

## SERVISNÍ MANUÁL ALFIN 281 W

## SERVICE MANUAL ALFIN 281 W



## 1. VAROVÁNÍ

**UPOZORNĚNÍ –** Pouze osoba splňující kvalifikaci danou zákonem je oprávněna opravovat stroj.

**PŘED OTEVŘENÍM KRYTU STROJE JEJ ODPOJTE VYTAŽENÍM SÍŤOVÉ VIDLICE ZE SÍŤE.**

Každé 4 měsíce otevřete stroj a jemně ho vyfoukejte stlačeným suchým vzduchem **POZOR, NEPOUŽÍVEJTE STLAČENÝ VZDUCH O PŘÍLIŠ VYSOKÉM TLAKU, ABY NEDOŠLO K MECHANICKÉMU POŠKOZENÍ ELEKTROSOUČÁSTEK.**

Každé 4 měsíce zkontrolujte řádný stav svařovacích kabelů a síťových kabelů.

## WARNING

**NOTE** Only trained personnel are permitted to work inside the machine.

**BEFORE OPENING THE MACHINE, CUT OFF ITS ELECTRICAL POWER BY REMOVING THE PLUG FROM THE MAINS SUPPLY SOCKET.**

Every six months, open the machine and clean it inside, using compressed dehumidified air.

**CAUTION. DO NOT USE COMPRESSED AIR AT TOO HIGH A PRESSURE. YOU COULD DAMAGE THE ELECTRONIC COMPONENTS.**

With the same frequency, check the welding cables and the supply cables.

<p><b>Není povolena žádná modifikace svařovacího stroje.</b></p> <p><b>Pro Vaši bezpečnost je nutné posečkat se sundáním krytu ze stroje po odpojení ze sítě po dobu minimálně 5 minut, kdy klesne napětí na kondenzátorech na hodnotu pod 36 V.</b></p>	<p><b>No modification, of any type, may be made to the welding machine.</b></p> <p><b>For safety while maintaining the machine, please shut off the supply power and wait for 5 minutes, until capacity voltage already drops to safe voltage 36V.</b></p>
<b>2. BLOKOVÉ SCHÉMA</b>	<b>ELECTRICAL PRINCIPLE DRAWING</b>

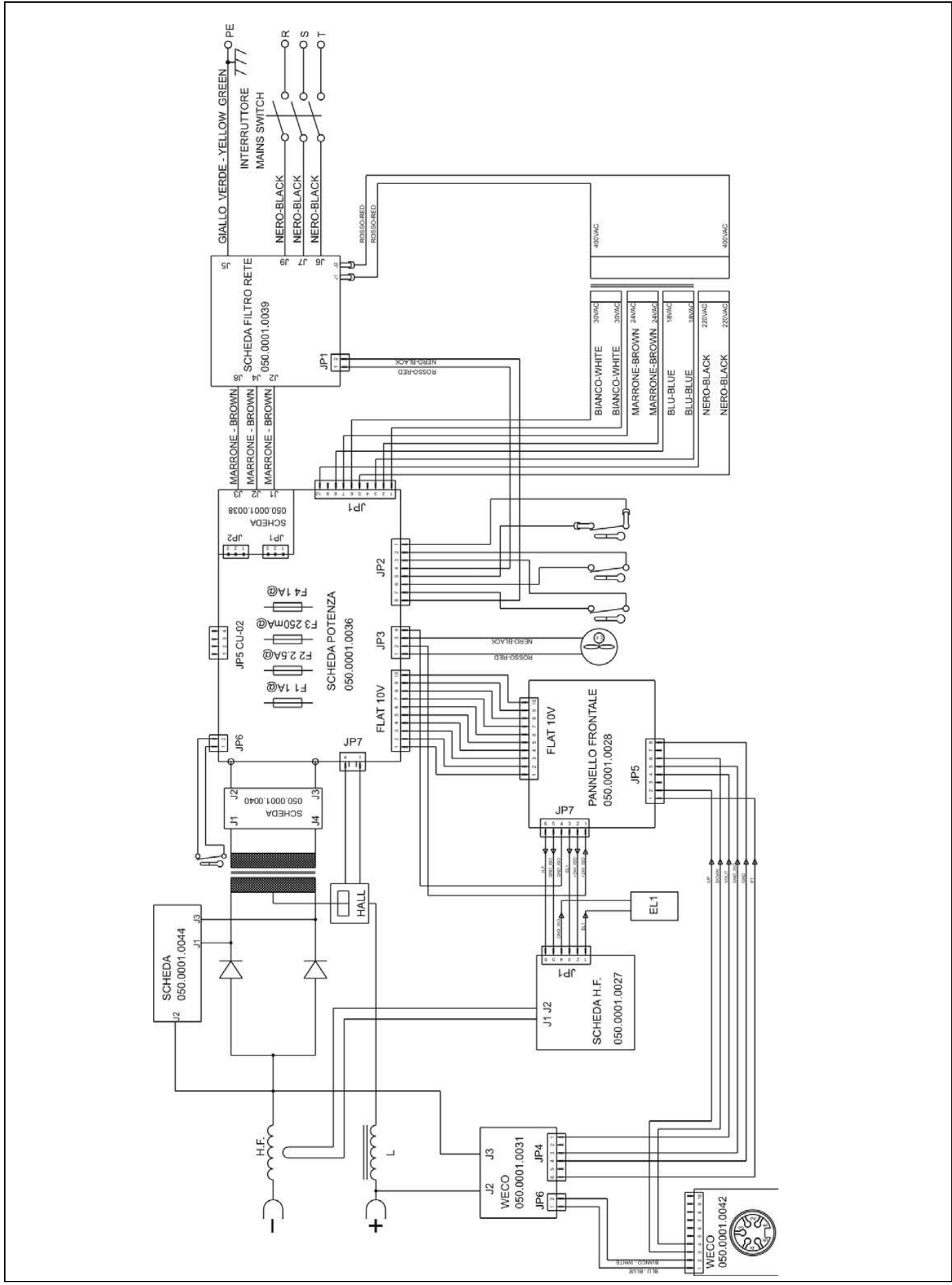
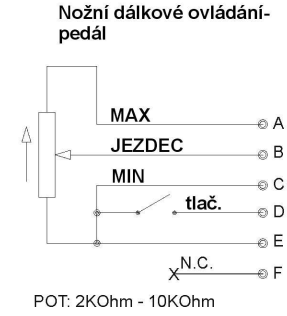
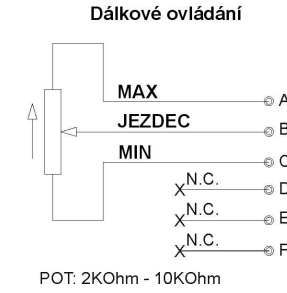
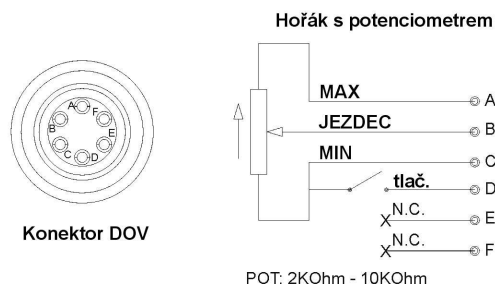
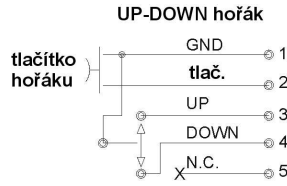
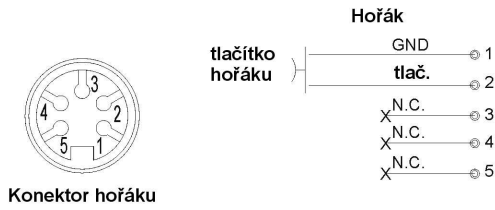
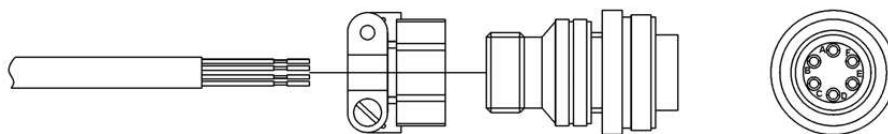
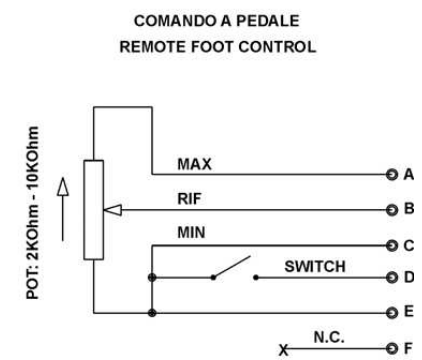
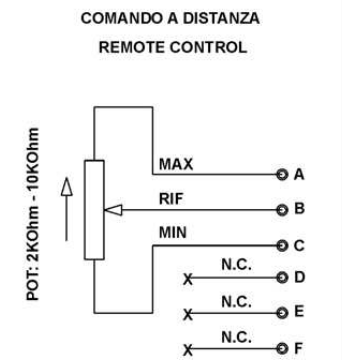
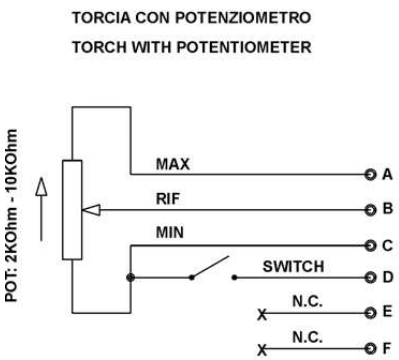
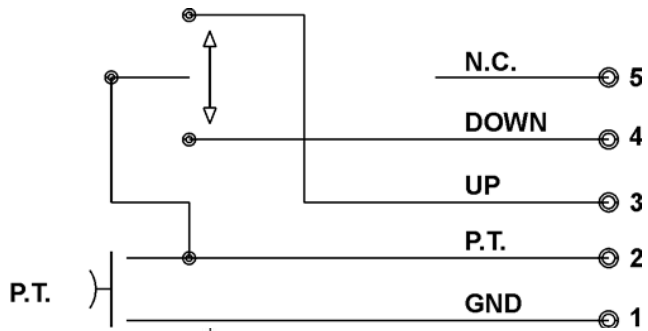


