service bulletin

MERCURY OUTBOARDS

NUMBER: **79-3**
DATE: **1**/15179

CIRCULATE TO:
SERVICE MANAGER
PARTS MANAGER
MECHANICS

A. Maximum Advance Timing Procedure and Throttle Cable Adjustment - 1979 Merc 7.5 and 9.8
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A. MAXIMUM ADVANCE TIMING PROCEDURE and THROTTLE CABLE ADJUSTMENT - 1979 Merc 7.5 and 9.8

(Attach Service Bulletin Sticker on P. 3B-6 in Your Service Manual.)

Firina Order	IAlternate Firina
Spark Plug	IChampion L-77J4*
Spark Plug Gap	**.040"** (1.02mm)
Maximum Advance Timing (Static)	Timing Marks Aligned (.104" BTDC) (Marks on Trigger and End Cap Flange Aligned at W.O.T.)
(Dynamic)	(Marks on Flywheel and Rewind Starter Housing Aligned at W.O.T.)
Full Throttle RPM	**5000-5800**
Idle RPM	550-750
Throttle Pickup	Throttle Lever (Post) Just Touches Throttle Cam at Recommended Idle RPM
Water Pressure (at Plug in Cylinder Block Cover)	With Thermostat: 20-30 PSI (1.4-2.1kg/cm*) Thermostat Removed: 5-8 PSI (0.35-0.56ka/cm*)

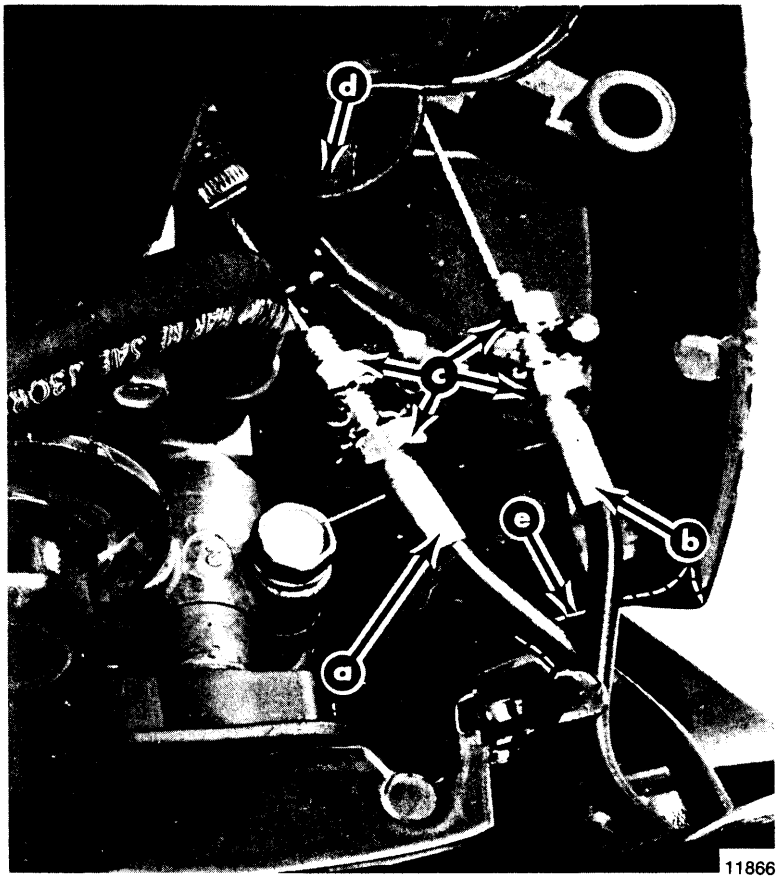
* *Use Champion QL-77J4 When RFI Suppression Is Required.*

Model 1979 Merc 7.5 and 9.8 Outboards are equipped with a new design, "Pull/Pull" (dual) throttle cable system. Proper setup (ignition timing and throttle cable adjustment) of these motors follows:

IMPORTANT: To simply check and verify correct ignition timing and/or throttle cable adjustment (either static or dynqmic procedure), it IS NOT necessary to alter any adjustments on the motor. (Omit Steps 3-thru-10, following.)

