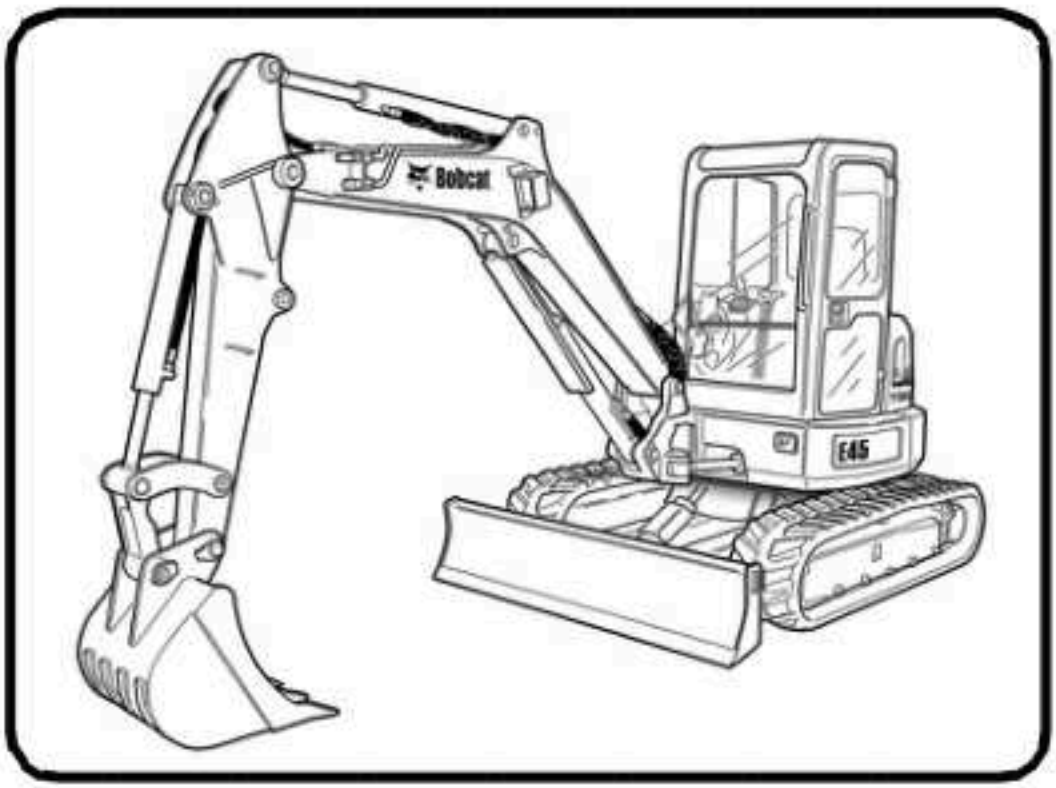
Bobcat®

Service Manual
E45 Compact Excavator

S/N AG3G11001 & Above
S/N AHHC11001 & Above



6989437 (9-10)

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CONTENTS

SAFETY & MAINTENANCE 10-01

HYDRAULIC SYSTEM 20-01

UNDERCARRIAGE 30-01

UPPERSTRUCTURE AND SWING SECTION 40-01

ELECTRICAL SYSTEM & ANALYSIS 50-01

ENGINE SERVICE 60-01

HEATING, VENTILATION & AIR CONDITIONING 70-01

SPECIFICATIONS SPEC-01

ALPHABETICAL INDEX INDEX-01

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FOREWORD 1-7

SAFETY INSTRUCTIONS 1-10

FIRE PREVENTION 1-12
- Maintenance 1-12
- Operation 1-12
- Electrical 1-12
- Hydraulic System 1-12
- Fueling 1-12
- Starting 1-12
- Spark Arrestor Exhaust System 1-12
- Welding And Grinding 1-13
- Fire Extinguishers 1-13

SERIAL NUMBER LOCATIONS 1-14
- Excavator Serial Number 1-14
- Engine Serial Number 1-14

DELIVERY REPORT 1-15

EXCAVATOR IDENTIFICATION 1-16

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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 (166,8 bar)

