ATTACHMENT 11

MAINTENANCE GROUP CHAIRMAN'S FACTUAL REPORT

DCA-07-MA-310

GPM Chapter 23 Surveillance 23-21 Data Analysis

Chapter 23: Surveillance

23-21 DATA ANALYSIS

NOTE: Any change to this approved section, GPM Sec. 23-21, other than typographical corrections, requires prior approval by the Federal Aviation Administration (FAA) Airworthiness Principals.

A. GENERAL

1. This section provides instructions on how to analyze mechanical performance data. Data analysis is the process of evaluating mechanical performance data to identify characteristics indicating a need for program adjustment, revision of maintenance practices or hardware improvement (modification).

2. An "event" based program forms the basis for AA's reliability/performance analysis system. Analyzing the mechanical events and their associated Pilot Reports (PIREPs) that impact the operation of the fleet provides an excellent method of assessing the mechanical performance of the fleet.

   NOTE: "Event" based programs are also known as "non-alert" programs and are acceptable methods of analysis per FAA Advisory Circular (AC) No. 120-17A (Chapter 2, section 15, paragraph b.(2)).

3. Analyzing actual "events", such as maintenance related delays (code 46P, greater than fifteen minutes), cancellations (code 910, attributed to maintenance), and air interrupts, identify aircraft systems/components with deteriorating performance. Systems/components found with deteriorating performance may require modification and/or maintenance program adjustment.

   The overall analysis process encompasses several different steps that can only be completed through the use of a spreadsheet application. AA uses the spreadsheet application Microsoft Excel® to accomplish both the statistical analysis and the graphing functions required in this section. Refer to Figure 1 for an outline of the following analysis process.

   NOTE: All events (delays, cancels, air-interrupts) and PIREPs are assigned a four-digit Air Transport Association (ATA) numeric code. The actual number of codes varies by fleet type but range anywhere from 180 to 190 codes.

   Briefly, the first step of the analysis totals the number of events within each 4 digit ATA numeric code and ranks the totals in descending order to determine operational impact by 4 digit ATA systems. Next the analysis trends both the event parameters (delays, cancels, and air-interrupts) and PIREP count/rate to determine the performance of each metric (deteriorating/no change/improving) against the fleet. With the completion of this step, the general condition of the fleet can be determined and systems detrimental to the overall performance of the fleet can be identified.

   NOTE: A system's performance trend can be determined by analyzing the slope of the data's linear trend (utilizing Excel's® Least Square Curve Fit function). Visually, if the trend line slopes up then the system's performance is deteriorating. Mathematically, if the slope of the trend line is positive, then the system's performance is deteriorating.

   In addition, to account for seasonal effects, repeat aircraft, incorporation of maintenance program adjustments, dependability issues, etc., the time interval analyzed is 2 years.

   The next step trends both the event parameters (delays, cancels, and air-interrupts) and the PIREP count/rate within the top 4 digit ATAs to determine the performance of each metric (deteriorating/no change/improving). System ATAs that are found with increasing trends are flagged for additional analysis.

   Due to the different systems covered by the ATA codes, the analysis completed after this stage will vary depending on the type of system (interiors, structures, avionics, powerplant, etc.,). Typically, only the PIREPs associated with the delay, cancel, and air-interrupt events are reviewed. This step looks at the various maintenance discrepancies (MDIS) and/or the final action taken (FACT) of the PIREPs to assess the discrepancies and/or the fixes experienced during the event. Findings from this analysis may be shown in a tabulated chart or in a "pie" chart.

   A system(s) and/or component(s) found significantly impacting the operation and with identifiable reason(s) for the poor performance is provided to the cognizant Maintenance and Engineering groups for further evaluation on a monthly basis.

NOTE: After identifying a discrepant system/component through the review of event parameters and PIREPs, the Reliability Engineer shall try to determine the reason(s) for the inadequate performance. The deterioration may be due to a maintenance program adjustment, recent modification, repeating aircraft, or some other reason. Consequently, an attribute of this method of analysis is the inherent feature of assessing maintenance program adjustments and/or equipment modifications during routine monthly reviews.

The analysis accomplished by the Reliability Group only identifies, from mechanical performance data, the system/component causing the event. If, during the course of the reliability engineer's analysis, a firm explanation for the inadequate performance cannot be determined, or when plausible reasons are identified, the engineers can present their findings to the cognizant Maintenance and Engineering groups for further investigation and disposition. Maintenance and Engineering's analysis will attempt to identify both the failure mode of the affected system/component and whether a cost-effective solution exists. In some instances, where the affected system/component does not have a direct adverse effect on operating safety, and/or a cost-effective solution, the final disposition may simply be to continue operation of the affected system/component with its inherent reliability.

4. Another analysis step compares operational data (current 12 months vs. previous 12 months) to provide a general impact assessment of maintenance program adjustments and/or system/component modification. The rolling 24-month timeline provides an optimum period for allowing ample time for implementing significant maintenance program adjustments and/or equipment modifications on a fleet and determining if the desired affects were achieved.

5. The data analysis accomplished by the Reliability Group includes both schedule/routine and unique "ad hoc" analysis.

   All scheduled analysis shall be posted on the Reliability Website at http://me.aa.com/engineering/foe/reliability/main.asp. Unscheduled analysis originating from either a finding made during a scheduled analysis or requests made from organizations within Maintenance and Engineering shall be posted on the Reliability Website at the discretion of the Engineer who completed the review.

6. Enhancements to the process of data analysis shall be made as computer capabilities and analysis methods improve. Those enhancements that the Manager of Reliability considers to be of value to the overall reliability program shall be added to the FAA CMO approved procedures.

7. For these methods of analysis to be effective, qualified individuals are required. Consequently, an integral part of the Reliability/Performance Analysis System is the use of individuals with technical and computer backgrounds to compile and analyze the data to arrive at meaningful conclusions.

8. All evaluations initiated as a result of Reliability analysis findings that require participation of organizations within Maintenance and Engineering shall be recorded and tracked on the Reliability Project Tracking Website at http://me.aa.com/eqa/relitrack.

B. RESPONSIBILITY

1. The Reliability/Performance Analysis group is responsible for completing the analysis as detailed in this section.

2. Each fleet type will have a responsible Reliability Engineer. The Reliability Engineer is the chief advocate for the fleet's mechanical reliability. The Reliability Engineer will utilize the operational data at their disposal to accomplish the following:
   - Rank aircraft systems impacting the operation of the fleet.
   - Identify systems with deteriorating performance.
   - Categorize maintenance discrepancies (MDIS) and fixes (FACT).
   - Compare operational data.
   - Report findings to cognizant Maintenance and Engineering groups.

C. DATA ANALYSIS PROCEDURES

Microsoft Excel® forms the basis for running AA's reliability program. Both the data analysis and display functions contained within the procedures are accomplished using Excel®. Consequently, when the procedures require a specific operation such as applying a linear trend line to an event parameter graphing the resulting computations, generalized instructions are provided in lieu of listing the explicit steps of accomplishing the Excel® function.

Completion of these procedures by the Reliability Engineers ensures that the operational data is analyzed in a consistent

manner across the different fleets. Display of the data analysis results may vary slightly across the fleets. Final data display is determined at the discretion of the cognizant Reliability Engineer.

