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# SECTION 2 REMOVAL & INSTALLATION OF UNIT

# GROUP 1 STRUCTURE

Use the illustration below to locate components included in the PM procedures.

#### 1.15P-9



15P9OM113

- 1 Steering wheel
- 2 Flasher position lamp
- 3 Accelerator
- 4 Brake pedal
- 6 Head lamp
- 7 Brake system
- 8 Drive motor
- 9 EPS actuator

- 10 Drive unit
- 11 Front wheel
- 12 Fuse box
- 13 Can tiller card
- 14 Inverter
- 15 Horn
- 16 Back buzzer
- 17 Flasher unit

- 18 DC-DC converter
- 19 EPS filter
- 20 Contactor
- 21 EPS controller
- 22 Battery connector
- 23 Battery
- 24 Combination lamp
- 25 Rear wheel



- 1 Steering wheel
- 2 Flasher position lamp
- 3 Accelerator
- 4 Brake pedal
- 5 Foot switch
- 6 Head lamp
- 7 Brake system
- 8 Drive motor
- 9 EPS actuator

- 10 Drive unit
- 11 Front wheel
- 12 Fuse box
- 13 Can tiller card
- 14 Inverter
- 15 Horn
- 16 Back buzzer
- 17 Flasher unit
- 18 DC-DC converter

- 19 EPS filter
- 20 Contactor
- 21 EPS controller
- 22 Battery connector
- 23 Battery
- 24 Combination lamp
- 25 Rear wheel
- 26 Inching switch

# **GROUP 2 REMOVAL AND INSTALLATION OF UNIT**

Remove and install following units as explained in the flow chart.

# **1. POWER TRAIN ASSEMBLY**

## 1) REMOVAL



### (1) Battery

① Disconnect the battery connector.



0 Open the battery cover.



③ Loosen the stopper bolt with hand and remove the battery support.



- ④ Using a battery hanger, carefully raise the battery assembly.
- \* Be careful not to damage control system.



⑤ Adjust the height of the roller of the stand to that of the roller of the vehicle. (option)



### (2) Front cover

- 1 Disconnect wirings from front cover.
- ② Remove front cover by loosening the screw.



# (3) Dashboard cover and steering column

- Disconnect the wiring harness to switches and lamps etc on the dashboard cover.
- ② Loosen the set screw and remove the dashboard cover.



③ Loosen the bolt and nuts, and remove the steering column assy.



#### (4) Brake pedal

① Disconnect brake pedal link from brake cam.







## (5) Wiring

1 Disconnect cable from drive motor.



② Disconnect wiring from EPS motor.



#### (6) Chain and sprocket sub assy

① Loosen the bolts and remove the chain and sprocket sub assy.



# (7) Drive unit

① Loosen the bolts and remove the dashboard assy.



- ② Loosen the socket bolts and lift up drive unit assembly carefully.
- \* Be careful not to damage drive unit and other components.



# 2) INSTALLATION

Installation is in the reverse order to removal, but be careful of following point.

- (1) Drive unit mounting bolts.
  - Tightening torque : 26.7~32.7 kgf · m (193~237 lbf · ft)



## 2. ELECTRICAL COMPONENTS

Before removing each component, disconnect cables and earth lines attached to the component.

#### 1) REMOVAL



#### (1) Drive motor

- Disconnect the battery cable and loosen the stopper bolt and then carefully raise the battery assembly.
- \* Be careful not to damage control system.



- ② Remove front cover by loosening the trus head bolts.
- ③ Disconnect the wiring harness to switches and lamps etc on the dashboard cover.



④ Loosen the screws and remove the dashboard cover.



⑤ Disconnect brake pedal link from brake cam.



6 Disconnect the cables from drive motor.



⑦ Remove drive motor and brake assembly by loosening the mounting bolts.



# (2) EPS motor

① Disconnect the wiring from the EPS motor.



② Remove EPS motor by loosening the mounting bolts.



# 2) INSTALLATION

Installation is in the reverse order to removal, but be careful of following points.

## (1) EPS motor mounting bolts

- Tightening torque : 3.7~4.1 kgf · m (26.8~29.6 lbf · ft)
- \* Apply the loctite #277 before tightening.



#### (2) Drive motor mounting bolts

 $\cdot$  Tightening torque : 3.7~4.1 kgf  $\cdot$  m (26.8~29.6 lbf  $\cdot$  ft)



### 4. TIRE AND WHEEL ASSEMBLY

#### 1) REMOVAL

- (1) Front tire and wheel assembly
- ① Jack up the front side of frame and put blocks under the lifted frame.



② Remove the hex bolts fixing the front wheel and take off the front wheel assembly.



#### (2) Rear tire and wheel assembly

① Jack up the rear side of frame and put blocks under the lifted frame.



② Remove the hub nuts attaching the rear wheel and take off the rear wheel assembly.



# 2) INSTALLATION

Installation is in the reverse order to removal, but be careful of following points.

#### (1) Front wheel hex bolts

 Tightening torque : 18.5~21.5 kgf · m (134~156 lbf · ft)



#### (2) Rear wheel hub nuts

 $\cdot$  Tightening torque : 9.0~11.0 kgf  $\cdot$  m (65.1~79.6 lbf  $\cdot$  ft)

