



ECB16-35 SERIES

OPERATOR MANUAL

< OM-ECB2019001-EN >



BYD FORKLIFT

Welcome to use BYD electric forklift!
May our electric vehicles bring greater convenience to your work !

Please read the instructions carefully before you use the electric vehicle.

The instructions is a general instruction. We reserve the right to make technical modifications to electric vehicles. If there is discrepancy between the contents of the instructions and the physical objects, the objects shall prevail and instructions are only for reference

Warning

The vehicle operators must strictly enforce the ISO3691:2013 "safety code for powered industrial vehicles". Untrained personnel are strictly prohibited to operate this vehicle.



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FOREWORD

Thank you for using BYD electric trucks.

These operator manual explain in detail how to correctly operate the BYD industrial trucks, as well as the procedures that you should follow when conducting checks, maintenance and repairs on the trucks.

Read through every chapter in the manual before operation for the correct use and maintenance of the trucks. When the truck is out for rental or transportation, keep this operation instruction together with the truck and make sure that operators can use the manual whenever necessary.

When using the operator manual, please pay attention to the following signs:

Danger

(Indicates an imminent extremely hazardous situation. Failure to avoid it will cause severe injuries, major property damage or even death)

Warning

(Indicates a potential extremely hazardous situation. Failure to avoid it might cause severe injuries, major property damage or even death)

Caution

(Indicates a potential hazardous situation. Failure to avoid it might cause slight to medium injuries, or property damage)

Note

(Tips of operational details, which are helpful for operation when they are kept)



DESCRIPTION

Operation Declaration

BYD industrial trucks can only be operated in the designated areas in the factory or in other specific environments, in compliance with local safety regulations on similar equipment.

Inappropriate use of the BYD industrial truck might cause damages and losses, which the operators or proprietor instead of BYD should be held liable for. If the truck needs to be operated in the environments other than those mentioned in this manual, contact with your local BYD dealer first for confirmation.

Any modification to the truck is not allowed unless BYD's written consent is granted. Contact with BYD first before modifying the trucks.

If you have ordered other auxiliary attachments besides forks, please handle the loads in compliance with the loading capacity of the attachments. All the attachments are provided with operation instructions. Read through the manuals before operation.

This manual is devised based on the standard trucks. For other questions not covered in the manual, please check with BYD after sales service.

BYD industrial truck is subject to ongoing development and optimizing the design of products. BYD Forklift reserves the right to alter the design, equipment, technical features, and technical specifications and so on. No guarantee of particular features of the truck should therefore be assumed from the present operator manual.

Truck Delivery

Every BYD industrial truck has passed through thorough performance tests before shipment. Although proper protection has also been adopted during transportation, it is advised to conduct a thorough inspection when the truck arrives.

- (1) Check if the wheel nuts are securely fastened
- (2) Check the hydraulic oil level
- (3) Check the brake
- (4) Check the driving
- (5) Check the steering
- (6) Check the mast and the attachment
- (7) Check the high voltage connectors (transportation might have loosened the connectors)

To avoid inconveniences in future warranty claims, please check the functions of the truck and check if the truck is complete.



SAFETY OPERATION SPECIFICATION

This chapter instructs on safety operation procedures that should followed during the use of the BYD industrial truck.

The operator of the BYD industrial truck should have obtained the driving permit in accordance with local regulations.

Before operating the truck, check the data plate and capacity chart to know the loading capacity of the truck and avoid the overloading during operation.

Warning signs and decals are pasted on the truck. Get familiar with the decals and its contents.



OPERATOR NOTICE

Operator Qualification

Industrial trucks can only be allowed to be operated by people with the qualification regulated by local laws. In the absence of local regulation and law, the operators should be those who have been specially trained and have experience in operating the trucks. The user or other entrusting part must confirm the qualification of the operators and make use of the tests before authorizing the person to operate the truck.

The operating company must make sure that the operators understand all the safety messages.

For the proprietor, make sure following safety instruction on your trucks are observed.

Please abide by relevant regulations and guide-principles, such as:

- (1) Operation of industrial vehicle
- (2) Lane and operative area regulation.
- (3) Driver's right, responsibility and standard of behavior
- (4) Special operation area.
- (5) Regular check-up.
- (6) Maintenance and repair message.

Danger

- (1) Unauthorized persons are not allowed to operate the truck.
- (2) Safety devices and features (such as OPS system) will provide extra safety. Do not deactivate these safety device and features.
- (3) Make sure that the load is well palletized and trimmed to avoid its protruding the loading surface of truck and thus slipping, collapsing and falling over.
- (4) Any modification is not allowed. Contact with BYD before making any modification.
- (5) Do not overload. Before operation, please check the rated loading capacity and loading center on the capacity chart. When an attachment has been installed, abide by the rated loading capacity given on the attachment.
- (6) Do not operate the truck after drinking. It might cause severe human injuries.

Caution

- (1) Read through the operation instructions before operating the truck.
- (2) Operators should wear working boots and working clothes.
- (3) Do not use hands with water or oil to operate the truck.
- (4) Conduct the daily checking and regular maintenance on the truck.
- (5) Stop operating the truck when abnormalities and damages are found on the truck. Do not use the truck until the truck is fully repaired.

Warning Decals and Signs

Warning decals and signs are pasted on the truck to remind the operators of potential risks, as well as safety notices, please find and read all these decals and signs.

If the warning decals and signs are missing or difficult to read, please contact your local BYD dealer for immediate replacement.

**TRUCK DESCRIPTION**

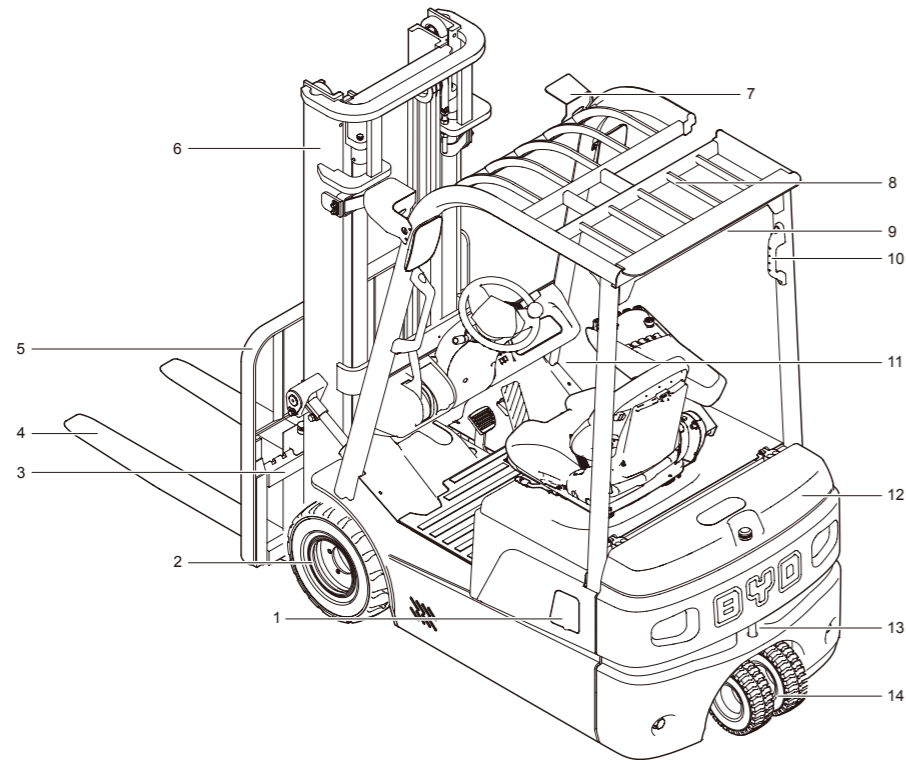
This chapter explains the overview of the truck and its relevant technical specifications.



APPEARANCE, TECHNICAL DATA AND CONDITION OF USING

Appearance

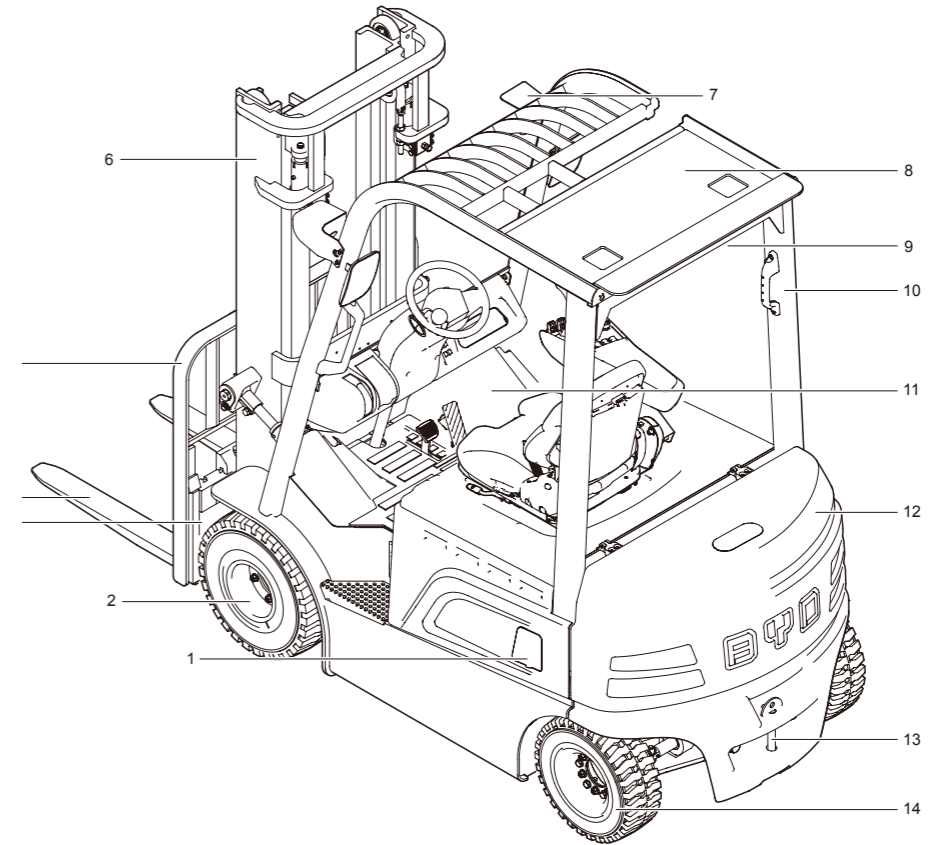
1. 1.6-1.8T



No.	Name	No.	Name	No.	Name
1	Charging Door	6	Mast	11	Driving Area
2	Front Wheel	7	Front Light	12	Counterweight
3	Carriage	8	Overhead Guard	13	Tow Pin
4	Fork	9	Rear Light	14	Rear Wheel
5	Load Backrest	10	Rear Handle		



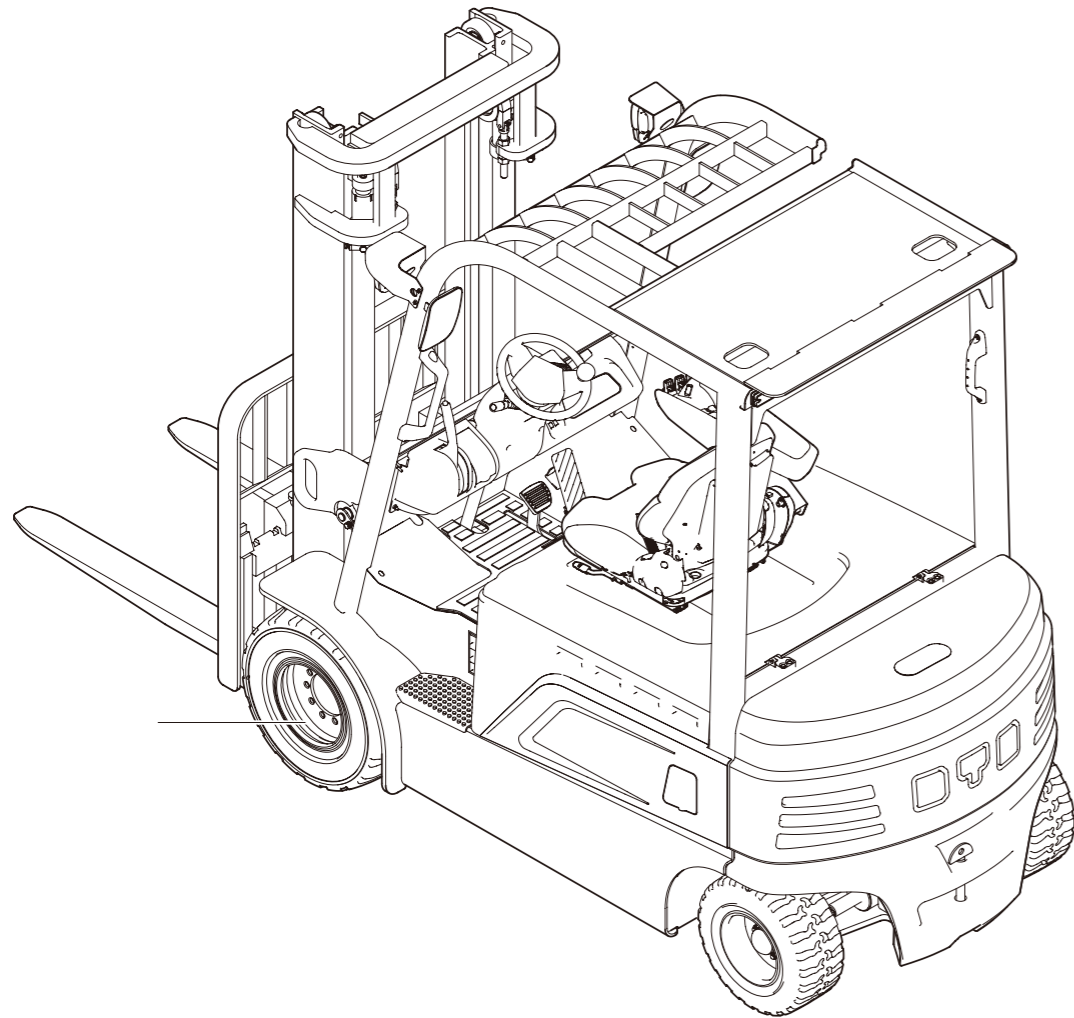
2. 2.0-2.5T



No.	Name	No.	Name	No.	Name
1	Charging Door	6	Mast	11	Driving Area
2	Front Wheel	7	Front Light	12	Counterweight
3	Carriage	8	Overhead Guard	13	Tow Pin
4	Fork	9	Rear Light	14	Rear Wheel
5	Load Backrest	10	Rear Handle		



3. 3.0-3.5T

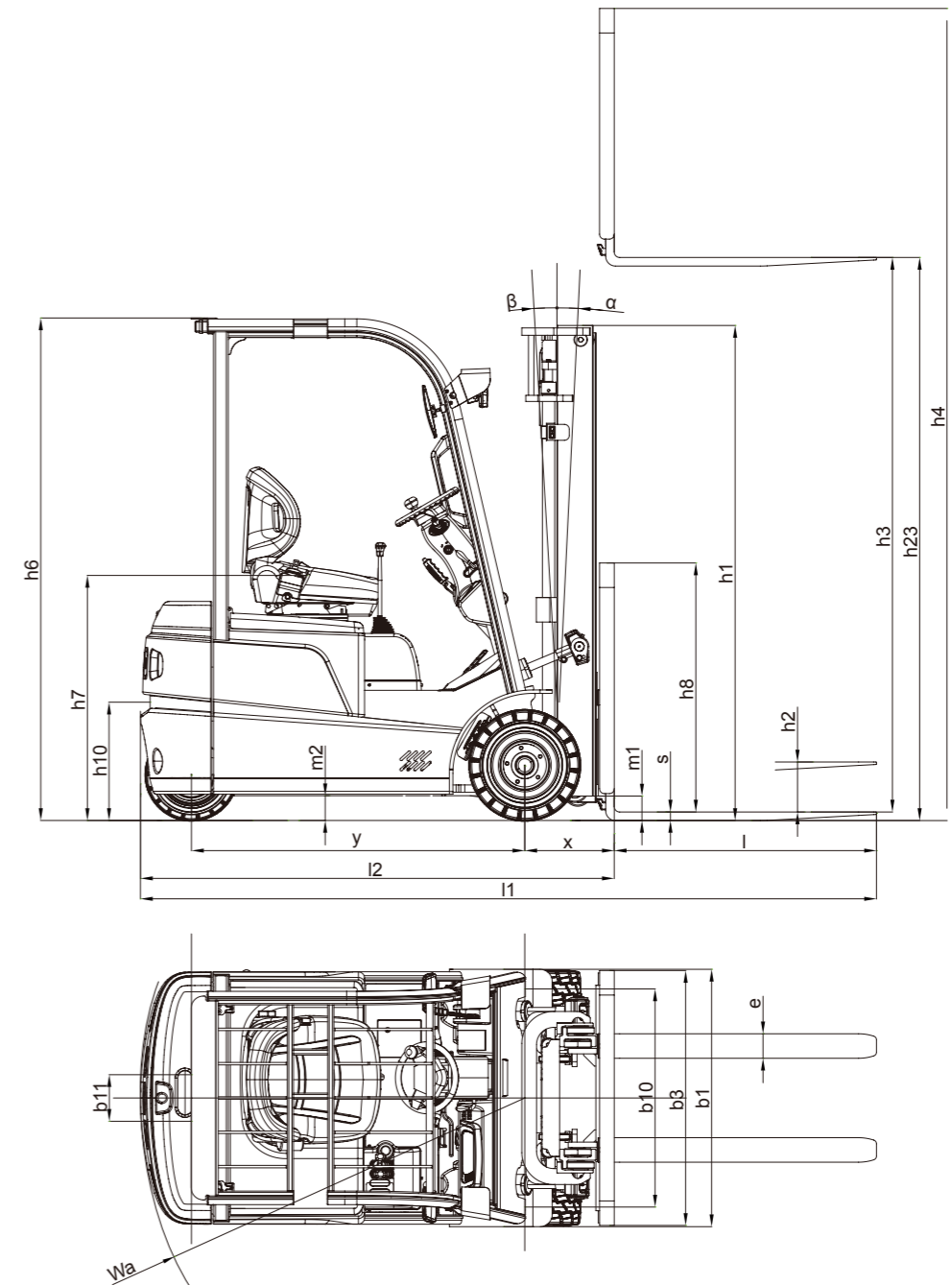


No.	Name	No.	Name	No.	Name
1	Charging Door	6	Mast	11	Driving Area
2	Front Wheel	7	Front Light	12	Counterweight
3	Carriage	8	Overhead Guard	13	Tow Pin
4	Fork	9	Rear Light	14	Rear Wheel
5	Load Backrest	10	Rear Handle		



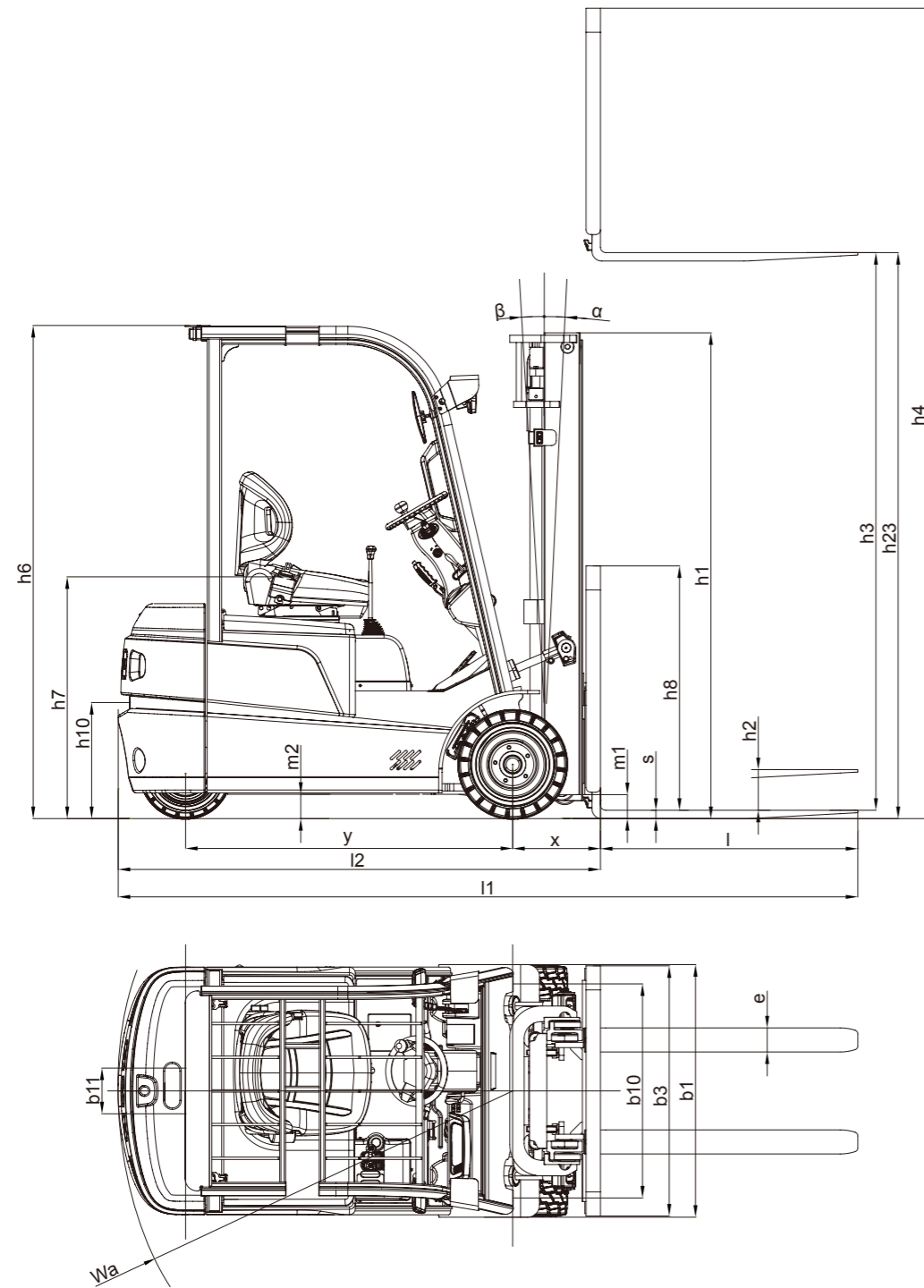
Technical Data(1.6-1.8T)

1. Dimension Figure(1.6T)





2. Dimension Figure(1.8T)



3. Technical Data Sheet

Identification	1.1	Manufacturer			BYD	BYD
	1.2	Type			CPD16	CPD18
	1.3	Drive			Electric	Electric
	1.4	Operator type			Seat	Seat
	1.5	Rated capacity	Q	kg	1600	1800
	1.6	Load centre	c	mm	500	500
	1.7	Load distance	x	mm	365	365
	1.8	Wheelbase	y	mm	1360	1360
Weight	2.1	Service weight including battery		kg	3100	3300
	2.2	Axle load, with load, front/rear		kg	4083/617	4495/605
	2.3	Axle load, without load, front/rear		kg	1466/1634	1551/1749
Wheel	3.1	Tire Type			Solid Tyre	Solid Tyre
	3.2	Tyre size, front		in	18×7-8	18×7-8
	3.3	Tyre size, rear		in	15×4.5-8	15×4.5-8
	3.4	Wheels number, front/rear(x=driven wheel)			2x/2	2x/2
	3.5	Track, front	b10	mm	890	890
	3.6	Track, rear	b11	mm	190	190
Dimension	4.1	Tilt of mast/fork carriage, forward/backward	a/b	deg	5/7	5/7
	4.2	Height, mast lowered	h1	mm	2020	2020
	4.3	Free lift height	h2	mm	150	150
	4.4	Lift height	h3	mm	3000	3000
	4.5	Height, mast extended	h4	mm	4035	4035
	4.6	Height of overhead guard	h6	mm	2050	2050
	4.7	Seat height	h7	mm	985	985
	4.8	Coupling height	h10	mm	480	480
	4.9	Overall length	l1	mm	2935	3005
	4.10	Length to face of forks	l2	mm	1935	2005
	4.11	Overall width	b1	mm	1050	1050
	4.12	Fork dimensions	s/e/l	mm	35/100/1000	35/100/1000
	4.13	Fork carriage ISO 2328, class/type A, B			2A	2A
	4.14	Fork carriage width	b3	mm	1040	1040
	4.15	Ground clearance, with load, below mast	m1	mm	95	95
	4.16	Ground clearance, centre of wheelbase	m2	mm	95	95
	4.17	Aisle width for pallets 1000×1200 crossways	Ast	mm	3460	3530
	4.18	Aisle width for pallets 800×1200 crossways	Ast	mm	3580	3650
	4.19	Minimum Turning radius	Wa	mm	1570	1640
	4.20	Internal turning radius		mm	0	0
Performance Data	5.1	Travel speed, with/without load		km/h	16/16	16/16
	5.2	Lifting speed, with/without load		mm/s	500/550	500/550
	5.3	Lowering speed, with/without speed		mm/s	530/500	530/500
	5.4	Max. drawbar pull, with/without load		kN	9.0/7.9	9.0/8.0
	5.5	Max. gradeability, with/without load		%	20/20	18/20
	5.6	Acceleration time(10m), with/without load		s	4.5/4.0	4.5/4.0
	5.7	Service brake			Mech./Hydr.	Mech./Hydr.
Drive	6.1	Drive motor rating S2=60min		kW	5×2	5×2
	6.2	Lift motor rating at S3 15 %		kW	16	16
Others	7.1	Type of Drive Control			AC	AC
	7.2	Operating hydraulic pressure		Mpa	16	18
	7.3	Sound pressure level at the driver's seat		dB(A)	65	65
	7.4	Towing coupling			PIN	PIN



