

310G-350 CRAWLER

TABLE OF CONTENTS

SERIES/SECTION	SECTION NO.	FORM NO.
10 SERIES - GENERAL		
General Engine Specifications - 188 Diesel	1010	9-77865
Detailed Engine Specifications - 188 Diesel	1027	9-78675
Maintenance and Lubrication	1050	9-99772
Torque Chart	1051	9-99772
Detailed Engine Specifications 148 Spark Ignition	1129	9-79085
20 SERIES - ENGINE		
Engine Diagnosis	2001	9-78875
Engine Tune-Up	2002	9-78825
Cylinder Head and Valves, Spark Ignition Engine	2013	9-80512
Cylinder Head, Valve Train and Camshaft	2015	9-78836
Engine Block, Spark Ignition Engine	2023	9-76995
Cylinder Block, Sleeves, Pistons and Rods	2025	9-78855
Crankshaft, Bearings, Flywheel and Oil Seals	2035	9-78866
Oil Pump	2045	9-78885
Engine Removal and Installation	2050	9-99772
Air Cleaner	2051	9-99772
Cooling System	2054	9-99772
Engine Lubrication	2555	9-78985
30 SERIES - FUEL SYSTEMS		
Model TSX Series Carburetor	35	9-80581
Fuel Filters, Diesel Engine	3010	9-78785
Fuel Injection Pump	3012	9-78795
Fuel Injectors	3013	9-78806
Throttle Linkage Adjustments, Fuel Lines	3052	9-99772
Fuel Filters, Spark Ignition Engine	3110	9-79065
40 SERIES - HYDRAULICS		
Hydraulic Diagrams, Trouble Shooting, Pressure Checks . . .	4011	9-99772
Equipment Pumps	4013	9-99772
Loader and Dozer Control Valves	4021	9-99772
Commercial-Shearing Backhoe Control Valves	4022	9-99772
Pull Behind Hydraulics, Diversion Valve	4028	9-99772
Boom Lockout System	4041	9-99772
Hydraulic Cylinders	4057	9-99772
50 SERIES - TRACK AND SUSPENSION		
Track and Suspension System	5010	9-99772
Intertrac Rollers	5505	9-99772
60 SERIES - POWER TRAIN		
Trouble Shooting and Testing	6012	9-99772
Power Shuttle Transmission	6014	9-99772
Torque Converter and Universal Joint Coupling	6016	9-99772
Transmission-Differential	6018	9-99772

CASE CORPORATION

C.E. Div. 9-99774
310G-350 Crawler
December 1975

PRINTED IN U.S.A.

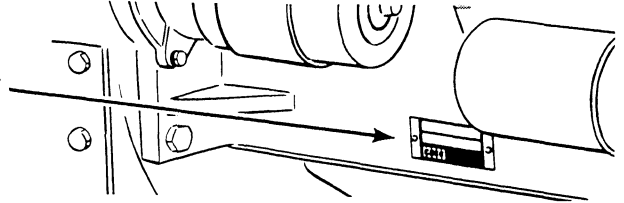
Reprinted

SERIES/SECTION	SECTION NO.	FORM NO.
60 SERIES - POWER TRAIN (CONT'D)		
Clutch	6021	9-99772
Drive Shaft	6022	9-99772
Final Drives	6026	9-99772
Power Takeoff	6028	9-99772
80 SERIES - ELECTRICAL		
Wiring Diagrams	8011	9-99772
Trouble Shooting	8012	9-99772
Ignition System	8013	9-99772
Batteries	8014	9-99772
Starter and Starter Solenoid	8015	9-99772
Alternator	8016	9-99772
Generator and Voltage Regulator	8017	9-99772
90 SERIES - MOUNTED EQUIPMENT		
Loader	9011	9-99772
Dozers	9013	9-99772
Winch	9014	9-99772
Ripper	9015	9-99772
Three-Point Hitch	9016	9-99772
Roll-Over Protection Structure	9019	9-99772
Model 26 and 26C Backhoe	9022	9-99772
Model 32 Backhoe	9023	9-99772
Model 33 Backhoe	9024	9-99772

Section 1010

GENERAL ENGINE SPECIFICATIONS 350 CRAWLER

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



General

188 DIESEL ENGINES

Type	Case Open Chamber, 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 In. (3 080.8 cm ³)
Compression Ratio	17.5 to 1
No Load Governed Speed	2150 RPM
Rated Engine Speed	2000 RPM
Engine Idling Speed	700 to 750 RPM
*Valve Tappet Clearance (Exhaust)	(Hot and Cold) .014 Inch (0.356mm)
(Intake)	(Hot and Cold) .012 Inch (0.305mm)

*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 (Without Filter)	6 U.S. Quarts (5.7 Litres)
(With Filter Change)	7 U.S. Quarts (6.6 Litres)
Oil Pressure	50 to 70 PSI (345 to 483 kPa) Eng. Warm and Operating at Rated Eng. Speed
Type System	Pressure and Spray Circulation
Oil Pump	Gear Type
Oil Filter	Full Flow Spin on Type

