

Reference Manual

For cart operation only. For pump operation see relevant pump manual.



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Safety Precautions

For Safety:

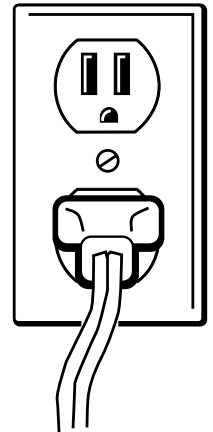
1. Do not operate, maintain, or service machine:
 - Unless trained and authorized.
 - Unless operation manual is read and understood.
 - In flammable or explosive areas.
2. Before operating machine:
 - Make sure all safety devices are in place and operate properly.
3. When maintaining or servicing machine:
 - Disconnect battery connections before working on machine.
 - Avoid contact with battery acid.
 - Avoid moving parts. Do not wear loose jackets, shirts, ties, or sleeves when working on machine.
 - Use DJ Products, Inc. supplied or equivalent replacement parts.
4. Do not transport machine with cover up.

Warning:

Batteries emit hydrogen gas. Explosion or fire can result. Keep sparks and open flame away. Keep covers open when charging.

Attention:

The battery charger supplied with the machine shall be grounded while in use to protect the operator from electric shock. This charger is designed for use on a nominal 120 volt circuit and has a grounding plug that resembles the plug illustrated. Make sure the charger is connected to an outlet having the same configuration as the plug. No adapter should be used with this charger. The green conductor in the cord is the ground wire. Never connect this wire to other than the grounding pin of the attachment plug. Store this machine indoors, do not expose to rain. This product is intended for commercial use.



General Specifications:

Electric 36 V DC — (3) 12V batteries
Charger, 110 VAC, 60 HZ

Power Train / Propelling System

36 V DC electric motor
36 V DC controller

Suspension System

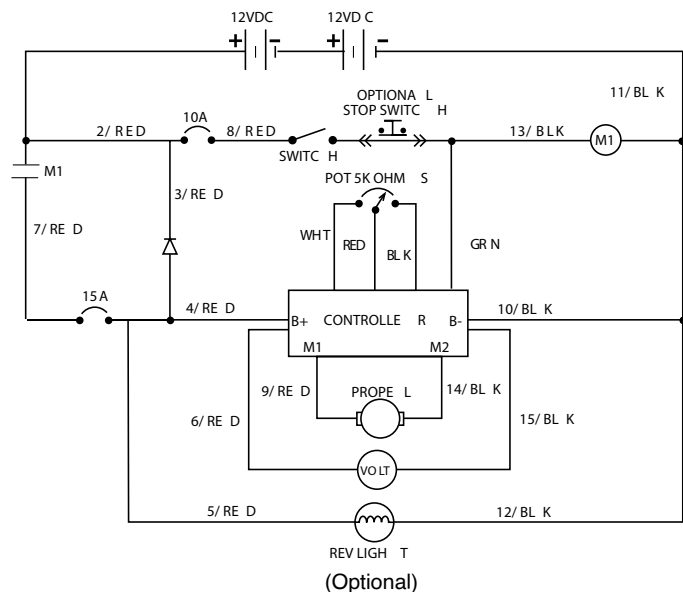
Casters — (1) rear, 5 in. (127 mm) dia.
Drive — (2) front, 10 in. (254 mm) dia.

General Machine Dimensions

Length — 36 in. (914 mm)
Width — 20.5 in. (521 mm)
Height — 41.1 in. (1042 mm)

Machine

Total Weight, with batteries — 350 lbs.



Additional Specifications

Nominal Power	1/2 hp (.373kW)
Maximum draw bar pull	700 lbs. (318 kg)
Hauling Capacity	1000 lbs (454 kg)

Adjustments

Controls:

The handle assembly can easily be adjusted if the machine comes out of neutral and begins to creep. By removing the (4) 5/16" self-threaded screws in the yellow control box, you will gain access to the control potentiometer. Adjust the potentiometer with a 1/2 SAE wrench. Turning the potentiometer towards the front of the machine will stop the machine from creeping backwards. Turning the potentiometer towards the rear of the machine will stop the machine from creeping forward.

