

shindaiwa®

SPECIFICATIONS

Diesel Engine Generator
DGK70F

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CHAPTER 1: GENERAL

1. Standard

Design and production are in conformity with:

- (1) Japan Industrial Standards (JIS)
- (2) Low Noise Type Construction Machinery Standard
- (3) Emission Regulations for non-road engines by CARB and EPA Tier 4 Final.

2. Design Condition

- (1) Installation Place: Outside Only.
- (2) Ambient Temperature: 5 to 104° F (-15 to 40°C)
- (3) Humidity: Less than 85%
- (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: 62 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		DGK70F	
Alternator	Generator Type	-		Revolving Field Brushless	
	Rated Frequency	Hz		60	
	Rated Output (Prime)	Three phase	kVA	70	
			kW	56	
		Single phase	kVA	42 [21] *1	
			kW	42 [21] *1	
	Standby Output	Three phase	kVA	77	
			kW	61.6	
		Single phase	kVA	46.2 [23.1] *1	
			kW	46.2 [23.1] *1	
	Rated Voltage	Three phase	V	208/240/ [480] *1	
		Single phase	V	120/139/240/[277] *1	
	Rated Current	Three phase-208V	A	168	
		Three phase-240V	A	168	
Three phase-480V		A	84		
Single phase-120V		A	175×2 [87.5 x 2]*1		
Single phase-240V		A	175 [175]*1		
Power Factor	-		Three phase 0.8, Single phase 1.0		
Insulation Class	-		F		
Excitation	-		Self-Excitation (brushless)		
No. of Pole	-		4		
Engine	Type	-		Vertical Water-Cooled 4-Cycle Diesel	
	Model (Manufacturer)	-		4JJ1X (ISUZU)	
	No. of Cylinder (bore × stroke)	(in./mm)		4 (3.76 x 4.13/95.4 x 104.9)	
	Continuous Rated Output	hp		86.5	
	Rated Speed	rpm		1,800	
	Displacement	cu.in./liters		183/2.999	
	Combustion System	-		Direct injection (Turbocharged)	
	Cooling	-		Water cooled	
	Starting	-		Electric	
	Fuel	-		No.2-D,S15 EPA regulation	
	Diesel Exhaust Fluid	-		ISO 22241 or API standard	
	Lubricating Oil	-		API Service Classification: CJ-4 class	
	Fuel Tank Capacity	gal./liters		106/400	
	DEF Tank Capacity	gal./liters		7.4/28	
	Lubricant Volume	gal./liters		4.1/15.5 (including filter 0.1/0.5)	
	Cooling Water Volume	gal./liters		3.7/14 (including sub-tank 0.4/1.5)	
	Starting Motor Capacity	V-kW		12-2.5	
	Charging Alternator Capacity	V-A		12-110	
	Battery Capacity	V-Ah		12-72	
Unit	Length	in./mm		102/2,590	
	Width	in./mm		37/950	
	Height	in./mm		69/1,750	
	Dry Weight	lbs./kg		3,869/1,755	
	Net Weight	lbs./kg		4,773/2,165	

*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.
GFCI Receptacle (120V-20A).....	2 pcs.
Twist Lock Receptacle (240/120V-50A).....	3 pcs.

(2) Safety Device

Circuit Breaker (3-Phase & 1-Phase)	1 ea.
Neutral Bonding (Grounding)	STD.

Protective Monitor	1 set
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●Engine will automatically shut down:

- 1) If water temp. exceeds standard.
- 2) If oil pressure exceeds standard.
- 3) If engine speeds exceeds standard.
- 4) If spill containment is full.
- 5) If DEF tank is empty.
- 6) If SCR system malfunctioned.
- 7) If DEF quality is abnormal.

●Warning light will blink:

- 1) If the battery charge is low.
- 2) If the air filter plugged.
- 3) If the load exceeds standard.
- 4) If the fluid exceeds standard.

The front panel and right & left door are featured to lock with padlock*.

The terminal cover and fuel & SCR cover are featured to lock with padlock*.

*Padlock is option.

