



maintenance management order

SUBJECT: PM Guidelines for Towveyor (Bypass),
Type B (Linkbelt)

DATE: July 22, 1998

NO: MMO-046-98

TO: Bulk Mail Centers

FILE CODE: Y

dewa:M94141AC

Online Change Record		
Change #	Date	Description of Change
2	4/25/2022	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 B (Linkbelt) and supersedes Maintenance Checklist BO68.

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 Safety Data Sheets (MSDS) 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 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 B (Linkbelt) Master Checklist

ATTACHMENT 1**-SUMMARY-****REVISED WORKLOAD ESTIMATE****FOR****TOWVEYOR (BYPASS), TYPE B (LINKBELT)**

Routine Servicing (hrs/yr)	Repair* (hrs/yr)	Total Servicing & Repair Time (hrs/yr)	Nonproductive Time ** (hrs/yr)	Total Servicing Per Machine (hrs/yr)
20.94	6.30	27.24	2.74	29.98

* Repair estimates based on 30% of servicing.

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

TIME TOTALS

Monthly Time Total: 1.15 Hrs. ***

Quarterly Time Total: 1.22 Hrs. ***

Semi-Annual Time Total: 0.27 Hrs. ***

Bi-Annual Time Total: 1.25 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 MARS System.

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ATTACHMENT 2**TOWVEYOR (BYPASS), TYPE B (LINKBELT) MASTER CHECKLIST**

03-TOWVE-BA-001-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	1
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE B		Equipment Model LINKBELT				Bulletin Filename M94141AC		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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WARNING

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

WARNING

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

CH-1 TOWPIN CHAIN Frequency Code: M-Q-----	4. CLEAN CHAIN. - With equipment operating, clean chain as follows: 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.	1 min per 10 ft.	7
CH-1 TOWPIN CHAIN Frequency Code: -M-Q-S-----	5. LUBRICATE CHAIN - Pour oil slowly over chain for two (2) complete turns.	0.22 min/10ft.	
Frequency Code: -M-Q-S----K	6. REMOVE COVER PLATES. - Remove cover plates. Erect barricades around open pits.	20 min	7

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		0	3	T	O	W	V	E	B	A	0	0	1
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE B		Equipment Model LINKBELT				Bulletin Filename M94141AC			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 Frequency Code: -M-Q-S----K	7. 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
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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.

AT-1 TRACK Frequency Code: ----Q-S----	8. CLEAN AND LUBRICATE ROLLER TURNS. - With disconnect locked out, perform the following: 1. Clean dirt and foreign material from roller turns. 2. Clean with solvent and blow dry. 3. Lubricate with GR-2.	10 min/ unit 7
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Frequency Code: ----Q-S----	9. CHECK ROLLERS. - Check rollers for wear, gouging, and roll wobble. Check mounting bolts.	2 min/ unit 7
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Frequency Code: ----Q-S----	10. CLEAN AND CHECK SPROCKET TURN. - Clean and check sprocket turn as follows: 1. Remove dirt and foreign material from sprocket turn. 2. Check for wear and alignment.	10 min/ unit 7
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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 B		Equipment Model LINKBELT			Bulletin Filename M94141AC			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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AT-1 TRACK 11. **CLEAN AND LUBRICATE SPROCKET TURN, BEARING EXTERIOR, AND FITTING.** - With disconnect locked out, perform the following: 5 min/unit 7

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

1. Wipe off sprocket turn, bearing exterior, and lubricating fittings.
2. Using a hand grease gun, apply one (1) shot of GR-2.
3. Wipe off excess.

WARNING

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

WARNING

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

CH-1 12. **CLEAN CHAIN.** - Clean towpin chain with solvent by brushing. Remove foreign material by blowing or wiping clean. Jog chain if necessary. 1 min per 10 ft. 7

TOWPIN CHAIN

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

Frequency Code: -----S----- 13. **CHECK CHAIN.** - Check chain for bent, cracked, or excessively worn links. 10 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	001	M
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE B		Equipment Model LINKBELT			Bulletin Filename M94141AC			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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CH-1
TOWPIN
CHAIN (Cont.)

14. **CHECK SPRING TAKE-UP SPROCKET.** - Check spring take-up sprocket for wear and alignment. Check to see if spring length exceeds 22 inches. See page IV-11 of O & M Manual for the adjustment procedures for chain tension.

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

3 7
min

15. **LUBRICATE TAKE-UP SPROCKET BEARING.** - Using a hand grease gun and needle adapter, apply two (2) shots or GR-2 to take-up sprocket bearing.

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

1 7
min

WARNING

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

CS-1
CONTAINER
SENSOR
SWITCHES

16. **CLEAN PIT, SWITCH HOUSING, AND ACTUATOR ARM.** - Clean pit, switch housing, and actuator arm as follows:

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

3 7
min

1. Clean dirt and accumulated material from pit.
2. Clean switch housing and actuator arm with solvent.

17. **CHECK SWITCH.** - Check switch mounting and for freedom of movement in direction of chain travel.

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

1 7
min

DA-2
SPROCKET
DRIVE ASS'Y

18. **CHECK MOTOR AND REDUCER HOUSINGS.** - Check motor and reducer housings for evidence of lubrication leakage.

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

5 7
min

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	1
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE B		Equipment Model LINKBELT			Bulletin Filename M94141AC			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
SPROCKET
DRIVE ASS'Y
(Cont.)

