

- N781FM 22 FEB 2025
- Takeoff time 1512:09z
- Aircraft configuration is without wheel pants on nose well, and mains.
- Time started decent 2033.20z from 2,500 at TAS = 102
 - Cessna 172P POH shows estimated power of 65% and 104 TAS at 2300 RPM
 - Descend speed TAS 113 KT, IAS 110 GS 104 vs of -200 VS estimated power 2300RPM
- Time Ended decent 2042.45 at 1,500ft 102 TAS IAS 101, GS 91 ALT 1390ft
- Data shows 9m35s decent of 1,000 ft from 2500ft to 1450ft, averaging to a 105 ft per min decent, hence a **cruise power decent**. The decent covered was XX with results in 112 GS estimated 2300 RPM decent at high speed.
- Time 3 miles east abeam KNAF 2040.40z, TAS 113 IAS 110 GS 102 Power estimate 2300RPM 1450ft
- Engine failure from AHRS data: 2043.05z TAS 102, IAS 99, GS 98 power estimate from POH 2300 RPM, Altitude 1470 ft
- Time of Crash from AHRS data: 2045.29z
- Time between overflight of KNAF at 2040:40 to engine failure was 2043.05z, 3:05mins
- Power from AHRS data shows TAS IAS of 102, IAS 99 and GS 98 using the engine charts 65% seen for the entire duration of flying over KNAF
- Gianluca Catalano noted no loss of power nor engine roughness at all just prior to the engine failure. This is also evident in the AHRS data of IAS/TAS/GS airspeed consistent with Cessna POH power setting of around 2300 or 65% power seen right before the engine quit to with a rapid IAS airspeed decrease, follow by decent at glide speed.

- METAR's of enroute and closest airport and time from takeoff to time of accident
- Takeoff times 1509Z (2009z), EDT Time of accident was recorded at 1545z EDT (2045z)
- KDOV 221955Z AUTO 21008KT 10SM CLR 05/M11 A3027 RMK A02 SLP254 T00531109
- KESN 222045Z 23007KT 10SM CLR 04/M10 A3029
- KBWI 222054Z 21005KT 10SM BKN140 BKN180 BKN250 06/M11 A3026 RMK AO2 SLP248 T00561111 56025 \$
- KFME 222049Z AUTO 21007KT 10SM CLR 05/M10 A3029 RMK AO1
- KNAK 221954Z AUTO 18010KT 10SM CLR 03/M08 A3030 RMK A02 SLP263 T00281078 \$
- KNAK 222054Z AUTO 15008KT 10SM CLR 02/M07 A3028 RMK AO2 SLP257 T00171067 56023 \$

	Converted to C-F	Temp Dew spread / dewpoint depression
KDOV 05c/M11c	41f/12f	16c
KESN 04c/M10c	39f/14f	14c
KBWI 06c/M11c	43f/10f	17c
KFME 05c/M10c	41f/14f	15c
KNAK 03c/M08c 1954z	37f /18f	11c
KNAK 02c/M07c 2054z	36f/19f	9c