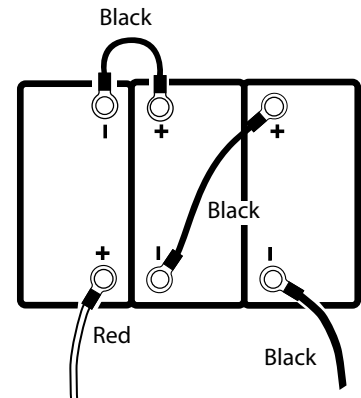
Installing Batteries

1. Make sure the power switch is in the off (O) position.
2. Using the lift handles provided on the battery, place batteries in the machine with the terminal posts shown.

For Safety:

When maintaining or servicing the machine:

- Battery acid can cause burns. Avoid contact with battery acid.
 - When working on or around batteries, wear protective clothing, gloves, and safety glasses.
 - Do not lay metal tools or metal objects on top of the batteries.
 - Only install deep cycle marine style lead acid batteries in your cart. The charger is built specifically for lead acid batteries. Any other battery may become overcharged and cause serious damage to the machine or operator.
 - When replacing batteries, you should replace all three batteries. This will assure the batteries will be kept in sync.
3. Remove the nuts from the terminal posts. Connect the wires as shown.
 4. Make sure to attach the positive leads to the positive terminals. Place the nuts on the terminal and tighten securely.



Accessory Panel

A. Power Switch

- The power switch controls the machine power.
- Turn key to (1) to turn on the power.
- Turn key to (O) to turn off the power.
- The machine batteries must be charged for the machine to have power.

B. Main Circuit Breaker

- The main circuit breaker protects the motor from overload. If the load is too high, the main circuit breaker will trip and the unit will stop. To reset the circuit breaker, press the circuit breaker reset button on the circuit breaker. It may be necessary to allow the circuit breaker to cool down before resetting, or it may trip again. Reduce the load before resuming. Please review the load limit sections for recommended load limits.

C Accessory Circuit Breaker

- The circuit breaker protects control circuit from overload.

Pre-Operation Checklist

Before operating the machine:

1. Make sure the charge is OFF by unplugging the AC power cord from the wall outlet.
2. Lower the machine cover.
3. Make sure all controls are free and clear of any obstructions.
4. Turn the power switch ON.
5. Make sure the emergency stop switch is working correctly. (Optional)
6. Make sure the safety light is operating correctly. (Optional)
7. Make sure the speed control switch is either in fast or slow speed.
8. Now you are read to operate. If any of the safety features were not operating correctly please contact:
 - Your Manager
 - Maintenance Personnel
 - Your Service Representative

Maintenance

The daily and monthly maintenance requirements listed here may be performed without tools by the machine operators. Instructions for these maintenance requirements are provided in this section of the manual.

Daily:

Perform all duties listed under Pre-Operation Checklist.

Every Month:

Add distilled water if needed. Water should be just over the top of the cells in the batteries.

Every Three Months:

- Lubricate the castor bearings with grease.
- Check and tighten all fasteners and hardware.
- Check, tighten, and lubricate battery posts and cables.
- Check transaxle for leaks, fill to level if required.

Charging Batteries

The batteries have approximately an eight hour run time when fully charges. The batteries take about eight hours to charge after they have been fully discharged. The battery charger has an automatic timer that will turn off the charger when the batteries reach full charge. The batteries should be charged after every eight hours of operation of the machine.

To charge the batteries:

1. Move the machine to a flat, dry surface in a well ventilated room.
2. Open the machine cover.
3. Check the water level in the battery cells. If the level is low, add just enough distilled water to cover plates. **DO NOT OVERFILL.**
4. Wipe off tops of batteries with a cloth.
5. Connect this charge to the machine.
6. Plug the charger into a wall outlet.

