

MAINTENANCE TECHNICAL SUPPORT CENTER
HEADQUARTERS MAINTENANCE OPERATIONS
UNITED STATES POSTAL SERVICE



Maintenance Management Order

SUBJECT: Operational and Preventive Maintenance
Guidelines for the Automated Parcel Bundle
Sorter (APBS) Using eCBM

DATE: August 22, 2016

NO: MMO-090-16

TO: All APBS Sites

FILE CODE: R8

bfra:mm14129as

Online Change Record		
Chg #	Date	Description of Change
6	3/14/2022	Attachment 2, item 47, step 1, deleted "PSN 7025-02-000-6603 Molyube 108-5C." Added "Refer to MTSC KB 0020628 for correct oil type."
5	12/2/2021	Attachment 2, task 18, added Step 2. While oil is draining from the gear reducer reservoir, service the low speed bearing. Using a grease gun with lithium-based grease NGLI Grade 2, apply grease to the zerk fittings on the front and rear of the gear reducer. Changed reference to MS-272, Volume A, Section 12 to MS-272, Volume A, Section 8.5.
4	4/13/2017	Attachment 2 Tasks 39 and 52 updated.
3	2/12/2017	Task 52 now includes scale validation. Time roll-up has been updated.
2	12/21/2016	Tasks 48-54 were renumbered.
1	12/06/2016	Task 43 was updated for clarity.

This Maintenance Management Order (MMO) provides Operational and Preventive Maintenance Guidelines for the APBS. **This Maintenance Management Order (MMO) supersedes MMO-107-12.** This bulletin applies to Acronym APBS, Class Code AA.

The workhours indicated in the workload estimate (Attachment 1) are based on 15-run-hours per day, 30 million mailpieces processed per year, and reflect the *maximum* annual workhours required to maintain each system. Actual workhour requirements and the frequency of tasks are dependent on run time, pieces processed, and machine configuration. Therefore, PM workhour requirements will vary day-to-day based on site-specific machine utilization and may require more than one employee to complete PM tasks and repairs during the Maintenance Window. Management may modify task frequencies to address local conditions.

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.

Preventive Maintenance (PM) guidelines provide maintenance employees with the recommended task based maintenance activities. The Electronic Conditioned Based Maintenance (eCBM) is an abbreviated task list that represents a portion of the PM checklist. The complete master PM checklist must be accessible to all maintenance employees when performing PM and eCBM task based maintenance activities.

A new special tool has been added to the special tools list and will be used during tasks within this bulletin: Brush and Power Rail Assessment Gauge, PSN 5220-17-000-5948.

WARNING

Various products requiring Safety Data Sheets (SDS) may be utilized during the performance of the procedures in this bulletin. Ensure the current SDS for each product used is on file and available to all employees. When reordering such a product, it is suggested that current SDS be requested. Refer to SDS 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 Electrical Work Plan (EWP) Personal Protective Equipment (PPE). Refer to the current EWP MMO for appropriate EWP PPE and barricade requirements.

Direct any questions or comments concerning this bulletin to the MTSC HelpDesk, online at <https://tickets.mtsc.usps.gov/login.php> or call (800) 366-4123.



Kevin Couch
Manager
Maintenance Technical Support Center
HQ Maintenance Operations

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

THIS PAGE BLANK

ATTACHMENT 1

SUMMARY

WORKLOAD ESTIMATE

FOR APBS SYSTEM

THIS PAGE BLANK

SUMMARY WORKLOAD ESTIMATE FOR APBS

4 Induction Machine Operating 6 Days/Week						Operational Maintenance + Total Servicing		
# of Transports	Routine Servicing per Machine (Hrs/Yr)	Repair Time per Machine (Hrs/yr) *	Routine Servicing + Repair Time (Hrs/Yr)	Non-Productive Time per Machine (Hrs/yr) **	Total Servicing per Machine (Hrs/Yr)	1 Tour Hrs/Yr OpM x 1	2 Tours Hrs/Yr OpM x 2	3 Tours Hrs/Yr OpM x 3
84	906.23	271.87	1178.10	117.81	1295.91	1472.71	1649.51	1737.91
100	937.66	281.30	1218.96	121.90	1340.86	1517.66	1694.46	1782.86
116	969.09	290.73	1259.82	125.98	1385.80	1562.60	1739.40	1827.80
132	1000.52	300.16	1300.68	130.07	1430.75	1607.55	1784.35	1872.75
148	1031.94	309.58	1341.52	134.15	1475.67	1652.47	1829.27	1917.67
164	1063.37	319.01	1382.38	138.24	1520.62	1697.42	1874.22	1962.62
180	1128.04	338.41	1466.45	146.65	1613.10	1789.90	1966.70	2055.10
196	1165.01	349.50	1514.51	151.45	1665.96	1842.76	2019.56	2107.96

4 Induction Machine Operating 7 Days/Week						Operational Maintenance + Total Servicing		
# of Transports	Routine Servicing per Machine (Hrs/Yr)	Repair Time per Machine (Hrs/yr) *	Routine Servicing + Repair Time (Hrs/Yr)	Non-Productive Time per Machine (Hrs/yr) **	Total Servicing per Machine (Hrs/Yr)	1 Tour Hrs/Yr OpM x 1	2 Tours Hrs/Yr OpM x 2	3 Tours Hrs/Yr OpM x 3
84	1050.77	315.23	1366.00	136.60	1502.60	1708.87	1915.13	2018.27
100	1087.07	326.12	1413.19	141.32	1554.51	1760.78	1967.04	2070.18
116	1123.37	337.01	1460.38	146.04	1606.42	1812.69	2018.95	2122.09
132	1159.67	347.90	1507.57	150.76	1658.33	1864.60	2070.86	2174.00
148	1195.97	358.79	1554.76	155.48	1710.24	1916.51	2122.77	2225.91
164	1232.27	369.68	1601.95	160.20	1762.15	1968.42	2174.68	2277.82
180	1268.57	380.57	1649.14	164.91	1814.05	2020.32	2226.58	2329.72
196	1304.87	391.46	1696.33	169.63	1865.96	2072.23	2278.49	2381.63

Repair maintenance estimates based on	30.00%	of preventive maintenance.
Based on	10.00%	of total PM and repair.

Operation Maintenance (hrs) 4 Inductions

Operation	1 Tour	2 Tours	3 Tours
6 day/week	176.80	353.60	442.00
7 day/week	206.27	412.53	515.67

5 Induction Machine Operating 6 Days/Week

# of Transports	Routine Servicing per Machine (Hrs/Yr)	Repair Time per Machine (Hrs/yr) *	Routine Servicing + Repair Time (Hrs/Yr)	Non-Productive Time per Machine (Hrs/yr) **	Total Servicing per Machine (Hrs/Yr)	Operational Maintenance + Total Servicing		
						1 Tour Hrs/Yr OpM x 1	2 Tours Hrs/Yr OpM x 2	3 Tours Hrs/Yr OpM x 3
84	1117.19	335.16	1452.35	145.24	1597.59	1779.59	1961.59	2052.59
100	1148.62	344.59	1493.21	149.32	1642.53	1824.53	2006.53	2097.53
116	1180.05	354.01	1534.06	153.41	1687.47	1869.47	2051.47	2142.47
132	1211.48	363.44	1574.92	157.49	1732.41	1914.41	2096.41	2187.41
148	1242.91	372.87	1615.78	161.58	1777.36	1959.36	2141.36	2232.36
164	1274.34	382.30	1656.64	165.66	1822.30	2004.30	2186.30	2277.30
180	1339.00	401.70	1740.70	174.07	1914.77	2096.77	2278.77	2369.77
196	1375.97	412.79	1788.76	178.88	1967.64	2149.64	2331.64	2422.64

5 Induction Machine Operating 7 Days/Week

# of Transports	Routine Servicing per Machine (Hrs/Yr)	Repair Time per Machine (Hrs/yr) *	Routine Servicing + Repair Time (Hrs/Yr)	Non-Productive Time per Machine (Hrs/yr) **	Total Servicing per Machine (Hrs/Yr)	Operational Maintenance + Total Servicing		
						1 Tour Hrs/Yr OpM x 1	2 Tours Hrs/Yr OpM x 2	3 Tours Hrs/Yr OpM x 3
84	1296.52	388.96	1685.48	168.55	1854.03	2066.36	2278.70	2384.86
100	1332.82	399.85	1732.67	173.27	1905.94	2118.27	2330.61	2436.77
116	1369.12	410.74	1779.86	177.99	1957.85	2170.18	2382.52	2488.68
132	1405.42	421.63	1827.05	182.71	2009.76	2222.09	2434.43	2540.59
148	1441.72	432.52	1874.24	187.42	2061.66	2273.99	2486.33	2592.49
164	1478.03	443.41	1921.44	192.14	2113.58	2325.91	2538.25	2644.41
180	1514.33	454.30	1968.63	196.86	2165.49	2377.82	2590.16	2696.32
196	1550.63	465.19	2015.82	201.58	2217.40	2429.73	2642.07	2748.23

Repair maintenance estimates based on	30.00%	of preventive maintenance.
Based on	10.00%	of total PM and repair.

