WHEN TO REPLACE CONSUMABLES WITHOUT WASTING MONEY

Just by using your plasma cutting machine your consumables will wear. This is normal is linked to the physical wear and tear of those components while creating a plasma arc.

Timely replacement of these consumables is needed to ensure consistent, high quality cut quality, but also to prevent and avoid total failure which could potentially damage other components of the machine.

To avoid such issues, many companies have put specific policies in place to ensure timely replacement of their consumables. Making the habit an integral part of your production process is a smart approach.

However, this sometimes also leads to ***overkill.***

Some companies will take the idea to far and have strict policies to replace all consumables after every shift or batch.

This general approach could lead to one or several consumables being prematurely replaced, which at the end of the year could mean a significant and unnecessary extra cost for a company.

So, when will a certain consumable really needs to be replaced?

Right of the bat, there is no rule of thumb that can be applied to all situations. The wear out of consumables is influenced by the application's power level, material thickness, the amount of cutting the torch does, but also the operator technique.

For example, on most plasma torches, the electrode and nozzle do not wear at the same rate. Which means the optimal replacement moment for each can differ. Your torch is a PT-31.

On the other hand, an insufficiently trained operator could use the wrong torch height settings leading to faster a faster deterioration of the torch. Or even worse, wrongfully using petroleum lubricant on the swirl baffle could cause a fire in the torch and burn it.

The key to getting timely consumables replacement right is to have the right expertise. Therefore, we recommend training your operators or contracting preventative maintenance service. Trained operators are far more likely to properly identify wear out on different consumables and use the optimal techniques for operation. This could save your shop a lot of money being spend on consumables while avoiding issues & and dreaded downtime. If you want to know more information about each specific consumable and tips on how to spot when they should be replaced, we recommend you read this separate article the different consumables and how long they last. Changing consumables will probably be one of the most frequent acts of maintenance you will perform.

ROUTINE DAILY CHECKS

Once you are fully and safely set up, you can move the actual maintenance steps of your plasma cutting machine.

First up are the routine daily checks that an operator should do before starting his shift:

1. VERIFY THE INLET AIR PRESSURE

For manual AIR systems confirm the inlet AIR pressures are conform the guidance in the AIR AND AMPERAGE GUDELINES DOCUMENT. Located on American Motor Products Website.

2. INSPECT THE AIR FILTERS

Inspect all air filters for moisture, oil, and particulates. If a filter is dirty or dark instead of white it should be replaced.

3. CLEAN THE TORCH BODY

Remove the torch from its mounting tube and do a first visual inspection. Look for excessive burn marks, cracks, traces of molten metal.

Also, inspect the mounting tube and the torch lead fittings. Firstly, give them a good blow to remove excessive dust.

Make sure all the connections remain undamaged and look for signs of leaks or residue build-up. Now it's time to have a closer look at the torch itself.

Carefully remove the different torch parts and again inspect each of them closely. Look for signs of mechanical damage to threads. You can clean the inside of the torch with a soft cotton swab.

Use a bit of electrical contact cleaner to get the grime out easier. In case you find indications of wear out (e.g. the O-rings), replace the component or go for a full new torch.

4. CLEAN THE TORCH LEADS

It's important to remove any accumulated metal dust or other particles from the torch leads.

When a plasma arc is started, a high voltage current will run through the leads. If this current, however, encounters metal dust on its path it will dissipate that energy and potential block the arc from starting.

Related to this, you will also want to double-check whether there is proper grounding to earth via high-frequency shielding.

Finally inspect the leads for any abnormality such as kinks, tears, exposed wiring, etc.

When reinstalling the torch, make sure it is properly mounted, perpendicular to the table.

5. CHECK THE AIR QUALITY

Hold a clean paper towel under the torch and purge air through the system you the test mode. You don't want to see water, oil mist or any particulates.

Contaminated AIR flow can lead to inferior cutting quality and shorter consumables life.

6. CONCLUSION

So, there you have it. We hope you found these tips useful, and you are now fully set to perfectly maintain your plasma cutting portion of your machine and ensure the continuity of your production.

In case you're looking for expert help or have any questions regarding preventive maintenance of your FOURFRONT machine, the AMP team is happy to help.

AMERICAN MOTOR PRODUCTS is a leading manufacturer of multi-functional generators and wants your machine running at it's best all the time. You spent your hard-earned money on our expensive machines, and we are here to give you personal service you deserve. Call us with any questions at 877-601-2823.