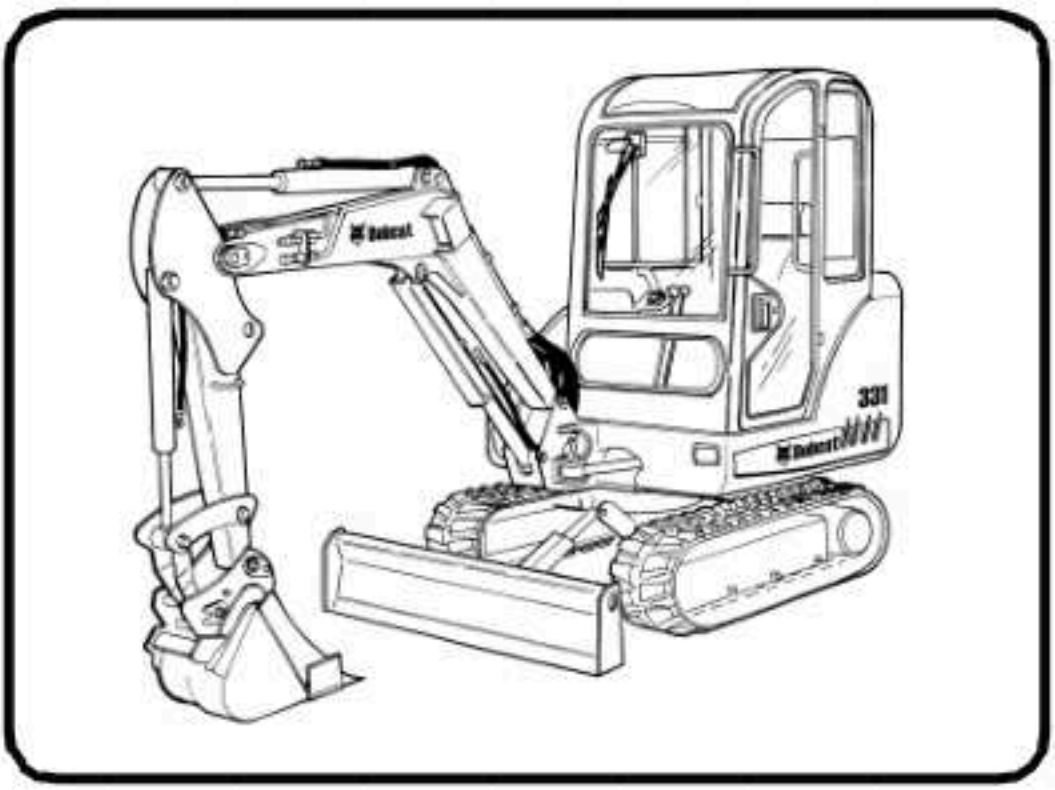
Bobcat

Service Manual

331, 331E, 334 Compact Excavator

331 S/N AACS11001 & Above
S/N A9K511001 & Above
331E S/N A9K911001 & Above
334 S/N A9K711001 & Above



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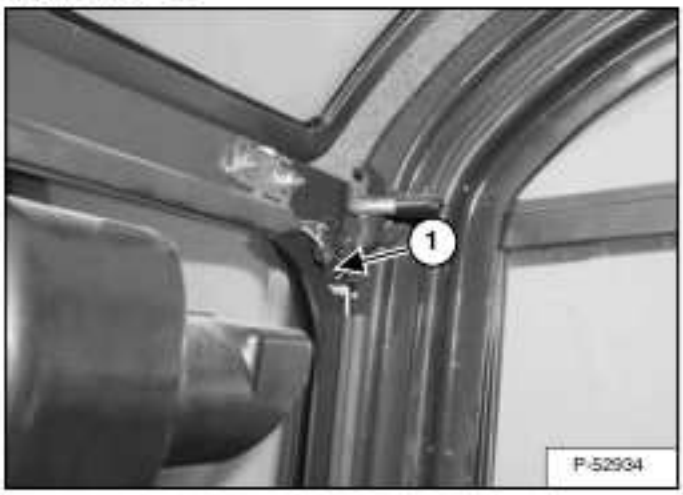
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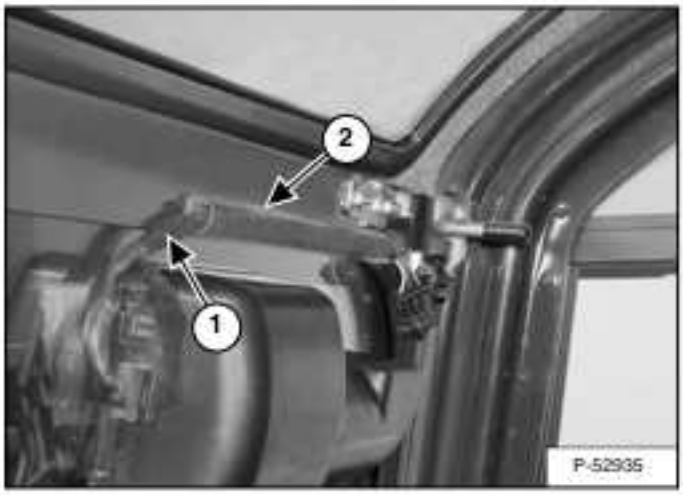
Front Window Removal And Installation

