

# WOLFPAC™ 270 AC/DC Welding Generator

- Stick (SMAW)
- MIG (GMAW)
- Flux Core (FCAW)
- TIG (GTAW) Scratch Start
- Auxiliary Power

## OWNER'S MANUAL



Manual No. MI 223.19.00.00



## WOLFPAC™ 270 AC/DC CC/CV Welding Generator

LR 102812  ©  
WITL/C



## **WARNING**

Read and understand this entire Owner's Manual and your employer's safety practices before installing, operating, or servicing the equipment.

While the information contained in this Owner's Manual represents our best judgment, AIR LIQUIDE assumes no liability for its use.

**AIR LIQUIDE WOLFPAC™ 270 AC/DC** Welding Generator

Owner's Manual Number MI 223.19.00.00

All rights reserved.

Reproduction of this work, in whole or in part, without written permission of the publisher is prohibited.

The publisher does not assume and hereby disclaims any liability to any part for any loss or damage caused by any error or omission in the **AIR LIQUIDE WOLFPAC™ 270 AC/DC** Welding Generator Owner's Manual, whether such error results from negligence, accidental, or any other cause.

**WOLFPAC™** Trademark of Air Liquide Canada Inc.

Air Liquide Welding is a trademark of L'Air Liquide S.A.

## TABLE OF CONTENTS

<b>1. GENERAL INFORMATION .....</b>	<b>5</b>
<b>1.1 NOTES, CAUTIONS AND WARNING.....</b>	<b>5</b>
<b>1.2 IMPORTANT SAFETY PRECAUTIONS.....</b>	<b>5</b>
<b>1.3 PUBLICATIONS .....</b>	<b>9</b>
<b>2. TECHNICAL SPECIFICATIONS .....</b>	<b>10</b>
<b>3. FRONT PANEL DESCRIPTION .....</b>	<b>11</b>
<b>4. OVERALL DIMENSIONS, WEIGHT AND BASE MOUNTING.....</b>	<b>15</b>
<b>5. SPECIFICATIONS .....</b>	<b>16</b>
<b>5.1 DESCRIPTION.....</b>	<b>16</b>
<b>6. SETTING-UP THE WELDING GENERATOR .....</b>	<b>17</b>
<b>7. WARNING.....</b>	<b>18</b>
<b>8. SIMULTANEOUS WELDING AND POWER AVAILABILITY.....</b>	<b>19</b>
<b>9. WIRING OPTIONAL 230 VOLT PLUG.....</b>	<b>20</b>
<b>10. GROUNDING THE GENERATOR TO A TRUCK OR A TRAILER FRAME.....</b>	<b>21</b>
<b>11. GROUNDING THE GENERATOR WHEN CONNECTING TO HOME, SHOP, OR     FARM WIRING.....</b>	<b>21</b>
<b>12. TYPICAL PROCESS CONNECTIONS.....</b>	<b>22</b>
<b>13. SELECTING MINIMUM WELD CABLE SIZES .....</b>	<b>22</b>
<b>14. WELD OUTPUT CONNECTION.....</b>	<b>23</b>
<b>15. SEQUENCE OF OPERATION .....</b>	<b>24</b>
<b>15.1 SHIELDED METAL ARC WELDING (SMAW).....</b>	<b>24</b>
<b>15.2 GAS TUNGSTEN ARC WELDING (GTAW).....</b>	<b>24</b>
<b>15.3 GAS METAL ARC WELDING (GMAW), FLUX CORED ARC WELDING (FCAW).....</b>	<b>24</b>
<b>16. ROUTINE MAINTENANCE.....</b>	<b>25</b>
<b>17. PARTS LIST.....</b>	<b>26</b>
<b>17.1 STATOR PARTS .....</b>	<b>26</b>
<b>17.2 SHEET PARTS.....</b>	<b>31</b>
<b>17.3 ENGINE RELATED PARTS .....</b>	<b>33</b>

## 1. GENERAL INFORMATION

### 1.1 Notes, Cautions and Warning

Throughout this manual, notes, cautions, and warnings are used to highlight important information. These highlights are categorized as follows:

#### NOTE

An operation, procedure, or background information that requires additional emphasis or is helpful in efficient operation of the system.

#### ———— CAUTION

A procedure which, if not properly followed, may cause damage to the equipment.



#### WARNING

A procedure which, if not properly followed, may cause injury to the operator or others in the operating area.

### 1.2 Important Safety precautions



#### WARNING

OPERATION AND MAINTENANCE OF WELDING EQUIPMENT CAN BE DANGEROUS AND HAZARDOUS TO YOUR HEALTH.

To prevent possible injury, read, understand, and follow all Warnings, Safety precautions and Instructions before using the equipment. Call 1-800-817-7697 or your local distributor if you have any questions.



#### GASES AND FUMES

Gases and fumes produced during the arc welding or cutting processes can be dangerous and hazardous to your health.

- Keep all fumes and gases from the breathing area. Keep your head out of the welding fume plume.

- Use an air-supplied respirator if ventilation is not adequate to remove all fumes and gases.
- The kinds of fumes and gases from arc welding/cutting depend on the kind of coatings being used on the metal, and the different process. You must be very careful when cutting or welding any metals that may contain one or more of the following:

Antimony	Arsenic	Barium	Beryllium	Cadmium
Chromium	Cobalt	Copper	Lead	Manganese
Mercury	Nickel	Selenium	Silver	

- Always read the Material Safety Data Sheets (MSDS) that should be supplied with the material you are using. These MSDS will give you the information regarding the kind and amount of fumes and gases that may be dangerous to your health.
- For information on how to test for fumes and gases in your workplace, refer to item 1 in Subsection 1.3 (Publications) in this manual.
- Use special equipment, such as water or down draft welding or cutting tables, to capture fumes and gases.
- Do not use the welding torch in an area where combustible or explosive gases or materials are located.
- Phosgene, a toxic gas, is generated from the vapors of chlorinated solvents and cleansers. Remove all sources of these vapors.



## **ELECTRIC SHOCK**

Electric Shock can injure or kill. The arc welding process uses and produces high voltage electrical energy. This electric energy can cause severe or fatal shock to the operator or other employees in the workplace.

- Never touch any parts that are electrically “live” or “hot”.
- Wear dry gloves and clothing. Insulate yourself from the work piece or other parts of the welding circuit.
- Repair or replace all worn or damaged parts.
- Extra care must be taken when the workplace is moist or damp.
- Install and maintain equipment according to the National Electrical Code, refer to item 9 in Subsection 1.3 (Publications).
- Disconnect power source before performing any service or repairs.
- Read and follow all the instructions in the Operating Manual.



## **FIRE AND EXPLOSION**

Fire and explosion can be caused by hot slag, sparks or the arc weld.

- Be sure there is no combustible or flammable material in the workplace. Any material that cannot be removed must be protected.
- Ventilate all flammable or explosive vapors from the workplace.
- Do not cut or weld on containers that may have held combustibles.
- Provide a fire watch when working in an area where fire hazards may exist.
- Hydrogen gas may be formed and trapped under aluminum workpieces when they are cut underwater or while using a water table. **DO NOT** cut aluminum alloys underwater or on a water table unless the hydrogen gas can be eliminated or dissipated. Trapped hydrogen gas that is ignited will cause an explosion.



## **NOISE**

Noise can cause permanent hearing loss. Arc welding or cutting processes can cause noise levels that exceed safe limits. You must protect your ears from high noise levels to prevent permanent loss of hearing.

- To protect your hearing from high noise levels wear protective ear plugs and/or ear muffs. Protect others in the workplace.
- Noise levels should be measured to be sure the decibels (sound) do not exceed safe levels.
- For information on how to test for noise, see item 1 in Subsection 1.3 (Publications).



## **ARC WELDING RAYS**

Arc welding or cutting rays can injure your eyes and burn your skin. The arc welding cutting process produces very bright ultra violet and infra red light. These arc rays will damage your eyes and burn your skin if you are not properly protected.

- To protect your eyes, always wear a welding helmet or shield. Also, always wear safety glasses with side shields, goggles or other protective eye wear. Keep helmet and safety glasses in good condition. Replace lenses when cracked, chipped or dirty.
- Wear welding gloves and suitable clothing to protect your skin from the arc rays and sparks.
- Protect others in the work area from the arc rays. Use protective booths, screens or shields.
- Use the shade of lens as recommended in item 4 of Subsection 1.3 (Publications).



