



## Installation Guide Tank Fan

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# PRE-INSTALLATION CHECKLIST

- I have verified the order information and all components are accounted for.
- I have read this Installation Manual carefully before operating the unit.
- I have checked the voltage requirement before using the fan.
- I have verified that the fan will be used in a flat surface that free from unauthorized objects.
- I am aware with the local safety regulations and features of the fan.
- I am aware to check the troubleshooting if there is any problem during installation process.
- I am aware to contact AMA Tech if there is any failure during installation process.

# Important Safety Instruction: Please Read & Save These Instructions

To reduce fire hazard, electric shock or personal injury, please observe the following points:



1. Before repairing or cleaning unit, please turn off the power to the control unit, and lock the repair cut-off device in order to prevent accidental power-on. If the repair cut-off device cannot be locked, please fix warning sign on control unit (refer to label).
2. To reduce fire hazard, electric shock or personal injury, brushless large fan must be installed with control unit (compatible model is marked on package) provided with helicopter fan collectively. Other components cannot be replaced.
3. During cleaning and repairing of tester, there could be risk of fire, electrical shock or personal injury! Please turn off fan power before repairing.
4. Please stay alert and use common sense during installation. Do not install fan if fatigued or under the influence of drug, alcohol or medicine. Any carelessness during installation will cause serious personal injury.
5. This unit is not suitable for persons (including children) with reduced physical, sensory or mental capabilities or lack of relevant experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance in a safe way by those who are responsible for their safety. Children should be supervised at all times to ensure they will not misuse the unit.
6. If the unit swings unnaturally, please stop operation immediately and contact your dealer or manufacturer.
7. This unit is to be used for commercial or industrial purposes only.
8. This unit to be used for safe and general ventilation purposes only. Do not use this unit to expel hazardous, explosive, or gaseous chemicals.
9. Disconnect all power supply before conducting maintenance. Do not remove the power cord

by pulling it crudely. Please hold the power cord firmly and pull it gently from the power socket.

10. Do not use this unit in conditions where there is exposure to harmful chemicals, salt water, acid rain or other corrosive elements, excessive humidity, snow, sleet, and/or strong winds.



1. All installations and wire connections must be conducted by qualified personnel in accordance with national regulations and standards.
2. When cutting or drilling holes in the ceiling, do not damage wires or other hidden water and electrical wiring.
3. Use this unit only in a manner instructed by the manufacturer. If you have any questions, please contact your dealer or manufacturer.
4. Installation of brushless large fan must be in accordance with requirements specified by this installation guide and abide by the requirements of National Electrical Code (NEC) and all local regulations. Finally, guaranteeing compliance is the user's responsibility. Not abiding by relevant regulations may cause personal injury or property loss.
5. When the unit is powered on, please be cautious and use common sense. Please do not connect fan to unsafe or dangerous power supply. Please do not try to resolve circuit issues by unauthorized technicians. Please contact your dealer or manufacturer concerning issues about installation.
6. Any safety equipment that needs to be dismantled or cut during maintenance or component replacement, must be reassembled and returned to its original position.
7. Please do not bend the fan blades throughout the installation, maintenance, and/or repair procedures. Do not insert any obstruction that may prevent the unit from operating normally.
8. Some power tools will be required during installation. Please follow the safety regulations for every tool. Do not use the tools for any purpose other than those specified by the manufacturer.
9. Warranty of brushless large fan does not cover equipment damage caused by improper installation.

10. Do not use unsafe wiring during operation. If wiring is damaged, please contact your dealer or manufacturer. Do not try to fix the issue by unauthorized technicians.
11. Do not lay wires underneath carpets or similar coverings. Do not pass wires under or in-between furniture or electrical appliances. Wires should be arranged neatly and away from walking paths to prevent accidents.

