

## Case Forklift H Series Operators Manual

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**586H**  
**588H**  
**Tier 4**  
Rough Terrain Forklift (RTFL)  
*from PIN NCC570000*

# OPERATOR'S MANUAL

**Part number 84587658**

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# 1 - GENERAL INFORMATION

## Intended use



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### H Series Rough Terrain Forklift

The rough terrain forklift, with standard equipment and authorized attachments, is intended to be used for above ground material handling. This machine is not intended to be used for towing other equipment or transporting loads at high speeds. Make sure the machine is suitably equipped for the type of work to be performed.

All persons who will be operating this machine shall possess a valid local vehicle operating permit and/or other applicable local age work permits.

Do not use this machine for any purpose or in any manner other than as described in the manual, safety signs, or other product safety information provided with the machine. These materials define the machine's intended use.

Consult an authorized dealer on changes, additions, or modifications that can be required for this machine to comply with various country regulations and safety requirements. Unauthorized modifications will cause serious injury or death. Anyone making such unauthorized modifications is responsible for the consequences.

**ATTENTION:** *The fuel system and engine on your machine are designed and built to government emissions standards. Tampering by dealers, customers, operators, and users is strictly prohibited by law. Failure to comply could result in government fines, rework charges, invalid warranty, legal action, and possible confiscation of the machine until rework to original condition is completed. Engine service and/or repairs must be done by a certified technician only!*

Your CASE CONSTRUCTION dealer is available for any further information. They will also provide any after-sales service you may need, and genuine spare parts, your guarantee of quality and match. CASE CONSTRUCTION customer assistance is also available. Call 1-866-54-CASE6 (1-866-542-2736) or email [casecustomerassistance.na@cnh.com](mailto:casecustomerassistance.na@cnh.com).

## CNH America LLC technical manuals

Manuals are available from your dealer for the operation, service, and repair of your machine. For prompt convenient service, contact your dealer for assistance in obtaining the manuals for your machine.

Your dealer can expedite your order for Operator's Manuals, Parts Catalogs, Service Manuals, and maintenance records. This Operator's Manual does not include instructions for attachments. Read the manual(s) provided with the authorized attachment to learn safe maintenance and operation.

Always give the machine name, model, and Product Identification Number (PIN) of your machine so your dealer can provide the correct manuals for your machine.

The company is continually striving to improve its products and therefore reserves the right to make improvements and changes when it becomes practical and possible to do so, without incurring any obligation to make changes or additions to the equipment sold previously.

All data given in this manual is subject to production variations.

**NOTICE:** *Operating and service messages displayed on the instrument control panel may vary from what is shown in the Operator's Manual. Should this occur, adhere to the latest instruction on the electronic operating panel.*

Dimensions and weights are approximate only and the illustrations do not necessarily show the machine in standard condition. For exact information about any particular machine, consult your dealer.

## Note to the Owner

This manual contains important information about the safe operation, adjustment, and maintenance of your forklift. This manual is divided into chapters as outlined in the table of contents. Refer to the index at the end of this manual for locating specific items about your machine. The forklift conforms to current safety regulations.

Use this manual as a guide. Your machine will remain a reliable working tool as long as it is kept in working condition and serviced properly.

DO NOT operate or permit anyone to operate or service this machine until you or the other persons have read and understand the safety, operation, and maintenance instructions in this manual. Use only trained operators who have demonstrated the ability to operate and service this machine correctly and safely.

The information in this manual is provided on the basis of information that was available at the time that the manual was written. Settings, procedures, part numbers, software, and other items can change. These changes can affect the service that is given to the machine. Ensure that you have the complete and most current information from your dealer before you start any machine operation.

The Operator's Manual is to be stored in the manual compartment equipped on this machine. Make sure this manual is complete and in good condition. Consult your dealer to obtain additional manuals or manuals in other languages. An Associates of Equipment Manufacturers (AEM) safety booklet is included with each machine. Take the time to read the booklet and understand its content.

Contact your dealer for any further information or assistance about your machine. Your dealer has manufacturer approved service parts. Your dealer has technicians with special training that know the best methods of repair and maintenance for your machine.



## Read the Operator's Manual

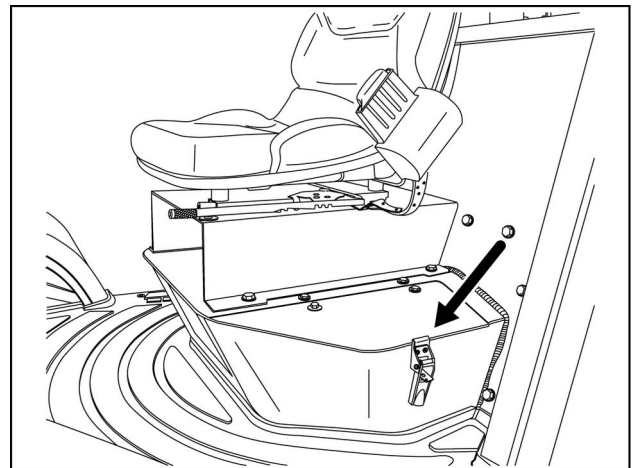
Improper operation of this machine can cause death or serious injury. Before using the machine, make certain that every operator:

- is instructed in safe and proper use of the machine.
- reads and understands the manual(s) pertaining to the machine.
- reads and understands all safety signs on the machine.
- clears the area of other persons and domestic animals.
- learns and practices safe use of machine controls in a safe, clear area before operating this machine on a job site.

