

# OPERATION AND PARTS MANUAL



## **BRAND SERIES MODEL DCA-45SSIU2 WHISPERWATT™ GENERATOR (STANDARD)**

PARTS LIST NO. M1870300034A  
Revision #7 (06/13/07)

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[www.multiquip.com](http://www.multiquip.com)



**THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.**



# **WARNING**



**CALIFORNIA — Proposition 65 Warning**

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.



**MQ POWER DCA-45SSIU2  
AC GENERATOR**

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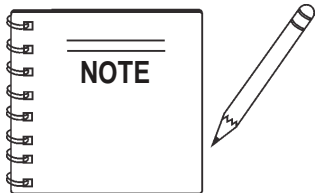
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**Specification and part number are subject to change without notice.**

# PARTS ORDERING PROCEDURES

## When ordering parts, please supply the following information:

- Dealer account number
- Dealer name and address
- Shipping address (if different than billing address)
- Return fax number
- Applicable model number
- Quantity, part number and description of each part
- Specify preferred method of shipment:
  - ✓ FedEx or UPS Ground
  - ✓ FedEx or UPS Second Day or Third Day
  - ✓ FedEx or UPS Next Day
  - ✓ Federal Express Priority One
  - ✓ DHL
  - ✓ Truck

*Note: Unless otherwise indicated by customer, all orders are treated as "Standard Orders", and will ship within 24 hours. We will make every effort to ship "Air Shipments" the same day that the order is received, if prior to 2PM west coast time. "Stock Orders" must be so noted on fax or web forms.*



## Here's how to get help...

*Please have the model and serial number on hand when calling.*

### Parts Department

800-427-1244 Fax: 800-672-7877  
310-537-3700 Fax: 310-637-3284

### Mayco Parts

800-306-2926 Fax: 800-672-7877  
310-537-3700 Fax: 310-637-3284

### Service Department

800-478-1244 Fax: 310-537-4259  
310-537-3700

### MQ Power Service Department

800-835-2551 Fax: 310-638-8046  
310-537-3700

### Warranty Department

800-421-1244, Ext. 279 Fax: 310-537-1173  
310-537-3700, Ext. 279

### Multiquip's Main Phone Numbers

800-421-1244 Fax: 310-537-3927  
310-537-3700

## Place Your Parts Order Via Web or Fax For Even More Savings!

### Extra Discounts!

All parts orders which include complete part numbers and are received by our automated web parts order system, or by fax qualify for the following extra discounts:

Ordered via	Standard orders	Stock orders (\$750 list and above)
Fax	3%	10%
Web	5%	10%

### Special freight allowances when you order 10 or more line items via Web or Fax! \*\*

FedEx Ground Service **at no charge for freight**  
No other allowances on freight shipped by any other carrier.

NOTE: DISCOUNTS ARE SUBJECT TO CHANGE



**MULTIQUIP INC.**  
18910 WILMINGTON AVENUE  
POST OFFICE BOX 6254  
CARSON, CALIFORNIA 90749  
310-537-3700 • 800-421-1244  
FAX: 310-537-3927  
E-MAIL: mq@multiquip.com  
WWW: multiquip.com

**Direct TOLL-FREE access  
to our Parts Department:**

Toll-free nationwide — 800-427-1244

# DCA-45SSIU2 — SPECIFICATIONS

Table 1. Generator Specifications		
<b>Model</b>	<b>DCA-45SSIU2</b>	
<b>Type</b>	Revolving field, self ventilated, open protected type synchronous generator	
<b>Armature Connection</b>	Star with Neutral	Zig Zag
<b>Phase</b>	3	Single
<b>Standby Output</b>	47.7 KVA (38.2 KW)	27.6 KW
<b>Prime Output</b>	45 KVA (36 KW)	26 KW
<b>Voltage</b>	240V or 480V	240/120V
<b>Frequency</b>	60 Hz	
<b>Speed</b>	1,800 rpm	
<b>Power Factor</b>	0.8	1
<b>Aux. AC Power</b>	Single Phase, 60 Hz	
<b>Voltage</b>	120 VAC	
<b>Output</b>	4.8 KW (2.4 KW x 2)	
Engine Specifications		
<b>Model</b>	<b>ISUZU B-4BG1</b>	
<b>Type</b>	4 Cycle, water-cooled, direct injection	
<b>No. of Cylinders</b>	4 cylinders	
<b>Bore x Stroke</b>	4.13 in. x 4.92 in. (105 mm x 125 mm)	
<b>Rated Output</b>	55.2 HP/1,800 rpm	
<b>Displacement</b>	268 cu. in. (4,392 cc)	
<b>Starting</b>	Electric	
<b>Coolant Capacity</b>	5.3 gal. (20 liters)	
<b>Lube Oil Capacity</b>	3.4 gal. (12.9 liters)	
<b>Fuel Consumption</b>	2.7 gal. (10.3L)/hr at <b>full load</b>	2.0 gal. (7.6L)/hr at <b>3/4 load</b>
	1.5 gal. (5.7L)/hr at <b>1/2 load</b>	1.1 gal. (4.2L)/hr at <b>1/4 load</b>
<b>Battery</b>	12V- 100AH	
<b>Fuel</b>	#2 Diesel Fuel	

