General Instructions

The concept behind a Field of Armor model kit is one in which you bend metal at pre-cut areas to form the various parts of a vehicle or tank.

When these parts are bent into place tabs and corresponding holes will line up allowing pop rivets or screws to be inserted to hold the assembly together.

All metal parts will follow this basic method of bending and fastening in order to take the metal parts from a 2D state into a 3D part

- 1. Check that you have received all parts for your new 1/6 scale model of the Panzer IV. Go to Field of Armor's website at "www.fieldofarmortanks.com" for a complete list of all parts.
- 2. Wipe down all metal parts with a laquer thinner or acetone solution—Make sure when doing so that there are open flames or embers that may cause a fire while doing this.
- 3. At certain stages of assembly you may want to pre-paint some areas so that you don't have to dis-assemble parts of your work later. For example all the running gear pieces, the Chassis side wall they install against and the well under the fenders. **NOTE:** DO NOT paint any surface that you will be gluing something to.
- 4. Effort should be taken not to lose any of the perforated metal pieces that remain in the flat metal structures (please note that some of these pieces may have come loose during shipping) as some are used as actual parts such as hatches and doors and some are to remain in place.
- 5. Any additional parts and materials over and above those listed in the parts section of these Instructions and that may be obvious in the instruction photographs are the responsibility of the purchaser.
- 6. Should you receive a chassis that has come apart during shipping or comes apart from bending and re-bending (the seams are designed to be bent several times before coming apart but always bend the along the seams slowly as to not over heat the stitching) do not be too concerned as it can be easily repaired by using some scape 20 gauge metal cut into strips approximately ½ " x 2" 2½" long. Bend the strip to 90 degrees or to suit the angle being repaired and drill 1/8" holes to accept Pop Rivets. Place the angle over the area to be repaired spaced at 4" 6" intervals and drill matching holes in the metal pieces being repaired. Secure with Pop Rivets. See Figures 6a, 6b and 6c below.







Figure 6a Figure 6b Figure 6c

General Instructions

- 7. Fill any holes and gaps with Bondo. Remove excess Bondo from surfaces using an exacto knife blade or something similar once it has set up but not hardened completely. When the Bondo has hardened sand smooth with a fine grit sandpaper.
- 8. It is recommended that the modeler use Super-glue when gluing Resin or Plastic Parts to other Resin or Plastic parts. When gluing Resin or Plastic Parts to Metal make sure that the Metal is free of grease and/or oil and glue using Epoxy.
- 9. Some Resin parts when they come out of the molds tend "naturally" to take on a slight curve should you encounter any such parts in your kit this can be eliminated by applying moderate heat and adjusting the part to its proper configuration.
- 10. For handles (not provided) to Engine Access Doors, Commander's Hatch (Cupola), Combat Compartment Access Doors and top of Superstructure Access Hatches it is suggested the modeler drill holes in the metal (in the approximate location shown in the photographs) to accept a bent 1/16th inch copper wire and secure in place with Epoxy (See Figure A).



Figure A

11. Using a piece of scrape metal it is advisable to create a stop for the Engine Access Doors, Combat Compartment Access Doors and top of Superstructure Access Hatches and the Brake Access Covers by Pop Riveting it to the underside of the opening and protruding into the opening (see Figure B). On larger doors (i.e. Engine Cover Deck Doors) or those that don's seat properly you may want to create a stop on the rwo sides of the opening as well.



Figure B

- 12. Some parts will require sanding before application.
- 13. Sand the metal surface area to which a part is to be applied and also when securing metal to metal. This will ensure a more secure bond.
- 14. All references to left and right assumes you are sitting in the tank facing forward.

Bag 1 Contents (23 Parts - 33 Pieces)

Note: Quantity of part indicated in ()





(1) Cupola BRA001-401R



(1) Mantlet Housing BRA001-403R

(1) Air Cleaner Housing BRA001-402R



(2) Turret Door BRA001-404R



(2) Turret Door BRA001-405R



(1) Barrel Step Down BRA001-407R



(2) Muzzle Break BRA001-408R



(4) Turret Door BRA001-409R



(3) Turret Rotate Guide BRA001-410R



(1) Turret Air Vent Top BRA001-411R



(1) Turret Air Vent Bottom BRA001-412R



(1) Cupola Hatch BRA001-416R



(1) Left Side Hatch BRA001-417R



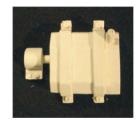
(1) Right Side Hatch BRA001-418R



(1) Turret Elevation Back Piece BRA001-426R



(1) Air Vent Cover BRA001-427R



(1) Turret Motor BRA001428R



(1) Armored View Cover BRA001429R



(2) Front Tow Shackle BRA001-432R



(2) Armor Side View Port BRA001-433R



(1) Ball Machine Gun Mount BRA001-434R

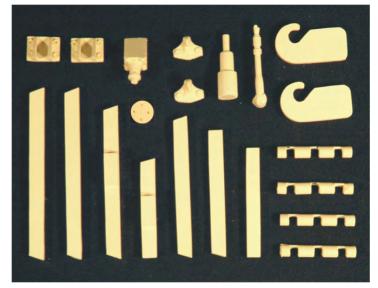


(1) Armor Visor Bottom BRA001-436R



(1) Armor Visor Top BRA001-437R

Bag 2 Contents (14 Parts - 21 pieces)





(1) Small Square End Turret Splash BRA001-421R



(2) Rear Tow Hook Brace BRA001-430R



(1) Small Single Angle Turret Splash BRA001-422R



(2) Rear tow Hook BRA001-431R



(1) Small Turret Splash BRA001-423R



(1) Antenna Mount BRA001-435R



(1) Turret Machine Gun BRA001-413R



(2) Long Turret Bullet Splash BRA001-419R



(1) Large Turret Splash BRA001-424R



(2) Lifting Hook BRA001-438R



(1) Small Vent Cover BRA001-414R



(1) Medium Bullet Splash BRA001-420R



(4) Turret Door Hinge BRA001-425R



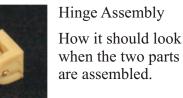
(1) Hull Machine Gun BRA001-439R



(4) Hinge Body BRA001-405R



(4) Hinge Tab BRA001-406R







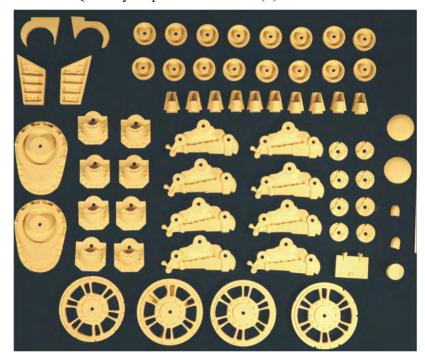
Bag 4 Contents (1 Part - 36 Pieces)

Note: Quantity of part indicated in ()



(36) Road Wheel BRA001-601R

Bag 5 Contents (16 Parts - 66 Pieces)





(2) Muffler End Caps BRA001-608R



(8) Suspension Arm BRA001-623R



(1) Muffler Right Bracket - Large BRA001-609R



(10) Bumper BRA001-624R



(1) Muffler Left Bracket - Large BRA001-610R



(2) Drive Gear Housing BRA001-625R



(8) Suspension Block (4) Drive Wheel BRA001-602R



(1) Radiator Fill Box BRA001-604R



(1) Left Side Idler Brace BRA001-606R



(16) Return Roller BRA001-621R



(1) Headlight BRA001-636R



BRA001-603R



(1) Right Side Idler Brace BRA001-605R



(1) Muffler Exhaust Tube BRA001-607R



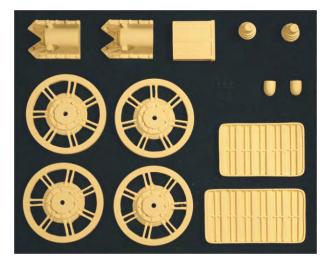
(8) Suspension **Block Cover** BRA001-622R



(1) Headlight Bracket BRA001-637R

Bag 6 Contents 7 Parts - 13 Pieces)

Note: Quantity of part indicated in ()





(2) Idler Mount BRA001-617R



(1) Large Engine Grill BRA001-613R



(4) Idler Wheel BRA001-615R



(2) Idler Mount Cap BRA001-618R



(1) Small Engine Grill BRA001-614R



(1) Wooden Jack Block BRA001-616R



(2) Brake Access Cover Vent BRA001-620R

Bag 7 Contents (8 Parts - 13 Pieces)





(1) Rear Bolt Detail #1 BRA001-628R



(2) Rear Bolt Detail #2 BRA001-629R



(2) Thin Muffler Bracket BRA001-611R



(1) Read Bolt Detail #3 BRA001-630R



(2) Idler Spacer BRA001-612R



(1) Rear Bolt Detail #4 BRA001-631R



(3) Chassis Service/ Hatch/Gas Cap BRA001-626R



(1) Rear Bolt Detail #5 BRA001-632R

Bag 8 Contents (1 Part - 212 Pieces)

Note: Quantity of part indicated in ()



(212) Tack Pin BRA001-901P

Bag 9 Contents (1 Part - 212 Pieces)

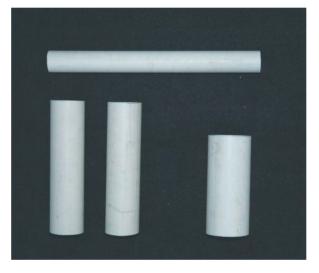
Note: Quantity of part indicated in ()



(212) Track Link BRA001-902P

Bag10 Contents (3 Parts - 4 Pieces)

Note: Quantity of part indicated in ()





(1) Barrel First Step BRA001-440T



(1) Barrel Counter Balance BRA001-442T



(2) Air Cleaner Tubes BRA001-443T

Bag11 Contents (1 Part - 1Pieces)



(1) Muffler Body BRA001-444T

Bag12 Contents (1 Part - 1Piece)

Note: Quantity of part indicated in ()



(1) Barrel BRA001-441T

Bag13 Contents (4 Parts - 4 Pieces)

Note: Quantity of part indicated in ()



(1) Chassis BRA001-706A



(1) Upper Deck BRA001-706B



(1) Turret BRA001-706C



(1) Turret Bottom BRA001-706D



(2) Return Roller Axle Support BRA002-719M

Bag14 Contents (6 Parts -10 Pieces)



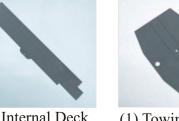
(4) Metal Drive Sprocket Wheel Attachment BRA001-700M



(1) Towing Bracket Housing BRA001-703M



(2) Internal Deck Brace BRA001-707M



(1) Towing Bracket BRA001-702M



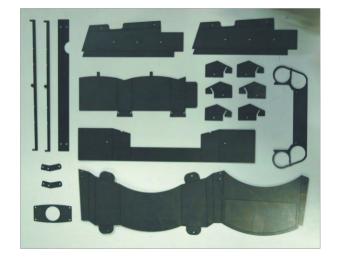
(1) Idler Axel Bracket BRA001-704M

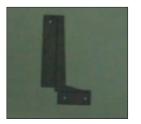


(1) Rear Brace BRA001-705M

Bag15 Contents (11 Parts - 20 Pieces)

Note: Quantity of part indicated in ()





(2) Rear Fender Brace BRA005-705M



(1) Mantlet BRA001-536M



(1) Barrel Housing Front Plate BRA001-501M



(2) Bustle Bracket BRA001-507M



(6) Intake Manifold Fins BRA001-510M



(1) Barrel Housing BRA001-503M



(1) Extra Wheel Holder BRA001-508M



(1) Air Cleaner Holder BRA001-511M



(1) Bustle BRA001-506M



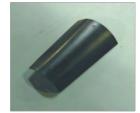
(2) Air Intake Manifold BRA001-509M



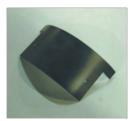
(2) Bullet Splash Ring BRA001-534M

Bag 16 Contents (4 Parts - 4 Pieces)

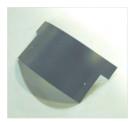




(1) Rear Turret Brace BRA001-502M



(1) Bustle Back BRA001-505M



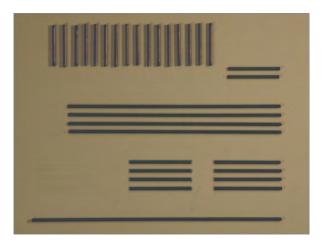
(1) Bustle Front BRA001-504M



(1) Turret Bullet Splash Ring BRA001-535M

Bag17 Contents (5 Parts - 31 Pieces)

Note: Quantity of part indicated in ()



3" Bogey Axle - 16 Pieces -BRA001-801M

3.75" Idler Axle - 2 Pieces - BRA001-802M

15.5" Suspension Axle - 4 Pieces - BRA001-803M

4.75" Return Roller Axle - 8 Pieces - BRA001-804M

18" Drive Axle - 1 Piece - BRA001-805M

Bag 18 Contents (1 Part - 1 Piece)

Note: Quantity of part indicated in ()



(1) Spacer Material - 36" Length BRA001-806T

Bag 19 Contents (1 Part - 50 Pieces)

Note: Quantity of part indicated in ()



(50) 1/4" Push Nut BRA001-807M

Bag 20 Contents (1 Part - 50 Pieces)

Note: Quantity of part indicated in ()



(50) 4-40 x 1/4" Screw (machine) BRA001-808M

Bag 21 Contents (1 Part - 60 Pieces)

Note: Quantity of part indicated in ()



(60) 1/8" x 1/4" Aluminum Pop Rivets BRA001-809M

Bag 22 Contents (1 Part - 20 Pieces)

Note: Quantity of part indicated in ()



(20) #6 ½" (Sheet Metal) BRA001-810M

Bag 23 Contents (1 Part - 1 Piece)

This part supplied with all tanks purchased after Feb 20, 2007.



