# Toolcat™ 5600

Bobcat®

# Service Manual

**S/N 424711001 & Above**
**S/N 424811001 & Above**



**Equipped With Toolcat Interlock Control System (TICS)**

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## HYDROSTATIC SYSTEM INFORMATION

### Troubleshooting Chart

The following troubleshooting chart is provided for assistance in locating and correcting problems. Many of the recommended procedures must be done by authorized Bobcat Service Personnel only.

**⚠ WARNING**

**Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.**

W-2408-0801

| PROBLEM | CAUSE |
|---|---|
| No drive on both axles | 1, 2, 3, 4, 5, 6, 7, 8, 9, 14 |
| No drive on one axle | 1, 2, 4, 5, 6, 9, 14 |
| The hydrostatic system is overheating. | 5, 10, 11, 12, 13, 14 |
| Drive axles turning at different speeds | 1, 2, 4, 6, 9, 14 |

| KEY TO CORRECT THE CAUSE |
|---|
| 1. The drive controller is not working correctly. |
| 2. Check for drive codes. |
| 3. The directional control is not working correctly. |
| 4. A hydrostatic motor has damage. |
| 5. The brake is not releasing. |
| 6. A hydrostatic pump has damage. |
| 7. The accelerator is not working correctly. |
| 8. The charge pressure is low. |
| 9. A replenishing valve not seating. |
| 10. The hydraulic fluid is not at correct level. |
| 11. The hydraulic cooler has a restriction. |
| 12. The hydraulic temperature sender is not working correctly. |
| 13. The cooling fan is not turning |
| 14. A speed sensor is not working correctly. |

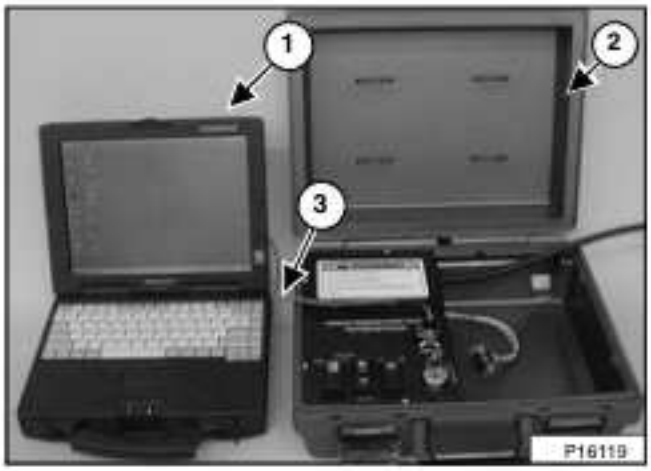


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## SERVICE PC (LAPTOP COMPUTER)

### Connecting The Service PC To Remote Start Tool

**Figure 60-140-1**




Tools that will be needed to complete the following steps are:

MEL1563 - Remote Start Tool
MEL1565 - Service Tool Harness Control
MEL1566 -Service Tool Harness Communicator (Computer Interface)

**NOTE: Make all connections with the key in the OFF position.**

The Service PC (Item 1) **[Figure 60-140-1]** with the remote start tool (Item 2) **[Figure 60-140-1]**. When connected to the loader, the Service PC is used to monitor, conduct diagnostic and load software.

Connect the Service Tool Harness Communicator (MEL1566) (Item 3) **[Figure 60-140-1]** to the designated serial port on the Service PC.

**NOTE: The recommended serial cable length should not exceed 15 feet. A serial cable longer than 15 feet will create a degraded signal causing communication errors.**

Connect the other end to the connector on the remote start tool.

Connect the remote start tool to the loader. (See REMOTE START on Page 10-60-1.)



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

### 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. |

### Rocker Arms

| | |
|---|---|
| O.D. of Rocker Arm Shaft | 0.5501 - 0.5506 (13,973 - 13,984) |
| I.D. of Rocker Arm Bushings | 0.5512 - 0.5519 (14,0 - 14,018) |
| Clearance Between Rocker Arm & Bushing | 0.0006 - 0.0018 (0,016 - 0,045) |
| Allowable Limit | 0.0039 (0,10) |

### Camshaft

| | |
|---|---|
| Journal O.D. | 1.5722 - 1.5728 (39,934 - 39,95) |
| Bearing I.D. | 1.5748 - 1.5758 (40,0 - 40,025) |
| Oil Clearance | 0.002 - 0.0036 (0,05 - 0,091) |
| Allowable Limit | 0.006 (0,15) |
| Alignment Allowable Limit | 0.0004 (0,01) |
| Cam Lobe Height | 1.3346 (33,90) |
| Allowable Limit | 1.3327 (33,85) |
| End Clearance | 0.0028 - 0.0087 (0,07 - 0,22) |
| Allowable Limit | 0.012 (0,3) |

### Tappet

| | |
|---|---|
| Clearance Between Tappet & Guide | 0.0071 - 0.0087 (0,18 - 0,22) |
| Tappet O.D. | 0.9433 - 0.9441 (23,959 - 23,98) |
| Tappet Guide I.D. | 0.9449 - 0.9457 (24,0 - 24,021) |



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# WIRING SCHEMATIC
# 5600 UTILITY WORK MACHINE
# (S/N 424711001 AND ABOVE)
# (S/N 424811001 AND ABOVE)
# CAB HARNESS

(Printed APRIL 2006)
V-0482

DISPLAY MODULE CONNECTORS J1-J6

**CAB HARNESS**
**7100827**

**CAB ACCESSORY**
**HARNESS 7100828**



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