### MAINTENANCE TECHNICAL SUPPORT CENTER **HEADQUARTERS MAINTENANCE OPERATIONS**





## Maintenance Management Order

**SUBJECT:** Mail Staging Tower (MST) Daifuku Preventive **DATE:** May 28, 2014

Maintenance

**NO**: MMO-044-14

**TO:** Mail Staging Tower (Daifuku) Sites FILE CODE: TM3

pmur:mm13047ab

This Maintenance Management Order (MMO) provides Preventive Maintenance Guidelines for the Mail Staging Tower (MST). This bulletin applies to Acronym MST, Class Code DA.

The workhours indicated in the workload estimate (Attachment 1) reflect the maximum annual workhours required to maintain each system. 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.

#### 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.

Web Access: http://mtsc.usps.gov

#### 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 requirements.

Direct any questions or comments concerning this bulletin to the MTSC HelpDesk, online at http://mtsc.usps.gov/apps/remedyticket/index.cfm or call (800) 366-4123 or (405) 573-2123.

Robert E. Albert

Manager

Maintenance Technical Support Center

**HQ Maintenance Operations** 

- Attachments 1. Summary of Workload Estimate
  - 2. Master Checklist 03-MST-DA-001-M Monthly PM
  - 3. Master Checklist 03-MST-DA-002-M Quarterly PM
  - 4. Master Checklist 03-MST-DA-003-M Annual PM

#### **ATTACHMENT 1**

SUMMARY

**WORKLOAD ESTIMATE** 

**FOR** 

**MST SYSTEM** 

# SUMMARY WORKLOAD ESTIMATE FOR MST

Operation	Routine Servicing (Hrs/Yr)	Repair∗ (Hrs/Yr)	Total Servicing & Repair Time (Hrs/Yr)	Nonproductive Time** (Hrs/Yr)	Total Servicing Per Unit (Hrs/Yr)
Monthly	36.00	10.80	46.80	4.68	51.48
Quarterly	13.87	4.16	18.03	1.80	19.83
Annual	3.53	1.06	4.59	0.46	5.05
Totals	53.40	16.02	69.42	6.94	76.36

#### NOTES:

- \*Repair estimates based on 30% of servicing.
- \*\*Based on 10% of total servicing and repair.

#### **NOTE**

The time shown does not allow for multiple assemblies on any equipment. Should multiple assemblies exist, the time must be modified at the local level to account for those occurrences. Other unique site conditions that require additional time are also to be addressed at the local level.

#### **ATTACHMENT 2**

#### **MST MASTER CHECKLIST**

03-MST-DA-001-M

Monthly Time Total: 180 minutes

Maintenance Technical Support Center IDENTIFICATION

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Maintenance	Checklist	WORK CODE	EQUIPMENT ACRONYM			ASS ODE	NUI	MBER	TYPE
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Mail Stagin	g Tower	Da	ifuku	mm13	3047al	)		Monthly	/
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Component		(Comply with all cur	rent safety precaution	ns)	Req (min)	Skill Lev	Run Hours	Pieces Fed (000)	Freq.
SAFETY STATEMENT	Di re- lo- do eq Ch If su fu Th IS W clo va in fre- eq ca yo W. St th- (P	OMPLY WITH ALL SA sconnect power and quired by this instructal lockout procedules own and lock out quipment and inspineck for suspicious of any unusual substituted any unusual substituted action on the extension on the extension of the extension of the extension of the cleaning is repaired by the cleaning of the cumulation of the use of compressed and the control of the cumulation of the	I apply lockour ction. Refer to ures to proper this machine. ect dust cordust or unusual tance is found proceeding was proceeding was a HEPA amp rag must d or blown air. ay be used on other cleaning rest safety deficie liately upon det PE:  bulletin may reptective Equipment Electrical V	ts when current rly shut Open nditions. I debris. d notify ith any WN AIR ernative filtered be used A lintoptical methods ncies to ection.	3	All			
			n in advance therson(s) perfor	the at no ming					
		Never step under staging crane who vertical travel drive anyone to ride on the	nen operating motor. Do not	the allow					

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		4. Click	the Set b	outton on the E	Error Log	Screen.					
		recur furthe	nd Page ring or	he Page e of any warrant spection							
				ig the error lo Error Display s	the Exit						
		7. Click	the Exit	button on the I	Error Log	screen.					
			tion scre	xit button or en to return							
		9. Repo	ort discrep	oancies to sup	ervisor.						

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VERTICAL	3.	Observe	Vertical	Tr	avel [	Drive	• Uni	t.		3	9				
TRAVEL DRIVE UNIT				W	/ARN	ING									
		from	ving observations are to be made outside the safety fence while the g unit is still in operation.												
			NOTE												
		recom	st 30 minutes of prior operation is mended to ensure an accurate rature reading.												
			n for any unusual noises from the al travel drive motor.						om the						
		any s other	al travel drive motor.  rve the vertical travel drive motor fo  signs of looseness, bearing failure, o  damage. Pay particular attention to the  ting bolts.						ilure, or						
		meas		s	urface	e tei			nometer, of the						
					NOT	Ε									
		exceed 40 °C ambie the s should	NOTE  measured temperature should not d the ambient air temperature plus C (~ 72 °F). For example, if the nt air temperature is 25 °C (77 °F), urface temperature on the motor d not exceed 65 °C (149 °F). [25 + 65 °C] or [77 + 72 = 149 °F]						plus f the <sup>7</sup> °F), notor						
		<ol> <li>Lister vertic</li> </ol>	n for a al travel				nois	es fi	om the						
		any	erve the vertical travel drive pulley for signs of looseness or other damage or cherter.						damage.						
		wrap the ι	rve the vertical travel lift wires as they and unwrap from the drive pulley and upper idler pulleys to ensure uniform ment and no binding.						illey and						
			n for a al travel					es fr	om the						

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Part or Component	Item No		(Com						Instru <sup>f</sup> ety p	ction recautic	on	s)	Est. Time Req (min)	Min. Skill Lev	Run Hours	P	esholo ieces Fed 000)	Freq.
		8. Repo	ort di	iscre	ера	ncie	es t	o si	ıper	/isor.								
HORIZONTAL TRAVEL DRIVE	4.	Observe	Но	rizo					_	Unit.			3	9				
UNIT			WARNING															
		from stagi	following observations are to be made rom outside the safety fence while the taging unit is still in operation.							the								
			isten for any unusual noises from the norizontal travel drive motor.							om the								
		any	Observe the horizontal travel drive motor for ny signs of looseness, bearing failure, of ther damage.															
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			nme	nde	d t	to	en			operat n ac								
		3. Usin mea: horiz	sure	th	e s	surf	ace	e te	empe			ometer, of the						
						N	ОТ	Е										
		excee 40 °( ambie the s shoul	NOTE  The measured temperature should not exceed the ambient air temperature plus 40 °C (~ 72 °F). For example, if the ambient air temperature is 25 °C (77 °F), the surface temperature on the motor should not exceed 65 °C (149 °F). [25 + 40 = 65 °C] or [77 + 72 = 149 °F]						plus the °F), notor									
		horiz	Listen for any unusual noises from the horizontal travel drive pulley and take-up pulley.															
		take- bear	Observe the horizontal travel drive pulley and ake-up pulley for any signs of looseness earing failure, or other damage. Ensure the ulleys have no lateral oscillations.						seness,									
										drive		belt for ack.						
		7. Liste	n fo	or	any	uı	nus	sual	no	ses 1	fro	om the						