1. Monthly Fleet Review. The objective of this procedure is to identify discrepant systems/components that may require further evaluation by the cognizant Maintenance and Engineering groups.

   a. Access the master database on the Reliability Fileserver and obtain the previous month's operational data and add the new month's data into existing fleet specific database.

      NOTE: Existing fleet specific databases require a rolling minimum of 24 months of operational data (aircraft nose number, date, station, trip number, remarks, impact code, 4 digit ATA, delay/cancel/air-interrupt code).

      The previous month's data is usually available by the 10th working day into the new month. Monthly reviews shall be completed no later than the end of the month.

      For new aircraft fleets, originate a new fleet specific database. When 6 months of data is obtained, begin analyzing the data per these procedures.

   b. From the fleet specific database, complete the following operations:

      (1) Determine operational impact by four-digit ATA system. This operation determines operational impact of delays, cancels, and air-interrupts in each four-digit ATA system. Only the top 25 ATA sub-chapters affecting the operational performance of the fleet for a one-year period are charted.

         (a) Tabulate all delays, cancels, and air-interrupts within all four digit ATAs.

         (b) Rank all four-digit ATAs for the current 12 months in descending order and graph the top 25 four digit ATAs into a bar chart.

         (c) Chart will show total number of events and list separately the number of delays, cancels, and air-interrupts within each ATA system. See Figure 2 for an example of the chart.

      (2) Determine fleet events trend. This operation calculates the monthly rate for all delays, cancels, and air-interrupts in a 2-year period or longer.

         (a) Calculate the rate (events per Revenue Departures) for each event parameter (delays, cancels, and air-interrupts) for the previous month.

         (b) Plot the new rate with the previous 23 or more monthly rates of each event parameter on a line chart. Afterwards, apply a linear trend line to each line series.

         (c) Chart will show events per revenue departures and the time interval under review. See Figure 3 for an example of the chart.

         (d) Mathematically determine the slope for each event parameter for all top 25 ATA sub-charters identified in step b.(1) of this section. Retain results on the analysis spreadsheet.

      (3) Complete an air-interrupt chart and summary. This operation originates a tabulation chart that lists the number of air-interrupts from the previous month with in each ATA sub-code. The summary lists details for each air-interrupt.

         (a) Originate a chart that lists the number of air-interrupt events that occurred with in each four-digit ATA system. See Figure 4 for an example of a chart.

         (b) Originate summary of all events. Summary will detail each event by four digit ATA code, discrepancy, finding, and fix. See Figure 5 for an example of a summary.

      (4) Determine Year over Year Comparison of top 25 ATA systems. This operation compares the performance change of the top ATAs, by sub-chapter, between the current 12 months and the previous 12 months.

         (a) Using the tabulated totals obtained for the Operational Impact by four-digit ATA code, calculate the rates (events per Revenue Departures) for each top ATA.

         (b) Calculate the rates (events per Revenue Departures) for the same ATA codes using the tabulated totals from the previous 12 months.

(c) Graph the current versus the previous 12-month rates for each ATA number on a bar chart.

(d) Chart will show events per revenue departures and the four-digit ATA systems under review. See Figure 6 for an example of the chart.

(5) Determine PIREP trend. This operation calculates the PIREP rates for a 2-year period or longer and determines PIREP trends for PIREP total against a fleet and for those four-digit ATA systems that have recorded PIREPS.

(a) Using the total PIREP count, calculate the PIREP rate (per 1000 Flying Hours) for the previous month.

(b) Plot the new PIREP rate with the previous 23 or more monthly rates and PIREP count on a line chart. Afterwards, apply a linear trend line to the PIREP Rate line.

(c) Chart will show a PIREP count line and PIREP rate line and the time interval under review. See Figure 7 for an example of the chart.

(d) Mathematically determine the slope for each four-digit ATA systems that have recorded PIREPs. Retain results on the analysis spreadsheet.

c. With the computations completed against the previous month's data, review the results to identify any ATA systems found with deteriorating performance. Figure 1 outlines the aircraft system reliability review.

(1) Review each event parameter of the top 25 Operational Impact four-digit ATA systems. Systems found with a positive slope value in one or more event parameters (delay, cancel, air-interrupt) shall be checked to determined what factors caused the increase. Check to see if the rise is the result of repeating aircraft or from some other anomaly that is no longer a factor but still affects the trend line, or simply too few events to justify a maintenance program adjustment or modification. Any system found that can not be determined to be insignificant requires further review.

(2) Review the slope values for each four-digit PIREP trend. Identify those systems found with a positive slope value and check to see if those PIREP system(s) also show up as a top 25 Operational Impact ATA system under further review from step c.(1) of this section or if the system sufficiently impacts the performance of the fleet.

(3) Review those ATA systems that are identified as both a top 25 Operational Impact ATA system under further review with an increasing PIREP rate. Begin the review by gathering the associated PIREP to each event parameter and accomplish a "root cause" analysis as outlined in Figure 8 . Determine from the data if a meaningful conclusion can be ascertained from the various discrepancies and/or fixes.

(4) Review the PIREP system(s) identified in step c.(2) of this section that have been determined to sufficiently impact the performance of the fleet. Begin the review by gathering all the PIREPs in the particular ATA and accomplish a "root cause" analysis as outlined in Figure 9 . Determine from the data if a meaningful conclusion can be ascertained from the various discrepancies and/or fixes.

(5) Originate Four Digit ATA Trend Chart and "Pie" Chart. These charts are originated at the discretion of the Reliability Engineer and are for those four digit ATAs that will be presented to the cognizant Maintenance and Engineering groups for possible further analysis and disposition.

(a) Calculate the rate (events per Revenue Departures) for each event parameter (delays, cancels, and air-interrupts) for the previous month.

(b) Plot the new rate with the previous 23 or more monthly rates of each event parameter on a line chart. Afterwards, apply a linear trend line to each line series.

(c) Chart will show events per revenue departures and the time interval under review. See Figure 10 for an example of the chart.

(d) Prepare, as appropriate, a tabulated and/or "pie" chart showing the findings of the "root cause" analysis of the PIREPs. See Figure 11 for an example of a "pie" chart.

d. With the review completed against the entire database, prepare the following monthly report as follows.

(1) Prepare a Monthly Review Package as a Power Point presentation.

(a) Prepare the following required charts.

NOTE: The final content of the Monthly Review Package will vary month to month depending on the

outcome of the monthly review and due to the uniqueness of the individual fleets. The charts listed below represent the minimum required content of the Monthly Review Package. This listing does not prohibit the use of other charts that are determined to be necessary by the Reliability Engineer and/or cognizant Maintenance and Engineering groups.

- Top 25 Operational Impact Four-Digit ATA Systems Chart (as completed in step b.(1). of this section). See Figure 2
- Delay, Cancel, and Air-Interrupt Fleet Trend Chart (as completed in step b.(2). of this section). See Figure 3
- Air-Interrupt Tabulation Chart (as completed in step b.(3) of this section). See Figure 4.
- Previous vs. Current Year Comparison of the TOP 25 Operational Impact Four-Digit ATA Systems (as completed in step b.(4). of this section). See Figure 6 .
- PIREP Count/Rate Fleet Chart (as completed in step b.(5). of this section). See Figure 7.

