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› AgPubs Case 310, 310C Crawler Dozer and 210B, 310 Wheel Tractor Loader Service Manual

AgPubs 310, 310C, 210B

AgPubs Case 310, 310C Crawler Dozer and 210B, 310 Wheel Tractor Loader Service Manual

Comprehensive Repair, Overhaul, and Troubleshooting Instructions

INTRODUCTION TO SERVICE MANUALS

This document serves as a service manual for specific Case equipment models. Understanding the type of manual required is crucial for effective maintenance and repair.

Generally, three primary manual types are produced for equipment:

- **Service Manual:** Provides detailed instructions for repair, overhaul, and troubleshooting procedures. This manual is essential for addressing mechanical and operational issues.
- **Operators Manual:** Covers basic maintenance, operational procedures, fluid types and quantities, and adjustments necessary for daily use.
- **Parts Catalog:** Contains exploded views, part names, and factory (OEM) part numbers, useful for identifying and ordering replacement components.

This manual is a **Service Manual**, designed to guide users through complex repair and maintenance tasks for the specified Case models.



Figure 1: Front cover of the AgPubs Service Manual for Case 310 and 310C Crawler Loaders. The manual is presented in a black binder, indicating a durable, reproduction format.



Figure 2: An open view of the AgPubs Service Manual, displaying the title page which confirms it is for Case 310 & 310C Crawler Loader, covering technical workshop, troubleshooting, overhaul, and repair.

GENERAL INFORMATION AND SPECIFICATIONS

GROUP A - GENERAL INFORMATION

1. Specifications
2. Lubrication
3. Torque Specifications

SECTION I

310 AND 310C CRAWLER TRACTORS

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OWATONNA TOOLS ARE SHOWN IN THE ILLUSTRATIONS IN THIS MANUAL. THEY ARE IDENTIFIED BY OTC PART NUMBER.

OTC TOOLS ARE AVAILABLE FROM OWATONNA TOOL COMPANY, OWATONNA, MINNESOTA, U.S.A.

Figure 3: A page from the service manual titled "SECTION I 310 AND 310C CRAWLER TRACTORS". This page outlines the main sections and sub-sections of the manual, including General Information, Engine, Fuel and Electrical Systems, Clutch, Driveshaft, Transmission, and Track and Suspension.

GROUP B - ENGINE

1. Specifications
2. Service Information

Carburetor System

Detailed instructions for carburetor assembly, disassembly, and adjustment are provided to ensure proper fuel delivery and engine performance.

