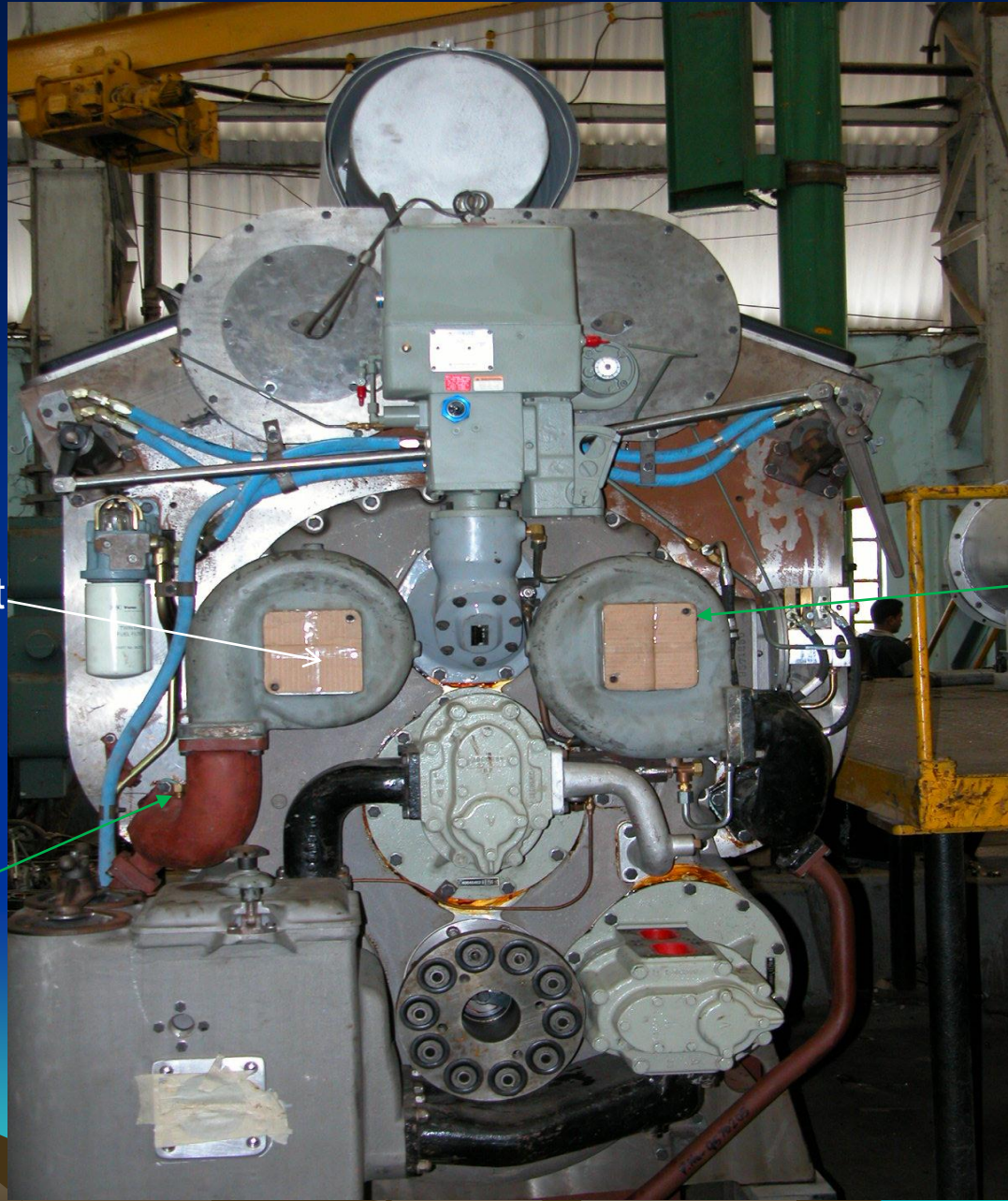


# **WATER COOLING SYSTEM OF GM-LOCO**

**K.NAGARATHNAM    SSE/DSL/HQ**





Inlet

WATER  
PUMP  
OUTLET TO  
MANIFOLD

WATER PUMP

# COMPONENTS OF COOLING WATER SYSTEM

- WATER PUMPS
- L/OIL COOLER-01(PLATE TYPE)
- RADIATOR CORES-02Nos. OR 04Nos.
- RADIATOR FAN AND MOTOR ASSEMBLY
- LOW WATER PROTECTION DEVICE-01
- EXPANSION TANK
- WATER LEVEL GAUGE WITH SIGHT GLASS
- ETP-1 & ETP-2
- HOT WATER INDICATION GAUGE-01 No.

