

MAINTENANCE TECHNICAL SUPPORT CENTER
HEADQUARTERS MAINTENANCE OPERATIONS
UNITED STATES POSTAL SERVICE



Maintenance Management Order

SUBJECT: Operational & Preventive Maintenance
Guidelines for Low Cost Universal Sorters
(LCUS)

DATE: April 21, 2015

NO: MMO-045-15

TO: Maintenance Managers All LCUS Sites

FILE CODE: B3B

pmur:mm14133aa

Operational Tourly Checklist, Item 7, substeps 3.h, 3.i, 3.j, and 3.k have added information for checking the D& R label and Scale check.

This Maintenance Management Order (MMO) provides Operational and Preventive Maintenance Guidelines for the Low Cost Universal Sorter System (LCUS). This bulletin applies to Acronym LCUS, Class Code BA.

The workhours represented in this MMO reflect the maximum workhours required to maintain the equipment. Given local conditions, management may modify task frequencies.

The minimum maintenance skill level required to perform each task is included in the Minimum Skill Level column of each checklist. This does not preclude higher level employees from performing any of this work.

WARNING

Various products requiring Material Safety Data Sheets (MSDS) may be utilized during the performance of the procedures in this bulletin. Ensure the current MSDS for each product used is on file and available to all employees. When reordering such a product, it is suggested that current MSDS be requested. Refer to MSDS for appropriate personal protective equipment.

WARNING

The use of compressed or blown air is prohibited. An alternative cleaning method such as a HEPA filtered vacuum cleaner, a damp rag, lint-free cloth, or brush must be used in place of compressed or blown air.

WARNING

Steps contained in this bulletin may require the use of Personal Protective Equipment (PPE). Refer to the current Electrical Work Plan (EWP) MMO for appropriate PPE and barricade requirements.

Direct any questions or comments concerning this bulletin to the MTSC HelpDesk, online at **MTSC>HELPDESK>Create/Update Tickets** or call (800) 366-4123.



Robert E. Albert
Manager
Maintenance Technical Support Center
HQ Maintenance Operations

- Attachments
1. Summary of Workload Estimate
 2. Master Checklist 03-LCUS-BA-001-M – LCUS PM
 3. Master Checklist 09-LCUS-BA-001-M – LCUS Operational Maintenance

ATTACHMENT 1

**SUMMARY OF
WORKLOAD ESTIMATE
FOR LOW COST UNIVERSAL SORTER**

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**SUMMARY
WORKLOAD ESTIMATE
FOR LOW COST UNIVERSAL SORTER**

Days	Routine Servicing (hrs/yr)	Repair* (hrs/yr)	Total Servicing & Repair Time (hrs/yr)	Non-Productive Time ** (hrs/yr)	Total Servicing Per Machine (hrs/yr)	OPERATIONAL MAINTENANCE + TOTAL SERVICING		
						1 TOUR	2 TOURS	3 TOURS
5 Day	251.23	75.37	326.60	32.66	359.26	679.93	1,000.59	1,321.26
6 day	251.23	75.37	326.60	32.66	359.26	744.06	1,128.86	1,513.66
7 day	251.23	75.37	326.60	32.66	359.26	808.19	1,257.13	1,706.06

NOTES

*Repair estimates based on 30% of servicing.

**Based on 10% of total servicing and repair.

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ATTACHMENT 2

LOW COST UNIVERSAL SORTER MASTER CHECKLIST

03-LCUS-BA-001-M

Time Total: See Attachment 1

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	3	L	C	U	S			B	A	0	0	1	M
Equipment Nomenclature Low Cost Universal Sorter		Equipment Model						Bulletin Filename mm14133			Occurrence			

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.

