BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G93.200.1
Issue 1, February, 1952
AT&T Co Standard

CABLE REEL TRAILERS

Contents **Page**

1. GENERAL

1.01 This practice covers the operation of the three commonly used cable reel trailers, designated as the PWD, PCP and PWCP trailers and replaces Specification 4736. The PWD and PWCP trailers are used only for hauling reels of cable, while the PCP trailer is a combination trailer used for hauling either a reel of cable or a load of poles. The operation of the PCP trailer for hauling a load of poles is covered in another section of the Practices, entitled "Pole Trailers."

1.02 The PWD and PCP trailers are designed to handle reels of cable not exceeding 36 inches in width and 84 inches in diameter. The PWCP trailer is designed to handle reels of cable not exceeding 46 inches in width and 84 inches in diameter.

2. SAFETY PRECAUTIONS

2.01 Always block both wheels of the trailer before detaching the trailer from the towing truck.

2.02 Whenever possible, use a truck to maneuver the trailer into position for loading, unloading or for moving the trailer short distances.

2.03 Use the truck winch line to raise or lower the trailer tongue whenever practical.

2.04 When coupling an empty trailer to the towing truck, place one man on each side of the trailer tongue to raise the tongue and guide the drawbar eye into the towing hook on the truck.

2.05 When coupling a trailer to a truck, be sure to close the latch on the towing hook and check that it is locked.

2.06 Keep workmen and other persons away from the trailer whenever the trailer tongue is being raised or lowered by the winch line, except when necessary to guide the drawbar eye into or out of the towing hook on the truck or move the tongue through the balance point.

2.07 Before paying out cable from a reel mounted on a trailer, place the rear prop in the ground position, with the tongue support shortened to its minimum length, to prevent overturning the trailer should the pull on the cable become great enough.

3. DESCRIPTION AND NAMES OF PARTS

3.01 The PWD, PCP and PWCP trailers are equipped with pneumatic tires and electric brakes and have a drop axle to accommodate as large a diameter reel as possible.

3.02 Saddle castings are provided on each side of the trailer at the rear. The top ends of the saddles are shaped in the form of a hook to facilitate picking up and carrying a reel of cable on a spindle bar.

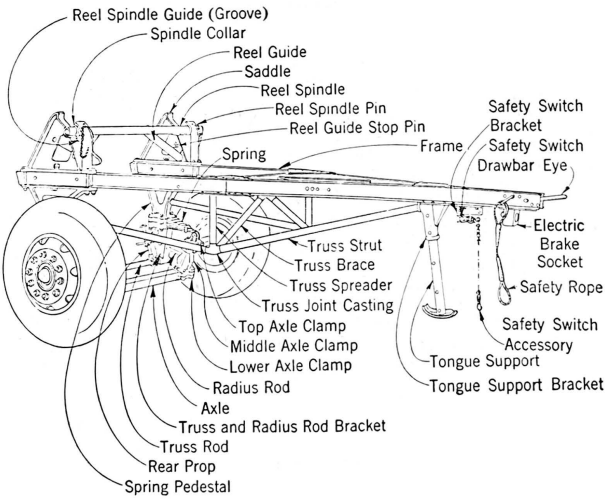
3.03 The trailer tongues are equipped with a tongue support near the front end which can be adjusted to five different lengths by the proper selection of holes for the insertion of the support locking pin. When the tongue support is fully extended it supports the tongue at a height about 3 inches below the standard height towing hook on a truck. When the support is fully telescoped there is ample clearance between the foot of the tongue support and the ground for trailing.

3.04 An adjustable prop is provided at the rear of the trailer for use during cable placing operations. The length of the prop can be changed by a screw arrangement. When not in use the rear prop is swung upward to a position above the truss rod on which it is mounted and held in this position by a chain attached to the left truss rod bracket.

