



# F-16 System Program Office



## ASIP Data Collection as a Critical Step Towards a Realistic Digital Twin

10 October 2023

Distribution Statement A: Approved for public release; distribution unlimited. Case Number: 75ABW-2023-0046

*Providing warfighters mission-ready F-16s!*



# Outline



*F-16 System Program Office*

- **Introduction/Portal Overview**
- **Modules:**
  - **Damage Evaluation System Technical/Repair Assistance Page (DESTRAP)**
  - **Flight Data Capture (FDC)**
  - **Common Inspection Reporting Engine (CIRE)**
  - **Individual Aircraft Tracking (IAT)**
  - **Service Life Reports (SLR)**
  - **Health Of The Fleet (HOTF)**
- **Data Usage Examples**
- **Summary**

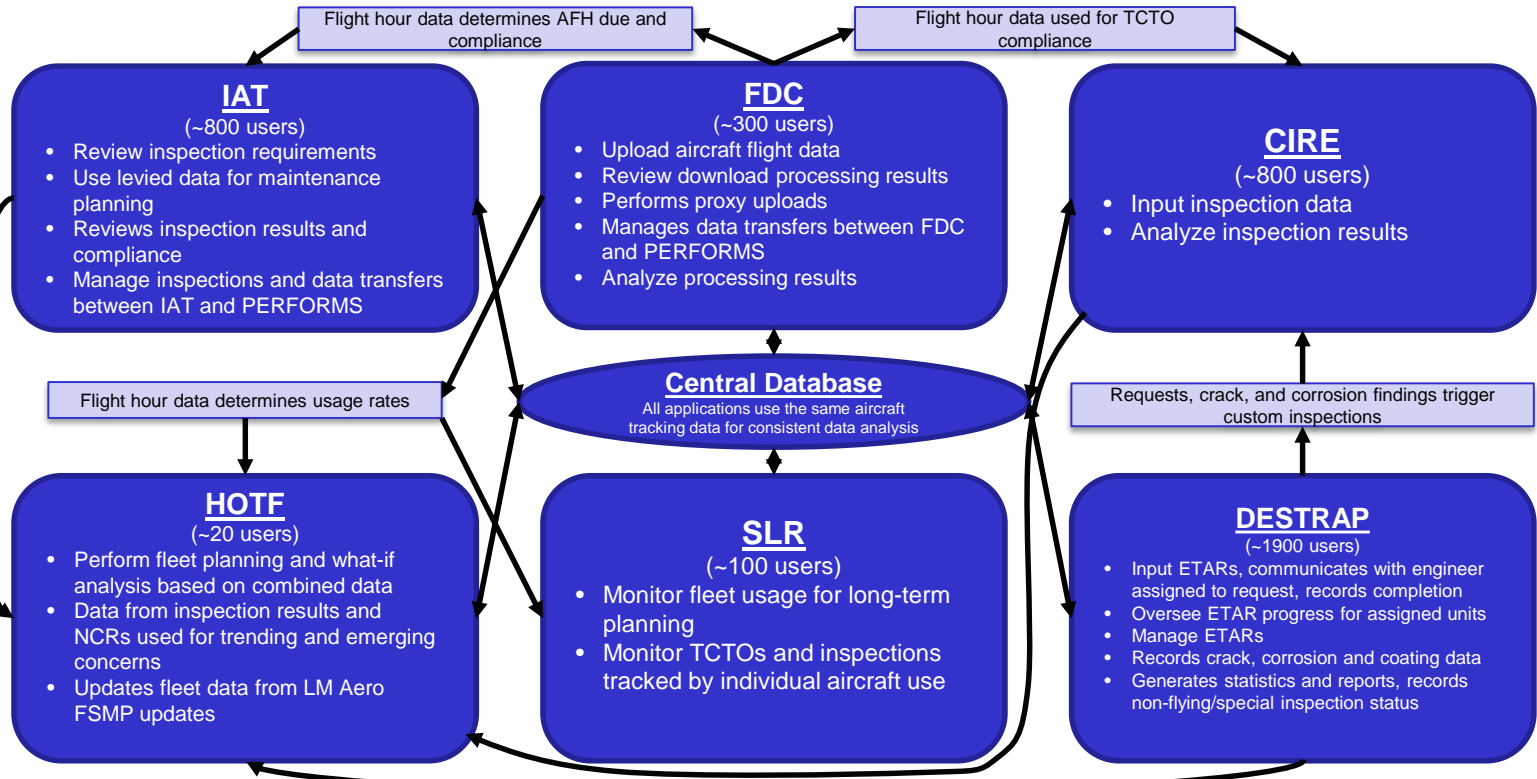


# What is F-16 ASIP Portal?



F-16 System Program Office

- 6 web-based modules that support USAF F-16 ASIP lifecycle
- Centralized database
- 3000+ active users
- Role based user management for each module





# DESTRAP



F-16 System Program Office

- Streamlines handling of ETARs (107-Ts and 202s)
- Units/depots can submit and monitor online
- Can include any attachments
- Brought online in 2000, backfilled as far back as 1989
- 90,000+ ETARs





# DESTRAP



F-16 System Program Office

- Field and engineer views follow AFMC Form 202
- Engineer can input ETAR into corrosion/coating or fatigue crack database
- Extensive history helps enable quick disposition responses
  - 107-T: 3.1 workdays
  - 202: 2.0 workdays

Part B

17. TO (Unit Office Symbol)  
F16 SPO / AFLCMC/WAM

18. FROM (Engineering Depot Office Symbol)  
AFLCMC/WAM

19. DATE RECEIVED  
mm/dd/yyyy

20. ENGINEER/ES  
(Signature/Office Symbol/Phone)

21. Disposition Instructions: \*  
 Repair  Rework  Use As Is  Condemn  Other

22. Instructions \*  
 Warnings:  Cautions:  Standard Repairs:

23. RESCIND ON  
 A. DATE:   
 B. COMPLETION OF S/N:  DD-0000  
 or AFMC Form 206 No.

24. T.O. / DWG CHG:  
 Requires AFMC Form 252 (TO CHG):  Yes  No  
 Requires AF Form 2600 (DWG CHG):  Yes  No

25. AFTO Form 95/DD Form 1524 Entry (Entry for Aircraft Records):

ORM Value: Please select a value on the chart below to assign an ORM value to this NCR.  
 Selected ORM Value: \*   
 ORM Justification: \*

Severity	I - Catastrophic (Death or System Loss)	II - Critical (Severe Injury or Major Damage)	III - Marginal (Minor Injury or Minor Damage)	IV - Negligible (Minor Injury or Minor Damage)
A. Frequent	1	3	6	13
B. Probable	2	5	9	16
C. Occasional	4	7	11	18
D. Remote	8	10	14	19
E. Improbable	12	15	17	20

Corrosion Induced Repair: \*  Yes  No

Cracking Information: \*  
[Add to Fatigue Crack Database](#)  
 Send crack data to LH Aero:  Yes  No

Require NCR Tracking:

Other Email Notifications:  
 Notify Engineer: [Solution will take longer than time allowed by regulation](#)  
 107T - 4 working days  
 202 (Work stoppage) - 5 working days  
 202 (Non work Stoppage) - 13 working days

Notify Commodities Group of Asset Requiring Overhaul:  
 Yes  No

Serial Number:

Attached Solution Files  
 There were no attachments found.  
[Add a Solution File](#)

Save Progress for Later | Save, Sign, and Submit for Approvals | Cancel Without Saving

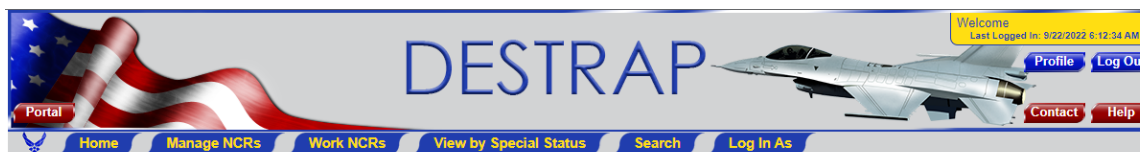


# DESTRAP



F-16 System Program Office

- Field message log keeps all relevant communication within ETAR
- Engineering message log allows coordination between engineers, sections, and equipment specialists



DESTRAP > View 202

## NONCONFORMING TECHNICAL ASSISTANCE REQUEST AND REPLY

NCR Form | **Message Log** | History | Prior NCRs | CIRE Inspections | Prior NCR Trackers

Add Engineering Message | Send Message To/From Field

**Engineering Messages**

There were no engineering messages found.

