

**shindaiwa®**

# **SPECIFICATIONS**

**Diesel Engine Generator**

**DGK45F**

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# CHAPTER 1: GENERAL

## 1. Standards

Design and production are in conformity with:

- (1) Japan Industrial Standards: JIS C 9300-1
- (2) Low Noise Type Construction Machinery Standard
- (3) Voluntary Emission Regulations for non-road engines in Japan by MLIT. (Tier 3)
- (4) EPA Tier 4 Emission

\*MLIT : Ministry of Land, Infrastructure, Transport and Tourism.

## 2. Design Conditions

- (1) Installation Place: Outside Only.
- (2) Ambient Temperature: 5 to 104° F (-15 to 40°C)
- (3) Humidity: Less than 80%
- (4) Altitude: Less than 984 ft. (300 m) above sea level

## 3. Test and Check

Test shall be conducted 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

## 4. Painting

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

## 5. 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: 63 dB(A) @7m distance under no load.
- (3) Fuel Tank  
A steel fuel tank is equipped and incorporated with the electrical level gauge.

## CHAPTER 2: SPECIFICATIONS

Model		Unit		DGK45F	
Alternator	Generator Type	-		Revolving Field Brushless	
	Rated Frequency	Hz		60	
	Rated Output(Prime)	Three phase	kVA	45	
			kW	36	
		Single phase	kVA	27 [13.5] *1	
			kW	27 [13.5] *1	
	Standby Output	Three phase	kVA	50	
			kW	40	
		Single phase	kVA	30 [15] *1	
			kW	30 [15] *1	
	Rated Voltage	Three phase	V	208/240/ [480] *1	
		Single phase	V	120/139/240/[277] *1	
	Rated Current	Three phase-208V	A	108	
		Three phase-240V	A	108	
Three phase-480V		A	54		
Single phase-120V		A	112.5×2 [56.3 x 2]*1		
Single phase-240V		A	112.5 [56.3]*1		
Power Factor	-		Three phase 0.8, Single phase 1.0		
Insulation class	-		F		
Excitation	-		Self-Excitation (brushless)		
No. of Poles	-		4		
Engine	Type	-		Vertical Water-Cooled 4-Cycle Diesel	
	Model(Manufacturer)	-		4LE2X(ISUZU)	
	No. of Cylinders (bore × stroke)	(in./mm)		4(3.35x3.78/85x96)	
	Continuous Rated Output	hp		59	
	Rated Speed	rpm		1,800	
	Displacement	cu.in./liters		133/2.179	
	Combustion System	-		Direct injection (Turbo-charged)	
	Cooling Method	-		Water cooled	
	Starting Method	-		Electric	
	Fuel	-		No.2-D,S15 EPA regulation	
	Lubricating Oil	-		API service-type CJ-4 class	
	Fuel Tank Capacity	gal./liters		79/300	
	Lubricant Volume	gal./liters		3.0/11.5(including filter 0.1/0.5)	
	Cooling Water Volume	gal./liters		2.9/11(including sub-tank 0.4/1.5)	
	Starting Motor Capacity	V-kW		12-2.0	
	Charging Alternator Capacity	V-A		12-50	
Battery Capacity	V-Ah		12-72		
Unit	Length	in./mm		83/2,100	
	Width	in./mm		37/950	
	Height	in./mm		61/1,550	
	Dry Weight	lbs./kg		2,634/1,195	
	Net Weight	lbs./kg		3,262/1,480	

\*Output in the brackets ([ ]) shows when the selector switch is set at 480V.

\*\*Specifications are subject to change without notice.

# CHAPTER 3: EQUIPMENT AND FEATURE

## 1. Equipment

### (1) Generator

Voltage Meter .....	1 pc.
Ampere Meter .....	1 pc.
Frequency Meter .....	1 pc.
Breaker Trip Selector Switch .....	1 pc.
Voltage Regulator.....	1 pc.
Ammeter Selector Switch .....	1 pc.
Voltage Selector Switch .....	1 pc.
Single Phase Receptacle (GFCI) (120V) .....	2 pc.
Three Phase Receptacle (240/120V) .....	3 pc.