**Please Keep This Manual!**

# Specifications & Components

## Fan specifications:

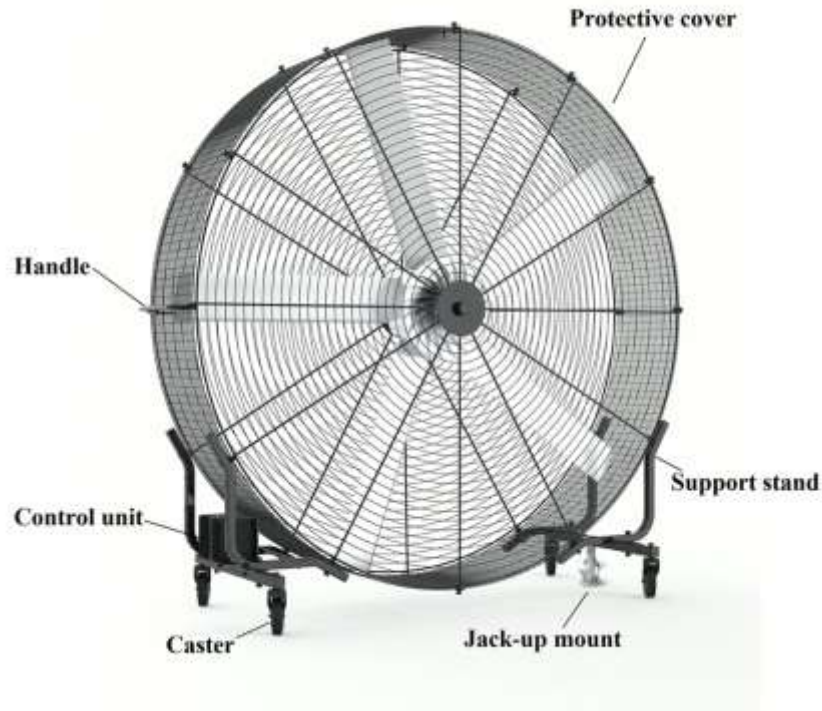
Model	Tank Fan
Fan diameter (m)	2
Max. speed (RPM)	270
Load current (A)	2A/4A
Single phase voltage (V)	220/110
Max. energy consumption (W)	440
Wind Volume at Max Speed (m <sup>3</sup> /min)	1413
Noise level	<65
No. of fan blades	5
Weight of Fan (Kg)	81

## Fan components:

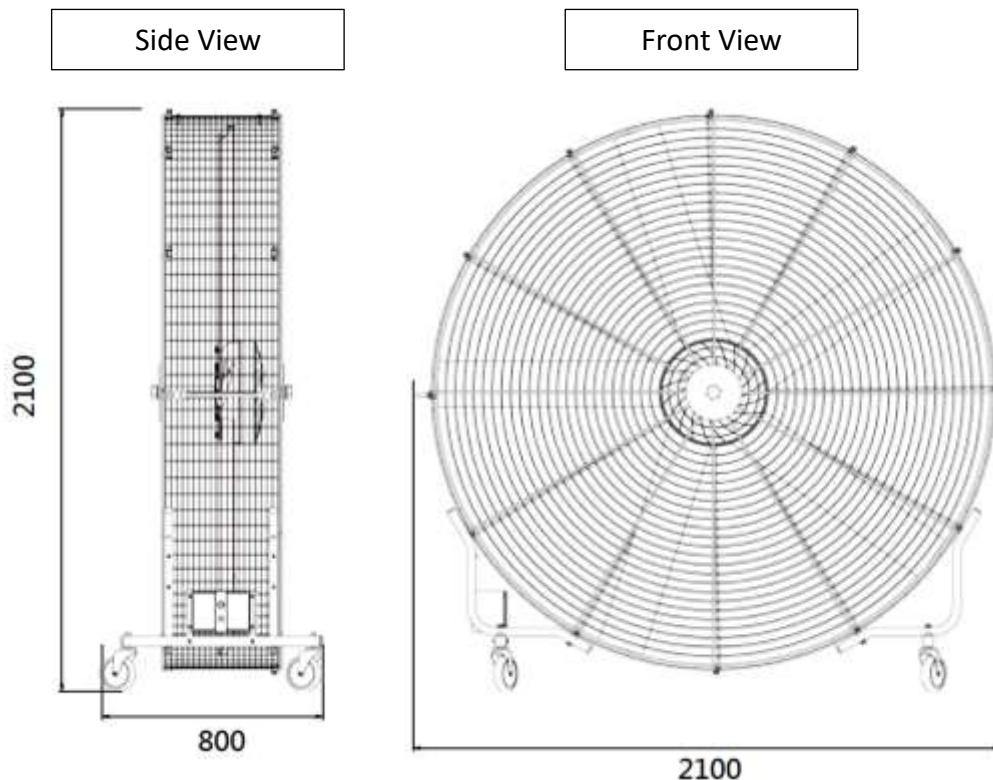
1. **Protective cover:** Protects fan and user
2. **Control unit:** Controls power supply and fan speed control
3. **Handle:** Stabilizes fan during maneuver
4. **Support stand:** Stabilizes fan
5. **Caster:** Brake feature to keep fan in place
6. **Jack-up mount:** Prevents fan from shaking due to uneven surfaces