SAFETY STATEMENT	1.	<p>COMPLY WITH ALL SAFETY PRECAUTIONS. Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shut down and lock out this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment.</p> <p>THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods cannot be used. Report safety deficiencies to your supervisor immediately upon detection.</p> <p>WARNING FOR EWP/PPE: Steps contained in this bulletin may require the use of Personal Protective Equipment (PPE). Refer to the current Electrical Work Plan (EWP) MMO for appropriate PPE and barricade requirements.</p>	1	ALL			
		<p style="text-align: center;">WARNING</p> <p>Be cautious when working around or on equipment when power has been applied.</p> <p style="text-align: center;">WARNING</p> <p>If electrical sources are energized, procedures must be performed following guidance provided in current EWP MMO.</p>					
SCALES	2.	<p>Verify Scale Calibration. In accordance with manufacturer's recommendation or local procedures, on each induction station, verify:</p>	15	10			W

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		<ol style="list-style-type: none"> Scale calibration Proper operation of scale unit 					
PHOTOSWITCH ACCUSIGHT PHOTOELECTRIC SENSORS	3.	Sensor Alignment. <ol style="list-style-type: none"> Inspect sensor alignment to ensure proper operation. Inspect LED to ensure proper operation. Inspect cabling and connectors for tightness. Repeat for remaining sensors. 	24	9			M
LCUS COMPUTER	4.	Test Printer. Print a test page to test the performance of the printer and clean as needed.	1	9			M
PUSHERS	5.	Check Pneumatic Pusher Diverters. On each pusher, verify air pressure is between 35 and 45 PSI.	5	9			M
CONVEYOR	6.	Inspect Rollers. <ol style="list-style-type: none"> Verify all carrying rollers are turning. When non-rotating carrying rollers are found, inspect the cam on the related pressure roller for proper seating on the support rail. 	2	9			M
LCUS COMPUTER	7.	Backup System Config Files. <ol style="list-style-type: none"> Make a copy of the "PLC Programs" directory. Make a copy of the "Sorter Software" directory. Store backup copies in accordance with local procedures. 	10	10			M
LCUS COMPUTER	8.	Backup System, TOC, & Historical Report Data. <ol style="list-style-type: none"> Double click the MSSQL Server icon in the bottom right of the desktop display. From the SQL Server Services Manager, click the red "Stop" button to stop the SQL Server application. Copy the "C:\Program Files\Microsoft SQL Server\MSSQL\Data" directory. 	10	10			M

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		<p>4. From the SQL Server Services Manager, click the green "Start/Continue" button to restart the SQL Server application.</p> <p>5. Store backup copies in accordance with local procedures.</p>					
LCUS COMPUTER	9.	<p>Check UPS.</p> <p>Test performance of backup battery by pressing the test button (normally the "ON" button).</p>	2	9			Q
CONVEYOR	10.	<p>Inspect Guide Rails.</p> <p>Verify all bracket fasteners are tight.</p>	12	7			Q
LCUS COMPUTER	11.	<p>Backup System Image HDD.</p> <p>1. Using the instructions applicable to the installed backup software (i.e. Symantec Ghost 2003); create an image of the system hard drive.</p> <p>2. Store system image disk for disaster recovery in accordance with local policy.</p>	120	10			Q
LCUS COMPUTER	12.	<p>Test Spare Computer.</p> <p>Perform an operational test the spare LCUS computer in accordance with local procedures.</p>	120	10			Q
POWER SUPPLY	13.	<p>Check Input and Output Levels.</p> <p>1. Verify the output voltage, (depending on installed unit).</p> <p>2. Verify the input voltage: 120VAC, 20A.</p> <p>3. Review the manufacturer's information printed on the power supply to determine the specifications of the installed units.</p> <p>a. 24VDC (24-28VDC), 12A (8 Motor PS) or</p> <p>b. 24VDC (24-28VDC), 24A (16 Motor PS) OR</p> <p>c. 48VDC (48-52VDC)</p>	240	10			S
DEVICENET AUXILIARY MODULE	14.	<p>Inspect and Test LEDs.</p> <p>1. Using the information in Section 7.2.3.2 of the LCUS Electrical and PLC Maintenance Manual, test the module LEDs for proper operation.</p> <p>2. Repeat test on remaining modules.</p>	110	10			A

