

**shindaiwa<sup>®</sup>**

**SPECIFICATION**  
**DGW500DM/GULF**

## Chapter1. General

### 1. Standards

The designs and the productions are in conformity with:

- (1) Japan Industrial Standards : JIS C 9300-1
- (2) Ministry of Construction (Low Noise Type Construction Machinery Standard)
- (3) Ministry of Construction (Construction Machinery Gas Emission Regulation Standard)

### 2. Design Conditions

- (1) Installation Place: Inside
- (2) Ambient Temperature:  $-15^{\circ}\text{C} \sim +40^{\circ}\text{C}$
- (3) Humidity: Less than 80%
- (4) Altitude: Less than 300meter (Sea Level)

### 3. Test and Check

The test shall be done for the complete workable unit of Diesel Engine Unit.

- (1) Checking Items
  - a) Insulation and Dielectric Tests
  - b) Starting
  - c) Protection Devices Working Test
  - d) Voltage Deviation and Speed Variation: 0-4/4 Load
  - e) Load Test: Welding and generating 4/4 Load

### 4. Painting

- (1) Painting specifications and color are the manufacturer's standard structure.

### 5. Structure

- (1) Beds (bottom columns) and Vibration Proof Device  
Alternator is coupled directly with engine and they are installed on the bed through vibration proof device (Rubber Pad and Angle).
- (2) Low Noise Sound-Proof Enclosure (Bonnet)  
The structure is that the inside of the bonnet is sound-proof treated and can be lifted up the alternator and the engine together with the beds by using a lifting lug.  
Sound Level: 57dB (A)/7m (No Load  $3000 \text{ min}^{-1}$ )
- (3) Fuel Tank  
The fuel tank is made of steel and incorporated with the electrical level gauge.

## SPECIFICATION

Model		<b>DGW500DM/GULF</b>	
Generating Method		Rotating Field	
Welding Generator	Rated Current Single / Dual (A)		480 / 230
	Rated Voltage Single / Dual (V)		39.2(CC)- 39.0(CV) / 29.2(CC)-22.5(CV)
	Duty Cycle Single / Dual (%)		60 / 80
	Rated Speed (min <sup>-1</sup> )		3000
	No Load Voltage (A)		MAX 85
	Output	Single	Current Adj. Range (A)
Welding Rod (Φ mm)			2.6 - 8.0 (Welding rod), 3.2 - 9.5 (Gouging rod)
Dual		Current Adj. Range (A)	30-280
		Welding Rod (Φ mm)	2.0 - 6.0 (Welding rod), 3.2 - 5.0 (Gouging rod)
AC Generator	Rated Frequency (Hz)		50
	Rated Speed (min <sup>-1</sup> )		3000
	Phase		1-Phase(50Hz)      3-Phase(50Hz)
	Rated Voltage (V)		220      380
	Power Factor		1.0      0.8
	Rated Output ( kVA )		6.6      13.2
	Rating		Continuous
Engine	Model		Kubota V1505
	Type		Vertical, Water-Cooled 4-Cycle Diesel Engine
	Displacement (L)		1,498
	Rated Output (kW/min <sup>-1</sup> )		24.5 / 3000
	Fuel		ASTM No.2 Diesel Fuel or Equivalent
	Lubricant Oil grade		API Class CD or Higher
	Lubrication Oil Capacity (L)		6.0 (Effective 2.0)
	Cooling Water Capacity (L)		5.8 (Sub Tank Capacity 0.85 L included)
Starting Method		Starter Motor	
Battery		75D31	
Fuel Tank Capacity (L)		63	
Dimension	Length (mm)		1680
	Width (mm)		700
	Height (mm)		950
Dry Weight (kg)		613	

## Chapter2. Equipment and Features

### 1. Equipment

#### (1) Generator

Digital AC voltage/frequency meter.....	1 pc
Single-Phase 220V Receptacle .....	2 sets
Three-Phase 380V Receptacle .....	1 set
Single phase Circuit Breaker.....	1 pc
Three phase Circuit Breaker .....	1 pc