Schéma zapojení DOV ALFIN 281 W

ELECTRICAL PRINCIPLE DOV ALFIN 281 W

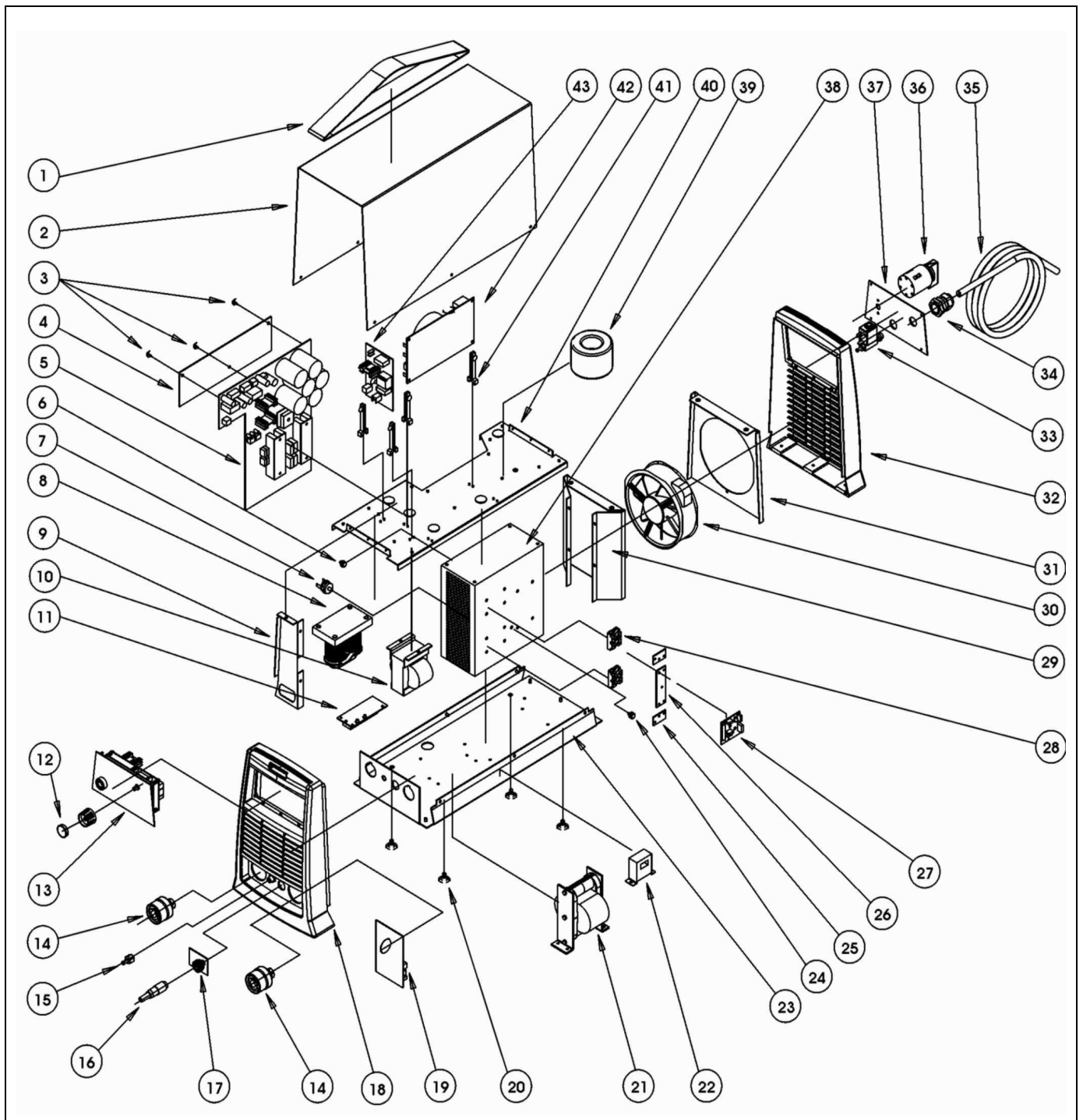


CONNETTORE TORCIA  
TORCH CONNECTOR



3. NÁHRADNÍ DÍLY

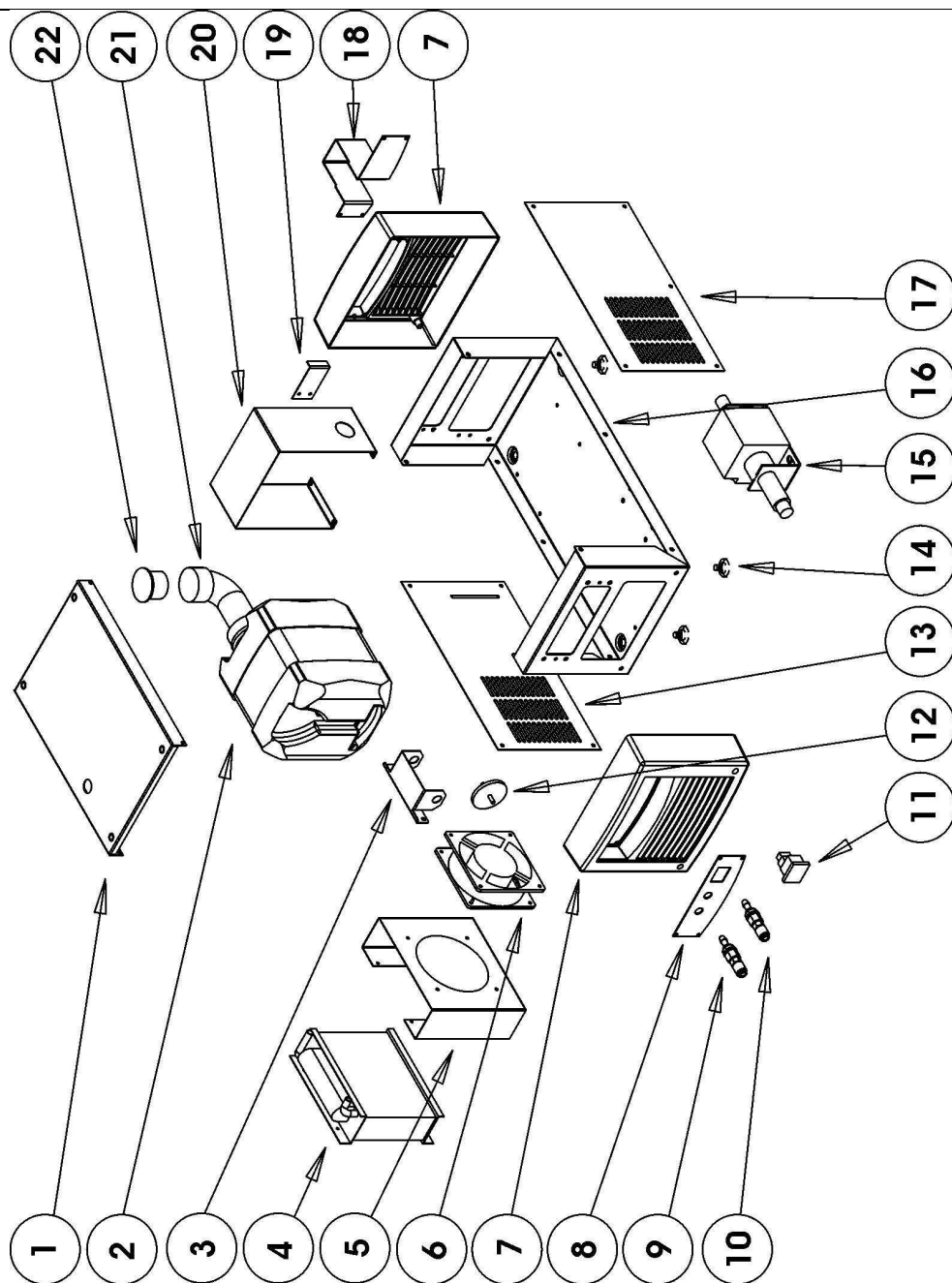
SPARE PARTS



Poz. S/N	Název	CODE
1	Popruh Alfin	005.0001.0011
2	Kryt horní Alfin	011.0001.0451
3	Kolík	016.0008.0156
4	Izolátor	046.0004.0005
5	PCB silová	050.0001.0036
6	Termostat	040.0003.1270
7	Regulátor teploty	040.0003.0060
8	HF trafo	044.0003.0004
9	Boční držák	011.0008.0029
10	Cívka	044.0004.0003
11	PCB primární kapacity	050.0001.0040
12	Knoflík	014.0002.0002
13	Přední panel	050.5010.0001
14	Rychlospojky	021.0001.0259
15	Konektor připojení plynu	021.0000.0001
16	Konektor ovládací	021.0004.3360
17	PCB konektor ovládací	050.0001.0042
18	Přední čelo	012.0004.0000
19	PCB výstupní filtr	050.0001.0031
20	Nožky	016.0009.0001
21	Trafo	042.0003.0032
22	Hallova sonda	041.0004.0300
23	Podstava	011.0008.0002
24	Termostat	040.0003.1170
25	Malá Cu propojka	045.0006.0061
26	Velká Cu propojka	045.0006.0058
27	PCB odrušovací	050.0001.0044
28	Diody	032.0002.2003
