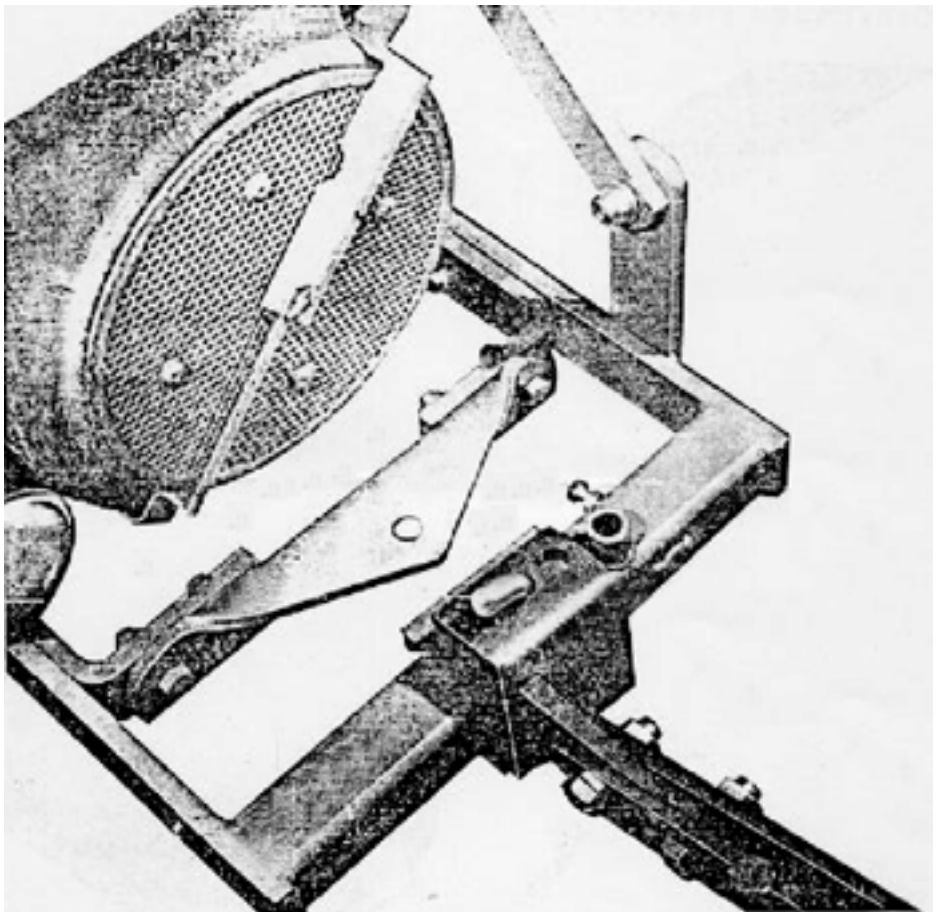
GRAVELY OWNERS MANUAL

LIFTABLE REAR HITCH MODEL NO. 19803E1



ATTACHMENT DRAWBAR CONNECTED TO THE LIFTABLE REAR HITCH

GENERAL

1. The Liftable Rear Hitch is designed and built to give many years of excellent service. The hitch is designed for rear connecting applications; trailing attachments, rear mounted attachments, and rear weight rack. The primary function of the hitch is to raise and lower rear mounted attachments for operation and transportation.

2. The Owners Manual includes the illustrated parts list, setting up, operation and safety instructions. Contact the Gravely Dealer for further information.

3. Weigh: 37 lbs.
   Extends Tractor Length: 6-1/2 inches
   Power: Manual or hydraulic, mechanical linkage
   Tractors: All single cylinder 800 series
   Purpose: Connecting and lifting rear attachments.