# DCA-45SSIU2 — DIMENSIONS (SIDE AND FRONT)

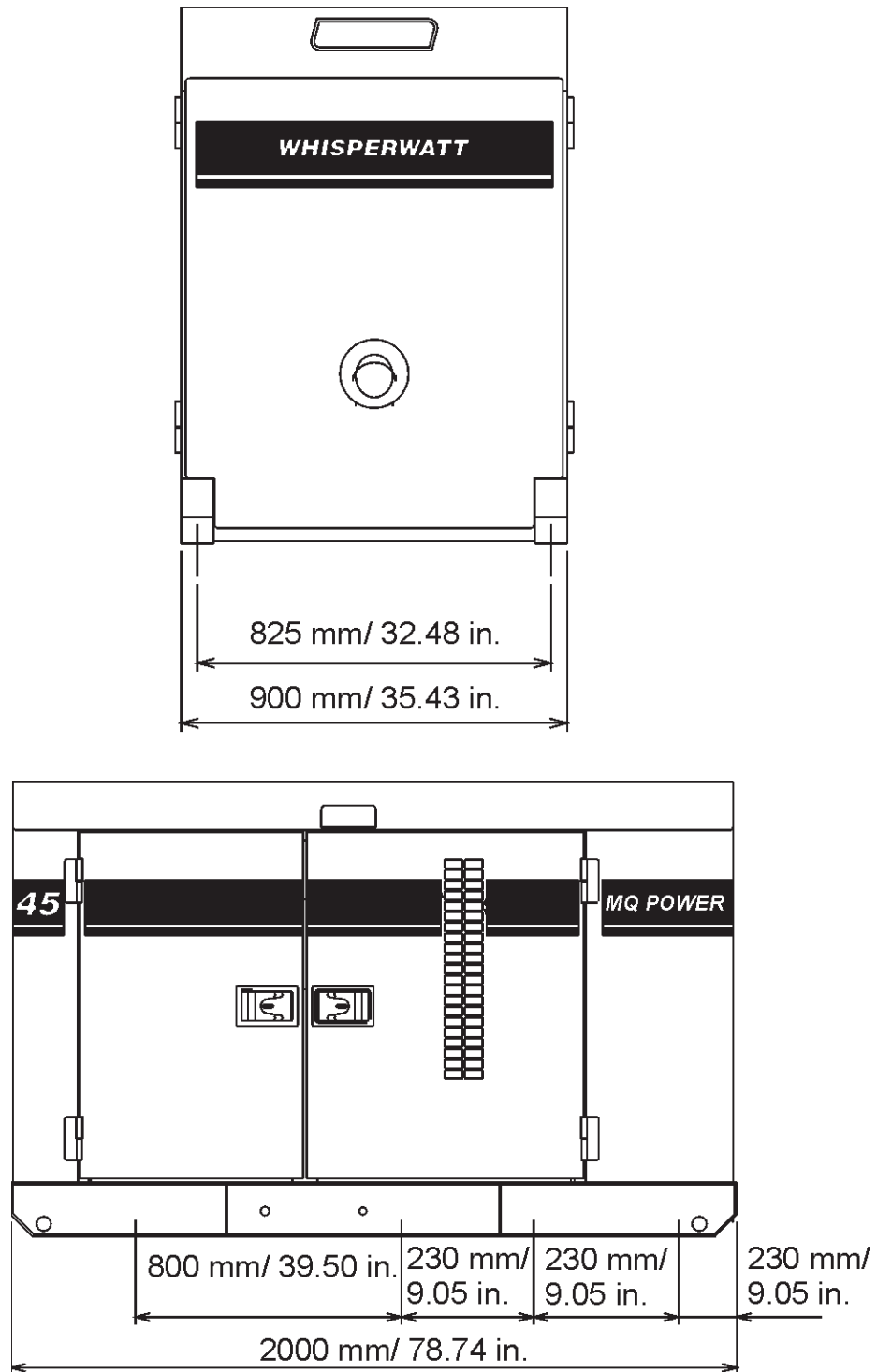


Figure 1. Dimensions

# DCA-45SSIU2 — DIMENSIONS (TOP AND REAR)

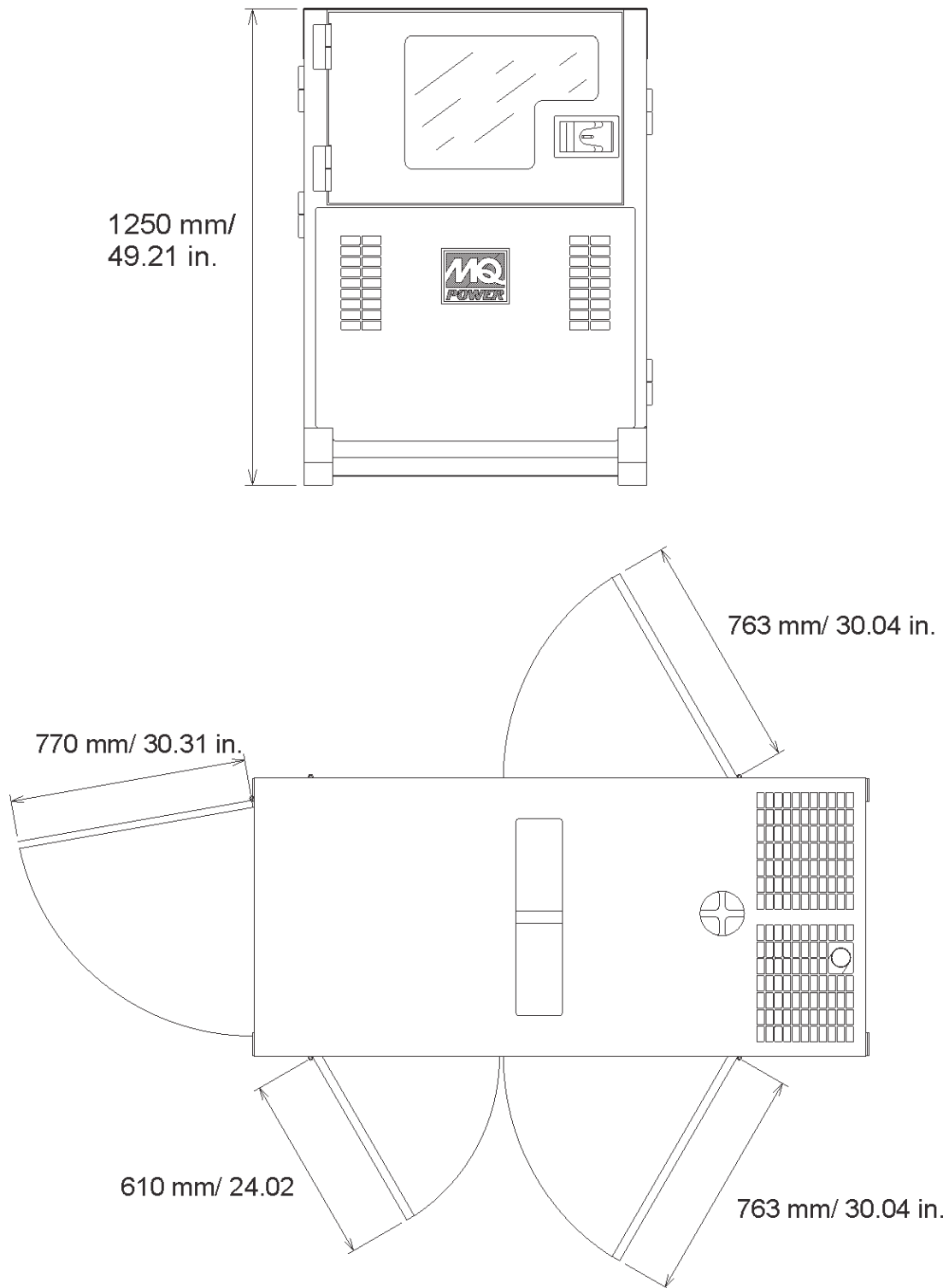


Figure 2. Dimensions

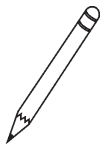
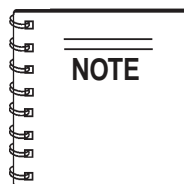




# DCA-45SSIU2 — SAFETY MESSAGE ALERT SYMBOLS

## FOR YOUR SAFETY AND THE SAFETY OF OTHERS!

Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the Safety Messages and Operating Instructions could result in injury to yourself and others.



This Owner's Manual has been developed to provide complete instructions for the safe and efficient operation of the MQ Power **Model DCA45SSIU2 WHISPERWATT™ GENERATOR**.

**Before using this GENERATOR, ensure that the operating individual has read and understands all instructions in this manual.**

## SAFETY MESSAGE ALERT SYMBOLS

The three (3) Safety Messages shown below will inform you about potential hazards that could injure you or others. The Safety Messages specifically address the level of exposure to the operator, and are preceded by one of three words: **DANGER**, **WARNING**, or **CAUTION**.



**DANGER:** You **WILL** be **KILLED** or **SERIOUSLY** injured if you **DO NOT** follow directions.



**WARNING:** You **CAN** be **KILLED** or **SERIOUSLY** injured if you **DO NOT** follow directions.



**CAUTION:** You **CAN** be injured if you **DO NOT** follow directions.

Potential hazards associated with trowel operation will be referenced with "**Hazard Symbols**" which appear throughout this manual, and will be referenced in conjunction with Safety "**Message Alert Symbols**".

