



maintenance management order

SUBJECT: PM Guidelines for Towveyor (Bypass),
Type E (ACCO)

DATE: December 10, 1998

NO: MMO-154-98

TO: Bulk Mail Centers

FILE CODE: Y

dewa:M98071AA

Online Change Record		
Change #	Date	Description of Change
2	4/26/2022	Attachment 2, corrected skill level 4, no longer in use, to level 7.
1	5/15/2013	This bulletin has been updated to reflect changes to the Attachment 1 Summary. The times have 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 Towveyor (Bypass), Type E (ACCO) and supersedes Maintenance Checklist BO71.

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

WARNING

Various products which require 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 by all employees. When reordering such a product, it is suggested that a current MSDS be requested.

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

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

Rex M. Gallaher
Manager
Maintenance Technical Support Center
Maintenance Policies and Programs

Attachments: 1. Summary of Revised Workload Estimate
2. Towveyor (Bypass), Type E (ACCO) Master Checklist

ATTACHMENT 1**-SUMMARY-****REVISED WORKLOAD ESTIMATE****FOR****TOWVEYOR (BYPASS), TYPE E (ACCO)**

Routine Servicing (hrs/yr)	Repair* (hrs/yr)	Total Servicing & Repair Time (hrs/yr)	Nonproductive Time ** (hrs/yr)	Total Servicing Per Machine (hrs/yr)
15.70	4.71	20.41	2.04	22.45

* Repair estimates based on 30% of servicing.

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

TIME TOTALS

Monthly Time Total: 0.30 Hrs. ***

Quarterly Time Total: 2.73 Hrs. ***

Semi-Annual Time Total: 0.10 Hrs. ***

Annual Time Total: 0.67 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 require additional time are to be addressed at the local level.

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

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ATTACHMENT 2**TOWVEYOR (BYPASS), TYPE E MASTER CHECKLIST**

03-TOWVE-BA-007-M

The "Part or Component" column for each step on the Master Checklist provides a "Frequency Code" designation followed by a letter or series of letters. These letters correspond to the frequency codes as published in MS-63 and specify the frequency for which that instruction (step) must be performed. These frequency codes are in compliance with NMICS superseding route structure. The possible frequencies and their codes are given in the table below:

Table 2-1. MS-63 (NMICS) Frequency-Codes

<u>CODE</u>	<u>FREQUENCY</u>	<u>DESCRIPTION</u>
A	ANNUAL	Once every 13 APs.
B	BI-WEEKLY	Once every 2 weeks
C	BI-MONTHLY	Once every 2 APs.
D	DAILY	Once a day; 7 days a week.
E	DAILY	Once a day; 6 days a week.
F	DAILY	Once a day; 5 days a week.
G	DAILY	Once a day; 4 days a week.
H	DAILY	Once a day; 3 days a week.
J	SEMI-WEEKLY	2 days a week.
K	BI-ANNUAL	Once every 2 years.
L	TRI-ANNUAL	Once every 3 years.
M	MONTHLY	Once every AP.
N	QUAD-ANNUAL	Once every 4 years.
P	QUINT-ANNUAL	Once every 5 years.
Q	QUARTERLY	4 times every 13 APs.
S	SEMI-ANNUAL	Twice every 13 AP.
T	TOURLY	3 times a day; 7 days a week.
U	TOURLY	Twice a day; 7 days a week.
V	TOURLY	3 times a day; 6 days a week.
W	WEEKLY	Once a week.
X	TOURLY	Twice a day; 6 days a week.
Y	TOURLY	3 times a day; 5 days a week.
Z	TOURLY	Twice a day; 5 days a week.

U.S. Postal Service Maintenance Checklist		IDENTIFICATION										
		Work Code		Equipment Acronym			Class Code	Number	Type			
		0	3	T	O	W	V	E	B	A	0	0
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE E		Equipment Model ACCO			Bulletin Filename M98071AA			Frequency ALL				

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. **COMPLY WITH ALL SAFETY PRECAUTIONS. - Disconnect power and activate lockouts as appropriate while working on this equipment. Where air pressure is required for cleaning, use a low air pressure (30 psi or less) air source. Eye protection (goggles or face shield) must be used when utilizing compressed air for cleaning. Check to ensure all employees are clear of the machine. Report safety deficiencies to your supervisor immediately upon detection.** - 3 min All

Frequency Code: -M-Q-S-A-

AA-1 2. **CHECK FOR MAIL. - Look for loose mail while performing activities.** - 2.5 min 7

Frequency Code: -M-Q-S-A-

WARNING

Eye protection (goggles or face shield) must be worn when using compressed air steam, or a high pressure cleaner/washer device for cleaning.

