

**\*TM 1-1730-227-13&P**

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**TECHNICAL MANUAL**

**OPERATOR AND FIELD MAINTENANCE MANUAL  
INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST  
FOR**

**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653 (EIC: N/A)**

\*This manual supersedes TM 55-1730-227-13&P, dated 9 January 1984, including all changes.

**DISTRIBUTION STATEMENT A** – Approved for public release; distribution is unlimited.

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**HEADQUARTERS, DEPARTMENT OF THE ARMY  
30 JULY 2009**



## **WARNING SUMMARY**

### **WARNING SUMMARY**

This warning summary contains general safety warnings and hazardous materials warnings that must be understood and applied during operation and maintenance of this equipment. Failure to observe these precautions could result in serious injury or death to personnel.

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### **WARNING**

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#### **CLEANING SOLVENT**

Cleaning Solvent, MIL-PRF-680, is combustibile and toxic to eyes, skin, and respiratory tract. Wear protective gloves and goggles/face shield. Avoid repeated or prolonged contact. Use only in well ventilated areas (or use approved respirator as determined by local safety/industrial hygiene personnel). Keep away from open flames or other sources of ignition.

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### **WARNING**

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#### **LOAD CAPACITY**

Do not load trailer to more than 2500 lbs. Make sure that any load is secured before towing.

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### **WARNING**

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#### **TOWING**

Release brakes before towing. Do not tow faster than 20 m.p.h.

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### **WARNING**

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#### **PARKING**

Set parking brakes on trailer and towing vehicle when parking.

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### **WARNING**

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#### **LIFTING PALLETS**

Set brakes before lifting. Place fork through both side of pallet. Remove eight screws, lock nuts, and washers attaching pallet to mounting channels before lifting. Do not get under load until it rests firmly on trailer.

## **WARNING SUMMARY – Continued**

### **WARNING**

#### **WHEEL REMOVAL**

Position the trailer on a hard, level surface. Block wheels on the opposite side of the trailer from which the wheel is to be removed to prevent trailer from rolling and causing possible personal injury.

**LIST OF EFFECTIVE PAGES/WORK PACKAGES**

INSERT LATEST UPDATED PAGES/WORK PACKAGES. DESTROY SUPERSEDED DATA.

Dates of issue for original and changed pages/work packages are:

Original.. 0...30 July 2009

**THE TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 21 AND THE TOTAL NUMBER OF WORK PACKAGES IN THIS MANUAL IS 36 CONSISTING OF THE FOLLOWING:**

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A.....	0	WP 0006 00 .....	0	WP 0017 00 .....	0	WP 0029 00 .....	0
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WP 0001 00 .....	0	WP 0011 00.....	0	WP 0024 00 .....	0	WP 0036 00 .....	0
WP 0002 00 .....	0	WP 0012 00 .....	0	WP 0025 00 .....	0		
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\* Zero in this column indicates an original page or work package

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HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, D.C., 30 July 2009

**TECHNICAL MANUAL**  
**OPERATOR AND FIELD MAINTENANCE MANUAL**  
**INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST**  
**FOR**

**STANDARD AIRCRAFT MAINTENANCE TRAILER**  
**PART NO. 4920-EG-081 NSN 1730-01-086-1653 (EIC: N/A)**

**REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS**

You can improve this manual. If you find mistakes or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) located at the back of this manual, directly to: Commander, U.S. Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5000. A reply will be furnished to you. You may also provide DA Form 2028 information to AMCOM via e-mail, fax or the World Wide Web. Our fax number is: DSN 788-6546 or Commercial (256) 842-6546. Our e-mail address is 2028@redstone.army.mil. Instructions for sending an electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028. For the World Wide Web use: <https://amcom2028.redstone.army.mil>.

CURRENT AS OF 30 July 2009

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## HOW TO USE THIS MANUAL

### HOW TO USE THIS MANUAL

#### Scope

This technical manual provides Operator usage and Field Maintenance information for the Standard Aircraft Maintenance Trailer. The information includes component and assembly description, usage information, maintenance and supporting data including a Repair Parts and Special Tools List (RPSTL) for identifying and ordering components, assemblies, and repair parts.

### ARRANGEMENT, IDENTIFICATION, AND LOCATION OF FRONT MATTER, CHAPTERS, WORK PACKAGES, AND REAR MATTER

#### Front Matter

The front matter includes such items as the Warning Summary, List of Effective Pages, Table of Contents and How To Use.

#### Chapters and Work Packages

The WP's contain information pertinent to the performance of specific tasks. Each WP is maintained as a separate entity. The WP's are grouped into Chapters based on overall content. WP's are arranged in numerical sequence regardless of chapter division. The chapter divisions and the WP's contained within the chapters are listed in the Table of Contents.

Chapter 1 – General Information, Equipment Description, and Theory of Operation. Information required providing the user with a physical and functionally explaining how the equipment operates.

Chapter 2 – Operator Instructions. This chapter provides a description of the operator controls and indicators, and provides instructions for operating the equipment in detail.

Chapter 3 – Troubleshooting Procedures. The troubleshooting procedures are presented according to the fault symptoms observed during the operational check procedures in Chapter 4.

Chapter 4 – Maintenance Instructions. This chapter provides information on performing preventive and corrective maintenance actions. Included are instructions concerning inspection, preventive maintenance checks and services, operational check and repair actions including subassembly/component removal installation procedures.

Chapter 5 – Supporting Information. This chapter provides information to support the maintenance actions in Chapter 4. Included are a list of reference material, Maintenance Allocation Chart (MAC), which identifies maintenance actions and their maintenance levels. It also provides information on Repair Parts and Special Tools List (RPSTL) that are required to perform maintenance functions. It also contains Cross-Reference Indexes that includes National Stock Numbers (NSN) and Part Numbers (P/N).

### FINDING INSTRUCTIONS YOU NEED

Primary paragraph title heads in bolded upper case letters.

Secondary level paragraphs are denoted by bolded headings set in Upper and Lower Case Type. These paragraphs always relate to and are subordinate to the most recent primary paragraph heading.

Tables are titled, numbered, and listed in the table of contents under the chapter and WP they appear and if you follow the leader line the last digit is the page number of the WP where the table is shown.



**CHAPTER 1**  
**GENERAL INFORMATION,**  
**EQUIPMENT DESCRIPTION AND THEORY OF OPERATION**  
**FOR**  
**STANDARD AIRCRAFT MAINTENANCE TRAILER**  
**(PART NO. 4920-EG-081) (NSN: 1730-01-086-1653)**



**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**GENERAL INFORMATION**

**SCOPE**

The type of manual, equipment identification, and purpose of equipment is as follows.

Type of Manual: Operator's, Field Maintenance Manual.

Equipment Identification: Standard Aircraft Maintenance Trailer, PN 4920-EG-081, NSN 1730-01-086-1653.

Purpose of Equipment: transports aircraft components, parts and material,

**MAINTENANCE FORMS, RECORDS, AND REPORTS**

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by (as applicable) DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual; DA PAM 738-751, Functional Users Manual for the Army Maintenance Management Systems - Aviation (TAMMS-A); or AR 700-138, Army Logistics Readiness and Sustainability

**REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)**

If the Standard Aircraft Maintenance Trailer needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you do not like about your equipment. Let us know why you do not like the design or performance. If you have Internet access, the easiest and fastest way to report problems or suggestions is to go to <https://aeps.ria.army.mil/aepspublic.cfm> (scroll down and choose the "Submit Quality Deficiency Report" bar). The Internet form lets you choose to submit an EIR, a Product Quality Deficiency Report (PQDR) or a Warranty Claim Action (WCA). You may also submit your information using an SF 368 (PQDR). You can send your SF 368 via e-mail, regular mail or facsimile using the addresses/facsimile numbers specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual. We will send you a reply.

**CORROSION PREVENTION AND CONTROL (CPC)**

CPC of Army material is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items. Corrosion specifically occurs with metals. It is an electrochemical process that causes the degradation of metals. It is commonly caused by exposure to moisture, acids, bases, or salts. An example is the rusting of iron. Corrosion damage in metals can be seen, depending on the metal, as tarnishing, pitting, fogging, surface residue, and/or cracking. Plastics, composites, and rubbers can also degrade. Degradation is caused by thermal (heat), oxidation (oxygen), solvation (solvents), or photolytic (light, typically UV) processes. The most common exposures are excessive heat or light. Damage from these processes will appear as cracking, softening, swelling, and/or breaking. SF 368, PQDR should be submitted to the address specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual.

**DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE**

For procedures to destroy this equipment to prevent its use by the enemy, refer to TM 750-244-1-3, Procedures for Destruction of Aviation Ground Support Equipment (FSC 1700) to Prevent Enemy Use.

**PREPARATION FOR STORAGE OR SHIPMENT**

WP 0027 00, Preparation for Storage or Shipment.

**LIST OF ABBREVIATIONS/ACRONYMS**

<b>AMCOM</b>	Aviation Missile Command
<b>AR</b>	Army Regulation
<b>CPC</b>	Corrosion Prevention and Control
<b>DA</b>	Department of the Army
<b>ea</b>	each
<b>EIR</b>	Equipment Improvement Recommendation
<b>fig</b>	figure

**LIST OF ABBREVIATIONS/ACRONYMS – CONTINUED**

<b>Term</b>	<b>Definition – Continued</b>
<b>FM</b>	Field Manual
<b>ft-lb</b>	foot-pound
<b>in-lb</b>	inch-pound
<b>MAC</b>	Maintenance Allocation Chart
<b>max</b>	maximum
<b>min</b>	minimum
<b>mph</b>	miles per hour
<b>NA</b>	not applicable
<b>NIIN</b>	National Item Identification Number
<b>NSN</b>	National Stock Number
<b>PAM</b>	Pamphlet
<b>PMCS</b>	Preventative Maintenance Checks and Services
<b>P/N</b>	Part Number
<b>psi</b>	pounds per square inch
<b>PQDR</b>	Product Quality Deficiency Report
<b>qty</b>	quantity
<b>RPSTL</b>	Repair Parts and Special Tools List
<b>SF</b>	Standard Form
<b>SMR</b>	Source Maintenance and Recoverability
<b>TAMMS</b>	The Army Maintenance Management System
<b>TAMMS-A</b>	The Army Maintenance Management System — Aviation
<b>TB</b>	Technical Bulletin
<b>TM</b>	Technical Manual
<b>U/M</b>	Unit of Measure
<b>UOC</b>	Usable on Code
<b>WP</b>	Work Package

**QUALITY OF MATERIAL**

Material used for replacement, repair, or modification must meet the requirements of TM 1-1730-227-13, Standard Aircraft Maintenance Trailer. If quality of material requirements are not stated in this manual, the material must meet the requirements of the drawings, standards, specifications, or approved engineering change proposals applicable to the subject equipment.

**SAFETY, CARE, AND HANDLING**

NA

**SUPPORTING INFORMATION FOR REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT**

1. Tools and test equipment required for the maintenance of the Standard Aircraft Maintenance Trailer are identified in the WP 0030 00, Maintenance Allocation Chart (MAC).
2. There are no special tools required for test or inspection procedures.
3. Repair parts are listed in WP 0032 00, Repair Parts and Special Tools List (RPSTL)



**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**EQUIPMENT DESCRIPTION AND DATA**

**EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES**

- Can be loaded and unloaded by sliding load to or from another trailer.
- Can be loaded or unloaded by lifting with a fork lift.
- Can be towed together with other trailers.

**LOCATION AND DESCRIPTION OF MAJOR COMPONENTS**

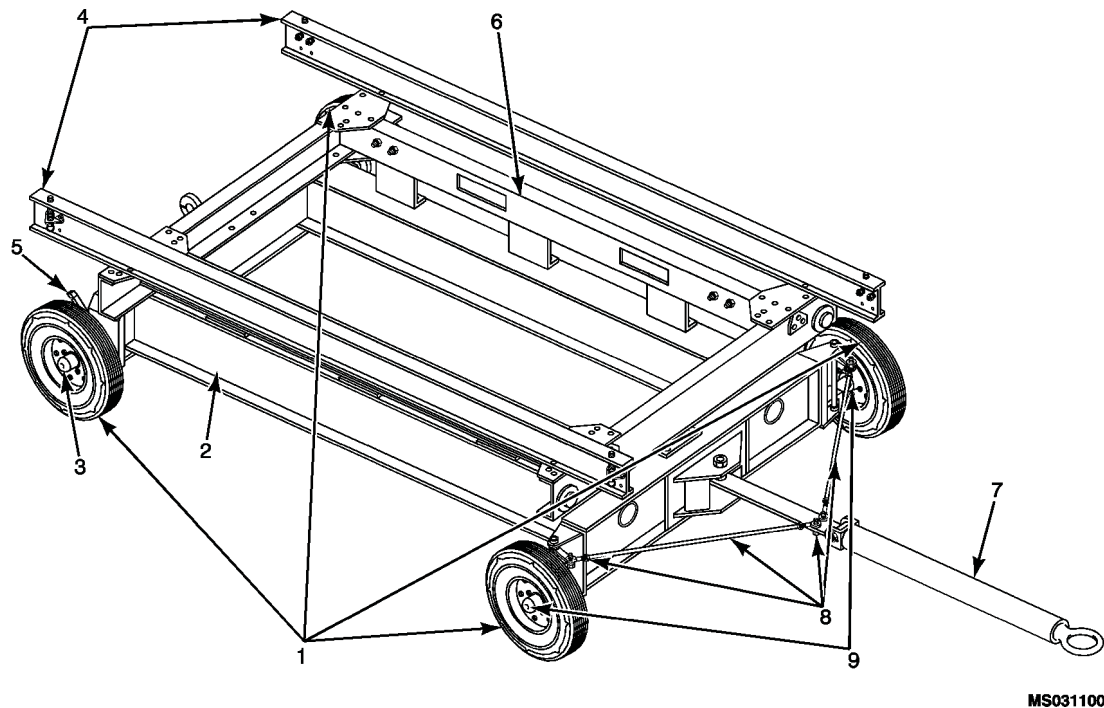


Figure 1. Standard Aircraft Maintenance Trailer - Major Components.

**TIRE AND RIM ASSEMBLY (1)**

Consists of a 6.00-9, 6-ply pneumatic tire, a 6.00-9 inner tube, and a 4.00-9 two piece demountable type rim. The rim assembly is held together by eight bolts, washers, and nuts.

**BASE ASSEMBLY (2)**

Consists of a welded I-beam assembly and provisions for mounting the front and rear mounting plate, towing bracket assembly, king pin support assemblies, and the rear corner assemblies.

**REAR CORNER ASSEMBLY (3)**

Consists of an axle shaft, brake flanges, and rear axle support assembly.

**RAIL ASSEMBLY (4)**

The rail assembly is comprised of an I-beam which is attached to the pallet assembly (6) and one of two different configurations to compensate for different load dimensions. The outer-most mounting position will place the rails **48 inches** apart. The inner mounting position will place the rails **30 inches** apart.

The rail assembly is equipped with two rail stop assemblies located at either end of the rail assemblies.

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**LOCATION AND DESCRIPTION OF MAJOR COMPONENTS – CONTINUED**
**PARKING BRAKE ASSEMBLY (5)**

Two brake assemblies are provided at the right and left rear axles. Consists of a brake drum, pedal assembly, hub assembly, and studs.

**PALLET ASSEMBLY (6)**

A welded channel structure equipped with corner plates to secure rail assemblies (Figure 1, Item 4), slots to allow fork-lift removal from the trailer undercarriage, and tiedown mounting provisions.

**TOW BAR ASSEMBLY (7)**

A tubular assembly with an eye fixed to one end and a tongue pivot assembly fixed to the opposite end.

**STEERING ASSEMBLY (8)**

Consists of two tie rod assemblies connected to the king pin pivot assemblies at one end and the tow bar tongue assembly at the opposite end.

**FRONT AXLE ASSEMBLY (9)**

An axle shaft connected to the king pin pivot assembly by a mounting block.

**EQUIPMENT DATA**

Length	161.31 ±0.00 inches
Width	69.75 ±0.50 inches
Height	34.75 ±0.25 inches
Operating Temperature	-65 to 125 °F
Load Capacity	2500 pounds (max)
Pallet Width	52.13 inches (max)
Rail Length	110 ±0.25 inches
Towing Speed	20 mph (max)
Tire Pressure	65 psi
Wheel Base	85.75 ±0.50 inches
Cramp Angle	40 degrees (min)
Unloaded Trailer Weight	800 pounds (approx)

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**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**THEORY OF OPERATION**

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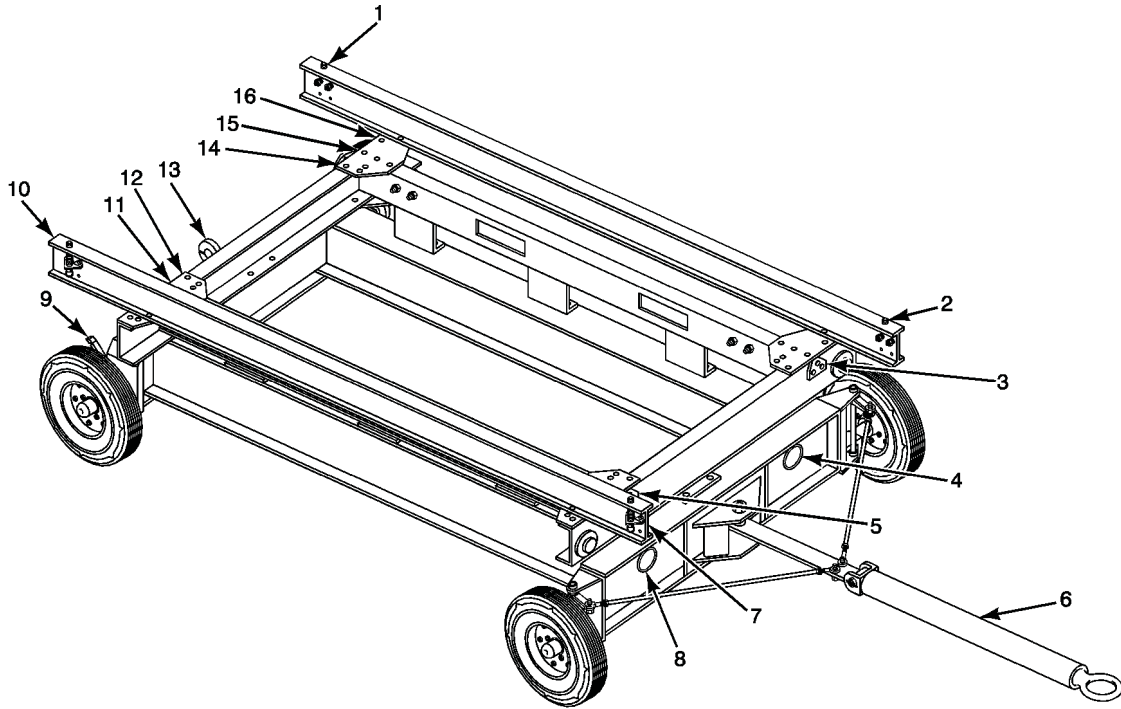
NA



**CHAPTER 2**  
**OPERATOR INSTRUCTIONS**  
**FOR**  
**STANDARD AIRCRAFT MAINTENANCE TRAILER**  
**(PART NO. 4920-EG-081) (NSN: 1730-01-086-1653)**



**OPERATOR INSTRUCTIONS**  
**STANDARD AIRCRAFT MAINTENANCE TRAILER**  
**PART NO. 4920-EG-081 NSN 1730-01-086-1653**  
**CONTROLS AND INDICATORS**



MS031107

Figure 1. Trailer Controls and Indicators.

Table 1. Trailer Controls and Indicators.

Key	Control/Indicator	Function
1,2,7 and 10	Rail Stop Assembly	Prevents material being transported on the trailer from sliding off the end of the rail assemblies. May be lowered to allow loads to be transferred off the trailer by pulling down on the pull rings. The stops will raise when the pull rings are released.
3,5,12 and 14 (5,12, and 14 hid- den)	Tie-down Mount	Provides an installation point for the tie-down ring when the ring is removed from it's storage position on the trailer undercarriage.

Table 1. Trailer Controls and Indicators. – Continued

Key	Control/Indicator	Function
4,8,11 and 15 (11 and 15 hid- den)	Tie-down Ring	Facilitates securing the load when removed from the storage position on the trailer undercarriage, and installed in the tie-down mount.
6	Tow Bar Assembly	Connects trailer to the pintle hook on the tow vehicle at the tow bar eye. Controls the steering mechanism of the trailer.
9 and 16	Parking Brake	When set, prevents the trailer from rolling while parked or being loaded or unloaded. Are set by depressing the pedal assembly, and are released by disengaging the lever on the underside of the pedal and lifting up on the pedal.
13	Pintle Hook	Allows the tow bar of another trailer to be attached to the rear of the lead trailer.



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**UNIT LEVEL INSTRUCTIONS**  
**STANDARD AIRCRAFT MAINTENANCE TRAILER**  
**PART NO. 4920-EG-081 NSN 1730-01-086-1653**  
**OPERATING UNDER USUAL CONDITIONS**

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**INITIAL SETUP:**

NA

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**SECURITY MEASURES FOR ELECTRONIC DATA**

NA

**OPERATING PROCEDURES**

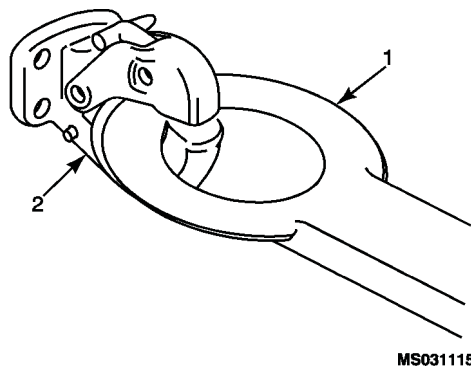


Figure 1. Coupling.

**COUPLING**

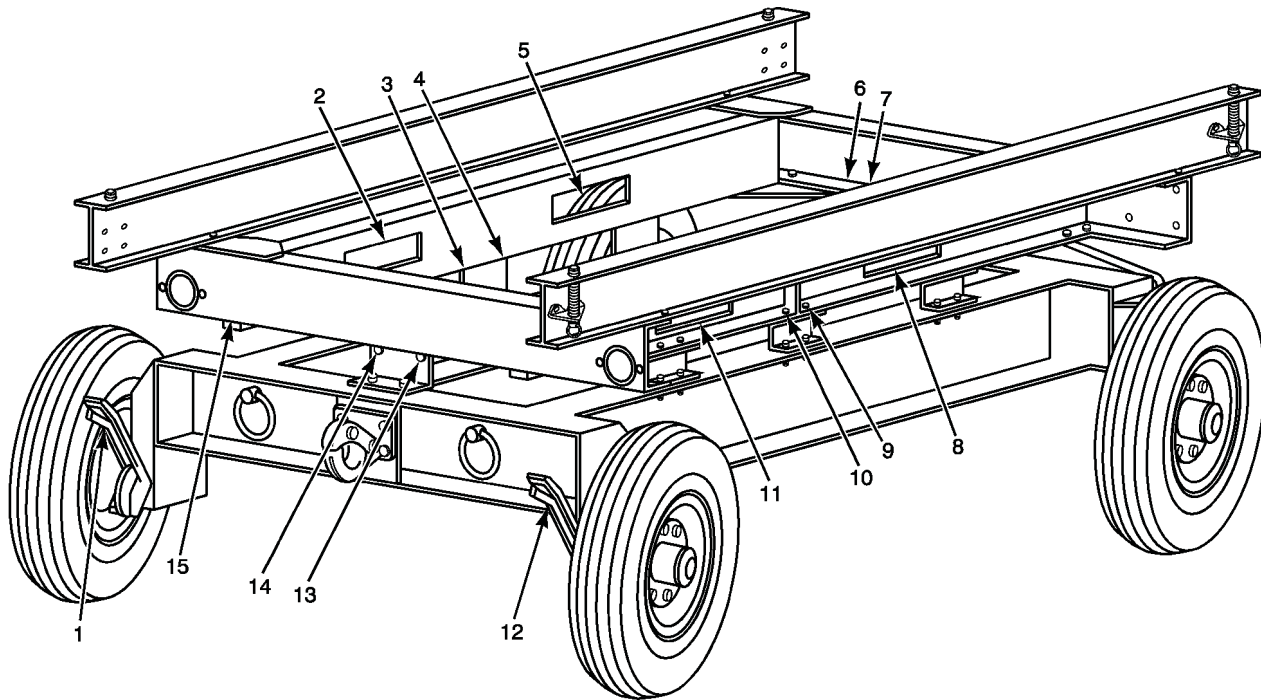
1. Set brakes on the tow vehicle to prevent rolling or an unexpected start .
2. Connect the tow bar eye (Figure 1, Item 1) of the trailer to the pintle hook (Figure 1, Item 2) of the tow vehicle.

**WARNING**

Do not tow faster than **20 mph**. Release brake before towing.

**TOWING**

1. If parking brakes are set on the trailer, release them before releasing brakes on the tow vehicle.
2. Release brakes on the tow vehicle.

**PALLET**

MS031116

Figure 2. Pallet Removal and Installation.

**REMOVE****WARNING**

Do not get under the load when it is supported only by the fork lift.

**CAUTION**

Set parking brakes before bringing the forks of the fork lift into the pallet. Before lifting the pallet, observe that the forks are through both sides of the pallet. Remove the pallet securing bolts before lifting

1. Set parking brakes (Figure 2, Item 1 and 12).
2. Position fork of fork lift through slots on both sides of the pallet (Figure 2, Item 2, 5, 8 and 11).
3. Remove pallet securing bolts (Figure 2, Item 3, 4, 6, 7, 9, 10, 13 and 14 (3,4,6, and 7 are hidden)).
4. Lift pallet (Figure 2, Item 15).

**INSTALL**

1. Set parking brakes (Figure 2, Item 1 and 12).
2. Lower pallet (Figure 2, Item 15).
3. Align holes and install pallet securing bolts (Figure 2, Item 3, 4, 6, 7, 9, 10, 13 and 14).

