

## Implement Joystick Control Patterns Can Be Changed

**E70B ( 5TG ),  
E110B ( 8MF ),  
E120B ( 6JF ),  
E200B ( 6KF ),  
EL200B ( 7DF ),  
E240B ( 8SF ),  
EL240B ( 5WG ),  
E300B ( 1WJ ),  
EL300B ( 3FJ ) Excavators**

The E Family of Excavators is equipped with threaded adapters or quick disconnect couplings on the hoses in the pilot circuit to simplify changing the control pattern for the implement joystick. Previously, Caterpillar recommended only the standard SAE excavator pattern as connected at the factory. Now, in response to customer demand, the backhoe pattern is offered as an option for use on machines OUTSIDE of Japan. See Illustration 1.

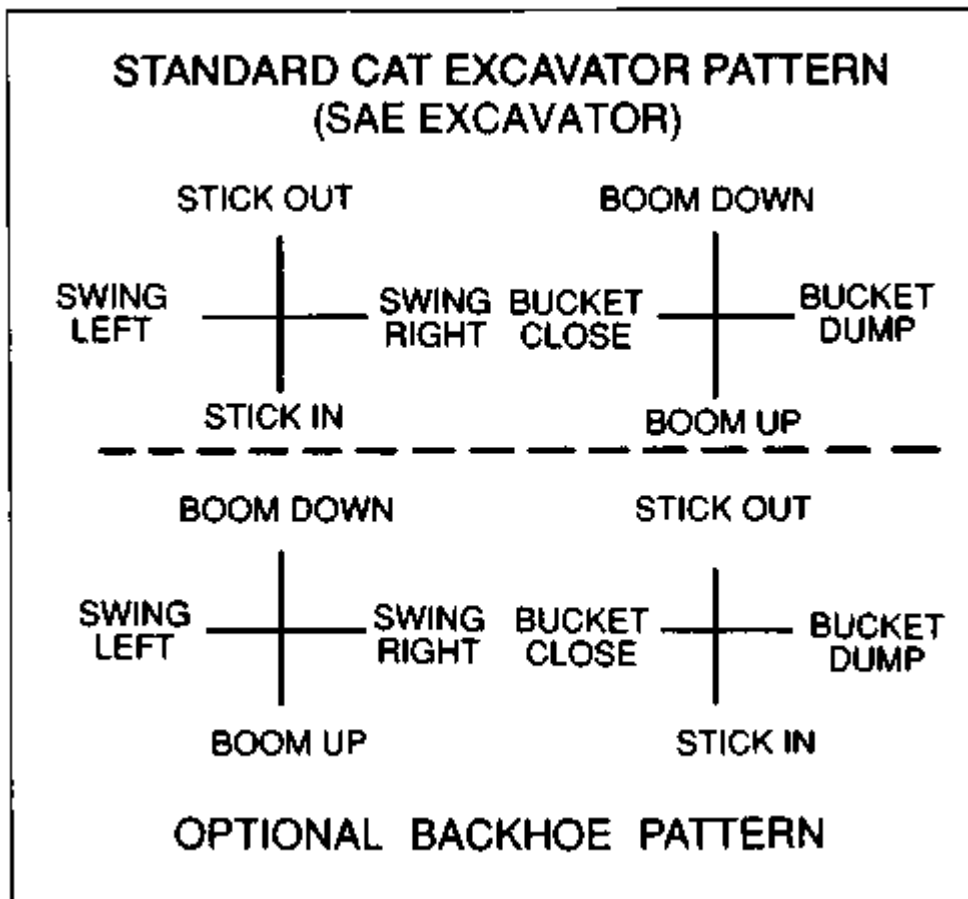


Illustration 1. The two joystick patterns available for machines shipped outside of Japan.

All machines shipped to NACD (North American Commercial Division) will still be connected for the standard excavator pattern. However, if requested by users, the optional backhoe pattern can be obtained by reconnecting the pilot hoses as shown herein.