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		b	orizontal trav	al drive ence	dor						
				el drive enco							
		8. R	eport discrep	oancies to sup	pervisor.						
CARRIAGE	5.	Obse	rve Carriage	Operation.			3	9			
				WARNING							
		fro	om outside	servations are the safety fe s still in oper							
		C		ny unusual e motor, sprod s.							
		si	bserve the gns of loose amage.								
		m		unusual nois rt bearings,							
				lifting motor aring failure, o							
				NOTE							
		re		inutes of prio to ensure ading.	•						
		m	neasure the	contact infra surface ter motor and th	nperature	of the					
				NOTE							
		ex 40 an the sh	ne measured ceed the an o °C (~ 72 nbient air ter e surface to ould not exc o = 65 °C] or	plus if the 7 °F), motor							
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SHUTTLE	6.	Observe	Shuttle_	Operation.			3	9			
				WARNING	<b>i</b>						
		from	outside	servations at the safety s s still in ope	fence whil						
			motor, d	unusual noi Irive gears,							
				huttle opera aring failure							
			ut bindir	the shuttle ng and retu		-					
		4. Repo	rt discrep	oancies to si	upervisor.						
STAGING CRANE	7.	Position Inspection		g Crane f	or Cleani	ng and	3	9			
				CAUTION							
		stagir opera maint to vis positi	ig crand ting the enance ually ch on, extra	ent protect of the post of the post of the post of the protect of the protect of the protect of the protect of the cranect of the cranect of the protect of	g the ssible nuttle used						
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		Power do ON/OFF OFF posidevice.	switch o	n th	e stagi	ng co	ntrolle	er in the						
	9.	Secure S	taging (	Crane	e Mask	•			6	All				
				WA	RNING	;								
		stagin stand mask attem mask vertic	e the jack stands directly below the ng crane mask and raise the ds until they are just below the with minimal clearance. Do not not to support the weight of the with the jack stands or the cal travel lift wires will unwrap from ertical travel drive pulley.											
		Place two staging of prevent the of a continspection allowing discrepan	rane mask me mask mponent n. Pos for eas	ask a from fail ition se o	as a s falling ure du one s of mair	afety in the iring stand	preca unlike clean at ea	ution to						
VERTICAL	10.	Check Ve	ertical T	ravel	Drive	Unit.			8	7				
TRAVEL DRIVE UNIT		1. Remo	ove the v	ertica	al trave	l drive	moto	r cover.						
				ear,				otor for or other						
		3. Chec leaka	ge.											
			ssive we	ar or	other s	igns c	f dam	age.						
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VERTICAL TRAVEL LIFT WIRES	11.	The st 6.35 diame diame section pulleys 2. Using measure of the content of the co	gure 1. Vect the vector by a caliper sure the control of the contr	counting rdware for damage. Travel Lift NOTE spect all ght. Pay of lift win pulleys.  Vertical The min applying the lift win pass through the lift w	bracked or cracked or	ets, boxs, looservisor.  S.  es, inclular attopass the pass the pa	racks, or olts, and seness or luding ention rough  re or broken  wire is ptable it wire arious y the ridler igure 2, es at the	24	9			
		meas	sure the	diameter	of the	lift wire						

Maintenance Technical Support Center IDENTIFICATION

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		diame	eter is no	t less than t	5.9mm.						
		defor	med, or o	ure the lift w corroded. ny broken s							
		less	than	5.9 mm eplacement	(~0.232	inches					
		CORREC	ET NG MI	WRONG EASURING	NEW DIAMETE	a ER = 6.35mr	n				
		Figure		rect Metho		uring					
				NOTE							
		vertica 2,000, questi more approp for pr travel	l trave 000 cy on or the than th oriate m ocedure	cles for the lift wire had ree years. naintenance son read count using	count exc ne lift wir s been in us Refer to documen ing the ve	ceeds Te in The se for The tation The certical					
		cover		e vertical		e moto	or				
		6. Repo	rt discre <sub>l</sub>	pancies to s	upervisor.						
HORIZONTAL	12.	Check Ho	orizonta	l Travel Dri	ve Unit.		8	7			
TRAVEL DRIVE UNIT				horizontal and encode		e moto	r,				
		exces		orizontal tra ear, bearin ge.							
				rizontal trav for excessi							

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								Req (min)	Lev	Hours	Fed (000)	·
								()			(000)	
			beari	ng failure	e, or other sig	ins of dam	age.					
		4.		Ü	oder for							
		<b>-</b> 7.	exces	ssive we	ear, bearing damage.							
		5.	asso	ciated ha	ounting bra ardware for of damage.							
		6.		_	pancies to su	pervisor.						
HORIZONTAL	13.	Ins	pect l	Horizonta	al Travel Dri	ve Belt.		8	9			
TRAVEL DRIVE BELT		1.	exce	ssive we	belt for damage.							
			Check for the following conditions:  a. Tooth wear – Canvas fibers on tooth becoming fluffy, rubber layer worn down and faded white, or canvas texture becoming dim or unclear due to over tensioning.									
			1	formed in pulleys,	ear – Broke n tooth root mechanical installation.	s due to	jammed					
				core fibe due to i	r – Belt edge rs (wicks) e: improper tra or interferenc	xposed an icking, wo	d frayed orn drive					
			1	Partial cu foreign installatio	ts – Cuts fo substances on.	-	engaging improper					
			e. Back surface sticky / soft – Stickiness of softening of the belt back surface may have occurred from oil contamination of dirt adherence to the belt.									
			f. Back surface cracked / worn - Crack formed on the belt back surface due t high or low temperature extremes.									
		2.		k the her tension	orizontal tra ı.	vel drive	belt for					