**Message Log**

There were no messages found.



# DESTRAP



F-16 System Program Office

- Corrosion and coatings database incorporated into DESTRAP
- Automatically delivers data to OEM
- Links to related ETARs
- Allows part records for multiple parts
- Enables quick, easy trending of corrosion data



### DESTRAP > Corrosion Details

CONTROL NUMBER:	DATE: 06/27/2022	BLOCK: 40	PART NUMBER: 16B1307-16	AIRCRAFT SIN:
-----------------	------------------	-----------	-------------------------	---------------

REPAIR DESCRIPTION: Remove and Replace		ASSIGNED CORROSION REGION: Cockpit Floor		
DAMAGE TYPE: Corrosion	DAMAGE TYPE DESCRIPTION:	REPAIR LEVEL: Field		
COMMENTS: Created from NCR answer form.				

[Edit Corrosion](#) [Delete Corrosion](#) [Extract Corrosion Data](#)

[Add Related NCR](#) [Add Part Record](#)

### Related NCRs

Date Submitted	Control Number	Part Number	Noun	Affected System
2022/05/03		16B1307-15	Cockpit corrosion report LHS & repairs	Fuselage, Forward
2022/05/19		16B1104-11	Longeron	Fuselage, Forward

### Part Records

	Part Number	Perforation			Location Data			Size Data			
		Perforated	Size of Perforation	Grounding Condition	Fuselage Station	Butt Line	Water Line	Length	Width	Depth	% Material Loss
<a href="#">Edit</a>	16B1231	False		False	116	2	81	1.6 inches	0.8 inches	0.04 inches	
<a href="#">Edit</a>	16B1235	False		False	151	6	84	4 inches	1.8 inches	0.063 inches	
<a href="#">Edit</a>	16B1702	False		False	123	2	83	1.7 inches	0.9 inches	0.045 inches	
<a href="#">Edit</a>	16B2240	False		False	158	17	86	0.5 inches	0.3 inches	0.054 inches	



# DESTRAP



F-16 System Program Office

- Fatigue crack database incorporated into DESTRAP
- Automatically delivers data to OEM
- Able to quickly identify any new issues
- Enables quick, easy trending of data

**DESTRAP > Fatigue Crack Details**

CONTROL NUMBER:	DATE: 2022/09/08 05:41	BLOCK: 30	PART NUMBER: 16B1105	AIRCRAFT S/N:
LENGTH: .115"	ORIENTATION: n/a	REPAIR DESCRIPTION: Replace Part	ORIGIN: Radius	MULTIPLE CRACKS: No
ASSIGNED CRACK REGION: N/A		<a href="#">Edit Crack</a>   <a href="#">Delete Crack</a>   <a href="#">Extract Crack Data</a>		
COMMENTS NDI found a crack located on the right inboard side of 16B1105 Canopy Sill Longeron at FS 158.00, Zone 1 inboard Face IAW T.O 1F-16C-36 WP 007 00. Crack length measurement is 0.115".				

[NCR Form](#) | [Approvals](#) | [Message Log](#) | [History](#) | [Prior NCRs](#) | [CIRE Inspections](#)

PRIORITY High		Selected ORM Value: 20	
Part A	SM MAINTENANCE	MWR	
1. TO (Engineering Depot Office Symbol) AFLCMC/WAM	2. FROM (Unit Office Symbol)	3. DATE 2022/09/08 05:41	4. CONTROL NUMBER User Control Number
5. NOUN * 16B1105 CSL Longeron at 158.00	6. PART NUMBER * 16B1105	7. NATIONAL STOCK NUMBER	8. SERIAL / TAIL NUMBER * <input type="checkbox"/> Show All
9. UNIT AIRCRAFT ASSIGNED TO / LOCATION *	10. T.O./DWG NUMBER * 1F-16C-36 WP 007 00 & 1F-16C-23 WP004 Para 4.2.6	11. WORK STOPPAGE <input type="radio"/> Yes <input checked="" type="radio"/> No	12. ORGANICALLY CAUSED (I.e. Maintenance Induced Damage) <input type="radio"/> Yes <input checked="" type="radio"/> No
13. QUALITY ASSURANCE NOTIFIED (Office Symbol / Date / Time)	A/C DEFICIENCY REGION * Cockpit/HUD	A/C BLOCK 30	A/C FLYING HOURS * 6952.4
14. DEFICIENCY AND RECOMMENDATIONS NDI found a crack located on the right inboard side of 16B1105 Canopy Sill Longeron at FS 158.00, Zone 1 inboard Face IAW T.O 1F-16C-36 WP 007 00. Crack length measurement is 0.115. T.O 1F-16C-3-3 does not provide guidances. On what to do if cracks are found in this area. Requesting guidance	15. INITIATOR //SIGNED//, (Signature / Office Symbol / Phone)		16. IND. TECH/PLANNER //SIGNED//, (Signature / Office Symbol / Phone)

**Attached Problem Files**

Name	Description	Created	
<a href="#">20220908054623_Picture1.jpg</a>		2022/09/08	<a href="#">Delete</a>
<a href="#">20220908054623_Picture3.jpg</a>		2022/09/08	<a href="#">Delete</a>
<a href="#">20220908054623_Picture4.jpg</a>		2022/09/08	<a href="#">Delete</a>





# DESTRAP



F-16 System Program Office

- ETAR tracking database is a field requested update to DESTRAP
- Allows units to quickly see what ETARs need follow-up actions and when follow-up is due
- Can list when action is due in flight hours or days and be marked as recurring



## DESTRAP > NCR Tracking Database

### Add NCR Tracker

Add Control Number to NCR Tracking Database:

### NCR Trackers (Created)

NCR Tracker	Unit

### NCR Trackers (In-Progress)

NCR Tracker	Unit	Date Due	Days Remaining	AFH Due	AFH Remaining	EFH Due	EFH Remaining
				7200.0	17.7		
				7200.0	17.7		

### NCR Trackers (Closed)

No Results Found



# FDC



F-16 System Program Office

- Provides single point interface for units to upload flight data, request additional analysis, track recorder health, input additional information for mishap events
- Upload CSFDR data at least every 75 flight hours



FDC > Upload Flight Data

Download Type:  Normal  Header Only  MISHAP Analysis  MX Analysis

**Download Files**

RDF (.zip):  [Select File](#)

AMU:  [Select File](#)

CSM:  [Select File](#)

NVM:  [Select File](#)

Download Date: \*

Tail Number: \*  [Recent History](#)

Flight Hours: \*  [REMIS Hours](#)

C/SFDR OFF Number: \*

SAU:

SAU Status: \*

Comments:

**Tail Number Recent History**

Download Date	Flight Hours	Type II Capture Rate
10/12/2022	6084.3	TBD
6/9/2022	6021.3	80%

**Flight Hour History**

The purpose of this REMIS data is to help reconcile errors, not to help guess or "round out" flight hour inputs. Please input the exact aircraft flight hour for the date of download.

Date	Flight Hours
10/11/2022	6084.3
10/8/2022	6082.6
10/5/2022	6082.6
10/2/2022	6082.6
9/29/2022	6082.6
9/26/2022	6081
9/23/2022	6081
9/20/2022	6081



# FDC



F-16 System Program Office

## Recorder health summary report provides ASIP health by jet, unit, MAJCOM or fleet

Recorder Health Summary - Report Period: Delivery - 10/13/2022

[Export Results to Excel](#)

Uploads Received	Valid IAT Uploads	Upload Period Hours	Valid IAT Hours	IAT Capture Rate	Valid L/ESS Hours	L/ESS Capture Rate
83	66	7904	4744.5	60%	276.8	3.5%

