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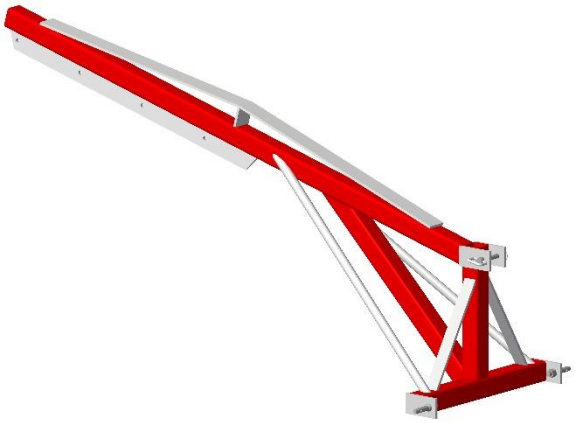
Livestock handling & yard equipment plans

3PL Tractor Boom Plans Book

Includes Plans To Build The Following:

- Three point linkage boom for tractor



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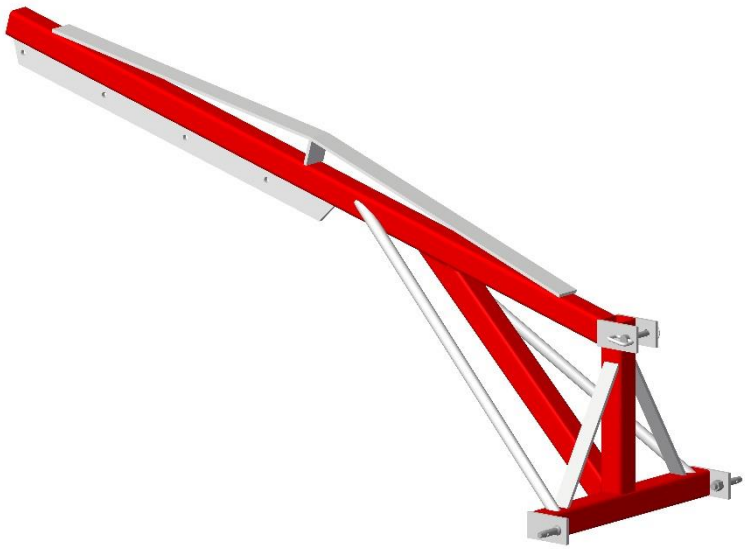
How to make a 3pl tractor boom



DO NOT attempt to build this project if you are not a skilled welder as failure of welds can result in injury to people or damage to property.

The steel shown in the cutting list is only a guide as you may have other material already available that you can use.

Materials required			
Item No	Material	Length	Quantity
1	75x75x4mm SHS *	500mm	1
2	75x75x4mm SHS	2200mm	1
3	75x75x4mm SHS	700mm	1
4	75x75x4mm SHS	930mm	1
5	50x10mm flat	450mm	2
6	75x10mm flat	75mm	1
7	75x10mm flat	1900mm	1
8	75x12mm flat	1200mm	1
9	25nb medium wall pipe	1000mm	2
10	75x10mm flat	140mm	2
11	75x10mm flat	140mm	2
	Lower 3 point linkage pins	To suit your tractor	2
	Upper 3 point linkage pin	To suit your tractor	1

*SHS = square hollow section (square tube)

1. Begin by cutting the steel to the required sizes. Note that Item 2 has a 15 degree mitre cut on one end. Refer to Diagram 1. Also note that Item 4 has a 45 degree mitre cut on one end and a 60 degree mitre cut on the other end. Refer to Diagram 2.

2. Position Items 1 and 2 as shown in Diagram 1 and tack weld together. Ensure that the angle inside the 2 pieces of steel is 105 degrees.