Fuel Injection Pump

Fuel Tightness Plunger	10 sec: initial pressure 1850 PSI (127,5 bar)
Allowable Limit	5 seconds
Injection Timing	5.5° degrees B.T.D.C.
*High Idle	2450 RPM
*Low Idle	1200 ± 75 RPM

Cylinder Head

Cylinder Head Surface Distortion	0.002 (0,05) in. 19.70 (500) Max.
Top Clearance (Piston to Head)	0.0236 - 0.0276 (0,60 - 0,70)
Compression	427 - 469 PSI (30 - 33 bar) @ 290 RPM
Allowable Limit	341 PSI (24 bar) @ 290 RPM
Allowable Difference Between Cylinders	10% or less

Valves

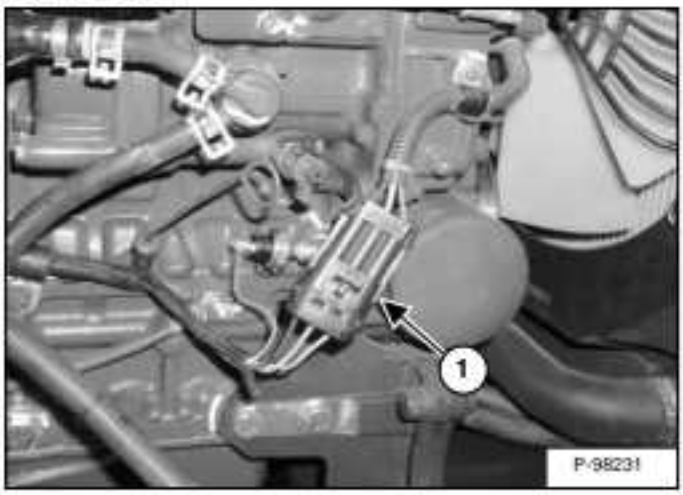
Valve Seat Width (Intake & Exhaust)	0.0835 (2,12)
O.D. of Valve Stems	0.3134 - 0.3140 (7,96 - 7,98)
I.D. of Valve Guides	0.3156 - 0.3161 (8,015 - 8,03)
Clearance Between Valve Stem & Guide	0.0016 - 0.0028 (0,04 - 0,07)
Allowable Limit	0.0039 (0,1)
Valve Clearance (Cold)	0.007 - 0.0087 (0,18 - 0,22)
Valve Recessing	0.006 - 0.0157 (0,15 - 0,4)
Valve Seat Angle (Int.)	45 degrees
Valve Seat Angle (Exh.)	45 degrees

* The engine speed control must be calibrated anytime engine speed stop screws are adjusted.

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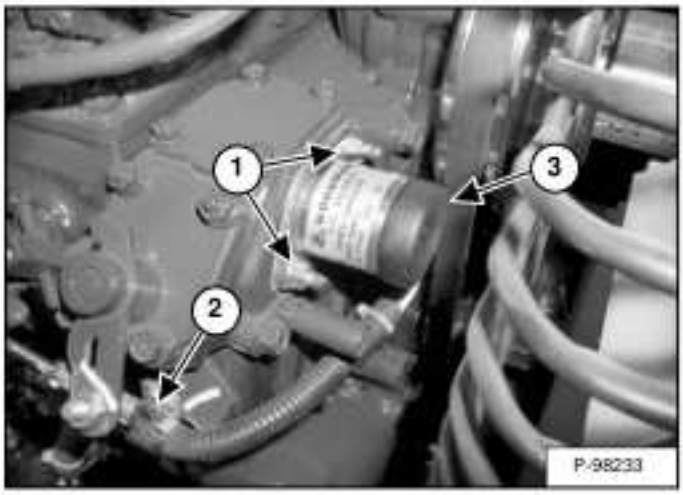
Fuel Shut-off Solenoid Removal And Installation

Figure 60-70-2



Disconnect the wire harness (Item 1) **[Figure 60-70-2]**.