29	Držák ventilátoru vnitřní	011.0008.0011
30	Ventilátor	003.0001.0003
31	Držák ventilátoru venkovní	011.0008.0010
32	Zadní čelo	012.0004.0100
33	Ventil	017.0001.5541
34	Kabelová vývodka	045.0000.0001
35	Přívodní kabel	045.0002.0005
36	Hlavní vypínač	040.0001.0015
37	Zadní panel	013.0012.0000
38	Chladič	015.0001.0006

39	Toroidní trafo	041.0005.0005
40	Vrchní držák	010.0004.0001
41	Stojky	016.0010.0001
42	Síťový filtr	050.0001.0039
43	PCB HF	050.0001.0027

**CS CU-02**



Poz. S/N	CODE	Název
1	011.0012.0022	Kryt
2	003.0003.0002	Nádržka
3	011.0012.0004	Držák
4	003.0003.0003	Chladič
5	011.0012.0003	Držák ventilátoru
6	003.0001.0005	Ventilátor



7	012.0006.0000	Čelo plastové
8	011.0012.0005	Přední panel
9	018.0002.0002	Rychlospojka červená
10	018.0002.0003	Rychlospojka modrá
11	040.0001.0001	Hlavní vypínač
12	003.0004.0003	Tlumič čerpadla
13	011.0000.0430	Kryt levý
14	016.0009.0001	Nožka
15	003.0004.0001	Čerpadlo
16	011.0012.0021	Dno
17	011.0000.0400	Pravý kryt
18	011.0012.0006	Zadní kryt
19	011.0012.0008	Držák nádržky
20	011.0012.0007	Držák nádržky
21	010.0000.0100	Hrdlo nádržky
22	017.0003.1005	Zátka