#### (2) Welder

Digital DC amperage/voltage meter .....	2 pcs
A Side Current / Voltage Adj. Dial .....	1 pc
B Side Current / Voltage Adj. Dial .....	1 pc
Single / Dual mode selector switch.....	1 pc
CC/CV selector switch .....	2pcs
Welding rod selector switch .....	2pcs
Arc Force Adj. Dial.....	2pcs
A Side welding current output terminal .....	1 set
B Side welding current output terminal .....	1 set
Optional Remote control receptacle .....	2pcs
Optional Wire Feeder control receptacle .....	2pcs
Welding terminal output selector.....	2pcs
Pole selector for optional Wire Feeder.....	2pcs
Voltage selector for optional Wire Feeder.....	2pcs
Safety breaker .....	2pcs

#### (3) The others

Emergency stop switch .....	1 pc
Idle control switch.....	1 pc
Starter switch .....	1 pc
Fuel gauge .....	1 pc
Hour meter: 99999.9Hr .....	1 pc
Side panel grounding terminal .....	1 pc
Display monitor Lamps .....	1 set
● High Water Temperature.	
● Low Oil Pressure	
● Insufficient Charging	
● Preheat indication	
● Overheat indication	

## 2. Features

### (1) Sound level

No load Rated speed, Distance: 7meter

Height: 1.5 meter A scale, 4 direction energy average value

Noise 50Hz ..... 57dB

### (2) Protection Device

Item	Set Value	Display	Trip	Engine Shut-Down
Low Oil Pres.	98.1kPa	○	-	○
High Water Temp.	110°C	○	-	○
Insufficient Charging	-	○	-	○
Over Current	15A	○	○	-
Current Leakage	30mA 0.1sec.	○	○	-

