

To: International Brotherhood of Teamsters Airline Division

From: Chris Moore, Chairman, TAMC

Date: November 13, 2014

Re: Allegiant Air – Air Returns and Diversions due to Maintenance-related Issues
Sept. - Oct. 2014

N.B.: Please share with Congress, the FAA, and the general public as is appropriate

SUMMARY

Allegiant Air is an FAA certificated, Ultra Low Cost carrier based in Enterprise NV. The Carrier operates a fleet of 70 Aircraft with an average age of 22.2 years. The MD-80 fleet, having 54 aircraft, comprises 75% of the fleet and has an average age of 24 years.

The Carrier employs approximately 1,800 people including roughly 230 mechanics with an average seniority of 4.0 years; however 55% of the group have less than 4 years and 35% have less than 2 years of experience with the airline. Allegiant Air is run by CEO Maurice Gallagher, and up until October 1st; President Andrew Levy. Both can trace their roots back to another low cost carrier; ValuJet, and were in place when ValuJet Flight 592 crashed into the Florida Everglades due to a cargo compartment fire caused by errors committed by contract maintenance employees.

The Aviation Mechanics Coalition, Inc. (TAMC) promotes the common interest of FAA-licensed aviation mechanics working in the United States aviation industry. In this regard, it promotes industry-wide safety rules and regulations affecting aviation maintenance and monitors aviation safety-related trends in the industry. TAMC also seeks to foster a better working environment for aviation industry mechanics and to identify and help eliminate obstacles and work-related disincentives leading to the erosion and dissipation of the aviation maintenance profession. Among other projects and operations undertaken by TAMC are: (1) the promotion and support of industry-wide safety rules and regulations through legislative and regulatory activity; (2) the performance of safety-related best-practices audits to measure airline maintenance safety compliance to ensure that maintenance professionals' working environments are safe; (3) the promotion and support of industry-wide health and retirement security standards for maintenance professionals to better ensure stable, long-term employment within the aviation maintenance profession; and (4) legislative, regulatory and media outreach to expose the hazards of outsourced aviation maintenance to the flying public and to prevent the loss of aviation maintenance professionals' jobs and work opportunities to low-wage, under-regulated and unsafe foreign maintenance operations. (5) Develop education programs specific to attracting and retaining workers to the industry. (6) Provide continued education programs for the advancement of Aviation Safety.

In February 2014, the TAMC was approached by pilots from Allegiant Air who were concerned by the number of Air Returns and Diversions due to Maintenance related issues. It should be noted that Allegiant has an aircraft utilization of roughly 5.5 hours per day which is less than half the industry average. The TAMC, after considering the number and reasons for the maintenance issues agreed to launch an investigation.

From the outset it became evident that finding published information on these incidents was going to be a daunting task. Searches of the NTSB and FAA web sites revealed no reports of declared emergencies for engine and hydraulic failures that were reported by local news. Interestingly, Allegiant is not required to report DOT delay and cancellation information because they fall below 1% of the total domestic scheduled-service passenger revenue. As a consequence of this rule, the TAMC had to rely on the pilots reporting back when they experienced an Air Return, Gate Return, Aborted Take-Off or other maintenance related incident.

The TAMC cannot conclude that the below maintenance issues were the only Air Returns, Gate Returns and Low Speed Aborts during the time period, as the Company does not report such incidents to the FAA. Further, we find it very disconcerting that an airline with such a small fleet has experienced such a large number of schedule disruptions due to mechanical issues.

What follows is a snap shot of September through October of 2014.

Definitions:

AR= Air Return DV= Diversion GR= Gate Return LSA= Low Speed Abort

Flight	A/C #	A/C Type	Departure.	Destination	Diverted to.	Staus	Date
AAV 220			KBLI	KLAS	KBLI	AR	9/4/2014

Event: Primary Stabilizer Trim Failure

(Primary Trim Failure leads to loss of Pitch Control by the flight crew. The crash of Alaska Airlines 261 was due to Stabilizer Trim Failure caused by inadequate lubrication. Failure to accomplish this required task has been cited in several mechanics calls to the Maintenance hotline)

AAV950	N871GA	MD83	KPGD	KYSY	KPDG	AR	9/4/2014
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Event: Engine developing 20% less than required power.

