

COFE+ Troubleshooting & Asset Care Guide

A field-ready manual for rapid diagnostics, issue isolation, and preventive asset care to maintain high uptime and consistent beverage quality.

This pack is designed for operators, service teams, and deployment partners.

It consolidates fault diagnostics, corrective actions, and maintenance workflows into one customer-facing reference.

Introduction: The Philosophy of Care

Your COFE+ robotic kiosk is a masterpiece of industrial engineering, designed for exceptional robustness in high-frequency, 24/7 commercial operations. However, even the most resilient machinery is subject to the laws of entropy.

The distinction between a machine that merely "functions" and one that consistently delivers "peak performance" over its lifecycle lies entirely in the details of daily care and swift, accurate troubleshooting. This guide is your comprehensive resource for both.

- **Part A: Troubleshooting** provides the tools to rapidly diagnose and resolve operational issues, minimizing downtime.
- **Part B: Asset Care** outlines the preventative maintenance protocols to ensure longevity, quality, and asset value.

By mastering this guide, you are not just maintaining a machine; you are upholding a standard of excellence and ensuring a world-class coffee experience in every cup.

Part A: Troubleshooting

When Things Go Wrong

This section is designed for rapid problem resolution. Always start with Chapter 1 for the fastest possible solution.

Chapter 1: Quick Reference - Your First 60 Seconds

Before diving deep, consult this table. It maps the most common symptoms to their most likely causes and provides an immediate action to try first. This resolves over 80% of common issues.

Table 1.1: Quick Troubleshooting Matrix

SYMPTOM / OBSERVATION	POTENTIAL CAUSE(S)	IMMEDIATE ACTION (TRY THIS FIRST)
Screen is blank or unresponsive	Power interruption / System freeze	1. Check Power: Ensure the main power switch is ON and the power cable is secure. 2. System Reboot: Press and hold the small, recessed reboot button for 5 seconds.
"Error Code" displayed on screen	Specific system fault	1. Look Up Code: Immediately go to Chapter 2: Understanding Error Codes and find the specific code for step-by-step instructions.
Coffee tastes weak or watery	Grind issue / Low beans / Needs cleaning	1. Check Beans: Visually inspect the bean hopper to ensure it is not empty. 2. Run Cleaning: Initiate a standard automated cleaning cycle (See Part B, Chapter 4).

SYMPTOM / OBSERVATION	POTENTIAL CAUSE(S)	IMMEDIATE ACTION (TRY THIS FIRST)
Milk is not frothing or is watery	Air in milk line / Protein buildup	1. Check Tube: Ensure the milk intake tube is fully submerged and the connection is tight. 2. Deep Clean Spout: Perform a weekly deep clean on the magnetic spout (See Part B, Chapter 5).
Robotic arm is not moving or is stuck	Servo disengaged / Obstruction	1. Calibrate Arm: Perform the Robotic Arm Calibration procedure (See Part B, Chapter 6). 2. Check for Obstructions: Visually inspect the arm's path for any foreign objects.
Cups or lids are not dispensing	Jammed consumable / Misaligned turret	1. Inspect for Jams: Open the consumable bay and remove any visibly damaged or jammed cups/lids. 2. Reset Turret: Manually rotate the cup turret to ensure it clicks back into the home position.
"Water Level Low" warning persists	Empty tank / Sensor error	1. Replace Tank: Replace the water tank with a full one. 2. Confirm Sensor: Ensure the corresponding sensor light illuminates after placing the new tank.
Machine is making unusual noises	Grinder blockage / Misaligned part	1. Stop Operation: Cancel the current order. 2. Isolate Noise: Try to identify the source of the noise (e.g., grinder, arm, pump) and contact support with this information.

Chapter 2: Understanding Error Codes

When the system detects a specific fault, it will display an error code. This code allows for precise and rapid diagnosis. Find your code in the table below and follow the prescribed solution steps in order.

