



Service Bulletin



Date 12/06/2019

BULLETIN # 259

Miller BB800X Duo Arcreach insulation resistance testing.

CAUTION: The following information is intended for use by qualified service personnel. When the unit is energised **LETHAL VOLTAGES** are present on the electrical and electronic components.

It is not intended that persons without suitable training and knowledge attempt to perform service tasks on the components of welding equipment.

When performing Insulation resistance test on Miller Big Blue 800 engine drive some precaution need to be taken to prevent damage of some components.

Some links need to be applied to across various components, so the high voltage from tester will not be able to damage components.

The Weld rectifier needs to short circuit, by adding shorting links to rectifier.

The IGBT collector emitter needs to be short circuited, which is achieved by shorting the "A" side output and putting the parallel switch in the "A" position.

Control PCB needs to be isolated from output terminals, by disconnecting a plug in wiring loom, to prevent damage.

The 240V and 415V socket outlets need to be accessed for testing, the windings are isolated and the three phase is star connected, so there is no requirement to short Active -Neutral or L1-L2-L3

The insulation resistance test can then be done from
 240V to weld output
 240V to chassis
 415V to weld output
 415V to chassis

Test Setup

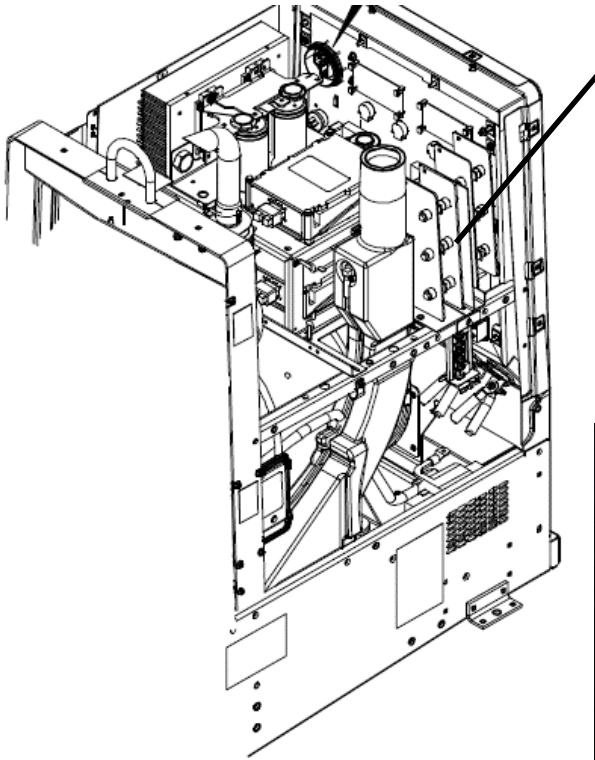
Remove the two front side panels.

The rectifiers are accessed on the left hand side of the machine the wiring loom plug on the right hand side of the machine.

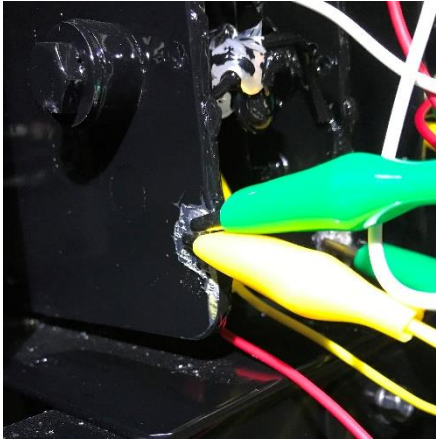
The information provided in this sheet is accurate and reliable, however no warranty of accuracy or reliability is given and no responsibility arising in any other ways by errors or omissions is accepted.



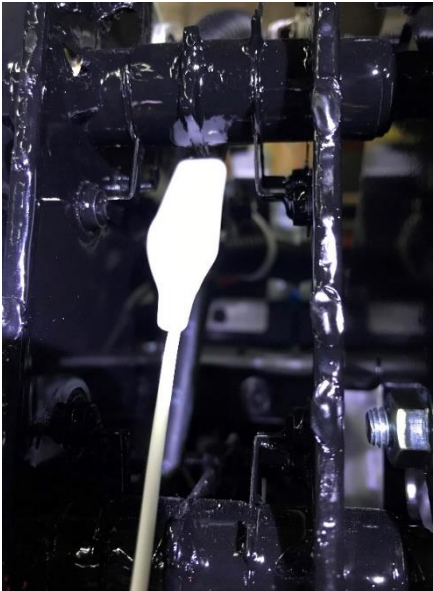
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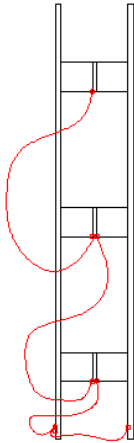
Rectifier location:
There are two rectifiers,
each one needs to have
shorting links

