

QUICK START GUIDE



WHISPERWATT™ SERIES MODELS

DCA150SSJU4F3

DCA180SSJU4F3

DCA220SSJU4F3

60 Hz GENERATORS

(ISUZU BR-4JJ1X/BR-4HK1X DIESEL ENGINES)

Revision #0 (03/11/25)

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GENERATOR START-UP PROCEDURE (MANUAL)

WARNING

DO NOT operate this equipment without first reading and understanding all relevant safety information. Refer to the **Safety Information** section in the operation manual provided with this equipment.

NOTICE

Make sure all necessary setup and inspections have been performed prior to operating this equipment. Refer to the **Inspection/Setup** section in the operation manual.

NOTICE

This Quick Start Guide contains instructions for single-generator use only. For information regarding parallel operation of multiple generators, refer to the operation manual.

BEFORE STARTING

CAUTION

The engine's exhaust contains harmful emissions. **ALWAYS** have adequate ventilation when operating. Direct exhaust away from nearby personnel.

WARNING

NEVER manually start the engine with the **main, GFCI or auxiliary** circuit breakers in the **ON** (closed) position.

1. Place the **main, auxiliary, and GFCI** circuit breakers (Figure 1) in the **OFF** position prior to starting the engine.

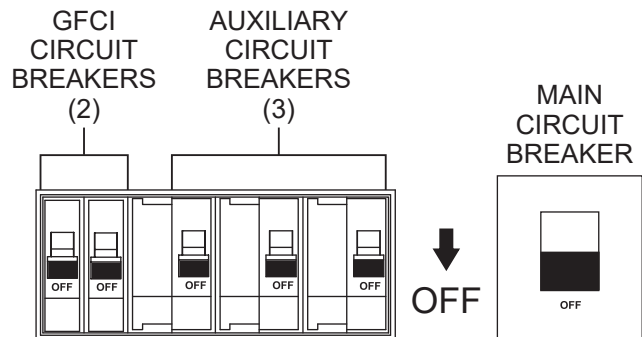


Figure 1. Main, Auxiliary, And GFCI Circuit Breakers (OFF)

2. Make sure the Voltage Selector switch (model DCA150SSJU4F3) or voltage change-over board (models DCA180SSJU4F3 and DCA220SSJU4F3) has been configured for the desired output voltage.

NOTICE

Make sure the tie bolts securing the voltage change-over board bus bars are **secure** and **tight**. The possibility exists of arcing that could cause a fire. Torque bolts to 65.0 lbf·in (14.7 N·m).

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- Connect the load to the **receptacles, output terminal lugs**, or optional **cam-loks** as shown in Figure 2. These load connection points can be found on the output terminal panel and the output terminal panel's hard wire hookup panel.

NOTICE

ALWAYS make sure that the connections to the UVW0 terminals are **secure** and **tight**. The possibility exists of arcing that could cause a fire. Torque tie bolts as shown in Table 1.

Table 1. Output Terminal Tie Bolt Torque Specs

Model	Tie Bolt Torque Spec	
	lbf-in	N-m
DCA150SSJU4F3	554.9	62.7
DCA180SSJU4F3	1088.6	123.0
DCA220SSJU4F3	554.9	62.7

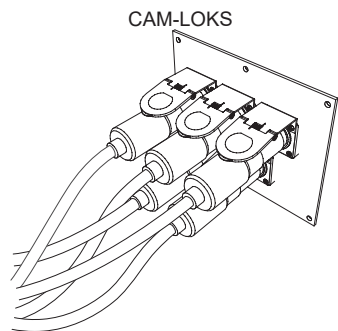
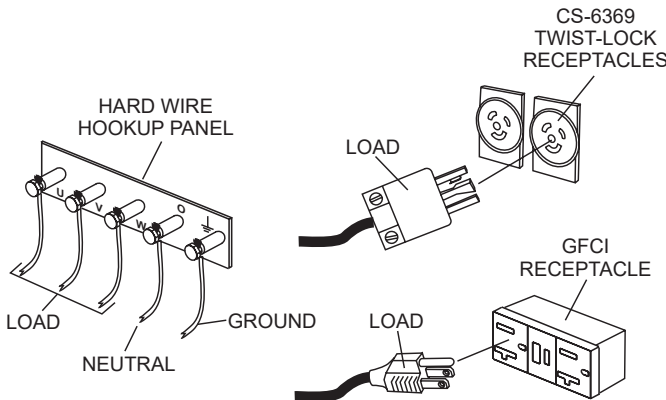


Figure 2. Connecting Loads

- Close all engine enclosure doors (Figure 3).

