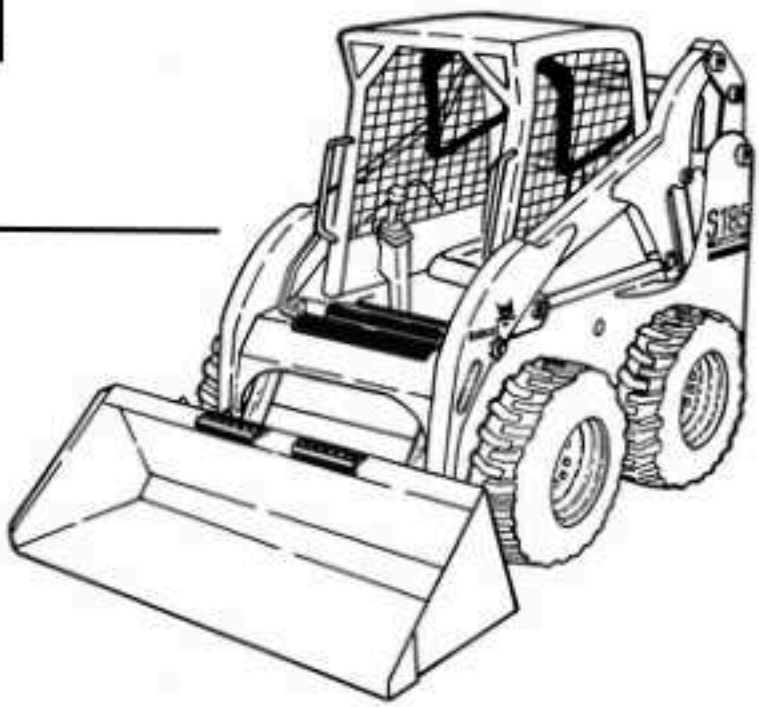
S175
S185
TURBO

INCLUDES HIGH FLOW

Bobcat®

Service Manual

S/N 525011001 & Above
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S/N 525211001 & Above
S/N 525311001 & Above



EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)

6902732 (2-06)

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ADVANCED CONTROL SYSTEM (ACS) (CONT'D)

