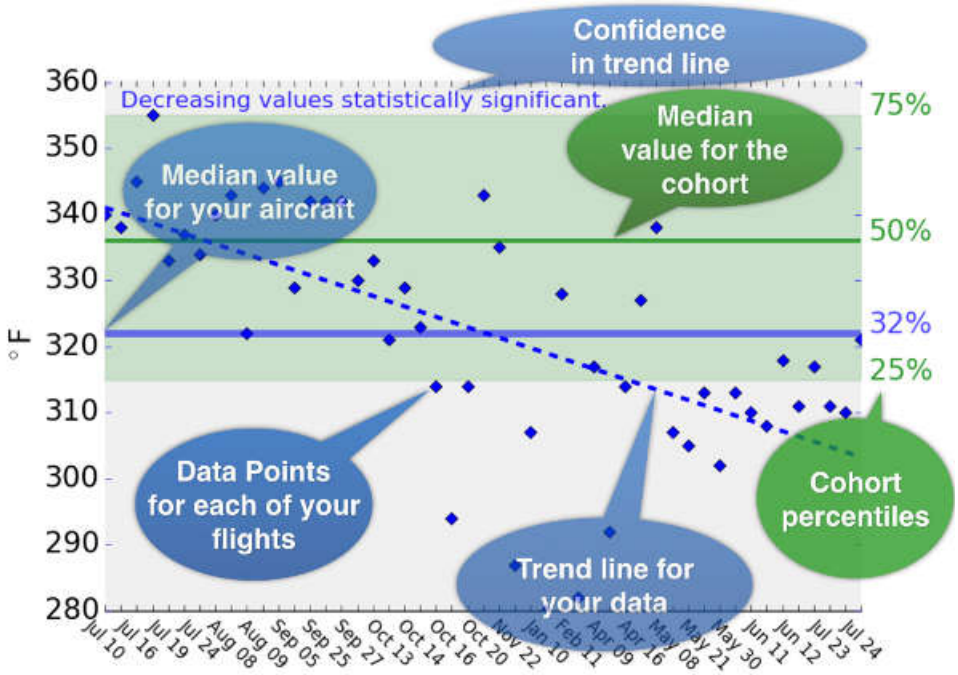
SAVVY TREND Analysis

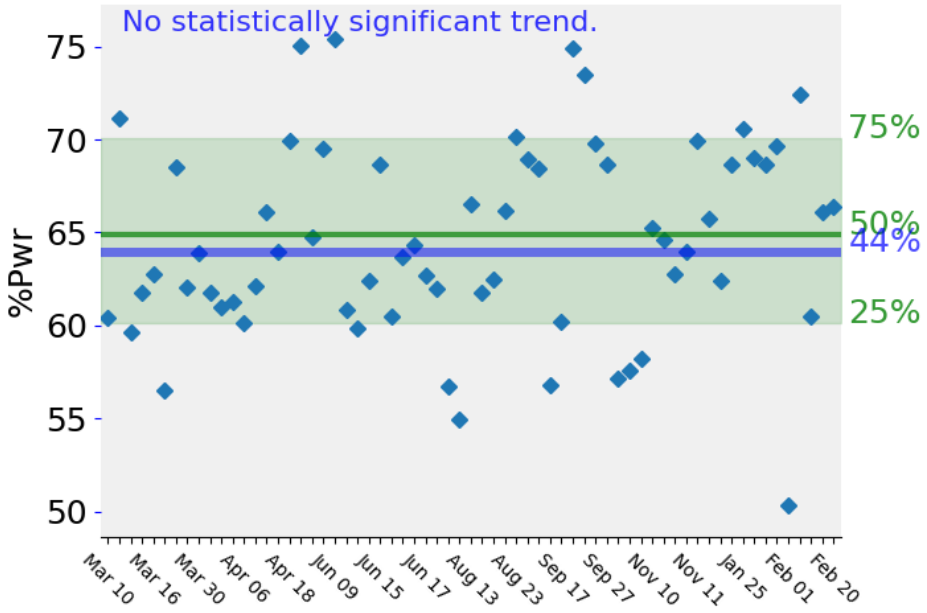
N8382Z · PA-28-236 Dakota · O-540 ·

Includes 66 flights between Mar 09, 2021 and Mar 09, 2022, compared with 5506 flights by a cohort of 65 PA-28-236 Dakota aircraft.