SAFETY

1. READ THE TRACTOR OWNERS MANUAL Be familiar with all controls and follow safety precautions outlined in the manual.
2. DO NOT ATTEMPT to connect anything to the hitch other than Gravely or authorized equipment. Improper attachments could cause damage to the equipment and/or injury to the operator.
3. HEAVY, REAR MOUNTED ATTACHMENTS reduce the weight on the front tractor wheels when the attachments are lifted, and will result in reduced steering control. Use supplemental weight (front wheel weight or front weight rack) as recommended for the given attachment. Exercise extra care in operation to protect against possible loss of steering control especially when going up slopes with the rear mounted attachments lifted. Slow down and watch out for bumps or obstructions.

OPERATION

1. Read the attachment manual. Connect the attachment as described in the attachment manual.
2. When using the tractors attachment lift with a center or front mounted attachment, lock the rear hitch in the stationary position and remove the lift rod from the tractor; see ADJUSTMENTS, paragraph 2 for the procedure to lock the hitch.
3. When using the tractor without attachments (if the linkage of the hitch is connected and the hitch is not in the stationary position), raise the tractors attachment lift all the way up to prevent possible dragging of the hitch.
4. Stabilized Attachment:
   A. Place the pad on the hitch as in fig 1, Items 1 and 5. Use the connecting hole as specified in the attachment manual.
   B. Connect the equipment to the hitch and secure it with the hitch pin, Item 9.
   C. Tighten the hitch bolts against the pad and secure them with the jam nuts, Items 8 and 18.
5. Free Swinging Attachments:
   A. Use the connecting hole as specific in the attachment manual. The pad is not used in this application.
   B. Connect the equipment to the hitch and secure it with the hitch pin, fig 1, Item 9
   C. Back off the hitch bolts so they do not extend out from the rear of the hitch and secure them with the jam nuts Items 8 and 18.
6. Towed Attachments: (ball and socket)
   A. Place the pad and the rear hitch weldment on the hitch as in fig 1, Items 5 anc 6. Use the connecting hole as specified in the attachment manual.
   B. Secure the pad and weldment with the hitch pin, Item 9.
   C. Tighten the hitch bolts against the pad and secure them with the jam nuts
   D. The ball stud can now be connected to the rear hitch weldment.

   The hitch raises or lowers with the raising or lowering of the tractors attachment lift. The hitch can be set at intermediate positions to suit the operator.

ADJUSTMENTS

1. To make the hitch go lower to the ground, adjust the yoke of the lift rod to give more clearance between the fender support weldment and the cross shaft lift arm; see ASSEMBLY, paragraph 10.
2. Stationary Position:
   A. To lock the hitch, raise or lower the hitch until the locking holes line up to permit the clevis pin to go through. Secure the clevis pins with hair pin cotters, fig 1, Items 16 and 17.
   B. The tractor is now ready for attachments that are connected to a stationary rear hitch; see the attachment manual.
   C. To free the tractors attachment lift for use with front or center mounted attachments (when the hitch is in the fixed position) disconnect the yoke from the cross shaft. Reconnect the clevis pin to the yoke (for storage) with the hair pin cotter and remove the rod from the tractor.

ASSEMBLY AND INSTALLATION

The deck support standards are replaced by the cross shaft weldment in the following manner.

1. Unbolt and remove the fender support weldment from the deck support standards.
2. Unbolt and remove the deck support standards from the transmission. Remember which side of the support the cables, hose and wires were on.
3. Raise the frame extension straps enough to get the cross shaft under all the cables, hose and wires.
4. Fasten the cross shaft weldment to the transmission with the bolts that were used for the deck support standards, fig 1, Item 2. Be sure all the cables, hose and wires are above the cross shaft and in the same position as before.

