#### **ORIGINAL INSTRUCTIONS**

# FARMALL® 45C FARMALL® 55C Tier 4B (final) Tractor

FARMALL® 45C Cab: PIN LSMF45CCxx0010001 and above; ROPS: PIN LSMF45CRxx0010001 and above FARMALL® 55C Cab: PIN LSMF55CCxx0010001 and above; ROPS: PIN LSMF55CCxx0010001 and above

### **OPERATOR'S MANUAL**

Part number 48115974

2<sup>nd</sup> edition English July 2018 Replaces part number 48048883



## Contents

1	GENERAL INFORMATION	
	Note to the owner	
	Tractor intended use Emissions overview	
	Electro-Magnetic Compatibility (EMC)	
	Manual scope	
	Product Identification Number (PIN)	
	,	
	Operator's manual storage on the machine - Roll Over Protective Structure (ROPS)	
	Operator's manual storage on the machine - Cab	
	Machine orientation - Roll Over Protective Structure (ROPS)	
	Machine orientation - Cab	. 1-12
2	SAFETY INFORMATION	
_	Safety rules and signal word definitions	2-1
	Safety rules	
	Do not operate tag	
	Folding Roll Over Protective Structure (ROPS)	
	Starting up the machine safely	
	Stopping the machine safely	
	Ecology and environment	
	Safety signs - Cab	
	Safety signs - Roll Over Protective Structure (ROPS)	
	Instructional signs - Cab	
	Instructional signs - Roll Over Protective Structure (ROPS)	. 2-50
3	CONTROLS AND INSTRUMENTS	
	Access to operator's platform	
	Operator's platform access - Roll Over Protective Structure (ROPS)	
	Cab door	
	Cab side window	
	Cab rear window	J-J
	Operator's seat	
	Seat belt - Cab	3-4
	Seat belt - Roll Over Protective Structure (ROPS)	3-4
	Seat controls - Cab	
	Seat controls - Roll Over Protective Structure (ROPS)	3-6
	Farward controls	
	Forward controls	27
	Instrument panel	
	Engine fault code display	
	Cruise controlTransmission shuttle shift lever	
	Clutch pedal	
	poss	

Brake pedals	3-20
Foot throttle pedal	3-20
Hand throttle lever	
Horn switch	
Hazard light switch	
Power Take-Off (PTO) switch	
Key switch	
Differential lock pedal	
Hydrostatic transmission (HST) foot pedals	
Multifunction light switch	
DPF switch	
Beacon switch (Beacon is optional)	
Left-hand side controls	
Transmission range lever - Mechanical - Cab	3-27
Transmission range lever - Mechanical - Roll Over Protective Structure (ROPS)	3-27
Park brake - Cab	3-28
Park brake - Roll Over Protective Structure (ROPS)	
Front Wheel Drive (FWD) lever - Cab	
Front Wheel Drive (FWD) - Handle	
MId Power Take Off (PTO) - Handle	3-32
Right-hand side controls	
Constant Engine Speed (CES) switch – Roll Over Protective Structure (ROPS)	3-33
Constant Engine Speed (CES) Up / Down switch – Roll Over Protective Structure (	
Constant Engine Speed (CES) switch – Cab	
Constant Engine Speed (CES) Up / Down switch – Cab	3-34
Hydraulic Power Lift (HPL) - Cab	
Hydraulic Power Lift (HPL) - Roll Over Protective Structure (ROPS)	3-36
Draft control - Cab	3-37
Draft control - Roll Over Protective Structure (ROPS)	
Rear remote control valves - Cab	3-39
Mid mount two spool control valve - Cab	
Transmission main shift lever - Cab	
Transmission main shift lever - Roll Over Protective Structure (ROPS)	3-45
Transmission range lever - Hydrostatic (HST) - Cab	
Transmission range lever - Hydrostatic (HST) - Roll Over Protective Structure (ROF	
Cab internal lighting	
Cab external lighting	
Front window wiper/washer	
Rear window wiper/washer (optional)	
Auxiliary power outlet	
Overhead controls	<b>-</b>
Cab climate control	3-52