3.05 The trailers have been balanced so that the tongues may be raised off the ground manually when the trailer is empty. As the trailer tongue is raised it becomes lighter and reaches a balance point when the end of the tongue is about 6 feet off the ground. When the tongue is above the balance point it will continue to rise, unless restrained by a rope or winch line, until the rear of the trailer strikes the ground.

3.06 The PWD trailer is used only for hauling reels of cable and the following figure shows the names of the parts of this trailer except the wheel assembly.

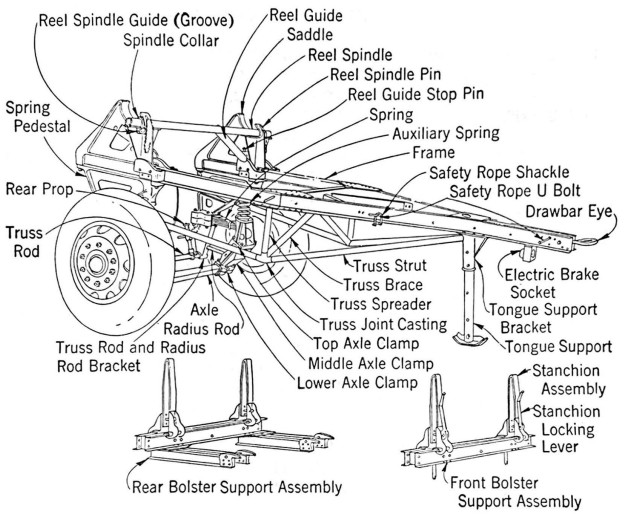
PWD TRAILER



3.07 The PCP trailer is a combination trailer which may be used for hauling either a reel of cable or a load of poles, and the following figure shows the names of the parts of

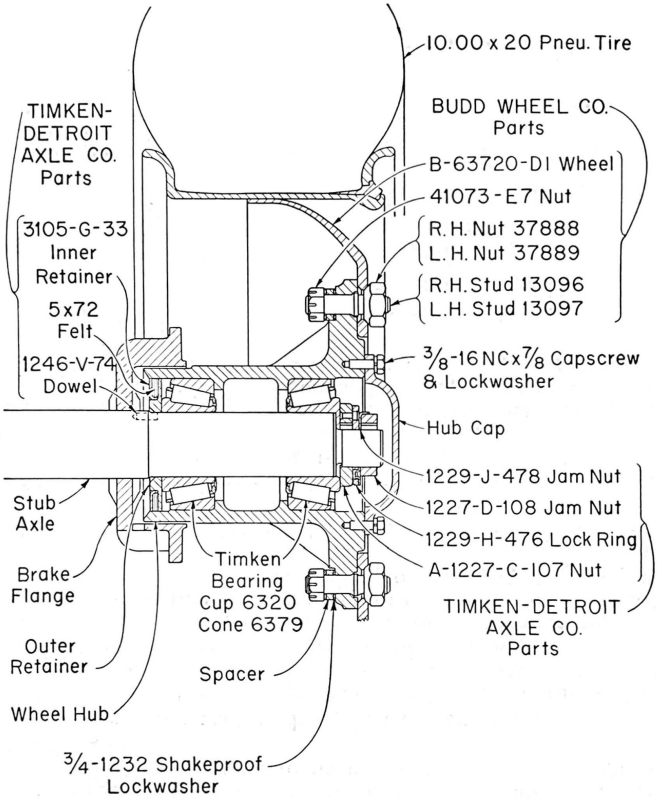
this trailer except the wheel assembly, and safety brake switch assembly. The safety brake switch assembly is the same as the one on the PWD trailer shown on the preceding page and has been omitted below in order not to congest the figure.

PCP TRAILER



3.08 The PWCP trailer is similar to the PCP trailer shown above. The only difference between the PCP and PWCP trailers is that the PWCP is wider, is provided with two reel spacers on the spindle bar to make possible the hauling of a No. 420 reel and is not provided with bolsters and stanchions for hauling poles. The names of the parts are the same as for the PCP trailer.

