

BROCO

TACTICAL

VEHICLE RESCUE & REPAIR PRODUCTS

**ARMORED VEHICLE CUTTING &
WELDING SOLUTIONS FOR TODAY'S
BATTLEFIELD**



Cutting-

***Broco Tactical Torches** are in service with military and civilian fire, rescue, law enforcement and Special Operations teams the world over. These totally portable, extremely powerful cutting torch systems have the capability of cutting thick steel, aluminum, cast iron and more.*

Broco pioneered the exothermic torch system. Evolved from market leading Broco Underwater[®] and Broco Industrial[®] torches, Broco Tactical Torches are fast, safe and easy to use. Consumable alloy cutting rods utilize oxygen as the only gas to burn at twice the temperature of oxy-acetylene. These lightweight systems are engineered to provide the greatest cutting capability in man portable systems.

Welding-

***Broco GOWELD** was born of the requirement for a durable professional welder that can operate using a vehicle's batteries as its power source yielding unmatched portability, performance and utility.*

In the field with USMC tank recovery mechanics, on board LAV's, with Spec Op units across the services, and now part of the U.S. Army Engineer's Urban Operations Tool Kit, GOWELD enables repairs to drivelines, suspensions and hulls and replacement of hinges, mounts, brackets or plate armor.

GOWELD can be used to weld steel or aluminum to thicknesses exceeding 1/2" utilizing a vehicle's 24v battery system.

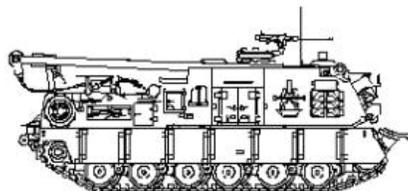
A FASTER PROCESS MEANS REDUCED EXPOSURE FOR CREWS AND VEHICLES

ENHANCED RESCUE AND REPAIR CAPABILITIES SAVE LIVES, LIMIT CREW EXPOSURE AND RETURN NEEDED ARMORED VEHICLE ASSETS TO THE BATTLEFIELD MORE QUICKLY.

CUT A THROWN TRACK IN LESS THAN 5 MINUTES, CUT THROUGH DAMAGED ROAD ARMS IN UNDER THREE MINUTES, OR QUICKLY REMOVE A SET OF HINGES FROM VEHICLE HATCHES FREEING PERSONNEL.

IMAGINE THE BENEFIT FROM MAKING TEMPORARY WELDED REPAIRS TO DRIVELINES, STEERING COMPONENTS OR HULLS IN THE FIELD ALLOWING THE VEHICLE AND CREW TO TRAVEL UNDER THEIR OWN POWER TO SAFETY.

BROCO DELIVERS AN ALTERNATIVE TO TRADITIONAL METHODS OF ACCOMPLISHING THESE SAME TASKS THAT TAKE MANY TIMES LONGER, OFTEN WHILE CREWS ARE UNDER FIRE.



REPAIR & RESCUE TORCH PC/MIL-60

Cut Track, Road Arms, Armor & More



The PC/MIL-60

Repair & Rescue torch is the vehicle mounted repair and rescue evolution of the Broco industrial torch. It fulfills the requirement for cutting track, armor, cast iron, aluminum, titanium, and a wide range of hardened alloys with a fast, easy to operate torch set. In use at U.S. Army armor schools (Ft. Knox and APG) since 1985, the PC/MIL-60 torch set is a standard item on the Army's M88A2 Hercules recovery vehicle.

Cut thick metals, exotic alloys (even enriched armor) other torch systems can't. Rescue crews, repair tracked vehicles, breach heavy security doors and vaults. Remove damaged track, road arms and tensioners quickly. Broco PC/MIL-60 uses only oxygen gas. No acetylene and faster repairs means increased crew safety.

PC/MIL-60 torch outfit includes the torch assembly with 30' oxygen hose and power cables, 30' hose/cable extension set, oxygen regulator, NATO Slave plug (to interface with vehicle power), cutting rods, accessories, and rugged storage case. PC/MIL-60 also includes a 16" rod extender for extra reach (or standoff) and a medical oxygen adapter so D & E cylinders with the post valves can be used with the torch.