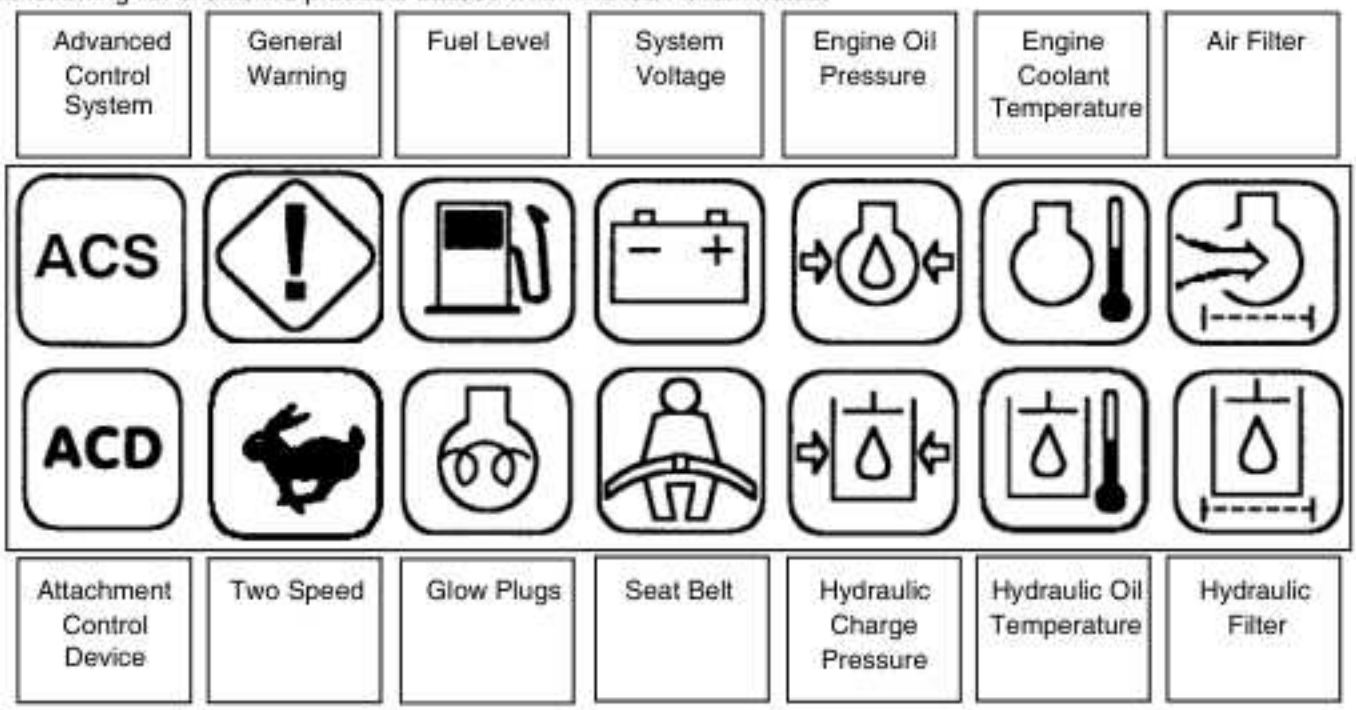
Troubleshooting Guide

The Advanced Control System (ACS) has a built-in diagnostic function which uses an icon on the right instrument panel to indicate the condition of the ACS SYSTEM. The system also records the alarm condition as a service code.

The control module continually checks the system in the order listed. The checks start with the lift handle sensor and then the lift actuator. If no problems are present, it will then check the tilt handle sensor and the tilt actuator. The system will stop its check at the first problem and then luminate the icon.

The system starts its diagnostics and calibration when the ignition key is turned ON.

The following list shows the probable causes when the icon is luminated.



Advanced Control System

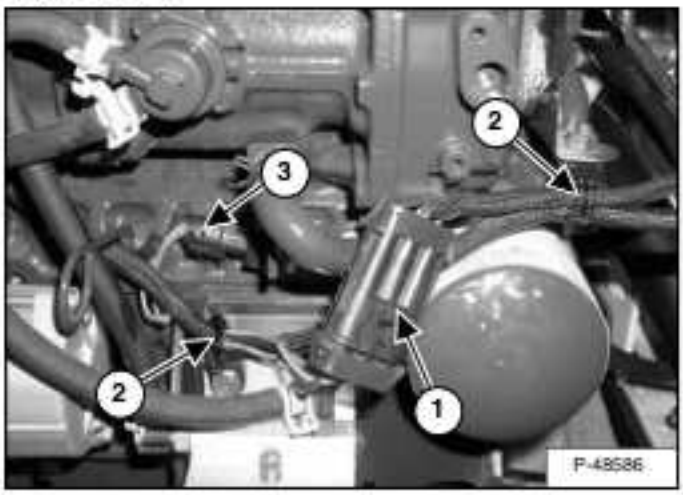
Errors-**lights** solid with 3 beeps
32-04- **ACS** in error
32-23- **ACS** not calibrated
32-31- **Tilt** actuator fault
32-34- **Tilt** actuator not calibrated
32-35- **Tilt** handle/pedal not calibrated
32-36- **Lift** actuator fault
32-39- **Lift** actuator not calibrated
32-40- **Lift** handle/pedal not calibrated
32-49- **Lift** actuator short to ground
32-50- **Tilt** actuator short to ground
32-51- **Lift** actuator short to battery
32-52- **Tilt** actuator short to battery
32-53- **Lift** handle/pedal short to ground
32-54- **Tilt** handle/pedal short to ground
32-55- **Lift** handle/pedal short to battery
32-56- **Tilt** handle/pedal short to battery
32-57- **Lift** actuator reduced performance
32-58- **Tilt** actuator reduced performance
32-59- **Lift** actuator wrong direction
32-60- **Tilt** actuator wrong direction
32-61- **Handle** lock short to ground
32-62- **Handle** lock short to battery
32-63- **Pedal** lock short to ground
32-64- **Pedal** lock short to battery
32-65- **Sensor** supply voltage out of range
32-66- **Battery** out of range
32-67- **Switch** flipped while operating

To see what error occurred. (See DIAGNOSTICS SERVICE CODES on Page 60-80-1.)

