

Merits

P301 series *Service Manual*

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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 P301 powerchair.

2. Service guide

The P301 powerchair consists of three main parts:

- Seat assembly
- Body assembly
- Electrical system (Please refer to P3/P7 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 assembly, the seat post assembly and the left/right armrest.

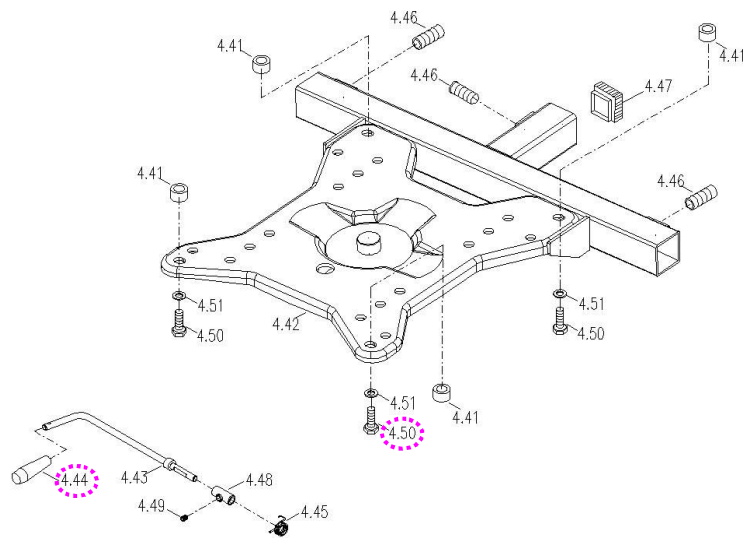
2.1.1. To replace the seat body

- ◆ 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.

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. (See next page)
- 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. (See next page)



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 assembly

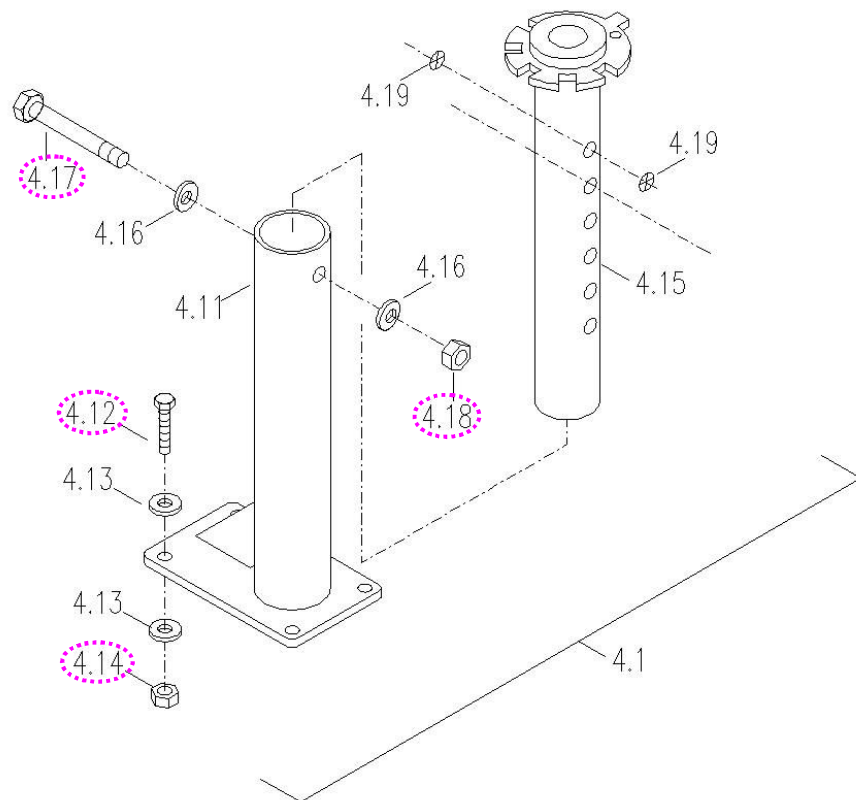
- ◆ When should you replace the seat post assembly?
 - ◇ If the seat post is deformation.
 - ◇ If the seat post out of shape due to an accident.
- ◆ How to replace the seat post assembly?
 - ◇ Please proceeding steps as follows if it has to replace.