It is your responsibility to observe pertinent laws and regulations and follow CNH America LLC instructions on machine operation and maintenance.

## Manual storage

Keep the Operator's Manual and the Associates of Equipment Manufacturers (AEM) safety booklet in the storage compartment located on the left side of the operator seat. The Operator's Manual and the AEM safety booklet must be available for use by all operators.



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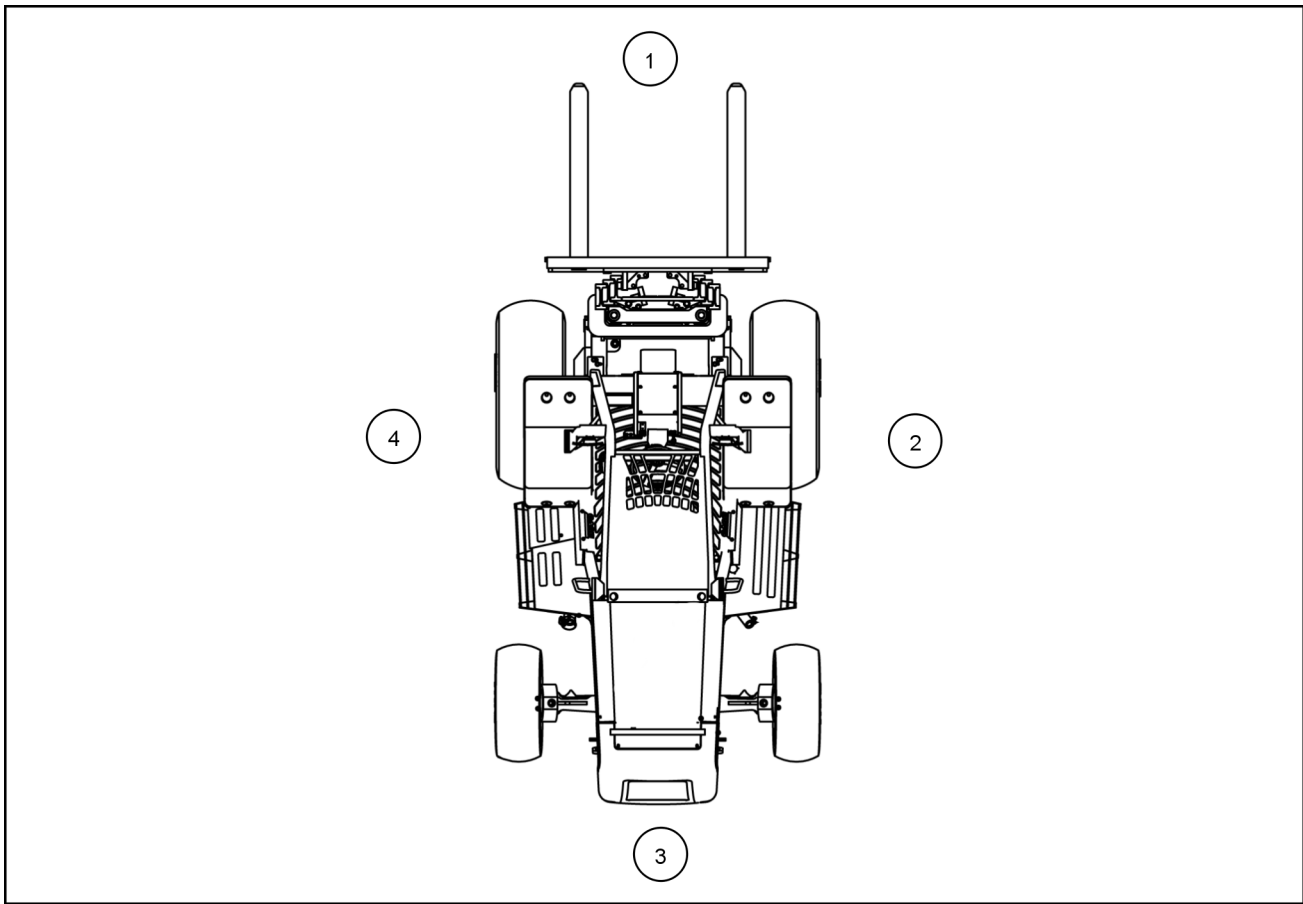
## Electro-Magnetic Compatibility (EMC)

Interference may arise as a result of add-on equipment which may not necessarily meet the required standards. As such interference can result in serious malfunction of the unit and/or create unsafe situations, you must observe the following:

- The maximum power of emission equipment (radio, telephones, etc.) must not exceed the limits imposed by the national authorities of the country where you use the machine.
- The electro-magnetic field generated by the add-on system should not exceed **24 V/m** at any time and at any location in the proximity of electronic components.
- The add-on equipment must not interfere with the functioning of the onboard electronics. Failure to comply with these rules will render the warranty null and void.

