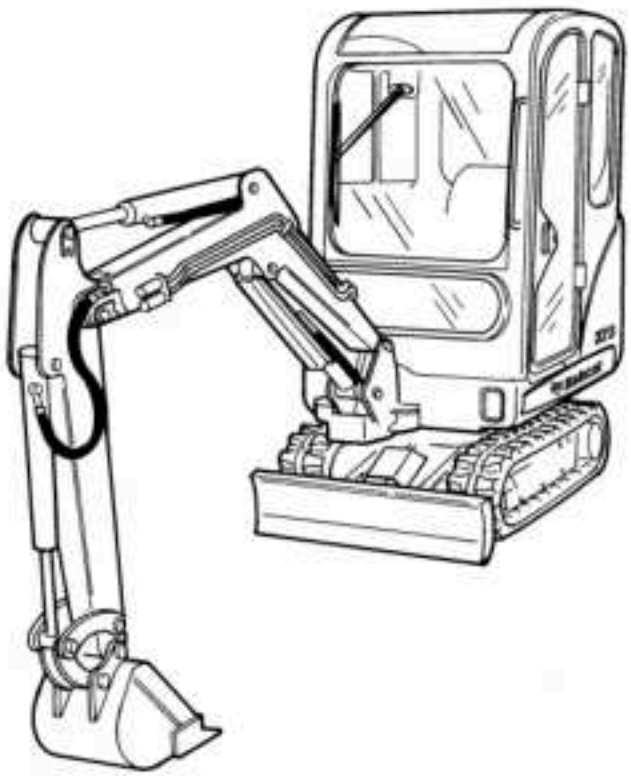
# 323

Bobcat®

# Service Manual

## S/N 562411001 & Above



Ingersoll Rand
Compact Vehicle Technologies

6903380 (11-06)
Printed in U.S.A.

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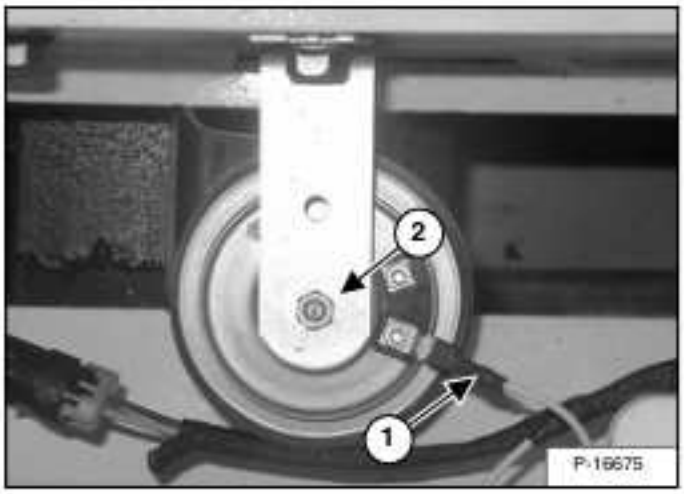
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## HORN

### Removal And Installation (Earlier Models)

Remove the floor mat and floor panels. (See Removal And Installation on Page 40-140-1.)

**Figure 40-170-1**




Remove the wire (Item 1) **[Figure 40-170-1]** from the horn.

Remove the nut (Item 2) **[Figure 40-170-1]**.

Remove the horn.

### Removal And Installation (Later Models)

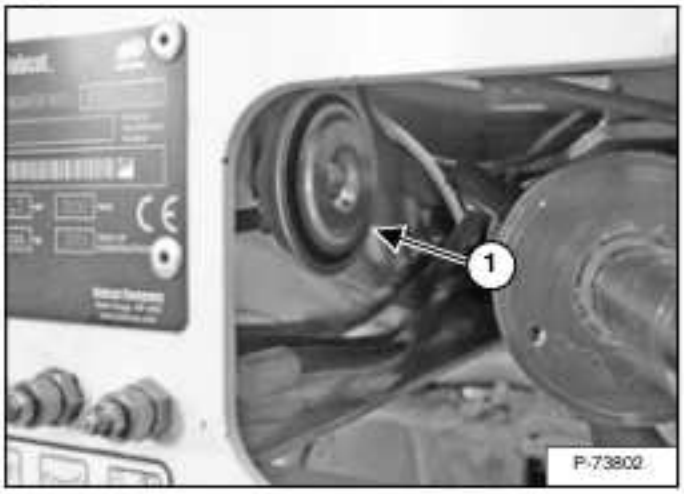
Rotate upperstructure until it is perpendicular to the tracks.

