



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

December 4, 2019

Attachment 2 – Dispatch Release

OPERATIONAL FACTORS

DCA19CA206

FRONTIER AIRLINES - DISPATCH RELEASE - FLT 461

RLSE FLT 461 MONTH 08 DAY 27
IFR KMSP/MSP KDEN/DEN
SKED TIMES 0600L/1100Z 0718L/1318Z
FUEL COST/GAL 2.02 2.07

//AIRCRAFT STATUS// CAT IIIB

ALTN N/R FOR KDEN/DEN

FUEL MSP 13.7 SN N328FR
BRAKE RLS 12.8
ENRT BURN 8.2 SEATS - 186
TAXI BURN 400
FUEL REMAINING AT DESTINATION 5.1 LBS/01.17 H.M -INCL.PLAN EXTRA-

(FPL-FFT461-IS
-A320/M-SDE2E3GIRWZ/S
-KMSP1100
-N0455F380 SCHEP9 ONL ANCHR4
-KDEN0147
-PBN/D1A104S2T1 NAV/RNVD1E1A1 REG/N328FR
SEL/KRCP)

PMTOW 156.8/LS
PTOW 135.5 PMRTW190.9/F02/O 0000/29.72/P17/30L
METW 198.4 METHOD-1
PLDW 127.2 MLDW 148.6/F03/S 0000/30.18/P16/35R

MEL/CDL/NEF
25-99-20AK 12A TRAY TABLE

RMKS NONE

CREW	CA	██████	██████	██████
	FO	██████	██████	██████
	FA	██████	██████ I	██████
	FB	██████	██████	██████
	FC	██████	██████████	██████████
	FD	██████	██████	██████

BY SIGNING THIS DISPATCH RELEASE I AM AFFIRMING MY BELIEF
THAT THIS FLIGHT CAN BE MADE WITH SAFETY.

██████ /RLSE TIME 271100
DESK D1 CAPTAIN

BY INITIALING BELOW, I AFFIRM THAT I AM FIT FOR DUTY
IN ACCORDANCE WITH 14 CFR 117.5 -REF: FOM I CH 10.50-

CAPTAIN.....FIRST OFFICER.....

TAKEOFF AND LANDING REPORT FFT 461 MSP-DEN 27AUG19
TLR-1 SEQ-527735 27AUG19 0847Z
A/C 328 A320-251 LEAP-X1A26

/// TAKEOFF DATA ///

APT	PRWY	POAT	PWIND	PQNH	PMRTW	FLP	O2	V1	VR	V2	PTOW	MFPTW
MSP	30L	17.0	000M00	29.72	1909	2	Y	29	34	39	1354	1568

RMKS NONE

RWY	OAT	WIND	QNH	MRTW	FLP	V1	VR	V2	PWR	CONFIG/CONDITION
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ACARS RUNWAYS			
RWY	ACARS	LENGTH	PMTOW NOTES
04		11006	1568
04/K		10492	1568
04/S		9420	1568
04/C2		8206	1568
04/T		7347	1568
04/W		5862	1568
12L		8200	1568 NOTAMS A6757/19
12L/P9		7780	1568
12L/R9		7780	1568
12L/M		6545	1568
12L/04		6000	1568
12L/C		5465	1554
12R		10000	1568 NOTAMS A6757/19
12R/A9		9550	1568
12R/W9		9550	1568
12R/A8		8100	1568
12R/W8		8100	1568
12R/M		7140	1568
12R/C		6186	1568
12R/D		5850	1568
17		8000	1568
17/L9		7550	1568
17/K8		6850	1568
17/L7		5550	1568
17/Y		5550	1568
22		11006	1568
22/C9		10388	1568
22/R		10388	1568
22/P		8623	1568
22/Q		8211	1568
22/C6		7603	1568
22/H		6843	1568
22/B		6509	1568
22/A		5968	1568
30L		10000	1568
30L/A2		9550	1568
30L/W2		9550	1568
30L/A3		8050	1568
30L/W3		8050	1568
30L/A4		6605	1568
30L/A5		6150	1568

30L/W5	6150	1568
30R	8200	1568
30R/P2	7720	1568
30R/P3	6210	1568
30R/P4	5420	1566
35	8000	1568
35/K2	7550	1568
35/K3	6500	1568

----- SPECIAL ENG FAIL TAKEOFF PROCEDURES -----

RWY	CLB	VIA	REACHING	OR	TURN	FRA	HOLD
35			1300		LT H260	1842	

----- DRY RWY - PTOW -----

RWY	MTOW	MT	CONFIG	FLP	V1	VR	V2	EFP
04	1354	67	FLEX - PACKS ON	1	124	129	132	DT H045
04/S	1354	67	FLEX - PACKS ON	1	129	129	132	DT H045
12L	1354	67	FLEX - PACKS ON	1	127	129	132	DT H121
12L/P9	1354	67	FLEX - PACKS ON	2	122	124	127	DT H121
12R	1354	67	FLEX - PACKS ON	1	124	129	132	DT H121
12R/A8	1354	67	FLEX - PACKS ON	3	128	128	129	DT H121
17	1354	67	FLEX - PACKS ON	3	130	130	130	DT H169
17/K8	1354	63	FLEX - PACKS ON	2	124	124	127	DT H169
22	1354	67	FLEX - PACKS ON	1	125	130	132	DT H225
22/A	1354	60	FLEX - PACKS ON	2	123	124	127	DT H225
22/C6	1354	65	FLEX - PACKS ON	2	126	126	128	DT H225
22/C9	1354	67	FLEX - PACKS ON	1	125	130	132	DT H225
30L	1354	67	FLEX - PACKS ON	1	125	130	132	DT H301
30L/A3	1354	67	FLEX - PACKS ON	1	127	130	132	DT H301
30R	1354	66	FLEX - PACKS ON	2	127	127	129	DT H301
30R/P3	1354	60	FLEX - PACKS ON	2	122	124	127	DT H301
35	1354	64	FLEX - PACKS ON	2	125	125	128	SPECIAL
35/K2	1354	63	FLEX - PACKS ON	2	126	126	129	SPECIAL

