

TM 55-1730-227-13&P

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TECHNICAL MANUAL

OPERATOR'S  
AVIATION UNIT  
AND INTERMEDIATE  
MAINTENANCE MANUAL  
(INCLUDING REPAIR PARTS AND  
SPECIAL TOOLS LIST)

FOR

STANDARD AIRCRAFT  
MAINTENANCE TRAILER  
P/N 4920-EG-081  
NSN 1730-01-086-1653

EQUIPMENT DESCRIPTION  
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REPAIR PARTS AND  
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HEADQUARTERS, DEPARTMENT OF THE ARMY

9 JANUARY 1984



CHANGE }  
NO. 1 }

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D.C., 8 December 1987

Operator's, Aviation Unit and  
Intermediate Maintenance Manual  
(Including Repair Parts and Special Tools List)  
f o r  
STANDARD AIRCRAFT  
MAINTENANCE TRAILER  
P/N 4920-EG-081  
NSN 1730-01-086-1653

TM 55-1730-227-13&P, 9 January 1984, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages

i and ii  
1-1 and 1-2  
2-3 and 2-4  
3-1 and 3-2  
A-1/A-2  
B-1 and B-2  
C-1 through C-21

Insert pages

i and ii  
1-1 and 1-2  
2-3 and 2-4  
3-1 and 3-2  
A-1/A-2  
B-1 and B-2  
C-1 through C-25/C-26

2. Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

Official:

**R. L. DILWORTH**  
*Brigadier General, United States Army*  
*The Adjutant General*

**CARL E. VUONO**  
*General, United States Army*  
*Chief of Staff*

DISTRIBUTION:

To be distributed in accordance with DA Form 12-31, -10, AVUM and AVIM requirements for All Fixed and Rotary Wing Aircraft.



**WARNING**

( C O N T )

USE OF CLEANING SOLVENTS

- Those areas of skin and clothing that come in contact with cleaning solvents should be thoroughly washed immediately.
- Saturated clothing should be removed immediately.
- Areas in which cleaning solvents are used should be adequately ventilated to keep vapors to a minimum.
- If cleaning solvents contact the eyes, nose, or ears, flush them with generous quantities of water, and then seek medical attention immediately.

USE OF LUBRICATING OIL

- Produces paralysis if swallowed.
- May burn if exposed to heat or flames.
- Areas of skin and clothing that come in contact with lubricating oil should be thoroughly washed immediately.
- Saturated clothing should be removed immediately.
- Areas in which lubricating oil is used should be adequately ventilated to keep mist and fumes to a minimum.

**WARNING**

**PRECAUTIONARY DATA**

Personnel performing operations, procedures, and practices which are included or implied in this technical manual shall observe the following instructions. Disregard of these warnings may result in serious or fatal injury to personnel.

**LOAD CAPACITY**

Do not load trailer to more than 2500 lbs.

**TOWING**

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

**PARKING**

Set parking brake on trailer and towing vehicle when parking.

**LIFTING PALLETS**

Set brakes before lifting. Place fork through both sides 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.

**WHEEL REMOVAL**

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

TECHNICAL MANUAL

No. 55-1730-227-13&amp;P

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D. C., 9 January 1984

OPERATOR'S AND ORGANIZATIONAL  
MAINTENANCE MANUAL  
INCLUDING  
REPAIR PARTS AND SPECIAL TOOLS LIST  
FOR STANDARD AIRCRAFT MAINTENANCE TRAILER

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of away to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, US Army Aviation Systems Command, ATTN: AMSAV-MMD, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished directly to you.

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# CHAPTER 1 INTRODUCTION

## SECTION I. GENERAL INFORMATION

### 1-1. Scope.

Type of Manual: Operator's Aviation Unit Maintenance, and Intermediate Maintenance including Repair Parts and Special Tools List.

Model Number and Equipment Name: Part Number 4920-EG-081 Trailer, Standard Aircraft Maintenance.

Purpose of Equipment: Transports materiel during aircraft maintenance.

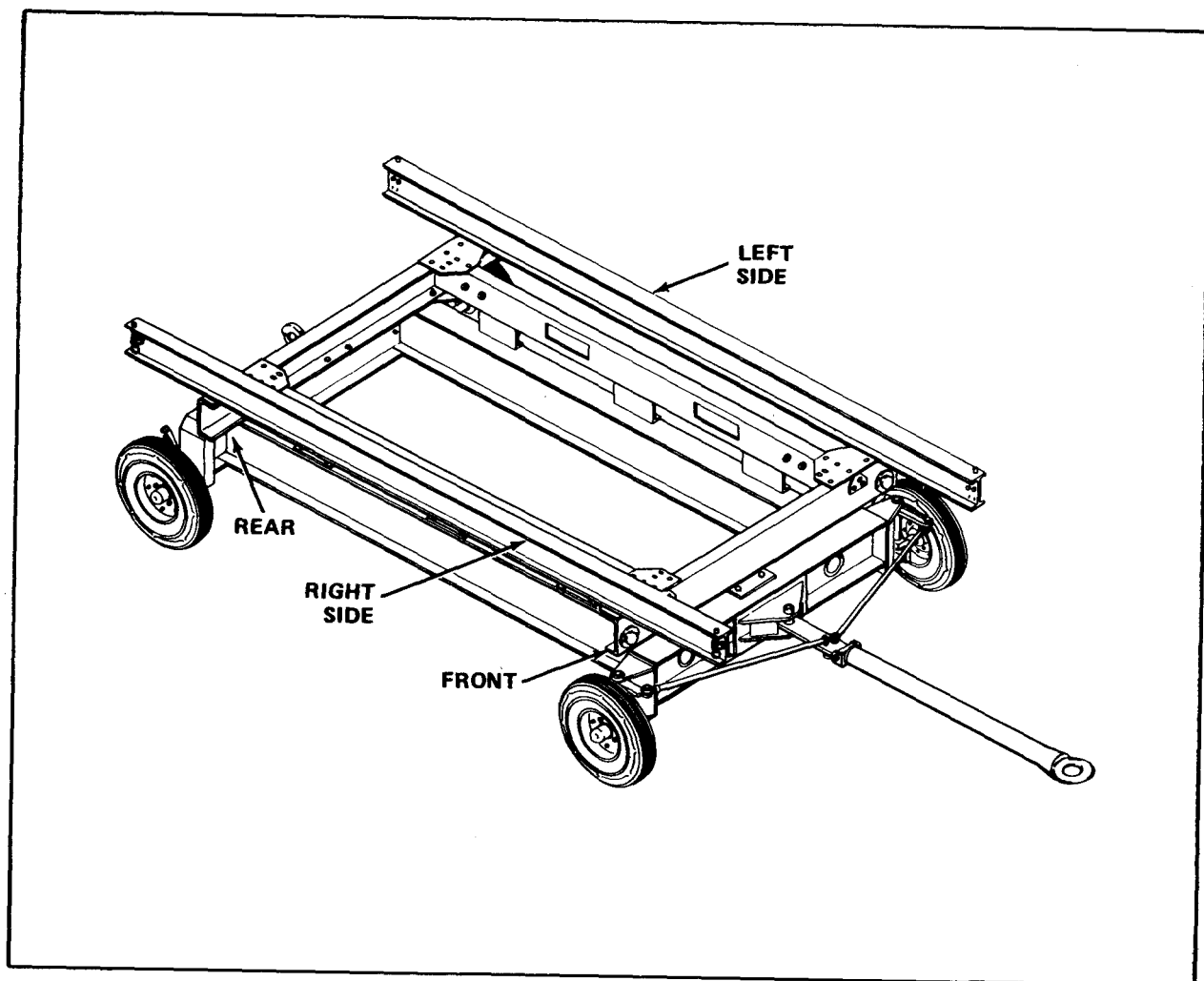


Figure 1-1. Trailer, Standard Aircraft Maintenance

1-2. Maintenance forms, records, and reports.

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-751, Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A).

1-3. Destruction of Army materiel to prevent enemy use.

Refer to TM 750-244-1-3, Procedure for Destruction of Aviation Support Equipment (FSC 1700) for instructions on destroying this equipment.

1-4. Preparation for storage and shipment. Refer to TM 740-90-1, Administrative Storage of Equipment and TM 743-200-1, Storage and Materiel Handling. In preparation for shipment, the towbar is to be removed (see paragraph 3-38, towbar removal) and secure to the trailer pallet.

1-5. Quality assurance quality control (QAQC). For quality assurance quality control requirements, refer to FM 55-411.

1-6. Reporting equipment improvement recommendations (EIR's). If your maintenance trailer needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Tell us why a procedure is hard to perform. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at: Commander, US Army Aviation Systems Command, ATTN: AMSAV - MMD, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. We'll send you a reply.

## **SECTION II. EQUIPMENT DESCRIPTION AND DATA**

1-7. Equipment characteristics, capabilities and features,

### **CHARACTERISTICS**

- Transports

### **CAPABILITIES AND FEATURES**

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



1-8. Location and description of major components.

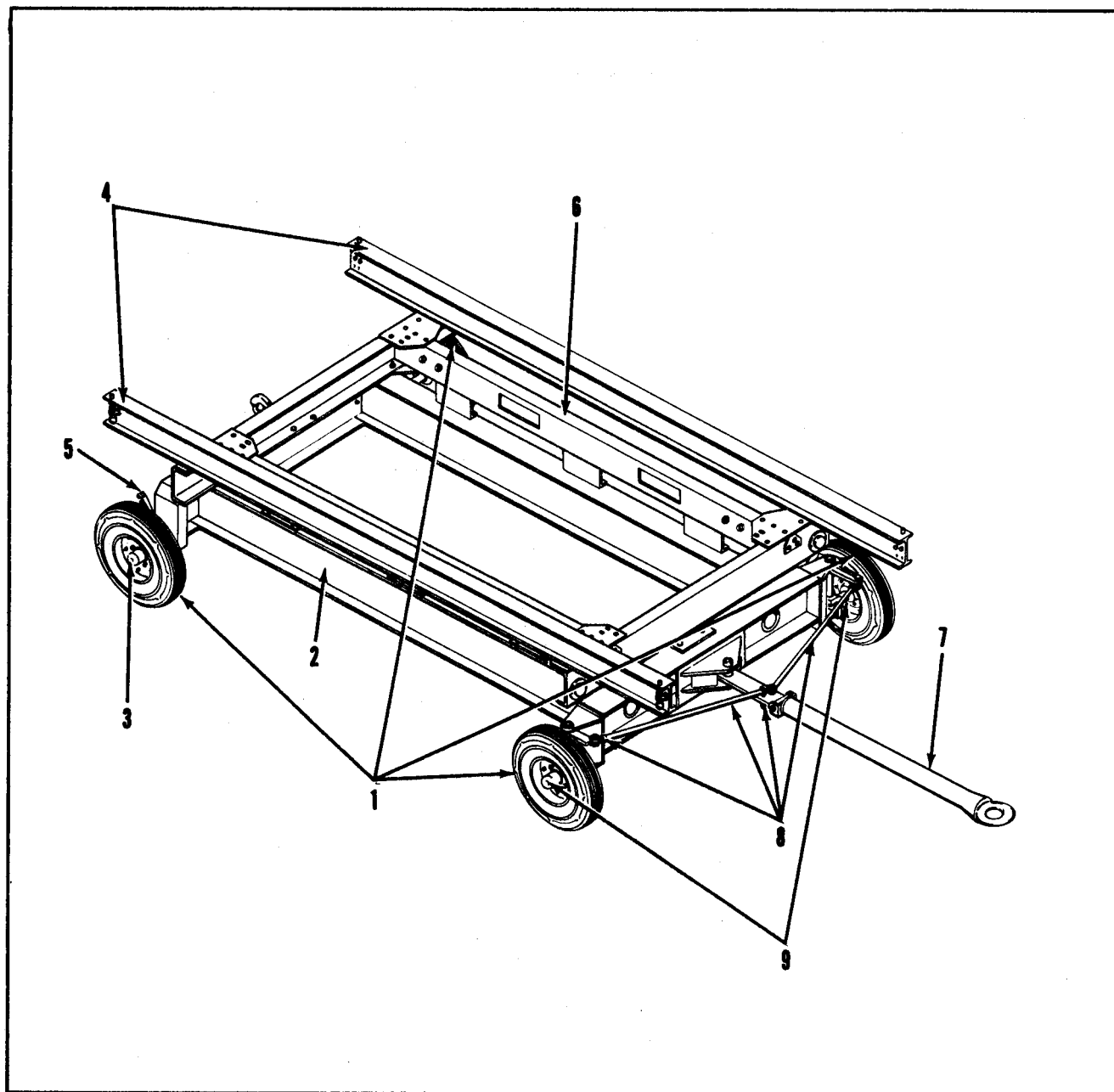


Figure 1-2. Location and Description of Major Components

1-8. Location and description of major components (cont).

**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 remountable type rim.

**BASE ASSEMBLY (2).** Consists of a welded I-beam frame 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) in one of two different configurations to compensate for different load dimensions. The rail assembly is equipped with two rail stop assemblies.

**PARKING BRAKE ASSEMBLY (5).** 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 (4), slots to allow forklift removal from the trailer undercarriage, and tiedown mounting provisions.

**TOWBAR 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 towbar tongue assembly at the opposite end.

**FRONT AXLE ASSEMBLY (9).** An axle shaft connected to the king pin pivot assembly by a mounting block.

1-9. Equipment data. The equipment data summarizes the specific capabilities and limitations of the equipment and other critical data needed by the aviation unit and intermediate maintenance personnel for operation and maintenance of the Standard Aircraft Maintenance Trailer.

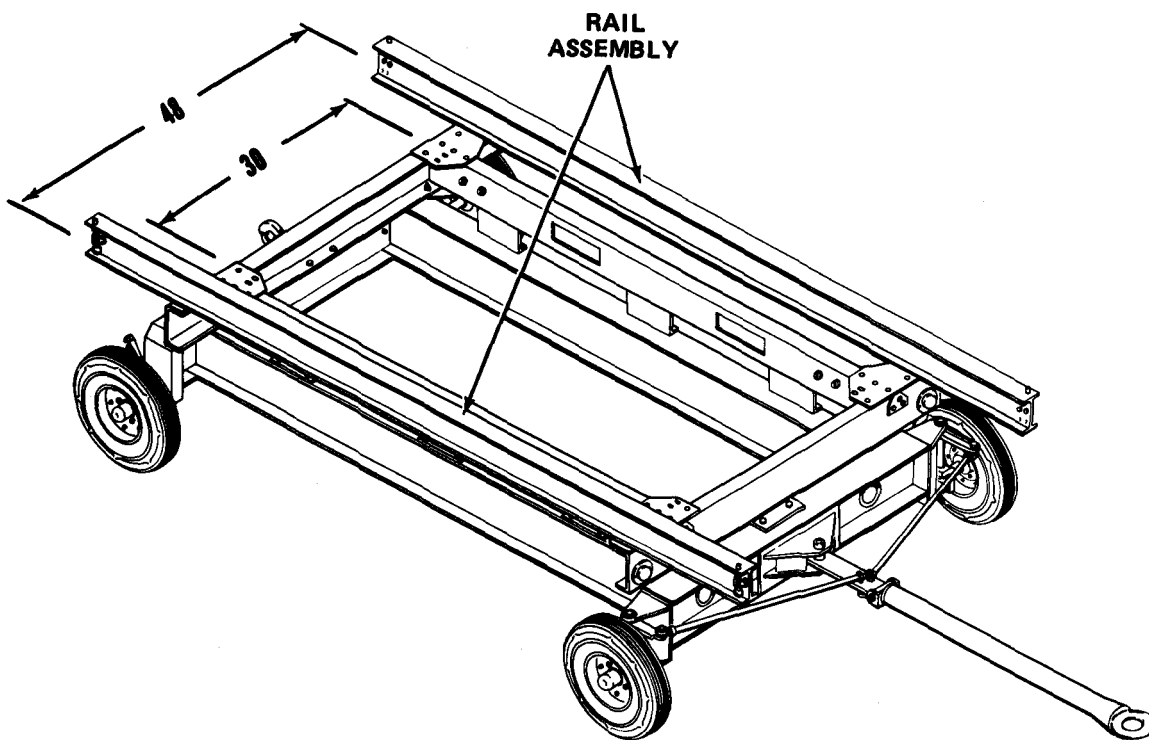
TABLE 1-1. EQUIPMENT DATA

Length	161.31±0.50 inches
Width	69.75±0.50 inches
Height	34.75±0.25 inches
Operating Temperature	-65°F 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 psig
Wheel Base	85.75±0.50 inches
Cramp Angle	40 degrees (min)
Unload Trailer Weight	800 pounds (approx)

## SECTION III. PRINCIPLES OF OPERATION

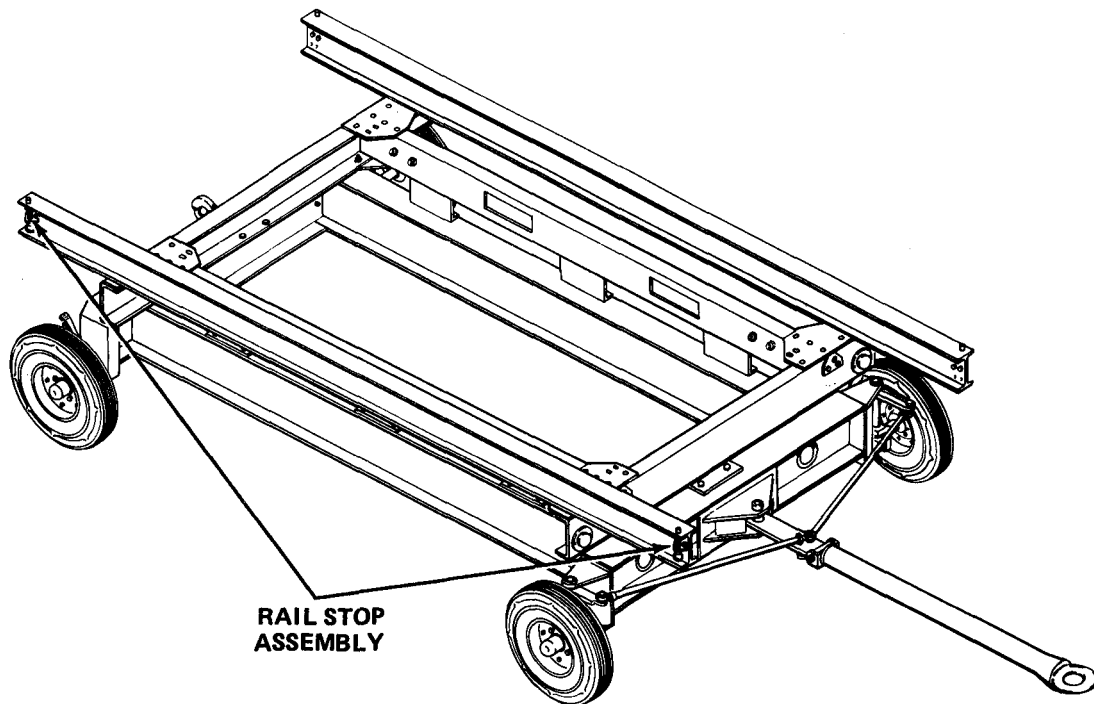
1-10. Functional description. This section contains a functional description of the Standard Aircraft Maintenance Trailer.

There are two mounting positions on the trailer for the rail assemblies. The outer most mounting position will place rails 48 inches apart. The alternate, inner mounting position, will place the rails 30 inches apart.



1-10. Functional description (cont).

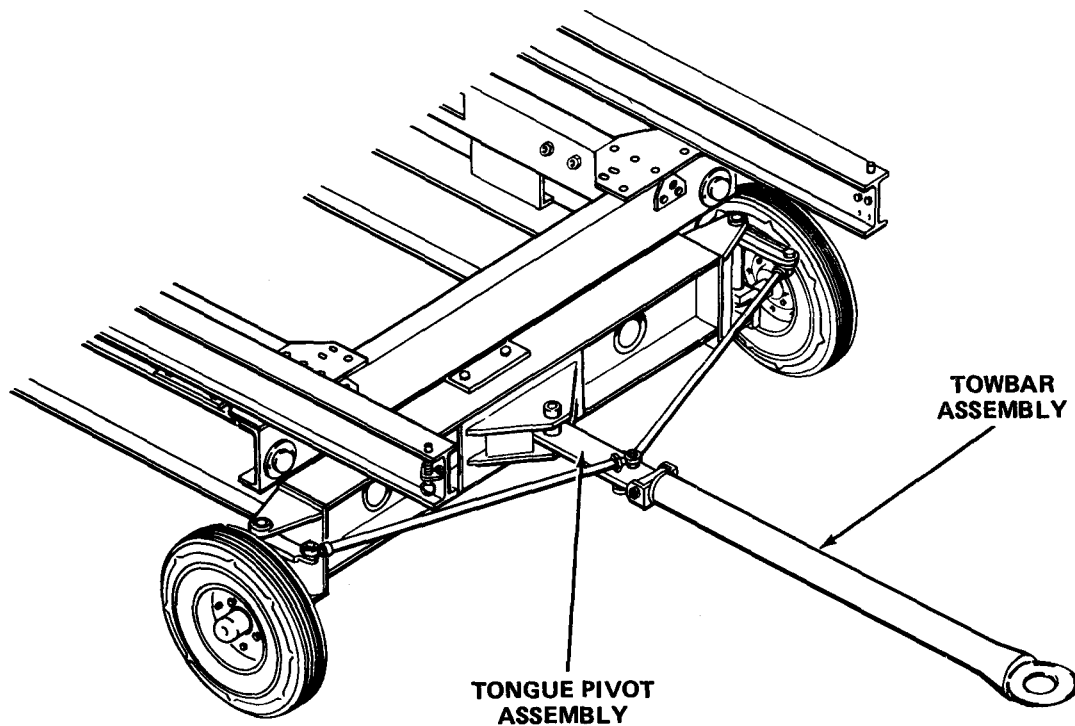
A rail stop assembly located at either end of the rail assemblies, prevents the load from sliding off the trailer. The rail stops may be lowered, to allow the load to be transferred off the trailer, by pulling down on the pull rings. The stops will raise when the pull rings are released.





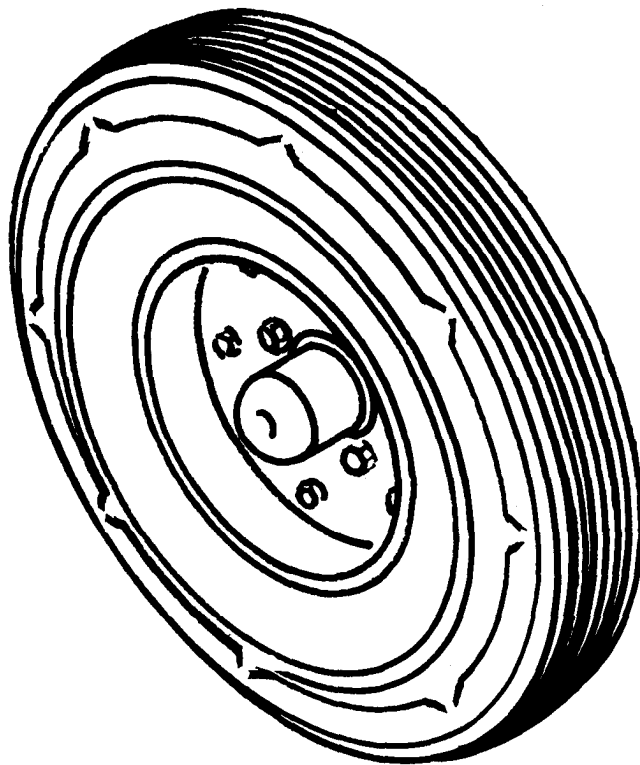
## 1-10. Functional description (cont).

The towbar assembly is used to connect the trailer to the tow vehicle through the use of the eye on the towbar and a pintle hook on the tow vehicle. The opposite end attaches to the trailer steering mechanism through the tongue pivot assembly.



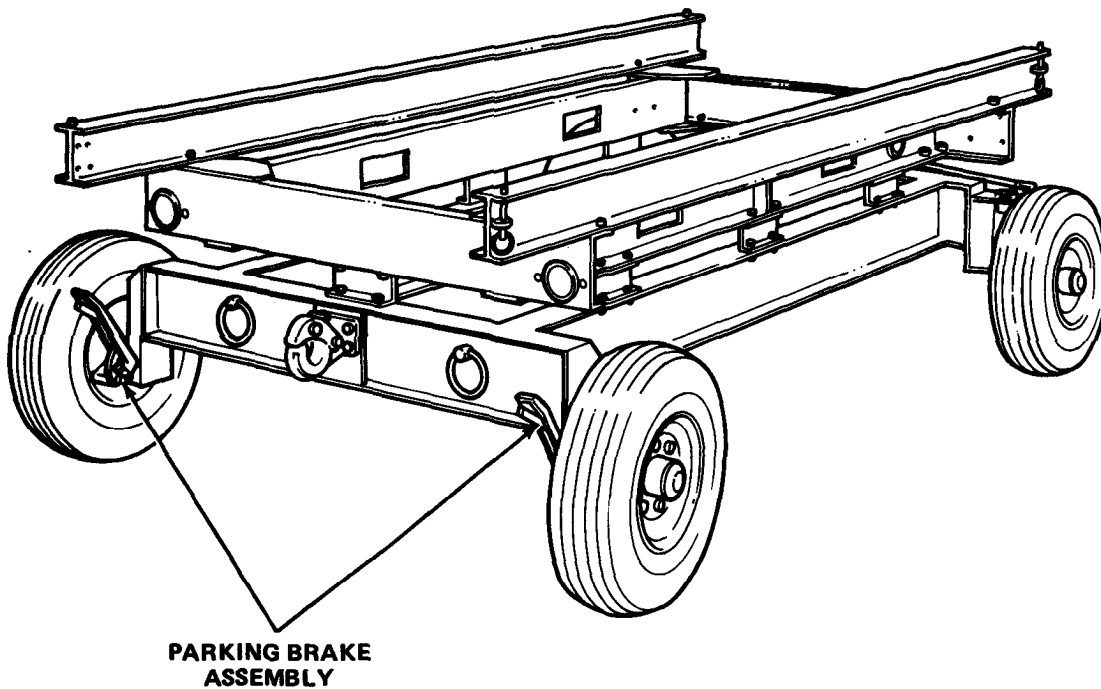
1-10. Functional description (cont).

Four tires with rim assemblies are used on the trailer. The 6.00-9, 6-ply tire is supplied with an inner tube, and is mounted on a two-piece rim assembly which is held together by eight bolts, washers and nuts.



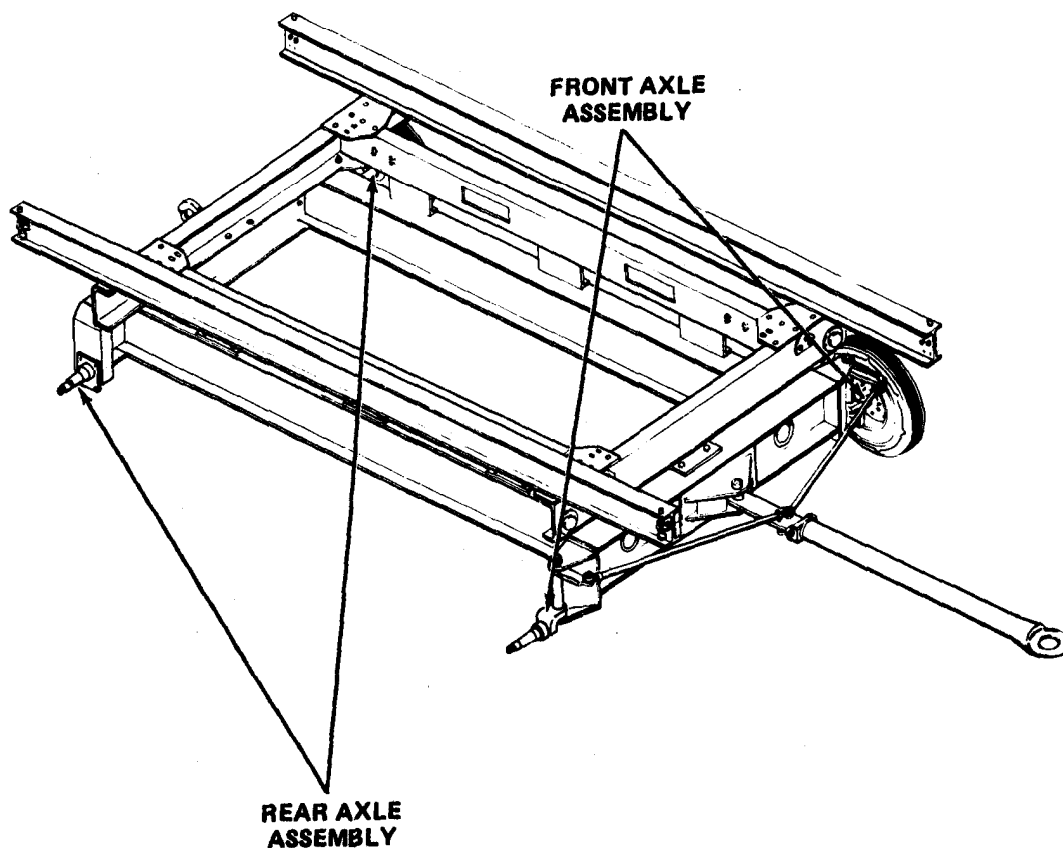
## 1-10. Functional description (cont).

Two brake assemblies are provided at the right and left rear axles to prevent the trailer from rolling when parked, or when being loaded or unloaded. The brakes are set by depressing the pedal assembly, and are released by disengaging the lever on the underside of the pedal assembly and then lifting up on the pedal assembly.



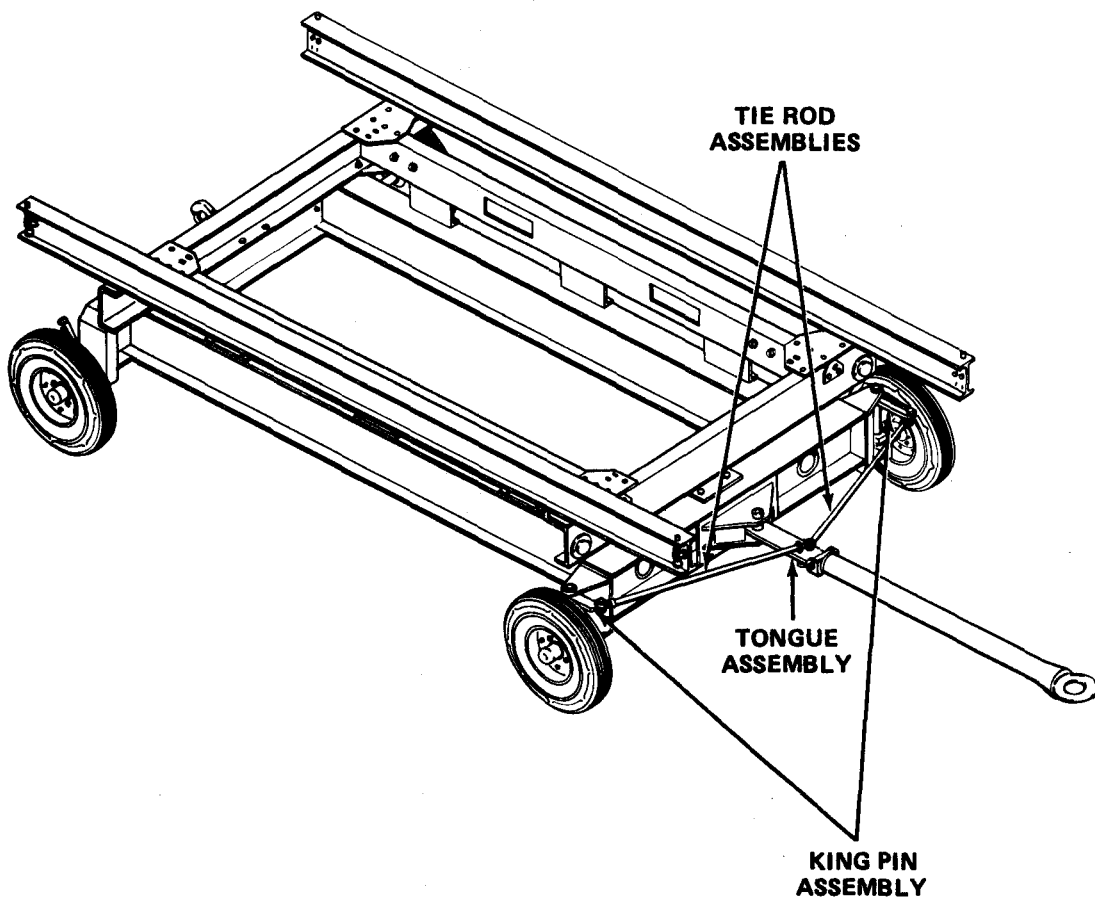
1-10. Functional description (cont).

