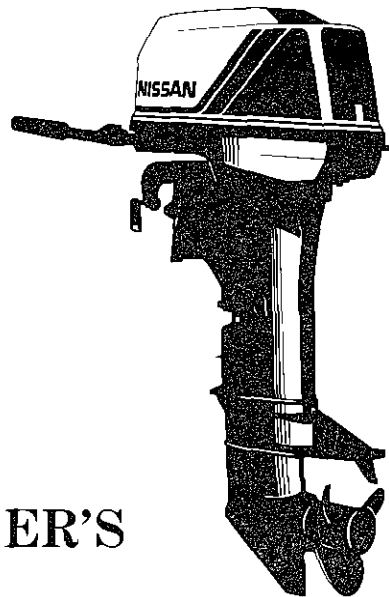


NISSAN OUTBOARD MOTOR



NS 40D
NS 50D



OWNER'S

OPERATING MANUAL

Copyright © 2007 Nissan Marine Co. Ltd. All rights reserved. No part of this manual may be reproduced or transmitted in any form or by any means without the express written permission of Nissan Marine Co., Ltd.

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

PREFACE

Thank you very much for selecting a Nissan Marine Outboard Motor. This operator's manual contains information on the operating procedures, preventive maintenance and inspection procedures of the Nissan Outboard Motor Models NS40D and NS50D. These outboard motors are available in four and three different types respectively to meet a wide variety of customers needs.

Please read this manual thoroughly before operating your Nissan outboard motor. You should become familiar with correct operating procedures so as to assure many years of safe and pleasant boating.

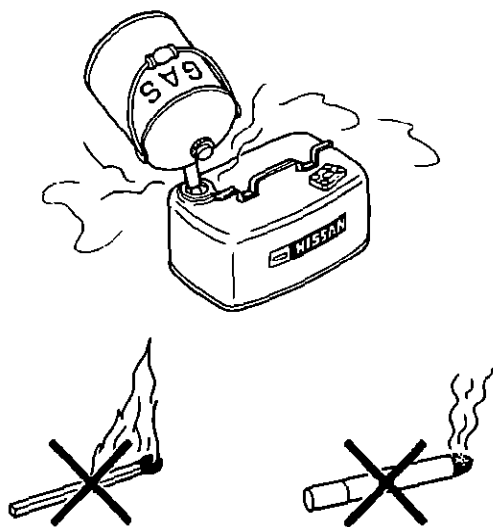
- The specifications and designs are subject to change without prior notice.
- If you have questions concerning your Nissan outboard motor, please feel free to contact your Nissan Marine distributor.

Table of Contents

WARNING-SAFETY	3	Shallow water boating	37
GENERAL PRECAUTIONS	4	Stopping the engine	37
SPECIFICATIONS	5	Mooring (Tilt up)	39
NAMES OF MAJOR PARTS	7	Removal and transit of outboard motor	40
MODEL AND OUTBOARD MOTOR SERIAL		ADJUSTMENT	42
NUMBER	12	Control lever operation adjustment	42
INSTALLATION	13	Trim tab adjustment	42
Outboard motor	13	Steering operation adjustment	43
Remote control unit installation	18	Throttle grip adjustment (F and EFO types)	43
Meter installation	23	INSPECTION AND MAINTENANCE	44
Battery installation	25	Daily inspection	44
Drag link installation (EP type).....	26	Periodic inspection	47
FUEL AND LUBRICATING OIL	27	Pre-storage inspection and service	51
OPERATION	29	Inspection after long-term storage	51
Run-in operation	29	When the motor is immersed in water	52
Preparations for starting the engine	30	Mooring in cold weather	52
Engine starting	31	TROUBLESHOOTING	53
Starting the engine (when the recoil starter/starter		Accessories	55
motor fails)	33	PROPELLERS	56
Warm-up operation	34	OPTIONAL ACCESSORIES	57
Overheat buzzer (optional)	35	WIRING DIAGRAM	59
Forward and reverse operation	35		

WARNING-SAFETY

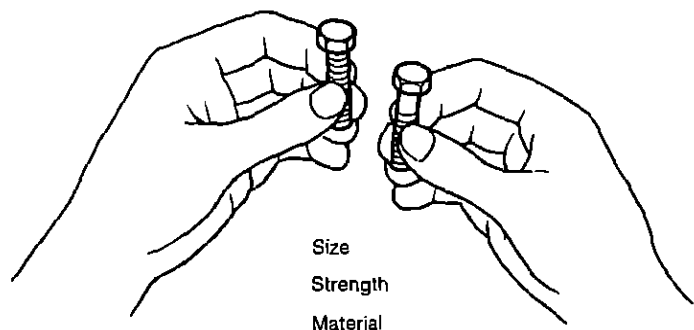
1. Gasoline is a highly flammable fuel and its gasses can burn and explode. Handle and store gasoline very carefully.
2. Do not attempt to modify the outboard motor.
3. Always wear a life-jacket while boating.
4. Respect and take care of the environment.



NSW001A

GENERAL PRECAUTIONS

1. Do not coat the bottom of the boat with paints which contain copper since they cause premature corrosion of the engine.
2. Operating in salt water
After operating your boat in salt water, use fresh water to rinse out the cooling system to avoid salt residue buildup.
3. Replacement parts
Use only genuine Nissan parts if required. Use of cheaper or generic parts should be avoided since they could cause injury, damage or loss of control.



NSW002A

The Owner's Manual contains very important information and is noted in the following ways:

NOTE — Gives either essential information to make doing things easier or are points of clarification.

CAUTION — Indicates special procedures that you must follow in order to keep from damaging the outboard motor.

WARNING — Indicates special procedures which must be followed in order not to cause human injury or damage to the product.

Carefully read the contents of the Outboard Motor Warranty and be sure that your Nissan distributor's seal stamped on the back. Please keep this warranty in a safe place.

SPECIFICATIONS

☆: Descriptions not included in this manual but in the corresponding catalog.

(NOTE) Overall height and weight are for the "L" type.

