CONTENTS

Foreword ·····	0-1	6. MACHINE INSPECTION	
Emission-related components warranty	0.0	1. Maintenance check list ·····	6-1
(USA and CANADA only)		2. Lubricants ·····	6-3
Before servicing this machine		3. Maintenance code ·····	6-4
Symbols			
Table to enter S/No and distribution		7. STORAGE AND DISPOSAL	
Safety decal ·····	0-6	1. Storage of machine	7-1
		2. Usage and disposal ·····	7-2
1. SAFETY HINTS			
1. Safety precautions ······	1-1	8. TROUBLESHOOTING	
2. Precautions of nameplate management \cdots	1-24	Engine troubleshooting	8-1
3. California proposition	1-24	Machine troubleshooting	
		g	
2. PRECAUTIONS		INDEX	Q_ 1
1. Vehicle identification number ······	2-1		J-1
2. Essential replacement parts	2-2		
3. SPECIFICATIONS			
1. Dimensions ·····	3-1		
2. General specifications	3-2		
3. List of option ·····	3-3		
4. CONTROL DEVICES			
1. Locations ·····	4-1		
2. Switches ·····	4-2		
3. Controls ·····	4-10		
4. Instrument panel ·····	4-17		
5. Cabin	4-32		
6. Other systems ·····	4-41		
5. OPERATION MODE			
1. Pre-operation check ·····	5-1		
2. Operating the engine ·····	5-2		
3. Driving and operation	5-6		
4. Operation ·····	5-12		

FOREWORD

This manual contains a number of instructions and safety recommendations regarding driving, handling, lubrication, maintenance, inspection and adjustment of the machine.

The manual is to promote safety maintenance and enhance machine performance.

Keep this manual handy and have all personnel read it periodically.

If you sell the machine, be sure to give this manual to the new owners.

This machine complies with EC directive "2006/42/EC".

1. Read and understand this manual before operating the machine.

This operator's manual may contain attachments and optional equipment that are not available in your area. Please consult your local HD Hyundai Construction Equipment distributor for those items you require.

Improper operation and maintenance of this machine can be hazardous and could result in serious injury or death.

Some actions involved in operation and maintenance of the machine can cause a serious accident, if they are not done in a manner described in this manual.

The procedures and precautions given in this manual apply only to intended uses of the machine. If you use your machine for any unintended uses that are not specifically prohibited, you must be sure that it is safe for you and others. In no event should you or others engage in prohibited uses of actions as described in this manual.

Some illustrations in this manual show details or attachments that can be different from your machine. Covers and guards might have been removed for illustrative purposes.

- Inspect the jobsite and follow the safety recommendations in the safety hints section before operating the machine.
- 3. Use genuine HD Hyundai Construction Equipment spare parts for the replacement of parts. We expressly point out that HD Hyundai Construction Equipment will not accept any responsibility for defects resulting from non-genuine parts or non workmanlike repair. In such cases HD Hyundai Construction Equipment cannot assume liability for any damage.

Continuing improvements in the design of this machine can lead to changes in detail which may not be reflected in this manual. Consult HD Hyundai Construction Equipment or your HD Hyundai Construction Equipment distributor for the latest available information for your machine or for questions regarding information in this manual.

EMISSION-RELATED COMPONENTS WARRANTY (USA AND CANADA ONLY)

HD Hyundai Construction Equipment shall have obligation under the EPA (Environmental Protection Agency) regulation of warranty about Emission-related components. This warranty shall exist for 3,000 hours or five years, whichever occurs first.

Naturally, this warranty does not cover to damage arising from accident, misuse or negligence, use of non-HD Hyundai Construction Equipment parts, or from alterations not authorized by HD Hyundai Construction Equipment.

Emission-related components according to the EPA regulation.

- 1. Air-induction system.
- 2. Fuel system.
- 3. Ignition system.
- 4. Exhaust gas recirculation systems.
- 5. After treatment devices.
- 6. Crankcase ventilation valves.
- 7. Sensors.
- 8. Electronic control units.