## 1.3 Publications

Refer to the following standards or their latest revisions for more information:

1. OSHA, SAFETY AND HEALTH STANDARDS, 29CFR 1910, obtainable from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
2. ANSI Standard Z49.1, SAFETY IN WELDING AND CUTTING, obtainable from the American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.
3. NIOSH, SAFETY AND HEALTH IN ARC WELDING AND GAS WELDING AND CUTTING, obtainable from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
4. ANSI Standard Z87.1, SAFE PRACTICES FOR OCCUPATION AND EDUCATIONAL EYE AND FACE PROTECTION, obtainable from American National Standard Institute, 1430 Broadway, New York, NY 10018.
5. ANSI Standard Z41.1, STANDARD FOR MEN'S SAFETY-TOE FOOTWEAR, obtainable from the American National Standards Institute, 1430 Broadway, New York, NY 1018.
6. ANSI Standard Z49.2, FIRE PREVENTION IN THE USE OF CUTTING AND WELDING PROCESSES, obtainable from American National Standard Institute, 1430 Broadway, New York, NY 10018.
7. AWS Standard A6.0, WELDING AND CUTTING CONTAINERS WHICH HAVE HELD COMBUSTIBLES, obtainable from American Welding Society, 550 N.W. Lejeune Road, Miami, FL33126.
8. NFPA Standard 51, OXYGEN-FUEL GAS SYSTEMS FOR WELDING, CUTTING AND ALLIED PROCESSES, obtainable from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.
9. NFPA Standard 70, NATIONAL ELECTRICAL CODE, obtainable from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.
10. NFPA Standard 51B, CUTTING AND WELDING PROCESSES, obtainable from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.
11. CGA Pamphlet P-1, SAFE HANDLING OF COMPRESSED GASES IN CYLINDERS, obtainable from the Compressed Gas Association, 1235 Jefferson Davis Highway, Suite 501, Arlington, Virginia, VA 22202.
12. CSA Standard W117.2, CODE FOR SAFETY IN WELDING AND CUTTING, obtainable from the Canadian Standards Association, Standards Sales, 178 Rexdale Boulevard, Rexdale, Ontario, Canada M9W 1R3.
13. NWSA booklet, WELDING SAFETY BIBLIOGRAPHY, obtainable from the National Welding Supply Association, 1900 Arch Street, Philadelphia, PA 19103.
14. American Welding Society Standard AWSF4.1, RECOMMENDED SAFE PRACTICES FOR THE PREPARATION FOR WELDING AND CUTTING OF CONTAINERS AND PIPING THAT HAVE HELD HAZARDOUS SUBSTANCES, obtainable from the American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.
15. ANSI Standard Z88.2, PRACTICE FOR RESPIRATORY PROTECTION, obtainable from American National Standards Instiute, 1430 Broadway, New York, NY 10018.

## 2. TECHNICAL SPECIFICATIONS

### WELDING GENERATOR DC

AC / DC amperage range	40-320 / 30-275
AC welding current	260 A @ 100% duty cycle
DC welding current	250 A @ 100% duty cycle

### AMPERAGE RANGE WITH FINE ADJUSTMENT IN EACH RANGE

AC	DC
40-70	30-40
70-135	40-90
155-240	90-170
200-300	170-260
260-320	220-275

### VOLTAGE

CC	100 OCV
CV	16 to 30 Load Volt

### AUXILIARY POWER

60 Hz Single Phase	115 V 3.5 kVA – 230 V 8.5 kVA
60 Hz Three Phase	460 V 10 kVA

### ENGINE

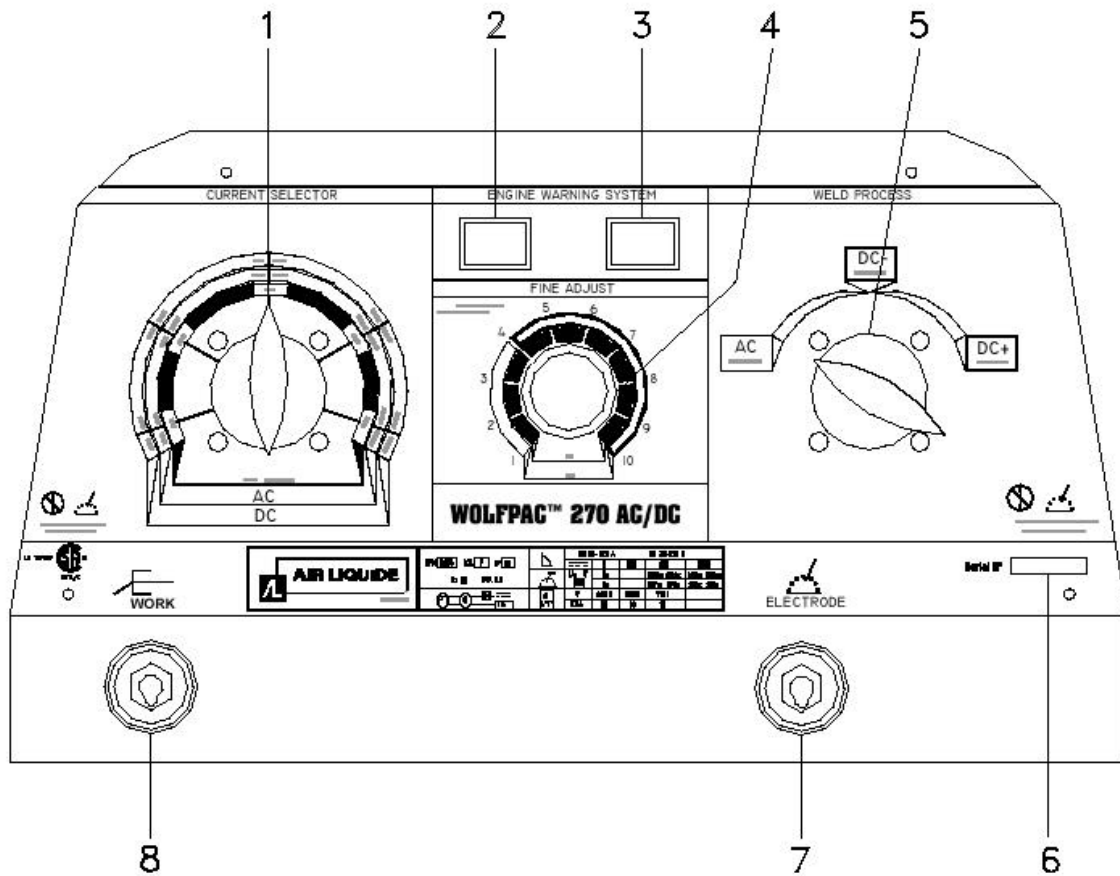
Make / Type	HONDA
Model series	GX 620 K1
Number of cylinders	2
Displacement	614 cc.
Power	20 HP
Engine speed	3600 r.p.m.
Cooling system	Air
Oil capacity	1.5 l – 0.42 gal US
Fuel capacity	37.5 l – 10 gal US
Fuel consumption	5.2 l/h – 1.4 gal / h (gal US)
Battery	12 V 44 Ah

### DIMENSION AND WEIGHT

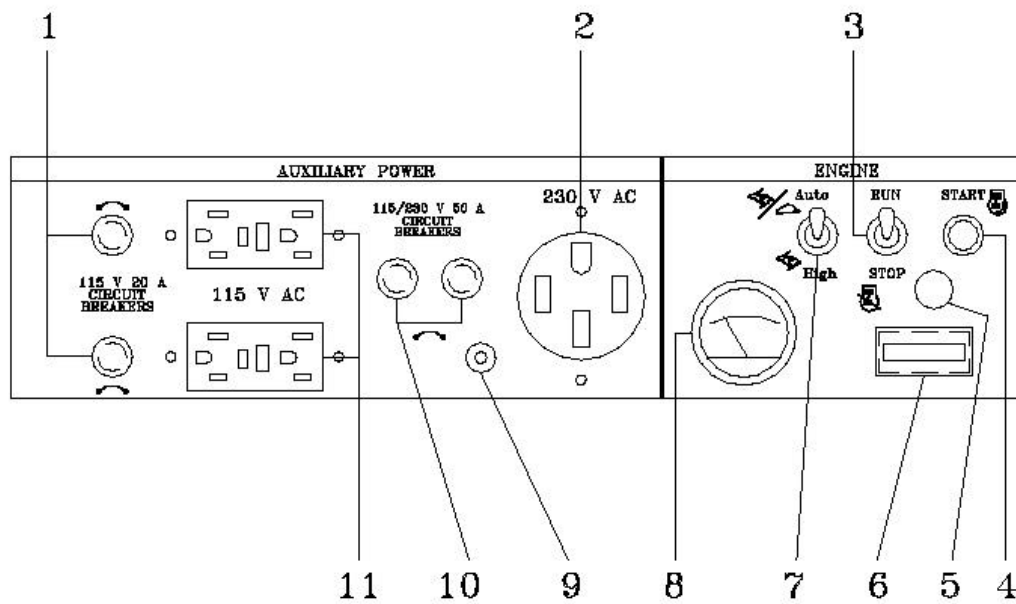
Height	710 mm	27.95 in
Width	530 mm	20.86 in
Length	1080 mm	42.52 in

Weight	270 kg	595 lb
--------	--------	--------

### 3. FRONT PANEL DESCRIPTION



1	Use to select welding current for CC mode and voltage for CV mode.
2	Battery charge lamp - when the “RUN/STOP” switch is turned on, the battery charge lamp will glow. For normal operation when the engine is running, the battery charge lamp will be off. Should the charging circuit at the battery fail, the battery warning lamp will turn on and the engine will shut off.
3	Oil Pressure Lamp - When the “RUN/STOP” switch is turned on, the oil pressure lamp will not glow. Should the oil sensor in the engine detect a low oil condition, the oil pressure lamp will turn on and the engine will shut off.
4	Controls throttle for fine welding control. Rotating this control in a clockwise direction increases the amperage or voltage output. The scale surrounding the control represents approximate amperage or voltage values.
5	Polarity Switch - Sets welding polarity for DC negative, DC positive or AC.
6	Serial number.
7	Connection for electrode cable or wire feeder.
8	Ground cable connection.



