

Transmatic 162 & 244



At the rear of this manual is a pull-out technical broadsheet and parts list. Please pass these documents to your Maintenance Department.



Fig. 1. — Transmatic 162

GENERAL

The Transmatic 162 and Transmatic 244 are feed units designed for use in MIG/MAG welding installations to feed hard, soft or tubular (cored) wires. Details of the wire sizes handled are given in the specification (See Technical Notes).

A quick-fit central adaptor (Euro-connector) allows the full range of air and water-cooled torches to be fitted quickly and with minimum preparation. When using a water-cooled torch the water adaptor kit must be fitted. (See opposite).

Wire is fed from the feeder by one/two driven feed roll(s) and one/two pressure roll(s). The feed roll(s) is driven from d.c. motor by a worm-drive gear.

When changing wire sizes the feed roll(s), outlet guide tube liner, inlet guide and intermediate guide may have to be changed, see Parts List.

Each feed roll has two alternative grooves and is stamped with the wire size on the outside (facing the operator) edge.

The pressure roll tension can be adjusted to counteract wire slip and provision is made to change guide tubes to optimise conditions for various wire sizes.

Standard facilities include variable wire feed speed, wire inching, gas purge, continuous/spot weld timing and latching.

The unit is fitted with a plastic hub designed to accept a standard reel of wire. A 30Kg reel holder, wire basket or reel cover kit can be fitted (See Optional Extras, page 8).

Overrun braking adjustment facilities are provided on the hub.

Water Adaptor Kit — (See below)

Required where a water-cooled torch is to be employed this kit contains the hoses and quick fit unions which enable the water supply and torch power/drain hoses to be coupled to the wire feed unit.

