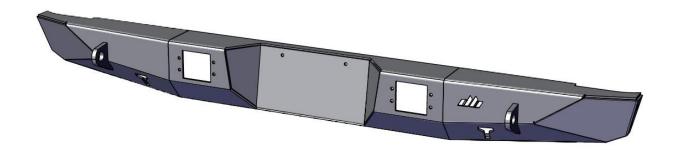


## **DIY Manta Ray Rear Bumper**

Jeep Comanche MJ



The Manta Ray DIY bumper kit is designed to be built with basic welding and metalworking skills and should take approximately 4-8 hours to complete.

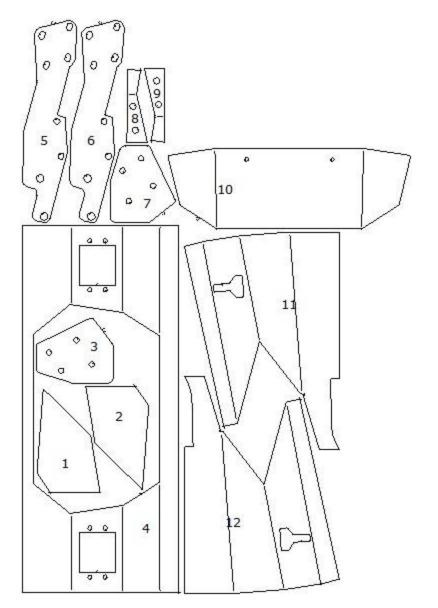
## You will need the following tools

- Welder & Safety Gear
- Angle Grinder & Sanding Disks
- Angle Finder
- Rubber Mallet
- Two Crescent Wrenches
- Minimum of two welding Clamps

- Heavy Workbench
- 17mm, Wrench & Socket Wrench
- Allen Head Socket

DirtBound Inc. is not responsible for incorrect assembly, we recommend only experienced welders assemble our DIY bumper kits. Always tack the assembly and test fit on the vehicle before fully welding.

You purchase DirtBound Inc. products at your own risk. In no event, shall DirtBound Inc.'s liability ever exceed the purchase price of any part sold. DirtBound Inc. shall not be liable for any indirect, special, incidental or consequential damages, nor for inconvenience or loss of use, including the cost of a rental car, storage charges, towing charges, telephone calls, legal fees and costs, labor costs and any additional parts required to remove and replace the defective or worn-out part.

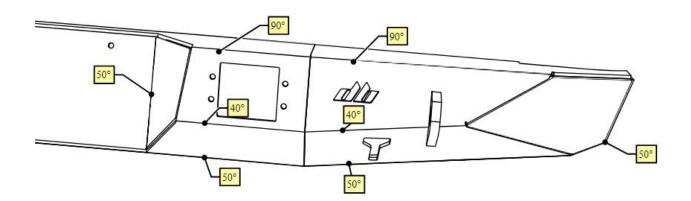


## **Parts List**

- 1. Side Triangle
- 2. Side Triangle
- 3. Weld Bracket
- 4. Main Center
- 5. Frame Tie Bracket
- 6. Frame Tie Bracket
- 7. Weld Bracket
- 8. End Cap
- 9. End Cap
- 10. Plate Mount Center
- 11. Side
- 12. Side

## **Bend Angles**

The parts are slotted at the end lines, to bend simply clamp the part to the work bench and use one or two crescent wenches to bend the part to the desired angle.



The weld brackets are spaced 44.5" Inside to Inside and centered to the bumper. The D Ring tabs are to be welded in front of the weld brackets to allow recovery pulls to be straight to the frame brackets.

