NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

April 5, 2016

Maintenance Factual

DCA16FA013

A. ACCIDENT

Operator:	Dynamic Airways LLC
Location:	Fort Lauderdale, Florida
Date:	October 29, 2015
Time:	1233 Eastern Daylight Time[1]
Airplane:	Boeing B767-269, Registration Number: N251MY, Serial Number: 23280

B. MAINTENANCE GROUP

Group Lead: Gregory Borsari
National Transportation Safety Board
Washington, DC

Participant: Robert Smedley
Federal Aviation Administration
Daly City, CA

[1] All times are Eastern Daylight Time (EDT) based on a 24-hour clock, unless otherwise noted. Actual time of incident is approximate.

Participant: Eugene Steller Jr.
Boeing Commercial Airplanes
Seal Beach, CA

Participant: Terry Mack
Dynamic International Airways
Greensboro, NC

C. SUMMARY

On October 29, 2015, about 1233 eastern daylight time (EDT), a Boeing 767-200ER, N251MY, operating as Dynamic Airways flight 405, caught fire while taxiing for departure at Fort Lauderdale-Hollywood International Airport (FLL), Fort Lauderdale, Florida. One passenger received serious injuries and the remaining 89 passengers and 11 flight crewmembers received minor injuries or were not injured. The airplane sustained substantial thermal damage from the fire. Flight 405 was a scheduled charter flight en route to Caracas, Venezuela, operating under the provisions of 14 Code of Federal Regulations Part 121 supplemental. Visual meteorological conditions prevailed at the time of the accident.

D. DETAILS OF THE INVESTIGATION

1.0 Air Operator Certificate

On October 7, 2010, the Federal Aviation Administration (FAA) Flight Standards District Office (FSDO), Eastern Region issued Dynamic Airways LLC., 701 North Terminal Road, Greensboro, NC, 27409, Certificate Number 2DYA562M.

See Attachment 1

2.0 Operations Specifications (OpSpecs)[2]

Dynamic Airways LLC has a Part 121 Certificate, which includes the standards, terms, conditions, and limitations contained in the FAA approved Operations Specifications (Parts D and E).

a) Air carrier was authorized as a 14CFR Part 121 operation.

b) Per section D072 of the OpSpecs, the Continuous Airworthiness Maintenance Program (CAMP), authorized Dynamic Airways LLC to use the 767 Maintenance Inspection Program (MIP), General Maintenance, Continuous Analysis Surveillance System (CASS) Manual, Reduced Vertical Separation Minimum Programs, Digital Flight Data Recorder Manual, Maintenance Standard Practices Manual to maintain the airplanes. N251MY is a B767-269 model aircraft which was not listed in the CAMP Program.

[2] Operations Specifications contains the authorizations, limitations, and certain procedures under which each kind of operation, if applicable, is to be conducted by the certificate holder.

c) Per section D085 of the OpSpecs, Dynamic Airways LLC operates seven (7) 767-200 aircraft in its fleet.

d) Per section D089 of the OpSpecs, Dynamic Airways LLC was authorized to use the Maintenance Time Limitations specified in the B-767-269 MIP-767 dated 09/1/2015.

e) Per section D091 of the OpSpecs, Dynamic Airways LLC was authorized to make arrangements with other organizations to perform substantial maintenance on its fleet of aircraft. The Maintenance Provider listing is found in the General Maintenance Manual.

f) According to Section D095 of the OpSpecs, Dynamic Airways LLC was authorized to use an approved Minimum Equipment List (MEL) for all airplanes in its fleet.

g) According to Section D097 of the OpSpecs, the FAA has approved sections (date 10/9/2014) of Dynamic Airways LLC maintenance program for the compliance of Supplemental Inspections (121.1109), Fuel Tank Systems Maintenance Program (121.1113) and Electrical Wiring Interconnection Systems (EWIS) Maintenance Program (121.1111).

h) Per section D485 of the OpSpecs, Dynamic Airways LLC had an Aging Aircraft Inspection and Records Review accomplished on aircraft N251MY in August, 2015.

i) Per section E096 of the OpSpecs, Dynamic Airways LLC was authorized for a Weight and Balance Program.

3.0 Aircraft Information

The Boeing Airplane Company manufactured the airplane on March 20, 1986. It was then delivered to Kuwait Airlines, the original owner.

In 2006, KMW Leasing II, LLC purchased the B767-269 aircraft, serial number 23280. Prior to KMW Leasing taking possession, the airplane was owned and operated by several companies both domestically and internationally.

KMW Leasing II, LLC sent the airplane to Kalitta Air in August 2012 to have a 4C Check accomplished. It left Kalitta Air on November 12, 2012 and was sent to AeroTurbine in Goodyear, Arizona to be stored.

KMW Leasing sent the airplane to Kalitta Air on April 15, 2015 to have a 6C Check and other bridging tasks accomplished in preparation for lease to Dynamic Airways. It was ferried to Greensboro, NC on June 25, 2015. Dynamic Airways LLC took possession of the airplane on June 26, 2015. The conformity inspection was accomplished on August 29, 2015. On September 12, 2015 the airplane was put on the Dynamic Airways certificate.

The airplane had 30,108.26 flight hours with 9,986 flight cycles at the time of the incident. Since putting the airplane on the Dynamic Airways Certificate, the airplane accumulated 234.34 flight hours and 83 flight cycles.