Maintenance Technical Support Center IDENTIFICATION

VERTICAL TRAVEL GUIDE ROLLERS Check the vertical travel guide rollers on each end of the staging crane (12 total) for excessive wear, looseness, bearing failure, rubber separation, or other signs of damage. Report discrepancies to supervisor.	Maintenance	Check	list	CODE			CRONYM			ODE	NU	MBEK	TYPE
Part or Component   No   Tresholds   Time   Task Statement and Instruction   Component   No   Tresholds   Time   Real   Run   Real   Run   Run						Т		=:		Α			М
Part or Component   Item No   Task Statement and Instruction   Est. Time (Comply with all current safety precautions)   Est. Time (min)   Skill Run   Pieces (min)   Freq.				Equipme							Occurre		
Component   No   (Comply with all current safety precautions)   Time (key   Run   Pieces   Freq.	Mail Staging	g Towe	er		Daifu	ıku		mm1	3047a	b		Monthly	У
Component   Comply with all current safety precautions   Req (min)   Silv   Run   Pieces   Freq (min)   Silv   Pieces   Freq (min)   Pieces   Pie	Part or			Task	Statement	and Ins	truction		l l	Min.		Threshold	ls
take-up pulley, and encoder covers. 4. Report discrepancies to supervisor.  14. Check Staging Crane Vertical Travel Guide Rollers.  Check the vertical travel guide rollers on each end of the staging crane (12 total) for excessive wear, looseness, bearing failure, rubber separation, or other signs of damage. Report discrepancies to supervisor.  CARRIAGE AND SHUTTLE  15. Clean Carriage and Shuttle. 1. Lower the cover on the bottom of the carriage assembly. 2. Remove the shuttle side cover(s). 3. Check for loose mail. 4. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner, a damp cloth, lint-free cloth or brush, must be used in place of compressed or blown air. Report safety deficiencies to your supervisor immediately upon detection. 5. Report discrepancies to supervisor.  CARRIAGE MOTORS AND DRIVE GEARS  16. Check Carriage Motors and Drive Gears. 1. Check the conveyor drive motor for excessive wear, bearing failure, or other signs of damage. 2. Check the conveyor drive chains, sprockets and driven gears for excessive wear, looseness, bearing failure, or other signs of damage. 3. Check the lifting motor, support bearings, and rack and pinion gears for excessive wear, bearing failure, cracks, or other signs of damage.	Component	No		(Comply wit	th all currer	nt safety	/ precautio	ns)	Req			Fed	Freq.
VERTICAL TRAVEL GUIDE ROLLERS  Rollers.  Check the vertical travel guide rollers on each end of the staging crane (12 total) for excessive wear, looseness, bearing failure, rubber separation, or other signs of damage. Report discrepancies to supervisor.  CARRIAGE AND SHUTTLE  15.  Clean Carriage and Shuttle. 1. Lower the cover on the bottom of the carriage assembly. 2. Remove the shuttle side cover(s). 3. Check for loose mail. 4. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner, a damp cloth, lint-free cloth or brush, must be used in place of compressed or blown air. Report safety deficiencies to your supervisor immediately upon detection. 5. Report discrepancies to supervisor.  CARRIAGE MOTORS AND DRIVE GEARS  16.  Check Carriage Motors and Drive Gears. 1 Check the conveyor drive motor for excessive wear, bearing failure, or other signs of damage. 2. Check the conveyor drive chains, sprockets and driven gears for excessive wear, looseness, bearing failure, or other signs of damage. 3. Check the lifting motor, support bearings, and rack and pinion gears for excessive wear, bearing failure, or other signs of damage.			take	-up pulley	, and en	coder	covers.	e motor,					
1. Lower the cover on the bottom of the carriage assembly.  2. Remove the shuttle side cover(s).  3. Check for loose mail.  4. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner, a damp cloth, lint-free cloth or brush, must be used in place of compressed or blown air. Report safety deficiencies to your supervisor immediately upon detection.  5. Report discrepancies to supervisor.  CARRIAGE MOTORS AND DRIVE GEARS  16. Check Carriage Motors and Drive Gears.  1 Check the conveyor drive motor for excessive wear, bearing failure, or other signs of damage.  2 Check the conveyor drive chains, sprockets and driven gears for excessive wear, looseness, bearing failure, or other signs of damage.  3 Check the lifting motor, support bearings, and rack and pinion gears for excessive wear, bearing failure, cracks, or other signs of damage.	STAGING CRANE VERTICAL TRAVEL GUIDE ROLLERS	14.	Rollers. Check t end of t wear, separation	he vertica he staging loosenes on, or otl	al travel g crane ( s, bear her signs	guide (12 to ring s of c	rollers tal) for e failure,	on each excessive rubber	6	7			
1. Lower the cover on the bottom of the carriage assembly.  2. Remove the shuttle side cover(s).  3. Check for loose mail.  4. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner, a damp cloth, lint-free cloth or brush, must be used in place of compressed or blown air. Report safety deficiencies to your supervisor immediately upon detection.  5. Report discrepancies to supervisor.  CARRIAGE MOTORS AND DRIVE GEARS  16. Check Carriage Motors and Drive Gears.  1 Check the conveyor drive motor for excessive wear, bearing failure, or other signs of damage.  2. Check the conveyor drive chains, sprockets and driven gears for excessive wear, looseness, bearing failure, or other signs of damage.  3. Check the lifting motor, support bearings, and rack and pinion gears for excessive wear, bearing failure, cracks, or other signs of damage.	CARRIAGE AND	15.	Clean C	arriage a	nd Shutt	tle.			8	7			
3. Check for loose mail.  4. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner, a damp cloth, lint-free cloth or brush, must be used in place of compressed or blown air. Report safety deficiencies to your supervisor immediately upon detection.  5. Report discrepancies to supervisor.  CARRIAGE MOTORS AND DRIVE GEARS  16. Check Carriage Motors and Drive Gears.  1. Check the conveyor drive motor for excessive wear, bearing failure, or other signs of damage.  2. Check the conveyor drive chains, sprockets and driven gears for excessive wear, looseness, bearing failure, or other signs of damage.  3. Check the lifting motor, support bearings, and rack and pinion gears for excessive wear, bearing failure, cracks, or other signs of damage.	SHUTTLE		asse	embly.				carriage					
4. When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner, a damp cloth, lint-free cloth or brush, must be used in place of compressed or blown air. Report safety deficiencies to your supervisor immediately upon detection.  5. Report discrepancies to supervisor.  CARRIAGE MOTORS AND DRIVE GEARS  16. Check Carriage Motors and Drive Gears.  1. Check the conveyor drive motor for excessive wear, bearing failure, or other signs of damage.  2. Check the conveyor drive chains, sprockets and driven gears for excessive wear, looseness, bearing failure, or other signs of damage.  3. Check the lifting motor, support bearings, and rack and pinion gears for excessive wear, bearing failure, cracks, or other signs of damage.			2. Rem	nove the s	huttle sic	de cov	er(s).						
cleaning method such as a HEPA filtered vacuum cleaner, a damp cloth, lint-free cloth or brush, must be used in place of compressed or blown air. Report safety deficiencies to your supervisor immediately upon detection.  5. Report discrepancies to supervisor.  CARRIAGE MOTORS AND DRIVE GEARS  16. Check Carriage Motors and Drive Gears.  1. Check the conveyor drive motor for excessive wear, bearing failure, or other signs of damage.  2. Check the conveyor drive chains, sprockets and driven gears for excessive wear, looseness, bearing failure, or other signs of damage.  3. Check the lifting motor, support bearings, and rack and pinion gears for excessive wear, bearing failure, cracks, or other signs of damage.			3. Che	ck for loos	se mail.								
MOTORS AND DRIVE GEARS  1. Check the conveyor drive motor for excessive wear, bearing failure, or other signs of damage.  2. Check the conveyor drive chains, sprockets and driven gears for excessive wear, looseness, bearing failure, or other signs of damage.  3. Check the lifting motor, support bearings, and rack and pinion gears for excessive wear, bearing failure, cracks, or other signs of damage.			clea vacu or com defid upor	ning met uum clear brush, n pressed ciencies t n detectio	hod suclater, a dan nust be or blown or blown or sour s	h as mp clo use n air. superv	a HEP <i>l</i> oth, lint-f ed in p Repo visor imr	A filtered ree cloth place of rt safety					
MOTORS AND DRIVE GEARS  1. Check the conveyor drive motor for excessive wear, bearing failure, or other signs of damage.  2. Check the conveyor drive chains, sprockets and driven gears for excessive wear, looseness, bearing failure, or other signs of damage.  3. Check the lifting motor, support bearings, and rack and pinion gears for excessive wear, bearing failure, cracks, or other signs of damage.	CARRIAGE	16	Check (	Carriage I	Motors a	nd Dr	ive Gea	rs.	8	7			
and driven gears for excessive wear, looseness, bearing failure, or other signs of damage.  3. Check the lifting motor, support bearings, and rack and pinion gears for excessive wear, bearing failure, cracks, or other signs of damage.	MOTORS AND		1. Che exce sign	ck the essive we s of dama	conveyo ear, bea ige.	or d iring	rive mo failure,	otor for or other	•	•			
rack and pinion gears for excessive wear, bearing failure, cracks, or other signs of damage.			and loos	driven eness, be	gears	for 6	excessive	e wear,					
4. Check the vertical LM guide bearings for			rack bear	and pin ring failur	excessiv	ve wear,							
			4. Che	ck the v	ertical L	M gu	ide bea	rings for					

IDENTIFICATION

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DETECTORS AND LIMIT SWITCH				NOTE								
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				ctrical con are not fr								
		6. Repo	rt discre	oancies to	super	isor.						

