F-15 Licensed Production in Japan

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- **First U.S. ally to be approved for in-country production**
- **Program defined in USG-GOJ agreements/ MOU**
- **Executed as MHI and McDonnell Douglas business collaboration**
- **187 aircraft produced in Japan**
- ***Limited to Japanese market***

USAF roles:

- Manage the technology transfer and control process
- Absorb and utilize the "flowback" of technical data from Japan

JDA/JASDF roles:

- Program funding and contracting
- Ensuring configuration standards in compliance with the MOU

Industry:

- MHI prime contractor in Japan
- Execute the program through MLA/TAA – as licensed by DOS
- Negotiated Royalties and License fees

F-15 Licensed Production in Japan
Goals and Objectives

- **Japan objectives:**
  - Acquire first rate air superiority capability to defend Japan (Cold War)
  - Boost Japanese defense industry (jobs and autonomy)
  - Gain advanced technology

- **U.S. objectives:**
  - Strengthen important ally's air superiority
    - Prevent air defense vacuum - deter the USSR
    - Safeguard allied operations at Japanese bases and ports
  - Protect the most sensitive/vulnerable technology

F-15 Licensed Production in Japan
Lessons

- **Benefits to the U.S. included:**
  - Enhanced alliance capability in air superiority. (Cold War strategy)
  - Larger total F15 user base (for logistics efficiency)
  - Revenue to U.S. industry
- **Although license fees and royalty payments added to production costs, benefits to Japan included:**
  - Years of USAF combat experience inherent in the F15 design
  - Common training and tactics with USAF
  - >10$B US RDT&E investment and extensive national test infrastructure
  - Revenue, jobs and advanced technology for Japanese industry prime contractor (MHI)

F-15 Licensed Production in Japan
Lessons

- **Ultimately, Japanese industry absorbed some advanced technologies**
- **Because of U.S. export stipulations, Japan could not apply beyond the F15 program without U.S. approval**
- **More “black box” rulings as newer fighters increase use of sensitive electronic subsystems**
- **MHI-Boeing relationship expanded with F-15 software source code and engineering design responsibilities into the commercial market, with MHI becoming a 787 investing partner.**

Conclusions

- **The Japan F-15 program has been very successful.**
  - Current force of 200 F15s remains the core of Japan's air defense
  - 21st century capability upgrades are available and affordable (USAF F15C through 2040)
  - MHI expanded its engineering and production capacity
- **Expectations of industrial benefits may have been unrealistic in the 1980s**
  - Market was restricted to Japan
  - IP rights and ownership of data
  - High costs of maintaining a competitive indigenous defense industry base.
  - Lack of true "defense companies" and the limited interest of commercial enterprises
- **True cooperative production before the 3P revision was more difficult**
- **Missed opportunities to provide depot maintenance to the USAF because of defense export restrictions.**
- **Moving from licensed production to international collaboration and revision of 3Ps will change dynamics**
  - Presents new opportunities . . . and challenges
  - F-15 mods, upgrades, sustainment
  - Follow on fighter development
  - Broader market

F-15J/DJ Collaboration
Looking ahead

Ensuring the sovereignty of Japanese territory well into the 21st Century