



Maintenance & Stockroom Review

Governance & Audit Report No. 2022-10

Issued on January 06, 2023

EXECUTIVE SUMMARY

Background

Procurement and Operations requested Governance and to perform a review of IndyGo's Maintenance & Stockroom Management Process.

IndyGo is preparing to move to a multi-site structure and the Maintenance and Stockroom function will be, to some extent, duplicated at the new facility. IndyGo recently updated the D365 and Dynaway systems for the Stockroom inventory and Maintenance processes.

Our assessments are performed in accordance with the professional practice standards of the Institute of Internal Auditors. This report was prepared for use by IndyGo's Board of Directors, Governance and Audit Committee, and management.

Objective and Scope

The objective was to obtain an understanding of key processes supporting IndyGo's Maintenance and Stockroom functionality and assess the effective use of the system supplied processes. In addition, as with all our reviews, we aimed to also identify any potential opportunities for improvement and automation.

The scope of the audit was to review the work order process, staffing/training, CORE item processing, inventory levels as well as the utilization of D365/Dynaway system.

Overall Report Rating & Observations

(See Appendix A for definitions)

	Report Rating	Number of Observations by Rating		
		High	Medium	Low
Maintenance & Stockroom Review	Medium	3	2	0

Overall Summary and Review Highlights

Governance and Audit was contacted by Operations as well as Procurement to perform a review of the processes and interaction between the Stock Room and Maintenance groups since the recent upgrade of the new Dynaway/D365 inventory system. As the Stock Room and Maintenance groups move toward a multi-site operation, management wants to ensure a full utilization of the inventory/maintenance system and efficiency in processes.

As a result of our review, we have noted five opportunities for process improvement. Three observations have been rated high and two observations have been rated medium, therefore making the overall rating of the review as high.

We would like to thank IndyGo staff and all those involved in assisting us in connection with the review. Questions should be addressed to the IndyGo Department of Governance and Audit at: batkinson@indygo.net.

OBSERVATIONS SUMMARY

Following is a summary of the observations noted. Definitions of the observation rating scale are included in Appendix A.

Governance and Audit Observations	
Recommendation Title	Rating
1. Dynaway Utilization	Medium
2. Work Order Process	High
3. Inventory Levels	High
4. Training & Staff Development	High
5. CORE Process	Medium

1. Dynaway Utilization

Observation:

IndyGo's D365/Dynaway system used for the inventory and work order process in the Stockroom is not being fully utilized.

Recommendation:

Management should consider taking a fresh look at the functionality of the Dynaway product and solicit any assistance from a Subject Matter Expert. Additional training and communication are deemed necessary so that both the Maintenance and Stockroom understand the system and its capabilities.

Observation Rating: Medium

IndyGo implemented Dynaway/D365 in May 2022. For the first month or so, the Stockroom was still performing inventory adjustments manually and were not informed about work orders being updated with parts pulled that were already being reflected in the stockroom inventory.

Dynaway has the functionality to track all maintenance costs on the buses, forecast repair costs for budget and end of life cycles. Dynaway contains an entire Warehouse Management System that could streamline IndyGo's inventory processes more efficiently and effectively. However, the system is not being utilized to perform such functions.

It was noted that the kitting process can be done by the technician for each job. Kits do not have to be designed for only standard processes. Kit is a term for pulling parts or parts needed. Item forecast lists can be assigned to a kit through Dynaway. The work order kit can be used as a pick list for the Stockroom. The work order list can then be marked "ready for pickup". Mechanics do not have to wait at a window for parts to be picked. Through discussion with Maintenance and Stockroom personnel, the Stockroom is no longer preparing kits. Kits did move over from prior version of Dynaway; however, the Stockroom employees do not appear to understand how to find the kits in the system or use this system functionality to

Management should review inventory to ensure it is accurately stated within the Dynaway system.

It is recommended that Dynaway functionality be communicated and trained to the Maintenance and Stockroom groups with regards to the tracking of all maintenance costs by bus/mile, forecasting and budgeting and the warehouse management system.

