



maintenance management bulletin

SUBJECT: PM Guidelines for Towveyor (Spur), Type C (SI Handling)

DATE: December 10, 1998

NO: MMO-157-98

TO: Bulk Mail Centers

FILE CODE: Y

dewa:M98066AA

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	5/8/2013	This bulletin has been updated to reflect changes to 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-144-98, dated November 20, 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 (Spur), Type C (SI Handling) 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.

MMO-157-95

Maintenance Technical Support Center

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 C (SI Handling) Master Checklist

ATTACHMENT 1

-SUMMARY-

REVISED WORKLOAD ESTIMATE

FOR

TOWVEYOR (SPUR), TYPE C (SI HANDLING)

Routine Servicing (hrs/yr)	Repair* (hrs/yr)	Total Servicing & Repair Time (hrs/yr)	Nonproductive Time ** (hrs/yr)	Total Servicing Per Machine (hrs/yr)
26.04	7.81	33.85	3.39	37.23

* Repair estimates based on 30% of servicing.

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

TIME TOTALS

Monthly Time Total: 1.29 Hrs. ***

Quarterly Time Total: 2.08 Hrs. ***

Annual Time Total: 0.90 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 C (SI HANDLING) MASTER CHECKLIST

03-TOWVE-SA-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

<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.

SAFETY STATEMENT 1. **COMPLY WITH ALL SAFETY PRECAUTIONS.** - 3 All min
 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.

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

U.S. Postal Service Maintenance Checklist	IDENTIFICATION				
	Work Code	Equipment Acronym	Class Code	Number	Type
	03	TOWVE	SA	002	M
Equipment Nomenclature TOWVEYOR (SPUR), TYPE C	Equipment Model SI HANDLING	Bulletin Filename M98066AA	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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AA-1 Frequency Code: -M-Q---A-	2. CHECK FOR MAIL. - Look for loose mail while performing activities.	2.5 min 47
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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 Frequency Code: -----A-	3. CLEAN CHAIN. - 1. Clean chain with steam or high pressure cleaner/washer device. 2. Run chain at least one (1) complete cycle. 3. Remove foreign material by blowing or vacuuming.	1 min per 10. ft. 47
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CH-1 TOWPIN CHAIN (Cont.) Frequency Code: -M-Q---A-	4. LUBRICATE CHAIN. - With equipment operating, pour GL-4 slowly over return strand of chain. Two (2) complete turns.	1 min per 10 ft. 47
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U.S. Postal Service Maintenance Checklist	IDENTIFICATION				
	Work Code	Equipment Acronym	Class Code	Number	Type
	03	TOWVE	SA	002	M
Equipment Nomenclature TOWVEYOR (SPUR), TYPE C	Equipment Model SI HANDLING	Bulletin Filename M98066AA	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-3 SIDE FINGER DRIVE WITH MOTOR BRAKE

Frequency Code:
----Q---A- | 5. CHECK BRAKE. - With equipment operating, perform the following:

1. Check for proper brake action.

2. Feel for vibration.

3. Listen for noise. | 5 min | 47 |
| SYSTEM

Frequency Code:
-M-Q---A- | 6. 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---A- | 7. REMOVE COVER PLATES. - Remove cover plates. Erect barricades around open pits. | 20 min | 47 |
| CH-1 TOWPIN CHAIN

Frequency Code:
----Q---A- | 8. CHECK CHAIN. - Check chain for bent, cracked, or excessively worn links. Jog if necessary. | 1 min per 10 ft. | 47 |

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.