## HAZARD SYMBOLS



### Lethal Exhaust Gases



Engine exhaust gases contain poisonous carbon monoxide. This gas is colorless and odorless, and can cause death if inhaled. **NEVER** operate this equipment in a confined area or enclosed structure that does not provide ample free flow air.



### Explosive Fuel



Diesel fuel is extremely flammable, and its vapors can cause an explosion if ignited. **DO NOT** start the engine near spilled fuel or combustible fluids. **DO NOT** fill the fuel tank while the engine is running or hot. **DO NOT** overfill tank, since spilled fuel could ignite if it comes into contact with hot engine parts or sparks from the ignition system. Store fuel in approved containers, in well-ventilated areas and away from sparks and flames. **NEVER** use fuel as a cleaning agent.



### Burn Hazards



Engine components can generate extreme heat. To prevent burns, **DO NOT** touch these areas while the engine is running or immediately after operations. **NEVER** operate the engine with heat shields or heat guards removed.



### Rotating Parts



**NEVER** operate equipment with covers, or guards removed. Keep **fingers, hands, hair** and **clothing** away from all moving parts to prevent injury.

# DCA-45SSIU2 — SAFETY MESSAGE ALERT SYMBOLS



## Accidental Starting



**OFF** **ALWAYS** place the engine ON/OFF switch in the **OFF** position, when the trowel is not in use.



## Respiratory Hazard



**ALWAYS** wear approved respiratory protection.



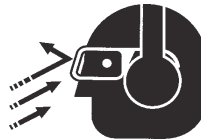
## Over Speed Conditions



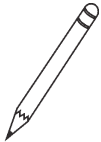
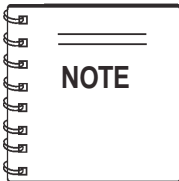
**NEVER** tamper with the factory settings of the engine governor or settings. Personal injury and damage to the engine or equipment can result if operating in speed ranges above maximum allowable.



## Sight and Hearing hazard



**ALWAYS** wear approved eye and hearing protection.



This **generator**, other property, or the surrounding environment could be damaged if you do not follow instructions.



## Equipment Damage Messages

Other important messages are provided throughout this manual to help prevent damage to your trowel, other property, or the surrounding environment.

# DCA-45SSIU2 — RULES FOR SAFE OPERATION

## CAUTION:



Failure to follow instructions in this manual may lead to serious injury or even death! This equipment is to be operated by trained and qualified personnel only! This equipment is for industrial use only.

The following safety guidelines should always be used when operating the **DCA-45SSIU2 Generator**:

### GENERAL SAFETY

- **DO NOT** operate or service this equipment before reading this entire manual.



- This equipment should not be operated by persons under 18 years of age.

- **NEVER** operate this equipment without proper protective clothing, shatterproof glasses, steel-toed boots and other protective devices required by the job.



- **NEVER** operate this equipment when not feeling well due to fatigue, illness or taking medicine.



- **NEVER** operate this equipment under the influence of drugs or alcohol.



- **NEVER** use accessories or attachments, which are not recommended by MQ Power for this equipment. Damage to the equipment and/or injury to user may result.

- Manufacture does not assume responsibility for any accident due to equipment modifications.

- Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.

- **ALWAYS** check the machine for loosened threads or bolts before starting.

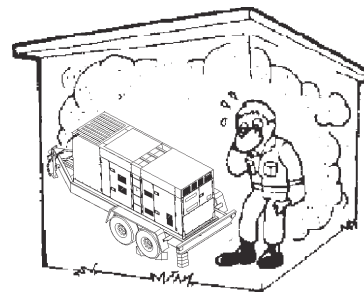
- **NEVER** operate the generator in an explosive atmosphere or near combustible materials. An explosion or fire could result causing severe **bodily harm or even death**.

- **NEVER** touch the hot exhaust manifold, muffler or cylinder. Allow these parts to cool before servicing engine or generator.



- **High Temperatures** – Allow the engine to cool before performing service and maintenance functions. Contact with **hot!** components can cause serious burns.

- The engine of this generator requires an adequate free flow of cooling air. **NEVER** operate the generator in any enclosed or narrow area where free flow of the air is restricted. If the air flow is restricted it will cause serious damage to the generator or engine and may cause injury to people. The generator engine gives off **DEADLY** carbon monoxide gas.



- **ALWAYS** make sure generator is properly grounded.

- **NEVER** use gas piping as an electrical ground.

- **DO NOT** place hands or fingers inside generator engine compartment when engine is running.

- **ALWAYS** make sure generator installation is accordance with **national and local electrical codes**.

- **ALWAYS** have a qualified electrician perform the generator wiring installation.

- **NEVER** power cables or cords **lay in water**.

- **NEVER stand in water** while AC power from the generator is being transfer to a load.

- **NEVER** use a defective or frayed power cable. Check the cable for cuts in the insulation.

- **NEVER** use a extension cord that is frayed or damaged where the insulation has been cut.

- **ALWAYS** make certain that proper extension cord has been selected for the job See Table 5.

- The electrical voltage required to operate the generator can cause severe injury or even death through physical contact with live circuits. Turn all circuit breakers **OFF** before performing maintenance on the generator.

# DCA-45SSIU2 — RULES FOR SAFE OPERATION

■ **ALWAYS** make sure that electrical circuits are properly **grounded** per the **National Electrical Code (NEC)** and local codes before operating generator. Severe **injury** or **death!** by electrocution can result from operating an ungrounded generator.

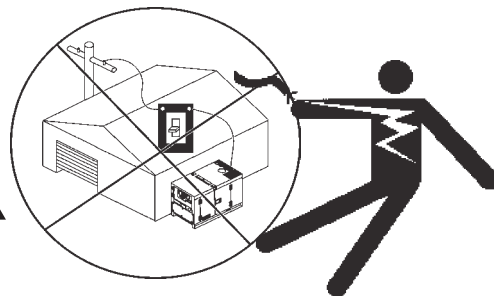
■ **ALWAYS** be sure the operator is familiar with proper safety precautions and operations techniques before using generator.

■ **ALWAYS** store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children.

■ **ALWAYS** read, understand, and follow procedures in Operator's Manual before attempting to operate equipment.



## DANGER:



■ Backfeed to a utility system can cause **electrocution** and or property damage. **DO NOT** connect to any building's electrical system except through an approved device or after building main switch is opened. **ALWAYS** have a licensed electrician perform the installation

## DANGER:



**Never** use damaged or worn cables when connecting equipment to the generator.

Make sure power connecting cables are

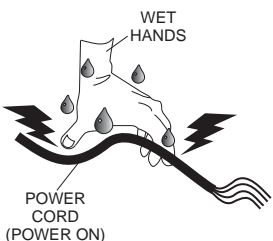
securely connected to the generator's output terminals, insufficient tightening of the terminal connections may cause damage to the generator and electrical shock.



