

## Volvo 270/280/290 Tilt Lock

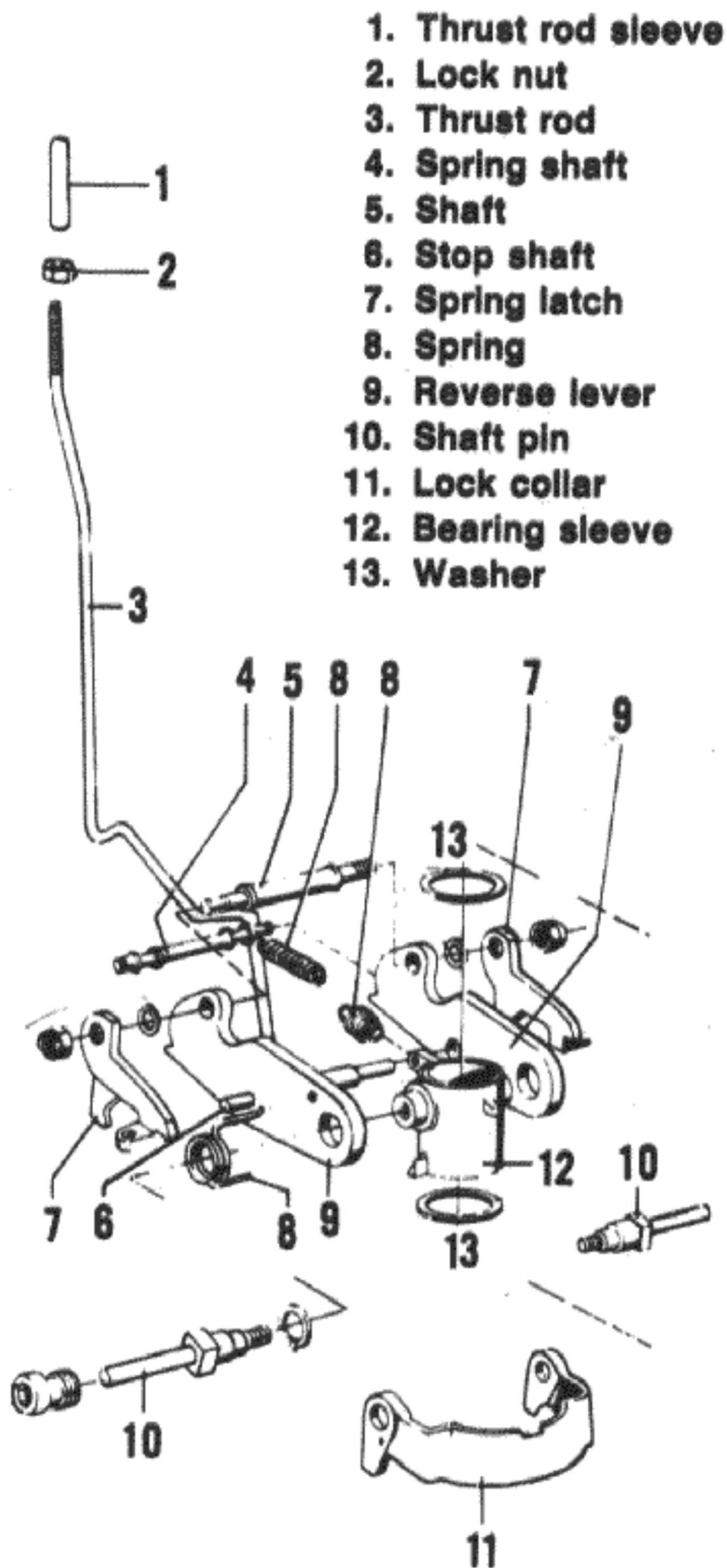
If you're here reading this item, it is **not** probably because you have this grand desire to try something completely different. Most likely you (or the wife) have recently hit the dock (or equivalent) due to a faulty reverse tilt lock mechanism.

Lets begin with a few diagrams and then we will progress into the guts of this issue. With exception of a few late model 290 drives that also had power trim, the tilt locking mechanism did not change much over the years.

Before taking anything apart; carefully clean the area around the tilt lock. A high pressure washer works wonders and/or a stiff scrub brush can be used to remove the heavy stuff. Then, check condition of the springs, pawls, and pivot pins.

The tilt lock mechanism must work freely. Jamming and/or stiffness can reduce the effectiveness of the reverse lock. It is not a good idea to grease the reverse lock but a light cleaner spray, similar to WD40, can be used to help clean the mechanism.

