

GETEC

INSTRUCTION BOOK

CHEETAH MODEL

HWCH 400-10

FLOW 18 GPM @ 2200 PSI





Hydra – Weld™

General Installation

The Hydra-Weld™ is a hydraulically-driven DC welder/ AC Generator that will deliver rated amperage when the proper flow is delivered to its hydraulic drive. Oil temperature should be between 100-140°F. A 10-micron filter is also recommended to maintain the drive at its maximum performance. Depending on the size of the reservoir, an oil cooler must be used; the smaller the reservoir; the larger the cooler.

The tank should **NEVER** be smaller than 2 times the required GPM.

When starting a new hydraulic system, we strongly recommend that you connect the pressure line to the return, bypassing the hydraulic welder drive. You should operate the system for 10 minutes that way. This will clean the system; otherwise, all kinds of problems will occur. After connecting the pressure and return line to the welder's hydraulic drive, state your system at a low speed, slowly increasing the speed until you reached the proper operating speed. While setting up a hydraulically-driven welder or generator, it is necessary to check the speed setting of the hydraulic drive, since most systems will vary in many ways (temperature – flow – viscosity / type of oil – etc.) from our test set up.

NEVER allow the welder to exceed 3900 RPM.

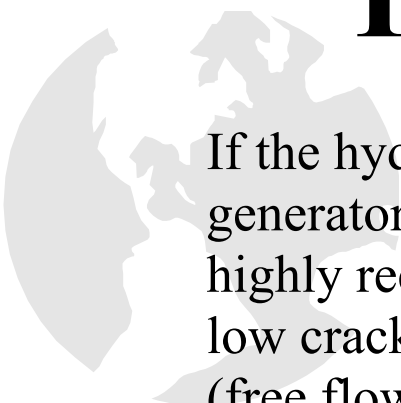
The return line pressure, under no circumstances, should reach 100 PSI or seal failure will occur.

The case drain must be connected directly to the tank (do NOT connect to the return line). We strongly recommend that the case drain be connected to the upper portion of the tank. Making it easier for the case drain oil to return to the tank. ~~Return~~ line must be ¾ or larger.



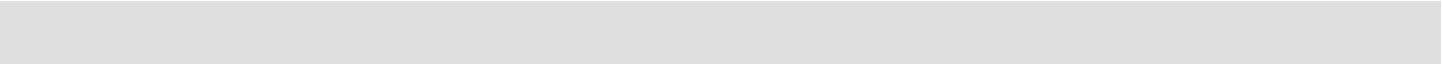


Important Hydraulic Circuit Installation Information



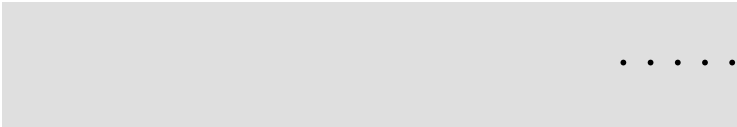
If the hydraulically-driven welder/generator or generator is mounted below the system tank, it is highly recommended that a check valve with a very low cracking pressure is installed in the case drain line (free flow motor to tank, blocking tank to motor). This will eliminate seal leakage during non-use time. It is also recommended that the case drain be connected directly to the top of the tank and not through a cooler or filter.





Caution

When used with customer supplied flow regulator, use extreme caution on initial setup. Overspeed will cause physical damage and is not covered under manufacturer's warranty.





INSTRUCTIONS FOR WELDING

WELDING CABLES

The welding cables must be of the minimum length necessary, they must be kept close together and run along the ground. Do not use cables on which the insulation is spoiled or which have an insufficient section.

EQUIPOTENTIAL CONNECTION AND EARTHING

Follow the national requirements for the for the equipotential connection of metal components in the vicinity of welding system and for earthing them if necessary.

PREPARING THE PARTS

The preparation varies depending on the type f join, the thickness, the position and the accessibility of the parts. In general, the edges to be welder must be prepared by cleaning off any paint, rust or other contaminating substances. For flat welding up to a thickness of 10-12mm, the V preparation is normally used; while for greater thickness it is preferable to use the X preparation with upside-down rewelding or the U preparation without rewelding.

CHOOSING THE ELECTRODE

The welders in the FW series are suitable for welding any type of electrodes (rutile, basic, and cellulose). The electrode diameter depends on the thickness of the material, the position of the part and the type of join. Larger diameters of course require greater currents and involve a greater amount of heat in welding. When making a weld in position it is convenient to use smaller diameters and several passes to reduce the flow of the weld pool.

CHOOSING THE CURRENT

The range of the welding current is recommended by the electrode manufacturer and is indicated on the electrode container.

WELDING

The arc is struck by rubbing the tip of the electrode on the part connected to the earth cable and then drawing back the electrode to the normal welding distance. If the movement is too fast, the arc goes out; if it is too slow, the electrode sticks and you must pull sideways to free it.

Welding consists of depositing drops of molten electrode metal on the part. As it burns, the electrode coating provides the protective gas for the weld pool.

Welding may be carried out with different techniques, the choice of which depends on various factors.

In general, the electrode is kept tilted and is shifted by making oscillating movements between the two edges that are to be joined so as to avoid an excessive build-up of weld material in the center of the weld.

At the end of each pass, it is necessary to remove the slag with a hammer and/or a brush,

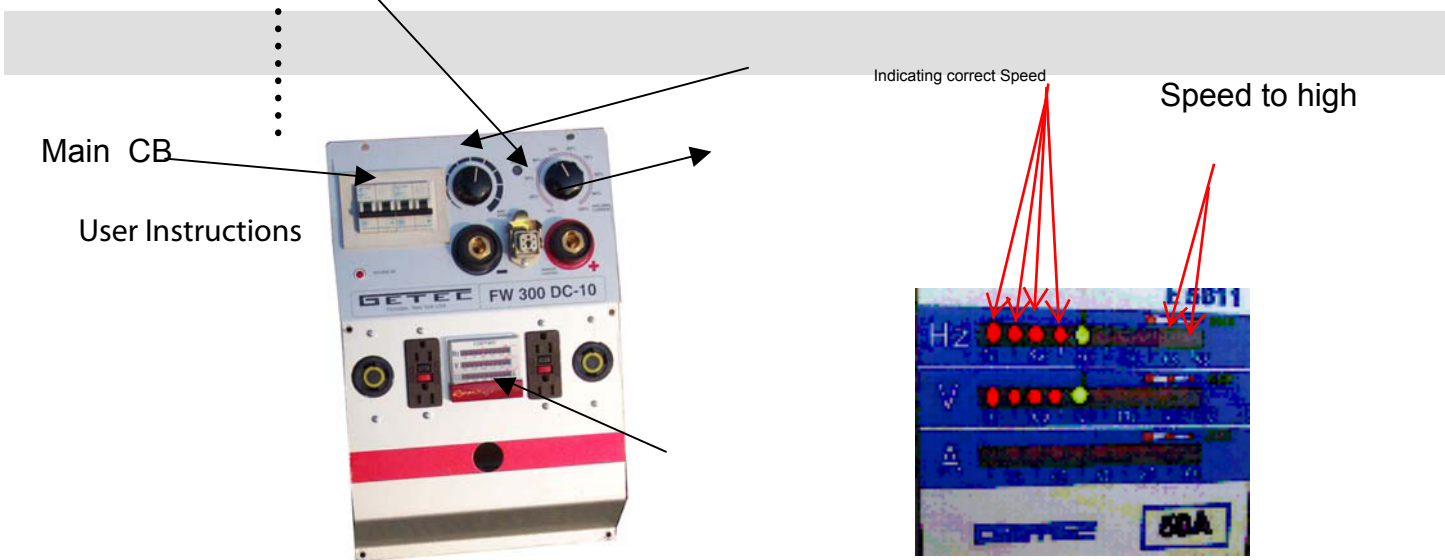


CAUTION

*The ARCFORCE on this Welder is designed to operate up to **200 Amp** welding only. Using the ARCFORCE while welding above 200 Amp could damage this welder and is not covered under Warranty. Try to keep the ARCFORCE setting at its **lowest***

CAUTION

This Welder is overspeed sensitive. Operating this Welder in excess of 3720 RPM will damage this Welder and is not covered under Warranty



CONTROL PANEL DESCRIPTION

- 1 Welding current potentiometer
- 2 Arc-force potentiometer
- 3 Negative welding socket
- 4 Positive welding socket
- 5 Remote control socket
- 6 Welding overload alarm
Operations Selector Switch

HOW TO USE THE GENERATOR

The machine will operate as a generator even while it is being used as a welder. However it is best to avoid using the maximum welding current together with heavy generator loads.