Model		NS40D —	NS40DEFO NS50DEFO	NS40DEPO NS50DEPO	NS40DEPTO NS50DEPTO
Type ☆		F	EFO	EP	
Overall length	mm (in)	1,107 (43.58)		630 (24.80)	
Overall width	mm (in)	381 (15.00)		340 (13.39)	355 (13.98)
Overall height	mm (in)	1,352 (53.23)		1,319 (51.93)	
Weight	kg (lb)	69.0 (152.1)	75.0 (165.4)	70.5 (155.5)	77.5 (170.9)
Transom height	mm (in)	S: 403 (15.87), L: 530 (20.87), XL: 657 (25.87)			
Max. output	PS (HP)	NS40D: 40 (39.5), NS50D: 50 (49.3)			
Max. speed range at full throttle	rpm	NS40D: 4,500 - 5,500, NS50D: 5,000 - 5,700			
No. of cylinders		3			
Displacement	cm ³ (cu in)	697 (42.53)			
Bore x stroke	mm (in)	68 x 64 (2.68 x 2.52)			
Exhaust system		Through-hub type			
Lubrication system		Mixture lubrication	Auto mixing (Separate refueling)		
Mixture ratio of fuel to oil		50:1 (after run-in period)	—		
Cooling system		Forced cooling (w/thermostat)			
Starting system		Recoil hand starter	Electric starter		
Ignition system		Contactless CD ignition			
Spark plug		NS40D: NGKB7HS-10 or Champion L82C [gap: 1.0 mm (0.039 in)] (*1) NGKBR7HS-10 NS50D: NGKB8HS-10 or Champion L78 [gap: 1.0 mm (0.039 in)] (*1) NGKBR8HS-10			
Charging performance		12V 130W			

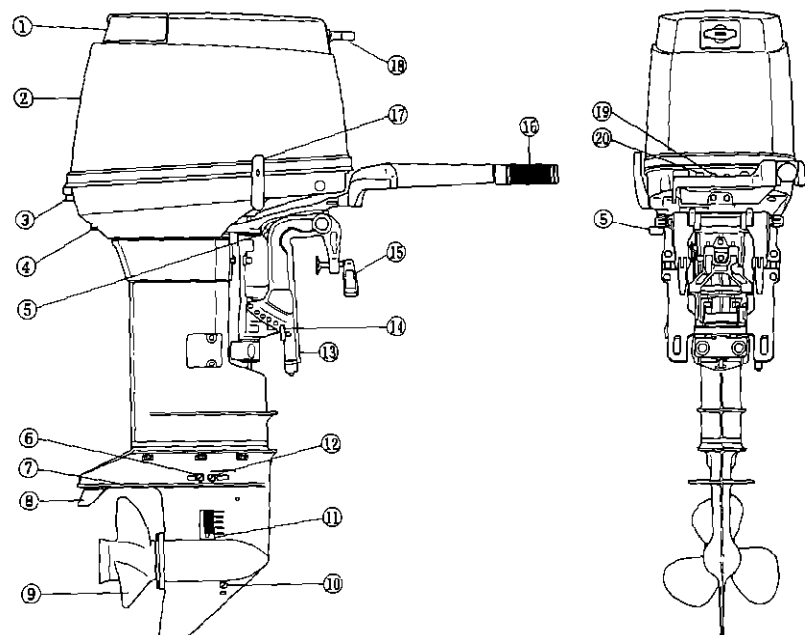
(*1): For Canada

Model	NS40D —	NS40DEFO NS50DEFO	NS40DEPO NS50DEPO	NS40DEPTO NS50DEPTO
No. of tilt stages	6		6	5 (*1)
Engine oil	NISSAN 2-cycle Motor Oil	NISSAN 2-cycle Motor Oil Super		
Gear oil	NISSAN Gear Oil SAE #80			
Fuel tank capacity	22.7ℓ (6 US gal, 5 Imp gal)			
Engine oil tank capacity	—	2ℓ (2-1/8 US qt, 1-3/4 Imp qt)		
Reduction ratio	13:24			

(*1): Outboard motors with power trim & tilt

NAMES OF MAJOR PARTS

NS40D



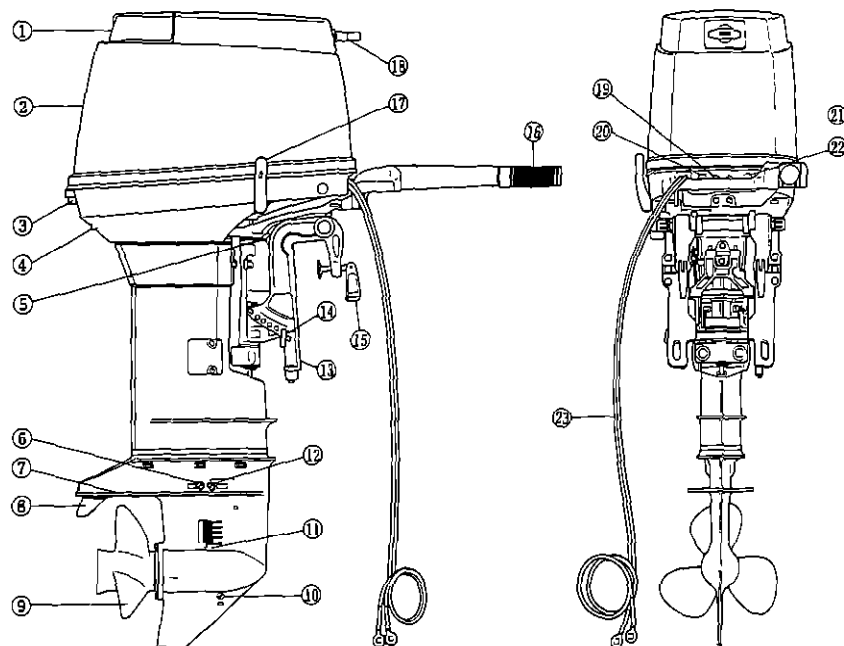
NSW003A

- ① Tilt handle
- ② Upper motor cover
- ③ Hook lever
- ④ Inspection port
- ⑤ Reverse lock lever
- ⑥ Water plug
- ⑦ Anti-cavitation plate