The airplane was equipped with two JT9D-7R4E4 Pratt and Whitney engines and a Garrett APU. The engines and APU had accumulated the following operating times at the time of the incident:

Table 1 - Engine and APU Information

	No.1 Engine	No.2 Engine	APU
Manufacturer	PW	PW	Garrett
Part Number	JT 9D-7R4E	JT 9D-7R4E	GTCP 331-200ER
Manufacture Date	12/1985	02/1986	07/29/1988
Date Installed	08/22/2008	05/16/2011	10/10/2006
Serial Number	716806	716808	P-1276
Location of Engine/APU Installation	Avborne N/R 3558	Pacific Aerospace Research N/R 4067	Timco N/R 599072
Time Since Overhaul (hours)	N/A*	N/A*	N/A*
Cycles Since Overhaul	N/A*	N/A*	N/A*
Days Since Overhaul	N/A*	N/A*	N/A*
Engine Total Time Hours	16,742	18,695.08	28,911.02 Since 9/30/2006
Engine Total Cycles	5,315	6,595	16,241

* The engines as installed are monitored and maintained according to the life-limit requirements of the modules that combined make the engine "whole". An engineering assessment of the engine modules dictates the level of maintenance to be accomplished. Therefore, it is rare that the entire engine receives an "overhaul" during a shop visit.

4.0 Aircraft Maintenance Program

Dynamic Airways developed their FAA approved maintenance program by utilizing the current Boeing 767-200/-300 Manuals and Documents (i.e. B767 Maintenance Review Board Report (MRB) Document # D622T001-MRBR, Revision June 2014, B767 Maintenance Planning Document (MPD) Document # D622T001, Revision April 2015, D622T001-9-01, 767 Airworthiness Limitations (AWL), Revised February 1, 2015, D622T001-9-02, 767 Airworthiness Limitations - Line Number Specific, Revised June 1, 2015, D622T001-9-03, 767 Certification Maintenance Requirements (CMRs), Revised July 1, 2015, D622T001-9-04, 767 Special Compliance Items/Airworthiness Limitations, Revised October 1, 2014 and all incorporated STC's, with Continuous Airworthiness Requirements (CAR's)).

The Dynamic Airways Maintenance Program has incorporated the basic manufacturer's requirements fully and provides for the general airworthiness of the aircraft. The whole program resides in the B767 Maintenance Inspection Program Manual. Dynamic Airways tracks the requirements of the maintenance program electronically utilizing Silver Wings Aviation Management System, "Silverwings".

The Maintenance Program consists of the following:

A. DAILY CHECK - visual check of specific areas of the aircraft to detect discrepancies and to ensure the aircraft is prepared for flight. Tasks are taken from the MPD “TR” and 24 calendar hour tasks. This check will be repeated once every calendar day, while aircraft is in service. (Not required if aircraft is not flown.)

B. SERVICE CHECK - consists of an interior and exterior walk around inspection and systems fluid checks, operational checks and servicing. This Check must be accomplished every 100 flight hours, 50 Flight cycles or 7 days, whichever comes first. A Service Check incorporates the requirements of a Daily Check.

C. 30-DAY CHECK - consists of an interior and exterior walk around inspection and systems fluid checks, operational checks and servicing. This Check must be accomplished every 400 flight hours or 30 days, whichever comes first. A 30-Day Check incorporates the requirements of a Service Check.

D. "A" CHECK - consists of a detailed interior and exterior walk around inspection, systems servicing, filter changes, various lubrications, interior checks for condition and security, and operational checks of systems. This Check must be accomplished every 750 hours or 300 cycles or 6 months, whichever comes first. The 30 day task card is issued at each “A” Check thus the check accomplishes the requirements of a Daily, Service Check and 30-Day Check. The “A” Check program consists of six (6) checks. The A Check program is not a “phased” program. Each “A” check contains the basic MPD A Check requirements.

E. "C" CHECK - consists of a thorough visual check of the general condition and security of installations and adjacent structure in all designated zone areas of the aircraft. Internal areas of the aircraft are opened as necessary for adequate visual inspection as specified by the B767 MPD. This check must be accomplished at intervals of 18 months, 6,000 hours or 3,000 cycles. The 30 day task card is issued at each “C” Check thus the check accomplishes the requirements of a Daily, Service Check and 30-Day Check. The “C” Check does not accomplish the requirements of the “A” Check. The 6A check must be accomplished at the same time as the “C” Check. Note the 6A check contains all “A” check task cards. The “C” Check program consists of eight (8) checks. The C Check program is not a “phased” program. Each C check contains the basic MPD C Check requirements.

F. STRUCTURAL TASKS - All structural tasks have been incorporated into the “C” Check. Intervals that do not correspond with a “C” Check are tracked individually.

G. CPCP TASKS - The corrosion prevention and control tasks as listed in Section 10 of the B767 MPD have been deleted and are now incorporated into the Systems, Zonal and Structural Tasks of the MPD.