Total Report Period Hours		Total IAT Uploads		Total Valid IAT Uploads		Total Valid IAT Hours		IAT Capture Rate		L/ESS Capture Rate	
7904		83		66		4744.5		60%		3.5%	
Download Date	Submitted Date	Days Elapsed	Fight Hours	Report Period Hours	OFF	SAU	SAU Status	IAT Capture Rate	L/ESS Capture Rate	POC	Edit
8/20/2022	8/22/2022	2	7912.2	75.4	5485297001	35351C1968	Good SAU	86.5%	22.7%	FDC User	Edit Upload
6/15/2022	6/15/2022	0	7836.8	11.2	5485297001	35351C1968	Good SAU	90.2%	90.5%	FDC User	Edit Upload
6/12/2022			7825.6	0.1	5485297001	35351C1968	Reformat	REFMT	REFMT	FDC Manager	Edit Upload
6/12/2022	6/12/2022	0	7825.5	63.3	5485297001	35351C1968	Good SAU	89.2%	24%	FDC User	Edit Upload
4/19/2022	4/20/2022	1	7762.2	60	5485297001	35351C1968	Good SAU	92.6%	14.5%	FDC User	Edit Upload
12/26/2021	1/19/2022	24	7702.2	72	5485297001	35351C1968	Good SAU	89.5%	14.3%	FDC User	Edit Upload
10/12/2021	10/12/2021	0	7630.2	74.9	5485297001	35351C1968	Good SAU	86.4%	12.6%	FDC User	Edit Upload
5/26/2021	5/26/2021	0	7555.3	68.3	5485297001	35351C1968	Good SAU	92.4%	13.4%	FDC User	Edit Upload
11/4/2020	11/4/2020	0	7487	69.5	5485297001	35351C1968	Good SAU	90.4%	14.4%	FDC User	Edit Upload
6/10/2020			7417.5	7.6	5485297001	35351C1968	R2	R2	R2	FDC User	Edit Upload
6/8/2020			7409.9	10.6	5485297001	35351C0997	Bad SAU	HDR ONLY	HDR ONLY	FDC User	Edit Upload
5/19/2020			7399.3	60.9	5485297001	35351C0997	R2	R2	R2	FDC Manager	Edit Upload
11/17/2019	11/17/2019	0	7338.4	63.4	5485297001	35351C1091	Good SAU	86.8%	6.7%	FDC User	Edit Upload
6/20/2019			7275	0.1	5485297001	35351C1091	Reformat	REFMT	REFMT	FDC Manager	Edit Upload
6/20/2019	6/21/2019	1	7274.9	68.7	5485297001	35351C1091	Good SAU	88.5%	9.2%	FDC User	Edit Upload
3/19/2019	3/25/2019	6	7206.2	69.5	5485297001	35351C1091	Good SAU	88.3%	6.2%	FDC User	Edit Upload
12/19/2018	12/19/2018	0	7136.7	72.4	5485297001	35351C1091	Good SAU	86.8%	7%	FDC User	Edit Upload



# FDC



F-16 System Program Office

## Last uploads report provides quick visual of hours since last download

Last Uploads for [Redacted]

Last Uploads Updated as of: 9/15/2022

Flight Hours Updated as of: 9/15/2022

[Export Results to Excel](#)

Legend
Less Than 65 Flight Hours
Flight Hours Between 65 and 75
Flight Hours Greater Than 75

Tail Number	Last Upload					Flight Hours Since Last Upload			
	Download Date	Submitted Date	Days Elapsed	Flight Hours	POC	Total Hours	75 Hrs	150 Hrs	225 Hrs
[Redacted]	9/6/2022	9/6/2022	0	5656.9	FDC User	11.2			
[Redacted]	6/15/2022	6/15/2022	0	7227.9	FDC User	68.2			
[Redacted]	9/6/2022	9/6/2022	0	5693.5	FDC User	0			
[Redacted]	8/26/2022	8/30/2022	4	4844.9	FDC User	19.3			
[Redacted]	2/14/2022	2/15/2022	1	6178	FDC User	67.3			
[Redacted]	7/6/2022	7/6/2022	0	7537.3	FDC User	67.8			
[Redacted]	8/30/2022	8/30/2022	0	7385.5	FDC User	15.4			
[Redacted]	8/30/2022	8/30/2022	0	5400.9	FDC Manager	7.3			
[Redacted]	4/6/2021	4/6/2021	0	7125.2	FDC User	22.4			
[Redacted]	8/23/2022	8/30/2022	7	7226.2	FDC User	14.9			
[Redacted]	7/11/2022	7/11/2022	0	7500.3	FDC User	36.8			
[Redacted]	10/15/2021	10/20/2021	5	6606.7	FDC User	70.2			
[Redacted]	7/28/2022	8/30/2022	33	4967	FDC User	53			



# FDC



F-16 System Program Office

- Tracking health analysis based on serial number provides trending issues on bad actors



FDC > SAU/DAU History

Search for SAU/DAU History

SAU/DAU Serial Number \*  OFF

SAU	Download Date	Tail Number	Unit	IAT Capture Rate	Period Hours	Flight Hours	OFF
35351C0010	10/11/2022			93.7	62.5	6548.5	5579990301
35351C0010	05/23/2022			91.7	38.9	6486.0	5579990301
35351C0010	01/11/2021			0.0	5.0	6385.0	5579990301
35351C0010	10/06/2020			89.8	4.1	6349.1	5579990301
35351C0010	10/01/2020			0.0	66.8	6345.0	5579990301
35351C0010	09/21/2020			0.0	6.9	5582.4	5485296001
35351C0010	06/23/2020			90.7	27.0	6278.2	5579990301
35351C0010	05/19/2020			0.0	43.8	6251.2	5579990301
35351C0010	04/01/2020			0.0	42.6	5505.7	5485296001
35351C0010	09/03/2019			0.0	60.3	7222.8	5485296001
35351C0010	09/03/2019			0.0	8.8	6749.8	5485296001
35351C0010	08/30/2019			0.0	2.0	6731.0	5485296001
35351C0010	11/03/2018			89.6	78.0	6082.1	5579990301
35351C0010	03/20/2017			0.0	22.0	7234.1	5485296001
35351C0010	10/04/2011			93.2	68.3	5401.5	5485296001
35351C0010	07/11/2011			91.5	76.4	5333.2	5485296001
35351C0010	01/28/2011			87.2	71.6	5256.8	5485296001
35351C0010	07/21/2010			87.6	74.2	5185.2	5485296001
35351C0010	01/05/2010			77.4	69.3	5111.0	5485296001
35351C0010	08/11/2009			31.1	213.0	5041.7	5485296001
35351C0010	10/04/2006			86.6	152.7	4828.7	5485296001



# CIRE



F-16 System Program Office

- CIRE has become an important part of F-16 digital data collection capabilities
- Inspections are fully customizable to stakeholder requirements
  - Structures
  - Mechanical systems
  - Avionics
  - Field users/depots
- Allows stakeholder to deploy inspections to field and access results immediately

Welcome CTR user cire  
Last Logged In: 9/29/2022 1:13:22 PM

Profile Log Out

Contact Help

Portal

Home Inspections Database

CIRE > Welcome to the Common Inspection Reporting Engine Web Application!

**WARNING:** This site is intended for the use of DoD and DoD contractor personnel only. Do not reproduce or distribute the content of this site to a wider audience without coordination with the information owner and your unit public affairs office.

You are accessing a U.S. Government (USG) information system (IS) (which includes any device attached to this information system) that is provided for U.S. Government-authorized use only. By using this IS (which includes any device attached to this IS) and clicking the "Acknowledge" button, you consent to the following conditions:

1. The U.S. Government routinely intercepts and monitors communications on this information system for purposes including, but not limited to, penetration testing, communications security (COMSEC) monitoring, network operations and defense, personnel misconduct (PM), law enforcement (LE), and counterintelligence (CI) investigations. At any time, the U.S. Government may inspect and seize data stored on this information system.
2. Communications using, or data stored on, this information system are not private, are subject to routine monitoring, interception, and search, and may be disclosed or used for any U.S. Government authorized purpose.