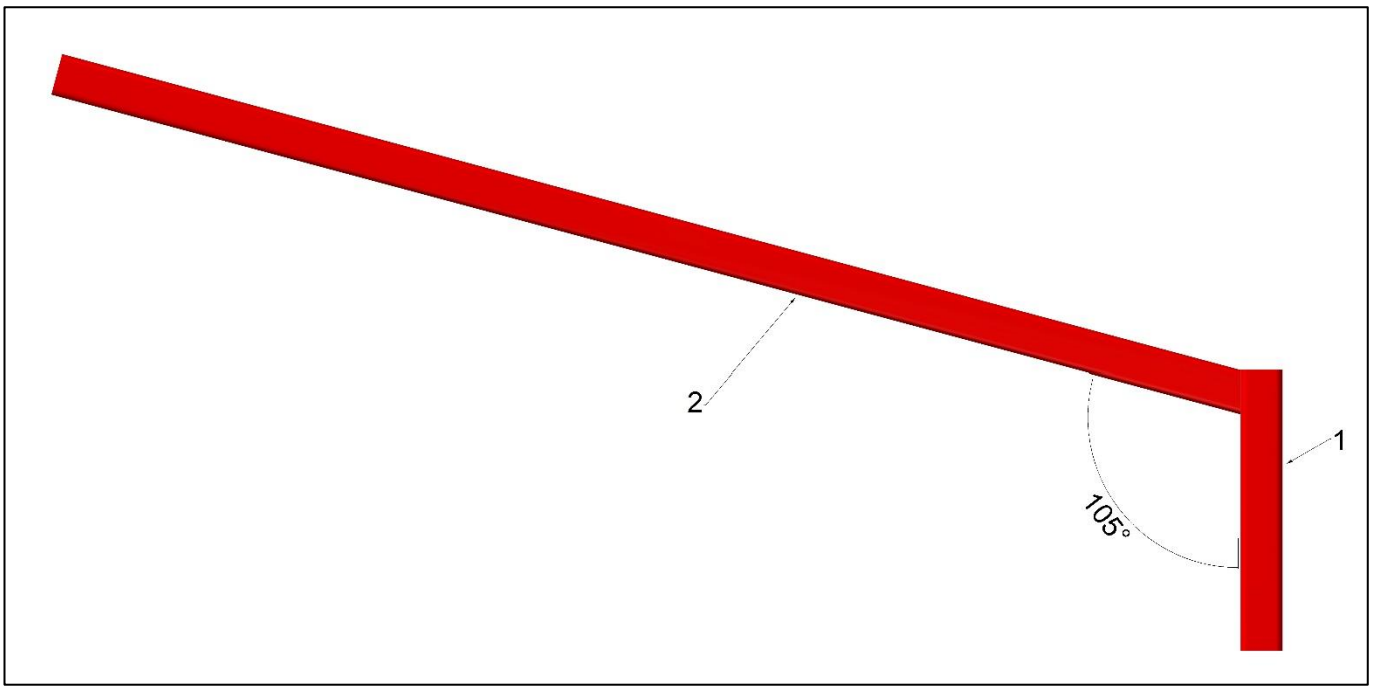


Diagram 1

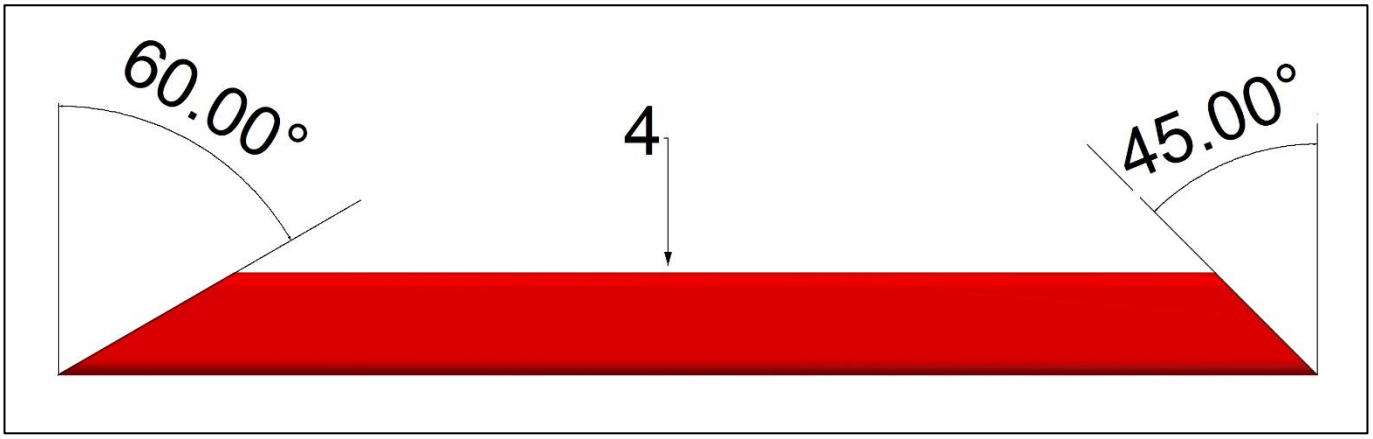


Diagram 2

3. Position the previously welded items into the centre of Item 3 as shown in Diagram 3 and tack weld.