Figure 40-30-16



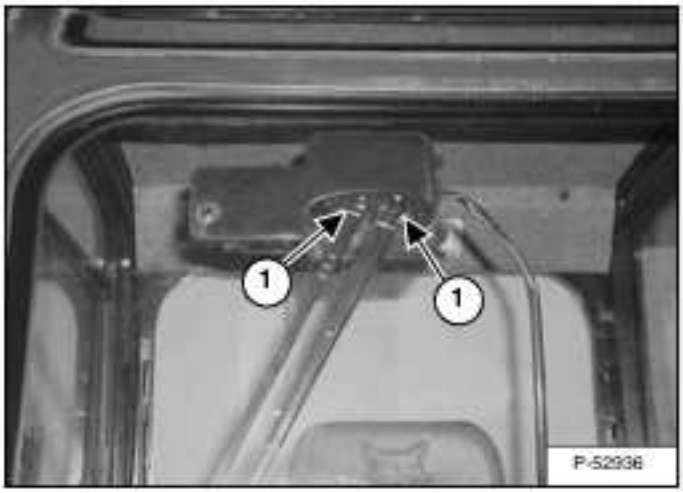
Disconnect the wire harness (Item 1) **[Figure 40-30-16]**.

Figure 40-30-17



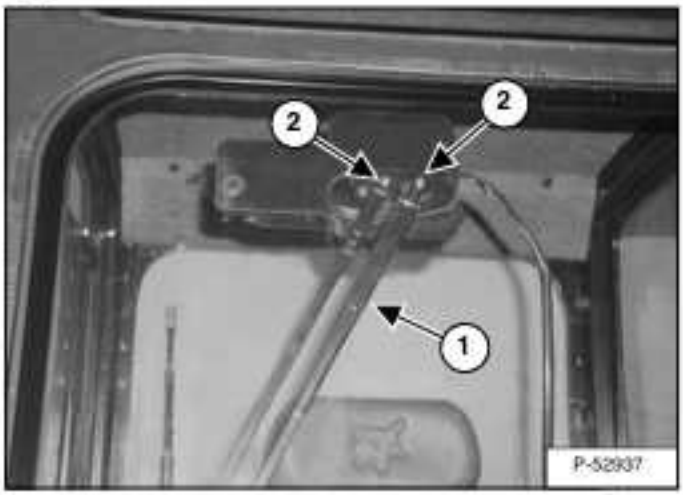
Remove the wire harness (Item 1) from the channel (Item 2) **[Figure 40-30-17]**.

Figure 40-30-18



Remove the nuts (Item 1) **[Figure 40-30-18]**.

Figure 40-30-19



Remove the wiper assembly (Item 1) from the pivot mounts (Item 2) **[Figure 40-30-19]**.

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ELECTRICAL SYSTEM INFORMATION

Troubleshooting Chart

The following troubleshooting chart is provided for assistance in locating and correcting problems which are most common. Many of the recommended procedures must be done by authorized Bobcat service personnel only.

AVOID INJURY OR DEATH

Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, Operator's Handbook 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-2003-0807

⚠ WARNING

PROBLEM	CAUSE
Battery will not take charge.	1, 2, 3, 4, 5
Alternator will not charge.	1, 2, 5
Starter will not turn engine.	2, 3, 4, 6, 7, 8, 9

KEY TO CORRECT THE CAUSE
1. Alternator belt is loose or damaged.
2. Battery connections are dirty or loose.
3. Battery is damaged.
4. The ground connection is not making a good contact.
5. The alternator is damaged.
6. The engine is locked.
7. The starter is damaged.
8. The wiring or the solenoid is damaged.
9. Check the fuses.

