

SERVICE MANUAL

T8.320 / T8.350 / T8.380 / T8.410 Powershift Transmission (PST) Tractor

PIN ZERE04800 and above

Part number 47685456

1st edition English

May 2014

Sample manual. Download All 4404 pages at:
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Link Product / Engine

| Product | Market Product | Engine |
|--|----------------|----------------|
| T8.320 696110027 PST TIER 4b [ZERE04800 -] | North America | F2CFE613G*B002 |
| T8.350 696110037 PST TIER 4b [ZERE04800 -] | North America | F2CFE614G*B003 |
| T8.380 696110047 PST TIER 4b [ZERE04800 -] | North America | F2CFE614D*B003 |
| T8.410 696110057 PST TIER 4b [ZERE04800 -] | North America | F2CFE614C*B003 |

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INTRODUCTION

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INTRODUCTION

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Foreword - Important notice regarding equipment servicing

All repair and maintenance work listed in this manual must be carried out only by qualified dealership personnel, strictly complying with the instructions given, and using, whenever possible, the special tools.

Anyone who performs repair and maintenance operations without complying with the procedures provided herein shall be responsible for any subsequent damages.

The manufacturer and all the organizations of its distribution chain, including - without limitation - national, regional, or local dealers, reject any responsibility for damages caused by parts and/or components not approved by the manufacturer, including those used for the servicing or repair of the product manufactured or marketed by the manufacturer. In any case, no warranty is given or attributed on the product manufactured or marketed by the manufacturer in case of damages caused by parts and/or components not approved by the manufacturer.

The information in this manual is up-to-date at the date of the publication. It is the policy of the manufacturer for continuous improvement. Some information could not be updated due to modifications of a technical or commercial type, or changes to the laws and regulations of different countries.

In case of questions, refer to your NEW HOLLAND Sales and Service Networks.

Safety rules


Personal safety





This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

Throughout this manual you will find the signal words DANGER, WARNING, and CAUTION followed by special instructions. These precautions are intended for the personal safety of you and those working with you.

Read and understand all the safety messages in this manual before you operate or service the machine.

 DANGER indicates a hazardous situation that, if not avoided, will result in death or serious injury.

 WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury.

 CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

FAILURE TO FOLLOW DANGER, WARNING, AND CAUTION MESSAGES COULD RESULT IN DEATH OR SERIOUS INJURY.

Machine safety

NOTICE: Notice indicates a situation that, if not avoided, could result in machine or property damage.

Throughout this manual you will find the signal word Notice followed by special instructions to prevent machine or property damage. The word Notice is used to address practices not related to personal safety.

Information

NOTE: Note indicates additional information that clarifies steps, procedures, or other information in this manual.

Throughout this manual you will find the word Note followed by additional information about a step, procedure, or other information in the manual. The word Note is not intended to address personal safety or property damage.

Safety rules - General maintenance safety

General maintenance safety

Keep the area used for servicing the machine clean and dry. Clean up spilled fluids.

Service the machine on a firm, level surface.

Install guards and shields after you service the machine.

Close all access doors and install all panels after servicing the machine.

Do not attempt to clean, lubricate, clear obstructions, or make adjustments to the machine while it is in motion or while the engine is running.

Always make sure that working area is clear of tools, parts, other persons and pets before you start operating the machine.

Unsupported hydraulic cylinders can lose pressure and drop the equipment, causing a crushing hazard. Do not leave equipment in a raised position while parked or during service, unless the equipment is securely supported.

Jack or lift the machine only at jack or lift points indicated in this manual.

Incorrect towing procedures can cause accidents. When you tow a disabled machine follow the procedure in this manual. Use only rigid tow bars.

Stop the engine, remove the key, and relieve pressure before you connect or disconnect fluid lines.

Stop the engine and remove the key before you connect or disconnect electrical connections.

Scalding can result from incorrect removal of coolant caps. Cooling systems operate under pressure. Hot coolant can spray out if you remove a cap while the system is hot. Allow the system to cool before you remove the cap. When you remove the cap, turn it slowly to allow pressure to escape before you completely remove the cap.

Replace damaged or worn tubes, hoses, electrical wiring, etc.

The engine, transmission, exhaust components, and hydraulic lines may become hot during operation. Take care when you service such components. Allow surfaces to cool before you handle or disconnect hot components. Wear protective equipment when appropriate.

When welding, follow the instructions in the manual. Always disconnect the battery before you weld on the machine. Always wash your hands after you handle battery components.

Safety rules - Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE)

Wear Personal Protective Equipment (PPE) such as hard hat, eye protection, heavy gloves, hearing protection, protective clothing, etc.

Safety rules - Do Not Operate tag

Do Not Operate tag

Before you start servicing the machine, attach a 'Do Not Operate' warning tag to the machine in an area that will be visible.

Safety rules - Ecology and the environment

Soil, air, and water are vital factors of agriculture and life in general. When legislation does not yet rule the treatment of some of the substances required by advanced technology, sound judgment should govern the use and disposal of products of a chemical and petrochemical nature.