## WARNING

**If the joystick control pattern is changed, the existing control pattern film must be replaced with the correct pattern film. And, if not already installed, put on a new warning film and instructional film. See following procedure.**

Caterpillar recommends and supports only the standard excavator and backhoe patterns as shown in Illustration 1. NO OTHER patterns should be installed.

Do the following steps to change the joystick pattern from the standard excavator pattern to the backhoe pattern, or vice versa. The new films required are:

7Y0007 Joystick Instruction Film (Standard-Cat Excavator)

or

9X1771 Joystick Instruction Film (Optional-Backhoe)

9X5980 Warning Film  
9X5955 Control Pattern Instruction Film

1. Lower implements to the ground and shut off engine.
2. With pilot control neutralizing lever in the DOWN or OPERATE position, operate pilot controls to discharge the pilot system accumulator.
3. Remove existing control pattern film and apply the new film that is correct for the new pattern to be used. See Illustration 2.

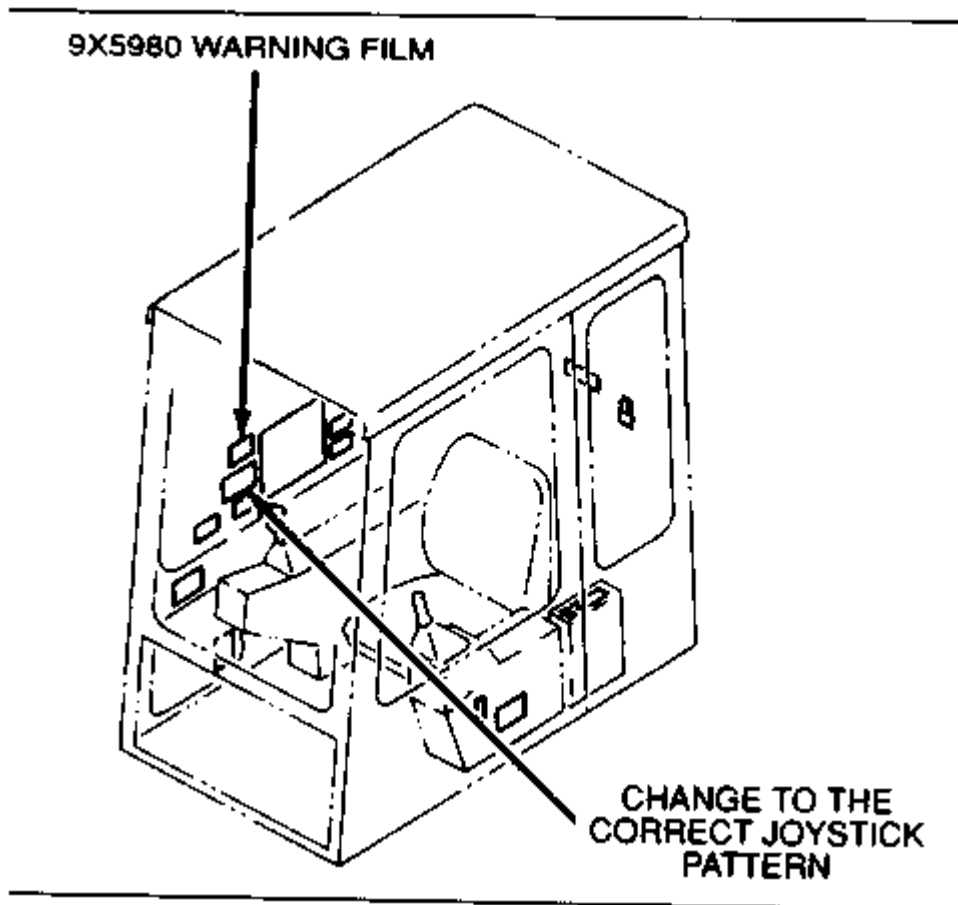


Illustration 2. Location of control pattern that must be changed, and the warning film which may be needed on some units.

