



maintenance management order

SUBJECT: PM Guidelines for Transport Conveyors with Van der Graaf Drives on the Singulate Scan Induction Unit (SSIU)

DATE: July 07, 2004

NO: MMO-051-04

FILE CODE: Y

TO: Bulk Mail Centers

dfau:MM02062AD

Online Change Record		
Change #	Date	Description of Change
3	4/28/2022	Attachments 2 - 5, corrected skill level 4, no longer in use, to level 7.
2	3/12/2004	Safety Warning added for working around moving conveyors
1	5/8/2013	This bulletin has been updated to reflect accurate rollup times using the standard two decimal place rounding.

This Maintenance Management Order (MMO) provides Preventive Maintenance (PM) guidelines for all transport conveyors on the Singulate Scan Induction Unit (SSIU) which use Van der Graff drives.

The attached master checklist provides tasks to be performed at periodic intervals, the time required per task, and the minimum skill level for each task in the Minimum Skill Level column. This does not preclude higher level employees from performing any of this work.

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

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. 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 only on optical equipment when other cleaning methods cannot be used.

Maintenance Managers are to use this Preventive Maintenance Checklist when preparing the route sheets for local maintenance personnel.

WARNING

Moving conveyors may expose employees to personal safety hazards. Do not climb, sit, or walk on conveyors without first performing local Energy Control Procedure (ECP).

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

Robert Tschantz
Manager (A)
Maintenance Technical Support Center
Maintenance Policies and Programs

- Attachments:
1. Summary of Workload Estimate
 2. Transport Conveyor with Van der Graaf Style Drive Master Checklist (Monthly)
 3. Transport Conveyor with Van der Graaf Style Drive Master Checklist (Quarterly)
 4. Transport Conveyor with Van der Graaf Style Drive Master Checklist (Semi-annual)
 5. Transport Conveyor with Van der Graaf Style Drive Master Checklist (Quint-annual)

ATTACHMENT 1**SUMMARY****WORKLOAD ESTIMATE FOR
TRANSPORT CONVEYOR WITH VAN DER GRAAF STYLE DRIVE**

Routine Servicing (hrs/yr)	Repair* (hrs/yr)	Total Servicing & Repair Time (hrs/yr)	Non-productive Time ** (hrs/yr)	Total Servicing Per Machine (hrs/yr)
20.09	6.03	26.12	2.61	28.73

* Repair estimates based on 30% of servicing.

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

TIME TOTALS

<u>Monthly Time Total:</u>	1.3 Hrs. ***
<u>Quarterly Time Total:</u>	0.6 Hrs. ***
<u>Semi-Annual Time Total:</u>	0.8 Hrs. ***
<u>Quint-Annual Time Total:</u>	0.6 Hrs. ***

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 requires additional time are to be addressed at the local level.

*** These times are provided for data entry for the VMARS System.

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ATTACHMENT 2

**TRANSPORT CONVEYOR WITH VAN DER GRAAF DRIVES
ON THE SSIU MASTER CHECKLIST**

03-SSIU-AA-001-M

MONTHLY

MONTHLY TIME TOTAL: 79.5 MINUTES

U.S. Postal Service Maintenance Checklist	IDENTIFICATION										
	Work Code:		Equipment Acronym				Class Code:		Number		Type
	0	3	S	S	I	U	A	A	0	0	1
Equipment Nomenclature Transport Conveyor With Van Der Graaf Drive		Equipment Model SSIU				Bulletin Filename MM02062AD		Frequency MONTHLY			

Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min. Skill Level
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SAFETY STATEMENT	1.	<p>COMPLY WITH ALL SAFETY PRECAUTIONS. – Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shutdown and lockout this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment.</p> <p><u>THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED.</u></p> <p>When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods can not be used. Report safety deficiencies to your supervisor immediately upon detection.</p>	3 min	All
SYSTEM	2.	<p>CHECK FOR MAIL. – Look for stray mail while performing all activities.</p>	2.5 min	7
		<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">WARNING</div> <p>Be cautious when working around or on equipment when power has been applied.</p>		
CONVEYOR BELT	3.	<p>CHECK CONVEYOR BELT. –</p> <ol style="list-style-type: none"> 1. Run conveyor belt. 2. Listen for bearing noise from operation of belt. 3. Listen for noise from the Van der Graaf drive. 4. Check for proper tracking and belt tensioning (slippage). 	5 min	7
SYSTEM (Cont.)	4.	<p>POWER DOWN AND LOCKOUT POWER. – Power down the equipment and lockout its electrical power as prescribed by the procedures contained in, or locally developed in accordance with, the current Maintenance Management Order (MMO) providing lockout/restore procedures.</p>	3 min	All

U.S. Postal Service Maintenance Checklist	IDENTIFICATION											
	Work Code:		Equipment Acronym				Class Code:		Number		Type	
	0	3	S	S	I	U	A	A	0	0	1	M
Equipment Nomenclature Transport Conveyor With Van Der Graaf Drive		Equipment Model SSIU				Bulletin Filename MM02062AD		Frequency MONTHLY				

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CONVEYOR	5.	CLEAN CONVEYOR UNIT. – 1. Open all access panels. 2. Visually check for damage and/or debris. 3. Using vacuum and rags, clean entire interior and exterior of the unit. 4. Clean photocells with a lint-free cloth. 5. Re-install all covers and access panels.	60 min	7
		<div style="border: 1px solid black; padding: 5px; display: inline-block;">WARNING</div> Be cautious when working around or on equipment when power has been applied.		
SYSTEM	6.	RESTORE EQUIPMENT TO SERVICE. – Restore equipment to service as prescribed by the procedures contained in, or locally developed in accordance with, the current Maintenance Management Order (MMO) providing lockout/restore procedures.	3 min	All
	7.	CLEAN-UP. – Ensure all tools, lubricants, rags, etc., are removed from the work area. Report all deficiencies to your supervisor in order to initiate any necessary work orders to make necessary repairs, or to remove excessive debris.	3 min	All

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Equipment Nomenclature Transport Conveyor With Van Der Graaf Drive		Equipment Model SSIU				Bulletin Filename MM02062AD			Frequency MONTHLY			

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ATTACHMENT 3

**TRANSPORT CONVEYOR WITH VAN DER GRAAF DRIVES
ON THE SSIU MASTER CHECKLIST**

03-SSIU-AA-002-M

QUARTERLY

QUARTERLY TIME TOTALS: 34.5 MINUTES

U.S. Postal Service Maintenance Checklist	IDENTIFICATION											
	Work Code:		Equipment Acronym				Class Code:		Number		Type	
	0	3	S	S	I	U	A	A	0	0	2	M
Equipment Nomenclature Transport Conveyor With Van Der Graaf Drive		Equipment Model SSIU				Bulletin Filename MM02062AD		Frequency QUARTERLY				

Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min. Skill Level
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SAFETY STATEMENT	1.	<p>COMPLY WITH ALL SAFETY PRECAUTIONS. – Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shutdown and lockout this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment.</p> <p><u>THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED.</u> 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 can not be used. Report safety deficiencies to your supervisor immediately upon detection.</p>	3 min	All
	2.	CHECK FOR MAIL. – Look for stray mail while performing all activities.	2.5 min	7
SYSTEM	3.	POWER DOWN AND LOCKOUT POWER. – Power down the machine and lockout its electrical power as prescribed by the current local lockout instructions providing lockout/restore procedures.	3 min	All
		<div style="border: 1px solid black; padding: 2px; display: inline-block;">WARNING</div> <p>Discard solvent soaked materials according to local procedures to prevent spontaneous combustion.</p>		

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	0	3	S	S	I	U	A	A	0	0	2	M
Equipment Nomenclature Transport Conveyor With Van Der Graaf Drive		Equipment Model SSIU				Bulletin Filename MM02062AD		Frequency QUARTERLY				

Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min. Skill Level
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VAN DER GRAAF DRIVE	4.	<p>CHECK VAN DER GRAAF DRIVE. –</p> <ol style="list-style-type: none"> 1. Remove covers. 2. Check all mounting bolts, taper locks, and shaft set-screws on drive for tightness. 3. Re-tighten as needed. 4. Check drive for oil leaks. 5. Check drive oil level and fill with oil (Sunoco SUNEP100 or equivalent) as needed. 6. Look for damage to drive and roller. 	20 min	7
		<div style="border: 1px solid black; padding: 2px; display: inline-block;">WARNING</div> <p>Be cautious when working around or on equipment when power has been applied.</p>		
SYSTEM	5.	<p>RESTORE EQUIPMENT TO SERVICE. – Restore equipment to service as prescribed by the procedures contained in, or locally developed in accordance with, the current Maintenance Management Order (MMO) providing lockout/restore procedures.</p>	3 min	All
	6.	<p>CLEAN-UP. – Ensure all tools, lubricants, rags, etc., are removed from the work area.</p> <p>Report all deficiencies to your supervisor in order to initiate any necessary work orders to make necessary repairs, or to remove excessive debris.</p>	3 min	All

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	0	3	S	S	I	U	A	A	0	0	2	M
Equipment Nomenclature Transport Conveyor With Van Der Graaf Drive		Equipment Model SSIU				Bulletin Filename MM02062AD			Frequency QUARTERLY			

Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min. Skill Level
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ATTACHMENT 4

**TRANSPORT CONVEYOR WITH VAN DER GRAAF DRIVES
ON THE SSIU MASTER CHECKLIST**

03-SSIU-AA-003-M

SEMI-ANNUAL

SEMI-ANNUAL TIME TOTALS: 49.5 MINUTES

U.S. Postal Service Maintenance Checklist	IDENTIFICATION											
	Work Code:		Equipment Acronym				Class Code:		Number		Type	
	0	3	S	S	I	U	A	A	0	0	3	M
Equipment Nomenclature Transport Conveyor With Van Der Graaf Drive		Equipment Model SSIU				Bulletin Filename MM02062AD		Frequency SEMI-ANNUAL				

Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min. Skill Level
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SAFETY STATEMENT	1.	<p>COMPLY WITH ALL SAFETY PRECAUTIONS. – Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shutdown and lockout this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment.</p> <p><u>THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED.</u></p> <p>When cleaning is required, an alternative cleaning method such as a HEPA filtered vacuum cleaner or a damp rag must be used in place of compressed or blown air. A lint-free cloth or brush may be used on optical equipment only when other cleaning methods can not be used. Report safety deficiencies to your supervisor immediately upon detection.</p>	3 min	All
SYSTEM	2.	<p>CHECK FOR MAIL. – Look for stray mail while performing all activities.</p>	2.5 min	7
MAIN CONTROL CABINET	3.	<p>CHECK MCC PROCESSOR ADAPTER BATTERY STATUS. –</p> <p>Through PROWORX on the SPC, launch the NetScan Utility and check processor adapter battery status(s).</p> <p>If low Bat condition exists, replace the two “AAA” batteries in the appropriate Processor Adapter.</p>	5 min	7
SYSTEM	4.	<p>POWER DOWN AND LOCKOUT POWER. – Power down the machine and lockout its electrical power as prescribed by the current local lockout instructions providing lockout/restore procedures.</p>	3 min	All
MAIN CONTROL CABINET and DRIVE CONTROL CABINET	5.	<p>CHECK MAIN CONTROL CABINET (MCC) AND DRIVE CONTROL CABINET (DCC). – Open and check cabinets as follows:</p> <ol style="list-style-type: none"> 1. Check for damage to panel exterior switches and indicator lamps. 2. Check for loose components and loose connections in panels. 	10 min per assy	7

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	0	3	S	S	I	U	A	A	0	0	3	M
Equipment Nomenclature Transport Conveyor With Van Der Graaf Drive		Equipment Model SSIU				Bulletin Filename MM02062AD		Frequency SEMI-ANNUAL				

Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min. Skill Level
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		3. Close cabinets.		
SYSTEM	6.	CHECK WIRING CABLES. – Check for damage to wiring cables between control panel and components.	10 min	7
PILLOW BLOCK BEARINGS	7.	LUBRICATE PILLOW BLOCK BEARINGS (4). – Lubricate bearings on drive and tail end rollers using a lithium based grease (NLGL-2).	10 min	7
		<div style="border: 1px solid black; padding: 5px; display: inline-block;">WARNING</div> Be cautious when working around or on equipment when power has been applied.		
SYSTEM	8.	RESTORE EQUIPMENT TO SERVICE. – Restore equipment to service as prescribed by the procedures contained in, or locally developed in accordance with, the current Maintenance Management Order (MMO) providing lockout/restore procedures.	3 min	All
	9.	CLEAN-UP. – Ensure all tools, lubricants, rags, etc., are removed from the work area. Report all deficiencies to your supervisor in order to initiate any necessary work orders to make necessary repairs, or to remove excessive debris.	3 min	All

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	0	3	S	S	I	U	A	A	0	0	3	M
Equipment Nomenclature Transport Conveyor With Van Der Graaf Drive		Equipment Model SSIU				Bulletin Filename MM02062AD			Frequency SEMI-ANNUAL			

Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min. Skill Level
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ATTACHMENT 5

**TRANSPORT CONVEYOR WITH VAN DER GRAAF DRIVES
ON THE SSIU MASTER CHECKLIST**

03-SSIU-AA-004-M

QUINT-ANNUAL

QUINT-ANNUAL TIME TOTAL: 72 MINUTES

U.S. Postal Service Maintenance Checklist	IDENTIFICATION										
	Work Code:		Equipment Acronym				Class Code:		Number		Type
	0	3	S	S	I	U	A	A	0	0	4
Equipment Nomenclature Transport Conveyor With Van Der Graaf Drive		Equipment Model SSIU				Bulletin Filename MM02062AD		Frequency QUINT-ANNUAL			

Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min. Skill Level
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SAFETY STATEMENT	1.	<p>COMPLY WITH ALL SAFETY PRECAUTIONS. – Disconnect power and apply lockouts when required by this instruction. Refer to current local lockout procedures to properly shutdown and lockout this machine. Open equipment and inspect dust conditions. Check for suspicious dust or unusual debris. If any unusual substance is found notify supervisor prior to proceeding with any further action on the equipment.</p> <p><u>THE USE OF COMPRESSED OR BLOWN AIR IS PROHIBITED.</u> 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 can not be used. Report safety deficiencies to your supervisor immediately upon detection.</p>	3 min	All
SYSTEM	2.	<p>POWER DOWN AND LOCKOUT POWER. – Power down the machine and lockout its electrical power as prescribed by the current local lockout instructions providing lockout/restore procedures.</p>	3 min	All
VAN DER GRAFF DRIVE	3.	<p>CHANGE VAN DER GRAAF DRIVE OIL. – Drain and fill drive with oil (Sunoco SUNEP100 or equivalent). If you have a oil analysis program adjust task and frequency accordingly.</p>	60 min	7
		<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">WARNING</div> <p>Be cautious when working around or on equipment when power has been applied.</p>		
SYSTEM	4.	<p>RESTORE EQUIPMENT TO SERVICE. – Restore equipment to service as prescribed by the procedures contained in, or locally developed in accordance with, the current Maintenance Management Order (MMO) providing lockout/restore procedures.</p>	3 min	All

U.S. Postal Service Maintenance Checklist	IDENTIFICATION											
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	0	3	S	S	I	U	A	A	0	0	4	M
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Part or Component	Item No.	Task Statement and Instruction (Comply with all current safety precautions)	Est. Time Req'd	Min. Skill Level
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	5.	CLEAN-UP. – Ensure all tools, lubricants, rags, etc., are removed from the work area. Report all deficiencies to your supervisor in order to initiate any necessary work orders to make necessary repairs, or to remove excessive debris.	3 min	All
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