The University of Alabama

Automotive Services Parts Room Procedures

Lean and Reliable Practices for Day-to-day Operations

The following procedures outline the steps for a clean, well-organized, efficiently run, lean, and reliable Automotive Services Parts Room. In this Operating Procedure, we will examine the day-to-day practices and procedures that must become ***routine*** *to keep the parts room in a 'Lean and Reliable' operating condition.*

Support from all levels of staff is crucial. Good leadership, cooperation, and support among the various levels will achieve remarkable results and improve operations. When this support is in place, it promotes an efficient, effective, and successful parts room that positively impacts the total operation of Automotive Services. The UA parts room will primarily focus on supporting automotive service maintenance activities, the University mission, and other activities on campus.

Security of the Parts Room:

Controls are expected to be maintained, and staff are expected to ensure that parts are on hand and available when needed. The following controls will be in place:

- Doors secured when staff are not in proximity.
- No unassisted outside personnel within the parts room.
- Only authorized UA staff within the parts room.

Accountability:

No parts leave the parts room without being accounted for, and this process must be documented. No part should be unaccounted for at any time.

Receiving:

At least two automotive staff will be responsible for receiving parts. Each staff member must perform their counts and verification of each part independently of the others. Each staff must verify the number of parts received with the parts invoice from the vendor, along with the brand, model, and unit of measurement of each item. At no time should one staff member check in a part unassisted. The Parts Associate is responsible for ensuring two staff members are present during the receiving process. Both employees are required to initial the invoice ticket legibly.

Note: Bulk Oil: The following is required each time Bulk Oil is received:

- Physically stick each bulk oil tank before the oil is received logging the amount of bulk oil in each tank.
- Physically stick each bulk oil tank minutes after oil is received logging the amount of bulk oil in each tank.
    - The difference between the before-delivery and after-delivery measurements is expected to match the delivery amount received.
    - Must note any differences and notify the vendor.

Receiving Parts into the System (stock and non-stock parts):

At no time shall the employee(s) receiving the part(s) be the staff entering the part into the inventory system. The program assistant or service writer shall be responsible for entering the "Quantity Received" of "Stock Part(s)" into the inventory system. The Parts Associate applies the "Non-Stock Part(s)" to the specific work order. The Associate Director of Automotive Services will assign this task if selected staff members are unavailable.

All inventory items will be expected to be entered into the system the same day the item(s) arrive, as will the inventory being worked on to the shelves. This will ensure a 'Neat, Clean, and Organized' parts area to enhance safety.

SKU Numbers:

SKU (item identification numbers) uniquely identify individual items within the Automotive Services Parts Room. Each item is required to have its unique SKU number so that we can effectively account for its activity and whereabouts within Automotive Services. Grouping of like items under one SKU number is not permissible. Bin locations should be named as short and easy to read as possible. Every SKU will be required to be identified within M5. Items will be required to have scannable barcodes.

Inventory Levels:

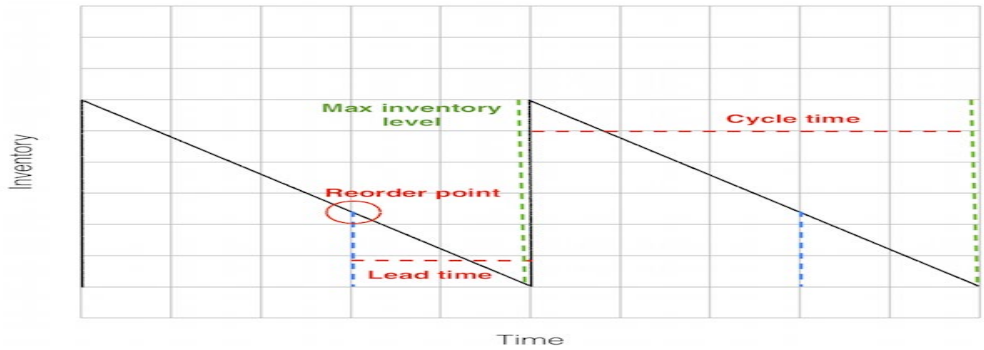
Our goal is to have a lean parts room and a reliable process for receiving parts. We are fortunate to have vendors close by who will serve as our warehouse and reduce our financial need to invest funds in having parts on hand.

