

Merits

P310 series *Service Manual*

Nov.1.2006 V1

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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 P310 powerchair.

2. Service guide

The P310 powerchair consists of three main parts:

- Seat assembly
- Body assembly
- Electrical system (Please refer to P3 /P7series Shark or VR2 service manual)

2.1. How to replace or repair the seat assembly

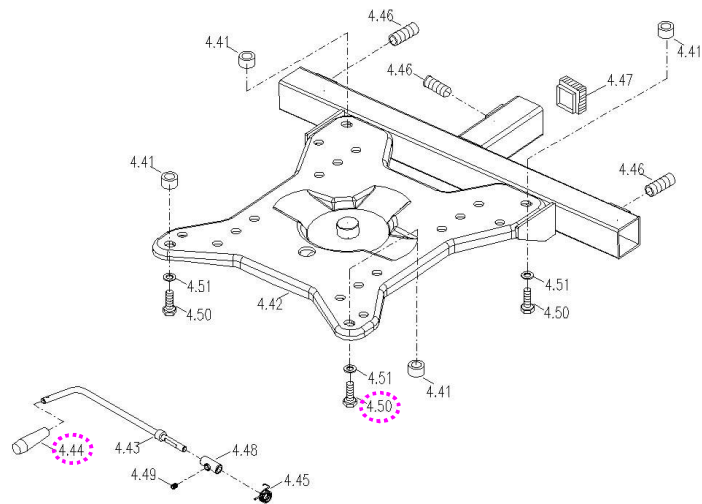
The Seat assembly includes the seat body, the seat base plate, the seat post assembly and the left/right armrest.

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.

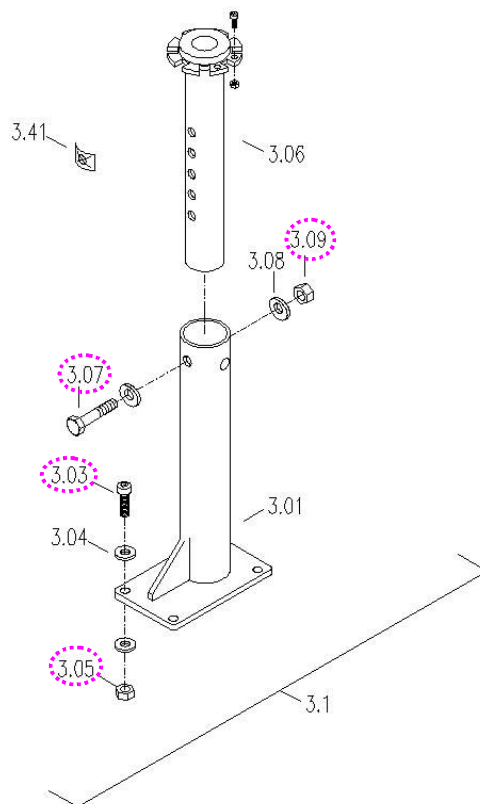
Follow preceding step of 2.1.1. You can remove seat base plate assembly too if it is worn out or deformed.

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.

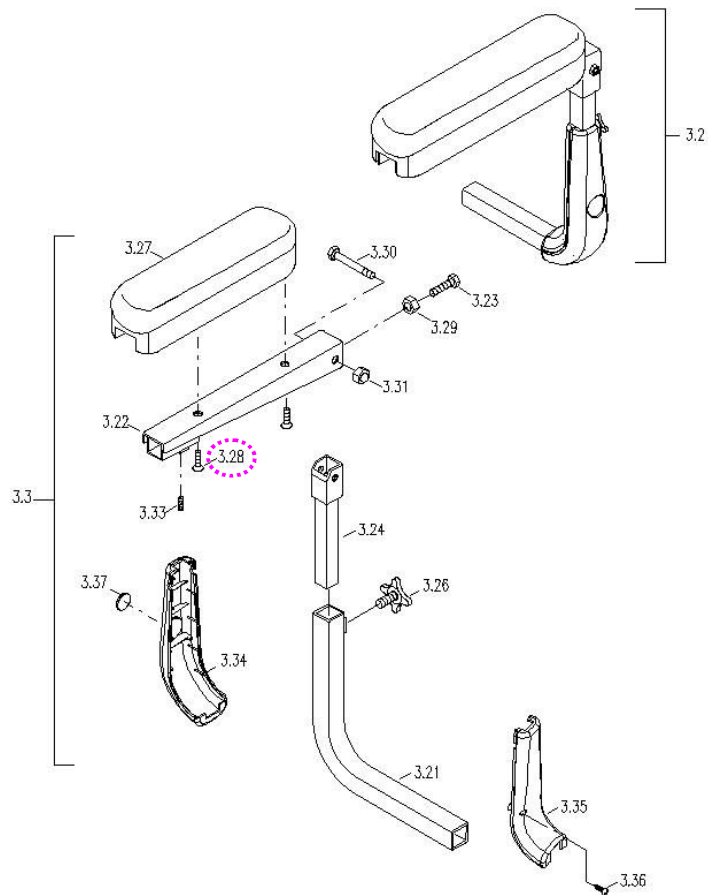
- a. To replace the upper seat post:** Use two wrenches to loosen the nut (3.09) and screw (3.07) to remove the upper seat post if it is worn out or deformed.
- b. To replace the lower seat post:** Repeat step of a. then hold the screw (3.03) and loosen the nut (3.05) to remove the lower seat post if 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.

