TOOLIOM WP-17V

TOOLIOM Lift TIG Torch 150A Air Cooled Welding Gun User Manual

Model: WP-17V | Brand: TOOLIOM

Introduction

This manual provides detailed instructions for the proper setup, operation, and maintenance of your TOOLIOM Lift TIG Torch 150A Air Cooled Welding Gun. Please read this manual thoroughly before using the product to ensure safe and efficient operation. This TIG torch is designed for use with compatible TOOLIOM welding machines, specifically the TL-195S, TL-200M, TL-200M PRO, TL-250M, and TL-250M PRO models.

Product Overview

The TOOLIOM Lift TIG Torch is an air-cooled welding gun designed for precise TIG welding applications. It features a 4-meter cable length and a 35-50 connection for robust performance up to 150A. The package includes all necessary components for immediate use.

Figure 1: Complete package contents of the TOOLIOM Lift TIG Torch, including the torch, cable, collets, collet body, alumina ceramic cups, and back caps.

Package Contents:

- 1 x Lift TIG Torch (WP-17V model)
- 3 x Collets
- 1 x Collet Body
- 3 x Alumina Ceramic Cups
- 1 x Long Back Cap
- 1 x Short Back Cap

Specifications

Feature	Specification
Brand	TOOLIOM

Feature	Specification
Model	WP-17V
Style	Air-Cooled TIG welding torch
Current Rating	Up to 150A
Cable Length	4 Meters
Connection Type	35-50
Material	Ceramic (for cups)
Item Weight	1.17 Kilograms (2.57 pounds)
Color	Blue (Torch body)
Compatible Welding Machines	TOOLIOM TL-195S, TL-200M, TL-200M PRO, TL-250M, TL-250M PRO

Setup

1. Connecting the Torch to the Welding Machine

1. Ensure your TOOLIOM welding machine is turned off and unplugged from the power source.
2. Locate the TIG torch connection port on your welding machine. This is typically a quick-connect fitting.
3. Insert the power cable connector of the TIG torch into the corresponding port on the welding machine. Ensure it is fully seated and securely twisted to lock it in place.

Figure 2: Proper connection of the TIG torch to a compatible TOOLIOM welding machine.

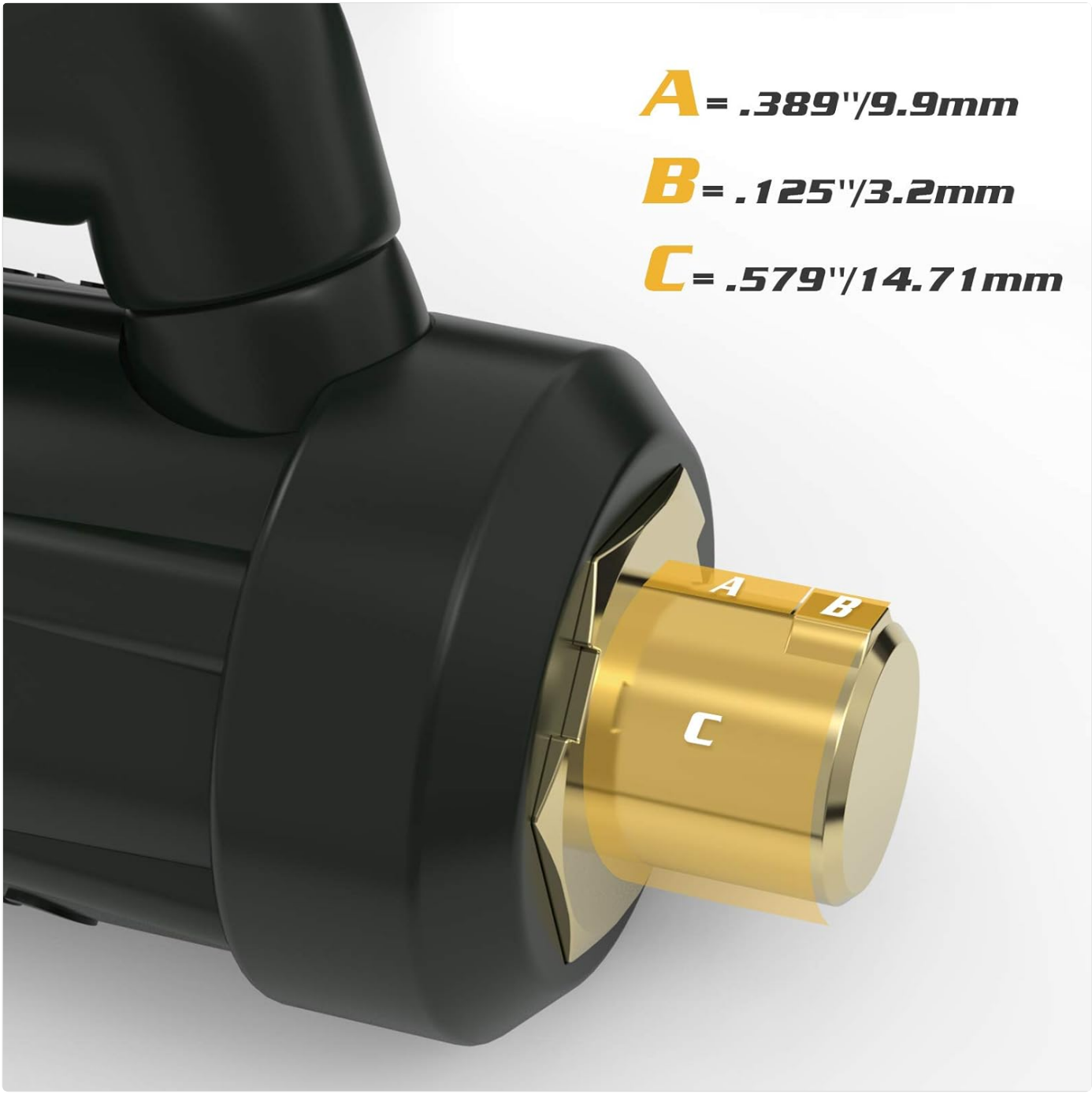

Figure 3: Detailed view of the torch connection, highlighting key dimensions for proper fitment.