**END OF WORK PACKAGE**

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**UNIT LEVEL INSTRUCTIONS**  
**STANDARD AIRCRAFT MAINTENANCE TRAILER**  
**PART NO. 4920-EG-081 NSN 1730-01-086-1653**  
**OPERATION UNDER UNUSUAL CONDITIONS**

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**INITIAL SETUP:****References**

FM 21-305

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**SECURITY MEASURES FOR ELECTRONIC DATA**

NA

**UNUSUAL ENVIRONMENT/WEATHER****OPERATION IN RAINY OR HUMID CONDITIONS**

Frequently inspect, clean, and lubricate equipment to prevent rust and fungus accumulation.

**OPERATION IN WATER**

Salt water will cause metal parts to rust and corrode. Clean, inspect, and lubricate frequently. After fording, clean, inspect, and lubricate immediately or when the tactical situation permits.

**OPERATION IN SNOW**

Refer to FM 21-305 for special instructions on operation in snow.

**OPERATION IN MUD****CAUTION**

When operating with reduced tire pressure do not exceed **5 mph**. Do not drive for a long distance.

For maximum mobility in mud, reduce tire pressure to **50 psi**. If one or more wheels sink into the mud, it may be necessary to jack up the mired wheel and insert planking or matting beneath it. Clean off all mud as soon as possible after operation.

**OPERATION IN DUSTY OR SANDY AREAS****CAUTION**

When operating with reduced tire pressure do not exceed **5 mph**. Do not drive for a long distance

For maximum mobility in sand, reduce tire pressure to **50 psi**. Clean, inspect, and lubricate frequently to prevent excessive wear.

**END OF WORK PACKAGE**



**CHAPTER 3**  
**FIELD MAINTENANCE**  
**TROUBLESHOOTING PROCEDURES**  
**FOR**  
**STANDARD AIRCRAFT MAINTENANCE TRAILER**  
**(PART NO. 4920-EG-081) (NSN: 1730-01-086-1653)**



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**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**TROUBLESHOOTING INDEX**

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<u>Malfunction/Symptom</u>	<u>Troubleshooting Procedure</u>
1. BRAKES.....	WP 0008 00
2. WHEELS.....	WP 0008 00
3. TRAILER.....	WP 0008 00
4. TIRES.....	WP 0008 00

**END OF WORK PACKAGE**





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**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**TROUBLESHOOTING**

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**INITIAL SETUP:****References**

WP 0020 00, Tie Rod Assembly  
WP 0022 00, Axle and King Pin Pivot Assembly

**References (cont.)**

WP 0023 00, Rim Assembly  
WP 0025 00, Hub and Bearings  
WP 0026 00, Parking Brake Assembly

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**GENERAL**

This section provides information useful in diagnosis and correction, inspection, operation, or failure of the Standard Aircraft Maintenance Trailer, or any of its components. Each trouble symptom stated is followed by a list of probable causes of the trouble. The possible remedy recommended is described opposite the probable cause.

**TROUBLESHOOTING PROCEDURE****BRAKES****SYMPTOM**

Unable To Hold Trailer

**MALFUNCTION**

Inspect brake assembly for broken components.

**CORRECTIVE ACTION**

Replace WP 0026 00, Parking Brake Assembly.

**MALFUNCTION**

Inspect brake linings for excessive wear.

**CORRECTIVE ACTION**

Replace WP 0026 00, Parking Brake Assembly.

**MALFUNCTION**

Inspect for grease on lining or drum.

**CORRECTIVE ACTION**

Clean or replace. Refer to WP 0026 00, Parking Brake Assembly.

**MALFUNCTION**

Defective grease seal.

**CORRECTIVE ACTION**

Replace WP 0025 00, Hub and Bearings.

**WHEELS****SYMPTOM**

Noise

**MALFUNCTION**

Wheel bearing looseness.

**CORRECTIVE ACTION**

Adjust WP 0025 00, Hub and Bearings.

**MALFUNCTION**

Inspect wheel bearing for wear.

**CORRECTIVE ACTION**

Replace WP 0025 00, Hub and Bearings

**MALFUNCTION**

Wheel rim loose.

**CORRECTIVE ACTION**

Tighten WP 0023 00, Rim Assembly.

**TRAILER****SYMPTOM**

Hard to turn.

**MALFUNCTION**

Inspect tie rod ends for proper lubrication.

**CORRECTIVE ACTION**

Lubricate WP 0020 00, Tie Rod Assembly.

**MALFUNCTION**

Inspect king pin support tubes for proper lubrication.

**CORRECTIVE ACTION**

Lubricate WP 0022 00, Axle and King Pin Pivot Assembly.

**MALFUNCTION**

Tie rod assembly bent or distorted.

**CORRECTIVE ACTION**

Repair or replace WP 0020 00, Tie Rod Assembly.

**SYMPTOM****MALFUNCTION**

King pin distorted or bent.

**CORRECTIVE ACTION**

Repair or replace WP 0022 00, Axle and King Pin Pivot Assembly.

**MALFUNCTION**

Front tire pressure low.

**CORRECTIVE ACTION**Inflate tires to **65 psi**.

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**TIRES****SYMPTOM**

Uneven tire wear

**MALFUNCTION**

Wheel bearings loose.

**CORRECTIVE ACTION**

Adjust WP 0025 00, Hub and Bearings.

**MALFUNCTION**

Improper tire pressure.

**CORRECTIVE ACTION**

Inflate tires to **65 psi**.

**MALFUNCTION**

Wheel alignment (on front tires).

**CORRECTIVE ACTION**

Adjust WP 0020 00, Tie Rod Assembly.

**END OF WORK PACKAGE**



**CHAPTER 4**  
**OPERATOR**  
**MAINTENANCE INSTRUCTIONS**  
**FOR**  
**STANDARD AIRCRAFT MAINTENANCE TRAILER**  
**(PART NO. 4920-EG-081) (NSN: 1730-01-086-1653)**



**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**SERVICE UPON RECEIPT**

**INITIAL SETUP:**

**Materials/Parts**

Grease, Automotive (WP 0035 00, Item 1)

**References**

DA PAM 738-751  
SF 364

**References (cont.)**

WP 0018 00  
WP 0020 00  
WP 0025 00

**SERVICE UPON RECEIPT OF MATERIEL**

**UNPACKING**

1. Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with instructions in DA PAM 738-751.
2. When the trailer is received, the tow bar assembly will be removed and secured to the trailer for shipping purposes. Remove the tow bar from it's secured position and install according to installation instructions in WP 0018 00, Tow Bar Assembly.

**CHECKING UNPACKED EQUIPMENT**

1. Inspect the equipment for damage incurred during shipment. If equipment has been damaged, report the damage on SF 364, Report of Discrepancy (ROD).
2. Check to see if the equipment has been modified.

**PROCESSING UNPACKED EQUIPMENT**

Before putting into service, the following checks and services must be completed.

**TIRE PRESSURE**

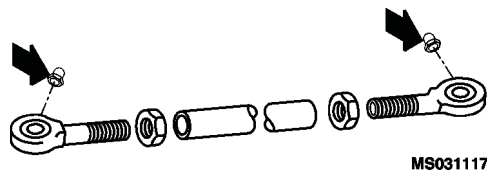
Recommended tire pressure is **65 psi**.

**LUBRICATION OF GREASE FITTINGS**

Grease fittings are to be lubricated using Grease, Automotive . The following points are to be greased:

**TIE ROD ASSEMBLY**

Tie Rod ends (Figure 1). One fitting at each end of two tie rods.



MS031117

Figure 1. Tie Rod Assembly.

**SERVICE UPON RECEIPT OF MATERIEL – CONTINUED****PROCESSING UNPACKED EQUIPMENT – CONTINUED****KING PIN SUPPORT TUBES**

King Pin Support Tubes (Figure 2). Two fittings located in the center of each support tube.

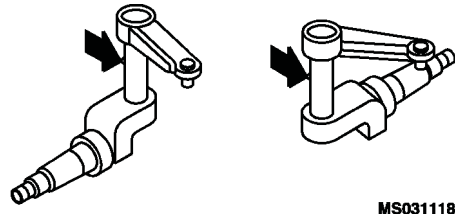


Figure 2. King Pin Support Tubes.

**TONGUE ASSEMBLY**

Tongue Assembly (Figure 3). One fitting located at the tow bar connection bearing.

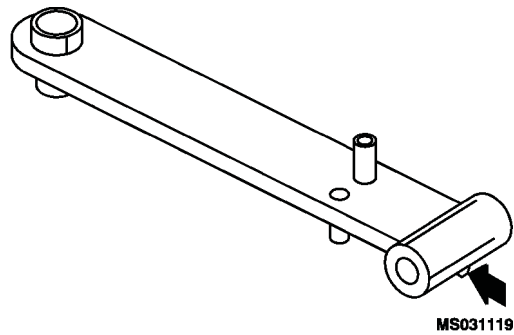


Figure 3. Tongue Assembly.

**WHEEL BEARINGS**

Wheel bearings (Figure 4). Refer to WP 0025 00 for lubrication and adjustment procedures.

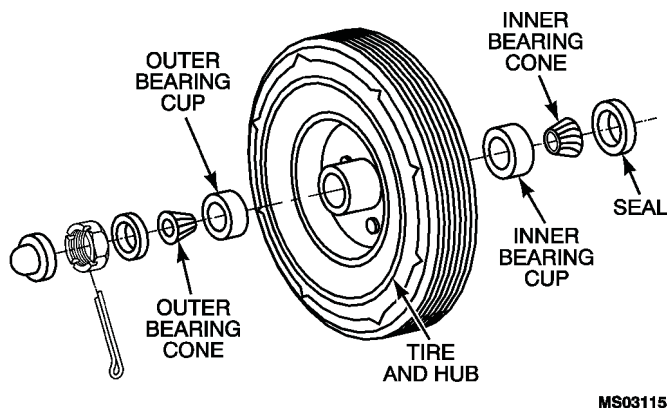


Figure 4. Wheel Bearings.



**SERVICE UPON RECEIPT OF MATERIEL – CONTINUED****PROCESSING UNPACKED EQUIPMENT – CONTINUED****TIE RODS**

Tie rods (Figure 5). Refer to WP 0020 00, Tie Rod Assembly for checking and adjustment procedures.

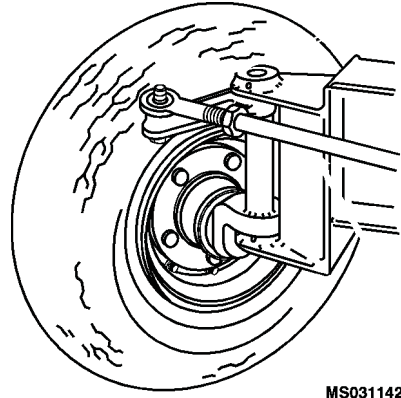


Figure 5. Tie Rod.

**END OF WORK PACKAGE**



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**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**PREVENTATIVE MAINTENANCE CHECKS AND SERVICES INTRODUCTION**

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**GENERAL**

This section lists and authorizes PMCS required for the Standard Aircraft Maintenance Trailer.

**EXPLANATION OF COLUMNS**

**ITEM NO. Column**

The number used to identify sequence of checks and services. This column shall be used as a source of item numbers for the TM Number Column on DA Form 2404, Equipment Inspection and Maintenance Worksheet, when recording results of PMCS.

**INTERVAL Column**

Indicates the time interval upon which the checks and services must be performed. Intervals are divided as follows:

- D Daily
- W Weekly
- M Monthly
- Q Quarterly
- S Semiannually
- A Annually

**ITEM TO BE INSPECTED Column**

Indicates items and components to be inspected.

**PROCEDURES Column**

Indicates the procedure by which the check or service is to be performed. Tolerances, adjustment limits, and instrument readings are included as applicable. When replacement or repair of a component is required, the procedures column will direct personnel to the appropriate task.

**END OF WORK PACKAGE**



**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**PREVENTATIVE MAINTENANCE CHECKS AND SERVICES (PMCS)**

**INITIAL SETUP:**

**References**

WP 0020 00, Tie Rod Assembly  
WP 0024 00, Tire and Tube

**References (cont.)**

WP 0025 00, Hub and Bearings

**Table 1. Preventative Maintenance Checks and Services (PMCS).**

<b>ITEM NO.</b>	<b>INTERVAL</b>	<b>MAN-HOUR</b>	<b>ITEM TO BE CHECKED OR SERVICED</b>	<b>PROCEDURE</b>	<b>EQUIPMENT NOT READY/ AVAILABLE IF:</b>
1	D		Tires	Inspect for proper inflation.	Not inflated to <b>65 psi</b>
2	W		Tires	Inspect for defects and/or wear. Replace as necessary.	
3	W		Tires	Inspect for uneven wear. Check wheel bearings per WP 0020 00, Tie Rod Assembly and tie rod adjustment WP 0025 00, Hub and Bearings .	
4	W		Wheel mounting hardware	Inspect for loose lug nuts. Tighten lug nuts.	
5	W		Wheels mounting hardware	Check slotted hub nuts for play. Adjust per WP 0025 00, Hub and Bearings.	
6	W		Brake parts	Inspect for damaged parts. Remove rear wheel assemblies and brake drums. Repair or replace damaged parts as necessary.	
7	Q		Brake linings	Inspect brake linings. Remove rear wheel assemblies and brake drums. Replace as necessary.	
8	Q		Wheel bearings	Adjust wheel bearings per WP 0025 00, Hub and Bearings	
9	A		Wheel bearings	Remove, clean, lubricate and adjust wheel bearings per WP 0025 00, Hub and Bearings	
10	S		Tires	Rotate tires per WP 0024 00, Tire and Tube	
11	M		Lube fittings	Lubricate all fittings.	
12	W		All components	Inspect for looseness, stripped or damaged threads. Tighten or replace as necessary.	

**MANDATORY REPLACEMENT PARTS**

NA

**END OF WORK PACKAGE**

**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**RAIL**

**INITIAL SETUP:**

**Tools and Special Tools**

Tool Kit, Aircraft Maintenance, (WP 0036 00, Item 2)  
Wrench, Torque 100–750 in lb, 3/8 drive  
(WP 0036 00, Item 5)

**References**

FM 1-563

**Equipment Condition**

Rail Stop Assembly removed (WP 0013 00)

**Personnel Required**

MOS 15H

**INSPECTION OF INSTALLED ITEMS**

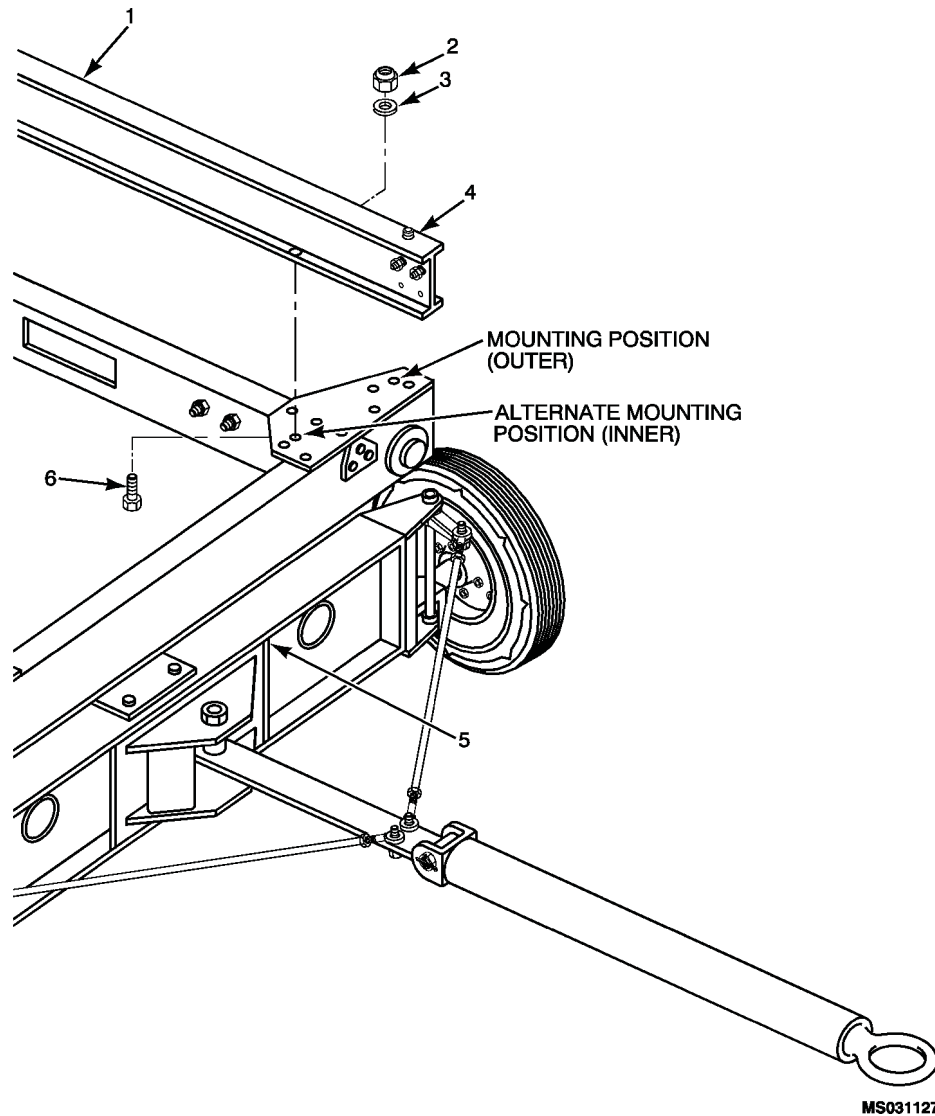


Figure 1. Rail removal and installation.

**INSPECTION OF INSTALLED ITEMS – CONTINUED**

1. Check rail for cracks, burrs, sharp edges and other similar damage.
2. Check for bends or distortion.

**REPAIR OR REPLACEMENT**

1. Welding. Welding to repair cracks is to be done in accordance with FM 1-563.
2. Use the appropriate hand file contained in the tool kit to remove burrs and sharp edges from rail.
3. Replace bent or distorted parts.

**REMOVAL****NOTE**

Rail to be removed only when repairs are made by welding.

1. Remove four hex head screws (Figure 1, Item 6), lock nuts (Figure 1, Item 2) and flat washers (Figure 1, Item 3) securing rail (Figure 1, Item 1) to pallet assembly (Figure 1, Item 5).
2. Remove rail (Figure 1, Item 1) from pallet assembly (Figure 1, Item 5).

**INSTALLATION**

1. Place the rail (Figure 1, Item 1) on the pallet assembly (Figure 1, Item 5). The rail stop assembly (Figure 1, Item 4) holes in the top of the rail should be to the outside when placed on the pallet assembly (Figure 1, Item 5).
2. There are two holes for mounting the rail (Figure 1, Item 1) on the pallet assembly (Figure 1, Item 5). Align the holes in the bottom of the rail (Figure 1, Item 1) with the holes in the pallet assembly (Figure 1, Item 5) for the desired mounting position.
3. Install four hex head screws (Figure 1, Item 6) through the rail (Figure 1, Item 1) into the pallet assembly (Figure 1, Item 5).
4. Place a flat washer (Figure 1, Item 3) and a lock nut (Figure 1, Item 2) on each screw. Tighten lock nuts (Figure 1, Item 2) to a torque of **276 in-lbs**.

**END OF WORK PACKAGE**



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**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**RAIL STOP ASSEMBLY**

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**INITIAL SETUP:**

**Tools and Special Tools**

Tool Kit, Aircraft Maintenance, (WP 0036 00, Item 2)  
Wrench, Torque 30-200 in lb, 1/4 drive  
(WP 0036 00, Item 4)

**Personnel Required**

MOS 15H

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**INSPECTION OF INSTALLED ITEMS**

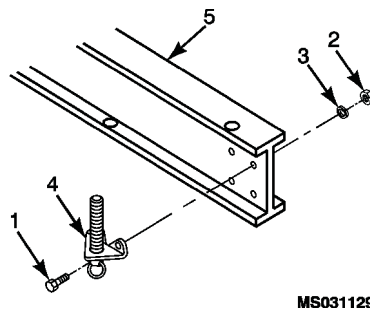


Figure 1. Rail Stop Removal and Installation.

1. Check rail stop assembly for bent or broken stop pin. Check for missing or broken spring or pull ring.
2. Check rail stop assembly for operation. Make certain stop pin retracts by pulling down on ring and returns when ring is released.

**REPAIR OR REPLACEMENT**

1. Remove burrs from end of stop pin using the appropriate file contained in the tool kit.
2. Remove dirt and obstructions from spring.
3. Replace with new rail stop assembly if required.

**REMOVAL**

1. Remove two hex head bolts (Figure 1, Item 1), hex nuts (Figure 1, Item 2), and helical lock washers (Figure 1, Item 3) securing rail stop assembly (Figure 1, Item 4) to rail (Figure 1, Item 5).
2. Remove rail stop assembly (Figure 1, Item 4) from rail (Figure 1, Item 5).

**INSTALLATION**

1. Position rail stop assembly (Figure 1, Item 4) on rail (Figure 1, Item 5).
2. Install two hex head bolts (Figure 1, Item 1) through the rail stop assembly (Figure 1, Item 4) into the rail (Figure 1, Item 5).
3. Install a helical lock washer (Figure 1, Item 3) and a hex nut (Figure 1, Item 2) on each hex head bolt (Figure 1, Item 1). Tighten hex nuts (Figure 1, Item 2) to a torque of **72 in-lbs**.

**END OF WORK PACKAGE**

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**STANDARD AIRCRAFT MAINTENANCE TRAILER**  
**PART NO. 4920-EG-081 NSN 1730-01-086-1653****PALLET ASSEMBLY**

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**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, Aircraft Maintenance, (WP 0036 00, Item 2)  
Wrench, Torque 100–750 in lb, 3/8 drive  
(WP 0036 00, Item 5)

**Personnel Required**

MOS 15H

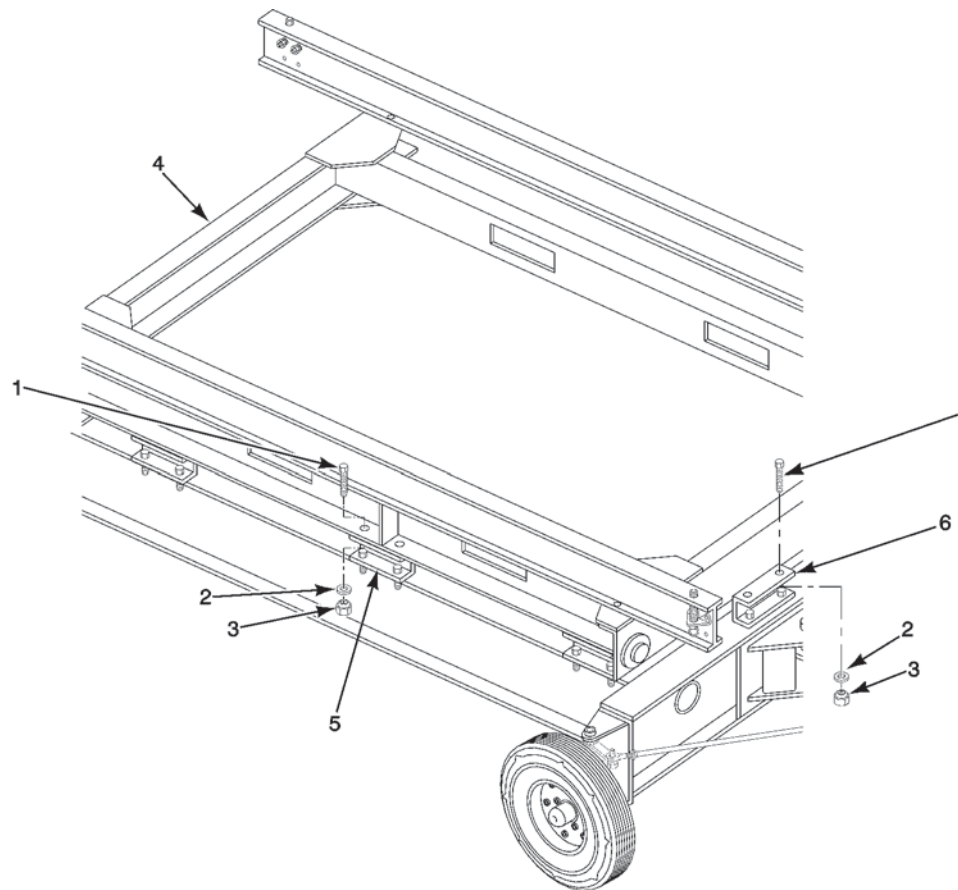
**References**

FM 1-563  
TM 1-1500-204-23 Series

**Equipment Condition**

Rail removed (WP 0012 00)

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**INSPECTION OF INSTALLED ITEMS**

MS031131

Figure 1. Pallet Assembly.

**INSPECTION OF INSTALLED ITEMS**

1. Check pallet assembly for cracks, burrs, sharp edges and other similar damage.
2. Check pallet assembly for bends or distortion.
3. Check pallet assembly for loose, missing or damaged parts.

**REPAIR OR REPLACEMENT**

1. Welding. Welding to repair cracks is to be done in accordance with FM 1-563.
2. Use the appropriate hand file contained in the tool kit to remove burrs and sharp edges from pallet assembly.
3. Tighten loose parts. Replace missing, damaged, bent, or distorted parts.

