863

863

HIGH FLOW

Service Manual

S/N 514425001 & Above
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EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)

6900648(7-10) Printed in U.S.A.

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Revised Feb. 99

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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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SELECT VALVE (863H) (Cont'd)

Removal And Installation

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

Disconnect the controls harness at the left side steering lever connectors (Item 1) **[A]**.

Disconnect the controls harness at the select valve connectors (Item 2) **[A]**.

Remove the rear bolt on the left side pedal link (Item 3) **[A]** and lower the link.

NOTE: Steering panel brace is removed for photo clarity.

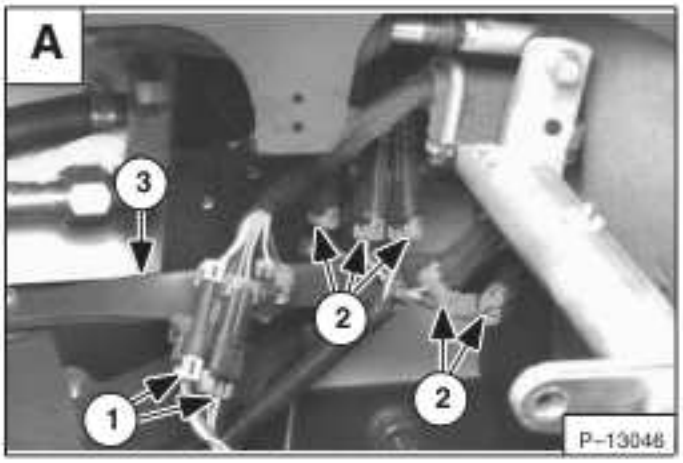
Drain the hydraulic reservoir. (See Page 1–1.)

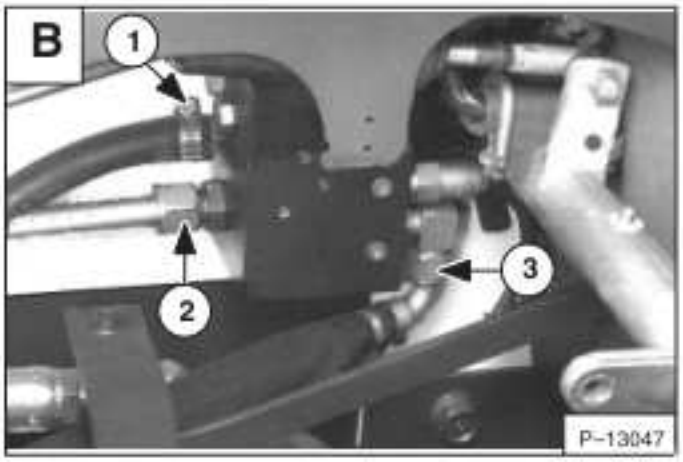
Loosen the clamp (Item 1) **[B]** and disconnect the hose.

Disconnect the tubeline (Item 2) **[B]**.

Disconnect the hose (Item 3) **[B]**.

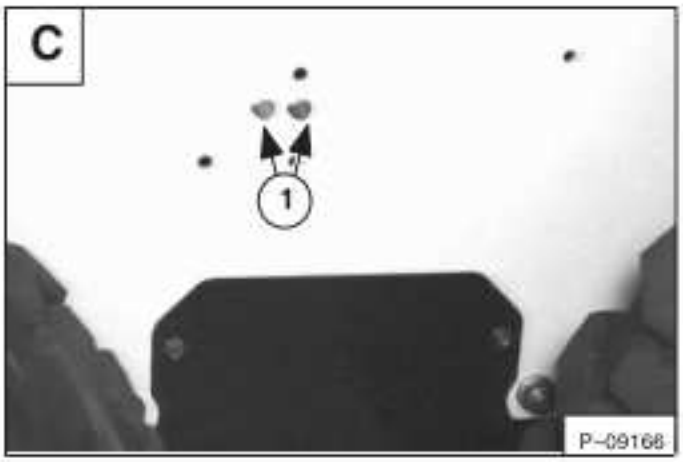
Install caps and plugs on open connections.





