

Friendshoring Maintenance in Japan

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Disclaimer

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Honor Statement

On my honor, I have neither given nor received unauthorized aid on this assignment.

A handwritten signature in black ink, appearing to be 'SHE' followed by a long horizontal stroke.

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Acronym List

AFL-CIO	American Federation of Labor-Congress of Industrial Organizations
CFAY	Commander, Fleet Activities Yokosuka
CONUS	Continental United States
DCS	Direct Commercial Sales
DLA	Defense Logistics Agency
DOD	Department of Defense
DOS	Department of State
DON	Department of the Navy
DPAS	Defense Priorities and Allocations System
FMS	Foreign Military Sales
FY	Fiscal Year
GAO	Government Accountability Office
HME	Hull, Mechanical & Electrical
NAVSUP	Naval Supply Command
NDAA	National Defense Authorization Act
NDIS	National Defense Industrial Strategy
OCONUS	Outside Continental United States
SRF	Ship's Repair Force



Executive Summary



The U.S. Navy is facing a serious issue in balancing the overall readiness of its warships with deployments to support national security objectives. As the number of shipyards capable of supporting maintenance has dwindled to just a few scattered across the country, persistent backlogs remain. This initiates a cycle where ships do not leave the shipyards on time, which affects the start of their certification period and may delay planned deployments to relieve ships currently on station for operational missions supporting national security.

A contributing problem to this overall issue is that **U.S. Navy ships stationed in the continental United States cannot conduct preventative and corrective maintenance at overseas facilities, affecting the Navy's overall readiness and U.S. national security.**

This report discusses in detail the numerous issues preventing the friendshoring of maintenance in Japan. Specifically,

- **Legal restrictions** within the U.S. Code and subsequent regulations prevent maintenance from being conducted overseas.
- **Congressional support** for conducting maintenance overseas remains mixed.
- **Shipyard standards and requirements** differ between the U.S. and Japan.
- **Security requirements** differ between the U.S. and Japan.
- **A plan for the crew** is lacking.

Following in-depth research into the issues discussed, this report presents a comprehensive three-pronged framework designed to provide:

- **Policy Recommendations** that outline key legislative and policy changes necessary to allow maintenance to be conducted in Japan.
- **Adaptations** that will be required to support the policy recommendations and serve as the critical bridge between legislative change and real-world implementation.
- **Implementations** focusing on key measures to support the crew and ensure the project's success.

This report aims to provide the Embassy with a cohesive understanding of the issue and a comprehensive framework that will help ensure U.S. warships can successfully conduct maintenance overseas. Implementing such a framework can potentially decrease maintenance delays and improve the Navy's overall readiness while protecting U.S. national security.



Introduction



Introduction

The U.S. Navy is currently facing a critical issue with ship maintenance. The inadequate infrastructure of the public shipyards in the U.S. and the limited number of private shipyards to accommodate U.S. Navy vessels significantly hinder the Navy's ability to complete maintenance on time. The GAO's alarming findings in August 2020 revealed that from fiscal years 2015-2019, a staggering 75 percent of the maintenance periods planned for aircraft carriers and submarines were delayed (Diana Maurer, 2023). This backlog is delaying necessary maintenance, which significantly impacts the Navy's readiness. When ships are delayed in maintenance, other operational ships unexpectedly conduct additional missions. This causes cascading problems for the operational ship as maintenance is delayed and the crew works overtime. Ambassador Emanuel argues that Japan is ready and able to help conduct maintenance on U.S. Navy ships (Emanuel, 2023). With numerous shipyards available, there is an opportunity to decrease the estimated 4,000-day maintenance backlog. However, Congress must give the U.S. Navy specific authority to utilize the Japanese shipyards.

Problem Statement

U.S. Navy ships stationed in the continental United States cannot conduct preventative and corrective maintenance at overseas facilities, affecting the Navy's overall readiness and U.S. national security.

Numerous factors contribute to the problem. First, Title 10 of the U.S. Code restricts ships stationed in the continental U.S. from conducting maintenance overseas*. Second, Congressional support for conducting maintenance overseas is mixed. Third, the Japanese shipbuilding industry has standards and requirements that are different from those of the U.S. shipbuilding industry. Fourth, the U.S. robust security requirements are more stringent than the Japanese security requirements. Finally, there is currently no plan for crew housing while in an overseas shipyard.

Client Overview

The U.S. Embassy in Tokyo is uniquely positioned to lobby the U.S. Congress on shipyard maintenance and the Japanese industry. Indeed, in the 1970s, when the U.S. was considering stationing a nuclear-powered aircraft carrier in Yokosuka, the Embassy played a critical role in gaining the Japanese government's approval. Today, the Embassy works with the U.S. Navy and Japanese Industry, bringing the two countries closer together.

This issue is expected to continue under the Trump Administration. Congress understands the importance of Japan as a critical ally in the Indo-Pacific, and the Embassy will almost certainly continue working to find solutions to support and improve the readiness of the U.S. Navy.

**The FY25 NDAA recently revised the law allowing ships stationed in the continental United States to conduct maintenance overseas so long as the work lasted no more than 21 days and capped the cumulative work over a three-year period. Implementation of this update has yet to be operationalized, and it is unclear when ships will be able to start conducting work in Japan.*



Background



Cascading issues are preventing the U.S. from utilizing Japanese shipyards to conduct maintenance. Before maintenance can be conducted overseas, laws and regulations must be changed. However, once the laws and regulations are changed, the U.S. Navy will still be unable to perform maintenance overseas due to policies pertaining to shipyard standards, security requirements, and crew housing. This section will provide an in-depth explanation for each of these issues.

Laws and Regulations

Numerous laws and regulations govern how the Department of Defense can spend appropriated money. The U.S. Code is the overarching law from which all follow-on policies are derived. This section explains the nesting effect of the current laws and policies and outlines how they could potentially need to change in the future.

Overhaul, Maintenance, and Repair

Title 10 of the U.S. Code is the primary governing body of laws for the Armed Forces. The primary law restricting U.S. Navy ships from being repaired overseas is 10 USC 8680, which states:

“Vessels Under Jurisdiction of the Secretary of the Navy With Homeport in United States or Guam.-(1) A naval vessel the homeport of which is in the United States or Guam may not be overhauled, repaired, or maintained in a shipyard outside the United States or Guam.” (10 USC 8680: Overhaul, Repair, Etc. of Vessels in Foreign Shipyards: Restrictions, n.d.)

However, if it meets the following criteria, work overseas can be performed: voyage repairs (VR); or necessary to correct damage sustained due to hostile actions or interventions. (10 USC 8680: Overhaul, Repair, Etc. of Vessels in Foreign Shipyards: Restrictions, n.d.)

It is important to note that in the FY25 NDAA, Congress amended 10 USC 8680 to include the following:

“(iii) corrective and preventive maintenance of a deployed naval vessel planned to last not more than 21 days.”

“(B) During any fiscal year, the cumulative work carried out under this paragraph for ships at any particular homeport may not exceed two percent of the average annual total workload of that homeport over the preceding three-year period, as measured in shipyard labor hours.” (To Authorize Appropriations for Fiscal Year 2025 for Military Activities of the Department of Defense, 2024)

This language was added to the U.S. Code on March 29, 2025. This is a crucial addition as the added language now stipulates that U.S. homeported ships that are deployed can conduct short maintenance periods. However, it also stipulates a strict cap on the amount of cumulative overseas maintenance per homeport. This cap is most likely to ensure maintenance is still heavily conducted within the U.S.

The Federal Acquisition Regulation (FAR) governs executive agencies' acquisition of supplies and services as delineated by appropriated funds from Congress; the Defense Acquisition Regulation Supplement (DFAR) is DoD-specific. The language in DFAR Part 225 Subpart 70 Section 13-2 (225.7013-2) has not been updated to reflect the FY25 NDAA changes and reflects the old 10 USC 8680:

(1) Do not overhaul, repair, or maintain, in a shipyard, outside the United States or Guam, a naval vessel (or any other vessel under the jurisdiction of the Secretary of the Navy) homeported in the United States or Guam.

(2) This restriction on overhaul, repair, or maintenance does not apply to—

(i) Voyage repairs; or

(ii) Repairs necessary to correct damage sustained due to hostile actions or interventions. (225.7013-2 Restrictions. | Acquisition.GOV, n.d.)

DFAR prevents the DoD contracting offices from being able to contract maintenance on a U.S. Navy vessel in a foreign port. However, the law and regulations specifically state that this does not apply to CONUS ships' voyage repairs (VR). The Joint Force Fleet Manual (JFMM), a NAVSEA governing policy document, defines a voyage repair as:

“A Voyage Repair availability is assigned solely for the accomplishment of corrective maintenance of mission or safety essential items necessary for a ship to deploy or continue on its deployment.” (Commanding Officer SUBMEPP, 2023)

The JFMM also prevents the DoN from conducting maintenance overseas per Federal law and regulations. However, it sets forth the approved policy for voyage repair, non-nuclear work. For 7th Fleet specifically, the JFMM identifies Ship Repair Facility – Japan Regional Maintenance Center (SRF-JRMC) Yokosuka, Japan, and SRF-JRMC Detachment Sasebo, Japan, as the two primary places where a VR can be conducted. When a deployed ship requests a VR, its work packages must be screened to limit the type of work to be accomplished and ensure it meets the requirements of mission or safety essential items. All required material needed for the VR must flow through SRF-JRMC.