Maintenance Technical Support Center IDENTIFICATION

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		1	Measure t the spring ounces).									
			If the dis (~ 3/16"), t									
	3.	Rep	ort discrep	ancies t	o super	visor.						
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Maintenance Technical Support Center

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SHUTTLE LIMIT	24.	Check S	huttle Li	mit Sv	vitch					2	7			1
SWITCH	<b>2</b> 4.	1. Chec	k the sloth up and	huttle	limit			nger	for	_	,			
			k to ens			it sv	vitch a	actuat	ing					
				WAF	RNING									
		matei	rd or dis rials acc	ordin	g to	MSE	OS ar							
			cessary, or roller w			mit	switch	plun	ger					
		4. Reins	stall the c	arriag	e and	shutt	le side	e cove	ers.					
		5. Repo	ort discrep	oancie	s to su	ıperv	isor.							
STAGING BINS	25.	Check S	taging B	ins an	d Sup	port	Trus	ses.		14	7			
AND SUPPORT TRUSSES		1. Chec bent	k the sta or damaç		ins to	ensu	re the	y are	not					
		2. Chec	k to ensu	ıre all	stagin	g bin	s are l	level.						
			ove any the stagi			erials	or lo	ose n	nail					
			k the sup ent or da			to e	nsure	they	are					
		5. Repo	ort discrep	oancie	s to su	ıperv	isor.							
INPUT / OUTPUT /	26.	Check In	put / Ou	tput /	Reject	t Co	nveyo	rs.		6	7			
REJECT CONVEYORS			k drive r for exc s, or any	cessiv	e wea	ar, t			_					
			ace the of slippa	age. Ī										
		3. Repo	ort discrep	oancie	s to su	ıperv	isor.							

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PHOTO SENSORS / REFLECTORS	27.	Clean a					Reject	6	7				
		Chec associand n     Ensur     Using emitter	k to en ciated re ot visibly re all ele	isure the flectors of damage ctrical control cloth cloth and a w, and a	ne photo are se ged. onnection lean the	o sens curely ns are t	fastened tight. exterior,						
		5. Repo	rt discre	oancies	to super	visor.							
INPUT CONVEYOR STOP PLATE	28.	Check In Check t excessive frayed or Report dis	he inpu e wear, broken v	ut conv looser vires, or	veyor s ness, s other si	stop polenoid	failure,	2	7				
MAINTENANCE	29.	Check M	aintenar	nce Unit	t.			3	7				
UNIT		<ol> <li>Chec wiring</li> <li>Chec maint</li> <li>Chec light.</li> <li>Chec on the chec light.</li> <li>Chec on the chec push</li> <li>Repo</li> </ol>	enance of the form date	mage to unit.  amage to amage to amage to cancies	to the motor to the the key-to the eto super	aintena that hat status lock swemerger	indicator						
STAGING CRANE	30.	Remove to the supervisor	the two 4 ced und all tools staging	- l-ton adj der the s, lubrio	justable staging cants, ra	g crane ags, et	e mask. c., from	6	All				

Maintenance Technical Support Center

IDENTIFICATION

Maintenance	Check	list	WORK CODE			JIPMENT RONYM	-		_	LASS	N	JMBER	TYPE
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Equipment Nomenclatur	е		Equipmen	nt Mode	el		E	Bulletin F	ilename	•	Occurr	ence	
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Part or	Item		Task	Stateme	ent and Ins	truction			Est.	Min.		Thresho	ds
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			ment v	/hen v	RNING vorking power								
	31.	Restore I	Equipme	ent To	Service				3	All			
		you n requir Plan (I Restore LOCKOU' ON/OFF "ON" pos switch is faults and	nust do ed by the EWP) M electrica T/TAGO switch co ition. E in the	rming n the he cui MO. al pov UT don the Ensure ON-LII	levice a staging the mo NE posit	riate Plectrical remover place	ing icir ler ecti	as /ork g you ng the in the ion key set any					
CLEAN UP	32.	Clean Up Ensure a removed deficiencie	all tools from t	he w	ork are	-		c., are		All			

#### **ATTACHMENT 3**

#### **MST MASTER CHECKLIST**

03-MST-DA-001-M

**Quarterly Maintenance** 

Quarterly Time Total: 208 minutes

Maintenance Technical Support Center IDENTIFICATION

Maintenance	Checkli	ist	WORK CODE			JIPMENT RONYM	•		_ASS ODE	NU	MBER	TYPE
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SAFETY STATEMENT		Disconner required local	ect pow by this ckout p nd lock nt and or suspic unusual or prio ction on E OF CO IBITED. leaning method cleaner of comp h or bront or bront e used. ervisor G FOR E ntained of Person defer to to (P) MMO	instruction rocedures out this inspect cious dust substance to procedure equipmed by the equipmed such as or a damp pressed or ush may be when other Report safimmediately EWP/PPE: in this bulle he current of for appropriate the current of the procedure of the equipmediately the current of the current of the current of the equipmediately the current of the equipmediately the current of the equipmediately the e	oly to to du or u e is eed nen D C ed, a rag blo e cle ety y u etin	lockou Refer to prope achine. st co unusua foun ding v t. OR BLC an al HEPA y must own air sed or eaning deficion de may re Equipm ctrical	ats when control current or curre		All			
		stagir one e	res tur ng unit, o except nspectio	WARNING inspection ing on confirm in a the person on are nea	n pov idva (s)	ver to ance th perfo	nat no rming					
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Compension.		(0	Comply wit	th all c	urrent s	afety p	recautior	ıs)	ı	Time Req min)	Skill Lev	Run Hours	Pieces Fed (000)	Freq.
STAGING CRANE	2.	Position Inspection	_		rane		Cleani	ng an	ıd	3	9			
		visual stagin opera maint possil shuttl when	equipm lly cheng crand ting the enance ble to vise e position	ent ck fe e an crar unit suall ion, ng th	prot the p nd shi ne or s t. V ly che use e ne crar	ection oosition wittle shuttl Vhen ck the extrement	on of fork we using it is e crane me canshuttle	when g the not and ution						
		Using the the stagin to allow c	ng crane	at a	comfo	rtable								
	3.	Lock Out	t Power.							2	All			
				WA	RNIN	G								
		you n	e perfor nust do red by tl	n th	e app	ropria	ate PP	E as						

Plan (EWP) MMO.

#### WARNING

With the staging controller disconnect open, 480VAC still exists on the line side of the disconnect.

Power down the staging unit by placing the ON/OFF switch on the staging controller in the "OFF" position and install a LOCKOUT/TAGOUT device.

6

ΑII

#### **SECURE STAGING CRANE MASK.** 4.

#### CAUTION

Place the jack stands directly below the staging crane mask and raise the stands until they are just below the mask with minimal clearance. Do not attempt to support the weight of the mask with the jack stands or the vertical travel lift wires will unwrap from the vertical travel drive pulley.

