FORKLIFT

SERVICE MANUAL

HDF35, HDF45-3

HYUNDAI

MidWestTech | Hyundai HDF35, HDF45-3 Forklift Service Manual | Publication HDF35, HD...

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

CONTENTS

SECTION 1 GENERAL

Group 1 Safety Hints 1-1
Group 2 Specifications 1-5
Group 3 Periodic Replacement 1-13

SECTION 2 REMOVAL AND INSTALLATION OF UNIT

Group 1 Major Components 2-1
Group 2 Removal and Installation of Unit 2-2

SECTION 3 POWER TRAIN SYSTEM

Group 1 Structure and Operation 3-1
Group 2 Troubleshooting 3-16
Group 3 Tests and Adjustments 3-20
Group 4 Disassembly and Assembly 3-22

SECTION 4 BRAKE SYSTEM

Group 1 Structure and Function 4-1
Group 2 Operational Checks and Troubleshooting 4-9
Group 3 Tests and Adjustments 4-12

SECTION 5 STEERING SYSTEM

Group 1 Structure and Function 5-1
Group 2 Operational Checks and Troubleshooting 5-11
Group 3 Disassembly and Assembly 5-13

SECTION 6 HYDRAULIC SYSTEM

Group 1 Structure and Function 6-1
Group 2 Operational Checks and Troubleshooting 6-16
Group 3 Disassembly and Assembly 6-20

SECTION 7 ELECTRICAL SYSTEM

Group 1 Component Location 7-1
Group 2 Electrical Circuit 7-2
Group 3 Component Specification 7-11
Group 4 Connector Destination 7-12
Group 5 Troubleshooting 7-14

MidWestTech | Hyundai HDF35, HDF45-3 Forklift Service Manual | Publication HDF35... Order the manual at mid-west-tech.com >

SECTION 8 MAST

Group 1 Structure 8-1
Group 2 Operational Checks and Troubleshooting 8-4
Group 3 Adjustment 8-7
Group 4 Removal and Installation 8-10

MidWestTech | Hyundai HDF35, HDF45-3 Forklift Service Manual | Publication HDF35... Order the manual at mid-west-tech.com >

SECTION 4 BRAKE SYSTEM

GROUP 1 STRUCTURE AND FUNCTION

1. OUTLINE

There are two brake systems, the foot brake system and the hand brake system.

In the foot brake system, oil pressure is generated in the master cylinder by treading on the brake pedal. This pressure causes the wheel cylinder pistons to extend, expanding the brake shoes and pressing them against the brake drums to attain braking force.

In the hand brake system, the brake shoes are expanded by operating the brake lever.
Force from the lever is transmitted to the brake shoes through the hand brake cables and a lever arm in each wheel brake assembly.

The wheel brake is the duo-servo type. With force applied to both the primary and secondary shoes, this type provides a large amount of brake force.
In addition, the brake equipped with automatic adjusters which constantly adjust the clearance between the shoe and the drum, compensation for wear due to the shoe friction and thus keeping the clearance constant.

2. SPECIFICATION

1) WHEEL BRAKE

Item		Specification
Type		Front wheel, duo-servo & auto adjustment type
Brake shoe size		314× 80mm
Wheel cylinder bore diameter		34.93mm
Master cylinder diameter		22.22mm
Pedal adjustment	Free height	143~153mm
	Pedal play	10mm
Brake drum diameter	Normal	315mm
Wheel cylinder installation torque		2.04~2.55kgf · m
Backing plate installation torque		26kgf · m
Brake oil		Only use for brake fluid DOT3

2) PARKING BRAKE

Item	Specification
Type	Toggle, internal expanding mechanical type
Parking lever stroke	214mm
Parking cable stroke	18.1mm

MidWestTech | Hyundai HDF35, HDF45-3 Forklift Service Manual | Publication HDF35... Order the manual at mid-west-tech.com >