AAV526	N415NV	MD83	KLAS	KLAS		AR	9/8/2014
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Event: #2 Engine Shutdown due oil loss caused by improper maintenance.

AAV318	N878GA	MD83	KLAX	KSGF	KIWA	DV	9/8/2014
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Event: Automation Issues.

AAV 116	N878GA	MD83	KIWA	KSBN	KIWA	AR	9/11/2014
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Event: Loss of all cockpit Automation, Repeat write up from 9/8/14 (noted above)

AAV154	N874GA	MD83	KIWA	KSCK	KLAS	DV	9/14/2014
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Event: Loud noise coming from Emergency Exit. Repeat Write up on prior leg

AAY416 N901NV B757 KLAS KMFE KLAS AR 9/15/2014

Event: Left Bleed Air Trip. (Engine "bleed" air is critical for cabin pressurization and cabin temperature control.)

AAY1073 N905NV B757 KLAX KHNL KLAX AR 9/15/2014

Event: Left Generator and Center fuel tank boost pump failure. (Resultant loss of 50% of electrical capability for flight instruments and systems and restricting the ability to transfer fuel from tank to engines, possibly leading to total loss of engines due to fuel starvation)

Flight A/C # A/C Type Departure Destination Diverted to Dispatcher Date

AA114 N421NV MD83 KIWA KGRI KIWA AR 9/18/2014

Event: Hydraulic Leak. (Note: Hydraulics control many critical systems such as Landing Gear and Flight Controls)

AAY960 N879GA MD83 KPDG KFWA KSFB DV 9/18/2014

Event: Smoke in the Cabin.

(Any smoke in the cabin is cause for alarm if the source cannot be readily identified and contained)

AAY160 N410NV MD83 KIWA KRAP KIWA AR 9/21/2014

Event: Generator Issues (Electrical System)

AAY900 N401NV MD83 KFLL KPBG KSFB DV 9/25/2014

Event: Center fuel pump not transferring to engines. (This could lead to fuel starvation to the engines resulting in loss of power or inflight shut down forcing an emergency landing or crash.)

AAY168 N423NV MD83 KIWA KMLI KIWA AR 9/28/2014

Event: Navigation instrumentation and high temperature issues.

AAY486 N417NV MD83 KLAS KLAS AR 10/2/2014

Event: Smoke in the cabin.

AAY812 N880NV MD83 KPIE KROA KPIE AR 10/3/2014

Event: Multiple electrical issues.

AAY526 N876GA MD83 KLAS KSCK KLAS AR 10/5/2014

Event: Flight Director and Automation Failure. The Flight Director (F/D) is the primary flight and navigation instrument for pilots. Loss of it and automation is a critical failure in clear weather and potentially catastrophic in bad weather or at night.

AA Y696 N216NV A320 KSFB KTYS KSFB AR 10/7/2014

Event: Loss of all three communications radios. (This results in loss of all radio contact with Air Traffic Control and the potential for Homeland Security to assume an aircraft has been hijacked)

Flight A/C # A/C Type Departure. Destination Diverted to. Dispatcher Date

AA Y620 N424NV MD83 KSFB KCVG KSFB AR 10/10/2014

Event: Right Landing Gear Unsafe Light (Indicates that the Landing Gear has not either extended or retracted correctly, leading to a possible gear collapse on landing)

AA Y8501 N426NV MD83 KENV KFOE KENV AR 10/13/2014

Event: Tail Compartment High Temperature Warning (A very critical situation indicating a possible Bleed Air leak from the engines leading to possible structural or systems failures)

AA Y680 N424NV MD83 KSFB KMLI KSFB AR 10/16/2014

Event: Right Landing Gear Unsafe Light (Repeat write up for the same issue days earlier. See above)

AA Y428 N421NV MD83 KLAS KMOT KLAS AR 10/18/2014

Event: Secondary Trim System Failure

AA Y168 N301NV A319 KIAW KMIL KIAW AR 10/19/2014

Event: Lavatories and Potable water systems inoperative

AA Y580 N906NV B757 KLAS KBLI KLAS AR 10/23/2014

Event: Compressor Stall with observed flames and High EGT. (Required engine power be reduced to idle, resulting in single engine operation)

AA Y182 N302NV A319 KIAW KGRR KIAW AR 10/23/2014

Event: Various MX Issues

AA Y404 N403NV MD83 KIAW KRFD GR 10/31/2014

Event: Engine compressor stalling after start. (Engine cannot develop power in this condition)