### (3) Accessories

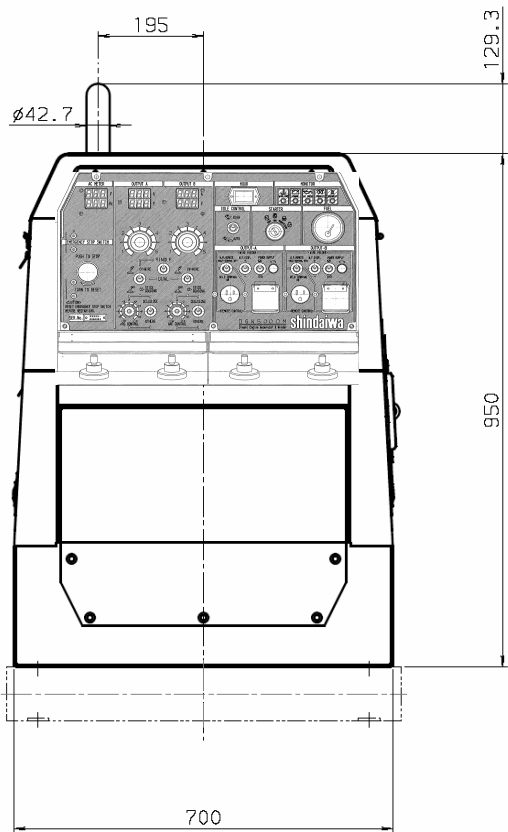
Instruction manual

Engine manual

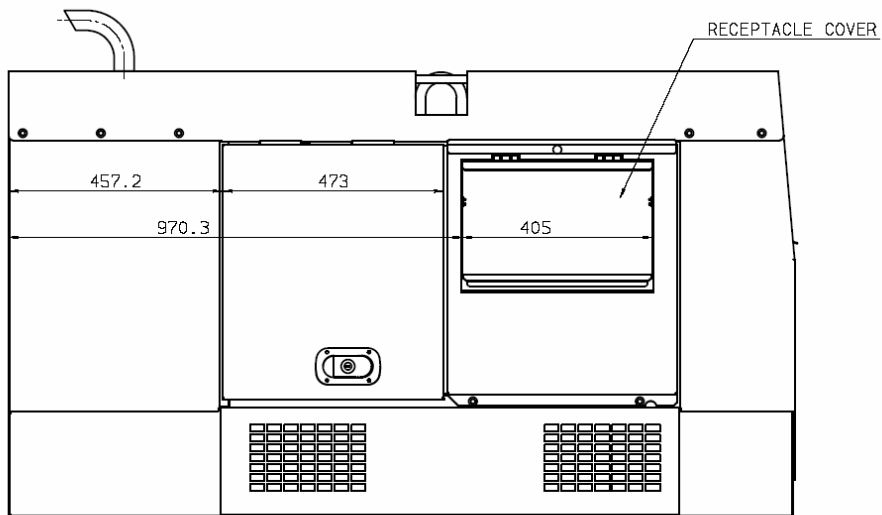
Grounding Rod: 1 piece

# APPEARANCE

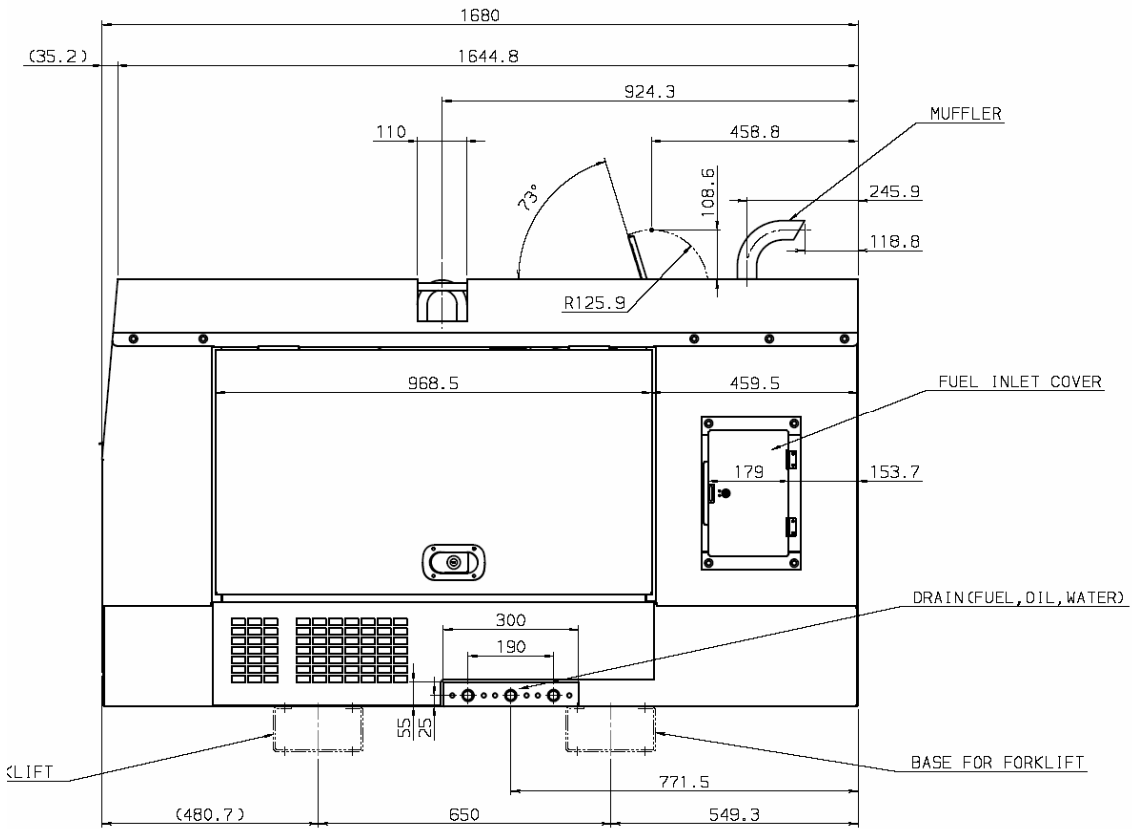
## FRONT VIEW



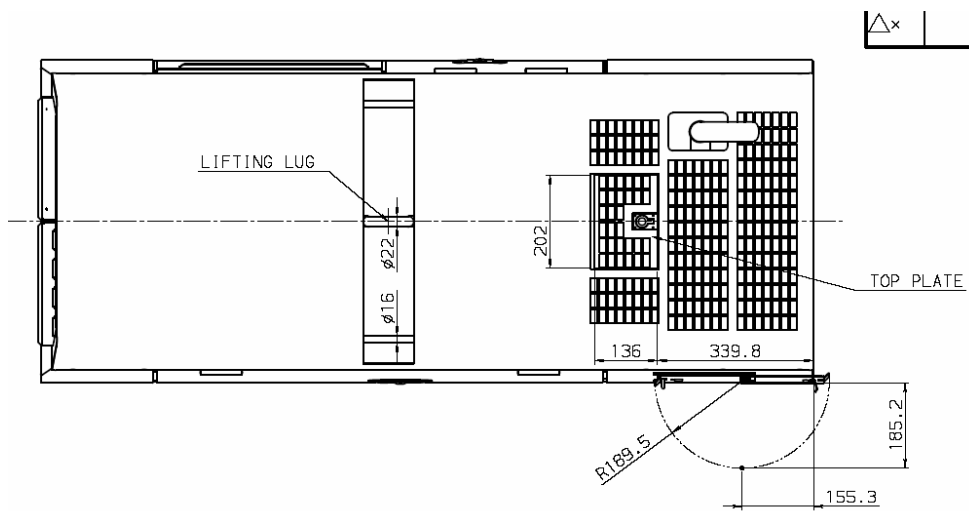
## RIGHT SIDE VIEW



LEFT SIDE VIEW



TOP VIEW



# CONTROL PANEL



No.	Name	Description of function
1	AC Voltage meter	Indicates generated AC voltage
2	AC Frequency meter	Indicates generated AC frequency
3	Emergency stop switch	Shut off the engine operation when the switch is pressed
4	Unit Serial Number (PID)	Production serial number (7digit) for identification
5	Welding output amperage/voltage meter	Indicates A side welding amperage/voltage at actual operation, and monitor for preset data while interval
6	Welding output amperage/voltage meter	Indicates B side welding amperage/voltage at actual operation, and monitor for preset data while interval
7	Amperage/Voltage dial	Adjust amperage (CC) and voltage (CV) for desired output
8	Single/Dual Mode selector switch	Select the Single (output A) or Dual (output A/B) by flipping this toggle switch
9	CV/CC selector switch	Select CV (Wire feeder) or CC (Stick/Gouging) for both A and B output individually
10	Arc force dial	Adjust Arc force effect while welding cellulose rods
11	Welding rod selector switch	Select Cellulose (for pipe welding) or Others (for general welding)