Table 2 - Maintenance Check Intervals

Check	Time Limit	Last Check Date	Location	Total Time	Total Cycles
Daily Check	Each Departure	10/28/2015	FLL	30,108	9,986
Service Check	7 Days/100 Flight Hours/ 50 Flight Cycles	10/20/2015	FLL	30,064	9,962
30-Day Check	400 Flight Hours/ 30 Days	10/08/2015	FLL	29,999	9,948
1A Check	6 Months/ 750 Flight Hours/ 300 Flight Cycles	06/25/2015	OSC-Kalitta	29,875	9,903
2A Check	12 Months/ 1500 Flight Hours/ 600 Flight Cycles	06/25/2015	OSC-Kalitta	29,875	9,903
3A Check	18 Months/ 2250 Flight Hours/ 9000 Flight Cycles	06/25/2015	OSC-Kalitta	29,875	9,903
4A Check	3000 Fight Hours/ 1200 Flight Cycles	06/25/2015	OSC-Kalitta	29,875	9,903
5A Check	3750 Flight Hours/ 1500 Flight Cycles	06/25/2015	OSC-Kalitta	29,875	9,903
6A Check	4500 Flight Hours/ 1800 Flight Cycles	06/25/2015	OSC-Kalitta	29,875	9,903
1C Check	18 Months/ 6000 Flight Hours/ 3000 Flight Cycles	06/25/2015	OSC-Kalitta	29,875	9,903
2C Check	36 Months/ 12000 Flight Hours/ 6000 Flight Cycles	06/25/2015	OSC-Kalitta	29,875	9,903
3C Check	54 Months/ 18000 Flight Hours/ 9000 Flight Cycles	06/25/2015	OSC-Kalitta	29,875	9,903
4C Check	72 Months/ 24000 Flight Hours/ 12000 Flight Cycles	10/30/2012	OSC-Kalitta	29,868	9,901
5C Check	90 Months/ 30000 Flight Hours/ 15000 Flight Cycles	06/25/2015	OSC-Kalitta	29,875	9,903
6C Check	108 Months/ 36000 Flight Hours/ 18000 Flight Cycles	06/25/20015	OSC-Kalitta	29,875	9,903
7C Check	126 Months/ 42000 Flight Hours/ 21000 Flight Cycles	06/25/2015	OSC-Kalitta	29,876	9,903
8C Check	144 Months/ 72000 Flight Hours/ 36000 Flight Cycles	07/14/2006	GSO- Timco	27,090	9,536

5.0 Continuing Analysis and Surveillance System (CASS)[3]

The Dynamic Airways CASS program continually assessed its Maintenance and Inspection program and all persons acting under that program (including sub-contractors) to ensure continuous compliance with its requirements and the regulations. Dynamic Airways had a system in place that detected, identified, and provided timely corrective action, on a continuing basis, for all deficiencies or deviations in those portions of its maintenance program accomplished by the essential maintenance provider, including maintenance recordkeeping. Dynamic Airways LLC conducted monthly CASS meetings, which according to Dynamic Airways LLC representative, the FAA Principal Maintenance Inspectors or representatives

[3] As established by 14 CFR Part 121.373, each certificate holder shall establish and maintain a system for the continuing analysis and surveillance of the performance and effectiveness of its inspection program and the program covering other maintenance, preventative maintenance and alterations and for the correction of any deficiency in those programs, regardless of whether those programs are carried out by the certificate holder or by another person.

attend. The CASS meetings covered the preceding month's activity. The CASS report showed statistical analysis of maintenance data collected from several sources i.e. Aircraft performance, Premature component removals, Deferred items, Pilot Reports, Minimum Equipment List, etc.

The CASS report from September, 2015 was reviewed. There were no systemic issues with the engines or fuel systems in the fleet.

6.0 Minimum Equipment List (MEL)

Dynamic Airways LLC was authorized to use an approved MEL on its airplanes per its OpSpecs. Under the FAA approved OpSpecs, Dynamic Airways LLC was authorized to use an MEL (revision 37, dated October 27, 2015) on its fleet of airplanes. This document is based on MMEL 767 Revision 37, dated March 27, 2015 and Boeing Dispatch Deviation Guide (DDG) D630T002-TBC, Revision 37 dated March 27, 2015. The applicable MEL is current.

From September 12, 2015 to October 29, 2015 aircraft records showed 59 recorded MEL deferrals. At the time of the incident, there were 12 open MEL items and 8 open Non-Essential Furnishings (NEF) deferrals in the airplane logbook and electronic records. The reviewed records were in compliance with Dynamic Airways approved MEL and met GMM requirements. There are no open or closed deferral actions involving the fuel supply (ATA 28) system.

7.0 Supplemental Type Certificates (STC)[4]

Supplemental Type Certificates (STCs), supplied by Dynamic Airways LLC, were reviewed. A total of 9 STCs were documented and installed on the airplane. There were no recorded STCs to the aircraft fuel system or engine pylon struts.

8.0 Airworthiness Directives (AD)[5] and Service Bulletins (SB)

Dynamic Airways LLC provided an AD summary for review. The AD summary contained the applicable Service Bulletins associated with the ADs.

A review of Airworthiness Directive status lists for the airplane, powerplants and appliances revealed the following:

Airframe AD's

There were 290 applicable Airworthiness Directives to this aircraft by S/N

64 applicable AD's were REPETITIVE
33 applicable AD's were ACTIVE
3 applicable AD's were OPEN

[4] The FAA issues Supplement Type Certificates, which authorize a major change or alteration to an aircraft, engine or component that has been built under an approved Type Certificate.
[5] Airworthiness Directive (AD) is a regulatory notice sent out by the FAA and EASA informing the operator of an action that must be taken for the aircraft to maintain its airworthiness status.

190 applicable AD's were terminated

Engine AD's

#1 Engine - JT9D-7R4E4, S/N 716806

10 applicable AD's recorded
10 applicable AD's terminated

#2 Engine - JT9D-7R4E4, S/N 716808

15 applicable AD's recorded
3 applicable repetitive AD's
3 applicable AD's were active
9 applicable AD's terminated

Appliance AD Status:

51 published AD's for the event (767) aircraft.

