

Merits

P120 series *Service Manual*

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

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 P120 powerchair.

2. Service Guide

The P120 powerchair consists of three main parts:

- Seat assembly
- Body assembly
- Electrical system (Please refer to P1 & P2 series for VSI controller service manual)

2.1 How to replace or repair the seat assembly

The seat assembly includes the seat body and the seat base plate assembly and the armrest assembly.

2.1.1 To replace the seat body

- ◆ When you should 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.

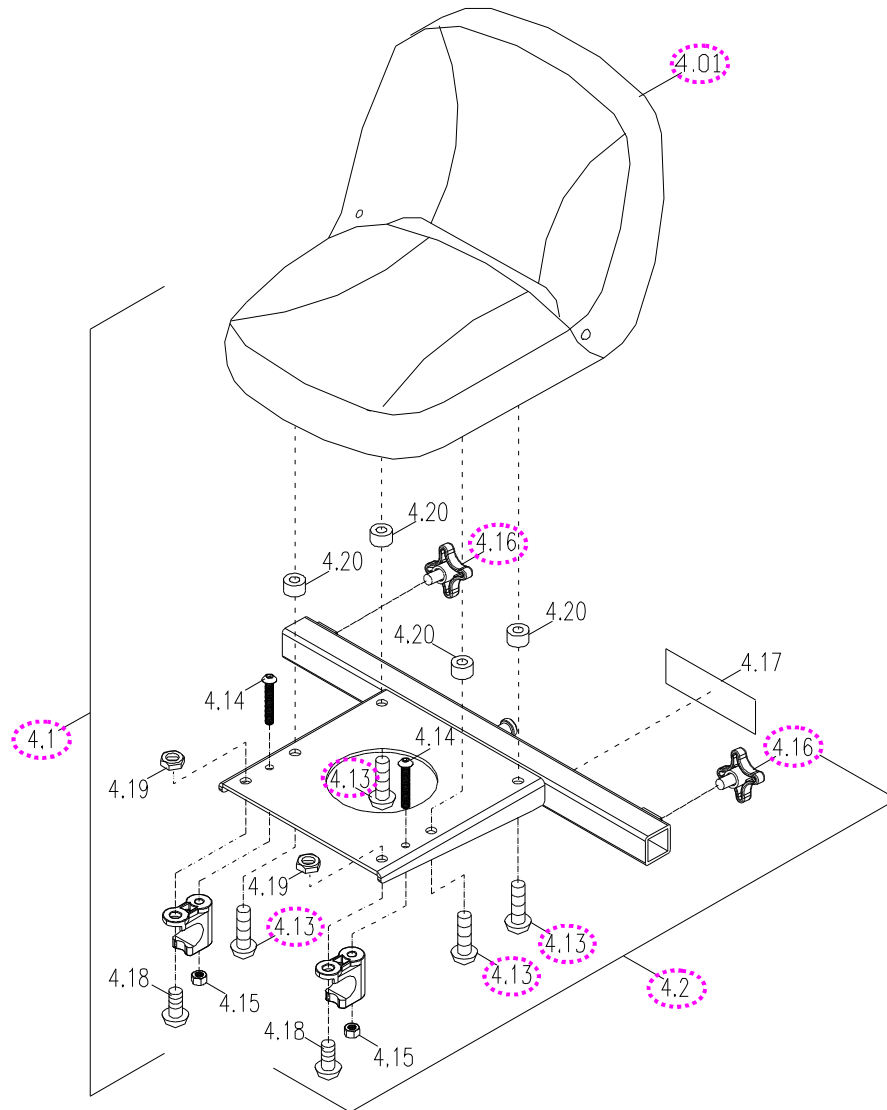
- a. Push down the seat free bar (1.23-page 8) to release the seat assembly (4.1) from the frame and pull out it. (See next page)
- b. Use hex tools to loosen four pieces screw (4.13) on seat base plate assembly and remove the seat body (4.01) from the seat base plate assembly if it is broken. (See next page)

2.1.2 To replace the seat base plate assembly

- ◆ When you should 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 (4.2) too if it is worn out or deformed.