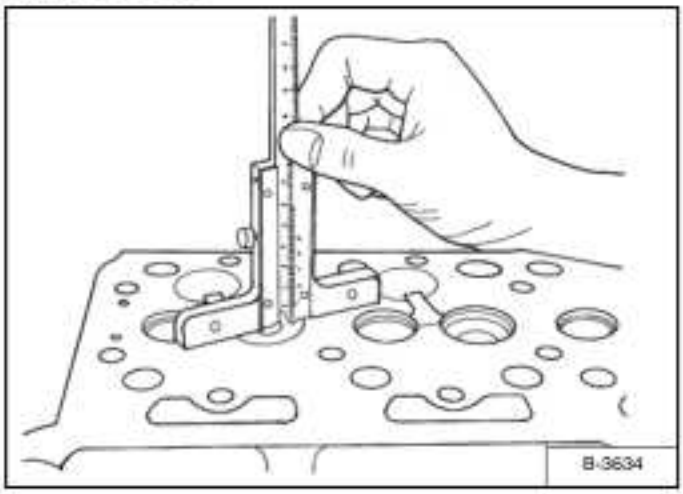
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Valve Guide Checking

Remove the valve and spring from the cylinder head. (See Cylinder Head Disassembly And Assembly on Page 60-80-4.)

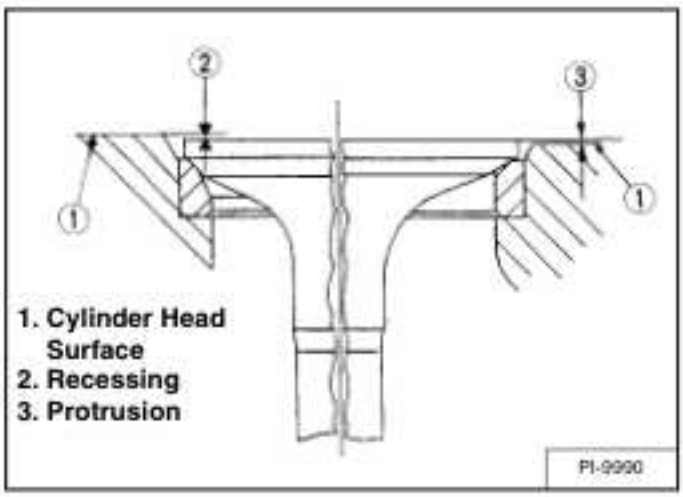
Clean the valve seat and combustion chamber.

Figure 60-80-18



Install the valve into the guide. Measure the valve recessing or protrusion with a depth gauge **[Figure 60-80-18]**.

Figure 60-80-19



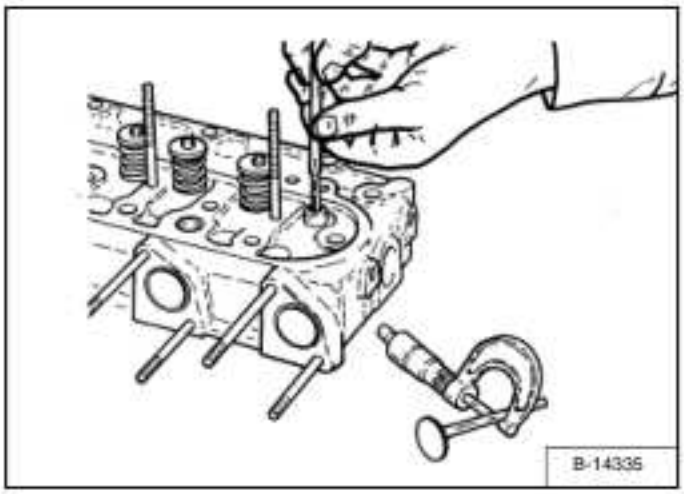
1. Cylinder Head Surface
2. Recessing
3. Protrusion

If the measurement exceeds the allowable limit, replace the valve or cylinder head **[Figure 60-80-19]**.

Protrusion	0.002 in. (0,5 mm)
Recessing	0.006 in. (0,15 mm)
Allowable Limit (Recessing)	0.0157 in. (0,4 mm)

Remove the carbon from the valve guide.

Figure 60-80-20



Measure the valve stem O.D. **[Figure 60-80-20]**.

Measure the valve guide I.D. **[Figure 60-80-20]**.

Calculate the clearance. If the clearance exceeds the allowable limit, replace the valve and/or valve guide.