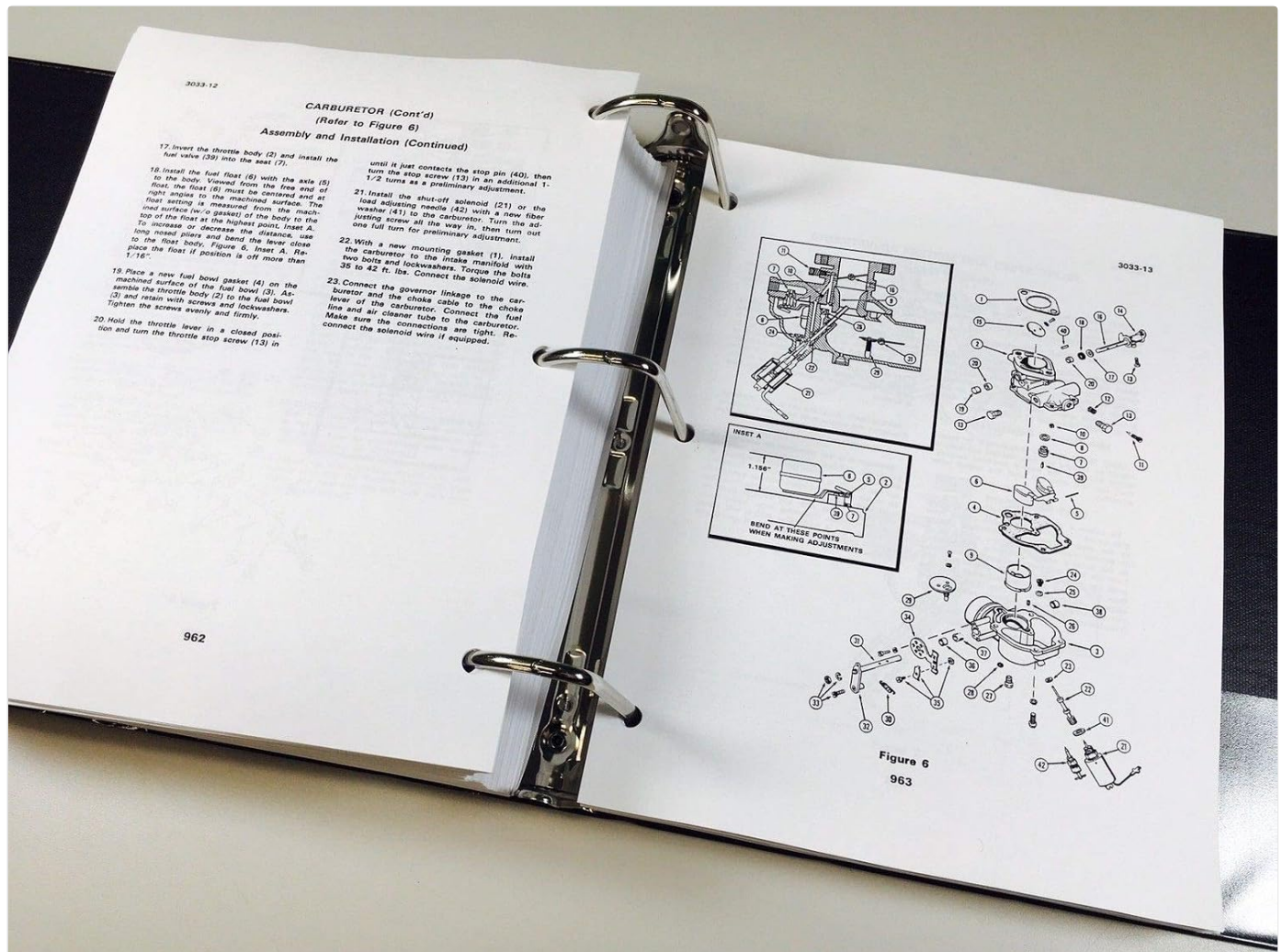


Figure 4: An exploded view diagram of a carburetor, illustrating its various components and assembly order. This section includes instructions for installation, adjustment, and troubleshooting of the carburetor system.

