

▲ = Revised November 1999. This bulletin supercedes the previous bulletin 96-5.

Troubleshooting Shift Problems

Models

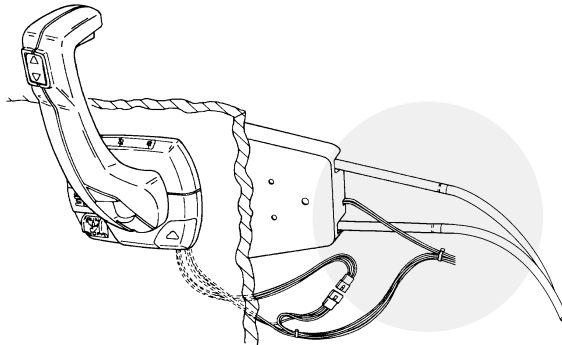
All models

Situation

Hard shifting or chocking / ratcheting when shifting into forward gear.

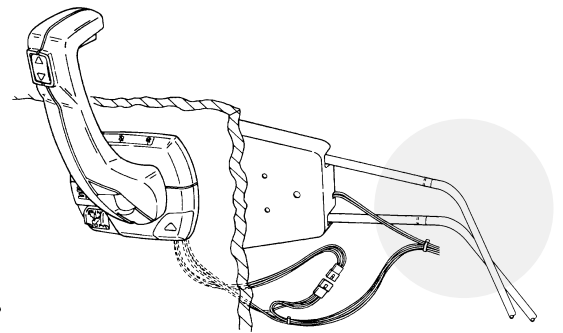
1. When installing the control box in the side panel of the boat make sure that the cables have enough clearance to operate, because the cables do move up and down when the shift handle is moved. If the control box is mounted too far back towards any fiberglass structure the cables will be interfered with, this will cause very hard shifting.

NOTE: The control box housing can be rotated in 30° increments to improve cable routing.



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Proper cable bend

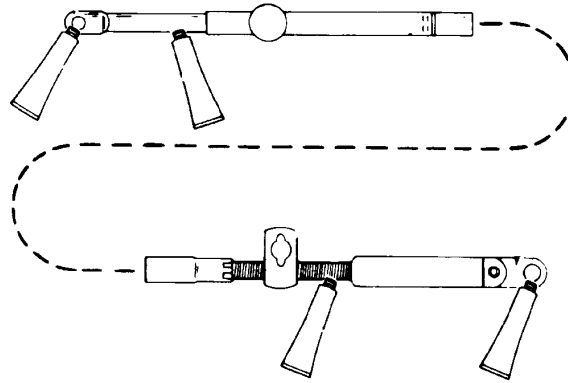


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Improper cable bend

2. Make sure that when the shift cable from the control box is lead through the side gunnel of the hull, that it does not have any extremely sharp bends in it as this will cause the stiff shifting.

3. Before installing the shift cable into the control box, extend the stainless rod eye end of the cable and grease it with (2-4-C Marine Lubricant, with Teflon) move it back and forth to allow even distribution of the grease.