### (2) Safety Device

Single Phase Breaker .....	1 pc.
Three Phase Breaker .....	1 pc.
Protective Monitor .....	1 set
●Battery Charge	
●Oil Pressure (with auto engine shutdown feature)	
●Water Temp. (with auto engine shutdown feature)	
●Over Speed (with auto engine shutdown feature)	
●Air Filter	
●Spill Containment (with auto engine shutdown feature)	
Fuel Cover/Front Panel/Right Doors (w/ locking feature) .....	1 pc ea.
Automatic Engine Shut-Down Feature (responding to some protective issues.)	

### (3) Equipment

Fuel Meter.....	1 pc.
Engine Display (Water Temp./Oil Pressure/Engine Speed).....	1 pc.
Engine Display (Water Temp./Oil Pressure/Engine Speed).....	1 pc.
Spill Containment Overflow Monitor .....	1 pc.
Preheat Lamp .....	1 pc.
Panel Light.....	1 pc.
Throttle Switch (RUN/IDLE) .....	1 pc.
Starter Switch.....	1 pc.
Fuel Tank .....	1 pc.
Fuel Filter (w/ fuel strainer) .....	1 pc.
Air Cleaner .....	1 pc.
Fuel Drain Plug .....	1 pc.
Spill Containment Drain Plug .....	1 pc.

Coolant Drain Plug.....	1 pc.
Hour Meter.....	1 pc.
Pilot Lamp .....	1 pc.
Low Noise Air Flow System	

## 2. Feature

### (1) Feature

- Sound Level 63B(A) at 7m distance under no load.
- Generating Performance 1-Phase & 3-Phase
- 2 Way Drive Control High/Low Speed
- Environmental Quiet Sound System
- Fuel Tank Capacity 79 gal. (300 Liters)
- Dry Weight 2634 lbs. (1195 kg)
- Dimensions (LxWxH) 83" x 37" x 61" (2100 x 950 x 1550 mm)

### (2) Protection Device

Item	Set Value	Engine Shut-Down
Water Temp.	212° F/100°C	✓
Low Battery Charge	-	✓
Low Oil Pressure	14 psi/96kPa	✓
Air Filter	when clogged	No
Over Speed	2070 rpm.	✓
Spill Containment	12 gal./45.4 liters	No
	25 gal./94.6 liters	✓

### (3) Fuel Economy

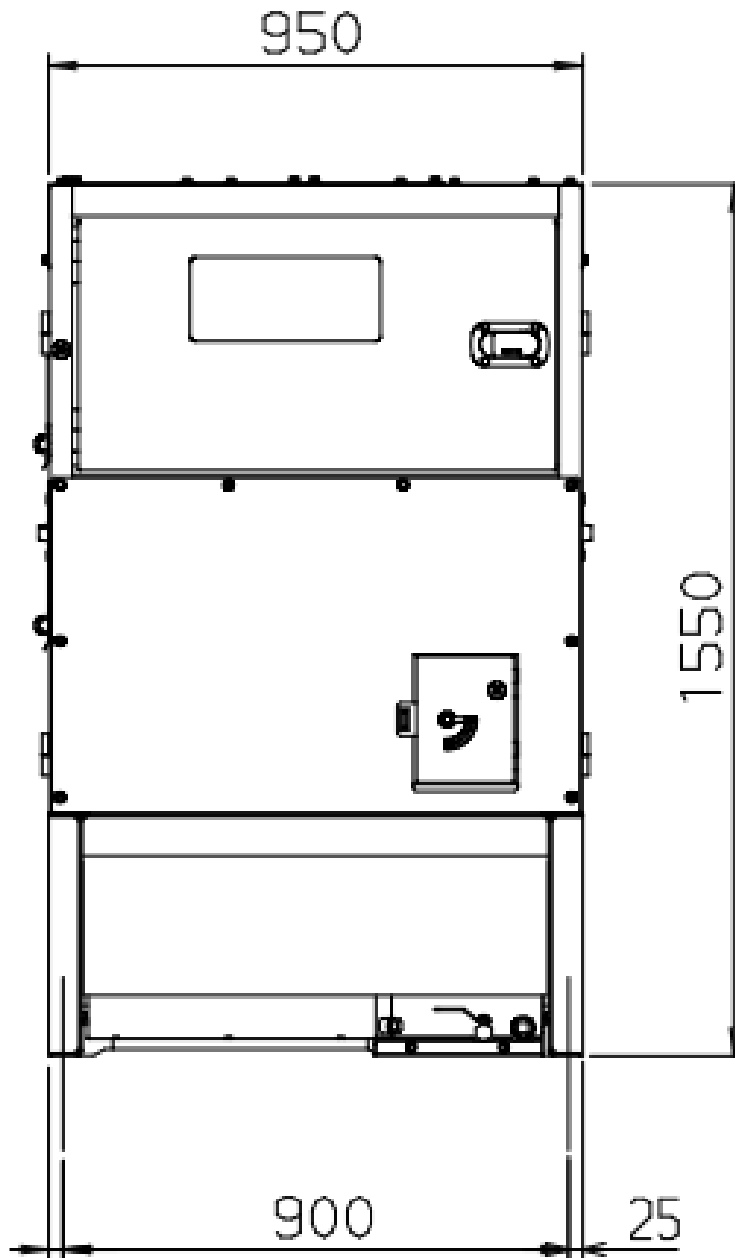
Criteria	Fuel Consumption
Full load	2.8 gal./hr (10.7L/hr.)
3/4 load	2.2 gal./hr (8.2L/hr.)
1/2 load	1.5 gal./hr (5.9L/hr.)
1/4 load	1.0 gal./hr. (3.8L/hr.)
No Load	n/a

