

# Service specification data

DGK25C

Group	Item	Equipment	Condition/Procedure	Standard data	Approval	
Overall Exterior	Shape Coloring, Paint Fuel, Oil Connection Wire harness	Visual inspection	Scratches, Bending, and hitting Constant painting and its color finish Leakage Looseness Wire lead has enough space and isolated from each body components	No damages	OK	
				No deterioration	OK	
				No leakage	OK	
				No looseness	OK	
				Isolated	OK	
Ground Earth	Continuity	Multi tester	Ground terminal to Engine ground bolt Ground terminal to Engine bed ground bolt Ground terminal to Receptacle ground terminal	Continuity	OK	
				Continuity	OK	
				Continuity	OK	
Di-electric Test	Resistance	DC500V Mega Ohm tester	Main Breaker: ON, 1-phase 50A breaker: ON, 1-phase 20A breaker: OFF a) Disconnect one 9P coupler from AVR stator b) Select the AC selector switch : 3phase 480V c) Disconnect Stator output (N10/N11/T12) from the terminal block d) Disconnect all wire harness which are connected to N10 and N11	Ground terminal to Output terminal L1 Ground terminal to Output terminal L2 Ground terminal to Output terminal L3 Ground terminal to Exciter coupler J or K	Resistance >3M Ohms	OK
					OK	
					OK	
					OK	
					OK	
Monitor Function	Glow lamp Warning lamp Hour meter Pilot indicator	Visual inspection	Key-on Key-on Key-on Engine running	Tern on, then terns off in 5sec.	OK	
				Terns on, then terns off	OK	
				Always on	OK	
				Always on	OK	
Protection Circuit	Emergency stop Trip lever Safety terminal cover	Visual inspection	Press emergency stop switch ON while engine operation Flip the test trip lever to "TRIP" Open the 3phase terminal cover while engine operation	Shut off engine	OK	
				Lever trips between ON/OFF	OK	
				Lever trips between ON/OFF	OK	
Operation Test	Phase direction AC 3phase output (Voltage& Exciter current) Single phase output AVR range Engine RPM range	Phase direction indicator AC voltage meter Frequency meter DC current meter AC voltage meter AC voltage meter Digital tachometer	Selector switch : 3phase 480V Output 20KW Voltage: 480V Frequency: 60Hz Power factor: 1 (No hunting at engine operation) Selector switch : 1phase 240V (No Load) 60Hz Selector switch : 3phase 480V Turn the AVR dial max Adjust the engine control switch with No load	Rotate as per the allow	OK	
				100% Load 20 KW 480 V 0.53 A 60 Hz	As per specification	OK
				75% Load 15 KW 480 V 0.46 A 60 Hz	As per specification	OK
				50% Load 10 KW 480 V 0.40 A 60 Hz	As per specification	OK
				25% Load 5 KW 480 V 0.34 A 60 Hz	As per specification	OK
				No Load No load 480 V 0.30 A 60 Hz	As per specification	OK
				50A receptacle (V) GFCI receptacles (V)	240 120	OK OK
No load Max (V) No load Min (V)	504 or higher Lower than 456	OK OK				
Idling pm Rated output rpm	1000 min-1 1800 min-1	OK OK				
Continuous Test	Continues output test	AC voltage meter Oil pressure gauge Coolant temp gauge	- Voltage: 240V Frequency: 60Hz Power factor: 1 (No hunting at engine operation)	Oil pressure at the end of 30mins operation	200-600 Kpa	OK
				Coolant temperature	<104 deg C (<219 deg F)	OK
				Engine rpm (min-1)	<1890	OK
				Ambient temperature	<40 deg C (<104 deg F)	OK
Auto start system	Function	Digital tachometer	AUTO/OFF/TEST switch 「AUTO」	Remote switch ON	Engine rpm will be 1800min-1	N / A
		DynaGen ES52 Auto start unit	Unit remote switch 「OFF」 「ON」 「OFF」	Remote switch OFF	Shut off engine	N / A
	Coolant temperature sensor	Visual inspection	Coolant temp overheat demo (Disconnect water sensor, then connect 150ohms dummy resistance) Unit AUTO/OFF/TEST switch 「TEST」	Detect the coolant temp overheat	Shut off engine	OK
				Overheat lamp and ES52 unit high temp lamp	Lamp terns on	N / A
	Oil pressure switch	Visual inspection	Abnormal oil pressure demo (Disconnect the oil pressure sensor and install valuable resistance, with 500ohms before start, then set to 160ohms after engine started) Unit AUTO/OFF/TEST switch 「TEST」	Detect the oil pressure too low	Shut off engine	OK
Oil pressure lamp and ES52 unit low oil lamp				Lamp terns on	N / A	
Others	External fuel tank connection	Visual inspection	Confirm fuel circulation after the external tank has been connected	Inlet hose and Return hose routing	Connected properly	OK
	Fuel gauge	Visual inspection	After the inspection, pull out the remaining fuel	Confirm the Fuel gauge indication	Empty	OK
	ECM memory reset		Connect Diagnosis tool [TECH2] and connect wire lead CN No1 to the ground, then Key switch [ON] , also hold memory clear switch for 3secs, then key switch [OFF] again	Diagnosis lamp error code	No error code flush light	N / A

- Notice 1: Every inspection data are based on 20deg C (70 deg F) for reference  
 2: External fuel tank connection and fuel gauge inspection are not necessary for -A models  
 3: Always stop the engine first before selecting output selector switch

Shindaiwa Corporation Service Division