# DATA Water cooling System

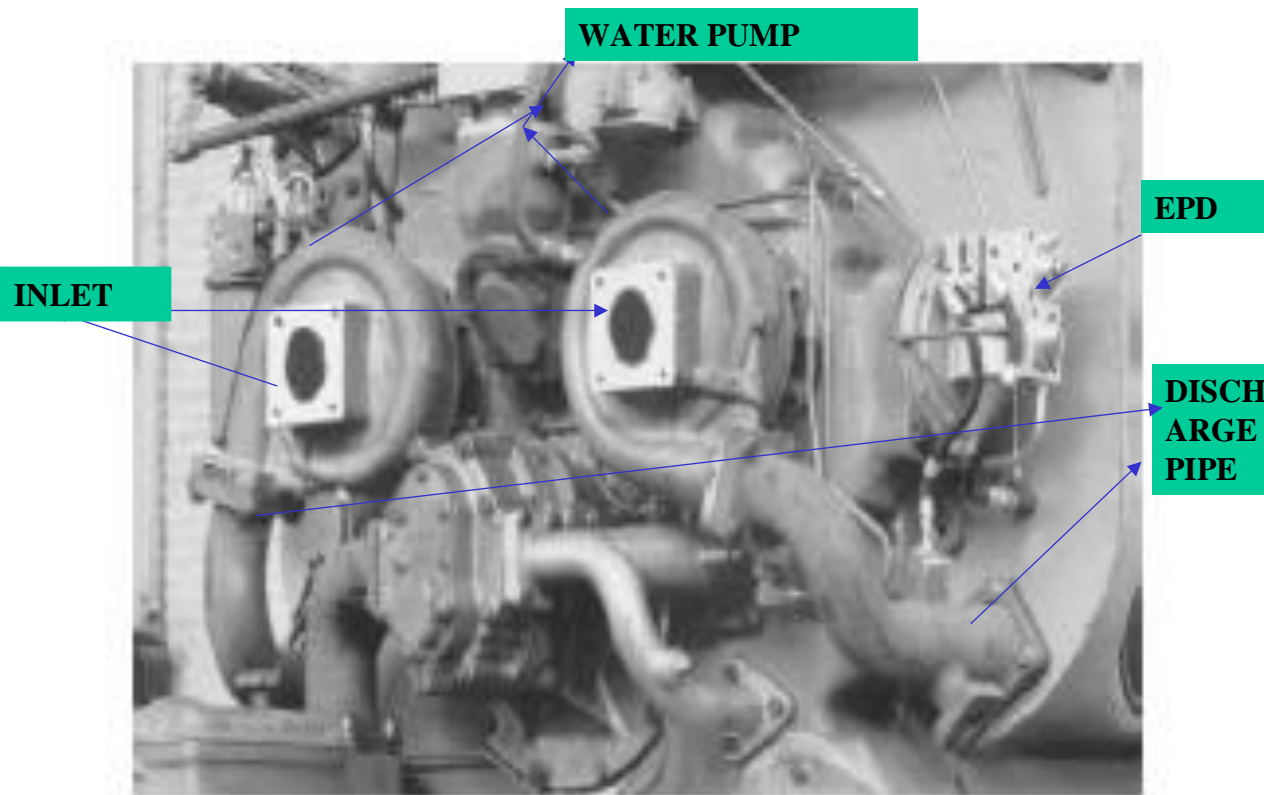
- **COOLING WATER SYSTEM CAPACITY-1045LTS**
- **NOS. OF PUMPS- TWO**
- **PUMP TYPE –CENTRIFUGAL PUMP**
- **PUMP CAPACITY-3785 LTS/MIN.**
- **RPM-900**
- **FAN DRIVE –A/C MOTOR (TWO NOS.)**