- ⑧ Trim tab
- ⑨ Propeller
- ⑩ Lower oil plug
- ⑪ Water strainer
- ⑫ Upper oil plug
- ⑬ Stern bracket
- ⑭ Thrust rod

- ⑮ Clamp screw
- ⑯ Throttle grip
- ⑰ Shift lever
- ⑱ Starter handle
- ⑲ Safety switch
- ⑳ Choke knob

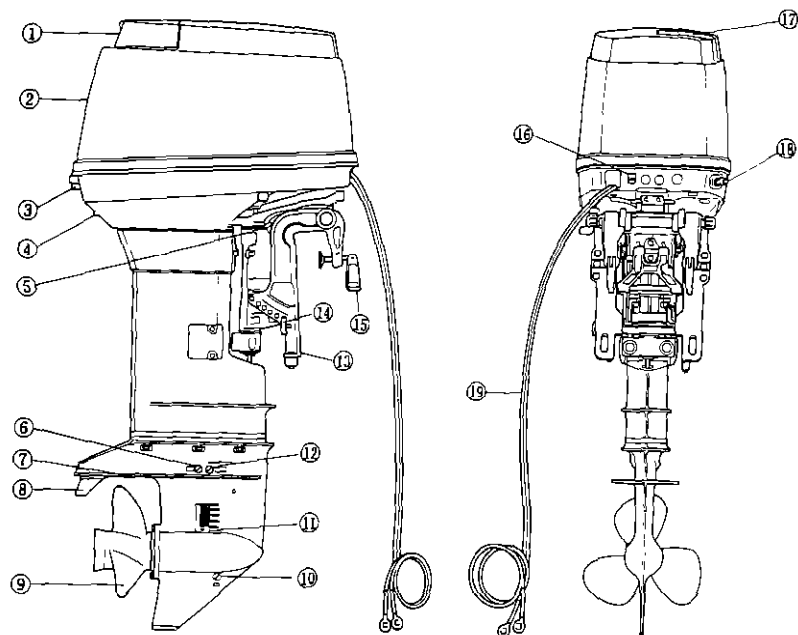
NS40DEFO, 50DEFO



NSW004A

- | | | |
|-------------------------|------------------|------------------|
| ① Tilt handle | ⑨ Propeller | ⑪ Shift lever |
| ② Upper motor cover | ⑩ Oil plug | ⑫ Starter handle |
| ③ Hook lever | ⑪ Water strainer | ⑬ Safety switch |
| ④ Inspection port | ⑫ Upper oil plug | ⑭ Choke knob |
| ⑤ Reverse lock lever | ⑬ Stern bracket | ⑮ Pilot lamp |
| ⑥ Water plug | ⑭ Thrust rod | ⑯ Main switch |
| ⑦ Anti-cavitation plate | ⑮ Clamp screw | ⑰ Battery cord |
| ⑧ Trim tab | ⑯ Throttle grip | |

NS40DEPO, 50DEPO



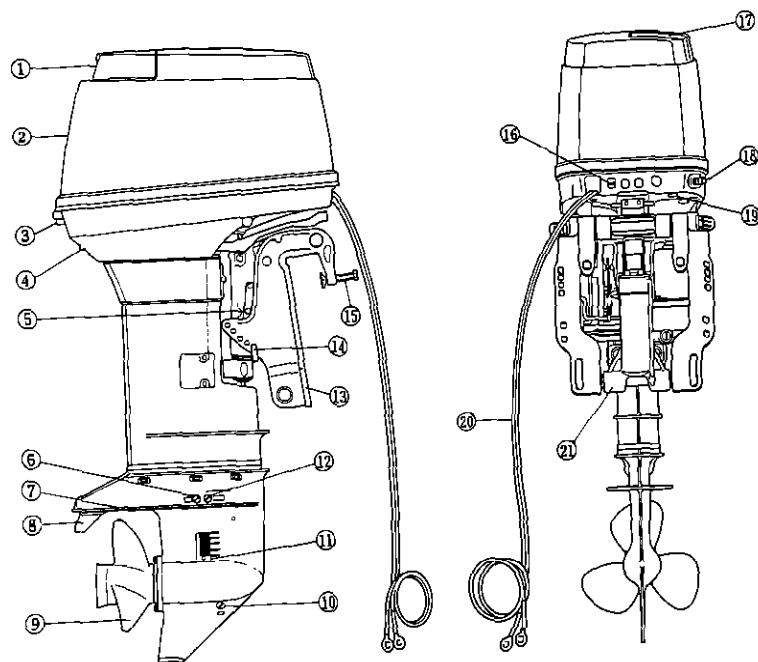
NSW005A

- ① Tilt handle
- ② Upper motor cover
- ③ Hook lever
- ④ Inspection port
- ⑤ Reverse lock lever
- ⑥ Water plug
- ⑦ Anti-cavitation plate

- ⑧ Trim tab
- ⑨ Propeller
- ⑩ Lower oil plug
- ⑪ Water strainer
- ⑫ Upper oil plug
- ⑬ Stern bracket

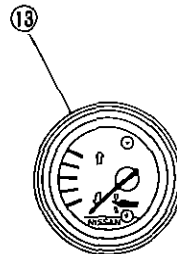
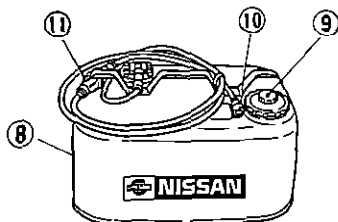
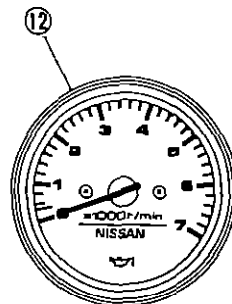
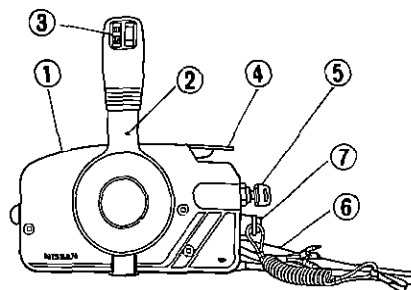
- ⑭ Thrust rod
- ⑮ Clamp screw
- ⑯ Choke knob
- ⑰ Filler lid
- ⑱ Fuel connector
- ⑲ Battery cord