Establish a minimum and a maximum inventory level for each part identified as items that will be on hand. The minimum inventory level is the fewest number of given parts you can have on hand at any one time, while the maximum represents the largest number on hand (excessive quantities of inventory are <u>not acceptable</u> unless approved by the Director of Fleet Management or Associate Director of Automotive Services).

Sawtooth Diagram to Manage Replenishment

The Sawtooth Diagram (as a visual) identifies how to establish parameters so that inventory volumes remain constant. To make this work, the **maximum inventory**, **minimum inventory**, and **reorder point** for ***<u>each item</u>*** must be set by previous data or known future jobs. Random thoughts are not justifiable data or reasonable. **Cycle Time** is determined based on known intervals and the number of units available for that specific item (PM parts should be based on the currently established intervals for vehicles). **Lead Time** is considered very short for our business since the vendors must deliver items within 45 minutes for items they have on hand or within 24 business hours for out-of-stock items. The benefit of our **Lead Time** should trend our parts on hand (exception: bulk oil) toward the minimum inventory for each SKU.

Sawtooth Diagram to Manage Replenishment



Inventory stock represented by a sawtooth curve

Our inventory must be readily available to meet AS needs, but not to a point of excess. Our in-stock inventory on hand will be determined by the number of parts issued over the past 90-day average x 2 or forecasted intervals of vehicles. Example: Part X has an issue rate of 9 over the last 90 days. This is an average of 3 per month.

- On hand should not exceed 6 (unless case quantities order items).
- The reorder point for this item should be set at 3 (one-month average).
- Quantities on hand for a specific part should not exceed the total number of vehicles on campus for that specific part.

Exception: Reviewing the forecast and the number of vehicles due for service exceeds the maximum of **6**. The total can reflect the number of parts needed to service the units available for the forecasted month. The Parts Associate will be required to review the 45-day (PM) forecaster weekly to ensure adequate amounts are in stock.

Factors to consider:

- The availability of parts from the local vendor. The above reorder point may be less since our contract vendor should have items available to us within 45 minutes of placing the order or within 24 hours.
- Weekly, monthly, and 45-day (PM) forecasting units for service.
- Items requiring to be ordered in bulk or by the case.

Replenishment:

Replenishment should be based on inventory needs generated from re-order points or based on the (PM) forecast of jobs. Inventory orders should be placed by **9** am daily. The following best practices should be followed:

- Assess and re-assess our forecast.
  - As our vehicle/equipment units change, so may our inventory levels for specific parts. Reorder points will need to be re-adjusted as needed.
- Formulate effective stocking levels.
  - Inventory must be tailor-made to fit the needs of The University of Alabama.

Obsolete, Overstock, and Slow-Moving Inventory Item(s):

The Parts Associate is required to work on obsolete, overstocked, and slow-moving inventory (weekly). The following will be required:

Defining:

Obsolete Inventory: Under the direction of Automotive Services, inventory no longer fits a vehicle or equipment. These stock inventory items will need to be returned for credit.

Overstock Inventory: The inventory quantity has a turn/movement rate of more than 60 days. The number of units more than 60 days will be required to be returned for credit.

Slow-Moving Inventory: Slow-moving inventory "in stock" that has not moved for a certain amount of time (90 days). The excess items will be required to be returned for credit. The stock inventory needs to be re-evaluated to be a "non-stock" part or lower the minimum inventory to "2 or Less". Items that have not moved more than 180 days must be moved to "non-stock" status. Ordered on an as-needed basis.

- Submit a list of obsolete, overstock, and slow-moving inventory item(s) to vendors for credit.
    - Credit could be for full credit or credit on needed parts.
        - Any credit less than the purchase price must be communicated with the Associate Director of Automotive Services before the transaction is finalized.
    - Only after documented efforts of working with the vendor to receive a credit have failed will the Parts Associate be required to communicate with the Associate Director of Automotive Services to find other avenues to reduce these items from inventory.
    - A spreadsheet detailing the list of items, status, vendor, and total cost of each item must be available on UA Box for the Director of AS to review on the 1st Monday of each month.
    - If multiple items can be used as the same part, then the Parts Associate must select the most appropriate part to keep while eliminating the remaining items.