Operation Maintenance (hrs) 5 Inductions

Operation	1 Tour	2 Tours	3 Tours
6 day/week	182.00	364.00	455.00
7 day/week	212.33	424.67	530.83

6 Induction Machine Operating 6 Days/Week						Operational Maintenance + Total Servicing		
# of Transports	Routine Servicing per Machine (Hrs/Yr)	Repair Time per Machine (Hrs/yr) *	Routine Servicing + Repair Time (Hrs/Yr)	Non-Productive Time per Machine (Hrs/yr) **	Total Servicing per Machine (Hrs/Yr)	1 Tour Hrs/Yr OpM x 1	2 Tours Hrs/Yr OpM x 2	3 Tours Hrs/Yr OpM x 3
84	1371.03	411.31	1782.34	178.23	1960.57	2147.77	2334.97	2428.57
100	1402.46	420.74	1823.20	182.32	2005.52	2192.72	2379.92	2473.52
116	1433.89	430.17	1864.06	186.41	2050.47	2237.67	2424.87	2518.47
132	1465.32	439.60	1904.92	190.49	2095.41	2282.61	2469.81	2563.41
148	1496.75	449.02	1945.77	194.58	2140.35	2327.55	2514.75	2608.35
164	1528.18	458.45	1986.63	198.66	2185.29	2372.49	2559.69	2653.29
180	1592.84	477.85	2070.69	207.07	2277.76	2464.96	2652.16	2745.76
196	1629.81	488.94	2118.75	211.88	2330.63	2517.83	2705.03	2798.63

6 Induction Machine Operating 7 Days/Week						Operational Maintenance + Total Servicing		
# of Transports	Routine Servicing per Machine (Hrs/Yr)	Repair Time per Machine (Hrs/yr) *	Routine Servicing + Repair Time (Hrs/Yr)	Non-Productive Time per Machine (Hrs/yr) **	Total Servicing per Machine (Hrs/Yr)	1 Tour Hrs/Yr OpM x 1	2 Tours Hrs/Yr OpM x 2	3 Tours Hrs/Yr OpM x 3
84	1592.30	477.69	2069.99	207.00	2276.99	2495.39	2713.79	2822.99
100	1628.60	488.58	2117.18	211.72	2328.90	2547.30	2765.70	2874.90
116	1664.90	499.47	2164.37	216.44	2380.81	2599.21	2817.61	2926.81
132	1701.20	510.36	2211.56	221.16	2432.72	2651.12	2869.52	2978.72
148	1737.50	521.25	2258.75	225.88	2484.63	2703.03	2921.43	3030.63
164	1773.81	532.14	2305.95	230.60	2536.55	2754.95	2973.35	3082.55
180	1810.11	543.03	2353.14	235.31	2588.45	2806.85	3025.25	3134.45
196	1846.41	553.92	2400.33	240.03	2640.36	2858.76	3077.16	3186.36

Repair maintenance estimates based on	30.00%	of preventive maintenance.
Based on	10.00%	of total PM and repair.

Operation Maintenance (hrs) 6 Inductions

Operation	1 Tour	2 Tours	3 Tours
6 day/week	187.20	374.40	468.00
7 day/week	218.40	436.80	546.00

THIS PAGE BLANK

ATTACHMENT 2

APBS MASTER CHECKLIST

03-APBS-AA-001-M

Time Total: See roll-up in Attachment 1.

NOTE

- * --- the tasks marked with an asterisk are per unit tasks.
- ** --- the tasks marked with two asterisk are critical tasks.

U.S. Postal Service		IDENTIFICATION													
Maintenance Checklist		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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 Electrical Work Plan (EWP) Personal Protective Equipment (PPE). Refer to the current EWP MMO for appropriate EWP PPE and barricade requirements.</p> <p>WARNING: Various products requiring Safety Data Sheets (SDS) may be utilized during the performance of the procedures in this bulletin. Ensure the current SDS for each product used is on file and available to all employees. When reordering such a product, it is suggested that current SDS be requested. Refer to SDS for appropriate personal protective equipment.</p> <p>NOTE: Priority code (A) work orders are assigned as soon as possible when safety or revenue loss is involved. Work requests with this priority can be assigned verbally and should be started immediately. The priority code assigned to work orders can be changed with the approval of the senior maintenance official or designee. The eMARS system automatically changes the scheduled completion date with the priority code change. Create work order for any deficiencies.</p>	1	All			

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

APBS: GENERAL	2**	Check Maintenance Logbook. NOTE: Site must ensure equipment is maintained to provide optimum performance and minimal downtime. 1. Check logbook for any degraded condition and inform supervisor if condition exists. 2. Create corrective work order if necessary.	5	09		5	
APBS: SYSTEM CONTROL WORK STATION	3**	Check for Disabled Carrier Cells. Check for disabled carrier cells from the Maintenance/Cells tab on the system application software. 1. Click Maintenance Tab . 2. Enter password. 3. Click Cells tab. 4. Note all disabled carrier cells. 5. Create corrective maintenance work order from PM allotting an estimated time of 6 minutes per disabled carrier cell.	8	09		5	
APBS: SYSTEM CONTROL WORK STATION	4	Check Log 2 Messages. Check and diagnose error messages as follows: 1. Access and print Log 2 from previous day C:/APBS/APBSLogs/MM-DD-YY/Log 2 : a. Click Windows 7 Start . b. Click My Computer . c. Double Click O/S C: drive. d. Double click APBS folder. e. Double click APBSLogs folder. f. Locate folder named for the previous day, such as MM DD YY. g. Locate Log 2.log. h. Open with a text editor such as "Notepad". 2. Note all "cell", "flag", and "brush" related data. 3. Check identified items for damage or failure. 4. Create work order for any deficiencies.	10	10		5	

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		5. Notify Maintenance Supervisor at this time of any degrading condition found in eCBM item number 2, 3, and/or 4.					
APBS	5**	Power Down and Lockout Power. Power down the machine and lock out its power as prescribed by the current local lockout instructions providing lockout/restore procedures. NOTE: An additional soft reboot of the computers in the OCR RACK is not needed if complying with the current Maintenance Management Order (MMO) providing lockout/restore procedures.	10	All		5	
INDUCT: CODE - WEIGH - BUFFER CONVEYORS	6	Clean Belt, Rollers, and Bearings. 1. Clean belt, rollers, and bearings of all debris. 2. Observe conveyor belt for conditions requiring replacement: a. Slick belt surface. b. Belt splice separation. c. Nicks, tears, abrasions, and fraying. 3. Create a corrective work order if any belt requires replacement. Refer to MS-272, Volume A, Section 12. * Multiplied by number of induction stations.	6*	09		315	
INDUCT: 45 DEGREE INDUCTION CONVEYOR	7	Clean Belts, Rollers, and Bearings. 1. Clean belt, rollers, pinch rollers, and bearings of all debris. 2. Observe conveyor belts for conditions requiring replacement: a. Slick belt surface. b. Belt splice separation. c. Nicks, tears, abrasions, and fraying. 3. Create a corrective work order if any belt requires replacement. Refer to MS-272, Volume A, Section 12. * Multiplied by number of induction stations.	4*	09		315	

