

Merits

P320 series *Service Manual*

Index

1. Introduction	1
2. Service guide	1
2.1. How to replace or repair the seat assembly	1
2.1.1. To replace the seat body	1
2.1.2. To replace the seat base plate.....	2
2.1.3. To replace the seat post.....	3
2.1.4. To replace the left/right armrest	3
2.2. How to replace or repair the body assembly	4
2.2.1. To replace the battery pack assembly.....	4
2.2.2. To replace the shroud	7
2.2.3. To replace the footplate	7
2.2.4. To replace the anti-tipper wheel.....	8
2.2.5. To replace the caster wheel assembly.....	9
2.2.6. To replace the driver wheel assembly	10
2.2.7. To replace the frame	12

The numbers shown in this service manual is just for reference. The part numbers should be in accordance with current exploded drawing.

1. Introduction

The purpose of this manual is to provide dealers and/or distributors with the product information and instructions that are required for servicing the P320 powerchair.

2. Service guide

The P320 powerchair consists of three main parts:

- Seat assembly
- Body assembly
- Electrical system (Please refer to P3 series Shark or VR2 service manual)

2.1. How to replace or repair the seat assembly

The seat assembly includes the seat body, the seat base plate, seat post and the left/right armrest.

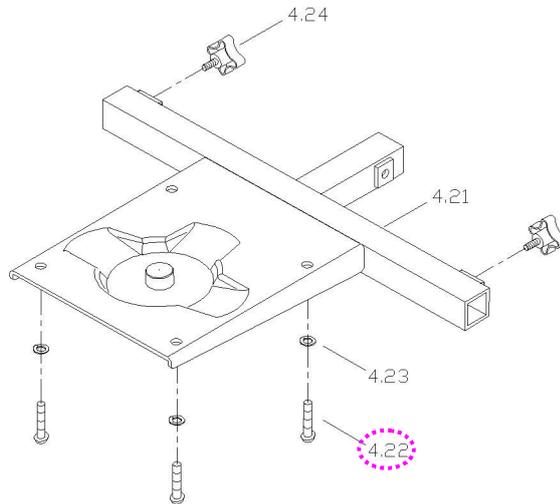
2.1.1. To replace the seat body

- ◆ When should you replace the seat body?
 - ◇ If the seat body is worn out.
 - ◇ If the seat body is pierced or scratched by something.
 - ◇ If the powerchair crashed cause the seat body out of shape.
- ◆ How to replace the seat body?
 - ◇ Please proceeding steps as follows if it has to replace.

For fish-on seat

Replace the seat body by the following steps if it is broken.

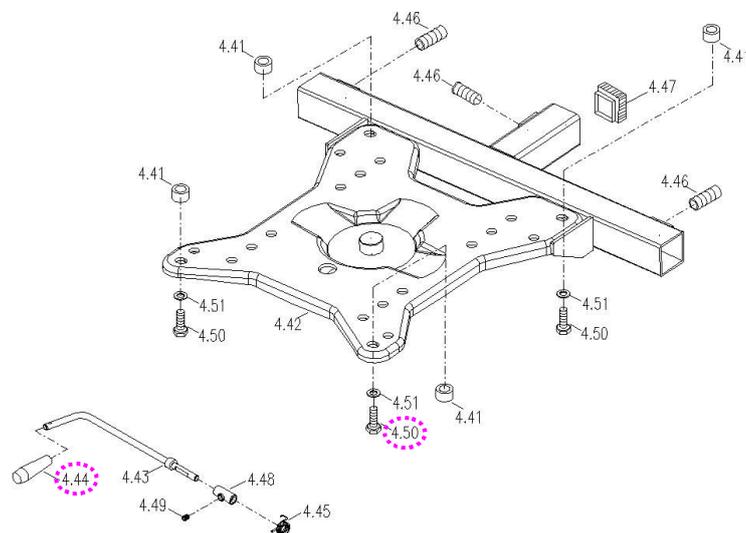
- a. Pull the seat upward.
- b. Use hex tools to loosen four pieces hex fixed bolt (4.22) on seat base plate assembly and remove the seat body from the seat base plate assembly if it is broken. (See next page)



For captain seat

Replace the seat body by the following steps if it is broken.