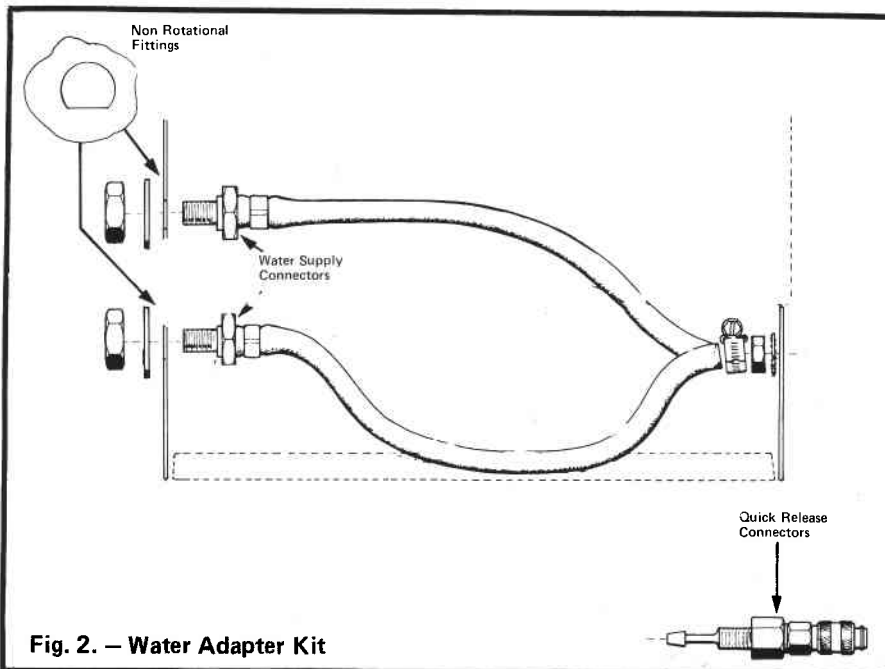


Fig. 2. — Water Adapter Kit

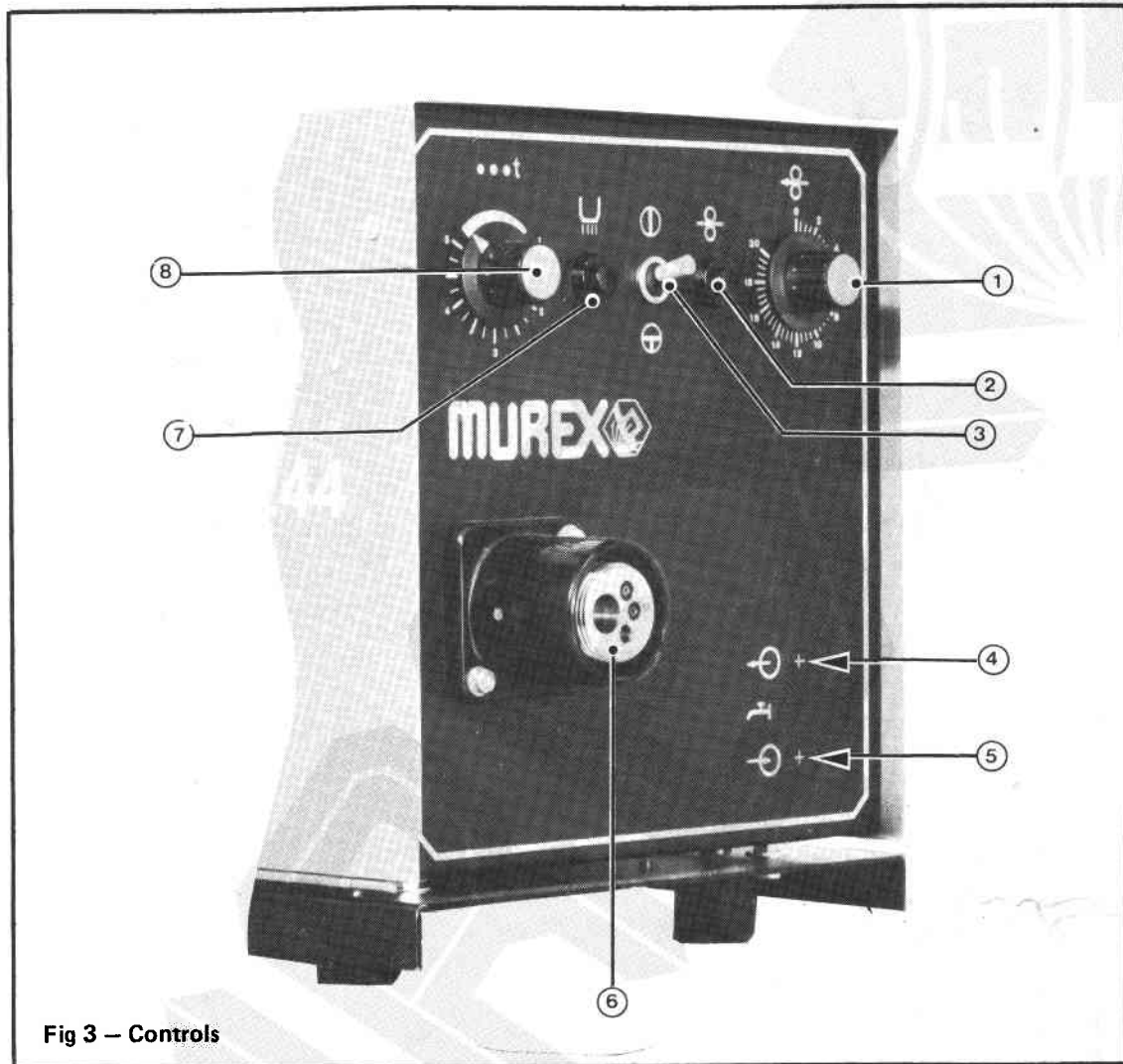


Fig 3 – Controls

CONTROLS

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|--|--|--|---|--|---|
| <p>1. Wire Feed Speed Control
Provides a continuously variable wire feed speed control. The wire speed is directly proportional to welding current so that increasing the speed increases current and vice-versa.</p> | <p>2. Wire Inch Control
Operates the wire feed motor but not the other welding services. It is used to 'inch' the wire through the equipment during setting up and adjustment procedures.</p> | <p>3. Latching Switch
This switch provides latching facilities as follows:

Unlatched (2 way)
Press- Continuous welding whilst torch switch held pressed.</p> | <p>Release- Welding stops
Latched (4 way)
Press- Gas Purge
Release- Continuous welding

Press- Welding stops, gas continues giving post weld gas coverage
Release Gas stops

Water Adaptor Fitting Holes</p> | <p>4. Water out to torch.</p> <p>5. Water return from torch (drain). When a water-cooled torch is used the water connections are mounted in the holes provided. These connections are contained in the water adaptor kit. See Optional Extras.</p> | <p>6. Central Adaptor (Euroconnector)
Allows for quick fitting of torches including gas connection wire outlet and torch switch connections.</p> <p>7. Gas Purge Button
When operated, opens the gas valve in the unit, allowing the gas to flow through to the welding torch. It is used when initially adjusting the gas glow and when purging the gas lines of air.</p> <p>8. Spot Weld ON/OFF and Timer Control - 2 way - Operation only
Switches the spot weld facility on and allows the operator to select a suitable weld time to provide sufficient penetration of the weld spot relative to the material being welded.</p> |
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INSTALLATION

INITIAL SETTING UP

1. Feed Rolls

Note: When changing wire sizes the inlet guide, intermediate guide, outlet guide tube liner and feed rolls may need changing as given below.