Stock Parts Turns/Movement Rate:

All stock parts must go by the following turn/movement rate criteria:

The cumulation of all parts in stock must have a minimum turn/movement rate of ***80%***, which has been issued over the past 90 days.

As of *November 16, 2020*, our measurements are the following:

• Active SKU's	663	
• Active SKUs with movement over the last 90 days	241	36.35% Movement
○ Inventory Value		$29,336.90
○ 90-Day Parts Valued Being Issued		$31,636.80
• Active SKUs with no movement over the last 90 days	422	63.65% No Movement
○ Inventory Value		$32,950.96

Spot Checks and Cycle Counts:

Cycle counts accomplish three different goals: 1) the physical inventory and verification of a specific type of part or a designated location of parts; 2) the upkeep of our most valuable or high-volume items; and 3) identifying shrinkage promptly. Once shrinkage is found on a specific part, the item(s) must be immediately researched, and a remedy must be placed before the next spot check or cycle count.

Note: Spot Check and Cycle Counts are required to be filed weekly/monthly on UA Box by the Parts Associate:

(Monthly):

1) Top 10 most expensive items
2) Bulk Oil
3) Spots check an additional ten items per week.
    a. All items spot-checked will require documentation to be on file.

Required (Semi-Annually):

1) All items inventoried: March and September (fiscal year ending)

Negative Inventory:

Negative on-hand inventory refers to the situation that occurs when an inventory count suggests that there is less than zero of an item(s). Due to the far-reaching impact of negative inventory errors, whenever a negative balance appears and is identified, the Parts Associate must look closely at identifying the source of the error and put a practice in place to correct it.

Negative quantity issued inventory will be required to be documented and available on UA Box on the 1st Monday of each month.

Damage Parts List:

The Parts Associate is responsible for recording all parts damages. Documents are available on UA Box on the 1st Monday of each month. The document shall have the following:

- The SKU # and description of the item
- Quantity and Cost of item
- The type of damage
- Staff Name

Inventory Adjustments:

Any inventory adjustments other than receiving, issuing to a job, or receiving credit from a vendor must have the written signature of the Associate Director of Automotive Services or the Director of Fleet Management. Only ethical business practices will be acceptable for inventory adjustments.

Vendor Contract:

Each year, a parts contract will need to be entered. Sometimes, the Parts Associate or Administrative Assistant will have the responsibility of gathering information for Procurement to administer the final touches on entering into an official agreement with a vendor. Following the terms of the contract is required.

Currently, we have the following avenues to purchase parts:

1) Primary Contract Vendor: This contracted vendor should ***always be called first*** to verify if they can supply the part or supplies needed.
2) Secondary Contract Vendor: This contracted vendor should be called if the Primary Contract Vendor can't supply the item at all, can't get the item to us in an appropriate time frame for the job to be completed, or if they are out of stock. The ONLY time price is a factor is if there happens to be a significant price difference, in which case Procurement Services needs to be made aware so they can address this with the Primary Contract Vendor.
3) Parts Associate will be required to know of cooperative and other approved state contracts.
4) The Director of Procurement has approved the purchase of "Manufacture Specific Parts Purchases." When manufacture-specific parts are "needed," authorization has been approved to purchase from the manufacturer. The use of the "Manufacture Specific Parts" is considered "secondary" and only when the "Primary Vendor" is unable to supply the manufactured part.
5) The parts Associate must do the following:
    a. Contact the Primary Contract Vendor or review the vendor's online system and request the following information:
        i. Availability of the product
        ii. Lead time of the product
        iii. Price of the product
            1. Any purchases outside of these steps must have prior approval (email) from Procurement for each purchase (exception: Manufacture Specific Parts). Prior email approvals will not be accepted.
                a. When emailing Procurement to request permission to purchase off-contract, please specify the reasoning (i.e. "This product is not offered by any contract vendors or secondary vendor", "I need the product tomorrow and the contract vendor's lead time is too far out", etc.)