2. Connecting the Gas Line

1. Identify the gas inlet on the TIG torch cable.
2. Connect the gas hose from your argon gas cylinder regulator to this inlet. Ensure all connections are tight to prevent gas leaks.

Figure 4: Connection point for the inert gas line on the TIG torch cable.

3. Assembling the Torch Head

1. Select the appropriate collet and collet body for your tungsten electrode size.
2. Insert the collet into the collet body.
3. Screw the collet body assembly into the torch head.
4. Insert the tungsten electrode through the collet and collet body, ensuring it protrudes the desired length from the ceramic cup.
5. Thread the alumina ceramic cup onto the torch head, ensuring it is snug but not overtightened.
6. Finally, screw on either the long or short back cap to secure the tungsten electrode.

Figure 5: Step-by-step assembly of the TIG torch head components: ceramic cup, collet body, collet, and tungsten electrode.

Operating Instructions

The TOOLIOM Lift TIG Torch is designed for Lift TIG welding, which provides a stable arc start without high-frequency interference. Always wear appropriate personal protective equipment (PPE) including welding helmet, gloves, and protective clothing before operating.

Figure 6: The fully assembled Lift TIG Torch, ready for operation.

Figure 7: Detailed view of the torch handle and head, showing the ergonomic design and WP-17V model marking.

Lift TIG Welding Procedure:

1. **Prepare Workpiece:** Ensure the workpiece is clean and free of contaminants. Connect the ground clamp to the workpiece or welding table.
2. **Set Welding Machine:** Turn on your TOOLIOM welding machine and set it to TIG mode. Adjust the amperage and gas pre-flow/post-flow settings according to your material and thickness.
3. **Initiate Arc:** Gently touch the tungsten electrode to the workpiece. The machine will detect contact and initiate a low-amperage current.
4. **Lift and Weld:** Slowly lift the torch a small distance (typically 1-3mm) from the workpiece. The arc will then fully ignite to the set welding amperage. Begin your weld.
5. **Terminate Arc:** To stop welding, simply lift the torch away from the workpiece. The arc will extinguish, and the gas post-flow will continue for the set duration to protect the cooling weld puddle and tungsten.

Important: Always ensure adequate ventilation when welding. Refer to your welding machine's manual for specific safety precautions and operational guidelines.

Maintenance

Regular maintenance of your TIG torch ensures optimal performance and extends its lifespan. Always disconnect the torch from the welding machine before performing any maintenance.

1. Cleaning the Torch Head:

- Periodically inspect the ceramic cup for cracks or damage. Replace if necessary.
- Clean any spatter or residue from the inside of the ceramic cup and around the collet body.
- Ensure the gas orifices are clear and unobstructed.

2. Tungsten Electrode Care:

- Regrind or replace the tungsten electrode if it becomes contaminated, blunted, or develops an irregular tip.
- Always grind tungsten longitudinally to maintain proper arc stability.

3. Cable Inspection:

- Regularly check the entire length of the cable for cuts, abrasions, or signs of heat damage.
- Ensure all connections (to the machine and gas line) are secure and free of corrosion.

4. Storage:

- Store the TIG torch in a clean, dry environment, away from excessive heat, moisture, and corrosive materials.
- Avoid kinking or sharply bending the cable during storage.

Troubleshooting

This section addresses common issues you might encounter with your TIG torch. For more complex problems, consult a qualified technician or contact TOOLIOM customer support.

Problem	Possible Cause	Solution
No Arc or Weak Arc	Loose connections, incorrect machine settings, contaminated tungsten, no gas flow.	Check all cable and gas connections. Verify machine settings (amperage, TIG mode). Regrind or replace tungsten. Ensure gas cylinder is open and regulator is set correctly.
Porous Weld	Insufficient gas shielding, gas leaks, contaminated workpiece, incorrect gas flow rate.	Increase gas flow (within recommended range). Check gas lines and connections for leaks. Clean workpiece thoroughly. Ensure proper post-flow time.
Tungsten Contamination	Touching workpiece, insufficient gas post-flow, incorrect amperage for tungsten size.	Avoid touching the workpiece with the tungsten. Increase gas post-flow time. Use appropriate tungsten diameter for the welding current.
Torch Overheating	Exceeding duty cycle, prolonged high amperage use, poor air circulation.	Allow torch to cool down. Reduce amperage or welding time. Ensure adequate air circulation around the torch and cable.

Warranty and Support

For information regarding the warranty of your TOOLIOM Lift TIG Torch, please refer to the warranty documentation provided with your original purchase or contact the retailer from whom you purchased the product. For technical support, spare parts, or service inquiries, please visit the official TOOLIOM website or contact their customer service department directly. Keep your purchase receipt as proof of purchase for any warranty claims.