Remove the mounting bolts (Item 1) **[C]** located on the outside left frame.

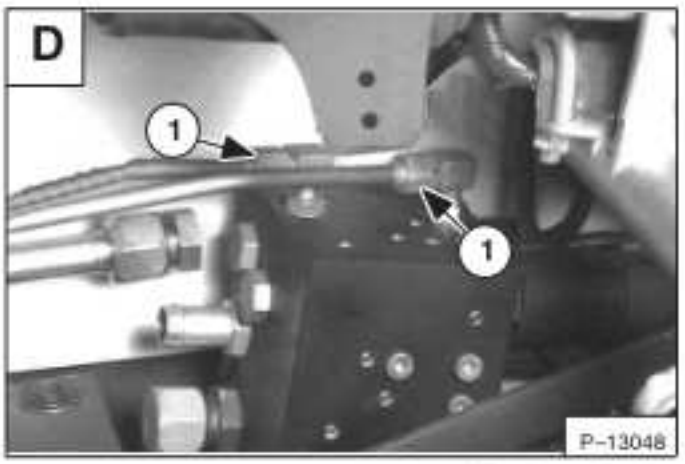
NOTE: The select valve will drop down for wrench clearance.



Disconnect the tubelines (Item 1) **[D]**.

Remove the select valve.

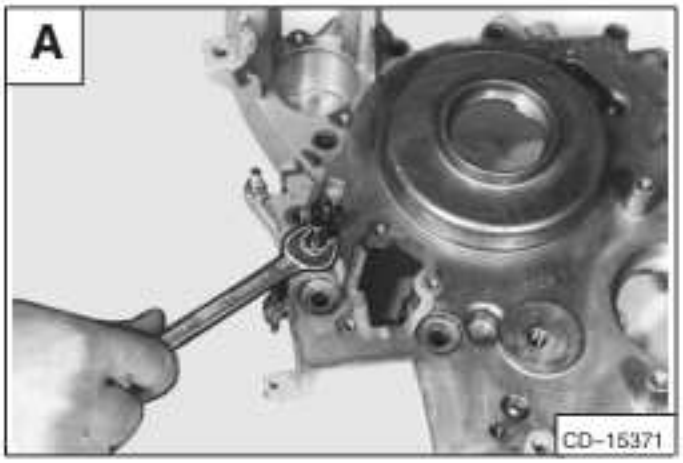
Installation: Connect controls harness to select valve solenoids. See Page 2–22 for solenoid identification and correct controls harness wire color.



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Assembly (Cont'd)

Install the torque control into the front cover **[A]**.



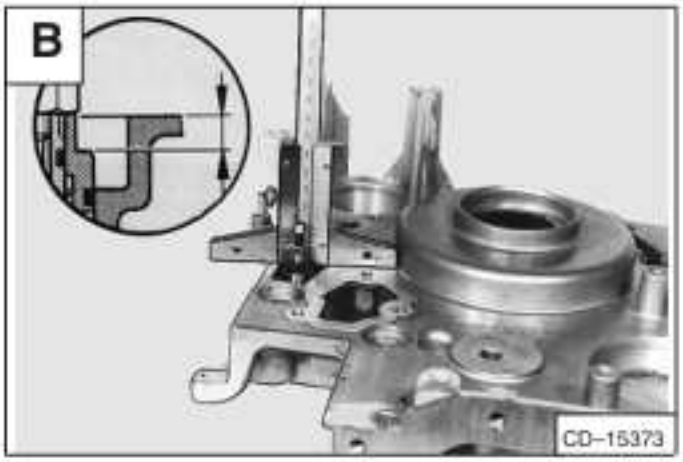
Install the torque control assembly to the dimensions taken (Page 100; Fig. **[B]**) or use the procedure below:

Measure the thread reach **[C]**.