2.1.3 To replace the armrest assembly

◆ When you should replace the armrest assembly?

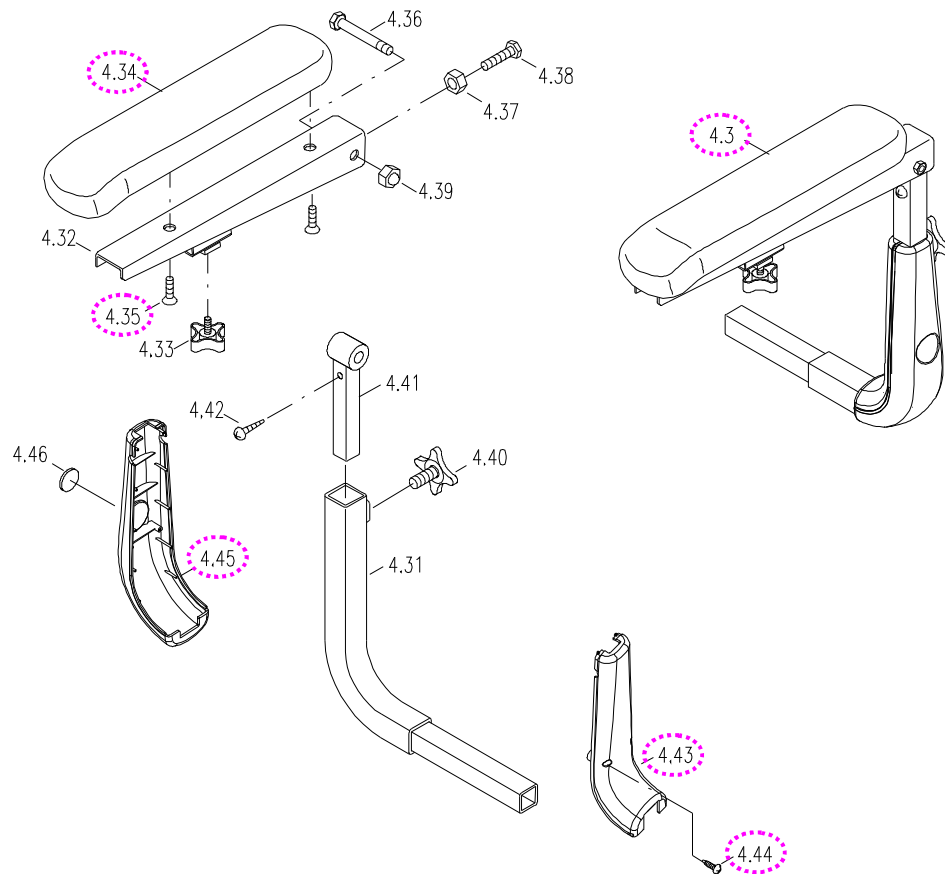
- ◇ If the armrest assembly is worn out.
- ◇ If the armrest assembly is pierced or scratched by something.
- ◇ If the powerchair crashed cause the armrest assembly out of shape.

◆ How to replace the armrest assembly?

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

1. Loosen the knob (4.16) by hand if the armrest assembly (4.3) is worn out or deformed, and then replace it. (See next page)
2. Use hex tools to loosen the screw (4.35) under armrest to disassemble armrest from armrest support plate. If the armrest pad (4.34) is broken, then replace it. (See next page)

3. Check for deformations or cracks on the armrest protective shroud (4.43 or 4.45). Use screw driver to loosen these two screws (4.44), and then replace it.