PERCENT POWER IN CRUISE

Measures your engine's power output during cruise flight. High power output for extended periods can contribute to reduced fuel efficiency, elevated CHT and reduced cylinder life.

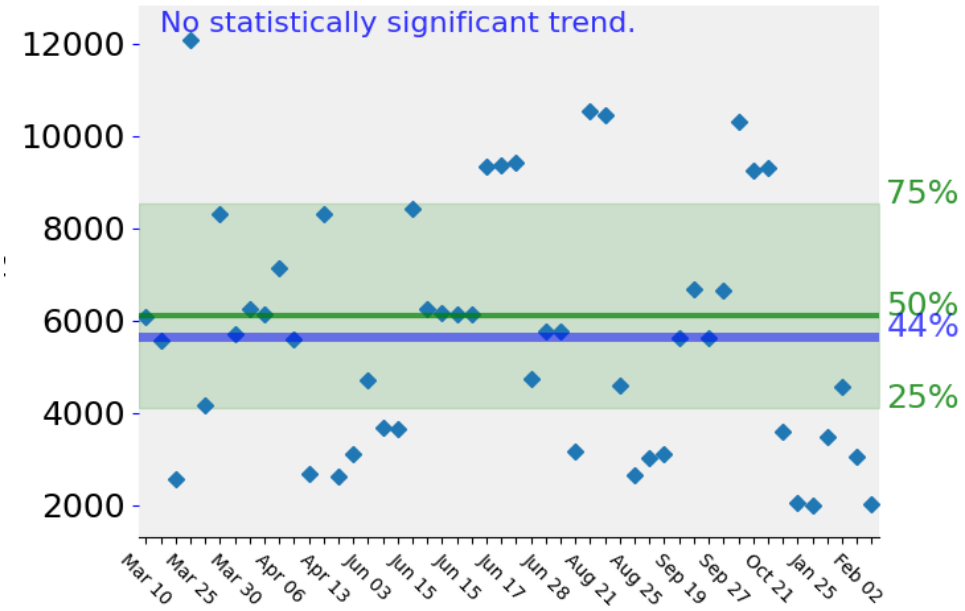


SAVVY SAYS...

The median of your engine's power output during cruise flights is about average.

ALTITUDE IN CRUISE (MSL)

Measures the altitude during the cruise phase of flight. For turbocharged aircraft, higher altitudes generally provide better performance and efficiency.