Maintenance Technical Support Center IDENTIFICATION

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Equipment Nomenclature			Equipm	ient M		ıle: ·			Bul	letin File		h	Occurre		h.
Mail Staging	ı rowe	·I	<u> </u>		Daifu	ıKU			<u> </u>	mm1	3047a	Ŋ		Quarter	ıy
Part or	Item		Tas	k Stat	ement	and Ir	nstrud	tion			Est.	Min.		Threshol	ds
Component	No	(	(Comply v	with al	l currer	nt safe	ty pr	ecautio	ns)		Time Req (min)	Skill Lev	Run Hours	Pieces Fed (000)	Freq.
		Place two staging of prevent to of a co inspection allowing discrepare	crane r he mas mpone n. Po for e	nask k froi nt fa ositioi ase	as am falli ailure n one of n	a sat ing in duri e sta nainte	fety the ing and	preca unlike clean at e	autionely ely el ely el eling ach	on to event and					
VERTICAL TRAVEL DRIVE UNIT	5.	Clean Ve	ertical 1		el Driv /ARN		nit.				8	7			
		prohi an alt a HE damp comp cloth optica	use of bited. ternative PA filter rag in pressed or breat ods callods callods.	Whe re clo ered must l or ush pme	en cle eanin vac be blow may nt wh	eaning mount uum useo n ai be nen o	ng is etho cle d ir r. use othe	requestion requestions in the second	uire cha or ce t-fre	d, as a of ee on					
		1. Ren	nove t er.	he v	/ertica	al tra	avel	driv	e r	notor					
		vacı	ng HE uum t oder, ai	he	moto	or, I	brak	e a	sse	aner, mbly,					
		3. Rep	ort disc	repa	ncies	to su	ıper	visor.							
VERTICAL TRAVEL DRIVE	6.	Inspect Gap.	Vertic	al T	ravel	Dri	ve	Moto	r B	rake	15	9			
MOTOR BRAKE GAP			the ve encode							nove					
		2. Ren	nove th	e end	coder	plug.									
		mou	nove th unted umferer	at	two	ро	sitio	ns	iago on	nally the					
		4. Ren	nove th	e fan	cove	r.									
		gaug mov at	asure th ge betw able iro least umferer	veen on co thr	the fore.	ixed	iror me	core	an mer	d the					

Maintonanoo roominoaroappo	<u> </u>	<u> </u>	<u> </u>											/11V1C		
U.S. Postal Service								IDI	ENTIFI	CATI	ON					
Maintenance Checklist		DRK DDE					MENT DNYM				CLA CO		NU	UMBE	ĒR	TYPE
	0	3	М	S	Т						D	Α	0	0	2	М
Equipment Nomenclature	Equ	ipmer	nt Mo	del				E	Bulletin	Filer	name	0	ccurr	ence		
Mail Staging Tower			[	Daifu	ıku				mr	m13	047ab			Qua	arter	ly
Part or Item	-	Fack 1	State	mont	and I	Inetru	ction		-		Fet	Min		Thre	scholo	10

Part or	Itom	Task Statement and Instruction	Est.	Min.		Thresholds	
Component	Item No	(Comply with all current safety precautions)	Time	Skill	Run	Pieces	Freq.
		(Compry with all current salety precadulons)	Req	Lev	Hours	Fed	ı iey.
	<u> </u>	NOTE 1	(min)		1	(000)	1
		NOTE					
		Normal brake gap should be 0.4 to 0.5 mm. If any of the gap measurements exceed the limit value listed below for the motor frame used, the brake gap must be adjusted. If the gap is too large to measure, reduce the number of adjusting washers and re-measure.					
		6. Motor Frame No. F112M					
		a. 3.7kw Motor Capacity					
		b. FB-5B Brake Type					
		c. Normal Gap Value: 0.4 - 0.5mm					
		d. Limit Gap Value: 1.0mm					
		7. Motor Frame No. F132S					
		a. 5.5kw Motor Capacity					
		b. FB-8B Brake Type					
		c. Normal Gap Value: 0.4 - 0.5 mm					
		d. Limit Gap Value: 1.0 mm					
		NOTE					
		To reduce the brake gap, turn the three brake gap adjustment bolts clockwise. Turn each bolt little by little in a rotating pattern to ensure a uniform gap. Re-check gap as the adjustments are being made.					
		8. Motor Frame No. F132M					
		a. 7.5kw Motor Capacity					
		b. FB-10B Brake Type					
		c. Normal Gap Value: 0.4 - 0.5 mm					
		d. Limit Gap Value: 1.2 mm					
		9. Re-install the fan cover.					
		10. Re-install the manual release bolts.					
		11. Re-install the encoder plug and encoder lead wire drawing cover.					
		12. Report discrepancies to supervisor.					

Maintenance Technical Support Center

U.S. Postal v	Sel vice					DENTIFICA			_		
Maintenance	Checkli	st	WORK CODE		QUIPMENT CRONYM			ASS ODE	NUI	MBER	TYPE
Equipment Nomenclature			0 3 Equipmen	M S T		Bulletin File	D	Α	0 Occurre	0 2	М
Mail Staging			Equipmen	Daifuku			ename 3047al			Quarterly	,
Mail Staying	j TOWEI			Dalluku		1111111	3047 al	,	'	<u> </u>	<i>y</i>
Part or	Item No			Statement and In			Est.	Min.	•	Thresholds	3
Component		(0	Comply wit	h all current safet	y precautior	ns)	Time Req (min)	Skill Lev	Run Hours	Pieces Fed (000)	Freq.
VERTICAL TRAVEL DRIVE MOTOR		1. Chec gauge trave 2. Ensumark 3. If the addit as for the b. A be  Do no gauge liters.  c. R	ck the oge mounel drive mure that the second level tional oil ollows:  ull out the opposed the second the seco	the oil level is	between bottom m 529, ISO ug cap loo drive mot ntil the oi mark on spacity is	the sight vertical the two lark, add VG 150) cated on tor. I level is	4	7			
VERTICAL TRAVEL LIFT WIRES		Discar materiaccord  Be sure the cord  1. Apple 1000 trave and 2. Usin lubric	rd or disials accordance we to lub unterweiny wire roll lift wire portion we geither cant so twire. Av	WARNING spose of che cording to M ith local proc NOTE ricate all lift v ght. ope lubricant accessible p es, including vrapped aroun a brush or an that it coats an void over sate	emical so MSDS and cedures. vires, incluing (Shell V. ortions of overhead and drive pure oil can, and perme.	uding  ALVATA f vertical d portion ulley. apply the ates into	45	7			

U.S. Postal	Service						IDENTIFICA	ATION				
Maintenance	Check	dist	WORK CODE		EQUIP ACRO				LASS ODE	NU	MBER	TYPE
			0 3	M S	Γ			D	Α	0	0 2	М
Equipment Nomenclature			Equipmer			· <u> </u>	Bulletin Fi			Occurre		
Mail Stagin	g Towe	er		Daifukı	ı		mm1	3047a	b		Quarter	y
Part or	Item		Task :	Statement an	d Instruc	tion		Est.	Min.		Threshold	ls
Component	No	((	Comply wit	h all current s	afety pre	ecautio	ns)	Time Req (min)	Skill Lev	Run Hours	Pieces Fed (000)	Freq.
		3. Wipe		excess lub	ricant	that d	rips from					
		4. Rein	stall vert	ical travel	drive m	otor c	cover.					
		5. Rep	ort discre	epancies to	super	visor.						
HORIZONTAL	9.	Clean Ho	rizontal	Travel Dr	ve Un	it.		8	7			
TRAVEL DRIVE UNIT				WARNIN	G							
		The u	se of co	ompressed	d or bl	own	air is					
				Vhen clear cleaning								
				red vacuu								
				ust be us								
				or blown sh may b								
				ment when		r clea	aning					
		1. Rem	ove the	horizonta y and enco	l trave		e motor,					
		the	drive mo	filtered va otor, enco ke-up pulle	der, h							
		3. Rein	stall the	horizonta y and enco	I trave		e motor,					
				pancies to								
CARRIAGE AND	10.	Clean Ca	rriage a	nd Shuttle	)_			10	7			
SHUTTLE				WARNIN	G							
				ompressed								
				Vhen clear								
		a HEI	PA filter	red vacuu	m cle	aner	or a					
				ust be us								
				or blown sh may b								
		optica	al equipr	ment when	n othe							
				cover on		ottom	of the					

Attachment 3 7

carriage assembly.

