Ship Maintenance Checklist

- Tool Used: **Notion AI**
- Objective: Automate ship maintenance planning with AI-enhanced checklists

Daily Inspection and Maintenance

⚓ Conduct thorough engine room inspection (temperature, pressure, leaks)

🚤 Check and record all fluid levels (oil, coolant, hydraulic)

🚢 Inspect propulsion system for unusual vibrations or sounds

📡 Test all communication equipment and backup systems

⛽ Monitor fuel consumption and quality

🛳️ Inspect deck machinery for proper operation

Weekly Maintenance Schedule

⚡ Service and test emergency generators

💡 Conduct full electrical system check

🌫️ Inspect and clean air filtration systems

🧯 Test all firefighting equipment

🚢 Check integrity of hull and bulkheads

💧 Service and test water purification systems

⚓ Inspect anchor windlass and chain

🔧 Clean and lubricate all deck machinery

Monthly Maintenance Requirements

⚙️ Complete thorough engine maintenance

🛟 Inspect and test all safety equipment

🔄 Service all pumps and valves

🆘 Inspect and test emergency systems

🚤 Conduct full hull inspection

🌫️ Service ventilation systems

🏗️ Inspect and test cargo handling equipment

Required Safety Equipment

- 🦺 Personal Protective Equipment (PPE)
- ⛑️ Safety harnesses and fall protection
- 🧥 Fire-resistant clothing
- 🥽 Safety glasses and ear protection
- 🧤 Chemical-resistant gloves
- 🌫️ Emergency breathing apparatus

Maintenance Documentation

📝 All maintenance activities must be recorded in the ship's maintenance log with:
- Date and time of maintenance
- Personnel involved
- Equipment serviced
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Parts replaced
- Test results
- Observations and issues found
- Follow-up actions required

Critical Safety Protocols

- ⚡ Always follow lockout/tagout procedures
- 🌫️ Ensure proper ventilation in confined spaces
- 🦺 Use appropriate PPE for each task
- 📋 Follow all safety permits and procedures
- 📢 Maintain clear communication during maintenance operations

🚨 Emergency Contact Procedures:
In case of emergency during maintenance operations, immediately notify the bridge and follow emergency response protocols.

Task Name	Frequency	Last Checked	Next Due	Alert Threshold (days)	Status
Check engine oil levels	Weekly	10 May 2025	17 May 2025	7	Pending
Conduct full electrical system check	Weekly	09 May 2025	16 May 2025	7	Completed
Inspect and clean air filtration systems	Weekly	08 May 2025	15 May 2025	7	Completed
Test all firefighting equipment	Weekly	09 May 2025	16 May 2025	7	Completed
Check integrity of hull and bulkheads	Weekly	10 May 2025	17 May 2025	7	Pending
Service and test water purification systems	Weekly	08 May 2025	15 May 2025	7	Completed
Inspect anchor windlass and chain	Weekly	07 May 2025	14 May 2025	7	Completed
Clean and lubricate all deck machinery	Weekly	09 May 2025	16 May 2025	7	Pending
Complete thorough engine maintenance	Monthly	01 May 2025	01 June 2025	30	Pending
Inspect and test all safety equipment	Monthly	02 May 2025	02 June 2025	30	Pending
Service all pumps and valves	Monthly	30 April 2025	30 May 2025	30	Completed
Check calibration of	Monthly	01 May 2025	01 June 2025	30	Pending

Task Name	Frequency	Last Checked	Next Due	Alert Threshold (days)	Status
navigation equipment					
Inspect and test emergency systems	Monthly	03 May 2025	03 June 2025	30	Completed

Reflection:

Using GenAI within Notion helped automate a traditionally manual and error-prone task like preventive ship maintenance. By leveraging AI-generated checklists and dynamic table structures, I created a robust workflow that ensures no routine inspection is missed. This not only enhances safety but also saves time in operational planning. GenAI can transform ship operations by integrating predictive maintenance, reducing downtime, and improving overall efficiency. I now see AI as a key driver in maritime logistics and defense applications—supporting data-driven decision-making and consistent compliance in high-stakes environments.