



TCG2000 Inductive Charger

FOR RAV4

OWNER'S MANUAL



TOYOTA MOTOR CORPORATION

Important Safety Instructions

SAVE THESE INSTRUCTIONS - This manual contains important safety instructions for the Magne Charge™ Inductive Charger Model TCG 2000 that shall be followed during installation, operation, and maintenance of the unit. Installation shall be in accordance with all local building codes, electrical codes, and ordinances by qualified personnel.

The following symbols are displayed in this manual or are displayed as labels on the machine regarding procedures that must be adhered to for safe operation of the equipment.

The contents that these symbols are used to express have the following meanings and accordingly must be strictly adhered to. Please carefully read this manual as well as the vehicle owner's manual before operating the charger unit.

Safety Display Symbols



WARNING

This symbol warns of the presence of dangerous high voltage and the risk of electrical shock. Comply with the written instructions in order to avoid serious injury.



WARNING

This symbol warns of the danger of an accident. Please follow the instructions to avoid serious injury.

NOTICE

NOTICE

This symbol indicates instructions for additional important operations. Please comply with the instructions for carrying out proper operation to prevent damage to the charger.



WARNING

- Do not damage the charger cable or charger paddle (i.e. by stepping on or dropping them). Do not use damaged charger cables, charger paddles or chargers. If the charger is damaged, contact your local Magne Charge™ sales or service distributor as soon as possible.
- Before cleaning this equipment turn off the power to the charger unit at the circuit breaker panel. For details refer to the Maintenance section.
- Do not disassemble, modify, work on, or operate this equipment using a method other than that described in this manual. This may damage the unit or lead to electrical shock or injury. Disassembly, modification, or otherwise working on this equipment will invalidate the warranty.
- The user should not move this unit to a different location for any reason. Furthermore, installation of this equipment should be performed by a qualified electrician in compliance with all local electrical codes and ordinances.



WARNING

- This charger may only be used to charge vehicles equipped with a Magne Charge™ inductive charge port. Refer to the vehicle owner's manual to determine whether the vehicle is equipped with a Magne Charge™ inductive charge port.
- To reduce the risk of burns and avoid damage to equipment, use adaptor for vehicles equipped with charge port having opening larger than charge paddle.

NOTICE

- Do not block the charger unit air vents. Allow 46 cm (18 inches) of clearance around and beneath the unit to ensure proper cooling.
- When the coupler paddle is removed from the inductive charge port do so in a manner that avoids pulling on the charger cable.

Introduction

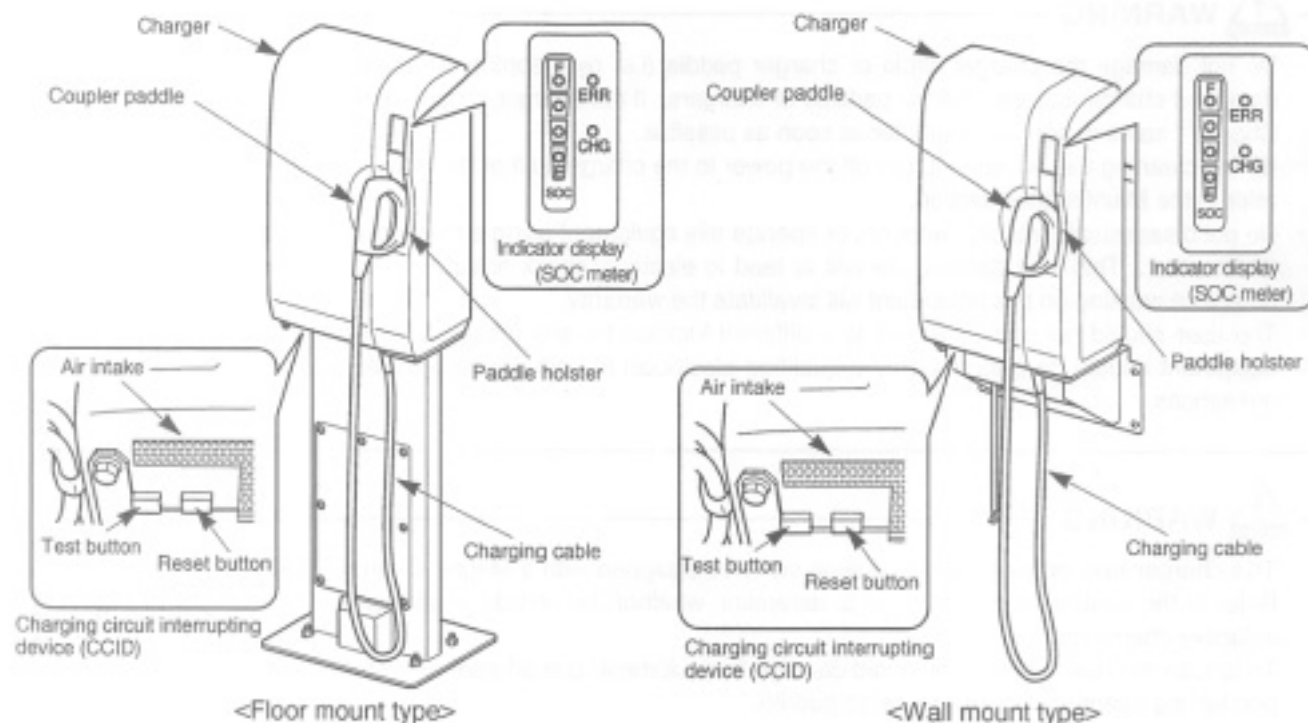
There are two types of inductive charger (floor mount type and wall mount type). Charging automatically starts with inserting the charge paddle into the inductive charge port (of the vehicle), and automatically stops when the batteries are full or when the charge paddle is removed from the charge port. Refer to the "Charging Procedure" section regarding the charging operation. For information on the charging time and other details refer to the Owner's Manual for this vehicle.