5 applicable AD's for the accident airplane recorded.
4 applicable AD's had been terminated
1 applicable AD was active

No discrepancies were found during the review of the listing. The Airframe, Engine and Appliance AD status as reflected by Dynamic Airways records were current. There were no AD's relative to the #1 Engine fuel system plumbing, or pylon strut affecting fuel system plumbing.

On November 21, 1991, Boeing published Alert Service Bulletin 767-28A-0037 which recommended operators replace existing strut to engine fuel tubes in the left and right engine due to cracking to prevent a possibility of an engine fire. The new fuel tube had a thicker wall and a larger bend radius. The Alert Service Bulletin was a one- time replacement of the fuel tubes. According to historical maintenance records Boeing Alert Service Bulletin 767-28A-0037 was incorporated on August 22, 1995 at aircraft total time18107 hours. There were no ADs associated to this Alert Service Bulletin.

9.0 Aircraft Technical Logs

A review of Aircraft Technical and Cabin Logs was carried out from September 12, 2015 thru October 29, 2015, the date of the accident.

Particular attention was given to ATA chapters 28, 29, 54 and all engine ATA related items by the maintenance record group. The day prior to the incident, maintenance accomplished a Daily Check on the airplane as well as several maintenance tasks. There was a Technical Log page

(007783) write up for a FMC Fuel Quantity Blank in which maintenance reset the fuel system per MM B767 28-42-00. No defects were noted during the operational check of the system.

10.0 Weight and Balance

Per the Dynamic Airways LLC OpSpecs, the airplanes were to be weighed every thirty-six (36) calendar months. The last actual weight and balance on the airplane was accomplished on June 18, 2015 by Kalitta Air for KMW Leasing prior to Dynamic Airways LLC taking possession of the airplane. The figures for the last weight and balance are shown below:

Basic Operating Weight:	176,960 pounds
Arm:	963.13 inches
Moment:	170,396,960 lb-inches

See Attachment 2

11.0 Service Difficulty Reports (SDR)[6] and Mechanical Interruption Summary Report (MISR)[7]

Dynamic Airways records reflected the submission of six (6) Service Difficulty Reports (SDR) during the month of September 2015. These reports were submitted as required to the FAA, as reflected in the GMM requirements for the company. There were no items concerning the aircraft fuel system.

Dynamic Airways records indicated five (5) Mechanical Interruption Service Reports (MISR) during month of September 2015. The reports were submitted as required to their local FAA certificate holding office. The records did not contain indications of mechanical interruptions due to aircraft fuel system malfunctions, including leaks.

12.0 Major Repairs and Alterations

There are 41 recorded Major Repairs in Dynamic Airways records for the event aircraft. Dynamic Airways compliance documents were reviewed. There were no recorded major repairs in the area subject to the left wing fuel system, or pylon structure. The most recent major repair recorded occurred on June 24, 2005.

There were a combined total of 32 Major Alterations accomplished on the aircraft. Nine (9) of this total were accomplished via STC's. The remaining alterations were accomplished through

[6] As required under 14 CFR 121.703, each scheduled operator is to report the occurrence or detection of each failure, malfunction or defect concerning (a) fires during flight, (b) false fire warning during flight, (c) engine exhaust system that causes damage during flight, (e) an aircraft component that causes accumulation or circulation of smoke, vapor, or toxic or noxious fumes during flight, (f) engine shutdown during flight, (g) a propeller feathering, (h) aircraft structure requiring major repairs, (i) cracks, corrosion, (j) other safety critical issues as stated in the FAR part. These occurrences must be reported within 72 hours of the event.

[7] Each scheduled operator is required under 14 CFR Part 121.705 to submit a summary of any (a) interruption to flight, (b) unscheduled change of aircraft en route, or unscheduled stop or diversion from a route caused by known or suspected mechanical difficulties or malfunctions that are not required to be reported as service difficulty reports.

Engineering Order / Authorization process, and were comprised predominately of aircraft passenger cabin modifications (ATA 25). There were no recorded alterations to the aircraft fuel system or engine pylon struts.

13.0 Life Limited Parts

Life Limited Parts status report for the airplane, the two installed powerplants and the APU were reviewed. No expired life limited parts were identified.

14.0 Vendors

The Maintenance Records Group reviewed the Approved Vendor List provided Dynamic Airways LLC. Dynamic Airways LLC accomplished audits of the approved vendors every two years. All essential maintenance vendors were listed in the operator's Approved Maintenance Provider List. There were no discrepancies in the listing.

15.0 Method of Record Keeping

Dynamic Airways LLC used several different methods for keeping track of the maintenance of its fleet. Dynamic Airways utilized an electronic computerized maintenance tracking program to track time limitations and perform daily duties (i.e. MEL/carry over/deferred item records, Engineering Authorizations, engine records etc.) with a software program called "Silverwings". Aircraft record information was entered into the system on a daily basis. A computer file history was maintained so that all inspections and checks were monitored for time limitations and backed up to prevent total loss of historical files.

The majority of hard copies of the documents were kept based on the Dynamic Airways LLC record retention policy (GMM Chapter 9).

16.0 Manuals

Dynamic Airways LLC used the following manuals to maintain the airworthiness of its fleet and management of the airline.

General Maintenance Manual (GMM) – The manual provided company policies and procedures to be followed by all persons performing maintenance and inspection services on company aircraft.

