



MERC 4.5 • 7.5 9.8

OPERATION AND MAINTENANCE MANUAL

### **GENERAL INFORMATION**

# IMPORTANT OWNER IDENTIFICATION and REGISTRATION INFORMATION

It is essential that your selling dealer fills out the Motor leads alone Card couple of and mails it to the Read of the mew product. It identifies name and address of the original purchaser, product model arid serial number, date of sale, type of use and selling dealer's code, his name and address. The dealer also that you are the original purchaser and user of the product.

See Warranty Policy arid information on outside hack cover of this book.

IMPORTANT: Read this book carefully and thoroughly, particularly SAFETY WARNING,

CAUTION and IMPORTANT information in bold type, such as this paragraph.

#### **DIRECTIONAL REFERENCES**

All directional references are given as they appear when viewing boat from stern, looking toward bow.

#### **SERIAL NUMBER**

The serial number is stamped into the serial number plate on the swivel bracket. This number is the manufacturer's key to numerous engineering details which apply to your motor. When ordering parts, accessories and tools, or when corresponding with the dealer in regard to service matters, always specify model and serial number.

The description and continuous contained herein wrrr in effect at the time this guide was approved fur printing. We are a Marine, whose policy is one of continuous improvement, reserves the right to description models at any time, or to description or designs, without notice and without incurring obligation.

#### PERIODIC CHECKUP

After 20 hours, an inspection should be justificated by an Authorized Outboard Dealer at local rates and paid for by the owner.

After the 20-hour check, your outboard should be taken to an Authorized Dealer every 100 hours of operation - or at least once each year - for lube changr, tuneup, etc.

To find the Authorized Service facilities in your locality, or when traveling, refer to the classified or yellow pages in the local telephone directory under "Outboard Motors" or "Marine Engines."

This owner's publication includes operation and service instructions. If disassembly or replacement, particularly of internal parts, is required, the owner is advised to see an Authorized Service Dealer and not to attempt the repair much himself.

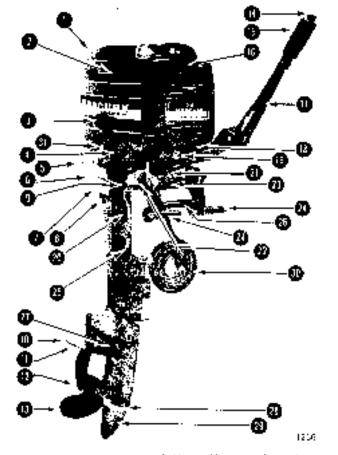
### **SPECIFICAPIONS**

	Merc 200		,	p.:5
K ir	30 (0.55) (2.100)			4 Anni 12 (4) A
Strake	13 5 wa 13 15			A Timbe US Pir
Piston L'i-ple ment	180cc (11 Cu. I	n.)	(5.:	90cι 5 Cu. In.)
Recommended Spark Plug	01.771/ 01.771/			QL-78V
Spark Plug Gap	1.0100			
· · · · · · · · · · · · · ·	Mar. 51.	۲۰,۰۰۰ ۱۳	٠ ]	Man Li
reank-taate Historiosoo — Mi	4.1.			
Propolate kilosomoli (	j. ti	13:		7.6
RPM Range		4500-5	500	
Fuel Tank Capacity* Liters	11-1/11.	11-1	/4	11-1/4

<sup>\*</sup> Additional capacity for oil included.

<sup>(</sup>ii) its trender new ones, or recommendates at the condition to him or recommendates with 10 (100%).

<sup>(2)</sup> Most modes the propolation is notative with 10 OMEV 28.



## 2-Cyl. Merc 7.5E Shawn

- Chrosen
- " Louis
- or March on
- 1 Supplierung
- a Confidential
- to True 25 on
- Longo e Beljer freger
- S. D. Garag Physics of
- Color Stap Lea
- De Seine Corne Par
- A. Walter Latings
- Lot Prop Today.
   Proposition
- 1. 561.50
- for the principal
- la e na sala
- to Society Hards
- dr Postania
- TO THE ROPE OF
- 20 Same Vageto, Presi
- "! I dien
- Of Tacks
- Protection and Building
- 21 classified as a
- as distance for
- 2000 tanp Solid brok. 2011 din on Yenesen
- 25 Tail read Eli Loc
- 250 350
- a Learned Hones
- H. B. des. Share the car

### MOTOR INSTALLATION

#### **OUTBOARD MOTOR MOUNTING**

SAFETY WARNING: Before operating motor, it is advisable to bolt the motor to the transom. During operation, clamp screws should be checked occasionally for tightness on the transom. Failure to bolt motor to transom may result in damage to boat, loss of motor and possible injury to occupants of boat.

(2) How to Plane a Boat

a WRONG! Bow lip

b WRONG! Bow Down

e RIGHT! Plane or Even keel



Your motor is he intend for a recommended trans in height. To avoid damage to transom and to prevent motor from working loose during operation, it is important that clamp (thumb) screws are tightened securely and equally. Timely screw grips should be in (or near) a horizontal plane to allow full tilt up and turn of motor. Failure to observe this thumb strew position could result in damage to steering parts.

#### **TILT ANGLE ADJUSTMENT**

Holes are provided in the clamp limited to permit the proper adjustment of tilt angle. Adjust tilt angle so that boat rides level (Figure 2)





#### **ELECTRICAL ACCESSORIES CONNECTIONS**

Any accessories, such as home imming lights, etc.—Initial to installed with electrical connections studied directly to the battery terminals via the strews of the battery logs.