HOW TO USE THE WELDER

Plug the ground cable into socket 3 (4 for reverse polarity welding).
 Attach the ground cable to the piece being welded.
 Plug the electrode holder cable into the other socket.
 Set the welding current on potentiometer 1.
 Weld.

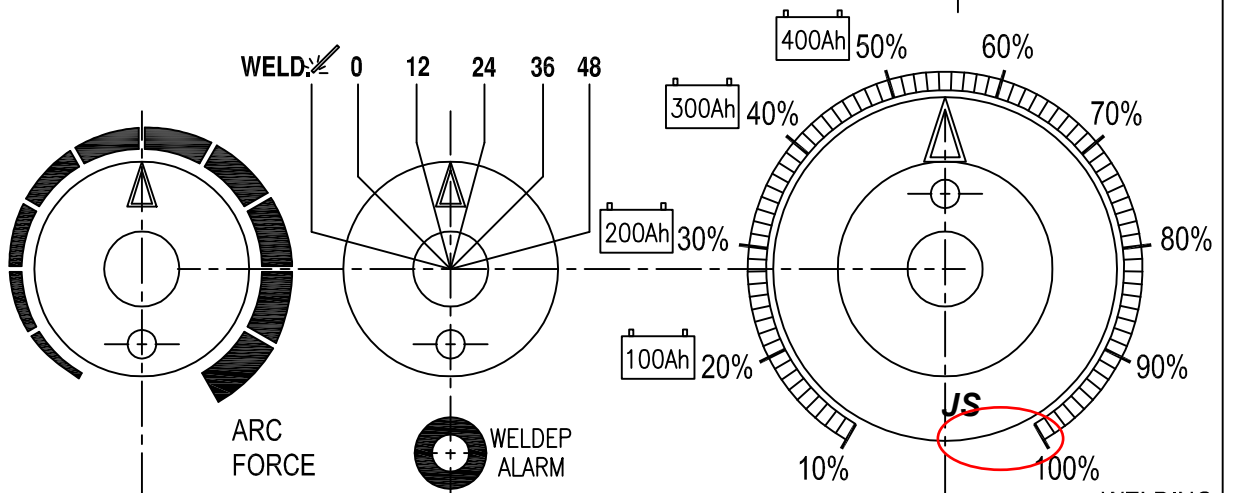
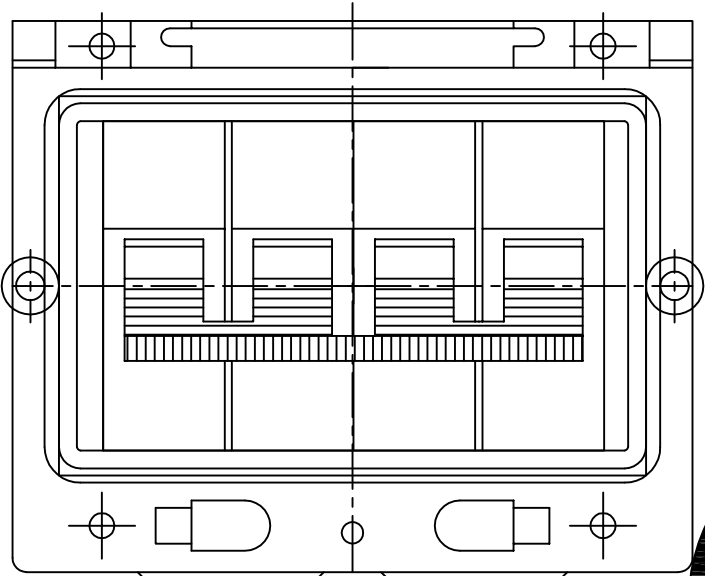
For some types of electrodes, (e.g. cellulose-based) potentiometer 2 (arc-force) has to be adjusted to obtain a good quality weld.

If, when working with high currents (i.e over 200A), the overload cut-out trips (pilot light 6 comes on), wait a few minutes for it to reset automatically.

Anti-stick function: if the electrode should stick the machine trips automatically cutting out the welding current after 2-3 seconds to save ruining the electrode.

Selector Switch

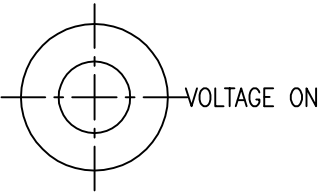
- Pos 1 For Welding only
- Pos 2 Welder Off
- Pos 3 12 Volt Batt. charging or Jumpstarting
- Pos 4 24 Volt Batt. charging or Jumpstarting
- Pos 5 36 Volt for CC and CV Wire feeders or Batt.charging and Jumpstarting
- Pos 6 48 Volt Batt.charging or Jumpstarting



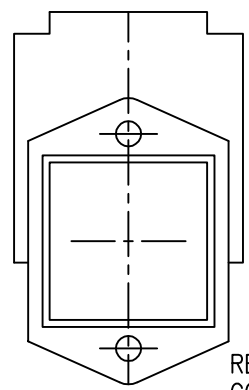
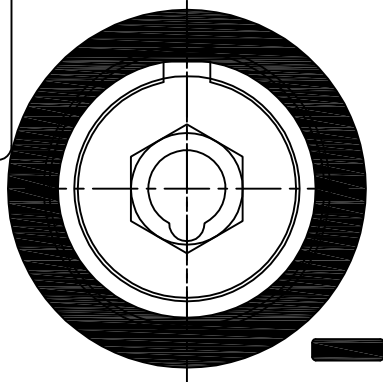
ARC FORCE

WELDEP ALARM

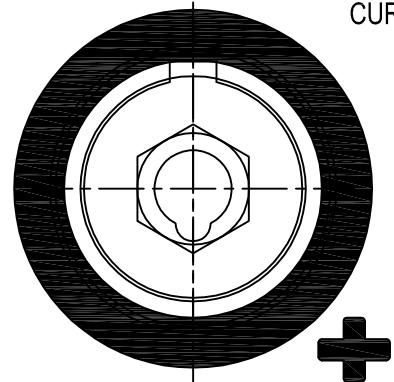
WELDING CURRENT



CE



REMOTE CONTROL



GETEC

Fermdale N.Y 12734

Phone 1 845 292 0800

MODEL
HW CH 400-10

CHEETAH

For Welding

Set Selector Switch to Weld Position , Set Amp Control to desired Amperage.