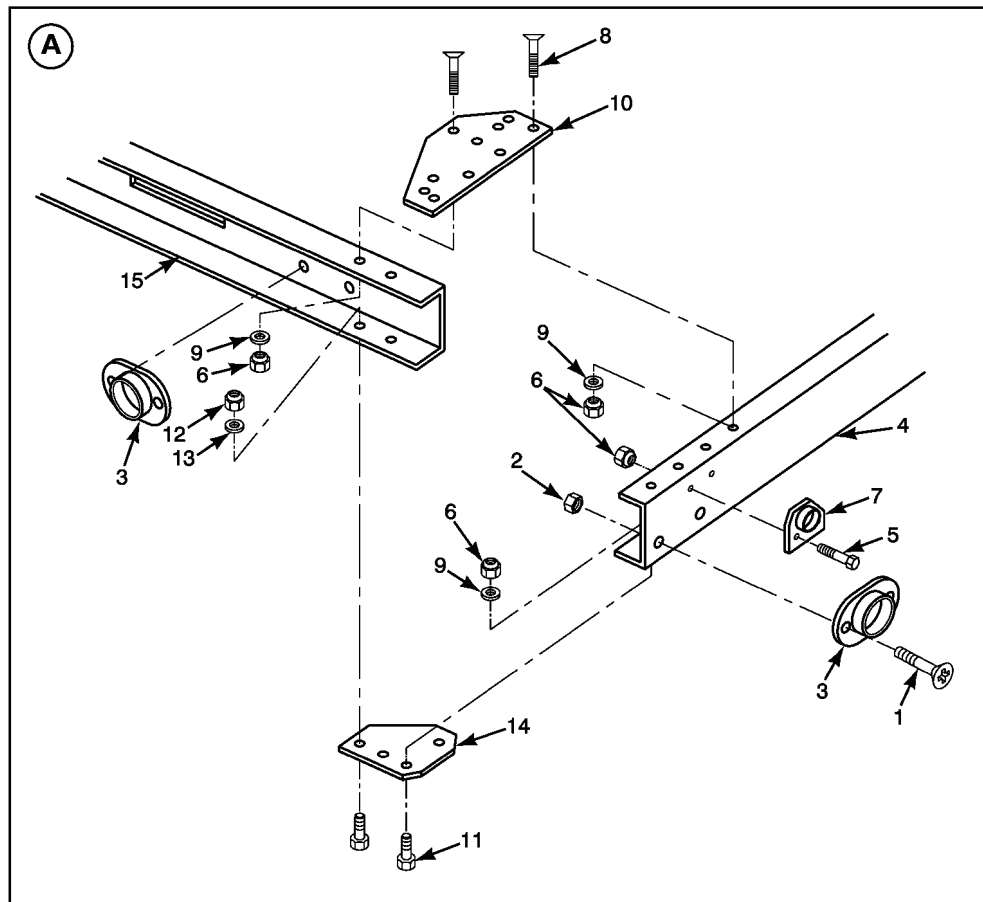
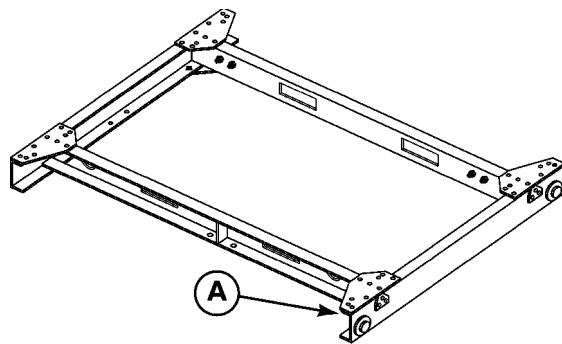
**REMOVAL**

1. Remove eight hex head screws (Figure 1, Item 1), lock nuts (Figure 1, Item 3) and flat washers (Figure 1, Item 2) from pallet assembly (Figure 1, Item 4).
2. Remove pallet assembly (Figure 1, Item 4) from pallet mounting channels (Figure 1, Item 5 and 6)

**INSTALLATION**

1. Position pallet assembly (Figure 1, Item 4) on top of pallet mounting channels (Figure 1, Item 5 and 6).
2. Insert eight hex head screws (Figure 1, Item 1) through holes on the pallet assembly (Figure 1, Item 4) and pallet mounting channels (Figure 1, Item 5 and 6).
3. Install a flat washer (Figure 1, Item 2) and a lock nut (Figure 1, Item 3) on each hex head screw (Figure 1, Item 1). Tighten lock nuts (Figure 1, Item 3) to a torque of **540 in-lbs**.

## DISASSEMBLY



MS031132

Figure 2. Pallet Assembly — Exploded View.

1. Remove sixteen round head machine screws (Figure 2, Item 1) with hex nuts (Figure 2, Item 2) securing the eight clearance indicating reflectors (Figure 2, Item 3) to the front pallet (Figure 2, Item 4), rear pallet (not shown), right side pallet (not shown) and left side pallet (Figure 2, Item 15). Remove reflectors (Figure 2, Item 3).
2. Remove eight hex head cap screws (Figure 2, Item 5) with self-locking nuts (Figure 2, Item 6) securing the four tie down mounts (Figure 2, Item 7) located on the front pallet (Figure 2, Item 4) and rear pallet (not shown). Remove tie down mounts (Figure 2, Item 7).

**DISASSEMBLY – CONTINUED**

3. Remove six countersunk socket screws (Figure 2, Item 8), self-locking nuts (Figure 2, Item 6) and flat washers (Figure 2, Item 9) securing each top corner plate (Figure 2, Item 10) to the pallet assembly (Figure 2, Item A). Remove four top corner plates (Figure 2, Item 10).
4. Turn the pallet assembly (Figure 2, Item A) over and remove four hex head cap screws (Figure 2, Item 11) with self-locking nuts (Figure 2, Item 12) and flat washers (Figure 2, Item 13), securing each bottom corner plate (Figure 2, Item 14). Remove the four bottom corner plates (Figure 2, Item 14) and separate the front pallet (Figure 2, Item 4), rear pallet (not shown), right side pallet (not shown) and left side pallet (Figure 2, Item 15) from each other.

**ASSEMBLY**

1. Place the front pallet (Figure 2, Item 4) and rear pallet (not shown) on a clean, level surface with the open channeled sides facing each other. There should be eight holes showing on top of each pallet end.
2. Position the right pallet (not shown) and left side pallet (Figure 2, Item 15) members across from each other with the channeled sides facing away from each other. There should be four holes showing on top of each right side pallet (not shown) and left side pallet (Figure 2, Item 15) ends.
3. Position four bottom corner plates (Figure 2, Item 14) under the pallet ends and sides. Align the holes and install four hex head cap screws (Figure 2, Item 11), flat washers (Figure 2, Item 13), and self-locking nuts (Figure 2, Item 6) into each corner plate. Tighten nuts to a torque of **275 in-lbs**.
4. Place two top corner plates (Figure 2, Item 10) with slotted holes in opposite corners of each other. Place two corner plates (Figure 2, Item 10) without slotted holes in the remaining corners. Install six countersunk socket screws (Figure 2, Item 8), flat washers (Figure 2, Item 9), and self-locking nuts (Figure 2, Item 6) into each top corner plate (Figure 2, Item 10). Tighten nuts to a torque of **276 in-lbs**.

**END OF WORK PACKAGE**

**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**PALLET MOUNTING CHANNEL**

**INITIAL SETUP:**

**Tools and Special Tools**

Tool Kit, Aircraft Maintenance, (WP 0036 00, Item 2)  
Wrench, Torque 100–750 in lb, 3/8 drive  
(WP 0036 00, Item 5)

**Personnel Required**

MOS 15H

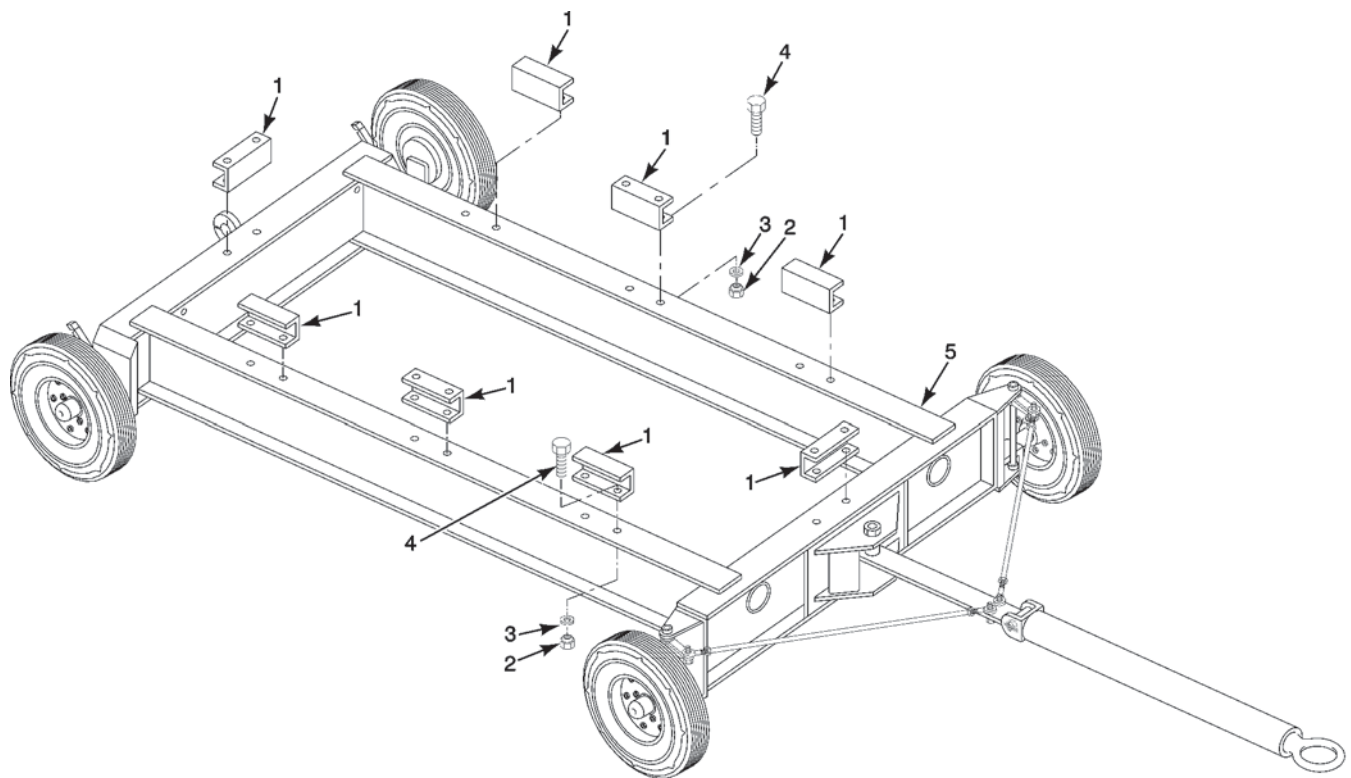
**References**

FM 1-563

**Equipment Condition**

Rail removed (WP 0012 00)  
Pallet Assembly removed  
(WP 0014 00, Pallet Assembly)

**INSPECTION OF INSTALLED ITEMS**



MS031134

Figure 1. Mounting Channel Locations.

1. Check channel for cracks, burrs, sharp edges and other similar damage.
2. Check channel for bends or distortion.
3. Check channel for loose, missing or damaged parts.

**REPAIR OR REPLACEMENT**

1. Welding. Welding to repair cracks is to be done in accordance with FM 1-563.
2. Use the appropriate hand file contained in the tool kit to remove burrs and sharp edges from channel.
3. Tighten loose parts. Replace missing, damaged, bent or distorted parts.

**REMOVAL****NOTE**

There are two types of channels used on the trailer undercarriage. One type has only two holes and the other type has four holes.

1. Remove two hex head screws (Figure 1, Item 4), flat washers (Figure 1, Item 3) and lock nuts (Figure 1, Item 2) securing channels to the trailer undercarriage (Figure 1, Item 5).
2. Remove channel (Figure 1, Item 1).

**INSTALLATION**

1. Position channel (Figure 1, Item 1) on trailer undercarriage (Figure 1, Item 5) as noted during removal Step 1.
2. Install two hex head screws (Figure 1, Item 4), flat washers (Figure 1, Item 3) and lock nuts (Figure 1, Item 2) to secure channel (Figure 1, Item 1) to trailer undercarriage (Figure 1, Item 5). Tighten lock nuts (Figure 1, Item 2) to a torque of **540 in-lbs**.

**END OF WORK PACKAGE**



**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**UNDERCARRIAGE**

**INITIAL SETUP:**

**Tools and Special Tools**

Tool Kit, Aircraft Maintenance , (WP 0036 00, Item 2)  
Wrench, Torque 100–750 in lb, 3/8 drive  
(WP 0036 00, Item 5)

**Personnel Required**

MOS 15H

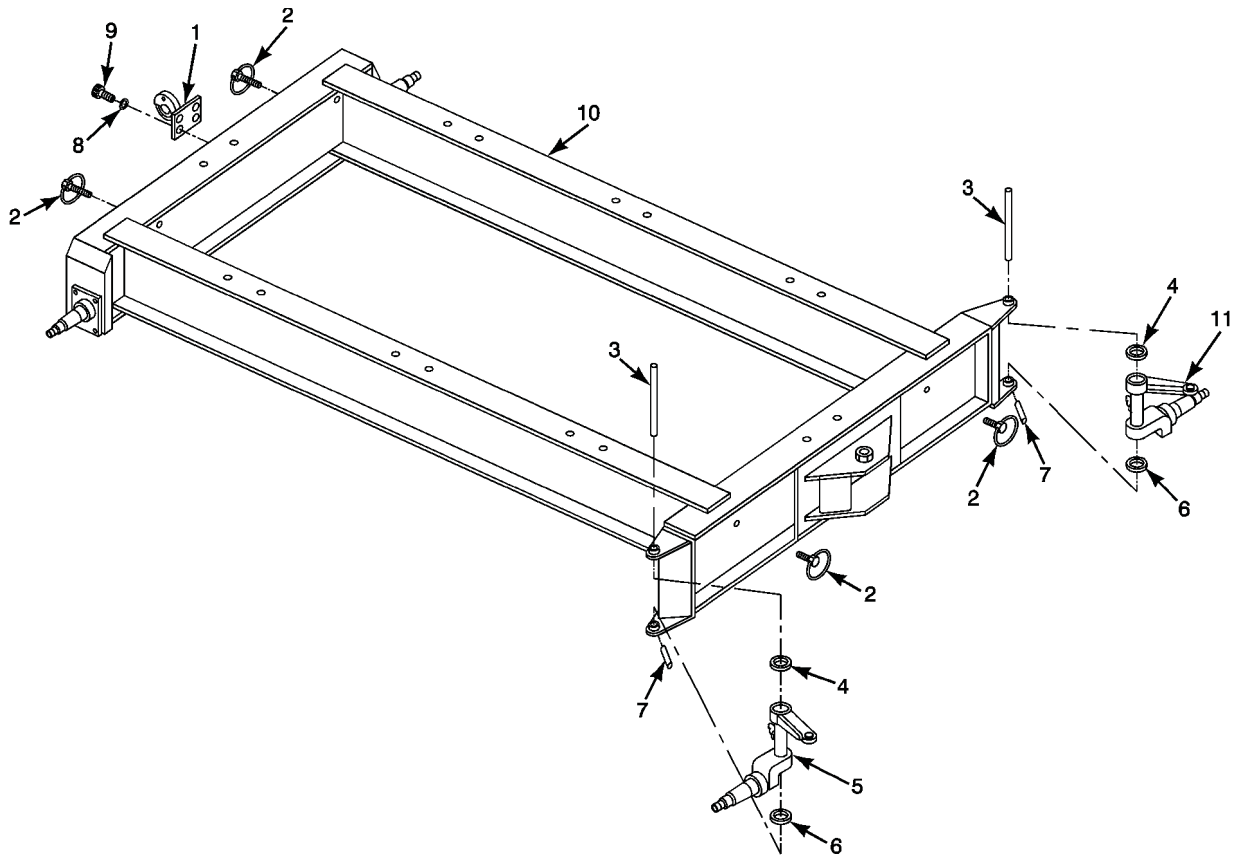
**References**

FM 1-563

**Equipment Condition**

Rail removed (WP 0012 00)  
Pallet Assembly removed (WP 0014 00)  
Pallet Mounting Channel removed (WP 0015 00)  
Tongue Assembly removed (WP 0019 00)  
Tie Rod Assembly removed (WP 0020 00)  
Hub and Bearings removed (WP 0025 00)  
Parking Brake Assembly removed (WP 0026 00)

**TEST AND INSPECTION**



MS031136

Figure 1. Undercarriage – Exploded View.

1. Check trailer undercarriage for cracks, burrs, sharp edges and other similar damage.
2. Check trailer undercarriage for bends or distortion.
3. Check trailer undercarriage for loose, missing or damaged parts.

**REPAIR OR REPLACEMENT**

1. Welding. Welding to repair cracks is to be done in accordance with FM 1-563.

**REPAIR OR REPLACEMENT – CONTINUED**

2. Use the appropriate hand file contained in the tool kit to remove burrs and sharp edges from trailer undercarriage.
3. Tighten loose parts. Replace missing, damaged, bent or distorted parts.

**DISASSEMBLY**

1. Remove four hex head cap screws (Figure 1, Item 9) with lock washers (Figure 1, Item 8) securing the pintle hook (Figure 1, Item 1) to the trailer undercarriage (Figure 1, Item 10). Remove the pintle hook (Figure 1, Item 1).
2. Remove four spring pins (Figure 1, Item 7), two king pins (Figure 1, Item 3), two flat washers (Figure 1, Item 6) and two thrust washers (Figure 1, Item 4) securing the left and right hand axle and king pin pivot assemblies (Figure 1, Item 5 and 11) to the trailer undercarriage. Remove both left and right hand axle and king pin pivot assemblies (Figure 1, Item 5 and 11).
3. Unscrew four tie-down rings (Figure 1, Item 2) from the front and rear of the trailer undercarriage (Figure 1, Item 10).

**ASSEMBLY**

1. Screw four tie-down rings (Figure 1, Item 2) into position on the front and rear of the trailer undercarriage (Figure 1, Item 10) until tight.
2. Install the left and right hand axle and king pin pivot assemblies (Figure 1, Item 5 and 11) into position with two thrust washers (Figure 1, Item 4), two flat washers (Figure 1, Item 6), two king pins (Figure 1, Item 3) and four spring pins (Figure 1, Item 7).
3. Position the pintle hook (Figure 1, Item 1) on the rear of the trailer undercarriage (Figure 1, Item 10) and install four hex head cap screws (Figure 1, Item 9) with lock washers (Figure 1, Item 8). Tighten hex head cap screws (Figure 1, Item 9) to a torque of **540 in-lbs**.

**END OF WORK PACKAGE**

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**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**BASE ASSEMBLY**

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**INITIAL SETUP:**

**Tools and Special Tools**

Tool Kit, Aircraft Maintenance, (WP 0036 00, Item 2)

**Personnel Required**

MOS 15H

**References**

FM 1-563

**Equipment Condition**

Rail removed (WP 0012 00)

Pallet Assembly removed (WP 0014 00)

**Equipment Condition (cont.)**

Pallet Mounting Channel removed (WP 0015 00)

Undercarriage disassembled (WP 0016 00)

Tongue Assembly removed (WP 0019 00)

Tie Rod Assembly removed (WP 0020 00)

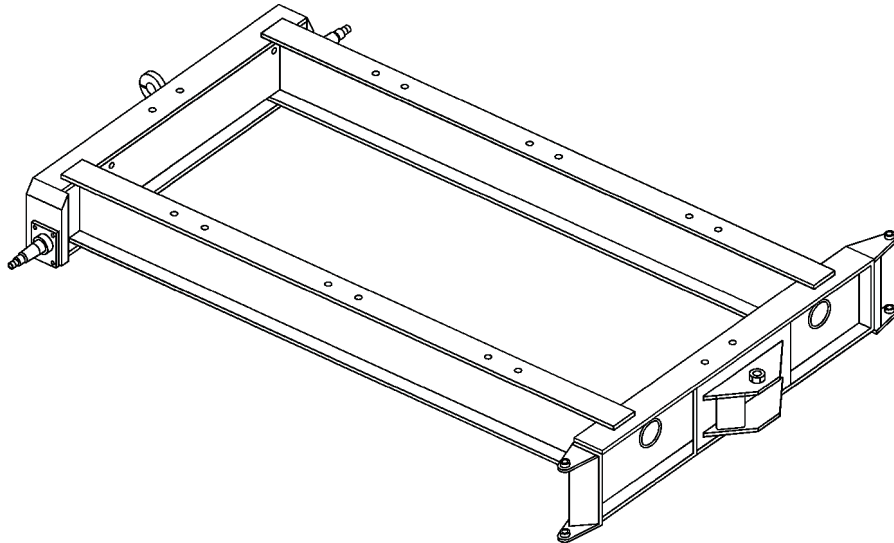
Axle and King Pin Pivot Assembly removed  
(WP 0022 00)

Hub and Bearings removed (WP 0025 00)

Parking Brake Assembly removed (WP 0026 00)

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**INSPECTION OF INSTALLED ITEMS**



MS031137

Figure 1. Base Assembly.

Check base assembly for cracks, burrs, sharp edges and other similar damage.

**REPAIR OR REPLACEMENT**

1. Welding. Welding to repair cracks is to be done in accordance with FM 1-563.
2. Use the appropriate hand file contained in the tool kit to remove burrs and sharp edges from channel.

**END OF WORK PACKAGE**



**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**TOW BAR ASSEMBLY**

**INITIAL SETUP:**

**Tools and Special Tools**

Tool Kit, Aircraft Maintenance, (WP 0036 00, Item 2)

**Personnel Required**

MOS 15H

**Materials/Parts**

Pin, Cotter (WP 0035 00, Item 3)

**References**

FM 1-563

**INSPECTION OF INSTALLED ITEMS**

1. Check tow bar assembly for cracks, burrs, sharp edges and other similar damage.
2. Check tow bar assembly for bends or distortion.
3. Check tow bar assembly for loose, missing or damaged parts.

**REPAIR OR REPLACEMENT**

1. Welding. Welding to repair cracks is to be done in accordance with FM 1-563.
2. Use the appropriate hand file contained in the tool kit to remove burrs and sharp edges from tow bar assembly.
3. Tighten loose parts. Replace missing, damaged, bent or distorted parts.

**REMOVAL**

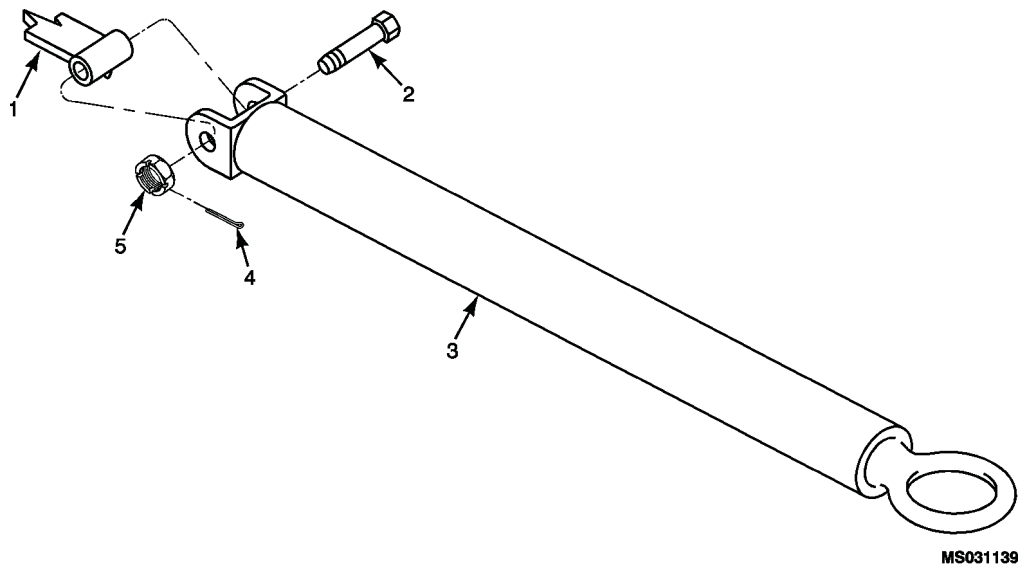


Figure 1. Tow Bar Assembly.

1. Straighten out cotter pin (Figure 1, Item 4) and remove from end of bolt (Figure 1, Item 2) securing assembly to the tongue assembly (Figure 1, Item 1).
2. Unthread slotted hex nut (Figure 1, Item 5) securing tow bar to tongue assembly (Figure 1, Item 1) and remove bolt (Figure 1, Item 2) and tow bar (Figure 1, Item 3).

**REMOVAL – CONTINUED****INSTALLATION**

1. Position tow bar (Figure 1, Item 3) on tongue assembly (Figure 1, Item 1) and install bolt (Figure 1, Item 2).
2. Thread slotted hex nut (Figure 1, Item 5) onto the bolt (Figure 1, Item 2) until the new cotter pin (Figure 1, Item 4) can be inserted into the hole in the bolt (Figure 1, Item 2). Bend the open end of the cotter pin (Figure 1, Item 4) to keep it in place.