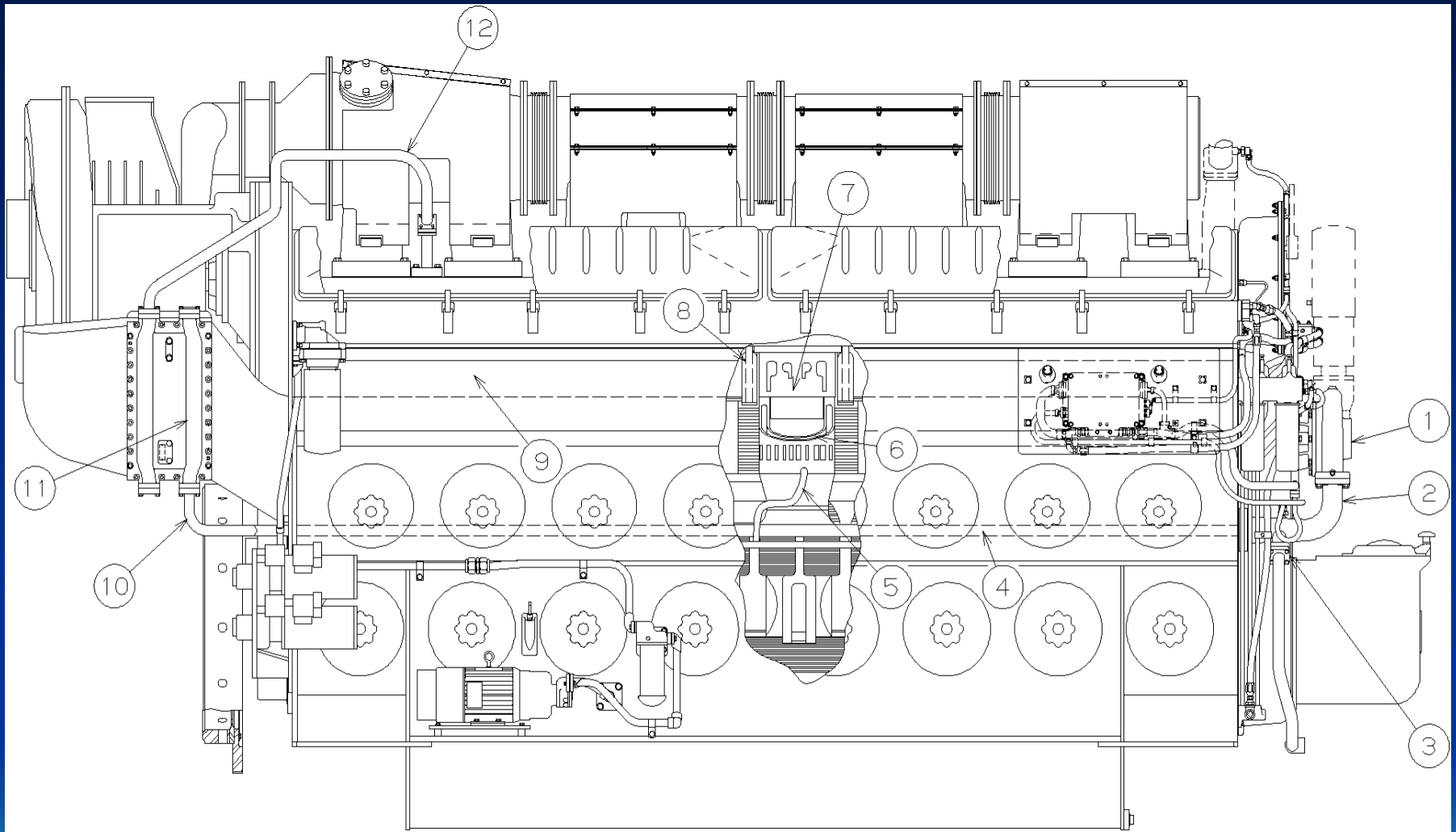
# WATER EXPANSION TANK



# WATER PUMP

WATER PUMP IS IN INSTALLED POSITION





1- WATER PUMP

2- WATER INLET ELBOW

3- SYSTEM DRAIN FLANGE

4- WATER INLET MANIFOLD

5- WATER INLET TUBE

6- LINER WATER PASSAGE

7- CYLINDER HEAD

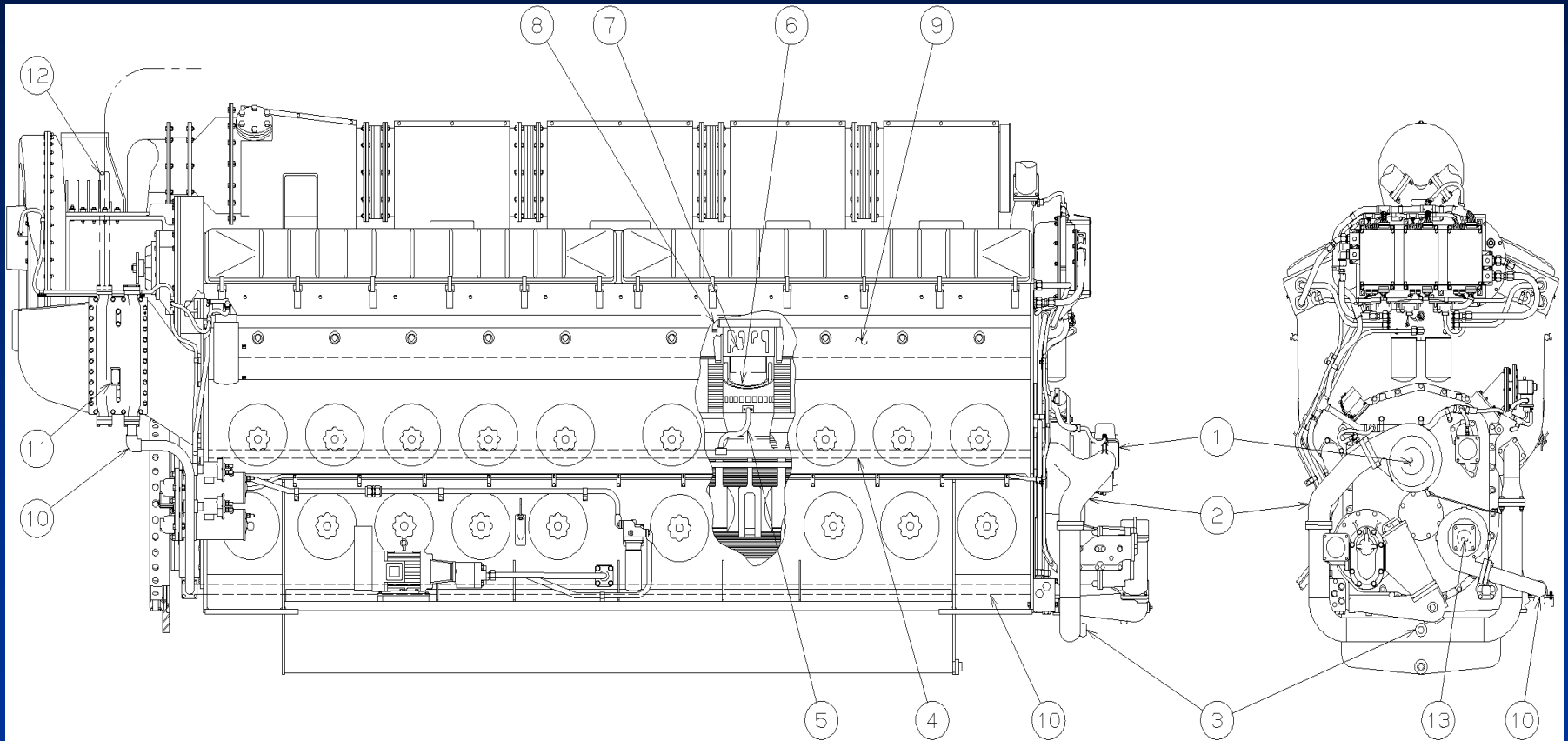
8- CYLINDER HEAD OUTLET ELBOW

9- WATER DISCHARGE MANIFOLD

10- WATER LINE TO AFTERCOOLERS

11- RIGHT BANK AFTERCOOLER

