

# Foamney

## PLASMA CUTTER

# OWNER'S MANUAL

## WITH BUILT-IN AIR COMPRESSOR



- Uses electrical arc and compressed air to cut steel, aluminum and other conductive metals.
- Drag torch technology allows you to move (drag) torch directly across the metal surface for more precise cuts.
- Cuts up to 1/8" mild steel and severs up to 1/4" steel.
- Uses standard household 120 VAC current.
- Built-in piston driven compressor and lightweight inverter power supply.
- Thermal overload protection
- Three diagnostic LED lights (power, temperature, and torch energized/ready to work).
- Post-Flow air cooling.



# Forney 5/3/1 Limited Warranty

Effective August 1st, 2009

- 1) **Limited Warranty** – Subject to the terms and conditions below, Forney Industries, Inc., Fort Collins, Colorado, warrants to its original retail purchaser that the new Forney equipment sold after the effective date of this limited warranty is free of defects in material and workmanship at the time it is shipped by Forney. This is in lieu of all other warranties, express or implied.
- 2) **Notification:** Please call 1-800-521-6038 with your warranty questions. You can also visit [forneywelding.forneyind.com](http://forneywelding.forneyind.com) for additional information about your new welder.
- 3) **Length of Warranty:** Within the warranty periods listed below, Forney will repair or replace any warranted parts or components that fail due to defects in material or workmanship. Warranty is effective from the date of original retail purchase. Warranty duration is as follows.
  - A) **5 years:** Original main power rectifiers only to include SCRs, diodes and discrete rectifier modules, transformers, stabilizers and reactors.
  - B) **3 years:** Drive Systems, PC Boards, Motors, and Switches and Controls
  - C) **1 year:** MiG guns, relays, contactors and regulators, plasma cutting torches, and accessories.
  - D) **90 days:** Replacement parts. Does not include labor.
- 4) Forney's limited warranty shall not apply to consumables such as contact tips, cutting nozzles, felt wire cleaner, drive rollers, gas diffusers, plasma torch tips and electrodes, weld cables, tips and parts that fail due to normal wear. In addition, this warranty does not extend to any damage caused by the untimely replacement or maintenance of any of the previously listed consumable parts.
- 5) **Warrantor:**  
Forney Industries  
1830 LaPorte Avenue  
Fort Collins, CO 80521  
1-800-521-6038  
[forneywelding.forneyind.com](http://forneywelding.forneyind.com)
- 6) **Purchaser / Warranty:** The original purchaser of the Forney Industries product. The warranty is not transferable. Forney Industries products are intended for purchase and use by persons trained and experienced in the use and maintenance of welding equipment.
- 7) **What is not covered under the warranty:**
  - A) Implied warranties, including those of merchantability and fitness for a particular purpose are limited in duration to this express warranty. After this period, all risks of loss, from whatever reason, shall be on the purchaser.
  - B) Any incidental, indirect, or consequential loss, damage, or expense that may result from any defect, failure or malfunction of the Forney product.
  - C) Any failure that results from accident, purchaser's abuse, neglect or failure to operate products in accordance with instructions provided in the owner's manual(s) supplied with the product.
  - D) Pre-delivery service, i.e. assembly and adjustment.
- 8) **Claim:** In the event of a warranty claim under this warranty, the exclusive remedies shall be, at Forney Industries sole option:
  - A) Repair; or
  - B) Replacement; or
  - C) Where authorized in writing by Forney Industries, the cost of repair or replacement at an authorized Forney Industries service station; or
  - D) Payment of or credit for the purchase price less reasonable depreciation based on actual use upon the return of the goods at the customer's risk and expense.
- 9) **Purchaser will:**
  - A) Contact Forney's customer service at 1-800-521-6038 within 30 days of the defect or failure.
  - B) Provide dated proof of purchase (typically a purchase receipt).
  - C) Provide the serial number. Registering your welder at [forneywelding.forneyind.com](http://forneywelding.forneyind.com) will speed up this process.
  - D) Deliver or ship welder to a Forney authorized service center. Freight &/or packaging costs, if any, must be borne by the purchaser.

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## **CAUTION!**

**BEFORE INSTALLING, OPERATING OR CARRYING OUT MAINTENANCE ON THE PLASMA CUTTER, READ THE CONTENTS OF THIS MANUAL CAREFULLY, PAYING PARTICULAR ATTENTION TO THE SAFETY RULES.**

**In the event of these instructions not being clear, please contact your supplier.**

CONGRATULATIONS ON YOUR NEW PURCHASE!  
YOU ARE NOW IN THE POSSESSION OF ONE OF THE SAFEST AND MOST TECHNOLOGICALLY ADVANCED PLASMA CUTTERS ON THE MARKET.  
FOLLOW OUR SUGGESTIONS AND YOU WILL BE GUARANTEED SAFE AND PROBLEM-FREE OPERATION.

## **SAFETY RULES AND GENERAL WARNINGS**

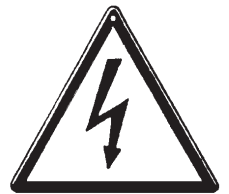
### **INTRODUCTION**

Your plasma cutting unit is fitted with sophisticated safeguards which block functioning and therefore the cutting operations until all the safety conditions are present. The plasma cutting technique requires dangerously high voltage for pilot arc starting and during cutting, therefore the following safety rules must be observed with great care.



### **ELECTRICITY**

- Make sure that the unit is grounded and that the supply line has an adequate ground connection.
- Make sure that the work bench has a satisfactory ground connection.
- Avoid contact between the material being cut and bare skin or damp clothes.
- Do not lean on the piece being cut or hold it in your hands.
- Do not carry out cutting operations in damp environments or on wet surfaces.
- Do not use the unit if the torch or cables appear damaged.
- Always turn the unit off before replacing the shield cup, air diffuser, tip or electrode.
- Always switch the unit off and remove the power cable from the mains socket before carrying out any maintenance inside the unit.
- Do not operate with cover removed.
- Do not touch live electrical parts.