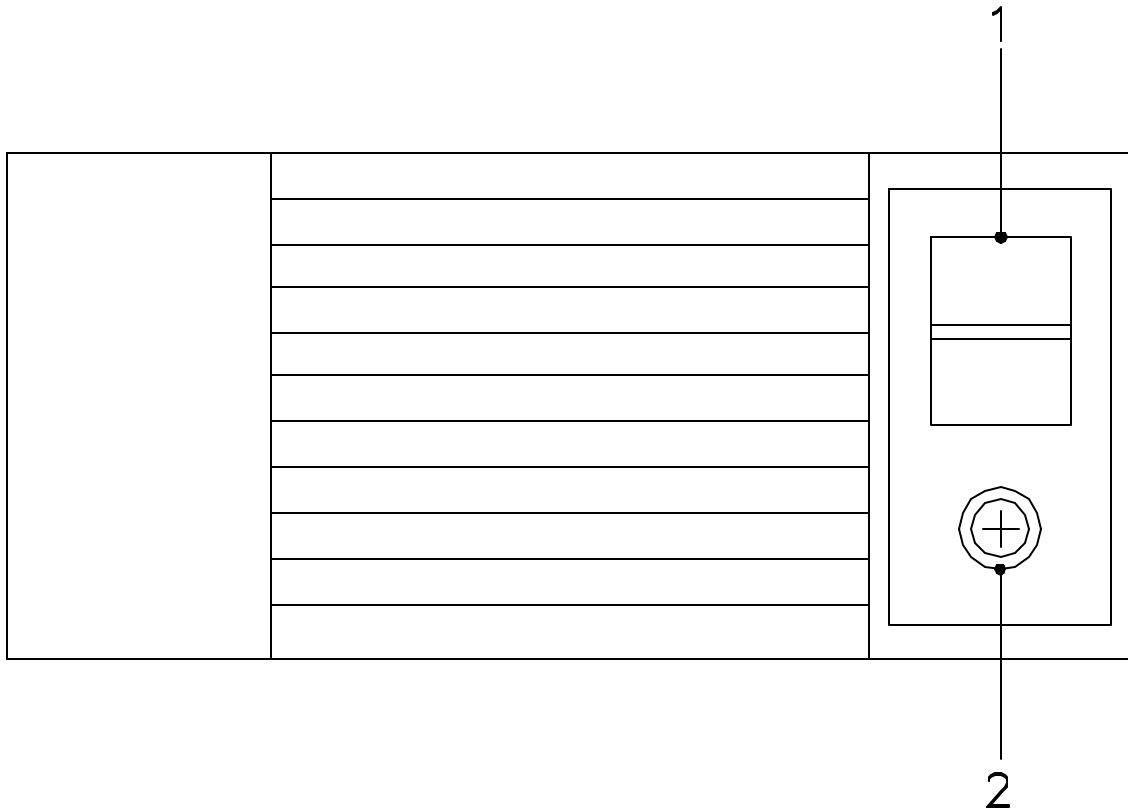
## FRONT PANEL DESCRIPTION

1	115 V 15 A Circuit Breakers – Push to reset. Controls 115 V power for the 115 V duplex GFCI receptacles.
2	230 / 115 V Single-Phase Receptacle – Supplies 60 Hz single-phase power at weld / power speed.

3	Engine "RUN/STOP" switch – Place in the "RUN" position to operate generator. Use the START button to start the engine. To shut off engine, place switch in "STOP" position.
4	START button - Used to start the engine. Set the "RUN/START" switch to "RUN", push "START" button to start the engine. When engine starts, release button.
5	Choke - Pull knob out to engage Choke. Push knob in for normal operation.
6	Engine hour meter - Monitors time in hours when the engine is on.
7	Engine: "AUTO/HIGH" switch – When in "Auto" position, the unit will idle until a load is applied. In "High" position, the engine will operate above idle RPM.
8	Fuel Gauge - Monitors fuel level.
9	Earth connection - Used to earth ground the generator for auxiliary power.
10	230 / 115 V Circuit Breakers – Push to reset. Controls 230 / 115 V power for the 230 / 115 V receptacle.
11	GFCI 115 V Duplex Receptacles – Ground fault interrupt protection receptacle for 115 V, 60 Hz power.

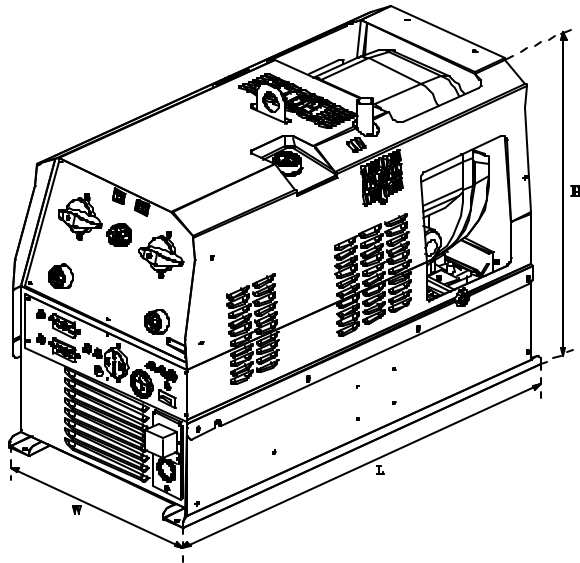
# FRONT PANEL DESCRIPTION

ref. FLA270PT3.DWG



1	13 A Circuit Breaker – 3-pole circuit breaker, controls 460 V three-phase power.
2	460 V Output - Access for three phase 460 V, 60 Hz connections. Connect Line 1, 2 and 3 to the output side of the circuit breaker and the ground to the bolt mounted beside the circuit breaker.

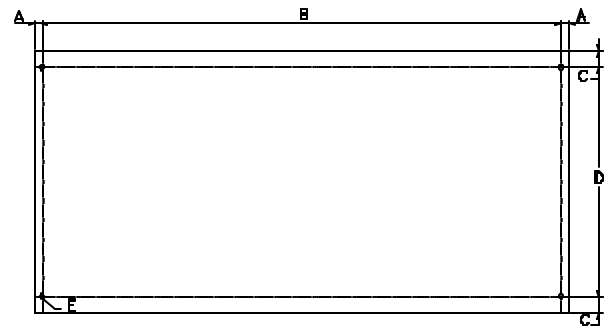
#### 4. OVERALL DIMENSIONS, WEIGHT AND BASE MOUNTING



ref. DIMENSHE.DWG

Dimensions

Height	710 mm	27.95 in
Width	530 mm	20.86 in
Length	1080 mm	42.52 in
A	15 mm	0.59 in
B	1050 mm	41.34 in
C	34.5 mm	1.36 in
D	424 mm	16.69 in
E	10.5 mm	0.41 in

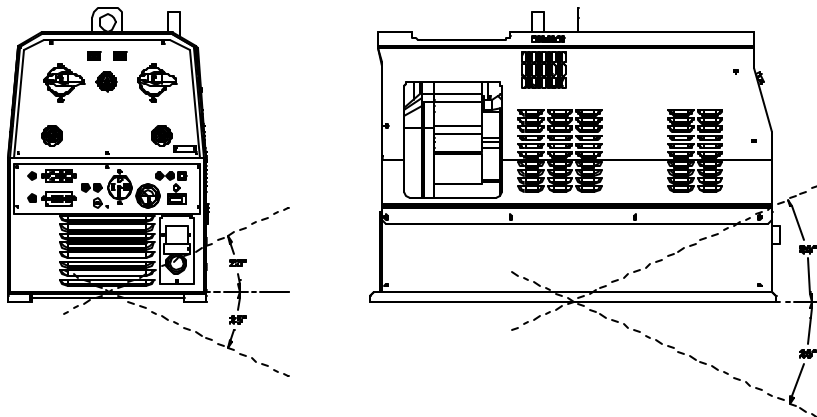


ref. DIMENS.DWG

Weight	270 kg	595 lb
--------	--------	--------

#### MAXIMUM WELDING GENERATOR OPERATING ANGLES

Do not exceed operating angles while running or engine damage will occur.



ref. FRVISION.DWG

## 5. SPECIFICATIONS

### 5.1 Description

The AIR LIQUIDE WOLFPAC™ 270 AC/DC is a gasoline engine driven AC/DC welding generator with selectable Constant Current (CC) and Constant Voltage (CV) output characteristics. This unit is designed for use with Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW) and TIG (GTAW) Scratch Start.

#### **NOTE:**

Full output may not be achieved before Engine break-in time. Engine break-in time is approximately 80 hours.

### **DUTY CYCLE**

The duty cycle of a welding generator is the percentage of a 10 (ten) minute period that the welding generator can be operated at a given output without causing overheating and damage to the unit. This unit is rated at 60 % (percent) duty cycle when operated at 275 A. The unit can be operated at 275 A for 6 (six) consecutive minutes, but it must operate at no load for the remaining 4 (four) minutes to allow proper cooling. If the welding amperes decrease, the duty cycle increases. If the welding amperes are increased beyond rated output, the duty cycle will decrease.

### **———— CAUTION**

**EXCEEDING DUTY CYCLE RATINGS** will cause the thermal overload protection circuit to become energized and shut down output until the cools to normal operating temperature.

**CONTINUAL EXCEEDING OF DUTY CYCLE RATINGS** can cause damage to the welding power source.

- Do not exceed indicated duty cycles.