FUEL AND ELECTRICAL SYSTEMS

GROUP C - FUEL AND ELECTRICAL SYSTEMS

1. Electrical System
2. Fuel System

CLUTCH SYSTEM

GROUP D - CLUTCH

1. Removing Engine and Associated Parts
2. Removing Clutch Housing

3. Servicing Clutch Pressure Plate
4. Disassembling Clutch Housing
5. Installing Clutch

DRIVESHAFT

GROUP E - DRIVESHAFT

1. Removing Driveshaft
2. Replacing Universal Joint Bearings
3. Installing Driveshaft

TRANSMISSION, DIFFERENTIAL, FINAL DRIVE, AND PTO BELT PULLEY

GROUP F - TRANSMISSION, DIFFERENTIAL. FINAL DRIVE. AND P.T.O. BELT PULLEY

1. Lubrication
2. Differential
3. Transmission
4. Final Drive
5. P.T.O. and Belt Pulley (Optional)

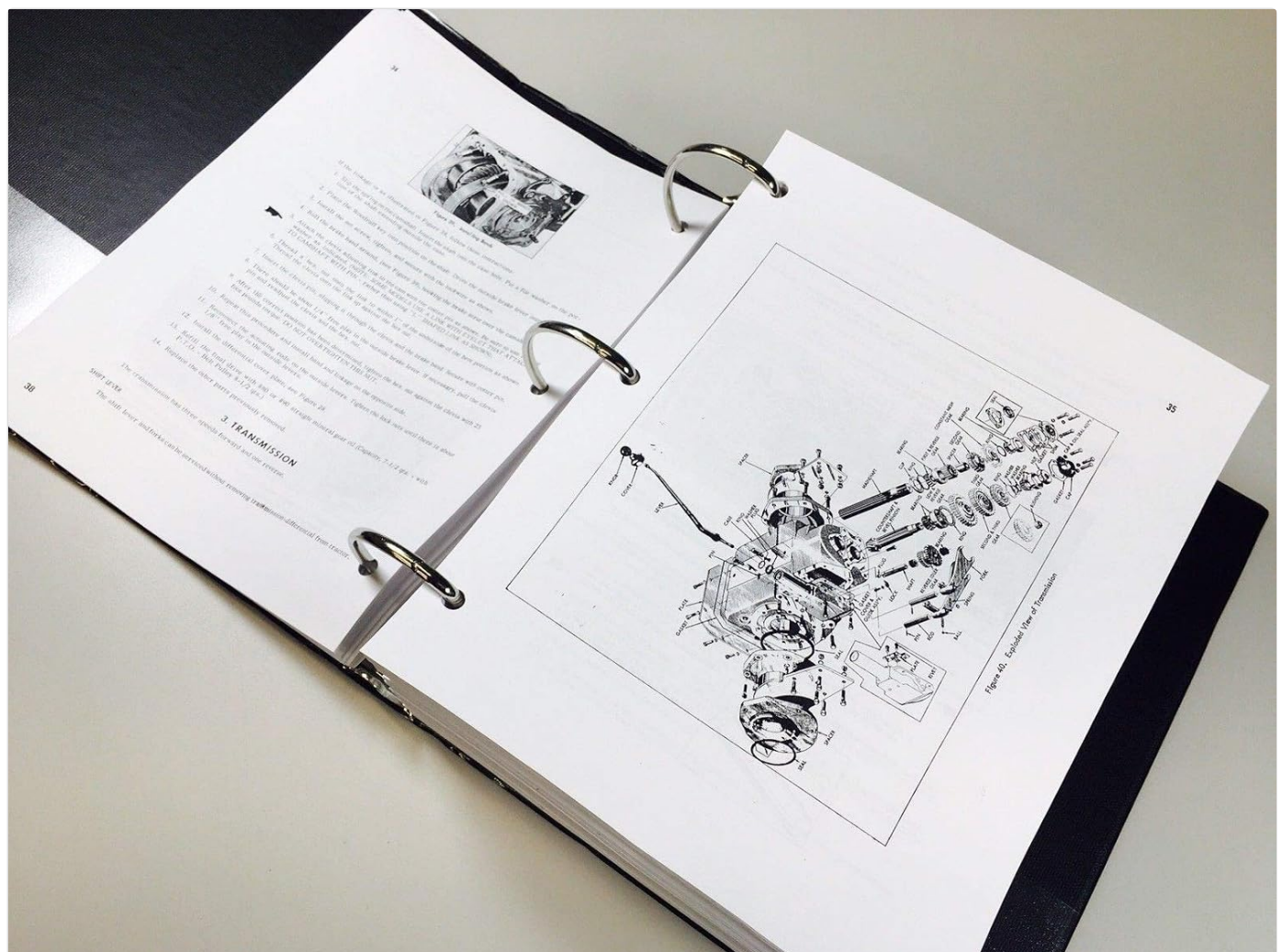


Figure 5: An exploded view diagram detailing the components of a transmission assembly. This illustration aids in the correct disassembly, inspection, and reassembly of the transmission system.

Figure 6: Diagram illustrating the hydraulic oil flow for the lifting position, including the pump, control valve, and pathways for high-speed and slow-speed lift operations. This diagram is crucial for understanding hydraulic system diagnostics.

Explanation of oil flow when using double-acting cylinders, focusing on the inner and outer hand lever operations for spool movement and hydraulic return paths.

OIL FLOW
(With Double Acting Cylinders)
(Refer to Figure D-2)

Lower Valve

Inner Hand Lever Rearward-Lower Spool Rearward

When the inner hand lever is moved rearward, the control valve spool in the lower valve is also moved rearward. As the valve spool is moved rearward the oil from the pump coming up through the torque tube cover into the lower valve neutral passage is blocked off by the spool. As pump pressure increases the drop check ball is forced off its seat, thus allowing pressurized oil to flow into the lower valve and around the spool to the upper valve. In this example we are assuming the lower valve has the least resistance at the remote cylinder and therefore its oil demands will be filled first.

As the pressurized oil enters the lower valve it is directed by lands and grooves on the spool to port (A), where it flows into the manifold. The oil then follows the drilled passages in the manifold to the front manifold port and out to a remote cylinder if connected.

The oil returning from the opposite end of the remote cylinder comes back through the rear manifold port, through the drilled passage in the manifold to port (B). At port (B) the return oil flows around the spool to the center return passage. The oil must then flow up through the upper valve, through the valve cover, down through the front return passages of the upper valve, lower valve, torque tube cover and back to sump.

After the demands of the lower valve system have been fulfilled and the lower spool returns to neutral the pressurized oil flows around the land of the lower spool to the upper spool for operation of the upper valve.

Upper Valve

Outer Hand Lever Forward-Upper Spool Forward

When the outer hand lever is moved forward, the valve spool is moved forward. This allows pressurized oil coming into the upper valve to flow around the land of the lower spool to the upper spool (D) to the manifold.

The pressurized oil enters the manifold at port (D). It is then directed by drilled passages in the manifold to the rear manifold port, through the hydraulic hose to the lower rear coupling and out to the remote cylinder.

The oil returning from the opposite end of the remote cylinder comes back through the upper rear coupling to the front manifold. It then flows through the drilled passages in the manifold to port (C). At port (C) the return oil flows around the groove in the spool to the front return port in the valve and down through the lower valve, torque tube cover and back to sump.

