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Airplane Performance – By the Numbers
GRF2019 – 3/28/2019

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FLIGHT OPS ENGINEERING
Alaska Airlines

Agenda

- FROST – The Importance of Mu Downgrade
- RCAM / Vertical and Horizontal
- Landing Performance – By the numbers
- TAKEOFF RCAM
- Takeoff Performance – By the numbers
- Questions


Seattle
Portland
Anchorage
ALASKA
CANADA
Boston
New York
Chicago
Washington D.C.
San Francisco
Bay Area
Salt Lake City
Denver
Los Angeles
San Diego
Atlanta
Dallas
Miami
Honolulu
Maui
HAWAI'I
Los Cabos
MEXICO
Puerto Vallarta
Mexico City
Cancun
Alaska
Virgin
america

- Alaska Airlines operates into some of the most challenging airports in the world.
- Alaska Airlines has been using the TALPA ARC Matrix for the Pilot in flight analysis since 2006 – 2007 winter season.

RCAM – Vertical

Table 5-2. Runway Condition Assessment Matrix (RCAM) ***(for Airport Operators' Use Only)***

Assessment Criteria		Downgrade Assessment Criteria		
Runway Condition Description	**Code**	**Mu (μ) [1]**	**Vehicle Deceleration or Directional Control Observation**	**Pilot Reported Braking Action**
• Dry	6	40 or Higher	---	---
• Frost • Wet (Includes Damp and 1/8 inch depth or less of water) ***1/8 inch (3mm) depth or less of:*** • Slush • Dry Snow • Wet Snow	5	40 or Higher	Braking deceleration is normal for the wheel braking effort applied AND directional control is normal.	Good
5° F (-15°C) and Colder outside air temperature: • Compacted Snow	4	39 to 30	Braking deceleration OR directional control is between Good and Medium.	Good to Medium
• Slippery When Wet (wet runway) • Dry Snow or Wet Snow (Any depth) over Compacted Snow ***Greater than 1/8 inch (3mm) depth of:*** • Dry Snow • Wet Snow ***Warmer than 5° F (-15°C) outside air temperature:*** • Compacted Snow	3	39 to 30	Braking deceleration is noticeably reduced for the wheel braking effort applied OR directional control is noticeably reduced.	Medium
Greater than 1/8 (3mm) inch depth of: • Water • Slush	2	29 to 21	Braking deceleration OR directional control is between Medium and Poor.	Medium to Poor
• Ice [2]	1	29 to 21	Braking deceleration is significantly reduced for the wheel braking effort applied OR directional control is significantly reduced.	Poor
• Wet Ice [2] • Slush over Ice • Water over Compacted Snow [2] • Dry Snow or Wet Snow over Ice [2]	0	20 or Lower	Braking deceleration is minimal to non-existent for the wheel braking effort applied OR directional control is uncertain.	Nil

DRAFT

RWYCC for FROST

- Originally FROST was a RWYCC 3
  - During testing we realized that the majority of the time Frost was actually RWYCC 5 (BA – Good)
  - FAA and TALPA intentionally raised it to a RWYCC 5 with the understanding that the Airport would have Mu as a mitigation for when FROST is more slippery.
- Mu Values of 45, 35, 25 with FROST would not be reported to the Flight Crew. Instead, the following FICON would communicate the necessary information:
- OTZ RWY 27 FICON 5/4/2 100 PRCT FROST

RCAM – Vertical

Table 5-2. Runway Condition Assessment Matrix (RCAM) *(for Airport Operators' Use Only)*

Assessment Criteria		Downgrade Assessment Criteria		
Runway Condition Description	**Code**	**Mu (μ) [1]**	**Vehicle Deceleration or Directional Control Observation**	**Pilot Reported Braking Action**
• Dry	6	40 or Higher	---	---
• Frost • Wet (Includes Damp and 1/8 inch depth or less of water) ***1/8 inch (3mm) depth or less of:*** • Slush • Dry Snow • Wet Snow	5	40 or Higher	Braking deceleration is normal for the wheel braking effort applied AND directional control is normal.	Good
5° F (-15°C) and Colder outside air temperature: • Compacted Snow	4	39 to 30	Braking deceleration OR directional control is between Good and Medium.	Good to Medium
• Slippery When Wet (wet runway) • Dry Snow or Wet Snow (Any depth) over Compacted Snow ***Greater than 1/8 inch (3mm) depth of:*** • Dry Snow • Wet Snow ***Warmer than 5° F (-15°C) outside air temperature:*** • Compacted Snow	3	39 to 30	Braking deceleration is noticeably reduced for the wheel braking effort applied OR directional control is noticeably reduced.	Medium
Greater than 1/8 (3mm) inch depth of: • Water • Slush	2	29 to 21	Braking deceleration OR directional control is between Medium and Poor.	Medium to Poor
• Ice [2]	1	29 to 21	Braking deceleration is significantly reduced for the wheel braking effort applied OR directional control is significantly reduced.	Poor
• Wet Ice [2] • Slush over Ice • Water over Compacted Snow [2] • Dry Snow or Wet Snow over Ice [2]	0	20 or Lower	Braking deceleration is minimal to non-existent for the wheel braking effort applied OR directional control is uncertain.	Nil

DRAFT

RCAM – Horizontal

	Dry	Wet (Includes water 1/8" or less and Damp)		Contaminant								
Type	N/A	Any	Slippery When Wet	Frost	Standing Water or Slush		Wet Snow or Dry Snow		Compacted Snow (May include imbedded Ice)		Dry or Wet Snow over Compacted Snow	Ice [1]	Wet Ice [1] Water Over Compacted Snow [1] Dry or Wet Snow Over Ice [1]
Depth	N/A	N/A		N/A	1/8" or less	Greater than 1/8"	1/8" or less	Greater than 1/8"	Any	Any	Any	Any	Any
NOTES			Slippery When Wet used to indicate excess rubber deposits in touchdown zones.		For Standing Water 1/8" or less report as WET				OAT -15°C or Colder	OAT Warmer than -15°C			Taxi, takeoff, and landing operations in Nil conditions are prohibited.
RWYCC	6	5	3	5	5	2	5	3	4	3	3	1	0

[1] *In some circumstances, these runway surface conditions may not be as slippery as the runway condition code assigned by the Matrix. The airport operator may issue a higher runway condition code (but no higher than code 3) if Mu values 40 or greater are obtained on all three thirds of the runway by a properly operated and calibrated friction measuring device and all other observations, judgment, and vehicle braking action support the higher runway condition code. The decision to issue a higher runway condition code than would be called for by the Matrix cannot be based on Mu values alone; all available means of assessing runway slipperiness must be used and must support the higher runway condition code. This ability to raise the reported runway condition code to a code 3 can only be applied to those runway conditions listed under code 0 and 1 in the Matrix.*

The airport operator must also continually monitor the runway surface as long as the higher code is in effect to ensure that the runway surface condition does not deteriorate below the assigned code. The extent of monitoring must consider all variables that may affect the runway surface condition, including any precipitation conditions, changing temperatures, effects of wind, frequency of runway use, and type of aircraft using the runway. If sand or other approved runway treatments are used to satisfy the requirements for issuing this higher runway condition code, the continued monitoring program must confirm continued effectiveness of the treatment.

