



# API CJ-4 / Cummins ISM

200 Hours, Fuel Sulfur 500 ppm

## SPECIFICATIONS

This procedure is approved for API CJ-4, Cummins CES-20081, and Mack EO-O Premium Plus. This is a replacement procedure for Cummins M11-EGR.

## OBJECTIVE

This procedure is used to evaluate a lubricant's effectiveness at reducing soot-related overhead wear, sludge, and oil filter plugging.

## FIELD SERVICE SIMULATED

High-load, heavy-duty field conditions with high soot and EGR flow rates using a 2007 emission compliant engine are simulated.

## PROCEDURE FIXTURE

This procedure uses a Cummins ISM engine equipped with EGR and is intended as a replacement procedure for the M-11 EGR, using newer hardware.

## PROCEDURE PARAMETERS

This is a 200-hour procedure. The engine has a variable geometry turbocharger, production EGR cooler, and electronically controlled EGR valve.

## CRITICAL PARTS EVALUATED

Injector adjusting screw, sludge, crosshead, top ring wear, oil filter plugging

## USED OIL ANALYSIS

Wear metals, viscosity, TAN, TBN, soot

## PASS/FAIL CRITERIA

Parameter	Anchor	Merit Wt	Max	Min
XHD	5.7	350	7.1	4.3
RWL	100	0	100	0
Ofdp	13	150	19	7
IAS	27	350	49	16
Sludge	9	150	9.3	8.7
Merits	1000			