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Removal And Installation (Cont'd)

Figure 70-80-7

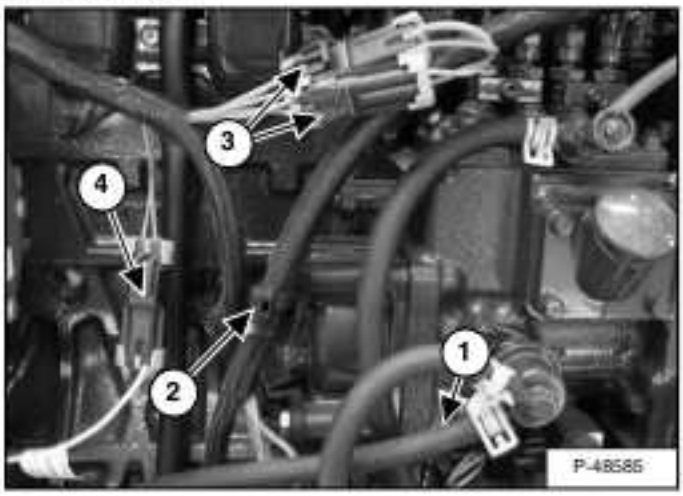


Disconnect the fuel stop wire harness (Item 1) **[Figure 70-80-7]**.

Remove the tie straps (Item 2) **[Figure 70-80-7]** from wiring harness clamp.

Disconnect engine oil pressure wire harness (Item 3) **[Figure 70-80-7]**.

Figure 70-80-8



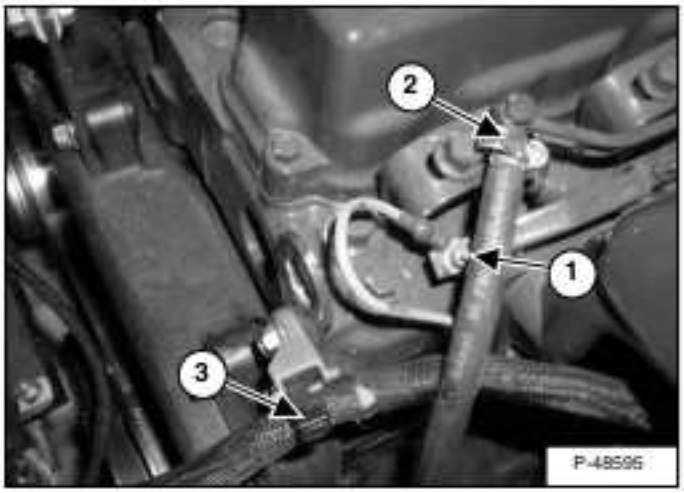
Disconnect fuel line (Item 1) **[Figure 70-80-8]**.

Cut tie straps (Item 2) **[Figure 70-80-8]**.

Mark and disconnect loader harness wire connectors (Item 3) **[Figure 70-80-8]**.

Disconnect engine speed harness (Item 4) **[Figure 70-80-8]**.

Figure 70-80-9

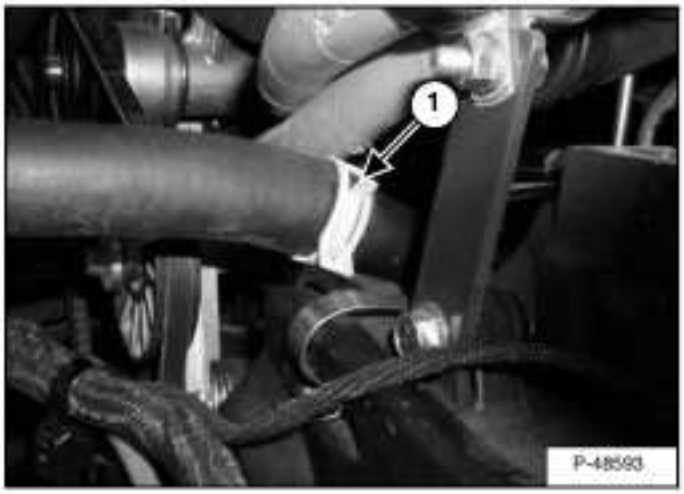


Disconnect glow plug wire (Item 1) **[Figure 70-80-9]**.

Disconnect and plug fuel return line (Item 2) **[Figure 70-80-9]**.

Remove the tie strap (Item 3) **[Figure 70-80-9]** from wiring harness clamp and move the wire harness to the left side of loader to allow clearance for engine removal.