#### 4. ZÁVADY - ŘEŠENÍ

Poř.	Závada	Příčina	Řešení
1	Stroj je zapnutý, ventilátor funguje, LED zapnutí nesvítí	LED nebo její připojení je vadné.	Opravte připojení nebo vyměňte LED poř.13
		Silová PCB je vadná.	Opravte nebo vyměňte PCB poř.č5
2	Stroj je zapnutý, LED zapnutí svítí, ventilátor neběží.	Překážka rotace ventilátor.	Odstraňte
		Motor ventilátor poškozen.	Vyměňte ventilátor
3	Stroj je zapnutý, LED zapnutí nesvítí, ventilátor neběží.	Není napětí v síti	Zkontrolujte, jestli je v síti napětí.
		Přepětí nebo podpětí v síti.	Zkontrolujte síťové napětí.
4	Žádné napětí na prázdko	Závada generátor.	Zkontrolujte hlavní vypínač
5	Žádný svařovací proud na svorkách	Svařovací kabely nejsou připojeny do konektorů.	Připojte svařovací kabely do rychlospojek na stroji.

		Poškozený svařovací kabel.	Vyměňte nebo opravte svařovací kabel.	
		Zemnicí kabel není připojen nebo je špatně připojen.	Zkontrolujte zemnicí kabel	
6	Obtížně se zapaluje oblouk nebo dochází k lepení elektrody.	Špatně utažené svařovací kabely.	Zkontrolujte utažení svařovacích kabelů.	
		Svařenec je znečištěn olejem nebo prachem.	Očistěte svařenec.	
		MMA/TIG výběr je špatný.	Vyberte MMA svařování.	
7	Nestabilní svařovací oblouk.	ARC FORCE nastaveno příliš nízké.	Zvyšte ARC FORCE.	
8	Svařovací proud nelze nastavit.	Poškozený potenciometr předního panelu.	Opravte nebo vyměňte potenciometr.	
9	Penetrace tavné lázně nedostačující.	Svařovací proud je nastaven příliš nízké.	Zvyšte svařovací proud	
		ARC FORCE nastaveno příliš nízké.	Zvyšte ARC FORCE.	
10	Nestabilní oblouk	Nepříznivý vliv průvanu	Použijte zástěnu.	
		Excentrická elektroda	Změňte úhle uchycení elektroda	
			Vyměňte elektrodu	
		Vliv magnetismu	Nahněte elektrodu proti směru magnetického vlivu.	
Změňte pozici zemnicího kabelu nebo přidejte zemnicí kabel na opačnou stranu svařence.				
11	LED ALARM svítí	Přehřátí	Stroj příliš zatížen	Počkejte, až se stroj vychladí
		Ochrana přepětí	Nestandardní proud na hlavním obvodu.	Otestujte a opravte hlavní obvod PCB poř.č5

## TROUBLESHOOTING

S/N	Troubles	Reasons	Solutions
1	Turn on the power source, and fan works, but the power light is not on.	The power light damaged or connection is not good	Test and repair the inside circuit of power light s/n 13
		Power PCB failures	Repair or change power PCB s/n 5
2	Turn on the power source, and the power light is on, but fan doesn't work	There is something in the fan	Clear out
		The fan motor damaged	Change fan motor
3	Turn on the power source, and the power light is not on, and fan doesn't work	No input voltage	Check whether there is input voltage
		Overvoltage (Input voltage is too much or not)	Check input voltage
4	No no-load voltage output	There is trouble inside the	Check the power switch

		machine		
5	No current output in the welding	Welding cable is not connected with the two output of the welder.		Connect the welding cable to the welder's output
		Welding cable is broken		Wrap, repair or change the welding cable
		Earth cable is not connected or loosen		Check the earth clamp
6	Not easy to start arc in the welding, or easy to cause sticking	The plug loosen or connect not well		Check and tighten the plug
		Oil or dust covered the workpiece		Check and clear out
		MMA/TIG welding selection is wrong		Selecting the MMA welding
7	The arc is not stable in the welding process	The arc force is too small		Increase the arc force
8	The welding current can not be adjusted	The welding current potentiometer in the front panel connection not so good or damaged		Repair or change the potentiometer
9	The penetration of molten pool is not enough(MMA)	The welding current adjusted too low		Increase the welding current
		The arc force adjusted too small		Increase the arc force
10	Arc blow	Airflow disturbance		Use the shelter from airflow
		The electrode eccentricity		Adjust the electrode angle
				Change the electrode
		Magnetic effect		Incline the electrode to the opposite way of the magnetic blow
Change the position of earth clamp or add earth cable in the two side of workpiece				
11	The alarm light is on	Over heat protection	Over welding current	Induce the welding current output
			Working time too long	Induce the duty cycle (interval work)
		Over current protection	Unusual current in the main circuit	Test and repair the main circuit and drive PCB s/n 5
<b>5. KONTROLA SILOVÉ PCB</b>			<b>CHECKING THE POWER PCB</b>	

Obrázek 1



Zkontrolujte , že kabely které jdou z PCB výstupní filtr k PCB řídicí jsou spojené a neporušené

Obrázek 2



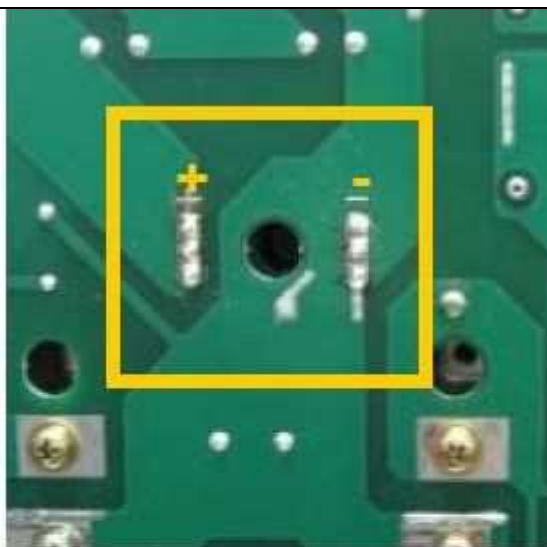
Před kontrolou výstupních usměřovačů odpojte vývody k PCB RC filtr (černé a hnědý drát) a změřte podle následující tabulky

červený	černý	hodnota
SX	MID	OL
MID	SX	>.150
MID	DX	>.150
DX	MID	OL

Nakonec zkontrolujeme dva transily na PCB RC filtr. V obou směrech musí vykazat přerušný obvod