The seat post assembly includes the upper seat post and the lower

seat post.

a. To replace the upper seat post: Use two wrenches to loosen the nut (4.18) and screw (4.17) to remove the upper seat post if it is worn out or deformed.

b. To replace the lower seat post: Repeat step of a. then use the wrench to hold the screw (4.12) and loosen the nut (4.14) to remove the lower seat post if it is worn out or deformed.

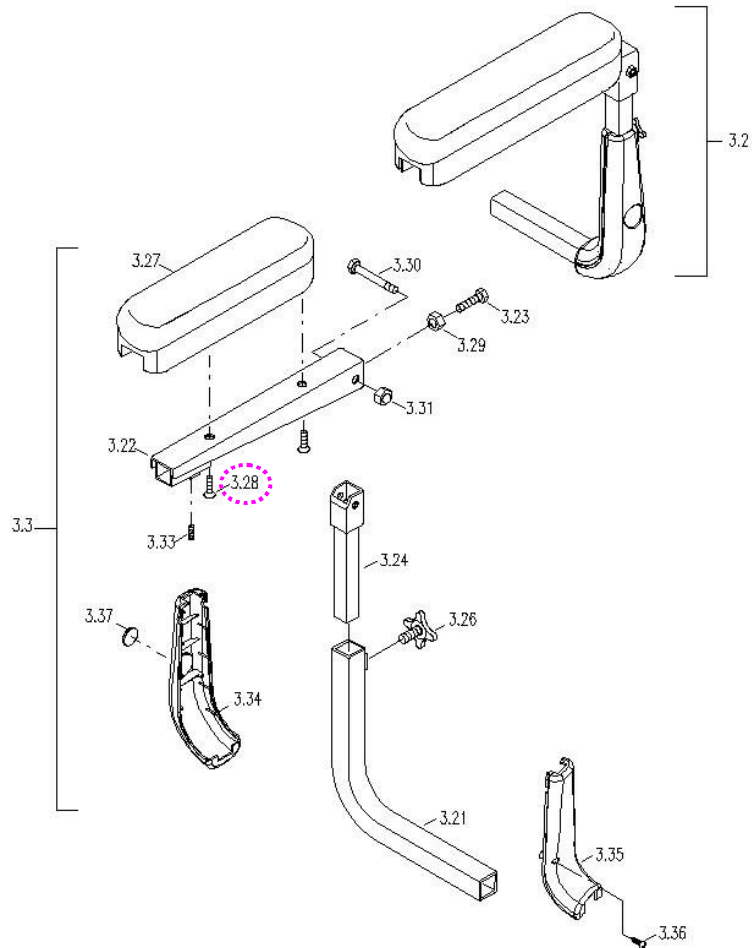


2.1.4. To replace the left/right armrest

- ◆ 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 (3.28) under armrest to disassemble armrest from armrest support plate. If the armrest is broken, then replace it.



Note: The arm tube protective shrouds (3.34 and 3.35) are option parts for powerchair.

2.2. How to replace or repair the body assembly

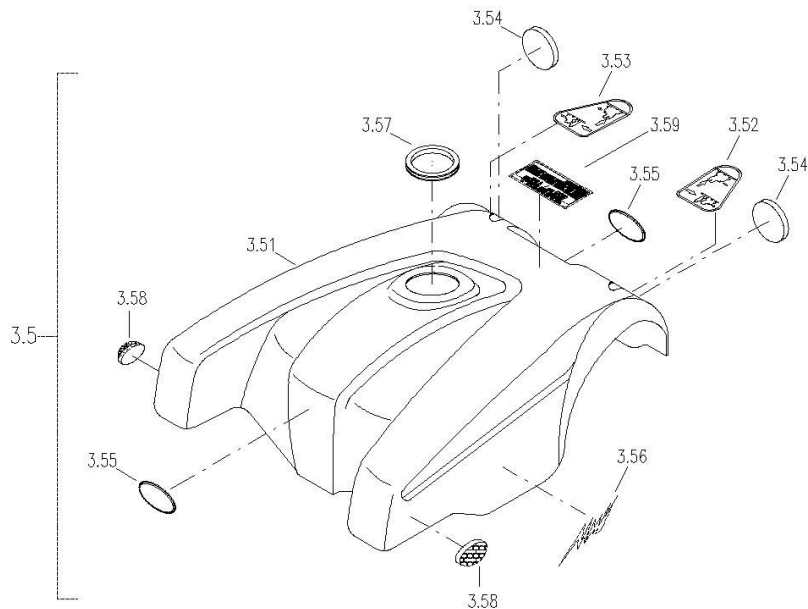
The Body Assembly includes shroud, footplate assembly, anti-tipper wheel assembly, caster wheel assembly, driver wheel assembly and the frame assembly.

