

**To:** International Brotherhood of Teamsters Airline Division, Members of Congress, the Federal Aviation Administration, and the general public

**From:** Chris Moore, The Aviation Mechanics Coalition, Inc.

**Date:** March 7, 2016

**Re:** Allegiant Air – Update on Maintenance-Related Issues (September 2015 – January 2016)

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## SUMMARY

This is an update from The Aviation Mechanics Coalition on maintenance issues and concerns at Allegiant Air. The report covers September 2015 through January 2016 and finds that within this five month period, the airline experienced at least 98 separate and preventable maintenance issues. This includes 35 engine issues such as failures to start, clogged filters, and two instances of catastrophic engine failures in which engines come apart. The report also found four instances of smoke in the cabin and three instances of pressurization problems.

Additionally, for the first time in its investigation of Allegiant Air, The Aviation Mechanics Coalition found:

- Little or no documentation during shift turnover: It is critical that maintenance crews carefully document their work so that after a shift change, the mechanics assigned to the next shift know where to pick up. When there is little or no shift turnover, mechanics do not have the information necessary for a successful transition.
- Improper use of minimum equipment list (MEL) and dispatch procedures. A fleet is able to operate with certain functions that do not work so long as maintenance follows a certain procedure, known as MEL and dispatch procedures. But at Allegiant Air, the TAMC found maintenance teams were not consistently or accurately following MEL and dispatch procedures.
- Sub-standard maintenance expertise. Many maintenance crews lack adequate experience to properly repair and dispatch aircraft. Allegiant Air flies into secondary and tertiary airports, where the company relies on contracted maintenance crews. Many of these crews do not have the necessary experience working on MD-80s, the bulk of Allegiant's fleet.

As noted, the information has been provided on an ad-hoc basis. While it's indicative of a widespread problem at Allegiant Air, the report is not comprehensive, and the likelihood is high that there are additional and similar unreported incidents.

In addition to the new findings, several issues revealed in previous TAMC reports (documenting incidents from September of 2014 through March 2015, as well as the summer of 2015) continue to be observed:

- Training for maintenance crews is inadequate.
- There is a lack of process to document equipment failures. Specifically, mechanics at Allegiant Air do not have the equipment needed to pull up the maintenance manual and are left having to work with manual references faxed from maintenance control or, in some instances, just verbal instructions.

- Mechanics report a culture of “just move the metal” and feel pressure 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.”
- There is a lack of spare parts. In some instances the spare parts that are available are not reliable. Because of this, mechanics are required to “cannibalize” parts from another aircraft because adequate in-stock spares are not available.
- There is inadequate tooling and equipment. Mechanics have reported that critical jobs, such as the lubrication of stabilizer jack screws, cannot be performed due to a lack of training on equipment and unavailable equipment.

**Definitions:**

**AR=** Air Return

Aircraft is inflight and the crew determines that, for safety purposes, they must return to the airport of departure.

**DV=** Diversion

The crew determines that, for the safety of the flight, they must land at the nearest suitable airport along the route of flight.

**GR=** Gate Return

After the flight has left the gate and prior to takeoff, a condition develops that requires a return to the gate for maintenance.

**LSA=** Low Speed Abort

Prior to V1 (the speed at which a safe abort cannot be made and the aircraft must takeoff), a very high risk event occurs that requires the crew to abort the takeoff run—.

**DE=** Declared Emergency

**RTO=** Rejected Takeoff

Flight	A/C #	A/C Type	Departure.	Destination	Diverted	Status	Date
AAV 458	902NV	757	LAS	IND		GR	9/2/15
<b>RT Emergency Door Slide would not Arm.</b>							
AAV410	422NV	MD80	LAS	GJT		GR	9/3/15
<b>#2 Engine High Idle EGT</b>							
AAV684	401NV	MD80	SFB	MYR		GR	9/3/15
<b>Engine Would not start</b>							
AAV958	884GA	MD80	PGD	SBN	PDG	AR	9/4/15
<b>Air Return due to #2 Airspeed/Altitude Indication Failure</b>							
AAV190	423NV	MD80	IWA	IDA		GR	9/4/15