# Product Overview

Kindly refer to below for the overview picture if you have successfully installed our product:



# Dimensions





# Installation Instructions

- **Base Support Assembly**

**Please follow below steps to install the base support assembly:**

1. Insert base support bar (38x38cm), protect sharp edges with rectangular stopper.



**NOTE:** **TWO** pieces of base support bars (38x38cm) are required for one tank fan.

2. Secure attachment between caster and base support bar.



**NOTE:** Each caster requires **ONE** nyloc nut ½-13, and **ONE** hex bolt M12.

3. Insert base support curved bar (30x30cm), protect sharp edges with rectangular stopper.



**NOTE: FOUR** pieces of base support curved bars (30x30cm) are required for one tank fan.

- **Fan Assembly**

**Please follow below steps to install the fan assembly:**

1. Place the front and rear metal fan covers on counter with the side hooks facing upwards.

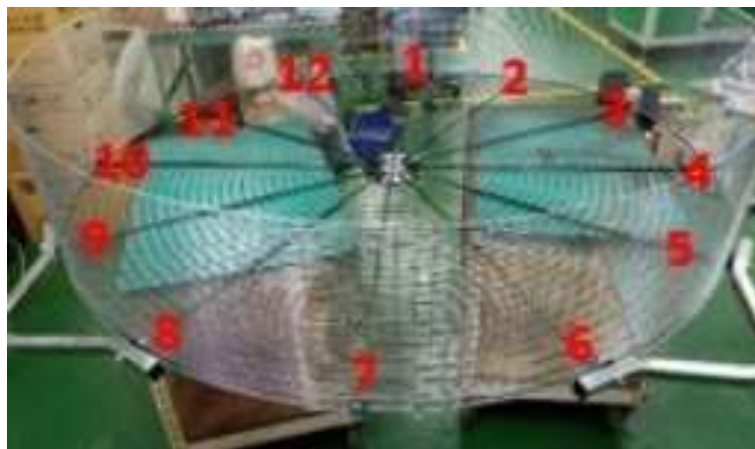


2. Find the center of spot-welded wire mesh and mark it accordingly.



**NOTE: TWO** Pieces of wire mesh (330x40cm) are required for one tank fan.

3. #1 and #7 are the contact points (#1 is the **TOP**, #7 is the **BOTTOM**);  
#4 is the position for the galvanized handle washer;  
#5, #6, #8, and #9 are the lock positions on the base support.



4. Find and align the center of the spot-welded wire mesh with the side hooks on the front and rear of the metal fan covers. Find the center of the horizontal axis, fasten screws, and insert galvanized handle washer.



**NOTE:**

1. **TWO** pieces of galvanized handle washers (80x30cm) are required for one tank fan;
  2. **EIGHT** sets of M10\*30 screws are required to lock one side of the fan.
5. Find the contact point on the center of the spot-welded wire mesh, and reinforce with one more screw.



