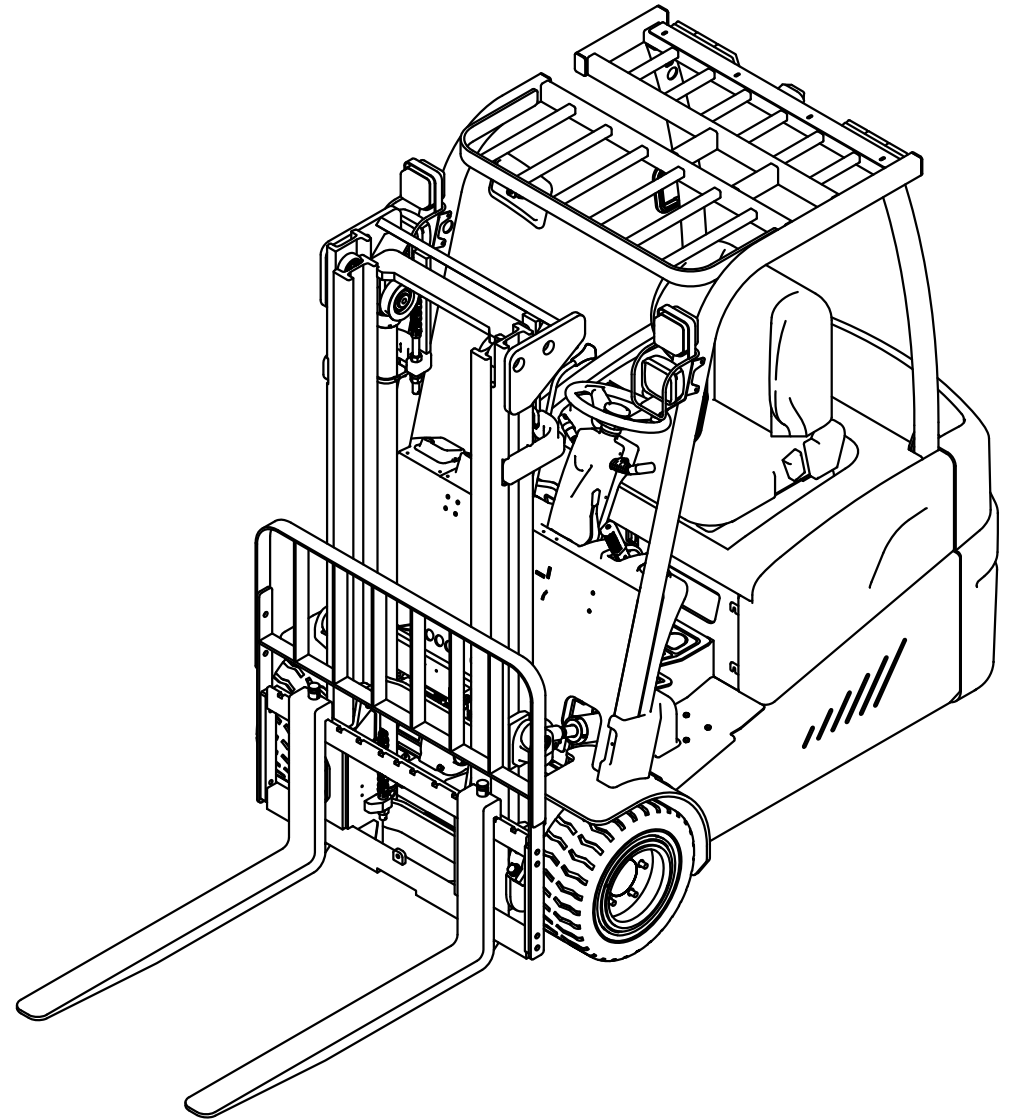


MiMA®

MATERIAL HANDLING EQUIPMENT
DESIGNER & MANUFACTURER

PARTS LIST

Electric counter balance forklift
TK C series



BANYITONG SCIENCE&TECHNOLOGY DEVELOPING CO.,LTD.

INSTRUCTION

- 1.This parts list include the main parts of the electric counter balance forklift TK C series;
- 2.Parts change indicates the time, such as "-2008.8" means that the parts are used until August 2008, "2006.10 -" means that the parts are used since October 2006;
- 3.When user purchase the parts, please write clearly the model and series No. of the electric forklift,the item No., name and quantity of the required part;
- 4.To ensure quality,please use our parts when repair and change the parts;
- 5.We'll improve or change some part to improve the quality of the forklift, this parts list can't modify one by one on time, thanks for your understanding. Please contact with our sales manager or distributor for details

Catalog

Fig.1 Driving system

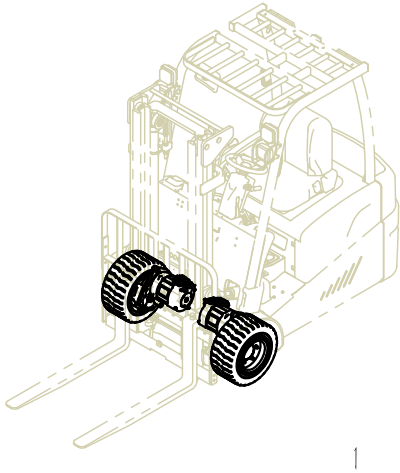


Fig.2 Electrical system

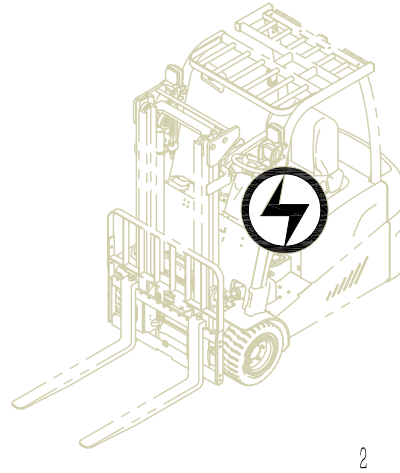


Fig.3 Electrical schematic

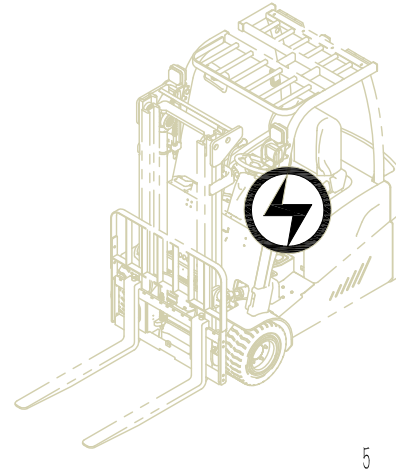


Fig.4 Cable assembly

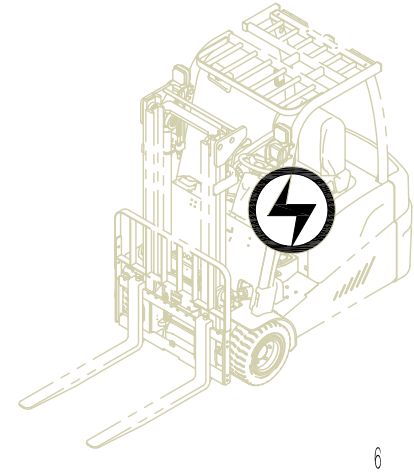


Fig.5 Harness assembly

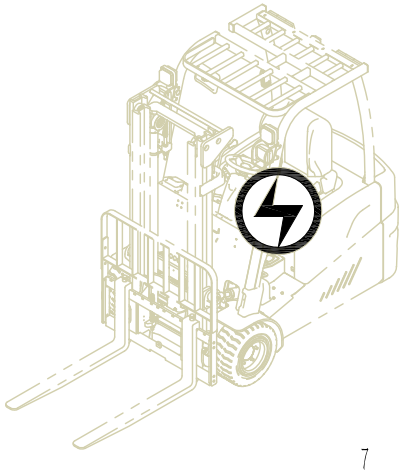


Fig.6 Auxiliary harness

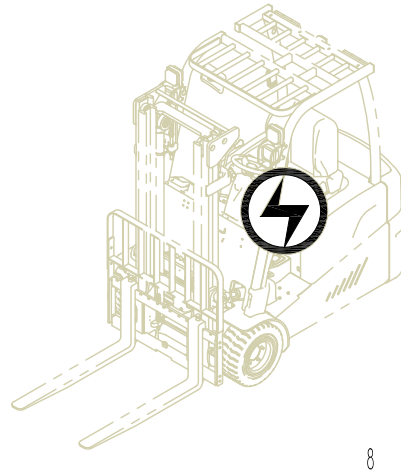


Fig.7 Steering system

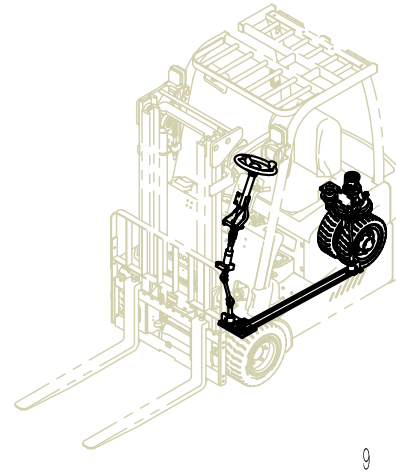
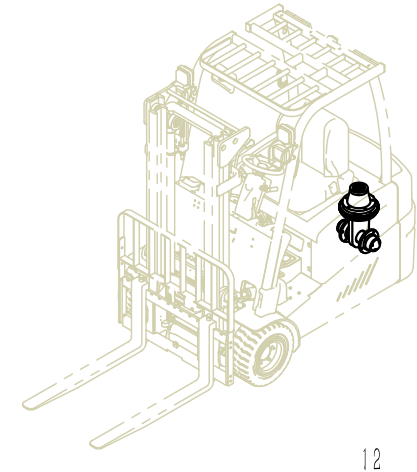
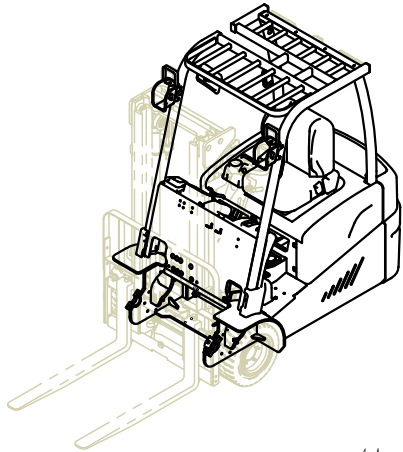