Before connecting the electrical and gas supplies, ensure that the equipment is set up for the type and size of wire to be used as follows:

- (a) Power Source switched off.
- (b) When changing wire sizes it may be necessary to change the feed roll, outlet guide tube liner, inlet guide and intermediate guide.

The size of feed roll is stamped on the visible surface of the roll when fitted.
—See 'Feed Roll changing'.

2. Interconnections

Lay out the torch leads keeping the leads as straight as possible.

Check that the power source is switched off.

CAUTION: Do not extend the interconnections beyond 20m, if in doubt call your nearest Murex distributor for advice.

3. Gas

Connect the shielding gas hose between the regulator and the nipple provided on the rear panel

4. Control and Power Cable

Connect the control and power cables between the fittings on the rear panel and the socket on the power source.

5. Work Return Lead

Connect the work return lead to a clean area on the work piece.

WELDING WIRE

Fit the reel of welding wire:

1. Remove the hand nut from the hub.
2. Place the reel of wire on the hub so that the wire will be drawn off from the bottom. Ensure that the pin on the hub locates in the hole in the side of the reel.
3. Release the end of the wire from the side of the reel but do not allow the coils to loosen. Cut off

the kinked portion and remove any sharp edges from the end of the wire. This must be done every time the wire is threaded through the equipment.

4. Loosen the hub reel brake nut so that the reel revolves freely. Tighten the nut just enough to prevent over-run when wire feed stops. Too much pressure will cause excessive drag.
5. Lift the pressure roll arm.
6. Thread the wire through the inlet guide over the feed roll(s) and into the outlet guide, for approximately 50mm (2in). Lower the pressure roll arm so that the welding wire is clamped into position in the groove.
7. Switch on the power source to obtain the 42V supply.
8. Push the inching button — See Fig. 2. and check that the wire is driven smoothly through the outlet guide.
9. Check that wire feed is smooth and positive. If the wire slips in the feed rolls, tighten the pressure adjuster just enough to obtain positive wire feed drive.
Do not overtighten.
10. Cut off the wire to protrude 10mm from the torch connector.

TORCH

1. Check that the torch leads are laid out straight and connect the torch to the torch adaptor.
2. Remove the nozzle and contact tip from the torch. Using the inching button, feed the wire through the torch. Thread a contact tip over the wire and screw it into the torch. Tighten the contact tip with the key provided.
3. Fit the appropriate nozzle.
4. Press the torch switch and check that wire flows smoothly from the torch.

REPLACEMENTS AND ADJUSTMENT

1. **Outlet Guide Tube Liner Removal**
 - (a) Release the pressure roll(s).
 - (b) If the guide tube liner will move freely, push it out of the torch adaptor using a pencil or soft wooden dowel rod, then withdraw it from the torch adaptor using a pair of long nose pliers.

If the guide tube liner does not move freely, it may be necessary to drive it out using a hard wooden dowel or old guide tube.

Note: Do not use a screwdriver or metal tool to push out the tube. Use of such a tool may score the end of the guide tube and impair wire feeding.

2. Feed Roll Changing

Remove the feedroll retaining screw(s). It will be necessary to give the screwdriver a sharp twist to avoid turning the motor.

Lift the pressure arm and pull off the feedroll(s). When replacing the feedroll(s), note the wire size which is stamped on the face of the roll(s).

The required size must face outwards when the roll is refitted.

Fit the feedroll(s) and lower the pressure arm. Refit the retaining screw(s) giving it a sharp twist with the screwdriver to tighten.

3. Inlet Guide Replacement

Slacken retaining screw and pull inlet guide out from rear.

4. Intermediate Guide Replacement

Release pressure arm. Slacken intermediate guide retaining screw. Remove rear feed roll. Slide out intermediate guide from the rear.

5. Overrun Adjustment

Tighten or unscrew the hub bolt/nut in the centre of the wire reel hub until sufficient hub friction is achieved to prevent overrun.