INFORMATION

INFORMATION

This indicates information for providing information that is useful to know. Please follow these instructions for carrying out proper operation.

Name of Each Component



Operation

A description is provided here of the procedure for charging an electric vehicle.

Refer to the charging procedure in your vehicle owner's manual regarding how to charge your vehicle.

Operation summary

Charging circuit interrupting device (CCID) test(See "CCID".)

NG

Contact your Magne Charge™ Sales and Service Representative for immediate service.

OK

Indicator display check
(See "How to Charge", P5.)

NG

See "Troubleshooting", P7.

OK

Charging commences

NG

OK

Charging completed

Charging Circuit Interrupting Device (CCID)



WARNING

The Charger Circuit Interrupt Device is a device that interrupts the flow of electricity to the charger if it detects a ground fault or if the ground conductor between utility and charger unit is open.

CCID Test Procedure

- 1 Press the CCID reset button on the bottom of the charger unit.

- 2 Press the CCID test button on the bottom of the charger unit.

The reset button is tripped when the test button is pressed. If the reset button is not tripped this means a defect has been detected by the CCID. Contact your Magne Charge™ Sales and Service Representative immediately for service.

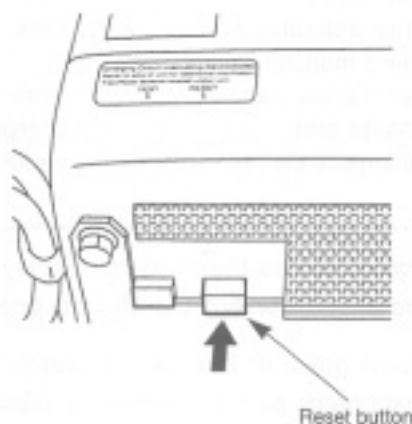
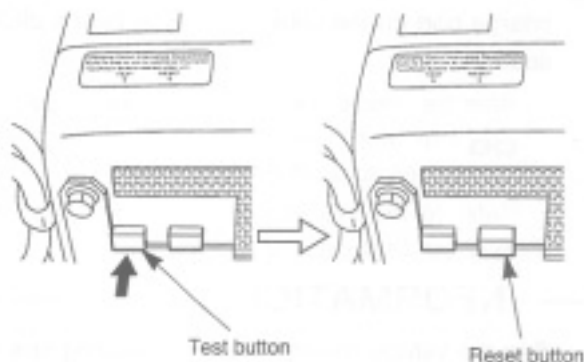
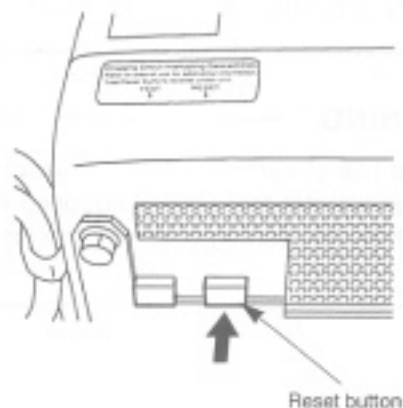
- 3 Press the reset button again.