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.
INDUCT: INDUCTION STATION	8	Clean Induction Station and Platform. 1. Remove large debris and clean the induction station platform using HEPA vacuum cleaner. 2. Clean induction station exterior using a damp cloth. * Multiplied by number of induction stations.	2*	07		315	
INDUCT: INDUCTION STATION/ RECEIVER MODULE	9	Clean Induction Station Interior. Clean induction station as follows: 1. Remove covers and panels. 2. Use a vacuum cleaner to clean accumulated dirt, dust, or debris from interior of the induction station. 3. Close all the covers and panels. * Multiplied by number of induction stations.	3*	07		315	
INDUCT: INDUCTION STATION/ RECEIVER MODULE	10**	Perform Mail Search. 1. Remove all covers and panels. Search for mailpieces. 2. Ensure all mail under the platform is removed. 3. Return all mail found during mail search to the proper mail path. 4. Close all covers and panels. * Multiplied by number of induction stations.	4*	07		5	
INDUCT: INCLINED CONVEYOR SECTION	11	Check Chain and Reducer. Check chain tension. Check drive chain tension. There should be 1/4 inch deflection on chain. Adjust as necessary. Refer to MS-272, Volume A, Section 9. Lubricate chain. Lubricate by applying anti-drip oil (PENKOTE by Total Lubrication USA, Inc.) on all teeth of chain sprocket. Gear reducer. NOTE: Gear reducer is a sealed unit, designed to run to failure. Inspect drive shaft between gear reducer and chain protective cover for debris, damage, or leaks.	7*	09	1800		

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129				Occurrence eCBM			

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.

		<ol style="list-style-type: none"> 1. Check gear reducer for leakage. 2. Create work order to replace, if leaking. <p>* Multiplied by number of induction stations.</p>					
INDUCT: INCLINED CONVEYOR	12	Clean Belt, Drive Roller, and Bearings. Clean belt, topside drive roller, and bearings. Refer to MS-272, Volume A, Section 12. * Multiplied by number of induction stations.	4*	07	70		
INDUCT: INCLINED CONVEYOR SECTION	13	Clean Belt, Drive Roller, and Bearings. Check belt, topside drive roller, and bearings. Clean takeup roller and bearings. <ol style="list-style-type: none"> 1. Remove bottom covers to gain access to rollers and bearings. 2. Clean all debris from the belt, roller, and bearings. 3. Lubricate roller bearing grease fittings if needed. 4. Replace covers. Refer to MS-272, Volume A, Section 12. * Multiplied by number of induction stations.	14*	09	900		
INDUCT: SENSOR ARRAY	14**	Clean Sensor Array. NOTE: Deflector must be removed to clean width receiver. <ol style="list-style-type: none"> 1. Remove deflector to access width receiver (Paragraph 10.6.3.2: Deflector). 2. Clean width and height sensor arrays and width array. <ol style="list-style-type: none"> a. Vacuum if required. b. Spray lint-free towel with locally-approved cleaner, and wipe height and width emitters and receivers until clean. 3. Install deflector (Paragraph 10.6.3.2: Deflector). Refer to MS-272, Volume A, Section 12. * Multiplied by number of induction stations.	4*	07		45	

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	3	A	P	B	S				A	A	0	0	1
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129				Occurrence eCBM		

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.

APBS: TRANSPORT OUTPUT/ SORT MODULES	15**	Perform Mail Search. 1. Looking through the clear Lexan panels, search the entire length of the machine for mailpieces. 2. Remove, open, and replace panel(s) only when a mailpiece is found. 3. Retrieve mail piece. 4. Close panels after retrieving mail piece. 5. Return all mail found during mail search to the proper mail path. *Multiplied by the number of A/B modules plus 1 for C modules.	4*	07		5	
APBS: TRANSPORT OUTPUT/ SORT MODULES	16	Clean Transport Sort Modules. Clean transport output/ sort module as follows: 1. Remove Lexan panels. 2. Use a HEPA vacuum cleaner to clean accumulated dirt, dust, or debris from interior of output / sort modules. 3. Replace Lexan panels. *Multiplied by the number of A/B modules plus 1 for C modules.	20*	07		1350	
DRIVE: DRIVE-END MODULE	17**	Perform Mail Search. 1. Remove panels from both sides of the drive-end module. Search for mailpieces. 2. Return all mail found during mail search to the proper mail path. 3. Replace panels on both side of the drive-end module.	3	07		5	
APBS: DRIVE-END MODULE	18**	Change Gear Drive Oil. WARNING: Discard or dispose of chemical soaked materials according to SDS and in accordance with local procedures. WARNING: Do not use PAG based synthetics (PolyAlkylene Glycol). PAG type synthetic oils will degrade some seals and will dissolve certain types of paint.	20	07			S

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		<p>NOTE: Mineral vs. Synthetic: Lab tests have shown that using a synthetic based lubricant can lower operating temperatures and increase the efficiency and life of worm gear speed reducers. In addition, synthetic lubricants have a wider range of acceptable operating temperatures, and in some cases last longer than mineral based lubricants. The trade-off is synthetic lubricants are more expensive and selection is limited compared to mineral based lubricants. When choosing to use a synthetic lubricant, use only PAO (PolyAlphaOlefin) based synthetic oil in standard Delroyd Worm Gear products.</p> <p>NOTE: Bottom drive oil capacity is 1.9 gallons. Vertical drive oil capacity is 3 gallons.</p> <ol style="list-style-type: none"> 1. Change the oil in the main gear reducer using AGMA 7C compounded steam cylinder oil from an approved manufacture or AGMA 7S from Mobil Oil Corporation. 2. While oil is draining from the gear reducer reservoir, service the low speed bearing. Using a grease gun with lithium-based grease NGLI Grade 2, apply grease to the zerk fittings on the front and rear of the gear reducer. <p>Refer to MS-272, Volume A, Section 8.5.</p>					
APBS: DRIVE-END MODULE	19	<p>Check Sprocket.</p> <ol style="list-style-type: none"> 1. Check drive end module sprocket teeth for wear using Sprocket Tooth Radius Gauge Assembly, PSN 3915-13-000-7152. 2. Create a corrective work order if worn beyond 0.060 inch. <p>Refer to MS-272, Volume A, Section 12.</p>	5	09	1800		
DRIVE: DRIVE-END MODULE	20	<p>Lubricate Sprocket Shaft Bearings.</p> <p>Using a grease gun with Lithium Base grease, NLGI Grade 2, lubricate sprocket shaft bearings on both sides.</p> <p>Refer to MS-272, Volume A, Section 12.</p>	2	07	300		
DRIVE: DRIVE MOTOR/GEAR REDUCER	21	<p>Check Drive Motor Belt.</p> <p>Inspect drive belt for signs of excessive wear such as cracks, worn or missing teeth, or signs of</p>	8	09	1200		

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		excessive side loading due to improper pulley alignment. Replace drive belt, if necessary. Refer to MS-272, Volume A, Section 9 for Tensioning and Section 12 for Wear Inspection.					
DRIVE: DRIVE MOTOR/GEAR REDUCER	22	Check Gear Reduction Motor Oil Level. 1. Check the oil level in the gear reduction motor located in the drive-end module. 2. Add AGMA 7C compounded steam cylinder oil from an approved manufacture or AGMA 7S from Mobil Oil Corporation until it is visible at oil level plug. Refer to MS-272, Volume A, Section 12.	2	07	600		
TAKE-UP MODULE: TAKE-UP END MODULE	23**	Perform Mail Search. 1. Remove all panels from the take-up end and the sweep side. Search for mailpieces. 2. Return all mail found during mail search to the proper mail path. 3. Replace all panels on the take-up end and the sweep side.	3	07		5	
TAKE-UP MODULE: SPROCKET/SHAFT/ BEARINGS	24	Lubricate Sprocket Shaft Bearings. Using a grease gun with Lithium Base grease, NLGI Grade 2, lubricate sprocket shaft bearings on both sides. Refer to MS-272, Volume A, Section 12.	2	07	300		
TAKE-UP MODULE: SPROCKET/SHAFT/ BEARINGS	25	Check Sprocket. 1. Check take-up end module sprocket teeth for wear using Sprocket Tooth Radius Gauge Assembly, PSN 3915-13-000-7152. 2. Create a corrective work order if worn beyond 0.060 inch. Refer to MS-272, Volume A, Section 12.	5	09	1800		
TAKE-UP MODULE: SPROCKET AND CHAIN	26**	Check Sprocket Alignment and Chain Tension. WARNING: Mis-aligned chain track system or incorrect tensioning rod adjustment may cause catastrophic jams. Ensure proper alignment of carrier cell and chain track systems. Adjust take-up sprocket shaft perpendicular to upper and lower tracks. Failure to comply may cause personal injury, severe damage to critical	40	09	1800		