Industrial Base

To support the aforementioned laws and regulations, additional laws ensure the U.S. maintains a defense industrial base (DIB) to support national security. Specifically, the DIB is “a network of organizations, facilities, and resources that provide the U.S. government...with defense-related materials, products, and services.” (Nicastro, 2024)

Title 10 USC 4816 stipulates that the Secretary of Defense shall annually assess the capabilities of the national technology and industrial base (10 USC 4816: National Technology and Industrial Base: Periodic Defense Capability Assessments, n.d.). The Industrial Base Policy Office releases an annual report to Congress on industrial capabilities. However, in recent years, Congress has grown concerned about the health of the industrial base, specifically domestic shipyards, which is why many remain skeptical of approving maintenance at overseas facilities.

Additionally, Title 10 USC 4817 provides the appropriated funding to support the industrial base. (10 USC 4817: Industrial Base Fund, n.d.) This fund works to monitor and expand the DIB. Specifically, it “address[es] urgent operational needs, and mitigates supply chain vulnerabilities.” (Nicastro, 2024). It is important to note that appropriated money from this fund goes to various foreign sources of non-domestic material, such as rare earth minerals or electronics. With funds already appropriated for foreign sources, it is unlikely additional legislation will be needed to allow for a potential expansion of the DIB into the Japanese DIB.

Title 50 of the U.S. Code is the primary governing body for war and national defense; Chapter 50 of Title 50 is the Defense Production Act (DPA). The DPA ensures that federal contracts and resources supporting those defense contracts take priority when necessary for national defense. Should there be shortfalls in industrial resources needed for national defense, the President can authorize various financial incentives to help expand the industry's production capacity. The key part of this act relevant to the policy project is the definition of domestic sources:

(A) In general

Except as provided in subparagraph (B), the term "domestic source" means a business concern—

(i) that performs in the United States or Canada substantially all of the research and development, engineering, manufacturing, and production activities required of such business concern under a contract with the United States relating to a critical component or a critical technology item; and

(ii) that procures from business concerns described in clause (i) substantially all of any components and assemblies required under a contract with the United States relating to a critical component or critical technology item. (50 USC Ch. 55: DEFENSE PRODUCTION, 1950)

This definition was expanded in 2023 under the FY24 National Defense Authorization Act to include Australia and the United Kingdom as domestic sources, but only for national defense matters.

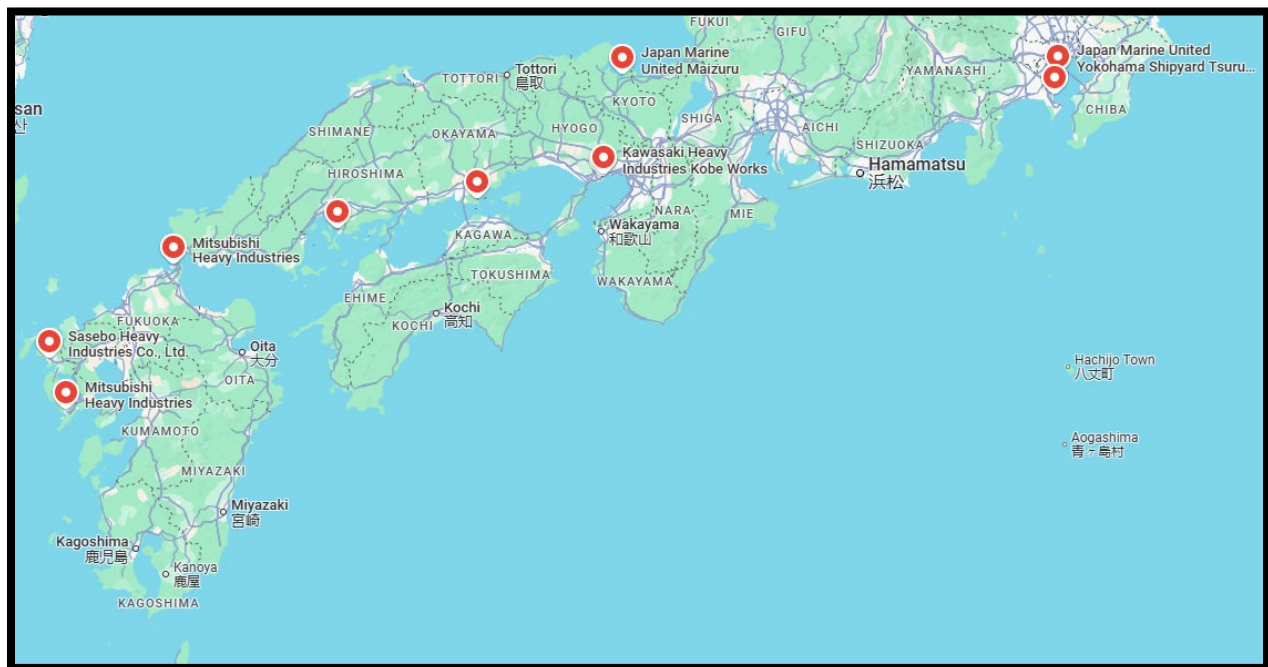
Under the Department of Commerce, the Bureau of Industry and Security facilitates the DPA through the Defense Priorities and Allocation System (DPAS) program. Specifically, this system “prioritize[s] national defense-related contracts and orders throughout the U.S. supply chain in order to support military, energy, homeland security, emergency preparedness, and critical infrastructure requirements.” (*Defense Priorities & Allocations System Program (DPAS)*, 2024). It’s important to note that this system can also provide military assistance to foreign nations.

The DPA is relevant to this policy project because government-furnished materials required for ship maintenance are constantly delayed. Rather than having specific materials ready on the shelf for ships going through maintenance availability, the ships and contractors must request the material through NAVSUP and DLA. The “lead time”, how long it will take to acquire the material, can vary depending on how common it is. Specialized parts have a longer lead time and can delay maintenance periods. By expanding the definition of domestic sources to include Canada, Australia, and the United Kingdom, the U.S. has access to a larger pool of materials and parts. Expanding the definition to Japan would drastically decrease any lead time delaying repairs in Japan. Rather than waiting many weeks for a specific part to arrive from the U.S., contractors could utilize a Japanese company that makes the same specific part if it’s readily available.

Policy Supporting the Industrial Base

The Department of Defense recognized that the DIB's long-term health needed improvement, and in 2023, the DOD published the first-ever National Defense Industrial Strategy (NDIS). The NDIS seeks to: “coordinate and prioritize actions to build a modern defense industrial ecosystem that is fully aligned with the NDS [National Defense Strategy]. It also calls for sustained collaboration and cooperation between the entire U.S. government, private industry, and our Allies and partners abroad” (Department of Defense, 2023).

The NDIS's top priority is ensuring supply chain resiliency while ensuring the DIB is not reliant on adversarial foreign sources. The NDIS seeks to expand the DIB through friendshoring and sourcing material from allies and partners. The DoD argues that friendshoring will mitigate the risk of supply chain disruptions and strengthen international security and economic collaboration (Department of Defense, 2023). This new policy initiative can potentially expand the DIB to Japan, making the case for utilizing Japanese shipyards. The figure below shows the different shipyards around Japan that could be utilized by U.S. ships.



Final Thoughts on Laws and Regulations

Congress will first need to change 10 USC 8680 to conduct repairs overseas. Subsequent federal regulations and defense policies will also need to be changed. If/when Congress changes the law, DOD's policy of friendshoring could expand the number of shipyards available for U.S. maintenance. As of March 2025, no changes to subsequent regulations and policy have been made to reflect the legal changes from the FY25 NDAA. Congress should also consider modifying the definition of domestic source to include Japan, which would increase the pool of materials and parts available for U.S. maintenance being conducted in Japan.

Congressional Support

Congressional support for utilizing Japanese shipyards varies. A handful of representatives and senators have proposed legislation that allows foreign support for U.S. defense systems. In contrast, a substantial group of representatives and senators has supported legislation to rebuild the U.S. shipbuilding industry.

Following the 2024 U.S. election cycle, there were no significant changes to the Congressional Shipbuilding Caucus. Representative Derek Kilmer (D-WA-6), Representative Alan Lowenthal (D-CA-47), and Representative Mike Gallagher (R-WI-8) decided not to seek reelection. Additionally, there were no significant changes to shipyard support in the Senate.

Support for Foreign Work

A select few senators support using foreign shipyards to address national security concerns. Senators Mike Lee (R-UT), Mitt Romney (R-UT), and Mark Kelly (D-AZ) have proposed various pieces of legislation that would support the use of foreign shipyards.