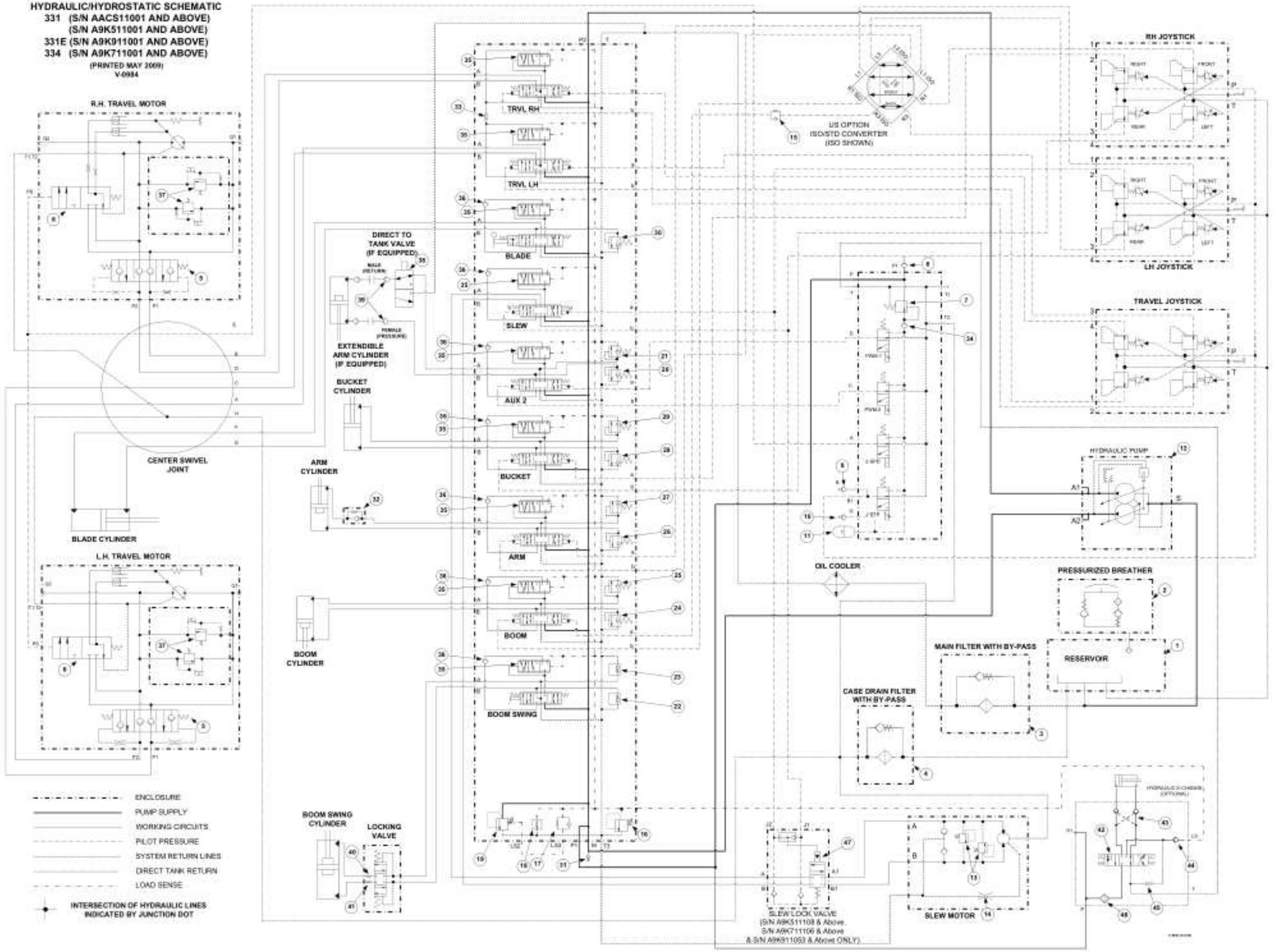
Valve Guide I.D.	0.3156 - 0.3161 in. (8,015 - 8,03 mm)
Valve Stem O.D.	0.3134 - 0.3140 in. (7,96 - 7,98 mm)
Clearance Between Valve Stem and Guide	0.0016 - 0.0028 in. (0,04 - 0,07 mm)
Allowable Limit	0.0039 in. (0,1 mm)

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HYDRAULIC/HYDROSTATIC SCHEMATIC

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(S/N A9K511001 AND ABOVE)
331E (S/N A9K911001 AND ABOVE)
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