5. Mast Data Sheet

		2-stage Standard Mast				2-stage Free Lift Mast			3-stage Free Lift Mast			
Lift height	h3	3000	3500	4000	4500	3000	3500	4000	4500	5000	5500	6000
Forks height(to the ground)	h23	3035	3535	4035	4535	3035	3535	4035	4535	5035	5535	6035
Height, mast lowered	h1	2020	2260	2510	2809	2020	2320	2570	2045	2245	2445	2645
Load backrest height	h8	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Height(to the ground), mast extended, without load backrest	h4	3625	4125	4625	5125	3605	4105	4605	5130	5630	6130	6630
Height(to the ground), mast extended, with load backrest	h4	4035	4535	5035	5535	4035	4535	5035	5535	6035	6535	7035
Free lift height(without load backrest)	h2	150	150	150	150	1415	1715	1965	1415	1615	1815	2015
Free lift height(with load backrest)	h2	150	150	150	150	970	1270	1520	995	1195	1395	1595
Tilt of mast/fork carriage, forward/backward	α / β	5/7	5/7	5/7	5/5	5/7	5/7	5/7	5/5	5/5	5/5	5/5
Load distance	x	365	365	365	365	365	365	365	385	385	385	385

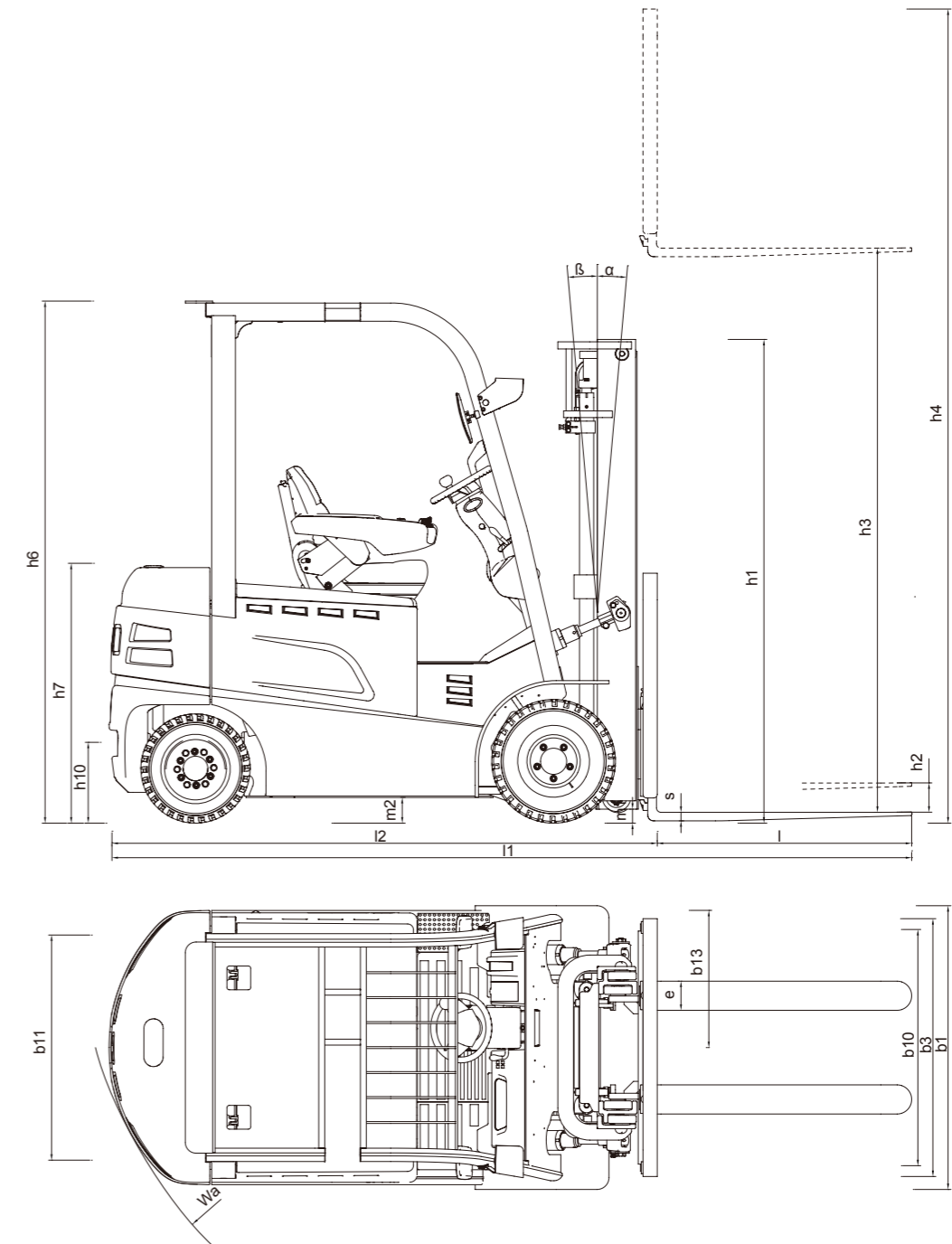
6. Battery Data Sheet

		1.6T		1.8T	
Battery capacity	V/Ah	80/230	80/270	80/230	80/270
Battery Weight	kg	640	640	640	640



Technical Data(2.0-2.5T)

1. Technical Data(2.0-2.5T)





2. Technical Data Sheet (Dual Drive)

Identification	1.1	Manufacturer			BYD	BYD
	1.2	Type			CPD20	CPD25
	1.3	Drive			Electric	Electric
	1.4	Operator type			Seat	Seat
	1.5	Rated capacity	Q	kg	2000	2500
	1.6	Load centre	c	mm	500	500
	1.7	Load distance	x	mm	425	425
	1.8	Wheelbase	y	mm	1505	1505
Weight	2.1	Service weight including battery		kg	3600	4200
	2.2	Axle load, with load, front/rear		kg	4901/699	5811/889
	2.3	Axle load, without load, front/rear		kg	1672/1928	1775/2425
Wheel	3.1	Tire Type			Solid Tyre	Solid Tyre
	3.2	Tyre size, front		in	21×8-9	21×8-9
	3.3	Tyre size, rear		in	18×7-8	18×7-8
	3.4	Wheels number, front/rear(x=driven wheel)			2x/2	2x/2
	3.5	Track, front	b10	mm	1000	1000
	3.6	Track, rear	b11	mm	955	955
Dimension	4.1	Tilt of mast/fork carriage, forward/backward	a/b	deg	5/8	5/8
	4.2	Height, mast lowered	h1	mm	2035	2035
	4.3	Free lift height	h2	mm	150	150
	4.4	Lift height	h3	mm	3000	3000
	4.5	Height, mast extended	h4	mm	4040	4040
	4.6	Height of overhead guard	h6	mm	2195	2195
	4.7	Seat height	h7	mm	1100	1100
	4.8	Coupling height	h10	mm	333	333
	4.9	Overall length	l1	mm	3375	3375
	4.10	Length to face of forks	l2	mm	2305	2305
	4.11	Overall width	b1	mm	1195	1195
	4.12	Fork dimensions	s/e/l	mm	40/120/1070	35/120/1070
	4.13	Fork carriage ISO 2328, class/type A, B			2A	2A
	4.14	Fork carriage width	b3	mm	1085	1085
Performance Data	5.1	Travel speed, with/without load		km/h	20/20	20/20
	5.2	Lifting speed, with/without load		mm/s	420/450	420/450
	5.3	Lowering speed, with/without speed		mm/s	500/400	500/400
	5.4	Max. drawbar pull, with/without load		kN	12.7/9.0	12.7/9.0
	5.5	Max. gradeability, with/without load		%	20/20	20/20
	5.6	Acceleration time(10m), with/without load		s	4.9/4.3	4.9/4.3
	5.7	Service brake			Mech./Hydr.	Mech./Hydr.
	Drive	6.1	Drive motor rating S2=60min		kW	8x2
6.2		Lift motor rating at S3 15 %		kW	20.7	20.7
Others	7.1	Type of Drive Control			AC	AC
	7.2	Operating hydraulic pressure		Mpa	14.2	16.8
	7.3	Sound pressure level at the driver's seat		dB(A)	65	65
	7.4	Towing coupling			PIN	PIN



3. Technical Data Sheet (Single Drive)

Identification	1.1	Manufacturer			BYD	BYD
	1.2	Type			CPD20	CPD25
	1.3	Drive			Electric	Electric
	1.4	Operator type			Seat	Seat
	1.5	Rated capacity	Q	kg	2000	2500
	1.6	Load centre	c	mm	500	500
	1.7	Load distance	x	mm	425	425
	1.8	Wheelbase	y	mm	1505	1505
Weight	2.1	Service weight including battery		kg	3620	4220
	2.2	Axle load, with load, front/rear		kg	4920/700	5830/890
	2.3	Axle load, without load, front/rear		kg	1690/1930	1793/2427
Wheel	3.1	Tire Type			Solid Tyre	Solid Tyre
	3.2	Tyre size, front		in	21×8-9	21×8-9
	3.3	Tyre size, rear		in	18×7-8	18×7-8
	3.4	Wheels number, front/rear(x=driven wheel)			2x/2	2x/2
	3.5	Track, front	b10	mm	970	970
	3.6	Track, rear	b11	mm	955	955
Dimension	4.1	Tilt of mast/fork carriage, forward/backward	a/b	deg	6/9	6/9
	4.2	Height, mast lowered	h1	mm	2035	2035
	4.3	Free lift height	h2	mm	150	150
	4.4	Lift height	h3	mm	3000	3000
	4.5	Height, mast extended	h4	mm	4040	4040
	4.6	Height of overhead guard	h6	mm	2195	2195
	4.7	Seat height	h7	mm	1100	1100
	4.8	Coupling height	h10	mm	333	333
	4.9	Overall length	l1	mm	3375	3375
	4.10	Length to face of forks	l2	mm	2305	2305
	4.11	Overall width	b1	mm	1195	1195
	4.12	Fork dimensions	s/e/l	mm	40/120/1070	35/120/1070
	4.13	Fork carriage ISO 2328, class/type A, B			2A	2A
	4.14	Fork carriage width	b3	mm	1085	1085
Performance Data	5.1	Travel speed, with/without load		km/h	16/16	16/16
	5.2	Lifting speed, with/without load		mm/s	420/450	420/450
	5.3	Lowering speed, with/without speed		mm/s	500/400	500/400
	5.4	Max. drawbar pull, with/without load		kN	12.7/9.0	12.7/9.0
	5.5	Max. gradeability, with/without load		%	16/20	16/20
	5.6	Acceleration time(10m), with/without load		s	4.9/4.3	4.9/4.3
	5.7	Service brake			Mech./Hydr.	Mech./Hydr.
	Drive	6.1	Drive motor rating S2=60min		kW	8.5
6.2		Lift motor rating at S3 15 %		kW	20.7	20.7
Others	7.1	Type of Drive Control			AC	AC
	7.2	Operating hydraulic pressure		Mpa	14.2	16.8
	7.3	Sound pressure level at the driver's seat		dB(A)	65	65
	7.4	Towing coupling			PIN	PIN



4. Mast Data Sheet (Dual Drive)

		2-stage Standard Mast				2-stage Free Lift Mast			3-stage Free Lift Mast			
Lift height	h3	3000	3300	3500	4000	3000	3500	4000	4500	4800	5500	6000
Forks height(to the ground)	h23	3040	3340	3540	4040	3040	3540	4040	4540	4840	5540	6040
Height, mast lowered	h1	2035	2185	2510	2585	2025	2325	2575	2115	2215	2475	2675
Load backrest height	h8	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Height(to the ground), mast extended, without load backrest	h4	3670	3970	4170	4670	3675	4175	4675	5190	5490	6190	6690
Height(to the ground), mast extended, with load backrest	h4	4040	4340	4540	5040	4040	4540	5040	5540	5840	6540	7040
Free lift height(without load backrest)	h2	150	150	150	150	1350	1650	1900	1425	1525	1785	1985
Free lift height(with load backrest)	h2	150	150	150	150	985	1285	1535	1075	1175	1435	1635
Tilt of mast/fork carriage, forward/backward	α / β	5/8	5/8	5/8	5/8	5/8	5/8	5/8	5/6	5/6	5/6	5/6
Load distance	x	425	425	425	425	425	425	425	431	431	431	431

5. Mast Data Sheet (Single Drive)

		2-stage Standard Mast				2-stage Free Lift Mast			3-stage Free Lift Mast			
Lift height	h3	3000	3300	4000	4500	3000	3500	4000	4500	4800	5500	6000
Forks height(to the ground)	h23	3040	3340	4040	4540	3040	3540	4040	4540	4840	5540	6040
Height, mast lowered	h1	1985	2185	2575	2830	2025	2325	2575	2115	2215	2475	2675
Load backrest height	h8	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Height(to the ground), mast extended, without load backrest	h4	3760	4060	4760	5260	3675	4175	4675	5195	5495	6195	6695
Height(to the ground), mast extended, with load backrest	h4	4040	4340	5040	5540	4040	4540	5040	5540	5840	6540	7040
Free lift height(without load backrest)	h2	150	150	150	150	1350	1650	1900	1420	1520	1780	1980
Free lift height(with load backrest)	h2	150	150	150	150	985	1285	1535	1075	1175	1435	1635
Tilt of mast/fork carriage, forward/backward	α / β	6/9	6/9	6/9	6/9	6/9	6/9	6/9	6/9	6/9	6/9	6/9
Load distance	x	425	425	425	425	425	425	425	431	431	431	431

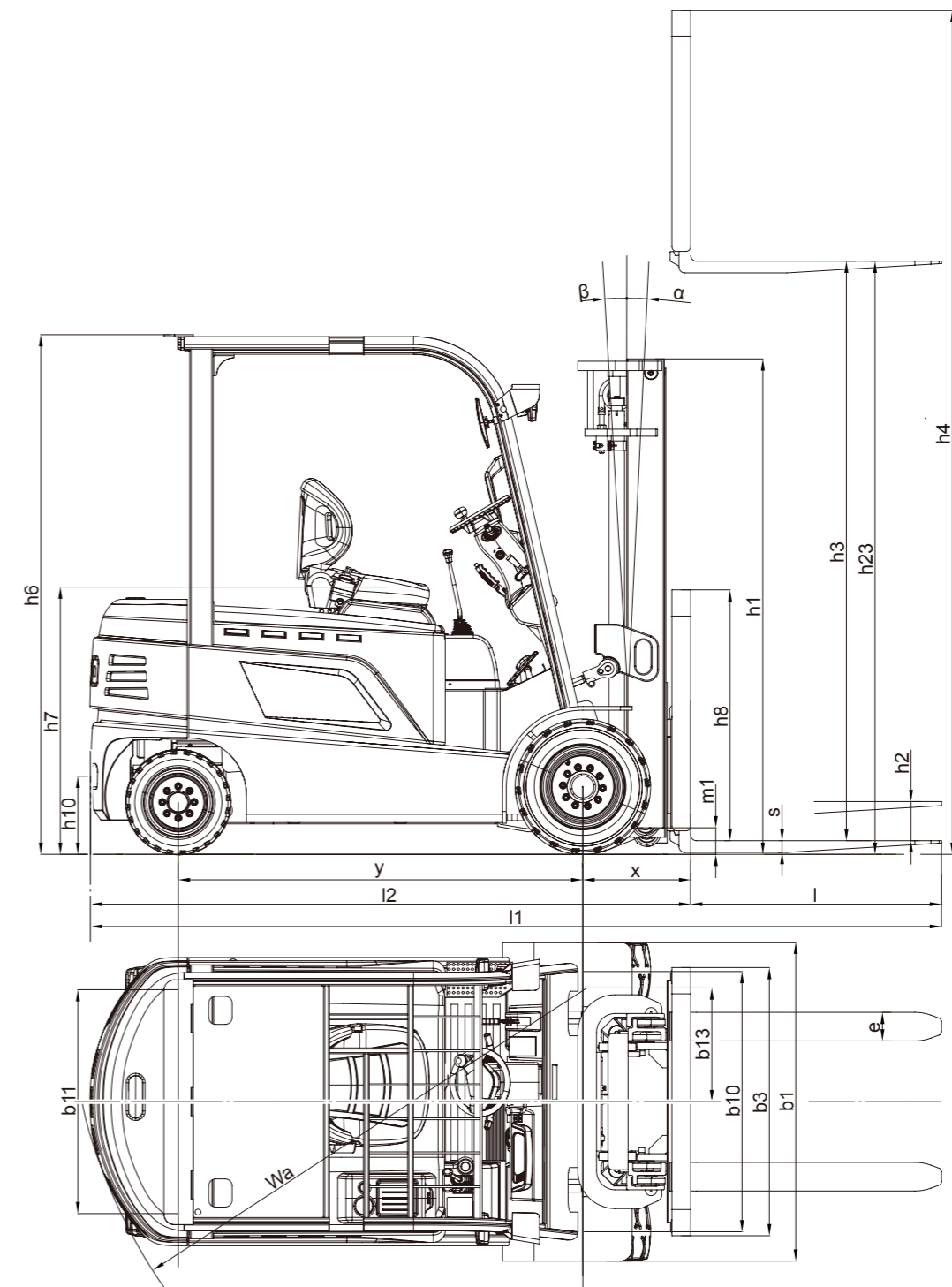
6. Battery Data Sheet

		2.0T				2.5T			
Battery capacity	V/Ah	80/230	80/270	80/460	80/540	80/230	80/270	80/460	80/540
Battery Weight	kg	540	540	855	855	840	840	855	855



Technical Data(3.0-3.5T)

1. Dimension Figure (Dual Drive)



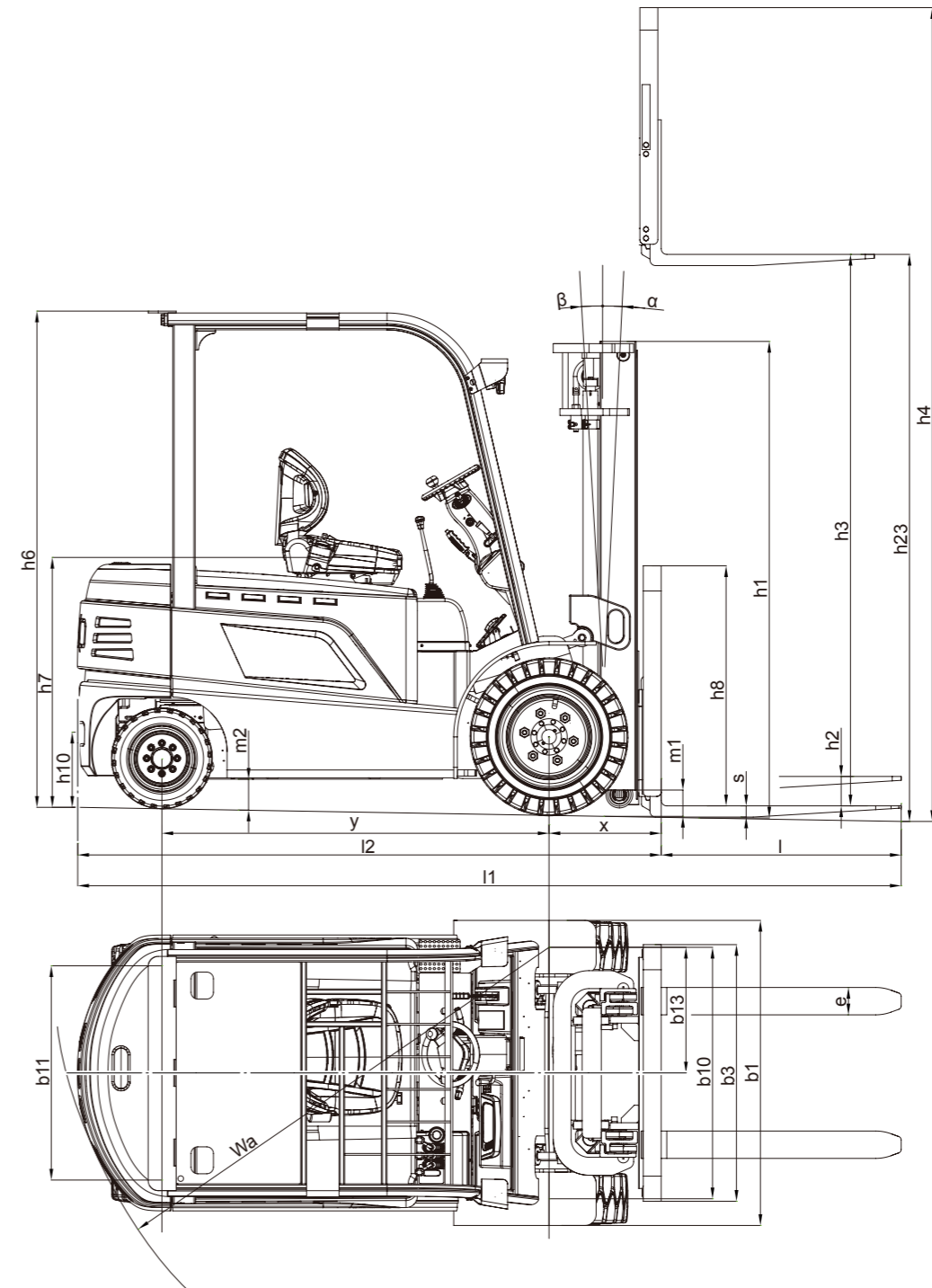


2. Truck Technical Data Sheet (Dual Drive)

Identification	1.1	Manufacturer		BYD	BYD	
	1.2	Type		CPD30	CPD35	
	1.3	Drive		Electric	Electric	
	1.4	Operator type		Seat	Seat	
	1.5	Rated capacity	Q	kg	3000	3500
	1.6	Load centre	c	mm	500	500
	1.7	Load distance	x	mm	460	460
	1.8	Wheelbase	y	mm	1725	1725
Weight	2.1	Service weight including battery		kg	4840	5440
	2.2	Axle load, with load, front/rear		kg	6693/1147	7722/1218
	2.3	Axle load, without load, front/rear		kg	2023/2817	2274/3166
Wheel	3.1	Tire Type			Solid Tyre	Solid Tyre
	3.2	Tyre size, front			23×10-12	23×10-12
	3.3	Tyre size, rear			200/50-10	200/50-10
	3.4	Wheels number, front/rear(x=driven wheel)			2x/2	2x/2
	3.5	Track, front	b10	mm	1110	1110
	3.6	Track, rear	b11	mm	955	955
Dimension	4.1	Tilt of mast/fork carriage, forward/backward	a/b	deg	5/8	5/8
	4.2	Height, mast lowered	h1	mm	2115	2115
	4.3	Free lift height	h2	mm	150	150
	4.4	Lift height	h3	mm	3000	3000
	4.5	Height, mast extended	h4	mm	4120	4120
	4.6	Height of overhead guard	h6	mm	2215	2215
	4.7	Seat height	h7	mm	1140	1140
	4.8	Coupling height	h10	mm	333	333
	4.9	Overall length	l1	mm	3630	3630
	4.10	Length to face of forks	l2	mm	2560	2560
	4.11	Overall width	b1	mm	1360	1360
	4.12	Fork dimensions	s/e/l	mm	50/125/1070	50/125/1070
	4.13	Fork carriage ISO 2328, class/type A, B			3A	3A
	4.14	Fork carriage width	b3	mm	1145	1145
4.15	Ground clearance, with load, below mast	m1	mm	110	110	
4.16	Ground clearance, centre of wheelbase	m2	mm	130	130	
4.17	Aisle width for pallets 1000×1200 crossways	Ast	mm	4075	4075	
4.18	Aisle width for pallets 800×1200 crossways	Ast	mm	4272	4272	
4.19	Minimum Turning radius	Wa	mm	2210	2210	
4.20	Internal turning radius	b13	mm	485	485	
Performance Data	5.1	Travel speed, with/without load		km/h	20/20	20/20
	5.2	Lifting speed, with/without load		mm/s	380/450	380/450
	5.3	Lowering speed, with/without speed		mm/s	550/450	550/450
	5.4	Max. drawbar pull, with/without load		kN	17.4/12.2	17.2/13.6
	5.5	Max. gradeability, with/without load		%	20/20	20/20
	5.6	Acceleration time(10m), with/without load		s	4.9/4.3	4.9/4.3
	5.7	Service brake			Mech./Hydr.	Mech./Hydr.
Drive	6.1	Drive motor rating S2=60min		kW	10×2	10×2
	6.2	Lift motor rating at S3 15 %		kW	24	24
Others	7.1	Type of Drive Control			AC	AC
	7.2	Operating hydraulic pressure		Mpa	16	18
	7.3	Sound pressure level at the driver's seat		dB(A)	65	65
	7.4	Towing coupling			PIN	PIN