3.09 The following figure shows the names of the parts of the wheel assembly used on the PWD, PCP and PWCP trailers.



4. LOAD CAPACITIES, TIRE SIZES AND TIRE PRESSURES

4.01 Three different sizes of tires may be used on the PWD, PCP and PWCP trailers. The maximum gross vehicle weight, maximum net load capacity and proper tire pressures for these different tire sizes are as follows:

Tire Size and Number of Plies	Proper Tire Inflation—lbs.	Minimum Tire Inflation—lbs.	Max. Gross Vehicle Weight —lbs.	Max. Net Load Cap. —lbs.
9.00 x 20-10	82	74	10,300	7,500
9.75 x 20-12	84	76	11,200	8,300
10.00 x 20-12	84	76	11,200	8,300

5. LOADING A REEL OF CABLE

5.01 Maneuver the trailer to a position in front of the cable reel to be loaded, but far enough away so that the trailer saddle will clear a spindle bar in the cable reel when the trailer tongue is raised.

5.02 Remove the locking pin from the tongue support, adjust the support to its minimum length and replace the locking pin.

5.03 Chock both trailer wheels in front and rear.

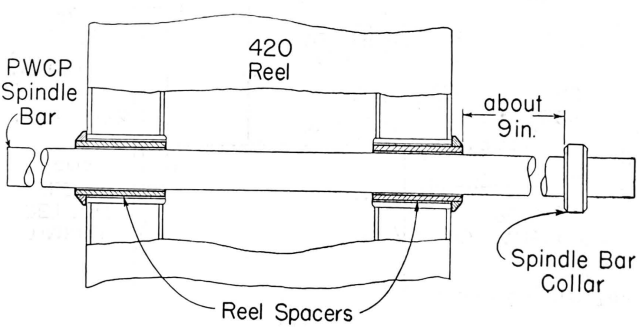
5.04 Pull the electric brake jumper cable out of the socket on the trailer and detach the trailer safety rope and safety brake chain from the rear end of the truck.

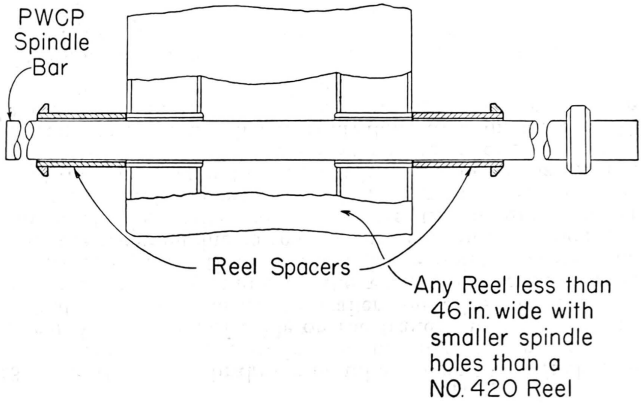
5.05 With one man on each side of the trailer tongue, uncouple the trailer from the truck, move truck forward 1 to 2 feet, and lower the trailer tongue until the tongue support rests on the ground.

5.06 Remove the pins that hold the spindle bar in the front hooks of the saddle.

5.07 Remove the spindle bar from the trailer and place it through the hubs of the cable reel which is to be loaded.

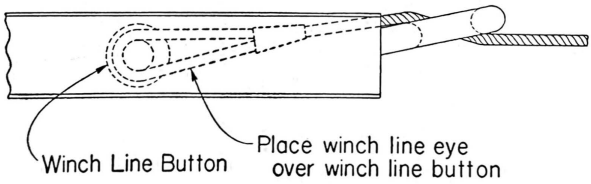
5.08 PWCP trailers are provided with two reel spacers on the spindle bar to accommodate the large spindle holes in No. 420 reels. Position the reel spacers as shown below.