# CIRE



F-16 System Program Office

- 99 total inspections, 68 active
- TCTOs, TO inspections, ACIs, depot overhauls recorded in CIRE
- Can track information in real time to identify issues or make corrections as necessary
- Embedded functions allow for export of data including attachments

Inspection	Description
AC2521 - Post-Block	Depot Level Analytical Condition Inspection F21 (Pre-Block)
AC2521 - Pre-Block	Depot Level Analytical Condition Inspection F21 (Pre-Block)
AC2522 - Post-Block	Depot Level Analytical Condition Inspection F22 (Pre-Block)
AC2522 - Pre-Block	Depot Level Analytical Condition Inspection F22 (Pre-Block)
AC2523	Hangar Annual Condition Inspection

Inspection	Description
100208	100208:11 Entry Current Inspection of the F-16 F-16 Lower Bulkhead Control Plug Substrate, Fuselage, and Tailcone
100209	2 Seal Canopy SR Lugs
100210	2 Seal Canopy SR Lugs
100211	2 Seal Canopy SR Lugs
100212	2 Seal Canopy SR Lugs
100213	2 Seal Canopy SR Lugs
100214	2 Seal Canopy SR Lugs
100215	2 Seal Canopy SR Lugs
100216	2 Seal Canopy SR Lugs
100217	2 Seal Canopy SR Lugs
100218	2 Seal Canopy SR Lugs
100219	2 Seal Canopy SR Lugs
100220	2 Seal Canopy SR Lugs
100221	2 Seal Canopy SR Lugs
100222	2 Seal Canopy SR Lugs
100223	2 Seal Canopy SR Lugs
100224	2 Seal Canopy SR Lugs
100225	2 Seal Canopy SR Lugs
100226	2 Seal Canopy SR Lugs
100227	2 Seal Canopy SR Lugs
100228	2 Seal Canopy SR Lugs
100229	2 Seal Canopy SR Lugs
100230	2 Seal Canopy SR Lugs
100231	2 Seal Canopy SR Lugs
100232	2 Seal Canopy SR Lugs
100233	2 Seal Canopy SR Lugs
100234	2 Seal Canopy SR Lugs
100235	2 Seal Canopy SR Lugs
100236	2 Seal Canopy SR Lugs
100237	2 Seal Canopy SR Lugs
100238	2 Seal Canopy SR Lugs
100239	2 Seal Canopy SR Lugs
100240	2 Seal Canopy SR Lugs
100241	2 Seal Canopy SR Lugs
100242	2 Seal Canopy SR Lugs
100243	2 Seal Canopy SR Lugs
100244	2 Seal Canopy SR Lugs
100245	2 Seal Canopy SR Lugs
100246	2 Seal Canopy SR Lugs
100247	2 Seal Canopy SR Lugs
100248	2 Seal Canopy SR Lugs
100249	2 Seal Canopy SR Lugs
100250	2 Seal Canopy SR Lugs
100251	2 Seal Canopy SR Lugs
100252	2 Seal Canopy SR Lugs
100253	2 Seal Canopy SR Lugs
100254	2 Seal Canopy SR Lugs
100255	2 Seal Canopy SR Lugs
100256	2 Seal Canopy SR Lugs
100257	2 Seal Canopy SR Lugs
100258	2 Seal Canopy SR Lugs
100259	2 Seal Canopy SR Lugs
100260	2 Seal Canopy SR Lugs
100261	2 Seal Canopy SR Lugs
100262	2 Seal Canopy SR Lugs
100263	2 Seal Canopy SR Lugs
100264	2 Seal Canopy SR Lugs
100265	2 Seal Canopy SR Lugs
100266	2 Seal Canopy SR Lugs
100267	2 Seal Canopy SR Lugs
100268	2 Seal Canopy SR Lugs
100269	2 Seal Canopy SR Lugs
100270	2 Seal Canopy SR Lugs
100271	2 Seal Canopy SR Lugs
100272	2 Seal Canopy SR Lugs
100273	2 Seal Canopy SR Lugs
100274	2 Seal Canopy SR Lugs
100275	2 Seal Canopy SR Lugs
100276	2 Seal Canopy SR Lugs
100277	2 Seal Canopy SR Lugs
100278	2 Seal Canopy SR Lugs
100279	2 Seal Canopy SR Lugs
100280	2 Seal Canopy SR Lugs
100281	2 Seal Canopy SR Lugs
100282	2 Seal Canopy SR Lugs
100283	2 Seal Canopy SR Lugs
100284	2 Seal Canopy SR Lugs
100285	2 Seal Canopy SR Lugs
100286	2 Seal Canopy SR Lugs
100287	2 Seal Canopy SR Lugs
100288	2 Seal Canopy SR Lugs
100289	2 Seal Canopy SR Lugs
100290	2 Seal Canopy SR Lugs
100291	2 Seal Canopy SR Lugs
100292	2 Seal Canopy SR Lugs
100293	2 Seal Canopy SR Lugs
100294	2 Seal Canopy SR Lugs
100295	2 Seal Canopy SR Lugs
100296	2 Seal Canopy SR Lugs
100297	2 Seal Canopy SR Lugs
100298	2 Seal Canopy SR Lugs
100299	2 Seal Canopy SR Lugs
100300	2 Seal Canopy SR Lugs

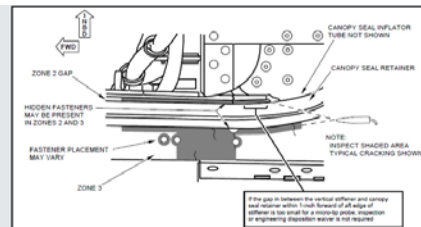


# CIRE



F-16 System Program Office

- Canopy sill longeron (CSL) inspection is an important safety critical inspection
- Requirement to upload photos has led to additional mitigation actions



Note:

- If cracked, report the 107/202 control number
- If cracked, do not pull the seal retainer to measure crack unless directed
- Provide any additional information in the comments block
- Report any life limiting restrictions

Longeron PN:  16B1103  16B1105  16B1107

Left Canopy Sill Longeron		Right Canopy Sill Longeron	
Cracks Found?	<input type="radio"/> Yes <input type="radio"/> No	Cracks Found?	<input type="radio"/> Yes <input type="radio"/> No
If crack was found, include 107/202 control number, crack length, and zone.		If crack was found, include 107/202 control number, crack length, and zone.	
Zone	<input type="text"/>	Zone	<input type="text"/>
Do not pull the seal retainer to measure crack unless directed		Do not pull the seal retainer to measure crack unless directed	
Crack Length	<input type="text"/>	Crack Length	<input type="text"/>
107/202 Control Number	<input type="text"/>	107/202 Control Number	<input type="text"/>
Comments		Comments	
<input type="text"/>		<input type="text"/>	
16RB098 Installed?	<input type="radio"/> Yes <input type="radio"/> No	16RB098 Installed?	<input type="radio"/> Yes <input type="radio"/> No
Date 16RB098 Installed	<input type="text"/>	Date 16RB098 Installed	<input type="text"/>
Flight Hours 16RB098 Installed	<input type="text"/>	Flight Hours 16RB098 Installed	<input type="text"/>
Flight Hours Given in 107/202	<input type="text"/>	Flight Hours Given in 107/202	<input type="text"/>
Longeron Replaced?	<input type="radio"/> Yes <input type="radio"/> No	Longeron Replaced?	<input type="radio"/> Yes <input type="radio"/> No
Date Longeron Replaced	<input type="text"/>	Date Longeron Replaced	<input type="text"/>
Flight Hours Longeron Replaced	<input type="text"/>	Flight Hours Longeron Replaced	<input type="text"/>

Inspection Attachments  
[20220922120111\\_1663868113121.jpg](#)  
[20220922120135\\_1663868110925.jpg](#)

[Download All Attachments](#)