3. Dimension Figure (Single Drive)





4. Truck Technical Data Sheet (Single Drive)

Identification	1.1	Manufacturer			BYD	BYD	
	1.2	Type			CPD30	CPD35	
	1.3	Drive			Electric	Electric	
	1.4	Operator type			Seat	Seat	
	1.5	Rated capacity		Q	kg	3000	3500
	1.6	Load centre		c	mm	500	500
	1.7	Load distance		x	mm	500	500
	1.8	Wheelbase		y	mm	1725	1725
Weight	2.1	Service weight including battery			kg	5000	5600
	2.2	Axle load, with load, front/rear			kg	7072/928	8113/987
	2.3	Axle load, without load, front/rear			kg	2333/2667	2584/3016
Wheel	3.1	Tire Type				Solid Tyre	Solid Tyre
	3.2	Tyre size, front				28×9-15	28×9-15
	3.3	Tyre size, rear				200/50-10	200/50-10
	3.4	Wheels number, front/rear(x=driven wheel)				2x/2	2x/2
	3.5	Track, front		b10	mm	1120	1120
	3.6	Track, rear		b11	mm	955	955
Dimension	4.1	Tilt of mast/fork carriage, forward/backward		a/b	deg	5/8	5/8
	4.2	Height, mast lowered		h1	mm	2115	2115
	4.3	Free lift height		h2	mm	150	150
	4.4	Lift height		h3	mm	3000	3000
	4.5	Height, mast extended		h4	mm	4120	4120
	4.6	Height of overhead guard		h6	mm	2215	2215
	4.7	Seat height		h7	mm	1140	1140
	4.8	Coupling height		h10	mm	333	333
	4.9	Overall length		l1	mm	3630	3630
	4.10	Length to face of forks		l2	mm	2560	2560
	4.11	Overall width		b1	mm	1360	1360
	4.12	Fork dimensions		s/e/l	mm	50/125/1070	50/125/1070
	4.13	Fork carriage ISO 2328, class/type A, B				3A	3A
	4.14	Fork carriage width		b3	mm	1145	1145
	4.15	Ground clearance, with load, below mast		m1	mm	110	110
	4.16	Ground clearance, centre of wheelbase		m2	mm	130	130
4.17	Aisle width for pallets 1000×1200 crossways		Ast	mm	4272	4272	
4.18	Aisle width for pallets 800×1200 crossways		Ast	mm	4620	4620	
4.19	Minimum Turning radius		Wa	mm	2270	2270	
4.20	Internal turning radius		b13	mm	560	560	
Performance Data	5.1	Travel speed, with/without load			km/h	15/16	15/16
	5.2	Lifting speed, with/without load			mm/s	380/450	380/450
	5.3	Lowering speed, with/without speed			mm/s	550/450	550/450
	5.4	Max. drawbar pull, with/without load			kN	14.5/13	14/14
	5.5	Max. gradeability, with/without load			%	15/20	15/20
	5.6	Acceleration time(10m), with/without load			s		
	5.7	Service brake				Mech./Hydr.	Mech./Hydr.
Drive	6.1	Drive motor rating S2=60min			kW	21.5	21.5
	6.2	Lift motor rating at S3 15 %			kW	24	24
Others	7.1	Type of Drive Control				AC	AC
	7.2	Operating hydraulic pressure			Mpa	16	18
	7.3	Sound pressure level at the driver's seat			dB(A)	65	65
	7.4	Towing coupling				PIN	PIN



5. Mast Data Sheet (Dual Drive)

		2-stage Standard Mast				2-stage Free Lift Mast			3-stage Free Lift Mast			
Lift height	h3	3000	3300	3500	4000	3000	3500	4000	4500	4800	5500	6000
Forks height(to the ground)	h23	3050	3350	3550	4050	3050	3550	4050	4550	4850	5550	6050
Height, mast lowered	h1	2115	2265	2365	2665	2080	2380	2630	2200	2350	2500	2750
Load backrest height	h8	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070
Height(to the ground), mast extended, without load backrest	h4	3740	4040	4240	4740	3735	4235	4735	5275	5575	6275	6775
Height(to the ground), mast extended, with load backrest	h4	4120	4420	4620	5120	4120	4620	5120	5620	5920	6620	7120
Free lift height(without load backrest)	h2	150	150	150	150	1345	1645	1900	1425	1575	1725	1975
Free lift height(with load backrest)	h2	150	150	150	150	960	1260	1510	1080	1230	1380	1630
Tilt of mast/fork carriage, forward/backward	α / β	5/8	5/8	5/8	5/8	5/8	5/8	5/8	5/6	5/6	5/6	5/6
Load distance	x	460	460	460	460	460	460	460	466	466	466	466

6. Mast Data Sheet (Single Drive)

		2-stage Standard Mast				2-stage Free Lift Mast			3-stage Free Lift Mast			
Lift height	h3	3000	3300	3500	4000	3000	3500	4000	4500	4800	5500	6000
Forks height(to the ground)	h23	3050	3350	3550	4050	3050	3550	4050	4550	4850	5550	6050
Height, mast lowered	h1	2115	2265	2365	2665	2080	2380	2630	2200	2350	2500	2750
Load backrest height	h8	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070	1070
Height(to the ground), mast extended, without load backrest	h4	3740	4040	4240	4740	3735	4235	4735	5275	5575	6275	6775
Height(to the ground), mast extended, with load backrest	h4	4120	4420	4620	5120	4120	4620	5120	5620	5920	6620	7120
Free lift height(without load backrest)	h2	150	150	150	150	1345	1645	1900	1425	1575	1725	1975
Free lift height(with load backrest)	h2	150	150	150	150	960	1260	1510	1080	1230	1380	1630
Tilt of mast/fork carriage, forward/backward	α / β	5/8	5/8	5/8	5/8	5/8	5/8	5/8	5/6	5/6	5/6	5/6
Load distance	x	500	500	500	500	500	500	500	506	506	506	506

7. Battery Data

		3.0T				3.5T	
Battery voltage/nominal capacity	V/Ah	80/230	80/270	80/460	80/540	80/460	80/540
Battery Weight	kg	860	860	860	860	1465	1465



Working Environment

Temperature: -10 ~ 40°C

Gradient: ≤ 20%

Others: no flammable gas, no flammable dust and no volatile flammable liquid

Contact with your BYD local dealer if the truck is intended to be used in the following environments:

- (1) in places where explosives are stored
- (2) in dusty areas
- (3) in ports or water front with corrosive salt hazards
- (4) in chemical factories with acid and other chemical hazards
- (5) in potential explosive environments with dust or other explosive gas
- (6) in toxic environment
- (7) in radioactive environment
- (8) in other special environment



NAMEPLATE AND DECALS

Truck Nameplate

		Electric Counterbalance Forklift (Iron-Phosphate Battery)	
Type	<input type="text"/>	Service weight including battery	<input type="text"/>
Serial No.	<input type="text"/>	Net weight(w/o battery)	<input type="text"/>
Year of manufacture	<input type="text"/>	Battery weight(min.)	<input type="text"/>
Rated capacity	<input type="text"/>	Battery weight(max.)	<input type="text"/>
Max.lift height	<input type="text"/>	Battery voltage	<input type="text"/>
Wheel size,front	<input type="text"/>	License No.	<input type="text"/>
Wheel size,rear	<input type="text"/>	Part No.	<input type="text"/>
BYD (SHAOGUAN) CO., LTD.			
Add.: No.1, BYD Road, Zhenjiang Industrial Park, Shaoguan, Guangdong, China			

- (1) Note
- (2) The truck nameplate is placed on the front of the truck.
- (3) After receiving the truck, check the information on the nameplate and confirm if it complies with the one you've ordered.
- (4) Caution
- (5) Every truck might have different specification, and check the nameplate before operation to confirm the truck specification.
- (6) When transporting the load, it should not exceed the rated loading capacity of the truck, please check and confirm the load of the truck.

Load Capacity Chart

When the load center exceeds the rated one, the loading capacity of the truck is reduced. The load capacity chart indicates the maximum loading capacity of the truck corresponding to the different load center.

Suppose the goods has the load center of 600 mm and the expected lifting height is 4500 mm.

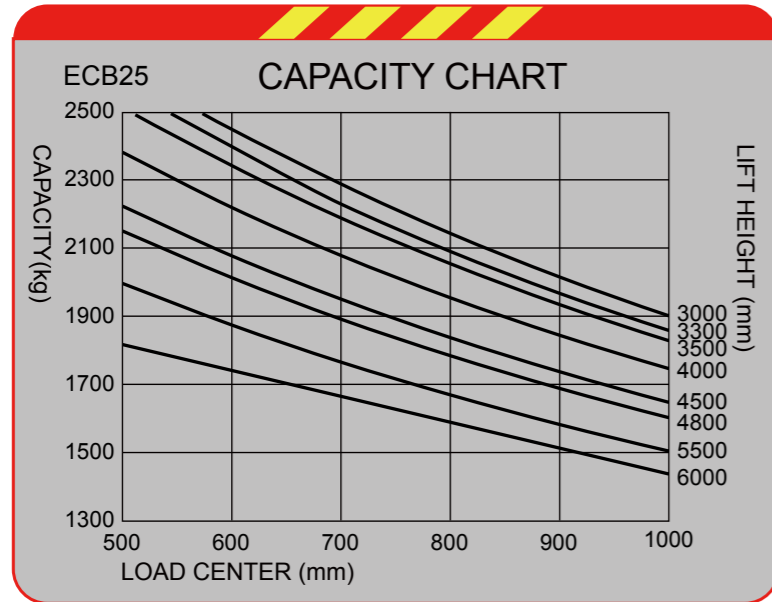
- (1) Draw the vertical line at the coordinate of load center of 600 mm and find the crossing point of this vertical line and the curve line of lifting height of 4500 mm.



(2) The ordinate on the Y-axis of the crossing point reads 2100kg, which is the permissible maximum lifting load.

By such analogy, you can calculate the loading capacity in the case of other load center and lifting height.

If it is needed for higher lifting position of the goods, decrease the load centre of the goods (with more appropriate package), or decrease the weight of the goods.



Caution

- (1) The truck specification varies depending on customer requirements. Refer to the load capacity chart for confirmation on the maximum allowed load.
- (2) The load capacity chart reflects only compact, well palletized and evenly centered loads within the load limit. Otherwise the stability of the truck and the rigidity of the related parts will be impaired.



Battery Nameplate

铁电池/Iron-Phosphate Battery

产品使用环境 Operating Environment	环境温度 Ambient Temperature	
	相对湿度 Relative Humidity	
产品基本性能 Basic Performance	型号 Model	
	电池型号 Cell Model	
	标准容量 Nominal Capacity	
	标称电压 Nominal Voltage	
	工作电压 Operating Voltage	
	额定工作电流 Rated Operating Current	
	电池包重量 Weight	
	出厂编号 Serial No.	

Caution: Before operation, you must be familiar with specific requirement for output configuration by referring to the instruction manual.

中国制造
Made in China
 BYD (SHAOGUAN) CO., LTD.

Note

- (1) The battery nameplate is placed on the battery.
- (2) After receiving the truck, check the information on the nameplate and confirm if it complies with the one you've ordered.

Other Stickers

Warning decals and signs are pasted on the truck, please read them before operation.



OPERATING

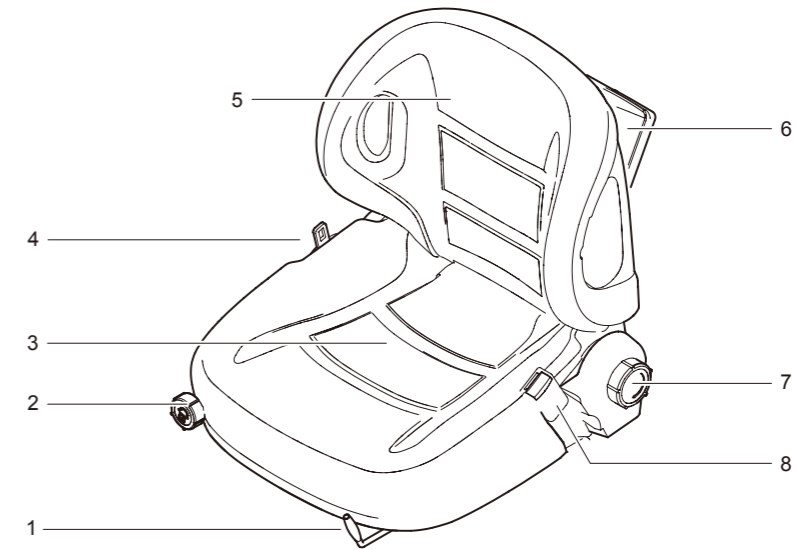
This chapter explains how to operate to BYD electric truck.



SEAT

Basic Seat (Type A)

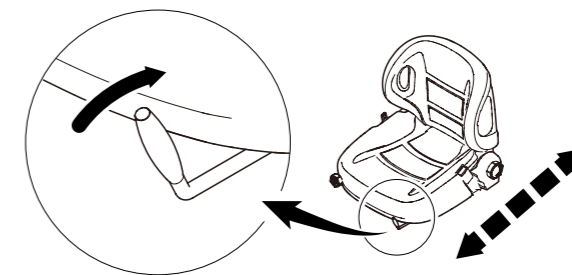
1. Appearance



No.	Name	No.	Name	No.	Name
1	Position Adjustment Handle	4	Seat Belt Retractor	7	Backrest Adjustment Knob
2	Weight Adjustment Knob	5	Backrest	8	Seat Belt Lock
3	Cushion	6	Seat Storage Box		

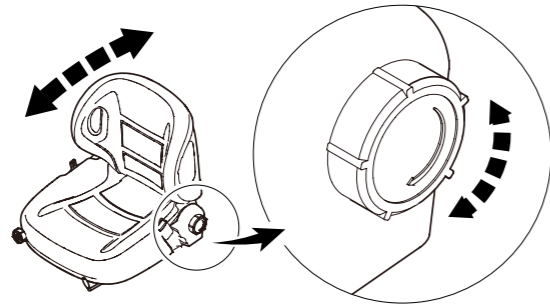
2. Forward and Backward Position Adjustment

- (1) Raise the adjustment lever, move the seat forward and backward to find the appropriate position.
- (2) Release the adjustment lever, finish the adjustment.

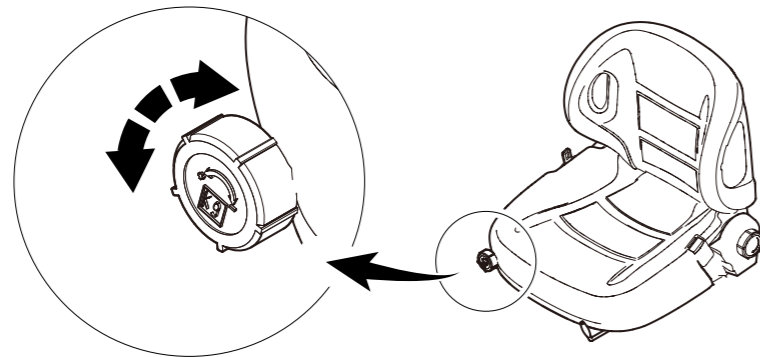


3. Backrest Adjustment

Turning the adjustment knob, the backrest can be moved forward and backward.



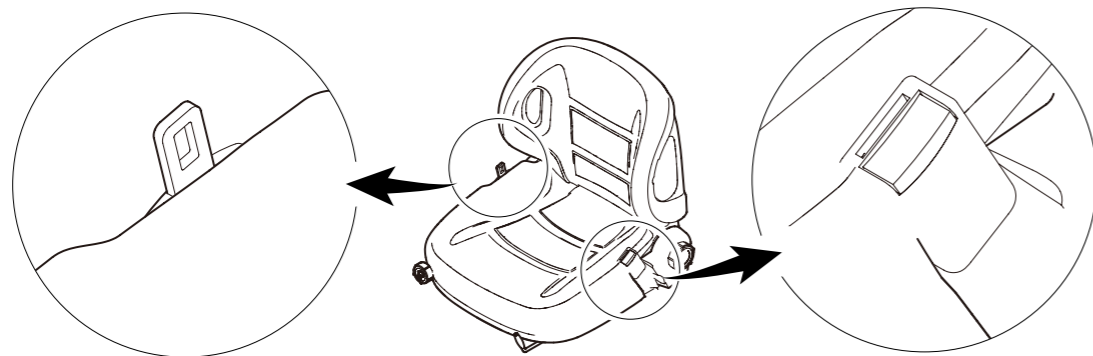
4. Weight Adjustment



5. Seat Belt

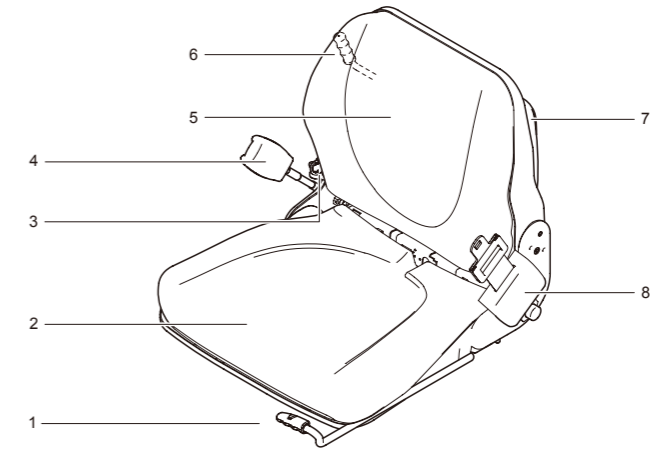
(1) Pull out the seat belt from the seat belt retractor.

(2) Put the buckle end into the lock.



Basic Seat (Type B)

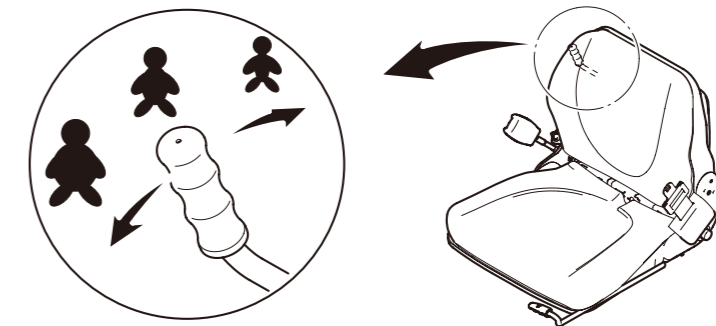
1. Appearance



No.	Name	No.	Name	No.	Name
1	Position Adjustment Handle	4	Seat Belt Retractor	7	Seat Storage Box
2	Cushion	5	Backrest	8	Seat Belt Lock
3	Backrest Adjustment Handle	6	Weight Adjustment Lever		

2. Weight Adjustment

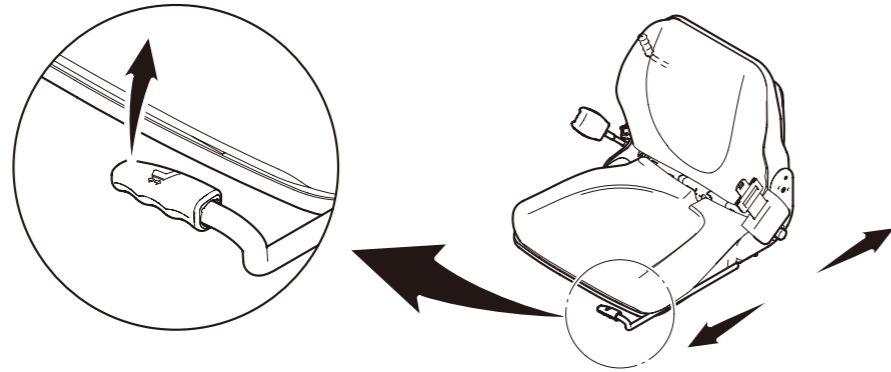
According to the driver's weight, follow the adjustment signs to press the adjustment lever upward or downward.



3. Forward and Backward Position Adjustment

Raise the adjustment lever, move the seat forward and backward to find the appropriate position.

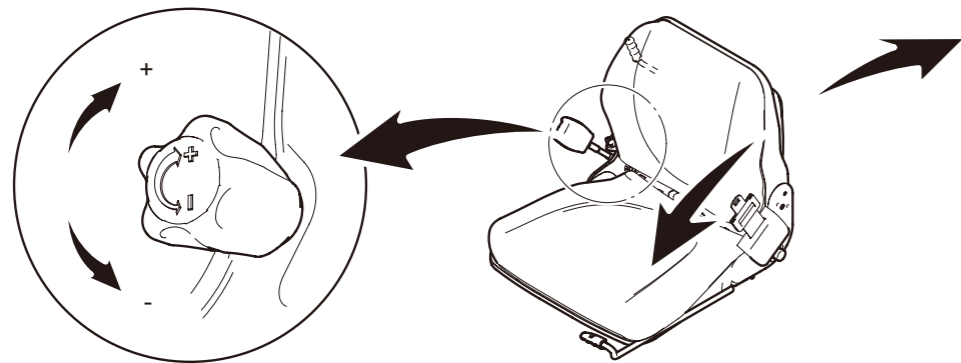
Release the adjustment lever, finish the adjustment.



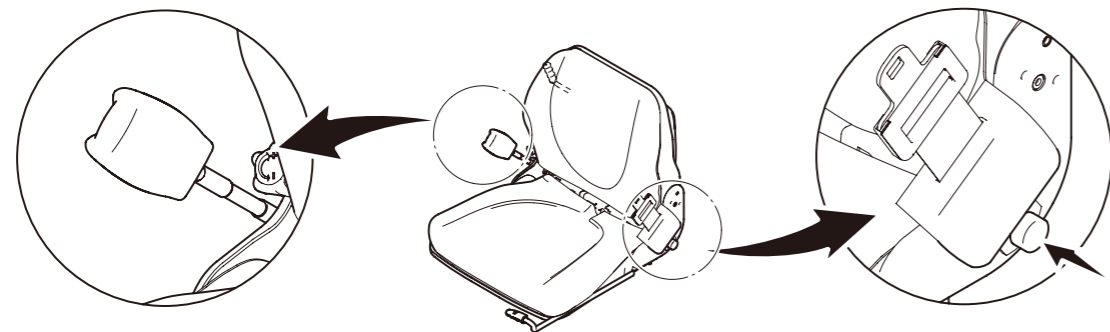
4. Backrest Adjustment

Turning the adjustment knob to "+", the backrest can be moved backward.

Turning the adjustment knob to "-", the backrest can be moved forward.

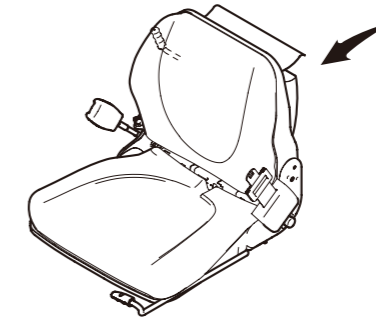


5. Seat Belt



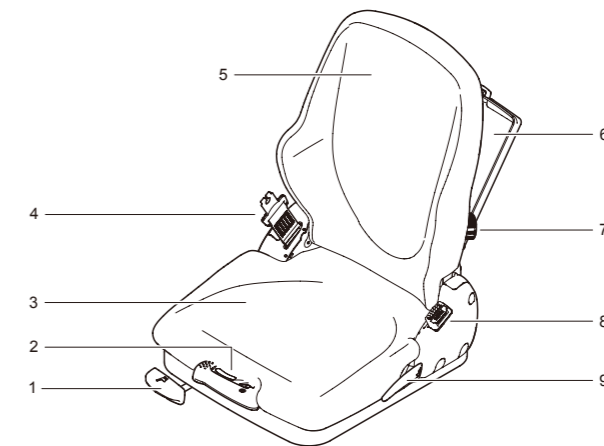
6. Seat Storage Box

There is a storage box on the rear side of seat, which could store documents, work gloves and other flat goods.