4. Position Item 4 in place and tack weld. Refer to Diagram 3.

5. Fully weld all previously tack welded pieces of shs.

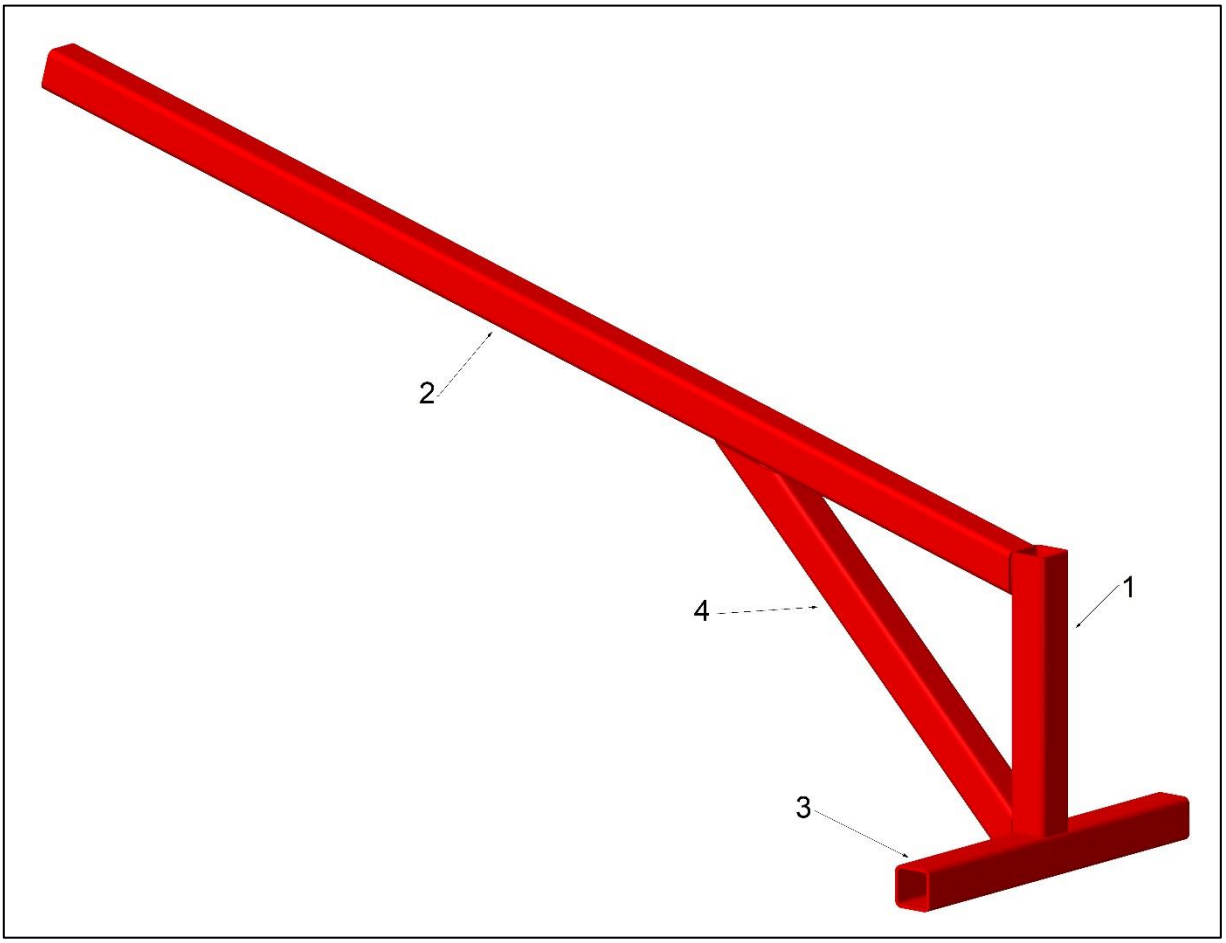


Diagram 3

6. Drill holes in Item 8 as shown in Diagram 4. The hole size will depend on what size “D” shackle you intend to use. Hole spacings are a suggestion only.

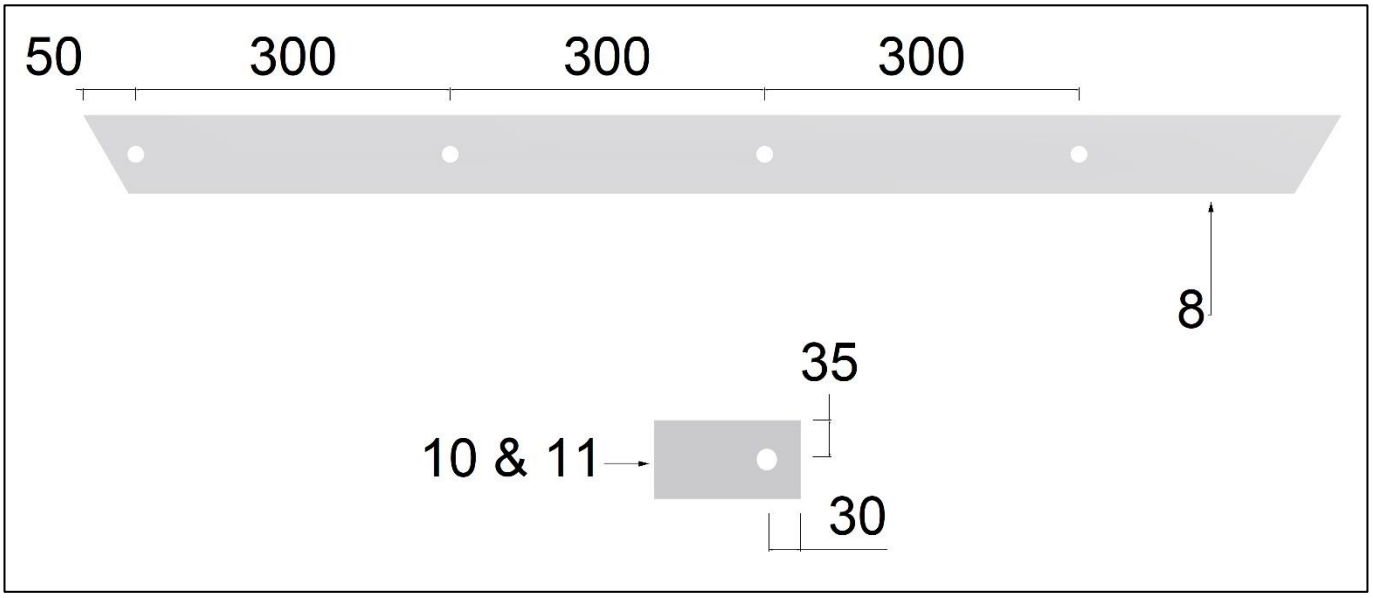


Diagram 4

7. Drill holes in Items 10 to suit your tractors lower pins and Items 11 to suit the top pin of your three point linkage.