**Aft Air Stair Door Open Indication**

AAY127 408NV MD80 SBN IWA GR 9/6/15

**Engine would not start**

AAY487 420NV MD80 BIS LAS SGU DV 9/7/15

**Diverted due to fuel issues**

AAY515 427NV MD80 FAT LAS GR 9/10/15

**Engine would not start**

AAY798 866GA MD80 SFB PBG SR 9/14/15

**Pitch Trim Problems**

AAY160 305NV A319 IWA RAP RTO 9/18/15

**Crew Rejected Takeoff due to Flight Control (Spoiler) issue**

AAY133 305NV A319 PVU IWA RTO 9/20/15

**Crew Rejected Takeoff due to Flight Control (Spoiler) Issue Repeat Writeup.**

AAY760 221NV A320 SFB CID GR 9/21/15

**Engine Problems**

AAY500 423NV MD80 LAS GPI AR 9/24/15

**Pressurization Controllers not working properly**

AAY180 868GA MD80 IWA MOT RTO 9/25/15

**Airspeed Indication Issues**

AAY166 305NV A319 IAW ATW GR 9/26/15

**Hydraulic Pump Issues**

AAY144 407NV MD80 IAW BIL GR 10/1/15

**Aft Cargo Door Open Indication**

AAY936 223NV A320 FLL TYS GR 10/1/15

**Air Conditioning Pack Problem**

AAY4401 905NV B757 LAS COS GR 10/1/15

**Landing Gear Indication Issue**

AAY832 404NV MD80 PIE TSY DV 10/2/15

**Diversion for Fuel issues**

AAY436 406NV MD80 LAS PIA GR 10/4/15

**Oil Quantity Issue**

AAY223 878GA MD80 LAS BLI RTO 10/9/15

**Engine Power Indication Issue**

AAY424 881GA MD80 LAS MEM GR 10/9/15

**#1 Generator inoperative**

AAY186 305NV A319 IAW BIS GR 10/11/15

**APU Generator and Engine Thrust lever faults**

AAY486 402NV MD80 LAS BIS GR 10/11/15

**Spoiler issue indication**

AAY516 408NV MD80 LAS FAT RTO 10/11/15

**High Speed Aborted Takeoff due to Engine Failure and Fire.**

AAY458 904NV B757 LAS IND RTO 10/12/15

**High Speed Aborted Takeoff due to Thrust Reverser unlocked indication**

AAY620 215NV A320 SFB CVG GR 10/13/15

**Spoiler Issues**

AAY510 878GA MD80 LAS BZN GR 10/15/15

**Air Conditioning Pack Issues**

AAY920 223NV A320 FLL SYR AR 10/16/15

**Air Return for Clogged Engine Fuel Filter**

AAY894 864GA MD80 IAG PIE GR 10/17/15

**Stall indication problem**

AAY452 905NV B757 LAS AUS GR 10/18/15

**Landing Gear Status Message**

AAY532 Various LAS CVG GR 10/18/15

**This flight had two gate returns for various mx issues (including two engine problems) and included an aircraft swap.**