The front axles are secured to the king pin pivot assemblies by means of a mounting block, allowing movement in conjunction with the steering mechanism. The rear axles are fixed, and are mounted to the trailer at the rear corner assemblies.



## 1-10. Functional description (cont).

The steering mechanism consists of the tie rod assemblies attached to the tongue assembly at one end, and the king pin pivot assemblies at the opposite ends. Movement of the towbar conveys equal force to both front axles through the tie rod assemblies to allow the front wheels to turn proportional to each other.





## CHAPTER 2

### OPERATING INSTRUCTIONS

#### SECTION I. DESCRIPTION AND USE OF OPERATOR'S CONTROLS

2-1. Operator's controls. Use Figure 2-1 and Table 2-1 to determine the location and function of operator's controls.

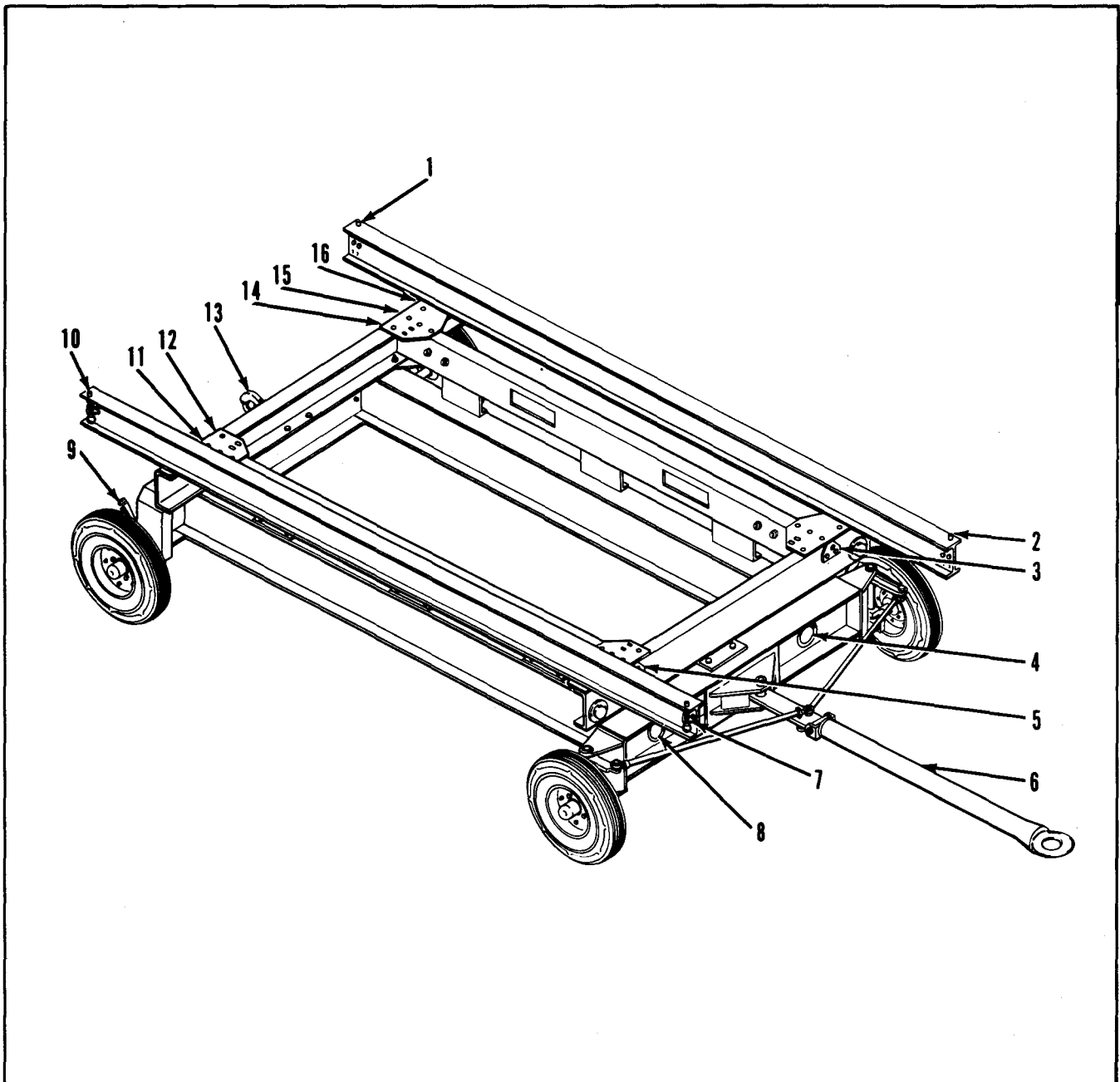


Figure 2-1. Standard Aircraft Maintenance Trailer Controls

## 2-1. Operator's controls (cont).

TABLE 2-1. STANDARD AIRCRAFT MAINTENANCE TRAILER CONTROLS

Key	Control	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.
3, 5, 12 and 14 (5, 12, and 14 hidden)	TIEDOWN MOUNT	Provides an installation point for the tiedown ring when the ring is removed from its' storage position on the trailer undercarriage.
4, 8, 11 and 15 (11 and 15 hidden)	TIEDOWN RING	Facilitates securing of the load when removed from the storage position on the trailer undercarriage, and installed in the tiedown mount.
6	TOWBAR ASSEMBLY	Connects trailer to the pintle hook on the tow vehicle at the towbar eye. Controls the steering mechanism of the trailer.
9 and 16	PARKING BRAKE	When set, prevents trailer from rolling while parked or being loaded or unloaded.
13	PINTLE HOOK	Allows the towbar of another trailer to be attached to the rear of the lead trailer.



## SECTION II. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

2-2. General. While operating the Standard Aircraft Maintenance Trailer the required PMCS shall be followed.

a. BEFORE YOU OPERATE. Always keep in mind the WARNINGS AND CAUTIONS. Check tire pressure daily. See Table 3-2 for complete instructions.

b. IF YOUR EQUIPMENT FAILS TO OPERATE. Troubleshoot in accordance with Table 3-3. Report any deficiencies using proper forms. See DA PAM 738-751.

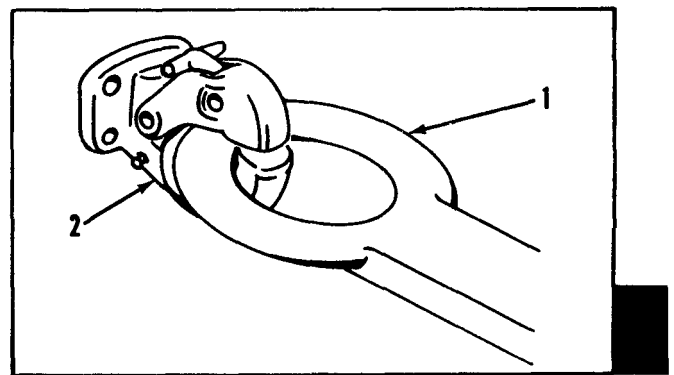
## SECTION III. OPERATION UNDER USUAL CONDITIONS

2-3. Coupling and Towing.

Coupling. To couple trailer to tow vehicle, perform steps (1) and (2).

(1) Set brakes on the tow vehicle to prevent rolling or an unexpected start.

(2) Connect towbar eye (1) of trailer to pintle hook (2) of the tow vehicle.



### NOTE

If trailer is loaded, make sure that load is secured before towing. Do not tow faster than 20 mph.

b. Towing. Before towing trailer, perform steps (1) and (2). Observe step (3) while towing.

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

(2) Release brakes on tow vehicle.

(3) Tow at speeds less than 20 mph.

2-4. Removing and installing pallet.

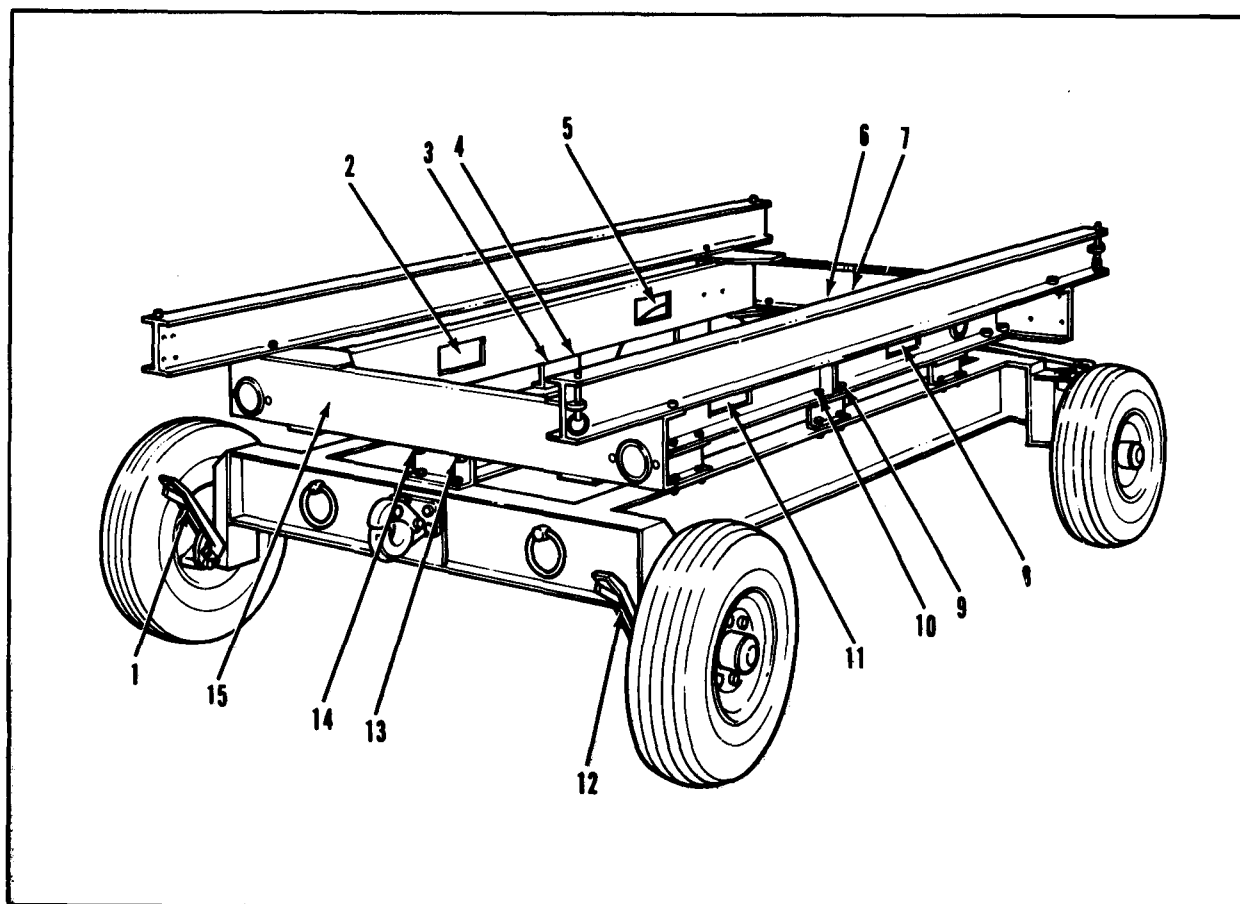
### CAUTION

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

2-4. Removing and installing pallet (cont).

**WARNING**

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



2-4. Removing and installing pallet (cont).

Removing pallet. Before removing pallet perform steps (1), (2) and (3), then perform step (4).

(1) Set parking brakes (1, 12).

(2) Position fork of fork lift through slots on both sides of pallet (2, 5, 8 and 11).

(3) Remove pallet securing bolts (3, 4, 6, 7, 9, 10, 13 and 14) (3, 4, 6 and 7 are hidden).

(4) Lift pallet (15).

b. Installing pallet. Before installing pallet perform step (1), then perform steps (2) and (3).

(1) Set parking brakes (1, 12).

(2) Lower pallet (15).

(3) Aline holes and install pallet securing bolts (3, 4, 6, 7, 9, 10, 13 and 14) .

#### SECTION IV. OPERATION UNDER UNUSUAL CONDITIONS

2-5. General. This section contains information for operating the Standard Aircraft Maintenance Trailer under unusual conditions.

2-6. Operation in Rainy or Humid Conditions. Frequently inspect, clean, and lubricate equipment to prevent rust and fungus accumulation.

2-7. Operation in Water.

a. Salt water will cause metal parts to rust and corrode. Clean, inspect and lubricate frequently.

b. Clean, inspect, and lubricate immediately after fording or when tactical situation permits.

2-8. Operation in Snow. Refer to FM 21-305 for special instructions on operation in snow.

2-9. Operation in Mud.

**CAUTION**

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

a. For maximum mobility in mud, reduce tire pressure to 50 psi.

b. If one or more wheels sink into the mud, it may be required to jack up the mired wheel and insert planking or matting beneath it.

c. Clean off all mud as soon as possible after operation.

2-10. 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.

a. For maximum mobility in sand, reduce tire pressure to 50 psi.

b. Frequently clean, inspect and lubricate to prevent excessive wear.

## **CHAPTER 3**

### **MAINTENANCE INSTRUCTIONS, AVUM, AVIM**

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#### **SECTION I.**

#### **REPAIR PARTS, SPECIAL TOOLS, TMDE AND SUPPORT EQUIPMENT**

- 3-1. Common tools and equipment. For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.
- 3-2. Tools for AVUM and AVIM. For AVUM; Tool Set, AVUM, Set No. 1 (NSN 4920-00-159-8727), Tool Set, AVUM, Set No. 2 (NSN 4920-00-567-0476), Tool Kit, Aircraft Mechanics General (NSN 5180-00-323-4692), Tool Kit, Airframe Repairman (NSN 5180-00-323-4876). For AVIM; Shop Set, AVIM, Tool Crib (NSN 4920-00-472-4183).
- 3-3. Special tools, TMDE, and support equipment. No special tools, TMDE, and support equipment is required.
- 3-4. Repair parts. Repair parts are listed and illustrated in Appendix C of this manual.

#### **SECTION II. SERVICE UPON RECEIPT**

- 3-5. Checking unpacked equipment.
  - a. Inspect the equipment for damage incurred during shipment. If equipment has been damaged, report the damage on SF Form 364, Report of Discrepancy.
  - b. Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with instructions of DA PAM 738-751.
  - c. Check to see whether equipment has been modified.
- 3-6. Assembly of equipment. 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 its secured position and install according to installation instructions in paragraph 3-38.
- 3-7. Preliminary servicing and adjustment of equipment. Before putting into service, the checks and services listed in Table 3-1 must be completed.

3-7. Preliminary servicing of equipment (cont).

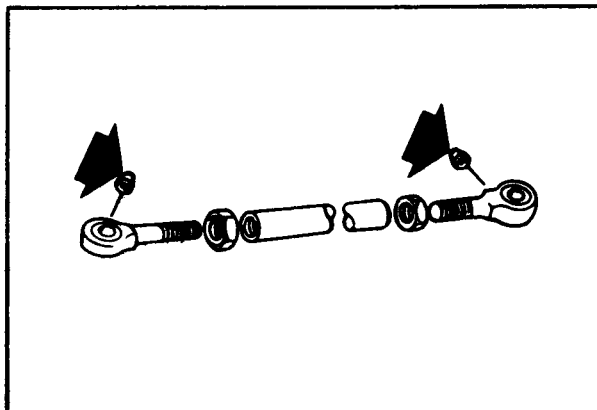
TABLE 3-1. PRELIMINARY SERVICING

Item	Action	Remarks
Tires	Check inflation pressure.	See para 3-7
Grease Fittings	Lubricate.	See para 3-8
Wheel Bearings	Adjust bearings and check for adequate lubrication.	See para 3-9
Tie Rods	Adjust.	See para 3-10

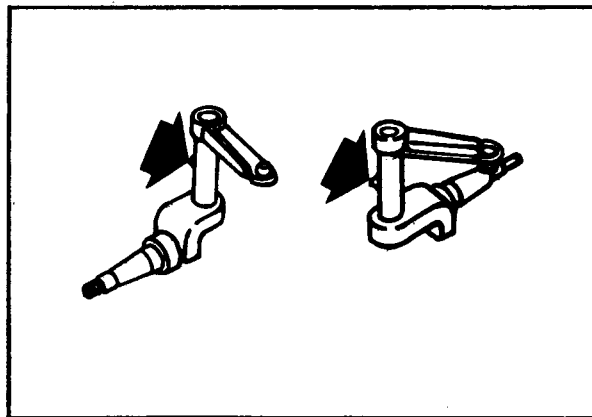
3-8. Tire pressure. Recommended tire pressure is 65 psi.

3-9. Lubrication of grease fittings. Grease fittings are to be lubricated using automotive and artillery grease, MIL-G-10924. The following points are to be greased:

a. Tie rod ends. One fitting at each end of two tie rods.

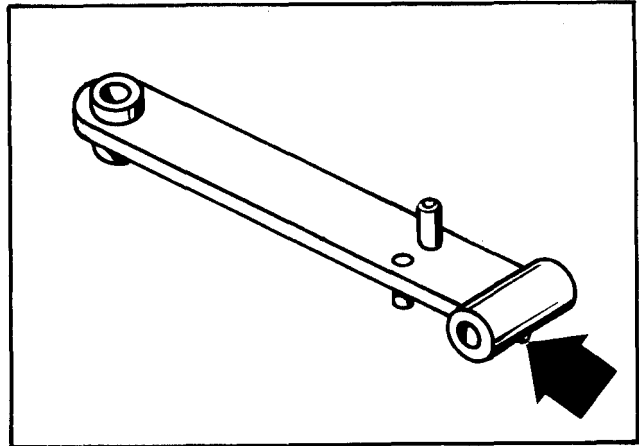


b. King pin support tubes. Two fittings located in the center of each support tube.

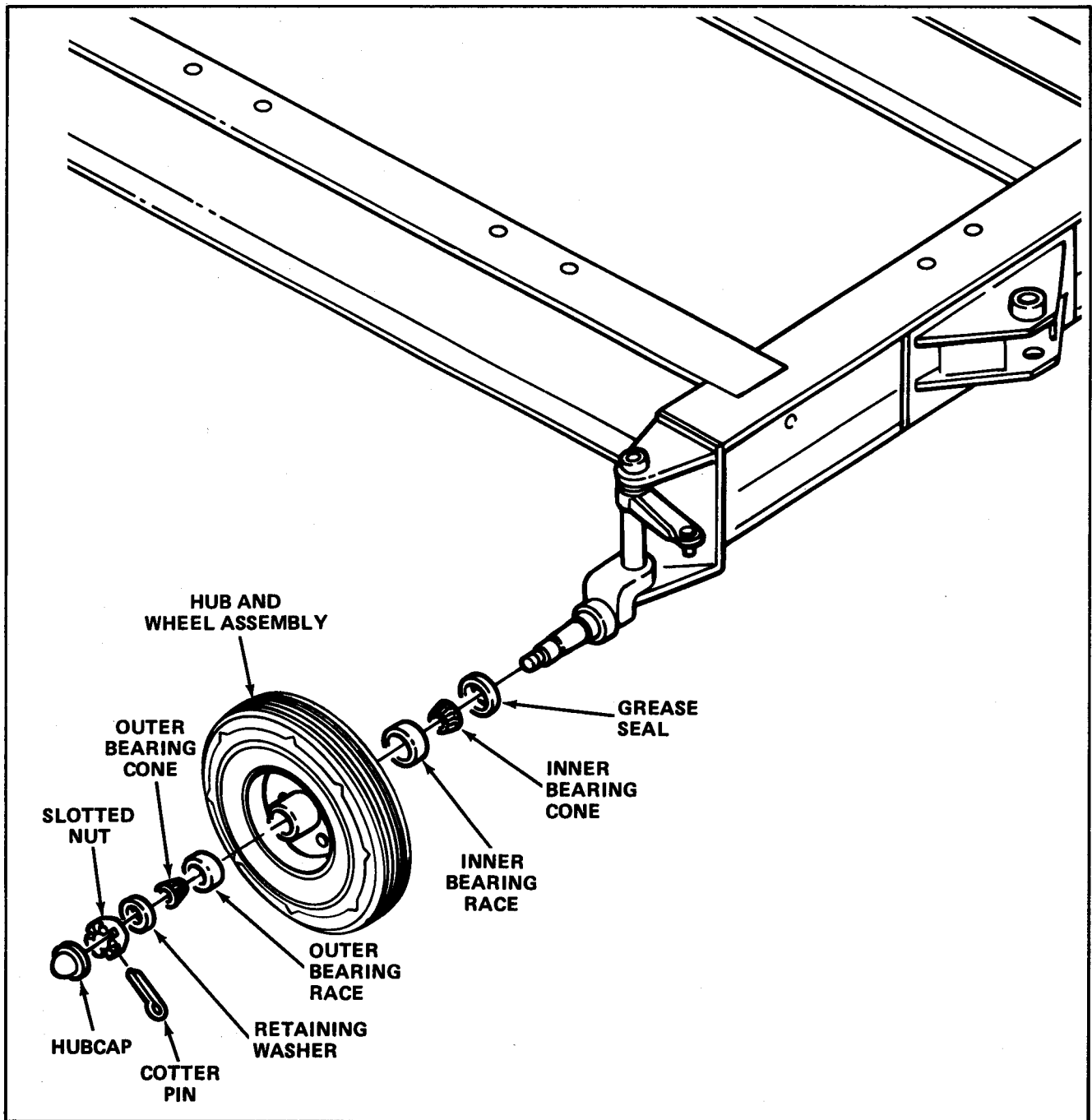


3-9. Lubrication of grease fittings (cont).

c. Tongue assembly. One fitting located at the center of the towbar connection bearing.



3-10. Lubrication and adjustment of wheel bearings.





## 3-10. Lubrication and adjustment of wheel bearings (cont).

**CAUTION**

Before raising one side of the trailer to service wheel bearings, block both wheels on the opposite side to prevent the trailer from rolling.

**NOTE**

When removing rear wheel hubs to service wheel bearings, make certain that parking brake has been released to prevent brake pads from contacting the brake drum.

- a. Block tires on opposite side of trailer to be raised.
- b. Raise trailer so that the wheel to be serviced clears the ground, and support trailer in the raised position.
- c. Remove hub cap, cotter pin, slotted nut, and bearing thrust washer.

**NOTE**

If a rear wheel is being serviced, inspect brake drum and brake linings for signs of grease.

- d. Remove hub and wheel assembly.
- e. Remove outer bearing cone from hub.
- f. Remove grease seal and inspect for defects. Remove inner bearing cone.  
Repack inner and outer bearing cones using automotive and artillery grease, MIL-G-10924.
- h. Replace inner and outer bearing cones and inner grease seal.
- i. Replace hub, wheel assembly and bearing thrust washer. Secure with slotted nut.
- j. Rotate wheel and tight en slotted nut until a slight drag is felt. Back off slotted nut about 1/8 turn to the nearest cotter pin slot.
- k. Install new cotter pin and hub cap.
- l. Lower trailer and remove wheel blocks.

## 3-11. Checking and adjusting tie rods.

## a. Checking.

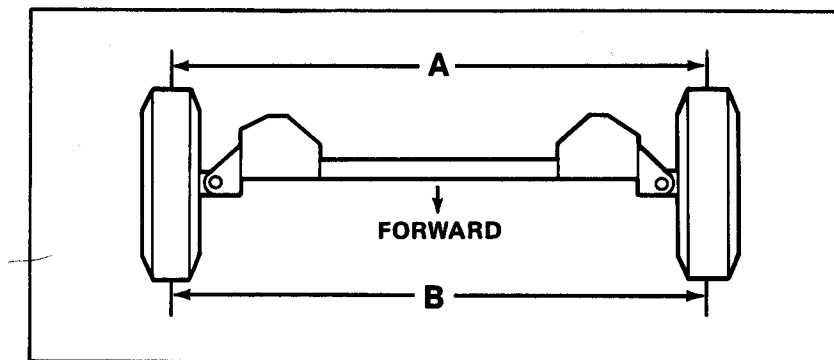
(1) Adjust wheel bearings. See paragraph 3-9. Place trailer on level ground or floor.

(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 (measurement A).

3-11. Checking and adjusting tie rods (cont).

a. Checking (cont).



(4) Measure between tread centers at hub height in front of tires (measurement B).

(5) Measurement B must be  $\frac{1}{16}$  inch less than measurement A.

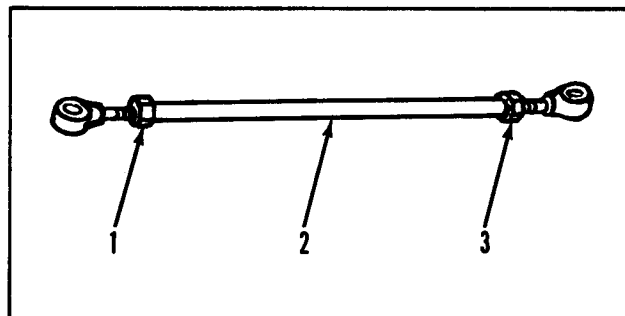
b. Adjusting. If measurement B is too short, lengthen tie rods. If measurement B is too long, shorten tie rods.

(1) Loosen two locknuts (1 and 3) on both tie rods.

(2) Turn tubes (2) to shorten or lengthen tie rods as needed.

(3) Check adjustments using the procedure in paragraph 3-10a.

(4) When measurements are correct, tighten locknuts (1 and 3).



**SECTION III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)**

3-12. All PMCS required for the Standard Aircraft Maintenance Trailer are listed in Table 3-2.

a. Item number column. Checks and services are numbered in logical order of performance regardless of the interval. This column should be used as a source of item numbers for the TM Number Column on DA Form 2404, Equipment Inspection and Maintenance Worksheet, in recording results of PMCS.

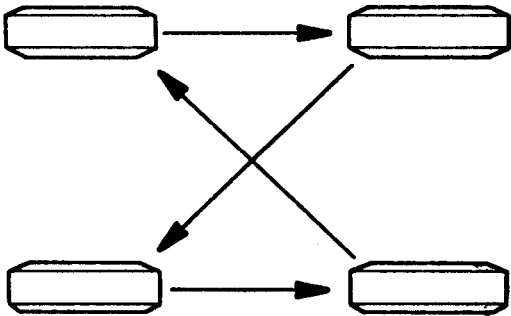
b. Item to be inspected column. The items listed in this column are divided into groups indicating the portion of the trailer of which they are a part.

c. Procedures column. This column contains a brief description of the procedure by which the check is to be performed.

TABLE 3-2. AVUM AND AVIM PREVENTIVE MAINTENANCE CHECKS AND SERVICES

D-Daily W-Weekly		M-Monthly Q-Quarterly		S-Semiannually A-Annually				
Item No.	Interval						Items To Be Inspected	Procedure
	D	W	M	Q	S	A		
1	•						Tires	Inflate to 65 psi.
2		•					Tires	Remove foreign matter. Inspect for tires that are defective or worn out. Replace as necessary. If tire wear is uneven, check wheel bearings and tie rod adjustment (see para 3-9 and 3-10).
3		•					Wheel mount - ing hardware	Tighten lug nuts. Check slotted nuts in hubs for excessive play. Adjust as necessary.
4		•					Brake parts	Remove rear wheel assemblies and brake drums. Check for damaged parts.
5				•			Brake linings	Remove rear wheel assemblies and brake drums. Check shoe linings.
6				•			Wheel bearings	Adjust wheel bearings (see para 3-9). (AVIM)

TABLE 3-2. AVUM AND AVIM PREVENTIVE MAINTENANCE CHECKS AND SERVICES (CONT)

D -Daily W-Weekly		M-Monthly Q-Quarterly		S-Semiannually A-Annually				
Item No.	Interval						Item To Be Inspected	Procedure
	D	W	M	Q	S	A		
7						•	Wheel bearings	Remove, clean, lubricate and adjust wheel bearings (see para 3-9). (AVIM)
8					•		Tires	Rotate tires.  
9			•				Lube fittings	Lubricate all fittings (see para 3-8).
10		•					All components	Tighten nuts and bolts. Replace parts with stripped or damaged threads.

**SECTION IV. TROUBLESHOOTING**

3-13. Listed below are malfunctions that could possibly occur during use. Areas to be inspected and action required for specific problems are also included.

Malfunction	Inspect	Corrective Action
Brakes are unable to hold trailer from rolling.	Brake assembly for broken components.	Replace (see para 3-64). (AVIM)
	Brake linings for excessive wear.	Replace (see para 3-64). (AVIM)
	Brake lining and brake drum for signs of grease. If present, inspect wheel hub grease seals for defects.	Clean or replace (see para 3-64). Replace (see para 3-61).
Noise from wheels.	Wheel bearings for looseness.	Adjust (see para 3-9, step m). (AVIM)
	Wheel bearings for wear.	Replace (see para 3-61). (AVIM)
	Wheel rim assembly for looseness.	Tighten (see para 3-55).
Trailer is hard to turn.	Tie rod ends for proper lubrication.	Lubricate (see para 3-8a).
	King pin support tubes for proper lubrication.	Lubricate (see para 3-8b).
	Tie rod assembly for bends or distortion.	Repair or replace (see Para 3-45 or 3-46).
	King pin for distortion or binding.	Repair or replace (see para 3-52 or 3-53). (AVIM)
	Front tires for low inflation pressure.	Inflate tires to 65 psi.
Uneven tire wear.	Wheel bearings for looseness.	Adjust (see para 3-9, step m). (AVIM)
	Tires for high or low pressure.	Tires to be inflated to 65 psi.

