

X, XHO, TB, TC Grades of Ultra Low Sulfur Diesel Fuel Specifications
Central, Rocky Mountain, and Southern Systems

Central System:

Product Property	Test Method	Origin Test Results		Deliveries ^{1/}
		Minimum	Maximum	
Gravity, °API	D287		Report	
Color	D1500		2.5	3
Distillation ^{4/}	D86, D2887			
50% Recovered, °F			Report	
90% Recovered, °F		540	640	
Copper Corrosion	D130		1	
Cetane				
Cetane Number	D613	40		
Or				
Cetane Index, A or B	D4737	40		
Cetane Index ^{2/}	D976	40		
Flash Point, °F	D93	140		130
Stability				
Thermal, % reflectance (W or Y)	D6468 (W)	75		
	D6468 (Y)	82		
Aging Period (Minutes)	D6468	90		
Or				
Oxidation, mg/100 ml	D2274		2.5	
Carbon Residue on 10% Bottoms, wt %	D524		0.35	
Cloud Point, °F	D2500			
September-March			+15	
April-August			+20	
Pour Point, °F	D97			
September-March			+0	
April-August			+10	
Viscosity, cSt at 104 °F	D445	1.9	4.1	
Ash, wt %	D482		0.01	
Haze Rating ^{3/}	D4176		2	3
NACE Corrosion	TM0172, D7548	B+		
Sulfur, ppm	D2622		11	

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Rocky Mountain System:

Product Property	Test Method	Origin Test Results		Deliveries ^{1/}
		Minimum	Maximum	
Gravity, °API	D287		Report	
Color	D1500		2.5	3
Distillation ^{4/}	D86, D2887			
50% Recovered, °F			Report	
90% Recovered, °F		540	640	
Copper Corrosion	D130		1	
Cetane				
Cetane Number	D613	40		
Or				
Cetane Index, A or B	D4737	40		
Cetane Index ^{2/}	D976	40		
Flash Point, °F	D93	134		130
Stability				
Thermal, % reflectance (W or Y)	D6468 (W)	75		
	D6468 (Y)	82		
Aging Period (Minutes)	D6468	90		
Or				
Oxidation, mg/100 ml	D2274		2.5	
Carbon Residue on 10% Bottoms, wt %	D524		0.35	
Cloud Point, °F	D2500			
September-March			+15	
April-August			+20	
Pour Point, °F	D97			
September-March			+0	
April-August			+10	
Viscosity, cSt at 104 °F	D445	1.9	4.1	
Ash, wt %	D482		0.01	
Haze Rating ^{3/}	D4176		2	3
NACE Corrosion	TM0172, D7548	B+		
Sulfur, ppm	D2622		12	

X. XHO, TB, TC Grade Ultra Low Sulfur Diesel Fuel Specifications
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Southern System:

Product Property	Test Method	Origin Test Results		Deliveries ^{1/}
		Minimum	Maximum	
Gravity, °API	D287		Report	
Color	D1500		2.5	3
Distillation ^{4/}	D86, D2887			
50% Recovered, °F			Report	
90% Recovered, °F		540	640	
Copper Corrosion	D130		1	
Cetane				
Cetane Number	D613	40		
Or				
Cetane Index, A or B	D4737	40		
Cetane Index ^{2/}	D976	40		
Flash Point, °F	D93	135		130
Stability				
Thermal, % reflectance (W or Y)	D6468 (W)	75		
	D6468 (Y)	82		
Aging Period (Minutes)	D6468	90		
Or				
Oxidation, mg/100 ml	D2274		2.5	
Carbon Residue on 10% Bottoms, wt %	D524		0.35	
Cloud Point, °F	D2500			
October-February			+15	
March-August			+28	
September			+20	
Pour Point, °F	D97		Report	
Viscosity, cSt at 104 °F	D445	1.9	4.1	
Ash, wt %	D482		0.01	
Haze Rating ^{3/}	D4176		2	3
NACE Corrosion	TM0172, D7548	B+		
Sulfur, ppm	D2622		11	

Foot Notes:

- 1/ Delivered products meet all applicable requirements at time and place of delivery.
- 2/ ASTM D976 result is required for low sulfur fuel oils to demonstrate aromatics compliance per the EPA.
- 3/ Compliance with ASTM D4176 will be determined using Procedure 2 at 77 °F or tank temperature at the time of sampling, whichever is lower.
- 4/ ASTM D2887 Simulated Distillation results must be reported after D86 correlation.

Additional Requirements:

Biodiesel: The presence of biodiesel is prohibited.

Dyes: X Grade shipments may not be dyed.