

780C LOADER BACKHOE TABLE OF CONTENTS

| SERIES/SECTION | SECTION NO. | FORM NO. |
|--|-------------|----------|
| 1 GENERAL | | |
| Safety Rules, Service Manual Introduction, and Torque | | |
| Specifications | 1001 | 8-44360 |
| Maintenance and Lubrication | 1002 | 8-44650 |
| General Engine Specifications | 1010 | 8-26390 |
| Detailed Engine Specifications | 1024 | 8-26061 |
| 2 ENGINES | | |
| Engine Removal and Installation | 2000 | 8-44650 |
| Engine Accessories (Air Cleaner, Ether Injection, Turbocharger) | 2001 | 8-44650 |
| Engine Stall Tests | 2003 | 8-44650 |
| Cylinder Head and Valve Train | 2415 | 8-26071 |
| Cylinder Block, Pistons, Rods, Camshaft, Main Bearings, Oil Seals, and Flywheel | 2425 | 8-26081 |
| Lubrication System | 2445 | 8-26091 |
| Cooling System | 2455 | 8-26101 |
| Turbocharger | 2465 | 8-26110 |
| Turbocharger Failure Analysis | 2565 | 8-78235 |
| 3 FUEL SYSTEM | | |
| Fuel Lines, Fuel Tank, and Engine Controls | 3001 | 8-44650 |
| Fuel System and Filters | 3410 | 8-26131 |
| Bosch Fuel Injection Pump, Drive Gear, and Timing | 3412 | 8-26141 |
| Fuel Injectors | 3413 | 8-26150 |
| 4 ELECTRICAL | | |
| Removal and Installation of Electrical Components | 4001 | 8-44361 |
| Electrical System Specifications and Troubleshooting | 4002 | 8-44361 |
| Wiring Schematics | 4003 | 8-44361 |
| Batteries | 4005 | 8-44360 |
| Starter and Starter Solenoid, Nippondenso | 4006 | 8-42191 |
| Alternator, Delco-Remy | 4007 | 8-42241 |
| Instrument Cluster and Instrument Panel | 4009 | 9-69300 |
| Alternator, Bosch | 4019 | 8-42851 |
| 5 STEERING | | |
| Steering System Troubleshooting | 5002 | 8-44360 |
| Steering Control Valve and Steering Column | 5007 | 9-69311 |
| Steering Cylinders | 5010 | 9-69310 |
| Circuit Relief Valve and Check Valves | 5011 | 9-69311 |
| Front Axle | 5021 | 9-69310 |
| 6 POWER TRAIN | | |
| General Transmission Information and Troubleshooting | 6202 | 8-44650 |
| Transmission | 6210 | 8-44360 |
| Transmission Controls | 6211 | 9-69300 |
| Drive Shaft | 6222 | 9-69300 |
| Differential and Planetaries | 6226 | 9-69301 |
| Wheels and Tires | 6229 | 9-69310 |

7 BRAKES

| | | |
|--|------|---------|
| Removal and Installation of Air Compressor | 7101 | 8-44360 |
| Troubleshooting Charts, Operation of the Air System, Air System Diagram | 7102 | 8-44360 |
| Air Compressor, Governor, Reservoir, and Relief Valve | 7103 | 8-44360 |
| Brake Valve | 7105 | 9-69300 |
| Brake Actuator | 7107 | 9-69311 |
| Alcohol Evaporator | 7111 | 8-44360 |
| Pressure Reducer Valve, Pressure Protection Valve, Clutch Cutout Valve, and Stoplamp Switch | 7113 | 9-69300 |
| Brakes | 7123 | 9-69300 |
| Parking Brake Control Valve and Quick Release Valve | 7126 | 8-44360 |

8 HYDRAULICS

| | | |
|---|------|---------|
| Removal and Installation of Hydraulic Pumps | 8001 | 8-44360 |
| Hydraulic System Schematics, Specifications, and Troubleshooting | 8002 | 8-44360 |
| Cleaning the Hydraulic System | 8003 | 9-69300 |
| Hydraulic Pump | 8005 | 8-44360 |
| Flow Control Valve | 8006 | 9-69311 |
| Loader Control Valve | 8007 | 9-69311 |
| Cylinders | 8090 | 8-44360 |
| Backhoe Relief Valve | 8106 | 8-44360 |
| Backhoe Control Valve | 8107 | 9-69300 |
| Removal and Installation of Stabilizer Control Valve | 8108 | 8-44360 |
| Stabilizer Control Valve | 8109 | 8-42190 |
| Boom Lock System | 8121 | 8-44360 |

