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SHAW AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
INSTRUCTION 21-101

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Supplement

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Supplement

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AIRCRAFT AND EQUIPMENT
MAINTENANCE MANAGEMENT

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This supplement implements and extends the guidance of Air Force Instruction (AFI) 21-101 Air Combat Command (ACC) Supplement (SUP), *Aircraft and Equipment Maintenance Management* for Shaw Air Force Base (AFB). It applies to these organizations and personnel maintaining aircraft, aircraft systems, equipment, support equipment, and components regardless of Air Force Specialty Code (AFSC). It provides broad management framework for commanders to adjust procedures to compensate for mission, facility, and geographic differences. This supplement does not apply to the Air National Guard (ANG) or Air Force Reserve Command (AFRC); however, ANG/AFRC personnel assigned to Classic Associate Units supporting Shaw AFB units will comply with the guidance provided within this supplement. The reporting requirements in this publication (unless otherwise specified) are exempt from licensing in accordance with (IAW) AFI 33-324, *The Air Force Information Collections and Reports Management Program*. For questions on interpreting this instruction, first contact your Major Command (MAJCOM) maintenance functional activity. Units may develop separate operating instructions as long as they are referenced in their DAFI 21-101 supplements. Ensure all records created as a result of processes

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SUMMARY OF CHANGES

*This interim change revises DAFI 21-101, ACC Supplement, Shaw AFB Supplement, by (1) removing Hanger Queen Manager and Aircraft Document Review, and BPO/QVI requirements. A margin bar (|) indicates newly revised material.

1.4.1. (Added-ShawAFB) Maintenance Tactics (MXK): MXK provides continual technical & managerial advice to senior leaders in all matters of aircraft maintenance, equipment and manpower sustainment. This includes solving sortie production challenges through effective analysis and application of the People, Processes and Resources model (PPR). MXK will monitor maintenance fleet health indicators by reviewing Analysis compiled HOF, the Status of Training (SOT) data, and QA MSEP briefs to recommend modifications.

1.4.2. **(Added-ShawAFB)** The Maintenance and Tactics Officer/Superintendent are responsible to the MXG/CC for development of maintenance TTPs supporting maintenance on all assigned aircraft and equipment.

1.4.3. **(Added-ShawAFB)** The MXK Officer/Superintendent should be an Advanced Maintenance and Munitions Operations School (AMMOS) graduate assigned directly to the MXG/CC. **(T-1).** Filling the MXK role fulfills the Tier II requirements outlined in AFMAN 21-111.

1.4.4. **(Added-ShawAFB)** MXK is the liaison to the Weapons Tactics section (OSK) of the Operations Group in developing procedures to best meet combat mission requirements. MXK is responsible to produce combat airpower through continued observations and recommendations, mentor MXG leaders at all levels via academic sessions, and advise senior leaders on proven sortie generation methods.

1.4.5. **(Added-ShawAFB)** MXK is grounded in a schedule of continuous observation, collaboration and academics that target leadership and production staffs. This cycle will assist units in pivoting from reactionary to proactive strategies of maintenance management where necessary.

1.4.6. **(Added-ShawAFB)** MXK will build and implement a 12-month Academic training plan that incorporates both the MXG and LRS. At a minimum, MXK will hold monthly academic sessions targeted at Officer and SNCO sortie production development. These academic sessions should be targeted at process weaknesses observed the previous months or as a precursor for major events (deployments, redeployments, FHP build, etc.). MXK should coordinate with AMMOS graduates in each maintenance and LRS squadron to implement

1.4.7. **(Added-ShawAFB)** MXK will build a standardized production lesson plan for all Sortie Generation Flight Commanders, Production Supers, and Expediters. This course ensures baseline knowledge in these management roles and also integrates the production staffs in the MXG under one set of TTPs. Course will be taught by the local AMMOS grad pool as soon as possible but no more than 3 months of appointment. MXK may teach the course by request during scheduled readiness days in the event a local grad is not available.

1.4.8. **(Added-ShawAFB)** MXK will organize and implement Mission Verification on a bi-annual basis. It is preferred that this verification run concurrently with Ops as an overall Wing Verification but at times when this is not possible a standalone Maintenance Verification is acceptable. The MXG/CC will concur on the target participants and target scenario for Verification before the event starts. The overall intent of Verification is to validate the MXG's capability to perform the desired mission set being evaluated during the event.

1.4.9. **(Added-ShawAFB)** MXK will be the MXG OPR for deployment generation planning and tactics. In coordination with maintenance units MXK will sustain "on the shelf" Generation Flow Plans (GFP) in support of associated DOC statement requirements.

1.4.10. **(Added-ShawAFB)** MXK will be the MXG Agile Combat Employment (ACE) OPR and will coordinate across the Wing and with outside agencies to develop ACE initiatives. MXK will standardize ACE concepts internal to the MXG and ensure the unit is aligned with MAJCOM and HAF guidance. This coordination will include ACC as the force provider and any MAJCOM the MXG is projected to be employed under. MXK is responsible to MXG leaders to provide a quarterly brief on ACE concepts being implemented/tested at the local level. The audience for this brief should include Sq/CCs, DOs, Senior Enlisted Leaders (SELs), MX SUPT, and MXG leadership.

1.4.11. **(Added-ShawAFB)** When personnel assigned to MXK are AMMOS grads, they will serve as the OPR for vetting packages of potential AMMOS students from MXG/LRS. They are responsible for hosting a package board prior to packages being submitted to the MAJCOM. During the board the group should decide on which packages will leave the base and in what order of merit. Required attendees will be Sq/CCs, Chiefs, AMMOS grads, and MXG leadership or delegate. MXK is responsible for providing feedback to all eligible MXG/LRS Officers/SNCOs on what members were selected and what factors were weighted. MXK will ensure all packages meet the specified MAJCOM deadlines.

1.4.12. **(Added-ShawAFB)** MXK may serve as the MXGs direct link to the AMMOS school house during the AFTTP 3-4 rewrite cycle. TTP development will be coordinated on by the local AMMOS grad community and collected by MXK and pushed to the school house. MXK is responsible to implement and follow the guidelines in AFMAN 21-111, *Advanced Maintenance and Munitions Operations School.*

1.14.8. **(Added-ShawAFB)** Squadrons will ensure proper CGO/SNCO coverage across all shifts, minimum 25 percent off shift.

1.15.2.2. **(Added-ShawAFB)** Use of Personal Electronic Devices (PEDs) for any Airman who have read and are briefed on the local guidelines set forth in this local publication, are authorized. Photography on the flightline is limited to specifically authorized times and locations. These guidelines do not grant permission to take picture or videos on the flightline, backshops or work

centers. Airman witnessed taking photos or video on the flightline, without specific authorization, will have their phone confiscated and the privileges revoked indefinitely.

1.15.2.2.1. **(Added-ShawAFB)** Authorization to use PEDs on the flightline does not supersede technical orders which strictly forbid use in and around a particular task. Notify supervision when performing tasks that strictly forbid PED usage.

1.15.2.2.2. **(Added-ShawAFB)** PEDs usage are kept at least 10' from aircraft and munitions.

1.15.2.2.3. **(Added-ShawAFB)** PEDs are securely stowed during engine operations.

1.15.2.2.4. **(Added-ShawAFB)** PED usage will not distract from official duties. Offensive or unprofessional content is not tolerated.

2.4.44.1. **(Added-ShawAFB)** The 7-level or equivalent will review 180 days of history prior to signing off repeat and recur discrepancies. Only 7-level and higher or civilian equivalent personnel will sign off Can Not Duplicate (CND) discrepancies.

2.4.73.1. **(Added-ShawAFB)** The 20 MXG/CC has authorized the removal of the aircraft engine run screen requirement during installed engine maintenance operations at all power settings.

2.5.1. **(Added-ShawAFB)** Mandatory daily production meeting attendees include QA, PS&D, MOC, Maintenance Management Analysis (MMA), FGS/EMS/CMS Production Superintendents, Leadership, and Engine Management. LRS/LGRM (Supply) and LRS/LGRF (POL) are requested to attend the daily.

3.1. (ShawAFB) General. Note: Due to the deactivation of 20 AMXS and activation of 55 FGS, 77 FGS, and 79 FGS, **Chapter 3 AIRCRAFT MAINTENANCE SQUADRON (AMXS)** in both the parent and ACC Supplement are no longer valid at Shaw AFB. To meet the requirements and intentions laid out in both of the higher level publications, without conflicting or confusing verbiage, DAFI 21-101_ACCSUP_SHAWAFBSUP_ADDENDUM1 will be utilized in place of Chapter 3. Additionally, any reference to Aircraft Maintenance Squadron (AMXS) or Aircraft Maintenance Unit (AMU) is now Fighter Generation Squadron (FGS).

4.2.4.1**. (Added-ShawAFB)** Transient aircraft carts are identified by tail number and reinstalled in the same aircraft prior to aircraft departure. FGSs no longer utilize service lockers. These carts are turned in to AMMO for storage.

4.4.3.1.6. **(Added-ShawAFB)** Assemblies with explosives installed will not be stored in any section other than the Egress Section for repair, paint, etc., unless a qualified egress technician (2A6X3) is present.

4.4.3.1.7. **(Added-ShawAFB)** Temporary storage of egress explosive items is authorized in Building 1207, Room 15 and 15B, egress explosive storage and maintenance areas.

4.4.3.1.8. **(Added-ShawAFB)** Egress maintenance will not be performed in the explosive storage area at any time.

4.4.3.1.9. **(Added-ShawAFB)** A list of authorized egress personnel for unescorted entry will be posted outside the explosive storage area.

4.4.3.1.10. **(Added-ShawAFB)** Visitors entering the Egress Maintenance facility will be escorted and will receive a safety briefing prior to entry.

4.5.1.1.1. **(Added-ShawAFB)** Using organizations are responsible for maintaining/transporting SE not cited on AGE Flight's authorized allowance standard.

4.5.1.1.2. **(Added-ShawAFB)** Using organizations are required to inspect/service oil and hydraulic servicing carts and monitor oxygen/nitrogen cart contents (quantity/pressure levels).

4.11.1.14.2. **(Added-ShawAFB)** Document findings and repairs found during intake/engine -6 inspections on 20 MXG Form 10, *F110-GE-129 Serviceable Damage/Blends*.

4.11.1.19. **(Added-ShawAFB)** EM will coordinate with FGS monitors on all maintenance performed on Pacer Engines. EM will ensure all parts are ordered using proper project codes for Pacer Engines. EM will maintain Pacer Engine records in appropriate folders. EM will ensure the wing is effectively scheduling engines IAW F110-GE-129D Pacer Stride Program MOU to ensure Pacer Engine obtains 100 Total Accumulated Cycles (TACs) per month. EM will coordinate with PS&D to determine if the Pacer Engine will be removed/installed into another aircraft if the required 100 TACS per month are not reached for two consecutive months or if the aircraft will be down for more than 10 days.

4.11.1.20. **(Added-ShawAFB)** FGS Pacer Engine Monitors will ensure the Pacer Engine identifying 3 x 5 card is located in the front cover of the AFTO Form 781 series aircraft forms. This is only required for aircraft with a Pacer Engine installed.

