

# ILSAC GF-3 (API SL with Energy Conserving)

## Engine Test Requirements as of 12/6/00

TEST TYPE	PURPOSE	PARAMETER	REQUIREMENT
IIIF	Oil Thickening	Kinematic viscosity increase @40°C	275%, max.
		Oil Consumption Interpretability <sup>4</sup>	5.2 L, max. for NOACK≤15% 6.5 L, max. for NOACK>15%
		MRV @ EOT	Report only
	Deposits - High Temp	Hot stuck rings	None
		Avg. piston skirt varnish	9.0, min.
		Weighted piston deposits	4.0, min.
Wear - High Temp	Avg. cam & lifter wear <sup>2</sup>	20 µm, max.	
IVA	Wear - Low Temp	Avg. cam wear	120 µm, max.
VE	Wear - Low Temp Not required for oils containing ≥ 0.08 mass phosphorus in the form of ZDDP	Avg. cam wear Max. cam wear	127 µm, max. 380 µm, max.
VG	Sludge - Low Temp	Avg. engine sludge	7.8, min.
		Rocker arm cover sludge	8.0, min.
		Oil screen clogging	20%, max.
		Hot stuck compression rings	None
	Varnish	Avg. engine varnish, 3 pt. <sup>1</sup>	8.9, min.
		Avg. piston skirt varnish	7.5, min. <sup>3</sup>
		Oil ring clogging	Rate and Report
		Cam follower pin wear	Rate and Report
		Cylinder bore wear	Rate and Report
		Cold stuck rings	Rate and Report
Oil screen debris	Rate and Report		
VIB	Fuel Economy	SAE Viscosity Grades	Improvement over BC 16-hr. aging      96-hr. aging
		0W-20 and 5W-20	2.0%              1.7%
		0W-30 and 5W-30	1.6%              1.3%
		All Others	FEI1 + FEI2      3.0% 0.9%              0.6% FEI1 + FEI2      1.6%
VIII	Bearing Corrosion	Bearing weight loss	26.4 mg., max.
	Shear Stability	10 h stripped 100°C viscosity	Must remain in original grade

<sup>1</sup>Average engine varnish will now be based on piston skirt varnish, right and left RAC (11-16-99).

<sup>2</sup>Note that GM dropped the IIIF maximum wear limit at the 7-26-00 PCEOCP.

<sup>3</sup>Result of ACC PAPTG presentation at 9-28-00 PCEOCP meeting.

<sup>4</sup>Motion made at 9/27/00 Surveillance Panel meeting.