Senator Lee has proposed three separate bills to modify Title 10. Specifically, during the 117th session of Congress, he introduced a bill to amend Title 10 that would allow the construction of naval vessels in shipyards within NATO countries (S.1648 - 117th Congress (2021-2022), 2021); the bill died in Committee. During the 118th session of Congress, he introduced the Ensuring Naval Readiness Act and the Ensuring Coast Guard Readiness Act. Both bills would amend Title 10 to allow the construction and maintenance of ships in NATO and Pacific Treaty Allies shipyards (S.4530 - 118th Congress (2023-2024), 2024; S.4531 - 118th Congress (2023-2024), 2024). These bills died in Committee; however, on February 5th, 2025, Senator Lee introduced both bills again into Congress (Lee, 2025). They have been referred to the Armed Service Committee, and it is yet to be decided whether they will proceed through the legislative process.

Senator Romney and Senator Kelly have jointly introduced legislation and amendments to legislation that would amend Title 10. Specifically, in the 118th session of Congress, they introduced the Bolstering Indo-Pacific Capabilities Act of 2024, which would exempt restrictions on repair and maintenance in foreign shipyards (S.4508 - 118th Congress (2023-2024), 2024). The bill died in Committee. Additionally, these senators introduced an amendment to the FY25 NDAA that would allow six vessels to be repaired overseas each fiscal year (S.Amdt.2103 to S.4638 - 118th Congress (2023-2024), n.d.). While this specific amendment did not make it into the final FY25 NDAA, an amendment with similar intent did, as previously mentioned.

Resistance to Foreign Work

However, many representatives and senators have resisted efforts to conduct maintenance overseas. This is primarily due to the optic that many American jobs would be offshored by supporting maintenance in Japanese shipyards. Members of the Congressional Shipbuilding Caucus and Congressional Labor Caucus resist foreign work the most and will likely continue to unless more jobs are brought to their district.

As co-chair of the Congressional Shipbuilding Caucus, Rep. Joe Courtney (D-CT-02) is one of the most ardent supporters of the U.S. shipbuilding industry. In March 2024, five unions petitioned the U.S. Trade Representative (USTR), Katherine Tai, to investigate unfair Chinese shipbuilding practices hurting domestic shipbuilding. On April 11th, 2024, the AFL-CIO wrote a letter to Ambassador Tai urging her support for the petition and the need to protect hundreds of

jobs. Four days later, Rep. Courtney submitted a letter to President Biden, signed by 37 colleagues, supporting the labor unions and urging Ambassador Tai to investigate China's unfair shipbuilding practices (Courtney, 2024). A month later, Rep. Courtney again testified to the Office of the United States Trade Representative on behalf of American workers and the shipbuilding industry to investigate China's unfair shipbuilding practices (Congressional Labor Caucus, 2024). On October 18, 2024, Rep. Jared Golden (D-ME-02) submitted another letter to President Biden and Ambassador Tai to take swift action to counter China's unfair shipbuilding practices as the USTR office continues investigating the matter; 67 of his colleagues signed the letter, including Rep. Courtney (Golden, 2024). These actions demonstrate the challenge in convincing members of Congress to support conducting maintenance overseas.

Not surprisingly, numerous labor unions in the U.S. have opposed work conducted in foreign shipyards. Specifically, in June 2024, the IFPTE lobbied the House and Senate Armed Service Committees to prevent Senator Romney's Title 10 Amendment from passing in the FY25 NDAA (*IFPTE Urges House and Senate Armed Services Committee to Support Navy Shipyards, Not Outsourcing to Foreign Private Shipyards*, 2024). Furthermore, Matthew Paxton, President of the Shipbuilders Council of America, argued in an op-ed that outsourcing work to other countries would be disastrous for the U.S. industrial base. He states that the U.S. would experience issues other countries have faced when outsourcing work, such as losing technical expertise, craftsmanship, and infrastructure (Paxton & Schonhaut, 2024).

The labor unions have donated significant amounts of money to representatives and senators sympathetic to bolstering the domestic shipyard industry. For instance, in the 2024 election cycle, Rep. Courtney received over \$22,000 in donations from union PACs. While not every member of the Shipbuilding Caucus received a donation from a union PAC, those who have significant influence within the Caucus and Congress did. This shows the enormous leverage the Unions and their PACs have in influencing policymakers to prevent legislation allowing maintenance in foreign shipyards from moving forward. Indeed, the bills that have proposed such changes have all died in committee thus far.

Dispute on the Cause of Maintenance Backlog

Not everyone agrees on the true causes for the maintenance backlog. Some critics argue that the Chinese are not to blame for the U.S.'s lag in the shipbuilding industry, while others argue that the ebb and flow of demand from the U.S. Navy's contracting process has contributed to the decline in American shipbuilding. Because the U.S. Navy changed its contracting process in 2014 to a coast-wide bid system, many Norfolk, VA ships have been sent to Pascagoula, MS. The same is true for San Diego, CA. As a result, Rep. Scott Peters (D-CA-50) and Rep. Jen Kiggans (R-VA-02) proposed the Smart Ship Repair Act of 2024. This bill would require the Navy to change its contracting practice for ship maintenance for availabilities longer than 18 months, rather than 10 months (Peters, 2024). As ships leave their homeport for maintenance due to cheaper bids, shipyards within that homeport suffer due to inconsistent work.

A lack of demand causes domestic shipyards to lay off skilled workers. However, once the Navy sends a ship to a local shipyard for maintenance, the work is often delayed because the skilled workers have already been laid off. This adds to the maintenance backlog and contributes to a lack of readiness. Rep. Peters and Rep Kiggans bill aims to prevent this exodus of ships from their districts to help bolster the shipbuilding industry.

The numerous bills and public petitions these lawmakers have engaged in are to protect their constituencies. Because there is a shipbuilding ecosystem within these representative districts, it will be challenging to convince them to utilize foreign shipyards to help dig the Navy out of the maintenance hole they are currently in.

Final Thoughts on Congressional Support

The three most supportive senators for foreign work come from states with NO shipyard infrastructure. Coalition building within Congress to support changes to the law could be found in non-maritime states. However, such coalition building will require providing “something” in return to the representatives and senators in states with a significant shipyard industry so that they can support their constituencies. A quid pro quo may be necessary. Congress, primarily worried about constituency votes, might be unable to see the offset strategy Japanese shipyards offer to bolster naval readiness.

A Note on Japanese Politics

Some Japanese scholars claim that the golden years of U.S.-Japan relations are over. The U.S. is not the only country experiencing highly consequential elections in 2024; Japan’s new Prime Minister called for a snap election, and the Liberal Democratic Party (LDP) lost the majority for the first time since 2008. Japan’s Prime Minister Ishiba is a veteran politician who has run for Prime Minister four times before. The loss of his majority could be problematic in the future, as the Democratic Party for the People (DPP) argues that Japan is overly reliant on the U.S. for defense (Moriyasu, 2024). If the DPP does not support Prime Minister Ishiba’s intention to continue the 2022 military buildup plan, there could be potential strains on the U.S.-Japan relationship. Prime Minister Ishiba has never worked with U.S. President Trump and will have to figure out how best to continue strong relations with the President, who had much admiration for former Prime Minister Shinto Abe. In February 2025, the two met, and the meeting was positive. It remains to be seen how the two gentlemen will continue to build their relationship.

Shipyard Regulations

A shipyard, domestic or foreign, seeking to conduct work on a U.S. government-owned vessel must have a signed Master Ship Repair Agreement (MSRA) with the U.S. government. Per the DFAR Part 217.7101:

(a) *“Master agreement for repair and alteration of vessels”—*

(1) *Is a written instrument of understanding, negotiated between a contracting activity and a contractor that—*

(A) *Contains contract clauses, terms, and conditions applying to future contracts for repairs, alterations, and/or additions to vessels; and*

(B) *Contemplates separate future contracts that will incorporate by reference or attachment the required and applicable clauses agreed upon in the master agreement.*

(2) *Is not a contract.* (DFAR, 2024)

An MSRA is not a contract; rather, it certifies a shipyard for future work to ease the contracting process. However, only U.S. Navy ships (USNS) can conduct work at a foreign shipyard with an MSRA. These ships fall under the Maritime Sealift Command (MSC) and

provide logistics to the fleet. This is an important distinction as USNS ships are not United States Ships (USS), commissioned warships of the Navy. Because USNS ships are built to universally accepted commercial standards, they can easily be maintained at a foreign shipyard with an MSRA. If a shipyard has an MSRA, it meets the baseline requirements to conduct work on a government-owned vessel.

Per NAVSEA policy:

“The foundation of an MSRA is that a firm has the internal organization and capability to perform 55% of a work package within its own facilities, utilizing its own shops and work force. Specifically, the firm must possess or have committed access to a pier or drydock located within the firm's immediate geographic region that must be accessible to and capable of berthing vessels in the performance of the duties as outlined in Enclosure (2).” (Commander, Navy Regional Maintenance Center, 2021)

Even if a domestic shipyard meets the above requirements, additional NAVSEA certifications are required to perform specialty work on U.S. warships. For example, MIL-STD-1689 is a military standard that outlines the requirements for surface ship structure fabrication and repair (*Certifications and Qualifications*, n.d.). NAVSEA has numerous military standard certifications that domestic shipyards must also acquire to work on USS warships.

Final Thoughts on Shipyard Regulations

If Japanese shipyards were to conduct maintenance on U.S. warships, they would need an MSRA and these additional NAVSEA certifications for specialty work. Acquiring these additional certifications can be costly and time-consuming. Currently, only MHI Yokohama Dockyard & Machinery Works have all the required certifications to conduct work on U.S. warships.

