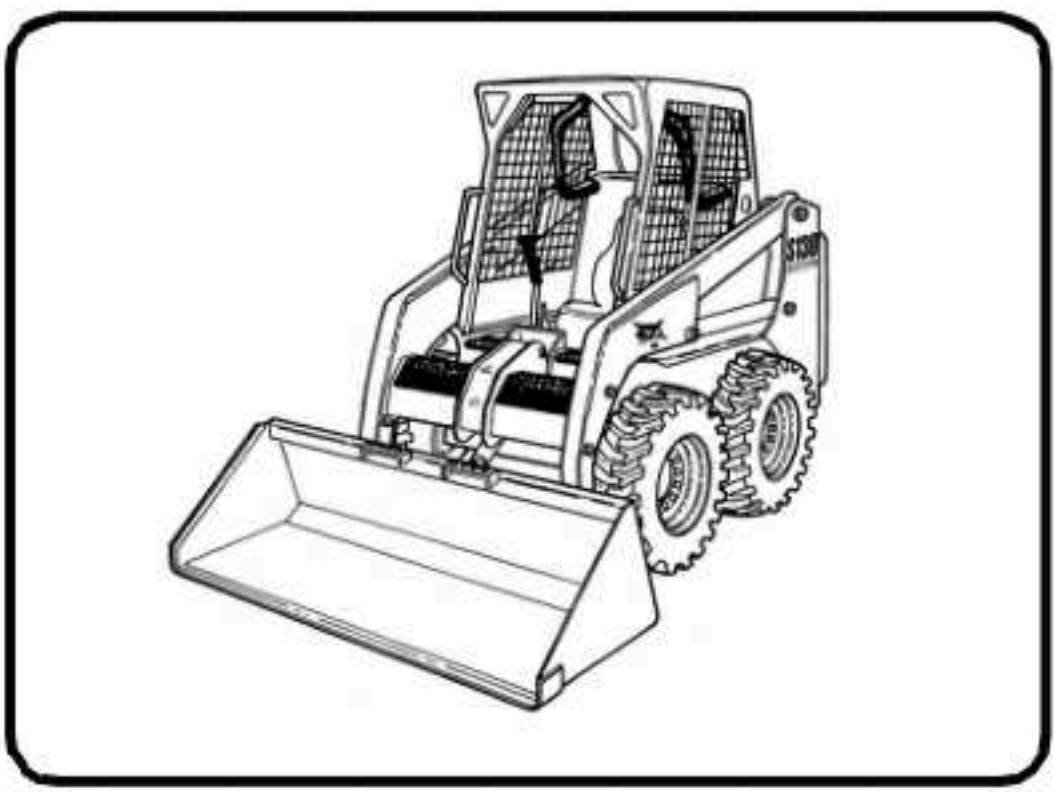
Bobcat®

Service Manual
S130 Skid-Steer Loader

S/N 529211001 & Above
S/N 529611001 & Above
S/N A84W11001 & Above
S/N A1Z711001 - A1Z759999
S/N A8NW11001 & Above
S/N A8KA11001 - A8KA59999



EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)

6904121 (7-09)

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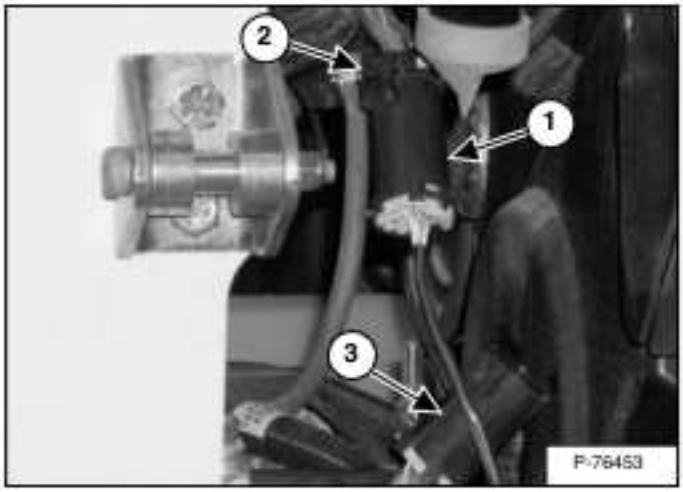
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Loader Service Tool Harness - 6689747 (Cont'd)

Figure 10-61-21



NOTE: The Remote Start Tool (Service Tool) connection harness has two connectors (Item 1) and (Item 3). The main connector (Item 1) [Figure 10-61-21] is always used for connection to the loader harness.

