

# API CJ-4 / High-Temp Corrosion

ASTM D 6594

## SPECIFICATIONS

This test is approved for API CJ-4.

## SIGNIFICANCE AND USE

This test method evaluates diesel engine lubricants to determine their tendency to corrode various metals, specifically alloys of lead and copper commonly used in cam followers and bearings.

## APPARATUS

The main apparatus consists of standard wall borosilicate glassware including a main sample tube, a sample tube head, air tube, thermocouple tube, and condenser. Also needed are a metal specimen hanger, adapter, a heating bath, dry air supply, flow meter, balance, syringe, oven, forceps, thermocouples, and sanding block and holder.

## TEST METHOD / SUMMARY

Four metal coupons of copper, lead, tin, and phosphor bronze are immersed in a measured amount of engine oil. At an elevated temperature of 135°C, the oil is blown with air.

## PASS / FAIL CRITERIA

Copper, used oil increase, max  
20 ppm  
Lead, used oil increase, max  
120 ppm  
Copper strip rating, max  
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