### LIGHTING CIRCUIT (Merc 9.8-7.5)

Material starting Merc 9 if 7 5 ergs of the impedience a lighting constitution in applies 90 water. The gular IAO power two lighting has ressoned as the decrease and lighting ACO gauge core service manual of contraval and lighting acting.

### PROPELLER RECOMMENDATIONS

#### **PROPELLERS**

For proper reconcilendations applying to your particular least consult your dealer. I -172 an improper propeller can cause serious damage to your outboard motor.

SAFETY WARNING: When installing or removing propeller, place a block of wood between the anti-cavitation plate and propeller to prevent accidental motor starting and to protect the Rands from propeller blades while removing the propeller nut.

#### **INSTALLING PROPELLER**

- 1. To aid in future removal of the propeller, liberally coat the propeller shaft splines with one of the following Quicksilver products:
  - Special Lubricant 101
  - 2-4-C Multi-Lube
  - Perfect Seal
- 2. Slide collar arid propeller onto shaft.
- 3. Place washer and nut (Figure 3) on end of propeller shaft and, will, wood block still in place, tighten nut securely.

#### **REMOVING PROPELLER**

- 1. Place a flat block of wood between anti-cavitation plate and propeller.
- 2. Remove propeller shaft nut and washer. (Figure 3)
- 3. Slide propeller off shaft.





- a Propeller Nut
- b Splined Washer
- c Quicksilver P
- d Collar e Propeller Shaft
- f Gear Housing

### **FUEL MIXTURE AND FUEL SYSTEM**

#### INSTALLING FUEL TANK

- 1. Place fuel tank in position in bottom of boat. (Figure 4)
- 2. Connect fuel line to motor by inserting twist connector into receptacle in bottom cowl. (Figure 5) Arrange the fuel line so that it cannot become pinched, kinked, sharply bent or stretched during operation of the motor. Check with the motor in far left and right turn positions.

CAUTION: Use CARE when transporting fuel tanks, whether in a boat or car. DO NOT fill fuel tanks to maximum capacity. Cool gasoline expands considerably and builds up pressure in the fuel tank due to higher outside temperatures. This can cause fuel leakage and a potential fire hazard.



5 Twist Connector



#### **GASOLINE-OIL SELECTION**

Use any gasoline, that will satisfy fourly operate an automobile engine, and Quirksilver Formula 50-D 2-Cirl Outboard Lubricant. If 50-D oil is not available, consult your Authorized Dealer for an acceptable oil.

outboard motor.

CAUTION: The use of other than Formula
50-D Oil or an acceptable oil may cause
piston scoring, bearing failure or both. DO
NOT, under any circumstances, use multi-
grade or other highly-detergent auto-
mobile oils or oils which contain metallic
additives. Use of improper gasolines and/
or oil can cause serious damage to your
and the contract of the contra

# **FUEL MIXTURE**

Use a 50:1 gradim out ratio as those in the following chart.

Type Oil	Metriz Mexicos	hadertal More pr	US Mizem
Familials (64)	each 20 liters	15 hep azzed trosa a zelta s gais sus du s	Holsana (Call)
Other Accepts able Dis-		populacionen () ilioale () et to	

#### CORRECT FUEL MIXING PROCEDURE

CAUTION: Observe fire prevention rules, particularly the matter of smoking. Mix fuel outdoors or at least in a well-ventilated location.

Mrs the Editority in the rounds track. A source a very ately the required amounts of or and passage. Para a smolt amount of gasoline into remote track (Figure 4) and obligenout storogy of oil falout the same and outas gas. May the coughly are shaking on stricting yights

ously, then add balance of oil and mix again. Cleanliness is of prime importance in mixing fuel, as even a very small particle of dirt can cause carburetion trouble.

IMPORTANT: Always use fresh gasoline. When standing, gasoline forms certain gum and varnish deposits and, when kept in a tank for a length of time, may give carburetor trouble and cause spark plug fouling.

# IMPORTANCE OF CONSISTENT FUEL MIXTURES

Carburetor idle adjustment is sensitive to furl mixture variations which result from use of different gasolines and oils or due to inaccurate measuring or mixing. This may necessitate frequent readjustment of the carburetor idle needle. Be consistent. Prepare each batch of fuel exactly the same as previous ones.

IMPORTANT: Using less than the recommended proportion of oil may result in very serious motor

damage from lack of sufficient **lubrication**. Using more than the recommended proportion of oil **will** cause spark plug fouling, erratic carburetion excessive smoking and faster-than-normal carbon accumulation.

#### **BREAK-IN PROCEDURE**

CAUTION: Follow break-in procedure carefully.

Operate a new motor at varied throttle officer for the first hour (one hour). Well both well-up the limit operation and prolonged idle in cold water areas during this period.

After thr first hour (one hour) of problem, the motor is ready for normal operation and may be run at any speed. DO NOT EXCLED the full throttle RPM range listed in "Specifications", proceeding

### **OPERATION**

NOTICE: Models **7.5/9.8** ONLY: If your **motor** will be operated <u>primarily</u> in cold water areas [normal water temperature BELOW **50**" F **(10**" C)] **and/or** areas where extreme day-to-day temperature variations of **20**" F to **40**" F (-6" C to 5" C) are common, we recommend installation of a thermostat (OPTIONAL ACCESSORY for **7.5/9.8** models) in the engine cooling system.

A thermostat controlled cooling system maintains a constant, higher engine operating temperature, thus providing smoother engine operation, particularly at sloweroperating speeds. See an Authorized Servicing Dealer for this accessory.

