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863

HIGH FLOW

Service Manual

(S/N 514411001–514424999)
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EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)

MELROE
INGERSOLL-RAND

6724799(4–96)

Printed in U.S.A.

bobcat

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CALIFORNIA
PROPOSITION 65 WARNING

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

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REMOTE START SWITCH

Procedure

The tool listed will be needed to do the following procedure:

MEL1429 A – Remote Start Switch

The Remote Start Switch is required when the service technician is adjusting the steering linkage, checking the hydraulic/hydrostatic system.

Lift and block the loader. (See Page 1–4.)

Raise the lift arms and install an approved lift arm support device. (See Page 1–6.)

Raise the operator cab. (See Page 1–7.)

NOTE: On current model loaders, the connector on the BICS harness is round (7–pin) connector, not a rectangular (8–pin) connector. Use the adapter harness (Item 1) [A] to connect the remote start switch to the loader harness.

Disconnect the operator cab wire harness (Item 1) **[B]** from the engine wire harness.

Connect the remote start switch to the engine harness connectors (Item 1) **[C]**.

⚠ WARNING

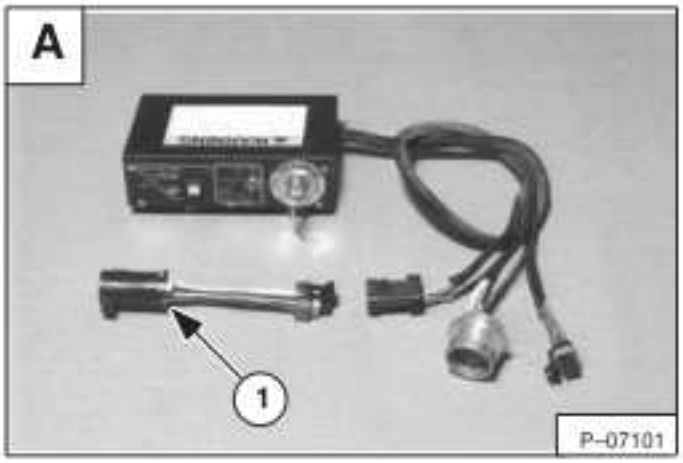
Put jackstands under the front axles and rear corners of the frame before running the engine for service. Failure to use jackstands can allow the machine to fall or move and cause injury or death.

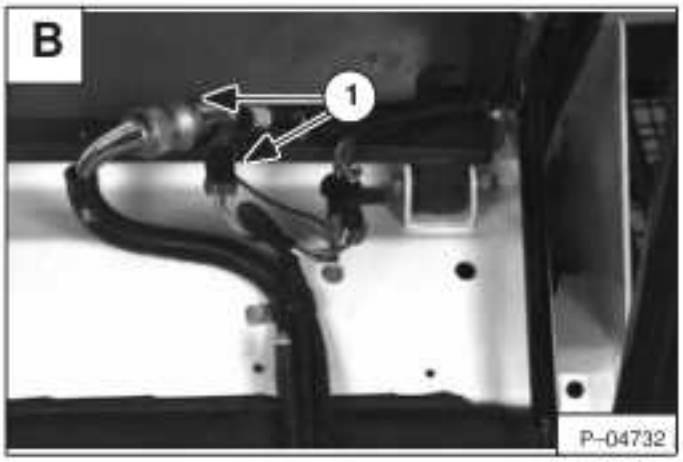
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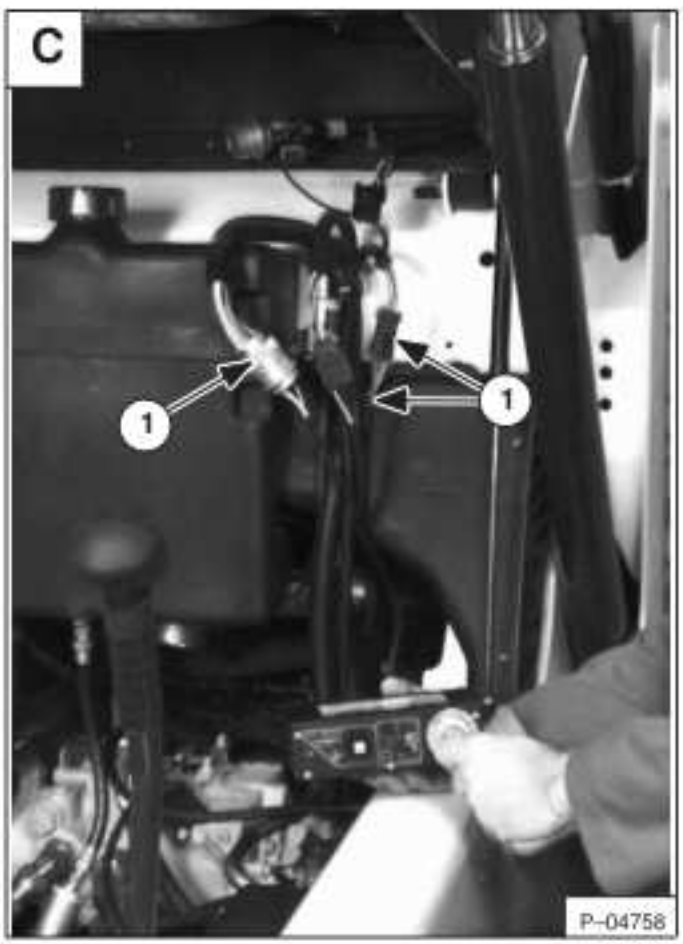
⚠ WARNING