Obrázek 3



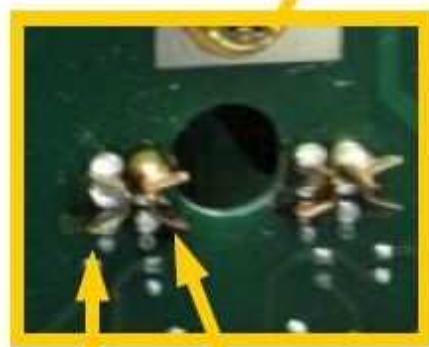
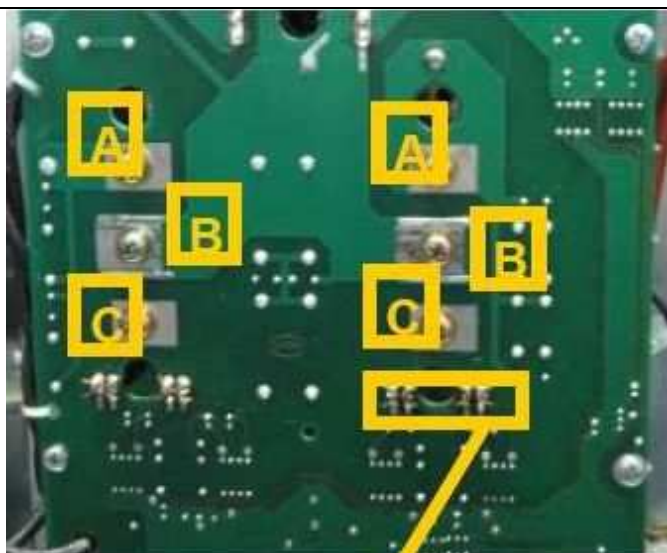
Vstupní usměrňovač na silové desce  
Pro kontrolu můstku změřte tento podle následující tabulky testerem diod

Červený vodič	Černý vodič	hodnota
+	-	OL
-	+	0.7 ca

Vyazuje-li měření větší odchylky, pro důkladnější kontrolu měřte mezi přívodními vodiči na PCB 0068 a +- kontakty vstupního usměrňovače podle tabulky

Červený	Černý	hodnota
AC	+	0.4 / 0,5
AC	-	OL
+	AC	OL
-	AC	0.4 / 0,5

Obrázek 4



červený černý

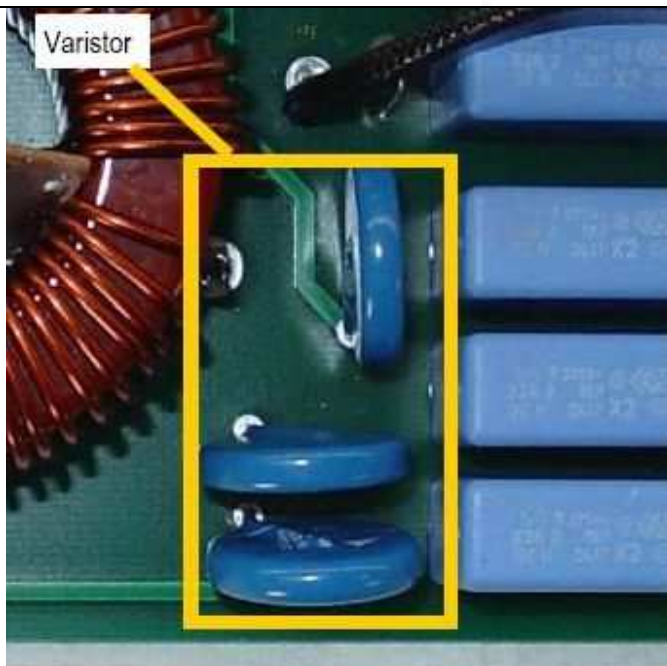
Pro kontrolu IGBT modulů změřte tyto podle následující tabulky testerem diod

červený	černý	hodnota
A	C	0,4
C	A	OL
A	B	OL
C	B	OL
B	A	0,4
B	C	0,8

Hodnoty jsou orientační. Naměříte-li zkrat, nebo rozpojený obvod (OL), je nutné PCB vyměnit

Dále použijte tester pro změření nožiček na zvětšenině, hodnoty musí být vždy OL

Obrázek 5



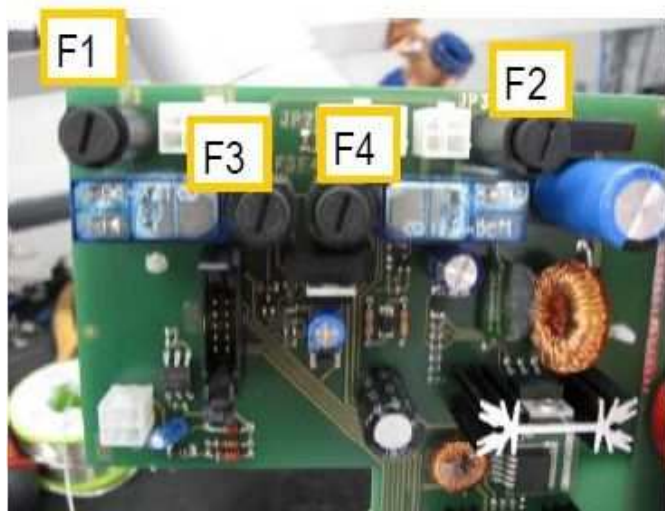
Varistory jsou blízko vstupu napájecího napětí na silovou PCB. Toto zařízení slouží k ochraně PCB před vstupním přepětím. Při přepětí "exploduje" a zkratuje vstup. Je-li rozsah zkratu velmi vysoký, obvod se přeručí

Obrázek 6



Pomocný transformátor připojen přes 10 vodičové spojení s PCB silová. Ujistěte se, že výstupy z transformátoru jsou správně nainstalovány tak, jak je vidět na obrázku

Obrázek 7



Pojistky:  
 – F1: 2.5 A;  
 – F2: 2.5 A;  
 – F3: 250 mA;  
 – F4: 1A.

