FORKLIFT

SERVICE MANUAL

25, 30, 35B-7A

HYUNDAI

MidWestTech | Hyundai 25, 30, 35B-7A Forklift Service Manual | Publication 25, 30, 35B-7A

Order the manual at mid-west-tech.com >

Contents

Foreword 1
I. Main technical parameters 4
II. Forklift structure, principle, adjustment and maintenance 6
1. Battery and installation 6
1.1 Overview 6
1.2 Battery structure 6
1.3 Standard battery (Zibo) and charger specification 6
1.4 Storage of battery 6
1.5 Use of battery 6
1.6 Maintenance of the battery 7
1.7 General considerations 8
1.8 Common fault and processing methods of battery 9
2. Driving motor and drive system 10
2.1 Overview 10
2.2 Gearbox and differential mechanism 10
2.3 Drive axle 16
2.3.1 Installation of wheel hub 17
2.3.2 Brake 17
2.3.3 Matters needing attention to installation and use 19
2.3.4 Disassembly and adjustment points of the brake 22
2.4 Driving motor 28
2.4.1 Specification of driving motor 28
2.4.2 Environmental conditions for use 28
3. Lifting motor and installation 29
3.1 Model and specification of lifting motor 29
4 Electrical systems 29
4.1 Overview 29
4.2 Characteristics of AC electric control 29
4.3 Common fault code of AC electric control 34
5. Steering device and installation 39
5.1 Overview 39
5.1.1 Inspection after re-installation of steering system 39
5.1.2 Steering system fault diagnosis 39
6. Steering axle and installation 40
6.1 Overview of steering axle 40
6.2 Adjustment and maintenance points 44
6.2.1 Adjustment of pre-load on the steering wheel bearing 44
7. Hand brake control 45
7.1 Overview 45
7.2 Parking brake control device 45
8. Foot brake control 45
8.1 Overview 45

MidWestTech | Hyundai 25, 30, 35B-7A Forklift Service Manual | Publication 25, 30, 3... Order the manual at mid-west-tech.com >

8.2 Foot brake pedal 45
8.2.1 Adjustment of foot brake pedal 46
8.3 Brake master pump 47
8.4 Fault diagnosis 48
9. Hydraulic oil tank and installation 48
9.1 Overview 48
9.2 Hydraulic oil tank 48
10. Hydraulic system 49
10.1 Overview 49
10.2 Gear pump 49
10.2.1 Maintenance of gear pump 49
10.2.2 Fault diagnosis 53
10.3 Multiway valve 53
10.3.1 Fault diagnosis 59
10.4 Full hydraulic orbitrol 60
10.5 Speed limit valve 60
10.6 Hydraulic pipeline 61
11. Working device 62
11.1 Overview 62
11.2 Inner and outer mast (Figure 10-26) 62
11.3 Fork carriage 63
11.3.1 Height adjustment of fork carriage 64
11.4 Rolle position (Figure 10-30) 64
11.5 Lifting cylinder 65
11.5.1 Adjustment of lifting cylinder 67
11.6 Tilting cylinder 68
11.7 Installation of mast (as shown in Figure 10-38) 71
11.8 Disassembly of mast (as shown in Figure 10-38) 72
III. List of wearing parts 72
1. Part of wearing parts 72
2. Oil seal 72
3. O sealing ring 73
4. Combined seal ring 73
5. Part of the electrical components 73

MidWestTech | Hyundai 25, 30, 35B-7A Forklift Service Manual | Publication 25, 30, 3... Order the manual at mid-west-tech.com >

Model			1	25B-7A	30B-7A	35B-7A
Rated lifting weight		kg	2	2500	3000	3500
Load center moment		mm	3	500	500	500
Lifting height		mm	4	3000	3000	3000
Free lifting height		mm	5	140	165	170
Specification of pallet fork	s×e×l	mm	6	40×122×1070	45×125×1070	50×130×1070
Tilting angle of mast	F/B ($\alpha°/\beta°$)	Deg	7	5/10	5/10	5/10
External dimension	Length (not including pallet fork)	mm	8	2286.5	2548	2639
	Width A	mm	9	1285	1285	1365
	Non- lifting height of mast H1	mm	10	2015	2045	2120
	Lifting height of mast	mm	11	4017	4140	4140
	Height of overhead guard H	mm	12	2152	2152	2138
Turning radius	Minimum R	mm	13	2095	2349	2405
Front overhang G		mm	14	454	476	495
Wheel track	Front Q/rear S	mm	15/16	1058/960	1065/980	1124/1010
Clearance from the ground	Minimum H3	mm	17	95	110	83
Wheel base F		mm	18	1485	1670	1690
Pallet fork spacing	Min/Max	mm	19	250/1000	250/1060	250/1060
Width of working channel, with tray (Ast)*	1000×1200 horizontal	mm	20	3732	4023	4100
	800×1200 vertical	mm	21	3932	4223	4300
Speed	Running (Full load)	km/h	22	15	15	15
	Running (No-load)	km/h	23	16	16	16
	Lifting (Full load)	mm/s	24	280	280	280
	Lifting (No-load)	mm/s	25	440	400	384
Climbing gradient	Full load	%	26	15	15	15
	No-load	%	27	15	15	15
Weight	Including battery box	kg	28	4160	4750	5250
Tire	Front ×2		29	23×9-10	23×9-10	23×10-12
	Rear×2		30	18×7-8	18×7-8	200/50-10
Motor	Drive motor	kw	31	K8.5/J8.5	K11.5/J11.5	K11.5/J11.5
	Lifting motor	kw	32	K11/J11	K15/J15	K15/J15
Battery	Standard	V/Ah	33	48/600	80/500	80/500
	Optional	V/Ah	34	48/660	80/550	80/550
Controller	Model		35	AC	AC	AC
	Manufacturer		36	ZAPI (ACE2 48V/400+400)	ZAPI(COMBI AC2 80V/400+400)	ZAPI(COMBI AC2 80V/400+400)
Working pressure		Mpa	37	17.5	17.5	17.5

Note: K=KDS motor, J=Jieheli motor/A standard battery is produced in Zibo and the optional battery is HAWKER. The optional battery has a different battery brand, and the capacity is also different.