(b) Supporting Four Digit ATA System Charts.

NOTE: The supporting charts are prepared at the discretion of the Reliability Engineer due to findings and/or request from the cognizant Maintenance and Engineering groups.

- Individual four-digit ATA Trend Chart with accompanying Tabulated or "Pie" chart, if applicable. See Figures 10 and 11 for examples of the charts.

(c) Assemble the charts together into a Power Point presentation.

(d) E-mail the completed package to the Managers of Production and Engineering. In addition, "carbon copy" the Reliability Staff Assistant for posting on the Reliability Website, http://me.aa.com/engineering/foe/reliability/main.asp.

(2) Prepare a Monthly Air-Interrupt Package as a Power Point presentation.

(a) Assemble the Air-interrupt Tabulated Chart and the Event Summaries together into a Power Point presentation. See Figures 4 and 5 .

(b) E-mail the completed package to Reliability Staff Assistant for posting on the Reliability Website, http://me.aa.com/engineering/foe reliability/main.asp.

2. Monthly ETOPS Reliability Review: the objective of this procedure is to prepare and provide event based information on the ER aircraft fleet reliability to the cognizant Maintenance and Engineering groups and AMR CMO.

NOTE: The charts listed below represent the minimum content of the monthly ETOPS report. This listing does not prohibit the use of other charts that are determined to be necessary by the Reliability Engineer and/or cognizant Maintenance and Engineering groups.

a. Prepare the following required charts: 12 Month Rolling In-Flight Shutdown Rate Chart (Ref. Figure 12), 12-month Rolling APU In-flight Start Rate Chart (Ref. Figure 13), ETOPS Incident Details (Ref. Figure 14), APU in-flight directed start program no-start details, ETOPS incident trend analysis.

b. APU In-Flight Start Review. The objective of this procedure is to determine 12-month rolling reliability for qualified environment in-flight APU starts for the ER fleets for evaluation by the cognizant Maintenance and Engineering groups.

(1) Capture all incidents on all three fleets that require an in-service, in-flight APU start by the QRH (i.e., IDG failure, engine IFSD, etc.) from FMR.

(2) Capture all starts made as part of the directed start program from ATA 49 FMR.

(3) Calculate the APU in-flight start rate.

(a) Only starts that occur within a qualified environment on ER aircraft are counted (Ref. GPM 22-02)

(b) In-service starts (regardless of cause) count as one start attempt.

(c) Every APU is given a maximum of 3 opportunities to start during a flight. If it takes 3 start attempts to start the APU, it will only count as one start attempt.

(d) Events where the APU does not start on the third attempt count as 1 no-start. If the APU does not start on the first or second attempts, and subsequent attempts are not made, 1 no-start is recorded.

(e) 12 month rolling reliability is equal to 1- ((the total number of no-start events in the 12 month period) divided by (the total number of start attempts in 12 month period)).

(f) Plot the new APU start rates for the ER fleets with the previous monthly rates on a line chart.

c. Assemble the charts together into a document presentation.

d. E-mail the completed package to Reliability Staff Assistant for posting on the Reliability Website (http://me.aa.com/engineering/foe/reliability/main.asp) and to the AMR CMO.

Aircraft System
Reliability Review

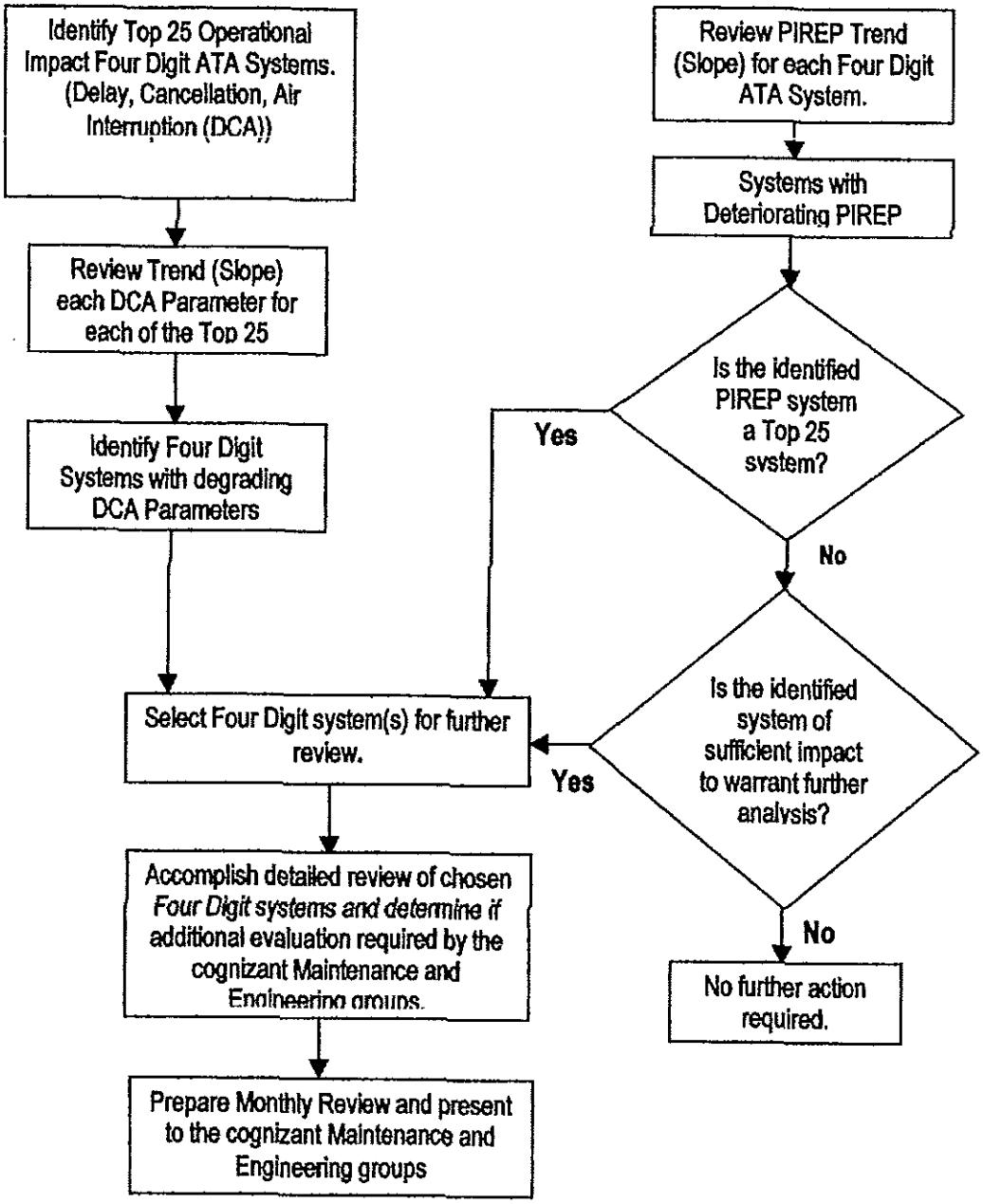
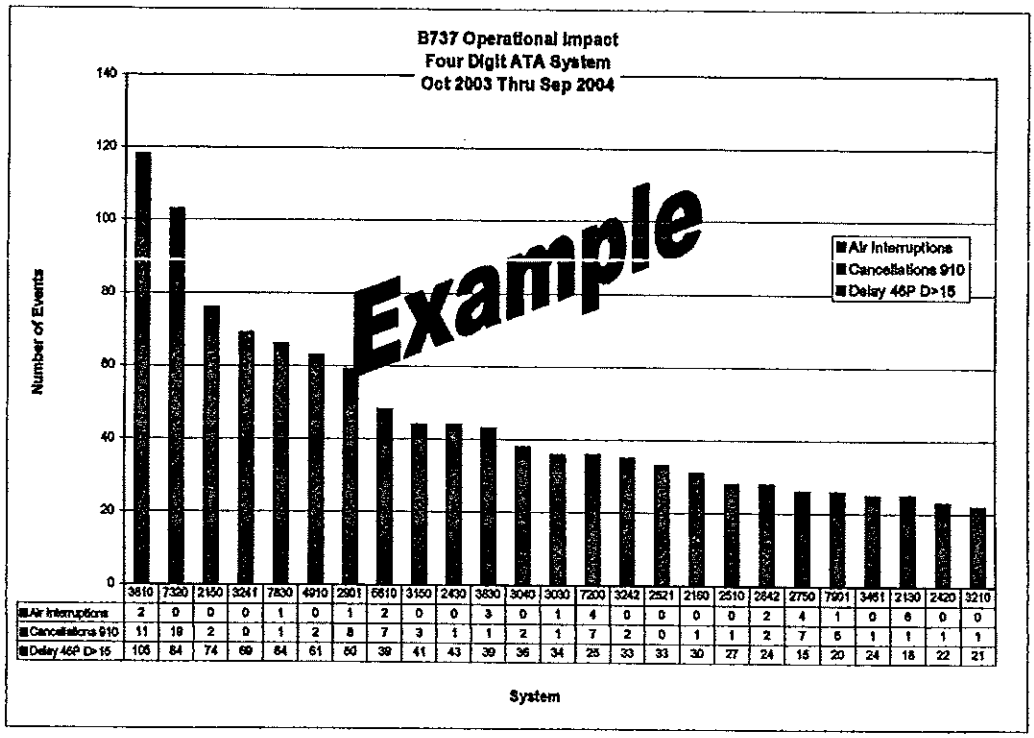