Comfort Seat

1. Appearance

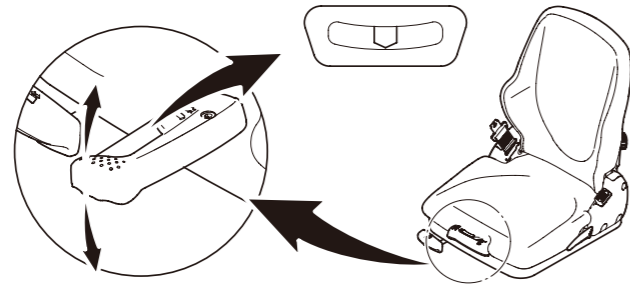


No.	Name	No.	Name	No.	Name
1	Position Adjustment Handle	4	Seat Belt Retractor	7	Waist Support Adjustment Handle
2	Weight Adjustment Lever	5	Backrest	8	Seat Belt Lock
3	Cushion	6	Seat Storage Box	9	Backrest Adjustment Handle

2. Weight Adjustment

Fold out the weight adjustment lever completely, hold it at the front and move it upwards or downwards (10 movements from minimum to maximum). Before every new movement, bring the lever back to the starting position (audible locking sound).

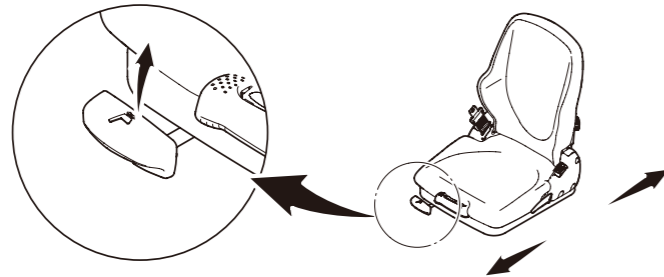
The driver's weight has been set correctly, when the arrow is in the middle of the viewing window. When finishing the adjustment, fold the lever completely into the locking.



3. Forward and Backward Position Adjustment

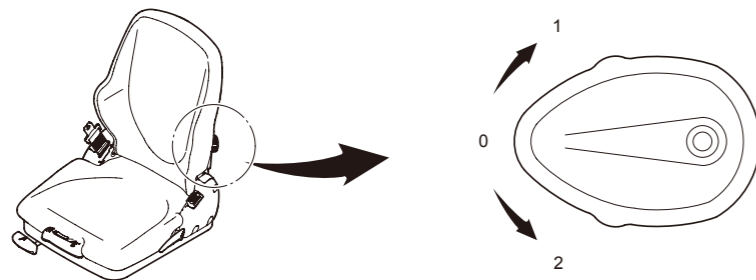
Raise the adjustment lever, move the seat forward and backward to find the appropriate position.

Release the adjustment lever, finish the adjustment.



4. Waist Support Adjustment

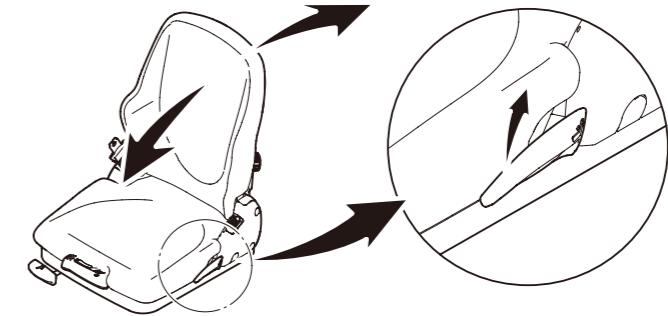
The lumbar support increases both the seating comfort and the performance of the driver. By turning the adjustment knob upwards, the curvature in the upper part of the backrest cushion can be adjusted. By turning the knob downwards, the curvature in the lower part of the backrest cushion can be adjusted.



5. Backrest Adjustment

Pull up the locking lever to adjust the angle of the backrest. When adjusting, do not apply load to the backrest by pressing against it.

Release the locking lever to lock the backrest.



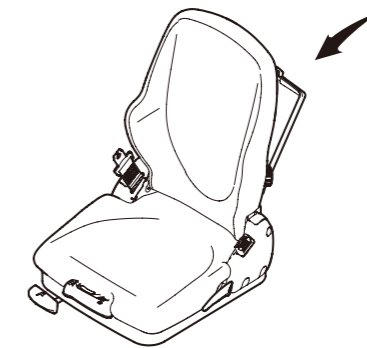
6. Seat Belt

Pull out the seat belt from the retractor, and then insert the end of the seat belt into the lock



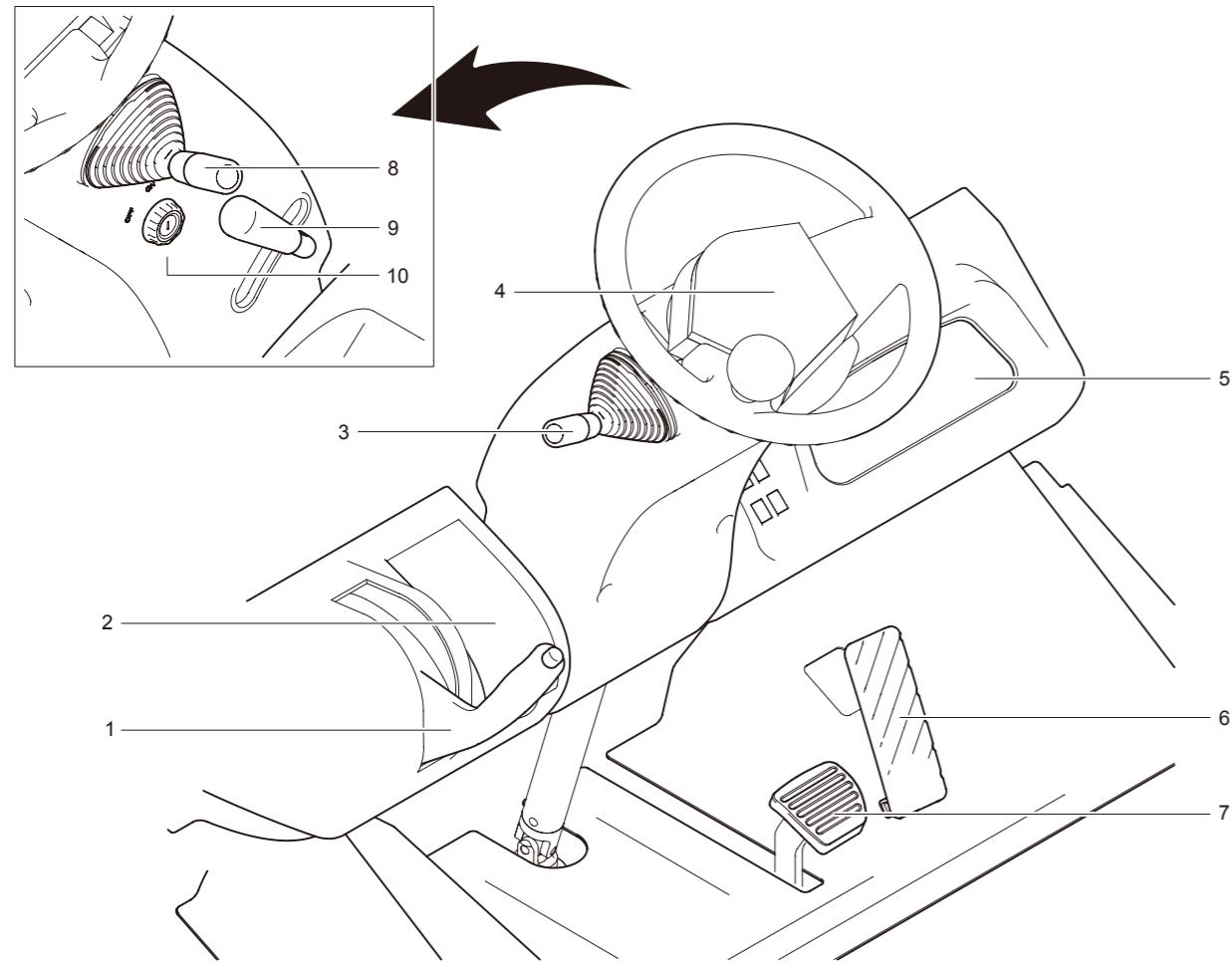
7. Seat Storage Box

There is a storage box on the rear side of seat, which could store documents, work gloves and other flat goods.



IGNITION AND CONTROL

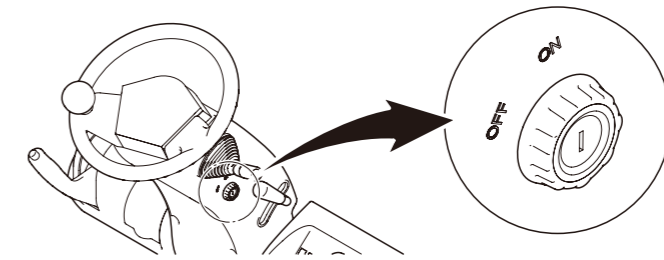
Driving Area Overview



No.	Name	No.	Name	No.	Name
1	Hand Brake	5	Combination Display	9	Steering Wheel Adjustment Handle
2	Brake Oil Reservoir Cover	6	Accelerator Pedal	10	Ignition Switch
3	Travel Direction Control	7	Brake Pedal		
4	Steering Wheel	8	Light Control Lever		

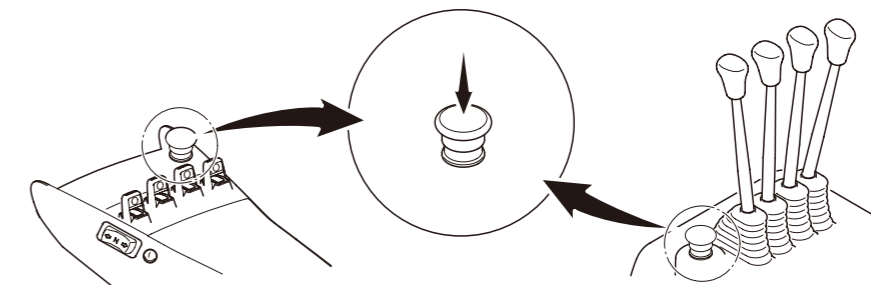
Ignition Switch

- (1) OFF: position of power off, key inserting and key pulling out.
- (2) ON: truck starting, display lighting up.



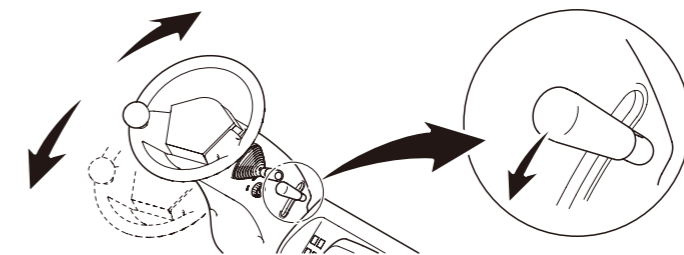
Emergency Switch

Press the emergency switch to shut off the power. Rotate and pull up it to resume the power.



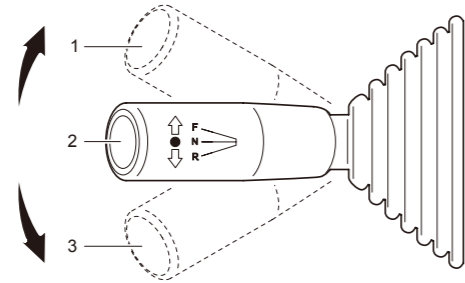
Steering Wheel Tilt Angle Adjustment

- (1) Press the steering wheel adjustment lever, and adjust the tilt angle of the steering wheel.
- (2) After adjustment, pull up the adjustment lever to lock the steering wheel, try to move it, and ensure it is steady.

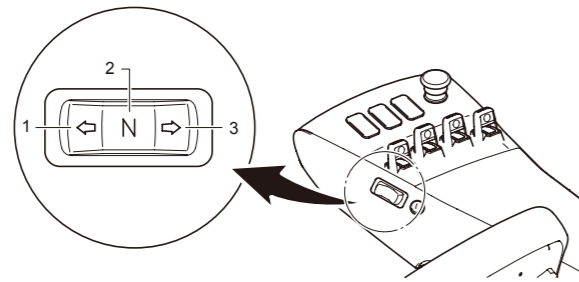


Gear

1. Travel Direction Control



2. Gear Switch



3. Description

No.	Name	Description
1	Forward Gear	When it is the forward gear, press the accelerator pedal, the truck moves forward.
2	Stop Gear	When it is the stop gear, the truck can not travel.
3	Backward Gear	When it is the backward gear, press the accelerator pedal, the truck moves backward.

Note

The display will show the sign of travel direction corresponding to the gear.

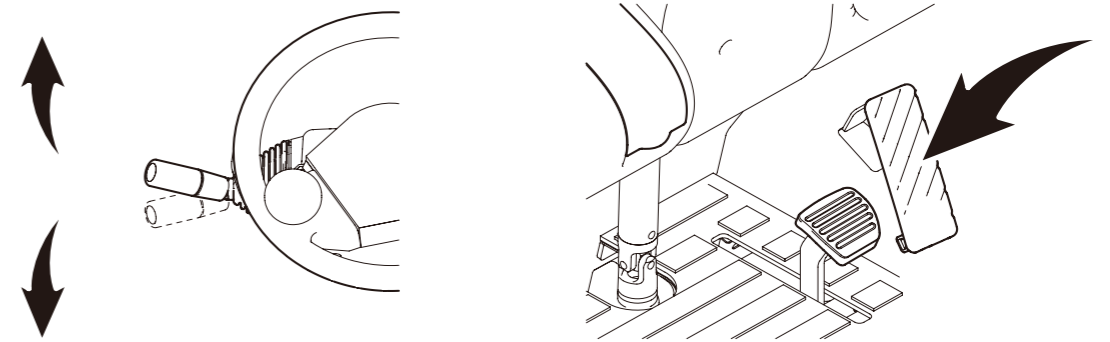
Travel, Steering and Braking

1. Travel

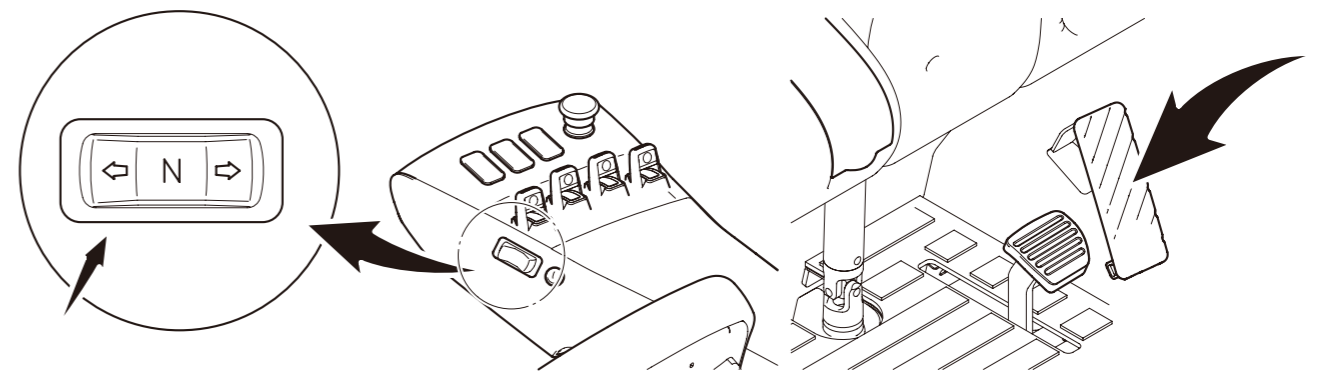
Select the forward gear, press the accelerator pedal, and then the truck moves forward.

Select the backward gear, press the accelerator pedal, and then the truck moves backward.

(1) Basic Type

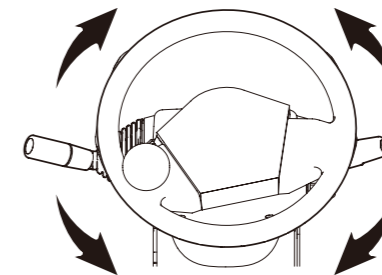


(2) Comfort Type



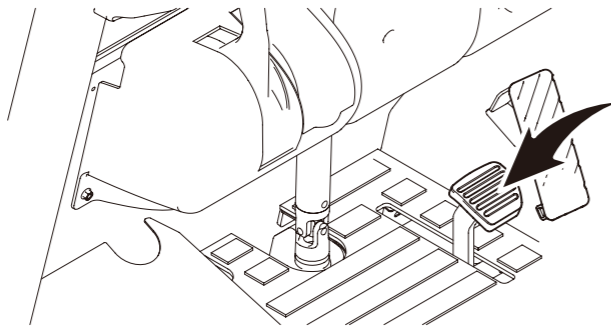
2. Steering

Rotate the steering wheel to steer the truck when driving.



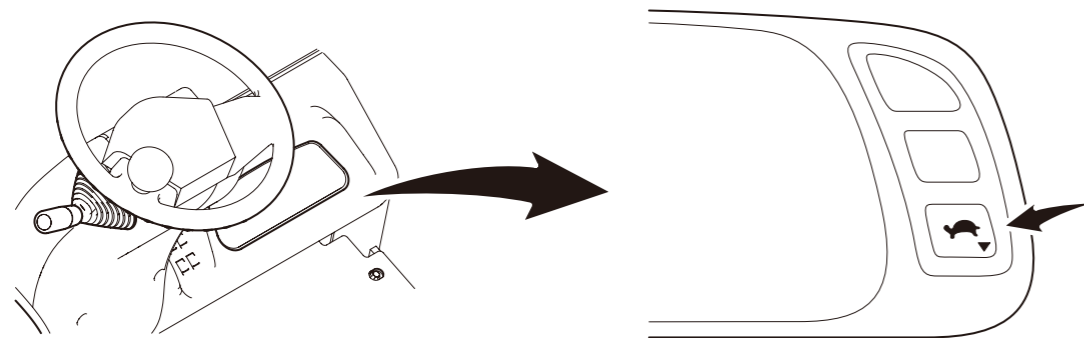
3. Braking

Press the service brake pedal to stop the truck.



Low Speed Mode

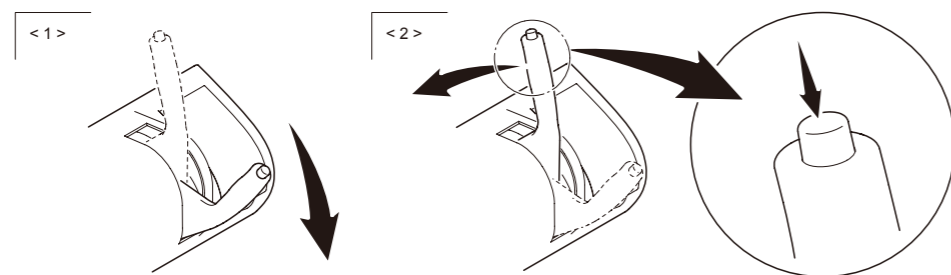
Press the low speed button on the display to start the mode at low speed.



Parking

(1) After stopping the truck by the service brake, hold the hand brake lever and pull it towards your body.

(2) To release the hand brake, press down the unlock button on the top of the hand brake lever and push it back.

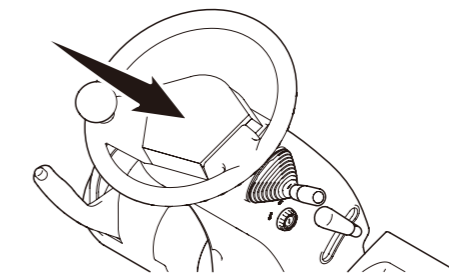


Caution

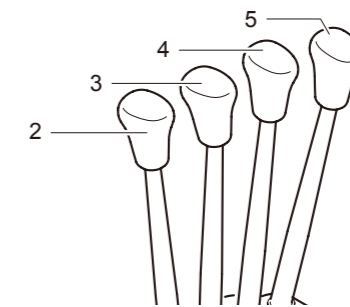
To park the truck on a slope, press the service brake pedal first to stabilize the truck and then apply the hand brake.

Horn

Press the button to let the horn honk.



Light



No.	Name	Description
1	Left Turning Indicator	Push the lever forward.
2	Clearance Lamp	Turn the switch clockwise to the first stop.
3	Light	Turn the switch clockwise to the second stop.
4	Right Turning Indicator	Pull the lever backward.

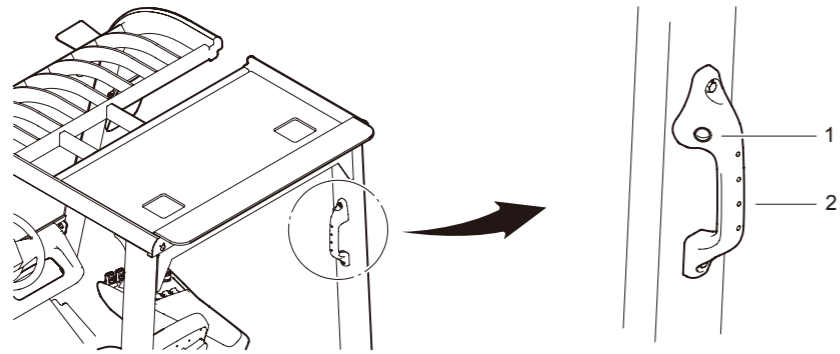
Note

When the turning indicator is switched on, it would return automatically to neutral when changing direction is completed.

Rear Handle

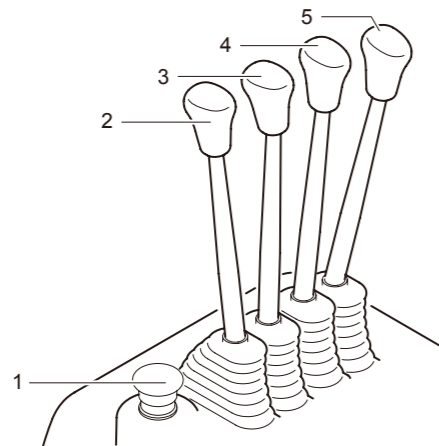
To maintain body balance by the rear handle when back the truck.

Press the button of the rear handle to let the horn honk.



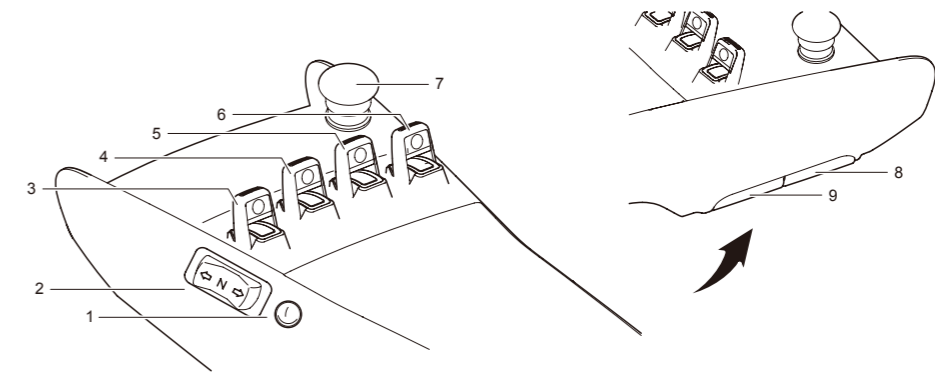
No.	Name	No.	Name
1	Rear Handle Button	2	Rear Handle

Manual Control Lever



No.	Name	Description
1	Emergency Switch	Press the emergency switch to shut off the power. Rotate and pull up it to resume the power.
2	Lifting Lever	Lower the forks by pushing the lever and lift the forks by pulling the lever.
3	Tilting Control Lever	Tilt the mast forward by pushing the lever and tilt the mast backward by pulling the lever.
4	3rd Function Control Lever	Usually it control the side shifter. Push the lever to shift to the left and pull the lever to shift to the right.
5	4th Function Control Lever	The control function is based on the actual attachment.