- a. Pull the swivel lever (4.44) under the seat up to unlock it and rotate the seat a little bit to the position where you can feel the seat rotate freely. Pull the seat upward.
- b. Use hex tools to loosen four pieces hex fixed bolt (4.50) on seat base plate assembly and remove the seat body from the seat base plate assembly if it is broken.



2.1.2. To replace the seat base plate assembly

- ◆ When should you replace the seat base plate assembly?
 - ◇ If the seat base plate is deformation.
 - ◇ If the seat base plate out of shape due to an accident.

◆ How to replace the seat base plate assembly?

◇ Please proceeding steps as follows if it has to replace.

Follow preceding step of 2.1.1. You can remove seat base plate assembly too if it is worn out or deformed.

2.1.3. To replace the seat post

◆ When should you replace the seat post?

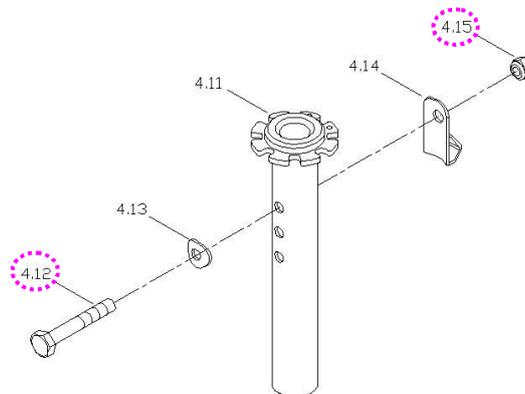
◇ If the seat post is deformation.

◇ If the seat post out of shape due to an accident.

◆ How to replace the seat post?

◇ Please proceeding steps as follows if it has to replace.

To replace the seat post use two wrenches to loosen the nut (4.15) and screw (4.12) if it is worn out or deformed.



2.1.4. To replace the left/right armrest

◆ When should you replace the armrest?

◇ If the armrest is worn out.

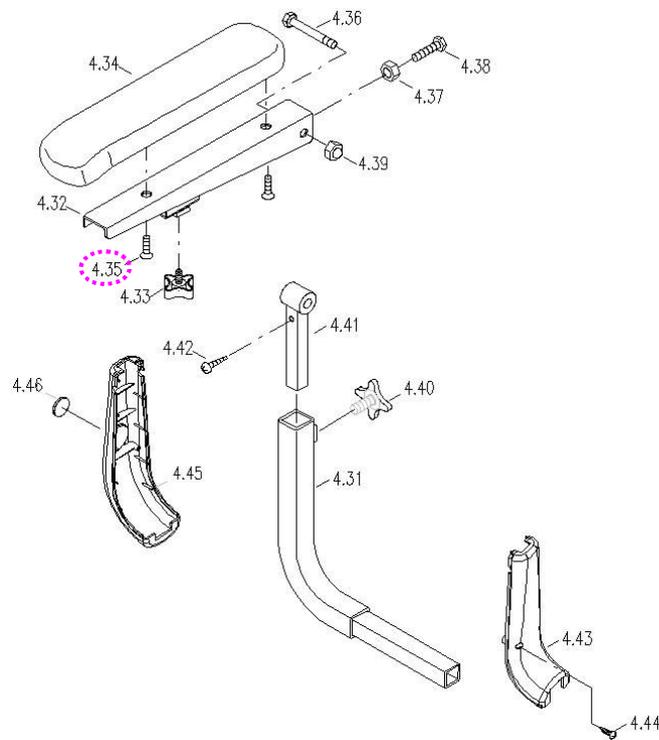
◇ If the armrest is pierced or scratched by something.