U.S. Postal Service Maintenance Checklist	IDENTIFICATION				
	Work Code	Equipment Acronym	Class Code	Number	Type
	03	TOWVE	S A	002	M
Equipment Nomenclature TOWVEYOR (SPUR), TYPE C	Equipment Model SI HANDLING	Bulletin Filename M98066AA	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
SENSORS

Frequency
Code:
---Q---A- | 9. CLEAN PIT, SWITCH HOUSING, AND ACTUATOR ARM. - With disconnect locked out, perform the following:

1. Clean dirt and accumulated material from pit.

2. Clean switch housing and actuator arm with solvent. | 10 min/
unit | 47 |
| Frequency
Code:
---Q---A- | 10. CHECK SWITCH AND ACTUATOR ARM. - Look for proper positioning and secure mounting of switch and actuator arm. | 1 min | 47 |
| Frequency
Code:
---Q---A- | 11. LUBRICATE AND CHECK PIVOT POINT. - Lubricate and check pivot point as follows:

1. Lubricate pivot point.

2. Operate by hand to see if it is sluggish or binding.

3. Check for damage. | 2 min | 47 |
| Frequency
Code:
---Q---A- | 12. CHECK SWITCH MOUNTING. - Check switch mounting and for freedom of movement in direction of chain travel. | 2 min | 47 |
| DA-3 SIDE
FINGER
DRIVE WITH
MOTOR
BRAKE

Frequency
Code:
-M-Q---A- | 13. CHECK CHAIN LUBRICANT LEVEL AND ADJUST VALVE. - Check lubricant level and adjust valve as follows:

1. Check level of lubricant in chain lubricator.

2. Refill with GL-3.

3. Adjust valve on oil container to provide small steady stream to chain for two complete passes. Nozzle should be over center of chain. | 10 min | 47 |
| Frequency
Code:
-M-Q---A- | 14. CHECK V-BELTS AND SHEAVES. - Check V-belts and sheaves for wear and alignment. | 2 min | 47 |

Maintenance Checklist	IDENTIFICATION									
	Work Code		Equipment Acronym			Class Code		Number		Type
	03		TOWVE			SA		002		M
Equipment Nomenclature		Equipment Model			Bulletin Filename		Frequency			
TOWVEYOR (SPUR), TYPE C		SI HANDLING			M98066AA		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:
-M-Q---A- | 15. | CLEAN V-BELT AND SHEAVES. - Clean foreign material from belts and sheaves by wiping with clean rags. | 4 min | 47 |
| Frequency Code:
-M-Q---A- | 16. | CHECK SHEAVES. - Check sheave's set screws and belt tension. | 2 min | 47 |
| Frequency Code:
---Q---A- | 17. | CHECK CHAIN ADJUSTMENT. - Check chain for proper adjustment. Adjust, if necessary, at take-up screws on drive assembly. | 4 min | 47 |
| Frequency Code:
---Q---A- | 18. | CLEAN AND CHECK CRITICAL SPEED SWITCH. - Clean and check critical speed switch. | 5 min | 47 |
| Frequency Code:
---Q---A- | 19. | CHECK BROKEN-CHAIN SWITCH. - Check broken-chain switch for secure mount and freedom of movement. Lubricate pivot points with HY-1. | 3 min | 47 |
| DA-3 SIDE FINGER DRIVE WITH MOTOR BRAKE (Cont.)
Frequency Code:
---Q---A- | 20. | CHECK MOTOR AND REDUCER. - Check motor and reducer for lubrication leaks. | 2 min | 47 |
| Frequency Code:
---Q---A- | 21. | CLEAN AND CHECK COUPLING. - Clean and check coupling as follows: <ol style="list-style-type: none"> 1. Clean and check coupling. 2. Wrench test set screws. 3. Feel keys for tightness. | 10 min | 47 |

Maintenance Checklist	IDENTIFICATION				
	Work Code	Equipment Acronym	Class Code	Number	Type
	03	TOWVE	SA	002	M
Equipment Nomenclature TOWVEYOR (SPUR), TYPE C	Equipment Model SI HANDLING	Bulletin Filename M98066AA	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: ---Q---A-	22. LUBRICATE GEAR REDUCER. - Add grease to gear reducer. Grease may be applied through a grease nipple provided on the top of the high speed end shield. Amount added should be equal to approximately 1/3 of normal fill.	20 min	<u>47</u>
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WARNING