Swing boom fully to the left.

Lower the boom/bucket and blade to the ground.

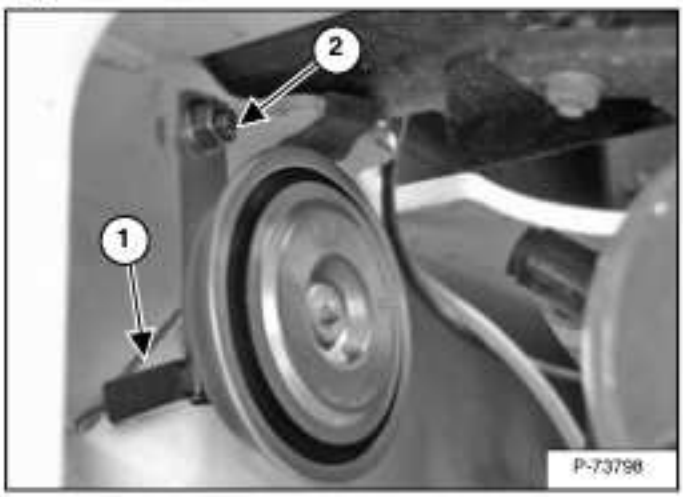
Stop the engine. Raise the left console.

**Figure 40-170-2**




Access the horn (Item 1) **[Figure 40-170-2]** through the right front side of the upperstructure.

**Figure 40-170-3**




Remove the wire (Item 1) **[Figure 40-170-3]** from the horn.

Remove the nut, lockwasher, and bolt (Item 2) **[Figure 40-170-3]** and remove the horn.



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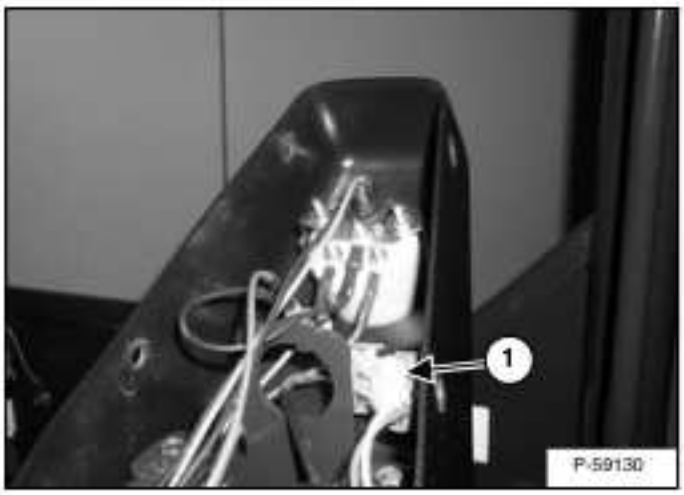
## MICROSWITCH (CONT'D)

### Testing

Raise the control console.

Remove the plate. (See Console Cover Removal And Installation on Page 40-60-1.)

**Figure 50-60-6**




Disconnect the microswitch harness (Item 1) **[Figure 50-60-6]** from the control harness.

**Figure 50-60-7**




Use a continuity tester to check the microswitch prior to removal. Test the continuity between the black and white wire pins (Item 1) **[Figure 50-60-7]**.

The microswitch is normally open.

With the console raised the gauge reading should show no current.

By pushing the actuator on the microswitch, the gauge reading should show a completed circuit. If not, the microswitch is faulty and must be replaced.