Security Requirements

A drastic change in the Japanese security clearance system is required for Japanese companies to have full access to U.S. warships during maintenance. In May 2024, the Japanese Parliament passed a bill to create a security clearance system that would provide individuals with the necessary clearance to access sensitive information surrounding economic security (Japan Times, 2024). Prior to this, Japan was the only G7 country without a security clearance system that would provide clearances for sensitive economic information in the private sector (Fujita, 2024). This severely hindered Japanese companies from partnering with overseas businesses. It will take time for this new security clearance system to become up and running, but this was a welcome change.

However, the U.S. has been concerned about the Japanese's ability to handle sensitive information for years. In 2020, the U.S. discovered that Chinese hackers had made their way into Japan's classified defense networks (Nakashima, 2023). Japan took steps to improve the defense of its systems, and the U.S. provided a joint NSA/Cyber Command team to help the Japanese identify any additional gaps in their defenses (Nakashima, 2023). These breaches by Chinese hackers underscore U.S. concerns about its ability to trust a key ally in the region. Two months after the new security clearance bill was passed, the Wall Street Journal reported that the Japanese Ministry of Defense reprimanded more than 100 JMSDF personnel over mishandling of classified information (Tsuneoka, 2024). While these personnel received their security clearance from a separate clearance system passed into law in 2014, the continued issues surrounding

Japan's inability to secure classified information makes it extremely difficult for the U.S. to justify information sharing with the Japanese.

Final Thoughts on Security Requirements

Without clearances, the average Japanese shipyard worker could not conduct maintenance in any classified space on a U.S. warship, limiting them to only conducting hull, mechanical, electrical (HME) maintenance. Indeed, Japanese personnel assigned to SRF, who have already received an initial background inquiry, require an escort to enter a classified space and perform maintenance. Equipment damage and repairs are often unexpected and a sailor may not have the right tools needed for repairs. Therefore, they cannot always plan ahead to have the tools and equipment necessary to repair said equipment. If the Japanese shipyard workers cannot enter classified spaces, even with an escort, critical equipment could remain out of commission for a prolonged period and hinder the ship's readiness.

Crew Comfort

Life in the shipyards is notoriously difficult for the crew. In 2022, the difficulty of shipyard life was exposed; within one week, three sailors onboard the USS GEORGE WASHINGTON committed suicide in April. Later that year, two more sailors would commit suicide. (Chan, 2024) This awful tragedy publicly highlighted the issues associated with living in the shipyards. It forced the Navy to rethink living conditions for the crew while in a maintenance period.

When a ship on deployment pulls in for a port call, the crew remains onboard unless they are authorized to stay in a hotel within the local community, paid for out of pocket. If a ship were to pull into a Japanese shipyard for a month-long maintenance availability, no government housing would be available, and the crew would have to remain onboard. Given recent events, this is not an ideal option. However, funding a 300+ crew to live in a hotel for a month would be too costly and is also not an ideal option.

Final Thoughts on Crew Comfort

As such, there is no clear or easy plan to house the crew in a Japanese shipyard, and the U.S. Navy cannot take lessons learned from the AUKUS deal at this time because no U.S. submarine has conducted maintenance in Australia or the United Kingdom yet. The crew must be supported in order to efficient and effectively conduct maintenance at overseas facilities.



Literature Review



Maintenance in foreign shipyards is restricted, and data from which to draw lessons is minimal. However, before 1987, maintenance was regularly conducted overseas on CONUS and OCONUS ships. Existing reports highlight the financial costs of conducting maintenance overseas before 1987 and between 2014 and 2018. Additionally, AUKUS exemplifies how U.S. laws and regulations can be adapted to meet evolving national security needs. Finally, USS STOCKDALE and USS MILIUS are unique case studies from which different lessons can be drawn.

Maintenance Overview

Before 1987

At a 1987 Defense Subcommittee of the House Committee on Appropriations hearing, representatives grew concerned about the amount of maintenance being conducted overseas and how that would hinder the U.S. industrial base. This led to changes in the law: ships stationed in the U.S. are prohibited from doing overhaul, repair, or maintenance work overseas (Government Accountability Office, 1992). Before this, maintenance was routinely conducted overseas. The U.S. had major maintenance facilities in Yokosuka, Japan, Subic Bay, the Philippines, and Guam to perform maintenance in theater. According to senior NAVSEA officials, ships would often conduct a brief maintenance period at one of these facilities before returning home from deployment.

Two GAO reports, conducted in 1987 and 1992, highlight the costs of performing maintenance overseas. From 1983 to 1987, GAO found that the Navy spent \$154.1 million (\$4.3 billion in today’s dollars) on warships repaired in foreign commercial shipyards (Government Accountability Office, 1987). According to the Navy, foreign commercial shipyards were necessary to support emergency problems or when the three main repair facilities were overloaded. This report does not explain what types of repairs were completed.

Additionally, in November 1992, the GAO found that between fiscal years 1987 and 1991, the Navy spent \$1.3 billion (\$29.1 billion in today’s dollars) on overseas maintenance (Government Accountability Office, 1992). During the same period, over \$200 million (\$448.2 million in today’s dollars) was also awarded to foreign contractors (Government Accountability Office, 1992). Of the maintenance conducted at one of the three maintenance facilities, “63% was for long-term planned maintenance and 37% was for corrective maintenance” (Government Accountability Office, 1992). Noticeably, the report states that it was inconclusive in determining Navy compliance with the legal changes. There was no internal oversight in overseas maintenance, and the Navy admitted to misclassifying the types of repairs the CONUS ships underwent overseas (Government Accountability Office, 1992).

Cost Comparisons Adjusted for Inflation	
<i>Cost in 1992</i>	<i>Cost in 2024</i>
\$1.3 billion	\$29.1 billion
\$200 million	\$448.2 million
<i>Cost in 1987</i>	<i>Cost in 2024</i>
\$154.1 million	\$4.3 billion

**Cost calculated utilizing the Minneapolis Federal Reserve Inflation Calculator*

2014-2018

In 2020, GAO reported maintenance delays for surface ships overseas. The maintenance was conducted by NAVSEA facilities overseas and focused on ships stationed in Japan, Spain, and Bahrain.

The report found that OCONUS ships had regularly deferred maintenance, leading to rapidly degrading material conditions (Maurer, 2020). Because material conditions were worse than expected, the Navy routinely underestimated how long it would take to conduct maintenance periods overseas. This resulted in prolonged maintenance periods and fewer ships available for operational patrols. Between 2014 and 2018, maintenance in Yokosuka was delayed 994 days, and Sasebo was delayed 1,001 days. GAO found that while NAVSEA collected a wide variety of information regarding the delays, it had not set up a process to address the root cause.

The report stated NAVSEA identified that shorter and more frequent maintenance periods in Japan would help mitigate delays from deferred maintenance (Maurer, 2020). However, it also noted that the U.S. industrial base had limited capacity and was delayed in maintenance for CONUS-based ships. While the report focuses on maintenance delays overseas, it forecasts the current issue facing the U.S. shipyard industry and identifies support from contractors in Japan to help mitigate future delays.

Assessment

The 1992 report explains that Congress changed the law because it was concerned about the state of the U.S. industrial base. However, these changes were in vain, as the 2020 report found that U.S. shipyards cannot complete maintenance on time due to limited capacity. Thus, the intended effects of supporting the U.S. industrial base never truly materialized.

The 1987 and 1992 reports demonstrate that conducting maintenance abroad for CONUS ships was once a common practice. The Navy had devised a schedule allowing for a short maintenance period before returning home. This could also be applied today; conducting a brief maintenance period abroad would depressurize the amount of work needed to be performed in a more extensive maintenance availability in the U.S.

AUKUS

On September 15, 2021, the White House released a joint statement with the governments of Australia and the United Kingdom announcing a new trilateral partnership called AUKUS. The announcement stated two lines of effort: Pillar One, providing Australia with nuclear-powered submarines, and Pillar Two, jointly developing advanced capabilities (House, 2021). With bipartisan congressional support, the laws regulating maintenance and arms transfer restrictions have been revised to support the Pillars of AUKUS. As this is an ongoing trilateral partnership, laws and regulations are expected to continue to be revised.

10 U.S.C 8680: Overhaul, repair, etc. of vessels in foreign shipyards

FY24 NDAA added a new section to this law that stipulated conditions for the repair and refurbishment of submarines. The law now states that the President can determine which shipyard is appropriate to conduct submarine maintenance. These shipyards can be public or private in any of the three countries involved in the trilateral partnership. For a submarine to qualify for a maintenance period in Australia or the United Kingdom, it must be on deployment. The Secretary of Defense must report to Congress why it was necessary. Personnel or contractors

from Australia or the United Kingdom are also authorized to work on U.S. submarines (10 USC 8680: Overhaul, Repair, Etc. of Vessels in Foreign Shipyards: Restrictions, n.d.).