1. Stop engine and remove top cowl.
2. Shift motor into forward gear and rotate handle twist-grip to wide-open-throttle [(W.O.T.), fully COUNTERCLOCKWISE to the stop.]

NOTE: As handle twist-grip is rotated COUNTERCLOCKWISE, the cable core wire, which retracts into its cable housing, is the "ADVANCE" cable. (Figure 1) The "ADVANCE" cable is installed on the LEFT side of the throttle spool (nearest to carburetor).



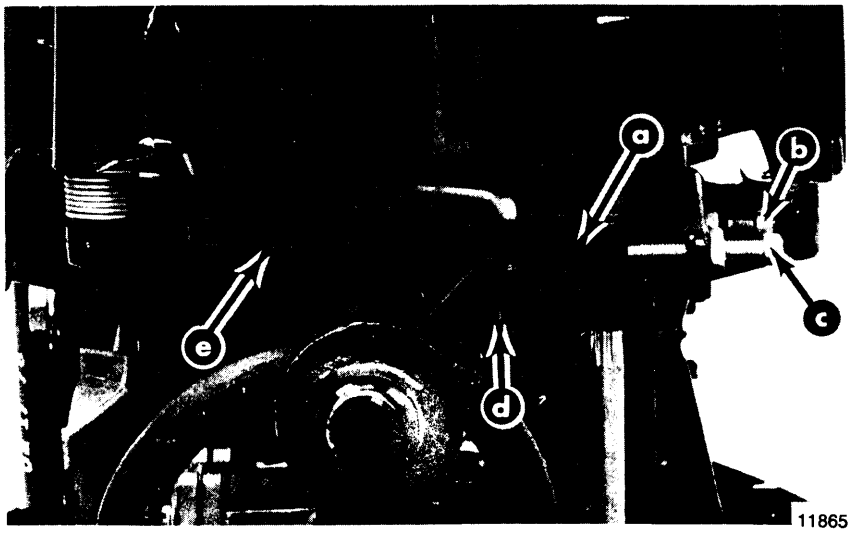
a - "ADVANCE" Cable
b - "RETARD" Cable
c - Cable Jam Nuts (4)
d - Throttle Spool
e - Cable Opening (Cowl)

Figure 1. Throttle Cables

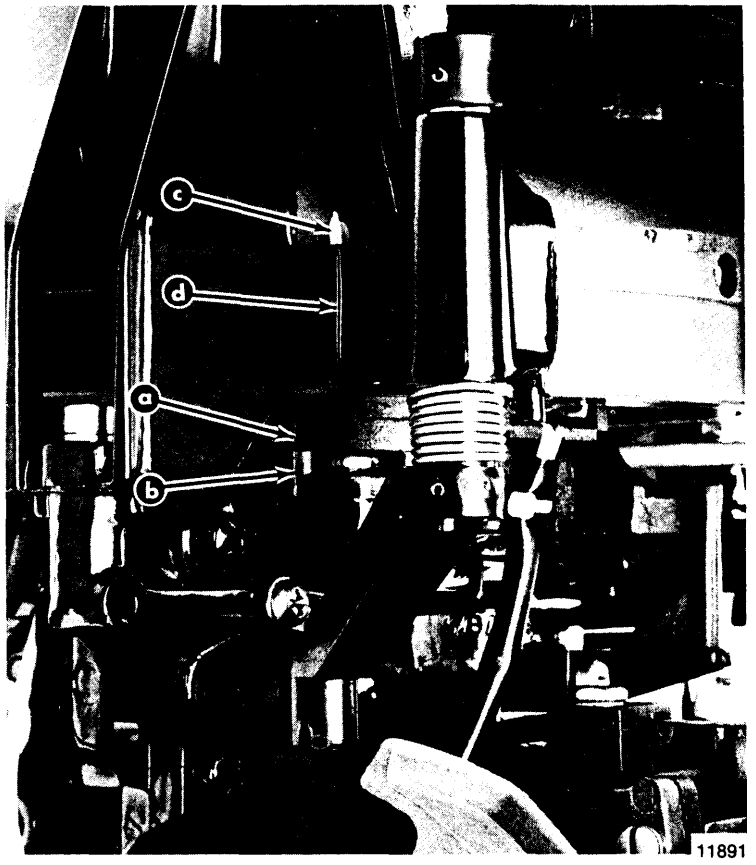
3. Loosen cable jam nuts on both throttle cables. (Figure 1)
4. Move throttle control lever (Figure 2) to align timing mark (straight line) on trigger assembly with timing mark (straight line) on end cap flange. (Figure 3)
5. With timing marks aligned (~~Step 4~~), adjust maximum advance screw (Figure 2) to just contact the throttle control lever.