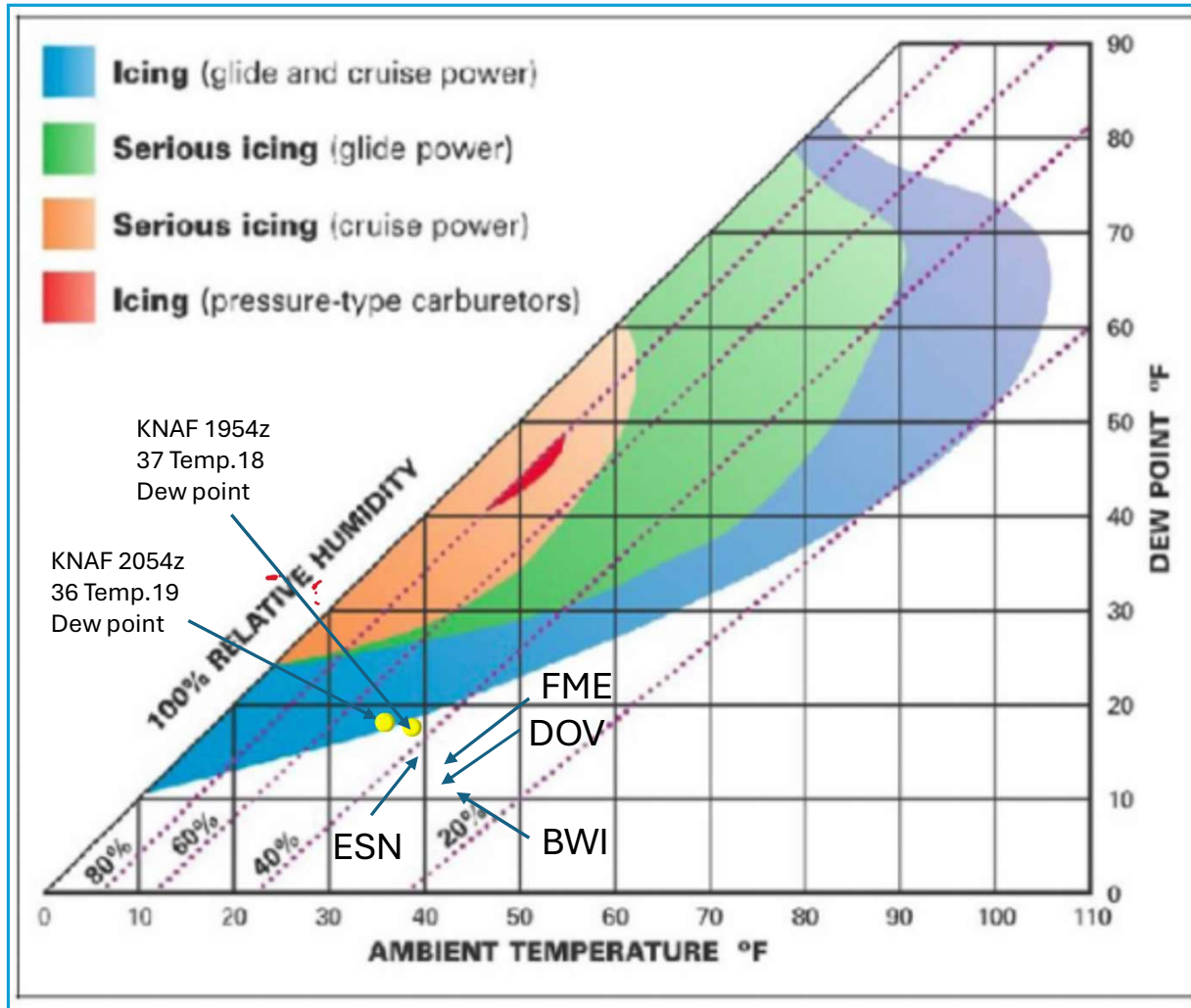
Souce: <https://aviationweather.gov/data/metar/?ids=KFME>

