

CIRCULATE TO:  
 SERVICE MANAGER   
 PARTS MANAGER   
 MECHANICS   
 "Place in a Service  
 Bulletin Binder"

- A. Checking Shift Cable Adjustments on MerCruiser 120-thru-260R & MR Models
- B. Difficult Shift Cable Adjustment

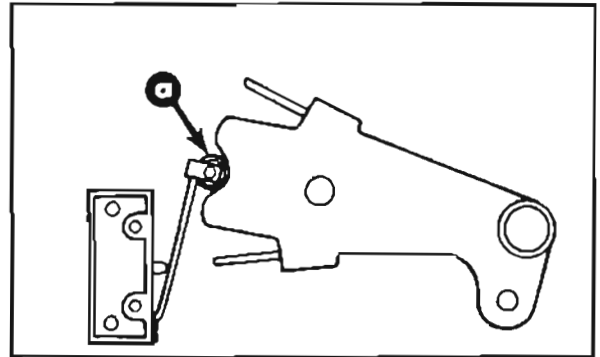
## A. CHECKING SHIFT CABLE ADJUSTMENTS ON MERCUISER 120-thru-260R & MR MODELS

It is the boat manufacturer's responsibility to adjust the shift cables. It is the dealer's responsibility to make sure that this has been done correctly before delivering the boat. The following procedure should be used to check for proper adjustment.

1. Shift operation can be checked with boat in the water or with stern drive connected to a garden hose.
2. Shift into forward and reverse gear making sure that clutch engages before engine begins to accelerate.
3. Shift into forward gear and stop engine. Fully advance throttle. Check that shift cutout switch roller is centered in notch of shift lever. (Figure 1) Repeat same procedure for reverse gear.
4. If proper shift operation is not observed, adjust shift cables, as outlined in "MerCruiser I-Drive Shift Cable Installation and Adjustment Procedure" (SIS-873), which was sent out with the previous service bulletin mailing.

a - Shift Cutout Switch Roller Centered In Lever Notch

**Figure 1. Checking Shift Cutout Switch**

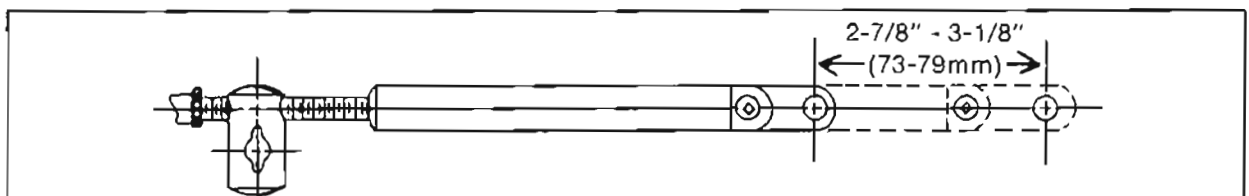


## B. DIFFICULT SHIFT CABLE ADJUSTMENT

If difficulty is experienced in obtaining proper shift cable adjustment, the following items should be checked in sequence given:

### 1. Remote Control Shift Cable Travel

Remote control must provide the shift cable travel shown in Figure 2 to properly shift the drive unit. Pull out on cable end guide when checking dimension in forward gear and push in on end guide when checking dimension in reverse gear.



**Figure 2. Remote Control Shift Cable Travel**

## 2. Drive Unit Shift Cable Adjustment

Check cable end dimension as shown in Figure 3.

- If dimension is less than specified, check items 5 and 7, following.
- If dimension is more than specified, check item 6, following.
- If the above is not the cause, remove shift cable end guide, check inner core wire dimension and readjust cable as outlined in SIS-873.