Figure 60-70-3

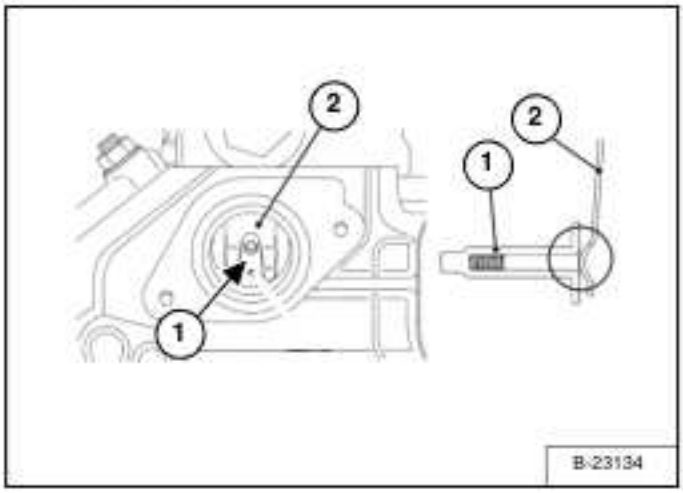


Remove the nuts (Item 1) **[Figure 60-70-3]**.

Remove the bolt (Item 2) **[Figure 60-70-3]**.

Remove the solenoid (Item 3) **[Figure 60-70-3]**.

Figure 60-70-4

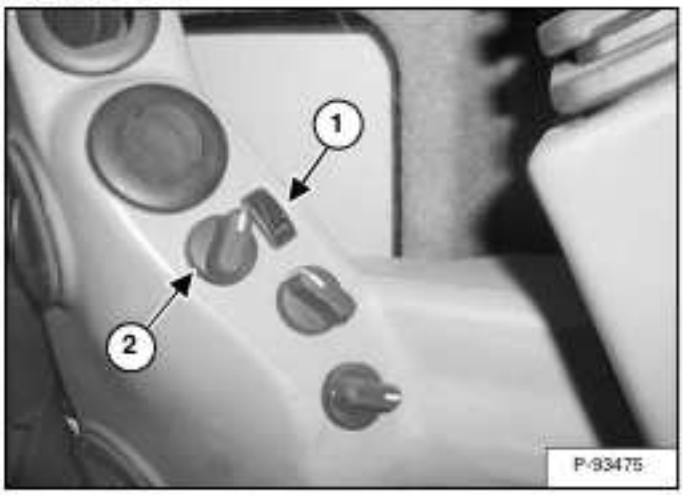


Installation: The guide (Item 1) on the fuel shut-off solenoid must contact the boost lever (Item 2) **[Figure 60-70-4]**.

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Electrical System (Cont'd)

Figure 70-30-8

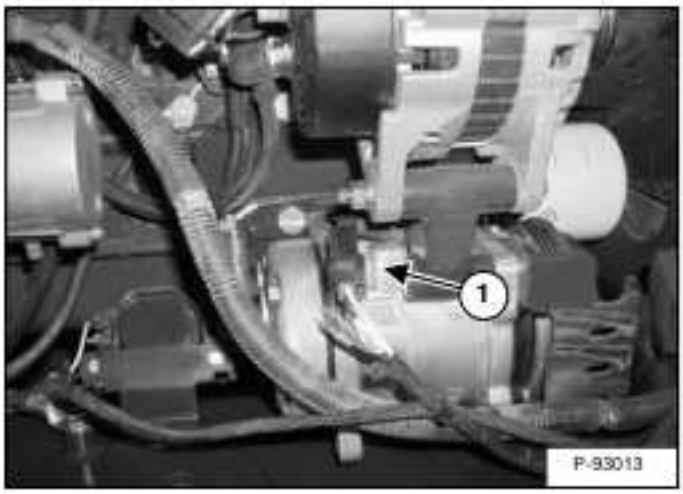


Push the A/C switch (Item 1) to the ON position. Turn the blower fan switch (Item 2) **[Figure 70-30-8]** to the first ON position.

The compressor clutch should make a click sound, which indicates the clutch is engaging.

NOTE: There is a time delay of 5 - 10 seconds until the clutch will engage.

Figure 70-30-9



Disconnect the wire harness (Item 1) **[Figure 70-30-9]**.

NOTE: The counterweight is removed for photo clarity.

With a multimeter, check the resistance to the compressor clutch.