Maintenance Technical Support Center

IDENTIFICATION

Maintenance	Check	list	WORK CODE		EQUIPMEN ACRONYM		_	_ASS ODE	NU	MBER	TYPE
			0 3	M S T			D	Α	0	0 2	М
Equipment Nomenclature			Equipme			Bulletin Fi			Occurre		
Mail Staging	lowe	r	<u> </u>	Daifuku		mm1	3047a	b		Quarterl	У
Part or	Item No		Task	Statement and	Instruction		Est.	Min.		Threshold	S
Component	140	(	Comply wit	th all current sa	fety precaut	ions)	Time Req	Skill	Run Hours	Pieces Fed	Freq.
							(min)	Lev		(000)	
		2. Rem	nove the	shuttle side	cover(s).						
		3. Usin vacu moto spro	ig a HE uum out or, shutt	EPA filtered t the convile motor, a rive chains	d vacuum eyor mo ill drive (	tor, lifting gears and					
			stall th	e carriage	and sh	uttle side					
		5. Rep	ort discre	epancies to	superviso	г.					
STAGING CONTROLLER	11.	you need required Plan (  With open, side of the prohibition of the prohibition optical method optical method open.	e performust do red by the EWP) M  the stag 480VA of the discrete. Vernative PA filter rag m ressed or brusal equipods can power in the stag ay He gum the incomplete the stag ay the stag	WARNING the n the appr	or blowring ing is reduced in plair. A liused o other clair. A liused and loused and lous	onnect ne line n air is quired, uch as r or a ace of nt-free nly on eaning ocked out, loor.	5	9			

Maintenance Te	chnica	al Suppo	rt Cent	er										٨	/IV	10-04	14-14
U.S. Postal	Service	•							IDE	NTIFI	CAT	ION					
Maintenance	Check	list	WORK CODE				UIPN	MENT NYM					ASS ODE	NU	JM	BER	TYPE
			0 3	М	S	Т						D	Α	0	C	) 2	М
Equipment Nomenclature	Э		Equipme	nt Mo	del		·		В	Bulletin	File	name		Occurr	enc	се	
Mail Staging	g Towe	er		[	Daifu	ıku				mr	n13	047a	b		Q	uarter	y
Part or	Item		Task	State	ment	and Ins	truct	ion				Est.	Min.		Tł	nreshold	ls
Component	No	(	Comply wit	h all d	currer	nt safety	y pred	cautio	ns)	)		Time	Skill	Run	F	Pieces	Freq.
												Req (min)	Lev	Hours		Fed (000)	
		4. Rep	ort discre	nan	cies	to sur	nerv	ieor									
OFLI	40			•		to sup	JC1 V	1301.					0				
CELL CONTROLLER	12.	Clean Ce	WARNING 8 9														
			WARNING														
			use of compressed or blown air is														
			use of compressed or blown air is bited. When cleaning is required,														
			use of compressed or blown air is ibited. When cleaning is required, ternative cleaning method such as EPA filtered vacuum cleaner or a														
			rag m														
			ressed or brus														
		optica	al equipi ods can	men	t wh	nen ot											
		1. Ope	n the net.	door	s o	n the	е с	ell (	cor	ntrolle	er						
		vacu	ig a HE uum the S, and ca	key	/boai	rd, mo											
			ck the essary.	UPS	6 fo	r any	fa	ults,	re	eset	if						
		4. Clos	e the cal	bine	t doc	ors.											
		5. Rep	ort discre	pan	cies	to sup	oerv	isor.									
INPUT / OUTPUT /	13.	Clean Inp	out / Out	put	/ Re	ject C	onv	eyo	rs.			10	7				
REJECT CONVEYORS				W	ARN	ING											
		prohil an alt a HEI damp comp cloth optica	se of cobited. Vernative PA filter rag m ressed or brus al equipods can	Vher cle red ust or k sh r	n cleanin vacu be clow nay t wh	eaning g met uum u used n air. be u	g is thou clea in . A	required such the second secon	uir ch ce it-fi	ed, as r a of ree on							

Attachment 3 9

Remove all loose string, rubber bands, labels, and other debris from the conveyor

Using a HEPA filtered vacuum cleaner, vacuum conveyor rollers and framework.

rollers.

Maintenance Technical Support Center

IDENTIFICATION

Maintenance	Check	list	CODE		CRONYM			ODE	INU	IVIDER	TTPE
			0 3	M S T			D	Α	0	0 2	М
Equipment Nomenclature			Equipmen			Bulletin File			Occurre		
Mail Staging	Towe	er		Daifuku		mm1	3047al	b		Quarterl	У
Part or	Item		Task	Statement and Ins	struction		Est.	Min.		Threshold	s
Component	No	(1	Comply wit	h all current safet	y precautior	ns)	Time Req (min)	Skill Lev	Run Hours	Pieces Fed (000)	Freq.
		3. Rep	ort discre	epancies to su	pervisor.						
LIFT WIRE UPPER	14.	Inspect L	ift Wire	Upper Idler F	Pulleys.		14	9			
IDLER PULLEYS		1. Che or o	ck each ther sigr	idler pulley for ns of damage earings and c	or excess e. Pay p	particular					
				er pulley mou se or missing							
		3. Rep	ort discre	epancies to su	pervisor.						
LIFT WIRE SPRING	15.	Inspect and Micr		e Spring Holnes.	ders, Ja	m Nuts,	8	9			
HOLDERS, JAM NUTS AND MICRO				NOTE							
SWITCHES				eck the ends ounterweight.	of all lift v	wires,					
				ı lift wire s ear or loosene		lder for					
		2. Ensi	ure jam r	iuts (w-nuts) a	re secure	<b>)</b> .					
				slack cable" n ened and not							
				electrical conr wires are not							
		•		epancies to su	•						
CARRIAGE	16.	Inspect C	Carriage	Control Cabl	es.		10	9			
CONTROL CABLES				NOTE							
		stagin cables the house folds u moves similar crane This c moves crane.	g control s. The f ome posit d in a bl up and pl s vertical r cable c mask to able carr s horizo	shuttle is con ller using a se irst set of con tion of the sta ack plastic ca ays out as the ly inside the starrier is used o connect with rier plays out a ntally across	eries of control cable ging cran ble carrie estaging or the standard the carries the carries the standard the	ontrol es at e are r that crane nit. A aging riage. rriage aging					
		1. Che	ck for pr	oper bending	oi cable	s at top					