## **CAUTION!**

**Repairs, maintenance and operation of the unit should be carried out by trained personnel who are aware of the risks caused by the high voltage needed to operate the plasma cutting unit.**

**The operator should work in compliance with current standards and abide by all safety regulations.**

## **CAUTION!**

**If during the cutting operation a slight electric shock is felt, stop work immediately and do not use the unit until the fault has been discovered and resolved.**

## EYE AND BODY PROTECTION

One of the hazards during the welding/cutting process is the emission of electromagnetic waves due to the electric arc. The length of these waves ranges from infrared to ultraviolet. If these rays hit the eyes, they can cause various complaints such as conjunctivitis, burns to the retina, deterioration of sight, etc. Moreover a high concentration of ultraviolet rays can burn the skin. It is, therefore, extremely important that the operator uses adequate safety equipment and clothing, such as:

- Leather gloves
- Leather aprons
- Shin-guards
- Safety shoes
- Safety mask (or even better helmet) large enough to cover the whole of the face, equipped with safety lenses able to filter all the radiation and reduce the intensity of the light absorbed by the eye.



### **CAUTION!**

**Never, under any circumstances, look at an electric arc without eye protection.**

### **CAUTION!**

**A further hazard for eyes is the risk of splinters or particles which may be detached during the cutting operations or during grinding, brushing or hammering away of the scale.**

**Always wear goggles or protective shields with transparent lenses during these operations to prevent splinters or other foreign bodies from entering the eye.**



**IMPORTANT:** *safety screens should be installed around the welding area to protect other people, who may be working in adjacent areas, from the radiation given out by the arc.*

## CUTTING FUMES AND GASES

Harmful fumes and metallic powders are produced during the cutting operation. Metals which are painted or coated or which contain mercury, cadmium, zinc, lead and graphite may produce harmful concentrations of toxic fumes during cutting.

To protect the operator or other persons from exposure to possible toxic fumes, fume respirators should be worn and work areas should be adequately ventilated.

When working in enclosed environments, suction units should be fitted below the cutting area.

### **CAUTION!**

**When halogenated solvents or degreasing agents are present, the material to be cut should be cleaned properly to prevent the formation of toxic gases.**

**Some chlorinated solvents may decompose in the presence of the radiation given out by the arc and may generate phosgene gas.**

## FIRE HAZARDS

- Prevent sparks or hot scale from producing flames
- Remove inflammable or combustible materials from the cutting area.
- Make sure that fire-fighting equipment is located near the work area.
- Situate the unit in an area where the air can be sucked in and exhausted from the grilles on the panel

### **CAUTION!**

**Do not cut fuel or lubricant containers even if these are empty.**

**Do not cut containers or casings which contain inflammable material.**

**Never cut in environments which are polluted by inflammable gas or combustible liquid vapors (such as petrol).**

## NOISE

Noise is generated during the cutting process. The noise level depends on the cutting parameters used.

**CAUTION!**  
**Noise can damage hearing**  
**Wear adequate hearing protection.**

## BURNS

The operator should be adequately protected during cutting operations. This should be routine practice.

**CAUTION!**  
**Do not point the torch jet at people or foreign bodies.**

## EMC

Before installing the plasma cutting unit, carry out an inspection of the surrounding area, observing the following guidelines:

- Make sure that there are no other power supply cables, control lines, telephone leads or other equipment near the unit.
- Make sure that there are no radio receivers or television appliances.
- Make sure there are no computers or other control systems.
- Make sure that there is no-one with a pacemaker or hearing aid in the area around the unit.
- Check the immunity of any other equipment operating in the same environment. In certain cases additional protective measures may be required.

Interference can be reduced in the following ways:

- If there is interference in the power supply line, an E.M.C. filter should be inserted between the mains and the unit.
- The output cables of the unit should be kept close together and stretched along the ground.
- All the panels of the unit should be correctly closed after carrying out maintenance.

## GENERAL INFORMATION

### PLASMA ARC AND BASIC PRINCIPLES FOR THE PERFORMANCE OF PLASMA CUTTING

- Plasma is a gas that is heated to an extremely high temperature and ionized so that it becomes a conductor of electricity.
- This cutting procedure utilizes the plasma to transfer the electric arc to the metal workpiece, which is melted by the heat and then separated.
- The torch uses compressed air from a single source, for both the plasma and cooling and protective gas.
- The start of the cycle is determined by an arc, called the pilot arc, which is struck between the mobile electrode (negative polarity) and the torch nozzle (positive polarity) due to the short circuit between these two elements.
- When the torch is brought into direct contact with the workpiece to be cut (connected to the positive polarity of the power source) the pilot arc is transferred between the electrode and the workpiece itself thus striking a plasma arc, also called cutting arc.
- The duration of the pilot arc is set in the factory at 3 seconds; if the transfer has not been made within this time, the cycle is automatically stopped except for the cooling air which is kept on.

## LOCATION AND HANDLING OF THE POWER SOURCE

- Choose location verifying that there is a good air flow and no dust, smoke or gas is present.
- Place the unit on a flat and stable surface.
- Make sure that obstacles do not prevent the cooling air flow out of front and rear openings of the machine.
- Arrange an open space of at least 5m around the machine.
- In the case the machine has to be moved, always disconnect the plug from the outlet and gather the cables so as not to damage them.

## POWER SUPPLY CONNECTION

The machine must be connected to a Line-Neutral system with a "PE" protected grounding wire. **Check that the relevant socket terminal is actually connected to the distribution system grounding.** This machine is shipped with a power cord complete with a 120V/15Amps (NEMA 5-15P) plug.



