

# 780 CK LOADER BACKHOE TABLE OF CONTENTS

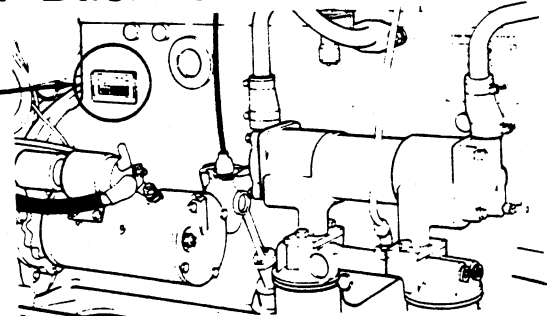
SERIES/SECTION	SECTION NO.	FORM NO.
10	SERIES - GENERAL	
	Maintenance and Lubrication .....	9-71435
	General Engine Specifications .....	9-80675
	Detailed Engine Specifications .....	9-78646
20	SERIES - ENGINE	
	General Engine Service and Removal .....	9-71435
	Engine Air Cleaner .....	9-71435
	Air Cleaner Installation, Turbocharged Engine .....	9-71435
	Engine Diagnosis .....	9-76365
	Engine Tuneup .....	9-76379
	Cylinder Head, Valve Train, and Camshaft .....	9-76166
	Cylinder Block, Sleeves, Pistons and Rods .....	9-76176
	Crankshaft, Main Bearings, Flywheel and Oil Seal Replacement .....	9-76187
	Lubrication System .....	9-78667
	Cooling System .....	9-76337
	Turbocharger Failure Analysis .....	9-78235
30	SERIES - FUEL SYSTEM	
	Electric Fuel Pump .....	9-71435
	Fuel Tank and Fuel Lines .....	9-71435
	Fuel System and Filters .....	9-75297
	Robert Bosch Fuel Injection Pump .....	9-74937
	Roosa Master Fuel Injectors .....	9-74959
40	SERIES - HYDRAULICS	
	Hydraulic System Flowmeter Tests and Pressure Checks (All Machines) .....	9-71435
	Loader/Backhoe Hydraulic System .....	9-71435
	Loader Hydraulic Diagram After SN 5500550, Backhoe Hydraulic Diagram and Installations, Loader Control Valve, Dipper Extension Cylinder .....	9-71435
	Backhoe Control Valve .....	9-71435
	Backhoe Basic Hydraulic Installation and Control Levers .44, Sup. 1	9-71435
	Hydra-Guide .....	9-71435
50	SERIES - STEERING	
	Steering Hydraulic System .....	9-71435
	Front Axle .....	9-71435
60	SERIES - POWER TRAIN	
	Clark Transmission Maintenance and Service Manual, HR28000 Series, 2 Speed .....	SM HR282
	Clark Transmission Maintenance and Service Manual Supplement, To Be Used in Conjunction with the HR28000 Series, 2 Speed Maintenance and Service Manual .....	SMS 282

SERIES/SECTION	SECTION NO.	FORM NO.
60 SERIES - POWER TRAIN (CONT'D.)		
General Transmission Service and Removal .....	63	9-71435
Differential, Planetaries and Drive Shaft .....	67	9-71435
Differential and Planetaries (Tractor SN 5500354 and After, Except 5500426 thru 5500439) .....	67, Sup. 1	9-71435
70 SERIES - BRAKES		
Brake System Diagram/Operation .....	71	9-71435
Brake System .....	72	9-71435
80 SERIES - ELECTRICAL		
Electrical System .....	82	9-71435
Wiring Diagram, Trouble Shooting the Starting and Charging Circuits, A15485 and R26136 Starters, Ether Injector Starting Aid .....	82, Sup. 1	9-71435
90 SERIES - MOUNTED EQUIPMENT		
Loader .....	92	9-71435
Loader Exploded Views, Return-To-Dig, Anti-Rollback, SN 5500550 and After .....	92, Sup. 1	9-71435
Backhoe .....	93	9-71435
Boom Lock, Dipper Extension, Hydraulic Installations with SN 5500550 and After, Backhoe Controls with SN 5500166 and After and SN 5500155 and 5500162 .....	93, Sup. 1	9-71435
Rollover Protective Structure .....	99	9-71435

10 SERIES  
GENERAL

# Section 1010 GENERAL ENGINE SPECIFICATIONS 780CK Loader Backhoe

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



## DIESEL ENGINES

### General

Type .....	4 Cylinder, 4 Stroke Cycle, Valve-in-Head Turbo-Charged
Firing Order .....	1-3-4-2
Bore .....	4-5/8 Inches (117.5mm)
Stroke .....	5 Inches (127mm)
Piston Displacement .....	336 Cubic Inches (8 259 cm <sup>3</sup> )
Compression Ratio .....	15.8 to 1
No Load Governed Speed .....	2330 to 2370 RPM
Rated Engine Speed .....	2200 RPM
Engine Idling Speed .....	700 to 750 RPM
*Valve Tappet Clearance (Exhaust) ... (Hot) .020 inch	(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 Alloy Liners

### Main Bearings

Number of Bearings .....	5
Type Bearings .....	Replaceable Precision Steel Back, Copper-Lead Alloy Liners

### Engine Lubricating System

Crankcase capacity .....	10 Qts. (9.4 litre)
with Filter Change .....	11 Qts. (10.34 litre)
Oil Pressure .....	46 to 59 Pounds with Engine Warm and Operating At Rated Engine Speed
Type System .....	Pressure and Spray Circulation
Oil Pump .....	Gear Type
Oil Filter .....	Full Flow Spin on Type

### Fuel System

Fuel Injection Pump .....	Robert Bosch, Type PES Multiple Plunger
Pump Timing .....	30 Degrees Before Top Dead Center (Port Closing)
Fuel Injectors .....	Pencil Type (Opening Pressure 2800 PSI)
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



Thank you so much for reading.  
Please click the “Buy Now!”  
button below to download the  
complete manual.



After you pay.

You can download the most  
perfect and complete manual in  
the world immediately.

Our support email:

[ebooklibonline@outlook.com](mailto:ebooklibonline@outlook.com)