

Case 580CK Model B Backhoe • Loader • Tractor Service Manual

v 8.0

TABLE OF CONTENTS

	SERIES/ SECTION	SECTION NO.
10	SERIES - GENERAL	
	General Specifications, 580B Tractors	11
	Detailed Specifications, 580B Tractors	12
	Lubrication, Shuttle Tractors	13
	Lubrication, Hydrostatic Tractors	13
	Lubrication, Loader & Backhoe	13
20	SERIES - ENGINE	
	Cylinder Head & Valves, Diesel	22
	Cylinder Head & Valves, Spark Ignition	22
	Engine Block Assemblies	23
	Air Cleaner System	24
30	SERIES - FUEL SYSTEM	
	Fuel System & Filters	31
	Roosa Master Model DB Fuel Injection Pump	32
	Roosa Master Fuel Injectors	33
	Model 267 Carburetor	35
40	SERIES - HYDRAULICS	
	Hydraulic Diagrams, Trouble Shooting, Testing & Service	42
	Hydraulic System & Power Steering Oil Filters	42
	Torque Converter - Power Shuttle Hydraulic Pump	43
	Equipment Pump	43
	Three-Point Hitch Cylinders	44
	Loader Control Valve	44a
	Backhoe Control Valve	44b
	Stabilizer Control Valve	44c
	Three-Point Hitch Control Valve	44d
	Cylinder Removal Installation	45
	Loader Cylinder	45
	Backhoe Cylinder	46
	Auxiliary Cylinder	47
	Hydraulic Hydraulic Guidance System	47
	Bomb Kickout System	49
50	SERIES - STEERING	
	Power Steering Pump & Hand Pump	52
	Steering Control Valve	53
	Steering Cylinders & Adjustment	54
	Steering Axle & Wheel Bearings	55
60	SERIES - POWER TRAIN	
	Torque Converter, Power Shuttle Countershaft, Control Valves, & Adjustment	61
	Power Shuttle Clutch Pack, Rockford Clutch	62
	Power Shuttle Clutch Pack, Twin Disc	63
	Hydrostatic Drive, Gear Train, Control Linkage	64
	Four-Speed Transmission & Final Drive	65
	Mechanical Shuttle	66
	Duel Range Assembly	67
	11-Inch Traction Clutch	68
	Independent Power Take-Off	69
	NOTE: The following sections also relate to the Power Train:	
	Torque Converter-Power Shuttle Hydraulic Pump	43

70	SERIES - BRAKES	
	Differential Brakes, Differential Lock, and Parking Brakes.	77
80	SERIES - ELECTRICAL	
	Wiring Diagram, Tractor	81
	Wiring Diagram Fork Lift Tractor	81
90	SERIES - MOUNTED EQUIPMENT	
	Miscellaneous Equipment (Includes Rear Attachment Support Arms, Counterweights, Moldboard, Logging & Pallet Forks, & Rollbar)	91
	Loader	92
	Backhoe	93
	Three-Point Hitch	97
100	SERIES - HOW IT WORKS - TROUBLE SHOOTING	
	Hydraulic Testing - Torque Converter - Power Shuttle	101
	How It Works - Hydrostatic Power Steering	151
	How It Works - Torque Converter with Rockford Power Shuttle.	162
	How It Works - Torque Converter with Twin Disc Power Shuttle	163
	How It Works - Hydrostatic Transmission	164