**NOTE:** **TWO** screws (M6\*20) are required for one tank fan.

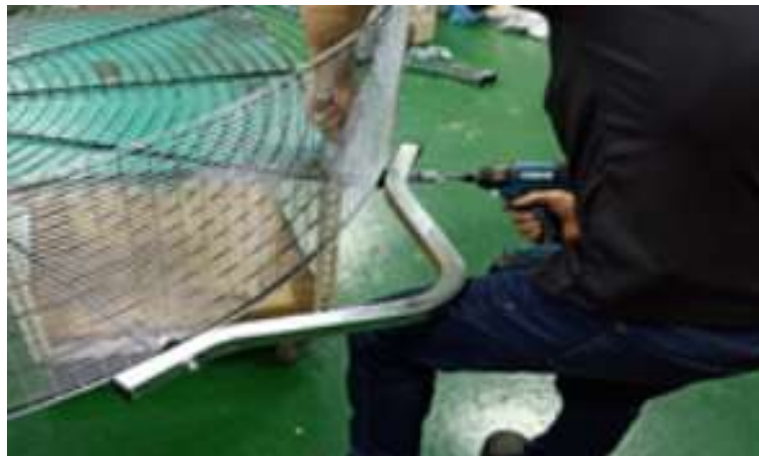


6. Fasten screw(s) between base support and wire mesh.



**NOTE: EIGHT** screws (M10\*60) are required for one tank fan.

7. Fasten and secure screws on the 12 contact points between the side hooks and wire mesh.



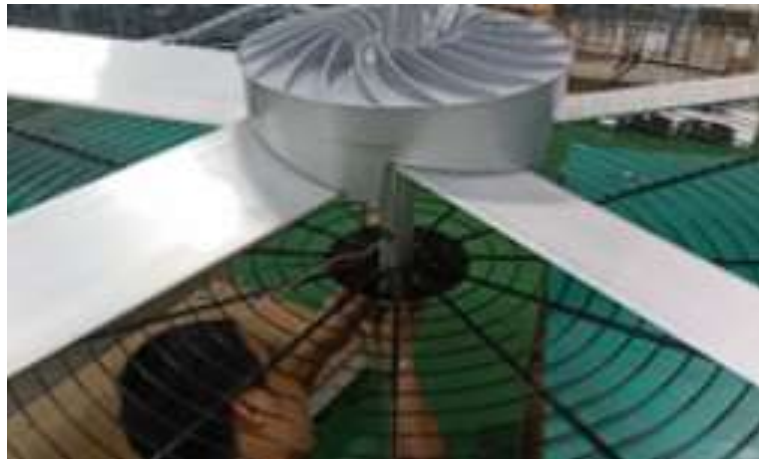
8. Gently fasten but not tighten the screw and washer between the handle and wire mesh.



9. Adjust the screws on the bottom first and then the top. Tighten the screw after adjusting washer.



10. Retrieve motor unit, and fasten the screw(s) with the electrical cable outlet facing down towards the base support.



**NOTE:**

1. **TWO** screws (M30\*60) are required for one tank fan;
2. The electrical cable outlet must face towards the bottom (i.e., base support).

11. Place the opposing metal fan cover to determine a horizontal plane, and adhere brand sticker.



12. Match the metal fan covers with the correct axis and secure with screws.



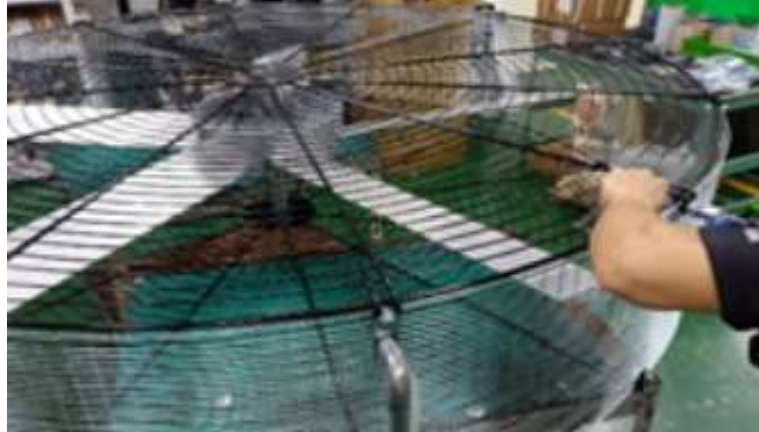
13. Tuck wire mesh inside the side hooks and align opposing covers.



