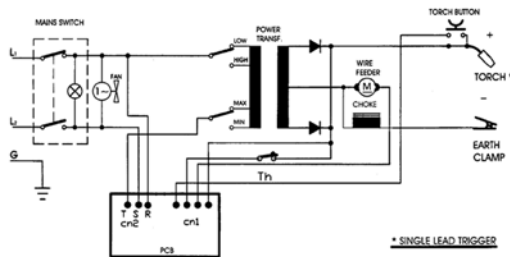


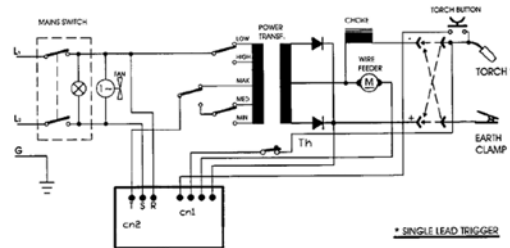
Migmate 130 conversion to DP version

Note: conversion will involve the opening of the machine, it should only be performed by electrically competent person.

The gas and dual purpose of the Migmate are almost the same and share 90+ % of their parts see diagram below.



Gas version



DP version

The main area of visual difference is to the front panel, the gas version has a cable clamp to hold the captive earth return lead and a blanking plug, in the DP version the place of these two is taken by a pair of 10-25mm Dinse sockets, the sockets are connected to the choke output and the +ve plate of the rectifier.



Gas version



DP version

Conversion to DP

Parts–

1 * 10mm Red ring crimp

1 * Red butt splice,

450 mm length 1mm² lead

1 * 1m length 10mm² length welding cable (if the earth lead is on poor condition you will need and extra 1.5m to make a new earth lead)

2 * small dinse socket (10-25mm)

2 * small dinse plug (10-25mm)

Following crimps/terminals are for 10mm² welding cable

1 * 8mm ring

1 * 6mm ring

1 * 10mm ring

Make up the following leads

+ve link cable use 400mm of 10mm² welding cable, fit 8mm ring crimp to one end and 6mm ring crimp to the other.

Torch link cable use 350mm of 10mm² welding cable fit 10mm ring crimp to one end and a dinse plug to the other.

Disconnect the welder from the mains.

Remove the side panels from the welder.

Disconnect the earth clamp from the earth lead and feed the lead back through the cable gland.

Remove the cable gland and blanking plug from the front panel.

Remove the torch connection lead from the brass threaded section of the torch and pull through the grommet in the centre panel.

Pass the ring crimp end of the new torch link cable through the grommet on the front of the welder and fit the ring onto the brass threaded section.

Remove the thermal overload lead and torch connection lead from the rectifier plate, (if the overload lead is crimped into the same ring crimp as the PCB connecting lead cut the overload lead next to the crimp), do not remove the feed motor power lead from the plate.

Extend the thermal overload lead by 450mm and pass it through the grommet in the centre panel.

Trim the lead so that it will reach the brass threaded section of the torch.

Fit a 10mm ring crimp to the end of the lead and fit this onto the brass threaded section of the torch.

Fit 10-25mm Dinse panel sockets into the holes vacated by the cable gland and blanking plug.

Bolt the +ve link cable to the right hand dinse socket.

Pass the free end of +ve link lead through the grommet in the centre panel.

Bolt the +ve link cable to the rectifier +ve plate.

Remove the crimp connection between the choke and the earth lead.

Clean the insulation from the choke lead for 40mm and form into a ring around a 8mm bolt.

Bolt the newly form ring onto the left hand dinse socket.

Refit the earth clamp onto the earth lead.

Fit a Dinse plug on the earth lead and refit the earth clamp.

Label the left hand socket - and the right hand socket +.

Ensure all connections are tight and the internal cables are routed neatly, check they are not touching any mains connection or hard against any sharp edges, you may need to use cable ties to secure the cables.

Refit cover

For gasless operation fit the earth lead into the right hand socket and the torch connection lead to the left hand socket.

For gas operation fit the earth lead into the left hand socket and the torch connection lead to the right hand socket.