11/2" x 7" x 1/16" Styrene BRA001-811P

Bag 24 Contents (4 Parts - 22 Pieces)

This part supplied with all tanks purchased after Feb 20, 2007.





(2) Brake Access Panel Hinge Half (Male) BRA005-432R



(8) Hinge Half (Male) BRA005-434R



(2) Brake Access Panel Hinge Half (Female) BRA005-433R



(8) Hinge Half (Female) BRA005-435R

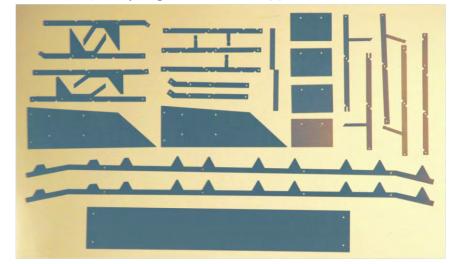
Bag 25 Contents (1 Part - 1 Piece Note: Quantity of part indicated in ()



(1) Instruction CD BRA001-ICD

Turret Schuertzen (Accessory Package "A")

Bag 23 Contents (12 Parts - 24 Pieces)





(2) Upper Deck (Hull) Side Shield Bracket (Front) BRA001-S522M



(3) Upper Deck (Hull) Side Shield Bracket (Middle) BRA001-S523M



(2) Upper Deck (Hull) Side Shield Bracket (Rear) bra001-S526M



(1) Rear Turret Shield BRA001-S516M



(2) Turret Side Shield Bracket (Rear)



Side Shield Bracket (Center) BRA001-S512M BRA001-S513M



(2) Turret Side Shield Bracket (Front)



(1) Upper Deck (Hull) Side Shield Bracket (Middle -Special)(At Air Cleaner) BRA001-S525M



BRA001-S514M (2) Turret Side Shield BRA001-S517M



(1) Door Latch BRA001-S519M



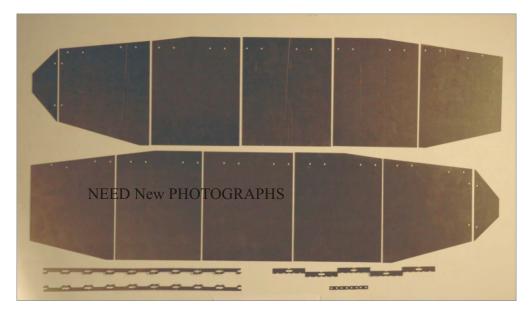
(2) Side Shield Hanger BRA001-S521M

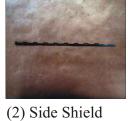


(4) Door BRA001-S518M

Side Schuertzen (Accessory Package "B")

Bag 24 Contents (9 Parts - 16 Pieces)





(2) Side Shield Attachment Clip BRA001-S515M



(1) Fender Spacer BRA001-S520M



(1) Front Side Shield Fastener BRA001-S527M



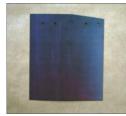
(2) Side Skirt Panel #5 BRA001-S528M



(2) Side Skirt Panel #4 BRA001-S529M



(2) Side Skirt Panel #3 BRA001-S530M



(2) Side Skirt Panel #2 BRA001-S531M



(2)Side Skirt Panel #1B BRA001-S532M



(2) Side Skirt Panel #1A BRA001-S533M

Chassis

Welcome to the world of "Battle Ready Armor"

Step 1. After opening the large bundled package (Bag 1) of metal parts and containing four parts in all, begin with the longest of the four pieces which is the main chassis piece (See Figure 1).

Note: This piece is folded in a particular manner and to avoid these pieces from breaking apart during assembly, you should only unfold it as illustrated below

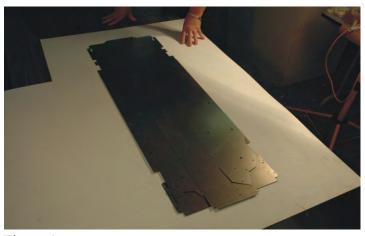


Figure 1





Figure 2

Figure 2a

Step 2. Fold out the side piece that lays on top raising it up at the seam just below the lower row of axle holes to a 90 degree angle to the bottom (See Figures 2 and 2a).

Step 3. Raise the other side to a 90 degree angle (See Figure 3).

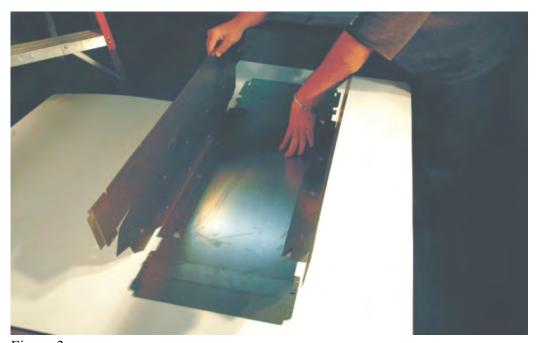


Figure 3

Chassis



Figure 4a

Figure 4b



Step 4. Raise the end pieces of the chassis and begin to shape them to match the pop rivet holes. (See Figures 4a, 4b, 4c and 4d.



Figure 4c



Figure 4d



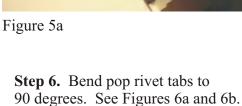




Figure 5b

Step 5. Raise the tabs at the four corners. See Figures 5a and 5b.



Figure 6a



Figure 6b

Chassis

Note: Creating the bottom stiffener channels is a bit tricky and when the operation is complete they should protrude from the bottom exterior rather than into the interior.



Figure 7

Step 7. Now that we have the tabs bent ready to recieve the pop rivets - before you actually secure any thing you must create the bottom stiffener.

Place the bottom of the chassis body on a flat surface and move it to the edge along the inner most seam. Bend the entire side down to a 90 degree angle.

(See Figure 7)



Figure 8a

Note: Repeat steps 7 and 8 on other side.

Step 8. Holding the narrow side securely in place, bend the entire side back up at the next seam outward to a 90 degree angle to create the stiffener channel. See Figures 8a and 8b.



Figure 8b

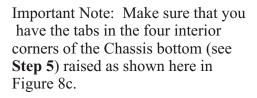




Figure 8c

Chassis

You are now ready to begin too secure the sides and the ends together with pop rivets.

Step 9. Making sure that you have bent all the appropriate tabs as discussed in step 6, line up the holes in the body sides with the holes in the tabs of the end piece tabs (their alignment should be self evident) and get your pop rivet gun ready. See Figures 9a, 9b and 9c.







Figure 9b



Figure 9c



Figure 9d

Note: When the pop rivet is in place it should look like those in Figure 9d.

Step 10. Complete pop riveting of all tabs for both the front and rear panels to the sides. When that is completed your chassis should look as the one in Figure 10a.

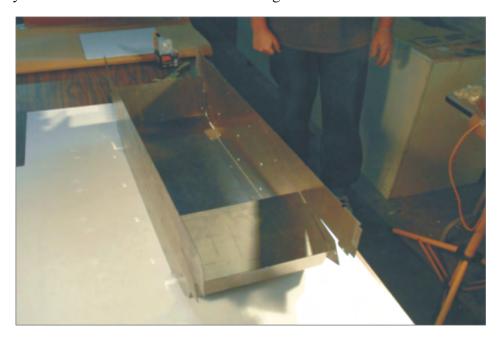


Figure 10a

Chassis

Step 11. Before bending the track fender into place bend the flaps along the edge down at a 90 degree angle to what will become the fender top.

(See Figures 11a, 11b and 11c)







Figure 11a Figure 11b Figure 11c

Step 12. Bend the fender down at a 90 degree angle to the Chassis body to create the fender top.

(See Figures 12a and 12b)





Figure 12a Figure 12b

Step 13. Bend down the tab on the fender fronts (See Figure 13a) and then bend down the fender fronts themselves (See Figure 13b) to an angle that is consistent with the pop rivet hole (See Figure 13c) in the Chassis body. Align the pop rivet holes and secure with a pop rivet (See Figure 13d).









Figure 13a

Figure 13b

Figure 13c

Figure 13d

Note: When this step is completed the fender fronts should look like Figure 13e.

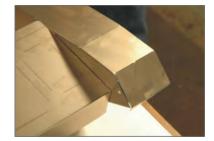


Figure 13e

Chassis

Step 14. T Bend down the tab on the fender backs as you did on the fender fronts and then bend down the fender backs themselves (See Figure 14a) to an angle that is consistent with the pop rivet hole (See Figure 14b) in the Chassis body. Secure with a pop rivet (See Figure 14d). The end result should look like Figure 14d.









Figure 14a Figure 14b Figure 14c Figure 14 d

Step 15. Locate the Rear Fender Braces as shown in Figure 15a and bend the tabs so that they are at 90 degree angles to the triangular brace (see Figure 15b).





NOTE: Bend the tabs on the two pieces so that one has the tabs bending to the left and the other bends them to the right so that when completed they are a mirror image of one another.

Figure 15a Figure 15b

Step 16. Align the holes in the Rear Fender Brace with the hole in the chassis located just under the fender at the rear as shown in Figure 16a and 16b and secure in place with Pop Rivets. Align the hole in the Rear Fender Bracket and the hole in the top fender and secure with a Pop Rivet (see Figure 16c).







Figure 16a Figure 16b Figure 16c

Step 17. Bend the tabs on the front panel down to be at a 90 degree angle to bottom of the Chassis body (see Figure 17a). Bend the tab on the rear panel down to be at the same angle (flush with) top of the fenders (See Figure 17b).





Figure 17a Figure 17b

Chassis

Step 18. Locate the two (2) Return Roller Axle Supports (see Figure 18a) and bend each end into the configuration shown in Figure 18b. Bend the center tab to the configuration shown in 18c. When completed the pieces should resemble the piece shown in Figure 16d.

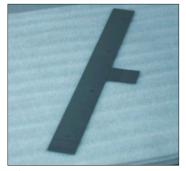


Figure 18a

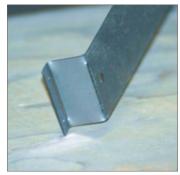


Figure 18b

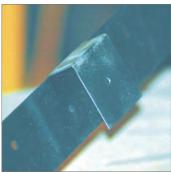


Figure 18d



Figure 18c

Step 19. Install the Return Roller Support Axle - one to either side of the Chassis as shown in Figure 19a. Secure in place using Pop Rivets. The Pop Rivets should be installed from the outside as shown in Figure 19b. Prior to installing all the Pop Rivets ensure the Return Roller Support Axle is in the correct location by installing a 4.75" Return Roller Axle (see Figure 19c) and make sure it is at a 90 degree angle to the body.



Figure 19a



Figure 19b



Figure 19c

Note: When complete the assembly of the Chassis body should appear as it does in the photograph (Figure 19d) to the right.



Figure 19d

Upper Deck

Note: If you are at this point then you have already completed the basic assembly of the Chassis.

Step 1. Lay the Upper Deck out on your work table

Note: This piece is folded in a particular manner and to avoid these pieces from breaking apart during assembly, you should only unfold it as illustrated below.

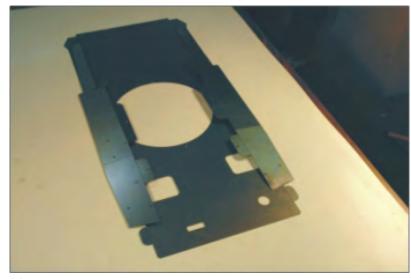


Figure 1a

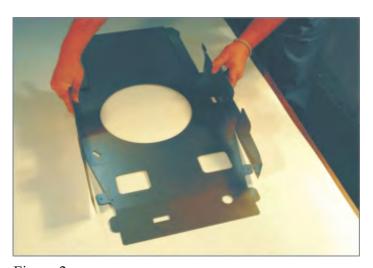


Figure 2a

Step 3. Bend the tab at the front of the Upper Deck to align with the pop rivet holes on the side piece.

Step 2. Raise the two Upper Deck sides to a 90 degree angle with the underside of the Upper Deck top (See Figure 2a). Raise the two small tabs to the front of the assembly to the same 90 degree angle as the sides (See Figure 2b),

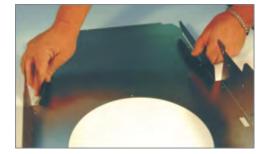


Figure 2b



Note: Also bend up the tabs on the vertical front panel. That being the one adjacent to the thumb in Figure 3a.



Upper Deck

Step 4. Having bent the tabs up to a 9- degree angle on the front vertical panel, now bend up the front vertical panel (See Figure 4a) to almost 90 degrees. Pull in the Upper Deck side pieces and secure them to the tabs you bent up on the top panel of the Upper Deck in step 3 with pop rivets. (See Figure 4b).

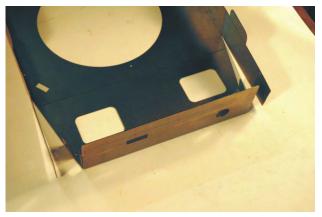




Figure 4b

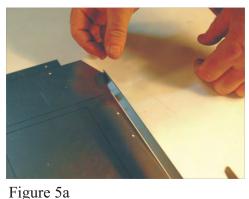
Figure 4a

Note: Although it is not required it might be a nice thing to drill an 1/8" hole and secure the side panel to the tab of the front vertical panel (See Figure 4c).