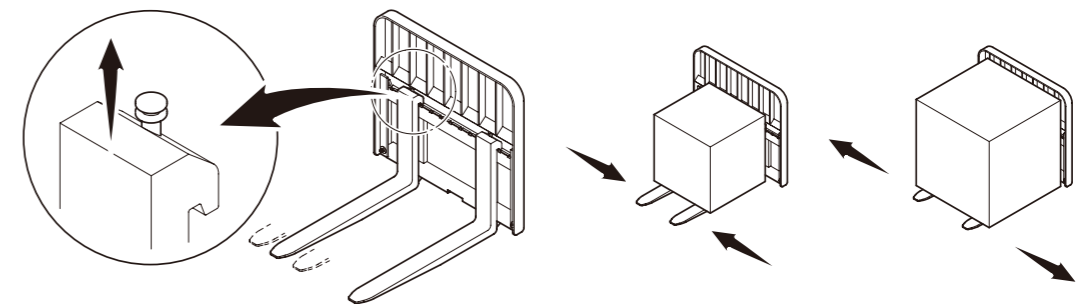
Multifunction Armrest



No.	Name	Description
1	Horn Button	Press the button to let the horn honk.
2	Gear Switch	Control the truck to go forward, stop or reverse.
3	Lifting Control Switch	Lower the forks by press the switch forward and lift the forks by press the switch backward.
4	Tilting Control Switch	Tilt the mast forward by press the switch forward and tilt the mast backward by press the switch backward.
5	3rd Function Control Switch	Usually it control the side shifter. Press the switch forward to shift to the left and press the switch backward to shift to the right.
6	4th Function Control Switch	The control function is based on the actual attachment.
7	Emergency Disconnect Switch	Press the emergency switch to shut off the power. Rotate and pull up it to resume the power.
8	Forward and Backward Position Adjustment Switch	Adjust the forward and backward position of the multifunction armrest.
9	Upward and Downward Position Adjustment Switch	Adjust the upward and downward position of the multifunction armrest.

Fork Distance Adjustment

Pull up the fork locking pin, and adjust the distance between forks according to the size of the goods.

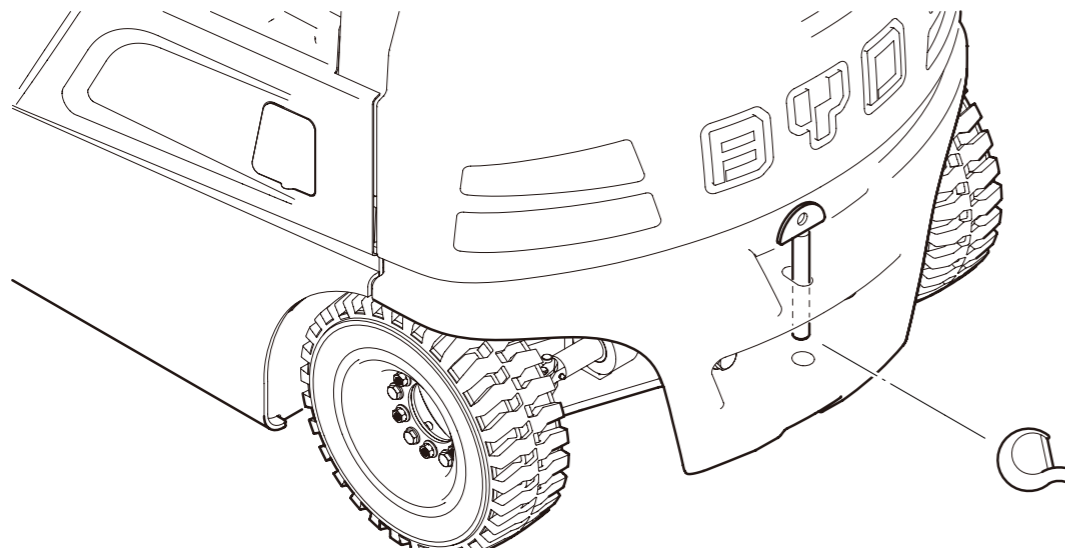


Caution

Both forks should be equidistant from the centre line of the truck.

Tow Pin

Pull up the tow pin, insert the hook, and then put the tow pin back.

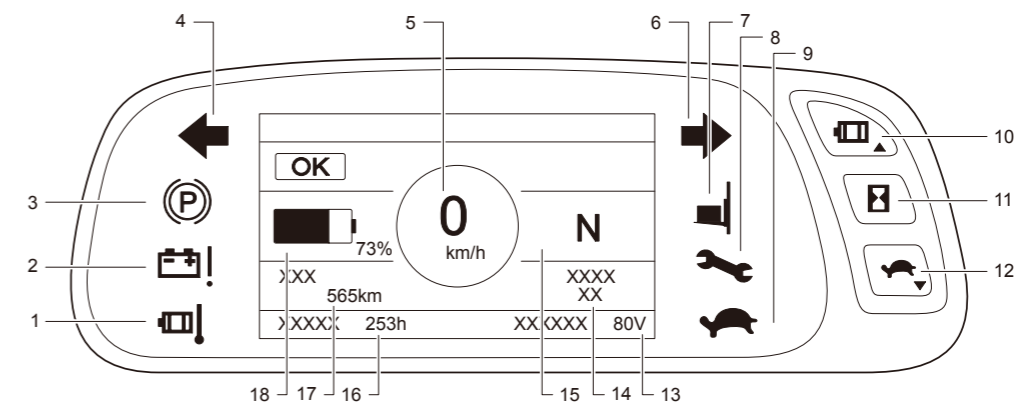


Caution

- (1) The tow pin can only be used for towing light duty trailers within the factory.
- (2) Ensure that the road is clean, flat and in good condition before draw the goods.

DISPLAY

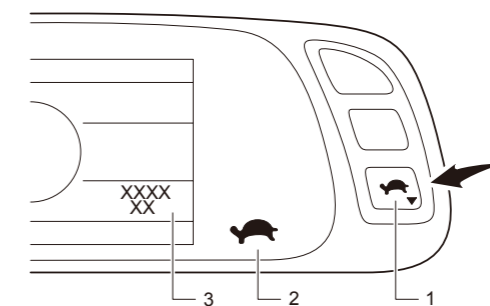
Display Appearance



No.	Name	No.	Name	No.	Name
1	Motor Overheating Warning Indicator	7	Overload Indicator(for Advanced Equipment)	13	Voltage Information
2	Battery Error Warning Indicator	8	Checking and Diagnosis Indicator	14	Speed Mode
3	Parking Indicator	9	Speed Mode Indicator	15	Gear
4	Left Turning Indicator	10	Operation Button	16	Total Working Hours
5	Prompt Information	11	Function Button	17	Total Mileage
6	Right Turning Indicator	12	Speed Mode Button	18	Battery Information

Display Using

1. Speed Mode Selection

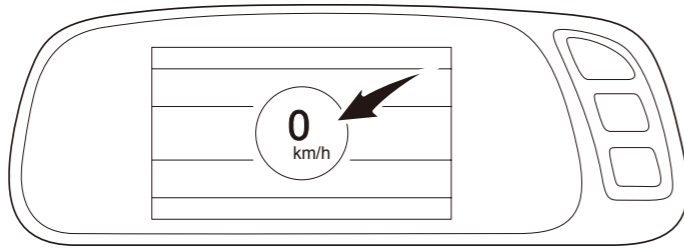


No.	Name	Description
1	Speed Mode Button	Press the speed mode button to choose setting from speed modes, which include the high speed mode, low speed mode and the close mode(no speed controlled).Press the speed mode button for 2 seconds and the indicator lits, and then press the button again to choose setting from speed modes, which includes the high speed mode, middle speed mode, low speed mode and the close mode(no speed controlled).
2	Speed Mode Indicator	
3	Speed Mode	



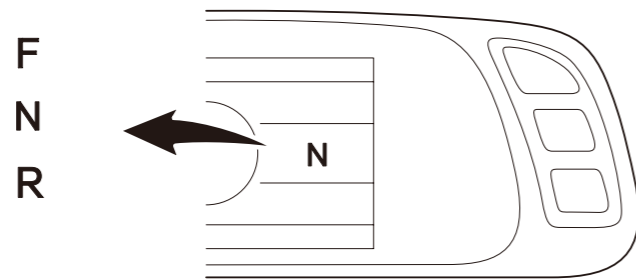
2. Prompt Information

The display shows the current speed or other working notice.



3. Gear

This sign shows the gears of the truck including F(Forward), N(Stop) and R(Backward).

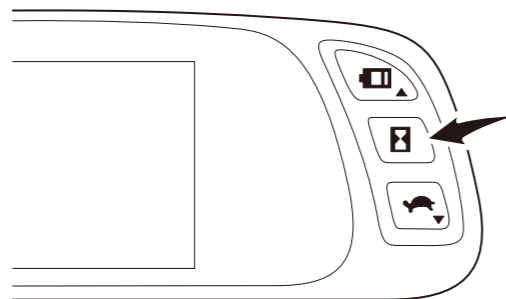


4. Display Setting

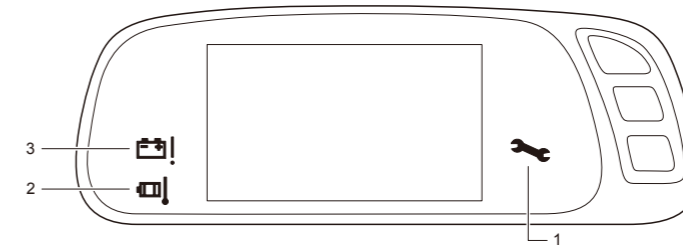
Press the middle button on the right side of the display to enter into the setting interface.

It is able to set time, unit, background light, language.

- (1) Upper Button: Moving the cursor upward. Increase the value of digit and number.
- (2) Middle Button: Press this button to enter the Setting window. Select and enter the submenu. Select and confirm the digit and number.
- (3) Lower Button: Moving the cursor downward. Decrease the value of digit and number.



5. Indicator



No.	Name	Description
1	Error Indicator	Indicator related to the breakdown, which appears when some failures occur.
2	Overheating Indicator	Indicator related to the temperature, which appears when some components are overheated.
3	Battery Abnormal Indicator	Indicator related to the battery, which appears in the case of low battery and battery failure.

6. Trouble-shooting Methods

The following table contains all the error messages that could be shown in the multifunction display. Please refer to the trouble shooting method for solution when the following error occurs.

After taking the recommended measures, contact the service personnel if the error message reappears and repeats more than 3 times.

	Prompt Information	Solution
Drive	Drive logic error one	If it is low battery, charge it. If it is normal, turn off and restart the truck.
	Drive logic error three	Turn off and restart the truck.
	Drive motor 3-phase wire fault	Turn off and restart the truck.
	Drive system fault	Turn off and restart the truck.
	Drive module fault	Turn off and restart the truck.
	Drive motor encoder fault	Turn off and restart the truck.
	Drive module initiation sequence fault	Return the direction control switch to neutral and restart the truck.
	Drive module initiation precharge fault	Turn off and restart the truck.
	Drive module heat sensor fault	Turn off and restart the truck.
Lifting	Lifting logic error one	If it is low battery, charge it. If it is normal, turn off and restart the truck.
	Lifting logic error three	If it is overloaded, stop it. Otherwise turn off and restart the truck.
	Lifting motor 3-phase wire fault	Turn off and restart the truck.
	Lifting motor encoder fault	Turn off and restart the truck.
	Lifting module heat sensor fault	Turn off and restart the truck.
	Lifting current sensor fault	Turn off and restart the truck.
Please check the lifting system		Place the control levers to the initial position, and then turn off and restart the truck.
Accelerating	Accelerator pedal false triggering	Check if the accelerator pedal returns normally, and then turn off and restart the truck.
	Accelerator pedal fault	Turn off and restart the truck.



Others	Main contactor open circuit	Turn off and restart the truck.
	Electrical relay fault	Turn off and restart the truck.
	Please check gear	Turn off the truck, return the gear adjustment lever to neutral position and restart the truck.
	CAN communication error	Turn off and restart the truck.
Battery	Battery voltage error	Turn off and restart the truck.
Temperature	Drive module overheating	Turn off and restart the truck.
	Drive motor overheating	Turn off the truck for 5 minutes and restart it.
	Lifting module overheating	Turn off the truck for 5 minutes and restart it.
	Lifting motor overheating	Turn off the truck for 5 minutes and restart it.



LOADING

Loading

1. Goods on the ground

- (1) Carefully drive the truck to the goods, and then stop it.
- (2) Tilt the mast forward and lower the forks.
- (3) Insert the forks accurately under the goods.
- (4) Lift the forks for a certain height, and tilt the mast backward.
- (5) Care about the road condition and passengers and keep appropriate speed when traveling. And delivery goods to the given location.

2. Goods on the high shelf

- (1) Carefully drive the truck to the goods, and then stop it.
- (2) Set the mast to the vertical position, and lift the forks to the bottom of the goods.
- (3) Insert the forks accurately under the goods.
- (4) Continue to lift the forks to let the goods be off the position.
- (5) Change to reverse the truck and release the brake.
- (6) Reverse with caution at a low speed until the goods are away from the stacking area.
- (7) Lower the forks to a certain height and tilt the mast backward.
- (8) Care about the road condition and passengers and keep appropriate speed when traveling. And delivery goods to the given location.

Danger

- (1) Do not drive too fast when approaching the goods to avoid crashing.
- (2) Do not stay under the lifted goods.

Caution

- (1) When transporting the load, the load should be securely fastened and compact with the gravity center well centered.
- (2) If tilt the mast backward before inserting the forks, the forks may hit the goods or can not insert into the bottom of the goods fully, which may cause danger.

Note

To turn on the truck, the emergency disconnect switch must be pulled up.

Travel

- (1) Ensure the goods will not tend to one side when traveling.
- (2) When the goods are on the forks, keep the mast tilting backward, and the forks should not be too high or low.
- (3) When traveling, do not tilt the mast forward or lift the forks to avoid accident by losing stability.
- (4) If the stacked loads are high and affect the visibility, travel the truck in reverse except climbing the slope.

Warning

- (1) Climb the slope by traveling forward and go downhill by traveling in reverse, and keep the truck at low speed.
- (2) Do not cross or turn around on a slope.

Caution

- (1) Have a second person as lookout if the visibility of the operator is reduced.
- (2) Do not depress the brake pedal with a lot of force, since excessive force might cause damage to the braking system.

Unloading

- (1) Unload the goods and lower the forks fully.
- (2) Lift the forks to the appropriate height.
- (3) Carefully operate the truck and insert the forks and goods into the shelf to the appropriate position.
- (4) Set the mast to the vertical position, and lower the forks to the appropriate position, and separate the forks and the goods.
- (5) Carefully and slowly leave the forks away from the bottom of the goods.
- (6) Leave and start next task.

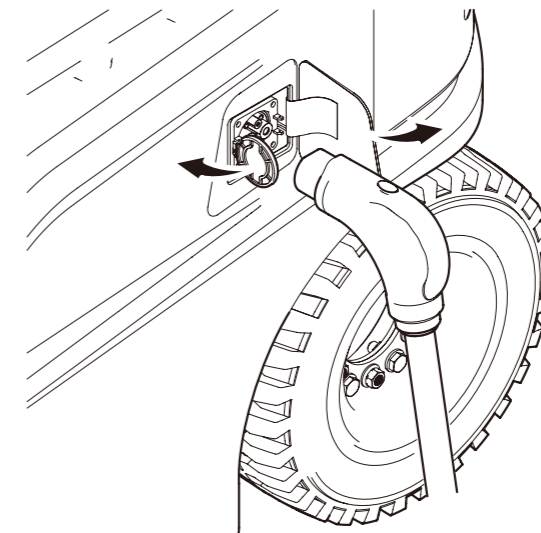
Exit

- (1) Unload the goods and lower the forks fully.
- (2) Apply the parking brake.
- (3) Rotate the key anti-clockwise to OFF position and take it out.
- (4) Press the emergency disconnect switch, unfasten the seat belt, and then exit.

BATTERY

Charging

Open the charging door, and then connect the charger connector. Follow the user manual of the charger to charge the truck.



Note

- (1) After the charging inlet cap is opened, the truck can not be used unless the cap is closed.
- (2) It is advised to charge at room temperature for the environment temperature influences the charging time.

TRANSPORTATION AND STORAGE

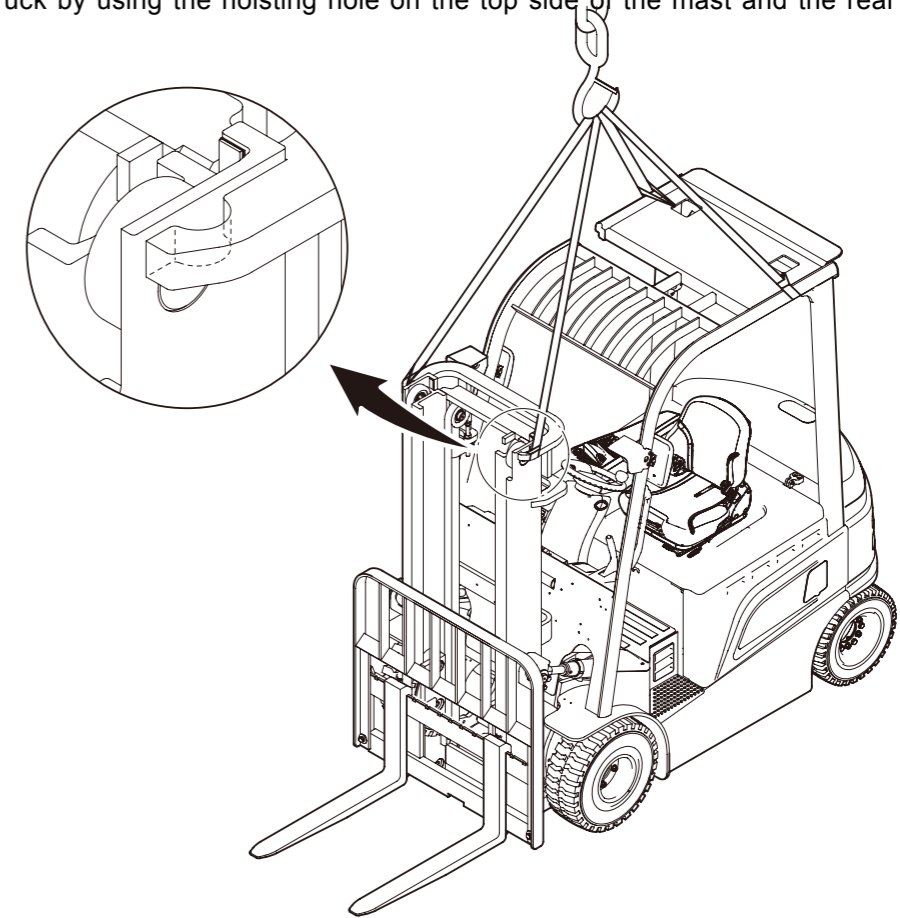
This chapter explains how to transport and store the truck.

TRANSPORTATION AND UNLOADING

Loading

1. Truck Hoisting

Hoist the truck by using the hoisting hole on the top side of the mast and the rear position of the overhead guard.

Danger

- (1) Ensure no one is in the working area of the hoist machine when hoisting.
- (2) Do not hoist the truck by using the hole on the counterweight.

Warning

Only use the hoist machine with the enough load capacity when hoisting the truck.

2. Truck Self-loading

Drive the truck into the transport truck at low speed.

Caution

- (1) Have a supervisor or a second person.
- (2) Make sure that the ground is strong enough to avoid the transport truck sinking into the floor.
- (3) Block the transporting truck by using steady blocks.
- (4) During loading and unloading, constantly check the rigidity and the stability of the ramp.

Transporting

- (1) Use a transport truck or a low flat bed truck to transport the truck.
- (2) During transportation, the parking brake must be applied, secure the wheels with wedges to ensure that the truck will not slip.

Unloading

1. Unload by Hoisting

Use the same method of the truck hoisting to unload the truck.

2. Self-unload

Drive the truck away from the carrier at low speed.

**DECOMMISSIONING AND RESTORING****Decommissioning**

Clean and remove the dust on the truck components and conduct the following procedures:

- (1) Check the truck for any leakage and abnormal components. If yes, repair the truck first.
- (2) Fully lift and lower the forks and tilting the mast forward and backward for several times. If the attachment is equipped, operate it for several times.
- (3) Lower the forks on a support surface to release the chains.
- (4) Repaint all the place with paint loss.
- (5) Check the hydraulic oil level, add it if necessary.
- (6) Lubricate all the components.
- (7) Take off the key and make sure that truck is disconnected from the battery power and press down the emergency disconnect switch. Battery status of charge should be around 50% to avoid overdischarge or full charge for long term storage.
- (8) Fully lift and lower the forks and tilting the mast forward and backward for several times every month. If the attachment is equipped, operate it for several times.

Caution

- (1) When storing the truck, place the it on a shelf so that the wheels are off the ground to protect the wheels and wheel bearings.
- (2) Do not cover the truck with a plastic cover, which will cause water vapor to condense and to accumulate.
- (3) Ask your BYD dealer for advice if the forklift needs to be decommissioned for more than 6 months.

Restoring

Clean and remove the dust on the truck components and conduct the following procedures:

- (1) Lubricate all the components.
- (2) Fully lift and lower the forks and tilting the mast forward and backward for several times. If the attachment is equipped, operate it for several times.
- (3) Check the status of charging the battery.
- (4) Check the gear oil, replace it if necessary.
- (5) Check the hydraulic oil, replace it if necessary.



Caution

It is recommended to check and test the performance of the truck before the first using after long-term decommissioning.



TRUCK MAINTENANCE

This chapter explains how to maintain the truck.



DAILY MAINTENANCE

Interval and Items

The period is accumulated in days or hours of operation whichever comes first. For example, if the truck works less than 8 hours per day, conduct the following inspection and checks on a daily basis. If daily working hours exceed 8 hours, conduct the following inspection and checks every 8 hours.

inspection checklist:

No.	Item	1 Day	1 Week
		8 Hours	40 Hours
1	Exterior	Inspection	
2	Wheel	Clean and Tighten	Clean and Tighten
3	Mast	Inspection	
4	Hydraulic System	Inspection	
5	Seat	Inspection	
6	Display	Inspection	
7	Warning Equipments	Inspection	
8	Braking	Inspection	Inspection
9	Travel, Steering and Control	Inspection	
10	Electric	Inspection	
11	Counterweight	Inspection	
12	Clean	Clean	
13	Other Anomalies	Inspection	

Note

- (1) These inspections should be conducted before operating the truck.
- (2) Before conducting the daily inspection, recheck for any fault and error found earlier.

Content Description

1. Exterior

- (1) Check the truck body for damage and deformation.
- (2) Check the floor where the truck is parked for oil leakage.
- (3) Check if the nameplate, the load chart and warning decals are complete.

Note

If any leakage occurs, confirm the location of the oil leakage and contact the after sale service.



2. Wheel

- (1) Check if the wheel fasteners are secured or loose. Fasten them if they are loose.
- (2) Take out debris embedded in the tire.
- (3) If tires are unevenly worn, or the tires are found damaged, or the rims are bent, then replace the tires.

3. Mast

- (1) Check the cylinders, oil pipes, and hoses for any oil leakage.
- (2) Check the mast for deformation and damage. Check if the bolts are securely fastened.

Note

If any leakage occurs, confirm the location of the oil leakage and contact the after sale service.

4. Hydraulic System

- (1) Check the hydraulic oil level in the oil tank.
- (2) Check the state of the filter indicator.

5. Seat

- (1) Pull the seat belt fully out and check for fraying.
- (2) Check the locking device of the seat belt, and check if the retractor functions properly.
- (3) Check if the seat can be adjusted forward and backward, and if the back rest angle and seat suspension can be adjusted.

Danger

In the case of seat belt failure, stop operating the truck and replace the seat belt.

6. Display

- (1) Check if the battery voltage and status of charger displayed are correct.
- (2) Check if any error indicator appears on the instrument panel.
- (3) Set the direction control switch to "forward", "neutral" and "reverse" and check if corresponding indicator appears.
- (4) Check if the turning indicator signs appear when the turning indicator is activated.
- (5) Check if the 3 control buttons on the instrument panel functions properly.

7.Warning Equipments

- (1) Check if working lights work properly.
- (2) Check if turning indicators work properly.
- (3) Set the travel direction control switch to "reverse" and check if reversing lights work and reversing beeper sounds.



- (4) Press horn button to see if it works.
- (5) Check if other warning equipments work properly.

8. Braking

- (1) Fully depress and then release the braking pedal and check if there is any abnormality.

(2) Check if the parking brake works properly when it is applied. Check the operating force needed to fully apply the parking brake by using an ergometer. Check for abnormal wear on the parking brake.

- (3) Check the braking oil level.

9. Travel, Steering and Control

- (1) Turn the steering wheel clockwise and anti-clockwise and check if the steering is smooth.
- (2) Operate the mechanical levers and check if lifting and tilting are smooth.
- (3) Depress the acceleration pedal to see if the truck can accelerate normally.
- (4) Check for abnormal sounds during truck operation.

10. Electric

- (1) Check the circuit of the truck.
- (2) Check fuses and relays.
- (3) Check the controller.

11. Counterweight

- (1) Check if the counterweight bolts loose.
- (2) Check the tow pin.

12. Clean

- (1) Clean the truck.

13. Others

- (1) Check if there are anything abnormal.



REGULAR MAINTENANCE

Interval and Items

The period is accumulated in months or hours of operation whichever comes first. For example, if the truck works less than 250 hours in 6 weeks, conduct the following inspection and checks every 6 weeks, otherwise conduct the following inspection and checks every 250 hours.