Fig.8 EPS axle assembly



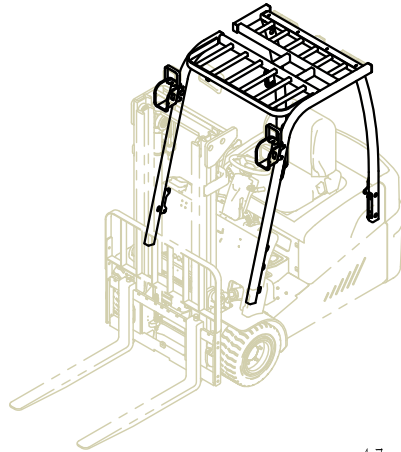
Catalog

Fig.9 Body system



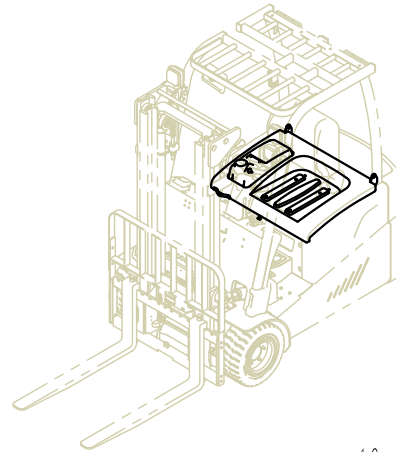
14

Fig.10 Overhead guard assembly



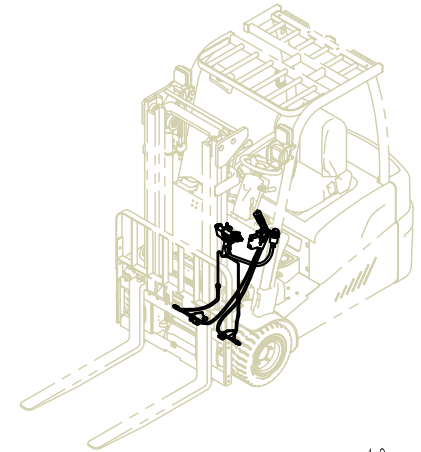
17

Fig.11 Battery cover assembly



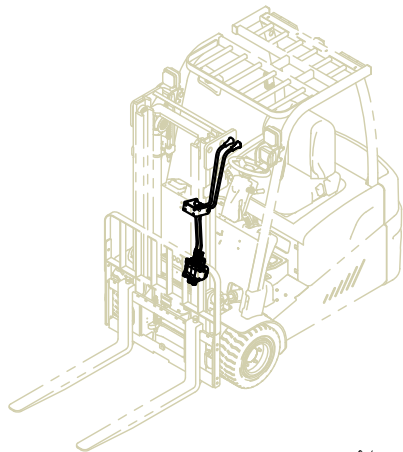
18

Fig.12 Braking System



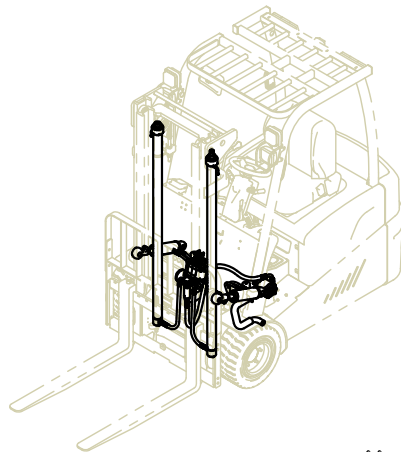
19

Fig.13 Two-piece valve element group



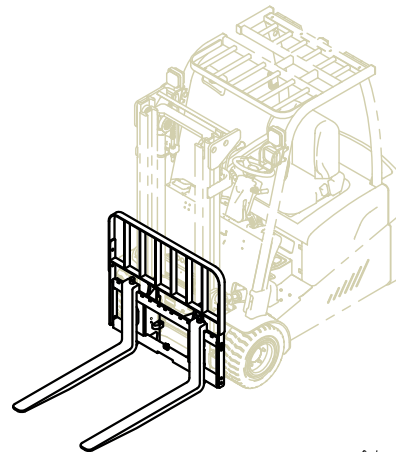
21

Fig.14 Hydraulic system



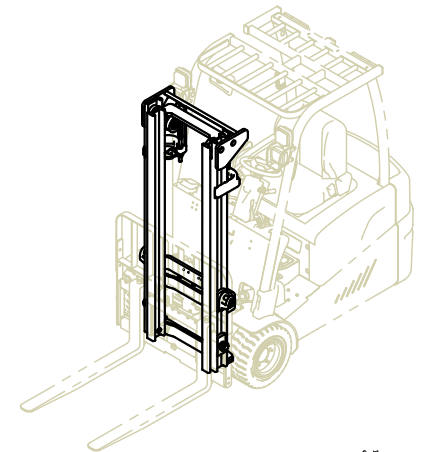
22

Fig.15 Fork carrier parts



24

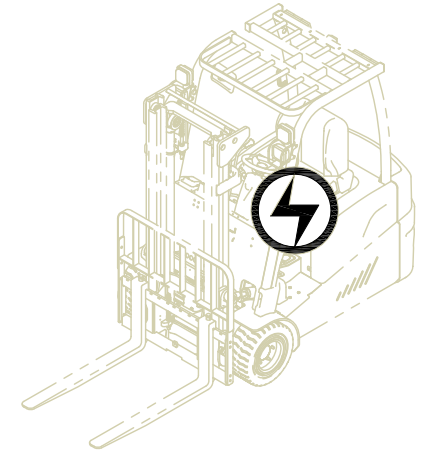
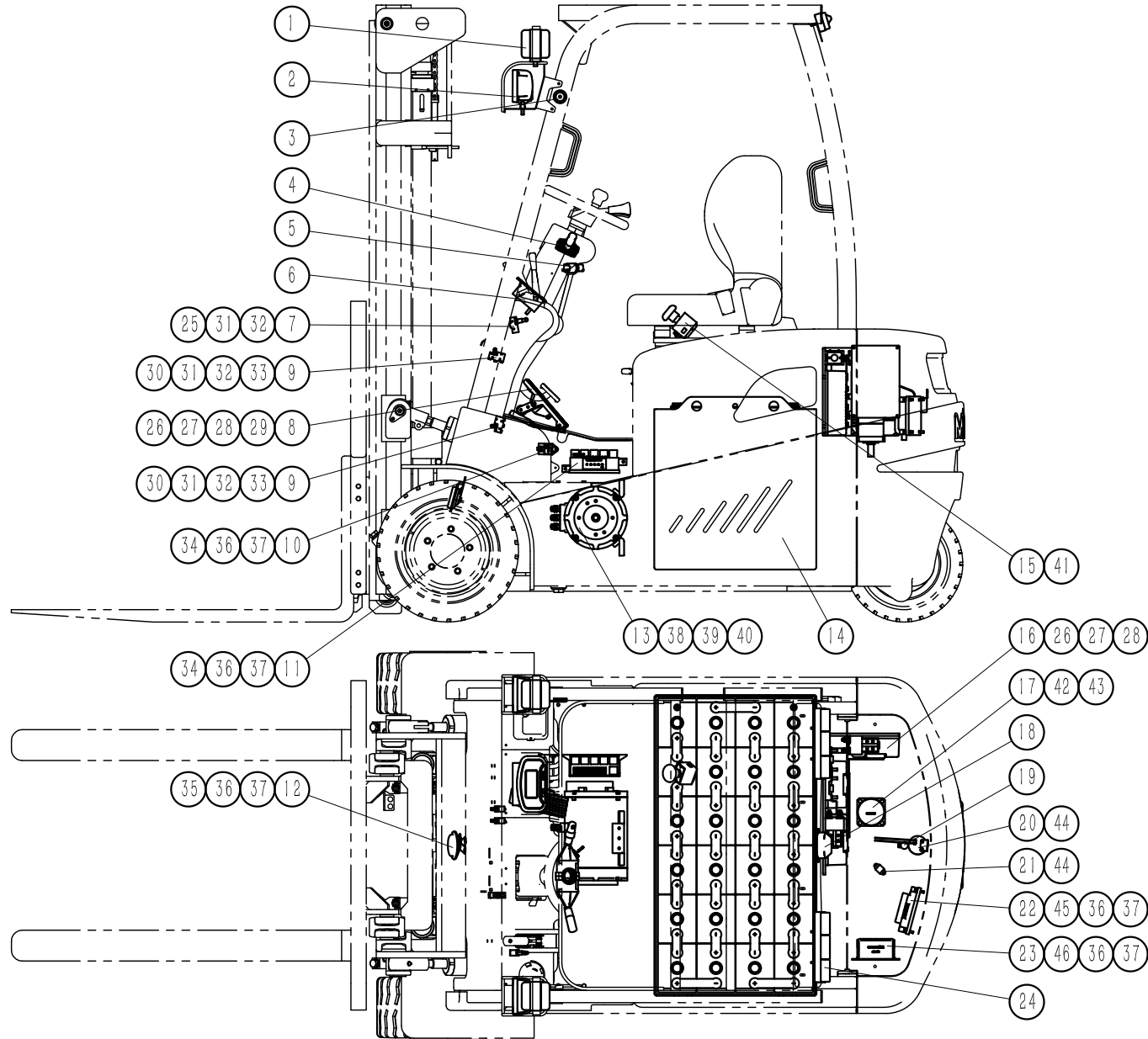
Fig.16 Mast



