



Telephone: +1 (780) 440-2231
Toll Free (NA Only): 1 (800) 661-4122
5750 – 50 Street NW,
Edmonton, AB Canada, T6B 2Z8
E-Mail: csimpson@drader.com

April 22, 2022

NOTICE OF CHANGES

We are happy to inform you that we have completed the work instructions and they are available by downloading them from Drader Injectiweld Repair Center website. **We remind you that these instructions are CONFIDENTIAL AND PROPRIETARY INFORMATION and are for internal use only by your organization. DO NOT forward them to any customers or anyone else.**

These instructions cover:

- 1) How to properly install the RTD and Heater wires with the crimp terminals already on, and then how to reassembly the Barrel correctly including how to place the new Silicone/Fibreglass sleeving insulation on the Connecting Tube.
- 2) How to replace the Switch Bracket and how to route and wire the unit with the new the HTCO, ground bond wires, with new Switch Bracket.
- 3) How to place the new Nomex® Baffles, assemble the unit with those Baffles and screw together and label the enclosure afterwards.
- 4) How to complete the high potential/dielectric and ground bond tests.

Over time we have developed a number of best practices and specialized procedures for assembling the subcomponents for the welders and to that end more parts will only be sold ready to assemble with no need for you to crimp wires, heat shrink connectors, etc. anymore. The following new components will be purchased with the connectors ready for install:

- 1) The RTD will come supplied with fibreglass insulation on each wire and the wires will have the connectors crimped and the heat shrink placed and shrunk accordingly. Note there is a technique that has been developed to get the wires through the barrel with the connectors on.
- 2) The Heaters will come supplied with fibreglass insulation and the wires will have the connectors crimped and the heat shrink placed and shrunk accordingly. Note there is a technique that has been developed to get the wires through the barrel with the connectors on.
- 3) The HTCO assembly will come with the bracket on, connectors and heat shrink in place. Note that this is only for newer Barrels with a ground hole.
- 4) The Rod Feed Tube will come with heat shrink already applied.

- 5) The ground wires will come with the star ring terminals in place and are now a PTFE Green/Yellow wire that is correctly coloured for the application.

In addition, starting as soon as possible, whenever anything related to wiring or electrical components have been modified or replaced it is now required that each welder be tested to ensure there is a high potential between ground (bond) and the other conductors of the device, and that the ground bond is confirmed. This is to ensure that no parts are shorted to ground (or may quickly become shorted to ground during use) and that all of the parts of the welder are properly bonded to the ground conductor.

These tests require specialized equipment called a High Potential or HIPOT, or Dielectric Tester that also has a ground bond testing capability. The HIPOT tester applies a high voltage (between 1000 and 5000V) between the ground conductor and the neutral and line (or the L1 and L2 in some locations) wires connected together and then measures if there is any leakage between those lines and the ground conductor and if the leakage becomes too great this indicates that the device likely has some kind of incorrect connection or damage to a component (often a heater or RTD). The ground bond test runs up to 40A of current between the ground conductor and a clamp attached to the barrel to confirm that all parts are bonded together to the earth ground bond conductor. It will also be crucial that all repair centers keep the calibration of their ground bond testers up to date in accordance with manufacturers specifications. The settings for the testing are provided in the Repair Instructions (part 1).

NOTE: HIGH POTENTIAL DIELECTRIC TESTING AND GROUND BOND TESTING CAN INVOLVE DANGEROUS VOLTAGES AND CURRENTS AND IT IS IMPERATIVE THAT YOU ARE PROPERLY TRAINED AND TAKE ALL PRECAUTIONS DURING BOTH THE SETUP, TESTING, AND TEARDOWN OF THE DEVICE UNDER TEST.

Additional updates:

- 1) Drader has updated the Power Cord assemblies by modifying the wire lengths. Please see the tables below to determine which Power Cord assembly to use in a welder repair.

Table 1. Unchanged Power Cord Assemblies with longer wires.

<ul style="list-style-type: none"> • 120V welders with a serial number W300-10403 and below • 240V welders with a serial number W300-10901 and below • Welders with metal Switch Bracket 	
Description	Item ID for power cords with longer wires remains the same
120V North America Power Cord Assembly	IASS-A-CRDNAM
240V Europe Power Cord Assembly	IASS-A-CRDEURO
240V UK Power Cord Assembly	IASS-A-CRDUKM
240V Australia Power Cord Assembly	IASS-A-CRDAUS

Note: Routing of the wires for these power cords remains unchanged.

Table 2. New Power Cord Assemblies with shorter wires.

- 120V welders with a serial number W300-10404 and up
- 240V welders with a serial number W300-10902 and up
- Welders with plastic Switch Bracket

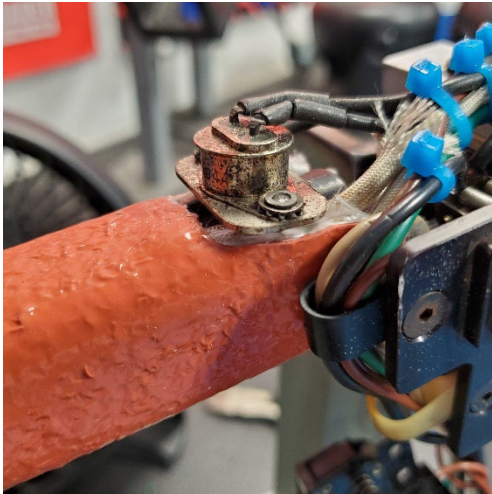
Description	New Item ID for modified power cords
120V North America Power Cord Assembly	IASS-A-R14CRDNAM
240V Europe Power Cord Assembly	IASS-A-R14CRDEURO
240V UK Power Cord Assembly	IASS-A-R14CRDUKM
240V Australia Power Cord Assembly	IASS-A-R14CRDAUS

Note: Routing of the wires for these power cords has changed.

- 2) Old vs New Ceramic HTCO assembly. Replace an old type HTCO with black Teflon wires with an old type HTCO. Item ID for this part has remained the same. All Barrels without the ground hole only accept the old type HTCO assembly. All new welders with a serial number W300-10404 and up for 120V welders, and W300-10902 and up for 240V welders must use a new type ceramic HTCO with pre-bent bracket and a separate ground wire.

Old HTCO assembly item ID: IASS-A-SWHTCO

New HTCO assembly item ID: IASS-A-HTCOTB



NOTE: Do not pull the Barrel Sleeve over the old type HTCO assembly. Cut a slot in the Sleeve as shown in the picture above (left).

- 3) Barrel Sleeve. Note that we no longer use the Kapton tape over the Barrel Sleeve. Kapton tape is still used but only with the new ceramic HTCO.
- 4) Metal vs Plastic Switch Bracket. Drader no longer provides metal Switch Brackets. If you need to replace a Switch Bracket please contact Customer Service for instructions.
- 5) Printed Circuit Board version 6 (PCB V6). All new welders with a serial number W300-10475 and up for 120V welders, and W300-10960 and up for 240V welders come with an upgraded PCB V6.

We appreciate your patience with us through this process and of course should you have any questions or concerns please feel free to contact Dave or Christie at +1-780-440-2231 or by email at DSoundara@drader.com, or CSimpson@drader.com.

Sincerely,

Kevin McTavish
VP of Manufacturing
Drader Manufacturing Industries, Ltd.
www.drader.com
780-440-2231, ext. 235