service bulletin



NUMBER: 80-18 DATE: 1/26/81

OFFICIAL NOTIFICATION
Under the U.S. Federal Boat Safety Act

MECHANICS

REQUIRED Steering Handle Assembly Replacement on the Following Merc 25M and 25ML Motors ONLY.

Merc 25M/ML	
United States	Serial No. 5705532 thru 5854016

Mercury Marine has determined that the steering handle assembly, complete, on some Merc 25M/ML motors (serial numbers specified above) must be replaced to reduce the possibility of steering handle breakage and/or binding of the twist grip and prevent a potential loss of steering and/or throttle/shift control.

Owners of these motors, who are properly registered with Mercury Marine (Warranty Registration Card), will receive a letter and a "Campaign Claim" card (letter copy at end of bulletin) as notification of this REQUIRED steering handle assembly replacement. Dealers should immediately contact their customers, who have purchased these Merc 25M/ML motors, and schedule them accordingly for replacement of the steering handle assembly, complete.

IMPORTANT: Merc 25M/ML motors (within the specified Serial No. range) that havehadthe NEW steering handle assembly, complete, installed **by** the factory will have the motor carton identified by a letter "X", in black ink, behind the Serial Number (in 2 places on the carton). [A new steering handle assembly, complete, is identified by the fact that the new steering bracket is 3" wide as opposed to the old steering bracket which is 2" wide.]

Order one Steering Handle Assembly, Complete, (A-94185A3) from your Regional Distribution Center for each of the Merc 25M/ML motors that you have sold or have new in stock.

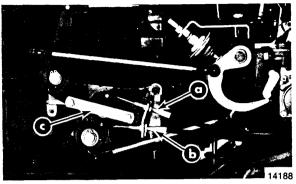
NOTE: The new Steering Handle Assembly, Complete includes a new, 3" wide steering bracket and 2 new attaching screws.

IMPORTANT: DO NOT DELAY installation of the new steering handle assembly. As soon as a new handle assembly is received, make the replacement and IMMEDIATELY return the old handle assembly to your Regional Service Center. (Properly package the old handle assembly to prevent damage in shipment — whenever possible, use the shipping carton from the new handle assembly.)

Credit for the Steering Handle Assembly and 0.7 hr. labor per outboard, will be issued upon return of the old Steering Handle Assembly (along with a completed "Campaign Claim" card) to your Regional Service Center.

A-94185A3 Steering Handle Assembly, Complete

Replace the Steering Handle Assembly, Complete, as follows:



- a Upper Cable Extends Outward When Twist Grip is Rotated Clockwise (Reverse Position) and Retracts When Twist Grip is Rotated Counterclockwise (Forward Position)
- b Lower Cable Retracts When Twist Grip is Rotated Clockwise (Reverse Position) and Extends When Twist Grip is Rotated Counterclockwise (Forward Position)
- c Throttle/Shift Linkage in "Neutral" Position

Figure 1. Throttle/Shift Linkage in "Neutral"
Position

DISCONNECTING THROTTLE/SHIFT CABLES

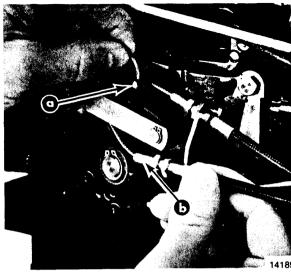
- **1.** Remove top cowl and starboard bottom cowl from engine as outlined in Service Manual.
- 2. Position throttle and shift linkage in "Neutral" position as shown in Figure 1.
- 3. Loosen jam nuts and lift cables from anchor bracket. Remove ends of cables from primary gear as shown in Figures 2 and 3.

REMOVING <u>OLD</u> STEERING HANDLE ASSEMBLY

- 1. Disconnect stop switch leads from switch box. (Use a 5/16" thin wall socket to remove switch box mounting bolt that secures black stop switch lead to ground.)
- 2. Remove (and discard) 2 screws that secure the steering handle assembly (steering bracket) to the "steering head" on the swivel tube. Remove steering handle assembly from motor.

INSTALLING NEW STEERING HANDLE ASSEMBLY

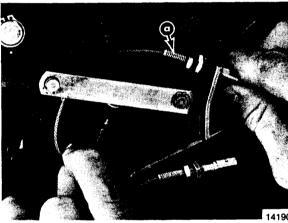
NOTE: DO NOT install decals on steering handle until handle installation has been completed and throttle/shift cables have been adjusted.



a - Primary Gear

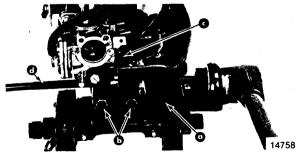
b - Lower Cable - Wrap Around Outside Groove

Figure 2 Removing and Installing Lower Throttle/Shift Cable



 a - Upper Cable (Determined by Cable That Extends Outward When Twist Grip is Rotated Clockwise; Wrap Cable Around Inside Groove.)