a - Throttle Control Lever
b - Idle Stop Screw
c - Maximum Advance Screw
d - Throttle Lever/"Post" (Carburetor)
e - Throttle Cam

Figure 2. Throttle/Timing Linkage



6. With throttle control lever contacting maximum advance screw (Step 5), pull the **"ADVANCE"** cable (toward throttle handle) to remove slack from cable core wire, then tighten **"ADVANCE"** cable jam nuts. (Figure 1)
7. Pull the **"RETARD"** cable (toward throttle handle) to remove slack from cable core wire, then tighten **"RETARD"** cable jam nuts. (Figure 1)
8. Place motor in test tank and connect Tachometer **(C-91-59339)** to **No.** 1 (top) spark plug. Start engine and allow to warm to normal operating temperature.



a - Timing Mark (Trigger)
b - Timing Mark (End Cap Flange) } Static
c - Timing Mark (Flywheel)
d - Timing Mark (Starter Housing) } Dynamic

Figure 3. Timing Marks

9. With engine running, shift motor into forward gear and rotate handle twist-grip to idle position (fully CLOCKWISE to stop). Adjust idle stop screw (Figure 2) to just contact throttle control lever at 550-750 idle RPM. ~~Stop engine.~~
10. With throttle control lever against the idle stop screw, adjust the throttle lever on the carburetor so that the "post" is just touching the throttle cam. (Figure 2)
11. Throttle cables are correctly adjusted when:
    a. At W.O.T., timing marks are aligned and throttle control lever is just touching the maximum advance screw ("slight tension" on "ADVANCE" core wire, which is retracted).
    b. At recommended idle RPM (550-750), throttle control lever is just touching the idle stop screw ("slight tension" on "RETARD" core wire, which is retracted).

NOTE: To check maximum advance timing dynamically (with a timing light), the timing mark on the flywheel must align with the timing mark on the rewind starter housing (Figure 3) when the engine is running at W.O.T. If an adjustment is required, refer to the static timing procedure, preceding.

B. STIFF THROTTLE OPERATION - 1979 Merc 7.5 and 9.8

(Attach Service Bulletin Sticker on P. 3B-7 in Your Service Manual.)

