

# NEW HOLLAND

# REPAIR MANUAL

## TC35, TC40, TC45, TC35D, TC40D, TC45D Tractor

NEW HOLLAND AGRICULTURE

SERVICE

86618104



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# SECTION 00 - GENERAL INFORMATION

BOOK 1

## Chapter 1 - General Information

CONTENTS


| Section | Description | Page |
|---|---|---|
| 00 000 | Introduction | 00-2 |
| | Safety | 00-3 |
| | Technical Information | 00-4 |
| | Safety Precautions | 00-5 |
| | Safety Decals - TC35, 40, 45 | 00-8 |
| | Instruction Decals - TC35, 40, 45 | 00-9 |
| | Safety Decals - TC35D, 40D, 45D | 00-12 |
| | Instruction Decals - TC35D, 40D, 45D | 00-13 |
| | International Symbols | 00-17 |
| | Specifications - TC35, 40, 45 | 00-18 |
| | General Dimensions - TC35, 40, 45 | 00-25 |
| | Specifications - TC35D, 40D, 45D | 00-31 |
| | General Dimensions - TC35D, 40D, 45D | 00-37 |
| | Minimum Hardware Tightening Torques | 00-41 |
| | Special Tools | 00-43 |
| | Lubricants | 00-44 |
| 00 400 | Recommended Lubricants | 00-44 |
| | Adjustments | 00-45 |
| | Tire Inflation Pressure - Adjustments | 00-45 |
| 00 100 | Pre-Season and Pre-Delivery Checklist | 00-46 |


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# SECTION 10 - ENGINE

BOOK 1

## Chapter 1 - Engine

CONTENTS


| Section | Description | Page |
|---|---|---|
| | Specifications | 10-3 |
| | Metric Bolt Torque Specifications | 10-12 |
| | Special Tools | 10-13 |
| | General Information | 10-15 |
| | Description of Operation | 10-15 |
| | Troubleshooting | 10-16 |
| 10 101 | Cylinder Head Removal | 10-53 |
| 10 106 | Timing Gears and Camshaft Removal | 10-57 |
| 10 102 | Oil Sump Removal | 10-58 |
| 10 110 | Balancer Assembly-Removal | 10-59 |
| 10 105 | Connecting Rods, Bearings, and Pistons, Rings Removal | 10-59 |
| 10 103 | Flywheel | 10-60 |
| | Disassembly, Inspection, Fits, Clearances, and Assembly of Component Assemblies | 10-61 |
| 10 101 | Cylinder Head Disassembly | 10-61 |
| 10 105 | Pistons, Piston Rings, and Connecting Rods Disassembly and Inspection | 10-67 |
| 10 103 | Crankshaft | 10-72 |
| 10 106 | Timing Gear | 10-76 |
| 10 103 | Flywheel | 10-77 |
| 10 102 | Timing Gear Housing | 10-78 |
| | Engine Reassembly | 10-79 |
| 10 103 | Crankshaft and Bearing Holder Reassembly | 10-79 |
| 10 105 | Pistons and Connecting Rods | 10-80 |
| 10 110 | Balancer Assembly-Installation | 10-81 |
| 10 106 | Timing Gear Cover, TIming Gears, and Camshaft Assembly | 10-82 |
| 10 106 | Idler Gear, Oil Pump, and Injection Timing | 10-83 |
| 10 101 | Head Gasket Selection | 10-86 |
| 10 106 | Valve Clearance Adjustment | 10-87 |
| 10 218 | Fuel Piping | 10-89 |
| | Engine Lubrication System | 10-91 |
| 10 304 | Engine Lubrication System - Description of Operation | 10-91 |
| 10 218 | Fuel Piping | 10-91 |
| 10 206 | Oil Filter | 10-95 |


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| | | |
|---|---|---|
| 10 304 | Oil Pump | 10-95 |
| | Cooling System | 10-99 |
| 10 400 | Cooling System - Description of Operation | 10-99 |
| 10 402 | Thermostat | 10-102 |
| 10 402 | Water Pump | 10-102 |
| 10 414 | Cooling Fan | 10-102 |
| | Cooling System Overhaul | 10-103 |
| 10 406 | Radiator | 10-103 |
| 10 402 | Water Pump Removal | 10-105 |
| 10 402 | Thermostat Removal | 10-108 |


# SECTION 10 - ENGINE

**BOOK 1**

## Chapter 2 - Fuel Systems

**CONTENT**


| Section | Description | Page |
|---|---|---|
| | Specifications | 10-112 |
| | Torque Specifications | 10-113 |
| | Special Tools | 10-113 |
| 10 242 | Description of Operation | 10-114 |
| | Troubleshooting | 10-116 |
| 10 244 | Fuel Variation Mechanism | 10-121 |
| 10 244 | CTD (Compact Timing Device) | 10-122 |
| 10 236 | Pumping Elements | 10-124 |
| 10 214 | Delivery Valves | 10-126 |
| 10 242 | Injection Pump Removal | 10-128 |
| 10 230 | Timing and Governor Adjustments | 10-131 |
| | Spill-Timing Procedure | 10-132 |
| | Auto Bleed | 10-137 |
| | Bleeding to Fuel System | 10-138 |
| | Fuel Scre/High Idle Adjustment | 10-138 |
| 10 230 | Governor Operation | 10-139 |
| 10 218 | Injectors | 10-145 |


