

Do-It-Yourself- Drawbar Anti-Rotation Device, by Marshel Rossow

Materials list:

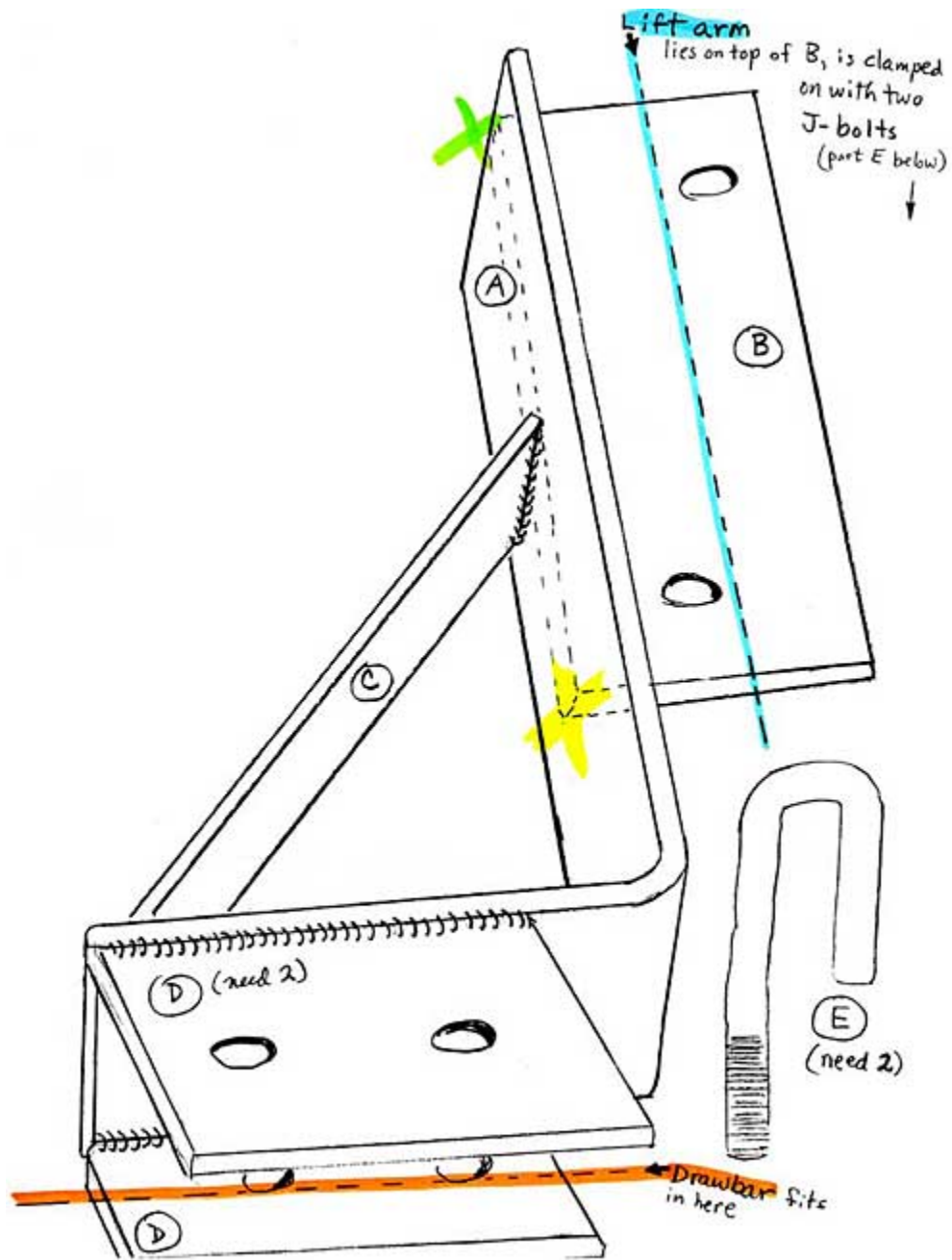
- (1) 2x13 (or 14) x 1/4" (or 3/16") flat metal for angle piece (see part A in sketch)
- (1) 2- 1/2 x 5 x 1/4" flat metal to clamp to lift arm (see part B)
- (1) 1x6 x 1/4" flat metal for brace (see part C)
- (2) 2- 1/2 x 4 x 1/4" flat metal for drawbar "sandwich" (see part D)
- (2) 3 x 3/8th- inch bolts or pins to go through holes in part D
- (2) 5/16- inch J bolts, actual size as shown in part E of sketch

This device attaches to the right lift arm with two J- bolts and to the drawbar with one or two regular bolts or pins. In building the device, it is wise to tack weld it all together first, because some "on- site" fine- tuning of angles may be necessary to make it perfectly fit your tractor.

The sketch is shown in more or less actual size. ("More or less" because I'm not an artist, plus I ran out of space to show the lower Part D in actual size.) Actual dimensions of the materials used aren't too critical. I build things out of whatever I have lying around.

Instructions:

1. Heat and bend Part A to about an 80° angle. The longer part should be about 7-1/2 inches and the short part about 5-1/2 inches after the angle is bent. The exact angle should be the same as the angle formed by the drawbar and the right lift arm.
2. Tack weld the two Parts D to the short leg of the angle Part A, as shown in the sketch. Leave just enough space between the top and bottom pieces for the drawbar to fit between them, like the meat in a sandwich, as shown in **orange** on the sketch. At some point, now or later, drill a couple of holes through both Parts D to match a couple of holes in the drawbar. Exact size doesn't matter; I use 3/8th inch bolts, but slightly smaller or larger would be OK. (You could probably get by with only one Part D if you bolted it tightly to the drawbar.)
3. Tack weld Part C to Part A as shown. Exact placement isn't too critical, nor is the exact dimensions of Part C. All Part C does is beef up the device so the angle is maintained. A gusset could be used just as well as a flat strap.
4. Tack weld Part B to Part A, as shown in the sketch. The sketch may not make it clear, but Part B is not welded to the top edge of Part A, but instead down about an inch at the rear edge of Part B (see **yellow X**) and about half an inch at the front edge (see **green X**). Part B should be at this slight uphill angle (higher as you move toward the front of the tractor) to match the exact angle of the lift arm. By holding the device up to the lift arm, you should be able to determine the exact angle you will need. When finished, the bottom edge of the lift arm should lie on top of Part B, as shown in blue on the sketch.
5. To determine the location of holes in Part B, mark the location so that one hole will be just to the left of the lift arm and one just to the right when viewed directly from above. Your goal is to be able to attach Part B to the lift arm with the two J-bolts facing each other. You'll drop the threaded part of the J-bolts through the holes in Part B, with the hook ends over the lift arm. (I hope this is clear; it's kind of hard to explain.)
6. I made the J-bolts out of 5/16th inch eye-bolts. I just heated up the eyes and reshaped them to fit over the lift arm. The sketch shows the exact size of the J-bolt. You could do the same thing with threaded rod bent to form the J.
7. If everything has gone according to plan, you should now be able to lightly mount the device on the tractor. Make adjustments as needed, then finish welding everything solidly together. Paint it, clamp it on snugly with the J-bolts and drawbar bolts/pins, and you're finished. It's guaranteed to keep the drawbar from rotating when using a ball hitch, etc.



Good luck with your project.
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