AAY1073 902NV B757 LAX HNL RTO 10/18/15

**High Speed Aborted Takeoff due to Engine Power Indication Problems**

AAY826 871GA MD80 PIE LCK GSP DV 10/23/15

**Maintenance Diversion**

AA Y607 403NV MD80 YNG SFB AR 10/25/15

**Smoke in the Cabin, Emergency Declared**

AA Y630 863GA MD80 SFB HGR GR 10/25/15

**Aft Cabin Door Open Indication**

AA Y484 408NV MD80 LAS GFK RTO 10/28/15

**Low Speed Abort for Engine Power Indication Problems**

AA Y607 884GA MD80 YNG SFB RTO 10/29/15

**Low Speed Abort for a Wheel Not Turning Indication**

AA Y406 LAS TUL SGF DV 10/30/15

**Diversion for Anti Ice system problems**

AA Y697 891GA MD80 TYS SFB RTO 10/30/15

**Low Speed Abort due to Forward Cargo Door Open Light**

AA Y730 403NV MD80 JQF FLL AR 10/30/15

**Smoke in the Cabin. This Aircraft Declared Emergency and Air Returned for the same reason on 10/25/15**

AA Y849 886GA MD80 RIC PIE GSO DV 10/30/15

**Diversion for Tail Compartment High Temperature Indication**

AA Y876 404NV MD80 PIE RFD PIA DV 10/30/15

**Maintenance Diversion**

AA Y438 406NV MD80 LAS XNA ABQ DV 11/5/15

**Media Reports Pressurization Warning Light**

AA Y482 422NV MD80 LAS GRR GR 11/6/15

**Excessive Play in the Rudder Pedals. (Primary Flight Control)**

AA Y1073 906NV B757 LAX HNL GR 11/7/15

**Cabin Entry Door Open Indication**

AA Y490 MD80 LAS BLV AR 11/8/15

**Air Return due to Dual Flight Director Failure**

AA Y1050 906NV B757 HNL LAS GR 11/8/15

**Cabin Entry Door Open Indication (Repeat Write up as 11/7/15)**

AA Y794 MD80 SFB TOL GR 11/9/15

**Aircraft Gate Returned Twice for Flight Director Issues**

AAY166 306NV A319 IAW ATW GR 11/11/15

**Rudder Trim Problems (Primary Flight Control)**

AAY456 414NV MD80 LAS FSD GR 11/12/15

**Low Hydraulic Pressure**

AAY180 878GA MD80 IAW MOT RTO 11/13/15

**Low Speed Abort due to #1 Engine Power Indication Issue.**

AAY715 403NV MD80 OWB SFB AR 11/15/15

**Smoke in the Cabin Emergency Declared. 3<sup>rd</sup> Emergency Air Return for this aircraft for this problem since 10/25/15.**

AAY759 864GA MD80 IND SFB GR 11/16/15

**Problem with First Officers Primary Flight Display**

AAY606 864GA MD80 SFB YNG GR 11/19/15

**Engine Starting Issue**

AAY490 406NV MD80 LAS BLV GR 11/20/15

**Engine Starting Issue**

AAY826 419NV MD80 PIE LCK GR 11/20/15

**#2 Generator would not come on line after start**

AAY772 405NV MD80 SFB FWA GR 11/22/15

**Engine Starting Issues**

AAY769 875GA MD80 RDU SFB GR 11/25/15

**Engine Starting Issue**

AAY828 419NV MD80 PIE GSP GR 11/25/15

**Hydraulic System Issues**

AAY482 420NV MD80 LAS GRR GR 11/27/15

**Slat Position Disagree Light.**

AAY738 425NV MD80 SFB ELM AR 11/28/15

**Air Return Left Generator problem followed by APR Generator Issue.**

AAY169 407NV MD80 MLI IWA GR 12/3/15

**Cargo Door Open Indication**

AA Y815	403NV	MD80	RDU	PIE	AR	12/3/15
<b>Smoke in the Cabin Emergency Declared 4<sup>th</sup> Air Return for this Aircraft for this issue since 10/25/15.</b>						
AA Y157	310NV	A319	COS	IWA	GR	12/4/15
<b>Anti-Ice issues</b>						
AA Y780	865GA	MD80	SBN	PIE	GR	12/6/15
<b>Unable to Start Engine</b>						
AA Y486	903NV	B757	LAS	BIS	GR	12/9/15
<b>#1 Engine Generator Trouble</b>						
AA Y452	903NV	B757	LAS	AUS	GR	12/10/15
<b>#1 Engine Generator Trouble (Same as 12/9 Gate Return)</b>						
AA Y180	878GA	MD80	IWA	MOT	GR	12/14/15
<b>Captain's Instrument Landing System Failed</b>						
AA Y402	417NV	MD80	LAS	SGF	GR	12/18/15
<b>#1 Engine Generator Failure</b>						
AA Y519	424NV	MD80	LAS	IDA	GR	12/20/15
<b>Engine Strat Issues</b>						
AA Y1207	871GA	MD80	PDG	AVL	GR	12/21/15
<b>Autospoiler Failure</b>						
AA Y748	412NV	MD80	SFB	SBN	GR	12/22/15
<b>Engine Oil Filter Clogged</b>						
AA Y104	868GA	MD80	IWA	PIA	GR	12/23/15
<b>Fuel Leak</b>						
AA Y678	404NV	MD80	SFB	SGF	GR	12/23/15
<b>Engine Problems</b>						
AA Y606	891GA	MD80	SFB	YNG	JAX	DV 12/24/14
<b>#1 Engine came open at altitude. Emergency Declared Divert to JAX</b>						
AA Y662	881GA	MD80	SFB	LEX	RTO	12/24/15
<b>Low Speed Abort due to Wheel Not Turning Indication</b>						
AA Y186	326NV	A319	IWA	BIS	GR	12/25/15