Air conditioning	3-53
Front sun shade	
Rear-view inside mirror	3-57
Exterior controls	
Exterior controls  Rear-view outside mirrors	2 50
Hood release latch	
Tioda release lateri	
4 OPERATING INSTRUCTIONS	
Commissioning the unit	
Engine break-in procedure	4-1
Diesel Particulate Filter (DPF) regeneration	4-2
Constant engine speed – Roll Over Protection Structure (ROPS)	4-7
Constant engine speed – Cab	4-8
Power Take Off (PTO) operation - Cab	
Power Take-Off (PTO) - Roll Over Protective Structure (ROPS)	
Three-point linkage	
Attaching three-point equipment	
Extendable drawbar - Cab	
Extendable drawbar - Roll Over Protective Structure - (ROPS)	
Top link adjustment	
Roll Over Protective Structure (ROPS) Fold up/down	
Non Over 1 Totective Structure (NOT 3) Tota apradwit	<del>4-</del> 21
Starting the unit	
Key switch	4-23
Cold starting aids	4-24
Starting the engine (Mechanical)	4-25
Starting the engine (Hydrostatic transmission)	4-28
Starting the tractor with jumper cables	4-31
Stanning the unit	
Stopping the unit	4.00
Stopping the engine	
Emergency stopping - Cab	
Emergency stopping - Roll Over Protective Structure - (ROPS)	
Brakes - HST and Mechanical transmissions	4-35
Moving the unit	
Steering wheel adjustment	4-38
Steering operation	
Transmission operation at low ambient temperatures	
Hydrostatic transmission (HST) operation	
16 x 16 Synchronized transmission operation	4-43

Parking the unit	
Brakes and controls - Park - CabBrakes and controls - Park - Roll Over Protective Structure - (ROPS)	4-45
Brakes and controls - Park - Roll Over Protective Structure - (ROPS)	4-47
5 TRANSPORT OPERATIONS	
Road transport	
External lighting - Cab	5-1
External lighting - Roll Over Protective Structure - (ROPS)	
Hazard warning light operation - Cab	5-3
Hazard warning light operation - Roll Over Protective Structure - (ROPS)	5-4
Turn signal operation - Cab	
Turn signal operation - Roll Over Protective Structure (ROPS)	
Road lights - Operation - Cab	
Road lights - Operation - Roll Over Protective Structure (ROPS)	
Work lights - Operation - Roll Over Protective Structure (ROPS)	
Driving the vehicle	
Shipping transport	
Carrying the tractor on a transporter	5-11
Recovery transport	
Towing	5-12
6 WORKING OPERATIONS	
General information	
Roll Over Protective Structure (ROPS) Fold up/down	6-1
Tractor ballasting	
Tractor ballasting weights	
Liquid ballast	6-6
7 MAINTENANCE	
General information	
General information	7-1
General specification - Diesel fuel	
General specification - Biodiesel fuels	
Refueling the tractor - Cab	
Refueling the tractor - Roll Over Protective Structure (ROPS)	
Change engine coolant to Organic Acid Technology (OAT) coolant	
Capacities	
·	

Maintenance planning  Maintenance chart Roll-Over Protective Structure (ROPS)	
Every 10 hours or daily	
Engine oil level - Check	7-16
Engine cooling system - Check	
After first 50 hours	
After first 50 hours Engine oil and oil filter - Change	7-18
Hydraulic oil filter - Replace	
Hydraulic (HST) oil filter - Replace	
Wheel bolt / nut - Tighten	
Fuel water seperator filter - Replace	7-21
Every 50 hours	
Grease fittings	7-22
Transmission fluid level - Check	
Clutch pedal free play - Check	
Brake pedal free play - Check	
Hydrostatic transmission (HST) neutral adjustment - Check	
Engine belts - Check	
Front axle and differential oil level - Check	
Air cleaner - Clean - Primary element	
Cab air filter - Clean	7-32
Every 100 hours	
Fuel filter - Drain	7-34
Every 300 hours	
Engine oil and oil filter - Change	7-35
Hydraulic oil filter - Replace	
Hydrostatic Transmission (HST) oil filter - Replace	
Engine belts - Check	
Wheel bolt / nut - Check	
Air cleaner primary element - Replace	
Every 500 hours	
Fuel filter water separator - Replace	
Cab air filter - Replace	7-39
Every 600 hours	
Front axle differential fluid - Change	
Transmission fluid - Change	7-43

