Weather Help - Wind & Temp Maps

Wind & Temp Maps

Upper Level Wind & Temp maps are created for the following forecast periods for these geographic regions:

Region Analysis Forecast Model

Region	Analysis	Forecast	Model
Regional U.S.	Every Hour	6 & 12 Hr Fcst every 3 Hrs	RUC Analysis / ETA Forecast
Full U.S.	Every Hour	12 & 24 Hr Fcst every 6 Hrs	RUC Analysis / ETA Forecast
All Others Areas	Every 6 Hrs	12 & 24 Hr Fcst every 6 Hrs	GFS Analysis & Forecast

And are generated at the following atmospheric levels:

Altitude Pressure

FL050 / 850 mb
FL100 / 700 mb
FL180 / 500 mb
FL240 / 400 mb
FL300 / 300 mb
FL340 / 250 mb
FL390 / 200 mb
FL450 / 150 mb
FL530 / 100 mb

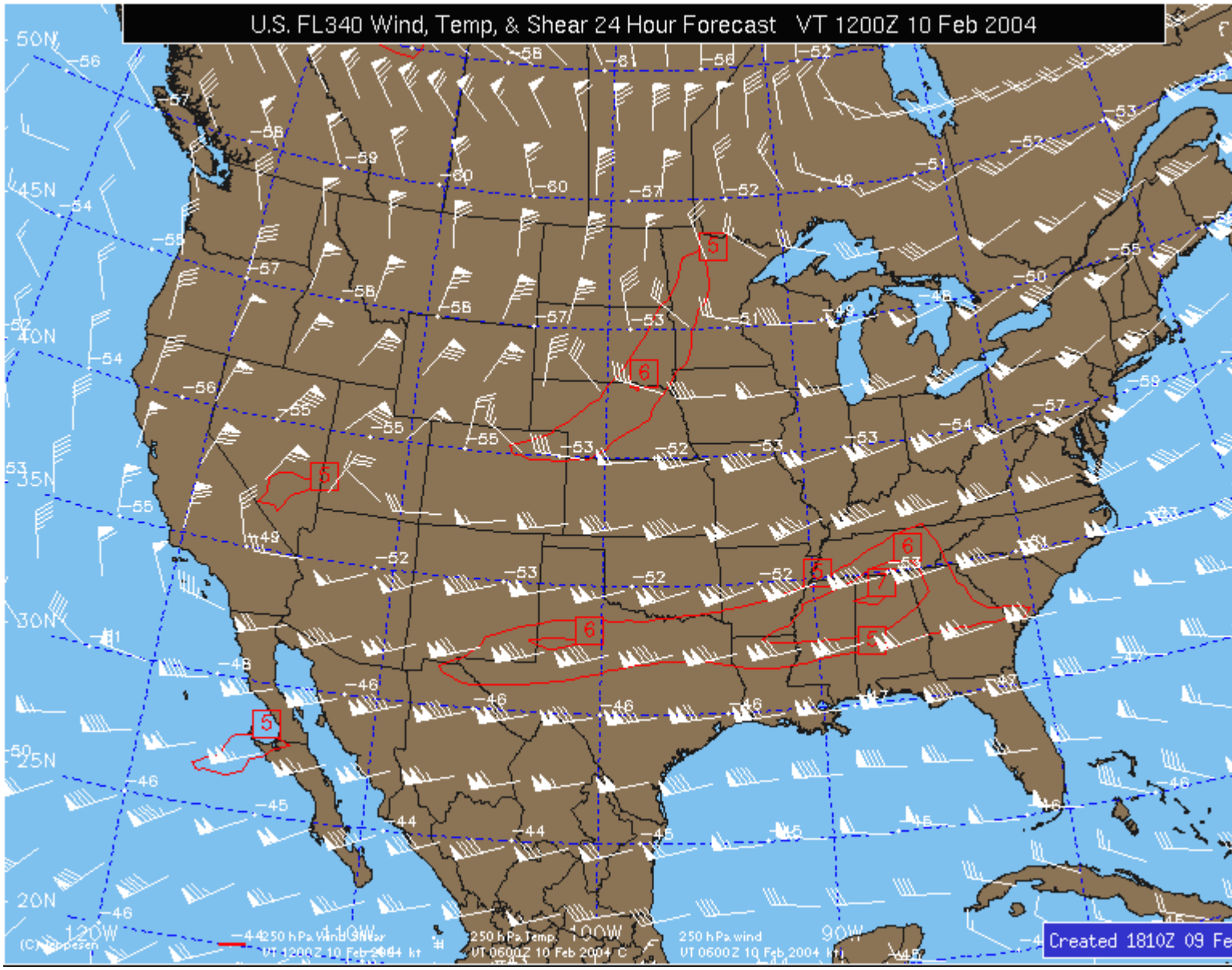
All Wind & Temp maps depict wind direction and speed at each grid point using standard wind flag symbology.
Wind direction is from the tail (where flags are) to the head (end of shaft).
Wind speed is indicated by the addition of wind flags and barbs on the shaft.
Each flag represents 50 kts of speed and each barb represents 10 kts of speed.
Half barbs represent 5 kts of speed.

Temperature is depicted at selected grid points with the actual value in degrees Celsius.
Negative temperatures have the minus sign ("-") preceding the number and positive temperatures have just the number.