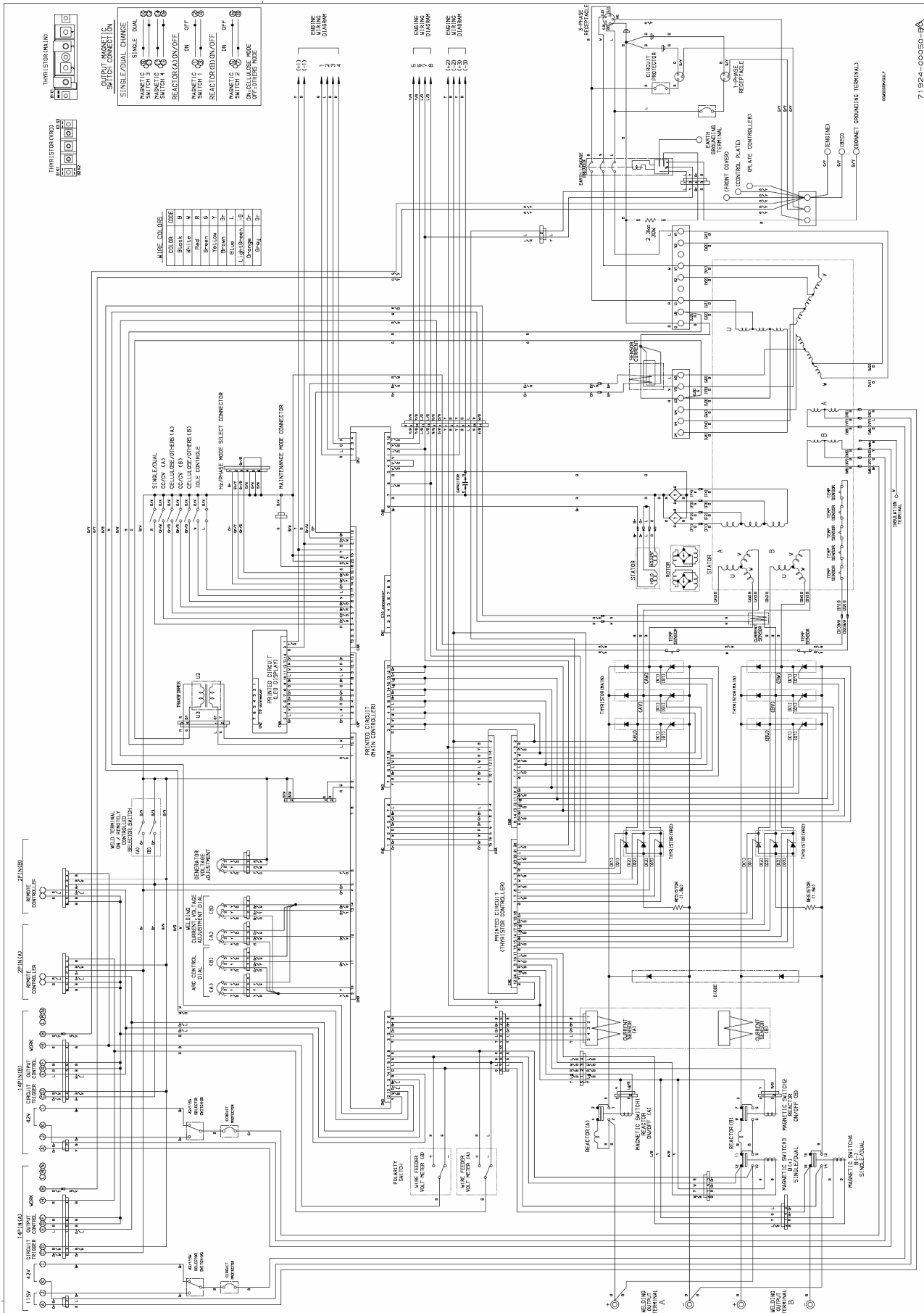
No.	Name	Description of function
12	Hour meter	Indicates total operating hours of the welder unit
13	Warning indicator	Lights when an equipment malfunction occurs
14	Idling rpm control	Select the idling speed by switching HIGH or AUTO position
15	Starter switch	STOP: Stops an engine operation RUN : Continue an engine operation PREHEAT: Warm-up for control operation and starts pre-heating START: Starts an engine operation
16	Fuel gauge	Indicates remaining diesel fuel in the fuel tank
17	Welding terminal output selector	Select the output control by switching this toggle switch for CC (Welding terminal ON) and CV (Wire Feeder remote control)
18	Pole selector for optional Wire Feeder	Select the pole by switching this toggle for accurate indication of optional Wire Feeder voltage meter
19	Voltage selector for optional Wire Feeder	Select the pole by switching this toggle for optional Wire Feeder power source (42V or 115V)
20	Safety breaker	Protect the internal circuit of optional Wire Feeder by tripping this breaker
21	Remote control connector (output A)	Connect 2 pins optional remote control for extended welding cables
22	Wire Feeder connector (output A)	Connect optional 14 pins Wire Feeder for CV operations
23	Remote control connector (output B)	Connect 2 pins optional remote control for extended welding cables
24	Wire Feeder connector (output B)	Connect optional 14 pins Wire Feeder for CV operations