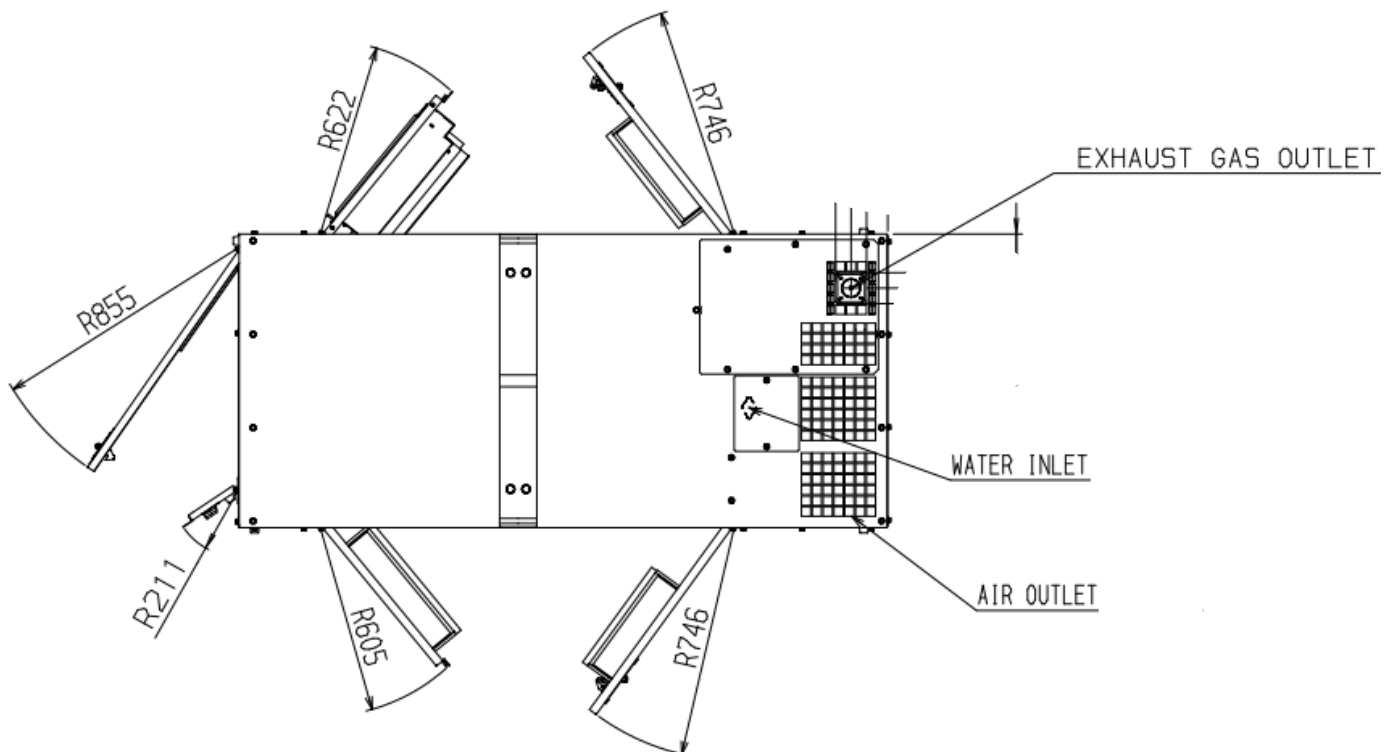
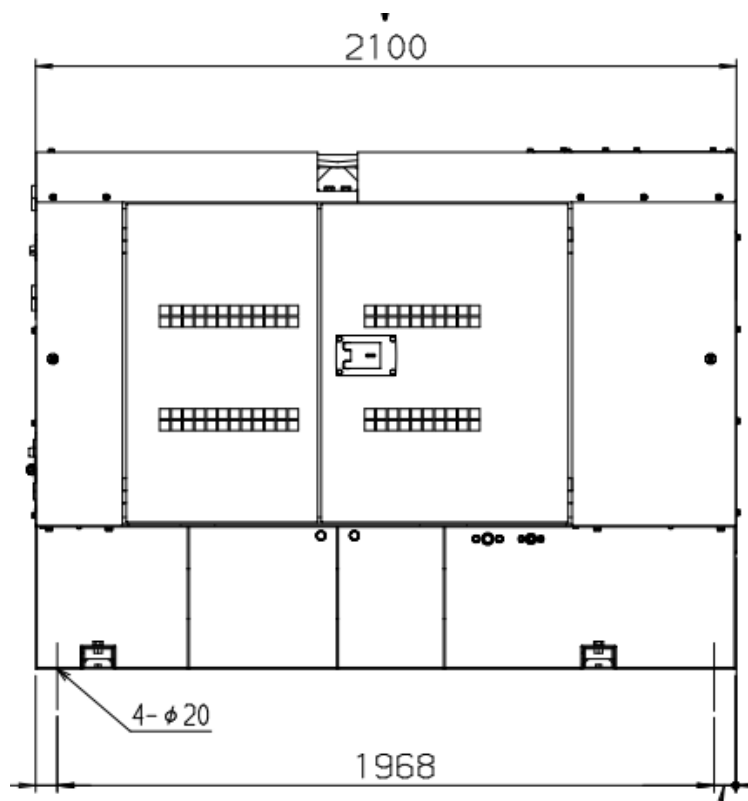
\*Above values are calculation base.