Figure 70-80-10



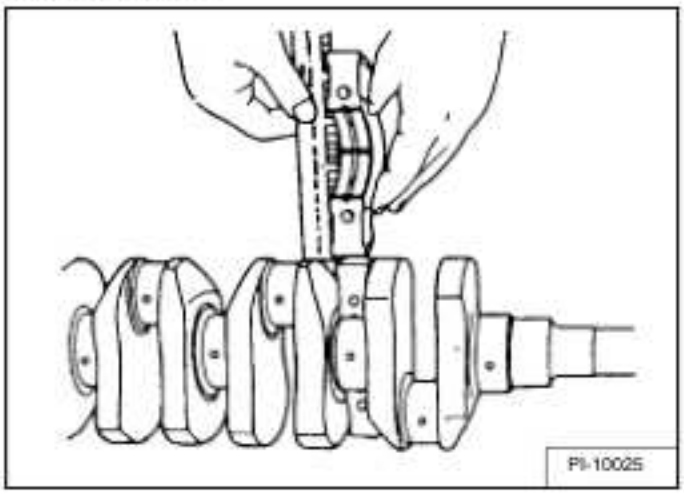
Disconnect engine coolant hose (Item 1) **[Figure 70-80-10]**.

Cap or plug all hoses and fittings.

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Crankshaft And Bearings, Servicing (Cont'd)

Figure 70-100-92



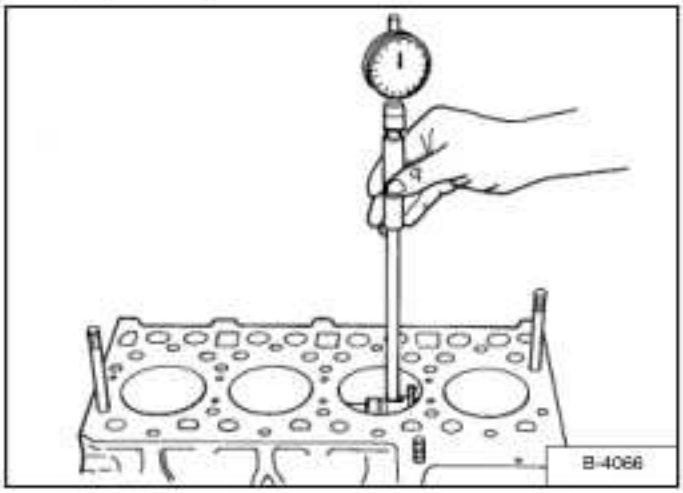
Measure the flattened press gauge **[Figure 70-100-92]**.

If the clearance exceeds the allowable limit, replace the No. 2 crankshaft bearing.

Crankshaft Journal O.D.	2.3591-2.3598 inch (59,92-59,94 mm)
Bearing I.D.	2.3614-2.3632 inch (59,98-60,02 mm)
Oil Clearance	0.0016-0.0041 inch (0,04-0,12 mm)
Allowable Limit	0.0079 inch (0,2 mm)

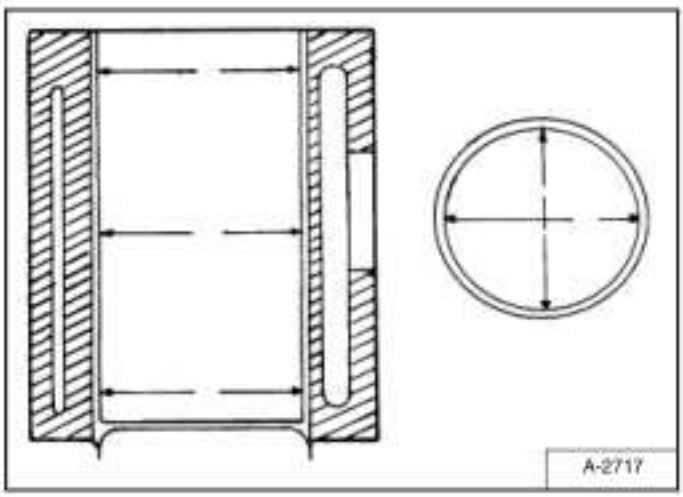
Cylinder Bore, Checking

Figure 70-100-93



Use a gauge to check the inside measurement of the cylinder bore **[Figure 70-100-93]**.

Figure 70-100-94



Measure the six points as shown in figure **[Figure 70-100-94]** to find the maximum wear.

