



Pipeline Specifications

Pioneer Pipeline

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Revision Notes:

Modified volatility table for Wyoming deliveries to reflect the latest version of ASTM D4814.

Revised: 10/2/2014



Pipeline Specifications

Pioneer Pipeline

click on product information to go to associated specification

Product Name	Product Code(s)
Gasoline, Subgrade, 81.5 octane	7.8#- D4X; 9.0#- D4V; >9.0#- D4U
Gasoline, Subgrade, 84 octane, (for shipment to breakout tankage at Salt Lake City for shipment on UNEV Pipeline to Las Vegas)	9.0#- D0H; >9.0#- D0G
Gasoline, Subgrade, 88 octane	7.8#- P6R; 9.0#- P6T; >9.0#- P6S
Gasoline, Conventional, 85 octane (no ethanol)	7.8#- D71; 9.0#- D47; >9.0#- D48
Gasoline, Conventional, 91 octane (no ethanol)	7.8#- P84; 9.0#- P1U; >9.0#- P64
Distillate, #2 Diesel Fuel, Ultra-Low Sulfur (15 ppm max), (for Tesoro manifold destination only, not for Salt Lake City receipts; also meets #2 Fuel Oil Specifications)	#2D 15 ppm Diesel- V95
Distillate, #1 Diesel Fuel, Ultra-Low Sulfur (15 ppm max), (for Tesoro manifold destination only, not for Salt Lake City receipts; does NOT meet Jet A specifications)	#1D 15 ppm Diesel- VA1
Distillate, #2 Diesel Fuel, Ultra-Low Sulfur (15 ppm max), (also meets #2 Fuel Oil Specifications)	#2D 15 ppm Diesel- V95
Distillate, #1 Diesel Fuel, Ultra-Low Sulfur (15 ppm max), (also meets Jet A specifications)	#1D 15 ppm Diesel- VA3
Distillate, Jet A, High Sulfur (1500 ppm max)	Jet A- K83
Distillate, Jet A, Ultra-Low Sulfur (15 ppm max), (for Salt Lake delivery only, does NOT meet #1 Diesel motor vehicle specifications)	Jet A- K32

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Pipeline Specifications

Pioneer Pipeline

click on product information to go to associated specification

Product Name	Product Code(s)
Volatility Schedule, Conventional, 84 Octane, Salt Lake City, UT breakout tank for shipment on UNEV Pipeline to Las Vegas	Various
Volatility Schedule, Conventional, All Grades, Salt Lake City, UT	Various
Volatility Schedule, Conventional, All Grades, Wyoming	Various

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Pipeline Specifications

Product Codes:

7.8#- D4X;
9.0#- D4V;
>9.0#- D4U

Pioneer Pipeline

Gasoline, Subgrade, 81.5 octane

Property	Test Method	Units	Min	Max	Specific	Note#
Additives	General Note					1
API Gravity (60 Deg F)	D287, D1298, D4052	API	Report			
Appearance	Visual		Clear & Br			2
Basicity	D1093 Acidity, mod. see note		Report			3
Benzene	D3606 Benz & Tol by GC	Vol%		4.0		4
Color	Visual		Undyed			
Copper Strip Corrosion	D130 Cu Str 3 Hr @ 122 F	Rating		1		
Lead (Pb)	D3237 Lead by AA	gPb/gal		0.01	@ origin	
Mercaptan Sulfur	D3227 Thiol Merc S by Titra	Wt%		0.002		5
Mercaptan Sulfur	D4952 Active S by Doc Tst	Rating	sweet			
NACE Rust test	NACE Rust TM0172-2001	Rating	B+			
Octane, (R+M) / 2	D2699 & 2700 OR D2885		81.5			
Octane, Motor	D2700 OR D2885		76.5			
Octane, Research	D2699 OR D2885		Report			
Oxidation Stability	D525 Oxid Stab by Ind Period	minutes	240			
Oxygenates Prohibited	See Note					6
Phosphorus	D3231 Phosphorus in Gasoline	g/gal		0.003		
Product Description	See Note					7
Referee Methods	See Note					8
Silver Strip Corrosion	D7667 or D7671	Rating		1		
Solvent Washed Gum	D381 Gum Content by Jet Evap	mg/100ml		5		
Sulfur	D2622 OR D5453	ppm		80		9
Volatility & Distillation	D4814 Spec for Auto SI Fuels		see Table			

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Pipeline Specifications

Product Codes:

7.8#- D4X;
9.0#- D4V;
>9.0#- D4U

Pioneer Pipeline

Gasoline, Subgrade, 81.5 octane

Notes:

1. This fuel may contain antioxidants/sweeteners and corrosion inhibitors. Corrosion inhibitors may be required to meet the 1 mil/yr standard pipeline corrosion rate. The use of other additives is prohibited. All additives and their concentrations must be previously approved by the pipeline Quality Control Coordinator, and must be clearly indicated on the Certificate of Analysis. The EPA specifically prohibits the intentional addition of additives containing lead, phosphorus, or heavy metals. No intentional addition of MMT, phosphorus, lead, or additives containing other heavy metals is allowed.
2. The finished fuel shall be visually free of undissolved water, sediment, and suspended matter; it shall be clear and bright at the ambient temperature or 21 Deg C (70 Deg F), whichever is higher. (ASTM D 4814)
3. ASTM D1093 should be performed to test for basicity according to the instructions in section 9.3 and 9.4 of the ASTM method using a phenolphthalein indicator solution, except as noted below. Combine 50 ml of the sample, 15 ml of water, and 3 drops of phenolphthalein indicator solution in a clean centrifuge tube, shake vigorously for 30 seconds, let stand for 3 minutes and observe against a white background (the centrifugation step in the ASTM method is not required). See the method for additional details. If a slightly pink to red color is observed in the water phase, the sample shows alkalinity and fails the test. The sample tested should be a lower sample as described in ASTM D4057, "...a spot sample of liquid from the middle of the lower one-third of the tank's content..."
4. Tests must be performed in accordance with EPA approved test methods published in 40 CFR Part 80.
5. The Mercaptan Sulfur determination may be waived if the fuel is considered sweet by the Doctor Test described in ASTM D 4952.
6. The use of alcohols and ethers as blending components at origin is prohibited.
7. This fuel meets or exceeds all the requirements of ASTM D4814 (Unleaded Gasoline). In addition, this fuel is a sub-octane gasoline, meant for blending with ethanol or a higher octane non-oxygenated gasoline in order to meet minimum octane requirements. This product is base gasoline and does not meet the EPA detergent additive requirement for finished gasoline. This product does not meet the requirements for reformulated gasoline (RFG) and may not be used in any reformulated gasoline covered area.
8. Referee Methods for Gasoline are as follows:
Vapor / Liquid Ratio, ASTM D5188. (source ASTM D4814); Oxygenates, ASTM D5599 is the EPA approved method, ASTM D4815 may be used if the method is correlated back to ASTM D5599.
9. Tests must be performed in accordance with EPA approved test methods published in 40 CFR Part 80.

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Pipeline Specifications

Product Codes:

9.0#- D0H;
>9.0#- D0G

Pioneer Pipeline

Gasoline, Subgrade, 84 octane, (for shipment to breakout tankage at Salt Lake City for shipment on UNEV Pipeline to Las Vegas)

Property	Test Method	Units	Min	Max	Specific	Note#
Additives	General Note					1
API Gravity (60 Deg F)	D287, D1298, D4052	API	Report			
Appearance	Visual		Clear & Br			2
Basicity	D1093 Acidity, mod. see note		Report			3
Benzene	D3606 Benz & Tol by GC	Vol%		4.9		4
Color	Visual		Undyed			
Copper Strip Corrosion	D130 Cu Str 3 Hr @ 122 F	Rating		1		
Haze, Colonial	D4176 Wtr & Part Cont, Proc 2	Rating		2		5
Lead (Pb)	D3237 Lead by AA	gPb/gal		0.01	@ origin	
Mercaptan Sulfur	D3227 Thiol Merc S by Titra	Wt%		0.002		6
Mercaptan Sulfur	D4952 Active S by Doc Tst	Rating	sweet			
NACE Rust test	NACE Rust TM0172-2001	Rating	B+			
Octane, (R+M) / 2	D2699 & 2700		84.0			
Octane, Research	D2699 OR D2885		Report			
Oxidation Stability	D525 Oxid Stab by Ind Period	minutes	240			
Oxygenates Prohibited	See Note					7
Phosphorus	D3231 Phosphorus in Gasoline	g/gal		0.003		
Product Description	See Note					8
Silver Strip Corrosion	D7667 or D7671	Rating		1		
Solvent Washed Gum	D381 Gum Content by Jet Evap	mg/100ml		5		
Sulfur	D2622 OR D5453	ppm		80		9
Volatility & Distillation	D4814 Spec for Auto SI Fuels		see Table			

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Pipeline Specifications

Product Codes:

9.0#- D0H;
>9.0#- D0G

Pioneer Pipeline

Gasoline, Subgrade, 84 octane, (for shipment to breakout tankage at Salt Lake City for shipment on UNEV Pipeline to Las Vegas)

Notes:

1. This fuel may contain antioxidants/sweeteners and corrosion inhibitors. Corrosion inhibitors may be required to meet the 1 mil/yr standard pipeline corrosion rate. The use of other additives is prohibited. All additives and their concentrations must be previously approved by the pipeline Quality Control Coordinator, and must be clearly indicated on the Certificate of Analysis. The EPA specifically prohibits the intentional addition of additives containing lead, phosphorus, or heavy metals. No intentional addition of MMT, phosphorus, lead, or additives containing other heavy metals is allowed.
2. The finished fuel shall be visually free of undissolved water, sediment, and suspended matter; it shall be clear and bright at the ambient temperature or 21 Deg C (70 Deg F), whichever is higher. (ASTM D 4814)
3. ASTM D1093 should be performed to test for basicity according to the instructions in section 9.3 and 9.4 of the ASTM method using a phenolphthalein indicator solution, except as noted below. Combine 50 ml of the sample, 15 ml of water, and 3 drops of phenolphthalein indicator solution in a clean centrifuge tube, shake vigorously for 30 seconds, let stand for 3 minutes and observe against a white background (the centrifugation step in the ASTM method is not required). See the method for additional details. If a slightly pink to red color is observed in the water phase, the sample shows alkalinity and fails the test. The sample tested should be a lower sample as described in ASTM D4057, "...a spot sample of liquid from the middle of the lower one-third of the tank's content..."
4. Tests must be performed in accordance with EPA approved test methods published in 40 CFR Part 80.
5. Product must be 55°F or tank temperature whichever is lower.
6. The Mercaptan Sulfur determination may be waived if the fuel is considered sweet by the Doctor Test described in ASTM D 4952.
7. The use of alcohols and ethers as blending components at origin is prohibited.
8. This fuel meets or exceeds all the requirements of ASTM D4814 (Unleaded Gasoline). In addition, this fuel is a sub-octane gasoline, meant for blending with ethanol or a higher octane non-oxygenated gasoline in order to meet minimum octane requirements. This product is base gasoline and does not meet the EPA detergent additive requirement for finished gasoline. This product does not meet the requirements for reformulated gasoline (RFG) and may not be used in any reformulated gasoline covered area.
9. Tests must be performed in accordance with EPA approved test methods published in 40 CFR Part 80.

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Pipeline Specifications

Product Codes:

7.8#- P6R;
9.0#- P6T;
>9.0#- P6S

Pioneer Pipeline

Gasoline, Subgrade, 88 octane

Property	Test Method	Units	Min	Max	Specific	Note#
Additives	General Note					1
API Gravity (60 Deg F)	D287, D1298, D4052	API	Report			
Appearance	Visual		Clear & Br			2
Basicity	D1093 Acidity, mod. see note		Report			3
Benzene	D3606 Benz & Tol by GC	Vol%		4.0		4
Color	Visual		Undyed			
Copper Strip Corrosion	D130 Cu Str 3 Hr @ 122 F	Rating		1		
Lead (Pb)	D3237 Lead by AA	gPb/gal		0.01	@ origin	
Mercaptan Sulfur	D3227 Thiol Merc S by Titra	Wt%		0.002		5
Mercaptan Sulfur	D4952 Active S by Doc Tst	Rating	sweet			
NACE Rust test	NACE Rust TM0172-2001	Rating	B+			
Octane, (R+M) / 2	D2699 & 2700		91.0		w/ 10% ETOH	6
Octane, (R+M) / 2	D2699 & 2700 OR D2885		88.0			
Octane, Motor	D2700 OR D2885		Report			
Octane, Research	D2699 OR D2885		Report			
Oxidation Stability	D525 Oxid Stab by Ind Period	minutes	240			
Oxygenates Prohibited	See Note					7
Phosphorus	D3231 Phosphorus in Gasoline	g/gal		0.003		
Product Description	See Note					8
Referee Methods	See Note					9
Silver Strip Corrosion	D7667 or D7671	Rating		1		
Solvent Washed Gum	D381 Gum Content by Jet Evap	mg/100ml		5		
Sulfur	D2622 OR D5453	ppm		80		10
Volatility & Distillation	D4814 Spec for Auto SI Fuels		see Table			

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Pipeline Specifications

Product Codes:

7.8#- P6R;
9.0#- P6T;
>9.0#- P6S

Pioneer Pipeline

Gasoline, Subgrade, 88 octane

Notes:

1. This fuel may contain antioxidants/sweeteners and corrosion inhibitors. Corrosion inhibitors may be required to meet the 1 mil/yr standard pipeline corrosion rate. The use of other additives is prohibited. All additives and their concentrations must be previously approved by the pipeline Quality Control Coordinator, and must be clearly indicated on the Certificate of Analysis. The EPA specifically prohibits the intentional addition of additives containing lead, phosphorus, or heavy metals. No intentional addition of MMT, phosphorus, lead, or additives containing other heavy metals is allowed.
2. The finished fuel shall be visually free of undissolved water, sediment, and suspended matter; it shall be clear and bright at the ambient temperature or 21 Deg C (70 Deg F), whichever is higher. (ASTM D 4814)
3. ASTM D1093 should be performed to test for basicity according to the instructions in section 9.3 and 9.4 of the ASTM method using a phenolphthalein indicator solution, except as noted below. Combine 50 ml of the sample, 15 ml of water, and 3 drops of phenolphthalein indicator solution in a clean centrifuge tube, shake vigorously for 30 seconds, let stand for 3 minutes and observe against a white background (the centrifugation step in the ASTM method is not required). See the method for additional details. If a slightly pink to red color is observed in the water phase, the sample shows alkalinity and fails the test. The sample tested should be a lower sample as described in ASTM D4057, "...a spot sample of liquid from the middle of the lower one-third of the tank's content..."
4. Tests must be performed in accordance with EPA approved test methods published in 40 CFR Part 80.
5. The Mercaptan Sulfur determination may be waived if the fuel is considered sweet by the Doctor Test described in ASTM D 4952.
6. Shippers must meet the 91.0 octane minimum with a hand blend containing 10 volume % denatured fuel ethanol.
7. The use of alcohols and ethers as blending components at origin is prohibited.
8. This fuel meets or exceeds all the requirements of ASTM D 4814 (Unleaded Gasoline). This product does not meet EPA additive addition requirements for finished gasoline. This product does not meet the requirements for reformulated gasoline (RFG) and may not be used in any reformulated gasoline covered area.
9. Referee Methods for Gasoline are as follows:
Vapor / Liquid Ratio, ASTM D5188. (source ASTM D4814); Oxygenates, ASTM D5599 is the EPA approved method, ASTM D4815 may be used if the method is correlated back to ASTM D5599.
10. Tests must be performed in accordance with EPA approved test methods published in 40 CFR Part 80.

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Pipeline Specifications

Product Codes:

7.8#- D71;
9.0#- D47;
>9.0#- D48

Pioneer Pipeline

Gasoline, Conventional, 85 octane (no ethanol)

Property	Test Method	Units	Min	Max	Specific	Note#
Additives	General Note					1
API Gravity (60 Deg F)	D287, D1298, D4052	API	Report			
Appearance	Visual		Clear & Br			2
Basicity	D1093 Acidity, mod. see note		Report			3
Benzene	D3606 Benz & Tol by GC	Vol%		4.0		4
Color	Visual		Undyed			
Copper Strip Corrosion	D130 Cu Str 3 Hr @ 122 F	Rating		1		
Lead (Pb)	D3237 Lead by AA	gPb/gal		0.01	@ origin	
Mercaptan Sulfur	D3227 Thiol Merc S by Titra	Wt%		0.002		5
Mercaptan Sulfur	D4952 Active S by Doc Tst	Rating	sweet			
NACE Rust test	NACE Rust TM0172-2001	Rating	B+			
Octane, (R+M) / 2	D2699 & 2700 OR D2885		85.0			6
Octane, Motor	D2700 OR D2885		80.0			6
Octane, Research	D2699 OR D2885		Report			
Oxidation Stability	D525 Oxid Stab by Ind Period	minutes	240			
Oxygenates Prohibited	See Note					7
Phosphorus	D3231 Phosphorus in Gasoline	g/gal		0.003		
Product Description	See Note					8
Referee Methods	See Note					9
Silver Strip Corrosion	D7667 or D7671	Rating		1		
Solvent Washed Gum	D381 Gum Content by Jet Evap	mg/100ml		5		
Sulfur	D2622 OR D5453	ppm		80		10
Volatility & Distillation	D4814 Spec for Auto SI Fuels		see Table			

Revised: 10/2/2014



Pipeline Specifications

Product Codes:

7.8#- D71;
9.0#- D47;
>9.0#- D48

Pioneer Pipeline

Gasoline, Conventional, 85 octane (no ethanol)

Notes:

1. This fuel may contain antioxidants/sweeteners and corrosion inhibitors. Corrosion inhibitors may be required to meet the 1 mil/yr standard pipeline corrosion rate. The use of other additives is prohibited. All additives and their concentrations must be previously approved by the pipeline Quality Control Coordinator, and must be clearly indicated on the Certificate of Analysis. The EPA specifically prohibits the intentional addition of additives containing lead, phosphorus, or heavy metals. No intentional addition of MMT, phosphorus, lead, or additives containing other heavy metals is allowed.
2. The finished fuel shall be visually free of undissolved water, sediment, and suspended matter; it shall be clear and bright at the ambient temperature or 21 Deg C (70 Deg F), whichever is higher. (ASTM D 4814)
3. ASTM D1093 should be performed to test for basicity according to the instructions in section 9.3 and 9.4 of the ASTM method using a phenolphthalein indicator solution, except as noted below. Combine 50 ml of the sample, 15 ml of water, and 3 drops of phenolphthalein indicator solution in a clean centrifuge tube, shake vigorously for 30 seconds, let stand for 3 minutes and observe against a white background (the centrifugation step in the ASTM method is not required). See the method for additional details. If a slightly pink to red color is observed in the water phase, the sample shows alkalinity and fails the test. The sample tested should be a lower sample as described in ASTM D4057, "...a spot sample of liquid from the middle of the lower one-third of the tank's content..."
4. Tests must be performed in accordance with EPA approved test methods published in 40 CFR Part 80.
5. The Mercaptan Sulfur determination may be waived if the fuel is considered sweet by the Doctor Test described in ASTM D 4952.
6. Requirements for Octane have been adjusted for altitude per ASTM D 4814.
7. The use of alcohols and ethers as blending components at origin is prohibited.
8. This fuel meets or exceeds all the requirements of ASTM D 4814 (Unleaded Gasoline). This product does not meet EPA additive addition requirements for finished gasoline. This product does not meet the requirements for reformulated gasoline (RFG) and may not be used in any reformulated gasoline covered area.
9. Referee Methods for Gasoline are as follows:
Vapor / Liquid Ratio, ASTM D5188. (source ASTM D4814); Oxygenates, ASTM D5599 is the EPA approved method, ASTM D4815 may be used if the method is correlated back to ASTM D5599.
10. Tests must be performed in accordance with EPA approved test methods published in 40 CFR Part 80.

Revised: 10/2/2014



Pipeline Specifications

Product Codes:

7.8#- P84;
9.0#- P1U;
>9.0#- P64

Pioneer Pipeline

Gasoline, Conventional, 91 octane (no ethanol)

Property	Test Method	Units	Min	Max	Specific	Note#
Additives	General Note					1
API Gravity (60 Deg F)	D287, D1298, D4052	API	Report			
Appearance	Visual		Clear & Br			2
Basicity	D1093 Acidity, mod. see note		Report			3
Benzene	D3606 Benz & Tol by GC	Vol%		4.0		4
Color	Visual		Undyed			
Copper Strip Corrosion	D130 Cu Str 3 Hr @ 122 F	Rating		1		
Lead (Pb)	D3237 Lead by AA	gPb/gal		0.01	@ origin	
Mercaptan Sulfur	D3227 Thiol Merc S by Titra	Wt%		0.002		5
Mercaptan Sulfur	D4952 Active S by Doc Tst	Rating	sweet			
NACE Rust test	NACE Rust TM0172-2001	Rating	B+			
Octane, (R+M) / 2	D2699 & 2700 OR D2885		91.0			
Octane, Motor	D2700 OR D2885		Report			
Octane, Research	D2699 OR D2885		Report			
Oxidation Stability	D525 Oxid Stab by Ind Period	minutes	240			
Oxygenates Prohibited	See Note					6
Phosphorus	D3231 Phosphorus in Gasoline	g/gal		0.003		
Product Description	See Note					7
Referee Methods	See Note					8
Silver Strip Corrosion	D7667 or D7671	Rating		1		
Solvent Washed Gum	D381 Gum Content by Jet Evap	mg/100ml		5		
Sulfur	D2622 OR D5453	ppm		80		9
Volatility & Distillation	D4814 Spec for Auto SI Fuels		see Table			

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Pipeline Specifications

Product Codes:

7.8#- P84;
9.0#- P1U;
>9.0#- P64

Pioneer Pipeline

Gasoline, Conventional, 91 octane (no ethanol)

Notes:

1. This fuel may contain antioxidants/sweeteners and corrosion inhibitors. Corrosion inhibitors may be required to meet the 1 mil/yr standard pipeline corrosion rate. The use of other additives is prohibited. All additives and their concentrations must be previously approved by the pipeline Quality Control Coordinator, and must be clearly indicated on the Certificate of Analysis. The EPA specifically prohibits the intentional addition of additives containing lead, phosphorus, or heavy metals. No intentional addition of MMT, phosphorus, lead, or additives containing other heavy metals is allowed.
2. The finished fuel shall be visually free of undissolved water, sediment, and suspended matter; it shall be clear and bright at the ambient temperature or 21 Deg C (70 Deg F), whichever is higher. (ASTM D 4814)
3. ASTM D1093 should be performed to test for basicity according to the instructions in section 9.3 and 9.4 of the ASTM method using a phenolphthalein indicator solution, except as noted below. Combine 50 ml of the sample, 15 ml of water, and 3 drops of phenolphthalein indicator solution in a clean centrifuge tube, shake vigorously for 30 seconds, let stand for 3 minutes and observe against a white background (the centrifugation step in the ASTM method is not required). See the method for additional details. If a slightly pink to red color is observed in the water phase, the sample shows alkalinity and fails the test. The sample tested should be a lower sample as described in ASTM D4057, "...a spot sample of liquid from the middle of the lower one-third of the tank's content..."
4. Tests must be performed in accordance with EPA approved test methods published in 40 CFR Part 80.
5. The Mercaptan Sulfur determination may be waived if the fuel is considered sweet by the Doctor Test described in ASTM D 4952.
6. The use of alcohols and ethers as blending components at origin is prohibited.
7. This fuel meets or exceeds all the requirements of ASTM D 4814 (Unleaded Gasoline). This product does not meet EPA additive addition requirements for finished gasoline. This product does not meet the requirements for reformulated gasoline (RFG) and may not be used in any reformulated gasoline covered area.
8. Referee Methods for Gasoline are as follows:
Vapor / Liquid Ratio, ASTM D5188. (source ASTM D4814); Oxygenates, ASTM D5599 is the EPA approved method, ASTM D4815 may be used if the method is correlated back to ASTM D5599.
9. Tests must be performed in accordance with EPA approved test methods published in 40 CFR Part 80.

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Pipeline Specifications

Product Codes:
#2D 15 ppm Diesel- V95

Pioneer Pipeline

Distillate, #2 Diesel Fuel, Ultra-Low Sulfur (15 ppm max), (for Tesoro manifold destination only, not for Salt Lake City receipts; also meets #2 Fuel Oil Specifications)

Property	Test Method	Units	Min	Max	Specific	Note#
Additives	General Note					1
API Gravity (60 Deg F)	D287, D1298, D4052	API	30.0			
Appearance	Visual		Clear & Br			2
Ash	D482 Ash	Wt%		0.01		
Carbon Res 10% Btms	D524 Ramsbottom Carb Res	Wt%		0.35		
Cetane by DSC	D6890 or D7170 Cetane Number		40			3
Cetane Ind-2 or Arom	D1319 Hydrocarbon Typ by FIA	Vol%		35.0		4
Cetane Ind-2 or Arom	D976 Cetane Index by 2-var		42			4
Cetane Number or Ind-4	D4737 Cet Ind by 4-var calc A		40.0			5
Cetane Number or Ind-4	D613 Cetane Number by Engine		40			5
Cloud Pt	D2500 Cloud Pt by manual	Deg F		32	Apr - Aug	
Cloud Pt	D2500 Cloud Pt by manual	Deg F		24	Mar	
Cloud Pt	D2500 Cloud Pt by manual	Deg F		6	Oct - Feb	
Cloud Pt	D2500 Cloud Pt by manual	Deg F		24	Sep	
Color, ASTM	D1500 Color (ASTM scale)			2.5		6
Copper Strip Corrosion	D130 Cu Str 3 Hr @ 122 F	Rating		1		
Dist 90 Vol% Rec, corr	D86 Dist at Atm Press	Deg F	540	640		
Dist End Pt	D86 Dist at Atm Press	Deg F		698		
Flash Pt	D93 PMCC Flash Pt	Deg F	130			
Haze @ 70 deg F	D4176 Wtr & Part Cont, Proc 2	Rating		2		
NACE Rust test	NACE Rust TM0172-2001	Rating	B+			
Pour Pt	D5949 Pour Pt by Phase Tech	Deg F		20	Apr - Aug	
Pour Pt	D5949 Pour Pt by Phase Tech	Deg F		15	Mar	
Pour Pt	D5949 Pour Pt by Phase Tech	Deg F		-15	Oct - Feb	
Pour Pt	D5949 Pour Pt by Phase Tech	Deg F		15	Sep	
Product Description	See Note					7
Referee Methods	See Note					8
Referee Methods	See Note					9
Sulfur @ origin	D2622, D5453, D7039	ppm		11		10
Thermal Stability	D6468 Stab by Ref, 90 min.	% Refl	80		Y test unit	
Viscosity @ 104 F	D445 Kinematic Viscosity	cSt	1.9	3.4		
Water & Sed, total	D2709 Water & Sed by Centr	Vol%		0.05		

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Pipeline Specifications

Product Codes:

#2D 15 ppm Diesel- V95

Pioneer Pipeline

Distillate, #2 Diesel Fuel, Ultra-Low Sulfur (15 ppm max), (for Tesoro manifold destination only, not for Salt Lake City receipts; also meets #2 Fuel Oil Specifications)

Notes:

1. The use of biodiesel, including Fatty Acid Methyl Esters (FAMES) is strictly prohibited. This fuel may contain antioxidants/sweeteners, corrosion inhibitors, and pour point depressants. Corrosion inhibitors may be required to meet the 1 mil/yr standard pipeline corrosion rate. The use of other additives is prohibited. All additives and their concentrations must be previously approved by the pipeline Quality Control Coordinator, and must be clearly indicated on the Certificate of Analysis. They must also be approved by Chevron PL.
2. The diesel fuel shall be visually free of undissolved water, sediment, and suspended matter. (ASTM D975)
3. The derived cetane number (DSC) measured by these methods can be used for cetane measurement. D613 is the referee method for cetane.
4. Either the Cetane Index by 2-variables minimum or the Aromatics maximum must be met (see ASTM D975 Table 1 notes for method version)
5. Where cetane number by Test Method D 613 is not available, Test Method D 4737 can be used as an approximation. (ASTM D975 Table 1 Notes)
6. Under United States regulations, if distillates are sold for tax exempt purposes then, at or beyond terminal storage tanks, they are required by 26 CFR Part 48 to contain the dye Solvent Red 164 at a concentration spectrally equivalent to 3.9 lb per thousand barrels of the solid dye standard Solvent Red 26, or the tax must be collected. (ASTM D975 Table 1 Notes)
7. This fuel meets or exceeds all the requirements of ASTM D975 (Ultra Low Sulfur Grade No. 2-D S15 Diesel Fuel Oil) and ASTM D396 (Grade No. 2 Low Sulfur Fuel Oil), with the possible exception of the lubricity/conductivity requirements in ASTM D975. Additives or further blending may be utilized at downstream locations to meet these requirements.
8. ASTM Referee Methods for #2 Diesel Fuel, 15 ppm Sulfur, are as follows:
Cloud Pt, ASTM D2500; Flash Point, ASTM D93; Sulfur, ASTM D5453; Distillation, D 86. (source ASTM D975)
9. ASTM Referee Methods for #2 Fuel Oil, 500 ppm Sulfur, are as follows:
Density, ASTM D1298; Distillation, ASTM D86; Flash Point, ASTM D93; Pour Point, ASTM D97; Sulfur, ASTM D2622. (source ASTM D396)
10. For this product, sulfur test instruments and methods used at each facility must be qualified by the current EPA approved method (see 40 CFR Part 80 for approved methods).

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Pipeline Specifications

Product Codes:
#1D 15 ppm Diesel- VA1

Pioneer Pipeline

Distillate, #1 Diesel Fuel, Ultra-Low Sulfur (15 ppm max), (for Tesoro manifold destination only, not for Salt Lake City receipts; does NOT meet Jet A specifications)

Property	Test Method	Units	Min	Max	Specific	Note#
Additives	General Note					1
API Gravity (60 Deg F)	D287, D1298, D4052	API	35.0			
Appearance	Visual		Clear & Br			2
Ash	D482 Ash	Wt%		0.01		
Carbon Res 10% Btms	D524 Ramsbottom Carb Res	Wt%		0.15		
Cetane by DSC	D6890 or D7170 Cetane Number		40			3
Cetane Ind-2 or Arom	D1319 Hydrocarbon Typ by FIA	Vol%		35.0		4
Cetane Ind-2 or Arom	D976 Cetane Index by 2-var		42			4
Cetane Number or Ind-4	D4737 Cet Ind by 4-var calc A		42			5
Cetane Number or Ind-4	D613 Cetane Number by Engine		40			5
Cloud Pt	D2500 Cloud Pt by manual	Deg F		-30		
Color, ASTM	D1500 Color (ASTM scale)			2.5		6
Copper Strip Corrosion	D130 Cu Str 2 Hr @ 212 F	Rating		1		
Dist 10 Vol% Rec, corr	D86 Dist at Atm Press	Deg F		419		
Dist 90 Vol% Rec, corr	D86 Dist at Atm Press	Deg F		550		
Flash Pt	D93 PMCC Flash Pt	Deg F	105			
Haze @ 70 deg F	D4176 Wtr & Part Cont, Proc 2	Rating		2		
NACE Rust test	NACE Rust TM0172-2001	Rating	B+			
Product Description	See Note					7
Referee Methods	See Note					8
Sulfur @ origin	D2622, D5453, D7039	ppm		11		9
Thermal Stability- 90 min	D6468 Stability by Reflect	% Refl	80		Y test unit	
Viscosity @ 104 F	D445 Kinematic Viscosity	cSt	1.3	2.1		
Water & Sed, total	D1796 Water & Sed by Centr	Vol%		0.05		

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Pipeline Specifications

Product Codes:

#1D 15 ppm Diesel- VA1

Pioneer Pipeline

Distillate, #1 Diesel Fuel, Ultra-Low Sulfur (15 ppm max), (for Tesoro manifold destination only, not for Salt Lake City receipts; does NOT meet Jet A specifications)

Notes:

1. The use of biodiesel, including Fatty Acid Methyl Esters (FAMES) is strictly prohibited. This fuel may contain antioxidants/sweeteners and corrosion inhibitors. Corrosion inhibitors may be required to meet the 1 mil/yr standard pipeline corrosion rate. The use of other additives is prohibited. All additives and their concentrations must be previously approved by the pipeline Quality Control Coordinator, and must be clearly indicated on the Certificate of Analysis. They must also be approved by Chevron PL.
2. The diesel fuel shall be visually free of undissolved water, sediment, and suspended matter. (ASTM D975)
3. The derived cetane number (DSC) measured by these methods can be used for cetane measurement. D613 is the referee method for cetane.
4. Either the Cetane Index by 2-variables minimum or the Aromatics maximum must be met (see ASTM D975 Table 1 notes for method version)
5. Where cetane number by Test Method D 613 is not available, Test Method D 4737 can be used as an approximation. (ASTM D975 Table 1 Notes)
6. Under United States regulations, if distillates are sold for tax exempt purposes then, at or beyond terminal storage tanks, they are required by 26 CFR Part 48 to contain the dye Solvent Red 164 at a concentration spectrally equivalent to 3.9 lb per thousand barrels of the solid dye standard Solvent Red 26, or the tax must be collected. (ASTM D975 Table 1 Notes)
7. This fuel meets or exceeds all the requirements of ASTM D975 (Ultra Low Sulfur Grade No. 1-D S15 Diesel Fuel Oil), with the possible exception of the lubricity/conductivity requirements in ASTM D975. Additives or further blending may be utilized at downstream locations to meet these requirements.
8. ASTM Referee Methods for #1 Diesel Fuel, 15 ppm Sulfur, are as follows:
Cloud Pt, ASTM D2500; Distillation, ASTM D86; Flash Point, ASTM D93; Sulfur, ASTM D5453. (source ASTM D975)
9. For this product, sulfur test instruments and methods used at each facility must be qualified by the current EPA approved method (see 40 CFR Part 80 for approved methods).

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Pipeline Specifications

Product Codes:
#2D 15 ppm Diesel- V95

Pioneer Pipeline

Distillate, #2 Diesel Fuel, Ultra-Low Sulfur (15 ppm max), (also meets #2 Fuel Oil Specifications)