	Air cleaner inner element - Replace	7-44
	Every 1500 hours	
	Engine coolant - Draining and flushing - Cab	
	Engine coolant - Draining and flushing - Roll Over Protective Structure (ROPS)	7-47
	General maintenance	
	Fuel water separator filter - Bleed	
	Hydrostatic Transmission (HST) neutral adjustment	
	Engine belts - Adjust	
	Alternator	
	Headlight bulb	
	Rear tail/brake/hazard/turn signal bulbs	
	Front turn signal/hazard light bulb	7-57
	External work light - Cab	7-58
	Wheels bolt/nut	
	Front wheels toe-in	
	Clutch pedal free play - Check	
	Fuse and relay locations	, 01
	Fuse and relay locations	7-62
	Storage	
	Storing the tractor	7-64
	Removal of the tractor from storage	
8	TROUBLESHOOTING	
	Symptom(s)	0.4
	Engine - Troubleshooting  Clutch - Troubleshooting	
	Mechanical service brakes - Troubleshooting	
	Hydraulic Lift System - Troubleshooting	
	Steering - Troubleshooting	
	Hydrostatic transmission - Troubleshooting	
	Electrical system - Troubleshooting	
9	SPECIFICATIONS	
_	Wheel tread settings	. 9-1
	Tire inflation pressures	. 9-2
	Liquid ballast	
	General specification	
	Consumables	. 9-8

	Tractor dimensions - Cab	
10	ACCESSORIES Optional equipment	10-1
11	FORMS AND DECLARATIONS Pre-delivery report - Dealer's copy Pre-delivery report - Owner's copy	

### 1 - GENERAL INFORMATION

#### Note to the owner

This manual contains information concerning the adjustment and maintenance of your new equipment. You have purchased a dependable machine, but only by proper care and operation can you expect to receive the performance and long service built into this equipment. Please have all operators read this manual carefully and keep it available for ready reference.

Your CASE IH dealer will instruct you in the general operation of your new equipment. (Refer to the 'Delivery Report' at the back of this manual.) Your dealer's staff of factory-trained service technicians will be glad to answer any questions that may arise regarding the operation of your machine. Case IH Max Service is also available. Call 1-877-4CASEIH (1-877-422-7344) or email maxservice.na@cnh.com.

Your CASE IH dealer carries a complete line of genuine CASE IH service parts. These parts are manufactured and carefully inspected to insure high quality and accurate fitting of any necessary replacement parts. Be prepared to give your dealer the model and product identification number of your new equipment when ordering parts. Locate these numbers now and record them below. Refer to the 'General Information' section of this manual for the location of the model and product identification numbers of your machine.

PLEASE RECORD THE FOLLOWING INFORM Model	ATION
Product Identification Number (PIN)	
Engine number	
Transmission number	
Purchase date	



This is the safety alert symbol. It is used with and without signal words to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

#### **A** WARNING

Illustrations in this manual may show protective shielding open or removed to better illustrate a particular feature or adjustment.

Replace all shields before operating the machine.

Failure to comply could result in death or serious injury.

W0012A

**ATTENTION:** The engine and fuel system on your machine is designed and built to government emission standards. Tampering by dealer, customers, operators, and end 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!

#### **Improvements**

CNH INDUSTRIAL AMERICA LLC is continually striving to improve its products. We reserve the right to make improvements or changes when it becomes practical and possible to do so, without incurring any obligation to make changes or additions to the equipment sold previously.

#### Tractor intended use

#### **▲** WARNING

Roll-over hazard!

Always pull from the drawbar. DO NOT attach chains or ropes to the Roll Over Protective Structure (ROPS) for pulling purposes, as the machine could tip over. When driving through door openings or under low overhead objects, make sure there is sufficient clearance for the ROPS.

Failure to comply could result in death or serious injury.

W0463A

Your tractor is designed and made to pull, to carry, and to power a variety of mounted or towed equipment, although within some physical limits. The working speed and performance may depend on a number of various parameters, such as weather and terrain conditions. Though the tractor is designed to perform in combination with a variety of equipment in most crops and conditions, there may be a number of combinations of above parameters, for which there is severe degradation of performance of the tractor and/or its mounted or trailed equipment. If you notice degradation of performance, contact your dealer for assistance. He may have useful information for improvements, or a kit may be available to enhance the performance.

