

# Reactor Coolant Pumps

## Chapter 2.2



# Objectives

1. State the purposes of the reactor coolant pump (RCP).
2. Describe the flow paths through the RCP.
3. Explain how the RCP seal minimizes leakage of reactor coolant to the containment building atmosphere.
4. State the safety-related function of the RCP motor flywheel.

# Objectives (Continued)

5. State the purposes of the RCP motor anti-reverse rotation mechanism.
6. State the purpose of the RCP instrumentation.

# Purposes of RCP

1. To provide the forced circulation of reactor coolant for the removal of core heat.
2. To provide energy to heat up the RCS from ambient temperature to greater than the minimum temperature for criticality prior to reactor startup.

Figure 2.2-1 Reactor Coolant Pump Operating Curve

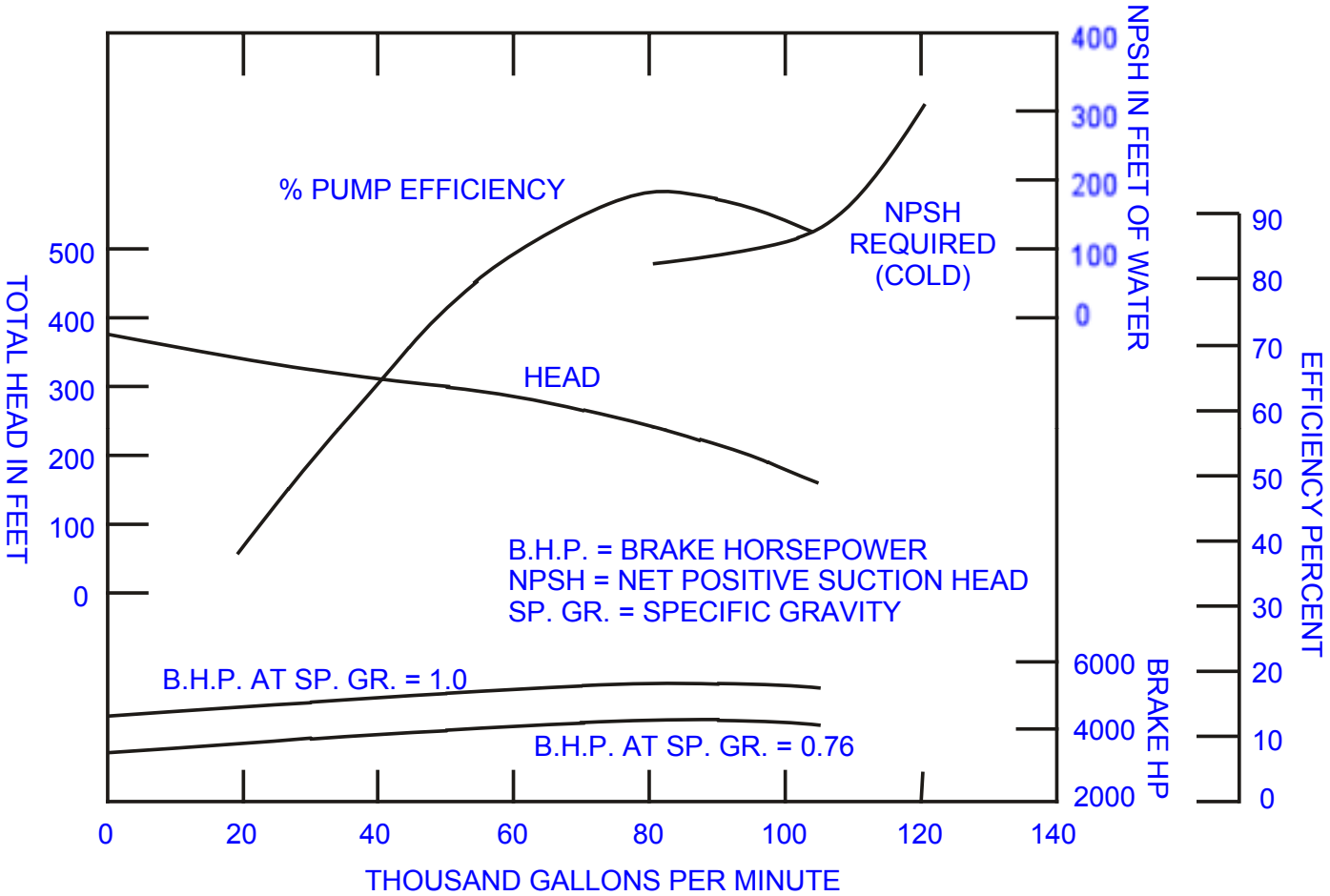


Figure 2.2-2 Reactor coolant Pump Assembly

