

MAINTENANCE TECHNICAL SUPPORT CENTER / MAINTENANCE POLICIES & PROGRAMS
ENGINEERING / UNITED STATES POSTAL SERVICE

maintenance management order

SUBJECT: PM Guidelines for Towveyor (Spur), Type F
(Linkbelt)

DATE: December 16, 1998

NO: MMO-167-98

TO: Bulk Mail Centers

FILE CODE: Y

dewa:M94153AC

Online Change Record		
Change #	Date	Description of Change
2	4/22/2022	Attachment 2, corrected skill level 4, no longer in use, to level 7.
1	5/9/2013	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) provides Preventive Maintenance (PM) guidelines for Towveyor (Spur), Type F (Linkbelt) and supersedes Maintenance Checklist BO72.

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.

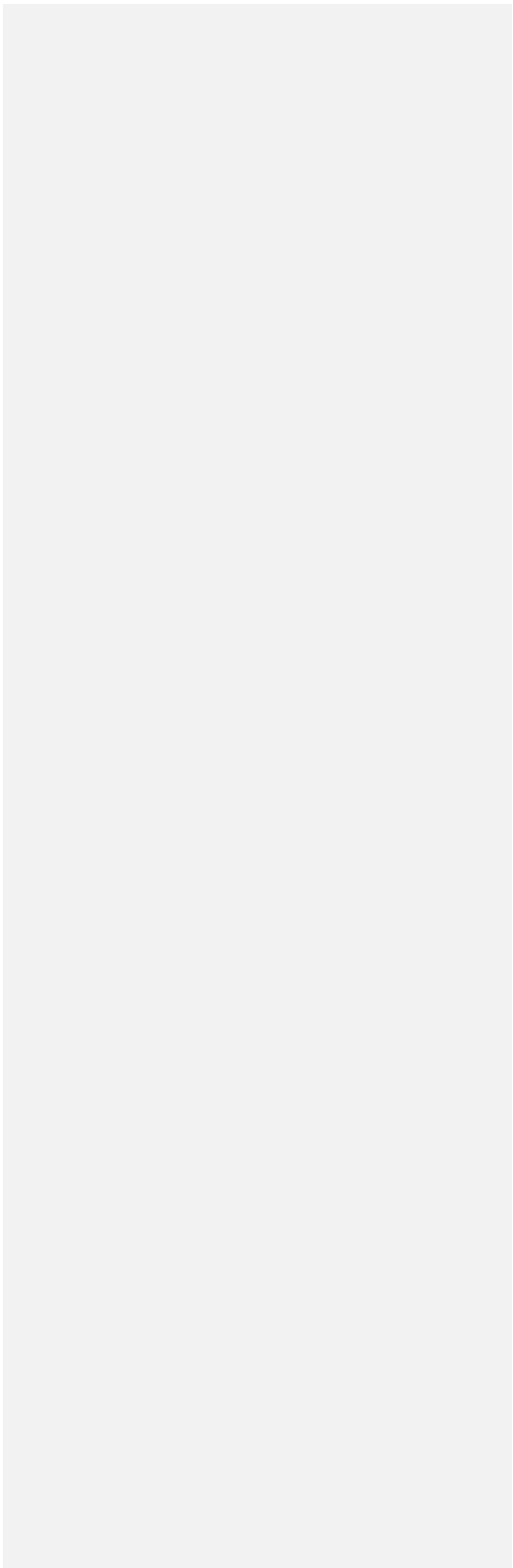
The workhours represented in this MMO reflect the maximum workhours required to maintain the equipment. Given local conditions, management may modify task frequencies.

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 (Spur), Type F (Linkbelt) Master Checklist



ATTACHMENT 1**-SUMMARY-****REVISED WORKLOAD ESTIMATE****FOR****TOWVEYOR (SPUR), TYPE F (LINKBELT)**

Routine Servicing (hrs/yr)	Repair* (hrs/yr)	Total Servicing & Repair Time (hrs/yr)	Nonproductive Time ** (hrs/yr)	Total Servicing Per Machine (hrs/yr)
21.43	6.43	27.86	2.79	30.64

* Repair estimates based on 30% of servicing.

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

TIME TOTALS

Monthly Time Total: 1.16 Hrs. ***

Quarterly Time Total: 0.95 Hrs. ***

Semi-Annual Time Total: 0.22 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 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 (SPUR), TYPE F (LINKBELT) MASTER CHECKLIST**

03-TOWVE-SA-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	
		03	T	O	W	V	E	S	A	001	M
Equipment Nomenclature TOWVEYOR (SPUR), TYPE F		Equipment Model LINKBELT			Bulletin Filename M94153AB			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.** - 3 All
min

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

AA-1 2. **CHECK FOR MAIL.** - Look for loose mail while 2.5 47
min

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

CH-1 TOWPIN 3. **CHECK MOTOR DRIVE AMMETER.** - With equipment 1 47
min
operating, check motor drive ammeter in the MSP. If reading exceeds normal by 10%, flow a thin stream of GL-1 around entire track. per 20 ft.

