

**UNIMAC®**



# **AIR METAL SAW**

## **USER MANUAL**

[Revision 3.0 October 2018]

**RETAIN THIS MANUAL FOR FUTURE REFERENCE**

**PLEASE READ THIS MANUAL CAREFULLY BEFORE USE**

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# SAFETY

To reduce the risks of electric shock, fire, and injury to persons, read all the instructions before using the tool.

## WORK AREA

1. Keep the work area clean and well lighted. Cluttered benches and dark areas increase the risks of electric shock, fire, and injury to persons.
2. Do not operate the tool in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. The tool is able to create sparks resulting in the ignition of the dust or fumes.
3. Keep bystanders, children, and visitors away while operating the tool. Distractions are able to result in the loss of control of the tool.

## PERSONAL SAFETY



1. Stay alert. Watch what you are doing and use common sense when operating the tool. Do not use the tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the tool increases the risk of injury to persons.
2. Dress properly. Do not wear loose clothing or jewellery. Contain long hair. Keep hair, clothing, and gloves away from moving parts. Loose clothes, jewellery, or long hair increases the risk of injury to persons as a result of being caught in moving parts.
3. Avoid unintentional starting. Be sure the switch is off before connecting to the air supply. Do not carry the tool with your finger on the switch or connect the tool to the air supply with the switch on.
4. Remove adjusting keys and wrenches before turning the tool on. A wrench or a key that is left attached to a rotating part of the tool increases the risk of personal injury.
5. Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.
6. Use safety equipment. A dust mask, non-skid safety shoes and a hard hat must be used for the applicable conditions. Wear heavy-duty work gloves during use.
7. Always wear eye protection. Wear ANSI-approved safety goggles.
8. Always wear hearing protection when using the tool. Prolonged exposure to high intensity noise is able to cause hearing loss.
9. Risk of Electric Shock. This tool is not provided with an insulated gripping surface. Contact with a "live" wire will also make exposed metal parts of the tool "live" and shock the operator.
10. Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is grounded.
11. Explore the workplace to avoid contact with hidden wiring. Thoroughly investigate the workplace for possible hidden wiring before performing work. Contact with live wiring will shock the operator.
12. **DANGER!** Keep hands and body away from cutting area and blade. Keep your second hand on auxiliary handle or motor housing. Heavy duty work gloves are needed for this tool. Contact with the blade will result in a serious injury.
13. Do not reach hands underneath the workpiece.

## AIR SOURCE

1. Never connect to an air source that is capable of exceeding 200 psi.



**AIR METAL SAW**

Over pressurizing the tool may cause bursting, abnormal operation, breakage of the tool or serious injury to persons. Use only clean, dry, regulated compressed air at the rated pressure or within the rated pressure range as marked on the tool.

Always verify prior to using the tool that the air source has been adjusted to the rated air pressure or within the rated air-pressure range.

2. Never use oxygen, carbon dioxide, combustible gases or any bottled gas as an air source for the tool. Such gases are capable of explosion and serious injury to persons.

**SPECIFIC SAFETY INSTRUCTIONS**

1. The warnings and precautions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.
2. **WARNING:** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities, may contain harmful chemicals. Some examples of these chemicals are:
  - Lead from lead-based paints
  - Crystalline silica from bricks and cement or other masonry products
  - Arsenic and chromium from chemically treated lumber

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

3. Attach all accessories properly to the tool before connecting the air supply. A loose accessory may detach or break during operation.
4. Obey the manual for the air compressor used to power this tool.
5. Install an in-line shutoff valve to allow immediate control over the air supply in an emergency, even if a hose is ruptured.
6. Use this tool with both hands only. Using tools with only one hand can result in loss of control.
7. Do not lay the tool down until it has come to a complete stop. Moving parts can grab the surface and pull the tool out of your control.

