How to Assemble the Vacuum Formed ABS Scale Lewis Gun

1. Read ALL the instructions before starting assembly. Visualize how the parts will fit together. If any questions exist as to how something fits, email info@foxflier.com before cutting!

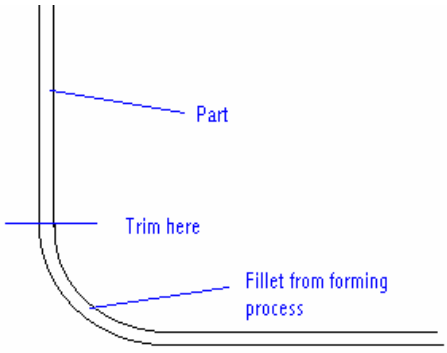
2. Begin assembly by thoroughly washing the inside and outside surfaces of the vacuum formed parts with warm soapy water to remove any traces of mold release. Dish detergent works fine.

3. The next step is to trim the parts. Trimming and removal of excess plastic can be accomplished with an Exacto knife and scissors. The simplest manner of trimming is by scoring around the periphery of the part then bending the plastic back and forth until it breaks off leaving a nice edge. USE CARE as the 0.060 ABS plastic is tough but it is easy to slip with a knife or scissors, bleed on your parts, and ruin the day! The outline of the part will determine the trim method to use.

4. Begin by marking a guideline with a pencil (or score using a scribe or punch) around the periphery of the part to be trimmed. DO NOT TRIM THE PART TOO CLOSELY TO BEGIN WITH. The ABS plastic is not difficult to cut, but it is difficult to add plastic once it is cut off! It is best to rough trim the parts then begin evening up the edges in small increments with scissors and sandpaper. TAKE YOUR TIME. 240-grit sandpaper and a sanding block works well to straighten the edges of the parts once trimmed. Another method is to lay a sheet of sandpaper on a flat surface and rub the trimmed edges of the part over the sandpaper until all edges are even. A small belt sander and a Dremel tool are VERY helpful with this process.

5. The large capacity ammo drum is pre-trimmed. If you desire the 47 round drum, simply cut off the lower half of the drum. Note there are two vertical cuts on each side of the drum that have been glued together. These cuts are necessary in order to remove the part from the mold. This is on purpose in order to allow the maximum amount of detail to be replicated on the drum. The ammo tray and handle or stock should be trimmed just above the fillet created by the forming process. .

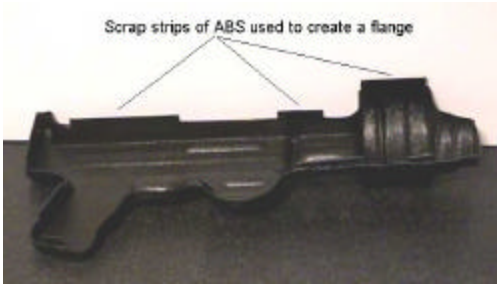
6. The receiver halves should be trimmed equally to yield a receiver the same width at the back as the width of the handle base / stock width. The barrel base and gas tube at the front of the receiver should both be approximately round. The trimming dimensions ARE NOT CRITICAL. Keeping the edges straight IS CRITICAL to yield a good-looking part and to ensure the gun halves fit together well for gluing and final assembly.



7. Once all the parts are trimmed out, ensure all edges are roughened (not smooth!) to help the glue bond the parts. MEK and a small artist's brush works best (as the MEK causes the ABS to melt and stick together). ABS cement works well. Epoxy or cyanoacrylate (super glue) also works.

8. The ammo drum is finished by gluing the faux ammo flat just inside the bottom of the drum. Paint the ammo brass or copper. Expanding spray foam available at most home stores (Wal-Mart, Lowes, Home Depot, Target, etc) can be sprayed inside the drum to stiffen the assembly once the bottom is installed. GO EASY ON THE FOAM. Spray a small amount on some scrap cardboard and watch it to see how much it expands. If you spray in too much, the foam will push the bottom off the ammo drum as it expands!