AA Y638 N893GA MD83 KSFB KUSA KSFB LSA 11/2/2014

Event: Right engine oil quantity went to zero. (Engine must be pulled back to idle or shut down resulting in single engine operation, requiring declaring an inflight emergency to

ATC, descending to a lower altitude due to reduced cabin pressurization capability and the disruption of other aircraft routing in the same area)

Flight	A/C #	A/C Type	Departure.	Destination	Diverted to.	Dispatche
N902NV	B757	KHNL	KLAS	KHNL	LSA	11/3/2014

Event: Captain's Airspeed Indicator Failed

Maintenance

As part of our initiative to gather data we created a hotline for Pilots and Mechanics to report maintenance issues. We interviewed a number of mechanics and concerns found similar regardless of which station they worked. Common concerns were the same.

Training is inadequate. One mechanic described it as a joke with only Computer Based Training, (CBT) and no classroom for the MD 80 which comprises 75% of the Allegiant fleet. The technology keeps failing making it very difficult to train.

Technology Failures result in mechanics routinely having to work with manual references faxed from Maintenance Control and in some instances with no paperwork at all, only verbal instructions. Not having the paperwork is a F.A.R. violation.

“Just Move the Metal” Mechanics report a culture of “just move the metal” and being pressured to get the aircraft to the next station. This has been confirmed by pilot reports of mechanics asking them if they can “just take the aircraft as it is.”

Mechanics and Pilots are reporting a lack of spare parts and reliable spare parts. In many instances mechanics are required to “cannibalize” parts from another aircraft because adequate in stock spares are not available. This process, in concert with a lack of reliable technology to cross check the effectivity of the part creates a situation wherein the wrong part can be installed on an aircraft. A good example of the dangers of installing unreliable parts is noted on 10/7/14 when a Communications Panel was replaced on aircraft N216NV, resulting in the failure of all 3 communications radios.

Many times mechanics with little or no experience on a difficult task are assigned with minimal or no oversight, only a directive to get the job signed off and the aircraft out.

Mechanics are also pointing out that there is inadequate tooling or equipment to perform their jobs. There have been allegations of critical jobs not being (Stabilizer Jack Screw Lubrication) performed due to lack of training on equipment and unavailability of safety equipment.

Conclusions

The lack of experience, parts, tooling and training combined with the age of the fleet; roughly 22.2, years is creating a dangerous paradigm that could eventually lead an accident resulting in serious injury and loss of life.

In conversations with some of the pilots it became evident that they are used to flying these aircraft with what they consider “nuisance” issues. A situation such as this creates a “Bad Norm” where a perceived “nuisance” is in actuality the precursor to an accident.

Moving forward the TAMC recommends the following:

- 1) **More onsite FAA oversight** of the maintenance program until such time as Allegiant can prove that adequate training, tooling and equipment and spares are provided.
- 2) **FAA should provide more oversight of the MRO facilities performing work for Allegiant** Currently, Allegiant outsources all of it’s Heavy Airframe MX, Engine Overhaul and Component work. Based on pilot reports, documentation gathered (including some listed above) and the 4 engine inflight engine shutdowns in a 2 week period over the summer, it is clear that serious FAA oversight is called for
- 3) **The Company should invest in required I.T. for improved accessibility to required manuals and training.**
- 4) **The Company should provide instructor lead training and mentoring of new hire mechanics.**
- 5) **New hire and low time mechanics should be paired with experienced mechanics when assigned to more difficult technical tasks.**
- 6) **The Company should provide the proper equipment, in working order, and training on such equipment, required to accomplish maintenance tasks.**
- 7) **The company should provide proper safety equipment and training on such items as fall restraint and safety harness systems.**
- 8) **The Company should review, on an ongoing basis the quality and reliability of spares and engines as well as maintenance provided by Outsourced Maintenance.**
- 9) **The company should create a Safety Culture by partnering with the mechanics ensuring a safe work environment as well as improved safety for their passengers.**

We sincerely hope that this report will help Allegiant to recognize the safety shortfalls within their maintenance organization as they are sometimes lost in the shuffle of the day to day business of running an airline. Further, we feel that if the airline fails to correct these problems promptly, they run the real risk of having an incident or accident that will result in loss of life.