Figure 4c

Step 5. Bend the tab at the rear end of the side panel.



Note: This tab will need to be adjusted to suit the angle of back vertical panel.

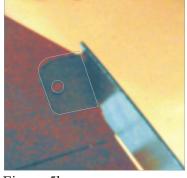


Figure 5b

Step 6. Align the hole in the rear vertical panel with the tab (See Figure 6a) on the Upper Deck side panel and secure it in place with a pop rivet. (See Figure 6b) Adjust the two pieces so that all angles and surfaces align.



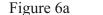




Figure 6b

Upper Deck

Step 7. The clip attachment for the securing the Upper Deck to the Chassis. (See Figure 7a) Bend the tab that secures the Upper Deck to the Chassis outward so that it is at a 90 degree angle (See Figure 7b) to vertical side panel. Then bend the upper half of the "arrow point" down and toward the rear to a 90 degree angle. (See Figure 7c)



Figure 7a



Figure 7c

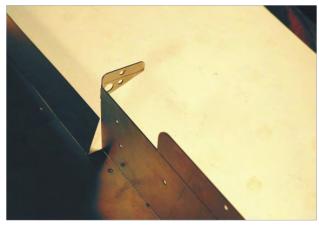
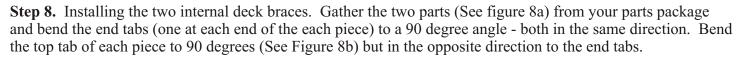


Figure 7b

Note: The "arrow shaped" tab in Figure 6a is used to secure the Upper Deck portion to the Chassis and so must be bent in the correct direction at the bend points.



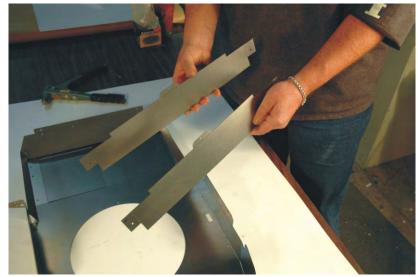


Figure 8a

Note: It is important that the tab at the top and the tabs at the ends of the cross brace pieces are opposite of each other.



Figure 8b



Figure 8c

Upper Deck

Step 9. Place the cross braces into the Upper Deck with top tabs facing away (See Figure 9a) from the circle. Align the end tabs with the holes in the sides and secure with pop rivets. (See Figure 9b)





Figure 9b

Figure 9a

Step10. Turn the Upper deck over. Align the top tabs with the hole in the top of the Upper Deck and secure with a pop rivet (See Figures 10a and 10b).





Figure 10a

Figure 10b

Step 11. Bend the tabs in the sides inward to a 90 degree angle (See Figure 11a).



Figure 11a

Upper Deck

Note: You have now completed the assembly of the Upper Deck. What you have created should look like what appears in Figure 12a below.

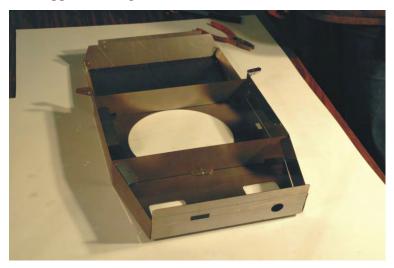


Figure 12a

Note: Your metal assembly so far is the Chassis and the Upper Deck and when placed together should resemble Figure 13a below.

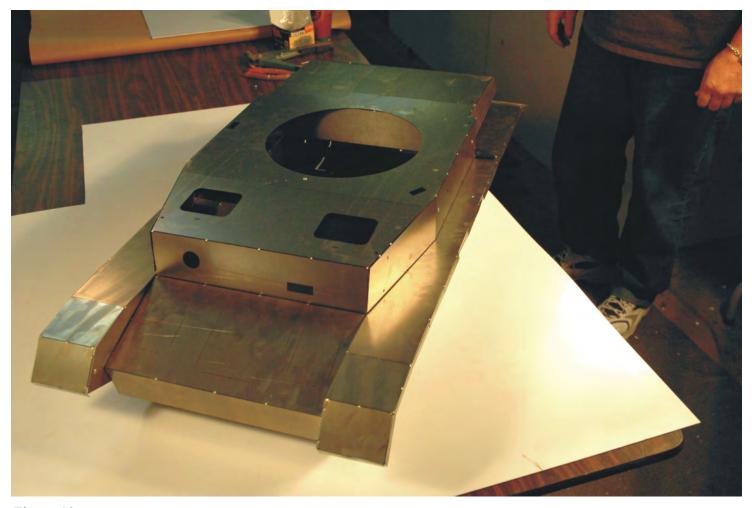


Figure 13a

Turret Bottom

Step 1. Place the Turret Bottom (See Figure 1a) on your work surface and locate the three (3) Turret Rotate Guides (See Figure 1b).

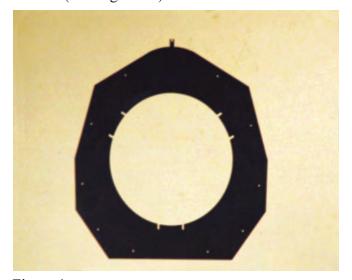


Figure 1a



Figure 2a

Step 3. Slide the "started" screws of each of the Turret Rotate Guides into the slots on the Turret Bottom making sure that the inside curve of the Turret Rotate Guide is mimicking the arc of the hole in the Turret

Bottom (See Figures 3a and 3b).

Note: Make sure the rabit on the Turret Rotate Guide is to the bottom and to the outside.



Figure 3a

Note: There is not a top or a bottom to this piece until you commit to installing the Turret Rotate Guides. The side to which they are installed will automatically become the bottom.



Figure 1b

Step 2. Pre-drill Turret Rotate Guides using the dimples on the top of each piece as locators using nothing larger than an 1/8 " bit. Drill to a depth of approx. 5/16" and start one $\#6 \times \frac{1}{2}$ "sheet metal screws in each hole.



Figure 2b



Figure 3b

Turret Bottom

Step 4. Adjust the Turret Rotate Guides to fit snugly and centered in the opening of the Upper Deck (See Figures 4a and 4b).



Figure 4a

Note: Place the assembled Turret Bottom in to the hole in the Upper Deck. Center the hole in the Turret Bottom vertically with the hole in the Upper deck by adjusting the Turret rotating Guides. Tighten the screws making sure they are secure - to the extent they will not come loose over time.



Figure 4b

Note: When this part of the assembly is complete it should look like Figure 5a below. The Turret bottom should turn easily in the Upper Deck. For smoother movement an application of silicon or wax to the guides can be applied.



Figure 5a

Turret

Step 1. Place Turret piece on work table with the folded over front wall up. (See Figures 1a and 1b) Raise the front wall of the Turret up to an approximate 80 degree angle to the turret top. (See Figure 1c)



Figure 1a

IMPORTANT:

Before proceeding it is important to read the entire procedure for Step 2 from start to finish to ensure the Mantlet Housing is installed correctly and in the right configuration.



Figure 2a

Step 2. Before proceeding with any other Turret assembly it is necessary to install the Mantlet Housing on the front wall of the Turret. Find the horizontal center of the Mantlet Housing and draw a line across the back of it bisecting the Mantlet in half along its length. (See Figure 2a) Place the back of the Mantlet Housing against the Turret front wall so the four corners of the square opening in the Mantlet Housing are within the round hole in the front wall of the Turret. (See Figure 2b) The line you have drawn on the back of the Mantlet Housing should appear in the center of the two screw holes adjacent to the round hole. Making sure that the Mantlet housing is parallel horizontally with the top of the Turret mark the hole locations on the back of the Mantlet Housing for pre-drilling. (See Figure 2c) (Continued on next page)



Figure 1b



Figure 1c



Figure 2b

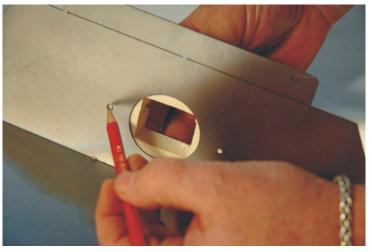


Figure 2c

Turret

Note: The square hole in the Mantlet Housing is not in the center of the piece. Make sure the short side of the two is toward the square opening in the front wall of the Turret and that the Mantlet Housing is parallel with the top of Turret. (See Figure 2d)

Step 2. (Cont'd) Pre-drill the two screw locations you marked on the back of the Mantlet Housing. Place the Mantlet Housing into position and secure with the 2 - #6 x $\frac{1}{2}$ " screws (sheet metal) provided. (See Figures 2e and 2f)

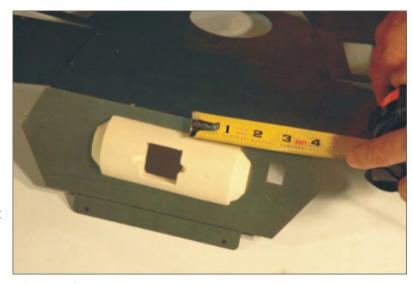


Figure 2d



Figure 2e



Figure 2f

angles of the Turret top.

Step 3. Bend the sides up at an angle (approx. 60 degrees) so that they begin to image the shape that final Turret will take when assembled.



Figure 3a

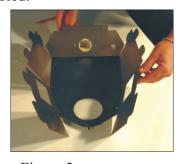
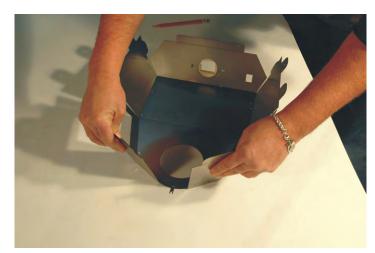


Figure 3c





Figure 3b



Step 4. Bend in the rear side panels to align with the

Figure 4

Turret

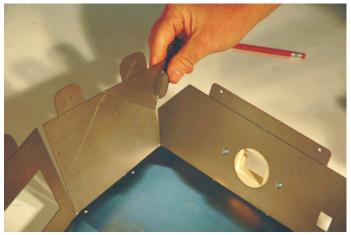


Figure 5a



Figure 5b **Step 5.** Bend over the large tabs on the bottoms of the Turret walls. (See Figure 5)

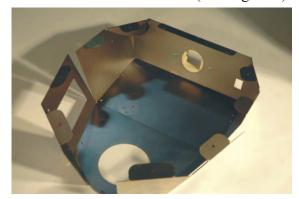
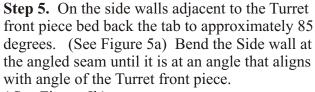


Figure 5

Step 6. With the tabs on the side walls bent down, place the Turret bottom over the tabs and line up the holes in the Turret Bottom with the holes in the tabs. Make sure the three (3) Turret Rotate pieces are to the outside. (See Figure 6a) Secure in place with pop rivets. (See Figure 6b)



(See Figure 5b)

When this exercise is complete the tab should be flush against the inside of the Turret front piece. (See Figure 5c)

Note: Although not necessary you can drill a 1'8" hole through both tab and the Turret Front piece and secure with a pop rivet.

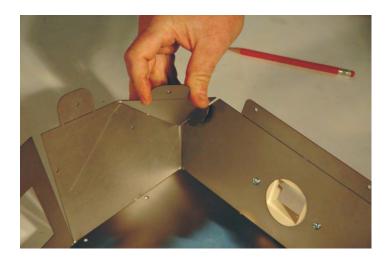


Figure 5c

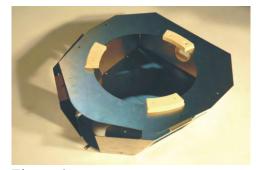


Figure 6a



Figure 6b

Turret

Step 7. Review you assembly so far - it should resemble Figure 7a from the bottom and Figure 7b from the top.

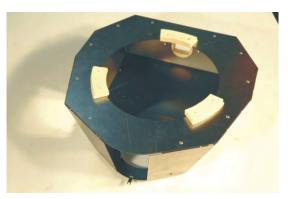


Figure 7a

Step 8. You are now ready to install the Turret Back Brace. This piece is identified on the Packing list on Bag #16. The piece has been pre-bent to make it easier to install but will still require some shaping. Shape the piece to align with the shape if the top and bottom of the Turret Assembly. (See Figure 87a)

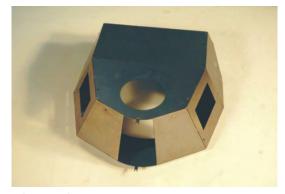


Figure 7b

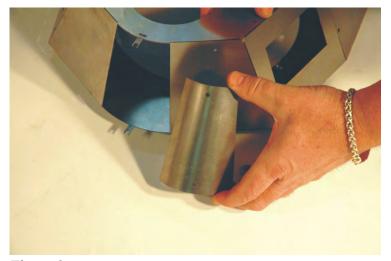


Figure 8a

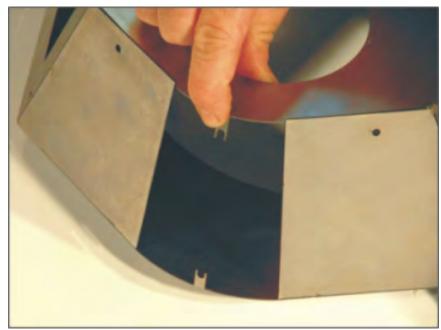


Figure 9

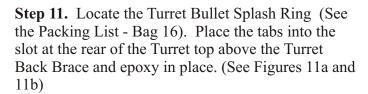
Step 9. Bend the keepers on the top and bottom of the Turret Assembly at the rear down and up respectively to accept the Turret Back Brace. (See Figure 9)

Turret

Step 10. Secure the Turret Back Brace in place with pop rivets. (See Figure 10a and 10b)



Figure 10a



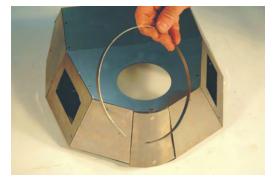


Figure 11a

Note: You have now completed the assembly of ll thee (3) major metal section of your PANZER IV. The three pieces together should look like Figure 12 to the right.