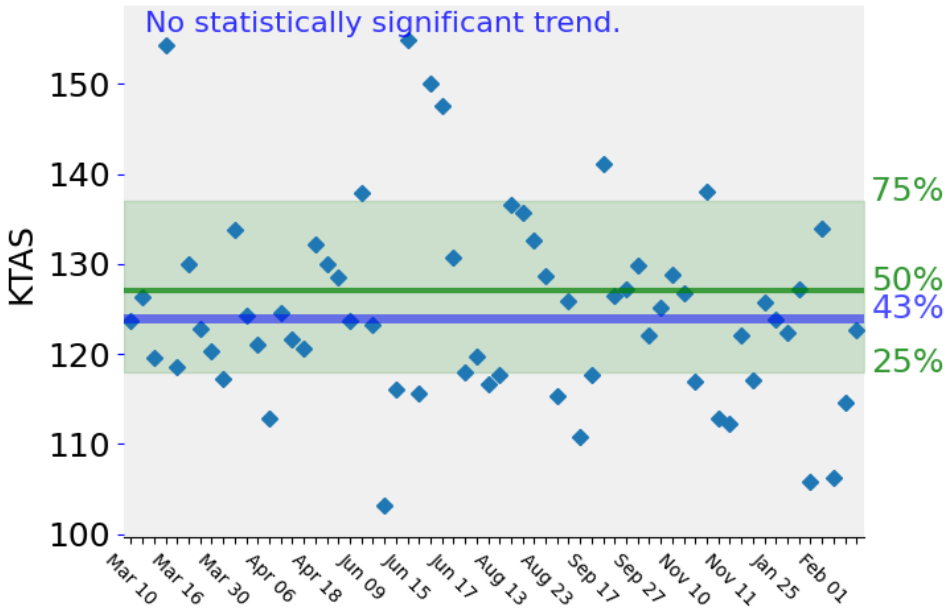


SAVVY SAYS...

Your cruising altitudes tend to be at mid-levels, resulting in average fuel efficiency and performance.

SPEED IN CRUISE (K.)

We use TAS if available, otherwise ground speed. Higher speed might be due to high power output, resulting in high CHT and reduced cylinder life. Or possibly operation at higher, more efficient altitudes.

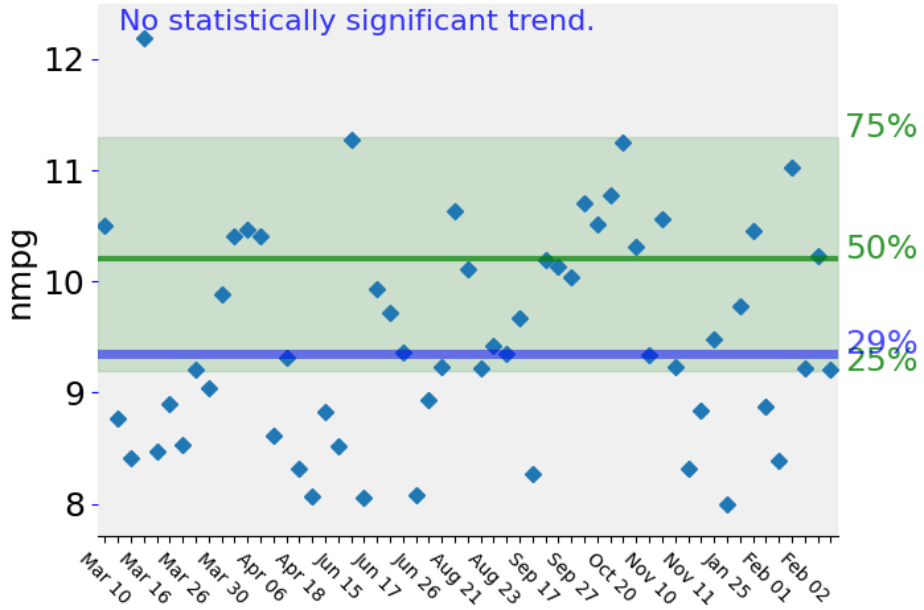


SAVVY SAYS...

Your cruise speed is average when compared with your cohort.

FUEL EFFICIENCY (NM PER GAL.)

Measures your aircraft's fuel efficiency during cruise flight.