The diagram below shows the individual components of the reverse lock mechanism. Note that the entire reverse lock mechanism is affixed to the bearing sleeve (item 12). The bearing sleeve also has to turn freely, side to side, on the water tube (not shown). The shaft pins (items 10) keep the bearing sleeve in line with the sterndrive, when it is turned from side to side.

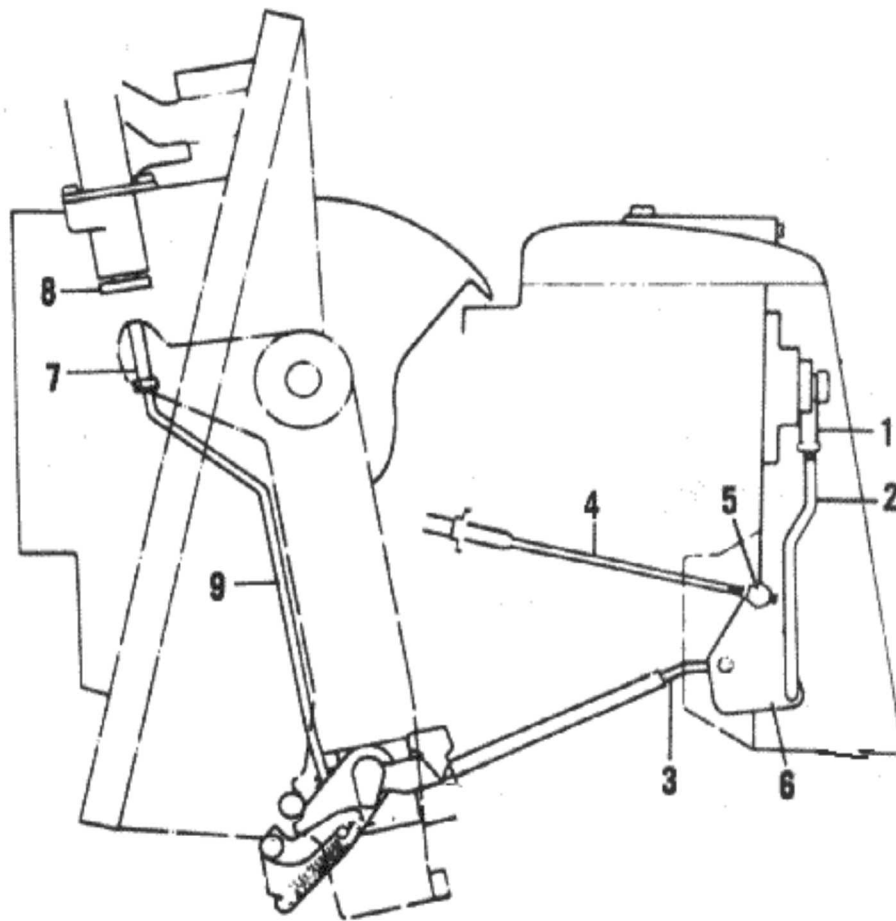


The transom shield tilt pin (not shown), that the lock clamps onto, must be straight and free of crud, as well.

Below is a diagram of the other components and linkages that are part of the tilt, shift, and reverse lock operations. Each of these operations has a direct effect on the reverse lock mechanism.

For example, in the diagram below, when you try to tilt the stern drive up, the tilt plunger (item 8) comes down and pushes on the thrust rod (item 9) which in turn pushes the reverse lock away from the tilt pin of the transom shield. A jammed and/or damaged thrust sleeve (item 7) can prevent the thrust rod from moving properly and effectively jamming the tilt lock. Or... If the shift isn't adjusted correctly, the retaining rod pawl (item 3) could prevent the lock collar from releasing the reverse lock, when tilting, and/or latch the reverse lock when shifted into reverse.

By the above examples, you can see how these operations are interrelated and each has to be adjusted correctly and functioning to allow proper operation of the reverse lock.



1. Locknut
2. Shift fork
3. Retaining pawl rod
4. Shift cable
5. Shift swivel
6. Shift yoke
7. Thrust sleeve
8. Tilt pressure plate
9. Thrust rod

Expanded image of the [intermediate housing](#) and tilt lock components. (opens in new window)

We will expand on this section in the coming weeks and...

In the next section we will show how to test the lock for proper operation.

And, the final section will show how to take one apart and reassemble it.

In the mean time... there is a brief description of the proper adjustment for the tilt-lock in the [PDF manual](#) on page 130.

To Be continued...

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