For Jumpstarting

Set Selector Switch to Battery Voltage (12V – 24V – 36 V – 48 V) Adjust Amp Control to 80 to 100 % , use Weld Terminals

For Battery Charging

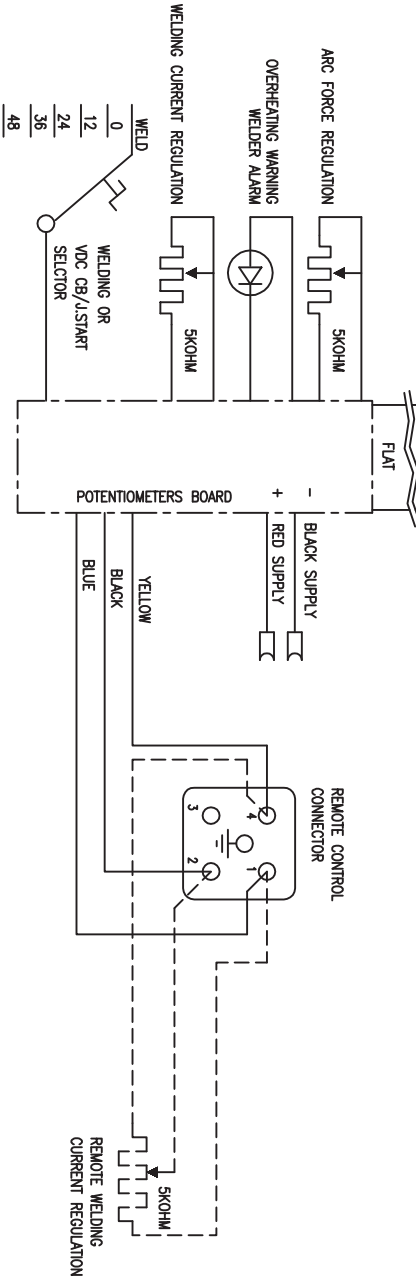
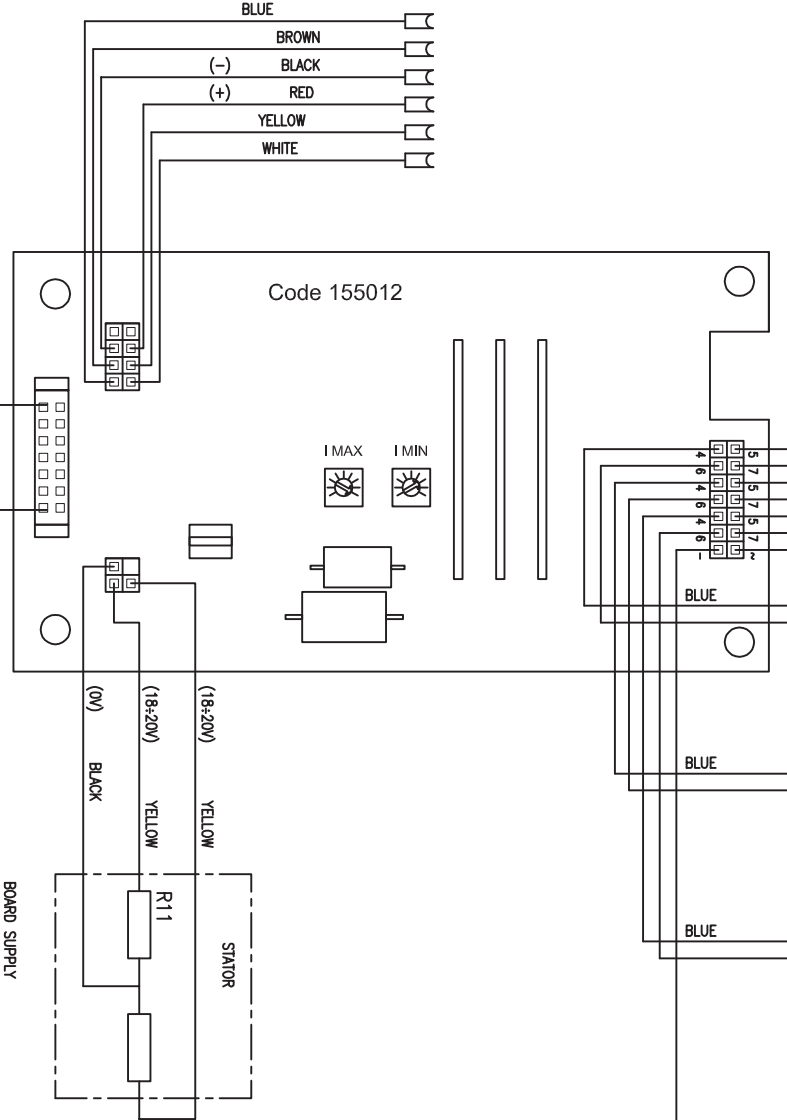
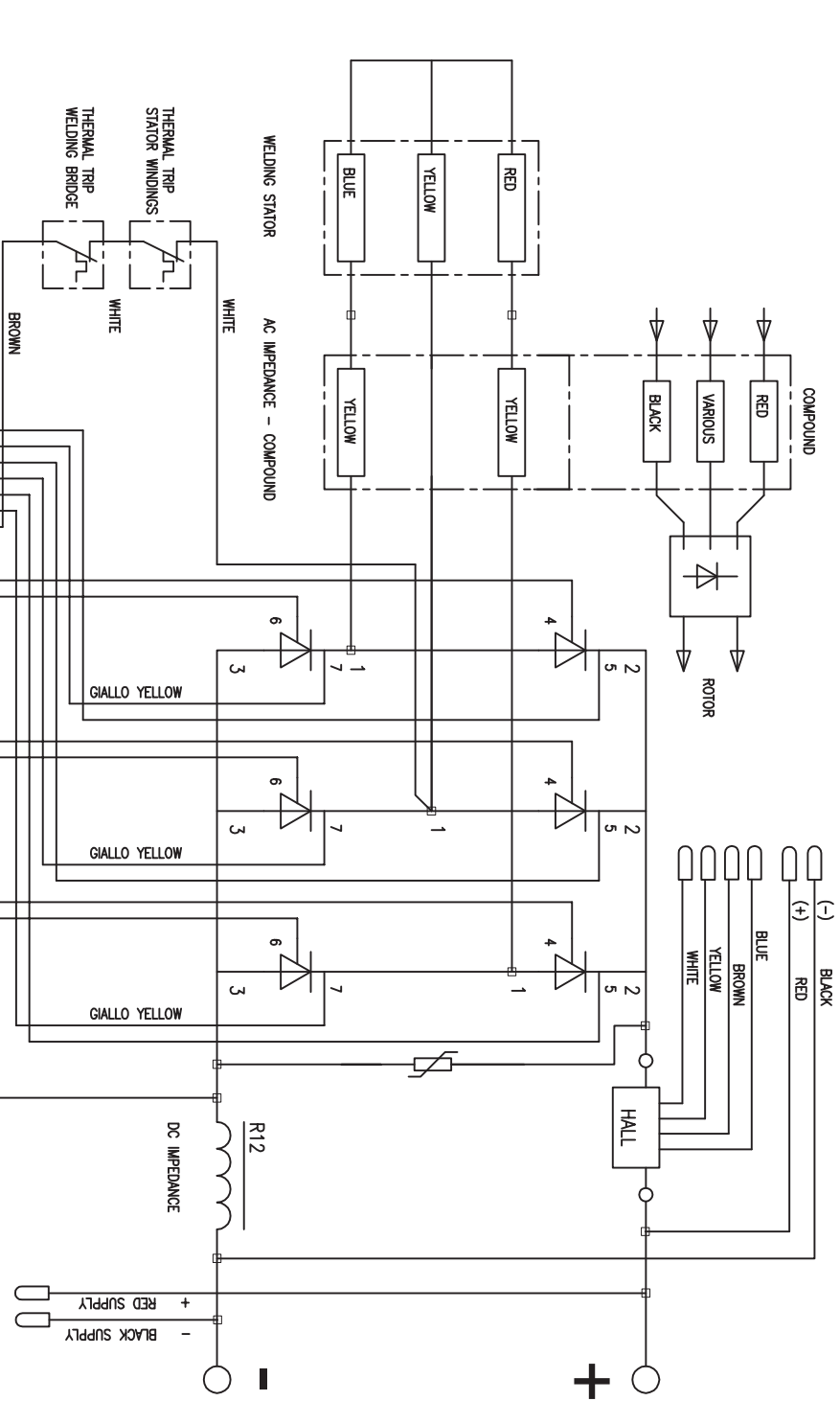
Set Selector Switch to Battery Voltage to be charged , Set AMP Control to charge Rate.