(1) 1.6-1.8T

Category	Item	6 (weeks)	3	6	12	hours
		250	500	1000	2000	
Chassis	Braking Oil	Replace				
	Gear Oil (Dual Drive)	First Replace	Replace			
Mast	Lift Chain Adjustment	Inspection				
	Chain Lubrication	Lubricate				
	Mast Cleaning	Clean				
	Mast Clearance Adjustment	Adjust				
Hydraulic	Mast And Related Devices Lubrication	Lubricate				
	Hydraulic Oil	Replace				
	Return Filter Element Replacement	First Replace	Replace			
	High Pressure Filter Element	First Replace	Replace			
Electric	Return Filter's Air Filter Replacement	Replace				
	Electric System	Inspection				
Others	Critical Fasteners Torque Checking	Inspection				

(2) 2.0-3.5T

Category	Item	6 (weeks)	3	6	12	hours
		250	500	1000	2000	
Chassis	Steering Axle	Lubricate				
	Braking Oil	Replace				
	Gear Oil (Dual Drive)	First Replace	Replace			
	Gear Oil (Single Drive)	Replace				
Mast	Lift Chain Adjustment	Inspection				
	Chain Lubrication	Lubricate				
	Mast Cleaning	Clean				
	Mast Clearance Adjustment	Adjust				
Others	Mast And Related Devices Lubrication	Lubricate				



Hydraulic	Hydraulic Oil	Replace
	Return Filter Element Replacement	First Replace Replace
	High Pressure Filter Element	First Replace Replace
	Return Filter's Air Filter Replacement	Replace
Electric	Electric System	Inspection
Others	Critical Fasteners Torque Checking	Inspection

Note

If the working environment is harsh, the maintenance interval should be reduced, and advice from aftersales personnel should be sought.

Content Description

1. Chassis

- (1) Lubricate the steering axle.
- (2) Replace the braking oil.
- (3) Replace the Gear oil.

2. Mast

- (1) Check the tension the lift chains, adjust them if necessary.
- (2) Lubricate the lift chains.
- (3) Clean the lift chains.

3. Hydraulic

- (1) Replace the hydraulic oil periodically.
- (2) Replace the return filter element.
- (3) Replace the high pressure filter element.
- (4) Replace the air filter.

4. Electric

- (1) Check the circuit of the truck.
- (2) Check fuses and relays.
- (3) Check the controller.

5. Others

Check the torque on the critical fastener.



SUPPLEMENTARY MATERIAL

Category, Amount And Type of Supplementary Material

(1) 1.6-1.8T

Item	Category	Amount	Type
Gear Oil (Dual Drive)	Gear Oil	(0.55~0.56 L)×2	SAE 80W / API GL-4 / UTTO
Hydraulic Oil	Hydraulic Oil	20 L	ISO VG46 (≤46°C), ISO VG68 (≤68°C)
Braking System	Braking Oil	As Needed	DOT4
Mast And Related Devices Lubrication	Lithium lubrication grease	As Needed	EP2
Lift Chain Lubrication	Machine Oil	As Needed	20# (Winter), 40# (Other Seasons)

(2) 2.0-2.5T

Item	Category	Amount	Type
Gear Oil (Dual Drive)	Gear Oil	(0.55~0.56 L)×2	SAE 80W / API GL-4 / UTTO
Gear Oil (Single Drive)	Gear Oil	4.2L	API GL-4, GL-5 (75W-90)
Hydraulic Oil	Hydraulic Oil	40 L	ISO VG46 (≤46°C), ISO VG68 (≤68°C)
Braking System	Braking Oil	As Needed	DOT4
Mast And Related Devices Lubrication	Lithium lubrication grease	As Needed	EP2
Steering Axle	Lithium lubrication grease	As Needed	EP3
Lift Chain Lubrication	Machine Oil	As Needed	20# (Winter), 40# (Other Seasons)

(3) 3.0-3.5T

Item	Category	Amount	Type
Gear Oil (Dual Drive)	Gear Oil	(1.2~1.3 L)×2	SAE 80W / API GL-4 / UTTO
Gear Oil (Single Drive)	Gear Oil	4.2L	API GL-4, GL-5 (75W-90)
Hydraulic Oil	Hydraulic Oil	53 L	ISO VG46 (≤46°C), ISO VG68 (≤68°C)
Braking System	Braking Oil	As Needed	DOT4
Mast And Related Devices Lubrication	Lithium lubrication grease	As Needed	EP2
Steering Axle	Lithium lubrication grease	As Needed	EP3
Lift Chain Lubrication	Machine Oil	As Needed	20# (Winter), 40# (Other Seasons)

Note

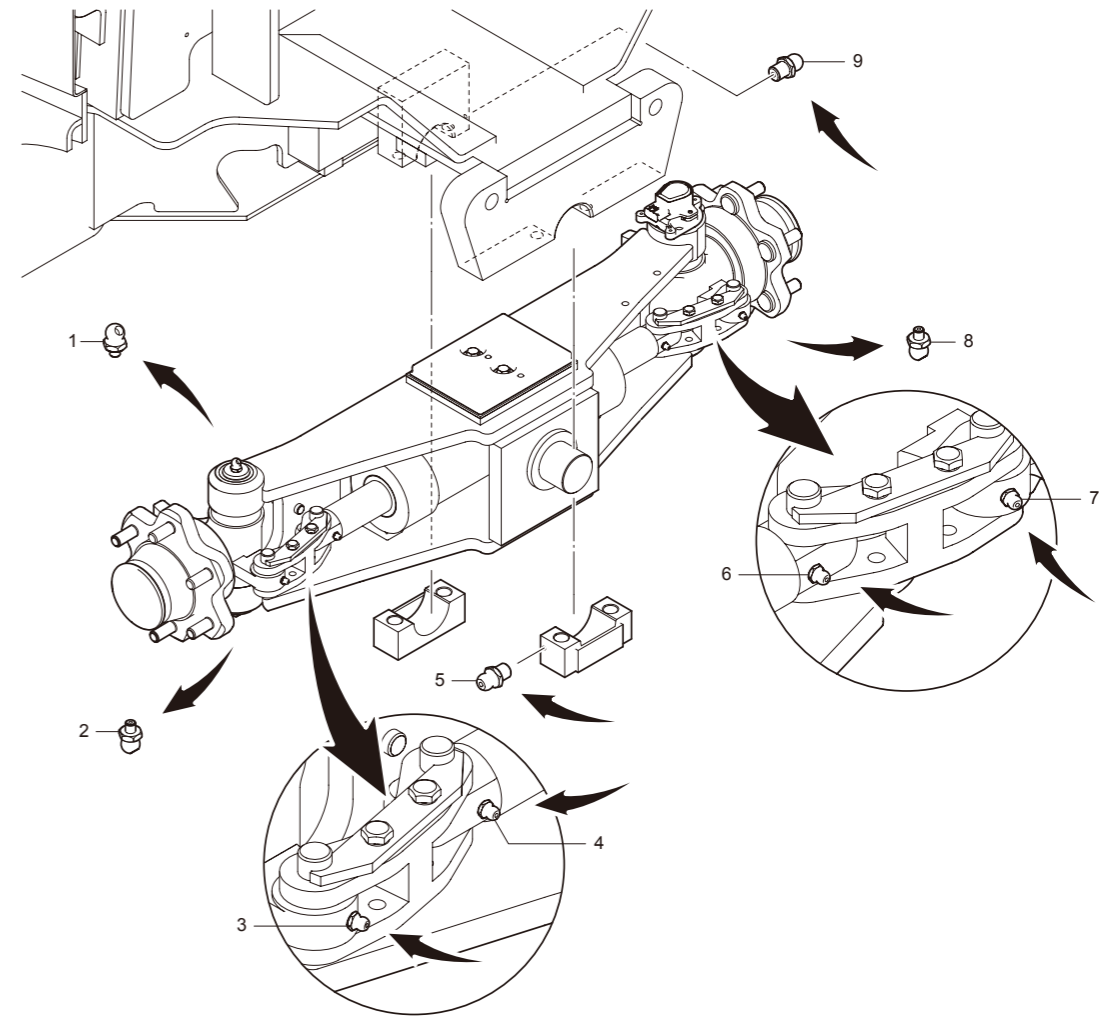
The given quantities are maximum values and take the actual quantities as the standard.

CHASSIS MAINTENANCE

Steering Axle Lubrication

Add grease by nipples on the steering axle to lubricate it's components.

Use the lubricating gun to add the grease until it overflows.

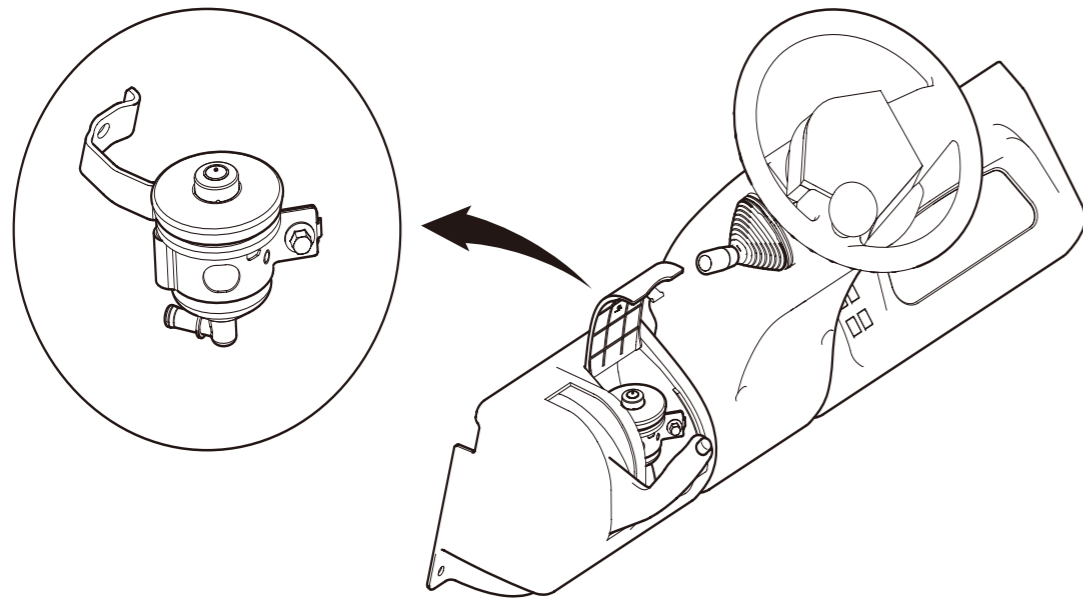
Note

(1) If the environment is dusty, lubricating every week will extend the working life of the bearing.

(2) It is more effective to lubricate more frequently with less grease than adding more grease but lubricating less frequently.

Brake Oil Checking

Add brake oil into the brake oil reservoir.



Caution

- (1) Do not mix different types of brake oil.
- (2) Do not have direct contact with the skin when adding the brake oil.
- (3) Unauthorized brake oil may damage the brake system.
- (4) Ensure the amount of the oil is 2/3 of the capacity of the reservoir.

Braking System Bleeding

(1) Run the truck until the driving axle gets lightly heated. Park the truck on a level floor, apply the hand brake, switch off the truck, remove the key and press down the emergency disconnect switch.

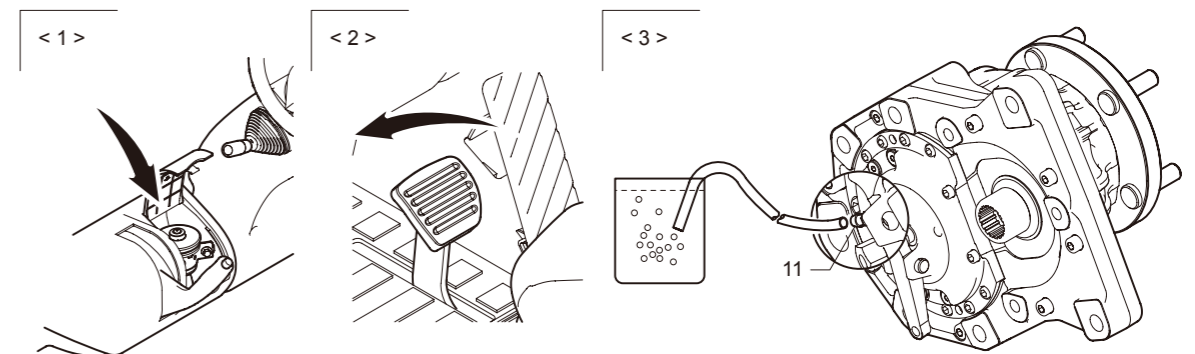
(2) Add brake oil into the brake oil reservoir.

(3) Clean the surrounding area around the braking oil drain plug, connect it to a container. Loosen the braking oil drain plug.

(4) Press the service brake pedal.

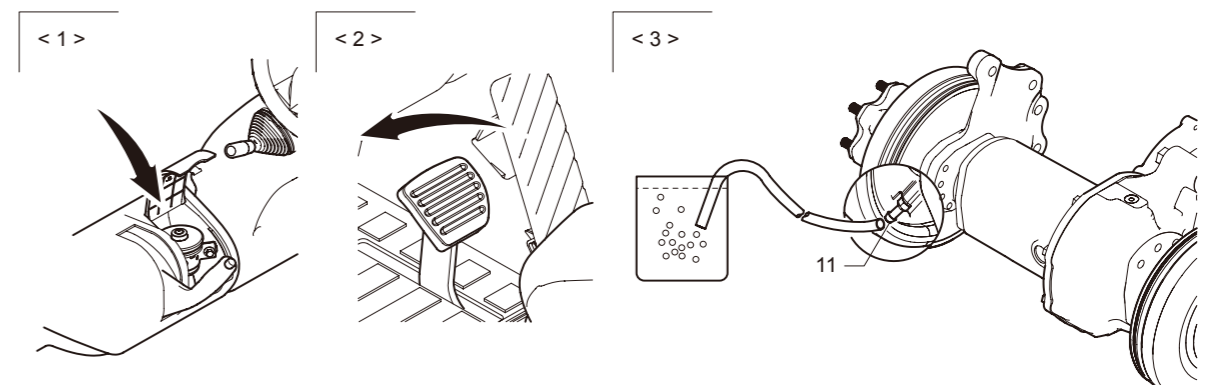
(5) Repeat the action of adding the brake oil and press the pedal until there aren't any bubbles in the container. Tighten the drain oil plug and add braking oil to 2/3 of the braking reservoir.

1. Dual Drive



Code	Name	QTY	Information
11	Bleeding Nipple	1	20 N-m

2. Single Drive



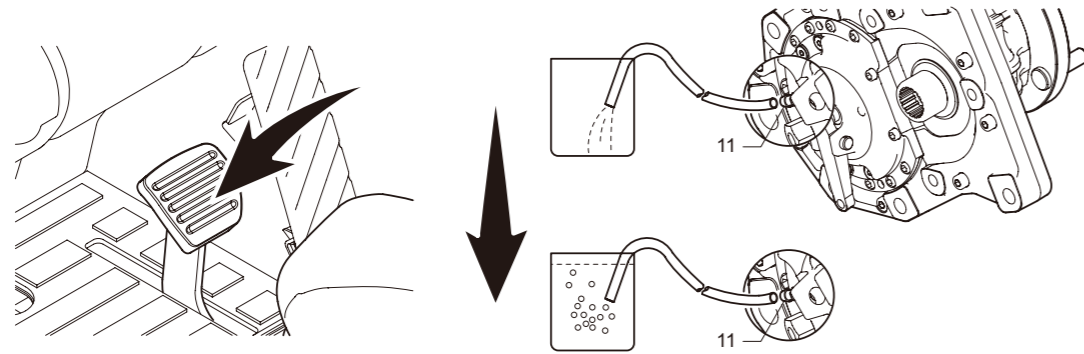
Code	Name	QTY	Information
11	Bleeding Nipple	1	20 N-m

Brake Oil Replacement

Run the truck until the driving axle gets lightly heated. Park the truck on a level floor, apply the hand brake, switch off the truck, remove the key and press down the emergency disconnect switch.

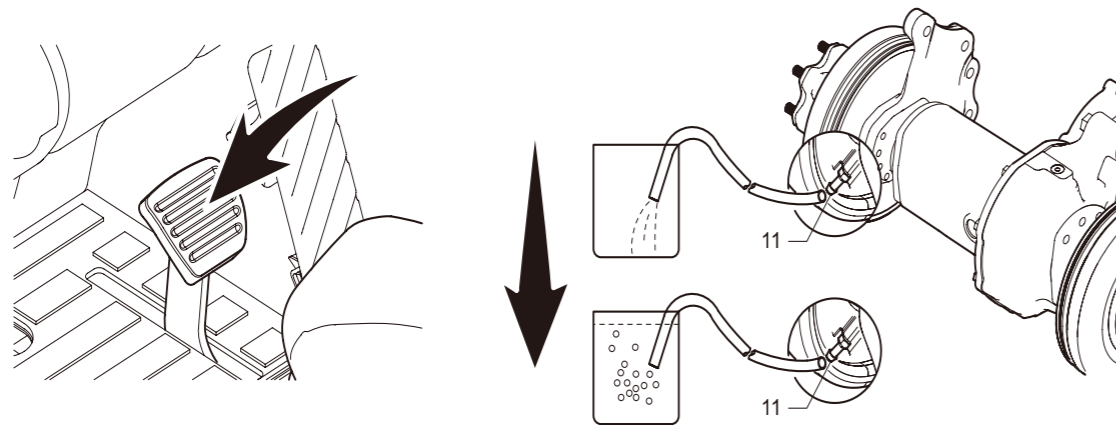
- (1) Clean the surrounding area around the braking oil drain plug, connect it to a container. Loosen the braking oil drain plug.
- (2) Press the service brake pedal and drain the brake oil.
- (3) Add new brake oil, expel the air in the brake system, tighten the drain oil plug and add braking oil to 2/3 of the braking reservoir.

1. Dual Drive



Code	Name	QTY	Information
11	Bleeding Nipple	1	20 N-m

2. Single Drive



Code	Name	QTY	Information
11	Bleeding Nipple	1	20 N-m

Gear Oil Replacement

(1) Run the truck until the driving axle gets lightly heated. Park the truck on a level floor, apply the hand brake, switch off the truck, remove the key and press down the emergency disconnect switch.

(2) Lift the truck with jack and secure the wheels with wedges, and then remove the wheels.

(3) Clean the surrounding areas around the oil drain plug, oil filler plug and oil level plug. Place a container below the oil drain plug.

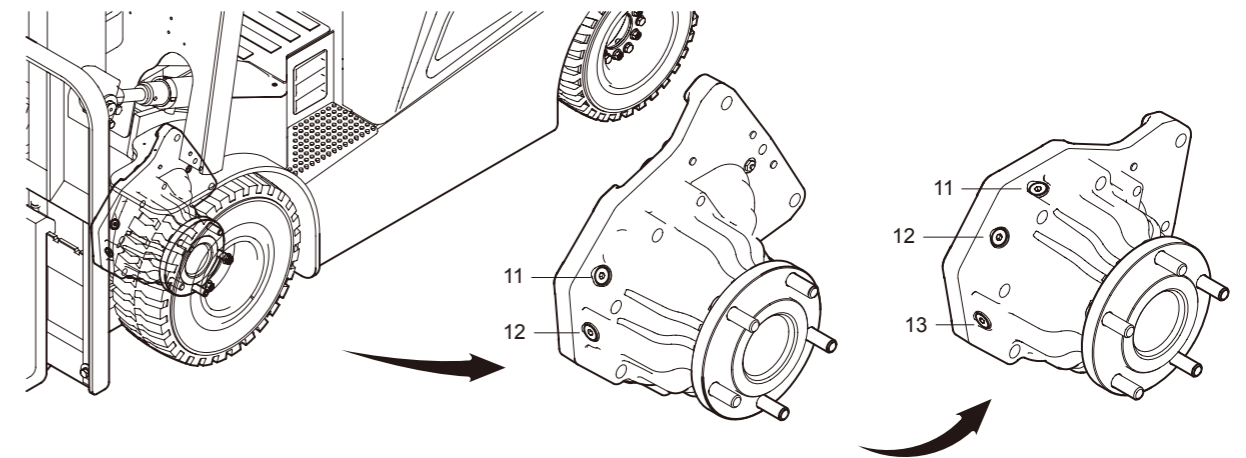
(4) Remove the oil drain plug, the oil filler plug and the oil level plug and drain all the gear oil.

(5) Put the oil drain plug back on and tighten it.

(6) Add the gear oil through the oil filler hole until the gear oil overflows out of the oil level hole.

(7) Tighten both the oil level plug and the oil filler plug.

(8) Refit the wheel and replace the gear oil in the gear box on the other side.



Code	Name	QTY	Information	Code	Name	QTY	Information
11	Oil Filler Plug	1	20 N-m	13	Oil Drain Plug	1	20 N-m
12	Oil Level Plug	1	20 N-m				

Caution

- (1) Ensure that the gear oil level reaches the lower edge of the oil level hole.
- (2) Only use the authorized types of gear oil.
- (3) The temperature of the gear box must not exceed 120 °C when working.

Wheel Removal and Installation

Note

For tri-point support truck, if the rear wheels are going to be changed, rotate them to the rear direction for easy disassembly.

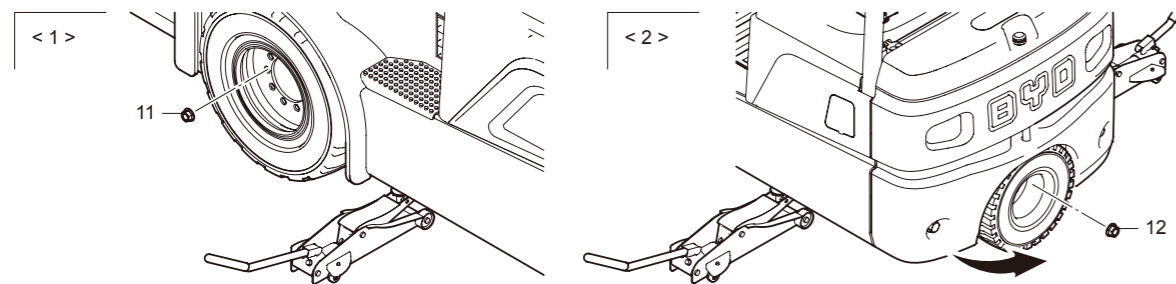
(1) Park the truck on the level floor, apply the handbrake, switch off the truck, remove the key and press down the emergency disconnect switch.

(2) Jack up the truck until the tire is going to be off the ground and loosen the wheel nuts.

(3) Continue to jack up the truck until the tire is off the ground, and then remove the wheel nuts and wheels.

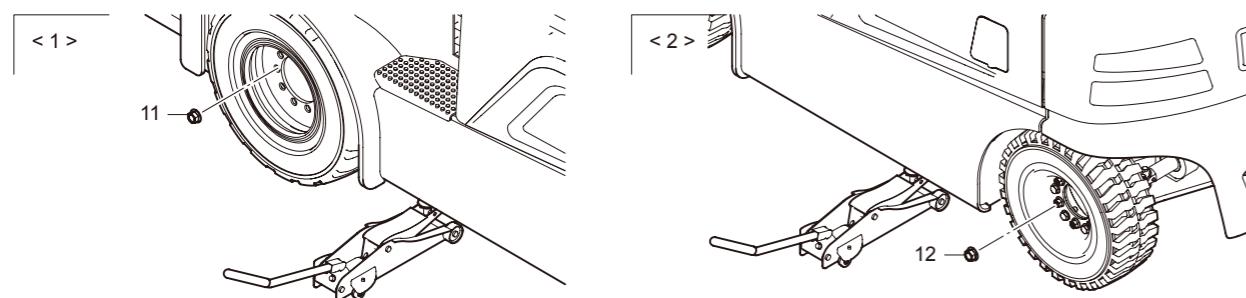
(4) Follow the reverse procedures to install the new wheel.