TROUBLESHOOTING (CONT)

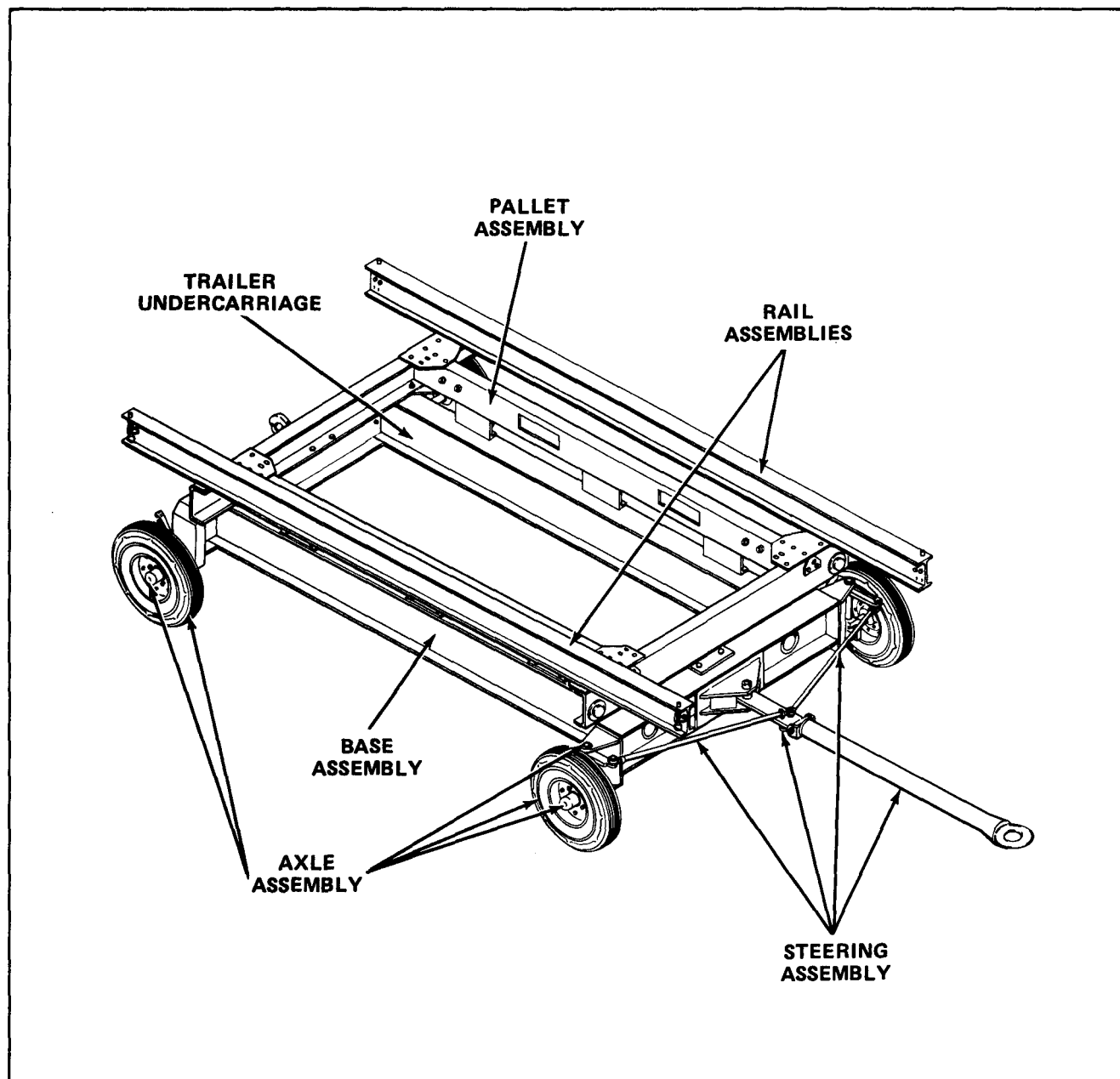
Malfunction	Inspect	Corrective Action
Uneven tire wear (cont).	Wheel alignment if uneven tire wear appears on front tires.	Adjust (see para 3-10a).

**SECTION V. MAINTENANCE PROCEDURES**

3-14. Maintenance of significant components. For maintenance procedures, the trailer will be divided into the assemblies listed below.

Assembly	Includes	Refer to Paragraph
Rail	Rail and stop assembly	3-15
Pallet	Pallet and pallet mounting channels	3-22
Trailer Undercarriage	Undercarriage	3-29
Base Assembly	Base	3-32
Steering Assembly	Towbar, tongue, tie rod ends, tie rods, bearings, fittings, etc.	3-35
Axle Assembly	Front axle and king pin pivot assembly. Wheels, tires and tubes, hubs and bearings, and parking brake assembly.	3-49

3-14. Maintenance of significant components (cont).





3-15. Summary of rail maintenance. Maintenance tasks are listed below with information necessary to locate detailed procedures.

Task Number	Task	Refer to Paragraph
1	Inspect rail.  Perform task 1, then perform task 2 and 3 as needed.	3-16
2	Repair rail.	3-17
3	Replace rail.	3-18
4	Inspect rail stop assembly.  Perform task 4, then perform task 5 and 6 as needed.	3-19
5	Repair rail stop assembly.	3-20
6	Replace rail stop assembly.	3-21



---

3-16. Rail - Inspect

3-16

---

This task covers: Inspection

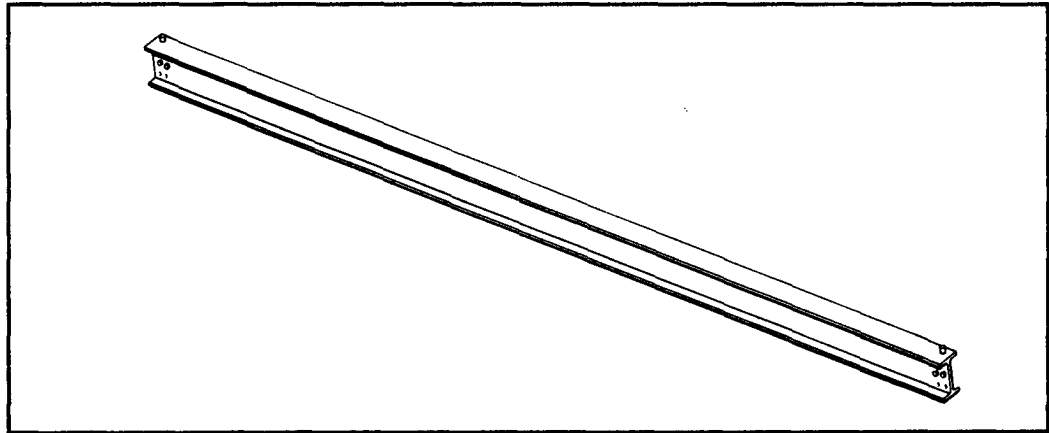
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INITIAL SETUP

Personnel Required:  
MOS 67( )10

---

INSPECTION



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

END OF TASK

---

3-17. Rail - Repair

---

3-17

This task covers: Repair (AVIM)

---

INITIAL SETUP

Tools:

Tool kit, airframe repairers NSN 5180-00-323-4876

Personnel Required:

MOS 68G

Reference Information:

FM 55-63

Equipment Condition:

Para 3-18 Rail to be removed only when repairs are made by welding

General Safety:

Refer to para 7-70, TM 55-1500-204-25/1 for welding safety.

---

REPAIR

1. Welding. Welding to repair cracks is to be done in accordance with FM 55-63. Fundamentals of Airframe Maintenance.
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, as outlined in paragraph 3-18.

END OF TASK

---

3-18. Rail - Replace

3-18

---

This task covers: Removal and Installation (AVIM)

---

INITIAL SETUP

Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692  
Wrench, torque 0-600 in-lbs

Personnel Required:

MOS 67( )10

Equipment Condition:

Para 3-21 Rail stop assembly removed

---

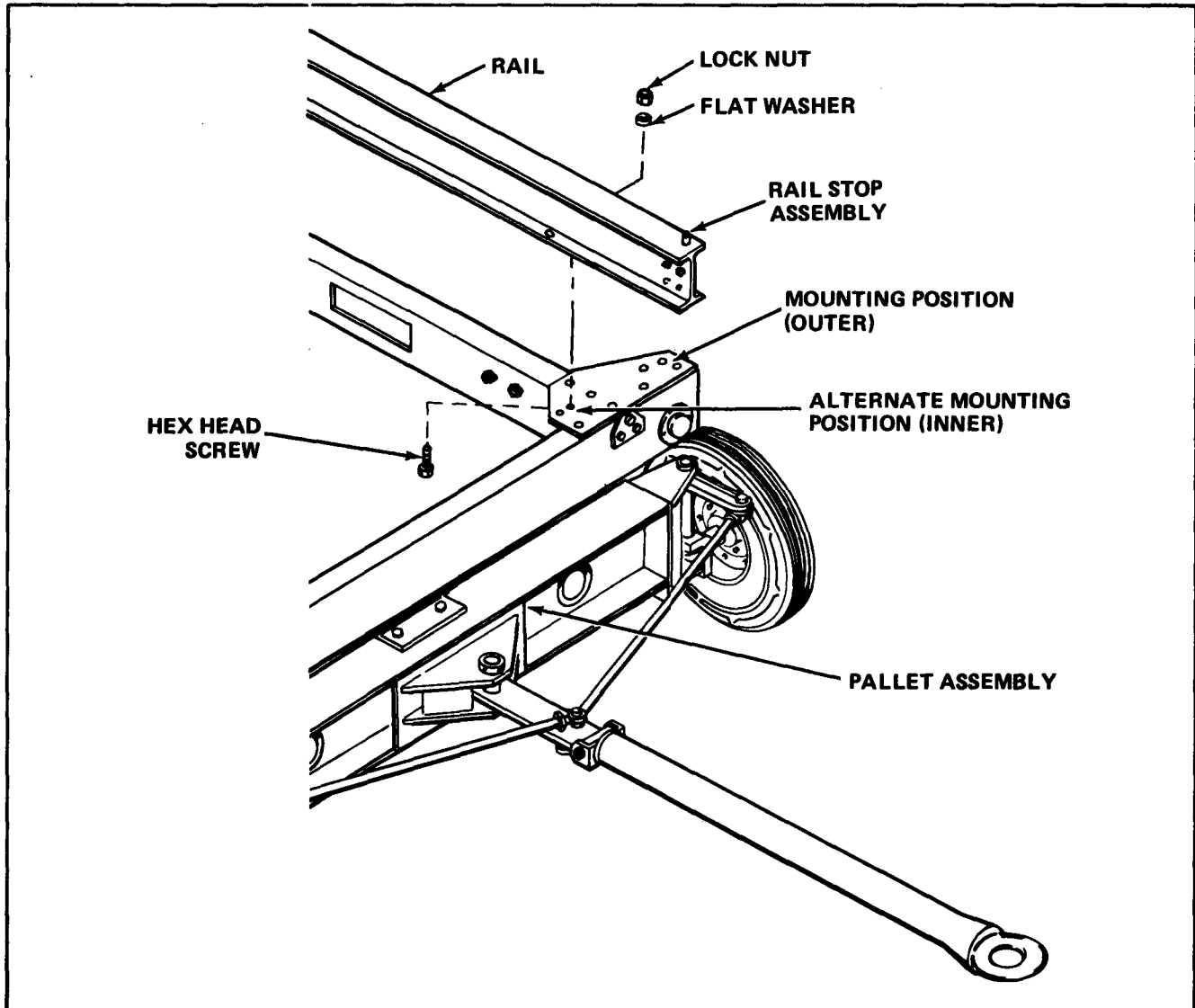
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### 3-18. Rail - Replace (Cont)

3-18

#### REMOVAL

1. Remove four hex head screws, lock nuts and flat washers securing rail to pallet assembly.
2. Remove rail from pallet assembly.



END OF TASK

---

3-18. Rail - Replace (Cont)

---

3-18

## INSTALLATION

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

END OF TASK

---

3-19. Rail stop assembly - Inspect

---

3-19

This task covers: Inspection

---

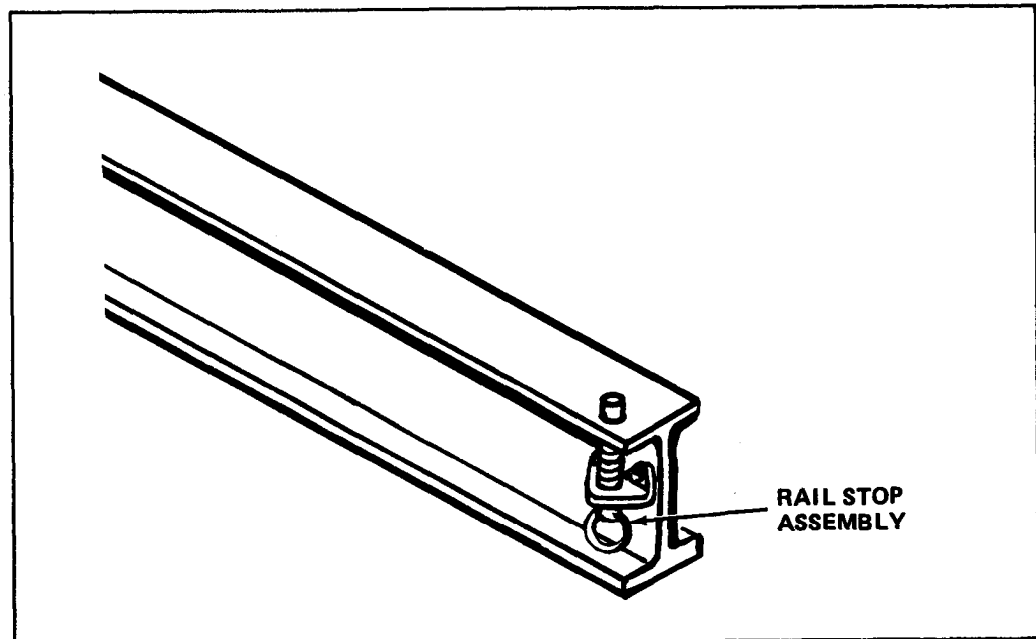
INITIAL SETUP

Personnel Required:

MOS 67( )10

---

INSPECTION



1. Check rail stop assembly for bent or broken stop pin. Also 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.

END OF TASK



---

3-20. Rail stop assembly - Repair

---

3-20

This task covers: Repair (AVIM)

---

INITIAL SETUP

Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Wrench, torque 0-600 in-lbs

Personnel Required:

MOS 67( )10

---

REPAIR

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 as outlined in paragraph 3-21, if further repair is required.

END OF TASK

---

3-21. Rail stop assembly - Replace

---

3-21

This task covers: Removal and Installation

---

INITIAL SETUP

Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

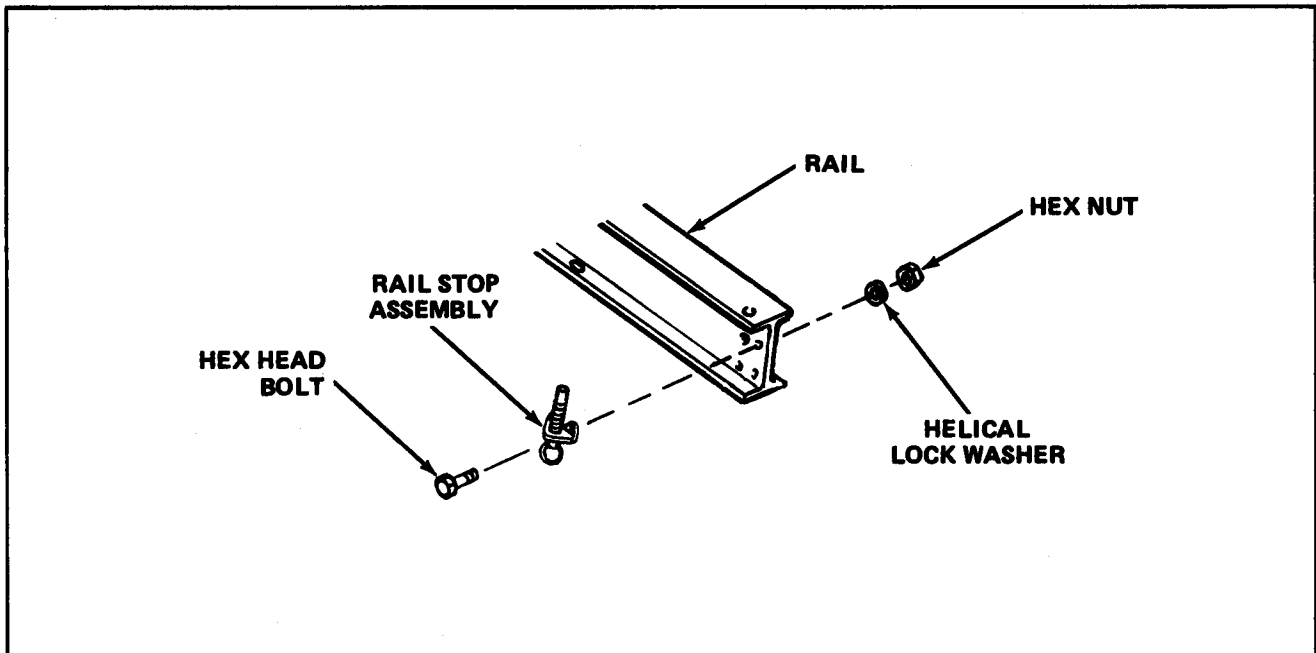
Personnel Required:

MOS 67( )10

---

REMOVAL

1. Remove two hex head bolts, hex nuts and helical lock washers securing rail stop assembly to rail.
2. Remove rail stop assembly from rail.



END OF TASK

---

**3-21. Rail stop assembly - Replace (Cont)**

---

**3-21****INSTALLATION**

1. Position rail stop assembly on rail.
2. Install two hex head bolts through rail stop assembly into rail.
3. Install a helical lock washer and a hex nut on each bolt. Tighten nuts to a torque of 72 in-lbs.

**END OF TASK**

3-22. Summary of pallet maintenance. Maintenance tasks are listed below with the information necessary to locate detailed procedures.

Task Number	Task	Refer to Paragraph
1	Inspect pallet assembly.  Perform task 1, then perform task 2 and 3 as needed.	3-23
2	Repair pallet assembly.	3-24
3	Replace pallet assembly.	3-25
4	Inspect pallet mounting channel.  Perform task 4, then perform task 5 and 6 as needed.	3-26
5	Repair pallet mounting channel.	3-27
6	Replace pallet mounting channel.	3-28

---

3-23. Pallet assembly - Inspect

---

3-23

This task covers: Inspection

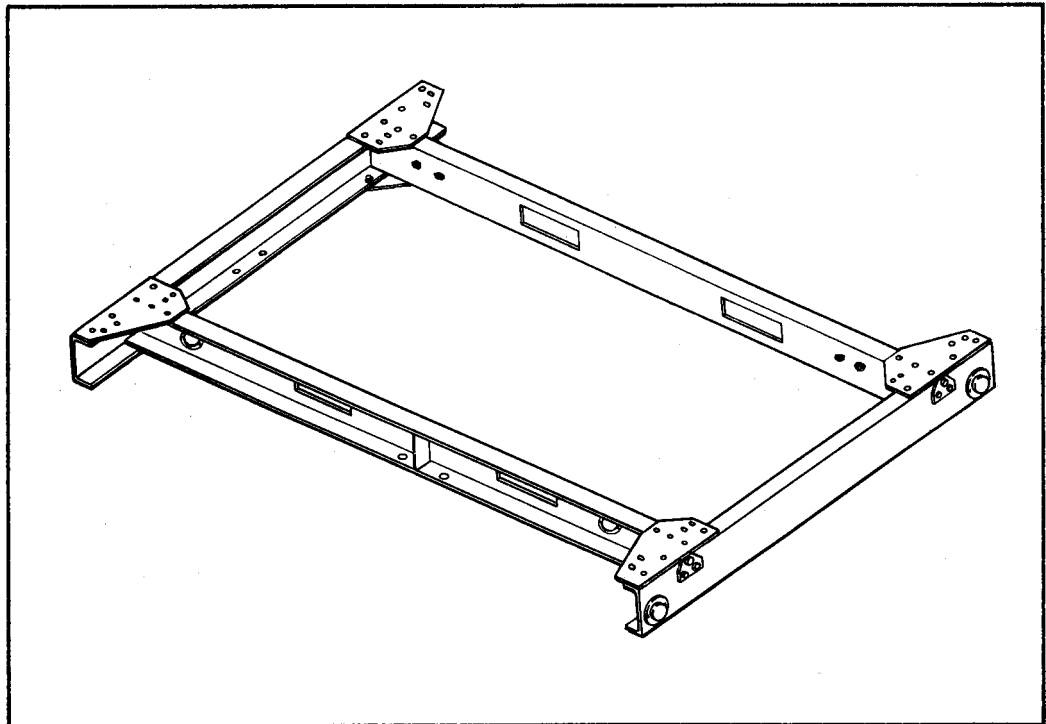
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INITIAL SETUP

Personnel Required:  
MOS 67( )10

---

INSPECTION



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.

END OF TASK

---

3-24. Pallet assembly - Repair

---

3-24

This task covers: Repair (AVIM)

---

INITIAL SETUP

Tools:

Tool kit, airframe repairers NSN 5180-00-323-4876

Personnel Required:

MOS 68G

Reference Information:

FM 55-63

Equipment Condition:

Para 3-18 Rail removed

General Safety:

Refer to para 7-70, TM 55-1500-204-25/1  
for welding safety.

---

REPAIR

1. Welding. Welding to repair cracks is to be done in accordance with FM 55-63, Fundamentals of Airframe Maintenance.
2. Use the appropriate hand file contained in the tool kit to remove burrs and sharp edges from pallet assembly.
3. Tighten loose parts. Also replace missing, damaged, bent or distorted parts, as outlined in paragraph 3-25.

END OF TASK

---

3-25. Pallet assembly - Replace

---

3-25

This task covers: Removal and Installation (AVIM)

---

INITIAL SETUP

Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Wrench, torque 0-600 in-lbs

Personnel Required:

MOS 67( )10

Equipment Condition:

Para 3-18 Rail removed

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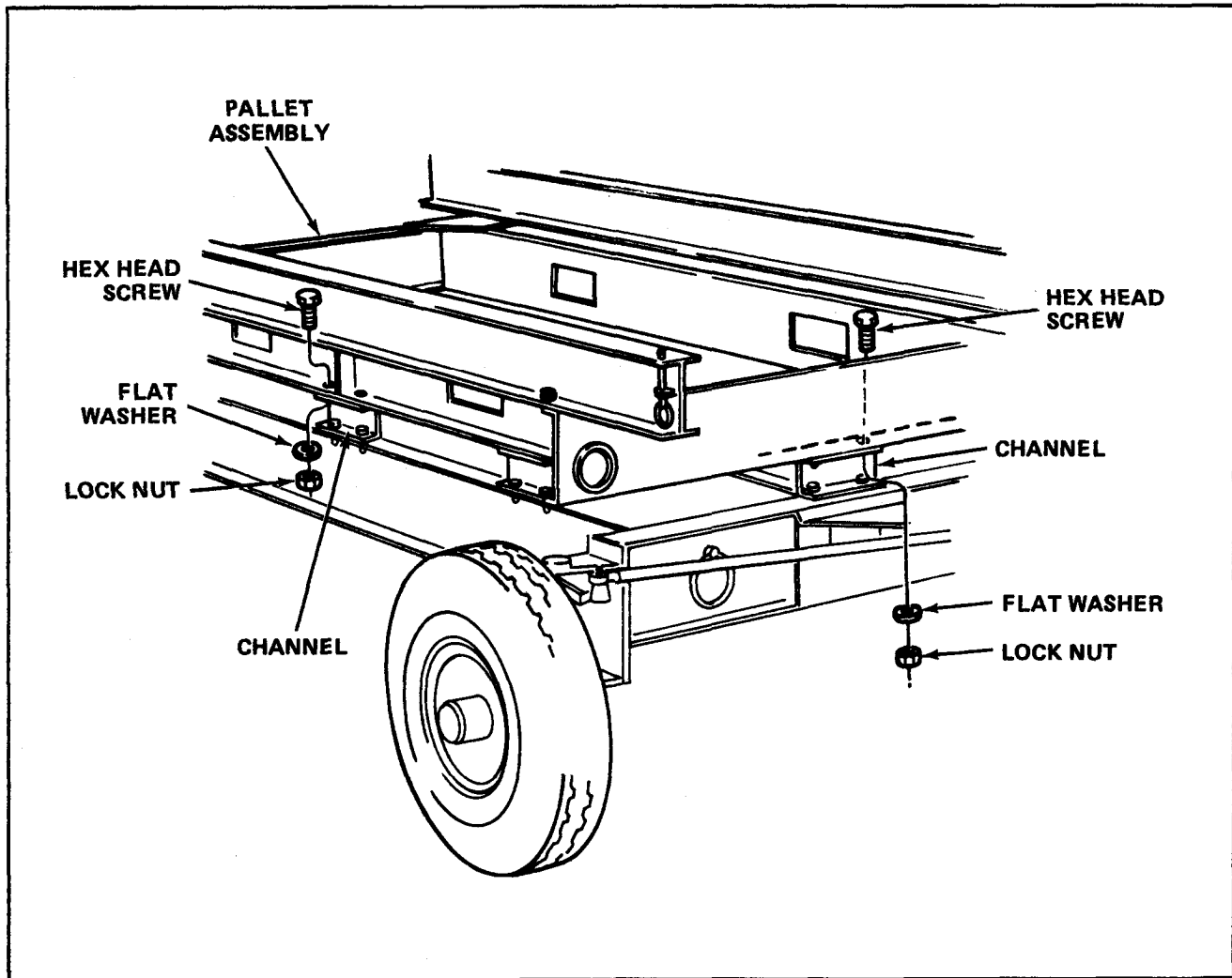
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## 3-25. Pallet assembly - Replace (Cont)

3-25

## REMOVAL

1. Remove eight hex head screws, lock nuts and flat washers from pallet assembly.
2. Remove pallet assembly from pallet mounting channels.



END OF TASK



---

3-25. Pallet assembly - Replace (Cont)3-25

---

## INSTALLATION

1. Position pallet assembly on top of pallet mounting channels.
2. Insert eight hex head screws through holes on pallet assembly and pallet mounting channels.
3. Install a flat washer and a lock nut on each screw. Tighten lock nuts to a torque of 540 in-lbs.

END OF TASK

---

3-25. Pallet assembly - Replace (Cont)

---

3-25

This task covers: Disassembly and Reassembly (AVIM)

---

INITIAL SETUP

Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692  
Wrench, torque 0-600 in-lbs

Personnel Required:

MOS 67( )10

Equipment Condition:

Para 3-18R a i l removed  
Para 3-25 Pallet assembly, removed

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## 3-25. Pallet assembly - Replace (Cont)

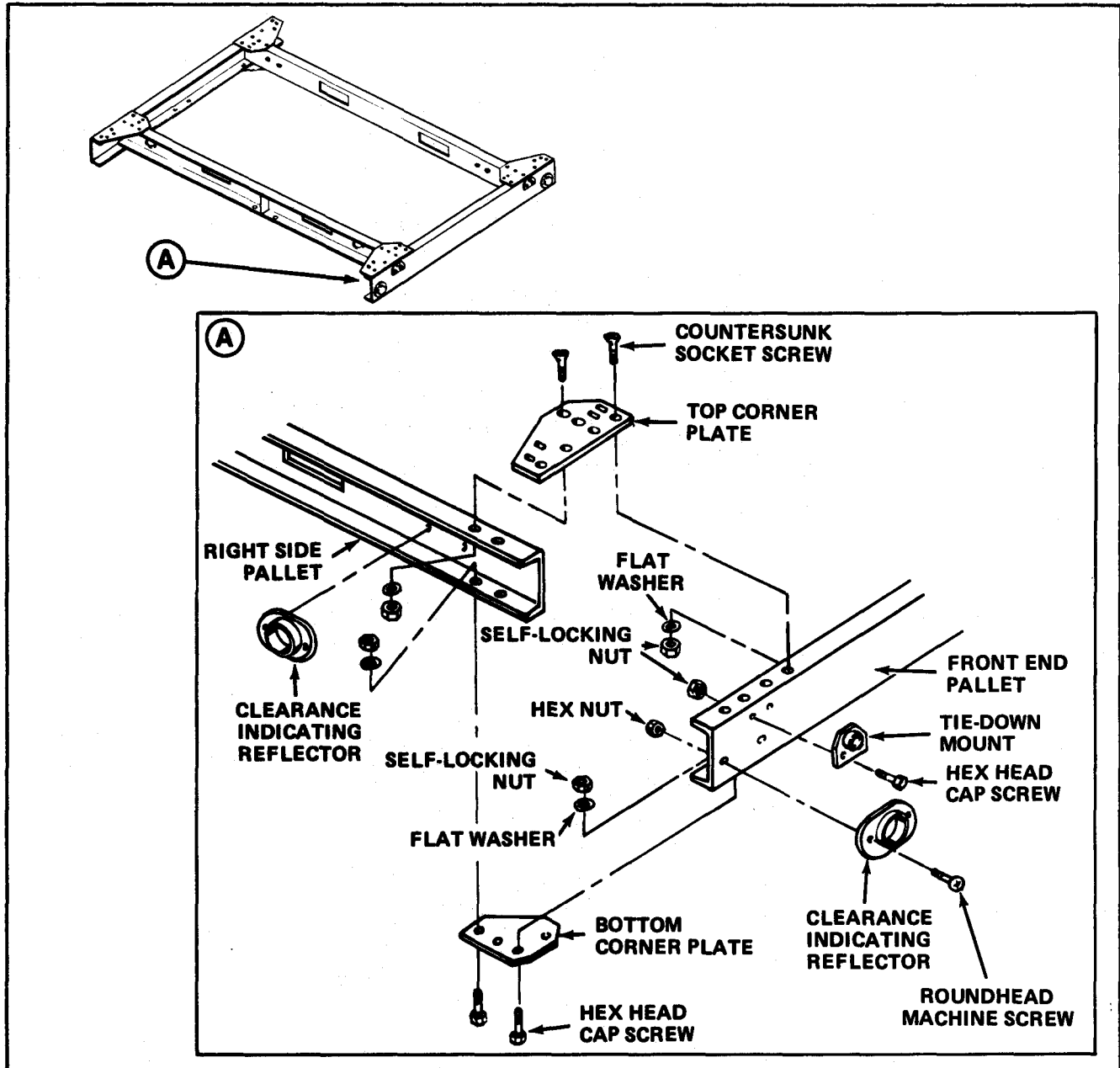
3-25

## DISASSEMBLY

## NOTE

Record location and color of each reflector for reassembly.

1. Remove sixteen roundhead machine screws with hex nuts securing the eight clearance indicating reflectors to the pallet assembly. Remove reflectors.



GO TO NEXT PAGE

---

3-25. Pallet assembly - Replace (Cont)

---

3-25

## DISASSEMBLY (Cont)

2. Remove eight hex head cap screws with self-locking nuts securing the four tie-down mounts, located on the front and rear pallet cross-members. Remove tiedown mounts.
3. Remove six countersunk socket screws, self-locking nuts and flat washers securing each top corner plate to the pallet assembly. Remove four top corner plates.
4. Turn the pallet assembly over and remove four hex head cap screws with self-locking nuts and flat washers, securing each bottom corner plate. Remove the four bottom corner plates and separate the front, rear, left side, and right side pallet members from each other.