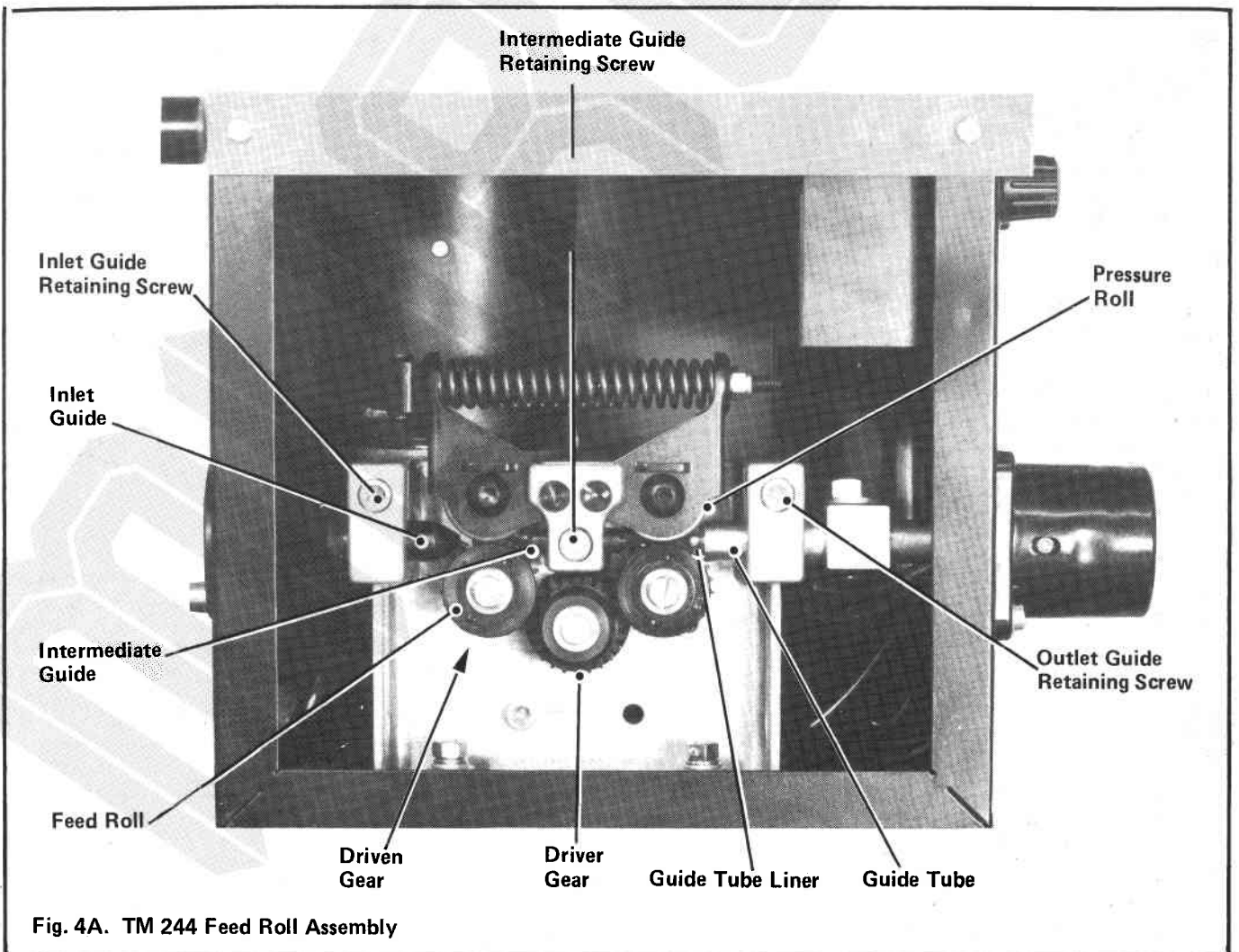
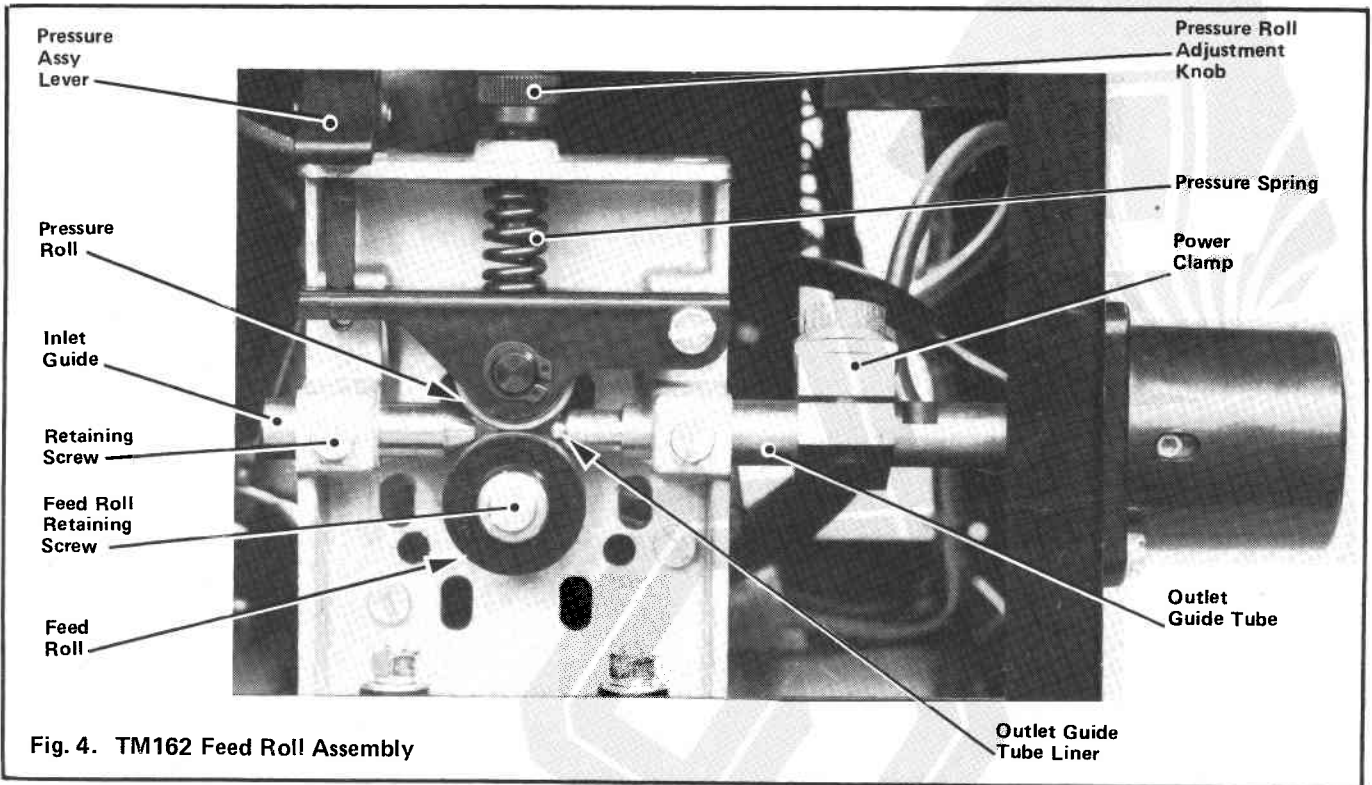
Note: Do not over tighten or the wire will slip in the feed rolls.