(3) Equipment

●Selector Switch for:

- AM Meter
 - Breaker trip
 - Voltage
 - Oil pressure/water temp./engine speed
 - Throttle (high speed/idle).....
- | | |
|-------|-------|
| | 1 pc. |
| | 1 pc. |
| | 1 pc. |
| | 1 pc. |
| | 1 pc. |

● Display	
• Output	1 pc.
• Oil pressure/water temp./engine speed.....	1 pc.
Voltage regulator.....	1 pc.
SCR monitor system (with monitor lamp).....	1 set
Engine monitor system (with monitor lamp).....	1 set
Electric starting	1 pc.
DEF level “LED” indicator	1 pc.
Fuel level “LED” indicator.....	1 pc.
Spill containment.....	1 pc.
Drain plug (Oil/Coolant/Fuel)	1 pc. ea.
Battery	1 pc.
Auto starter receptacle*.....	1 pc.
Low noise air flow system	STD.

*The auto starter is option.

2. Feature

(1) Feature

- Sound Level 62dB(A) at 7m distance under no load.
- Generating Performance 3-Phase and 1-Phase
- 2 Way Drive Control High/Low Speed
- Simultaneous Output (3 phase & 1 phase)
- Environmental Low sound system and spill Containment. Comply with CARB and EPA phase 4 final emission standard.
- Fuel Tank Capacity 106 gal. (400 Liters)
- DEF Tank Capacity 7.4 gal. (28 liters)
- Dry Weight 3,869 lbs. (1,755 kg)
- Dimensions (LxWxH) 102” x 37” x 69” (2,590 x 950 x 1,750 mm)

(2) Protection Device

Item	Set Value	Engine Shut-Down	Warning Lamp Flashing
High Water Temp.	212° F/100°C	✓	✓
Low Oil Pressure	7 psi/49kPa	✓	✓
Engine Over Speed	2070 min ⁻¹	✓	✓
Spill Containment	Fluid exceeds a certain level	-	✓
Spill Containment	Fluid near the max. level	✓	✓
DEF Tank Level	when empty	✓	✓
DEF Quality	when detects other type of liquid	✓	✓
SCR System Error	-	✓	✓
Battery Charge	low voltage	-	✓
Air Filter Clogging	When clogged	-	✓