Obrázek 8



Digitální multimetr. "OL" označuje přerušný obvod



**CAUTION!**

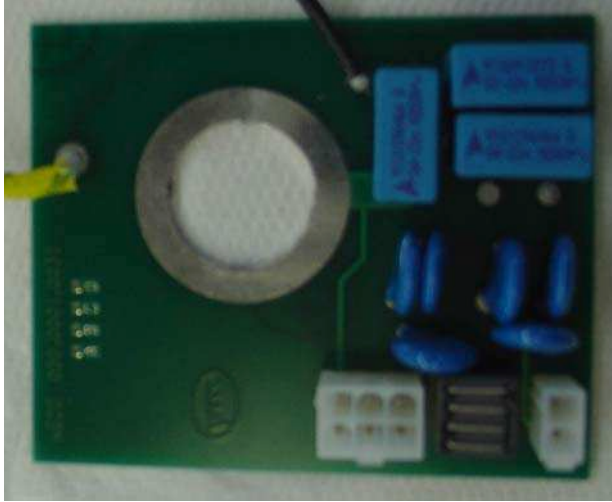
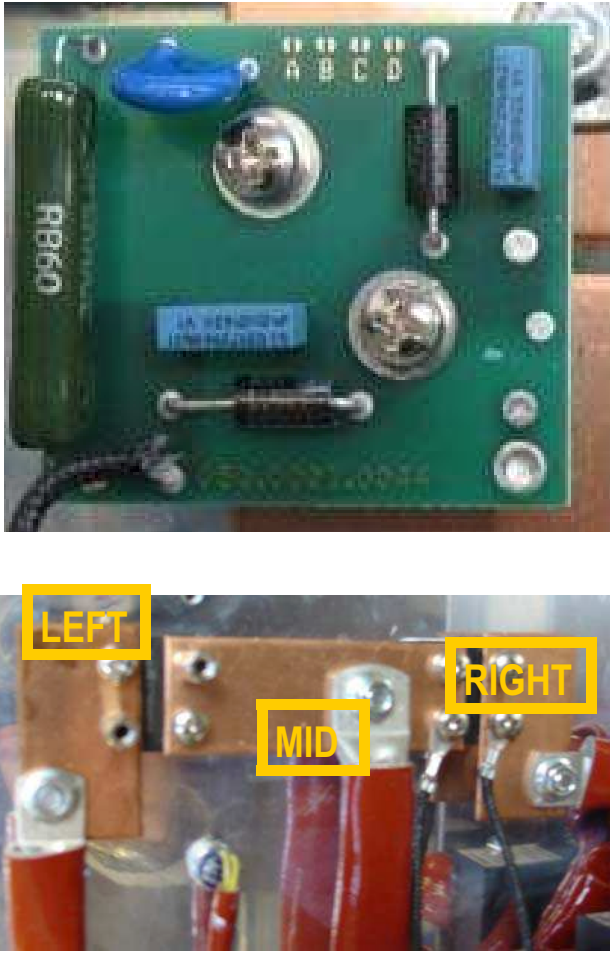

Before carrying out any work on the machine make sure it is off and the plug has been disconnected.

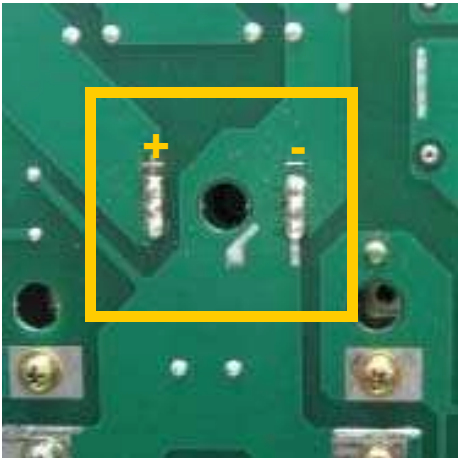
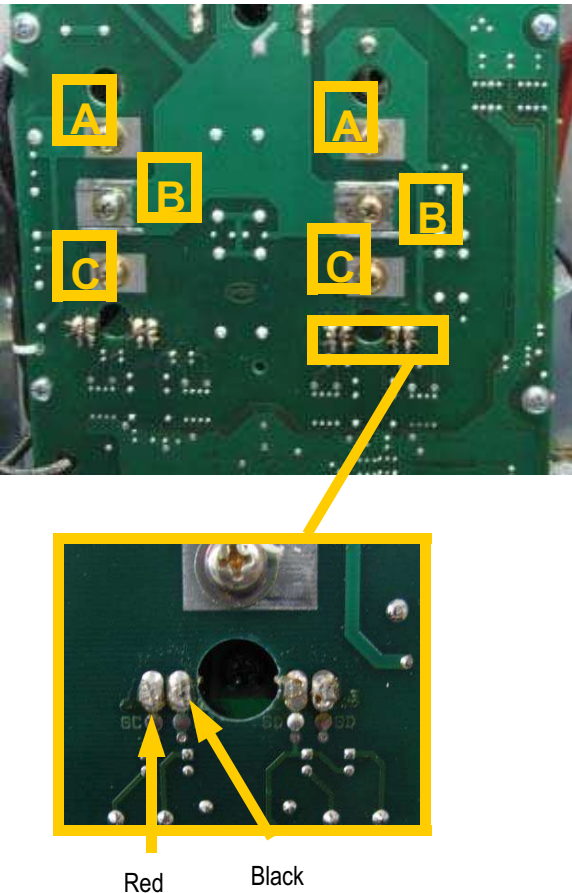
PROBLEM	CASE	SOLUTION
The machine does not switch on.	<ul style="list-style-type: none"> <li>- Electrical power does not reach the machine.</li> <li>- Voltage reaches the machine switch but there is no voltage after the contacts.</li> <li>- There is voltage after the disconnecting switch but the machine does not go on.</li> </ul>	<ul style="list-style-type: none"> <li>• Make sure the line switches are closed, the protection devices (fuses) have not been enabled and that the power supply cable is intact.</li> <li>• Switch the machine off and disconnect the plug. Make sure that when the switch is closed, there is continuity between the contact input and output and the varistors are not broken. (picture 5). If they are damaged the line filter board 0068 must be replaced (picture 5). Otherwise check the power board.</li> <li>• Switch the machine off and disconnect the plug, check that the Power Transformer cable is connected to the Power Board (picture 6).</li> </ul>
The protection devices of the line set off when the switch is activated and the machine does not go on.	<ul style="list-style-type: none"> <li>- Damaged power supply cable with short-circuited wires.</li> <li>- Inverter is damaged.</li> </ul>	<ul style="list-style-type: none"> <li>• Switch off the machine and disconnect the plug. Make sure that there are no short circuits between the poles of the plug caused by a damaged power supply cable.</li> <li>• Switch off the machine, disconnect the plug and check: <ul style="list-style-type: none"> <li>- varistors (picture 5);</li> <li>- inverter (picture 4);</li> <li>- Input bridge rectifier (picture 3);</li> </ul> </li> </ul>