4. A 9X5980 Warning Film should be located inside the cab as shown in Illustration 2. This film is installed on some machines.

## **For E70B, E110B, E120B, E200B, EL200B Excavators**

5. Remove the protective cover from under the main frame beneath the cab. See Illustration 3. Install the 9X5955 Instruction Film if it is not installed. It shows pilot hose connections for both patterns, and tells the user to contact the Caterpillar dealer before switching the hoses again.

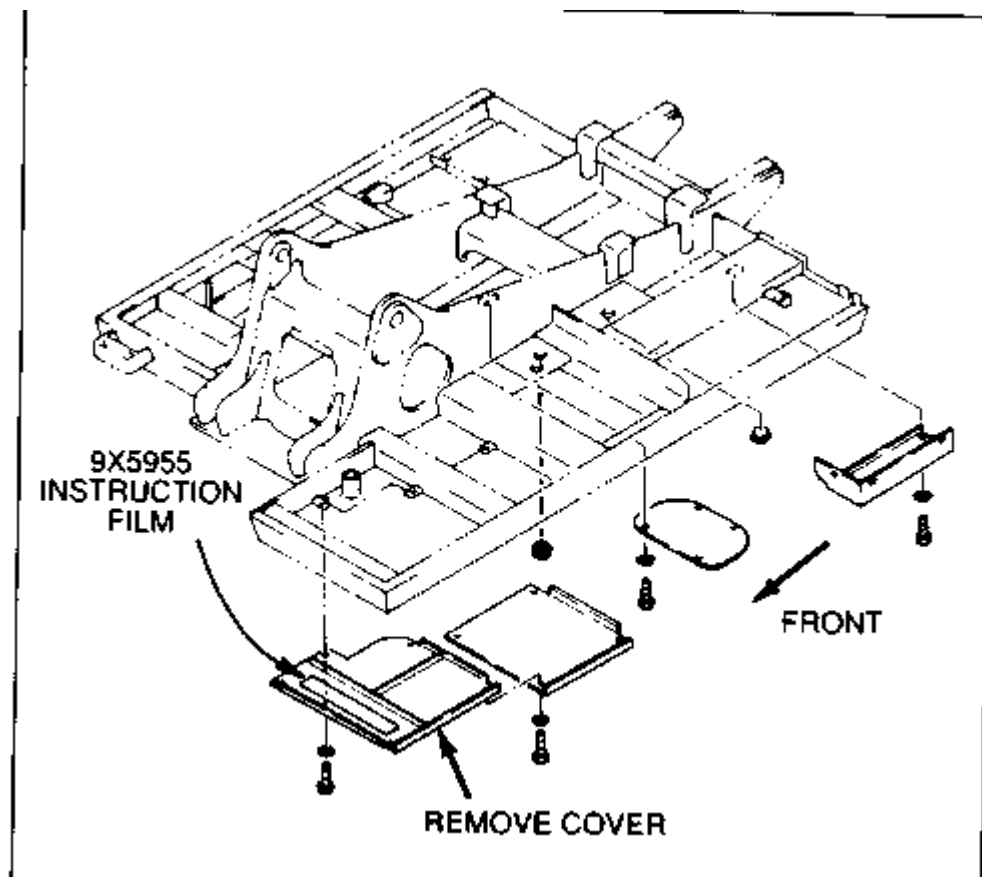


Illustration 3. Location of the instruction film.

