



*New Enhanced
Service
Bulletin*

QTR_04
06

A QUARTERLY PUBLICATION
BOEING.COM/COMMERCIAL/
AEROMAGAZINE

AERO

New Enhanced Service Bulletins

by Mark Baker, Tim Dowling, Willard Martinez, Tom Medejski,
Dan Pedersen and Don Rockwell, Service Bulletin Engineering

Increasing economic and regulatory pressures make it imperative for airlines to find opportunities to reduce costs and show conformance to manufacturer's data. Because airline maintenance operations represent a significant cost, airlines have asked Boeing for help in reducing this cost. Recent results show that changing the way service bulletins are prepared and delivered – combined with airline process improvements – can reduce maintenance cost significantly and improve the ability to show conformance.

Boeing has continually made enhancements to the content, format, and delivery of its service bulletins. Past enhancements include digital delivery, simplified English, and tabular work instructions.

Boeing has been working directly with airlines to reduce end-to-end costs for service bulletin incorporation. During this process, it was observed that when airlines create their engineering orders, they rewrite or reengineer service bulletins and rekit or repackage the kit of parts to match their own engineering orders. This reengineering causes unnecessary delays and expense for the airlines in implementing service bulletins.

Boeing developed the "Enhanced Service Bulletin," also known as the "Next Generation Service Bulletin," to minimize this reengineering effort while making it easier and less expensive to implement service bulletins. The enhanced service bulletin, in conjunction with airline process improvements, will enable a smooth workflow ensuring that information, parts, and tools are staged in a coordinated manner to support the mechanic during service bulletin incorporation.

Boeing's enhanced service bulletins incorporate four key features: lean work instructions, faster access to essential information, improved kit packaging, and selective information extraction. These features have been incrementally introduced into Boeing service bulletins as they became available beginning in mid 2003. Today, Boeing develops all new service bulletins to encompass all four features whenever possible.

*FOUR KEY FEATURES REDUCE
AIRLINE ENGINEERING,
PLANNING, AND OPERATIONS
COSTS ASSOCIATED
WITH SERVICE BULLETIN
INCORPORATION.*

01.

Lean work instructions

One of the most apparent changes in the enhanced service bulletin is that figure instructions are provided in a work breakdown of four hours or fewer. This makes it possible for airlines to schedule mechanics' time more efficiently and reduces the coordination difficulties associated with work shift changeover.

Each figure in the enhanced service bulletin is a single configuration. Previously, multiple configurations were typically shown in a figure. This required the airline engineer, planner, or mechanic to extract the steps applicable to the specific airplane. One configuration per figure simplifies extraction of the applicable data and can prevent accomplishment of the wrong steps. Additionally, separate left and right side figures are now provided, which further facilitates extraction of the applicable data.

03.

Improved kit packaging

Enhanced service bulletin kits are packaged to match the figure instructions. If operators use the service bulletin instructions as written, this new packaging eliminates additional repackaging or sorting through parts. This change alone can result in a significant time savings in both the operations and maintenance arenas.

02.

Faster access to essential information

When viewed online, Boeing's enhanced service bulletins include hotlinks within their text that provide direct access to referenced documents, making it easier and faster to find the information needed. For example, hotlinks provide quick access to relevant information in the Airplane Maintenance Manual (AMM), Structural Repair Manual (SRM), and other documents available on the Web portal MyBoeingFleet.com.

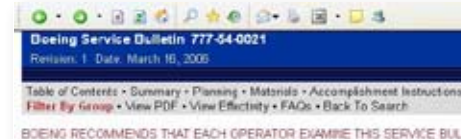
04.

Selective information extraction

Enhanced service bulletins enable airline personnel to extract information specific to selected airplane configurations. This allows an airline to more quickly identify and extract service bulletin information specific to its airplane configuration. Once the data is extracted, it can easily be copied into an airline's own document management system.



The HTML file provides hotlinks to maintenance documentation referenced in the service bulletin and the ability to quickly extract data.



BOEING RECOMMENDS THAT EACH OPERATOR EXAMINE THIS SERVICE BULLETIN IMMEDIATELY.

Filter This Service Bulletin By Group

[More info on Filter by Group](#)

Step 1 - Deselect group/configuration options to filter this service bulletin.