Figure 1. Aircraft System Reliability Review



	3610	7320	2150	3241	7830	4910	2901	5610	3150	2430	3630	3040	3090	7200	3242	2521	2160	2510	2842	2750	7901	3461	2130	2420	3210
Air Interruptions	2	0	0	0	1	0	1	2	0	0	3	0	1	4	0	0	0	0	2	4	1	0	6	0	0
Cancellations 910	11	18	2	0	1	2	8	7	3	1	1	2	1	7	2	0	1	1	2	7	5	1	1	1	1
Delay 46P D>15	105	84	74	69	64	61	60	39	41	43	39	36	34	25	33	33	30	27	24	15	20	24	18	22	21

Figure 2. Top 25 Operational Impact Four-Digit ATA Systems Chart

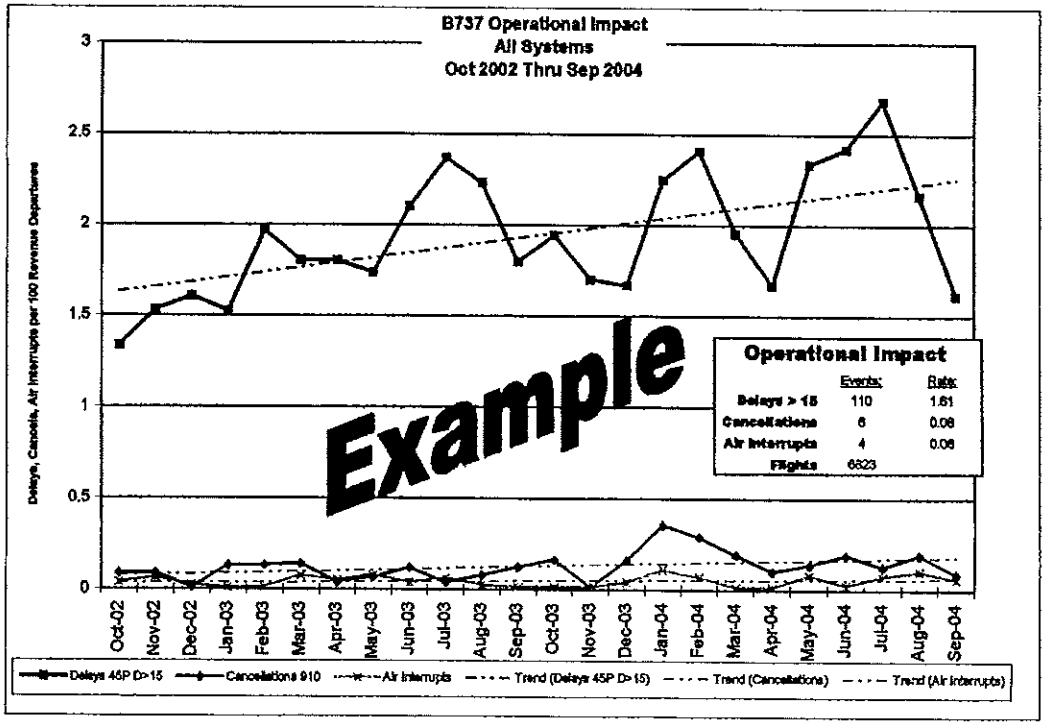


Figure 3. Delay, Cancel, and Air-Interrupt Fleet Trend Chart

B737 - Air Interruption Events
Four Digit ATAs - Oct 03 thru Sep 04

ATA	Description	Oct 03 thru Sep 04 *	Sep-04
2130	Air Conditioning - Pressurization	6	
2760	Flight Controls - Leading Edge	5	2
7200	Engine	4	
2750	Flight Controls - Flaps/Trailing Edge	4	
3830	Water/Waste - Waste Disposal	3	
2740	Flight Controls - Horizontal Stabilizer	2	
3810	Pneumatic - Distribution	2	
5610	Windows - Flight Compartment	2	

***Only Four Digit ATAs with more than one event are shown**

Figure 4. Air-Interrupt Tabulation Chart

B737 - Air Interruption Events
September 2004 Details

Date	Route	Trip	A/C	Sys	ATA	Code	Event Remarks	Event Driver	Final Fix
12/04	DFW-SNA	745	3BY	27	2760	A	RETURNED DFW ACCT L/E SLATS WOULD NOT RETRACT. NO EMERGENCY DECLARED, UNEVENTFUL LANDING, NOT OVERWEIGHT. REPLACED PROX SWITCH AND FSEU NO HISTORY. IN WORK.	UNABLE TO RETRACT L/E SLATS	R/R FSEU
15/04	MIA-IAH	37072	3BY	27	2760	A	RETURNED MIA ACCT L/E SLAT DISAGREE LIGHT. NO EMERGENCY. LANDED WITHOUT INCIDENT AND WAS NOT OVERWEIGHT. ACCOMPLISHED FDR DOWNLOAD. REPLACING ALL [illegible] ACTUATORS. 3 PREVIOUS PENDING	[illegible]/E SLAT ASSYMMETRY [illegible]GHT	R/R ACTUATORS
23/04	MIA-YUL	426	3BA	78	7830	A	LANDED RDU [illegible] LIGHT [illegible] RETRACTED UNEVENTFULLY, NOT [illegible]IGHT. PLACARDED LH [illegible]SER PER MEL. NO HISTORY - OPEN MEL TFI	THRUST REVERSER LIGHT ILLUMINATED	R/R RIGHT UPPER T/R ACTUATOR
29/04	DFW-MEX	1653	3BD	22	2250	A	RETURNED DFW ACCT UNCOMMANDED YAW. EMERGENCY DECLARED. LANDING WITHOUT INCIDENT AND WAS NOT OVERWEIGHT. ACCOMPLISHED DFDR DOWNLOAD. SUSPECT CROSS/TAIL WINDS. TROUBLESHOOTING IN PROGRESS. NO HISTORY	UNCOMMANDED YAW	NO FAULT FOUND