NS40DEPTO, 50DEPO



NSW006A

- | | | |
|-------------------------|------------------|--|
| ① Tilt handle | ⑧ Trim tab | ⑮ Clamp screw |
| ② Upper motor cover | ⑨ Propeller | ⑯ Choke knob |
| ③ Hook lever | ⑩ Lower oil plug | ⑰ Filler lid |
| ④ Inspection port | ⑪ Water strainer | ⑱ Fuel connector |
| ⑤ Tilt stopper | ⑫ Oil plug | ⑲ Power trim & tilt switch (engine side) |
| ⑥ Water plug | ⑬ Stern bracket | ⑳ Battery cord |
| ⑦ Anti-cavitation plate | ⑭ Thrust rod | ㉑ Power trim & tilt |



NSW007A

- ① Remote control box
- ② Control lever
- ③ Power trim & tilt switch (box side)
- ④ Free accelerator lever
- ⑤ Main switch
- ⑥ Cord assembly B
- ⑦ Safety switch

- ⑧ Fuel tank
- ⑨ Air vent screw
- ⑩ Fuel connector
- ⑪ Primary valve
- ⑫ Tachometer (EPO and EPTO types)
- ⑬ Trim meter

MODEL AND OUTBOARD MOTOR SERIAL NUMBER

It's a good idea to record your engine model and serial number to help in ordering parts or in case of theft.

NOTE:

Always mention both the engine model and serial number when requesting service or ordering parts.

WARNING:

Installation of an engine that exceeds the rated capacity of the boat is dangerous. Too much power causes serious instability. Check your capacity plate or consult your dealer/manufacture

INSTALLATION

OUTBOARD MOTOR

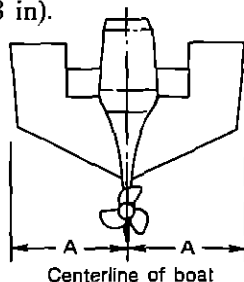
Mounting position

Mount the outboard motor on the centerline of the boat using cushion(s) or plate(s) as required. (Fig. 1)

Mounting height

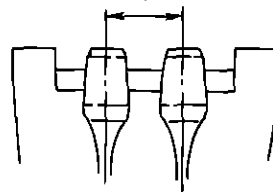
When two outboard motors are to be mounted on the boat, maintain a distance of 470 to 660 mm (18.50 to 25.98 in) between the two. (Fig. 2) After mounting the motors, maintain a distance of 0 to 30 mm (0 to 1.18 in) between the anti-cavitation plate and the bottom of the boat.

- The location of the stern bracket may be shifted at an interval of 18 mm (0.71 in) on outboard motors equipped with the power trim& tilt. On the other models, it may be shifted at an interval of 25 mm (0.98 in).



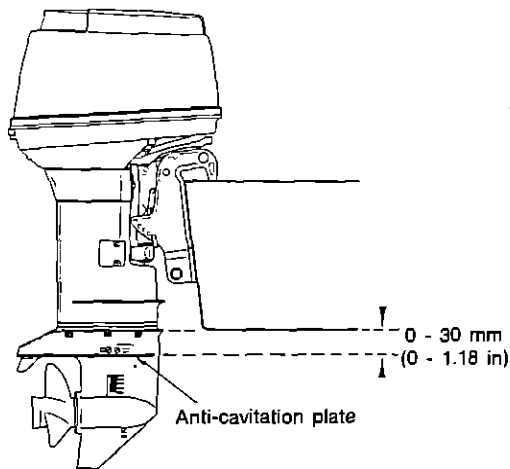
(Figure 1)

470 - 660 mm (18.50 - 25.98 in)



(Figure 2)

NSW008A



(Figure 3)

NSW009A

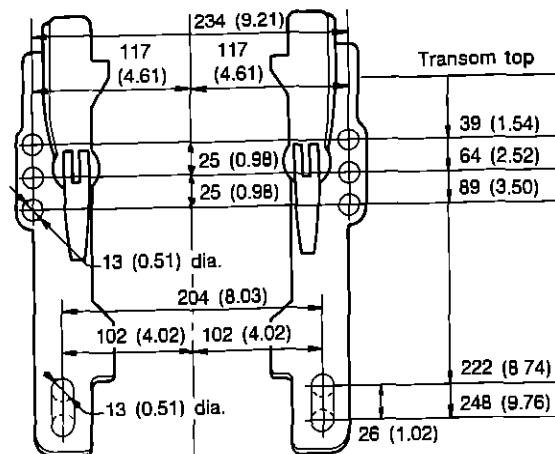
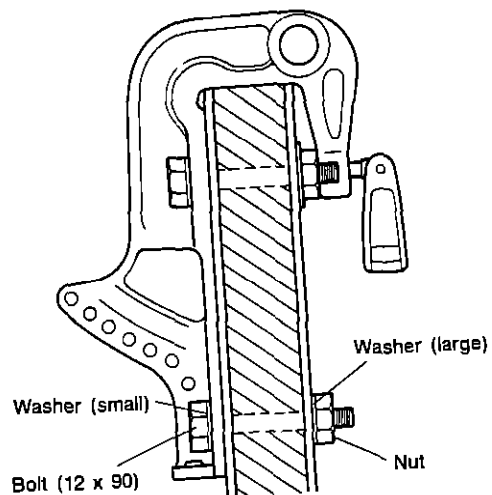
Stern bracket

- (1) While aligning the transom board with the mounting holes of the motor's stern bracket, drill four holes on the board and tighten with the furnished M12 x 90 mm bolts. Refer to the outline dimensions of the stern bracket on page 14.
- (2) Before drilling the holes, secure the transom board using a clamp to prevent misalignment.

NOTE:

Apply a coat of silicone sealant to the drilled holes and bolts before tightening the nuts and bolts.