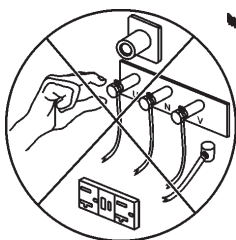
## DANGER:



**NEVER** grab or touch a live power cord with wet hands, the possibility exists of electrical shock, electrocution, and even **death!**



## DANGER:



■ **NEVER** touch output terminals during operation. This is extremely dangerous. **ALWAYS** stop the machine and place the circuit breaker in the "OFF" position when contact with the output terminals is required. There exists the possibility of **electrocution, electrical shock or burn, which can cause severe bodily harm or even death!**

## CAUTION:



**DO NOT** touch or open any of the below mentioned components while the generator is running. Always allow sufficient time for the engine and generator to cool before performing maintenance.

### Radiator

1. **Radiator Cap** - Removing the radiator cap while the engine is hot will result in high pressurized, boiling water to gush out of the radiator, causing severe scalding to any persons in the general area of the generator.
2. **Coolant Drain Plug** - Removing the coolant drain plug while the engine is hot will result in hot coolant to gush out of the coolant drain plug, therefore causing severe scalding to any persons in the general area of the generator.
3. **Engine Oil Drain Plug** - Removing the engine oil drain plug while the engine is hot will result in hot oil to gush out of the oil drain plug, therefore causing severe scalding to any persons in the general area of the generator.

### Maintenance Safety

■ **NEVER** lubricate components or attempt service on a running machine.

■ **ALWAYS** allow the machine a proper amount of time to cool before servicing.



■ Keep the machinery in proper running condition.

■ Fix damage to the machine immediately and always replace broken parts.

# DCA-45SSIU2 — RULES FOR SAFE OPERATION

- **NEVER** Run engine without air filter. Severe engine damage may occur.
- **ALWAYS** service air cleaner frequently to prevent engine malfunction.
- **ALWAYS** disconnect the **negative battery terminal** before performing service on the generator.
- **ALWAYS** be sure the operator is familiar with proper safety precautions when operating the generator set.
- **ALWAYS** store equipment properly when not in use.
- **DO NOT** leave the generator running in the **manual mode** unattended.
- **DO NOT** allow unauthorized people to operate this equipment.
- **ALWAYS** read, understand, and follow procedures in Operator's Manual before attempting to operate equipment.
- Refer to the **Isuzu Engine Owner's Manual** for engine technical questions or information.

## DANGER:



Pay close attention to ventilation when operating the generator inside tunnels and caves. The engine exhaust contains noxious elements. Engine exhaust must be routed to a ventilated area.



## Generator Grounding

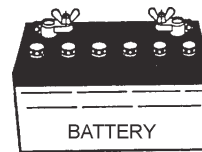
To guard against electrical shock and possible damage to the equipment, it is important to provide a good **EARTH** ground.

Article 250 (Grounding) of the **National Electrical Code** (NEC) provides guide lines for proper grounding and specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

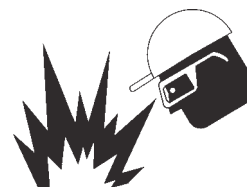
**ALWAYS** be sure to use the ground terminal (green wire) when connecting a load to the UVWO output terminals.

## Battery

The battery contains acids that can cause injury to the eyes and skin. To avoid eye irritation, **always** wear safety glasses. Use well insulated gloves when picking up the battery. Use the following guidelines when handling the battery:



1. **DO NOT** drop the battery. There is the possibility of risk that the battery may explode.
2. **DO NOT** expose the battery to open flames, sparks, cigarettes etc. The battery contains combustible gases and liquids. If these gases and liquids come in contact with a flame or spark, an explosion could occur.
3. **ALWAYS** keep the battery charged. If the battery is not charged a buildup of combustible gas will occur.
4. **ALWAYS** keep battery charging and cables in good working condition. Repair or replace all worn cables.
5. **ALWAYS** recharge the battery in an vented air environment, to avoid risk of a dangerous concentration of combustible gases.
6. In case the battery liquid (dilute sulfuric acid) comes in contact with **clothing or skin**, rinse skin or clothing immediately with plenty of water.
7. In case the battery liquid (dilute sulfuric acid) comes in contact with your **eyes**, rinse eyes immediately with plenty of water, then contact the nearest doctor or hospital, and seek medical attention.



## Transporting

- **ALWAYS** shutdown engine before transporting.
- Tighten both fuel tank caps securely.
- If generator is mounted on a trailer, make sure trailer complies with all local and state safety transportation laws. See next page "**Towing Safety Precautions**" for basic towing techniques.

## Towing Safety Precautions

### CAUTION:



Conform to **Department of Transportation (DOT) Safety Towing Regulations** before towing generator.

To reduce the possibility of an accident while transporting the generator on public roads, always make sure the trailer that supports the generator and the towing vehicle are in good operating condition and both units are mechanically sound.

The following list of suggestions should be used when towing your generator:

- Make sure the hitch and coupling of the towing vehicle are rated equal to, or greater than the trailer "gross vehicle weight rating" (GVWR) of 6,000 lbs.
- **ALWAYS** inspect the hitch and coupling for wear. **NEVER** tow a trailer with defective hitches, couplings, chains etc.
- Check the tire air pressure on both towing vehicle and trailer. **Trailer tires should be inflated to 50 psi cold.** Also check the tire tread wear on both vehicles.
- **ALWAYS** make sure the trailer is equipped with a "Safety Chain".
- **ALWAYS** attach trailer's safety chains to towing vehicle properly.
- **ALWAYS** make sure the vehicle and trailer directional, backup, brake, and trailer lights are connected and working properly.
- The maximum speed for highway towing is **45 MPH** unless posted otherwise. Recommended off-road towing is not to exceed **10 MPH** or less depending on type of terrain.
- Place **chock blocks** underneath wheel to prevent **rolling**, while parked.
- Use the trailer's swivel jack to adjust the trailer height to a level position while parked.
- Avoid sudden stops and starts. This can cause skidding, or jack-knifing. Smooth, gradual starts and stops will improve towing.
- Avoid sharp turns.
- Trailer should be adjusted to a level position at all times when towing.
- Raise and lock trailer wheel stand in up position when transporting.
- DOT Requirements include the following:
  - Connect and test electric brake operation.
  - Secure portable power cables in cable tray with tie wraps.

### Emergencies

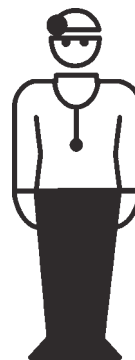
- **ALWAYS** know the location of the nearest **fire extinguisher**.



- **ALWAYS** know the location of the nearest **first aid kit**.



- In emergencies **always** know the location of the nearest phone or **keep a phone on the job site**. Also know the phone numbers of the nearest **ambulance, doctor** and **fire department**. This information will be invaluable in the case of an emergency.