4.11.3.6.2.4.1. **(Added-ShawAFB)** Ensure the total operating time of old and new Serially-Controlled/Time-Tracked components are added.

4.11.11. **(Added-ShawAFB)** Comprehensive Engine Trending and Diagnostics System (CETADS) Procedures and Responsibilities:

4.11.11.1. **(Added-ShawAFB)** EM assists CETADS users with technical program support and trending assistance. Provide CETADS training to primary/alternate CETADS users. Review data provided daily for adverse trends, shifts, cautions, and alarms. Investigate adverse trend indications found to exist in the CETADS database. Report findings to the Propulsion Flight, AFETS, and all users to remedy adverse conditions. This locally produced report is sent daily showing results from previous days flying based on engine download completion by FGSs.

4.11.11.2. **(Added-ShawAFB)** CETADS host operators will maintain the only working copy of CETADS to prevent uploading of the wrong version and loss of data. Host operators are the primary contact with software engineers to report all program deficiencies and file program change reports. Host operators will control passwords for CETADS users at every location connected to the host computer to ensure program and database integrity.

4.11.11.3. **(Added-ShawAFB)** Each FGS/Test Cell will provide Engine Management with the name of the primary/alternate Engine Specialist who are the primary point of contact for CETADS.

4.11.11.4. **(Added-ShawAFB)** Provide an engine download to EM prior to engine/LRU removal. Upload new header to reflect correct engine/DEC installation. Provide an engine download for all ground runs, taxies, and sorties via LAN or CD to EM no later than 0600 for day flying and 0900

for night flying. The download data is compared with the flying schedule or debrief recap to ensure all engines flown are updated.

5.2.1.12.1. **(Added-ShawAFB)** Maintenance Radio Call Signs:

5.2.1.12.2. **(Added-ShawAFB)** Identification of radio call signs are as follows in **Table 5.1.**:

Table 5.1. (Added-ShawAFB) Call Sign Identification.

Fighter Wing (FW) / Operations Group (OG) / Maintenance Group (MXG) / Maintenance Operations (MXO)		
Duty Position	**Radio Net**	**Call-Sign**
20 FW Commander	Wing CC	Valor 1
20 FW Vice Commander	Wing CC	Valor 2
20 OG Commander	Wing CC	Valor 3
20 OG Deputy Commander	Wing CC	Viper 1
20 MXG Commander	Wing CC	Valor 4
20 MXG Deputy Commander	Wing CC	Falcon 1
20 MXG Superintendent	MOC	Valor 4 Chief
Maintenance Operation Center	ALL	MOC
QA Superintendent		QA Chief
Chief Inspector		QA 1
QA Inspectors		QA 2 – 50
FOD NCO		FOD Super
AFETS Office		AFETS
Wing Weapons Manager	MOC	Weapons Chief
Weapons Superintendent		WS 1
Weapons Standardization		WS 2
Avionics Manager		Avionics Super
MXO OIC		Falcon 3
MXG/MXO Unit Control Center (UCC)		UCC

Equipment Maintenance Squadron (EMS)		
Duty Position	**Radio Net**	**Call Sign**
EMS Commander	MOC	Eagle 1
EMS Director of Operations		Eagle 2
EMS Superintendent		Eagle Chief
EMS Production Supervision		Eagle Super
UCC		Eagle UCC
AGE Flight Chief		AGE Chief
AGE Production Superintendent		AGE Super
AGE Base Station		AGE Base
Base AGE		Saber AGE
Shooter CAT	Shooter	Shooter AGE
Gambler CAT	Gambler	Gambler AGE
Tiger CAT	Tiger	Tiger AGE
Armament Flight Chief	MOC	Armament Chief
Armament	MOC	Armament
Munitions Flight Commander	MUNS	AMMO Lead
Munitions Flight Chief		AMMO Chief
Munitions Control		AMMO Control
Munitions Storage Element Chief		Stacker Super
Munitions Storage Element		Stacker 1-4
Munitions Combat Plans		Atlas Super
Conventional MX NCOIC		Bullet Super
Conventional MX		Bullet 1-50
Fabrication Flight Commander	MOC	Fab Lead
Structural Maintenance NCOIC		Structures Super
Structural MX Production Superintendent		Structures 1
Corrosion Production Superintendent		Structures 2
Corrosion Control		Corrosion

Structural MX Flight Line Dispatch		Structures Dispatch
Metals Tech		Metals Tech
Nondestructive Inspection (NDI)		NDI
Maintenance Flight Commander		Maintenance Lead
Maintenance Flight Chief		Maintenance Flight Super
CRASH		Crash Super
CRASH Recovery		Crash 1 – 3
Transient Aircraft Services	Tower	TA 1 – 3
Component Maintenance Squadron (CMS)		
Duty Position	**Radio Net**	**Call-Sign**
CMS Commander		Thunder 1
CMS Director of Operations		Thunder 2
CMS Superintendent		Thunder Chief
CMS Production Supervisor		Thunder Super
CMS Mobility		Thunder Mobility
Unit Control Center (UCC)	MOC	Thunder UCC
Propulsion Flight Commander		Props Lead
Propulsion Flight Chief		Props Chief
Test Cell		Test Cell 1
Test Cell Van		Test Cell 2

5.2.1.12.3. **(Added-ShawAFB)** Fighter Generation Squadron (FGS) names and assigned Radio nets are as follows in **Table 5.2.**:

Table 5.2. (Added-ShawAFB) Fighter Generation Squadron Names and Radio Nets.

Fighter Generation Squadron (FGS)	**Radio Net**	**Call-Sign**
55 FGS TOP 3	Shooter	Shooter Lead
77 FGS TOP 3	Gambler	Gambler Lead
79 FGS TOP 3	Tiger	Tiger Lead

5.2.1.12.4. **(Added-ShawAFB)** FGS radio call signs are numerical suffixes assigned to each typical position or section of the FGS. The only difference in the call signs will be the FGS designated name. Typical call signs are preceded by the appropriate squadron name followed by the appropriate suffix. Typical call sign suffixes are assigned as follows in **Table 5.3.**:

Table 5.3. (Added-ShawAFB) Typical Call Sign Suffixes.

Fighter Generation Squadron (FGS)	Radio Net	Call-Sign
Chief	Shooter/Gambler/Tiger	Chief
Lead Production Superintendent	Shooter/Gambler/Tiger	P1
Production Superintendent	Shooter/Gambler/Tiger	Super
Debrief	Shooter/Gambler/Tiger	Debrief
Dispatch		Dispatch
A Flight Expediter		1
B Flight Expediter		2
A/B Aircraft Section (APG) Chiefs		APG
Maintenance Crew		MX
Weapons Section Chief		3
Weapons Expediter		4
Weapons Maintenance		5
Specialist Expediter		6
Servicing Crew		Servicing
Tow Team		Tow 1, 2
Support		Support
DMS		DMS

5.2.1.12.5. **(Added-ShawAFB)** Radio call signs for all Phase I/Phase II exercises are designated as FOR EXERCISE USE ONLY and are as follows in **Table 5.4.**:

Table 5.4. (Added-ShawAFB) Phase I/Phase II Exercise Radio Call Sign Identification.

All FGS Cell Positions	Shooter/Gambler/Tiger	Cell
All FGS Runners		Runner
AMMO Exercise Call Signs		**Call Sign**

Storage	AMMO	Storage
Ramp/Conventional		Iron
Slips		Gator
Missiles		Maverick
Gate Guard		AMMO Gate
20 FW/XP		
Duty Position	**Radio Net**	**Call-Sign**
Maintenance Division	MOC	MX Division Chief
WIT Members		WIT 1 thru 10

6.10.5.2.1.1. **(Added-ShawAFB)** Unit TODOs will add MXG Lead TODOs to their accounts using the AFTO Form 43, *USAF Technical Order Distribution Office (TODO) Assignment or Change Request*.

6.10.5.2.1.2. **(Added-ShawAFB)** The Lead TODO will compile lists from all TODOs into a single product, then forward to 20 MXG/MXOS and included in the wing's weekly maintenance plan and flying schedule.

6.12.1.1.1. **(Added-ShawAFB)** OCFs will not be flown for engine anomalies. If the engine problem cannot be duplicated and corrected on the ground, an FCF will be flown.

6.12.1.1.2. **(Added-ShawAFB)** After successful OCF completion, the aircraft will be released by the OCF pilot. The pilot will sign the "Inspected By" block in the aircraft forms.

6.12.1.2. **(Added-ShawAFB)** The OG/CC will designate a unit Officer in Charge (OIC) and Deputy OIC for the 20 FW FCF program. The OIC will normally be 20 OG/OGV and the Deputy will normally be AFRC 482 OG Det 1.

6.12.2.2.1. **(Added-ShawAFB)** To ensure sufficient time for review, FGSs will notify the QA FCF Program Manager NLT 24 hours prior to an intended FCF flight of the tail number, reason for the FCF and the FCF pilot's name. Squadrons will hand carry the aircraft forms to QA as soon as possible to allow adequate time for a review and any required correction.

6.12.3.1.1. **(Added-ShawAFB)** Ensure the OCF pilot receives a complete briefing on the condition dictating the OCF and upon system(s) requiring in-flight checks.

6.12.3.5.1.1. **(Added-ShawAFB)** Aircrews of transient aircraft requiring FCFs will be briefed by the FCF OIC (or QA FCF Program Manager if the OIC is unavailable) prior to flight.

6.12.3.6. **(Added-ShawAFB)** QA will accomplish a preflight QVI prior to the first OCF/FCF attempt.

6.12.4.4. **(Added-ShawAFB)** FCFs will be flown in the cleanest possible configuration to permit maximum flame out gliding performance and impose no limitations on the required FCF profile.

Aircraft requiring FCFs to satisfy TO 1F-16CJ-6-11, *Scheduled Inspection and Maintenance Requirements* or TO 1-1-300, *Maintenance Operational Checks and Check Flights*, requirements will be clean. The only permissible deviation is a MAU-12 on aircraft station 5.

6.12.4.5. **(Added-ShawAFB)** Fuel load of the aircraft that requires the FCF should be the maximum load for that configuration or as required for the FCF profile. Fuel loads less than maximum will be coordinated through the OG/CC.

6.12.4.6. **(Added-ShawAFB)** Serviceable aircraft, flying an FCF profile for pilot currency only, may be flown with pylons on aircraft station 5 and 3/7, and missile rails on station 2/8. A centerline fuel tank may be carried.

6.12.4.7. **(Added-ShawAFB)** FCFs will use the call sign FRESCO11.

6.12.4.8. **(Added-ShawAFB)** The FCF pilot must coordinate for airspace considerations to include supersonic airspace and Special Use Airspace for maneuvering.

6.12.4.9. **(Added-ShawAFB)** FCF/OCFs are flown during daylight hours only.

6.12.4.10. **(Added-ShawAFB)** Weather requirements will normally be Visual Meteorological Conditions and weather requirements IAW TO 1-1-300. The 20 OG/CC may waive certain weather requirements IAW TO 1-1-300.

6.12.4.11. **(Added-ShawAFB)** FCF flights will utilize the FCF 1/2/3 stereo flight plans and W177/161 airspace. FCF pilots will follow procedures outlined in the current 20 FW IFG.