NOTE: *The following are recommendations that may be of assistance:*

- Become acquainted with and ensure that you understand the relative legislation applicable to your country.
- Where no legislation exists, obtain information from suppliers of oils, filters, batteries, fuels, antifreeze, cleaning agents, etc., with regard to their effect on man and nature and how to safely store, use, and dispose of these substances.
- Agricultural consultants will, in many cases, be able to help you as well.

Helpful hints

- Avoid filling tanks using cans or inappropriate pressurized fuel delivery systems that may cause considerable spillage.
- In general, avoid skin contact with all fuels, oils, acids, solvents, etc. Most of them contain substances that may be harmful to your health.
- Modern oils contain additives. Do not burn contaminated fuels and or waste oils in ordinary heating systems.
- Avoid spillage when draining off used engine coolant mixtures, engine, gearbox and hydraulic oils, brake fluids, etc. Do not mix drained brake fluids or fuels with lubricants. Store them safely until they can be disposed of in a proper way to comply with local legislation and available resources.
- Modern coolant mixtures, i.e. antifreeze and other additives, should be replaced every two years. They should not be allowed to get into the soil, but should be collected and disposed of properly.
- Do not open the air-conditioning system yourself. It contains gases that should not be released into the atmosphere. Your NEW HOLLAND dealer or air conditioning specialist has a special extractor for this purpose and will have to recharge the system properly.
- Repair any leaks or defects in the engine cooling or hydraulic system immediately.
- Do not increase the pressure in a pressurized circuit as this may lead to a component failure.
- Protect hoses during welding as penetrating weld splatter may burn a hole or weaken them, allowing the loss of oils, coolant, etc.

Torque - Minimum tightening torques for normal assembly

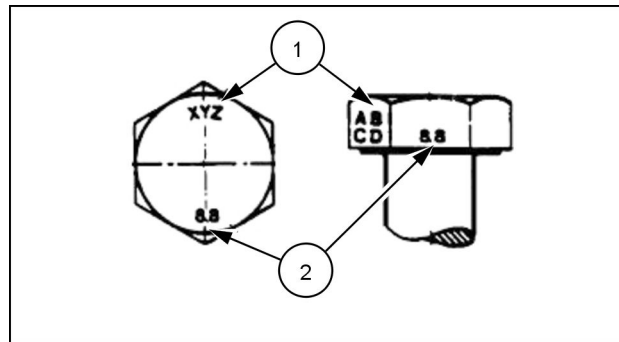
METRIC NON-FLANGED HARDWARE

| NOM. SIZE | CLASS 8.8 BOLT and CLASS 8 NUT | | CLASS 10.9 BOLT and CLASS 10 NUT | | LOCKNUT CL.8 W/CL8.8 BOLT | LOCKNUT CL.10 W/CL10.9 BOLT |
|--------------|-----------------------------------|---------------------|-------------------------------------|----------------------|------------------------------------|--------------------------------------|
| | UNPLATED | PLATED W/ZnCr | UNPLATED | PLATED W/ZnCr | | |
| M4 | 2.2 N·m (19 lb in) | 2.9 N·m (26 lb in) | 3.2 N·m (28 lb in) | 4.2 N·m (37 lb in) | 2 N·m (18 lb in) | 2.9 N·m (26 lb in) |
| M5 | 4.5 N·m (40 lb in) | 5.9 N·m (52 lb in) | 6.4 N·m (57 lb in) | 8.5 N·m (75 lb in) | 4 N·m (36 lb in) | 5.8 N·m (51 lb in) |
| M6 | 7.5 N·m (66 lb in) | 10 N·m (89 lb in) | 11 N·m (96 lb in) | 15 N·m (128 lb in) | 6.8 N·m (60 lb in) | 10 N·m (89 lb in) |
| M8 | 18 N·m (163 lb in) | 25 N·m (217 lb in) | 26 N·m (234 lb in) | 35 N·m (311 lb in) | 17 N·m (151 lb in) | 24 N·m (212 lb in) |
| M10 | 37 N·m (27 lb ft) | 49 N·m (36 lb ft) | 52 N·m (38 lb ft) | 70 N·m (51 lb ft) | 33 N·m (25 lb ft) | 48 N·m (35 lb ft) |
| M12 | 64 N·m (47 lb ft) | 85 N·m (63 lb ft) | 91 N·m (67 lb ft) | 121 N·m (90 lb ft) | 58 N·m (43 lb ft) | 83 N·m (61 lb ft) |
| M16 | 158 N·m (116 lb ft) | 210 N·m (155 lb ft) | 225 N·m (166 lb ft) | 301 N·m (222 lb ft) | 143 N·m (106 lb ft) | 205 N·m (151 lb ft) |
| M20 | 319 N·m (235 lb ft) | 425 N·m (313 lb ft) | 440 N·m (325 lb ft) | 587 N·m (433 lb ft) | 290 N·m (214 lb ft) | 400 N·m (295 lb ft) |
| M24 | 551 N·m (410 lb ft) | 735 N·m (500 lb ft) | 762 N·m (560 lb ft) | 1016 N·m (750 lb ft) | 501 N·m (370 lb ft) | 693 N·m (510 lb ft) |

NOTE: M4 through M8 hardware torque specifications are shown in pound-inches. M10 through M24 hardware torque specifications are shown in pound-feet.