(4) Accessories

Operator's Manual	1 copy
Engine Warranty Manual	1 copy
Starter Key	2 pcs.

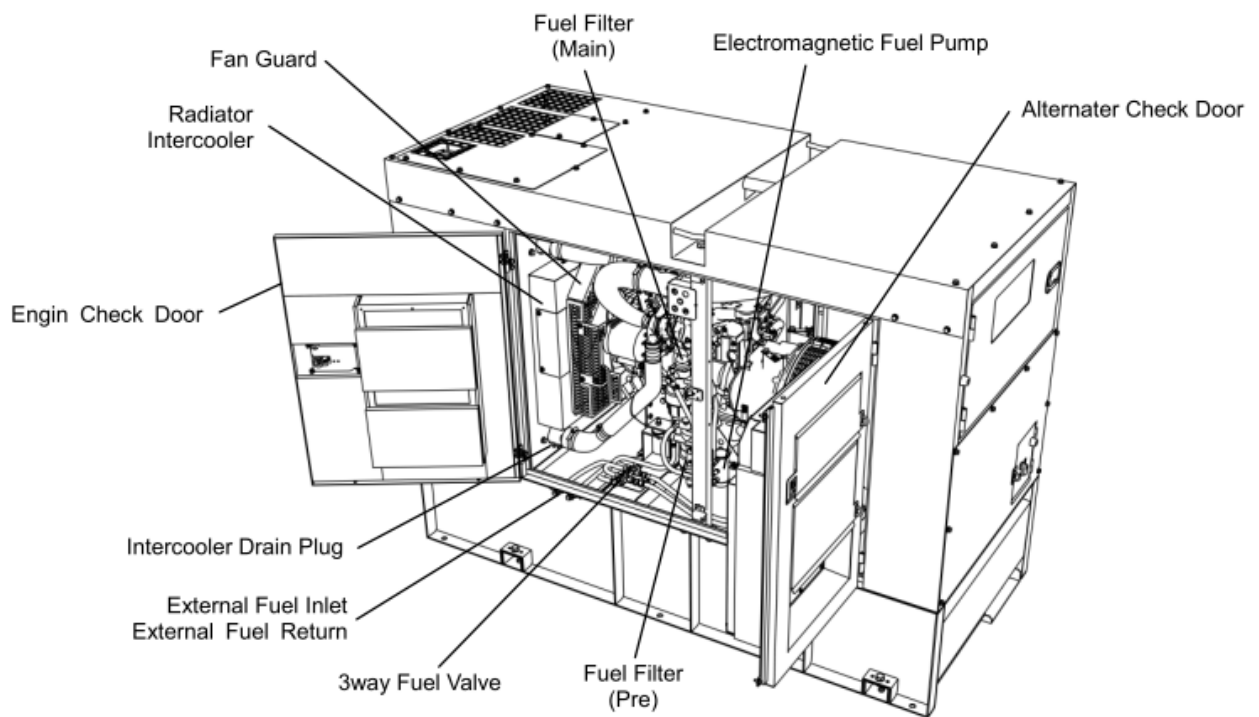
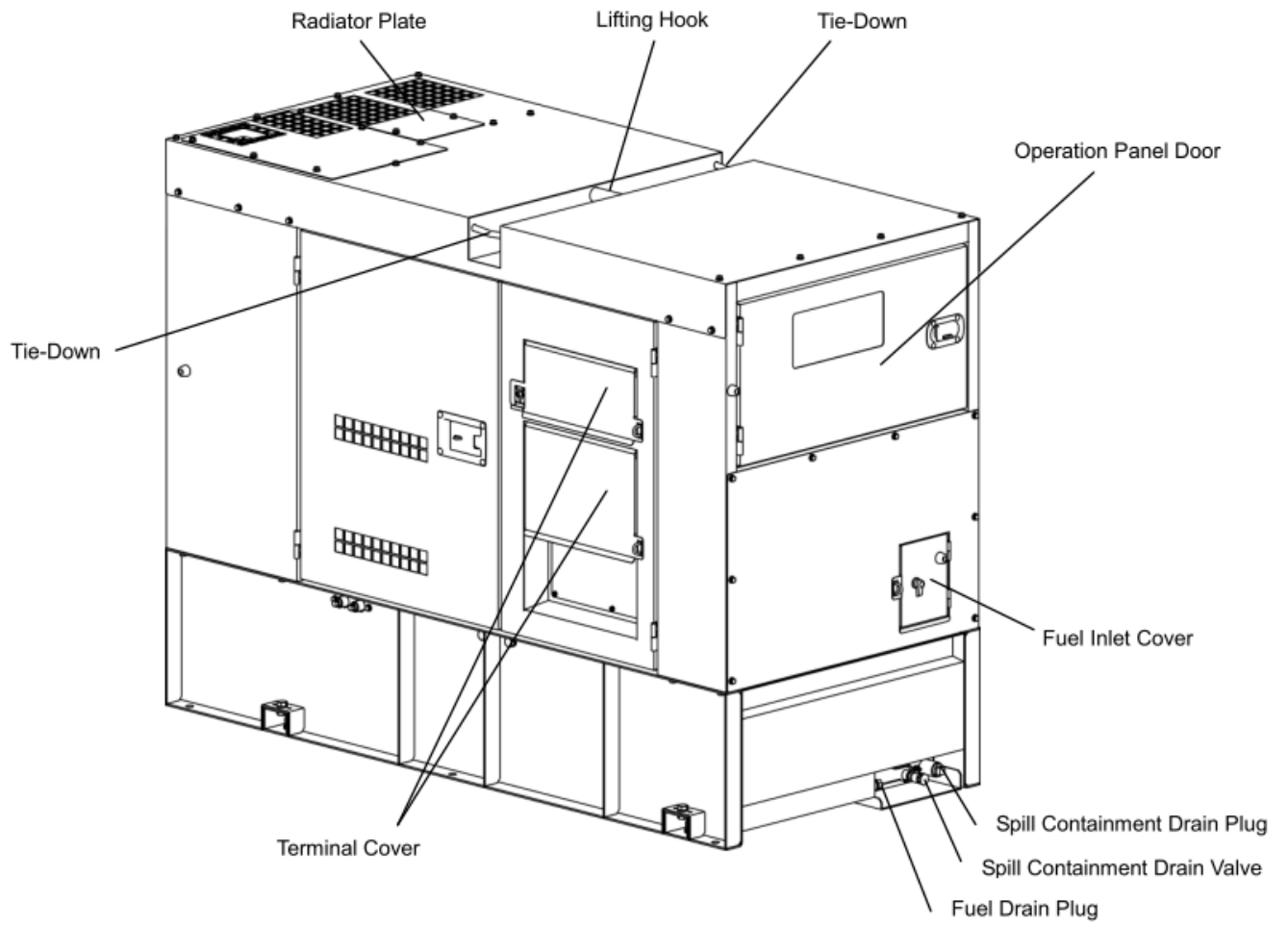
**CHAPTER 4: APPEARANCE**