6.12.4.12. **(Added-ShawAFB)** All FCFs require OG/CC and MXG/CC or designated representative's approval prior to takeoff. This requirement stands for both mandatory and proficiency FCFs.

6.12.5.2. **(Added-ShawAFB)** Debrief will take place in the appropriate FGS's debrief section. The pilot will determine, with QA assistance, if the aircraft should be released for normal operations. The aircraft should be released if the system generating the FCF performed properly. If discrepancies in unrelated systems are discovered, the FCF pilot may release the aircraft at his discretion. The discrepancies will be annotated and corrective actions completed.

6.12.6.1 **(Added-ShawAFB)** FCF requirements for off-station locations will be coordinated with home station and follow location procedures. If no FCF procedures exist at the off-station location follow home station requirements and procedures.

6.12.7. (Added-ShawAFB) FCF OIC responsibilities:

6.12.7.1. **(Added-ShawAFB)** Oversee the 20 FW FCF program; provide local FCF procedures briefing to all new wing FCF pilots; ensures a simulator FCF/emergency procedures profile with each new wing FCF pilot is accomplished; in concert with the deputy OIC, brief local area and FCF procedures to transient aircrews performing FCFs.

6.12.7.2. **(Added-ShawAFB)** Ensure the 20 FW has the required number of current and qualified FCF pilots to meet wing requirements. The OIC will work directly with the OG/CC, FS/CCs, and FS/DOs to fill the required positions. FCF pilots in the 20 FW will be 4-ship flight leads (Minimum) assigned to 20 FW. Each fighter squadron will have at least one FCF pilot and no more

than three FCF pilots at the discretion of each FS/CC. Fighter Squadron FCF pilots do not include the OIC, Deputy, or previously qualified attached FCF pilots.

6.12.7.3. **(Added-ShawAFB)** Coordinate with QA FCF Program Manager to review the aircraft forms prior to preparing for the flight.

6.12.8. (Added-ShawAFB) FCF Pilot Qualification Training:

6.12.8.1. **(Added-ShawAFB)** Upgrading FCF pilots will:

6.12.8.1.1. **(Added-ShawAFB)** Follow 20 OG OI 11-2F16V1 for syllabus requirements.

6.12.8.1.2. **(Added-ShawAFB)** Read DAFI 21-101 and AFI 21-101_ACCSUP; TO 1-1-300; TO 1F-16CM-6CF-1, *Acceptance and Functional Check Flight Procedures Manual* and TO 1F-16CM-6CL-1, *Acceptance and/or Functional Check Flight Checklist*; 20 FW In-Flight Guide; and this supplement.

6.12.8.1.3. **(Added-ShawAFB)** Accomplish an open-book examination based on the references listed in the previous paragraph. A passing score is 85% corrected to 100%.

6.12.8.1.4. **(Added-ShawAFB)** Complete the local FCF profile in a Mission Training Center (MTC) simulator with a current and qualified FCF pilot.

6.12.8.1.5. **(Added-ShawAFB)** See a full FCF profile in flight from the rear cockpit. UP may sit in the front cockpit at the discretion of the current/qualified FCF pilot.

6.12.8.1.6. **(Added-ShawAFB)** Demonstrate proficiency in a complete FCF profile from the front cockpit with a current and qualified FCF pilot in the rear cockpit. An actual FCF will not be used for front seat training.

6.12.8.1.7. **(Added-ShawAFB)** Prior F-16 FCF Experience: Complete a locally developed test, fly a FCF/EP simulator profile (grade sheet is not required) and receive a briefing by the FCF OIC pilot.

6.12.8.2. **(Added-ShawAFB)** FCF pilots will:

6.12.8.2.1. **(Added-ShawAFB)** Provide the QA FCF program manager a copy of the FCF certification letter signed by the 20 OG/CC.

6.12.8.2.2. **(Added-ShawAFB)** Meet FCF Pilot Currency Requirements, IAW TO 11-2F-16V1, Table 4.1 and 6.7. FCF pilots will receive FCF academics from the FCF OIC or Deputy annually.

6.12.8.2.3. **(Added-ShawAFB)** FCF currency will be tracked using the ARMS database.

6.12.8.2.4. **(Added-ShawAFB)** Annual Test. FCF pilots must accomplish an open book FCF examination annually. A passing score is 85% corrected to 100%.

6.14.1.2. **(ShawAFB)** QA will utilize 20 MXG Form 15, *OCF/FCF/High Speed Taxi* aircrew briefing checklist specifically for high speed taxi checks, to include the required FCF briefing items and pertinent warnings, cautions.

6.15.3.2.3. **(Added-ShawAFB)** Maintenance personnel will utilize 20 MXG FORM 6, *Aircraft Weight and Balance Preparation* to track W&B preparation task completion.

6.16. (Added-ShawAFB) Chafing Awareness Program. QA must monitor and track instances of wire, harness, and metal/line/tube chafing and utilize a database for tracking wire and harness chafing problems identified through OTIs and maintenance cross-tell reports.

6.16.1. **(Added-ShawAFB)** Select 10 percent of assigned aircraft for inspection when notified of a potential chafing problem involving like model, lot number or block of aircraft. Consult the database before expending man-hours performing inspections. The QA Superintendent or Chief Inspector shall recommend initiating an OTI if the sampled aircraft indicates a chafing problem or the detected chafing is an operational safety hazard.

6.16.2. **(Added-ShawAFB)** QA will develop local chafing inspection work cards if there are no requirements in the Dash-6 TOs, for periodic, pre-flight, thru-flight and basic post-flight inspections. Ensure local work cards cover at least 50 percent of accessible areas, focusing on known chafing areas.

6.16.3. **(Added-ShawAFB)** Chafing Awareness training is conducted by QA during initial block training upon assignment to 20 MXG.

7.5.12. **(Added-ShawAFB)** Airborne dual flight control branch failure, DUAL FC caution light or Flight Control System (FLCS) MFL 021).

7.6.3.6. **(Added-ShawAFB)** MOC annotates the impoundment in IMDS-CDB and notifies QA. Each additional condition that requires an impoundment, FGS will implement impoundment procedures for each separate condition. Aircraft with multiple impoundments are not released until all impoundment conditions are cleared.

7.6.5.1.1. **(Added-ShawAFB)** Flight control diagnostic procedures. Each FGS SEL or NCOIC will establish a team of highly qualified technicians as a Flight Control Team (FCT). Only one team will be assigned to a specific problem and team integrity will be maintained until the impoundment is released.

7.6.5.1.2. **(Added-ShawAFB)** FCT Composition. The team chief will be a highly qualified 7 or 9 level technician who reports directly to the impoundment official. Team members will consist of flight control technicians (2A374/2A354) available at the time of the malfunction.

7.6.5.1.3. **(Added-ShawAFB)** When required, additional technicians may be appointed to the team. QA and Air Force Engineering Technical Service (AFETS) personnel may be used as technical advisors.

7.6.5.1.4. **(Added-ShawAFB)** Diagnostic Procedures. The FCT chief or designated representative will debrief the aircrew. Additionally, integrated maintenance data system-central data base (IMDS-CDB) historical data, Crash Survivable Flight Data Recorder (CSFDR) and aircraft stored digital flight control system data are used to supplement checklists in developing a troubleshooting strategy.

7.6.6.1. **(Added-ShawAFB)** If a system component, LRU, AME, or engine is determined as the cause, inform the appropriate back shop the component is impounded, and notify QA to initiate a separate 20 MXG Form 22, *Quality Assurance Impoundment Record*. The aircraft impoundment must still be cleared by 20 MXG/CC/CD.

8.2.2.1. **(Added-ShawAFB)** Agencies which enter the flightline or aerospace equipment maintenance industrial areas, to include all wing organization's (e.g. Hospital, CE, Vehicle Mx, Security Forces, etc.), will account for all tools and equipment prior to departing the flightline or aerospace equipment maintenance industrial area. Any lost or missing items will be immediately reported to the Maintenance Operations Center.

8.2.16.1. **(Added-ShawAFB)** Squadron Commanders will establish procedures for controlled access to tool rooms.

8.3.14. **(Added-ShawAFB)** Backshops with no tool rooms and Support Sections, (i.e., personnel assigned to pass out tools, equipment, and hazmat items, full time) that perform all maintenance in their work area, may use an ACC Form 140, *CTK Inventory and Control Log*, on HAZMAT lockers to open and close the locker. An inventory is performed and documented at each shift change. If the item leaves the work area it must be signed out through TCMax®.

8.5.1.1. **(ShawAFB)** TCMax® database is backed up automatically weekly.

8.5.1.1.2. **(Added-ShawAFB)** TCMax® database is kept on a database server at 20 CS, back-ups are maintained separate from main database.

8.5.1.2.1.2. **(Added-ShawAFB)** Tools signed out longer than 24 hours are identified as Long Term Sign Out in TCMax®. Items are inventoried/re-issued every Friday to validate accountability.

8.5.1.2.1.3. **(Added-ShawAFB)** Tools/Equipment are issued to DoD card holding personnel. DoD ID number will be used to track all individual user's tools.

8.5.1.2.1.4. **(Added-ShawAFB)** Only issuable equipment items are tracked in TCMax®. This equipment must have an EID. Equipment Serial Number (S/N) must be tracked in TCMax®, if available (non-dispatchable equipment items are not tracked in TCMax®).

8.5.1.2.1.5. **(Added-ShawAFB)** Items (AME, pods, non-dispatchable equipment, aircraft parts) tracked/managed by other systems (IMDS, DPAS, RAMPOD, etc.) are not tracked/managed with TCMax®.

8.5.1.2.1.6. **(Added-ShawAFB)** Items temporarily transferred outside of support for extend mission requirements are tracked in TCMax® using "Temporary/Transfer Deploy." 20 MXG/MXQP is the approving authority for use or add of new Temporary/Transfer Deploy locations.

8.5.1.2.1.6.1. **(Added-ShawAFB)** The following Temporary locations are authorized:

Table 8.1. (Added-ShawAFB) Temporary/Transfer Deploy Locations.

20 CS/SCOC
20 CS/LMR
20 MXG TODO
AFREP
ASM

Cal Lab (PMEL)
METALS TECH
NDI
VEHICLE MAINTENANCE
WARRANTY REPAIR

8.5.1.2.1.7. **(Added-ShawAFB)** Document eTool Serial Numbers in TCMax®.

8.5.2.1.1. **(Added-ShawAFB)** Pro Supers may authorize on line turnovers as needed. A TSgt or above will inventory the Composite Tool Kit (CTK)/equipment and ensure the item has been transferred from the original individual to the gaining individual.

8.5.2.3. **(Added-ShawAFB)** During crash recovery operations/crash site location. The Crash Recovery Team Chief will monitor/oversee the exchange of the CTK and any other items previously signed out from one individual to the other. The transfer is accomplished only when all involved persons are present at the exchange site.

8.5.2.3.1. **(Added-ShawAFB)** Beginning/end of each shift, the individual who signed out the CTK along with the on-duty team chief will inventory all tools and equipment in the presence of the individual accepting the CTK. Upon completion of the inventory, the on-duty team chief will sign-in the CTK using the ACC Form 140. The individual accepting the CTK will sign it out using the ACC Form 140.