(3) Fuel Economy

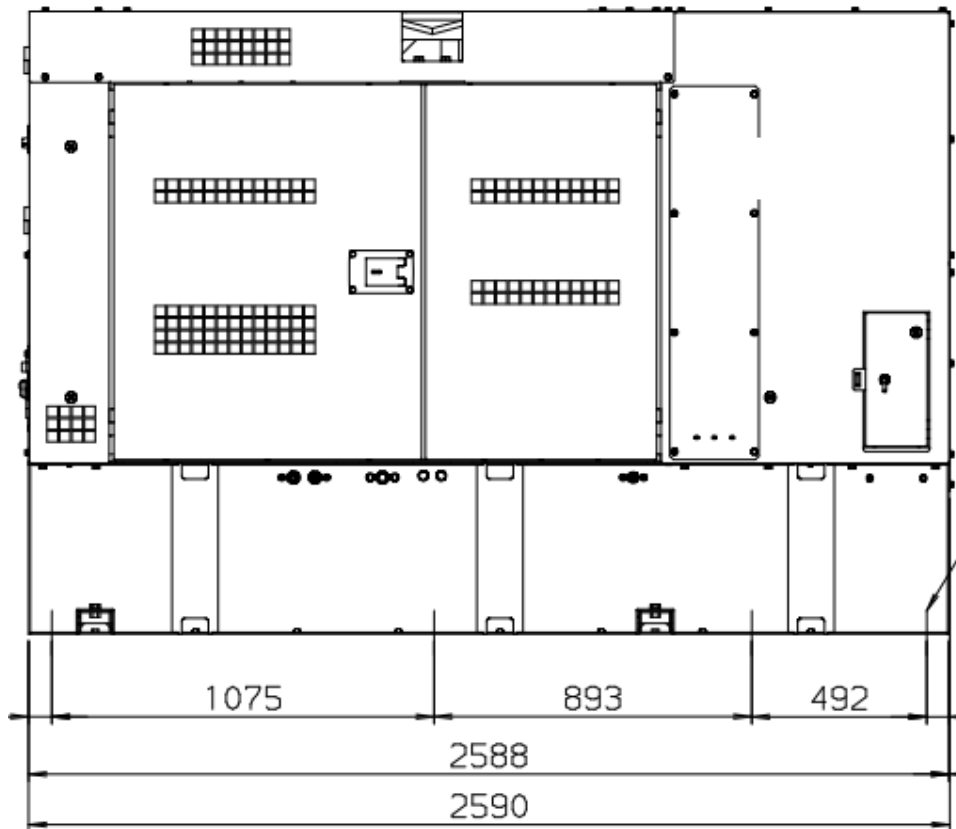
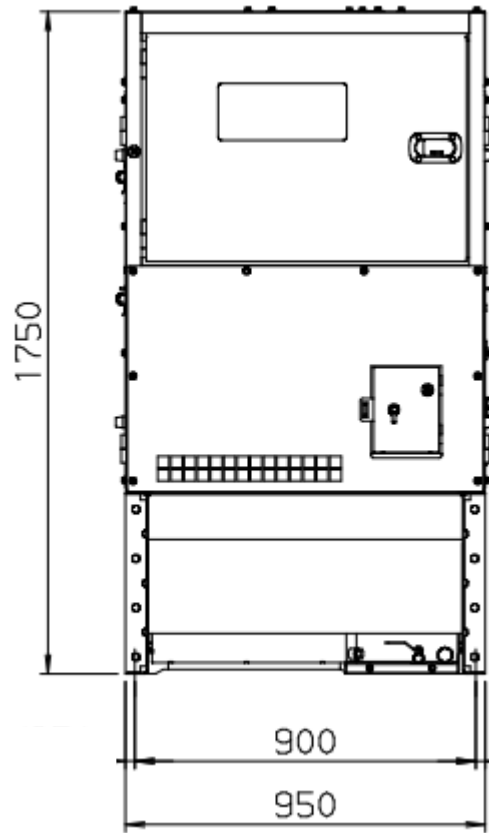
Criteria	Fuel Consumption	Continuous Operation
Full load	4.38 gal./hr (16.6L/hr.)	24 hrs.
3/4 load	3.46 gal./hr (13.1L/hr.)	31 hrs.
1/2 load	2.50 gal./hr (9.5L/hr.)	42 hrs.
1/4 load	2.06 gal./hr. (7.8L/hr.)	51 hrs.