Property	Test Method	Units	Min	Max	Specific	Note#
Additives	General Note					1
API Gravity (60 Deg F)	D287, D1298, D4052	API	30.0			
Appearance	Visual		Clear & Br			2
Ash	D482 Ash	Wt%		0.01		
Carbon Res 10% Btms	D524 Ramsbottom Carb Res	Wt%		0.35		
Cetane by DSC	D6890 or D7170 Cetane Number		40			3
Cetane Ind-2 or Arom	D1319 Hydrocarbon Typ by FIA	Vol%		35.0		4
Cetane Ind-2 or Arom	D976 Cetane Index by 2-var		42			4
Cetane Number or Ind-4	D4737 Cet Ind by 4-var calc A		40.0			5
Cetane Number or Ind-4	D613 Cetane Number by Engine		40			5
Cloud Pt	D2500 Cloud Pt by manual	Deg F		16	Apr - Aug	
Cloud Pt	D2500 Cloud Pt by manual	Deg F		6	Sep - Feb	
Cloud Pt	D5773 Cloud Pt by Phase Tech	Deg F		10	Mar	
Color	Visual		Undyed			6
Color, ASTM	D1500 Color (ASTM scale)			2.5		
Copper Strip Corrosion	D130 Cu Str 3 Hr @ 122 F	Rating		1		
Dist 10 Vol% Rec, corr	D2887 Sim Dist by GC	Deg F	Report			
Dist 10 Vol% Rec, corr	D86 Dist at Atm Press	Deg F	Report			
Dist 50 Vol% Rec, corr	D2887 Sim Dist by GC	Deg F	Report			
Dist 50 Vol% Rec, corr	D86 Dist at Atm Press	Deg F	Report			
Dist 90 Vol% Rec, corr	D2887 Sim Dist by GC	Deg F	572	672		
Dist 90 Vol% Rec, corr	D86 Dist at Atm Press	Deg F	540	640		
Dist End Pt	D86 Dist at Atm Press	Deg F	Report			
Dist End Pt, corr	D2887 Sim Dist by GC	Deg F	Report			
Dist IBP, corr	D2887 Sim Dist by GC	Deg F	Report			
Dist IBP, corr	D86 Dist at Atm Press	Deg F	Report			
Flash Pt	D93 PMCC Flash Pt	Deg F	135			
Haze @ 50 deg F	D4176 Wtr & Part Cont, Proc 2	Rating		2	Nov - Mar	
Haze @ 70 deg F	D4176 Wtr & Part Cont, Proc 2	Rating		2	Apr - Oct	
NACE Rust test	NACE Rust TM0172-2001	Rating	B+			
Pour Pt	D5949 Pour Pt by Phase Tech	Deg F		21	Mar - Aug	
Pour Pt	D5949 Pour Pt by Phase Tech	Deg F		-15	Sep - Feb	
Product Description	See Note					7
Referee Methods	See Note					8
Referee Methods	See Note					9
Sulfur @ origin	D2622, D5453, D7039	ppm		10	Connect. PL	10
Sulfur @ origin	D2622, D5453, D7039	ppm		11	Salt Lake C.	10
Sulfur @ origin	D2622, D5453, D7039	ppm		10	Sinclair, WY	10
Thermal Stability	D6468 Stab by Ref, 90 min.	% Refl	75		W test unit	
Thermal Stability	D6468 Stab by Ref, 90 min.	% Refl	82		Y test unit	
Thermal Stability	DuPont 90 min @ 300 F	Pad Rating		4		
Viscosity @ 104 F	D445 Kinematic Viscosity	cSt	1.9	3.4		
Water & Sed, total	D2709 Water & Sed by Centr	Vol%		0.05		



Pioneer Pipeline

Distillate, #2 Diesel Fuel, Ultra-Low Sulfur (15 ppm max), (also meets #2 Fuel Oil Specifications)

Notes:

1. The use of Biodiesel, including Fatty Acid Methyl Esters (FAME's), is strictly prohibited. The fuel may contain antioxidants/sweeteners, corrosion inhibitors, and pour point depressants. Corrosion inhibitors may be required to meet the 1 mil/yr standard pipeline corrosion rate. All additives and their concentrations must be previously approved by the pipeline Quality Control Coordinator, and must be clearly indicated on the Certificate of Analysis.
2. The diesel fuel shall be visually free of undissolved water, sediment, and suspended matter. (ASTM D975)
3. The derived cetane number (DSC) measured by these methods can be used for cetane measurement. D613 is the referee method for cetane.
4. Either the Cetane Index by 2-variables minimum or the Aromatics maximum must be met (see ASTM D975 Table 1 notes for method version)
5. Where cetane number by Test Method D 613 is not available, Test Method D 4737 can be used as an approximation. (ASTM D975 Table 1 Notes)
6. Under United States regulations, if distillates are sold for tax exempt purposes then, at or beyond terminal storage tanks, they are required by 26 CFR Part 48 to contain the dye Solvent Red 164 at a concentration spectrally equivalent to 3.9 lb per thousand barrels of the solid dye standard Solvent Red 26, or the tax must be collected. (ASTM D975 Table 1 Notes)
7. This fuel meets or exceeds all the requirements of ASTM D975 (Ultra Low Sulfur Grade No. 2-D S15 Diesel Fuel Oil) and ASTM D396 (Grade No. 2 Low Sulfur Fuel Oil), with the possible exception of the lubricity/conductivity requirements in ASTM D975. Additives or further blending may be utilized at downstream locations to meet these requirements.
8. ASTM Referee Methods for #2 Diesel Fuel, 15 ppm Sulfur, are as follows:
Cloud Pt, ASTM D2500; Flash Point, ASTM D93; Sulfur, ASTM D5453; Distillation, D 86. (source ASTM D975)
9. ASTM Referee Methods for #2 Fuel Oil, 500 ppm Sulfur, are as follows:
Density, ASTM D1298; Distillation, ASTM D86; Flash Point, ASTM D93; Pour Point, ASTM D97; Sulfur, ASTM D2622. (source ASTM D396)
10. For this product, sulfur test instruments and methods used at each facility must be qualified by the current EPA approved method (see 40 CFR Part 80 for approved methods).

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Pipeline Specifications

Product Codes:
#1D 15 ppm Diesel- VA3

Pioneer Pipeline

Distillate, #1 Diesel Fuel, Ultra-Low Sulfur (15 ppm max), (also meets Jet A specifications)

Property	Test Method	Units	Min	Max	Specific	Note#
Acid Number	D3242 Acidity in Turb Fuel	mg KOH/g		0.10		
Additives	General Note					1
API Gravity (60 Deg F)	D287, D1298, D4052	API	37.5	50.5		
Appearance	Visual		Clear & Br			2
Aromatics	D1319 HC by FIA	Vol%		24.9		
Ash	D482 Ash	Wt%		0.01		
Carbon Res 10% Btms	D524 Ramsbottom Carb Res	Wt%		0.15		
Cetane by DSC	D6890 or D7170 Cetane Number		40			3
Cetane Number or Ind-4	D4737 Cet Ind by 4-var calc A		40.0			4
Cetane Number or Ind-4	D613 Cetane Number by Engine		40			4
Color	Visual		Undyed			5
Color, Saybolt	D156 Saybolt Color		+18			
Color, Saybolt	D6045 Color by Auto TriStim		+18			
Copper Strip Corrosion	D130 Cu Str 2 Hr @ 212 F	Rating		1		
Dist 10 Vol% Rec, corr	D2887 Sim Dist by GC	Deg F		361		
Dist 10 Vol% Rec, corr	D86 Dist at Atm Press	Deg F		397		
Dist 50 Vol% Rec, corr	D2887 Sim Dist by GC	Deg F	Report			
Dist 50 Vol% Rec, corr	D86 Dist at Atm Press	Deg F	Report			
Dist 90 Vol% Rec, corr	D2887 Sim Dist by GC	Deg F		579		
Dist 90 Vol% Rec, corr	D86 Dist at Atm Press	Deg F		550		
Dist End Pt	D86 Dist at Atm Press	Deg F		566		
Dist End Pt, corr	D2887 Sim Dist by GC	Deg F		638		
Dist IBP, corr	D2887 Sim Dist by GC	Deg F	Report			
Dist IBP, corr	D86 Dist at Atm Press	Deg F	Report			
Dist Loss, corr	D86 Dist at Atm Press	Vol%		1.5		
Dist Residue	D86 Dist at Atm Press	Vol%		1.5		
Existent Gum	D381 Gum Content by Jet Evap	mg/100 ml		6		6
Flash Pt	D56 Flash Pt by TCC	Deg F	110			
Freeze Pt	D2386 Freeze Pt by manual	Deg C		-41		
Freeze Pt	D5972 Freeze Pt by Ph Tech	Deg C		-41		
Haze @ 70 deg F	D4176 Wtr & Part Cont, Proc 2	Rating		2		
JFTOT Press Drop	D3241 JFTOT@ 260 C	mm Hg		25		7
JFTOT Tube Rating	D3241 JFTOT@ 260 C	Rating		<3		7
Mercaptan Sulfur	D3227 Thiol Merc S by Titra	Wt%		0.003		8
Mercaptan Sulfur	D4952 Active S by Doc Tst	Rating	sweet			
MSEP	D3948 Water Sep by MSEP	Rating	85			
Naphthalenes or Smoke Pt	D1322 Smoke Pt	mm	20			13
Naphthalenes or Smoke Pt	D1840 Naphthalenes by UV	Vol%		2.9		9
Net Heat of Combustion	D3338 Net Heat of Comb	BTU/lb	18,410			
Net Heat of Combustion	D3338 Net Heat of Comb	MJ/kg	42.9			
Net Heat of Combustion	D4809 Heat of Comb bomb cal	BTU/lb	18,410			
Net Heat of Combustion	D4809 Heat of Comb bomb cal	MJ/kg	42.9			
Particulates	D2276 Parti Cont in Av Fuel	mg/gal	Report			
Particulates	D5452 Partic in Av Fuels	mg/gal	Report			

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Pipeline Specifications

Product Codes:
#1D 15 ppm Diesel- VA3

Pioneer Pipeline

Distillate, #1 Diesel Fuel, Ultra-Low Sulfur (15 ppm max), (also meets Jet A specifications)

Property	Test Method	Units	Min	Max	Specific	Note#
Product Description	See Note					10
Referee Methods	See Note					11
Referee Methods	See Note					12
Specification Severity	See Note					14
Sulfur @ origin	D2622, D5453, D7039	ppm		10	Connect. PL	15
Sulfur @ origin	D2622, D5453, D7039	ppm		11	Salt Lake C.	15
Sulfur @ origin	D2622, D5453, D7039	ppm		10	Sinclair, WY	15
Test Tolerances	See Note					16
Viscosity @ -4 F (-20 C)	D445 Kinematic Viscosity	cSt		8.0		
Viscosity @ 104 F	D445 Kinematic Viscosity	cSt	1.3	2.4		
Water & Sed, total	D2709 Water & Sed by Centr	Vol%		0.05		