U.S. Postal Service		IDENTIFICATION													
Maintenance Checklist		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		equipment elements, and excessive downtime for repairs. NOTE: This task requires two people. Time is doubled for staffing purposes. 1. Remove access panels from Takeup end of the machine. 2. Unplug P3 and P5 (left) or P6 and P4 (right) to the interlock on the non-console side. 3. Remove side cover from the non-console side of the machine. Reference MS-272, Volume A, Section 10.4.1. 4. Measure dimension at point A (top left side lead-in guide to top of expansion track) to ensure lead guide alignment is within 1/16 to 1/64 inch. Refer to MS-272, Volume A, Section 9.2.3 for figure. 5. Measure distance between bearing block and frame on each side (dimensions A and B) to ensure sprocket and track alignment is no more than 1/16 inch from each other. 6. Compare lead-in guide on right side of sprocket with left-side lead-in guide using level or inclinometer. 7. Measure gap distance at chain roller location dimension B using feeler gauge to ensure less than 1/32 inch gap for proper chain tension. 8. Reinstall cover and connect plugs. 9. Reinstall access panels. 10. If any dimension is incorrect, create a work order to correct chain tension and sprocket alignment (refer to MS-272, Volume A, Section 9.2.3).					
OVERHEAD CAMERA SYSTEM: TRANSPORT OVERHEAD PC ENCLOSURE	27	Clean PSOC-T Fan Filter. Using a HEPA filtered vacuum cleaner, clean the outside of the incoming air fan filter.	1	07			M
OVERHEAD CAMERA SYSTEM: INDUCTION OVERHEAD	28	Clean PSOC-I Fan Filter. Using a HEPA filtered vacuum cleaner, clean the outside of the incoming air fan filter.	1	07			M

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

CAMERA PC ENCLOSURE							
OVERHEAD CAMERA SYSTEM: TRANSPORT OVERHEAD CAMERA	29	Clean Overhead Camera Clear Cover. CAUTION: The glass used in this system is fragile enough to break if pressure is applied. NOTE: Do not spray the equipment. Only a misting of the cloth is required. Optionally, use a streak-free glass cleaner. 1. Using a lint-free cloth, gently wipe the underside of the clear cover over the camera lens and LED array. 2. Use a spray bottle containing tap water to moisten cloth for wiping away stubborn smudges.	5	07			B
OVERHEAD CAMERA SYSTEM: INDUCTION OVERHEAD CAMERA	30	Clean Overhead Camera Clear Cover. CAUTION: The glass used in this system is fragile enough to break if pressure is applied. NOTE: Do not spray the equipment. Only a misting of the cloth is required. Optionally, use a streak-free glass cleaner. 1. Using a lint-free cloth, gently wipe the underside of the clear cover over the camera lens and LED array. 2. Use a spray bottle containing tap water to moisten cloth for wiping away stubborn smudges.	5	07			B
OCR CABINET: CABINET DOOR AIR FILTER	31	Replace Air Filter. Replace two (2) air filters. Use 18" x 30" x 1" filter with MERV 8 rating.	1	07			Q
GENERAL	32	Restore Equipment to Service. Restore equipment to service as prescribed by the current local procedure providing lockout/restore procedures.	5	All			
APBS: SYSTEM CONTROL WORK STATION	33**	Critical File Backup to NDSS/SPS. 1. Navigate to Maintenance > PM Tab. 2. Click Create button.	2	09			B

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	3	A	P	B	S				A	A	0	0	1
Equipment Nomenclature Automated Parcel Bundle Sorter	Equipment Model						Bulletin Filename mm14129				Occurrence eCBM			

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.

		3. At Creating Backup File window, click OK . 4. Click Upload button. 5. At Sending File to NDSS/SPS window, click OK . 6. At Success – File Transferred window, click OK .					
APBS: E-BOX	34**	Check E-Box Display. 1. Verify display shows current date and time and a status of DCS: UP. 2. Create work orders and notify your supervisor of any discrepancies.	1	07			D
OCR CABINET: UPDATE OCR ADDRESS DIRECTORIES and LOOP LIST	35**	Download and Update OCR Address Directories for IC and RP. 1. Log into the Image Controller GUI as an admin user. 2. Navigate to Address Directories > Overview and Download using the left-side menu. 3. Click the Check for Updates button. 4. The Image Controller will present a status query has been submitted and success or failure for the query. 5. In the section labeled IC Addr. Directories, click the Update Current from NDSS button. 6. The Image Controller will present a status download request has been submitted status and will report success or failure for the download. 7. Navigate to Address Directories > Overview and Download using the left-side menu. 8. In the section labeled RP Addr. Directories click the Update checkbox then click the Update RP(s) from IC button. 9. The download process is complete when the text field for the updated RP shows the new version loaded. 10. Verify loop list is up to date. <ol style="list-style-type: none"> Click on Configuration tab. Click on ARD Loop and Outcome 	15	10			W

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		Download. c. Verify Loop list is current within one day. If date is not current, click Update and generate a local work order to monitor and correct problems with daily automatic Loop updates. 11. Logout of admin user. a. Click User Action b. Click Logout .					
INDUCT: INCLINED CONVEYOR SECTION	36	Check the Conveyor Belt for Proper Tension and Tracking. WARNING: Conveyor belt rotates without protection to personnel. Ensure personnel stay cautious of rotating parts and pinch points. Failure to comply may result in physical injury. 1. Check the conveyor belt for proper tension and tracking. 2. Create work orders and notify supervisor of discrepancies. Refer to MS-272, Volume A, Section 9. * Multiplied by number of induction stations.	1*	09	1800		
INDUCT: 45 DEGREE INDUCTION CONVEYOR	37	Check Belt Tracking and Tension. WARNING: Conveyor belt rotates without protection to personnel. Ensure personnel stay cautious of rotating parts and pinch points. Failure to comply may result in physical injury. 1. Check the induction belt for proper tracking and tension. 2. Create work orders and notify supervisor of discrepancies. Refer to MS-272, Volume A, Section 9. * Multiplied by number of induction stations.	2*	09		315	
INDUCT: CODE - WEIGH - BUFFER CONVEYORS	38	Check Belt Tracking, Tension, and Speed. WARNING: Conveyor belt rotates without protection to personnel. Ensure personnel stay cautious of rotating parts and pinch	12*	09		1350	

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		<p>points. Failure to comply may result in physical injury.</p> <p>NOTE: Belt tightens by turning adjustment screws CW. Belt loosens by turning adjustment screws CCW. Belt tracks to loose side.</p> <ol style="list-style-type: none"> Select Conveyor belt for test from operator keying station keypad: <ol style="list-style-type: none"> Press blank key to enter Maintenance mode. Enter password. Press blank key to advance to next screen. Select the correct number key to activate conveyor belt. Pressing the number key a second time will deactivate the Code Conveyor belt. <ol style="list-style-type: none"> Number 2 key activates and deactivates Code belt. Number 3 key activates and deactivates Weigh belt. Number 4 key activates and deactivates Buffer belt. Observe belt tracking. Adjust if belt tracks to one side: <ol style="list-style-type: none"> Rotate adjustment screw on side belt tracks toward CW 1/8 revolution. Repeat belt tracking until belt remains centered for at least 5 minutes. Measure belt speeds at induction by holding a hand held tachometer with the tachometer wheel to surface of conveyor belt. If belt speed is incorrect, do following: <ol style="list-style-type: none"> Correct any mechanical issue prior to adjusting register settings of conveyor. Adjust belt speed at system computer in order to improve package placement on all the inductions. <ol style="list-style-type: none"> Code -Register 31 default value is 275 at a belt speed of 46.3-48 m/min 					
--	--	--	--	--	--	--	--