**END OF WORK PACKAGE**

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**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**TONGUE ASSEMBLY**

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**INITIAL SETUP:**

**Tools and Special Tools**

Tool Set, Aviation Unit, (WP 0036 00, Item 1)  
Tool Kit, Aircraft Maintenance, (WP 0036 00, Item 2)

**References**

FM 1-563

**Materials/Parts**

Grease, Automotive (WP 0035 00, Item 1)

**Equipment Condition**

Tow Bar Assembly removed (WP 0018 00)  
Tie Rod Assembly removed (WP 0020 00)

**Personnel Required**

MOS 15H

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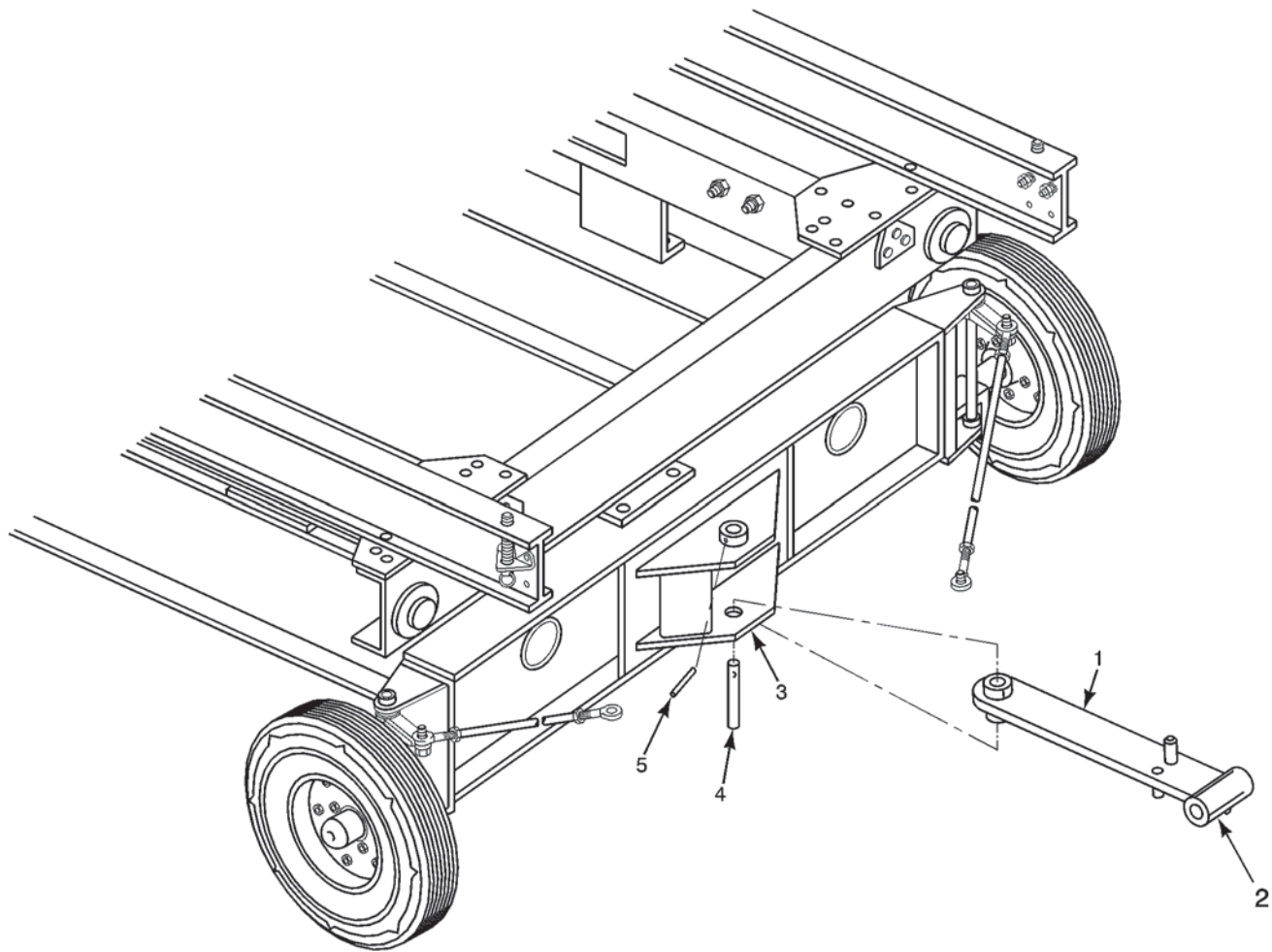
**INSPECTION OF INSTALLED ITEMS**

1. Check tongue assembly for cracks, burrs, sharp edges and other similar damage.
2. Check tongue assembly for bends or distortion.
3. Check tongue assembly for loose, missing or damaged parts.
4. Check tongue assembly for worn bushings.

**LUBRICATION**

Lubricate the bearing located in the tongue assembly (Figure 1, Item 2) with Grease, Automotive.

## LUBRICATION – CONTINUED



MS031141

Figure 1. Tongue Attaching Parts.

**REPAIR OR REPLACEMENT**

1. Welding. Welding to repair cracks is to be done in accordance with FM 1-563.
2. Use the appropriate hand file contained in the tool kit to remove burrs and sharp edges from tongue assembly.
3. Tighten loose parts. Replace missing, damaged, bent or distorted parts.

**REMOVAL**

1. Remove the groove pin (Figure 1, Item 5) from the tongue pivot pin (Figure 1, Item 4).
2. Remove the tongue pivot pin (Figure 1, Item 4) securing the tongue assembly (Figure 1, Item 1) to the bracket assembly (Figure 1, Item 3). Remove the tongue assembly (Figure 1, Item 1).

**INSTALLATION**

1. Position the tongue assembly (Figure 1, Item 1) on the trailer and align the holes.
2. Insert the tongue pivot pin (Figure 1, Item 4) through the bracket assembly (Figure 1, Item 3) on trailer into the tongue assembly (Figure 1, Item 1).



**INSTALLATION – CONTINUED**

3. Insert groove pin (Figure 1, Item 5) through the hole in the bracket assembly (Figure 1, Item 3) into the pivot pin (Figure 1, Item 4).

**END OF WORK PACKAGE**



**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**TIE ROD ASSEMBLY**

**INITIAL SETUP:**

**Tools and Special Tools**

Tool Set, Aviation Unit, (WP 0036 00, Item 1)  
Tool Kit, Aircraft Maintenance, (WP 0036 00, Item 2)

**Materials/Parts**

Grease, Automotive (WP 0035 00, Item 1)  
Pin, Cotter (WP 0035 00, Item 4)

**Personnel Required**

MOS 15H

**References**

WP 0025 00, Hub and Bearings

**Equipment Condition**

Tie Rod Assembly removed (WP 0020 00)

**INSPECTION OF INSTALLED ITEMS**

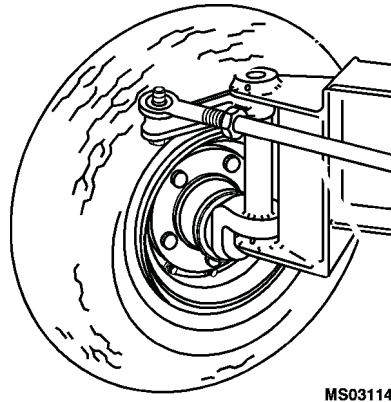


Figure 1. Tie Rod Assembly.

1. Check tie rod assembly (Figure 1) for bends or distortion.
2. Check tie rod assembly (Figure 2) for loose, missing or damaged parts.

**LUBRICATION**

Lubricate the bearings located in the tie rod ends of the tie rod assembly with Grease, Automotive. Grease fittings are provided on each tie rod end for this task.

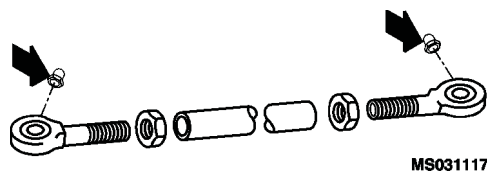


Figure 2. Tie Rod Lubrication Fittings.

**REPAIR OR REPLACEMENT**

1. Replace bent or distorted parts of the rod assembly.
2. Tighten jam nuts.
3. Replace all missing or damaged parts.

## REMOVAL

## LEFT SIDE

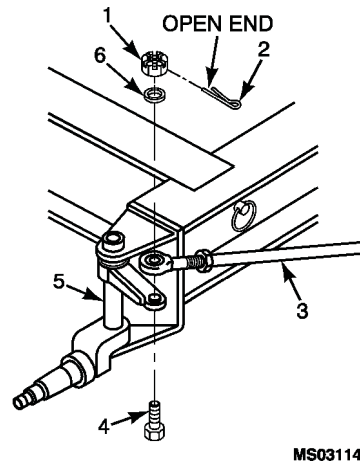


Figure 3. Left Hand Tie Rod Removal.

1. Straighten out and remove two cotter pins (Figure 3, Item 2) located at both ends of tie rod (Figure 3, Item 3).
2. Unthread two slotted hex nuts (Figure 3, Item 1) securing the tie rod (Figure 3, Item 3) to the left hand axle and king pin pivot assembly (Figure 3, Item 5) and to the top of the tongue assembly.
3. Remove two bolts (Figure 3, Item 4) and flat washers (Figure 3, Item 6) securing both ends of the tie rod (Figure 3, Item 3) to the left hand axle and king pin pivot assembly (Figure 3, Item 5) to the top of the tongue assembly. Remove the tie rod (Figure 3, Item 3).

## RIGHT SIDE

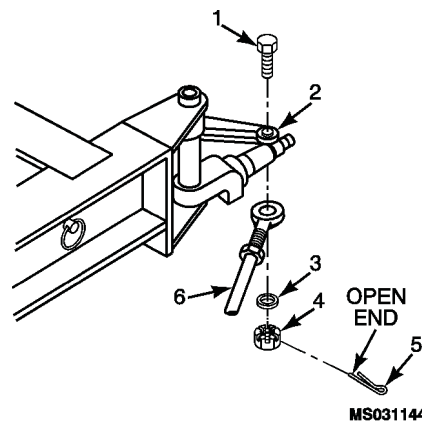


Figure 4. Right Hand Tie Rod Removal.

1. Straighten out and remove two cotter pins (Figure 4, Item 5) located at both ends of the tie rod (Figure 4, Item 6)
2. Unthread two slotted hex nuts (Figure 4, Item 4) securing the tie rod (Figure 4, Item 6) to the right hand axle and king pin pivot assembly (Figure 4, Item 2) and to the bottom of the tongue assembly.
3. Remove two bolts (Figure 4, Item 1) and flat washers (Figure 4, Item 3) securing both ends of the tie rod (Figure 4, Item 6) to the right hand axle and king pin assembly (Figure 4, Item 2) and to the bottom of the tongue assembly. Remove the tie rod (Figure 4, Item 6).

**INSTALLATION****LEFT SIDE**

1. Position one end of the tie rod (Figure 3, Item 3) on the left hand axle and king pin pivot assembly (Figure 3, Item 5) and the other end on the bottom of the tongue assembly and install two bolts (Figure 3, Item 4).
2. Install two flat washers (Figure 3, Item 6) and slotted hex nuts (Figure 3, Item 1) on bolts (Figure 3, Item 4). Thread the slotted hex nuts (Figure 3, Item 1) on the bolts (Figure 3, Item 4) far enough to install new cotter pins (Figure 3, Item 2) through slots in the slotted hex nuts (Figure 3, Item 1) into the hole in the bolts (Figure 3, Item 4).
3. Bend the open end of the cotter pins (Figure 3, Item 2) to secure them in place.
4. Check and adjust tie rod as necessary.

**RIGHT SIDE**

1. Position one end of the tie rod (Figure 4, Item 6) on the right hand axle and king pin pivot assembly (Figure 4, Item 2) and the other end on the top of the tongue assembly and install two bolts (Figure 4, Item 1).
2. Install two flat washers (Figure 4, Item 3) and slotted hex nuts (Figure 4, Item 4) on bolts (Figure 4, Item 1). Thread the slotted hex nuts (Figure 4, Item 4) on the bolts (Figure 4, Item 1) far enough to install new cotter pins (Figure 4, Item 5) through the slots in the slotted hex nuts into the hole in the bolts (Figure 4, Item 1).
3. Bend the open end of the cotter pins (Figure 4, Item 5) to secure them in place.
4. Check and adjust tie rod as necessary.

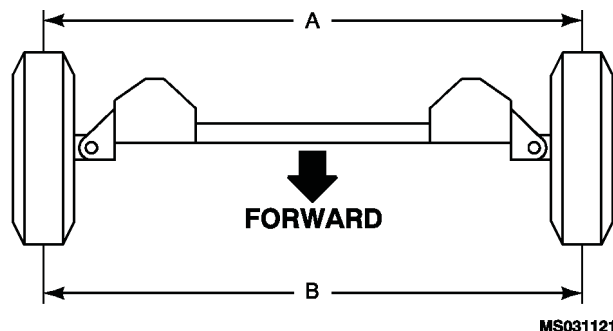
**ADJUSTMENT****CHECK ADJUSTMENT PROCEDURE**

Figure 5. Tie Rod Adjustment Measurements.

1. Adjust wheel bearings. Refer to WP 0025 00, Hub and Bearings. Place trailer on level ground or floor.
2. Position tow bar so that both front tires are straight, so that if the trailer were to be towed, it would not turn.
3. Measure between tread centers at hub height behind tires (Figure 5 , measurement A)
4. Measure between tread centers at hub height in front of tires (Figure 5 , measurement B).
5. Measurement B (Figure 5 ) must be **1/16 inch** less than (Figure 5 measurement A).

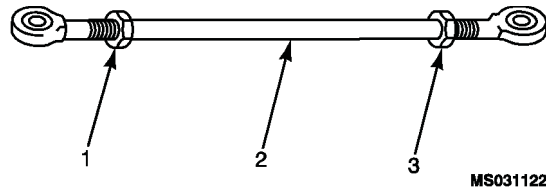
**ADJUSTMENT – CONTINUED****TIE ROD ADJUST PROCEDURE**

Figure 6. Tie Rod Assembly.

1. If measurement B (Figure 5 ) is too short, lengthen tie rods. If measurement is too long, shorten tie rods as needed.
2. Loosen two locknuts (Figure 6, Item 1 and 3) on both tie rods.
3. Turn tubes (Figure 6, Item 2) to shorten or lengthen as needed.
4. Check the adjustments using the Check Adjustment Procedure.
5. When measurements are correct, tighten locknuts (Figure 6, Item 1 and 3).

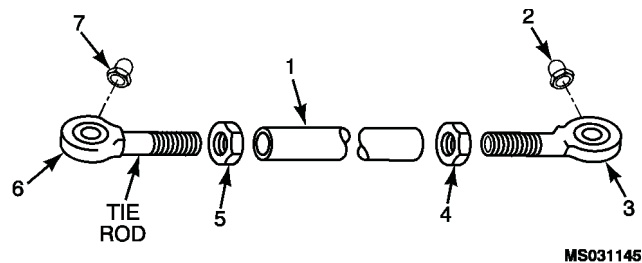
**DISASSEMBLY**

Figure 7. Tie Rod – Exploded View.

**NOTE**

Take note that there are left and right-hand threaded hex jam nuts and tie rod ends.

1. Loosen two hex jam nuts (Figure 7, Item 4 and 5) on the tie rod ends (Figure 7, Item 3 and 6).
2. Unthread two tie rod ends (Figure 7, Item 3 and 6) with hex jam nuts (Figure 7, Item 4 and 5) from the tie rod steering body (Figure 7, Item 1).
3. Unthread and discard grease fittings (Figure 7, Item 2 and 7) from each tie rod end (Figure 7, Item 3 and 6) if damaged.

**ASSEMBLY**

1. Thread two tie rod ends (Figure 7, Item 3 and 6) with hex jam nuts (Figure 7, Item 4 and 5) into the tie rod steering body (Figure 7, Item 1).
2. It will be necessary to make adjustments in the tie rod assembly for proper alignment of tires during installation. Refer Tie Rod Adjust Procedure above.
3. Install new grease fittings (Figure 7, Item 2 and 7) in the tie rod ends (Figure 7, Item 3 and 6) if damaged fittings were removed.

**END OF WORK PACKAGE**

**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**BEARINGS AND GREASE FITTINGS**

**INITIAL SETUP:**

**Tools and Special Tools**

Tool Kit, Aircraft Maintenance, (WP 0036 00, Item 2)

**Personnel Required**

MOS 15H

**References**

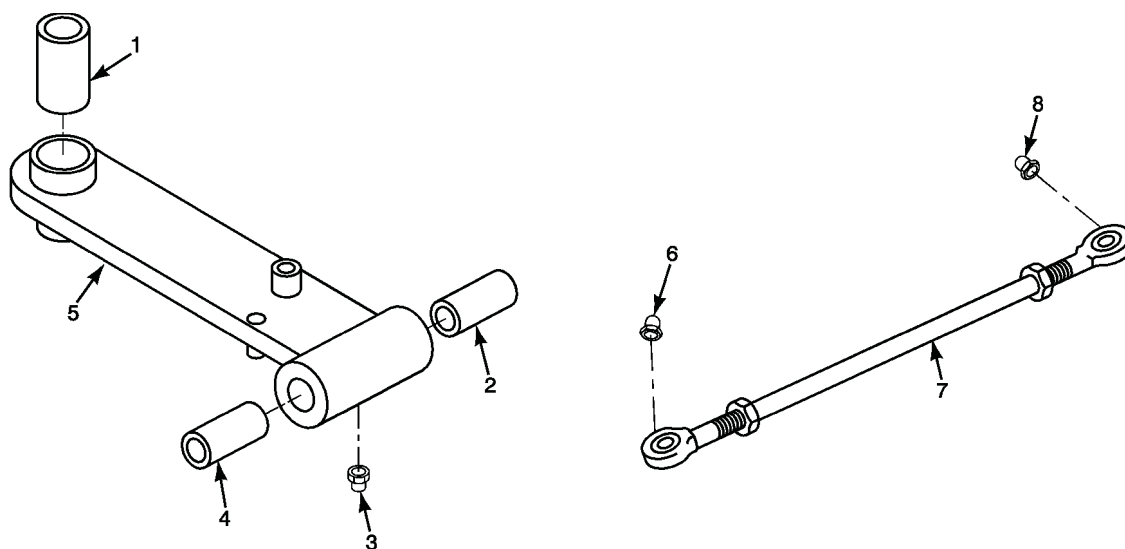
WP 0020 00, Tie Rod Assembly

**Equipment Condition**

Tongue Assembly removed (WP 0019 00)

Tow Bar Assembly removed. (WP 0018 00)

**INSPECTION OF INSTALLED ITEMS**



MS031147

Figure 1. Bearings and Fittings.

1. Check bearings (Figure 1, Item 1, 2, and 4 ) and grease fittings (Figure 1, Item 3, 6, and 8 ) for worn or damaged parts.
2. Check bearings (Figure 1, Item 1, 2, and 4 ) for evidence of binding or excessive clearance.

**REMOVAL**

1. Drive three bearings (Figure 1, Item 1, 2 and 4) out of the tongue assembly (Figure 1, Item 5). Discard bearings.
2. Unthread damaged grease fitting (Figure 1, Item 3, 6 and 8) from tongue assembly (Figure 1, Item 5). Discard fitting.
3. Bearings in the tie rod ends cannot be removed. Replace tie rod end refer to WP 0020 00, Tie Rod Assembly.
4. Unthread damaged grease fittings (Figure 1, Item 6 and 8) from tie rod assembly (Figure 1, Item 7). Discard fittings.

**INSTALLATION**

1. Drive three new bearings (Figure 1, Item 1, 2 and 4) into position on the tongue assembly (Figure 1, Item 5).
2. Thread new grease fitting (Figure 1, Item 3, 6 and 8) into tongue assembly (Figure 1, Item 5) and tie rod assemblies (Figure 1, Item 7) until threads are no longer visible.

**END OF WORK PACKAGE**



**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**AXLE AND KING PIN PIVOT ASSEMBLY**

**INITIAL SETUP:**

**Tools and Special Tools**

Tool Kit, Aircraft Maintenance, (WP 0036 00, Item 2)  
Tool Set, Intermediate Maintenance  
(WP 0036 00, Item 3)  
Wrench, Torque 30-200 in lb, 1/4 drive  
(WP 0036 00, Item 4)

**Materials/Parts**

Grease, Automotive (WP 0035 00, Item 1)

**Personnel Required**

MOS 15H

**References**

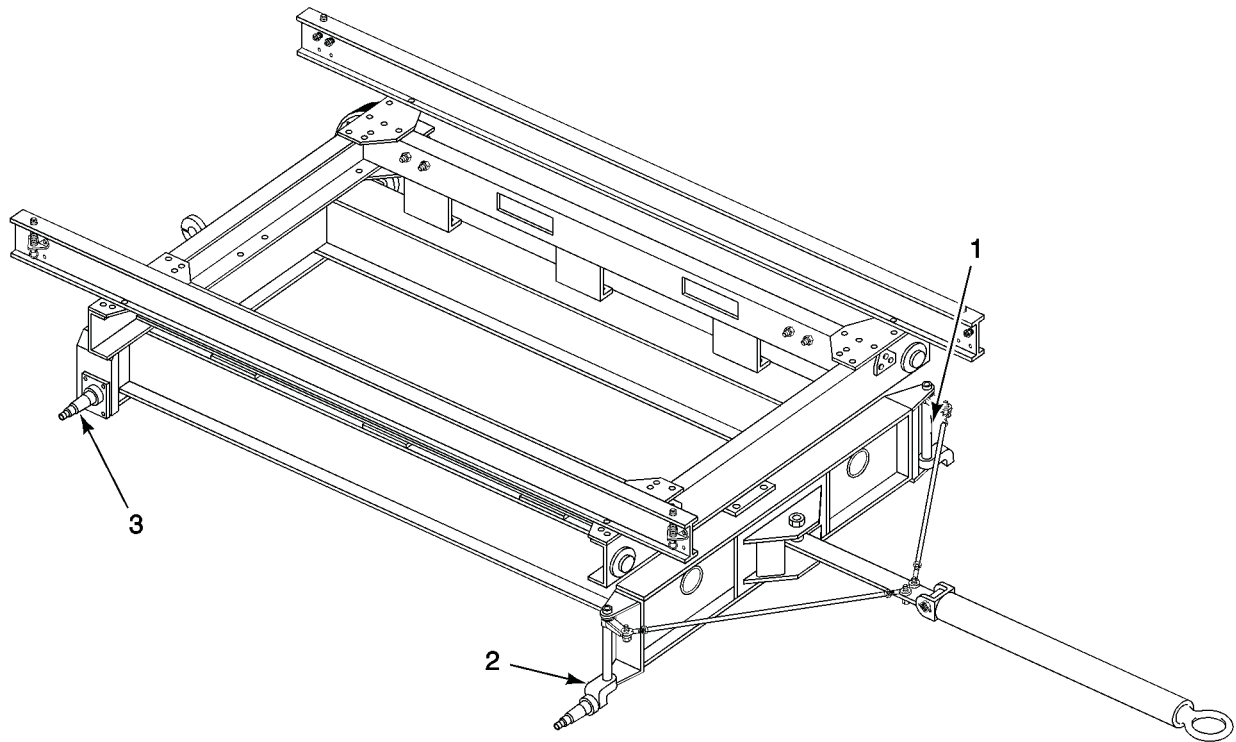
FM 1-563

**Equipment Condition**

Tie Rod Assembly removed (WP 0020 00)

Hub and Bearings removed (WP 0025 00)

**INSPECTION OF INSTALLED ITEMS**



MS031148

Figure 1. Axle and King Pin Pivot Assemblies.

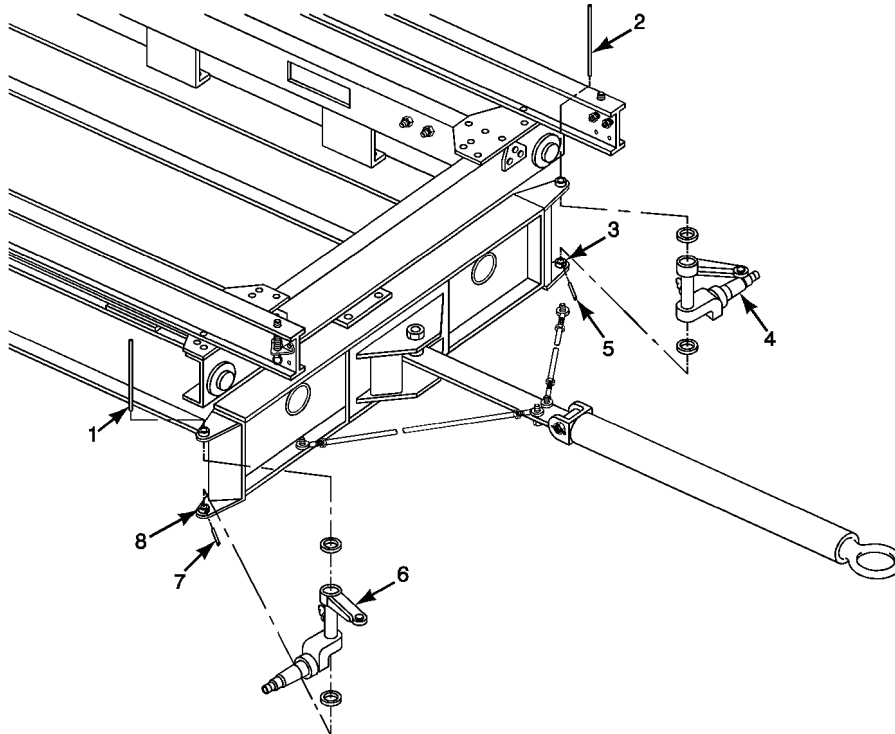
1. Check left and right-hand axle and king pin pivot assemblies (Figure 1, Item 1 and 2 ) for bends or distortion.
2. Check rear axle (Figure 1, Item 3 ) and left and right-hand axle and king pin pivot assemblies (Figure 1, Item 1 and 2 ) for cracks, burrs, sharp edges and other similar damage.
3. Check left and right-hand axle and king pin pivot assemblies (Figure 1, Item 1 and 2 ) for worn bearings and king pins.
4. Check left and right-hand axle and king pin pivot assemblies (Figure 1, Item 1 and 2 ) for missing parts.

**SERVICE**

Lubricate the bearings located in the left and right-hand axle and king pin pivot assemblies (Figure 1, Item 1 and 2 ). There are grease fittings provided for this task.

**REPAIR OR REPLACEMENT**

1. Welding. Welding to repair cracks is to be done in accordance with FM 1-563.
2. Use the appropriate hand file contained in the tool kit to remove burrs and sharp edges from rear axle or axle and king pin pivot assembly.
3. Replace missing, damaged, bent or distorted parts.

**REMOVAL**

MS031149

Figure 2. LH and RH Axle and King Pin Pivot Assemblies – Exploded View.

**LEFT OR RIGHT-HAND**

1. Remove two spring pins (Figure 2, Item 5 and 7 ) from the king pin (Figure 2, Item 1 and 2 ).
2. Remove king pins (Figure 2, Item 1 and 2 ) securing the axle and king pin pivot assemblies (Figure 2, Item 4 and 6 ) to the king pin support assemblies (Figure 2, Item 3 and 8 ). Remove the axle and king pin pivot assemblies (Figure 2, Item 4 and 6 ).

**INSTALLATION****LEFT OR RIGHT-HAND**

1. Position axle and king pin pivot assemblies (Figure 2, Item 4 and 6 ) on the king pin support assemblies (Figure 2, Item 3 and 8 ).
2. Align holes and install king pins (Figure 2, Item 1 and 2 ) through the king pin support assemblies (Figure 2, Item 3 and 8 ) and the axle and king pin pivot assemblies (Figure 2, Item 4 and 6 ).
3. Install two spring pins (Figure 2, Item 5 and 7 ) through the holes on the king pin support assemblies (Figure 2, Item 3 and 8 ) and king pins (Figure 2, Item 1 and 2 ).