## Right, left, front, and rear of the machine

The terms right hand and left hand, when used in this manual, indicate the right and left sides of the machine as seen from the operator's seat.

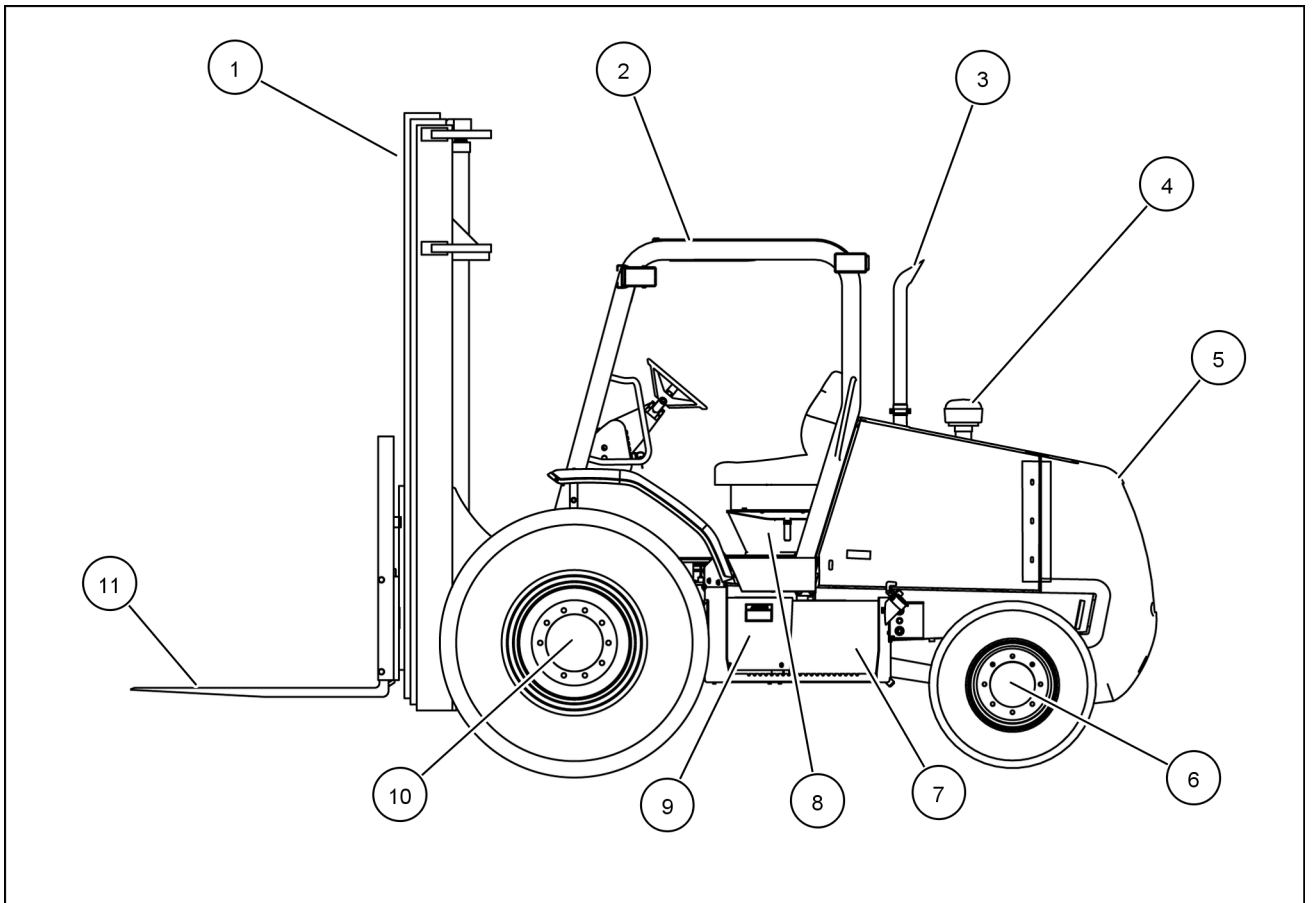


RAIL12FRK1131GA 1

Top view of machine

1. Front of machine
2. Right side of machine
3. Rear of machine
4. Left side of machine