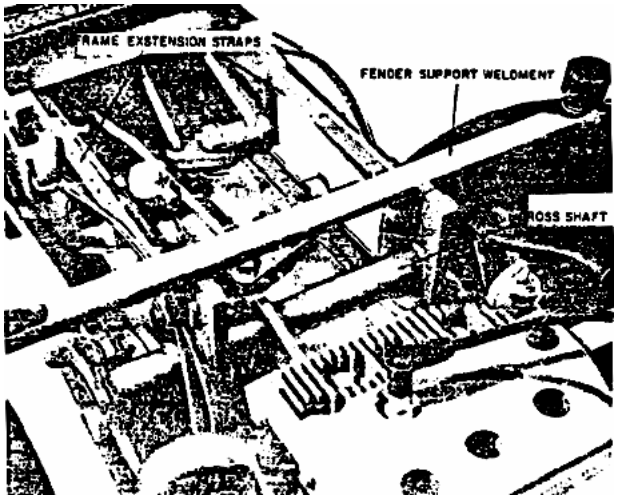


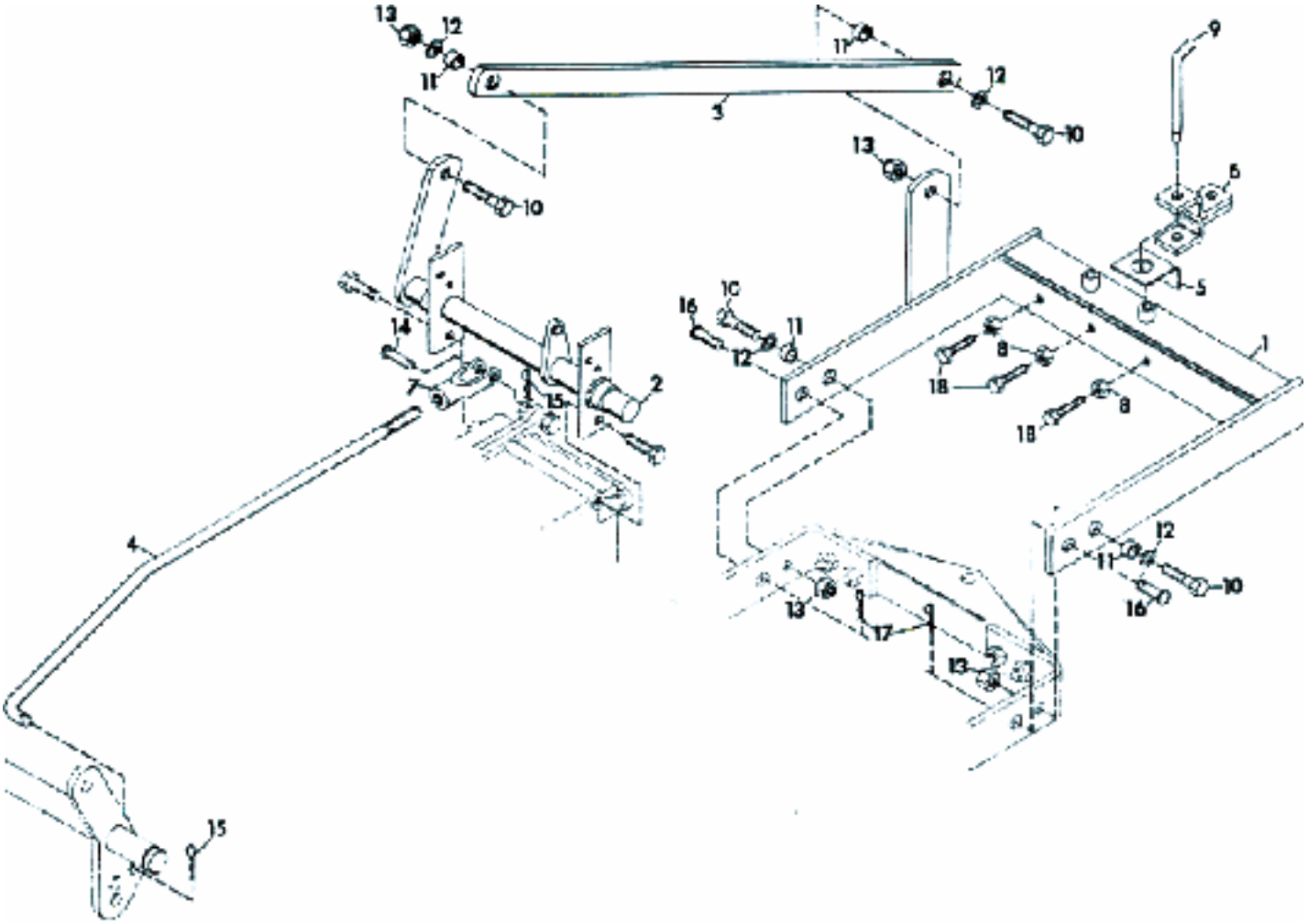
fig 2

5. Fasten the frame extension straps and the fender weldment to the cross shaft with the same nuts and bolts that were used for the deck support standards, bolt heads to the inside and nuts to the outside, fig 2.
6. Fasten the rear hitch to the tractor standard hitch with the nuts, bolts, bushings and washers as in fig 1. Items 1, 10, 11, 12 and 13. Note the relationship of the washers to the bolts. The washers go next to the bolt heads.
7. Connect the rear hitch to the cross shaft with the strap, fig 1, Items 3. 10, 11, 12 and 13. Note the relationship of the flatwashers to the something.
8. Run the yoke about half way on the lift rod, fig 1, Items 4 and 7.
9. Connect the bent portion of the lift rod to the rear most hole of the lift lever and fasten it with the hair pin cotter, fig 1, Items 4 and 15.
10. Raise the tractors attachment lift to the highest position. Raise the rear hitch to the highest position; the lift arm of the cross shaft contacts the fender support weldment.
11. With both the lift and hitch in the highest position, adjust the yoke to match up with the connection hole of the cross shaft. Fasten the yoke to the cross shaft with the clevis pin and hair pin cotter, fig 1, Items 14 and 15.
12. Run the jam nuts on the hitch bolts and screw the bolts into the hitch as in fig 1, Item 1, 8 and 18. Screw the bolts in until they start coming out of the back of the hitch. Lock them there with the jam nuts.