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### NOTICE

**As a precaution, note how the hoses are connected. The hoses are labeled with aluminum tags and color bands. Refer to Charts A and B for identification codes and colors.**

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<b>Chart A.</b> <b>Pilot Control Valve Connections</b> <b>Standard SAE Excavator Control Pattern</b>				
<b>Pilot Valve</b>	<b>Control Side</b>	<b>Bulkhead Nut</b>	<b>Main Valve</b>	<b>Control Side</b>
<b>Tag Label</b>	<b>Color</b>	<b>Color</b>	<b>Tag Label</b>	<b>Color</b>
R3	Green	Green	R3	Green
R4	Purple	Purple	R4	Purple
L3	Blue	Blue	L2	Yellow
L2	Yellow	Yellow	L1	Red
R1	Orange	Orange	R1	Orange
R2	White	White	R2	White
L1	Red	Red	L4	Bronze
L4	Bronze	Bronze	L3	Blue

<b>Chart B.</b> <b>Pilot Control Valve Connections</b> <b>Optional Backhoe Pattern</b>				
<b>Pilot Valve</b>	<b>Control Side</b>	<b>Bulkhead Nut</b>	<b>Main Valve</b>	<b>Control Side</b>
<b>Tag Label</b>	<b>Color</b>	<b>Color</b>	<b>Tag Label</b>	<b>Color</b>
L1	Red	Green	R3	Green
R4	Purple	Purple	R4	Purple
R1	Orange	Blue	L2	Yellow
L2	Yellow	Yellow	L1	Red
L3	Blue	Orange	R1	Orange
R2	White	White	R2	White
R3	Green	Red	L4	Bronze
L4	Bronze	Bronze	L3	Blue

Note: Bulkhead nut is used only on E70B.

E70B has threaded fittings, not quick couplers.

- Remove hose brackets from the pilot control valve side of the connectors (front of machine).

7. To change from one **joystick pattern** to the other pattern, switch the positions of the four following quick couplers on the pilot control side of the connector, which is toward the front of machine (see Illustration 4):

...Switch **pilot control side** connectors L1 and R3.

...Switch **pilot control side** connectors L3 and R1.

This will switch the stick and boom functions.