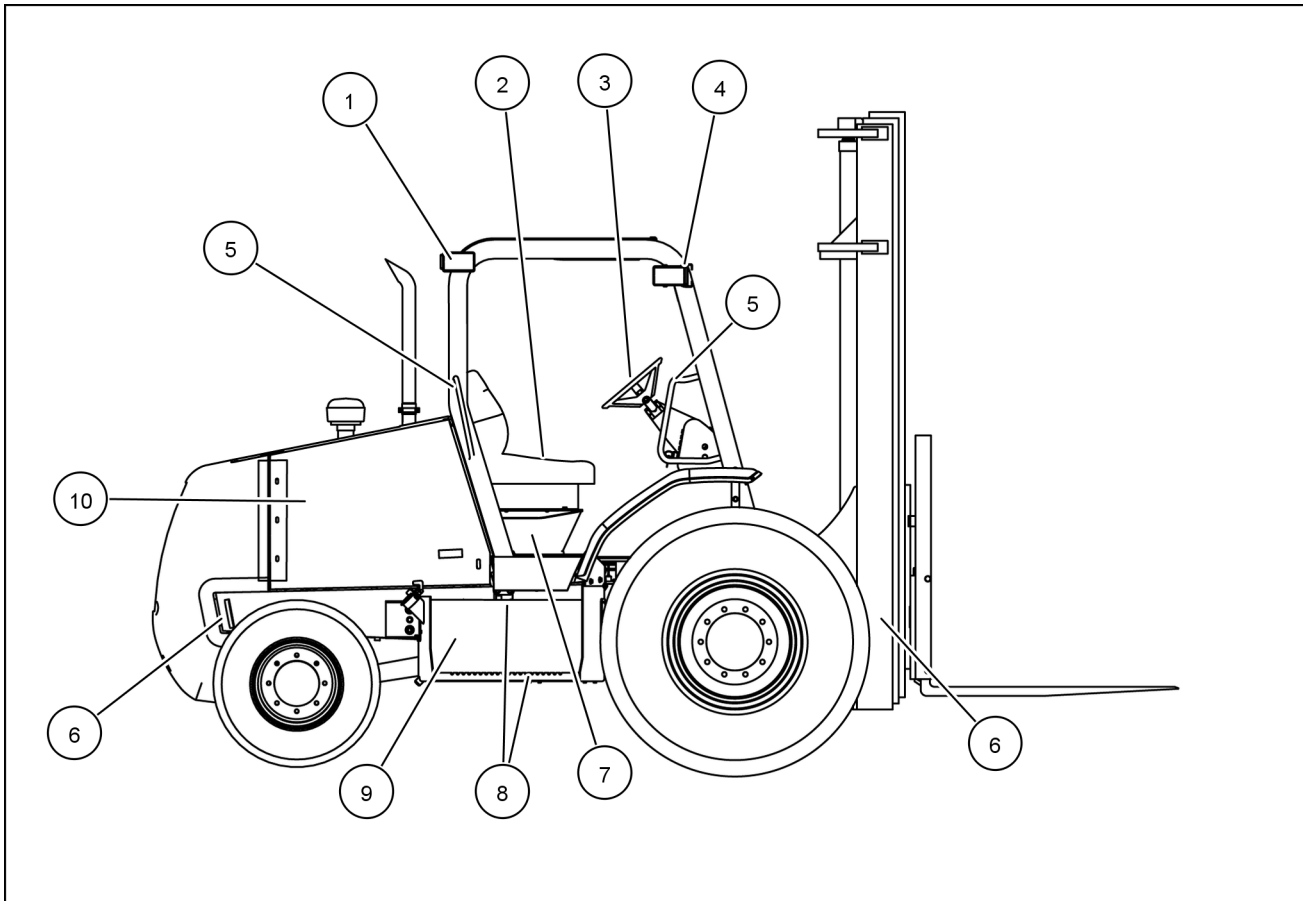
## Component identification



RAIL12FRK1095GA 1

1. Forklift mast (standard mast or optional Freelif mast)
2. Roll Over Protective Structure (ROPS)
3. Exhaust stack
4. Air pre-cleaner
5. Rear counterweight
6. Rear steer axle
7. Hydraulic reservoir
8. Manual and tool storage compartment
9. Battery compartment
10. Front drive axle
11. Lifting forks