CH-1 TOWPIN 3. **CLEAN CHAIN. - Clean the chain as follows:** 1 min/10ft. of chain 7

1. Clean chain with steam or high pressure cleaner/washer device. Run chain at least one (1) complete cycle.

2. Remove foreign material by blowing or vacuuming.

Frequency Code: -----S-A-

Frequency Code: -M-Q-S-A-- 4. **LUBRICATE CHAIN. - Pour oil slowly over return strand of chain for two (2) complete turns.** 0.22 min/10ft. 7

U.S. Postal Service Maintenance Checklist	IDENTIFICATION											
	Work Code		Equipment Acronym				Class Code		Number		Type	
	0	3	T	O	W	V	E	B	A	0	0	7
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE E		Equipment Model ACCO				Bulletin Filename M98071AA		Frequency ALL				

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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SYSTEM	5.	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.	1 min	7
Frequency Code: ----Q-S-A-				

Frequency Code: ----Q-S-A-	6.	REMOVE COVER PLATE. - Remove cover plates. Erect barricades around open pits.	10 min	All
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WARNING

Eye protection (goggles or face shield) must be worn when using compressed air for cleaning.

WARNING

Discard solvent soaked materials according to local procedures to prevent spontaneous combustion.

Frequency Code: ----Q-S-A-	7.	CHECK CHAIN. - Check chain for bent, cracked, or excessively worn links.	1 min per 10 ft.	7
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CS-1 CONTAINER SENSOR SWITCHES	8.	CLEAN PIT, SWITCH HOUSING, AND ACTUATOR ARM. - Clean pit, switch housing, and actuator arm as follows:	10 min	7
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- | | | | | |
|-------------------------------|--|--|--|--|
| Frequency Code:
----Q-S-A- | | <ol style="list-style-type: none"> 1. Clean dirt and accumulated material from pit. 2. Clean switch housing and actuator arm with solvent. | | |
|-------------------------------|--|--|--|--|

U.S. Postal Service Maintenance Checklist	IDENTIFICATION											
	Work Code		Equipment Acronym				Class Code		Number		Type	
	0	3	T	O	W	V	E	B	A	0	0	7
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE E		Equipment Model ACCO				Bulletin Filename M98071AA		Frequency ALL				

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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CS-1 CONTAINER SENSOR SWITCHES (Cont.) Frequency Code: ----Q-S-A-	9.	CHECK AND LUBRICATE MOUNTING. - Clean and lubricate mounting as follows: 1. Check switch mounting for security. 2. Check freedom of movement in direction of travel. Lube necessary points.	2 min	7
CD-1 Frequency Code: ----Q-S-A-	10.	CHECK AND LUBRICATE SPROCKET. - Clean and lubricate sprocket as follows: 1. Check sprocket for uneven wear. 2. Lube necessary parts. 3. Check for smooth and quiet meshing of spur gear teeth.	5 min	7
Frequency Code: ----Q-S-A-	11.	CLEAN PIT. - Clean Pit.	5 min	7
DA-2 DRIVE ASSY Frequency Code: ----Q-S-A-	12.	CLEAN MOTOR AND REDUCER. - Clean motor and reducer as follows: 1. Clean motor and reducer by wiping. 2. Clean vent holes and cooling fins as applicable.	10 min	7
Frequency Code: ----Q-S-A-	13.	CHECK MOTOR. - Check motor and reducer housing for evidence of lubrication leakage.	5 min	7
Frequency Code: ----Q-S-A-	14.	CHECK GREASE LEVEL AND BEARINGS. - Check grease level and bearings as follows: 1. Check grease level of reducer. Add as required. 2. Check bearings replace as necessary.	20 min	7

U.S. Postal Service Maintenance Checklist	IDENTIFICATION											
	Work Code		Equipment Acronym			Class Code		Number	Type			
	0	3	T	O	W	V	E	B	A	0	0	7
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE E		Equipment Model ACCO			Bulletin Filename M98071AA		Frequency ALL					

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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DA-2 DRIVE ASSY (Cont.)	15.	LUBRICATE MOTOR. - Lubricate motor as follows:	4	7
		1. Remove grease relief plug.	min	
Frequency Code: -----A-		2. For motors 1/2 HP and over, apply 2 pumps of GR-2.		

WARNING

Be cautious when working around or on equipment when power has been applied.

SYSTEM	16.	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	All
Frequency Code: -----A-			min	

DA-2 DRIVE ASSY (Cont.)	17.	RUN MOTOR - Run motor for one minute	1	7
			min	
Frequency Code: -----A-				

SYSTEM	18.	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.	1	7
Frequency Code: -----A-			min	

DA-2 DRIVE ASSY (Cont.)	19.	REPLACE GREASE RELIEF PLUG. - Replace motor grease relief plug.	1	7
			min	
Frequency Code: -----A-				

U.S. Postal Service Maintenance Checklist	IDENTIFICATION											
	Work Code		Equipment Acronym				Class Code		Number		Type	
	0	3	T	O	W	V	E	B	A	0	0	7
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE E		Equipment Model ACCO				Bulletin Filename M98071AA		Frequency ALL				

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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DA-2 DRIVE ASSY (Cont.) 20. **DRAIN AND REFILL REDUCER.** - Disassemble reducer, clean out old lubricant and refill with GR-2. 30 min 7

Frequency Code:
-----A-

21. **CHECK V-BELTS AND SHEAVES.** - Check V-belts and sheaves as follows: 2 min 7

Frequency Code:
----Q-S-A-

1. Check V-belts and sheaves for wear and alignment.

2. Check sheave set screws and belt tension.

22. **CLEAN V-BELT AND SHEAVES.** - Clean foreign material from belts and sheaves by wiping with clean rags. 4 min 7

Frequency Code:
----Q-S-A-

23. **CHECK AND CLEAN CRITICAL SPEED SWITCH.** - 10 min 7

Frequency Code:
----Q-S-A-

1. Check critical speed switch.

2. Check flexible coupling and set screws for wear and damage.

3. Wipe clean.

WARNING

Discard solvent soaked materials according to local procedures to prevent spontaneous combustion.