25

Fig.2 Electrical System

MK316/MK320



| Fig.2 Electrical System | | | | | MK316/MK320 | | | | |
|-------------------------|----------------------|------------------------------|------|---------|-------------|--------------------|--------------------------------|------|---------|
| No. | Code | Designation | Qty. | Remarks | No. | Code | Designation | Qty. | Remarks |
| 1 | DJ12310-Z1 12V | double-sided turn signal | 2 | | 23 | HWZ3B-48V-12V-360W | DC converter | 1 | |
| 2 | DJ12-24027-D1 | LED headlights | 2 | | 24 | DJ12LED-W1 | 12V tricolor tail light | 2 | |
| 3 | TK2030.8.8 | Threading apron | 7 | | 25 | GB5783 M4×25 | Hex head bolt | 2 | |
| 4 | A7J32-40111 | Combination switch | 1 | | 26 | GB5783 M8×25 | Hex head bolt | 4 | |
| 5 | JK410 | Ignition switch | 1 | | 27 | GB97.1 8 | Flat washers | 4 | |
| 6 | enGage IV | Instrument assembly | 1 | | 28 | GB93 8 | Spring washer | 4 | |
| 7 | Z-15GQ22-B | Micro switch | 1 | | 29 | GB6170 M8 | Type 1 hex nut | 2 | |
| 8 | MTF-129005-2 | Accelerator | 1 | | 30 | GB5783 M4×30 | Hex head bolt | 6 | |
| 9 | Z-15GW22-B | Micro switch | 3 | | 31 | GB97.1 4 | Flat Washers | 8 | |
| 10 | SG152 | Electronic flasher | 1 | | 32 | GB93 4 | Spring washer | 8 | |
| 11 | MK20BJ | Relay box | 1 | | 33 | GB6170 M4 | Type 1 hex nut | 6 | |
| 12 | DL2280-12V | Electric horn | 1 | | 34 | GB5783 M6×12 | Hex head bolt | 3 | |
| 13 | XQJ8.6-BYT5 | Lifting motor | 1 | | 35 | GB5783 M6×20 | Hex head bolt | 2 | |
| 14 | QDC48-400-4 | Battery | 1 | MK316 | 36 | GB97.1 6 | Flat Washers | 13 | |
| 14 | QDC48-490-2 | Battery | 1 | MK320 | 37 | GB93 6 | Spring washer | 13 | |
| 15 | ZDK31-250 | DC power switch | 1 | | 38 | GB5786 M12×1.25×40 | Hex head bolt | 4 | |
| 16 | 1232E-5221-1K216LE | Electronic control assembly | 1 | MK316 | 39 | GB97.1 12 | Flat Washers | 4 | |
| 16 | 1234E-5321-1K220LE | Electronic control assembly | 1 | MK320 | 40 | GB93 12 | Spring washer | 4 | |
| 17 | ZYT48400-G33.92 | Steering unit | 1 | | 41 | GB818 M4×12 | Cross recessed pan head screws | 2 | |
| 18 | LED-3051-DC12V | 12V warning light | 1 | | 42 | GB5783 M10×30 | Hex head bolt | 4 | |
| 19 | RVQ24YN03-12-20FB502 | Potentiometer | 1 | | 43 | GB93 10 | Spring washer | 4 | |
| 20 | DJB-12B | Reversing buzzer | 1 | | 44 | GB5783 M4×12 | Hex head bolt | 4 | |
| 21 | QLB2.105.702 | Lifting speed sensor | 1 | | 45 | GB70.1 M6×20 | Hexagon socket head cap screw | 4 | |
| 22 | EPS4803-MK | Electric steering controller | 1 | | 46 | GB70.1 M6×12 | Hexagon socket head cap screw | 4 | |

Fig.3 Electrical schematic

MK316/MK320

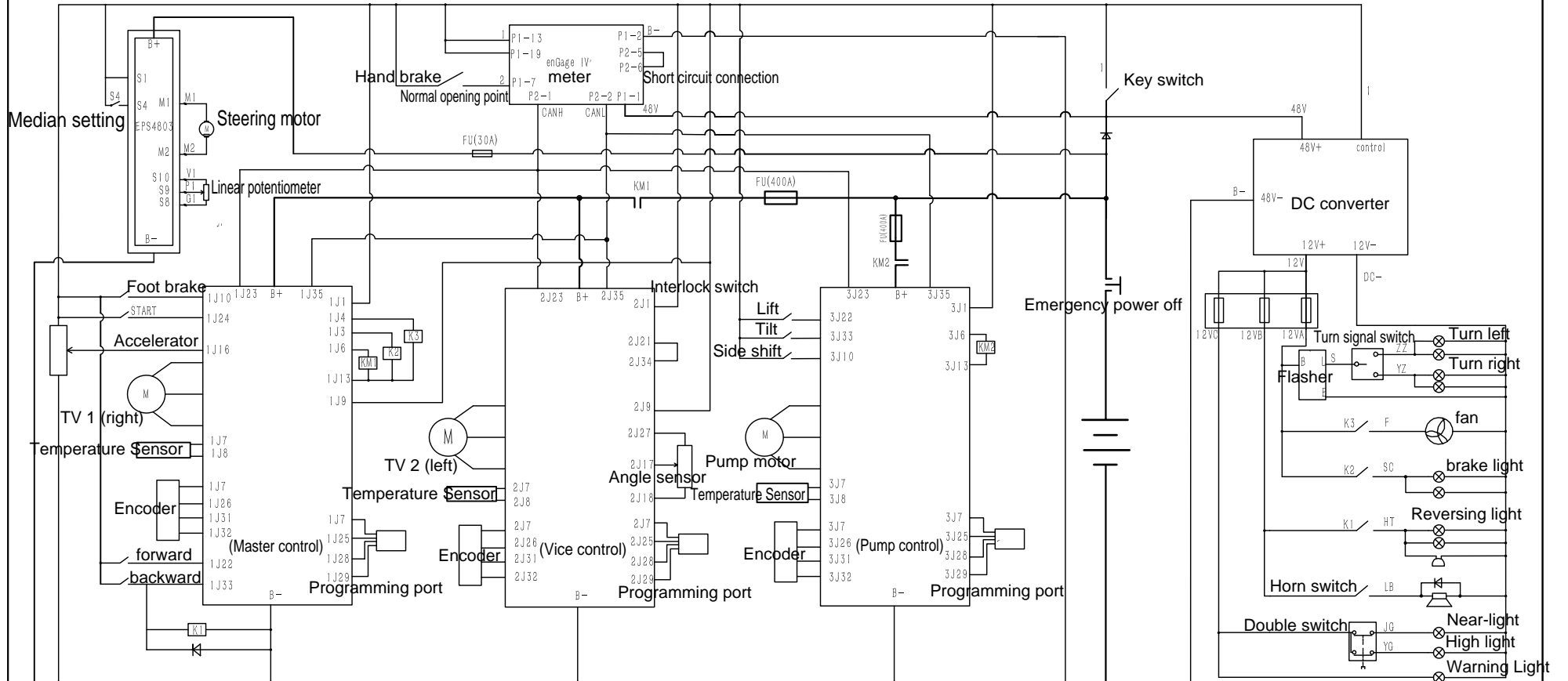


Fig.4 Cable assembly

MK316/MK320

Electronic control assembly
(master control, vice control part)