### **CAUTION!**

**A circuit capable of 15 Amps, 120V is required for proper operation. Protect the circuit with appropriately sized time-delay fuses (20A) or circuit breakers.**

## EXTENSION CORD RECOMMENDATIONS

Avoid using an extension cord unless absolutely necessary. If necessary, use an extension cord of an appropriate wire size for the cord length and system voltage. Use a cord that meets national and local cods.

<b>Input Voltage</b>	<b>Phase</b>	<b>Recommended cord gauge size</b>	<b>Length</b>
120VAC	1	12 AWG	up to 33 ft (10m) - suggested up to 50 ft (15m) - maximum

## GENERATOR RECOMMENDATIONS

When using a generator with this machine, it should produce 120VAC.

<b>Engine Drive Rating</b>	<b>Output Current</b>	<b>Performance</b>
2,5KW	20Amps	Full Arc Stretch

## CONNECTION TO GROUND CABLE

Connect the ground cable clamp to the piece to be cut or to the metallic workbench. Take following precautions:

- Verify that there is a good electrical contact particularly if insulated or oxidated coated sheets are cut.
- Make ground connections as close as possible to the cutting area. The use of the metallic structures which are not part of the workpiece, such as the return cable of the cutting current, may endanger the safety system and give poor cutting results.
- Do not make a ground connection on the piece which has to be removed.

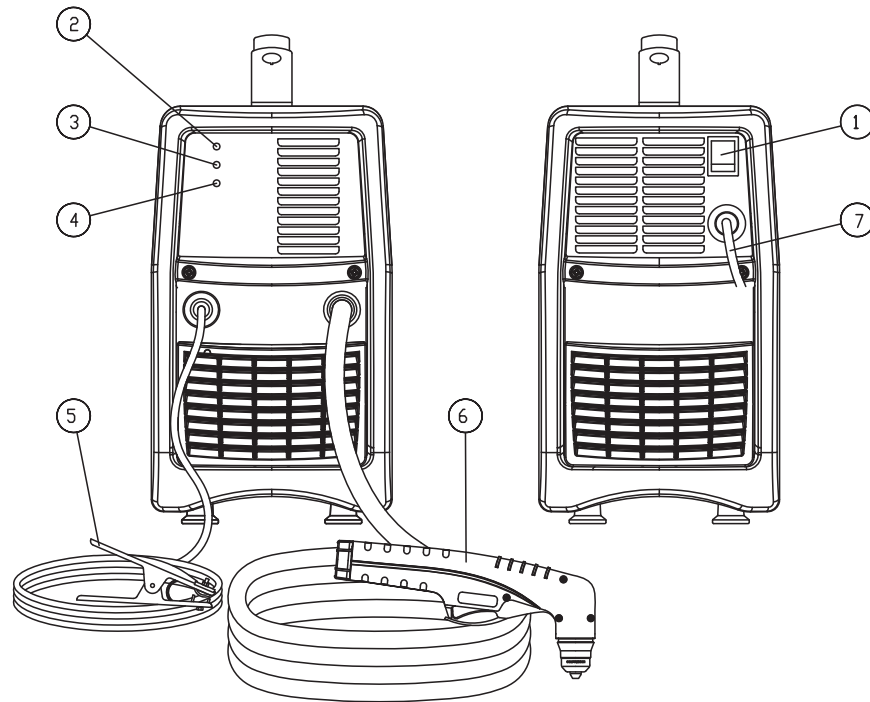
## TORCH CONNECTION

**WARNING!: Use torches specified in this instructions manual.**

**CAUTION!:** Disconnect power source before disassembly of the torch.

**AVERTISSEMENT:** couper l'alimentation avant de désassembler la torche.

**WARNING!:** Before starting the cutting operations verify that the parts are properly assembled by inspecting the head of the torch as shown on paragraph "Torch Maintenance"



- 1.ON/OFF Switch** – In the ON position the machine is ready for normal operation. All system control circuits are activated. OFF position deactivates control circuits.
- 2.Green LED**– It blinks for a few seconds to show that capacitors are being charged and that the unit is getting ready for operation. It turns ON when input voltage is applied within normal range – blinks slowly when input voltage goes above 135Vac, or below 85Vac.
- 3.Yellow LED**– Turns ON when the thermal protection is activated.
- 4.Red LED**–Turns ON when torch is triggered. Blinks quickly during 3 second safety pre-flow prior to pilot arc ignition. Blinks slowly if cutting arcs not initiated after 3 second pilot arc ignition.
- 5.Work cable with clamp**
- 6.Torch**
- 7.Input power cable**



## CUTTING OPERATION

### PRELIMINARIES

**CAUTION!:** Disconnect power source before disassembly of the torch.

**AVERTISSEMENT:** couper l'alimentation avant de désassembler la torche.

- Check and follow instructions as foreseen in the paragraphs "Safety and Installation" of the present instructions manual.

### PARTS OF THE TORCH

- Check the torch for proper parts assembly order and installation (refer to Section called Torch Consumable Parts Selection). NOTE: The power supply will not operate unless the torch shield cup is fully seated against the PIP (Parts in Place) pins in the torch head.

### INPUT POWER

- Check the power source for proper input voltage.
- Make sure the power source meets circuit protection and wiring requirements.
- Plug unit in and close main disconnect switch to supply primary power to the system.

### GROUND CABLE

- Check for a solid ground cable connection to the workpiece.