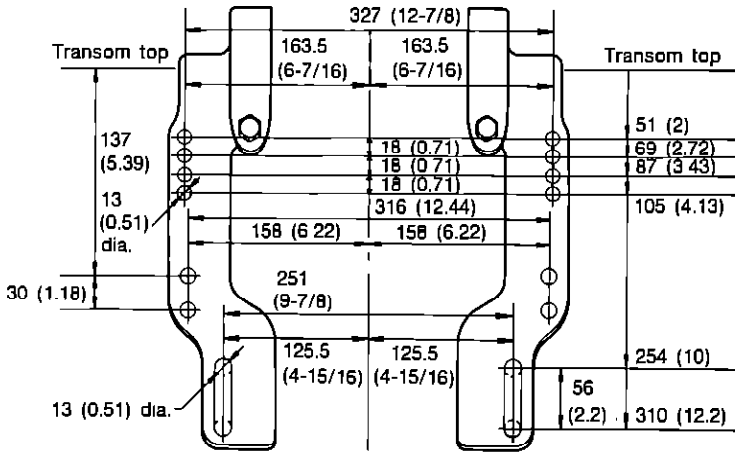
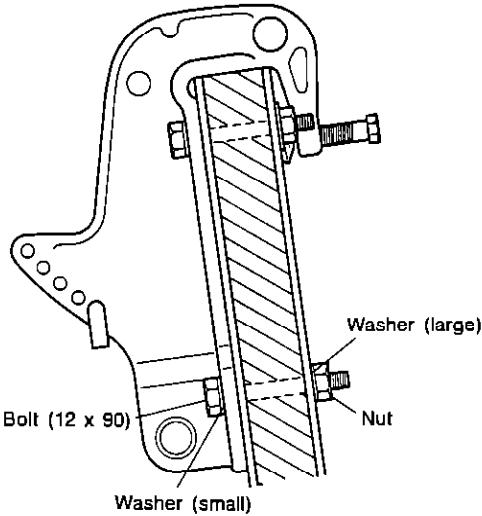
[OUTLINE DIMENSIONS OF THE STERN BRACKET INSTALLATION] Manual tilt



Unit: mm (in)

NSW010A
1 1

PTT tilt



Unit: mm (in)

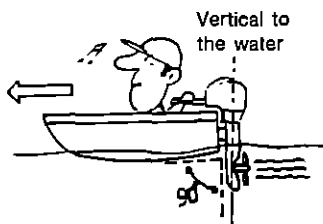
NSW011A

Mounting angle

The position of the outboard motor can be adjusted, depending on the transom angle, loads, etc. Select a position so that the anti-cavitation plate is parallel to the water surface while operating the boat.

- Correct trim angle

The boat is parallel to the water surface and the thrust rod position is correct.



NSW012A

1. Outboard motor set vertical to water surface

- Incorrect trim angle (Bow up)

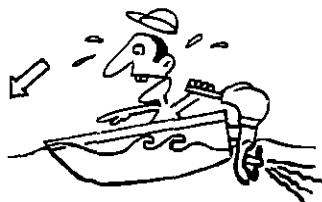
The bow swings from side to side or hits the water surface during operation. Set the thrust rod at a lower position.



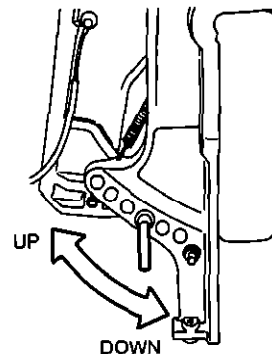
NSW013A

- Incorrect trim angle (Bow down)

The bow moves down and is splashed by water. Set the thrust rod at a higher position.



NSW014A



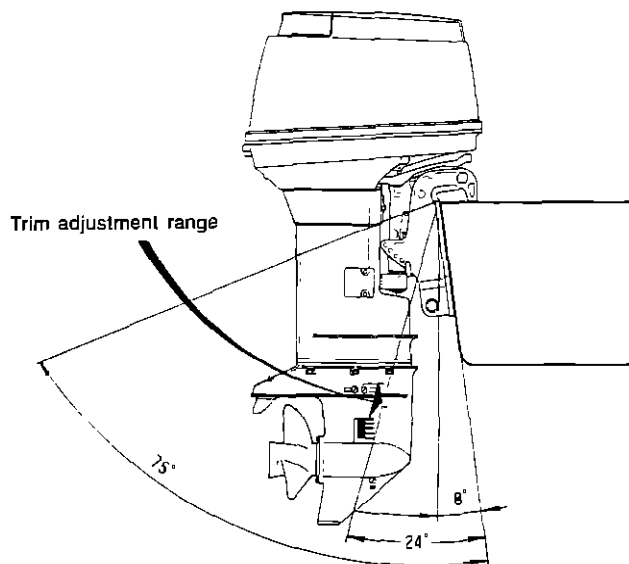
NSW015A

Power trim & tilt type

The power trim & tilt unit is designed to properly adjust the mounting (= trim) angle of the outboard motor in relation to transom shape and load conditions.

NOTE:

The trim angle can be continuously adjusted over the specified adjustment range. Except for shallow water operations, avoid operating the boat while tilted.



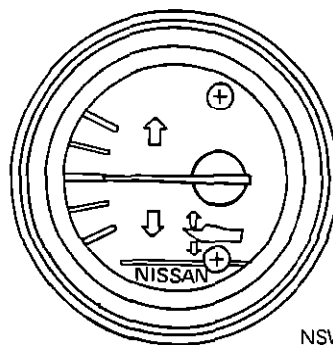
NSW016A

*Trim meter

Familiarize yourself with the trim meter indicator in relation to the optimum trim angle to make the best use of the power trim & tilt unit.

A. Correct trim angle

The trim angle is correct when the boat is nearly parallel to the water surface during operation.