After the USMC began purchasing Broco torches for their M88A2 Hercules vehicles, elements of 1st Tank BN at Camp Pendleton had opportunity to experience the utility of the system while training recovery mechanics in the use of the torch.

At the site was a tank that sustained road damage after striking a large rock at high speed, bending the forward road arm. Upon removal of the assembly it was discovered that the stainless steel primary bushing had rotated off its keyway and was misaligned inside the housing. Two days of work left it unmoved and a replacement housing was requisitioned.

During the lunch break a Broco torch was brought over and used to cut the web at the back of the bushing and then using the push-cutting technique, thin the wall of the bushing in two places causing it to collapse into itself after which the pieces were extracted by hand. In total, a 35 minute job.

The housing was left undamaged. A new bushing was installed and the tank repaired at a savings of thousands of dollars and many additional man hours.

PC/MIL-60 Set Contents:

PC/T-30	TORCH, 30' CABLE & HOSE ASSEMBLY
PC/SP-30	STRIKER PLATE ASSY, 30' CABLE
PC/EXMIL60	EXTENSION SET, 30' HOSE & 35' CABLES
HR-3500-1	REGULATOR W/ QUICK CONNECT
600143	SLAVE CONNECTOR ASSY
M87-1	MEDICAL OXYGEN ADAPTER
PC/BAK	BATTERY ADAPTER CLAMPS SET
PC/C-1600M	STORAGE CASE WITH CUSTOM FOAM
PC/LS	LEATHER SHIELD
LBT-6160B	LONG ROD HOLDER
LBT-6160C	ROD/EXTENDER HOLDER
PC/TACXT16	ROD EXTENDER, 16" LONG
PC/INST-TA	MANUAL, OPERATION INSTRUCTIONS
1418PC-SPS	1/4" CUTTING RODS, SAMPLE PACK
3818PC-SPS	3/8" CUTTING RODS, SAMPLE PACK
3836PC-25	CUTTING RODS, 3/8 X 36", 25 LB BOX
PC/TSG	GOGGLES, #5 SHADE
PC/WG	WELDING GLOVES
PC/VRK	VALVE REPAIR KIT
PCRP-303	COLLET NUT
PCRP-305A	COLLET KIT, 3/8"
PCRP-305B	COLLET KIT, 1/4"
PCRP-305C	COLLET KIT, 1/2"
PCRP-305D	COLLET KIT, 3/16"
W1013	WRENCH, 10-WAY

REPAIR & RESCUE TORCH PC/A-5V2HR

Portable, Self-Contained Cutting Power



The PC/A-5V2HR

Repair & Rescue torch is the most recent evolution of the Prime Cut industrial backpacked torch. It meets the requirements of USAR teams for both confined space and extended cutting operations. Torch is setup with 5' hose and cable. Included in the kit is the 25' heavy rescue extension set. Attach the quick connect battery clamps to utilize a standard auto type 12 volt battery, bring up a shop sized oxygen cylinder and it is ready to do a lot of heavy cutting.

PC/A-5V2HR also includes a 16" rod extender for extra reach (or standoff) and a medical oxygen adapter so D & E cylinders with the post valves can be used with the torch. Everything fits in a rugged storage case (included).

This kit was configured for and purchased in early 2003 by the Marines for their heavy repair applications onboard the M88A2 Hercules vehicles. A NATO Slave plug is available to operate the PC/A-5V2HR directly from a military vehicle's battery system.