The factory specifications are:

Kubota V2203-M-DI

3.4252-3.4261 inch (87,0-87,022 mm)

The wear limit is: +0.0059 inch (+0,15 mm).

Kubota V2003-M-DI-T (Turbo)

3.2677-3.2686 inch (83-83,02 mm).

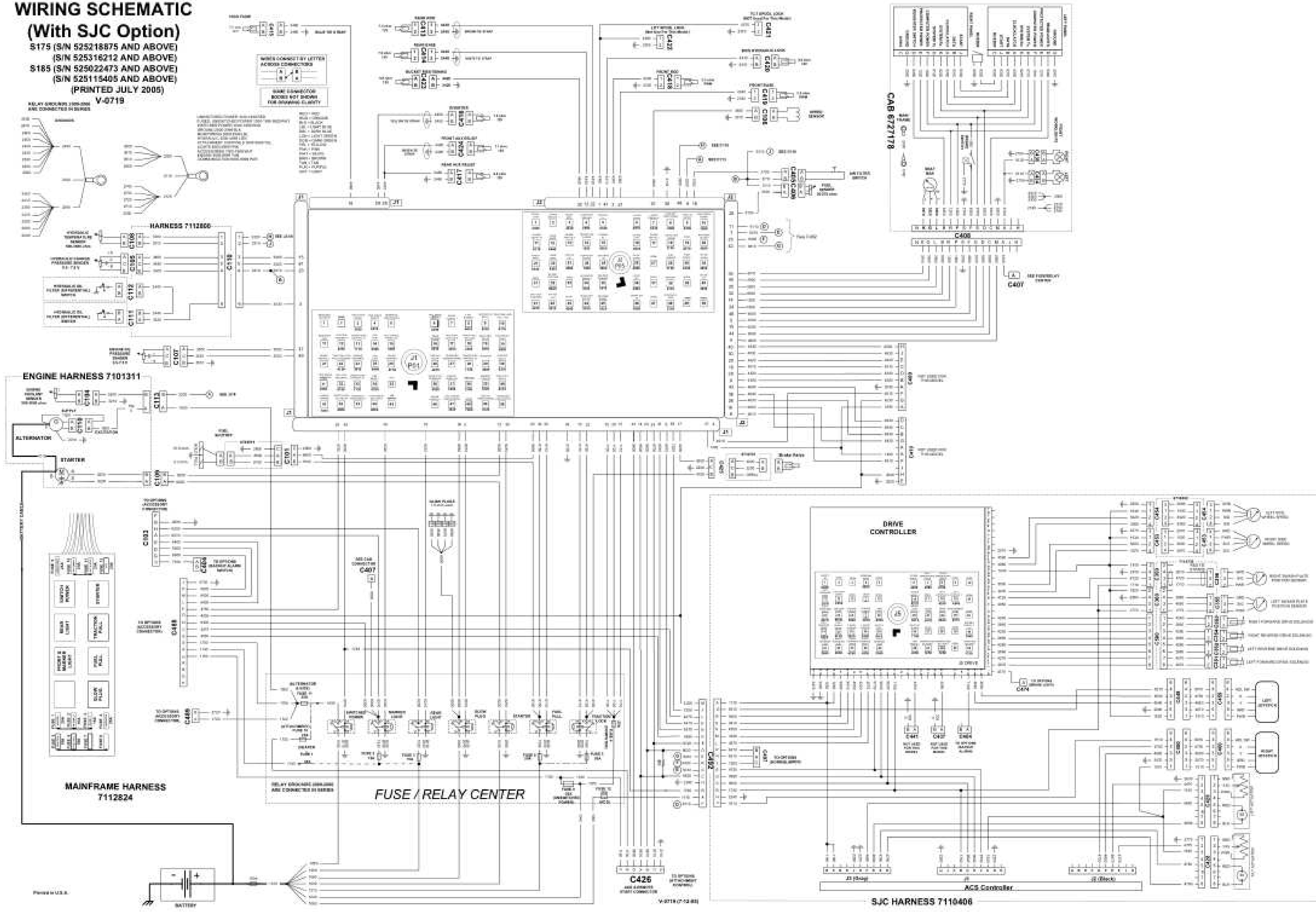
The wear limit is +0.0059 inch (+0,15 mm).

If the cylinder bore is not within specifications, re-bore the cylinder for oversize piston.

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