Emergency power off switch

Connector Z065-350-02

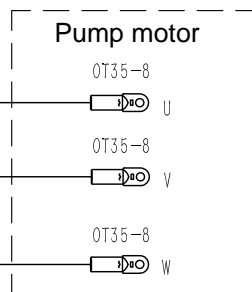
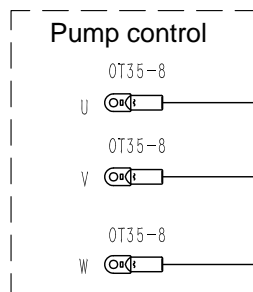
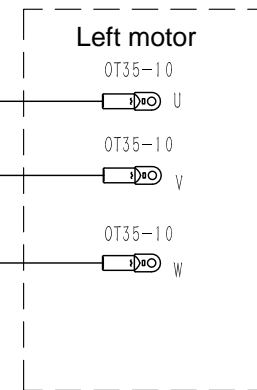
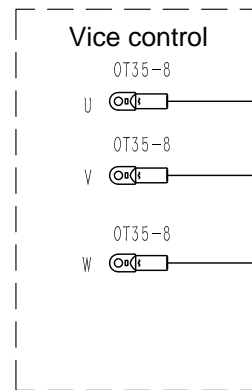
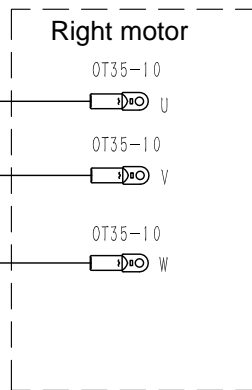
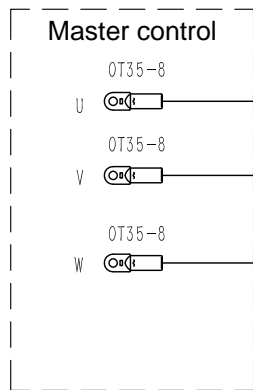
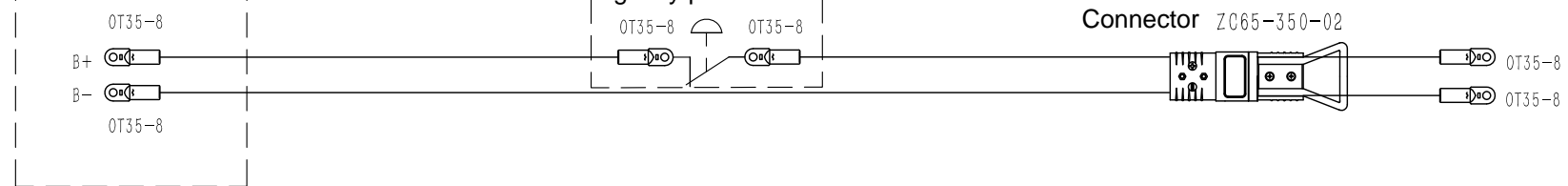


Fig.5 Harness assembly

MK316/MK320

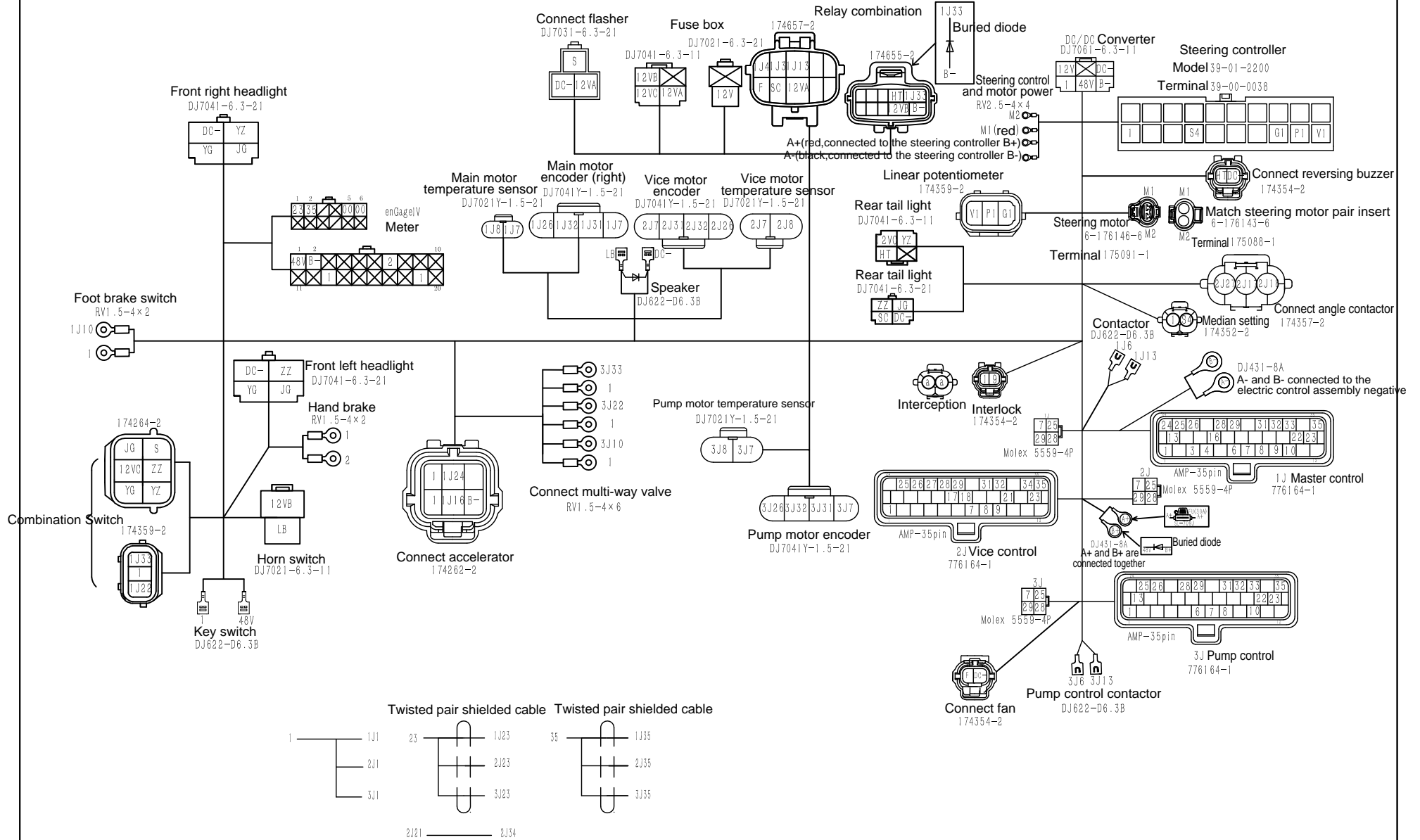
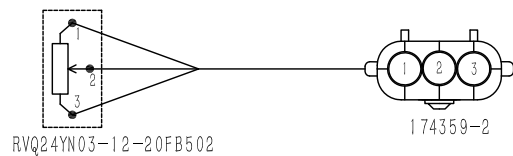
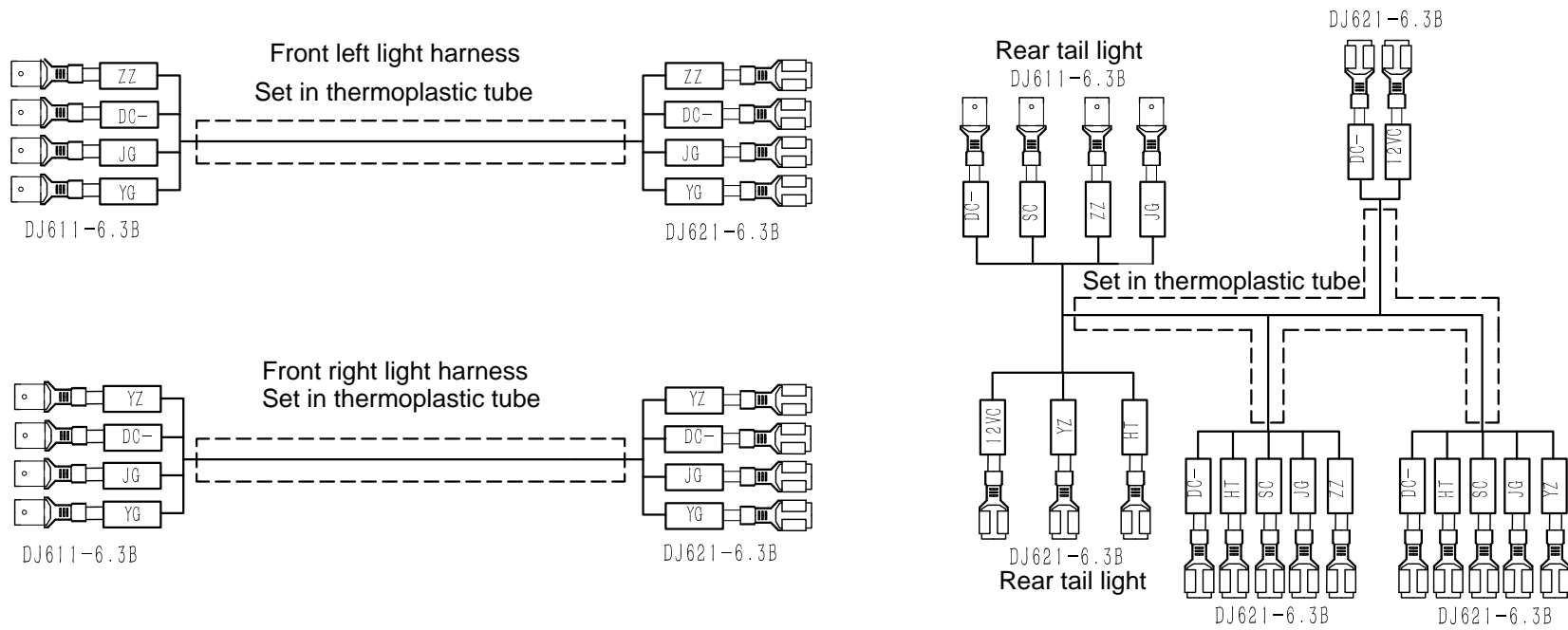


