

FORKLIFT TRUCK

**OPERATOR'S
MANUAL**

**HDF20-5
HDF25-5
HDF30-5**

HYUNDAI

A MESSAGE TO HYUNDAI LIFT TRUCK OPERATORS

Lift trucks are specialized machines with unique operating characteristics, designed to perform a specific job. Their function and operation is not like a car or ordinary truck. They require specific instructions and rules for safe operation and maintenance.

Safe operation of lift trucks is of primary importance to HYUNDAI.

Our experience with lift truck accidents has shown that when accidents happen and people are killed or injured, the causes are:

- **Operator not properly trained**
- **Operator not experienced with lift truck operation**
- **Basic safety rules not followed**
- **Lift truck not maintained in safe operating condition**

For these reasons, HYUNDAI wants you to know about the safe operation and correct maintenance of your lift truck.

This manual is designed to help you operate your lift truck safely.

This manual shows and tells you about safety inspections and the important general safety rules and hazards of lift truck operation. It describes the special components and features of the truck and explains their function. The correct operating procedures are shown and explained. Illustrations and important safety messages are included for clear understanding. A section on maintenance and lubrication is included for the lift truck mechanic.

The operator's manual is not a training manual. It is a guide to help trained and authorized operators safely operate their lift truck by emphasizing and illustrating the correct procedures. However, it cannot cover every possible situation that may result in an accident. You must watch for hazards in your work areas and avoid or correct them. It is important that you know and understand the information in this manual and that you know and follow your company safety rules!

Be sure that your equipment is maintained in a safe condition. Do not operate a damaged or malfunctioning truck. Practice safe operation every time you use your lift truck. Let's join together to set high standards in safety.

Remember, before you start operating this lift truck, be sure you understand all driving procedures. It is your responsibility, and it is important to you and your family, to operate your lift truck safely and efficiently.

△ Be aware that the Federal Occupational Safety and Health Act(OSHA) and state laws require that operators be completely trained in the safe operation of lift trucks; It is also an (OSHA) requirement that a machine inspection be performed before every shift. If you need training in operating or inspecting your lift truck, ask your supervisor.

HYUNDAI lift trucks are built to take hard work, but not abuse. They are built to be dependable, but they are only as safe and efficient as the operator and the persons responsible for maintaining them. Do not make any repairs to this truck unless you have been trained in safe lift truck repair procedures and are authorized by your employer.

This manual describes procedures for operation, handling, lubrication, maintenance, checking and adjustment. It will help the operator realize peak performance through effective, economical and safe machine operation.

HOW TO USE THIS MANUAL

This manual is a digest of essential information about the safe operation, the features and functions and explains how to maintain your lift truck. This manual is organized into nine major parts:

Section 1. General Safety Rules, reviews and illustrates accepted practices for safe operation of a lift truck.

Section 2. Operating Hazards, warns of conditions that could cause damage to the truck or injury to the operator or other personnel.

Section 3. Know Your Truck, describes the major operating components, systems, controls, and other features of your truck and tells how they function.

Section 4. Operator Maintenance and Care, presents details on how to perform the operator's daily safety inspection and refuel the lift truck.

Section 5. Starting and Operating Procedures, discusses specific instructions on the safe, efficient operation of your lift truck.

Section 6. Emergency Starting and Towing, gives instructions for towing your truck in an emergency and for using battery jumper cables to start your truck in an emergency.

Section 7. Planned Maintenance and Lubrication, describes the PM (Planned Maintenance) program.

Section 8. Specifications, provides reference information and data on features, components, and maintenance items.

Section 9. Trouble shooting, provides trouble symptoms, causes and methods of remedy.

Section 10. Testing and Adjusting, gives instructions for testing and adjusting.

※ **The descriptions and specifications included in this manual were in effect at the time of printing.** HYUNDAI reserves the right to make improvements and changes in specifications or design, without notice and without incurring obligation. Please check with your authorized HYUNDAI dealer for information on possible updates or revisions.

The examples, illustrations, and explanations in this manual should help you improve your skill and knowledge as a professional lift truck operator and take full advantage of the capabilities and safety features of your new lift truck.

The first section of the manual is devoted to a review, with illustrations and brief messages, of general safety rules and the major operating hazards you can encounter while operating a lift truck. Next, you will find description's of the components of your specific lift truck model and how the instruments, gauges, and controls operate. Then, you will find a discussion of safe and efficient operating procedures, followed by instruction's on how to tow a disabled lift truck. The later sections of the manual are devoted to maintenance and truck specifications.

