



**NAVSEA**

**WARFARE CENTERS**

Indian Head EOD Technology Division

NAVAL SURFACE WARFARE CENTER

**INDIAN HEAD EXPLOSIVE ORDNANCE DISPOSAL TECHNOLOGY DIVISION**

# **CAD/PAD International Logistics Meeting (2018 ILM)**

## **CAD/PAD F-35 Transition**



# OVERVIEW



- **Transition from Lockheed Martin to CAD/PAD Joint Program Office (JPO)**
  - Benefits to the Services, Partners & Foreign Military Sales (FMS)
  - Customer Expectations
- **CAD/PAD JPO Guidance** (Living documents / expect updates)
- **Product Support Categories**
  - **Acquisition Strategy**
    - Contracts, Timeline and Deliveries
  - **Technical Management (Engineering)**
    - Cataloging and Item Changes
  - **Life Cycle Management (Logistics)**
    - Storage and Stock Points
- **Questions?**

# TRANSITION FROM LM to GOV'T



Transition Began

2009

Joint Strike Fighter Program Office (JSFPO)  
2016 Decision



2020

Transition Completed

- **CAD/PAD Joint Program Office (JPO) becomes the Product Support Provider (PSP) for JSF CAD/PAD**

\*Lockheed will continue to support all F-35 customers until the CAD/PAD JPO Transition is complete\*

- **Benefits to the Customer**
  - NSWC IHEODTD (CAD/PAD) “Center of Excellence”
  - Our Goal: “Lower Life Cycle Sustainment Costs”
  - Advantages: using Inherently Governmental Services
- **Customer Expectations**
  - Business As Usual!
  - Partner Ship To Addresses needed.
  - Contact CAD/PAD JPO with Questions.



# LIFE CYCLE GUIDANCE



## CAD/PAD JPO Guidance

Life Cycle Sustainment Plan &  
CAD/PAD Support Agreement



# GUIDANCE



PRESENT

FUTURE

## Life Cycle Sustainment Plan

### Provides

Guidance for Life Cycle Sustainment

### Describes

In detail how NSWC IHEODTD will execute the Acquisition and Sustainment Strategies

### Changes occur

Throughout product development as we strive to meet Milestone Decisions

## JSF CAD/PAD Support Agreement

### Purpose

Documents what each Country 'Agrees to'

### Signature

Air Commadore

Each Service, Partner & FMS Country

### Updates

3yr Review for significant changes

All parties must Agree to Funding Annex



# PARTS REFERENCE LIST



<b><u>CARTRIDGE KIT COMMON KIT - JN75</u></b>
LOWER BRIDLE, RELEASE CARTRIDGE - JN67
DROGUE, DEPLOYMENT CARTRIDGE (DDU) - JN66
PIRD, CARTRIDGE - JN68
AUXILIARY, SECONDARY CARTRIDGE - JN72
<b><u>CARTRIDGE, PRIMARY - JN41</u></b>
<b><u>CARTRIDGE KIT CTOL/CV - JN74</u></b>
ADU CARTRIDGE - JL54
AUTO BACKUP UNIT CARTRIDGE ASSY (ABU) - JN70
CARTRIDGE, INITIATOR - JN65
PARACHUTE, DEPLOYMENT CARTRIDGE (PDU) - JN71
<b><u>CARTRIDGE, STOVL KIT - JN73</u></b>
ADU CARTRIDGE - JL54
AUTO BACKUP UNIT CARTRIDGE ASSY (ABU) - JN70
CARTRIDGE, INITIATOR - JN65
PARACHUTE, DEPLOYMENT CARTRIDGE (PDU) - JN71
AUTO EJECT CARTRIDGE ASSEMBLY - JN76
<b>BATTERY PACK, THERMAL - CIX - JN77</b>
<b>CARTRIDGE, FIRE BOTTLE - JN63</b>
<b>METRON ACTUATOR - (ALIU) - No DODIC yet</b>
<b>PROTRACTOR (MWARS) - No DODIC yet</b>
<b>SHAPED CHARGE, FLEXIBLE, 12 GR - JN55</b>
<b>TRANSFER LINE, RDC, PP TO HE -CTOL -55.2" - JN56</b>
<b>TRANSFER LINE, RDC, PP TO HE - CV/STOVL -51.3" - JN57</b>
<b>TRANSFER LINE, RDC, PP TO HE -25.3" - JN59</b>
<b>TRANSFER LINE, RDC, PP TO HE -6.2" - JN60</b>
<b>TRANSFER LINE, RDC, PP TO HE -61.1" - JN58</b>
<b>UNDER SEAT ROCKET MOTOR (USRM) - JN42</b>