◇ If the powerchair crashed cause the armrest out of shape.

◆ How to replace the armrest?

- ◇ Please proceeding steps as follows if it has to replace.

Use hex tools to loosen bolt (4.35) under armrest to disassemble armrest from armrest support plate. If the armrest is broken, then replace it.



Note: The arm tube protective shrouds (4.43 and 4.45) are option parts for powerchair.

2.2. How to replace or repair the body assembly

The Body Assembly includes battery pack assembly, shroud, footplate, anti- tipper wheel, caster wheel assembly, driver wheel assembly and the frame.

2.2.1. To replace the battery pack assembly

- ◆ When should you replace the battery pack assembly or relation parts?
 - ◇ If the battery pack can not charge or batteries seem weak.
 - ◇ If the circuit breaker can not reset or broken.
- ◆ How to replace the battery pack assembly or relation parts?

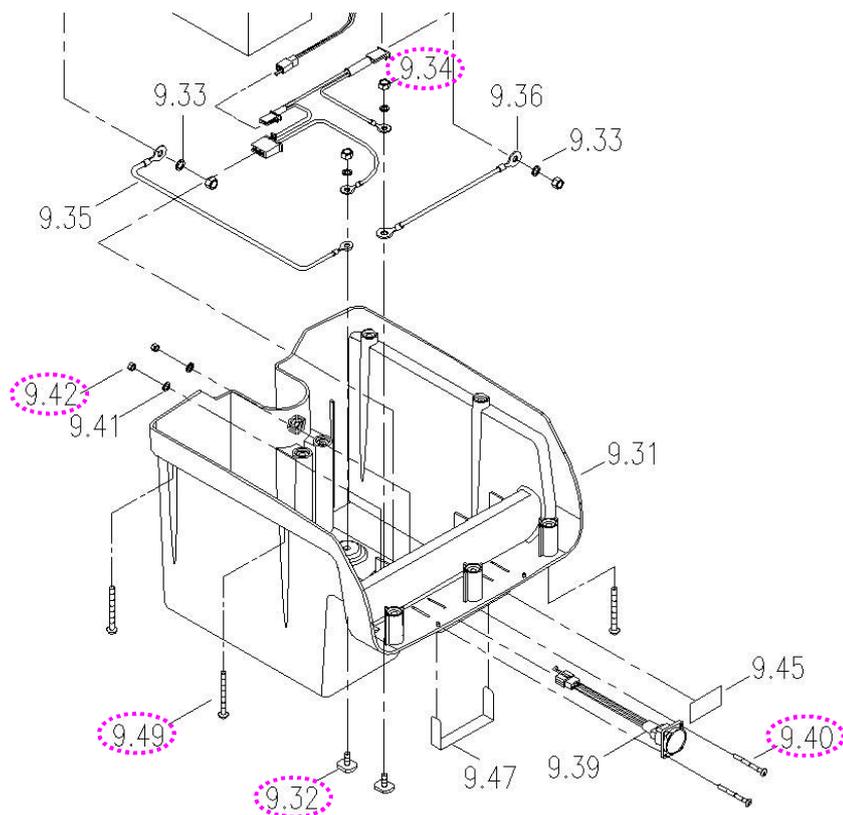
◇ Please proceeding steps as follows if it has to replace.

The battery pack assembly is composed of the case, the cover, the handle, the lock, the spring, two batteries and multi electric harnesses.

Check for deformations or cracks on the battery pack assembly. Release the buckle and lift the handle of the battery pack assembly upward and remove the battery pack assembly.