#### CO-PILOT ADJUSTMENT

The coupling periods of thom control in the steering on clausism. He continended objectment is such that the context will remain in a fixed-context position without it of

needed minimal coatroll, we twill so be to oughe to dow from and casy steering. Adjusting of it attracted by a constant hexagon head series in top 1 as all several hancet. The pare by Taghten the source to measure the tion, by a controller rates friction, I see out to them who musing remote strating.

6 Co-Pilot Adjustment - Merc 9.8-7.5-4.5

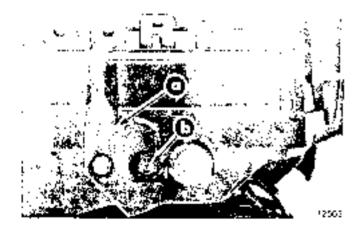


n Coellatot Adjustin ne Seres. Er Tella Firmages

#### SHIFTING GEARS

Gran shift begons heated upragit side or matur. Granter 11 Gran positions are FORW MRD (noward front). NTO TRAK (vertical, as a news, to Figure 7) and RT (VERS), cloward from (

Shift Lever and More 9.8E and 7.5E Electric Start Burgar



#### THROTTLE SETTINGS

Ring on thest prip threatte has they become a "Both" "Shart and "Shift Bange" (Gigores). In result at the twice grip has a faction effection I" broid to the both twenth according to the both special Bank and the both section Bank and the set is permissioned the distribution of the distribution for the land twenty permission. I full Section 1 who have the character of the Bank Both New HIROT "in ChEDC of CONTACT through the "Threat Section because the action of the section of the se

\* OR EMICHOUNICY \$1 OP: Depress "Stop dation for bottom cowl (Figure 12)

If remote continues are used approximately the last degrees or root of him bettiages, i.e., a ward and revolve hit little the motor, the remainder of the control transfer movement to tward or reverse.

- a Shift Lever
- b Electric Start Button https://www.boat-manuals.com/





05634

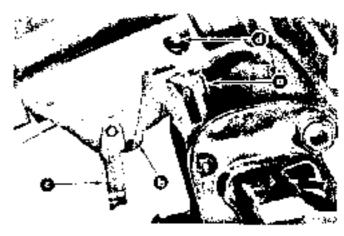
a Ring b Troll Set

#### TILT STOP LEVER

Motor can be lacked at 121 to position by pulling till stop lever chiguin 20 with motor fully filted.

IMPORTANT: Do not use tilt slop lever while trailering. Tilt motor and place a block of wood between clamp and swivel bracket.



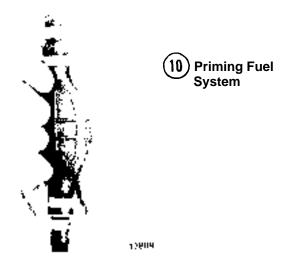


- a Tilt Stop Lever
- b Reverse Lock Lever
- c Troll Bracket
- d Swivel Bracket Fitting

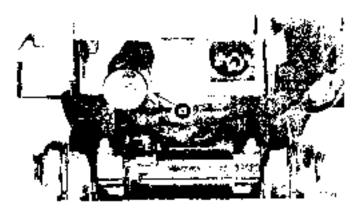
#### STARTING PROCEDURE - MANUAL

Be sure fuel tank contains a sufficient amount of fuel mixture and that tank is properly switch in boat.

- Caren et Ind. line to motor by meeting twist conqueror annoursepande un cow? To lock, twist for curricular kwise, as shown to ligare 5.
- 3. Open air vent serew on fuel tank cap.
- Permethologystem by some group product taken of thele one obligate of a When tally product, bulls will feel treat
- 5 Shift into nentra.



(11) Manual Choke (a) -Merc 9.8-7.5



SAFETY WARNING: Be sure that outboard is in "NEUTRAL" gear before attempting to start motor electrically or manually. If outboard starts while in gear, occupants may be thrown from boat.

0. Kotate twist grip throttle to "Start" position | = ure 8).

- 7. If the engine is cold, pull out the choke knob (Figure 11) to place the choke in "On" purallim (on Merc 4.5, set the choke in closed position as indicated by arrow). Use of the choke is not necessary if engine is warm.
- 8. With shift lever in neutral position, pull starter handle.
- O. After pulling starter handle once, place manual choke in "Off" pasition and again pull starter handle to start motor. Should a cold motor falter after starting, quickly move choke "On" and "Off" and times until motor runs steadily.

IMPORTANT: Starter is automatic rewind type.

Proper operating technique will add many hours of life to starter cable and to starter internal mechanism. Grasp handle firmly and pull outward slowly until engagement of ratchet mechanism can be felt. Then continue outward pull with a full, vigorous stroke. Do not release handle at end of stroke and allow it to snap back. Retain grip on handle and allow cable to rewind slowly. Ratchet https://www.boat-manuals.com/

release mechanism is designed so that starter cannot engage during **rewind**.

#### STARTING PROCEDURE - ELECTRIC

#### Merc 9.8 and 7.5

- 1. Compose harriers have to recent determinations at topic, Bed lead of harriers at a line to positive 21 post of hattery and black hard to use two Colynet or hattery. I suggesse to present corresion of the metads.
- Become that find tank contains a soft retent 2005 of of find mixture and that tack is properly secures in line.
- 3. Comment fuel line to motor by many reg twist connector into the regions on cowl. Lock by twisting \(\frac{1}{8}\)-turn to always (Figure 5)
- 4. Operate tent a rew on trad tink capachigure to
- 5. Prime carburetor and fuel overlap by equeryng priming tube on fuel line. When fully primed, prossure will be felt, (Figure 10)

13 (ENGLISH 3)

- 6. Shift into neutral.
- 7 Rotate twist grip throttle to "Start" position. (Figure 3)
- Pull our the choke knob to place show so "Oo" position.