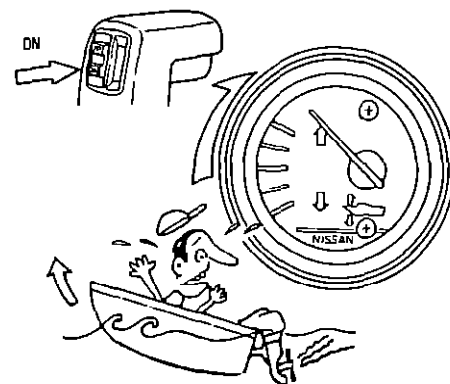


NSW017A

B. Incorrect trim angle (Bow up)

Too great a trim angle moves the bow up and reduces boat speed. This in turn causes the bow to swing from side to side or the bottom of the boat to hit the waves. If this occurs, reduce the trim angle.

- Press the "DN" section of the power trim & tilt switch (or the control lever grip).

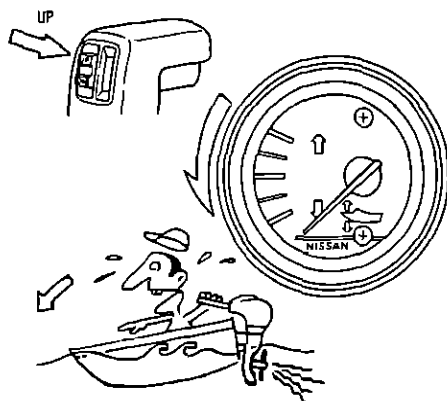


NSW018A

C. Incorrect trim angle (Bow down)

Too small a trim angle moves the bow down and reduces boat speed. It also pours water onto the boat. When this occurs, reduce the trim angle as required.

- Press the "UP" section of the power trim & tilt switch (or the control lever grip).



NSWQ19A

**REMOTE CONTROL UNIT
INSTALLATION**

Descriptions concerning the remote control unit apply to the right-hand drive model.

EP type

Remote control box position and cable length

A. Remote control box position

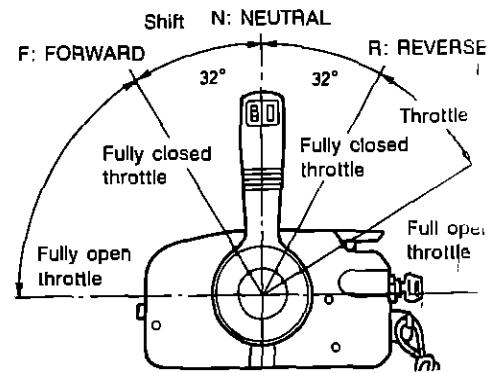
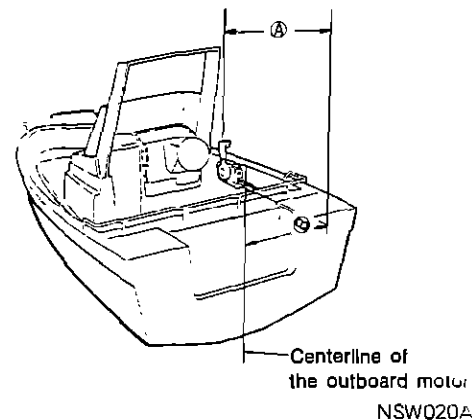
Select a place that does not interfere with the control levers and switches. Ensure that there are no obstacles for the remote control cable.

B. Remote control cable length

After selecting the remote control box position, determine the cable length between A and B (shown in the figure below) plus 300 mm (1 ft).

NOTE:

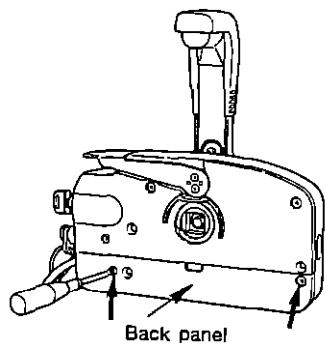
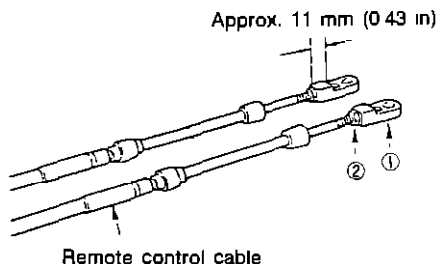
Be careful not to bend the remote control cable less than a diameter of 406 mm (16 inches).



NSWQ21A

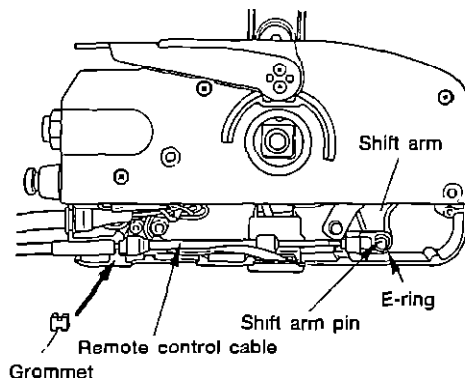
Cable installation (on the remote control side)

- A. Loosen the two screws on the back panel, and remove the back panel.
- B. Screw terminal eye 1 approximately 11 mm (0.43 in) (equivalent to approximately 11 bolt threads) into the remote control end, and secure with nut 2.



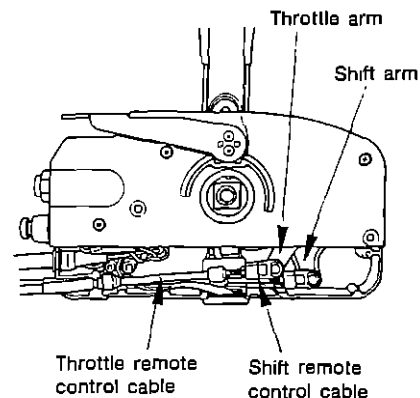
NSW022A

- C. Position the outer groove of the shift remote control cable in the housing clamp groove, install the terminal eye onto the shift arm pin and secure with the E-ring.
- D. Position the grommet (furnished with the remote control box) in the clamp groove.