## 6. SETTING UP THE WELDING GENERATOR



1. Lifting forks

2. Lifting eye

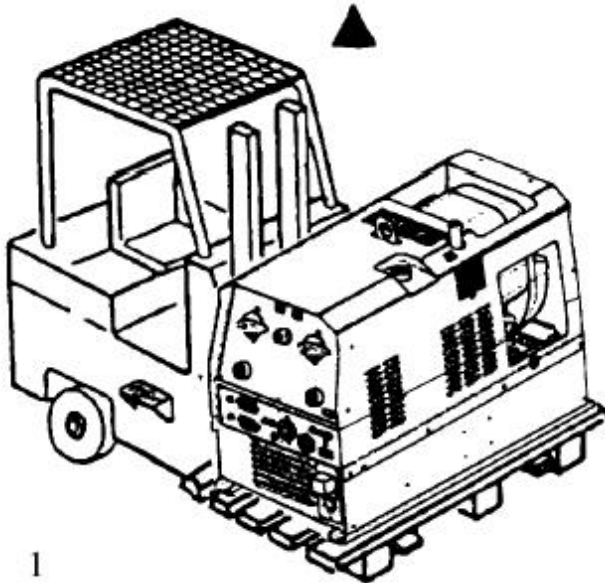
Use lifting eye or lifting forks to move unit.

If using lifting forks, extend forks beyond opposite side of unit.

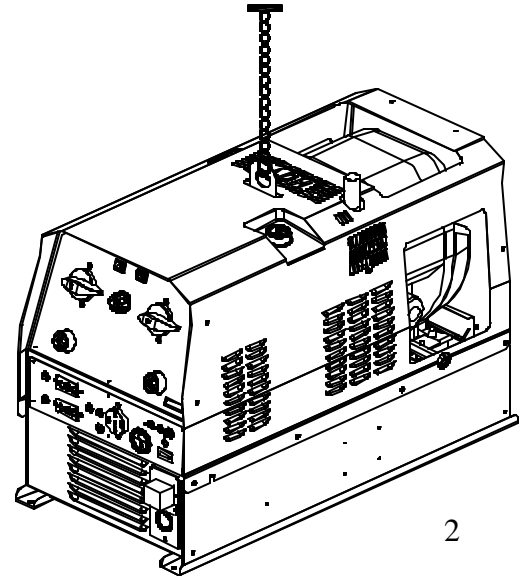
3. Trailer

Install unit on trailer according to trailer manufacturing.

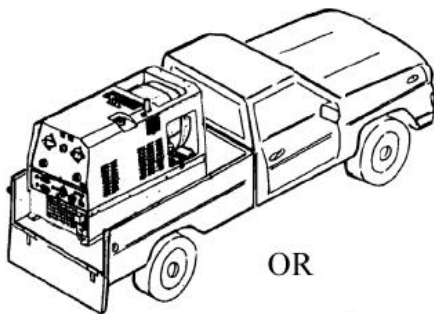
Movement



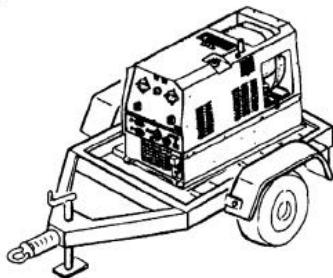
OR



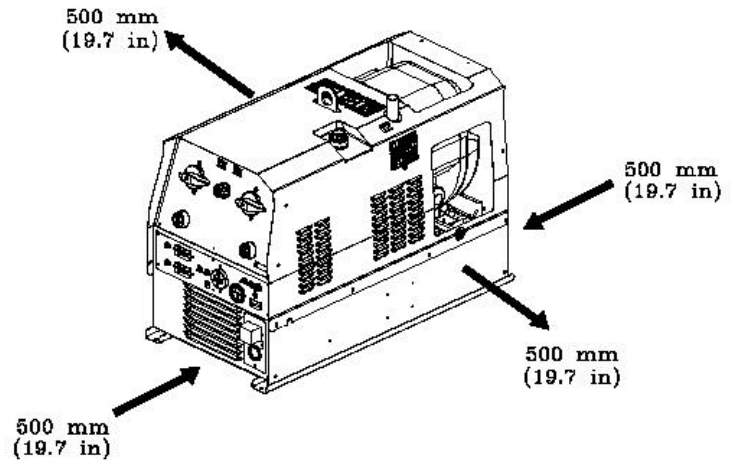
Location



OR



Airflow Clearance

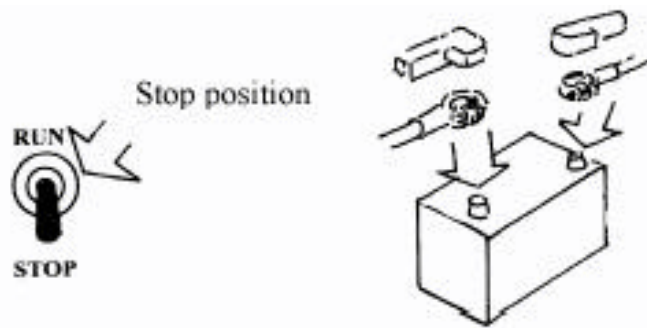


## 7. WARNING



### **SPARKS CAN CAUSE BATTERY GASES TO EXPLODE. BATTERY ACID CAN BURN EYES AND SKIN.**

- Stop engine before disconnecting or connecting battery cables.
  - Always wear a faceshield and proper protective clothing when working on battery.
  - Do not allow tools to cause sparks when working on battery.
1. Place the engine control switch in the “STOP” position.
  2. Remove bolts and pull out tray.
  3. Connect the cables.
  4. Reinstall battery tray.



### **ENGINE FUEL CAN CAUSE FIRE OR EXPLOSION.**

- Stop engine before fueling.
- Do not fuel while smoking or near sparks or flames.
- Do not overfill tank-clean up any spilled fuel.

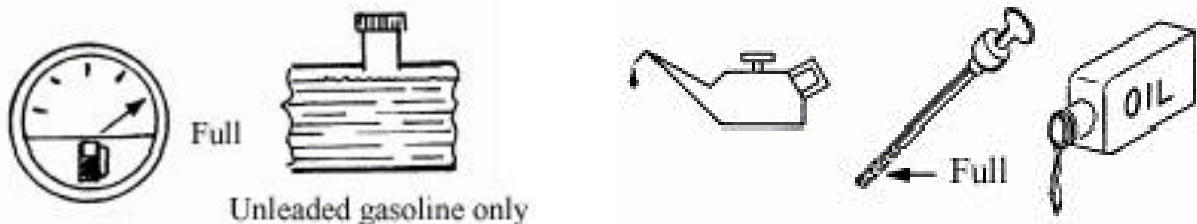
### **REMOVE FUEL CAP SLOWLY. FUEL SPRAY MAY CAUSE INJURY. FUEL MAY BE UNDER PRESSURE.**

Rotate fuel cap slowly and wait until hissing stops before removing cap.

Check all fluids daily. Engine must be cold and on a level surface.

Add fresh fuel when starting engine the first time.

Wipe dipstick clean and check oil: if oil is not up to full mark, add oil.



## 8. SIMULTANEOUS WELDING AND POWER AVAILABILITY

### **SINGLE-PHASE OR THREE-PHASE Fine Current Control Set at Maximum**

Weld current DC	Auxiliary power 3-phase or Auxiliary power 1-phase
270 A @ 30.8 V	1.2 kVA
220 A @ 28.8 V	3.66 kVA
170 A @ 26.8 V	4.5 kVA
120 A @ 24.8 V	7 kVA
70 A @ 22.8 V	8.5 kVA
0 A @ 0 V	10 kVA