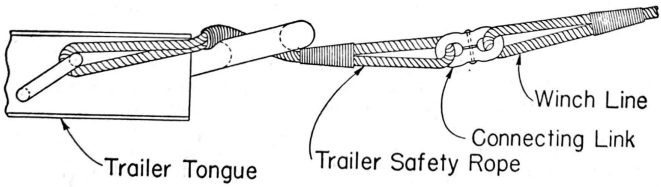




5.09 Adjust the reel guides on the trailer to suit the width of the reel to be loaded.

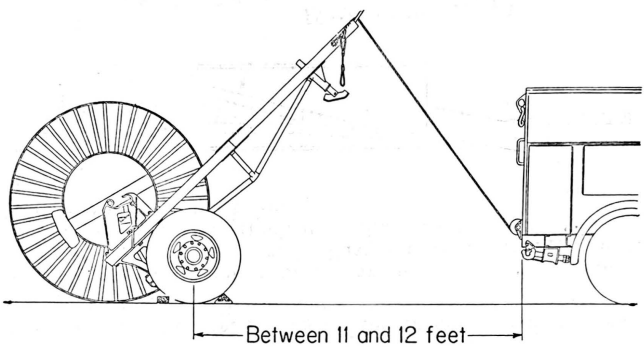
5.10 Place the truck spindle bar in the lower position on the rear of the truck. Pass the winch line under the truck spindle bar and attach it to the trailer tongue using one of the methods shown below.





5.11 With one man on each side of the trailer tongue, raise the tongue manually to just beyond the balance point. Slack off the winch line sufficiently to allow the men to raise the tongue. After the tongue passes the balance point, have the men stand clear and slack off on the winch line until the rear hooks on the saddle castings are just below the level of the spindle bar in the cable reel.

5.12 Roll the cable reel toward the trailer until the spindle bar is against the saddles on both sides of the trailer. Make sure that the spindle bar collar lines up with the groove in the saddle casting.



5.13 Set the truck brakes and take up on the winch line slowly pulling the trailer tongue down and raising the cable reel. With a reel of cable on the trailer the balance point is reached when the end of the trailer tongue is about 3 feet above the ground, depending on the weight of the cable reel. As the tongue passes through the balance point, increase the speed of the truck engine to remove the slack in the winch line and to catch the trailer tongue before the tongue support strikes the ground. To perform this operation smoothly, it is essential that the rear end of the truck be not more than 2 feet from the end of the trailer tongue when the tongue support is resting on the ground. This is equivalent to a distance of 11 to 12 feet between the trailer axle and the rear end of the truck as shown in the above figure.

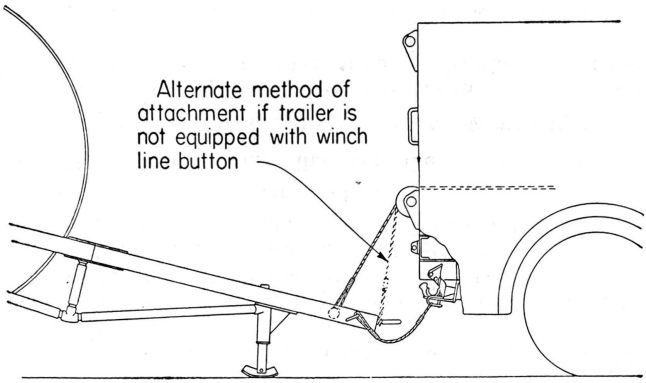
5.14 Replace the reel spindle pins to hold the spindle bar in the front hooks of the saddle castings.

6. COUPLING LOADED TRAILER TO TOWING TRUCK

6.01 Block both wheels of the trailer with wheel chocks or wooden blocks and back up the truck until the towing hook on the truck is about 6 inches in front of the drawbar eye on the trailer.