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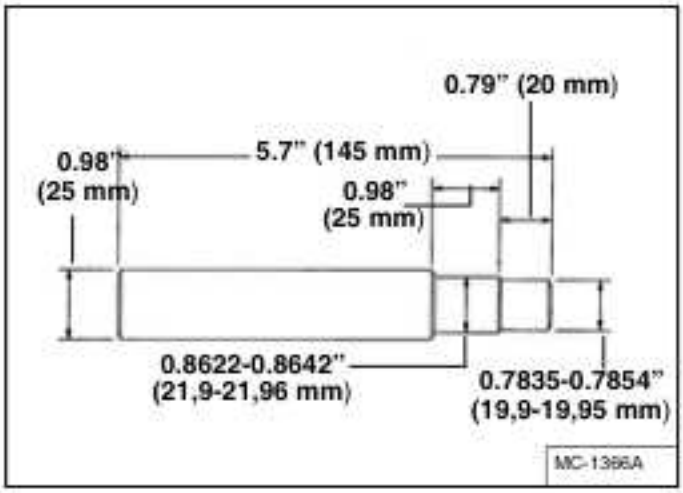
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**Piston And Connecting Rod, Servicing (Cont'd)**

Calculate the oil clearance. If the clearance exceeds the allowable limit, replace the bushing. If it still exceeds the specifications, replace the piston pin.

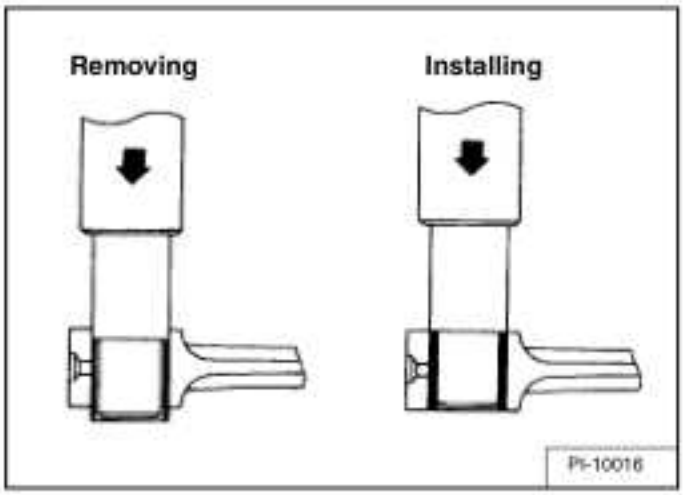
| | |
|---|---|
| Piston Pin O.D. | 0.7875-0.7878 in. (20,002-20,011 mm) |
| Bushing I.D. | 0.7884-0.7890 in. (20,025-20,04 mm) |
| Oil Clearance between Piston Pin & Bushing | 0.0006-0.0015 in. (0,014-0,038 mm) |
| Allowable Limit | 0.004 in. (0,10 mm) |

**Figure 60-80-60**




To replace the connecting rod small end bushing, make a driver tool as shown in figure **[Figure 60-80-60]**.

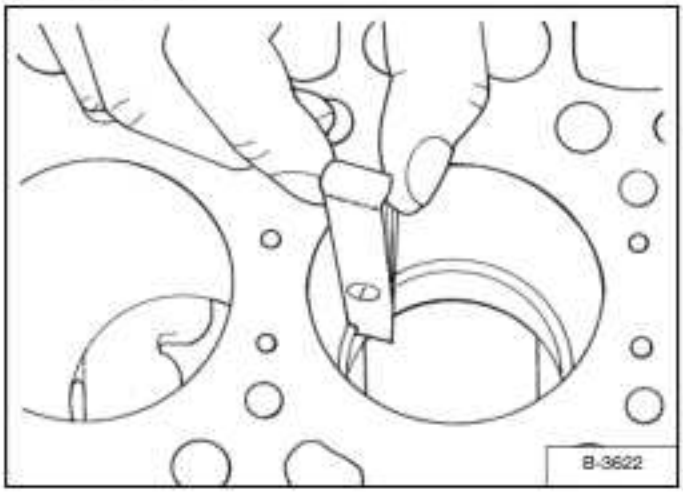
**Figure 60-80-61**




Use a press and special driver tool to remove the small end bushing **[Figure 60-80-61]**.

***Installation:*** Clean the small end bushing and bore. Put oil on the bushing and press into the connecting rod until it is flush **[Figure 60-80-61]**.

**Figure 60-80-62**




Install a new piston ring into the lower part of the cylinder bore. Measure the ring gap with a feeler gauge **[Figure 60-80-62]**.