----- DRY RWY - PTOW PLUS 4000 -----

RWY	MTOW	MT	CONFIG	FLP	V1	VR	V2	EFP
04	1394	67	FLEX - PACKS ON	1	130	134	136	DT H045
04/S	1394	65	FLEX - PACKS ON	2	125	126	129	DT H045
12L	1394	66	FLEX - PACKS ON	2	127	127	129	DT H121
12L/P9	1394	65	FLEX - PACKS ON	2	126	126	129	DT H121
12R	1394	67	FLEX - PACKS ON	1	131	134	136	DT H121
12R/A8	1394	64	FLEX - PACKS ON	2	129	129	132	DT H121
17	1394	64	FLEX - PACKS ON	3	128	128	128	DT H169
17/K8	1394	60	FLEX - PACKS ON	2	126	126	129	DT H169
22	1394	67	FLEX - PACKS ON	1	129	134	136	DT H225
22/A	1394	57	FLEX - PACKS ON	2	123	125	129	DT H225
22/C6	1394	62	FLEX - PACKS ON	2	126	127	129	DT H225
22/C9	1394	67	FLEX - PACKS ON	1	134	134	136	DT H225
30L	1394	67	FLEX - PACKS ON	1	136	136	137	DT H301
30L/A3	1394	66	FLEX - PACKS ON	2	130	130	132	DT H301
30R	1394	63	FLEX - PACKS ON	2	127	127	129	DT H301
30R/P3	1394	58	FLEX - PACKS ON	2	126	126	129	DT H301
35	1394	61	FLEX - PACKS ON	2	125	126	129	SPECIAL
35/K2	1394	60	FLEX - PACKS ON	2	126	126	129	SPECIAL

----- DRY RWY - PTOW PLUS 4000 - 10KT TW -----

RWY	MTOW	MT	CONFIG	FLP	V1	VR	V2	EFP
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04	1394	65	FLEX - PACKS ON	2	128	128	130	DT	H045
04/S	1394	61	FLEX - PACKS ON	2	124	126	129	DT	H045
12L	1394	62	FLEX - PACKS ON	2	123	126	129	DT	H121
12L/P9	1394	61	FLEX - PACKS ON	3	123	125	127	DT	H121
12R	1394	65	FLEX - PACKS ON	2	126	126	129	DT	H121
12R/A8	1394	60	FLEX - PACKS ON	3	126	126	128	DT	H121
17	1394	60	FLEX - PACKS ON	2	127	127	130	DT	H169
17/K8	1394	55	FLEX - PACKS ON	2	122	125	129	DT	H169
22	1394	66	FLEX - PACKS ON	2	131	131	133	DT	H225
22/A	1394	45	FLEX - PACKS ON	2	119	124	129	DT	H225
22/C6	1394	58	FLEX - PACKS ON	2	126	126	129	DT	H225
22/C9	1394	65	FLEX - PACKS ON	2	132	132	134	DT	H225
30L	1394	66	FLEX - PACKS ON	2	134	134	135	DT	H301
30L/A3	1394	62	FLEX - PACKS ON	2	125	127	129	DT	H301
30R	1394	59	FLEX - PACKS ON	2	125	126	129	DT	H301
30R/P3	1394	51	FLEX - PACKS ON	3	119	122	125	DT	H301
35	1394	57	FLEX - PACKS ON	2	125	125	129	SPECIAL	
35/K2	1394	55	FLEX - PACKS ON	2	123	125	129	SPECIAL	

/// LANDING DATA ///

APT	PRWY	POAT	PWIND	PQNH	PMRLW	FLP	PLDW
DEN	35R	16.0	000M00	30.18	1894	3	1272

RMKS NONE

RWY	OAT	WIND	QNH	MRLW	FLP	VREF	PWR	CONFIG/CONDITION
----- ACARS RUNWAYS -----								
RWY	ACARS	LENGTH	NOTES					
07		12000						
08		12000						
16L		12000	NOTAMS 07/655 08/300 08/325 08/326 08/403 A7654/19					
16R		16000						
17L		12000						
25		12000						
26		12000	NOTAMS A7429/19					
34L		16000						
34R		12000	NOTAMS 08/348 08/402 A7762/19					
35R		12000						

END TAKEOFF AND LANDING REPORT FFT 461 MSP-DEN 27AUG19

BRIEFING GENERATED 27AUG19 0948 UTC
 FRONTIER AIRLINES WEATHER BRIEF FLT 461 MSP-DEN
 KMSP 270853Z 24006KT 10SM CLR 17/13 A2973 RMK AO2 SLP065 T01670128 52004
 KMSP 270753Z 28005KT 10SM FEW130 17/13 A2972 RMK AO2 SLP063 T01670128
 KMSP 270852Z 2709/2812 26007KT P6SM FEW130 FM271300 27012G18KT P6SM VCSH SCT060 BKN110 FM271500 27015G22KT P6SM SCT110 FM271900 27018G28KT P6SM VCSH BKN080