Figure 5. Air-Interrupt Details

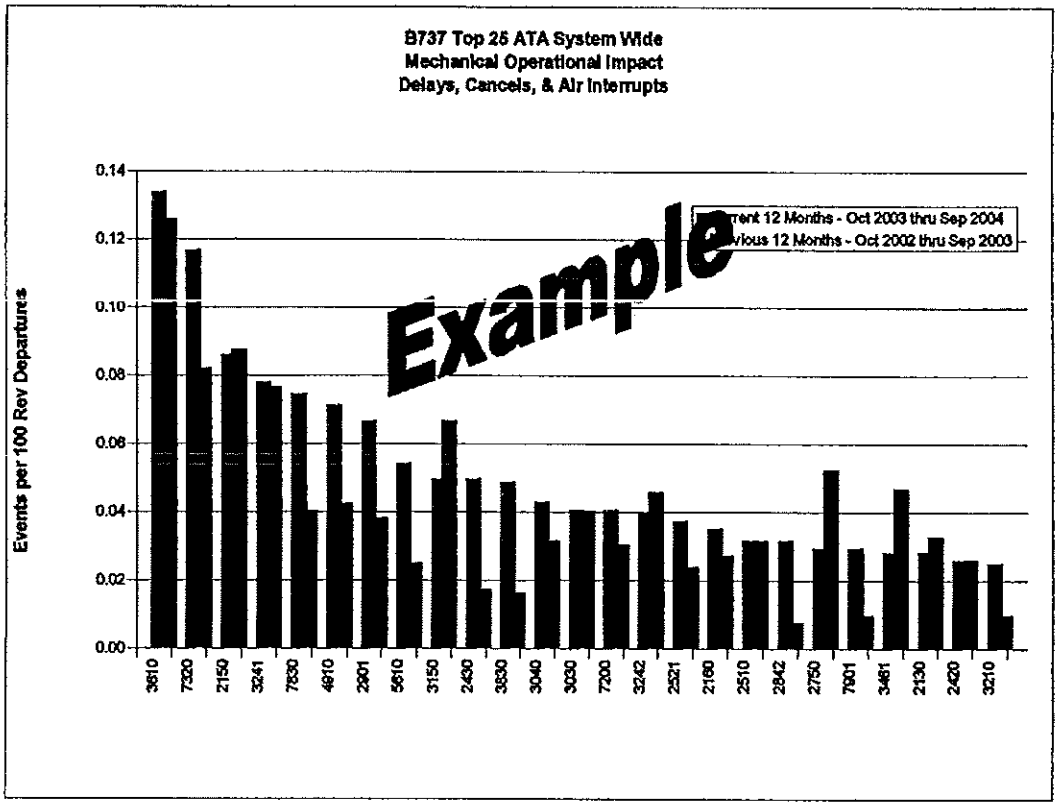


Figure 6. Previous vs. Current Year Comparison of the TOP 25 Operational Impact Four-Digit ATA Systems