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COMPACTBLOCK I/O	15.	<p>Inspect LEDs.</p> <ol style="list-style-type: none"> Using the information in Section 7.3.3.3 of the LCUS Electrical and PLC Maintenance Manual, ensure the module LEDs are functioning and do not indicate any faults. Repeat inspection on remaining modules. 	10	10			A
I/O CARD	16.	<p>Inspect LEDs.</p> <ol style="list-style-type: none"> Using the information in Section 7.4.3.3 of the LCUS Electrical and PLC Maintenance Manual, ensure the I/O Card LEDs are functioning and do not indicate any faults. Repeat inspection on remaining I/O Cards. 	28	10			A
160 SERIES VFD AND ASSOCIATED DEVICENET ADAPTER MODULE	17.	<p>Inspect LEDs.</p> <ol style="list-style-type: none"> Using the information in Section 7.5.6 of the LCUS Electrical and PLC Maintenance Manual, ensure the VFD LEDs are functioning and do not indicate any faults. Repeat inspection on remaining VFDs. 	118	10			A
LOCKOUT	18.	<p>Perform System Lockout.</p> <p>Power down the machine and lock out power and compressed air as prescribed by the current local lockout instructions.</p>	30	7			W, M, Q, S, K
CONVEYOR	19.	<p>Spot Check Idler Rollers.</p> <ol style="list-style-type: none"> Spot-check roller faces of random 10% of return rollers. Look for excessive wear and build-up of foreign material on roller faces. 	18	7			W
CONVEYOR	20.	<p>Clean, & Inspect Photocell / Proximity Switch Units.</p> <ol style="list-style-type: none"> Remove accumulated dust and foreign material from housings, lenses and reflectors by wiping or brushing. Wrench-test all mounting bolts for tightness. 	21	9			W
CONVEYOR	21.	<p>Inspect Power Rollers.</p> <ol style="list-style-type: none"> Verify shaft bracket for tightness. The shaft should not rotate or vibrate in the bracket or frame. 	30	9			W

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		3. Verify all attachment nuts & bolts are tight.					
PHOTOSWITCH ACCUSIGHT PHOTOELECTRIC SENSORS	22.	<p>Clean and Inspect Sensors.</p> <p>1. Using a dry lint-free cloth, remove all dust and debris.</p> <p>2. Visually inspect for any defects.</p>	21	9			W
SYSTEM OPTICS	23.	<p>Check and clean system optics on all Vitronics Cameras.</p> <p style="text-align: center;">CAUTION</p> <p>The glass used in this system is fragile enough to break if pressure is applied. Wipe very gently.</p> <p style="text-align: center;">CAUTION</p> <p>Do not scratch the glass. Wiping the glass with a dirty cloth can result in very small scratches.</p> <p style="text-align: center;">NOTE</p> <p>Do not wet microfiber cloth. It should not feel wet; otherwise it is too moist and could leave wet spots on the glass. Only a misting of the cloth is required. Optionally, use a locally approved streak-free glass cleaner.</p> <p>1. Check ViCAMssi2-PSOC camera unit glass.</p> <p style="padding-left: 20px;">a. If glass is noticeably covered with dust, wipe the glass with a clean microfiber cloth.</p> <p style="padding-left: 20px;">b. Wipe off any smudges. Use spray bottle with glass cleaner to mist microfiber cloth for wiping away stubborn smudges</p> <p>2. Check LED light grid receiver glass.</p> <p style="padding-left: 20px;">a. If glass is noticeably covered with dust, wipe the glass with a clean microfiber cloth.</p> <p style="padding-left: 20px;">b. Wipe off any smudges. Use spray bottle to mist microfiber cloth for wiping away</p>	30	7			M