1. 1.6-1.8T



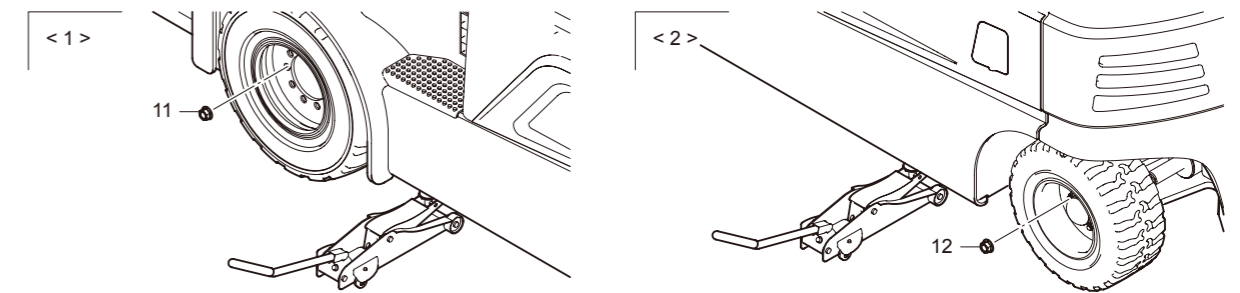
Code	Name	QTY	Information		Name	QTY	
1	Nut M14	10	200 N-m	2	Bolt M14 × 24.6	10	160 N-m

2. 2.0-2.5T



Code	Name	QTY	Information		Name	QTY	
1	Nut M14	10	200 N-m	2	Bolt M14	12	160 N-m

3. 3.0-3.5T



Code	Name	QTY			Name	QTY	
1	Nut M14	20	200 N-m	2	Bolt M14	16	160 N-m



MAST MAINTENANCE

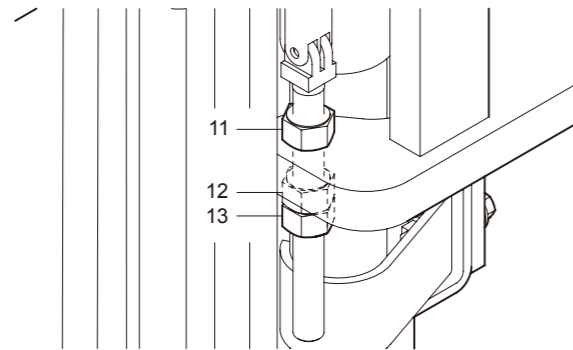
2-Stage Standard Mast Lift Chain Adjustment

The 2-stage standard mast has the main lift chain that is needed to be adjusted.

No.	Chain	Adjustment Purpose	Requirement
1	Main lift chain	Fork-to-ground clearance	10~20 mm

1. Fork-to-ground clearance adjustment

- (1) Tilt the mast to be on the vertical position, and then fully lower the mast.
- (2) Loosen the upper nut (that some masts have) and the lower nut.
- (3) Screw the middle nut to adjust the chain until it meet the requirement.
- (4) Tighten the upper and lower nuts.



Code	Name	QTY		Name	QTY	Information
11	Nut	1		13	Nut	130 N-m
12	Nut	1				

3-Stage Free Lift Mast Chain Adjustment

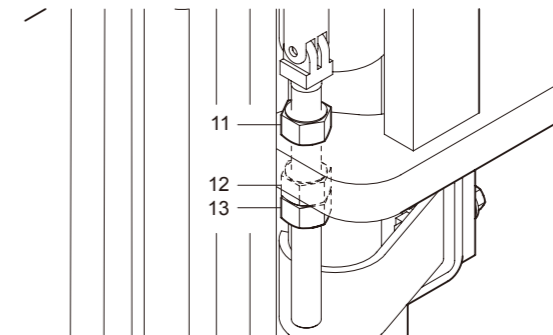
The 3-stage free list mast has a main lift chain set and a free lift chain set that are needed to be adjusted.

No.	Chain	Adjustment Purpose	Requirement
1	Main lift chain	Inner mast bottom height	≤2 mm
2	Free lift chain	Fork-to-ground clearance	10~20 mm



1. Inner Mast Bottom Height Adjustment

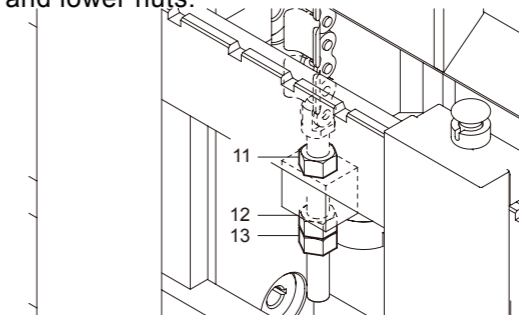
- (1) Tilt the mast to be on the vertical position, and then fully lower the mast.
- (2) Loosen the upper nut (that some masts have) and the lower nut.
- (3) Screw the middle nut to adjust the chain until it meet the requirement.
- (4) Tighten the upper and lower nuts.



Code	Name	QTY		Name	QTY	Information
11	Nut	1		13	Nut	130 N-m
12	Nut	1				

2. Fork-to-ground clearance adjustment

- (1) Tilt the mast to be on the vertical position, and then fully lower the mast.
- (2) Loosen the upper nut (that some masts have) and the lower nut.
- (3) Screw the middle nut to adjust the chain until it meet the requirement.
- (4) Tighten the upper and lower nuts.



Code	Name	QTY		Name	QTY	Information
11	Nut	1		13	Nut	130 N-m
12	Nut	1				

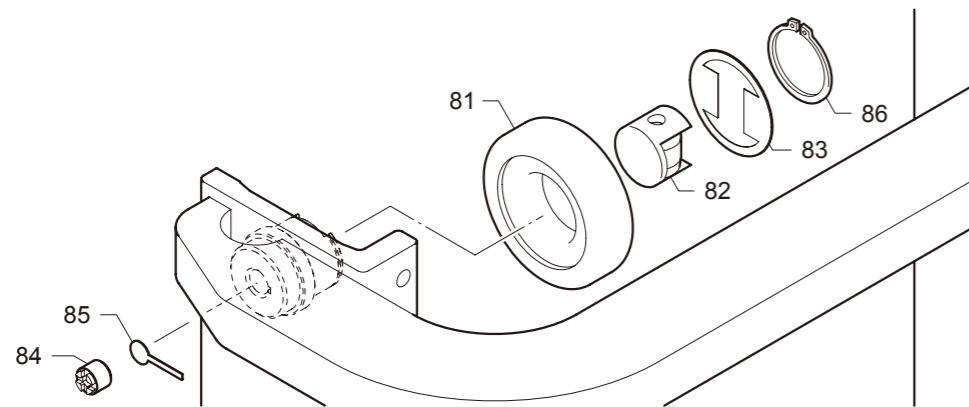
Mast Cleaning

Clear the dirty and debris in the mast.

Mast Clearance Adjustment

1. General Description

A circlip locks the mast roller, bearing, and the dust protection that are installed on the mast or the carriage stub. The bearing is used to adjust the clearance of the mast and carriage by the adjusting screw, which is installed on the other side of the stub and secured by a secure pin.



2. 2-Stage Mast And Carriage Roller Description

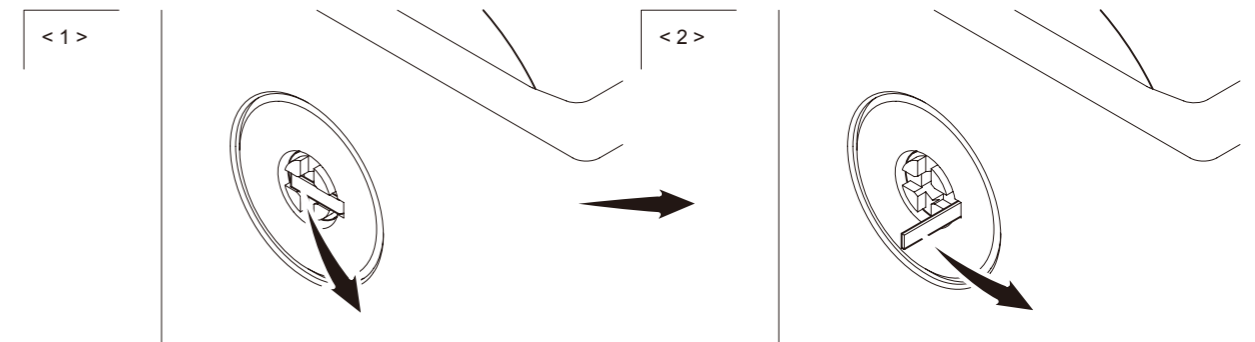
In the 2-stage mast, 2 mast rollers are installed on the top side of the outer mast, 2 mast rollers are installed on the bottom side of the inner mast, and 6 mast rollers are installed on the carriage. Being different from others, the upper 2 mast rollers of the carriage are installed by roller protections and bolts.

3. 3-Stage Mast And Carriage Roller Description

In the 3-stage mast, 2 mast rollers are installed on the top side of the outer mast, 4 mast rollers are installed on both sides of the middle mast, 2 mast rollers are installed on the bottom side of the inner mast, and 6 mast rollers are installed on the carriage. Being different from others, the upper 2 mast rollers of the carriage are installed by roller protections and bolts.

4. General Carriage and Mast Clearance Adjustment Procedure

- (1) Lift the mast to expose the position of the adjusting screw.
- (2) Bend the secure pin to expose the adjusting screw.
- (3) Use the screw to adjust the clearance.
- (4) After adjustment, bend the secure pin to secure the adjustment screw.



5. Order Of Adjusting 2-Stage Mast and Carriage Clearance

- (1) Clearance between the outer mast and the inner mast.
- (2) Clearance between the inner mast and the carriage.

6. Order Of Adjusting 3-Stage Mast and Carriage Clearance

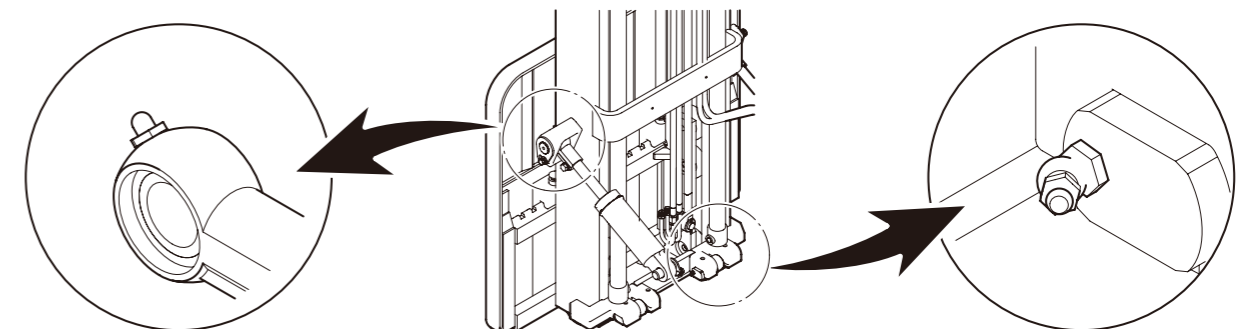
- (1) Clearance between the outer mast and the middle mast.
- (2) Clearance between the middle mast and the inner mast.
- (3) Clearance between the inner mast and the carriage.

Mast Lubrication

1. Mast Mounting Pin Lubrication for Tilting

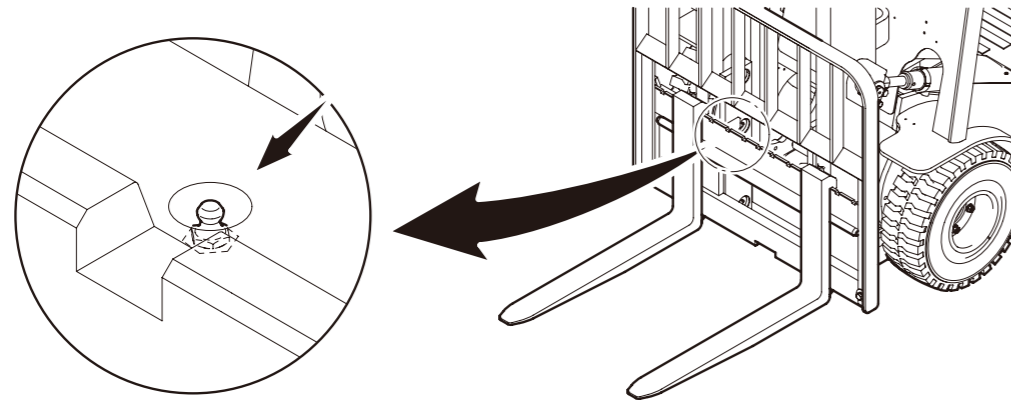
- (1) Lift the mast and tilt it to exposure the grease nipple.

- (2) After adding lubrication grease, tilt the mast forward and backward for several times to make the grease uniform.



2. Side Shifter Lubrication

Find the grease nipples of the side shifter, and add the grease until it overflows.



3. Mast Channel Lubrication

Lubricate the mast channel by using the lubrication grease.

Chain Lubrication

Clean the surface of chains, and lubricate them by the machine oil.

Ensure the machine oil permeates through the gaps of the chain plates during lubrication, and lift the mast several times after lubrication.

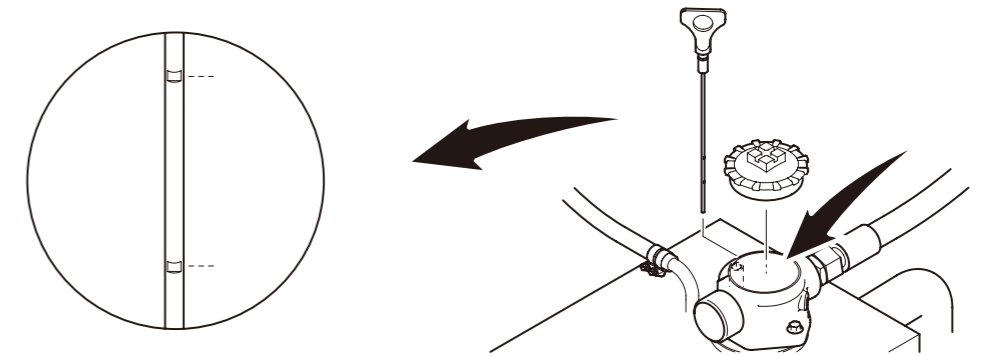
HYDRAULIC MAINTENANCE

Hydraulic Oil Level Check

Park the truck on a level ground and fully lower the mast and apply the parking brake. Switch off the truck, take off the key and press down the emergency disconnect switch.

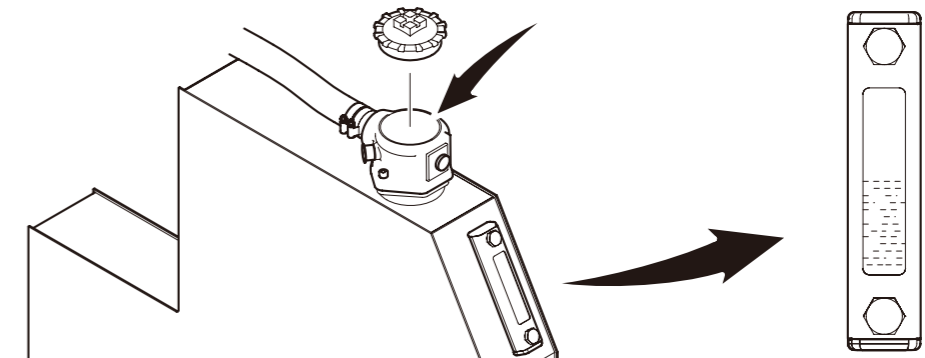
1. Checking by Oil Dipstick

- (1) Pull out the oil dipstick, use the clean cloth to wipe the oil on it, and then insert it back.
- (2) Pull out the oil dipstick again, and then see if the oil level is between two marks.
- (3) If the oil level is under the lower mark, take off the oil filter cap and refill the oil.



2. Checking by Oil Gauge

Open the battery hood to check the gauge. If there is no oil in the gauge, unscrew the cover plate of the return filter, and then fill oil into the oil tank until it appears in the gauge.



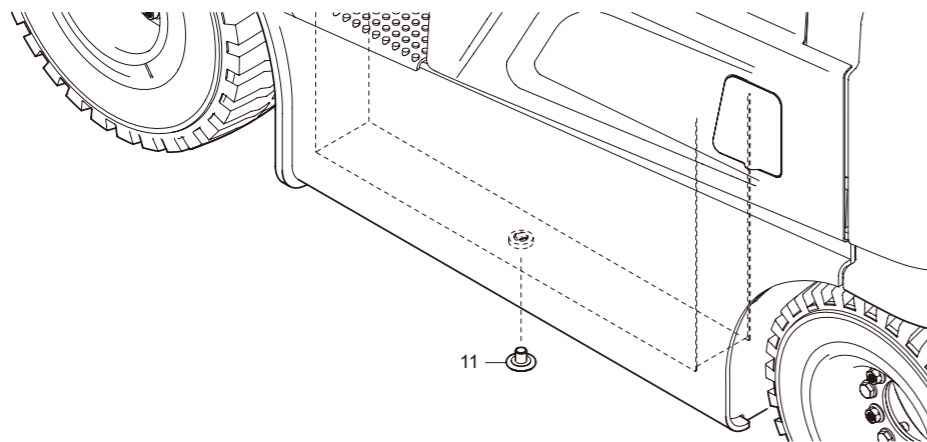


Caution

- (1) When refilling the oil, care about the condition around to prevent dust and water entering the oil tank.
- (2) Do not mix different types of hydraulic oil.
- (3) When disposing the waste oil, keep children away and do not pour it into the sewer or onto the ground.
- (4) Unauthorized hydraulic oil may damage the hydraulic system, and use only authorized hydraulic oil. If you need to switch to other types of hydraulic oils, contact with the after sale service people.

Hydraulic Oil Replacement

- (1) Drive the truck to the maintenance ditch, fully lower the forks, apply the hand brake, switch off the truck, remove the key and press down the emergency disconnect switch.
- (2) Place a container below the drain plug of the oil tank, and then unscrew the drain plug to drain the hydraulic oil.
- (3) Check if the seal ring of the drain plug is in good condition, replace the drain plug if necessary.
- (4) Screw and tighten the drain plug, and add a small amount of new hydraulic oil first to check if there is any leakage, retighten or replace the drain plug if necessary.
- (5) Add new hydraulic oil into the oil tank until the oil appears in the gauge.
- (6) Remove the residual oil spill on the oil tank, truck bottom and working area.



Code	Name	QTY	Information
11	Plug	1	45 N-m



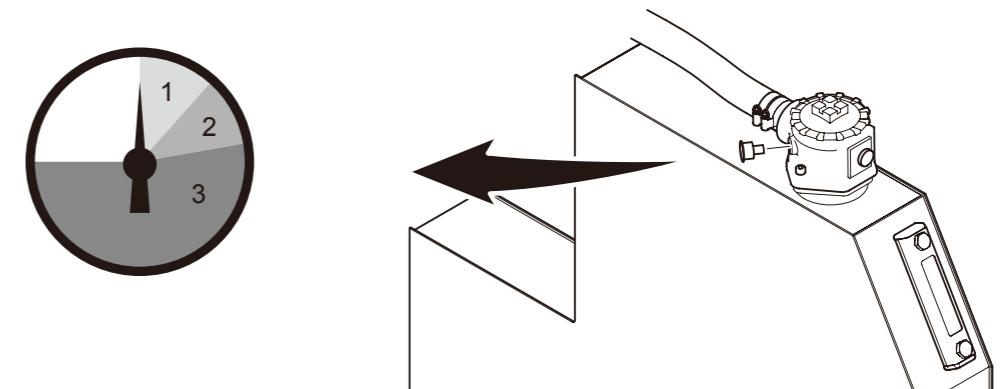
Caution

- (1) When refilling the oil, care about the condition around to prevent dust and water entering the oil tank.
- (2) Do not mix different types of hydraulic oil.
- (3) When disposing the waste oil, keep children away and do not pour it into the sewer or onto the ground.
- (4) Unauthorized hydraulic oil may damage the hydraulic system, and use only authorized hydraulic oil. If you need to switch to other types of hydraulic oils, contact with the after sale service people.

Return Filter Element State Indicator

The indicator of the return filter indicates the state of the filter element.

- (1) Green area: the element is in good condition.
- (2) Yellow area: the element's performance drops and it's better to be replaced within a short time.
- (3) Red area: the element is invalid, and it must be replaced immediately.

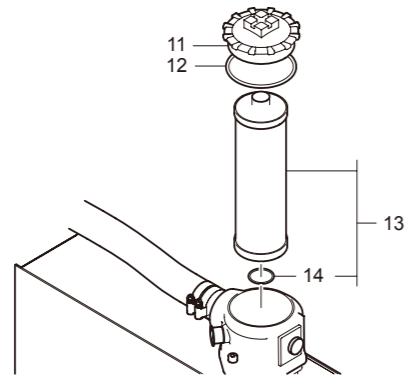


Caution

- (1) Whatever the state of the element the indicator indicates, it must be replaced regularly.
- (2) Whether it's time to replace the element according to the replacement interval or not, if the indicator indicates the state of yellow or red area, the element must be replaced.

Return Filter Element Replacement

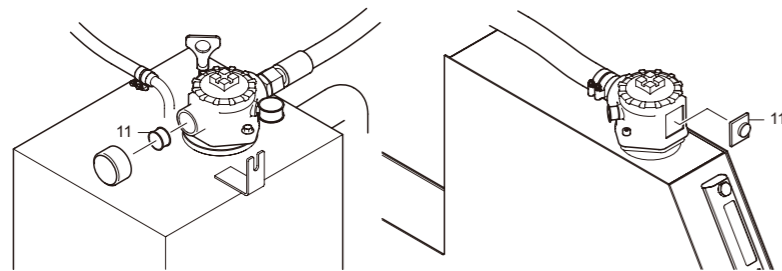
- (1) Put the clean cloth around the return filter.
- (2) Unscrew the cover plate with the seal, and then pull the out filter element.
- (3) Clean the cover plate and check if the o-ring is in good condition, replace it if necessary.
- (4) Check if the spread and the o-ring of the new element are in good condition, replace them if necessary.
- (5) Use clean hydraulic oil to lubricate the the o-ring of the new element, fit the new element carefully and screw the cover plate.
- (6) After replacement, operate the hydraulic system to check if there is any leakage.



Code	Name	QTY		Name	QTY
11	Cover Plate	1		13	Filter Element
12	Seal	1		14	O-Ring

Air Filter Replacement

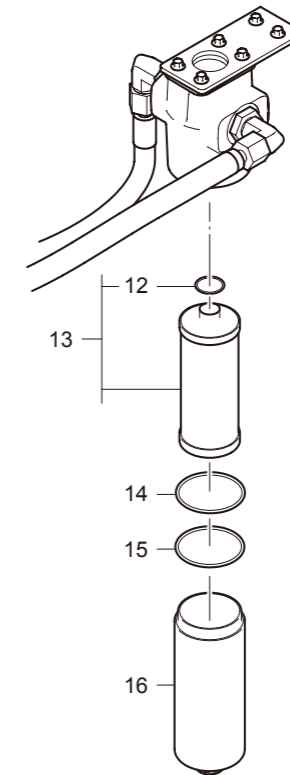
Unscrew the cap of the air filter, check the air filter, replace it if necessary.



Code	Name	QTY	Information
11	Air Filter Element	1	

High Pressure Filter Element Replacement

- (1) Put the clean cloth around the return filter.
- (2) Unscrew the filter bowl and pull the out filter element.
- (3) Clean the filter bowl and check if the o-ring is in good condition, replace it if necessary.
- (4) Check if the spread and the o-ring of the new element are in good condition, replace them if necessary.
- (5) Use clean hydraulic oil to lubricate the the o-ring of the new element, fit the new element carefully.
- (6) Screw in the filter bowl fully and then unscrew by one quarter-turn.
- (7) After replacement, operate the hydraulic system to check if there is any leakage.



	Name	QTY		Name	QTY
12	O-Ring	1		15	Retainer Ring
13	Filter Element	1		16	Filter Bowl
14	O-Ring	1			

ELECTRIC MAINTENANCE

Warning

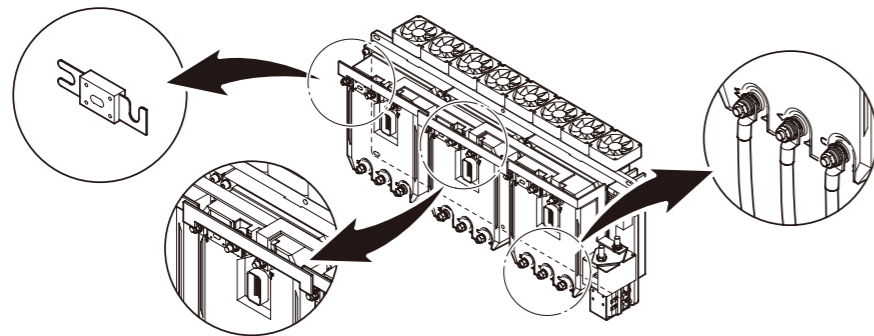
Disconnect the battery before checking the electric system.

Circuit Inspection

- (1) Check if there any parts loose in the circuit and tighten them if necessary.
- (2) Check if there are anything abnormal of connectors (for example, burn marks).
- (3) Check if there any plugs and sockets loose and latch them tightly again if necessary.