Under archives for 22 1900z for all four airports

FROM
22 2950-2200z
METAR's

KDOV 41f/12f
KESN 39f/14f
KBWI 43f/10f
KFME 41f/14f
KNAF 36f/19f
2054z

KNAF 37f/18f
1953z



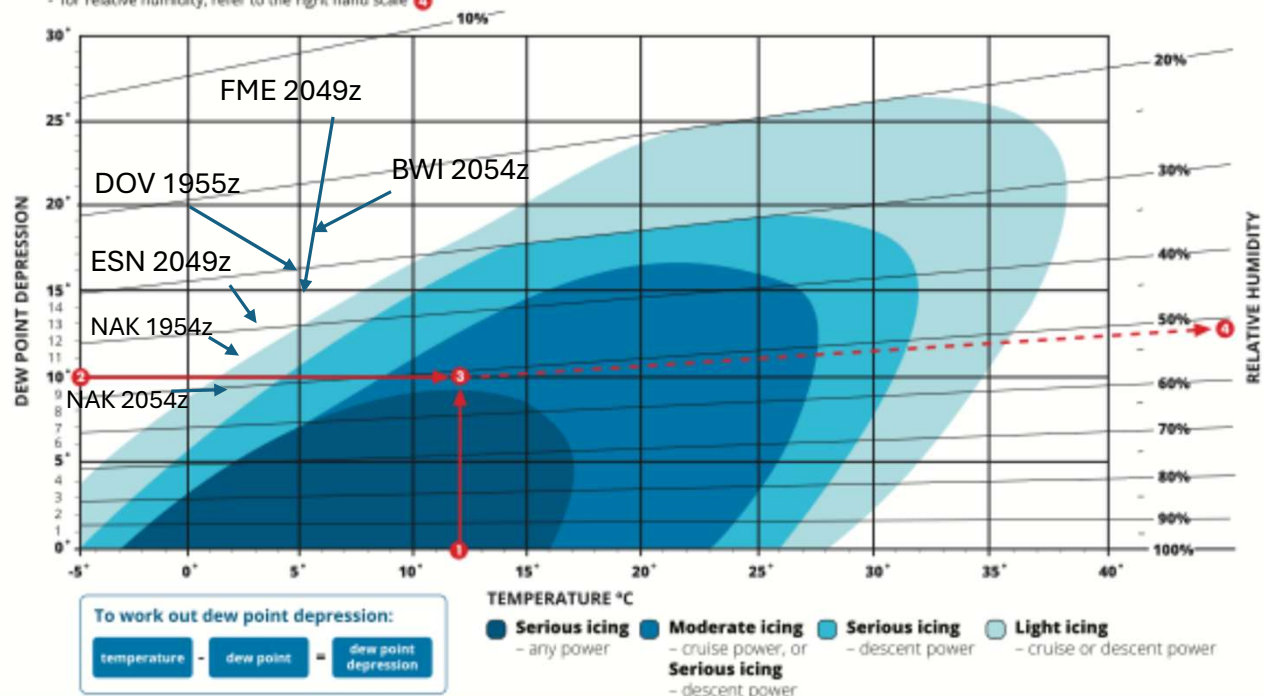
Carburettor icing probability

To use this chart

- obtain the temperature and dew point
- calculate the difference between the two. This is the 'dew point depression'
- for example, if the temperature is 12°C ¹ and the dew point is 2° the dew point depression will be 10° ²
- for icing probability, refer to the shading legend appropriate to the intersection of the lines ³
- for relative humidity, refer to the right hand scale ⁴



Australian Government
Civil Aviation Safety Authority



Metar's for airports at 221950-2200z

KDOV 05c/M11c	16	Dew dep
KESN 03c/M10c	13	
KBWI 06c/M12c	18	
KFME 05c/M10c	15	
KNAK 03c/M08c	11	1954z
KNAK 02c/M07c	9	2054z

- E mail from CFI Perrey another Cessna 172P



Thomas Perrin

Thomas Perrin-Rigal testimony N781FM accident

To: [REDACTED]

Inbox - Google March 11, 2025 at 22:4



To whom it may concern

I was operating a C-172P registered N78ER on 2/22/2025 between approximately 15:15 EST and 15:55 EST. I was coming back from KESN en route to W00 when N781FM suffered an engine failure in that area. I recall transiting about 3NM south of KANP at 2,000ft from east to west when the accident occurred.

I did not experience any carburetor icing during this flight, or during any of the 4 flights I did that day in that area.

Please don't hesitate to contact me with any questions.

Best Regards.

Thomas Perrin-Rigal
CFII

[REDACTED]@com

Two other CFI flying 172P with 180HP have made statement they were flying right above area at the same time for longer period of time of the N718FM accident and didn't experience at the time any signs of carb icing, statement on request

CRUISE PERFORMANCE

CONDITION:
2550 LBS

22 Feb 2025

1'500-2'500 MSL

Temp - 12m ISA
estimate 2300 RPM
No Wheel pants

TAS 103

PRESSURE ALTITUDE FT	RPM	20°C BELOW STANDARD TEMP			STANDARD TEMPERATURE			20°C ABOVE STANDARD TEMP		
		% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2000	2550	---	---	---	76	116	10.2	72	115	9.6
	2500	77	114	10.3	72	113	9.6	68	113	9.1
	2400	69	109	9.2	64	108	8.7	61	107	8.3
	2300	61	103	8.3	58	103	7.9	55	102	7.6
	2200	55	98	7.5	52	97	7.2	49	96	6.9
	2100	49	92	6.8	46	91	6.6	43	89	6.3
4000	2600	---	---	---	76	118	10.2	72	117	9.6
	2500	73	113	9.7	68	113	9.2	65	112	8.7
	2400	65	108	8.8	62	107	8.3	58	107	8.0
	2300	58	103	8.0	55	102	7.6	52	101	7.3
	2200	52	97	7.3	49	96	6.9	47	94	6.6
	2100	46	91	6.6	44	89	6.3	41	87	6.1
6000	2650	---	---	---	76	120	10.1	72	119	9.6
	2600	77	118	10.3	72	117	9.6	68	117	9.1
	2500	69	113	9.3	65	112	8.8	62	111	8.4
	2400	62	108	8.4	59	107	8.0	56	106	7.6
	2300	56	102	7.7	53	101	7.3	50	99	7.0
	2200	50	96	7.0	47	95	6.7	44	93	6.4
8000	2700	---	---	---	76	122	10.1	71	121	9.5
	2600	73	117	9.8	69	117	9.2	65	116	8.7
	2500	66	112	8.8	62	111	8.4	59	110	8.0
	2400	59	107	8.1	56	106	7.7	53	104	7.3
	2300	53	101	7.4	50	100	7.0	47	98	6.7
	2200	47	95	6.7	45	93	6.4	42	90	6.1
10,000	2700	77	122	10.2	72	121	9.6	68	121	9.1
	2600	69	117	9.3	65	116	8.8	62	115	8.4
	2500	63	112	8.5	59	110	8.1	56	109	7.7
	2400	57	106	7.8	53	104	7.4	50	103	7.0
	2300	51	100	7.1	48	98	6.8	45	96	6.5
	2650	69	119	9.3	65	118	8.8	62	117	8.4
12,000	2600	66	116	8.9	62	115	8.4	59	114	8.0
	2500	60	111	8.2	56	109	7.7	53	107	7.4
	2400	54	105	7.5	51	103	7.1	48	100	6.7
	2300	48	98	6.8	45	96	6.5	42	93	6.2