Never work on a machine with the lift arms up unless the lift arms are secured by an approved lift arm support device. Failure to use an approved lift arm support device can allow the lift arms or attachment to fall and cause injury or death.

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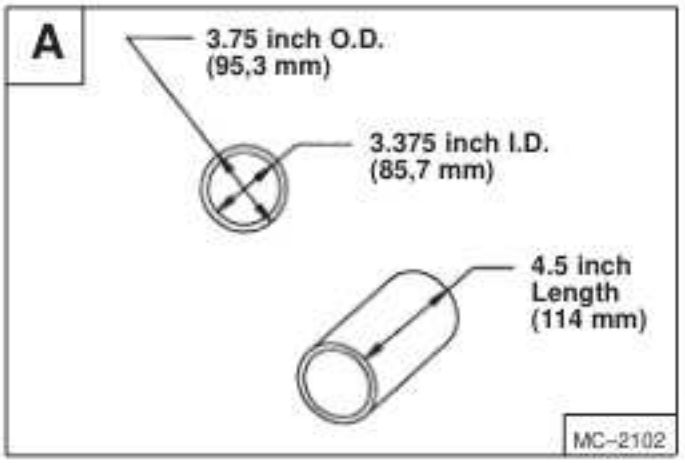
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MOTOR CARRIER (Cont'd)

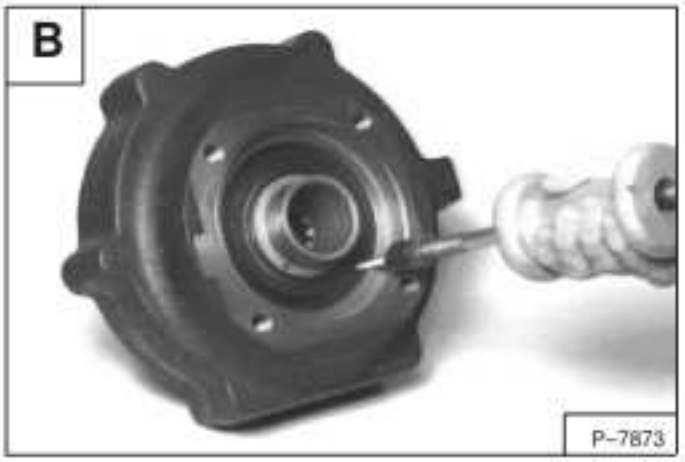
Disassembly

A tool will be needed to do the following procedure, use the dimensions shown in figure **[A]** and make the tool.

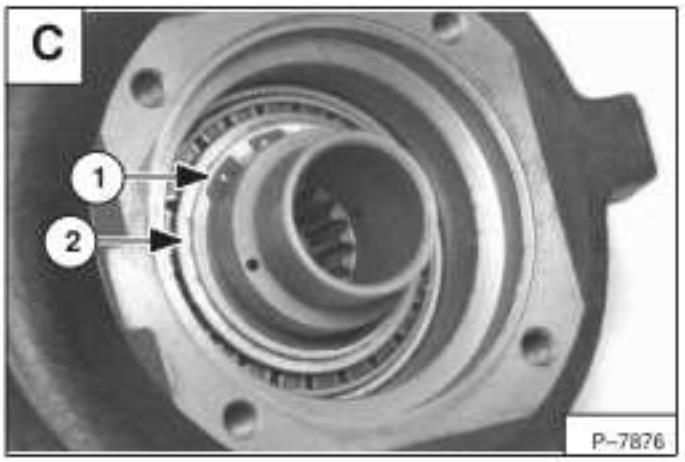
Also a hydraulic press, slide hammer with puller end, bearing puller, snap ring pliers and driver tools.