IMPORTANT: Avoid use of choke during normal operation or if motor is warm.

9. With shift to the in neutral, press starter button to actuate the starter. (Figure 7) Assoon as most starts to run, release button arid push choke knob in.

IMPORTANT: The starter motor is not designed for continuous operation, and serious damage may result if operated continuously for more than 30 seconds. Pause and allow the starter motor to cool off for 2 minutes.

# OPERATION WITHOUT BATTERY (Electric Starting Models)

It is a red continuance on again yith cost as so, it my models and for started and operated without what early earth a documented at years with a model with operate that a short operate the red of periods a however, we are continued to see mosting and type one redulternance of the first theory are threshold for position leads to be seen to complete the attitude of bridges of redulter known against regulation known and religious (1).

SAFETY WARNING: Battery leads MUST BE taped off (insulated) or positioned in a manner that prevents a completed circuit between the leads.

#### STOPPING PROCEDURE

If the motor is to remain installed on the boas ready for national choke.

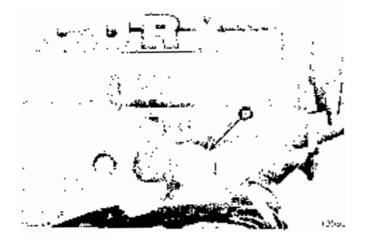
It the motor is to remain installed on the boas ready for national and and https://www.boat-manuals.com/

10. If motor should falter, actuate manual choke.

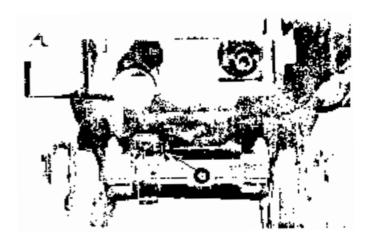
depending "Stop" button, (Figure 12) Hold "Stop" button down until motor has stopped reticing completely

Prose are went series on the bank any

(12) Stopping (a) - Merc 9.8-7.5-4.5



13 Troll (a) - Merc 9.8-7.5-4.5



TILT-UP AND SHALLOW WATER TROLL LEVER OPERATION

Motor can be tilted up manually only when placed in "Forward" gear. (Figure 7)

Merc 9.8-7.5-4.5 motors can be placed in a limit a water "Troll" position and released from this projection as follows:

- I. Rrtard twist grip throttle to "Shift Haven" (Figure 8) and shift into "Forward" (Figure 7).
- 2. Pa-blever in direction of "Troll." (Figure 13)
- 3. Tilt motor up manually to engage in shallow water "Troll" position.
- 4. To release from shallow water "Troll," retard throttle and shift to "Forward." Push lime to the side and down, then tilt motor manually to distribute from the "Troll" position.

#### SHALLOW WATER OPERATION

CAUTION: When shift lever is in "Neutral" or "Reverse" position, lower unit is locked in normal operating position. Shock load of impact could cause transom breakage, particularly when boat is backing up. Proceed cautiously when in reverse motion and be careful of underwater obstructions. Do not accelerate motor to high RPM.

#### **OPERATION** IN SALT WATER

Prior to operation in salt water, it to considerable the tree of be removed, and the course psychologic sprayed with an approved corresion and that greyer tive.

#### DON'TS

- Don't operate motor out-of-&dla or with T. -Intrattaction is, or water pumpers where a P be donaged. Head "Flathing" period trees carefully. I dissing.
- Dian't operate motor with all loss processored.
- Dron's (2006) suit: genes no reservoist grap throttle is an "Shill Bange" position
- Don't vasce into engagement in vitago, quick abit is recommended.

#### CAVITATION

Cavitation, which is evident when the motor speeds up but boat special is reduced, is caused by one of the following:

- I. Propeller operating too close to the surface.
- 2. Transom too high.
- 3. Tilt angle adjusted so that lower unit is too high.
- 4. Boat riding stern-high because of improper loading. (Figure 2)
- 5. Propeller fouled by weeds, rope, etc.
- 6. Damaged or broken propeller blades. Broken blade usually is indicated by excessive vibration.
- 7. Propeller safety clutch slipping due to damage.

#### WATER PUMP OPERATION

Normal water pump operation is indicated by a steady,

"In It take" stream of water issuing from a smoll such at the near of the bottom cool while the motor is country. (Figure 1)

IMPORTANT: On 9.8 and 7.5 models, which are equipped with a thermostat (OPTIONAL ACCE 5-SORY) in the cooling system (Figure 14), a "tell-tale" stream is NOT visible until the engine reaches normal operating temperatures, and the thermostat opens (5 to 45 seconds, depending upon engine RPM and water temperature).

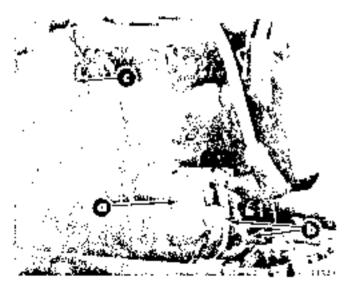
If the "tell-tale" is intermittent or absent during operation (frryuent visual the kit STOP MOTOR IV WILL DIST. L. and

- Check gear housing water fullible for publisher restriction (wreds, mud. etc.).
- Check "tell-tale" hose for possible restruction (use a piece of wire).
- Models 9.8 arid 7.5 equipped with the number of Check thermostat and/or thermostat housing for pure librorestriction and/or thermostat malfunction. (Figure 14)

If no restriction is evident, a malfunction has occurred at some other point within the cooling since possibly the water pump itself

Operation with a defective water pump of distinction in the cooling as a ten will cause overhead and severe engine damage. Refer the motor to an Au harioul Service facility.