**NOTE:** Align brand sticker parallel to the handle.



14. Fasten and secure screws between the **TWELVE** side hooks and wire mesh.



15. Fasten screw between caster bar and base support curved bar.



16. Secure and tighten screw with tool.





17. Lift the fan upright and tighten the screws on the axis on the front and rear.



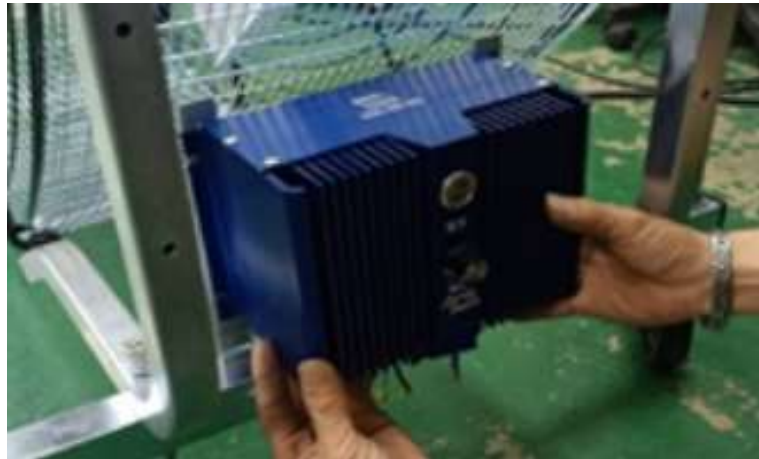
**NOTE:** Ensure that the axis is aligned when tightening the screw.

18. Tighten the washer on control unit to the base support.



**NOTE:** The control unit is to be installed on the base support near the handle.

19. Place a washer underneath the control unit and secure it tightly.



NOTE: The electrical cable outlet must face towards the bottom.

- **Operational Testing**

**Please follow below steps when tank fan is ready to use:**

1. Connect power supply to fan and turn it on. Check for anomalies.



2. Record video of operation and document the electric current while the fan is on.



**NOTE:** At maximum 270 RPM, the electric current should be below 5.5 amps.

# Operating Conditions

Our tank fan will be working on optimal condition within below conditions:

<b>Environment</b>	<b>Conditions</b>
<b>Installation Site</b>	<b>Indoor</b>
<b>Environmental temperature</b>	<b>0~40°C (= 32~104°F)</b> <b>To increase product reliability, please refrain from using this product where temperature fluctuation is high</b>
<b>Humidity</b>	<b>Below 95%RH</b>
<b>Environment</b>	<b>Avoid corrosive chemicals and/or flammable gas</b>
<b>Altitude</b>	<b>Below 1000m</b>

# Operating Instructions

Please read manual carefully before operating the unit. Clear all obstacles in the vicinity of the unit to ensure safe distances and efficient ventilation.



1. Disconnect all power before maintenance. All maintenance operations are to be conducted by authorized technicians only.
2. Standard model has a ground wire (green color) in the control unit. Please connect the ground wire to prevent electric shock, leakage current, or malfunction.



1. Do not lay wires underneath carpets or similar coverings. Do not pass wires under or in-between furniture or electrical appliances. Wires should be arranged neatly and away from walking paths to prevent accidents.
2. Do not use unsafe wiring during operation. If wiring is damaged, please contact your dealer or manufacturer. Do not try to fix the issue by unauthorized technicians.
3. When the unit is powered on, please be cautious and use common sense. Please do not connect fan to unsafe or dangerous power supply. Please do not try to resolve circuit issues by unauthorized technicians. Please contact your dealer or manufacturer concerning issues about installation.
4. Please only use the unit in accordance with the instructions provided in the manual. Product warranty does not cover equipment damage caused by improper installation. If you have any questions, please contact your dealer or manufacturer.

5. Please operate the unit on even surfaces to avoid tipping.
6. To secure the unit, engage brake on caster (see diagram 1). To stabilize unit, step on jack-up mount to balance uneven surfaces (see diagram 3).
7. Before plugging power cord into power socket, wait for the unit to come to a stop with brake engaged on caster.
8. Do not remove the power cord by pulling it crudely. Please hold the power cord firmly and pull it gently from the power socket.



Diagram 1.  
Engage brake on caster.  
mount.



Diagram 2.  
Release brake on caster.



Diagram 3.  
Step on jack-up mount



Diagram 4.  
Release jack-up

# Operating Instructions (cont.)



## **(I) Power button: Turns the unit ON/OFF**

1. Ensure that there are no obstacles or potential hazards in the operating space.
2. Check mains electricity and unit specification are compatible.
3. Ensure that the fan speed dial is set on slow (speed dial pointing towards bottom left).
4. Press Power Button to start the unit.
5. To turn OFF the unit when it is on, press Power Button.
6. Do not disconnect power supply when unit is operating. Turn ON or turn OFF the unit by pressing Power Button only.
7. Do not turn ON unit until the fan blades have completely stopped.

## **(II) Fan speed control**

1. Fan speed is adjustable after the unit has been turned ON for at least TWO minutes.
2. After TWO minutes of operation, user can adjust fan speed.