Table 2.1: Error Code Index & Solutions

CODE	SYSTEM	MEANING & SEVERITY	SOLUTION STEPS
E-101	Brewer	Critical: Brew Pressure Low. The system cannot build enough pressure for proper espresso extraction.	1. Run Cleaning Cycle: This often clears minor blockages. 2. Check Water: Ensure the water tank is full and properly connected. 3. Contact Support: If the problem persists after two attempts.
E-102	Brewer	Warning: Brew Temperature Low. The water is not hot enough for extraction.	1. Wait: Allow the machine 5-10 minutes to heat up, especially after a reboot. 2. Reboot: Perform a system reboot. 3. Contact Support: If the temperature does not rise.

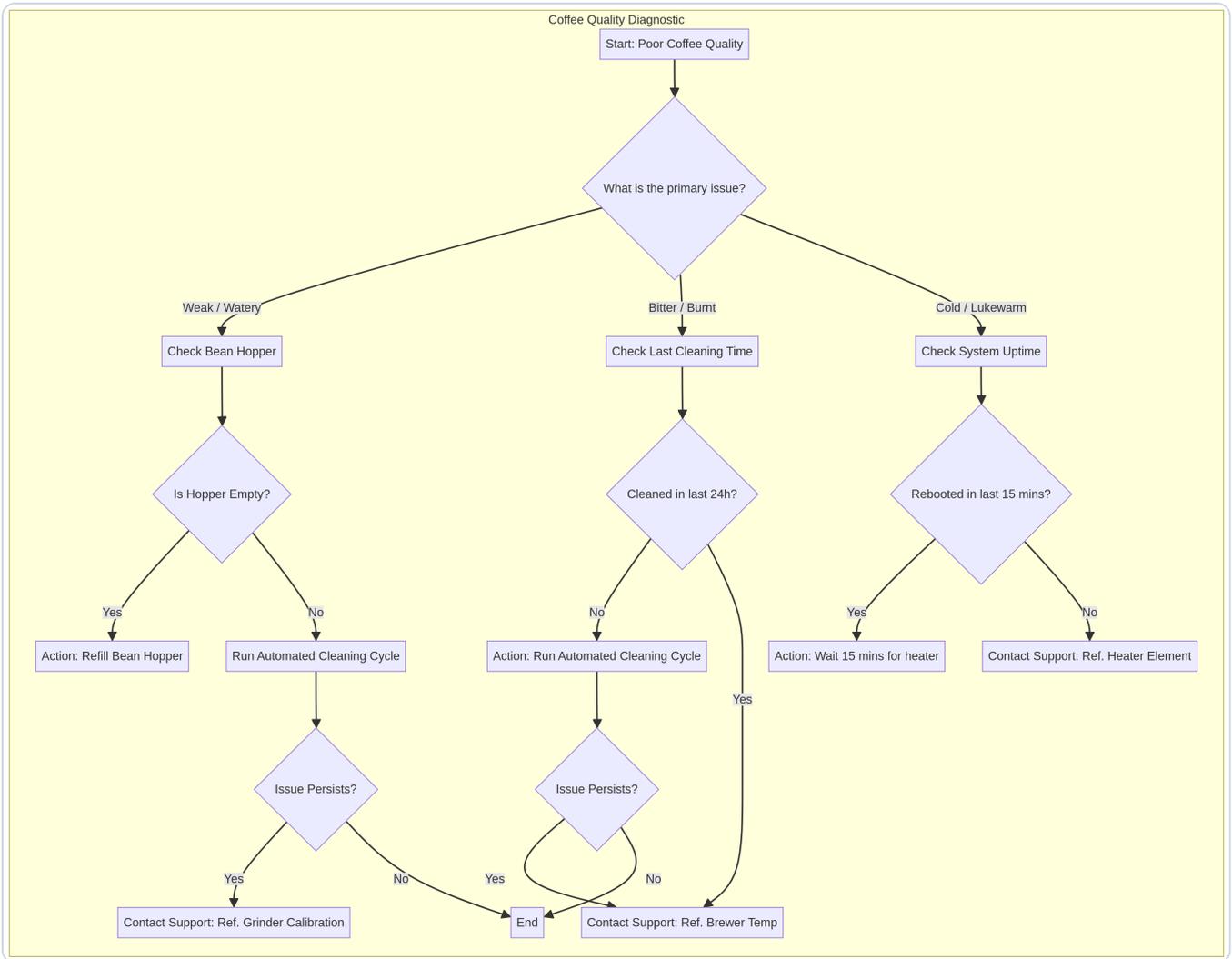
CODE	SYSTEM	MEANING & SEVERITY	SOLUTION STEPS
E-201	Grinder	Critical: Grinder Motor Blocked. The grinder is physically jammed.	1. Cancel Order: Immediately cancel any active order. 2. Inspect Hopper: Check for foreign objects (e.g., stones, plastic) in the bean hopper. 3. Contact Support: DO NOT attempt to manually unjam the grinder blades.
E-301	Milk System	Warning: Milk Pump Flow Error. The system detects air or a blockage in the milk line.	1. Check Milk Pouch: Ensure the milk pouch is not empty and is correctly loaded in the cassette. 2. Purge Line: Dispense "Milk Only" for 5 seconds to clear air bubbles. 3. Clean Spout: Perform a deep clean of the milk spout.
E-401	Robotic Arm	Critical: Axis Calibration Failed. The arm cannot find its home position.	1. Clear Path: Ensure there are no obstructions in the arm's movement path. 2. Manual Calibration: Follow the Robotic Arm Calibration procedure in Part B, Chapter 6. 3. Contact Support: If calibration fails twice.
W-001	General	Info: Water Level Low. The water tank is nearly empty.	1. Prepare New Tank: Get a new water tank ready. The machine can typically complete 1-2 more drinks before stopping.
W-002	General	Info: Coffee Grounds Full. The waste bin for used coffee grounds is full.	1. Empty Bin: Follow the procedure in Part B, Chapter 6 to empty the waste bin.
W-003	General	Info: Wastewater Full. The wastewater bucket is full.	1. Empty Bucket: Follow the procedure in Part B, Chapter 6 to empty the wastewater bucket.