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		<p>stubborn smudges</p> <p>3. Check LED light grid transmitter glass.</p> <p>a. If glass is noticeably covered with dust, wipe the glass with a clean microfiber cloth.</p> <p>b. Wipe off any smudges. Use spray bottle with glass cleaner to mist microfiber cloth for wiping away stubborn smudges</p> <p>4. If applicable, check mirror glass.</p> <p>a. If glass is noticeably covered with dust, wipe the glass with a clean microfiber cloth.</p> <p>b. Wipe off any smudges. Use spray bottle with glass cleaner to mist microfiber cloth for wiping away stubborn smudges</p>					
LCUS COMPUTER	24.	<p>Clean Keyboard and Mouse.</p> <p>Wipe clean and vacuum debris. Ensure proper operation.</p>	3	7			M
CONVEYOR	25.	<p>Check Belting (PVC Belt).</p> <p>1. Look and feel for damage to the belt cover and carcass (inner layer).</p> <p>2. Examine top and bottom covers for excessive wear, scuffs, gouging, stripping, cracking, swells, and ply separation.</p> <p>3. Look for excessive wear or tears along belt edges.</p> <p>4. Look for accumulation of dirt or foreign materials on top and bottom surfaces.</p>	14	9			M
CONVEYOR	26.	<p>Check Belt Fasteners.</p> <p>1. Examine all fasteners used in splicing or repairing the belt.</p> <p>2. Look for wear or damage to fasteners.</p> <p>3. Ascertain that they are secure in belt.</p> <p>4. Examine belt for transverse breaks or ply separations.</p>	3	9			M

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CONVEYOR	27.	<p>Clean & Inspect Belting.</p> <ol style="list-style-type: none"> Brush belt or wash with a solution of mild detergent and water to remove accumulated dust and foreign material from pulley contact side of accessible belt areas. Do not permit moisture to enter roller or pulley bearings. 	30	7			M
CONVEYOR	28.	<p>Clean & Inspect Air Operated Devices.</p> <ol style="list-style-type: none"> Remove accumulated dust and foreign material from components by wiping or brushing. Wrench-test all mounting bolts for tightness. Repeat steps 1 and 2 for each air operated device. 	9	9			M
CONVEYOR	29.	<p>Inspect Roller O-Rings.</p> <p>Check for cracked, broken, or elongation occurring in the bands between rollers.</p>	60	7			M
PUSHERS	30.	<p>Inspect Pneumatic Pusher Diverters.</p> <ol style="list-style-type: none"> Verify photo sensor flag is vertical. Verify locking collar is tightened. Verify Photo sensor mount is securely fastened. Verify air cylinder end cushions are adjusted properly to eliminate slamming at end of stroke when actuated. Inspect all components for wear and proper alignment. <p>OR</p> <p>Inspect Electric Pusher Diverters.</p> <ol style="list-style-type: none"> Verify Home Proximity sensor to flag gap, should be 1/4" minimum. Verify side-to-side gap of approximately 1/16" gap on both sides. Inspect all components for wear and proper alignment. 	130	9			M
LCUS COMPUTER	31.	<p>Clean Monitor.</p> <p>Clean Screen with an approved monitor screen</p>	2	7			Q

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Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
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		cleaner and a lint free non-abrasive cloth.					
LCUS COMPUTER	32.	Clean CPU. 1. Open case, and remove dust and debris using HEPA vacuum and soft bristle brush as needed. 2. Ensure all cards and connectors are secure.	20	10			Q
CONVEYOR	33.	Inspect Conveyor. 1. Examine conveyor for worn or loose parts. 2. Check for accumulated dust or other foreign materials. 3. Look and feel for loose or damaged conduit and wiring.	35	9			Q
CONVEYOR	34.	Check Motorized Pulleys. 1. Make certain that shafts at connection end and drive end are free from dirt accumulation. 2. Examine flanges at both ends of pulley for oil leakage. 3. Rotate pulley until embossed arrow on end flange of electrical terminal box is in true vertical position then remove oil filler plug and check oil level.	22	9			Q
PULLEYS	35.	Check Head, Tail, Take-Up & Snub. 1. Examine pulley face for general wear and grooving caused by conveyor belt. 2. Look for build-up of foreign material on pulley face. 3. Examine pulley bearings for wear, dirt, or corrosion. 4. If possible, feel pulley shafts for looseness through bearings. 5. Check bearing stops for proper position.	14	9			Q
SCREW TAKE-UP	36.	Inspect Assembly. 1. Feel to ascertain that take-up frame is securely mounted. 2. Make certain that adequate take-up travel is provided to allow for adjustment as needed	4	9			Q

