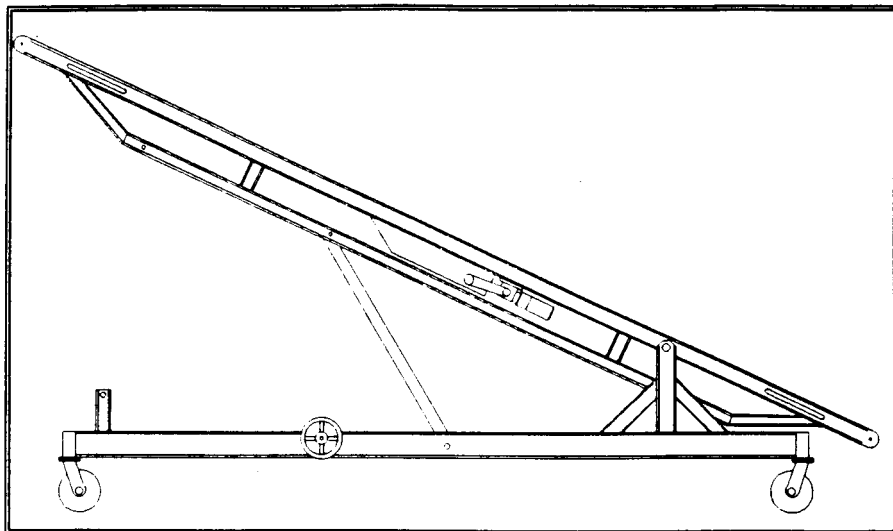

TECHNICAL MANUAL

Operator's, Unit and DS Maintenance Manual



**CONVEYOR, BELT, PORTABLE,
ELECTRIC, CASTER MOUNTED**

**NSN: 3910-01-376-0431
HIGHLAND ENGINEERING, INC.
MODEL 9306**

Approved for Public Release; Distribution is Unlimited

HEADQUARTERS, DEPARTMENT OF THE ARMY

SEPTEMBER 1994

**Operator's, Unit and DS Maintenance Manual
FOR
CONVEYOR, BELT, PORTABLE,
ELECTRIC, CASTER MOUNTED**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA Form 2028-2 located in the back of this manual, direct to: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished to you.

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CHAPTER 1 INTRODUCTION

Section I GENERAL INFORMATION

1-1 SCOPE

This manual is an Operators Technical Manual which provides operation and maintenance information for the Caster Mounted Electric Portable Belt Conveyor made by Highland Engineering, Inc., Howell, Michigan, USA. "0AK83" (first character is numeric zero) appears on the identification plate and is a code which represents Highland Engineering, Inc. as the manufacturer. The Caster Mounted Electric Portable Belt Conveyor is intended for use in environments with a temperature range of 0 deg. F to 120 deg. F and is adjustable and mobile to allow efficient positioning and use.

1-2 MAINTENANCE FORMS, RECORDS, and REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750, The Army Maintenance Management System (TAMMS).

1-3 DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Please refer to TM 750-244-6, Procedures for Destruction of Tank Automotive Equipment to Prevent Enemy Use (US Army Tank-Automotive Command).

1-4 REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your Caster Mounted Electric Portable Belt Conveyor needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF368 (Product Quality Deficiency Report). Mail it to us at US Army TACOM, AMSTA-QRD, Warren, MI 48397-5000. We'll send you a reply.

1-5 PREPARATION FOR STORAGE OR SHIPMENT

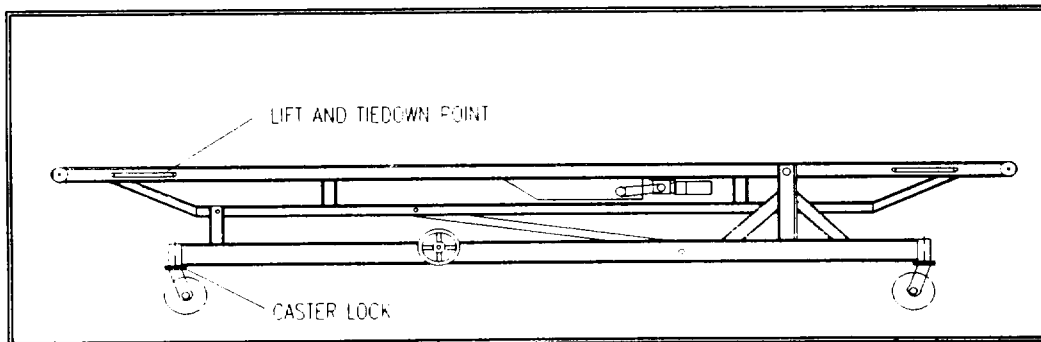
- a. Turn machine off.
- b. Unplug machine, safely stow the power cord.
- c. Place machine in horizontal position.
- d. Insert pins to lock conveyor in down position.
- e. Clean entire exterior of machine.

Lift Procedure:

1. Lock the conveyor in the down position with locking pins in two places.
2. Attach slings to the four handles located 18" from each corner.
3. Slowly start lifting the conveyor, if it does not lift in a level position, readjust the lift point.

Tiedown Procedure:

1. Lock the conveyor in the down position with locking pins in two places.
2. Lock the caster in four places.
3. Attach tiedown straps to the four handles located 18" from each corner and tighten securely.

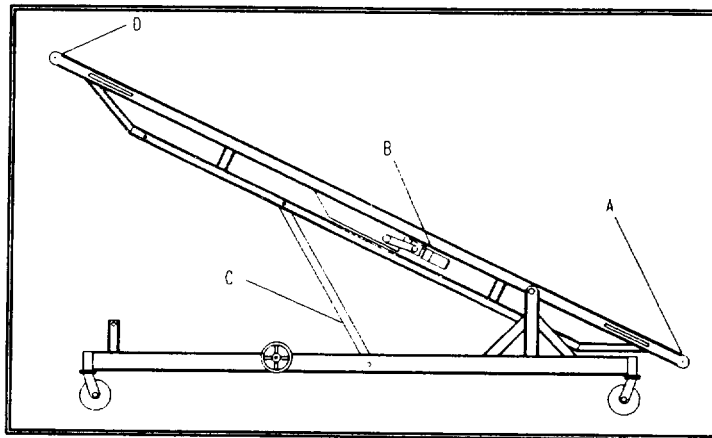


Section II Equipment Description

1-6 EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

- a. Mobile
- b. Adjustable inclination angle
- c. Reversible belt motion

1-7 LOCATION AND DESCRIPTION OF MAJOR COMPONENTS



- a. Tail End Parts are placed onto, or removed from this portion of the conveyor, depending on the direction of flow.
- b. Center Drive The motor is located here, and this is where motion of the conveyor belt is supplied from.
- c. Lifter This portion of the machine controls the angle at which the conveyor will run.
- d. Head End Parts are placed onto, or removed from this portion of the conveyor, depending on the direction of flow.

1-8 EQUIPMENT DATA

Weights and Dimensions

Length (horizontal position)	19 ft
Height (horizontal position).....	36 in
Conveyor Width	30 in
Belt width	18 in
Maximum incline angle	30 deg
Maximum incline height.....	118 in
Weight	575 lbs

Performance

Belt feed rate	100 ft/min @60Hz 83 ft/min @50Hz
Maximum product weight (horizontal)	45 lbs / in ft
Maximum product weight (fully inclined)	300 lbs total

Drive Specifications

Voltage	220 AC 50/60 Hz Cycles
---------------	---------------------------

1-9 SAFETY, CARE, AND HANDLING

- a. Proper Operations and Daily Maintenance. Procedures are vital to safe, reliable use of this type of mechanical equipment.
- b. Notes, Cautions, and Warnings. The various procedures described in this manual, and the NOTES, CAUTIONS, and WARNINGS, should be followed to prevent the possibility of equipment damage, and or operator danger.
- c. Safety Guidelines:
 1. Do not use this equipment for applications for which it is not intended.
 2. Do not allow improperly trained personnel to operate this equipment.
 3. Read and understand the operating procedures and safety precautions before operating the machine.
 4. Always operate with all safety guards in place and in proper working order.
 5. Do not leave machine unattended.
 6. Be careful to ensure proper placement of the machine and lock all adjustment mechanisms.
 7. Always keep hands, feet, and clothing free of moving parts.
 8. Perform maintenance checks as required per the PMCS Schedule.
 9. Always use extreme caution, and follow all safety procedures, as listed in this manual, when operating this machine.

Section III Technical Principles of Operation

1-10 DRIVE OPERATION

The center drive system consists of a motor unit, a drive pulley, the take-up roller, several idlers, and the associated linkages. As the motor turns, the center drive pulley is rotated by the chain, and causes the belt to move on the conveyor. The take-up roller, and idlers are used to keep proper tension on the belt, and reduce slippage. Belt tracking can be controlled by adjustment of tail pulleys and idlers.

1-11 LIFTER

The lifter unit allows one end of the conveyor to be elevated. Cranking the lift handle clockwise will cause the lift mechanism to move the lift end of the conveyor upwards, cranking counterclockwise rotation will lower the conveyor. This allows for easy and accurate positioning of the machine. Maximum height is 118". Maximum incline is 30 degrees.

CAUTION:

ENSURE THAT THE LOCKING PINS ARE REMOVED FROM THE CONVEYOR BEFORE IT IS RAISED. FAILURE TO DO SO MAY CAUSE EQUIPMENT DAMAGE.

1-12 CONTROLS

The start switch, stop switch, and directional selector switch are the only controls the operator need be concerned with once the machine is properly setup. The start switch will cause the conveyor to begin to move in the direction indicated by the directional selector switch. Either stop button will cause the belt to immediately cease movement.

CHAPTER 2 OPERATING INSTRUCTIONS

Section I Description and Use of Operator Controls

2-1 CONTROLS

Once the machine is in position, and all adjustment mechanisms are properly locked, the conveyor may be plugged in, and operation may begin. The start switch (Figure 2-1) at either end of the unit can be used to start the conveyor, and the conveyor can be stopped by pressing either stop switch.

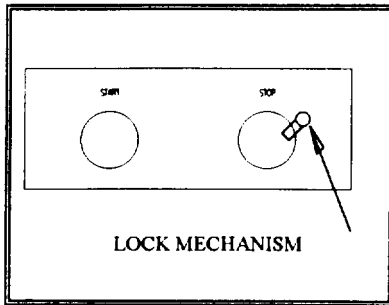


Figure 2-1.

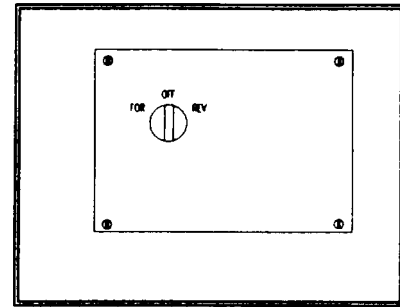


Figure 2-2.

Locking either stop button with the attached lock mechanism will make the conveyor inoperative.

The main operator control panel (Figure 2-2) contains the directional selector switch. This switch is used to change the direction of the belt movement. It is a three position switch, forward, off, reverse.

CAUTION:

THE DIRECTION OF THE BELT CANNOT BE CHANGED WHILE THE CONVEYOR IS IN MOTION. FAILURE TO DO SO MAY CAUSE EQUIPMENT DAMAGE.

2-2 LIFTER

The incline of the belt conveyor is adjusted using a hand wheel which is mounted to the lower frame. Clockwise rotation raises the conveyor, and counter-clockwise rotation lowers it.

CAUTION:

ENSURE LOCKING PINS ARE REMOVED BEFORE RAISING OR LOWERING THE CONVEYOR. FAILURE TO DO SO MAY CAUSE EQUIPMENT DAMAGE.

**Section II OPERATOR PREVENTIVE MAINTENANCE
CHECKS AND SERVICES**

2-3 PMCS CHART

OPERATOR / CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES							
I T E M	INTERVAL					ITEM TO BE INSPECTED INTERVAL PROCEDURE: CHECK FOR AND HAVE REPAIRED. FILLED. OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF
	B	D	A	W	M		
1	*					CONVEYOR FRAME Check for cracks, bends, or broken welds	a. Frame welds are cracked or broken.
2	*					ELECTRICAL SYSTEM Check for frayed cable and broken plug, switches, or buttons.	a. Power cord is frayed, or plug is damaged. b. Buttons or switches are cracked or broken
3	*					CASTERS Check that all casters provide a positive anti- motion lock	a. Any caster is broken, or the locking mechanism for any caster is damaged.
4	*					LIFTER Check that the crank mechanism is free to turn and the locking pins are in place.	a. If the crank mechanism is jammed or broken. b. If the locking pins are missing, or broken.
5				*		LUBRICATION Check that chain is properly oiled. and lift mechanism is properly greased	a. If either the chain or lift mechanism is dry or inadequately lubricated.
6					*	LUBRICATION Check that the reducer oil level is adequate	a. If the reducer oil level is below normal.

Section III OPERATION IN USUAL CONDITIONS**2-4 SET-UP**

Before using the conveyor, the operator should ensure that the area in which the conveyor will be used is separated from personnel traffic. It is also important to check that the material to be moved is within the weight and load restrictions of the machine. Once the above conditions are met, and the area has been cleared, setup may begin.

- a. Roll the conveyor into position.
- b. Lock casters.
- c. Adjust the lifter to allow the correct angle.

CAUTION:

ENSURE LOCKING PINS ARE REMOVED BEFORE RAISING OR LOWERING THE CONVEYOR. FAILURE TO DO SO MAY CAUSE EQUIPMENT DAMAGE.

- d. Check that the movement of the belt is not restricted.
- e. Plug conveyor in.
- f. Adjust belt direction switch.
- g. Press start switch.

CAUTION:

IF AT ANY TIME THE CONVEYOR BELT BECOMES JAMMED, OR OTHERWISE IMMOBILIZED, IMMEDIATELY STOP THE MACHINE AND FOLLOW THE TROUBLESHOOTING PROCEDURES FOUND IN CHAPTER 3. FAILURE TO DO SO MAY CAUSE INJURY TO PERSONNEL OR INJURY TO EQUIPMENT.

2-5 STARTING AND USING

Once the conveyor is positioned and setup in accordance with Section 24, operation may begin. Material can be placed on the belt at any point, and removed from the belt at any point. However, material must be spaced to ensure no more than 45 lbs per ft is on the belt (when in horizontal position), or a max of 300 lbs when inclined.

WARNING:

IT IS IMPORTANT TO KEEP THE AREA IMMEDIATELY SURROUNDING THE CONVEYOR FREE FROM OBSTRUCTIONS WHICH MIGHT ENDANGER PERSONNEL.

When not in use, it is important to turn the conveyor off, this can be done by pressing the stop button at either end of the machine, or moving the directional selector switch to off.

CHAPTER 3 Maintenance Instructions

Section I GENERAL MAINTENANCE PROCEDURES

3-1 GENERAL

All maintenance such as lubrication and adjustments shall be performed only by authorized personnel. It is important the machine longevity and operator safety that proper maintenance procedures be followed at all times. If any safety devices are removed to facilitate adjustments, they must be replaced before power is applied to the conveyor.

3-2 DRIVE CHAIN ALIGNMENT AND TENSION

The drive chain and sprockets should be periodically checked for proper tension and alignment. Improperly adjusted drive components will cause excess wear, and accelerated failure.

Adjustment Procedures:

- a. Ensure machine is not powered.
- b. Remove chain guard.
- c. Check sprocket alignment by placing a straight edge across the face of both sprockets. (See Figure 3-1) Loosen set screws and adjust as needed. Re-tighten set screws.