END OF TASK

## REASSEMBLY

1. Place the front and rear pallet members 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 left and right side pallet members across from each other with the channeled sides facing away from each other. There should be four holes showing on top of each left and right side pallet end.
3. Position four bottom corner plates under the pallet ends and sides. Aline the holes and install four hex head cap screws, flat washers and self-locking nuts into each corner plate. Tighten nuts to a torque of 276 in-lbs.
4. Place two top corner plates with slotted holes in opposite corners of each other. Place two corner plates without slotted holes in the remaining corners. Install six countersunk socket screws, flat washers and self-locking nuts into each top corner plate. Tighten nuts to a torque of 276 in-lbs.
5. Install four tiedown mounts on the front and rear pallet members with eight hex head cap screws and self-locking nuts. Tighten nuts to a torque of 228 in-lbs.
6. Position the clearance indicating reflectors as noted in paragraph 3-25, step 1, of the disassembly procedures and install sixteen roundhead machine screws with hex nuts. Tighten nuts to a torque of 72 in-lbs.

END OF TASK

---

3-26. Pallet mounting channel - Inspect

---

3-26

This task covers: Inspection

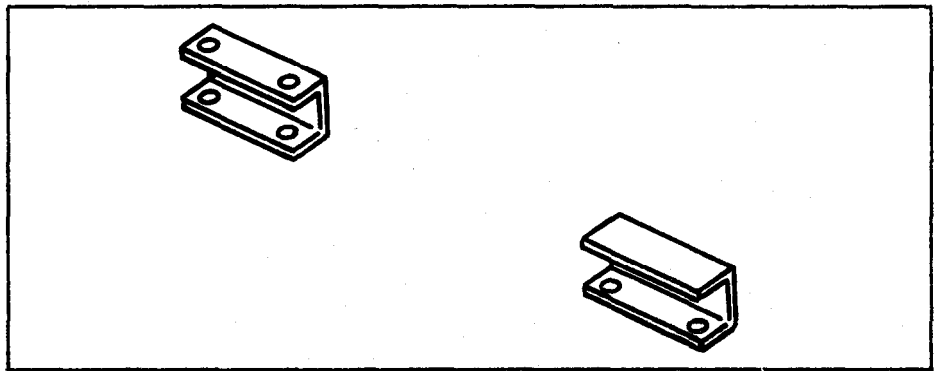
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## INITIAL SETUP

Personnel Required:MOS 67( )10

---

## INSPECTION



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.

END OF TASK

---

3-27. Pallet mounting channel - Repair

---

3-27

This task covers: Repair (AVIM)

---

INITIAL SETUP

Tools:

Tool kit, airframe repairers NSN 5180-00-323-4876

Personnel Required:

MOS 68G

Reference Information:

FM 55-63

Equipment Condition:

Para 3-18 Rail removed

Para 3-25 Pallet assembly removed

General Safety:

Refer to para 7-70, TM 55-1500-204-25/1  
for welding safety.

---

REPAIR

1. Welding. Welding to repair cracks is to be done in accordance with FM 55-63, Fundamentals of Airframe Maintenance.
2. Use the appropriate hand file contained in the tool kit to remove burrs and sharp edges from channel.
3. Tighten loose parts. Also replace missing, damaged, bent or distorted parts, as outlined in paragraph 3-28.

END OF TASK

---

3-28. Pallet mounting channel - Replace

---

3-28

This task covers: Removal and Installation (AVIM)

---

INITIAL SETUP

Tools:

Tool kit, aircraft general mechanics NSN 5180-00-323-4692  
Wrench, torque 0-600 in-lb

Personnel Required:

MOS 67( )10

Equipment Condition:

Para 3-18 Rail removed  
Para 3-25 Pallet assembly removed

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## 3-28. Pallet mounting channel - Replace (Cont)

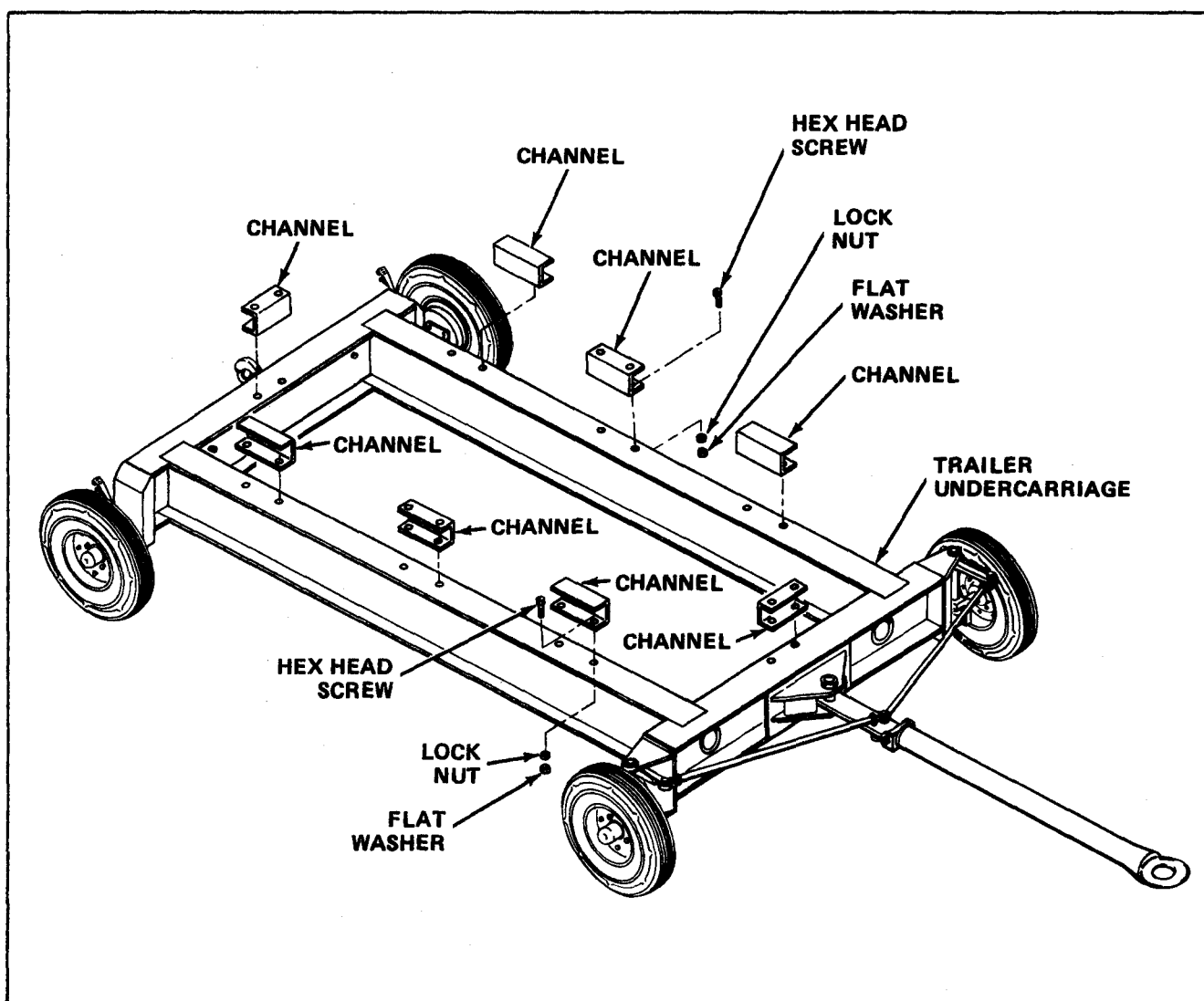
3-28

## 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, flat washers and lock nuts securing channel to trailer undercarriage.
2. Remove channel.



END OF TASK



---

3-28. Pallet mounting channel - Replace (Cont)

---

3-28

## INSTALLATION

### 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. Position channel on trailer as noted during removal, paragraph 3-28, step 1.
2. Install two hex head screws, flat washers and lock nuts to secure channel to trailer undercarriage. Tighten nuts to a torque of 540 in-lbs.

END OF TASK

3-29. Summary of trailer undercarriage maintenance. Maintenance tasks are listed below with information necessary to locate detailed procedures.

Task Number	Task	Refer to Paragraph
1	Inspect trailer undercarriage.  Perform task 1, then perform task 2 as needed.	3-30
2	Repair trailer undercarriage.	3-31

---

3-30. Trailer undercarriage - Inspect

---

3-30

This task covers: Inspection

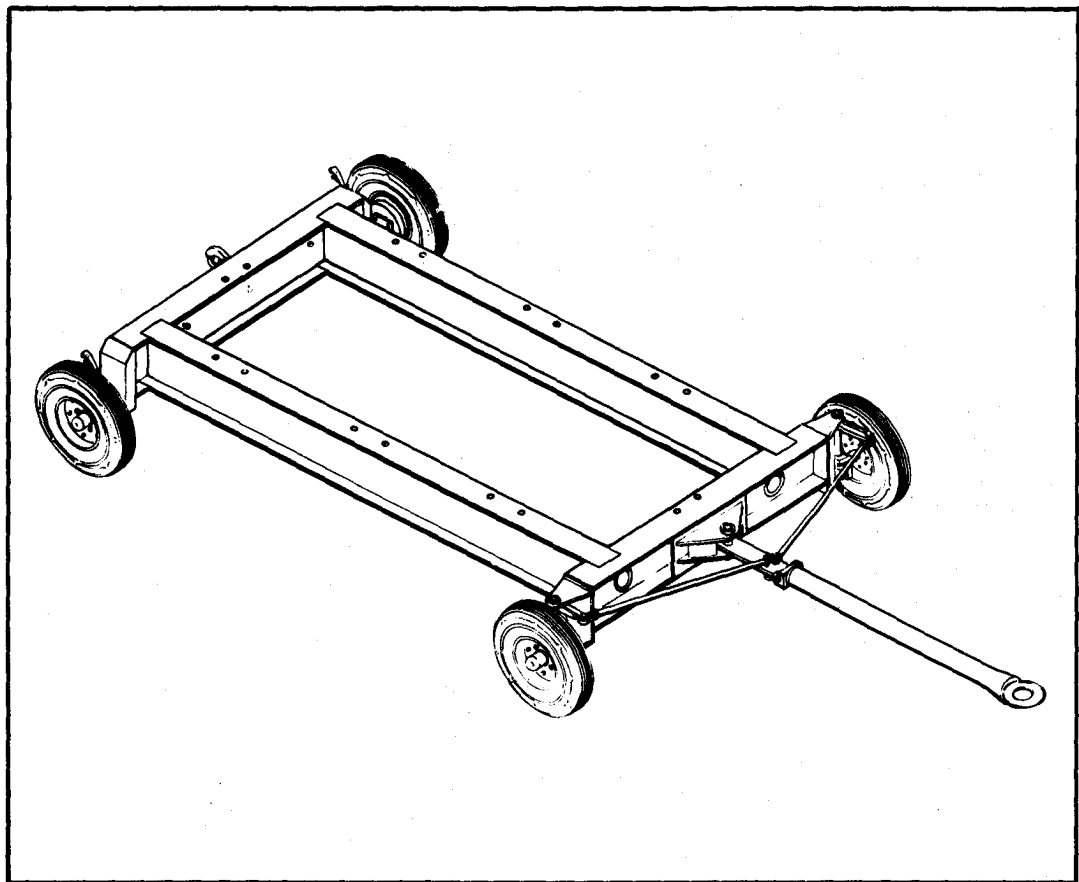
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INITIAL SETUP

Personnel Required:  
MOS 67( ) 10

---

INSPECTION



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.

END OF TASK

---

3-31. Trailer undercarriage - Repair

---

3-31

This task covers: Repair (AVIM)

---

INITIAL SETUP

Tools:

Tool kit, airframe repairers NSN 5180-00-323-4876

Personnel Required:

MOS 68G

Reference Information:

FM 55-63

Equipment Condition:

Para 3-18 Rail removed

Para 3-25 Pallet assembly removed

Para 3-28 Pallet mounting channels removed

General Safety:

Refer to para 7-70, TM 55-1500-204-25/1  
for welding safety.

---

REPAIR

1. Welding. Welding to repair cracks is to be done in accordance with FM 55-63, Fundamentals of Airframe Maintenance.
2. Use the appropriate hand file contained in the tool kit to remove burrs and sharp edges from trailer undercarriage.
3. Tighten loose parts. Also replace missing, damaged, bent or distorted parts, as outlined in paragraph 3-31, disassembly and reassembly.

END OF TASK

---

3-31. Trailer undercarriage - Repair (Cont)3-31

---

This task covers: Disassembly and Reassembly (AVIM)

---

INITIAL SETUP

Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692  
Wrench, torque 0-600 in-lbs

Personnel Required:

MOS 67( )10

Reference Information:

FM 55-63

Equipment Conditions:

Para 3-18 Rail removed  
Para 3-25 Pallet assembly removed  
Para 3-28 Pallet mounting channels removed  
Para 3-42 Tongue assembly removed  
Para 3-46 Tie rod assembly removed  
Para 3-53 Axle and king pin pivot  
assembly removed  
Para 3-61 Hub and bearings removed  
Para 3-64 Brake assembly removed

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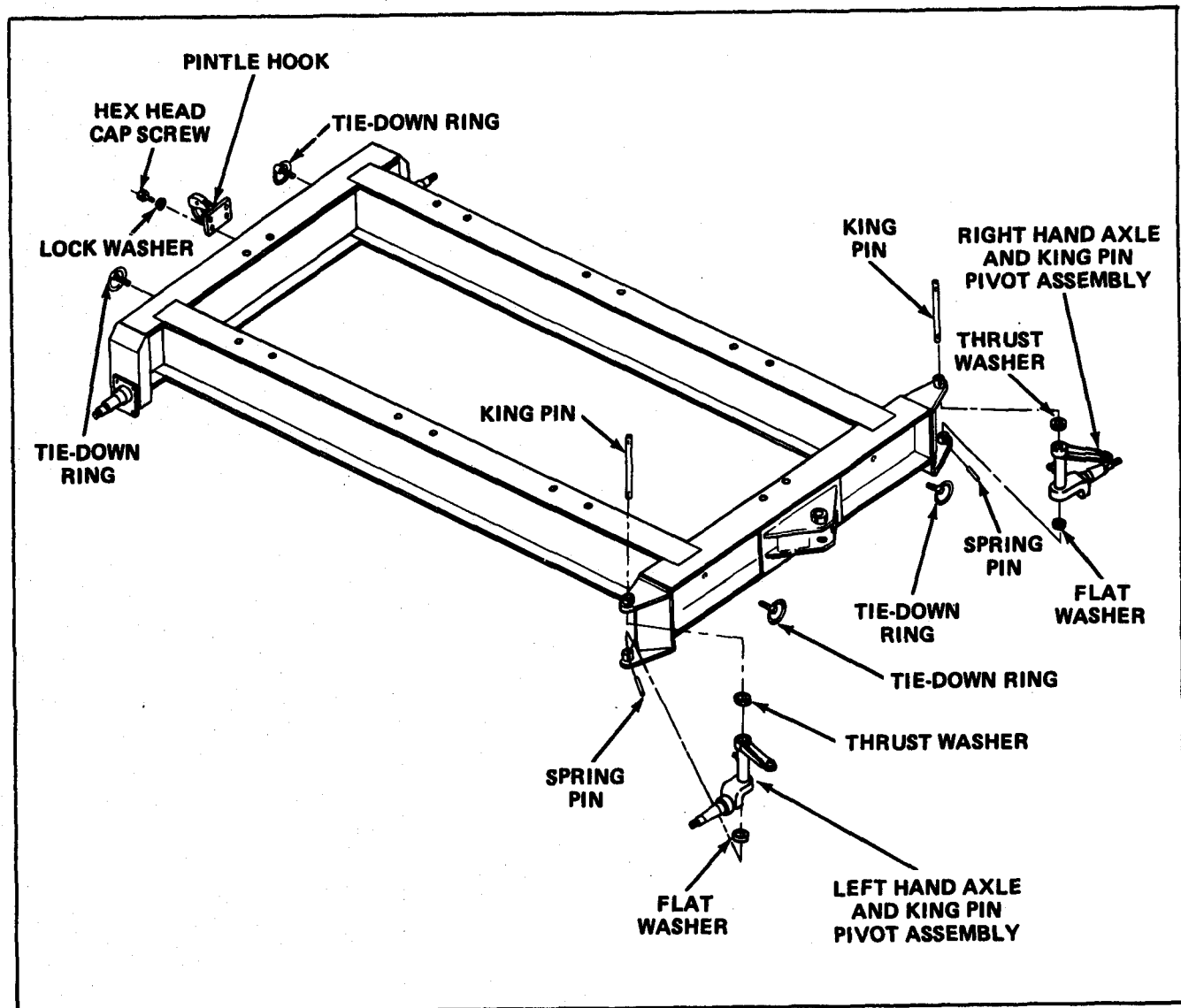
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## 3-31. Trailer undercarriage - Repair (Cont)

3-31

## DISASSEMBLY

1. Remove four hex head cap screws with lock washers securing pintle hook to the trailer undercarriage. Remove pintle hook.
2. Remove four spring pins, two king pins, two flat washers and two thrust washers securing the left and right-hand axle and king pin pivot assemblies to the trailer undercarriage. Remove both left and right-hand axle and king pin pivot assemblies.
3. Unscrew four tiedown rings from the front and rear of the trailer undercarriage.



END OF TASK

---

3-31. Trailer undercarriage - Repair (Cont)3-31

---

## REASSEMBLY

1. Screw four tiedown rings into position on the front and rear of trailer undercarriage until tight.
2. Install the left and right-hand axle and king pin pivot assemblies into position with two thrust washers, two flat washers, two king pins and four spring pins.
3. Position the pintle hook on the rear of trailer undercarriage and install four hex head cap screws with lock washers. Tighten screws to a torque of 540 in-lbs.

END OF TASK

3-32. Summary of base assembly maintenance. Maintenance tasks are listed below with information necessary to locate detailed procedures.

Task Number	Task	Refer to Paragraph
1	Inspect base assembly.	3-33
	Perform task 1, then perform task 2 as needed.	
2	Repair base assembly.	3-34



---

3-33. Base assembly - Inspect

---

3-33

This task covers: Inspection

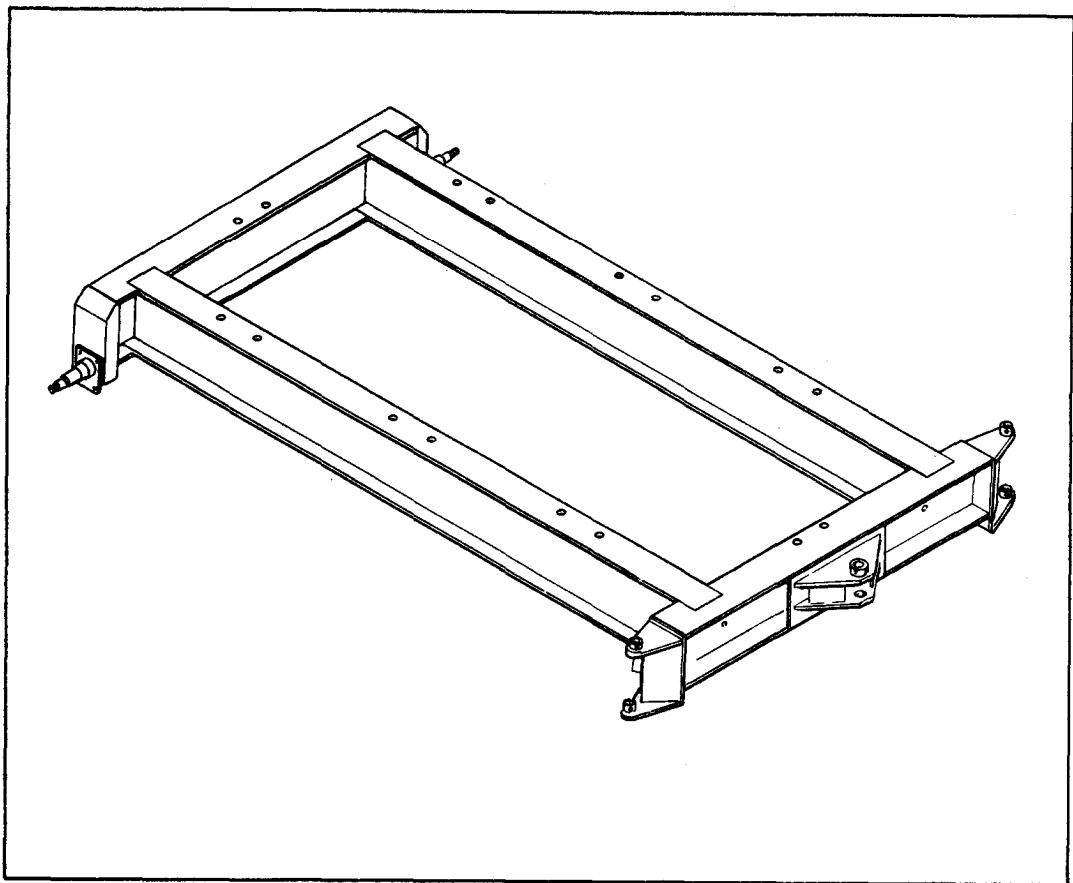
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INITIAL SETUP

Personnel Required:  
MOS 67( )10

---

INSPECTION



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

**END OF TASK**

---

3-34. Base assembly - Repair

---

3-34

This task covers: Repair (AVIM)

---

INITIAL SETUP

Tools:

Tool kit, airframe repairers NSN 5180-00-323-4876

Personnel Required:

MOS 68G

Reference Information:

FM 55-63

Equipment Condition:

Para 3-18 Rail removed

Para 3-25 Pallet assembly removed

Para 3-28 Pallet mounting channels removed

Para 3-31 Trailer undercarriage disassembled

Para 3-42 Tongue assembly removed

Para 3-46 Tie rod assembly removed

Para 3-53 Axle and king pin pivot  
assembly removed

Para 3-61 Hub and bearings removed

Para 3-64 Brake assembly removed

General Safety:

Refer to para 7-70, TM 55-1500-204-25/1  
for welding safety.

---

REPAIR

1. Welding. Welding to repair cracks is to be done in accordance with FM 55-63, Fundamentals of Airframe Maintenance.

2. Use the appropriate hand file contained in the tool kit to remove burrs and sharp edges from base assembly.

END OF TASK

3-35. Summary of steering assembly maintenance. Maintenance tasks are listed below with information necessary to locate detailed procedures.

Task Number	Task	Refer to Paragraph
1	Inspect towbar assembly.  Perform task 1, then perform task 2 and 3 as needed.	3-36
2	Repair towbar assembly.	3-37
3	Replace towbar assembly.	3-38
4	Inspect tongue assembly.  Perform task 4, then perform task 5, 6 and 7 as needed.	3-39
5	Service tongue assembly.	3-40
6	Repair tongue assembly.	3-41
7	Replace tongue assembly.	3-42
8	Inspect tie rod assembly.  Perform task 8, then perform task 9, 10 and 11 as needed.	3-43
9	Service tie rod assembly.	3-44
10	Repair tie rod assembly.	3-45
11	Replace tie rod assembly.	3-46
12	Inspect bearings and grease fittings.  Perform task 12, then perform task 13 as needed.	3-47
13	Replace bearings and grease fittings.	3-48

---

3-36. Towbar assembly - Inspect

---

3-36

This task covers: Inspection

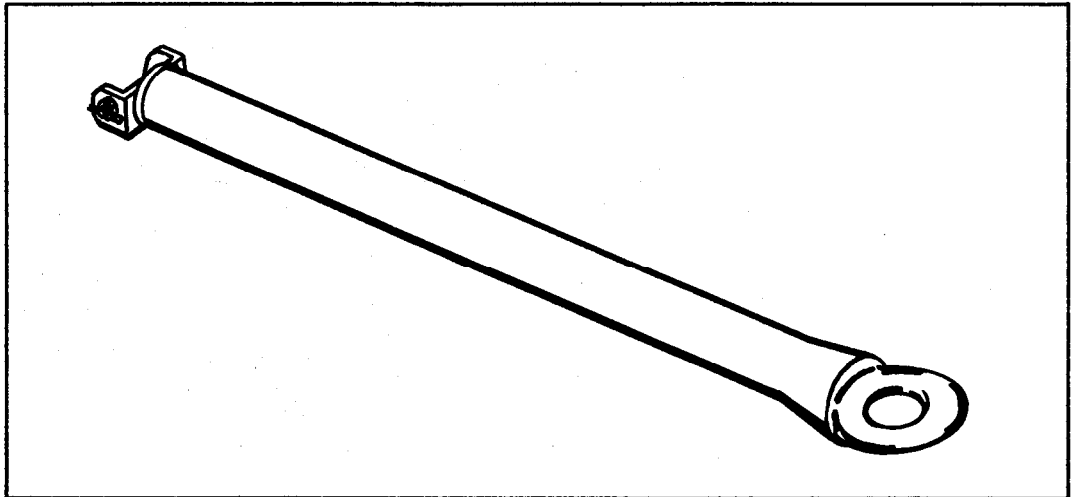
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INITIAL SETUP

Personnel Required:  
MOS 67( )10

---

INSPECTION



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

2. Check towbar assembly for bends or distortion.

3. Check towbar assembly for loose, damaged or missing parts.

END OF TASK

---

3-37. Towbar assembly - Repair

---

3-37

This task covers: Repair (AVIM)

---

INITIAL SETUP

Tools:

Tool kit, airframe repairers NSN 5180-00-323-4876

Personnel Required:

MOS 68G

Reference Information:

FM 55-63

Refer to para 7-70, TM 55-1500-204-25/1  
for welding safety.

---

REPAIR

1. Welding. Welding to repair cracks is to be done in accordance with FM 55-63, Fundamentals of Airframe Maintenance.
2. Use the appropriate hand file contained in the tool kit to remove burrs and sharp edges from towbar assembly.
3. Tighten loose parts. Also replace missing, damaged, bent or distorted parts, as outlined in paragraph 3-38.

END OF TASK

---

3-38. Towbar assembly - Replace

---

3-38

This task covers: Removal and Installation (AVIM)

---

INITIAL SETUP

Tools :

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Personnel Required:

MOS 67( )10

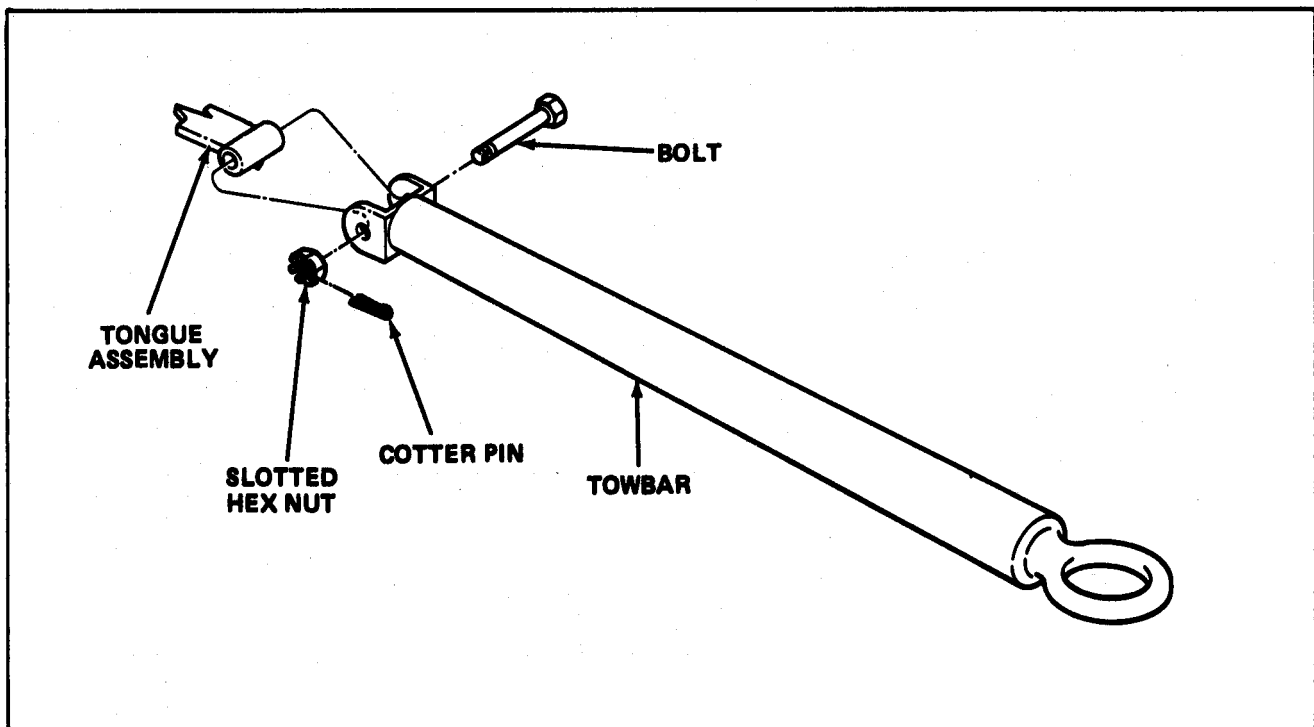
Parts Required:

Cotter Pin

---

REMOVAL

1. Straighten out cotter pin and remove from end of bolt securing the towbar assembly to the tongue assembly.
2. Unthread slotted hex nut from bolt securing towbar to tongue assembly and remove bolt and towbar.



END OF TASK

---

3-38. Towbar assembly - Replace (Cont)

---

INSTALLATION

1. Position towbar on tongue assembly and install bolt.
2. Thread slotted hex nut onto the bolt until the new cotter pin can be inserted into the hole in bolt. Bend the open end of the cotter pin to keep it in place.

END OF TASK

---

3-39. Tongue assembly - Inspect

---

3-39

This task covers: Inspection

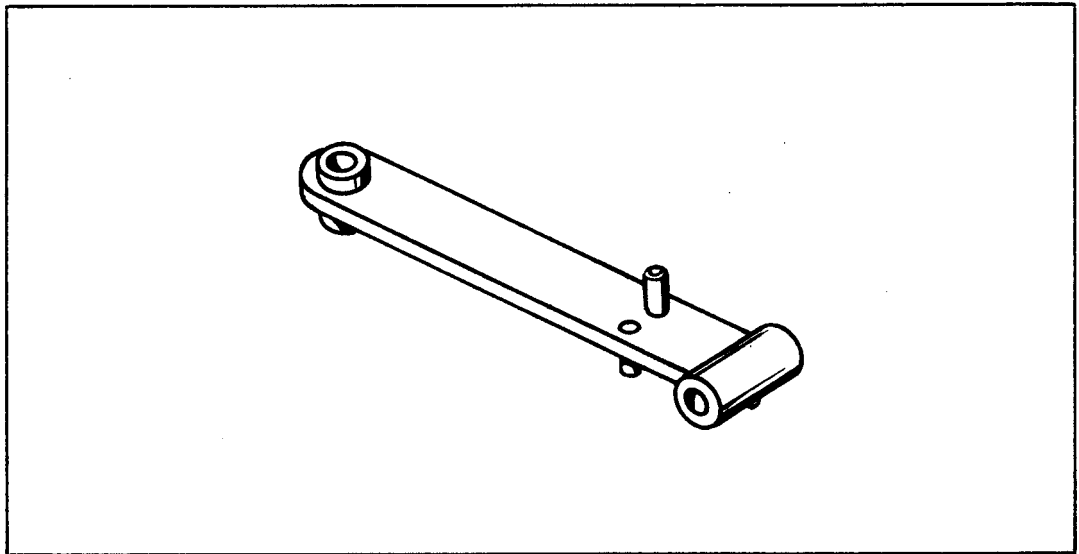
---

INITIAL SETUP

Personnel Required:  
MOS 67( )10

---

INSPECTION



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 worn bushings.
4. Check tongue assembly for loose, missing or damaged parts.