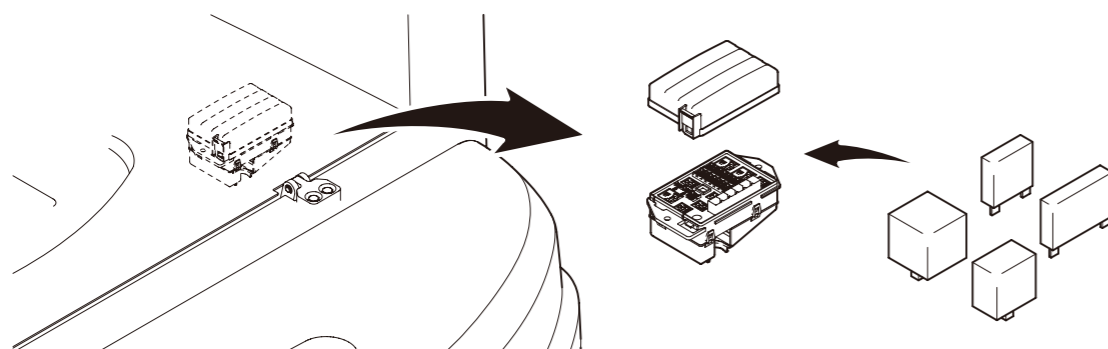
Main Controller Inspection

- (1) Inspecting fuses and relays and replace them if necessary.
- (2) Check if the fuses of the controller are normal, replace them if necessary.
- (3) Check if there are any burn marks on the connecting bars, replace them if necessary.



Fuses and Relays Inspection

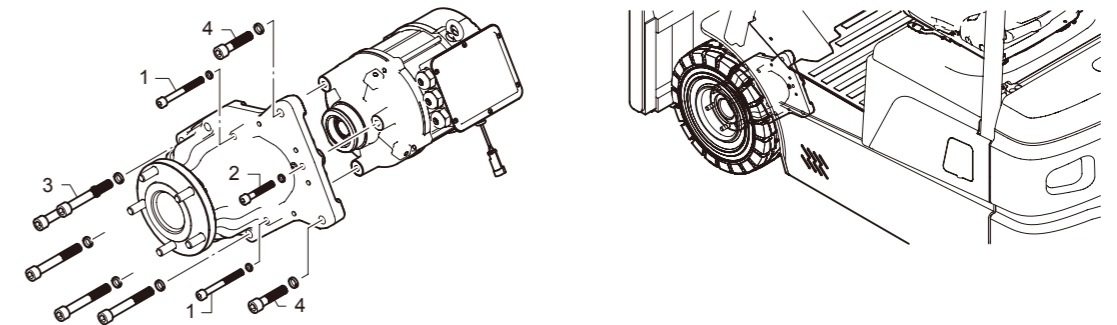
Inspecting fuses and relays and replace them if necessary.



CRITICAL FASTENERS TORQUE CHECKING

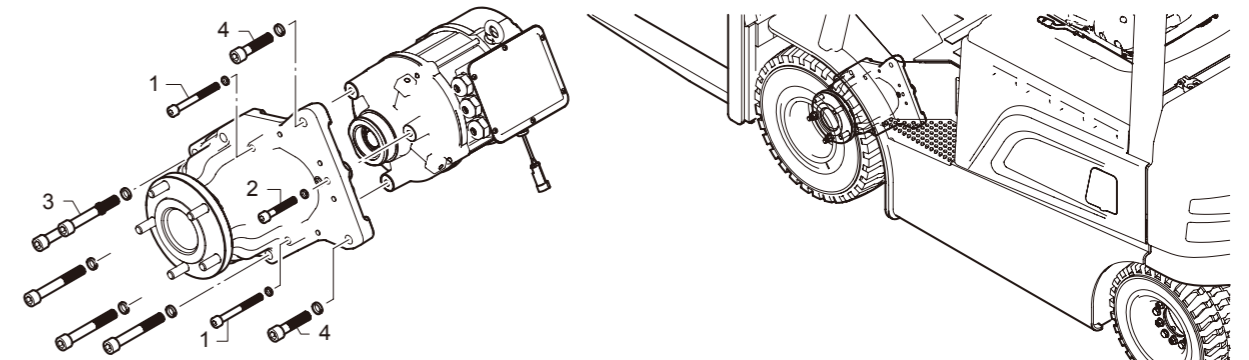
Drive Axle and Motor

1. Dual Drive, 1.6-1.8T



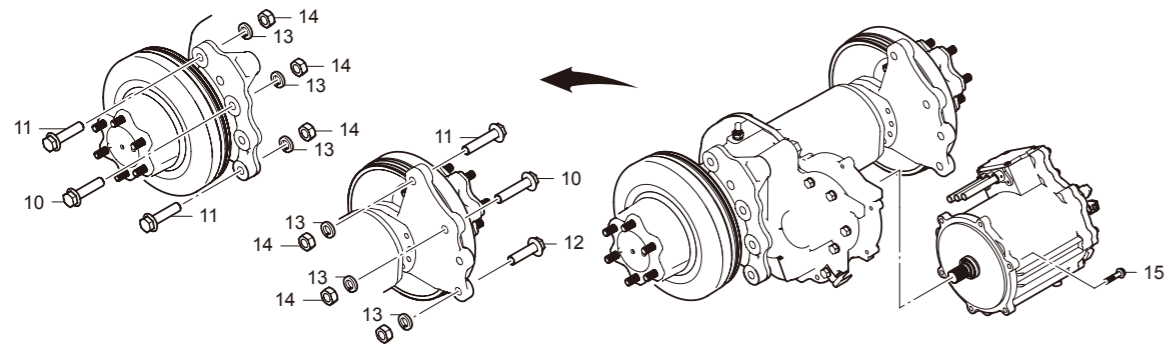
Code	Name	QTY	Information	Code	Name	QTY	Information
1	Torx Screw M10×90	1	50 N-m	3	Hexagon Screw M14×100	1	130 N-m
2	Torx Screw M10×60	1	50 N-m	4	Screw M14×60	1	130 N-m

2. Dual Drive, 2.0-2.5T



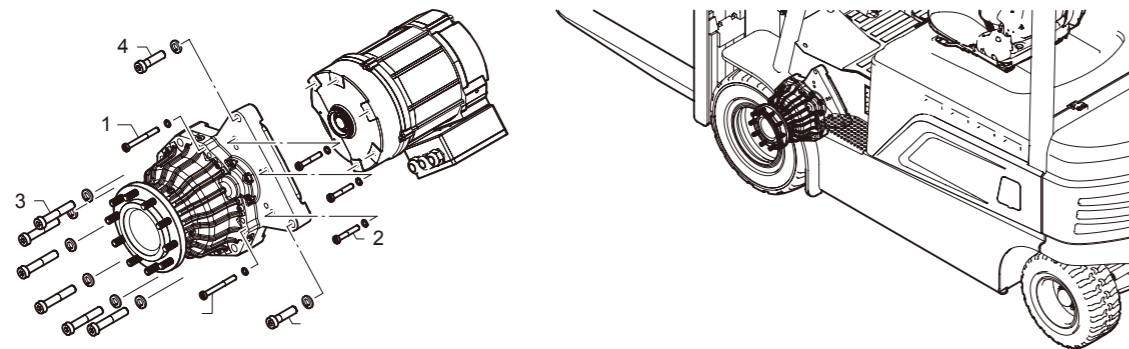
Code	Name	QTY	Information	Code	Name	QTY	Information
1	Torx Screw M10×90	1	50 N-m	3	Hexagon Screw M14×100	1	130 N-m
2	Torx Screw M10×60	1	50 N-m	4	Hexagon Screw M14×65	1	130 N-m

3. Single Drive, 2.0-2.5T



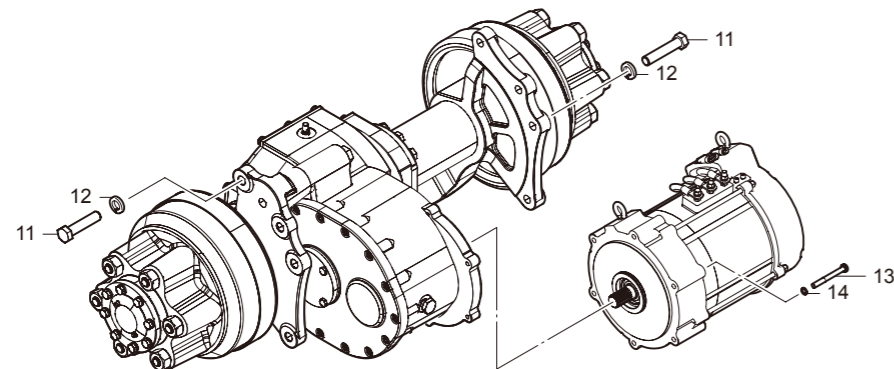
Code	Name	QTY	Information	Code	Name	QTY	Information
10	Bolt M18×80	2	160 N-m	13	SPRING WASHER M18	6	
11	Bolt M18×80	3	160 N-m	14	Nut M18	6	
12	Bolt M18×80	1	160 N-m	15	Bolt M10×40	6	50 N-m

4. Dual Drive, 3.0-3.5T



Code	Name	QTY	Information	Code	Name	QTY	Information
1	Screw M10×95	1	50 N-m	3	Hexagon Screw M16×95	1	165 N-m
2	Screw M10×65	1	50 N-m	4	Hexagon Screw M16×65	1	165 N-m

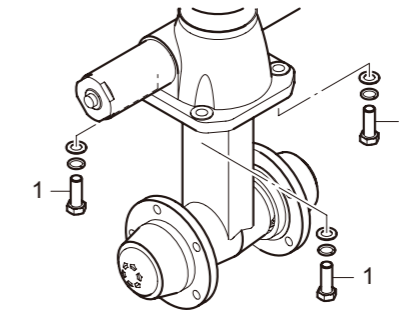
5. Single Drive, 3.0-3.5T



Code	Name	QTY	Information	Code	Name	QTY	Information
11	BOLT M20×55	8	180 N-m	13	Hexagon Screw M16×95	6	50 N-m
12	SPRING WASHER M20	8		14	SPRING WASHER M10	7	

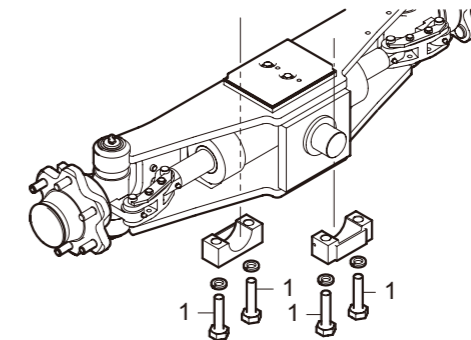
Steering Axle

1. 1.6-1.8T



Code	Name	QTY	Information
1	Bolt M16×70	3	220 N-m

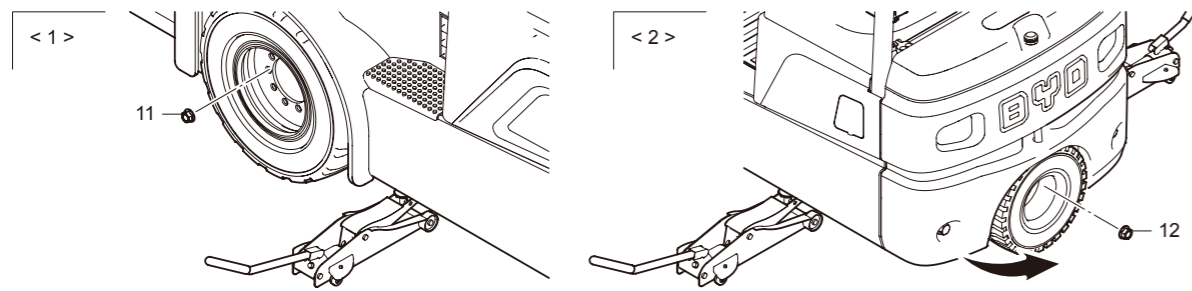
2. 2.0-3.5T



Code	Name	QTY	Information
1	Bolt M16×70	4	220 N-m

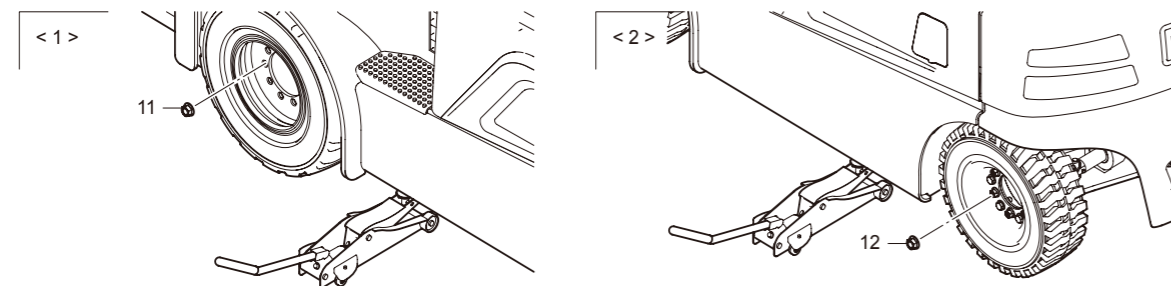
Wheel

1. 1.6-1.8T



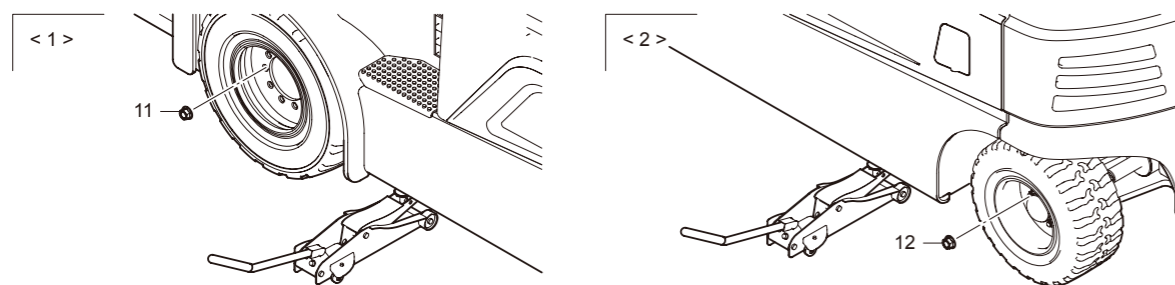
Code	Name	QTY	Information	Code	Name	QTY	Information
1	Nut M14	10	200 N-m	2	Bolt M14×24.6	10	160 N-m

2. 2.0-2.5T



Code	Name	QTY	Information	Code	Name	QTY	Information
1	Nut M14	10	200 N-m	2	Nut M14	12	160 N-m

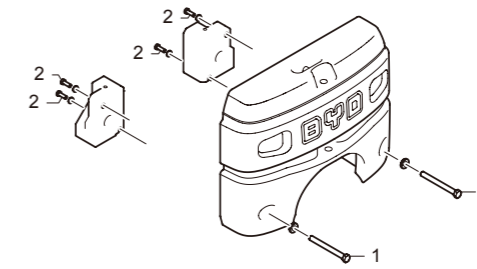
3. 3.0-3.5T



Code	Name	QTY	Information	Code	Name	QTY	Information
1	Nut M14	20	200 N-m	2	Nut M14	16	200 N-m

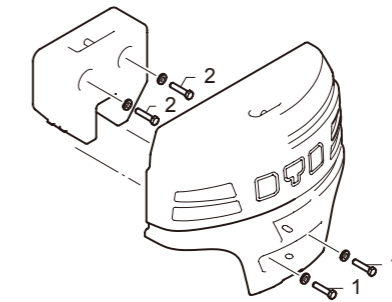
Counterweight

1. 1.6-1.8T



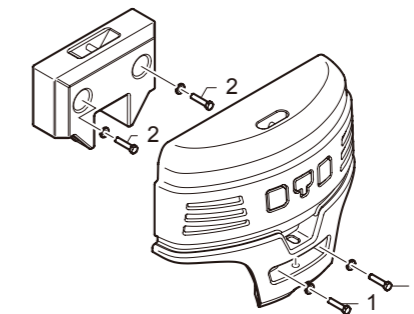
Code	Name	QTY	Information	Code	Name	QTY	Information
1	Bolt M24×240	2	280 N-m	2	Bolt M16×70	4	180 N-m

2. 2.0-2.5T



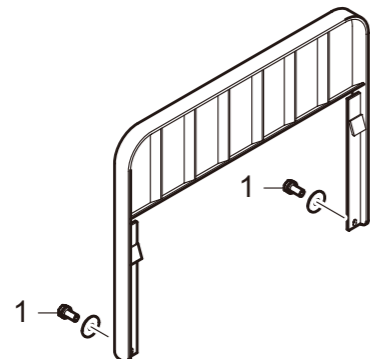
Code	Name	QTY	Information	Code	Name	QTY	Information
1	Bolt M24×110	2	280 N-m	2	Bolt M24×110	2	180 N-m

3. 3.0-3.5T



Code	Name	QTY	Information	Code	Name	QTY	Information
1	Bolt M24×110	2	280 N-m	2	Bolt M24×110	2	180 N-m

Load Backrest



(1) 1.6-1.8T

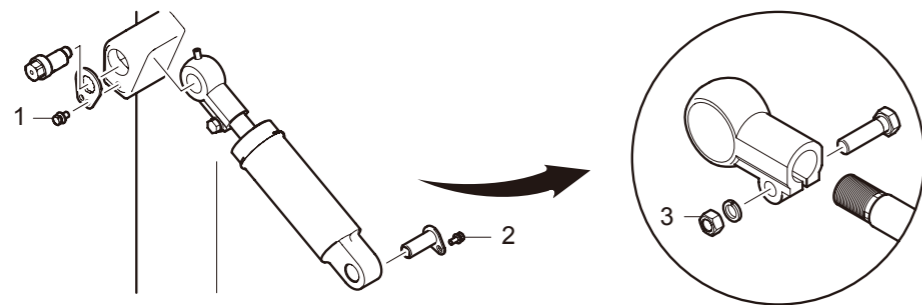
Code	Name	QTY	Information
1	Bolt Assy M14×30	2	120 N-m

(2) 2.0-3.5T

Code	Name	QTY	Information
1	Bolt Assy M14×35	2	120 N-m

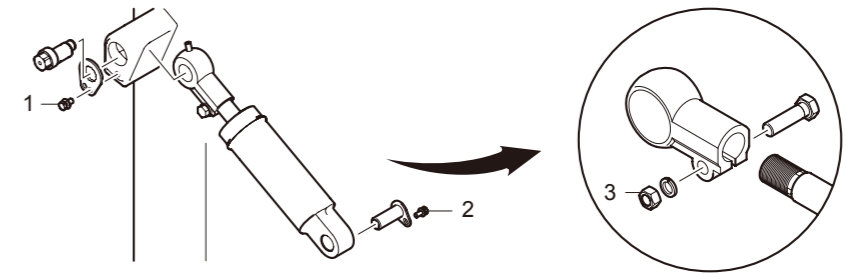
Tilt Cylinder

1. 1.6-1.8T



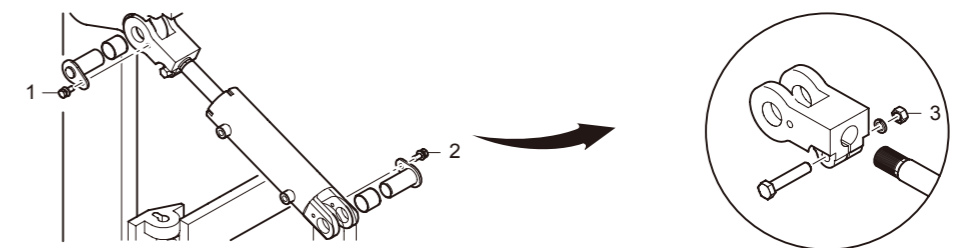
Code	Name	QTY	Information	Code	Name	QTY	Information
1	Bolt Assy M12×25	1	60 N-m	3	Nut M14	1	120 N-m
2	Bolt Assy M10×20	1	20 N-m				

2. 2.0-2.5T



Code	Name	QTY	Information	Code	Name	QTY	Information
1	Bolt Assy M12×25	1	75 N-m	3	Nut M14	1	120 N-m
2	Bolt Assy M10×20	1	55 N-m				

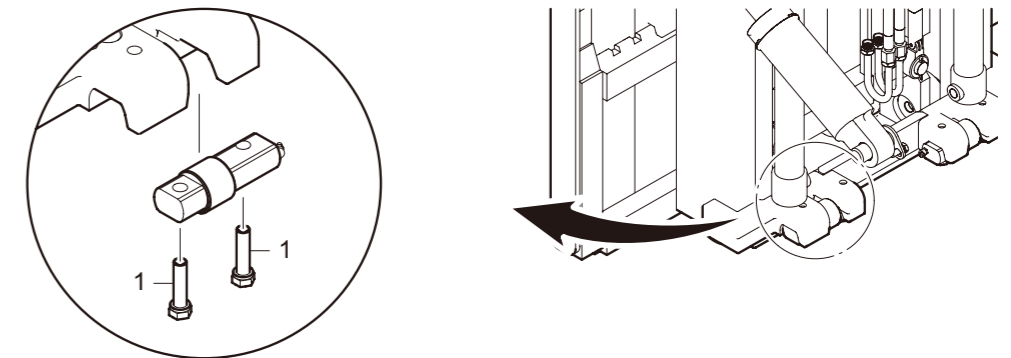
3. 3.0-3.5T



Code	Name	QTY	Information	Code	Name	QTY	Information
1	Bolt Assy M10×25	1	55 N-m	3	Nut M14	1	120 N-m
2	Bolt Assy M10×25	1	55 N-m				

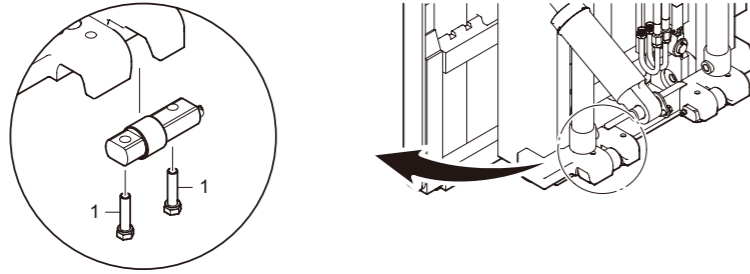
Mast

1. 1.6-1.8T



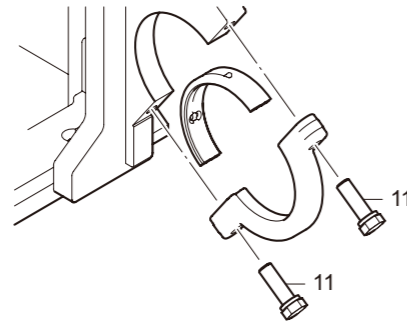
Code	Name	QTY	Information
1	Bolt Assy M14×60	4	120 N-m

2. Dual Drive, 2.0-2.5T



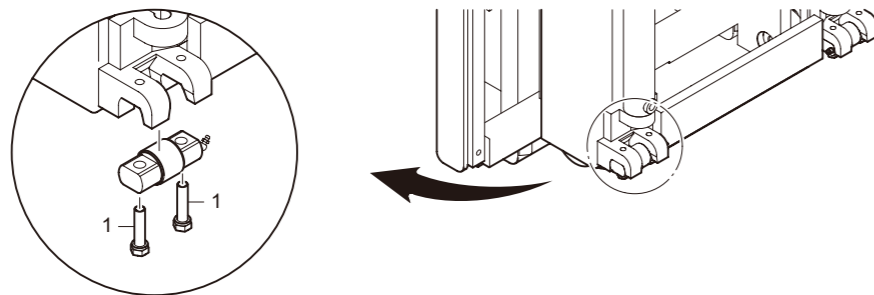
Code	Name	QTY	Information
1	Bolt Assy M14×65	4	160 N-m

3. Single Drive, 2.0-2.5T



Code	Name	QTY	Information
1	Bolt Assy M14×45	4	

4. 3.0-3.5T



Code	Name	QTY	Information
1	Bolt Assy M14×60	4	160 N-m



INFORMATION

Contact Information

Importer: BYD Europe B.V.
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Tel:+31-10-2070888 Fax:+31-10-2070880

Importer: BYD Motors Inc.
Address: 1800 South Figueroa Street, Los Angeles, CA, 90015
Tel: 213-748-3980 Fax: 213-748-3945
E-mail: FORKLIFTSERVICE@BYD.COM

Importer: BYD do Brasil
Address: Av. Antonio Boscato, 230 Terminal Intermodal de Cargas – TIC, CEP 13069-119 CAMPINAS - SP
Tel: +55193514-2551
E-mail: FORKLIFTSERVICE@BYD.COM

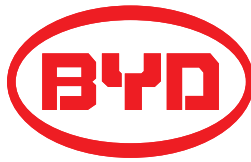
Importer: BYD JAPAN CO.,LTD.
Address: The fifth Yasuda Bldg.5F,2-20-3 Tsuya-cho, Kanagawa-ku, Yokohama-shi,Kanagawa-ken,221-0835,Janpan
Tel: 81-45-290-6550 Fax: 81-45-319-1506

Importer: BYD Auto Industry Company Limited
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