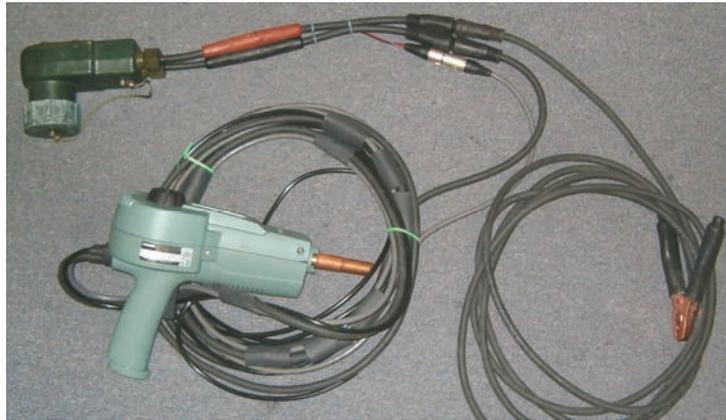
General Benefits

- *Reduced danger to crew by dramatically shortening rescue & repair time.*
 - *Exothermic torch process does not require cleaning or pre-heating of parts.*
 - *Exothermic torch has no electric shock hazard.*
 - *Exothermic torch does not use hazardous secondary fuels like acetylene or gasoline.*
 - *Exothermic torch can cut while submerged in standing water.*
 - *Exothermic torch is quick to setup and easy to use.*
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PC/A-5V2HR Set Contents:

BOC-N045	ALUMINUM OXYGEN CYLINDER
PC/T-5	TORCH WITH CABLE & HOSE ASSEMBLY, 5'
PC/SP-5	STRIKER PLATE 5' LONG W/ CONNECTOR
PCEX-25	HOSE & CABLE EXTENSION SET, 25'
PC/TAC3105250	SUBMERSIBLE OXYGEN REGULATOR
PC/BISLW	LIGHTWEIGHT BATTERY IGNITION SYSTEM W/ CHARGER
PC/ARC-BP-BK	BROCO MODULAR MOLLE BACKPACK SET; INCLUDES– BACKPACK PLATFORM, CYL- INDER CARRIER, LONG ROD QUIVER, SHORT ROD QUIVER, ROD EXTENDER HOLDER, BAT- TERY POUCH, GEAR POUCH AND WEB CLIPS
PC/LS	LEATHER SHIELD
PC/LSH	LEATHER STRIKER HOLDER
PCRP-305A	COLLET KIT, 3/8"
PCRP-305B	COLLET KIT, 1/4"
PCRP-305D	COLLET KIT, 3/16"
PCRP-305C	COLLET KIT, 1/2"
PC/TACXT16	ROD EXTENDER, 16" LONG
M87-1	YOKE ADAPTER, MEDICAL OXYGEN, CGA 870 X CGA 540
PC/BAK	BATTERY ADAPTER CLAMPS SET
PC/TFHBL	TRANSFILL HOSE
PC/TSG	GOGGLES, #5 SHADE
PC/WG	WELDING GLOVES
1418PC-SPS	1/4" CUTTING RODS, SAMPLE PACK
3818PC-SPS	3/8" CUTTING RODS, SAMPLE PACK
PC/C-1650	STORAGE CASE W/ CUSTOM FOAM

PORTABLE MIG WELDER GOWELDUSMC



GOWELD® Portable MIG Welder

is a versatile welding product with unrivaled features. Built to last in the harshest environment, GOWELD® features a die cast aluminum chassis, heavy duty motor with optical encoder and programmed microprocessor control circuit to monitor feed and weld functions. Together the optical encoder and microprocessor yield speed control with the least variance. More consistent speed means more consistent welds. LEDs indicate power status, polarity, and low battery warning.

A requirement exists for welding capability that can be transported and fielded from any military vehicle. Temporary repair facilitating the movement of a vehicle under its own power reduces personnel time in the field and poses less exposure and danger to crews of both towed and towing vehicles. Broco GOWELD portable welder provides capability of welding steel or aluminum to thicknesses exceeding 1/2" utilizing a vehicle's 24v battery system.

GOWELD is a 'spool gun' using wire electrode from 2lb or 1lb (aluminum) spools housed within the welder body. GOWELD connects to the vehicle by way of a NATO Slave plug or conventional battery clamps. GOWELD uses either self-shielding flux-cored mild steel welding wire or gas shielded aluminum welding wire. GOWELDUSMC kit weighs only 32 lbs including Slave plug and padded case.