Arms Export Control Act

Section 38 (j)(1)(A) of the Arms Export Control Act (AECA) authorizes the President to exempt foreign countries from the AECA if there is a binding agreement. The foreign government must then implement changes to its export control system to be comparable to the U.S. system (22 USC Ch. 39: ARMS EXPORT CONTROL, n.d.). Once AUKUS was signed, the governments of Australia and the United Kingdom began changing their export control statutes. On August 15, 2024, the Department of State reported to Congress that Australia and the United Kingdom had export control systems comparable to the U.S. (Office of the Spokesperson, 2024). These changes are pivotal facilitators in implementing the two Pillars of AUKUS.

ITAR: Exemption for Defense Trade and Cooperation for AUKUS

In preparation for these changes, the Department of State posted a proposed rule change to the International Traffic in Arms Regulations on May 1, 2024. DOS sought to change ITAR to support the Pillars of AUKUS. On August 20, 2024, five days after the notification of the AECA compliance report to Congress, DOS published an interim final rule amending ITAR. This exemption will help facilitate license-free defense trade between the countries and expand the eligibility of defense trade items from the munitions list.

Assessment

These legal changes resulted from bipartisan support in Congress, reflecting a political environment where Congress is willing to rely on our allies to address national security issues. Congress has repeatedly changed and modified multiple laws that impact conducting maintenance overseas. Given the success of the AUKUS adaptations, similar legal changes could be applied to Japan. Implementing legal modifications specific to Japan is essential for facilitating the maintenance of CONUS ships at Japanese shipyards.

Ship Case Studies

In recent years, two different U.S. warships have conducted non-traditional maintenance overseas. The USS STOCKDALE, a San Diego-homeported ship, experienced a major casualty and remained in Japan for an extended time to conduct repairs. The USS MILIUS, a Yokosuka-homeported ship, was the first U.S. warship to conduct maintenance at MHI shipyard in Yokohama. These case studies offer unique lessons learned that could be applied to future maintenance periods.

USS STOCKDALE

In August 2021, the USS STOCKDALE deployed with Carrier Strike Group One to the Indo-Pacific region. From August to December, they participated in numerous international exercises with U.S. partners and allies. However, in January 2022, STOCKDALE damaged its sonar dome and had to immediately return to port for emergent repairs. STOCKDALE pulled into Sasebo to allow SRF-JRMC Detachment Sasebo to conduct an initial review of the damage. It was determined that the ship would need to perform permanent repairs in a dry dock, meaning it would have to sail to Yokosuka. A temporary mechanical patch was installed to prevent further damage as the ship sailed North (Stoller, 2022). The ship remained in Yokosuka for several months to conduct repairs on the sonar dome.

The Navy investigated the damage, but the report was not made public. However, this incident is an example of a prolonged maintenance period for a CONUS ship in Japan, and the Navy should review it. SRF-JRMC Yokosuka conducted repairs on a U.S. Naval Base, not in a Japanese shipyard or by a Japanese company. The most important lesson to focus on is what actions were taken for crew comfort. The CONUS crew was away from homeport for several months, which begs the question:

- Where was the crew housed? Did they remain onboard?
- Did the crew receive additional pay besides the standard sea duty and family separation pay?
- Were additional Morale, Welfare, and Recreation (MWR) activities provided to the STOCKDALE sailors?
- Was there an increase in liberty incidents due to the STOCKDALE sailor's presence?

Answers to these questions could help the Navy devise a plan to care for the CONUS crew during future overseas repairs. For instance, if the crew remained onboard the ship, providing housing for the sailors wouldn't be necessary. Crew comfort is one of the biggest obstacles when conducting maintenance overseas. However, as noted by NAVSEA officials, overseas maintenance was a regular occurrence, and the Navy found solutions for the crew in the 1980s and again for the STOCKDALE.

USS MILIUS

In April 2019, USS MILIUS, an OCONUS-based ship, conducted a three-week maintenance period at MHI Yokohama. This maintenance period was part of the Off-Base Expansion Capacity Initiative, as the Navy was experimenting with Japanese shipyards.

To conduct any maintenance on U.S. Navy warships, MHI had to be certified by NAVSEA to complete specific work on U.S. warships. These certifications were in addition to the shipyard's MSRA. Receiving these additional certifications can be costly for the shipyard itself. Still, MHI's desire to attain them shows the ability of Japanese shipyards to conduct such work on U.S. warships. MHI's shipyard is a 32-minute car drive or an hour-and-a-half train ride from Yokosuka. This presented numerous challenges for MILIUS sailors as they had to commute daily.

Other challenges presented themselves during this experiment. For example, after the USS COLE terrorist attack, the U.S. implemented numerous anti-terrorism force protection (ATFP) measures to prevent another attack. Security barriers are required to be placed around the ship to keep unauthorized vessels away from U.S. warships. MHI did not have such a barrier, and one had to be brought in at an extra cost. Additionally, Japan has strict rules and regulations for conducting maintenance on warships equipped with missiles. The ships would most likely need to offload missiles to enter the Japanese shipyards for maintenance. Offloading missiles is a cumbersome, dangerous evolution, and removing them to support a short maintenance period is inefficient.

Public information regarding the success of the MILIUS maintenance period in MHI is nonexistent. However, MHI's willingness to partner with the U.S. Navy is an encouraging sign for potential future work. There are lessons to be drawn from crew comfort and additional costs incurred. For example, MHI has hotels within its facilities. For future work, the U.S. Navy should determine if there is a cost advantage to having the sailors stay at these hotels for short

periods. Staying in hotels is common as sailors stationed in Norfolk and conducting maintenance periods in Pascagoula, MS, also get housed in hotels. Additionally, the U.S. Navy should assist Japanese shipyards in procuring security barriers for future U.S. work. This could help mitigate costs for overseas maintenance.

Assessment

The STOCKDALE case study demonstrates that it is possible for a CONUS-based ship to conduct maintenance overseas for an extended period. While it was difficult for the crew to be unexpectedly extended on deployment, they were able to remain on the ship and did not have any catastrophic issues. While not ideal, if the maintenance conducted doesn't interfere with the habitability of crew quarters, remaining onboard for the maintenance period is a viable solution. If crews were to remain onboard, the Navy could find various MWR activities and excursions to keep morale up.

The MILIUS case study demonstrates the capability of Japanese companies to conduct quality work on a U.S. warship. While there were a variety of challenging issues, the U.S. and Japan were able to tackle them, and they can be planned for in the future. The Navy should review the MILIUS case study to determine what lessons they can take away for future maintenance availabilities at MHI Yokohama.



Tradeoff Criteria



Each issue contributing to the overall problem of being unable to conduct maintenance in Japan will have different criteria for determining the tradeoffs. The following questions will serve as overarching guidance when evaluating the tradeoffs for policy recommendations, adaptations, and implementations. Instead of applying a single evaluative criterion, these questions will help provide a balanced evaluation of the positives and negatives.

Efficiency

Conducting maintenance in the same region where a ship is deployed is incredibly efficient. To assess overall efficiency, the following three impact categories will consider:

- *Time Costs*: Are the costs of implementation justified by the expected benefits, such as improved fleet readiness?
- *Maintenance Costs*: Does the recommendation improve resource allocation and reduce inefficiencies (e.g., maintenance backlogs, shipyard delays)?
- *Long-Term Costs*: Does the recommendation reduce long-term operational costs?

Political Feasibility

Members of Congress will have a vested interest in these policy recommendations, as they directly impact their constituents, American businesses, and national security. Gaining their support will be crucial for any policy option to be successfully implemented. Additionally, it will be crucial to gain support from other stakeholders that impact political decisions, such as unions, the Executive Branch, and international partners. To assess the political feasibility of these recommendations, the following key questions will be considered:

- Can the recommendation gain sufficient political and institutional support (e.g., from Congress, the Department of Defense, shipyard unions, and international partners)?
- How resistant are key decision-makers (such as skeptical representatives and senators), and can their concerns be mitigated?

Determining how politically feasible a policy recommendation is will be evaluated using historical Congressional voting records on similar legislation, public statements from legislators, international partners, unions, and established policies within Executive Departments.

Implementation Feasibility

Implementing the policy recommendations will require a whole-of-government approach. As such, the implementation of each policy recommendation needs to be analyzed based on the following impact categories: structural capacity and implementation capacity. The following key questions will be considered:

- *Structural Capacity*: Can the policy be realistically implemented given current organizational structures and resources?
 - Are the necessary agreements, infrastructure, and human capital available to ensure smooth execution?
 - Does the recommendation create additional administrative burdens or require new intergovernmental coordination (e.g., between U.S. and Japanese shipyards)?
- *Implementation Timeline*: What is the timeline to implement or accomplish the policy option?

The structural capacity will be measured based on existing DoD Departments, current budget allocations, and administrative requirements. The implementation timeline will be measured using the preestablished risk management framework created by the DoD in the NDIS (Department of Defense, 2023).

Timeline Evaluation	Definition
Long-Term	<ul style="list-style-type: none"> • 5+ Years • FY29 and beyond
Medium-Term	<ul style="list-style-type: none"> • 3-4 Years • FY27-FY28
Short-Term	<ul style="list-style-type: none"> • 0-2 Years • FY25-FY26

Crew Comfort

These policy decisions will have a significant impact on the ship's crew. Conducting maintenance away from their homeport presents challenges, particularly if it extends their time away from loved ones. To assess overall crew comfort, the criteria will be evaluated across two impact categories:

- *Morale*: How likely is this policy option to increase morale of the sailor?
- *Sailor Well-Being*: How likely is this policy option to increase stress levels and burnout?