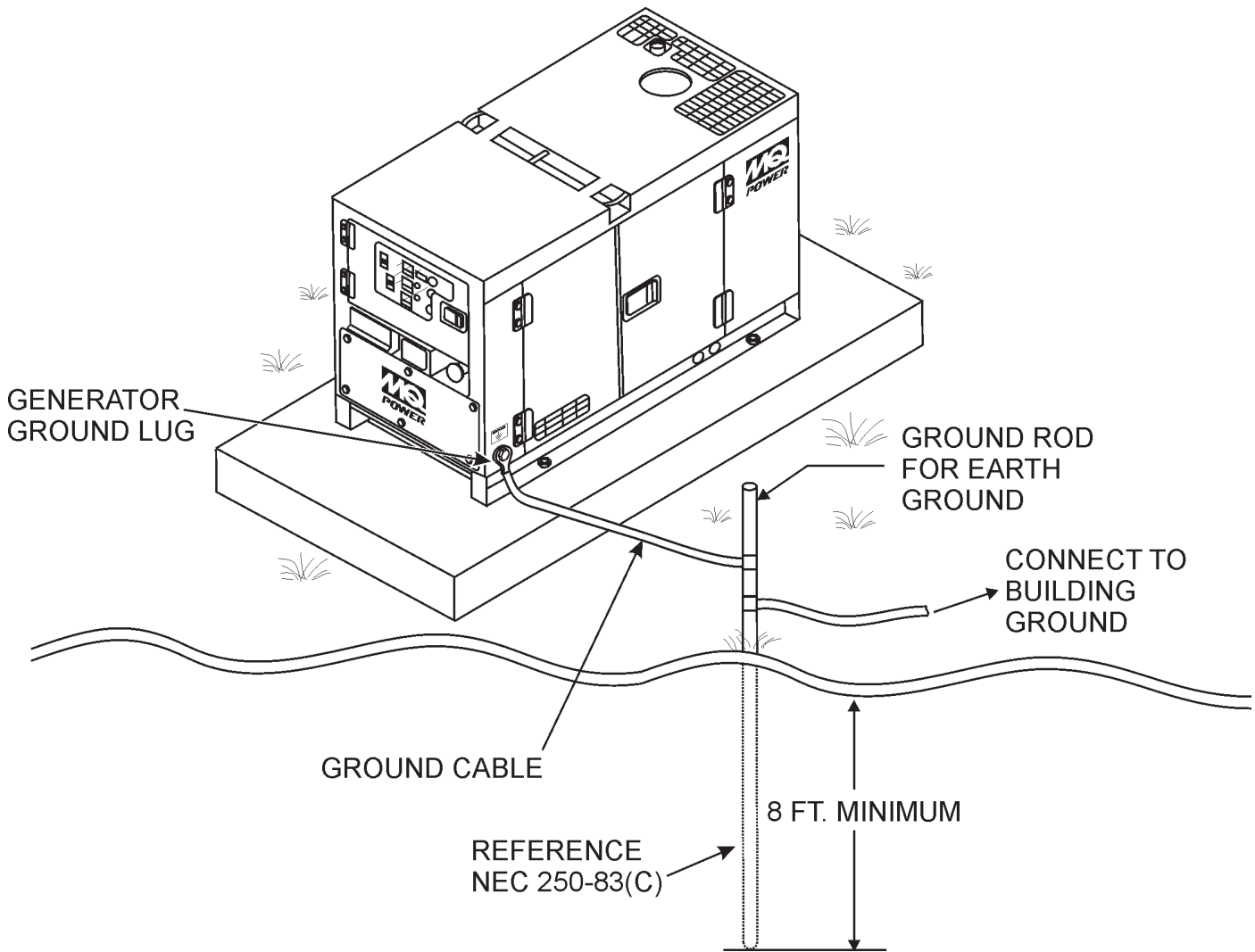


Figure 3. Typical Generator Grounding Application



## Outdoor Installation

Install the generator in a clear area. Make sure the generator is on secure level ground so that it cannot slide or shift around. Also install the generator in a manner so that the exhaust will not be discharged in the direction of nearby homes.

The installation site must be relatively free from moisture and dust. All electrical equipment should be protected from excessive moisture. Failure to do will result in deterioration of the insulation and will result in short circuits and grounding.

Foreign materials such as dust, sand, lint and abrasive materials have a tendency to cause excessive wear to engine and alternator parts.

## CAUTION:



Pay close attention to ventilation when operating the generator inside tunnels and caves. The engine exhaust contains noxious elements. Engine exhaust must be routed to a ventilated area.

## Indoor Installation

Exhaust gases from diesel engines are extremely poisonous. Whenever an engine is installed indoors the exhaust fumes must be vented to the outside. The engine should be installed at least two feet from any outside wall. Using an exhaust pipe which is too long or too small can cause excessive back pressure which will cause the engine to heat excessively and possibly burn the valves.

## Mounting

The generator must be mounted on a solid foundation (such as concrete) and set firmly on the foundation to isolate vibration of the generator when it is running. The generator must set at least 6 inches above the floor or grade level (in accordance to NFPA 110, Chapter 5-4.1). **DO NOT** remove the metal skids on the bottom of the generator. They are to resist damage to the bottom of the generator and to maintain alignment.

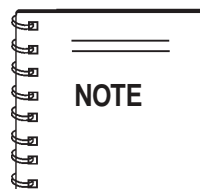
## Generator Grounding

To guard against electrical shock and possible damage to the equipment, it is important to provide a good **EARTH** ground.

Article 250 (Grounding) of the National Electrical Code (NEC) provides guide lines for proper grounding and specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

NEC articles 250-64(b) and 250-66 set the following grounding requirements:

1. Use one of the following wire types to connect the generator to earth ground.
  - a. Copper - 10 AWG (5.3 mm<sup>2</sup>) or larger.
  - b. Aluminum - 8 AWG (8.4 mm<sup>2</sup>) or larger.
2. When grounding the generator (Figure 3) connect the ground cable between the lock washer and the nut on the generator and tighten the nut fully. Connect the other end of the ground cable to earth ground.
3. NEC article 250-52(c) specifies that the earth ground rod should be buried a minimum of 8 ft. into the ground.



When connecting the generator to any buildings electrical system **ALWAYS** consult with a licensed electrician.

# DCA-45SSIU2 — TOWING SAFETY PRECAUTIONS

## Towing Safety Precautions

### CAUTION:



Check with your local county or state safety towing regulations before towing your generator.

To reduce the possibility of an accident while transporting the generator on public roads, always make sure the trailer (Figure 4) that supports the generator and the towing vehicle are in good operating condition and both units are mechanically sound.

The following list of suggestions should be used when towing your generator:

- Make sure the hitch and coupling of the towing vehicle are rated equal to, or greater than the trailer "gross vehicle weight rating" (GVWR).
- **ALWAYS** inspect the hitch and coupling for wear. **NEVER** tow a trailer with defective hitches, couplings, chains etc.
- Check the tire air pressure on both towing vehicle and trailer. Also check the tire tread wear on both vehicles.
- **ALWAYS** make sure the trailer is equipped with a "Safety Chain".

- **ALWAYS** attach trailer's safety chain to bumper of towing vehicle.
- **ALWAYS** make sure the vehicle and trailer directional, backup, brake, and trailer lights are connected and working properly.
- The maximum speed for highway towing is **55 MPH** unless posted otherwise. Recommended off-road towing is not to exceed **15 MPH** or less depending on type of terrain.
- Place *chocked blocks* underneath wheel to prevent **rolling**, while parked.
- Place *support blocks* underneath the trailer's bumper to prevent **tipping**, while parked.
- Use the trailer's hand winch to adjust the height of the trailer, then insert locking pin to lock wheel stand in place, while parked.
- Avoid sudden stops and starts. This can cause skidding, or jackknifing. Smooth, gradual starts and stops will improve gas mileage.
- Avoid sharp turns to prevent rolling.
- Remove wheel stand when transporting.
- **DO NOT** transport generator with fuel in tank.