## 9. WIRING OPTIONAL 230 VOLT PLUG



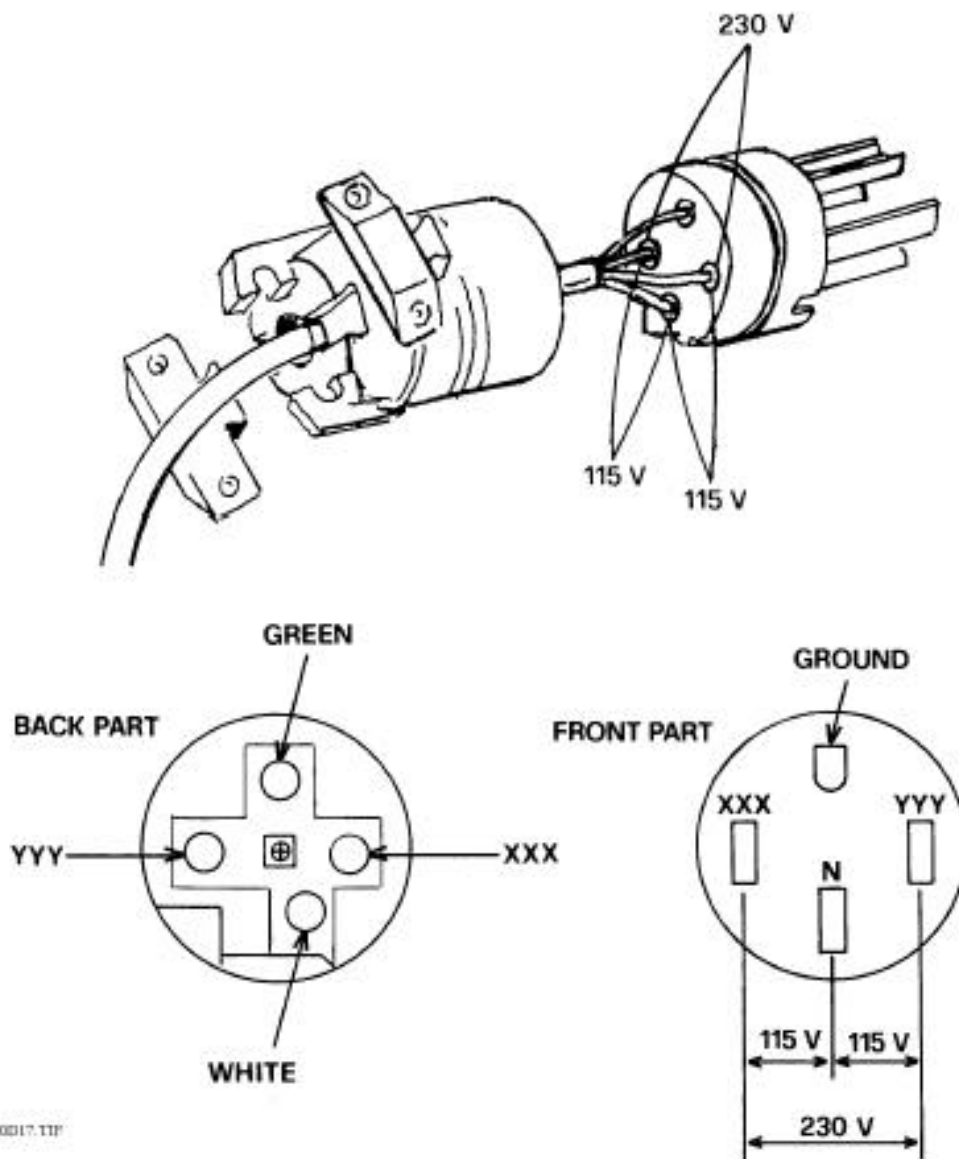
The plug can be wired for a 230 V, 2-wire load or a 115 / 230 V, 3-wire load.

White - Neutral terminal

YYY - Load 1 terminal

XXX - Load 2 terminal

Green - Ground terminal



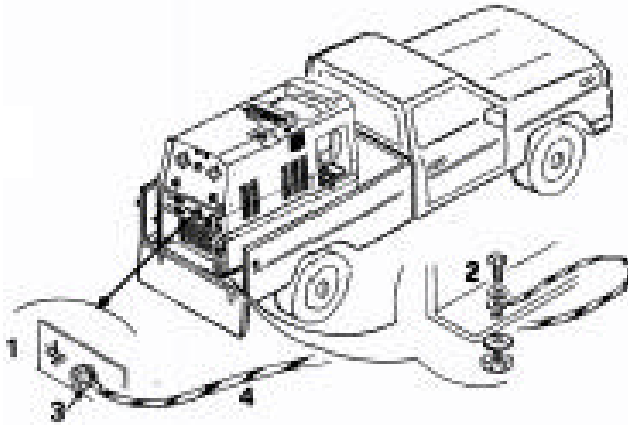
ref TA500017.TIP

## 10. GROUNDING THE GENERATOR TO A TRUCK OR A TRAILER FRAME



1. Generator base
2. Metal vehicle frame
3. Equipment grounding terminal
4. Grounding cable

Use #10 AWG or larger insulated copper wire.



### Grounding methods

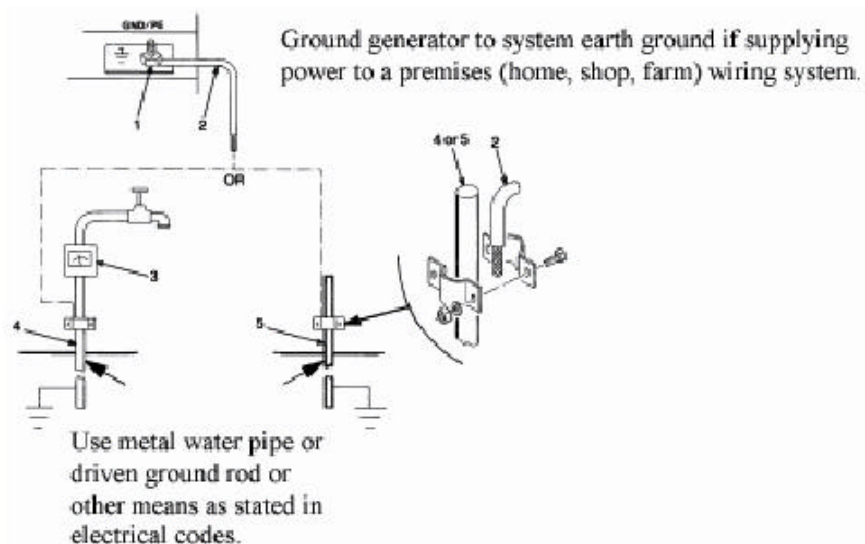
Electrically bond generator frame to vehicle frame by metal-to-metal contact.

## 11. GROUNDING THE GENERATOR WHEN CONNECTING TO HOME, SHOP, OR FARM WIRING

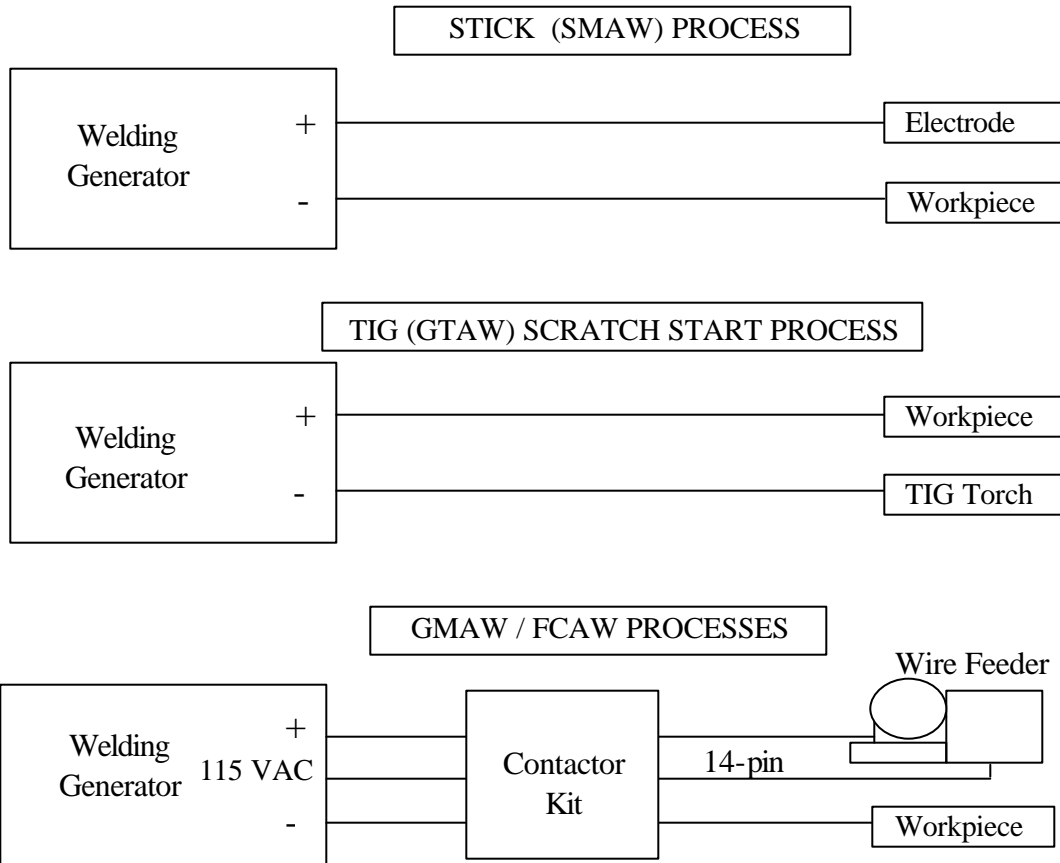


1. Equipment grounding terminal
2. Grounding cable
3. Water meter
4. Metal water pipe
5. Driven ground rod

Use #10 AWG or larger insulated copper wire.



## 12. TYPICAL PROCESS CONNECTIONS



## 13. SELECTING MINIMUM WELD CABLE SIZES

Welding Amperes	Total cable length in weld circuit not exceeding							
	30 m (100 ft) or less		45 m (150 ft)	60 m (200 ft)	70 m (250 ft)	90 m (300 ft)	105 m (350 ft)	120 m (400 ft)
100	4	4	4	3	2	1/0	1/0	1/0
150	3	3	2	1	1/0	2/0	3/0	3/0
200	3	2	1	1/0	2/0	3/0	4/0	4/0
250	2	1	1/0	2/0	3/0	4/0	2-2/0	2-2/0
300	1	1/0	2/0	3/0	4/0	2-2/0	2-3/0	2-3/0
350	1/0	2/0	3/0	4/0	2-2/0	2-3/0	2-3/0	2-4/0
400	1/0	2/0	3/0	4/0	2-2/0	2-3/0	2-4/0	2-4/0
500	2/0	3/0	4/0	2-2/0	2-3/0	2-4/0	3-3/0	3-3/0
600	3/0	4/0	2-2/0	2-3/0	2-4/0	3-3/0	3-4/0	3-4/0

Weld cable sizes (AWG) are based on either a 4 volts (V) or less drop, or a current density of more than 300 circular mils per ampere.