Caution: Temperatures near and above freezing (e.g., at -3°C and warmer) may cause contaminants to behave more slippery than indicated by the runway condition code given in the Matrix. At these temperatures, airport operators should exercise a heightened level of runway assessment, and should downgrade the runway condition code if appropriate.

Downgrade Assessment Criteria (Mu), Pilot Braking Action Descriptors							
RWYCC from ABOVE	6	5	4	3	2	1	0
Mu (μ)[2]	40 or higher		39 - 30		29 - 21		20 or lower
Deceleration & Directional Control Observation		Braking deceleration is normal for the wheel braking effort applied. Directional control is normal.	Brake deceleration and controllability is between Good and Medium.	Braking deceleration is noticeably reduced for the wheel braking effort applied. Directional control may be slightly reduced.	Brake deceleration is between Medium and Poor. Potential for hydroplaning exists.	Braking deceleration is significantly reduced for the wheel braking effort applied. Directional control may be significantly reduced.	Braking deceleration is minimal to non-existent for the wheel braking effort applied. Directional control may be uncertain.
PIREP	Dry	Good	Good to Medium	Medium	Medium to Poor	Poor	Nil

[2] *The correlation of the Mu (μ) values with runway conditions and condition codes in the Matrix are only approximate ranges for a generic friction measuring device and are intended to be used only to downgrade a runway condition code. Airport operators should use their best judgment when using friction measuring devices for downgrade assessments, including their experience with the specific measuring devices used.*

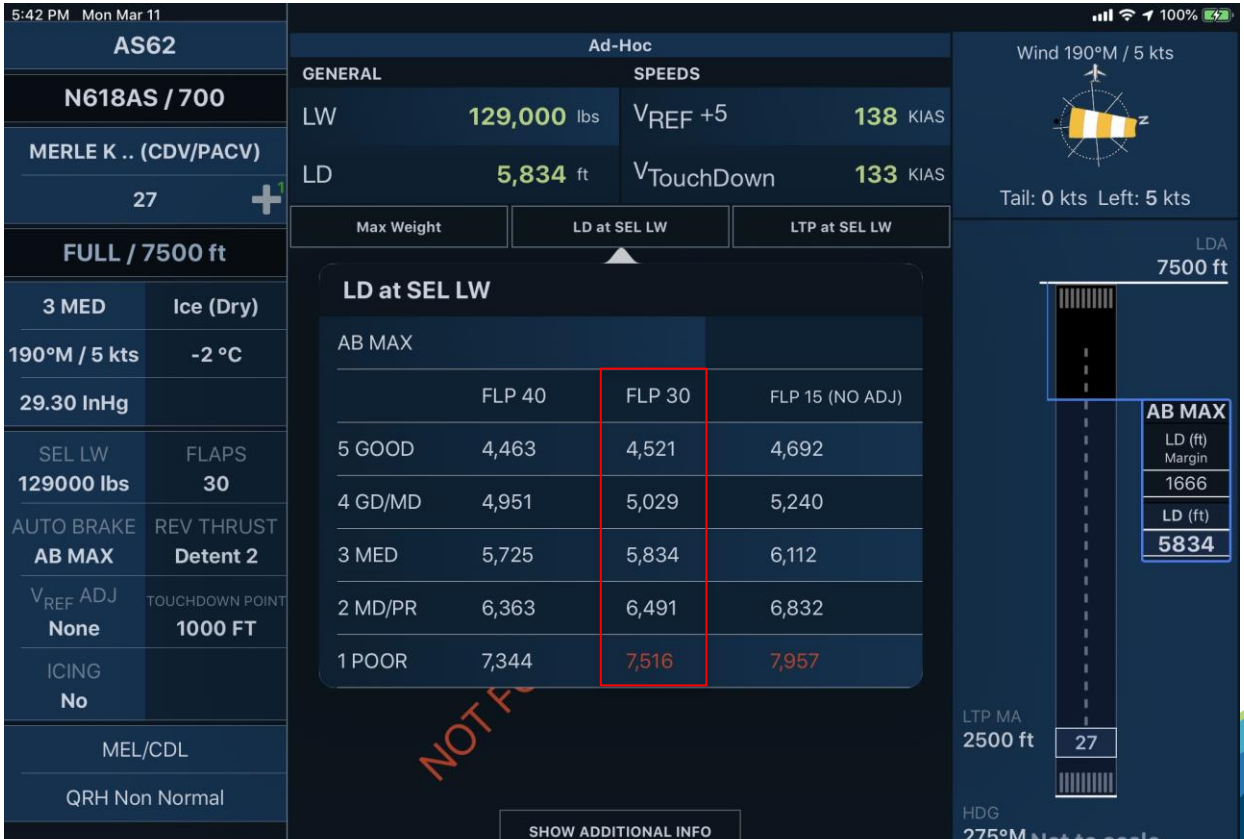
LANDING RUNWAY CONDITION ASSESSMENT MATRIX (RCAM)

	Dry	Wet (Includes water 1/8" or less and Damp)		Contaminant									
Type	N/A	Any	Slippery When Wet	Frost	Standing Water or Slush		Wet Snow or Dry Snow		Compacted Snow (May include Imbedded Ice)		Dry or Wet Snow Over Compacted Snow	Ice[1]	Wet Ice[1] Water Over Compacted Snow[1] Dry or Wet Snow Over Ice[1]
Depth	N/A	1/8" or less		N/A	1/8" or less	Greater than 1/8"	1/8" or less	Greater than 1/8"	Any	Any	Any	Any	Any
Notes			Slippery When Wet used to indicate excess rubber deposits in touchdown zones.		May include moderate rainfall intensity.	Includes moderate rainfall intensity on smooth runways or heavy rainfall intensity.[2]			OAT -15°C or Colder	OAT Warmer than -15°C			Takeoff and landing operations in NIL conditions are prohibited.
RWYCC	**6**	**5 (GOOD)**	**3 (MEDIUM)**	**5 (GOOD)**	**5 (GOOD)**	**2 (MED to POOR)**	**5 (GOOD)**	**3 (MEDIUM)**	**4 (GOOD to MED)**	**3 (MEDIUM)**	**3 (MEDIUM)**	**1 (POOR)**	**0 (NIL)**

[1] The Runway Codes of 1 or 0 may be upgraded to Code 3 by airport operator if conditions warrant.
[2] A current FICON Report/PIREP can upgrade the Rwy Condition Code in Moderate or Heavy Rain.

CAUTION! Temperatures near and above freezing (e.g., at -3°C and warmer) may cause contaminants to behave more slippery than indicated by the runway condition code given in the Runway Surface Condition Report Assessment Table. At these temperatures, airport operators should exercise a heightened level of runway assessment, and should downgrade the runway condition code if appropriate.