Management should consider soliciting the help of a Subject Matter Expert (SME) to obtain a standard chart of typical specifications for each vehicle type, fluid types and quantities, wheel torques, etc. so that the mechanics nor stockroom must go searching for these and spend additional time when it could be at their immediate disposal.

The Dynaway product is owned by the Maintenance division but collaboration is needed with the Stockroom division for success in achieving full functionality.

Management should consider purchasing company tablets that have the Dynaway mobile app installed to be issued and used by each department for the purposes of generating a work order. Also, the handheld devices for

Management Action Plans:

Inventory Review

Inventory is cycle counted on a regular basis to ensure accuracy. Finance also solicits and completes a full year-end inventory to verify it is balanced before transitioning into a new Fiscal year.

Responsible Parties:

Stockroom

Due Dates:

December 31, 2023

Dynaway Functionality

The Stockroom Team was not included in Dynaway training/on-boarding. The Stockroom staff would welcome start-up training, as well as refresher training scheduled at regular intervals.

The Maintenance Manager has taken the ownership/lead for the Maintenance department. The manager will help staff navigate and utilize Dynaway for operational needs.

prepare kitting. This lack of knowledge seems to be going backwards in this process.

The Dynaway product offers a mobile app option that can be used on the mechanic's cell phones. Per discussion with the mechanics, there is a concern with using the mobile app and the optics of how this would look to management. The mechanics do not want to appear to be inappropriately using their mobile devices for personal use. Company provided tablets was a prior recommendation as a solution but was not approved by senior management due to the costs involved.

Finally, it is felt that there was no direct ownership of the Dynaway product within either of these groups. Governance & Audit believe that the lack of ownership leads to no one fully understanding its capabilities and functionalities; thereby not capitalizing on the expense of this product and utilizing this system in its entirety.

inventory scanning could also be used to update the work orders with parts. It appears management would only need to increase the function on two (2) licenses and utilization of a bar code process.

Responsible Parties:

Stockroom and Maintenance

Due Dates:

Start-Up training – by End of Q2/2023
Refresher training is ongoing quarterly.

Dynaway Ownership

James Moore, from Maintenance has taken the ownership/lead.

Responsible Parties:

Maintenance and Stockroom

Due dates:

Completed

Company Tablets

Workstation /laptops are set up and ready for use.

Responsible Parties:

Maintenance

Due Dates:

Completed

2. Work Order Process

<p>Observation:</p> <p>After meeting with multiple staff members and reviewing the Dynaway System capabilities through the Dynaway website and instructional videos, it has been determined that the work order process is not being used to full capability which would streamline parts distribution and improve inventory accuracy.</p>	<p>Recommendation:</p> <p>Use the Dynaway work order and kitting processes to full capability routing the parts requests to the stockroom electronically.</p>	
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Observation Rating: High