2.2.1. 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.

For general powerchair

Check for deformations or cracks on the shroud. Simply lift the shroud straight up then replace it.



For full light powerchair

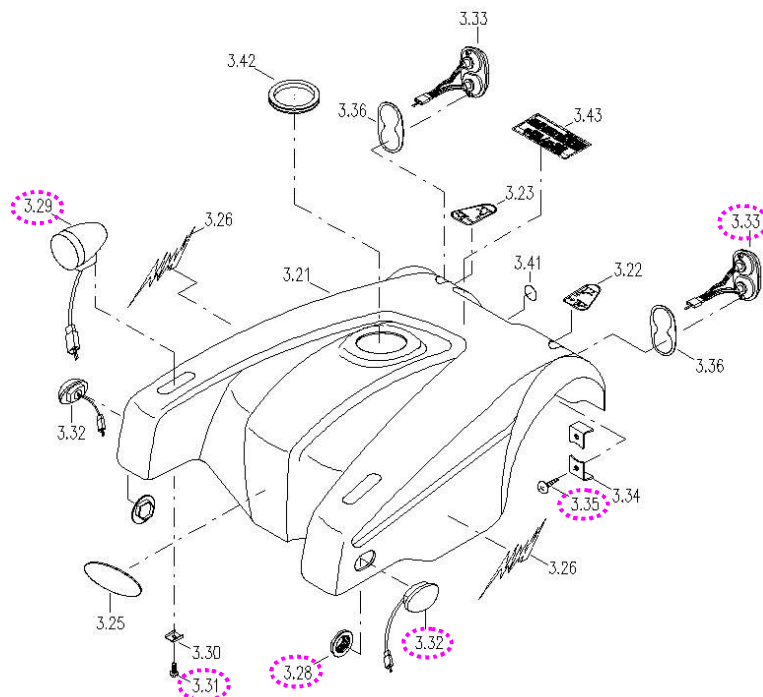
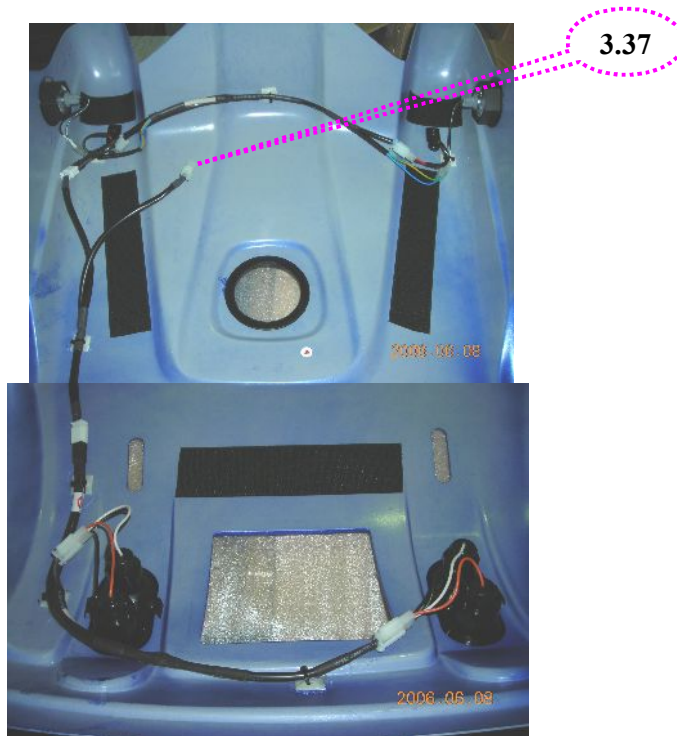
Check for deformations or cracks on the shroud.

Replace the shroud by the following steps if it is deformed or broken.

- a. Remove the seat assembly.
- b. Simply lift the shroud straight up carefully.
- c. Take off the plug (3.37) under cover of the shroud. (See next page)
- d. Take off the plug of headlight (3.29) by hand and use a screw

driver to loosen screw (3.31). Then replace headlight if it is broken or worn out.