B767 Maintenance Inspection Program Manual – The manual provided policies and procedures in implementing the 767 maintenance inspection program to ensure the airworthiness of the airplanes.

CASS Manual – The manual was designed to ensure that Dynamic Airways conducts its inspection and maintenance programs according to regulations and company manuals, and that these programs were effective in achieving the desired result of consistently having only airworthy aircraft approved for return to service.

Minimum Equipment List (MEL) – List of equipment and instruments that may be inoperative on a specific aircraft.

Weight and Balance Manual – Weight and balance procedures to be followed by maintenance and flight operations personnel on all aircraft operated by Dynamic Airways LLC.

Manufacture Supplied Manuals - Aircraft/Engine Maintenance Manuals, Structural Repair Manuals, Overhaul Manuals, Wiring Manuals, Fault Isolation Manuals, Illustrated Parts Catalog, Corrosion Program Manual, NDT Manual, Significant Structure Items Manual, Service Bulletins and Engine Manuals.

17.0 Boeing Service Letter – Strut Fuel Line Installation Coupling Retainer / O-ring Replacement

March 14, 2000, Boeing released Service Letter 767- SL-28-033. The service letter provided details on in-service strut fuel feed line coupling fractures and provided a recommended replacement interval for the coupling retainer halves (BACR10AD32), the coupling retainer rings (BACR12BN32) and the O-rings (MS29513-330). The retainer halves were part of the BACC42R32 flexible coupling assembly. In-service experience on the 767 airplane and other Boeing models indicated that a number of fuel leaks were related to deteriorated O-rings installed in the Wiggins couplings in the strut fuel lines.

The 767 MPD (Item number 28-018-01 and Task Card number 28-018-01-01) was added to the Maintenance Planning Data document as a Boeing recommended inspection and was revised to include a recommendation for a periodic replacement of the retainer halves, the retainer rings and the O-rings installed in the 767 strut fuel line. Further, to avoid fuel leaks due to retainer halve(s) damage or O-rings(s) aging, and to prevent damage to new O-rings due to worn/bent retaining rings, Boeing suggested operators replace these components on the strut fuel feed line installation at one of the following intervals, whichever was the most frequent:

A. 1 “D” check or 4 “C” check intervals
B. 25,000 flight hours
C. Five years regardless of flight hours
D. Whenever a coupling is disassembled for any reason

After replacement of the above hardware, Boeing suggested operators ensure the couplings were assembled correctly per the Aircraft Maintenance Manual.

The last 4C where MPD Task Card Number 28-018-01-01 was accomplished on N251MY was on October 12, 2012 by Kalitta Air prior to Dynamic Airways LLC taking possession of the airplane on June 26, 2015.

The strut fuel feed line components while not specifically called out could be looked at during a Zonal Inspection (General Visual) of the area which was accomplished at every 1C interval. The last Zonal Inspection was accomplished May 5, 2015, again prior to Dynamic Airways LLC taking possession of the airplane.

In the August 22, 2014 revision of the MPD, MPD item number 28-018-01 was deleted by Boeing from the MPD with the following reason - "Deleted Task because Service Letter 767-SL-28-033 provides maintenance action required and operators should manage this task through their internal processes for incorporating service letters in their maintenance program as needed".

18.0 Kalitta Air 6C Check June 25, 2015

From April 21, 2015 to June 25, 2015, KMW Leasing sent N251MY to Kalitta Air to have a 6C Check accomplished. The Maintenance Group reviewed the C Check work package and concentrated on work accomplished around the #1 Engine Fuel Feed System. Even though Dynamic Airways LLC had not taken possession of the airplane at the time of the 6C Check they had developed their own numbering system for their task cards for the C Check.

Table 3 – 6C Check Fuel Feed System Task

Dynamic Airways Task Card	MPD Task Number	Description	Date Accomplished
23541150	78-120-01	General Visual Inspection – Left Engine Nacelle/Strut Fire and Drainage Seals (JT9D-7R4)	May 17, 2015
23143050	54-406-00	General Visual Inspection - Left Nacelle Strut	May 6, 2015
33343250	54-426-00 54-438-00	Internal Visual Inspection – Left Nacelle Strut Internal Detailed Inspection – Left Nacelle Strut	May 5, 2015 May 5, 2015
33343150	54-424-00	Internal Detailed Inspection – Left Nacelle Strut FWD Upper Spar	April 30, 2015

There were no additional non-routine write-ups associated with any of the above inspections.

19.0 Flight Recorder Parameter Verification

The flight recorder parameter verification was a 6,000 flight hour or 18 month Task (MPD Task 31-001-00) whichever came first. The task verifies that each parameter is being recorded correctly and if not, corrective action taken. The parameter verification reviewed the FAA mandatory parameters. The last check was completed on May 29, 2015 by Aero Instruments and Avionics Inc. prior to Dynamic Airways LLC taking possession of the airplane.

20.0 Interview Summaries

Mr. Charles Golstrom, Senior Inspector for Kalitta Air, LLC was interviewed on February 2, 2016 via phone.

Mr. Steve Pidgeon, Inspector for Kalitta Air LLC was interviewed on February 3, 2016 via phone.

Mr. Joseph Baker, mechanic for STS under contract for Kalitta Air LLC was interviewed on February 4, 2016 via phone.