8.5.2.4. **(Added-ShawAFB)** Crash recovery response tool and equipment control procedures are as follows:

8.5.2.4.1. **(Added-ShawAFB)** All crash recovery equipment, i.e. aircraft slings, airbags, are inventoried quarterly/inspected semiannually. The trailer is driven to ensure proper mechanical operation during quarterly inspection.

8.5.2.4.2. **(Added-ShawAFB)** The crash recovery trailer is inspected on scheduled fly days and annotated on an AF Form 1800, *Operator's Inspection Guide and Trouble Report*.

8.5.4.4. **(Added-ShawAFB)** When single person sign out is necessary (i.e. weekend duty) the following procedures apply: The individual contacts weekend duty super, upon completion of their shift, to sign-in CTK. If the weekend duty super cannot be reached, the individual will utilize MOC to contact weekend duty supervisor from another squadron to sign-in CTK. No exceptions, the same person cannot sign-in/sign out a CTK.

8.6.1.2.1.3.1. **(Added-ShawAFB)** Four-digit alphanumeric prefixes are used to identify CTKs in the FGS and Phase. See Table 8.2.

8.6.1.2.1.3.2. **(Added-ShawAFB)** Four-digit alphanumeric prefixes are used to identify CTKs in the 20th Equipment Maintenance Squadron (EMS). See Table 8.3.

8.6.1.2.1.3.3. **(Added-ShawAFB)** Alphanumeric prefixes are used to identify CTKs for the 20th Component Maintenance Squadron (CMS). See Table 8.4.

8.6.1.2.1.3.4. **(Added-ShawAFB)** Four-digit alphanumeric prefixes are used to identify CTKs in 20 MXG/MXO. See Table 8.5.

Table 8.2. (Added-ShawAFB) Tool Identification Numbers (FGS).

Gambler FGS	SP77
Shooter FGS	SP55
Tiger FGS	SP79
Shooter Phase	SP05
Gambler Phase	SP07
Tiger Phase	SP09

Table 8.3. (Added-ShawAFB) Tool Identification Numbers (EMS).

20th Equipment Maintenance Squadron:	
AGE	SPEG
Aircraft Structural Maintenance	SPEX
Armament	SPEA
Conventional Maintenance	SPEC
Corrosion	SPEW
Munitions Inspection	SPEI
Metals Technology	SPEM
Precision Guided Munitions	SPEY
Mobility	SPEO
Nondestructive Inspection	SPEN
Munitions Stockpile Management	SPEH
Munitions Support Equipment	SPER
Transient Aircraft Services	SPET

Table 8.4. (Added-ShawAFB) Tool Identification Numbers (CMS).

20th Component Maintenance Squadron:	
AIS	SPCA
Electrical and Environmental	SPCE
Egress	SPCG
EWS	SPCW
Fuels	SPCF
Propulsion Flight F110 JEIM	SPCJ
Propulsion Flight Support Equipment	SPCS
Propulsion Flight Test Cell	SPCH
Tank Farm	SPCB
TMDE	SPCT

Table 8.5. (Added-ShawAFB) Tool Identification Numbers (MXG/MXO).

20th Maintenance Operations/Maintenance Group:	
372 TRS DET 2	SPMF
Air Force Repair Enhancement Program	SPMG
Maintenance Training Section	SPMT
Quality Assurance	SPMQ
Weapons Standardization	SPMW
End-of-Runway (EOR)	SPME

8.6.8. **(Added-ShawAFB)** Reflective material will be applied to all CTKs used on the flightline and visible on equipment.

8.6.9. **(Added-ShawAFB)** All padlocks and keys for dispatchable CTKs/vehicles will be listed on the MIL and marked with the CTK number. Keys may also be tracked by TCMax® using key box feature and accounted for separately.

8.6.9.1. **(Added-ShawAFB)** All dispatchable CTKs will have a "Remove Before Flight" streamer secured to the key ring.

8.6.9.2. **(Added-ShawAFB)** FO will not be stored in a CTK. A small Foreign Object (FO) container will be added to all dispatchable CTKs and marked with the CTK number and listed on the MIL. FO containers will be emptied prior to returning CTK into Support Section.

8.6.10. **(Added-ShawAFB)** Rag control procedures. Rags will be grouped together in bags/containers marked with EID and quantity of rags. The quantity of rags per bag is 5.

8.6.11. **(Added-ShawAFB)** All items attached to vehicle key rings, such as Foreign Object Damage (FOD) picker and fuel servicing key, will be accounted for via TCMax®. Items attached to vehicle key rings will not be annotated on the back of the AF Form 1800.

8.6.12. **(Added-ShawAFB)** Any item attached to the vehicle (i.e., magnet FOD bars, FOD cans, flashlights, tire gauges, etc.) for the purpose of FOD checks or servicing will be marked with the vehicle registration number.

8.7.1.1. **(Added-ShawAFB)** Requests for locally manufactured tools, equipment or parts will be submitted using the 20 MXG Form 20, *Local Manufacture Request*.

8.7.1.2. **(Added-ShawAFB)** New tools, equipment, or parts manufactured will be added to the biennial review letter or the work center will create a separate inventory list.

8.7.1.3. **(Added-ShawAFB)** The inventory list will be in memorandum format and contain at a minimum, item location, description of use, quantity, and be signed by flight/section supervision. The inventory list will be filed with biennial review letter.

8.7.2.1. **(Added-ShawAFB)** The biennial review will be in letter format detailing the location, description of item, description of use, and quantity. It will be signed by the flight/section supervision and routed for QA Chief Inspector or Local Manufactured Tool Program manager signature.

8.9.2.3.1. **(ShawAFB)** Initial search time will not exceed one hour.

8.9.2.6.2. **(ShawAFB)** Lost item/tool reports are completed using the electronic ACC Form 145, *Lost Tool/Object Report* located on the 20 MXG QA SharePoint.

9.12.2. **(Added-ShawAFB)** Non Defense Property Accountability System (DPAS) tracked equipment is authorized sign out, using an AF Form 1297, *Temporary Issue Receipt*.

9.17.1. **(ShawAFB)** Refer to 20 MXGI 21-101, *Local Manufacture Procedures*.

9.24. (ShawAFB) DR Exhibits. When DIFM assets are submitted to JDRS as a Product Quality Deficiency Report (PQDR) are not turned into LRS Flight Service Center until confirmation from JDRS, the asset was accepted as a PQDR. Flight Service center must hold the asset in the approved holding area until shipping and disposition instructions are received from JDRS or the Originating Point (20 MXG QA) to avoid inadvertent turn-in under an incorrect condition code.

11.8.3.11.1.1. **(Added-ShawAFB)** FOD Prevention General Guidance: FGSs and EOR personnel will perform FOD walk prior to the first sortie of the day. 20 CMS, 20 EMS, 20 MXO (MTS/WS) will perform FOD walks at the beginning of every duty day.

11.8.3.11.1.2. **(Added-ShawAFB)** When used, EOR will FOD walk the EOR pads and a minimum of 10 feet into the grass adjacent to the EOR pads. Each FGS will FOD walk their assigned areas

and will go a minimum of 10 feet into the grass infield adjacent to the taxiway and the flightline road in front of their respective area of responsibility.

11.8.3.11.1.3. **(Added-ShawAFB)** 20 CMS, 20 EMS, and 20 MXO (MTS/WS), will FOD walk the ramp, parking lots, areas around buildings and a minimum of 10 feet into the grass of the flightline adjacent to their buildings. Phase personnel will assist EMS with FOD walk of area adjacent to building 1200.

11.8.3.11.1.4. **(Added-ShawAFB)** Organizations that perform duties in buildings on the east side of Killian Avenue and buildings adjacent to the flightline access road will police parking lots and areas around buildings daily, to include the flightline access road. Personnel using the trim pads and Hot Cargo pad will ensure these areas are free of foreign objects before and after use. All available personnel will conduct a FOD walk of their respective areas after heavy rains or high winds.

11.8.3.11.1.5. **(Added-ShawAFB)** MTS will conduct daily FOD walks of the south ramp adjacent to building 712 and the Transient Aircraft Services (TA) parking area. TA will conduct daily FOD walks on the south ramp areas that are used to park transient aircraft. Demo personnel will conduct FOD walk of their assigned areas adjacent to Romeo row prior to their first launch of the day.

11.8.3.11.1.6. **(Added-ShawAFB)** FGSs will operate the FOD BOSS equipment prior to the first launch of the day in their assigned FOD walk areas. CMS and EMS/Phase will operate the FOD BOSS equipment in their assigned FOD walk areas two hours prior to hot pit crew set up on days hot pit refueling areas are utilized.

11.8.5.4.2.1. **(Added-ShawAFB)** Each Flight/Section/FGS will develop and maintain a FOD board in a centralized location. The board will contain at a minimum: current FOD poster, SHAWAFBVA 21-1, *FOD Prevention Goals*, SHAWAFBVA 21-2, *FOD Prevention Phone Numbers* and SHAWAFBVA 21-3, *Are you a FOD Fighter*.

11.13.3.5. **(Added-ShawAFB)** The owning FGS will appoint a SNCO/NCO as a CANN manager. The CANN Manager will manage the aircraft throughout the CANN process to include bundled and heavy maintenance, engine runs and operational/functional/leak checks. CANN manager is responsible for all IMDS entries required documenting the removal and installation actions on CANN aircraft and will reconcile the AFTO Form 781A, *Maintenance Discrepancy and Work Document*, with IMDS daily.

11.13.3.6. **(Added-ShawAFB)** QA completes a BPO/PR QVI and forms review prior to the first flight from scheduled CANN status.

11.13.3.7. **(Added-ShawAFB)** Shaw Supply will coordinate with the CANN Manager to provide an MXG approved Supply Zero Balance listing not less than 5 days prior to CANN of parts to fill MRSP/MSK requirements for any upcoming TDY. Retain DIFM responsibility. Provide storage of classified parts as required.

11.13.3.8. **(Added-ShawAFB)** All Classified parts are secured in owning FGS vault. CANN personnel are responsible for transporting items between aircraft and owning FGS supply section.

11.13.3.9. **(Added-ShawAFB)** CANN action during a Red Ball/Alert Launch or for extensive troubleshooting, the removed item maybe released from CANN using AF Form 1297. Within 2 hours of CANN action, the required CANN documentation is accomplished, no exceptions.

11.13.3.10. **(Added-ShawAFB)** FGS Flightline Expediter will provide the MOC with the CANN document number and aircraft affected by the CANN action.

*11.14.5.1.2. **(Added-ShawAFB)** DELETED

11.18.8.2.1. **(Added-ShawAFB)** All serviceable/repaired damage will be annotated on the front and back of 20 MXG Form 10 and placed in aircraft records/engine work package.

11.18.8.2.2. **(Added-ShawAFB)** 20 MXG Form 10 accompanies the engine upon issue/removal from the aircraft.

11.18.9. **(Added-ShawAFB)** The following procedures will be accomplished on engines requiring blade blending after being released to maintenance:

11.18.9.1. **(Added-ShawAFB)** The appropriate FGS/squadron Support Section will control blade blend kits. Kits will only be issued to technicians certified to perform blade blends identified by letter filed in support. All fan blade blends will be accomplished with designated blend kits only.

11.18.10. **(Added-ShawAFB)** Training and certification requirements for blade blending personnel are outlined in Table 11.3.