**ITEM DETAILS**

## SET-UP

Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

**Note:** For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

**Note:** This air tool may be shipped with a protective plug covering the air inlet. Remove this plug before set up.

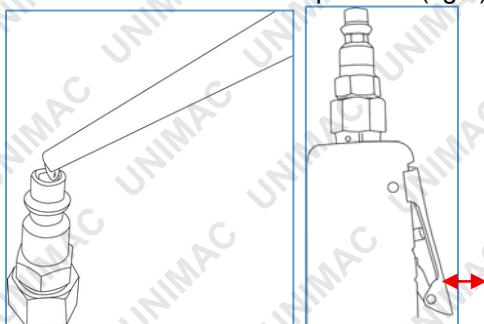
### WARNING!

**TO PREVENT SERIOUS INJURY FROM EXPLOSION:** Use only clean, dry, regulated, compressed air to power this tool. Do not use oxygen, carbon dioxide, combustible gases, or any other bottled gas as a power source for this tool.



1. Incorporate a filter, regulator with pressure gauge, oiler, in-line shutoff valve, and quick coupler for best service, as shown. An in-line shutoff ball valve is an important safety device because it controls the air supply even if the air hose is ruptured. The shutoff valve should be a ball valve because it can be closed quickly.

**Note:** If an automatic oiler system is not used, add a few drops of Pneumatic/Air Tool Oil before each use into the airline connection before operation (fig 1). Pump lever a few times to ensure oil runs through tool (fig 2).



2. Attach an air hose to the compressor's air outlet. Connect the air hose to the air inlet of the tool. Other components, such as a coupler plug and quick coupler, will make operation more efficient, but are not required.

**WARNING! TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:** Do not install a female quick coupler on the tool. Such a coupler contains an air valve that will allow the air tool to retain pressure and operate accidentally after the air supply is disconnected.

**Note:** Air flow, and therefore tool performance, can be hindered by undersized air supply components. The air hose must be long enough to reach the work area with enough extra length to allow free movement while working.

3. Release the throttle.
4. Close the in-line shutoff valve between the compressor and the tool.
5. Turn on the air compressor according to the manufacturer's directions and allow it to build up pressure until it cycles off.
6. Adjust the air compressor's output regulator so that the air output is enough to properly power the tool, but the output will not exceed the tool's maximum air pressure at any time. Adjust the pressure gradually, while checking the air output gauge to set the right pressure range.
7. Inspect the air connections for leaks. Repair any leaks found.
8. If the tool will not be used at this time, turn off and detach the air supply, safely discharge any residual air pressure, and release the throttle to prevent accidental operation.

**AIR METAL SAW**

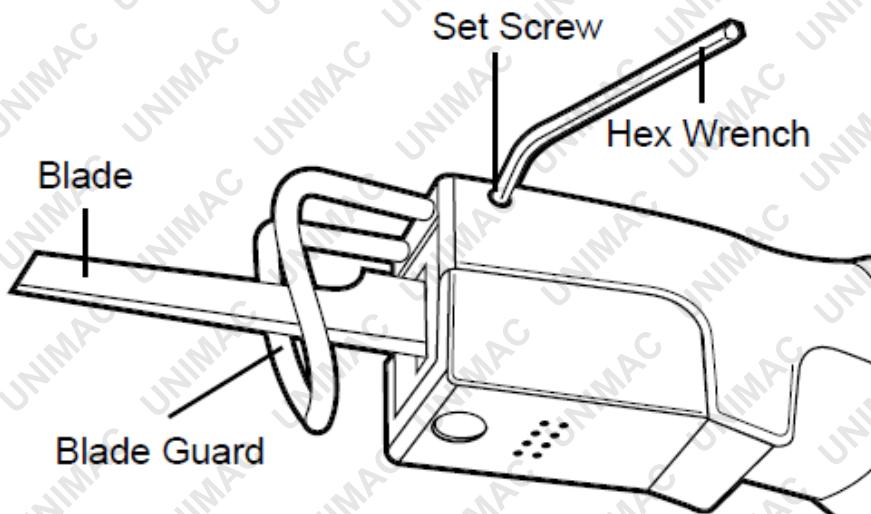
Note: Residual air pressure should not be present after the tool is disconnected from the air supply. However, it is a good safety measure to attempt to discharge the tool in a safe fashion after disconnecting to ensure that the tool is disconnected and not powered.

**TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:** Turn off the tool, detach the air supply, safely discharge any residual air pressure in the tool, and release the throttle and/or turn the switch to its off position before performing any inspection, maintenance, or cleaning procedures.

**TO PREVENT SERIOUS INJURY:** Do not adjust or tamper with any control or component in a way not specifically explained within this manual. Improper adjustment can result in tool failure or other serious hazards.

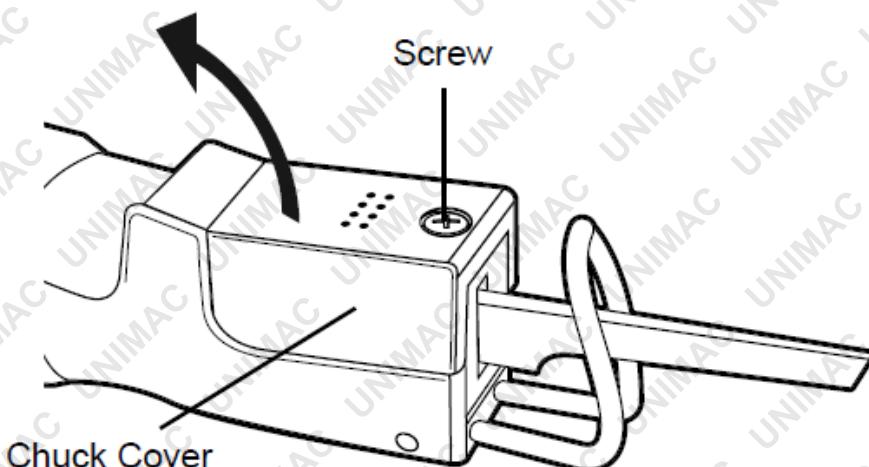
**INSTALLING BLADE**

1. The Blade Guard may be removed when replacing blades, but it must always be on during operation. Using the Saw without the Blade Guard can result in severe injury.



**Figure 1**

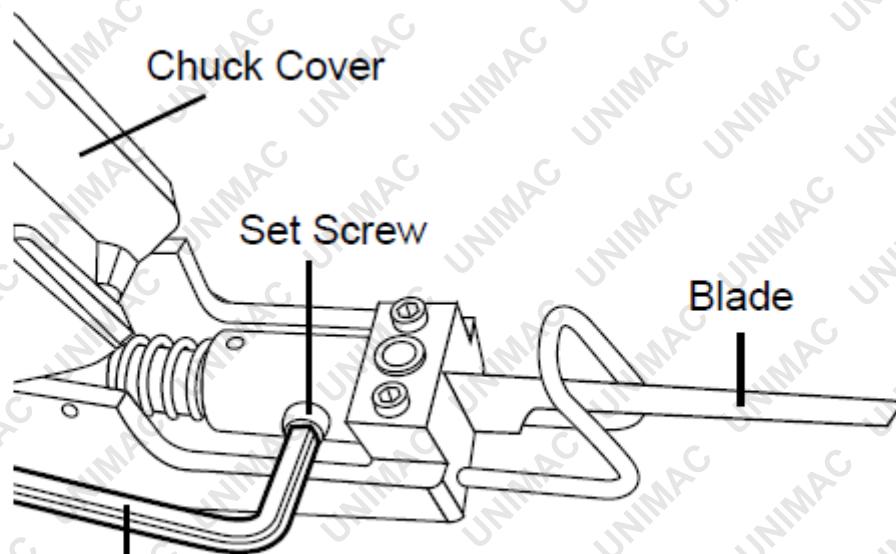
2. To remove the Blade Guard, use the Wrench to loosen the two Set Screws on the outside of the tool. When replacing the Blade Guard, place it in the slots and tighten the Set Screws. See Figure 1, above.



**Figure 2**

3. To change blades, first open the Chuck Cover by removing the Screw. Swing the Chuck Cover back on its hinge. See Figure 2, above.

