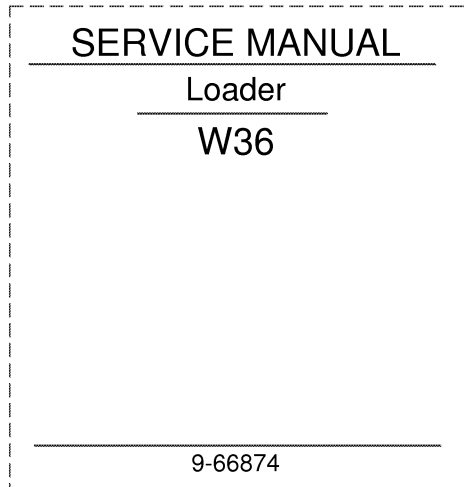


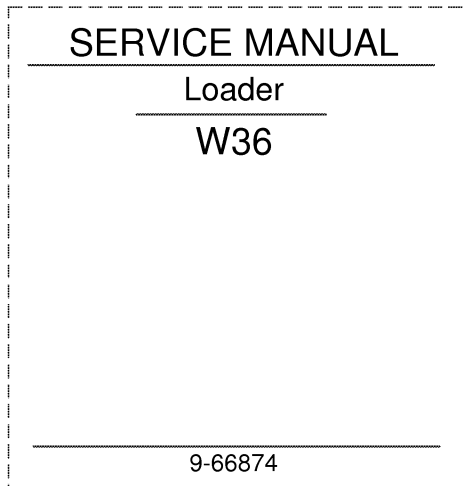
1. Trim along dashed line.
2. Slide into pocket on Binder Spine.

TYPE 1-4



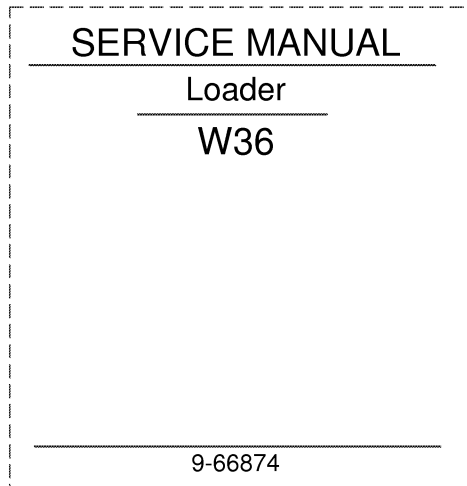
1. Trim along dashed line.
2. Slide into pocket on Binder Spine.

TYPE 1-4



1. Trim along dashed line.
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TYPE 1-4



1. Trim along dashed line.
2. Slide into pocket on Binder Spine.

TYPE 1-4

W36 LOADER TABLE OF CONTENTS AND SERVICE MANUAL INTRODUCTION

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SERIES/SECTION	SECTION NO.	FORM NO.
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Service Manual Introduction

Safety Rules



This Safety Alert Symbol Indicates Important Safety Messages In This Manual. When You See This Symbol, Carefully Read The Message That Follows and Be Alert To the Possibility Of Personal Injury Or Death.

1-1

It is our recommendation that the warning tag illustrated in Figure 1 be put on the key for the key switch whenever someone is working on the machine. Make the tag from a light, durable material. The message on the tag in Figure 1 can be copied on any office copying machine and attached to your tag.



770523

Figure 1



WARNING: Read operator's manual to familiarize yourself with control lever functions.

46-27



WARNING: Operate controls from the operator's seat only.

35-7



WARNING: When working in the area of the fan belt with the engine running, avoid loose clothing if possible, and use extreme caution.

35-4



WARNING: When performing checks and tests on the equipment hydraulic system or steering system, DO NOT deviate from the written procedure.

40-13



WARNING: When cycling the loader lift cylinders or the bucket cylinders to check operation or to remove air from a circuit, be sure fellow workers are out of the way.

47-13



WARNING: After installing tire on rim (wheel), place wheel in a safety cage before inflating tires. If proper equipment is not available, have a tire repair shop do the work.

40-5



WARNING: This is a one man machine, no riders allowed.

35-8



CAUTION: When removing hardened pins such as a pivot pin, or a hardened shaft, use a soft head (brass or bronze) hammer or use a driver made from brass or bronze and a steel head hammer.