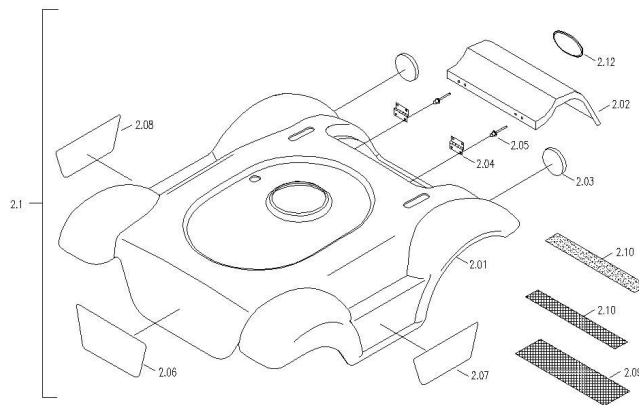
2.2. How to replace or repair the body assembly

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.

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

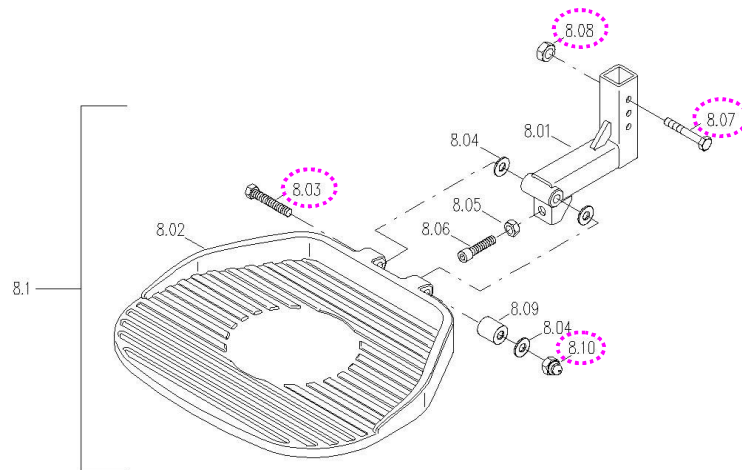


2.2.2. To replace the footplate assembly

- ◆ 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.

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

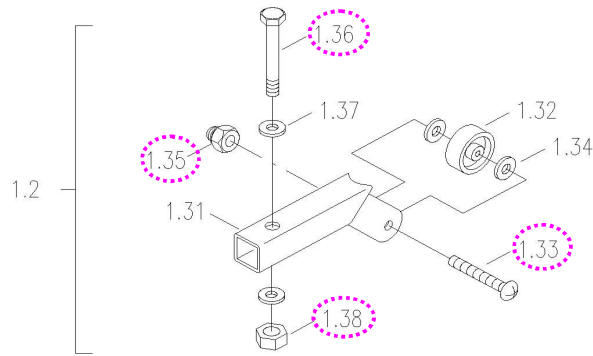


2.2.3. To replace the anti-tipper wheel assembly

- ◆ 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.

Replace the anti-tipper wheel assembly if it is worn out or deformed. Hold the screw (1.36) and loosen the nut (1.38) and then replace the anti-tipper wheel assembly. (See next page)

Replace the anti-tipper wheel if it is worn out or deformed. Hold the screw (1.33) and loosen the nut (1.35) and then replace the anti-tipper wheel. (See next page)



2.2.4. To replace the castor wheel assembly

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

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

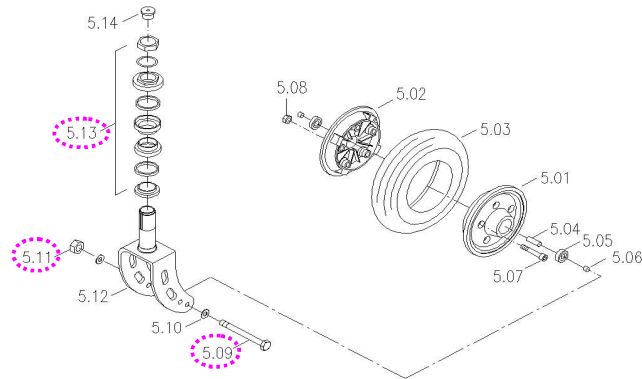
Replace the castor wheel assembly by the following steps if, after inspection, the assembly is found to be deformed.