FM280100 28012G20KT P6SM SCT050 BKN080

MSP 09/471 MSP RWY 04 RAI LGT OUT OF SERVICE
1809261213-1910231800EST
MSP 08/509 MSP TWY Q BTN TWY C AND TWY P2 CLSD 1908270400-
1908271100
MSP 08/508 MSP TWY D BTN TWY P AND TWY Q CLSD 1908270400-1908271100
MSP 08/507 MSP TWY B BTN TWY A2 AND TWY A3 CLSD
1908270500-1908271030
MSP 08/506 MSP TWY A3 BTN RWY 12R/30L AND TWY B CLSD
1908270500-1908271030
MSP 08/505 MSP TWY D NORTHWEST 52FT ADJ GATE H6 CL IRREGULAR SFC
12IN DPT X 200FT WID X 200FT LEN 1908262232-1910312300
MSP 08/503 MSP RWY 04/22 CLSD EXC TAX 5 MIN PPR 121.9
1908270400-1908271100
MSP 08/501 MSP TWY D BTN TWY S AND 650FT NORTHEAST OF TWY S WIP
CONST 1908261831-1910312300
MSP 08/490 MSP TWY D BTN TWY C6 AND TWY P WIP STEEL PLATES
1908261038-1908302000
MSP 08/489 MSP TWY D BTN TWY C6 AND TWY P WIP IRREGULAR SFC
1908261036-1908302000
MSP 08/385 MSP TWY A BTN TWY A4 AND TWY A7 IRREGULAR SFC
1908191710-1909131100
MSP 08/234 MSP TWY D BTN TWY S AND 650FT NE CLSD TO ACFT WINGSPAN
MORE THAN 171FT MAX TAX SPEED OF 8KT 1908121250-1910312300
MSP 08/185 MSP TWY C BTN TWY C2 AND TWY S CLSD 1908091438-
1910312300
MSP 08/154 MSP TWY Q BTN TWY D AND TWY G WIP IRREGULAR SFC
1908081720-1909010500
MSP 08/152 MSP TWY Q WIP STEEL PLATES BTN TWY P8 AND TWY G
1908081710-1909010500
MSP 07/396 MSP RWY 12R/30L CL MARKINGS OBSC 1907191832-1909010500
MSP 07/111 MSP TWY ALL SFC MARKINGS NOT STD 1907071950-1909010500
MSP 07/110 MSP APRON ALL SFC MARKINGS NOT STD 1907071949-1909010500
MSP 07/109 MSP RWY 17/35 SFC MARKINGS NOT STD 1907071948-1909010500
MSP 07/108 MSP RWY 04/22 SFC MARKINGS NOT STD 1907071947-1909010500
MSP 07/107 MSP RWY 12R/30L SFC MARKINGS NOT STD
1907071946-1909010500
MSP 07/106 MSP RWY 12L/30R SFC MARKINGS NOT STD
1907071945-1909010500
MSP 06/198 MSP NAV ILS RWY 12L CAT II/III NA 1906122019-2010052000
MSP 06/197 MSP NAV ILS RWY 12R CAT II/III NA
1906122017-2011052000EST
MSP 06/196 MSP NAV ILS RWY 30L CAT II NA 1906122015-2010052000
MSP 04/522 MSP TWY J CLSD TO ACFT WINGSPAN MORE THAN 85.5FT
1904261655-PERM
KDEN 270853Z 10007KT 10SM SCT050 BKN070 16/09 A3016 RMK AO2 SLP142
T01610094 58009
KDEN 270753Z 08004KT 10SM FEW060 BKN080 16/09 A3018 RMK AO2
SLP148 T01610089
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FRONTIER AIRLINES WEATHER BRIEF FLT 461 MSP-DEN