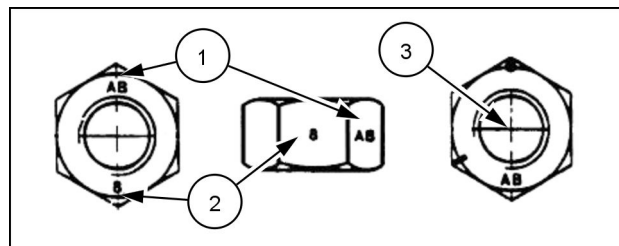
METRIC FLANGED HARDWARE

| NOM. SIZE | CLASS 8.8 BOLT and CLASS 8 NUT | | CLASS 10.9 BOLT and CLASS 10 NUT | | LOCKNUT CL.8 W/CL8.8 BOLT | LOCKNUT CL.10 W/CL10.9 BOLT |
|--------------|-----------------------------------|------------------------|-------------------------------------|-------------------------|------------------------------------|--------------------------------------|
| | UNPLATED | PLATED W/ZnCr | UNPLATED | PLATED W/ZnCr | | |
| M4 | 2.4 N·m (21 lb in) | 3.2 N·m (28 lb in) | 3.5 N·m (31 lb in) | 4.6 N·m (41 lb in) | 2.2 N·m (19 lb in) | 3.1 N·m (27 lb in) |
| M5 | 4.9 N·m (43 lb in) | 6.5 N·m (58 lb in) | 7.0 N·m (62 lb in) | 9.4 N·m (83 lb in) | 4.4 N·m (39 lb in) | 6.4 N·m (57 lb in) |
| M6 | 8.3 N·m (73 lb in) | 11 N·m (96 lb in) | 12 N·m (105 lb in) | 16 N·m (141 lb in) | 7.5 N·m (66 lb in) | 11 N·m (96 lb in) |
| M8 | 20 N·m (179 lb in) | 27 N·m (240 lb in) | 29 N·m (257 lb in) | 39 N·m (343 lb in) | 18 N·m (163 lb in) | 27 N·m (240 lb in) |
| M10 | 40 N·m (30 lb ft) | 54 N·m (40 lb ft) | 57 N·m (42 lb ft) | 77 N·m (56 lb ft) | 37 N·m (27 lb ft) | 53 N·m (39 lb ft) |
| M12 | 70 N·m (52 lb ft) | 93 N·m (69 lb ft) | 100 N·m (74 lb ft) | 134 N·m (98 lb ft) | 63 N·m (47 lb ft) | 91 N·m (67 lb ft) |
| M16 | 174 N·m (128 lb ft) | 231 N·m (171 lb ft) | 248 N·m (183 lb ft) | 331 N·m (244 lb ft) | 158 N·m (116 lb ft) | 226 N·m (167 lb ft) |
| M20 | 350 N·m (259 lb ft) | 467 N·m (345 lb ft) | 484 N·m (357 lb ft) | 645 N·m (476 lb ft) | 318 N·m (235 lb ft) | 440 N·m (325 lb ft) |
| M24 | 607 N·m (447 lb ft) | 809 N·m (597 lb ft) | 838 N·m (618 lb ft) | 1118 N·m (824 lb ft) | 552 N·m (407 lb ft) | |

IDENTIFICATION**Metric Hex head and carriage bolts, classes 5.6 and up**

20083680 1

1. Manufacturer's Identification
2. Property Class

Metric Hex nuts and locknuts, classes 05 and up

20083681 2

1. Manufacturer's Identification
2. Property Class
3. Clock Marking of Property Class and Manufacturer's Identification (Optional), i.e. marks **60 °** apart indicate Class 10 properties, and marks **120 °** apart indicate Class 8.