END OF TASK



---

**3-40. Tongue assembly - Service**

---

**3-40**

This task covers: Service

---

**INITIAL SETUP****Tools:**

Tool set, AVUM, No.2 NSN 4920-00-567-0476

**Material:**

Grease-MIL-G-10924

**Personnel Required:**

MOS 67( )10

---

**SERVICE**

Lubricate the bearing located in the tongue assembly. (Refer to paragraph 3-8.)

END OF TASK

---

3-41. Tongue assembly - Repair

---

3-41

---

This task covers: Repair (AVIM)

---

INITIAL SETUP

Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Personnel Required:

MOS 68G

Reference Information:

FM 55-63

Equipment Condition:

Para 3-38 Towbar removed

Para 3-42 Tongue pivot pin removed

Para 3-46 Tie rod ends removed

General Safety:

Refer to para 7-70, TM 55-1500-204-25/1  
for welding safety.

---

REPAIR

1. Welding. Welding to repair cracks is to be done in accordance with FM 55-63, Fundamentals of Airframe Maintenance.
2. Use the appropriate hand file contained in the tool kit to remove burrs and sharp edges from tongue assembly.
3. Replace missing, damaged, bent or distorted parts, as outlined in paragraph 3-42.

END OF TASK

---

3-42. Tongue assembly - Replace3-42

---

This task covers: Removal and Installation

---

## INITIAL SETUP

Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Personnel Required:

MOS 67( )10

Equipment Condition:

Para 3-38 Towbar assembly removed

Para 3-46 Tie rod ends removed

---

REMOVAL

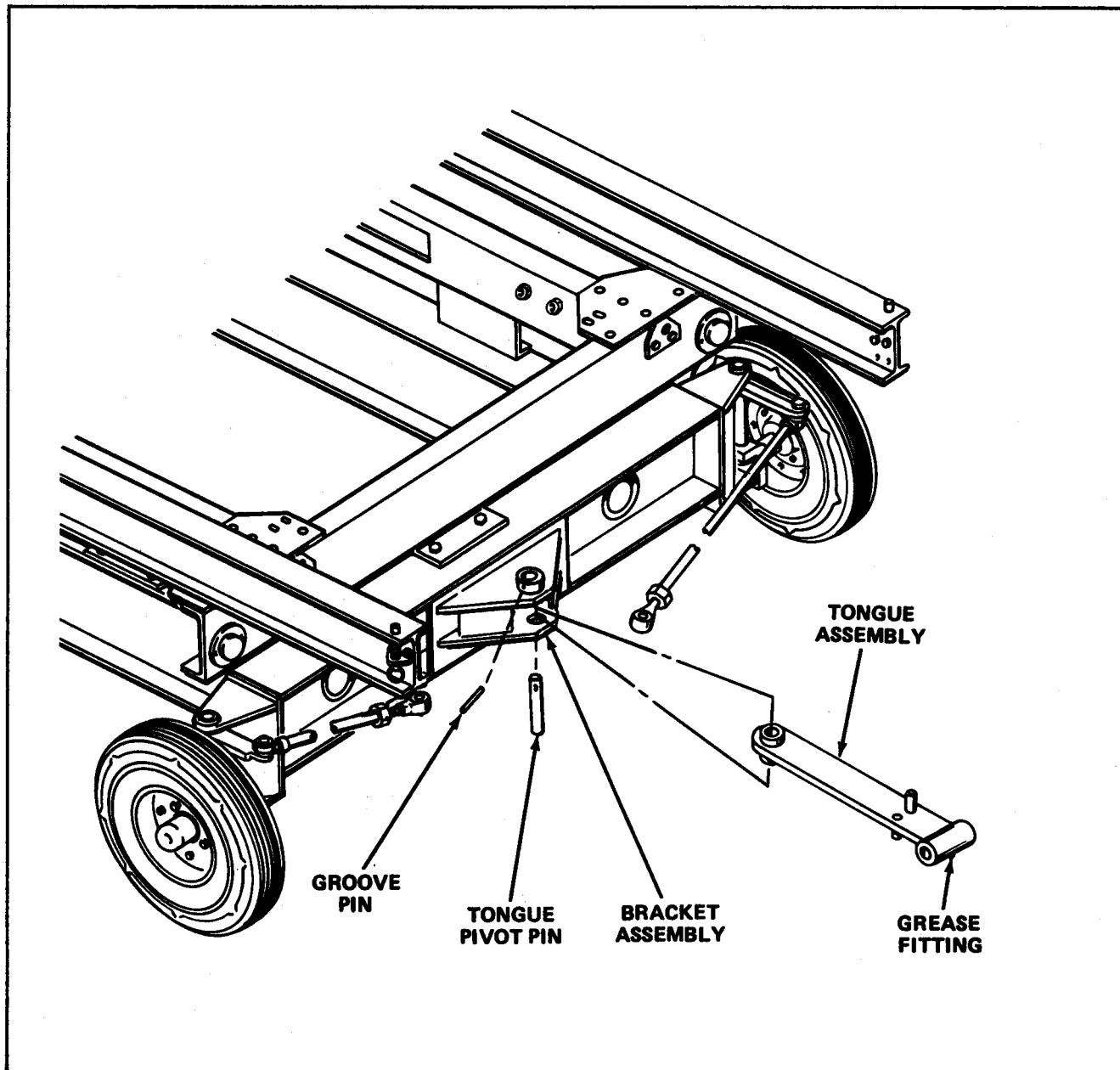
1. Remove the groove pin from tongue pivot pin.
2. Remove the tongue pivot pin securing the tongue assembly to the bracket assembly. Remove tongue assembly.

GO TO NEXT PAGE

3-42. Tongue assembly - Replace (Cont)

3-42

REMOVAL (Cont)



END OF TASK

---

**3-42. Tongue assembly - Replace (Cont)**

---

**3-42****INSTALLATION**

1. Position the tongue assembly on trailer and align holes.
2. Insert the tongue pivot pin through the bracket assembly on trailer into the tongue assembly.
3. Insert groove pin through hole in the bracket assembly into the pivot pin.

**END OF TASK**

---

3-43. Tie rod assembly - Inspect

---

3-43

This task covers: Inspection

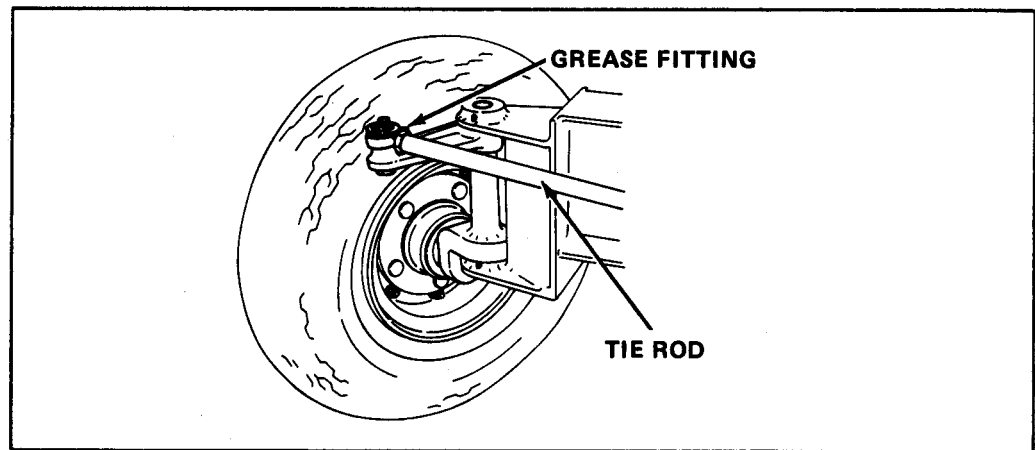
---

INITIAL SETUP

Personnel Required:  
MOS 67( )10

---

INSPECTION



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

END OF TASK

---

3-44. Tie rod assembly - Service

---

3-44

This task covers: Service

---

#### INITIAL SETUP

Tools:

Tool set, AVUM, No. 2 NSN 4920-00-567-0476

Material:

Grease-MIL-G-10924

Personnel Required:

MOS 67( )10

---

#### SERVICE

Lubricate the bearings located in the tie rod ends of the tie rod assembly. Grease fittings are provided on each tie rod end for this task (Refer to paragraph 3-8).

END OF TASK

---

3-45. Tie rod assembly - Repair

---

3-45

This task covers: Repair

---

INITIAL SETUP

Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Personnel Required:

MOS 67( )10

---

REPAIR

1. Replace bent or distorted parts of tie rod assembly, as outlined in paragraph 3-46.
2. Tighten jam nuts
3. Replace all missing or damaged parts as outlined in paragraph 3-46.

END OF TASK



---

3-46. Tie rod assembly - Replace

---

3-46

---

This task covers: Removal and Installation

---

## INITIAL SETUP

Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Personnel Required:

MOS 67( )10

Parts Required:Cotter Pins

---

## REMOVAL LEFT SIDE

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

END OF TASK

REMOVAL RIGHT SIDE

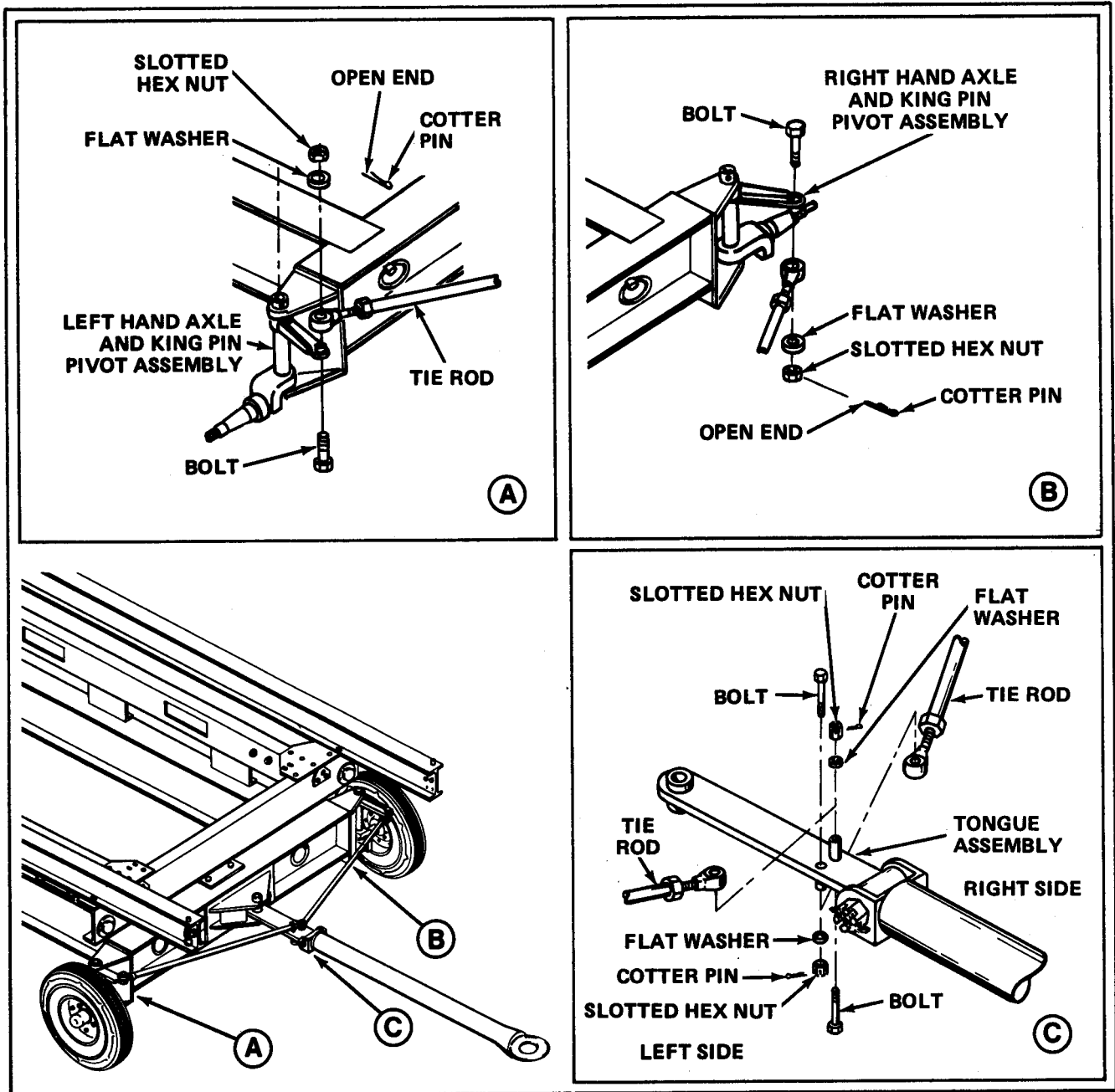
1. Straighten out and remove two cotter pins located at both ends of tie rod assembly.
2. Unthread two slotted hex nuts securing the tie rod assembly to the right-hand axle and king pin pivot assembly and to the bottom of the tongue assembly.
3. Remove two bolts and flat washers securing both ends of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

GO TO NEXT PAGE

3-46. Tie rod assembly - Replace (Cont)

3-46

REMOVAL RIGHT SIDE (Cont)



END OF TASK

---

3-46. Tie rod assembly - Replace (Cont)

---

3-46

INSTALLATION LEFT SIDE

1. Position one end of tie rod assembly on the left-hand axle and king pin pivot assembly and the other end on bottom of the tongue assembly and install two bolts.
2. Install two flat washers and slotted hex nuts on bolts. Thread the nuts on bolts far enough to install new cotter pins through slots in nuts into the hole in the bolts.
3. Bend the open end of the cotter pins to secure them in place.
4. Refer to paragraph 3-10 for tie rod assembly adjustment.

END OF TASK

INSTALLATION RIGHT SIDE

1. Position one end of tie rod assembly on the right-hand axle and king pin pivot assembly and the other end on the top of the tongue assembly and install two bolts.
2. Install two flat washers and slotted hex nuts on bolts. Thread the nuts on bolts far enough to install new cotter pins through slots in nuts into the hole in the bolts.
3. Bend the open end of the cotter pins to secure them in place.
4. Refer to paragraph 3-10 for tie rod assembly adjustment.

END OF TASK

---

3-46. Tie rod assembly - Replace (Cont)3-46

---

This task covers: Disassembly and Reassembly

---

**INITIAL SETUP****Tools:**

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

**Personnel Required:**

MOS 67( )10

**Equipment Condition:**

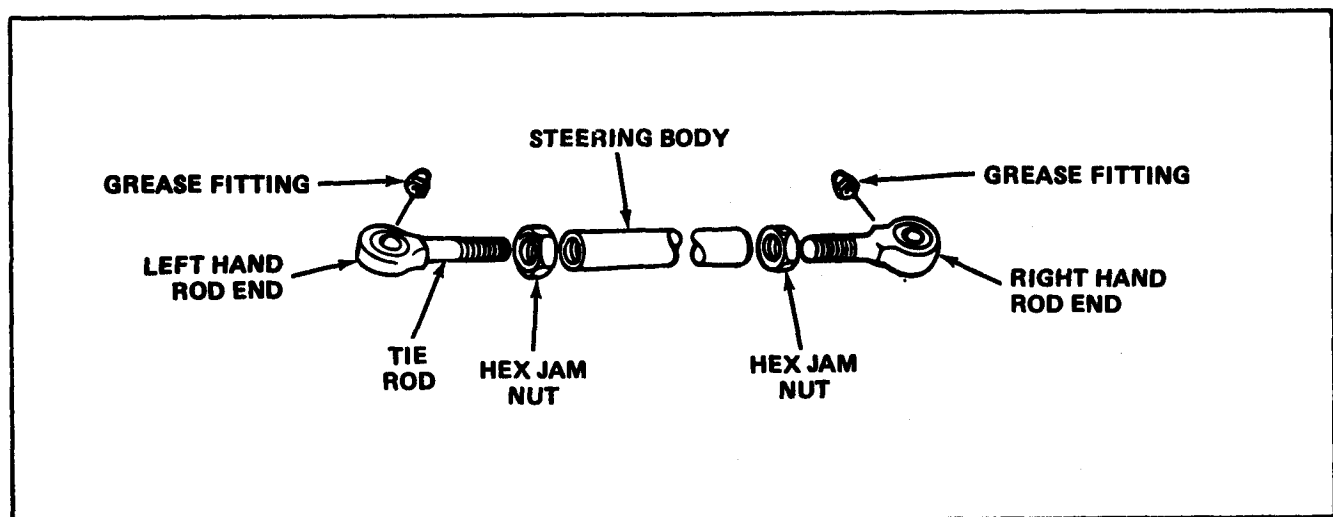
Para 3-46 Tie rod removed

---

**DISASSEMBLY****NOTE**

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

1. Loosen two hex jam nuts on the tie rod ends.
2. Unthread two tie rod ends with hex jam nuts from the tie rod steering body.
3. Unthread and discard grease fittings from each tie rod end if damaged.



END OF TASK

---

3-46. Tie rod assembly - Replace (Cont)

---

3-46

REASSEMBLY

1. Thread two tie rod ends with hex jam nuts into tie rod steering body.
2. It will be necessary to make adjustments in the tie rod assembly for proper alinement of tires during installation. Refer to paragraph 3-10 for this task.
3. Install new grease fittings in tie rod ends if damaged fittings were removed.

END OF TASK

---

3-47. Bearings and grease fittings - Inspect

---

3-47

This task covers: Inspection

---

INITIAL SETUP

Personnel Required:

MOS 67( )10

Equipment Condition:

Para 3-38 Towbar assembly removed

Para 3-42 Tongue assembly removed

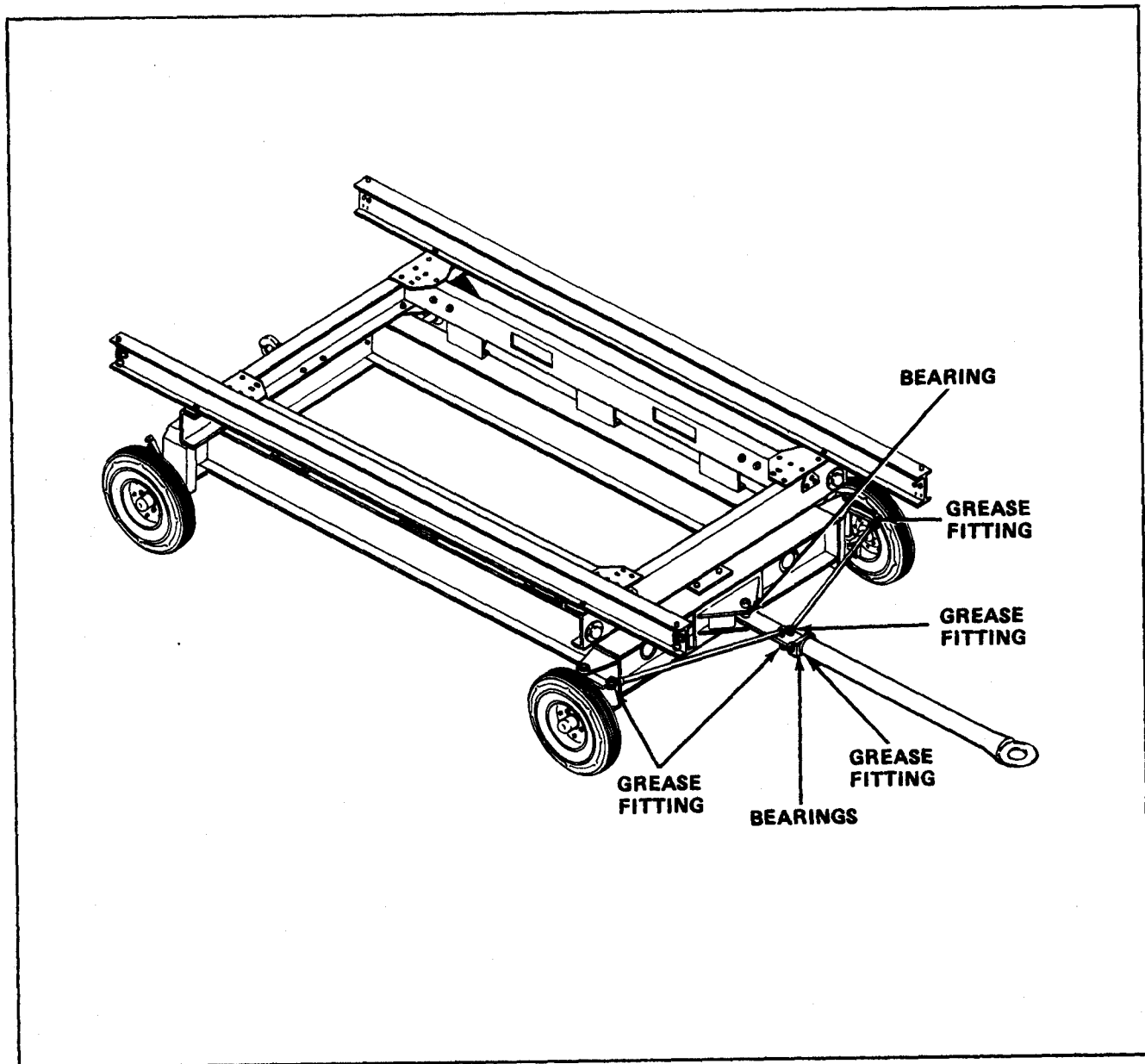
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GO TO NEXT PAGE

3-47. Bearings and grease fittings - Inspect (Cont)

3-47

INSPECTION



1. Check bearings and grease fittings for worn or damaged parts.
2. Check bearings for evidence of binding or excessive clearance.

END OF TASK



---

3-48. Bearings and grease fittings - Replace

---

3-48

This task covers: Removal and Installation

---

INITIAL SETUP

Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Personnel Required:

MOS 67( )10

Equipment Condition:

Para 3-38 Towbar removed

Para 3-42 Tongue assembly removed

---

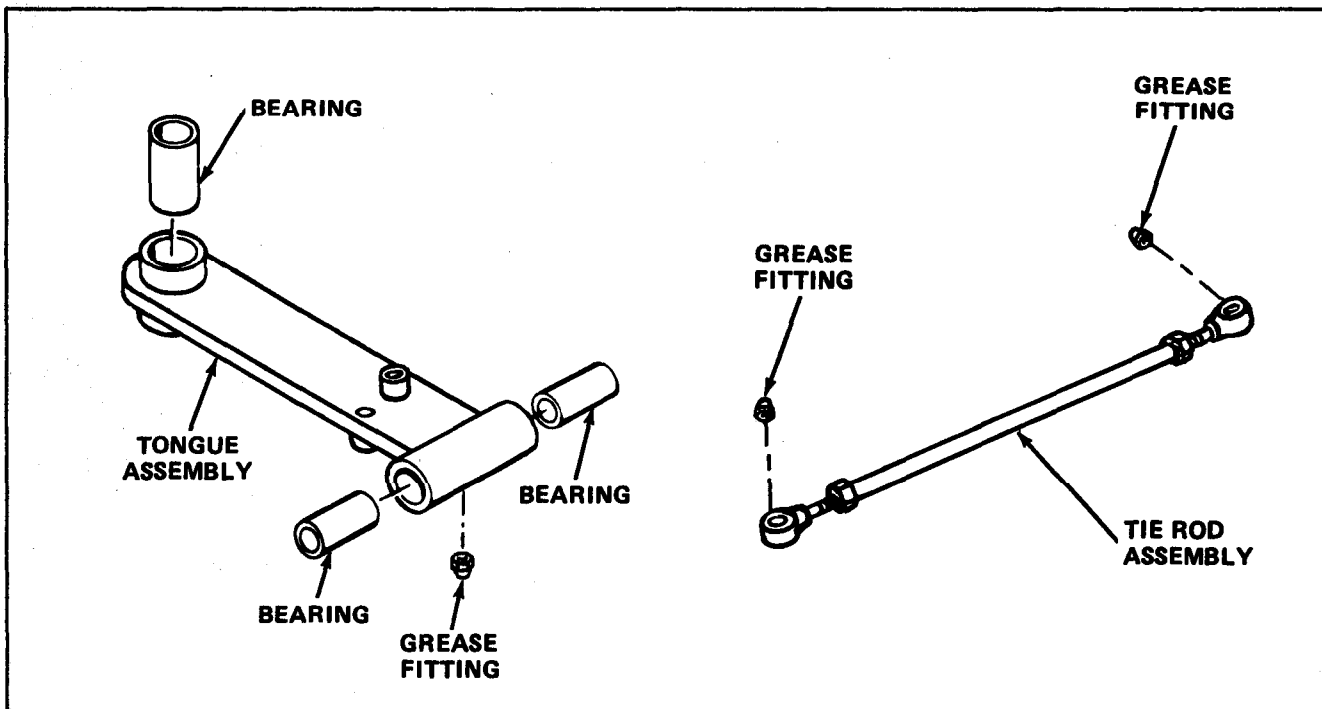
GO TO NEXT PAGE

## 3-48. Bearings and grease fittings - Replace (Cont)

3-48

## REMOVAL

1. Drive three bearings out of the tongue assembly. Discard bearings.
2. Unthread damaged grease fitting from tongue assembly. Discard fitting.
3. Bearings in tie rod ends cannot be removed. Replace tie rod end (Refer to paragraph 3-46).
4. Unthread damaged grease fittings from tie rod assembly. Discard fittings.



END OF TASK

## INSTALLATION

1. Drive three new bearings into position on the tongue assembly.
2. Thread new grease fitting into tongue assembly until threads are no longer visible.

END OF TASK

3-49. Summary of axle assembly maintenance. Maintenance tasks are listed below with information necessary to locate detailed procedures.

Task Number	Task	Refer to Paragraph
1	Inspect axle and king pin pivot assembly.  Perform task 1, then perform task 2, 3 and 4 as needed.	3-50
2	Service axle and king pin pivot assembly.	3-51
3	Repair axle and king pin pivot assembly.	3-52
4	Replace axle and king pin pivot assembly.	3-53
5	Inspect rim assembly.  Perform task 5, then perform task 6 as needed.	3-54
6	Replace rim assembly.	3-55
7	Inspect tire and tube.  Perform task 7, then perform task 8 and 9 as needed.	3-56
8	Repair tire and tube.	3-57
9	Replace tire and tube.	3-58
10	Inspect hubs and bearings.  Perform task 10, then perform task 11 and 12 as needed.	3-59
11	Service hubs and bearings.	3-60
12	Replace hubs and bearings.	3-61
13	Inspect parking brake assembly.  Perform task 13, then perform task 14 and 15 as needed.	3-62

3-49. Summary of axle assembly maintenance (cont).

Task Number	Task	Refer to Paragraph
14	Repair parking brake assembly.	3-63
15	Replace parking brake assembly.	3-64

---

3-50. Axle and king pin pivot assembly - Inspect

---

3-50

This task covers: Inspection

---

INITIAL SETUP

Personnel Required:

MOS 67( )10

Equipment Conditions:

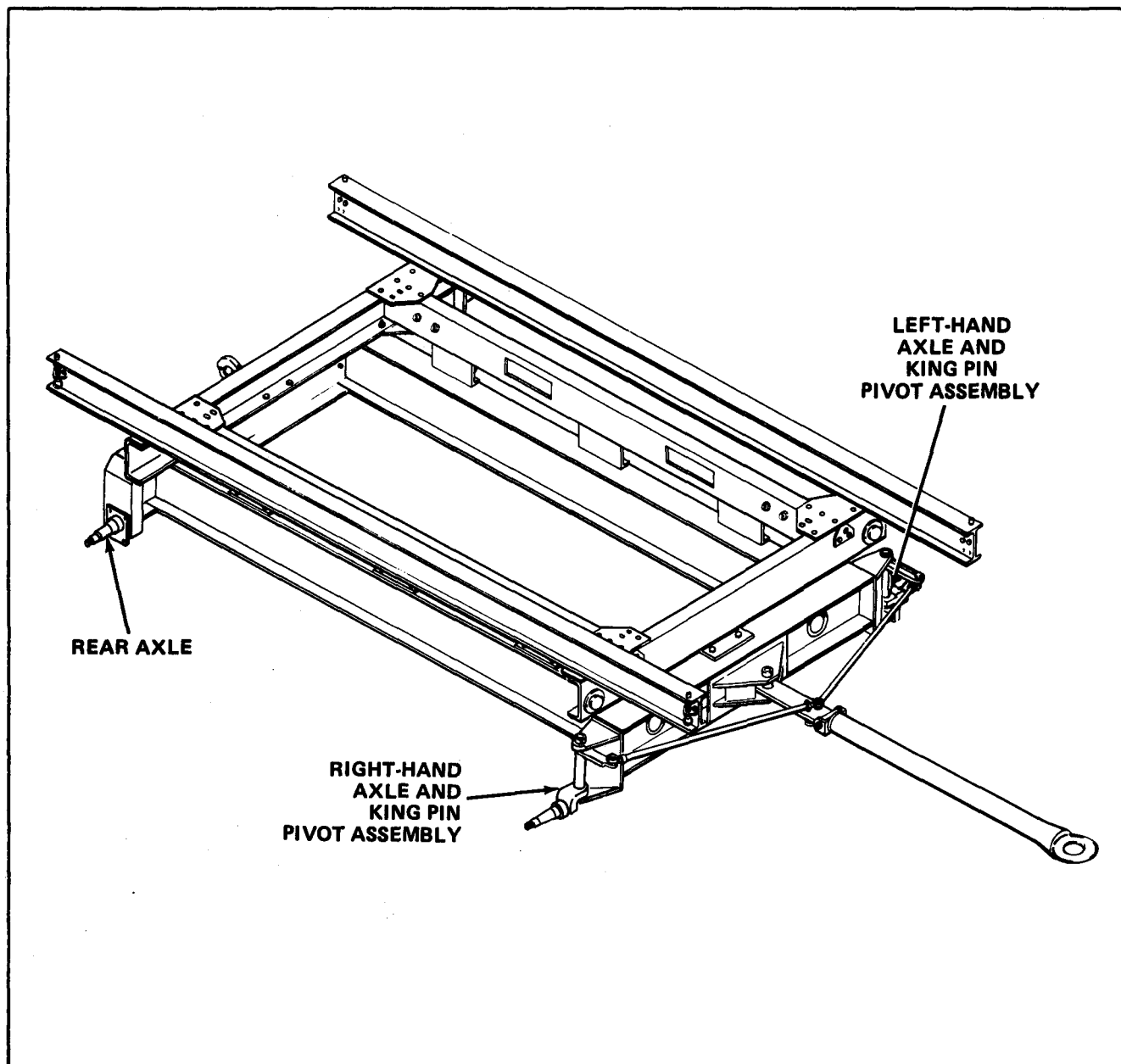
Para 3-61 Hub and bearings removed

Para 3-64 Brake assembly removed

---

GO TO NEXT PAGE

INSPECTION



1. Check left and right-hand axle and king pin pivot assemblies for bends or distortion.

GO TO NEXT PAGE

---

**3-50. Axle and king pin pivot assembly - Inspect (Cont)**

---

**3-50****INSPECTION (Cont)**

2. Check rear axle and left and right-hand axle and king pin pivot assemblies for cracks, burrs, sharp edges and other similar damage.
3. Check left and right-hand axle and king pin pivot assemblies for worn bearings and king pins.
4. Check left and right-hand axle and king pin pivot assemblies for missing parts.