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		<p>(152-160 fpm).</p> <p>2) Weigh -Register 32 default value is 325 at a belt speed of 57.9-61 m/min (190-200 fpm).</p> <p>3) Buffer -Register 33 default value is 325 at a belt speed of 57.9-60.1 m/min (190-197 fpm).</p> <p>4. Continue adjustment until tracking is stable for at least 5 minutes.</p> <p>5. Press correct number key on operator keying station keypad to halt belt motion.</p> <p>a. Number 2 key activates and deactivates Code belt.</p> <p>b. Number 3 key activates and deactivates Weigh belt.</p> <p>c. Number 4 key activates and deactivates Buffer belt.</p> <p>6. Press CANCEL key on operator keying station keypad to exit Maintenance mode.</p> <p>* Multiplied by number of induction stations.</p>					
INDUCT: WEIGHING/ MEASURING CONVEYOR	39**	<p>Check Weighing Accuracy.</p> <p>Check the Weigh Scale system for accuracy. Calibrate as necessary referring to Induction Line Scale Upgrade Modification MWO.</p> <p>NOTE: Priority A work order must be assigned if a Scale fails static validation.</p> <p>NOTE: Induction Maintenance menu is now capable of zeroing out scale when static reading (no weight on scale) is within 0 to 1.3 lbs. after performing scale calibration. This is accomplished by pressing F4 key on keying station while in Maintenance mode.</p> <p>1. Verify each scale LCD monitor is reading 0.00 lbs.</p> <p>a. If scale is reading anything other than 0.00 lbs., zero the scale using substeps below; otherwise go to Step 4.</p> <p>1). Code -Register 31 default</p>	2*	09		315	

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	3	A	P	B	S				A	A	0	0	1
Equipment Nomenclature Automated Parcel Bundle Sorter	Equipment Model						Bulletin Filename mm14129				Occurrence eCBM			

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.

		<p>value is 275 at a belt speed of 46.3-48 m/min (152-160 fpm).</p> <ol style="list-style-type: none"> Turn operator control box ON/OFF keyswitch to OFF position. Select scale via operator keying station keypad as follows: <ol style="list-style-type: none"> Press blank key to enter Maintenance mode. Enter password. Place a twenty-pound weight on scale. Check correct weight displayed at operator keying station display. <ol style="list-style-type: none"> If incorrect weight is displayed on Legacy Scale, perform scale assembly adjustment (Paragraph 9.6.3.1 Scale Assembly). If no weight is displayed, troubleshoot according to Paragraph 5.6.5.2 Weigh. If new Scale has been installed, refer to Induction Line Scale Upgrade Modification MWO. Remove object from scale. Create work orders and notify supervisor of discrepancies. <p>Refer to MS-272, Volume A, Section 9.</p> <p>* Multiplied by number of induction stations.</p>					
INDUCT: RETURN CONVEYOR	40	<p>Check No Read Chute and Conveyor.</p> <ol style="list-style-type: none"> Ensure reflective tape is intact and in good condition. Check photoeye operation by blocking and observing that LED transitions from on to off. Ensure Return belt is operational and is tracking properly. Create work orders and notify supervisor of discrepancies. 	5	09		150	

U.S. Postal Service Maintenance Checklist	IDENTIFICATION														
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE	
	0	3	A	P	B	S				A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter	Equipment Model						Bulletin Filename mm14129				Occurrence eCBM				

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.

APBS: INTERLOCKS AND E-STOPS	41**	Check all Interlocks and E-Stops. WARNING: Be cautious when working around or on equipment when power has been applied. NOTE: When performing this step, check only one interlock switch and one emergency stop switch with machine running. Check all other interlock and E-STOP switches while machine is stopped. NOTE: This task requires two people. Time is doubled for staffing purposes. Verify light conditions and warning sounds for each E-STOP and interlock. 1. Load Maintenance Sortplan at Main CPU. 2. Start APBS. Verify that when START switch is pressed, the stack light assembly yellow indicator and horn pulses six times, which indicates a warning that the system is starting up and a physical or electrical hazard exist. Machine runs. 3. Press one E-STOP switch control panel assembly and note that following occurs: <ol style="list-style-type: none"> Machine stops immediately. Lamp lights in E-STOP switch. Red light illuminates on stack light assembly. Preset lamp goes out on Power Distribution Cabinet. Fault lamp on Power Distribution Cabinet illuminates. Fault on Main CPU indicates approximate location of E-STOP/interlock being tested. Pressing Start pushbutton does not start machine. 4. Reset E-STOP switch and note that following occurs: <ol style="list-style-type: none"> System READY PRESET lamp illuminates on Power Distribution Cabinet. Red light goes out on all the Stack Light Assemblies and the white light illuminates. Lamp goes out in module control panel 	10*	07			M
------------------------------------	------	--	-----	----	--	--	---

U.S. Postal Service		IDENTIFICATION													
Maintenance Checklist		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		<p>E-STOP switch.</p> <p>d. Preset can now be established by pressing the Preset pushbutton. Preset lamp illuminates.</p> <p>e. Start APBS. Verify that when START switch is pressed, the stack light assembly yellow indicator and horn pulses six times, which indicates a warning that the system is starting up and a physical or electrical hazard exist. Machine runs.</p> <p>f. Red Fault indicator goes out on Power Distribution Cabinet when start button is pressed.</p> <p>g. Stop the machine and exit sortplan.</p> <p>5. Without starting and stopping machine, check all remaining E-STOP switches one at a time to ensure that each one causes actions as described in items 3b – 3f above to occur when pressed and actions described in items 4a – 4d and 4f occur when they are reset.</p> <p>6. Without starting and stopping machine, check interlocks one at a time, by opening panel or door, to ensure that each one causes actions described in items 3c – 3f above to occur when opened and actions described in items 4a, b, c, and e occur when panel or door closed.</p> <p>7. If any problems are found, notify supervisor.</p> <p>*Multiplied by the number of A/B modules plus 1 for C modules.</p>					
APBS: INDUCTION STATION/RECEIVER MODULE	42	<p>Check the Recenter Function.</p> <p>WARNING: Mechanical hazards are present when moving carrier cells. Use care when working around moving carrier cells. Failure to comply may cause injury or death.</p> <p>Check the recenter function is operating correctly by performing the following:</p> <ol style="list-style-type: none"> Load Maintenance sort plan from System Computer. Manually place a parcel directly on a carrier cell belt so that the package slightly over 	5	09			M

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		<p>hangs the roller edge of the carrier cell.</p> <p>3. Start the machine.</p> <p>4. As the carrier cell enters the Recentering Module, verify that the recentering function orients the package so that it no longer hangs over the edge of the carrier cell.</p> <p>5. Create work order for discrepancies.</p> <p>Use MS-272, Volume A, Section 9.7 if adjustment is required.</p>					
APBS: TRANSPORT OUTPUT/ SORT MODULES	43	<p>Sweep Lamp Check and Horse Head Display.</p> <p>1. For the first bin display, press the sweep button on the bin display and note that following occurs:</p> <ul style="list-style-type: none"> a. Sweep Lamp for that bin should flash on and off while in sweep. b. Amber light illuminates on all stack light assemblies. c. Bin display indicated the bin is in sweep. d. Warning lamp on Power Distribution Cabinet illuminates. <p>2. Take the bin out of sweep and note that following occurs:</p> <ul style="list-style-type: none"> a. Sweep lamp go out. b. Amber light goes out on all the Stack Light Assemblies. c. Bin display indicated sort information for the bin. d. Warning lamp goes out at Power Distribution Cabinet. <p>3. Continue checking each sweep button following steps 1. a-c and 2. a-c.</p> <p>4. Ensure bin display is legible.</p> <p>5. Create work order to correct deficiencies.</p> <p>*Multiplied by the number of A/B modules plus 1 for C modules.</p>	1*	07			M
APBS: TRANSPORT OUTPUT/ SORT	44**	<p>Verify Brush Out of Track Detection is Operational.</p>	40	09			Q

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

MODULES		<p>Check transport for proper operation of the Brush Out of Track monitoring circuitry, and Bottom Brush Out of Track monitoring circuitry, if applicable.</p> <ol style="list-style-type: none"> Use the current Automated Parcel Bundle Sorter (APBS) Updated Brush Out of Track (BOT) Procedure MMO located on the MTSC website to perform the following sections: <ol style="list-style-type: none"> 2.0 Brush out of track verification test (upper). 3.0 Updated bottom brush out of track (if applicable). Create work orders to fix any deficiencies and to repeat step 1 after corrective action. 					
APBS: MAIN CHAIN	45**	<p>Visual/Audible Inspection of Drive Chain Operation.</p> <p>WARNING: Be cautious when working around or on equipment when power has been applied.</p> <p>WARNING: Mechanical hazards are present when moving carrier cells. Use care when working around moving carrier cells. Failure to comply may cause injury or death.</p> <p>Refer to the alignment and adjustment section of the MS-272 manual.</p> <p>The following procedure checks for proper chain tension by running the drive chain and inspecting for erratic chain movement as well as unusual noise emissions. These conditions relate directly to the level of tension existing in the drive chain and are used to gauge the final chain tension adjustment that may be required.</p> <ol style="list-style-type: none"> Turn main power switch on Power Distribution Cabinet (PDC) to OFF position. Lock out according to local procedures to prevent mechanical motion. Remove Drive Module covers at reject chute. Remove access panel on Takeup Module opposite induct side. Remove side cover on Takeup Module opposite induct side. 	8	09	500		

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	3	A	P	B	S				A	A	0	0	1
Equipment Nomenclature Automated Parcel Bundle Sorter	Equipment Model						Bulletin Filename mm14129				Occurrence eCBM			

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.