INCH NON-FLANGED HARDWARE

| NOMINAL SIZE | SAE GRADE 5 BOLT and NUT | | SAE GRADE 8 BOLT and NUT | | LOCKNUT GrB W/ Gr5 BOLT | LOCKNUT GrC W/ Gr8 BOLT |
|-----------------|---|--------------------------|--------------------------------------|--------------------------|-------------------------------|-------------------------------|
| | UN- PLATED or PLATED SILVER | PLATED W/ZnCr GOLD | UN- PLATED or PLATED SILVER | PLATED W/ZnCr GOLD | | |
| 1/4 | 8 N·m (71 lb in) | 11 N·m (97 lb in) | 12 N·m (106 lb in) | 16 N·m (142 lb in) | 8.5 N·m (75 lb in) | 12.2 N·m (109 lb in) |
| 5/16 | 17 N·m (150 lb in) | 23 N·m (204 lb in) | 24 N·m (212 lb in) | 32 N·m (283 lb in) | 17.5 N·m (155 lb in) | 25 N·m (220 lb in) |
| 3/8 | 30 N·m (22 lb ft) | 40 N·m (30 lb ft) | 43 N·m (31 lb ft) | 57 N·m (42 lb ft) | 31 N·m (23 lb ft) | 44 N·m (33 lb ft) |
| 7/16 | 48 N·m (36 lb ft) | 65 N·m (48 lb ft) | 68 N·m (50 lb ft) | 91 N·m (67 lb ft) | 50 N·m (37 lb ft) | 71 N·m (53 lb ft) |
| 1/2 | 74 N·m (54 lb ft) | 98 N·m (73 lb ft) | 104 N·m (77 lb ft) | 139 N·m (103 lb ft) | 76 N·m (56 lb ft) | 108 N·m (80 lb ft) |
| 9/16 | 107 N·m (79 lb ft) | 142 N·m (105 lb ft) | 150 N·m (111 lb ft) | 201 N·m (148 lb ft) | 111 N·m (82 lb ft) | 156 N·m (115 lb ft) |
| 5/8 | 147 N·m (108 lb ft) | 196 N·m (145 lb ft) | 208 N·m (153 lb ft) | 277 N·m (204 lb ft) | 153 N·m (113 lb ft) | 215 N·m (159 lb ft) |
| 3/4 | 261 N·m (193 lb ft) | 348 N·m (257 lb ft) | 369 N·m (272 lb ft) | 491 N·m (362 lb ft) | 271 N·m (200 lb ft) | 383 N·m (282 lb ft) |
| 7/8 | 420 N·m (310 lb ft) | 561 N·m (413 lb ft) | 594 N·m (438 lb ft) | 791 N·m (584 lb ft) | 437 N·m (323 lb ft) | 617 N·m (455 lb ft) |
| 1 | 630 N·m (465 lb ft) | 841 N·m (620 lb ft) | 890 N·m (656 lb ft) | 1187 N·m (875 lb ft) | 654 N·m (483 lb ft) | 924 N·m (681 lb ft) |

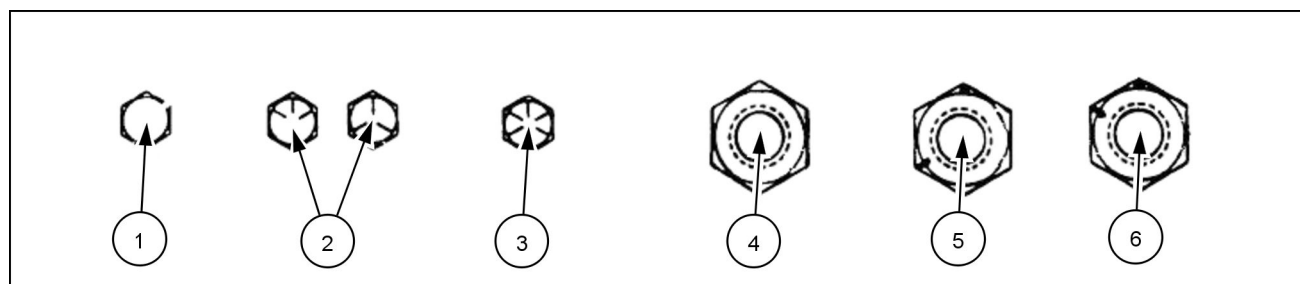
NOTE: For Imperial Units, **1/4 in** and **5/16 in** hardware torque specifications are shown in pound-inches. **3/8 in** through **1 in** hardware torque specifications are shown in pound-feet.

INCH FLANGED HARDWARE

| NOM- INAL SIZE | SAE GRADE 5 BOLT and NUT | | SAE GRADE 8 BOLT and NUT | | LOCKNUT GrF W/ Gr5 BOLT | LOCKNUT GrG W/ Gr8 BOLT |
|----------------------|---------------------------------|--------------------------|---------------------------------|--------------------------|-------------------------------|-------------------------------|
| | UNPLATED or PLATED SILVER | PLATED W/ZnCr GOLD | UNPLATED or PLATED SILVER | PLATED W/ZnCr GOLD | | |
| 1/4 | 9 N·m (80 lb in) | 12 N·m (106 lb in) | 13 N·m (115 lb in) | 17 N·m (150 lb in) | 8 N·m (71 lb in) | 12 N·m (106 lb in) |
| 5/16 | 19 N·m (168 lb in) | 25 N·m (221 lb in) | 26 N·m (230 lb in) | 35 N·m (310 lb in) | 17 N·m (150 lb in) | 24 N·m (212 lb in) |
| 3/8 | 33 N·m (25 lb ft) | 44 N·m (33 lb ft) | 47 N·m (35 lb ft) | 63 N·m (46 lb ft) | 30 N·m (22 lb ft) | 43 N·m (32 lb ft) |
| 7/16 | 53 N·m (39 lb ft) | 71 N·m (52 lb ft) | 75 N·m (55 lb ft) | 100 N·m (74 lb ft) | 48 N·m (35 lb ft) | 68 N·m (50 lb ft) |
| 1/2 | 81 N·m (60 lb ft) | 108 N·m (80 lb ft) | 115 N·m (85 lb ft) | 153 N·m (113 lb ft) | 74 N·m (55 lb ft) | 104 N·m (77 lb ft) |
| 9/16 | 117 N·m (86 lb ft) | 156 N·m (115 lb ft) | 165 N·m (122 lb ft) | 221 N·m (163 lb ft) | 106 N·m (78 lb ft) | 157 N·m (116 lb ft) |
| 5/8 | 162 N·m (119 lb ft) | 216 N·m (159 lb ft) | 228 N·m (168 lb ft) | 304 N·m (225 lb ft) | 147 N·m (108 lb ft) | 207 N·m (153 lb ft) |
| 3/4 | 287 N·m (212 lb ft) | 383 N·m (282 lb ft) | 405 N·m (299 lb ft) | 541 N·m (399 lb ft) | 261 N·m (193 lb ft) | 369 N·m (272 lb ft) |
| 7/8 | 462 N·m (341 lb ft) | 617 N·m (455 lb ft) | 653 N·m (482 lb ft) | 871 N·m (642 lb ft) | 421 N·m (311 lb ft) | 594 N·m (438 lb ft) |
| 1 | 693 N·m (512 lb ft) | 925 N·m (682 lb ft) | 979 N·m (722 lb ft) | 1305 N·m (963 lb ft) | 631 N·m (465 lb ft) | 890 N·m (656 lb ft) |