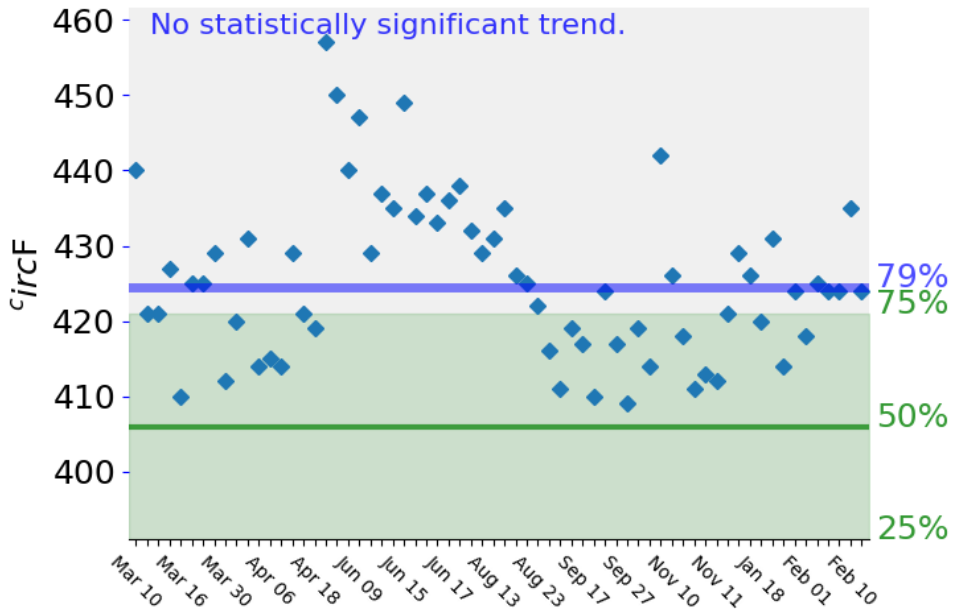


SAVVY SAYS...

Your aircraft's fuel efficiency is below average when compared with your cohort. This might be because you operate at high power settings or at lower altitudes

MAXIMUM CHT DURING FLIGHT (DEG. F.)

Measures the maximum CHT attained during each flight, most likely during climb phase. Prolonged periods of high CHT can contribute to reduced cylinder life.

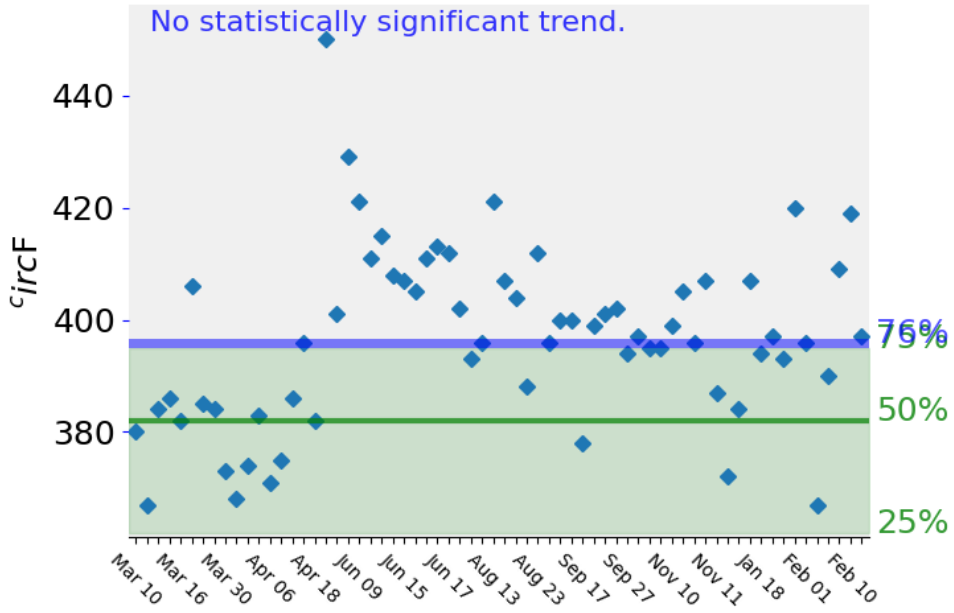


SAVVY SAYS...

Your maximum CHTs have been higher than 79% of the cohort which is on the high side. Savvy suggests you confirm that your full power fuel flow is adequate, ignition timing advance is correct, baffling is in good shape, and climb airspeed is high enough. ALERT: We are concerned because the median of the maximum CHTs attained during your flights was over 420°F, and we think that's way too high.

MAXIMUM CHT IN CRUISE (DEG. F.)

Measures the maximum cylinder head temperature (CHT) during the cruise phase of flight, an indication of the stress placed on your engine's reciprocating components. High CHT correlates with reduced longevity of cylinder assemblies.

