

11/8/2023

FOR YOUR INFORMATION

2023-187/11-38

To: Airport Manager, Sheridan County Airport (SHR), WY, Airline Performance Group, Inc, Collins Aerospace 2037018

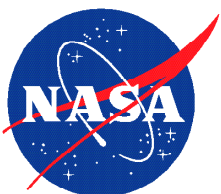
Info: FAA (AAS-1, AFS-260, AFS-200, AVP-1, AVP-200, ANM-600, Director of Air Traffic Operations CSA, Runway Safety Team), AAAE, A4A, ALPA, AOPA, APA, ASAP, ATSG, CAPA, IATA, ICASS, ICAO, IFALPA, IPA, NBAA, RAA, NTSB

From: Becky L. Hooey, Director
NASA Aviation Safety Reporting System

Re: SHR Airport Runway 06/24 Slope Calculations

We recently received ASRS reports describing a safety concern that may involve your area of operational responsibility. We do not have sufficient details to assess either the factual accuracy or possible gravity of the report. It is our policy to relay the reported information to the appropriate authority for evaluation and any necessary follow-up. We feel you should be aware of the enclosed deidentified report.

To properly assess the usefulness of our alert message service, we would appreciate it if you would take the time to give us your feedback on the value of the information that we have provided. Please contact Dr. Becky Hooey at (408) 541-2854 or email at becky.l.hooey@nasa.gov.



Aviation Safety Reporting System
P.O. Box 189 | Moffett Field, CA | 94035-0189



ACN 2037018

DATE / TIME

Date of Occurrence 202309
Local Time Of Day 0601 to 1200

PLACE

Locale SHR.Airport
State WY
Altitude - AGL 0

AIRCRAFT / EQUIPMENT X

Make Model Name Small Transport, Low Wing, 2 Turbojet Eng
Operating Under FAR Part 91

PERSON 1

Function - Flight Crew Captain
ASRS Report Number 2037018

EVENTS

Anomaly Deviation / Discrepancy - Procedural - Clearance
Anomaly Deviation / Discrepancy - Procedural - FAR
Anomaly Deviation / Discrepancy - Procedural - Published
Material / Policy
Anomaly Deviation / Discrepancy - Procedural - Weight and
Balance
Detector - Person Flight Crew
Result - Flight Crew Overcame Equipment Problem
Result - Aircraft Equip Problem Dissipated

NARRATIVE 1

Due to the longer runway being closed at SHR, we were forced to use RW06/24 for departure. While mission planning for our fuel load, we ran APG (Aircraft Performance Group) software for the shorter runway and noticed that there was only a very small difference between the takeoff distances of the two runways. This surprised me because there is a 1.6% slope on that runway (uphill for RW24, downhill for RW06).

So, the other pilot and I used our FMSCDU (Flight Management System Control Display Unit) to calculate the takeoff distance and noticed that for the runway data no slope was given. This is an FAA approved system and extremely common (Collins ProLine 21 Advanced). We manually input the runway slope for RW24, which put our takeoff distance well beyond takeoff distance available even without fuel or passengers. There was a Part 135 operator who was in the FBO who was relying on third party data to takeoff rather than the FMSCDU, which begs the question of whether the third party provider was aware of the slope. Fortunately, we were able to takeoff on RW06, which had the beneficial downhill slope.

We also checked the FMSCDU for other runways we commonly use that have slopes. None of these runways had the slopes in the database, which means that the TOLD (Takeoff and Landing Data) for the uphill runways is inaccurate and possibly out of range for legal operations.

Also, I think third party data providers need to be aware that they may not have the requisite information regarding runway slopes.

We were able to find the slopes in ForeFlight. The FAA VFR Sup for SHR doesn't list the slope for RW06/24 individually.

SYNOPSIS

Corporate Captain reported third party vendor of TOLD software is missing runway slope option which may compute inaccurate TOLD data.