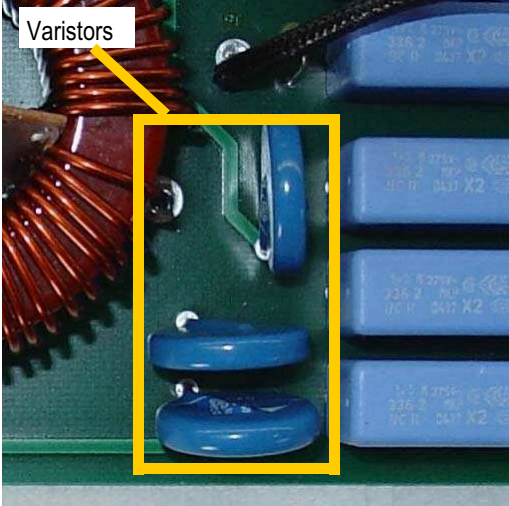


PROBLEM	CASE	SOLUTION
The front panel does not switch on.	<ul style="list-style-type: none"> <li>- The flat cable that connects the front panel to the power board is not correctly inserted.</li> <li>- The Fuse F4 is damaged.</li> </ul>	<ul style="list-style-type: none"> <li>• Switch off the machine and disconnect the plug. Make sure the flat cable that connects the front panel to the power board is inserted correctly. If correctly inserted, replace the front panel</li> <li>• If the front panel doesn't work there's probably a feeding problem. In this case the fuse F4 must be replaced (picture 10). If the problem remains, try to replace the Power Board the Toroidal Transformers. Otherwise the front panel can be damaged, so it must be replaced.</li> </ul>
The Machine works and weld but the fan doesn't work (the thermal cycle of the machine are too short).	<ul style="list-style-type: none"> <li>- The cable that connects the Power Board to the Fan is not correctly inserted.</li> <li>- The Fan is Damaged.</li> </ul>	<ul style="list-style-type: none"> <li>• Connect the cable or eventually replace it.</li> <li>• The Fan must be replaced.</li> </ul>
The output voltage in MMA/TIG is about 11V and the Machine doesn't weld.	<ul style="list-style-type: none"> <li>- The wires that connect the output filter board 0031 to the front panel are not correctly inserted or are damaged.</li> <li>- The power board and/or the front panel are damaged.</li> </ul>	<ul style="list-style-type: none"> <li>• Switch off the machine and disconnect the plug: <ul style="list-style-type: none"> <li>- Connect the cables or if they are damaged replace them (picture 1);</li> </ul> </li> <li>- The damaged boards must be replaced.</li> </ul>
The output voltage in each procedure is about 11V and enabling of the thermal protection device.	<p>Wait a few minutes keeping the machine on to favour cooling of the inverter. If the machine continues running with the protection devices on, switch the machine off and disconnect the plug. Remove the hood and make sure:</p> <ul style="list-style-type: none"> <li>- the temperature of the heat sink tool is less than 40°C;</li> <li>- If it is less than 40°C, check whether the thermal protective device contacts are normally closed.</li> </ul>	<ul style="list-style-type: none"> <li>- If one of the protection devices is always opened it is defective, it must be accordingly replaced.</li> <li>- If it is closed, make sure the two terminals are well inserted in the connector.</li> <li>- Power board feed problems, it must be accordingly replaced.</li> </ul>

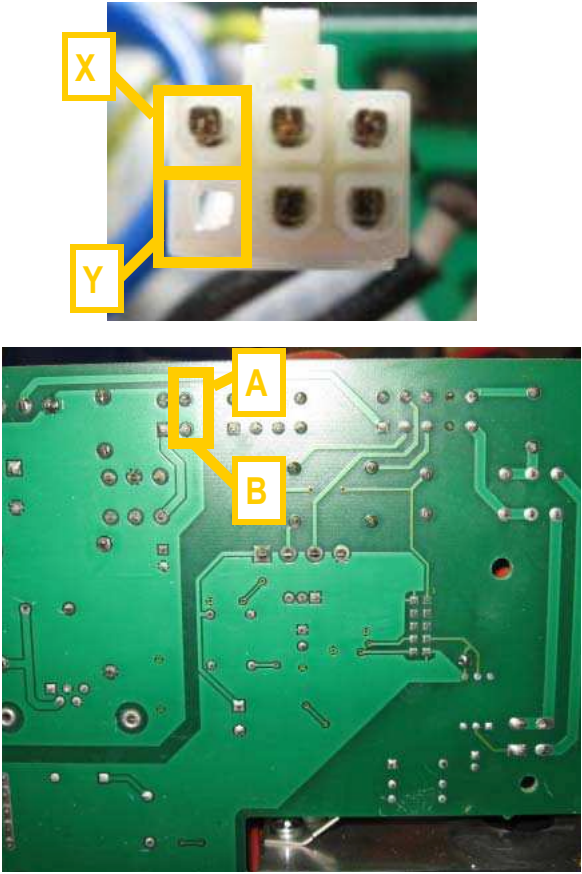
PROBLEM	CASE	SOLUTION
The output voltage in MMA/TIG is zero and the welding procedure is blocked in MMA.	<ul style="list-style-type: none"> <li>- Transils on the snubber board 0065 are damaged.</li> <li>- ISOTOP diodes are in short circuit.</li> <li>- The inductive value of the Power Transformer is null.</li> </ul>	<p>Switch off the machine and disconnect the plug. Remove the snubber board ( above the ISOTOP diodes):</p> <ul style="list-style-type: none"> <li>• check with a diode tester the status of the transils on the snubber board. If it's damaged, it must be replaced (picture 2);</li> <li>• check with a diode tester the status of the diodes. If they are damaged, they must be replaced (picture 2);</li> <li>• Otherwise the Power Transformer could be damaged, then it must be replaced.</li> </ul>
The MMA welding is non optimal.	<ul style="list-style-type: none"> <li>- Spattering occurs during MMA welding.</li> </ul>	<ul style="list-style-type: none"> <li>• Make sure welding polarity is correct, the earth clamp is fixed correctly and check the hot-start and arc-force values that have to be decreased if they are too high.</li> </ul>
When welding the protection devices of the line set off.	Make sure the welding current does not require greater power than the one supplied by the line.	Decrease the welding current.
The remote control doesn't work.	<ul style="list-style-type: none"> <li>- Make sure the wiring which goes to the front panel board is connected.</li> <li>- Check the continuity of the remote control cable.</li> <li>- The torch potentiometer could be damaged.</li> <li>- The military connector is damaged or disconnected.</li> </ul>	<ul style="list-style-type: none"> <li>• Insert the wires into the connectors correctly and insert the connectors into their housings. Should this not be sufficient, replace the front panel board or the power board.</li> <li>• The potentiometer must be replaced.</li> <li>• Connect the military connector or replace it.</li> </ul>
The machine does not strike in HF mode.	<ul style="list-style-type: none"> <li>- The front panel could be damaged.</li> <li>- The HF board could be damaged.</li> <li>- HF board cable could be damaged or disconnected.</li> </ul>	<ul style="list-style-type: none"> <li>• Replace the front panel board; first verify that the spare part has the right software.</li> <li>• The HF board must be replaced.</li> <li>• Connect the cables or, if damaged, replace them.</li> </ul>
Gas comes out but the machine doesn't weld.	Pre-gas settings are not correct.	Regulate pre-gas settings.

PROBLEM	CASE	SOLUTION
Gas does not come out from solenoid valve.	<ul style="list-style-type: none"> <li>- Excessive gas pressure.</li> <li>- Damage solenoid valve wiring.</li> <li>- Feeding is missing.</li> <li>- The solenoid valve control relay on the front panel is damaged.</li> <li>- HF board is damaged.</li> <li>- Solenoid valve is damaged.</li> </ul>	<ul style="list-style-type: none"> <li>• Remove the gas connection. Carry out a gas test on the front panel in the MIG/TIG procedure and check opening of the solenoid valve. Reduce gas pressure. Restore connections and carry out a gas test.</li> <li>• Switch off the machine and disconnect the plug: <ul style="list-style-type: none"> <li>- Check the continuity of the cable that connect the solenoid valve to the HF board and the one that connect the HF board to the front panel. If there's no continuity, try to repair the damaged cables;</li> <li>- Check that the connectors are correctly inserted.</li> </ul> </li> <li>• Check continuity between points A/B of the power board and x/y poles of the connector that goes to the front panel. After that the solenoid valve or the front panel must be replaced (picture 8).</li> <li>• The front panel must be replaced.</li> <li>• The HF board must be replaced.</li> <li>• Should the operations carried out not have a positive outcome, replace the solenoid valve.</li> </ul>
The torch button doesn't work.	<ul style="list-style-type: none"> <li>- The torch could be damaged.</li> <li>- There is no continuity between the amphenol connector and the front panel.</li> <li>- The front panel is damaged.</li> </ul>	<ul style="list-style-type: none"> <li>• The Torch must be replaced.</li> <li>• Single out the interruption and replace the wiring.</li> <li>• The front panel must be replaced.</li> </ul>
The machine always welds at maximum current.	<ul style="list-style-type: none"> <li>- The front panel is damaged.</li> <li>- The Power Board is damaged.</li> <li>- The Hall Effect is damaged.</li> </ul>	<ul style="list-style-type: none"> <li>• Switch off the machine and disconnect the plug: <ul style="list-style-type: none"> <li>- Replace the front panel board; first verify that the spare part has the right software.</li> <li>- The Power Board must be replace.</li> <li>- The Hall Effect must be replace.</li> </ul> </li> </ul>
The machine can't stop welding or the welding current is not the one set.	The slope up and slope down are not correctly set.	<ul style="list-style-type: none"> <li>• Regulate in the correct way the slopes.</li> <li>• Otherwise, reset the parameters and reset the machine (picture 7).</li> </ul>