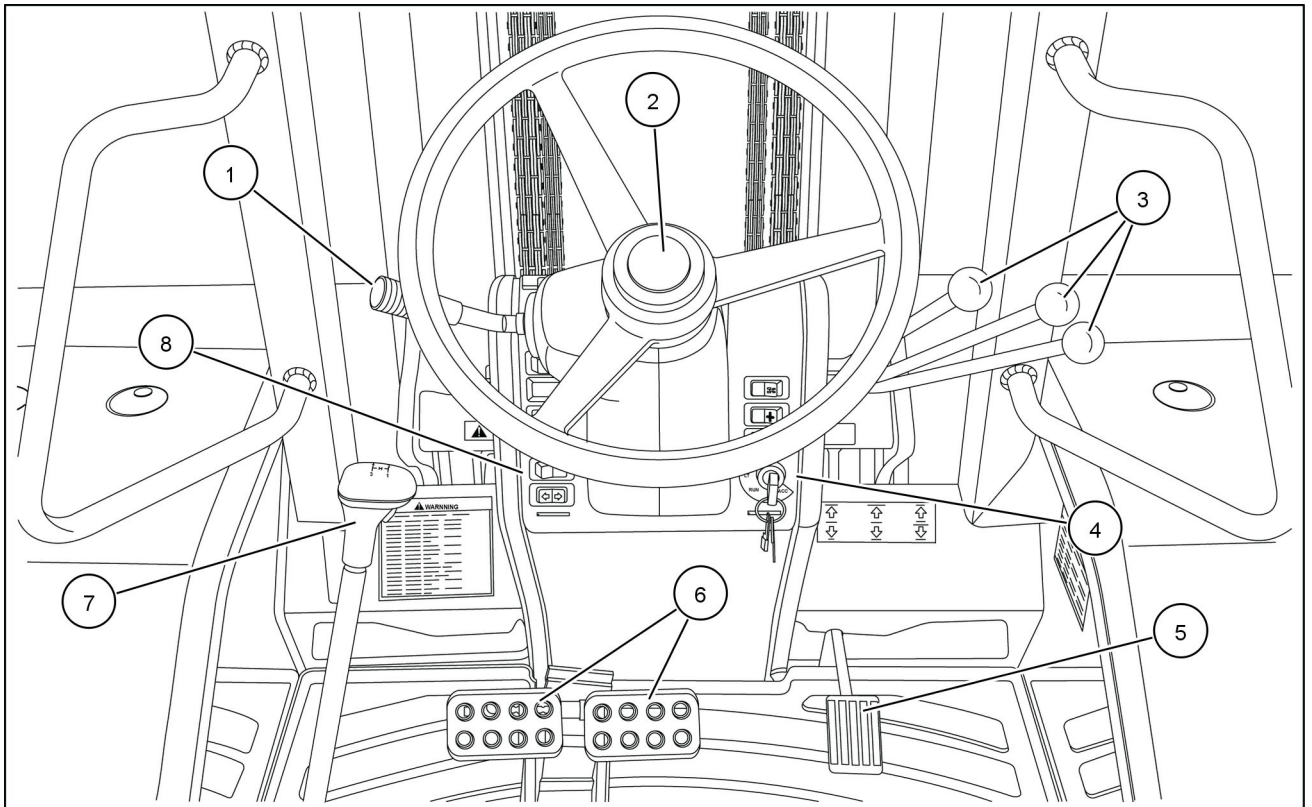
## 1 - GENERAL INFORMATION



RAIL12FRK1096GA 2

1. Rear work lights
2. Operator's seat
3. Steering column
4. Front work lights
5. Grab handles
6. Transport tie down — four locations (both sides of forklift mast and counterweight)
7. Fuse and relay location
8. Entry steps (both sides of machine)
9. Fuel reservoir
10. Side engine panels (both sides of machine)

## 1 - GENERAL INFORMATION



RAPH12FRK1111FA 3

1. Forward Neutral Reverse (F-N-R) lever
2. Steering wheel and column
3. Forklift controls levers— lift, tilt, side shift, and optional auxiliary (not shown)
4. Right side control panel switches — differential lock, 4WD (optional), parking brake, clutch cutout, and key ignition switch
5. Foot throttle
6. Right and left brake pedal with locking device
7. Four speed shift lever with clutch cutout button
8. Left side control panel switches — horn, rear lights, front lights, hazard \ flashers, and turn signal

## Product Identification Number (PIN)

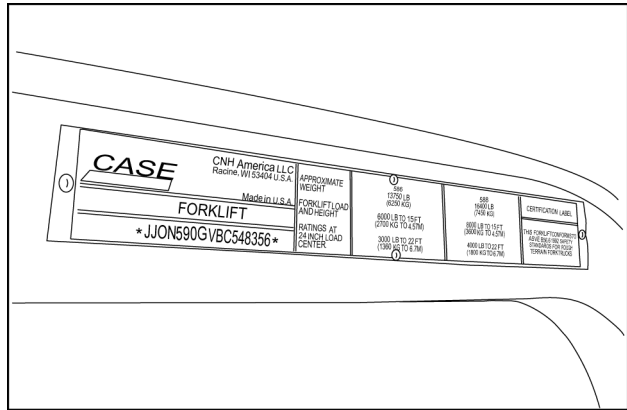
Record the machine and Product Identification Numbers (PIN). If needed, provide these numbers to your dealer when you require parts or information for your machine. Keep a record of these numbers and your Manufacturer's Statement of Origin in a safe place. If the machine is stolen, report the numbers to your local law enforcement agency.

### Machine identification

Model name

PIN

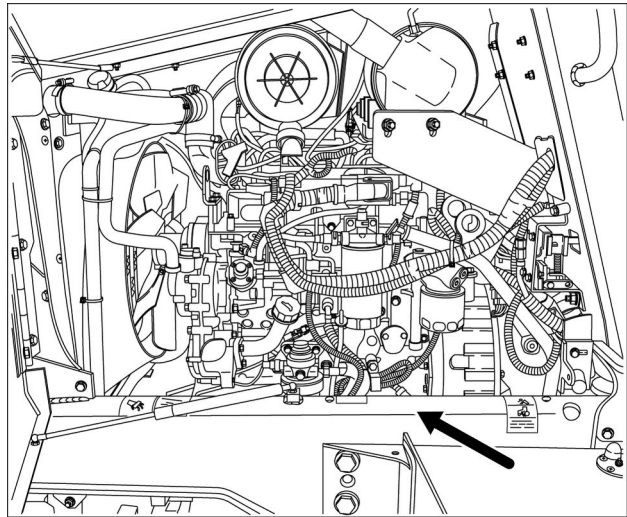
Model year



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Locate the PIN plate on the upper right-hand side of the Roll-Over Protective Structure (ROPS).