Figure D-2

D-4

D-5

Hydraulic Steering System

Information on the hydraulic steering system, including the reservoir, filter, pump, manual steering pump, and control valve functions during engine operation.

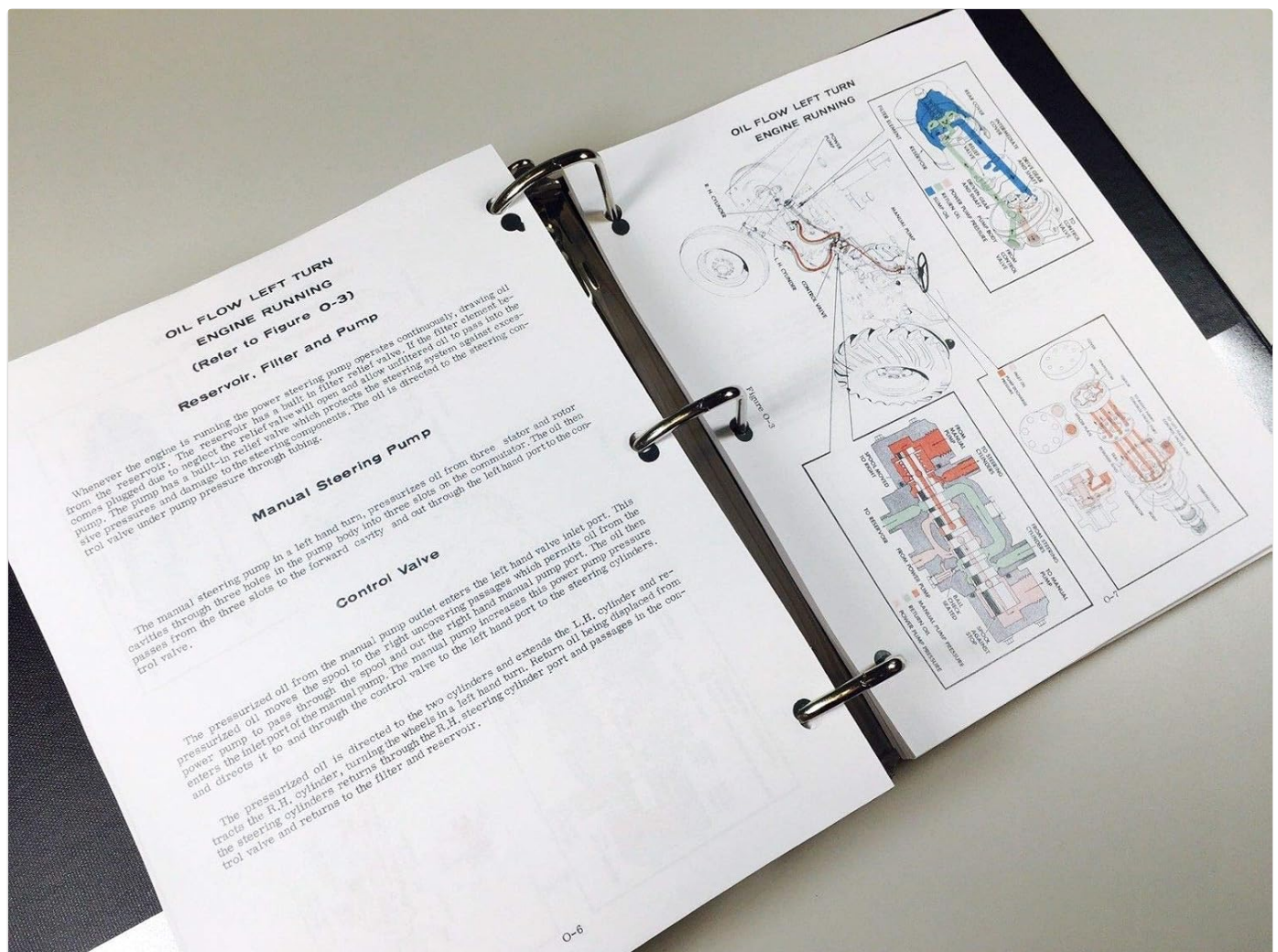


Figure 8: Diagram illustrating the hydraulic steering system, including the reservoir, filter, pump, and control valve. This diagram helps in understanding the flow and function of the steering hydraulics when the engine is running.

LUBRICATION AND MAINTENANCE SCHEDULE

This section details the lubrication points and recommended service intervals for various components of the equipment, ensuring proper maintenance and longevity.