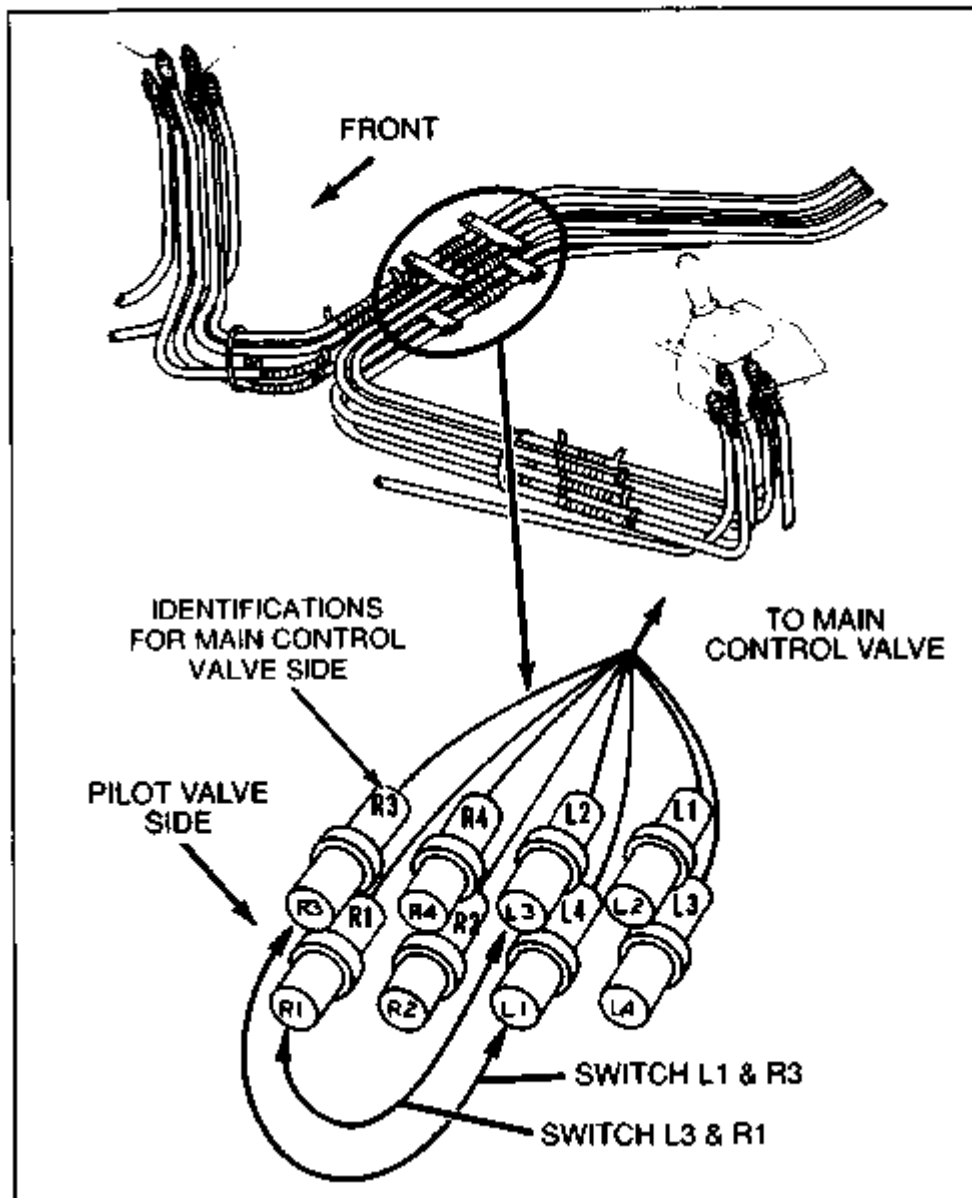


Illustration 4. Locations of the four pilot hose connectors that are exchanged on E70B, E110B, E120B, E200B, EL200B.

8. Reinstall hose brackets and protective cover.

9. Operate the excavator in an open area to be sure the implement operation matches the desired pattern.

## For E240B, EL240B, E300B, EL300B Excavators

5. Open the access door behind the operator compartment. See Illustration 5. The pilot lines extend rearward from the bulkhead panel to the main control valve.

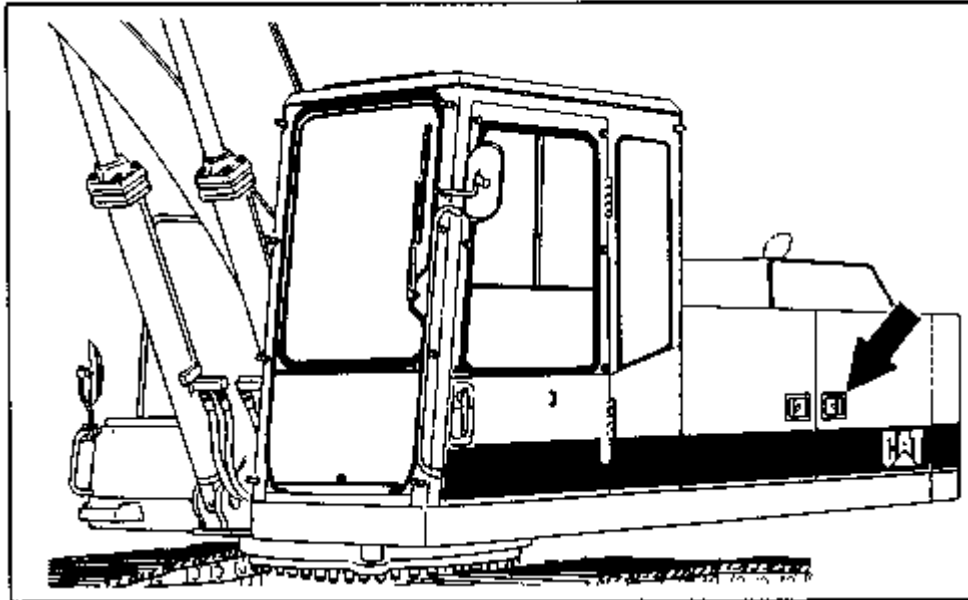


Illustration 5.