Service Policy

Whenever ordering parts or requesting any type of service, specify:

1. The model of the machine
2. Serial number
3. The part number
4. The part description

Load Limits

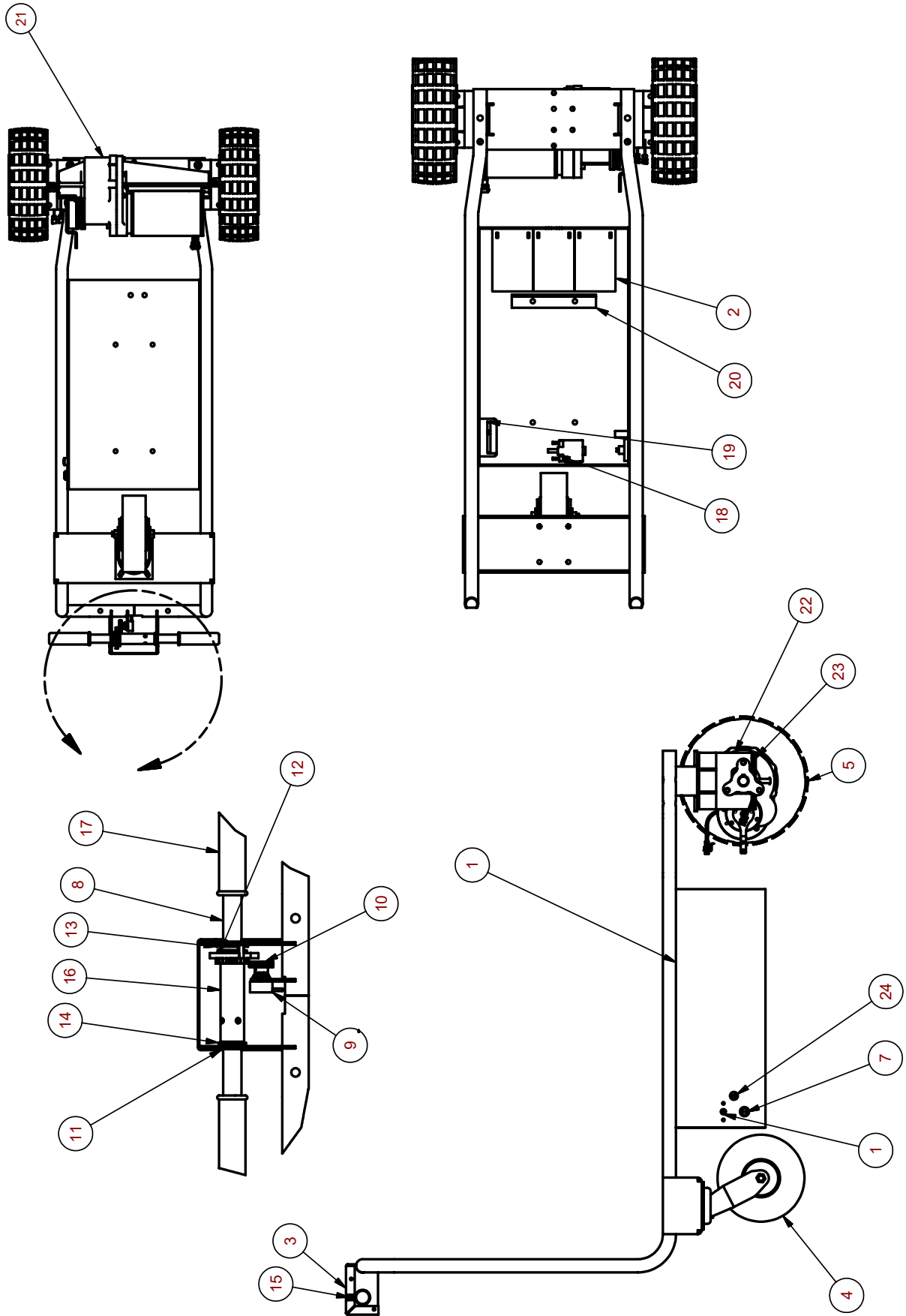
The cart is specifically designed to haul parts. You should never operate the cart:

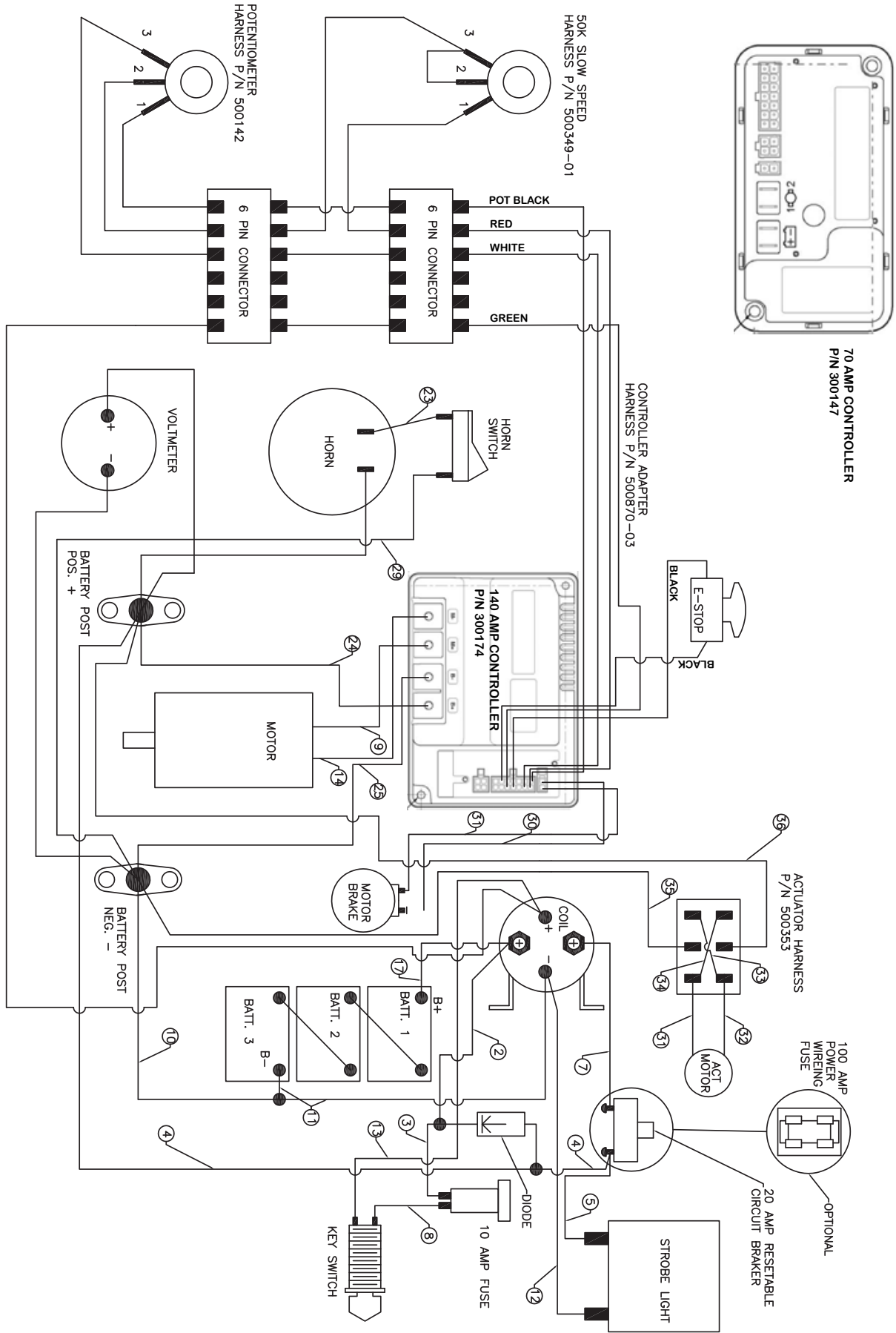
- With an operator under the age of 16.
- With an operator sitting or riding on the cart or any carts it may be pushing.
- With added weight not specifically added by DJ Products, Inc. or a certified service rep.
- With the door in the open position.
- Without being properly trained by a supervisor.
- In severe weather.
- With a know feature not working correctly.
- While on specific medicine that may impair your vision or reflexes.