See Attachment 3

Submitted by: Gregory Borsari
Aviation Accident Investigator
Maintenance

Attachment 1

Air Operator Certificate

US Department
of Transportation
Federal Aviation
Administration

Air Carrier Certificate

This certifies that

DYNAMIC AIRWAYS, LLC
701 North Terminal Service Road
Greensboro, NC 27409

has met the requirements of the Federal Aviation Act of 1958, as amended, and the rules, regulations, and standards prescribed thereunder for the issuance of this certificate and is hereby authorized to operate as an air carrier and conduct common carriage operations in accordance with said Act and the rules, regulations, and standards prescribed thereunder and the terms, conditions, and limitations contained in the approved operations specifications.

This certificate is not transferable and, unless sooner surrendered, suspended, or revoked, shall continue in effect indefinitely.

By Direction of the Administrator

[redacted]

Certificate number: 2DYA562M

Effective Date: October 7, 2010

Issued at: EA-39,Greensboro, NC

Lawrence Fields
(Signature)
Manager, Flight Standards Division
(Title)

Eastern Region
(Region/Office)

Attachment 2

Weight & Balance

Dynamic Airways

DYA-MF-04D
REV: 0
7/4/2013

AIRCRAFT WEIGHT AND BALANCE REPORT
SUBTRACTIONS/ADDITIONS

AIRCRAFT: N251MY SERIAL #: 23280 AIRCRAFT TYPE: B767-200

The Net Change total shall be entered on form DYA-MF-04A.

ITEM DESCRIPTION	REMOVED			ADDED		
	REMOVED WEIGHT	X ARM	=MOMENT	ADDED WEIGHT	X ARM	=MOMENT
1. Two pilots				480	181.2	86976.0
2. Flight Crew Flight Kits				0		
3. Cabin Crew (FWD FA)				210	288	60480.0
2 FA FWD Galley				420	269	112980.0
2FA AFT Galley				420	1592	668640.0
4. All crew baggage						
5. Aircraft Manuals and Forms				50	220	11000.0
6. Catering Service						0.0
FWD Galley				174	269	46806.0
AFT Galley				800	1592	1273600.0
7. Potable water (Right Main tanks)				909	1572	1429105.2
8. Potable water (Auxiliary tank)				151.2	1,449	219088.8

Weight Empty Data BEW	Weight Pounds	C.G. Arm Inches	Moment Inch/Pounds
Airplane as Weighed	176,920.0	963.13	170,396,960
Shortage Items +			
Overage Items -	3,614		3,908,676.0
Airplane Basic Operating Weigh	W: **180,534.3**	Arm: **965.499**	**174,305,636**
Calculated By Fidel Herrera	Empty Operating weight C. G.		**965.499**
% MAC	$\frac{(B.A. - 913.2)x}{237.5} \times 100 = \frac{52.30}{237.5} X 100$		% MAC = **22.0**

Sep 11, 2015

[redacted]

Attachment 3

Interview Summaries

Interview Summary

Name: _Charles Goldstrom__
Date/Time: 2 February 2016 at _1305__ **EST**
Location: Via phone
Representation: Yes _Robert Fabyan___
Present: Greg Borsari, NTSB; Pocholo Cruz, NTSB; Eugene Steller Jr., Boeing; Robert Smedley, FAA; Terry Mack, Dynamic Airways

Mr. Charles Goldstrom is a Senior Inspector for Kalitta and has been with the company for about 10 years. He said his responsibility in 2012 was as an inspector during the 4C maintenance check on this aircraft.

Asked to describe his professional background with regard to aviation he said he has been in the industry since about 1977 with various airlines. From 1985 he was with Republic Airlines which became Northwest after a merger. He stated he has worked as a mechanic and as an inspector. When asked, he stated he has an Airframe & Powerplant certificate as well as being an authorized PMA DMAR FAA designee.

When asked about his current assignment, he stated that he is an inspector in the back shops. He said he has been in the back shops the last two years.

He was asked to describe his current duties and he stated that he performs first article inspections, conformity inspections, audits, Non Destructive Testing as well as STC prototype conformity inspections including issuing the 8130-9 tag. He added that he conforms the work to the engineering drawings.

When asked if he was familiar with the fuel line coupling seal replacement task, he responded that yes he has both performed the task as well as inspected the workmanship accomplished by others.

Asked what specifically he checks for while inspecting the fuel line couplings during the 4C maintenance check, he said that he inspects the condition of the parts, how clean the surfaces are, the coupling mating area. He added that he witnesses the installation while the mechanic is performing the work and that everything is aligned properly prior to assembly. That if the mechanic reaches for a set of pliers it is a no go as the coupling is hand tightened only. He added that they have the task card with them and step through the process as the job progresses. If they need to they also have access to the AMM. He stated that he the inspector watches the mechanic while he is completing each step and then signs off each step as it is completed.

When asked if he needed any tools to aid in the inspection, he said that yes, a mirror and flashlight was required in order to inspect the area.

When asked if there were any issues or concerns with the paperwork and he responded that honestly, he could not remember any. When further asked if both engines were worked at the same time or if they were done at different times he said if they had been worked separately that additional paperwork would be issued by the planner.

Asked if the paperwork varied from operator to operator and he said that this is a Boeing task and that some operators might have additional information or steps in their paperwork but that they were pretty much the same.

When asked if he felt there was a better way to accomplish this task he said that he did not know of any better way. He added that it sure beats the old style couplings.

He was asked how difficult it was to inspect the area inside the strut and he stated that it was not too bad. You did have to get your head up in there and use a flashlight and mirror.