This completes the CCID test.

NOTICE

If the reset button trips when no CCID test is being performed, check the electrical specifications of the power supply.

The reset button may trip if a single-phase line is not being used.



How to Charge

1 Remove the coupler paddle from the holster.

When the coupler paddle is removed all of the indicator display lamps come on and then go off.

INFORMATION


If all lamps do not come on verify that power is being supplied to the charger and that the charging circuit interrupting device (CCID) has not been tripped.



WARNING

To reduce the risk of burns and avoid damage to equipment, use adapter for vehicles equipped with charge port having opening larger than charge paddle.

2 Insert the coupler paddle firmly into the inductive charge port on the vehicle until you hear a clicking sound.

- After the paddle is inserted it is locked in place, the  indicator display comes on, and charging commences automatically.
- Refer to the Indicator Display List regarding the indicator display during charging.

INFORMATION

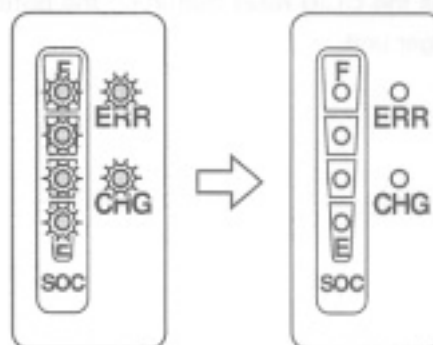
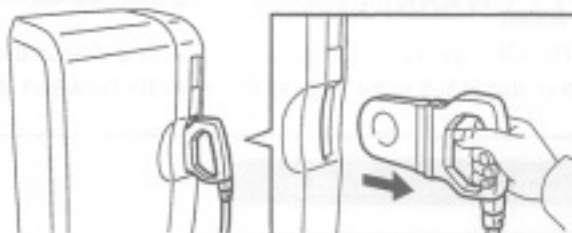
- See the vehicle owner's manual regarding how to open the charge port compartment.
- Charging will not start if the coupler paddle is not fully inserted.
- On some vehicles the coupler paddle can be locked in the inductive charge port. (See the vehicle owner's manual).
- The coupler paddle can be extracted from the inductive charge port at any time during charging. Charging automatically ceases once the paddle is removed.

3 When charging finishes the indicator display SOC meter lamps all come on and the lamp goes off.

4 After the lamp goes off remove the paddle from the inductive charge port and return the paddle to the holster.

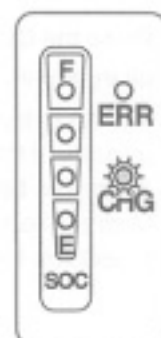
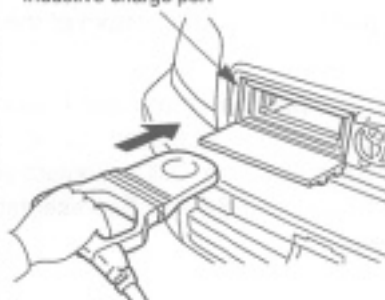
INFORMATION

See the vehicle owner's manual regarding how to open the charge port compartment on the vehicle.

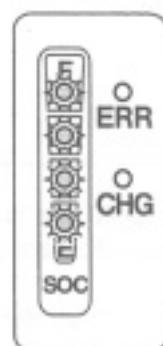


<indicator display>
(SOC meter)

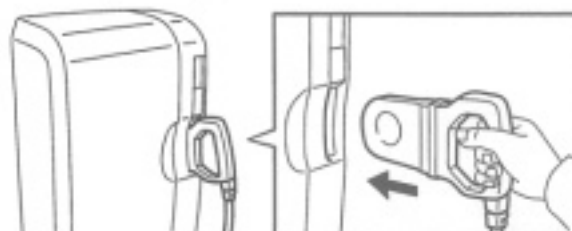
Inductive charge port



<Indicator display>
(SOC meter)








<indicator display>
(SOC meter)



Indicator Display List

The following indicators display when the unit is in use. Verify the meaning of the indicators that display.

