

shindaiwa[®]

SPECIFICATIONS

Diesel Engine Generator & Welder

DGW400DMK-S1

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CHAPTER 1: GENERAL

1. Applications

- (1) Shielded Metal Arc Welding
- (2) Semi-Auto Arc Welding (MIG, MAG, Self-Shielded)
- (3) Gouging
- (4) Scratch Start TIG
- (5) Power Sourcing for light, electric tools and appliances.

2. Standard

Design and production are in conformity with:

- (1) Japan Industrial Standards: JIS C 9300-1
- (2) Low Noise Type Construction Machinery Standard
- (3) Construction Machinery Gas Emission Regulation Standard by Ministry of Construction (Phase 3)
- (4) International Protection (classified by IEC standard 60529)

3. Design Condition

- (1) Installation Place: Outside Only.
- (2) Ambient Temperature: -15 to +40°C
- (3) Humidity: Less than 85%
- (4) Altitude: Less than 300 meters above sea level

4. Test and Check

Test shall be done with a complete workable unit of the diesel engine unit.

Check Items:

- (1) Insulation and Dielectric Test
- (2) Starting
- (3) Protection Device Working Test
- (4) Voltage Deviation and Speed Variation: 0-4/4 Load
- (5) Load Test: Welding and Generating 4/4 Load

5. Painting

Painting and color specifications are as per manufacturer's standard.

6. Structure

- (1) Bed and Vibration Proof Device
Alternator is directly coupled with engine and both are installed on the bed through the vibration proof device.
- (2) Low Noise
Low noise structure is put in the inside of the bonnet.
Sound Level: 64dB(A) @7m distance under no load. (50Hz)
65dB(A) @7m distance under no load. (60Hz)

(3) Fuel Tank

A steel fuel tank is equipped and incorporated with the electrical level gauge.

CHAPTER 2: SPECIFICATIONS

Model		DGW400DMK-S1		
Generating Method		Rotating Field		
Welding Generator	Operation	Single	Dual	
	CC DROOP	Rated Current (A)	370 / 390	180 / 200
		Rated Voltage (V)	34.8 / 35.6	27.2 / 28.0
		Duty Cycle (%)	60	100
		Current Adj. Range (A)	95 - 390 / 110 - 400	50 - 200 / 60 - 210
		Welding Rod (φ)	2.6 - 8.0	2.0 - 4.0
		Gouging Rod (φ)	3.2 - 8.0	3.2 - 5.0
	CV	Rated Current (A)	330 / 340	180 / 200
		Rated Voltage (V)	31.5 / 32.0	20.0 / 21.0
		Duty Cycle (%)	100	100
		Voltage Adj. Range (V)	14 - 34.5 / 14.5 - 35	14 - 21 / 14.5 - 23.5
		Welding Wire (φ)	0.6 - 2.0	0.6 - 1.6
Rated Speed (min ⁻¹)		3000 / 3600		
No Load Voltage (V)		MAX 85		
AC Generator	Rated Frequency (Hz)	50 / 60		
	Rated Speed (min ⁻¹)	3000 / 3600		
	Phase	Single		
	Rated Voltage (V)	110 / 115	230 / 240	
	Rated Output (kVA)	3.3 / 3.5	6.9 / 7.2	
	Power Factor	1.0		
	Rating	Continuous		
Engine	Model	Kubota D902		
	Type	Vertical, Water-Cooled 4-Cycle Diesel Engine		
	Displacement (L)	0.898		
	Rated Output (kW/min ⁻¹)	15.0 / 3000	17.6 / 3600	
	Fuel	ASTM No.2-D Diesel Fuel or Equivalent		
	Lubricant Oil	API Class CD or better		
	Lubrication Oil Volume (L)	3.6 (Effective 1.7)		
	Cooling Water Volume (L)	4.0 (Sub Tank Capacity 0.6 L included)		
Starting	Starter Motor			
Battery		46B24L (Japanese Industrial Standard)		
Fuel Tank Capacity (L)		37		
Dimension	Length (mm)	1435		
	Width (mm)	700		
	Height (mm)	848		
Dry Weight (kg)		453		

*Specifications subject to change without notice.

CHAPTER 3: EQUIPMENT AND FEATURE

1. Equipment

(1) Generator

1-Phase Receptacle (110/115V)	2 pcs.
1-Phase Receptacle (230/240V)	2 pcs.
1-Phase Breaker (110/115V)	1 pc.
1-Phase Breaker (230/240V).....	1 pc.
Earth Leakage Circuit Breaker (ELCB)	1 pc.
Voltage Adjusting Volume	1 pc.
Frequency Selector.....	1 pc.
Single/Dual Selector	1 pc.