<p>After interviewing multiple maintenance staff members, it has been determined and observed that the parts distribution process has not improved since the installation of Dynaway. G & A witnessed that manual processes for providing parts lists and pulling inventory has not changed. Maintenance staff members are still being required to list parts requests on manually written white cards. The cards are then used to pull parts and inventory is updated after the parts are distributed. The white card process was verified with stockroom management.</p> <p>The Dynaway work order process is designed to build a parts list in the system. A kit listing all the needed parts for a repair can also be developed in Dynaway by the mechanic. The online work order parts list can then be reviewed in the stockroom and the parts pulled for the job. As parts are pulled from the electronic work order list, inventory can be updated real time using the Dynaway mobile app, a tablet or computer.</p> <p>Maintenance is reporting that mechanics are standing waiting on parts for an extended period of time at the stockroom counter as witnessed by G & A. Using the online work order parts list would eliminate the need to go to the counter to order parts. The list would already be online for the stockroom staff. The mechanic would only be required to go to the parts window to pick up the completed order. G & A has verified the online parts list process with</p>	<p>System access should be reviewed to ensure that maintenance staff has the ability to update parts lists and create kits directly in Dynaway.</p> <p>Management should retrain maintenance and stockroom staff on the workorder process and how the system is meant to work.</p> <p>It is recommended that the Stockroom cease in using the manual white cards and begin relying on the work order process as it was designed to work. Staff must be willing to change from outdated processes and utilize functionality that has been purchased to streamline operations.</p> <p>Ensure that maintenance staff members have access to the mobile app, tablets, or convenient computer workstations to create the work order parts list from their workstation and not at the stockroom window.</p> <p>A one-day demonstration or overview of the complete system capabilities shared with maintenance and stockroom staff by the IndyGo Operations Performance Manager would be helpful with getting everyone up to speed and on board. It is noted that part of the unwillingness to change is lack of understanding of the big picture.</p>	<p>Management Action Plans:</p> <p><u>Parts Kitting</u></p> <p>Kitting is now in place starting with preventative maintenance parts. Additional kitting for some known repairs which need multiple parts will also be created.</p> <p><u>Responsible Parties:</u></p> <p>Maintenance</p> <p><u>Due Dates:</u></p> <p>Completed</p> <p><u>Maintenance and Stockroom Process</u></p> <p>Automated requisitions instead of white cards will help efficiency of manpower. This process will start at the Supervisor level and employees will be trained going forward. The implementation of automated requisitions will need to be a collaboration between the Maintenance ss well as the Stockroom teams.</p> <p><u>Responsible Parties:</u></p> <p>Maintenance and Stockroom</p> <p><u>Due Dates:</u></p> <p>Start training – by End of Q2/2023</p> <p>Refresher training – ongoing quarterly</p>
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maintenance, IT PMO as well as the Dynaway website and YouTube demonstration videos.

Work orders for accident repairs are currently not separated for tracking costs for the accident separately from the regular maintenance costs of the bus. If there is a large expense due to an accident, the cost is included in the lifetime maintenance cost of the bus and per mile cost over the life of the bus. This was verified by the IndyGo Operations Performance Manager.

The Dynaway system also has the capability to have work orders automated and tied to a maintenance calendar for preventive maintenance processes.

Currently, the work order parts lists and inventory are updated from the white cards by stockroom management after the fact. There could be a day or more delay in completing the update causing the inventory listed in the system to not be correct at any given point.

At this time, the Dynaway system is only formatted to allow stockroom management to add parts to the online workorder. In the event an item is not in the inventory stockroom, a purchase order can be created from the Dynaway workorder. Access would need to be reviewed and allowances made to make use of the full Dynaway capabilities that have been purchased.

Management should develop an automated coding system for the work order numbers or title identifying the work order as an accident repair. This would allow cost for accident costs not to inflate the overall maintenance cost for regular operation of the bus.

Mobile App

Addressed by the addition of new computer workstations.

Responsible Parties:

Maintenance

Due Dates:

Completed

One-Day Demo

A One-Day Demonstration will be provided.

Responsible Parties:

Maintenance and Stockroom

Due Dates:

End of Q2/2023

3. Inventory Levels

Observation:
 During this review of the inventory levels in the stockroom, it is noted that the inventory physical count is often off from what the system shows.

It is observed that there are buses waiting in the maintenance area for repairs to be completed because of not having the necessary parts in inventory. Maintenance staff is questioning is there an ordering issue or budget constraint?

It is determined that the Min-Max on part inventory need to be reviewed for correctness.

Recommendation:
 Management should review the processes in the stockroom relative to inventory ordering, Min-Max settings and utilize automation that is provided in the Dynaway system.

Observation Rating: High

It is determined that the stockroom regularly runs out of preventive maintenance parts that are in high demand. The physical inventory count does not always agree with the system count. The stockroom is not using the work order parts list to pull inventory and update in the system real time. A white card is written listing the work order parts list. The inventory is pulled based on the manual white card. The inventory is then updated in the system from the white cards when time allows. If updates are done the following day or days, the actual inventory is not correct in the system. The parts list on the system work order could show the mechanic a part is available, but it may not be due to timing differences on entering the data from the white card. White card updates to the system are only done by the stockroom management.