6.02 Attach the trailer safety rope to the towing hook frame.

6.03 Pass the winch line over the sheave on the spindle bar and attach it to the trailer tongue as shown below.



6.04 Open the latch on the truck towing hook.

6.05 Take up on the winch line until the drawbar eye of the trailer is just above the opening in the truck towing hook.

6.06 Back up the truck until the drawbar eye engages the towing hook.

6.07 If the alternate method shown above is used, slack off on the winch line until there is about 6 inches of slack in the winch line and leave it attached to the drawbar eye.

6.08 If the winch line button method is used, slack off on the winch line and remove it from the button.

6.09 Close the latch on the truck towing hook and make sure the latch pin is engaged so as to lock the latch in the closed position.

6.10 Connect the electric brake socket on the trailer to the electric brake socket on the truck by means of the electric brake jumper cable.

6.11 Connect the safety brake chain to the rear end of the truck.

6.12 Shorten the tongue support on the trailer to its minimum length and remove the trailer wheel chocks.

7. UNCOUPLING LOADED TRAILER FROM TOWING TRUCK

7.01 Block both wheels of the trailer with wheel chocks or lags.

7.02 Disconnect the safety brake chain from the truck.

7.03 Remove the electric brake cable between the trailer and the truck.

7.04 With the spindle bar in the lower position on the rear end of the truck, pass the winch line over the sheave on the spindle bar and connect it to the tongue of the trailer as shown in the figure following Par. 6.03.

7.05 Open the latch on the towing hook of the truck.

7.06 Take up on the winch line to raise the drawbar eye just far enough so that it can be uncoupled from the towing hook.

7.07 Move the truck forward, just enough to pull the towing hook away from the drawbar eye on the trailer.

7.08 Slack off on the winch line until the tongue support is resting on the ground and supporting the trailer tongue.

7.09 Disconnect the trailer safety rope from the truck.

7.10 Disconnect the winch line from the trailer tongue.

8. UNLOADING A REEL OF CABLE FROM TRAILER

8.01 Back the truck up to the trailer so that the rear end of the truck is 1 to 2 feet from the drawbar eye of the trailer.

8.02 Block both wheels of the trailer with wheel chocks or lags.

8.03 Remove the locking pins which hold the cable reel spindle bar in the front hooks of the trailer saddles.

8.04 With the truck spindle bar in the lower position, pass the winch line under the spindle bar and attach it to the trailer tongue as shown on figure following Par. 5.10.

8.05 Take up on the winch line slowly until the trailer tongue passes through the balance point. It may be necessary to manually raise the trailer tongue through the balance point with one or two men on each side of the trailer tongue.

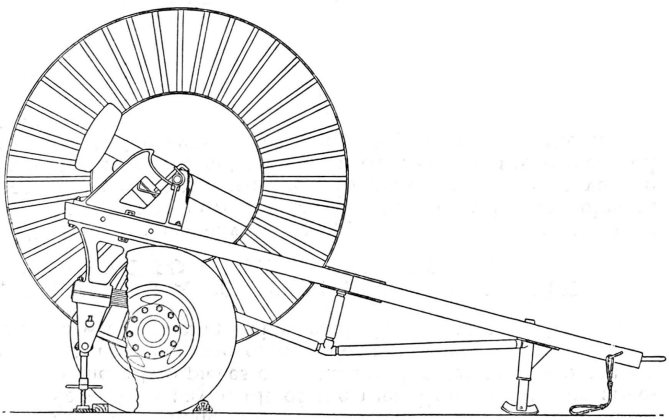
8.06 After the trailer tongue rises above the balance point, slack off on the winch line slowly until the cable reel rests on the ground and clears the rear hooks of the trailer saddles.

8.07 Roll the cable reel away from the trailer.

8.08 Take up on the winch line to lower the trailer tongue, but stop the winch line before the trailer tongue reaches the balance point. Place one man on each side of the trailer tongue to lower the tongue from the balance point to the ground.