Table 11.3. (Added-ShawAFB) IMDS-CDB Course Code Summary for Blade Blending.

COURSE CODE	TITLE	OCCURRENCE
002876	Blade Blending Initial Certification	One Time
002875	Blade Blending Certifier	One Time
002878	Blade Blending 180 Day Proficiency	Semi-Annual
002879	Blade Blending Annual Recertification	Annual
039007	F110-129 Blade Blending Course	One Time

11.19.1.2. **(Added-ShawAFB)** Target Population. Only certified 2A3X3 and 2A6X1, 5-, 7-, and 9-levels or civilian equivalent may perform flexible borescope inspections on engines.

11.19.2.3.1. **(Added-ShawAFB)** Documentation, after completing formal training, the instructor signs off the individual's ITP within Training Business Area (TBA). Upon certification, personnel are placed and tracked on the Special Certification Roster (SCR). Ensure that all borescope inspections are loaded against the engine and not the aircraft.

11.19.7 **(Added-ShawAFB)** Training and certification requirements for flexible borescope personnel are outlined in Table 11.4.

Table 11.4. (Added-ShawAFB) IMDS-CDB Course Code Summary for Flexible Borescope:

COURSE CODE	TITLE	OCCURRENCE
005137	Flexible Borescope Initial	One Time

005256	Flexible Borescope 180 Day Proficiency	Semi-Annual
005139	Flexible Borescope Annual Recertification	Annual
002883	Certifying Official	One Time

11.25.1.1.9.2. **(Added-ShawAFB)** Maintain a MX Group Hot Pit Refuel Manager Continuity Book with the following guidelines:

11.25.1.1.9.2.1. **(Added-ShawAFB)** TAB A – Hot Pit Manager/evaluator appointment letter.

11.25.1.1.9.2.2. **(Added-ShawAFB)** TAB B – Squadron's Hot Pit Monitor/Squadron Certifier (SC) appointment letters.

11.25.1.1.9.2.3. **(Added-ShawAFB)** TAB C – Listing: IMDS-CDB course codes required for unit personnel.

11.25.1.1.9.2.4. **(Added-ShawAFB)** TAB D – Site Certification info.

11.25.1.1.9.2.5. **(Added-ShawAFB)** TAB E – General Information.

11.25.4.1. **(Added-ShawAFB)** QA/Squadron FGS DO/SEL will appoint a squadron hot pit refuel monitor. Letters will be forwarded to MXG Hot Pit Refuel Manager in QA any time changes are made.

11.25.4.2. **(Added-ShawAFB)** The Squadron Hot Pit Refuel Monitor will maintain a continuity book with the following guidelines:

11.25.4.2.1. **(Added-ShawAFB)** TAB A – QA/Squadron Hot Pit Refuel Monitor letter of appointment.

11.25.4.2.2. **(Added-ShawAFB)** TAB B – Squadron Certifier appointment letters.

11.25.4.2.3. **(Added-ShawAFB)** TAB C – Listing of Hot Pit Refueling IMDS-CDB course codes required for unit personnel.

11.25.4.3. **(Added-ShawAFB)** Ensure all hot pit refueling training codes are entered into IMDS-CDB and recurring training is monitored. Use the following IMDS-CDB course codes:

Table 11.5. (Added-ShawAFB) IMDS-CDB Course Codes for Hot Pit Refueling.

COURSE CODE	TITLE	OCCURRENCE
016140	F16 Hot Pit Academics	One Time
016141	F16 Hot Pit Annual by QA for all Hot Pit Members	Annual
016143	F16 Hot Pit Pad Supervisory Proficiency	Semi-Annual
016142	F16 Hot Pit Squadron Certifier Proficiency	Semi-Annual

11.25.4.4. **(Added-ShawAFB)** Ensure all qualified hot pit refuel personnel are entered on the SCR using an ACC Form 64, *Request for Special Certification*. Use the following codes:

Table 11.6. (Added-ShawAFB) Codes for Special Certification Roster.

COURSE CODE	TITLE	OCCURRENCE
003044	F16 Hot Pit A Member Initial Cert	One Time
003041	F16 Hot Pit B Member Initial Cert	One Time
003027	F16 Hot Pit Pad Supervisor Initial Cert	One Time
003927	F16 Hot Pit Refueling A Man Cert	Semi-Annual
003925	F16 Hot Pit Refueling B Man Cert	Semi-Annual
003928	F16 Hot Pit Squadron Certifier (SC) EPE by QA	Annual

11.25.4.5. **(Added-ShawAFB)** Training and certification requirements for hot refuel team members are outlined in Table 11.5.

11.28.2.5.2.1. **(Added-ShawAFB)** Ensure the following equipment is centrally located either in the designated CDDAR area, or within the Wheel & Tire section, and available for emergency dispatch 24/7. Equipment listing letter will be maintained in CDDAR program book (CR-1) within the Wheel & Tire section.

11.28.2.5.2.1.1. **(Added-ShawAFB)** Two six pack trucks equipped with radio and emergency light bars.

11.28.2.5.2.1.2. **(Added-ShawAFB)** Suitable trailer/tow vehicle for storage/transportation of recovery equipment.

11.28.2.5.2.1.3. **(Added-ShawAFB)** Two aircraft tow vehicles equipped with radio and emergency lights. **Note:** Wollard tow vehicle cannot be used for F-22 towing.

11.28.2.5.2.1.4. **(Added-ShawAFB)** CDDAR will maintain a crane rental contract through LRS/CONS.

Table 11.7. (Added-ShawAFB) CDDAR Support Equipment List (Not all inclusive list).

NF-2/FL-1 Light cart	MC-2A Low-Pack	MC-7 Air Cart
B-1 Maintenance Stand (or equivalent)	B-4 Maintenance Stand (or equivalent)	-60/-86 Generator Set
Hydraulic Test Stand	10 Air Conditioner	Aircraft Lifting Jacks
MD-1 Aircraft Tow Bar	Tank Dollies	Heaters
Bulldozer	Forklift	Semi-truck/Flatbed Trailer

11.28.2.5.4.1. **(Added-ShawAFB)** The 20 EMS Crash Recovery/Wheel & Tire section are responsible for the removal of disabled, damaged and/or crashed aircraft from the active runway, taxiways or other areas on or off base. The section will maintain a 24-hour crash phone or crash radio standby on normal duty days.

11.28.2.5.4.2. **(Added-ShawAFB)** Should a wide-bodied aircraft become damaged, disabled, or crash, the MOC will notify Command Post for further handling instructions. Further actions will be accomplished IAW pre-established MAJCOM agreements, 00-80C-1, *Crashed, Damaged, Disabled Aircraft Recovery Manual*, LCL-20 MXG-011, *Crash Recovery Emergency Response* or owning agency guidance.

11.28.2.5.4.3. **(Added-ShawAFB)** The CDDAR team will consist of a recovery supervisor and two recovery members. The Crash Recovery Team Supervisor (CRTS) will respond with one Crash Recovery Team Member (CRTM) in the primary crash recovery vehicle. The second CRTM will respond with an aircraft tow vehicle and await further guidance from the CRTS. The CRTS will establish and maintain radio contact with the Senior Fire Officer (SFO) or On-Scene Commander (OSC) on the fire/crash net.

11.28.2.5.4.4. **(Added-ShawAFB)** If the aircraft stops on the active runway or taxiway, the SFO or OSC will determine if a fire or explosive hazard exists. Once determined there is no hazard or the fire or explosive hazard is eliminated, the OSC will clear the CRTS to begin recovery operations.

11.28.2.5.4.5. **(Added-ShawAFB)** If no further assistance is required, the OSC will clear the aircraft to taxi to the De-Arm location. The OSC will terminate the In-Flight Emergency.

11.28.2.5.4.6. **(Added-ShawAFB)** If further assistance is required, the CRTS will establish hand signal communication with aircraft commander and will supervise normal engine shutdown procedures on the runway. The CRTS will tow the aircraft to the aircraft parking spot, with the pilot as brake rider. The De-Arm crew will respond to de-arm the aircraft. The CRTS will then tow the aircraft to its squadron location or request the squadron send a tow crew to retrieve the aircraft from EOR. Once the aircraft has cleared the runway, the OSC will terminate the IFE.

11.28.2.5.4.7. **(Added-ShawAFB)** Major Response: A major response is defined as an aircrew declared emergency requiring crash recovery team response and action in recovering/removing the aircraft. EXAMPLES: Landing gear will not extend, collapsed landing gear, aircraft departs runway/taxiway and/or aircraft crashes.

11.28.2.5.4.8. **(Added-ShawAFB)** CDDAR team will consist of a CRTC, CRTS and CRTM as required. The CRTC will respond with one CRTM in the primary crash recovery vehicle. All other recovery team members will wait for further guidance from the CRTC.

11.28.2.5.4.9. **(Added-ShawAFB)** CDDAR Response after duty hours:

11.28.2.5.4.9.1**(Added-ShawAFB)** CDDAR team will maintain a stand-by roster outside of normal operating hours, and will be recalled by MOC or Command Post in event of an aircraft emergency.

11.28.2.5.4.9.2. **(Added-ShawAFB)** 20 EMS maintenance supervision will provide MOC a weekend duty roster which includes the CDDAR team POC.

11.28.2.5.4.9.3. **(Added-ShawAFB)** 20 EMS Maintenance Flight provides Command Post a Crash Recovery after duty hours recall roster semi-annually for hours when Crash Recovery is not manned.

11.33.4. **(Added-ShawAFB)** Parking, launch and recovery of explosives-loaded aircraft, end-of-runway procedures, inspecting and "safing" hung munitions, and impoundment of aircraft for AME munitions, jammed guns, or delayed/un-commanded release requires three EOR qualified weapons personnel when live munitions are present.

11.33.4.1. **(Added-ShawAFB)** Will be conducted in locations as indicated on approved explosive site plans.

11.33.4.2. **(Added-ShawAFB)** Store protective covers in the weapons pylon stowage pouch.

11.33.5. **(Added-ShawAFB)** A minimum launch/arm team will consist of one qualified Aircraft Technician (APG) and two EOR qualified weapons personnel, one being a checklist and marshalling qualified. A minimum De-Arm/Safe team will consist of two weapons personnel, one being checklist and marshalling qualified.

11.33.6. **(Added-ShawAFB)** The weapons checklist qualified technician monitors arming/de-arming operations and has control of the aircraft until the weapons operation is complete.

11.33.7. **(Added-ShawAFB)** Safety blocks for Bomb Dummy Unit (BDU)-33s expended during the sortie will remain in the pylon storage bag during Arm/De-arm procedures, and will be recovered by a weapons crew after shutdown.

11.33.8. **(Added-ShawAFB)** Arm/De-Arm personnel will immediately report any missing safety devices to MOC and the applicable FGS Production Superintendent for resolution and use spare safety pins/devices to accomplish aircraft De-arm/Safing procedures.

11.33.9. **(Added-ShawAFB)** MOC will coordinate with weapons standardization for MXG requirements for transient aircraft. MXG will perform EOR duties for cross-countries, demos, TDY launch/recovery.

11.33.10. **(Added-ShawAFB)** Explosively loaded aircraft parked on the parking apron will have ARM/DE-ARM/IPL procedures accomplished in chocks. Returning aircraft that have not expended all live air-to ground ordnance will have "Safing" procedures performed after returning to their parking location in chocks.