46-17



CAUTION: When using a hammer to remove and install pivot pins or separate parts, using compressed air or using a grinder, wear eye protection that completely encloses the eyes (approved goggles or other approved eye protectors).

46-13



CAUTION: When servicing or repairing the machine, keep the shop floor and operator's compartment and steps free of oil, water, grease, tools, etc. Use an oil absorbing material and/or shop cloths as required. Use safe practices at all times.

40-8



CAUTION: Use suitable floor (service) jacks or chain hoists to raise wheels off the floor. Always block machine in place with suitable safety stands. 40-7



CAUTION: Pin sized and smaller streams of hydraulic oil under pressure can penetrate the skin and result in serious infection. If hydraulic oil under pressure does penetrate the skin, seek medical treatment immediately. Maintain all hoses and tubes in good condition. Make sure all connections are tight. Make a replacement of any tube or hose that is damaged or thought to be damaged. DO NOT use your hand to check for leaks; use a piece of cardboard or wood. 40-6-A



CAUTION: Some components of this machine are very heavy. Use suitable lifting equipment or additional help as instructed in this service manual. 40-10

General Information

This service manual has been prepared with the latest service information available. Trouble shooting, removal, disassembly, inspection and installation procedures coupled with complete specifications and tightening references can be found in most sections. Some sections will have exploded views without accompanying text due to the simplicity of the procedure. This service manual is one of the most important tools available to the service technician. It is an invaluable aid in properly performing any phase of service.

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 viewed from the operator's seat for proper operation of the machine or attachment.

The information contained in this manual is current at the time of printing.

Text

If this manual covers more than one machine, or different models of component parts (planetary axles, gear boxes, control valves, etc.) the procedures will apply to all unless otherwise noted.

Table of Contents

The preceding pages contain a Table of Contents which list the Series number and title, and the sections contained in each series. The individual sections, where required, will have a Table of Contents on the second page of that section.

Page Numbers

All page numbers consist of two sets of digits separated by a dash, such as 4002-9. The digits preceding the dash identify the section. The digits following the dash represent the consecutive page number within that section. Page numbers will be found at the upper right or left of each page.

Illustrations

Where possible, illustrations are placed as close as possible to the accompanying text and should be used as part of the text.

Torque References

Essentially two grades of fasteners (bolts, nuts and screws) are used on Case machinery. They are grade 5 and grade 8. Refer to Section 1051 for torque specifications and means of identification.

The specifications in Section 1051 are standard torque values and should be used on all fasteners during assembly and installation unless special torque values are noted in a particular section.

Serial and Model Numbers

When ordering repair or replacement parts it can be necessary to furnish the parts department with one or both numbers. Serial and model numbers will be found in the following locations.

Machine - serial number plate attached to right-hand instrument panel.

Engine - serial number plate attached to left-hand side of engine above the starter.

Component parts - plate attached to part or number stamped in part.

Classification of Lubricants

Oil, lubricants and grease are classified and graded according to standards recommended by the Society of Automotive Engineers (SAE), the American Petroleum Institute (API), and the National Lubricating Grease Institute (NLGI).

Engine Oil

The SAE number indicates the viscosity of engine oils, for example, SAE 30, a single grade oil. Engine oils are also identified by dual numbers, SAE 10W30, a multigrade oil.

The API classification (SD, CD, etc.) defines oil performance in terms of engine usage. Only oils specified in Section 1050 should be used. These oils contain sufficient chemical additives to provide maximum engine protection. Both the SAE grade and API designation must be found on the container.

Gear Lubricant and Grease

Gear lubricant and grease must be that specified in Section 1050,

Special Tools

There are some special tools that are needed to remove and install, disassemble and assemble, check and adjust the component parts of this machine. Some special tools are easily made locally and the necessary information to make the tool is contained in this service manual. Others are more difficult and costly to make locally and must be purchased. Use these tools as recommended in this service manual for your personal safety and to do the job correctly.

Special tools that were formerly ordered from Case Service Parts Supply are now available from Service Tools in the U.S. and from Jobborn Manufacturing Co. in Canada.

Address your orders for special tools to:

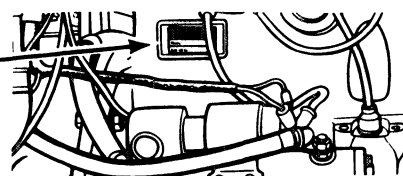
Service Tools
P.O. Box 314
Owatonna, Minnesota 55060

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

Section 1010

GENERAL ENGINE SPECIFICATIONS W36 LOADER

THE MODEL AND ENGINE SERIAL NUMBER IS STAMPED ON A PLATE LOCATED ON THE SIDE OF THE ENGINE ABOVE THE CRANKING MOTOR.