    b. NOTE: ALL PURCHASES MADE OUTSIDE OF THE "PRIMARY CONTRACT VENDOR" MUST BE LOGGED ON A SPREADSHEET WITH THE FOLLOWING FIELDS (this report needs to be available on UA Box for the Associate Director of AS to review on the 1st Monday of each month).
        i. DATE OF PURCHASE
        ii. ITEM #
        iii. ITEM DESCRIPTION
        iv. QUANTITY
        v. COST
        vi. REASON FOR PURCHASE
        vii. IF APPROVAL WAS NEEDED AND WHO GAVE THE APPROVAL

NOTE: If, for any reason, our suppliers change, it is not an approval or authorization to purchase additional quantities of inventory before the contract expires. It is business as usual, and any exceptions must be approved by the Director of Fleet Management. Continue to follow the "Replenishment" guidelines as it relates to re-order points.

All Inventory Items:

All inventory items, no matter the cost or classified as new, used, equipment, or survey units, will be accounted for. The following will be required of the Parts Associate of all inventory items:

- These items must be on a documented report for verification with the following:
    - Issued a specific item number (SKU)
        - Used, survey, and equipment should be maintained within M5.
    - Description of item
    - Model number, if known
    - Arrival date
    - Reason for the item being maintained.
    - Vendor information, if known
    - Estimated cost.
- All equipment, including lifts, tools, etc., is required to have a specific item number assigned and certification/inspection dates documented and required compliance of certification/inspections up to date. These items should be identified as "Component" within M5.
- Cycle count will be semi-annual for non-stock and equipment items.
    - Note: **This cycle count does not take the place of a safety check**

Opening and Closing work orders:

The employee in the front office, Automotive Parts Associate, Automotive Services Manager, and/or Associate Director of Automotive Services creates a new work order for repairs. Generally, the Automotive Service Manager will assign the work order to an Automotive Tech I or II. The work orders are placed in a file box in the AS hallway for the Automotive Tech I or II to receive and the Automotive Service Manager assign the work order to an Automotive Tech I or II. The Automotive Tech I or II will be responsible for the timely and correct repairs or make suggestions for complex repairs to complete the work order to the Automotive Service Manager and/or Associate Director of Automotive Service.

Work Order Completion:

<u>Step 1:</u> Work Order assigned to (Automotive Parts Associate):

- ➢ The Automotive Tech I or II gives the work order to the Automotive Parts Associate to pull or order stock parts or non-stock parts.
- ➢ The Automotive Parts Associate will bill the parts for the work order and then give the work order back to Automotive Tech I or II.
    - Note: Parts must be applied to the work order before being given to the Automotive Tech I or II.
- ➢ The Automotive Tech I or II records their notes on the work order when repairs are completed and returns the work order back to the Automotive Parts Associate immediately at completion.
- ➢ The Automotive Parts Associate will be required to add correct parts, commercial charges, and labor at the Automotive Services established rate structure to the work order.

Note: Once the using department has picked up the vehicle, the Automotive Parts Associate has ***24 business hours to complete*** his/her part of the work order and be passed to the next step (Automotive Service Manager for review).

Step 2: Work Order assigned to (Automotive Service Manager):

- The Associate Manager of Automotive Services reviews each work order/job(s) and verifies and/or adds any parts (stock and/or non-stock parts), commercial charges, and labor to the work order and checks the work order for proper billing and notes. Then, if everything is correct, they pass the work order to the next step (Associate Director of Automotive Services). **Note:** Once the work order has been assigned to the Automotive Service Manager, the ***Automotive Service Manager has 24 business hours*** to complete his/her part of the work order and be passed to the next step (Associate Director for review).

Step 3 (Final Step): Work Order assigned to (Associate Director of Automotive Service):

- The Associate Director of Automotive Services reviews each work order/job for accuracy.
- Adjust based on the accuracy of the work order. He/she can adjust accordingly based on accuracy or customer service.
- Must ensure that parts, commercial parts, labor, and professional documentation of the Automotive Tech I or II notes are visible on the work order.
- Ensure all inventory items are accounted for within the M5 Inventory system.