**END OF TASK**

---

3-51. Axle and king pin pivot assembly - Service

---

3-51

This task covers: Service (AVIM)

---

INITIAL SETUP

Tools:

Shop set, AVIM, tool crib NSN 4920-00-472-4183

Material:

Grease-MIL-G-10924

Personnel Required:

MOS 67( )10

---

SERVICE

Lubricate the bearings located in the left and right-hand axle and king pin pivot assemblies. There are grease fittings provided for this task (Refer to paragraph 3-8).

END OF TASK



---

3-52. Axle and king pin pivot assembly - Repair

---

3-52

---

This task covers: Repair (AVIM)

---

## INITIAL SETUP

Tools:

Tool kit, airframe repairers NSN 5180-00-323-4876

Personnel Required:

MOS 68G

Reference Information:

FM 55-63

Equipment Condition:

Para 3-61 Hub and bearings removed from axle

General Safety:Refer to para 7-70, TM 55-1500-204-25/1  
for welding safety.

---

REPAIR

1. Welding. Welding to repair cracks is to be done in accordance with FM 55-63, Fundamentals of Airframe Maintenance.
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, as outlined in paragraph 3-53.

END OF TASK

---

3-53. Axle and king pin pivot assembly - Replace

---

3-53

This task covers: Removal and Installation

---

#### INITIAL SETUP

##### Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

##### Personnel Required:

MOS 67( )10

##### Equipment Condition:

Para 3-46 Tie rod assembly removed

Para 3-61 Hub and bearings removed from axle

---

#### REMOVAL OF LEFT OR RIGHT- HAND

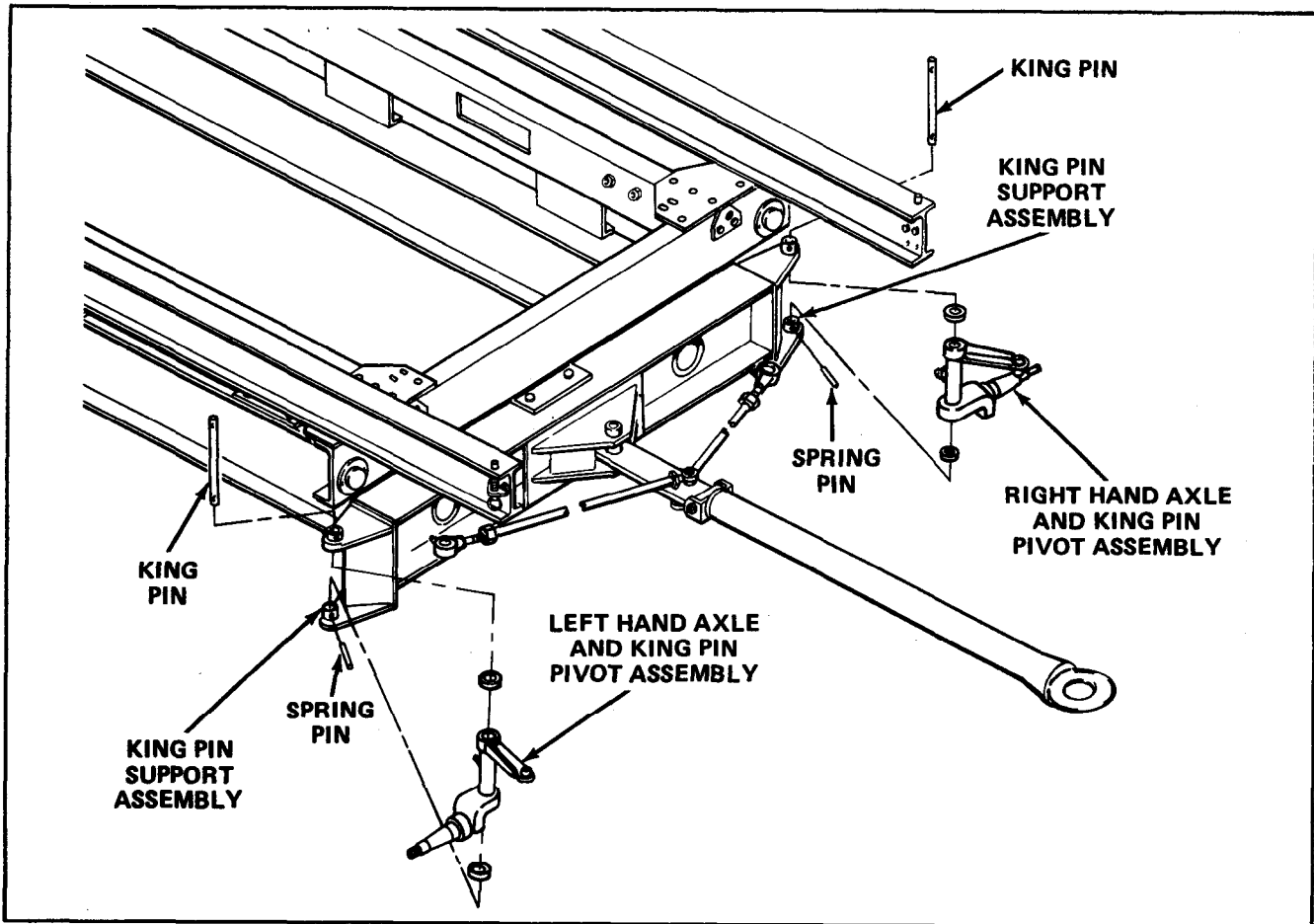
1. Remove two spring pins from the king pin.
2. Remove king pin securing the axle and king pin pivot assembly to the king pin support assembly. Remove axle and king pin pivot assembly.

GO TO NEXT PAGE

## 3-53. Axle and king pin pivot assembly - Replace (Cont)

3-53

## REMOVAL OF LEFT OR RIGHT-HAND (Cont)



END OF TASK

## INSTALLATION OF LEFT OR RIGHT-HAND

1. Position axle and king pin pivot assembly on the king pin support assembly.
2. Align holes and install king pin through the king pin support assembly and the axle and king pin pivot assembly.
3. Install two spring pins through the holes on the king pin support assembly and king pin.

END OF TASK

---

3-53. Axle and king pin pivot assembly - Replace (Cont)

---

3-53

This task covers: Disassembly and Reassembly

---

**INITIAL SETUP**

**Tools:**

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Wrench, torque 0-600 in-lbs

**Personnel Required:**

MOS 67( )10

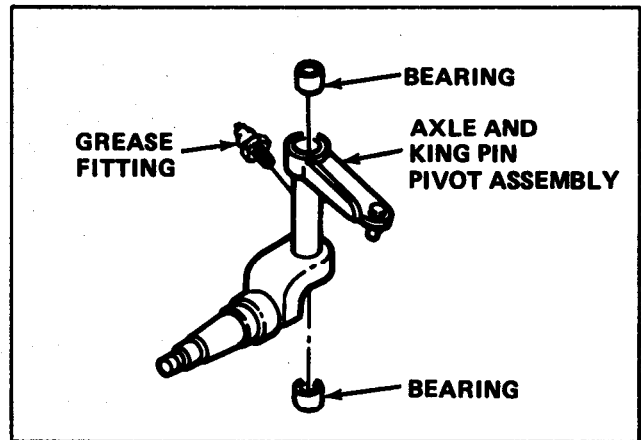
**Equipment Condition:**

Para 3-61 Hub and bearings removed from axle

---

**DISASSEMBLY**

1. Drive two bearings out of the axle and king pin pivot assembly. Discard the bearings.
2. Unthread damaged grease fitting from the axle and king pin pivot assembly. Discard grease fitting.



**END OF TASK**

**REASSEMBLY**

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

**END OF TASK**

---

3-54. Rim assembly - Inspect

---

3-54

---

This task covers: Inspection

---

## INITIAL SETUP

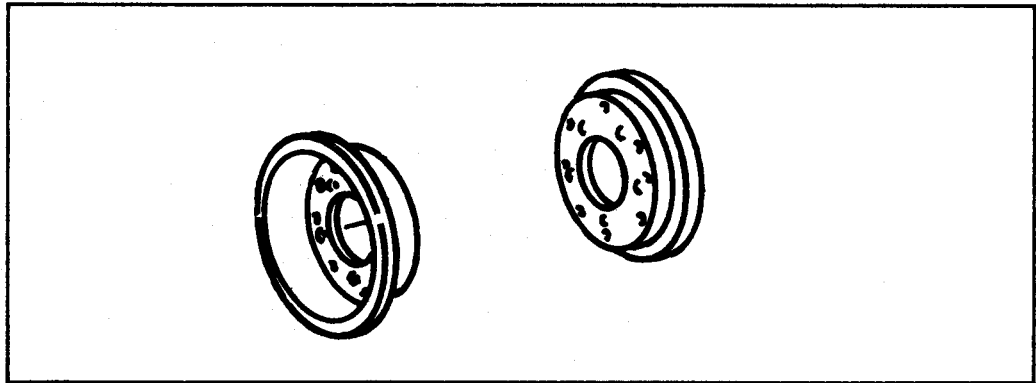
Personnel Required:

MOS 67( )10

Equipment Condition:

Para 3-55 Rim assembly removed

## INSPECTION



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

END OF TASK

---

3-55. Rim assembly - Replace

---

3-55

This task covers: Removal and Installation

---

INITIAL SETUP

Tools:

Tool set, AVUM, No. 2 NSN 4920-00-567-0476

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Wrench, torque 0-600 in-lbs

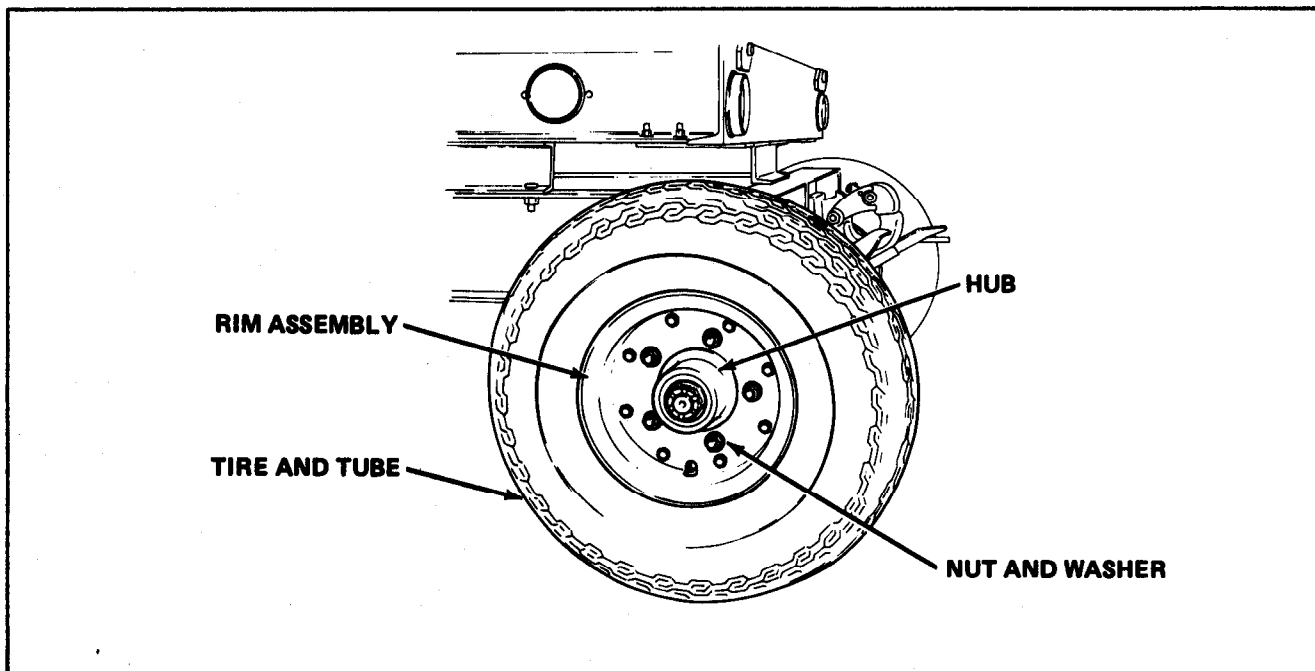
Personnel Required:

MOS 67( )10

---

REMOVAL

1. Remove five nuts with washers securing rim assembly, tire and tube to hub.
2. Remove rim assembly, tire and tube from hub.



END OF TASK

---

**3-55. Rim assembly - Replace (Cont)**

---

**3-55****INSTALLATION**

1. Position the rim assembly, tire and tube on hub.
2. Install five washers and nuts to secure the rim assembly, tire and tube to hub. Tighten nuts to a torque of 540 in-lbs.

**END OF TASK**

### 3-55. Rim assembly - Replace (Cont)

3-55

This task covers: Disassembly and Reassembly

#### INITIAL SETUP

##### Tools:

Tool set, AVUM, No. 2 NSN 4920-00-567-0476

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Wrench, torque 0-600 in-lbs

##### Personnel Required:

MOS 67( )10

##### Equipment Condition:

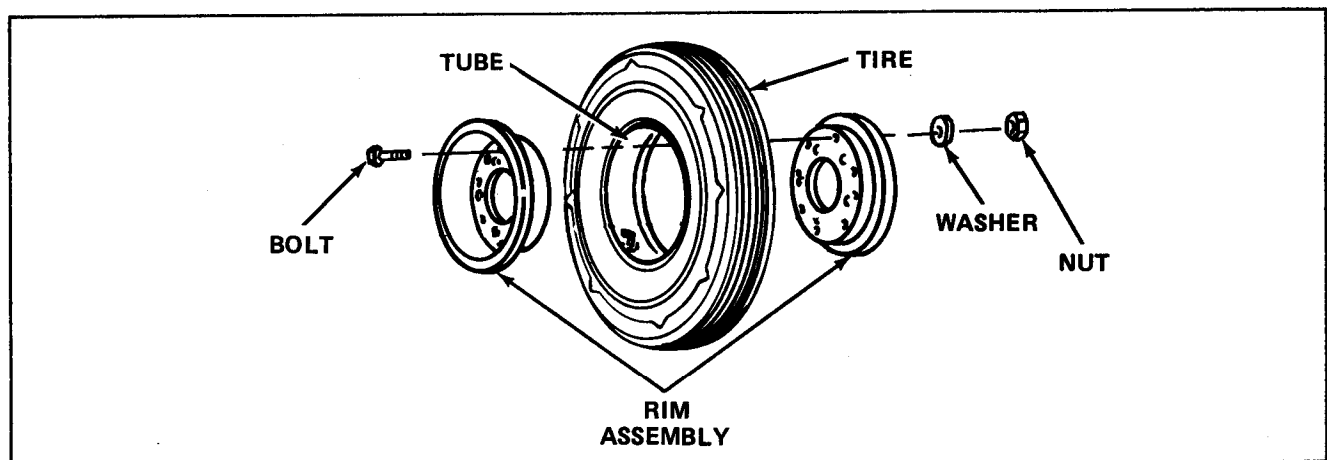
Para 3-55 Rim assembly removed from hub

#### DISASSEMBLY

##### **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.
2. Remove eight nuts and washers from bolts securing both halves of the rim assembly together.
3. Remove eight bolts and separate both halves of rim assembly from the tire and tube, being careful not to damage the valve stem on the tube.



END OF TASK



---

**3-55. Rim assembly - Replace (Cont)**

---

**3-55****REASSEMBLY**

1. Position both halves of rim assembly on the tire and tube. Align holes being careful not to pinch the tube between the rim halves or damage the valve stem.
2. Insert eight bolts in the rim assembly and install eight washers and nuts. Tighten to a torque of 19 ft-lbs.
3. Inflate tire and tube to 65 psi.

**END OF TASK**

---

3-56. Tire and tube - Inspect

---

3-56

This task covers: Inspection

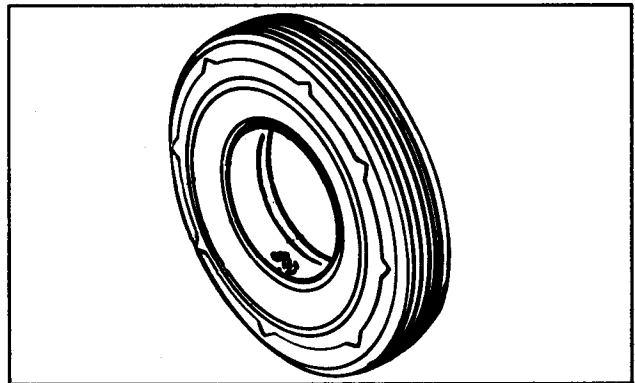
---

INITIAL SETUP

Personnel Required:  
MOS 67( )10

---

INSPECTION



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.

END OF TASK

---

3-57. Tire and tube - Repair

---

3-57

This task covers: Repair (AVIM)

---

INITIAL SETUP

Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Shop set, AVIM, tool crib NSN 4920-00-472-4183

Personnel Required:

MOS 67( )10

Reference Information:

FM 55-63

Equipment Condition:

Para 3-55 Rim assembly removed from hub and tire  
and tube removed from rim assembly

---

REPAIR

1. All tire and tube repair will be done in accordance with FM 55-63, Fundamentals of Airframe Maintenance.
2. Remove any objects imbedded in the treads.

END OF TASK

---

3-58. Tire and tube - Replace

---

3-58

This task covers: Removal and Installation (AVIM)

---

#### INITIAL SETUP

##### Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Shop set, AVIM, tool crib NSN 4920-00-472-4183

##### Personnel Required:

MOS 67( )10

##### Equipment Condition:

Para 3-55 Rim assembly removed from hub and tire  
and tube removed from rim assembly

---

#### REMOVAL AND INSTALLATION

Removal and installation of tire and tube is to be done in accordance with FM 55-63, Fundamentals of Airframe Maintenance.

END OF TASK

---

3-59. Hub and bearings - Inspect

---

3-59

---

This task covers: Inspection

---

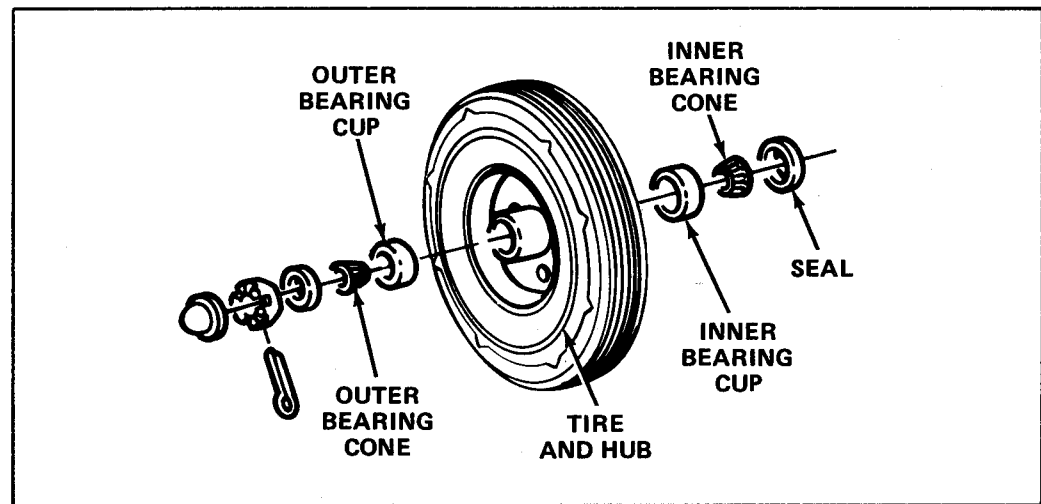
## INITIAL SETUP

Personnel Required:  
MOS 67( )10

Equipment Condition Prior to Step 3:  
Para 3-61 Hub and bearings removed

---

## INSPECTION



1. Check wheel for any sideways movement of bearings. Note that wheel is to be raised off the ground to complete this task.
2. Check bearings for excessive noise when wheel is rotated.
3. Check hub and bearings for worn or damaged parts.

END OF TASK

---

3-60. Hub and bearings - Service

---

3-60

This task covers: Service (AVIM)

---

INITIAL SETUP

Tools:

Shop set, AVIM, tool crib NSN 4920-00-472-4183

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Material:

Grease-MIL-G-10924

Dry Cleaning Solvent, Federal Specification PD-680

Personnel Required:

MOS 67( )10

Equipment Condition:

Para 3-61 Bearings removed from hub

---

SERVICE

**WARNING**

Kerosene (or dry cleaning solvent) is flammable and a skin irritant. Keep open flame away, avoid prolonged skin contact, and wash contacted skin areas.

1. Rinse bearings in kerosene or dry cleaning solvent to remove old grease. Remove bearings from kerosene or solvent and let air dry.
2. Repack bearings with grease.

END OF TASK

---

3-61. Hub and bearings - Replace

---

3-61

---

This task covers: Removal and Installation (AVIM)

---

## INITIAL SETUP

Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Shop set, AVIM, tool crib NSN 4920-00-472-4183

Personnel Required:

MOS 67( )10

Parts Required:

Cotter pin

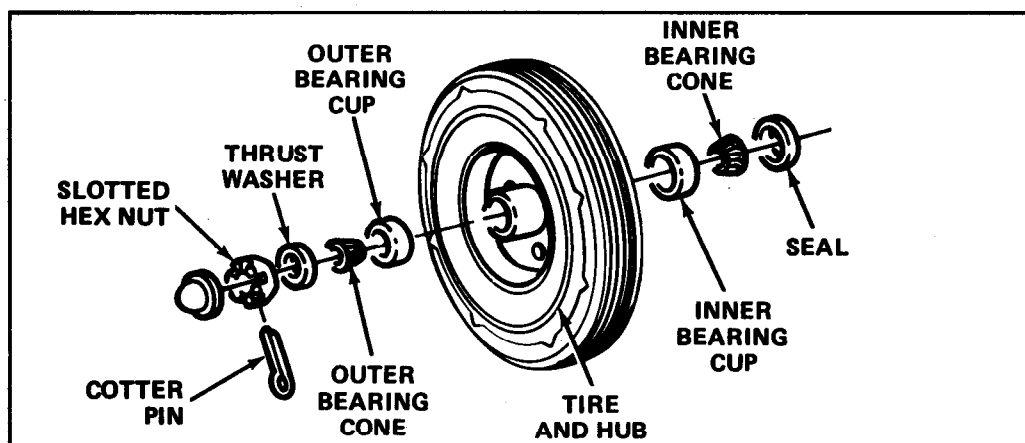
Seal

Equipment Condition:Para 3-60 Hub and bearing serviced

---

## REMOVAL

1. Remove hub cap from hub.
2. Straighten the ends of the cotter pin and pull out of slotted hex nut.
3. Unthread slotted hex nut and remove thrust washer and outer bearing.
4. Remove tire and hub from axle.
5. Remove inner grease seal and inner bearing cone from hub. Discard seal.
6. Drive inner and outer bearing cup from hub.



END OF TASK

---

3-61. Hub and bearings - Replace (Cont)

---

3-61

INSTALLATION

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

END OF TASK



---

3-62. Parking brake assembly - Inspect

---

3-62

This task covers: Inspection

---

INITIAL SETUP

Personnel Required:

MOS 67( )10

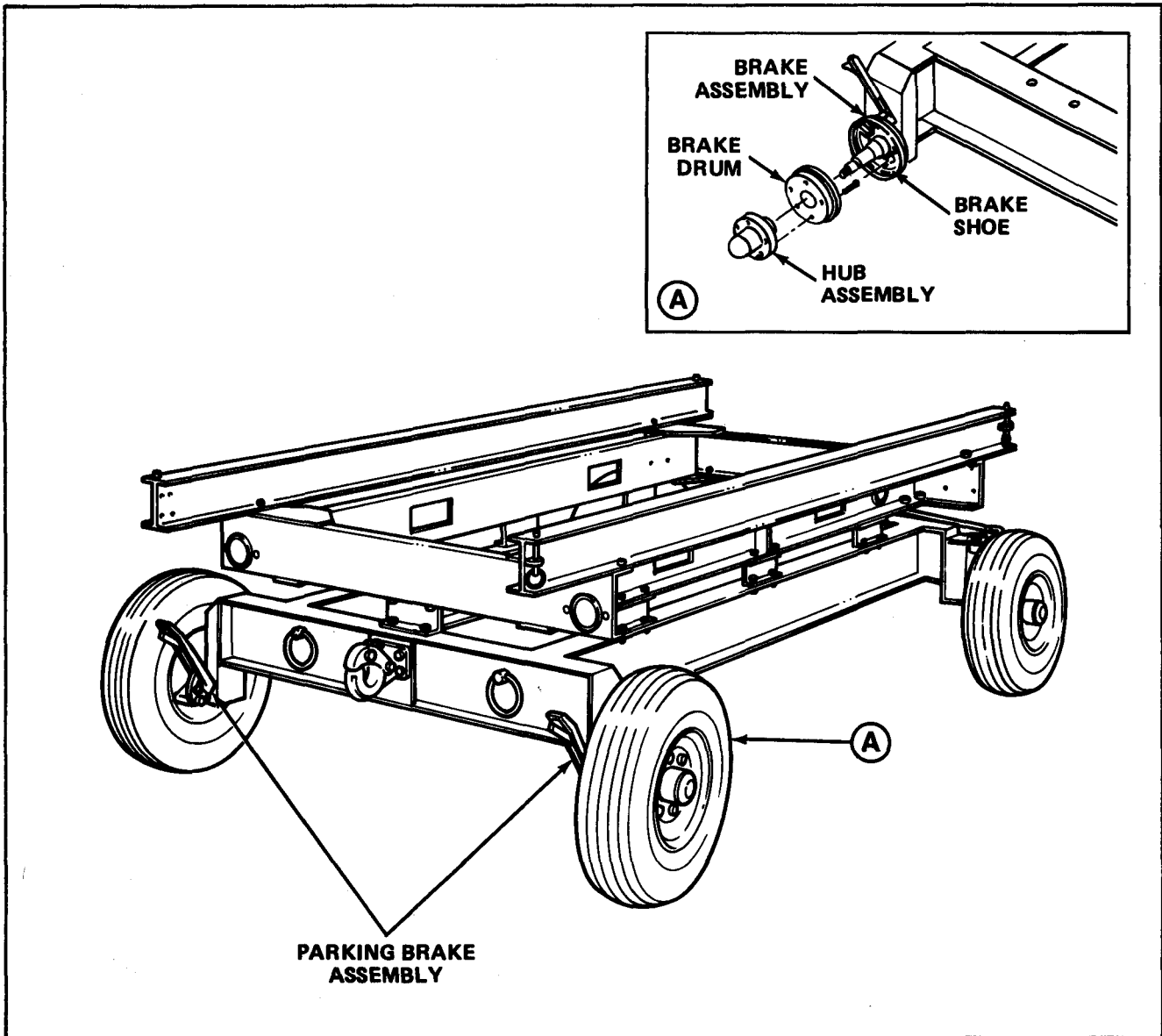
Equipment Condition:

Para 3-61 Hub and bearings removed

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GO TO NEXT PAGE

# INSPECTION



1. Check brake drum and shoe assembly for wear.
2. Check brake drum and shoe assembly for evidence of grease.
3. Check brake assembly for loose, missing or damaged parts.

END OF TASK

---

3-63. Parking brake assembly - Repair

---

3-63

---

This task covers: Repair (AVIM)

---

## INITIAL SETUP

Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Shop set, AVIM, tool crib NSN 4920-00-472-4183

Wrench, torque 0-600 in-lbs

Personnel Required:

MOS 67( )10

Equipment Condition:

Para 3-61 Hub and bearings removed

---

REPAIR

1. Remove and replace brake drum or worn shoe assembly.
2. Tighten loose parts. Replace missing or damaged parts as outlined in paragraph 3-64.

END OF TASK

---

3-64. Parking brake assembly - Replace

---

3-64

This task covers: Removal and Installation (AVIM)

---

INITIAL SETUP

Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Shop set, AVIM, tool crib NSN 4920-00-472-4183

Wrench, torque 0-600 in-lbs

Personnel Required:

MOS 67( )10

---

REMOVAL

NOTE

Place the brake pedal in the off position to perform the following task.

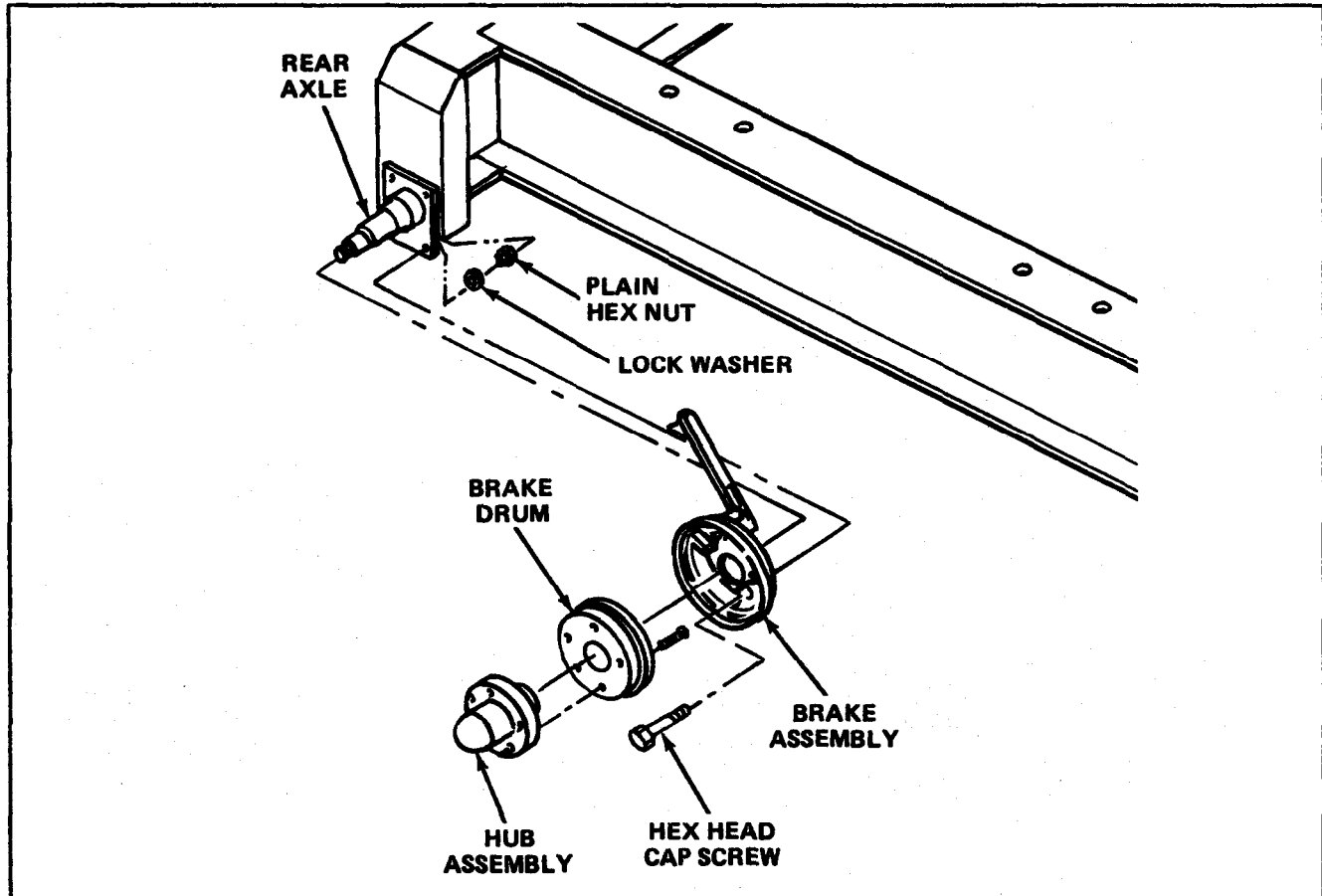
1. Pull brake drum and hub assembly off the brake assembly.
2. Remove four hex head cap screws, lock washers and plain hex nuts securing the brake assembly to the rear axle. Remove brake assembly.

