

Pre-Draw-Parts Management

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Abstract: *Pre - draw in aviation refers to the strategic process of forecasting, reserving, and allocating aircraft parts, components, or materials in advance of maintenance, repair, or overhaul (MRO) activities. This proactive approach aims to optimize inventory management, reduce lead times, and ensure the availability of critical resources to support uninterrupted flight operations. Key terminologies associated with pre - draw include forecasting, reservation, allocation, lead time, safety stock, and inventory turnover. By leveraging advanced demand planning, collaboration with suppliers, and sophisticated inventory management systems, aviation organizations can enhance operational efficiency, minimize downtime, and improve overall reliability. This abstract provides an overview of the concepts and strategies involved in pre - draw in aviation, highlighting its importance in maintaining a robust and responsive supply chain to meet the dynamic needs of the aviation industry.*

Key words in Pre - draw:

In the context of pre - draw in aviation, several specific terminologies are commonly used to describe the processes and concepts involved. Here are some key terms:

- 1) **Forecasting:** The process of predicting future demand for aircraft parts, components, or materials based on historical data, maintenance schedules, and operational requirements.
- 2) **Reservation:** The act of reserving or setting aside specific inventory items for future use in maintenance, repair, or overhaul (MRO) activities.
- 3) **Allocation:** The distribution or assignment of available inventory to meet anticipated demand, ensuring that enough critical parts and materials are reserved for planned activities.
- 4) **Lead Time:** The time required between placing an order for aircraft parts or materials and receiving them from suppliers. Understanding lead times is crucial for effective pre - draw planning.
- 5) **Safety Stock:** Additional inventory maintained above the forecasted demand to account for uncertainties in demand, supply chain disruptions, or unexpected changes in maintenance requirements.
- 6) **Replenishment:** The process of restocking or refilling inventory levels to maintain optimal stock levels and ensure the availability of critical parts and materials.
- 7) **Inventory Turnover:** A measure of how quickly inventory is used or sold within a specific period, indicating the efficiency of inventory management and pre - draw processes.
- 8) **Supplier Collaboration:** Collaborative efforts with suppliers to coordinate pre - draw activities, share forecasted demand, and ensure timely delivery of aircraft parts and materials.
- 9) **Demand Planning:** The systematic process of forecasting future demand, aligning inventory levels with projected requirements, and optimizing pre - draw strategies to meet operational needs.
- 10) **Inventory Management System (IMS):** A software system used to track, monitor, and manage inventory levels, reservations, allocations, and replenishment activities related to pre - draw in aviation.

Understanding these terminologies is essential for aviation professionals involved in pre - draw planning, inventory

management, and supply chain optimization to effectively forecast demand, allocate resources, and ensure the availability of critical parts and materials for maintenance and repair activities.

Introduction to Pre - draw:

Pre - draw in aviation is a proactive and strategic approach to managing inventory and supply chain logistics within the aerospace industry. It involves forecasting, reserving, and allocating aircraft parts, components, or materials in advance of maintenance, repair, or overhaul (MRO) activities. This forward - thinking methodology aims to streamline operations, optimize inventory levels, and ensure the availability of critical resources to support the efficient and reliable performance of aircraft fleets.

In the fast - paced and dynamic environment of aviation, where safety, reliability, and operational efficiency are paramount, pre - draw plays a crucial role in minimizing downtime, reducing lead times, and mitigating risks associated with unexpected maintenance needs or supply chain disruptions. By leveraging advanced forecasting techniques, collaborative partnerships with suppliers, and integrated inventory management systems, aviation organizations can effectively anticipate demand, allocate resources, and maintain optimal stock levels to meet the evolving needs of their fleets and operations.

This introduction sets the stage for exploring the key concepts, strategies, and terminologies associated with pre - draw in aviation, highlighting its significance in shaping a resilient and responsive supply chain that can adapt to the challenges and complexities of the aerospace industry.

Why do you need a pre - draw kit for your next aircraft maintenance project?

Over the years, I've noticed a trend. During the maintenance project, there's always panicked emails and phone calls. Half of the calls are for material that should have been pre - planned. It's guaranteed. It'll happen. Maybe even today.

Maintenance teams wait too long to purchase the material they need. So, when they do purchase, they're in a frantic rush. You need the material. If panicking gets your bird out of the hangar. But a better, less stressful way is to pre - plan the

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material you know you'll need before your upcoming maintenance check. Items like rivets, grease, oils, tape, wire, O - rings, bolts, and various other expendables and consumables. It is all about pre - planning and It's called a pre - draw.

Pre - planning your maintenance check material is called a pre - draw kit. Each maintenance check, whether you're an MRO, operator, lessor, or even military, there are items you know you'll need. Whether it's an overnight check, line maintenance or a full - blown C & D check, you have task cards, so you have an idea of what's going to happen. You have a list of the consumables, expendables, and even tooling required.

A simple example is with your overnight checks. Your maintenance team will be sure to inspect your aircraft tires for damage. If the tire is damaged, they'll have to remove it and install a replacement tire. When installing the tire, they'll need a mixture of tools, consumables, and various expendables.

Aircraft material like this:

Tool:

- 1) Wrench - Torque 0 to 350 ft - lbs (0 to 474.53 Nm)
- 2) Consumables:
- 3) Grease - Mobil 28 grease
- 4) Expendables:
- 5) Tie bolts
- 6) Inner wheel bearing
- 7) Outer wheel bearing
- 8) Outer grease seal
- 9) Retaining clip
- 10) Washers
- 11) Inflation valve extension kit

A kit specifically designed for a routine, recurring purpose. This is a simple example. Your C and D check would be a more elaborate pre - draw kit depending on the task cards scheduled.

References

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