

BRIEF SUMMARY: CARB Diesel Fuel Specifications and Test Methods

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This summary is not a legal document and not intended to be used in lieu of the regulations but as an aid to understanding the specifications of the regulated fuel properties.

CCR Section ^a	Diesel Parameter	Test Method	Specification	Designated Equivalent Limits CCR Section 2282(h)	Reproducibility
2281	Sulfur Content ^{b,c,d}	<u>ASTM D5453-93</u> Equiv: Canadian/CGSB-3.0, No.16.0-95, Method S121	15 ppm	15 ppm	for D2622: 0.16(x) for D5453: 0.2217(x ^{0.92})
2282	Aromatic Hydrocarbon Content ^{b,c,d}	<u>ASTM D5186-03 (2009) (with correlation equation)^e</u>	10 v%	21.0 w%	0.75 (x ^{0.23}) (where x = wt%) ^e
2282(e)			small refiner: 20 v%		
2282(h)	API Gravity	ASTM D287-82 Equiv: ASTM D4052-96(2002) ^{e1}	not applicable	36.9° API (minimum)	0.5° API (at 60°F ±18°)
2284	Lubricity ^{b,c,d}	ASTM D6079-02	520 microns	520 microns	at 25°C = 0.127 mm at 60°C = 0.136 mm
2282(g)	Below are additional parameters specified for Certified Diesel Formulations (alternative formulations):				
	Polynuclear Aromatic Hydrocarbon Content (PAH)	<u>ASTM D5186-03 (2009)</u>	Specified in the formulation.	3.5 w%	for x < 5.0 w%: 0.47 (x ^{0.45}) for x > 10 w%: 1.77 (x ^{0.50})
	Nitrogen Content	<u>ASTM D4629-96</u>	Specified in the formulation.	500 ppm	0.85 (x ^{0.54}) x = average of 2 test results
	Cetane Number	ASTM D613-84 <u>CARB using PAC Diesel Fuel Analyzer as a screen.</u> Equiv: ASTM D6890-07B	Specified in the formulation	53 (minimum)	2.5 @ 40 ^f 2.6 @ 44 ^f 3.1 @ 52 ^f 3.3 @ 56 ^f
Check the executive order for each certified diesel formulation for any additional specifications, i.e.additive requirements.					

a = CCR Section 2285 exempts qualifying military vehicles from CARB diesel fuel requirements.

b = also applies to non-vehicular diesel fuel used in internal combustion engines except for locomotives and marine vessels.

c = CCR Section 2299 extends standard to apply to intrastate diesel-electric locomotives and harborcraft.

d = CCR Section 2479 extends standard to apply to mobile handling equipment at ports and intermodal rail yards using CARB diesel.

e = correlation equation: ArHC v% = (0.916)(ArHC w%) + 1.33

f = reproducibility values for intermediate and higher cetane numbers to be obtained by linear interpolation.

Note 1: for reproducibility, x = test result.

Note 2: values are maximums unless otherwise indicated.

Note 3: underline = current CARB enforcement test method.