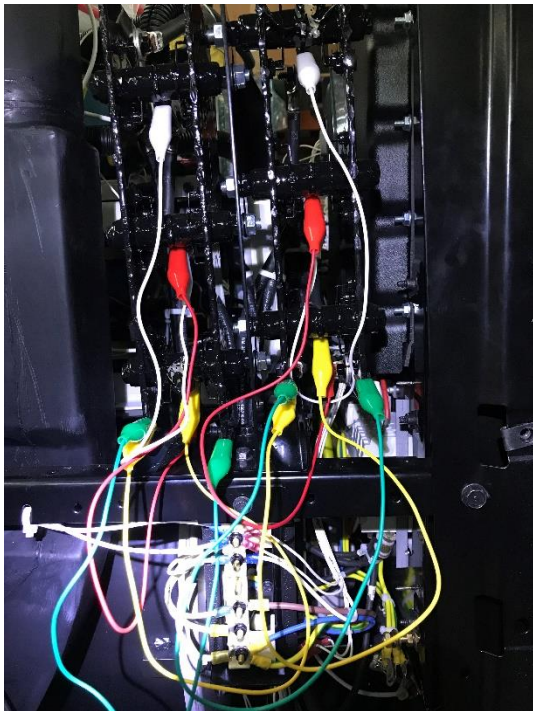


Rectifier is
painted black.
Some paint
needs to be
scraped off
expose
aluminium, to
make contact
with the
attached test
clips.



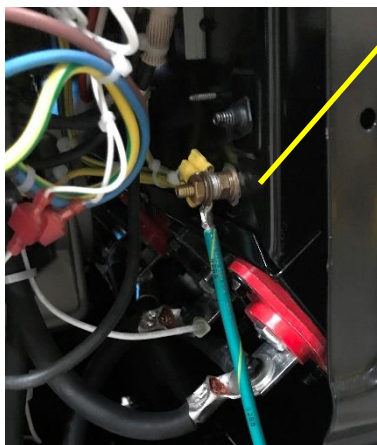
The rectifier is three phase and
therefore has a connection to
each phase winding, total 3.
A clip needs to be attached to
each phase, which is located in
between the two rectifiers plates.
Some paint needs to be scraped
off to attach the test clips.





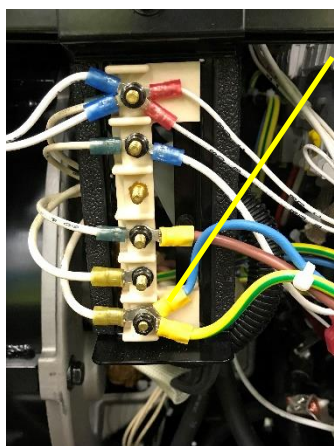
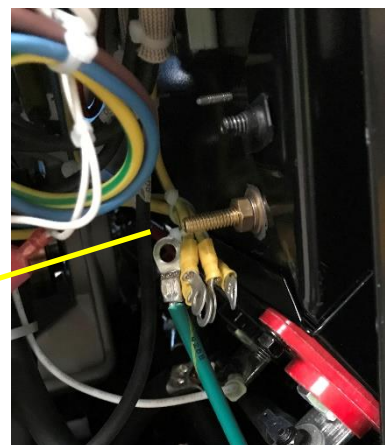
Both rectifiers
with shorting
..