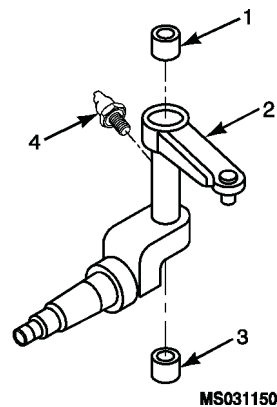
**DISASSEMBLY**

Figure 3. King Pin Pivot Assembly.

1. Drive two bearings (Figure 3, Item 1 and 3) out of the axle and king pin pivot assembly (Figure 3, Item 2). Discard the bearings.
2. Unthread damaged grease fitting (Figure 3, Item 4) from the axle and king pin pivot assembly (Figure 3, Item 2). Discard the fitting.

**ASSEMBLY**

1. Drive two new bearings (Figure 3, Item 1 and 3) into position in the axle and king pin pivot assembly (Figure 3, Item 2).
2. Thread a new grease fitting (Figure 3, Item 4) into position on the axle and king pin pivot assembly (Figure 3, Item 2) until the threads on the fitting are no longer visible.

**END OF WORK PACKAGE**



**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**RIM ASSEMBLY**

**INITIAL SETUP:**

**Tools and Special Tools**

Tool Set, Aviation Unit (WP 0036 00, Item 1)  
 Tool Kit, Aircraft Maintenance (WP 0036 00, Item 2)  
 Wrench, Torque 100–750 in lb, 3/8 drive  
 (WP 0036 00, Item 5)

**Personnel Required**

MOS 15H

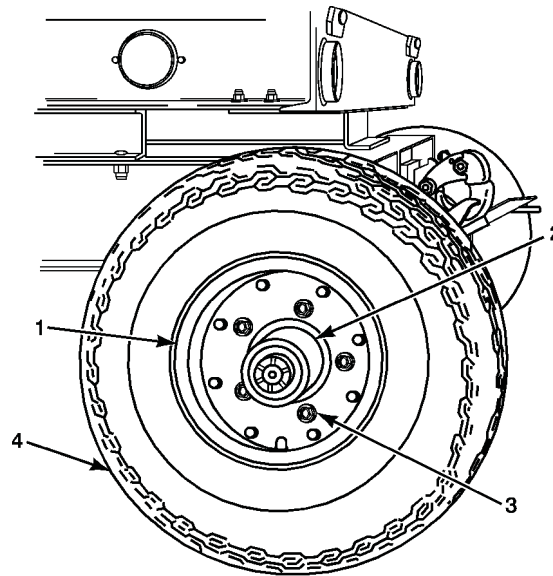


Figure 1. Wheel Assembly.

**INSPECTION OF INSTALLED ITEMS**

1. Remove rim assembly (Figure 1, Item 1) from hub (Figure 1, Item 2).
2. Check rim assembly (Figure 1, Item 1) for cracks, burrs, sharp edges and other similar damage.
3. Check rim assembly (Figure 1, Item 1) for bends or distortion.
4. Check rim assembly (Figure 1, Item 1) for loose, missing or damaged parts.

**REMOVAL**

**WARNING**

Position trailer on a hard level surface. Block wheels on the opposite side of the trailer from which the wheel is to be removed to prevent the trailer from rolling and causing personal injury.

1. Position trailer on a hard level surface. Block tires on opposite side of wheels to be removed.
2. Raise trailer so that wheel to be removed clears the ground and support the trailer in the raised position.

**REMOVAL – CONTINUED**

3. Remove five nuts with washers (Figure 1, Item 3) securing the rim assembly (Figure 1, Item 1), tire and tube (Figure 1, Item 4) to the hub (Figure 1, Item 2).
4. Remove rim assembly (Figure 1, Item 1), tire and tube (Figure 1, Item 4) from the hub (Figure 1, Item 2).

**INSTALLATION**

1. Position the rim assembly (Figure 1, Item 1), tire and tube (Figure 1, Item 4) on the hub (Figure 1, Item 2).
2. Install five nuts with washers (Figure 1, Item 3) to secure the rim assembly (Figure 1, Item 1), tire and tube (Figure 1, Item 4) to the hub (Figure 1, Item 2). Tighten nuts with washers (Figure 1, Item 3) to a torque of **540 in-lbs.**

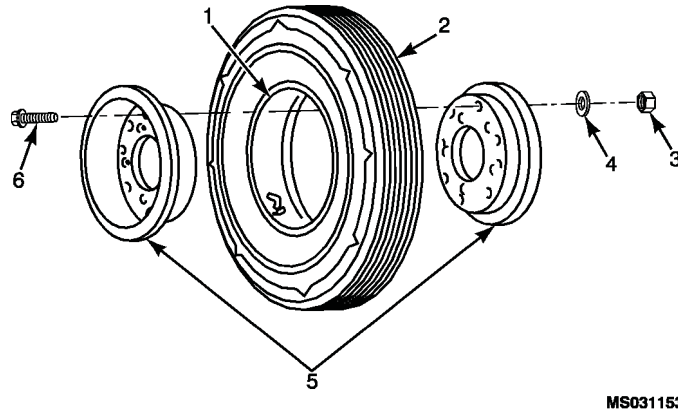
**DISASSEMBLY**

Figure 2. Rim Assembly – Exploded View.

**WARNING**

Deflate tire before loosening bolts securing rim halves. Failure to deflate tire could cause explosive rim failure.

1. Depress valve in valve stem to allow air to be released from tube (Figure 2, Item 1).
2. Remove eight nuts (Figure 2, Item 3) and washers (Figure 2, Item 4) from bolts (Figure 2, Item 6) securing both halves of the rim assembly (Figure 2, Item 5) together.
3. Remove eight bolts (Figure 2, Item 6) and separate both halves of the rim assembly (Figure 2, Item 5) from the tire (Figure 2, Item 2) and tube (Figure 2, Item 1), being careful not to damage the valve stem on the tube (Figure 2, Item 1).

**ASSEMBLY**

1. Position both halves of the rim assembly (Figure 2, Item 5) on the tire (Figure 2, Item 2) and tube (Figure 2, Item 1). Align bolt (Figure 2, Item 6) holes being careful not to pinch the tube (Figure 2, Item 1) between the rim halves (Figure 2, Item 5) or damage the valve stem.
2. Insert eight bolts (Figure 2, Item 6) in the rim assembly (Figure 2, Item 5) and install eight washers (Figure 2, Item 4) and eight nuts (Figure 2, Item 3). Tighten to a torque of **19 ft-lbs.**
3. Inflate tire (Figure 2, Item 2) and tube (Figure 2, Item 1) to **65 psi.**
4. Lower trailer to the ground and remove the wheel blocks.

**END OF WORK PACKAGE**

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STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653

TIRE AND TUBE

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**INITIAL SETUP:**

**Tools and Special Tools**

Tool Kit, Aircraft Maintenance (WP 0036 00, Item 2)  
Tool Set, Intermediate Maintenance  
(WP 0036 00, Item 3)  
Wrench, Torque 100–750 in lb, 3/8 drive  
(WP 0036 00, Item 5)

**Personnel Required**

MOS 15H

**References**

FM 1-563

**Equipment Condition**

WP 0023 00, Rim Assembly removed  
(WP 0023 00, Rim Assembly)

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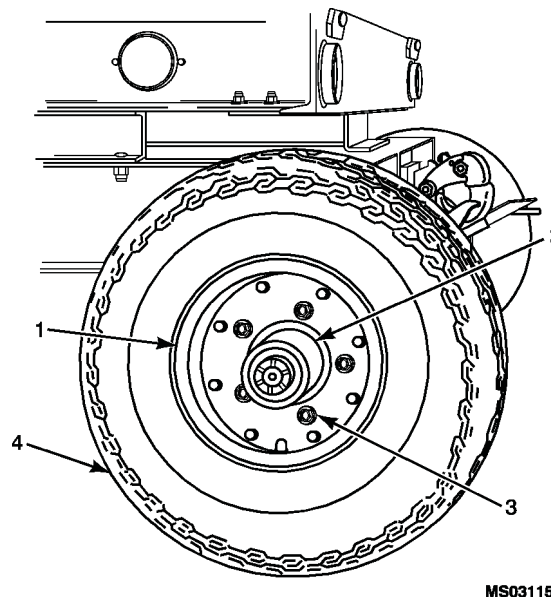


Figure 1. Wheel Assembly.

**INSPECTION OF INSTALLED ITEMS**

1. Check tire pressure on all four tires. They should all be **65 psi**.
2. Check tire for cuts, defects, wear and leaks.
3. Check tire for any object imbedded in the treads.

**REPAIR OR REPLACEMENT**

1. All tire and tube repair will be done in accordance with FM 1-563.
2. Remove any objects imbedded in the treads.

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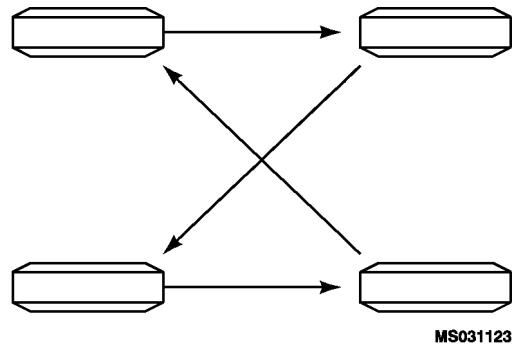
**SERVICE****TIRE ROTATION**

Figure 2. Tire Rotation.

**NOTE**

Tires to be rotated will be installed on rims, meet proper inflation pressures, and be mounted on the maintenance trailer.

1. Position trailer on a hard level surface.
2. Raise trailer so that the wheels clear the ground and support the trailer in the raised position.
3. Remove five nuts with washers (Figure 1, Item 3) securing each wheel assembly to the hub (Figure 1, Item 2). Remove the wheel assemblies (Figure 1, Item 1) from their hubs (Figure 1, Item 2).
4. Reposition each wheel assembly to its new location per Figure 2.
5. Position the wheel assemblies (Figure 1, Item 1) on their hubs (Figure 1, Item 2) at their new locations.
6. Install five nuts with washers (Figure 1, Item 3) securing each wheel assembly (Figure 1, Item 1) to the hub (Figure 1, Item 2). Tighten nuts with washers (Figure 1, Item 3) to a torque of **540 in-lbs**.
7. Lower trailer to the ground.

**REMOVAL**

Removal of the tire and tube is to be done in accordance with FM 1-563.

**INSTALLATION**

Installation of the tire and tube is to be done in accordance with FM 1-563.

**END OF WORK PACKAGE**



**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**HUB AND BEARINGS**

**INITIAL SETUP:**

**Tools and Special Tools**

Tool Kit, Aircraft Maintenance (WP 0036 00, Item 2)  
Tool Set, Intermediate Maintenance  
(WP 0036 00, Item 3)

**Materials/Parts**

Cleaning Compound, Solvent (WP 0035 00, Item 2)

**Materials/Parts (cont.)**

Grease, Automotive (WP 0035 00, Item 1)  
Pin, Cotter (WP 0035 00, Item 5)  
Seal, Grease (WP 0035 00, Item 6)

**Personnel Required**

MOS 15H

**INSPECTION OF INSTALLED ITEMS**

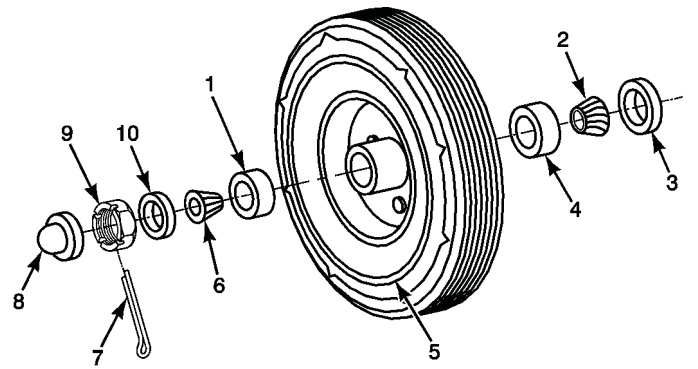


Figure 1. Bearings Assembly.

1. Raise wheels off ground for the following checks.
2. Check wheel for any sideways movement of bearings.
3. Check bearings (Figure 1, Item 2 and 6 ) for excessive noise when wheel is rotated.
4. Check tire and hub (Figure 1, Item 5 ) and bearings (Figure 1, Item 2 and 6 ) for worn or damaged parts.

**SERVICE**

**WARNING**

Cleaning solvent MIL-PRF-680 is flammable and a skin irritant. Keep open flame away, avoid prolonged skin contact, and wash contacted skin area.

1. Rinse bearings (Figure 1, Item 2 and 6 ) in Cleaning Compound, Solvent to remove old grease. Remove bearings (Figure 1, Item 2 and 6 ) from solvent and let air dry.
2. Repack bearings (Figure 1, Item 2 and 6 ) with Grease, Automotive.

**REMOVAL**

1. Remove hub cap (Figure 1, Item 8) from tire and hub (Figure 1, Item 5).
2. Straighten the ends of the cotter pin (Figure 1, Item 7) and pull out of the slotted hex nut (Figure 1, Item 9).
3. Unthread the slotted hex nut (Figure 1, Item 9) and remove thrust washer (Figure 1, Item 10) and outer bearing cone (Figure 1, Item 6).

**REMOVAL – CONTINUED**

4. Remove tire and hub (Figure 1, Item 5) from axle.
5. Remove inner grease seal (Figure 1, Item 3) and inner bearing cone (Figure 1, Item 2) from tire and hub (Figure 1, Item 5).
6. Drive inner and outer bearing cups (Figure 1, Item 1 and 4) from tire and hub (Figure 1, Item 5).

**INSTALLATION**

1. Drive the inner bearing cup (Figure 1, Item 4) and outer bearing cup (Figure 1, Item 1) into the tire and hub (Figure 1, Item 5) until they bottom out in the tire and hub (Figure 1, Item 5).
2. Insert inner bearing cone (Figure 1, Item 2) into the tire and hub (Figure 1, Item 5) and drive a new inner grease seal (Figure 1, Item 3) into the tire and hub (Figure 1, Item 5) making certain that the inner grease seal (Figure 1, Item 3) does not become cocked in the tire and hub (Figure 1, Item 5).
3. Slide tire and hub (Figure 1, Item 5) with inner and outer bearing cups (Figure 1, Item 1 and 4), inner bearing cone (Figure 1, Item 2) and grease seal (Figure 1, Item 3) installed, on rear axle shaft or front axle and king pin pivot assembly.
4. Install outer bearing cone (Figure 1, Item 6), thrust washer (Figure 1, Item 10), and slotted hex nut (Figure 1, Item 9) on axle shaft.
5. Tighten slotted hex nut (Figure 1, Item 9) while rotating the tire until a noticeable drag is felt. Back off the nut (Figure 1, Item 9) about  $\frac{1}{8}$  turn to the nearest cotter pin slot.
6. Install cotter pin (Figure 1, Item 7) and bend open end to keep it in place.
7. Install hub cap.

**END OF WORK PACKAGE**

**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**PARKING BRAKE ASSEMBLY**

**INITIAL SETUP:**

**Tools and Special Tools**

Tool Kit, Aircraft Maintenance (WP 0036 00, Item 2)  
Tool Set, Intermediate Maintenance  
(WP 0036 00, Item 3)  
Wrench, Torque 30-200 in lb, 1/4 drive  
(WP 0036 00, Item 4)

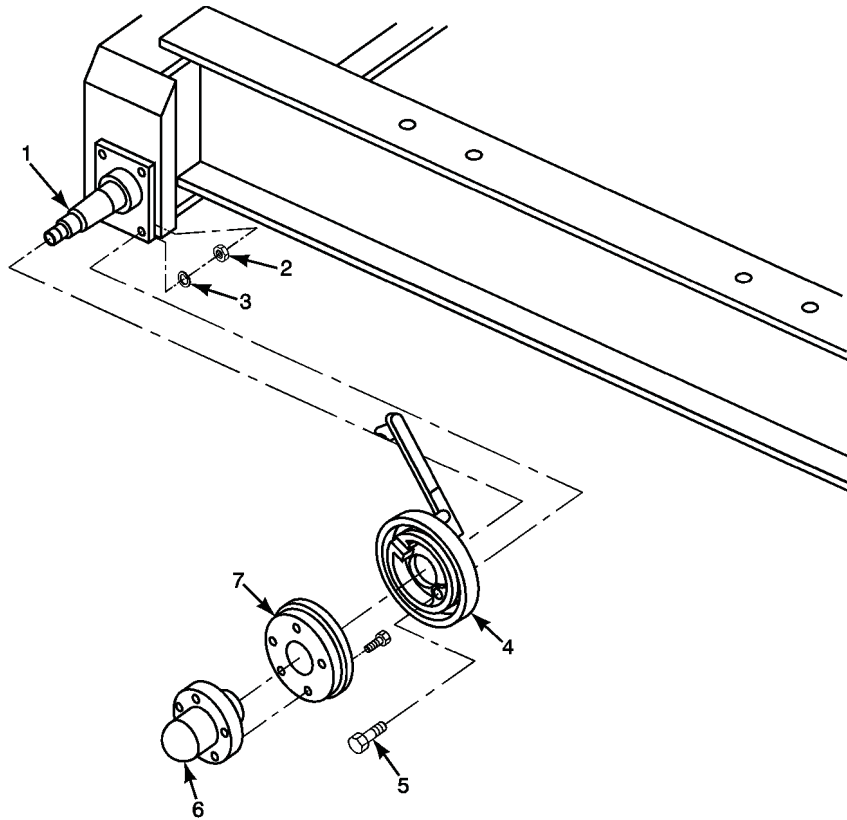
**Personnel Required**

MOS 15H

**Equipment Condition**

Hub and Bearings removed (WP 0025 00)

**INSPECTION OF INSTALLED ITEMS**



MS031158

Figure 1. Parking Brake and Drum Assembly.

1. Check brake drum (Figure 1, Item 7) and shoe assembly (Figure 2, Item 5) for wear.
2. Check brake drum (Figure 1, Item 7) and shoe assembly (Figure 2, Item 5) for evidence of grease.
3. Check brake assembly (Figure 1, Item 4) for loose, missing or damaged parts.

**REPAIR OR REPLACEMENT**

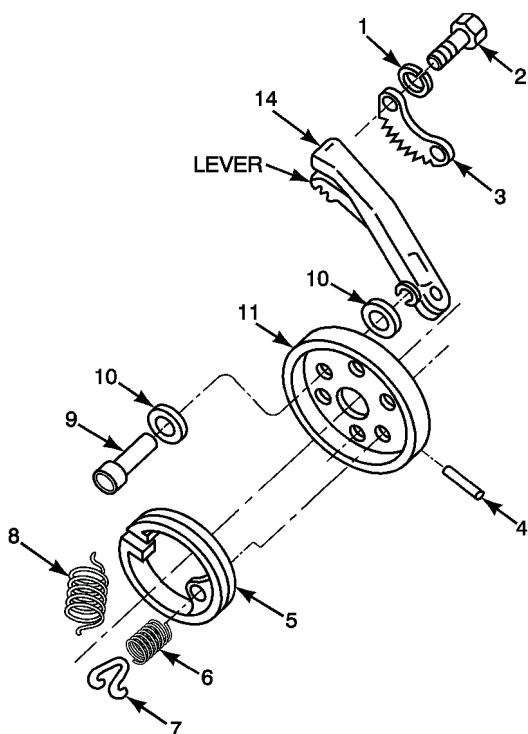
1. Remove and replace brake drum (Figure 1, Item 7) or worn shoe assembly (Figure 2, Item 5).
2. Tighten loose parts. Replace missing or damaged parts.

**REMOVAL**

1. Pull brake drum (Figure 1, Item 7) and hub assembly (Figure 1, Item 6) off the brake assembly (Figure 1, Item 4).
2. Remove four hex head cap screws (Figure 1, Item 5), lock washers (Figure 1, Item 3), and plain hex nuts (Figure 1, Item 2) securing the brake assembly (Figure 1, Item 4) to the rear axle. Remove the brake assembly (Figure 1, Item 4).

**INSTALLATION**

1. Position the brake assembly (Figure 1, Item 4) on the rear axle (Figure 1, Item 1) and align holes.
2. Install the four hex head cap screws (Figure 1, Item 5) through the brake assembly (Figure 1, Item 4) and place a lock washer (Figure 1, Item 3) and a plain hex nut (Figure 1, Item 2) on each hex head cap screw (Figure 1, Item 5). Tighten plain hex nuts (Figure 1, Item 2) to a torque of **19 ft-lbs**.
3. Position the brake drum (Figure 1, Item 7) and hub assembly (Figure 1, Item 6) on the brake assembly (Figure 1, Item 4) after installing WP 0025 00, Hub and Bearings.

**DISASSEMBLY**

MS031159

Figure 2. Parking Brake – Exploded View.

1. Remove two screws (Figure 2, Item 2) and two lock washers (Figure 2, Item 1) to loosen the sector (Figure 2, Item 3) from the back of the mounting plate (Figure 2, Item 11). Note the position of the sector (Figure 2, Item 3) and the pedal assembly (Figure 2, Item 14) for reassembly.
2. Loosen screw (Figure 2, Item 2) and remove the pedal assembly (Figure 2, Item 14) along with the sector (Figure 2, Item 3).
3. Turn the mounting plate (Figure 2, Item 11) over and push in on the clip (Figure 2, Item 7). Pull the spring pin (Figure 2, Item 4) free from the back of the mounting plate (Figure 2, Item 11) and remove the compression spring (Figure 2, Item 6) and clip (Figure 2, Item 7) from the front of the mounting plate (Figure 2, Item 11).

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**DISASSEMBLY – CONTINUED**

4. Remove the shoe assembly (Figure 2, Item 5) with the spring from the front of the mounting plate . Remove the spring from the brake lining.
5. Remove the camshaft assembly (Figure 2, Item 9) and the two washers (Figure 2, Item 10).

**ASSEMBLY**

1. Install camshaft assembly (Figure 2, Item 9) with one washer (Figure 2, Item 10) on each side of the mounting plate (Figure 2, Item 11).
2. Spread the brake shoe assembly (Figure 2, Item 5) and position with the camshaft assembly (Figure 2, Item 9) between wear plates on the brake shoe assembly (Figure 2, Item 5).
3. Install compression spring (Figure 2, Item 6) and clip (Figure 2, Item 7) into shoe assembly. Push on compression spring (Figure 2, Item 6) and clip (Figure 2, Item 7) and then insert spring pin (Figure 2, Item 4) through clip (Figure 2, Item 7) and into the groove on back side of mounting plate (Figure 2, Item 11).
4. Install pedal assembly (Figure 2, Item 14) on camshaft assembly (Figure 2, Item 9) then position the sector (Figure 2, Item 3) in the pedal assembly (Figure 2, Item 14) as noted during disassembly, Step 1.), and secure the pedal assembly (Figure 2, Item 14) to the back of the mounting plate (Figure 2, Item 11) with two lock washers (Figure 2, Item 1) and screws (Figure 2, Item 2). Tighten all screws to a torque of **11 ft-lbs**.
5. Install tension spring (Figure 2, Item 8) on brake shoe assembly (Figure 2, Item 5). Note that the brake assembly is self-adjusting.

**END OF WORK PACKAGE**



**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**PREPARATION FOR STORAGE OR SHIPMENT**

**INITIAL SETUP:**

**Materials/Parts**

Pin, Cotter (WP 0035 00, Item 3)  
Preservative Oil (WP 0035 00, Item 7)  
Strapping (WP 0035 00, Item 8)  
Wrap, Barrier (WP 0035 00, Item 9)

**Personnel Required**

MOS 15H

**Equipment Condition**

Preventative Maintenance Checks and Services (PMCS) performed (WP 0011 00)

**PREPARATION FOR STORAGE OR SHIPMENT**

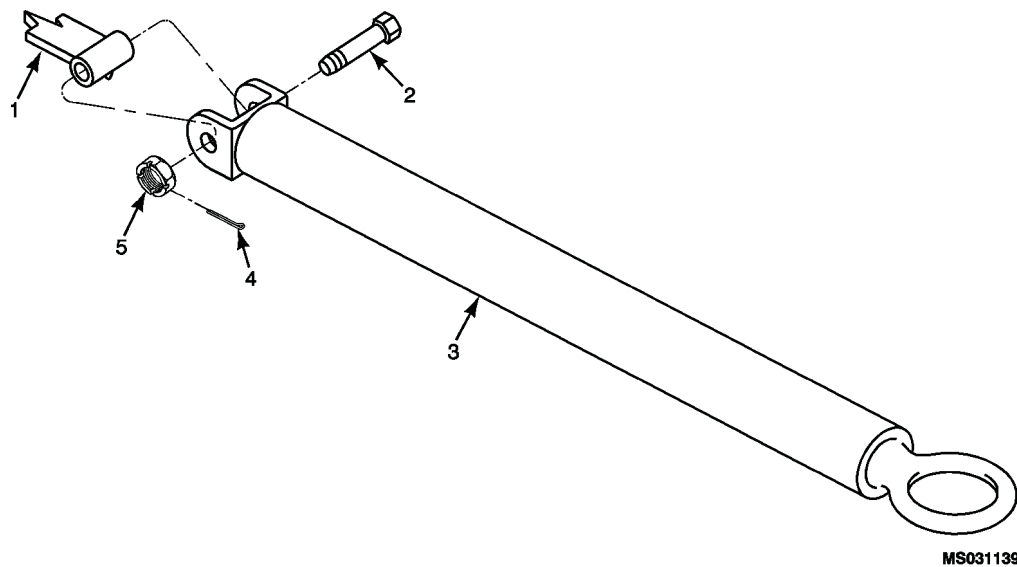


Figure 1. Tow Bar.