Chapter 3: Step-by-Step Diagnostics

If the Quick Reference and Error Code tables do not resolve your issue, use these diagnostic flowcharts to trace the problem to its root cause. Follow the path that matches your issue.

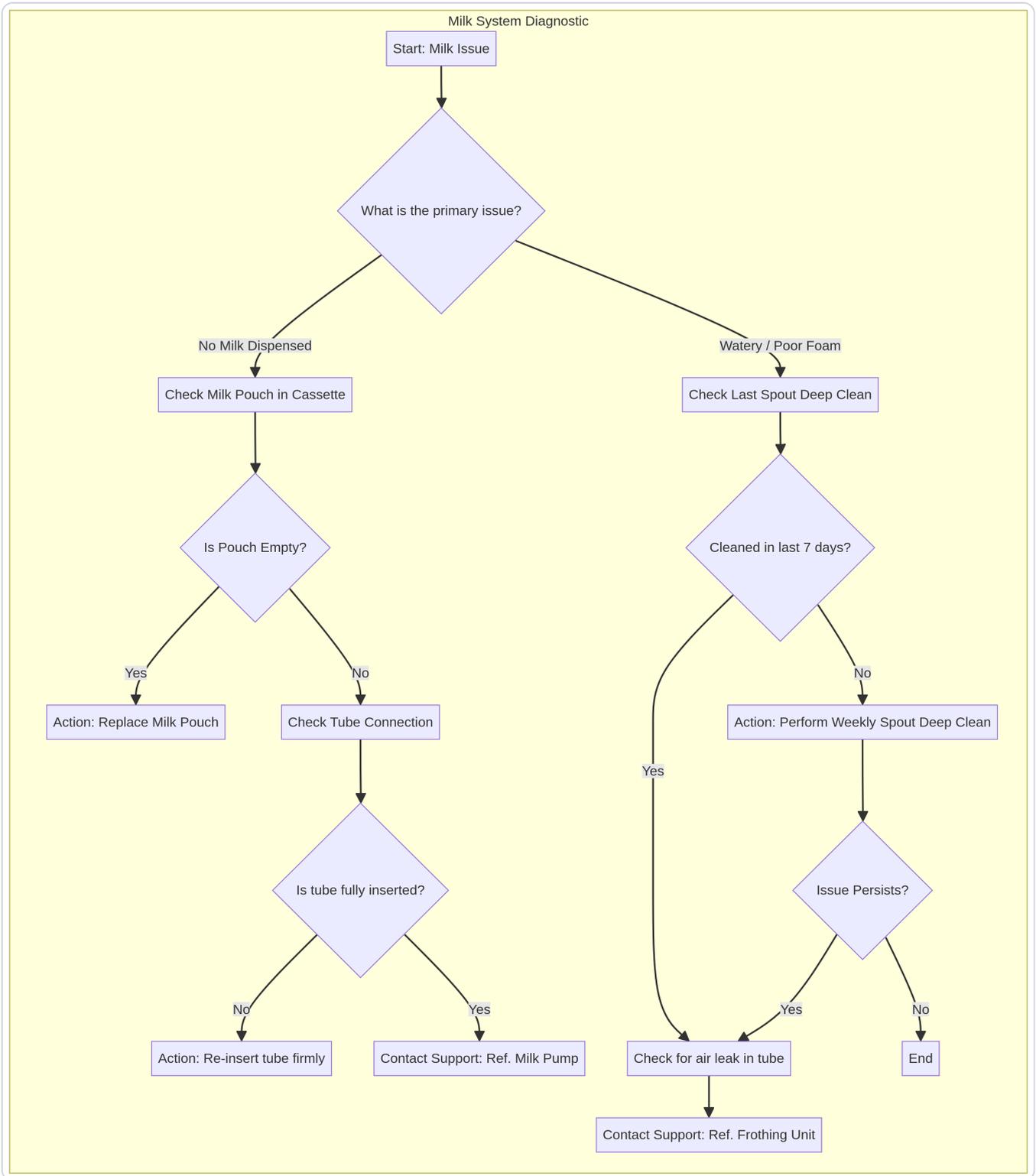