Pilot Braking Action Descriptors and Crosswind Component Limits							
Runway Condition Codes (RWYCC)	6	5	4	3	2	1	0
Deceleration & Directional Control Observation		Braking deceleration is normal for the wheel braking effort applied. Directional control is normal.	Brake deceleration and controllability is between GOOD and MEDIUM.	Braking deceleration is noticeably reduced for the wheel braking effort applied, or directional control is slightly reduced.	Brake deceleration is between MEDIUM and POOR. Potential for hydroplaning exists.	Braking deceleration is significantly reduced for the wheel braking effort applied, or directional control is significantly reduced.	Braking deceleration is minimal to non-existent for the wheel braking effort applied, or directional control is minimal to non-existent.
PIREP	Dry	GOOD	GOOD to MEDIUM	MEDIUM	MEDIUM to POOR	POOR	NIL
Landing Max Allowable Crosswind Component (Boeing)	40 kts (700) 37 Kts (800 & 900)	40 kts (700) 37 Kts (800 & 900)	35 kts	25 kts	17 kts	15 kts	N/A
Landing Max Allowable Crosswind Component (gust included) (Airbus)	38 kts	38 kts	29 kts	25 kts	20 kts	15 kts	N/A


5:42 PM Mon Mar 11
100%
AS62
N618AS / 700
MERLE K .. (CDV/PACV)
27
FULL / 7500 ft
3 MED
Ice (Dry)
190°M / 5 kts
-2 °C
29.30 InHg
SEL LW
129000 lbs
FLAPS
30
AUTO BRAKE
AB MAX
REV THRUST
Detent 2
VREF ADJ
None
TOUCHDOWN POINT
1000 FT
ICING
No
MEL/CDL
QRH Non Normal
Ad-Hoc
GENERAL
SPEEDS
LW
129,000 lbs
VREF +5
138 KIAS
LD
5,834 ft
VTouchDown
133 KIAS
Max Weight
LD at SEL LW
LTP at SEL LW
LD at SEL LW
AB MAX
FLP 40
FLP 30
FLP 15 (NO ADJ)
5 GOOD
4,463
4,521
4,692
4 GD/MD
4,951
5,029
5,240
3 MED
5,725
5,834
6,112
2 MD/PR
6,363
6,491
6,832
1 POOR
7,344
7,516
7,957
NOT F
SHOW ADDITIONAL INFO
Wind 190°M / 5 kts
Tail: 0 kts Left: 5 kts
LDA
7500 ft
AB MAX
LD (ft)
Margin
1666
LD (ft)
5834
LTP MA
2500 ft
27
HDG

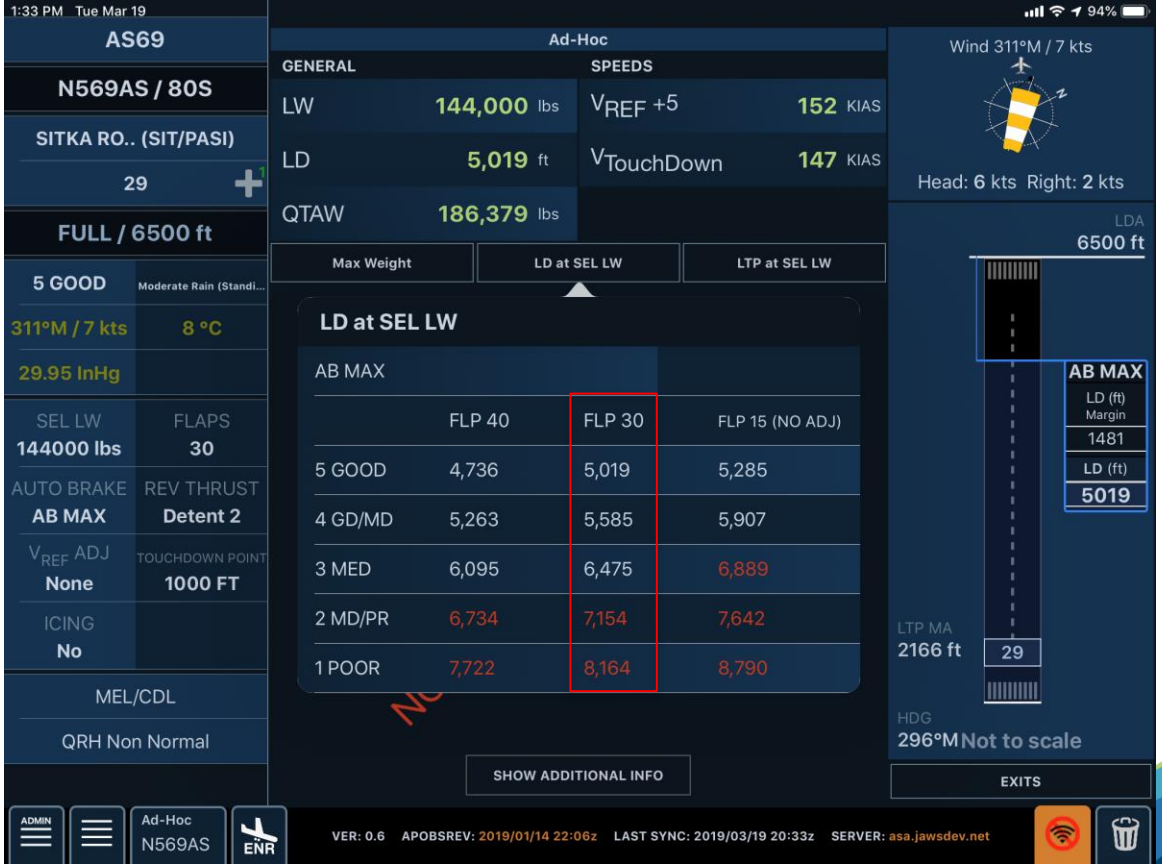
LANDING RUNWAY CONDITION ASSESSMENT MATRIX (RCAM)

	Dry	Wet (Includes water 1/8" or less and Damp)		Contaminant									
Type	N/A	Any	Slippery When Wet	Frost	Standing Water or Slush		Wet Snow or Dry Snow		Compacted Snow (May include Imbedded Ice)		Dry or Wet Snow Over Compacted Snow	Ice[1]	Wet Ice[1] Water Over Compacted Snow[1] Dry or Wet Snow Over Ice[1]
Depth	N/A	1/8" or less		N/A	1/8" or less	Greater than 1/8"	1/8" or less	Greater than 1/8"	Any	Any	Any	Any	Any
Notes			Slippery When Wet used to indicate excess rubber deposits in touchdown zones.		May include moderate rainfall intensity.	Includes moderate rainfall intensity on smooth runways or heavy rainfall intensity.[2]			OAT -15°C or Colder	OAT Warmer than -15°C			Takeoff and landing operations in NIL conditions are prohibited.
RWYCC	**6**	**5 (GOOD)**	**3 (MEDIUM)**	**5 (GOOD)**	**5 (GOOD)**	**2 (MED to POOR)**	**5 (GOOD)**	**3 (MEDIUM)**	**4 (GOOD to MED)**	**3 (MEDIUM)**	**3 (MEDIUM)**	**1 (POOR)**	**0 (NIL)**

[1] The Runway Codes of 1 or 0 may be upgraded to Code 3 by airport operator if conditions warrant.
[2] A current FICON Report/PIREP can upgrade the Rwy Condition Code in Moderate or Heavy Rain.

CAUTION! Temperatures near and above freezing (e.g., at -3°C and warmer) may cause contaminants to behave more slippery than indicated by the runway condition code given in the Runway Surface Condition Report Assessment Table. At these temperatures, airport operators should exercise a heightened level of runway assessment, and should downgrade the runway condition code if appropriate.