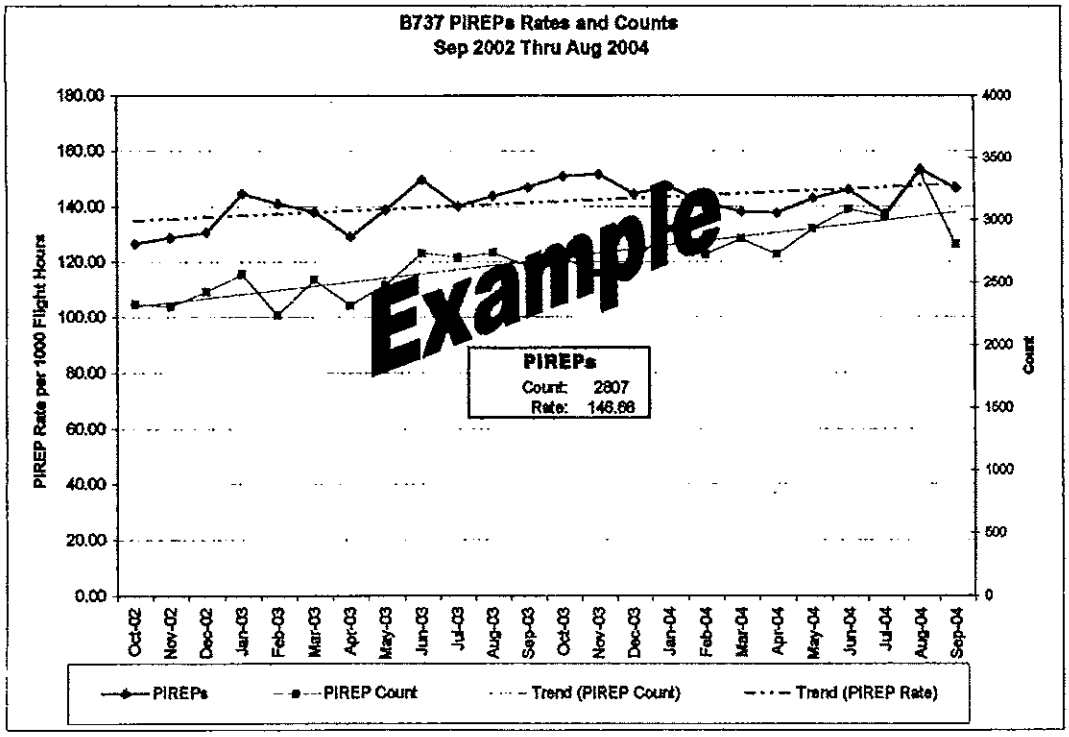


Figure 7. PIRREP Count/Rate Fleet Chart

Delay, Cancellation, Air Interruption, or Out of Service Root Cause Analysis

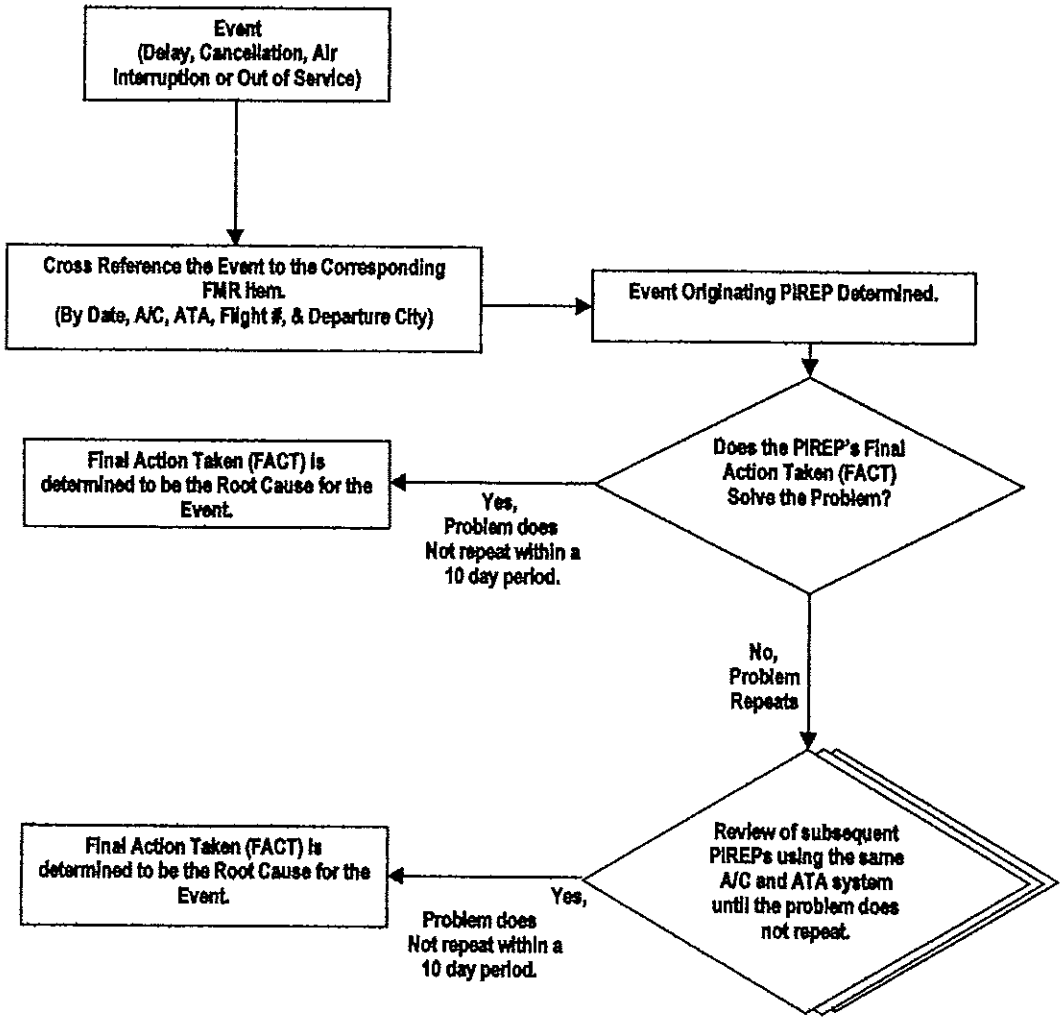


Figure 8. Delay, Cancellation, Air Interruption, or Out of Service Root Cause Analysis