8. Weld Items 8, 10 and 11 in place. Refer to Diagram 5.

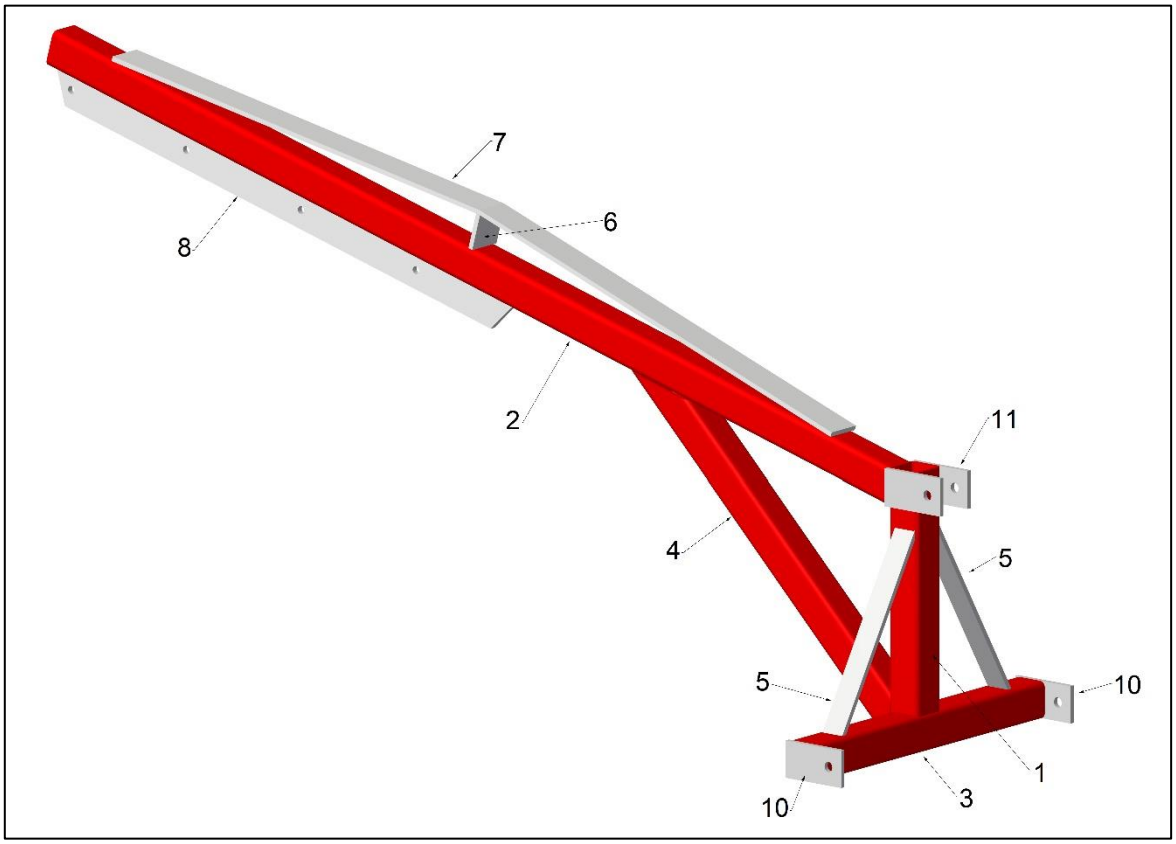


Diagram 5

9. Position Item 6 half way along Item 2 and weld in place. Refer to Diagram 5.

10. Mark the centre of Item 7 and position the centre mark over Item 6. Tack weld one end of Item 7 to Item 2, bend it over Item 6 and tack weld the other end. Fully weld. Refer to Diagram 5.