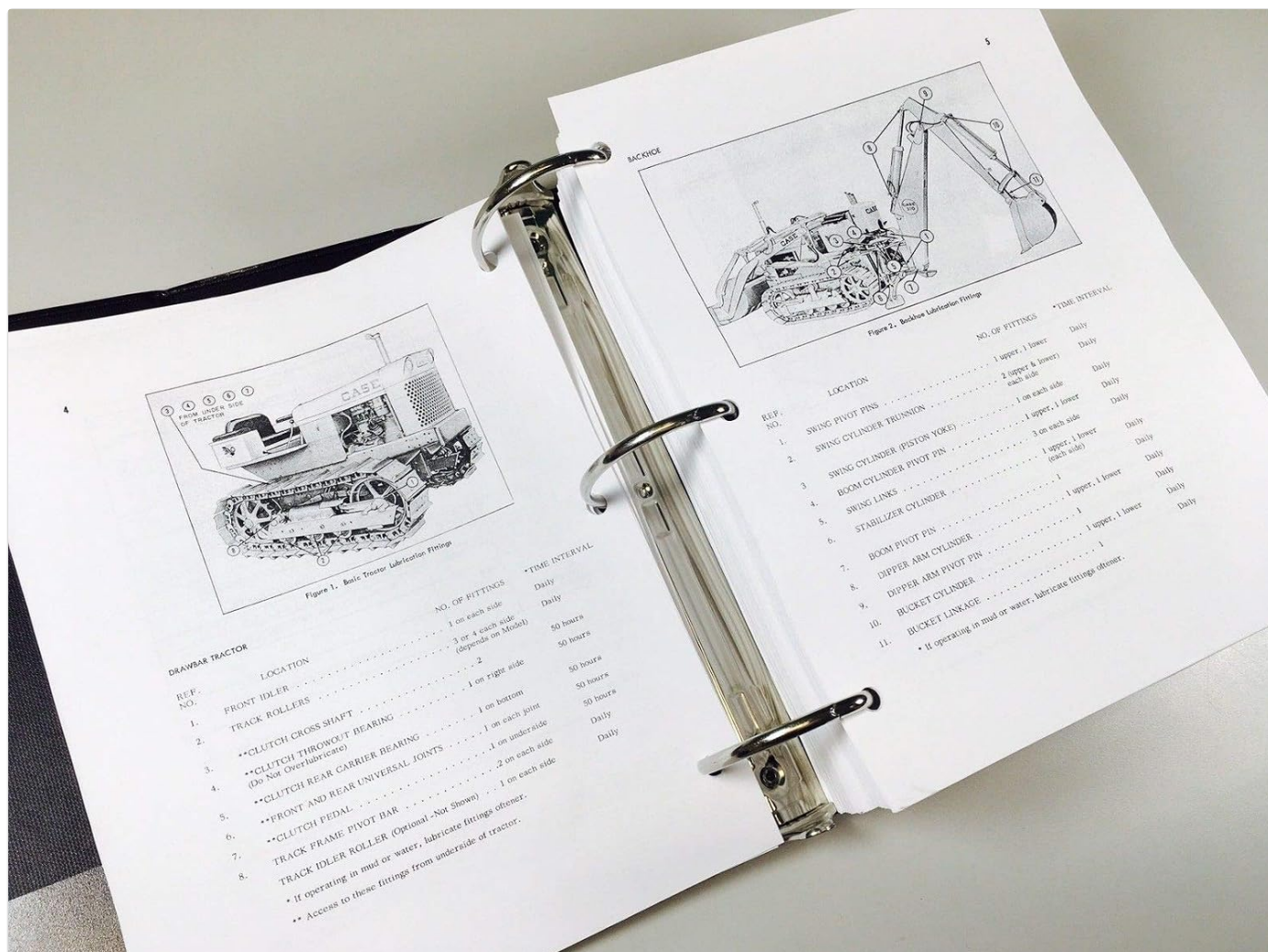


Figure 9: A lubrication chart and diagram showing various lubrication points on the equipment, along with recommended time intervals for servicing. This includes points for track rollers, clutch cross shaft, and other critical components.

SPECIAL TOOLS INFORMATION

Certain procedures within this manual may require specialized tools. Illustrations in this manual identify tools manufactured by Owatonna Tool Company (OTC).

OTC tools are available from Owatonna Tool Company, Owatonna, Minnesota, U.S.A.

WARRANTY AND SUPPORT

For information regarding product warranty or technical support, please refer to the original purchase documentation or contact the manufacturer directly. This service manual provides technical repair guidance and does not include warranty terms.

For further assistance, consult authorized service centers or qualified technicians experienced with Case equipment.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question