



TRUCKEE TAHOE AIRPORT DISTRICT STAFF REPORT

AGENDA TITLE: Cessna JT-A Diesel 172 Usage and Revenue/Cost Update

MEETING DATE: 3/24/2021

PREPARED BY: Mark Covey, Pilot & Passenger Outreach Coordinator

OBJECTIVE: Receive information from Staff regarding program update and performance of the Cessna 172 JTA rental aircraft program.

DISCUSSION: The Airport Board and Staff began discussion in 2015 of a new measure to reduce noise and annoyance with the exploration of a diesel-powered training aircraft. With great advancement in aero-diesel (JET-A) technology in 2017, a viable option for KTRK was available. After a series of comparative tests between the Cessna JT-A diesel 172 and a standard Cessna 172, findings indicated a significant noise reduction (6 decibels) with the diesel engine and 3-bladed composite propeller. The Board unanimously passed a motion to purchase the diesel powered 172 on January 24, 2018.

The 2018 Cessna 172 JT-A Diesel began revenue flights on January 1, 2019. Since coming online, the aircraft has flown over 2,300 flights in 900 flight hours. This airplane helped 36 individuals earn Private, Instrument and Commercial ratings.

In 2020, N5901G was the aircraft with the most operations at KTRK. Totaling 938 operations, 01G generated just 10 comments from 7 households. This is in comparison to the significantly louder legacy Cessna 172 rental, N9110H, with 522 operations and 20 comments by 10 households; as reported in the 2020 annual ops and comments report. During its inaugural year of operation in 2019, N5901G had 961 operations, generating 10 comments; while N9110H had 728 operations, generating 15 comments.

In addition to being much quieter, the diesel aircraft is more efficient, burning 6-8 gallons of jet fuel per hour compared to its 100LL burning counterpart at 10-12 gallons per hour. This is advantageous for two reasons:

1. 100LL fuel contains lead and is only produced at eight refineries in the United States and one in Canada.
2. Jet fuel technology is rapidly evolving to include Sustainable Aviation Fuel (SAF) that is derived from plant, non-palm waste oils, solid wastes such as paper and textiles as well as algae. Availability and adaptation of SAF is growing exponentially around the globe.

On January 1, 2021 TTAD raised rental rates on 01G from \$150/hour to \$170/hour for renters within the district and \$200/hour for those residing outside the district to help offset the increasing cost of required maintenance. In addition to FAA required 100-hour inspections for rental aircraft (approximately \$3,000 per inspection over the forecasted 40-year lifespan), the diesel engine must be replaced at 2100 hours (in about 4.5 years) at a cost of approximately \$50,000 and gearbox replacement at 1200 hours at an estimated cost of \$8,000. Other costs will be incurred for maintenance based on inspection results. For example, at 1200, 1500 and 1800 hours, the timing chain must be inspected and replaced as needed, costing around \$3,000. Another consideration is the foregone revenue of the Bravo 3 hangar at \$392/month: including both Fly Quiet incentives as well as home-basing discount.

Due to COVID restrictions and safety protocol, 01G was taken offline for over two and a half months in 2020. This made a significant financial impact on the program. As a result, some student pilots either delayed their training, shelved their training altogether or resumed training at another location such as Reno or Minden.

N5901G is a valued asset to the pilot community because it is a Technologically Advanced Airplane (TAA). The Garmin G-1000NXi flight deck with integrated auto pilot affords students greater situational awareness while learning to fly solely on instruments. Prior to 2018, commercial students were required to have 10 hours in a complex airplane (retractable gear & constant speed propeller). A 2018 FAA rule change allows commercial students to attain the requisite 10 hours in a TAA; helping reduce impact and annoyance in the district since complex trainers are higher horsepower engines and are flown in from outside the area for training, diminishing revenue generation within the District.

