



# maintenance management order

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

**DATE:** December 8, 1998

**NO:** MMO-161-98

**TO:** Bulk Mail Centers

**FILE CODE:** Y

dewa:M98070AA

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	5/8/2013	This bulletin has been updated to reflect changes to the Attachment 1 Summary. The mathematical calculations were originally added incorrectly. The times have been updated to reflect accurate rollup times using the standard two decimal place rounding.

This Maintenance Management Order (MMO) supersedes MMO-153-98, dated November 30, 1998 due to recalculation of the roll up times. All other information remains the same.

This Maintenance Management Order (MMO) provides Preventive Maintenance (PM) guidelines for Towveyor (Bypass), Type C (Linkbelt) and supersedes Maintenance Checklist BO69.

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 C (Linkbelt) Master Checklist

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

Routine Servicing (hrs/yr)	Repair* (hrs/yr)	Total Servicing & Repair Time (hrs/yr)	Nonproductive Time ** (hrs/yr)	Total Servicing Per Machine (hrs/yr)
21.66	6.51	28.17	2.82	30.99

\* Repair estimates based on 30% of servicing.

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

**TIME TOTALS**

<u>Monthly Time Total:</u>	1.16 Hrs. ***
<u>Quarterly Time Total:</u>	1.27 Hrs. ***
<u>Semi-Annual Time Total:</u>	0.08 Hrs. ***
<u>Annual Time Total:</u>	0.67 Hrs. ***
<u>Bi-Annual Time Total:</u>	1.31 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 C (LINKBELT) MASTER CHECKLIST**

03-TOWVE-BA-002-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**

<b><u>CODE</u></b>	<b><u>FREQUENCY</u></b>	<b><u>DESCRIPTION</u></b>
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 <b>Maintenance Checklist</b>	IDENTIFICATION											
	Work Code		Equipment Acronym				Class Code		Number		Type	
	0	3	T	O	W	V	E	B	A	0	0	2
Equipment Nomenclature <b>TOWVEYOR (BYPASS), TYPE C</b>		Equipment Model <b>LINKBELT</b>				Bulletin Filename <b>M98070AA</b>		Frequency <b>ALL</b>				

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  Frequency Code: -M-Q-S-A-K	1.	<b>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.</b>	3 min	All
AA-1  Frequency Code: -M-Q-S-A-K	2.	<b>CHECK FOR MAIL. -</b> Look for loose mail while performing activities.	2.5 min	7
CH-1 TOWPIN CHAIN  Frequency Code: -M-Q-S----	3.	<b>CHECK MOTOR DRIVE AMMETER. -</b> With equipment operating, check motor drive ammeter in the MSP. If reading exceeds normal by 10%, flow a thin stream of GL-1 around entire track.	1 min per 20 ft.	7

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	0	3	T	O	W	V	E	B	A	0	0	2
Equipment Nomenclature <b>TOWVEYOR (BYPASS), TYPE C</b>		Equipment Model <b>LINKBELT</b>				Bulletin Filename <b>M98070AA</b>		Frequency <b>ALL</b>				

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 (Cont.)  Frequency Code: -M-Q-----	4. <b>CLEAN CHAIN.</b> - 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
Frequency Code: -M-Q-S-----	5. <b>LUBRICATE CHAIN</b> - Pour oil slowly over chain for two (2) complete turns.		0.22 min/ 10ft.	
SYSTEM  Frequency Code: -M-Q-S-A-K	6. <b>POWER DOWN AND LOCKOUT POWER.</b> - 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: -M-Q-S---K	7. <b>REMOVE COVER PLATES.</b> - Remove cover plates. Erect barricades around open pits.		20 min	7

**WARNING**

U.S. Postal Service		IDENTIFICATION						
<b>Maintenance Checklist</b>		Work Code	Equipment Acronym			Class Code	Number	Type
		<b>03</b>	<b>TOW</b>	<b>VE</b>	<b>BA</b>	<b>002</b>	<b>M</b>	
Equipment Nomenclature <b>TOWVEYOR (BYPASS), TYPE C</b>		Equipment Model <b>LINKBELT</b>		Bulletin Filename <b>M98070AA</b>		Frequency <b>ALL</b>		