Figure 3. Removing and Installing Upper Throttle/Shift Cable



a - Steering Bracket (3"Wide)

b - Screws (2) - Torque to 30 Ft. Lbs. (4.15mkg)

c - Stop Switch Harness

d - Throttle/Shift Cables

Figure 4. New Steering Handle Assembly, Complete, Installed

IMPORTANT: The steering handle twist grip is secured with tape to prevent twist grip rotation and keep the cables wrapped around the pulley inside the handle. DO NOT REMOVE TAPE until YOU are ready to connect cables to the primary gear.

- 1. Using 2 new screws provided, secure the steering handle assembly (steering bracket) to the "steering head" on the swivel tube, as shown in Figure 4. Torque screws to 30 ft. lbs. (4.15 mkg).
- 2. Position the stop switch wire harness and cables into recess under bottom cowl and route the harness to the switch box.

IMPORTANT: Make sure wire harness and switch box terminals are clean, assuring good contact. DO NOT overtighten connections.

- **3.** Secure Black/Yellow wire from harness to terminal on switch box marked BLK-YEL. Secure black wire along with switch box mounting bolt (engine ground).
- 4. Coat wire connections with Quicksilver Liquid Neoprene (C-92-25711) to avoid corrosion.

CONNECTING THROTTLE/SHIFT CABLES

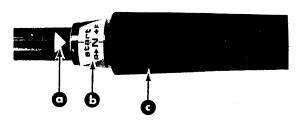
- 1. Route the cables to the primary gear on starboard side of engine.
- 2. Position throttle/shift linkage on engine in "Neutral" position, as shown in Figure 1.
- **3.** Remove tape from twist grip and rotate steering handle twist grip fully <u>clockwise</u> (Reverse). Insert anchor pin on end of <u>extended (longer) cable</u> into primary gear, wrap cable around <u>inside groove</u> of gear and mount cable in top side of anchor bracket. (Figure **3**)
- 4. Rotate steering handle twist grip fully <u>counterclockwise</u> (Forward). Insert anchor pin on end of second cable into primary gear, wrap cable around <u>outside groove</u> of gear and mount cable in bottom side of anchor bracket. (Figure 2)
- 5. Adjust cable "jam" nuts to remove slack from cables.
- **6.** Check operation of throttle/shift mechanism as follows:
 - a. Rotate steering handle twist grip <u>counterclockwise</u>; engine should shift into <u>forward</u>. (Upper cable should retract and lower cable extend.)
 - b. Rotate steering handle twist grip <u>clockwise</u> while rotating the propeller. Engine should shift into <u>reverse</u>. (Upper cable should extend and lower cable retract.)
- 7. Recheck tension of throttle/shift cables. If necessary, remove slack from cables.

CAUTION: When installing starboard bottom cowl, make sure stop switch wiring harness is not pinched between cowls.

8. Install starboard bottom cowl and top cowl as outlined in Service Manual.

DECAL INSTALLATION

- 1. Remove paper backing from "Arrow" decal (Figure 5) and install decal around steering handle so that arrow is centered on top side and pointed toward twist grip, as shown in Figure 5.
- 2. Rotate steering handle twist grip to neutral detent position. Remove paper backing from "start" decal and install decal around twist grip so that "start" and neutral position on decal is aligned with arrow, as shown in Figure 5.



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a - "Arrow" Decal c - Twist Grip in Neutral b - "Start" Decal

Figure 5. Decal Installed on Steering Handle



Dear Mercury Outboard Owner:

Mercury Marine has determined that the steering handle assembly on the Merc 25M/ML you purchased, requires replacement. A new steering handle assembly, complete, must be installed to reduce the possibility of steering handle breakage and/or binding of the twist grip and prevent potential **loss** of steering and/or throttle/shift control.

In the interest of safety, and to prevent this situation from occurring, we request you contact your Mercury Outboard dealer and arrange to deliver your Merc 25M/ML to him for no charge replacement of the steering handle assembly, complete.

We are sorry to cause you this inconvenience, however, we have taken this action in the interest of your personal boating safety and continued satisfaction with our product.

Please take care of this immediately! This letter and the enclosed "Campaign Claim" card are your official notification and authorization to do so.

Mercury Marine Division

Enclosure