MidWestTech | Hyundai 25, 30, 35B-7A Forklift Service Manual | Publication 25, 30, 3... Order the manual at mid-west-tech.com >

4.3 Common fault code of AC electric control

CODE OF COMMON TRACTION FAULT

Code	Fault name	Description	Conditions for removing the fault
13	EEPROM KO	EEPROM error	The controller will use initial parameters.
17	LOGIC FAILURE#3	Logic card fault #3, overload protection of hardware circuit	Hardware failure generated by current protection caused by the logic card. The logic card needs to be replaced.
18	LOGIC FAILURE#2	Logic card fault #3, U, V and W voltage feedback circuit error	Hardware failure of phase voltage feedback caused by logic card. The logic card needs to be replaced.
19	LOGIC FAILURE#1	LOGIC FAILURE #1, logic card fault #1, over voltage or under voltage detected	The under voltage/over-voltage protection fault signal is triggered and generated by interrupt, and there are two reasons: 1. Under voltage/overvoltage situation does exist. 2. Hardware failure of overvoltage protection caused by logic card. The logic card needs to be replaced.
30/31	VMN LOW/ VMN HIGH	Low VMN, high VMN Motor power output error; power component or MOS tube driving circuit or motor failure	This alarm takes place. It is possibly caused by the reasons below: 1. Motor connection or motor circuit error; check whether the motor's three-phase connection is correct and the vehicle's power matches with the motor power. 2. If inverter power failure, there is a need to replace the controller.
37	CONTACTOR CLOSED	Main contactor's contact is adhesive	Before the main contactor is driven, check whether the controller's main contactor contact is adhesive. The controller will drive the main circuit within a short time, trying to release the surplus electricity of the capacitor. If it is not released, there will be a mistake. Suggest checking whether the contactor contact has a phenomenon of mechanical adhesion.
38	CONTACTOR OPEN	Main contactor can not suck or contactor is bad	Main contactor coil has been driven by logic card, but the contactor is not closed. There are two possible reasons below: 1. The coil is disconnected or not well connected. 2. The contactor contact can not work normally.
53	STBY I HIGH	High static electric current, and current sensor feedback circuit voltage fault	The signal output from current sensor and detected by micro control system is

MidWestTech | Hyundai 25, 30, 35B-7A Forklift Service Manual | Publication 25, 30, 3... Order the manual at mid-west-tech.com >

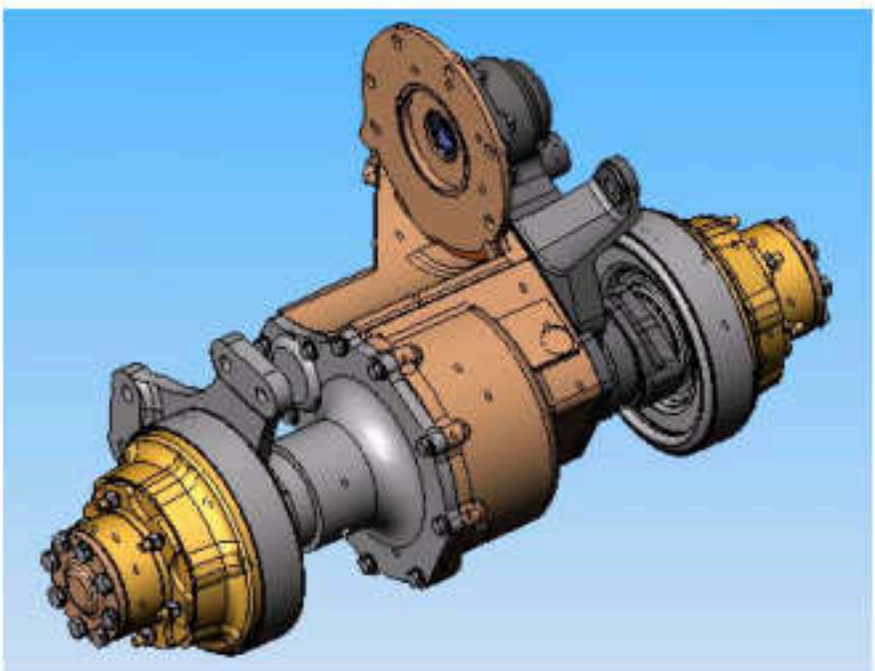
2.3 Drive axle

Drive axle consists of bridge shell and wheel hub, installed in the front of the frame.

Bridge shell is of integrally cast structure, tires are prized on the wheel hub by the wheel rim with studs and nuts, the wheel hub is supported on the bridge shell by cone roller bearing, power is passed through a differential mechanism to the half shaft, and the wheel hub is driven by the half shaft and the front wheel is driven to turn, while the half shaft only bears the torque passed to the wheel hub. An oil seal is arranged in the wheel hub, to prevent water and dust entering or oil leakage. The drive axle structure is shown in Figure 2-6 and Figure 2-7.

Front wheel tire and rim model and tire pressure are shown in Table 1-1

Forklift tonnage	2.5T	3.0T	3.5T
Wheel tire	23×9-10 18PR		23×10-12
Wheel rim	6.50F-10		8.00G-12
Tire pressure	1030kPa		Solid tire



MidWestTech | Hyundai 25, 30, 35B-7A Forklift Service Manual | Publication 25, 30, 3... Order the manual at mid-west-tech.com >