IMPORTANT:

Do NOT fasten any of the parts together - that will happen later in the assembly peocess.

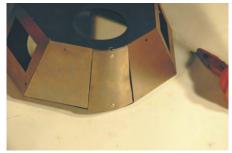


Figure 10b



Figure 11b

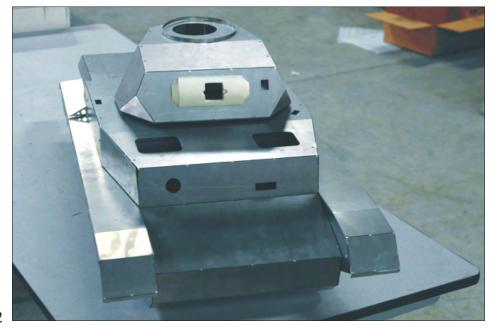


Figure 12

Running Gear

IMPORTANT: You have now completed the three (3) major portions of the of the tank, the Chassis, The Upper Deck and the Turret Assembly. By following the instructions that follow it will insure that you will not assemble or place parts onto the superstructure out of order and should therefore avoid having to DIS-assemble anything in order to complete a specific task.

Step1. Locate the three following parts - the Idler Axle Bracket, the Towing Bracket and the Towing Bracket Housing (See Figure 1a).

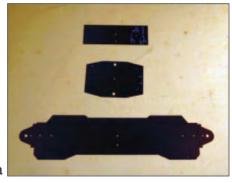


Figure 1a



Figure 2a



Figure 2c

Step 3. Place the Towing Bracket Housing against the Idler Axle bracket as shown in Figure 3a and line up the holes. Next place the Towing Bracket in the Towing Bracket Housing (See Figure 3b) and line up the bottom hole. The entire assembly should look as it appears in Figure 3c.

Note: Do NOT pop rivet these pieces together - even though you may be tempted to - see Step 4.



Figure 2b

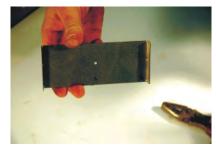


Figure 2d

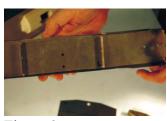


Figure 3a



Figure 3b

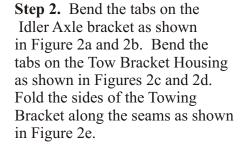




Figure 2e



Figure 3c

Running Gear

Step 4. Place the Idler Axle Bracket, Towing Bracket, Towing Bracket Housing Assembly at the rear of the Chassis and align the holes. Pop rivet the Assembly in place with two (2) pop rivets. See Figures 4a, 4b and 4c. When the assembly is in place it should look like it does in Figure 4d.



Figure 4a



Figure 4c



Figure 4b



Figure 4d

Step 5. Locate the two (2) Idler Mounts and the two (2) Idler Mount Caps as shown inn Figure 5a. Secure the Idler Mount Caps to the Idler Mounts with Super-glue.



Figure 5a



Figure 5c



Figure 5d



Slide the Idler Mount and Idler Mount Cap assembly into place - one on each side of the Idler Axle Bracket as shown in figures 5b, 5cand 5d. Align the hole in the Assembly with the hole in the bracket.

> **Note:** When you have it aligned mark the three holes (2 on the back and 1 on the end) on the Idler Mount assembly and pre-drill for Sheet Metal Screws.

Running Gear

Step 6 Place the Idler Mount assemblies in place and fasten with the three (3) #6 x ½" Sheet Metal Screws. One screw in the end (Figures 6a), one screw in the back outside the Chassis (Figure 6b) and one on the back inside the Chassis (Figure 6c)







Figure 6a Figure 6b Figure 6c



Step 7. Insert one (1) Idler Axle in each Idler Mount Assembly. (See Figure 7a) Secure the axle in place with epoxy

Step 8. With the Chassis portion of the tank sitting right side up insert the four (4) 15.5 "Suspension Axles into each of the four lower holes in the Chassis. See Figures 8a.



Figure 8a

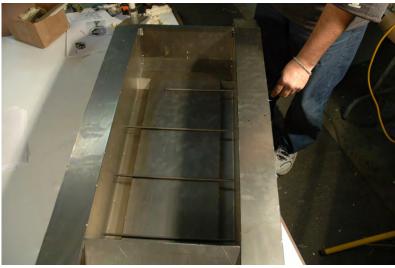


Figure 8b

Note: The Suspension Axles should be laying flat across the Chassis bottom spanning the stiffening channels that run the length of the Chassis on either side. See Figure 8b.

Running Gear

Step 9. Turn the tank Chsassis so that the bottom side is facing up. Locate 8 each of the following: Suspension Blocks, Suspension Block Covers and Suspension Arms. Four of each part will be used on each side of the tank (See Figure 9a).



Note: Follow the same photographs and instructions shown for each side of the tanks running gear from Step 9 through Step 18.

Figure 9a

Step 10. Position 4 of the Suspension Blocks on the axles so that the concave protrusion is away from the bottom and toward the top of the fender skirt. Fasten them in place using epoxy (See Figures 10a and 10b).







Figure 10b

Step 11. When the Suspension Blocks are securely in place install one (1) Suspension Arm onto each of the axles (See Figure 11a) so the rounded portion of the center hole fits into the concave of the Suspension Block (See Figure 11b) and so that the detail on the Suspension Arm is facing outward.

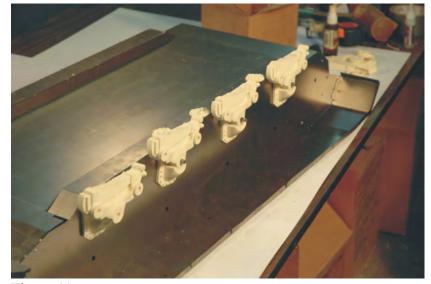






Figure 11b

Running Gear

Step 12. Install the 3" BogeyAxles onto the Suspension arms - two (2) per Suspension Arm - one (1) axle on each end. Secure the axles in place with epoxy making sure that the axle is flush with the inside face of the

Suspension Arm. See Figures 12a and 12b.

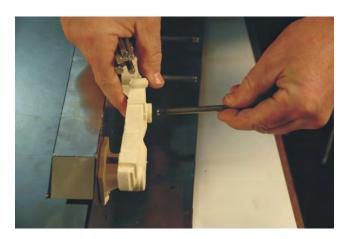


Figure 12a

Step 13. Installing the Suspension Block Covers. Slide the Suspension Block Cover over the axle detail side facing outward and align the notch in the Suspension Block Cover with the pin on the Suspension Block. (See Figures 12 a and 12b) Secure in place with Super-glue making sure not to get any on the Suspension Arm.

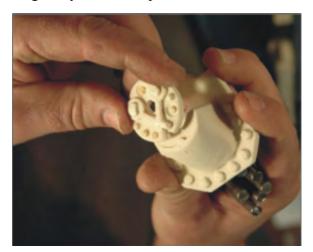


Figure 13a

Note: The Suspension Block and the Suspension Block Cover can be assembled prior to their being secured to the Chassis. Make sure when doing it this way that axle holes are aligned properly and that when securing the assembly to the Chassis that axle holes on the Assembly line up with the axle holes in the Chassis. Also when finally installing the axle make sure that you have inserted the Suspension Arm in place properly.

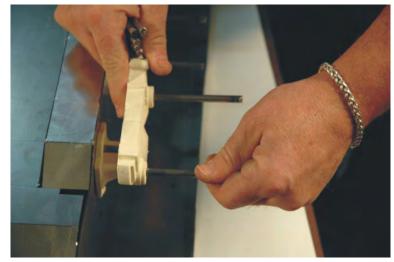


Figure 12b



Figure 13b



Figure 13c

Running Gear

Step 14. Balance the amount of the axle exposed beyond the Suspension Block Cap piece so that it is the same on both sides (Approx. 1/4") of the tank and secure the axle in place with a Push Nut. See Figures 14a and 14b.



Figure 14a

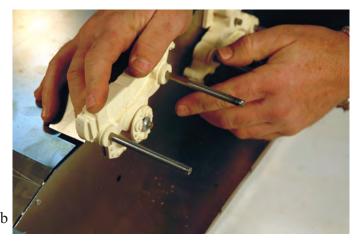


Figure 14b

Step 15. Install the 18" Drive Axle and install in the front of the Chassis in the axle hole. Locate the Drive Gear Housing. (See Figure 15a) and install it as over the axle and securing it in place with epoxy as shown in Figures 15b and 15c.



Figure 15a



Step 16. Locate the Left and Right Idler Braces and install them in the location shown in Figures 16a and 16b directly behind the Idler Mount. Secure in place using epoxy.

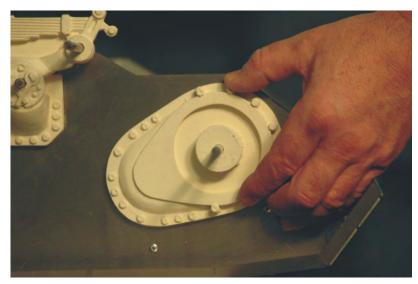


Figure 15b





Figure 16a



Figure 16b

Running Gear

Step 17. Locate the ten (10) Bumpers and allocate 5 per side. Installing the Bumpers - Starting at the REAR install one (1) on either side of the Rear Suspension Assembly (See Figure 1a). Install one (1) of each of the remaining three (3) Bumpers toward the front on each of the other three (3) Suspension Assemblies. Line the tops of the bumpers with the tops of the Suspension Blocks and so the widest part of the Bumper is 1/4" away from the Suspension Block (See Figure 3c).





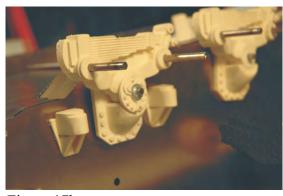


Figure 17b

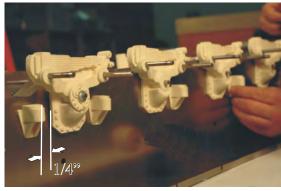


Figure 17c

Step 18. Locate the Idler Wheels and the Idler Spacer (See Figure 18a). Using Super-glue secure the Idler Spacer to the inside face of one of the Idler Wheels making sure that it is centered around the axle hole in the wheel (See Figures 18b and 18c) and so that the prongs on the Idler Spacer are centered between the spokes of the Idler Wheel (See Figure 18d). Using one of the short axles as a guide place the second Idler Wheel in place on the axle and align the spokes so that one Wheel is the mirror image of the other and secure using Super-glue (See Figures 18e and 18f). Install an 11/16" long section of Spacer Material on the Idler Axle and mount the Idler Wheel Assembly on the Idler Axles. Secure in place with a push nut.

Note: This procedure can be undertaken directly onto Idler Axle in place on the installed Idler Axle.

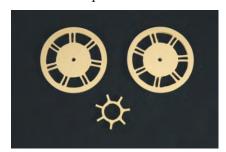


Figure 18a

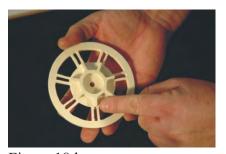


Figure 18d



Figure 18b



Figure 18e

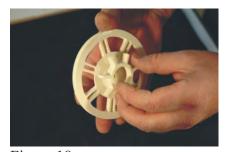


Figure 18c

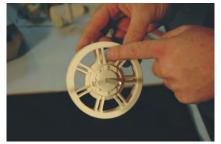
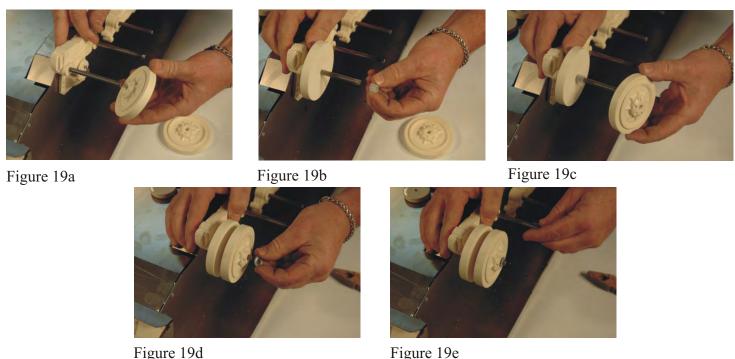


Figure 18f

Running Gear

Step 19. Locate the bag of 36 Road Wheels. On each of the Bogey Axles place one (1) Road Wheel with the detail portion facing inward (See Figure 19a). Slide a 1/4" length of Spacer Material over each of the Bogey Axles (See Figure 19b). Place a second Road Wheel on each of the Bogey Wheels with the detail portion facing outward (See Figure 19c). There should be approximately 1/4" of axle exposed when the Wheels and the Spacer Materials are installed. Secure in place with Push Nuts.



Step 20. Install the Eight (8) 4.75" Return Roller Axles (four (4) per each side) in the axle holes in the upper part of the Chassis (See Figure 20a) just under the fenders through to the Interior Return Roller Support and secure the inside of the Axle in place with a Push Nut. Install a 1-1/4" long piece of Spacer Material on the Return Roller Axle (See Figure 20b). Slide one (1) Return Roller Wheel with the detail portion to the inside (See Figure 20c). Install a 1/4" long piece of Spacer Material over the axle (See Figure 20d). Install a second Return Roller Wheel on the axle and with the detail portion facing outward (See Figure 20e). Secure with a Push Nut (See Figure 20f).