12- AFTERCOOLER WATER DISCHARGE

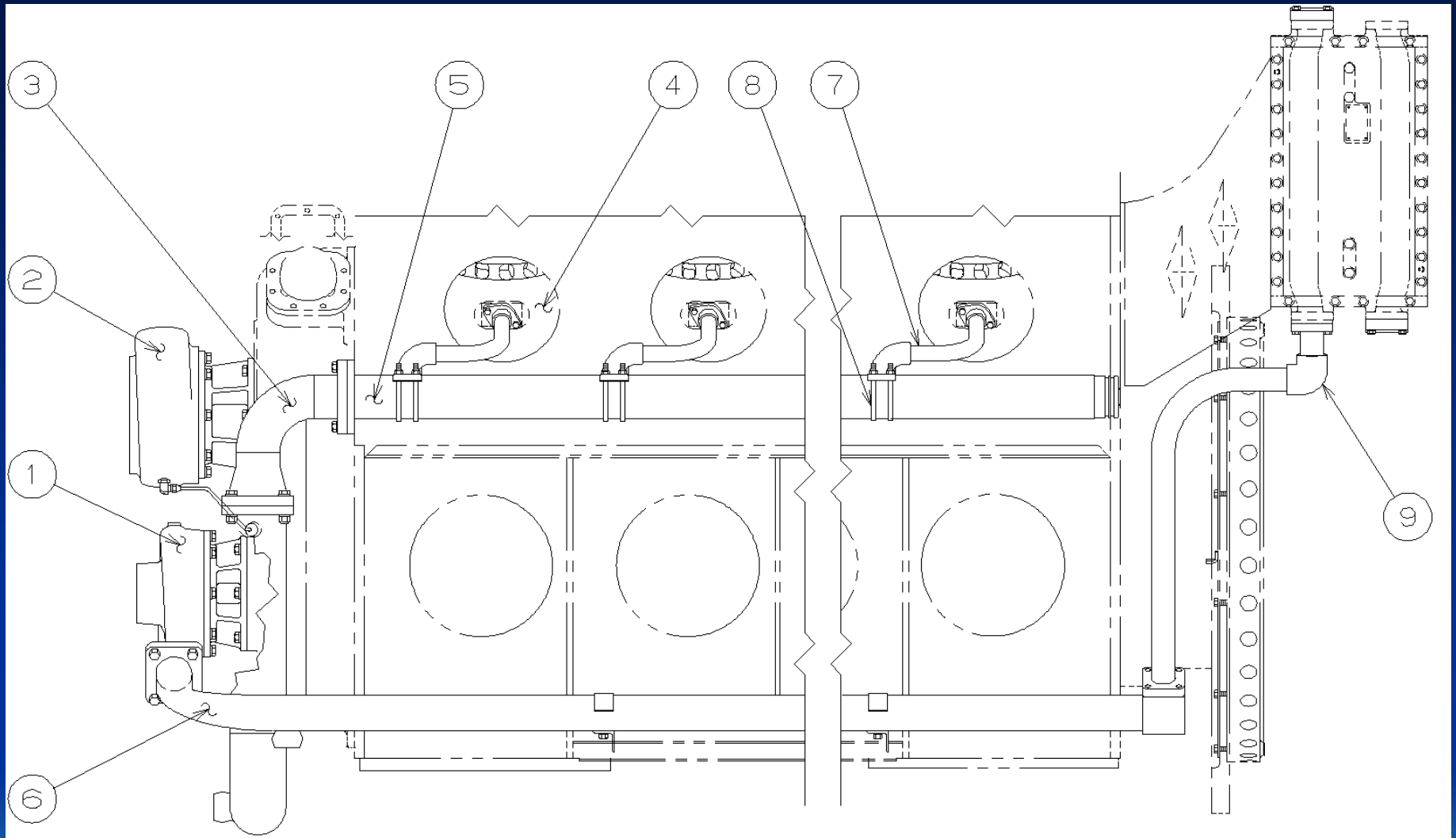


1- MAIN WATER PUMP  
 2- WATER INLET PIPE ASSEMBLY  
 3- SYSTEM DRAIN  
 4- WATER INLET MANIFOLD

5- WATER INLET TUBE  
 6- LINER WATER PASSAGE  
 7- CYLINDER HEAD  
 8- CYLINDER HEAD OUTLET ELBOW

9- WATER DISCHARGE MANIFOLD  
 10- WATER LINE TO AFTERCOOLERS  
 11- RIGHT BANK AFTERCOOLER  
 12- AFTERCOOLER WATER DISCHARGE TO RADIATORS  
 13- AFTERCOOLER WATER PUMP