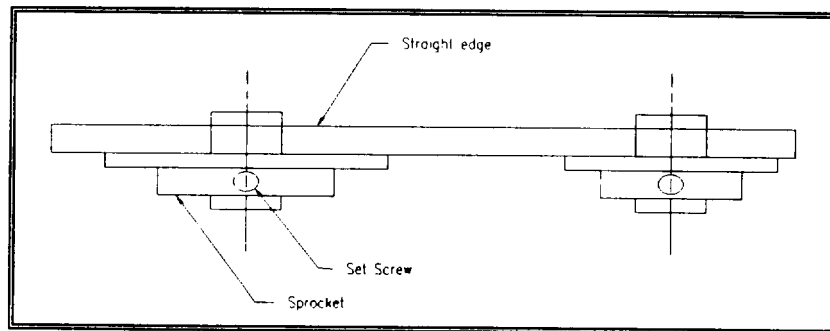


FIGURE 3-1.

- d. Chain tension is controlled with a spring tension unit which makes adjustment unnecessary. The spring unit should be checked to be sure it is operating properly.
- e. Lubricate chain per lubrication instructions.
- f. Replace chain guard as not to interfere with the motion of the drive.

3-3 LUBRICATION

Bearings: The bearings used are sealed and pre-lubricated. No lubrication is required.

Chain: SAE-30 oil should be applied to the chain approximately every 40 hours of operation. Under harsh conditions, more frequent lubrication is recommended.

Lift mechanism: Lubricate at fitting using extreme pressure grease (EPI) approximately every 40 hours of operation.

Reducer: Check oil level every time conveyor is transported, and after every 100 hours of operation. Change reducer oil every 2500 hours or 6 months, using AGMA Class 8 EP, NSN 9150-(,0-535-0660 or equivalent.

CAUTION:

See the Supplemental Operating Maintenance and Repair Parts Instructions (SOMARPI) portion of this manual for an excerpt from DOD Hazardous Materials Information System DOD 6050.5-L on SAE motor oil. There is a chemical substance hazard associated with the use, storage, and disposal of SAE motor oil.

Section II CHANGING THE BELT

3-4 INSTALLING (REPLACING) THE BELT

If the replacement of the conveyor belt becomes necessary, run the conveyor until the splice is centered on the upper bed of the conveyor. Lockout power to the conveyor using the stop button. Remove tension from the belt by loosening the take-up pulley on both sides. Next remove the lacing pin. Next remove the lower belt guard and the chain guard. Loosen the drive chain by removing the lower tension sprocket and the master link. Remove the old belt by pulling through the head end. Once this is accomplished, the new belt can be threaded through the conveyor (See Figure 3-3). One side of the belt will be smooth, thread the belt so that this side is facing down. Thread the belt from the tail end of the conveyor.

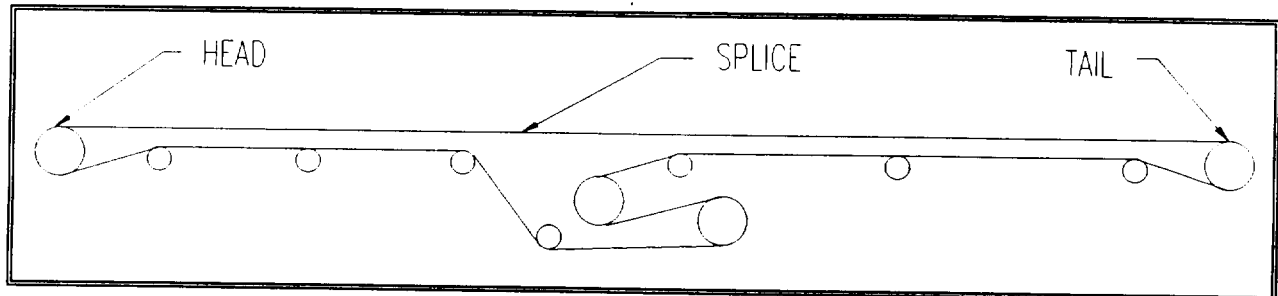


FIGURE 3-3.

Once the belt has been threaded through the conveyor, pull the ends together and insert lacing pin. (See Figure 3-4).

It is important to maintain the proper tension on the belt so that it will not slip when carrying the rated load. Belt tension should be adjusted with the take-up pulley (See Figure 3-3). Make certain to keep pulleys square with bed by moving both take-up bolts an equal amount. Replace the drive chain, reinstall the master link, and replace the tension sprocket. Replace all machine guards.

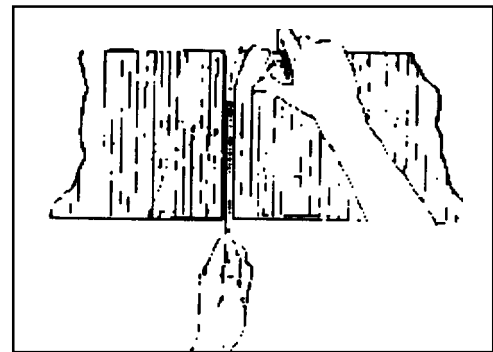


FIGURE 3-4

Section III TROUBLESHOOTING

3-5 TROUBLESHOOTING CHART

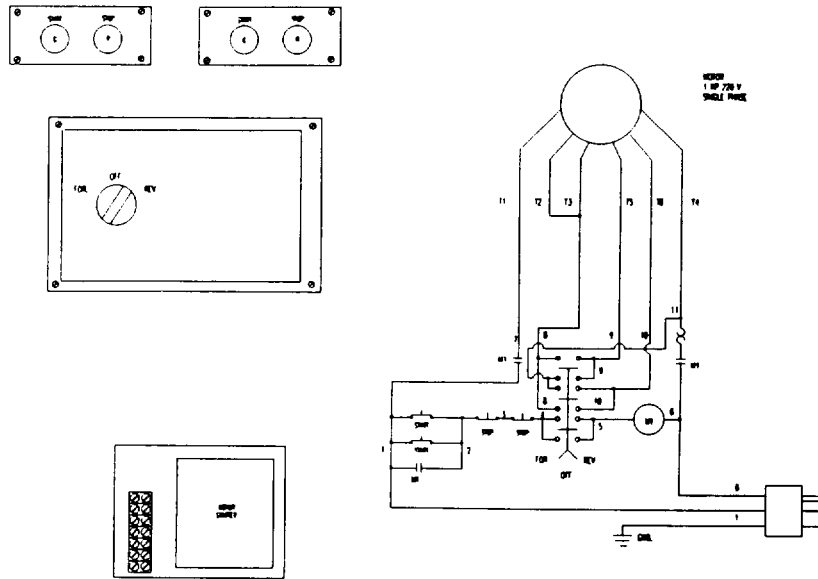
TROUBLE	CAUSE	SOLUTION
<p>Conveyor will not start or motor quits frequently. Drive chain and sprockets have excessive wear.</p>	<p>1. Motor is overloaded or drawing too much current. 1. Lack of lubrication on chain may have caused chain stretch, which created an improper chain to sprocket mesh. 2. Sprockets are out of alignment. 3. Loose chain.</p>	<p>1. Check for overloading of conveyor. 1. Replace chain and sprocket. 2. Align sprockets. (See sect 3-2) 3. Tighten chain.</p>
<p>Loud popping or grinding noise.</p>	<p>1. Defective bearing. 2. Loose set screws. 3. Loose drive chain.</p>	<p>1. Replace bearing. 2. Tighten set screw. 3. Tighten chain.</p>
<p>Motor or reducer overheating.</p>	<p>1. Conveyor is overloaded. 2. Low voltage to motor. 3. Low lubricant level in reducer.</p>	<p>1. Check 2. Have an electrician check supply voltage. 3. Relubricate. (See sect 3-3)</p>
<p>Belt doesn't move. but drive runs.</p>	<p>1. Conveyor is overloaded. 2. Belt is loose.</p>	<p>1. Reduce load. 2. Tighten belt.</p>
<p>Entire belt creeps off at one spot.</p>	<p>1. One or more idlers are out of line. 2. Material buildup on pulleys or idlers.</p>	<p>1. Adjust idlers. 2. Remove residue from pulleys or idlers.</p>
<p>Belt creeps to one side at either tail pulley.</p>	<p>1. Tail pulley, return idler, or snub idler near tail pulley not properly aligned or square with bed.</p>	<p>1. Adjust as necessary.</p>
<p>Entire belt creeps to one side.</p>	<p>1. Conveyor not level. 2. Material buildup on rollers, pulleys. or idlers.</p>	<p>1. Correct as necessary. 2. Remove residue.</p>

WARNING:

IT IS IMPORTANT THAT ONLY QUALIFIED PERSONNEL ENGAGE IN TROUBLESHOOTING OR REPAIR OF THE CONVEYOR, OR INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT MAY RESULT.

Section IV CONTROLS

3-6 CONTROL DIAGRAM



Controls for Belt Conveyor 9306

SECTION V REPAIR**3-7 REPLACING THE MOTOR**

Removal:

- a. Remove the cover on the motor case, remove (and discard) the wire nuts from the feed cables. Remove the cable from the motor.
- b. Remove the four bolts securing the motor to the reducer while supporting the motor.
- c. Remove the motor.

Replacement:

- a. Insert the motor insuring that the key engages the reducer shaft correctly.
- b. Replace the bolts and tighten.
- c. Reconnect the cable with new wire nuts. Replace the wiring cover.

3-8 REPLACING IDLER ROLLERS

Removal:

- a. Remove the four bolts securing the roller.
- b. Remove the roller.

Replacement:

- a. Insert the roller.
- b. Replace the bolts and insure the roller is straight and turns freely.

3-9 REPLACING TAKE-UP ROLLERS

Removal:

- a. Remove setscrews from the outer take-up blocks (2 places).
- b. Remove attaching bolts from take-up blocks.
- c. Loosen adjusting nuts (4 places).
- d. Remove take-up blocks.
- e. Remove shaft and roller assembly.
- f. Remove shaft with drift tool while supporting roller.

Replacement:

- a. Replace shaft in new take-up roller.
- b. Replace shaft and roller assembly.
- c. Replace take-up blocks and replace bolts.
- d. Adjust take-up roller assembly.
- e. Replace setscrews in the outer take-up blocks (2 places).

APPENDIX A

PUBLICATION REFERENCES

A-1. FORMS

The following forms pertain to this material. (Refer to DA Pamphlet 310-2 for index of blank forms.)

Standard Form 46, U.S. Government Motor Vehicle Operator's Identification Card

Standard Form 91, Operator's Report of Motor Vehicle Accident.

Recommended Changes to DA Publications and Blank Form, DA Form 2028.

DA PAM 738-750, The Army Maintenance Management System (TAMMS), for instructions on the use of maintenance forms pertaining to this material.

A-2. OTHER PUBLICATIONS

The following publications contain information pertinent to the major item materiel and associated equipment.

The Army Maintenance Management System (TAMMS) applies as follows:

- (1) Army Equipment Log Book Binder, NSN 7510-00-889-3494.
- (2) Case, Maintenance and Operational Manuals, NSN 7520-00-559-5618.
- (3) DA Form 2407, Maintenance Request.
- (4) DA Form 2408, Equipment Log Book Assembly (Record).
- (5) DA Form 2408-1, Equipment Daily and Monthly Log.
- (6) DA Form 2408-5, Equipment Modification Record.
- (7) DA Form 2408-9, Equipment Control Record.
- (8) DA Form 2409, Equipment Maintenance Log (Consolidated).

The following publications contain information pertinent to the major item materiel and associated equipment.

- a. Operating Vehicle.
 - Driver Selection and Training (Wheeled Vehicles) FM 55-30
 - Manual for the Wheeled Vehicle Driver FM 21-305
 - Prevention of Motor Vehicle Accidents AR 385-55
 - Accident Reporting and Records AR 385-40

- b. Maintenance and Repair.
 - The Army Maintenance Management Systems (TA..S) DA PAM 738-750
 - Identification List for Fuels, Lubricants. Oils and Waxes C 9100-IL
 - Description. Use. Bonding Techniques. and Properties of Adhesives TB ORD 1032
 - Materiels Used for Cleaning. Preserving. Abrading. and Cementing
 - Ordnance Material and Related Materials. Including Chemicals TM 9-247
 - Metal Body Repair and Related Operations FM 43-2
 - Welding Theory and Application TM 9-247
 - Painting Instructions for Field Use TM 43-0139
 - Inspection. Care. and Maintenance of Anti-Friction Bearings TM 9-214
 - Operator's. Organizational. Direct Support and General Maintenance Manual for Lead-Acid Storage Batteries. 4HN, 24 (NSN 6140-00-059-3528). MS 75047-1. 2HN. 12V (NSN 6140-00-057-2554); MS 35000-3. TM 9-6140-200-14

- c. Cold Weather Operation and Maintenance
 - Basic Cold Weather Manual FM 31-70
 - Northern Operations FM 31-71
 - Operation and Maintenance of Ordnance Materiel in Extreme Cold Weather (0°F to -65°F) FM 9-207
 - Winterization Kits for Army Tank-Automotive Materiel SB 9-16

- d. Decontamination.
 - Chemical. Biological. and Radiological ICBRI Decontamination TM 3-220
 - Chemical. Biological. Radiological. and Nuclear Defense (NBC) FM 21-40

 - General

 - Hand Portable Fire Extinguishers Approved for Army Users TB 5-4200-200-10
 - Camouflage FM 5-20
 - Procedures for Destruction of Equipment to Prevent Enemy Use (Mobility Equipment Command) TM 750-244-3
 - Administrative Storage of Equipment TM 740-90-1
 - Preservation of USAMECOM Mechanical Equipment for Shipment and Storage TM 740-97-2

APPENDIX B

REPAIR PARTS AND SPECIAL TOOLS LIST

**CONVEYOR, BELT, PORTABLE,
ELECTRIC, CASTER MOUNTED**

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SECTION I INTRODUCTION ILLUS./FIGURE

SECTION II REPAIR PARTS LIST

MAIN ASSEMBLY	1
CASTERS AND LOCKING PINS	2
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LIFT	5
MOTOR AND REDUCER.....	6
HEAD AND TAIL END.....	7
CONTROLS	8

SECTION III CROSS REFERENCE INDEXES..... I-1

UNIT, DIRECT SUPPORT
REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

1. Scope.

This RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of unit, direct support. It authorizes the requisitioning, issue, and disposition of spares, repair parts, and special tools as indicated by the source, maintenance, and recoverability (SMR) codes.

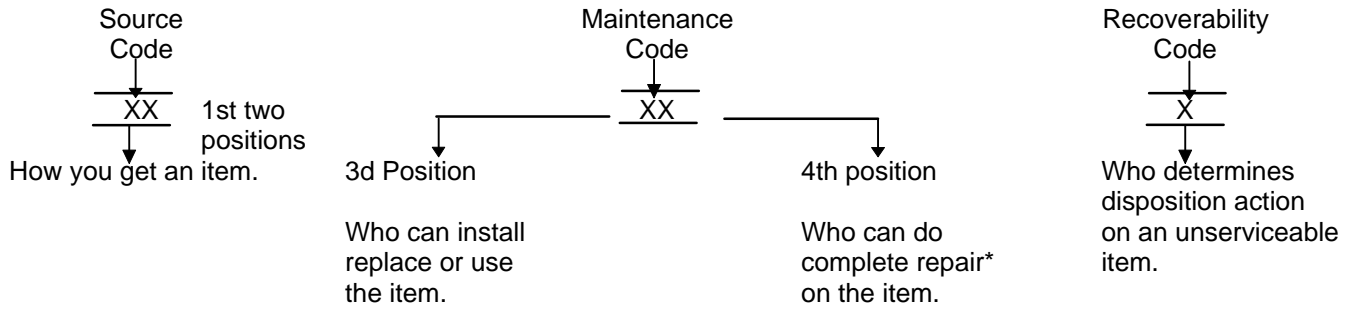
2. General.

In addition to Section I, Introduction, this Repair Parts and Special Tools List is divided into the following sections: a. Section II. Repair Parts List. A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed in item name sequence. Repair parts kits are listed separately in their own functional group within Section II. Repair parts for reparable special tools are also listed in this section. Items listed are shown on the associated illustration(s)/figure(s).

b. Section III. Special Tools List. A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in DESCRIPTION AND USABLE ON CODE column) for the performance of maintenance.

c. Section IV. National Stock Number and Part Number Index. A list, in National item identification number (NIIN) sequence, of all National stock numbered items appearing in the listing, followed by a list in alphanumeric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

3. EXPLANATION OF COLUMNS (SECTIONS II AND III) (CONT)



*Complete Repair: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

(1) **Source Code.** The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follow.