9. PLACING CABLE FROM A REEL MOUNTED ON TRAILER

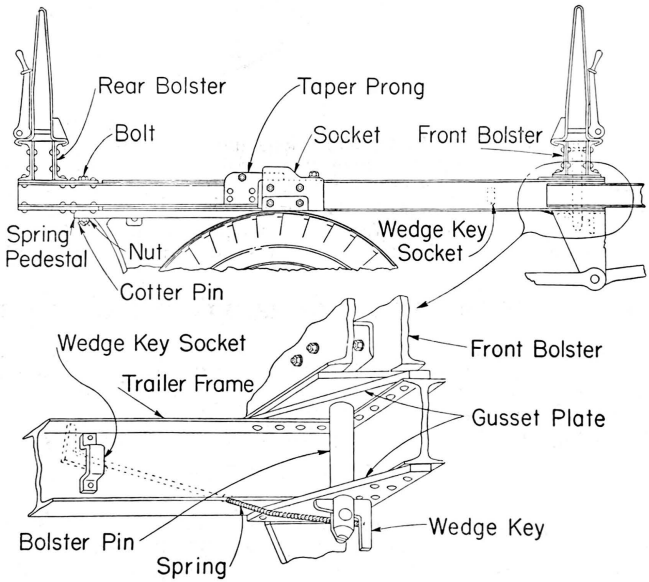
9.01 If the trailer is to remain stationary as the cable is payed out, block both trailer wheels front and rear with wheel chocks or wooden lags. Swing the rear prop on the trailer truss rod to the ground position and adjust its length so that the foot of the prop rests firmly on the ground to prevent the trailer tongue from rising accidently as the cable is pulled off of the reel.



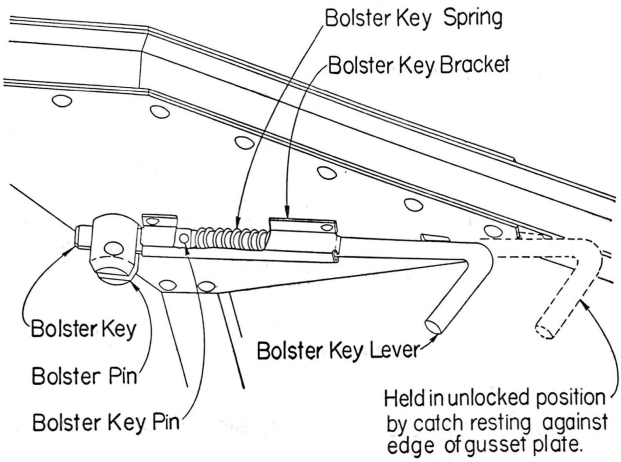
9.02 If desired, an R Cable Reel Brake may be mounted on the trailer to control the rotation of the cable reel, and a TF Cable Guide may be mounted on the trailer to guide the cable as it is payed off of the reel. Refer to the practices covering these two pieces of apparatus for details in connection with their use. The use of a brake and guide are particularly desirable when placing lashed cable from a moving trailer.

10. CHANGING A PCP TRAILER FROM A POLE TRAILER TO A CABLE REEL TRAILER

10.01 The trailer may be equipped with either wedge keys or bolster keys for locking the front bolster pins in place. If wedge keys are used, as shown below, remove the wedge key from the bolster pin on each side of the trailer and place the wedge keys in the wedge key sockets on the trailer frame.



10.02 If bolster key levers are used, as shown below, pull the bolster key lever on each side of the trailer to the unlocked position.