### AUTOMATIC PURGE SYSTEM

- Place the ON/OFF switch to the ON position. The ON light will flicker momentarily as the system powers up and then stays on. Activate the torch trigger to initiate gas purge (pre-flow) to remove any condensation that may have accumulated in the torch and leads while the system was shut down. When the gas purge is complete, pilot arc will be initiated.
- If during cutting there is still condensation exiting from the torch, stop cutting and turn unit off. Wait for torch cooling to remove the shield cup. Dry the shield cup inside with dry air.

### CHECKING AIR QUALITY

- To check air quality, deactivate the torch (post-flow) and place welding filter lens in front of the torch. Any oil or moisture in the air will be visible on the lens. DO NOT initiate pilot arc while checking air quality.

## CUTTING

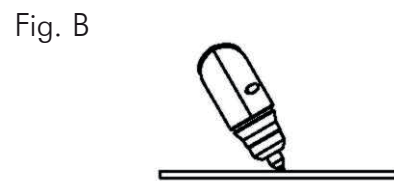
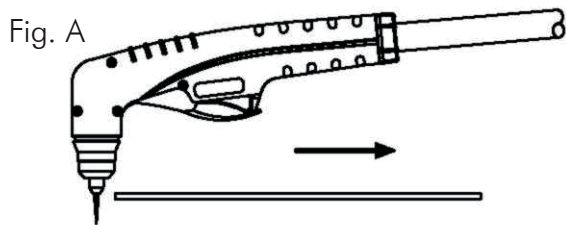
### A. Pilot Arc: Starting the arc.

- Upon squeezing the trigger there is a three second safety delay to purge the torch air system. After three seconds the pilot arc ignites, immediately transfer the arc to the work piece and begin the cut. If you fail to transfer the arc within three seconds the pilot arc stop and it will be necessary to release and then squeeze the trigger again to restart the sequence.

**NOTE: REPEATED PILOT ARC STARTS WITHOUT CUTTING IS NOT RECCOMENDED AND WILL SHORTEN THE LIFE OF CONSUMABLE TORCH PARTS. ALWAYS KEEP IN MIND THAT THE PILOT ARC IS DESIGNED TO TRANSFER THE ARC TO THE WORKPIECE AND NOT FOR NUMEROUS STARTS WITHOUT CUTTING.**

### B. Cutting with a Hand Torch

- The torch can be comfortably held in one hand or steadied with two hands. Choose the technique that feels most comfortable and allows good control and movement. Position the index finger or thumb to press the control switch on the torch handle.
- For edge starts, hold the torch perpendicular to the workpiece with the front of the tip on the edge of the workpiece at the point where the cut is to start. - Fig. A. For piercing, angle the torch slightly to direct sparks away from the torch until the pierce is complete. Fig. B



- For drag cuts keep the torch in contact with the workpiece. For standoff cutting, hold the torch 2-3 mm from the work.
- With the torch in starting position, press the control switch. After an initial gas purge (pre-air), the pilot arc will come on and remain on for 3 seconds until the cutting arc starts.
- Once on, the main arc remains on as long as the control switch is held down, unless the torch is withdrawn from the work or torch motion is too slow. Keep moving while cutting. Cut at a steady speed without pausing. Maintain the cutting speed so that the arc lag is about 30° behind the travel direction. Fig. C
- If the cutting arc is interrupted, and the torch trigger is still pressed, the pilot arc comes back on automatically after 3 seconds.
- To shut off the torch simply release the control switch. When the switch is released a post-flow will occur. If the torch trigger is pressed during the post-flow, the pilot arc will restart.

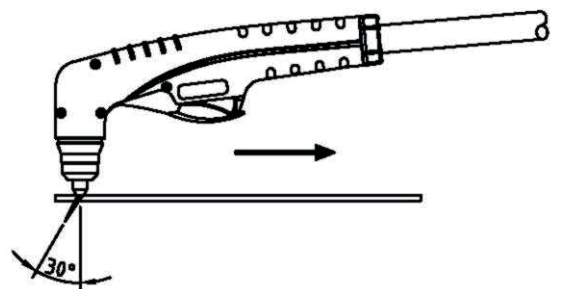
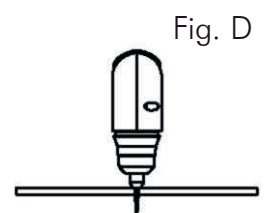
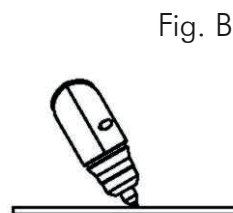


Fig. C

### C. Piercing with a Hand Torch

**Note: If necessary to make a cut on a metal sheet which is thicker than the maximum piercing capacity (without an edge start) make a hole  $\varnothing$  6mm at least using an electric drill to start cutting.**

- When piercing with a hand torch, tip the torch slightly so that blowback particles blow away from the torch tip (and operator) rather than directly back into it. Fig. B
- Complete the pierce off the cutting line and then continue the cut onto the line. Hold the torch perpendicular to the workpiece after the pierce is complete. Fig. D
- Clean spatter and scale from the shield cup and the tip as soon as possible. Spraying or dipping the shield cup in anti-spatter compound will minimize the amount of scale which adheres to it.



## WARNING!

Disconnect primary power at the source and wait that the torch has cooled before disassembling the torch or torch leads. Frequently review the Important Safety Precautions at the front of this Manual.

Be sure the operator is equipped with proper gloves, clothing, eye and ear protection. Make sure no part of the operator's body comes into contact with the work piece while the torch is activated.

## CAUTION

Sparks from the cutting process can cause damage to coated, painted, and other surfaces such as glass, plastic and metal.