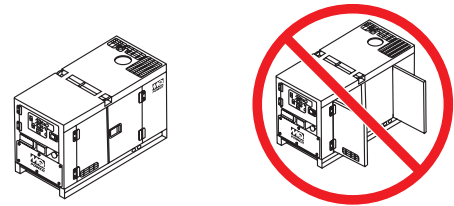


Figure 3. Engine Enclosure Doors

STARTING (MANUAL)

- Place the **Engine Speed** switch in the **LOW** position (Figure 4).



Figure 4. Engine Speed Switch (Low Position)

- To start the engine, place the **Auto Start/Stop** switch in the **MANUAL** position (Figure 5).

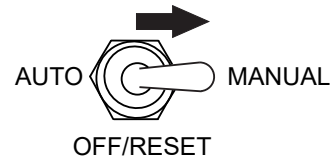


Figure 5. Auto Start/Stop Switch (Manual Position)

NOTICE

If the engine fails to start within three attempts, the Shutdown lamp will illuminate and the Auto Start/Stop switch must be placed in the Off/Reset position before the next attempt.

NOTICE

The engine will pre-heat automatically in cold weather conditions. "Glow Plug Hold" message will be displayed and the engine will start automatically after pre-heating.

- Once the engine starts, let the engine run for 1–2 minutes to warm up. For operation in below-freezing weather temperatures, this warmup period must be extended to 5–7 minutes. During the warmup period, check for any abnormal noise, vibration, or fluid leakage. Check the gauges on the control panel. If any abnormalities exist, shut down the engine and correct the problem.

GENERATOR START-UP PROCEDURE (MANUAL)

4. After the warmup process has completed, place the **Engine Speed switch** in the **HIGH** (up) position. The engine speed will increase to 1,800 rpm and the unit is now ready for operation.



Figure 6. Engine Speed Switch (High Position)

5. The generator's **frequency meter** (Figure 7) should be displaying the 60-cycle output frequency in **HERTZ**.

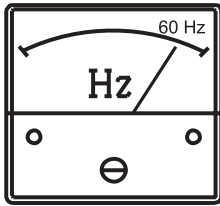


Figure 7. Frequency Meter

6. The generator's **AC voltmeter** (Figure 8) will display the generator's output in **VOLTS**.

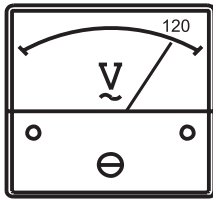


Figure 8. Voltmeter

7. If the voltage is not within the specified tolerance, use the **voltage regulator** (Figure 9) to increase or decrease the desired voltage.

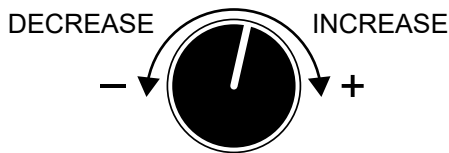


Figure 9. Voltage Regulator

8. The **ammeter** (Figure 10) will indicate **zero amps** with no load applied. When a load is applied, the ammeter will indicate the amount of current that the load is drawing from the generator.

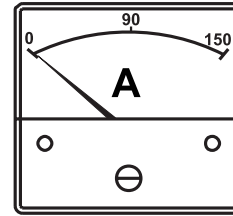


Figure 10. Ammeter (No Load)

9. The **engine oil pressure gauge** (Figure 11A) will indicate the oil pressure of the engine. Under normal operating conditions the oil pressure should be approximately 46 psi (317 kPa). When starting the generator the oil pressure may read a little higher, but after the engine warms up the oil pressure should return to the correct pressure range.