(14) Recider/Alternator Leads -Merc 9.8 and 7.5



- a Rectifier
- b Yellow/Red Alternator Leads
- c Thermostat Housing (Optional Merseul')

SARETY WANNING Is the move wis not be operated for a ported or time, if it is to be removed from the boat or if it is to be tilted up, we reconstant the favoring produce to prevent spillage have the car barrier timed and bowl and to prevent gate sometions in the carbin-time curing storage:

- Discogneditie merline
- 2. Allow motor to run at idling speed until it stops of its own accord, indicating the carburetor has run dry

#### REMOVING MOTOR FROM BOAT

When repoying keep notor in an apright position, cesting on its skey, until all water has drained from the drive shall bearing. If the motor is placed on to side while water remains to tap for the drive shall bearing, some water may onto the considers through the exhaust ports and cause it occurs datasign.

### ADJUSTMENTS/MAINTENANCE

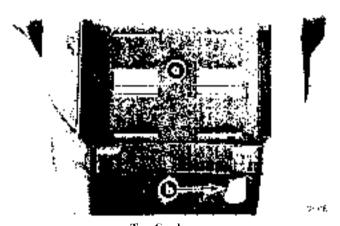
#### REMOVING TOP COWL

MERC 9.8-7.5: Hermone top cowl by pushing cowl release lever on rear of bottom cowl and lifting cowl off (up and forward). High 15)

**MERC 4.5:** Pull the two latch pin lever- outward from side of bottom cowl (Figure 16) and lift top cowl off (up and forward).

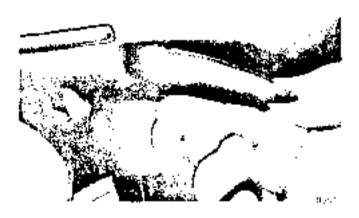
Avoid operation of motor with cowling removed.

## (15) Removing Top Cowl - Merc 9.8-7.5



a Top Cowl n/<sup>b</sup> Top Cowl Latch

# (16) Removing Top Cowl - Merc 4.5



#### CARBURETOR ADJUSTMENT

The carburetor has a fixed high qualifiet, but an idle mixture adjustment is provided

### IDLE MIXTURE ADJUSTMENT (FIGURE 17)

Idle mixture cannot be adjusted effectively will in

"Nentral committee will spotter and corporate relations for all the ways of the form of the world and returns."

at carbination in surface partons of expression and incarted, name talls in the expression Carl Interface to much the attribute twentood at the expression right will dank see the excellent carrier at this approxiation will dank see the excellent carrier at this approxiance entropy of extraction in

A same e remot stast callober e la casa da sus suscentiamentes e productival recipied instrumental a anches

- White proton amounts at shore a part obtained for wood ware furnishermix to easier this periodiction for the west of all motors to its facilities applied to managed by streethick was and machine. Figure 15 f.
- Shoop farm randay dockorse on the chinace for exemly and motor picks up specific.
- 3. Continue turning cleak at a received too lean a mix ture is obtained, and motor - - down and m s fires.

# (17) Idle Adjustment



- a ldle \d]n-tment
- b Rich (Turn Left) Lean (Turn Right)
- Set adjusting process hallway between rich and lean.

 De not adjust former than meress, by to attach easuiddy smooth (200). When it if end, if e per enilde to self-traxfully slight is in horither than ealight.

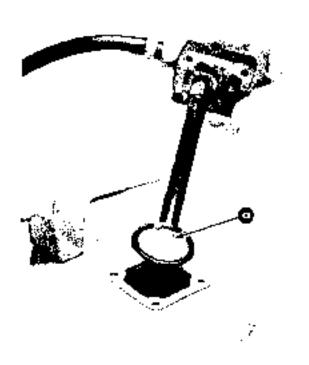
### SERVICING FUEL TANK FILTER (FIGURE 18)

Describition find from these theory is such removed and picking indicated the following the wine results on a section 1 for a magnific fermion there is gradient as keyword.

# SERVICING CAMBURETOR FULL FILTER/SCREEN

Cartimeter fuel after some of some color action to take one of all requirements theter consists of the after all other checks, fue take is accombined styles the cause of the frontee, clear or reptace the fuel filter sometimes in research.

NOTE: More 1.5 to the escreency located under the strainer cover on repeat the contractor.



a Fuel Tank Filter

Carburetor Fuel Screen - Merc 9.8-7.5



a Tuel Serven Corre It Tuel Serven

### **LUBRICATION (FIGURE 20)**

drive unit with Chickeller Separation Outboard Gear Lucracutt as follows:

IMPORTANT: Do not use regular automotive grease in the lower drive unit.

https://www.boat.manuals.com/

14027

# 20 Lubrication





ja kadzirosi latka landi. Kasir Vist Sajawa

c. Uchida Stafi Laikaa

Remove also after any Company of the removal care of the restrict of a way has been fact so the account of a Min, which exists

IMPORTART: Never apply tubricant to me is well without first removing tubricant vent screw. as the injected tubricant displaces air which must be allowed to escape so that the gear housing can be completely filted.