9. One method that works well for assembly of the two gun receiver halves is to carefully glue small strips of scrap ABS around the inside periphery of the halves to create a flange (or step) to help align the halves (shown at right). The key, as with all the parts is to ensure the bonding lines are all straight and meet together before trying to glue. GAPS won't close later on and will have to be filled.



10. The ammo tray after trimming can be installed as-is on the top of the receiver. You may have to notch the back lower edge to get a good fit. The tray should mount flat and parallel on the top of the gun's receiver.

11. The backbone of the ABS Lewis is a ½" wooden dowel that runs through the center of the gun. Hardwood dowels are available at most home supply stores. After the receiver halves are glued together, cut a ½" hole in the front and rear of the receiver to insert the dowel. The front hole should be centered with the barrel and the rear hole centered such that the dowel passes through the receiver parallel with the top and sides. The dowel will extend into the stock or handle base.

12. Once the stock or handle is glued together, cut a ½" hole into the mating face to extend the dowel through the stock or base. Expanding foam can now be sprayed into the ½" holes and the dowel inserted through the receiver and stock BEFORE the foam sets up. MAKE SURE everything is straight before the foam & glue hardens. Again, be careful with the amount of foam. Use cyanoacrylate or epoxy to adhere the stock firmly to the rear of the receiver. Let everything dry overnight,

13. Cut a ½" hole in the center of one of the centering rings

14. Slide the centering ring down the dowel and glue it to the front of the receiver. It should align as shown on the right. This becomes the rear support for the 3" PVC barrel shroud.

15. Another centering ring is placed about 1/3 the way down the dowel to position the front of the barrel shroud. Make sure everything is aligned straight.

16. Trim the shroud tip halves. Dry fit the halves of the tip into the end of the PVC tube. The halves should fit snugly. Carefully trim the halves until satisfied with the fit. Once satisfied with the fit, glue the halves together.

17. After the halves are completely dry, cut a ½" hole into the center of the tip for the dowel.

18. The front end of the tip may be cut open at this time. Use the molded in line as a trimming guide to leave a lip around the edge as shown.

19. The tip may now be glued to the PVC shroud tube.

20. Slide the PVC tube down the dowel and install over the centering rings. Glue the PVC tube to the receiver ensuring the assembly is kept STRAIGHT until the glue dries. Expanding foam can be used in the shroud to make things even more secure. Want some weight? Sand can be placed inside the receiver, shroud, and stock to add heft. Seal the sand in with the expanding foam.

21. The rings around the shroud in the picture at right were fashioned from strips of ABS cut from the sheet included with the kit and simply wrapped around the tube and glued using cyanoacylate. Cooling fins around the barrel at the front of the receiver were made from pieces of triangular ABS sheet painted silver and glued around the barrel.

22. A dummy trigger can be fashioned from scrap ABS or sheet metal and glued inside the trigger guard. A cocking knob can be made from a hardware store drawer knob.

23. Plastic gun grips available for BB pistols or handguns can be purchased at sporting goods stores, carved to fit, and screwed/epoxied on the Lewis grip to provide a realistic touch.

24. Many different Lewis Gun mounts were used depending on the application. Below are a couple of photos to provide ideas for mounting. A loop on top of the ammo can be fashioned from a piece canvas web belt (Army/Navy store) and a bracket from sheet metal.

25. The gun should be painted to add authenticity. Plastic model filler can be used to fill in seams. Lightly roughen surfaces to be painted with 240 to 400 grit sandpaper and clean thoroughly to ensure the paint adheres. Model paints or spray enamels work great. Black or Gun Metal colored paint looks best. The ammo drum can be painted black or olive drab. Flat or satin paints look best. If gloss paints are used, an overcoat of satin clear will cut the gloss. Weathering (dry brushing) using flat black & silver paint to replicate wear really brings out the details. The Lewis barrel shrouds were rough turned so dry brushing black/silver around the periphery of the shroud to replicate turning marks would add authenticity.

Have fun and email me if you have any questions or comments at info@foxflier.com. Go as far as you desire on the detailing but remember this is a STAND-OFF kit. It ain't exact!

Regards,
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