WSC TRAILER

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1. GENERAL

1.01 This section describes and covers the operation and maintenance of the WSC trailer for wire, strand and cable reels.

1.02 All operations prescribed herein can be performed by two men with the aid of a truck with rear mounted winch, spindle bar and spindle bar sheave.

2. PRECAUTIONS

2.01 Chock both trailer wheels in front and rear and release the trailer brakes before detaching the trailer from the truck and before loading or unloading the trailer.

2.02 See that the spindle with reel rolls slowly along the saddles so as to prevent it from striking the ends of the saddles with force. A shock, especially at the rear, may cause the front wheel chocks to kick out. A shock at the front may force the tongue down.

2.03 Never unload a reel by lifting the tongue by hand. Bear in mind that as the trailer is tilted, the force required at the end of the tongue to control the trailer increases as the tongue is raised and the reel rolls to the rear.

2.04 When raising or pulling down the tongue with the winch line it is important to have the truck as close to the trailer as practicable. This minimizes the tendency of the winch line to pull the trailer forward as the tongue approaches the horizontal.

2.05 Be sure the winch line is under the sheave and the spindle bar in its low position when raising or lowering the tongue except when coupling or uncoupling the trailer from a truck.

2.06 When rolling the reel toward the front, and especially toward the rear, the saddles should be almost horizontal. When the saddles are inclined any more than just past the horizontal, the reel spindle is apt to roll too rapidly or skid.

2.07 Workmen and other persons should stay clear of the trailer whenever the tongue is being raised or lowered with the winch line, except when necessary to guide the towing eye into the towing hook on the truck, or to control the tongue by hand.

2.08 After coupling a trailer to a truck, be sure that the latch on the towing hook is closed and locked and that the safety rope is connected.

2.09 Load the reel so that it can be rotated in the required direction when the cable is to be payed out. When cable, etc., is pulled from a reel on a trailer not coupled to a truck, pull from the underside of the reel if the pull is toward the rear, and from the top if the pull is toward the front, so that a sudden snag or a hard pull will not overturn the trailer. For the same reason, whenever working on a steep grade, point the tongue of the trailer down grade.

2.10 Before tilting a trailer, especially one with fenders, see that there are no obstructions which might damage fenders or other equipment on the trailer. Fold the fender flaps over the tops of the fenders before tilting.

2.11 Keep electric brakes and their controls in good operating condition. In testing them, first apply the brakes by means of the hand controller in the cab, if there is one, and attempt to tow the trailer. The trailer wheels should lock. Then, if the trailer brakes are operated by the brake pedal of the truck, release the brakes, tow the trailer at a speed of about 5 m.p.h. and apply the truck brakes. Both trailer wheel brakes should operate.

2.12 On a trailer equipped with a break-away safety system, test it by pulling the break-away safety switch chain. It should be possible to pull the switch plunger out before the chain disengages from the plunger. With the safety switch plunger pulled out, attempt to tow the trailer. The brakes should lock the trailer wheels. Be sure to push the break-away switch plunger back, in order to release the brakes after completing the test.

2.13 Never leave a break-away safety switch on for more than about 30 seconds.

2.14 If the trailer is equipped with a safety break-away switch, connect the chain so that if the trailer should accidentally become disconnected from the towing hook of the towing truck while traveling, the chain will operate the safety switch before the slack in the safety rope is taken up, and yet have sufficient slack to permit making turns without operating the switch.

2.15 One man should be assigned to direct all operations. He should make sure beforehand that any signal that he might give will be thoroughly understood.

3. DESCRIPTION

3.01 The WSC trailer is a two-wheel tilt loading type reel carrying trailer. It is regularly equipped with 7.50 X 16—8 ply pneumatic tires, safety rope, wheel chock receptacles, reel spindle and reel spacers. Equipment such as electric brakes, safety break-away switch, fenders, fender flaps, turn signals and different combinations of reflectors and lights are optional. The figure on Page 4 shows the trailer with all available equipment.