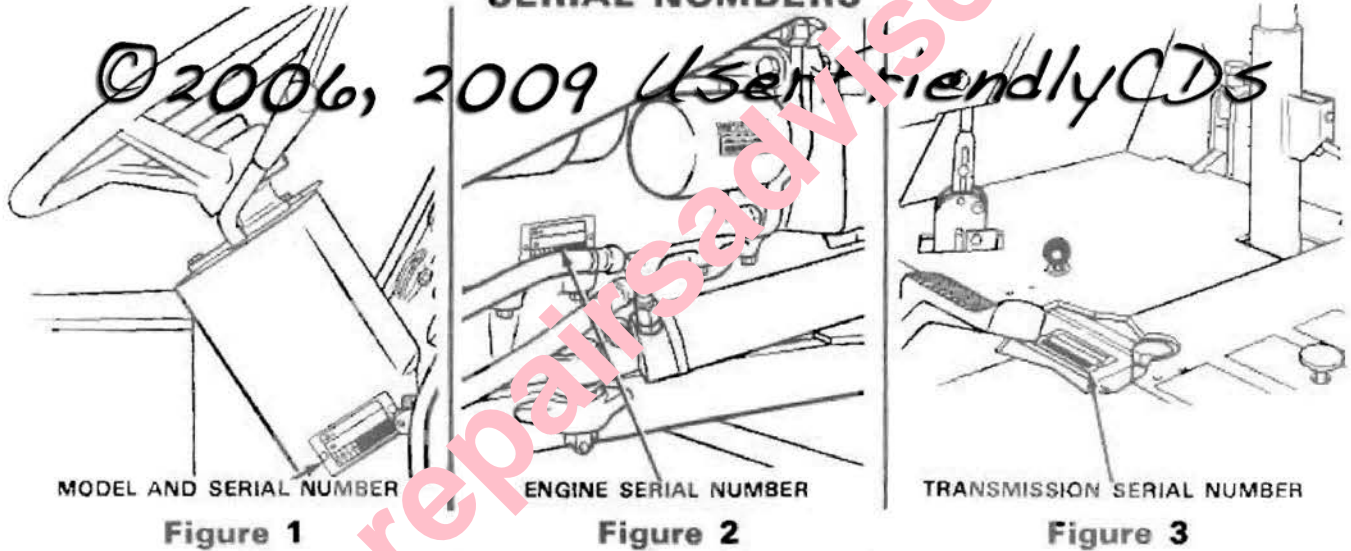
NOTE: Also refer to sections in the 10 Series, Hydraulics, for troubleshooting and how it works information relating to the equipment hydraulics system.

Section

11

GENERAL SPECIFICATIONS 580B TRACTORS

SERIAL NUMBERS



DIESEL ENGINES

General

Type	"Case" Open Chamber Combustion 4 Cylinder, 4 Stroke Cycle, Valve-in-Head.
Firing Order	1-3-4-2
Bore	3-13/16 Inches (96.8mm)
Stroke	4-1/8 Inches (104.8mm)
Piston Displacement	188 Cubic Inches (3 080.8cm ³)
Compression Ratio	17.5 to 1
Cylinder Sleeves	Removable Wet Type
No Load Governed Speed (Mechanical Shuttle)	2060 RPM
No Load Governed Speed (Power Shuttle)	2250 RPM
Rated Engine Speed (Mechanical Shuttle)	1900 RPM
Rated Engine Speed (Power Shuttle)	2100 RPM
Engine Idling Speed	600-650 RPM
*Valve Tappet Clearance (Exhaust)	(Hot and Cold) .014 Inch (0.356mm)
(Intake)	(Hot and Cold) .014 Inch (0.356mm)

*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

Oil Pressure	50 to 70 Pounds (3.5 to 4.9 kg/cm ²) 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	Roosa-Master
Pump Timing	8 Degrees Before Top Dead Center
Fuel Injectors	Pencil Type (Opening Pressure 2800 PSI).
Fuel Transfer Pump	Vane Type, Integral Part of Injection Pump.
Governor	Mechanical, Fly-Weight, Integral Part of Injection Pump.
1st Stage Fuel Filter	Replaceable Type
2nd Stage Fuel Filter	Replaceable Type
Fuel Tank Water Trap and Drain	Located in Base of Fuel Tank
Fuel Tank Capacity	22 U.S. Gallons (83.31 liters)
Fuel Level Gauge	Electric, Located on Instrument Panel.

SPARK IGNITION ENGINES

General

Type	4 Cylinder, 4 Stroke Cycle, Valve-in-Head
Firing Order	1-3-4-2
Bore (188G)	3-13/16 Inches (96.8mm)
(159G)	3-1/2 Inches (88.9mm)
Stroke	4-1/8 Inches (104.8mm)
Compression Ratio (188G)	7.5 to 1
(159G)	7.42 to 1
Piston Displacement	377 Cubic Inches
No Load Governed Speed (188G)	2250 RPM
(159G)	2250 RPM
Rated Engine Speed (188G)	2100 RPM
(159G)	1900 RPM
Engine Idling Speed	600 RPM
*Valve Tappet Clearance (Intake)	(Hot and Cold) .014 Inches (0.356mm)
(Exhaust)	(Cold) .020 Inches (0.508mm) (Hot) .014 Inches (0.356mm)
Exhaust Valve Rotators	Positive Type
*Hot Settings Are Made After The Engine Has Operated At Thermostat Controlled Temperature For At Least Fifteen Minutes.	

This and other manuals you can download on the site:
www.repairsadviser.com/Case-580B-Shuttle-Transmission-Loader-Backhoe-Operators-Manual-PDF