2.2 How to replace or repair the body assembly

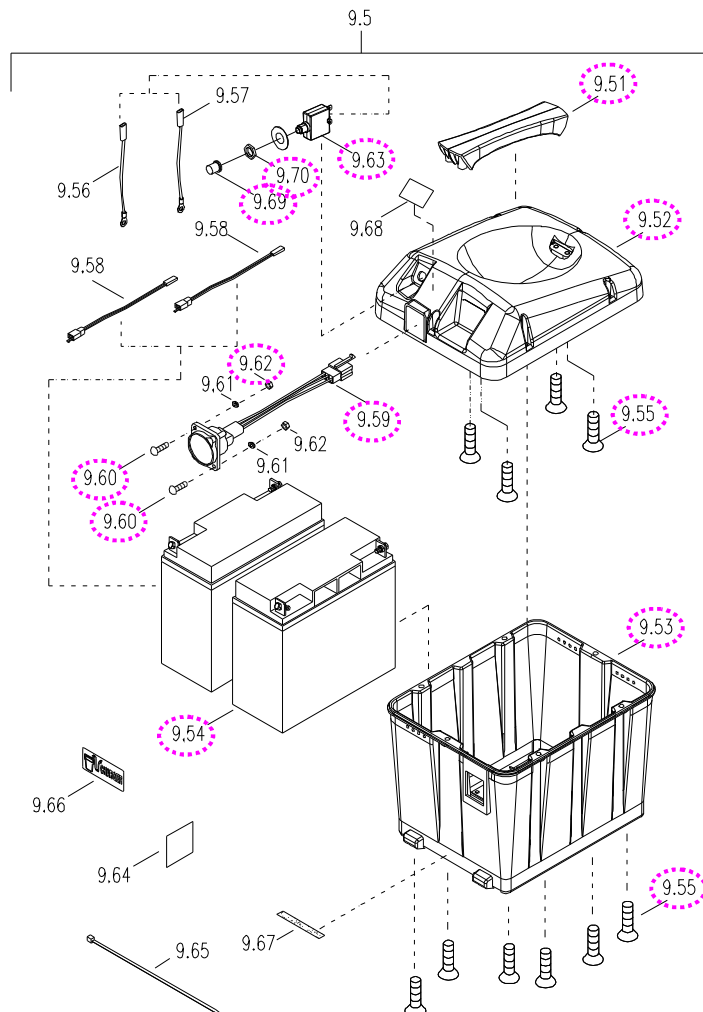
The body assembly is composed of the battery pack assembly, the footplate, the caster assembly, the driven wheel assembly, the motor & gearbox assembly, the frame assembly, and so on.

2.2.1 To replace the battery pack assembly

- ◆ When you should be replace the battery pack assembly or relation parts?
 - ◇ If the battery pack assembly or relation parts are worn out or broken.
 - ◇ If scooter can not avoid knocked or bumped cause the battery pack assembly broken.
 - ◇ If the 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.

1. Replace the lower cover assembly by following steps if it is worn out or broken.
 - a. Use screwdriver to loosen six screws (9.55) to open the cover assembly. Pull out the connector of all harness, and enable the low cover assembly and the upper cover assembly to separate.
 - b. Replace the battery (9.54) if it has a breakdown.
 - c. Remove two batteries. Replace the lower cover (9.53) if it is broken or worn out.