As an inspector he was asked if he ever had to reject someone's work and he stated, absolutely. He is the inspector and that from time to time rework is required. He added that he is watching the work being performed and that he can correct as they go along. Or that he could issue a reject item if needed.

When asked if he knew the mechanic that did the seal replacement in October 2012, he said that yes, he has worked with him, he is a good young man, that he is up and coming. He added that his workmanship is good.

Asked if he was ever pressured to inspect an area and get the job done, he responded that no not here. Yes at previous employers, but here the airplane is the hangar and we have the time to get the job done.

When asked about training, he said that there is lots of training, both classroom and computer based. Everything from general familiarization courses up to his inspection training and recurrent training requirements.

Asked if there was a process for raising issues within the company such as safety or job related concerns he responded that yes, management was good to work with. That they listened and took action where needed. He added that there is also the FAA ASAP program if needed. Asked if he ever raised an issue and he responded, yes minor ones, but no show stoppers. He also added that the issues raised were resolved to his satisfaction.

When asked if he could get help with a task if needed he said that yes. He would ask another inspector to help him out. Maybe switch inspection tasks. He added that he got hurt in a fall a few years back and that he is not as young as he used to be so does have trouble accessing certain areas. He added that is why he transferred to the back shops.

When asked if anything was going on outside of work that might affect the quality of his work he responded no, that he was okay. Other than the fall, he was okay. He added that he has a regular sleep pattern and routine schedule he follows.

Additional questions on the fuel coupling seal replacement task card were asked. Specifically where do you find additional information that might not be on the task card? He responded that the task card is detailed enough and that he could and has utilized the AMM and other supporting documents when needed.

When asked how turnovers or worked is passed down he said that there is an electronic turnover system that is used as well as verbal discussions. He said the electronic turnover system would reflect if the task was turned over to the next shift. Everything is recorded in this system. He also stated that the fuel coupling seal replacement task on this aircraft was done in one shift without any worker turnover.

Lastly he was asked if there were any unusual circumstances going on when the seals were replaced and he stated, no, not that he could recall.

Interview concluded at 1338 EST

Interview Summary

Name: _Steve Pidgeon__
Date/Time: 3 February 2016 at _1305__ **EST**
Location: Via phone
Representation: Yes _Robert Fabyan___
Present: Greg Borsari, NTSB; Pocholo Cruz, NTSB; Eugene Stellar Jr., Boeing; Robert Smedley, FAA; Terry Mack, Dynamic Airways

Mr. Steve Pidgeon is an Inspector for Kalitta and has been with the company for about nine years. He stated that he was promoted about a month ago to an inspector position. Before that he was a general Airframe & Powerplant (A&P) mechanic for Kalitta approximately nine years. He stated that his responsibility in 2012 was as a mechanic.

He stated that he has an A&P certificate which he obtained around 2007.

When asked if he was familiar with the fuel coupling O-ring replacement task he said that yes, he has done the task before. Asked how often he did this task, he said that he figured he did this task about once or twice each year.

He was asked about how long it took to accomplish the fuel coupling seal replacement task and he stated about two to three hours per side. He responded no to the question of any special tooling required. He was asked if there were any issues, concerns or ambiguities with how the task card was written and he responded that there were not. The AMM is available to the mechanics to use if they have any questions. The task can be performed as written. When asked if the task varied from operator to operator he said no, they all used the Boeing task card. At least the ones he has worked.

He was asked if there is a better way to do the task. He responded that he could not think of any.

When asked if he did both engines on this aircraft during the "C" check, he responded no, not that he could recall. When shown the paperwork he pointed out that the task card did not state which engine this particular card was for. There should be another card attached indicating if it was for number one or number two, and he could not recall which engine he had done.
He further stated that if this was an ETOPS aircraft he would not be assigned both engines.

He was asked if one person can complete the task and he responded yes. The task does not require two people to disassemble, clean, inspect, replace the O-rings and reassemble.

When asked how he would rate the overall quality of the seals and couplings he said on a scale from 1 to 10, with 10 being the highest quality, he would give them a 7. He further stated he would prefer to see stronger material over the aluminum currently used in the coupling halves.

He responded to the question that yes the aircraft was in the hangar at the time the work was performed. He added that the lighting and conditions were good.

When asked what the access to perform this task was like he explained that there was an access panel approximately 12 x 15 inches. He added that it is kind of tight, but not too bad. Asked if any further open up or removal of any items such a pneumatic duct was required to facilitate the work he said that he could not recall.

He was asked to describe the sequence for replacing the O-rings he stated he followed the paperwork. Disassemble, clean, check fitting condition, lubricate the new O-rings and install. Then assemble. He further stated that the couplings were installed hand tight and no special tooling required. He responded to the sequence for attaching the safety wire and he stated he would safety each coupling as he went along. He was asked if there were any issues with assembling the coupling or installing the safety wire and he stated, no, no issues.

When asked about installing the bonding wire he said that he could not recall having any issues with it, not that he could remember.

When asked if there were any distractions at that time he said, no not that he could recall.

When asked about training from Kalitta, he responded that they receive the Boeing general familiarization course on each aircraft type they work. The training is classroom style.

He was asked if there was a process for him to raise issues such as safety related, paperwork issues and/or tooling he responded that yes there is a process to fill out a safety issue sheet and turn it in. He further responded that he had not had any issues but he felt comfortable enough that if there was one he could submit the safety sheet if needed.

Asked if he ever felt pressure to get a task completed he responded, yes at times but he would stick with the task requirements and complete the job. When asked if this added any frustration he responded no, not really.