Use Weld Terminals

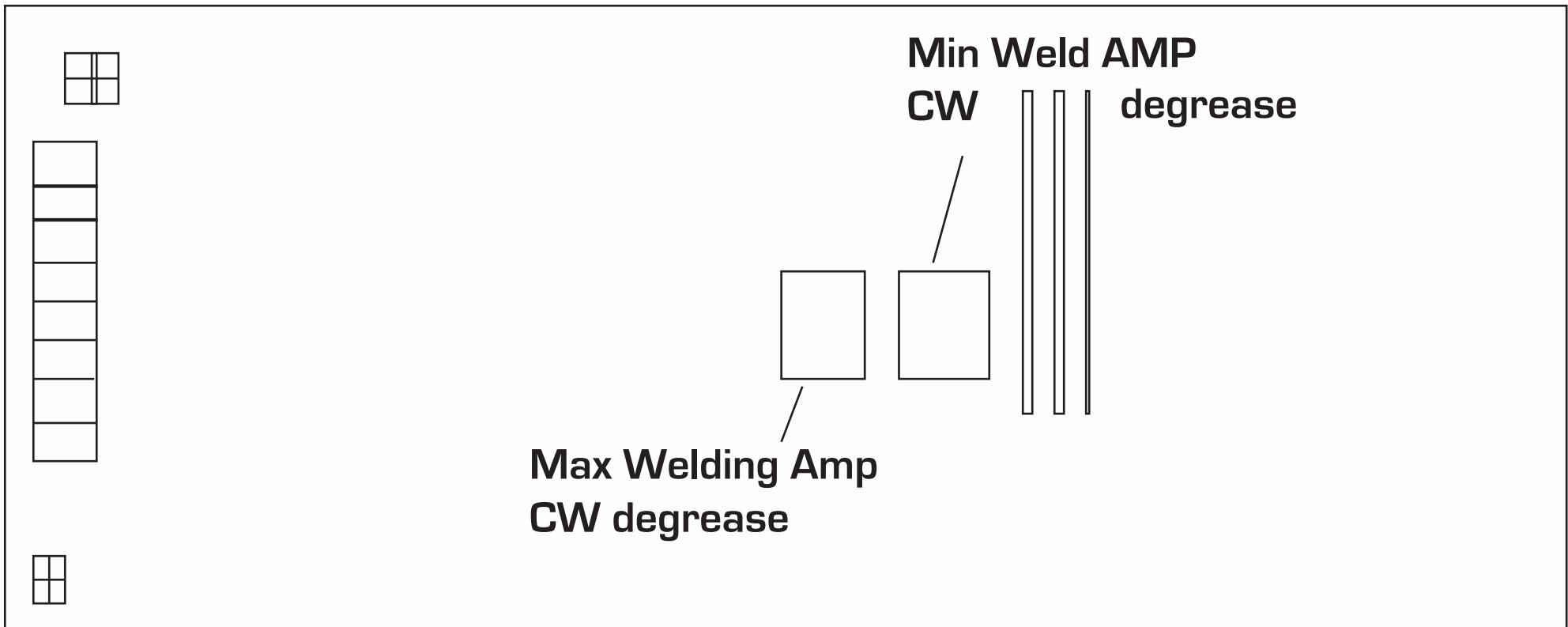
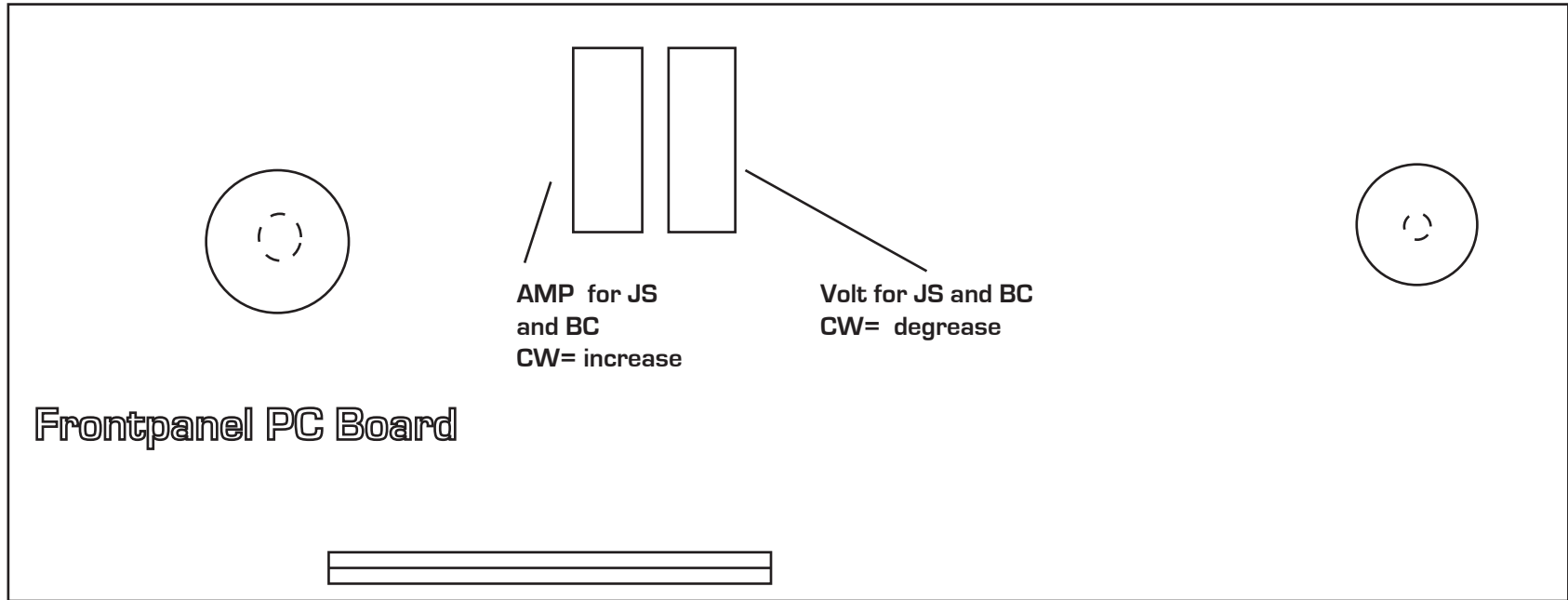
For CV

Set Selector Switch to 36 V , Set Amp control to desired Amperage , Use Weld Terminals

The AC Generator can be used during Welding Operation with some limitations.



Cheetah 330



THERMAL BREAKER INTERVENTION

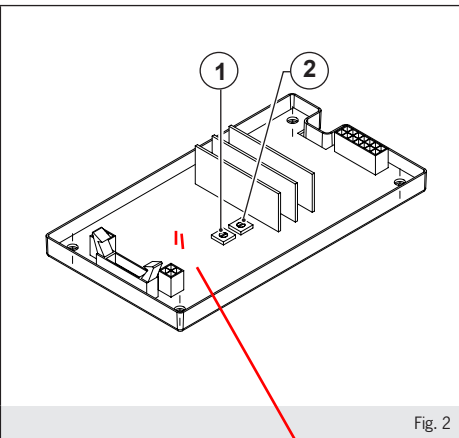
The thermal circuit breaker (8) trips if the load connected to the outlet exceeds the maximum permissible current.

Check the thermal circuit breaker if the generator does not supply power.

ELECTRONIC REGULATOR AND ADJUSTMENT POTENTIOMETER

The machine has inside an electronic regulator (fig.2) and adjustment potentiometers (fig.3) to guarantee the performances in current and voltage. Below the indication of the trimmers with relative functionalities:

- fig.2 - trimmer (1): Maximum welding current setting;
- fig.2 - trimmer (2): Minimum welding current setting;
- fig.3 - trimmer (3): Jump-start current setting;
- fig.3 - trimmer (4): Jump-start voltage setting.



The presetting of the trimmers are made in the factory. Do not change the parameters of the regulators. Possible modification may result in incorrect operation of the machine. Any modification of the settings results in the decay of the guarantee.