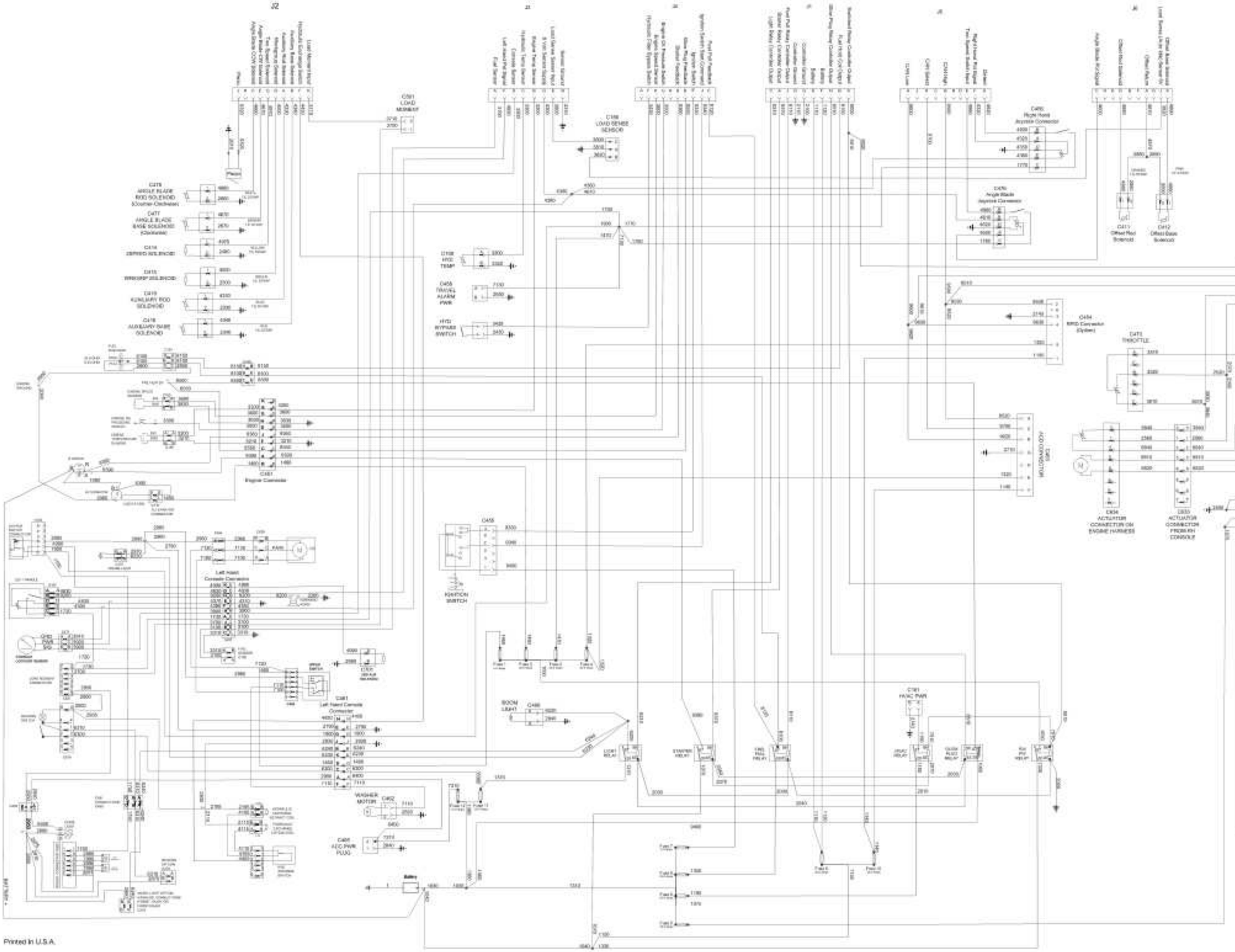
If there is no resistance value, replace the compressor. (See Removal And Installation on page 70-140- 1.)

With a multimeter, check the voltage to the compressor clutch at the wire harness.

If the voltage reading is approximately 12 volts, the system is operating correctly.

If there is no power at the clutch, reconnect the wiring harness to the compressor clutch.

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WIRING SCHEMATIC
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