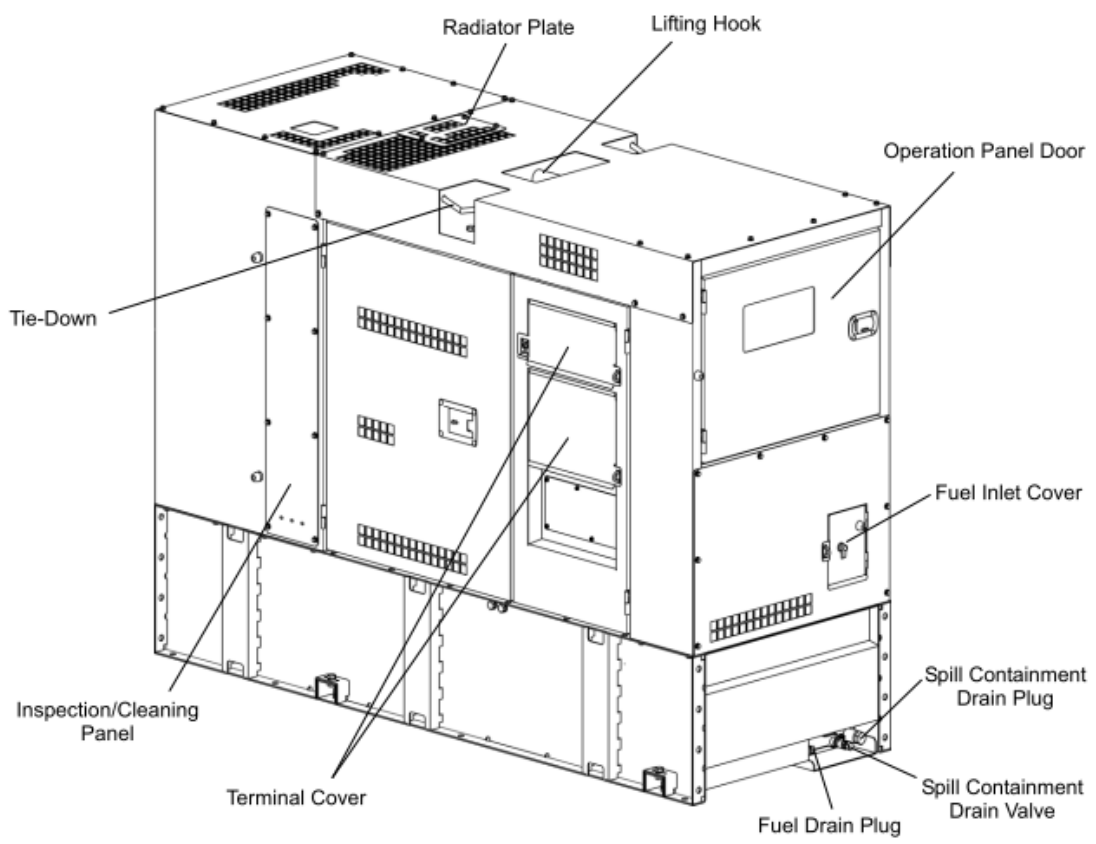
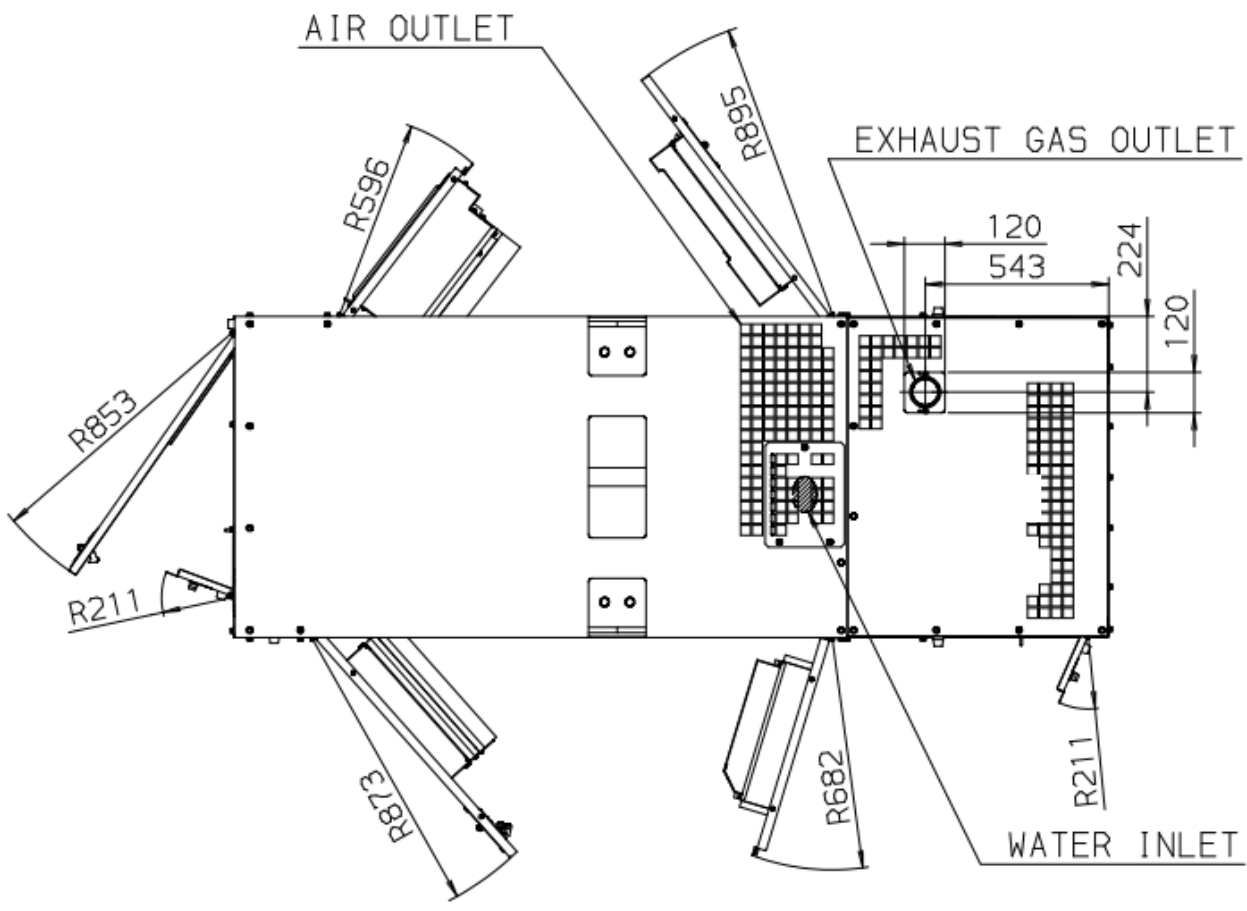
*Above data should be used for reference only. Note that fuel consumption and operational hrs. differ. per condition of the actual use.