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

Frequency Code: ----Q-S---- 4. **CHECK AMMETER.** - With equipment operating, check 2 47
min.
ammeter on Spur MSP. If needle indicates a pulsing variance, check chain adjustment as per page IV-13 of the O & M Manual.

U.S. Postal Service Maintenance Checklist		IDENTIFICATION									
		Work Code	Equipment Acronym				Class Code	Number		Type	
		03TOWVESA001M									
Equipment Nomenclature TOWVEYOR (SPUR), TYPE F		Equipment Model LINKBELT		Bulletin Filename M94153AB			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.

CH-1 TOWPIN CHAIN (Cont.)	5. CLEAN CHAIN. - Clean chain as follows:	1 min/10 ft.	47
Frequency Code: -M-Q-----	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: -M-Q-S-----	6. LUBRICATE CHAIN. - Pour oil slowly over chain for two (2) complete turns.	.22 min/10ft.	
SYSTEM	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	47
Frequency Code: -M-Q-S----K			
Frequency Code: -M-Q-S----K	8. REMOVE COVER PLATES. - Remove cover plates. Erect barricades around open pits.	20 min	47

U.S. Postal Service		IDENTIFICATION									
Maintenance Checklist		Work Code	Equipment Acronym				Class Code	Number		Type	
		03	TOWVE	S	A	001	M				
Equipment Nomenclature TOWVEYOR (SPUR), TYPE F		Equipment Model LINKBELT		Bulletin Filename M94153AB		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.

WARNING

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

- | | | | | |
|--|--|---|--------|-----------|
| | AT-1 TRACK

Frequency Code:
----Q-S---- | 9. CLEAN AND LUBRICATE ROLLER TURNS. - Clean and lubricate roller turns as follows: | 10 min | 47 |
| | | 1. Clean dirt and foreign material from roller turns.
2. Clean with solvent and blow dry.
3. Lubricate with GR-2. | | |
| | Frequency Code:
----Q-S---- | 10. CHECK ROLLERS. - Check rollers as follows: | 2 min | 47 |
| | | 1. Check rollers for wear, gouging and roll wobble.
2. Check mounting bolts. | | |
| | Frequency Code:
----Q-S---- | 11. CLEAN AND CHECK SPROCKET TURN. - Clean and check sprocket turn as follows: | 10 min | 47 |
| | | 1. Remove dirt and foreign material from sprocket turn.
2. Check for wear and alignment. | | |

U.S. Postal Service Maintenance Checklist	IDENTIFICATION												
	Work Code		Equipment Acronym				Class Code		Number		Type		
	03		TOWVE				SA		001		M		
Equipment Nomenclature TOWVEYOR (SPUR), TYPE F		Equipment Model LINKBELT				Bulletin Filename M94153AB				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 (Cont.) 12. **LUBRICATE SPROCKET TURN, BEARING EXTERIOR AND FITTINGS.** - With disconnect locked out, perform the following: 5 min **47** |

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 TOWPIN CHAIN 13. **CLEAN CHAIN.** - With disconnect locked out, perform the following: 1 min/10 ft. **47** |

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

1. Clean towpin chain with solvent by brushing.
2. Remove foreign material by blowing or wiping clean. Jog chain if necessary.

Frequency Code: ----Q-S---- 14. **CHECK CHAIN.** - Inspect chain for bent, cracked, or excessively worn links. 1 min/10 ft. **47** |

WARNING

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

U.S. Postal Service Maintenance Checklist	IDENTIFICATION										
	Work Code		Equipment Acronym			Class Code		Number		Type	
	0 3		T O W V E S A			0 0 1		M			
Equipment Nomenclature TOWVEYOR (SPUR), TYPE F		Equipment Model LINKBELT			Bulletin Filename M94153AB			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

Frequency
Code:
----Q-S---- | 15. CLEAN PIT, SWITCH HOUSING, AND ACTUATOR ARM. - Clean pit, switch housing, and actuator arm as follows:

1. Clean dirt and accumulated material from pit.

2. Clean switch housing and actuator arm with solvent. | 3 min | <u>47</u> |
| Frequency
Code:
----Q-S---- | 16. CHECK SWITCH MOUNTING. - Check switch mounting and for freedom of movement in direction of chain travel. | 1 min | <u>47</u> |
| DA-2
SPROCKET
DRIVE ASS'Y

Frequency
Code:
-M-Q-S---- | 17. CHECK MOTOR AND REDUCER HOUSING. - Check motor and reducer housing for evidence of lubrication leakage. | 5 min | <u>47</u> |
| Frequency
Code:
-M-Q-S---- | 18. 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 | <u>47</u> |
| DA-2
SPROCKET
DRIVE ASS'Y
(Cont.)