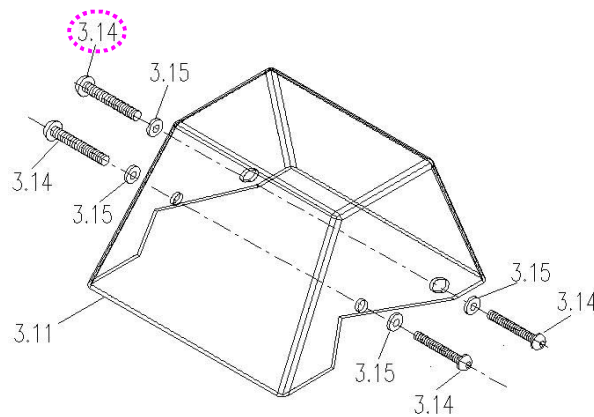
- e. Take off the plug of turnlight (3.32) by hand. Hold the turnlight in place and rotate the turnlight holder by hand (3.28). Then replace it if it is broken or worn out.
- e. Take off the plug of rearlight (3.33) by hand and use a screw driver to loosen two screws (3.35). Then replace rearlight if it is broken or worn out.



2.2.2. To replace the dashboard cover

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

After remove the shroud. Loosen four screws (3.14) if dashboard cover is worn out or broken. Simply lift it straight up then replace it.



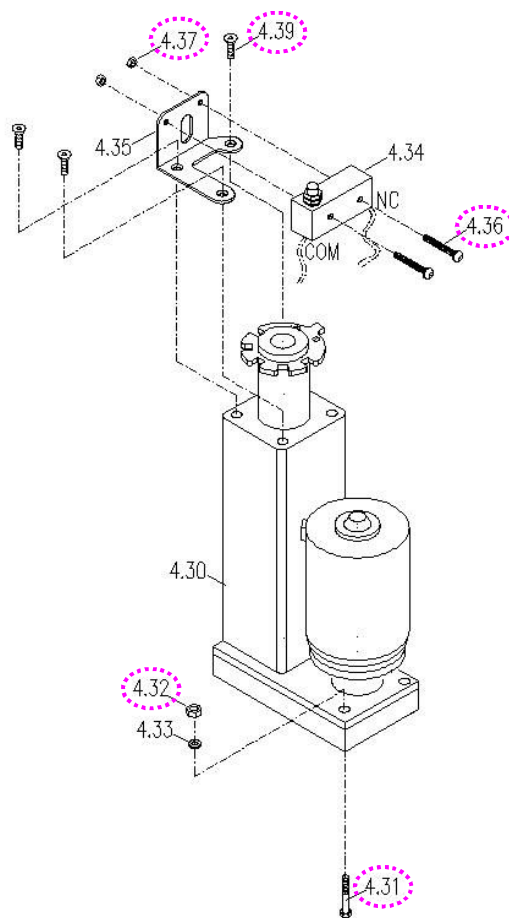
2.2.3. To replace the seat lift motor assembly

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

Replace the limited switch of seat lift assembly if it is worn out or deformed. Hold the screw (4.36) and loosen the nut (4.37) and then replace it. (See next page)

Replace the seat lift motor assembly by following steps if it is worn out or deformed.

- a. Remove the seat assembly.
- b. Remove the shroud.
- c. Use hex tools to loosen three bolts (4.39) first.
- d. Hold the screw (4.31) under the frame and loosen the nut (4.32) and then replace seat lift motor assembly if it is worn out or deformed.



2.2.4. To replace the footplate assembly

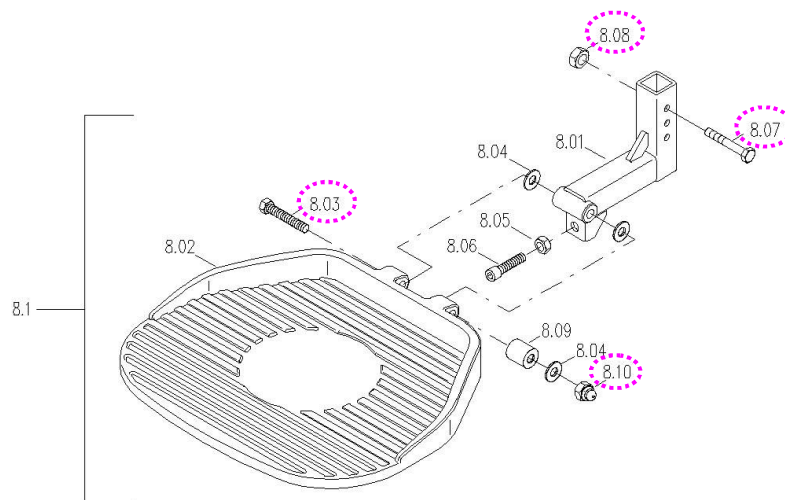
- ◆ When should you replace the footplate assembly?
- ◇ If the footplate assembly is deformation.
- ◇ If the footplate assembly out of shape due to an accident.