11.33.11. **(Added-ShawAFB)** See 20 MXG Emergency Action Checklist for aircraft returning with hung ordnance.

11.33.11.1. **(Added-ShawAFB)** If an aircraft returns from flight with a suspected hung rocket, after safing actions are complete, a weapons load crew will remove the rocket and attach an AFTO Form 350, *Repairable Item Processing Tag* and turn into AMMO for inspection. The weapons crew, using a grease pencil, will mark the rocket with a "\" below the field number marking on the rocket motor. Subsequently, a weapons load crew completes an AFTO Form 350 with the following information: "Hung rocket, aircraft tail number, rocket serial number, LAU-131 serial number, tube number, and date" and turn the rocket in to Munitions Flight. The AFTO Form 350 should include information from both "misfires".

11.33.11.2. **(Added-ShawAFB)** LAU-131 pods that experience a hung rocket are removed from the aircraft and turned into 20 EMS Armament Flight as soon as possible for test and repair as needed. The LAU-131 cannot fly until inspected by the Armament Flight. Removal is required, as soon as possible, after hung rockets are downloaded. Under no circumstances will a LAU-131 that experienced a hung store be allowed to fly with rockets until it has been inspected by Armament Flight. Rockets for Training Missions only.

11.38.7.2.1. **(Added-ShawAFB) Note:** Upon removal of the OAP requirements in the F-16 Technical Manuals, the following paragraphs no longer apply: 11.38.7.2.2 - 11.38.7.2.3

11.38.7.2.2. **(Added-ShawAFB)** Newly assigned OAP Managers attend OAP training within 30 days of assignment. Training is conducted by OAP Laboratory Personnel at the NDI Building.

11.38.7.2.3. **(Added-ShawAFB)** OAP managers, including transient alert, propulsion, and EMS will sample all oil servicing carts prior to servicing aircraft for the first flying day of the week. Deliver samples to the OAP Laboratory two hours prior to the first scheduled takeoff times. If the first day of the week is a non-flying day, oil servicing carts are sampled prior to 0900.

11.45.1.1.1. **(Added-ShawAFB)** Corrosion prevention training will be completed on the 367 TRSS training site, The Griffin at https://367trss.cce.af.mil/Courses/Airframe?weaID=General. Two courses will be required annually and tracked in the MIS. Griffin course codes and titles are F5MKU00OVT0001, *Corrosion Control Familiarization Course* and I3ADU00TCB0002, *Corrosion and Prevention*.

14.2.3.3. **(ShawAFB)** FGSs will utilize 20 MXG Form 16, *Aircraft Document Review*.

14.2.4.2.1.1.1. **(Added-ShawAFB)** CMS/EMS/FGS Production Superintendents.

14.2.6.1. **(ShawAFB)** See **Table 14.1** through **Table 14.8**.

Table 14.1. (Added-ShawAFB) Manual JCNs-Quality Assurance.

Quality Assurance	6001-6050

Table 14.2. (Added-ShawAFB) Manual JCNs-Shooters FGS.

Debrief Local	6051-6100
Deployed Package #1	6101-6150
Deployed Package #2	6151-6200
Expediters "A" Flight	6201-6250
Specs Flight	6251-6300
Scheduling	6301-6350
Support Section Cannibalization Numbers	6351-6400
Support Section Tools	6401-6450
Aircrew Flight Equipment	6451-6500
Weapons Flight	6501-6550

Aircraft	S100-S500

Table 14.3. (Added-ShawAFB) Manual JCNs-Gambler FGS.

Debrief Local	6551-6600
Deployed Package #1	6601-6650
Deployed Package #2	6651-6700
Expediters "A" Flight	6701-6750
Specs Flight	6751-6800
Scheduling	6801-6850
Support Section Cannibalization Numbers	6851-6900
Support Section Tools	6901-6950
Aircrew Flight Equipment	6951-7000
Weapons Flight	7001-7050
Aircraft	G100-G500

Table 14.4. (Added-ShawAFB) Manual JCNs-Tiger FGS.

Debrief Local	7051-7100
Deployed Package #1	7101-7150
Deployed Package #2	7151-7200
Expediters "A" Flight	7201-7250
Specs Flight	7251-7300
Scheduling	7301-7350
Support Section Cannibalization Numbers	7351-7400
Support Section Tools	7401-7450
Aircrew Flight Equipment	7451-7500
Weapons Flight	7501-7550
Aircraft	T100-T500

Table 14.5. (Added-ShawAFB) Manual JCNs-MXO.

Maintenance Training Flight	7701-7750
Engine Management Section	7751-7800

Table 14.6. (Added-ShawAFB) Manual JCNs-CMS.

EWS	7801-7850
TMDE	7851-7900
Propulsion Flight JEIM F110	7901-8000
Propulsion Flight Accessories	8001-8050
Propulsion Flight Engine Support Equipment	8051-8100
Propulsion Flight Test Cell	8101-8200
Propulsion Flight Cannibalization Numbers	8201-8250
Fuel Cell Maintenance	8251-8300
Hydraulics	8301-8350
Electric/Environmental	8351-8400
Egress	8401-8450
AIS Test Station	8451-8500
AIS Manual Test Equipment	8501-8550

Table 14.7. (Added-ShawAFB) Manual JCNs-EMS.

AGE Inspections	8551-8600
Base Age Team	8601-8650
Shooter AGE Team	8651-8700
Gambler AGE Team	8701-8750
Tiger AGE Team	8751-8800
Aircraft Structural Maintenance	8801-8850
Armament	8851-8900
Munitions	8901-8950
Metals Technology	8951-9000
Transient Maintenance	9001-9050
NDI	9051-9100
Aircrew Flight Equipment	9101-9150
Wheel and Tire	9151-9250
Phase Inspection Docks	9251-9300
Phase Support	9301-9350
Landing Gear Team	9351-9400

Table 14.8. (Added-ShawAFB) Manual JCNs-Field Training Detachment.

FTD	9401-9450

14.3.1.1.5. **(Added-ShawAFB)** The respective FGS Support Section representatives and Engine Management Support Section representatives will order/maintain all hazardous materials to comply with TCTOs and TCIs and will provide document numbers to the TCTO and TCI managing agency.

14.3.1.1.5.1. **(Added-ShawAFB)** Technicians who are found to be in violation of the written authorizations and procedures will have their rights revoked until the member is retrained.

14.3.2.6. **(Added-ShawAFB)** PS&D and EMB PS&D check and clear errors daily, using IMDS-CDB screen 690 option L to list errors. Use screen 42, 79, 412 and 904 to research/correct errors. Forward all errors requiring specialist verification/correction to the applicable agency.

14.3.2.7. **(Added-ShawAFB)** FGS maintenance will ensure aircraft configuration tables in IMDS-CDB are updated whenever Generic Configuration Status Accounting Subsystem (GCSAS) items are removed and replaced. Provide AFTO Form 95, *Significant Historical Data*, to the FGS PS&D section for newly installed items so PS&D can load the parts and request the AFTO Form 95 for the old item. Forward AFTO Form 95 to the DMS section NLT the next duty day. Submit AF Form 3535, *Facsimile Electro Mail Transmittal*, when a new part is received and not approved under GCSAS. Provide the following information to PS&D: WUC, new part number, TO figure and index with latest change and date, work center, points of contact and duty phone number.

14.3.2.8. **(Added-ShawAFB)** EMS and CMS maintenance technicians will monitor configuration of the applicable system in IMDS-CDB to ensure correct installed-on relationships. Load all new parts (to include applicable time changes/inspection job standards) into IMDS-CDB, installed as a result of a maintenance action. Coordinate with the applicable phase dock chief to verify accessible components during all aircraft phase inspections. Performing work center will delete removed parts from the IMDS-CDB that are no longer serviceable. Submit AF Form 3535 when a new part is received and not approved under GCSAS. Provide the following information to PS&D: WUC, new part number, TO figure and index with latest change and date, work center, points of contact and duty phone number.

14.3.2.9. **(Added-ShawAFB)** Armament scheduling section will monitor IMDS-CDB to ensure configuration of the gun system is correctly maintained. Load all parts, (to include time change/inspection job standards) for the gun system. If the item requires an AFTO Form 95 maintain the significant historical data IAW 00-20 series Technical Orders. Reference TO 1F-16CJ-6-11, Section II for required AFTO Form 95 items. Delete from the data base all parts removed from the aircraft/gun that are no longer serviceable. Submit AF Form 3535 when a new part is received and not approved under GCSAS. Provide the following information to PS&D: WUC, new part number, TO figure, and index with latest change, and date, work center, points of contact and duty phone number.

14.3.2.10. **(Added-ShawAFB)** PS&D will develop/maintain a required configuration table worksheet. Identify the work center responsible for removal, installation, and IMDS-CDB documentation of the selected item. Notify OO-ALC/YPV of the new part number WUC not yet approved under GCSAS. Notify applicable maintenance activities when new WUCs and part

numbers are added to the configuration table. Delete and correct configuration/GCSAS conflicts in IMDS-CDB, forward errors to applicable maintenance activity if required. All errors are corrected within 5 duty days. Review missing, out-of-configuration items using IMDS-CDB screen #990 on one aircraft per squadron each month. Selected aircraft require a completed a phase within the last 30 days. Out-of-Configuration items are distributed to the FGS SEL/NCOIC for corrective action.

14.3.4.2.4.2.4. **(Added-ShawAFB)** When off-equipment work centers are authorized to manage their Job Safety Standards (JSTs), Owning work centers will:

14.3.4.2.4.2.4.1. **(Added-ShawAFB)** Request access to the JML from PS&D/DBM and coordinated with QA JST Managers for any changes required.

14.3.4.2.4.2.4.2. **(Added-ShawAFB)** Mark in red any changes made to JSTs until new JML is received.

14.3.4.2.4.2.4.3. **(Added-ShawAFB)** Newly received JML, verify all changes are corrected in the database.

14.3.4.2.4.2.4.4. **(Added-ShawAFB)** Retain a copy of previous JML showing what changes were made.

14.3.4.2.4.2.4.5. **(Added-ShawAFB)** Document inspection on AF Form 2411, *Inspection Document*, and maintain inspection record with JML 28.

14.3.4.3.2.1.1. **(Added-ShawAFB)** Egress and Armament Scheduler will load the applicable JST to each component as required in the MIS.

14.3.4.3.6.3.3. **(Added-ShawAFB)** CAD/PAD and explosive items will be managed as follows: Notify munitions operations NLT 7 days prior to delivery date. Failure to notify munitions operations 7 days in advance will require and emergency issue letter.

14.3.6.1.5. **(Added-ShawAFB)** Refer to local transfer checklist established by PS&D.

14.4.1.2.12.1.1. **(Added-ShawAFB)** EM will forecast and order engine time changes as follows: Forty five days or 100 hours/cycles prior to the estimated due month, process screen #86 to schedule the time change and defer the event using defer code time change TCG. Fill out AF 2005, propulsion flight supply personnel or DMS will order parts to obtain a valid document number. Save 2005 with the document number in a folder (may be digital). When notified the part has issued, load it into IMDS-CDB. Change the defer code of the event to AWM and notify the PS&D schedulers or appropriate agency that the part is available to be changed.

