



SPECIFICATION

DGW500DM/ARAM

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 3600 min^{-1})
- (3) Fuel Tank
The fuel tank is made of steel and incorporated with the electrical level gauge.

SPECIFICATION

Model			DGW500DM/ARAM		
Rated Frequency (Hz)			50	60	
Generating Method			Rotating Field		
Welding Generator	Rated Current Single / Dual (A)		480/230	500/230	
	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 ⁻¹)		3000	3600	
	No Load Voltage (A)		MAX 85	MAX 95	
	Output	Single	Current Adj. Range (A)	60-500	65-500
			Welding Rod (Φ mm)	2.6 - 8.0 (Welding rod), 3.2 - 9.5 (Gouging rod)	
		Dual	Current Adj. Range (A)	30-280	35-280
Welding Rod (Φ mm)			2.0 - 6.0 (Welding rod), 3.2 - 5.0 (Gouging rod)		
AC Generator	Phase		1-Phase		
	Rated Speed (min ⁻¹)		3000	3600	
	Rated Voltage (V)		110	120	
	Power Factor		1.0	1.0	
	Rated Output (kVA)		3.5	3.8	
	Rating		Continuous		
Engine	Model		Kubota V1505		
	Type		Vertical, Water-Cooled 4-Cycle Diesel Engine		
	Displacement (L)		1,498		
	Rated Output (kW/min ⁻¹)		24.5/3000	27.0/3600	
	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 110/120V Receptacle	2 sets
Main/ELCB Single 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
Frequency changeover(50/60Hz) switch	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 60Hz 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