- 2 Insert lathricant take made it! ping hole and in set lathreaset and excess similated and in the lathreaset vent screwhole, present repethat the housing is filled.
- 3. K. place his resent vent serew first then fill plug, taking so and care that the according is in place and the resolution of the less that water will not leak past the dimension to the gear house.

(a) discount the contract of the contract o

Time a consequence of Weight and Constitutions

- Import sugripulpose hare and an oriental insecond hardon charge. He amiliationed on conferent topol procedure.
- Valoritie fin table fillings for from all evices bracket, Algere 90

#### **LUBRICATION CHART**

Fig.	Description	Type Lubricant	Fresh Water Frequency	Salt Water Employees
90	նուղ հետո-ութբ	Qualistics Super Durit as ant	Alter Lat 19 Days, should select 19 Days.	Same 35 1 - 6 Wiston
1.9	Survey Bracket and Swite.			
1,	Tili I de Frienge	Umri 2-4-U		Freque M. Toss
20	Throttle-Shift Lankage	or M.Digarp Tubricant	From 80 Bays	
9	Bester Link Lesie	,  -		
l	Thumb 501 4-	Chin to is a Vall Corresse		
3	Propeller Shaft	Quicksilver  — Special Lubricant 101  — 2-4-C Multi-Lube  — Perfect Seal	Once in Season	Form let Dia

NOTE: Lubricants, scales vetc., ran he obtained from your Authorized -- rvi ing Dealer.

#### **SERVICING SPARK PLUGS**

SAFETY WARNING: Do not touch or disconnect any ignition system parts while engine is running or while battery cables of electric starting models are connected. Do not remove spark plug connectors and hold them in your hand to check for spark while engine is running, as high voltage is present. Never attempt to turn engine over by hand with propeller or flywheel.

- Remove space play a selectional magazinella di concer di circodo is reodost, a place vatti no separk plug.
- 37. Install spack plugs. Start the reacods one or two titles with langers to avoid darger of crossthreading. After scatting plug-lange, tight on gasket, an oblit onal festion with a whereby will generally be satticiona to tighter. Do not overughter.

 Control the seark pergoleads to its respective spark plug.

# PREPARATION FOR STORAGE OR SHIPMENT

- Operate number on water resson these exacting existent. Discount of the fined fine from the mater and allow motor terrum at elling specificant it store of its invariance of multisating distribution for her condity.
- 2. Dram he bank.
- 3. Aubrican lower drive unt
- L. Boanve spark plugs
- a. Rotate crankshift to a position where the No. 1 stopt pistor, is at heltern dead content position. This can be determined by it setting a peace of root into the spack plag hole. Apply a Merci y

approved to the seal into the spink plus hole of the No. I sylinder, all using time for some of the oil to diam into the excitation via the mander ports. Repeat this operation for the other country, then mistall spark plugs and operate the starter via minds to distribute oil as one the inside of the crankcase and colling is.

- Ghair the amorar thoroughly inclining all secess sible powerhead parts. Instail cowing and apply a thin fiducial escan, fresh potential total paratial surfaces.
- 7. To aid in future removal of the propeller, liberally coat the propeller shaft splitts with one of the full many (luickalive panelui).
  - Special Lubricant 101
  - -- 2-4-C Multi-Lube
  - -- Perfect Seal

IMPORTANT: When storing outboard motor for the winter, be sure that all water is drained from the gear housing (thru the propeller herb). Trapped water may freeze and expand, thus cracking the gear housing and/or water pump housing.

Check and refill lower unit, as explained, before storage to protect against possible water leakage

into gear housing which is caused by loose lubricant vent screw or loose fill plug. Be sure to replace gaskets under screws, replacing any damaged gaskets.

# ATTENTION REQUIRED FOLLOWING OPERATION IN SALT WATER OR SILT

Even though the interior surface are treated to resist corrosion, there still is a possibility of a mechanical buildup of salt and sil deposite which no form of protective coulting can precede and which can be estimated only by measured this large with tresh water.

- When your multiourd is left on the best, (2) the more round, the water.
- Lanceste Hande screws with Quessalver Antitionro-ton Greise.
- 3. To aid in future removal of the propeller, liberally coat the propeller shaft splines with one of the following Quit-itsilver products
  - Special Lahrman 101
  - 2-4-C Multi-Lube
    - Perfect Seal

4. Into preschant can be sprayed with a coating of a Mercury approved rust preventive oil to protect the finish of all parts beneath the cowl. The exterior also can be sprayed or wiped to prescal salt correspond from dulling the finish.

#### Fortinsh meter:

- a. Remove Harstop play marked "FD 5H" of and waster transfluencing bade. Play is for ated ten ath discer shall trinscover or 93-57.5 HP endels they are "Taxard in right side of bottom covering 1.5 HP model (Tigner 22).
- Connect (Dishing Jevje, and strach gash in hose compline with hose
- Law on water Ian 100 XOA OPERATE the out-overd winds thusing. Water How is strong enough teat this-long can be done with system arcs we provided a on the water tap. DO XOE LSC Life water processing.

(21) Flush Plug - Merc 9.8-7.5



a Phush Plug

(22) "FLUSH" Plug - Merc 4.5



While and after flushing, keep motor in upright position, resting on skeg, until all water has drained from drive shaft housing to prevent water from entering the powerhead via drive shaft housing and exhaust ports.

By following the preceding simple preventive maintenance operations at regular intervals, longer life will be added to your motor when used in salt water.

# ATTENTION REQUIRED FOLLOWING COMPLETE SUBMERSION

In an effort to deter serious internal engine damage and avert expensive engine repairs, a motor, that has been submerged, requires IMMEDIATE service upon recovery.