Fig.6 Auxiliary harness

MK316/MK320

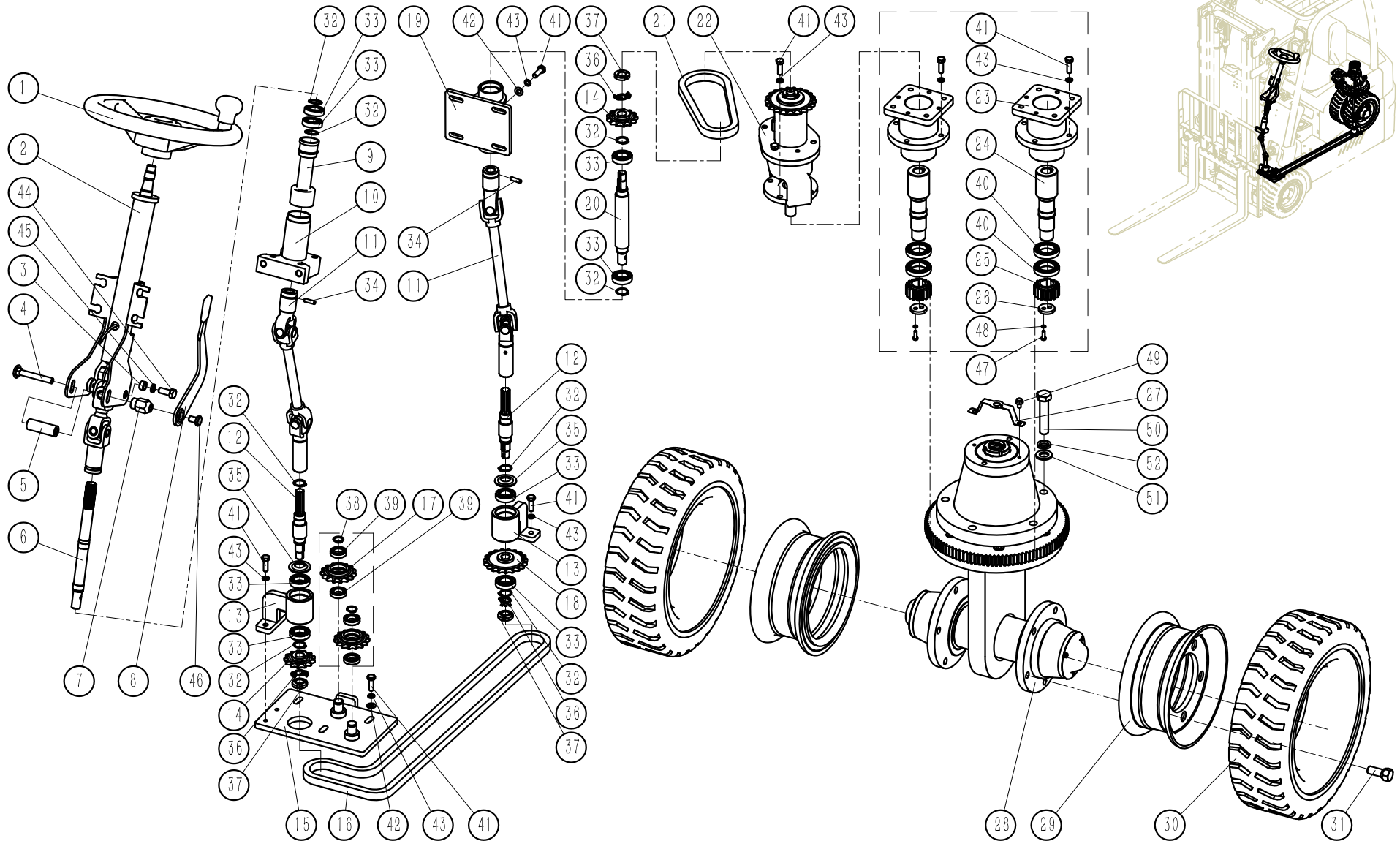


Angle potentiometer

- 2J17 is the sliding end, connected to the potentiometer 2
- 2J18 is the low end, connected to the potentiometer 3
- 2J27 is high-end, connected to potentiometer 1