# PARTS ACQUISITION



Item	DODIC	HAZ Class
<b>Primary Cartridge</b>	JN41	1.4C
<b>USRM</b>	JN42	1.3C
<b>STOVL Kit</b>	JN73	1.4C
<b>CTOL/CV Kit</b>	JN74	1.4C
<b>Common Kit</b>	JN75	1.4C
<b>CIX Battery</b>	JN77	Non-Regulated
SHAPED CHARGE, FLEXIBLE LINEAR, 12 GR	JN55	1.4D
TRANSFER LINE, RDC, PP TO HE -25.3"	JN59	1.4S
TRANSFER LINE, RDC, PP TO HE -61.1"	JN58	1.4S
TRANSFER LINE, RDC, PP TO HE - CV/STOVL - 51.3"	JN57	1.4S
TRANSFER LINE, RDC, PP TO HE -CTOL -55.2"	JN56	1.4S
TRANSFER LINE, RDC, PP TO HE -6.2"	JN60	1.4S
INITIATOR, GAS TO RDC	JN65	INERT
INTERCONNECT, ACCEPTOR	JN64	INERT
HANDLE, INTERNAL	JN62	INERT
INTERCONNECT, DONOR	JN61	INERT
CARTRIDGE, FIRE BOTTLE	JN63	1.4C

FY20

FY21

6 Parts - FY20  
17 Parts - FY21  
20 Parts - FY22

## FY22 and beyond

- Water Activated Release System (MWARS)
- Auto Life Raft Inflation Unit (ALIU)
- Catapult Set Design: 'Pending'



# FY20 CAD/PAD Buys



Configuration is "Short Term"

## JSF STOVL Cartridge Kit

Used on: F-35B

Kit DODIC: JN73

Contents:

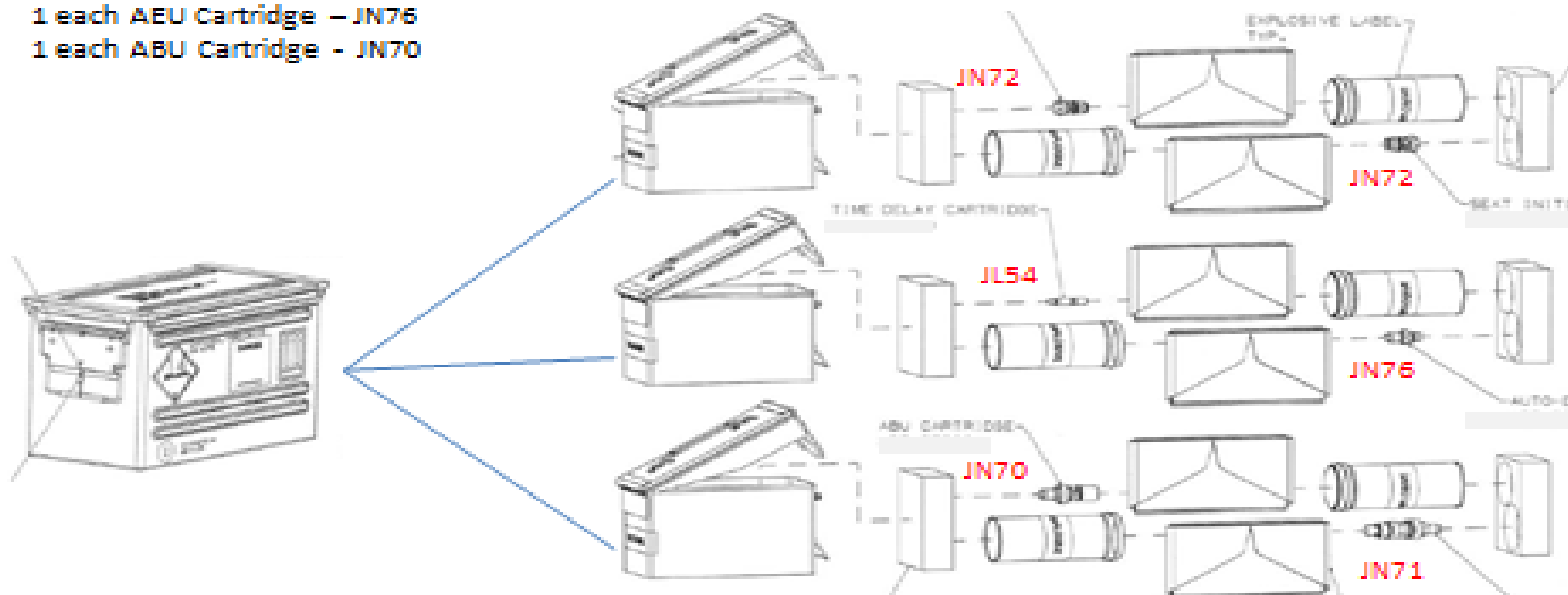
2 each Seat Initiator Cartridge— JN72

1 each ADU cartridge— JL54 ( new cartridge TBD)