- 1. Wash entire motor with clean, fresh water to remove mud, silt, weeds, salt, etc.
- 2. Remove the spark plug and purge the engine and carburetor of as much water as possible ("crank" engine with spark plug holes facing downward).
- 3. If compressed air is available, "blow-dry" the engine internally and externally.

- 4. Pour a liberal amount of Unite-land Liberal Cleaner or Cleaner
- 5. Manually "crank" engine to distribute the lubricant within the engine, then drain excess lubrican from engine.
- 6. Reinstall spark plug and high tension It ad.

IMPORTANT: If it appears that the engine DID NOT take in any foreign material (mud, sand, weeds, etc), and "cranks" freely, the engine should be started. If there is evidence that foreign material had entered the engine, the engine should be disassembled and cleaned (take motor to an Authorized Dealer for service).

- 7. Start engine and operate at low RPM for a minimum of 5 minutes, then run engine at varied throttle set tings for an additional 15-20 minutes. (Normal operation will continue the drying-out process, displacing remaining moisture and providing internal lubrication.)
- 8. If engine performance still indicates engine troubie. take motor to an Authorized Dealer for further service.

### TROUBLESHOOTING

IMPORTANT: The following chart is intended as a guide to aid in finding and correcting minor outboard motur malfunctions, should they occur. Possible causes are listed in order of probability and, even though some may appear to be quite obvious, these same causes often are overlooked when a problem occurs. If a problem cannot be located and corrected with the aid of the guide, see your Authorized Dealer for further service. For manual start engines, disregard references to electric starting.

SAFETY WARNING: Before attempting **any** checks or repairs, battery cables on electric start model MUST BE REMOVED from battery to prevent possible personal injury or damage to equipment.

Trouble	Possible Cause	Remedy
A region of his	Land and the state	Latina with sham is terrel
' 	and agreements of	A bound of physics (Const.)
!	in the spine state, that	- Open instead
 	<ul> <li>Transport regulars for a control of process.</li> </ul>	Company of the second
1	transcret con	a Section a surrog Postance of the entrance of
	Section of the second sections	or constraints at a fact of a fact o

75 J. M.J. 1861 5

Trouble	Possible Cause	Remedy
2. Lancollina September	7. Loose or corroded Latter! connections	The first condition of the control of the conditions of the condit
1	8 Stale or continue of all fuel	Co. Tall tank outs (3), a disestrative
	9. Imperper fuel-oil ratio	22. Mexical all heavy of by and recovering the state
	10. lb-lo-to-e or wrong type spark plugs	10 by Servering Speck Plans operating a memory
	11. Poor connections or damaged ignition wiring	1.24 ook gener for we ze archivary and rich or aichain coorain to be ship to exact at heale to keto.
B. Poor idling or	Fooles gars and	1. See "Seeding Spek Plag", projeto prominin
engine misses while idling	2 համուս ըս դորլայ	2. The wave pointed of blocke Unitable on about 45 fractions on for the second
	3. Stale or contaminated fuel	2. Till Gescondistans (set) tim
	4. Throttle -In:III : not closing completely	r. Soc. V. Barejo (Septembril) by her bar proper transforming and rate over
	5. Letter w ignition component	a Sa Viranian Servicing Laute 1941.
	6. Reed valve open or broken	C. Sar Well mixed Privileing Practic Science.
to English rooms	Fouled or wrong type spark plugs	U. See Servicinia Spark Plage is providing natural as
a lagh caral	2. Stale or annual real fuel	2 1 distance out on the distinct
	3. Wrong fuel and oil mixture	A. Masternatistic entropy of providing some in-

C. Finance restricts of high open to the conference of the confere	C. Promodel etc. as an along discrete.	Check on est or ways in brooks and significant Observations.  Then the place of street in the street.
	Language and a management	5. See "Carburetor", preceding m man на
	9. Dang hit gatk min g	6. See Suther cod Service Dealer for proper synchronical of
	Emine contenting	7. See "G", "Light Dark - unit following in chart.
11 3106 21 6 11 . 1	Corroded or loose battery terminals	1. Clean and 1.2hu. battery terminals.
had dang revelop we	2. Low electrolyte level	2. Fill hatter to recommend devel.
112 -1	3. born out or inefficient battery	3. Replace battery with one of recourse of capacity.
	4. Landar use of electrical and electrical	4. Use battery of proceedings of the process of the
	5. I straight rectifier	5. See hillion december for repair.
	6. Defective alternator	20 See America d Seconda Dealer Conseque
L. Micorope I	I. Transom too high	1. The another Conjugate transpose in the successible
Sector than rotma	2. Boat improperly loaded	2. Distribute hard resplace that means over place
	3. Tilt angle not correctly adjusted	C. Napadina interato wi merena della errapi citent
	4. Properties of wrong pitch or diameter	C. I stall correct propolar to operate of the return to recom- mented IPM or see
j	No Propositionniano	C. Have proper later superior replace