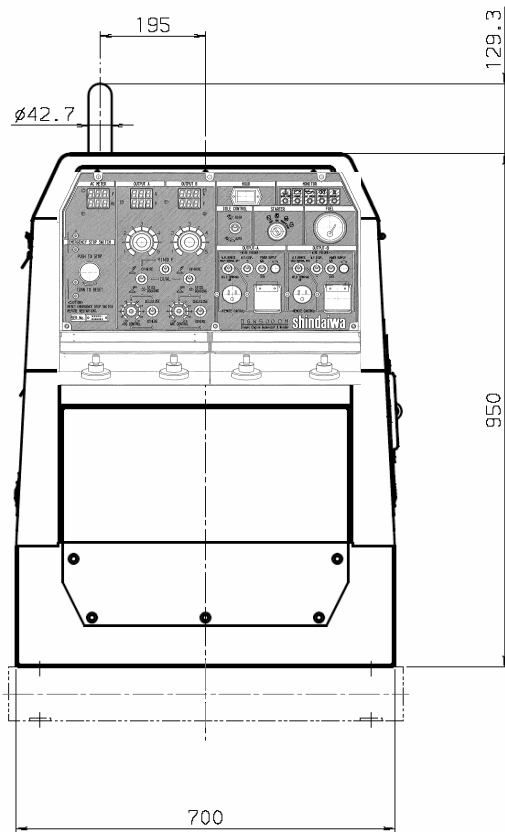
Instruction manual

Engine manual

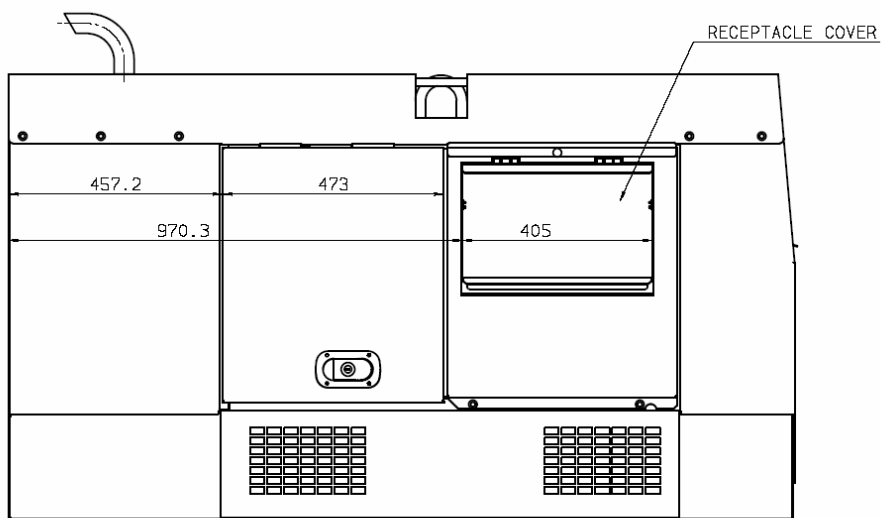
Grounding Rod: 1 piece

APPEARANCE

FRONT VIEW



RIGHT SIDE VIEW



Technical drawing of the rear view of a forklift chassis. The drawing includes the following dimensions and labels:

- Overall width: 1680
- Overall height: 1644.8
- Height from ground to top of chassis: 110
- Height from ground to top of chassis (at the rear): 924.3
- Height from ground to top of chassis (at the rear): 458.8
- Height from ground to top of chassis (at the rear): 108.6
- Height from ground to top of chassis (at the rear): 245.9
- Height from ground to top of chassis (at the rear): 118.8
- Height from ground to top of chassis (at the rear): R125.9
- Height from ground to top of chassis (at the rear): 968.5
- Height from ground to top of chassis (at the rear): 459.5
- Height from ground to top of chassis (at the rear): 179
- Height from ground to top of chassis (at the rear): 153.7
- Height from ground to top of chassis (at the rear): 300
- Height from ground to top of chassis (at the rear): 190
- Height from ground to top of chassis (at the rear): 55
- Height from ground to top of chassis (at the rear): 25
- Height from ground to top of chassis (at the rear): 771.5
- Height from ground to top of chassis (at the rear): 549.3
- Height from ground to top of chassis (at the rear): 650
- Height from ground to top of chassis (at the rear): 480.7
- Height from ground to top of chassis (at the rear): 35.2
- Height from ground to top of chassis (at the rear): 23°
- Height from ground to top of chassis (at the rear): MUFFLER
- Height from ground to top of chassis (at the rear): FUEL INLET COVER
- Height from ground to top of chassis (at the rear): DRAIN (FUEL, OIL, WATER)
- Height from ground to top of chassis (at the rear): BASE FOR FORKLIFT
- Height from ground to top of chassis (at the rear): LIFT

Technical drawing of the top plate of a door, showing dimensions and components. The drawing includes a side view on the left and a top view on the right. The side view shows a vertical section with a lifting lug and a hole with a diameter of $\phi 22$. The top view shows a rectangular plate with a width of 185.2 and a length of 155.3. The top view also shows a circular arc with a radius of R189.5. The top view includes a grid pattern and a label 'TOP PLATE'. The side view includes a label 'LIFTING LUG' and a hole with a diameter of $\phi 16$. The top view includes dimensions 202, 136, and 339.8.

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)