GOWELD DATA

Process: FCAW, GMAW

*Wire speed range: 50 ipm – 1100 ipm
(inches/minute)*

*Wire diameters: .023" (0.6mm) -
.045" (1.2mm)*

Input voltage:

Batteries, 2 x 12v: 24vDC

Batteries, 3 x 12v: 36vDC

Output voltage range:

15vDC – 26vDC (2 batteries)

22vDC – 39vDC (3 batteries)

Amperage: 200+

Duty cycle: 50%

*Automatic protection: (LED indicators,
see manual for details)*

Motor overheat

Wire jam

Low Battery shutdown



GOWELDUSMC Kit Contents:

- GOWELD portable welder with 20' cable
- Ground cable with clamp, 20'
- Slave connector & adapter cable assembly
- Battery clamp harness assembly
- Spare parts set including:
 - Contact tips
 - Nozzle & insulator
 - Gas diffuser
- Welding wire
- Accessories
- Padded soft case

GLOBAL MILITARY CUSTOMERS

U.S. Tactical Torch Customers-

- U.S. Army M88A2 Recovery Vehicle program (Model PC/MIL-60)
- U.S. Army Forward Recovery System- Heavy (FRS-H) program (Modified PC/MIL-60)
- U.S. Army Forward Metal Working Set program (New) (PC/MIL-60)
- U.S. Army Engineers Urban Operations Pioneer Tool Set program, Platoon Level (PC/TACMOD1)
- U.S. Army Special Forces (PC/TACMOD1)
- USMC M88A2 Hercules Vehicle program (PC/A-5V2HR)
- USMC Light Armored Reconnaissance (PC/A-5V2HR)
- USMC Amphibious Assault (PC/A-5V2HR)
- USMC Marine Expeditionary Forces (PC/TACMOD1)
- U.S. Navy SEALs (PC/TACMOD5)
- U.S. Coast Guard MSST (PC/TACMOD1)
- OEM Supplier To BAE Ground Systems

Foreign Tactical Torch Customers-

- UK MOD CRARRV Challenger Recovery Vehicle (Model PC/MIL-30BAE) (Through BAE UK)
- UK Special Forces (PC/TACMOD1, PC/MTMOD1 Mini-Tac)
- Swedish Army (PC/MIL-60)
- Canadian Defense Forces (Rescue) (PC/A-5V2HR)
- Canadian Defense Forces Combat Engineers (PC/TAC-A/PC/TACMOD4)
- Canadian Defense Forces Special Forces (PC/TACMOD1, PC/MTMOD1 Mini-Tac)
- French Army Combat Engineers (PC/TCMOD1)
- Italian Navy (Damage Control) (PC/A-5V2HR)
- Royal Australian Navy (Damage Control) (PC/A-5V2HR)
- Australian Army Special Forces (PC/TACMOD1)
- Singapore Defense Forces (PC/TAC-A)
- German Army Combat Divers (Modified PC/MIL-60)
- German Federal Law Enf. Special Units (PC/TACMOD1, PC/MTMOD1 Mini-Tac)
- Portuguese Navy Special Forces (PC/TAC-A)
- Republic of South Korea Maritime Police (Coast Guard) (PC/A-5V2HR)

GOWELD Customers-

- On-board welder for the USMC M88A2 Recovery Vehicle
- On-board welder for the UK MOD CRARRV Vehicle
- U.S. Army Combat Engineer's Urban Operations Tool Set
- U.S. Army and U.S. Navy Special Forces
- USMC Light Armored Reconnaissance and Amphibious Assault units
- U.S. Navy SeaBees

• **CUTTING TORCH SETS**

- **PC/MIL-60 VEHICLE MOUNTED**
NSN 3439-01-553-0279
3433-01-560-8668
- **PC/A-5V2HR BACKPACKED**
NSN 3433 01 554 9829

• **PORTABLE MIG WELDER**

- **GOWELDUSMC**
NSN 3439 01 584 9441

• **CONSUMABLES**

CUTTING RODS

- **3836PC-25**
NSN 3439 01 411 3866
- **3818PC-25**
NSN 3439 01 411 7879

RAPIDFIRE ROD IGNITERS

- **PC/RFC-10**
NSN 3439 01 478 3168

WELDING WIRE

- **500124 FLUX CORED**
NSN 3439 01 576 8437

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CAUTION: Cutting & welding equipment is potentially dangerous to operate and must be used only by trained professionals in strict accordance with industry accepted standards and practices.