**NOTE** Handle torch leads with care and protect them from damage.

## TORCH CONSUMABLE PARTS SELECTION

**WARNING!:** Use torches specified in the this instructions manual.

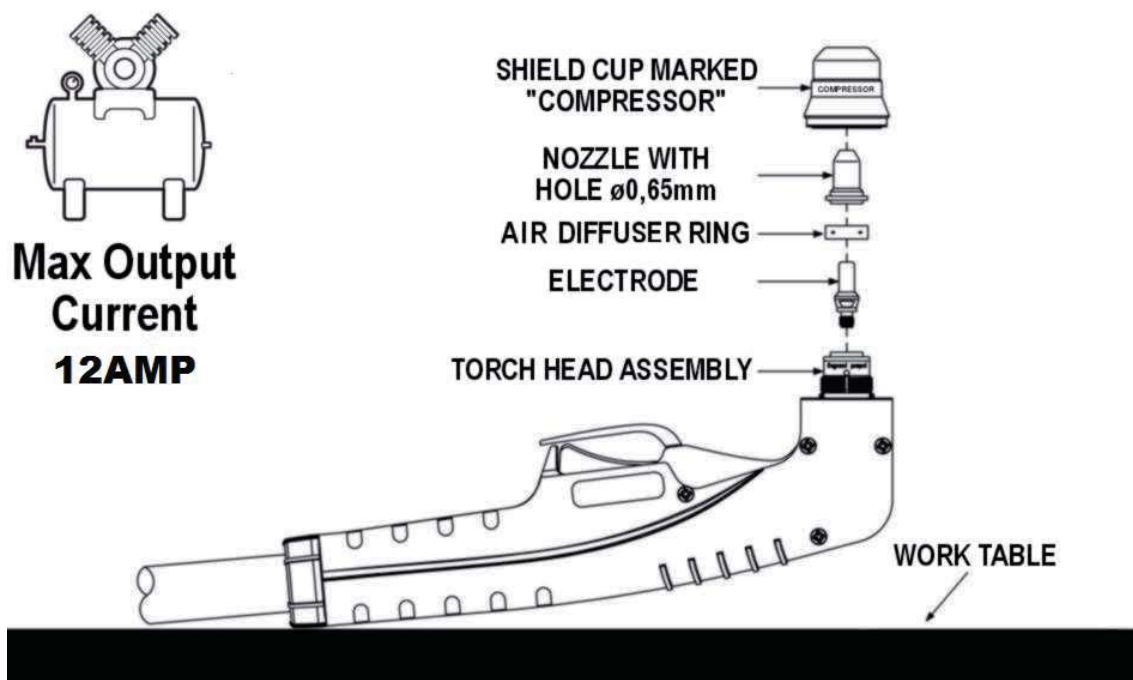
**WARNING!:** Disconnect power source before disassembly of the torch.

**AVERTISSEMENT:** couper l'alimentation avant de désassembler la torche.

**WARNING!:** It is extremely important that you read carefully these instructions before choosing the consumables for your torch. This will prevent damages to the torch and the plasma unit.

To change the torch consumable parts use the following procedure:

1. Position the torch with the shield cup facing upward to prevent these parts from falling out when the cup is removed.



**WARNING:** Wait the torch has sufficiently cooled before replacing torch parts.

2. Unscrew and remove the shield cup from the Torch Head Assembly.
3. Remove the tip, gas distributor, and electrode.
4. Install the electrode, gas distributor, and tip.
5. Hand tighten the shield cup until it is seated on the torch head. If resistance is felt when installing the cup, check the threads before proceeding.

## OPERATING FAULTS

During cutting operations performance faults may arise which are not caused by equipment malfunctioning but by other operational faults such as:

### Insufficient penetration :

- too high cutting speed;
- torch is too tilted;
- piece is too thick;
- cutting current too low;
- torch parts are worn out;
- non-genuine Manufacturer's parts;

### Interruption of the cutting arc:

- cutting speed too slow;
- excessive distance between torch and workpiece;
- AC line too low - reduce output current;
- torch parts are worn out;
- non-genuine Manufacturer's parts;
- work cable is disconnected;

### Excessive dross:

- too slow cutting speed (bottom dross);
- too fast cutting speed (top dross);
- excessive distance between torch and workpiece;
- cutting current too low;
- torch parts are worn out;
- non-genuine Manufacturer's parts;

### Tilted cutting (not perpendicular):

- Torch position not correct;
- asymmetric wear of nozzle hole and/or wrong assemblage of the torch parts;

### Excessive wear of nozzle and electrodes:

- air pressure too low;
- exceeding system capability (material too thick);
- contaminated air (humidity-oil);
- excessive pilot arc ignitions in the air;
- Improperly assembled torch;
- torch tip contacting workpiece;
- damaged or loose torch head components;
- non-genuine Manufacturer's parts.

## MAINTENANCE

Maintenance can only be carried out on the unit if the person in charge of this operation has the necessary technical knowledge and the correct tools. If this is not the case, contact your nearest service center.

### CAUTION!

**Never access inside the machine (panel removal) or touch the torch (disassembly) without having disconnected power plug.**

**Any inspection performed under voltage inside the machine or inside the torch may cause severe electric shocks caused by direct contact with parts under voltage.**

## UNIT

Keep the cutting or gouging area and the area around the machine clean and free of combustible materials. No debris should be allowed to collect, this could obstruct air flow to the machine.

Inspect the unit every 3-4 months (depending on how often the unit is used) and use compressed air to remove any dust deposits.

### CAUTION!

**Only use dry compressed air for cleaning. Do not point the jet of air at the electronic circuits.**

## **TORCH**

Periodically, according to its use or to cutting faults verify wear of the parts connected to plasma arc:

### **Shield Cup:**

Unscrew manually from head of the torch. Clean thoroughly and replace if damaged (burns, distortions or cracks). Verify integrity of superior metal sector (actuator torch safety).