These will be based on the metrics of CY23 Health of Force (HOF) Survey. Two of the metrics used in the HOF were morale and sailor well-being. To help gauge morale, the survey asked sailors about the overall morale status at the Command. The survey found that senior officers and senior enlisted officers were more likely to have higher morale than junior officers and junior enlisted officers. Additionally, it was found that proximity to the base and MWR facilities greatly impacted overall morale. The survey also sought to gauge the sailor's overall well-being through stress levels and potential burnout. It was found that inadequate manning led to higher stress levels. To gauge burnout, the survey defined it as "the extent to which participants are disengaged from work and their levels of exhaustion with the physical and cognitive demands of their job" (Department of the Navy, 2023).



Recommendations



Significant changes to existing laws and regulations are required to enable U.S. Navy maintenance operations in Japanese shipyards. The following recommendations outline the key legislative and policy changes necessary to facilitate this shift. These legal reforms set the foundation for operational success.

Laws and Regulations

Recommendation 1: Change Title 10 USC 8680 and remove the language prohibiting CONUS-based ships from conducting work overseas.

By completely removing the language, the U.S. Navy will no longer be prohibited from conducting maintenance overseas. Without this handicap, the U.S. Navy will have more shipyards at its disposal to conduct depot-level maintenance on its ships. Frequent and short maintenance periods will help the ship accomplish maintenance jobs that historically extend a longer maintenance availability, such as a CNO availability. This will further reduce the amount of necessary work to be accomplished during the maintenance period and aid the ship in completing the maintenance period on time, thus breaking the cycle of delays.

Pros

- Conducting maintenance overseas will drastically minimize travel time for ships, enabling them to resume operations in just 48 hours.
- This strategy will reduce maintenance backlogs and improve resource allocation, *assuming Congress amends the Defense Production Act to include Japan as a domestic source*. Allowing U.S. warships to obtain parts from Japanese companies during maintenance will lessen dependence on often backlogged American suppliers.
- Lowering maintenance costs will reduce long-term expenses as ships will avoid delays and additional costs from ongoing issues.

Cons

- This policy option faces low political feasibility because numerous bills mentioned in the background section have died in Committee and never reached the floor of either Chamber for a vote.
- The law will be enacted promptly, but its implementation will take time, with ships likely in Japanese shipyards 3 to 4 years post-passage. Any changes to the law by Congress would require modifications to additional regulations, and the U.S. must prepare for this. Agreements with Japanese shipyards and the government would also need to be established.

Key Takeaway

It would significantly impact maintenance efficiency, but implementation would face major political and structural challenges.

Recommendation 2: Redefine Hardship Duty Pay-Tempo in MILPERSMAN 7220-075.

If the law is changed, the U.S. Navy could face longer deployments to account for overseas maintenance periods. Thus, the U.S. Navy should change its definition of hardship duty for deployed consecutive days from 220 to 250 to account for potential maintenance periods. There are two benefits to this change. First, the U.S. Navy will not sacrifice operational

requirements while the ship is deployed. Second, this will help the U.S. Navy save millions of dollars by not having to pay additional bonus pay due to longer deployment cycles. During the long-term planning meetings, Fleet Commanders could preemptively plan for a maintenance period at an overseas location and know the exact number of days a ship will be on deployment.

Pros

- Extending the standard deployment timeline would allow ships to remain in theater longer to conduct operations. Conducting maintenance overseas will drastically minimize travel time for ships, enabling them to resume operations in just 48 hours.
- Long-term costs would be significantly reduced as the Navy wouldn't have to pay additional bonuses as 22% of DoD's budget goes towards compensation for military personnel (*How Much Does the US Spend on Defense?* | USAFacts, 2024).
- Enables ships to stay on station longer by performing intermediate maintenance and depot-level repairs in theater. This approach aims to reduce delays in longer depot maintenance availabilities upon return to homeport.

Cons

- A significant morale decrease would occur if standard deployment extended from 220 to 250 days for overseas maintenance. Increased time away from family is challenging and unpopular with the crew. Additionally, it would eliminate the bonus pay sailors receive for extended deployments, which, while not preferred over time at home, does help boost morale.
- Stress levels and burnout would increase. Extending time away from home to accommodate a three-week maintenance period would increase the exhaustion levels related to the cognitive demands of a sailor's job.
- Congress would most likely not support this policy change as there has been an increased focus on improving the well-being of sailors.

Key Takeaways

While this could potentially cut the cost of extra bonuses, it would be extremely unpopular among sailors and potentially difficult to implement.

Recommendation 3: Create a joint maintenance department within the U.S.-Japan Joint Command.

This will facilitate information sharing, not only about the ship specifications but also ship schedules. The U.S. Navy can share with the JMSDF which ships will be deployed and when the optimal time for a ship to enter a short maintenance period at a Japanese shipyard would be. In turn, the JMSDF can serve as the intermediary coordinating with the Japanese shipyards. Japanese shipyards have their maintenance schedules for JMSDF ships outlined years in advance. However, occasionally, there will be a few weeks when no ship is serviced. These periods are where the U.S. Navy could take advantage of and get work done on their ships. This department could be the synergy between the U.S.-Japan industry and the military.

Pros

- Rather than coordinating with multiple entities within the Navy to plan a maintenance period, having one organization coordinate it all will decrease the time a ship has to wait to enter a maintenance availability.
- This department will be essential for coordinating maintenance availabilities between the Japanese shipyards and the U.S. Navy. It will help keep ships in the theater to support maintenance periods and mitigate maintenance delays over time.

Cons

- Lowering maintenance costs will reduce long-term expenses as ships will avoid delays and additional costs from ongoing issues. However, additional funds will need to be allocated for the department to be able to operate.
- Although the Joint Command Headquarters was announced bilaterally, at this time, it is unclear what steps have been taken to establish it officially. Using AUKUS as a baseline for the implementation timeline, it is likely that the official Joint Command Headquarters won't be officially established for a few more years.

Key Takeaways

While this is politically feasible, it would require dedicated funding and additional structural adjustments.

Laws and Regulations			
Recommendation	Pros	Cons	Key Takeaways
Change Title 10 USC 8680	<ul style="list-style-type: none"> ✓ Reduces maintenance backlog and improves fleet readiness ✓ Allows faster repairs and return to operations ✓ Reduces long-term costs by lowering maintenance delays 	<ul style="list-style-type: none"> ✗ Low political feasibility—previous bills have failed in Congress ✗ Would require multiple legal and structural changes before implementation 	High impact on efficiency but faces major political and structural challenges.
Modify Title 10 USC 8680 (Add Overseas Maintenance Specs)	<ul style="list-style-type: none"> ✓ Already implemented in FY25 NDAA, enabling maintenance overseas within limits ✓ More flexibility for planning maintenance 	<ul style="list-style-type: none"> ✗ Implementation details remain uncertain 	A step forward, but further adjustments may be needed based on real-world implementation.
Redefine Hardship Duty Pay-Tempo	<ul style="list-style-type: none"> ✓ Allows ships to stay in theater longer without sacrificing operations ✓ Reduces costs related to bonus pay ✓ Helps maintain fleet readiness by enabling short maintenance periods abroad 	<ul style="list-style-type: none"> ✗ Likely to reduce morale by extending deployment time ✗ Could increase stress and burnout ✗ Low political feasibility due to efforts to improve sailor quality of life 	Cost-saving but unpopular among sailors and politically difficult to implement.
Create a Joint Maintenance Department (US-Japan Joint Command)	<ul style="list-style-type: none"> ✓ Streamlines maintenance coordination ✓ Reduces delays in scheduling maintenance periods ✓ Strengthens U.S.-Japan defense ties 	<ul style="list-style-type: none"> ✗ Requires additional funding ✗ Long-term costs need to be accounted for 	Politically feasible but requires dedicated funding and structural adjustments.



Adaptations



While policy changes create the opportunity for U.S. Navy maintenance in Japanese shipyards, the success of this transition depends on how well the regulatory environment, shipyard infrastructure, and security measures are adapted to meet operational requirements. The following recommendations outline the necessary steps to facilitate adapting the policy recommendations. These adaptations serve as the critical bridge between legislative change and real-world implementation.

Congressional Support

Recommendation 1: Host skeptical representatives and senators in Japan.

Invite those resisting maintenance overseas to visit Japan and see the quality work the Japanese workers are known for. Touring Japanese shipyards and speaking with Japanese industry could help persuade skeptical representatives and senators that this partnership is worthwhile. A forum for representatives and senators to ask questions and learn more could open doors to new conversations.

Pros

- Representatives and senators may become convinced to change the law to allow maintenance in Japan and to allow Japanese products as a domestic source. This would reduce pressure on parts and ensure critical components stayed in the U.S. for long-term maintenance.
- Conducting maintenance at a lower cost will help save money in the long run. The Japanese are known for completing work early, on time, and often under budget (Baucom, 2024). This is compelling for a Congress looking to cut spending.
- Hosting a delegation of representatives and senators shouldn't be difficult to achieve, as members of Congress frequently travel to Japan to meet with senior officials.