Fig.7 Steering system

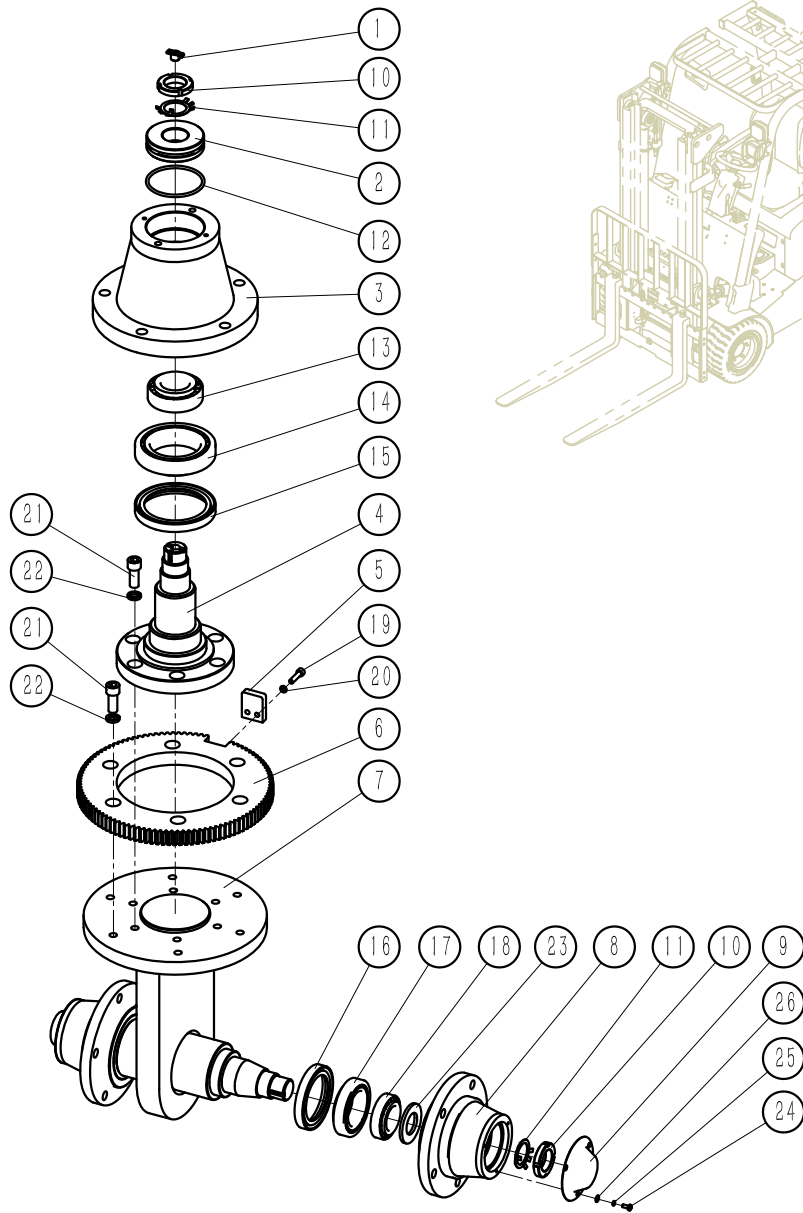
MK316/MK320



| Fig.7 Steering system | | | | | MK316/MK320 | | | | |
|-----------------------|---------------|---|------|-----------|-------------|----------------|---------------------------------------|------|-----------|
| No. | Code | Designation | Qty. | Remarks | No. | Code | Designation | Qty. | Remarks |
| 1 | A3600 | Steering wheel | 1 | | 25 | TF15.5.2 | Steering gear | 2 | |
| 2 | TK2030.5.1.1 | Steering column assembly | 1 | | 26 | TF15.5.3 | Limit ring | 2 | |
| 3 | GT111608 | Spacer | 2 | | 27 | 1K220L-J0003 | Steering potentiometer bracket | 1 | |
| 4 | GB794 M10×100 | Reinforced semi-circular head square bolt | 1 | | 28 | 1K220L-J3000 | Electric power steering axle assembly | 1 | See Fig.9 |
| 5 | MK20.5.2.1 | Casing | 1 | | 29 | 3.00D-8-1K220L | Rim assembly | 2 | |
| 6 | 1K220L-J0002 | Steering gear connecting shaft | 1 | | 30 | 15×4.5-8-3.00 | Solid tire | 2 | |
| 7 | MK20.5.2.2 | Nut | 1 | | 31 | 1K220L-J3008 | Hub bolt | 10 | |
| 8 | H2404-10501 | Handle assembly | 1 | | 32 | GB894.1 20 | Shaft circlip | 8 | |
| 9 | FCT01 | Boot cover | 1 | | 33 | GB276 61904-2Z | Deep groove ball bearing | 8 | |
| 10 | TK2030.5.1.2 | Steering gear connection flange | 1 | | 34 | GB119.2 6×22 | Cylindrical pin | 2 | |
| 11 | MF15.5.3 | Coupling assembly | 2 | | 35 | JB1090 d20 | J-ring | 2 | |
| 12 | 1K220L-J5001 | Sprocket shaft | 2 | | 36 | GB858 14 | Lock washer for round nut | 3 | |
| 13 | 1K220L-J5100 | Active sprocket bracket | 2 | | 37 | GB812 M14×1.5 | Round nut | 3 | |
| 14 | 1K220L-J5004 | Transition sprocket | 2 | | 38 | GB894.1 17 | Shaft circlip | 2 | |
| 15 | 1K220L-J4000 | Sprocket mount | 1 | | 39 | GB276 61903-2Z | Deep groove ball bearing | 4 | |
| 16 | 08A-192 | Single row roller chain | 1 | | 40 | GB276 61906-2Z | Deep groove ball bearing | 4 | |
| 17 | 1K220L-J0004 | Redirection sprocket | 2 | | 41 | GB5783 M8×25 | Hex head bolt | 19 | |
| 18 | 1K220L-J5003 | Transition sprocket | 1 | | 42 | GB97.1 8 | Flat Washers | 7 | |
| 19 | 1K220L-J6100 | Bearing housing welding | 1 | | 43 | GB93 8 | Spring washer | 19 | |
| 20 | 1K220L-J6001 | Sprocket shaft | 1 | | 44 | GB5783 M10×25 | Hex head bolt | 1 | |
| 21 | 08A-40 | Single row roller chain | 1 | | 45 | GB93 10 | Spring washer | 1 | |
| 22 | DZX48310.3 | Down steering assembly | 1 | See Fig.8 | 46 | GB5783 M10×20 | Hex head bolt | 1 | |
| 23 | 1K220L-J7001 | Transition mount | 2 | | 47 | GB5783 M6×25 | Hex head bolt | 4 | |
| 24 | 1K220L-J7002 | Steering wheel bearing | 2 | | 48 | GB93 6 | Spring washer | 4 | |

Fig.8 Electric power steering bridge assembly

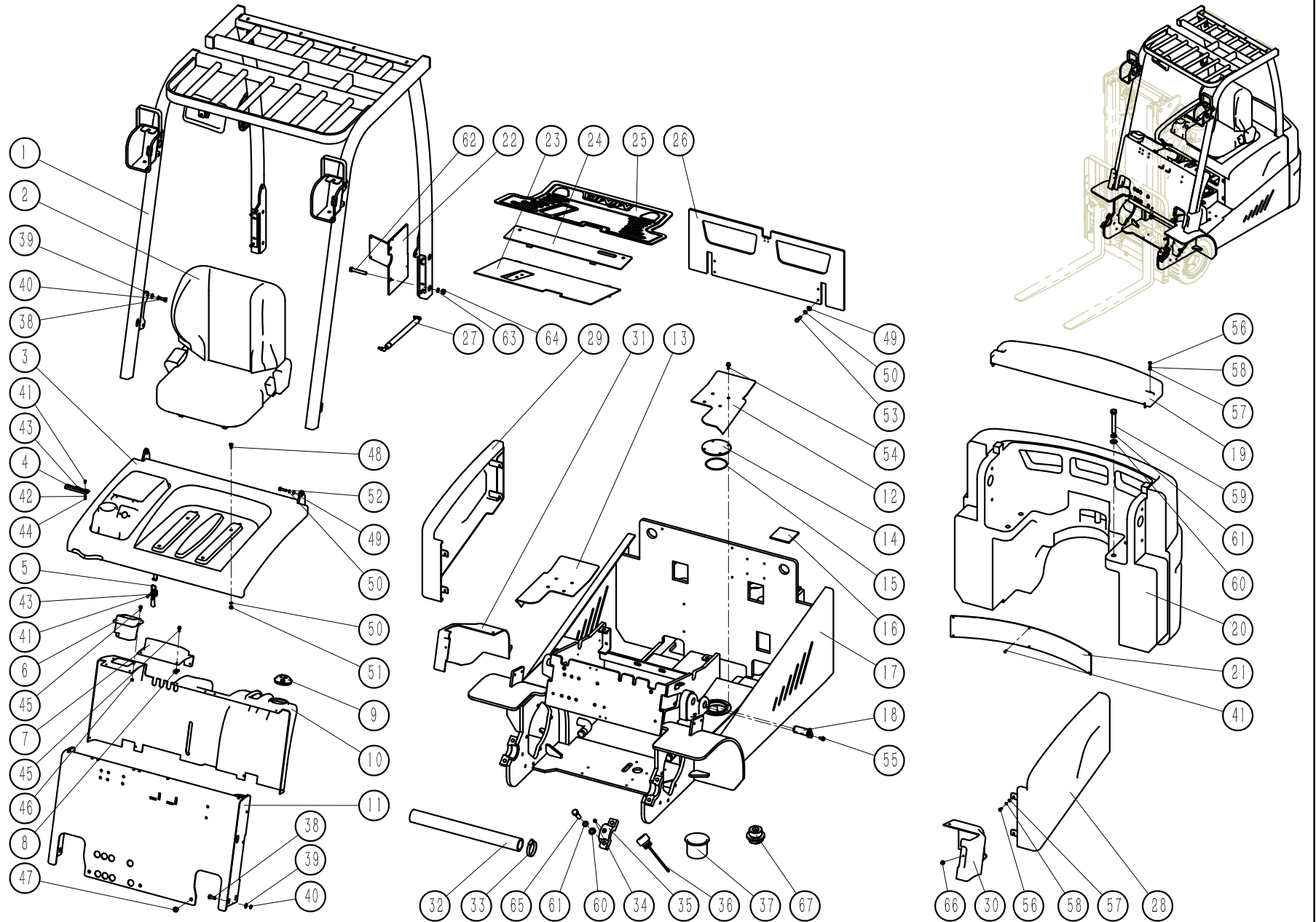
MK316/MK320



| No. | Model | Designation | Qty. | Remark |
|-----|------------------|--|------|--------|
| 1 | TK420.5.1.6 | Adapter sleeve | 1 | |
| 2 | 1K220L-J3004 | Platen | 1 | |
| 3 | 1K220L-J3003 | Bearing block | 1 | |
| 4 | 1K220L-J3001 | Steering axle rotating shaft | 1 | |
| 5 | 1K220L-J3006 | Steering limit block | 1 | |
| 6 | 1K220L-J3002 | Steering large ring gear | 1 | |
| 7 | 1K220L-J3100 | Steering bridge support welding | 1 | |
| 8 | 1K220L-J3005 | Wheel hub | 2 | |
| 9 | 1K220L-J3007 | Hub cap | 2 | |
| 10 | GB812 M30×1.5 | Round nut | 3 | |
| 11 | GB858 30 | Lock washer for round nut | 3 | |
| 12 | GB3452.1 73×3.55 | Hydraulic and pneumatic O-type rubber seal | 1 | |
| 13 | GB297 33108 | Tapered roller bearing | 1 | |
| 14 | GB297 32014 | Tapered roller bearing | 1 | |
| 15 | B85×110×12 | Rotary shaft lip seal | 1 | |
| 16 | B65×90×10 | Rotary shaft lip seal | 2 | |
| 17 | GB297 32010 | Tapered roller bearing | 2 | |
| 18 | GB297 32007 | Tapered roller bearing | 2 | |
| 19 | GB70.1 M6×20 | Hexagon socket head cap screw | 2 | |
| 20 | GB93 6 | Spring washer | 2 | |
| 21 | GB70.1 M12×25 | Hexagon socket head cap screw | 12 | |
| 22 | GB93 12 | Spring washer | 12 | |
| 23 | GB97.1 30 | Flat Washers | 2 | |
| 24 | GB818 M4×12 | Phillips disk screw | 6 | |