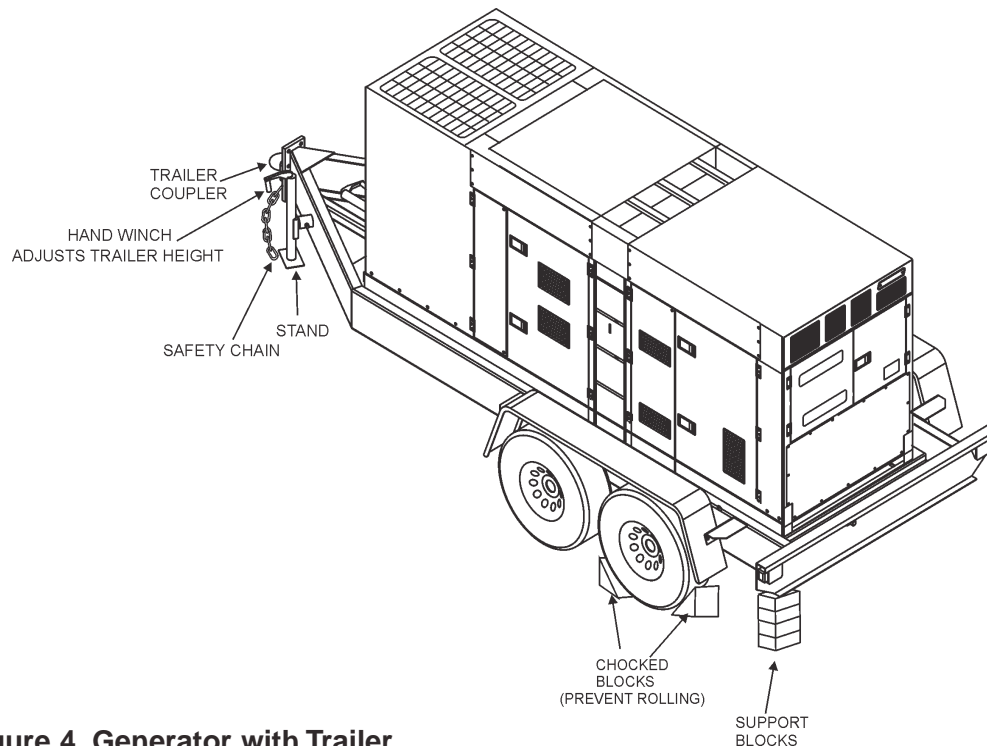


Figure 4. Generator with Trailer

## CAUTION:



**ALWAYS** make sure the trailer is in good operating condition. Check the tires for proper inflation and wear. Also check the wheel lug nuts for proper tightness.

### Explanation of Chart:

This section is to provide the user with trailer service and maintenance information. The service and maintenance guidelines referenced in this section apply a wide range of trailers. Remember periodic inspection of the trailer will ensure safe towing of the equipment and will prevent damage to the equipment and personal injury.

It is the purpose of this section to cover the major maintenance components of the trailer. The following trailer components will be discussed in this section:

- Brakes
- Tires
- Lug Nut Torquing
- Suspension
- Electrical
- Brake Troubleshooting Tables

Use the following definitions when reading Table 2.

1. **Fuel Cell** - Provides an adequate amount of fuel for the equipment in use. Fuel cells must be empty when transporting equipment.
2. **Braking System** - System employed in stopping the trailer. Typical braking systems are electric, surge, hydraulic, hydraulic-surge and air.
3. **GVWR**- Gross Vehicle Weight Rating (GVWR), is the maximum number of pounds the trailer can carry, including the fuel cell (empty).
4. **Frame Length** - Measurement is from the ball hitch to the rear bumper (reflector).
5. **Frame Length** - Measurement is from fender to fender
6. **Jack Stand** - Trailer support device with maximum pound requirement from the tongue of the trailer.
7. **Coupler** - Type of hitch used on the trailer for towing.
8. **Tire Size** - Indicates the diameter of the tire in inches (10,12,14, etc.), and the width in millimeters (175,185,205, etc.). The tire diameter must match the diameter of the tire rim.
9. **Tire Ply** - The tire ply (layers) number is rated in letters; 2-ply,4-ply,6-ply, etc.
10. **Wheel Hub** - The wheel hub is connected to the trailer's axle.
11. **Tire Rim** - Tires mounted on a tire rim. The tire rim must match the size of the tire.
12. **Lug Nuts** - Used to secure the wheel to the wheel hub. Always use a torque wrench to tighten down the lug nuts. See Table 17 and Figure 67 or lug nut tightening and sequence.
13. **Axle** - Indicates the maximum weight the axle can support in pounds, and the diameter of the axle expressed in inches (see Table 2). Please note that some trailers have a double axle. This will be shown as 2-6000 lbs., meaning two axles with a total weight capacity of 6000 pounds.
14. **Suspension** - Protects the trailer chassis from shocks transmitted through the wheels. Types of suspension used are leaf, Q-flex, and air ride.
15. **Electrical** - Electrical connectors (looms) are provided with the trailer so the brake lights and turn signals can be connected to the towing vehicle.
16. **Application** - Indicates which units can be employed on a particular trailer.

# DCA-45SSIU2 — TRAILER SPECIFICATIONS

**Table 2. Trailer Specifications**

MODEL	APPLICATION	FUEL CELL	BRAKE SYSTEM	GVWR	FRAME LENGTH	FRAME WIDTH	JACK STAND
TRLR-10W	SDW225, SGW250, TLW-300	NO	NO	1900LBS	96"	50"	800LB. FULL TILT WHEEL
TRLR-10	DCA10, TLG12, DCA-15	NO	NO	1900LBS	96"	50"	800LB. FULL TILT WHEEL
TRLR-10XF	DCA10, TLG-12, DCA15, TLW-300	52 GAL	NO	1900LBS	96"	50"	800LB. FULL TILT WHEEL
TRLR-225W	WELDERS, DA7000SS	NO	NO	2200LBS	85"	42"	800LB. FULL TILT WHEEL
TRLR-BLW400	BLW-400	NO	ELECTRIC	2700LBS	W/MAST 154" W/O 124"	55" (78" TALL)	800LB. FULL TILT WHEEL
TRLR-50X	DCA-25	NO	NO	2700LBS	124"	55"	800LB. FULL TILT WHEEL
TRLR-50XF	DCA-25	41 GAL	NO	2700LBS	124"	55"	800LB. FULL TILT WHEEL
TRLR-70W	DCA-45, -60, 70	NO	SURGE	7000LBS	186"	77"	2000LB. FLAT PAD
TRLR-70X	DCA-45, -60, 70	OPT	SURGE	7000LBS	138"	66"	2000LB. FLAT PAD
TRLR-70XF	DCA-45, -60, 70	53 GAL	SURGE	7000LBS	138"	66"	2000LB. FLAT PAD
TRLR-100XF	DCA-100, 125	150 GAL	HYDRAULIC SURGE	7000LBS	190"	76"	2000LB. FLAT PAD
TRLR-85/125	DCA-85, 100, 125	145 GAL	HYDRAULIC	10000LBS	186"	77"	2000LB. FLAT PAD
TRLR-150XF	DCA-150, 180	200 GAL	HYDRAULIC SURGE	11160LBS	204"	84"	5000 LB. FLAT PAD
TRLR-220XF	DCA-220	250 GAL	HYDRAULIC SURGE	14000LBS	222"	83"	5000 LB. FLAT PAD
TRLR-300XF	DCA-300	250 GAL	HYDRAULIC SURGE	18000LBS	238"	83"	5000 LB. FLAT PAD
TRLR-400XF	DCA-400	350 GAL	ELECTRIC	18000LBS	238"	83"	5000 LB. FLAT PAD
TRLR-600XF	DCA-600, 800	550 GAL	AIR	30000LBS	384"	96"	5000 LB. FLAT PAD
TRLR-800SX	DCA-600, 800	550 GAL	AIR	30000LBS	384"	96"	5000 LB. FLAT PAD