3.1 Flowchart: Coffee Quality Issues

Use this flowchart if the final coffee product is unsatisfactory (e.g., weak, bitter, cold, or incorrect volume).



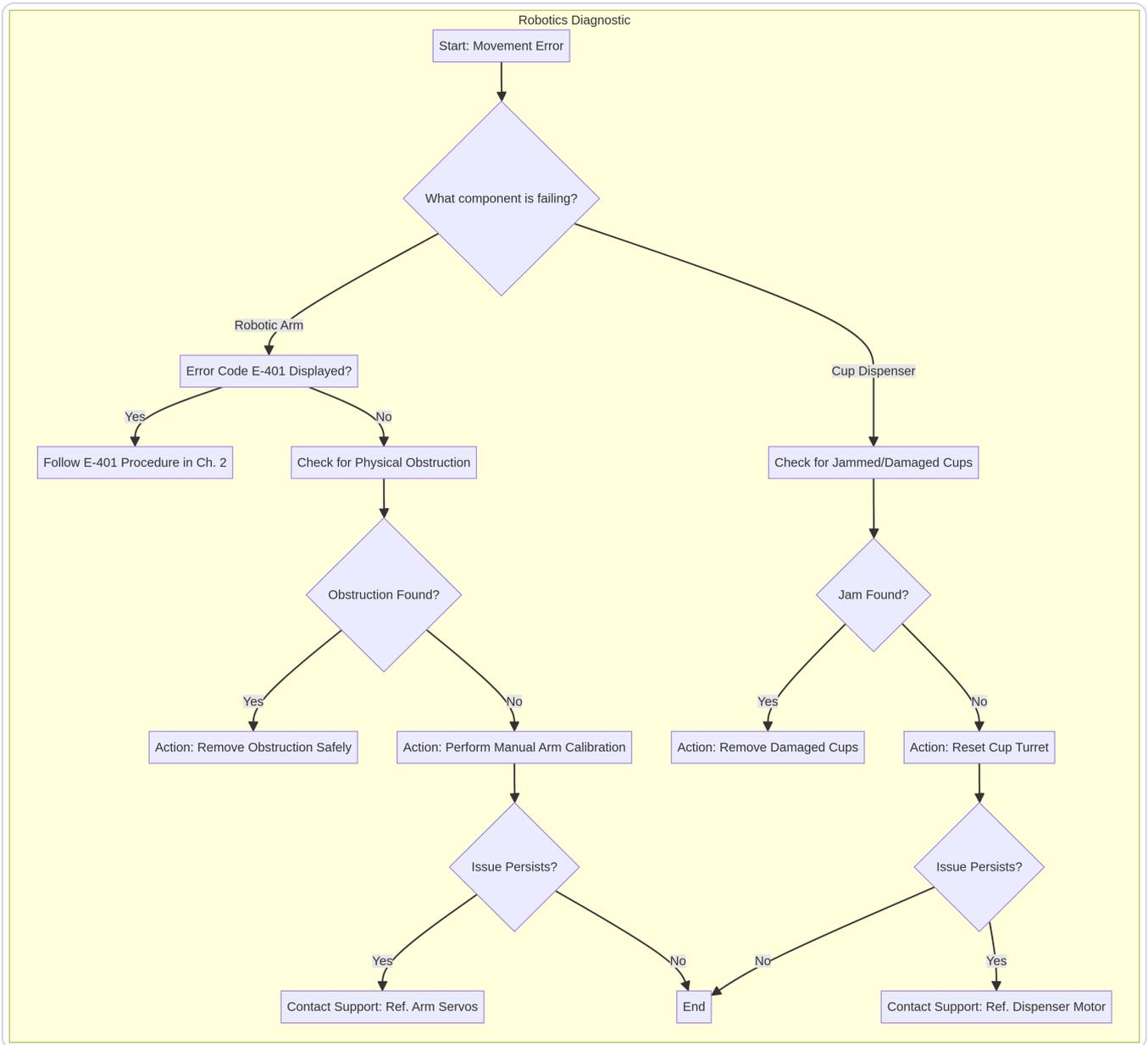
3.2 Flowchart: Milk Frothing & Dispensing Issues