1 each Parachute Deployment Cartridge — JN71

1 each AEU Cartridge — JN76

1 each ABU Cartridge - JN70



# FY20 CAD/PAD Buys



Configuration is “Short Term”

## JSF CTOL/CV Cartridge Kit

Used on: F-35A F-35C

Kit DODIC: JN74

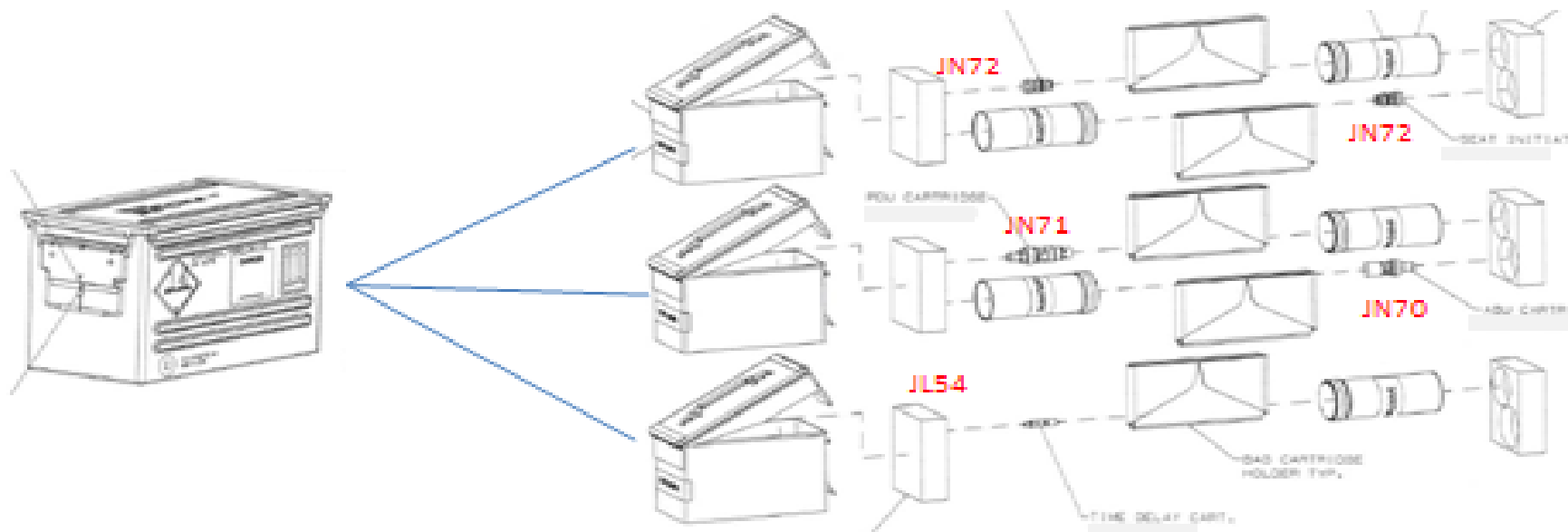
Contents:

2 each Seat Initiator Cartridge—JN72

1 each ADU cartridge—JL54 ( new cartridge TBD)

1 each Parachute Deployment Cartridge — JN71

1 each ABU Cartridge - JN70



# FY20 CAD/PAD Buys



Configuration is “Short Term”