KDEN 270910Z 2709/2812 11005KT P6SM SCT050 BKN070

FM271100 18008KT P6SM SCT070 SCT220

FM271300 29008KT P6SM FEW070 SCT110 SCT220

FM271700 01010G18KT P6SM FEW110 SCT220

FM272100 06008G18KT P6SM FEW070 SCT220

FM280200 10010KT P6SM FEW220

FM280600 18008KT P6SM FEW220

DEN DEN 08/565 DEN TWY D5 CL LGT BTN RWY 16R/34L AND TWY D U/S

1908270615-1909032359

DEN DEN 08/564 DEN TWY F BTN TWY ZN AND TWY ZS CLSD

1908270534-1908271100

DEN 08/563 DEN TWY BN BTN TWY G AND GATE B11 CLSD

1908270500-1908271100

DEN 08/562 DEN TWY F1 F2 F3 F4 F6 F8 F9 F10 F12 TWY F BTN

TWY F7 AND TWY F12 TWY WC BTN TWY D AND TWY F TWY WD BTN TWY D

AND RWY 16L/34R TWY WE BTN TWY F AND TWY D CLSD 1908270500-

1908271100

DEN 08/561 DEN RWY 16L/34R CLSD 1908270500-1908271100

DEN 08/557 DEN TWY AA CL LGT BTN TWY K AND TWY L U/S

1908261950-1909262359

DEN 08/548 DEN TWY AA BTN TWY K AND TWY L CLSD 1908261400-

1909172359

DEN 08/526 DEN TWY M BTN TWY Z AND TWY ZN EAST EDGE IRREGULAR SFC

1908250136-1909242359

DEN 08/483 DEN RWY 16L/34R CL MARKINGS OBSC 1908221814-1909222359

DEN 08/448 DEN RWY 35R SEQUENCED FLG LGT U/S

1908210734-1909182000EST

DEN 08/403 DEN OBST CRANE ASN 2019-ANM-611-NRA 395108N1043953W

0.7NM SE DEN 5409FT 30FT AGL FLAGGED 1908261300-1909172300

DEN 08/402 DEN OBST CRANE ASN 2019-ANM-448-NRA 395331N1044046W

1.8NM N DEN 5535FT 185FT AGL FLAGGED AND LGTD DLY 1200-0100

1908231200-1911030100

DEN 08/401 DEN OBST CRANE ASN 2017-ANM-1762-NRA 395141N1043959W

0.3NM E DEN 5600FT 235FT AGL FLAGGED AND LGTD DLY 1200-0200

1908211200-1911030200

DEN 08/375 DEN OBST TOWER LGT ASR 1024846 395627.00N1043210.00W

7.9NM NE DEN 5578.7FT 257.9FT AGL U/S 1908170444-1909160444

DEN 08/348 DEN OBST CRANE ASN UNKNOWN 395331N1044045W 1NM E APCH

END RWY 16L UNKNOWN 60FT AGL FLAGGED DLY 1200-0100

1908191200-1911010100

DEN 08/326 DEN OBST CRANE ASN 2017-ANM-1749-NRA 395137N1044052W

0.4NM WSW DEN 5601FT 235FT AGL FLAGGED AND LGTD

1908201200-1911152300

DEN 08/325 DEN OBST CRANE ASN 2017-ANM-1750-NRA 395125N1044053W

0.5NM SW DEN 5604FT 235FT AGL FLAGGED AND LGTD

1908201200-1911152300

DEN 08/300 DEN OBST CRANE ASN 2017-ANM-1750-NRA 395125N1044053W

0.5NM SW DEN 5604FT 235FT AGL FLAGGED AND LGTD DLY 1200-2300

1908201200-1911152300

DEN 08/243 DEN APRON CONCOURSE B BTN GATE B59 AND GATE B65 NORTH

RED TXL CL MARKING REMOVED 1908101101-1911012359

DEN 08/130 DEN TWY BN EDGE LGT BTN TWY G AND TWY H OUT OF SERVICE

1908060828-1909302359

DEN 08/053 DEN TWY BS CLSD BTN TWY H AND GATE B14

1908020830-1909302359

DEN 08/025 DEN TWY BS CL LGT OUT OF SERVICE 1908011137-1909302359

DEN 08/023 DEN TWY H BTN TWY AN AND TWY BN CLSD

1908011115-1909132359

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FRONTIER AIRLINES WEATHER BRIEF FLT 461 MSP-DEN
DEN 07/655 DEN OBST CRANE ASN 2017-ANM-1652-NRA 395113N1044037W
0.5NM SSW DEN 5625FT 250FT AGL FLAGGED AND LGTD DLY 1300-0100
1907261300-1911030100
DEN 07/567 DEN TWY EA SFC PAINTED HLDG PSN SIGNS BTN RWY 17R/35L
AND TWY M SOUTH SIDE NOT STD 1907221849-1909132359
DEN 07/480 DEN TWY EC BTN RWY 17R/35L AND TWY P CLSD FOR
CONSTRUCTION 1907182319-1908312359
DEN 07/463 DEN TWY EA CLSD TO ACFT WINGSPAN MORE THAN 214FT
1907180948-1909132359
DEN 07/315 DEN TWY M EDGE LGT BTN TWY A AND TWY M10 NOT STD
1907130558-1909012359
DEN 07/172 DEN APRON DEICING PAD WA SPOT 5W CLSD
1907081615-1908312359
DEN 07/171 DEN APRON DEICE PAD WA SPOT 6 CLSD 1907081603-1908312359
DEN 07/143 DEN RWY 17R/35L CLSD 1907071242-1909132359
DEN 06/657 DEN TWY CS EDGE LGT BTN TWY G AND TWY H OUT OF SERVICE
1906270330-1908312359
DEN 06/227 DEN TWY H CL LGT BTN TWY BS AND TWY CN OUT OF SERVICE
1906101454-1909131300
DEN 06/128 DEN APRON CONCOURSE B NORTH RED TXL CLSD BTN TWY K AND
GATE B65 1906060752-1912061400
DEN 06/122 DEN RWY 35L RVR OUT OF SERVICE 1906060010-1909132359
DEN 06/121 DEN RWY 17R RVR OUT OF SERVICE 1906060010-1909132359
DEN 06/104 DEN RWY 17R RVR OUT OF SERVICE 1906051316-1909132359
DEN 06/035 DEN TWY M2 M4 M5 M6 M7 M9 TWY M10 BTN TWY M AND
RWY 17R/35L TWY A BTN TWY M AND RWY 17R/35L CLSD 1906031300-
1909132359
DEN 05/859 DEN TWY BN BTN TWY L AND TWY H CLSD TO ACFT WINGSPAN
MORE THAN 171FT 1905312218-PERM
DEN 05/851 DEN NAV ILS RWY 35L LOC/GP/DME OUT OF SERVICE
1906031300-1909132359
DEN 05/850 DEN NAV ILS RWY 17R LOC/GP OUT OF SERVICE
1906031300-1909132359
DEN 05/849 DEN RWY 35L PAPI OUT OF SERVICE 1906031300-1909132359
DEN 05/848 DEN RWY 35L ALS OUT OF SERVICE 1906031300-1909132359
DEN 05/847 DEN RWY 17R PAPI OUT OF SERVICE 1906031300-1909132359
DEN 05/846 DEN RWY 17R ALS OUT OF SERVICE 1906031300-1909132359
DEN 05/283 DEN TWY CS CL BTN TWY L AND GATE C46 LGT U/S
1905121104-1908312300
DEN 05/253 DEN TWY CS BTN GATE C48 AND TWY K CLSD TO ACFT WINGSPAN
MORE THAN 118FT 1905110014-1908312300
DEN 05/220 DEN APRON CONCOURSE B SOUTH GREEN TXL CLSD TO ACFT
WINGSPAN MORE THAN 95FT EAST OF GATE B50 1905090929-1908312359
DEN 04/601 DEN RWY 16L RTHL OUT OF SERVICE 1904241333-1910302100EST
DEN 02/653 DEN COM REMOTE COM OUTLET 122.35 OUT OF SERVICE
1902211828-PERM

FDC FDC 9/8410 MSP SID MINNEAPOLIS-ST PAUL
INTL/WOLD-CHAMBERLAIN MINNEAPOLIS MN.
SCHEP NINE DEPARTURE...
O APOS NEILL TRANSITION NA EXCEPT FOR AIRCRAFT EQUIPPED WITH
SUITABLE
RNAV SYSTEM WITH GPS
ONL VORTAC OUT OF SERVICE. 1908271400-1909040026EST
FDC FDC 9/8325 MSP SID MINNEAPOLIS-ST PAUL