		6. Override interlock switches. 7. Remove lockout and turn main power switch on PDC to ON position. 8. Perform PDC start-up. 9. Place equipment in Jog mode. 10. Jog drive chain at least two full chain revolutions, and inspect chain at reject chute side of Drive Module and at Take-Up Module. 11. Locate any erratic chain movement or unusual noise emissions. 12. Turn main power switch on PDC to OFF position. 13. Lock out according to local procedures to prevent mechanical motion. 14. Correct any erratic chain movement or unusual noise emissions. 15. Remove lockout and turn main power switch on PDC to ON position. 16. Perform PDC start-up. 17. Run drive chain at full operating speed through several chain revolutions to inspect for erratic chain movement or unusual noise emissions. 18. Locate any problems. 19. Turn main power switch on PDC to OFF position. 20. Lock out according to local procedures to prevent mechanical motion. 21. Correct problem(s). 22. Remove lockout and turn main power switch on PDC to ON position. 23. Press the Preset Pushbutton and ensure Ready Preset indicator illuminates. 24. Place equipment in Jog mode. 25. Run drive chain at full operating speed while performing a visual/audio inspection to detect continuous, erratic chain movement, or noise emissions.					
--	--	---	--	--	--	--	--

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		<p>NOTE: The following step works best for articulated chains, but will work to some degree on straight.</p> <p>26. Inspect along lower drive chain path in the last C module, approximately 4 feet beyond point where chain exits chain sprocket. Look for abnormalities in drive chain toggle deviation occurring in continuous, rather than occasional or random frequencies, indicate chain requires tension adjustment.</p> <p>27. Reset interlock switches.</p> <p>28. Install side cover on Takeup Module opposite induct side.</p> <p>29. Install access panel on Takeup Module opposite induct side.</p> <p>30. Install Drive Module covers at reject chute.</p> <p>31. Create work order if chain needs adjusting.</p>					
CARRIER CELL: CARRIER CELL UNIT	46	<p>Check Carrier Cell Unit.</p> <p>WARNING: Mechanical hazards are present when moving carrier cells. Use care when working around moving carrier cells. Failure to comply may cause injury or death.</p> <p>NOTE: Buildup of dirt or residue on exposed conveyor belts reduces surface friction, allowing packages to slip, and resulting in sorting errors.</p> <ol style="list-style-type: none"> Refer to last logbook entry. Check 50 different carrier cells each time. Jog carrier cells to Drive Module maintenance port. Inspect conveyor belt for conditions requiring replacement: <ol style="list-style-type: none"> Slick belt surface Belt splice separation Nicks, tears, abrasions, and fraying Check for dirt or residue on exposed conveyor belt. Clean if necessary. Inspect drive and idler rollers for following conditions and bearings. <ol style="list-style-type: none"> Drive roller has no anti-slip tape 	100	09	75		

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		<p>b. Roller is damaged</p> <p>c. Bearing noise</p> <p>7. Inspect drive belt for conditions requiring replacement, using inspection mirror and flashlight:</p> <p>a. Cracks</p> <p>b. Worn/missing teeth</p> <p>c. Signs of excessive side-loading due to improper pulley alignment</p> <p>8. Check carrier cell wheels for flat areas that indicate a bearing failure.</p> <p>9. Check grounding clips for tightness and good electrical contact. Secure as necessary.</p> <p>10. Ensure that carrier cell unit has grounding strap installed. Replace as necessary.</p> <p>11. List carrier cell number and any discrepancies found during inspection. Create work orders for carrier cells that need to be cleaned, repaired, or replaced.</p> <p>12. Record the carrier cell numbers checked during inspection in log book.</p> <p>Refer to MS manual for the carrier cell conveyor tracking and tensioning procedure.</p> <p>Check current collectors (brushes).</p> <p>1. Check 50 carrier cells each time. Check the current collectors (brushes) using (new) APBS/APPS Brush and Rail Gauge, PSN 5220-17-000-5948, and replace brush and stem assembly if brush is not within acceptable limits.</p> <p>Refer to MS manual for the proper checking, and replacement procedures.</p>					
DRIVE: AUTOMATIC OILER	47	<p>Check the Automatic Oiler.</p> <p>1. Check the oil level in the automatic oiler (add oil as required). Refer to MTSC KB 0020628 for correct oil type.</p> <p>2. Check the oiler for proper spray pattern.</p>	5	07	300		

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		Refer to MS-272, Volume A, Section 9.					
DRIVE: PHOTOEYES	48	<p>Check MECH REJECT SLIDE and Waterfall Scan Photoeyes.</p> <p>MECH REJECT PHOTOEYES (DS 5 and 6).</p> <ol style="list-style-type: none"> Clean photoeye. <ol style="list-style-type: none"> Spray microfiber cloth with locally approved cleaner and wipe photoeye until clean. Clean reflector. <ol style="list-style-type: none"> Spray microfiber cloth with locally approved cleaner and wipe reflector until clean. Check upper and lower photoeye operation by blocking and observing that green LED transitions from ON to OFF on the Reject 2 MC-70. Create work orders for any needed repairs. <p>WATERFALL SCAN PHOTOEYES (DS 1, 2, and 3).</p> <ol style="list-style-type: none"> Clean photoeye. <ol style="list-style-type: none"> Spray microfiber cloth with locally approved cleaner and wipe photoeye until clean. Clean reflector. <ol style="list-style-type: none"> Spray microfiber cloth with locally approved cleaner and wipe reflector until clean. Check upper and the two lower photoeyes operation by blocking and observing that green LED transitions from ON to OFF on the Reject 2 MC-70. Create work orders for any needed repairs. <p>Refer to MS-272, Volume A, Section 9.</p>	6	07	150		
APBS: POWER RAIL	49	<p>Power Rail Cleaning and Inspection.</p> <p>WARNING: Access to power rail may require use of step ladder. Be cautious of your body position while on step ladder to prevent the</p>	24*	09	1800		

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		<p>potential for a fall. Follow all safety precautions. Failure to comply may cause injury.</p> <p>NOTE: This task should be planned during a large maintenance window to prevent removing and reinstallation of the carrier cells more than once. This task has 42 days to live to allow for the coordination of task.</p> <p>Clean the power rail as follows:</p> <ol style="list-style-type: none"> 1. Remove ten carrier cells. 2. Jog the machine until the entire opening is at beginning of upper power rail. This will provide access for cleaning the power track. 3. Power down and lock out the main power cabinet. 4. Ensure the APBS will not start by doing the following. <ol style="list-style-type: none"> a. Attempt to turn on CB1, the Main CPU Display and PDC indicators should not illuminate. b. Press the Preset on the PDC Control Panel. c. Press the Start on the PDC Control Panel, the machine should not start. 5. Clean dirt and debris from all internal power rail track and insulator surfaces. Use a HEPA vacuum cleaner and a stiff bristled brush to complete this task. <p>Inspect the power rail as follows:</p> <ol style="list-style-type: none"> 1. Using (new) APBS/APPS Brush and Rail Gauge, PSN 5220-17-000-5948, inspect sidewall wear and look for damage to the sidewall. 2. Using (new) APBS/APPS Brush and Rail Gauge, PSN 5220-17-000-5948, inspect upper power rail depth wear to ensure copper does not exceed 14 mm (0.552 inch). 3. Replace worn power rails, if required. 4. Remove lockout device and power up the main power cabinet so the opening can be 					
--	--	---	--	--	--	--	--