Use this flowchart if there are problems with milk, such as poor foam quality, incorrect temperature, or no dispensing.



3.3 Flowchart: Robotic Arm & Dispensing Issues

Use this flowchart for any physical movement errors, including the robotic arm, cup dispenser, or lid dispenser.



Part B: Asset Care

Keeping It Perfect

This section outlines the preventative maintenance schedule. Consistent care is the key to maximizing uptime and asset lifespan. The following are checklists for daily and weekly tasks, with detailed procedures in the subsequent chapters.

Chapter 4: Daily Care Protocol (15-Minute Routine)

Perform these tasks at the beginning of every operational day.

- **4.1 Morning Prep & Safety**
- Verify you have the essential toolkit (gloves, masks, cleaning agents).
- Put on required PPE (gloves, mask).
- **4.2 Automated Cleaning Cycle**

- Initiate the 10-minute deep-cleaning cycle via the screen interface.
- Ensure one cleaning tablet is inserted and the cleaning tank is filled correctly.
- **4.3 Spout & Surface Sanitization**
- Rinse the main beverage spout with hot water.
- Sanitize the spout and all external surfaces with alcohol wipes.
- **4.4 Waste Management**
- Empty the wastewater bucket.
- Empty the coffee grounds bin.
- **4.5 Consumables & Fluids Check**
- Visually check levels of coffee beans, milk, powders, and syrups.
- Check water tank level.
- Restock cups and lids as needed.
- **4.6 Quality Assurance Test**
- Order one **Iced Mocha** to test all subsystems (Espresso, Milk, Powder, Syrup, Ice) simultaneously.
- Verify the drink quality meets standards.
- **4.7 Digital Validation**
- Log in to the Maintenance App.
- Enter all precise refill quantities to ensure real-time inventory accuracy.

Chapter 5: Weekly Care Protocol (30-Minute Routine)

Perform these tasks once per week, in addition to all daily tasks.