PIREP
Root Cause Analysis

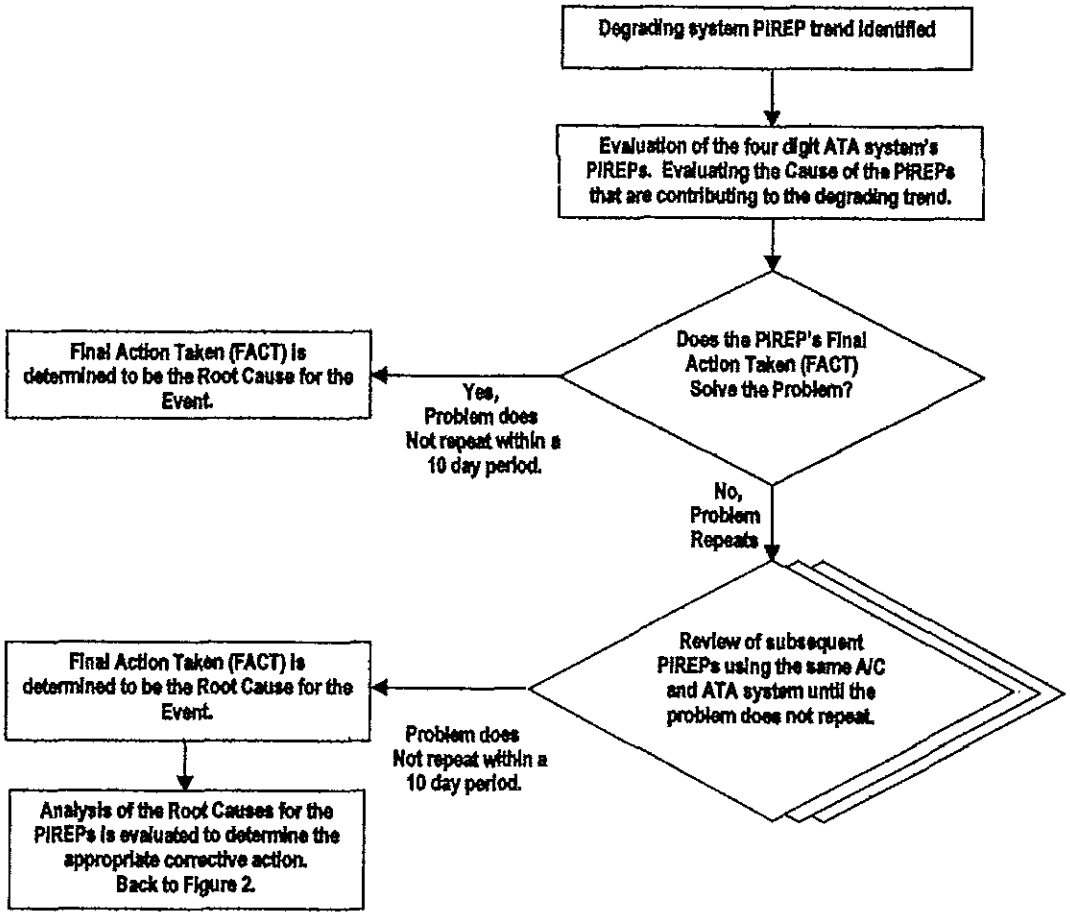


Figure 9. PIREP Root Cause Analysis

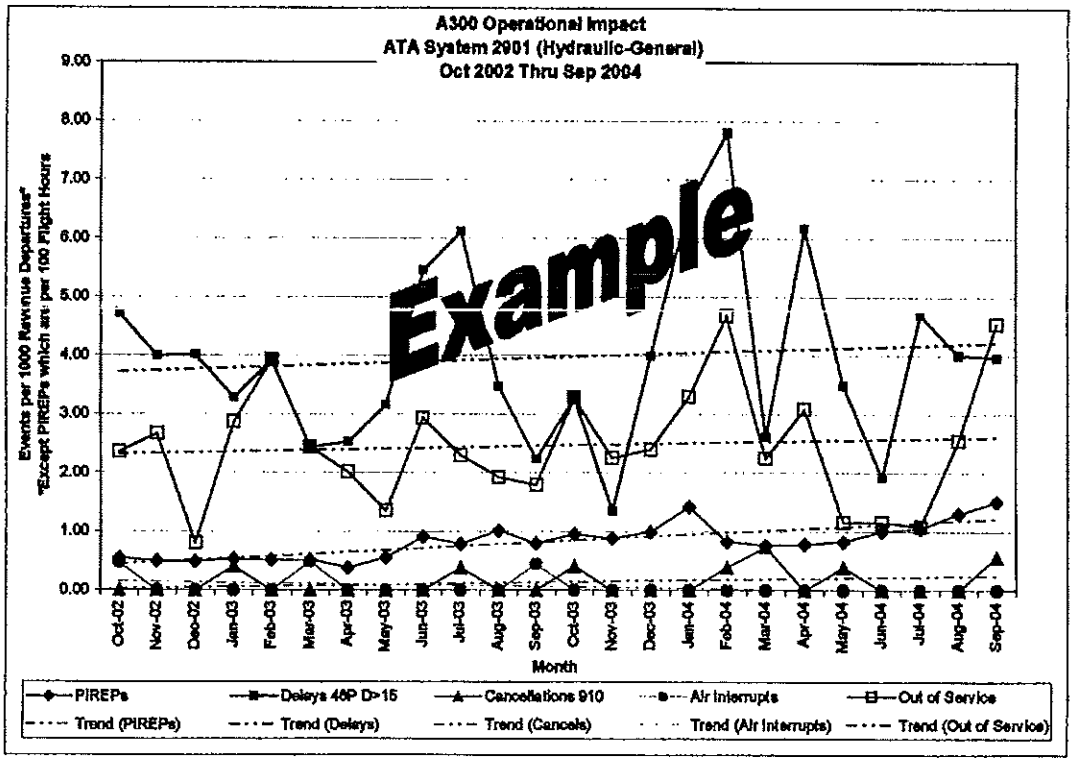


Figure 10. Four Digit ATA Trend Chart

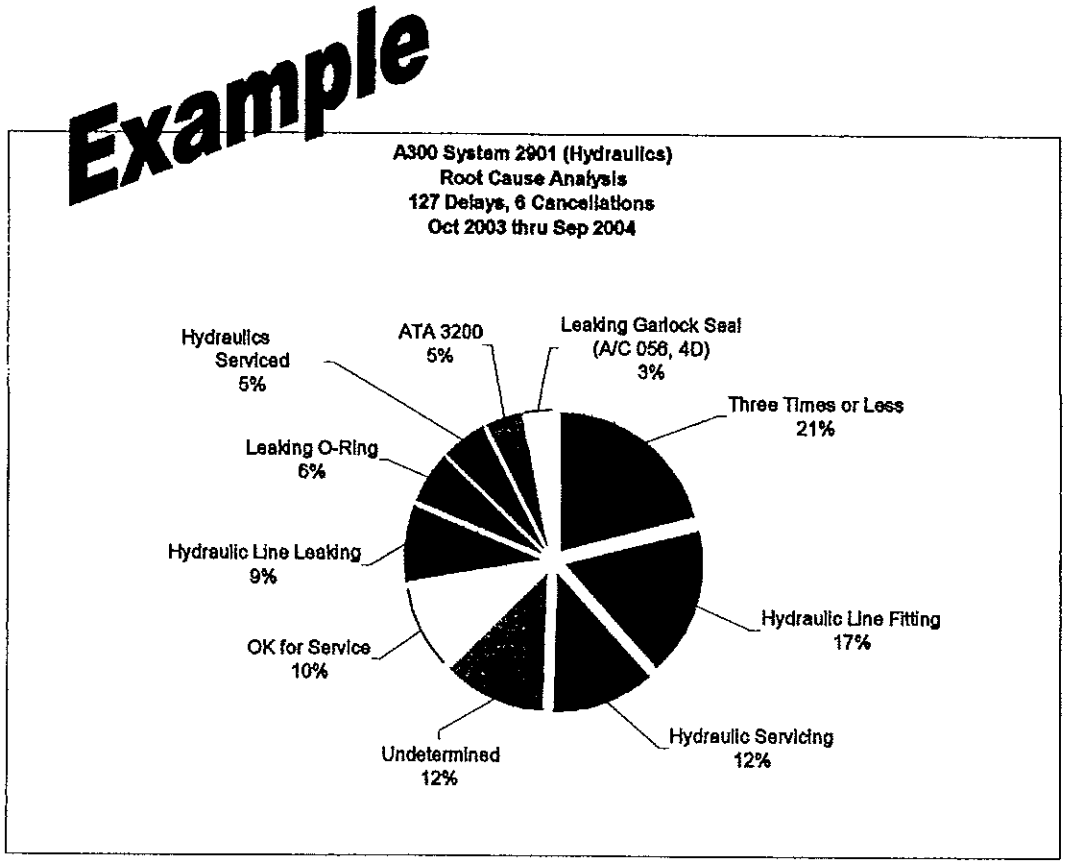


Figure 11. Four Digit ATA PIREP "Pie" Chart

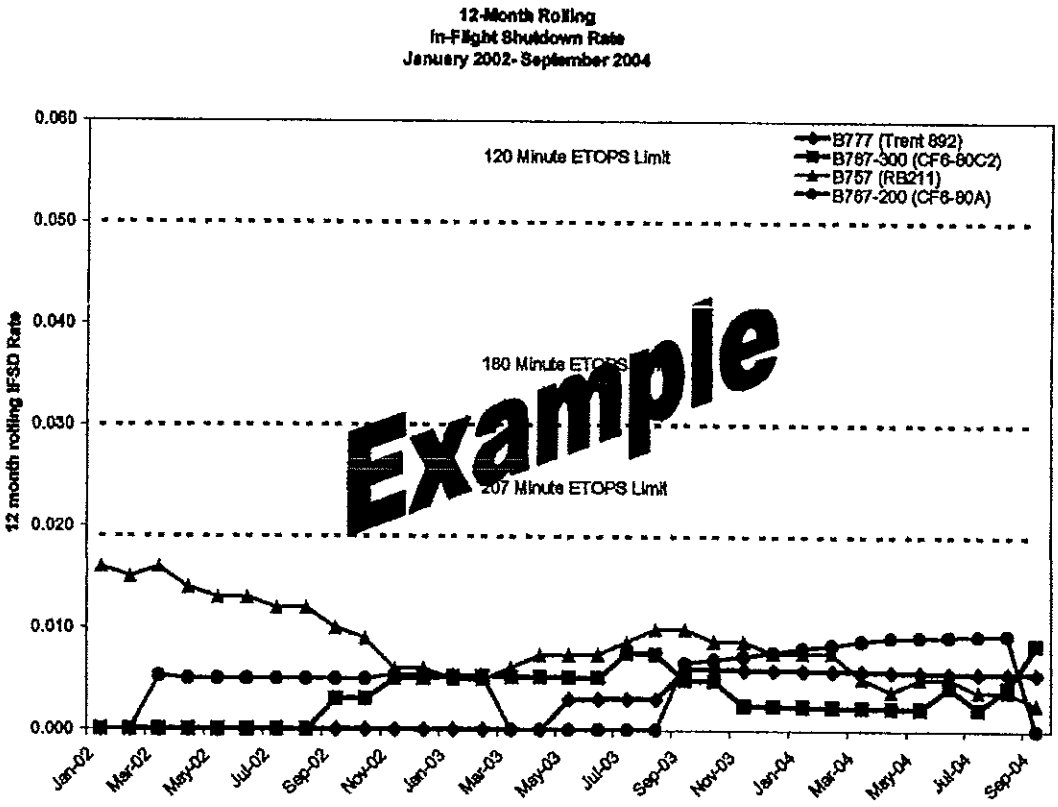


Figure 12. 12 Month Rolling In-Flight Shutdown Rate Chart

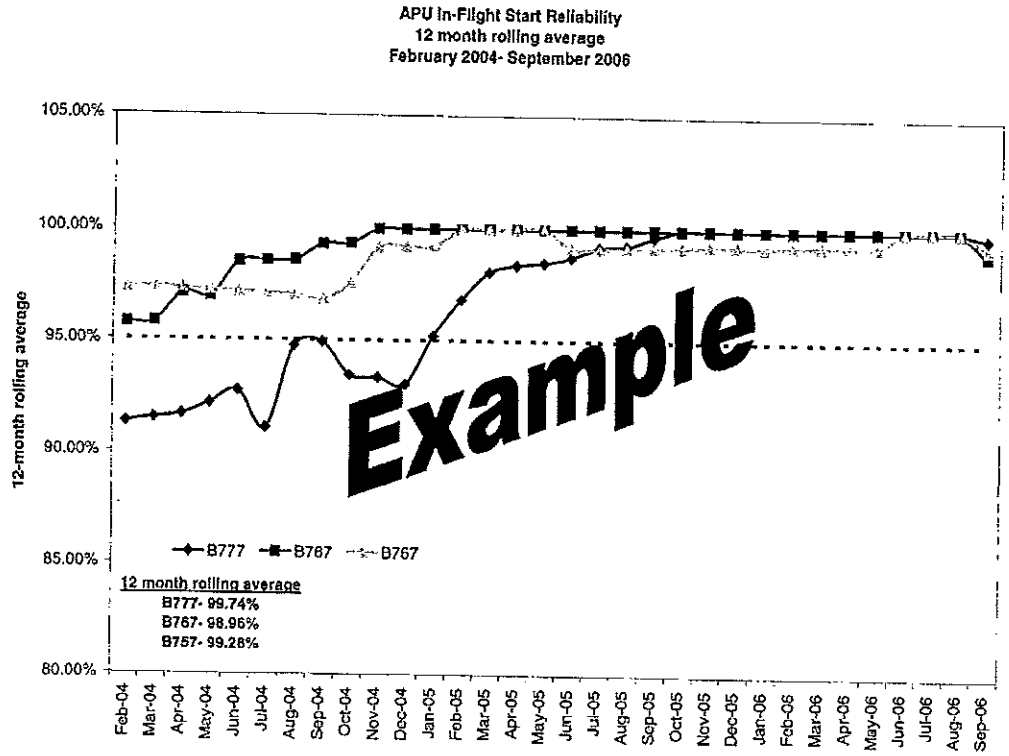


Figure 13. APU In-Flight Start Reliability Chart

B777 ETOPS INCIDENT DETAILS
JULY 2004- SEPTEMBER 2004

Fleet	Aircraft	ETOPS AC	ATA	Date	STATION	Flight	ETOPS FLIGHT	FMR	Final Fix
B777	7AU	ETOPS	2420	1-Jul	ORD	46	yes	STAUS MESSAGE ELEC GEN SYS L	NO CORRELATED MAINT.MSGS FOUND AT MAT. ACCOMPLISHED GROUND TES TS ON MAT OF LEFT GCU AND B ALL TESTS PASSED- MSG CLEARED. RAN ENGINES AND GEN S YS OPS CHECKS-NORMAL. CONTACTED TECH S ERVICES. OK FOR SERVICE. 7AU242348 0101 0 1JUL ORD
B777	7BJ	ETOPS	2420	5-Jul	JFK	131	yes	DURING CRUISE&FLIGHT BUSINESS GALLEY CHILLERS AND OVENS W[illegible] D ON,R ECEIVED EICAS CAU ELEC GEN OFF [illegible] MPT TO RESET THE GEN FAILED	R)<R Y1 ENG IDG - ALL OPS AND LEAK CHKS GOOD 7BJ241DEE 0102 0 5JUL JFK
B777	7AJ	ETOPS	3426	5-Jul	JFK-NRT	167	YES	[illegible] STATUS MSG / LH HPSOV [illegible] WITHOUT INCIDENT AND WAS [illegible] EXPT. REPLACED SAARU AND LH AIR [illegible] CONTROLLER. 2 PREVIOUS ITEM - ON WATCH.	FOUND MX MSG 34-36901. REPLACED SAARU. ALL REQUIRED TESTS PASS
