

# ENTERPRISE-D POWER CONDUIT TRENCH COVERS

DON'S LIGHT & MAGIC  
DLM

PARA  
GRAFIX™  
PGX239

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## INTRODUCTION

ParaGrafix is pleased to rerelease the classic Enterprise-D warp engine power conduit trench cover set we originally produced exclusively for Don's Light and Magic (DLM). This set allows the builder to run wiring to the warp engines to run lighting for the engines, Bussard collectors without the wires showing.

## TOOLS & MATERIALS

In addition to the photoetch, you will also need scissors\* or a knife\*\* to remove individual pieces from the main fret, a file to remove material left from cutting\*\*\*, and super glue\*\*\*\* (aka CA or cyanoacrylate).

Slow setting super glues are preferred as they allow time for shifting parts around to ensure the best fit possible.

For the templates, you will need a set of standard scissors as well as a pencil or sharp hobby blade to mark the hull, plus tape to hold the templates while marking.

To remove pylon material for the trenches you will need a rotary cutting tool such as a Dremel or Tamiya Handy Drill or Handy Router. (The Tamiya tools run slowly enough that the kit plastic will not melt as easily.) A 1/4 inch (6mm) end mill bit is ideal for routing the trenches – in addition, a 1/4 inch ball end mill is useful in the curved areas at the pylons' "elbows".

\* Xuron's Professional Photoetch Scissors (9180ET) are ideal for cutting this set's extremely thin brass.

\*\* We prefer a #17 Xacto chisel blade.

\*\*\* Diamond files have a random surface texture that is less likely to catch and bend photoetched parts. Zona's set number 37354 is an excellent choice.

\*\*\*\* Creative Dynamic's Glue Looper is an excellent super glue applicator.

### Key

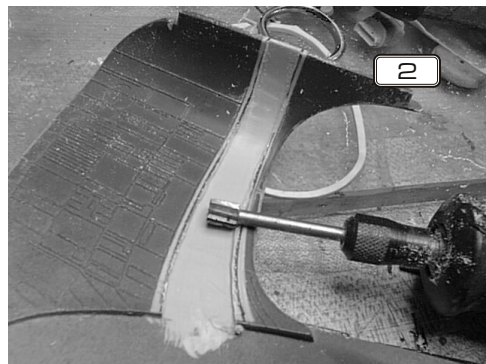
Photoetched part: **1**

Alignment: **C**

## PREPARE POWER TRENCHES MARK TRENCHES

Cut out the two templates and tape them in place on the hull over the corresponding kit details. If you will be marking the hull with a pencil, cut the templates to the dotted line; if marking with a hobby knife cut out the entire template.

Mark the hull using either a sharp pencil or, also sharp, hobby blade. Make sure the markings are easily visible. See figure 1. (Note that the cut areas have been marked in paint in the photos for illustration purposes.)



## ROUTE OUT TRENCHES

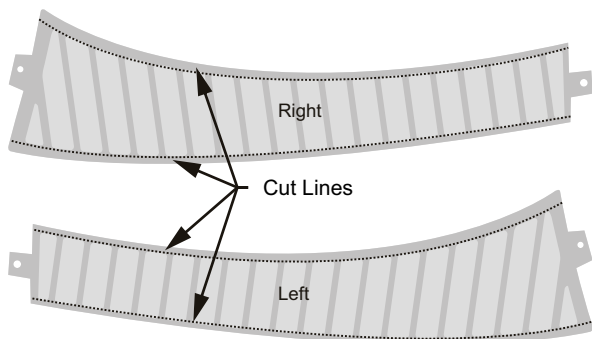
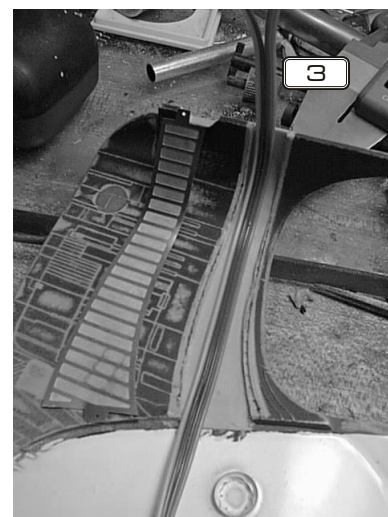
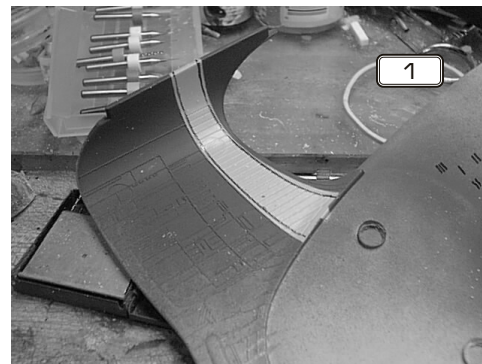
Using your tool of choice, route out about one-half of the thickness of the pylon. See figure 2.