- · Do not use the tractor for another purpose than intended by the manufacturer and outlined in this manual.
- Do not use the tractor beyond its limits of terrain gradient and stability as outlined further in this manual. Using the tractor beyond these limits may result in roll-over or tip-over. Observe the recommendations in this manual.
- Use only approved accessories and attachments that are designed for your machine. Consult your dealer on changes, additions or modifications that may be required for your machine. Do not make any unauthorized modifications to your machine.
- Do not use the tractor on higher speeds than allowed by the load and the environment. A wet surface or other low
  adherence conditions may increase the braking distance or result in vehicle instability. Always adapt your traveling
  speed according to the load of the vehicle and the characteristics of the road.
- Do not use the tractor near or on soft verges of canals and brooks or banks and verges that are undermined by rodents. The tractor may sink sideways and roll-over.
- Do not use the tractor on brittle bridge heads and poor bridge floors. These constructions may collapse and cause roll-over of the tractor. Always check out the condition and carrying capacity of bridges and ramps prior to engage.
- Do not use the tractor without wearing the seat restraint system during activities where roll-over or tip-over hazards
  exist. The Roll Over Protection Structure (ROPS) cab or ROPS structure will only be fully effective when the driver
  remains attached to his seat.
- Do not use equipment mounted on the tractor which is not correctly matching and firmly fixed. Such equipment may
  increase the risk for roll-over and hit the tractor when coming loose. Ensure that the dimensions of the three-point
  linkage interface of both the tractor and the equipment are matching according to the categories defined in ISO
  730. Ensure that the dimensions and speed of the Power Take-Off (PTO) shaft on the tractors are matching those
  of the equipment.
- Do not use the tractor in combination with equipment, without having consulted the specific operator's manual provided with the equipment. The tractor is a universal tool to carry, tow, and drive a variety of equipment. This manual alone cannot provide you with all the information required for the safe operation of the combination.
- Do not use the tractor beyond its limits of dynamic stability. High speed, abrupt maneuvers, and fast and short cornering will increase the risk of roll-over.
- Do not use the tractor for pulling work, in cases where you do not know whether the load will yield, for instance when pulling stumps. The tractor may flip over when the stump is not yielding.
- Be cautious that the center of gravity of the tractor may increase when loads on the front-end loader or the three-point linkage are raised. In these conditions, the tractor may roll-over earlier than expected.
- Do not step down from the tractor without shutting down the PTO, shifting the transmission to park or neutral and applying the park brake, unless continued PTO operation is required for some equipment, such as pumps or wood chippers. The latter equipment may have an emergency stop device on the equipment itself, as human intervention is needed during operation. But other equipment, engaged and driven by the tractor will have no means to stop the power transmission, other than the PTO clutch of the tractor.
- You shall take the necessary precautions to always be aware of the possible presence of bystanders, certainly when
  maneuvering in confined areas, such as the farm yard and sheds. Keep people away from the tractor during work;
  ask bystanders to leave the field. There is not only the risk to be overrun by the tractor, but objects ejected by some

equipment mounted on the tractor, such as a rotary mower, may cause harm. Stones may be thrown further than the mowed crop. Pay the necessary attention while operating next to public roads or footpaths. Thrown objects can get projected outside the field and hit unprotected people like bikers or pedestrians. Wait to cut the edge of the field till it is clear of bystanders.

- Do not allow riders on the tractor; do not allow people standing on the access way or step to the cab when the tractor is moving. Your view to the left will be obstructed and a rider risks to fall from the tractor during unforeseen or abrupt movements.
- Always stay clear from implements operating area and especially do not stand between tractor and trailed vehicle
  either three-point linkage when operating lift controls; ensure no bystanders are near these operating areas.
- Your tractor may be equipped with a number of sensors to control safety functions. Tripping these sensors will result
  in a safe operation mode. Do not attempt to bypass any function on the tractor. You will be exposed to serious
  hazards, and moreover, the behavior of the tractor may become unpredictable.
- A tractor has only one operator station and is a one man operated vehicle. Other people on or around the tractor during normal operation are not allowed.
- All persons who will be operating this machine shall possess a valid local vehicle operating permit and/or other applicable local age work permits.
- · The machine is designed and produced exclusively for agricultural use.
- The machine is not designed for light/heavy forestry applications; usage is prohibited for forestry applications.
- All other use will be considered to be contrary to the use specified by CNH INDUSTRIAL AMERICA LLC, who
  cannot be held liable for damage to property or the machine, or for personal injuries which may result.
- Persons who risk improper use will therefore assume the responsibility for any consequences arising from such use.
- Compliance with the instructions for use, maintenance and repairs described in this manual, are the essential preconditions for the use specified by CNH INDUSTRIAL AMERICA LLC.
- The machine must only be used, serviced, or repaired by personnel trained in the relevant working methods and safety regulations and who have been authorized to work on the machine.
- The engine and fuel system on your machine is designed and built to government emissions standards. Tampering by dealer, 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!
- The user must also observe the rules concerning general safety and accident prevention, including the Highway Code when driving on public highways.
- Any arbitrary modifications made to this machine will release CNH INDUSTRIAL AMERICA LLC from any liability resulting from damage or injury.
- CNH INDUSTRIAL AMERICA LLC and all its distribution organizations, inclusive of, but not restricted to, national, regional, or local distributors, cannot be held liable for damage resulting from the malfunction of parts and/or components not approved by CNH INDUSTRIAL AMERICA LLC.
- Under no circumstances will a guarantee be issued for products made or sold by CNH INDUSTRIAL AMERICA LLC that are damaged as a result of the malfunction of parts and/or components not approved by CNH INDUSTRIAL AMERICA LLC.