General

DIESEL ENGINES

Type	6 Cylinder, 4 Stroke Cycle, Valve-in-Head Intercooled-Turbo-Charged
Firing Order	1-5-3-6-2-4
Bore	4-5/8 Inches (117.5mm)
Stroke	5 Inches (127mm)
Piston Displacement	504 Cubic Inches (8 257cm ³)
Compression Ratio	15.8 to 1
Cylinder Sleeves	Removable Wet Type
No Load Governed Speed	2436 to 2465 RPM
Rated Engine Speed	2200 RPM
Engine Idling Speed	700 to 750 RPM
Exhaust Valve Rotators	Positive Type
*Valve Tappet Clearance (Exhaust)	(Hot) .020 Inch(0.508mm) (Cold) .025 Inch (0.635mm)
(Intake)	(Hot and Cold) .015 Inch (0.381mm)

*Hot Settings Are Made After the Engine Has Operated At Thermostat Controlled Temperature For At Least Fifteen Minutes.

Piston and Connecting Rods

Rings per Piston	3
Number of Compression Rings	2
Number of Oil Rings	1
Type Pins	Full Floating Type
Type Bearing	Replaceable Precision, Steel Back, Copper Lead or Aluminum Alloy Liners

Main Bearings

Number of Bearings	7
Type Bearings	Replaceable Precision Steel Back, Copper-Lead or Aluminum Alloy Liners

Engine Lubricating System

Crankcase Capacity (W/O Filter Change)	26 U.S. Qts. (24.6 litres)
With Filter Change	30 U.S. Qts. (28.4 litres)
Oil Pressure	45 to 60 PSI (310 to 414 kPa) with Engine Warm and Operating at Rated Engine Speed
Type System	Pressure and Spray Circulation
Oil Pump	Gear Type
Oil Filter (2)	Full Flow Spin on Type
Piston Oil Cooling	(From Main Bearings)Nozzle Pressure Spray

Fuel System

Fuel Injection Pump	Robert Bosch, Type PES Multiple Plunger
Pump Timing	25° Before Top Dead Center (Port Closing) IMPORTANT: Do not Advance Beyond 25° BTDC
Fuel Injectors	American Bosch 17mm Nozzles, Opening Pressure 4000 PSI (27 579 kPa)
Fuel Transfer Pump	Plunger Type, Integral Part of Injection Pump
Governor	Variable Speed, Fly-Weight Centrifugal Type, Integral Part of Injection Pump
1st Stage Fuel Filter	Full Flow Spin on Type
2nd Stage Fuel Filter	Full Flow Spin on Type
Hand Primer Pump	Located Top of Fuel Transfer Pump
Preliminary Fuel Filter	Located Bottom of Fuel Transfer Pump

Section 1012

DECALS AND REPAINTING

GENERAL INFORMATION

1. All decals relating to operation of the machine and mounted equipment must be in such condition that they can be read without difficulty. Any decal that is damaged or cannot be read must be replaced.
2. All decals that contain a safety message as indicated by WARNING or CAUTION must be in such condition that they can be read without difficulty. Any decal that is damaged or cannot be read must be replaced.
3. Whenever a machine or attachment is being repainted, cover good decals and remove damaged decals and decals that cannot be read. Use enamel thinner to aid in decal removal.
4. Whenever a decal is being replaced, remove the existing decal first. Use enamel thinner to aid in decal removal.
5. When repainting a machine or attachment use standard procedure; degrease, wash, sand, wiper down, mask as required and paint.
6. The following pages show decals as they are installed and their part number. Verify part number in parts catalog before ordering a decal.