## 14. WELD OUTPUT CONNECTION

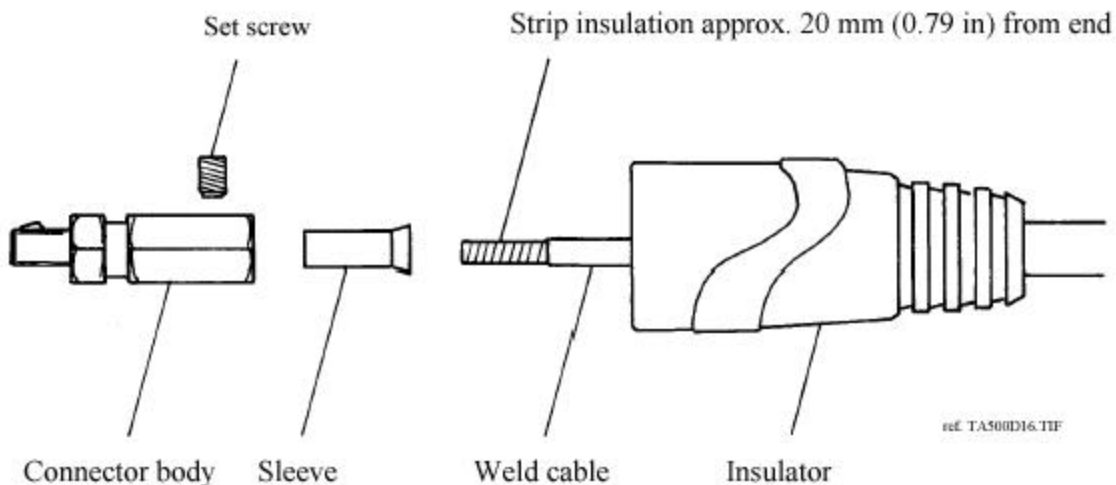


**ELECTRIC SHOCK CAN KILL.**

**ARCING CAN BURN SKIN OR DAMAGE ELECTRICAL CONNECTIONS.**

### CONNECTOR INSTALLATION

1. Obtain cable of desired length and proper size for installation.
2. If the installation requires cable larger than 3/0 AWG, prepare one end of 3/0 AWG pigtail no longer than 0.61 m (2 ft) for connector installation. The remaining end of the pigtail is connected to the main run of 3/0 AWG or larger weld cable.
3. Push weld cable through insulator.
4. Remove 20 mm (0.79 in) of insulation from end of cable.
5. Install supplied sleeve on stripped end of cable.
6. Insert weld cable with sleeve into connector body so that cable is snug and against bottom of connector body.
7. Install and tighten set screw with supplied hex wrench to secure connector body onto cable.
8. Push insulator onto connector body to cover set screw.



### WELD CABLE CONNECTIONS

1. Do not touch live electrical parts.
2. Shut down unit before making any weld output connections.
3. Do not change position of the welding cable connectors while welding.
4. Be sure that the connectors are secure in receptacle before welding.

## 15. SEQUENCE OF OPERATION



**READ AND FOLLOW ALL SAFETY PRECAUTIONS BEFORE PROCEEDING WITH OPERATION.**

### 15.1 Shielded Metal Arc Welding (SMAW)

1. Install and connect unit according to section 6.
2. Wear gloves and protective clothing.
3. Connect ground cable to work output connection.
4. Connect ground clamp to workpiece.
5. Connect electrode cable to electrode output connection.
6. Chose AC, DC- or DC+ weld current.
7. Chose coarse adjustment setting.
8. Chose fine adjustment setting.
9. Insert electrode into electrode holder.
10. Begin welding.

### 15.2 Gas Tungsten Arc Welding (GTAW)

1. Install and connect unit according to section 6.
2. Wear gloves and protective clothing.
3. Connect ground cable to work output connection.
4. Connect ground clamp to workpiece.
5. Connect TIG Torch to electrode output connection.
6. Chose AC or DC- weld current.
7. Chose coarse adjustment setting.
8. Chose fine adjustment setting.
9. Begin welding.

### 15.3 Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW)

1. Install and connect unit according to section 6.
2. Wear gloves and protective clothing.
3. Connect ground cable to work output connection.
4. Connect ground clamp to workpiece.
5. Connect electrode cable to electrode output connection.
6. If desired, install external contactor kit.
7. Install and connect wire feed system.
8. If using CV with the external contactor kit, place the coarse adjustment switch to “CV” mode.
9. If using CV with the external contactor kit, chose fine adjustment setting for voltage control.
10. If using CV with the external contactor kit, chose wire feed speed setting on wire feeder.
11. If using CC, chose coarse adjustment setting for amperage control.
12. If using CC, chose fine adjustment setting for amperage control.
13. Chose wire feed speed setting on feeder to adjust arc length.
14. Turn on shielding gas supply and set desired flow rate.
15. Begin welding.

## 16. ROUTINE MAINTENANCE

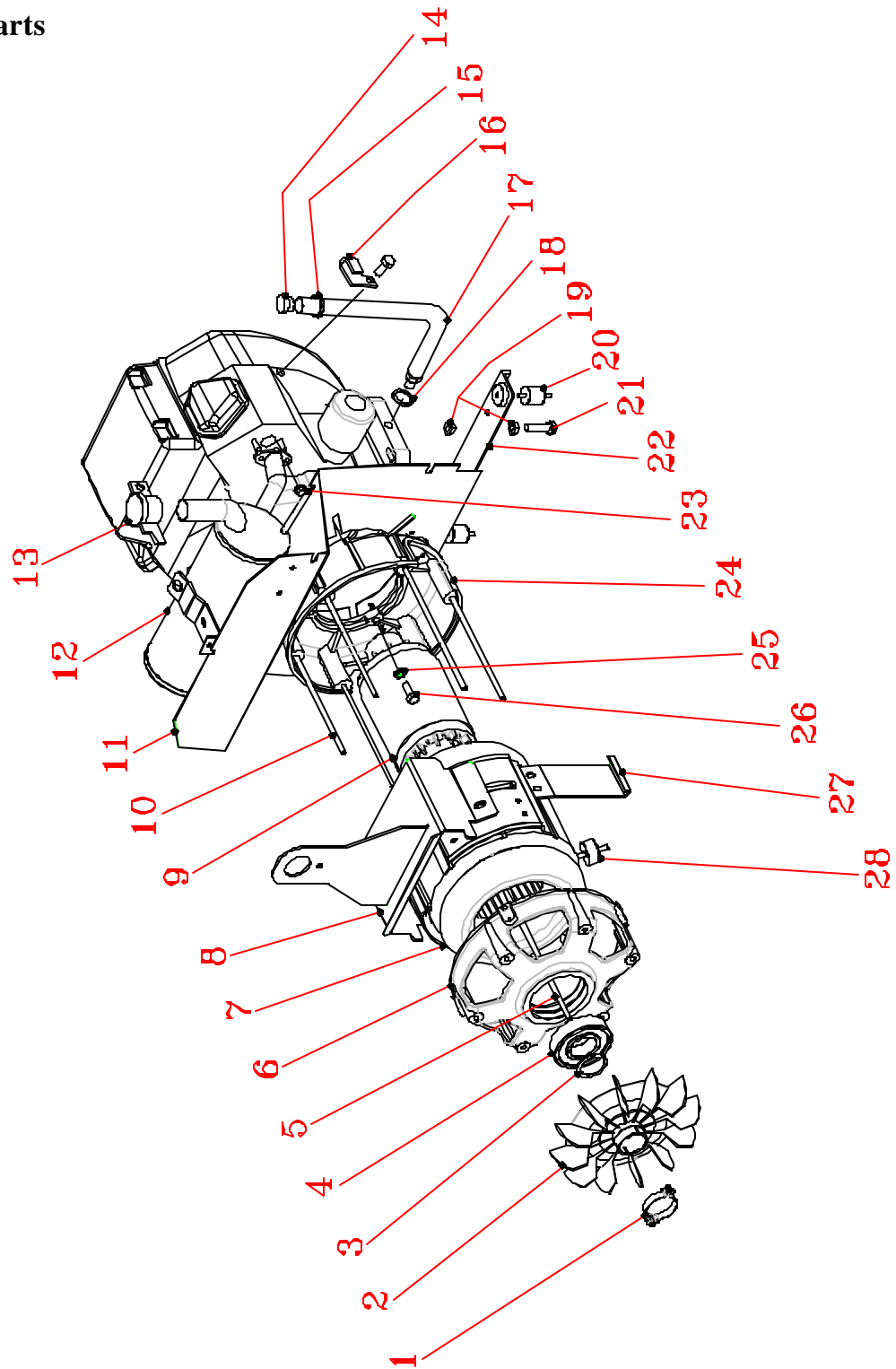


### ATTENTION: STOP ENGINE BEFORE MAINTENANCE

8 HOURS	<ul style="list-style-type: none"><li>➤ Wipe up oil and fuel spills</li><li>➤ Check fluid levels</li></ul>
50 HOURS	<ul style="list-style-type: none"><li>➤ Change oil and oil filter</li><li>➤ Clean cooling system</li></ul>
100 HOURS	<ul style="list-style-type: none"><li>➤ Clean and tighten battery connections</li><li>➤ Service the air cleaner</li></ul>
200 HOURS	<ul style="list-style-type: none"><li>➤ Replace unreadable labels</li><li>➤ Replace the fuel filter</li><li>➤ Check valve clearance</li></ul>
250 HOURS	<ul style="list-style-type: none"><li>➤ Check and clean spark arrestor</li></ul>
500 HOURS	<ul style="list-style-type: none"><li>➤ Check spark plugs</li></ul>
1000 HOURS	<ul style="list-style-type: none"><li>➤ Blow-out or vacuum inside as required</li></ul>