U.S. Postal Service		IDENTIFICATION													
Maintenance Checklist		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		jogged to the next segment of power rail. 5. Continue to clean and inspect each section until the entire upper rail has been completed. *Multiplied by the number of A/B modules plus 1 for C modules.					
PSOC: PSOC-T	50**	Calibrate Focus and ADC. NOTE: If site adds, removes, or replaces a light source (broken light bulb) that will affect the ambient lighting of the camera, PSOC will need to be calibrated. Using the current MMO for calibrating the PSOC- T, verify camera angle and the acquisition line distance is within tolerance, then calibrate the camera following the step and substeps for Focus and ADC.	12	10			B
PSOC: PSOC-I	51**	Calibrate Focus and ADC. NOTE: If site adds, removes, or replaces a light source (broken light bulb) that will affect the ambient lighting of the camera, PSOC will need to be calibrated. Using the current MMO for calibrating the PSOC- I, verify camera angle and the acquisition line distance is within tolerance, then calibrate the camera following the step and substeps for Focus and ADC.	10	10			M
APBS: INDUCTION STATION	52**	Perform Operational Check. NOTE: Priority A work order must be assigned if a Scale fails validation. NOTE: During peak processing times, it may take one hour or longer for data to make it to Product Tracking website and be displayed. Perform scale and operational checks as follows: 1. Check the Current (Tracking) Barcode Read count in IDS by performing the following: a. Login to an ACE computer and open Internet Explorer. b. Type mpewatch in address block and hit Enter.	13	09		5	

U.S. Postal Service Maintenance Checklist	IDENTIFICATION														
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE	
	0	3	A	P	B	S				A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter	Equipment Model						Bulletin Filename mm14129				Occurrence eCBM				

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.

		<p>c. Select MPEwatch Site List.</p> <p>d. Select your site.</p> <p>e. Select Equip Status.</p> <p>f. Select the box to the left of SPBSTS-00X for the APBS E-Box.</p> <p>g. Check to ensure the Status is connected and take note of the Current Barcode Read count.</p> <p>2. Prepare APBS machine for operation.</p> <p>NOTE: Induction Maintenance menu is now capable of zeroing out scale when static reading (no weight on scale) is within 0 to 1.3 lbs. This is accomplished by pressing F4 key on keying station while in Maintenance mode.</p> <p>3. Verify each scale LCD monitor is reading 0.00 lbs.</p> <p>a. If scale is reading anything other than 0.00 lbs., zero the scale using sub-steps below; otherwise go to step 4.</p> <p>1) Enter maintenance mode by pressing blank key on keypad (located above the red CANCEL) and entering the maintenance password.</p> <p>2) Press F4.</p> <p>3) Exit maintenance mode by pressing the CANCEL key.</p> <p>4. Place 20 lb. weight PSN 6670-17-000-8102 in each of the four corners of the scale transport belt. Verify weight is 20 lbs. +/- 0.03 at each corner location.</p> <p>5. Ensure induction line module side covers do not touch Scale Transport Conveyor assembly. Press inward on side covers, and verify there is no weight value change on the scale display.</p> <p>6. Remove 20 lb. weight from scale transport belt. Verify display reads 0.00 Lbs.</p> <p>7. Create a work order for any discrepancies found for steps 4 - 6.</p>					
--	--	---	--	--	--	--	--

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		<p>8. Place 20 Lb. weight in center of scale. Verify it reads 20 lbs. +/- 0.03.</p> <p>a. If scale is within acceptable tolerance, the validation procedure is complete; proceed to step 8.</p> <p>b. If scale weight does not read within specified 20 lbs. +/- 0.03, create a priority "A" work order, and notify supervisor.</p> <p>NOTE: Normal register values for all inductions except the last is 64, so a value of 80 disables scale. The normal value for the last induction line is 69, so a value of 85 disables the scale. Disabling scale serves as a flag for Revenue Protection to not use weight data from this scale.</p> <p>c. If the work order created in the above step is unable to be scheduled and corrected within the current Maintenance Window, disable scale by adding a value of 16 to the normal values in register 121-126 and save. Keep the Priority "A" work order open until the scale is calibrated and Register settings are back to normal values.</p> <p>9. Load Maintenance sort plan from System Computer by selecting a local 750 sort plan or opening the sample sortplans folder and selecting the machine's configuration.</p> <p>10. Start the APBS machine. Ensure that all audible and visual safety alarms are operational.</p> <p>11. Check that Date and Time on E-BOX display is current and make note of the current count.</p> <p>12. Use 5 piece test deck PSN 3915-15-000-0674 and sample barcode sheet from MWO-041-16 Attachment 3, perform the following:</p> <p>a. At Induction Line 1 perform the following:</p> <p>1) Pre-scan the test barcodes at the end of Attachment 3 for induction 1 with the handheld scanner, and ensure the keypad display shows >> Rt barcode.</p> <p>2) Induct Test Card 1 face up so that</p>					
--	--	---	--	--	--	--	--

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		<p>the PSOC can capture the tracking barcode.</p> <p>b. At Induction Line 2 perform the following:</p> <ol style="list-style-type: none"> 1) Pre-scan the test barcodes at the end of Attachment 3 for induction 2 with the handheld scanner, and ensure the keypad display shows >> Rt barcode. 2) Induct Test Card 2 face up so that the PSOC can capture the tracking barcode. <p>c. At Induction Line 3 perform the following:</p> <ol style="list-style-type: none"> 1) Pre-scan the test barcodes at the end of Attachment 3 for induction 3 with the handheld scanner, and ensure the keypad display shows >> Rt barcode. 2) Induct Test Card 3 face up so that the PSOC can capture the tracking barcode. <p>NOTE: Current APBS-SC version is not compatible with the Last Induction's software architecture. Sites are not to install the last induction's handheld scanner until further directed by USPS Engineering. Installation of the hand scanner to the last induction will result in missing scans at IDS.</p> <p>d. At Induction Line 4 (if applicable) perform the following:</p> <ol style="list-style-type: none"> 1) Pre-scan the test barcodes at the end of Attachment 3 for induction 4 with the handheld scanner, and ensure the keypad display shows >> Rt barcode. 2) Induct Test Card 4 face up so that the PSOC can capture the tracking barcode. <p>e. At Induction Line 5 (if applicable) perform the following:</p> <ol style="list-style-type: none"> 1) Pre-scan the test barcodes at the end of Attachment 3 for induction 5 with the handheld scanner, and ensure the keypad display shows 					
--	--	--	--	--	--	--	--

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	3	A	P	B	S				A	A	0	0	1
Equipment Nomenclature Automated Parcel Bundle Sorter	Equipment Model						Bulletin Filename mm14129				Occurrence eCBM			

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.