Anti Stick will work when 2 Pins are NOT shorted.
to turn Anti Stick OFF ,shorten the 2 Pins.

THERMAL BREAKER INTERVENTION

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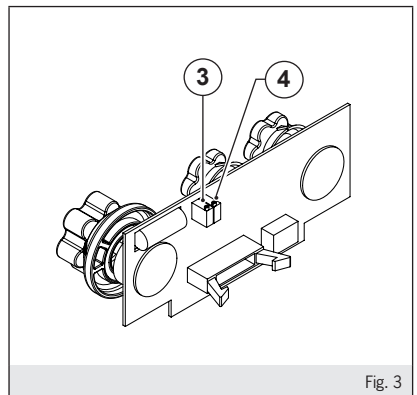
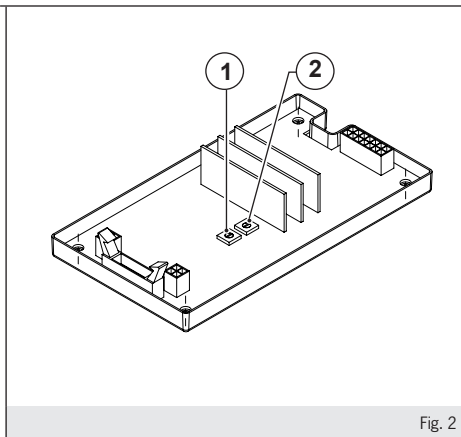
ELECTRONIC REGULATOR AND ADJUSTMENT POTENTIOMETER

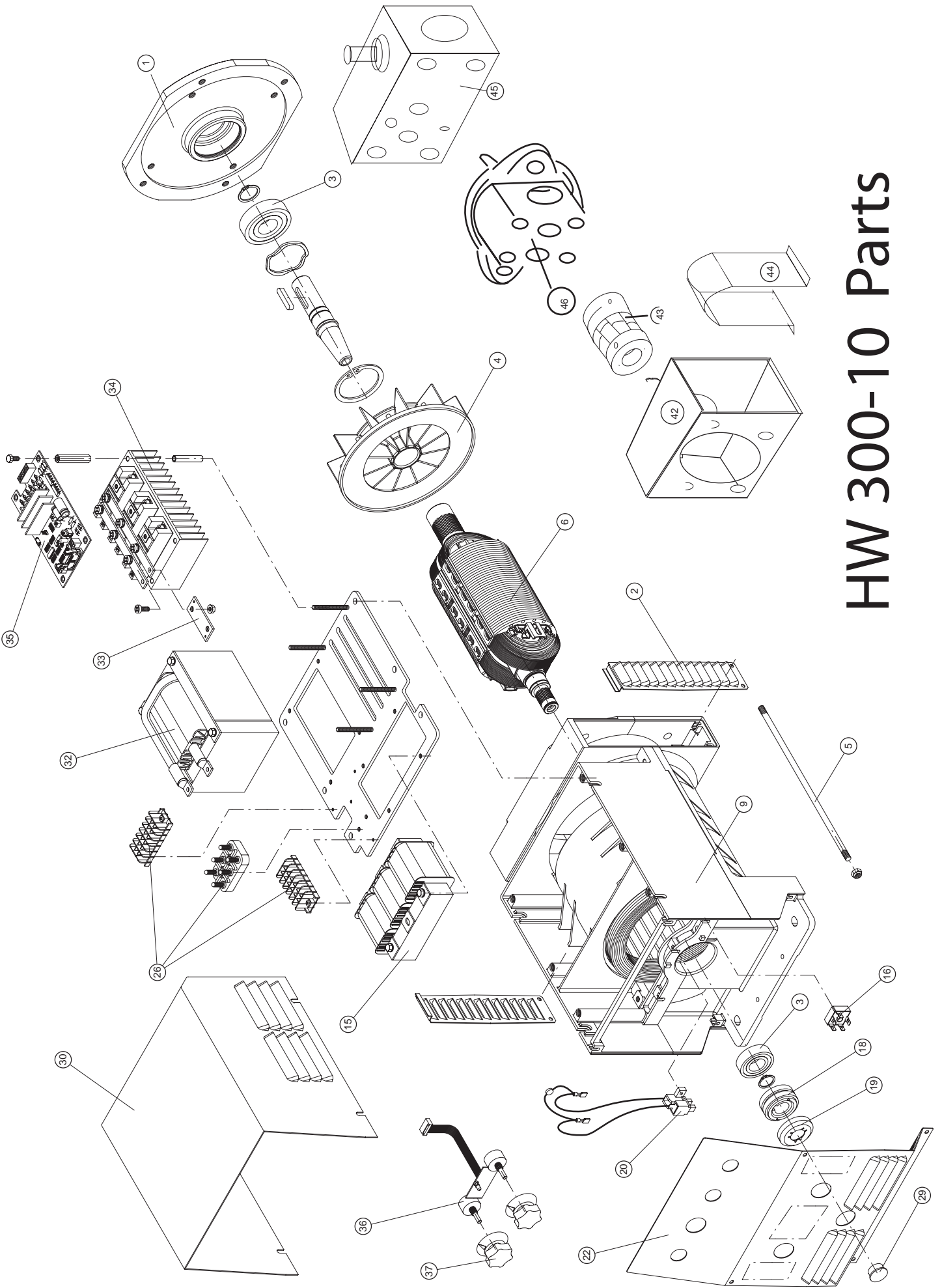
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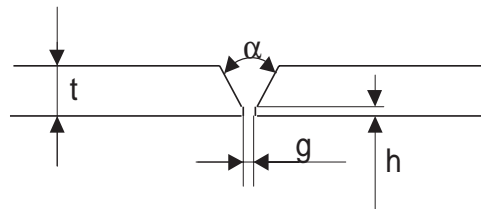


HW 300-10 Parts

Minimum section of the welding cables		
Max welding current	Cable length	
	5-10m	10-20m
130A	25mm ²	35mm ²
220A	35mm ²	50mm ²
300A	50mm ²	70mm ²

Tab.1

t mm	a °	h mm	g mm
0-3	0	0	0
3-6	0	0	0-t/2
6-12	60-120	0-1.5	0-2



Tab.2

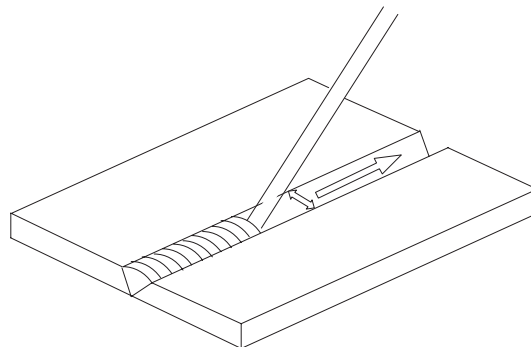


Fig.1

FW400 Parts List

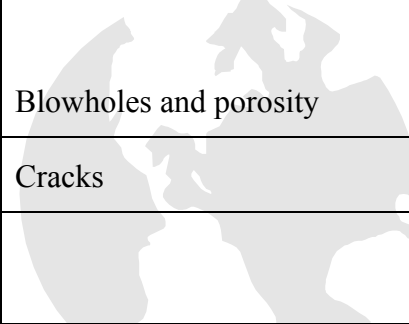
Page 1 of 2

Item ##		Description	Price
1	601049	Front Flange	
2	601050	Front Guard IP23	
2a	601051	Front Guard IP21	
3	601052	Bearing Type 6306 2RS1 C3	
3a	601053	Bearing Type 6206 2RS1 C3	
4	601054	Fan with Ø 37 hole	
4a	601055	Fan with Ø 42 hole	
5	601056	Stay Rod	
6	601057	Rotor	
9	601058	Stator	
12	601059	Spring Washer Ø72	
15	601060	Compound	
16	601061	Field Rectifier Bridge	
17	601062	EMC Filter	
18	601063	Slip Ring (51X22X08)	
19	601064	Slip Ring (Ø51)	
20	601065	Brush Holder & Brushes	
22	601066	FW Blind Panel	
22a	601067	FW Panel	
24	601068	Disk Joint	
25	601069	Flange SAE 4	
25a	601070	Flange SAE 5	
26	601071	Base 6 M6 pins	
26a	601072	Term. Block 6 double fast-ons	
29	601073	Tap for Rear Guard	
30	601074	FW Top Cover	