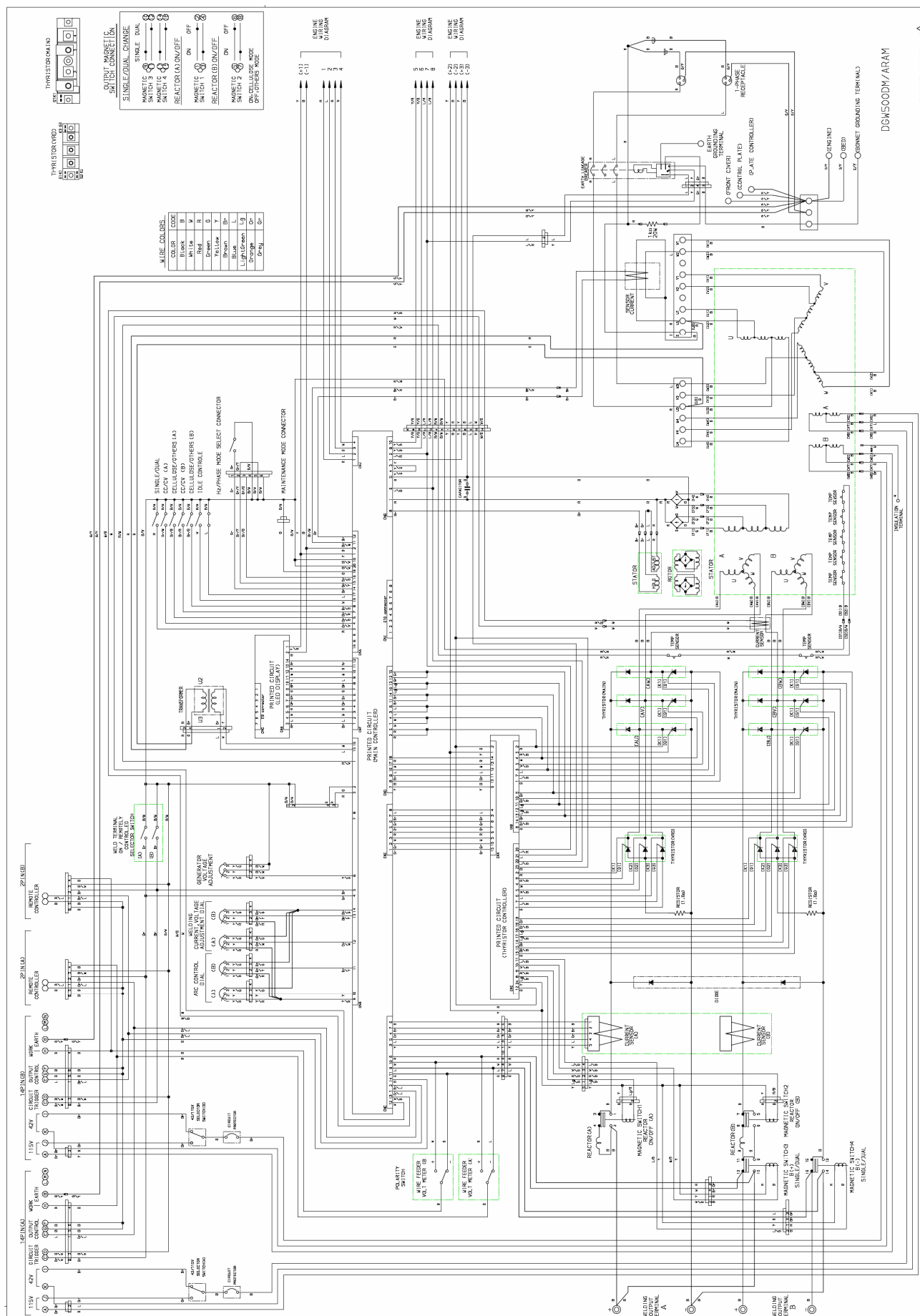
No.	Name	Description of function
12	Hour meter	Indicates total operating hours of the welder unit
13	Warning indicator	Lights when an equipment malfunction occurs
14	Idling rpm control	Select the idling speed by switching HIGH or AUTO position
15	Starter switch	STOP: Stops an engine operation RUN : Continue 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 9 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 9 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