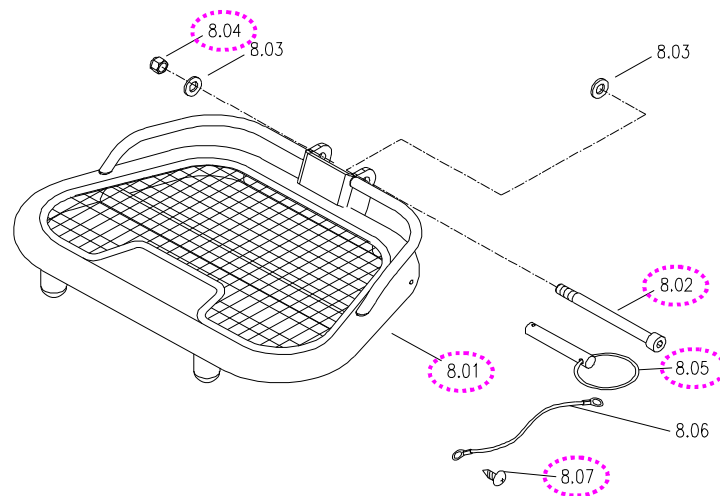
2. Replace the upper cover assembly by the following steps if it is worn out or broken.
 - a. Follow preceding step above.
 - b. Loosen the circuit breaker cap (9.69) by hand. Use wrench to loosen the nut (9.70) then replace the circuit breaker (9.63) if it is broken.
 - c. Use screwdriver and wrench to loosen the screw (9.60) and nut (9.62), and then replace the charger socket set (9.59) if it is broken.
 - d. Hold the handle (9.51) in place and use screwdriver to loosen four screws (9.55), and then replace the upper cover (9.52) or the handle (9.51) if it is broken or worn out.



2.2.2 To replace the footplate

- ◆ When you should 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.

Use screwdriver to loosen the screw (8.07) and draw out the pull pin (8.05), use hex. tools and wrench to loosen the screw (8.02) and nut (8.04), and then replace the footplate (8.01) if it is worn out or deformed.



2.2.3 To replace the caster assembly

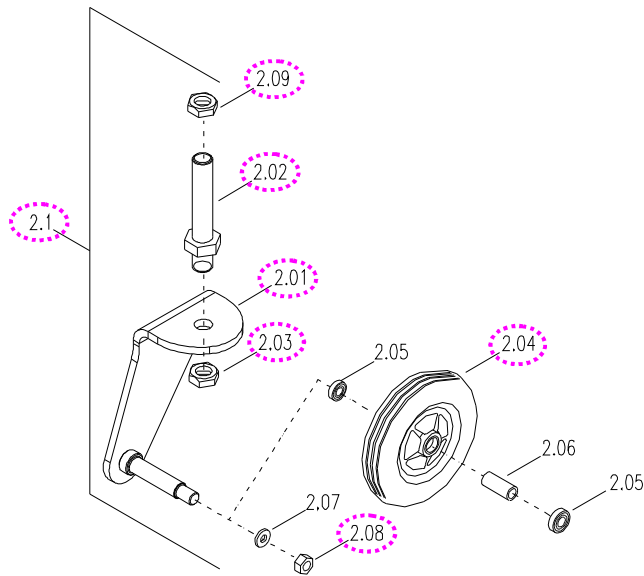
- ◆ When should you replace the caster assembly?
 - ◇ If your caster assembly is deformation.
 - ◇ If the caster assembly out of shape due to an accident.
 - ◇ If the caster assembly is worn out.
 - ◇ If the caster assembly is pierced by something.
- ◆ How to replace the caster assembly?
 - ◇ Please proceeding steps as follows if it has to replace.

The caster assembly is composed of a caster, stem and fork.

Fix the caster in place, remove the cap (1.18-page 8) first, use wrench to loosen the nut (2.09) and remove the caster assembly. (See next page)

1. Replace the caster assembly (2.1) if it is found to be deformed. (See next page)
2. Use wrench to loosen the nut (2.08). Replace the caster (2.04) if it is worn out or deformed. (See next page)