Fig.9 Body System

MK320

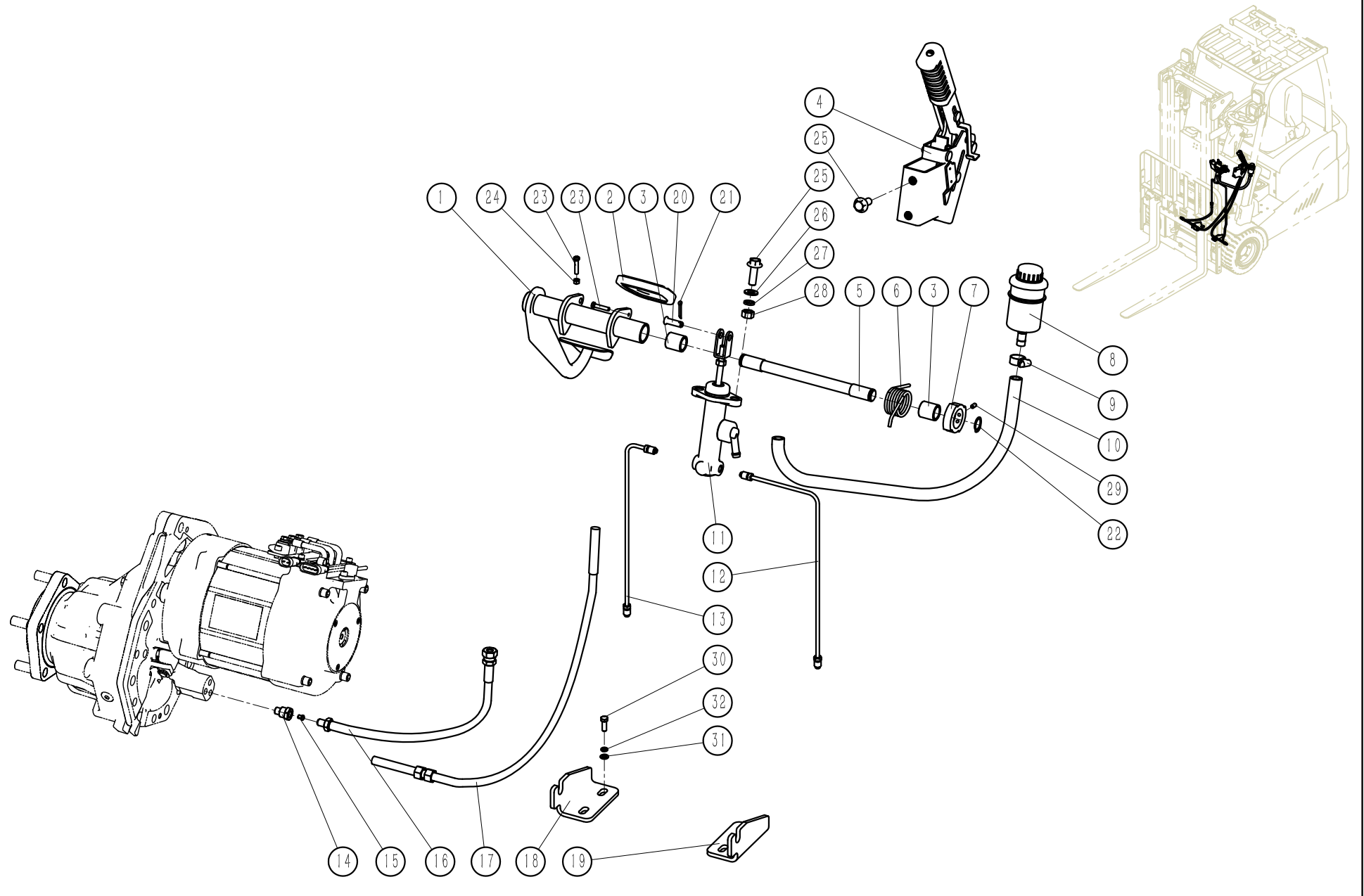


| Fig. 9 Body System | | | | | MK316/MK320 | | | | |
|--------------------|------------------|-------------------------------------|------|--------|-------------|----------------|------------------------------------|------|----------|
| NO. | Code | Designation | Qty. | Remark | NO. | Code | Designation | Qty. | Remark |
| 1 | 1K220L-G0000 | Roof guard assembly | 1 | Fig.10 | 25 | 1K220L-H0005 | Pedal pad | 1 | |
| 2 | BF2-1 | Seat | 1 | | 26 | 1K220L-A0003 | Neutral board | 1 | |
| 3 | MK15.1.8 | Battery cover assembly | 1 | Fig.11 | 27 | BQTH250 | Gas Spring | 2 | |
| 4 | 120J | Folder | 1 | | 28 | 1K220L-H4000 | Left guard plate assembly | 1 | |
| 5 | JY40323 | Quick fixture | 1 | | 29 | 1K220L-H5000 | Right guard plate assembly | 1 | |
| 6 | H2406-42072 | Tool box | 1 | | 30 | 1K220L-H0001 | Left shield | 1 | |
| 7 | MK20.1.17.2-E | Meter cover | 1 | | 31 | 1K220L-H0002 | Right shield | 1 | |
| 8 | LP-133 M6 | Spring nut | 10 | | 32 | 1K220L-K0003 | Connecting hose | 1 | |
| 9 | MF15.1.6.3 | Rubber cover | 1 | | 33 | JB8870 d70 | Hose clamp | 2 | |
| 10 | MK20.1.17.1 | Front cover | 1 | | 34 | JB7940.1 M10×1 | Straight-through injection oil cup | 2 | |
| 11 | 1K220L-A2000 | Front panel soldering | 1 | | 35 | 1K220L-A0002 | Support cover | 2 | |
| 12 | 1K220L-A0005 | Left pedal | 1 | | 36 | TK1530.3.7 | Hydraulic oil ruler | 1 | |
| 13 | 1K220L-A0006 | Right pedal | 1 | | 37 | JYB095-75 | Liquid cup | 1 | Optional |
| 14 | 1K220L-K0004 | Fuel tank cover | 2 | | 38 | GB5783 M10×25 | Hex head bolt | 8 | |
| 15 | GB3452.1 95×3.55 | Hydraulic and pneumatic O-ring seal | 2 | | 39 | GB97.1 10 | Flat Washers | 8 | |
| 16 | MK20.1.16 | Battery pad | 4 | | 40 | GB93 10 | Spring washer | 8 | |
| 17 | 1K220L-A1000 | Frame welding | 1 | | 41 | GB818 M4×12 | Phillips disk screw | 12 | |
| 18 | XZ30-075-LW | Ear plate pin | 2 | | 42 | GB97.1 4 | Flat Washers | 2 | |
| 19 | 1K220L-H0004 | Back cover | 1 | | 43 | GB93 4 | Spring washer | 6 | |
| 20 | 1K220L-A0001 | Counterweight | 1 | | 44 | GB6170 M4 | Type I hex nut | 2 | |
| 21 | MK20.1.22 | Counterweight stencil | 1 | | 45 | GB5783 M6×20 | Hex head bolt | 12 | |
| 22 | 1K220L-A0007 | Controller mounting board | 1 | | 46 | GB6170 M6 | Type I hex nut | 2 | |
| 23 | 1K220L-A3200 | Front pedal welding | 1 | | 47 | GB5783 M10×20 | Hex head bolt | 3 | |
| 24 | 1K220L-A3100 | Back pedal welding | 1 | | 48 | GB5783 M8×16 | Hex head bolt | 6 | |

| Figure9. Body System | | | | MK316/MK320 | | | |
|----------------------|--------------------|--------------------------------|------|-------------|------|-------------|------|
| NO. | Code | Designation | Qty. | NO. | Code | Designation | Qty. |
| 49 | GB97.1 8 | Flat Washers | 2 | | | | |
| 50 | GB93 8 | Spring washer | 10 | | | | |
| 51 | GB6170 M8 | Type I hex nut | 4 | | | | |
| 52 | GB5783 M8×30 | Hex head bolt | 2 | | | | |
| 53 | GB5783 M8×25 | Hex head bolt | 4 | | | | |
| 54 | GB5783 M8×20 | Hex head bolt | 8 | | | | |
| 55 | GB5783 M8×16 | Hex head bolt | 2 | | | | |
| 56 | GB818 M6×20 | Cross recessed pan head screws | 6 | | | | |
| 57 | GB97.1 6 | Flat Washers | 6 | | | | |
| 58 | GB93 6 | Spring washer | 6 | | | | |
| 59 | GB5786 M16×1.5×110 | Hex head bolt | 4 | | | | |
| 60 | GB97.1 16 | Flat Washers | 8 | | | | |
| 61 | GB93 16 | Spring washer | 8 | | | | |
| 62 | GB5783 M12×80 | Hex head bolt | 4 | | | | |
| 63 | GB93 12 | Spring washer | 4 | | | | |
| 64 | GB6170 M12 | Type I hex nut | 4 | | | | |
| 65 | GB5786 M16×1.5×60 | Hex head bolt | 4 | | | | |
| 66 | GB5783 M4×12 | Hex head bolt | 4 | | | | |
| 67 | QC385 M30×2 | Hex head magnetic plug | 2 | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Fig.12 Brake System