16.1. (ShawAFB) Purpose of Coating and Marking Guidance. See https://usaf.dps.mil/sites/20FW/maint_grp/qa/mxqp/SitePages/Home.aspx for paint schemes and standards approved locally or waived through AF Form 679, *Air Force Publication Compliance Item Waiver Request/Approval* or the 20 MXG Form 19, *20 MXG Nonconforming Technical Request (107T)* process.

16.2.3. **(Added-ShawAFB)** Aircraft full paints, touch-ups, and tail flashes are scheduled during Shared Resource Meetings.

16.2.3.1. **(Added-ShawAFB)** Aircraft scheduled for a full paint must be washed no earlier than 7 days prior to the scheduled paint. Any aircraft that is over the 7 day window since the last wash are inspected by a Structural Maintenance Craftsman or above and accepted on a case by case basis. Aircraft may be directed for a re-wash before entering the paint facility.

16.2.3.2. **(Added-ShawAFB)** Aircraft arriving to the paint facility dirty will be directed to the wash rack for a re-wash. Spot washes must be approved and coordinated through Corrosion Control NCOIC.

16.2.3.3. **(Added-ShawAFB)** Removal of all pylons, tanks, flaperons, pod fittings and a full defuel of the aircraft is mandatory before the aircraft is towed into the paint facility for a full paint. The horizontal stabilizers will also be disconnected once the aircraft is towed into the paint facility. Touch-up paints/tail flashes/intake repairs require prior coordination with the Corrosion Control NCOIC to determine what items must be removed and if a defuel is required. Any and all panels removed off aircraft prior will be delivered with aircraft during full paint delivery.

16.2.3.4. **(Added-ShawAFB)** No aircraft maintenance will be performed inside the paint booth unless approved by the Corrosion Control NCOIC and coordinated with EMS pro-super.

16.2.3.5. **(Added-ShawAFB)** Cannibalization will not be performed while an aircraft is inside the paint booth without MXG/CC approval.

16.3.4.1.1. **(Added-ShawAFB)** Fifteenth Air Force CC aircraft will be marked with the 15 AF patch on the left side of the intake and wing patch on the right side of the intake.

16.3.4.1.2. **(Added-ShawAFB)** All aircraft are marked with applicable subdued squadron patch (55 FGS, 77 FGS, 79 FGS) on the left side of the intake and wing patch on right side of the intake unless otherwise specified.

16.3.4.1.3. **(Added-ShawAFB)** The 20 FW/CC lead aircraft is marked with the subdued multi-squadron patch on the left side of the intake.

16.3.4.1.4. **(Added-ShawAFB)** The OG/CC aircraft is marked with the multi-squadron patch (subdued) on the left side of the intake.

16.3.4.1.5. **(Added-ShawAFB)** The FGS/CC aircraft is marked with the applicable fighter squadron patch (subdued) applied to the left side of the intake.

16.3.4.1.6. **(Added-ShawAFB)** The Demo team aircraft will be marked with the "Let's Roll" decal applied to the left side of the intake and the 20 FW patch (subdued) on the right side.

16.3.5.2.1. **(Added-ShawAFB)** Tail stripes on demo and commander's aircraft are 9 inches. All other aircraft tail stripes are 6 inches.

16.3.7. **(ShawAFB)** An aircraft paint identification placard will be stenciled on the right aft strake with the subdued color to match other aircraft markings.

16.3.8.1.1. **(Added-ShawAFB)** The name tapes shall only be replaced when the pilot, DCC or ADCC changes, or in conjunction with the 180-day wash. The condition of the name tapes will be inspected prior to each aircraft's 180-day wash by the owning FGS. If name tapes are deteriorated, peeling, or a name change is required, the FGS will input a job into IMDS for corrosion. An ACC

Form 122, *Abort/IFE Record*, and AFTO Form 350 will be routed to corrosion before new name tapes are created.

16.3.8.2.1. **(Added-ShawAFB)** FGS and Demo will produce an MFR with all approved pilot call signs signed by the WG/CC and sent to the Corrosion Control NCOIC.

16.3.8.2.2. **(Added-ShawAFB)** FGS and Demo will re-accomplish MFR for any additions.

16.3.8.3.1. **(Added-ShawAFB)** Aircrew and crew chief names will be flat black and produced with the "Verve Mod" font, 1.75" in height, 30 degree italicized slant and not exceeding 28" in length.

16.3.8.4.1. **(Added-ShawAFB)** Aircrew and crew chief names will be applied in the designated locations.

16.3.8.5. **(Added-ShawAFB)** The 15 AF/CC aircraft are cobalt blue with white shadowing.

16.3.8.6. **(Added-ShawAFB)** WG/CC aircraft have the rank cobalt blue, first name ruby red, call sign (if applicable) cobalt blue, and last name yellow all with white shadowing.

16.3.8.7. **(Added-ShawAFB)** OG/CC aircraft will have the rank cobalt blue, first name ruby red, call sign (if applicable) cobalt blue, and last name yellow all with black shadowing.

16.3.8.8. **(Added-ShawAFB)** Demo aircraft are yellow with black shadowing.

16.3.8.9. **(Added-ShawAFB)** The 55 FGS/CC aircraft are cobalt blue with white shadowing.

16.3.8.10. **(Added-ShawAFB)** The 77 FGS/CC aircraft are ruby red with black shadowing.

16.3.8.11. **(Added-ShawAFB)** The 79 FGS/CC aircraft are yellow with black shadowing.

16.3.9.2.1. **(Added-ShawAFB)** The bird of prey, a "Wild Weasel" is applied to all aircraft. The weasel is 20" in size and subdued in color on all aircraft. Demo aircraft will not have a "Wild Weasel".

16.3.9.2.2. **(Added-ShawAFB)** The 20 FW/CC aircraft will have a subdued wild weasel roundel on one or both sides of the aircraft in place of the bird of prey.

16.3.10.1.1. **(Added-ShawAFB)** The 20 FW/CC aircraft will have the unit identifier and radio call signs shadowed in white. All other CC lead aircraft will be shadowed in black.

16.3.10.2.2. **(Added-ShawAFB)** The 15 AF/CC aircraft are marked with a 9" blue and white "15th Air Force" tail stripe.

16.3.10.2.3. **(Added-ShawAFB)** WG/CC and OG/CC aircraft are marked with 9" multi-squadron tail stripe.

16.3.10.2.4. **(Added-ShawAFB)** FGS/CC aircraft are marked with applicable squadron 9" tail stripe.

16.3.10.2.5. **(Added-ShawAFB)** Demo aircraft are marked with 9" multi-squadron tail stripe.

16.3.17.1. **(Added-ShawAFB)** Specialty markings for tanks, pods, and ladders outlined in this supplement are accomplished by an off base paint facility and are at the expense of the owning unit. Corrosion Control will paint the standard paint schemes as depicted in the applicable TO.

16.3.17.2. **(Added-ShawAFB)** Corrosion Control is approved to paint all pods and ladders IAW aircraft tech data and materials on the Qualified Products Listing (QPL). Corrosion control will facilitate the re-standardization of customized pods and ladders.

16.3.17.1.2. **(Added-ShawAFB)** One each travel pod and ladder for the 15 AF/CC, 20 FW/CC, 20 OG/CC, 55 FGS/CC, 77 FGS/CC, and 79 FGS/CC aircraft have a distinct paint scheme representing each organization to which it belongs.

16.3.17.1.3. **(Added-ShawAFB)** The 15 AF/CC travel pod is blue with white wings stretching nearly the entire length of both sides. The door has the commander's rank & name; it also has Commander 15th Air Force Shaw AFB, SC. The top of the pod contains an ACC patch and 15th Air Force patch and the Commanders rank located forward and aft between the wing tips. On the left, centered in the wing, is a 15th Air Force circular patch.

16.3.17.1.4. **(Added-ShawAFB)** The crew ladder is white with a desert camouflage pattern with the commander's rank centered down both legs. From top to bottom the steps of the ladder have commanders rank and name, 15th Air Force, squadron patches, United States Air Forces Central (USAFCENT), and squadron patches. The hand rail is polished aluminum.

16.3.17.1.5. **(Added-ShawAFB)** The 20 FW/CC's travel pod is blue and white checker board forward, red in the middle and orange and black tiger striped aft. The door has the commander's rank, & name; it also has Commander 20th Fighter Wing Shaw AFB, SC. On top of the pod is a white rectangle with an ACC patch and Victory by Valor patch with the three squadron patches below. 20 Fighter Wing is centered on the left side.

16.3.17.1.5.1. **(Added-ShawAFB)** The crew ladder is white, with the following on each step from top to bottom, the commander's rank and name, blue, yellow and red in nebular line, 55th checkerboard with patch, 77th red with patch and 79th tiger stripes with patch, and a chrome stripe. The top seat and arms are trimmed in chrome. The top seat also has F-16 mural picture. Each leg has Victory by Valor centered on a waiving banner.

16.3.17.1.6. **(Added-ShawAFB)** The 20 OG/CC's travel pod is painted the same as the 20 FW/CC's travel pod except for the following differences. The door has OG/CC rank, & name; it also has Commander 20th Operations Group Shaw AFB, SC. The top has an ACC and Victory by Valor patch. The left side has a squadron patch centered in each squadrons respective paint scheme. Both nose cones are polished aluminum.

16.3.17.1.6.1. **(Added-ShawAFB)** The crew ladder is white with the following on each step starting at the top; 55th checkerboard with patch, 77th red with patch and 79th tiger stripes with patch and a blue yellow and red nebular line. Both legs contain each squadrons paint scheme corresponding to each step. The arms are trimmed with chrome. The Commanders rank and name is on the seat and a Victory by valor patch on the top step.

16.3.17.1.7. **(Added-ShawAFB)** The 55 FS/CC's travel pod is blue and white with silver shadowing checkerboard on both ends up to main body which is solid blue. The door has the squadron commanders' rank & name; it also has Commander 55th Fighter Squadron. The right

side has a 55th squadron and Victory by Valor patches. The lug plate is outlined by a silver line. The top has a 55 on the forward and aft portion of the main body. There are shooter dice with trailing flames on the left side.

16.3.17.1.7.1. **(Added-ShawAFB)** The crew ladder is white with blue checkerboard on each step and on the legs. The seat has a moon, F-16, Air Force symbol, and 55th patch mural. The top step contains the same info as the travel pod door. The Fighting Fifty Fifth is on top of both arms.

16.3.17.1.8. **(Added-ShawAFB)** The 77 FS/CC's travel pod is black at both ends and fades to red in the center. 77th Fighter Squadron, Commanders rank & name; and Commander is located on the door. The right side has a Victory by Valor patch, the 77th squadron patch, World's Greatest, and Gamblers Big Red Machine. The left side has All Aces No Jokers, two fanned card hands and green Mig-215 star.

16.3.17.1.8.1. **(Added-ShawAFB)** The crew ladder is black fading to red and back to black. The top step has the commander's name and rank, the next step has the crew chief rank and name. Fanned cards are on left arm. Gamblers down left leg and All Aces No Jokers on right leg. The Big Red Machine on seat. Victory by Valor and 77th patches on top step. Hand rail is polished aluminum. Tail number and green Mig-215 stars on front of top step. All steps have a card suit on the front of both sides.