Code	Explanation
PA PB PC** PD PE PF PG	<p>Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the level indicated by the code entered in the 3d position of the SMR code.</p> <p>**NOTE: Items coded PC are subject to deterioration.</p>
KB KD KF	<p>Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance level indicated in the 3d position of the SMR code. The complete kit must be requisitioned and applied.</p>

MO - Made at Org/AVUM category
 MF - Made at DS/AVIM category
 MH - Made at GS category
 ML - Made at Specialized Repair Activity (SRA)
 MD - Made at Depot

Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the Bulk Material group of the repair parts list in this RPSTL. If the item is authorized to you by the 3d position code of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.

AO - Assembled by Org/AVUM category
 AF - Assembled by DS/AVIM category
 AH - Assembled by GS category
 AL - Assembled by SRA
 AD - Assembled by Depot

Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the 3d position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher level, order the item from the higher level of maintenance.

- XA - Do not requisition an "XA"-coded item. Order its next higher assembly. (Also, refer to the NOTE below.)
- XB - If an "XB" item is not available from salvage, order it using the CAGEC and part number given.
- XC - Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.
- XD - Item is not stocked. Order an "XD"-coded item through normal supply channels using the CAGEC and part number given, if no NSN is available.

NOTE

Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 750-1.

(2) Maintenance Code. Maintenance codes tell you the level(s) of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the SMR code as follows:

(a) The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following levels of maintenance:

CODE	APPLICATION/EXPLANATION
C	-Crew or operator maintenance done within unit or aviation unit maintenance.
O	-Unit or aviation unit level can remove, replace, and use the item.
F	-Direct support or aviation intermediate level can remove, replace, and use the item.
H	-General support level can remove, replace, and use the item.
L	-Specialized repair activity can remove, replace, and use the item.
D	-Depot level can remove, replace, and use the item.

(b) The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (i.e., perform all authorized repair functions). (NOTE : Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.) This position will contain one of the following maintenance codes.

CODE	APPLICATION/EXPLANATION
O	-Unit or aviation unit is the lowest level that can do complete repair of the item.
F	-Direct support or aviation intermediate is the lowest level that can do complete repair of the item.
H	-General support is the lowest level that can do complete repair of the item.
L	-Specialized repair activity is the lowest level that can do complete repair of the item.
D	-Depot is the lowest level that can do complete repair of the item.

Code

- Z -Nonreparable. No repair is authorized.
- B -No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item.) However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

(3) Recoverability Code. Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR code as follows:

RECOVERABILITY CODES	APPLICATION/EXPLANATION
Z	-Nonreparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in 3d position of SMR code.
O	-Reparable item. When uneconomically repairable, condemn and dispose of the item at unit or aviation unit level.
F	-Reparable item. When uneconomically repairable, condemn and dispose of the item at the direct support or aviation intermediate level.
H	-Reparable item. When uneconomically repairable, condemn and dispose of the item at the general support level.
D	-Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item not authorized below depot level.
L	-Reparable item. Condemnation and disposal not authorized below Specialized Repair Activity (SRA).
A	-Item requires special handling or condemnation procedures because of specific reasons (e.g., precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. FSCM (Column (3)). The Federal Supply Code for Manufacturer (FSCM) is a digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

d. PART NUMBER (Column (4)). Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

NOTE: When you use an NSN to requisition an item, the item you receive may have a different part number from the part ordered.

e. DESCRIPTION AND USABLE ON CODE (UOC) (Column 5). This column includes the following information:

- (1) The Federal item name and, when required, a minimum description to identify the item.
- (2) The physical security classification of the item is indicated by the parenthetical entry (insert applicable physical security classified abbreviation, e.g., Phy Sec C1 (C)Confidential, Phy Sec C1 (S)-Secret, Phy Sec C1 (T)-Top Secret.
- (3) Items that are included in kits and sets are listed below the name of the kit or set.
- (4) Spare/repair parts that make up an assembled item are listed immediately following the assembled item line entry.
- (5) Part numbers for bulk materials are referenced in this column in the line item entry for the item to be manufactured/ fabricated.
- (6) When the item is not used with all serial numbers of the same model, the effective serial numbers are shown on the last line(s) of the description (before UOC).
- (7) The usable on code, when applicable (see paragraph 5, Special Information).
- (8) In the Special Tools List section, the basis of issue (BOI) appears as the last line(s) in the entry for each special tool, special TMDE, and other special support equipment. When density of equipment supported exceeds density spread indicated in the basis of issue, the total authorization is increased proportionately.
- (9) The statement "END OF FIGURE" appears just below the last item description in Column 5 for a given figure in both Section II and Section III.

f. QTY (Column 6). The QTY (quantity per figure column) indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that the quantity is variable and the quantity may vary from application to application.

4. EXPLANATION OF COLUMNS (SECTION IV)

a. National Stock Number (NSN) Index.

(1) **STOCK NUMBER column.** This column lists the NSN by National item identification number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN

NSN

(i.e., 5305-01-674-1467). When using this

NIIN

column to locate an item, ignore the first 4 digits of the NSN. However, the complete NSN should be used when ordering items by stock number.

(2) **FIG. column.** This column lists the number of the figure where the item is identified/located. The figures are in numerical order in Section II and Section III.

(3) ITEM Column. The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line.

b. PART NUMBER INDEX Part numbers in this index are listed by part number in ascending alphanumeric sequence (i.e., vertical arrangement of letter and number combination which places the first letter or digit of each group in order A through Z, followed by the numbers 0 through 9, and each following letter or digit in like order).

(1) FSCM Column. The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(2) PART NUMBER Column. Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

(3) STOCK NUMBER Column. This column lists the NSN for the associated part number and manufacturer identified in the PART NUMBER and FSCM columns to the left

(4) FIG. Column. This column lists the number of the figure where the item is identified/located in Section II and Section III.

(5) ITEM Column. The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

5. Special Information. Use the following subparagraphs as applicable:

a. USABLE ON CODE. The usable on code appears in the lower left corner of the Description column heading. Usable on codes are shown as "UOC: ..." in the Description Column (justified left) on the first line applicable item description/nomenclature. Uncoded items are applicable to all models.

b. FABRICATION INSTRUCTIONS. Bulk materials required to manufacture items are listed in the Bulk Material Functional Group of this RPSTL. Part numbers for bulk materials are also referenced in the description column of the line item entry for the item to be manufactured/fabricated. Detailed fabrication instructions for items source coded to be manufactured or fabricated are found in the applicable maintenance level manual.

c. ASSEMBLY INSTRUCTIONS. Detailed assembly instructions for items source coded to be assembled from component spare/repair parts are found in the applicable maintenance level manual. Items that make up the assembly are listed immediately following the assembly item entry or reference is made to an applicable figure.

d. KITS. Line item entries for repair parts kits appear in a group in Section II. See table of contents.

6. How to Locate Repair Parts.

a. When National Stock Number or Part Number is Not Known.

(1) First. Using the table of contents, determine the assembly group or subassembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and listings are divided into the same groups.

(2) Second. Find the figure covering the assembly group or subassembly group to which the item belongs.

(3) Third. Identify item on the figure and note the item number.

(4) Fourth. Refer to the Repair Parts List for the figure to find the part number for the item number noted on the figure.

(5) Fifth. Refer to the Part Number Index to find the NSN, if assigned.

b. When National Stock Number or Part Number is Known:

(1) First. Using the Index of National Stock Numbers and Part Numbers, find the pertinent National Stock Number or Part Number. The NSN index is in National Item Identification Number (NIIN) sequence. The part numbers in the Part Number Index are listed in ascending alphanumeric sequence. Both indexes cross-reference you to the illustration figure and item number of the item you are looking for.

(2) Second. After finding the figure and item number, verify that the item is the one you are looking for, then locate the item number in the repair parts list for the figure.

7. Abbreviations.

<u>Abbreviation</u>	<u>Explanation</u>
NIIN	Acronym for National Item Identification Number (consists of the last 9 digits of the NSN)
RPSTL	Acronym for Repair Parts and Special Tools List
SMR	Acronym for Source, Maintenance and Recoverability Code
TMDE	Acronym for Test, Measurement, and Diagnostic Equipment

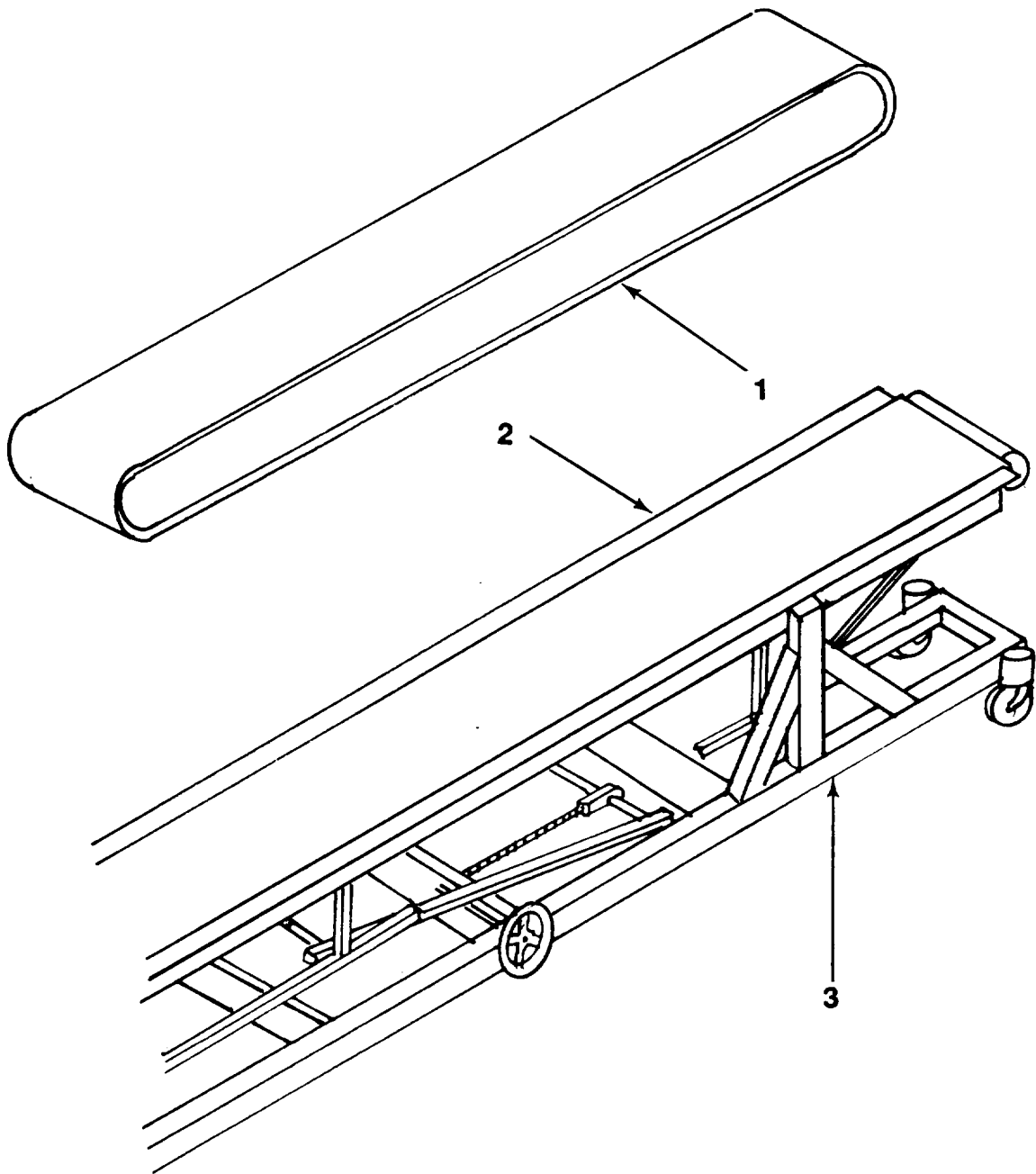


FIGURE 1: MAIN ASSEMBLY.

SECTION II

TM 10-3930-665-13&P

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
				GROUP 75: CONVEYING, FEEDING AND EQUIPMENT COMPONENTS GROUP 7501: BELTING, CHAIN FIG. 1: MAIN ASSEMBLY	
1	PAOZZ	OD5X3	RBT30L	BELT, FLAT	1
2	XC	OAK83	9306-1	WELDMENT, FRAME UPPE	1
3	XC	OAK83	9306-2	WELDMENT, FRAME, LOWE	1

END OF FIGURE

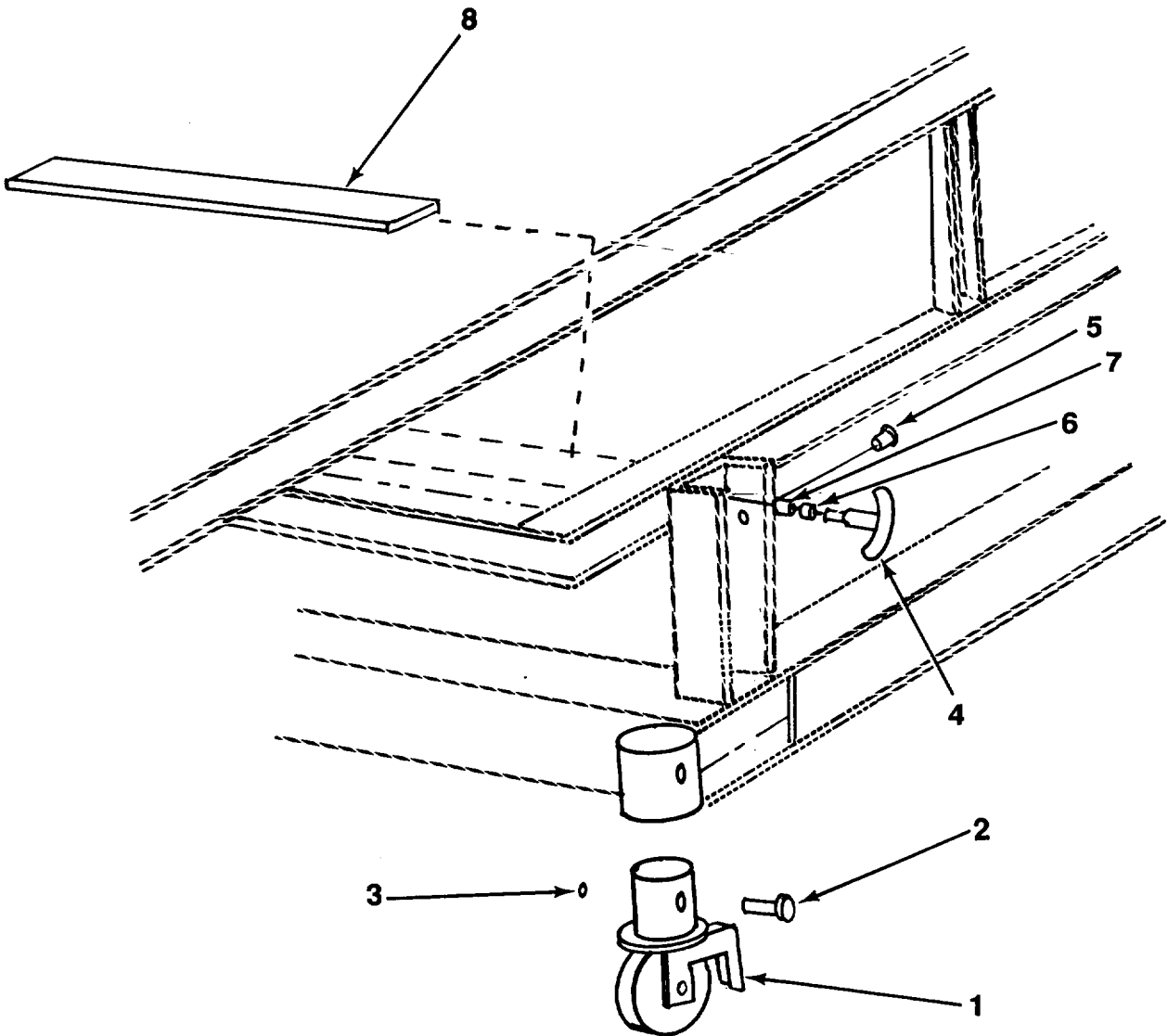


FIGURE 2: CASTERS AND LOCKING PINS

SECTION II

TM 10-3930-665-13&P

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
GROUP 7501: BELTING, CHAIN					
FIG. 2: CASTERS AND LOCKING PINS					
1	PAOZZ	69455	2888T62	CASTER, SWIVEL.....	4
2	PAOZZ	96906	MS-90728-66	SCREW, CAP, HEXAGON H.....	4
3	PAOZZ	96906	MS17829-6C	NUT, SELF-LOCKING, HE	4
4	PAOZZ	99862	CL-8-BLPT-2.5-C	PIN, SHOULDER, HEADED	2
5	PAOZZ	96906	MS35207-261	SCREW, MACHINE	1
6	PAOZZ	02064	P-0.5000X3/4X1	BUSHING, MACHINE THR.....	2
7	PAOZZ	9G138	99862P-48-10	BUSHING, SLEEVE.....	2
8	PFOZZ	OAK83	9306-19	PAD, CUSHIONING.....	1