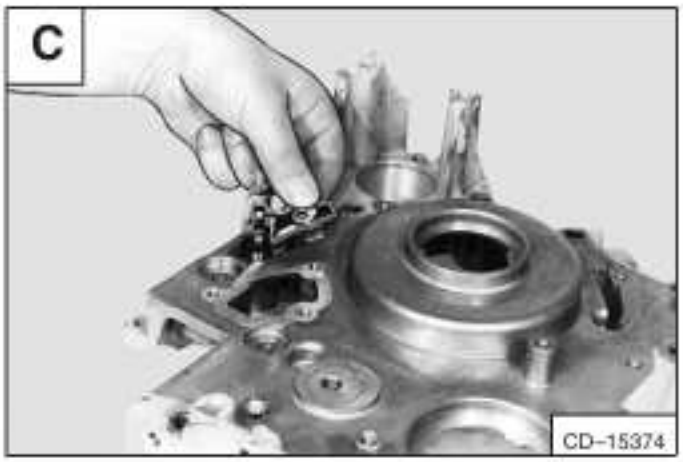
Specification:

Thread Reach ..... 0.252 ± 0.019 inch (6,4 ± 0,5 mm)

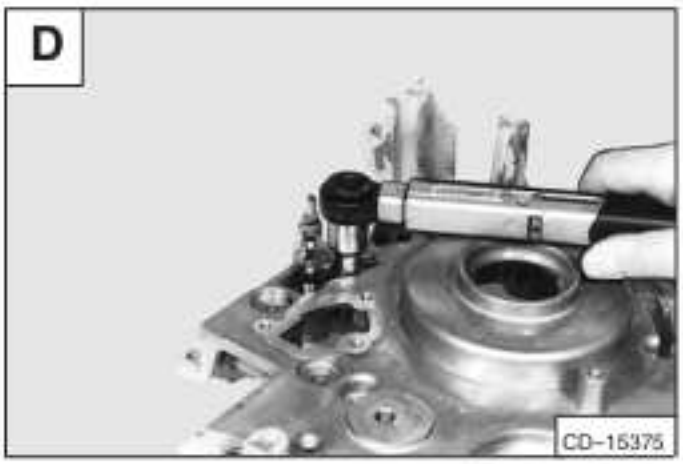
NOTE: Dynamometer testing may be necessary depending on engine performance.



Install the clamp and nut **[C]**.



Tighten the clamp nut to 88 in.–lbs. (10 Nm) torque **[D]**.



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	SOLUTION
1.	Turn the key OFF, put the hand controller in neutral position, turn the key ON. (The engine does not have to be running for system recalibration or diagnostics).
2.	Check wire connections for loose connector body, loose or bent pins in connectors.
3.	Check for broken or damaged wire.
4.	Check for stuck or sticky handle controller mechanism.
5.	Turn the key OFF check to ensure spool moves freely, returns to neutral, turn the key ON.
6.	Check the signal voltage from the handle controller unit. (See Page 10–8)
7.	Check the signal voltage from the lift or tilt spool actuator. (See Page 10–6)
8.	Check to insure the actuator moves freely on the actuator mounting bolt.

NOTE: If during operation one or both indicator light(s) goes out, this represents a reduced performance state. This is caused by the actuator not being able to reach (full stoke) as commanded by the handle controller. When the handle controller is returned to neutral and the actuator reaches neutral, the condition will clear itself and the light will come back ON. Reduced speed in the lift or tilt circuits may be noticed. This will not disable the loader, but may be an indication that an actuator is going bad.

When the wrong BICS™ controller, (Black face instead of Green face) is installed in an Advanced Hand Control loader, and the key is turned to the ON position, the left light will come on for 0.5 seconds and remain ON, then both lights will stay ON for an additional 0.5 seconds, then both lights will go out with no flashing code, because there is no signal from the BICS to the control module. The BICS™ controller lights will be ON, but the Advanced Hand Controller will not allow the loader hydraulics to function.