**Note:** When Saw is in the upside down position, the blade teeth will face upward.

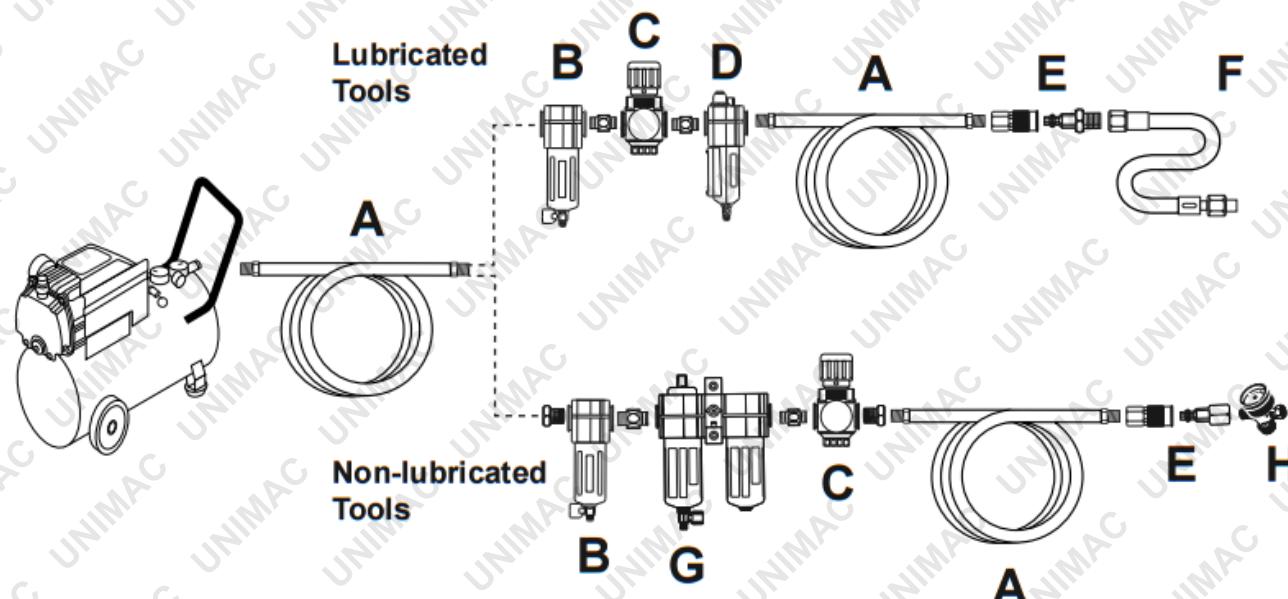


**Figure 3 Hex Wrench**

4. Loosen the two Set Screws inside, until the blade can be removed. Replace with a new blade (sold separately) and tighten the Set Screws. Replace the Chuck Cover and carefully tighten the Screw.

**CAUTION:** Do not overtighten the Screw or you may break the Chuck Cover.

## CONNECTING TO AIR



	Description	Function
A	Air Hose	Connects air to tool
B	Filter	Prevents dirt and condensation from damaging tool or work piece
C	Regulator	Adjusts air pressure to tool
D	Lubricator (optional)	For air tool lubrication
E	Coupler and Plug	Provides quick connection and release
F	Leader Hose (optional)	Increases coupler life
G	Air Cleaner / Dryer (optional)	Prevents water vapor from damaging work piece
H	Air Adjusting Valve (optional)	For fine tuning airflow at tool

# OPERATION

## WORK PIECE AND WORK AREA SET UP

1. Designate a work area that is clean and well-lit. The work area must not allow access by children or pets to prevent distraction and injury.
2. Route the air hose along a safe route to reach the work area without creating a tripping hazard or exposing the air hose to possible damage. The air hose must be long enough to reach the work area with enough extra length to allow free movement while working.
3. Secure loose workpieces using a vise or clamps (not included) to prevent movement while working.
4. There must not be hazardous objects (such as utility lines or foreign objects) nearby that will present a hazard while working.