Pilot Braking Action Descriptors and Crosswind Component Limits							
Runway Condition Codes (RWYCC)	6	5	4	3	2	1	0
Deceleration & Directional Control Observation		Braking deceleration is normal for the wheel braking effort applied. Directional control is normal.	Brake deceleration and controllability is between GOOD and MEDIUM.	Braking deceleration is noticeably reduced for the wheel braking effort applied, or directional control is slightly reduced.	Brake deceleration is between MEDIUM and POOR. Potential for hydroplaning exists.	Braking deceleration is significantly reduced for the wheel braking effort applied, or directional control is significantly reduced.	Braking deceleration is minimal to non-existent for the wheel braking effort applied, or directional control is minimal to non-existent.
PIREP	Dry	GOOD	GOOD to MEDIUM	MEDIUM	MEDIUM to POOR	POOR	NIL
Landing Max Allowable Crosswind Component (Boeing)	40 kts (700) 37 Kts (800 & 900)	40 kts (700) 37 Kts (800 & 900)	35 kts	25 kts	17 kts	15 kts	N/A
Landing Max Allowable Crosswind Component (gust included) (Airbus)	38 kts	38 kts	29 kts	25 kts	20 kts	15 kts	N/A


1:33 PM Tue Mar 19
94%
AS69
N569AS / 80S
SITKA RO.. (SIT/PASI)
29
FULL / 6500 ft
5 GOOD
Moderate Rain (Standi...
311°M / 7 kts
8 °C
29.95 InHg
SEL LW
144000 lbs
FLAPS
30
AUTO BRAKE
AB MAX
REV THRUST
Detent 2
VREF ADJ
None
TOUCHDOWN POINT
1000 FT
ICING
No
MEL/CDL
QRH Non Normal
Ad-Hoc
GENERAL
SPEEDS
LW 144,000 lbs
VREF +5 152 KIAS
LD 5,019 ft
VTouchDown 147 KIAS
QTAW 186,379 lbs
Max Weight
LD at SEL LW
LTP at SEL LW
LD at SEL LW
AB MAX
FLP 40
FLP 30
FLP 15 (NO ADJ)
5 GOOD 4,736 5,019 5,285
4 GD/MD 5,263 5,585 5,907
3 MED 6,095 6,475 6,889
2 MD/PR 6,734 7,154 7,642
1 POOR 7,722 8,164 8,790
SHOW ADDITIONAL INFO
Wind 311°M / 7 kts
Head: 6 kts Right: 2 kts
LDA
6500 ft
AB MAX
LD (ft) Margin
1481
LD (ft)
5019
LTP MA
2166 ft
29
HDG
296°M
Not to scale
EXITS
ADMIN
Ad-Hoc
N569AS
ENR
VER: 0.6 APOBSREV: 2019/01/14 22:06z LAST SYNC: 2019/03/19 20:33z SERVER: asa.jawsdev.net

Takeoff RCAM

TAKEOFF RUNWAY CONDITION ASSESSMENT MATRIX (RCAM) – (BOEING ONLY – AIRBUS SEE QRH OR AQRG)

Type	Dry	Wet (5/5/5)			Loose Contaminants							Hard Packed Contaminants		
Contaminant		Water, Wet Snow, Dry Snow, Slush		Frost	Wet Snow, Standing Water, or Slush			Dry Snow				Compacted Snow	Ice	
Depth		1/8" or less		N/A	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	> 1/2"	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	> 4"	Any	Any	
Notes			Slippery When Wet										See Note Below[2]	
Takeoff Performance Level	DRY	WET	Medium (or PIREP value)	WET	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	No Ops	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	No Ops	Medium[2] (or PIREP value)	Medium[2] (or PIREP value)	Poor
Crosswind Limit[1] (Boeing)	40 kts (400 & 700) 33 Kts (800 & 900)	25 kts	15 kts (400) 20 kts (NG)	25 kts	Wet Snow 15 kts (400) 20 kts (NG)	Water/Slush 7 kts (400) 15 kts (NG)		15 kts (400) 20 kts (NG)				15 kts (400) 20 kts (NG)	15 kts (400) 20 kts (NG)	7 kts (400) 13 kts (NG)

Type	Layered Contaminants																	
Contaminant	Dry Snow Over Compacted Snow					Wet Snow Over Compacted Snow				Wet Ice or Water Over Ice[3] Wet Snow Over Ice[3] Slush Over Ice[3] Water or Slush Over Compacted Snow[3]				Dry Snow Over Ice[3]				
Depth	≤ 1/8"	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	> 4"	≤ 1/8"	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	> 1/2"	≤ 1/8"	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	> 1/2"	≤ 1/8"	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	> 4"
Notes										See Notes Below								
Takeoff Performance Level	Medium[2] (or PIREP value)	Dry Snow > 1/8" to ≤ 1"	Dry Snow > 1" to ≤ 2"	Dry Snow > 2" to ≤ 4"	No Ops	Medium[2] (or PIREP value)	Wet Snow > 1/8" to ≤ 1/4"	Wet Snow > 1/4" to ≤ 1/2"	No Ops	No Ops[3] or Medium[2] (or PIREP value)	No Ops[3] or Wet Snow > 1/8" to ≤ 1/4"	No Ops[3] or Wet Snow > 1/4" to ≤ 1/2"	No Ops	No Ops[3] or Medium[2] (or PIREP value)	No Ops[3] or Dry Snow > 1/8" to ≤ 1"	No Ops[3] or Dry Snow > 1" to ≤ 2"	No Ops[3] or Dry Snow > 2" to ≤ 4"	No Ops
Crosswind Limit[1] (Boeing)	15 kts (400) 20 kts (NG)					15 kts (400) 20 kts (NG)				See Note 1 Below				See Note 1 Below				

1 Crosswind Limits are not enforced by Takeoff Performance Tools. If available, use PIREP values to determine actual crosswind limits. See applicable flight manual, Limitations, for crosswind limits.
2 If RWYCC allow operations, use the code provided (Code 3 = Medium, Code 2 or 1 = Poor).
3 PIREPS can be used to override No Ops conditions (allowing operations). Any PIREP that allows operation and contaminant depths greater than 1/8 inch, use the depth value to determine takeoff performance.

TAKEOFF RUNWAY CONDITION ASSESSMENT MATRIX (RCAM) – (BOEING ONLY – AIRBUS SEE QRH OR AQRG)

Type	Dry	Wet (5/5/5)			Loose Contaminants							Hard Packed Contaminants		
Contaminant		Water, Wet Snow, Dry Snow, Slush		Frost	Wet Snow, Standing Water, or Slush			Dry Snow				Compacted Snow	Ice	
Depth		1/8" or less		N/A	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	> 1/2"	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	> 4"	Any	Any	
Notes			Slippery When Wet										See Note Below[2]	
Takeoff Performance Level	DRY	WET	Medium (or PIREP value)	WET	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	No Ops	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	No Ops	Medium[2] (or PIREP value)	Medium[2] (or PIREP value)	Poor
Crosswind Limit[1] (Boeing)	40 kts (700) 33 Kts (800 & 900)	25 kts	20 kts (NG)	25 kts	Wet Snow 20 kts (NG)	Water/Slush 15 kts (NG)		20 kts (NG)				20 kts (NG)	20 kts (NG)	13 kts (NG)