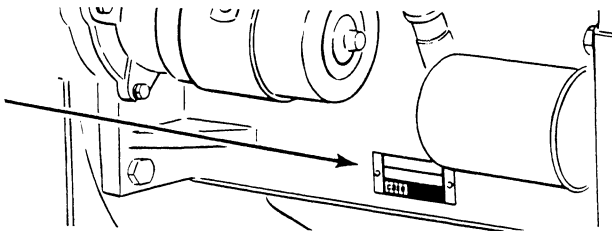
Fuel System

Fuel Injection Pump	Roosa-Master
Pump Timing	8 Degrees Before Top Dead Center
Fuel Injectors (Prior Eng. SN 2726393)	Pencil Type (Opening Press. 2800 PSI) (19 306 kPa)
Fuel Injectors (Start'g W/Eng. SN 2726393) ..	Pencil Type (Opening Press. 3200 PSI) (22 064 kPa)
Fuel Transfer Pump	Vane Type, Integral Part of Injection Pump
Governor	Variable Speed, Fly-Weight Centrifugal Type, Integral Part of Injection Pump
Fuel Filters (Prior Eng. SN 2718490)	Replaceable Element Type
Fuel Filters (Starting W/Eng. SN 2718490)	Full Flow Spin on Type

GENERAL ENGINE SPECIFICATIONS

310 CRAWLER

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



188 DIESEL ENGINES

General

Type	Case Open Chamber, 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 (3 080.8 cm ³)
Compression Ratio	17.5 to 1
No Load Governed Speed	2015 RPM
Rated Engine Speed	1850 RPM
Engine Idling Speed	575 to 675 RPM
*Valve Tappet Clearance (Exhaust)	(Hot and Cold) .014 Inch (0.356mm)
(Intake)	(Hot and Cold) .012 Inch (0.305mm)

*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 Bearings	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 (Without Filter)	5 U.S. Quarts (4.7 Litres)
(With Filter Change)	6 U.S. Quarts (5.7 Litres)
Oil Pressure	50 to 70 PSI (345 to 483 kPa) Eng. Warm and Operating at Rated Eng. Speed
Type System	Pressure and Spray Circulation
Oil Pump	Gear Type
Oil Filter	Full Flow Spin on Type

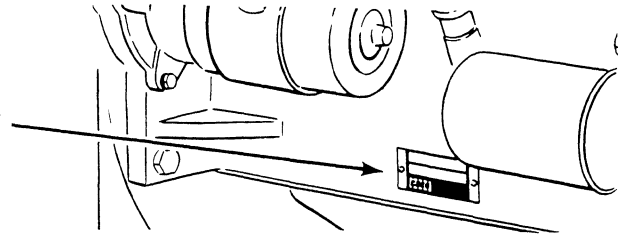
Fuel System

Fuel Injection Pump	Roosa-Master
Pump Timing	8 Degrees Before Top Dead Center
Fuel Injectors (Prior Eng. SN 2726393)	Pencil Type (Opening Press. 2800 PSI (19 306 kPa)
Fuel Injectors (Start'g W/Eng. SN 2726393) ..	Pencil Type (Opening Press. 3200 PSI) (22 064 kPa)
Fuel Transfer Pump	Vane Type, Integral Part of Injection Pump
Governor	Variable Speed, Fly-Weight Centrifugal Type, Integral Part of Injection Pump
Fuel Filters (Prior Eng. SN 2718490)	Replaceable Element Type
Fuel Filters (Starting W/Eng. SN 2718490)	Full Flow Spin on Type

GENERAL ENGINE SPECIFICATIONS

310 CRAWLER

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



148 SPARK IGNITION ENGINE

General

Type	Case Open Chamber, 4 Cylinder, 4 Stroke Cycle, Valve-in-Head
Firing Order	1-3-4-2
Bore	3-3/8 Inches (85.7mm)
Stroke	4-1/8 Inches (104.8mm)
Piston Displacement	148 Cubic Inches (2 425.3mm)
Compression Ratio	7.1 to 1
No Load Governed Speed	2025 RPM
Rated Engine Speed	1850 RPM
Engine Idling Speed	575 to 675 RPM
*Valve Tappet Clearance (Exhaust)	(Hot) .014 Inch (0.356mm)
	(Cold) .020 Inch (0.508mm)
(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	4
Number of Compression Rings	3
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	3
Type Bearings	Replaceable Precision, Steel Back, Copper-Lead or Aluminum Alloy Liners.

Engine Lubricating System

Crankcase Capacity (Without Filter)	5 U.S. Quarts (4.7 Litres)
(With Filter Change)	6 U.S. Quarts (5.7 Litres)
Oil Pressure	24 to 32 PSI (165 to 221 kPa) 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

Carburetor	Marvel-Schebler No. TSX-957
Main Jet Adjustment	Approx. 1-3/4 Turns Open
Idle Jet Adjustment	Approx. 1 Turn Open

Distributor Ignition

Contact Point Gap020 Inches (0. 508mm)
Dwell Angle	42°
Spark Plug Gap (18mm) (Heat Range-8)025 Inch (0.635mm)

Engine Timing

Static Timing	6° BTDC
Running Timing	38° BTDC at Rated Speed

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