9 MOUNTED EQUIPMENT

| | | |
|--|------|---------|
| Air Conditioning Troubleshooting and System Checks | 9002 | 9-69270 |
| Air Conditioning System | 9003 | 8-44360 |
| Loader | 9010 | 8-44360 |
| Rops Cab and Canopy | 9061 | 9-69310 |
| Seat, Seat Belts, and Seat Support | 9064 | 9-69300 |
| Backhoe | 9100 | 9-69300 |
| Noise Control | 9203 | 9-69300 |

REAR POCKET

| | |
|---|---------|
| Electrical Schematic (24 Volt System) | 850572A |
| Instrument Cluster (12 Volt System) | 870586 |
| Main Harness (12 Volt System) | 870263 |
| Engine Harness (12 Volt System) | 870264 |
| Rear Harness (12 Volt System) | 870265 |
| Cab Harness (12 Volt System) | 870266 |
| Canopy Harness (12 Volt System) | 870267 |
| Hydraulic Schematic | 851051 |

1001

SAFETY RULES, SERVICE MANUAL INTRODUCTION, AND TORQUE SPECIFICATIONS

TABLE OF CONTENTS

| | |
|--|--------|
| Safety Rules | 1001-2 |
| Service Manual Introduction | 1001-4 |
| Torque Specifications - U.S. Hardware | 1001-5 |
| Torque Specifications - Metric Hardware | 1001-6 |
| Torque Specifications - Steel Hydraulic Fittings | 1001-7 |

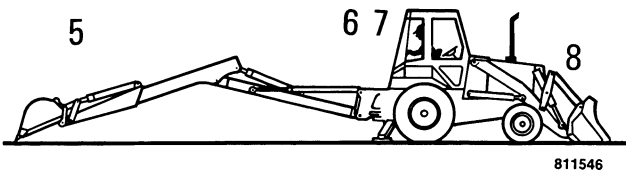
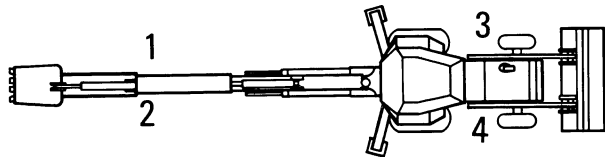
Written In *Clear
And
Simple
English*

SERVICE MANUAL INTRODUCTION

This service manual has been prepared with the latest service information available. Troubleshooting, removal, disassembly, inspection and installation procedures, and complete specifications and tightening references can be found in most sections. Some sections have drawings but no written procedure because the job is so easily done. This service manual is one of the most important tools available to the service technician.

Right, Left, Front, and Rear

The terms right-hand and left-hand and front and rear as used in this manual indicate the right and left sides, and front and rear of the machine as seen from the operator's seat for correct operation of the machine or attachment.



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- | | |
|------------------------------|-------------------------|
| 1. <i>Right Side-Backhoe</i> | 5. <i>Front-Backhoe</i> |
| 2. <i>Left Side-Backhoe</i> | 6. <i>Rear-Backhoe</i> |
| 3. <i>Left Side-Machine</i> | 7. <i>Rear-Machine</i> |
| 4. <i>Right Side-Machine</i> | 8. <i>Front-Machine</i> |

Table of Contents

A Table of Contents is in the front of this manual. The Table of Contents shows the main divisions and the sections that are in each division. The individual sections also have a Table of Contents.

Page Numbers

All page numbers are made of two numbers separated by a dash, such as 4002-9. The number before the dash is the section number. The number following the dash is the page number in that section. Page numbers will be found at the upper right or left of each page.

Illustrations

Illustrations are put as near as possible to the text and are to be used as part of the text.

Clear and Simple English

This manual is written in C.A.S.E. (Clear and Simple English). C.A.S.E. is easier to read than "regular" English because C.A.S.E. uses a small number of common words and has special rules for writing.