Type	Layered Contaminants																	
Contaminant	Dry Snow Over Compacted Snow					Wet Snow Over Compacted Snow				Wet Ice or Water Over Ice[3] Wet Snow Over Ice[3] Slush Over Ice[3] Water or Slush Over Compacted Snow[3]				Dry Snow Over Ice[3]				
Depth	≤ 1/8"	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	> 4"	≤ 1/8"	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	> 1/2"	≤ 1/8"	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	> 1/2"	≤ 1/8"	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	> 4"
Notes										See Notes Below								
Takeoff Performance Level	Medium[2] (or PIREP value)	Dry Snow > 1/8" to ≤ 1"	Dry Snow > 1" to ≤ 2"	Dry Snow > 2" to ≤ 4"	No Ops	Medium[2] (or PIREP value)	Wet Snow > 1/8" to ≤ 1/4"	Wet Snow > 1/4" to ≤ 1/2"	No Ops	No Ops[3] or Medium[2] (or PIREP value)	No Ops[3] or Wet Snow > 1/8" to ≤ 1/4"	No Ops[3] or Wet Snow > 1/4" to ≤ 1/2"	No Ops	No Ops[3] or Medium[2] (or PIREP value)	No Ops[3] or Dry Snow > 1/8" to ≤ 1"	No Ops[3] or Dry Snow > 1" to ≤ 2"	No Ops[3] or Dry Snow > 2" to ≤ 4"	No Ops
Crosswind Limit[1] (Boeing)	20 kts (NG)					20 kts (NG)				See Note 1 Below				See Note 1 Below				

1 Crosswind Limits are not enforced by Takeoff Performance Tools. If available, use PIREP values to determine actual crosswind limits. See applicable flight manual, Limitations, for crosswind limits.
2 If RWYCC allows operations, use the code provided (Code 3 = Medium, Code 2 or 1 = Poor).
3 PIREPS can be used to override No Ops conditions (allowing operations). Any PIREP that allows operation and contaminant depths greater than 1/8 inch, use the depth value to determine takeoff performance.


9:23 AM Tue Mar 19
11%
AS69
N569AS / 80S
SITKA RO.. (SIT/PASI)
29
FULL / 6700 ft
Dry
311°M / 9 kts
-3 °C
29.96 InHg
ENG A/I: NRM
SEL TOW
145000 lbs
FLAPS
Optimum
ENG BLEEDS
Optimum
THRUST
Optimum
MEL/CDL
Ad-Hoc
CONFIGURATION
TOW 145,000 lbs
FLAPS 1
22K N1 88.7 %
SEL(AT)/OAT -- / -3 °C
ENG A/I On
ENG BLEEDS On
SPEEDS
V1 144 KIAS
VR 145 KIAS
V2 151 KIAS
EO ACCEL ALT 560 MSL
EO ACCEL HT 533 AGL
EO OBST ALT 6,300 MSL
SHOW ADDITIONAL INFO
RLS TOW --- lbs
RWY LIM TOW 178,338 lbs
NON-STD. ASA: At ISIN LOC/D1.2 turn LEFT. Intercept and track INBOUND via the BKA VOR R336 to BKA VOR and hold LEFT turns.
NOT FOR OPERATIONAL USE!
Wind 311°M / 9 kts
Head: 8 kts Right: 3 kts
Max Tailwind: 2 kts
ASDA
6700 ft
TORA
6700 ft
ASD (ft) Margin
115
ASD (ft)
6585
OBSTACLE
TOR (ft) Margin
763
TOR (ft)
5937
29
FULL
HDG
296°M
Not to scale
ADMIN
Ad-Hoc
N569AS
TO
VER: 0.6 APOBSREV: 2019/01/14 22:06z LAST SYNC: 2019/03/19 16:17z SERVER: asa.jawsdev.net


9:24 AM Tue Mar 19
11%
AS69
N569AS / 80S
SITKA RO.. (SIT/PASI)
29
FULL / 6700 ft
Wet Only
None
311°M / 9 kts
-3 °C
29.96 InHg
ENG A/I: NRM
SEL TOW
145000 lbs
FLAPS
Optimum
ENG BLEEDS
Optimum
THRUST
Optimum
MEL/CDL
Ad-Hoc
CONFIGURATION
TOW 145,000 lbs
FLAPS 1
22K N1 88.7 %
SEL(AT)/OAT -- / -3 °C
ENG A/I On
ENG BLEEDS On
SPEEDS
V1 140 KIAS
VR 145 KIAS
V2 151 KIAS
EO ACCEL ALT 560 MSL
EO ACCEL HT 533 AGL
EO OBST ALT 6,300 MSL
SHOW ADDITIONAL INFO
RLS TOW ---
RWY LIM TOW 178,788 lbs
NON-STD. ASA: At ISR LOC/D1.2 turn LEFT. Intercept and track INBOUND via the BKA VOR R336 to BKA VOR and hold LEFT turns.
NOT FOR OPERATIONAL USE!
Wind 311°M / 9 kts
Head: 8 kts Right: 3 kts
Max Tailwind: 2 kts
ASDA
6700 ft
TORA
6700 ft
OBSTACLE
TOR (ft) Margin
168
TOR (ft)
6532
ASD (ft) Margin
168
ASD (ft)
6532
29
FULL
HDG
296°M
Not to scale
ADMIN
Ad-Hoc
N569AS
TO
VER: 0.6 APOBSREV: 2019/01/14 22:06z LAST SYNC: 2019/03/19 16:23z SERVER: asa.jawsdev.net

TAKEOFF RUNWAY CONDITION ASSESSMENT MATRIX (RCAM) – (BOEING ONLY – AIRBUS SEE QRH OR AQRG)

Type	Dry	Wet (5/5/5)			Loose Contaminants							Hard Packed Contaminants		
Contaminant		Water, Wet Snow, Dry Snow, Slush		Frost	Wet Snow, Standing Water, or Slush			Dry Snow				Compacted Snow	Ice	
Depth		1/8" or less		N/A	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	> 1/2"	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	> 4"	Any	Any	
Notes			Slippery When Wet										See Note Below[2]	
Takeoff Performance Level	DRY	WET	Medium (or PIREP value)	WET	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	No Ops	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	No Ops	Medium[2] (or PIREP value)	Medium[2] (or PIREP value)	Poor
Crosswind Limit[1] (Boeing)	40 kts (700) 33 Kts (800 & 900)	25 kts	20 kts (NG)	25 kts	Wet Snow 20 kts (NG)	Water/Slush 15 kts (NG)		20 kts (NG)				20 kts (NG)	20 kts (NG)	13 kts (NG)

Type	Layered Contaminants																			
Contaminant	Dry Snow Over Compacted Snow					Wet Snow Over Compacted Snow				Wet Ice or Water Over Ice[3] Wet Snow Over Ice[3] Slush Over Ice[3] Water or Slush Over Compacted Snow[3]				Dry Snow Over Ice[3]						
Depth	≤ 1/8"	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	> 4"	≤ 1/8"	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	> 1/2"	≤ 1/8"	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	> 1/2"	≤ 1/8"	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	> 4"	
Notes										See Notes Below										
Takeoff Performance Level	Medium[2] (or PIREP value)	Dry Snow > 1/8" to ≤ 1"	Dry Snow > 1" to ≤ 2"	Dry Snow > 2" to ≤ 4"	No Ops	Medium[2] (or PIREP value)	Wet Snow > 1/8" to ≤ 1/4"	Wet Snow > 1/4" to 1/2"	No Ops	No Ops[3] or Medium[2] (or PIREP value)	No Ops[3] or Wet Snow > 1/8" to ≤ 1/4"	No Ops[3] or Wet Snow > 1/4" to ≤ 1/2"	No Ops	No Ops[3] or Medium[2] (or PIREP value)	No Ops[3] or Dry Snow > 1/8" to ≤ 1"	No Ops[3] or Dry Snow > 1" to ≤ 2"	No Ops[3] or Dry Snow > 2" to ≤ 4"			
Crosswind Limit[1] (Boeing)	20 kts (NG)					20 kts (NG)				See Note 1 Below				See Note 1 Below						

1 Crosswind Limits are not enforced by Takeoff Performance Tools. If available, use PIREP values to determine actual crosswind limits. See applicable flight manual, Limitations, for crosswind limits.
2 If RWYCC allow operations, use the code provided (Code 3 = Medium, Code 2 or 1 = Poor).
3 PIREPS can be used to override No Ops conditions (allowing operations). Any PIREP that allows operation and contaminant depths greater than 1/8 inch, use the depth value to determine takeoff performance.