(2) Welder

Output Control Dial (with pre-setting function)	2 pcs.
Welding Mode Selector Switch (CV/DROOP/CC Mode)	2 pcs.
Arc Control Dial.....	2 pcs.
Welding Rod Capacity	
Single Operation.....	Φ2.6~8.0
Dual Operation	Φ2.0~4.0
ECO Welding	1 pc.

(3) Safety Device

Emergency Stop Switch.....	1 pc.
VRD (Voltage Reduction Device).....	1 pc.
Guard (to prevent access to the rotating part)	1 pc.
Earth Leakage Circuit Breaker.....	1 pc.
1-Phase Breaker (110/115V)	1 pc.
1-Phase Breaker (230/240V).....	1 pc.
Bonnet Grounding Terminal.....	1 pc.
Fuel Inlet Cover (with a key locking system)	1 pc.
Wire Feeder Output Control.....	1 pc.
Engine Shut-Down Function (at abnormal high water temp. and oil pressure)	

(4) Equipment

Spill Containment.....	1 pc.
Idle Control Switch (ECO/Auto/High)	1 pc.
Digital Display (Voltage/Current/Frequency)	1 pc.
Starter Switch.....	1 pc.
Monitor Lamp.....	1 set
• Water Temp.	
• Battery Charge	
• Oil Pressure	
• Spill Containment	
Error Code Display.....	1 set
Fuel Meter.....	1 pc.
Hour Meter.....	1 pc.

2. Feature

(1) Feature

- Sound Level 64 dB(A) at 7m distance under no load.
65 dB(A) at 7m distance under no load.
- Generating Performance 1-Phase
- 3 Way Drive Control ECO/Low/High Speed
- Environmental Low Noise Level and Slow-Down Function
- Fuel Tank Capacity 37 Liters
- Dry Weight 453 kg
- Dimensions (LxWxH) 1435 x 700 x 848 mm

(2) Protection Device

Item	Set Value	Engine Shut-Down
Water Temp.	-	✓
Battery Charge	-	✓
Oil Pressure	-	✓
Spill Containment	Approx. 43L	-