INTL/WOLD-CHAMBERLAIN MINNEAPOLIS MN.
LEINY SIX DEPARTURE RNAV ...
DEPARTURE PROCEDURE GPS REQUIRED
FSD VORTAC OUT OF SERVICE. 1908271300-1909021300EST
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FRONTIER AIRLINES WEATHER BRIEF FLT 461 MSP-DEN
FDC FDC 9/6170 MSP SID MINNEAPOLIS-ST PAUL
INTL/WOLD-CHAMBERLAIN MINNEAPOLIS MN.
DARWIN SEVEN DEPARTURE ...
DEPARTURE ROUTE DESCRIPTION: CHANGE THENCE INSTRUCTIONS TO READ ON
TRANSITION OR ASSIGNED ROUTE. EXPECT CLEARANCE TO FILED
ALTITUDE/FLIGHT LEVEL 10 TEN MINUTES AFTER DEPARTURE. ALL OTHER
DATA REMAINS AS PUBLISHED. 1905131431-2105131431EST
FDC FDC 9/5958 MSP SID MINNEAPOLIS-ST PAUL
INTL/WOLD-CHAMBERLAIN MINNEAPOLIS MN.
ORSKY TWO DEPARTURE...
ROCHESTER ONE DEPARTURE...
SCHEP NINE DEPARTURE...
ZMBRO SEVEN DEPARTURE...
DEPARTURE PROCEDURE DME REQUIRED EXCEPT FOR AIRCRAFT EQUIPPED WITH
SUITABLE RNAV SYSTEM WITH GPS.
ALL OTHER DATA REMAINS AS PUBLISHED
FOW VOR/DME OUT OF SERVICE. 1908221304-2004301304EST
FDC FDC 9/3457 MSP IAP MINNEAPOLIS-ST PAUL
INTL/WOLD-CHAMBERLAIN MINNEAPOLIS MN.
ILS RWY 30L CAT II AMDT 47 ...
PROCEDURE NA EXCEPT WHEN ATCT ADVISES THIS CRANE IS DOWN.
TEMPORARY CRANES BEGINNING 2363FT NW OF APCH END RWY 30L UP TO
1027FT MSL 2017-AGL-9802 9803 9808 9809 10432-NRA
1906121810-2010301810EST
FDC FDC 9/3456 MSP IAP MINNEAPOLIS-ST PAUL
INTL/WOLD-CHAMBERLAIN MINNEAPOLIS MN.
ILS OR LOC RWY 30L AMDT 47...
S-ILS 30L DA 1067/HAT 253.
FOR INOPERATIVE ALS INCREASE VISIBILITY ALL CATS TO RVR 4000
EXCEPT WHEN ATCT ADVISES THIS CRANE IS DOWN.
TEMPORARY CRANES BEGINNING 2363FT NW OF APCH END RWY 30L UP TO
1027FT MSL 2017-AGL-9802 9803 9808 9809-NRA
2018-AGL-10432-NRA .
1906121810-2010301810EST
FDC FDC 9/3455 MSP IAP MINNEAPOLIS-ST PAUL
INTL/WOLD-CHAMBERLAIN MINNEAPOLIS MN.
RNAV GPS Z RWY 30L AMDT 5A...
LPV DA 1079/HAT 256 ALL CATS.
LNAV/VNAV DA 1188/HAT 365 ALL CATS VIS RVR 3500 ALL CATS.
FOR INOPERATIVE ALS INCREASE LNAV/VNAV VISIBILITY ALL CATS TO RVR
5500 EXCEPT WHEN ATCT ADVISES THIS CRANE IS DOWN.
TEMPORARY CRANES UP TO 1027FT MSL BEGINNING 2363FT NW OF APCH END
RWY 30L 2017-AGL-9802 9803 9808 9809-NRA 2018-AGL-10432-NRA .
1906121810-2010301810EST
FDC FDC 7/4604 MSP STAR MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN
MINNEAPOLIS MN.
BLUEM RNAV ARRIVAL...HELLO TRANSITION ATC ASSIGNED
ONLY.
1702151350-PERM

FDC FDC 9/7954 DEN SID DENVER INTL DENVER CO.
PLAINS NINE DEPARTURE...
GARDEN CITY TRANSITION NA EXCEPT FOR ACFT EQUIPPED WITH SUITABLE
RNAV SYSTEM WITH GPS
GCK VORTAC OUT OF SERVICE. 1908271400-1909031630EST

FDC FDC 9/7889 DEN IAP DENVER INTL DENVER CO.
RNAV RNP Z RWY 7 ORIG-A...
RNP 0.30 DA 5759/HAT 407 . VIS RVR 4000.
CHANGE INOPERATIVE MALSR NOTE TO READ: FOR INOPERATIVE MALSR
INCREASE RNP 0.10 ALL CATS VISIBILITY TO RVR 4500 AND RNP 0.30 ALL
CATS VISIBILITY TO RVR 6000.
1907251154-2107251153EST
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FRONTIER AIRLINES WEATHER BRIEF FLT 461 MSP-DEN
FDC FDC 9/7873 DEN IAP DENVER INTL DENVER CO.
ILS OR LOC RWY 17R AMDT 3B...
S-ILS 17R DA 5718/HAT 326 ALL CATS VISIBILITY ALL CATS RVR 2600.
S-LOC 17R MDA 5880/HAT 488 ALL CATS VISIBILITY CATS C/D RVR 5000.
VDP AT I-ACX 1.18 DME.
CHANGE NOTE TO READ: FOR INOP ALS INCREASE S-ILS 17R VISIBILITY
ALL CATS TO RVR 5000 AND S-LOC 17R CATS C/D VISIBILITY TO 1 3/8 SM.
TEMPORARY CRANES 5603 MSL 1501FT SOUTHWEST OF RWY 17R
2017-ANM-1698 THRU 1701-NRA .
1908261449-1910021449EST
FDC FDC 9/7871 DEN IAP DENVER INTL DENVER CO.
RNAV GPS Y RWY 17R AMDT 1C...
LPV DA 5742/HAT 350 ALL CATS VISIBILITY ALL CATS RVR 3000.
CHANGE NOTE TO READ: FOR INOPERATIVE MALSR INCREASE LPV ALL CATS
VISIBILITY TO RVR 5500 LNAV/VNAV ALL CATS VISIBILITY TO 1 1/2 MILE
AND LNAV CAT C/D TO 1 1/2 MILE.
TEMPORARY CRANES 5603 MSL 1501FT SOUTHWEST OF RWY 17R
2017-ANM-1698 THRU 1701-NRA .
1908261448-1910021448EST
FDC FDC 9/7216 DEN IAP DENVER INTL DENVER CO.
ILS OR LOC RWY 34L AMDT 2B...
S-LOC 34L MDA 5700/HAT 373 ALL CATS. VISIBILITY CATS C/D RVR 3500.
1907241550-2107241550EST
FDC FDC 9/7215 DEN IAP DENVER INTL DENVER CO.
RNAV GPS Y RWY 35L AMDT 2B...
LNAV MDA 5820/HAT 386 ALL CATS. LNAV VISIBILITY CATS C/D RVR 3500.
1907241549-2107241549EST
FDC FDC 9/6794 DEN IAP DENVER INTL DENVER CO.
RNAV RNP Z RWY 16R ORIG-C...
RNP 0.30 DA 5695/ HAT 369 ALL CATS. TEMPORARY CRANE 5535 MSL 4903FT
SOUTHEAST OF RWY 16R 2019-ANM-448-NRA .
1908231800-2008271800EST
FDC FDC 9/6793 DEN IAP DENVER INTL DENVER CO.
RNAV GPS Y RWY 16L AMDT 1C...
LNAV/VNAV DA 5753/ HAT 396 ALL CATS VISIBILITY ALL CATS RVR 3500.
LNAV MDA 5840/ HAT 483 ALL CATS VISIBILITY CAT C/D RVR 5000. VDP
1.3 NM TO RW16L. DISREGARD LUWEE STEPDOWN FIX AND ALTITUDE IN
PLANVIEW AND PROFILE VIEW. CHANGE INOP NOTE TO READ: FOR
INOPERATIVE MALSR INCREASE LNAV/VNAV ALL CATS VISIBILITY TO RVR
6000 AND LNAV CATS C/D VISIBILITY TO 1 3/8 SM. TEMPORARY CRANE
5535 MSL 2790FT SOUTHEAST OF RWY 16L 2019-ANM-448-NRA .
1908231800-2008271800EST
FDC FDC 9/6792 DEN IAP DENVER INTL DENVER CO.
RNAV RNP Z RWY 16L ORIG-C...
RNP 0.10 DA 5702/ HAT 345 ALL CATS VISIBILITY ALL CATS RVR 3200.
RNP 0.30 DA 5702/ HAT 345 ALL CATS. CHANGE INOP NOTE TO READ: FOR
INOPERATIVE MALSR INCREASE RNP 0.10 AND RNP 0.30 ALL CATS
VISIBILITY TO RVR 5000. TEMPORARY CRANE 5535 MSL 2790FT SOUTHEAST
OF RWY 16L 2019-ANM-448-NRA .
1908231800-2008271800EST
FDC FDC 9/6108 DEN ODP DENVER INTL DENVER CO.
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES AMDT 3...
TAKEOFF OBSTACLE NOTES: RWY 26 4 TEMPORARY CRANES BEGINNING
5459FT FROM DER AND 40FT LEFT OF CENTERLINE 150FT AGL/ UP TO
5503FT MSL 2019-ANM-292 THRU 295-NRA .