IDENTIFICATION

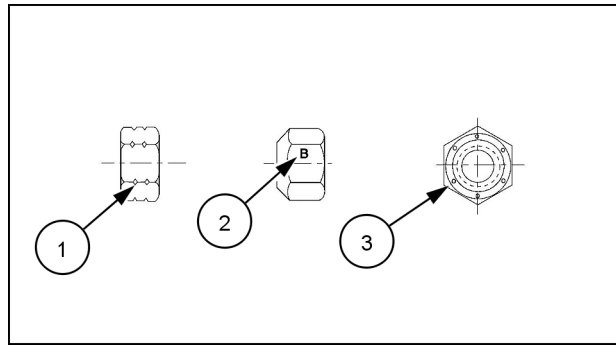
Inch Bolts and free-spinning nuts



20083682 3

Grade Marking Examples

| SAE Grade Identification | | | |
|--------------------------|-----------------------|---|---------------------------------|
| 1 | Grade 2 - No Marks | 4 | Grade 2 Nut - No Marks |
| 2 | Grade 5 - Three Marks | 5 | Grade 5 Nut - Marks 120 ° Apart |
| 3 | Grade 8 - Five Marks | 6 | Grade 8 Nut - Marks 60 ° Apart |

Inch Lock Nuts, All Metal (Three optional methods)

20090268 4

Grade Identification



| Grade | Corner Marking Method (1) | Flats Marking Method (2) | Clock Marking Method (3) |
|---------|-----------------------------|--------------------------|--------------------------|
| Grade A | No Notches | No Mark | No Marks |
| Grade B | One Circumferential Notch | Letter B | Three Marks |
| Grade C | Two Circumferential Notches | Letter C | Six Marks |

Capacities

| System | Metric | U.S. | Imperial |
|--|--------|-------------|--------------|
| 9.0 l engine | | | |
| NEW HOLLAND AMBRA UNITEK MASTERGOLD SBL CJ-4 | | | |
| Engine oil – no filter change | 25 l | 6.6 US gal | 5.5 UK gal |
| Engine oil– with filter change | 25 l | 6.6 US gal | 5.5 UK gal |
| Cooling system | 26.5 l | 7 US gal | 5.8 UK gal |
| Transmission/hydraulic system – NEW HOLLAND AMBRA MASTERTRAN® ULTRACTION | | | |
| Powershift | 172 l | 45.5 US gal | 38 UK gal |
| Auto Command transmission with standard rear axle | 187 l | 49.5 US gal | 41.25 UK gal |
| Auto Command transmission with heavy duty rear axle | 206 l | 54.5 US gal | 45.4 UK gal |
| Mechanical Front Drive (MFD) axles — TUTELA HYPOIDE EP GEAR LUBE or NEW HOLLAND AMBRA HYPOIDE 140 | | | |
| Class 4.5 fixed front axle | | | |
| Differential | 11 l | 11.6 US qt | 194 UK pt |
| Planetary (each) | 2.3 l | 4.9 US pt | 4 UK pt |
| Class 4.75 fixed and saddle suspended front axle | | | |
| Differential | 17.5 l | 18.5 US qt | 30.8 UK pt |
| Planetary (each) | 4.3 l | 9.1 US pt | 7.6 UK pt |
| Class 5.0 fixed and saddle suspended front axle | | | |
| Differential | 17.5 l | 18.5 US qt | 30.8 UK pt |
| Planetary (each) | 4.5 l | 9.5 US pt | 8 UK pt |
| Front PTO | 4.2 l | 4.4 US qt | -- |
| DEF/AdBLUE® Tank | 87 l | 23 US gal | 23.8 UK gal |
| Fuel tank | 636 l | 168 US gal | 140 UK gal |
| * Pin quantity is determined by observing the wheel ends. | | | |

Product identification

Tractor model and product identification number

| | | |
|--|---------------------|--|
|  CNH Industrial America LLC Racine, WI 53404 U.S.A. Made In U.S.A. | |  MP04 |
| Type 1 | EEC Number 2 | Product Identification Number 3 |
| • Total Permissible Mass (*): 4 kg • Permissible Front Axle Load (*): 5 kg • Permissible Rear Axle Load (*): 6 kg (*) Depending on the Tires | | Permissible Towable Mass: • Unbraked Towable Mass: 7 kg • Independently-Braked Towable Mass: 8 kg • Inertia-Braked Towable Mass: 9 kg • Towable Mass Fitted with an Assisted Braking System: (Hydraulic or Pneumatic): 10 kg |