### **Tip:**

Check wear of plasma arc hole and of inner and outer surfaces. If the hole is widened compared to its original width or if it is damaged, replace tip. If surfaces are particularly oxidized clean them with extra fine abrasive paper.

### **Air Distribution Ring:**

Verify there are no burns or cracks or that airflow holes are not obstructed. If damaged, replace immediately.

### **Electrode:**

Replace electrode when crater settling on emitting surface is about 2mm.

## **WARNING!**

- Before making any operation to the torch let it cool at least all along the "postgas" period.
- Except for particular cases it is advisable to replace electrode and tip AT THE SAME TIME.
- Respect assembly order of torch parts (reserved compared to disassembly).
- Be sure that the Air Diffuser ring is positioned correctly.
- Reassemble shield cup tightening securely by hand.
- Never assemble shield cup without having assembled electrode distributing ring and tip beforehand.
- Timely and appropriate control procedures on torch parts are essential for safety and functionality of the cutting system.

## **TORCH BODY, HANDLE AND CABLE**

- These parts usually need no particular maintenance with the exception of a periodic inspection and an accurate cleaning to be made WITHOUT THE USE OF SOLVENTS.
- In case of damages to the insulation such as breaks, cracks and burns or even a loosening of electric conductors, the torch CANNOT BE USED FURTHER SINCE SAFETY CONDITIONS HAVE NOT BEEN RESPECTED.
- IN THIS CASE, REPAIRING (EXTRAORDINARY MAINTENANCE) CANNOT BE MADE ON SITE BUT NEEDS TO BE DELEGATED TO A SERVICE CENTER TO MAKE SPECIAL TESTS AFTER REPAIRING HAS BEEN EXECUTED.
- In order to keep the torch and the cable efficient it is necessary to follow these precautions:
- DO NOT touch torch and cable with warm or hot parts.
- DO NOT strain the cable.
- DO NOT move the cable on sharp edges or abrasive surfaces.
- Gather the cable in regular coils if it is too long.
- DO NOT step on the cable.

## TROUBLESHOOTING

### SYMPTOM

### POSSIBLE CAUSE AND REMEDY

GREEN LED OFF, Fan not operating. No Input Power.

1. Plug unit into 120V outlet.

GREEN LED ON, YELLOW Over-temperature LED ON. Unit is overheated.

1. Make sure the unit has not been operated beyond duty cycle limits.

2. Air Flow obstructed.

GREEN LED ON, YELLOW Over-temperature LED OFF, no air flow when torch switch pressed.

1. Shield cup not properly installed on torch. Check that shield cup is fully seated against torch.

2. Faulty Torch Switch or Parts Assembly in torch holder. Refer to Maintenance paragraph.

3. Faulty Main PC Board Repair / Replace Power Supply.

GREEN LED ON, YELLOW Over-temperature LED OFF. Air flows, Pilot arc does not start.

1. Faulty torch parts. Inspect torch parts and replace if necessary.

2. Faulty main PC Board. Repair /replace.

Torch has pilot arc but does not cut.

1. Work lead not connected. Make sure work lead is connected securely to bare metal.

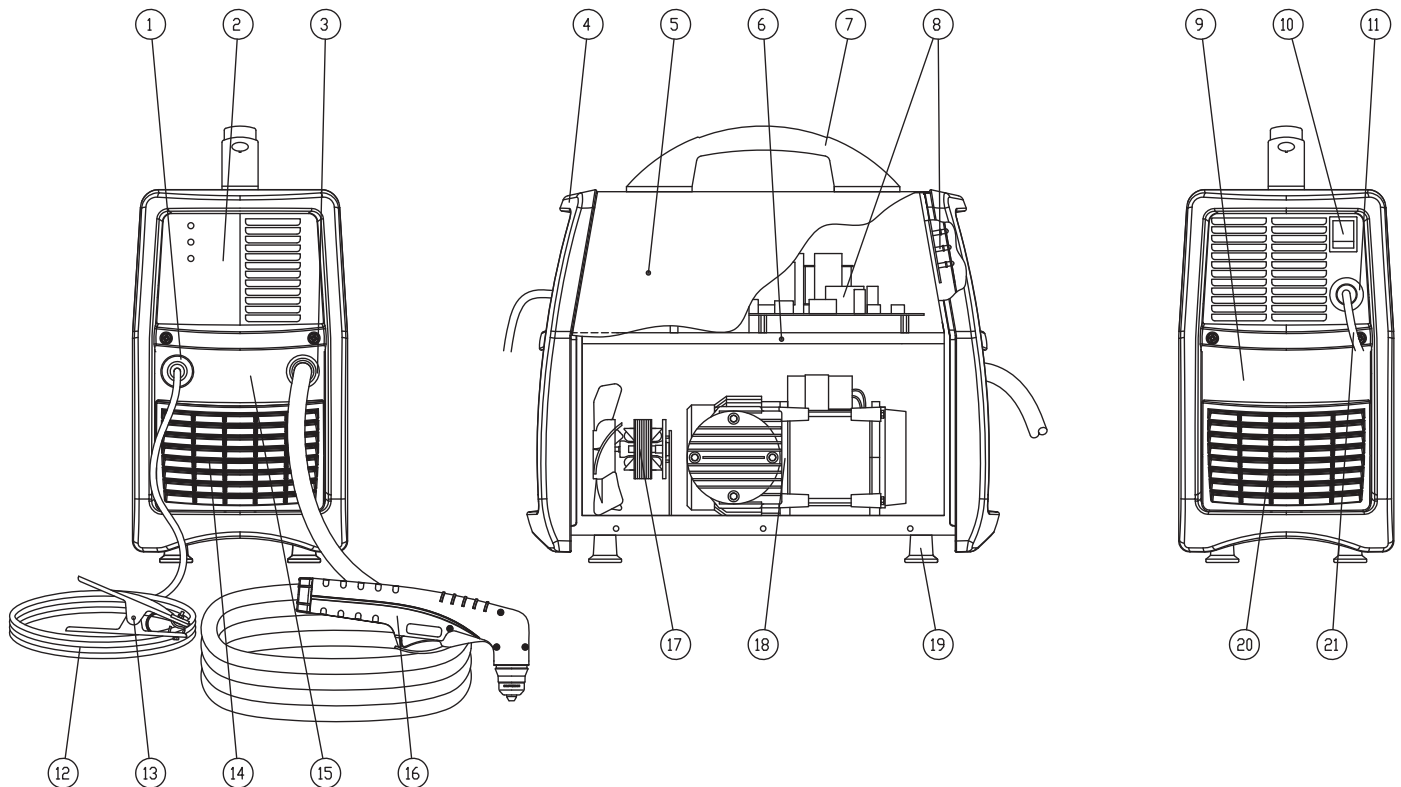
2. AC input power too low. Use shortest distance to breaker panel possible.