**NOTE:** The PIN is also stamped on the right hand side of the frame.

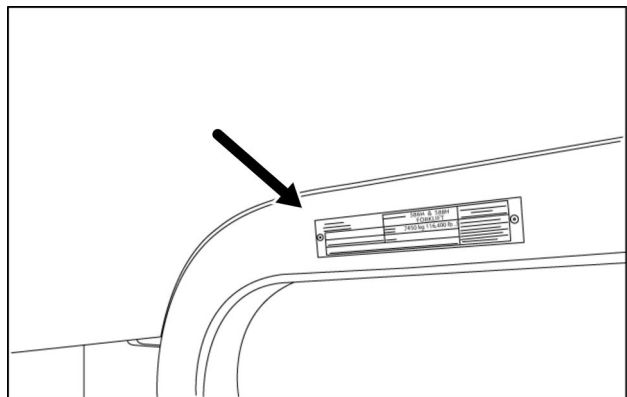


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### Roll-Over Protective Structure (ROPS)

PIN

Locate the PIN plate on the upper left-hand side of the ROPS.

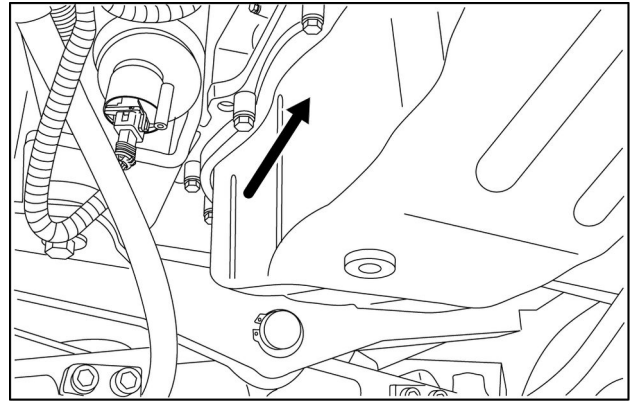


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## Engine

### PIN

Locate the PIN plate on the left-hand side of the oil pan near the fuel water separator.

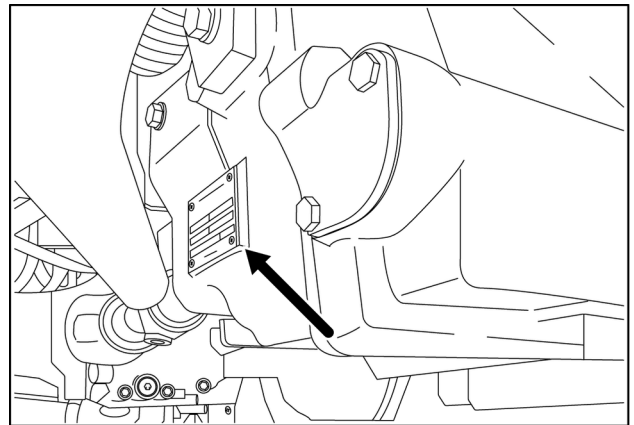


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## Transmission

### PIN

Locate the PIN plate on the left-hand side of the transmission housing.

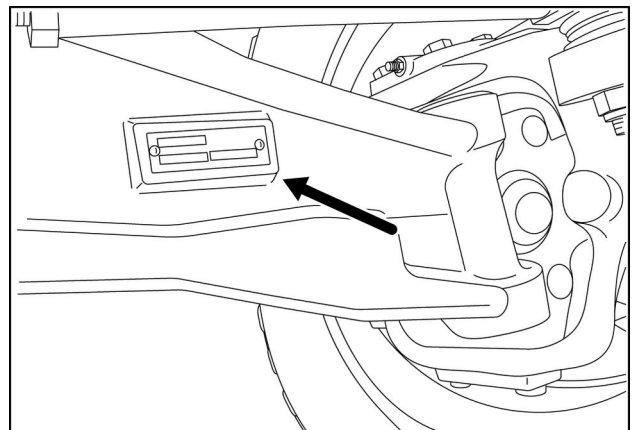


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## Rear steer axle — Two wheel drive (2WD)

### PIN

Locate the PIN plate on the left-hand front side of the rear steer axle.

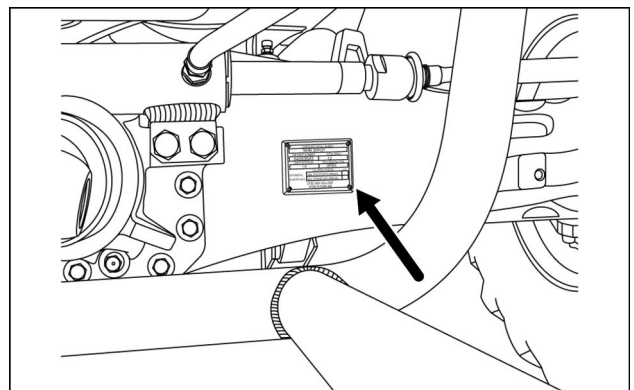


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## Rear steer axle — Four wheel drive (4WD)

### PIN

Locate the PIN on the left-hand front side of the rear steer axle.