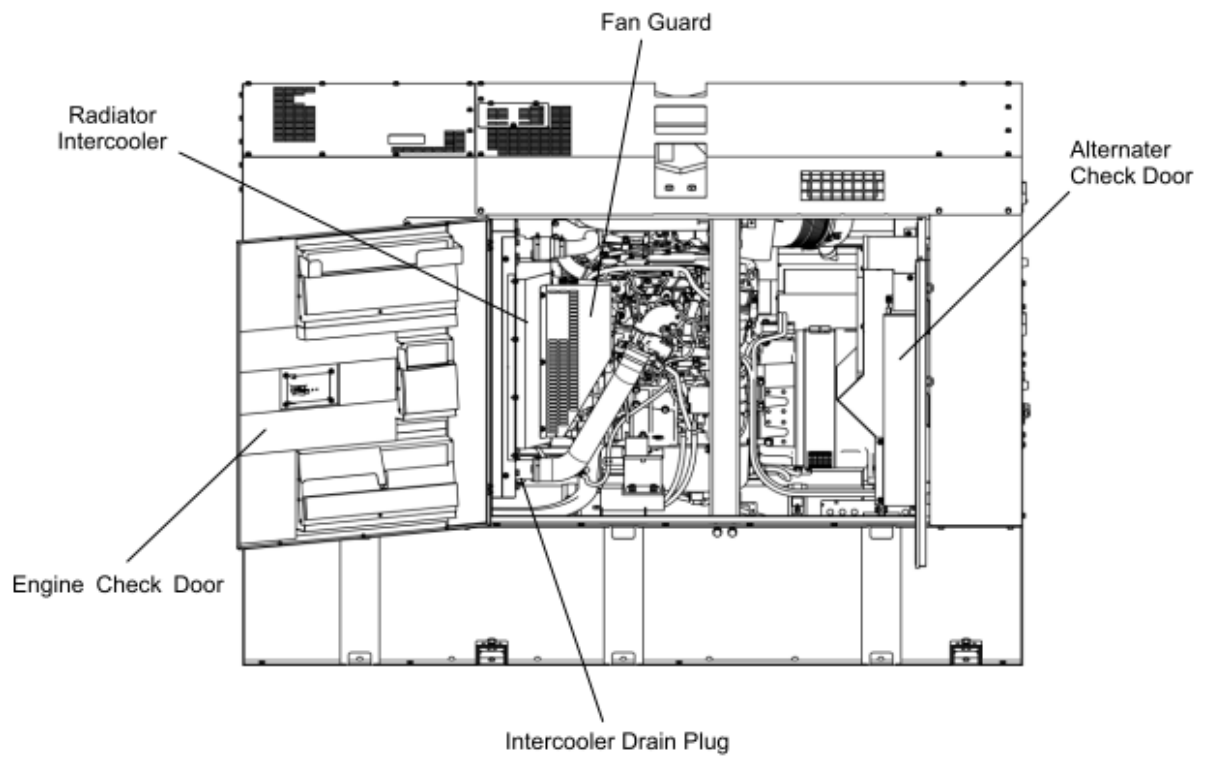
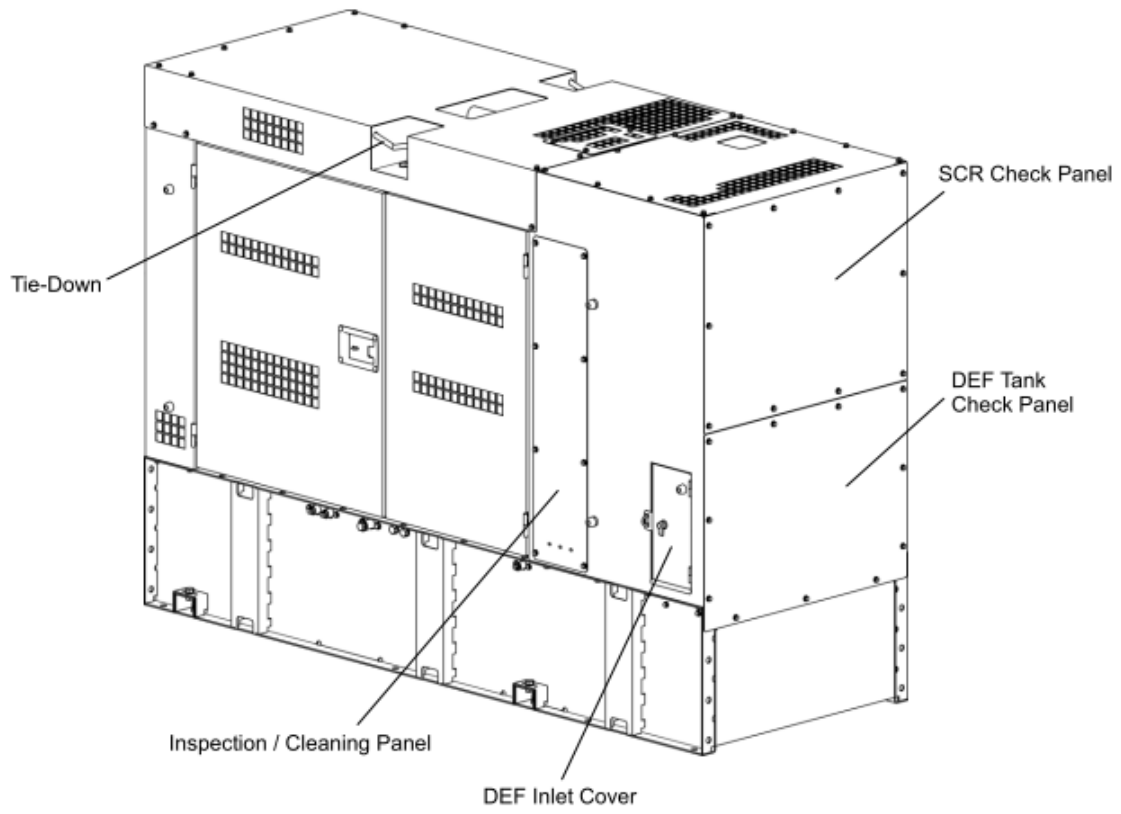
(4) Accessory