# DCA-45SSIU2 — TRAILER SPECIFICATIONS

**Table 2. Specifications (Con't)**

MODEL	COUPLER	TIRES	WHEELS	AXLE	HUBS	SUSPENSION	ELECTRICAL
TRLR-10W	2" BALL CLASS 2 ADJUSTABLE	175-13C	13"X4.50"	2200# 2X2	5 LUG	3 LEAF	4 WIRE LOOM W/ 4 POLE FLAT
TRLR-10	2" BALL CLASS 2 ADJUSTABLE	175-13C	13"X4.5"	2200#2X2	5 LUG	3 LEAF	4 POLE FLAT
TRLR-10XF	2" BALL CLASS 2 ADJUSTABLE	175-13C	13"X4.5"	2200#2X2	5 LUG	3 LEAF	4 POLE FLAT
TRLR-225W	2" BALL CLASS 2 ADJUSTABLE	175-13B	13X4.5"	2200#2X2	5 LUG	Q FLEX	4 POLE FLAT
TRLR-BLW 400	2" BALL CLASS 2 ADJUSTABLE	175-13C	13 X 4.5"	2200#2X2	5 LUG	3 LEAF	4 POLE FLAT
TRLR-50X	2" BALL CLASS	B78-13LRC	13"X4.50"	3500lbs. 2-3/8"	5 LUG	4 LEAF	4 POLE RUBBER FLAT
TRLR-50XF	2" BALL CLASS	B78-13LRC	13"X4.50"	3500lbs. 2-3/8"	5 LUG	4 LEAF	4 POLE RUBBER FLAT
TRLR-70W	2" BALL CLASS 3" ADJUSTABLE	205-14C BIAS (4)	14"X5"	3500lbs. 3"	5 LUG	5 LEAF	4 POLE RUBBER FLAT
TRLR-70X	2" BALL CLASS 3" ADJUSTABLE	205-14C BIAS (4)	14"X5"	3500lbs 3"	5 LUG	5 LEAF	4 POLE RUBBER FLAT
TRLR-70XF	2" BALL CLASS 3" ADJUSTABLE	205-14C BIAS (4)	14"X5"	3500lbs. 3"	5 LUG	5 LEAF	4 POLE RUBBER FLAT
TRLR-100XF	ADJUSTABLE 2- 5/6 OPT 3" EYE	205-15C BIAS (4)	14"X5.5"	3500lbs 3"	5 LUG	5 LEAF	4 WIRE LOOM
TRLR-85/125	ADJUSTABLE 2- 5/6 OPT 3" EYE	ST225/75R15D RADIAL (4)	14"x6"	(2)-6000lbs	6 LUG	7 LEAF	4 WIRE LOOM
TRLR-150XF	3" BALL EYE	750-16 E BIAS (4)	16"X7"	(2)-6000lbs	8 LUG	7 LEAF	4 WIRE LOOM
TRLR-220XF	3" EYE ADJUSTABLE	ST235/85R16E RADIAL(4)	16"X7"	(2)-7000lbs	8 LUG	Q FLEX	4 WIRE LOOM
TRLR-300XF	3" EYE ADJUSTABLE	ST235/85R16E RADIAL(6)	16"X7"	(2)-6000lbs	8 LUG	Q FLEX	4 WIRE LOOM
TRLR-400XF	3" EYE ADJUSTABLE	ST235/85R16E RADIAL(6)	16"X7"	(3)-7000lb- s.	8 LUG	Q FLEX	4 WIRE LOOM
TRLR-600XF	5TH WHEEL	ST215/75R17.5H RADIAL (8)	16"X7"	(3)-10000l- bs	8 LUG	7 LEAF	6 WIRE LOOM
TRLR-800AR	5TH WHEEL	ST215/75R17.5H RADIAL (8)	16"X7"	(3)-10000l- bs	8 LUG	AIR-RIDE	6 WIRE LOOM

# DCA-45SSIU2 — GENERATOR DECALS

The DCA-45SSIU2 generator is equipped with a number of safety decals. These decals are provided for operator safety and maintenance information. The illustration below and on the preceding page show the decals as they appear on the machine. Should any of these decals become unreadable, replacements can be obtained from your dealer.

**OPERATING PROCEDURES**

**Manual Starting**

1. Check the engine oil, coolant, and fuel levels. Replenish if necessary.
2. Place all Generator Circuit Breakers in the "OFF" position and close all doors.
3. Check that the Voltage select switch (or the Voltage change-over board) is present at desired voltage.  
(In case of generator having multiple voltage ratings.)
4. Set the Engine speed switch to the "LOW" position.
5. Turn the Auto-Off/Reset-Manual switch to the "Manual" position to start the engine. If the engine fails to start in the specified number of attempts, the overcrank lamp will indicate and the Auto-Off/Reset-Manual switch must be returned to the "Off/Reset" position before proceeding.
6. When the engine is ready for starting during cold weather operating conditions, push the intake heater button for approximately 30 seconds. Start engine using the Auto-Off/Reset-Manual switch to the "Manual" position. As soon as the engine starts, release the button.  
(If the engine still does not start, utilize the water heater until water is warm. (If additional water heater is supplied).)
7. After starting, allow the engine to run for 1 or 2 minutes to warm up. At temperatures below freezing, this time period must be extended to 2 to 4 minutes.
8. When the engine starts, immediately check for abnormal noise, vibration, fluid leakage or any indication of a problem. Check the control panel gauges. If all is normal, let the engine remain at the "Low" position for a short time, depending on the ambient conditions, warm up.
9. After sufficient warm-up time has elapsed, set the Engine speed switch to the "High" position and the unit is ready for operation.
10. Check the NO Load speed as shown in the table below.  
90% operation—Approx. 60 Dps (1200rpm)
11. Adjust the Voltage Regulator to the specified voltage.

M35200010

P/N M352000103

**SAFETY INSTRUCTIONS**

Improper operation of this machine can cause severe injury or death.

- Read the instruction manual carefully before operating or servicing.

This machine should only be operated by a person with sufficient knowledge and skill to ensure safe operation.

High voltage circuits are located inside the output terminal cover and control panel.