24. **CHECK AND CLEAN SPROCKET.** - Check and clean sprocket as follows: 5 min 7

Frequency Code:
----Q-S-A-

1. Check sprocket for wear and alignment.

2. Wrench test set screws.

3. Clean sprocket with solvent and rags.

DA-2 DRIVE 25. **CHECK CHAIN.** - Check slack of chain by looking for 4 7

U.S. Postal Service Maintenance Checklist	IDENTIFICATION											
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	0	3	T	O	W	V	E	B	A	0	0	7
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE E		Equipment Model ACCO				Bulletin Filename M98071AA		Frequency ALL				

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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ASSY (Cont.) pulsating at drive sprocket output side. Adjust if min necessary.

Frequency Code:
----Q-S-A-

Frequency Code: 26. **CLEAN DRIVE PIT.** - Clean drive pit. 15 min 7

----Q-S-A-

WARNING

Discard solvent soaked materials according to local procedures to prevent spontaneous combustion.

DS-1 DIVERTER 27. **CLEAN AND CHECK TRACK SWITCH PITS.** - Clean and check track switch pits as follows: 10 min 7

- Frequency Code:
----Q-S-A-
1. Remove dirt and accumulated debris from track switch pits.
 2. Clean switch housing using solvent and rags.
 3. Check operating by unlatching switching blade.

Frequency Code: 28. **CLEAN SOLENOID HOUSING, PLUNGER ROD, AND LINKAGE.** - Clean solenoid housing, plunger rod, and linkage as follows: 5 min 7

----Q-S-A-

1. Using rags and solvent, clean solenoid housing, plunger rod and linkage.
2. Check plunger rod for free movement.
3. Check solenoid mounting and switch blade.

U.S. Postal Service Maintenance Checklist	IDENTIFICATION											
	Work Code		Equipment Acronym				Class Code		Number		Type	
	0	3	T	O	W	V	E	B	A	0	0	7
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE E		Equipment Model ACCO				Bulletin Filename M98071AA		Frequency ALL				

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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DS-1
DIVERter
(Cont.)

29. **LUBRICATE LINKAGE AND PIVOT POINTS.** - Lightly lubricate all linkage and pivot points on solenoid and brake assembly with HY-1.

5 min 7

Frequency Code:
----Q-S-A-

PS-1 PIN
STOP ASSY

30. **WIPE MOTOR AND REDUCERS.** - Wipe motor and reducers clean.

2 min 7

Frequency Code:
----Q-S-A-

31. **CHECK MOTOR AND REDUCER HOUSING.** - Check motor and reducer housing for evidence of lubrication leakage.

2 min 7

Frequency Code:
----Q-S-A-

32. **LUBRICATE REDUCER.** - Add two (2) shots of lubricant GR-2 to reducer.

2 min 7

Frequency Code:
----Q-S----

33. **CHECK AND LUBRICATE SPRING RETAINER.** - Check and lubricate spring retainer as follows:

2 min 7

Frequency Code:
----Q-S-A-

1. Check spring retainer pivot arm for wear or damage.

2. Lightly lube pivot points with HY-3.

34. **CHECK AND LUBRICATE PIVOTING TRACK.** - Check and lubricate pivoting track as follows:

2 min 7

Frequency Code:
----Q-S-A-

1. Check pivoting track for wear or damage.

2. Lightly lube pivot points with HY-3.

35. **LUBRICATE SURFACES OF SLIDING PLATE** - Lightly lube the contacting surfaces of the sliding plate assembly with HY-3.

2 min 7

Frequency Code:
----Q-S-A-

U.S. Postal Service Maintenance Checklist	IDENTIFICATION											
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	0	3	T	O	W	V	E	B	A	0	0	7
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE E		Equipment Model ACCO				Bulletin Filename M98071AA		Frequency ALL				

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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CLEAN-UP Frequency Code: -M-Q-S-A-	41.	CLEAN- UP - Ensure all tools, lubricants, rags, etc., are removed from the work area. Report all deficiencies to your supervisor.	3 min	All
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WARNING

Be cautious when working around or on equipment when power has been applied.

SYSTEM Frequency Code: -M-Q-S-A-	42.	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
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START-UP Frequency Code: -M-Q-S-A-	43.	START-UP. - Perform normal start-up procedures as follows: <ol style="list-style-type: none"> 1. Start or preset equipment. 2. Check for proper operation. 3. Report all deficiencies to your supervisor in order to initiate any necessary work orders to make necessary repairs, or to remove excessive debris. 	5 min	All
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