3. Faulty Main PC Board.Repair/Replace.

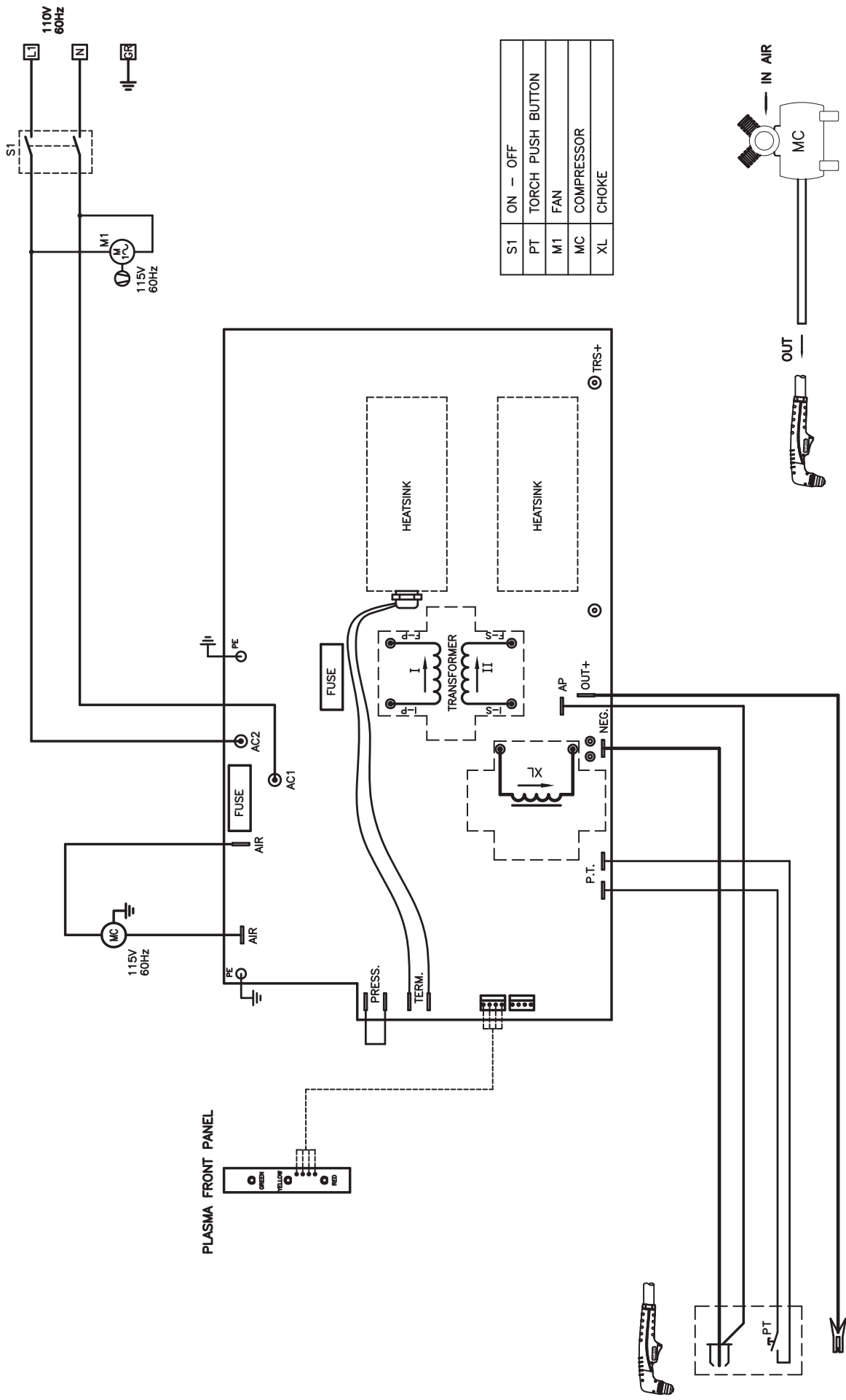
## UNIT PARTS LIST

FIG #	OEM #	DESCRIPTION	QTY	FORNEY #
01	04600233	CABLE CLAMP	1	85208
02	77650239	FRONT PLATE	1	85399
03	21605023	RUBBER GROMMET	1	85400
04	21690505	FRAME	2	85401
05	05000225	COVER PANEL	1	85402
06	33620217	INTERNAL PANEL	1	85403
07	21600030	PLASTIC HANDLE	1	85404
08	22735221	MOTHER + FRONT PANEL PCB	1	85405
09	33700347 9005	LOWER PANEL	1	85406
10	22200047	BIPOLAR BLACK SWITCH W/PROTECTION	1	85407
11	04600234	CABLE CLAMP	1	85209
12	43210150	GROUND CABLE 13' W/CLAMP	1	85408
13	22110007	GROUND CLAMP 200A	1	84964
14	21690506	VENT-HOLES	1	85409
15	33710590 9005	FRONT PANEL	1	85410
16	23010083	PT-25C PLASMA TORCH WITH 13' LEAD	1	85390
17	04600054	COMPLETE FAN 110V	1	85201
18	22920009	COMPRESSOR 60HZ 110V	1	85411
19	21610027	RUBBER FOOT	4	85412
20	21690509	VENT-HOLES	1	85413
21	20220018	POWER CABLE 3X14 AWG 7.4' WITH 5-15P PLUG	1	85225