16.3.17.1.9. **(Added-ShawAFB)** The 79 FS/CC's travel pod is orange on top fading to yellow on bottom with black tiger stripes. The door has the Commanders rank, & name; and Commander 79th Fighter Squadron. 79th Fighter Squadron and tiger is on the left side. The top has an ACC patch and memorials to two fallen squadron members. The right side has a "Victory by Valor" and 79th Patch on either side of the door.

16.3.17.1.9.1. **(Added-ShawAFB)** The crew ladder is orange fading to white. The commander's name is on seat front, seat top has a tiger breaking through picture. "Tiger Meet of Americas 2005" is on the top step. 79th Fighter Generation Squadron going down both legs. Both arms have a tiger head and paw graphics.

16.3.17.1.10. **(Added-ShawAFB)** Viper Demo Team is authorized to have three modified travel pods and ladders; one for each aircraft. Names and ranks of Commanders/Crew Chiefs are subject to change without additional approval.

16.3.17.1.10.1. **(Added-ShawAFB)** Standardization of travel pods, the door side is called right side and opposite is left side, when looking at the door, forward is left and aft is right. Viper East Demo Team commanders pod is black with yellow, fading to orange, fading to red flames on front. Door has rank, & name; and Commander Viper East Demo Shaw AFB, SC. USAF Heritage Aircraft and Viper East patch is on the right side. The Air Force Symbol, ACC patch and Viper East is located on left. A snake head graphic is on top. The second travel pod is black with ghost flames. Viper East Demo and USAF Heritage Flight patch on right side. Viper East Demo and ACC patch is on left side. The third travel pod is green on top fading to gold with 15 black diamonds on top. Right side has USAF Heritage Aircraft, ACC patch, Viper East Patch and Viper East Demo Team, and snake head. Left side has green yellow and black break through snake graphic, Air Force Symbol and Viper East Demo Team.

16.3.17.1.10.1.1. **(Added-ShawAFB)** The crew ladders for all three aircraft are identical. They are black with Viper East Demo Team running down the front of the steps. A Victory by Valor patch and Viper East running down the legs. The seat has ACC patch cradled in the Air Force symbol. Viper East patch is on the top step. This paint scheme will only be accomplished by an off base paint facility using approved materials procured by Demo Team Squadron funds. The paint scheme must be approved in writing by the Wing Commander before being painted. Approval letters will be maintained by the Demo Team.

KRISTOFFER R. SMITH, Colonel, USAF

Commander, 20th Fighter Wing

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 90-201_ACCSUP, *The Air Force Inspection System*, 13 May 2019

AFMAN 21-111, *Advanced Maintenance and Munitions Operations School,* 06 March 2019

SHAWAFBI 11-250, *Airfield Operations and Base Flying Procedures*, 1 August 2021

SHAWAFBVA 21-1, *FOD Prevention Goals*, 10 November 2020

SHAWAFBVA 21-2, *FOD Prevention Phone Numbers*, 17 November 2020

SHAWAFBVA 21-3, *Are you a FOD Fighter*, 17 November 2020

20 MXGI 21-101, *Local Manufacture Procedures*, 14 November 2019

TO 00-80C-1, *Crashed, Damaged, Disabled Aircraft Recovery Manual*, 17 November 2020

TO 1F-16C-38, *Aircraft Structural Integrity Program*, 1 March 2019

TO 1F-16CJ-2-1-1, *Cross Servicing Guide*, 1 March 2021

TO 1F-16CJ-2-49GS-00-1, *General System-Emergency Power System*, 1 January 2022

TO 1F-16CJ-2-49JG-00-2, *Job Guide-Emergency Power System*, 1 March 2021

TO 1F-16CJ-2-70FI-00-1, *Fault Isolation-Power Plant*, 1 September 2021

TO 1F-16CJ-6-11, *Scheduled Inspection and Maintenance Requirements*, 25 March 2022

TO 1F-16CJ-21, *Aircraft Equipment Inventory List Master Guide*, 1 March 2021

TO 1F-16CM-6CF-1, *Acceptance and Functional Check Flight Procedures Manual,* 15 March 2020

TO 1F-16CM-6CL-1, *Acceptance and/or Functional Check Flight Checklist,* 15 March 2020

TO 1-1-300, *Maintenance Operational Checks and Check Flights,* 15 October 2021

TO 4B-1-1, *Use of Landing Wheel Brakes and Wheels during Ground Operation*, 7 May 2021

TO 11A18-7-7, *Specialized Storage and Maintenance Procedures*, 10 February 2021

TO 35F5-1-2, *Explosion-Proof Lanterns and Extension Light Assemblies*, 24 March 2008

LCL-20 MXG-011, *Crash Recovery Emergency Response*, 25 September 2019

Prescribed Forms

None

Adopted Forms

ACC Form 64, *Request for Special Certification*

ACC Form 122, *Abort/IFE Record*

ACC Form 140, *CTK Inventory and Control Log*

ACC Form 145, *Lost Tool/Object Report*

AF Form 1297, *Temporary Issue Receipt*

AF Form 1800, *Operator's Inspection Guide and Trouble Report*

AF Form 2411, *Inspection Document*

AF Form 3535, *Facsimile Electro Mail Transmittal*

AFTO Form 43, *USAF Technical Order Distribution Office (TODO) Assignment or Change Request*

AFTO Form 95, *Significant Historical Data*

AFTO Form 350, *Repairable Item Processing Tag*

AFTO Form 781A, *Maintenance Discrepancy and Work Document*

DAF Form 679, *Air Force Publication Compliance Item Waiver Request/Approval*

Abbreviations and Acronyms

ACE—Agile Combat Employment

ADR—Aircraft Document Review

AFETS—Air Force Engineering and Technical Service

AME—Alternate Mission Equipment

AMMOS—Advanced Maintenance and Munitions Operations School

APG—Airplane General

AWM—Awaiting Maintenance

BDU—Bomb Dummy Unit

CAD/PAD—Cartridge Actuated Device/Propellant Actuated Device

CANN—Cannibalization

CD—Deputy Commander

CDDAR—Crashed, Damaged or Disabled Aircraft Recovery

CE—Civil Engineer

CETADS—Comprehensive Engine Trending and Diagnostics System

CMS—Component Maintenance Squadron

CND—Can Not Duplicate

CRTS—Crash Recovery Team Supervisor

CSFDR—Crash Survival Flight Data Recorder

CTK—Composite Tool Kit

DEC—Digital Electronic Control

DFLCC—Digital Flight Control Computer

DIFM—Due-in From Maintenance

DMS—Decentralized Materiel Support

DO—Director of Operations

DOC—Designed Operational Capability

DPAS—Defense Property Accountability System

EID—Event Identification Description / Equipment Identification Designator

EMS—Equipment Maintenance Squadron

EOR—End of Runway

FCF—Functional Check Flight

FCSDR—Flight Control Seat Data Recorder

FCT—Flight Control Team

FGS—Fighter Generation Squadron

FHP—Flying Hour Program

FLCS—Flight Control System

FO—Foreign Object

FOD—Foreign Object Damage

GCSAS—Generic Configuration Status Accounting Subsystem

HAF—Headquarters, US Air Force

HAZMAT—Hazardous Material

IAW—In Accordance With

IMDS—Integrated Maintenance Data System

JDRS—Joint Deficiency Reporting System

LAN—Local Area Network

LRS—Logistics Readiness Squadron

LRU—Line Replaceable Unit

MAJCOM—Major Command

MIL—Master Inventory List

MLV—Viper Memory Load Verifier

MOC—Maintenance Operations Center

MOU—Memorandum of Understanding

MSA—Munitions Storage Area

MSEP—Maintenance Standardization & Evaluation Program

MTC—Mission Training Center

MXG—Maintenance Group

NCO—Noncommissioned Officer

NCOIC—Noncommissioned Officer in Charge

NDI—Nondestructive Inspection

OAP—Oil Analysis Program

OCF—Operational Check Flight

OPR—Office of Primary Responsibility

OSC—On-Scene Commander

OTI—One Time Inspection

PEDs—Personal Electronic Devices

POC—Point of Contact

PQDR—Product Quality Deficiency Report

PRDs—Pilot Reported Discrepancies

PS&D—Plans, Scheduling, and Documentation

QA—Quality Assurance

QPL—Qualified Products Listing

QVI—Quality Verification Inspections

RAMPOD—Reliability, Availability, Maintainability for Pods

SCR—Special Certification Roster

SEL—Senior Enlisted Leader

SFO—Senior Fire Officer

TA—Transient Aircraft Services

TAC—Total Accumulated Cycles

TBA—Training Business Area

TCG—Time Change

TCI—Time Change Item

WUC—Work Unit Code

WWM—Wing Weapons Manager

Office Symbols

15 AF/CC—15th Air Force Commander

20 CS/SCOC—20th Communication Squadron Client Service Center

20 FW/CC—20th Fighter Wing Commander

20 FW/XP—20th Fighter Wing Plans and Programs

20 MXG/CC—20th Maintenance Group Commander

20 MXG/MXK—20th Maintenance Group Maintenance Tactics

20 MXG/MXO—20th Maintenance Group Maintenance Operations

20 MXG/MXOS—20th Maintenance Group Plans, Scheduling, & Documentation

20 MXG/MXQP—20th Maintenance Group Product Improvement Program

20 OG/CC—20th Operations Group Commander

20 OSS/OSK—20th Operations Support Squadron Weapons and Tactics

55 FGS/CC—55th Fighter Generation Squadron Commander

55 FS/CC—55th Fighter Squadron Commander

77 FGS/CC—77th Fighter Generation Squadron Commander

77 FS/CC—77th Fighter Squadron Commander

79 FGS/CC—79th Fighter Generation Squadron Commander

79 FS/CC—79th Fighter Squadron Commander

Attachment 20 (Added-ShawAFB)

MAINTENANCE ON EXPLOSIVE LOADED AIRCRAFT

A20.1. **(Added-ShawAFB)** Precision Guided Munitions (TGM-65, CATM-9, and CATM-120) are downloaded from aircraft towed from the flightline to any maintenance area, hangars, and outside fuel barn maintenance areas. If adverse weather occurs, 20 FW/CC may waive downloads. 20 FW aircraft, broke off station, deviations are approved by the 20 MXG/CC.

Table A20.1. (Added-ShawAFB) Maintenance on Explosive Loaded Aircraft Requirements.

Type Maintenance	Install Safety Pins/Devices	Download External Munitions	Download All Munitions
Pre/Post/Thru-flight	X		
Servicing (fuel/oil/oxygen/nitrogen)	X		
Towing/Taxi	X		
Jacking (one wheel)	X		
Jacking (entire aircraft)		X To include Chaff/Flare	
Engine Run	X		
Trim Pad/Hush House Run		X	
Full Aircraft Wash		X	
Full Aircraft Paint			X
Flight Line Paint Touch-up/Tail Flash	X		
Engine R/I		X To include Chaff/Flare	
Internal Fuel System Maintenance			X To include ACMI Pods
Aircraft Phase			X
Functional Check Flight			X
Minor Maintenance To Prevent Abort	X		
Canopy/Seat Removal/Installation		X	
NDI (X-ray)			X
Compass Swing		X	
Training (WLT/MTS)			X