Maintenance Tec	<u>chnic</u> a	al Suppo	<u>rt Cen</u> te	er							M	MO-04	4-14		
U.S. Postal	Service						DENT	IFICAT	ION						
Maintenance	Check	list	WORK CODE		EQUIPN ACROI					ASS ODE	NU	MBER	TYPE		
			0 3		Т				D	Α	0	0 2	М		
Equipment Nomenclature	9		Equipmen	nt Model			Bulle	tin File	name		Occurre	nce			
Mail Staging	g Towe	er		Daifuk	U		r	nm13	3047al	b		Quarterl	у		
Part or	Item		Task	Statement a	nd Instruct	ion			Est.	Min.		Threshold	s		
Component	No	(	Comply wit	h all current	safety pre	cautior	ns)		Time	Skill	Run	Pieces	Freq.		
									Req (min)	Lev	Hours	Fed (000)			
			bottom, e carriers	where c	ables e	nter	and	exit							
		ensı	Check for proper location of cables, and check for damage to the cables at the top and bottom of the cable carriers.  Check for damage to the rubber support												
			heck for damage to the cables at the top nd bottom of the cable carriers. heck for damage to the rubber support												
		plate	heck for damage to the rubber support late where the cables come out of the lable carriers.  Insure the carriage is not hitting the vertical												
		or	ate where the cables come out of the able carriers.												
			ck for da cable car	amage to riers.	the pla	stic p	oieces	s of							
		insid	le the ca	amage to able carrie ble from th	ers that	sepa	arate	the							
		8. Rep	ort discre	epancies to	o superv	isor.									
VERTICAL POSITIONING	17.			ct Vertical		ning	Pho	to	6	9					
PHOTO SENSORS				NOTE											
AND LIMIT SWITCHES		each) locate	are U-sh	ositioning naped pho home p	photo s toelectri	c swi	tches	;							
				photo se			secu	rely							
				p cloth, c			exter	iors							
		3. Chec	k for prop	per alignm	ent.										
				cal travel ened and											

Attachment 3 11

Pay particular attention to roller on actuating

Ensure all electrical connections are tight and the lead wires are not frayed or broken.

arm.

Maintenance Technical Support Center

IDENTIFICATION

Maintenance	Check	list	COI	DE					PMENT DNYM			_		ASS ODE	NI	JMBI		TYPE
Equipment Nomenclature	-		0 Equit	3 omen	M t Mod	S	Т			P	ılleti	n Filo	D name	Α	0 Occurr	0	2	М
Mail Staging		ar.	Equi	pinen		aei Daifu	ואו			Bu			name 8047al	h	Occum		artarl	V
Mail Staging	g rowe	;I				Janu	iku				- 111	IIIII	0047 a	D		Qu	arterl	у
Part or	Item No							Instru					Est.	Min.		Thre	eshold	S
Component		(	(Compl	y with	n all c	urrer	nt sat	ety pr	ecautio	ns)			Time Req (min)	Skill Lev	Run Hours	F	eces ed (00)	Freq.
		6. Repo	ort dis	crep	anci	ies t	o st	ıperv	isor.									
VERTICAL	18.	Inspect \	Vertic	al L	oca	tion	De	tecti	on Pl	ates	s.		4	9				
LOCATION DETECTION					N	ЮТ	Ε											
PLATES		The v	vertica	al lo	cati	on	dete	ection	n plat	es	(4							
		each) end o heigh	f the s	stagi	ng ι	unit.	Th											
			ure th		etec	tion	pla	tes a	are no	t be	ent	or						
			ure t ened.		dete	ctio	n p	lates	are	sec	cure	ely						
		3. Rep	ort di	scre	pano	cies	to s	uper	visor.									
HORIZONTAL	19.	Inspect I	Horiz	onta	ıl Lo	cat	ion	Zon	Plat	es.			4	9				
LOCATION ZONE PLATES					N	тои	Ε											
TEMES		The I moun mask	ted to															
		Ensure t and not Report di	shift	ed	fron	n th	neir	orig	inal									
BEAM LEVEL	20.	Perform	Bean	n Le	vel	Che	ck.						18	9				
CHECK					N	тог	Е											
		Since tende mask stagin a fixe this p they they An al	ncy fragger must must must must	to s t be s / s erer lure. be te b	treto e ch supp nce If leve ear	ch, leck lort to poir the eled	the ed trus: nt w bin bef	sta for I ses a hen s ar	ging evel. are us perfo e not proce	crai Tl ed a rmii leve edin	ne he as ng el,							
		on t liftin	he 4-	ton a	adju are	stat pro	ole j perl	ack s ly w	k is n stands rappe	an	ıd t	he						
		2. Plac	e a s	string	g or	othe	er s	traigl	nt edg	je a	cro	ss						

U.S. Postal Service							IDE	NTIF	ICATI	ON					
Maintenance Checklist	CO					 MEN NYM					ASS DE	N	UMBE	ER	TYPE
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Equipment Nomenclature	Equi	pmer	nt Mo	del			Е	Bulletir	Filer	name	(	Occurr	ence		
Mail Staging Tower				Daifu	ıku			m	m13	047ab			Qua	arter	ly

Part or	Item	Task Statement and Instruction	Est.	Min.	_	Thresholds	;
Component	No	(Comply with all current safety precautions)	Time	Skill	Run	Pieces	Freq.
L	1		Req (min)	Lev	Hours	Fed (000)	_
		the top of the left and right staging bins				<del></del>	
	1 	the top of the left and right staging bins directly above the staging crane mask		ļ		] ,	
	1 	(beam). Place one string or straight edge at		ļ		ļ ,	
	1 	the home position and one at the opposite		ļ		ļ ,	
	1 	end of the beam, i.e., first and last bays.		ļ		] ,	
	1 	At the home position, measure the gap between the string and the beam.					
	1 	Measure the same gap at the opposite end of the beam.					
		5. Compare values to determine if beam is level.					
		If necessary, adjust the lift wire end nuts to level the beam.					
	1 	7. Report discrepancies to supervisor.					
STACING CRANT	24	Carriage beam  Carriage beam  Figure 1. Alternate Beam Leveling Procedure					
STAGING CRANE	21.	Unsecure Staging Crane Mask.	6	All			
		Remove the two 4-ton adjustable jack stands that were placed under the staging crane mask. Remove all tools, lubricants, rags, etc., from inside the staging unit. Report discrepancies to supervisor.					

Maintenance Technical Support Center

IDENTIFICATION

Maintenance	Check	list		WORK CODE					PMENT DNYM			_	_	ASS ODE	NU	JMBE		TYPE
Equipment Nomenclature			(	3 quipme		S	Т			I D.	ılle#:	n Eile	D name	Α	Occurre	0	2	М
				quipm			ılzı			Bu				h	Occurre		ort or ele	
Mail Staging	Towe	er				Daifu	ıku				II	imie	8047al	o .		Qua	arterl	У
Part or	Item No			Task	State	ment	and	Instru	ction				Est.	Min.		Thre	shold	S
Component	140		(Cor	mply w	rith all (	currer	nt saf	fety pr	ecautio	ns)			Time Req (min)	Skill Lev	Run Hours	F	eces ed 00)	Freq.
					W	ARN	ING	i										
		equ app	ipme lied.	ent	whe	n p	oow	er	ound has	or o								
	22.	Resto	re Eq	uipm ]		Γο S ARN							2	All				
		you req	ı mu uired	st do	ormin on th	g the	ne f ppro	ollov opria	wing ite Pf trical	PE	as							
		Restor LOCK( ON/OF "ON" p switch	OUT/ F sw position	TAG( vitch on.	OUT on th Ensu	dev ne st re th	rice tagir ne n	and ng co node	d pla ontroll	cing er i	j t n t	he he						
VERTICAL	23.	Perfor	m Ve	rtica	l Lea	rnin	g.					6	9					
LEARNING		At the	cell c	ontro	ller:													
		bı	uttons		the	Mon	itoriı		d Erro creen									
		M		nanc					nd t ne M									
		-	lick ainte	the nanc		arnir een.	ng	but	ton	on	t	he						
		cl		the S					ption the									
				ve th h vert				crane	e as	it	go	es						
									plete, reen.	clic	ck t	he						
									e Mai ring so			се						