#### **Emissions overview**

#### FEDERAL and CALIFORNIA EMISSION CONTROL SYSTEM WARRANTY STATEMENT

#### Your warranty rights and obligations

The California Air Resources Board (CARB), U.S. Environmental Protection Agency (EPA), and LS Mtron Ltd. (LS Mtron) are pleased to explain the emission control system warranty on your 2017-2018 model year engine. New engines must be designed, built and equipped to meet stringent anti-smog standards. LS Mtron must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance or usage of your engine. Additional conditions and responsibilities are further outlined below. Where a warrantable condition exists, LS Mtron will repair your engine at no cost to you including diagnosis, parts and labor.

#### MANUFACTURER'S LIMITED WARRANTY COVERAGE:

LS Mtron warrants to the original owner, and to each subsequent owner of a new diesel engine, that the emission control system of your engine:

- 1. Was designed, built and equipped so as to conform at the time of sale with all applicable regulations of CARB and EPA.
- 2. Is free from defects in material and workmanship which will cause such engine to fail to conform with applicable regulations for the following warranty period:
  - o For engines rated at or above 19 kW (25 Hp): five (5) years or 3,000 hours of operation, whichever occurs first.

The warranty period shall begin:

- On the date the equipment is first delivered to the first retail purchaser, or;
- If the equipment is placed in service for demonstration purposes prior to sale at retail, on the date the engine is first placed in service.

The emission control systems of your new LS Mtron engine were designed, built and tested using genuine LS Mtron parts, and the engine is certified as being in conformity with CARB and EPA emission control regulations. Accordingly, it is recommended that any replacement parts used for maintenance, repair, or replacement of emission control systems must be LS Mtron parts. Any replacement part may be used in the performance of any maintenance or repairs and will be provided without charge to the owner, although LS Mtron recommends that the owner obtain assurance that such parts are warranted by their manufacturer and LS Mtron to be equivalent to genuine LS Mtron parts. Such use shall not reduce the warranty obligations of LS Mtron, provided they are warranted to be equivalent to genuine LS Mtron parts.

Any warranted part which is not scheduled for replacement as required maintenance shall be warranted for the warranty period defined above. If any such part fails during the period of warranty coverage, and provided that there has been no abuse, neglect or improper maintenance or usage of your engine, it will be repaired or replaced under warranty. Any such part repaired or replaced under the warranty shall be warranted for the remaining warranty period.

Any warranted part which is scheduled only for regular inspection in the written instructions shall be warranted for the warranty period defined above, provided that there has been no abuse, neglect or improper maintenance or usage of your engine. A statement in the written instructions to the effect of "repair or replace as necessary" shall not reduce the period of warranty coverage. Any such part repaired or replaced under warranty shall be warranted for the remaining warranty period.

Any warranted part which is scheduled for replacement as required maintenance shall be warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part shall be repaired or replaced by LS Mtron under warranty, provided that there has been no abuse, neglect or improper maintenance or usage of your engine. Any such part repaired or replaced under warranty shall be warranted for the remainder of the period prior to the first scheduled replacement point for the part.

LS Mtron provides warranty services or repairs at all manufacturer distribution centers (warranty stations) that are franchised to service the subject engines. Please see the Customer Assistance section of this statement for help in locating such service centers. Repair or replacement of any warranted part under warranty shall be performed at no charge to the owner at a warranty station.

The owner will not be charged for diagnostic labor that leads to the determination that a warranted part is in fact defective, provided that such diagnostic work is performed at a warranty station.