END OF FIGURE

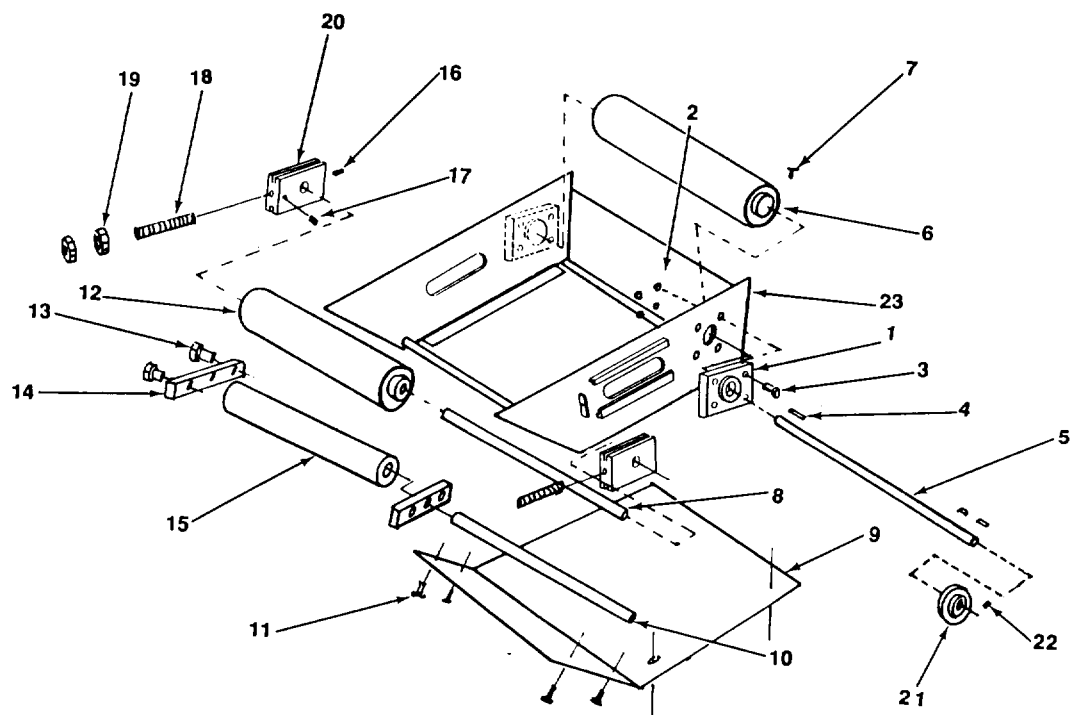


FIGURE 3: DRIVE FRAME

SECTION II

TM 10-3930-665-13&P

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
				GROUP 40: ELECTRIC MOTORS	
				GROUP 4216: MISC. WIRING AND FITTINGS	
				FIG. 3: DRIVE FRAME	
1	PAOZZ	72547	SF-3/4	BEARING.....	2
2	PAOZZ	96906	MS17829-6C	NUT, SELF-LOCKING, HE	8
3	PAOZZ	30076	15529	SCREW, CAP, HEXAGON H.....	8
4	PAOZZ	OAK83	9306-93	KEY.....	3
5	PFOZZ	OAK83	9306-21	SHAFT, STRAIGHT	1
6	PFOZZ	7K971	3.5PC20-D-.75RTL	PULLEY	4
7	PAOZZ	96906	MS18063-13	SETSCREW	4
8	PFOZZ	OAK83	9306-7	SHAFT, STRAIGHT.....	3
9	PAOZZ	OAK83	9306-71	GUARD, MECHANICAL DR	1
10	PAOZZ	OAK83	9306-5	SHAFT, STRAIGHT	7
11	PAOZZ	96906	M535207-263	SCREW, MACHINE	10
12	PAOZZ	OAK83	9306-4	PULLEY, FLAT	3
13	PAOZZ	OAK83	9306-62	SCREW, ASSEMBLED WAS	28
14	PFOZZ	OAK83	9306-14	PLATE, MOUNTING	14
15	PFOZZ	OAK83	9306-9	BEARING, ROLLER ROD	7
16	PAOZZ	96906	MS51977-43	SETSCREW	6
17	PAOZZ	96906	MS16562-36	PIN, SPRING	6
18	PFOZZ	OAK83	9306-11	ROD, CONTINUOUS THRE	2
19	PAOZZ	96906	MS51967-14	NUT, PLAIN, HEXAGON	4
20	PFOZZ	OAK83	9306-10	BLOCK, TAKEUP	2
21	PAOZZ	76474	40B30	SPROCKET	1
22	PAOZZ	96906	M518063-13	SETSCREW	2
23	XBFFF	OAK83	9306-13	FRAME, DRIVE, ALUM.....	1

END OF FIGURE

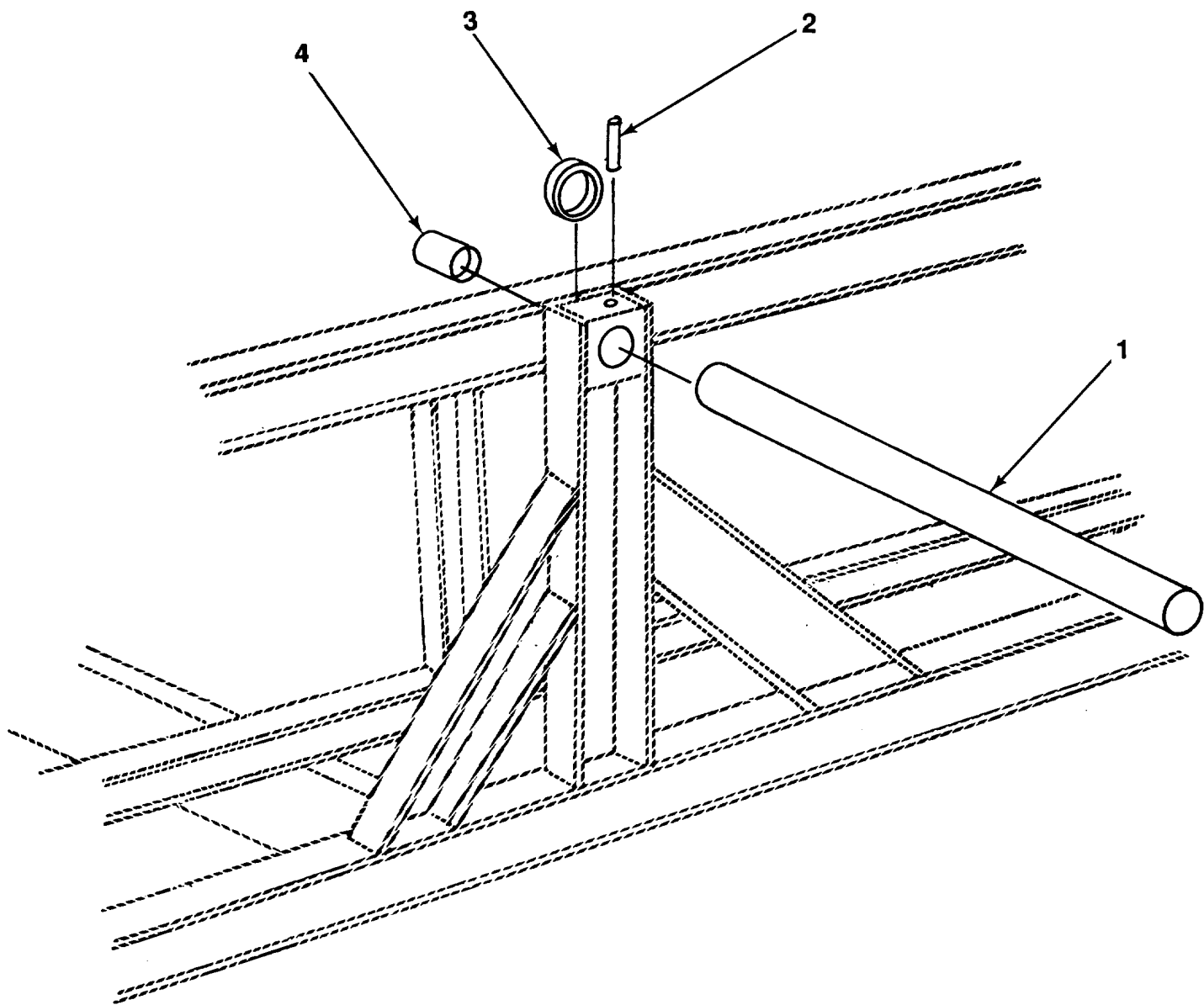


FIGURE 4: MAIN PIVOT

SECTION II

TM 10-3930-665-13&P

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
				GROUP 7501: BELTING, CHAIN FIG. 4: MAIN PIVOT	
1	PFOZZ	OAK83	1045	SHAFT, STRAIGHT	1
2	PAOZZ	96906	MS16562-69	PIN, SPRING	2
3	PFOZZ	3A621	DRT-2448-4	BEARING, WASHER, THRU	2
4	PAOZZ	72547	EF-1 P2428-12	SPACER, SLEEVE	2

END OF FIGURE

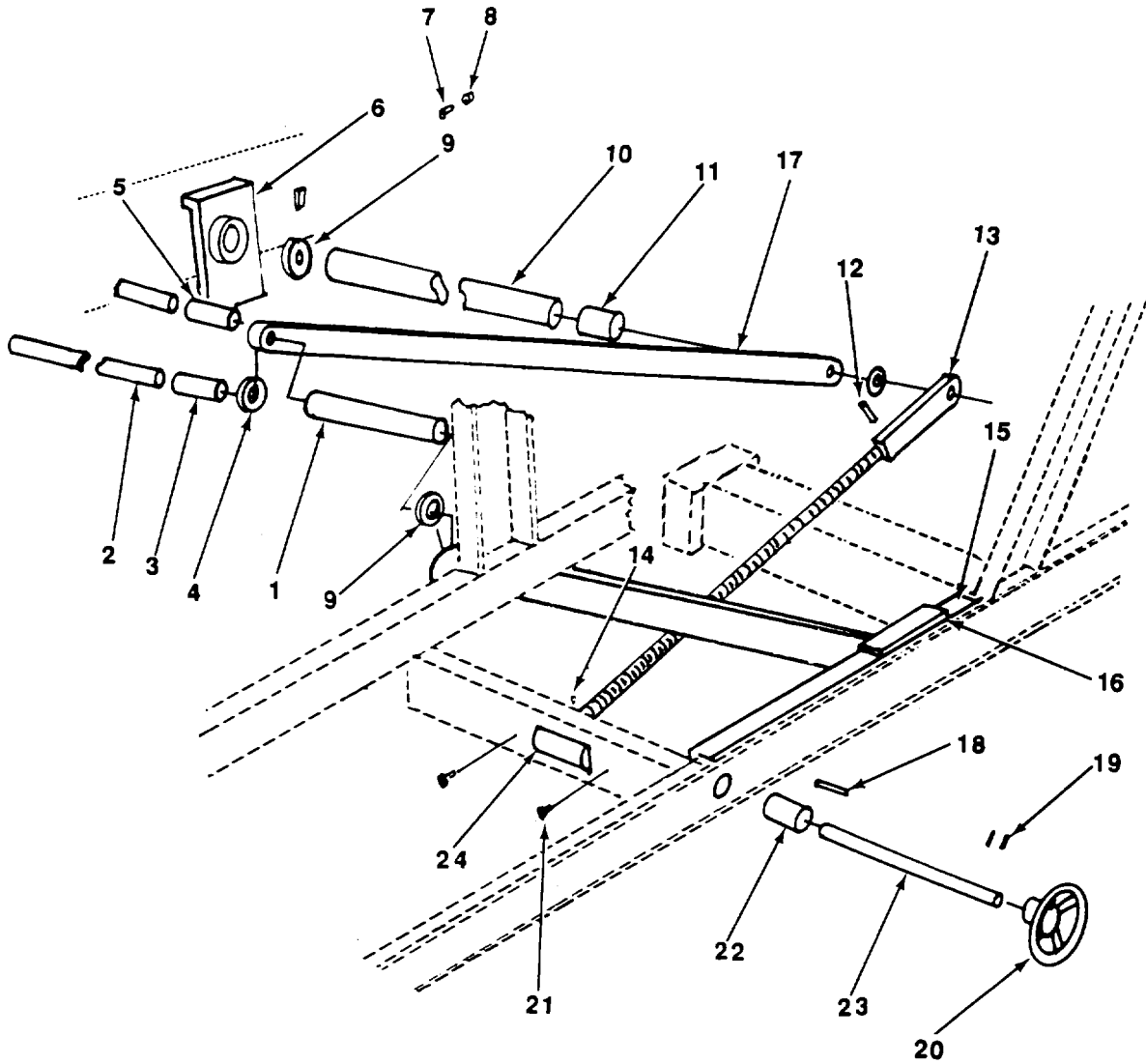


FIGURE 5: LIFT

SECTION II

TM 10-3930-665-13&P

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
GROUP 7508: ELEVATING WHEEL					
FIG. 5: LIFT					
1	PFOZZ	OAK83	9306-37	SPACER, SLEEVE	1
2	PFOZZ	OAK83	9306-41	SHAFT, STRAIGHT	1
3	PAOZZ	72547	EF-1 FP1216-12	SPACER, SLEEVE	2
4	PAOZZ	72547	EF-1 2X3/4	WASHER, BEARING, THRU	2
5	PFOZZ	OAK83	9306-38	SPACER, SLEEVE	2
6	PFOZZ	OAK83	9306-29	SHAFT, SHOULDERED	2
7	PAOZZ	96906	MS-90728-66	SCREW, CAP, HEXAGON H.....	2
8	PAOZZ	96906	MS51967-8	NUT, PLAIN, HEXAGON	2
9	PFOZZ	72547	1.5X1.0X1/8GFT	BEARING, WASHER, THRE	2
10	PFOZZ	OAK83	9306-42	SHAFT, STRAIGHT	1
11	PAOZZ	72547	FR1620-12	BUSHING, MACHINE THR.....	2
12	PAOZZ	96906	MS16562-50	PIN, SPRING	1
13	PFOZZ	OAK83	9306-39	BLOCK, ALUM.....	1
14	PAOZZ	96906	MS17829-6C	NUT, SELF-LOCKING, HE	2
15	PFOZZ	OAK83	9306-43	PAD, CUSHIONING.....	4
16	PAOZZ	74445	HKA-640428	SCREW, MACHINE	24
17	PFOZZ	OAK83	9306-27	CONNECTING LINK, RIG.....	2
18	PAOZZ	96906	MS20066-120	KEY, MACHINE	1
19	PAOZZ	96906	MS16562-52	PIN, SPRING	2
20	PFOZZ	99862	CL-8-HWSFA	HANDWHEEL	1
21	PAOZZ	96906	MS18154-59	SCREW, CAP, HEXAGON H.....	2
22	PAOZZ	72547	FP1216-8	BUSHING, SLEEVE.....	1
23	PFOZZ	OAK83	9306-40	TUBE, METALLIC	1
24	PFOZZ	18740	2500-THD-8-30	ACTUATOR	1