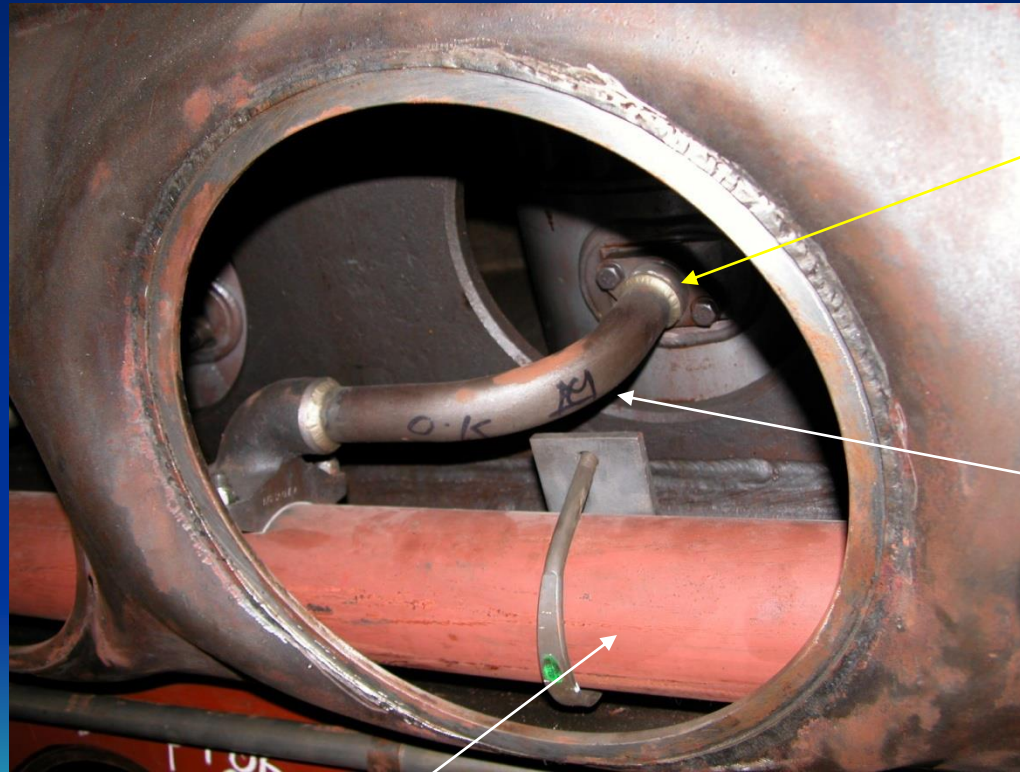




- 1- AFTERCoolER WATER PUMP
- 2- MAIN WATER PUMP
- 3- WATER INLET PIPE ASSEMBLY
- 4- CYLINDER LINER
- 5- MANIFOLD

- 6- AFTERCoolER WATER LINE
- 7- WATER INLET TUBE
- 8- SADDLE STRAP
- 9- AFTERCoolER CONNECTION PIPE ASSEMBLY

# WATER INLET

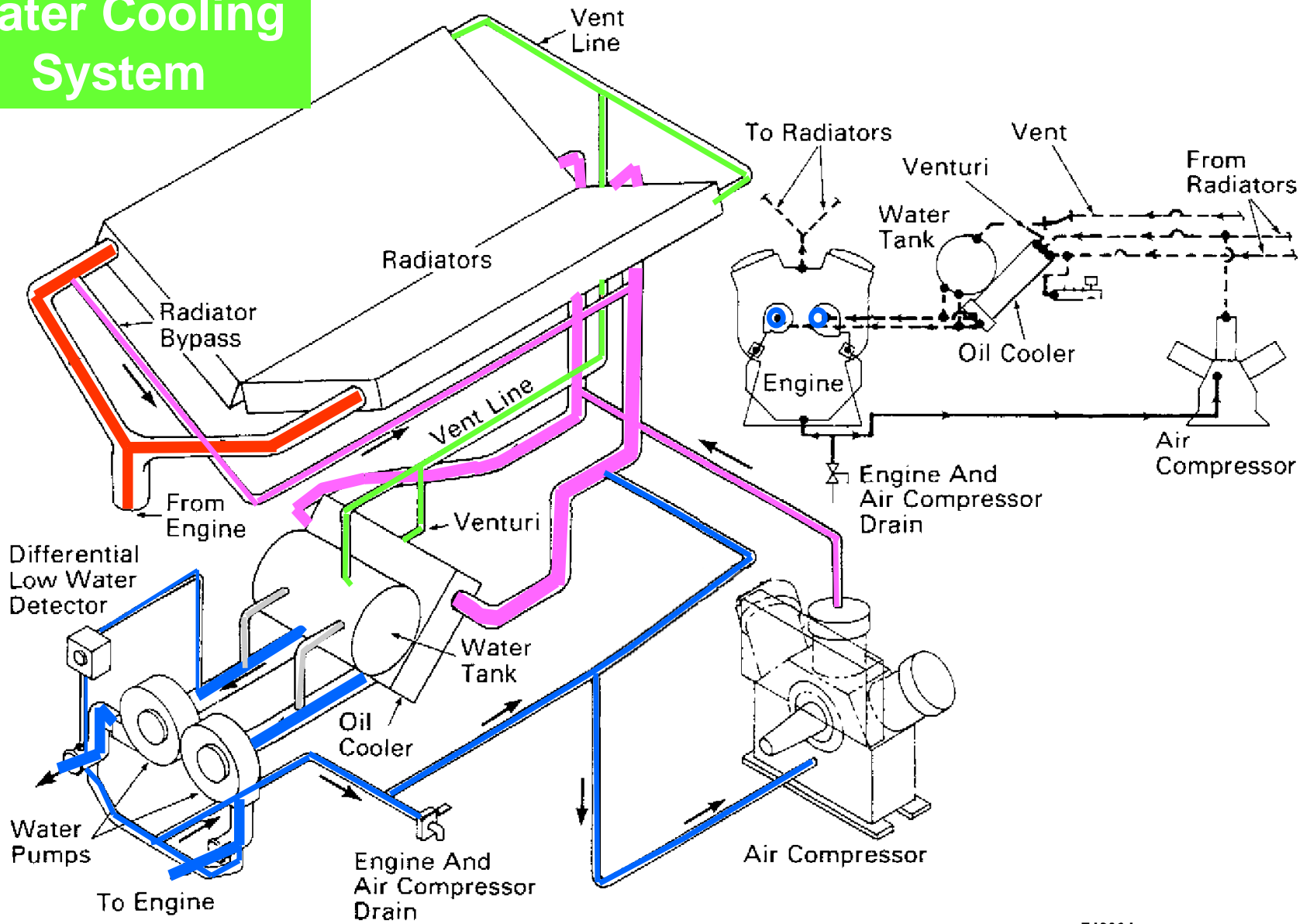