If the gap exceeds the allowable limit, replace the piston ring.

| | |
|---|---|
| Top Compression Ring & Oil Ring | 0.006-0.012 in. (0,15-0,30 mm) |
| Second Compression Ring | 0.012-0.018 in. (0,30-0,45 mm) |
| Allowable Limit | 0.047 in. (1,2 mm) |

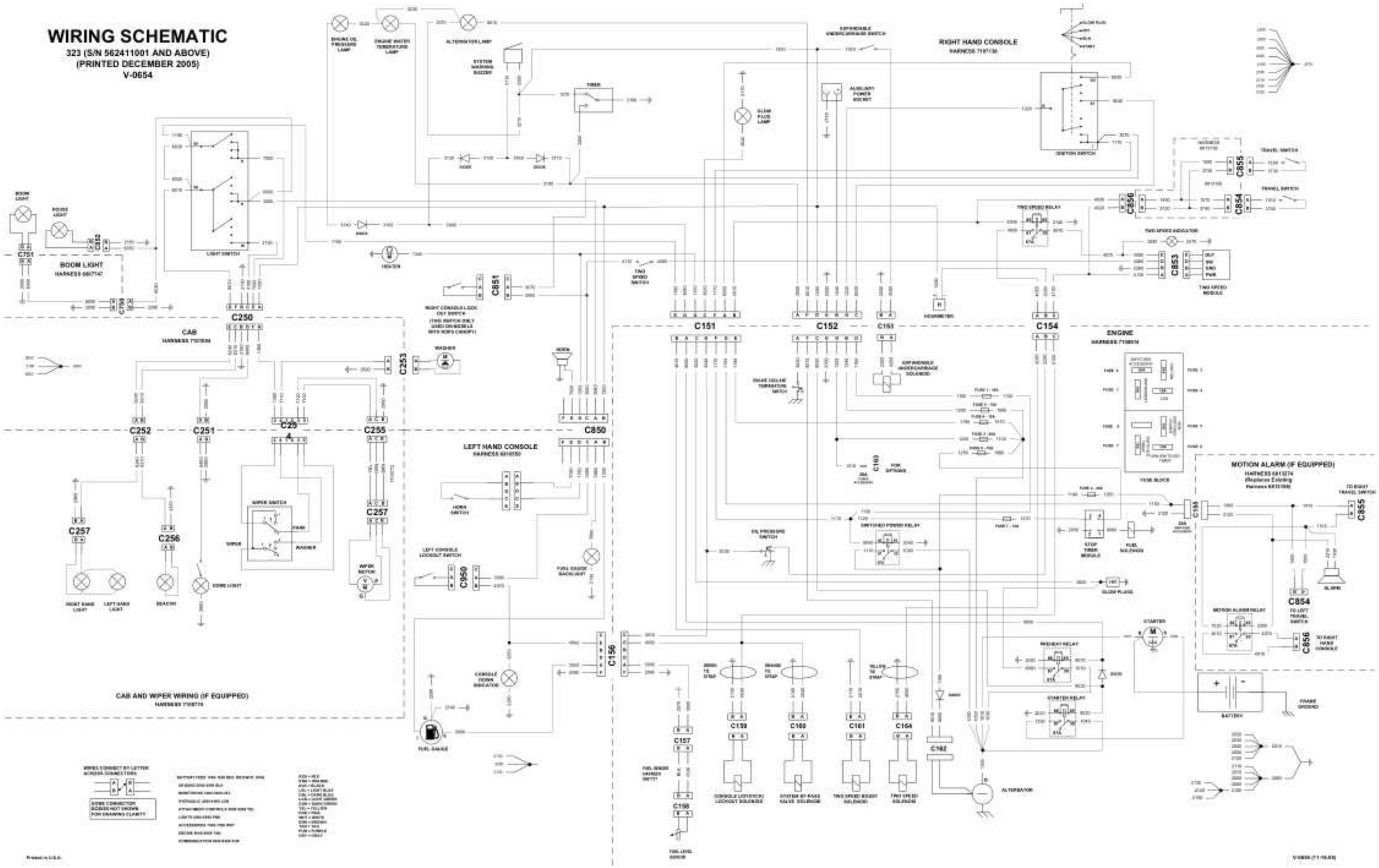


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