Pioneer Pipeline

Distillate, #1 Diesel Fuel, Ultra-Low Sulfur (15 ppm max), (also meets Jet A specifications)

Notes:

1. The use of Biodiesel, including Fatty Acid Methyl Esters (FAME's), is strictly prohibited. Only those additives specified and within the concentrations noted in the current edition of ASTM D 1655 are permitted. Use of additives permitted by ASTM D 1655 must be clearly indicated on the Certificate of Analysis. All additives must be previously approved by the pipeline Quality Control Coordinator. The use of any other additives is prohibited.
2. The diesel fuel shall be visually free of undissolved water, sediment, and suspended matter. (ASTM D975)
3. The derived cetane number (DSC) measured by these methods can be used for cetane measurement. D613 is the referee method for cetane.
4. Where cetane number by Test Method D 613 is not available, Test Method D 4737 can be used as an approximation. (ASTM D975 Table 1 Notes)
5. Under United States regulations, if distillates are sold for tax exempt purposes then, at or beyond terminal storage tanks, they are required by 26 CFR Part 48 to contain the dye Solvent Red 164 at a concentration spectrally equivalent to 3.9 lb per thousand barrels of the solid dye standard Solvent Red 26, or the tax must be collected. (ASTM D975 Table 1 Notes)
6. Existent Gum is, by definition, a measurement of unwashed gum content. A washed gum content is known as "Solvent Washed Gum". (ASTM D 381)
7. JFTOT Thermal stability test shall be conducted for 2.5 hours at a controlled temperature of 260 C (500 F) minimum. No peacock or abnormal color deposits are allowed. (ASTM D1655, Table 1). Tube deposit ratings shall always be reported by the Visual Method; a rating by the Tube Deposit Rating (TDR) optical density method is desirable but not mandatory. (ASTM D1655, Table 1, Notes)
8. The Mercaptan Sulfur determination may be waived if the fuel is considered sweet by the Doctor Test described in ASTM D 4952.
9. One of the following requirements shall be met:
 - A. Smoke Point 27 mm minimum by ASTM D 1322 OR
 - B. Smoke Point 20 mm minimum AND Naphthalenes 2.9 Vol% maximum by ASTM D 1840.
10. This fuel meets or exceeds the requirements of ASTM D1655 (Jet A) and ASTM D975 (Ultra-Low Sulfur Grade No. 1-D S15 Diesel Fuel Oil), with the possible exception of the lubricity/conductivity requirements in ASTM D975. Additives or further blending may be utilized at downstream locations to meet these requirements.
11. ASTM Referee Methods for #1 Diesel Fuel, 15 ppm Sulfur, are as follows:
Cloud Pt, ASTM D2500; Distillation, ASTM D86; Flash Point, ASTM D93; Sulfur, ASTM D5453. (source ASTM D975)
12. ASTM Referee Methods for Jet A are as follows:
Aromatics, ASTM D1319; Distillation, ASTM D86; Flash Point, ASTM D56; Existant Gum, ASTM D381; Freeze Point, ASTM D2386; Net Heat of Combustion, D 4809. (ASTM D1655)
For a product satisfying both ASTM D1655 (Jet A) and ASTM D975 (#1 Diesel Fuel Oil), ASTM D56 is considered the referee method.
13. One of the following requirements shall be met:

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Pipeline Specifications

Product Codes:

#1D 15 ppm Diesel- VA3

Pioneer Pipeline

Distillate, #1 Diesel Fuel, Ultra-Low Sulfur (15 ppm max), (also meets Jet A specifications)

A. Smoke Point 27 mm minimum by ASTM D 1322 OR

B. Smoke Point 20 mm minimum AND Naphthalenes 2.9 Vol% maximum by ASTM D 1840.

14. Because of the requirements for test tolerances in ASTM D 1655 (and detailed in footnote 749) some of the specification limits set forth here are slightly more severe than as set forth in ASTM D 1655. The properties to which this higher severity apply are: API Gravity, Aromatics, Distillation, Freeze Point, Gum, Naphthalenes, Net Heat of Combustion, and Smoke Point.

15. For this product, sulfur test instruments and methods used at each facility must be qualified by the current EPA approved method (see 40 CFR Part 80 for approved methods).

16. Test results shall not exceed the maximum or be less than the minimum values specified (herein). No allowance shall be made for the precision of the test methods. To determine conformance to the specification requirement, a test result may be rounded to the same number of significant figures as in this specification using Practice E 29. Where multiple determinations are made, the average result, rounded in accordance with Practice E 29, shall be used. (ASTM D1655)

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Pipeline Specifications

Product Codes:
Jet A- K83

Pioneer Pipeline

Distillate, Jet A, High Sulfur (1500 ppm max)

Property	Test Method	Units	Min	Max	Specific	Note#
Acid Number	D3242 Acidity in Turb Fuel	mg KOH/g		0.10		
Additives	General Note					1
API Gravity (60 Deg F)	D287, D1298, D4052	API	37.5	50.5		
Appearance	Visual		Clear & Br			2
Aromatics	D1319 Hydrocarbon Typ by FIA	Vol%		24.9		
Color	Visual		Undyed			
Color, Saybolt	D156 Saybolt Color		+18			
Color, Saybolt	D6045 Color by Auto TriStim		+18			
Copper Strip Corrosion	D130 Cu Str 2 Hr @ 212 F	Rating		1		
Dist 10 Vol% Rec, corr	D2887 Sim Dist by GC	Deg F		361		
Dist 10 Vol% Rec, corr	D86 Dist at Atm Press	Deg F		397		
Dist 50 Vol% Rec, corr	D2887 Sim Dist by GC	Deg F	Report			
Dist 50 Vol% Rec, corr	D86 Dist at Atm Press	Deg F	Report			
Dist 90 Vol% Rec, corr	D2887 Sim Dist by GC	Deg F	Report			
Dist 90 Vol% Rec, corr	D86 Dist at Atm Press	Deg F	Report			
Dist End Pt	D86 Dist at Atm Press	Deg F		566		
Dist End Pt, corr	D2887 Sim Dist by GC	Deg F		638		
Dist IBP, corr	D2887 Sim Dist by GC	Deg F	Report			
Dist IBP, corr	D86 Dist at Atm Press	Deg F	Report			
Dist Loss, corr	D86 Dist at Atm Press	Vol%		1.5		
Dist Residue	D86 Dist at Atm Press	Vol%		1.5		
Existent Gum	D381 Gum Content by Jet Evap	mg/100 ml		6		3
Flash Pt	D56 Flash Pt by TCC	Deg F	110			
Freeze Pt	D2386 Freeze Pt by manual	Deg C		-41		
Freeze Pt	D5972 Freeze Pt by Ph Tech	Deg C		-41		
Haze @ 70 deg F	D4176 Wtr & Part Cont, Proc 2	Rating		2		
JFTOT Press Drop	D3241 JFTOT@ 260 C	mm Hg		25		4
JFTOT Tube Rating	D3241 JFTOT@ 260 C	Rating		<3		4
Mercaptan Sulfur	D3227 Thiol Merc S by Titra	Wt%		0.003		5
Mercaptan Sulfur	D4952 Active S by Doc Tst	Rating	sweet			
MSEP	D3948 Water Sep by MSEP	Rating	85			
Naphthalenes	D1840 Naphthalenes by UV	Vol%		2.9		6
Net Heat of Combustion	D3338 Net Heat of Comb	BTU/lb	18,410			
Net Heat of Combustion	D3338 Net Heat of Comb	MJ/kg	42.9			
Net Heat of Combustion	D4809 Heat of Comb bomb cal	BTU/lb	18,410			
Net Heat of Combustion	D4809 Heat of Comb bomb cal	MJ/kg	42.9			
Particulates	D2276 Parti Cont in Av Fuel	mg/gal	Report			
Particulates	D5452 Partic in Av Fuels	mg/gal	Report			
Product Description	See Note					7
Referee Methods	See Note					8
Smoke Pt	D1322 Smoke Pt	mm	20			9
Specification Severity	See Note					10
Sulfur	D2622-98 Sulfur (1998 Version)	ppm		1500		11
Sulfur	D5453-99 Sulfur (1999 Version)	ppm		1500		11

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Pipeline Specifications

Product Codes:
Jet A- K83

Pioneer Pipeline

Distillate, Jet A, High Sulfur (1500 ppm max)

Property	Test Method	Units	Min	Max	Specific	Note#
Sulfur Test Methods & Inst.	See Note					12
Test Tolerances	See Note					13
Viscosity @ -4 F (-20 C)	D445 Kinematic Viscosity	cSt		8.0		



Pioneer Pipeline

Distillate, Jet A, High Sulfur (1500 ppm max)

Notes:

1. The use of Biodiesel, including Fatty Acid Methyl Esters (FAME's), is strictly prohibited. Only those additives specified and within the concentrations noted in the current edition of ASTM D 1655 are permitted. Use of additives permitted by ASTM D 1655 must be clearly indicated on the Certificate of Analysis. All additives must be previously approved by the pipeline Quality Control Coordinator. The use of any other additives is prohibited.
2. The diesel fuel shall be visually free of undissolved water, sediment, and suspended matter. (ASTM D975)
3. Existent Gum is, by definition, a measurement of unwashed gum content. A washed gum content is known as "Solvent Washed Gum". (ASTM D 381)
4. JFTOT Thermal stability test shall be conducted for 2.5 hours at a controlled temperature of 260 C (500 F) minimum. No peacock or abnormal color deposits are allowed. (ASTM D1655, Table 1). Tube deposit ratings shall always be reported by the Visual Method; a rating by the Tube Deposit Rating (TDR) optical density method is desirable but not mandatory. (ASTM D1655, Table 1, Notes)
5. The Mercaptan Sulfur determination may be waived if the fuel is considered sweet by the Doctor Test described in ASTM D 4952.
6. One of the following requirements shall be met:
 - A. Smoke Point 27 mm minimum by ASTM D 1322 OR
 - B. Smoke Point 20 mm minimum AND Naphthalenes 2.9 Vol% maximum by ASTM D 1840.
7. This fuel meets or exceeds all the requirements of ASTM D1655 (Jet A).
8. ASTM Referee Methods for Jet A are as follows:
Aromatics, ASTM D1319; Distillation, ASTM D86; Flash Point, ASTM D56; Existant Gum, ASTM D381; Freeze Point, ASTM D2386; Net Heat of Combustion, D 4809. (ASTM D1655)
For a product satisfying both ASTM D1655 (Jet A) and ASTM D975 (#1 Diesel Fuel Oil), ASTM D56 is considered the referee method.
9. One of the following requirements shall be met:
 - A. Smoke Point 27 mm minimum by ASTM D 1322 OR
 - B. Smoke Point 20 mm minimum AND Naphthalenes 2.9 Vol% maximum by ASTM D 1840.
10. Because of the requirements for test tolerances in ASTM D 1655 (and detailed in footnote 749) some of the specification limits set forth here are slightly more severe than as set forth in ASTM D 1655. The properties to which this higher severity apply are: API Gravity, Aromatics, Distillation, Freeze Point, Gum, Naphthalenes, Net Heat of Combustion, and Smoke Point.
11. The maximum for this product and this location shall be the same as that set by Chevron Pipeline (Northwest Terminalling). The value shown was current as of the date of the production of this specification.
12. For this product, sulfur test instruments and methods used at each facility must be qualified by the current EPA approved method (see 40 CFR Part 80 for approved methods).
13. Test results shall not exceed the maximum or be less than the minimum values specified (herein). No allowance shall be made for the precision of the test methods. To determine conformance to the specification requirement, a test result may be rounded to the

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Pipeline Specifications

Product Codes:

Jet A- K83

Pioneer Pipeline

Distillate, Jet A, High Sulfur (1500 ppm max)

same number of significant figures as in this specification using Practice E 29. Where multiple determinations are made, the average result, rounded in accordance with Practice E 29, shall be used. (ASTM D1655)


Pioneer Pipeline

Distillate, Jet A, Ultra-Low Sulfur (15 ppm max), (for Salt Lake delivery only, does NOT meet #1 Diesel motor vehicle specifications)

Property	Test Method	Units	Min	Max	Specific	Note#
Acid Number	D3242 Acidity in Turb Fuel	mg KOH/g		0.10		
Additives	General Note					1
API Gravity (60 Deg F)	D287, D1298, D4052	API	37.5	50.5		
Appearance	Visual		Clear & Br			2
Aromatics	D1319 Hydrocarbon Typ by FIA	Vol%		24.9		
Color	Visual		Undyed			
Color, Saybolt	D156 Saybolt Color		+18			
Color, Saybolt	D6045 Color by Auto TriStim		+18			
Copper Strip Corrosion	D130 Cu Str 2 Hr @ 212 F	Rating		1		
Dist 10 Vol% Rec, corr	D2887 Sim Dist by GC	Deg F		361		
Dist 10 Vol% Rec, corr	D86 Dist at Atm Press	Deg F		397		
Dist 50 Vol% Rec, corr	D2887 Sim Dist by GC	Deg F	Report			
Dist 50 Vol% Rec, corr	D86 Dist at Atm Press	Deg F	Report			
Dist 90 Vol% Rec, corr	D2887 Sim Dist by GC	Deg F	Report			
Dist 90 Vol% Rec, corr	D86 Dist at Atm Press	Deg F	Report			
Dist End Pt	D86 Dist at Atm Press	Deg F		566		
Dist End Pt, corr	D2887 Sim Dist by GC	Deg F		638		
Dist IBP, corr	D2887 Sim Dist by GC	Deg F	Report			
Dist IBP, corr	D86 Dist at Atm Press	Deg F	Report			
Dist Loss, corr	D86 Dist at Atm Press	Vol%		1.5		
Dist Residue	D86 Dist at Atm Press	Vol%		1.5		
Existent Gum	D381 Gum Content by Jet Evap	mg/100 ml		6		3
Flash Pt	D56 Flash Pt by TCC	Deg F	110			
Freeze Pt	D2386 Freeze Pt by manual	Deg C		-41		
Freeze Pt	D5972 Freeze Pt by Ph Tech	Deg C		-41		
Haze @ 70 deg F	D4176 Wtr & Part Cont, Proc 2	Rating		2		
JFTOT Press Drop	D3241 JFTOT@ 260 C	mm Hg		25		4
JFTOT Tube Rating	D3241 JFTOT@ 260 C	Rating		<3		4
Mercaptan Sulfur	D3227 Thiol Merc S by Titra	Wt%		0.003		5
Mercaptan Sulfur	D4952 Active S by Doc Tst	Rating	sweet			
MSEP	D3948 Water Sep by MSEP	Rating	85			
Naphthalenes	D1840 Naphthalenes by UV	Vol%		2.9		6
Net Heat of Combustion	D3338 Net Heat of Comb	BTU/lb	18,410			
Net Heat of Combustion	D3338 Net Heat of Comb	MJ/kg	42.9			
Net Heat of Combustion	D4809 Heat of Comb bomb cal	BTU/lb	18,410			
Net Heat of Combustion	D4809 Heat of Comb bomb cal	MJ/kg	42.9			
Particulates	D2276 Parti Cont in Av Fuel	mg/gal	Report			
Particulates	D5452 Partic in Av Fuels	mg/gal	Report			
Product Description	See Note					7
Referee Methods	See Note					8
Smoke Pt	D1322 Smoke Pt	mm	20			9
Specification Severity	See Note					10
Sulfur	D5453, D7039	ppm		10		
Test Tolerances	See Note					11

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Pipeline Specifications

Product Codes:
Jet A- K32

Pioneer Pipeline

Distillate, Jet A, Ultra-Low Sulfur (15 ppm max), (for Salt Lake delivery only, does NOT meet #1 Diesel motor vehicle specifications)

Property	Test Method	Units	Min	Max	Specific	Note#
Viscosity @ -4 F (-20 C)	D445 Kinematic Viscosity	cSt		8.0		



Pioneer Pipeline

Distillate, Jet A, Ultra-Low Sulfur (15 ppm max), (for Salt Lake delivery only, does NOT meet #1 Diesel motor vehicle specifications)

Notes:

1. The use of Biodiesel, including Fatty Acid Methyl Esters (FAME's), is strictly prohibited. Only those additives specified and within the concentrations noted in the current edition of ASTM D 1655 are permitted. Use of additives permitted by ASTM D 1655 must be clearly indicated on the Certificate of Analysis. All additives must be previously approved by the pipeline Quality Control Coordinator. The use of any other additives is prohibited.
2. Aviation turbine fuel covered by this specification shall be visually free of undissolved water, sediment, and suspended matter. (ASTM D1655)
3. Existent Gum is, by definition, a measurement of unwashed gum content. A washed gum content is known as "Solvent Washed Gum". (ASTM D 381)
4. JFTOT Thermal stability test shall be conducted for 2.5 hours at a controlled temperature of 260 C (500 F) minimum. No peacock or abnormal color deposits are allowed. (ASTM D1655, Table 1). Tube deposit ratings shall always be reported by the Visual Method; a rating by the Tube Deposit Rating (TDR) optical density method is desirable but not mandatory. (ASTM D1655, Table 1, Notes)
5. The Mercaptan Sulfur determination may be waived if the fuel is considered sweet by the Doctor Test described in ASTM D 4952.
6. One of the following requirements shall be met:
 - A. Smoke Point 27 mm minimum by ASTM D 1322 OR
 - B. Smoke Point 20 mm minimum AND Naphthalenes 2.9 Vol% maximum by ASTM D 1840.
7. This fuel meets or exceeds all the requirements of ASTM D1655 (Jet A).
8. ASTM Referee Methods for Jet A are as follows:
Aromatics, ASTM D1319; Distillation, ASTM D86; Flash Point, ASTM D56; Existant Gum, ASTM D381; Freeze Point, ASTM D2386; Net Heat of Combustion, D 4809. (ASTM D1655)
For a product satisfying both ASTM D1655 (Jet A) and ASTM D975 (#1 Diesel Fuel Oil), ASTM D56 is considered the referee method.
9. One of the following requirements shall be met:
 - A. Smoke Point 27 mm minimum by ASTM D 1322 OR
 - B. Smoke Point 20 mm minimum AND Naphthalenes 2.9 Vol% maximum by ASTM D 1840.
10. Because of the requirements for test tolerances in ASTM D 1655 (and detailed in footnote 749) some of the specification limits set forth here are slightly more severe than as set forth in ASTM D 1655. The properties to which this higher severity apply are: API Gravity, Aromatics, Distillation, Freeze Point, Gum, Naphthalenes, Net Heat of Combustion, and Smoke Point.
11. Test results shall not exceed the maximum or be less than the minimum values specified (herein). No allowance shall be made for the precision of the test methods. To determine conformance to the specification requirement, a test result may be rounded to the same number of significant figures as in this specification using Practice E 29. Where multiple determinations are made, the average result, rounded in accordance with Practice E 29, shall be used. (ASTM D1655)