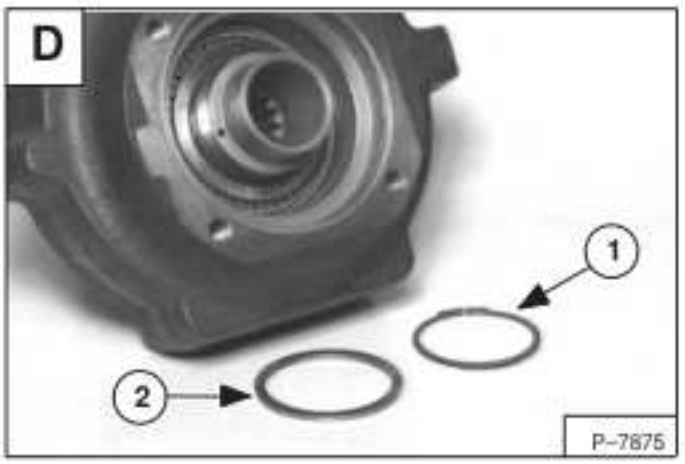


Use a slide hammer (with puller end) and remove the seal from the motor carrier **[B]**.



Remove the snap ring (Item 1) **[C]** & **[D]** and back-up washer (Item 2) **[C]** & **[D]** from the motor carrier.





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PWM MODULE (Cont'd)

Description (Cont'd)

Later S/N loaders have additional wires in the PWM module as shown in Fig. **[A]**. Loaders with the module mounted on the inside left fender are equipped with the auxiliary hydraulic deactivation feature and are listed below:

Loader S/N's 514411603 & Above
514511003 & Above
514611002 & Above

- Take voltage measurements by probing into wires near the PWM module. All connectors must remain plugged into their respectful harness
- Sit in the operator's seat. Turn key to ON position. Lower the seat bar. Check that the BICS™ controller lights are on. Check input voltage (Item 1) **[A]**. Press the auxiliary hydraulics switch. The mode switch light will come ON. Raise the seat bar. The light should be OFF. Input voltage will drop to less than 1.0 volts.

NOTE: Item descriptions are listed below as Input to or Output from the Module. Voltage readings are approximate. They are affected by battery condition (system voltage).

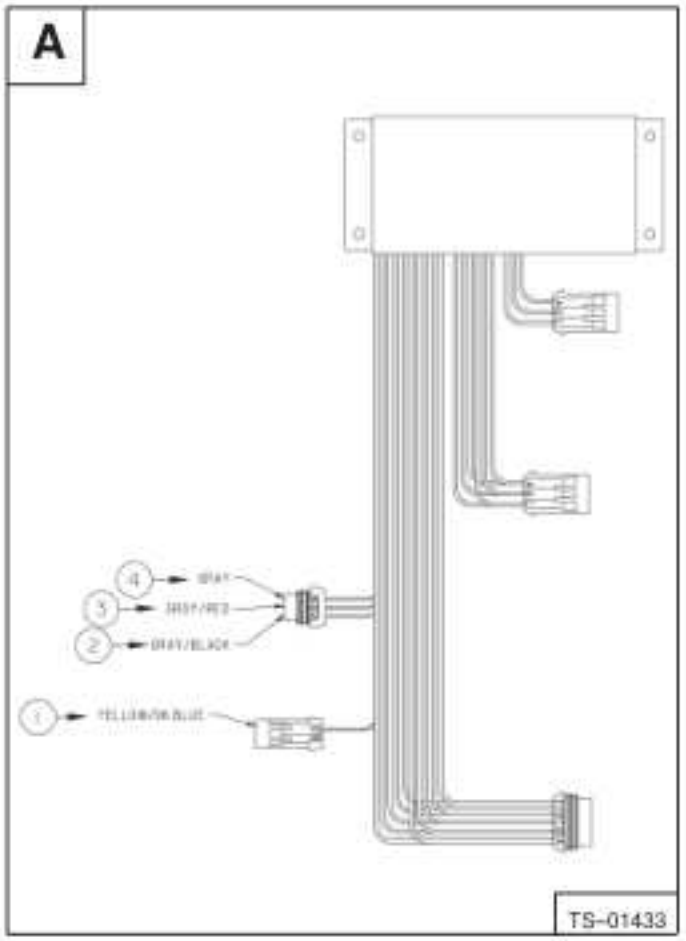


Fig. [A]:

Item	Description	Volts
1	Input from BICS™ Auxiliary Deactivation	12.0
2	For future use	
3	For future use	
4	For future use	

PWM TROUBLESHOOTING

Conditions

- Auxiliary Hydraulic Switch lights will not come ON. Check the following:

  PWM fuse
  Wires disconnected, shorted, or cut.
  Auxiliary hydraulic switch failure.
  Module failure.