**Engine Starting Issues**

AA9878 878GA MD80 GEG LAS AR 12/25/15

**Air Return due to Pressurization Issues**

AA9798 886GA MD80 PIE SGF AR 12/26/15

**Air Return due to Oil Temperature Issues and Start Valve Open indication**

AA9528 883GA MD80 LAS SCK GR 12/27/15

**Low Engine Oil Quantity and Take Off Configuration Warning**

AA982 223NV A320 PDG ABE AR 12/27/15

**Standby Attitude Indicator Failed In Flight**

AA959 874GA MD80 SBN PDG RTO 12/28/15

**Low Speed Aborted Takeoff due to Engine Compressor Stalling**

AA9778 227NV A320 SFB ATW FAR DV 12/28/15

**Anti Ice System Trouble. Emergency Declared Divert to FAR**

AA9736 865GA MD80 SFB BGR PVD DV 12/30/15

**Excessive Heat in Aft Lav due to Bleed Air Leak in Tail Compartment. Declared Emergency Divert to PVD.**

AA9760 405NV MD80 SFB CID CHA DV 12/31/15

**Catastrophic #1 Engine Failure. Declared Emergency Divert to CHA**

AA9145 875GA MD80 BLI IWA GJT DV 1/2/16

**Catastrophic #2 Engine Failure. Declared Emergency Divert to GJY**

AA9812 861GA MD80 PIE RGA GR 1/3/16

**#1 Engine Starting issues**

AA9756 227NV A320 SFB AUS RTO 1/10/16

**High Speed Aborted Take Off due to #1 Engine Compressor issues.**

AA9639 403NV MD80 JQF SFB 1/11/16

**#2 Engine Compressor Stall on Climb Out Requiring an Engine Change on Landing.**

AA9188 886GA MD80 IWA BZN GR 1/15/16

**Total Anti-skid breaking failure indication.**

AA9807 861GA MD80 SGF PIE GR 1/17/16

**RT Generator will not stay on line.**



AAY490	79GA	MD80	LAS	BLV	AR	1/18/16
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**Tail Compartment High Temperature Indication.**

AAY2532	427NV	MD80	LAS	CVG	AR	1/18/16
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**Left Air Conditioning Pack Over Temperature.**

AAY804	225NV	A320	PIE	CHA	AR	1/25/16
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**Cargo Door Unsafe Indication, Return to Field.**

AAY460	410NV	MD80	LAX	CID	AR	1/28/16
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**Nose Landing Gear Unsafe Light. Return to Field.**

AAY496	879GA	MD80	LAS	DSM	GR	1/29/16
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**Right Engine Idle issues.**

**Numerous flights: Aircraft 225NV A320 Had no less than 5 ignition failure issues in the month of January 2016.**

**Background on The Aviation Mechanics Coalition, Inc.**

Given Allegiant pilots' growing concerns about the airline's approach to maintenance and its impact on passenger safety, the Aviation Mechanics Coalition has been compiling off-the-record reports of incidents from pilots since 2014. Previous reports document incidents from [September of 2014 through March 2015](#) and the [summer of 2015](#).

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.

Please see [Teamsterair.org](http://Teamsterair.org) for the list of mechanical issues.