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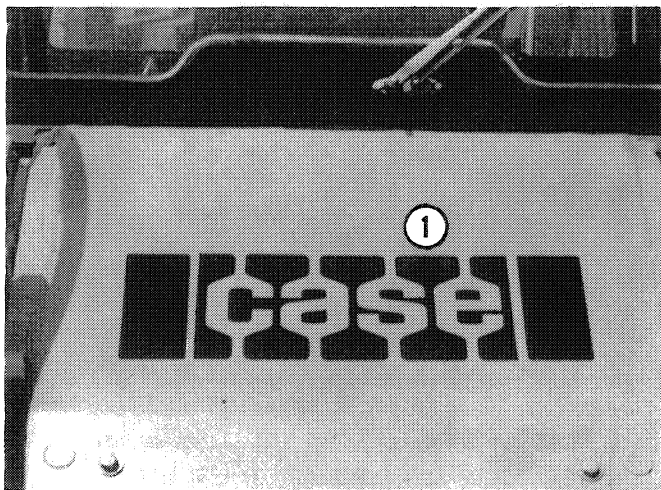
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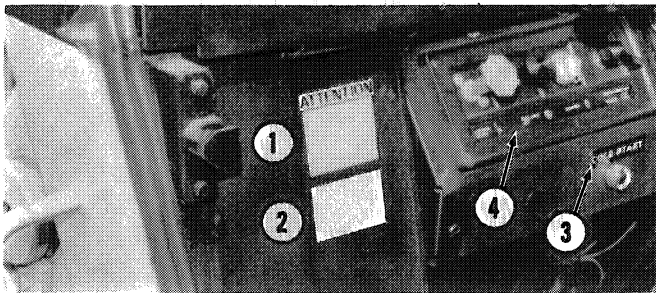
Thank you so much for reading



776951

- 1. 321-3126

Figure 1



776962

- 1. 321-2605 See Figure 3
- 2. 321-4454 See Figure 4
- 3. 321-2653
- 4. 321-3889 See Figure 5

Figure 2

ATTENTION

Operating Turbocharged Engine

Priming In cold weather, after several weeks standing or with engine oil filter change, pull out fuel shutoff control and crank engine for maximum of 30 seconds

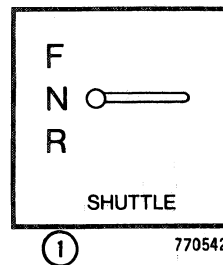
Starting Push in fuel shutoff control and start engine Run at 1000 rpm for two (2) minutes

Stopping Idle engine a few minutes before stopping

730931

- 1. 321-2605 See Figure 2 For Location

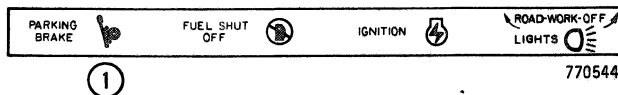
Figure 3



770542

- 1. 321-4454 See Figure 2 For Location

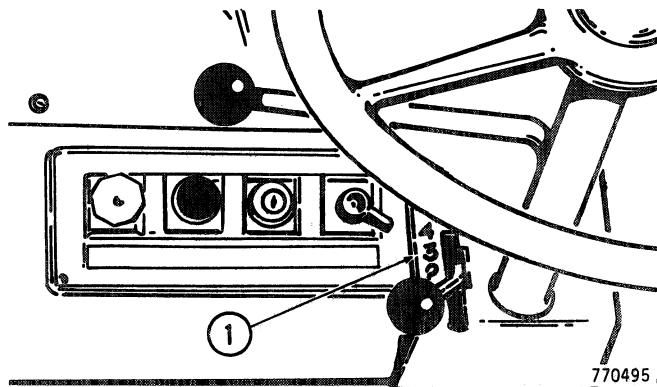
Figure 4



770544

- 1. 321-3889 See Figure 2 For Location

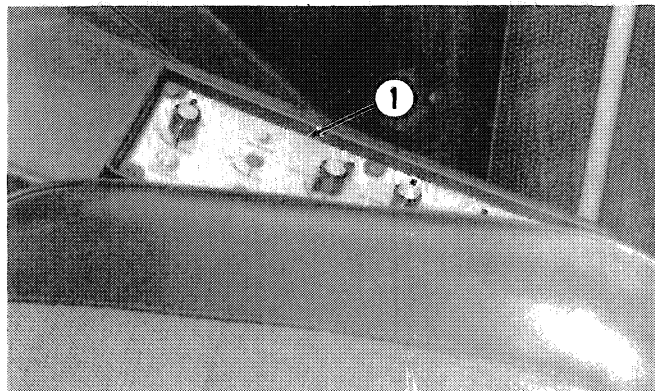
Figure 5



770495

- 1. 321-4455

Figure 6



776966

- 1. 321-4137

Figure 7

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