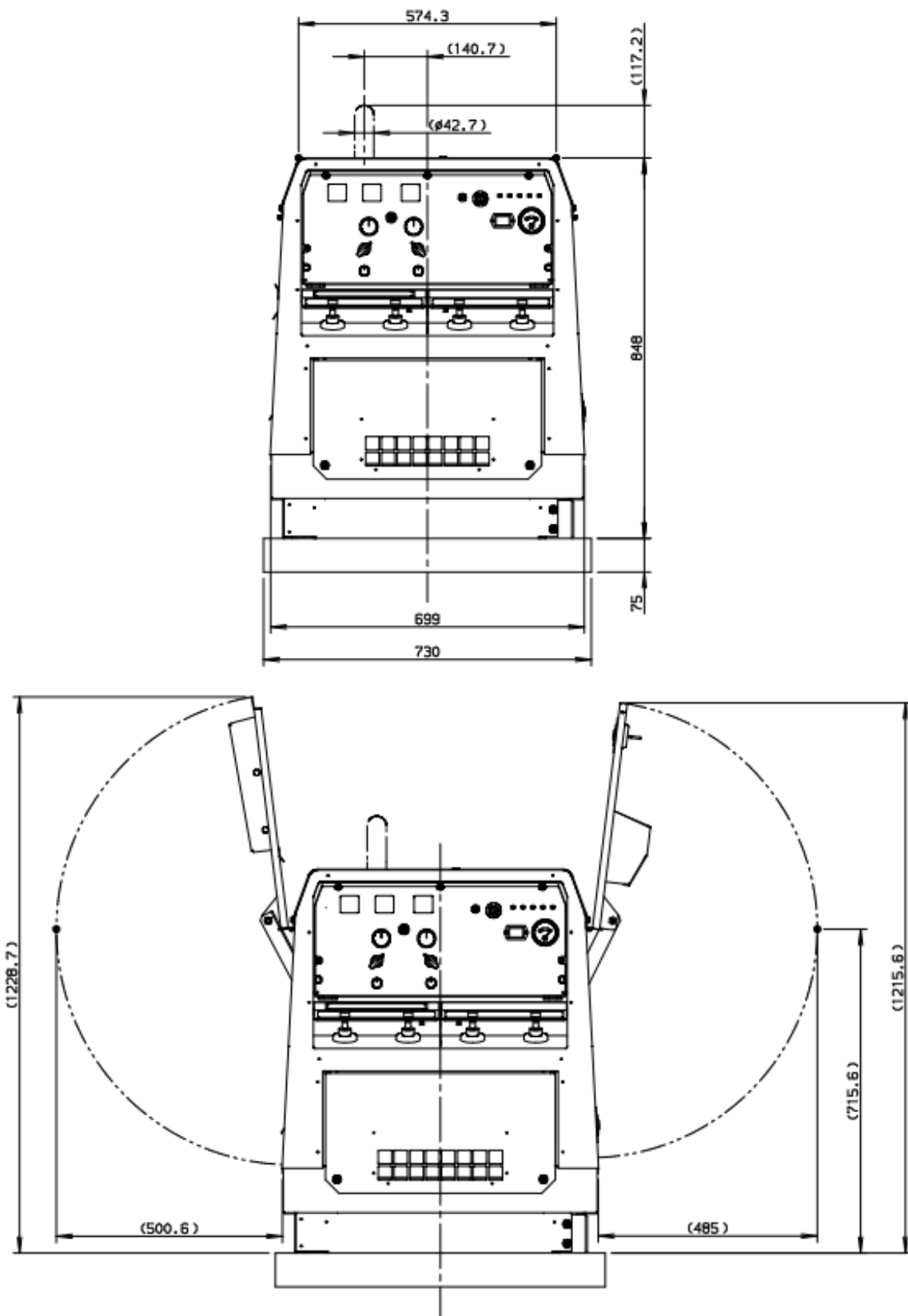
(3) Fuel Economy

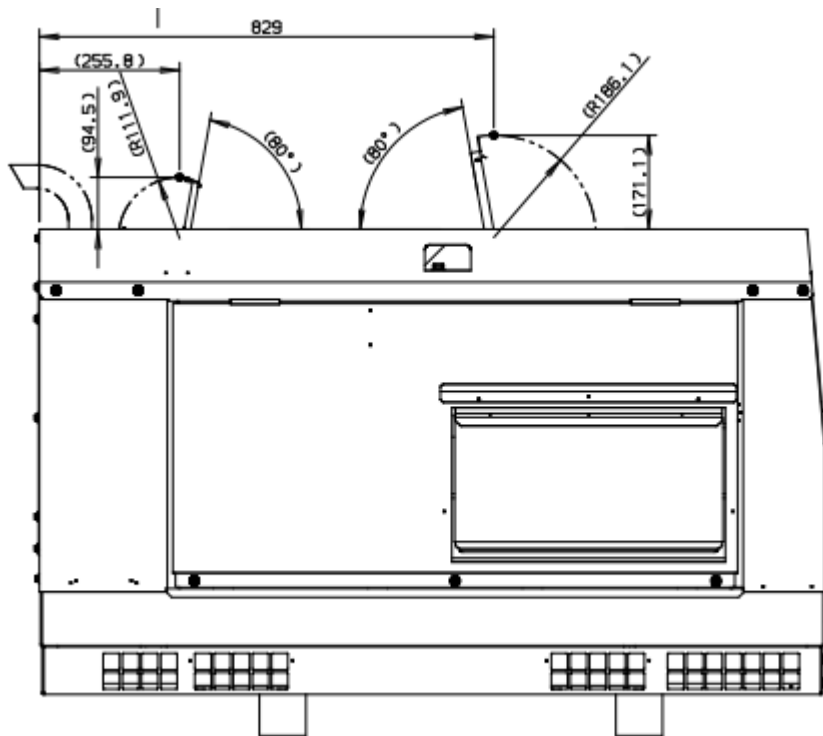
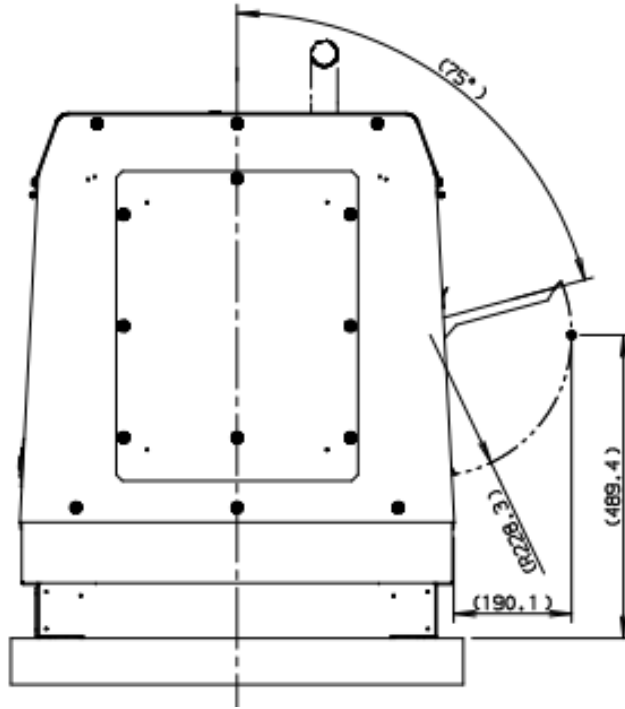
	Criteria	Fuel Consumption
Welding		
No Load	Idle Control Switch at HIGH (60Hz)	1.9L/hr. (0.50 gal./hr)
	Idle Control Switch at HIGH (50Hz)	1.5L/hr. (0.40 gal./hr)
	Idle Control Switch at AUTO & ECO	0.8L/hr. (0.21 gal./hr)
Loaded		Duty Cycle: 60%
	Rated Current at 390A (60Hz)	3.6L/hr. (0.95 gal./hr)
	Rated Current at 370A (50Hz)	3.3L/hr. (0.87 gal./hr)
		Duty Cycle: 50%
	Rated Current at 390A (60Hz)	3.1L/hr. (0.82 gal./hr)
	Rated Current at 370A (50Hz)	2.9L/hr. (0.77 gal./hr)
Generating		
Loaded	Rated at 10.7kVA (60Hz)	4.7L/hr. (1.24 gal./hr)
	Rated at 9.6kVA (50Hz)	4.1L/hr. (1.08 gal./hr)