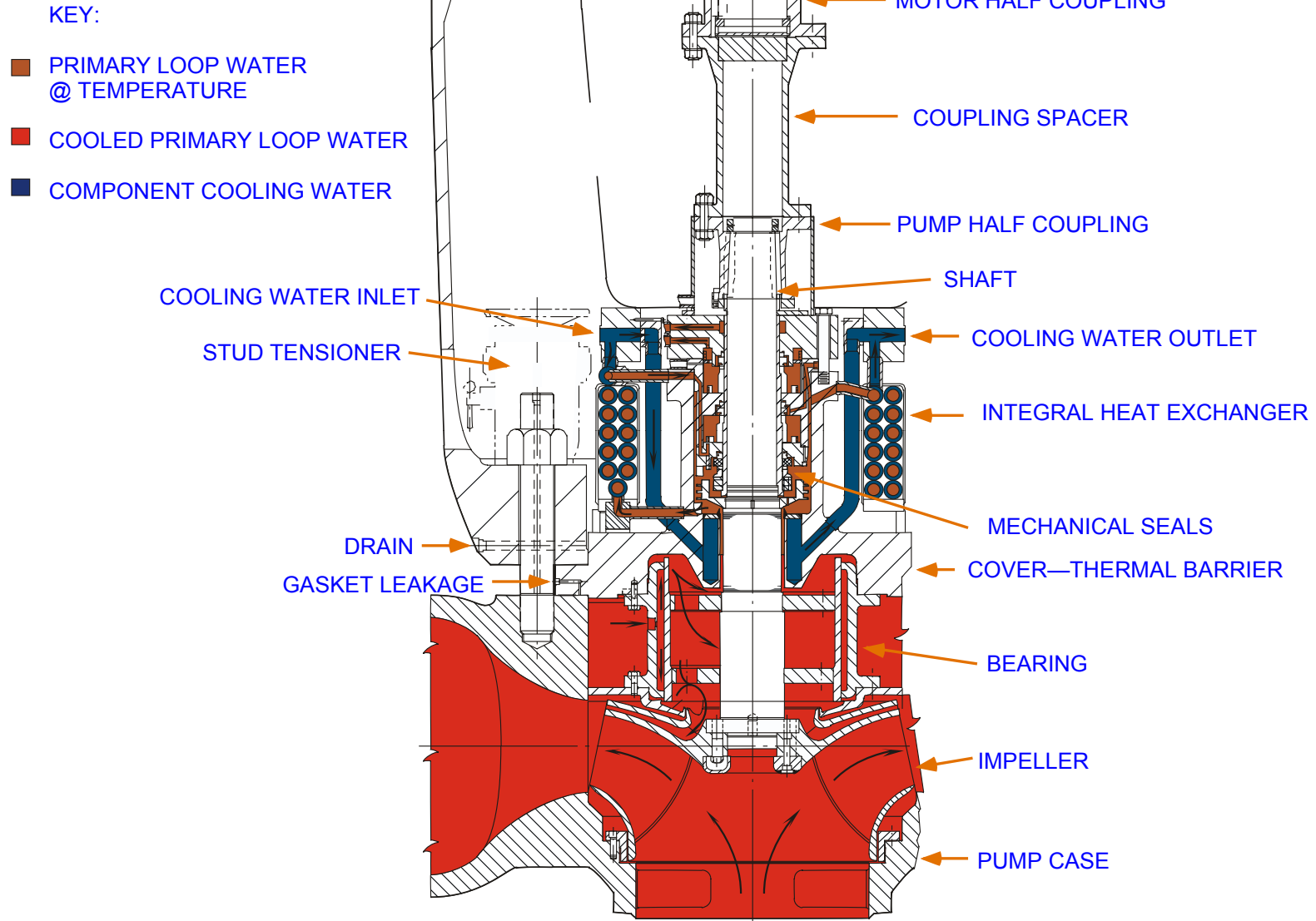


Figure 2.2-3 Reactor Coolant Pump Seal Assembly

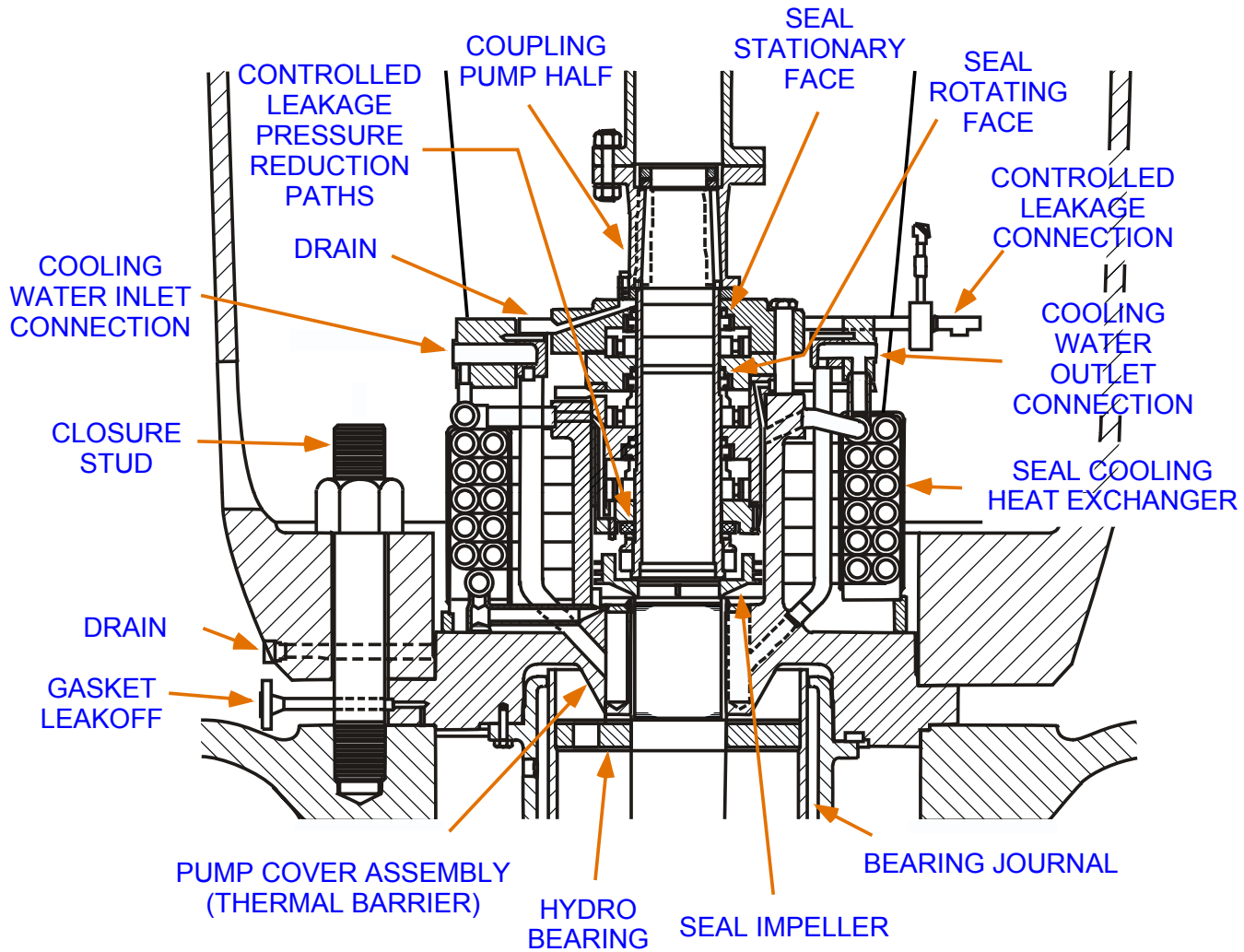


Figure 2.2-4 Simplified Seal Diagram

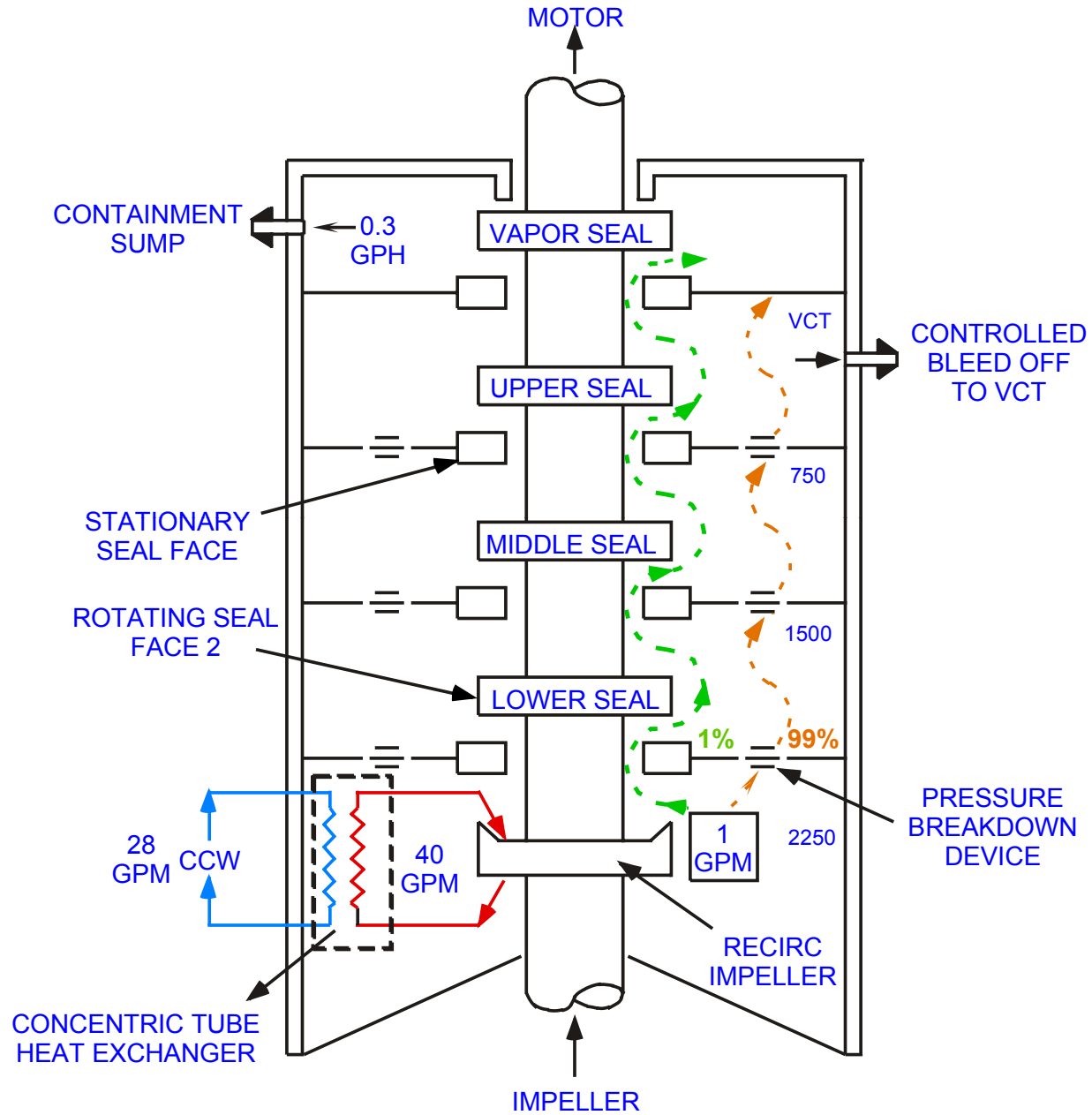