**DO NOT** route all of the way through the pylon!

Slow and steady patience are necessary for this step so that the plastic is not melted, you do not cut past your cut lines, and you do not cut through the pylon.

## TEST DEPTHS

Test the depth of your trench against your chosen power leads. The leads should fit completely within the trench. See figure 3.



You may photocopy these templates for personal use. Alternatively, these instructions are available at [www.ParaGrafix.biz/instructions/PGX239.pdf](http://www.ParaGrafix.biz/instructions/PGX239.pdf). When printing the instructions, make sure that scaling is turned off.



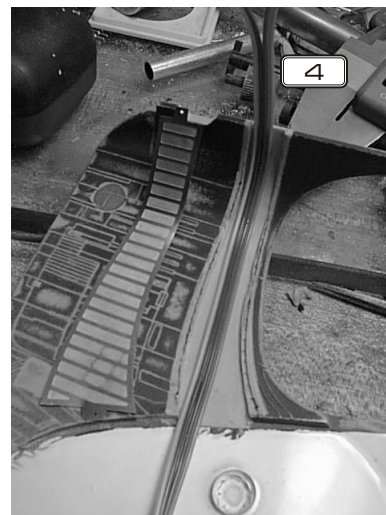
## INSTALL WIRING

Once the trench is complete, lay the ribbon cable (or individual wires) into the trench and glue them down. See figure 4.

To help protect the brass parts from warping or being dented during handling, we suggest filling in the remainder of the trench with filler putty or epoxy cement. When the filler is fully cured, sand it smooth. See figure 5.

**TIP:** Brass is electrically conductive. The two covers incorporate tabs with holes in them that allow the builder to use the covers as additional "wires" and are ideal for use as a common ground lead. Please note that you should solder the ground leads to the brass parts before attaching them to the kit or painting – the heat from soldering will damage paint and melt the kit's plastic parts.

For ease of construction, you can add short (1 to 2 inches, 25 to 50 mm) pigtailed to the brass parts. This will allow you to assemble major portions of the kit and attach the brass covers before completing your wiring.



## FINAL ASSEMBLY INSTALL TRENCH COVERS

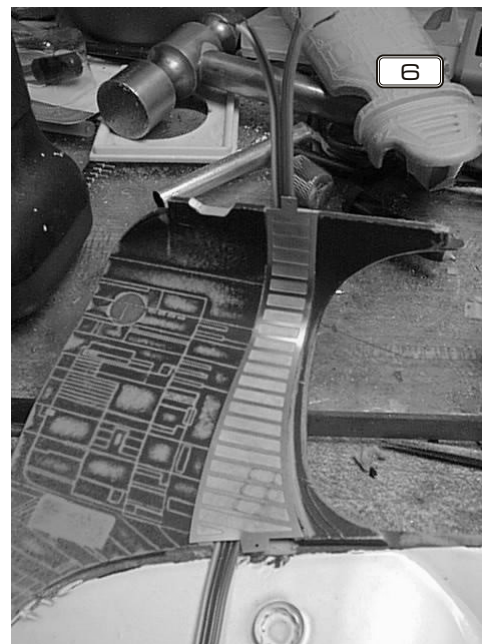
Pre-bend the brass pieces to follow the contour of the warp engine pylons using the pylons themselves as a form.

**TIP:** Because this brass has large, thin areas, we advise that you **do not** anneal the parts before bending them.

Glue the photoetched trench covers to the kit using super glue or a very thin layer of epoxy cement. A slow setting glue is preferable so that there is time to adjust the parts' positions before the glue sets up. See figure 6.

## COMPLETE MODEL

Once the trench covers' glue joints have fully set, complete the kit's assembly including connecting wiring to the power cables, painting and lighting.



ParaGrafix, Inc.  
Attleboro MA 02703 USA  
+1 508-431-9800  
[www.ParaGrafix.biz](http://www.ParaGrafix.biz)

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