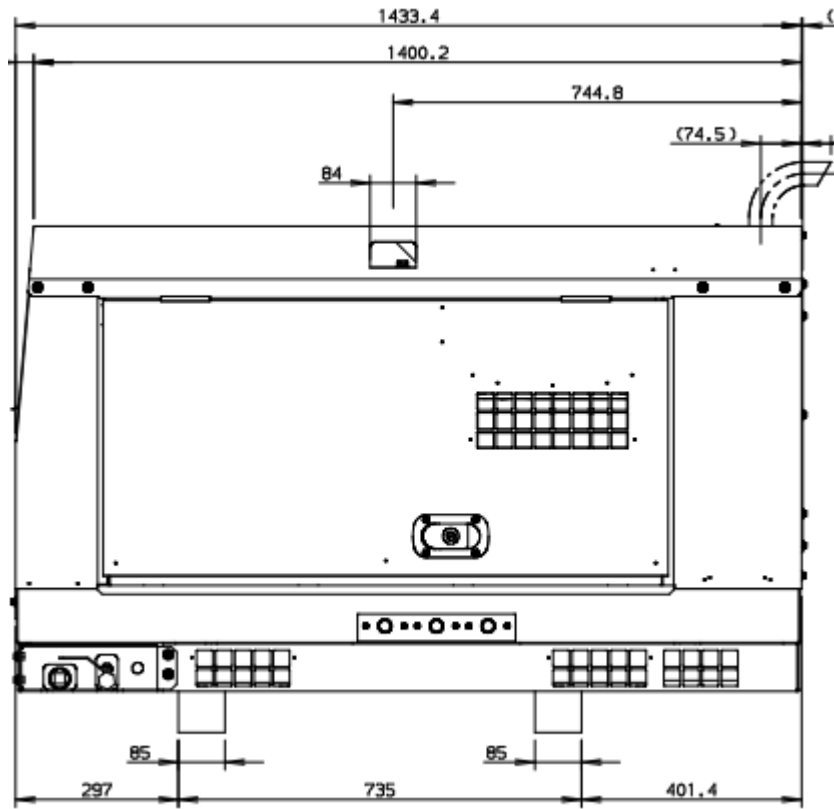
(4) Accessories

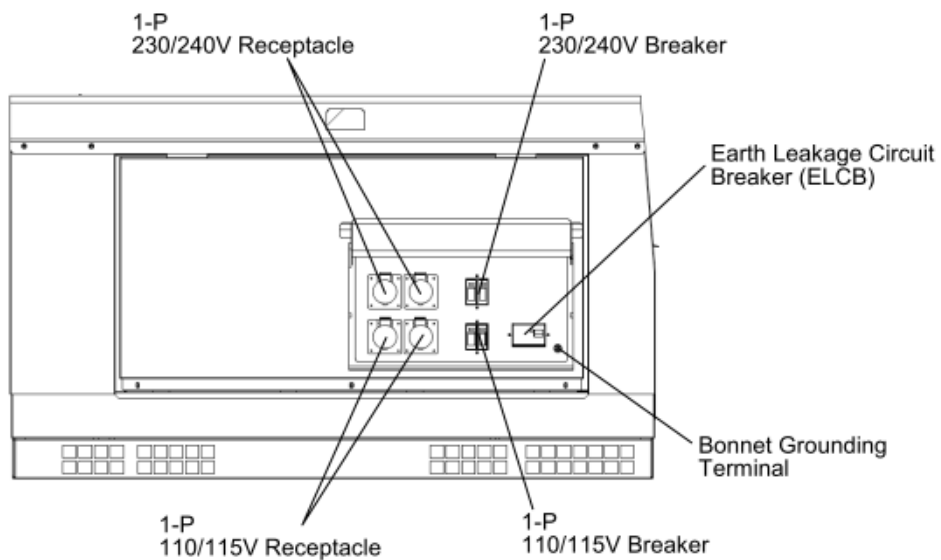
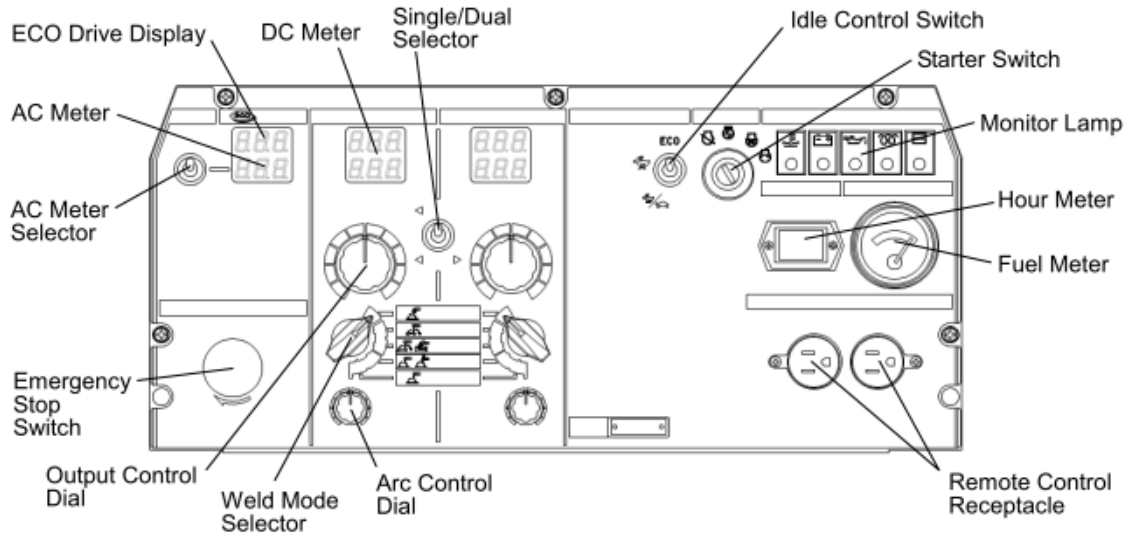
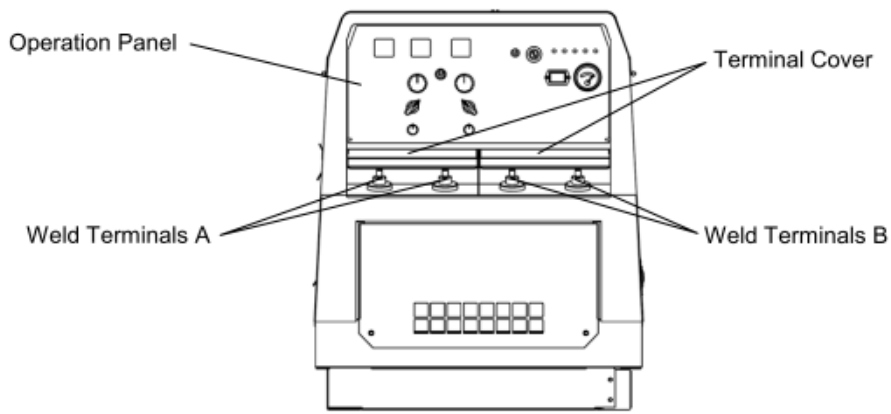
Owner's & Operator's Manual	1 copy
Starter Key	1 pair
Door Key	1 pair