END OF FIGURE

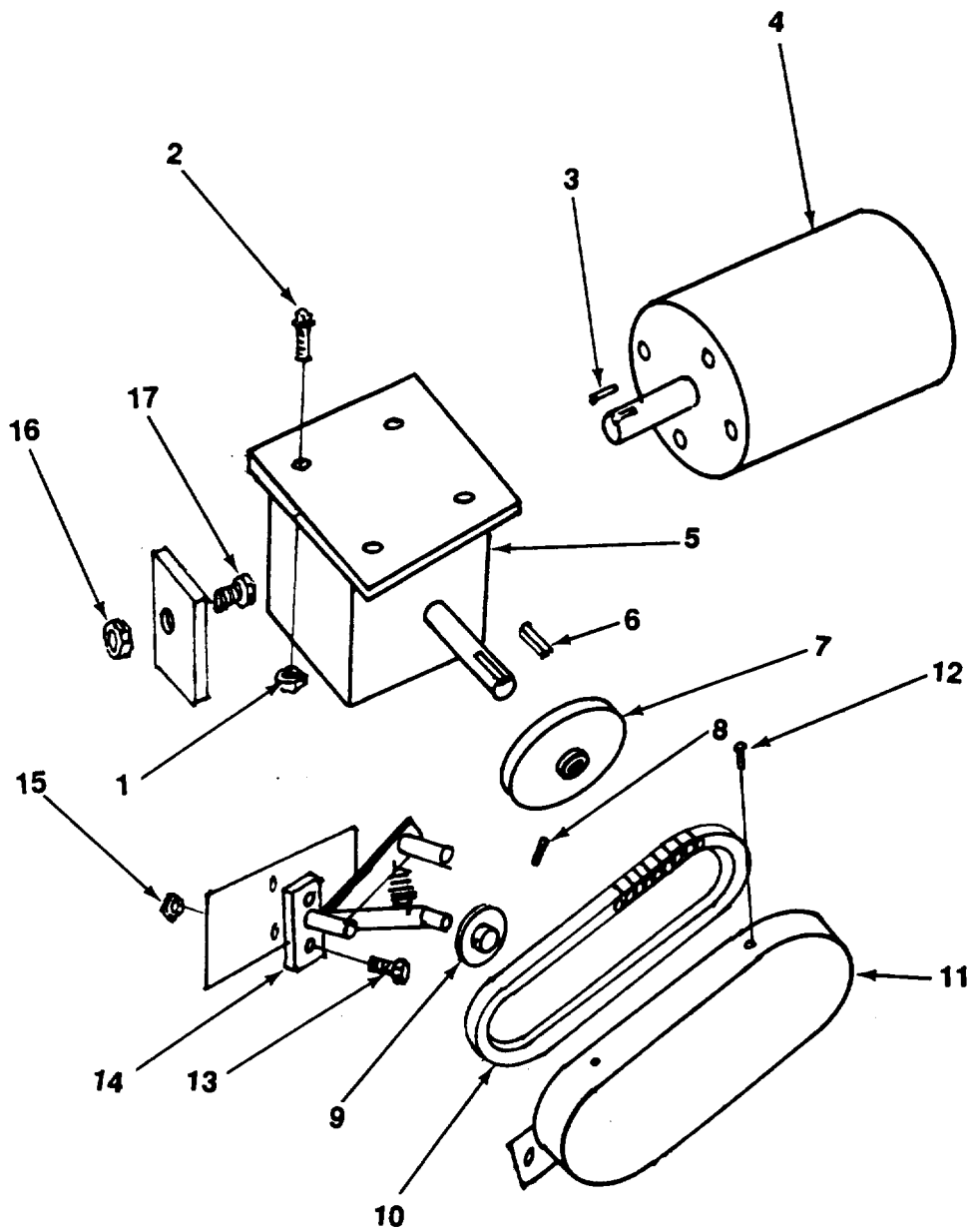


FIGURE 6: MOTOR AND REDUCER

SECTION II

TM 10-3930-665-13&P

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
				GROUP 40: ELECTRIC MOTORS	
				GROUP 4000: MAJOR ASSEMBLAGE-MOTOR	
				FIG. 6: MOTOR AND REDUCER	
1	PAOZZ	96906	MS17829-6C	NUT, SELF-LOCKING, HE	4
2	PAOZZ	80204	B1821BH038C088N	SCREW, CAP, HEXAGON H.....	4
3	PAOZZ	96906	MS20066-122	KEY, MACHINE	1
4	PAOZZ	OEXL7	V56C17D5310	MOTOR, DIRECT CURREN.....	1
5	PFOZZ	72547	SRF721	GEAR ASSEMBLY, SPEED	1
6	PAOZZ	OAK83	9306-95	KEY.....	1
7	PAOZZ	71176	40B17	SPROCKET WHEEL	1
8	PAOZZ	96906	MS18063-13	SETSCREW	2
9	PFOZZ	72547	40812T1	SPROCKET, IDLER.....	2
10	PAOZZ	72547	RC40X46	CHAIN, ROLLER	1
11	PAOZZ	OAK83	9306-45	GUARD, MECHANICAL.....	1
12	PAOZZ	96906	M535207-261	SCREW, MACHINE	5
13	PAOZZ	30076	15529	SCREW, CAP, HEXAGON H.....	2
14	PFOZZ	72547	61BG	SPRING, TENSIONER	1
15	PAOZZ	96906	MS17829-6C	NUT, SELF-LOCKING, HE	2
16	PAOZZ	96906	MS51967-8	NUT, PLAIN, HEXAGON	1
17	PAOZZ	96906	MS-90728-66	SCREW, CAP, HEXAGON H.....	1

END OF FIGURE

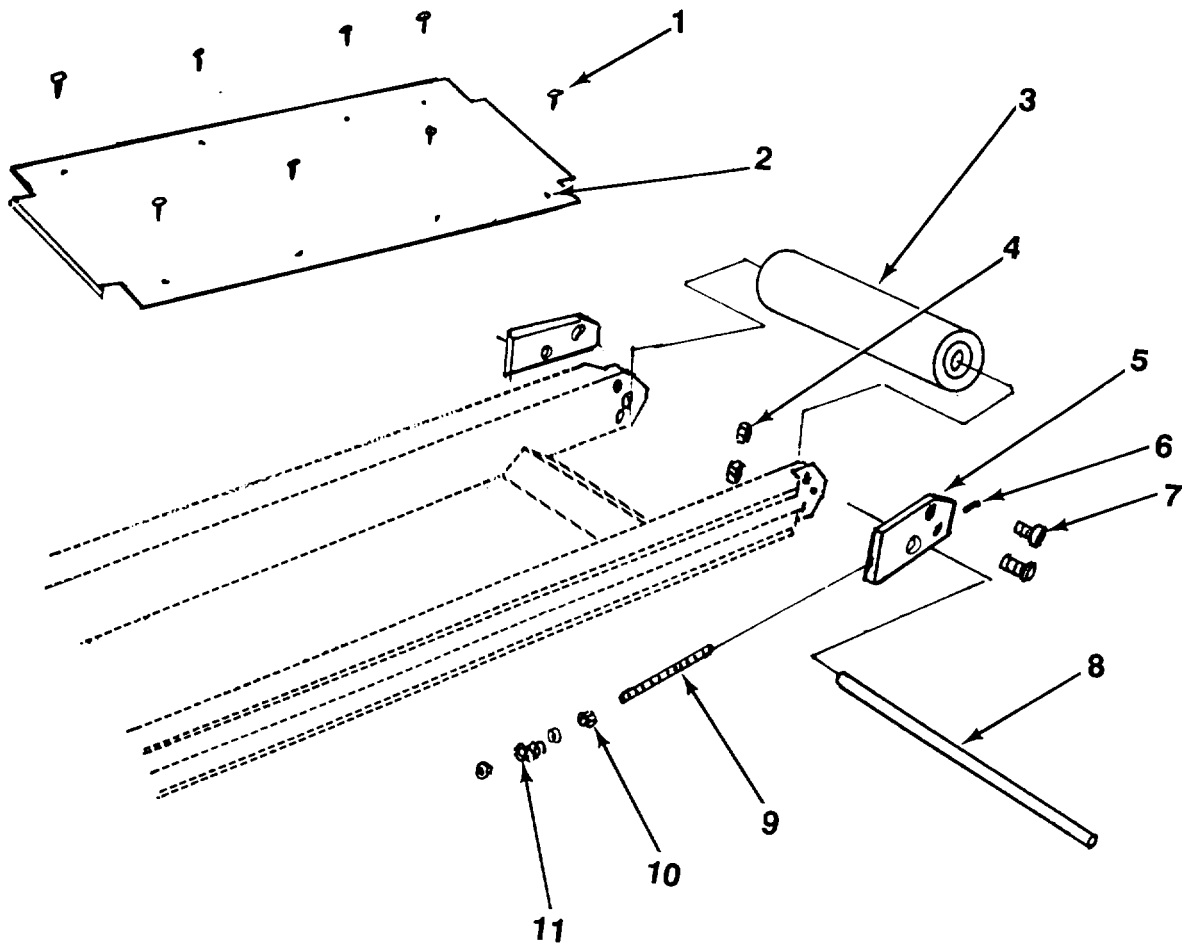


FIGURE 7: HEAD AND TAIL END.

SECTION II

TM 10-3930-665-13&P

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
GROUP 7504: ROLLS					
FIG. 7: HEAD AND TAIL END					
1	PAOZZ	39428	97517A055	RIVET, BLIND.....	50
2	PAOZZ	OAK83	9306-72	BED, SLIDER	5
3	PAOZZ	OAK83	9306-4	PULLEY, FLAT	3
4	PAOZZ	96906	MS17829-6C	NUT, SELF-LOCKING, HE	8
5	PFOZZ	OAK83	9306-6	BRACKET, MOUNTING.....	4
6	PAOZZ	96906	MS51977-43	SETSCREW	6
7	PAOZZ	74445	HKA-64074E	SCREW, HEX, W/WASHER	8
8	PFOZZ	OAK83	9306-7	SHAFT, STRAIGHT	3
9	PFOZZ	OAK83	3/8-16X3.50	ROD, THREADED END.....	4
10	PAOZZ	96906	MS51967-9	NUT, PLAIN, HEXAGON	8
11	PAOZZ	96906	MS27183-14	WASHER, FLAT	8

END OF FIGURE

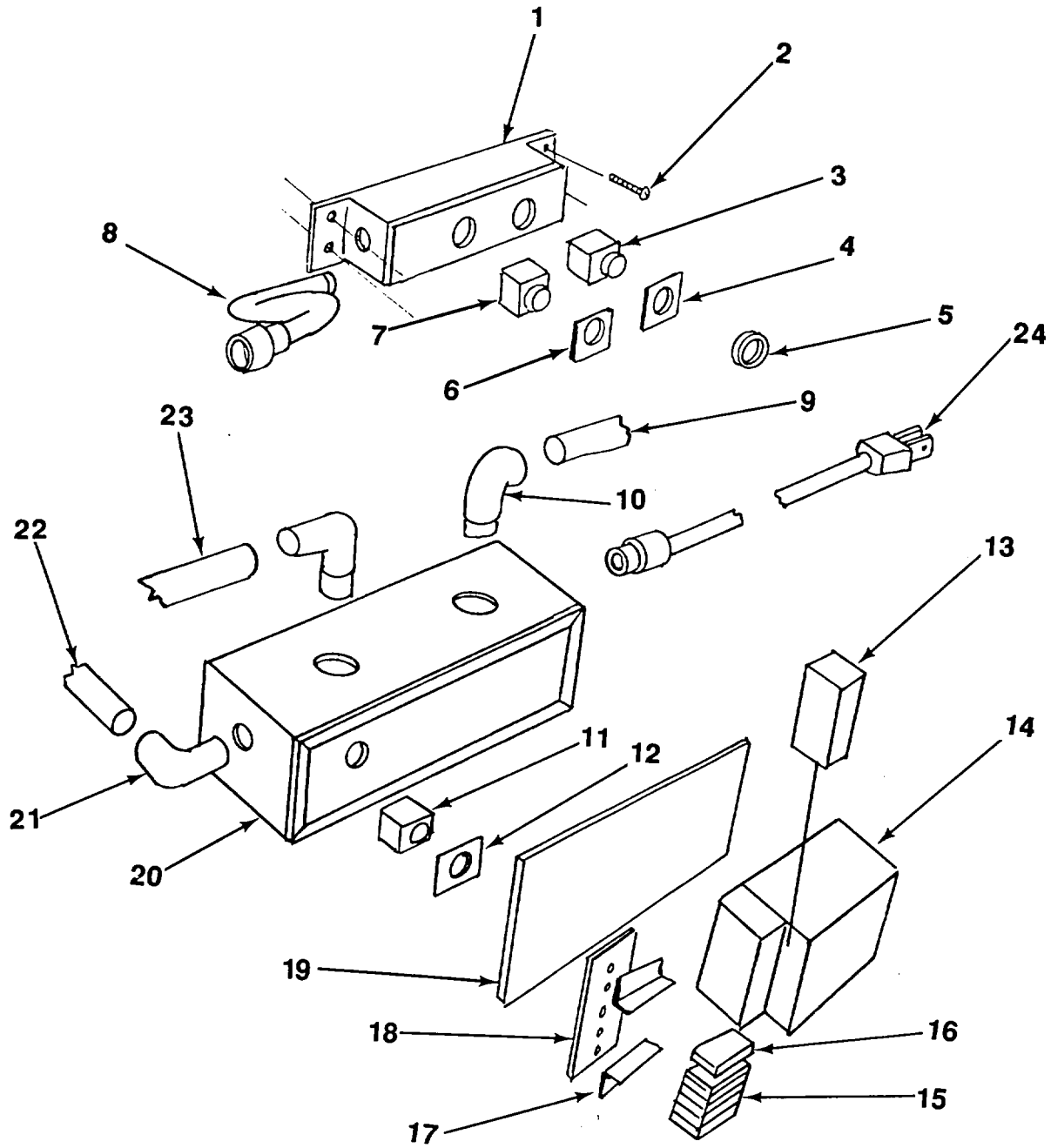


FIGURE 8: CONTROLS.