BEFORE SERVICING THIS MACHINE

It is the responsibility of the owner and all service and maintenance personnel to avoid accidents and serious injury by keeping this machine properly maintained.

It also is the responsibility of the owner and all service and maintenance personnel to avoid accidents and serious injury while servicing the machine.

No one should service or attempt to repair this machine without proper training and supervision.

All service and maintenance personnel should be thoroughly familiar with the procedures and precautions contained in this manual.

All personnel also must be aware of any federal, state, provincial or local laws or regulations covering the use and service of construction equipment.

The procedures in this manual do not supersede any requirements imposed by federal, state, provincial or local laws.

HD Hyundai Construction Equipment can not anticipate every possible circumstance or environment in which this machine may be used and serviced.

All personnel must remain alert to potential hazards.

Work within your level of training and skill.

Ask your supervisor if you are uncertain about a particular task. Do not try to do too much too fast. Use your common sense.

TABLE TO ENTER SERIAL NO. AND DISTRIBUTOR

Machine Serial No.	
Engine Serial No.	
Manufacturing year	
Manufacturer Address	HD Hyundai Construction Equipment co., Ltd. 477 Bundangsuseo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do 13553, Korea
Distributor for North Americas Address	HD Hyundai Construction Equipment Americas, Inc 6100 Atlantic Boulevard Norcross GA 30071 U.S.A
Distributor for Europe Address	HD Hyundai Construction Equipment Europe N. V. Hyundailaan 4 3980 Tessenderlo Belgium
Dealer Address	

SYMBOLS

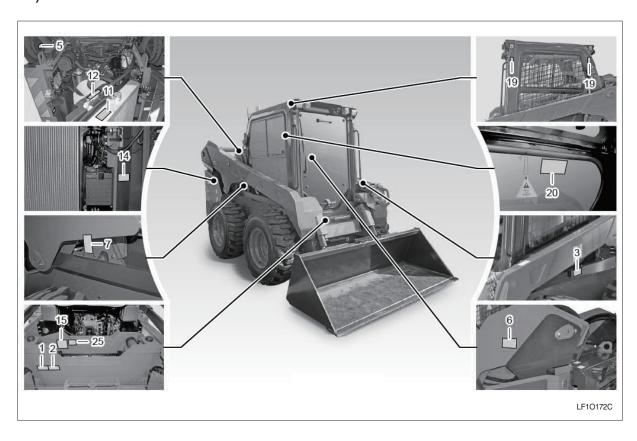
▲ Important safety hint.

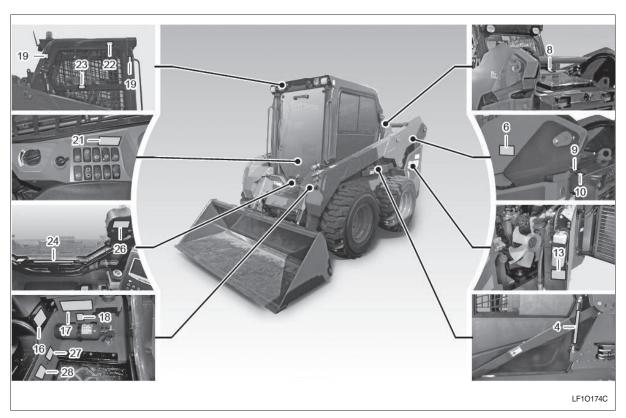
 \triangle It indicates matters which can cause the great loss on the machine or the surroundings.

 $\frak{*}$ It indicates the useful information for operator.

SAFETY DECALS

1) DECAL MOUNTING LOCATION





2) DESCRIPTION

(1)



(2)





(4) WARNING

To prevent injury or death: Check to make sure that the stopper pin used to secure the cabin is in the locked position. Refer to the owner's manual.