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

Frequency Code: ---Q---A-	23. 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. 	10 min	<u>47</u>
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DA-3 SIDE FINGER DRIVE WITH MOTOR BRAKE (Cont.) Frequency Code: -----A-	24. LUBRICATE MOTOR. - Remove grease relief plug. For motors 1/2 HP and over, apply 2 pumps of GR-2.	44 min	<u>47</u>
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WARNING

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

SYSTEM Frequency Code: -----A-	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	26. RUN MOTOR. - Run motor for one minute	1	<u>47</u>
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U.S. Postal Service Maintenance Checklist	IDENTIFICATION				
	Work Code	Equipment Acronym	Class Code	Number	Type
	03	TOWVEY	SA	002	M
Equipment Nomenclature TOWVEYOR (SPUR), TYPE C	Equipment Model SI HANDLING	Bulletin Filename M98066AA	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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- Code: -----A- min
- 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 47 |
- Frequency Code: -----A-
- DA-3 28. **REPLACE RELIEF PLUG.** - Replace grease relief plug. 1 min 47 |
- SIDE FINGER DRIVE WITH MOTOR BRAKE
- Frequency Code: -----A-
- DA-3 29. **LUBRICATE COUPLING.** - Drain and refill coupling with same quantity HY-1 lubricant. 10 min 47 |
- SIDE FINGER DRIVE WITH MOTOR BRAKE (Cont.)
- Frequency Code: -----A-
- Frequency Code: -----A- 30. **CHECK LUBRICANT ON SHAFT BEARINGS.** - Check bearings for adequate lubricant. Apply new lubricant as necessary, use lubricant GR-2 30 min 47 |
- Frequency Code: -----A-
- Frequency Code: ----Q--A- 31. **CLEAN DRIVE PIT.** - Clean drive pit. 30 min 47 |

U.S. Postal Service Maintenance Checklist	IDENTIFICATION				
	Work Code	Equipment Acronym	Class Code	Number	Type
	03	TOWVE	SA	002	M
Equipment Nomenclature TOWVEYOR (SPUR), TYPE C	Equipment Model SI HANDLING	Bulletin Filename M98066AA	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

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| DS-1
DIVERTERS

Frequency Code:
----Q---A- | 32. CLEAN TRACK SWITCH PITS AND SWITCH HOUSING. - With disconnect locked out, perform the following: | 1. Remove dirt and accumulated debris from track switch pits.

2. Clean switch housing using solvent and rags.

3. Check operation by unlatching switching blade. | 15 min | 47 |
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WARNING

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

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|---|---|---|-------|----|
| DS-1
DIVERTERS
(Cont.)

Frequency Code:
----Q---A- | 33. CLEAN AND CHECK SOLENOID HOUSING, PLUNGER ROD, AND LINKAGE. - Clean and check solenoid housing, plunger rod, and linkage as follows: | 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. | 3 min | 47 |
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| Frequency Code:
----Q---A- | 34. LUBRICATE LINKAGE. - Lightly lubricate all linkage and pivot points on solenoid and brake assembly with HY-1. | 2 min | 47 |
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| AT-1 TRACK

Frequency | 35. CHECK TRACK. - Check entire length of track for loose wear strips. | 1 min/
50 ft. | 47 |
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U.S. Postal Service Maintenance Checklist	IDENTIFICATION				
	Work Code	Equipment Acronym	Class Code	Number	Type
	03	TOWVE	SA	002	M
Equipment Nomenclature TOWVEYOR (SPUR), TYPE C	Equipment Model SI HANDLING	Bulletin Filename M98066AA	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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Code:
-M-Q---A-

ZZ-1 ROUTE COMPLETION 36. **REPLACE COVER PLATES.** - Replace all cover plates. 20 min 47

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

CLEAN-UP 37. **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---A-

WARNING

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

SYSTEM 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

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

START-UP 39. **START-UP.** - Perform normal start-up procedures as follows: 5 min All

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

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.

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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	2
Equipment Nomenclature TOWVEYOR (SPUR), TYPE C			Equipment Model SI HANDLING			Bulletin Filename M98066AA			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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