Frequency
Code:
-M-Q-S---- | 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 | <u>47</u> |

U.S. Postal Service Maintenance Checklist	IDENTIFICATION									
	Work Code	Equipment Acronym				Class Code	Number	Type		
	03	TOWVE	SA	001	M					
Equipment Nomenclature TOWVEYOR (SPUR), TYPE F		Equipment Model LINKBELT		Bulletin Filename M94153AB		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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Frequency Code: -----K 20. **CLEAN AND DRAIN REDUCER.** - With disconnect locked out and with unit warm from running, perform the following: 20 min **47** |

1. Clean air vent and drain reducer by removing drain plug.
2. Replace drain plug.
3. Refill to proper level with GL-7.

Frequency Code: -----S---- 21. **LUBRICATE REDUCER OUTPUT SHAFT BEARING.** - Lubricate reducer output shaft bearing as follows: 1 min/Drive **47** |

1. Remove relief plug from reducer output shaft bearing.
2. Apply GR-2 until fresh lubricant appears at plug.

WARNING

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

SYSTEM Frequency Code: -----S---- 22. **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

U.S. Postal Service Maintenance Checklist	IDENTIFICATION									
	Work Code	Equipment Acronym				Class Code	Number		Type	
	03	TOW	VE	SA	001	M				
Equipment Nomenclature TOWVEYOR (SPUR), TYPE F	Equipment Model LINKBELT			Bulletin Filename M94153AB		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 ASSEMBLY (cont.) 23. **LUBRICATE SHAFT BEARING.** - Run one (1) minute. 1 min 47

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

SYSTEM 24. **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 47

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

DA-2 SPROCKET DRIVE ASS'Y 25. **REPLACE RELIEF PLUG.** - Replace reducer output shaft relief plug. Wipe off excess lubricant. 1 min 47

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

Frequency Code: 26. **CHECK V-BELTS AND SHEAVES.** - Check V-belts and sheaves for wear and alignment. 1 min 47
----Q-S----

Frequency Code: 27. **CLEAN AND CHECK V-BELTS AND SHEAVES.** - Clean and check V-belts and sheaves as follows: 1 min 47
----Q-S----

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

U.S. Postal Service Maintenance Checklist	IDENTIFICATION												
	Work Code		Equipment Acronym				Class Code		Number		Type		
	03		TOWVE				SA		001		M		
Equipment Nomenclature TOWVEYOR (SPUR), TYPE F		Equipment Model LINKBELT				Bulletin Filename M94153AB				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:
----Q-S----

28. **CHECK AND CLEAN SPROCKET.** - Check and clean sprocket as follows: 5 min **47** |

1. Inspect sprocket for wear and alignment.
2. Wrench test set screws.
3. Clean sprocket with solvent and rags.

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

29. **CLEAN DRIVE PIT.** - Clean all dirt and foreign material from drive pit. 10 min **47** |

WARNING

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

DS-1
DIVERGING
TRACK
SWITCH

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

30. **CLEAN AND CHECK SWITCH HOUSING.** - Clean and check switch housing as follows: 4 min **47** |

1. Clean switch housing using solvent and rags.
2. Check operation of unlatching switching blade.

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

31. **CLEAN TRACK SWITCH PITS.** - Remove dirt and accumulated debris from track switch pits.. 3 min **47** |

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

32. **CLEAN SOLENOID HOUSING PLUNGER ROD, AND LINKAGE.** - Clean solenoid housing, plunger rod, and linkage using solvent and rags. 1 min **47** |

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

33. **CHECK PLUNGER ROD.** - Check plunger rod for free movement. Check solenoid mount and switch blade. 1 min **47** |

U.S. Postal Service Maintenance Checklist	IDENTIFICATION									
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	03	TOWVE	SA	001	M					
Equipment Nomenclature TOWVEYOR (SPUR), TYPE F	Equipment Model LINKBELT		Bulletin Filename M94153AB		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 DIVERGING TRACK SWITCH (cont.) Frequency Code: ----Q-S----	34. LUBRICATE LINKAGE AND PIVOT POINTS. - Lightly lubricate all linkage and pivot points on solenoid and blade assembly with HY-1.	2 min	47
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AT-1 TRACK Frequency Code: -M-Q-S-----	35. CHECK TRACK - Check entire length of track for loose wear strips	1 min/ 50 ft.	47
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ZZ-1 ROUTE COMPLE- TION Frequency Code: -M-Q-S----K	36. REPLACE COVER PLATES. - Replace all cover plates	20 min	47
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CLEAN-UP Frequency Code: -M-Q-S----K	37. 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	38. 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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U.S. Postal Service Maintenance Checklist	IDENTIFICATION											
	Work Code		Equipment Acronym				Class Code		Number		Type	
	0	3	T	O	W	V	E	S	A	0	0	1
Equipment Nomenclature TOWVEYOR (SPUR), TYPE F	Equipment Model LINKBELT				Bulletin Filename M94153AB				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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START-UP	39.	START-UP. - Perform normal start-up procedures as follows:	5 min	All
Frequency Code: -M-Q-S----K		<div>1. Start or preset equipment.</div> <div>2. Check for proper operation.</div> <div>3. Report all deficiencies to your supervisor in order to initiate any necessary work orders to make necessary repairs, or to remove excessive debris.</div>		

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