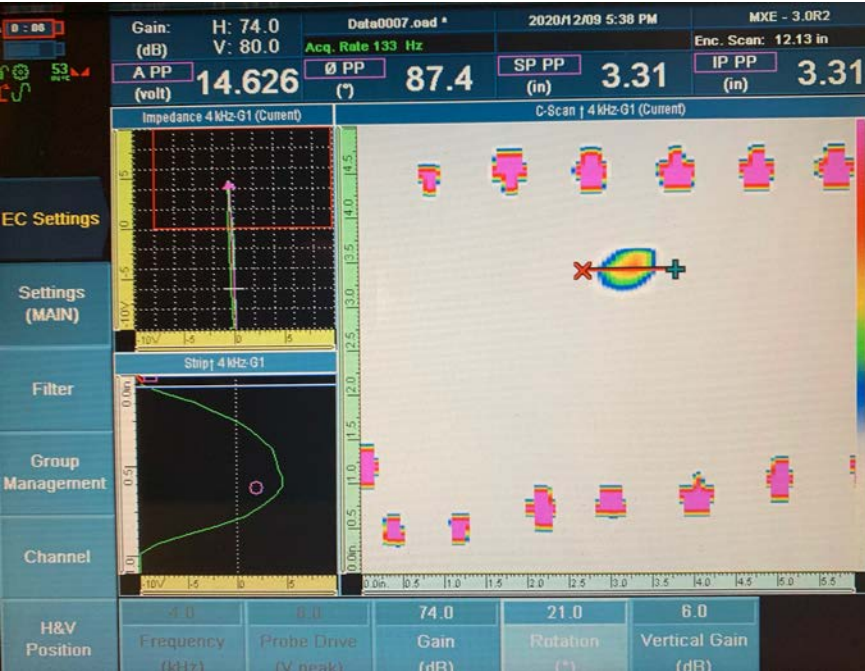
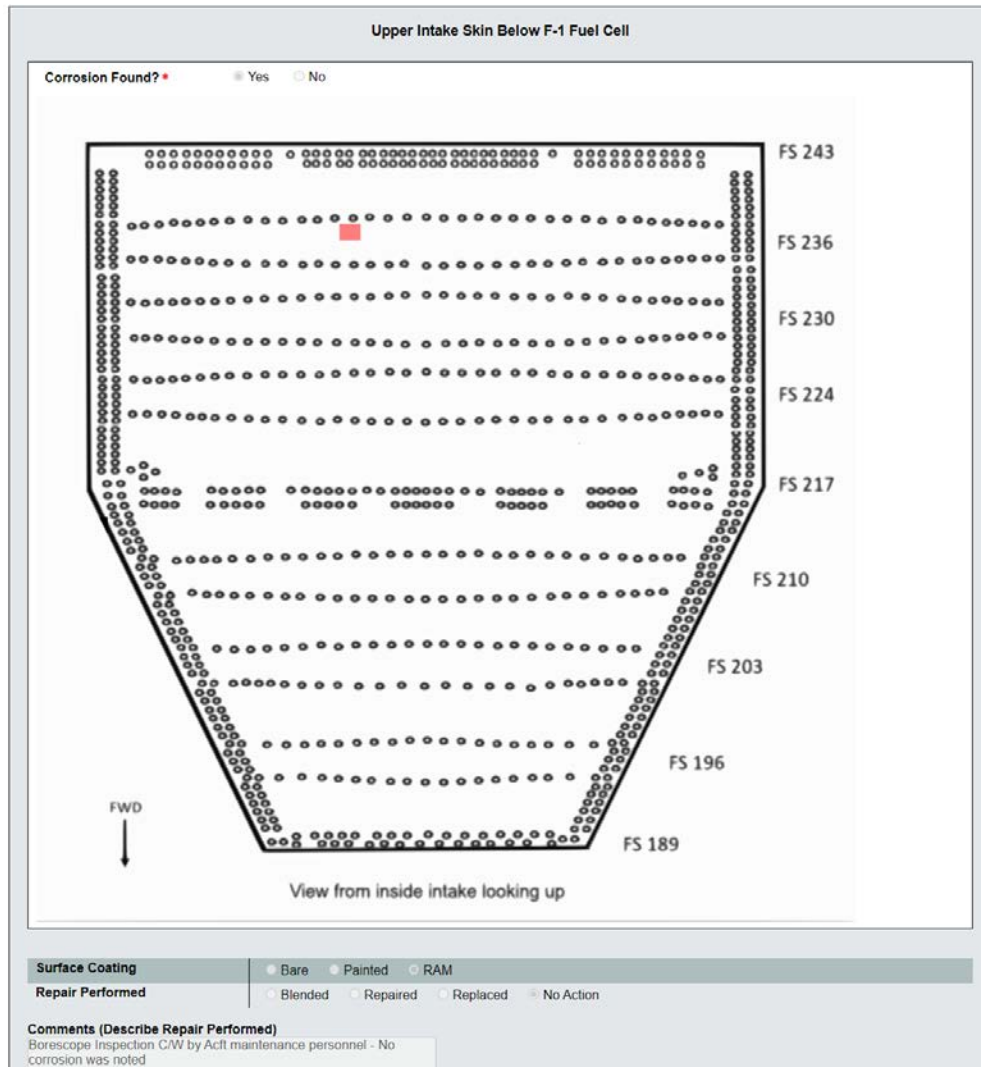


# CIRE



F-16 System Program Office

- Corrosion inspection allows user to select area of interest and upload relevant data





# IAT



F-16 System Program Office

- Fixed inspection fields based on requirement to upload results to OEM proprietary PERFORMS software

<p><b>UPPER LEFT</b></p> <p>Cracks Found: Yes <input type="radio"/> No <input type="radio"/></p> <p>Crack Length (Inches)</p> <input type="text"/> <p>Orientation</p> <input type="text"/> <p>Comments</p> <input type="text"/>	<p><b>LOWER LEFT</b></p> <p>Cracks Found: Yes <input type="radio"/> No <input type="radio"/></p> <p>Crack Length (Inches)</p> <input type="text"/> <p>Orientation</p> <input type="text"/> <p>Comments</p> <input type="text"/>
---	---

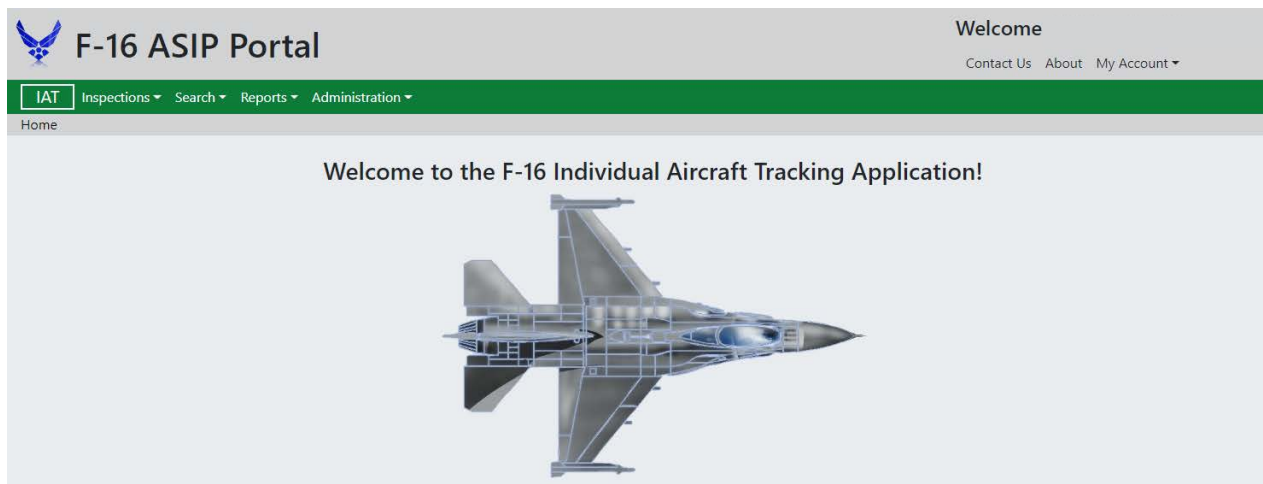


# IAT



F-16 System Program Office

- IAT inspections are levied on an individual A/C basis based on CSFDR download data and PERFORMS output
- TOs drive units to website for inspection requirements
- Updated inspection requirements are uploaded every 6 months





# IAT



F-16 System Program Office

## ■ Multiple report views to easily determine when inspections are due/overdue

F-16 ASIP Portal

Welcome

Contact Us Help My Account

IAT Inspections Search Reports Administration

Home / Reports / Delinquent Inspections Report

Export Results to Excel

No delinquent inspections found

F-16 ASIP Portal

Welcome

Contact Us Help My Account

IAT Inspections Search Reports Administration

Home / Reports / Unit Inspection Report

Submit Query

(28 Inspections)

Export Results to Excel

Tail Number	Control Point Inspection	Due at AFH
W1102DA	W1102DA	6001.9
W1102DA	W1102DA	8074.2
W1102DA	W1102DA	7240.6
W1102DA	W1102DA	6203.3
B5247IA	B5247IA	6189
B5257FA	B5257FA	5596
W1102CA	W1102CA	5552.3
B5237BA	B5237BA	7211.5
B5237GA	B5237GA	7270
B5257FA	B5257FA	7211.5
W1102CA	W1102CA	5268.8
W1102DA	W1102DA	5925
W1102CA	W1102CA	5271.9
W1263AA	W1263AA	6958
B5237BA	B5237BA	7495.2
B5237GA	B5237GA	8228
B5257FA	B5257FA	7495.2
W1102DA	W1102DA	5756
B5237BA	B5237BA	7499
W1263AA	W1263AA	7147.6
B5237BA	B5237BA	7154.1
B5237GA	B5237GA	7779
B5257FA	B5257FA	7248
W1102DA	W1102DA	7175



# IAT



*F-16 System Program Office*

- **Ability to levy non-PERFORMS driven inspections**
- **Enables quick data collection of selected aircraft to support risk assessments or other efforts**
- **Provides capability to target high risk aircraft for inspection**



# SLR

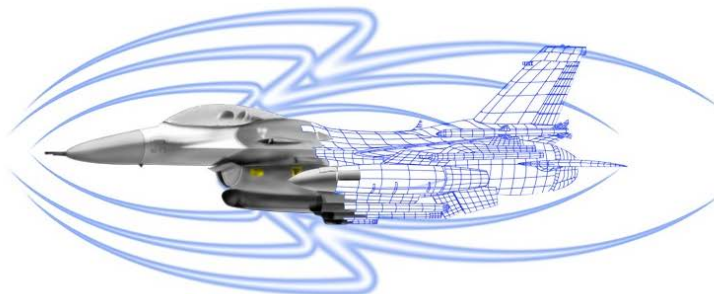


F-16 System Program Office

- Designed to communicate Equivalent Flight Hours (EFH) with maintenance group commanders, fleet planners, etc.
  - Actual Flight Hours (AFH) updated at least twice a week
  - Severity factors updated annually
- Official source for all F-16 service life data
  - Eliminates confusion due to data dissemination challenges



SLR > Welcome to the F-16 Service Life Reports Web Application!