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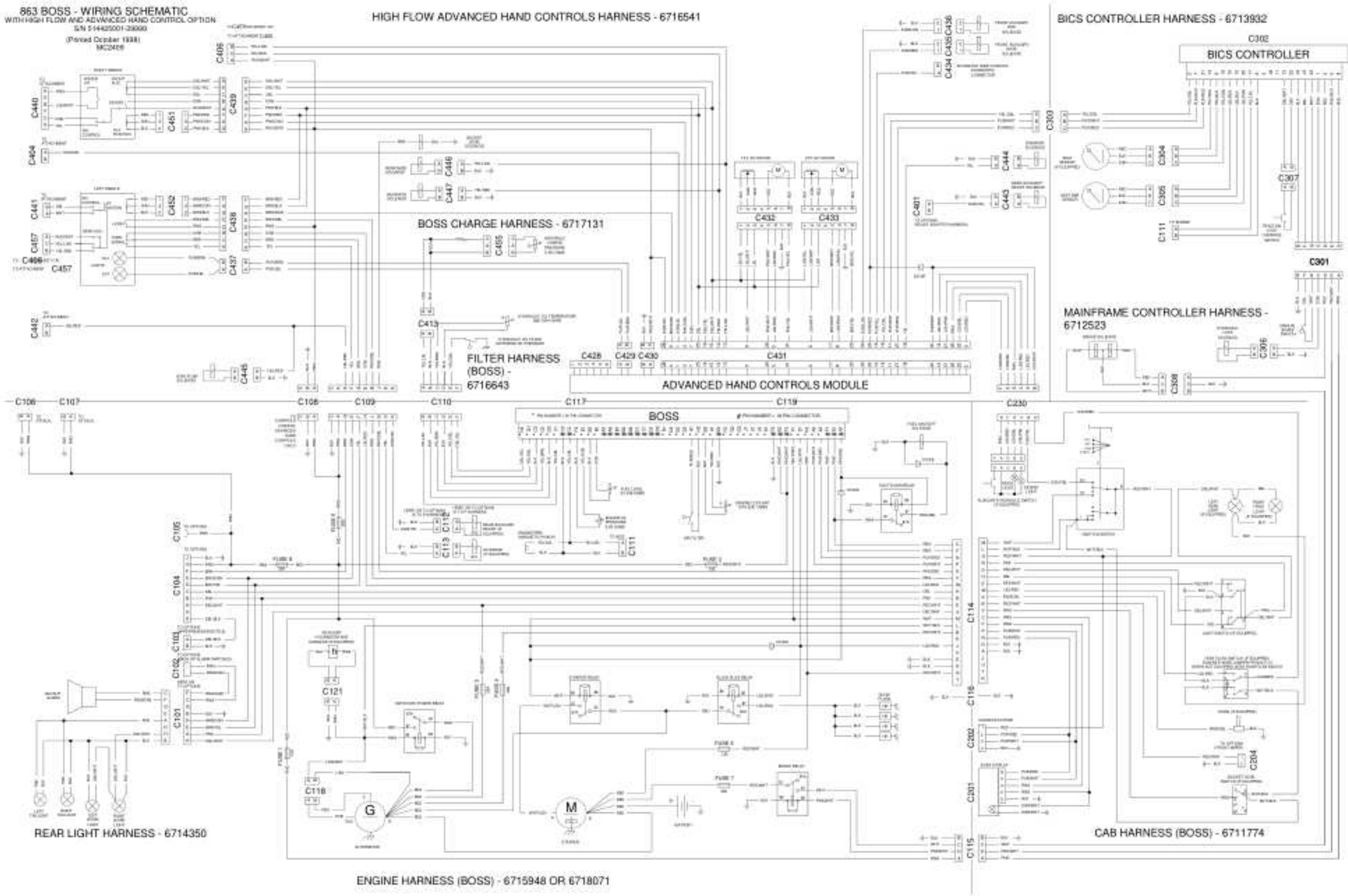
863 BOSS - WIRING SCHEMATIC

WITH HIGH FLOW AND ADVANCED HAND CONTROL OPTION

S/N 514625001-230999

(Printed October 1998)

MC2409



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