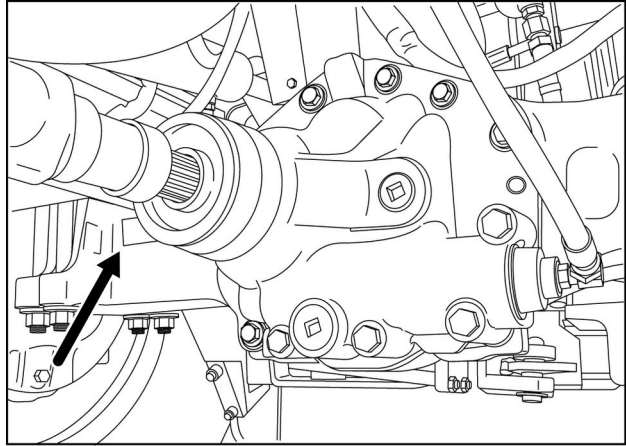


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**Front drive axle**

PIN

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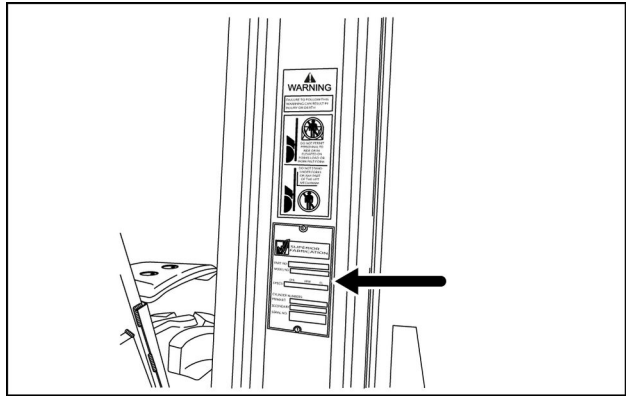


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**Forklift mast**

PIN

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## Exhaust Gas Recirculation (EGR) exhaust treatment - Product overview

### What is Exhaust Gas Recirculation (EGR)?

Your CASE CONSTRUCTION machine is equipped with additional components to comply with national and local exhaust emissions requirements. EGR works by recirculating a portion of the engine's exhaust gases back into the engine's combustion chamber to lower combustion temperatures.

The main components of the EGR system include:

- EGR valve
- Diesel Particulate Filter (DPF)
- Diesel Oxidation Catalyst (DOC)
- Exhaust gas temperature sensors
- Differential pressure sensor
- Throttle valve actuator

### What is a Diesel Particulate Filter (DPF)?

A Diesel Particulate Filter (DPF) is a filter mounted in the exhaust stream. During normal operating conditions, the exhaust gases pass through the porous walls of the DPF and trap Particulate Matter (PM) generated by the combustion process of the engine. When channels inside the DPF fill up with PM, the system must be cleaned. The cleaning process is called Regeneration.

### How does the regeneration process work?

When the DPF becomes restricted, the system will need to be cleaned or regenerated by raising exhaust temperatures to burn off the trapped Particulate Matter (PM). This process is usually done automatically, but may require a manual regeneration sequence to be activated depending on operating conditions. Burned PM will leave behind traces of ash within the DPF. The ash must be cleaned out by a CASE CONSTRUCTION dealer outfitted with machines specifically designed to clean DPF systems. In severe cases the DPF may need to be replaced. Refer to the **7-20** for service intervals.

### Automatic regeneration

When the DPF enters automatic regeneration mode, the display will indicate "DPF ON", several conditions need to be followed to properly let the machine perform this function.

- During this mode do not idle or shut the machine down.
- Hot exhaust gases will be generated, use in well ventilated area away from combustible materials.
- Use the machine under normal work scenarios until the automatic regeneration process has completed.
- If the machine will be idled during this time, shut the machine down and perform a manual regeneration upon resume of operation.

### Manual regeneration

When automatic regeneration of the DPF is inhibited, unsuccessful or the machine had to be shutdown during the automatic regeneration process, manual regeneration is used. During the manual regeneration mode, the display will indicate "DPF ON", several conditions need to be followed to properly let the machine perform this function.

- During this mode, the machine will be unusable
- Move the machine to a safe place away from combustible materials.
- Hot exhaust gases will be generated, use in well ventilated area away from combustible materials.
- Let the regeneration finish before shutting the machine off.

## Finding a Diesel Particulate Filter (DPF) cleaning facility

To find a CASE CONSTRUCTION dealer that is fully equipped to service your DPF system, please call the number below.

CASE CONSTRUCTION Customer Assistance: 1-866-542-2736  
casecustomerassistance.na@cnh.com

## U.S. EPA and California Emissions Control Warranty Statement

CASE CONSTRUCTION warrants to the ultimate purchaser and each subsequent purchaser that the engine is designed, built and equipped so as to conform with U.S. Environmental Protection Agency regulations applicable at the time of manufacture and that it is free from defects in workmanship or material which would cause it not to meet these regulations for a period of:

- 5 years or 3,000 hours of operation, whichever occurs first.

**NOTE:** *This warranty applies to all units operated in the United States or Canada.*

### Coverage

The model year, class of diesel engine, and emission application determination for your engine are identified on the Emission Control Information Label. This label is affixed to one of the following areas of the engine: the top of engine's rocker arm cover, the right-hand side of the oil pan, and the right-hand side of the engine front gear cover. The warranty period begins on the date the new equipment is sold to the first retail purchaser. The presence of the emission control label is the indication that the engine conforms to the applicable standards. Any emission control system parts which are proven defective during normal use will be repaired or replaced during the warranty period.