# SLR



F-16 System Program Office

- **Fleet Management Reports (Block Specific)**
  - **Aircraft Service Life Table**
    - Current AFH and EFH hours and projections by block
- **In Service Schedule**
  - Represents the number of aircraft reaching service life or being attrited during each calendar year
- **Service Life Chart**
  - Displays individual aircraft progression in AFH and EFH
- **Force Projection Chart**
  - Represents the number of aircraft available for active service in each calendar year
  - Accounts for aircraft reaching service life or being attrited
  - Illustrates when aircraft reach certified service life

Tail Number	Block	Model	MAJCOM	Unit	AFH (per RCMES pull on 10/14/2022)	EFH (Text Baseline)	Severity Factor (Text Baseline)	Certified Service Life	Usage Rate (AFH Year)	AFH at Certified Service Life	Years Remaining until Certified Service Life is Reached	Date When Certified Service Life Reached
					3257.5	3172.1	0.974	10800	49	11091	159.5	04/04/2182
					9191.3	8933.0	0.972	10800	193	11112	10.0	09/25/2032
					7921.2	8406.0	1.061	10800	142	10177	15.9	09/11/2038
					8197.4	9035.9	1.102	10800	142	9798	11.3	11/09/2033
					7782.7	7689.7	0.988	10800	142	10931	22.2	12/26/2044
					8650.5	7796.9	0.901	10800	193	11982	17.3	01/17/2040
					7999.7	7937.0	0.992	10800	193	10885	14.9	09/24/2037
					8197.8	7982.3	0.974	10800	193	11092	15.0	10/09/2037
					7547.2	7373.7	0.977	10800	193	11054	18.2	12/13/2040
					8794.2	9687.4	1.102	10800	142	9904	7.1	11/28/2029







# SLR



F-16 System Program Office

- Communicate data for risk-based TCTOs
- Used for fleet planning, depot scheduling



SLR > TCTO 2750

NOTE: For any data errors on this page, click [here](#) to contact us.

Data Filters

MAJCOM: All Installation: All Block: All

Apply Filters Reset Filters

Export Results to Excel

Search:

Show All entries

Tail Number	Block	MAJCOM	Unit	AFH (per REMS pull on 10/14/2022)	TCTO 2750 Do Not Exceed AFH	Remaining AFH
7921.2	C/W			7921.2	C/W	N/A
8197.4	C/W			8197.4	C/W	N/A
7782.7	C/W			7782.7	C/W	N/A
7897.0	C/W			7897.0	C/W	N/A
8794.2	C/W			8794.2	C/W	N/A
7367.8	C/W			7367.8	C/W	N/A
7404.9	C/W			7404.9	C/W	N/A
7859.9	C/W			7859.9	C/W	N/A
5797.8	8804.6			5797.8	8804.6	1006.8
6610.9	C/W			6610.9	C/W	N/A
8687.2	C/W			8687.2	C/W	N/A
6248.0	6994.3			6248.0	6994.3	746.3
6321.5	C/W			6321.5	C/W	N/A
6446.1	C/W			6446.1	C/W	N/A
7144.0	8214.0			7144.0	8214.0	1070.0
6838.6	C/W			6838.6	C/W	N/A
7450.1	C/W			7450.1	C/W	N/A
7068.4	7870.3			7068.4	7870.3	801.9
5798.7	C/W			5798.7	C/W	N/A
7524.3	C/W			7524.3	C/W	N/A
7501.5	C/W			7501.5	C/W	N/A
6750.7	C/W			6750.7	C/W	N/A



SLR > Programmed Structural Sustainment & Repair

NOTE: For any data errors on this page, click [here](#) to contact us.

Data Filters

MAJCOM: All Installation: All Block: All Model: All

Apply Filters Reset Filters

Export Results to Excel

Search:

Show All entries

Tail Number	Block	Model	MAJCOM	Unit	AFH (per REMS pull on 10/14/2022)	PSSR Do Not Exceed AFH	PSSR 2 Do Not Exceed AFH	Remaining AFH
3257.5					3257.5	10678.9	TBD	7621.4
9191.3					9191.3	9342.0	TBD	150.7
7921.2					7921.2	8395.2	TBD	474.0
8197.4					8197.4	8658.0	TBD	460.6
7782.7					7782.7	8777.8	TBD	995.1
8650.5					8650.5	9437.3	TBD	786.8
7999.7					7999.7	8936.3	TBD	936.6
8197.8					8197.8	9128.4	TBD	930.6
7547.2					7547.2	C/W	10912.5	3365.3
8794.2					8794.2	9009.2	TBD	215.0
7404.9					7404.9	8341.2	TBD	938.3
7859.9					7859.9	C/W	CSL	N/A
6141.6					6141.6	6327.6	TBD	186.0
7938.8					7938.8	C/W	9396.9	1458.1
6734.7					6734.7	7517.8	TBD	783.1
8447.7					8447.7	9311.4	TBD	863.7
7148.9					7148.9	8075.3	TBD	926.4
8416.7					8416.7	9265.9	TBD	849.2
8912.9					8912.9	C/W	10494.3	1581.4
6945.6					6945.6	8123.7	TBD	1178.1
8493.7					8493.7	9391.3	TBD	897.6
8383.2					8383.2	8648.0	TBD	264.8



# SLR



F-16 System Program Office

- Reports used to track modification programs and CSL replacements
- Provides resource for units to know when to start inspections based on TCTOs or part replacements

SLR > Service Life Extension Program

NOTE: For any data errors on this page, click [here](#) to contact us.

MAJCOM: All Installation: All Block: All Model: All

Export Results to Excel

Showing 1 to 12 of 12 entries

Tail Number	Block	Model	MAJCOM	Unit	Completion Date	Completed Flight Hours	Flight Hours Since Completion
					08/15/2022	8704.7	0.9
					06/27/2022	7015.6	41.8
					09/30/2022	10749.5	1.6
					08/12/2022	6758.6	10.7
					09/29/2022	7225.8	6.5
					09/28/2022	7188.0	1.3
					05/30/2019	6636.2	706.7
					06/15/2022	8819.9	50.3
					11/19/2019	8652.5	1172.7
					08/07/2019	6574.1	746.3
					04/26/2018	6448.4	1105.8
					12/27/2021	7047.1	218.1

Showing 1 to 12 of 12 entries

SLR > Canopy Sill Longeron Replacement

NOTE: For any data errors on this page, click [here](#) to contact us.