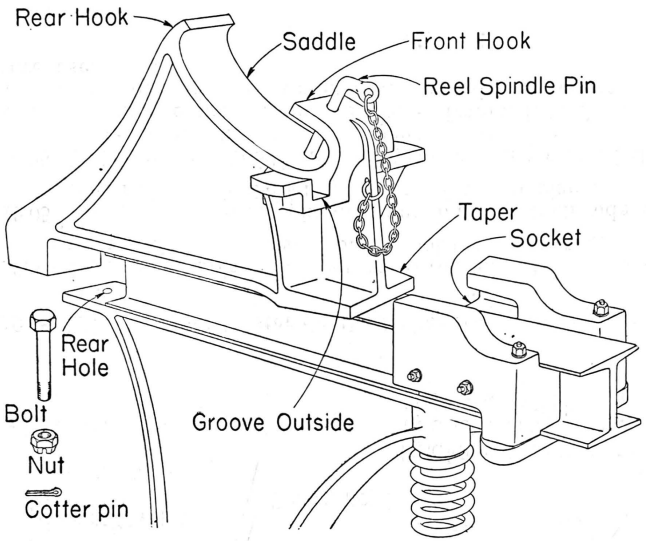
10.03 Lift the front bolster off the trailer frame and lay aside or store for future use.

10.04 Return the bolster key levers to the locked position to release the compression of the bolster key spring.

10.05 Remove the cotter pin, nut and bolt on each side of the trailer which hold the rear bolster in place.

10.06 Slide the rear bolster assembly toward the rear of the trailer until the tapered prongs on the front of the assembly clear the sockets on the trailer frame. Lift the rear bolster assembly off the trailer and lay aside or store for future use.

10.07 Place a saddle casting on each side of the trailer at the rear end of the frame with the tapered end forward and the spindle bar groove on the outside as shown below.



10.08 Slide the saddle castings forward, forcing the tapered ends into the sockets on the trailer frame, until the hole in the rear end of each saddle casting lines up with the hole in the rear end of the spring pedestal casting.

10.09 Using the two 1-1/4" bolts which were removed when the bolsters were removed, fasten the saddle castings in place. Secure the bolts in place with nuts and cotter pins.

10.10 Remove the reel spindle pin in each saddle. Place the reel spindle in the front hooks of the saddles and replace the reel spindle pins.

11. MAINTENANCE AND LUBRICATION

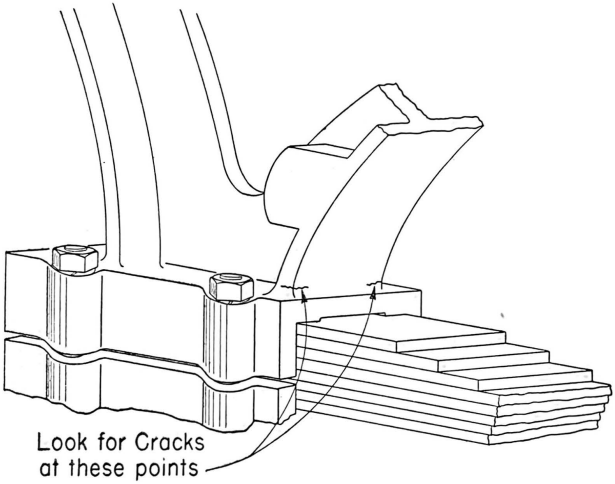
11.01 Check tire pressures at least once a month and inflate tires to pressures shown in Par. 4.01.

11.02 Keep removable bolts and pins lubricated with cup grease.

11.03 Keep all nuts and bolts drawn up tight and keep saddle casting and bolster mounting nuts and bolts equipped with cotter pins.

11.04 Keep reflectors, tail lamps, electric brakes and associated wiring in serviceable condition. The electric brakes including the emergency breakaway system should be checked before using the trailer. Do not use a trailer with faulty brakes.

11.05 Inspect saddle and pedestal castings for cracks especially at locations shown below. Do not use a trailer with cracked castings. Report cracked castings for repairs in accordance with local practices.



11.06 The wheels are equipped with Timken roller bearings. These bearings should be inspected at least once a year by a motor vehicle mechanic for any necessary adjustment and lubrication.

11.07 See that the trailer is repainted as required by appearance and degree of rusting.

11.08 See that the trailer is examined by motor vehicle personnel at least once a year. Any unsatisfactory condition developing in the interim between such inspections should be reported whenever they occur.