Earth points need to be removed to disconnect MEN



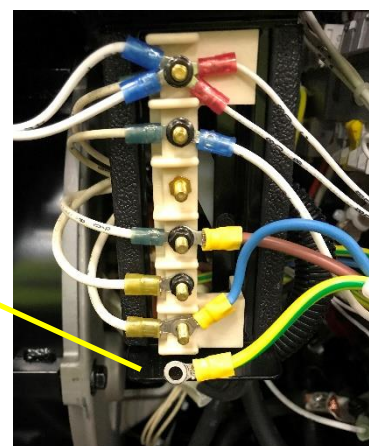
Front Panel earth
point

Front Panel earth
wires removed

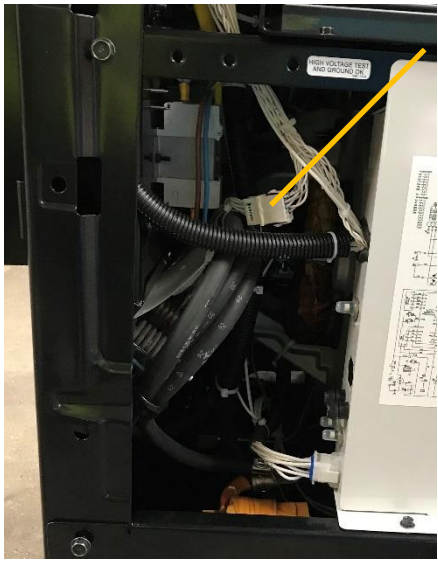


Terminal strip earth
point

Terminal strip earth
wires removed



Disconnect Plug RC30



Locate plug RC30 from RHS of machine

Disconnect plug RC30

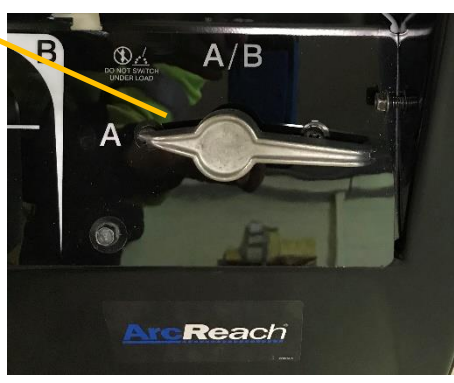


Setup Weld Output

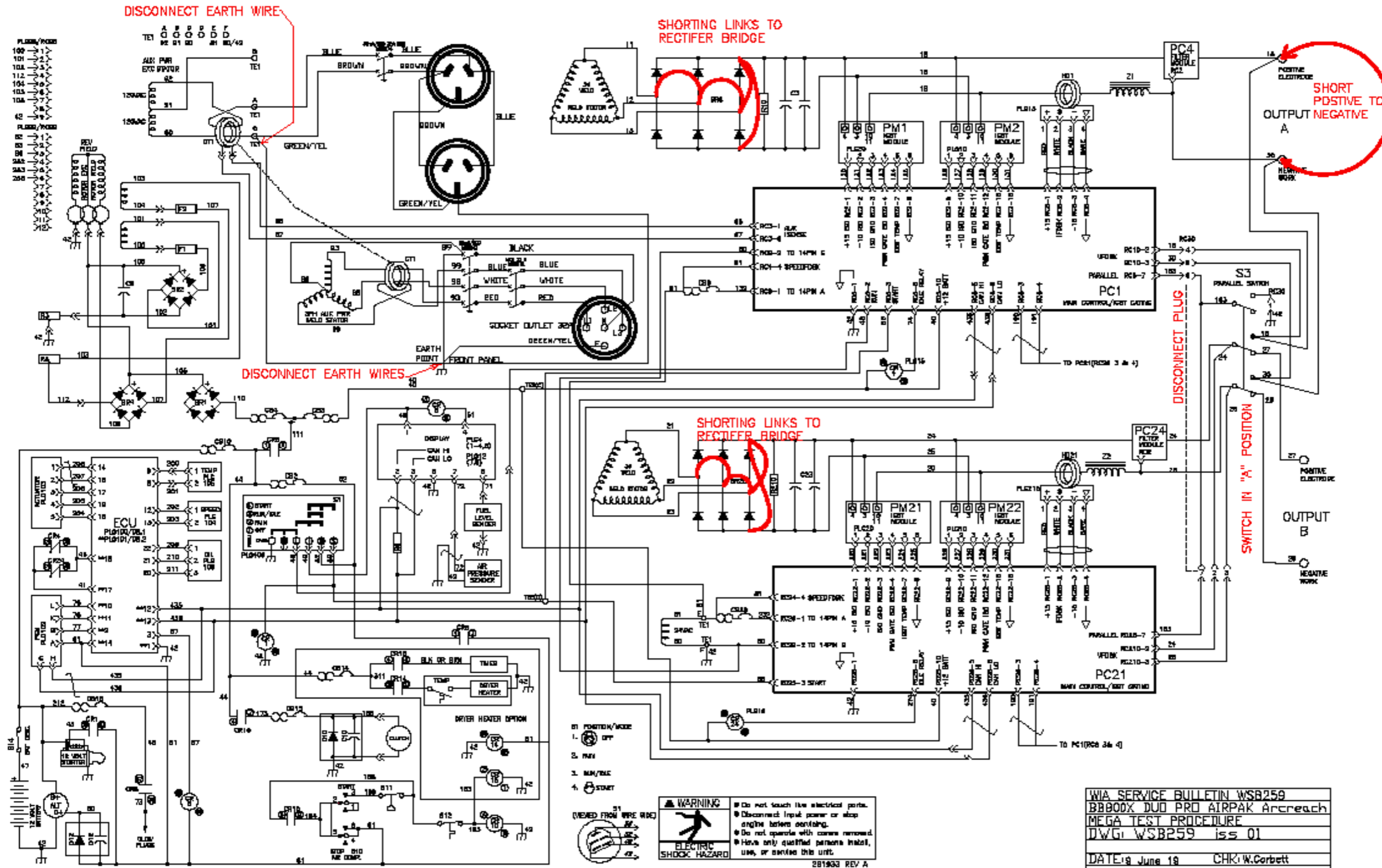


Place Parallel switch in "A" Mode

Locate plug RC30 from RHS of machine



Proceed with testing.
At end of test, remove all links and reconnect RC30



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