Conversion to Gasless

Parts–

10mm Red ring crimp

1 * Red butt splice

450 mm length 1mm² lead

1 * 6mm 10mm² crimp

M6*30mm bolt

M6 nut

3*M6 15mm dia washer

Disconnect the welder from the mains.

Remove the side panel from the welder.

Loosen the earth lead cable gland.

Remove the torch connecting lead from the rectifier plate.

Remove the thermal overload lead and torch connection lead from the rectifier plate, (if the overload lead is crimped into the same ring crimp as the PCB connecting lead cut the overload lead next to the crimp), do not remove the feed motor power lead from the plate.

Extend the thermal overload lead by 450mm and pass it through the grommet in the centre panel.

Trim the lead so that it will reach the brass threaded section of the torch.

Fit a 10mm ring crimp to the end of the lead and fit this onto the brass threaded section of the torch.

Remove the crimp connection between the choke and the earth lead.

Clean the insulation from the choke lead for 40mm and form into a ring around a 6mm bolt.

Bolt the free end of the torch connecting lead to the newly form ring using the M6 nut bolts and washers.

Fit the 6mm crimp onto the end of the earth lead.

Pull the earth lead so that it reaches the rectifier plate at the point where the torch connecting lead was located and bolt into place.

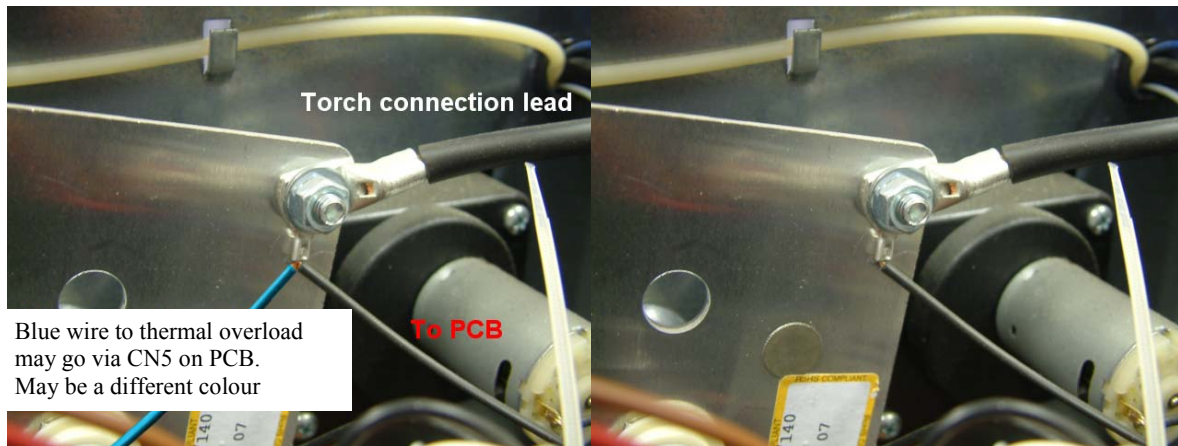
Tighten the earth lead cable gland.

Ensure all connections are tight and the internal cables are routed neatly, check they are not touching any mains connection or hard against any sharp edges, you may need to use cable ties to secure the cables.

Refit cover.

The welder will now operate correctly with gasless wire but not solid wire, if solid wire is to be used the polarity will have to be reversed again.