SECTION II

TM 10-3930-665-13&P

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
				GROUP 40: ELECTRIC MOTORS	
				GROUP 4216: MISC. WIRES AND FITTINGS	
				FIG. 8: CONTROLS	
1	PAOZZ	08843	3865JFG	SWITCH OX	1
2	PAOZZ	96906	MS90725-1	SCREW, CAP, HEXAGON H.....	10
3	PFOZZ	08843	E2PBSC	SWITCH BOX	1
3	PAOZZ	01121	800T-B6A	SWITCH, PUSH.....	2
4	PAOZZ	01121	800T-X550	MARKER, IDENTIFICATI.....	2
5	PFOZZ	01121	800T-N2	LOCK, FLUSH	2
6	PAOZZ	01121	800-X550	MARKER, IDENTIFICATI.....	2
7	PFOZZ	01121	BOOT-A1A	SWITCH, PUSH.....	2
8	PAOZZ	03743	CG 1850	ADAPTER, CONNECTOR.....	2
9	PFOZZ	69304	STO#12-2	CABLE, POWER, ELECTRI	2
10	PAOZZ	03743	CG90-25505	BOX CONNECTOR, ELECT.....	2
11	PAOZA	01121	800T-J28	SWITCH, PUSH.....	1
12	PAOZZ	01121	800T-X507	MARKER, IDENTIFICATI.....	1
13	PFOZZ	01121	W50	HEATER, THERMAL RELE	1
14	PAOZZ	01121	509-T0XA	STARTER, MOTOR.....	1
15	PAOZZ	01121	1492-CD2	TERMINAL BOARD.....	6
16	PAOZZ	01121	1492-N16	INSULATOR, PLATE	1
17	PAOZZ	01121	1492-N2	CLIP, SPRING TENSION	2
18	PAOZZ	01121	1492-N1	HOLDER, ELECTRICAL C	1
19	PAOZZ	00843	A6P6	PANEL, BLANK	1
20	PAOZZ	08843	3865JFG	SWITCH BOX.....	1
21	PAOZZ	03743	CG90 3750	BOX CONNECTOR, ELECT.....	2
22	PAOZZ	07759	STO#12-5	CABLE, POWER, ELECTRI	2
23	PFOZZ	69304	STO#12-3	CABLE, POWER, ELECTRI	2
24	PAOZZ	OAK83	9306-86	CABLE ASSEMBLY, POWE.....	2

END OF FIGURE

CROSS-REFERENCE INDEXES

NATIONAL STOCK NUMBER INDEX					
STOCK NUMBER	FIGURE	ITEM	STOCK NUMBER	FIGURE	ITEM
5305-00-058-9376	3	16	5365-01-384-0795	5	3
	7	6	5365-01-384-1052	5	11
5305-00-068-0498	8	2	5365-01-384-2479	5	5
5310-00-080-6004	7	11	5365-01-384-2494	5	1
5305-00-269-3211	3	3	5307-01-384-2940	3	18
	6	13	5340-01-384-3447	5	15
5315-00-298-9161	6	3	5340-01-384-3462	5	20
5930-00-331-2416	8	3	5340-01-384-3466	7	5
5970-00-407-0931	8	16	3120-01-384-3477	5	9
5310-00-483-8790	2	3	6105-01-384-5151	6	4
	2	3	3020-01-384-6210	3	12
	3	2		7	3
	5	14	3040-01-384-6222	5	17
	6	1	3040-01-384-6227	3	10
	6	15	3040-01-384-6251	5	6
	7	4	3040-01-384-6263	4	1
5340-00-499-1907	8	17	3040-01-384-6278	3	5
5310-00-732-0558	5	8	3040-01-384-6284	5	2
	6	16	3040-01-384-6300	3	8
	7	10		7	8
5310-00-768-0318	3	19	3910-01-384-6585	7	2
5305-00-782-9489	2	2	3910-01-384-6641	3	20
	2	2	5340-01-384-7789	2	8
	5	7		2	8
	6	17	3020-01-384-8882	3	9
5315-00-810-3701	3	17	3020-01-384-9014	6	11
5315-00-814-3531	5	12	5340-01-385-0017	8	5
5930-00-836-2394	8	11	4710-01-385-1209	5	23
5315-00-836-9628	5	19	3030-01-385-1237	1	1
5305-00-842-1117	3	7	7690-01-385-3952	8	4
	3	22		8	6
	6	8	3120-01-385-4627	4	3
5930-00-843-0830	8	7	3010-01-385-6883	6	5
5315-00-844-5840	4	2	7690-01-386-5979	8	12
5935-00-947-6177	8	8	3910-01-386-6626	3	15
5320-00-962-4693	7	1	3040-01-387-3969	5	10
5975-00-988-3493	8	19			
5305-00-989-7434	3	11			
5315-00-990-2973	5	18			
5305-00-990-6444	2	5			
	2	5			
	6	12			
5305-01-010-2362	5	21			
5305-01-140-9118	6	2			
5998-01-192-9008	B	18			
5999-01-241-8032	8	13			
5940-01-316-0399	8	15			
5975-01-344-4609	8	10			
5340-01-383-9877	3	14			
5365-01-384-0264	4	4			

CROSS-REFERENCE INDEXES

CAGEC	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
			STOCK NUMBER		
00843	A6P6		5975-00-988-3493	8	19
80204	B18218H038C088N		5305-01-140-9118	6	2
03743	CG 1850		593S-00-947-6177	8	8
03743	CG90 3750			8	21
03743	CG90-2550S		5975-01-344-4609	8	10
99862	CL-8-BLPT-2.5-C			2	4
				2	4
99862	CL-9-HWSFA		5340-01-384-3462	5	20
3A621	DRT-2448-4		3120-01-385-4627	4	3
72547	EF-1 FP1216-12		5365-01-384-0795	5	3
72547	EF-1 P2428-12		5365-01-384-0264	4	4
72547	EF-1 2X3/4			5	4
08843	E2PBSC			8	3
72547	FP1216-8			5	22
72547	FR1620-12		5365-01-384-1052	5	11
74445	HKA-64042B			5	16
74445	HKA-64074E			7	7
96906	MS-90728-66		5305-00-782-9489	2	2
				2	2
				5	7
				6	17
96906	MS16562-36		5315-00-810-3701	3	17
96906	MS16562-50		5315-00-814-3531	5	12
96906	MS16562-52		5315-00-836-9628	5	19
96906	MS16562-69		5315-00-844-5840	4	2
96906	MS17829-6C		5310-00-483-8790	2	3
				2	3
				3	2
				5	14
				6	1
				6	15
				7	4
96906	MS18063-13		5305-00-842-1117	3	7
				3	22
				6	8
96906	MS18154-59		5305-01-010-2362	5	21
96906	MS20066-120		5315-00-990-2973	5	18
96906	MS20066-122		5315-00-298-9161	6	3
96906	MS27183-14		5310-00-080-6004	7	11
96906	MS35207-261		5305-00-990-6444	2	5
				2	5
				6	12
96906	MS35207-263		5305-00-989-7434	3	11
96906	MS51967-14		5310-00-768-0318	3	19
96906	MS51967-8		5310-00-732-0558	5	8
				6	16
				7	10
96906	M551977-43		5305-00-058-9376	3	16
				7	6
96906	MS90725-1		5305-00-068-0498	8	2
02064	P-0.5000X3/4X1			2	6

CROSS-REFERENCE INDEXES

CAGEC	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
			STOCK NUMBER		
02064	P-0.5000X3/4X1			2	6
005X3	RBT30L		3030-01-385-1237	1	1
72547	RC40X46			6	10
72547	SF-3/4			3	1
72547	SRF721		3010-01-385-6883	6	5
69304	STO#12-2			8	9
69304	STO#12-3			8	23
07759	STO#12-5			8	22
OEXL7	V56C17D5310		6105-01-384-5151	6	4
01121	W50		5999-01-241-8032	8	13
72547	1.5X1.0X1/8GFT		3120-01-384-3477	5	9
OAK83	1045		3040-01-384-6263	4	1
01121	1492-C02		5940-01-316-0399	8	15
01121	1492-N1		5998-01-192-9008	8	18
01121	1492-N16		5970-00-407-0931	8	16
01121	1492-N2		5340-00-499-1907	8	17
30076	15529		5305-00-269-3211	3	3
				6	13
18740	2500-THD-B-30			5	24
69455	2988T62			2	1
				2	1
7K971	3.5PC20-D-.75RTL			3	6
OAK83	3/8-16X3.50			7	9
08843	3965JFG			8	1
				8	20
72547	40812T1			6	9
71176	40817			6	7
76474	408B30			3	21
01121	509-TOXA			8	14
72547	61BG			6	14
01121	800T-A1A		5930-00-843-0830	8	7
01121	800T-B6A		5930-00-331-2416	8	3
01121	800T-J28		5930-00-836-2394	8	11
01121	800T-N2		5340-01-385-0017	8	5
01121	800T-X507		7690-01-386-5979	8	12
01121	800T-X550		7690-01-395-3952	8	4
				8	6
OAK83	9306-1			1	2
OAK83	9306-10		3910-01-384-6641	3	20
OAK83	9306-11		5307-01-384-2940	3	18
OAK83	9306-13			3	23
OAK83	9406-14		5340-01-383-9877	3	14
OAK83	9306-19		5340-01-384-7789	2	8
				2	8
00K83	9306-2			1	3
OAK83	9306-21		3040-01-384-6278	3	5
OAK83	9306-27		3040-01-384-6222	5	17
OAK83	9306-29		3040-01-384-6251	5	6
OAK83	9306-37		5365-01-384-2494	5	1
OAK83	9306-38		5365-01-384-2479	5	5
OAK83	9306-39			5	13

CROSS-REFERENCE INDEXES

CAGEC	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
			STOCK NUMBER		
OAK83	9306-4		3020-01-384-6210	3	12
				7	3
OAK83	9306-40		4710-01-385-1209	5	23
OAK83	9306-41		3040-01-384-6284	5	2
OAK83	9306-42		3040-01-387-3969	5	10
OAK83	9306-43		5340-01-384-3447	5	15
OAK83	9306-45		3020-01-384-9014	6	11
OAK83	9306-5		3040-01-384-6227	3	10
OAK83	9306-6		5340-01-384-3466	7	5
OAK83	9306-62			3	13
OAK83	9306-1		3040-01-384-6300	3	8
				7	8
OAK83	9306-71		3020-01-384-8882	3	9
OAK83	9306-72		3910-01-384-6585	7	2
OAK83	9306-86			8	24
OAK83	9306-9		3910-01-386-6626	3	15
OAK83	9306-93			3	4
OAK83	9306-95			6	6
39428	97517A055		5320-00-962-4693	7	1
9G138	99862P-48-10			2	7
				2	7

CROSS-REFERENCE INDEXES

FIGURE AND ITEM NUMBER INDEX				
FIG	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
1	1	3030-01-385-1237	005X3	RBT30L
1	2		OAK83	9306-1
1	3		OAK83	9306-2
2	1		69455	2888T62
2	1		69455	2888T62
2	2	5305-00-782-9489	96906	MS-90728-66
2	2	5305-00-782-9489	96906	MS-90728-66
2	3	5310-00-483-8790	96906	MS17829-6C
2	3	5310-00-483-8790	96906	MS17829-6C
2	4		99862	CL-8-BLPT-2.5-C
2	4		99862	CL-8-BLPT-2.5-C
2	5	5305-00-990-6444	96906	M535207-261
2	5	5305-00-990-6444	96906	M535207-261
2	6		02064	P-0.5000X3/4X1
2	6		02064	P-0.5000X3/4X1
2	7		9G138	99862P-48-10
2	7		9G138	99862P-48-10
2	8	5340-01-384-7789	OAK83	9306-19
2	8	5340-01-384-7789	OAK83	9306-19
3	1		72547	SF-3/4
3	2	5310-00-483-8790	96906	M517829-6C
3	3	5305-00-269-3211	30076	15529
3	4		OAK83	9306-93
3	5	3040-01-384-6278	OAK83	9306-21
3	6		7K971	3.5PC20-D-.75RTL
3	7	5305-00-842-1117	96906	MS18063-13
3	8	3040-01-384-6300	OAK83	9306-7
3	9	3020-01-384-8882	OAK83	9306-71
3	10	3040-01-384-6227	OAK83	9306-5
3	11	5305-00-989-7434	96906	MS35207-263
3	12	3020-01-384-6210	OAK83	9306-4
3	13		OAK83	9306-62
3	14	5340-01-383-9877	OAK83	9306-14
3	15	3910-01-386-6626	OAK83	9306-9
3	16	5305-00-058-9376	96906	M551977-43
3	17	5315-00-810-3701	96906	M516562-36
3	18	5307-01-384-2940	OAK83	9306-11
3	19	5310-00-768-0318	96906	MS51967-14
3	20	3910-01-384-6641	OAK83	9306-10
3	21		76474	40830
3	22	5305-00-842-1117	96906	MS518063-13
3	23		OAK83	9306-13
4	1	3040-01-384-6263	OAK83	1045
4	2	5315-00-844-5840	96906	M516562-69
4	3	3120-01-385-4627	3A621	DRT-2448-4
4	4	5365-01-384-0264	72547	EF-1 P2428-12
5	1	5365-01-384-2494	OAK83	9306-37
5	2	3040-01-384-6284	OAK83	9306-41
5	3	5365-01-384-0795	72547	EF-1 FP1216-12
5	4		72547	EF-1 2X3/4
5	5	5365-01-384-2479	OAK83	9306-38

CROSS-REFERENCE INDEXES

FIGURE AND ITEM NUMBER INDEX

FIG	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
5	6	3040-01-384-6251	OAK83	9306-29
5	7	5305-00-782-9489	96906	MS-90728-66
5	8	5310-00-732-0558	96906	MS51967-8
5	9	3120-01-384-3477	72547	1.5X1.0X1/8GFT
5	10	3040-01-387-3969	OAK83	9306-42
5	11	5365-01-384-1052	72547	FR1620-12
5	12	5315-00-814-3531	96906	MS16562-50
5	13		OAK83	9306-39
5	14	5310-00-483-8790	96906	MS17829-6C
5	15	5340-01-384-3447	OAK83	9306-43
5	16		74445	HKA-64042B
5	17	3040-01-384-6222	OAK83	9306-27
5	19	5315-00-990-29713	96906	MS20066-120
5	19	5315-00-836-9628	96906	MS16562-52
5	20	5340-01-384-3462	99862	CL-8-HWSFA
5	21	5305-01-010-2362	96906	MS18154-59
5	22		72547	FP1216-8
5	23	4710-01-385-1209	OAK83	9306-40
5	24		18740	2500-THD-B-30
6	1	5310-00-483-8790	96906	MS17829-6C
6	2	5305-01-140-9118	80204	B1821BH038C088N
6	3	5315-00-298-9161	96906	MS20066-122
6	4	6105-01-384-5151	OEXL7	V56C17D5310
6	5	3010-01-395-6883	72547	SRF721
6	6		OAK83	9306-95
6	7		71176	40817
6	8	5305-00-842-1117	96906	MS18063-13
6	9		72547	40B12T1
6	10		72547	RC40X46
6	11	3020-01-384-9014	OAK83	9306-45
6	12	5305-00-990-6444	96906	MS35207-261
6	13	5305-00-269-3211	30076	15529
6	14		72547	61BG
6	15	5310-00-483-8790	96906	MS17829-6C
6	16	5310-00-732-0558	96906	MS51967-8
6	17	5305-00-782-9489	96906	MS-90728-66
7	1	5320-00-962-4693	39428	97511A055
7	2	3910-01-384-6585	OAK83	9306-72
7	3	3020-01-384-6210	OAK83	9306-4
7	4	5310-00-483-8790	96906	MS17829-6C
7	5	5340-01-384-3466	OAK83	9306-6
7	6	5305-00-058-9376	96906	MS51977-43
7	7		74445	HKA-64074E
7	9	3040-01-384-6300	OAK83	9306-7
7	9		OAK83	3/8-16X3.50
7	10	5310-00-732-0558	96906	M551967-8
7	11	5310-00-080-6004	96906	M527183-14
8	1		08843	3865JFG
8	2	5305-00-068-0498	96906	MS90725-1
8	3		08843	E2PBSC
8	3	5930-00-331-2416	01121	800T-B6A

CROSS-REFERENCE INDEXES

FIGURE AND ITEM NUMBER INDEX				
FIG	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
8	4	7690-01-385-3952	01121	800T-X550
8	5	5340-01-385-0017	01121	800T-N2
8	6	7690-01-385-3952	01121	800T-X550
8	7	5930-00-843-0830	01121	800T-A1A
8	8	5935-00-947-6177	03743	CG 1850
8	9		69304	STO#12-2
8	10	5975-01-344-4609	03743	CG90-2550S
8	11	5930-00-836-2394	01121	800T-J2B
8	12	7690-01-386-5979	01121	800T-X507
8	13	5999-01-241-8032	01121	W50
8	14		01121	509-TOXA
8	15	5940-01-316-0399	01121	1492-C02
8	16	5970-00-407-0931	01121	1492-N16
8	17	5340-00-499-1907	01121	1492-N2
8	18	5998-01-192-9008	01121	1492-N1
8	19	5975-00-988-3493	00843	A6P6
8	20		08843	3865JFG
8	21		03743	CG90 3750
8	22		07759	STO#12-5
8	23		69304	STO#12-3
8	24		OAK83	9306-86

**SUPPLEMENTAL OPERATING, MAINTENANCE
AND REPAIR PARTS INSTRUCTIONS
FOR
BELT, CONVEYOR, ELECTRIC MOTOR DRIVEN,
NSN 3910-01-376-0431
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APPENDICES

- A - Warrants Guidelines
- B - Maintenance Expenditure Limits (MEL)
- C - Maintenance Allocation Chart (MAC)
- D - Preventive Maintenance Checks and Services (PMCS) - Operator
- E - Preventive Maintenance checks and Services (PMCS) - Unit
- F - Expendable / Durable Supplies and Materials List
- G - Recommended Common Tools

SECTION I

GENERAL

1.1. PURPOSE: To provide user and support personnel Supplemental Operating and Repair Parts Instructions (SOMARPI) applicable to the conveyor belt manufactured by Highland Engineering

1.2 SCOPE This SOMARPI applies to Department of the Army Units, Organizations and Activities that use and/or support the Belt, Conveyor, Electric, Castor Mounted NSN 3910-01-376-0431

1.3 DESCRIPTION: The portable conveyor is a continuous belt type with steel slider plates, electric motor driven , and is used in moving materials horizontally or up an incline. The conveyor is 19 feet long with a belt width of 18 inches and weighs 575 pounds. The conveyor frame is aluminum , mounted on four swivel type caster wheels approximately six inches in diameter and two inches wide. The casters have a foot operated brake. The controls are a push button start and stop switch at both ends and a emergency stop switch . The capacity is 45 pounds per linear foot when the conveyor is level and no more than 15 pounds per linear foot when the conveyor is operated at an angle of 30 degrees. The belt speed is 100 feet per minute.