Trouble	Possible Cause	Remedy
F. Morter special stream than non-call	Weeds an all the experimental tought on year in energy	Property of the second to the
110-17-11	2 Best inproperties.	9. District television of surface and or any or any
	The formal one constitution of	Condition through the first to a many all the dispersions
	U. Doversonthi nel 1920	May as and other recommendation of the residence of the congret
	5 Lagertei	the Committee of the rest of the committee of the committ
	C. Populicanian	$\gamma = T$ for people for $\gamma = \kappa$ then let repose $\alpha$
	2. Propolar a scana post contras o	be intermediately appropriate to consider a finite result of the second matrix $B_{\rm c}^{\rm eff}(M)$ result
	a transación con discolor es	the Mariana diamental adjustments of the property of the first
	an Windowski open open filosofij iz	er skriftski a regisjak Projection and Grand Grand
	Contractor assimen	or soften mass of a compression of
to high man	. Cross company d	<ol> <li>One service conference in the CSC - Water Pring Op- tion - precipitation and</li> </ol>
	2. Studie is conclusive and the concession of the state o	2. See E. Mora positioned that the consistence of
	For how will have obtained to so within 20	a segmentario de la Section de Companyo de la Companyo de Companyo
	https://www.boat-r	nanuäls.com/

the Marish (

### INDEX

Page	Page
General Information	Tilt Stop Lever
Important Owner Identification and	Starting Promise Manual
Registration InformationCover	Starting Procedure - Electric · · · · · · · · · · · · · · · · · · ·
Directional References ,Cover	Operation without Battery (Figure 2)
Serial'NumberCover	Starting Models)
Periodic Checkup	Stopping Procedure · · · · · · · · · · · · · · · · · · ·
Specificanos	Tilt-Up and Shallow Water Troll
Motor Installation ,3	Lever Operation · · · · · · · · · · · · · · · · · · ·
Outboard Motor Mounting	Shallow Water Upration16
Tilt Angle Adjustment	Operation in Salt Water
Floring Accessories Connections4	Don'ts
12  111	Cavitation · · · · · · · · · · · · · · · · · · ·
Propeller Recognic indefines	Water Pump Operation
1գոր Հությունը	Remover: Motor from Boat
Instaling Projedler	Adjustments Ma etch one
Removing Proposition	The meaning Top Cowl
Furl Mixture and Fuel System , , ,	Carregreeof Adag-Imeni
l:1-: dlu = Fuel Tank6	ldle Mixture Կվրդ-Լորբու20
Gasoline-Oil Selection	Servicase Fuel Tank Filter21
Fuel Mixture <sup>7</sup>	Separate Carleio of Fuel Elect Science 33
trace: Fuel Mixing Processor	وسيدار والمستنب والمرازين والمالواء أ
Importance of Consequence Fuel Mixtures8	5. or ng Spark   Ing
Break-in Procedure	Preparation for Stering or Sterior and
Operation	Attention Աւդաւ I following Կրբեյյն և
Co Pilot Adjustuent	in Salt Water or Silt · · · · · · · · ·
Shifting հայլը	ծու∷վուր Required լուրուսել է արի t
Through Settingshttps://www.boa	at-manuals::com/ · · · · · · · · · · · · · · · · · · ·

ւ ≱աչդաշտ. Մուլը	1. Ne consiglie on 187 modure	L. Mix to Delither explify and prince on each factor
र्ग जार्ली	<ol> <li>High specific and dome we cover that is the control of another.</li> </ol>	1. See Carlandor Cyrosolia (1621) 1
; 	to Water escopilation	r - Korii Walion Productingoller Gegleen eta (h. 1901 hi 2010 in 1901)
	To be a congression former	See Aythorized Servicine Developer Septim

### WARRANTY

- I. We warrant each new Mercury Outboard Motor and accessories attached, thereto, (hereafier referred to as "Product", a zer leet red by us, to be free from defects in material and workmanship.
- II. This warranty shall become effective only upon our receipt of a completed Product Registration Card, which shall picture the Product so regions: I by serial number. This warranty shall remain in effect for a period of one (1) year from date of purchase.
- IV. Reasonable access must be provided to the problem for warranty service. This warranty will not apply to: 1) I and, launch, towing and it charges; telephone or rental charges of any type, inconvenience, loss of time or income; or other consequential damages; or 2) Removal and/or it is ment of boat partitions or material because of boat design for necessary access to the Product.
- V. Claim shall be made under this warranty by delivering the Product for inspection to a Mercury Marine dealer authorized to service the Purchaser's Product. If purchaser cannot deliver Product to such authorized dealer, he may give notice in writing to the area Mercury Marine distributor or Branch Manager or to the Company. Mercury Marine shall then arrange for the inspection and repair, provided such service is covered under this warranty. Purchaser shall pay for all related transportation charges and/or travel time. Further, if the service is not required by this warranty, purchaser shall pay for all related labor and material. Any Product or parts shipped by purchaser inspection or repair must be dispersed with transportation of the propagation.
- The Owner's Registration MerCard is the only valid registration identification and must be presented at the time warranty service is required. Warrant) claims will not be accepted without presentation of the MerCard.
- VI. Our obligation under this Warranty shall be limited to repairing a defective part or at our option replacing such part or parts as shall be necessary to remedy any malfunction resulting from defects in material or workmanship as covered by this Warranty. We reserve the right to change or the design of any Product without assuming any obligation to modify any Product part with a manufactured.
- VII. This warranty is in lieu of all other warranties expressed or implied and may not be modified or extended by anyone, except that any qualification or restriction contained herein which is prohibited by any law where the Product is sold and such qualification or restriction only, is null and void. All other qualifications and restrictions of this warranty remain in full force arid effect. There are no warranties which extend I and the description on the face hereof.

MERCURY MARINE

DIVISION OF BRUNSWICK CORPORATION FOND DU LAC. WISCONSIN 54935 U.S.A.

MARINE POWER - EUROPE DIVISION OF BRUYSWICK S.A PETIT RECHAIN, BELGIUM MERCURY MARINE LTD.
MISSISSAUGA, ONTARIO
CANADA

MERCURY MARINE PTY. LTD LUMBER OF VICTORIA 3175