FORKLIFT

SERVICE MANUAL

HDF15, HDF18-3

HYUNDAI

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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		254× 48.5mm
Wheel cylinder bore diameter		22.22mm
Master cylinder diameter		15.87mm
Pedal adjustment	Free height	132~142mm
	Pedal play	10mm
Brake drum diameter	Normal	255mm
Wheel cylinder installation torque		0.8~1.2kgf · m
Backing plate installation torque		15~21kgf · 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

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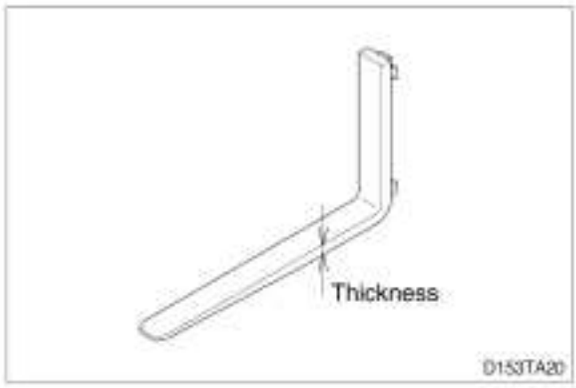
1. OPERATIONAL CHECKS

1) FORKS

(1) Measure thickness of root of forks and check that it is more than specified value.
EX : ℓ =1070mm(42.1in)

mm(in)

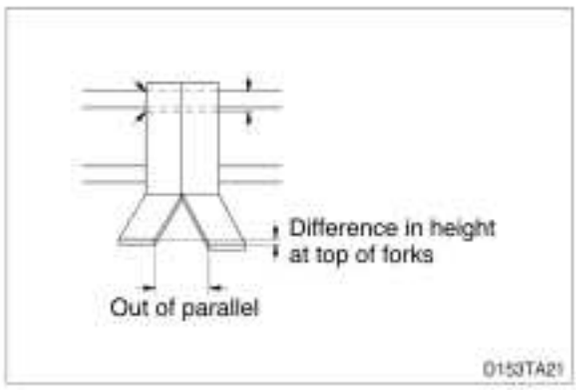
STD Fork assy	Applicable model	Standard	Limit
F5B129820	HDF15/18 III	40(1.6)	37(1.5)



2) Set forks in middle and measure out of parallel and difference in height at top of forks.

mm(in)

Difference in height	Max 15(0.6)
Out-of-parallel	Max 35(1.4)



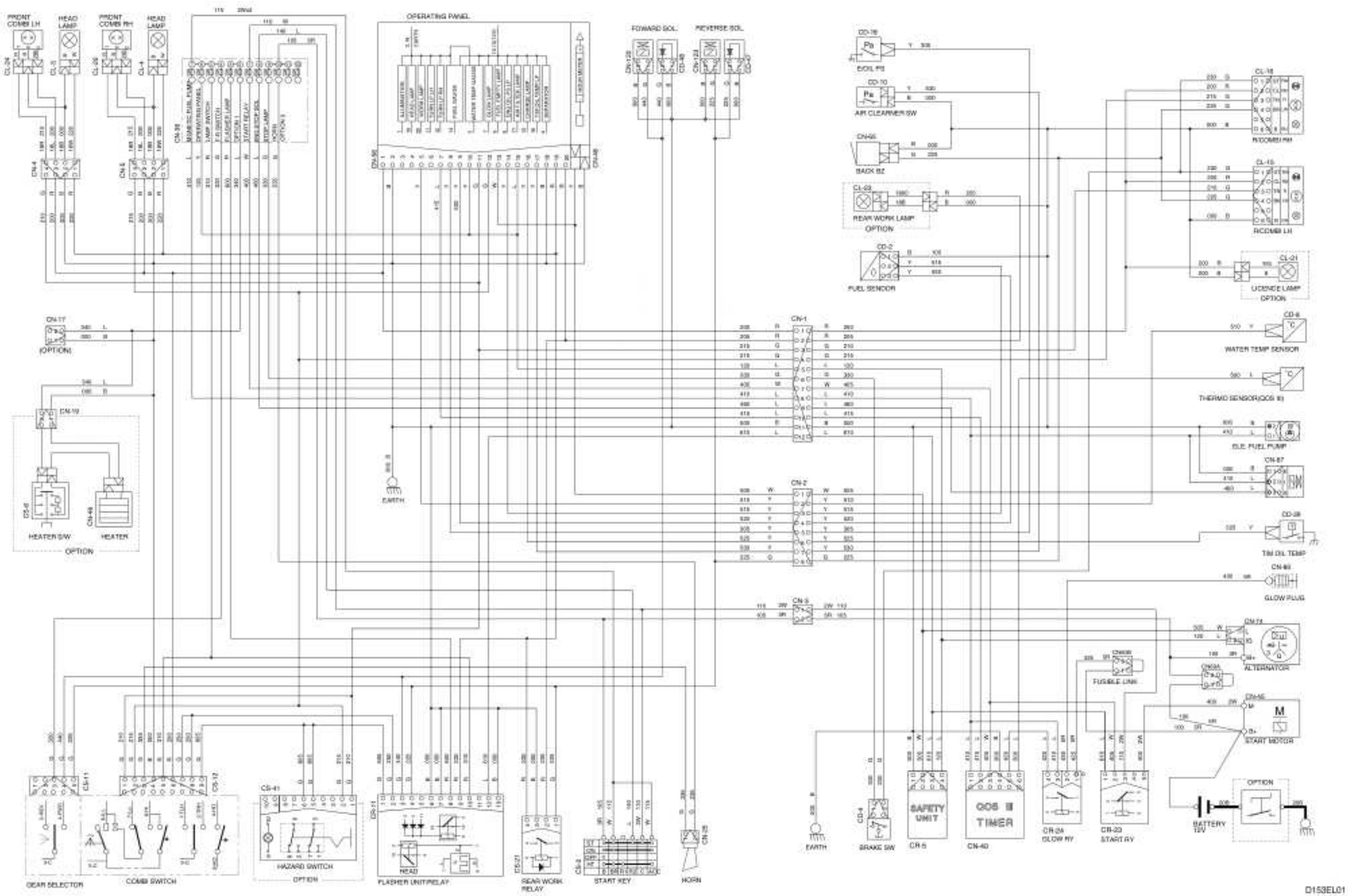
3) Most force is concentrated at root of fork and at hook, so use crack detection method to check cracks.

2. MAST

1) Check for cracks at mast stay, tilt cylinder bracket, guide bar, fork carriage and roller shaft weld. Check visually or use crack detection method. Repair any abnormality.
2) Set mast vertical, raise forks about 10cm from ground and check front-to-rear clearance and left-to-right clearance between inner mast and fork carriage, and between outer mast and inner mast. Use these figures to judge if there is any play at roller or rail.
   - Front-to-rear clearance : Within 2.0mm(0.08in)
   - Left-to-right clearance : Within 2.5mm (0.10in)
3) Check that there is an oil groove in bushing at mast support.
4) Set mast vertical, raise forks about 10cm from ground, and push center of lift chain with finger to check for difference in tension.
   If there is any difference in tension, adjust chain stopper bolt.
5) Check visually for abnormalities at thread of chain anchor bolt, and at contact surface between chain wheel and chain.
   Rotate chain wheel by hand and check for any play of bearing.

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GROUP 2 ELECTRICAL CIRCUIT



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