WELDING ISSUES & POSSIBLE SOLUTIONS

A Guide to Troubleshooting Common GMAW Gun and Consumable Problems

Making a high-quality MIG weld is no easy task. But making a high-quality MIG weld when your gun and consumables aren't functioning properly is just about impossible. Porosity, excessive spatter, undercut and burn back are just a few of the problems that can occur when something's not right with these components. Troubleshooting weld defects can be a difficult task, since any single problem can be caused by a variety of factors. It is often easier to avoid weld defects from occurring by conducting a thorough check of your MIG gun and consumables prior to welding than it is to troubleshoot an existing issue. Problems will inevitably occur, however, and being able to quickly and accurately identify their source will save you both money and frustration. The following is a guide to solving many of the most common consumables and gun-related problems associated with MIG welding.

Wire does not feed

Wire does not feed — There are a number of problems that could cause the wire to not feed, including issues related to the feeder relay, control lead, adapter connection, liner or the trigger switch. Begin troubleshooting this problem by checking whether the drive rolls are turning when the gun trigger is pulled. If they are not turning, an electrical continuity failure is occurring. Check the terminals and connector contact pins to ensure the gun is properly connected to the wire feeder. The wire can also fail to feed if the trigger switch is broken, or control leads in the gun cable are damaged. If this is the case, they will need to be replaced. If the drive rolls are turning but the wire is not feeding, it is usually caused by inadequate drive roll pressure or a blockage in the contact tip or liner. Check the drive rolls and contact tip before moving on to the liner, which takes more time and effort to check and replace. If a faulty feeder relay is the cause, consult the feeder manufacturer for information on correcting the problem. A broken control lead or a poor adapter connection will require you to test and replace the leads and/or contact pins. Some guns feature a spare set of control leads that can be used to correct the problem. With others, it may be necessary to replace the entire cable.

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