Add CSL Replacement Data

Tail Number: 00-0000 Add Selected Tail Number

MAJCOM: All Installation: All Block: All Model: All

Export Results to Excel

Showing 1 to 12 of 12 entries

Tail Number	Block	Model	Unit	Longeron Replacement Date	AFH	Flight Hours at Replacement	Flight Hours Since Replacement	Action
				02/08/2021	6156.2	5762.0	393.2	Edit
				03/08/2021	6290.2	5885.2	405.0	Edit
				01/03/2020	7887.0	7538.7	358.3	Edit
				05/02/2019	8794.2	8212.4	581.8	Edit
				04/16/2018	7367.8	6725.8	642.0	Edit
				12/07/2017	7859.9	7249.5	610.4	Edit
				09/30/2016	8687.2	7417.2	1270.0	Edit
				05/19/2016	6518.2	5778.2	740.0	Edit
				09/25/2014	6555.1	5674.3	880.8	Edit
				05/18/2016	7002.0	6711.7	1190.3	Edit
				04/12/2018	8044.7	7513.3	731.4	Edit
				02/09/2015	7349.4	6243.8	1105.6	Edit
				08/14/2017	8818.1	7843.9	974.2	Edit
				07/21/2020	7320.1	9677.0	-2256.9	Edit
				10/23/2015	7857.0	6809.6	1447.4	Edit
				04/15/2020	7360.1	6859.8	500.3	Edit
				06/25/2020	7161.3	6211.9	849.4	Edit
				05/07/2020	8023.1	6994.3	1028.8	Edit
				03/19/2015	7812.0	6656.6	1155.4	Edit

SLR > Falcon Structural Augmentation Roadmap

NOTE: For any data errors on this page, click [here](#) to contact us.

MAJCOM: All Installation: All Block: All Model: All

Export Results to Excel

Showing 1 to 12 of 12 entries

Tail Number	Block	Model	MAJCOM	Unit	Completion Date	Completed Flight Hours	Flight Hours Since Completion
					05/20/2002	0.0	6120.5
					05/23/2002	0.0	6447.6
					06/05/2002	0.0	4292.9
					06/05/2002	0.0	6872.3
					06/01/2002	0.0	6286.5
					08/11/2002	0.0	5902.5
					08/15/2002	0.0	5064.3
					08/23/2002	0.0	6155.2
					08/13/2002	0.0	6390.2
					09/30/2002	0.0	5827.1
					10/21/2002	0.0	7527.2
					11/13/2002	0.0	6478.4
					03/09/2005	0.0	5841.0
					04/08/2011	2372.0	885.5
					03/14/2005	5015.9	1376.3
					08/14/2006	5279.0	1128.6
					07/21/2005	5171.6	1063.7
					06/05/2005	5836.1	1414.9
					03/28/2007	5093.0	791.0
					03/21/2005	4852.6	1726.9
					11/24/2004	5678.5	3512.8
					06/01/2012	4868.9	274.8
					06/22/2005	5218.1	2703.1



# HOTF



F-16 System Program Office

- **Engineering only tools**
  - Enables “what-if” scenarios without modifying database
- **Severity factor, usage rate, attrition rate management**
- **Reduces use of spreadsheets**
  - Revision issues
  - User errors



HOTF > Welcome to the F-16 Health of the Fleet Web Application!





# HOTF



F-16 System Program Office

- Trending tools to quickly visualize any changes in fleet severity
- Risk tracking tool enables engineering to see all tracked risk assessments/TCTOs
- Contains live version of annual USAF ASIP review spreadsheets
  - Enables easier data collection for annual review

MDS	A/C Qty	IOC Year	Projected Retire Year	Projected Years in Service	Design Service Life Years	Design Service Life Hours	Certified Service Life Hours	CSL in EFH or AFH?	High AFH	Avg AFH	Avg AFH per A/C Year	High AFH Projected at Retire	Avg AFH Projected at Retire	High EFH	Avg EFH	Avg EFH per A/C Year	High EFH Projected at Retire	Avg EFH Projected at Retire	As of	
F-16 25/30/32					15	8000	10800	EFH												09/26/2022
F-16 40/42					15	8000	8000	EFH												09/26/2022
F-16 50/52					15	8000	8000	EFH												09/26/2022
F-16 40-52 C Model Post-SLEP					15	8000	13856	EFH												09/26/2022
F-16 40/42 D Model Post-SLEP					15	8000	13700	EFH												09/26/2022
F-16 50/52 D Model Post-SLEP					15	8000	12200	EFH												09/26/2022

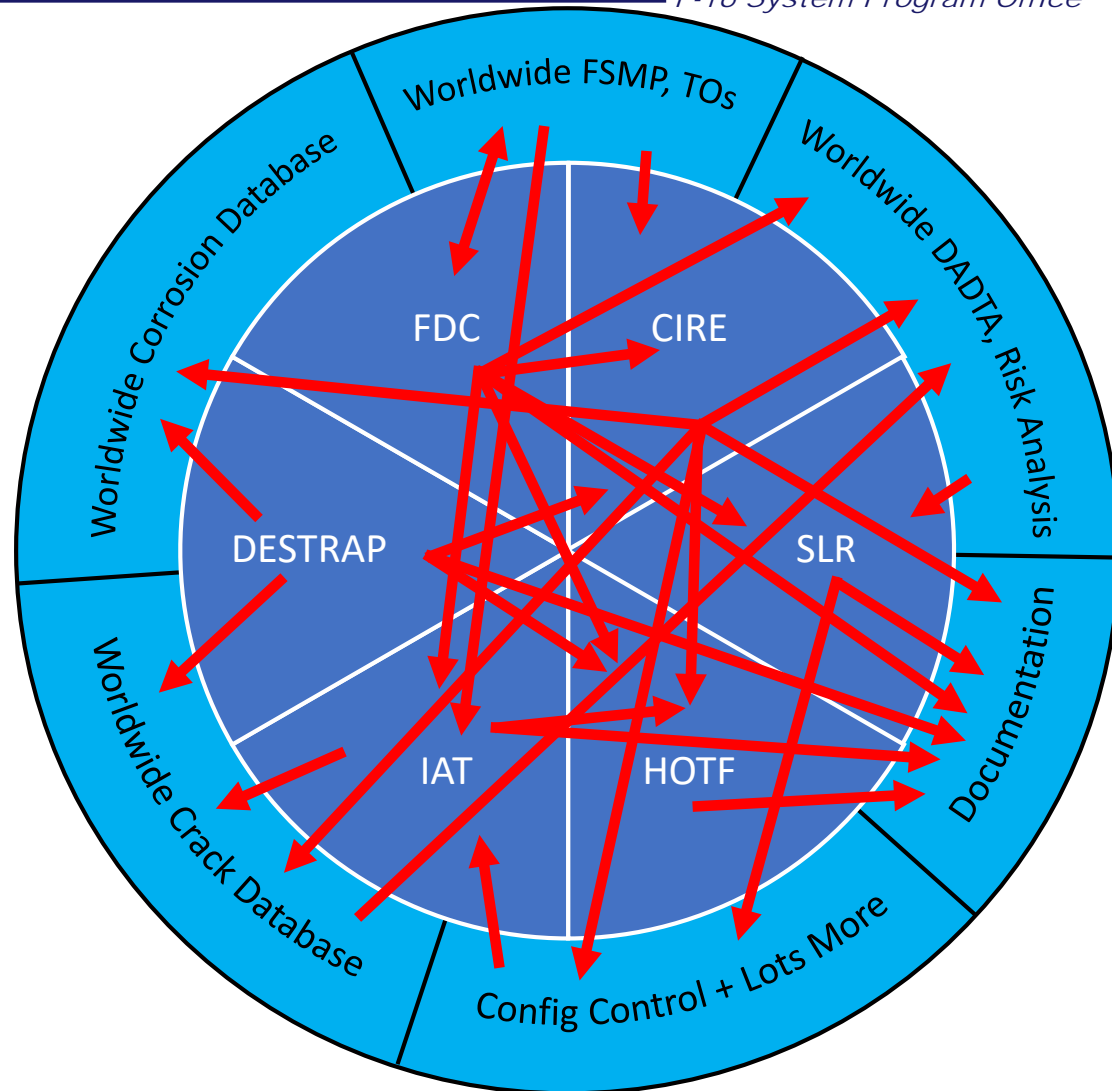


# F-16 ASIP Engineering Threads



F-16 System Program Office

- Simplified concept of the digital threads between USAF, OEM, FMS
  - Not all automated, currently
- 20+ years of collaboration to get to current maturity level
- All threads are vital towards creating a digital twin





# Programmed Structural Sustainment & Repair



F-16 System Program Office

## CIRE

**Left Forward F3 309**

Cracks Found?	Yes	No
Initial Blend Depth	035	No
Bulkhead Replaced?	Yes	No
Blended?	Yes	No
Final Blend Depth	035	No
Comments		

**Right Forward F3 309**

Cracks Found?	Yes	No
Initial Blend Depth	034	No
Bulkhead Replaced?	Yes	No
Blended?	Yes	No
Final Blend Depth	032	No
Comments	No crack after bands	

**Left A/R F3 309**

Cracks Found?	Yes	No
Initial Blend Depth	030	No
Bulkhead Replaced?	Yes	No
Blended?	Yes	No
Final Blend Depth	030	No
Comments		

**Right A/R F3 309**

Cracks Found?	Yes	No
Initial Blend Depth	03	No
Bulkhead Replaced?	Yes	No
Blended?	Yes	No
Final Blend Depth	03	No
Comments		

## Depot

## Risk Assessments

## FDC

Download Type:  Normal  Header Only  MISHAP Analysis  MX Analysis

Download Files:

RDF (zip):

AMU:

CSM:

NVM:

Download Date:

Tail Number:

Flight Hours:

C/SFDR OFP Number:

SAU:

SAU Status:

Comments:

**Tail Number Recent History**

Download Date	Flight Hours	Type B Capture Rate
10/12/2022	6084.3	TBD
9/9/2022	6021.3	80%

**Flight Hour History**

The purpose of this REMI'S data is to help reconcile errors, not to help guests or "round out" flight hour inputs. Please input the exact aircraft flight hour for the date of download.