GO TO NEXT PAGE

## 3-64. Parking brake assembly - Replace (Cont)

3-64

## REMOVAL (Cont)



END OF TASK

## INSTALLATION

1. Position the brake assembly on the rear axle and align holes.
2. Install four hex head cap screws through the brake assembly and place a lock washer and a plain hex nut on each screw. Tighten nuts to a torque of 19 ft-lbs.
3. Position the brake drum and hub assembly on brake assembly after installing hub and bearings (Refer to paragraph 3-61).

## NOTE

Brake assembly is self adjusting.

END OF TASK

---

3-64. Parking brake assembly - Replace (Cont)

---

3-64

This task covers: Disassembly and Reassembly (AVIM)

---

INITIAL SETUP

Tools:

Tool kit, aircraft mechanics general NSN 5180-00-323-4692

Shop set, AVIM, tool crib NSN 4920-00-472-4183

Wrench, torque 0-600 in-lbs

Personnel Required:

MOS 67( )10

Equipment Condition:

Para 3-61 Hub removed from axle

Para 3-64 Brake assembly removed from axle

---

DISASSEMBLY

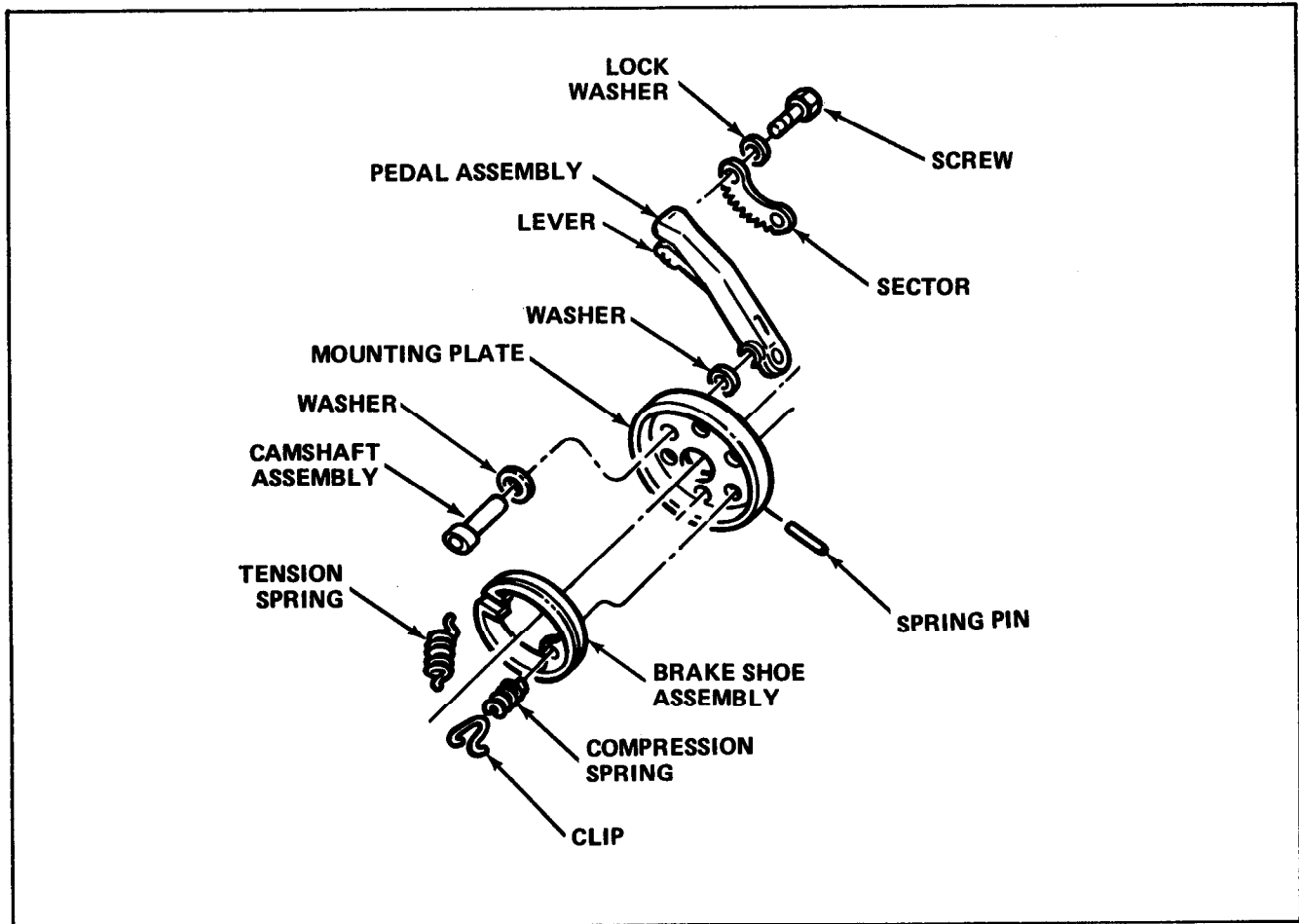
1. Remove two screws and two lock washers to loosen the sector from the back of the mounting plate. Note position of the sector and pedal assembly for reassembly.
2. Loosen screw and remove the pedal assembly along with the sector.
3. Turn the mounting plate over and push in on the clip. Pull the spring pin free from the back of the mounting plate and remove the compression spring and clip from the front of the mounting plate.
4. Remove the shoe assembly with tension spring from the front of the mounting plate. Remove spring from brake lining.
5. Remove the camshaft assembly and the two washers.

GO TO NEXT PAGE

## 3-64. Parking brake assembly - Replace (Cont)

3-64

## DISASSEMBLY (Cont)



END OF TASK

## REASSEMBLY

1. Install camshaft with one washer on each side of the mounting plate.
2. Spread shoe assembly and position with cam between wear plates on shoe assembly.
3. Install compression spring and clip into shoe assembly. Push on compression spring and clip and then insert spring pin through clip and into groove on back side of mounting plate.

GO TO NEXT PAGE

---

3-64. Parking brake assembly - Replace (Cont)

---

3-64

REASSEMBLY (Cont)

4. Install pedal assembly on camshaft then position the sector in the pedal assembly as noted during disassembly, paragraph 3-64, step 1, and secure the pedal assembly to the back of the mounting plate with two lock washers and screws. Tighten all screws to a torque of 11 ft-lbs.
5. Install tension spring on shoe assembly. Note that brake assembly is self-adjusting.

END OF TASK



## SECTION VI. PREPARATION FOR STORAGE OR SHIPMENT

### 3-65. Preparation for storage.

#### a. Parts required. Cotter pin.

b. Prepare the equipment for storage by completing the requirements for preliminary servicing in accordance with Table 3-1. The following procedures may then be followed in preparation for storage.

(1) Remove cotter pin, slotted hex nut and bolt that secures towbar to tongue assembly. Discard cotter pin.

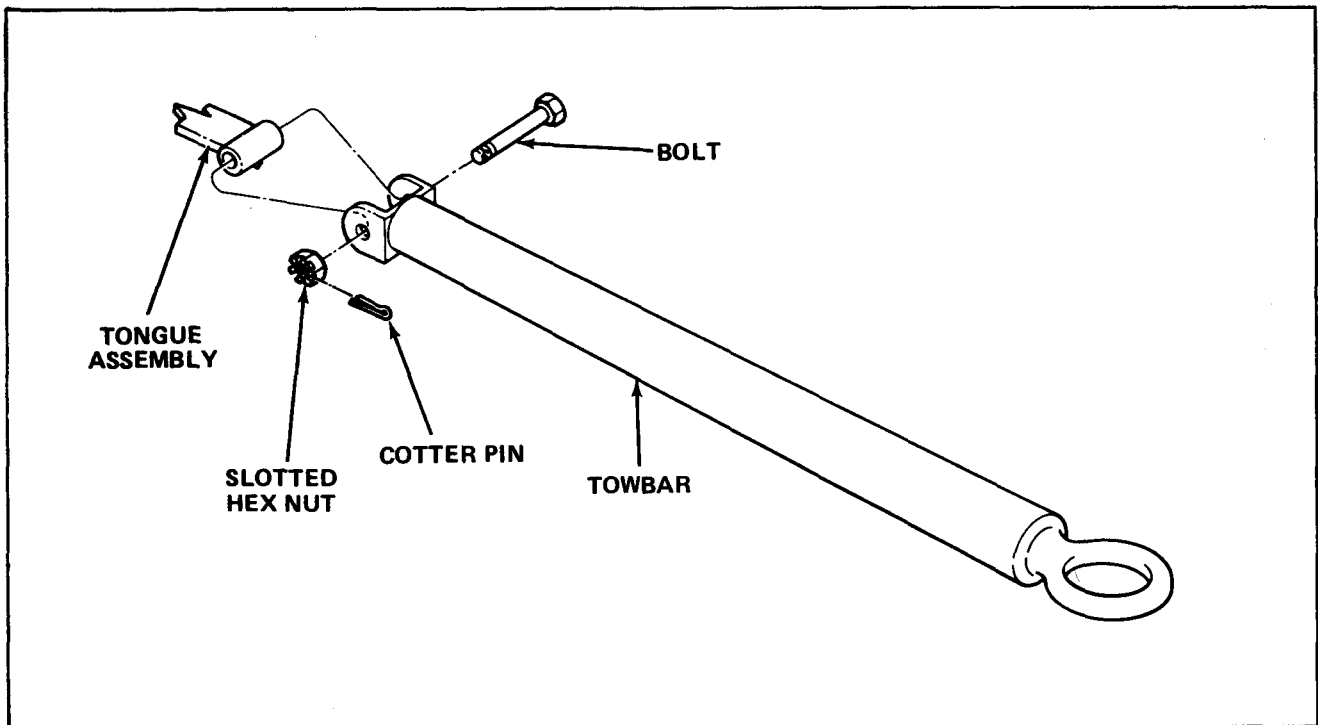
(2) Remove towbar and put aside.

(3) Insert bolt through tongue assembly and install slotted hex nut. Install new cotter pin in bolt.

(4) Apply light film of light preservative oil to bolt holes at end of towbar.

(5) Center towbar within the outer side of the right or left side trailer undercarriage I-beam. Secure towbar to undercarriage with strapping, making certain that strapping passes through the towbar 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.



3-66. Preparation for shipment.

a. Parts required. Cotter pin.

b. Prepare the equipment for shipment by completing the requirements for preliminary servicing in accordance with Table 3-1. The following procedures may then be followed in preparation for shipment.

(1) Remove cotter pin, slotted hex nut and bolt that secures towbar to tongue assembly. Discard cotter pin.

(2) Remove towbar and put aside.

(3) Insert bolt through tongue assembly and install slotted hex nut. Install new cotter pin in bolt.

(4) Apply light film of light preservative oil to bolt holes at end of towbar.

(5) Center towbar within the outer side of the right or left side trailer undercarriage I-beam. Secure towbar to undercarriage with strapping, making certain that strapping passes through the towbar eye at one end. Before tightening straps, place a double layer of barrier wrap between towbar 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.

## APPENDIX A REFERENCES

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### A-1. Dictionaries of Terms and Abbreviations

AR 310-25	Dictionary of United States Army Terms
AR 310-50	Authorized Abbreviations and Brevity Codes

### A-2. Publication Index

DA PAM 25-30	Consolidated Index of Army Publications and Blank Forms
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### A-3. Logistics and Storage

TM 740-90-1	Administrative Storage of Equipment
TM 743-200-1	Storage and Materiels Handling

### A-4. Maintenance of Supplies and Equipment

AR 750-1	Army Material Maintenance Concepts and Policies
DA PAM 738-751	Functional Users Manual for the Army Maintenance Manage- ment System-Aviation (TAMMS-A)
TM 43-0139	Painting Instructions for Field Use
FM 55-63	Fundamentals of Airframe Maintenance
FM 55-411	Maintenance, Quality Control and Technical Inspection Guide for Army Aircraft

### A-5. Other Publications

TM 750-244-1-3	Procedures for the Destruction of Aviation Ground Support Equipment (FSC 1700) to Prevent Enemy Use
AR 420-90	Fire Prevention and Protection
FM 21-11	First Aid For Soldiers



## **APPENDIX B**

### **MAINTENANCE ALLOCATION CHART**

---

#### **SECTION I. INTRODUCTION**

##### **B-1. General.**

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance categories.

b. The Maintenance Allocation Chart (MAC) in Section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance function to the end item or component will be consistent with the capacities and capabilities of the designated maintenance categories.

c. Section III lists the tools and test equipment required for each maintenance function as referenced from Section II.

d. Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

##### **B-2. Maintenance functions. Maintenance functions will be limited to and defined as follows:**

a. Inspect. To determine the serviceability of an item by comparing its physical and mechanical characteristics with established standards through examination (e.g., by sight, sound, or feel).

b. Service. Operations required periodically to keep an item in proper operating condition i.e., to clean, to preserve, to paint, or to replenish lubricants or gases.

c. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and is shown as the 3d position code of the SMR code.

d. Repair. The application of maintenance services, including fault location/troubleshooting, removal/installation, and 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, or end item.

##### **B-3. Explanation of Columns in the MAC, Section II.**

a. Column 1, Group Number. Column 1 lists functional group code numbers, the purpose of which is to identify maintenance of significant components, assemblies, and subassemblies, with the next higher assembly. End item group number is "00".

b. Column 2, Component/Assembly. Column 2 contains the names of components, assemblies, and subassemblies for which maintenance is authorized.

c. Column 3, Maintenance Function. Column 3 lists functions to be performed on the item listed in Column 2. (For detailed explanation of these functions, see paragraph B-2.) The higher level of maintenance has the authority to determine:

B-3. Explanation of Columns in the MAC, Section II (cont).

- (1) If the lower level is capable of performing the work.
- (2) If the lower level will require assistance or technical supervision and on-site inspection.
- (3) If the authorization will be granted.

d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a work time figure in the appropriate subcolumn(s), the category of maintenance authorized to perform the function listed in Column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. The work time figure represents the average time required to restore an item (assembly, subassembly, component, or end item) to a serviceable condition under typical field operating conditions.

e. Column 5, Tools and Equipment. Column 5 specifies, by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

f. Column 6, Remarks. This column shall, when applicable, contain a letter code, in alphabetic order, which shall be keyed to the remarks contained in Section IV.

B-4. Explanation of Columns in Tools and Test Equipment Requirements, Section III.

a. Column 1, Reference Code. The tool and test equipment reference code correlates with a code used in the MAC, Section II, Column 5.

b. Column 2, Maintenance Category. The lowest category of maintenance authorized to use the tool The "O" code corresponds to Aviation Unit Maintenance (AVUM), and the "F" code corresponds to Aviation Intermediate Maintenance (AVIM).

c. Column 3, Nomenclature. Name or identification of the tool.

d. Column 4, National Stock Number. The National Stock Number of the tool.

B-5. Explanation of Columns in Remarks, Section IV.

a. Column 1, Reference Code. The code recorded in Column 6, Section II.

b. Column 2, Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC, Section II.

## SECTION II. MAINTENANCE ALLOCATION CHART FOR STANDARD AIRCRAFT MAINTENANCE TRAILER

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY		(5) TOOLS AND EQPT	(6) REMARKS
			AVUM	AVIM		
00	Trailer Rail Type Aircraft Maintenance					
01	Rail Assembly					
0101	Rail	INSPECT REPAIR REPLACE	.3	1.0 1.5	103 102	
0102	Rail Stop Assembly	INSPECT REPAIR REPLACE	.3 .5	.5	102 102	
02	Pallet Assembly	INSPECT REPAIR REPLACE	.3	1.0 1.5	103 102	
0201	Pallet Mounting Channel	INSPECT REPAIR REPLACE	.2	.5 1.0	103 102	
03	Trailer Undercarriage	INSPECT REPAIR	.3	1.0	103 102	
0301	Base Assembly	INSPECT REPAIR	.5	1.0	103	
0302	Steering Assembly					
030201	Towbar	INSPECT REPAIR REPLACE	.3	.8 .5	103 102	
030202	Tongue	INSPECT SERVICE REPAIR REPLACE	.3 .3 .5	.8	101 102 102	

## SECTION II. MAINTENANCE ALLOCATION CHART FOR STANDARD AIRCRAFT MAINTENANCE TRAILER (CONT)

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY		(5) TOOLS AND EQPT	(6) REMARKS
			AVUM	AVIM		
030203	Tie Rods	INSPECT	.3			
		SERVICE	.3		101	
		REPAIR	.5		102	
		REPLACE	.8		102	
030204	Bearings, Fittings, Etc.	INSPECT	.3			
		REPLACE	.5		102	
0303	Axle Assembly					
030301	Axle and King Pin Pivot Assembly	INSPECT	.3			
		SERVICE		.5	115	
		REPAIR		.8	103	
		REPLACE	.7		102	
030302	Rim Assembly	INSPECT	.3			
		REPLACE	.5		101 102	
030303	Tires and Tubes	INSPECT	.3			
		REPAIR		.8	115 102	
		REPLACE		.8	115 102	
030304	Hubs and Bearings	INSPECT	.3			
		SERVICE		.8	115 102	
		REPLACE		.8	115 102	
030305	Parking Brake Assembly	INSPECT	.3			
		REPAIR		.8	115 102	
		REPLACE		.8	115 102	



## SECTION III. TOOLS AND TEST EQUIPMENT

TM55-1730-227-13&amp;P

(1) TOOL OR TEST EQUIPMENT REFERENCE CODE	(2) MAINTENANCE CATEGORY	(3) NOMENCLATURE	(4) NATIONAL STOCK NUMBER
100	O	TOOL SET, AVUM, SET NO. 1	4920-00-159-8727
101	O	TOOL SET, AVUM, SET NO. 2	4920-00-567-0476
102	O	TOOL KIT, AIRCRAFT MECHANICS GENERAL	5180-00-323-4692
103	O	TOOL KIT, AIRFRAME REPAIRMANS	5180-00-323-4876
115	F	SHOP SET, AVIM, TOOL CRIB	4920-00-472-4183

## SECTION IV. REMARKS

(NOT REQUIRED)



## APPENDIX C

### REPAIR PARTS AND SPECIAL TOOLS LIST

#### SECTION I. INTRODUCTION

**C-1. Scope.** This RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of Operator, Aviation Unit and Aviation Intermediate maintenance for 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.

**C-2. General.** In addition to Section I, Introduction, this Repair Parts and Special Tools List is divided into the following sections:

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

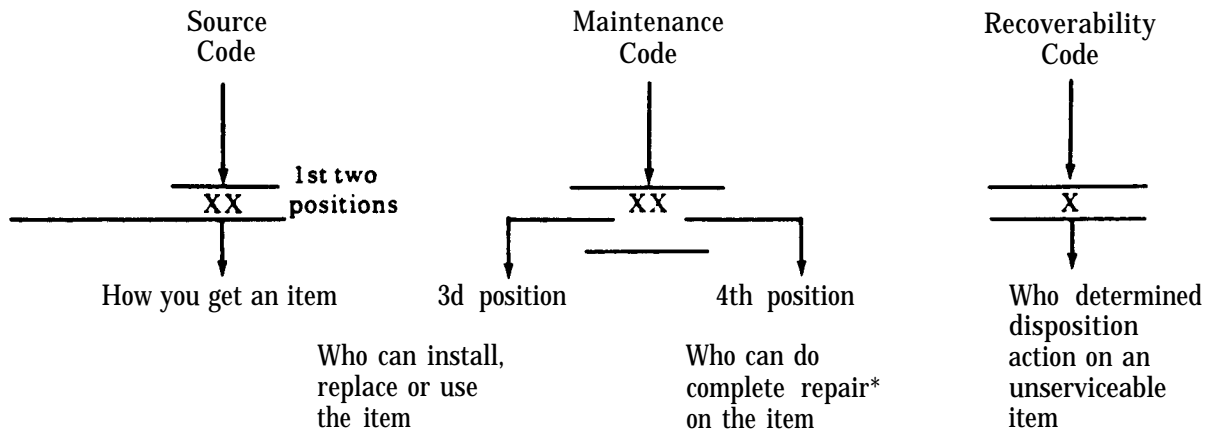
**b. Section III. Special Tools List.** A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in DESCRIPTION AND USABLE ON CODE column) for the performance of maintenance. (Not applicable)

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

**C-3. Explanation of Columns (Sections II and III).**

**a. Item No. (Column (1)).** Indicates the number used to identify items called out in the illustration.

**b. SMR Code (Column (2)).** The Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instruction, as shown in the following breakout:



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

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

Code	Explanation
<div style="border: 1px solid black; padding: 5px; display: inline-block;">           PA            PB            PC**            PD            PE            PF            PG         </div>	Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered in the 3d position of the SMR code.  **NOTE: Items coded PC are subject to deterioration.
<div style="border: 1px solid black; padding: 5px; display: inline-block;">           KD            KF            KB         </div>	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the 3d position of the SMR code. The complete kit must be requisitioned and applied.

Code	Explanation
<div style="border: 1px solid black; padding: 5px; display: inline-block;">           MO- (Made at org/              AVUM Level)            MF- (Made at DS/              AVUM Level)            MH- (Made at GS              Level)            ML- (Made at Spe-              cialized Repair              Act (SRA))            MD- (Made at Depot)         </div>	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the Bulk Material group of the repair parts list in this RPSTL. If the item is authorized to you by the 3d position code of the SMRcode, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.

Code	Explanation
<div style="border: 1px solid black; padding: 5px; display: inline-block;">           AO- (Assembled by org/AVUM Level)            AF- (Assembled by DS/AVIM Level)            AH- (Assembled by GS Category)            AL- (Assembled by SRA)            AD- (Assembled by Depot)         </div>	Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the 3d position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher level, order the item from the higher level of maintenance.

XA - Do not requisition an "XA" -coded item. Order its next higher assembly. (Also, refer to the NOTE below.)

XB - If an "XB" item is not available from salvage, order it using the FSCM and part number given.

XC - Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.

XD - Item is not stocked. Order an "XD" -coded item through normal supply channels using the FSCM and part number given, if no NSN is available.

NOTE: Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 700-42.

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

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

Code	Application/Explanation
C	-Crew or operator maintenance done within organizational or aviation unit maintenance.
O	-Organizational or aviation unit category can remove, replace, and use the item.
F	-Direct support or aviation intermediate level can remove, replace, and use the item.
H	-General support level can remove, replace, and use the item.
L	-Specialized repair activity can remove, replace, and use the item.
D	-Depot level can remove, replace, and use the item.

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

Code	Application/Explanation
O	-Organizational or (aviation unit) is the lowest level that can do complete repair of the item.
F	-Direct support or aviation intermediate is the lowest level that can do complete repair of the item.
H	-General support is the lowest level that can do complete repair of the item.
L	-Specialized repair activity (designate the specialized repair activity) is the lowest level that can do complete repair of the item.
D	-Depot is the lowest level that can do complete repair of the item.
Z	-Nonreparable. No repair is authorized.
B	-No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item). However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

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

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

**c. FSCM (Column (3)).** The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

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

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

**e. Description and Usable On Code (UOC) (Column (5)).** This column includes the following information:

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

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

#### **C-4. Explanation of Columns (Sect. IV).**

##### **a. National Stock Number (NSN) Index.**

**(1) Stock Number Column.** This column lists the NSN by National item identification number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN (i.e., <sup>NSN</sup>5305-01-674-1467). When using this <sub>NIIN</sub> column to locate an item, ignore the first 4 digits of the NSN. However, the complete NSN should be used when ordering items by stock number.

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

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

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

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

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

**(3) Stock Number Column.** This column lists the NSN for the associated part number and manufacturer identified in the Part Number and FSCM Columns to the left.

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

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

**C-5. Special Information.** Use the following subparagraphs as applicable:

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

Code	Used On	
PAA	Model M114	
PAB	Model M114A	(These codes and model
PAC	Model M114B	numbers are examples only)

**b. Index Numbers.** Items which have the word BULK in the figure column will have an index number shown in the item number column. This index number is a cross-reference between the National Stock Number/Part Number Index and the bulk material list in Section II.

**c. Associated Publications.** The publication(s) listed below pertain to (insert applicable equipment nomenclature) and its components:

Publication	Short Title
-------------	-------------

NOT APPLICABLE

NOTE: Associated publications shall not be listed herein combined narrative and RPSTL manuals.



## **C-6. How to Locate Repair Parts.**

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

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

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

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

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

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

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

**(1) First.** Using the Index of National Stock Numbers and Part Numbers, find the pertinent National Stock Number or Part Number. The NSN index is in National Item Identification Number (NIIN) sequence (see C-4.a(1)). The part numbers in the Part Number index are listed in ascending alphanumeric sequence (see C-4.b). Both indexes cross-reference you to the illustration figure and item number of the item you are looking for.

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

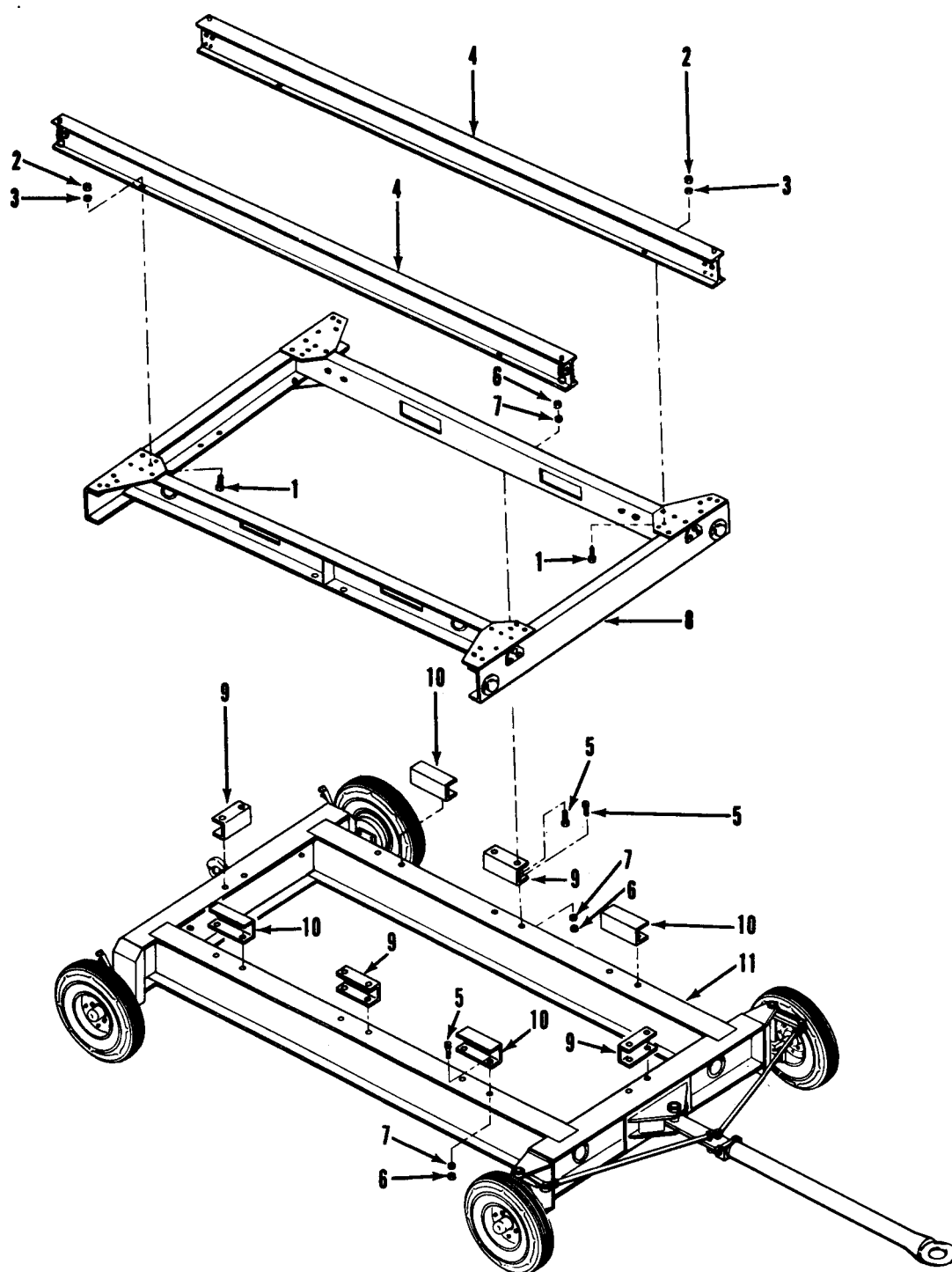


Figure C-1. Standard Aircraft Maintenance Trailer

SECTION II				TM55-1730-227-13&P	C1	
(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY	
GROUP 00. STANDARD AIRCRAFT MAINTENANCE TRAILER						
FIGURE C-1 STANDARD AIRCRAFT MAINTENANCE TRAILER						
1	PBFZZ	96906	MS90726-62	SCREW,CAP,HEXAGON H	8	
2	PBFZZ	96906	MS21044N6	NUT,SELF-LOCKING,HE	8	
3	PBFZZ	96906	MS27183-14	WASHER,FLAT	8	
4	PBFFF	81996	4920-EG-108	RAIL ASSY SEE FIG C-2 FOR BREAKDOWN	2	
5	PBFZZ	96906	MS90726-113	SCREW,CAP,HEXAGON H	24	
6	PBFZZ	96906	MS21044N8	NUT,SELF-LOCKING,HE	24	
7	PBFZZ	96906	MS27183-18	WASHER,FLAT	24	
8	PBFFZ	52793	4920-EG-095	PALLET ASSY SEE FIG C-3 FOR BREAKDOWN	1	
9	XBFFF	81996	4920-EG-081-6	CHANNEL	4	
10	XBFFF	81996	4920-EG-081-7	CHANNEL	4	
11	PBFFF	81996	4920-EG-082	TRAILER ASSY UNDERCARRIAGE,SEE FIG C-4 FOR BREAKDOWN	1	
END OF FIGURE						