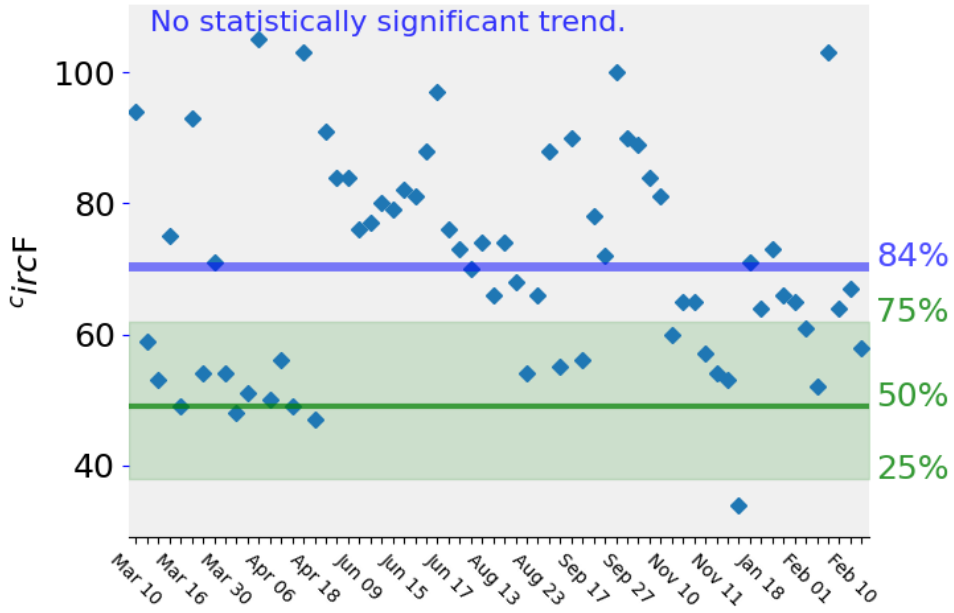


SAVVY SAYS...

Your cruise CHTs have been higher than 76% of the cohort which is higher than we like to see. We suggest that you adjust your leaning procedures and/or power settings to reduce your CHTs in cruise.

MAXIMIMUM CHT SPREAD IN CRUISE (DEG. F.)

Measures the median temperature spread between your hottest and coolest cylinders at maximum CHT during cruise. The spread is an indication of mixture distribution and the adequacy of cooling airflow to all cylinders.

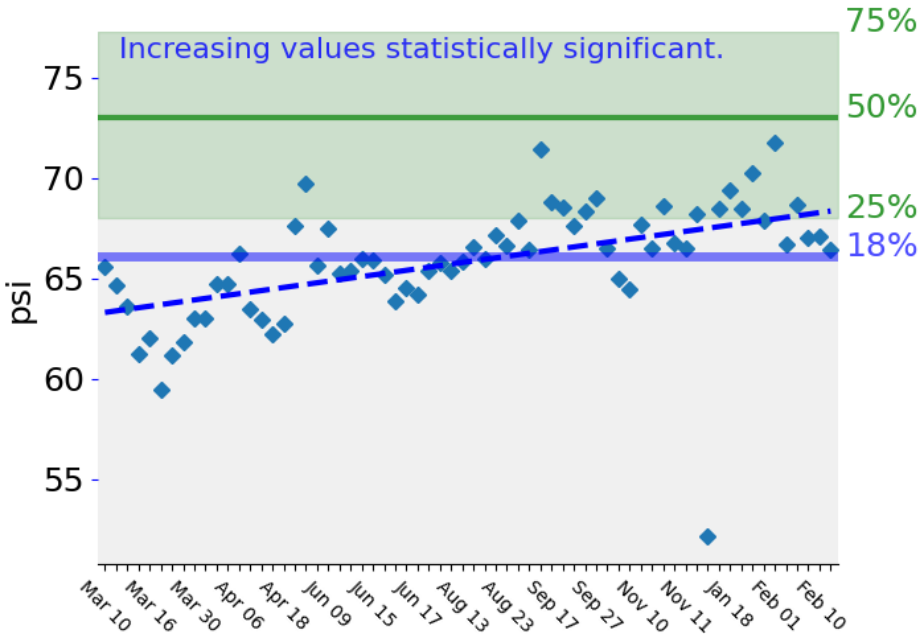


SAVVY SAYS...

