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EXHIBIT NO. 8P

NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D.C.

ASTM JET FUEL SPECIFICATION RECOMMENDATION

by

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TABLE 1

COMMERCIAL SPECIFICATIONS
ASTM and IATA Recommendations

	Issuing Agency:		ASTM		IATA		Test Method	
	Specification:		D1655-88a(1)		Guidance Material,			
	Latest Revision Date:		1988	1988	Nov. 14, 1988			
	Grade Designation:		JetA/A-1(2)	Jet B				
	Fuel Type:		Kerosene	Wide-Cut	Kerosene	Wide-Cut	ASTM	IP
COMPOSITION	Acidity, Total (mg KOH/g)	Max.	0.1		0.015	0.015	D974 or D3242	354
	Aromatics (vol %)	Max.	20 (3)	20 (3)	20 (3)	20 (3)	D1319	156
	Olefins (vol %)	Max.			5.0	5.0	D1319	156
	Sulfur, Mercaptan (wt %)	Max.	0.003	0.003	0.003	0.003	D3227	342
	or Doctor Test N = Neg.		N	N	N	N	D235	30
	Sulfur, Total (wt %)	Max.	0.3	0.3	0.3	0.3	D1266; D2785, D2622	107/243
VOLATILITY	Distillation Init. BP (C)				Rpt	Rpt		
	Temp. 10% Rec (C)	Max.	205		204	Rpt	D86	123
	20% Rec (C)	Max.		145	Rpt	143		
	50% Rec (C)	Max.	Rpt	190	Rpt	188		
	90% Rec (C)	Max.	Rpt	245	Rpt	243		
	Final BP (C)	Max.	300		300			
	Residue (vol %)	Max.	1.5	1.5	1.5	1.5		
	Loss (vol %)	Max.	1.5	1.5	1.5	1.5		
	Flash Point (C)	Min.	38		38		D56/D3828(5)	170/303
	Density (15 C) Kg/M^3		775-840	751-802	775-840	751-802	D1298/ D4052	160
	Vapor Pressure 38 C (kPa)	Max.		21		21	D323	69
FLUIDITY	Freezing Point (C)	Max.	−40 (2) (6)	−50 (6)	−47 (6)	−50 (6)	D2386	16
	Viscosity @ −20 C (mm^2/S)	Max.	8.0		8		D445	71
COMBUSTION	Net Heat of Comb. (MJ/Kg)	Min.	42.8	42.8	42.8	42.8	D4529/D3338 (7)	12/193
	Luminometer No.	Min.	45	45	45	45	D1740	
	or Smoke Point (mm)	Min.	25	25	25	25	D1322	
	or Naphthalenes (vol %)	Max.	3 (8)	3 (8)	3 (8)	3 (8)	D1840	
CORROSION	Copper Strip (2 h @ 100 C)	Max.	1	1	1	1	D130	154
	Silver Strip (4 h @ 50 C)	Max.			1 (11)	1 (11)		227
STABILITY	JFTOT ΔP (mm Hg)	Max.	25 (9)	25 (9)	25	25	D3241	
	Tube Color Code	Max.	<3	<3	<3 (12)	<3 (12)		
CONTAMINANTS	Existent Gum (mg/100 mL)	Max.	7	7	7	7	D381	131
	Particulates (mg/L)	Max.					D2276	216
	Water Reaction Interface	Max.	1b	1b	1b	1b	D1094	289
	Water Reaction Separation	Max.	2	2	2	2	D1094	289
	WSIM	Min.					D2550/D3602	
ADDITIVES	Anti-Icing		Agreement	Agreement				
	Antioxidant		Option	Option	Option (4)	Option (4)		
	Corrosion Inhibitor/ Lubricity Improver		Agreement	Agreement	Agreement			
	Metal Deactivator		Option	Option	Option	Option		
	Static Dissipator		Agreement	Agreement	Mandatory	Mandatory		
OTHER	Conductivity (pS/m)		50-450 (10)	50-450 (10)	50-450 (10)	50-450 (10)	D2624 D4308	274

NOTES:

(1) Published in 1989 Book of Standards, Vol. 05.01.
(2) Jet A-1 is similar in all properties but Freezing Point which is −47°C max.
(3) Fuel containing up to 25 Vol. % aromatics may be shipped if supplier notifies user of shipment within 90 days or as mutually agreed.
(4) Mandatory requirement for fuels that have been hydrotreated. Must be added immediately after processing.
(5) Results from D3828 may be up to 2°C below those obtained by D56 or the noted IP methods.
(6) Other freezing points may be specified by agreement where operating conditions permit.
(7) D1405 or IP 193 may be used for IATA Guidance Material. In case of dispute, D2382 is referee method.
(8) Plus Smoke Point = 20 min. but 18 min. may be shipped if supplier notifies user within 90 days or as mutually agreed. For IATA, Smoke Point relaxation only to 19mm.
(9) Test at 260°C tube temperature. If test limits are not met, test may be repeated at 245°C. Results at both temperatures will be reported. For ASTM, method D1660 is alternative (5 hours) at 149°C preheat, 204.5°C filter temperature with limits of 76mm Hg ΔP and less than Code 3 visual tube rating.
(10) Applies to fuel delivered into aircraft. Conductivity loss resulting from additive depletion may be corrected by carefully controlled addition of the static dissipator. See specifications for limits.
(11) Test is optional.
(12) Heater tube should have no "peacock" or "abnormal" color deposits.

ATTACHMENT 15