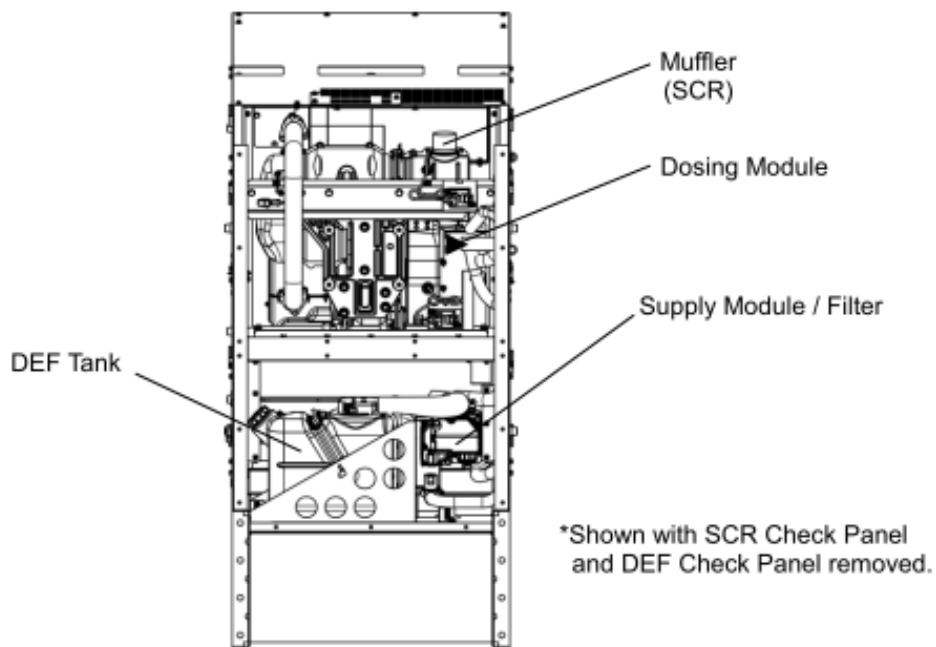
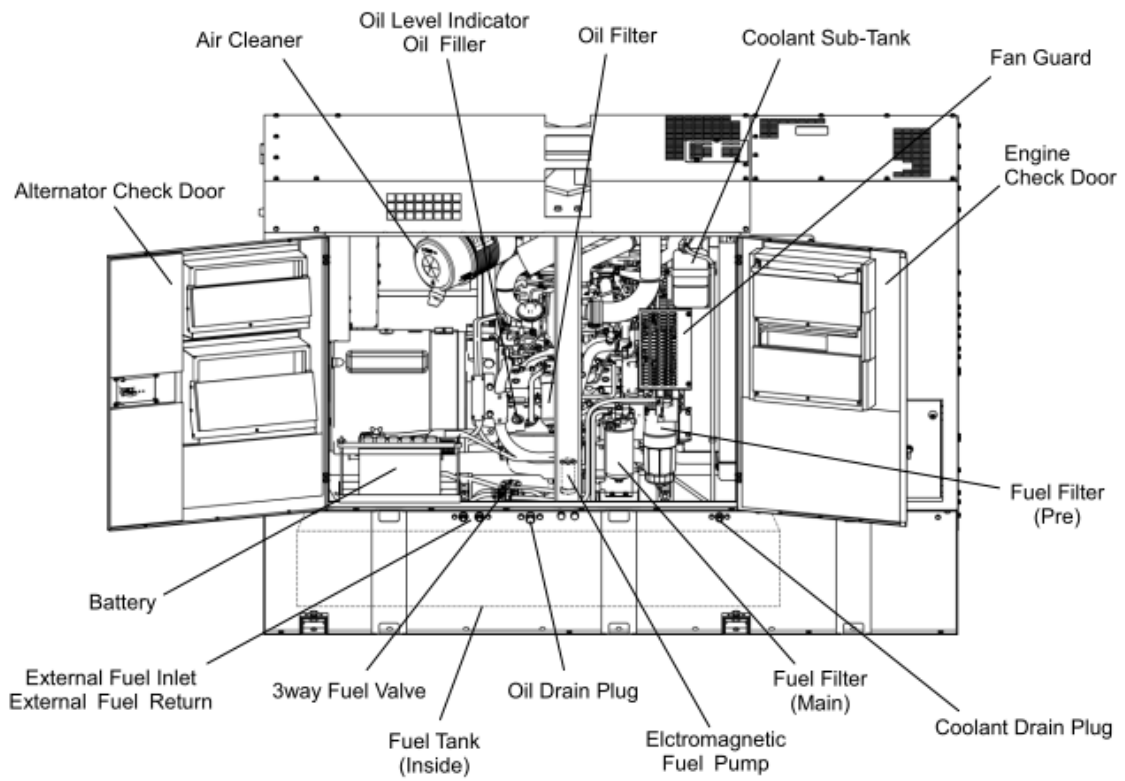
Operator's manual	1 copy
Engine warranty manual	1 copy
Starter key	2 pcs.

CHAPTER 4: APPEARANCE









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