SERVICE MANUAL

H40-50J, H60JS (F003)



FORM 599895 Rev. 12/03

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SERVICE MANUAL CONTENTS

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FRAME	0100 SRM 0179	08/81
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COOLING SYSTEM	0700 SRM 0626	11/01
ROCHESTER CARBURETOR	0900 SRM 0011	02/97
LPG FUEL SYSTEM	0900 SRM 0015	09/93
OIL CLUTCH	1200 SRM 0018	02/97
SINGLE-SPEED PS TRANSMISSION-REPAIR	1300 SRM 0043	10/82
OIL CLUTCH TRANSMISSION	1300 SRM 0059	03/97
DRIVE AXLE	1400 SRM 0049	09/03
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MASTER CYLINDER	1800 SRM 0013	02/97
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CYLINDER HEAD

Valve seat specifications	See Figure 6.
Valve seat width, intake valves	0.896 to 1.897 mm (0.035 to 0.074 in.)
Valve seat width, exhaust valves	1.468 to 2.468 mm (0.058 to 0.0971 in.)
Clearance between intake valve and guide	
– Production Limit	0.0254 to 0.0686 mm (0.0010 to 0.0027 in.)
– Service Limit	0.094 mm (0.0037 in.)
Clearance between exhaust valve and guide **NOTE:** The valve stems for the exhaust valves have a taper of 0.0025 mm (0.001 in.)	
– Production Limit (top of taper)	0.0254 to 0.0686 mm (0.0010 to 0.0027 in.)
– Service Limit	0.119 mm (0.0047 in.)
– Production Limit (bottom of taper)	0.0508 to 0.0939 mm (0.0020 to 0.0037 in.)
– Service Limit	0.145 mm (0.0057 in.)
Diameter of exhaust valve stem	8.6817 to 8.6995 mm (0.3418 to 0.3425 in.)
Diameter of intake valve stem	8.6817 to 8.6995 mm (0.3418 to 0.3425 in.)
Valve head diameter (all)	8.6817 to 8.6995 mm (0.3418 to 0.3425 in.)
Valve installed height (all)	42.926 mm (1.69 in.)
Valve spring, free length (see Figure 48)	52.8 mm (2.08 in.)
Valve spring force (installed and valve is closed)	347 to 383 N @ 43 mm (78 to 86 lbs @ 1.69 in.)
Valve spring force (installed and valve is open)	756 to 800 N @ 32 mm (170 to 180 lbs @ 1.26 in.)

HYDRAULIC VALVE LIFTER

Leak rate	12 to 90 seconds with 50 lb load
Body diameter	21.3868 to 21.4046 mm (0.8420 to 0.8427 in.)
Plunger travel	3.175 mm (0.125 in.)
Clearance in bore	0.0635 mm (0.0025 in.)
Lifter bore diameter	21.425 to 21.450 mm (0.8435 to 0.8445 in.)

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Stator Windings Check

To check the stator windings for electrical ground, connect an ohmmeter as shown in Figure 17. There must be no continuity between any of the stator terminals and the metal housing.

To check the stator for open circuits, connect the ohmmeter or test lamp between each pair of wires to the stator as shown in Figure 17. If the test lamp does not illuminate or the meter reading is high, the windings have an open circuit.

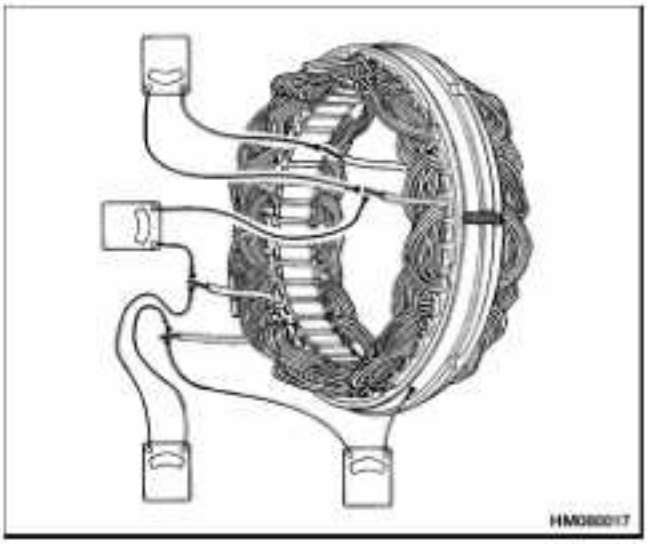


Figure 17. Stator Checks

Voltage Regulator Check

Use a voltage regulator test device. Do not use an ohmmeter. If the voltage regulator has damage, replace the voltage regulator.

Troubleshooting

PROBLEM	POSSIBLE CAUSE	PROCEDURE OR ACTION
Battery is charged above normal.	Alternator is not charging correctly.	Repair or install new parts.
	Electrical ground in wire to brush or clip.	Repair or install new parts.
	High resistance in the circuit.	Repair or install new parts.
Battery uses more water than normal.	Battery is charging more than normal.	Replace voltage regulator.
	Alternator has damage in the field windings, diodes, diode bridge, or stator.	Install new parts.
	Battery has damage or is too old.	Replace battery.

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Item	Design Data
Pressure Gauge (Range Based on Requirements)	0 to 552 kPa (0 to 80 psi) 0 to 1380 kPa (0 to 200 psi) 0 to 2068 kPa (0 to 300 psi)
Method of Mounting	To Panel with Bracket

SENDER SPECIFICATIONS

Item	Design Data
Operating Voltage	
All Senders	12-Volt System
Terminal Threads (Electrical)	
All Senders	#10-32 UNF-2A
Fastener Data (To Fit in a Threaded Hole)	
Temperature Sender	
Body Threads	1/2-14 Dryseal
Hex (Across Flats)	23.4 mm (0.92 in.) for a 15/16 in. Wrench
Pressure Sender	
Fitting Threads	1/8-27 Dryseal NPTF
Hex (Across Flats)	22.4 mm (0.88 in.) for a 7/8 in. Wrench
Fuel Sender Plate	
Number of Holes	5 (Not Equally Spaced)
Hole Size	5 - 5.1 mm (0.196 - 0.200 in.)

Troubleshooting

PROBLEM	POSSIBLE CAUSE	PROCEDURE OR ACTION
	METER	
No Indication - All Meters	Battery disconnected.	Clean the battery terminals and battery cable connectors. Install connectors.
	Battery malfunction or discharged.	Charge or replace battery.
	Wiring group connector or connectors not connected.	Fasten the connector or connectors.

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