The second connector (Item 3) [Figure 10-61-21] is used for attachment ACD upgrades or attachment operational diagnostics only. This connector has a cap attached to it to prevent damage or corrosion when not in use.

Connect the Remote Start Tool (Service Tool) connector (Item 1) to the loader harness connector (Item 2) and the other Remote Start Tool (Service Tool) connector to the ACD harness connector (Item 3) **[Figure 10-61-21]**.

NOTE: The right instrument panel (Key Switch or Keyless) must be in the off position or the Remote Start Tool (Service Tool) will not operate.

⚠ WARNING

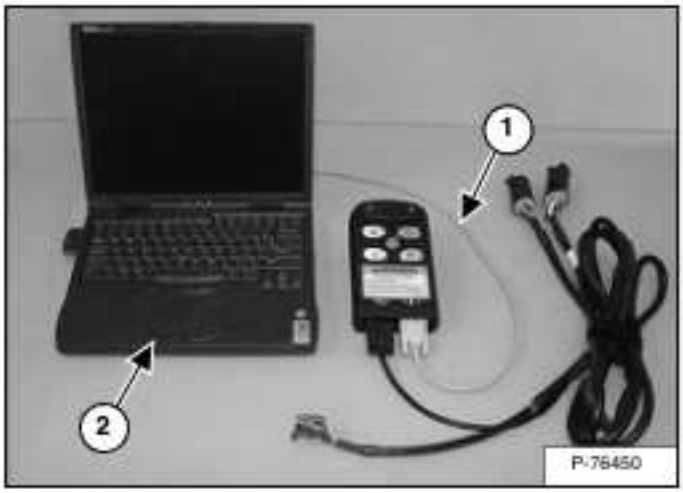
AVOID INJURY OR DEATH

- **Lift and block the machine.**
- **Check that wheels or tracks are clear.**
- **Cab ignition must be in the "STOP" position to start the engine with the Service Tool (if applicable).**
- **See machine Service Manual for more instructions.**

W-2792-0409

Computer Service Tool Harness - 6689746

Figure 10-61-22



The computer service tool harness (Item 1) **[Figure 10-61-22]** is required to connect remote start tool (service tool) to the Service PC (Item 2) **[Figure 10-61-22]**.

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Specifications

All dimensions are given in inches. Respective metric dimensions are given in millimeters enclosed by parentheses.

Fuel Injection Nozzles

Opening Pressure	2702 - 2916 PSI (186 - 201 bar)
Fuel Tightness Nozzle Seat	Dry Nozzle at 2418 PSI (167 bar) for 10 seconds

Fuel Injection Pump

Injection Timing	6.2 - 8.2 degrees B.T.D.C.
High Idle	2860 - 3000 RPM
Low Idle	1075 - 1225 RPM

Cylinder Head

Cylinder Head Surface Distortion	0.002 (0,05) Max.
Thickness of Gasket (Used)	0.0453 - 0.0492 (1,15 - 1,25)
(New)	0.0512 - 0.0551 (1,3 - 1,4)
Top Clearance (Piston to Head)	0.0236 - 0.0276 (0,60 - 0,70)
Compression	427 - 469 PSI (29,4 - 32,4 bar)
Allowable Limit	341 PSI (23,5 bar)
Difference Between Cylinders	10%

Valves

Valve Seat Width (Intake & Exhaust)	0.084 (2,12)
Valve Seat Angle	Intake 60 degrees, Exhaust 45 degrees
O.D. of Valve Stems	0.3134 - 0.3140 (7,96 - 7,98)
I.D. of Valve Guides	0.3156 - 0.3161 (8,015 - 8,03)
Clearance Between Valve Stem & Guide	0.0016 - 0.0028 (0,04 - 0,07)
Allowable Limit	0.004 (0,1)
Valve Clearance (Cold)	0.0071 - 0.0087 (0,18 - 0,22)
Valve Recessing (Protrusion)	0.002 (0,05)
(Recess)	0.006 (0,15)

