injection systems.

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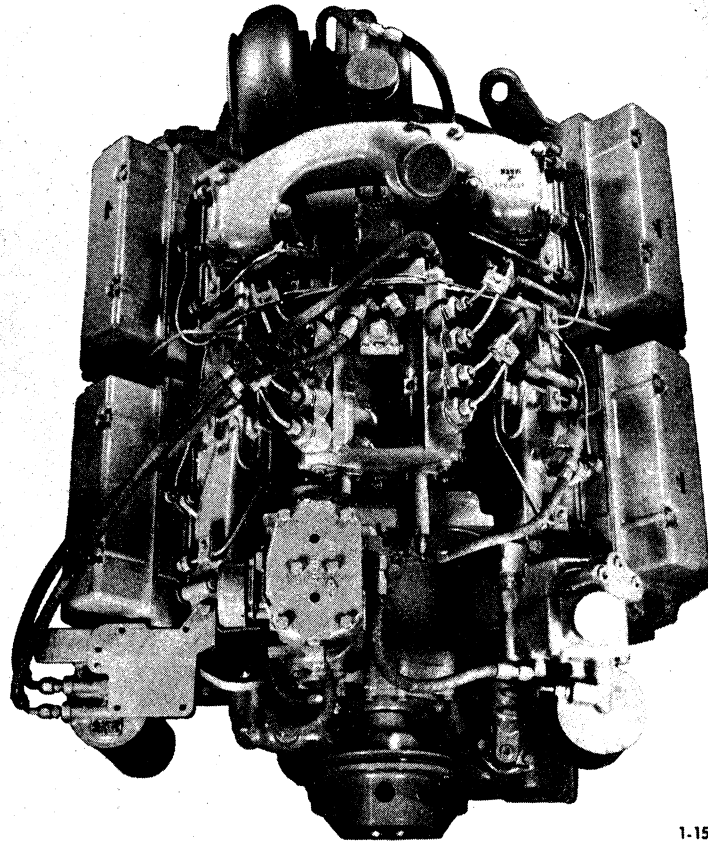


# NOTES



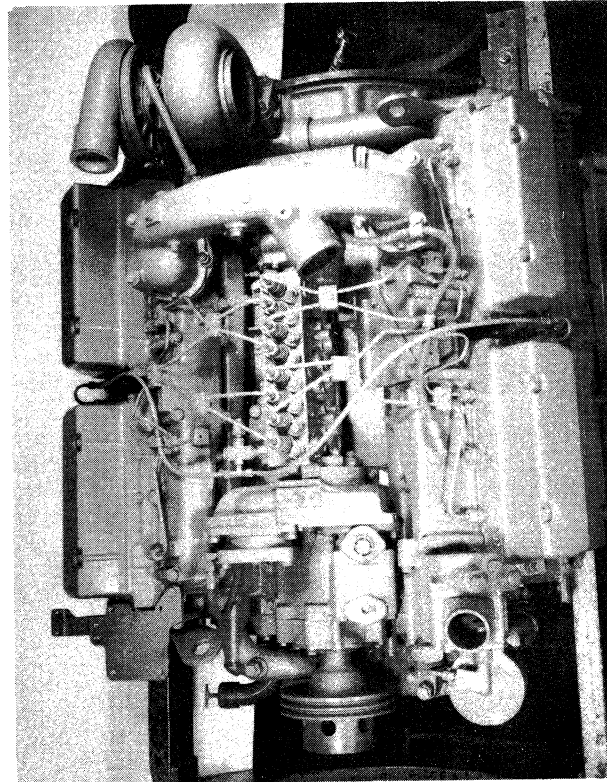


# INTRODUCTION



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V8-998 Series Engine (Top View—AMBAC Equipped)



V8-998 Series Engine (Top View—Bosch Equipped)