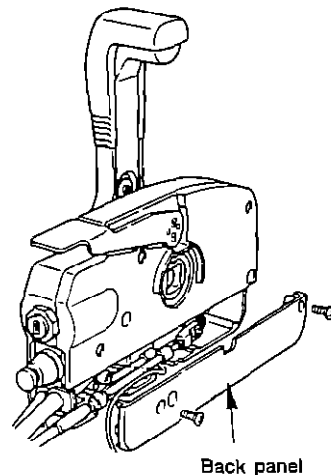


NSW023A

- E. Connect the throttle remote control cable to the throttle arm using a manner similar to the installation of the shift remote control cable.
- F. Install the back panel.

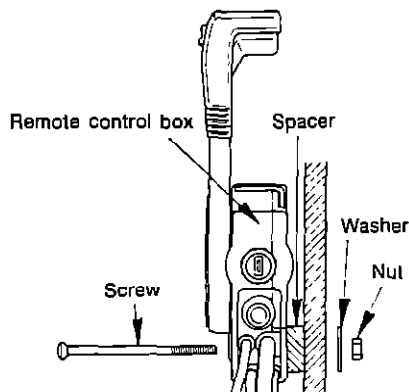


NSW024A



NSW025A

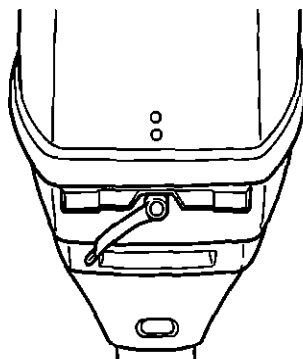
G. After properly installing the remote control cables, install the remote control box using the furnished screws, spacers, washers and nuts (three each).



NSW026A

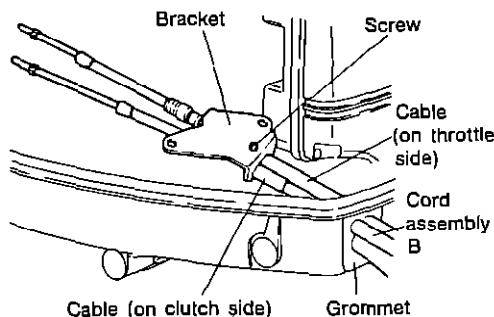
Installation of remote control cable (on the engine side)

A) Move the hook lever (on the lower motor cover) down and remove the upper motor cover.



NSW027A

B) Remove the bracket from the front of the lower motor cover, pass both cord assembly B and the remote control cable through the grommet. Secure the remote control cable to the bracket and then to the lower motor cover.

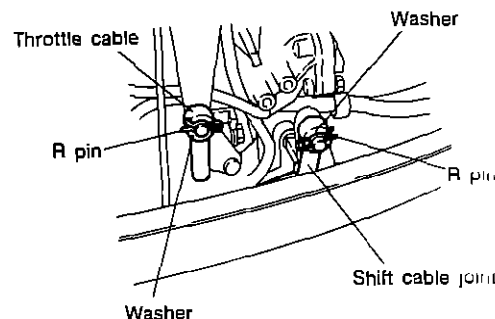


NSW028A

CAUTION:

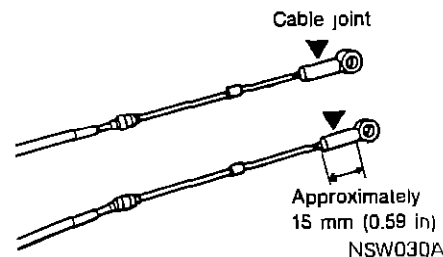
Completely loosen the panhead phillip screws (420). Connect the throttle and clutch cables to their positions and secure with the screws.

C) Remove the R pins from the throttle and shift cable joints, and remove the two cable joints.



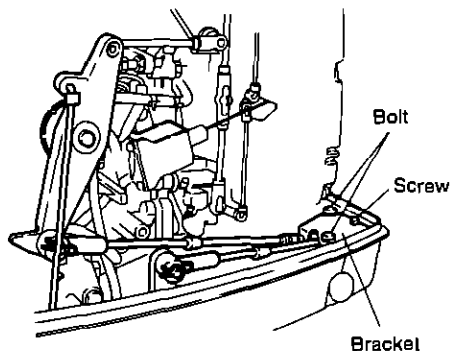
NSW029A

D) Screw the cable joints approximately 15 mm (0.59 in) (32° in terms of angle) into the ends of the remote control cables.



NSW030A

- H) Turn the cable joint in either direction so that the hole in the cable joint is aligned with the shift arm and advancer arm pins. Tighten the nut to lock the cable joint, and secure the arm pin using the R pin and washer.



NSW034A

NOTE:

- Ensure that the outboard motor shifts in when the control lever is set at the 1st stop (approximately 32°) position in both the FORWARD (F) and REVERSE (R) directions. Also check that the throttle operates and is set at the fully open position when the control lever is turned further than the 1st stop position.

Return the control lever to Neutral (N) to ensure that the advancer arm (on the outboard motor side) is fully closed. If it is not closed, adjust the cable joint position on the outboard motor side.

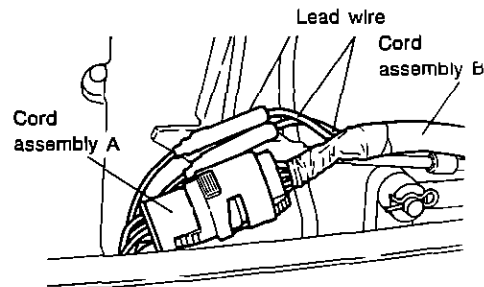
- When installing the throttle cable to the advancer arm pin, turn the rod snap in the direction shown in the figure and remove the link rod. After installing the cable, replace the link rod in the original position.

- I) ① Connect cord assembly B to cord assembly A.

WARNING:

NEVER DISCONNECT THE CORD ASSEMBLY WHILE THE ENGINE IS OPERATING.