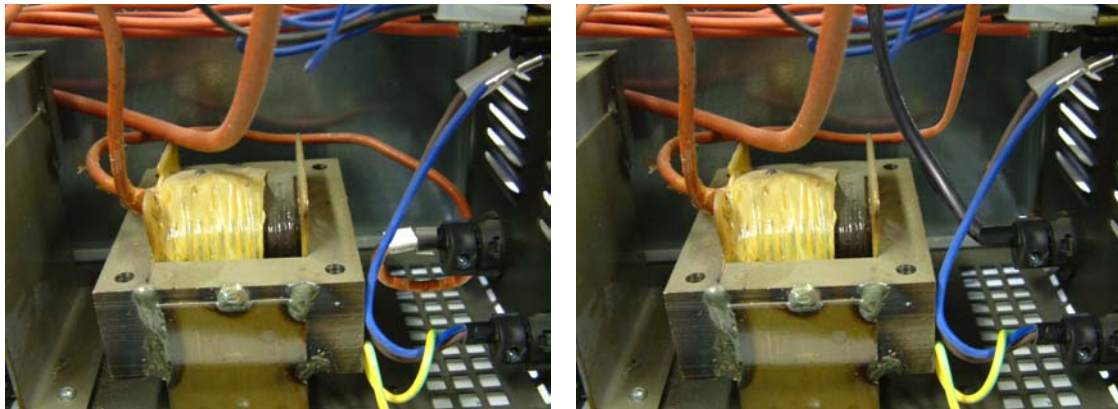
Rectifier Plate



Before

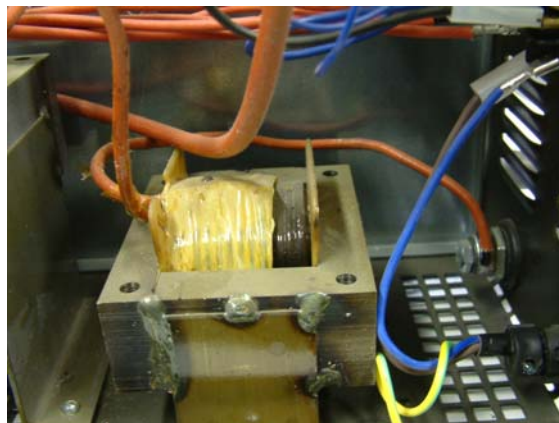
After

Choke

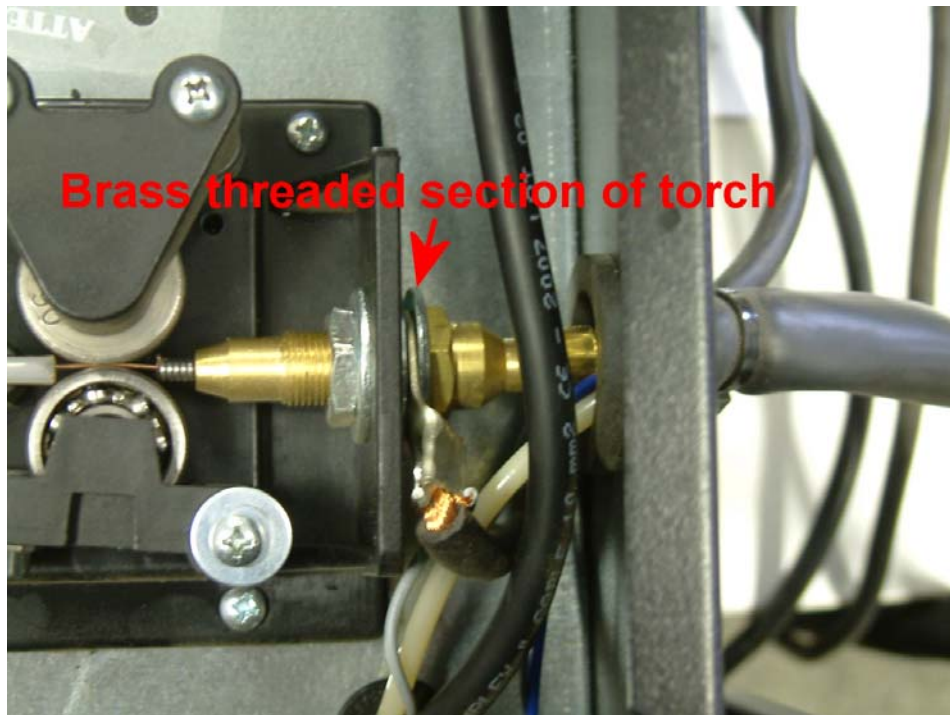


Before

After gasless



After gas/gasless



Brass threaded section of torch

Route for new torch link cable



Dinse plugs and sockets.

These are a family of high current welding power connectors, they come in range of sizes normally specified by the cross sectional area of the cable, to connect you insert the plug in the socket and turn the plug half a turn.