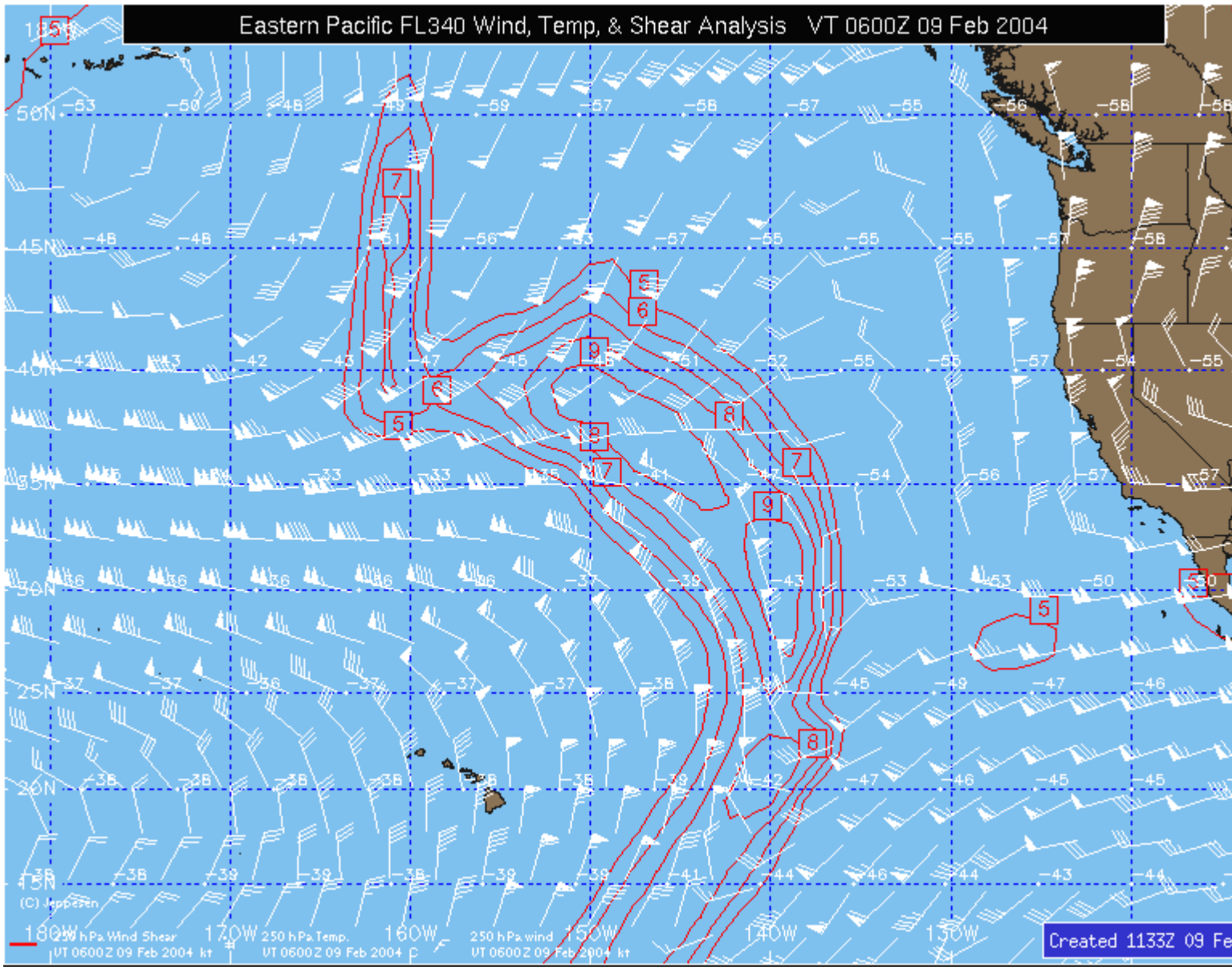
Vertical Wind Shear (VWS) is depicted for all FL240, FL300, FL340, FL390, FL450 and FL530 maps for values of 5 knots per thousand feet and greater. Vertical Wind Shear is depicted using contours in thin solid red lines on the m with contours at 1 knot per thousand feet intervals. Vertical Wind Shear is calculated by taking the vector differen between the wind velocity value 2000 feet above the indicated level and 2000 feet below the indicated level. The vector difference takes wind speed as well as wind direction into account. Vertical Wind Shear is useful in determi areas where clear air turbulence is more likely to be experienced. As the VWS value increases, the probability of encountering clear air turbulence (CAT) increases, and as the severity of CAT experienced increases with increasi VWS values. Just because you have very strong wind speeds does not mean you will have strong VWS, contrarily VWS values are more likely in areas where you have a rapid increase or decreases of wind speed or a sharp chan wind direction with altitude. As VWS is a good indicator of CAT, it is not the only ingredient in CAT. CAT can be present in the complete absence of VWS, especially in Mountain Wave or Convective situations.

All 700 mb (FL100) wind & temp maps also contain contours of Relative Humidity at 700 mb (FL100) for 70% and 90%.
Relative humidity can assist in detecting areas of possible icing at this level.
The zero degree Celsius isotherm is also indicated on the map, so that areas where the temperature is below zero where the RH is greater than 70% represents areas of possible icing.
If the temperature is below zero and the RH is above 90% icing conditions are likely to exist.
This information was added to the level to primarily assist ETOPS operators to determine areas where engine deic fuel should be added.

FL300 Wind & Temp Analysis



Europe FL390 Wind & Temp 24 Hour Forecast



Eastern Pacific FL 100 Wind, Temp, & RH Analysis