## JSF Common Cartridge Kit

Used on: F-35A F-35B F-35C

Kit DODIC: JN75

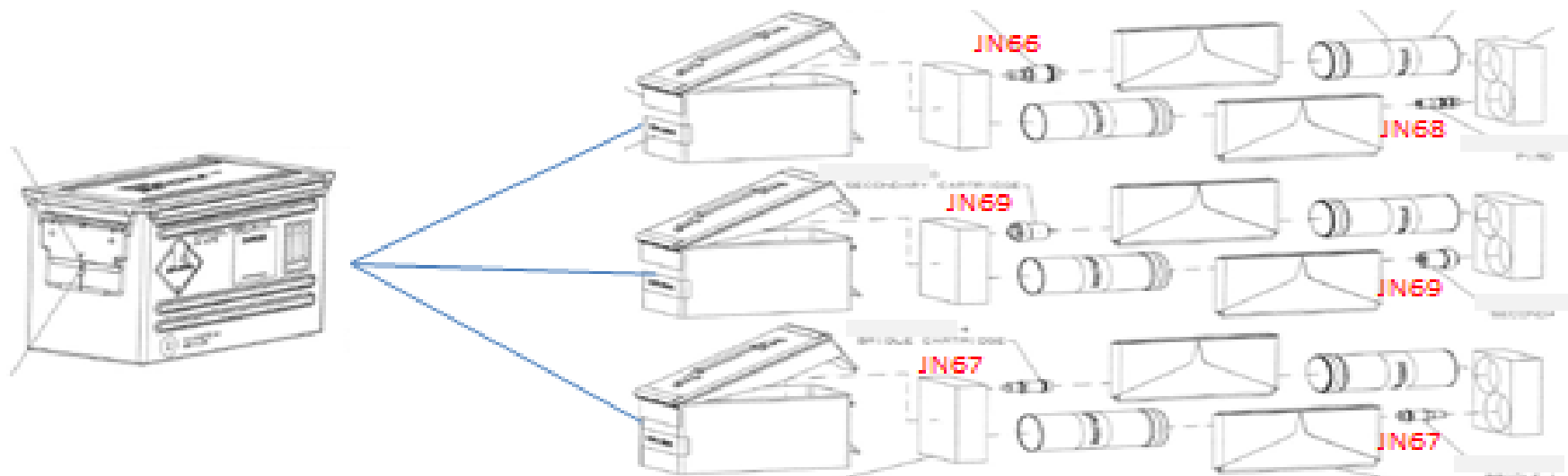
Contents:

2 each Secondary Cartridge – JN69

2 each Bridle Release Cartridge – JN67

1 each Drogue Deployment Cartridge – JN66

1 each PIRD Cartridge – JN68



# ENGINEERING



## Transition Efforts

### ➤ Cataloging Items

- 28 Items Total Estimated Completion Date (ECD): 2019  
(17 Seat, 10 TRS & 1 FPS)

### ➤ Obsolescence

- **Redesign** Auto Deployment Unit (ADU) and Powered Inertial Reel Device (PIRD) Cartridges
- **Requalify** Metron for Water Activated Release System (MWARS) Auto Life Raft Inflation Unit (ALIU) ECD: 2021

## Item Changes

### Primary + Secondary Cartridges = Catapult Cartridge Set

- **Items Always:** Tested, Packaged, Stored, Shipped, Installed & DEMIL'd  
\*Together\*

### ➤ Seat Single Pack Configuration is Pending

- Benefits:
  - Eliminates breaking apart kits
  - Allows for \*Independent Asset Management \*



# F-35 CAD/PAD PARTS FLOW



## Vendor Items

## Seat Items

- ❖ Common Kit
- ❖ STOVL Kit
- ❖ CTOL/CV
- ❖ USRM
- ❖ Primary Cartridge
- ❖ CIX Battery

## TRS

- ❖ FLSC
- ❖ (5x)TRS, RDC Lines
- ❖ Initiator, Gas RDC
- ❖ Interconnect, Acceptor
- ❖ Internal, Handle
- ❖ Interconnect, Donor

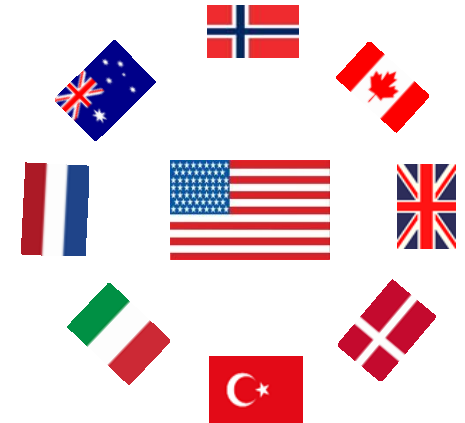
## FPS Cartridge

- ❖ Cartridge, Fire Bottle

Hill AFB

NSWC  
IHEODTD

Partners



FMS



Final Assembly  
Check-out  
(FACO)



**Emergency  
Stock**  
3- International  
Sites





# QUESTIONS?



# LOGISTICS PARTS FLOW



## NSWC IHEODTD

### Hill AFB

#### FACOs

Italy,  
Japan

#### FMS

Israel, Japan  
Korea

#### Emergency Stock Points

3 – International  
Sites

### Partners

Australia  
Canada  
Denmark  
Italy  
Netherlands  
Norway  
Turkey  
U.K.

\*In Development:  
Shipping & DEMIL Plan\*