All sections written in C.A.S.E. are indicated by the symbol below.

Written In *Clear
And
Simple
English*

Special Tools

Special tools are needed to remove and install, disassemble and assemble, check and adjust some component parts of this machine. Some special tools can be easily made locally and the necessary information to make the tool is in this service manual. Other special tools are more difficult to make locally and are available from Service Tools in the U.S. and from Jobborn Manufacturing in Canada. Use these tools according to the instructions in this service manual for your personal safety and to do the job correctly.


Order special tools from either of the following companies.


Service Tools
P.O. Box 314
Owatonna, Minnesota 55060

Jobborn Manufacturing Co.
97 Frid Street
Hamilton, Ontario L8P 4M3
Canada

TORQUE SPECIFICATIONS - U.S. HARDWARE

Use the torques in this chart when special torques are not given. These torques apply to fasteners with both UNC and UNF threads as received from suppliers, dry, or when lubricated with engine oil. Not applicable if special graphites, moly-disulfide greases, or other extreme pressure lubricants are used.

| Grade 5 Bolts, Nuts, and Studs | | | |
|---|------------|---------------|-----------------|
|  | | | |
| Size | Pound-Feet | Newton metres | Kilogram metres |
| 1/4 in 6.4 mm | 9-11 | 12-15 | 1.2-1.5 |
| 5/16 in 7.9 mm | 17-21 | 23-28 | 2.4-2.9 |
| 3/8 in 9.5 mm | 35-42 | 48-57 | 4.8-5.8 |
| 7/16 in 11.1 mm | 54-64 | 73-87 | 7.5-8.8 |
| 1/2 in 12.7 mm | 80-96 | 109-130 | 11.1-13.3 |
| 9/16 in 14.3 mm | 110-132 | 149-179 | 15.2-18.2 |
| 5/8 in 15.9 mm | 150-180 | 203-244 | 20.8-24.9 |
| 3/4 in 19.0 mm | 270-324 | 366-439 | 37.3-44.8 |
| 7/8 in 22.2 mm | 400-480 | 542-651 | 55.3-66.4 |
| 1.0 in 25.4 mm | 580-696 | 787-944 | 80.2-96.2 |
| 1-1/8 in 28.6 mm | 800-880 | 1085-1193 | 111-122 |
| 1-1/4 in 31.8 mm | 1120-1240 | 1519-1681 | 155-171 |
| 1-3/8 in 34.9 mm | 1460-1680 | 1980-2278 | 202-232 |
| 1-1/2 in 38.1 mm | 1940-2200 | 2631-2983 | 268-304 |

| Grade 8 Bolts, Nuts, and Studs | | | |
|---|------------|---------------|-----------------|
|  | | | |
| Size | Pound-Feet | Newton metres | Kilogram metres |
| 1/4 in 6.4 mm | 12-15 | 16-20 | 1.7-2.1 |
| 5/16 in 7.9 mm | 24-29 | 33-39 | 3.3-4.0 |
| 3/8 in 9.5 mm | 45-54 | 61-73 | 6.2-7.5 |
| 7/16 in 11.1 mm | 70-84 | 95-114 | 9.7-11.6 |
| 1/2 in 12.7 mm | 110-132 | 149-179 | 15.2-18.2 |
| 9/16 in 14.3 mm | 160-192 | 217-260 | 22.1-26.5 |
| 5/8 in 15.9 mm | 220-264 | 298-358 | 30.4-36.5 |
| 3/4 in 19.0 mm | 380-456 | 515-618 | 52.5-63.0 |
| 7/8 in 22.2 mm | 600-720 | 814-976 | 83.0-99.5 |
| 1.0 in 25.4 mm | 900-1080 | 1220-1465 | 124-149 |
| 1-1/8 in 28.6 mm | 1280-1440 | 1736-1953 | 177-199 |
| 1-1/4 in 31.8 mm | 1820-2000 | 2468-2712 | 252-277 |
| 1-3/8 in 34.9 mm | 2380-2720 | 3227-3688 | 329-376 |
| 1-1/2 in 38.1 mm | 3160-3560 | 4285-4827 | 437-492 |

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