Pioneer Pipeline

Volatility Schedule, Conventional, 84 Octane, Salt Lake City, UT breakout tank for shipment on UNEV Pipeline to Las Vegas

Month(s)	Volatility Class	RVP max, psi	V/L Test Temp min, °F	Drive Index max	Distillation Requirements, °F				End Pt max	Dist Resid max, %
					10% max	50% min	50% max	90% max		
Jan	E-5*	12.5**	102	1200	122	170	230	365	430***	2
Feb	E-5*	12.5**	102	1200	122	170	230	365	430***	2
Mar	D-4*	12.5**	107	1220	131	170	235	365	430***	2
Apr 1 - 15	D-4*	10.0**	107	1220	131	170	235	365	430***	2
Apr 16 - 30	D-4*	9.0**	107	1220	131	170	235	365	430***	2
May	A-3*	9.0**	116	1250	158	170	250	374	430***	2
Jun	A-2*	9.0**	122	1250	158	170	250	374	430***	2
Jul	A-2*	9.0**	122	1250	158	170	250	374	430***	2
Aug	A-2*	9.0**	122	1250	158	170	250	374	430***	2
Sep 1 - 15	A-2*	9.0**	122	1250	158	170	250	374	430***	2
Sep 16 - 30	B-2*	9.0**	122	1240	149	170	245	374	430***	2
Oct 1 - 15	C-3*	9.0**	116	1230	140	170	240	365	430***	2
Oct 16 - 31	C-3*	10.5**	116	1230	140	170	240	365	430***	2
Nov 1 - 15	D-4*	10.5**	107	1220	131	170	235	365	430***	2
Nov 16 - 30	D-4*	12.5**	107	1220	131	170	235	365	430***	2
Dec	E-5*	12.5**	102	1200	122	170	230	365	430***	2

* Nevada Administrative Code requires "Northern Nevada" code for the entire state as reflected by the published ASTM classes listed.

** The Holly/UNEV RVP schedule includes the anticipated summer ramp down as well as the Las Vegas requirement that the 1.0 psi blend waiver is not allowed Oct 1 - Mar 31.

*** This is a more restrictive requirement than that defined by the underlying ASTM Volatility Class.

Volatility dates are approximate. Shipping dates are determined by the Refinery and/or Pipeline Scheduler. The above Volatility Classes are standard as set forth by the Pipeline. Other Volatility Classes may be requested as well.

Test Methods: (latest version unless otherwise indicated)

Distillation: ASTM D86, corrected to 760 mm Hg;

Driveability Index: ASTM D4814;

V/L: ASTM D5188, or the estimate method using Appendix X2 of ASTM D4814;

Vapor Pressure: ASTM D5191-01. For conventional gasoline that meets a summer RVP specification of 9.0 psi or less and which is intended for sale in the summer, EPA requires the use of the EPA equation and also requires that batch reporting of RVP be to 2 decimal places (example; 8.97 psi).

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Pipeline Specifications

Destination(s):
Various

Pioneer Pipeline

Volatility Schedule, Conventional, All Grades, Salt Lake City, UT

Month(s)	Volatility Class	Clear RVP max. psi	RVP max. psi	V/L Test Temp min. °F	Drive Index max	Distillation Requirements, °F						
						10% max	Clear 50% min	50% min	50% max	90% max	End Pt max	Dist Resid max, %
Jan	E-5	15.0*	16.0	105	1200	122	170*	150	230	365	430	2
Feb	E-5	15.0*	16.0	105	1200	122	170*	150	230	365	430	2
Mar	D-4	13.5*	14.5	116	1220	131	170*	150	235	365	430	2
Apr	D-4	13.5*	14.5	116	1220	131	170*	150	235	365	430	2
May	A-3	9.0*	10.0	116	1250	158	170*	150	250	374	430	2
Jun	AA-2	7.8*	8.8	122	1250	158	170*	150	250	374	430	2
Jul	AA-2	7.8*	8.8	122	1250	158	170*	150	250	374	430	2
Aug	AA-2	7.8*	8.8	122	1250	158	170*	150	250	374	430	2
Sep 1 - 15	AA-2	7.8*	8.8	122	1250	158	170*	150	250	374	430	2
Sep 16 - 30	B-2	10.0*	11.0	122	1240	149	170*	150	245	374	430	2
Oct	C-3	11.5*	12.5	116	1230	140	170*	150	240	365	430	2
Nov	D-4	13.5*	14.5	116	1220	131	170*	150	235	365	430	2
Dec	E-5	15.0*	16.0	105	1200	122	170*	150	230	365	430	2

Vapor pressure and T50 minimum limits marked with an * apply to the fuel without ethanol. Unmarked limits apply to the fuel with 10 vol% ethanol. V/L limits for Classes 4 and 5 are more severe than for many other fuels because this terminal is in the high altitude area V and is treated as such within ASTM D4814.

A 1.0 psi higher vapor pressure is allowed for conventional gasoline-ethanol blends that contain greater than 1% vol ethanol, and this allowance is reflected in the table. During the period of May 1 through September 15 this allowance only pertains to blends that contain between 9 and 10 vol % ethanol.

Test Methods: (latest version unless otherwise indicated)

Distillation: ASTM D86, corrected to 760 mm Hg;

Driveability Index: ASTM D4814;

V/L: ASTM D5188, or the estimate method using Appendix X2 of ASTM D4814;

Vapor Pressure: ASTM D5191-01. For conventional gasoline that meets a summer RVP specification of 9.0 psi or less and which is intended for sale in the summer, EPA requires the use of the EPA equation and also requires that batch reporting of RVP be to 2 decimal places (example; 8.97 psi).


Pioneer Pipeline
Volatility Schedule, Conventional, All Grades, Wyoming

Month(s)	Volatility Class	Clear RVP max, psi	RVP max, psi	V/L Test Temp min, °F	Drive Index max	Distillation Requirements, °F						
						10% max	Clear 50% min	50% min	50% max	90% max	End Pt max	Dist Resid max, %
Jan	E-5	15.0*	16.0	105	1200	122	170*	150	230	365	430	2
Feb	E-5	15.0*	16.0	105	1200	122	170*	150	230	365	430	2
Mar	E-5	15.0*	16.0	105	1200	122	170*	150	230	365	430	2
Apr	D-4	13.5*	14.5	116	1220	131	170*	150	235	365	430	2
May	A-3	9.0*	10.0	116	1250	158	170*	150	250	374	430	2
Jun	A-2	9.0*	10.0	122	1250	158	170*	150	250	374	430	2
Jul	A-2	9.0*	10.0	122	1250	158	170*	150	250	374	430	2
Aug	A-2	9.0*	10.0	122	1250	158	170*	150	250	374	430	2
Sep 1 - 15	A-2	9.0*	10.0	122	1250	158	170*	150	250	374	430	2
Sep 16 - 30	B-2	10.0*	11.0	122	1240	149	170*	150	245	374	430	2
Oct	C-3	11.5*	12.5	116	1230	140	170*	150	240	365	430	2
Nov	D-4	13.5*	14.5	116	1220	131	170*	150	235	365	430	2
Dec	E-5	15.0*	16.0	105	1200	122	170*	150	230	365	430	2

Vapor pressure and T50 minimum limits marked with an * apply to the fuel without ethanol. Unmarked limits apply to the fuel with 10 vol% ethanol. V/L limits for Classes 4 and 5 are more severe than for many other fuels because this terminal is in the high altitude area V and is treated as such within ASTM D4814.

A 1.0 psi higher vapor pressure is allowed for conventional gasoline-ethanol blends that contain greater than 1% vol ethanol, and this allowance is reflected in the table. During the period of May 1 through September 15 this allowance only pertains to blends that contain between 9 and 10 vol % ethanol.

Test Methods: (latest version unless otherwise indicated)

Distillation: ASTM D86, corrected to 760 mm Hg;

Driveability Index: ASTM D4814;

V/L: ASTM D5188, or the estimate method using Appendix X2 of ASTM D4814;

Vapor Pressure: ASTM D5191-01. For conventional gasoline that meets a summer RVP specification of 9.0 psi or less and which is intended for sale in the summer, EPA requires the use of the EPA equation and also requires that batch reporting of RVP be to 2 decimal places (example; 8.97 psi).