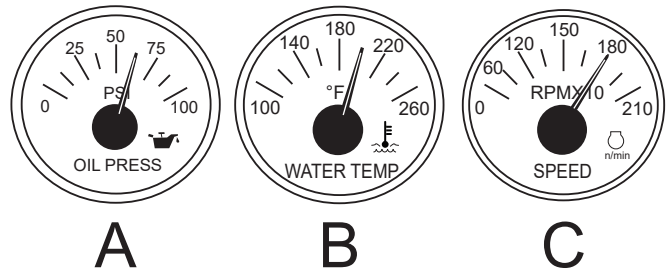


Figure 11. Engine Gauges

10. The **coolant temperature gauge** (Figure 11B) will indicate the coolant temperature. Under normal operating conditions the coolant temperature should be between 185°F and 207°F (85°–97°C).

11. The **tachometer** (Figure 11C) will indicate the speed of the engine when the generator is operating. Under normal operating conditions, this gauge should indicate 1,200 rpm when the Engine Speed switch is the LOW position, and 1,800 rpm when the Engine Speed switch is in the HIGH position.

GENERATOR START-UP PROCEDURE (MANUAL)

12. Place the **main, auxiliary, and GFCI** circuit breakers in the **ON** position (Figure 12).

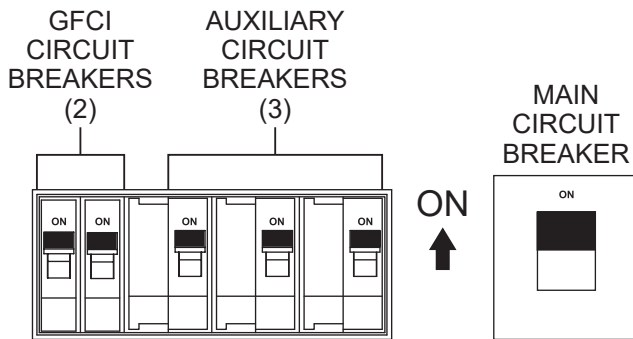


Figure 12. Main, Auxiliary, And GFCI Circuit Breakers (ON)

13. Observe the generator's ammeter (Figure 13) and verify it reads the anticipated amount of current with respect to the load. The ammeter will only display a current reading if a load is in use.

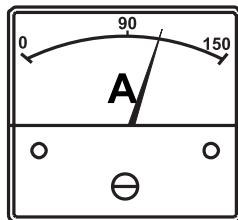


Figure 13. Ammeter (Load)

14. Verify that the **generator load gauge** (Figure 14) reads the anticipated percentage of load. It is recommended the load be above the red area (20%) for maintaining sufficient exhaust temperature.

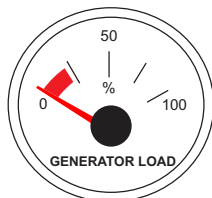


Figure 14. Generator Load Gauge

15. The generator will run until manually stopped or an abnormal condition occurs.

GENERATOR START-UP PROCEDURE (AUTO MODE)

STARTING (AUTO MODE)

DANGER



Before connecting this generator to any building's electrical system, a **licensed electrician** must install an **isolation (transfer) switch**. Serious damage to the building's electrical system may occur without this transfer switch.

NOTICE

When connecting the generator to an isolation (transfer) switch, **ALWAYS** have power applied to the generator's internal battery charger. This will ensure that the engine will not fail due to a dead battery.

NOTICE

When the generator is set to **AUTO** mode, the generator will **automatically start** in the event of commercial power falling below a prescribed level by means of a contact closure that is generated automatically by a transfer switch.

WARNING

When operating the generator in **AUTO** mode, remember that the generator can start up at any time without warning. **NEVER** attempt to perform any maintenance while the generator is in Auto mode.

CAUTION

The Engine Speed switch **must** be set to the **High position** when running in **Auto mode**. Failing to set the switch in the proper position can result in damage to the generator when it turns on.

NOTICE

When the **Auto Start/Stop switch** is placed in the **AUTO** position, the engine glow plugs will be warmed and the engine will start automatically.

NOTICE

The battery charger option can only be operated when the generator is in Manual Start mode.