Figure 2.2-5 Reactor Coolant Pump Motor Assembly

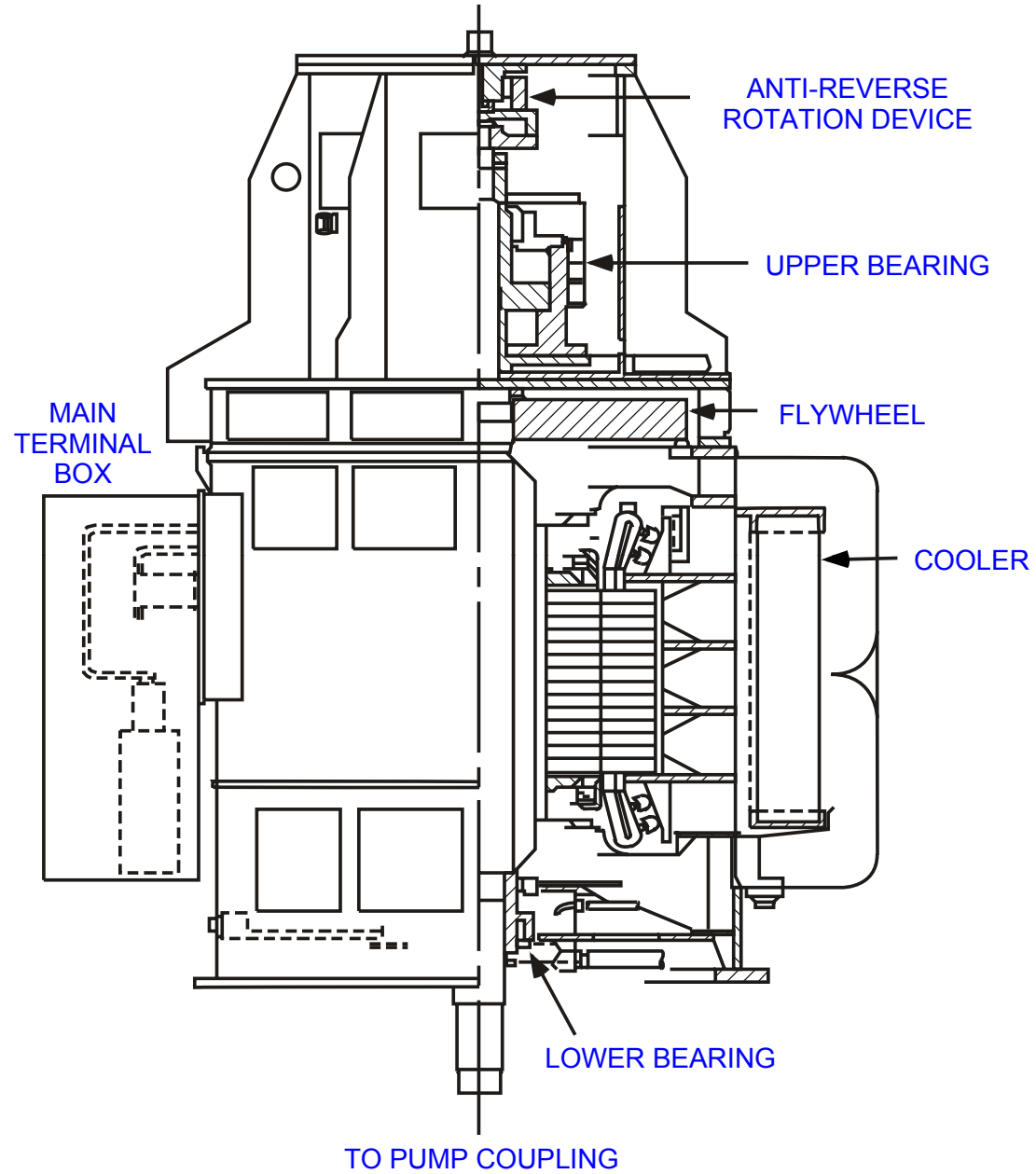
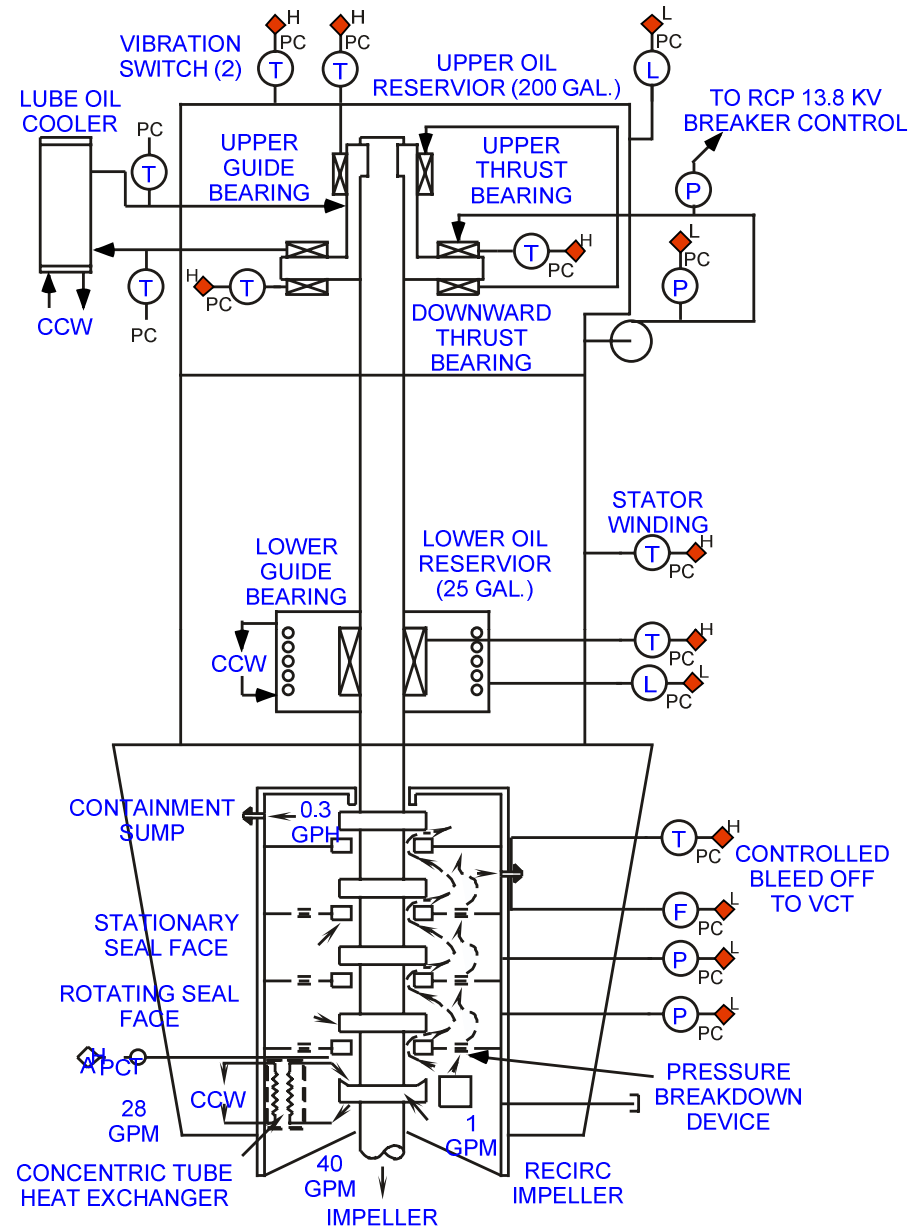


Figure 2.2-6 Reactor Coolant Pump Instrumentation



The End