3/19/2024 **FOR YOUR INFORMATION** 2024-51/11-3

2069879

To: Airbus Industries

Info: FAA (AVP-1, AVP-200, AFS-200, AFS-100, AFS-260, AIR-720, AIR-780, AIR-360, SEA-AEG), A4A, ALPA, AOPA, APA, ASAP, ATSAP, ATSG, CAPA, IAM, AMFA, IBT, IATA, ICAO, ICASS, IFALPA, IPA, NATCA, NBAA, NTSB, RAA

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

Re: Airbus A321 Fuel Pump Maintenance Procedure Issues

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 2069879	
DATE / TIME	
Date of Occurrence	202401
Local Time Of Day	0001 to 0600
PLACE	
Locale	ZZZ.Airport
State	US
Altitude - AGL	0
AIRCRAFT / EQUIPMENT X	
Make Model Name	A321
Operating Under FAR Part	121
COMPONENT 1	
Aircraft Component	Fuel Booster Pump
PERSON 1	
Function - Maintenance	Lead Technician
ASRS Report Number	2069879
EVENTS	
Anomaly	Aircraft Equipment Problem - Critical
Anomaly	Deviation / Discrepancy - Procedural - Published Material / Policy
Anomaly	Ground Event / Encounter - Fuel Issue
Anomaly	No Specific Anomaly Occurred - Unwanted Situation
Detector - Person	Maintenance
Result - General	Maintenance Action
NARRATIVE 1	

Aircraft X had an open discrepancy for the RH wing INBD fuel pump fuel leak. As the crew chief assigned with the aircraft, I requested a defuel of the aircraft because it had 22,000lbs total fuel. The Aircraft Maintenance Manual (AMM) does not call for a defuel but I decided it was best as a precaution. The aircraft was eventually defueled to 13,000 lbs total fuel but was imbalanced with fuel in the right wing tank. I instructed the mechanic to pump all of the fuel into the center tank which resulted in roughly 8000lbs of fuel in the center tank and the remaining fuel in the left wing. Once the fuel was moved, the mechanic began the removal procedure of the fuel pump in accordance with the AMM. All precautions and steps were followed. During the removal of the pump, the slide valve remained on the pump and was pulled from the wing tank as one unit. The slide valve was tightly sealed with O-rings on the fuel pump which prevented it from separating from the pump as it should have per the AMM. This caused a fuel leak from the wing. The mechanic immediately tried to stop the leak but was unable to successfully put the fuel pump back in place. He then contacted me by phone. I immediately went to the aircraft. I contacted management and was told that the fire department was already notified. Many mechanics, crew chiefs, and supervisors immediately got spill kits and attempted to contain the fuel. Mechanics were able to then separate the slide valve from the fuel pump on the ground and slide it into place on the wing to stop the leak. We then cleaned the spill.

The slide valve is supposed to be locked in place by a flange. The flange is very small and easily worn, about the size of half a 3/16 washer. The pump was very sealed into the slide valve, so when it was removed, it came

out as one assembly past the flange. In addition, the center fuel tank gravity fed fuel into the right wing which caused the large spill even after taking extra precautions to defuel the wing tank.

Suggestions: There needs to be more details in the AMM as precautions to take when removing a fuel pump. The Aircraft Maintenance Manual does not suggest defueling the tank before removal of the pump. The Aircraft Maintenance Manual also does not caution in the removal procedures that on A321 aircraft the center fuel tank will gravity feed into the wing tanks if the center tank has less fuel. This spill could have been easily avoided if that precaution was present in the removal of the fuel pump reference.

SYNOPSIS

Aircraft technician reported lack of key information in A321 aircraft maintenance manual when removing a fuel pump leading to fuel spill.