TROUBLE SHOOTING TIPS

Problem	Probable Cause	Correction To Make
Insufficient metal to make weld.	Worn mold resulting in leaking weld metal. See image 5 page 287	Replace mold or if only worn around conductor opening, use duct seal around conductor. Do not get duct seal into mold cavity.
	Wrong size cartridge for mold. See image 5 page 287	Check ID plate for mold and compare with number on bottom of cartridge.
	Too much spillage when dumping powder. See image 3 page 286	Carefully open lid while holding over crucible and dump.
	Wrong mold for conductor being used.	Replace with correct mold. In some applications, shim stock or adapter sleeves can be used to enlarge cable to fit mold.
Mold does not close tightly causing weld metal to leak out.	Handle clamps not properly adjusted.	Remove set screw between the handles of the mold and adjust handle tension by backing out the eye bolt.
	Dirt or slag stuck in parting line of mold.	Clean mold thoroughly between connections.
	Bent or out-of-round cable.	Straighten or cut out bad section of cable.
Handle clamps will not lock closed.	Handle clamps not properly adjusted.	Remove set screw between the handles of the mold and adjust handle tension by backing out the eye bolt.
Excessively high weld, bubbly or gassy appearance, poor weld.	Moisture in mold. See image 6 page 287	Pre-heat mold to above 220˚ F with a propane torch.
	Oil, grease, moisture or foreign material on conductors. See image 6 page 287	Pre-heat conductors with propane torch then use a clean wire brush on conductor to remove any residue left on conductors. If welding to cast iron or steel surface, weld area must be cleaned down to bright metal.
	Wrong size cartridge for mold. See image 4 page 286	Check ID plate for mold and compare with number on bottom of cartridge.
	Duct seal in weld cavity.	Take special precautions to keep duct seal out of weld cavity.
	Weld powder has gotten wet.	Replace with fresh, dry weld powder.
Weld metal blows out top of mold.	Mold worn or chipped around disc seal allowing powder to leak into mold cavity.	Replace mold.
	Forgot to use steel disc or did not seat it properly at bottom of crucible.	Make sure disc is seated at bottom of crucible before pouring the powder into crucible.

Continued on next page

TROUBLE SHOOTING TIPS

Problem	Probable Cause	Correction To Make
Cannot ignite powder.	Insufficient starting powder in ignition pocket on mold lid.	Place at least half of starting powder in ignition pocket of mold lid.
	Flint ignitor not shooting enough spark.	Clean flint ignitor according to directions on box or replace flint ignitor.
	Starting powder lumped together.	Break up starting powder on lid with edge of powder tube.
Mold wearing out too fast.	Improper cleaning of mold.	Use mold cleaner, soft natural bristle brush or clean rag to clean mold between shots. Do not use wire brush or screwdriver on molds.
	Bent or out of round cable causes chipping and premature wear of the mold.	Use caution when closing mold. Do not force mold shut around bent, twisted or out of round conductors.
Poor weld to ground rod.	Weight of mold not supported during reaction causing mold to slip when cable melts.	Use locking pliers on ground rod under mold to support the weight of the mold during the reaction.
	Moisture or contaminant on cable or ground rod.	Pre-heat conductors with propane torch then use a clean wire brush on conductors to remove any residue left on conductors.
Weld will not stick to steel surface.	Improperly cleaned area on steel.	An area larger than the weld area should be cleaned down to bright clean metal.
	Moisture or contaminant on cable or steel surface.	Pre-heat conductors with propane torch then use a clean wire brush on conductors to remove any residue left on conductors.
	Cable is improperly positioned in mold, blocking the flow of weld metal.	Position cable in mold in accordance with directions for mold. If directions are not available, position top of cable in the center of where the liquid weld metal hits the steel.
Weld will not stick to cast iron surface.	All of the causes listed under welding to steel surface also apply to this section.	
	Not using CI (Cast Iron) powder.	Specify "CI" behind cartridge when order powder (i.e. 25 CI).
Cable pulls out of mold when it is fired.	Cables are either twisted or under tension.	Use 38-0330-00 cable clamp or other method to remove tension. Cut out severely twisted cable.

EXAMPLES OF ACCEPTABLE AND NON ACCEPTABLE WELDS

A Good connection is a normal weld with only minor surface imperfections.

An Acceptable connection is a less than normal weld, but a good performing weld. Imperfections indicate that:

1) a new mold is required,
2) a change in procedure is necessary, or
3) the proper mold conductor and/or welding material was not used.

A Bad connection shows inadequate fill or an extra high riser due to

1) use of incorrect procedure,
2) use of incorrect equipment and/or equipment worn beyond its useful life, or
3) use of incorrect material.

Good Weld

Image 1: A solid weld with only minor surface imperfections.

Acceptable Welds

Image 2: Fill is lower than normal, but still sufficient.

Image 3: A worn or incorrect mold was used, allowing leakage around conductor. The fill in this connection is sufficient to make it as acceptable.

Image 4: Weld is too high. This makes it difficult to remove the weld from the mold.

Continued on next page

EXAMPLES OF ACCEPTABLE AND NON ACCEPTABLE WELDS

Bad Welds

Image 5: Fill too low. Weld cavity was not filled over cable strands.

Image 6: Contaminated weld. Cables excessively dirty or moisture present.

Image 7: Poor connectivity. Visible wire shown in weld.

TROUBLE SHOOTING TIPS
for the EZ Lite Remote® Ignition System

USE A FLINT IGNITOR OR THE EZ Lite Remote® AND NEVER BE STUCK OUT ON THE JOB

Problem	Probable Cause	Correction To Make
Weld metal does not ignite.	Batteries need to be replaced.	Check the battery level indicator; if yellow or red replace with 4 D alkaline batteries.
Ignitor does not ignite.	Ignitor not inserted in the connector properly.	Make sure the ignitor is inserted such that it snaps in the connector.
	Batteries need to be replaced.	Check battery level indicator; if yellow or red replace with 4 D alkaline batteries.
	Ignitor could be used or damaged.	Replace with a new ignitor.
	Cord damaged by improper storage	Replace unit
Battery level indicator does not function.	Batteries need to be replaced.	Replace with 4 D size alkaline batteries.
	Batteries inserted incorrectly.	Check direction at the back of the remote unit to insert the batteries.
	Incorrect battery type.	Make sure D size alkaline batteries are used.
	Blown fuse.	Replace fuse with GMA-6A Cooper Bussmann or equivalent.
	Cold weather has effected the batteries.	Use our Cold Weather kit page 131, or keep EZ Lite Remote warm.