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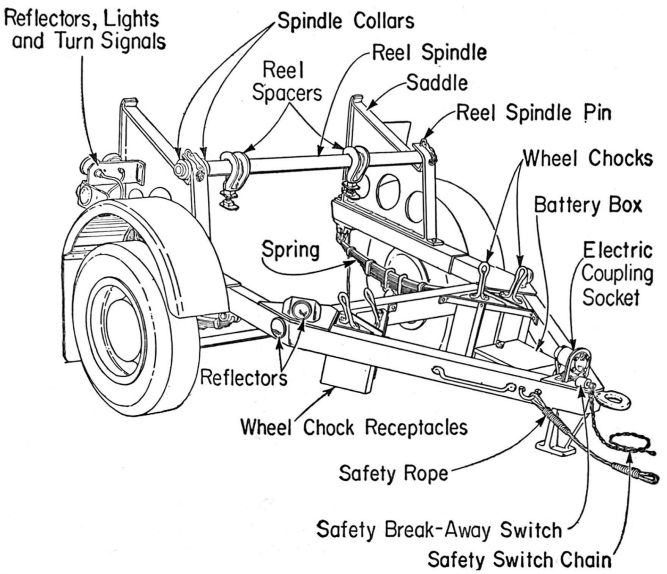


4. DIMENSIONS, WEIGHTS AND CAPACITY

4.01 The trailer is about 104" long and 82" wide overall. It can carry a reel 54" in diameter with satisfactory clearance between the reel and axle. The inside width between the reel spindle supports is about 54".

4.02 The weight of the trailer including all optional equipment such as brakes, fenders, flaps, etc., is about 950 lbs. When carrying its rated load of 4000 lbs., its gross weight will, therefore, be about 4950 lbs. Allowing for the weight of about 300 lbs. which is carried by the towing hook, the weight on each tire will be about 2325 lbs. if the load is centered. The rated capacity of a 7.50 X 16—8 ply tire at 60 lbs. air pressure is 2140 lbs. An occasional tire overload of 25% is permissible.

5. TILTING EMPTY TRAILER

5.01 It requires about 150 lbs. to lift the empty trailer tongue at ground level and less than a 50 lb. pull to start the trailer tongue downward from its topmost position. Holding the tongue at any intermediate position requires, of course, an intermediate force. For example, the trailer is in balance when the tongue is about 85″ from the ground and requires about a 100 lb. lifting force at the end of the tongue to hold the frame in a horizontal position. Two men can, therefore, tilt the empty trailer by hand from one extreme position to the other, or wheel it about.

5.02 In view of the ease with which the empty trailer can be handled by two men it is inadvisable for a two-man crew to handle it with a winch line since this may result in weights and forces at the tongue which are more than the one man at the trailer can handle safely.

6. LOADING A REEL

6.01 When setting up to load the trailer, bear in mind the direction the reel will rotate when the cable is pulled off (2.09).

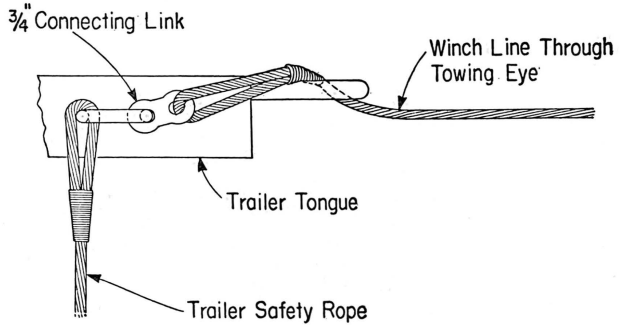
6.02 Chock both trailer wheels in front and rear.

6.03 Uncouple the trailer from the truck (Part 9).

6.04 Move the truck foreward 12″ to 18″ so as to clear the trailer tongue. The closer the truck is to the trailer, the better, provided there will be no interference when the trailer is tilted.