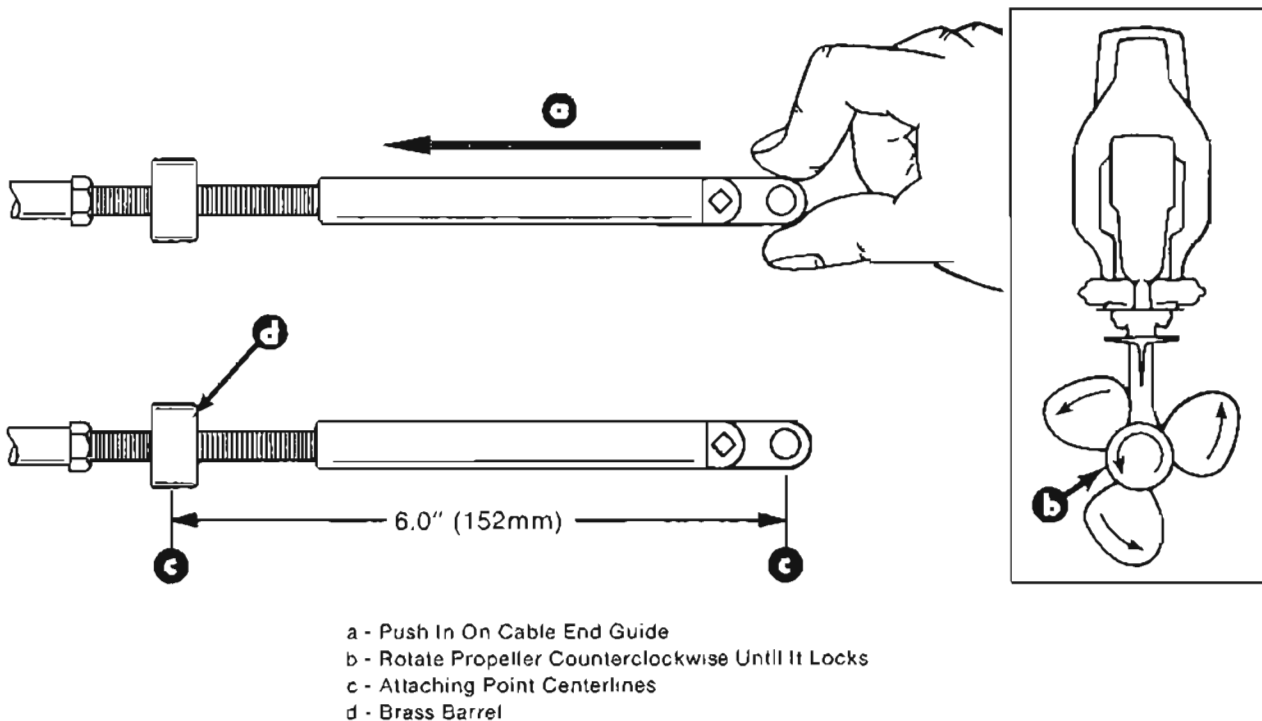


Figure 3. Checking Cable End Dimension

## 3. Shift Lever Adjustable Stud

If shift cutout switch kills engine when shifting into reverse, check shift lever adjustable stud to make sure that it is all-the-way to bottom of slot. (Figure 4)