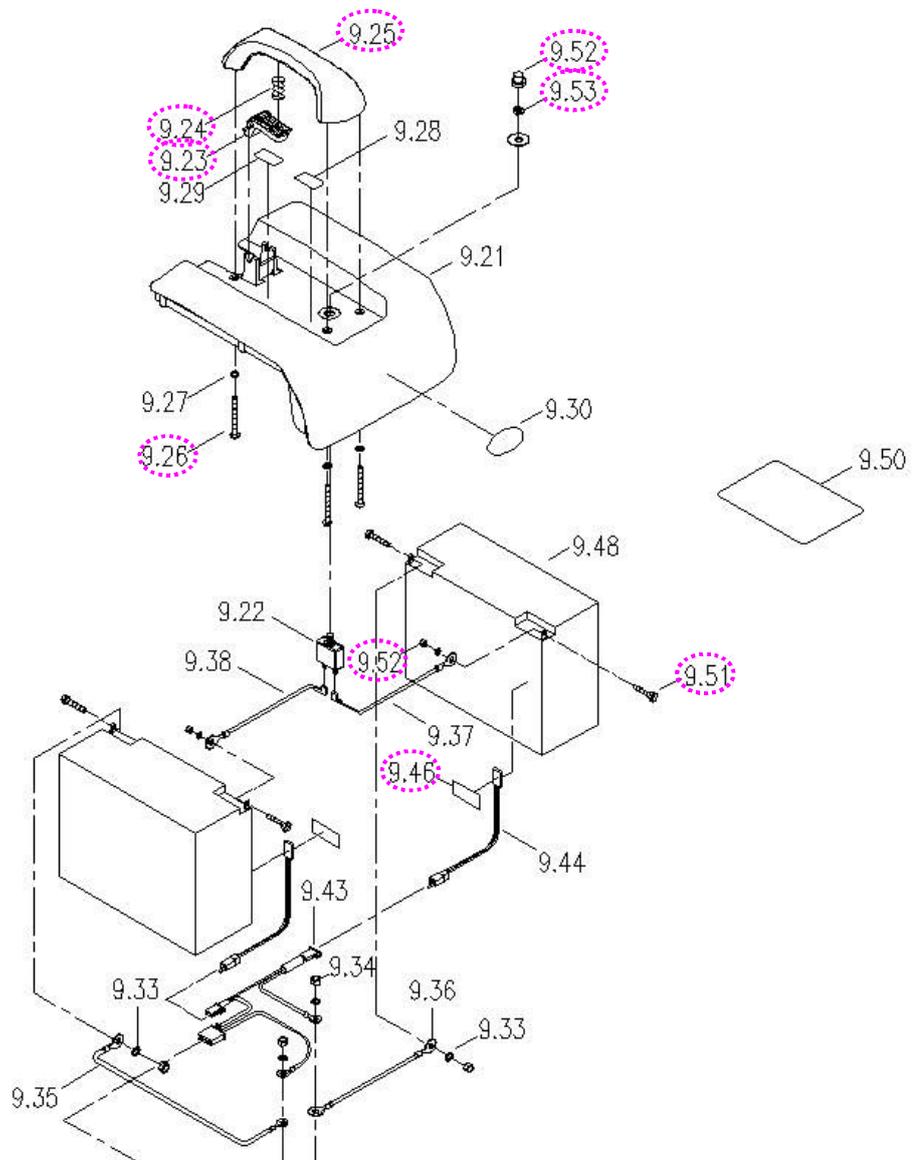
Replace the case by following steps if it is worn out or broken.

- a. Use screwdriver to loosen seven screws (9.49) to open the cover assembly.
- b. Hold the conduct electricity coppers (9.32) in place and loosen two nuts (9.34) by a wrench to remove the cover assembly and batteries assembly.
- c. Hold the screw (9.40) and use screwdriver to loosen two nuts (9.42) to remove the charger socket set. Then replace the case if it is broken.



Replace the cover, the handle, the lock and the spring by the following steps if it is worn out or broken.

- a. Follow preceding step above.
- b. Hold the handle (9.25) in place and use screwdriver to loosen four screws (9.26) to release the handle.
- c. Replace the cover, the handle, the lock or spring if it is broken or worn out.
- d. Loosen the circuit breaker button (9.52) by hand. Use wrench to loosen the nut (9.53) then replace the cover if it is worn out.