Note: Once the work order has been assigned to the Associate Director, the ***Associate Director has 48 business hours*** to complete his/her part of the work order and then closes the work order.

Note: Errors (positive/negative), such as inaccurate labor time/rates, inaccurate parts (stock or non-stock), or inaccurate commercial charges, must be sent to Administrative Assistant II of Fleet Management for documentation. Provide the description, part number, invoice number, labor, commercial charges, etc., of the list of errors. This should be done daily.

Hazard Communication Standard (Safety Data Sheets):

The Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)), revised in 2012, requires that the chemical manufacturer, distributor, or importer provide Safety Data Sheets (SDSs) (formerly MSDSs or Material Safety Data Sheets) for each hazardous chemical to downstream users to communicate information on these hazards. The information in the SDS is essentially the same as the MSDS, except now the SDSs must be presented in a consistent, user-friendly, 16-section format. This brief provides guidance to help workers who handle hazardous chemicals become familiar with the format and understand the contents of the SDSs.

The Parts Associate is responsible for maintaining accurate and up to date SDS for every item within Automotive Services (including the containment room) and having the information readily available for everyone as well as ensuring that the proper PPE is available for these items.

Limit the amounts of new and hazardous materials stored at AS to minimize the risk and size of spills. Place materials out of the foot and vehicle traffic lane to prevent accidental spills. Store materials indoors and away from exterior doors and sewer drains to avoid accidental environmental releases.

When you move or dispense materials, handle them properly to prevent spills. Carry one item at a time when you are moving or dispensing chemicals. Place multiple items in a rolling cart or tray instead of trying to carry them all at once. Check the containment room and dispensing areas for signs of leaks.

To prevent spills, use good storage techniques. Materials must be placed in compatible groups and appropriate storage containers. Securely seal materials before storage. Keep materials sheltered and in the proper environment. Post material storage areas with spill response procedures and emergency phone numbers.

The Parts Associate must check all chemical locations daily (including the containment building outside). If you cause or find a spill, immediately notify the Associate Director of AS and other staff in the area. If the spilled material is flammable or volatile, shut off flame sources and air the area out, if it is safe to do so. If possible, protect floor drains or outside access areas from the spill. Cone or rope off the spill area to prevent further access and potential exposures. If you or another member were exposed to the spilled material, use emergency eyewashes or showers for at least 15 minutes, get to a well-ventilated area, and seek medical attention if needed.

The Parts Associate is responsible for identifying and correcting the spill immediately with the approval of the Director of Automotive Services. Repeated spills must be eliminated. Contact for Environmental Health and Safety 205-348-5905.

Note: There should be an immediate plan to clean up the spill no matter the size of the spill.

As you can see, many factors are involved in The University of Alabama Parts Room when it comes to inventory. Many challenges come with communication, organization, competent forecasting, staying involved, and compliance with the above outlined procedures, so we never have to deal with a lack of inventory, a surplus of inventory, or safety concerns.

Recap of Monthly and Weekly Spreadsheet Requirements:

1st Monday of Each Month, the following spreadsheets should be updated in UA Box:

- Obsolete, Overstock, and No Movement Inventory Items
- Purchases Made Outside of the Primary Contract Vendor
- Negative Quantity Issued Inventory
- Damage Parts List

Weekly, the following must be updated in UA Box:

- Spot Checks and Cycle Counts
    - All AS Inventory Items

Work Orders and Jobs must be closed as stated above.

Note: If a vehicle has left the shop and the work order/jobs have not been completed and closed in 4 business days (in M5), starting on the 5th business day, this task is considered ***non-compliant***.

About UA Box:

UA Box is a valuable tool for sharing and collaboration – folders and documents may be shared among users for distributed editing and viewing. UA Box has robust permissions settings, allowing collaborators to be viewers or editors, and it keeps revisions of documents so that our work is never lost.

Accessing UA Box:

Log into your UA MyBama account. Click on the "Employee" tab. Search under the "Administrative System" area until you find "UA-Box," then proceed to the file "Automotive Services – Parts Room." This will be the area to upload document.