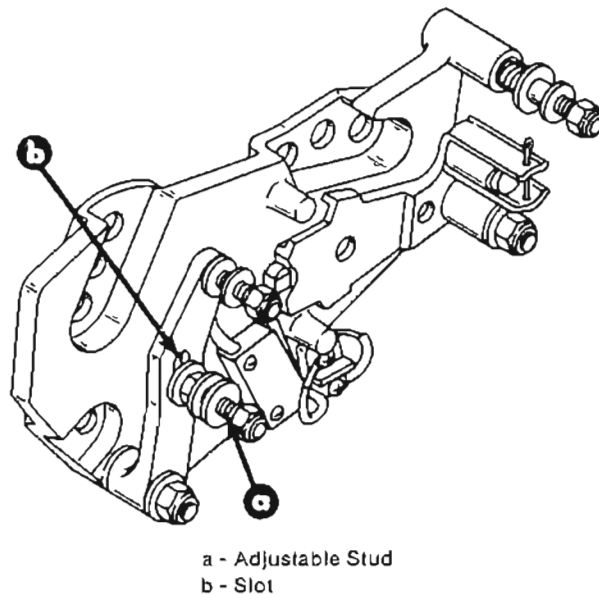
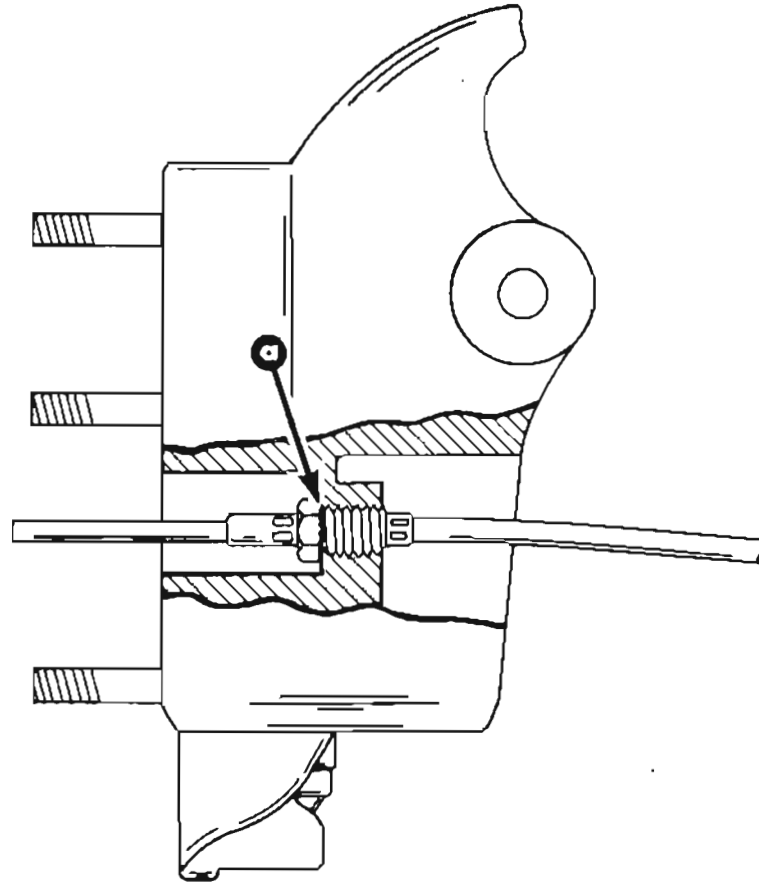


Figure 4. Shift Lever Adjustable Stud

4. **Drive Unit Shift Cable Brass Fitting**

If shift cutout switch kills engine when shifting into reverse, check to make sure that shift cable brass fitting is tightened properly. (Figure 5) No more than 2 threads on brass fitting should be exposed.

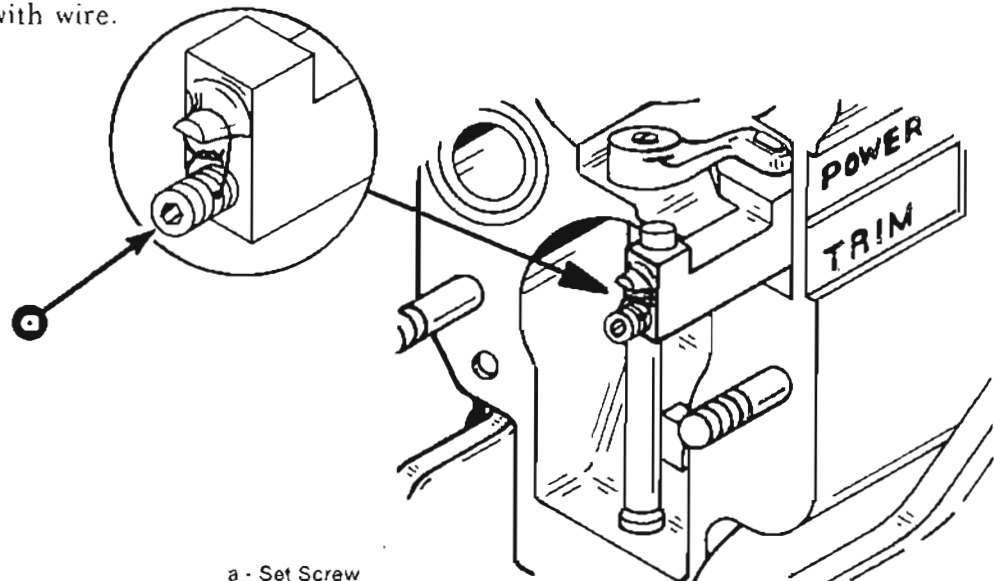


a - No More Than 2 Threads of Fitting Should Be Exposed

**Figure 5. Checking Shift Cable Fitting**

5. **Shifting Slide Assembly Set Screw**

If difficulty is experienced in getting good clutch engagement in forward or reverse, check shifting slide assembly set screw to make sure that it has been tightened correctly. (Figure 6) Screw should be turned in until it bottoms out, and then backed out  $\frac{1}{4}$ -turn before it is secured with wire.