◆ How to replace the footplate assembly?

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

Replace the footplate assembly if it is worn out or deformed. Hold the screw (8.07) and loosen the nut (8.08) and then replace the footplate assembly.

Hole the screw (8.03) and loosen the nut (8.10) then remove the footplate. If the footplate is worn out, then replace it.



2.2.5. To replace the anti-tipper wheel assembly

◆ When should you replace the anti-tipper wheel assembly?

◇ If the anti-tipper wheel assembly is worn out.

◇ If your powerchair can not avoid knocked or bumped cause the anti-tipper wheel broken.

◆ How to replace the anti-tipper wheel assembly?

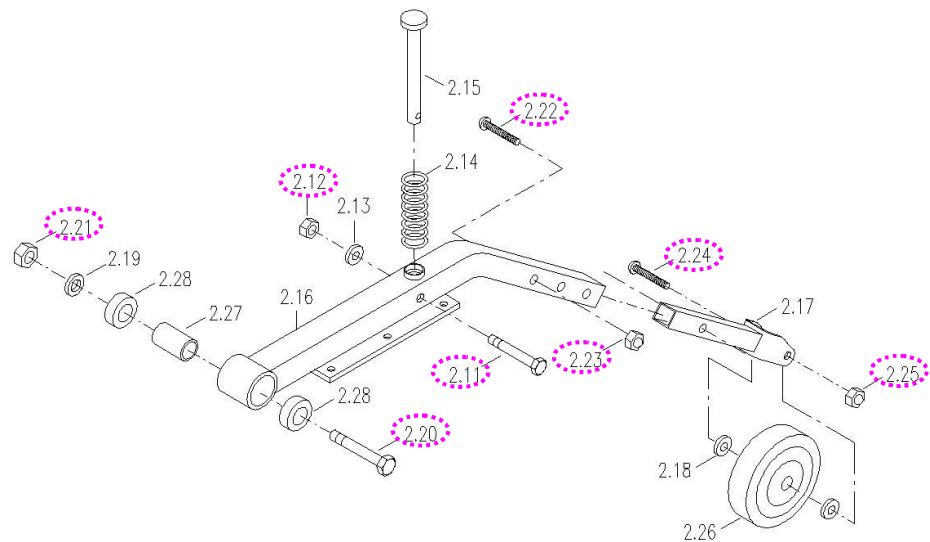
◇ Please proceeding steps as follows if it has to replace.

The anti-tipper wheel assembly includes the suspension bar, suspension spring, suspension tube set, anti-tipper extension tube and anti-tipper wheel.

Replace the anti-tipper wheel assembly by the following steps if it

is worn out or deformed.

- a. Remove the seat assembly.
- b. Remove the shroud.
- c. Use hex tools to loosen the six screws (5.60 and 5.61, see page 12) to remove the motor and gearbox.
- d. Use wrench to hold the screw (2.11) and loosen the nut (2.12) then replace the suspension bar or suspension spring if they are worn out or deformed.
- e. Use wrench to hold the screw (2.20) and loosen the nut (2.21) to take off suspension tube set. Then remove the bronze spacer and inner bushing of suspension tube. Replace the suspension tube if it is worn out or deformed.
- f. Hold the screw (2.22) and loosen the nut (2.23) to replace the anti-tipper wheel assembly if it is worn out or deformed.
- g. Hold the screw (2.24) and loosen the nut (2.25) to replace the anti-tipper wheel if it is worn out or deformed.



2.2.6. To replace the **caster wheel assembly**

- ◆ When should you replace the caster wheel assembly?

- ◇ If the caster wheel assembly is worn out.
- ◇ 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.