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		before next inspection.					
CONVEYOR	37.	<p>Check Structural Parts.</p> <ol style="list-style-type: none"> 1. Check conveyor for damage caused by mail jams, vibration, improper loading, or abnormal attrition. These could result in loosened connecting bolts, side panels misaligned, loose hanger rods, belt wipers, and supports. 2. Examine structure for cracked or broken welds. 3. Examine all floor mounted or low clearance conveyor support structures, ladders, walkways, handrails, guards, bracing or any other structural members that might be exposed to or subject to being struck by any Powered Industrial Vehicles (Forklifts, Pallet Jacks, Tow Motors, etc.). 4. Look for damage such as fractured or deformed parts, broken bolts, loose anchor bolts, cracked welds, and loose connections. 	30	7			Q
CONVEYORS	38.	<p>Clean and Inspect.</p> <ol style="list-style-type: none"> 1. Remove dust and accumulated foreign material from conveyor parts by wiping and brushing. 2. Wrench-test all mounting bolts for tightness. 3. Pillow/Flange block bearings are sealed for life and require no lubrication. 	30	7			Q
CONVEYOR	39.	<p>Clean and Inspect Motorized Pulley.</p> <ol style="list-style-type: none"> 1. Remove accumulated dust and foreign material from face of lagged pulley, by brushing, wiping, or washing as appropriate. 2. Inspect for wear or damage to pulley lagging. 	66	9			Q
CONVEYOR	40.	<p>Clean and Inspect, Head, Tail, Take-Up & Snub Pulleys.</p> <ol style="list-style-type: none"> 1. Brush, wipe, or scrape accumulated dust and foreign material from pulley face. 2. Look for wear or damage to pulley face. 	34	7			Q
CONVEYOR	41.	<p>Clean and Inspect Screw Take-Up.</p>	8	9			Q

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		<ol style="list-style-type: none"> Brush and wipe accumulated dust and foreign material from take-up adjusting screws, carriage frame, and other take-up assembly parts. Wrench-test adjusting nuts and frame mounting bolts for tightness. Inspect belt for evidence of improper tension. Lubricate take-up screw with SAE 30-W oil. 					
CONVEYOR	42.	Inspect Taper-Lock Pulley Hubs. <ol style="list-style-type: none"> Wrench-test hub mounting screws for tightness. Look for damage to hubs and shafts, and for broken or missing screws. 	6	9			Q
CONVEYOR	43.	Clean & Inspect Bearing Blocks. <ol style="list-style-type: none"> Wrench-test bearing block mounting bolts for tightness. Tighten as required. Wrench-test all setscrews in bearing collars for tightness on pulley shaft. Tighten as required. Wipe off exterior of sealed bearings. 	18	9			Q
CONVEYOR	44.	Clean & Inspect Gear Reducers. <ol style="list-style-type: none"> Remove accumulated dust and foreign material from housing. Inspect for oil leakage. Wrench-test all mounting bolts for tightness. 	5	9			Q
CONVEYOR	45.	Clean & Inspect V-Belt Drive. <ol style="list-style-type: none"> Remove guard. Remove accumulated dust and foreign material from belt & sheaves and inspect for wear. Check belt for proper tension. Wrench-test sheave setscrews and feel keys and sheaves for tightness on shaft. 	5	9			Q