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WELDING PROBLEMS

Too many splashes	Long arc High current
Sticking	Arc is too long Current too low
Craters	Electrode moving away too fast when removed
Inclusions	Bad cleaning between passes Bad distribution of passes
Insufficient penetration	Faulty electrode movement Advance speed too fast Welding current too low
Blowholes and porosity	Narrow caulking iron No chipping at root Humidity in the electrode
Cracks	Arc is too long Currents too high Dirty materials
	Hydrogen in the weld (in the coating of the electrode) x)



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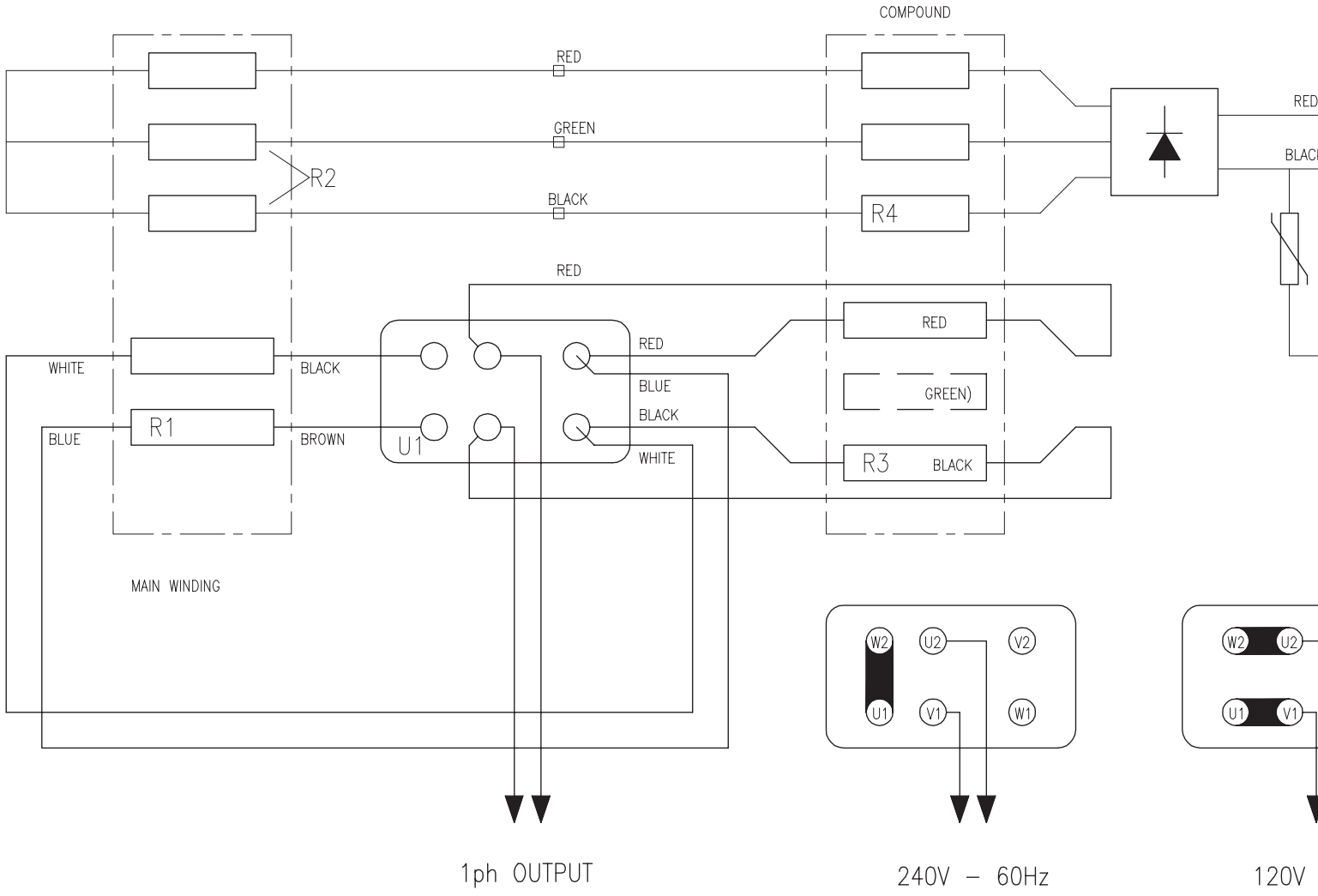
FW400 Parts List

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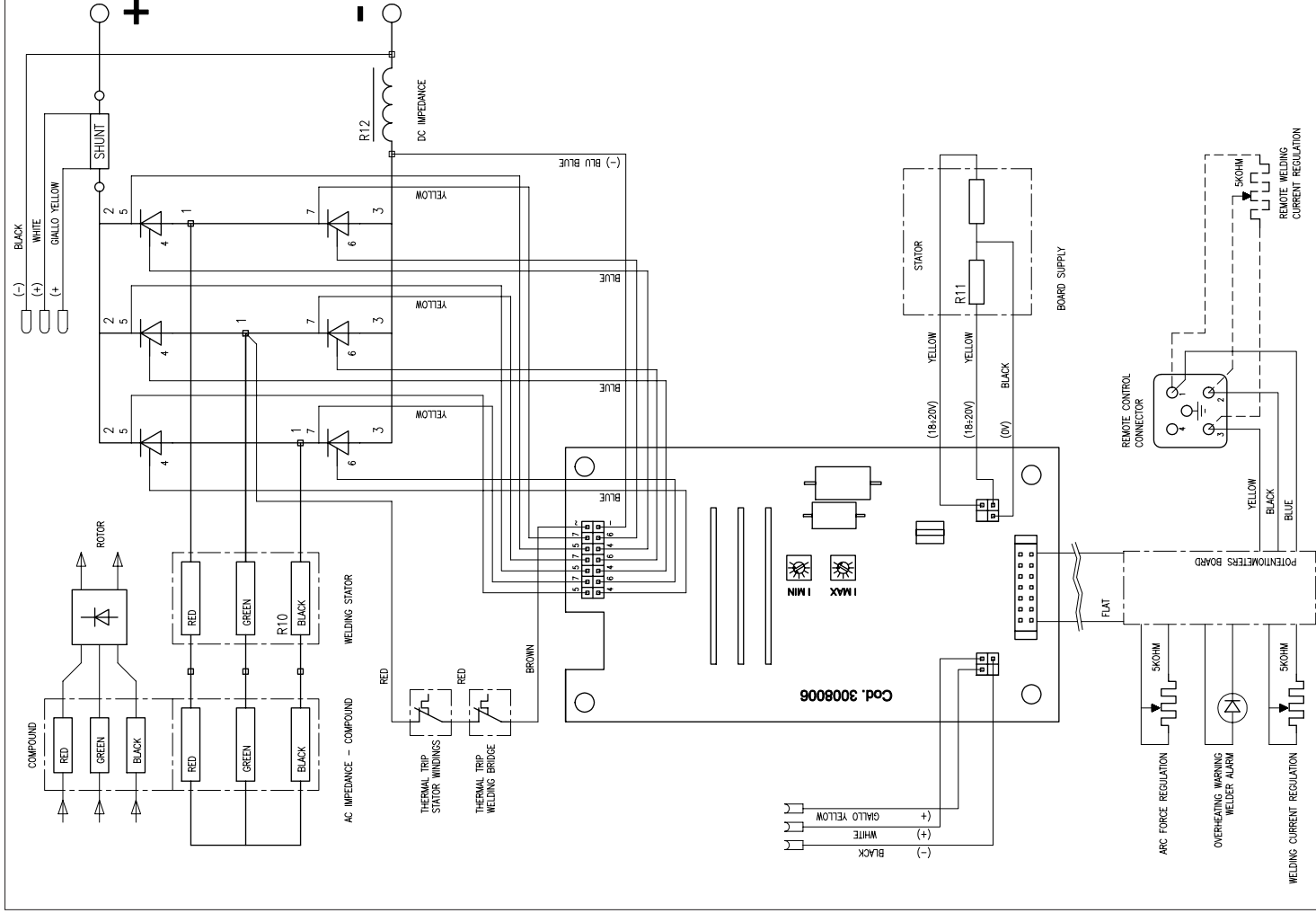
Item #	#	Description	Price
31	601075	Kit: from J609B c.35 to B34	
32	601076	FW Welding Impedance	
33	601077	Shunt 300A 75mV	
34	601078	Welding Bridge	
35	601079	FW PCB	
36	601080	Potentiometer PCB	
36a	601081	FW Pot. PCB (400mm cable)	
37	601082	Potentiometer Knob	
37	601083	Female 400A Welding Terminal	
37a	601084	Male 400A Welding Terminal	