Date	Flight Hours
10/11/2022	6084.3
10/8/2022	6082.6
10/5/2022	6082.6
10/2/2022	6082.6
9/29/2022	6082.6
9/26/2022	6081
9/23/2022	6081
9/20/2022	6081

## SLR

SLR > Programmed Structural Sustainment & Repair

NOTE: For any data errors on this page, click [here](#) to contact us.

Data Filters: MAJCOM: All Installation: All Block: All Model: All Apply Filters Reset Filters

Export Results to Excel

Search:

Tail Number	Block	Model	MAJCOM	Unit	AFH (per risks put on 10/14/2022)	PSSR Do Not Exceed AFH	PSSR 2 Do Not Exceed AFH	Remaining AFH
7921.2					3257.5	10878.9	TBD	7921.4
9191.3					9191.3	9342.0	TBD	930.7
7921.2					7921.2	8395.2	TBD	474.0
8197.4					8197.4	8658.0	TBD	460.6
7782.7					7782.7	8777.8	TBD	995.1
8650.5					8650.5	9437.3	TBD	786.9
7999.7					7999.7	8936.3	TBD	936.6
8197.8					8197.8	9128.4	TBD	930.6
7547.2		CW			7547.2	CW	10912.5	3365.3
8794.2					8794.2	9009.2	TBD	215.0
6141.6					6141.6	6327.6	TBD	186.0
7404.9					7404.9	8341.2	TBD	836.3
7859.9		CW			7859.9	CW	CSL	N/A
7038.6					7038.6	8327.6	TBD	1458.1
7038.6		CW			7038.6	CW	8395.9	1458.1
6734.7					6734.7	7517.8	TBD	783.1
8447.7					8447.7	9311.4	TBD	863.7
7148.9					7148.9	8075.3	TBD	906.4
8416.7					8416.7	9265.9	TBD	849.2
8912.9		CW			8912.9	CW	10494.3	1581.4
6645.6					6645.6	8123.7	TBD	1178.1
8493.7					8493.7	9391.3	TBD	897.6
8383.2					8383.2	9648.0	TBD	294.8



# Canopy Sill Longerons

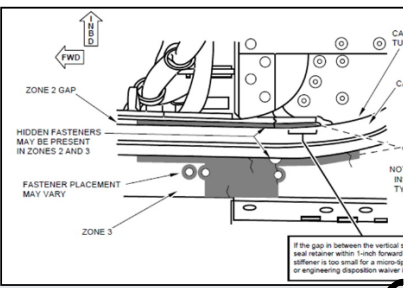


F-16 System Program Office

In the zone 1 area we want no black or white paint.

If there is a coating, it should be a thin smooth even coating of alodine and/or primer.

Your unit can choose to leave Zone 1 bare metal.

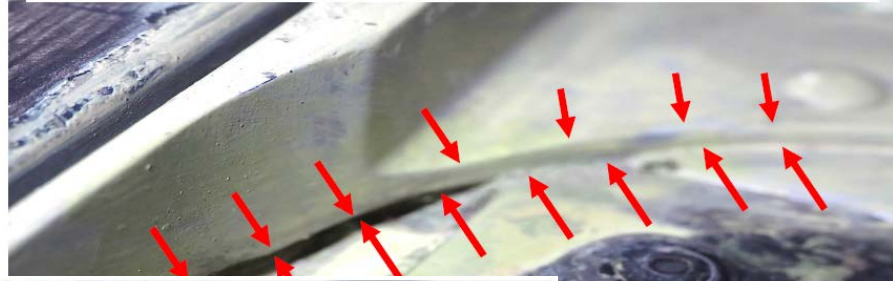


Note:

- If cracked, report the 107/202 control number
- If cracked, do not pull the seal retainers to measure crack unless directed

Examples of what a proper prep can look like.

Remember if there is surface damage to submit 107 for guidance



face

in the red arrows so the sealant MUST be smooth and thin



[20220922120111\\_1663868113121.jpg](#)  
[20220922120135\\_1663868110925.jpg](#)

Download All Attachments



# Holistic Data Capture for Digital Twins



F-16 System Program Office

**HOTF > Severity Factor Trending Tool**

**Data Filters**

Aircraft Status: Active | MAJCOM: All | Installation: All | Block: Select All 25 30 32 40 42 50 52 | Model: All

Chart Date From: 2014 | Chart Date To: 2023 | Generate Chart Report

**Severity Factor Trends - 2014 - 2023**

Year	Severity Factor
2014	1.08
2015	1.07
2016	1.05
2017	1.05
2018	1.05
2019	1.04
2020	1.02
2021	1.01
2022	1.00
2023	0.99

**Table 1: Control Number and Part**

Control Number	Part
23-	-002
23-	-001
22-	-004
22-	-003
22-	-002
22-	-001
21-	-002
21-	-001
20-	-008
20-	-007
20-	-006
20-	-005
20-	-004
20-	-003
20-	-002
20-	-001
19-	-012
19-	-011
19-	-010
19-	-009
19-	-008

**Table 2: Download Date**

Download Date
4/10/2023
12/21/2022
6/27/2022
4/21/2022
3/25/2022
3/25/2022
12/8/2021
8/16/2021
5/3/2021
3/4/2021
6/29/2020
2/19/2020
7/23/2019
4/25/2019
12/6/2018
6/19/2018
2/21/2018
8/23/2016
7/27/2016
3/3/2016
6/4/2015
3/30/2015
2/19/2015
1/27/2015
12/11/2014

**Table 3: Name and Unit**

Name	Unit
I3, 16B1105, SL for cracks at i 158.0	
core/Coating ickness	
I3, 16B1105, SL for cracks at i 158.0	
I3, 16B1105, SL for cracks at i 158.0	
core/Coating ickness	
core/Coating ickness	
1F-16-2930	
23_16B6224	
23_16B6224	





# Summary



*F-16 System Program Office*

- **Portal contains 6 modules designed to support ASIP lifecycle and meet digital engineering requirements**
- **ASIP data collection and management required for digital twin efforts**
- **Realistic digital twin requires all data from the entire lifecycle of an aircraft**



# Acronyms



*F-16 System Program Office*

- **ACI – Analytical Condition Inspection**
- **AFH – Actual Flight Hours**
- **AFMC – Air Force Materiel Command**
- **ASIP – Aircraft Structural Integrity Program**
- **CIRE – Common Inspection Reporting Engine**
- **CSFDR – Crash Survivable Flight Data Recorder**
- **CSL – Canopy Sill Longeron**
- **DADTA – Durability and Damage Tolerance Analysis**
- **DESTRAP – Damage Evaluation System Technical/Repair Assistance Page**
- **EFH – Equivalent Flight Hours**
- **ETAR – Engineering Technical Assistance Request**
- **FDC – Flight Data Capture**
- **FMS – Foreign Military Sales**
- **FSMP – Force Structural Maintenance Plan**
- **HOTF – Health Of The Fleet**
- **IAT – Individual Aircraft Tracking**
- **MAJCOM – Major Command**
- **OEM – Original Equipment Manufacturer**
- **PERFORMS – Processing, Evaluating and Reporting of FORce Management data Software**
- **PSSR – Programmed Structural Sustainment and Repair**
- **SLR – Service Life Reports**
- **SPO – System Program Office**
- **TCTO – Time Compliance Technical Order**
- **TO – Technical Order**
- **USAF – United States Air Force**

Pound For Pound

# Questions?

The Best Fighter Around