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CONVEYOR	46.	Lubricate Chain Roller. Brush any SAE 30 motor oil along the length of the chain. (Alternate Method: remove chain and soak in SAE 30 weight oil for 1 hour, reinstall.)	15	7			Q
POWER SUPPLY	47.	Clean Power Supply Enclosures (All). 1. Using a dry lint-free cloth and vacuum, remove any dirt or debris from the enclosure. 2. Repeat task on all remaining Power Supply Enclosures.	28	7			S
POWER SUPPLY	48.	Tighten Power Supply Connections (All). 1. Check for loose wires or fittings, tighten as necessary. 2. Repeat task on all remaining power supplies.	35	9			S
DEVICENET AUXILIARY MODULE	49.	Clean and Inspect Modules. 1. Using a dry lint-free cloth and vacuum, remove any dirt or debris from the module. 2. Inspect wires and connectors for defects and tightness.	38	10			S
COMPACTBLOCK I/O	50.	Clean and Inspect Modules. 1. Using a dry lint-free cloth and vacuum, remove any dirt or debris from the module. 2. Inspect wires and connectors for defects and tightness.	65	10			S
I/O CARD	51.	Clean and Inspect Cards. 1. Using a dry lint-free cloth and vacuum, remove any dirt or debris from the I/O Cards. 2. Inspect wires and connectors for defects and tightness.	45	10			S
160 SERIES VFD AND ASSOCIATED DEVICENET ADAPTER MODULE	52.	Clean and Inspect Module. 1. Using a dry lint-free cloth and vacuum, remove any dirt or debris from the VFD and associated Devicenet Adapter Module. 2. Inspect wires and connectors for defects and tightness.	25	10			S

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CONVEYOR	53.	<p>Change Motorized Pulley Oil.</p> <p>With disconnect locked out,</p> <ol style="list-style-type: none"> 1. Disconnect the motor leads from the terminal board, 2. Loosen the setscrews and remove the junction box. 3. Relieve screw take-up to loosen belt and remove pulley from conveyor mountings. 4. Remove drain plug and seal washer and remove oil with suction pump. 5. With pulley in the horizontal level position, rotate the pulley until the embossed arrow on the drive end is pointing up. 6. Refill with EP100 (Mobil SHC-634 or equivalent) synthetic oil to level of the oil fill hole. 7. Re-install fill-hole plug with a new copper seal washer. Re-install pulley on conveyor. 	40	7			K
RESTORE	54.	<p>Restore Power to Equipment.</p> <p>Restore equipment to service as prescribed by the current local procedures.</p>	7	7			W, M, Q, S, K
CLEAN UP	55.	<p>Clean Up</p> <p>Ensure all tools, lubricants; rags, etc. are removed from the work area. Report all deficiencies to supervisor.</p>	2	7			W, M, Q, S, K

ATTACHMENT 3

LOW COST UNIVERSAL SORTER MASTER CHECKLIST

09-LCUS-BA-001-M

Operational Maintenance

Time Total: 74 minutes

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	9	L	C	U	S			B	A	0	0	1	M
Equipment Nomenclature Low Cost Universal Sorter		Equipment Model						Bulletin Filename mm14133			Occurrence Tourly			

Part or Component	Item No	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req (min)	Min. Skill Lev	Thresholds		
					Run Hours	Pieces Fed (000)	Freq.

SAFETY STATEMENT	1.	<p>COMPLY WITH ALL SAFETY PRECAUTIONS. Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shutdown and lockout this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment.</p> <p>THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED.</p> <p>When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods cannot be used. Report safety deficiencies to your supervisor immediately upon detection.</p> <p>WARNING FOR EWP/PPE: Steps contained in this bulletin may require the use of Personal Protective Equipment (PPE). Refer to the current Electrical Work Plan (EWP) MMO for appropriate PPE and barricade requirements.</p>	1	All			
LCUS COMPUTER	2.	<p>Check CPU Fan.</p> <p>Visually check the LCUS computer to ensure the cooling fan is operating.</p>	1	9			
CONVEYORS	3.	<p>Observe Motors.</p> <ol style="list-style-type: none"> With equipment running, observe housing to detect any excessive shock or vibration transmitted by conveyor. Listen for evidence of wear or damage to bearings or gears. 	8	9			
CONVEYORS	4.	<p>Check Head, Tail, Take-Up & Snub Pulleys.</p> <ol style="list-style-type: none"> With equipment operating, listen to pulley bearing for abnormal noise. Feel bearing housings for excessive vibrations. Examine pulleys for eccentricity or other indications of a bent shaft. 	2	9			