LS Mtron is liable for damages to other engine components proximately caused by a failure under warranty of any warranted part.

LS Mtron is required by California regulations to maintain a supply of warranted parts sufficient to meet the expected demand for such parts during the warranty period for the engines covered by this warranty.

#### **OWNER'S WARRANTY RESPONSIBILITIES:**

This engine is designed to operate on ultra low sulfur diesel fuel only. Use of any other fuel may result in this engine no longer operating in compliance with CARB or EPA's emissions requirements.

The purchaser is responsible for initiating the warranty process. You must present the engine to a LS Mtron dealer as soon as a problem exists. The warranty repairs should be completed by the dealer as expeditiously as possible.

Use of any add-on or modified parts that are not exempted from anti-tampering laws by CARB or EPA may reduce or eliminate your warranty coverage. The use of any non-exempted add-on or modified parts shall be grounds for disallowing a warranty claim. LS Mtron is not liable for failures of warranted parts caused by the use of a non-exempted add-on or modified part.

The emissions control parts covered by this Limited Emission Control System Warranty are listed under "What is covered by the Limited Emission Control System Warranty." You are responsible for the performance of all scheduled maintenance or repairs on your new LS Mtron engine. LS Mtron may deny a warranty claim if failure to perform maintenance results in the failure of a warranted part. Receipts covering the performance of regular maintenance should be retained in the event of questions arise concerning maintenance. The receipts should be transferred to each subsequent owner of the equipment with the emission warranted engines.

#### **Customer Assistance**

LS Mtron Ltd. 886, Gwahak-Ro, Bongdong-Eup Wanju-gun, Jeollabuk-Do, Korea Phone: 82-63-279-5824

Fax: 82-63-279-5933

CNH America LLC Matt Fraiser 1919 Williams St San Leandro, CA 94577 Phone: 1-510-351-2015

Fax: 1-510-357-2546

CNH America LLC Andrew Jonik 200 George Delp Rd

New Holland, PA 17557 Phone: 1-717-355-1121 Fax: 1-717-355-1706

#### What is not covered by the Limited Emission Control System Warranty

This warranty does not cover:

- 1. Malfunctions in any part caused by any of the following: misuse, abuse, improper adjustments, modifications, alteration, tampering, disconnection, improper or inadequate maintenance, or use of fuels not recommended for the engine as described in the Maintenance Manual.
- 2. Damage resulting from accident, acts of nature or other events beyond the control of LS Mtron.
- 3. The replacement of expendable maintenance items such as exhaust system, filters, hoses, belts, oil, thermostat, and coolant made in connection with scheduled maintenance services once these parts have been replaced.
- 4. Replacement items which are not genuine LS Mtron parts or not authorized by LS Mtron.
- Loss of time, inconvenience, loss of use of equipment, engine or commercial loss.

#### What is covered by the Limited Emission Control System Warranty

The following is a list of systems and parts that are considered a part of the Emission Control System and are covered by the Limited Emission Control System Warranty for engines which were built to conform to CARB and EPA regulations:

IMPORTANT! This may not include expendable maintenance items such as nozzle assemblies and rubber flanges. Emission related parts requiring scheduled maintenance are warranted until their first scheduled replacement point only.

This Limited Emission Control System Warranty applies to the following emission control parts:

- 1. Fuel System
  - A. Fuel injection pump.
  - B. Fuel Injectors.
- 2. Air Induction System
  - A. Intake manifold.
  - B. Turbocharger
  - C. Air Control Valve
  - D. Exhaust Manifold
- 3. Exhaust Gas Recirculation (EGR) System
  - A. EGR valve body
- 4. Aftertreatment Devices
  - A. Diesel Oxidation Catalyst (DOC)
  - B. Diesel Particulate Filter (DPF)
- 5. Positive Crankcase Ventilation (PCV) System.
  - A. PCV Valve.
  - B. Oil Filler Cap.
- 6. Miscellaneous items Used in Above Systems
  - A. Vacuum, temperature, and time sensitive valves and switches.
  - B. Electronic control units, sensors, solenoids, and wiring harnesses.
  - C. Hoses, belts, connectors, assemblies, clamps, fittings, tubing, sealing gaskets or devices, and mounting hardware.
  - D. Pulleys, belts and idlers.
  - E. Emission Control Information Labels.
  - F. Any other part with the primary purpose of reducing emissions or that can increase emissions during failure without significantly degrading engine performance.



Our support email: ebooklibonline@outlook.com