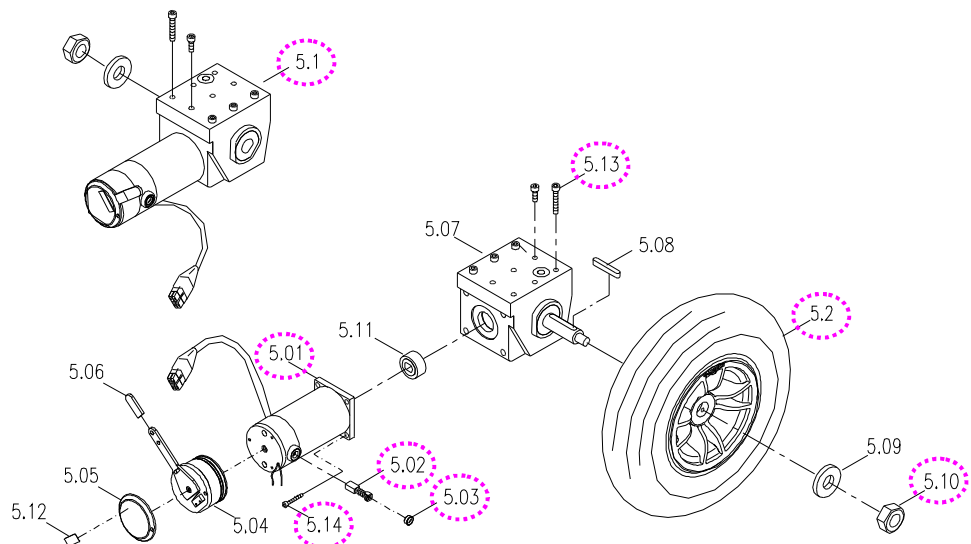
3. Use wrench to loosen the nut (2.03). Replace the fork (2.01) or stem (2.02) if it is worn out or deformed.



2.2.4 To replace the driven wheel assembly

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

Use wrench to loosen the nut (5.10). Replace the driven wheel assembly (5.2) if it is worn out or deformed.



2.2.5 To replace the motor & gearbox assembly

◆ When you should replace the motor & gearbox assembly?

- ◇ If the motor & gearbox assembly has noise.
- ◇ If the motor & gearbox assembly can't drive the powerchair.
- ◇ If the motor & gearbox assembly out of shape due to an accident.
- ◇ If the motor & gearbox assembly is deformation.

◆ How to replace the motor & gearbox assembly?

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

1. Replace the motor & gearbox assembly (5.1) by the following steps if it has a breakdown. (See page 6)
 - a. Remove the driven wheel (5.2). (The step is same as 2.2.4.)
 - b. Use hex. tools to loosen the screw (5.13), and then replace the motor & gearbox assembly. (See page 6)
2. Replace the motor (5.01) if it has a breakdown. Use hex. tools to loosen the screw (5.14), and then replace it. (See page 6)
3. Replace the carbon brush (5.02) if it has a breakdown. Use screwdriver to loosen the carbon brush cap (5.03), and then replace it. (See page 6)

2.2.6 To replace the frame assembly

◆ When you should replace the frame assembly?

- ◇ If the frame assembly is deformation.
- ◇ If your powerchair can not avoid knocked or bumped cause the frame assembly is deformed.
- ◇ If the frame assembly is out of shape due to an accident.

◆ How to replace the frame assembly?

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

The frame assembly is composed of the folding mechanic form, the bolt connect form, the folding shaft form and the frame.

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

- a. Remove the seat assembly, the battery pack assembly, the footplate, the caster assembly and motor and gearbox assembly by step 2.1, 2.2.1 until 2.25 previously.
- b. Use hex tools hold the screws (1.12 and 1.14) and use wrench to loosen the nuts (1.13 and 1.15) to remove the folding mechanism form (1.10). (See next page)

- c. Pull out the pull pin (1.28) by hand first. Use hex tools hold the screw (1.08) and use wrench to loosen the nuts (1.09) to remove the bolt connect form (1.06).
- d. Use hex tools hold the two screws (1.04) and loosen the two nuts (1.05) to remove the folding shaft form (1.02).
- e. Use hex tools hold the screw (1.44) and loosen the nut (1.45) to remove the battery box locked form (1.38).
- f. Use driver screw to loosen the eight screws (1.50) and remove two 9P fixed plate shelves (1.49).
- g. Check for deformations or cracks on the frame and replace the frame (1.01) should they exist.