The median value of the maximum CHT spread during cruise flights is higher than 84% of the cohort.

OIL PRESSURE IN CRUISE (PSI)

Measures the average oil pressures during cruise for your flights.

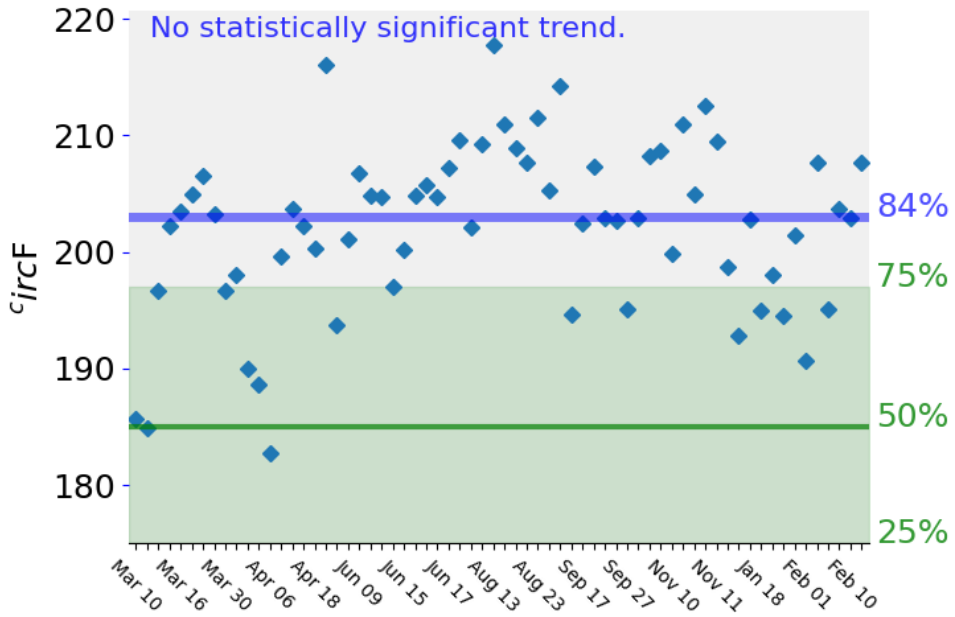


SAVVY SAYS...

Your average oil pressures during cruise have a median value lower than 82% of the cohort. Your oil pressures are in the normal range.

OIL TEMPERATURE IN CRUISE

Measures average oil temperature during cruise.