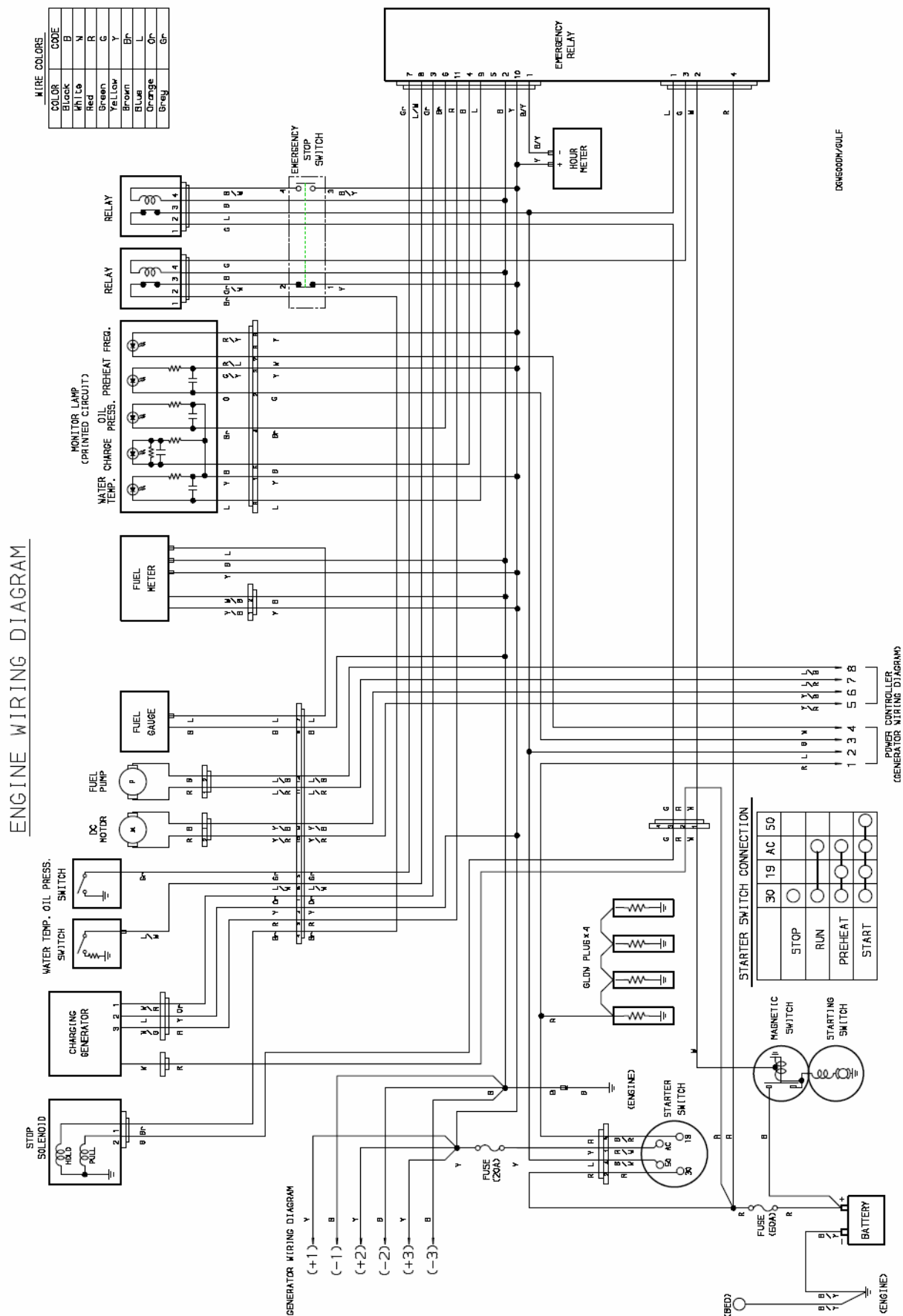


No.	Name	Description of function
25	Single Phase circuit breaker With Electric Leakage Circuit Breaker (ELCB) function	Turns the power supply to load equipment ON (closed) and OFF (open)
26	Single phase receptacles	2 x 110/120 V output receptacles
27	Earth Grounding terminal	Ground the unit to the earth to prevent the electrical shock
28	Bonnet Grounding Terminal	Ground the bonnet to prevent the electrical shock

WELDER and GENERATOR WIRING



ENGINE WIRING DIAGRAM



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