- **5.1 All Daily Care Tasks**
- Complete the full Daily Care Protocol first.
- **5.2 Brewer Spout Deep Clean**
- Disengage the Magnetic Quick-Release Mechanism on the spout.
- Soak all components in warm, soapy water for 5 minutes.
- Use a brush to gently remove any protein or syrup buildup.
- Rinse thoroughly and reassemble.
- **5.3 Coffee Bean Hopper Cleaning**
- Empty any remaining beans from the hoppers.
- Wipe the interior surfaces with alcohol wipes to dissolve and remove coffee oil residue.
- **WARNING:** Do not use water to clean the hoppers.
- **5.4 Powder & Syrup System Flush**
- **Powder:** Replace the powder pipe set with a clean, sanitized spare. (Clean the old set offline).
- **Syrup:** Submerge syrup suction tubes in hot water and activate the pump until the discharge runs clear.

Chapter 6: Detailed Maintenance Procedures

This chapter provides detailed, step-by-step instructions for the tasks mentioned in the checklists. These procedures are adapted from the original Asset Care guide for clarity and directness.

6.1 Water System: Tank Replacement

1. **Remove Seal:** Tear the dust seal from the new water barrel cap. **WARNING:** Do not remove the inner white cap.
2. **Sanitize Tube:** Retrieve the intake tube and thoroughly wipe its entire surface with an alcohol wipe.
3. **Insert & Connect:** Insert the sanitized tube vertically into the center valve of the barrel cap until it reaches the bottom.
4. **Position & Verify:** Place the barrel in its designated bay. Confirm that the corresponding blue **Sensor Light** illuminates, indicating the system recognizes the new tank.

6.2 Milk System: Pouch Replenishment

1. **Load Cassette:** Place a new milk pouch flat inside the cassette. **Critical Check:** Ensure both bottom corners of the pouch are fully expanded and not folded.
2. **Incision & Insertion:** Create a small, clean incision at the outer corner of the pouch. Insert the sanitized intake tube into the inner fluid reservoir. **WARNING:** The pouch has a dual-layer structure. **DO NOT** insert the tube between the outer film and the inner liner.
3. **System Prime:** On the service screen, select the "Milk" icon to engage the pump. Once a steady stream of milk flows out, immediately stop the pump. This removes air from the line.

6.3 Robotic Arm: Manual Calibration

1. **Power Down Servos:** On the main control panel, toggle the **Robotic Arm** switch to the **OFF** position.
2. **Zero-Positioning:** Gently and manually guide the arm to its designated "Home Position" (the gripper should be facing the cup dispenser).
3. **Reactivate System:** Toggle the **Robotic Arm** switch back to the **ON** position. The arm will lock its servos and complete a startup self-check.

6.4 Brewer System: Automated Cleaning

1. **Insert Tablet:** Access the brewer unit. Insert exactly one (1) Espresso Cleaning Tablet into the designated intake slot.
2. **Prepare Solution:** Dispense 30-40ml of the approved Cleaning Concentrate into the Black Cleaning Tank and mix with clean water.
3. **Submerge Tubes:** Fully submerge both milk intake tubes into the cleaning solution. This is critical to prevent the pumps from drawing in air.
4. **Execute Cycle:** From the service menu on the screen, select "Deep Clean" and initiate the 10-minute automated cleaning cycle.

6.5 Ingredient & Consumable Management

- **Coffee Bean Hoppers:** Wipe the interior with alcohol wipes to dissolve oil residue. **Do not wash with water.** (Summer: every 3 days. Winter: once a week).

- **Powder Canisters:** Before refilling, gently shake the canister to loosen any compacted powder. Every 7-14 days, swap the pipe set with a clean spare.
- **Syrup System:** To clean, submerge the suction tube in hot water and activate the pump from the service menu until the discharge runs clear.
- **Cup Turret:** Disengage the locking knob and rotate the dispenser to load new cup stacks. Remove any damaged or deformed cups.
- **Lid Magazine:** Load new lids from the top down, ensuring they align perfectly within the magnetic guide rails.

6.6 Waste Management

1. **Wastewater:** Carefully remove the wastewater bucket. Empty it completely. When reinstalling, ensure the handle is facing outward for easy removal.
 2. **Coffee Grounds:** Before removing the bin, gently shake the connected chute to clear any potential blockages. Remove, empty, and replace the bin.
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