



Cold Weather Operations Planning Guide

N484EM, N585PL, N686BE

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All Gulfstream manuals are primary over this TFS created document. This is for reference only.

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PREFLIGHT

**For prolonged cold soak in temperatures less than -20C see CWO AFM
Section IV or QRH NORMAL PROCEEDURES Page NI-1**

- **Manually remove heavy accumulation of snow**
Do not sweep off wings, damage to VGs can occur.
- **Engine Oil Temp needs to be Above -40°C For Start**
- **If Engine Oil Temp is -10°C or colder engine crank cycle allow N1 and N2 rotation to achieve maximum levels within starter limitations (One 5 min crank, then 15 mins off).**
- **Let cabin warm up to 15° C (59°F) before turning on avionics.**
Our interpretation is to turn the screens off and use the SMC to start the APU and warm the cabin before turning the screens back on.
- **Consider doing a flight control check prior to applying Anti/De-ice fluid. You will still need to do a control check prior to departure but this can be done closer to the departure time to preserve as much fluid on the surface as possible.**

ANTI/DE-ICE PROCEDURE PARAMETERS

- **COLD WEATHER OPERATIONS QRH NI-1**
- **Other helpful references:**
 - **COLD WEATHER OPERATIONS AFM IV-87**
 - **DE-ICING PROCEEDURE Checklist OM 07-01-70**
 - **CWOM**



TAXI CHECKLIST NOTES

- Do not advance thrust lever until oil temp reaches greater than +5°C.
- If cabin begins to pressurize, immediately deselect the air source and do not open door until cabin diff is 0.
- Caution Note: Ride the brakes during taxi to warm the brakes to approximately 100°C, If possible. This prevents Ice accumulation on the brakes. Do not take off with brake temperature below 10°C on contaminated runways. This can take 3-5 minutes between brake application and temperature to peak. Pilot technique is to apply park brake less than yellow line and the temps increase quicker and the taxi is smoother.
- Avoid setting the parking break for any length of time.
- Exercise nose wheel in both directions.
- Prior to taking the runway perform Pre-Takeoff Contamination Check.

APPROACH, LANDING, AND TAXI NOTES

- The water system may be purged in flight below 30,000'. However, after purging the water system during flight at approach speeds in sub-freezing conditions significant ice accumulations aft of the forward drain mast on the belly of the aircraft have been observed. It is recommended to perform water purge during initial phases of the arrival while airspeed is high or after landing during taxi to prevent ice from adhering to the aircraft or accumulating near the Main Entry Door after shutdown.



- **ENG/WING ANTI ICE must be selected ON during flight operations when icing conditions exist or are anticipated.**
- **It is highly recommended that WING ANTI ICE be turned ON during descent if the departure airport had a contaminated runway. This will provide some heat to the brakes.**
- **Lower landing gear earlier than normal.**
- **Perform several brake applications. Toe brakes do not work in the air, only the parking brake does. CAUTION: Do not land with the parking brake on. Look for no “Parking Brake” CAS in the EICAS check on the before landing checklist.**
- **Auto brakes are recommended.**
- **If icing conditions are encountered during approach, rollout, and/or taxi then do not raise the flaps above 10° without visual inspection.**

SHUTDOWN AND STORAGE NOTES

- **If fueling then going into a hangar, do not fill fuel tanks completely to allow for expansion.**

If aircraft remains outside:

- **Install protective covers**
- **Purge the water system**
 - **You must drain the water system if parking the aircraft for longer than 30 minutes with ECS OFF and temps below 0°C. Operate the water taps several times to make sure lines are empty. Check the fill port to ensure water is drained.**

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- **At 0°C or below, remove all freezable items from aircraft. Coffee pots, medical kits, defibulator, and unplug Eros masks (make note or use a flag if unplugging mask). Alcohol will have different freezing point based on alcohol concentration but remove with normal freezables.**
- **-10°C (14°F) remove Eros masks.**
- **-28°C (-20°F) remove life rafts.**
- **Reference Cold Weather Ops AFM Normal Procedures Section IV**