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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**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	8.	<b>CLEAN AND LUBRICATE ROLLER TURNS.</b> - With disconnect locked out, clean and lubricate roller turns as follows:	10 min	7
Frequency Code: ----Q-S----		<ol style="list-style-type: none"> <li>1. Clean dirt and foreign material from roller turns.</li> <li>2. Clean with solvent and blow dry.</li> <li>3. Lubricate with GR-2.</li> </ol>		
Frequency Code: ----Q-S----	9.	<b>CHECK ROLLERS.</b> - Check rollers for wear, gouging, and roll wobble. Check mounting bolts.	2 min	7
Frequency Code: ----Q-S----	10.	<b>CLEAN AND CHECK SPROCKET TURN.</b> - Clean and check sprocket turn as follows:	10 min	7
		<ol style="list-style-type: none"> <li>1. Remove dirt and foreign material from sprocket turn.</li> <li>2. Check for wear and alignment.</li> </ol>		
Frequency Code: -----S----	11.	<b>CLEAN AND LUBRICATE SPROCKET TURN, BEARING EXTERIOR, AND FITTINGS.</b> - With disconnect locked out, perform the following:	5 min	7
		<ol style="list-style-type: none"> <li>1. Wipe off sprocket turn, bearing exterior, and lubricating fittings.</li> <li>2. Using a hand grease gun, apply one (1) shot of GR-2.</li> <li>3. Wipe off excess.</li> </ol>		

**WARNING**



U.S. Postal Service  <b>Maintenance Checklist</b>	IDENTIFICATION											
	Work Code		Equipment Acronym				Class Code		Number		Type	
	0	3	T	O	W	V	E	B	A	0	0	2
Equipment Nomenclature <b>TOWVEYOR (BYPASS), TYPE C</b>		Equipment Model <b>LINKBELT</b>				Bulletin Filename <b>M98070AA</b>		Frequency <b>ALL</b>				

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

CH-1  
TOWPIN  
CHAIN      12.    **CHECK CHAIN.** - Check chain for bent, cracked, or excessively worn links.      10 min      7

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

Frequency Code:      13.    **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.      3 min      7

----Q-S----

Frequency Code:      14.    **LUBRICATE TAKE-UP SPROCKET BEARING.** - Using a hand grease gun and needle adapter, apply two (2) shots of GR-2 to take-up sprocket bearing.      1 min      7

----Q-S----

**WARNING**

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

CS-1  
CONTAINER  
SENSOR  
SWITCHES      15.    **CLEAN PIT, SWITCH HOUSING, AND ACTUATOR ARM.** - Clean pit, switch housing, and actuator arm as follows:      3 min      7

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

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

Frequency Code:      16.    **CHECK SWITCH MOUNTING.** - Check switch mounting and for freedom of movement in direction of chain travel.      1 min      7

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		0	3	T	O	W	V	E	B	A	0	0	2
Equipment Nomenclature <b>TOWVEYOR (BYPASS), TYPE C</b>		Equipment Model <b>LINKBELT</b>				Bulletin Filename <b>M98070AA</b>			Frequency <b>ALL</b>				

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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----Q-S----

DA-3  
SPROCKET/  
MOTOR  
BRAKE  
DRIVE ASSY

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

5 min      7

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

18. **CLEAN AND CHECK MOTOR AND REDUCER EXTERIOR.** - Clean and check motor and reducer exterior as follows:

2 min      7

1. Remove dust and foreign material from motor and reducer exterior.
2. Check to make sure vent holes are not plugged.

19. **CHECK OIL LEVEL.** - With unit warm from running, check oil level in reducer. Refill, if required, to proper level with GL-7.

2 min      7

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

20. **CHECK V-BELT AND SHEAVES.** - Check V-belt and sheaves for wear and alignment.

1 min      7

21. **CLEAN AND CHECK V-BELTS AND SHEAVES.** - Clean and check V-belts and sheaves as follows:

1 min      7

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

1. Clean foreign material from belts and sheaves by wiping with clean rags.
2. Check sheaves set screws and belt tension.

**WARNING**

**Discard solvent soaked materials**

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	0	3	T	O	W	V	E	B	A	0	0	2
Equipment Nomenclature <b>TOWVEYOR (BYPASS), TYPE C</b>			Equipment Model <b>LINKBELT</b>			Bulletin Filename <b>M98070AA</b>			Frequency <b>ALL</b>			

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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**according to local procedures to prevent spontaneous combustion.**