Cons

- There is no guarantee that lawmakers would change their stance on the issue.

Key Takeaway

This is a useful diplomatic tool, but it is not a guaranteed solution to diminish political resistance.

Recommendation 2: Coalition Build Domestically

Partner with skeptical representatives and senators to pass legislation to improve shipyard infrastructure while also allowing maintenance to be conducted overseas. The 2021 Infrastructure Bill created numerous jobs around the country to improve the country's infrastructure. However, few jobs were created to improve shipyard infrastructure. New legislation targeting the infrastructure of America's shipyards could bring money and jobs into districts throughout the country. Improving domestic capabilities for ship maintenance is a long-term project, but ensuring America's national security is not. This quid pro quo legislation would help improve America's domestic shipyard ecosystem while ensuring U.S. Navy ships do not fall further behind on maintenance and can ensure their readiness.

Pros

- Improving the domestic shipyard ecosystem through modern infrastructure and creating a trained workforce would help mitigate delays in longer maintenance periods and return ships to the Fleet faster.
- Modernizing the domestic shipyard infrastructure would improve work efficiency during maintenance and potentially mitigate delays. Increasing efficiency could shorten the maintenance period and reduce overall costs.

Cons

- At this time, infrastructure is not a high priority for the current administration, nor are any infrastructure bills pending.
- If Congress passed a bill to support revitalizing domestic shipyard capabilities, it would take time for the shipyards to hire and train enough workers, receive contracts from the government, and improve the infrastructure and facilities necessary for maintenance work.
 - For example, Congress authorized the U.S. Navy's Shipyard Infrastructure Optimization Program to upgrade the four public shipyards in America in 2018. As of 2023, work has still not commenced, and there is no clear plan for the infrastructure overhaul (Office, 2023).
- Ships would return to the U.S. for maintenance instead of being serviced in theater, which delays their return until replacements arrive. This reduces the number of operational ships in theater and affects overall fleet readiness.

Key Takeaways

This is a long-term solution that does not immediately relieve maintenance backlogs. However, it could be seen as a compromise to achieve the overall goal.

Congressional Support			
Recommendation	Pros	Cons	Key Takeaways
Host Skeptical Representatives and Senators in Japan	<ul style="list-style-type: none">✓ Could shift opinions by demonstrating Japan's shipyard capabilities✓ Strengthens U.S.-Japan relations✓ Shows potential cost savings	<ul style="list-style-type: none">✗ No guarantee that lawmakers would change their stance	A useful diplomatic tool but not a guaranteed solution for political resistance.
Coalition Build Domestically	<ul style="list-style-type: none">✓ Could modernize domestic shipyard infrastructure✓ Improves efficiency in the long run	<ul style="list-style-type: none">✗ No current infrastructure bills prioritize shipyards✗ Takes years to implement and does not immediately address fleet readiness	A long-term solution that does not provide immediate relief for maintenance backlogs.

Shipyards Regulations

Recommendation 1: Create a joint study to determine what JMSDF maintenance standards would meet NAVSEA standards.

It takes a lot of time and money for a shipyard to fully certify in the standards required for military warships. While this is necessary and important to protect the integrity of the work, JMSDF ships are just as capable and lethal as U.S. warships. A study involving NAVSEA and JMSDF officials could help find similarities in military standards and ease the burden on Japanese shipyards. Minimizing the number of additional standards a Japanese shipyard would have to certify could remove potential barriers. Rather than waiting for a shipyard to certify in NAVSEA standards, U.S. Navy ships could pull into Japanese shipyards that have been identified to have standards comparable to NAVSEA and immediately start work.

Pros

- Identifying Japanese standards and regulations that align with U.S. requirements is crucial for minimizing the additional certifications a Japanese shipyard must undertake to maintain U.S. ships.
- There is a precedence for Congress to direct studies be conducted as evidence in the annual NDAA.
- A joint study would provide NAVSEA and Congress with more information about what work could feasibly be done in Japan and potentially help reduce bureaucratic red tape preventing such work.

Cons

- The FY25 NDAA has already been passed and signed into law; however, the FY26 NDAA has yet to be introduced. Historically, it is introduced in the mid-to-late year, leaving the potential for a study to be introduced this year.

Key Takeaways

While this is a politically feasible option that will provide useful information for future planning, it will take time to produce results.

Recommendation 2: Create a sister company program.

Facilitate partnerships between American and Japanese companies to share best practices for shipbuilding and repair. American companies could learn how to be more efficient and prevent delays, while Japanese companies could learn the intricacies of U.S. maintenance. In 1990, General Dynamics San Diego shipyard NASSCO sought guidance from a Japanese consulting team to improve its internal processes and revive the shipyard (Callen, 1990). The improvements from this collaboration facilitated more contracts with NASSCO, and today, it is one of the busiest shipyards in San Diego. The success of this collaboration is a historical example of how U.S. shipyards could learn from their Japanese partners and generate more work and jobs for the American economy.

Pros

- Implementing Japanese lessons learned in U.S. shipyards can boost efficiency, reducing shipyard time and maintenance costs, leading to overall cost savings.

Cons

- Ships would return to the U.S. for maintenance rather than conducting it in theater, delaying their return until a relief ship was in place. This decreases the number of operational ships in theater and impacts overall fleet readiness.

Mixed

- There was strong political resistance to Nippon Steel buying U.S. Steel. However, in January 2025, President Trump and Prime Minister Ishiba announced that Nippon Steel would invest in U.S. Steel instead (Rappeport, 2025). This partnership highlights the potential for Japanese companies to improve American firms, with Nippon Steel's investment likely to enhance U.S. steel production. This approach has received more political support than a full buyout.
- Nippon Steel announced its acquisition of U.S. Steel on December 18, 2023. It remains unclear how long the two companies had been in discussions prior to the announcement. Issues surrounding the acquisition persisted for over a year. As of March 2025, the investment deal is still being negotiated. However, the situation underscores that building this relationship will take time and require political support from both governments.

Key Takeaways

This is a promising idea; however, it is difficult to determine the political buy-in, and implementation delays could prevent this from coming to fruition.

Shipyard Regulations			
Recommendation	Pros	Cons	Key Takeaways
Create a Joint Study (JMSDF & NAVSEA Standards)	<ul style="list-style-type: none">✓ Identifies overlapping standards to reduce certification barriers✓ Supports Congressional decision-making	<ul style="list-style-type: none">✗ Would need to be introduced in the FY26 NDAA, delaying implementation	Politically feasible and useful for future planning, but it will take time to produce results.
Create a Sister Company Program	<ul style="list-style-type: none">✓ Could improve shipyard efficiency and knowledge-sharing✓ Historical precedent exists for similar programs	<ul style="list-style-type: none">✗ Potential resistance due to political sensitivities surrounding foreign investment✗ Long negotiation timelines	A promising concept, but political buy-in and implementation delays could slow progress.

Security Requirements

Recommendation 1: Create an agreement similar to AUKUS.

A framework for utilizing shipyards in other countries is already available; tailor the framework to accommodate ship maintenance in Japan. This will allow import/export restrictions to loosen, and information sharing will be able to flow more freely between the two nations. Additionally, part of the AUKUS framework is the Australians' financial contribution to the U.S. submarine defense industrial base. Clauses such as this could incentivize skeptical representatives and senators if the Japanese were to contribute to the U.S. shipyard defense industrial base financially. The Japanese have expressed interest in AUKUS, demonstrating an initial willingness to modify their own laws and requirements (Chung, 2024).

Pros

- Japanese financial contributions would help modernize shipyard infrastructure and train the workforce, reducing maintenance delays and returning ships to the Fleet faster.
- If the Japanese were to contribute financially to the domestic shipyard ecosystem, the U.S. wouldn't front the billions of dollars needed to modernize the infrastructure alone. It could reduce the shipyard modernization timeline, enabling ships to undergo maintenance sooner.
- There is bipartisan support in Congress for Japanese engagement with AUKUS; on May 8, 2024, Senator Romney introduced the Coordinating AUKUS Engagement with Japan Act. This bill sought to bring Japan into the fold and expand industrial defense coordination (*Romney, Kaine, Colleagues Introduce Bill to Increase AUKUS Cooperation in the Indo-Pacific | U.S. Senator Tim Kaine of Virginia, 2024*).

Cons

- Using AUKUS as a reference, it will likely take years for both governments to pass domestic legislation to support any potential collaboration. AUKUS was introduced in 2022, and U.S. submarines have yet to utilize Australian or British shipyards for maintenance.

Key Takeaways

This is a potential long-term solution but will not be an immediate fix.

Recommendation 2: Help Japan develop a comparable security program.

The U.S. can help Japan create a security program comparable to the U.S. to facilitate information sharing and allow proper ship access. By aiding the Japanese in creating this program, the U.S. can ensure that sensitive information shared with the Japanese wouldn't be at risk. Australia and the United Kingdom already have security programs comparable to those of the U.S. as Five Eyes (FYEY) partners. However, they were required to change various systems within their country to finalize the AUKUS deal.