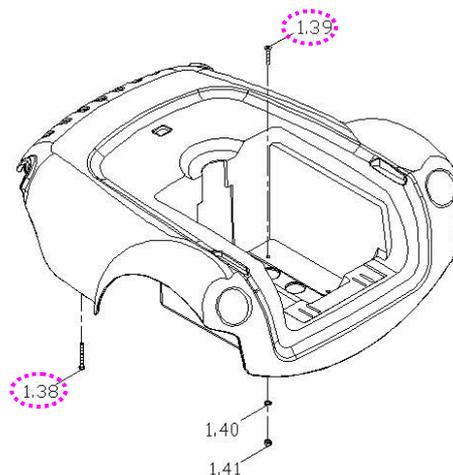
Replace two batteries by the following steps if it is worn out.

- a. Follow preceding step above.
- b. Hold the screws (9.51) and loosen four nuts (9.52) to remove the circuit breaker assembly. (See illustration above)
- c. Remove the heatproof tape (9.46) from battery if battery is worn out. (See illustration above)

2.2.2. To replace the shroud

- ◆ When should you replace the shroud?
 - ◇ If your powerchair can not avoid knocked or bumped cause the shroud broken.
- ◆ How to replace the shroud?
 - ◇ Please proceeding steps as follows if it has to replace.

Check for deformations or cracks on the shroud. Loosen six screws (1.38 and 1.39) and simply lift the shroud straight up if it broken.



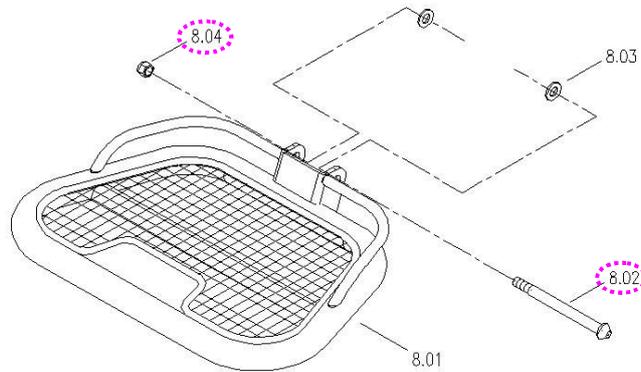
2.2.3. To replace the footplate

- ◆ When should you replace the footplate?
 - ◇ If the footplate is deformation.
 - ◇ If the footplate out of shape due to an accident.

◆ How to replace the footplate?

◇ Please proceeding steps as follows if it has to replace.

Hold the screw (8.02) and loosen the nut (8.04) then remove the footplate. If the footplate is worn out, then replace it.



2.2.4. To replace the anti-tipper wheel

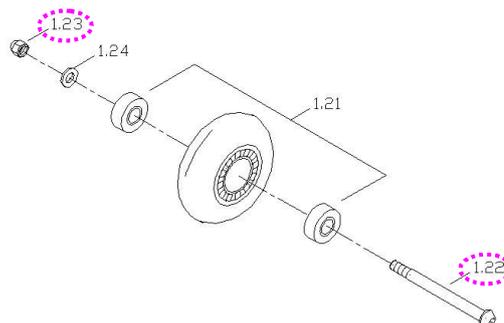
◆ When should you replace the anti-tipper wheel?

- ◇ If the anti-tipper wheel is worn out.
- ◇ If the screw (1.22) of anti-tipper wheel out of shape due to an accident.
- ◇ If your powerchair can not avoid knocked or bumped cause the anti-tipper wheel broken.

◆ How to replace the anti-tipper wheel?

◇ Please proceeding steps as follows if it has to replace.

Replace the anti-tipper wheel if it is worn out or deformed. Hold the screw (1.22) and loosen the nut (1.23) and then replace the anti- tipper wheel.