Figure 20a



Figure 20d



Figure 20b

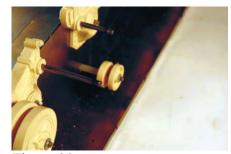


Figure 20e



Figure 20c



Figure 20f

Running Gear

Step 21. Each side of the tank has a pair of Drive Wheels (See Figure 21a) that need some assembly before being installed Pre-drill the Resin portion of the Drive Wheels at the twelve (12) dimples around the outside edge and start two (2) 4-40 x 1//4" machine screws (See Figure 21b). Place the slots on the metal portion of the Drive Wheel over the screws and position it so that it fits into the rabbet around the outer edge of the resin piece (See Figure 21c). Secure the metal portion of the Drive Wheel to the resin portion using ten (10) additional machine screws (See Figure 21d).







Figuire 21a Figure 21b Figure 21d Figure 21c

Step 22. Install the 18" Drive Axle at the front of the tank through the holes provided. Place an approx. 11/16" long piece of Spacer Material (See Note A Below) over the Axle (See Figure 22a). Install one (1) Drive Wheel onto the axle with the metal piece to the inside (See Figure 22b. Install a 1/2" length of Spacer Material (See Note A Below) and install the second Drive Wheel with the metal portion facing outward (See Figure 22c). Secure in the Drive Wheels in place with a Push Nut (See Figure 22d).



Figure 22a





Figure 22c



Figure 22d

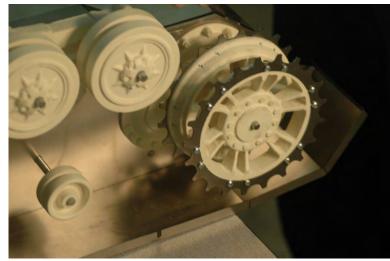


Figure 22f



Figure 22e

Note A: The length of the Spacer Material between the Drive Gear Housing and the inside Drive Wheel and the distance between the two (2) Drive Wheels should be determined by laying an assemble section of track over the cogs of the metal gear portion of the Drive Wheels and measuring the distance between the two (2) wheels (See Figure 21g).

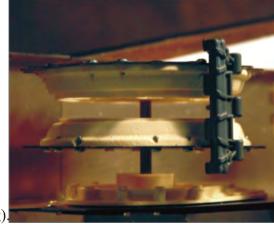


Figure 21g

General Note: If any of the axles when the final installation of the wheel assemblies is completed and any of the axles protrude more than 1/4" past the wheel OR are aesthetically unpleasing cut them off to the desired length.

Running Gear

Step 22. Assemble the tracks. Fit the three (3) tabs of one piece of Track into the three (3) depressions of a second piece and insert a Track Pin (See Figures 22a and 22b). Repeat this process with half the track pieces to form one single track assembly (See Figure 22c). Assemble the remainder of the pieces to create the second track assembly.







Figure 22a Figure 22b Figure 22c

Step 23. To assure the alignment of drape a piece of track over the drive Wheels and the Road Wheels and the Return Rollers (See Figures 23a and 23b. The tongue on the underside of track piece should run smoothly through the space between the wheels (See Figure 23c). Make adjustments to the Spacer Material as required to assure proper tracking.

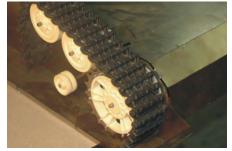


Figure 23a





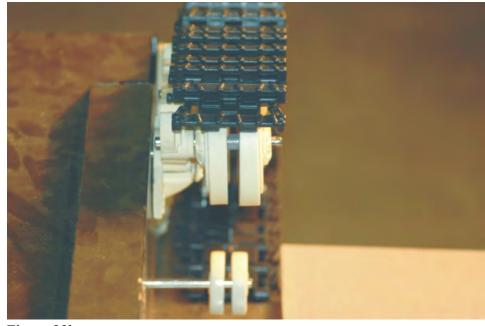


Figure 23b

Step 24. Lay the track assemblies over the Wheels and Rollers making sure that the tracks are engaged with the Drive Wheel Sprockets and insert the last Track Pin (See Figure 24 a). If there is to much slack in the track or the track is not long enough either remove a Track Link or add one as the case may be to complete the installation (See Figure 24b).



Note: It is advisable to remove the track during the remainder of the assembly process. This will keep the tank from shifting and Rolling about while you are working.



Figure 24a Figure 24b

Chassis and Upper Deck Assembly

Step 1. With the running gear now installed there is no reason not to attach the Upper Deck To the Chassis. Bend the tab at the rear of the upper deck to an angle that matches the slope of the Rear panel (See Figure 1b). The tab on the front panel should be adjusted so that it is at 90 degrees to top of the Upper Deck (See Figure 1c).

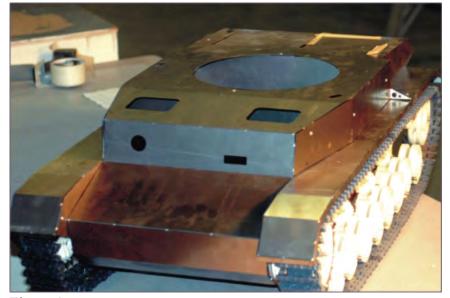




Figure 1b

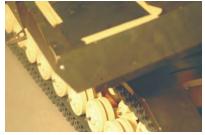


Figure 1c

Figure 1a

Step 2. Having placed the Upper deck onto the Chassis so that Tab at the back is on the outside of the Chassis and the front panel extension is fitting tightly against the front panel. Pop Rivet the Side tabs on the Upper Deck to the Chassis (See Figure 2a). Pop Rivet the Upper Deck Rear Tab to the Chassis - one (1) location on either side (See Figure 2b). The tabs folded over in Step 11 of the Upper Deck Assembly Instructions can now be Pop Riveted to the Chassis. There are one on each side (See Figure 2c) and two toward the front and can be secured from under the Chassis Fenders. Your tank assembly should now resemble Figure 2d.



IMPORTANT

If it is your intention to install drive motors and a Radio Control System (upgrade kits coming soon) at a later date then you may want to secure the Upper Deck to the Chassis only at the side tabs and using Nuts and Bolts rather than Pop Rivets.



Note: Although not necessary, you may want to assemble the Manifold and install it prior to fastening the Upper Deck to the Chassis.

Figure 2a

Figure 2c



Figure 2b



Figure 2d

Turret Barrel, Bustle and Miscellaneous Outfitting

Step 1. Locate the metal Barrel Housing (See Figure 1a) and bend the Barrel Housing as shown in Figures 1b, 1c, 1d, 1e and 1f.







Figure 1c

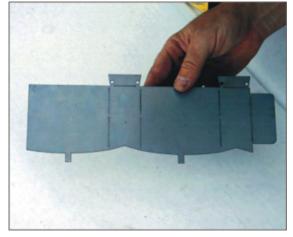


Figure 1a





Figure 1e

Step 2. Locate the Barrel Housing Front Plate (See Figure 2a) and Pop Rivet it to the Barrel Housing as shown in Figures 2b and 2c.

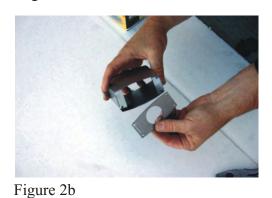


Figure 2a



Figure 2c

Step 3. Locate the Mantlet (a metal part- see Figure 3a).



Figure 3a

Turret Barrel, Bustle and Miscellaneous Outfitting

Step 4. Bend the flanges on the ends and sides to a 45 degree angle (see Figure 4a and 4b) away from what will be the outer face of the mantlet (the sides and the ends should meet at the corners) and making sure that the hole for the Turret Machine Mount is to the left side when looking at the mantlet piece from the front.

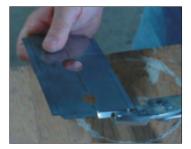






Figure 4a

Figure 4b

Figure 4c

Step 5. Bend the mantlet to the same angle as the angled front of the Barrel Housing Assembly (see Figure 5a). Install the Barrel Housing Assembly onto the Mantlet so the angled front of the Mantlet fits into the angle on the rear of the Barrel Housing Assembly and so the tabs on the Barrel Housing Assembly fit into the slots in the Mantle (See Figure 5b).







Figure 5a

Figure 5b Figure 5c

Step 6. Bend back the tabs on the Barrel Housing Assembly (See Figure 3c) to secure it in place. The result should be as seen in Figure 3d.







Step 4. Attach the Barrel Step Down (as seen in the Assemblers left hand [See Figure 4a]) to the Barrel First Step (as seen in the Assemblers right hand [See Figure 4a]) using Super-glue (See Figure 4b).

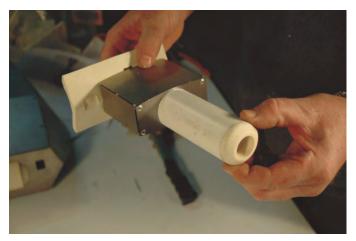






Figure 4b

Turret Barrel, Bustle and Miscellaneous Outfitting



Step 5. Attach the Barrel Step Down Assembly to The Barrel Housing Assembly using Epoxy (See Figure 5a). Make sure the holes in the Barrel housing Assembly and the Barrel Step Down line up.

NOTE: All Photographs in Steps 6 through 8 as well as miscellaneous photographs though out the instructions show a resin Mantlet instead of the new metal one - however the assembly of the various stages remains correct.

Figure 5a

Step 6. Install the Barrel Counter Balance piece onto the Turret Elevation Back piece (See Figure 6a). Insert the Turret elevation Back piece and Counter Balance into the Mantlet Housing (See Figure 6b) and snap them into place in the Mantlet housing so the wooden dowel fits into the slot of the Mantle (See Figure 6c).



Figure 6a



Figure 6b



Figure 6c

Step 7. Insert the Barrel through the Barrel Step down Assembly and Barrel Housing Assembly (See Figure 7a) so that it extends through the Mantlet approx. 3/4" (See Figure 7b). Insert the Barrel Assembly into the Barrel Elevation Back piece until the Barrel is restricted by the Dowel (See Figure 7c).









Figure 7c

Turret Barrel, Bustle and Miscellaneous Outfitting

Step 8. Super-glue the two (2) halves of the Muzzle Break together and then again using Super-glue secure the Muzzle Break into the end of the Barrel (See Figure 8a) making sure that the openings in the Muzzle break are positioned horizontally as shown in Figure 8b. The barrel assembly is now complete and should look similar to Figure 8c.



Figure 8a



Figure 8b



Figure 8c

Step 9. Add weight to the counter balance until it is totally balanced with the Barrel Assembly to the point that the barrel stays in the position you set it at.

Step 10. Locate the Metal Bustle piece (See Figure 10a). The arrow in Figure 10a indicates that the cut out piece is the access door to the bustle and it may be easier at this point to turn the Bustle over and install two (2) hinges (not included) to this part of the assembly. Returning the Bustle piece to the position shown in Figure 10a begin by folding the two side pieces (one (1) on either side of the right hand portion of the Bustle piece to 90 degrees and then fold back

on each side at the seam adjacent to the side walls (See Figure 10b). Bend each side tab vertically at the next seam (See Figure 10c). Fold the top piece over (See Figure 10d) and bend down the tab on the left side of the top piece (See Figure 10e) so that it fits inside the vertical tab on the right side piece (See Figure 10f). DO NOT secure with pop rivets at this point.



Figure 10b



Figure 10a



Figure 10c



Figure 10e



Figure 10d



Figure 10f

Turret Barrel, Bustle and Miscellaneous Outfitting

Step 11. Locate the two (2) Bustle Brackets (See figure 11a. Position one (1) Bustle bracket against the side of the Bustle side that has the top and side tabs. Align the Bracket with the holes in the side and top tabs and with the curve of the Bracket pointing downward (See Figure 11c). Secure in place with Pop Rivets (See Figure 11d).

Repeat process for the other side.

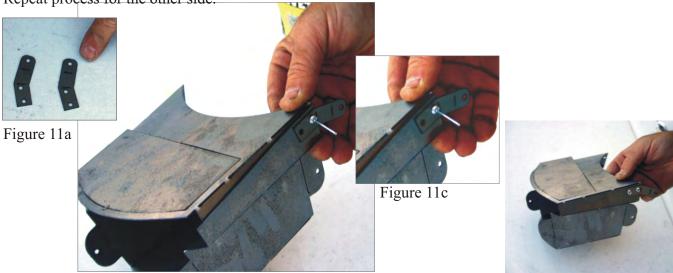


Figure 11b Figure 11d

Step 12. Bend the tabs on the front and back of the bustle(See Figure 12 a). Fit the concave Bustle front into position and secure with Pop Rivets (See Figures 12b). Fit the convex Bustle Back into position and secure with Pop Rivets (See Figure 12c).





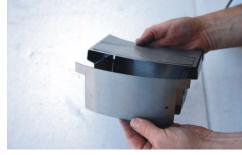


Figure 12a Figure 12b Figure 12c

Step 13. Installing the Bustle onto the Turret. Bend the Bustle Brackets inward at the first joint to approx. 80 degrees and then bend the tab at the second joint an additional approx. 30 degrees (See Figures 13 a and 13b) so that the holes. In the Bustle Bracket align with the mounting holes in the Turret. From inside the Turret secure the Bustle in place with Pop Rivets (See Figures 13c and 13d). The final installation should resemble Figure 13e.