Steps for these groups/configurations will be shown		IS
<input type="checkbox"/>	Show All Groups (do not filter this Service Bulletin)	
<input type="checkbox"/>	Group 1: Airplane line number 6 through 503, 505 and 506 with the heat shield blaster and cover plate	
<input type="checkbox"/>	Config 1: Airplanes 421, 424 - 427, 435, 436, 439 been changed to use subplates on the plate	
<input type="checkbox"/>	Config 2: All airplanes line number 6 through 506 plate	
<input checked="" type="checkbox"/>	Group 2: Airplane line number 2 through 506 with Pratt and	

Step 2 - View the filtered Service Bulletin. The filter will remain on until you reset.

- [Planning](#)
- [Materials](#)
- [Accomplishment Instructions](#)
- [Figure Index](#)

How Does Filter By Group Work?

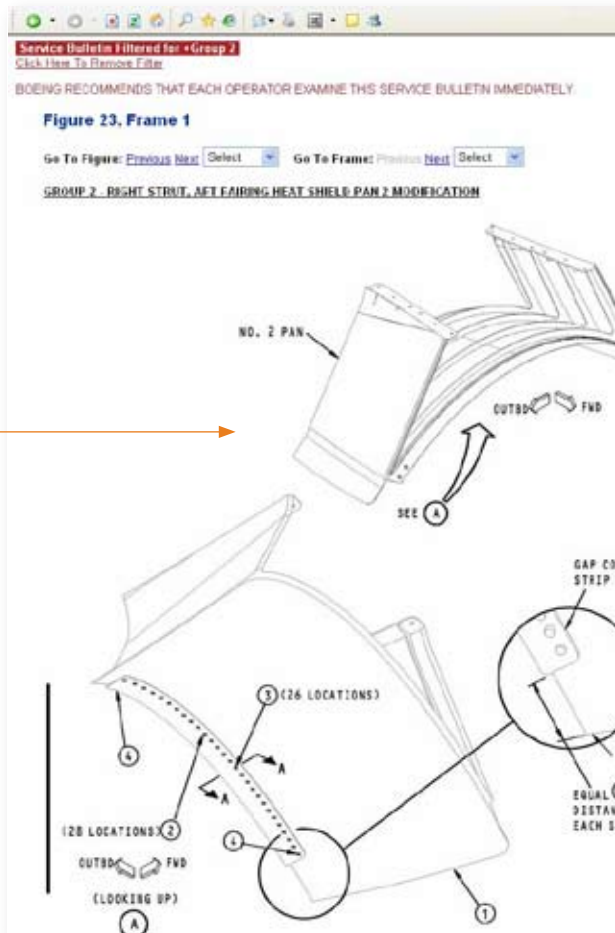
The "Filter by Group" feature for HTML Service Bulletins allows you to select a group to which the filter will apply to that group.

Example: You are working on an aircraft that belongs to Group 1 and want to view the Accomplishment Instructions link. A banner is displayed at the top of the page that says "Service Bulletin Filtered for Group 1".

The parts of the Service Bulletin that are filtered are as follows:

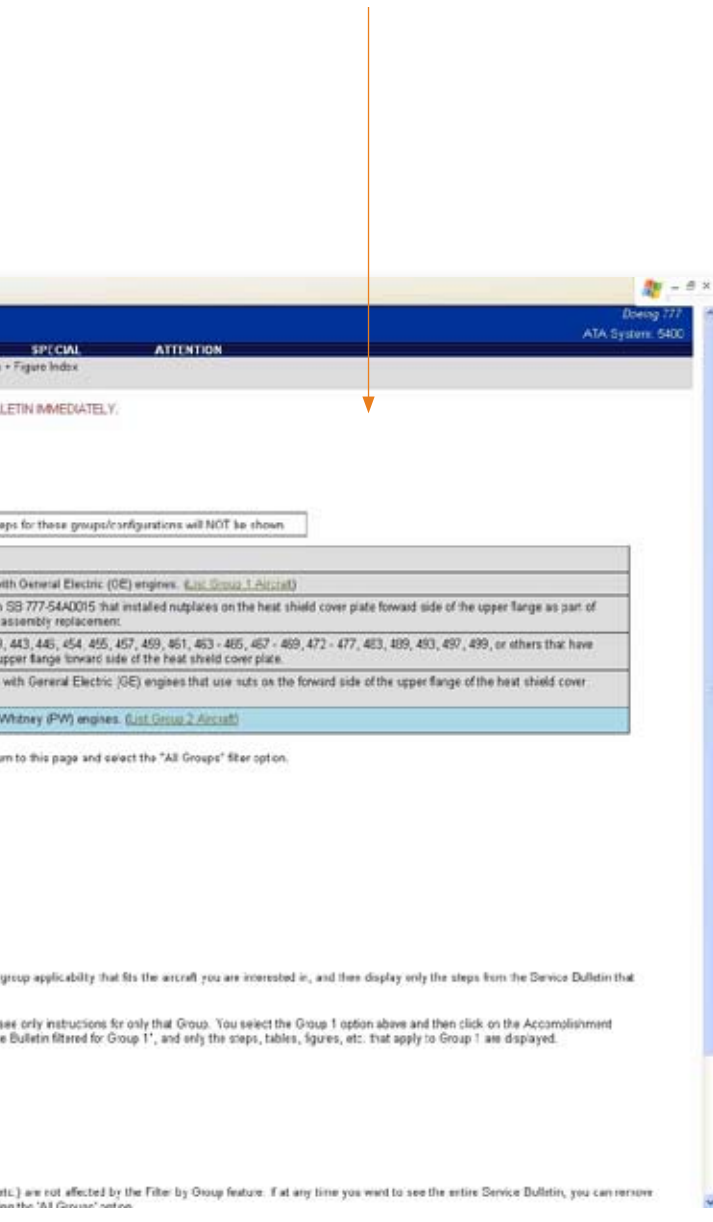
- Planning Information
- Materials Information
- Accomplishment Instructions
- Figure Index (if present)
- Appendix Index (if present)

All other sections of the Service Bulletin (Summary, Revision Transmittal Info, etc.) are not filtered by the "Filter By Group" feature.



ONE CONFIGURATION PER FIGURE PROVIDES DIRECT ACCESS TO APPLICABLE DATA.

THE “FILTER” FUNCTION ALLOWS AIRLINES TO EXTRACT DATA BY INDIVIDUAL AIRPLANE GROUP AND CONFIGURATION.



The left and right side figures allow airlines to show compliance with the manufacturer's data.

BENEFITS OF THE BOEING ENHANCED SERVICE BULLETIN

Boeing worked with airlines to validate the benefits of the enhanced service bulletin. As part of that effort, Boeing coordinated closely with one airline to study the predicted benefits of the enhanced service bulletin. Study data from the airline showed these predicted benefits:

- A potential 60 percent reduction in defects attributed to the rewriting or reengineering of the service bulletin data into the airline's document management system.
- A potential 77 percent reduction in labor hours to develop and release the service bulletin data into the airline's document management system.

Based on the positive results of the study data, Boeing continued to work closely with the same airline to collect actual labor hour benefits. The actual data was obtained by comparing airline incorporation of a conventional service bulletin on part of its fleet and an enhanced version of the same service bulletin on the remainder of its fleet. Data from the airline showed these actual results:

- A reduction in nonrecurring engineering labor hours to develop the airline's own engineering and job cards from 143 labor hours to 87 labor hours.
- A reduction in recurring kit packaging labor hours from 24 hours to 6 hours per airplane.

ENHANCEMENTS CONTINUE

To date, Boeing has issued more than 1,300 service bulletins across all Boeing model airplanes with one or more of the four key features described above. Boeing has been working with a number of airlines to assist in the adoption and implementation of enhanced service bulletins into their operations as well as to obtain airline user feedback. Such feedback is key to adding improvements to the enhanced service bulletins.

SUMMARY

Boeing understands that each airline's maintenance operation is unique and is willing to work with individual airlines to ensure that each leverages all of the benefits possible from enhanced service bulletins and that the bulletins fit well with existing airline operations. Airlines may contact their Boeing Field Service Representative for assistance in adopting enhanced service bulletins. For more information, contact Dan Pedersen at dan.w.pedersen@boeing.com. [A](#)