## 17. PARTS LIST

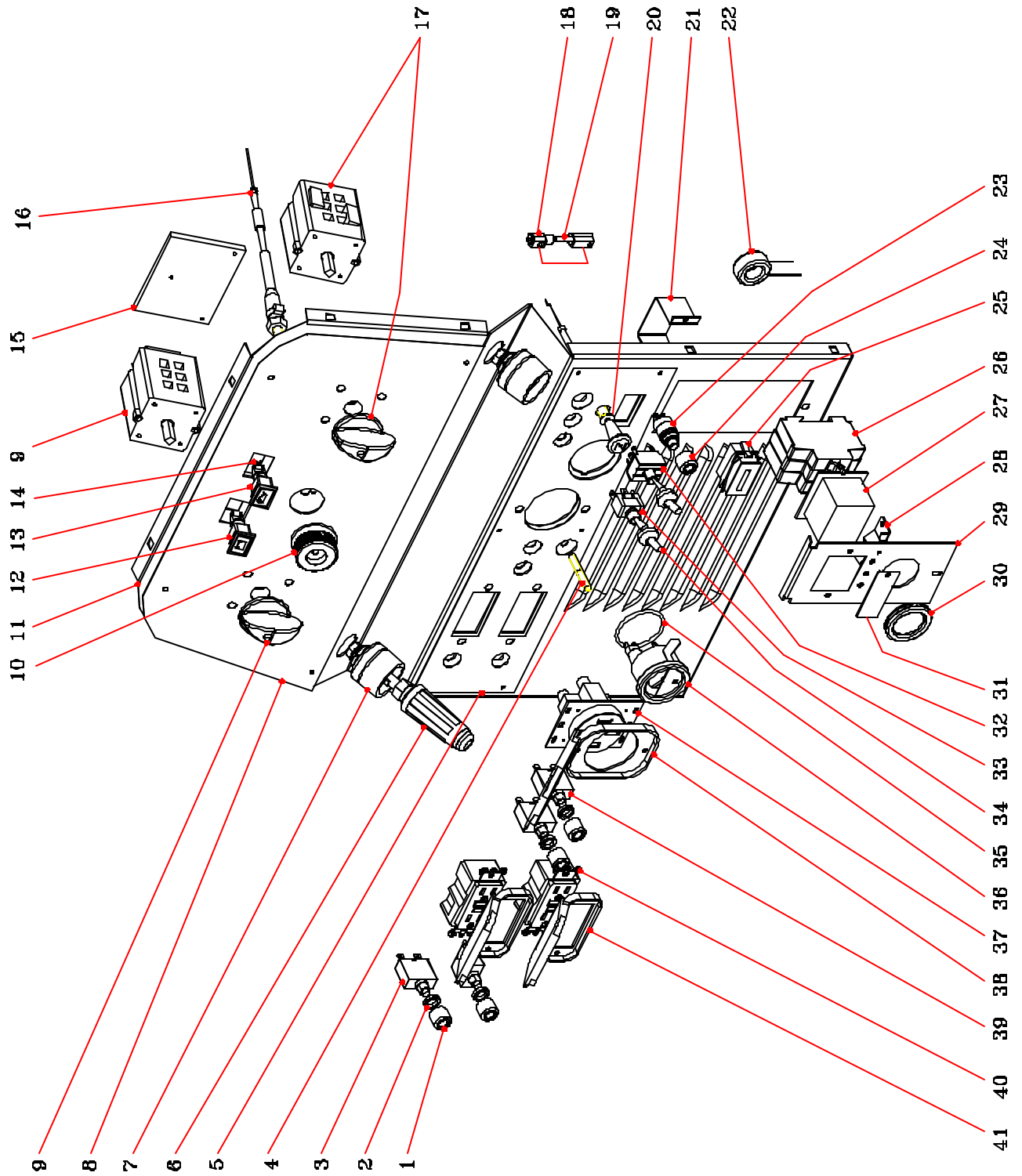
### 17.1 Stator parts



## SPARE PARTS LIST

Item N°	Replacement Part N°	Description	Stock N°
1	11-3592	Fan ring	20.857
2	11-3593	Fan	20.858
3	11-3077	Seeger ring	0905
4	11-3078	Bearing	903
5	11-3633	Rotor tie-rod	20.913
6	11-3595	Flange with bearing seat	20.860
7	11-3596	Stator	20.861
8	11-3597	Hook	20.862
9	11-3632	Rotor	20.912
10	11-3599	Tie-rod	10.661
11	11-3993	Engine bulkhead	23.416
12	11-3869	Silencer	23.049
13	11-3499	Flap	20.187
14	11-3721	Oil drain cap	21.571
15	11-3722	Hose clamp	21.572
16	11-3868	Clamp	23.048
17	11-3720	Oil drain cap	21.570
18	11-3533	Washer	0873
19	11-3851	Washer	0873
20	11-3017	Engine shock absorber M 30 x 30 mm	313
21	11-3896	Screw M 8 x 25 mm	20.485
22	11-3795	Engine holder	22.191
23	11-3871	Flange nut M 5 x 16 mm	23.051
24	11-3659	Engine connection flange	21.293
25	11-3872	Washer M 10 mm	23.052
26	11-3870	Screw M 9.52 x 31.75 mm	23.050
27	11-3608	Stator plate	20.871
28	11-3660	Stator shock absorber 40 x 25 mm	21.291