1.4. OPERATIONAL CONCEPT: This conveyor is used to move small packages and materials short distances in military postal units or TDA activities . The conveyor can be used level or tilted at an angle up to 30 degrees. The conveyor is transportable by air , rail , highway and marine transport modes.

1.5. PROCUREMENT STATUS : The Procurement Contract Number is DAAE07-93-C-0313.

1.6. EQUIPMENT PUBLICATIONS: TM 10-3930-665-1 3&P and SOMARPI 10-3930-665.

- a. Equipment publications will be DA TM10-3930-665-13 & P, the TM contains operator, repair and repair parts information .

NOMENCLATURE	PUBLICATION NUMBER	DATE	SOURCE OF SUPPLY
Operation, Maintenance			
Repair Parts &	TM 10-3930-665-13&P		
Special Tools	NONE		
SOMARPI	SOMARPI 10-3930-665		TACOM

b. Requests for additional copies of this SOMARPI should be made to:

Commander
U.S. Army Tank-Automotive Command
ATTN: AMSTA-MCS
Warren, MI 48397-5000

1.7 PERSONNEL AND TRAINING:

a. MOS Requirements: Qualitative and Quantitative Personnel Requirements Information (QQPRI) will be disseminated IAW AR611-1. The following MOSs can operate and maintain the conveyor;

(1) Operator: 71L

(2) Unit Maintenance: 63J and 92Y

1.8 LOGISTICS ASSISTANCE (AR700-4): U.S. Army Tank-Automotive Command's Logistic Assistance Representative stationed at CONUS and OCONUS installations are available to furnish on-site training/technical assistance. Assistance can be obtained by listed in AR700-4. contacting the appropriate Logistics Assistance Office (LAO)

1.9 RECOMMENDING PUBLICATION CHANGES: To recommend changes to this publication, complete and mail DA Form 2028 (recommended changes to publications and blank forms) to

COMMANDER
U.S. ARMY TANK-AUTOMOTIVE COMMAND
Warren, MI 48397-5000

SECTION II
MAINTENANCE

2.1 MAINTENANCE CONCEPT:

a. This conveyor will not require special or new maintenance considerations. Maintenance operations can be accomplished within the current maintenance concept for Material Handling Equipment.

b. Nature and extent of maintenance

(1) Maintenance Allocation Chart (MAC): Maintenance will be performed as necessary by the category indicated in the MAC (Appendix B) to retain and/or restore serviceability. Units may exceed their authorized scope and functions in the MAC when approved by the appropriate commander.

(2) Maintenance:

(a) Unit Maintenance: Is performed by the operator, crew and/or unit maintenance personnel. It is characterized by quick turn-around based on repair by replacement and minor repairs. Inspections by sight and touch of external and other easily accessible components. Lubrication, cleaning, preserving (to include painting), tightening, and minor adjustments to easily accessible mechanical, electrical, and hydraulic systems.

(b) Direct Support (DS) is characterized by one stop painting of skirts, fenders, body and hull sections. Receive, store and issue Class IX supplies. Evacuation of unserviceable end items and modules to designated repair facilities.

(c) General Support (GS) is characterized by: commodity oriented platoons performing repair of components and end items in support of the theater supply system; back-up maintenance support to DS, Job Shop/bay or production line operations: diagnosis and isolation of material, and module malfunctions to the internal part level; adjustment, alignment and repair of materiel and modules as necessary, when authorized; repair of module by replacement of external and internal parts; replacement of defective modules beyond the authorized capability of lower maintenance levels; performance of heavy body, hull, turret, and frame repair; collection and classification of unserviceable or abandon Class VII materiel for proper disposition; evacuation of unserviceable, unrepairable materiel through selected disposal channels; fabrication or manufacture of repair parts, assemblies, components, jigs, and fixtures as approved by MACOMS (reference AR 750-1 Chapter 2, Section I, Para 2-1, K).

(d) Depot: There is no scheduled depot maintenance on the conveyor belt.

c. Maintenance Expenditure Limit (MEL): The MEL is based on a life expectancy of 15 years. Repair limits are based on 50 percent of replacement cost for the first 10 years and 25 percent for the remaining 5 years (Appendix D).

2.2 RELIABILITY, AVAILABILITY, AND MAINTAINABILITY: Reliability and maintainability will be assessed through the field evaluation of current users. Specific numerical RAM requirements or objectives are not established.

2.3 MODIFICATION: Modification will be accomplished by the end item manufacturer after Belvoir Research, Development, and Engineering Center (BREDC) acceptance and with TACOM approval.

2.4 EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR): Equipment Improvement Recommendations will be submitted IAW DA PAM 738-750

2.5 SHIPMENT AND STORAGE:

a. Refer to TB9-2300-28 1-35 for procedures covering preservation of equipment for shipment. General procedures for shipment are found in FM 55-15 with more specific information in TM 55-2200-001-12 for rail and TB 55-45 for air transport. For instructions covering administrative storage of equipment.

b. Administrative Storage: Refer to TM 740-90-1

c. Weight Classification: The weight classification of the end item as delivered by the manufacturer is 575 pounds.

2.6 DESTRUCTION TO DENY ENEMY USE: Refer to TM 750-244-3 for instructions governing destruction of equipment to prevent enemy use.

2.7 BASIC ISSUE ITEMS LIST (BIIL): N/A UNIT OF

SMR CODE	NSN	DESCRIPTION	MEASURE	QTY
			N/A	

2.8 SPECIAL TOOLS AND TEST EQUIPMENT: None

2.9 MAINTENANCE FORMS AND RECORDS: Operational, maintenance and historical forms/records will be IAW the current DA PAM 738-750

2.10. PREVENTIVE MAINTENANCE CHECKS AND SERVICES: See Appendices D/E.

2.11 EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST: See Appendix F for a list of maintenance and operating supplies required for initial operation.

**SECTION III
REPAIR PARTS SUPPLY**

3.1 GENERAL:

- a. The basic policies and procedures in AR710-2 "Unit Supply Update" are generally applicable to repair parts management for Material Handling Equipment (MHE) items.
- b. The technical manual does cross-reference repair parts to National Stock Numbers (NSN). Use TM 10-3930-665-13&P for repair parts to NSN

3.2 REQUISITIONING REPAIR PARTS:

- a. Preparation and Transmittal:

- (1) Requisitions will be prepared in the normal MILSTRIP format.

- (2) NSN Repair Parts. Requisitions transmitted by AUTODIN for NSN repair parts will be automatically routed by the Defense Automated Addressing Systems (DAAS) to the responsible federal supply class manager. Automated processing (AUTODIN) of CAGE part number requisitions, without edit for matching NSNs is authorized.

- (3) Non-NSN Repair Parts. Requisitions for non-NSN repair parts may be locally procured (CONUS only) or requisitioned from the Defense Construction Supply Center (DCSC). When the manufacturer's part number and the CAGE exceed columns 8-22, prepare AO5 (OCONUS)/AOE (CONUS) requisition.

- (a) Project codes have been assigned to identify non-NSN repair parts requisitions placed on the wholesale supply system.

- (b) For applicable codes and format to assist in requisitioning parts for materiel handling equipment mail requisitions to:

- Commander
Defense Construction Supply Center
ATTN: DCSC-OSR
Columbus, OH 43215

- (4) Non-AMDF requests. All requests for NSN items not in the AMDF will be identified by an assigned Document

Identifier Code (DIC). These requests will be edited for sufficient data to provide identification of higher supply levels.

b. MHE repair parts that cannot be locally procured will be routed to DCSC, OCONUSN activities are not required to attempt local purchase.

3.3 REPAIR PARTS SUPPLY:

General: The basic policies and procedures in AR710-2, DA PAM710-2-1 and DA PAM 710-2-2, as contained in the latest edition off Unit Supply Update", are generally applicable to repair parts, management for Material Handling Equipment (MHE) items

3.4 SUBMITTING REPAIR PARTS REQUISITION:

Unique or Specific Coding applicable to repair parts requisitions for this equipment is furnished in Tables 1 and 2 below Other entries should conform to normal AR 725-50 MILSTRIP codes and formats

*TABLE 1
NON-NSN REQUISITION FORMAT*

CARD COLUMN	DESCRIPTION	ENTRY	
		CONUS	OCONUS
1-3	Document Identifier Code	AOB	AO2
4-6	Route Identifier Code	S9C	S9C
8-22	Part Number	Enter the Federal Supply Code for the Manufacturer, followed by the Part Number.	
54-56	Distribution Code:		
54	Control Activity	F	AR 725-50
55-56	Weapon	System to be provided	

	Designator Code	in final MFP	
57-59	Project Code	JZM	JZM

*TABLE 2
NSN FORMAT*

CARD COLUMN		DESCRIPTION		ENTRY
		CONUS	OCONUS	
1-3	Document Identifier Code	AOA	AO1	
8-22	National Stock Number	Enter applicable 13 digit NSN		
54-56	Distribution Code	Same as Table 1		
57-59	Project Code	Not required		

APPENDIX A

WARRANTY GUIDELINES

There is no warranty on this piece of equipment.

APPENDIX - B

MAINTENANCE EXPENDITURE LIMITS (MEL)

NSN 3910-01-376-0431 BELT, CONVEYOR PRODUCTION YEAR 1995
YEARS OF LIFE EXPECTANCY 15 MEL FROM 1995 to 2005 50%,
FROM 2005 to 2010 25%

MISCELLANEOUS

The yellow auxiliary power extension cord has a plug on one end that matches the power supply cord on the conveyor . Due to the difference in local electrical codes or field use the using unit will have to either wire the cord into a power supply or install an electrical connector that matches their power supply

APPENDIX C

MAINTENANCE ALLOCATION CHART

Section I - INTRODUCTION

1. **General.** This Maintenance Allocation Chart (MAC) designates responsibility for performance of maintenance functions to specific maintenance categories.

2. **Maintenance Functions.** Maintenance functions are as follows:

a. Inspect: To determine the serviceability of an item by comparing its physical, mechanical or electrical characteristics with established standards through examination.

b. Test: To verify serviceability and detect incipient failures by measuring the mechanical and/or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service: Operations required periodically to keep an item in proper operating condition; i.e., to clean (decontaminate), to preserve, to drain, to paint or to replenish fuel, lubricants, hydraulic fluids or compressed air (gas) supplies.

d. Adjust: To maintain, within prescribed limits, by bringing into proper or exact position or by setting the operating characteristics to specified parameters.

e. Align: To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate: To determine and cause corrections to be made or to be adjusted on instruments or test, measurement and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Install: The act of emplacing, seating, or fixing into position, an item, part or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. Replace: The act of substituting a serviceable like type part, sub-assembly or module (component or assembly) for an unserviceable counterpart.

i. Repair: The application of maintenance services or other maintenance actions to restore serviceability to an item by correcting specific damage, fault, malfunction or failure in a part, subassembly, module (component or assembly), end item or system.

(1) Group Number	(2) Component/ Assembly	(3) Maint. Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
40	ELECTRIC MOTOR								
4000	ELECTRIC MOTOR	Replace		1.0					
4007	DRIVE COMPONENTS								
	Drive Reducer.	Replace		0.4					
	Drive Pulley	Replace		0.7					
	Bearing & Roller Assy	Replace		0.4					
	Idler	Replace		0.3					
	Chain & Guard	Replace		0.2					
4009	CONTROL PANELS								
	Switch Start/ Stop	Replace		0.5					
	Switch Directional Control	Replace		0.5					
	Switch Emergency Stop	Replace		0.5					
4216	MISCELLANEOUS WIRING								
	Wiring Power Cord	Replace		0.2					
	Wiring Harness	Repair		0.2					
	Wiring Supports	Replace		0.1					
7501	CONVEYING								
	Belting	Replace		0.8					
	Frame Support	Replace		0.1					
	Pins Castors	Replace		0.1					
7508	LIFT								
	Hand Wheel & Screw	Replace		0.7					
	Pivot Shaft	Replace		0.5					

DOD HAZARDOUS MATERIALS INFORMATION SYSTEM (DOD 6050 5-L)

MOTOR OIL SAE-30

HEALTH HAZARD DATA

EYE: PRODUCT IS PRACTICALLY NON-IRRITATING TO EYES UPON DIRECT CONTACT BASED ON TESTING OF SIMILAR PRODUCTS & ,OR COMPONENTS.

SKIN. AVOID CONTACT PRODUCT IS MINIMALLY IRRITATING TO SKIN UPON DIRECT CONTACT. BASED ON TESTING OF SIMILAR PRODUCTS &/ OR COMPONENTS, PROLONG/REPEATED CONTACT MAY RESULT IN CONTACT DERMATITIS WHICH IS CHARACTERIZED BY THE EFFECTS OF OVEREXPOSURE AS PRESENTED BELOW.

ACUTE: SWALLOWING MAY RESULT IN STOMACH CRAMPS AND DIARRHEA MAY CAUSE SKIN IRRITATION UPON DIRECT CONTACT

CHRONIC: ON RARE OCCASIONS PROLONGED I REPEATED EXPOSURE TO OIL MIST POSES A RISK OF PULMONARY DISEASE SUCH AS CHRONIC LUNG INFLAMMATION. CONSTITUENTS OF THIS PRODUCT HAVE BEEN ASSOCIATED WITH PHOTSENSITIVITY.

SIGNS / SYMPTOMS OF OVEREXPOSURE: HEALTH HAZARD: DRYNESS, CHAPPING & REDDENING CONDITION MAY MAKE SKIN MORE SUSCEPTIBLE TO OTHER IRRITANTS, SENSITIZER, & DISEASE. PROLONGED / REPEATED CONTACT MAY RESULT IN ACNE WHICH IS CHARACTERIZED BY BLACKHEADS WITH POSSIBLE SECONDARY INFECTION. CONSTITUENTS OF PRODUCTS HAVE BEEN ASSOCIATED WITH PHOTSENSITIVITY.