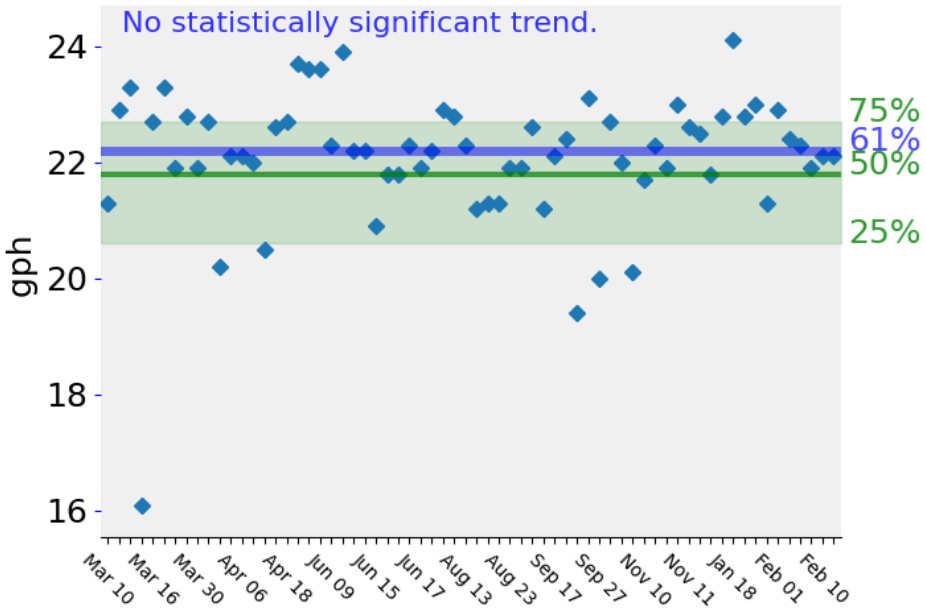


SAVVY SAYS...

The median of your average oil temperatures during cruise are higher than 84% of the cohort. Your oil temperatures are on the high side. We recommend keeping an eye on it.

MAXIMUM FUEL FLOW DURING FLIGHT

Measures maximum fuel flow during flight, most likely during takeoff. Sufficient fuel flow is important for proper cylinder cooling during high power operations

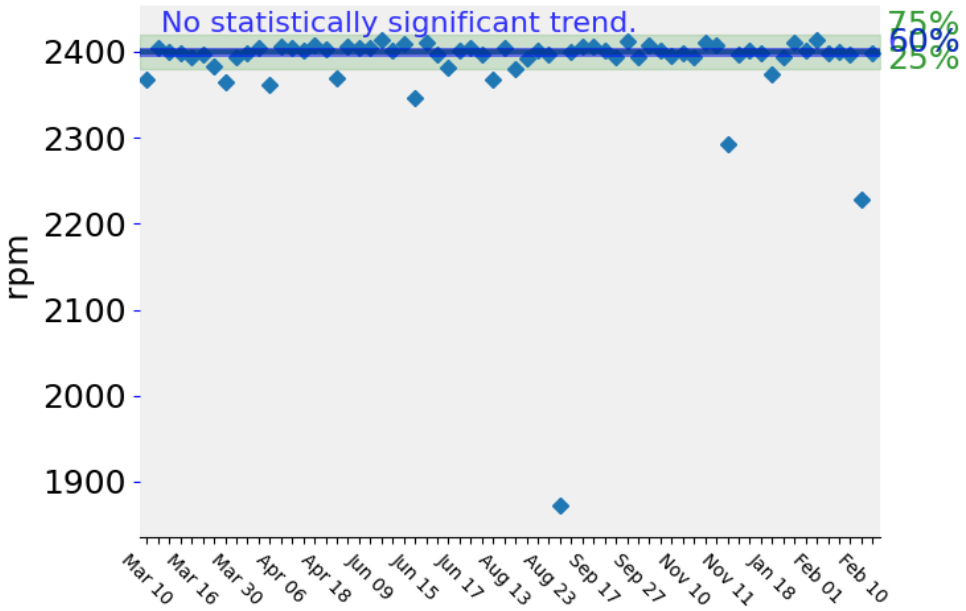


SAVVY SAYS...

Your maximum fuel flow is average when compared with your cohort.

MAXIMUM RPM DURING FLIGHT

Measures maximum rpm during flight, most likely during takeoff. Maximum permitted RPM is necessary for the engine to develop full rated power during takeoff and in initial climb.