GROUP 2 OPERATIONAL CHECKS AND TROUBLESHOOTING

1. OPERATIONAL CHECKS

Check item	Checking procedure
Steering wheel 	· Set rear wheels facing straight forward, then turn steering wheel to left and right. Measure range of steering wheel movement before rear wheel starts to move. Range should be 30~60mm at rin of steering wheel. If play is too large, adjust at gear box. Test steering wheel play with engine at idling.
Knuckle	· Check knuckle visually or use crack detection method. If the knuckle is bent, the tire wear is uneven, so check tire wear.
Steering axle	· Put camber gauge in contact with hub and measure camber. If camber is not within 1± 0.5° ; rear axle is bent. · Ask assistant to drive machine at minimum turning radius. · Fit bar and a piece of chalk at outside edge of counterweight to mark line of turning radius. · If minimum turning radius is not within± 100mm (± 4in)of specified value, adjust turning angle stopper bolt. Min turning radius(Outside) HDF 35III: 2500mm HDF 45III: 2535mm
Hydraulic pressure of power steering	Remove plug from outlet port of flow divider and install oil pressure gauge. Turn steering wheel fully and check oil pressure. ※ Oil pressure : 100 ~ 105 kgf/cm² (98 ~ 103bar)

2. TROUBLESHOOTING

Problem	cause	Remedy
Steering wheel drags.	· Low oil pressure. · Bearing faulty. · Spring spool faulty. · Reaction plunger faulty. · Ball-and-screw assembly faulty. · Sector shaft adjusting screw excessively tight. · Gears poorly meshing. · Flow divider coil spring fatigued.	· Check lockout. Repair. · Clean or replace. · Clean or replace. · Replace. · Clean or replace. · Adjust. · Check and correct meshing. · Replace.
Steering wheel fails to return smoothly.	· Bearing faulty. · Reaction plunger faulty. · Ball-and-screw assy faulty · Gears poorly meshing.	· Clean or replace. · Replace. · Clean or replace. · Check and correct meshing.

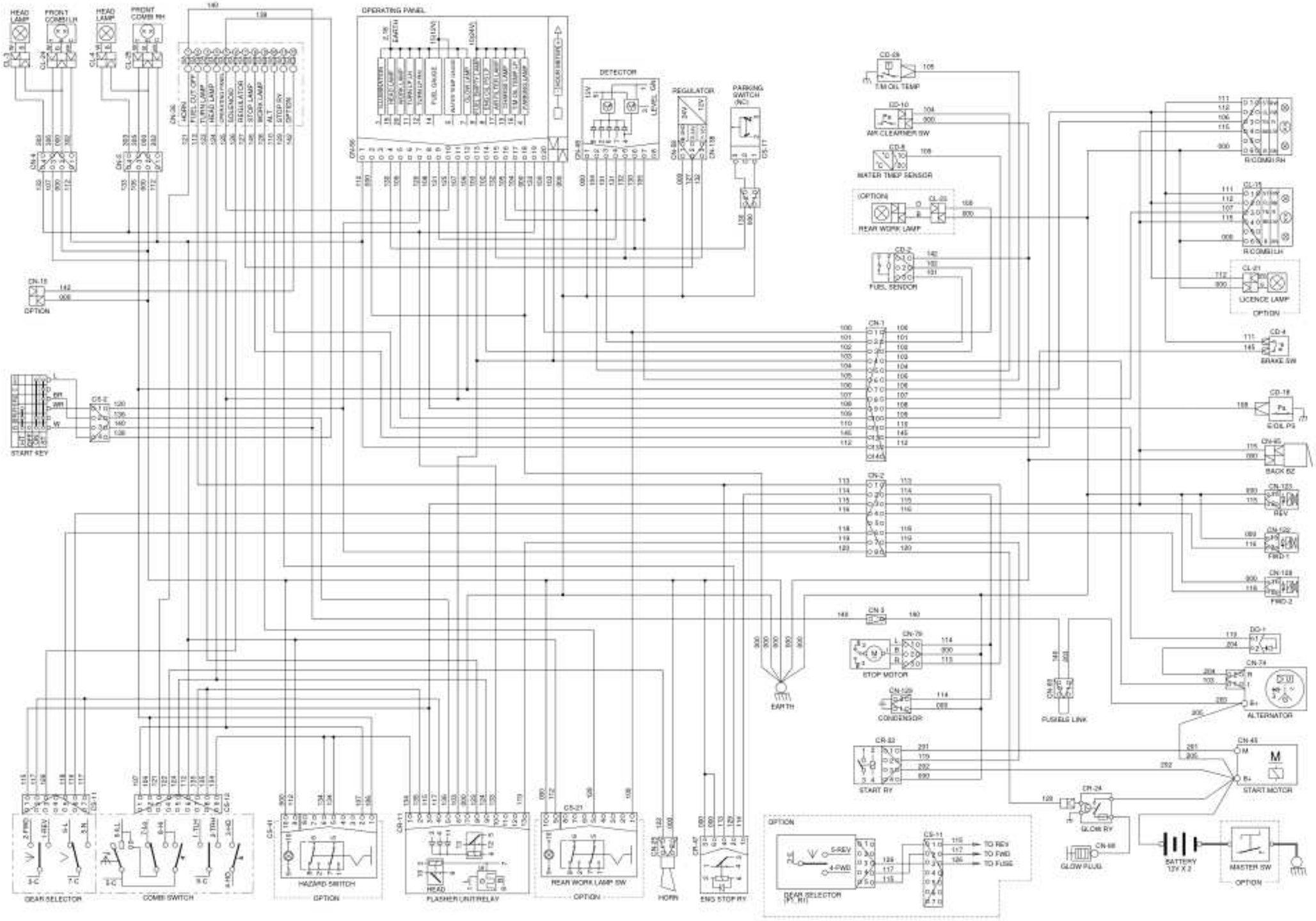
MidWestTech | Hyundai HDF35, HDF45-3 Forklift Service Manual | Publication HDF35... Order the manual at mid-west-tech.com >