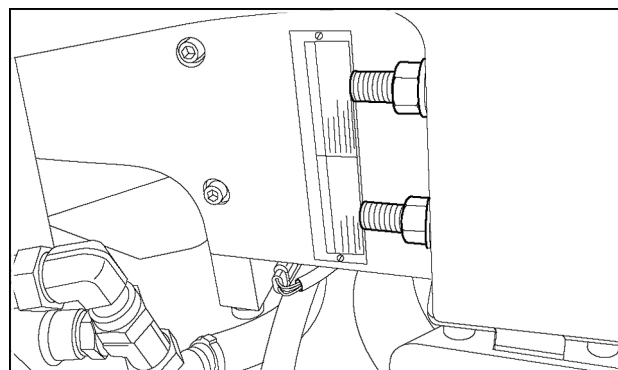
RAIL14TR00787EA 1

| | |
|----------------------------------|--|
| 1. Type | Permissible towable mass: |
| 2. EEC number | • 7. Unbraked towable mass |
| 3. Product identification number | • 8. Independently brakes towable mass |
| 4. Total permissible mass | • 9. Inertia braked towable mass |
| 5. Permissible front axle load | • 10. Towable mass fitted with an assisted braking system (hydraulic or pneumatic) |
| 6. Permissible rear axle load | |

Model :

Serial number:

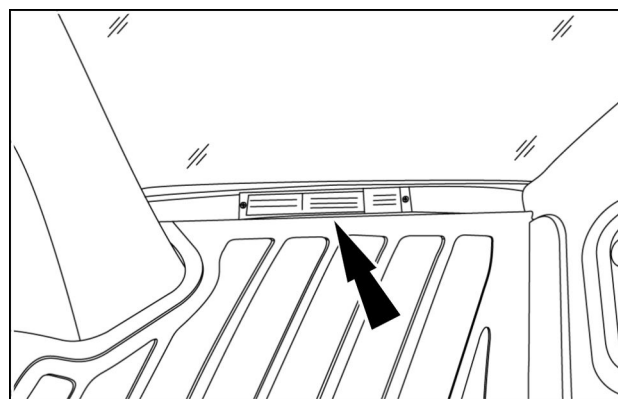
NOTE: Located on right hand front casting. Pin plate may be mounted vertically or horizontally.



RCPH11CCH117AAB 2

Roll Over Protective System (ROPS) serial number

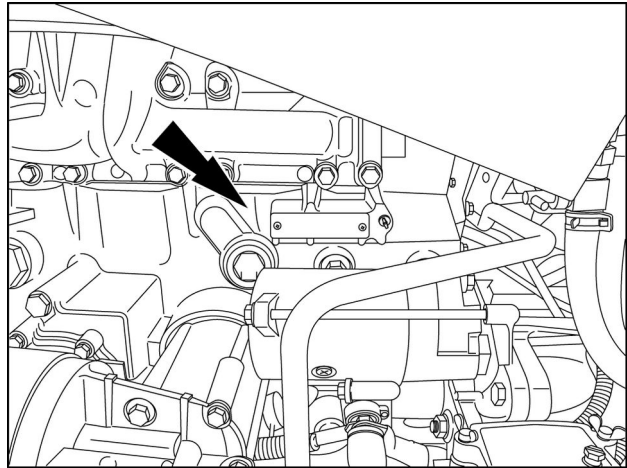
NOTE: Located on the right hand cab floor.



RCPH11CCH014AAB 3

Engine serial number

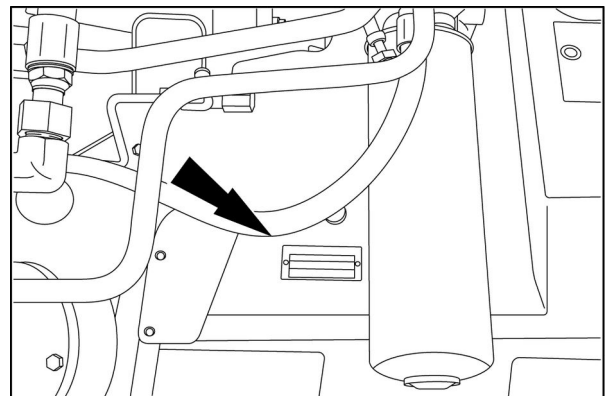
NOTE: Located on the valve cover. The serial number is also etched into the left hand side of the engine block, just below the oil cooler.