**STORAGE**

1. Remove cotter pin (Figure 1, Item 4), slotted hex nut (Figure 1, Item 5) and bolt (Figure 1, Item 2) that secures tow bar (Figure 1, Item 3) to tongue assembly (Figure 1, Item 1).
2. Remove tow bar (Figure 1, Item 3) and set aside.
3. Insert bolt (Figure 1, Item 2) through tongue assembly (Figure 1, Item 1) and install slotted hex nut (Figure 1, Item 5). Install new cotter pin (Figure 1, Item 4) in bolt.
4. Apply light film of Preservative Oil to bolt holes at end of tow bar.
5. Center tow bar within the outer side of the right or left-hand side trailer undercarriage I-beam. Secure tow bar to undercarriage with Strapping making certain that strapping passes through the tow bar eye at one end.
6. Raise trailer and place four wooden blocks of equal height, two on both sides of the trailer undercarriage, so that the wheels are approximately one inch off the ground and will spin freely.

**SHIPMENT**

1. Remove cotter pin (Figure 1, Item 4), slotted hex nut (Figure 1, Item 5) and bolt (Figure 1, Item 2) that secures tow bar (Figure 1, Item 3) to tongue assembly (Figure 1, Item 1).
2. Remove tow bar (Figure 1, Item 3) and set aside.

**PREPARATION FOR STORAGE OR SHIPMENT – CONTINUED****SHIPMENT – CONTINUED**

3. Insert bolt (Figure 1, Item 2) through tongue assembly (Figure 1, Item 1) and install slotted hex nut (Figure 1, Item 5). Install new cotter pin (Figure 1, Item 4) in bolt (Figure 1, Item 2).
4. Apply light film of Preservative Oil to bolt holes at end of tow bar (Figure 1, Item 3) .
5. Center tow bar within the outer side of the right or left-hand side trailer undercarriage I-beam. Secure tow bar to undercarriage with Strapping, making certain that strapping passes through the tow bar eye at one end. Before tightening straps, place a double layer of Wrap, Barrier between tow bar and undercarriage I-beam at points of contact to prevent marring of paint during shipment.
6. Once trailer is placed on transporting vehicle, block all four wheels to prevent trailer movement.

**END OF WORK PACKAGE**



**CHAPTER 5**  
**SUPPORTING INFORMATION**  
**FOR**  
**STANDARD AIRCRAFT MAINTENANCE TRAILER**  
**(PART NO. 4920-EG-081) (NSN: 1730-01-086-1653)**



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**SUPPORTING INFORMATION**  
**STANDARD AIRCRAFT MAINTENANCE TRAILER**  
**PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**REFERENCES**

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**SCOPE**

This work package lists all Field Manuals, Technical manuals and miscellaneous publications referenced in this manual.

**REFERENCE LIST**

AR 700-138	Army Logistics Readiness and Sustainability
CTA 8-100	Army Medical Department Expendable/Durable Items
CTA 50-970	Expendable/Durable Items (Except Medical, Class V, Repair Parts, and Heraldic Items)
DA Form 2024	Equipment Inspection and Maintenance Worksheet
DA Form 2028	Recommended Changes to Publications and Blank Forms
DA PAM 25-30	Consolidated Index of Army Publications and Blank Forms
DA PAM 738-751	Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A)
DA PAM 750-8	The Army Maintenance Management System (TAMMS) Users Manual
FM 1-563	Fundamentals and Procedures of Airframe Maintenance
FM 21-305	Manual for Wheeled Vehicle Driver
FM 4-25.11	First Aid
SF 364	Report of Discrepancy (ROD)
SF 368	Product Quality Deficiency report
TM 1-1500-204-23 Series	Aviation Unit Maintenance (AVUM) and Aviation Intermediate Manual for General Maintenance Practices
TM 750-244-1-3	Procedures for the Destruction of Aviation Ground Support Equipment (FSC 1700) to Prevent Enemy Use



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**SUPPORTING INFORMATION****STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653****MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION**

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**MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION****Aviation Maintenance Allocation Chart**

The MAC (immediately following the introduction) designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component shall be consistent with the capacities and capabilities of the designated maintenance level which are shown on the MAC as:

Field - includes two columns, "O" which corresponds to Aviation Maintenance Company (AMC) and "F" which corresponds to Aviation Support Battalion (ASB)

Sustainment - includes two columns, "L" which corresponds to Theater Aviation Sustainment Maintenance Group (TASMG) and other organizations that have National Maintenance Program certification and "D" which corresponds to Depot .

The maintenance to be performed below depot and in the field is described as follows:

1. **Aviation Maintenance Company (AMC).** The primary purpose of the aviation maintenance company is to support the momentum of offensive operations. Composition of the AMC will be based on type of operations being supported, nature of the battlefield, and the need for flexibility. AMCs will provide forward positioning of essential maintenance repair parts and supplies, maximum use of support teams, use of airlift/air drops for resupply, for maintenance that does not interfere with the tactical plans and operations. AMCs are agile, mobile, and well equipped. They will carry limited stockpiles of demand supported, essential parts and supplies. The AMC performs battle damage assessment and repair (BDAR) and unit level repairs on Aviation Life Support Systems (ALSS). The AMC performs production control, quality control, and Maintenance Management/Maintenance Test Pilot functions. AMCs will rig aircraft for recovery operations. The AMC manages the battalion maintenance program and operates a central tool room. The AMC conducts forward arming and refueling. AMCs will be comprised of 3 to 4 modular platoons, which are configured to maintain unit level operational readiness and aircraft availability:
  - Headquarters Platoon - Establishes standard operating procedures, receives and processes work requests, schedules maintenance, maintains status of aircraft, coordinates inspections and test flights and return of repaired aircraft, enforces quality standards, responsible for safety. Also, obtains, stores, and issues Classes II, III, IV, and IX, prescribe load list, shop stock and authorized stockage list items.
  - Airframe Repair Platoon - Tailored to battalion it supports. Performs scheduled and unscheduled maintenance, troubleshoots faulty components, and removes and replaces aircraft components. Provides mission capable aircraft to support flight company operations.
  - Component Repair Platoon - Performs scheduled and unscheduled maintenance, troubleshoots faulty components, and removes and replaces aircraft components. Performs BDAR and manages Class IX spare/shop stock. This platoon uses Shop Equipment Contact Maintenance (SECM) trucks which are multi-capable and self-contained and are used to perform on-site maintenance using enhanced power tools, test, measurement, and diagnostic equipment, welding and cutting equipment, and an air compressor. The SECM truck is highly mobile.
  - Armament platoon - Only used in attack battalions and cavalry squadrons. Performs scheduled and unscheduled maintenance on armament components.
2. **Aviation Support Company (ASC) in the Aviation Support Battalion (ASB).** Comprised of Headquarters, Airframe, and Component Repair Platoons. Provides maintenance assistance to aviation units helping them

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**MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION – CONTINUED**

maintain operational readiness and aircraft availability. Utilizes SECM trucks. Capable of supporting split based operations in two separate and distinct locations. Performs the following types of maintenance:

- a. Intermediate maintenance and logistics support operations.
  - b. Maintenance actions which require more than 3 days to correct.
  - c. Phased maintenance and preventive maintenance services.
  - d. In-depth troubleshooting and diagnosis of airframe and component malfunctions.
  - e. Repairs airframes and LRU component.
  - f. Fixes night vision systems, aviation life support systems, aviation electrical and hydraulic components.
  - g. Limited capability to fabricate hydraulic lines.
  - h. Repairs engines, prop and rotors, armament, and armament subsystems.
  - i. Fixes and fuels organic battalion equipment, ground aviation vehicles, and aviation ground support equipment.
  - j. Operates and performs field maintenance on aviation ground power units, generator, and ground support equipment.
  - k. Battle damage assessment and repair (BDAR).
  - l. Production control and quality control.
  - m. Test Pilot functions.
3. **Theater Aviation Sustainment Maintenance Group (TASMG).** Assists in deployment and redeployment, provides technical assistance, supports increased operational tempo, sustains Army aviation across the entire spectrum of operations. The TASMG:
- a. Provides support to CONUS deploying forces
  - b. Provides support to OCUNUS deployed forces
  - c. OCONUS aviation maintenance support for contingency and stability and/or support operations.
  - d. Expands aviation maintenance capabilities of CONUS depots
  - e. Classifies and inspects aviation stocks and components.
  - f. Repairs engines, airframes, armament, composite materials, electrical systems, avionics, hydraulics.
  - g. Fabricates hydraulics lines.
  - h. Backup ASB and AMC maintenance functions.

**Use of the MAC**
**NOTE**

Approved item names are used throughout this MAC. Generic terms/ nomenclature (if any) are expressed in parentheses and are not to be considered as official terminology.

This MAC assigns maintenance functions to the lowest level of maintenance, based on past experience and the following considerations:

- Skills available.
- Work time required.
- Tools and test equipment required and/or available.

Only the lowest level of maintenance authorized to perform a maintenance function is indicated. If the lowest maintenance level cannot perform all tasks of any single maintenance function (e.g., test, repair), then the higher maintenance level(s) that can accomplish additional tasks will also be indicated.

A maintenance function assigned to a maintenance level will automatically be authorized to be performed at any higher maintenance level.

A maintenance function that cannot be performed at the assigned level of maintenance for any reason may be evacuated to the next higher maintenance level. Higher maintenance levels will perform the maintenance functions of lower maintenance levels when required by the commander who has the authority to direct such tasking.

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**MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION – CONTINUED**

The assignment of a maintenance function will not be construed as authorization to carry the related repair parts or spares in stock. Information to requisition or otherwise secure the necessary repair parts will be as specified in the associated RPSTL.

Normally there will be no deviation from the assigned level of maintenance. In cases of operational necessity, at the request of a lower maintenance level and on a one-time basis, transfer of maintenance functions to the lower level may be accomplished by specific authorization of the maintenance officer of the higher level of maintenance to which the function is assigned. The special tools, equipment, etc., required by the lower level of maintenance to perform this function will be furnished by the maintenance level to which the function is assigned. This transfer of a maintenance function to a lower maintenance level does not relieve the higher maintenance level of the responsibility for the function. The higher level of maintenance will provide technical supervision and inspection of the function being performed at the lower level.

**Maintenance Functions**

Maintenance functions will be limited to and defined as follows:

1. **Inspect.** To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).
2. **Test.** To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.
3. **Service.** Operations required periodically to keep an item in proper operating condition, i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.
  - a. **Unpack.** To remove from packing box for service when required for the performance of maintenance operations.
  - b. **Repack.** To return item to packing box after service and other maintenance operations.
  - c. **Clean.** To rid the item of contamination.
  - d. **Touch up.** To spot paint scratched or blistered surfaces.
  - e. **Mark.** To restore obliterated identification.
4. **Adjust.** To maintain or regulate, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.
5. **Align.** To adjust specified variable elements of an item to bring about optimum or desired performance.
6. **Calibrate.** To determine and cause corrections to be made or to be adjusted on instruments of test, measuring, 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.
7. **Remove/Install.** To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.
8. **Paint.** To prepare and spray color coats of paint so that the ammunition can be identified and protected. The color indicating primary use is applied, preferably, to the entire exterior surface as the background color of the item. Other markings are to be painted as original so as to retain proper ammunition identification.
9. **Replace.** To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and assigned maintenance level is shown as the third position code of the Source, Maintenance, and Recoverability (SMR) code.
10. **Repair.** The application of maintenance services, including fault location/troubleshooting, removal/installation, disassembly/assembly procedures, and maintenance actions to identify troubles and 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.

**MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION – CONTINUED****NOTE**

The following definitions are applicable to the "repair" maintenance function:

Services. Inspect, test, service, adjust, align, calibrate, and/or replace.

Fault location/troubleshooting. The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or Unit Under Test (UUT).

Disassembly/assembly. The step-by-step taking apart (or breakdown) of a spare/functional group coded item to the level of its least component identified as maintenance significant (i.e., assigned an SMR code) for the level of maintenance under consideration.

Actions. Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.

11. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.
12. Rebuild. Those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (e.g., hours/miles) considered in classifying Army equipment/components.

**Explanation of Entries in the MAC**

Group Number and Component/Assembly. The functional groupings in the sample below identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly.

<b>Group Number</b>	<b>Component/Assembly Description</b>
<b>04</b>	POWER PLANT
<b>0401</b>	ENGINE, GENERAL Servicing, handling inspection requirements, overhaul and retirement schedules. External lines and hoses. (As applicable.)
<b>0402</b>	COMPRESSOR SECTION (COLD SECTION MODULE) Rotor, blades, vanes, impeller, stators, inlet guide vanes, mainframe, particle separator, bleed valve, bearings, seals, external lines and hoses.
<b>0403</b>	COMBUSTION SECTION (HOT SECTION MODULE) Liners, nozzles, stators, rotor, seals, couplings, blades.
<b>0404</b>	POWER-TURBINE (POWER TURBINE MODULE) Nozzles, rotors, blades, exit guide vanes, exhaust frame, drive shaft, bearings, seals, external lines and hoses.
<b>0405</b>	ACCESSORY GEAR BOX (ACCESSORY SECTION MODULE) Input and output gears, seals, chip detector, housings, drive shaft, bearings.
<b>0406</b>	FUEL SYSTEM Fuel control, fuel boost pump, governors, fuel filter assembly, sequence valve, fuel manifold, fuel nozzle, external lines and hoses.
<b>0407</b>	ELECTRICAL SYSTEM Electrical control units, exciters, thermocouples, ignition harness, electrical cables, history record, torque over speed sensor, Np sensor, external lines and hoses.
<b>0408</b>	OIL SYSTEM Tanks, oil filter, oil cooler, lube and scavenger pumps, oil filter bypass sensor, external lines and hoses.

Maintenance Function. Entry lists the functions to be performed on the items listed in Component/Assembly.

Maintenance Level. The maintenance levels field and sustainment are listed on the MAC with individual columns for AMC, ASB, TASM, and Depot that include the work times for maintenance functions at each maintenance level. Work time presentations such as "0.1" indicate the average time (expressed in manhours in whole hours or decimals) it requires a maintenance level to perform a specified maintenance function. If a work time has not been established, the



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**MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION – CONTINUED**

columnar presentation will indicate "--". Maintenance levels higher than the level of maintenance indicated are authorized to perform the indicated function.

Tools and Equipment Reference Code. Entry specifies, by code, those common tool sets (not individual tools), common TMDE, and special tools, special TMDE, and special support equipment required to perform the designated function.

Remarks Code. When applicable, this column contains a letter code, in alphabetical order, which is keyed to the remarks.

**Explanation of Entries in the Tools and Test Equipment Requirements**

Tool or Test Equipment Reference Code. The tool or test equipment reference code correlates with a code used in tasks and equipment reference code entry of the MAC.

Maintenance Level. The lowest level of maintenance authorized to use the tool or test equipment.

Nomenclature. Name or identification of the tool or test equipment.

National Stock Number (NSN). The NSN of the tool or test equipment.

Tool Number. The manufacturer's part number.

**Explanation of Entries in the Remarks**

Remarks Code. The code recorded in remarks code entry of the MAC.

Remarks. This entry lists information pertinent to the maintenance function being performed as indicated in the MAC



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**MAINTENANCE ALLOCATION CHART (MAC)**

Table 1. Maintenance Allocation Chart (MAC).

(1) GROUP NUMBER	(2) DESCRIPTION	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL FIELD SUSTAINMENT				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			AMC (O)	ASB (F)	TASMG (L)	DEPOT (D)		
00	TRAILER RAIL TYPE AIRCRAFT MAINTENANCE	INSPECT						
01	RAIL ASSEMBLY	REPAIR REPLACE						
0101	RAIL	INSPECT REPAIR REPLACE	.3	1.0 1.5				
0102	RAIL STOP ASSEMBLY	INSPECT REPAIR REPLACE	.3 .5	.5				
02	PALLET ASSEMBLY	INSPECT REPAIR REPLACE	.3	1.0 1.5				
0201	PALLET MOUNTING CHANNEL	INSPECT REPAIR REPLACE	.2	.5 1.0				
03	TRAILER UNDERCARRIAGE	INSPECT REPAIR	.3	1.0				
0301	BASE ASSEMBLY	INSPECT REPAIR	.5	1.0				
0302	STEERING ASSEMBLY	INSPECT						
030201	TOW BAR	INSPECT REPAIR REPLACE	.3	.8 .5				
030202	TONGUE	INSPECT SERVICE REPAIR REPLACE	.3 .3 .5	.8				
030203	TIE RODS	INSPECT SERVICE REPAIR REPLACE	.3 .3 .5 .8					
030204	BEARINGS, FITTINGS, ETC.	INSPECT REPLACE	.3 .5					
0303	AXLE ASSEMBLY	INSPECT						
030301	AXLE AND KING PIN PIVOT ASSEMBLY	INSPECT SERVICE REPAIR REPLACE	.3   .7	.5 .8				

Table 1. Maintenance Allocation Chart (MAC) – Continued

(1) GROUP NUMBER	(2) DESCRIPTION	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD AMC (O)	ASB (F)	TASMG (L)	SUSTAINMENT DEPOT (D)		
030302	RIM ASSEMBLY	INSPECT	.3					
		REPLACE	.5					
030303	TIRES AND TUBES	INSPECT	.3					
		REPAIR		.8				
030304	HUBS AND BEARINGS	REPLACE		.8				
		INSPECT	.3					
030305	PARKING BRAKE ASSEMBLY	SERVICE		.8				
		REPLACE		.8				
		INSPECT	.3					
		REPAIR		.8				
		REPLACE		.8		na		

Table 2. Tools and Test Equipment.

TOOLS OR TEST EQUIP REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
NA	F			

Table 3. Remarks.

REMARK CODE	REMARKS
NA	

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**REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)**

**INTRODUCTION**

**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 the Standard Aircraft Maintenance Trailer. It authorizes the requisitioning, issue, and disposition of spares, repair parts, and special tools as indicated by the Source, Maintenance, and Recoverability (SMR) codes

**General**

In addition to the Introduction work package, this RPSTL is divided into the following work packages.

- 1. Repair Parts List Work Packages.** Work packages containing lists of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. These work packages also include 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. Sending units, brackets, filters, and bolts are listed with the component they mount on. Bulk materials are listed by item name in FIG. BULK at the end of the work packages. Repair parts for reparable special tools are also listed in a separate work package. Items listed are shown on the associated illustrations.
- 2. Special Tools List Work Packages.** Work packages containing lists of special tools, special TMDE, and special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in the DESCRIPTION AND USABLE ON CODE (UOC) column). Tools that are components of common tool sets and/or Class VII are not listed.
- 3. Cross-Reference Indexes Work Packages.** There are two cross reference indexes work packages in this RPSTL: the National Stock Number (NSN) Index work package and the Part Number (P/N) Index work package. The National Stock Number Index work package refers you to the figure and item number. The Part Number Index work package refers you to the figure and item number.

**EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES**

**ITEM NO. (Column (1)).** Indicates the number used to identify items called out in the illustration.

**SMR CODE (Column (2)).** The SMR code containing supply/requisitioning information, maintenance level authorization criteria, and disposition instruction, as shown in the following breakout:

Source Code	Maintenance Code	Recoverability Code
<u>XXXXX</u>	<u>XXXXX</u>	<u>XXXXX</u>
1st two positions: How to get an item.	3rd position: Who can install, replace, or use the item.	4th position: Who can do complete repair* on the item.
		5th position: Who determines disposition action on unserviceable items.

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

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

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**EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES – CONTINUED**

– Continued

<b>Source Code</b>	<b>Application/Explanation</b>
PA	
PB	
PC	<b>NOTE</b> Items coded PC are subject to deterioration.
PD	
PE	
PF	
PG	Stock items; use the applicable NSN to requisition/request items with these source codes. They are authorized to the level indicated by the code entered in the 3rd position of the SMR code.
KD	
KF	
KB	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 third position of the SMR code. The complete kit must be requisitioned and applied.
MO-Made at Service/AMC level	
MF-Made at Field/ASB level	
MH-Made at Below Depot Sustainment level	
ML-Made at SRA/TASMG	
MD-Made at Depot	Items with these codes are not to be requisitioned/requested individually. They must be made from bulk material which is identified by the P/N in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the bulk material group work package of the RP-STL. If the item is authorized to you by the third position code of the SMR code, but the source code indicates it is made at higher level, order the item from the higher level of maintenance.
AO-Assembled by Service/AMC level	
AF-Assembled by Field/ASB level	
AH-Assembled by Below Depot Sustainment level	
AL-Assembled by SRA/TASMG	
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 third position 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 the next higher assembly. (Refer to NOTE below.)
XB	If an item is not available from salvage, order it using the CAGEC and P/N.
XC	Installation drawings, diagrams, instruction sheets, field service drawings; identified by manufacturer's P/N.

**EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES – CONTINUED**

– Continued

<b>Source Code</b>	<b>Application/Explanation</b>
XD	Item is not stocked. Order an XD-coded item through local purchase or normal supply channels using the CAGEC and P/N 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 items source coded "XA" or those aircraft support items restricted by requirements of AR 750-1.

**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:

**Third Position.** 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 the following levels of maintenance:

<b>Maintenance Code</b>	<b>Application/Explanation</b>
C -	Crew or operator maintenance done within Field maintenance.
O -	Service/AMC maintenance can remove, replace, and use the item.
F -	Field/ASB maintenance can remove, replace, and use the item.
H -	Below depot sustainment can remove, replace, and use the item.
L -	Specialized repair activity or TASMG can remove, replace, and use the item.
D-	Depot can remove, replace, and use the item.

**Fourth Position.** The maintenance code entered in the fourth position tells you whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (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.

<b>Maintenance Code</b>	<b>Application/Explanation</b>
O -	Service/AMC is the lowest level that can do complete repair of the item.
F -	Field/ASB is the lowest level that can do complete repair of the item.

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**EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES – CONTINUED**

– Continued

<b>Maintenance Code</b>	<b>Application/Explanation</b>
H -	Below depot sustainment is the lowest level that can do complete repair of the item.
L -	Specialized repair activity or TASMG can remove, replace, and use the item.
D -	Depot is the lowest level that can do complete repair of the item.
Z-	Nonreparable. No repair is authorized.
B-	No repair is authorized. No parts or special tools are authorized for maintenance of "B" coded item. However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

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

<b>Recoverability Code</b>	<b>Application/Explanation</b>
Z -	Non-reparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in the third position of the SMR code.
O -	Reparable item. When uneconomically repairable, condemn, and dispose of the item at unit level.
F -	Reparable item. When uneconomically repairable, condemn, and dispose of the item at the direct support 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 are not authorized below depot level.
L -	Reparable item. Condemnation and disposal not authorized below Specialized Repair Activity (SRA)/TASMG.
A -	Item requires special handling or condemnation procedures because of specific reasons (such as precious metal content, high dollar value, critical material or hazardous material). Refer to appropriate manuals/directives for specific instructions.

**NSN (Column (3)).** The NSN for the item is listed in this column.

**CAGEC (Column (4)).** The Commercial and Government Entity Code (CAGEC) is a five-digit code which is used to identify the manufacturer, distributor, or Government agency/activity that supplies the item.



## EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES – CONTINUED

**PART NUMBER (Column (5)).** 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 P/N from the number listed.

**DESCRIPTION AND USABLE ON CODE (UOC) (Column (6)).** This column includes the following information:

1. The federal item name, and when required, a minimum description to identify the item.
2. P/Ns of bulk materials are referenced in this column in the line entry to be manufactured or fabricated.
3. Hardness Critical Item (HCI). A support item that provides the equipment with special protection from electromagnetic pulse (EMP) damage during a nuclear attack.
4. The statement END OF FIGURE appears just below the last item description in column (6) for a given figure in both the repair parts list and special tools list work packages.

**QUANTITY (QTY) (Column (7)).** 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 instead of a quantity indicates that the quantity is variable and quantity may change from application to application.

## EXPLANATION OF CROSS-REFERENCE INDEXES WORK PACKAGES FORMAT AND COLUMNS

### 1. National Stock Number (NSN) Index Work Package.

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

<u>NSN</u>
(e.g., 5385-01-574-1476)
NIIN

When using this column to locate an (e.g., 5385-01-574-1476) item, ignore the first four digits of NIIN the NSN. However, the complete NSN should be used when ordering items by stock number.

**FIG. Column.** This column lists the number of the figure where the item is identified/located. The figures are in numerical order in the repair parts list and special tools list work packages.

**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.

**2. Part Number (P/N) Index Work Package.** P/Ns in this index are listed in ascending alphanumeric sequence (vertical arrangement of letter and number combinations 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).

**PART NUMBER Column.** Indicates the part number assigned to the item.

**FIG. Column.** This column lists the number of the figure where the item is identified/located in the repair parts list and special tools list work packages.

**ITEM Column.** The item number is the number assigned to the item as it appears in the figure reference in the adjacent figure number column.

## HOW TO LOCATE REPAIR PARTS

### 1. When NSNs or P/Ns Are Not Known.

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

**Second.** Find the figure covering the functional group or the subfunctional group to which the item belongs.

**HOW TO LOCATE REPAIR PARTS – CONTINUED**

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

**Fourth.** Look in the repair parts list work packages for the figure and item numbers. The NSNs and part numbers are on the same line as the associated item numbers.

**2. When NSN Is Known.**

**First.** If you have the NSN, look in the STOCK NUMBER column of the NSN index work package. The NSN is arranged in NIIN sequence. Note the figure and item number next to the NSN.

**Second.** Turn to the figure and locate the item number. Verify that the item is the one you are looking for.

**3. When P/N Is Known.**

**First.** If you have the P/N and not the NSN, look in the PART NUMBER column of the P/N index work package. Identify the figure and item number.