Figure 13a



Figure 13c



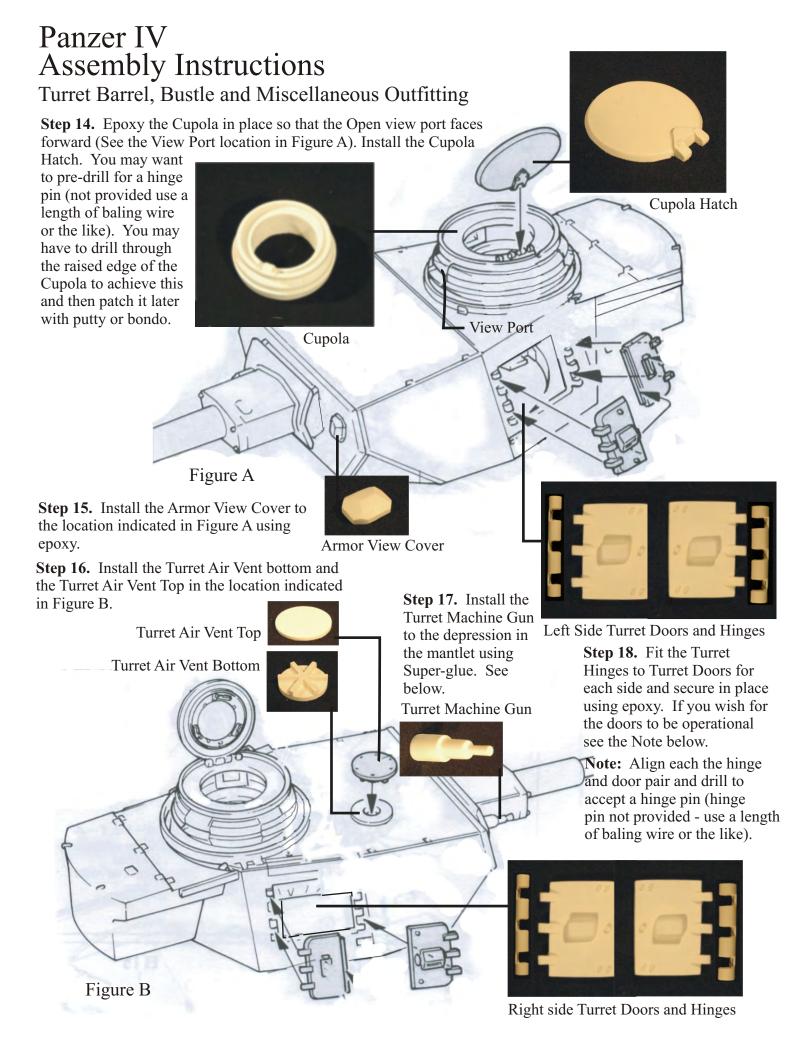
Figure 13b



Figure 13d



Figure 13e



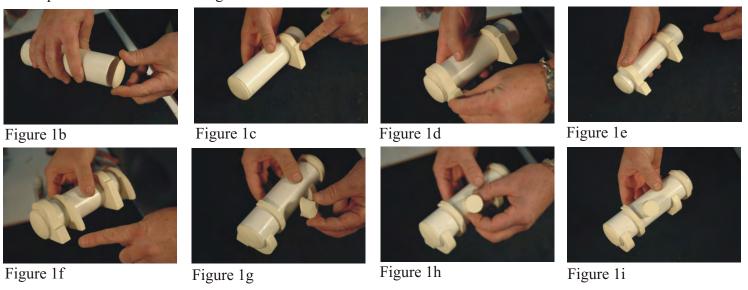
Muffler

Step 1. Locate the muffler parts as shown in Figure 1a. Using Super-glue apply the Muffler End Caps to the Muffler Tube (See Figure 1b). Install the Muffler Right Bracket Large in 1-3/4" from the end of the Muffler Tube to the centerline of the Bracket (See Figure 1c). Install the Muffler Left Bracket Large at the left end of the Muffler Tubed in approximately 1/8" (See Figures 1d and 1e) making sure the flat mounting surface (the flat portions opposite the top of the hook arch) match. Install one (1) Thin Muffler Bracket at the right end of the Muffler Tube and one (1) on the left side of the Muffler Tube in approx. 5/8" from the Large Bracket (See Figure 1e) making sure the flat portions match the plane of the Large Brackets. Install the Muffler Exhaust Tube onto the assembly as indicated in Figure 1g.



Figure 1a

The location should be approx. 3/4" in from the edge of the Thin Muffler Bracket to the edge of the Exhaust Tube. The bottom edge of the Exhaust Tube should touch a horizontal line drawn across the Muffler tube at the top edge of the hook portion of the Large Muffler Brackets (See Figures 1g and 1h). Before finally gluing the Exhaust Tube into position hold it in its location and check that it clears the metal of the tank Superstructure. When the assembly is complete it should look like Figure 1i.



Step 2. Install the Muffler Assembly in the location shown in Figures 2a, 2b and 2c.



Figure 2h

Figure 2a Figure 2b

Note: It would be wise to wait until the Chassis and Upper Deck are assembled before completing this installation. When installing make sure to leave room at the right end of the Muffler Assembly to install the right Tow Hook Assembly (See Section on Individual Part Placement.



Figure 2c

Air Cleaner, Manifold and Spare Wheel Holder

AIR CLEANER

Step 1. Locate the Air Cleaner Holder, The Air Cleaner Tubes, The spacer Material, the Air Cleaner Housing and the 1-1/2" by 7" piece of Styrene (See Figure 1a). Using one of the Air Cleaner tubes mark out four (4) circles and cut them out (See Figures 1b and 1c).





Figure 1a

Figure 1b



Figure 1c

Step 2. Place one (1) disk at either end of each Air Cleaner Tube and secure in place using Super-glue (See Figure 2a). Drill a hole in one end of each of the Air Cleaner



Tubes to accept a 41/2" length of Spacer Material. (See Figures 2b and 2c).

Figure 2a

Figure 2b

Figure 2c

Step 3. Bend the two ends of the metal Air Cleaner Holder to a 90 degree angle (See Figures 3a and 3b). Attach the Air Cleaner Holder midway along the right side of the upper deck opposite the center point of the opening for

the turret in the holes provided for attachment (See Figure 3c). Secure in

place with Pop Rivets.





Figure 3a

Figure 3b **Step 4.** Cut two lengths of the Spacer Material approx. 41/2"

in length (See Figure 4a). Install the Spacer Material in the holes of the Air Cleaner Housing and insert the Air Cleaner Tubes into the holes of the Air Cleaner Holder (See Figure 4b). Secure the Air Cleaner Tube in place using epoxy.

Note: The Air Cleaner Housing shown in figure 4b is to be installed next (See Step 5)



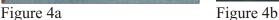


Figure 3c



Air Cleaner, Manifold and Spare Wheel Holder

AIR CLEANER (continued)

Step 5. Install the Air Cleaner Housing (See Figure 5a) on the right side of the Upper Deck adjacent to the Tab on the Upper Deck (See Figure 5c and 5d) that fastens to the Upper Deck to the Chassis. Before securing the Air Cleaner Housing in place using epoxy make sure that the Spacer material has been cut to the proper length and that the entire Assembly fits together harmoniously (See Notes Below) and that the Spacer Materials fit into the Air Cleaner Housing as shown in Figure 5b. When the installation is complete it should resemble Figure 5f.



Figure 5a



Figure 5b

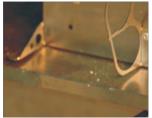


Figure 5c

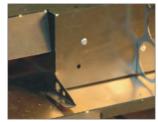


Figure 5d

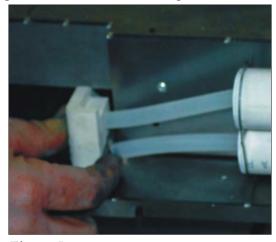


Figure 5e

Note: The bottom hole in the Air Cleaner Housing aligns with the hole in the Tab that is used to secure the Upper Deck to the Chassis and when the Air Cleaner Housing piece is installed the two should line up and the bottom length of Spacer Material should pass through it into the hole in the Air Cleaner Housing.

Note: In order to get the Spacer Material to bend into the configuration you need to complete the Assembly you may need to apply heat. A Hair Dryer will do nicely but be careful not to overheat the material and melt it into a soft gooey ball.



Breakaway view of Chassis and Upper Deck Assembly Showing the general mounting location for the Air Cleaner Assembly.

Air Cleaner, Manifold and Spare Wheel Holder **MANIFOLD**

Step 1. There are two (2) Air Intake Manifold pieces and six (6) Intake Manifold Fins. They are assembled using one (1) Air Intake Manifold piece and three (3) Intake Manifold Fins (See Figure 1a).

Step 2. Bend the tabs at the top and bottom of the Air Intake Manifold pieces to an angle complimentary to the slot in the Intake Manifold Fins (See Figure 2a) and also bend the tabs with the holes in them on the Intake Manifold Fins to a 90 degree angle (See Figure 2b)





Note: Remember there is a left side and a right side and so the tabs on the Intake Manifold Fins need to be in the opposite direction for each side.

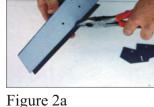


Figure 2b

Step 4. When completed you should have two Manifold Assemblies that are the mirror image of one another and resemble Figure 4a.

Step 3. Slip the slots in the Intake Manifold Fins and align the holes in the with the holes in the Air Intake Manifold and secure with Pop Rivets. (See Figure 3a)





Note. If you have not yet secured the Upper Deck to the Chassis it may be easier to Install the Manifold Assembly Figure 5a prior to doing so.



Step 1. Locate the Spare Wheel Holder metal piece. (See Figure 1a)

SPARE WHEEL HOLDER



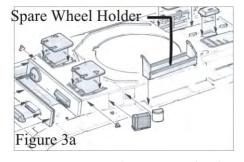
Figure 1a

Step 2. Bend the Spare Wheel Holder piece into a rectangle (See Figures 2a and 2b) and secure the open ends by bending the tab on one to line up with the holes of the other and secure with Pop Rivets.





Figure 3a Figure 2a

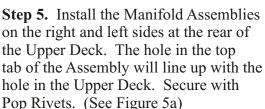


Step 3. Secure the Spare Wheel Holder to the left side of the Upper Deck (the opposite side of the Air Cleaner) by aligning the hole in the Spare Wheel Holder with those on the Upper and deck and using Pop Rivets (See Figure 3a).



Figure 1a





Panzer IV

Assembly Instructions

Individual Part Placement

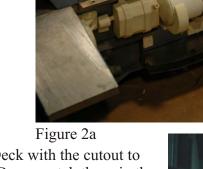
Rear Brace

Step 1. Locate the metal Rear brace as Shown is Figure 1a.



Figure 1a

Figure 2a Step 2. Align the Rear Brace along the bottom of the rear of the Upper Deck with the cutout to the right side and so the holes in the Brace match those in the Upper Deck and secure in place with Pop Rivets. Bend the rear brace up at the seam so that it is horizontal to the ground.





Cutout in Rear Brace goes to the Right side to allow for the Gas Cap

Rear Brace

Figure 2b

Figure 2c

Rear Tow Hooks

Step 1. There are two (2) Two Hook Assemblies comprised of a Tow Hook and a Tow hook Brace (See Below).

Step 2. Using Super-glue attach one (1) Tow Hook Brace to each Tow Hook as shown in Figure 2a.



Figure 2a



(2) Rear Tow Hook Brace



(2) Rear tow Hook

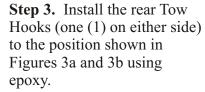




Figure 3a



Figure 3b

Panzer IV

Assembly Instructions

Individual Part Placement

Turret Motor

Step 1. Install the Turret Motor at the rear of the tank adjacent to the Muffler and the Left Rear Tow Hook (See Figure 1a).



(1) Turret Motor

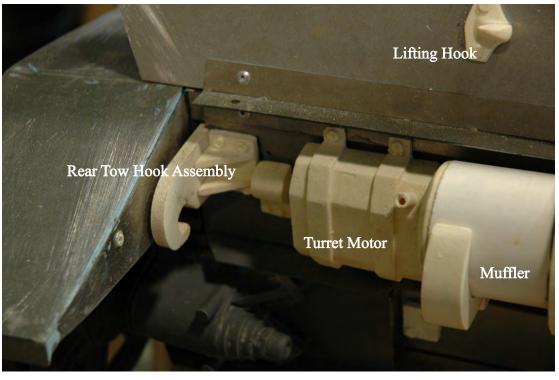


Figure 1a

Headlight and Headlight Bracket

Install the Headlight Bracket By drilling holes in the fender to suit the holes in the Headlight Bracket and secure in place using sheet metal screws or a suitable nut and bolt making sure their length doesn't interfere with the Treads (See Figure A). Secure the Headlight into the brackat using Super-glue (See Figure B).



(1) Headlight Bracket



(1) Headlight



Figure A



Figure B

Front Tow Shackle

There are two (2) Front Tow Shackles and they are located at the front of the Chassis (one on each side)adjacent to the fender with the cant of the legs on the Shackle facing inward (See Figure A).



(2) Front Tow Shackle



Figure A

Panzer IV

Assembly Instructions

Individual Part Placement

Hull Machine Gun and Ball Machine Gun Mount





(1) Ball Machine

Front

These two (2) parts go together. Clean the excess resin from the Hull Machine Gun and square off the muzzle. Using a sharp knife or a saw separate the Hull Machine Gun from bulbous end (See Figure A). Inset the Hull Machine Gun into the large hole in the Ball Machine Gun Mount and secure in place using Super-glue (See Figure B and C). See the breakaway on the next page for the mounting position.