Valve Springs

Free Length	1.642 - 1.661 (41,7 - 42,2)
Allowable Limit	1.622 (41,2)
Fitted Length	1.378 (35,0)
Compress to Fitted Length	26.4 lb. (117,6 N)
Allowable Limit	22.5 lb. (100,0 N)

Valve Timing

Intake Valve (Open)	9 degrees B.T.D.C.
(Close)	45 degrees A.T.D.C.
Exhaust Valve (Open)	50 degrees B.T.D.C.
(Close)	12 degrees A.T.D.C.

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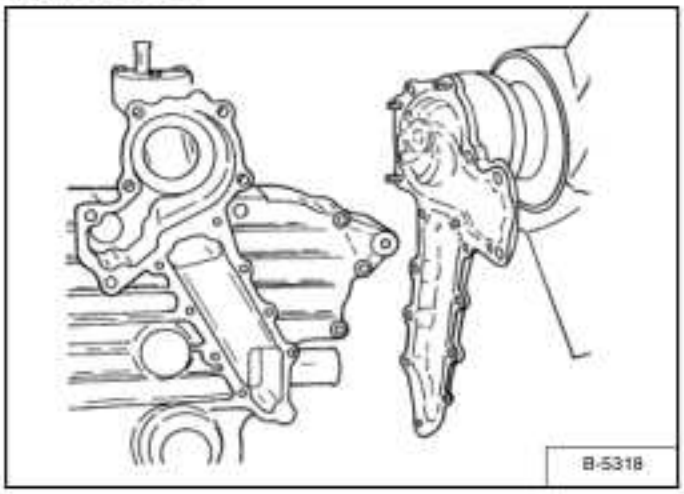
Water Pump Removal And Installation

Drain the cooling system.

Remove the alternator belt.

Remove the water pump bolts.

Figure 70-50-17

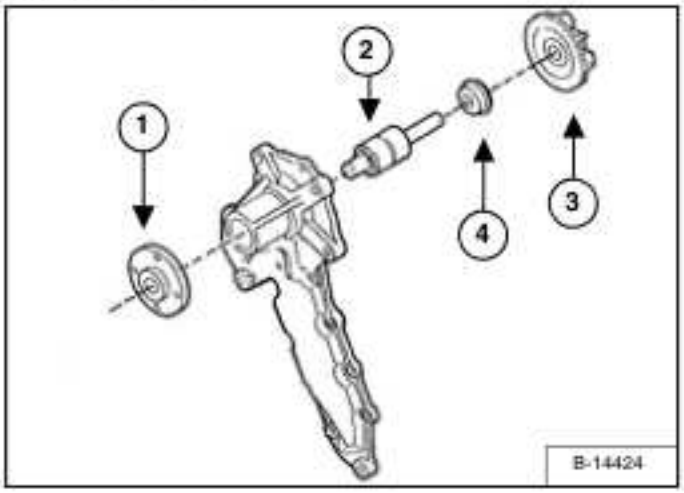


Remove the water pump **[Figure 70-50-17]**.

Installation: Always use a new gasket when installing the water pump.

Water Pump Disassembly And Assembly

Figure 70-50-18



Remove the flange (Item 1) **[Figure 70-50-18]**.

Press the shaft (Item 2) and impeller (Item 3) **[Figure 70-50-18]** out the impeller side of the water pump.