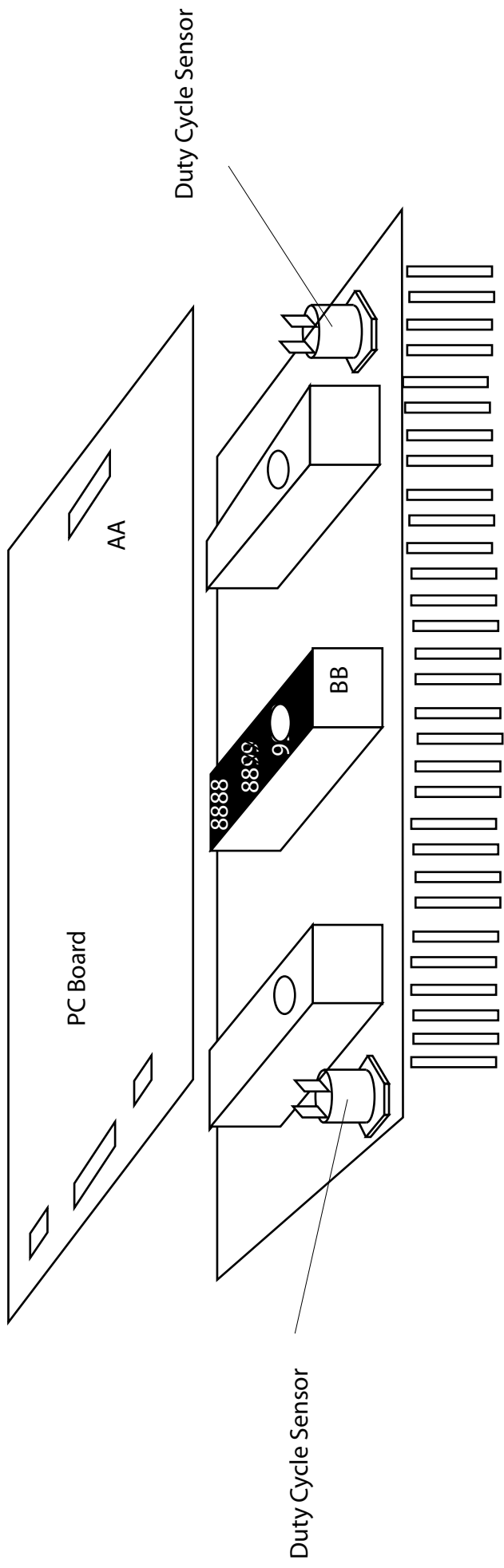
1 PH

AUXILIARY WIND.



Wiring diagrams





There is only one Duty Cycle Sensor, could be on either Side.

Remove Dark Brown Wire.

Measure Resistance from Empty Terminal you removed Dark Brown Wire To Red Wire on Center Rectifier ,marked XX

Reading should be .1 Ohm.

UPS 1z098 E81 03 6633 6487

Remove other wire from Duty Cycle Switch, Shorten them out (together) and test Welder.

If Welder works replace DCS

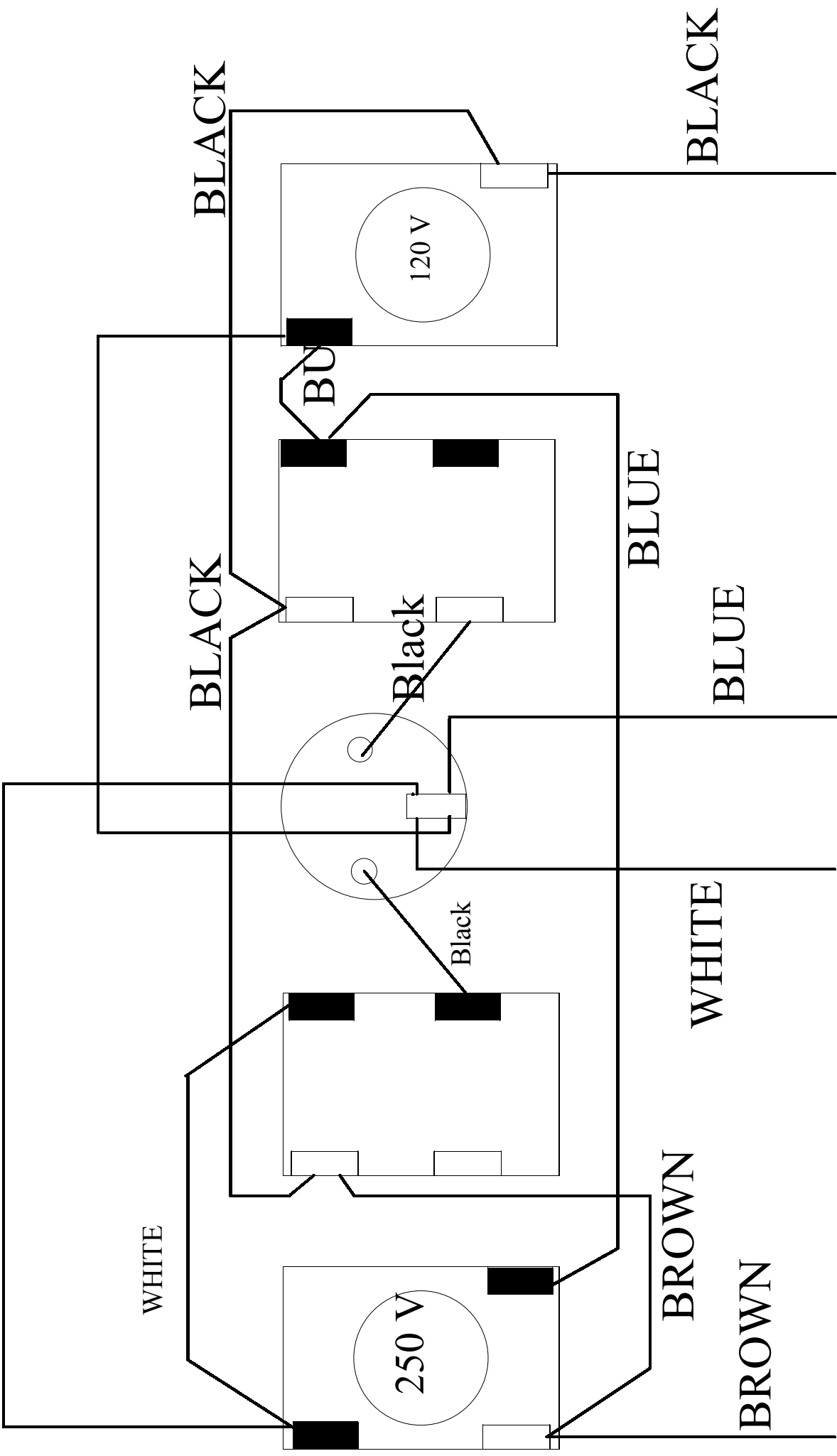
To test both Duty Cycle Switches

Remove small Red Wire from Duty Cycle Switch (coming from Connector AA) and connected to Point BB on

Center Module .(there should be a small Red Wire and a Heavy Yellow Wire)

If your Welder works now properly but has no Over Heat protection.