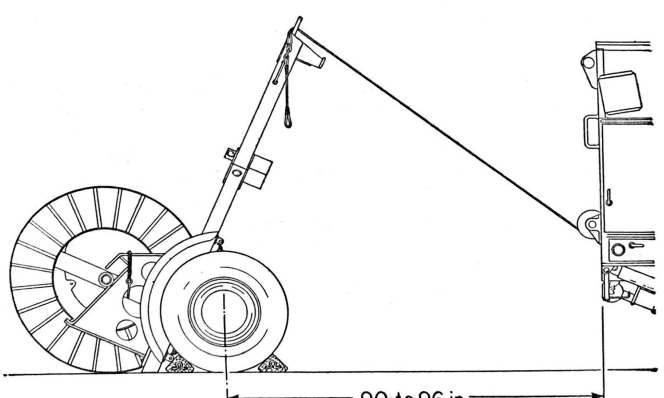
6.05 Remove the spindle from the trailer and put it into the arbor holes of the reel or reels. If the spindle has removable collars, remove them. They are not needed.

6.06 Place the truck spindle bar with sheave and sheave guard in the low position on the rear of the truck. Pass the winch line **under** the sheave and attach it to the trailer by the method shown in the following figure. Put the winch in the free running position and pull off enough line to permit raising the tongue to its topmost position. About seven feet of slack should be ample. Then raise the tongue manually (Part 5) until the rear of the trailer rests on the ground.



6.07 Roll the reel with spindle toward the trailer so that when the trailer tongue is pulled down to lift the reel, the fixed collars will straddle one of the saddles and the reel will be centered with respect to the trailer.

6.08 Set the truck brake, **slowly** pull the trailer tongue down with the winch line and watch the spindle for proper engagement with the saddles. Before the reel is lifted by the saddles, stop the winch line to make any necessary adjustments.



6.09 Resume pulling slowly and when the trailer saddles are just slightly past the horizontal, **stop.** Roll the reel and spindle by hand slowly toward the front of the saddles. It is important that the reel spindle be made to roll slowly so that it will not strike the front ends of the saddles with force, but will come to rest gently.

6.10 With very light reels the trailer will be tongue heavy when the spindle is at the fronts of the saddles, and cause the tongue to move toward the ground. In such cases be ready to guide the tongue downward by hand until it is about at truck floor level. With heavier reels, after the reel has reached the front of the saddles, pull the tongue down by hand. With very heavy reels it will be necessary to have the winch line assist the downward hand pulling. When the end of the tongue is at about truck floor level, hold it by hand and take up the winch line just enough to take up the slack, but not so much as to pull the tongue forward. With the winch stopped, lower the tongue by hand until it is supported by the stationary winch line. Lower the tongue to the ground with the winch.

6.11 Restore the reel spindle pins to lock the reel spindle in the saddles.

6.12 Remove the winch line from the end of the tongue.

6.13 See that the reel is centered on the trailer, and lock it in position by placing a clamp-on type reel spacer on the reel spindle snugly against each side of the reel (Part 10).

7. UNLOADING A REEL

7.01 Chock both trailer wheels in front and rear.

7.02 Uncouple the trailer from the truck (Part 9) and move the truck ahead about 12″ to 18″.

7.03 Remove the locking pins which hold the reel spindle in the saddles.

7.04 Place the truck spindle bar with sheave and sheave guard in the low position, pass the winch line **under** the sheave and attach it to the trailer tongue as shown in Fig. 6.06.

7.05 Take up on the winch line until the end of the tongue is about 10 inches below the truck floor level. Then lift the tongue by hand, using the winch line only if necessary to assist, until the end of the tongue is at about floor level. At this point stop the winch and put it in reverse gear. Resume lifting the tongue by hand and pay out the winch until the saddles are just horizontal.

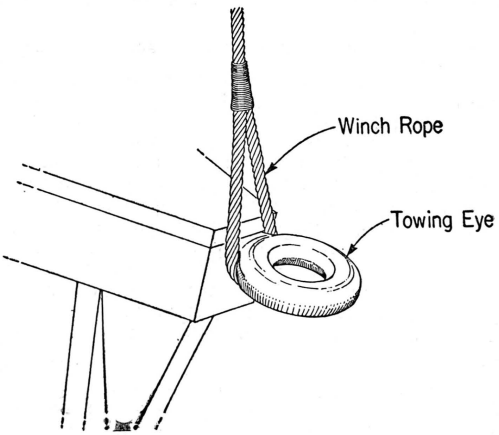
7.06 With the saddles horizontal, roll the reel by hand **slowly** to the rear of the saddles. With very light reels it may be necessary to raise the tongue beyond the point where the saddles are horizontal before the trailer becomes tail heavy. In any case, it is important that the reel spindle be made to roll **slowly** so that it will not strike the rear ends of the saddles with force, but will come to rest gently. After the reel has reached the rear of the saddles, pay out the winch line until the reel rests upon the ground. Chock the reel and pay out the winch line until the rear of the trailer rests on the ground.