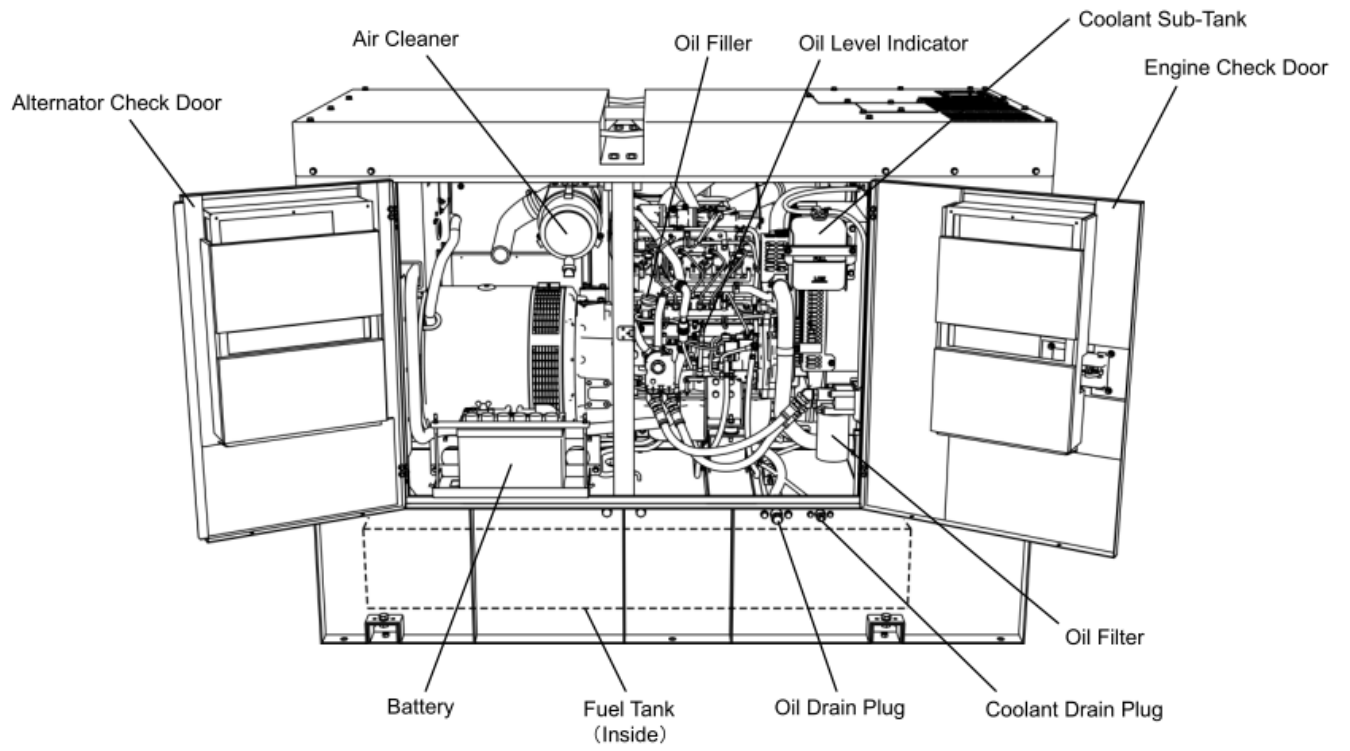




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