2.2.5. To replace the caster wheel assembly

- ◆ When should you replace the caster wheel assembly?
 - ◇ If the caster wheel assembly is worn out.
 - ◇ If the stud (3.02) of caster wheel assembly is broken.
 - ◇ If the caster wheel assembly is out of shape due to an accident.

- ◆ How to replace the caster wheel assembly?
 - ◇ Please proceeding steps as follows if it has to replace.

The caster wheel assembly is composed of a caster wheel and fork.

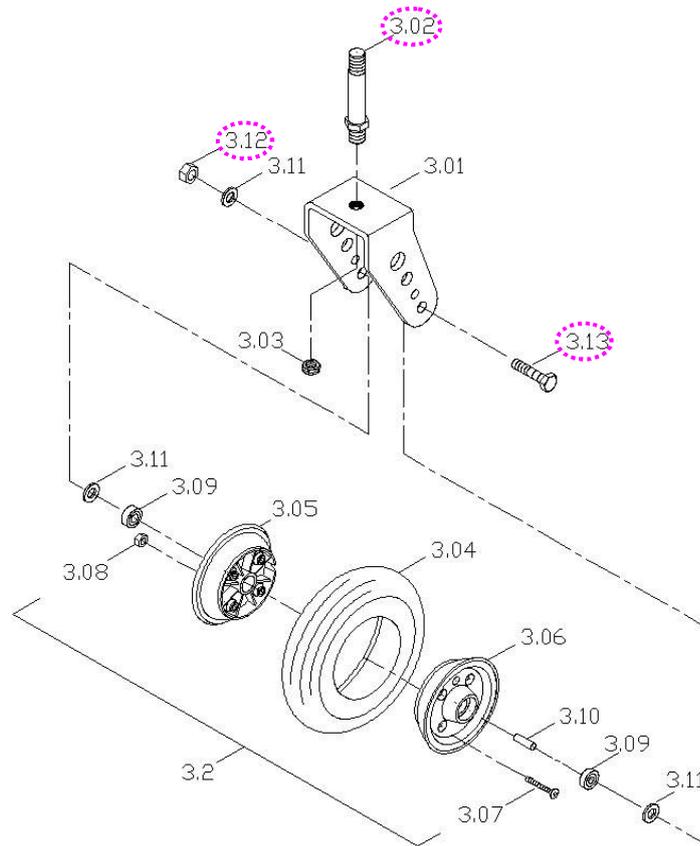
Replace the caster wheel assembly by the following steps if, after inspection, the assembly is found to be deformed.

- a. Remove the seat assembly.
- b. Remove the battery pack assembly, shroud and end cup.
- c. Use screw driver to remove the cap (1.06, see page 13) first.

Fix the caster wheel in place. Hold the stub (3.02) and loosen the nut (1.05, see page 13) and then remove the caster wheel assembly. (See next page)

Replace the caster wheel by the following steps if it is worn out or deformed.