LINER INLET

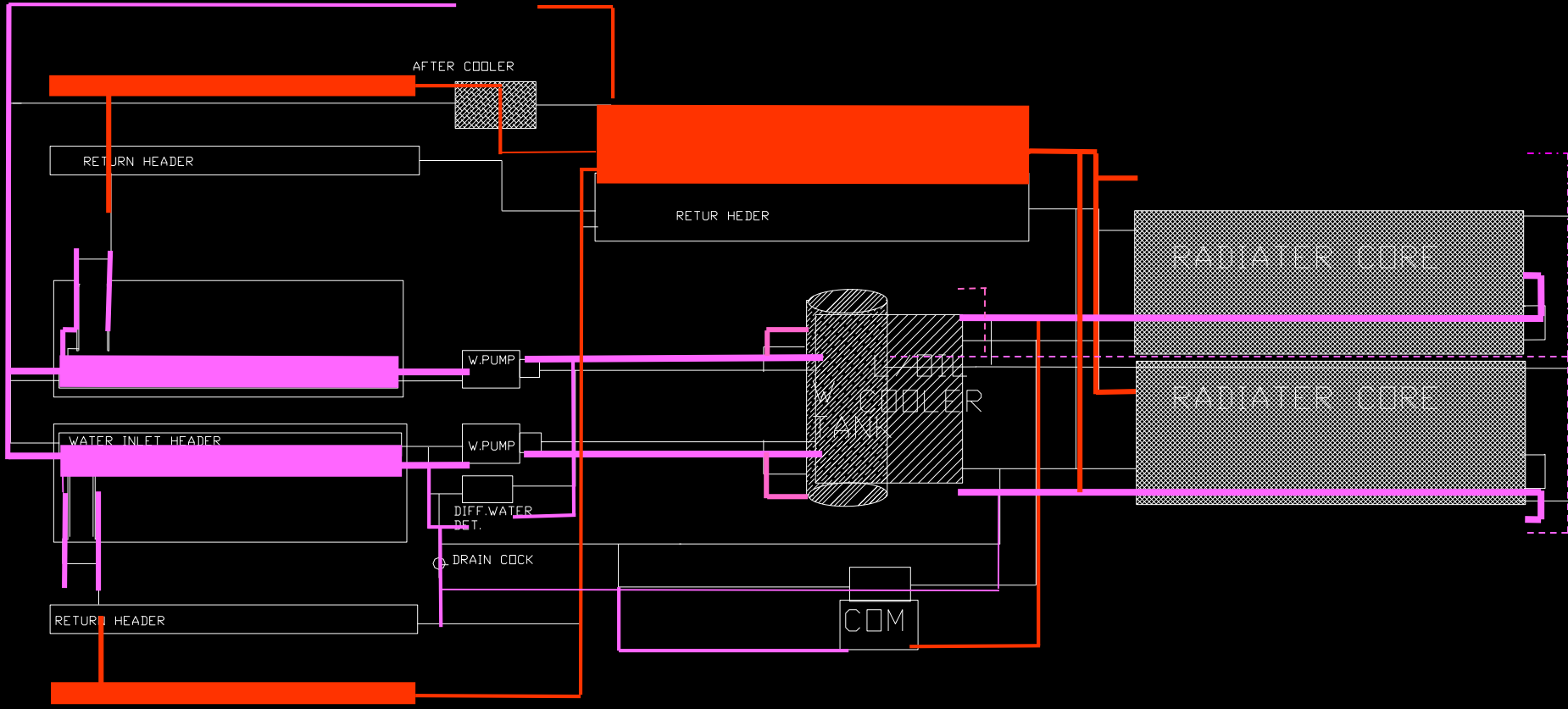
WATER  
INLET TUBE

WATER  
INLET  
MANIFOLD

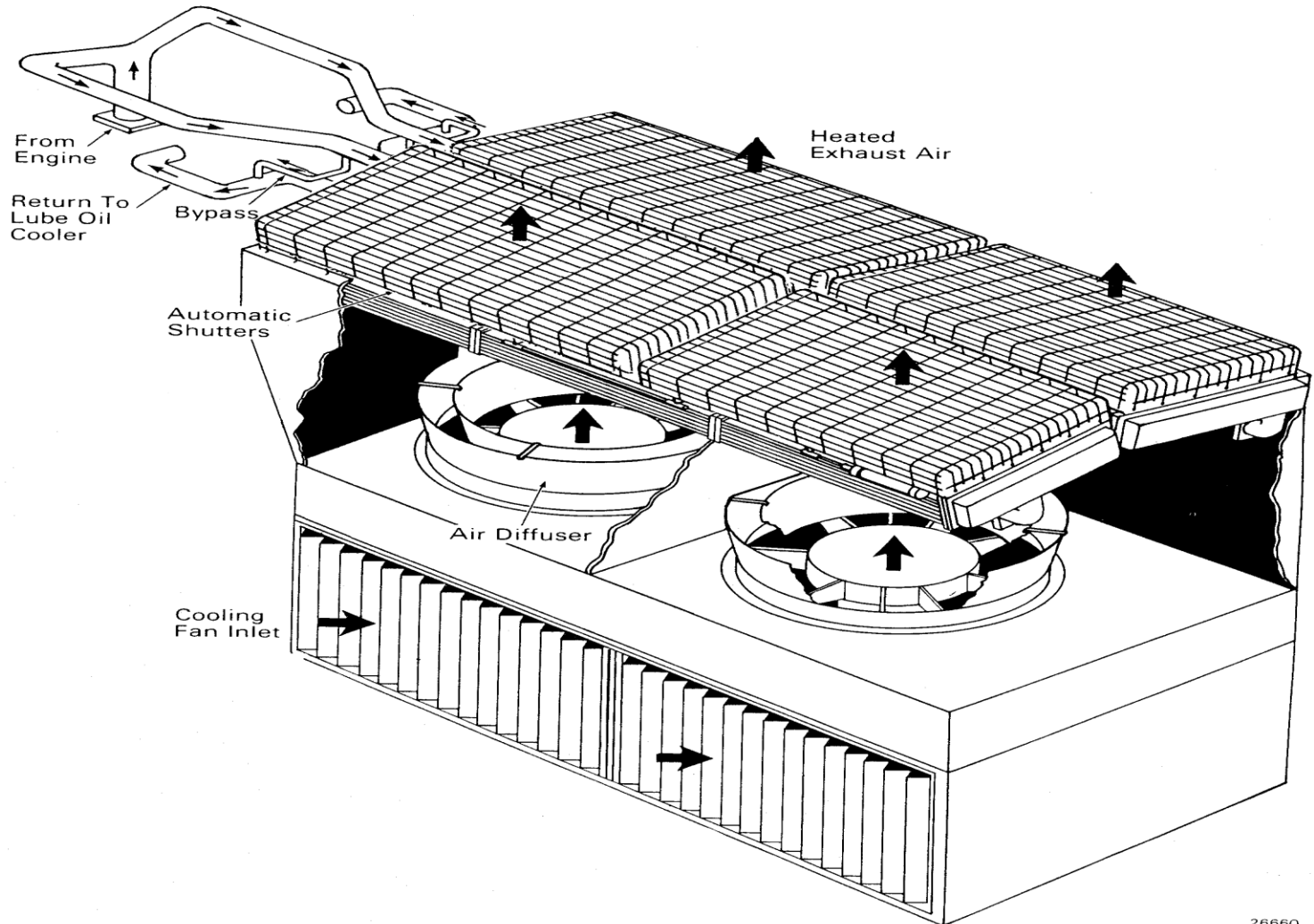
# Water Cooling System



# WATER COOLING SYSTEM



# RADIATOR CORE AND FAN



## ADVANTAGES OF PRESSURISED COOLING WATER SYSTEM

The cooling system is pressurized