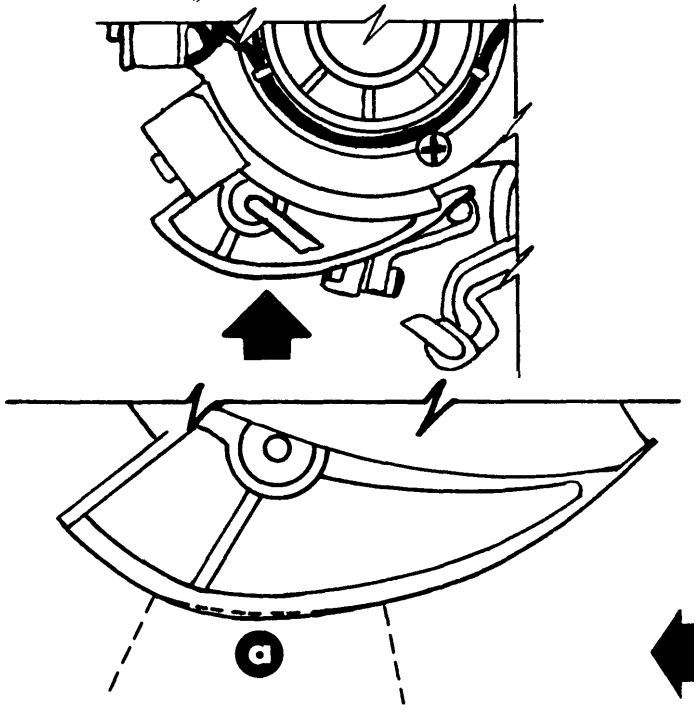
We have received an occasional report that the carburetor throttle lever on some Merc 7.5 and 9.8 motors [with "Pull/Pull" (dual) throttle cable system] does not open fully when the handle twist-grip is rotated to wide-open-throttle (W.O.T.).

Investigation has revealed that a slight irregularity in the throttle cam may cause the throttle lever "post" to "hang up" on the cam at approximately 3/4 throttle. (Figures 2 and 4) This condition, however, usually has been noticed when checking a motor that IS NOT RUNNING (static).

In almost all cases, the throttle lever DOES FULLY OPEN under actual operating conditions (when the engine is running).

If the preceding condition persists and/or twist grip operation is stiff, employment of the following service measures should eliminate the problem.

1. Coat the throttle cam (Figures 2 and 4) with a light film of Special Lubricant 101 (C-92-79214) or Multipurpose Lubricant (C-92-75605).
2. Lubricate the cable (core wire) groove in the throttle spool (Figure 1) with Special Lubricant 101 or Multipurpose Lubricant and also place a few drops of light oil around the spool stub (underside of spool) where it fits into the bottom cowl.
3. Make certain that the throttle cables are properly adjusted (refer to Part **"A"** of this Service Bulletin).



IMPORTANT: If the above measures do not alleviate the problem, it will be necessary to remove the trigger assembly from the engine and sand or file the "high end" of the throttle cam face (from approximately ¾ throttle position to full throttle position) to smooth-out any irregularity in the cam. (Figure 4)

Ignition timing MUST BE RESET to specification after reinstallation of the trigger assembly (refer to Part "A" of this Service Bulletin).

a - 3/4 Throttle to Full Throttle

Figure 4. Throttle Cam (Top View)

C. THROTTLE CABLE CHAFING - 1979 Merc 7.5 and 9.8

(Attach Service Bulletin Sticker on P. 8B-3 in Your Service Manual.)

We have received a few reports of the throttle cables chafing against the bottom cowl on some 1979 Merc 7.5 and 9.8 Outboards, with the "Pull/Pull" (dual) throttle cable system.

If this condition is encountered, the following corrective action should be applied when servicing a Merc 7.5 or 9.8 motor.

NOTE: The bottom cowl on later models already incorporates a wider and deeper cable opening to prevent cable chafing.

1. Make certain that the throttle cables are properly adjusted (refer to Part **"A"** of this Service Bulletin).
2. Position the cables (conduits) between the handle and the bottom cowl to gain access to the cable opening in the cowl. (DO NOT BEND **or** KINK the cables.) Then, using a small, round file, smooth-off any sharp edges (both sides and bottom) in the cable opening thru the cowl. (Figure 1)
3. After smoothing-off any sharp edges in the cable opening, reposition the cable conduits (between the handle and bottom cowl) to provide the best possible cable clearance thru the opening in the cowl.