9:23 AM Tue Mar 19
11%
AS69
N569AS / 80S
SITKA RO.. (SIT/PASI)
29
FULL / 6700 ft
Dry
311°M / 9 kts
-3 °C
29.96 InHg
ENG A/I: NRM
SEL TOW
145000 lbs
FLAPS
Optimum
ENG BLEEDS
Optimum
THRUST
Optimum
MEL/CDL
Ad-Hoc
CONFIGURATION
TOW 145,000 lbs
FLAPS 1
22K N1 88.7 %
SEL(AT)/OAT -- / -3 °C
ENG A/I On
ENG BLEEDS On
SPEEDS
V1 144 KIAS
VR 145 KIAS
V2 151 KIAS
EO ACCEL ALT 560 MSL
EO ACCEL HT 533 AGL
EO OBST ALT 6,300 MSL
SHOW ADDITIONAL INFO
RLS TOW --- lbs
RWY LIM TOW 178,338 lbs
NON-STD. ASA: At ISR LOC/D1.2 turn LEFT. Intercept and track INBOUND via the BKA VOR R336 to BKA VOR and hold LEFT turns.
NOT FOR OPERATIONAL USE!
Wind 311°M / 9 kts
Head: 8 kts Right: 3 kts
Max Tailwind: 2 kts
ASDA
6700 ft
TORA
6700 ft
ASD (ft) Margin
115
ASD (ft)
6585
OBSTACLE
TOR (ft) Margin
763
TOR (ft)
5937
29
FULL
HDG
296°M
Not to scale
ADMIN
Ad-Hoc
N569AS
TO
VER: 0.6 APOBSREV: 2019/01/14 22:06z LAST SYNC: 2019/03/19 16:17z SERVER: asa.jawsdev.net


9:24 AM Tue Mar 19
11%
AS69
N569AS / 80S
SITKA RO.. (SIT/PASI)
29
FULL / 6700 ft
Compact Snow
3 Medium
311°M / 9 kts
-3 °C
29.96 InHg
ENG A/I: NRM
SEL TOW
145000 lbs
FLAPS
Optimum
ENG BLEEDS
Optimum
THRUST
Optimum
MEL/CDL
Ad-Hoc
CONFIGURATION
TOW 145,000 lbs
FLAPS 10
24K N1 90.9 %
SEL(AT)/OAT -- / -3 °C
ENG A/I On
ENG BLEEDS On
SPEEDS
V1 115 KIAS
VR 135 KIAS
V2 143 KIAS
EO ACCEL ALT 560 MSL
EO ACCEL HT 533 AGL
EO OBST ALT 6,300 MSL
SHOW ADDITIONAL INFO
RLS TOW ---
RWY LIM TOW 170,589 lbs
NON-STD. ASA: At ISH LOC/D1.2 turn LEFT. Intercept and track INBOUND via the BKA VOR R336 to BKA VOR and hold LEFT turns.
NOT FOR OPERATIONAL USE!
Wind 311°M / 9 kts
Head: 8 kts Right: 3 kts
Max Tailwind: 2 kts
ASDA
6700 ft
TORA
6700 ft
OBSTACLE
TOR (ft) Margin
206
TOR (ft)
6494
ASD (ft) Margin
206
ASD (ft)
6494
29
FULL
HDG
296°M
Not to scale
ADMIN
Ad-Hoc
N569AS
TO
VER: 0.6 APOBSREV: 2019/01/14 22:06z LAST SYNC: 2019/03/19 16:23z SERVER: asa.jawsdev.net


9:27 AM Tue Mar 19
12%
AS69
N569AS / 80S
SITKA RO.. (SIT/PASI)
29
FULL / 6700 ft
Ice (Dry)
1 Poor
311°M / 9 kts
-3 °C
29.96 InHg
ENG A/I: NRM
SEL TOW
145000 lbs
FLAPS
Optimum
ENG BLEEDS
Optimum
THRUST
Optimum
MEL/CDL
Ad-Hoc
CONFIGURATION
TOW 145,000 lbs
FLAPS 15
24K N1 90.9 %
SEL(AT)/OAT -- / -3 °C
ENG A/I On
ENG BLEEDS On
SPEEDS
V1 101 KIAS
VR 132 KIAS
V2 140 KIAS
EO ACCEL ALT 560 MSL
EO ACCEL HT 533 AGL
EO OBST ALT 6,300 MSL
SHOW ADDITIONAL INFO
RLS TOW ---
RWY LIM TOW 161,533 lbs
NON-STD. ASA: At ISN LOC/D1.2 turn LEFT. Intercept and track INBOUND via the BKA VOR R336 to BKA VOR and hold LEFT turns.
NOT FOR OPERATIONAL USE!
Wind 311°M / 9 kts
Head: 8 kts Right: 3 kts
Min Headwind: 3 kts
ASDA
6700 ft
TORA
6700 ft
OBSTACLE
TOR (ft) Margin
127
TOR (ft)
6573
ASD (ft) Margin
127
ASD (ft)
6573
29
FULL
HDG
296°M
Not to scale
ADMIN
Ad-Hoc
N569AS
TO
VER: 0.6 APOBSREV: 2019/01/14 22:06z LAST SYNC: 2019/03/19 16:23z SERVER: asa.jawsdev.net