		<b>EXPLANATION</b>																									
<b>PICTURE 1</b>		<p>Check that the cables that connect the output filter board 0031 to the front panel are correctly inserted.</p>																									
<b>PICTURE 2</b>		<p>To check diodes remove the snubber board and carry out the following measures with a diode tester:</p> <table border="1" data-bbox="845 918 1484 1187"> <thead> <tr> <th>Copper bar</th> <th>Probe</th> <th>Copper bar</th> <th>Probe</th> <th>Measure</th> </tr> </thead> <tbody> <tr> <td>LEFT</td> <td>Red</td> <td>MID</td> <td>Black</td> <td>"OL"</td> </tr> <tr> <td>LEFT</td> <td>Black</td> <td>MID</td> <td>Red</td> <td>&gt;.150</td> </tr> <tr> <td>MID</td> <td>Red</td> <td>RIGHT</td> <td>Black</td> <td>&gt;.150</td> </tr> <tr> <td>MID</td> <td>Black</td> <td>RIGHT</td> <td>Red</td> <td>"OL"</td> </tr> </tbody> </table> <p>At the ends of the two transils (see below) positioned on the snubber board, "OL" must always be measured.</p> 	Copper bar	Probe	Copper bar	Probe	Measure	LEFT	Red	MID	Black	"OL"	LEFT	Black	MID	Red	>.150	MID	Red	RIGHT	Black	>.150	MID	Black	RIGHT	Red	"OL"
Copper bar	Probe	Copper bar	Probe	Measure																							
LEFT	Red	MID	Black	"OL"																							
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MID	Black	RIGHT	Red	"OL"																							

		<b>EXPLANATION</b>																					
<b>PICTURE 3</b>		<p>Input bridge rectifier on the Power Board 0035.</p> <p>To check the Input bridge rectifier , carry out the following measurements with a diode tester:</p> <table border="1" data-bbox="836 394 1497 564"> <thead> <tr> <th>Faston</th> <th>Probe</th> <th>Faston</th> <th>Probe</th> <th>Measure</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">+</td> <td style="text-align: center;">Red</td> <td style="text-align: center;">-</td> <td style="text-align: center;">Black</td> <td style="text-align: center;">"OL"</td> </tr> <tr> <td style="text-align: center;">-</td> <td style="text-align: center;">Red</td> <td style="text-align: center;">+</td> <td style="text-align: center;">Black</td> <td style="text-align: center;">0.7 ca.</td> </tr> </tbody> </table> <p>Should there be a short circuit on one of these measurements, the input bridge rectifier must be replaced.</p>	Faston	Probe	Faston	Probe	Measure	+	Red	-	Black	"OL"	-	Red	+	Black	0.7 ca.						
Faston	Probe	Faston	Probe	Measure																			
+	Red	-	Black	"OL"																			
-	Red	+	Black	0.7 ca.																			
<b>PICTURE 4</b>		<p>To check the inverter, carry out the following measurements with a diode tester:</p> <table border="1" data-bbox="884 900 1437 1238"> <thead> <tr> <th>Red Probe</th> <th>Black Probe</th> <th>Measure</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">A</td> <td style="text-align: center;">C</td> <td style="text-align: center;">0.4</td> </tr> <tr> <td style="text-align: center;">C</td> <td style="text-align: center;">A</td> <td style="text-align: center;">"OL"</td> </tr> <tr> <td style="text-align: center;">A</td> <td style="text-align: center;">B</td> <td style="text-align: center;">"OL"</td> </tr> <tr> <td style="text-align: center;">C</td> <td style="text-align: center;">B</td> <td style="text-align: center;">"OL"</td> </tr> <tr> <td style="text-align: center;">B</td> <td style="text-align: center;">A</td> <td style="text-align: center;">0.4</td> </tr> <tr> <td style="text-align: center;">B</td> <td style="text-align: center;">C</td> <td style="text-align: center;">0.8</td> </tr> </tbody> </table> <p>Should there be a short-circuit on one of these measurements or an "OL" instead of a numeric value, the power board must be replaced.</p> <p>Use the tester to measure the pins indicated in the enlarged picture – the values obtained must always be "OL" (on all four pairs of pins).</p>	Red Probe	Black Probe	Measure	A	C	0.4	C	A	"OL"	A	B	"OL"	C	B	"OL"	B	A	0.4	B	C	0.8
Red Probe	Black Probe	Measure																					
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		<b>EXPLANATION</b>
<b>PICTURE 5</b>		<p>The varistors are three blue discs near the ground wire of the power board. These devices are for protecting the board from input overvoltage. When there is overvoltage they “explode” causing a short circuit most of the times. If the extent of the short circuit is very high they become an open circuit.</p>
<b>PICTURE 6</b>		<p>The auxiliary transformer is connected by means of a 10-way connector to the power board. Make sure the outputs of the transformer are connected correctly and the wirings, whose data are indicated on the auxiliary transformer, are inserted into the connector in the following way and as indicated in the picture.</p>
<b>PICTURE 7</b>		<p>In order to reset the parameters, switch the machine on while the S2 and S4 buttons are being pressed.</p>

		EXPLANATION
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>PICTURE 8</b></p>	 <p>The image consists of two photographs. The top photograph shows a close-up of a white plastic connector with six pins. Two pins are highlighted with yellow boxes and labeled 'X' and 'Y'. The bottom photograph shows a green printed circuit board (PCB) with various components and traces. Two points on the board are highlighted with yellow boxes and labeled 'A' and 'B'.</p>	<p>Check continuity, with a diode tester, between points A/B of the power board and x/y poles of the connector that goes to the front panel.</p>



**MG057-2 SERVISNÍ MANUÁL / SERVICE MANUAL ALFIN 281 W**

Vypracoval: Worked out:	RL 23/6/2008	Přezkoumal: Inspected:	DJ 20/4/2010	Schválil: Approved:	VS 20/4/2010
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