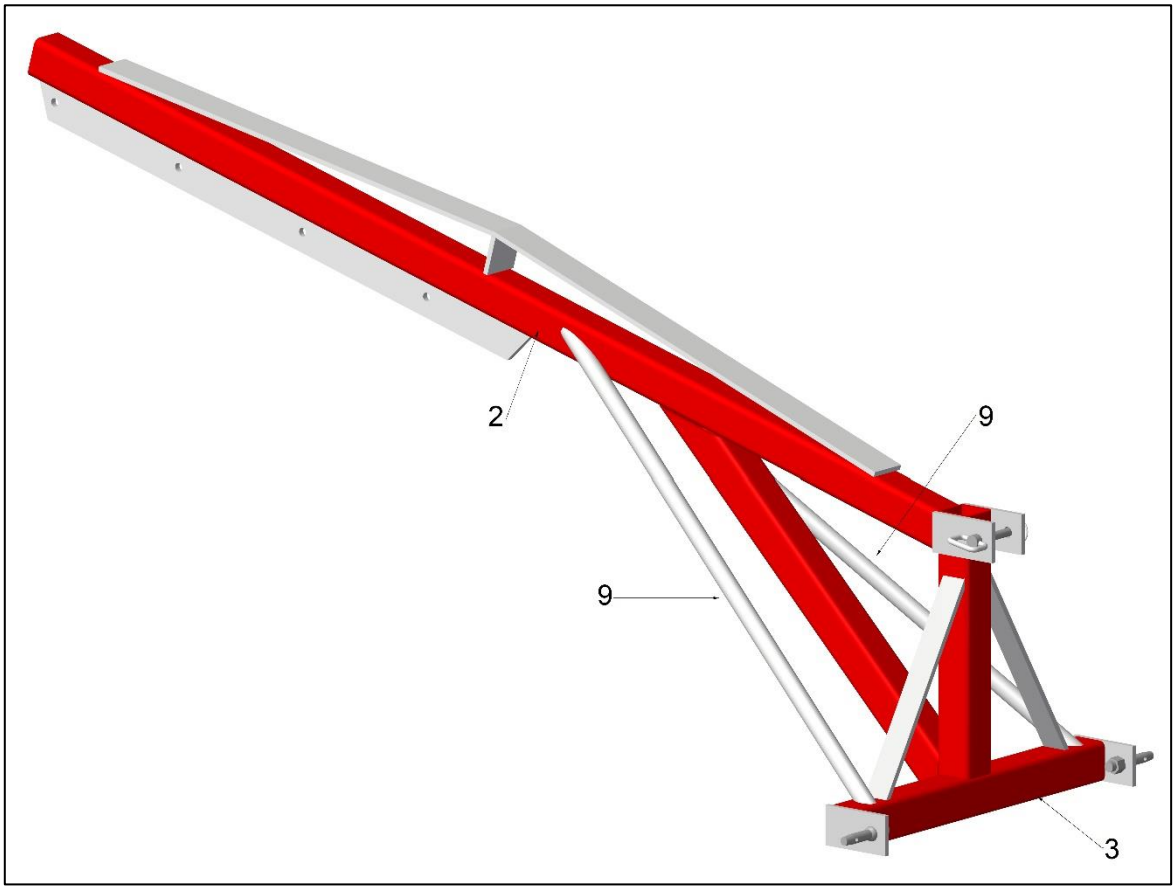


Diagram 6

11. Next to be fitted are Items 9. These can either be cut to the required angles and welded in place as shown in Diagram 6 or a simpler solution is to flatten the ends at the correct angles and then weld in place.

12. Grind any welds as required and paint.

Some free handy tools:

Linear cutting list optimiser: https://www.kurraglenindustries.com.au/linear-cutting-list-calculator.htm

Free project calculator: https://www.kurraglenindustries.com.au/project-calculator.htm