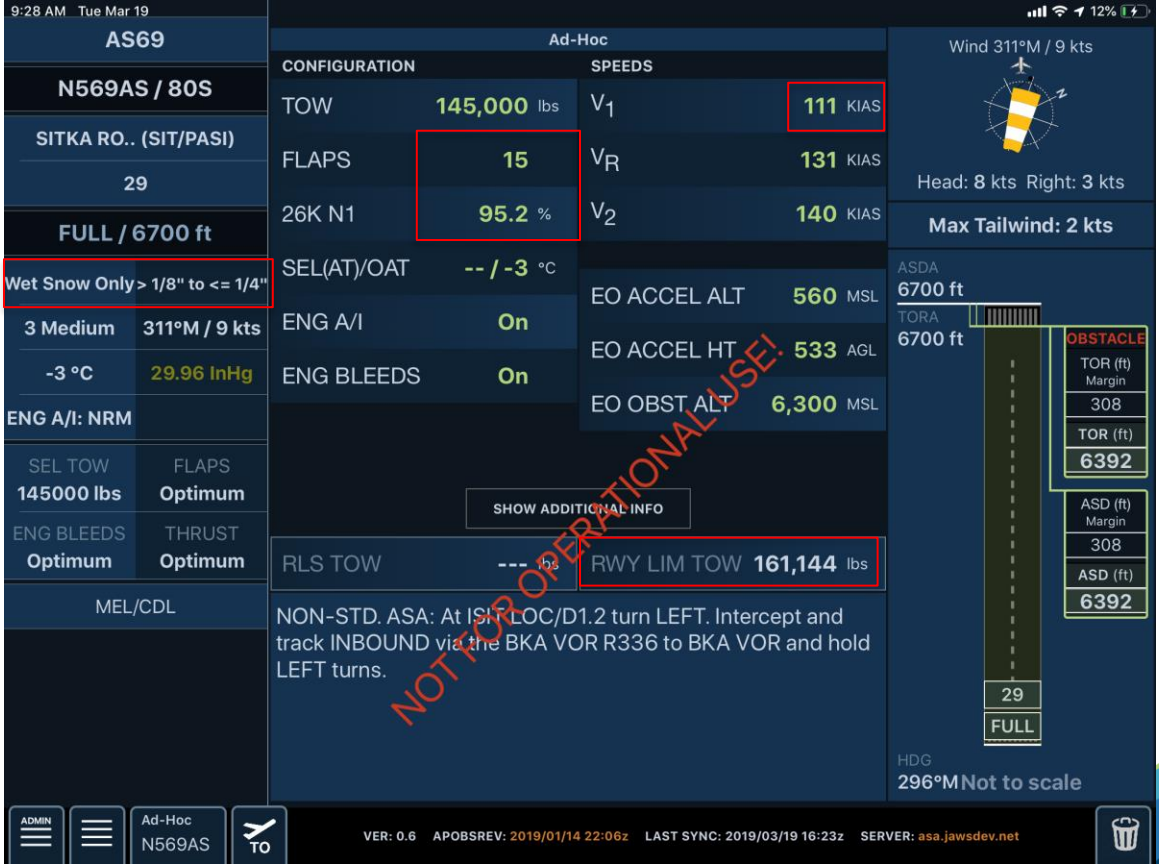
TAKEOFF RUNWAY CONDITION ASSESSMENT MATRIX (RCAM) – (BOEING ONLY – AIRBUS SEE QRH OR AQRG)

Type	Dry	Wet (5/5/5)			Loose Contaminants							Hard Packed Contaminants		
Contaminant		Water, Wet Snow, Dry Snow, Slush		Frost	Wet Snow, Standing Water, or Slush			Dry Snow				Compacted Snow	Ice	
Depth		1/8" or less		N/A	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	> 1/2"	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	> 4"	Any	Any	
Notes			Slippery When Wet										See Note Below[2]	
Takeoff Performance Level	DRY	WET	Medium (or PIREP value)	WET	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	No Ops	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	No Ops	Medium[2] (or PIREP value)	Medium[2] (or PIREP value)	Poor
Crosswind Limit[1] (Boeing)	40 kts (700) 33 Kts (800 & 900)	25 kts	20 kts (NG)	25 kts	Wet Snow 20 kts (NG)	Water/Slush 15 kts (NG)		20 kts (NG)				20 kts (NG)	20 kts (NG)	13 kts (NG)

Type	Layered Contaminants																	
Contaminant	Dry Snow Over Compacted Snow					Wet Snow Over Compacted Snow				Wet Ice or Water Over Ice[3] Wet Snow Over Ice[3] Slush Over Ice[3] Water or Slush Over Compacted Snow[3]				Dry Snow Over Ice[3]				
Depth	≤ 1/8"	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	> 4"	≤ 1/8"	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	> 1/2"	≤ 1/8"	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	> 1/2"	≤ 1/8"	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	> 4"
Notes										See Notes Below								
Takeoff Performance Level	Medium[2] (or PIREP value)	Dry Snow > 1/8" to ≤ 1"	Dry Snow > 1" to ≤ 2"	Dry Snow > 2" to ≤ 4"	No Ops	Medium[2] (or PIREP value)	Wet Snow > 1/8" to ≤ 1/4"	Wet Snow > 1/4" to ≤ 1/2"	No Ops	No Ops[3] or Medium[2] (or PIREP value)	No Ops[3] or Wet Snow > 1/8" to ≤ 1/4"	No Ops[3] or Wet Snow > 1/4" to ≤ 1/2"	No Ops	No Ops[3] or Medium[2] (or PIREP value)	No Ops[3] or Dry Snow > 1/8" to ≤ 1"	No Ops[3] or Dry Snow > 1" to ≤ 2"	No Ops[3] or Dry Snow > 2" to ≤ 4"	No Ops
Crosswind Limit[1] (Boeing)	20 kts (NG)					20 kts (NG)				See Note 1 Below				See Note 1 Below				

1 Crosswind Limits are not enforced by Takeoff Performance Tools. If available, use PIREP values to determine actual crosswind limits. See applicable flight manual, Limitations, for crosswind limits.
2 If RWYCC allow operations, use the code provided (Code 3 = Medium, Code 2 or 1 = Poor).
3 PIREPS can be used to override No Ops conditions (allowing operations). Any PIREP that allows operation and contaminant depths greater than 1/8 inch, use the depth value to determine takeoff performance.


9:23 AM Tue Mar 19
11%
AS69
N569AS / 80S
SITKA RO.. (SIT/PASI)
29
FULL / 6700 ft
Dry
311°M / 9 kts
-3 °C
29.96 InHg
ENG A/I: NRM
SEL TOW
145000 lbs
FLAPS
Optimum
ENG BLEEDS
Optimum
THRUST
Optimum
MEL/CDL
Ad-Hoc
CONFIGURATION
TOW 145,000 lbs
FLAPS 1
22K N1 88.7 %
SEL(AT)/OAT -- / -3 °C
ENG A/I On
ENG BLEEDS On
SPEEDS
V1 144 KIAS
VR 145 KIAS
V2 151 KIAS
EO ACCEL ALT 560 MSL
EO ACCEL HT 533 AGL
EO OBST ALT 6,300 MSL
SHOW ADDITIONAL INFO
RLS TOW --- lbs
RWY LIM TOW 178,338 lbs
NON-STD. ASA: At ISR LOC/D1.2 turn LEFT. Intercept and track INBOUND via the BKA VOR R336 to BKA VOR and hold LEFT turns.
NOT FOR OPERATIONAL USE!
Wind 311°M / 9 kts
Head: 8 kts Right: 3 kts
Max Tailwind: 2 kts
ASDA
6700 ft
TORA
6700 ft
ASD (ft) Margin
115
ASD (ft)
6585
OBSTACLE
TOR (ft) Margin
763
TOR (ft)
5937
29
FULL
HDG
296°M
Not to scale
ADMIN
Ad-Hoc
N569AS
TO
VER: 0.6 APOBSREV: 2019/01/14 22:06z LAST SYNC: 2019/03/19 16:17z SERVER: asa.jawsdev.net