Take time to carefully read the **Know Your Truck** section. By acquiring a good basic understanding of your truck's features, and how they function, you are better prepared to operate it both efficiently and safely.

In **Planned Maintenance**, you will find essential information for correct servicing and periodic maintenance of your truck, including charts with recommended maintenance intervals and component capacities. Carefully follow these instructions and procedures.

Each major section has its own table of contents, so that you can find the various topics more easily.

INTRODUCTION

HYUNDAI welcomes you to the growing group of professionals who own, operate and maintain HYUNDAI lift trucks. We take pride in the long tradition of quality products and superior value the HYUNDAI name represents. This manual familiarizes you with safety, operating, and maintenance information about your new lift truck. It has been specially prepared to help you use and maintain your HYUNDAI lift truck in a safe and correct manner.

Your HYUNDAI lift truck has been designed and built to be as safe and efficient as today's technology can make it. As manufactured, for some models, it meets all the applicable mandatory requirements of ANSI B56.1-1988 Safety Standard for Powered Industrial Trucks. Some trucks are also furnished with equipment to help you operate safely; for example, load back rest, parking brake and horn are standard equipment.

Safe, productive operation of a lift truck requires both skill and knowledge on the part of the operator. The operator must know, understand, and practice the safety rules and safe driving and load handling techniques described in this manual. To develop the skill required, the operator must become familiar with the construction and features of the lift truck and how they function, the operator must understand its capabilities and limitations, and see that it is kept in a safe condition.

Routine Servicing and Maintenance

Regular maintenance and care of your lift truck is not only important for economy and utilization reasons; it is essential for your safety. A faulty lift truck is a potential source of danger to the operator, and to other personnel working near it. As with all quality equipment, keep your lift truck in good operating condition by following the recommended schedule of maintenance.

Operator Daily Inspection - Safety and Operating Checks

A lift truck should always be examined by the operator, before driving, to be sure it is safe to operate. The importance of this procedure is emphasized in this manual with a brief illustrated review and later with more detailed instructions. HYUNDAI dealers can supply copies of a helpful **Drivers Daily Checklist**. It is an OSHA requirement.

Planned Maintenance

In addition to the daily operator inspection, HYUNDAI recommends that a planned maintenance and safety inspection program (PM) be performed by a trained and authorized mechanic on a regular basis. The PM will provide an opportunity to make a thorough inspection of the safety and operating condition of your lift truck. Necessary adjustments and repairs can be done during the PM, which will increase the life of components and reduce unscheduled downtime and increase safety. The PM can be scheduled to meet your particular application and lift truck usage.

The procedures for a periodic planned maintenance program that covers inspections, operational checks, cleaning, lubrication, and minor adjustments are outlined in this manual. Your HYUNDAI dealer is prepared to help you with a Planned Maintenance Program by trained service personnel who know your lift truck and can keep it operating safely and efficiently.

Service Manual

In-depth service information for trained service personnel is found in Service Manual.

We urge you to first carefully read the manual from cover to cover. Take time to read and understand the information on general safety rules and operating hazards. Acquaint yourself with the various procedures in this manual. Understand how all gauges, indicator lights, and controls function. Please contact your authorized HYUNDAI dealer for the answers to any questions you may have about your lift truck's features, operation, or manuals.

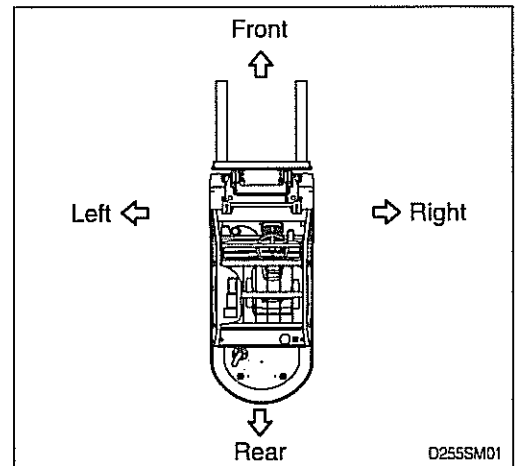
Operate your lift truck safely; careful driving is your responsibility.

Drive defensively and think about the safety of people who are working nearby. Know your truck's capabilities and limitations. Follow all instructions in this manual, including all symbols (▲ △ ※) and messages to avoid damage to your lift truck or the possibility of any harm to yourself or others.