Daily buses are parked waiting for inventory parts. It was reported that some of the wait times are weeks to months. The body shop had resorted to making panels because they are not being maintained in the stockroom. Lack of windows and body panels seem to be always short stocked. IndyGo has around 200 buses most of which have

The Stockroom should stop using the manual white cards immediately. The work order process in Dynaway has a part list and the mechanic can develop a kit that the stockroom can use to pull parts. As parts are pulled for the work order, the inventory can be updated at the same time using a computer, tablet, or mobile device. This will ensure inventory is always updated real time.

For parts such as tubing and hoses, management could research the cost of procuring hose making equipment. This would eliminate the need for many different sizes to be maintained in stock. The exact size part could be made on site for each purpose.

Management should consider increasing the number of body panels and windows on hand for buses that have interchangeable parts.

Historical parts, that use data available in Dynaway, can be used to help with adjusting the Min-Max amounts in the

Management Action Plans:

White Cards
 Addressed in Work Order Process section.

Panels and Windows
 Procurement has seen significant lead time on both items in the supply chain. Procurement will work with Maintenance on determining appropriate inventory levels on hand. Bulk ordering may be required and narrowing window part numbers could help alleviate some supply chain issues. Review with Maintenance to determine window and panel stock items and set inventory quantities.

Responsible Parties:
 Stockroom and Maintenance

Due Dates:
 End of Q2/2023

interchangeable parts. It is reported that only one or two of some parts are stocked. G & A witnessed a bus out of service waiting for a small window to be received.

Basic regularly used parts are not being kept in stock. G & A was shown the brake part bin that holds various springs and clips. This bin is supposed to be monitored and kept stocked by the vendor. A view of the cabinet showed empty sections that should have parts. A mechanic shared that sometimes a wrong part/spring is suggested in place of the correct item which is not in stock. This mechanic will not risk this when it comes to certain safety issues.

With BYD buses, there is a lot of aluminum welding being done because of damaged body parts. Something simple like welding wire and hinges are regularly out of stock.

Regularly basic parts are not kept on hand like a gasket. A gasket is regularly taken from a part that is in stock to be used. Leaving this new part without the provided pieces for future.

system to be updated more accurately. Reports can be pulled to assist with correcting on hand inventory as well as assisting in developing future fiscal year inventory budget. The report availability was demonstrated by the IndyGo Operation Performance Manager.

Stockroom management should set up a regular schedule with vendors who supply small part bin inventory (springs, clips, nuts, and bolts). Stockroom management should verify the vendors are meeting expectations. Purchasing could assist with vendor replacement if the vendor is not meeting contractual agreements.

Inventory Levels (Min/Max)

A Top 150 Min/Max review was completed quarterly for the past two years. Maintenance was in attendance allowing for input on Min/Max needs and adjustments. Min-Max levels will be reviewed with Maintenance management team on a regular basis.

Review parts and usable items that are not a regular stock item but are used frequently and include these parts for normal reorder in the system.

Review the Monthly Out of Stock Report for adjustments to the preset inventory levels.

Responsible Parties:

Stockroom and Maintenance

Due Dates:

Ongoing

Small Parts Vendors Schedule

A regular schedule with small parts vendors is already being done. IndyGo partners with three separate companies and will continue monitoring these firms.

Responsible Parties:

Stockroom

Due Dates:

Completed

4. Training & Staff Development

Observation:
 After meeting with several members operations, stockroom staff and system project management, it is a concern of the stockroom staff knowledge of the inventory as well as the Dynaway system. There appears to be concerns around stockroom management not including all staff members in the training sessions for the Dynaway system.

There were multiple reports and concerns regarding stockroom staff not finding inventory and knowledge of part locations.

Recommendation:
 It is recommended that overnight and weekend supervision be increased and expectations for staff behavior, knowledge and quality of service be stressed to stockroom management.