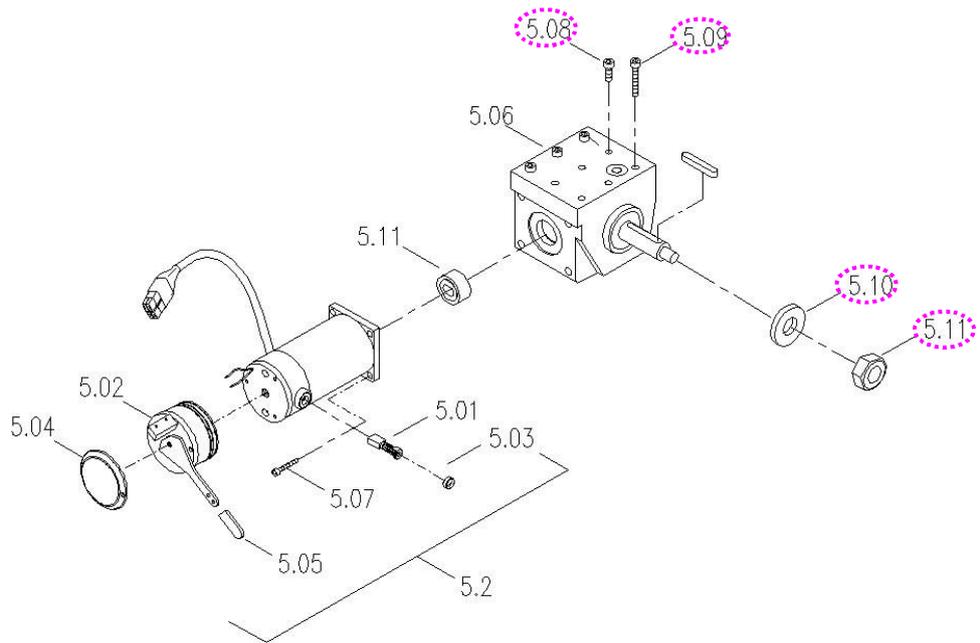
- a. Hold the screw (3.13) and loosen the nut (3.12) and then remove the caster wheel. (See next page)
- b. If the PU tire is worn out, then replace it.



2.2.6. To replace the driver wheel assembly

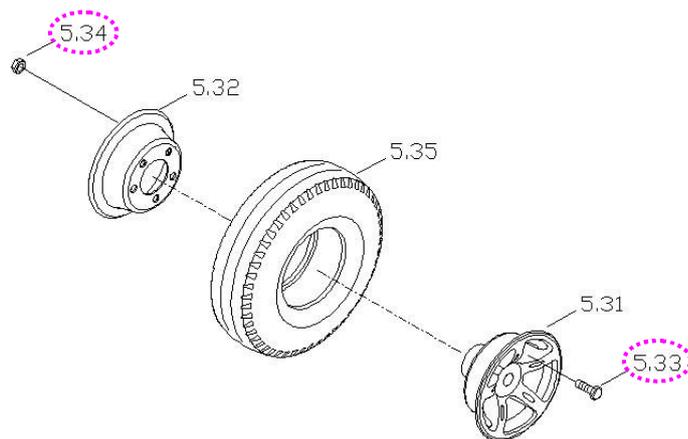
- ◆ When should you replace the driver wheel assembly?
 - ◇ If the driver wheel assembly is worn out.
 - ◇ If the driver wheel assembly is out of shape due to an accident.
- ◆ How to replace the driver wheel assembly?
 - ◇ Please proceeding steps as follows if it has to replace.

Use socket wrench to loosen the nut (5.11) and washer (5.10) to replace the driver wheel assembly if it is worn out or deformed.
(See next page)



Replace the driver wheel by the following steps if it is worn out or deformed.

- a. Follow preceding step above.
- b. If the PU tire is worn out. Hold the screw (5.33) in place and use socket wrench to loosen the nut (5.34) and replace it.



2.2.7. To replace the frame

- ◆ When should you replace the frame?
 - ◇ If the frame is deformation.
 - ◇ If your powerchair can not avoid knocked or bumped cause the frame deform.
 - ◇ If the frame is out of shape due to an accident.

- ◆ How to replace the frame?
 - ◇ Please proceeding steps as follows if it has to replace.

Check the whole body assembly by the following steps if there is noise or sticking motion during operation of the powerchair.

- a. Remove the seat assembly, the battery pack, the shroud, the footplate, anti-tipper wheel and the caster wheel assembly by step 2.1, 2.2.1 until 2.2.5 previously.
- b. Use hex tools to loosen six pieces the screw (5.08 and 5.09) to remove motor and gearbox assembly. (See page 11)
- c. Hold the screw (1.09) and loosen the nut (1.10) to remove controller. (See next page)
- d. Hold the screw (1.11) and loosen the nut (1.12) to remove contact box assembly. (See next page)
- e. Check for deformations or cracks on the frame and replace the frame should they exist.