## UNIT PARTS BREAKDOWN



# UNIT WIRING DIAGRAM

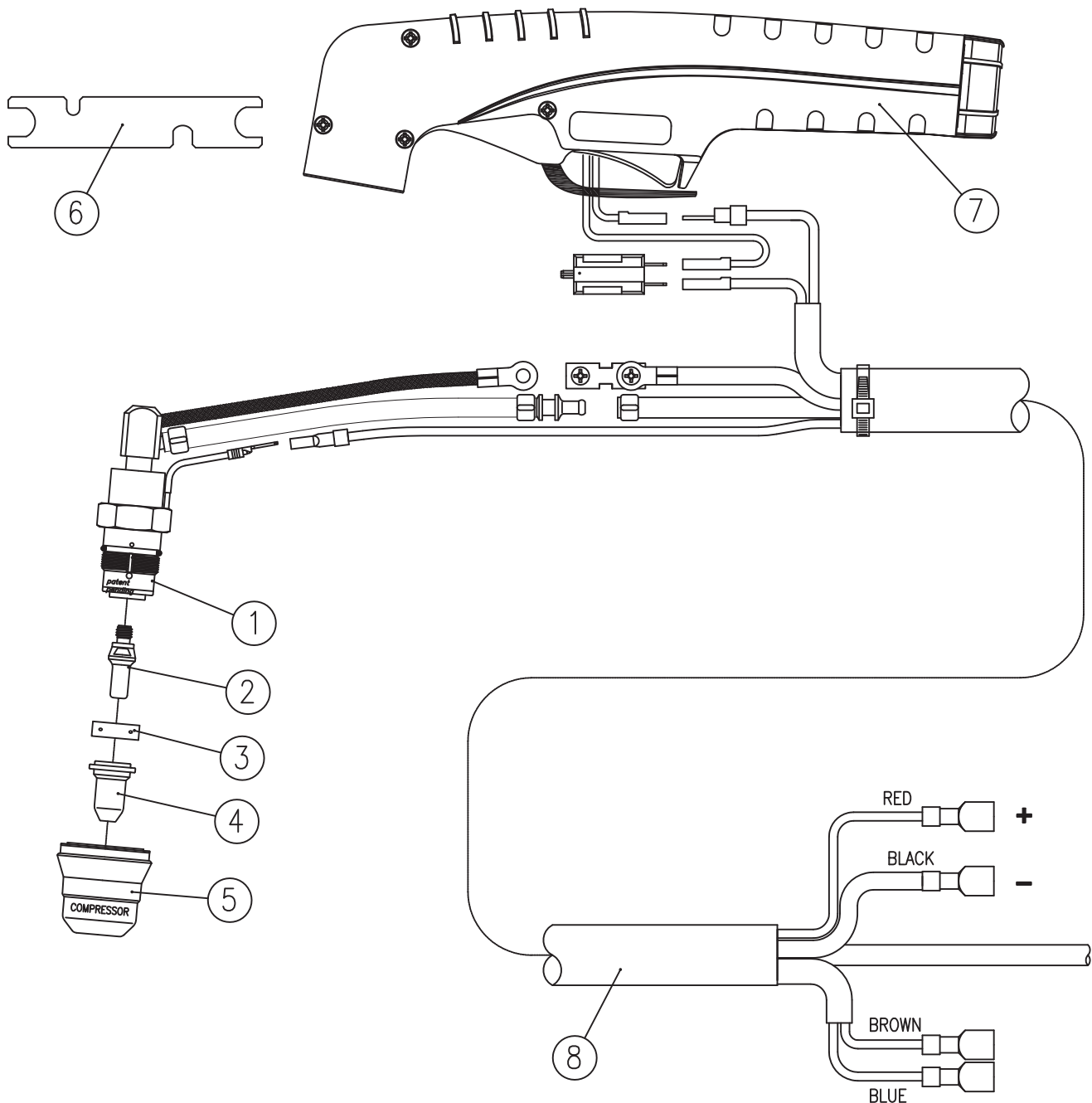




# TORCH PARTS LIST

FIG #	OEM #	DESCRIPTION	FORNEY #	QTY
	23010083	PT-25C PLASMA TORCH WITH 13' LEAD	85390	
01	23015183	PLASMA TORCH BODY	85391	1
02	23015187	ELECTRODE	85392	1
03	23015179	AIR DISTRIBUTION RING	85393	1
04	23015189	TIP $\varnothing$ 0,65 / .025	85392	1
05	23015182	SHIELD CUP	85394	1
06	23015193	WRENCH FOR ELECTRODE	85396	1
07	23015184	COMPLETE HANDLE	85397	1
08	23015195	CABLE ASSEMBLY	85398	1

## TORCH PARTS BREAKDOWN



**Forney** SINCE 1932

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WELDING SUPPLIES AND ACCESSORIES

SINCE 1932

AIR FITTINGS

CENTER

RE GAUGES

**magswitch** Forney

Weld It!

Square It!

Hold It!

Hang It!

**magswitch**

Cut It!

Hold It!

Guide It!

Resaw It!

**magswitch**





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