ALL OTHER DATA REMAINS AS PUBLISHED. 1908081236-1909151236EST
PAGE 05 27AUG19

FRONTIER AIRLINES WEATHER BRIEF FLT 461 MSP-DEN
FDC FDC 9/6107 DEN IAP DENVER INTL DENVER CO.
RNAV RNP Z RWY 8 ORIG-B...
RNP 0.10 DA 5791/HAT 437 ALL CATS.
RNP 0.30 DA 5856/HAT 466 ALL CATS VIS RVR 5500 ALL CATS.
FOR INOPERATIVE MALSR INCREASE RNP 0.10 ALL CATS VISIBILITY TO 1
1/4 MILE AND RNP 0.30 ALL CATS VISIBILITY TO 1 3/8 MILE.
4 TEMPORARY CRANES UP TO 5503 MSL BEGINNING 4420FT WEST OF APCH
END RWY 8 2019-ANM-292 THRU 295-NRA .
1908081236-1909151236EST
FDC FDC 9/6106 DEN IAP DENVER INTL DENVER CO.
ILS OR LOC RWY 8 AMDT 5A...
S-ILS 8 DA 5788/HAT 434 ALL CATS. VIS ALL CATS RVR 4000.
S-LOC 8 MDA 5820/HAT 466 ALL CATS VIS CATS A/B RVR 4000 CATS C/D
RVR 5000.
VDP AT I-FUI 1.07 DME DISTANCE VDP TO THLD 1.25 MILES.
DISREGARD NOTE: RVR 1800 AUTHORIZED WITH USE OF FD OR AP OR HUD
TO DA.
FOR INOPERATIVE MALSR INCREASE S-LOC 8 CAT A/B VISIBILITY TO RVR
5500 AND CAT C/D VISIBILITY TO 1 3/8.
4 TEMPORARY CRANES UP TO 5503 MSL 4420FT WEST OF APCH END RWY 8
2019-ANM-292 THRU 295-NRA .
1908081236-1909151236EST
FDC FDC 9/6105 DEN SID DENVER INTL DENVER CO.
DENVER ONE DEPARTURE...
PIKES ONE DEPARTURE...
PLAINS NINE DEPARTURE...
ROCKIES FOUR DEPARTURE...
YELLOWSTONE TWO DEPARTURE...
TAKEOFF OBSTACLE NOTES: RWY 26 4 TEMPORARY CRANES BEGINNING
5459FT FROM DER AND 40FT LEFT OF CENTERLINE 150FT AGL/ UP TO
5503FT MSL 2019-ANM-292 THRU 295-NRA .
ALL OTHER DATA REMAINS AS PUBLISHED. 1908081236-1909151236EST
FDC FDC 9/6104 DEN IAP DENVER INTL DENVER CO.
RNAV GPS Y RWY 8 AMDT 1C...
LPV DA 5788/HAT 434 ALL CATS VIS RVR 4000 ALL CATS.
LNAV MDA 5820/ HAT 466 ALL CATS. VIS CATS A/B RVR 4000 CATS C/D
RVR 5000.
VDP 1.13 NM TO RW08.
FOR INOPERATIVE MALSR INCREASE LNAV CAT C/D VISIBILITY TO 1 3/8
MILE.
DISREGARD NOTE: RVR 1800 AUTHORIZED WITH USE OF FD OR AP OR HUD
TO DA.
4 TEMPORARY CRANES UP TO 5503FT MSL BEGINNING 4420FT WEST OF
APCH END RWY 8 2019-ANM-292 THRU 295-NRA .
1908081236-1909151236EST
FDC FDC 9/6015 DEN SID DENVER INTL DENVER CO.
ROCKIES FOUR DEPARTURE...
KREMMLING TRANSITION MEEKER TRANSITION NA EXCEPT FOR AIRCRAFT
EQUIPPED WITH SUITABLE RNAV SYSTEM WITH GPS. BLUE MESA TRANSITION
DOVE CREEK TRANSITION MONTROSE TRANSITION DME REQUIRED EXCEPT FOR
AIRCRAFT EQUIPPED WITH SUITABLE RNAV SYSTEM WITH GPS
RLG VOR/DME OUT OF SERVICE. 1908221600-1910031600EST
FDC FDC 9/5089 DEN IAP DENVER INTL DENVER CO.
RNAV RNP Z RWY 17R ORIG-C...
RNP 0.10 DA 5792/ HAT 400 ALL CATS VISIBILITY ALL CATS RVR 3500.