## GENERAL OPERATING INSTRUCTIONS

This Saw may be used for cutting through copper, sheet metal, aluminum, and plastic.

When cutting sheet metal, the angled face of the Blade Guard should rest on the plate to minimize its chatter, allowing for smoother cutting action.

**WARNING: Do not exceed the maximum 16 gauge thickness when cutting sheet metal with this Saw.** Doing so can cause serious injury and damage to the tool.

**WARNING:** Do not use a dull or cracked blade. Check that the blade and Blade Guard are secured tightly before every use. Operate the Saw with two hands. Hold the Housing and throttle with one hand, keeping your forefinger behind the Safety Catch. Hold the front end of the tool with your other hand. Keep all fingers behind the handle recess but do not cover the Chuck vent holes.

**WARNING:** Failure to use two hands may cause the Saw to vibrate out of your control causing serious injury.

1. Once the blade is securely installed, push the Safety Catch forward to release the Throttle. Then press down on the Throttle to activate the Saw.
2. Contact the workpiece allowing the Saw to do the cutting for you. Do not exert excessive pressure on the workpiece.

**NOTE:** If the tool requires more force to accomplish the task, verify that the tool receives sufficient, unobstructed airflow (CFM) and increase the pressure (PSI) output of the regulator up to the maximum air pressure rating of this tool. If the tool still does not have sufficient force at maximum pressure and sufficient airflow, then a larger tool may be required.

3. To prevent accidents, turn off the tool, detach the air supply, safely discharge any residual air pressure in the tool, and release the throttle and/or turn the switch to its off position after use. Clean external surfaces of the tool with a clean, dry cloth. Then store the tool indoors out of children's reach.

**WARNING: To prevent tool and accessory failure, resulting in injury, do not exceed the tool's maximum air pressure rating.**

# MAINTENANCE

## TOOL USE AND CARE

1. Use clamps or another practical way to secure and support the workpiece to a stable platform. Holding the work by hand or against the body is unstable and is able to lead to loss of control.
2. Do not exceed the maximum 16 gauge thickness when cutting sheet metal with saw.
3. Do not force the tool. Use the correct tool for the application. The correct tool will do the job better and safer at the rate for which the tool is designed.
4. Do not use the tool if the switch does not turn the tool on or off. Any tool that cannot be controlled with the switch is dangerous and must be repaired.
5. Disconnect the tool from the air source before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool unintentionally. Turn off and detach the air supply, safely discharge any residual air pressure, and release the throttle and/or turn the switch to its off position before leaving the work area.
6. Store the tool when it is idle out of reach of children and other untrained persons. A tool is dangerous in the hands of untrained users.
7. Maintain the tool with care. Keep a cutting tool sharp and clean. A properly maintained tool, with sharp cutting edges reduces the risk of binding and is easier to control.
8. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that affects the tool's operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools. There is a risk of bursting if the tool is damaged.
9. Use only accessories that are identified by the manufacturer for the specific tool model. Use of an accessory not intended for use with the specific tool model, increases the risk of injury to persons.

## CLEANING, MAINTENANCE, AND LUBRICATION

**NOTE:** These procedures are in addition to the regular checks and maintenance explained as part of the regular operation of the air-operated tool.

1. Daily - Air Supply Maintenance:

Every day, maintain the air supply according to the component manufacturers' instructions. Maintain the lubricator's oil level. Drain the moisture filter regularly. Performing routine air supply maintenance will allow the tool to operate more safely and will also reduce wear on the tool.

2. Make sure that the Housing that holds the blades and Air Inlet are free of dirt and debris.

3. Periodically: Apply a light machine oil to the pivot point on the Throttle.

4. Before Each Use: Check to make sure blades and Blade Guard are securely in place. If necessary, tighten the Set Screws.

5. Quarterly (every 3 months) – Tool Disassembly, Cleaning, and Inspection:

Have the internal mechanism cleaned, inspected, and lubricated by a qualified technician.

## TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	LIKELY SOLUTIONS
Decreased output	Not enough air pressure and/or air flow	Check for loose connections and make sure that air supply is providing enough air flow (CFM) at required pressure (PSI) to the tool's air inlet. <b>Do not exceed maximum air pressure.</b>
Obstructed Throttle		Clean around Throttle to ensure free movement
Incorrect lubrication or not enough		Lubricate using air tool oil and grease according to directions

PROBLEM	POSSIBLE CAUSE	LIKELY SOLUTIONS
Housing overheats during use.	lubrication	
	Air leaking from loose housing	Make sure housing is properly assembled and tight
	Blocked air inlet screen (if equipped)	Clean air inlet screen of build-up
	Mechanism contaminated	Have qualified technician clean and lubricate mechanism. Install in-line filter in air supply as stated in Initial Tool Set Up/Assembly: Air Supply
Housing overheats during use.	Incorrect lubrication or not enough lubrication	Lubricate using air tool oil and grease according to directions
	Worn parts	Have qualified technician inspect internal mechanism and replace parts as needed
Severe air leakage (Slight leakage is normal especially on older tools)	Cross-threaded housing components	Check for incorrect alignment and uneven gaps. If cross-threaded, disassemble and replace damaged parts before use
	Loose housing	Tighten housing assembly. If housing cannot tighten properly, internal parts may be misaligned
	Damaged valve or housing	Replace damaged components.
	Dirty, worn or damaged valve	Clean or replace valve assembly

# TECHNICAL SPECIFICATIONS

ELEMENT	VALUE
Maximum air pressure	90 PSI
Air inlet	1/4" – 18 NPT
Maximum speed*	9,000 SPM
Average air consumption	4 CFM @ 90 PSI
Length of Stroke	3/8"
Steel cutting capacity	Up to 16 gauge

\*Maximum speed at stated maximum air pressure. Excess air pressure is hazardous and may cause the tool to exceed stated maximum speed.

## GLOSSARY

SYMBOL	PROPERTY OR STATEMENT
n°	No-load speed
.../min	Revolutions or reciprocation per minute
PSI	Pounds per square inch of pressure
ft-lb	Foot-pounds of torque
BPM	Blows per minute
CFM	Cubic Feet per Minute flow
SCFM	Cubic Feet per Minute flow at standard conditions
NPT	National pipe thread, tapered
NPS	National pipe thread, straight



Some experts believe that the incorrect or prolonged use of almost any product may cause serious injury or death. To help reduce your risk of serious injury or death, refer to the information below. For more information, see [www.datastreamserver.com/safety](http://www.datastreamserver.com/safety)

- Consult all documentation, packaging and product labelling before use. Note that some products feature documentation available online. It is recommended to print and retain the documentation.
- Before each use, check the product for loose/broken/damaged/missing parts, wear or leaks (if applicable). Never use a product with loose/broken/damaged/missing parts, wear or leaks.
- Products must be inspected and serviced (if applicable) by a qualified technician every 6 months. This is based on average residential use by persons of average size and strength, and on a property of average metropolitan size. Use beyond these recommendations may require more frequent inspections/servicing.
- Ensure that all users of the product have completed a suitable industry recognised training course before being allowed access to the product.
- The product has been supplied by a general merchandise retailer that may not be familiar with your specific application or description of application. Be sure to attain third-party approval from a qualified specialist for your application before use, regardless of any assurances from the retailer or its representatives.
- This product is not intended for use where fail-safe operation is required. As with any product (for example, automobile, computer, toaster), there is the possibility of technical issues that may require the repair or replacement of parts, or the product itself. If the possibility of such failure and the associated time it may take to rectify could in any way inconvenience the user, business or employee, or financially affect the user, business or employee, then the product is not suitable for your requirements. This product is not intended for use where incorrect operation or a failure of any kind, including but not limited to, a condition requiring product return, replacement, parts replacement or service by a technician may cause financial loss, loss of employee time or an inconvenience requiring compensation.
- If this product has been purchased in error when considering the information presented here, contact the retailer directly for details of their returns policy, if required.

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