If the standard rear hitch does not have the clevis pin holes, make the new holes as follows, fig 1, Item 16.

A. Raise or lower the liftable rear hitch = until it is level (parallel) with the fixed rear hitch.
B. Complete the modification and install the clevis pin in one side before starting on the other side.
C. Drill a hole in the fixed rear hitch. Drill it through the hole in the liftable rear hitch to assure hole alignment. Use a 5/8" drill.
D. Ream and deburr the new hole as necessary to accept the clevis pin.
E. Install the clevis pin and secure it with the hair pin cotter.
F. Repeat the drilling operation for the other side.

15. The two clevis pins and associated hair pin cotters are only used to lock the hitch in a fixed rigid position. Remove the pins to make the hitch liftable.
16. See OPERATION for use of the pad, weldment and pin, fig 1, Items 5, 6 and 9.



ITEM NO.	PART NO.	DESCRIPTION
1	20452A1	Hitch, Rear Weldment
2	19522A1	Hitch, Rear Cross Shaft Weldment
3	19808P1	Strap, Rear Hitch
4	19092P1	Rod, Lift
5	14949P1	Pad
6	18866A1	Hitch, Rear We1dment
7	19091P1	Yoke, Adjustable
8	451519	Nut, Jam 3/8-16 Hex Heavy
9	18864P1	Pin, Hitch
10	180179	Bolt, Hex 1/2-13 x 1-3/4
11	19260Pl	Bushing, Pivot Casting
12	120306	Washer, Flat 17/32 x 1-1/16 x .095
13	435507	Nut, Lock 1/2-13 Washer Insert Hex
14	138086	Pin, Clevis ½ x 1-713
15	15691P1	Pin, Hair Cottcr