RAIL12TR02140AA 4

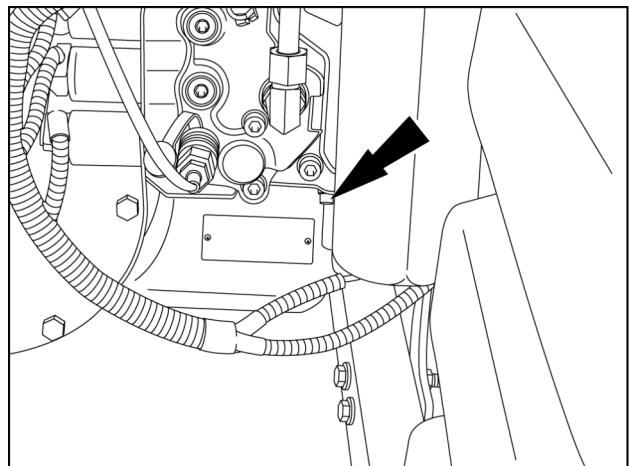
Transmission serial number

NOTE: Located on the right hand side of the transmission to the left of the main hydraulic filter.



RAIL12TR01410AA 5

Powershift transmission

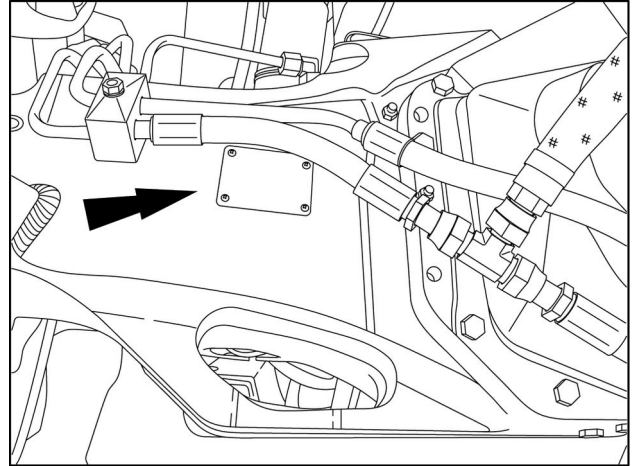


RAIL12TR02191AA 6

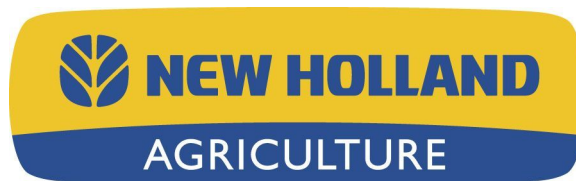
Auto Command

Axle serial number

Located on the rear left hand side of the class 4.75 fixed, 4.75 saddle suspended, 5.0 fixed and 5.0 saddle suspended front axle housings. (example shown)



RAIL12TR02142AA 7



SERVICE MANUAL

Engine

T8.320 696110027 PST TIER 4b [ZERE04800 -]
T8.350 696110037 PST TIER 4b [ZERE04800 -]
T8.380 696110047 PST TIER 4b [ZERE04800 -]
T8.410 696110057 PST TIER 4b [ZERE04800 -]

Contents

Engine - 10

| | |
|---|-------|
| [10.001] Engine and crankcase | 10.1 |
| [10.101] Cylinder heads | 10.2 |
| [10.202] Air cleaners and lines | 10.3 |
| [10.216] Fuel tanks | 10.4 |
| [10.218] Fuel injection system..... | 10.5 |
| [10.304] Engine lubrication system..... | 10.6 |
| [10.310] Aftercooler..... | 10.7 |
| [10.400] Engine cooling system | 10.8 |
| [10.414] Fan and drive | 10.9 |
| [10.500] Selective Catalytic Reduction (SCR) exhaust treatment..... | 10.10 |



Engine - 10

Engine and crankcase - 001

T8.320 696110027 PST TIER 4b [ZERE04800 -]
T8.350 696110037 PST TIER 4b [ZERE04800 -]
T8.380 696110047 PST TIER 4b [ZERE04800 -]
T8.410 696110057 PST TIER 4b [ZERE04800 -]

Contents

Engine - 10

Engine and crankcase - 001

SERVICE

| | |
|---------------|----|
| Engine | |
| Remove | 3 |
| Install | 12 |

Engine - Remove

Prior operation:

Disconnect the batteries — **Battery - Disconnect (55.302)**

Prior operation:

Remove the hood — **Hood - Remove (90.100)**

Prior operation:

Side shield - Remove (90.102)

Prior operation:

Recover the refrigerant — **Air conditioning - Recover (50.200)**

Prior operation:

Drain the coolant — **Engine cooling system - Emptying (10.400)**

Prior operation:

Engine cooling system - Remove (10.400)

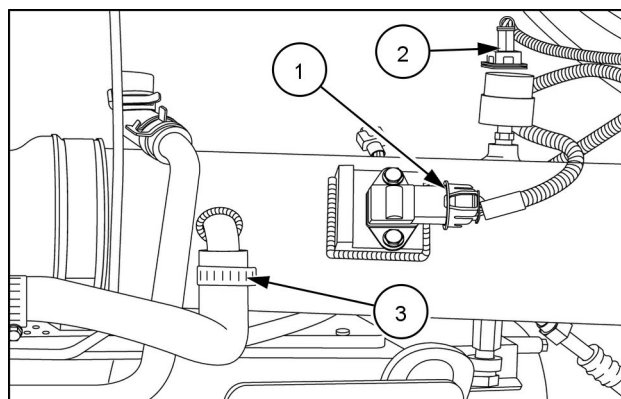
Prior operation:

Diesel Oxidation Catalyst (DOC) - Remove (10.500)

NOTE: Clean all fittings before disconnecting.