(5)



(6)



(7)



(8)



(9)

WARNING To prevent injury or death: Take care to prevent hands or body parts from being caught in the door when closing the top door on the engine room. LF18-0049

(10)

WARNING

To prevent injury or death:

When the diesel particulate filter (DPF) is in regeneration mode, the exhaust gas and DPF muffler become hot.

The muffler becomes extremely hot during regeneration, so keep the machine away from people, animals, plants, and flammable matter. In addition, keep the area around the DPF muffler clean and clear of flammable matter. LF18-0044 (11)



(12)



(13)



(14)

WARNING

Battery explosions may be caused by cigarettes, flames, or sparks. Always protect your eyes and face from the battery. Do not charge or use booster cables or adjust the connection ports without proper guidelines and training.

Tighten the vent cap firmly and keep it in a horizontal position. Poisonous substances can cause severe burns. Battery electrolyte contains sulfuric acid. Do not allow it to come into contact with skin, eyes, or clothes. In the event of an accident, wash it off immediately with clean water and consult a physician. Keep out of reach of children.

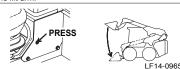




(16)

WARNING

To prevent severe injury or death: Do not leave the work site with the lift arm raised. In the event of an emergency where the engine shuts off or the lift arm must be lowered, check in a seated position whether the area under the lift arm is clear. Then, press the bottom left button to lower



(17)

WARNING

The operation of this equipment may produce flames which can cause a fire around dry matter. A flame removal device is needed. The operator must comply with all relevant legislation and fire prevention requirements.

WARNING

- To prevent injury:

 · Make sure to read and understand the owner's manual before operating the machine.

 Familiarize yourself with all controls.

 · Check to make sure that the surrounding area is clear of people before operating the machine.

 · Keep all safety devices in place.
- Do not allow people to ride on implements or on the outside of the vehicle.
- Before leaving the machine, lower all implements to the ground, turn off the engine, and remove the key.

 LF18-00

LF18-0071

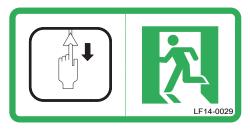
(18)



(19)



(20)



(21)

▲ WARNING To prevent injury or death: Do not stick any part of your body outside the cabin while the machine is running. Refer to the owner's manual. LF18-0053

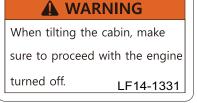
(22)



(23)



(26)



(24)



To prevent injury or death: Open and close the door with both hands while taking care not to hit your head. After the door is open, move the locking pins on both sides outwards to secure the door in order to prevent it from falling suddenly.

LF18-005

(25)

WARNING

TO AVOID PERSONAL INJURY:

When opening and closing the door, be careful not to hit the window with your head or other parts of your body. LF14-0984

(27)

WARNING

CALIFORNIA PROPOSITION 65

Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- · Always start and operate the engine in a well ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- . Do not modify or tamper with the exhaust system.
- · Do not idle the engine except as necessary.

For more information go to www.P65warnings.ca.gov/diesel.

(28)

WARNING

This machine has DPF(Diesel Particulate Filter) system. Use the CJ-4(or above) graded Engine oil. Otherwise, It will cause DPF failure.



- DPF Regeneration Progress indicator
- The lamp blinks during the regeneration
 Do not touch the DPF components.
 It is extremely not and may cause body damage
 Keep the distance from people and animal
 Do not place the flammable objects near
 the exhaust pipe
 Do not turn off the engine and continue
 the work above 1700rpm
- Park the machine in a flat place and keep away from flammable objects around the exhaust pipe 2. Procedure
 Procedure
 Turn on the brake switch

- 2) Turn on the brake switch
 3) Do not turn or press the throttle
 (Keep the engine at idle speed)
 4) Press the regeneration button 2 seconds
 5. Engine automatically controls the speed
 4. Regeneration takes 30-40 minutes normally

LF10-0015A