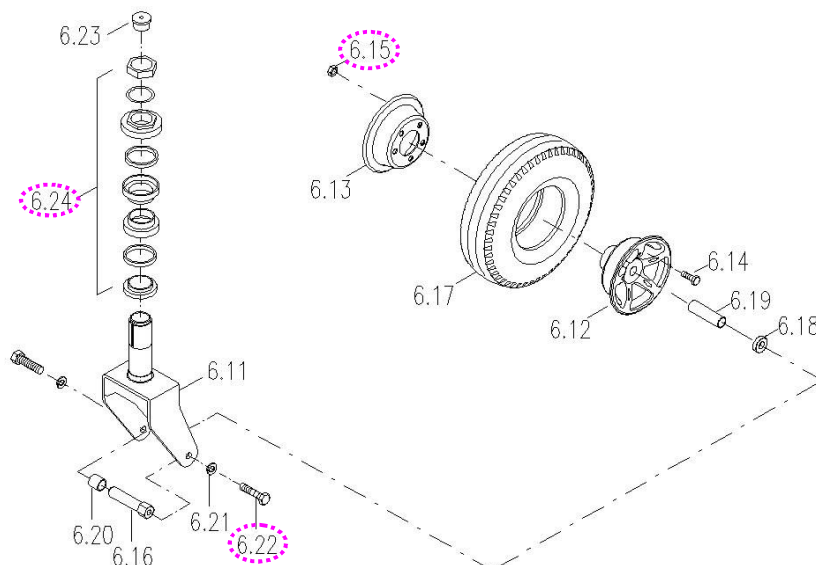
The caster wheel assembly is composed of a caster wheel and fork.

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 shroud.
- c. Fix the caster wheel in place, use wrench to loosen the nut of assembly (6.24) and then remove the caster wheel assembly.

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

- a. Use wrench to loosen two screws (6.22) and then remove the caster wheel.
- b. Loosen the nuts (6.15) to replace the PU tire. If it is worn out or deformed.

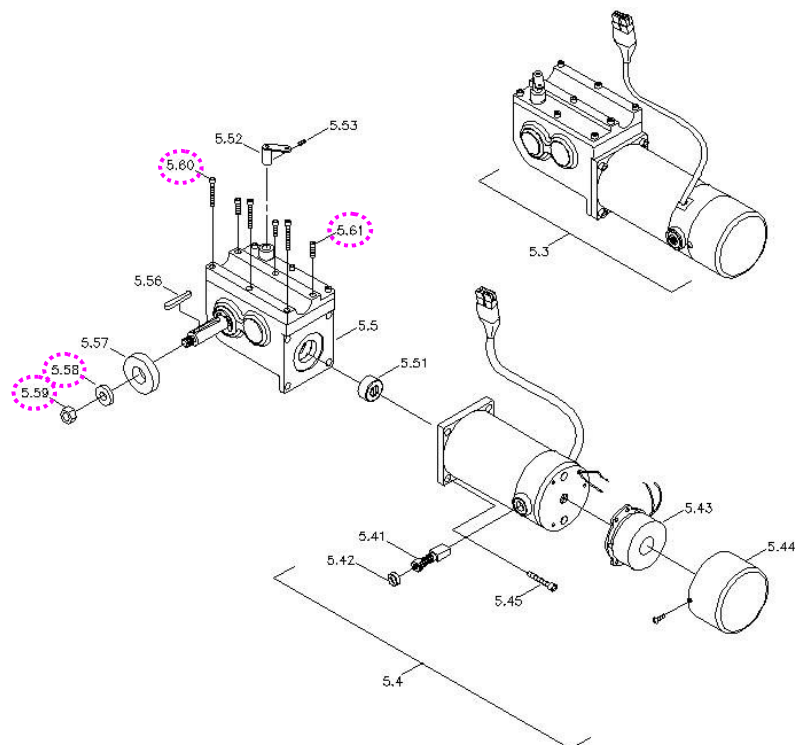


2.2.7. To replace the driver wheel assembly

- ◆ When should you replace the driver wheel assembly?
 - ◇ If the driver wheel assembly is worn out.
 - ◇ If the Pneumatic tire of driver wheel is pierced by something.
 - ◇ 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 wrench to loosen the nut (5.59) and washer (5.58) to replace the driver wheel assembly if it is worn out or deformed.