9:28 AM Tue Mar 19
12%
AS69
N569AS / 80S
SITKA RO.. (SIT/PASI)
29
FULL / 6700 ft
Wet Snow Only > 1/8" to <= 1/4"
3 Medium
311°M / 9 kts
-3 °C
29.96 InHg
ENG A/I: NRM
SEL TOW
145000 lbs
FLAPS
Optimum
ENG BLEEDS
Optimum
THRUST
Optimum
MEL/CDL
Ad-Hoc
CONFIGURATION
TOW 145,000 lbs
FLAPS 15
26K N1 95.2 %
SEL(AT)/OAT -- / -3 °C
ENG A/I On
ENG BLEEDS On
SPEEDS
V1 111 KIAS
VR 131 KIAS
V2 140 KIAS
EO ACCEL ALT 560 MSL
EO ACCEL HT 533 AGL
EO OBST ALT 6,300 MSL
SHOW ADDITIONAL INFO
RLS TOW ---
RWY LIM TOW 161,144 lbs
NON-STD. ASA: At ISIN LOC/D1.2 turn LEFT. Intercept and track INBOUND via the BKA VOR R336 to BKA VOR and hold LEFT turns.
NOT FOR OPERATIONAL USE!
Wind 311°M / 9 kts
Head: 8 kts Right: 3 kts
Max Tailwind: 2 kts
ASDA
6700 ft
TORA
6700 ft
OBSTACLE
TOR (ft) Margin
308
TOR (ft)
6392
ASD (ft) Margin
308
ASD (ft)
6392
29
FULL
HDG
296°M
Not to scale
ADMIN
Ad-Hoc
N569AS
TO
VER: 0.6 APOBSREV: 2019/01/14 22:06z LAST SYNC: 2019/03/19 16:23z SERVER: asa.jawsdev.net


9:28 AM Tue Mar 19
13%
AS69
N569AS / 80S
SITKA RO.. (SIT/PASI)
29
FULL / 6700 ft
Wet Snow Only > 1/4" to <= 1/2"
3 Medium
311°M / 9 kts
-3 °C
29.96 InHg
ENG A/I: NRM
SEL TOW
145000 lbs
FLAPS
Optimum
ENG BLEEDS
Optimum
THRUST
Optimum
MEL/CDL
Ad-Hoc
CONFIGURATION
TOW 145,000 lbs
FLAPS 25
26K N1 95.2 %
SEL(AT)/OAT -- / -3 °C
ENG A/I On
ENG BLEEDS On
SPEEDS
V1 118 KIAS
VR 129 KIAS
V2 138 KIAS
EO ACCEL ALT 560 MSL
EO ACCEL HT 533 AGL
EO OBST ALT 6,300 MSL
SHOW ADDITIONAL INFO
RLS TOW ---
RWY LIM TOW 154,051 lbs
NON-STD. ASA: At ISR LOC/D1.2 turn LEFT. Intercept and track INBOUND via the BKA VOR R336 to BKA VOR and hold LEFT turns.
NOT FOR OPERATIONAL USE!
Wind 311°M / 9 kts
Head: 8 kts Right: 3 kts
Min Headwind: 3 kts
ASDA
6700 ft
TORA
6700 ft
OBSTACLE
TOR (ft) Margin
272
TOR (ft)
6428
ASD (ft) Margin
272
ASD (ft)
6428
29
FULL
HDG
296°M
Not to scale
ADMIN
Ad-Hoc
N569AS
TO
VER: 0.6 APOBSREV: 2019/01/14 22:06z LAST SYNC: 2019/03/19 16:28z SERVER: asa.jawsdev.net

TAKEOFF RUNWAY CONDITION ASSESSMENT MATRIX (RCAM) – (BOEING ONLY – AIRBUS SEE QRH OR AQRG)

Type	Dry	Wet (5/5/5)			Loose Contaminants							Hard Packed Contaminants		
Contaminant		Water, Wet Snow, Dry Snow, Slush		Frost	Wet Snow, Standing Water, or Slush			Dry Snow				Compacted Snow	Ice	
Depth		1/8" or less		N/A	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	> 1/2"	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	> 4"	Any	Any	
Notes			Slippery When Wet										See Note Below[2]	
Takeoff Performance Level	DRY	WET	Medium (or PIREP value)	WET	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	No Ops	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	No Ops	Medium[2] (or PIREP value)	Medium[2] (or PIREP value)	Poor
Crosswind Limit[1] (Boeing)	40 kts (700) 33 Kts (800 & 900)	25 kts	20 kts (NG)	25 kts	Wet Snow 20 kts (NG)	Water/Slush 15 kts (NG)		20 kts (NG)				20 kts (NG)	20 kts (NG)	13 kts (NG)

Type	Layered Contaminants																	
Contaminant	Dry Snow Over Compacted Snow					Wet Snow Over Compacted Snow				Wet Ice or Water Over Ice[3] Wet Snow Over Ice[3] Slush Over Ice[3] Water or Slush Over Compacted Snow[3]				Dry Snow Over Ice[3]				
Depth	≤ 1/8"	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	> 4"	≤ 1/8"	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	> 1/2"	≤ 1/8"	> 1/8" to ≤ 1/4"	> 1/4" to ≤ 1/2"	> 1/2"	≤ 1/8"	> 1/8" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 4"	> 4"
Notes										See Notes Below								
Takeoff Performance Level	Medium[2] (or PIREP value)	Dry Snow > 1/8" to ≤ 1"	Dry Snow > 1" to ≤ 2"	Dry Snow > 2" to ≤ 4"	No Ops	Medium[2] (or PIREP value)	Wet Snow > 1/8" to ≤ 1/4"	Wet Snow > 1/4" to ≤ 1/2"	No Ops	No Ops[3] or Medium[2] (or PIREP value)	No Ops[3] or Wet Snow > 1/8" to ≤ 1/4"	No Ops[3] or Wet Snow > 1/4" to ≤ 1/2"	No Ops	No Ops[3] or Medium[2] (or PIREP value)	No Ops[3] or Dry Snow > 1/8" to ≤ 1"	No Ops[3] or Dry Snow > 1" to ≤ 2"	No Ops[3] or Dry Snow > 2" to ≤ 4"	No Ops
Crosswind Limit[1] (Boeing)	20 kts (NG)					20 kts (NG)				See Note 1 Below				See Note 1 Below				

1 Crosswind Limits are not enforced by Takeoff Performance Tools. If available, use PIREP values to determine actual crosswind limits. See applicable flight manual, Limitations, for crosswind limits.
2 If RWYCC allow operations, use the code provided (Code 3 = Medium, Code 2 or 1 = Poor).
3 PIREPS can be used to override No Ops conditions (allowing operations). Any PIREP that allows operation and contaminant depths greater than 1/8 inch, use the depth value to determine takeoff performance.

Contaminants not on the RCAM

Why is this important to the Global Runway Reporting Community?

- Common but Distinct Language
  - Pilots should never “report” RWYCC
  - Airports should never describe their runways in terms of “Good, Medium, Poor”
  - It is acceptable to use these terms for Taxiways and Ramp Areas
- Accurate Runway Condition Reporting is CRITICAL
- Takeoff and Landing Performance is greatly affected by what is REPORTED on the runway.
  - Contaminant Type and Depth is what is important for Takeoff (Sometimes Depth can be more limiting then RWYCC)
  - RWYCC is what is important for landing (Although Depth can also limit landing if outside of limits)
- While Friction Measurement values are not reported, their very important DOWNGRADE information should be.

Any Questions?