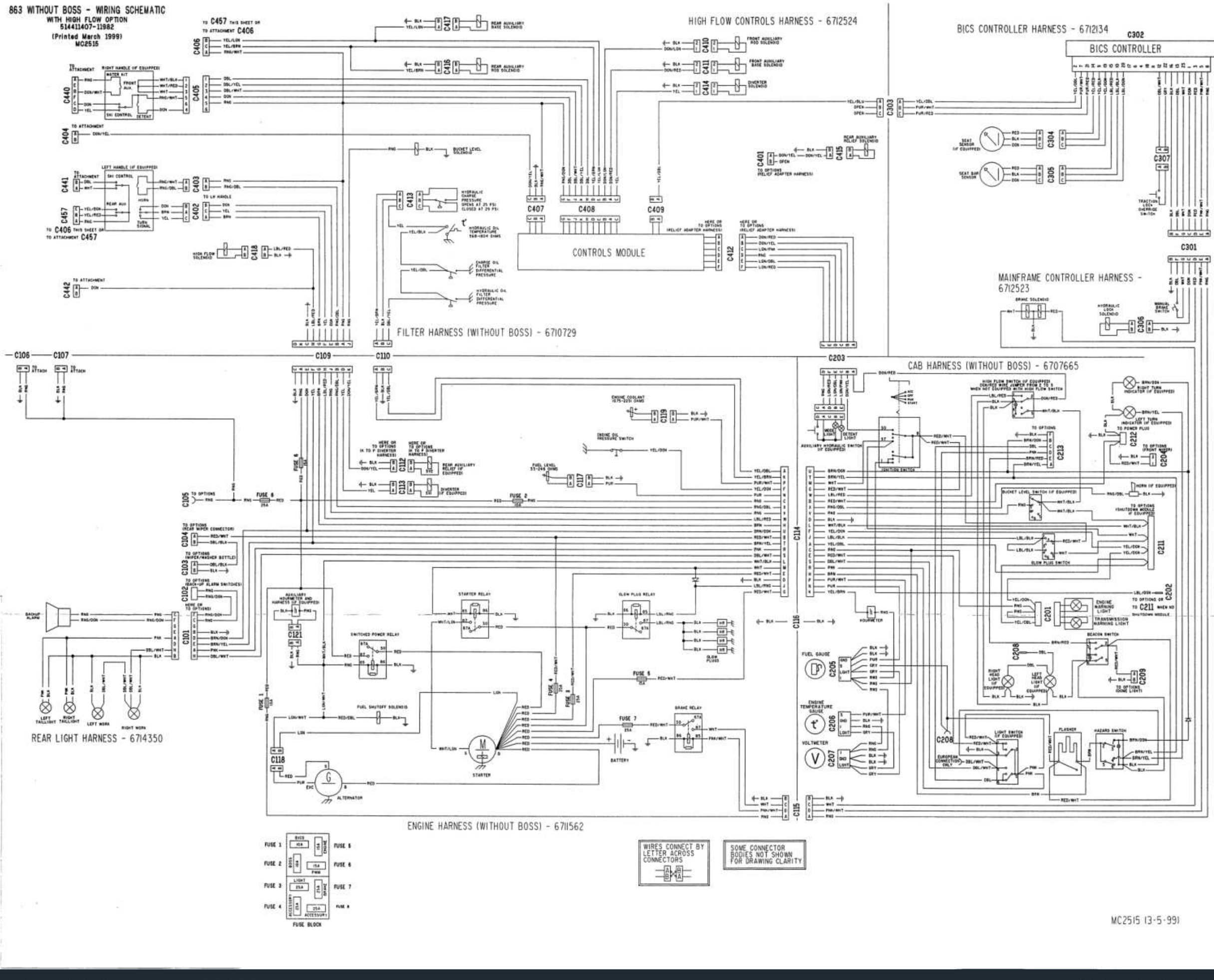
  Use the voltage tests in the wire identification section to determine the cause.

- Auxiliary Hydraulic Switch lights are flashing. See the troubleshooting chart. (See Page 8–30.)

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