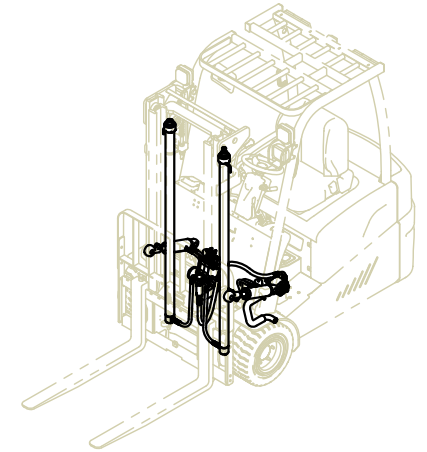
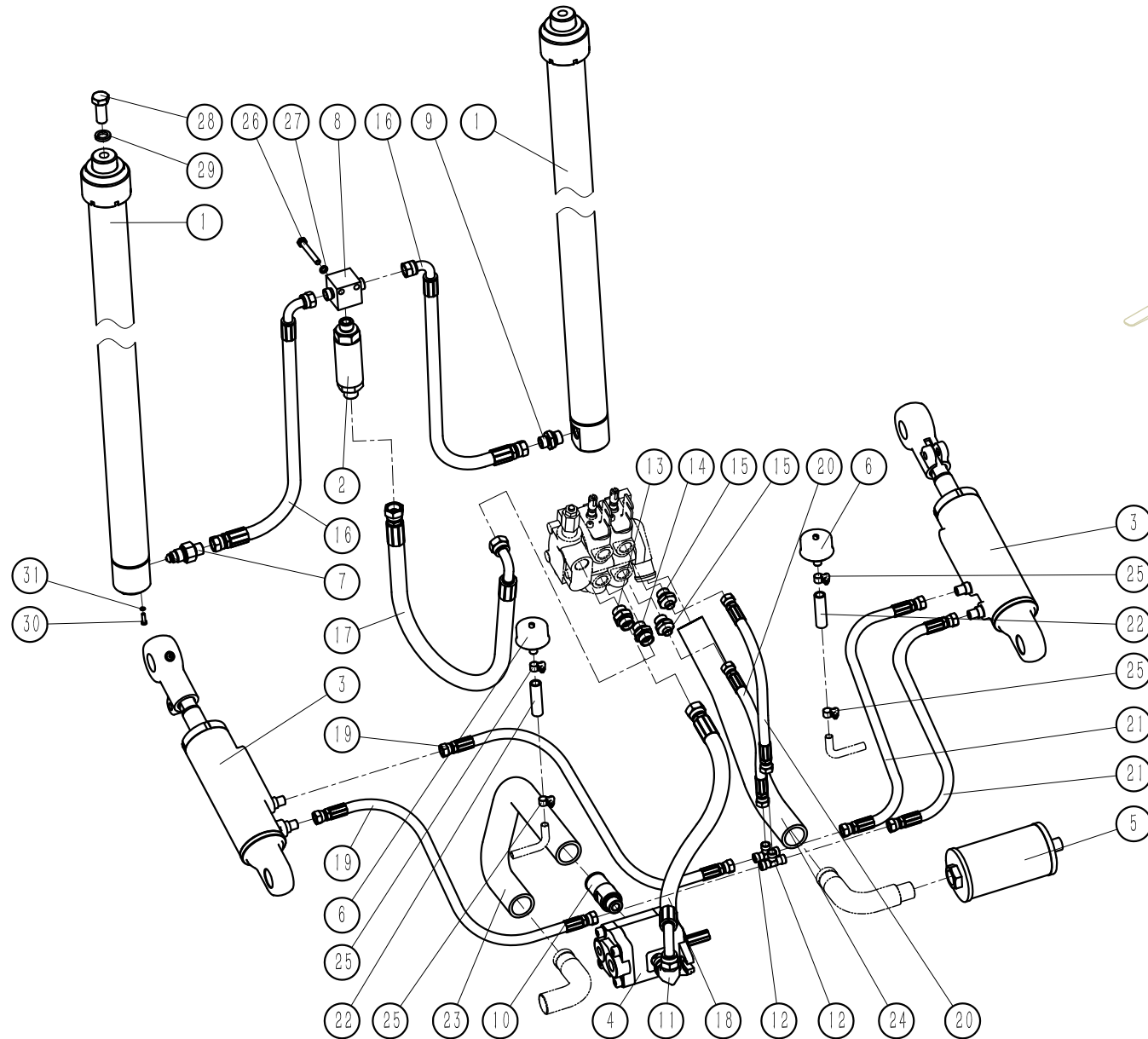
MK316/MK320



| Fig.12 Brake System | | | | | MK316/MK320 | | | | |
|---------------------|---------------|--------------------------------|---|--|-------------|---------------|-----------------------------------|---|--|
| NO. | Code | Designation | | | NO. | Code | Designation | | |
| 1 | MK20.6.1.1 | Brake pedal welding | 1 | | 25 | GB5783 M10×35 | Hex head bolt | 3 | |
| 2 | 239A5-42301 | Pedal pad | 1 | | 26 | GB97.1 10 | Flat Washers | 2 | |
| 3 | HZ182425 | Sliding bearing | 2 | | 27 | GB93 10 | Spring washer | 2 | |
| 4 | A73J3-60000 | TK series hand brake assembly | 1 | | 28 | GB6170 M10 | Type I hex nut | 2 | |
| 5 | MK20.6.1.2 | Brake shaft | 1 | | 29 | GB77 M5×10 | Hexagon socket flat end set screw | 2 | |
| 6 | TK420.6.1.5 | Brake torsion spring | 1 | | 30 | GB5783 M8×20 | Hex head bolt | 4 | |
| 7 | MK20.6.1.3 | Brake signal touch panel | 1 | | 31 | GB97.1 8 | Flat Washers | 4 | |
| 8 | TK1530.6.4 | Brake cup | 1 | | 32 | GB93 8 | Spring washer | 4 | |
| 9 | JB8870 d20 | Hose clamp | 2 | | | | | | |
| 10 | XJG12D-050 | Rubber tube | 1 | | | | | | |
| 11 | ZDZB1-3T-MK20 | Brake master cylinder | 1 | | | | | | |
| 12 | 1K220L-L2000 | Brake hose 1 | 1 | | | | | | |
| 13 | 1K220L-L3000 | Brake hose 2 | 1 | | | | | | |
| 14 | TK450.6.6 | Joint nut | 2 | | | | | | |
| 15 | BQD4501W.13.7 | Nozzle core | 2 | | | | | | |
| 16 | TKA15.6.12 | Right brake hose | 2 | | | | | | |
| 17 | TK420.6.5 | Hand brake right brake line | 2 | | | | | | |
| 18 | 1K220L-L0002 | Right pull wire bracket | 1 | | | | | | |
| 19 | 1K220L-L0001 | Left pull wire bracket | 1 | | | | | | |
| 20 | GB882 8×26B | Pin | 1 | | | | | | |
| 21 | GB91 3.2×20 | Cotter pin | 1 | | | | | | |
| 22 | GB894.1 18 | Shaft circlip | 2 | | | | | | |
| 23 | GB818 M6×25 | Cross recessed pan head screws | 2 | | | | | | |
| 24 | GB6170 M6 | Type I hex nut | 2 | | | | | | |

Fig. 14 Hydraulic System

MK316/MK320



| Fig.14 Hydraulic System | | | | | MK316/MK320 | | | | |
|-------------------------|--------------------|-------------------------|------|--------|-------------|-------------------|-----------------|------|--------|
| NO. | Code | Designation | Qty. | Remark | NO. | Code | Designation | Qty. | Remark |
| 1 | LM3545-TK3000 | Lifting cylinder | 2 | MK316 | 24 | 1K220L-K0002 | Oil return hose | 1 | |
| 1 | LM4050-TK3000 | Lifting cylinder | 2 | MK320 | 25 | JB8870 d20 | Hose clamp | 4 | |
| 2 | XSF-1669 | Speed limit valve | 1 | | 26 | GB5783 M8×60 | Hex head bolt | 2 | |
| 3 | QX3063-1K078 | Tilt cylinder | 2 | | 27 | GB93 8 | Spring washer | 2 | |
| 4 | DSG05C16F9H9-R005C | Gear pump | 1 | | 28 | GB5786 M16×1.5×40 | Oil return hose | 2 | |
| 5 | Y0816A | Oil return filter | 1 | | 29 | GB93 16 | Spring washer | 2 | |
| 6 | HX0403 | Tank respirator | 2 | | 30 | GB5786 M12×1.5×35 | Hex head bolt | 2 | |
| 7 | BYT-QDF-3t-00 | Shut-off valve assembly | 1 | | 31 | GB93 12 | Spring washer | 2 | |
| 8 | XSF-F16L-S.QT(Zn) | Three-way connector | 1 | | | | | | |
| 9 | S1CH-18-20 | Straight connector | 1 | | | | | | |
| 10 | GJT1271 | Straight pipe joint | 1 | | | | | | |
| 11 | S1CH9-220GDQ | Straight pipe joint | 1 | | | | | | |
| 12 | SAC-14 | Three-way connector | 2 | | | | | | |
| 13 | S1CH-22DQ | Straight connector | 1 | | | | | | |
| 14 | S1CH-22-20 | Straight pipe joint | 1 | | | | | | |
| 15 | S1CH-14-20(AH13) | Straight pipe joint | 2 | | | | | | |
| 16 | YGZES-10050J | Hydraulic hose assembly | 2 | | | | | | |
| 17 | YGLES-12070SZJ | Hydraulic hose assembly | 1 | | | | | | |
| 18 | YGLES-12070J | Hydraulic hose assembly | 1 | | | | | | |
| 19 | YGIES-06070J | Hydraulic hose assembly | 2 | | | | | | |
| 20 | YGIES-06031J | Hydraulic hose assembly | 2 | | | | | | |
| 21 | YGIES-06044J | Hydraulic hose assembly | 2 | | | | | | |
| 22 | XJG12D-006 | Rubber tube | 2 | | | | | | |
| 23 | 1K220L-K0001 | Oil suction hose | 1 | | | | | | |