## AUXILIARY AC OUTPUT PANEL



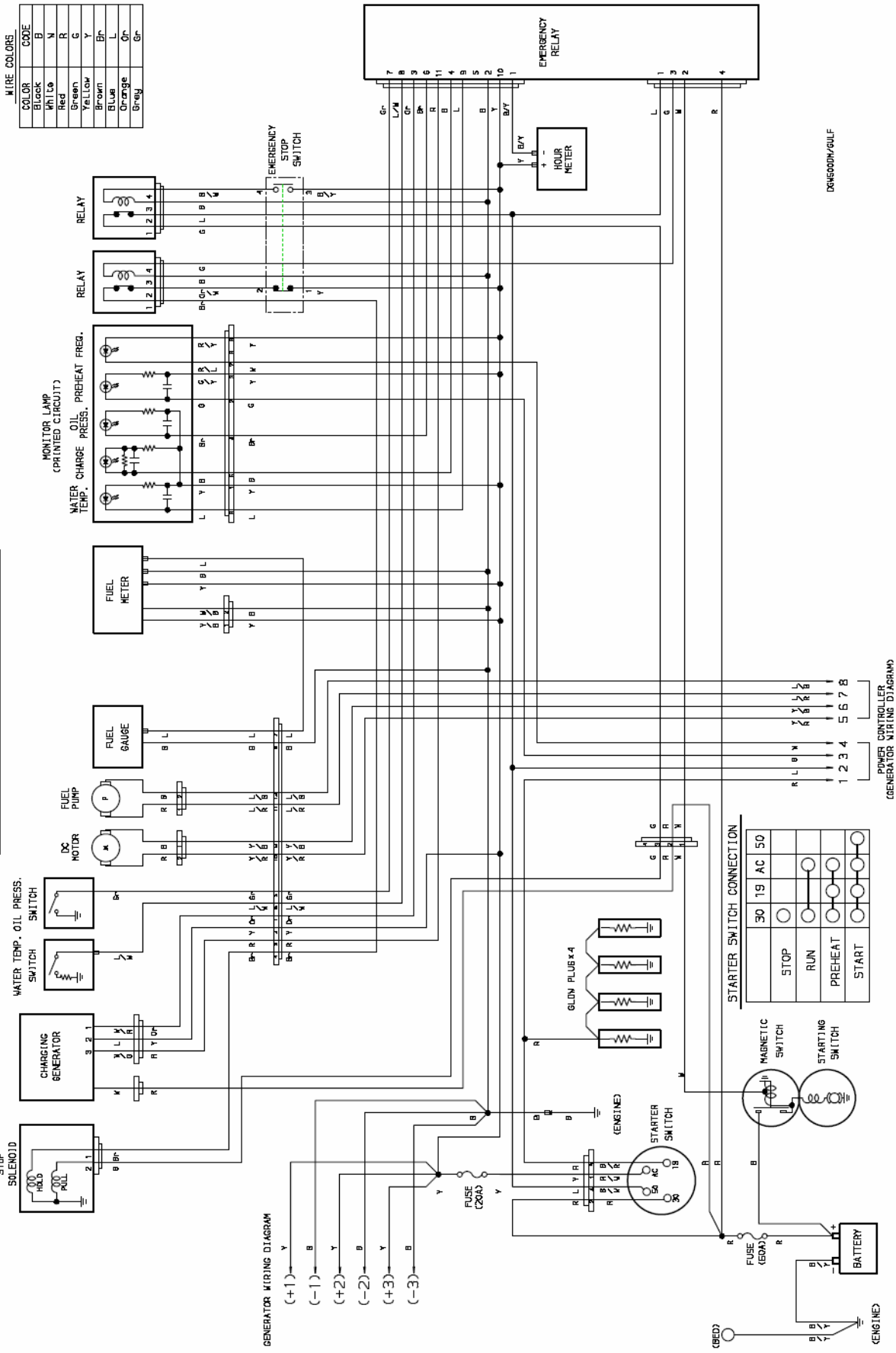
## WELDER and GENERATOR WIRING

No.	Name	Description of function
25	Three phase receptacle	1 x 380V output receptacle
26	Single phase receptacles	2 x 220V output receptacles
27	Three phases circuit breaker	Turns the power supply to load equipment ON (closed) and OFF (open)
28	Single Phase circuit breaker	Turns the power supply to load equipment ON (closed) and OFF (open)
29	Earth Grounding terminal	Ground the unit to the earth to prevent the electrical shock
30	Bonnet Grounding Terminal	Ground the bonnet to prevent the electrical shock



ENGINE WIRING

# ENGINE WIRING DIAGRAM



DSHEODM/GULF

71924-00050-AA

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