This manual is intended to be a permanently attached part of your lift truck. Keep it on the truck as a ready reference for anyone who may drive or service it. If the truck you operate is not equipped with a manual, ask your supervisor to obtain one and have it attached to the truck. And, remember, your HYUNDAI dealer is pleased to answer any questions about the operation and maintenance of your lift truck and will provide you with additional information should you require it.

1. DIRECTION

The directions of this machine indicate forward, backward, right and left when machine is in the travelling direction.

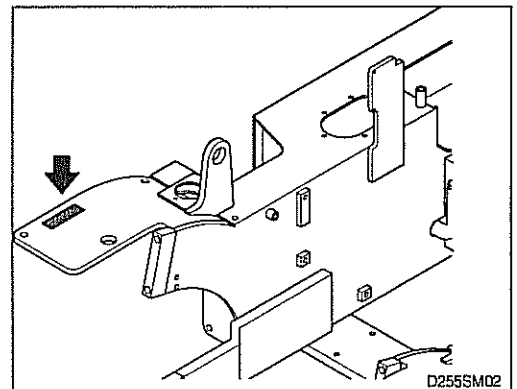


2. SERIAL NUMBER

Inform following when you order parts or the machine is out of order.

1) MACHINE SERIAL NUMBER

It's shown on front of the right side frame.



3. SYMBOLS

▲ Important safety hint

△ It indicates matters which can cause the great loss on the machine or the surroundings.

※ It indicates the useful information for operator

1. SAFETY HINTS

1. Daily inspection	1-1
2. Do's and don'ts	1-2
3. Seat belts	1-4
4. No riders	1-5
5. Pedestrians	1-6
6. Operator protection	1-7
7. Fork safety	1-8
8. Pinch points	1-9
9. Travel	1-10
10. Grades, ramps, slopes and inclines	1-11
11. Tip over	1-12
12. Surface and capacity	1-14
13. Parking	1-15
14. Refueling	1-16
15. Step	1-17

2. OPERATING HAZARDS

1. Loose loads	2-1
2. Long and wide loads	2-2
3. Rear swing	2-2
4. Low overhead clearance	2-3
5. Fast turns and high loads	2-3
6. Drop-offs	2-4
7. Right angle stacking	2-4
8. Chain slack	2-5
9. Pallets and skids	2-5
10. Caution for electrical lines	2-6
11. Lifting loads	2-7

3. KNOW YOUR TRUCK

1. General locations	3-1
2. Data/safety plates and decals	3-2
3. Instruments and controls	3-5
4. Indicator symbols	3-6
5. Operating lever and switch	3-9

4. OPERATOR MAINTENANCE AND CARE

- 1. Daily safety inspection 4-1
- 2. Fuel safety practices 4-3

5. STARTING AND OPERATING PROCEDURES

- 1. Before operating the truck 5-1
- 2. Check before starting 5-2
- 3. Check before starting engine 5-3
- 4. Seat adjustment 5-8
- 5. Starting from a safe condition 5-9
- 6. General starting and operating tips 5-10
- 7. Starting the engine 5-11
- 8. Check after starting engine 5-12
- 9. Levers and pedals 5-14
- 10. Operating safely 5-16
- 11. Load handling 5-18
- 12. Shut down procedure 5-23

6. EMERGENCY STARTING AND TOWING

- 1. How to tow a disabled truck 6-1
- 2. How to use battery jumper cables 6-3

7. PLANNED MAINTENANCE AND LUBRICATION

- 1. Introduction 7-1
- 2. Safe maintenance practices 7-2
- 3. Major component locations 7-5
- 4. Periodic replacement of consumable parts 7-6
- 5. Planned maintenance intervals 7-7
- 6. How to perform planned maintenance 7-10
- 7. Replacement and check 7-12
- 8. Lubrication chart 7-27
- 9. Greasing point 7-28
- 10. Handling machine in extremely hot places 7-29
- 11. Cold weather operation 7-30
- 12. Storage 7-31
- 13. Transport 7-32
- 14. Recommendation table for lubricants 7-33
- 15. Fuel and lubricants 7-34

8. SPECIFICATIONS

1. Specification table	8-1
2. Specification for major components	8-3
3. Tightening torque	8-7

9. TROUBLESHOOTING

1. Engine system	9-1
2. Electrical system	9-2
3. Torque flow system	9-3
4. Steering system	9-7
5. Brake system	9-8
6. Hydraulic system	9-10

10. TESTING AND ADJUSTING

1. Engine system	10-1
2. Drive system	10-5
3. Travel system	10-8
4. Steering system	10-9
5. Adjustment of parking brake lever	10-10