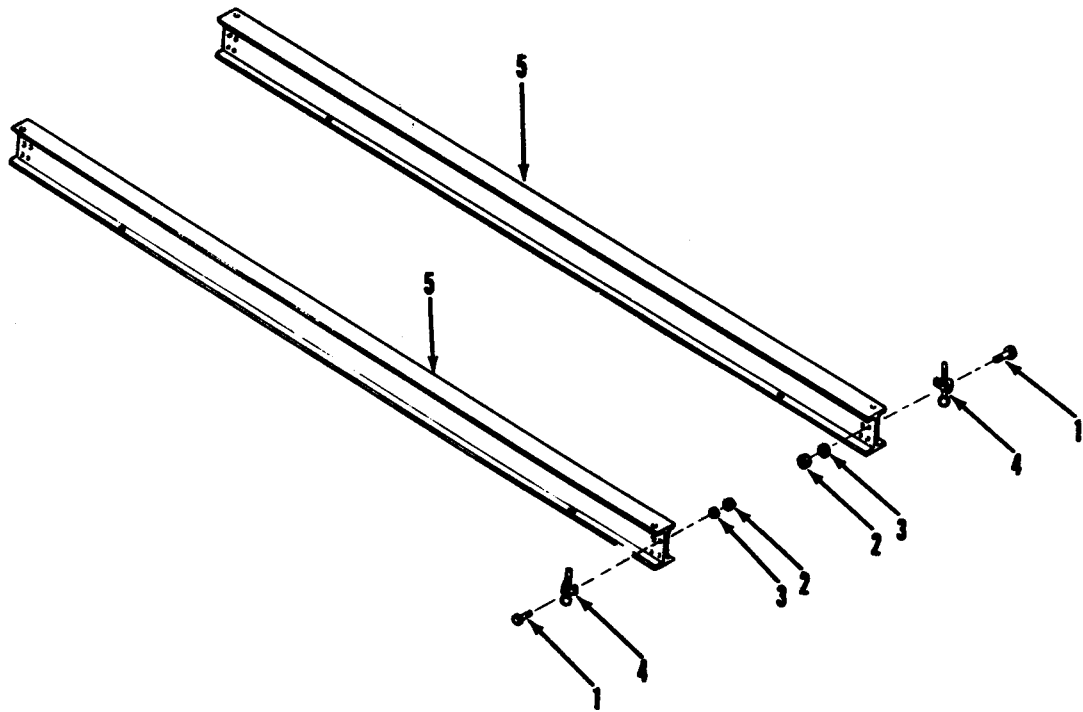


Figure C-2. Rail Assembly

SECTION II			TM55-1730-227-13&P	C1	
(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 01 RAIL ASSEMBLY					
FIGURE C-2 RAIL ASSEMBLY					
	PBFFF	81996	4920-EG-108	RAIL ASSY SEE FIG C-1 FOR NHA	2
1	PBFZZ	96906	MS90726-6	.SCREW,CAP,HEXAGON H	8
2	PBFZZ	96906	MS51968-2	.NUT,PLAIN HEXAGON	8
3	PBFZZ	96906	MS35338-63	.WASHER,LOCK	8
4	PBFFZ	52793	4920-EG-108	.RAIL ASSY,STOP	4
5	XDFFF	81996	4920-EG-108-2	.RAIL	2
END OF FIGURE					



SECTION II		TM55-1730-227-13&P		C1	
(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 02 PALLET ASSEMBLY					
FIGURE C-3 PALLET ASSEMBLY					
1	PBFFF	81996	4920-EG-095	PALLET ASSY SEE FIG C-1 FOR NHA	1
1	PBFZZ	96906	MS24672-29	.SCREW,CAP,SOCKET HE	24
2	PBFZZ	96906	MS21044N6	.NUT,SELF-LOCKING,HE	48
3	PBFZZ	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
6	PBFZZ	96906	MS90726-64	.SCREW,CAP,HEXAGON H	16
7	XBFZZ	81996	4920-EG-105	.PLATE,CORNER,BOTTOM	4
8	XDFZZ	96906	MS35206-280	.SCREW,MACHINE	16
9	PBFZZ	96906	MS51967-2	.NUT,PLAIN,HEXAGON	16
10	PBFZZ	96906	MS35387-2	.REFLECTOR,INDICATIN INDICATING, AMBER	4
11	PBFZZ	96906	MS35387-1	.REFLECTOR,INDICATIN	4
12	PBFZZ	96906	MS90726-60	.SCREW,CAP,HEXAGON H	8
13	PBFZZ	52793	4920-EG-106	.TIEDOWN 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
END OF FIGURE					

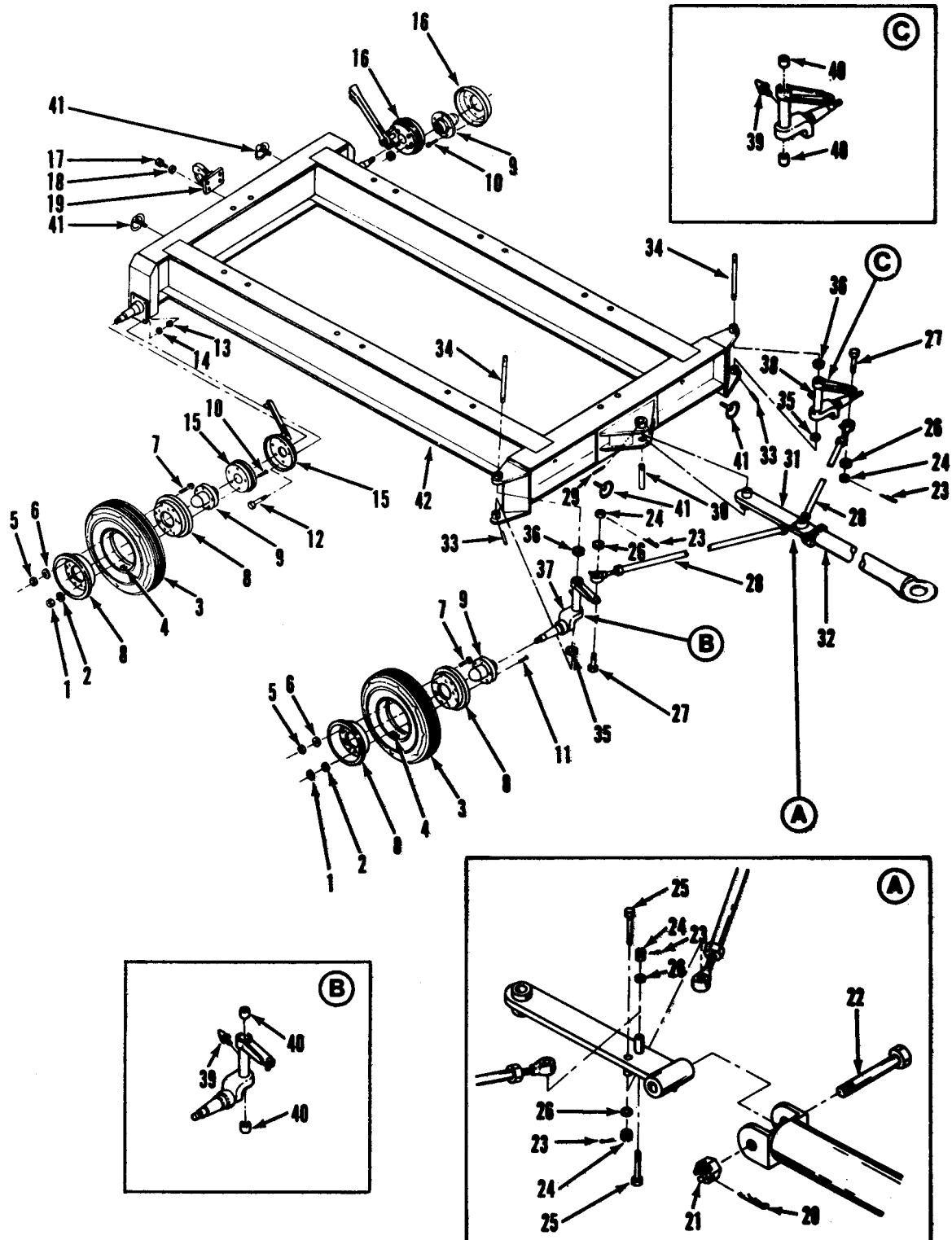


Figure C-4. Standard Undercarriage for Aircraft Maintenance Trailer



SECTION II		TM55-1730-227-13&P		C1	
(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 03 TRAILER UNDERCARRIAGE ASS EMBL Y	
				FIGURE C-4 TRAILER UNDERCARRIAGE A SSEMBLY	
	PBFFF	81996	4920-EG-082	TRAILER ASSY, UNDERCARRIAGE, SEE FIG C-1 FOR NHA	1
1	XDFZZ	96906	MS35690-822	.NUT	20
2	XDFZZ	96906	AN935-816	.WASHER	20
3	XDOZZ	96906	MS35389-6	.TIRE,PNEUMATIC	4
4	XDFZF	73808	6-00X9	.INNER TUBE,PNEUMATI	4
5	XDFZZ	96906	AN325-6	.NUT	32
6	XDFZZ	96906	AN935-616	.WASHER,LOCK	32
7	XDFZZ	96906	AN60-6-7	.BOLT	32
8	XDFZZ	96906	MS24325-1	.WHEEL,PNEUMATIC TIR	8
9	XDFZZ	96906	MS24328-1	.HUB,BODY FIGURE C-6 FOR BREAKDOWN	4
10	XDFZZ	81996	4920-EG-100	.STUD,HUB	10
11	XDFZZ	52793	6440	.BOLT,CARRIAGE, RIBBED NECK,THREAD 1-2-20UNF2A,DIA OF RIBBED NECK 0.554-0.54	10
12	PBFZZ	96906	MS90726-62	.SCREW,CAP,HEXAGON H	8
13	XDFZZ	96906	MS51968-8	.NUT,PLAIN,HEXAGON	8
14	PAFZZ	96906	MS35338-46	.WASHER,LOCK	8
15	PBFZZ	83445	51588-R	.BRAKE HOUSING ASSY SEE FIG C-6 FOR BREAKDOWN	1
16	PBFZZ	83445	51588-L	.BRAKE HOUSING,L-H SEE FIG C-6 FOR BREAKDOWN	1
17	PBFZZ	96906	MS90726-111	.SCREW,CAP,HEXAGON H	4
18	PAFZZ	96906	MS35338-48	.WASHER,LOCK	4
19	XDFZZ	74410	C7061999	.PINTLE ASSEMBLY,TOW	1
20	PAOZZ	96906	MS24665-423	.PIN,COTTER	1
21	PBFZZ	96906	MS35692-57	.NUT,PLAIN,SLOTTED H	1
22	XBFZZ	81996	4920-EG-088-7	.BOLT	1
23	XDOZZ	96906	MS24665-287	.PIN,COTTER	4
24	XDOZZ	88044	AN320-8	.NUT,PLAIN,SLOTTED,H	4
25	XDFZZ	81996	4920-EG-089-2	.BOLT	2
26	XDOZZ	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 FIG C-5 FOR BREAKDOWN	2
29	PBFZZ	96906	MS35671-41	.PIN,GROOVED,HEADLES	1
30	XBFZZ	81996	4920-EG-093	.PIN,TONGUE PIVOT	1
31	PBFFZ	52793	4920-EG-087-1	.TONGUE ASSY,TOWBAR SEE FIG C-5 FOR BREAKDOWN	1
32	PAOZZ	81996	4920-EG-088-1	.TOWBAR ASSEMBLY	1
33	PBFZZ	96906	MS39086-174	.PIN,SPRING	4
34	XBFZZ	81996	4920-EG-090-4	.PIN,KING	2
35	PBFZZ	96906	MS27183-25	.WASHER,FLAT	V
36	XBFZZ	81996	4920-EG-090-5	.WASHER,THRUST	2
37	XBFZZ	81996	4920-EG-090-1	.AXLE,KINGPIN ASSY RIGHT HAND	1
38	XBFZZ	81996	4920-EG-090-2	.AXLE,KINGPIN ASSY LEFT HAND	1

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
39	XDOZZ	96906	MS15001-1	.FITTING,LUBRICATION	1
40	PBFZZ	71366	P-345	.BEARING,SLEEVE	2
41	XBFFZ	98750	48B7385	.RING CARGO TIEDOWN	4
42	XAFFF	81996	4920-EG-082-3	.BASE ASSEMBLY	1

END OF FIGURE



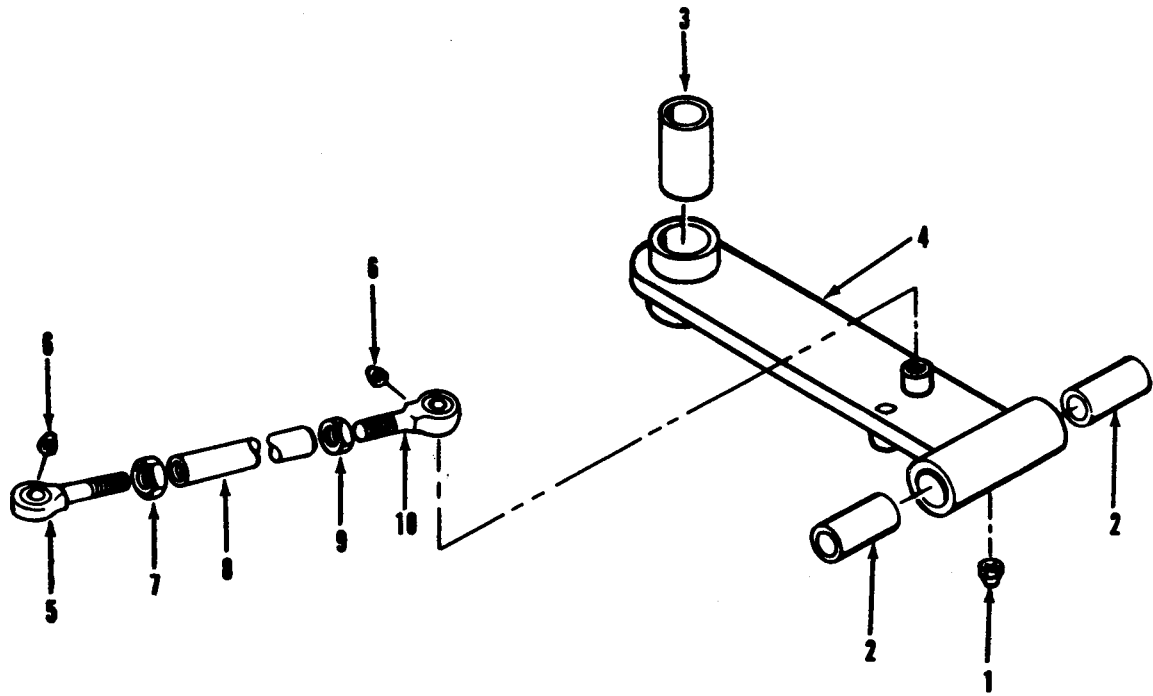


Figure C-5. Tie Rod and Tongue Assembly

SECTION II		TM55-1730-227-13&P		C1	
(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 0302 TONGUE ASSEMBLY AND TIE ROD ASSEMBLY	
				FIGURE C-5 TONGUE ASSEMBLY	
	PBFFZ	52793	4920-EG-087-1	TONGUE ASSY,TOWBAR SEE FIG C-4 FOR NHA	1
1	XDOZZ	96906	MS15001-1	.FITTING,LUBRICATION	1
2	XDFZZ	71366	P-77-14	.BEARING	2
3	XDFZZ	71366	P-125-16	.BEARING	1
4	XDFZZ	81996	4920-EG-087-2	.TONGUE	1
	XDFFF	81996	4920-EG-089	ROD ASSY TIE SEE FIG C-4 FOR NHA	1
5	PBOZZ	57448	TREL8N	.BEARING,PLAIN,ROD E	2
6	XDOZZ	96906	MS15001-1	.FITTING,LUBRICATION	4
7	XDOZZ	96906	MS35691-37	.NUT,PLAIN,HEXAGON	2
8	XDOZZ	81996	4920-EG-089-2	.BODY TIE ROD STERNG	2
9	XDOZZ	96906	MS27952-34	.NUT HEX JAM	2
10	PBOZZ	73134	HM-8FGPB	.BEARING,PLAIN,ROD E	2
				END OF FIGURE	

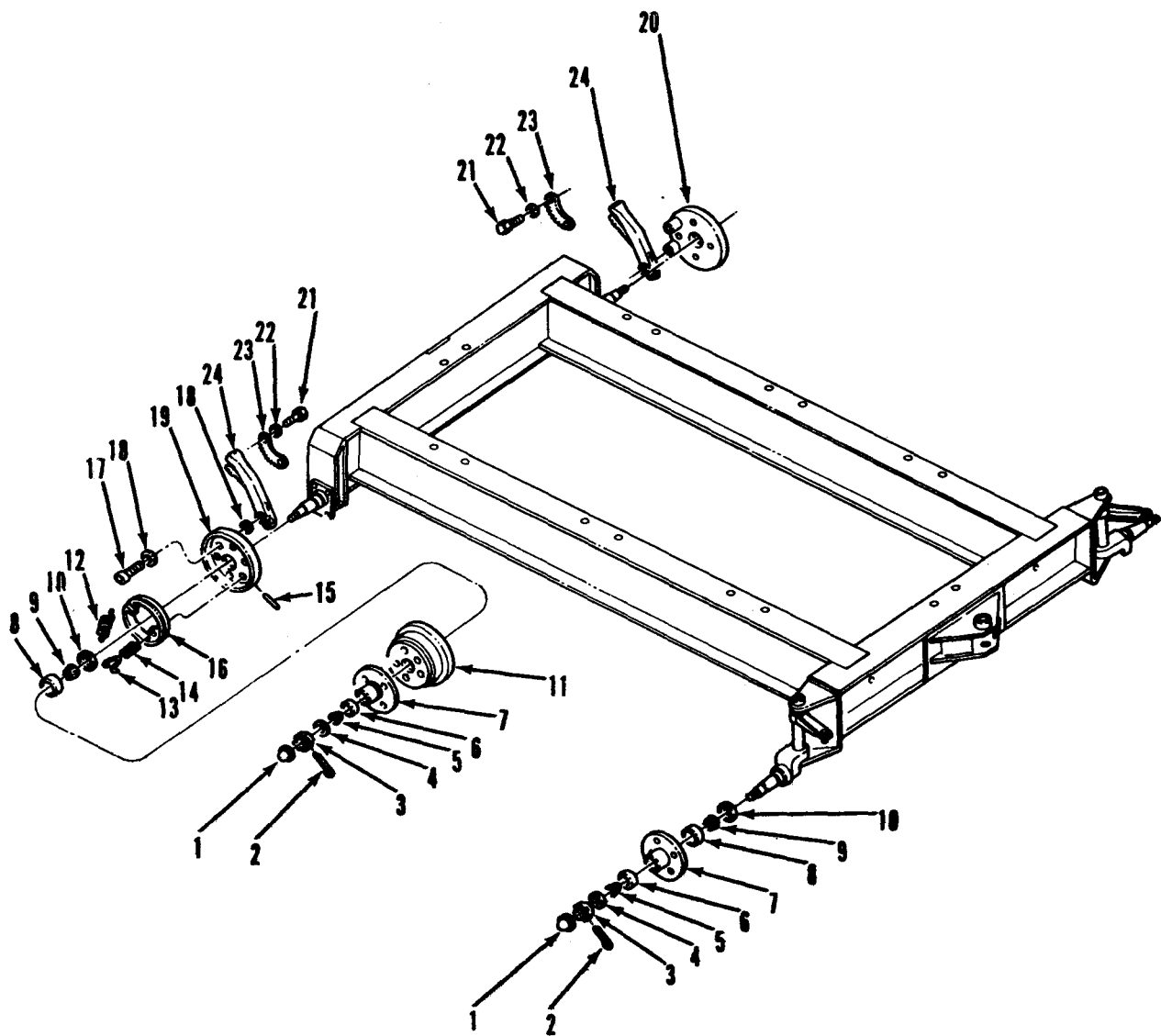


Figure C-6. Axle Assembly

SECTION II		TM55-1730-227-13&P		C1	
(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
GROUP 0304 HUBS AND BEARINGS AND PARKING BRAKE ASSEMBLY					
FIGURE C-6 HUB ASSEMBLY					
	XDFZZ	96906	MS24328-1	HUB,BODY SEE FIG C-4 FOR NHA	4
1	XDFZZ	52793	03-006394	.CAP,HUB	4
2	XDFZZ	96906	AN380-4-7	.PIN,COTTER	4
3	XDFZZ	96906	AN320-16	.NUT,SLOTTED HEX	4
4	XDFZZ	81996	4920-EG-086-3	.WASHER	4
5	XDFZZ	60038	15125	.CONE AND ROLLERS,TA	4
6	XDFZZ	60038	15245	.CUP,TAPERED ROLLER	4
7	XDFZZ	52793	03-006404-M	.HUB	4
8	XDFZZ	60038	24720	.CUP,TAPERED ROLLER	4
9	XDFZZ	60038	24780	.CONE AND ROLLERS,TA	4
10	XDFZZ	52793	03-013021	.SEAL,GREASE	4
	PBFZZ	83445	51588-R	BRAKE HOUSING ASSY SEE FIG C-4 FOR NHA	1
	PBFZZ	83445	51588-L	BRAKE HOUSING,L-H SEE FIG C-4 FOR NHA	1
11	PBFZZ	83445	51314-6	.BRAKE DRUM	1
12	XDFZZ	83445	51267-5	.SPRING,TENSION	2
13	XDFZZ	83445	55008	.CLIP	2
14	XDFZZ	83445	55007	.SPRING,COMPRESSION	2
15	XDFZZ	96906	MS9048-108	.PIN,SPRING	2
16	XDFZZ	83445	51496	.SHOE ASSEMBLY	2
17	XDFZZ	83445	51401-46	.CAM SHAFT ASSEMBLY	2
18	XDFZZ	96906	AN960-1016L	.WASHER	4
19	XDFZZ	83445	51594-I-R	.PLATE,MOUNTING, RIGHT-HAND	1
20	XDFZZ	83445	51594-I-L	.PLATE,MOUNTING, LEFT-HAND	1
21	XDFZZ	83445	AS65-5-6	.SCREW	4
22	XDFZZ	96906	MS35333-41	.WASHER,LOCK	4
23	XDFZZ	83445	111543	.SECTOR	2
24	XDFZZ	83445	101694	.PEDAL ASSEMBLY,BRAK	2

END OF FIGURE

## NATIONAL STOCK NUMBER AND PART NUMBER INDEX

## NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG	ITEM	STOCK NUMBER	FIG	ITEM
5315-00-013-7228	C-4	20			
5305-00-068-0506	C-2	1			
5310-00-080-6004	C-1	3			
	C-3	3			
3120-00-138-1809	C-5	10			
3120-00-138-1810	C-5	5			
9905-00-202-3639	C-3	10			
9905-00-205-2795	C-3	11			
5305-00-269-2803	C-3	12			
5305-00-269-2805	C-1	1			
	C-4	12			
5305-00-269-2807	C-3	6			
5310-00-274-8715	C-2	3			
5315-00-290-9244	C-4	29			
2530-00-528-7206	C-6	11			
5310-00-584-5272	C-4	18			
5310-00-637-9541	C-4	14			
5305-00-725-4183	C-1	5			
5305-00-761-4227	C-4	17			
5310-00-761-6882	C-3	9			
5310-00-768-0319	C-2	2			
5310-00-809-5998	C-1	7			
5310-00-809-8540	C-4	35			
5310-00-850-6881	C-4	21			
5310-00-877-5795	C-1	6			
5315-00-882-0904	C-4	33			
5310-00-950-0039	C-1	2			
	C-3	2			
4920-01-140-6716	C-4	15			
	C-6				
4920-01-140-6717	C-1	8			
	C-3				
4920-01-140-6721	C-3	13			
4920-01-141-7518	C-1	11			
	C-4				
4920-01-141-7554	C-4	31			
	C-5				
4920-01-141-7555	C-1	4			
	C-2				
	C-2	4			
4920-01-142-0989	C-4	16			
	C-6				
3120-01-176-2037	C-4	40			
5305-01-179-5256	C-3	1			
1730-01-223-3185	C-4	32			



## NATIONAL STOCK NUMBER AND PART NUMBER INDEX

## PART NUMBER INDEX

FSCM	PART NUMBER	STOCK NUMBER	FIG	ITEM
96906	AN320-16		C-6	3
88044	AN320-8		C-4	24
96906	AN325-6		C-4	5
96906	AN380-4-7		C-6	2
96906	AN60-6-7		C-4	7
96906	AN935-616		C-4	6
96906	AN935-816		C-4	2
96906	AN960-1016L		C-6	18
83445	AS65-5-6		C-6	21
74410	C7061999		C-4	19
73134	HM-8FGPB	3120-00-138-1809	C-5	10
96906	MS15001-1		C-4	39
			C-5	1
			C-5	6
96906	MS21044N6	5310-00-950-0039	C-1	2
			C-3	2
96906	MS21044N8	5310-00-877-5795	C-1	6
96906	MS24325-1		C-4	8
96906	MS24328-1		C-4	9
			C-6	
96906	MS24665-287		C-4	23
96906	MS24665-423	5315-00-013-7228	C-4	20
96906	MS24672-29	5305-01-179-5256	C-3	1
96906	MS27183-14	5310-00-080-6004	C-1	3
			C-3	3
96906	MS27183-18	5310-00-809-5998	C-1	7
96906	MS27183-19		C-4	26
96906	MS27183-25	5310-00-809-8540	C-4	35
96906	MS27952-34		C-5	9
96906	MS35206-280		C-3	8
96906	MS35333-41		C-6	22
96906	MS35338-46	5310-00-637-9541	C-4	14
96906	MS35338-48	5310-00-584-5272	C-4	18
96906	MS35338-63	5310-00-274-8715	C-2	3
96906	MS35387-1	9905-00-205-2795	C-3	11
96906	MS35387-2	9905-00-202-3639	C-3	10
96906	MS35389-6		C-4	3
96906	MS35671-41	5315-00-290-9244	C-4	29
96906	MS35690-822		C-4	1
96906	MS35691-37		C-5	7
96906	MS35692-57	5310-00-850-6881	C-4	21
96906	MS39086-174	5315-00-882-0904	C-4	33
96906	MS51967-2	5310-00-761-6882	C-3	9
96906	MS51968-2	5310-00-768-0319	C-2	2
96906	MS51968-8		C-4	13
96906	MS9048-108		C-6	15
96906	MS90726-111	5305-00-761-4227	C-4	17
96906	MS90726-113	5305-00-725-4183	C-1	5
96906	MS90726-6	5305-00-068-0506	C-2	1
96906	MS90726-60	5305-00-269-2803	C-3	12
96906	MS90726-62	5305-00-269-2805	C-1	1

## NATIONAL STOCK NUMBER AND PART NUMBER INDEX

## PART NUMBER INDEX

FSCM	PART NUMBER	STOCK NUMBER	FIG	ITEM
96906	MS90726-62	5305-00-269-2805	C-4	12
96906	MS90726-64	5305-00-269-2807	C-3	6
71366	P-125-16		C-5	3
71366	P-345	3120-01-176-2037	C-4	40
71366	P-77-14		C-5	2
57448	TREL8N	3120-00-138-1810	C-5	5
52793	03-006394		C-6	1
52793	03-006404-M		C-6	7
52793	03-013021		C-6	10
83445	101694		C-6	24
83445	111543		C-6	23
60038	15123		C-6	5
60038	15245		C-6	6
60038	24720		C-6	8
60038	24780		C-6	9
98750	48B7385		C-4	41
81996	4920-EG-081-6		C-1	9
81996	4920-EG-081-7		C-1	10
81996	4920-EG-082	4920-01-141-7518	C-1	11
			C-4	
81996	4920-EG-082-3		C-4	42
81996	4920-EG-086-3		C-6	4
52793	4920-EG-087-1	4920-01-141-7554	C-4	31
			C-5	
81996	4920-EG-087-2		C-5	4
81996	4920-EG-088-1	1730-01-223-3185	C-4	32
81996	4920-EG-088-7		C-4	22
81996	4920-EG-089		C-5	
81996	4920-EG-089-1		C-4	28
81996	4920-EG-089-2		C-4	25
			C-5	8
81996	4920-EG-089-3		C-4	27
81996	4920-EG-090-1		C-4	37
81996	4920-EG-090-2		C-4	38
81996	4920-EG-090-4		C-4	34
81996	4920-EG-090-5		C-4	36
81996	4920-EG-093		C-4	30
52793	4920-EG-095	4920-01-140-6717	C-1	8
			C-3	
81996	4920-EG-096		C-3	14
81996	4920-EG-097		C-3	16
81996	4920-EG-098		C-3	15
81996	4920-EG-099		C-3	5
81996	4920-EG-100		C-4	10
81996	4920-EG-105		C-3	4
81996	4920-EG-105		C-3	7
52793	4920-EG-106	4920-01-140-6721	C-3	13
81996	4920-EG-108	4920-01-141-7555	C-1	4
			C-2	
			C-2	4
81996	4920-EG-108-2		C-2	5

## NATIONAL STOCK NUMBER AND PART NUMBER INDEX

## PART NUMBER INDEX

FSCM	PART NUMBER	STOCK NUMBER	FIG	ITEM
83445	51267-5		C-6	12
83445	51314-6	2530-00-528-7206	C-6	11
83445	51401-46		C-6	17
83445	51496		C-6	16
83445	51588-L	4920-01-142-0989	C-4	16
			C-6	
83445	51588-R	4920-01-140-6716	C-4	15
			C-6	
83445	51594-I-L		C-6	20
83445	51594-I-R		C-6	19
83445	55007		C-6	14
83445	55008		C-6	13
73808	6-00X9		C-4	4
52793	6440		C-4	11



## APPENDIX D

### EXPENDABLE SUPPLIES AND MATERIALS LIST

#### SECTION I. INTRODUCTION

D-1. Scope. This appendix lists expendable supplies and materials needed to operate and maintain the Standard Aircraft Maintenance Trailer. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

D-2. Explanation of columns.

a. Column (1) - Item number. This number is assigned to the entry in the listing.

b. Column (2) - Level. This column identifies the lowest level of maintenance that requires the listed item.

O - Aviation Unit Maintenance (AVUM)

F - Aviation Intermediate Maintenance (AVIM)

c. Column (3) - National Stock Number. This is the National stock number assigned to the item; it is to be used to request or requisition the item.

d. Column (4) - Description. Indicates the Federal item name and, if required, a description to identify the item.

e. Column (5) - Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

#### SECTION II.

#### EXPENDABLE SUPPLIES AND MATERIAL LIST FOR STANDARD AIRCRAFT MAINTENANCE TRAILER

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
1	O	9150-00-190-0904	Grease, Automotive and Military MIL-G-10924	lb
2	F	6850-00-285-8011	Solvent, Dry Cleaning P-D-680	gl



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**By Order of the Secretary of the Army:**

**Official:**

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DATE SENT

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TM 55-1730-227-13&P

PUBLICATION DATE  
9 Jan 84

PUBLICATION TITLE Standard Aircraft  
Maintenance Trailer P/N 4920-EG-  
081 NSN 1730-01-086-1653

BE EXACT... PIN-POINT WHERE IT IS

PAGE  
NO.PARA-  
GRAPHFIGURE  
NO.TABLE  
NO.

6

2-1  
a

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

In line 6 of paragraph 2-1a the  
manual states the engine has  
6 Cylinders. The engine on my  
set only has 4 Cylinders.  
Change the manual to show 4  
Cylinders.

B1

4-3

Callout 16 on figure 4-3 is  
pointing at a bolt. In key  
to figure 4-3, item 16 is called  
a shim - Please correct  
one or the other.

125

line 20

I ordered a gasket, item  
19 on figure B-16 by NSN  
2 910-00-762-3001. I got a  
gasket but it doesn't fit.  
Supply says I got what  
I ordered, so the NSN is  
wrong. Please give me a  
good NSN

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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 dekagram = 10 grams = .35 ounce  
 1 hectogram = 10 dekagrams = 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	liters	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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