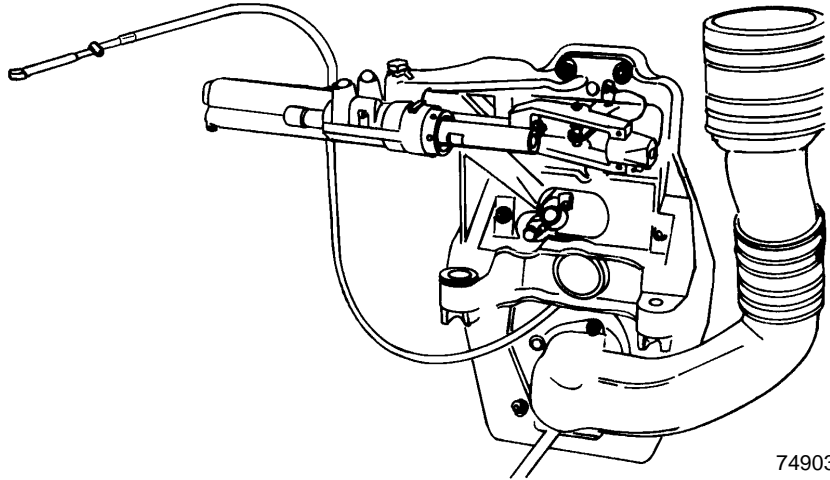


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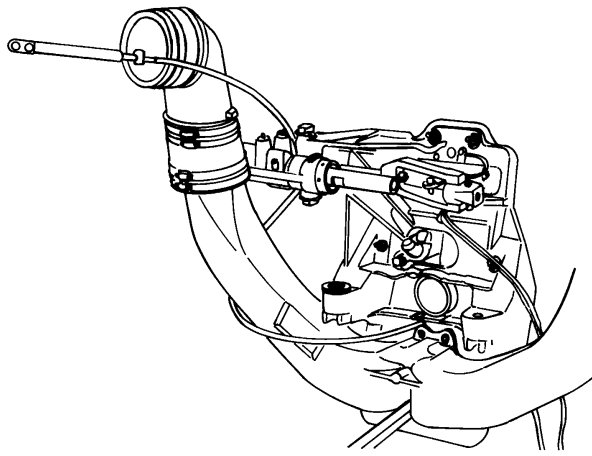
4. Do not strap or clamp the control cables to any other cables or rigid structure within **three feet** of the control box.
5. Be sure the cables are not permanently kinked.
6. Make sure there is proper clearance for cable movement when the control box is installed in the side panel. The cables must have room to move up and down when the control handle is shifted into either forward or reverse.
7. Check to make sure that the engine was not set down on the intermediate shift cable during installation as this will crush the inner cable tubing and cause improper and / or stiff shifting.
8. DO NOT fasten the shift cable with straps or clamps to any other cable within **five feet** of the shift plate.
9. DO NOT fasten the shift cable to the transom with any type of plastic clips or fasteners with in **five feet** of the shift plate.
10. DO NOT over tighten the throttle or shift cable attaching nuts at the engine end. Barrel and cable end must be free to rotate on the mounting stud.
11. Check the intermediate shift cable routing from the transom assembly to the shift plate as follows:
 - a. The cable should come through the transom, above the exhaust pipe and make a turn towards the starboard side of the boat between the exhaust pipe and the engine flywheel housing.
 - b. The cable should then be routed under the starboard rear engine mount, and turn towards the transom.
 - c. Then go up behind the power steering valve and loop over to the shift plate on the engine, where it is connected to the anchor points on the shift plate.

Following this routing will prevent the engine coupler from damaging the cable.

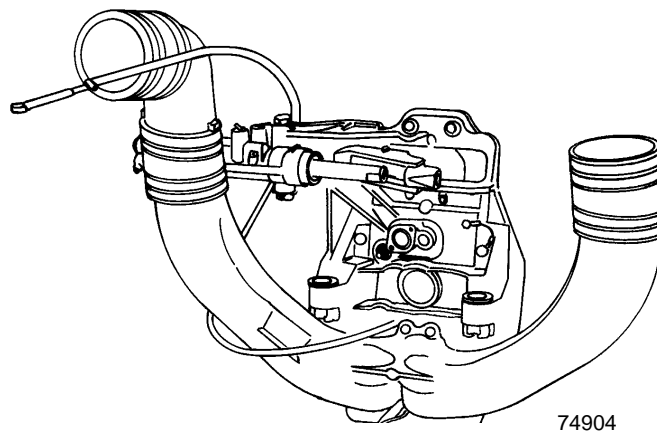
Shift Cable Routing



3.0L & 3.0LX Model Only

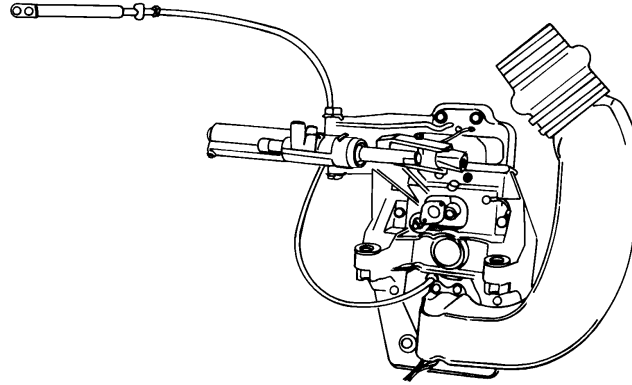


All V-6 & V-8 Alpha Models



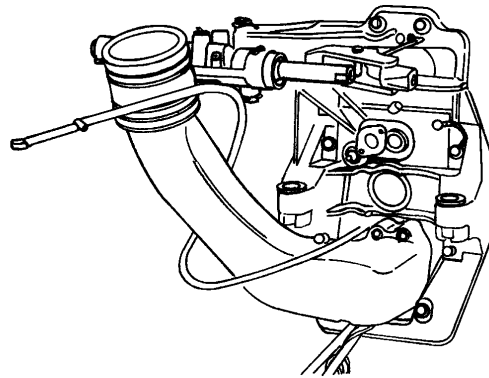
All V-6 & V-8 Bravo Models

Shift Cable Routing



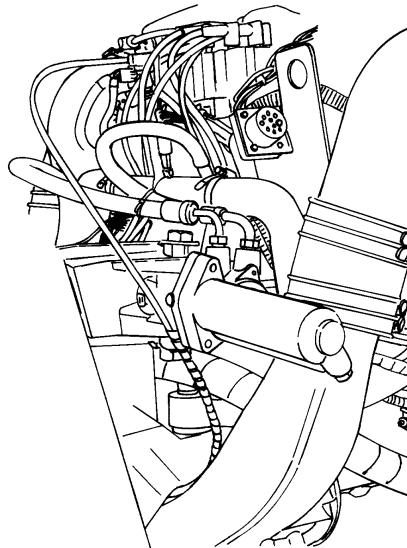
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V-8 Diesel Model



74905

In-line Diesel Model



75767



On 7.4L MPI MCM