8. COUPLING TRAILER TO TOWING TRUCK

8.01 Chock both trailer wheels in front and rear and place the truck so that the towing hook is about six inches in front of the towing eye on the trailer.

8.02 Attach the trailer safety rope to the shackle on the frame of the towing hook.

8.03 Place the truck spindle bar with sheave and sheave guard in the low position on the truck. Pass the winch line over the sheave and attach it to the trailer tongue by passing the eye of the winch line around and to the rear of the towing eye, as shown in the figure below.



8.04 Take up on the winch line until the towing eye of the trailer is just above the tip of the towing hook.

8.05 Back the truck until the center of the towing eye is over the tip of the opened towing hook, or close enough to it so that after the truck is stopped the eye can be guided by hand to engage the hook as the eye is lowered. It may be necessary to move the wheel chocks in order to be able to guide the eye.

8.06 Lower the eye to engage the hook, slack off on the winch line and leave it attached to the towing eye.

8.07 Close the latch on the towing hook and make sure that it is locked in the closed position.

8.08 Connect the electric coupling socket on the trailer to the electric coupling socket on the truck with the electric jumper cable.

8.09 If the trailer is equipped with a safety break-away switch, connect the ends of the safety break-away chain to the break-away switch and to the rear end of the truck (2.14).

8.10 Return the wheel chocks to their receptacles.

8.11 Examine all the connections to make sure that there is enough slack to permit making sharp turns when traveling.

8.12 Make sure that there are no projections on the truck such as pole derrick legs or long tools which will interfere when making sharp turns.

9. UNCOUPLING TRAILER FROM TOWING TRUCK

9.01 Chock both trailer wheels in front and rear.

9.02 Remove the electric jumper and safety break-away chain from the trailer and the truck.

9.03 Raise the towing eye with the winch line just far enough to disengage it from the opened towing hook.

9.04 Move the truck forward just far enough so that the trailer tongue can be lowered to the ground.

9.05 Lower the tongue to the ground with the winch line.

9.06 Disconnect the winch line from the trailer tongue.

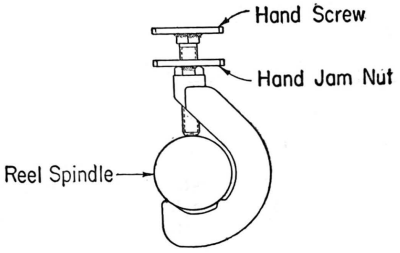
9.07 Disconnect the trailer safety rope from the truck.

9.08 If the truck is leaving the trailer, put the safety break-away chain back on the safety break-away switch.

10. REEL SPACERS

10.01 Two reel spacers of the clamp-on type shown below are furnished with each trailer. Use a reel spacer on each side of the reel.

10.02 In order to place the reel spacer on a reel spindle, back out the jam nut and hand screw, place the spacer on the spindle snugly against the side of the reel, and tighten the hand screw against the spindle. Lock the hand screw in place with the jam nut.



11. MAINTENANCE AND LUBRICATION

11.01 Report immediately in accordance with local routines and instructions any defects which can not be promptly cared for on the job.

11.02 Examine the tires for condition and inflate, if necessary, before using the trailer. Check tire pressures at intervals of a month or less and, if necessary, inflate to 60 pounds pressure.

11.03 Protect movable bolts and pins from rusting with a light coating of oil or grease.

11.04 Keep all nuts and bolts drawn up tight.

11.05 Keep reflectors, tail lamps, electric brakes and associated equipment in serviceable condition.

11.06 Inspect trailer members for any defects such as fractures. Do not use a trailer with defective members.

11.07 A motor vehicle mechanic should inspect the trailer for necessary adjustments, repairs, repainting and lubrication at intervals of twelve months or less.