He was asked about management at Kalitta and how they were to work with. He said he never had a problem with management. When further asked if he felt management understood the requirements of the task, he stated, yes they know what the job is.

When asked if he needed help with a task how he would get that help, he said he could get the help. He added he would see his lead and/or supervisor and that he has not had any problem getting help when needed.

He was asked if anything was going on in his life at that time that could have impacted is work performance and responded, no. There were no life changing events.

He indicated that he gets regular sleep and that his hours of duty were from 6:00 AM to 3:30 PM with Sunday and Mondays off at that time period.

When asked if he ever felt unfit for duty, he responded no that he has always been in pretty good shape.

Asked what type of airplanes the hangar was used for, he responded that they worked B767, DC10 and DC9 type aircraft.

He was asked if the task cards were from Boeing or Kalitta and he responded that they use the Boeing task cards. Kalitta will attach a card to the Boeing task card to distinguish between engine one and engine two.

When asked if he had changed fuel coupling seals before, he responded yes he has. Asked if he worked on both engines and he stated not if the airplane was ETOPS.

He was asked when he last replaced fuel coupling seals on a Boeing aircraft? He responded that it could have been a couple of months or up to a year ago.

When asked if he had any of his worked rejected by inspection, he responded no.

A follow up question was asked regarding when the work was inspected. Was it after the task was completed? He stated, no. The inspector is there with him while he performs the task. It is 100 percent buy back throughout the entire task.

He was asked if he signs off the paperwork step by step as they go or after the job is done. He responded that they typically get cleaned up and then complete the paperwork in the office.

A follow up question was asked regarding how the lighting was for this task. He said that he can use his portable headlamp or another flashlight if needed. He further added that the lighting was sufficient.

Interview concluded at 1344 EST

Interview Summary

Name: _Joseph Baker__
Date/Time: 4 February 2016 at _1300__ **EST**
Location: Via phone
Representation: Yes _Robert Fabyan___
Present: Greg Borsari, NTSB; Pocholo Cruz, NTSB; Eugene Stellar Jr., Boeing; Terry Mack, Dynamic Airways

Mr. Joseph Baker is a mechanic for STS Aviation Group performing contract maintenance work at Kalitta and has been with the company for about 11 months. He has an Airframe & Powerplant certificate which he obtained in 2012. Prior to joining STS he said he worked for Bonus Tech for about four years in Florida performing engine tear down work.

He was asked about his current duties and he responded that he gets his assignment from the lead, that he prints out the paperwork and reads the manual and then does the work.

When asked if he was familiar with the fuel coupling seal replacement task he said no, he would have to see the task. After showing him the task card and figures he indicated that he had not done that particular task.

He was asked about the left nacelle strut visual inspection task that he inspected during the 1015 C-check and if he was familiar with that task. He responded, yes. He was further asked to tell us specifically what he looks at and he responded that he gets the card, the manual and grabs his flash light and mirror in order to do the task.

He was prompted to tell us what specifically do you look for during the zonal inspection of the strut and he responded that he looks for corrosion, loose wiring, fuel leaks or fuel odors and that he did not recall seeing any defects with that airplane. He added that he looks for anything that does not look right or looks out of place.

When asked how often he has done that particular task he responded that he believes about three different times on other aircraft.

He was asked if he could see everything he needed and if he needed any special tooling to perform the zonal inspection of the strut. He responded yes I can see what I need to and the only tooling needed was a flashlight and mirror.

When asked if Kalitta provided any training and if so, what kind of training he responded yes, general familiarization training on the 767 aircraft. He responded that it was classroom training he received.

He was asked if there was a process he could use to raise issues or concerns with the company regardless of what it was. Safety, paperwork and tooling were provided as clarification. He said that yes he would go to his lead to raise a concern if there was one. When asked if he ever had to raise an issue he said no, he has not.

When asked if he had ever felt pressured to get a job done he said no, they know that it takes time.

He was asked if he needed help with a task could he get it and he said yes, he would go to his lead. Further questioned on if he ever had asked for help and he stated yes, once in a while and that he got the help he needed.

When asked if anything was going on in his life that could have affected his workmanship during this time period and what his sleep pattern was he responded that no, everything was normal and that he worked second shift. He also said that he gets about eight hours of sleep each night.

He was asked if anything was going on medically that could affect his workmanship or ever felt unfit for duty, he responded no to both.

When asked since being employed as a contract employee if he worked anywhere else or just at Kalitta, he said that he only works at Kalitta.

He was asked if he had any airframe mechanic or fuel system experience prior to working for STS and he said no. He further stated his previous experience was engine teardown work.

When asked what other type of aircraft he has worked he said he has worked on 727, 747, DC10 as well as the 767.

Asked if he has performed zonal inspections on other aircraft and responded yes he has. He was asked if he did the zonal inspection on both sides of this aircraft and he stated he was not sure who did the other side that he did number one engine.

He was asked to give us a sense of what he looks for while performing the zonal inspection. He responded he looks for corrosion, wiring problems, anything leaking or other defects.

He was further asked how you know if something is not correct. What do you look for? If something is out of place or not installed properly how would you know? He said he looks at the paperwork, prints out the AMM and looks at the figures. He added he has the figures with him.

He was asked if there were any additional inspections done in the area prior to the area being closed up. He said the task he did was not an inspection task, that a mechanic could do the work and that it was a while ago so he could not really remember if there were any additional inspections done in that area.

Interview concluded at 1334 EST