- a. Remove the seat assembly.
- b. Remove the shroud.
- c. Fix the castor wheel in place, use wrench to loosen the nut of assembly (5.13 or 7.07) and then remove the castor wheel assembly. (See next page)

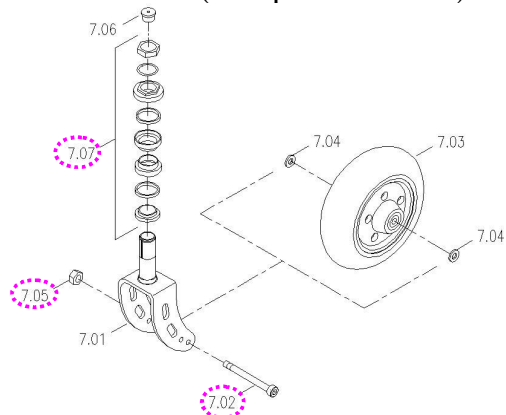
Replace the castor wheel by the following steps if it is worn out or deformed.

- a. Hold the screw (5.09 or 7.02) and loosen the nut (5.11 or 7.05) and then remove the castor wheel. (See next page)

b. If the PU tire is worn out, then replace it.



PU form (two piece of rims)

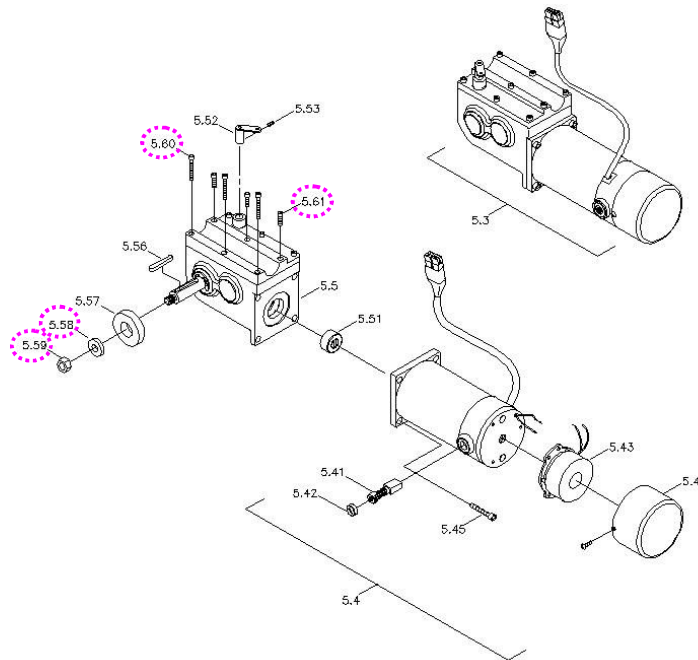


solid tire (one piece of rim)

2.2.5. To replace the driver wheel assembly

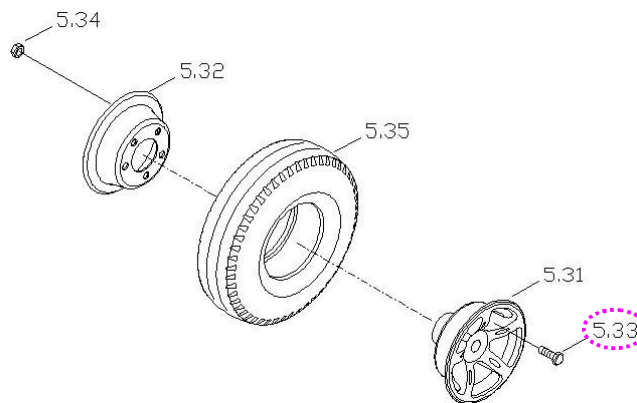
- ◆ When should you replace the driver wheel assembly?
 - ◇ If the driver wheel assembly is worn out.
 - ◇ If the driver wheel assembly is out of shape due to an accident.
- ◆ How to replace the driver wheel assembly?
 - ◇ Please proceeding steps as follows if it has to replace.

Loosen the nut (5.59) and washer (5.58) 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, replace it by loosening screw (5.33) and replace it.



2.2.6. 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.

The frame assembly is composed of the cross beam and the frame.

Replace the cross beam by following steps if there is noise or sticking motion during operation of the powerchair.

- a.** Remove the seat assembly, the shroud and the caster wheel assembly by step 2.1, 2.2.1 and 2.24.
- b.** Remove cotter pin (1.06) first. Use hex tools to hold the screw (1.03) and loosen the nut (1.05) then remove the cross beam. If the cross beam is worn out or deformed. (See next page)

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

- a.** In addition to follow preceding step above, it has to remove the footplate assembly and the anti-tipper assembly by step 2.1, 2.2.1, 2.2.2 and 2.2.3 previously.
- b.** Use hex tools to loosen six pieces the screw (5.60 and 5.61) to remove motor and gearbox assembly. (See page 9)
- c.** Hold the screw (1.33) and loosen the nut (1.34) to remove controller. (See next page)
- d.** Hold the screw (1.09) and loosen the nut (1.08) to remove support bar. (See next page)
- e.** Check for deformations or cracks on the frame and replace the frame should they exist.