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CONVEYORS	5.	<p>Check Idler Rollers.</p> <ol style="list-style-type: none"> With equipment operating, listen for abnormal noise from load and return rollers. Check for sluggish or frozen rollers. Look for eccentricity or other evidence of a bent shaft. 	11	9			
CONVEYORS	6.	<p>Check Belting (PVC Belt)</p> <ol style="list-style-type: none"> With equipment operating, observe belt (under load if possible), to determine if tension is properly adjusted. Look and listen for evidence of belt slippage on motorized drive pulley. Look for excessive belt sag between idler rolls. Observe tracking of belt over tail, head, and take-up pulleys. Look for belt run-out along carrying and return runs of conveyor 	3	9			
SYSTEM	7.	<p>Check System Operation.</p> <ol style="list-style-type: none"> With system operating and sort plan loaded, run one tray or scan a tray label Verify that the camera reads the barcode Check ULX Transmission in MPEWatch <ol style="list-style-type: none"> On any ACE computer log into MPEWatch. Select MPEwatch Site List. Select your facility from the list of sites. Select mhe monitor from the menu options at the top of the screen. Find the LCUS in the chart at the bottom of the page. Ensure it has "OK" under ULX Details. Review all other information on this report and notify supervisor of any problems. 	15	9			

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		<p style="text-align: center;">NOTE</p> <p>If discrepancies are found place the equipment out of service.</p> <p>h. Print a DNR test label.</p> <p>i. Check the label quality to ensure it does not have any defects as described in MMO-012-09.</p> <p style="text-align: center;">NOTE</p> <p>If discrepancies are found place the equipment out of service.</p> <p>j. Place a calibrated known weight on the scale.</p> <p>k. Ensure the scale is reading the correct weight ± .05 pounds of calibrated weight.</p>					
PUSHERS	8.	<p>Observe Operation of Pushers (Pneumatic or Electric).</p> <p>1. Ensure pushers are the parcels (or other products) on center.</p> <p>2. Verify the pusher is not making "Hard Contact" with the parcels due to them not being close to the pusher on the belt.</p> <p>3. Ensure the pusher fully extends and retracts each cycle.</p> <p>4. Listen/watch for excessive noise or vibration during pusher cycle.</p>	15	9			
INDUCTION LANES	9.	<p>Observe Operation of Induction Lanes (All)</p> <p>1. Ensure all belts are functioning properly.</p> <p>2. Observe Operator or run test pieces to ensure proper operation of the scanner and keypad.</p> <p>3. Ensure scanned or keyed parcels are being properly inducted onto the sorter.</p> <p>4. Talk with operators to determine if they have been experiencing any machine problems.</p>	11	9			

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SYSTEM	10.	<p>Check Rejects.</p> <p>Non-Recirculating Machines (Straight or "L" Configurations)</p> <ol style="list-style-type: none"> Observe the Full Inspect the contents of the end bin. If multiple pieces normally sorted to the same lane are found in the end bin, determine if the pieces failed to sort due to the lane being full or equipment problems. <p>Recirculating Machines (Oval Configuration)</p> <ol style="list-style-type: none"> Observe the Lighted Lane Full indicators to ensure no lane full conditions exist. Observe the mail on the sorter, ensure there are no pieces recirculating due to system errors. 	5	9			
CLEAN UP	11.	<p>Clean up.</p> <p style="text-align: center;">NOTE</p> <p>If problems are found and can be corrected on this tour generate a Reactive workorder and correct the problem. If the problem cannot be corrected on this tour generate a Corrective workorder so that the work can be scheduled.</p> <p>Ensure all tools, lubricants; rags, etc. are removed from the work area. Report all deficiencies to supervisor.</p>	2	7			