**Second.** Look up the item on the figure in the applicable repair parts list work package.

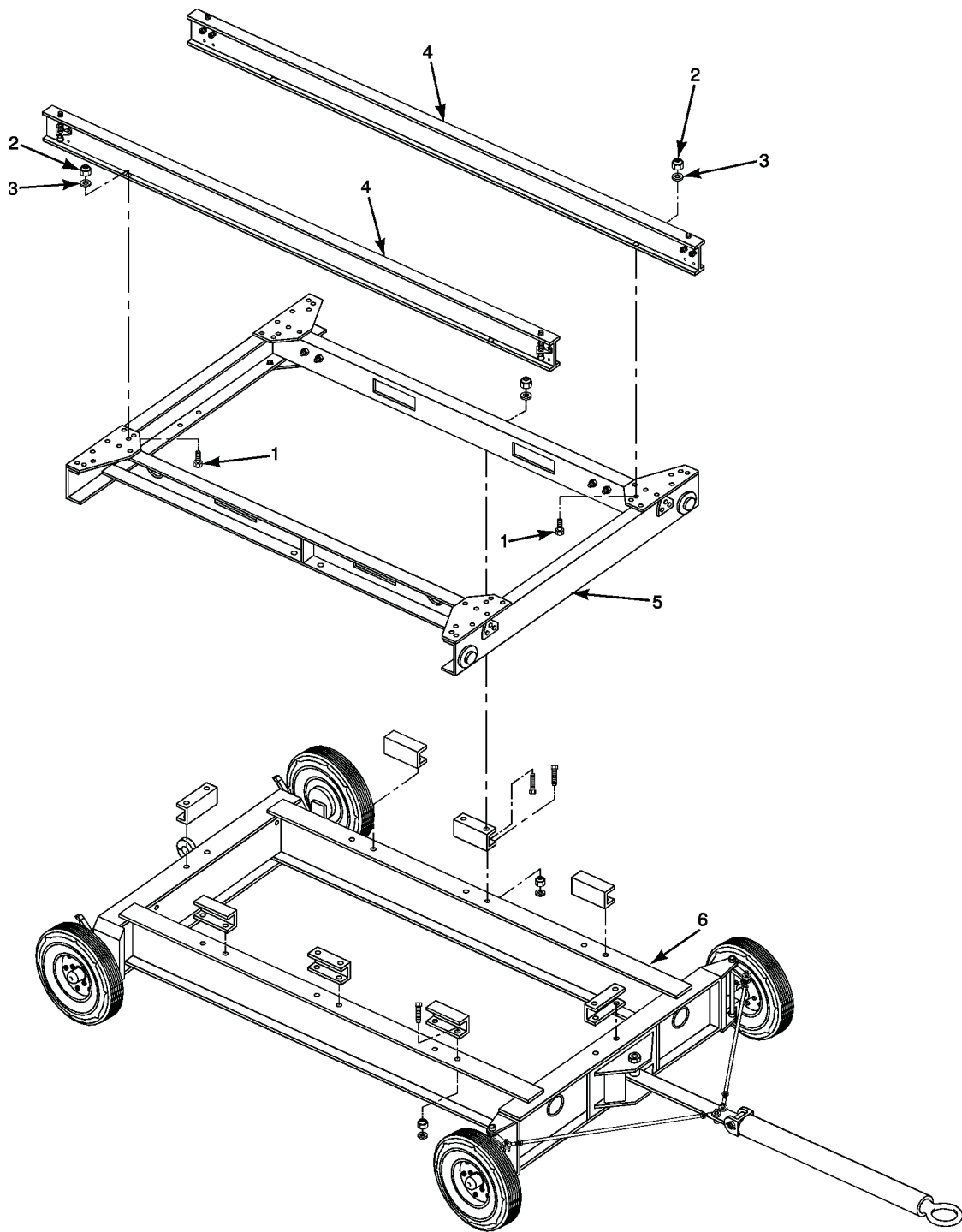
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**SUPPORTING INFORMATION**

**STANDARD AIRCRAFT MAINTENANCE TRAILER  
PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)**

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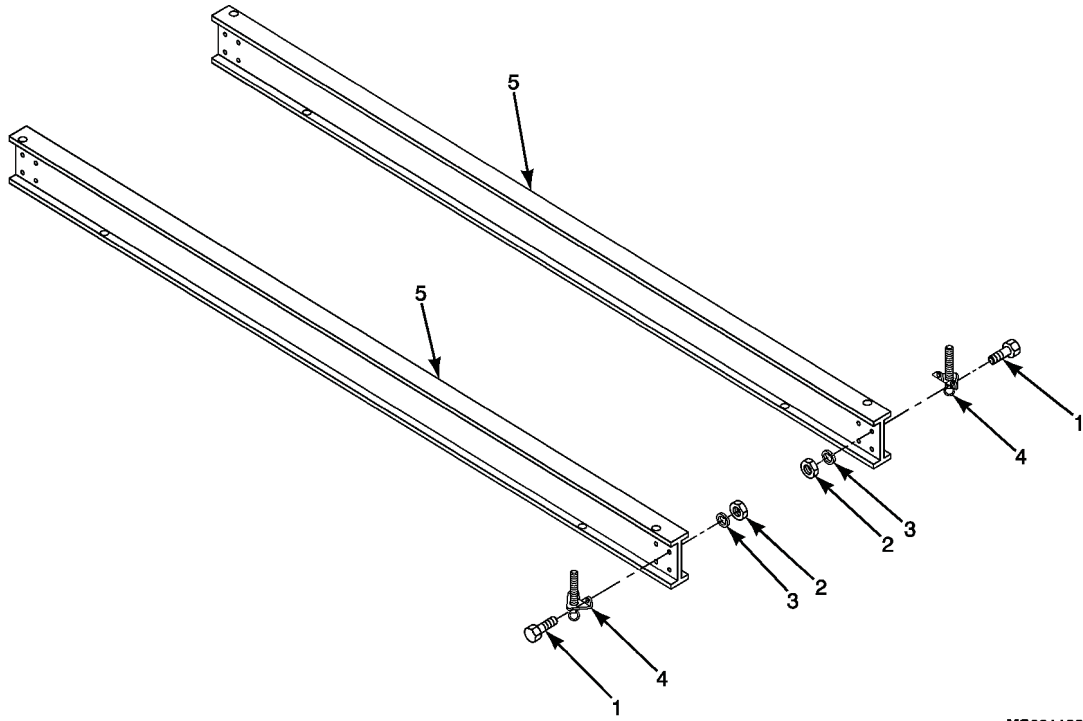


MS031101A

Figure 1. Standard Aircraft Maintenance Trailer.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE(UOC)	(7) QTY
<b>GROUP 00</b>						
<b>STANDARD AIRCRAFT MAINTENANCE TRAILER</b>						
1	PBFZZ	5305-00-269-2805	96906	MS90726-62	SCREW, CAP, HEXAGON .....	8
2	PBFZZ	5310-00-950-0039	96906	MS21044N6	NUT, SELF-LOCKING .....	8
3	PBFZZ	5310-00-080-6004	96906	MS27183-14	WASHER, FLAT .....	8
4	PBFZZ	4920-01-141-7555	81996	4920-EG-108	RAIL ASSY. (SEE Figure 2 FOR BREAKDOWN) .....	2
5	PBFZZ	4920-01-140-6717	52793	4920-EG-095	PALLET ASSY (SEE Figure 3. (Sheet 1 of 2) FOR BREAKDOWN) .....	1
6	XDFFF		81996	4920-EG-082	TRAILER ASSY. UNDERCARRIAGE (SEE Figure 4 FOR BREAKDOWN) .....	1

END OF FIGURE



MS031102

Figure 2. Rail Assembly.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE(UOC)	(7) QTY
					<b>GROUP 01</b>	
					<b>RAIL ASSEMBLY</b>	
					<b>GROUP 0101</b>	
					<b>RAIL</b>	
					<b>GROUP 0102</b>	
					<b>RAIL STOP ASSEMBLY</b>	
1	PBFZZ	5305-00-068-0513	96906	MS90726-6	SCREW, CAP, HEXAGON .....	8
2	PBFZZ	5310-00-768-0319	61028	MS51968-2	NUT, PLAIN, HEXAGON .....	8
3	PBFZZ	5310-00-274-8715	96906	MS35338-63	WASHER, LOCK .....	8
4	PBFFZ	4920-01-141-7555	52793	4920-EG-108	RAIL ASSY, STOP .....	4
5	PBFFF	4920-01-273-7390	81996	4920-EG-108-2	RAIL .....	2

**END OF FIGURE**

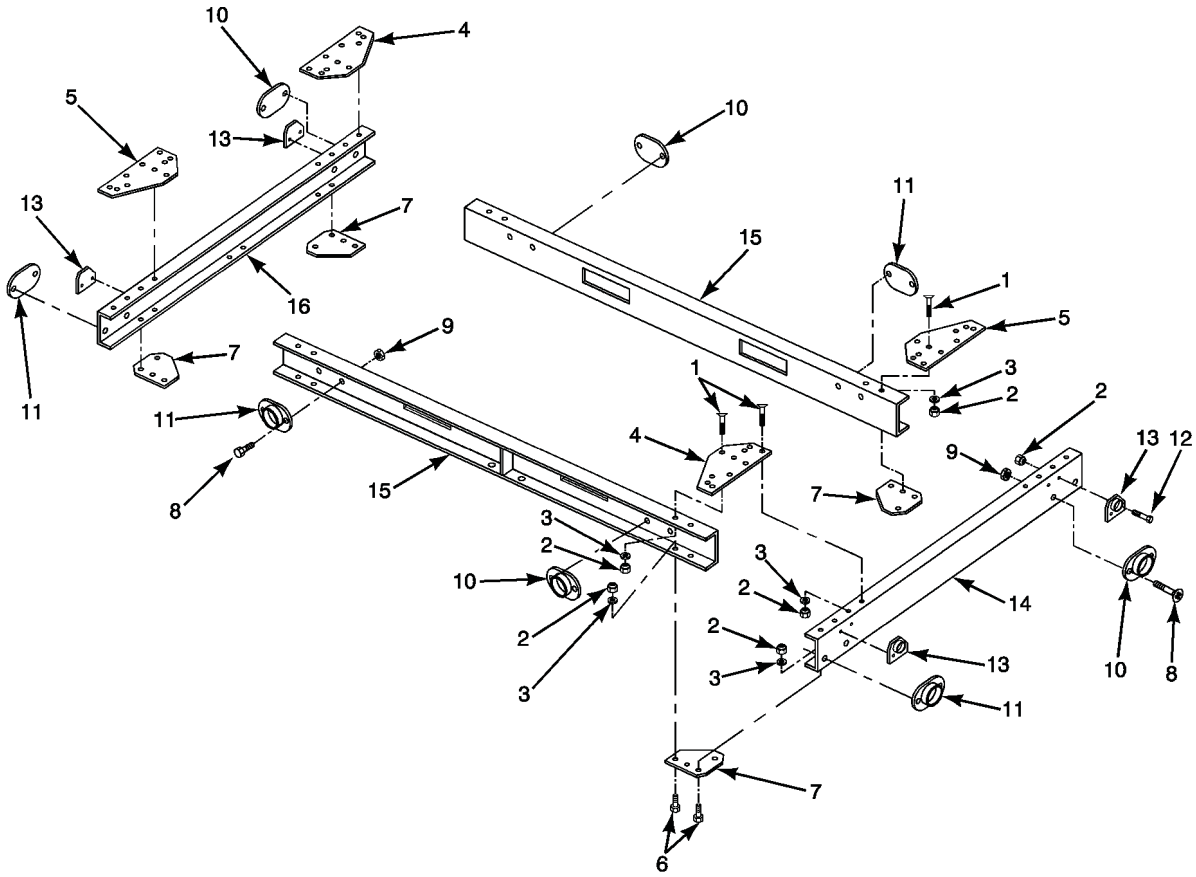
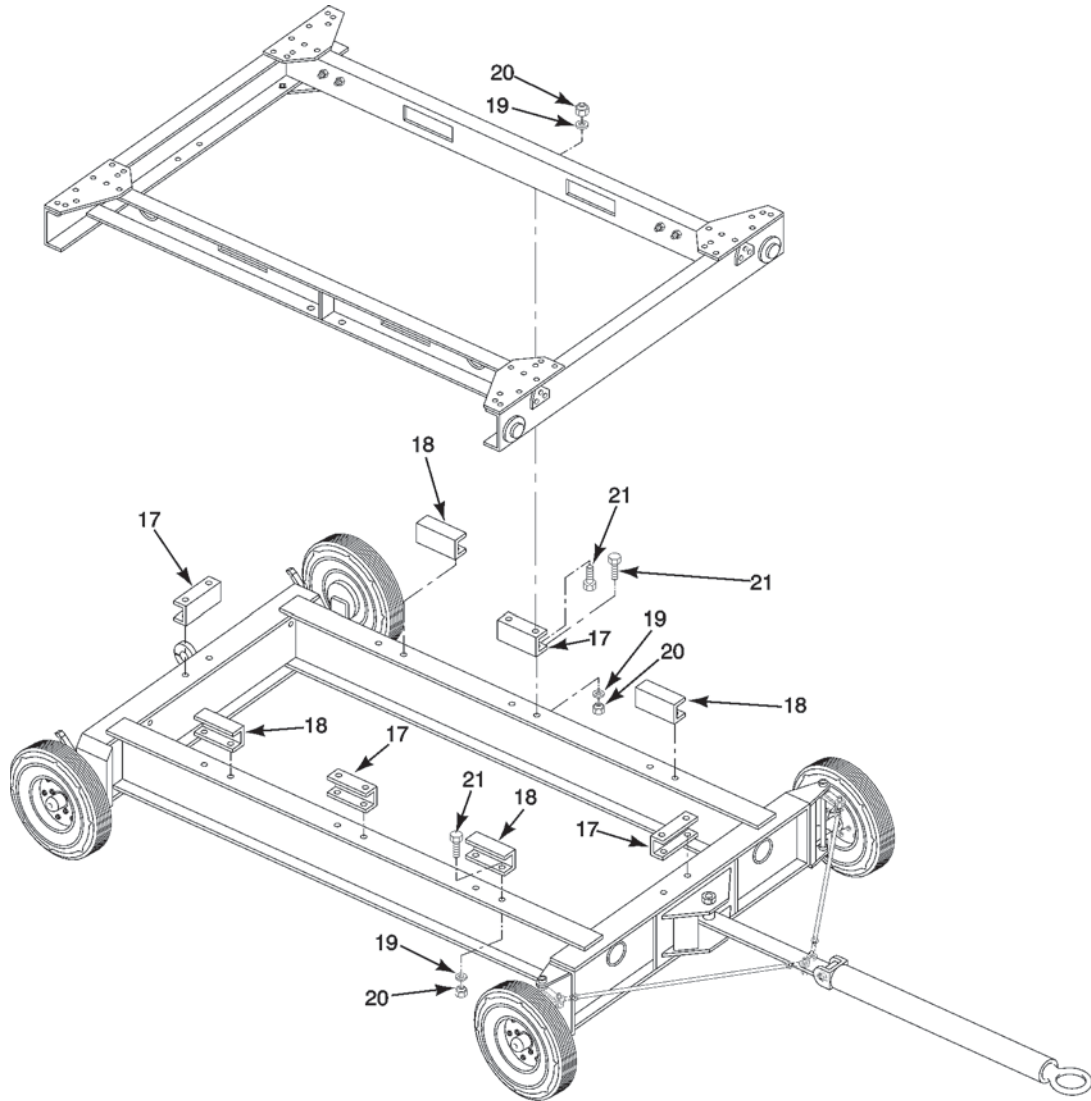


Figure 3. Pallet Assembly (Sheet 1 of 2).

MS031103





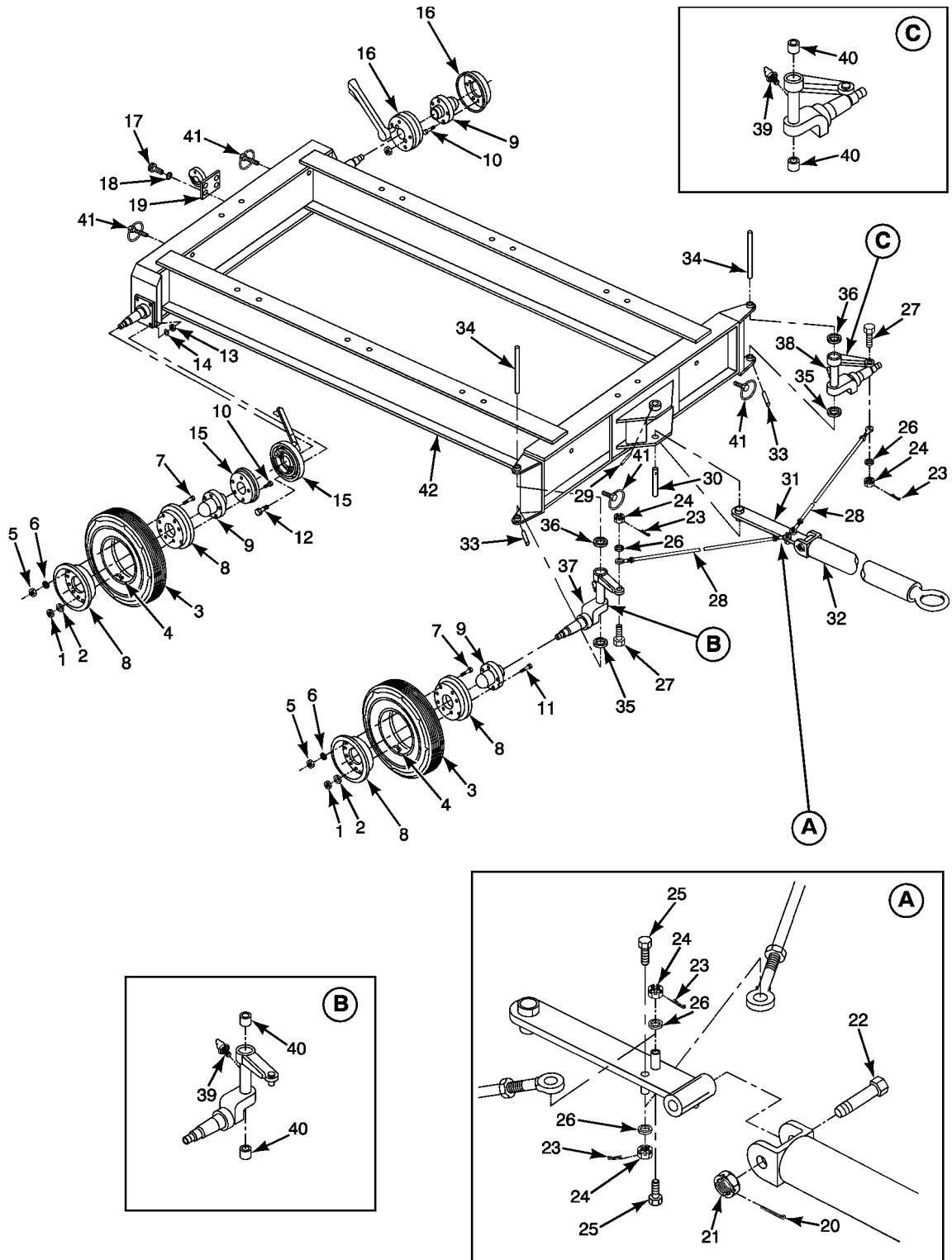
MS033114

Figure 3. Pallet Assembly. (Sheet 2 of 2)

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE(UOC)	(7) QTY
<b>GROUP 02 PALLET ASSEMBLY</b>						
<b>GROUP 0201 PALLET MOUNTING CHANNEL</b>						
1	PBFZZ	5305-01-179-5256	96906	MS24672-29	SCREW, CAP, SOCKET .....	24
2	PBFZZ	5310-00-950-0039	96906	MS21044N6	NUT, SELF-LOCKING .....	48
3	PBFZZ	5310-00-080-6004	96906	MS27183-14	WASHER, FLAT .....	40
4	XBFZZ		81996	4920-EG-103	PLATE, CORNER, TOP .....	2
5	XBFZZ		81996	4920-EG-099	PLATE, CORNER, TOP .....	2

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE(UOC)	(7) QTY
6	PBFZZ	5305-00-269-2807	96906	MS90726-64	SCREW, CAP, HEXAGON .....	16
7	XBFZZ		81996	4920-EG-105	PLATE, CORNER, BOTTOM .....	4
8	PBFZZ	5305-00-988-1724	96906	MS35206-280	SCREW, MACHINE .....	16
9	PBFZZ	5310-00-761-6882	96906	MS51967-2	NUT, PLAIN, HEXAGON .....	16
10	PBFZZ	9905-00-202-3639	96906	MS35387-2	REFLECTOR, INDICATING, CLEARANCE (AMBER) .	4
11	PBFZZ	9905-00-205-2795	96906	MS35387-1	REFLECTOR, INDICATING, CLEARANCE (RED) .....	4
12	PBFZZ	5305-00-269-2803	96906	MS90726-60	SCREW, CAP, HEXAGON .....	8
13	PBFZZ	4920-01-140-6721	52793	4920-EG-106	TIE DOWN MOUNTS .....	4
14	XDFFF		81996	4920-EG-096	PALLET, END, FRONT .....	1
15	XDFFF		81996	4920-EG-098	PALLET, SIDE .....	2
16	XDFFF		81996	4920-EG-097	PALLET, END, REAR .....	1
17	XBFZZ		81996	4920-EG-081-6	CHANNEL .....	4
18	XBFZZ		81996	4920-EG-081-7	CHANNEL .....	4
19	PBFZZ	5310-00-809-5998	96906	MS27183-18	WASHER, FLAT .....	24
20	PBFZZ	5310-00-877-5795	96906	MS21044-N8	NUT, SELF-LOCKING .....	24
21	PBFZZ	5305-00-725-4183	80205	MS90726-113	SCREW, CAP, HEXAGON .....	24

END OF FIGURE



MS031104

Figure 4. Trailer Undercarriage .

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE(UOC)	(7) QTY
<b>GROUP 03</b>						
<b>TRAILER UNDERCARRIAGE</b>						
<b>GROUP 0301</b>						
<b>BASE ASSEMBLY</b>						
<b>GROUP 0302</b>						
<b>STEERING ASSEMBLY</b>						
<b>GROUP 030201</b>						
<b>TOW BAR</b>						
<b>GROUP 030304</b>						
<b>AXLE AND KING PIN PIVOT ASSEMBLY</b>						
<b>GROUP 030302</b>						
<b>RIM ASSEMBLY</b>						
<b>GROUP 030303</b>						
<b>TIRES AND TUBES</b>						
1	PAFZZ	5310-00-732-0560	96906	MS35690-822	NUT .....	20
2	PAFZZ	5310-01-073-8614	88044	AN935-816	WASHER, LOCK .....	20
3	PAFZZ	2610-00-050-9840	96906	MS35389-6	TIRE, PNEUMATIC .....	4
4	PAFZZ	2630-01-109-2741	73808	6.00X9	INNER TUBE, PNEUMATIC .....	4
5	PAFZZ	5310-00-620-8201	88044	AN325-6	NUT .....	32
6	PAFZZ	5310-01-108-6232	88044	AN935-616	WASHER, LOCK .....	32
7	PRFZZ			AN60-6-7	BOLT .....	32
8	PAFZZ	2530-00-528-7224	96906	MS24325-1	WHEEL, PNEUMATIC TIRE .....	8
9	PAFZZ	2530-00-893-0568	96906	MS24328-1	HUB, BODY (SEE Figure 6 FOR BREAKDOWN) .....	4
10	XDFZZ		81996	4920-EG-100	STUD, HUB .....	10
11	PAFZZ	5306-00-237-8296	52793	6440	BOLT, CARRIAGE, RIBBED NECK, THREAD 1-2-20UNFA, DIA OF RIBBED NECK 0.554-0.54 ..	10
12	PBFZZ	5305-00-269-2805	96906	MS90726-62	SCREW, CAP, HEXAGON .....	8
13	PAFZZ	5310-00-732-0559	96906	MS51968-8	NUT, PLAIN, HEXAGON .....	8
14	PAFZZ	5310-00-637-9541	96906	MS35338-46	WASHER, LOCK .....	8
15	PBFZZ	4920-01-140-6716	83445	51588-R	BRAKE HOUSING ASSY. (SEE Figure 6 FOR BREAKDOWN) .....	1
16	PBFZZ	2530-01-142-0989	83445	51588-L	BRAKE HOUSING L-H (SEE Figure 6 FOR BREAKDOWN) .....	1
17	PBFZZ	5305-00-761-4227	96906	MS90726-111	SCREW, CAP, HEXAGON .....	4
18	PAFZZ	5310-00-584-5272	96906	MS35338-48	WASHER, LOCK .....	4
19	XDFZZ		74410	C7061999	PINTLE ASSY, TOW .....	1
20	PAOZZ	5315-00-013-7228	96906	MS24665-423	PIN, COTTER .....	1
21	PBOZZ	5310-00-850-6881	96906	MS35692-57	NUT, PLAIN, SLOTTED .....	1
22	XBFZZ		81996	4920-EG-088-7	BOLT .....	1
23	PAOZZ	5315-00-011-9120	96906	MS24665-287	PIN, COTTER .....	4
24	PAOZZ	5310-00-176-8112	88044	AN320-8	NUT, PLAIN, SLOTTED .....	4
25	PAOZZ	1730-01-255-2164	81996	4920-EG-089-2	BOLT .....	21
26	PAOZZ	5310-00-809-3079	96906	MS27183-19	WASHER, FLAT .....	4
27	XBFZZ		81996	4920-EG-089-3	BOLT .....	2
28	XDOFF		81996	4920-EG-089-1	ROD ASSY, TIE (SEE Figure 5 FOR BREAKDOWN) ..	2
29	PBFZZ	5315-00-290-9244	96906	MS35671-41	PIN, GROOVED, HEADLESS .....	1

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE(UOC)	(7) QTY
30	XBFZZ		81996	4920-EG-093	PIN, TONGUE, PIVOT .....	1
31	XBFZZ		52793	4920-EG-087-1	TONGUE ASSY, TOW BAR (SEE Figure 5 FOR BREAKDOWN) .....	1
32	PAOZZ	1730-01-223-3185	81996	4920-EG-088-1	TOW BAR ASSY .....	1
33	PBFZZ	5315-00-882-0904	96906	MS39086-174	PIN, SPRING .....	2
34	XBFZZ		81996	4920-EG-090-4	PIN, KING .....	2
35	PBFZZ	5310-00-809-8540	96906	MS27183-25	WASHER, FLAT .....	V
36	XBFZZ		81996	4920-EG-090-5	WASHER, THRUST .....	2
37	PBFZZ	2910-01-218-6264	81996	4920-EG-090-1	AXLE, KING PIN ASSY RIGHT HAND .....	1
38	XBFZZ		81996	4920-EG-090-2	AXLE, KING PIN ASSY LEFT HAND .....	1
39	PAOZZ	4730-00-050-4203	96906	MS15001-1	FITTING LUBRICATION .....	2
40	XDFZZ	3120-01-176-2037	71366	P-345	BEARING, SLEEVE .....	4
41	XBFZZ		98750	48B7385	RING, CARGO TIEDOWN .....	4
42	XAFFF		81996	4920-EG-082-3	BASE ASSY .....	1