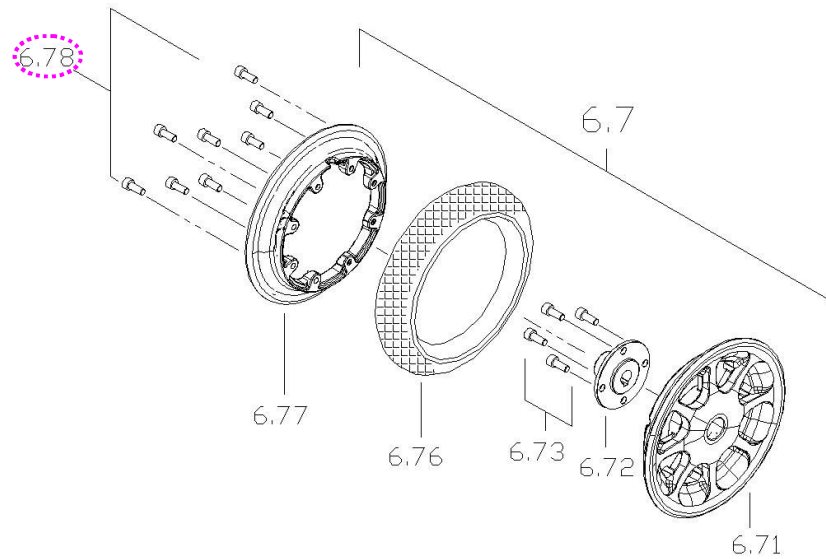


Replace the driver wheel by the following steps if it is worn out or deformed.

For PU tire

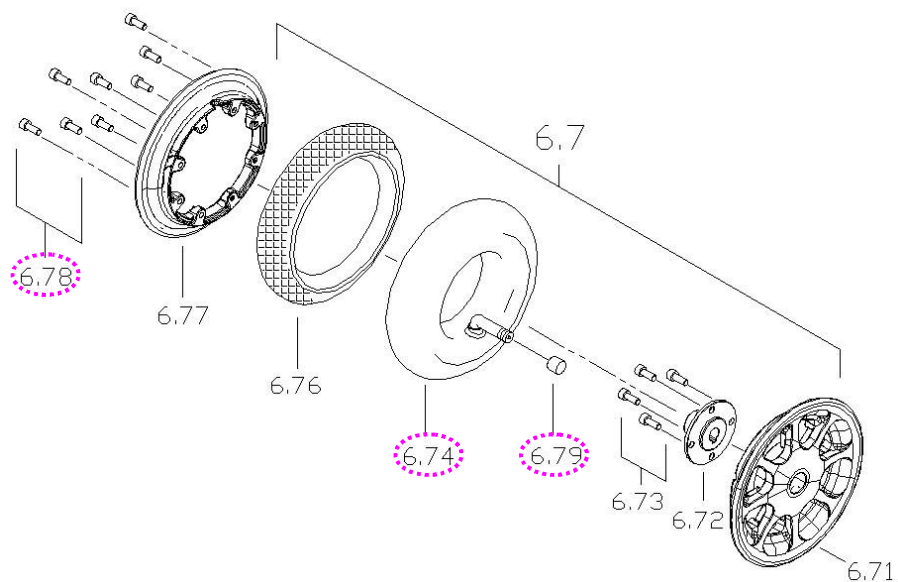
- a. Follow preceding step above.

- b. If the PU tire is worn out. Use hex tools to loosen eight screws (6.78) to replace it. (See next page)



For Pneumatic tire

- a. Loosen the cap (6.79) by hand to remove it.
b. Use a pointed material to release gas of tube valve (6.74) first.
c. Use hex tools to loosen the eight screws (6.78) to replace tire or tube if they are worn out or broken.



2.2.8. To replace the frame assembly

- ◆ 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 shroud, dashboard cover, the seat post/lift assembly, the footplate assembly, anti-tipper wheel assembly and the caster wheel assembly by step 2.1 and 2.2.1 until 2.26.
- b.** Use hex tools to loosen six pieces the screw (5.60 and 5.61) to remove motor and gearbox assembly. (See page 12)
- c.** Use screw driver to hold the screw (1.21) and loosen the nut (1.22) to remove controller. (See next page)
- d.** Check for deformations or cracks on the frame and replace the frame should they exist.