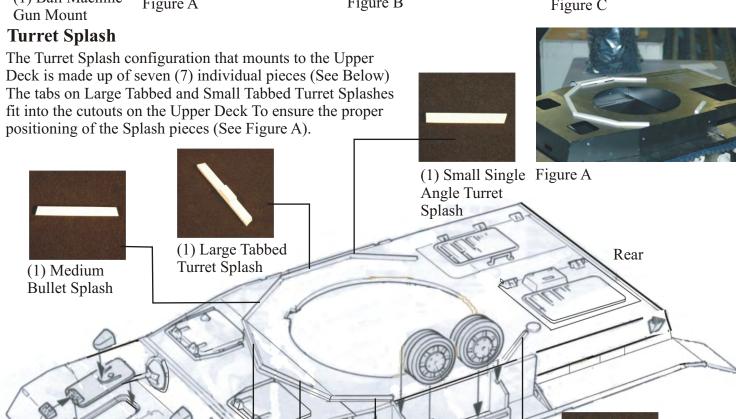
Figure A



Figure B



Figure C



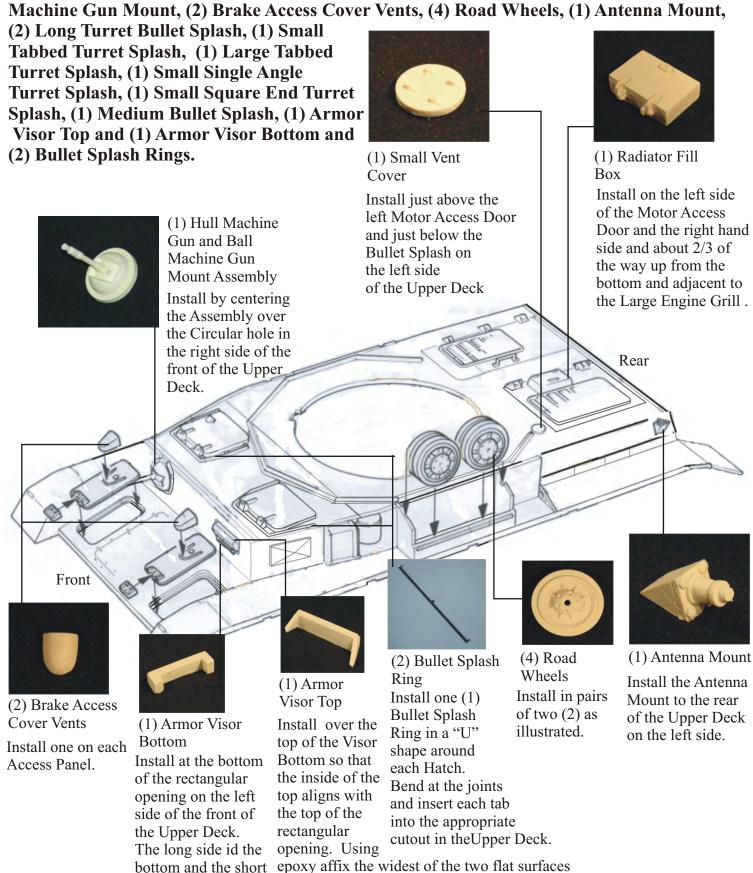
(2) Long Turret **Bullet Splash**

(1) Small Tabbed Turret Splash

(1) Small Square **End Turret Splash** Install this Splash piece at the same but opposite angle as the Small Single Angle Turret Splash on right hand side rear.

Individual Part Placement

Placement for (1) Small Vent Cover, (1) Radiator Fill Box, (1) Hull Machine Gun, (1) Ball Machine Gun Mount, (2) Brake Access Cover Vents, (4) Road Wheels, (1) Antenna Mount,



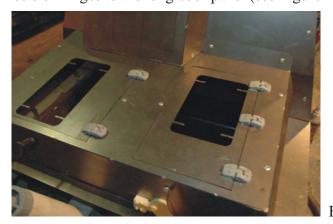
to the Upper Deck with the legs forming the sides.

arms form the sides.

Brummbar Assembly Instructions

Engine Access Doors, Hinge and Engine Grill Assembly

Step 1. Gently twist the individual Engine Access Doors from the Engine Deck Cover (they are attached with two small stitches of metal that allow easy removal) and attach two (2) sets of hinges to the wide door panel and three (3) sets of hinges to the long door panel (see Figure 1a).



NOTE: Assemble the hinge halves by drilling a hole throw each part and inserting a pin (see Figures 1b, 1c and 1d) through the two halves (here in the shop we use 1/16" copper wire for the pin) and then install them to the door side only.







Figure 1a Figure 1b

Figure 1c

Figure 1d



NOTE: Using a piece of scrape metal it is advisable to create a stop for the Engine Access Doors (See Figure 1e) (and the Brake Access Covers) to close against by Pop Riveting it to the underside of the opening and protruding into the opening.

Figure 1e

Step 2. Take each of the Engine Access Doors and install the Engine Grills in them. First bend the four (4) Metal Tabs into what would be where the Engines would be (see Figures 2a and 2b). Lay the Access Door face down and fit the Engine grill into the opening in the metal so that the face of the grill is flush with the metal (see Figure 2c). Bend the Metal Tabs over the Resin Grill piece and place a dab of Epoxy on the back side of each Metal Tab to hold the Grill securely in position (see Figure 2d).



Figure 2b

Figure 2a

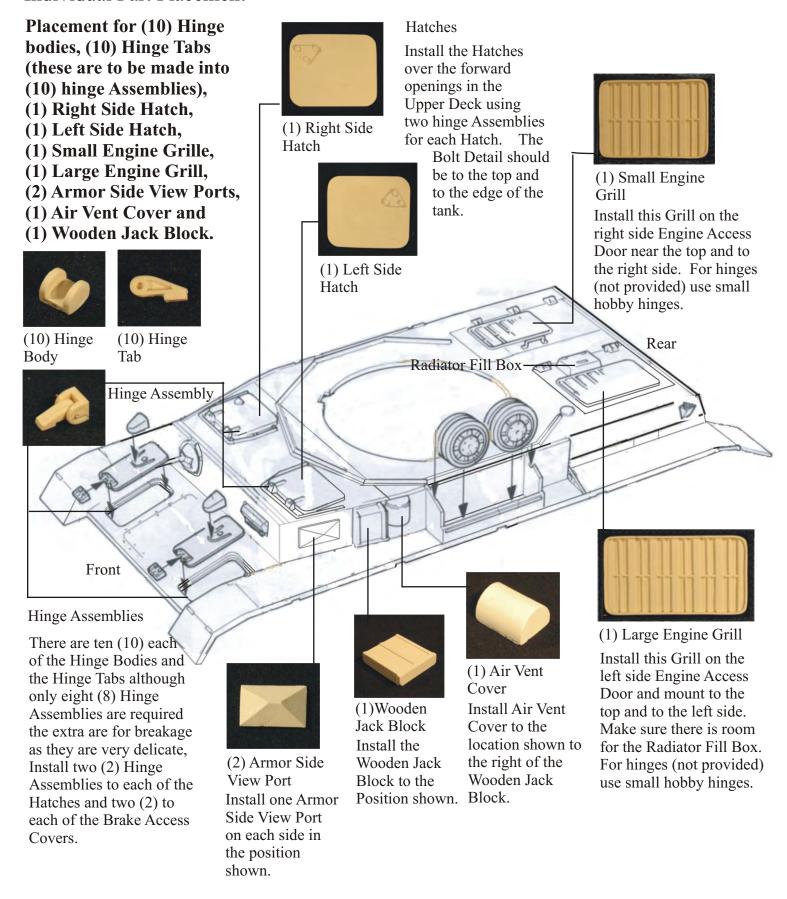




Figure 2d

Figure 2c

Individual Part Placement



Individual Part Placement

Placement for (2) Lifting Hooks, (1) Gas Cap, (2) Rear Tow Hook Assemblies (consisting of two (2) Rear Tow Hooks and (2) Rear Tow Hook Braces).

(1) Lifting Hook Install one (1) Lifting Hook to the left of center on the rear of the Upper Deck as shown

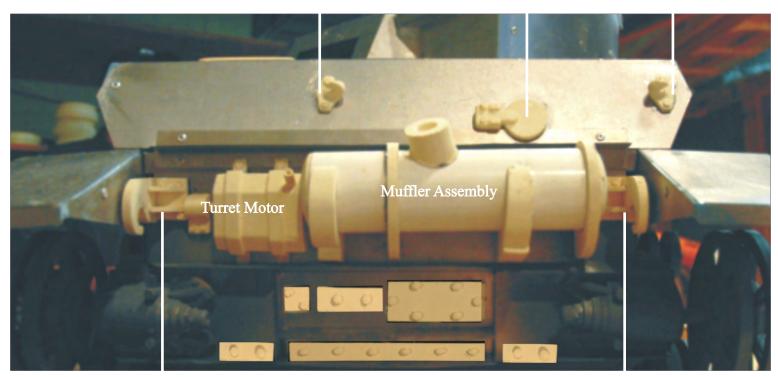


Gas Cap
Install the Gas Cap
so that the bottom
curve of it fit into
the cutout of the
Rear Brace.



(1) Lifting Hook Install one (1) Lifting Hook to the right side on the rear of the Upper Deck as shown





Rear View



(1) Rear Tow Hook Assembly Install one (1) Rear Tow Hook Assembly to left side rear on the Chassis just under the Rear Brace



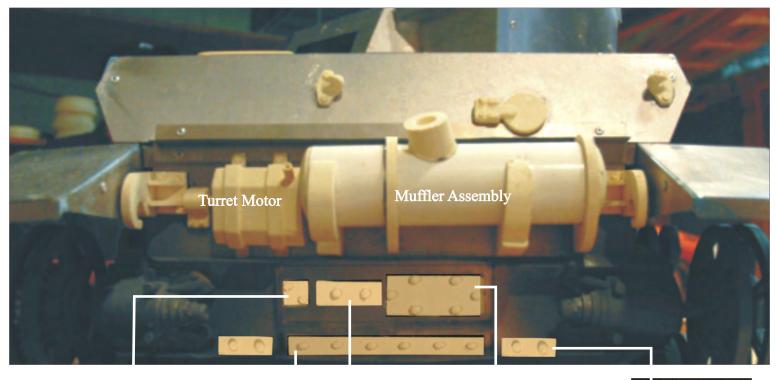
(1) Rear Tow Hook Assembly Install one (1) Rear Tow Hook Assembly to left side rear on the Chassis just under the Rear Brace

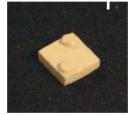
Individual Part Placement

Bolt Details

Placement locations for Bolt Details #1, #2, #3, #4 and #5.

Rear View





(1) Rear Bolt Detail #1 Install this Bolt Detail above the rear Towing Bracket inside the Towing Bracket Housing on the left side.



(1) Rear Bolt Detail #4 Install this Bolt Detailhorizontally inside the Towing Bracket



(1) Read Bolt Detail #2 Install this Bolt Detail between Bolt Detail #1 and Bolt Detail #5 above the **Towing Bracket**



(1) Rear Bolt Detail #5 Install this Bolt Detail above the rear Towing Bracket inside the Towing Bracket Housing on the right side.

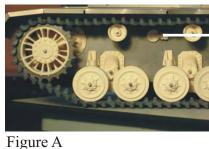


(2) Rear Bolt

Detail #3 Install one (1) Bolt Detail on either side between the Towing Bracket Brace and the Idler Mount Assembly

Chassis Service Hatch

Install the Chassis Service Hatches on the left side of the Chassis. One (1) in front as shown in Figure A and one (1) in the rear as shown in Figure B.



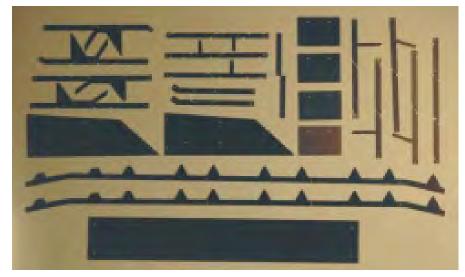




(2) Chassis Service Hatch

Figure B

Turret Schuertzen (Accessory Package "A")



These are all the parts that should be in your Schuertzen Accessory Kit "A". It should be noted that this Kit contains the hangers for the Side Shields available in our Schuertzen Accessory Kit "B".

NOTE: The notches in the Brackets indicate the points along the length of the Bracket shaft that there is a bend to be made. Some notches are used in combination to define the angle at which the Bracket shaft is to be bent. Also the Bracket for the Right Side is the Mirror image of the Left Side and should be bent in exactly the opposite configuration.

Step 1. Locate the two (2) Turret Side Shield Brackets (Rear) and bend them into the configuration as shown in Figure 1a, 1b and 1c. **The Bracket for the Right Side is the Mirror image of the Left Side and should be bent in exactly the opposite configuration.**









Figure 1a

Figure 1b

Figure 1c

Note: These brackets are to be installed using Pop Rivets to the location shown in **Step 4** on either side of the Turret.

(2) Turret Side Shield Bracket (Rear) PZK512M

Step 2. Locate the two (2) Turret Side Shield Brackets (Center). Bend the Bracket along the seam between the shaft and the body to 90 degrees as shown in Figure 2a and then bend into the configuration as shown in Figure 2b and 2c. **The Bracket for the Right Side is the Mirror image of the Left Side and should be bent in exactly the opposite configuration.**









Figure 2a

Figure 2b

Figure 2c

Note: These brackets are to be installed using Pop Rivets to the location shown in **Step 4** on either side of the Turret.