END OF FIGURE

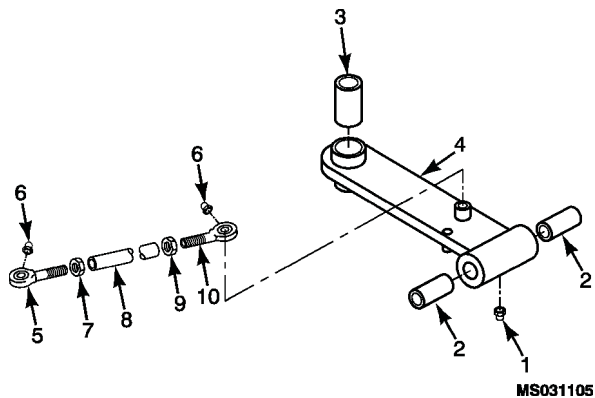
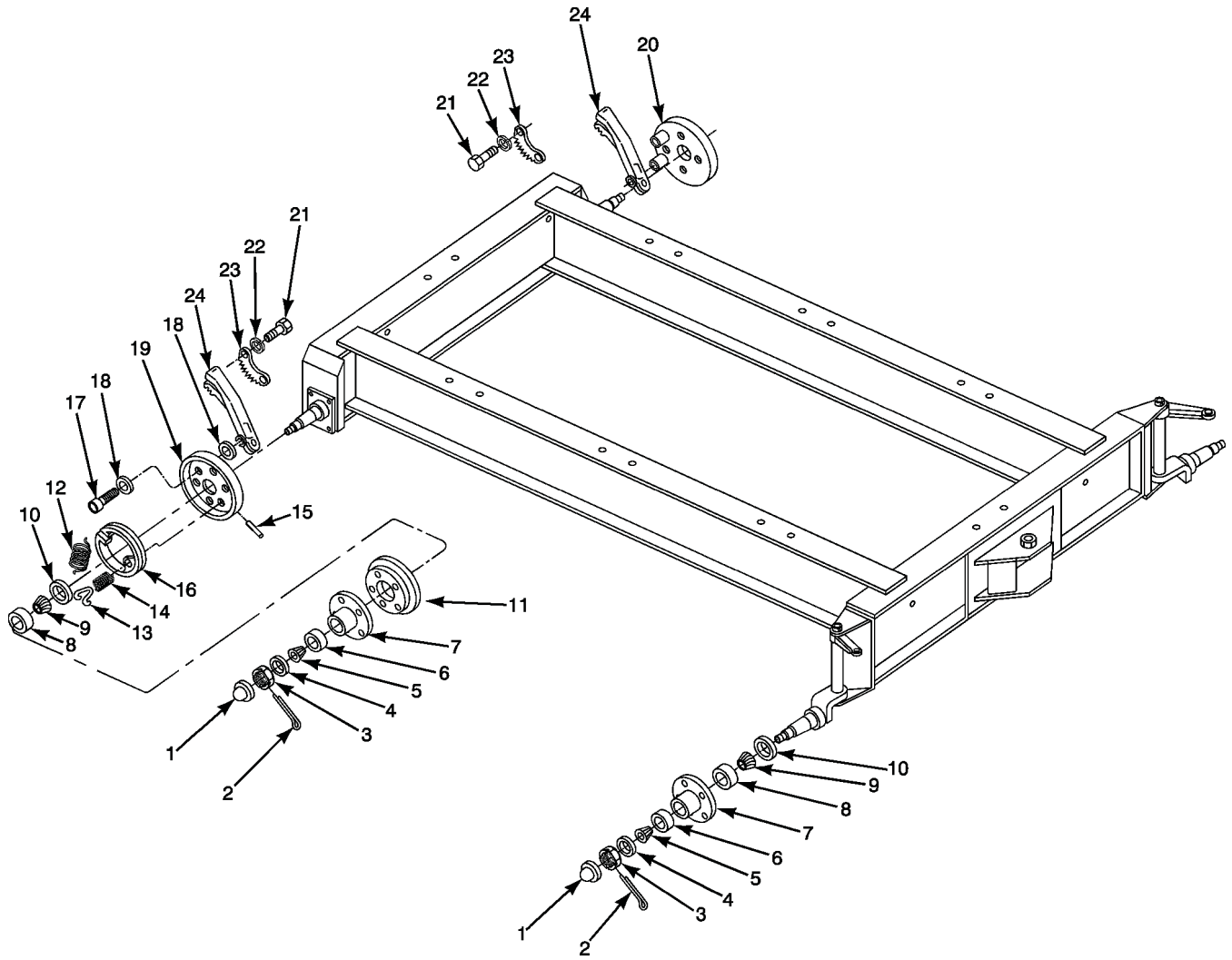


Figure 5. Tie Rod and Tongue Assembly.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE(UOC)	(7) QTY
<b>GROUP 030202</b>						
<b>TONGUE ASSEMBLY</b>						
<b>GROUP 030203</b>						
<b>TIE ROD ASSEMBLY</b>						
1	PAOZZ	4730-00-050-4203	96906	MS15001-1	FITTING LUBRICATION .....	1
2	XDFZZ	5307-00-823-8679	71366	P-77-14	BEARING .....	2
3	XDFZZ		71366	P-125-16	BEARING .....	1
4	XDFZZ		81996	4920-EG-087-2	TONGUE .....	1
5	PBOZZ	3120-00-138-1810	57448	TREL8N	BEARING, PLAIN, ROD END .....	2
6	PAOZZ	4730-00-050-4203	96906	MS15001-1	FITTING, LUBRICATION .....	1
7	PAOZZ	5310-00-834-8734	96906	MS35691-37	NUT, PLAIN, HEXAGON .....	2
8	PAOZZ	1730-01-255-2164	81996	4920-EG-089-2	BODY, TIE ROD, STEERING .....	2
9	PAOZZ	5310-01-048-7662	96906	MS27952-34	NUT, HEX, JAM .....	2
10	PAOZZ	3120-00-138-1809	73134	HM-8FGPB	BEARING, PLAIN, ROD END .....	2

END OF FIGURE



MS031106

Figure 6. Axle Assembly.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE(UOC)	(7) QTY
--------------------	--------------------	------------	--------------	-----------------------	---	------------

**GROUP 0303  
AXLE ASSEMBLY**

**GROUP 030301  
AXLE AND KING PIN PIVOT ASSEMBLY**

**GROUP 030304  
HUBS AND BEARINGS**

**GROUP 030305  
PARKING BRAKE ASSEMBLY**

1	PAFZZ	5342-01-260-5494	52793	03-006394	CAP, HUB .....	4
2	PAFZZ	5315-00-298-1480	88044	AN380-4-7	PIN, COTTER .....	4
3	PAFZZ	5310-00-176-8117	88044	AN320-16	NUT, SLOTTED, HEX .....	4

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE(UOC)	(7) QTY
4	XDFZZ		81996	4920-EG-086-3	WASHER .....	4
5	PAFZZ	3110-00-198-2169	60038	15125	CONE AND ROLLERS, TAPERED .....	4
6	PAFZZ	3110-00-198-2170	60038	15245	CUP, TAPERED ROLLER .....	4
7	PAFZZ	2530-00-470-4139	52793	03-006404-M	HUB .....	4
8	PAFZZ	3110-00-100-0542	60038	24720	CUP, TAPERED, ROLLER .....	4
9	PAFZZ	3110-00-100-3537	60038	24780	CONE AND ROLLERS, TAPERED .....	4
10	PAFZZ	5330-01-265-8802	52793	03-013021	SEAL, GREASE .....	4
11	PBFZZ	2530-00-528-7206	83445	51314-6	BRAKE DRUM .....	2
12	PAFZZ	5360-00-608-2440	83445	51267-5	SPRING, TENSION .....	2
13	PAFZZ	5340-00-675-2101	83445	55008	CLIP .....	2
14	PAFZZ	5360-00-673-7413	83445	55007	SPRING, COMPRESSION .....	2
15	PAFZZ	5315-00-584-9918	96906	MS9048-108	PIN, SPRING .....	2
16	PAFZZ	2630-00-815-5308	83445	51496	SHOE ASSEMBLY .....	2
17	XDFZZ		83445	51401-46	CAM SHAFT ASSEMBLY .....	2
18	PAFZZ	5310-00-167-0841	88044	AN960-1016L	WASHER .....	4
19	PAFZZ	2530-00-766-6199	83445	51594-1-R	PLATE, MOUNTING, RIGHT-HAND .....	1
20	PBFZZ	2530-00-766-6198	83445	51594-1-L	PLATE, MOUNTING, LEFT-HAND .....	1
21	PAFZZ	5306-00-226-4825	83445	AS65-5-6	BOLT, MACHINE .....	4
22	PAFZZ	5310-00-167-0721	96906	MS35333-41	WASHER, LOCK .....	4
23	XDFZZ	3040-00-568-9622	83445	111543	SECTOR .....	2
24	PAFZZ	1450-00-589-8536	83445	101694	PEDAL ASSEMBLY, BRAKE .....	2

END OF FIGURE



**SUPPORTING INFORMATION**  
**STANDARD AIRCRAFT MAINTENANCE TRAILER**  
**PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**NATIONAL STOCK NUMBER INDEX**

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5315-00-011-9120	4	23	5310-00-732-0559	4	13
5315-00-013-7228	4	20	5310-00-732-0560	4	1
4730-00-050-4203	4	39	5305-00-761-4227	4	17
4730-00-050-4203	5	1	5310-00-781-6882	3	9
4730-00-050-4203	5	6	2530-00-766-6198	6	20
2610-00-050-9840	4	3	2530-00-766-6199	6	19
5305-00-068-0513	2	1	5310-00-768-0319	2	2
5310-00-080-6004	1	3	5310-00-809-3079	4	26
5310-00-080-6004	3	3	5310-00-809-5998	1	7
3110-00-080-0542	6	8	5310-00-809-8540	4	35
3110-00-100-3537	6	9	2530-00-815-5308	6	16
3120-00-138-1809	5	10	5307-00-823-8679	5	2
3120-00-138-1810	5	5	5310-00-834-8734	5	7
5310-00-167-0721	6	22	5310-00-850-6881	4	21
5310-00-167-0841	6	18	5310-00-877-5795	1	6
5310-00-176-8112	4	24	5315-00-882-0904	4	33
5310-00-176-8117	6	3	2530-00-893-0568	4	9
3110-00-198-2169	6	5	5310-00-950-0039	1	2
3110-00-198-2170	6	6	5310-00-950-0039	3	2
9905-00-292-3639	3	10	5305-00-968-1724	3	8
9905-00-205-2795	3	11	2530-00-766-6199	6	19
5306-00-226-4825	6	21	5310-00-768-0319	2	2
5306-00-237-8296	4	11	5310-00-768-0319	2	2
5305-00-269-2803	3	12	5310-00-809-3079	4	26
5305-00-269-2805	1	1	5310-00-809-5998	1	7
5303-00-269-2805	4	12	5310-00-809-8540	4	35
5305-00-269-2807	3	6	2530-00-815-5308	6	16
5310-00-274-8715	2	3	5307-00-823-8679	5	2
5315-00-290-9244	4	29	5310-00-834-8734	5	7
5315-00-298-1480	6	2	5310-00-850-6881	4	21
2530-00-470-4139	6	7	5310-00-877-5795	1	6
2530-00-528-7206	6	11	5315-00-882-0904	4	33
2530-00-528-7224	4	8	2530-00-893-0568	4	9
3040-00-568-9622	6	23	5310-00-950-0039	1	2
5310-00-584-5272	4	18	5310-00-950-0039	3	2
5315-00-584-9918	6	15	5305-00-968-1724	3	8
1450-00-589-8536	6	24	5310-01-048-7662	5	9
5360-00-608-2440	6	12	5310-01-073-8614	4	2
5310-00-620-8201	4	5	5310-01-108-6232	4	6
5310-00-637-9541	4	14	2630-01-109-2741	4	4
5360-00-673-7415	6	14	4920-01-140-6716	4	15
5340-00-675-2101	6	13	4920-01-140-6717	1	8
5305-00-725-4183	1	5	4920-01-140-6721	3	13
			4920-01-141-7555	1	4

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STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
4920-01-141-7555	2	4	1730-01-223-3185	4	32
2530-01-142-0989	4	16	1730-01-255-2164	4	25
3120-01-176-2037	4	40	5342-01-260-5494	6	1
5301-01-179-5256	3	1	5330-01-265-8002	6	10
2910-01-218-6264	4	37	4920-01-273-7390	2	5

**SUPPORTING INFORMATION**  
**STANDARD AIRCRAFT MAINTENANCE TRAILER**  
**PART NO. 4920-EG-081 NSN 1730-01-086-1653**

**PART NUMBER INDEX**

PART NUMBER	FIG.	ITEM	PART NUMBER	FIG.	ITEM
6440	4	11	51267-5	6	12
15123	6	5	51314-6	6	11
15245	6	6	51401-46	6	17
24720	6	8	51588-L	4	16
24780	6	9	51588-R	4	15
51496	6	16	51594-1-L	6	20
55007	6	14	51594-1-R	6	19
55008	6	13	6-00X9	4	4
101694	6	24	AN320-16	6	3
111543	6	23	AN320-8	4	24
03-006394	6	1	AN325—6	4	5
03-006404-M	6	7	AN380-4-7	6	2
03-013021	6	10	AN60-6-7	4	7
48B7385	4	41	AN935-616	4	6
4920-EG-081-6	1	9	AN935-816	4	2
4920-EG-081-7	1	10	AN960-1016L	6	18
4920-EG-082	1	11	AS65-5-6	6	21
4920-EG-082-3	4	42	C7061999	4	19
4920-EG-086-3	6	4	HM-8FGPB	5	10
4920-EG-087-1	4	31	MS15001-1	4	39
4920-EG-087-2	5	4	MS15001-1	5	1
4920-EG-088-1	4	32	MS15001-1	5	6
4920-EG-088-7	4	22	MS21044N6	1	2
4920-EG-089-1	4	28	MS21044N6	3	2
4920-EG-089-2	4	25	MS21044N8	1	6
4920-EG-089-3	4	27	MS24325-1	4	8
4920-EG-090-1	4	37	MS24328-1	4	9
4920-EG-090-2	4	38	MS24665-287	4	23
4920-EG-090-4	4	34	MS24665-423	4	20
4920-EG-090-5	4	36	MS24672-29	3	1
4920-EG-093	4	30	MS27183-14	1	3
4920-EG-095	1	8	MS27183-14	3	3
4920-EG-096	3	14	MS27183-18	1	7
4920-EG-097	3	16	MS27183-19	4	26
4920-EG-098	3	15	MS27183-25	4	35
4920-EG-099	3	5	MS27952-34	5	9
4920-EG-100	4	10	MS35206-280	3	8
4920-EG-103	3	4	MS35333-41	6	22
4920-EG-105	3	7	MS35338-46	4	14
4920-EG-106	3	13	MS35338-48	4	18
4920-EG-108	1	4	MS35338-63	2	3
4920-EG-108	2	4	MS35387-1	3	11
4920-EG-108-2	2	5	MS35387-2	3	10
			MS35389-6	4	3

PART NUMBER	FIG.	ITEM	PART NUMBER	FIG.	ITEM
MS35671-41	4	29	MS90726-113	1	5
MS35690-822	4	1	MS90726-6	2	1
MS35691-37	5	7	MS90726-60	3	12
MS35692-57	4	21	MS90726-62	1	1
MS38086-174	4	33	MS90726-62	4	12
MS51967-2	3	9	MS90726-64	3	6
MS51968-6	2	2	P-125-16	5	3
MS51968-8	4	13	P-345	4	40
MS9048-108	6	15	P-77-14	5	2
MS90726-111	4	17	TREL8N	5	5

**SUPPORTING INFORMATION**  
**STANDARD AIRCRAFT MAINTENANCE TRAILER**  
**PART NO. 4920-EG-081 NSN 1730-01-086-1653**  
**EXPENDABLE AND DURABLE ITEMS LIST**

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**EXPENDABLE AND DURABLE ITEMS LIST INTRODUCTION**

**Scope**

This work package lists expendable and durable items that you will need to operate and maintain the Standard Aircraft Maintenance Trailer, PN: 4920-EG-081. This list is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V, Repair Parts, and Heraldic Items) and CTA 8-100, Army Medical Department Expendable/Durable Items.

**Explanation of Columns in the Expendable/Durable Items List**

Column (1) Item No. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item (e.g., Use brake fluid (WP 0098, item 5)).

Column (2) Level. This column identifies the lowest level of maintenance that requires the listed item (include as applicable: Field: O = AMC, F = ASB, Sustainment: L = TASMG D = Depot).

Column (3) National Stock Number (NSN). This is the NSN assigned to the item which you can use to requisition it.

Column (4) Item Name, Description, Part Number/(CAGEC). This column provides the other information you need to identify the item. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC) (in parentheses).

Column (5) U/I. Unit of Issue (U/I) code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

**Table 1. Expendable and Durable Items List.**

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGE, PART NUMBER	(5) U/I
1	F	9150-01-197-7690	Grease, Automotive MIL-PRF-10924	lb
2	F	6850-01-474-2316	Cleaning Compound, Solvent (81349) MIL-PRF-680	oz
3	F	5315-00-013-7228	Pin, Cotter (96906) MS24665-423	ea
4	F	5315-00-011-9120	Pin, Cotter (96906) MS24665-287	ea
5	F	5315-00-298-1480	Pin, Cotter (88044) AN380-4-7	oz
6	F	2530-00-470-4139	Seal, Grease (52793) 03-006404-M	ea
7	F	9150-00-889-3523	Preservative Oil (81349) MIL-PRF-46002	
8	F	5340-00-469-3537	Strapping (96169) 3642-17R51PC14	
9	F		Wrap, Barrier	

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**SUPPORTING INFORMATION**  
**STANDARD AIRCRAFT MAINTENANCE TRAILER**  
**PART NO. 4920-EG-081 NSN 1730-01-086-1653**  
**TOOL IDENTIFICATION LIST**

**INTRODUCTION**

**Scope**

This work package lists all common tools and supplements and special tools/fixtures needed to maintain the Standard Aircraft Maintenance Trailer.

**Explanation of Columns in the Tool Identification List**

Column (1) Item Number. This number is assigned to the entry in the list and is referenced in the initial setup to identify the item (e.g., "Extractor (item 32, WP 0090 00)").

Column (2) Item Name. This column lists the item by noun nomenclature and other descriptive features (e.g., "Gage, belt tension").

Column (3) National Stock Number. This is the National Stock Number (NSN) assigned to the item; use it to requisition the item.

Column (4) Part Number/CAGEC. 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. The manufacturer's Commercial and Government Entity Code (CAGEC) is also included.

Column (5) Reference. This column identifies the authorizing supply catalog or RPSTL for items listed in this work package." (Not required for DMWRs/NMWRs)

**Table 1. Tools Identification List.**

(1)	(2)	(3)	(4)	(5)
ITEM NO	ITEM NAME	NATIONAL STOCK NUMBER	PART NUMBER	REFERENCE
1	Tool Set, Aviation Unit	4920-00-567-0476	SC492099CLA92 81996	
2	Tool Kit, Aircraft Maintenance	5180-01-375-6925	SC5180-99-B01 81996	
3	Tool Set, Intermediate Maintenance	4920-00-472-4183	SC492099CLA86TCAM 81996	
4	Wrench, Torque 30-200 in lb, 1/4 drive	5120-01-396-5955		
5	Wrench, Torque 100-750 in lb, 3/8 drive	5120-01-426-7560		





By Order of the Secretary of the Army:

Official:

A handwritten signature in black ink that reads "Joyce E. Morrow". The signature is written in a cursive style with a large initial "J" and a long horizontal stroke at the end.

JOYCE E. MORROW  
*Administrative Assistant to the  
Secretary of the Army*  
0918803

GEORGE W. CASEY, JR.  
*General, United States Army  
Chief of Staff*

Distribution:

To be distributed in accordance with the initial distribution number (IDN) 390849,  
requirements for TM 1-1730-227-13&P.



## ***These are the instructions for sending an electronic 2028***

The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however only the following fields are mandatory: 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, and 27.

From: "Whomever" [whomever@wherever.army.mil](mailto:whomever@wherever.army.mil)

To: 2028@redstone.army.mil

Subject: DA Form 2028

1     **From: Joe Smith**  
2     *Unit: home*  
3     **Address: 4300 Park**  
4     **City:** Hometown  
5     **St: MO**  
6     **Zip: 77777**  
7     **Date Sent:** 19--OCT--93  
8     **Pub no:** 55--2840--229--23  
9     **Pub Title: TM**  
10    **Publication Date:** 04--JUL--85  
11    *Change Number: 7*  
12    *Submitter Rank: MSG*  
13    **Submitter FName:** Joe  
14    *Submitter MName: T*  
15    **Submitter LName:** Smith  
16    **Submitter Phone:** 123--123--1234  
17    **Problem: 1**  
18    *Page: 2*  
19    *Paragraph: 3*  
20    *Line: 4*  
21    *NSN: 5*  
22    *Reference: 6*  
23    *Figure: 7*  
24    *Table: 8*  
25    *Item: 9*  
26    *Total: 123*

27    **Text:**

This is the text for the problem below line 27.



<b>RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS</b> <small>For use of this form, see AR 25-30; the proponent agency is ODISC4.</small>						Use Part II ( <i>reverse</i> ) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/ Supply Manuals (SC/SM)	DATE <b>8/30/02</b>
TO: ( <i>Forward to proponent of publication or form</i> )( <i>Include ZIP Code</i> ) Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM--MMC--MA--NP Redstone Arsenal, AL 35898						FROM: ( <i>Activity and location</i> )( <i>Include ZIP Code</i> ) MSG, Jane Q. Doe 1234 Any Street Nowhere Town, AL 34565	
<b>PART 1 - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS</b>							
PUBLICATION/FORM NUMBER <b>TM 9-1005-433-24</b>						DATE <b>16 Sep 2002</b>	TITLE Organizational, Direct Support, And General Support Maintenance Manual for Machine Gun, .50 Caliber M3P and M3P Machine Gun Electrical Test Set Used On Avenger Air Defense Weapon System
ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON	
1	WP0005 PG 3		2			Test or Corrective Action column should identify a different WP number.	
<b>EXAMPLE</b>							
<small>* Reference to line numbers within the paragraph or subparagraph.</small>							
TYPED NAME, GRADE OR TITLE <b>MSG, Jane Q. Doe, SFC</b>					TELEPHONE EXCHANGE/ AUTOVON, PLUS EXTENSION <b>788-1234</b>		SIGNATURE

TO: (Forward direct to addressee listed in publication) Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM-MMC-MA-NP Redstone Arsenal, AL 35898	FROM: (Activity and location) (Include ZIP Code) MSG, Jane Q. Doe 1234 Any Street Nowhere Town, AL 34565	DATE <b>8/30/02</b>
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**PART II - REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS**

PUBLICATION NUMBER			DATE		TITLE			
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION
<b>EXAMPLE</b>								

**PART III - REMARKS** *(Any general remarks or recommendations or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

EXAMPLE

TYPED NAME, GRADE OR TITLE <b>MSG, Jane Q. Doe, SFC</b>	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION <b>788-1234</b>	SIGNATURE
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<b>RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS</b> For use of this form, see AR 25--30; the proponent agency is ODISC4.						Use PartII(reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/ Supply Manuals (SC/SM)	DATE
TO: (Forward to proponent of publication or form)(Include ZIP Code) Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM-MMC-MA-NP Redstone Arsenal, AL 35898						FROM: (Activity and location)(Include ZIP Code)	
PART 1 --ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
PUBLICATION/FORM NUMBER						DATE	TITLE
ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON	
* Reference to line numbers within the paragraph or subparagraph.							
TYPED NAME, GRADE OR TITLE						TELEPHONE EXCHANGE/ AUTOVON, PLUS EXTENSION	SIGNATURE

<b>TO:</b> <i>(Forward direct to addressee listed in publication)</i> Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM-MMC-MA-NP Redstone Arsenal, AL 35898	<b>FROM:</b> <i>(Activity and location) (Include ZIP Code)</i>	<b>DATE</b>
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**PART II --REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS**

PUBLICATION NUMBER			DATE		TITLE			
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

**PART III --REMARKS** *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
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## The Metric System and Equivalents

### Linear Measure

1 centimeter = 10 millimeters = .39 inch  
 1 decimeter = 10 centimeters = 3.94 inches  
 1 meter = 10 decimeters = 39.37 inches  
 1 dekameter = 10 meters = 32.8 feet  
 1 hectometer = 10 dekameters = 328.08 feet  
 1 kilometer = 10 hectometers = 3,280.8 feet

### Weights

1 centigram = 10 milligrams = .15 grain  
 1 decigram = 10 centigrams = 1.54 grains  
 1 gram = 10 decigrams = .035 ounce  
 1 decagram = 10 grams = .35 ounce  
 1 hectogram = 10 decagrams = 3.52 ounces  
 1 kilogram = 10 hectograms = 2.2 pounds  
 1 quintal = 100 kilograms = 220.46 pounds  
 1 metric ton = 10 quintals = 1.1 short tons

### Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce  
 1 deciliter = 10 centiliters = 3.38 fl. ounces  
 1 liter = 10 deciliters = 33.81 fl. ounces  
 1 dekaliter = 10 liters = 2.64 gallons  
 1 hectoliter = 10 dekaliters = 26.42 gallons  
 1 kiloliter = 10 hectoliters = 264.18 gallons

### Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch  
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches  
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet  
 1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet  
 1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres  
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

### Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch  
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches  
 1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

## Approximate Conversion Factors

To change	To	Multiply by	To change	To	Multiply by
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29.573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	grams	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

## Temperature (Exact)

F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C
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