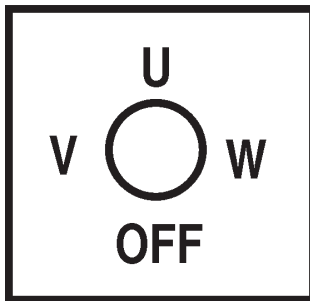
- Close the cover and control panel before operating.

Moving parts and hot surfaces are contained within the enclosure.

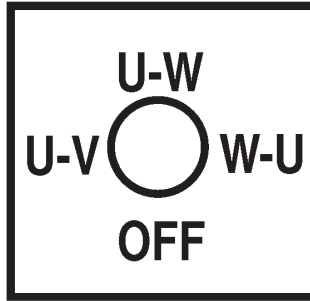
- Close all doors and lock them before operating.

M92010030

P/N M9520100304



P/N M9520000104



P/N M9520000204



P/N M950000004



P/N M9510200002

**OVER CURRENT RELAY**

If it is Impossible to reset the CIRCUIT BREAKER, open the control panel and push the RESET BUTTON as below.

M92020010

P/N M9520200104



P/N M9500300104



P/N M9500300004



P/N M9500500104

**DIESEL FUEL**

M90050000


P/N M9500500004

**WATER • OIL CHECK AND FILL DAILY**

M90300010

P/N M9503000103

# DCA-45SSIU2 — GENERATOR DECALS



**⚠ WARNING**  
**ELECTRIC SHOCK HAZARD**

- Do not touch internal wiring or connections while this machine is operating.
- Turn power off before servicing.

M92010000

P/N M9520100004


**FUELING INSTRUCTIONS**

*For best results:*

1. Elevate trailer tongue slightly.
2. Fill trailer tank first
3. Fill generator tank next

*Optimum venting will be achieved as a result of this procedure.*


P/N TBD



<b>⚠ WARNING</b>	<b>⚠ WARNING</b>	<b>⚠ WARNING</b>
<p><b>ELECTRIC SHOCK HAZARD</b></p> <ul style="list-style-type: none"> <li>• Do not touch output terminals when this machine is operating.</li> <li>• Turn power off before servicing</li> </ul>	<p><b>ELECTRIC SHOCK HAZARD</b></p> <ul style="list-style-type: none"> <li>• Always complete the grounding path from the ground terminal on this genset to an external grounding source. See instruction manual for delta setup.</li> </ul>	<ul style="list-style-type: none"> <li>• Before connecting this generator to any building's electrical system, a licensed electrician must install an isolation (transfer) switch.</li> <li>• Serious injury or death may result without this transfer switch</li> </ul>

M9520100503

P/N M9520100503




**⚠ WARNING**

**HOT COOLANT** can cause severe burns.

- Do not remove cap if radiator is hot.

M90310000

P/N M9503100004



**⚠ WARNING**

**ENGINE EXHAUST** can cause severe injury or death.

- Use only in open, well ventilated areas or vent exhaust outside.

M90320000

P/N M9503200004

**DANGER**

**HIGH VOLTAGE**

M9520100401


P/N M9520100404

**⚠ CAUTION**

Stop engine before switching

M9520100204

P/N M9520100204



**⚠ CAUTION**

**MOVING PARTS** can cause severe injury.

- Do not operate with doors open.
- Stop engine before servicing.

M90300000


P/N M9503000004

**NOTE**

To use 50 amp receptacles, adjust the voltage selector switch to the single phase position and the main line circuit breaker to the on position.

M1500020

P/N M1550000204




**⚠ CAUTION**

- **HOT PARTS** can burn skin.
- Do not touch until the machine has sufficiently cooled.

M91010000

P/N M9510100004



**⚠ WARNING**

**ELECTRIC SHOCK HAZARD**

- Do not touch output terminals while this machine is operating.
- Turn power off before servicing.

P/N M9520100503

## DCA-45SSIU2 FAMILIARIZATION

### Generator

The MQ Power Model DCA-45SSIU2 (Figure 5) is a 26 kW **generator** that is designed as a high quality portable (requires a trailer for transport) power source for telecom sites, lighting facilities, power tools, submersible pumps and other industrial and construction machinery.

### Engine Operating Panel

The "Engine Operating Panel" is provided with the following:

- Tachometer
- Water Temperature Gauge/Lamp
- Oil Pressure Gauge/Lamp
- Charging Ammeter Gauge
- Engine Speed Handle
- Pre-Heat Lamp
- Panel Light
- Panel Light Switch
- Ignition/Preheat Switch

### Generator Control Panel

The "Generator Control Panel" is provided with the following:

- Output Voltage Adjustment Knob
- Frequency Meter (Hz)
- AC Ammeter (Amps)
- AC Voltmeter (Volts)
- Ammeter Change-Over Switch
- Voltmeter Change-Over Switch
- Voltage Regulator
- Over-Current Relay

### Output Terminal Panel

The "Output Terminal Panel" is provided with the following:

- Three 250 VAC output receptacles (CS-6369), 50 amps
- Three auxiliary circuit breakers, 250V @50 amps
- Two 125 VAC output receptacles, (GFCI), 20 amps
- Two GFCI circuit breakers, 120V @ 20amps
- Five output terminal lugs (3Ø power)

### Control Box

The "Control Box" is provided with the following:

- 3-Pole, 250 VAC, 110 amp Main Circuit Breaker
- Automatic Voltage Regulator
- Current Transformer
- Emergency Relay

### Open Delta Excitation System

The DCA-45SSIU2 generator is equipped with the state of the art "**Open-Delta**" excitation system. The open delta system consist of an electrically independent winding wound among stationary windings of the AC output section.

There are four connections of the open delta A, B, C and D. During steady state loads, the power from the voltage regulator is supplied from the parallel connections of A to B, A to D, and C to D. These three phases of the voltage input to the voltage regulator are then rectified and are the excitation current for the exciter section.

When a heavy load, such as a motor starting or a short circuit occurs, the automatic voltage regulator (AVR) switches the configuration of the open delta to the series connection of B to C. This has the effect of adding the voltages of each phase to provide higher excitation to the exciter section and thus better voltage response during the application of heavy loads.

The connections of the AVR to the AC output windings are for sensing only. No power is required from these windings.

The open-delta design provides virtually unlimited excitation current, offering maximum motor starting capabilities. The excitation does not have a "**fixed ceiling**" and responds according the demands of the required load.

### Engine

The **DCA-45SSIU2** is powered by a 4 cycle, water cooled, turbocharged Isuzu 4BG1 **diesel** engine. This engine is designed to meet every performance requirement for the generator. Reference Table 1 for engine specifications.

In keeping with Multiquip's policy of constantly improving its products, the specifications quoted herein are subject to change without prior notice.

The basic controls and indicators for the DCA-45SSIU2 generator are addressed on the following pages.

### Mechanical Governor System

The mechanical governor system control the RPM of the engine. When the engine demands increase or decrease, the mechanical governor system regulates the frequency variation to  $\pm 5\%$ . The electronic governor option increases frequency variation to  $\pm 0.25\%$ .

### Extension Cables

When electric power is to be provided to various tools or loads at some distance from the generator, extension cords are normally used. Cables should be sized to allow for distance in length and amperage so that the voltage drop between the generator and point of use (load) is held to a minimum. Use the cable selection chart (Table 5) as a guide for selecting proper extension cable size.