6. Feed Roll Pressure

Correct feed roll pressure will provide smooth, uninterrupted feeding of the wire. Inspection of the wire should reveal only slight marks from the feed rolls and no deformation of the wire. Use of the correct pressure is especially important when feeding aluminium wires. The pressure should be just enough to provide positive wire drive without slipping.

7. Burn Off Adjustment

If burn off requires adjustment, it must be set using a control mounted on the printed circuit board. See Fig. 7.



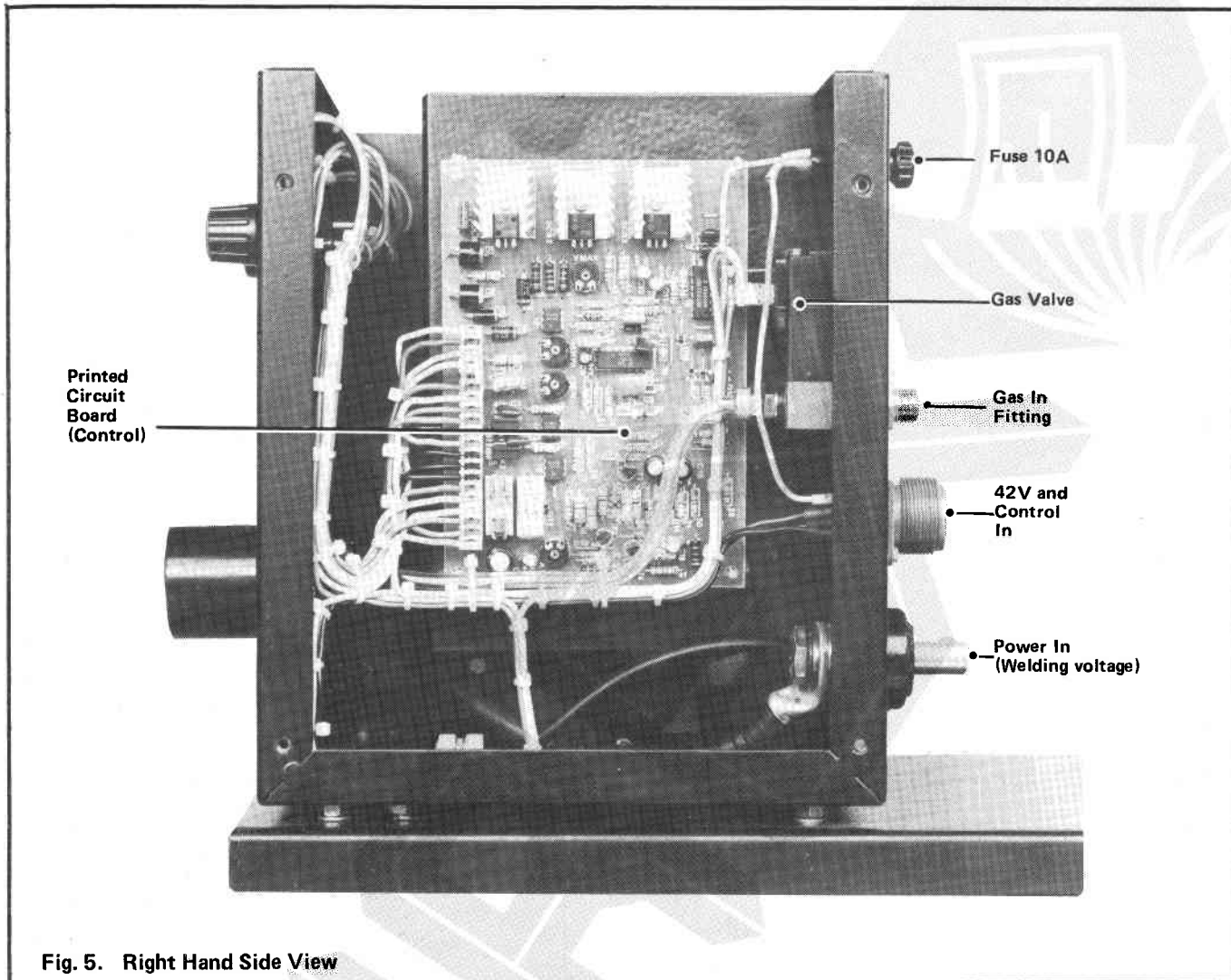


Fig. 5. Right Hand Side View

Maximum Motor Speed Setting

Soft Start Control

Minimum Motor Speed Setting

Burn - off Control

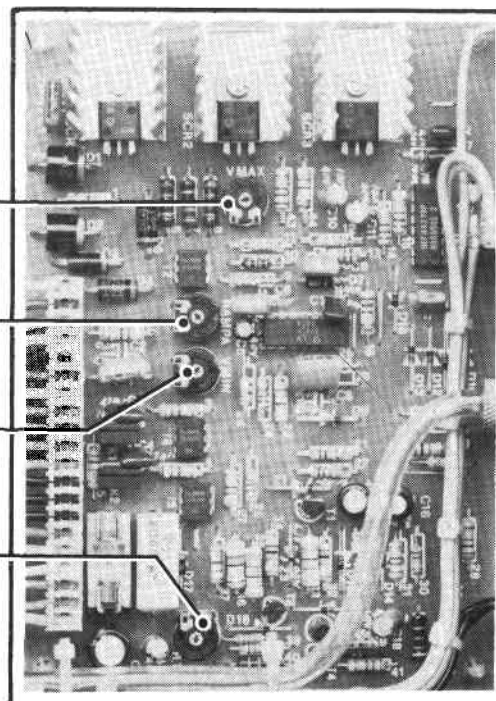


Fig. 6. Printed Circuit Board Controls