



TECHNICAL SERVICE BULLETIN

TSB 2019-1001 Level: 1

Effective June 27th, 2019

Topic	P51-860 & P51-870 TITAN datalogs stored in internal memory may become corrupted if memory usage meets or exceeds maximum available internal memory.
Affected Units	All P51 TITAN models: 40860, 40870, & 40875 with firmware version v1.00
Resolution	Users must be sure to delete stored datalog files or adjust logging rate if next datalog will cause the P51 device to reach maximum memory usage. A future firmware update will eliminate this issue.

ISSUE:

P51 TITAN units generate datalog files saved to the device’s internal memory each time the device is powered on. The device records measurements according to the user defined “logging rate” stored within the device settings menu. This means that if the logging rate is set to 1 second, measurements will be stored to that session’s log file every 1 second. While the device has significant internal memory for this function, it must be cleared as it nears maximum memory usage. Once the device reaches 80% memory capacity, at each startup it will prompt the user to delete the datalogs stored on the device. If the user fails to clear the device memory before it reaches maximum capacity, the latest datalog file will become corrupted and will be irretrievable. Alternately, if a user selects a short logging rate interval and then allows the device to datalog beyond its capacity, the datalog will also become corrupt before the user is prompted to clear the device memory.

ROOT CAUSE ANALYSIS:

The root cause of the issue has been linked to the improper saving and closing of the datalog form stored within the device’s internal memory. During normal operation, when the P51 device is powered off, the device properly saves and closes the current datalog session. If the device memory reaches maximum capacity before the P51 is powered off, the device will cease to log data and will be unable to properly save and close out of the file, effectively corrupting the stored data and rendering it unusable.

INSTRUCTIONS:

Users must be sure to clear their stored datalog files when prompted by the device. Ignoring this warning will eventually cause the device memory to reach maximum capacity and prompt this issue. Before deletion, any datalogs on the device can be copied to the user’s PC and stored for later analysis. Alternately, users must be sure to select an appropriate logging rate as per the length of intended datalog session. Table 1 details the maximum datalog interval allowed at each logging rate setting assuming the P51 device memory is at 0% capacity (the device memory has just been cleared). Logging beyond the listed time durations at the corresponding logging rate interval will prompt the above issue.

Selected Sampling Rate (s)	Estimated Datalog Length (hrs)
1s	13.5
5s	67.5
10s	135
30s	405
60s (1 min)	810
300s (5 min)	4054
600s (10 min)	8108 (339 days)

Table 1: Logging Rates and Time to Maximum Memory Capacity

If this issue occurs, the corrupted datalog file must be deleted from the P51 device. It cannot be recovered, and the user will not be able to log additional data until the internal memory is cleared.