By disregarding any of these limits, it may cause damage to the operator, your customer, and customer's vehicles, the cart, and your building.

Disregarding any of these limits will void your warranty in case the cart is damaged.

Item	Qty	Part No.	Description
24	1	500147	10 Amp Circuit Breaker (RE CIRK IT)
23	2	590107	3/4 Transaxle Clamp
22	2	590102	Transaxle Bracket Weldment 3/4 HP
21	1	500151-410	0.75 HP Transaxle Assembly
20	1	506011-02	Battery Side Stop
19	1	500126-06	36v 60a Controller
18	1	500149	Solenoid
17	2	500152	Handle Bar Grip
16	1	500140	Handle Bar Gear-222079
15	1	500140-01	Torsion Spring Centering Bolt
14	1	500297	1" Handle Bar Gear Spacer
13	1	500277	1.2 Handle Bar Gear Spacer
12	1	500296	Torsion Spring
11	2	500137	Handle Bar Gear Bushing
10	1	500139	Pot Gear
9	1	500142	Pot and Harness Assy
8	1	701017	Handle Bar
7	1	500145-01	Key Assy (Chrome) UL Rated
6	1	500146-03	40 Amp Circuit Breaker
5	2	500129-01	Foam Filled Non-Marking Tire, Rim
4	1	300099	Caster 8 Inch Swivel
3	1	701013	Low End Control Box
2	3	30078	Small 12V battery
1	1	701003	Low End Parts Caddy Frame Weldment





Troubleshooting Guide (Questions and Answers)

Q. The cart turns on and powers up but does not move.

- A. 1. Make sure wires number 9 and 14 are plugged into the controller and are making a good connection.
2. Make sure motor connector under the machine is plugged in and is not damaged.
3. Check to make sure the 5k potentiometer in the handle bar is centered. Test the black and red wire on the pot, the center position is 2.5 ohm, when not moving the handle bars should read between 2.4k ohm and 2.6k ohm. If it is out of that range the machine will not move.
4. Test controller for power. You should have at least 36 volts coming into the controller at the b+ and b- terminals. Now check voltage at the motor connector under the machine. With the machine on and rotating the handle bars all the way forward or reverse you should have the same voltage as you did going to the controller. If you do not the controller could be bad.

Q. When I am done running the machine and I let go of the handle bars the machine slowly moves on its own.

- A. The potentiometer in the handle bar is slightly out of center. Center the pot to 2.5k ohm by testing the black and red wires on the pot and rotating it to whatever direction is needed.

Q. When I turn the key on, nothing happens at all.

- A. If the voltmeter doesn't come on or you don't hear the contactor click one of three things could be bad. Check the battery voltage across all three batteries; you should have at least 36 volts. If that is OK either the contactor is not working or the key switch is not working. To bypass the key switch take the two wires going to the key switch and touch them together, if the key switch is bad the machine should turn on. To bypass the contactor please call DJ Products, Inc. service dept. for further tests.

Q. When I turn on the handle bar I can hear the machine running but it doesn't move.

- A. The gear at the end of the DC drive motor has either fallen off or broke. Take the drive motor off the transaxle to inspect the gear. At the end of the motor there should be a shaft with a gear and a clip holding it on. When taking the motor off you might want to tilt the machine at a slight angle to help prevent oil from leaking out of the transaxle. Note: Do not tip it too far, the batteries may leak acid out. If some oil leaks out you can refill it with 80 or 90 weight gear oil.

Q. When I rotate the handle bar, it does not snap back into the center position.

- A. The torsion spring has either slipped off the centering bolt or the spring has broke. Take the screws out of the control box to pull the box apart, the bottom part will pull completely off and the top part can rotate up. Inspect the torsion spring to make sure it is in the proper position.

Q. When I am pulling/pushing with the cart, I hear a pop and the machine stops moving.

- A. The circuit breaker on the machine is blown, turn the machine off and push in the circuit breaker, it should reset itself. If this happens more often the circuit breaker could be wearing out and you may need to purchase a new breaker.