DA-3 SPROCKET/ MOTOR BRAKE DRIVE ASSY (Cont.)  Frequency Code: ----Q-S----	22.	<b>CHECK AND CLEAN SPROCKET.</b> - Check and clean sprocket as follows:  1. Check sprocket for wear and alignment.  2. Wrench test set screws.  3. Clean sprocket with solvent and rags.	5 min	7
Frequency Code: ----Q-----	23.	<b>CLEAN DRIVE CHAIN.</b> - Clean drive chain as follows:  1. Use clean rag to wipe old lubricant and foreign material from exterior of drive chain.  2. Brush new lubricant (SAE-20W) on roller drive chain.  3. Clean up any lubricant drippage.	10 min	7
Frequency Code: -----A--	24.	<b>CLEAN AND LUBRICATE DRIVE CHAIN AND SPROCKETS.</b> - Clean and lubricate drive chain and sprocket as follows:  1. Use clean rag to wipe old lubricant and foreign material from exterior of drive chain.  2. Clean chain in place by brushing with a solution of 2/3 solvent and 1/3 oil (SAE-20W).  3. Remove all packed foreign material from between sprocket teeth.  4. Look for evidence of wear to chain and sprockets.  5. Feel drive chain to determine if chain has proper tension.  6. Brush new lubricant (SAE-20W) on roller chain.  7. Clean up any lubricant spillage.	40 min	7
DA-3 SPROCKET/	25.	<b>Lubricate Reducer Output Shaft Bearing.</b> - Remove relief plug from reducer output shaft bearing. Apply GR-	1 min	7

U.S. Postal Service		IDENTIFICATION										
<b>Maintenance Checklist</b>		Work Code		Equipment Acronym			Class Code		Number		Type	
		<b>0</b>	<b>3</b>	<b>T</b>	<b>O</b>	<b>W</b>	<b>V</b>	<b>E</b>	<b>B</b>	<b>A</b>	<b>0</b>	<b>0</b>
Equipment Nomenclature <b>TOWVEYOR (BYPASS), TYPE C</b>		Equipment Model <b>LINKBELT</b>			Bulletin Filename <b>M98070AA</b>			Frequency <b>ALL</b>				

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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MOTOR                          2 until fresh lubricant appears at plug.  
BRAKE  
DRIVE ASSY  
(Cont.)

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

WARNING

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

SYSTEM                          26.   **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

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

DA-3                                  27.   **LUBRICATE REDUCER OUTPUT SHAFT BEARING.** - Run One (1) minute to even lubricant presure.                          1 min                          7

SPROCKET/  
MOTOR  
BRAKE  
DRIVE ASSY  
(Cont.)

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

DA-3                                  28.   **CHECK MAGNETIC BRAKE ASSEMBLY.** - With equipment operating, check magnetic brake assembly as follows:                          2 min                          7

1. Observe effectiveness of magnetic brake assembly.

SPROCKET/  
MOTOR  
BRAKE  
DRIVE ASSY  
(Cont.)

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Equipment Nomenclature <b>TOWVEYOR (BYPASS), TYPE C</b>		Equipment Model <b>LINKBELT</b>				Bulletin Filename <b>M98070AA</b>		Frequency <b>ALL</b>				

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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Frequency Code: ----Q-S----	2. Look for proper braking action on motor.  3. Feel motor housing for excessive vibration when brake operates.  4. Listen for noisy brake operation.	1 min	7
SYSTEM  Frequency Code: ----Q-S----K	29. <b>POWER DOWN AND LOCKOUT POWER.</b> - 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
DA-3 SPROCKET/ MOTOR BRAKE DRIVE ASSY (Cont.) Frequency Code: ----Q-S----	30. <b>REPLACE RELIEF PLUG.</b> - Replace reducer output shaft bearing relief plug.	1 min	7
Frequency Code: -----K	31. <b>CLEAN AND DRAIN REDUCER.</b> - With disconnect locked out and with unit warm from running, perform the following:  1. Clean air vent and drain reducer by removing drain plug.  2. Replace drain plug and refill to proper level with GL-7.	20 min	7
Frequency Code: ----Q-S----	32. <b>CLEAN DRIVE PIT.</b> - Clean dirt and foreign material from drive pit.	10 min	7
AT-1 TRACK  Frequency Code: -M-Q-S-----	33. <b>CHECK TRACK</b> - Check entire length of track for loose wear strips	1 min/ 50 ft.	7
ZZ-1 ROUTE	34. <b>REPLACE COVER PLATES.</b> - With disconnect locked	20	7

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Equipment Nomenclature <b>TOWVEYOR (BYPASS), TYPE C</b>		Equipment Model <b>LINKBELT</b>				Bulletin Filename <b>M98070AA</b>			Frequency <b>ALL</b>				

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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COMPLETION out, replace all cover plates. min

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

CLEAN-UP 35. **CLEAN- UP.** -Ensure all tools, lubricants, rags, etc., are removed from the work area. Report all deficiencies to your supervisor. 3 min All

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

**WARNING**

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

SYSTEM 36. **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

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

START-UP 37. **START-UP.** - Perform normal start-up procedures as follows: 5 min All

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

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.