The engine owner has responsibility to perform all the required maintenance listed in the Owner's Manual. CASE CONSTRUCTION will not deny an emission warranty claim solely because no record of maintenance exists; however, a claim may be denied if failure to perform maintenance resulted in the failure of a warranted part.

It is recommended that replacement parts used for maintenance or repairs be CASE CONSTRUCTION Service Parts to maintain the quality originally designed into your emission certified engine. The use of non- CASE CONSTRUCTION parts does not invalidate the warranty on other components unless the use of such parts causes damage to warranted parts.

The manufacturer is liable for damages to other engine components caused by the failure of any warranted emission control system part. CASE CONSTRUCTION is not responsible for failures resulting from improper repair or the use of parts that are not genuine CASE CONSTRUCTION or CASE CONSTRUCTION approved parts.

### Component coverage

New engines certified for sale and registered will have the following items covered by the emission warranty, depending on the emission level of the engine, if the items were first installed on the new engine as original equipment:

Fuel injection system	Exhaust after treatment Devices (if applicable)
<ul style="list-style-type: none"><li>• Fuel injection pump</li><li>• Fuel injectors</li><li>• Fuel injection lines</li></ul>	<ul style="list-style-type: none"><li>• Diesel Oxidation Catalytic (DOC)</li><li>• Diesel particulate filter (DPF)</li></ul>
Air induction system	Exhaust Gas Recirculation Systems (EGR)
<ul style="list-style-type: none"><li>• Intake manifold</li><li>• Turbocharger system (includes exhaust manifold)</li><li>• Charge air cooler</li></ul>	<ul style="list-style-type: none"><li>• EGR valve assembly</li><li>• EGR cooler</li></ul>
Positive Crankcase Ventilation (PCV) system or Crankcase Ventilation (CCV) (if applicable)	Cold Start Enrichment Systems
<ul style="list-style-type: none"><li>• PCV or CCV valve</li><li>• Oil fill cap</li></ul>	Electronic Control Units, Sensors, Solenoids, and Wiring harnesses used in above systems

## Emissions warranty does not cover

- Repairs arising from storage deterioration, failure to maintain the equipment, negligence, alteration, improper use of the equipment, collision or other accident, vandalism, or other casualty, or operation beyond rated capacity or specification.
- Repairs arising from abuse or neglect, including but not limited to: operation without adequate coolant or lubricants, adjustments to the fuel system outside equipment specifications, over-speeding, improper storage, starting, warm-up, or shutdown practices, incorrect fuel or contaminated fuel, oil or other fluids.
- Normal maintenance services, such as engine tune-ups, engine fuel system cleaning, checks, adjustments, shimming, etc.
- Items replaced due to customer demand.
- Labor charges performed by anyone except a dealer authorized by contract to repair the equipment, unless they qualify under special provisions (i.e. outside labor).
- Any and all travel costs for items such as towing, service calls, or transporting a unit to and from the place where the warranty service is performed.
- Normal maintenance costs, including but not limited to: lubricants, coolants, fluids, fuel, filters, and associated labor. Lubricants, filters, and coolants may qualify for warranty reimbursement if they require replacement as a DIRECT RESULT of a defect in material or workmanship.
- Claims involving the inspection or reconditioning of units after storage or prior use.
- Repairs arising from service performed by agents not approved by CASE CONSTRUCTION.
- Repairs arising from any unauthorized modification to the product or the use of non- CASE CONSTRUCTION parts, implements or attachments.
- Removal, replacement, or installation of non- CASE CONSTRUCTION optional equipment, attachments or components.
- Premiums charged for overtime labor costs or out of shop expenses.
- Economic loss including lost profits, crop loss, equipment rental, or other expense.
- Unauthorized modification or updating machines without a warrantable failure.
- Any and all costs of dealer shop supplies incurred with repairs, including but not limited to: solvents, cleaners, anti-seize lubricants, loctite, sealant, adhesive, oil-dry, shop towels, etc.
- Failure of the machine, its implements or attachments caused by improper field application or loading.
- Any and all costs for coolant, fuel, or lube (oil) analysis including supplies and lab recommendations.
- Cost associated with cleaning of machine in preparation for servicing.

## Glossary

Acronym	Definition
EGR	Exhaust Gas Recirculation
DPD	Diesel Particulate Diffuser
DPF	Diesel Particulate Filter
DOC	Diesel Oxidation Catalyst
ISO	International Organization for Standardization
MSDS	Material Safety Data Sheet
NO <sub>x</sub>	Nitrogen Oxide
PPE	Personal Protective Equipment
ULSD	Ultra Low Sulfur Diesel
PM	Particulate Matter

## Units of measure

Symbol	Definition
C	Centigrade
F	Fahrenheit
°	Degree
%	Percent

<b>Symbol</b>	<b>Definition</b>
<	Less than
>	Greater than
mg/kg	Milligrams per kilogram