# Maintenance Instructions

**WARNING** : Disconnect all power supply before conducting maintenance. Do not remove the power cord by pulling it crudely. Please hold the power cord firmly and pull it gently from the power socket.

**CAUTION**: If the unit is suspected to be defective, please turn OFF control unit and then disconnect power supplies. Contact your dealer or manufacturer promptly.

**CAUTION**: All maintenance operations are to be conducted by authorized technicians only. Do not attempt to perform maintenance without authorization.

## Maintenance Checks

- ✓ Regular checks on the sturdiness of the unit, components and fasteners (e.g., screws, bolts, hinges, etc.).
- ✓ Use a soft damp cloth to clean dust off the unit. Do not use cleaning agents to avoid damage to treated surfaces.



# Troubleshooting

Please read the following self-help troubleshooting guides before contacting your dealer or manufacturer.

<b>Issues</b>	<b>Solution</b>
Shaking	This is normal when the unit starts up as the fan adjusts to the stator. Slight vibration during startup will not affect fan operation.
The fan does not start	Please check the following: 1. Power supplies are normal. 2. Power connections are normal. 3. Power cord is plugged into power socket.  If issue persists, please contact your dealer or manufacturer.
Flashing Fan Power Button	If the fan is suspected to be defective, the Fan Power Button may flash and show an error code. If so, please refer to Troubleshooting - Error codes.

If your issue cannot find the solution for the problems that happened, kindly contact AMA Tech's local dealer through email or phone-call **sales1@amatg.com.tw /+886-2-2268-0565**.

# New Unit Warranty

AMA Tech will ensure to replace any defective part (s), component (s), unit (s) within 7~21 working days from the arrival date as per the freight forwarder's shipping details.

The terms and conditions are as follow:

## **1.1 Return merchandise packaging**

A "Re-packaging fee" will be incurred if the contents are not returned in its original packaging.

## **1.2 Dead on Arrival (DOA)**

1.2.1 Units are deemed DOA if the defect (s) are not the result of improper operation, damage during freight transport, or unauthorized repair.

1.2.2 AMA Tech has full authority to determine whether a defect is of natural causes, misuse, unauthorized modification or repair, or external forces (e.g., power interference, motor failure, improper installation, incorrect wire connection, etc...) at our discretion. These cases or alike shall be processed as standard unit maintenance service cases, and abide by the procedures pertaining to as such.

## **1.3 Freight charge**

1.3.1 If the goods are deemed DOA, AMA Tech will arrange and cover the two-way freight charge.

1.3.2 If the defect is not deemed DOA, it shall be processed as standard unit maintenance service and repair, thus, standard charges will apply, and the two-way freight charges are to be covered by the dealer/buyer.

## **1.4 Maintenance fee**

An invoice will be issued in advance to the dealer/buyer should such service be required.

# Repair

## **1.1 Return merchandise packaging**

1.1 Please ensure that all returned items are packaged correctly and in its original packaging.

## **1.2 Warranty and maintenance**

No additional maintenance charge will be incurred for units that are within one year of purchase as per invoice date.

**1.2.1** AMA Tech may still offer maintenance service even when the warranty period expires or that the damage is not covered by the warranty. In such cases, standard maintenance service and repair charges apply. The returned item (s) will not be eligible for replacement or free service if the damage or defect is caused by any of the following conditions:

- a ) Power interference.
- b ) Defect as the result of external forces.
- c ) Improper installation pertaining to incorrect power settings.
- d ) The unit was misused, abused, or incorrectly installed.
- e ) Wiring error.
- f ) Unit failure is caused by natural disasters or force majeure.
- g ) Damage caused during transportation due to lack of proper padding or original packaging.
- h ) No Fault Found (NFF)

### **1.2.2 Freight charge:**

The dealer/buyer is responsible for the freight charge of returning the unit to AMA Tech.

# Out of Warranty Repair

AMA Tech may still offer maintenance service even when the warranty period expires or that the damage is not covered by the warranty. In such cases, standard maintenance service and repair charges apply.

## **1.1 Repair charge**

An invoice will be issued in advance to the dealer/buyer should such service be required.

## **1.2 Freight charge**

For out-of-warranty repairs, the dealer/buyer is responsible for the two-way freight charge.