Observation Rating: High

It was reported that stockroom staff night shift and weekend shift are not pulling the parts. They will ask the mechanic to help pull the parts or they may say, “it isn’t in stock”. When the day shift staff starts, the parts seem to be found.

Multiple staff members expressed concern that parts are pulled wrong or not found more often during the night shift. Items can be shown in stock in the system but can’t be found at night. This causes delay on repairs as mechanics must wait and creates a delay on getting buses repaired timely.

It is felt that additional training needs to be done with stockroom parts locations. This is not a problem during the day shift.

Work Orders and parts list can be seen on the computer and mobile app but are no longer on the video screen at the parts counter.

A review of inventory locations with all stockroom staff members and developing testing for familiarity of parts and locations should be performed.

It was determined that additional training hours are available with the Crowe implementation consultant. It is recommended that a system refresher training be held with all stockroom employees participating. Training could be completed by Crowe staff or IndyGo Dynaway experts who have been identified by G & A as well as the IT PMO.

Management should ensure that the system is formatted to include work order parts listings to display on video by parts counter including the ability to display standard kits as well as individual work order kits. G & A verified that kitting is available and was demonstrated on Dynaway system YouTube videos.

Management should require cross training of positions in the stockroom and assign staff to cover vacations.

Management Action Plans:

Inventory Review and Training
 Currently training in addition to cross training for Maintenance and Stockroom staff is underway for part identification and locations.

Responsible Parties:
 Stockroom

Due Dates:
 Ongoing

Crowe Refresher Training
 Management agrees that a system refresher training completed by Crowe staff or IndyGo Dynaway experts be held with all stockroom employees participating.

Responsible Parties:
 Stockroom

The IndyGo PMO (Project Manager Office) believes that system training would resolve this issue if there would be willingness to change.

Training did not go well as not all stockroom employees were included in the training sessions provided by the consultant. G & A verified through the IT PMO that the stockroom was an issue from the beginning due to lack of attendance and participation. The first multiple day training by Dynaway only had one stockroom supervisor attend. The first training provided by the consultant Crowe only had day shift employees attend. The second training provided by the consultant Crowe only had one stockroom supervisor and the stockroom manager attend. The manager stated they would train the rest of the staff.

When day shift parts receiver is on vacation, the work piles up. No one covers vacations or appears to be cross trained.

The stockroom is no longer doing kits as done with the previous version of Dynaway. It was observed that kits did move over during the Dynaway upgrade. Stockroom employees need to be retrained on finding the kits in the system. A mechanic was able to find and demonstrate that the previously designed kits are in the system since the upgrade. The Dynaway training and demonstration material states that projected parts lists can be developed for specific regular maintenance jobs.

A meeting was held with maintenance and stockroom to develop a plan. G & A was provided a copy of the SOP dated August 22, 2022, which is not being followed at this time. This was verified by a stockroom staff member.

Due Dates:

May 31, 2023

Parts Counter Display

The parts counter video screen is again being utilized to display the work order and parts listing.

Responsible Parties:

Stockroom

Due Dates:

Completed

5. CORE Processing

Observation:
 The administration of CORE products through the Dynaway system as well as being processed by the Stockroom is lacking. The CORE items are not being managed correctly and many CORE credits are being missed

Recommendation:
 IndyGo management should implement a more formal process surrounding CORE items to ensure these items are being accurately labeled on the CORE item and noted in the system.

Observation Rating: Medium

Through our interviews with various Stockroom and Maintenance personnel along with the CORE Administrator, it was noted that not all the parts are being labeled as CORE with the green label when received. Also, CORE and warranty items appear to sit on the shelf for up to 3 months at time before being returned to the vendor for credit. The perception is the Stockroom is not assisting in the compliance of CORE processing procedures and when the Stockroom met with CORE/Warranty, they were disinterested in understanding their role in the processing of CORE items. Additionally, when the seasoned receiver goes on vacation, CORE receiving, and CORE paperwork stops until their return. It was stated that there is a lack of understanding by management as to why the CORE items cannot be updated when there are 6-7 people in the Stockroom but only see 2 actively involved and working.