CHANGE INOP NOTE TO READ: FOR INOPERATIVE MALSR INCREASE RNP 0.10
ALL CATS VISIBILITY TO RVR 6000 AND RNP 0.30 ALL CATS VISIBILITY TO
1 5/8 MILE. TEMPORARY CRANE 5600 MSL 1712FT WEST OF RWY 17R
2017-ANM-1762-NRA TEMPORARY CRANES 5603 MSL 1501FT SOUTHWEST OF
RWY 17R 2017-ANM-1698 THRU 1701-NRA ..
1908211239-2006101239EST
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FRONTIER AIRLINES WEATHER BRIEF FLT 461 MSP-DEN
FDC FDC 9/3822 DEN IAP DENVER INTL DENVER CO.
RNAV RNP Z RWY 34R ORIG-C...
RNP 0.10 DA 5815/ HAT 461 ALL CATS VISIBILITY ALL CATS RVR 5000.
TEMPORARY CRANE 5601 MSL 2215FT SOUTHEAST OF RWY 34R
2017-ANM-1749-NRA TEMPORARY CRANE 5604 MSL 3084FT SOUTHEAST OF
RWY 34R 2017-ANM-1750-NRA .
1908201900-1911301900EST
FDC FDC 8/9800 DEN IAP DENVER INTL DENVER CO.
RNAV RNP Z RWY 25 ORIG-B...
RNP 0.30 DA 5792/HAT 437 ALL CATS..
1811231416-2011231416EST
SIGC
MKCC WST 270855
CONVECTIVE SIGMET 40C
VALID UNTIL 1055Z
MO AR TX OK
FROM 40WNW FAM-50SSE FAM-40NE ELD-60ESE ADM-20NW MLC-40WNW FAM
AREA SEV TS MOV FROM 31030KT. TOPS ABV FL450.
HAIL TO 1.5 IN...WIND GUSTS TO 65KT POSS.
CONVECTIVE SIGMET 41C
VALID UNTIL 1055Z
TX OK
FROM 20ESE MMB-30WNW MLC-40E ADM-40SSE SPS-20ESE MMB
AREA SEV TS MOV FROM 35025KT. TOPS ABV FL450.
HAIL TO 1.5 IN...WIND GUSTS TO 65KT POSS.
CONVECTIVE SIGMET 42C
VALID UNTIL 1055Z
OK KS
FROM 50ENE GCK-60NW END
LINE TS 25 NM WIDE MOV FROM 35020KT. TOPS TO FL350.
CONVECTIVE SIGMET 43C
VALID UNTIL 1055Z
IN IL MO
FROM 30WNW TTH-30S TTH-40NE FAM-STL-30WNW TTH
AREA TS MOV FROM 28025KT. TOPS TO FL440.
OUTLOOK VALID 271055-271455
AREA 1...FROM GIJ-BNA-210W PIE-60SSE LEV-MHZ-ABI-TXO-LBL-SGF-GIJ
REF WW 625.
WST ISSUANCES EXPD. REFER TO MOST RECENT ACUS01 KWNS FROM STORM
PREDICTION CENTER FOR SYNOPSIS AND METEOROLOGICAL DETAILS.
AREA 2...FROM CYS-HLC-LBL-TXO-ABQ-CYS
WST ISSUANCES POSS. REFER TO MOST RECENT ACUS01 KWNS FROM STORM
PREDICTION CENTER FOR SYNOPSIS AND METEOROLOGICAL DETAILS.
SIGW
MKCW WST 270855
CONVECTIVE SIGMET...NONE
OUTLOOK VALID 271055-271455
TS ARE NOT EXPD TO REQUIRE WST ISSUANCES.
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FRONTIER AIRLINES WEATHER BRIEF FLT 461 MSP-DEN

WA3S

CHIS WA 270845

AIRMET SIERRA UPDT 2 FOR IFR AND MTN OBSCN VALID UNTIL 271500

.
AIRMET IFR...KS MN IA MO WI LM LS MI LH IL IN KY
FROM 80E INL TO YQT TO SSM TO YVV TO 30SE ECK TO FWA TO CVG TO
20ENE ARG TO RZC TO OSW TO 60WSW MCI TO 30WNW IOW TO 80E INL
CIG BLW 010/VIS BLW 3SM BR/FG. CONDS ENDG 12-15Z.

.
AIRMET IFR...MO IL IN KY TX AR TN LA MS AL AND CSTL WTRS
FROM CVG TO HNN TO HMV TO GQO TO 50SW PZD TO 40W CEW TO 40SE SJI
TO 20SW LSU TO 50ESE CWK TO 20SW GGG TO 50SSE LIT TO 30ENE ARG
TO CVG
CIG BLW 010/VIS BLW 3SM PCPN/BR. CONDS CONTG BYD 15Z ENDG 15-18Z.
WA3T

CHIT WA 270845

AIRMET TANGO UPDT 1 FOR TURB STG WNDS AND LLWS VALID UNTIL 271500

.
AIRMET TURB...NE KS IA MO IL IN KY OK TX AR TN LA MS AL
FROM 40SSE DSM TO 60SW BDF TO 40ESE AXC TO 40N MSL TO 40ESE IGB
TO 30NNW MCB TO 40SW AEX TO 40W IAH TO 40SSW JCT TO 20S LBB TO
30NE TXO TO 30W LBL TO 20SSE GCK TO 60NNW SLN TO 40SSE DSM
MOD TURB BTN FL290 AND FL420. CONDS CONTG BYD 15Z THRU 21Z.

.
AIRMET TURB...KS OK TX
FROM 40WSW SLN TO 50E ICT TO 60W TTT TO 50NE JCT TO DLF TO 60NW
DLF TO 70SSE FST TO 50WNW MRF TO 40E ELP TO INK TO 30NNE TCC TO
20NNE LBL TO 40WSW SLN

WA3Z

CHIZ WA 270845

AIRMET ZULU UPDT 1 FOR ICE AND FRZLVL VALID UNTIL 271500

.
AIRMET ICE...ND MN
FROM 80SE YWG TO 20ESE FAR TO 60NNW ABR TO 40NW BIS TO 50NW ISN
TO 80SE YWG
MOD ICE BTN 080 AND FL200. CONDS DVLPG 09-12Z. CONDS CONTG BYD
15Z THRU 21Z.