Frequency
Code:
-M-Q-S---- | 19. | CLEAN AND CHECK MOTOR AND REDUCER EXTERIOR. - Clean and check motor and reducer exterior as follows:

1. Remove dust and foreign material from motor and reducer exterior.

2. Check to make sure vent holes are not plugged. | 2
min | 7 |
| Frequency
Code:
-M-Q-S---- | 20. | CHECK OIL LEVEL. - With unit warm from running, check oil level in reducer. Refill, if required, to proper level with GL-7. | 1
min | 7 |
| Frequency
Code:
-----K | 21. | DRAIN AND REFILL REDUCER. - With disconnect locked out and with unit warm from running, perform the following:

1. Clean air vent.

2. Drain reducer by removing drain plug.

3. Replace drain plug.

4. Refill to proper level with GL-7. | 20
min | 7 |
| Frequency
Code:
----Q-S---- | 22. | CLEAN V-BELT AND SHEAVES. - Clean foreign material from belts and sheaves by wiping with clean rags. | 1
min | 7 |
| Frequency
Code:
----Q-S---- | 23. | CHECK V-BELTS AND SHEAVES. - Check V-belts and sheaves as follows:

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

2. Check sheave set screws and belt tension. | 1
min | 7 |

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	0	3	T	O	W	V	E	B	A	001	M
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE B		Equipment Model LINKBELT			Bulletin Filename M94141AC			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 SPROCKET DRIVE ASS'Y	24.	LUBRICATE REDUCER OUTPUT SHAFT BEARING. - With disconnect locked out, remove relief plug from reducer output shaft bearing. Apply GR-2 until fresh lubricant appears at plug.	1 min	7
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Frequency
Code:
----Q-S----

WARNING

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

SYSTEM	25.	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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Frequency
Code:
----Q-S----

DA-2 SPROCKET DRIVE ASS'Y	26.	LUBRICATE REDUCER OUTPUT SHAFT BEARING. - Run one (1) minute.	1 min	7
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Frequency
Code:
----Q-S----

SYSTEM	27.	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
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Frequency
Code:
----Q-S----

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	1
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE B		Equipment Model LINKBELT			Bulletin Filename M94141AC			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 SPROCKET DRIVE ASS'Y	28.	REPLACE RELIEF PLUG. -.Replace reducer output shaft bearing relief plug.	1 min	7
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Frequency Code:
----Q-S----

WARNING

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

Frequency Code: ----Q-S----	29.	CHECK AND CLEAN SPROCKET. - Check and clean sprocket as follows: <ol style="list-style-type: none"> 1. Check sprocket for wear and alignment. 2. Wrench test set screws. 3. Clean sprocket with solvent and rags. 	5 min	7
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Frequency Code: ----Q-S----	30.	CLEAN DRIVE PIT. - Clean dirt and foreign material from drive pit.	10 min	7
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DS-1 DIVERGING TRACK SWITCH Frequency Code: ----Q-S----	31.	CLEAN AND CHECK TRACK SWITCH PITS AND SWITCH HOUSING. - Clean and check track switch pits and switch housing as follows: <ol style="list-style-type: none"> 1. Remove dirt and accumulated debris from track switch pits. 2. Clean switch housing using solvent and rags. 3. Check operation by latching switching blade. 	7 min	7
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	0	3	T	O	W	V	E	B	A	0	0	1
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE B		Equipment Model LINKBELT				Bulletin Filename M94141AC		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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WARNING

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

DS-1 DIVERGING TRACK SWITCH (Cont.) Frequency Code: ----Q-S----	32. CLEAN AND CHECK SOLENOID HOUSING, PLUNGER ROD, AND LINKAGE. - Clean and check solenoid housing, plunger rod, and linkage as follows:	2 min	7
	1. Using rags and solvent, clean solenoid housing, plunger rod, and linkage.		
	2. Check plunger rod for free movement.		
	3. Check solenoid mount and switch blade.		
Frequency Code: ----Q-S----	33. LUBRICATE LINKAGE AND PIVOT POINTS. - Lightly lubricate all linkage and pivot points on solenoid and blade assembly with HY-1.	2 min	7
PD-1 EMPTY PUSHER DETECTOR Frequency Code: ----Q-S----	34. CLEAN EMPTY PUSHER DETECTOR BOX. - Remove dirt and accumulated debris from Empty Pusher Detector box.	3 min	7
Frequency Code: ----Q-S----	35. CHECK PHOTOCELL HOUSING, LENS, AND REFLECTOR. - Check photocell housing, lens, and reflector. Check mounting bolts for tightness.	2 min	7

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	0	3	T	O	W	V	E	B	A	0	0	1
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE B		Equipment Model LINKBELT				Bulletin Filename M94141AC		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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WARNING

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

PS-1 PIN DISENGAGING STOP Frequency Code: ----Q-S----	36.	CLEAN AND LUBRICATE PIN DISENGAGING STOP. - Clean and lubricate pin disengaging stop as follows: 1. Remove dirt and accumulated debris from pin disengaging stop. 2. Clean actuator cylinder and pivot points with clean rags and solvent. 3. Lubricate with HY-3.	1 min/ unit	7
Frequency Code: ----Q-S----	37.	CLEAN AND CHECK LIMIT SWITCH. - Clean and check limit switch as follows: 1. Clean limit switch housing and actuator arm with solvent. 2. Check switch mounting and for freedom of movement in direction of chain travel.	2 min/ unit	7
AT-1 TRACK Frequency Code: -M-Q-S----	38.	CHECK TRACK. - Check entire length of track for loose wear strips	1 min/ 50 ft.	7
ZZ-1 ROUTE COMPLE- TION Frequency Code: -M-Q-S----K	39.	REPLACE COVER PLATES. - With disconnect locked out, replace all cover plates.	20 min	7

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	0	3	T	O	W	V	E	B	A	0	0	1
Equipment Nomenclature TOWVEYOR (BYPASS), TYPE B		Equipment Model LINKBELT				Bulletin Filename M94141AC		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----K	40.	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----K	41.	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
START-UP Frequency Code: -M-Q-S----K	42.	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