to raise the boiling point of the cooling water. This in turn permits higher engine operating temperatures, with a minimal loss of coolant due to boiling. Pressurization also ensures a uniform water flow, and minimizes the possibility of water pump cavitations during transient high temperature conditions.

# WATER EXPANSION TANK (water filling)

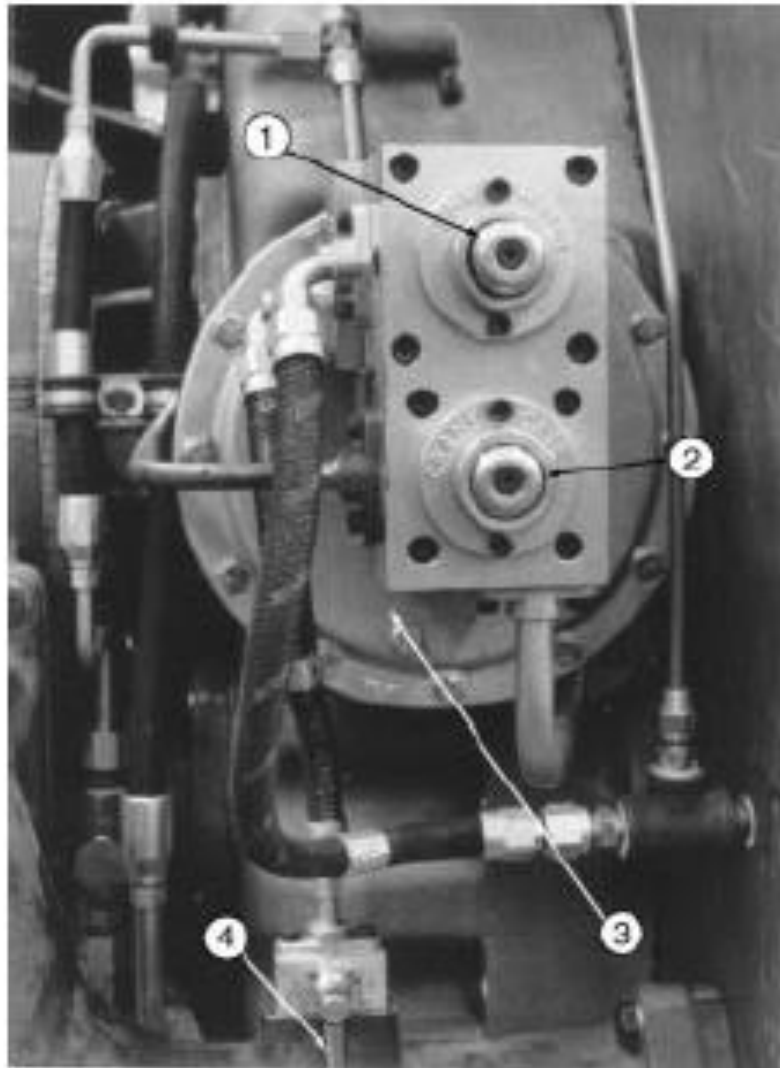


1. Filler/Relief Valve Handle (Pull Down To Open)
2. Pressure Cap
3. Filler Pipe Connector

F20036



## Low water protection device



1. Low Water Portion
2. Crankcase Pressure Portion
3. Veni And Test Fitting
4. Test Cock

F29234