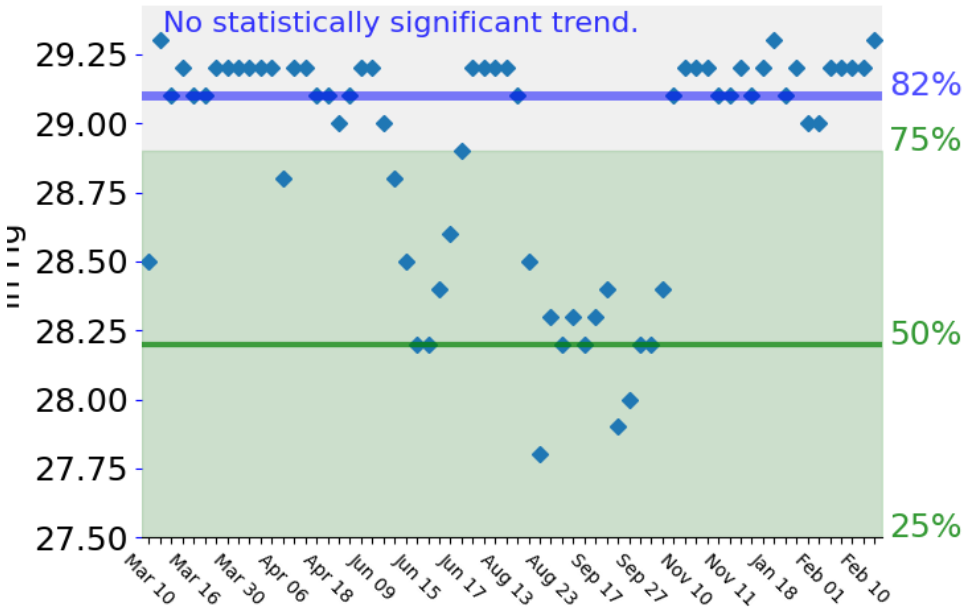


SAVVY SAYS...

Your maximum RPM is average when compared with your cohort.

MAXIMUM MAP DURING FLIGHT

Measures maximum manifold pressure during flight, most likely during takeoff. Sufficient MAP, not to exceed redline, is necessary for the engine to develop full rated power during takoff and initial climb

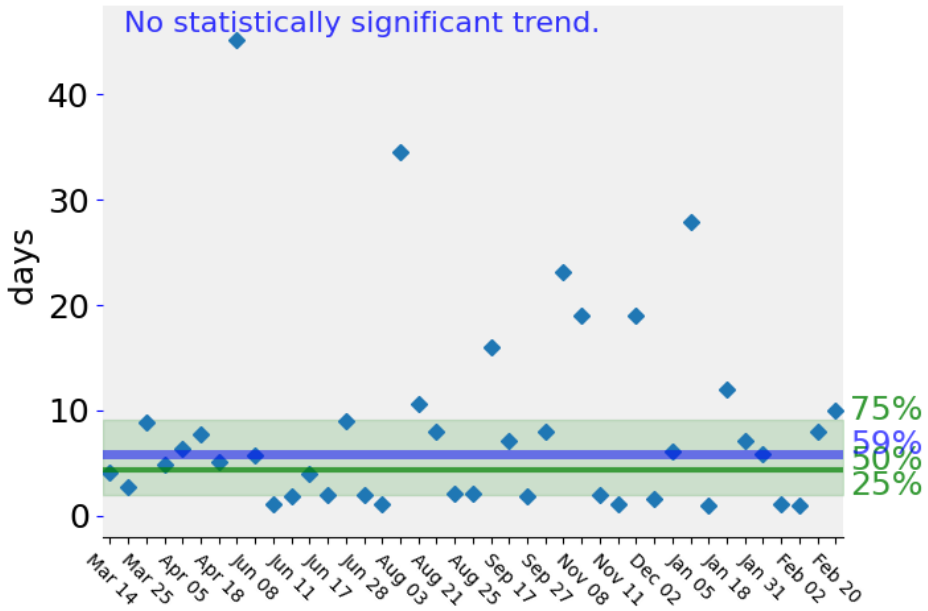


SAVVY SAYS...

Your maximum MP is higher than average when compared with your cohort.

INACTIVITY PERIODS (DAYS)

Measures the number of days your aircraft was inactive between flights. Inactivity can contribute to engine corrosion and reduced life of engine components.



SAVVY SAYS...

Your engine's inactivity is about average when compared to your cohort. Savvy recommends continuing to fly as frequently as possible

For more information about the contents of this SavvyAnalysis Report Card and how to interpret it, see our FAQ page. If you have questions or comments, please let us know.