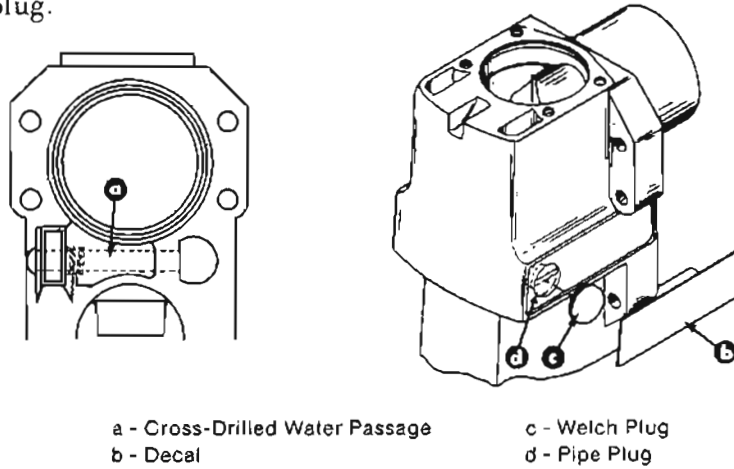


a - Set Screw

**Figure 6. Shifting Slide Assembly Set Screw**

## 6. Cross-Drilled Water Passage Pipe Plug

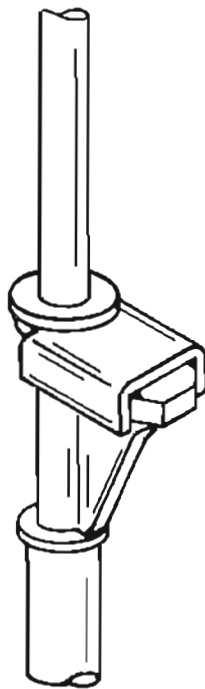
If good forward clutch engagement is not obtained, or if shift cutout switch kills the engine when shifting into forward or reverse, check cross-drilled water passage pipe plug in drive shaft housing to make sure that it is not interfering with shifting slide assembly. (Figure 7) This can be done by shining a flashlight into shifting slide assembly cavity. Plug must be flush to slightly recessed in inner casting surface. If necessary, remove decal and weld plug and tighten pipe plug.



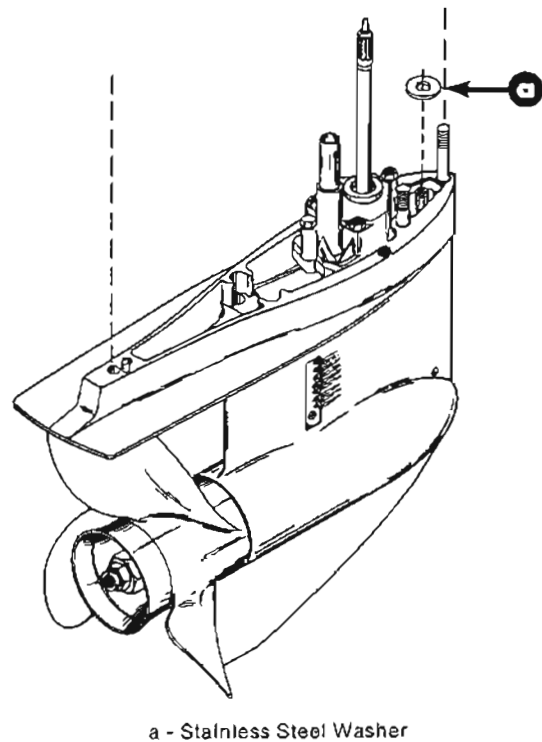
**Figure 7. Drive Shaft Housing Cross-Drilled Water Passage**

## 7. Shift Shaft Bushing Stainless Steel Washer

If clutch does not engage fully in forward or reverse or does not shift out of gear properly, check to make sure that intermediate shift shaft is engaging properly with upper shift shaft. (Figure 8) If not, problem may be due to a missing shift shaft bushing washer. (Figure 9)



**Figure 8. Upper and Intermediate Shift Shafts**



**Figure 9. Shift Shaft Bushing Washer**