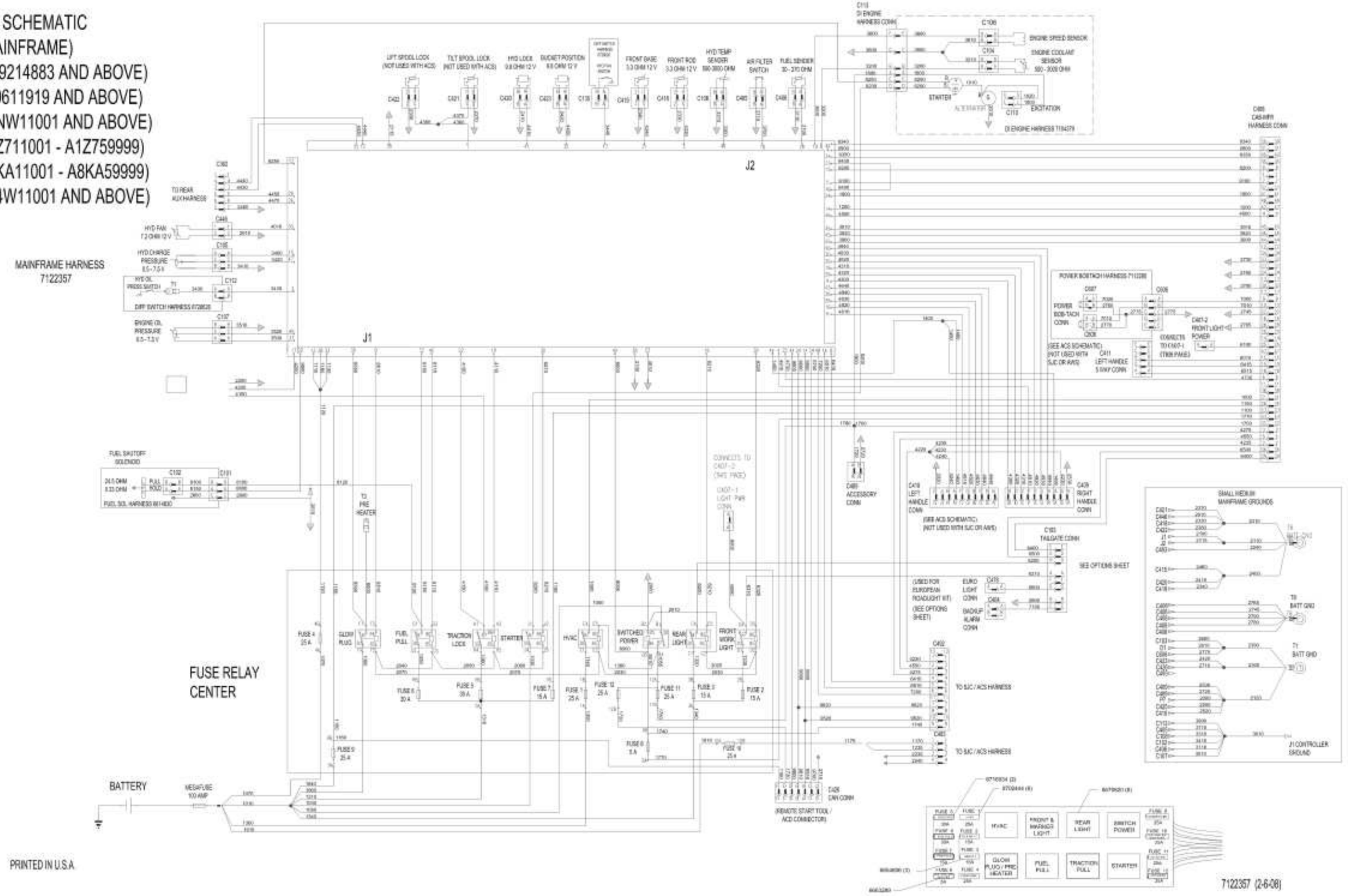
Remove the impeller (Item 3) **[Figure 70-50-18]** from the shaft.

Remove the seal (Item 4) **[Figure 70-50-18]**.

Install a new seal (Item 4) **[Figure 70-50-18]** when assembling the water pump.

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WIRING SCHEMATIC
(MAINFRAME)
S130 (S/N 529214883 AND ABOVE)
(S/N 529611919 AND ABOVE)
(S/N A8NW11001 AND ABOVE)
(S/N A1Z711001 - A1Z759999)
(S/N A8KA11001 - A8KA59999)
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