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### NOTICE

**As a precaution, note how the hoses are connected. The hoses are labeled with aluminum tags and color bands. Refer to Charts C and D for identification codes and colors. The letters I, H, G, F, etc. are stamped in the bulkhead above the connectors.**

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<b>Chart C.</b> <b>Pilot Control Valve Connections</b> <b>Standard SAE Excavator Control Pattern</b>				
<b>Pilot Valve</b>	<b>Control Side</b>	<b>Bulkhead Nut</b>	<b>Main Valve</b>	<b>Control Side</b>
<b>Tag Label</b>	<b>Color</b>		<b>Tag Label</b>	<b>Color</b>
–	–	I	R4	–
–	–	H	L4	–
–	–	G	R1	–
–	–	F	L3	–
–	–	E	R2	–
–	–	D	L2	–
–	–	C	R3	–
–	–	B	L1	–

<b>Chart D.</b> <b>Pilot Control Valve Connections</b> <b>Optional Backhoe Pattern</b>				
<b>Pilot Valve</b>	<b>Control Side</b>	<b>Bulkhead Nut</b>	<b>Main Valve</b>	<b>Control Side</b>
<b>Tag Label</b>	<b>Color</b>		<b>Tag Label</b>	<b>Color</b>
–	–	I	R4	–
–	–	H	R3	–
–	–	G	L2	–
–	–	F	L3	–
–	–	E	R2	–
–	–	D	R1	–
–	–	C	L4	–
–	–	B	L1	–

6. To change from one joystick pattern to the other, switch the positions of the four following quick couplers which are on the main control valve side of the connector. See Illustration 6.

Switch **main control valve side** connectors L4 and R3.

Switch **main control valve side** connectors R1 and L2.



This will switch the stick and boom functions to the opposite joystick control lever that they were prior to the conversion.

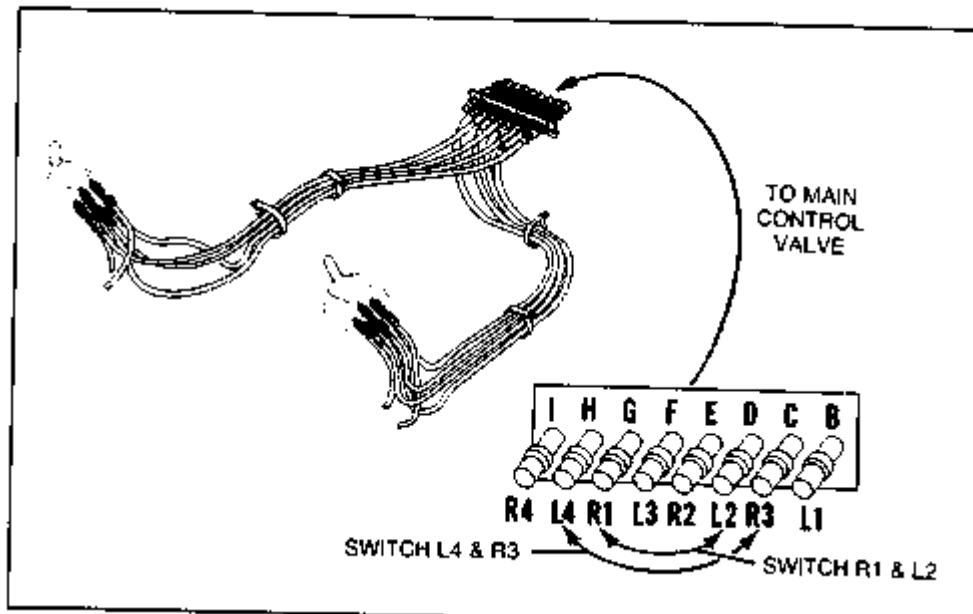


Illustration 6. Locations of the four main control valve connectors that are exchanged on E240B, EL240B, E300B, EL300B.

7. Close the access door behind the operator compartment.
  8. Operate the excavator in an open area to be sure the implement operation matches the desired pattern.
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