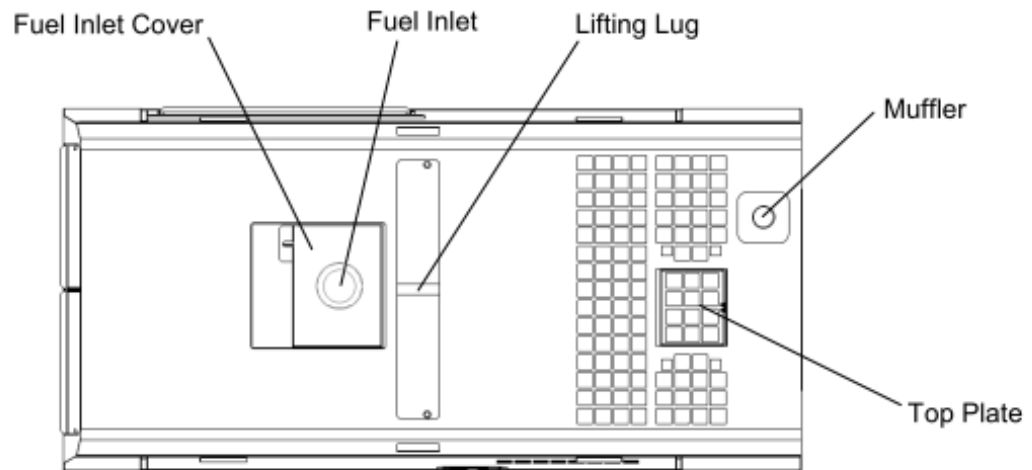
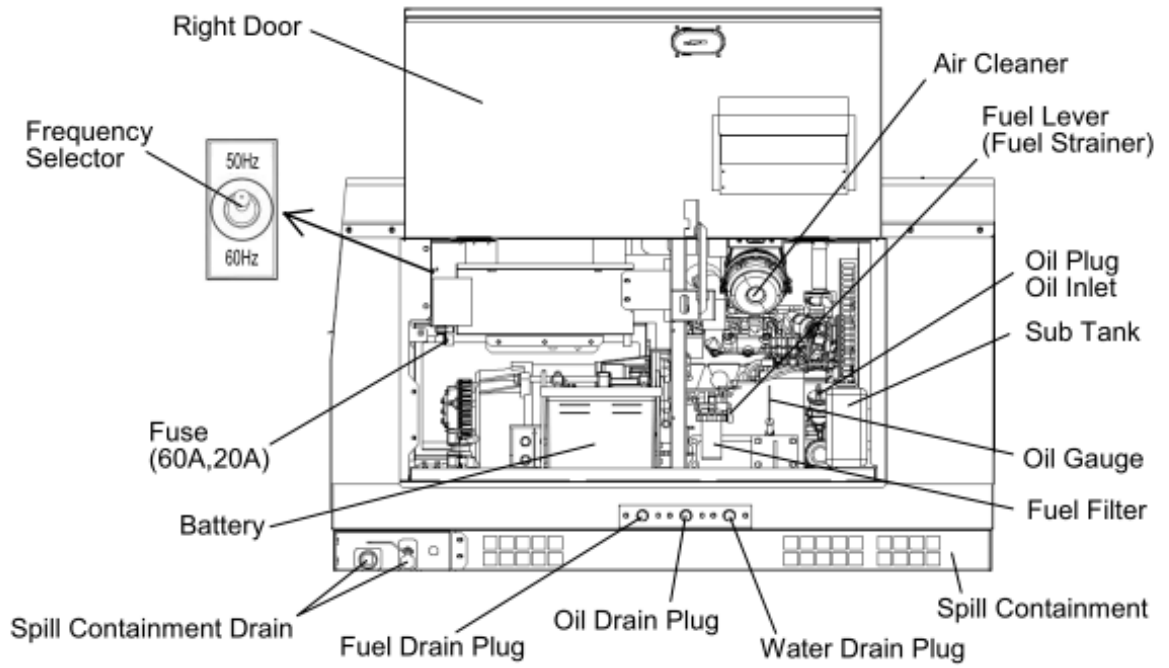
CHAPTER 4: APPEARANCE











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