It means that the Stator winding has a Defect that can not be repaired.



12 and 15 KW Panel Wiring

2FP95 Hi-Flow Flow Regulator

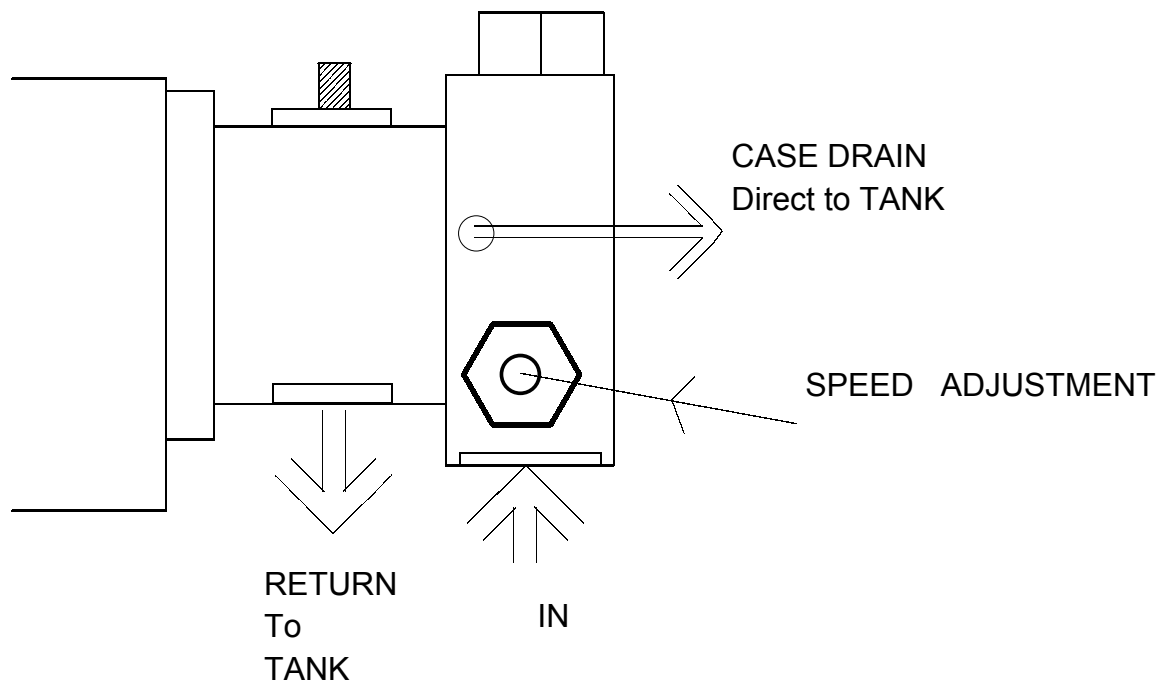
The 2FP95 hi-flow regulator has been factory set to maintain the generator's speed at its proper limits. The regulator may need very slight adjustments after connecting to its new system. Type of oil, temperatures, minimum and maximum flow may affect this regulator in a different way than our test setup. The regulator will not be out of adjustment more than $\frac{1}{8}$ of a turn.

Clockwise will slow the generator down (reduce flow).

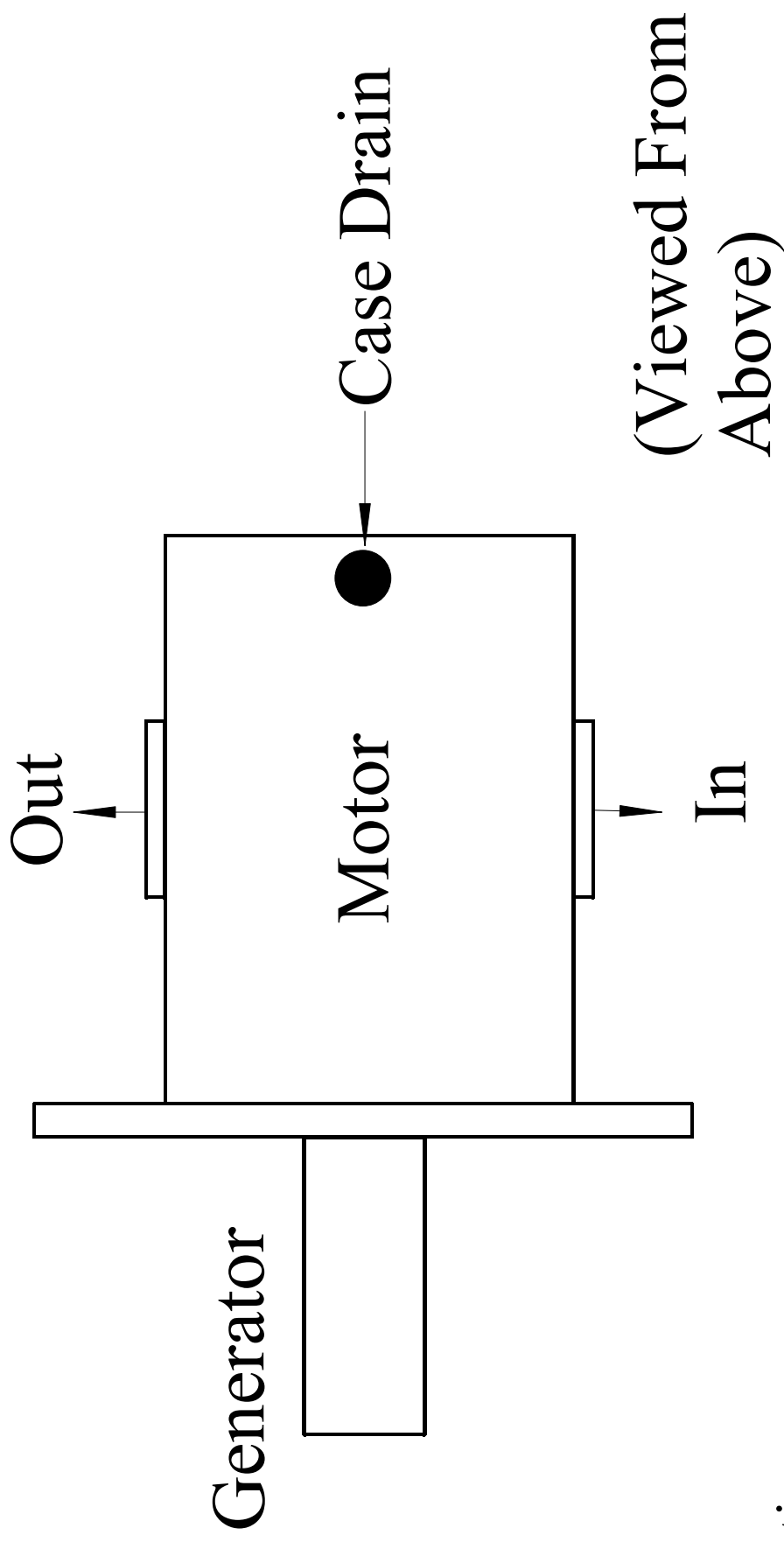
CounterClockwise will speed up the generator (increase flow, if present).

Caution : Overspeed will cause damage to generator and void warranty
Always check Speed after Installation.

The stability of the Flowregulator will become more sensitive the higher the Regulator has to bypass.
This will cause hunting .



HM 401 AND HW 301 HM 621 AND HW 251 Hydraulic Drive



Caution

Do not allow generator to exceed 3800 RPM



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