EMERGENCY/FIRST AID PROC:

EYE: IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES & CONTINUE FLUSHING UNTIL IRRITATION SUBSIDES. IF MATERIAL IS HOT, TREAT FOR THERMAL BURNS & TAKE VICTIM TO HOSPITAL IMMEDIATELY

SKIN REMOVE CONTAMINATED CLOTHING WASH CONTAMINATED AREA THOROUGHLY WITH SOAP AND WATER IF MATERIAL IS HOT, SUBMERGE INJURED AREA IN COLD WATER. IF VICTIM IS SEVERELY BURNED, REMOVE TO HOSPITAL IMMEDIATELY

INHALATION: REMOVE TO FRESH AIR SUPPORT BREATHING. (GIVE OXYGEN/ARTIFICIAL RESPIRATION)

PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS IF MATERIAL IS RELEASED / SPILL: NOTIFY APPROPRIATE AUTHORITY OF SPILL. CONTAIN SPILL IMMEDIATELY. DO NOT ALLOW SPILL TO ENTER SEWERS / WATERCOURSES . REMOVE ALL SOURCES OF IGNITION. ABSORB WITH APPROPRIATE INERT MATERIAL SUCH AS SAND , CLAY, ETC. LARGE SPILLS MAY BE PICKED UP USING VACUUM PUMPS, SHOVELS, BUCKETS. NEUTRALIZING AGENT: NONE SPECIFIED BY MANUFACTURER.

WASTE DISPOSAL METHOD: ALL DISPOSAL MUST COMPLY WITH FEDERAL /STATE / LOCAL REGULATIONS . MATERIAL IF SPILLED / DISCARDED, MAY BE REGULATED WASTE . REFER TO LOCAL / STATE REGULATIONS . CAUTION ! IF REGULATED SOLVENTS ARE USED TO CLEAN UP SPILLED MATERIAL, RESULTING WASTE MIXTURE MAY BE REGULATED.

PRECAUTIONS-HANDLING / STORING: DO NOT TRANSFER TO UNMARKED CONTAINER. STORE IN CLOSED CONTAINERS AWAY FROM HEAT, SPARKS, OPEN FLAME, OR OXIDIZING MATERIAL

OTHER PRECAUTIONS : PRODUCT IS NOT CLASSIFIED AS HAZARDOUS UNDER DOT REGULATIONS. FIRE EXTINGUISHERS SHOULD BE KEPT READILY AVAILABLE. SEE NFPA AND OSHA 1910.106 - FLAMMABLE AND COMBUSTIBLE LIQUIDS. CONTROL MEASURES

RESPIRATORY PROTECTION: RESPIRATORY PROTECTION IS NOT REQUIRED UNDER CONDITIONS OF NORMAL USE . IF VAPOR / MIST IS GENERATED WHEN MATERIAL IS HEATED / HANDLED USE A NIOSH / MSHA ORGANIC VAPOR RESPIRATOR WITH DUST / MIST FILTER . ALL RESPIRATORS MUST BE NIOSH CERTIFIED . DO NOT USE COMPRESSED OXYGEN IN HYDROCARBON ATMOSPHERES .

VENTILATION: IF VAPOR / MIST IS GENERATED WHEN MATERIAL IS HEATED / HANDLED, ADEQUATE VENTILATION IN ACCORDANCE WITH GOOD ENGINEERING PRACTICE MUST BE PROVIDED PROTECTIVE GLOVES: IMPERVIOUS GLOVES

EYE PROTECTION: CHEMICAL WORK GOGGLES OR FULL LENGTH FACE SHIELD.

OTHER PROTECTIVE EQUIPMENT: IMPERVIOUS CLOTHING (BOOTS, APRONS, ETC.) OVER PARTS OF THE BODY SUBJECT TO EXPOSURE.

WORK HYGIENIC PRACTICES: CONSUMPTION OF FOOD & BEVERAGE SHOULD BE AVOIDED IN WORK AREAS WHERE HYDROCARBONS ARE PRESENT. ALWAYS WASH HANDS.

Users and maintainers should consult the local medical authority and environmental coordinator for health and environmental support. The excerpt that follows is from the DOD Hazardous Materials Information System (DOD 6050.-L) and addresses the use, storage, and disposal of the SAE-30 motor oil, cited in paragraph 3-3 under LUBRICATION in the technical manual portion.

APPENDIX D

OPERATOR/CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

GENERAL

Your Preventive Maintenance Checks and Services Table lists the inspections and care of your equipment required to keep it in good operating condition

Record all deficiencies and shortcomings along with corrective action taken on DA Form 2404

OPERATOR, CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES

1. The number column of your PMCS is the source for the number used on the TM Number Column on DA Form 2404
2. The interval column of your PMCS Table tells you when to do a certain check of service
 - a. While you operate, perform your Before (B) PMCS. Always keep in mind the WARNINGS and CAUTIONS.
 - b. While you operate, perform your During (D) PMCS. Always keep in mind the WARNINGS and CAUTIONS.
 - c. Right after you operate, perform your After (A) PMCS.
3. The procedure column of your PMCS Table tells you how to do the required checks and services. Carefully follow these instructions. If you do not have the tools, or if the procedure tells you to, have unit maintenance do the work.
4. If your equipment does not perform as required, refer to the troubleshooting section in this manual for possible problems. Report any malfunctions or failures on the proper DA Form 2404 or refer to D.A Pamphlet 738-750

NOTE

The terms ready/available and mission capable refer to the same status: Equipment is on hand and is able to perform listed combat missions (see DA Pamphlet 738-750)

5. Equipment is not ready/available if column. This column tells you when and why your equipment cannot be used.
6. Always do your PMCS in the same order so it gets to be a habit. Once you've had some practice, you will spot anything wrong in a hurry.
7. When you do your PMCS, take along a rag or two.
8. While performing PMCS, observe WARNINGS and CAUTIONS preceding those operations which could endanger your safety or could result in damage to equipment.

WARNING

Dry cleaning solvent, P-D-680 is toxic and flammable. Wear protective goggles and gloves and use only in well ventilated area. Avoid allowing solvent to contact skin, eyes, and clothes, and do not breathe vapors. Do not use near open flame or excessive heat. If you become dizzy while using cleaning solvent, get fresh air immediately and get medical aid. If solvent comes in contact with skin or clothing, wash with water. If solvent gets in your eyes, flush with water and get medical aid immediately. Flash point of solvent is 138 F (59 C).

- a. Keep it clean Dirt, grease, oil and debris only get in the way and may cover up a serious problem. Clean as you work and as needed. Use dry cleaning solvent (P-D-680) to clean metal surfaces Use soap and water when you clean rubber or plastic material.
- b. Bolts, nuts. and screws. Check that they are not loose, missing, bent or broken. You can't try them all with a tool, or course, but look for chipped paint. bare metal or rust around bolt heads. Tighten any bolt, nut, or screw that you find loose.
- c. Welds. Look for loose or chipped paint. rust or gaps ,where parts are welded together. If you find a bad report to unit maintenance

d. Electric wires and connectors. Look for cracked or broken insulation, bare wires and loose or broken connectors. Report damaged or loose wiring to unit maintenance.

9. It is necessary for you to know how fluid leaks affect the status of your equipment. The following are definitions of the types/classes of leakage you need to know to be able to determine the status of your equipment . Learn and be familiar with them and REME.MBER - when in doubt, notify your supervisor.

Class I Seepage of fluid (as indicated by wetness or discoloration) not great enough to form drops.

Class II Leakage of fluid great enough to form drops, but not enough to cause drops to drip from the item being checked/inspected.

Class III Leakage of fluid great enough to form drops and fall from the item being checked/inspected.

CAUTION

Equipment operation is allowable with minor leakages (Class I or II) Of course, consideration must be given to the fluid capacity in the item/system being checked/inspected When operating with Class I or II leaks, continue to check fluid levels as required on your PMCS. Class III leaks should be reported to your supervisor or unit maintenance. Equipment is not ready/available if any gasoline leak is present, whether Class I, II. or III (Reference AR 385-55).

APPENDIX E**UNIT MAINTENANCE****PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) GENERAL**

To make sure that your vehicle is ready for operation at all times, inspect it systematically so you can discover any defect and have them corrected before they result in serious damage or failure. The item number indicates the sequence of minimum inspection requirements. If you are operating the vehicle and notice something wrong which could damage the equipment if you continue operation, stop operation immediately. Record all deficiencies and shortcomings, along with the corrective action taken, on DA Form 2404. The Item Number column is the source for the numbers used on the TM Number column on DA Form 2404.

UNIT MAINTENANCE PREVENTIVE MAINTENANCE CHECKS AND SERVICES

1. The item numbers of the table indicates the sequence of the PMCS. Perform at the intervals shown below.
 - a. Do your (H) PREVENTIVE MAINTENANCE at the hour interval listed.
 - b. Do your (Q) PREVENTIVE MAINTENANCE quarterly (once every 3 months).
2. If something does not work, troubleshoot it according to the instructions in this manual or notify your supervisor.
3. Always do your preventive maintenance in the same order, so it gets to be a habit. Once you have had some practice, you will spot anything wrong in a hurry.
4. If anything looks wrong and you can't fix it, write it down on your DA Form 2404. If you find something seriously wrong report it to intermediate direct support as soon as possible.

5. It is necessary for you to know how fluid leaks affect the status of your equipment. The following are definitions of the types/classes of leakage you need to know to be able to determine the status of your equipment. Learn and be familiar with them and REMEMBER--when in doubt, notify your supervisor.

CAUTION

Equipment operation is allowable with minor leakages (Class I or II) Of course, consideration must be given to fluid capacity in the item/system being checked/inspected. When operating with Class I or II leaks, continue to check fluid levels as required on your PMCS. Class III leaks should be reported to your supervisor or unit maintenance.

LEAKAGE DEFINITIONS FOR UNIT MAINTENANCE

- CLASS I Seepage of fluid (as indicated by setness or discoloration) not great enough to form drops.
- CLASS II Leakage of fluid great enough to form drops, but not enough to cause drops to drip from the item being checked/inspected.
- CLASS III Leakage of fluid great enough to form drops that fall from the item being checked/inspected.

WARNING

Dry cleaning solvent P-D-680 is toxic and flammable. Wear protective goggles and gloves and use only in well ventilated area. Avoid allowing solvent to contact you skin, eyes and clothes and don't breath vapors. Do not use near open flame or excessive heat. If you become dizzy while using cleaning solvent, get fresh air immediately and get medical aid. If solvent comes in contact with skin or clothing, wash with water. If solvent gets in your eyes, flush with water and get medical aid immediately.

WARNING

Compressed air, used for cleaning purposes will not exceed 30 psi. Use only with effective chip guarding and personnel protective equipment (goggles/shield/gloves, etc.).

a. Keep it clean: Dirt, grease, oil and debris only get in the way and may cover up a serious problem. Clean as you work and as needed Use dry cleaning solvent (P-D-680) to clean metal surfaces. Use soap and water when you clean rubber or plastic material.

b. Bolts, nuts, and screws: Check that they are not loose, missing, bent or broken. You can't try them all with a tool, of course, but look for chipped paint, bare metal or rust around bolt heads Tighten any bolt, nut, or screw that you find loose.

c. Welds: Look for loose or chipped paint, rust or gaps where parts are welded together. If you find a bad weld, report it to direct support.

d. Electric wires and connectors: Look for cracked or broken insulation, bare wires and loose or broken connectors. Tighten loose connections and make sure the wires are in good condition.

e. Hoses and fluid lines: Look for wear, damage, and leaks. Make sure clamps and fittings are tight. We spots show leaks but a stain around a fitting or connector can also mean a leak. If leakage comes from a loose fitting or connector, tighten the fitting or connector. If something, is broken or worn out, either correct it or report it to intermediate direct support (refer to Allocation Chart).

APPENDIX - F

EXPENDABLE / DURABLE SUPPLIES LIST

COMPONENT	DESCRIPTION	UNIT/MEASURE	NSN
Various	Dry Cleaning Solvent	1 Gal	6850-00-281-1985
Oil Can Points	OE/HDO 30,MIL-L-2104D	1 QT	9150-00-186-6681
Levers /Bearings	OE/HDO 300,MIL-L-2104D	1 QT	9150-00-186-6681
Gear Reducer	AGMA Class 8 EP		9150-00-535-0660
Lift Mechanism	GAA (3516)	none	9150-00-190-0907

APPENDIX -G

**RECOMMENDED COMMON TOOLS
FOR
CONVEYOR BELT
NSN 3910-01-376-043 1**

Hex Keys

1/8" NSN 5120-00-198-5412
5/16" NSN 5120-00-198-5409
3/8" NSN 5120-00-198-5406
1/2" NSN 5120-00-198-5407

Cross Tip Screwdriver

7 1/2" NSN 5120-00-234-8913

Flat Tip Screwdriver

7 3/8" NSN 5120-00-287-2505
7 1/2" NSN 5120-00-222-8852

Ball Peen Hammer

12 oz NSN 5120-01-112-8344

Vise Grips

7" NSN 5120-00-277-4243

Adjustable Wrench

8" NSN 5120-00-240-5328

Combination Wrench Box & Open-end

1/2" NSN 5120-00-228-9506
9/16" NSN5120-00-228-9507

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PARA-GRAPH

FIGURE NO.

TABLE NO.

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

TEAR ALONG PERFORATED LINE

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE:

DA FORM 2028-2
1 JUL 79

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.—IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
 1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
 1 Kilometer = 1000 Meters = 0.621 Mile =

WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
 1 Kilogram = 1000 Grams = 2.2 Lb
 1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
 1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inch
 1 Sq. Meter = 10,000 Sq Centimeters = 10.76 Sq. Feet
 1 Sq. Kilometer = 1,000,000 Sq. Meters = 0.386 Sq. Mile

CUBIC MEASURE

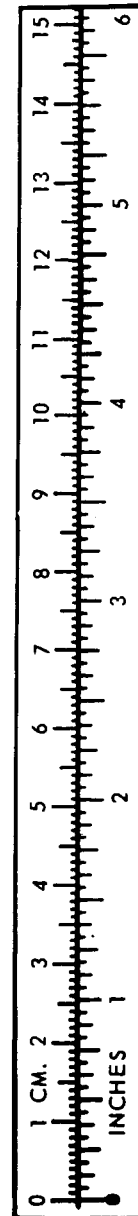
1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inch
 1 Cu. Meter = 1,000,000 Cu. Centimeters = 35.31 Cu. Feet

TEMPERATURE

$5/9 (^{\circ}\text{F} - 32) = ^{\circ}\text{C}$
 212° Fahrenheit is equivalent to 100° Celsius
 90° Fahrenheit is equivalent to 32.2° Celsius
 32° Fahrenheit is equivalent to 0° Celsius
 $9/5 (^{\circ}\text{C} + 32) = ^{\circ}\text{F}$

APPROXIMATE CONVERSION FACTORS

<u>TO CHANGE</u>	<u>TO</u>	<u>MULTIPLY BY</u>
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches.....	Square Centimeters.....	6.451
Square Feet.....	Square Meters	0.093
Square Yards.....	Square Meters	0.836
Square Miles.....	Square Kilometers	2.590
Acres	Square Hectometers.....	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces.....	Milliliters.....	29.573
Pints.....	Liters.....	0.473
Quarts.....	Liters.....	0.946
Gallons.....	Liters.....	3.785
Ounces	Grams.....	28.349
Pounds.....	Kilograms	0.454
Short Tons	Metric Tons.....	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Sq. Inch.....	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter.....	0.425
Miler per Hour	Kilometer per Hour.....	1.609
<u>TO CHANGE</u>	<u>TO</u>	<u>MULTIPLY BY</u>
Centimeters	Inches.....	0.394
Meters.....	Feet	3.280
Meters.....	Yards.....	1.094
Kilometers.....	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet.....	10.764
Square Meters	Square Yards.....	1.196
Square Kilometers	Square Miles.....	0.386
Square Hectometers	Acres	2.471
Cubic Meters.....	Cubic Feet	35.315
Cubic Meters.....	Cubic Yards.....	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts.....	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms.....	Pounds	2.205
Metric Tons	Short Tons.....	1.102
Newton-Meters.....	Pound-Feet.....	0.738
Kilopascals.....	Pounds per Square Inch	0.145
Kilometers per Liter.....	Miles per Gallon.....	2.354
Kilometers per Hour	Miles per Hour	0.621



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