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| LUBRICATION SYSTEM | N843L | N844 | N844L |
|---|---|---|---|
| **Pressure Relief Valve** | | | |
| Opening Pressure | 42.66-49.7 psi (2.9-3.4 bar) | 42.66-49.7 psi (2.9-3.4 bar) | 42.66-49.7 psi (2.9-3.4 bar) |
| Fully Open at 3000 rpm | 71.1 psi (4.9 bar) | 71.1 psi (4.9 bar) | 71.1 psi (4.9 bar) |
| **Rotor-to-Vane Clearance** | | | |
| Standard | 0.004-0.006 in. (0.1-0.15 mm) | 0.004-0.006 in. (0.1-0.15 mm) | 0.004-0.006 in. (0.1-0.15 mm) |
| Maximum | 0.010 in. (0.25 mm) | 0.010 in. (0.25 mm) | 0.010 in. (0.25 mm) |
| **Rotor-to-Cover Clearance** | | | |
| Standard | 0.004-0.006 in. (0.1-0.15 mm) | 0.004-0.006 in. (0.1-0.15 mm) | 0.004-0.006 in. (0.1-0.15 mm) |
| Maximum | 0.008 in. (0.20 mm) | 0.008 in. (0.20 mm) | 0.008 in. (0.20 mm) |
| **Oil Pump Volume** | 0.8 gal. (3.2 L) | 1.18 gal. (4.5 L) | 1.18 gal. (4.5 L) |
| **COOLING SYSTEM** | | | |
| **Type of System** | Pressurized liquid w/recirculating by-pass | | |
| **Water Pump** | Centrifugal | | |
| Drive Belt Deflection (Tension) | 0.2-0.4 inch (5-10 mm) when 2.3 lbs. (5 kg) force is applied midway between pulleys. | | |
| **Thermostat** | | | |
| Starts to Open | 176-183°F (80-84°C) | | |
| Fully Open | 203°F (95°C) | | |
| **Radiator Cap Pressure Rating** | 13 psi (0.9 bar) | | |
| Coolant | Ethylene glycol and water in a 50/50 mixture. | | |
| Capacity | N843L 7.8 U.S. qts. (7.4 liters) | N844 8.3 U.S. qts. (7.9 liters) | N844L 8.4 U.S. qts. (8.0 liters) |



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## ECONOMY MODEL SAFE OPERATION CIRCUIT TROUBLESHOOTING

| CONDITION | POSSIBLE CAUSE | REMEDY |
|---|---|---|
| Engine does not continue to run while operator is seated | Defective seat safety switch | Test seat safety switch and replace as necessary |
| | Defective seat safety switch timer | Test seat safety switch and replace as necessary |
| | Defective range neutral or fuel shutoff relay | Test relays and replace as necessary |
| | Malfunctioning fuel shutoff solenoid | Test fuel shutoff solenoid and replace as necessary |
| | Defective operator safety module | Test module and replace as necessary |
| | Defective 8-amp operator safety circuit breaker | Test circuit breaker and replace as necessary |
| | Open wiring in safe operation circuit | Check for loose connectors, grounds, and wiring damage |
| Engine continues to run after operator has left seat for more than two seconds and mid PTO and parking brake is not engaged | Defective seat safety switch | Test seat safety switch and replace as necessary |
| | Defective seat safety switch timer | Test seat safety switch and replace as necessary |
| | Defective parking brake switch | Test switch and replace as necessary |
| | Defective range neutral or fuel shutoff relay | Test relays and replace as necessary |
| | Malfunctioning fuel shutoff solenoid | Test fuel shutoff solenoid and replace as necessary |
| | Defective operator safety module | Test module and replace as necessary |
| | Short-circuit in wiring or faulty ground circuit | Check for loose safety switch connectors, grounds, and wiring harness for damage |
| Engine does not continue to run when operator is not in seat, transmission is in neutral, PTO is off, and parking brake is engaged | Defective range neutral switch, PTO switch, parking brake switch, or start circuit diode | Test components and replace as necessary |



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## DELUXE AND ECONOMY MODEL

### TACHOMETER CIRCUIT TROUBLESHOOTING

| CONDITION | POSSIBLE CAUSE | REMEDY |
|---|---|---|
| Tachometer does not operate when tractor engine is running | Blown 7.5-amp instrument panel fuse | Inspect and replace fuse as necessary |
| | Defective tachometer | Test tachometer and replace instrument panel as necessary |
| | Tachometer pick-up wire damaged, corroded, disconnected or short-circuited | Inspect tachometer pick-up, repair or replace as necessary |
| | Faulty tachometer gauge ground | Inspect and repair ground wire as necessary |
| | Defective alternator component | Test alternator and components, repair or replace as necessary |
| Inaccurate tachometer reading | Malfunctioning tachometer | Test tachometer and replace instrument panel as necessary |
| | Loose alternator belt | Adjust belt tension |



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