.
OTLK VALID 1500-2100Z...ICE ND SD MN
BOUNDED BY 70NE MOT-60WNW YQT-40SSE BJI-30W RWF-20NW ABR-20E
DIK-50NNW ISN-70NE MOT
MOD ICE BTN 070 AND FL300. CONDS CONTG THRU 21Z.

.
AIRMET MTN OBSCN...KY TN
FROM HNN TO HMV TO GQO TO 20N LOZ TO HNN
MTNS OBSC BY CLDS/PCPN/BR. CONDS CONTG BYD 15Z THRU 21Z.

....
MOD TURB BLW 090. CONDS CONTG BYD 15Z THRU 21Z.

.
AIRMET TURB...ND SD NE MN IA WI
FROM 80ESE YWG TO 20N BJI TO 50NNE BRD TO 50SSW DLH TO 20W ODI
TO 20SW MCW TO 40NE OBH TO 40WSW ANW TO 80ENE CZI TO 50NNW ISN
TO 80ESE YWG
MOD TURB BLW 100. CONDS CONTG BYD 15Z THRU 21Z.

.

AIRMET TURB...MN WI LM LS MI LH IN KY
FROM YQT TO SSM TO YVV TO 30SE ECK TO FWA TO CVG TO HNN TO 40S
HNN TO 40SW LOZ TO 20WNW IIU TO 40SSE TTH TO 50W TVC TO 60WSW
YQT TO YQT
MOD TURB BLW 080. CONDS CONTG BYD 15Z ENDG 15-18Z.

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FRONTIER AIRLINES WEATHER BRIEF FLT 461 MSP-DEN

.
FRZLVL...RANGING FROM 080-160 ACRS AREA
120 ALG BFF-40SSE OBH-OVR-50SW TVC-40SSW SSM-20WNW SSM

....
AIRMET TURB...ND SD NE MN IA WI LM LS MI LH IL
FROM 50NNW ISN TO 70NE BIS TO 40SW BJI TO 30NNE DLH TO 20ESE YQT
TO 30ESE SSM TO 20SSW GRR TO 20SW ORD TO 40SSE DBQ TO 50ESE DSM
TO 30NNE OVR TO 40NNW BFF TO 70SW RAP TO 50NNW ISN
MOD TURB BTN FL180 AND FL330. CONDS CONTG BYD 15Z THRU 21Z.

.
AIRMET STG SFC WNDS...MN WI LS MI
FROM 20E YQT TO 70NNE SAW TO 60N RHI TO 20WNW DLH TO 50SW YQT TO
20E YQT
SUSTAINED SURFACE WINDS GTR THAN 30KT EXP. CONDS DVLPG 12-15Z.
CONDS CONTG BYD 15Z ENDG 18-21Z.

.
LLWS POTENTIAL...KY
BOUNDED BY CVG-HNN-70SSW HNN-40S CVG-CVG
LLWS EXP. CONDS ENDG 09-12Z.

.
LLWS POTENTIAL...LM LS MI LH
BOUNDED BY 70NW SSM-SSM-20ENE YVV-40SSW ASP-40N TVC-70NW SSM
LLWS EXP. CONDS ENDG 09-12Z.

.
OTLK VALID 1500-2100Z...TURB ND SD NE MN IA WI LS MI
BOUNDED BY 30N INL-YQT-70N SAW-20W ODI-20SW MCW-40NE OBH-40WSW
ANW-60WSW RAP-70NW ISN-30N INL
MOD TURB BLW 100. CONDS CONTG THRU 21Z.

....
WA5S
SLCS WA 270845
AIRMET SIERRA UPDT 1 FOR IFR VALID UNTIL 271500

.
NO SGFNT IFR EXP OUTSIDE OF CNVTV ACT.

....
WA5T
SLCT WA 270845
AIRMET TANGO UPDT 1 FOR TURB VALID UNTIL 271500

.
AIRMET TURB...NM
FROM 30NNE TCC TO INK TO 40E ELP TO 50NNE ELP TO 20SW TCC TO
30NNE TCC
MOD TURB BLW 090. CONDS DVLPG AFT 12Z. CONDS CONTG BYD 15Z THRU
21Z.

.
AIRMET TURB...MT WY
FROM 30N HVR TO 50NNW ISN TO 80ENE CZI TO 60ESE HVR TO 30N HVR
MOD TURB BLW 100. CONDS ENDG BY 15Z.

.
WA5Z
SLCZ WA 270845
AIRMET ZULU UPDT 1 FOR ICE AND FRZLVL VALID UNTIL 271500

.
NO SGFNT ICE EXP OUTSIDE OF CNVTV ACT.

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FRZLVL...RANGING FROM 080-175 ACRS AREA
120 ALG 50WSW YXC-40SSW YXC-70E DLN-30E BOY-BFF
160 ALG 50SW DNJ-50SW MLD-50ENE MTU-50W LBL

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FRONTIER AIRLINES WEATHER BRIEF FLT 461 MSP-DEN
AIRMET TURB...MT WY
FROM 60SSW YXH TO 50NNW ISN TO 70SW RAP TO 40NNW BFF TO 30SSE
CZI TO 50SSE LWT TO 60SSW YXH
MOD TURB BTN FL180 AND FL330. CONDS CONTG BYD 15Z THRU 21Z.

.
OTLK VALID 1500-2100Z
AREA 1...TURB MT WY
BOUNDED BY 70NW ISN-60WSW RAP-60E CZI-MLS-70NW ISN
MOD TURB BLW 100. CONDS DVLPG AFT 15Z. CONDS CONTG THRU 21Z.

.
AREA 2...TURB CO NM
BOUNDED BY 30ESE TBE-INK-40E DMN-40NE ABQ-30ESE TBE
MOD TURB BLW 090. CONDS CONTG THRU 21Z.

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END BRIEFING