Through review of the Dynaway system and CORE spreadsheets prepared by the CORE Administrator, it was noted that there were only 18 items listed as CORE in Dynaway. This is incorrect and there are many more CORE items (i.e., no turbos were not included in the system as CORE however have a CORE credit price of \$700). The CORE/ Warranty Administrator found two engine CORE credits for approximately \$9k - \$11K that had left IndyGo property with no paperwork. Fortunately, this was found when the credit was received back from the vendor. If there is no

Management should create a formal process to handle all CORE items. Once created, this should be communicated to the Stockroom and Maintenance groups to ensure all personnel are well versed on the CORE processing procedures.

A thorough review of all items that are eligible for receipt of CORE credit should be performed. This should include review of the system to guarantee all items are marked as CORE in Dynaway. Also review should include going to CORE item location in the Stockroom and checking to make sure an item is accurately labeled as such so that Maintenance and Stockroom know that it needs to be returned for CORE credit to vendor.

The CORE/Warranty Administrator, to do their job duties and recover as many CORE credits as possible that are available to IndyGo, require management’s involvement and buy-in to this process. Governance & Audit recommends management’s participation in these efforts to communicate the importance financially to the organization for receipt of CORE credits.

Management Action Plans:

CORE Process
 There is a dedicated Operations employee assigned to this role. Stockroom staff’s role in the CORE process is to label received parts accordingly. Maintenance staff needs to treat all parts as CORE. Stockroom has started using a neon green CORE label to help maintenance identify CORE parts.

Dynaway is set to automatically flag at the work order level COREs that need to be returned.

Responsible Parties:
 Stockroom and Maintenance

Due Dates:
 Ongoing

paperwork maintained by IndyGo and nothing recorded in the Dynaway system. The reliance on the vendor to issue the credit is the only way IndyGo has to be notified a CORE was processed and received. There seems to be a breakdown in accurately recording CORE items in Dynaway and a lack of confidence that IndyGo is receiving all the credits available.

Governance & Audit met with the CORE Administrator during the review and noted that CORE/Warranty recovered (September through December 2021) approximately \$177k for CORE credits. It is expected that for EOY 2022, recoveries will exceed \$250k. It is trending upward; however, it could be substantially higher with accurate record-keeping and processing of CORE items.

APPENDIX A – RATINGS DEFINITIONS

Observation Rating Definitions		Report Rating Definitions	
Rating	Definition	Rating	Explanation
Low	Process improvements exist but are not an immediate priority for IndyGo. Taking advantage of these opportunities would be considered best practice for IndyGo.	Low	Adequate internal controls are in place and operating effectively. Few, if any, improvements in the internal control structure are required. Observation should be limited to only low risk observations identified or moderate observations which are not pervasive in nature.
Medium	Process improvement opportunities exist to help IndyGo meet or improve its goals, meet, or improve its internal control structure, and further protect its brand or public perception. This opportunity should be considered in the near term.	Medium	Certain internal controls are either: <ul style="list-style-type: none"> Not in place or are not operating effectively, which in the aggregate, represent a significant lack of control in one or more of the areas within the scope of the review. Several moderate control weaknesses in one process, or a combination of high and moderate weaknesses which collectively are not pervasive.
High	Significant process improvement opportunities exist to help IndyGo meet or improve its goals, meet or improve its internal control structure, and further protect its brand or public perception presents. This opportunity should be addressed immediately.	High	Fundamental internal controls are not in place or operating effectively for substantial areas within the scope of the review. Systemic business risks exist which have the potential to create situations that could significantly impact the control environment. <ul style="list-style-type: none"> Significant/several control weaknesses (breakdown) in the overall control environment in part of the business or the process being reviewed. Significant non-compliance with laws and regulations. Observations which are pervasive in nature.
Not Rated	Observation identified is not considered a control or process improvement opportunity but should be considered by management or the board, as appropriate.	Not Rated	Adequate internal controls are in place and operating effectively. No reportable observations were identified during the review.