Pros

- Specialized workers wouldn't need to be flown in if Japanese shipyard workers were approved via a comparable security program, allowing maintenance to start immediately and enabling the ship to return to operations sooner.

- Developing a comparable security program would strengthen U.S.-Japanese relations, enhance military coordination, and potentially reduce costs beyond ship maintenance.

Cons

- Japan's security system may take years to change, especially after the two-year-old discovery of Chinese infiltration and a subsequent security breach last year, indicating a slow reform process.

Key Takeaways

This would also provide long-term benefits for the overall U.S.-Japan relationship but would face major implementation hurdles.

Security Requirements			
Recommendation	Pros	Cons	Key Takeaways
Create an Agreement Similar to AUKUS	<ul style="list-style-type: none"> ✓ Allows for better security cooperation between the U.S. and Japan ✓ Potential Japanese financial contributions to modernize shipyards 	<ul style="list-style-type: none"> ✗ Would take years for legal and legislative adjustments ✗ Requires strong bipartisan and international coordination 	Long-term potential but not an immediate fix.
Help Japan Develop a Comparable Security Program	<ul style="list-style-type: none"> ✓ Could enable faster maintenance by reducing clearance barriers ✓ Strengthens long-term U.S.-Japan defense cooperation 	<ul style="list-style-type: none"> ✗ Japan's security reforms have been slow, taking years to implement ✗ Requires significant policy shifts on both sides 	It would provide long-term benefits but faces major implementation hurdles.



Implementation



After securing policy changes and adapting necessary regulations, successful execution depends on ensuring that U.S. Navy personnel can work efficiently and maintain high morale while stationed in Japanese shipyards. The following recommendations focus on key measures to support the crew.

Together, the recommendations, adaptation, and implementation form a comprehensive framework to enable ship maintenance in Japan while ensuring operational readiness and personnel support.

Crew Comfort

Recommendation 1: Include berthing options for the crew in the contract with Japanese companies.

MHI Yokohama has its own hotel facilities that the MILIUS crew could have used. If the U.S. Navy could negotiate the use of those facilities for a decent price, it would help mitigate the frustrations of long travel periods to and from Yokosuka.

Pros

- Sailors prefer to sleep off the ship to decompress and boost morale. The Navy has allowed enlisted sailors at domestic shipyards to stay in barracks off-ship, and this could be an option extended to overseas maintenance periods.

Cons

- Including hotels within the contract for a 300+ crew would greatly increase the cost of overseas maintenance.

Mixed

- MHI has hotel facilities in the shipyard, but it's unclear if other shipyards have them. Hotels outside the shipyard complex would have to be considered.

Implementation

- As part of the bid for the work, the contracting office should request information on hotel facilities within the shipyard and its surrounding area.
- Once the shipyard is selected, the contracting office should ensure a clause that includes hotel facilities will be provided for the crew.
- The ship identified to conduct work in Japan will need to provide the contracting office with the approximate number of male/female rooms required.

Key Takeaways

This is a feasible option; however, it comes with considerable cost considerations.

Recommendation 2: Mobilize the Reserves to support the crew.

Additional personnel supporting the crew could help ensure the maintenance periods do not extend past three weeks. Engineering Duty Officer (EDO) reservists were utilized during COVID-19 to support the backlog of maintenance the quarantines had caused (Brayshaw, 2020). The Surface Warfare Community (SWO) could also call on TAR SWOs to supplement the

Wardroom and manage various administrative items pertaining to availability. Mobilizing reservists to integrate with the crew during a prolonged maintenance period could also allow the crew to take local leave for rest, helping mitigate a decline in morale for sailors away from home.

Pros

- Having extra personnel would allow Japanese shipyard workers to proceed without waiting for the ship's crew. Reservists could assist with maintenance, enabling quicker overseas repairs and ensuring ships return to operations within 48 hours.
- Having additional sailors dedicated to maintenance can provide the ship's crew with downtime to recuperate before heading to sea again.
- Having additional personnel to support these repairs in Japanese shipyards can help alleviate the burden on ship's company and potentially reduce burnout.
 - A 2024 GAO report found that not all positions are filled on a ship, making it difficult for sailors to conduct maintenance and repairs (Office, 2024).

Cons

- Mobilizing reservists overseas could significantly raise maintenance costs. Depending on their duration abroad, each reservist may incur over \$10,000 in expenses, including flights, hotels, and per diem.
- Efforts to enhance the EDO community's capacity for SURGEMAIN will take time to filter down to subordinate Commands, and specific reserve units must be identified for support.

Implementation

- This will require buy-in from the SWO community and EDO community.
- The EDO community will need to work with the SWO community to provide an adequate number of sailors to support the work.
- The EDO community will need to expand its SURGEMAIN capacity.

Key Takeaways

This would prove to be immensely helpful to the sailors but could be costly and bureaucratically complex to implement.

Recommendation 3: Ferry the crew from Yokosuka.

Contract a high-speed ferry to move sailors from Yokosuka to Yokohama; by water, it is a very short sail. This was previously done for JMSDF sailors who needed to ferry to their ships moored at CFAY. Of note, this option would only be feasible for MHI Yokohama *and* assuming that the crew is housed at CFAY.

Pros

- Improved transportation could reduce commuting stress and help sailors concentrate on their tasks.
 - One major issue during the MILIUS maintenance at MHI was the crew's lengthy commute of over an hour and a half to the shipyard.

Cons

- Depending on where the ferry embarks the crew, how often the ferry runs, and other Japanese restrictions, hiring a ferry to transport the crew could increase the overall maintenance cost overseas.
- While there is a precedent of this occurring in Yokosuka and could be done again, it is unclear if the other shipyards in Japan can support this.

Implementation

- CFAY will need to be involved in determining housing on base or in the greater Yokosuka area for the visiting ship.
- The contracting office will have to either include ferries in the initial bid or publish a separate bid for a ferry company to transport the sailors to and from the shipyard.
- CFAY and the local Yokosuka government will have to determine if the ferries will embark the crew at a commercial dock or at the naval base.
 - If embarking at the naval base, the ferry company will have to be vetted to ensure it meets the security requirements of the U.S. Navy.

Key Takeaways

If the crew was given space on base to stay, ferries could prove to be useful, but pricey.

Recommendation 4: Create an MWR unit designated to support CONUS ships in Japanese shipyards.

MWR Japan hosts a variety of excursions across the country. Having a unit dedicated to the ships in Japanese shipyards could allow sailors to see parts of the country they would not have previously had the opportunity to visit. Keeping the sailors busy when not working will help prevent liberty incidents that could harm U.S.-Japanese relations.

Pros

- MWR offers sailors unique excursions to countries they might not otherwise visit, boosting morale by allowing them to leave the shipyard. MWR events are highly popular during deployments.
- Additional MWR facilities will provide sailors with an outlet to mitigate stress levels and burnout.
- This policy option doesn't need Congressional approval since the Defense Human Resource Activity manages the MWR program. The FY25 NDAA, titled “Servicemember Quality of Life Improvement and National Defense Authorization Act,” indicates that Congress would likely support policies to enhance servicemember quality of life.
- The MWR facilities within Japan are robust and could potentially support an additional unit.

Cons

- Additional money would be required to support another MWR unit. However, the budget for this unit would most likely cost less than the overall budget for overseas maintenance.

Implementation

- Determine which MWR office in Japan will take the lead on supporting CONUS ships at Japanese shipyards.

Key Takeaways

This is a politically feasible option that would help boost morale for the sailors but funding would need to be secured.

Crew Comfort			
Recommendation	Pros	Cons	Key Takeaways
Include Berthing Options for Crew in Contracts	<input checked="" type="checkbox"/> Improves morale by allowing sailors to stay off-ship <input checked="" type="checkbox"/> Aligns with existing Navy policies for domestic shipyard maintenance	<input checked="" type="checkbox"/> Increases overall maintenance costs <input checked="" type="checkbox"/> Unclear if all shipyards have suitable facilities	Feasible but comes with cost considerations.
Mobilize the Reserves to Support the Crew	<input checked="" type="checkbox"/> Reduces workload for ship's company <input checked="" type="checkbox"/> Helps prevent burnout and ensures maintenance work is completed on time	<input checked="" type="checkbox"/> Expensive—costs for flights, lodging, and per diem could add up quickly <input checked="" type="checkbox"/> Requires policy changes at the DoD level	Helpful but costly and bureaucratically complex to implement.
Ferry the Crew from Yokosuka	<input checked="" type="checkbox"/> Reduces stress related to long commutes to shipyards	<input checked="" type="checkbox"/> Additional costs for ferry service <input checked="" type="checkbox"/> Feasibility depends on shipyard locations and Japanese restrictions	Useful but requires careful cost-benefit analysis.
Create an MWR Unit for CONUS Ships in Japanese Shipyards	<input checked="" type="checkbox"/> Provides recreational opportunities to improve morale <input checked="" type="checkbox"/> Aligns with Congressional efforts to improve quality of life for service members	<input checked="" type="checkbox"/> Requires additional funding for new MWR initiatives	Politically feasible and morale-boosting, but funding must be secured.



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