B777	7AN	ETOPS	2420	13-[illegible]	[illegible]	[illegible]	[illegible]	ELEC[illegible]N OFF L INDICATION ON EICAS	REPLACED LH IDG PER MM OPS CHECK NORMAL NO LEAKS FOUND PERFORM ED ALL REQUIRED TESTS 7AN242640 1319 13JUL DFW
B777	7AV	ETOPS	2420	18-[illegible]	[illegible]SW	78	yes	APU GENERATOR FAULT LITE CAME ON AND GENERATOR DROPPED OFF THE LINE	REMOVED AND REPLACED APU GENERATOR AS PER AMM. PERFORMED ALL T EST AND FOUND OK FOR SVC. REMOVED PLACARD. CLEARED MIC SHEET 7AV2429A6 1322 19J UL LGW
B777	7AA	ETOPS	2180	25-Jul	DFW	60	YES	ELECCTRICAL ODOR DETECTED INBUSINESS CLASS APPROXIMATELY 2 HR\$20MINUTES INTO FLIGHT; POW PORTS TURNED OFF AT PANEL AT 2R. ODEO DISPATED.	TURNED POWER PORT SYS ON; NO ODOR DETECTED THROUGHOUT CABIN. 7 AA213588 1744 25JUL DFW
B777	7AE	ETOPS	4910	30-Jul	AFW	9828	no	APU FAILED TO START DURING TWO CONSECTIVE START ATTEMPTS AT ALTITUDE 410 . MATS INDICATES EGT INCREASE. SUCCESSFUL START ATTEMPT AT LOWER ALTITUDE FL 35 0 EROPS CHECKS AFTER APU ST WHERE SATISFACTORY	INFO NOTED PERFORMED OPS)< MAT CHECK OF APU NO FAULT FOUND 7A E493134 1534 30JUL AFW
B777	7BN	ETOPS	3835	1-Aug	DFW-FRA	0070	YES	LANDED ORD ACCT F/C AND BUSINESS CLASS LAVS SINKS OVERFLOWING. NO EMERGENCY DECLARED. UNEVENTFUL LANDING, NOT OVERWEIGHT. REPLACED RESTRICTOR VALVE IN MAIN WATER DRAIN. 9 PREVIOUS - OK.	FOUND FWD DRAIN LINE RESTRICTOR VALVE STOCK CLOSED REMOVED)< REPLACED VALVE PER M/M OPS CK NORMAL ALL B/C)< F/C LAV SINKS DRAIN OK NO LEAKS NOTED

Figure 14. ETOPS Incident Details

END