GROUP 4 CONNECTOR DESTINATION

Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CN-1	KET	14	I/conn(Dashboard harness-frame harness)	S814-014001	S814-114001
CN-2	KET	12	I/conn(Dashboard harness-frame harness)	S814-012001	S814-112001
CN-3	KET	1	I/conn(Dashboard harness-frame harness)	MG640944-5	MG650943-5
CN-4	KET	4	Support harness	-	S814-104001
CN-5	KET	4	Support harness	-	S814-104001
CN-25	MOLEX	2	Horn	35215-0200	
CN-36	-	2	Fuse cox	F12890010	
CN-48	KET	2	Hour meter	S822-014000	
CN-56	MOLEX	20	Operating panel	35109-2010	
CN-58	KET	8	Detector(indicator)	S810-008201	
CN-60	-	2	Fusible link	-	21N4-01310
CN-65	KET	2	Back buzzer	S822-014000	
CN-74	KET	2	Alternator	MG640188-4	
CN-79	YAZAKI	3	Stop motor	7323-9033	
CN-122	AMP	2	Forward solenoid 1	S816-002001	
CN-123	AMP	2	Reverse solenoid 1	S816-002001	
CN-128	AMP	2	Forward solenoid 2	S816-002001	
CN-129	KET	2	Condensor	S810-002201	
CN-138	KET	3	Regulator	S810-003201	
Switch					
CS-2	RING TERM	5	Start switch	G9110009/19/23	
CS-11	AMP	7	Gear selector switch	S811-007002	
CS-12	AMP	9	Combination switch	S811-009002	
CS-17	KET	2	Parking switch	S810-002201	
CS-21	SWF	10	Work lamp switch	593757	
CS-41	SWF	10	Hazard switch	593757	
Lamp					
CL-15	-	6	Combination lamp-LH	110-6PR	
CL-16	-	6	Combination lamp-RH	110-6PR	
CL-21	SHUR	2	License lamp	S822-014000	S822-114000
CL-23	SHUR	2	Work lamp	S822-014000	S822-114000
Relay					
CR-23	AMP	4	Start relay	S810-004202	
CR-24	KET	1	Glow relay	S822-014000	
Sensor and pressure switch					
CD-2	KET	3	Fuel sendor	S810-003201	
CD-4	-	2	Brake switch	S822-014000	

MidWestTech | Hyundai HDF35, HDF45-3 Forklift Service Manual | Publication HDF35... Order the manual at mid-west-tech.com >

GROUP 2 ELECTRICAL CIRCUIT



MidWestTech | Hyundai HDF35, HDF45-3 Forklift Service Manual | Publication HDF35, HDF45-3

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