

## **Plasma cutting application: Armored vehicle Manufacture and repair**

### **Specific plasma use**

#### **Armor panel fabrication**

High-hard steel or titanium plates of various thicknesses, typically 3/16" to 1/2" (5 to 12 mm), are cut to size using hand-held torch or mechanized torches on a CNC table. Panels are then pierced to cut interior holes for windows, gun ports, wiring harnesses, vents, etc.

**Systems** Powermax600®, 1000, 1250 or 1650

#### **Mounting bracket fabrication**

Metal strips are cut to the desired size to make custom brackets for mounting armor panels.

**Systems:** Powermax30, 600 or 1000

#### **Body panel removal and modification**

Welds securing stock body panels, typically 22 gauge to 1/8" (.8 to 3 mm) thick, on standard military or civil vehicles are gouged out or panels are cut away to provide access and space for the installation of custom armored panels and other security items.

**Systems:** Powermax30 or 600 or 1000

#### **Armored vehicle repair**

Welds securing collision or ballistic damaged armored panels are gouged out or sections are cut away for the installation of replacement parts.

**Systems:** Powermax30, 600 or 1000



Photo courtesy of ISBI



# **Armored Vehicle Manufacture and Repair**

### **Specific benefits of Powermax systems**

- Minimized vehicle production time: Superior speed of plasma cutting results in shorter cut times and greater productivity over conventional processes such as oxyfuel or saws.
- Improved plate points: High cut quality of plasma improves welds in critical joint areas and reduces undesirable overlapping joints which increase vehicle weight. Improved welded joints also result in a more secure armor shell.
- Minimized secondary operations: Cleaner cuts reduce or eliminate the need for such operations as grinding.
- Maintain ballistic steel properties: The controlled arc and high cutting speeds reduce heat-affected zone and does not compromise the strength properties of armor plates.
- Portability: Compact design of the power supply and torch offers ease of cutting at various locations.
- Ease of use: Drag-cutting technology makes it easy to follow a line or template.
- Best finishing on civil vehicle bodies: Use of FineCut™ consumables delivers higher quality cuts as a result of less dross, narrow kerf and smaller heat affected zone on exterior body panels under 10 gauge (3.4 mm).
- Fast and clean weld removal: Gouge capabilities offer ease of removing existing welds with better control, reduced noise and smoke over conventional methods.
- Protects vehicle electronics: Contact start technology does not affect sensitive vehicle electronics unlike plasma models that use high frequency.

## **Hypertherm®**

**Hypertherm, Inc.**  
Hanover, NH 03755 USA  
603-643-3441 Tel

**Hypertherm (S) Pte Ltd.**  
417847, Republic of Singapore  
65 6 841 2489 Tel

**Hypertherm (Shanghai)  
Consulting Co., Ltd**  
PR China 200052  
86-21 5258 3330 /1 Tel

**Hypertherm Europe B.V.**  
4704 SE Roosendaal, Nederland  
31 165 59 69 07 Tel

**HYPERTHERM BRASIL LTDA.**  
Guarulhos, SP - Brasil  
55 11 6482 1087 Tel

[www.hypertherm.com](http://www.hypertherm.com)

Hypertherm, Powermax and FineCut are trademarks of Hypertherm, Inc. and may be registered in the United States and/or other countries.

© Copyright 12/06 Hypertherm, Inc. Revision 1  
892070