1. Perform steps 1–4 under **Before Starting** in the **Generator Start-Up Procedure (Manual)** section.
2. Place the **Engine Speed switch** in the **HIGH** position (Figure 15).



Figure 15. Engine Speed Switch (High Position)

3. Place the **Auto Start/Stop switch** (Figure 16) in the **AUTO** position.



Figure 16. Auto Start/Stop Switch (Auto Position)

4. Once the start signal is received (the remote-start contacts are closed), the pre-heating process will begin. When the pre-heating process has completed, the engine will start automatically and accelerate to rated speed. When the remote-start contacts are opened, the engine will stop.
5. If the engine fails to start, perform the manual starting procedure.

NOTICE

If the unit has **PowerBalance®** installed, once the main breaker is closed, the **PowerBalance®** should activate after 1 minute if the load is below 30% of the rated load.

If at any time the load spikes to 90% or more, the **PowerBalance®** will immediately drop out and wait 5 minutes to re-evaluate the load.

GENERATOR SHUTDOWN PROCEDURE

NORMAL SHUTDOWN PROCEDURE

WARNING

NEVER stop the engine suddenly except in an emergency.

To shut down the generator, use the following procedure:

1. Place the load's ON/OFF switch in the **OFF** position.
2. Place the **main, auxiliary, and GFCI** circuit breakers (Figure 17) in the **OFF** position.

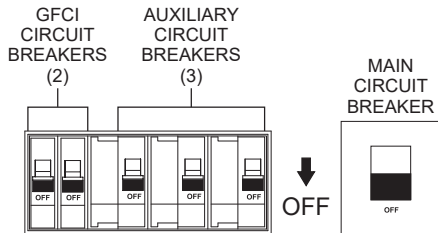


Figure 17. Main, Auxiliary, And GFCI Circuit Breakers (OFF)

3. Place the **Engine Speed switch** in the **LOW** position (Figure 18).



Figure 18. Engine Speed Switch (Low Position)

4. Let the engine cool by running it at low speed for 3–5 minutes with no load applied.
5. Place the **Auto Start/Stop switch** (Figure 19) in the **OFF/RESET** position.

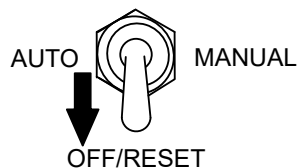


Figure 19. Auto Start/Stop Switch (Off/Reset Position)

NOTICE

DO NOT disconnect the battery cables immediately after the engine stops. Wait for at least 30 seconds before disconnecting the battery cables.

6. Allow adequate time for cooling, then inspect the entire generator for any damage or loosening of components that may have occurred during operation.

EMERGENCY SHUTDOWN PROCEDURE

NOTICE

The **Emergency Stop switch** should only be used to stop the engine in case of an emergency or to lock out operation during service. The Emergency Stop switch should **NEVER** be used for routine stopping of the engine.

1. To stop the engine in the event of an emergency, press the **Emergency Stop switch** (Figure 20).

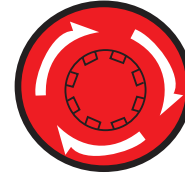


Figure 20. Emergency Stop Switch

2. Place the **main, auxiliary, and GFCI** circuit breakers in the **OFF** position as shown in Figure 17.
3. The Emergency Stop switch is a push-locked type switch. The switch contact can only be released by rotating the button in the clockwise direction. The engine cannot be restarted until the contact is released (closed).

AUTOMATIC SHUTDOWN SYSTEM

This unit is equipped with safety devices that will automatically shut down the engine when a fault occurs. The Shutdown lamp on the controller will illuminate and diagnostic trouble codes will be displayed to signify the reason for the shutdown. Refer to the **Troubleshooting** section of the operation manual for more information.

NOTICE

Before inspecting the generator after an automatic shutdown, place the Auto Start/Stop switch in the **OFF/RESET** position, and place all circuit breakers in the **OFF** position. Allow adequate time for cooling before troubleshooting. When all faults have been cleared, restart the engine according to the **Generator Startup Procedure** section.

QUICK START GUIDE

HERE'S HOW TO GET HELP

PLEASE HAVE THE MODEL AND SERIAL
NUMBER ON HAND WHEN CALLING

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