		>> Rt barcode. 2) Induct Test Card 5 face up so that the PSOC can capture the tracking barcode. 13. Induct Test Card 5 face up so that the PSOC can capture the tracking barcode. 14. End Run at System Computer. 15. Ensure that all mailpieces are sorted to the correct bin location. a. If using a Sample sortplan, it is expected that the test cards will be considered Out of Sort and will be sorted to the mechanical reject bin. 16. At the Image Controller, login with Maintenance and ensure all test card images can be viewed from the Package/Browse tab. a. Open an MTSC ticket if any test card images fail to be seen at Image Controller. 17. Check that E-BOX count has incremented the five test pieces. Note that the count could be as high as 11 for the test deck. This is due to the RP potentially providing additional FDOC results for cards 1 thru 5. 18. Ensure the tracking data made it to IDS by performing the following: a. Allow 20 minutes to go by. b. Login to an ACE computer and open Internet Explorer. c. Type mpewatch in address block and hit Enter. d. Select MPEwatch Site List . e. Select your site. f. Select Equipment Status . g. Select the box to the left of SPBSTS-00X for the APBS E-Box. h. Ensure the Status is connected and that the Current Barcode Read is between 5 and 11 after running the test deck.					
--	--	--	--	--	--	--	--

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	3	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		<p>19. Ensure that Tracking Barcodes for your site were sent to Product Tracking and Reporting by entering them in the PTR web page at least 20 minutes after running them at https://pts-2.usps.gov/pts2-web/landing/ or entering pts in Internet Explorer address block.</p> <p>NOTE: If test piece fails, ensure it is not due to loop from Image Controller.</p> <p>20. Create work order to investigate any failures.</p> <p>Tracking Barcode Troubleshooting</p> <p>If E-Box is incrementing at the APBS but MPEwatch is not incrementing when it updates every five minutes while the machine is running, there may be an issue from the E-Box to IDS.</p> <ol style="list-style-type: none"> 1. Sites should reboot the E-Box and monitor for two hours. 2. If the count continues to stay the same, site should open a MTSC help ticket for SPBSTS stating SPBSTS-00X off of APBS-X is not updating IDS from the MPEwatch webpage. 3. If MPEwatch increments but site is unable to view the scans at the Product Tracking System webpage https://pts-2.usps.gov/pts2-web/landing/. 4. Attempt the tracking barcodes again after two hours has elapsed. 5. If you are still unable to view the scans of a known good sampling of tracking codes, open an MTSC help ticket for IDS stating SPBSTS-00X off of APBS-X is not updating Product Tracking System webpage. If using the MTSC web portal to open a ticket and equipment type IDS is not listed for your site use acronym NDSS and put IDS in the description. 					
FINAL-CLEANUP	53	<p>Cleanup.</p> <p>Ensure all tools, lubricants, rags, etc., are removed from the work area. Report all deficiencies to your supervisor.</p>	2	All			

* --- the tasks marked with an asterisk are per unit tasks.

U.S. Postal Service Maintenance Checklist	IDENTIFICATION														
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE	
	0	3	A	P	B	S				A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter	Equipment Model						Bulletin Filename mm14129				Occurrence eCBM				

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.

**** --- the tasks marked with two asterisk are critical tasks.**

ATTACHMENT 3

APBS MASTER CHECKLIST

09-ABPS-AA-001-M

Operational Maintenance

Time Total: See Attachment 1 roll-ups.

NOTE

* --- the tasks marked with an asterisk are per unit tasks.

** --- the tasks marked with two asterisk are critical tasks.

U.S. Postal Service Maintenance Checklist	IDENTIFICATION													
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
	0	9	A	P	B	S				A	A	0	0	1
Equipment Nomenclature Automated Parcel Bundle Sorter	Equipment Model						Bulletin Filename mm14129				Occurrence eCBM			

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: EWP/PPE: Steps contained in this bulletin may require the use of Electrical Work Plan (EWP) Personal Protective Equipment (PPE). Refer to the current EWP MMO for appropriate PPE requirements.</p> <p>WARNING: Various products requiring Safety Data Sheets (SDS) may be utilized during the performance of the procedures in this bulletin. Ensure the current SDS for each product used is on file and available to all employees. When reordering such a product, it is suggested that current SDS be requested. Refer to SDS for appropriate personal protective equipment.</p>	1	All			T
OPERATIONAL: GENERAL	2	<p>Monitor Equipment Condition.</p> <ol style="list-style-type: none"> Check Maintenance logbook for any outstanding issues. Ask operators (keyers/facers and sweepers) and operations supervisor if they are aware of any equipment problems. Investigate reported problems. 	2	9			T
OPERATIONAL: SYSTEM CONTROL WORK STATION	3	<p>Check System Workstation Computer.</p> <ol style="list-style-type: none"> Check for low read rate at the System Workstation Computer Operations-Overview 	2	09			T

U.S. Postal Service Maintenance Checklist	IDENTIFICATION														
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE	
	0	9	A	P	B	S					A	A	0	0	1
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129				Occurrence eCBM			

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.
		screen. Initiate action to correct low (less than 85%) read rate. Read Rate is dependent on operation and mail base. 2. Check RTFs and Errors on System Workstation RTF/Error panes. 3. Check Maintenance/Cells tab to identify disabled carrier cells. 4. Investigate discrepancies at the earliest opportunity (Operation's break/lunch).					
OCR CABINET: RACK COMPUTER	4	Check Image Controller Computer. CAUTION: Limit the time that the OCR Rack door is open as there is no filtering of air intake to the rack components while the door is open. 1. Check IC System Status Screen and verify that Device Icons are green (connected) and connections are checked. 2. Initiate action to correct red (disconnected) devices. 3. Under Packages/Monitor, ensure that you are receiving OCR and BCR results when viewing multiple packages in Priority Runs (438 or 439).	2	09			T
INDUCT: INDUCTION STATION	5	Check Induction Stations. 1. Observe proper tracking of belts. 2. Observe that belt and parcel/bundle stops at appropriate photocells. 3. Check measuring array for debris, clean if necessary. 4. Check induction for proper positioning of mail on carrier cells. All sizes, shapes and weights should be centered laterally and slight forward of center longitudinally. 5. Note any discrepancies in logbook and initiate corrective action. * Multiplier is # of Induction stations.	1*	09			T
OUTPUT: TRANSPORT OUTPUT/ SORT MODULES	6	Check Transport Output Modules. 1. Observe that warning lamps, warning horns, and startup delay operate properly.	5	09			T

U.S. Postal Service Maintenance Checklist		IDENTIFICATION													
		WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE
		0	9	A	P	B	S			A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter		Equipment Model						Bulletin Filename mm14129			Occurrence eCBM				

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.

		<ol style="list-style-type: none"> Check that bin full and sweep indicators operate properly. Listen for unusual noises emanating from the transport output modules. Look for bent chutes and dividers. Check re-centering module to ensure that mail is centered as it leaves the module. Reprocess 3-5 pieces of varied size and weight mail from bin 54 or 55 and observe that mail unloads properly to the same bin. Note any discrepancies in logbook and initiate corrective action. 					
DRIVE: DRIVE-END MODULE	7	Check Drive Module. <ol style="list-style-type: none"> Listen for unusual noises emanating from the drive module. Check drive module overflow bin. <ol style="list-style-type: none"> Observe that no mail is close in proximity to carrier cells. Stop machine and remove mail that may cause a jam and carrier cell crash. During operational breaks, remove all mail from overflow bin. Check mechanical reject bin. <ol style="list-style-type: none"> Observe that carrier cell belts are spinning at both the reject and cell test positions. Check for excessive mail pieces in mechanical reject bin. Investigate excessive mechanical rejects. Note discrepancies in logbook and initiate corrective action. 	2	09			T
OPERATIONAL: E-BOX	8**	E-Box Operational Checks. NOTE: During peak processing times, it may take one hour or longer for data to make it to Product Tracking website and be displayed. <ol style="list-style-type: none"> Check EBOX shows DCS: UP. 	8*	09			T

U.S. Postal Service Maintenance Checklist	IDENTIFICATION														
	WORK CODE		EQUIPMENT ACRONYM						CLASS CODE		NUMBER			TYPE	
	0	9	A	P	B	S				A	A	0	0	1	M
Equipment Nomenclature Automated Parcel Bundle Sorter	Equipment Model						Bulletin Filename mm14129				Occurrence eCBM				

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.

		2. Check the EBOX count is incrementing on the LCD display. 3. Ensure EBOX is sending data to IDS. <ul style="list-style-type: none"> a. Open Internet Explorer on an ACE workstation. b. Enter MPEWatch into address block. c. Click MPEWatch Site List. d. Find and click on your site. e. Click "Equip Status". f. Find "SPBSTS-00X" (X is machine number), and click the box just to left. g. Verify it is incrementing (every 5 minutes) when the site refreshes for the current date while machine is running. 4. Sample three sorted mailpieces that have a tracking barcode. 5. Ensure that Tracking Barcodes were sent to Product Tracking and Reporting by entering them in the PTR web page at least 20 minutes after sampling them at https://pts-2.usps.gov/pts2-web/landing/ or entering pts in Internet Explorer address block. 6. Create work order to investigate any failures. * Accomplish twice per tour.					
--	--	--	--	--	--	--	--

*** This task is accomplished twice per tour.**

*** --- the tasks marked with an asterisk are per unit tasks.**

**** --- the tasks marked with two asterisk are critical tasks.**