U.S. Postal Service							ID	ENTIF	ICAT	ON					
Maintenance Checklist	CO	RK DE				 NYMC ONYM					ASS DE	N	UMBI	ĒR	TYPE
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Equipment Nomenclature	Equi	ipmer	nt Mo	del				Bulletir	n Filer	name	(	Occuri	rence		
Mail Staging Tower				Daifu	ıku			m	m13	047ab			Qua	arter	y

Part or	Item	Task Statement and Instruction	Est.	Min.	Thresholds			
Component	No	(Comply with all current safety precautions)	Time Req (min)	Skill Lev	Run Hours	Pieces Fed (000)	Freq.	
		NOTE						
		For newly learned parameters to take effect, the staging controller must be powered down and back up. New parameters are loaded when the staging controller restarts.						
		<ol> <li>Power down the staging controller by placing the ON/OFF switch on the staging controller in the "OFF" position.</li> </ol>						
		<ol><li>Restore electrical power by returning the ON/OFF switch to the "ON" position.</li></ol>						
		<ol> <li>Click the Cancel Alarm and Error Reset buttons on the Monitoring screen at the cell controller to clear any faults that may exist.</li> </ol>						
		<ol> <li>Click the Start button on the Monitoring screen and return the staging unit to operational status.</li> </ol>						
		12. Report discrepancies to supervisor.						
CLEAN UP		CLEAN UP. Ensure all tools, lubricants, rags, etc., are removed from the work area. Report all deficiencies to your supervisor.	3	All				

Maintenance Technical Support Center

U.S. Postal Service	IDENTIFICATION															
Maintenance Checklist	_	RK DE		EQUIPMENT ACRONYM						CLA CO	NUMBER			TYPE		
	0	3	М	S	Т						D	Α	0	0	2	М
Equipment Nomenclature	Equ	ipmer	nt Mo	del			•		Bulletir	C	Occurrence					
Mail Staging Tower	Daifuku							mm13047ab				Quarterly				

Part		Task Statement and Instruction	Est.	Min.		Threshold	s
Compo	nent	(Comply with all current safety precautions)	Time Req (min)	Skill Lev	Run Hours	Pieces Fed (000)	Freq.

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#### **ATTACHMENT 4**

#### **MST MASTER CHECKLIST**

03-MST-DA-003-M

ANNUAL

Annual Time Total: 212 minutes

Maintenance Technical Support Center IDENTIFICATION

U.S. Postal	IDENTIFICATION												
Maintenance	Checkl	ist	WORK EQUIPMENT CODE ACRONYM				_	ASS ODE	NU	MBER		TYPE	
England (N	_		0 3	M S	Т		D. " " ="	D	Α	0		2	М
Equipment Nomenclature			Equipmer				Bulletin Fil		ı	Occurrence			
Mail Staging	g Iowe	r		Daifu	ıku		mm1	3047al	0	Annual			
Part or	Item		Task	Statement	and Instru	ıction		Est.	Min.		Thresh		
Component	No	(	Comply wit	h all curre	nt safety p	recautio	ns)	Time Req	Skill Lev	Run	Piece		Freq.
	<u> </u>							(min)		Hours	Fed (000		
SAFETY STATEMENT		COMPLY Disconnerequired local	by this by this ckout point and lock in suspice in the control of the complete in the control of the control of the channed of	er and instruct rocedur out th inspe- cious du substa r to p the equ OMPRES is requ d such or a dai oressed ush may when ot Report immedia EWP/PPI in this b nal Proto he curre	3	All							
		stagir one of the in	res turn ng unit, o except t spection	confirm the per n is near WARN	ction n pow in adva son(s) the sta	er to nce th perfor ging c	at no ming rane.						
		crane drive	step u when o motor. n stagin	perating Do no									

U.S. Postal Service	IDENTIFICATION															
Maintenance Checklist		ORK ODE		EQUIPMENT ACRONYM							CL CC	N	IUMB	TYPE		
	0	3	М	S	Т						D	Α	0	0	2	М
Equipment Nomenclature	Equipment Model							Bullet		Occurrence						
Mail Staging Tower	Daifuku						mm13047ab					Annual				

Part or	Item	Task Statement and Instruction	Est.	Min.	Thresholds				
Component	No	(Comply with all current safety precautions)	Time	Skill	Run	Pieces	Freq.		
			Req (min)	Lev	Hours	Fed (000)			
STAGING CRANE	2.	Lower Staging Crane To Lowest Position.	3	9					
		CAUTION							
		For equipment protection, always visually check position of the staging crane and shuttle fork when operating the crane or shuttle using maintenance unit. When it is not possible to visually check the crane and shuttle position, extreme caution must be used when operating the crane or shuttle.							
		Using the hand held maintenance unit, position the staging crane at its lowest position.							
	3.	Lock Out Power.	2	All					
		WARNING							
		Before performing the following steps you must don the appropriate PPE as required by the current Electrical Work Plan (EWP) MMO.							
		WARNING							
		With the staging controller disconnect open, 480VAC still exists on the line side of the disconnect.							
		Power down staging unit by placing the ON/OFF switch on staging controller in the "OFF" position and install a LOCKOUT/TAGOUT device.							
STAGING BINS	4.	Clean Staging Unit Bins And Framework.	180	7					
		Using a vacuum, clean the staging unit bins and framework starting from the top and moving across and downward. Report discrepancies to supervisor.							
STAGING FRAMEWORK	5.	Check Staging Unit Hardware.  Check the entire staging unit framework for loose or missing hardware. Pay particular attention to the overhead support structure and the bin support trusses.	18	7					

Maintenance Technical Support Center IDENTIFICATION

Maintenance	WORK CODE			PMENT		_ASS ODE	NUMBER		TYPE				
Equipment Nomenclature	<u> </u>		0 3 Equipmen		Т		Bulletin Fil	D ename	Α	0 Occurre	0 2 ence	М	
Mail Staging		r		Daifuk	u			3047a	b	Annual			
Part or	Item No			Statement ar				Est. Time	Min. Skill		Threshold		
Component		(	Comply wit	th all current	safety p	ns)	Req (min)	Lev	Run Hours	Pieces Fed (000)	Freq.		
		<ol> <li>Rep</li> <li>Rep</li> </ol> Be ca	lace or ti	staging bir ghten as n epancies to WARNIN when work when po	ecesson super	ervisor.	or on						
	6.	applie	ed.	MENT TO		been	3	All					
	0.	Befor you r requii Plan ( Restore LOCKOU ON/OFF	e performust do red by the EWP) Melectrica	WARNIN rming the n the app he curren	follopropri t Elect by the an	owing state PP ctrical in the ctrica	Work  mg your  cing the er in the	3	All				
		switch is	in the	ON-LINE the stagir	positio	on. Re	eset any						
CLEAN UP	7.	removed	all tools from t	s, lubricar the work ur supervis	area		etc., are eport all	3	All				