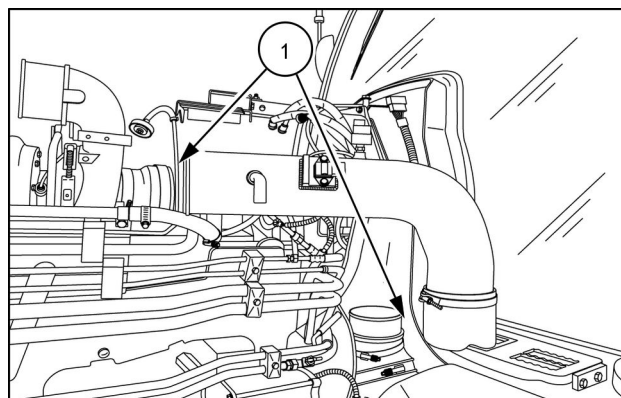
NOTE: Cap or plug all lines and ports when disconnecting hydraulic components.

1. Disconnect the harness connector to the humidity sensor **(1)** and the air restriction sensor **(2)**. Disengage the hose clamp **(3)** and disconnect the hose from the air intake tube.



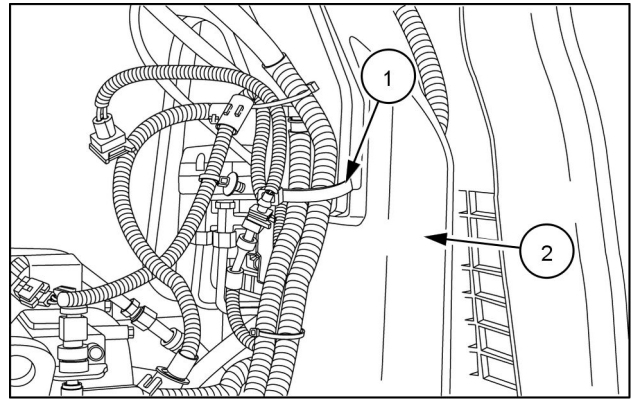
RAIL13TR04202AA 1

2. Disconnect the clamps **(1)** from each end of the air intake tube and remove the tube.



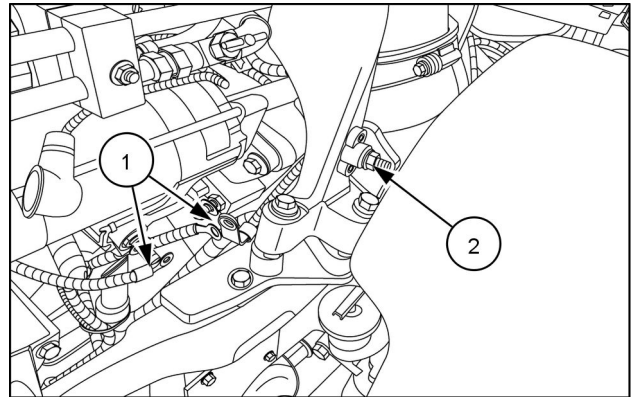
RAIL13TR04211AA 2

3. Cut the wire tie (1) securing the harness to the hood support (2).



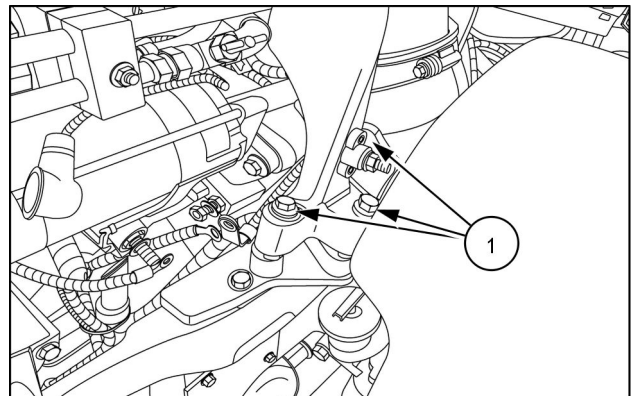
RAIL13TR04204AA 3

4. Disconnect the starter cables (1) and the auxiliary wire (2).



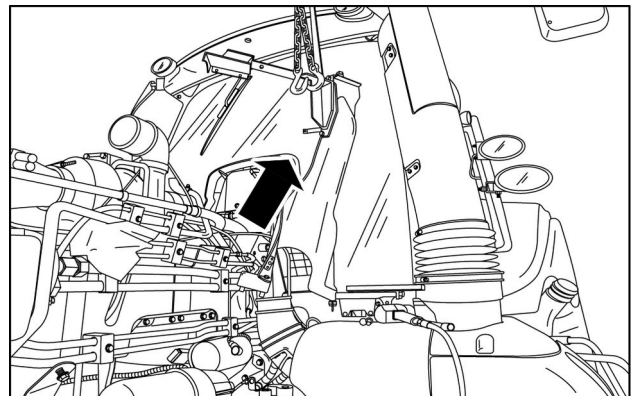
RAIL13TR04209AA 4

5. Remove the three bolts (1) securing the hood support to the frame.



RAIL13TR04209AA 5

6. Remove the hood support.



RAIL13TR04212AA 6