(2) Turret Side Shield Bracket (Center) PZK513M

Turret Schuertzen (Accessory Package "A")

Step 3. Locate the two (2) Turret Side Shield Brackets (Front) and bend them into the configuration as shown in Figure 3a, 3b, 3c, 3d, 3e and 3f. The Bracket for the Right Side is the Mirror image of the Left Side and should be bent in exactly the opposite configuration.









Figure 3c



Figure 3d



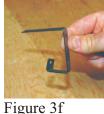


Figure 3a

PZK514M

(2) Turret Side Shield Bracket (Front)

Note: These brackets are to be installed using Pop Rivets to the location shown in **Step 4** on either side of the Turret.

Step 4. Secure the Front, Center and Rear Brackets to the Turret as shown in Figure 4a by aligning the holes in the Turret and the holes in the Bracket and using Pop Rivets (See Figure 4b).





Figure 4a

Figure 4b

Step 5. Locate the two (2) Turret Side Shields and bend the front, angled portion at the seam into the configuration as shown in Figure 5a.



(2) Side Turret Shield PZK517M



Figure 5a

Figure 6c

Step 6. Line up the holes in the Brackets and the Side Shields and secure in place using Pop Rivets (See Figures 6a, 6b and 6c). Make sure the pointed end is at the bottom (and that you don't put your eye out).



Figure 6a





Figure 6b

Turret Schuertzen (Accessory Package "A")

Step 7. Locate the Rear Turret Shield and bend it into a semi-circle shape. Position the Rear Turret Shield around the rear of the Bustle and align the hole in the Rear Turret Shield with the holes in the Rear Turret Shield Bracket.

Rear Turret Shield Bracket

Secure in place using Pop Rivets.



(1) Rear Turret Shield PZK516M

Step 8. Locate the four (4) Doors and the Door Latch. Break the Door Latch into two (2) individual pieces. Place one (1) piece along the edge of the Door opposite the edge with the holes in it and so that the edge of the Door laps over the latch half way. Secure in place using Epoxy.



(4) Door PZK518M



(1) Door Latch PZK519M

Note: The later versions of the Panzer IV do NOT have holes in the doors and in any case you will need to drill holes in the doors to accept the hobby hinges (not provided) and fill the holes in the doors prior to painting.

Rear Turret Shield

Step 9. Using Hobby hinges (not provided) on one side of the tank attach one (1) Door (the one with the Latch attached and with the latch to the outside) to the Front Turret Side Shield and one (1) Door (without a Latch attached) to the Rear Turret Shield. Repeat the process for the other side (See Figure below).

Note: The later versions of the Panzer IV do NOT have holes in the doors and in any case you will need to drill holes in both the doors and the Side and Rear Shields to accept the hobby hinges (not provided) and to fill the holes in the doors prior to painting.



Turret Schuertzen (Accessory Package "A")

Step 10. We are now ready to install the Brackets for mounting Side Shield Hangers. There are eight (8) Brackets in total and are installed to the Upper Deck. First locate the two (2) Upper Deck (Hull) Side Shield Hanger Brackets (Front) and bend them into the configuration as Shown in Figure 10a. Align the holes in the Bracket with the holes in the Upper Deck and secure in place with Pop Rivets. The Bracket for the Right Side is the Mirror image of the Left Side and should be bent in exactly the opposite



(2) Upper Deck (Hull) Side Shield Bracket (Front) PZK522M

NOTE: The notches in the Brackets indicate the points along the length of the bracket shaft that there is a bend to be made.

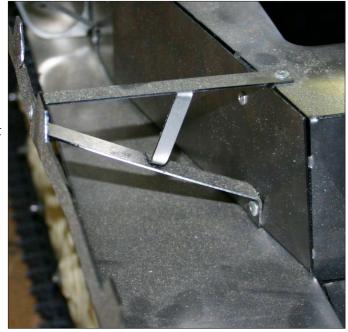


Figure 10a

Step 11. Locate the two (2) Upper Deck (Hull) Side Shield Hanger Bracket (Rear) and bend them into the configuration as Shown in Figure 11a. Align the holes in the Bracket with the holes in the Upper Deck and secure in place with Pop Rivets. The Bracket for the Right Side is the Mirror image of the Left Side and should be bent in exactly the opposite configuration.



(2) Upper Deck (Hull) Side Shield Bracket (Rear) PZK526M

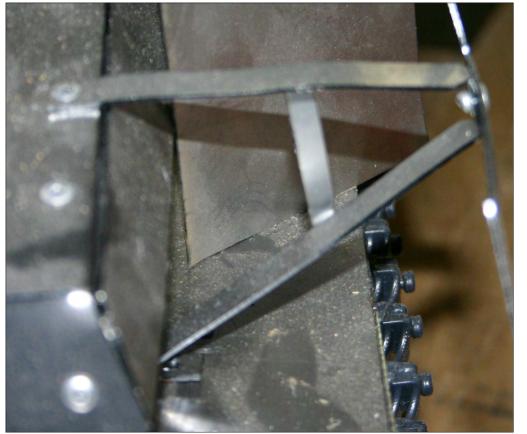


Figure 11a

Turret Schuertzen (Accessory Package "A")

Step 12. Locate the three (3) Upper Deck (Hull) Side Shield Hanger Brackets (Middle) and bend them into the configuration as Shown in Figure 12a. Align the holes in the Bracket with the holes in the Upper Deck and secure in place with Pop Rivets. These Brackets are the two (2) Middle Brackets on the Left Hand side of the tank and the Front most middle bracket on the right hand side of the tank. There is a special bracket that goes to the Air Cleaner Location. The Bracket for the Right Side is the Mirror image of the Left Side and should be bent in exactly the opposite configuration.

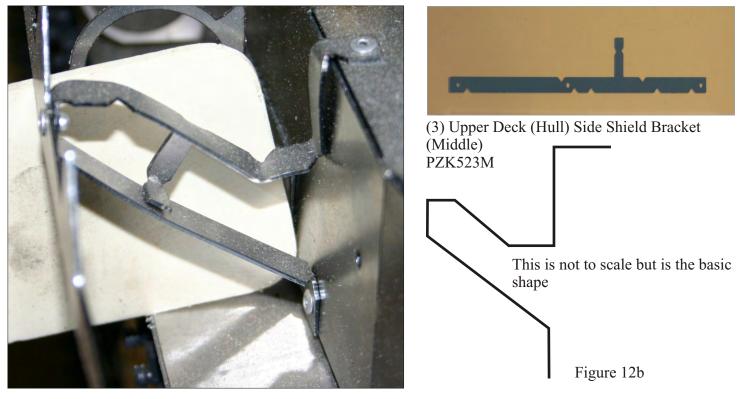


Figure 12a

Step 13. Locate the one (1) Upper Deck (Hull) Side Shield Hanger Brackets (Middle) and bend it into the configuration as Shown in Figure 13a. This is the special bracket that goes to the Air Cleaner Location. Align the holes in the Bracket with the holes in the Upper Deck and secure in place with Pop Rivets. **The Bracket for the Right Side is the Mirror image of the Left Side and should be bent in exactly the opposite configuration.**



(1) Upper Deck (Hull) Side Shield Bracket (Middle - Special)(At Air Cleaner) PZK525M

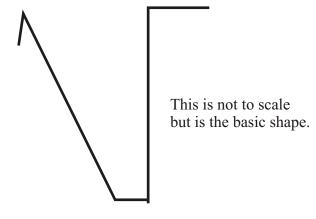
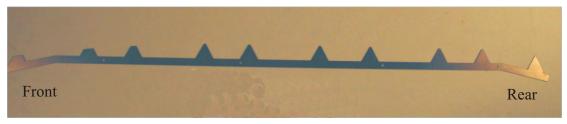


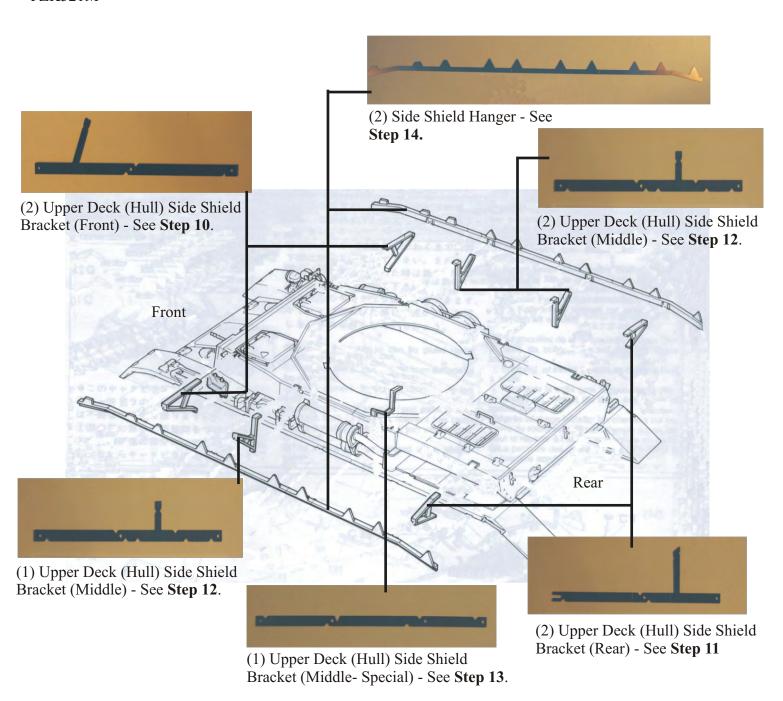
Figure 13a

Turret Schuertzen (Accessory Package "A")

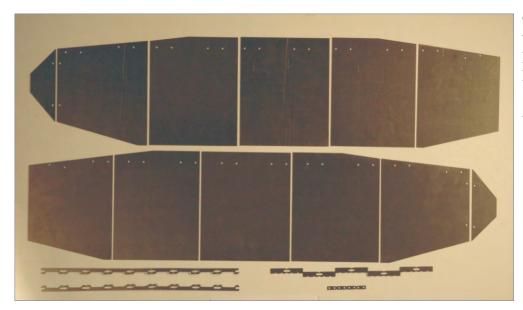
Step 14. Locate the two (2) Side Shield Hangers. With the jagged side to the top and the sharper angle in the length to the front align the holes in the Side Shield Hangers with the holes in the Side Shield Brackets secure in place with Pop Rivets.



(2) Side Shield Hanger PZK521M



Side Schuertzen (Accessory Package "B")



These are all the parts that should be in your Schuertzen Accessory Kit "A". It should be noted that this Kit contains the hangers for the Side Shields available in our Schuertzen Accessory Kit "B".

Step 1. Locate the Side Skirt Panel 1A and Side Skirt Panel 1B and Front Side Shield Fasteners. Break the Front Side Shield Fasteners in to four (4) individual pieces. With Two (2) of the fasteners Join Side Skirt Panel 1A to Side Skirt Panel 1B by aligning the holes in the Fasteners with the holes in the Side Skirt Panels and securing them

with Pop Rivets. The resultant is a single Side Skirt Panel #1 (See Figure 1a).



(2)Side Skirt Panel #1B PZK532M



2) (Side Skirt Panel #1A PZK533M



(1) Front Side Shield Fastener PZK527M

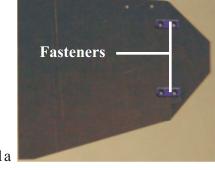


Figure 1a

Step 2. Locate the two (2) Side Shield Attachment Clips and break them into Twenty (20) individual pieces and allocate two (2) clips for each Side Panel. Bend the individual Side Shield Attachment Clips to the shape as shown in Figure 2a and then attach two (2) Clips to the back sides of each of Side Skirt Panels #1, #2, #3, #4 and #5 using Pop Rivets (See Figure 2b).



(2) Side Shield Attachment Clip PZK515M

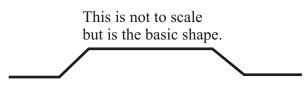


Figure 2a

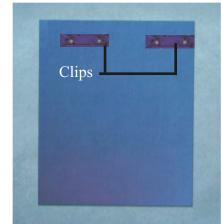


Figure 2b

Side Schuertzen (Accessory Package "B")

Step 3. Locate the Fender Spacer part and separate it into ten (10) individual pieces. Bend the notched end 90



(1) Fender Spacer PZK520M



Figure 3a

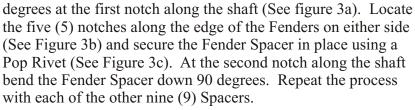




Figure 3b



Figure 3c



Figure 3d

Step 4. Hang the Side Skirt Panels on the Side Shield Hanger included in Accessory Package "A". The Panel arrangement is as shown below.



(2) Side Skirt Panel #5 PZK 528M



(2) Side Skirt Panel #4 PZK529M



(2) Side Skirt Panel #3 PZK 530M



(2) Side Skirt Panel #2 PZK531M



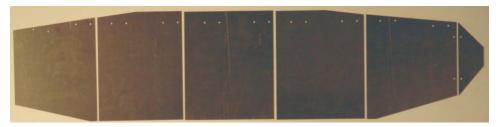
(2) Side Skirt Panel #1B PZK532M



(2) Side Skirt Panel #1A PZK533M



Left Side Skirt Panel Arrangement



Right Side Skirt Panel Arrangement