Indicator display	Circumstances	
	No display	Either the power to the charger unit is interrupted or the coupler paddle has not been removed from the holster.
	Lamp test	Charger unit is executing a self-test. (When the coupler paddle is removed from the holster all indicator lamps will come on briefly.)
	Charging	The charger unit is transferring power to the vehicle.
	Charging (Charge status)	The charger unit is transferring power to the vehicle. (Bar display up to each hash mark represents 25% of a full charge.)
	Charge Complete	Vehicle is in the fully charged status.

Maintenance

The following must be complied with when maintenance is carried out.








WARNING

- Always turn off the power to the charger unit at the circuit breaker before carrying out cleaning.
- If the unit is dirty apply a mild cleaning solution with a slightly damp cloth. Do not use any type of abrasive pad, scouring powder, flammable solvent or non-flammable solvent such as alcohol or benzene.
- Do not get moisture or water inside the unit during cleaning. This may increase the risk of electrical shock or may damage the unit.

Troubleshooting

Check the following. If the unit still has a problem please contact your Magne Charge™ Sales and Service Representative.

Indicator display	Circumstance	Cause	Processing
 <p>No display</p>	When the indicator display does not change even after the coupler paddle is removed from the holster.	Power is not being supplied to the charger unit.	<ul style="list-style-type: none"> Check whether the charger unit CCID has been tripped. (See the CCID section.) Check whether the power being supplied to the charger has been turned off at the service circuit breaker panel. If it has been turned off then reset.
	Error lamp turns on when an attempt is made to charge the vehicle.	Power is not supplied from the charger to the vehicle due to an error on the vehicle side.	Check the vehicle owner's manual. If the problem cannot be eliminated contact the dealer.
	When an attempt is made to charge the vehicle.	Main power voltage fluctuated.	Verify that the cable to the charger unit is not too long or short. (Have this work carried out by a qualified electrician.)
		If the paddle stroke is returned in too short a time.	Return the paddle to its holder and start again.
	When an attempt is made to charge the vehicle.	The utility power is lower than the normal operation voltage range.	Check the power supply voltage being supplied to the charger unit.
 <p>Flashing lamps vary due to some trouble</p>	When an attempt is made to charge the vehicle.	The charger is damaged.	Contact your Magne Charge™ Sales and Service Representative.

FCC Information

The Magne Charge™ Inductive Charger Model TCG2000 operates on a radio frequency subject to Federal Communications Commission (FCC) Rules.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

This product has been designed to protect against Radio Frequency Interference (RFI). However, there may be some instances when high powered radio signals or nearby RF producing equipment (such as digital phones, RF communications equipment, etc.) could affect operation. If interference to your charger is suspected, we suggest the following steps be taken before consulting your Magne Charge™ Sales and Service Representative for assistance:

1. Reorient or relocate nearby electrical appliances or equipment during charging.
2. Turn off nearby electrical appliances or equipment during charging.

Changes or modifications to this product by other than an authorized service facility could void authorization to use this equipment.

Specifications

This owner's manual contains the latest information at the time of printing. We reserve the right to make changes to this product without notice.

For questions concerning the specifications of this product please contact your Magne Charge™ Sales and Service Representative.

Item	Specification
● Input	
Voltage	: 208 ~ 240 Vac (Single-phase line)
Current	: 30 Amps
Frequency	: 60 Hz
● Output	
Power	: 6.0 kW (Max.)
● Dimensions	
Height	: 625 mm (25 inches)
Width	: 405 mm (16 inches)
Depth	: 210 mm (8 inches)
Charger cable length	: 3.0 m (9 feet 10 inches)
Weight	: Approx. 30 kg (Approx. 66 pounds)
● Environment	
Temperature	: -30°C (-22°F) ~ 50°C (122°F)
Indoor use	: Possible
Outdoor use	: Possible
● Options	
★ Wall mount kit	: G9093 - 42040
★ Floor mount kit	: G9093 - 42050

NOTICE

If this product becomes damaged after being worked on by anyone other than an authorized service technician this will cause the warranty on this product to be void.



EV BATTERY CHARGER
25EK