# FRONTAL (ELECTRIC EQUIPMENT)

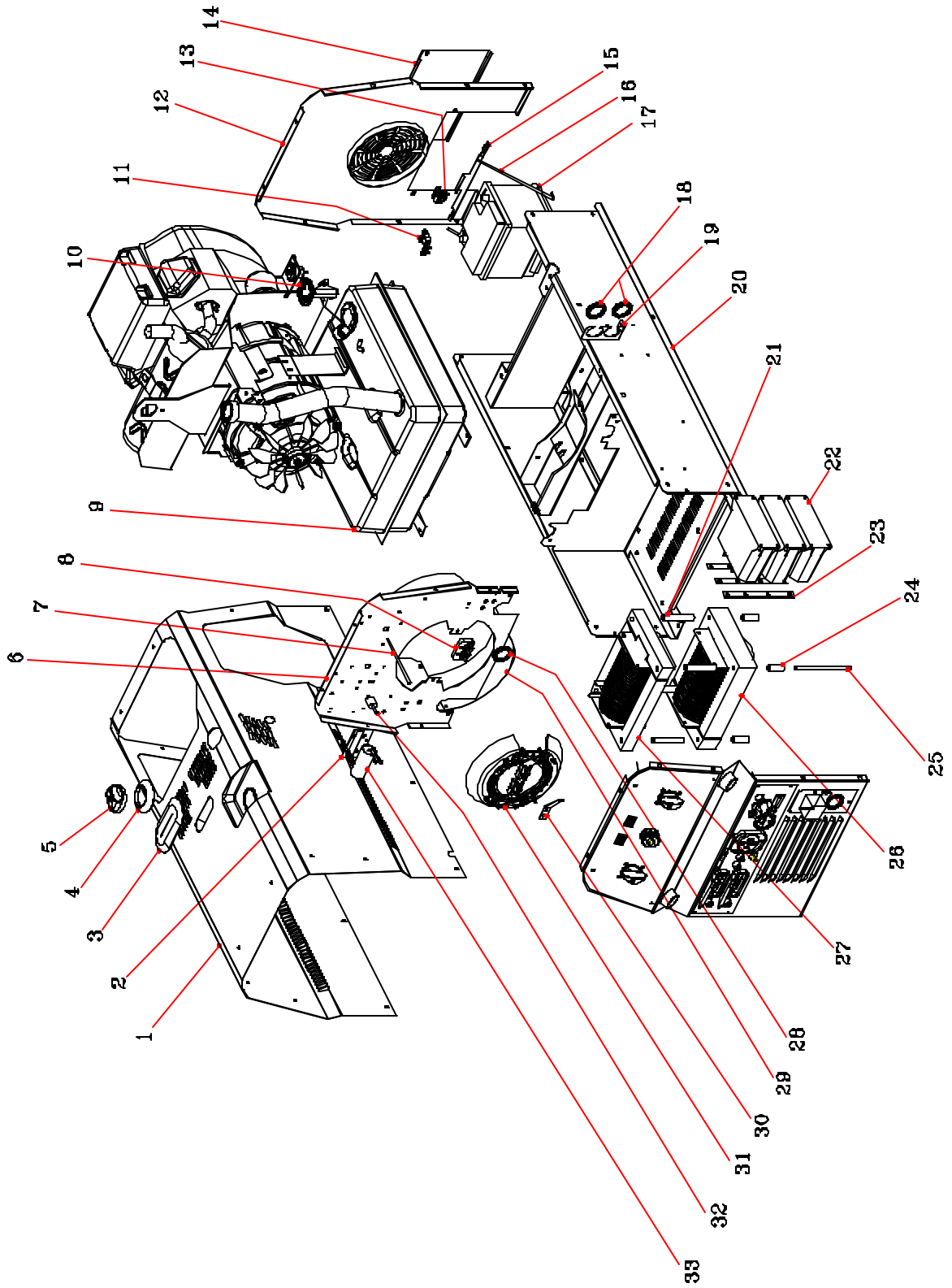


## SPARE PARTS LIST

Item N°	Replacement Part N°	Description	Stock N°
1	11-3049	Circuit breaker cover	14.658
2	11-3048	Ring	14.270
3	11-3047	15A circuit breaker	13.640
4	11-3100	Earth clamp	15.721
5	11-3620	Lower aluminum front plate	20.882
6	11-3232	Male cable connector	886
7	11-3231	Welding outlet	836
8	11-3994	Aluminum front plate	23.583
9	11-3797	Current selector assembly	22.194
10	11-3229	Knob fine adjust	14.269
11	11-3995	Front panel sheet	23.584
12	11-3227	Battery charge signal lamp	10.264
13	11-3876	Oil pressure signal lamp	23.056
14	11-3875	15 ohm ½ W resistor	23.055
15	11-3449	GS9712/A electronic panel	19.734
16	11-3877	Fine adjust throttle unit	23.057
17	11-3798	Weld process selector assembly	22.195
18	11-3118	Fuse holder	588
19	11-3119	8A fuse	12.284
20	11-3243	Choke knob assembly	19.723
21	11-3137	Circuit breaker support	17.608
22	11-3318	Amperometric transformer	19.753
23	11-3152	Start button	11.336
24	11-3153	Start button cover	13.294
25	11-3151	Hour meter	19.657
26	11-3681	13 A 3-pole circuit breaker	21.433
27	11-3143	3-pole circuit breaker cover	13.885
28	11-3138	Cable holder	19.650
29	11-3245	Circuit breaker support	19.704
30	11-3087	Rubber wire holder	10.174
31	11-3510	Protection cover	20.494
32	11-3809	“Stop / Run” switch	22.324
33	11-3792	“Auto / High” switch	22.232
34	11-3723	Switch cover	12.179
35	11-3810	O – ring	22.433
36	11-3150	Fuel gauge – Monitor fuel level	11.688
37	11-3046	230 V, 50 A 14-50 single-phase outlet	19.655
38	11-3789	230 V, 50 A 14-50 single-phase cover	22.145
39	11-3149	50 A circuit breaker	19.656
40	11-3050	115 V, 2 x 15 A GFCI 5-15R single-phase outlet	19.654

<b>Item N°</b>	<b>Replacement Part N°</b>	<b>Description</b>	<b>Stock N°</b>
41	11-3375	115 V, 2 x 15 A GFCI 5-15R single-phase cover	19.762

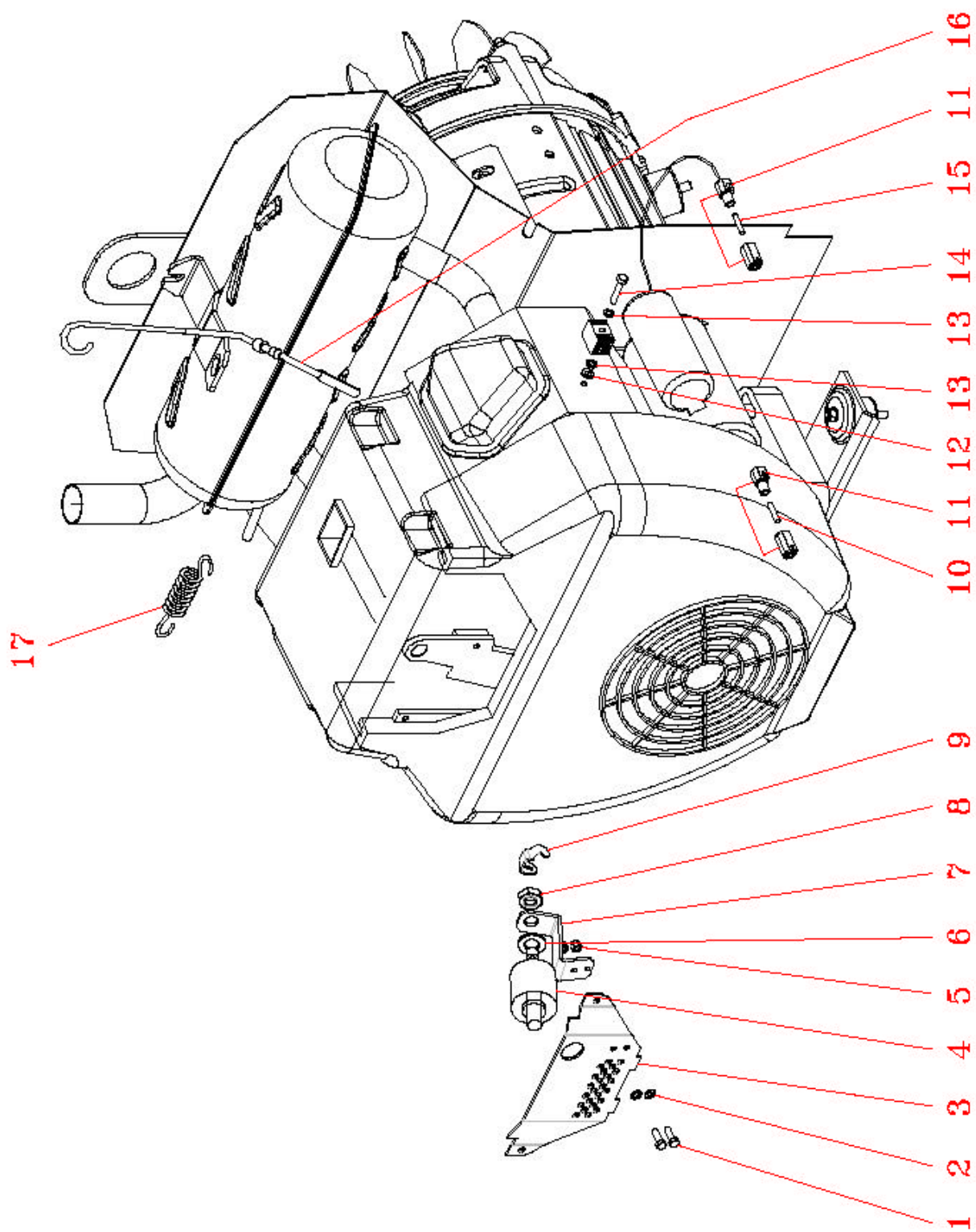
## 17.2 Sheet parts



## SPARE PARTS LIST

Item N°	Replacement Part N°	Description	Stock N°
1	11-3996	Canopy	23.422
2	11-3806	Capacitor support	22.325
3	11-3610	Hook gasket	18.550
4	11-3611	Fuel tank cap gasket	20.873
5	11-3612	Fuel tank cap	20.874
6	11-3997	Panel	23.423
7	11-3262	Tie-rod	11.277
8	11-3614	3 poles terminal board	614
9	11-3677	Fuel tank	21.399
10	11-3615	Fuel level gauge	20.876
11	11-3190	Positive battery charging clip	14.247
12	11-3998	Rear panel	23.424
13	11-3948	Negative battery charging clip	23.403
14	11-3257	Battery cover	19.715
15	11-3895	Battery clamp	23.098
16	11-3544	Battery tie-rod	20.716
17	11-3543	12 V, 44 Ah battery	20.715
18	11-3878	Rubber wire holder	10.173
19	11-3790	Support	21.929
20	11-3616	Frame	20.878
21	11-3661	Spacer	21.321
22	11-3241	3 x 60 $\mu$ F capacitor	19.640
23	11-3618	Bridge for capacitor	20.880
24	11-3662	Spacer	21.289
25	11-3663	Reactor tie-rod	13.579
26	11-3554	DC reactor	20.723
27	11-3432	AC reactor	19.843
28	11-3087	Rubber wire holder	10.174
29	11-3619	Lower conveyor	20.881
30	11-3631	Shunt	20.911
31	11-3875	Rectifier	23.058
32	11-3504	Insulator	19.378
33	11-3625	Capacitor	20.887

### 17.3 Engine related parts



## SPARE PARTS LIST

<b>Item N°</b>	<b>Replacement Part N°</b>	<b>Description</b>	<b>Stock N°</b>
1	11-3901	Screw M 5 x 12 mm	23.123
2	11-3886	Washer M 5 mm	23.065
3	11-3898	Solenoid protection	23.120
4	11-3235	Solenoid	19.700
5	11-3902	Nut M 5 mm	23.124
6	11-3904	Washer M 12 mm	23.126
7	11-3897	Solenoid support	23.119
8	11-3903	Low nut M 12 mm	23.125
9	11-3899	Throttle plate	23.121
10	11-3894	Fuse 5 A	23.097
11	11-3118	Fuse holder	588
12	11-3891	Washer M 8 x 18 mm	23.070
13	11-3892	Washer M 6 mm	23.071
14	11-3893	Screw M 6 x 40 mm	23.072
15	11-3274	Fuse 25 A	11.211
16	11-4004	Oil Level dipstick	23.495
17	11-3900	Throttle spring	23.122

# 18. WIRING DIAGRAM