FISCAL IMPACT: See attachments

PUBLIC COMMUNICATIONS: Website, social media campaigns, Nov. 23, 2019 presentation and flight demo at board meeting

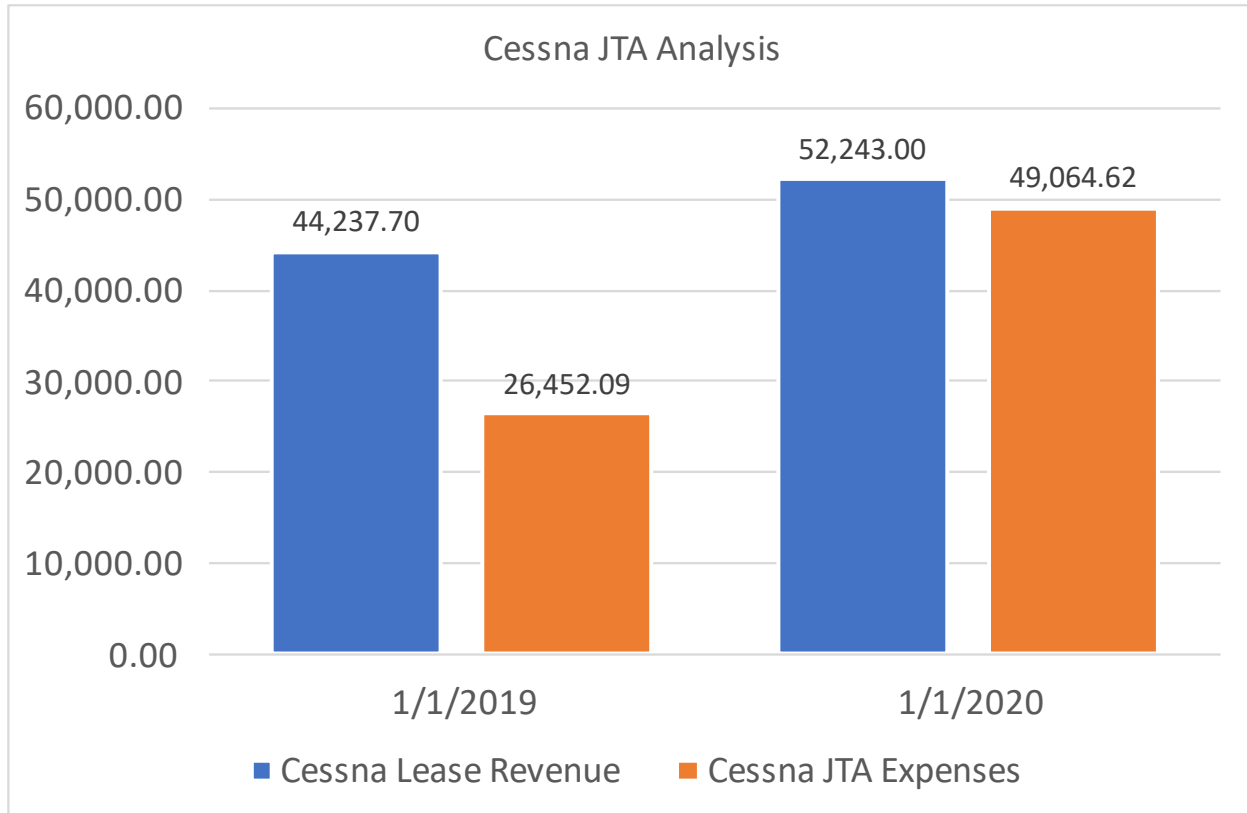
ATTACHMENTS:

Proforma: https://truckeeatahoeairport.com/board_meetings/169/view_file?file=tab+14a+-+ktrk+-+turbo+skyhawk+-+proforma+-+9-19-17.pdf

Motion passage of purchase: https://ktrk-production-assets.s3.us-west-2.amazonaws.com/board_meeting/171/20180330091450315.pdf

JT-A acquisition staff report and leaseback plan:

https://truckeetahoeairport.com/board_meetings/171/view_file?file=tab+14+-+cessna+jta+aquisition+staff+report.pdf



4 year financial (2022 forecasted)