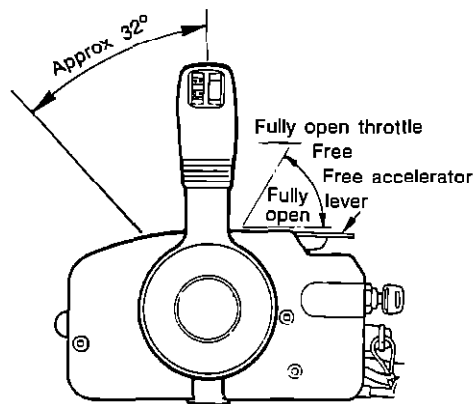
- ② Connect the pink and blue leads wires of cord assembly B to the corresponding colored lead wires of cord assembly A.



NSW035A

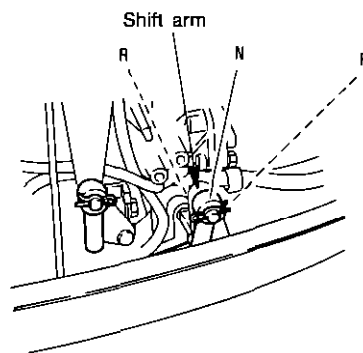
- Turn the control lever (on the remote control box) approximately 32° in the FORWARD direction until it stops at the 1st lower position. At this point, identify the shift cable by checking which cable end responds to control lever movement.

- E) Ensure that the control lever (on the remote control box) is at Neutral, and that the free accelerator lever is set at the fully closed throttle position.



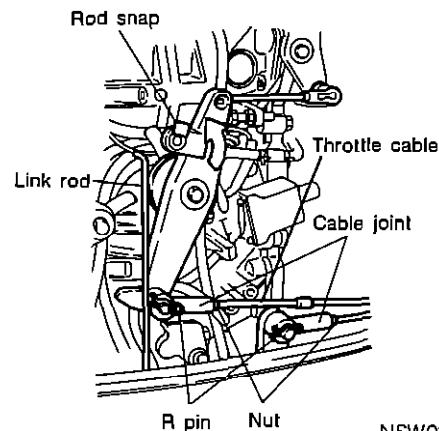
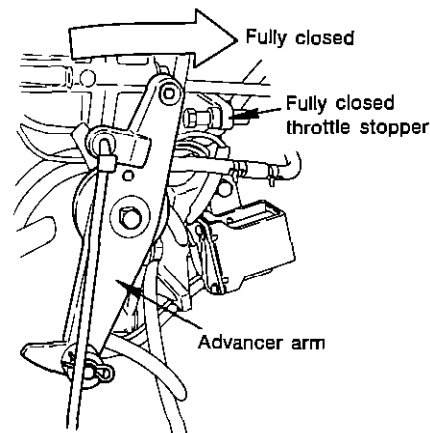
NSW031A

- F) Move the shift arm from the F to the N and R position, and return to the N position.



NSW032A

- G) Move the advancer arm to the fully closed position.



NSW033A

● Lead wire connections

Connect lead wires using the following figure as a guide.

Tachometer:

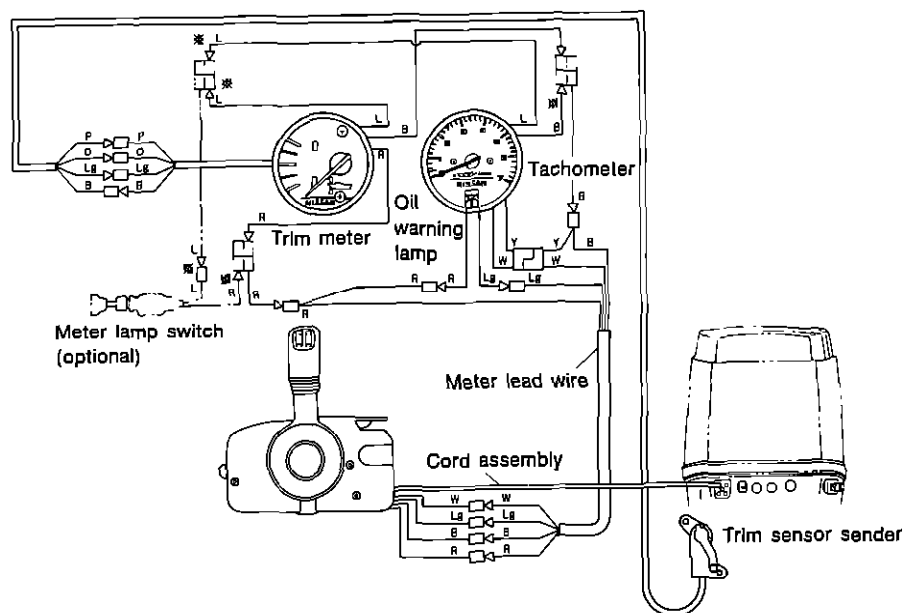
EPO and PETO

Trim meter:

EPTO

Trim sensor:

EPTO



Key to cord color symbols

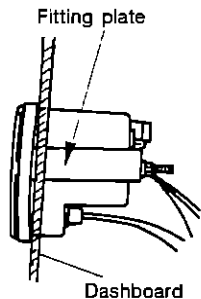
B : Black
 L : Blue
 Lg : Light green
 O : Orange
 P : Pink
 R : Red
 Sb : Sky blue
 W : White
 Y : Yellow

NOTE:

Terminals marked with an asterisk
 "*" are connected only when the op-
 tional meter lamp switch is installed.

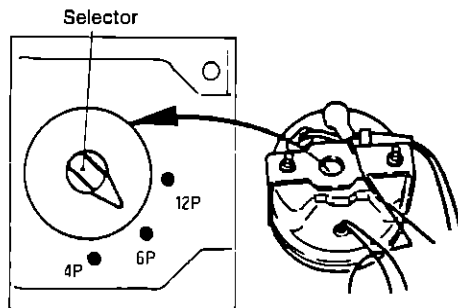
NSW039A

METER INSTALLATION



NSW036A

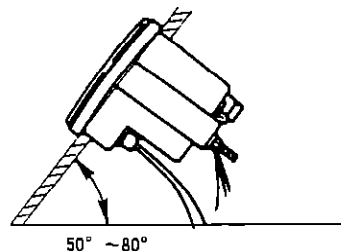
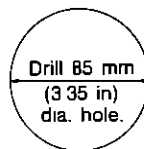
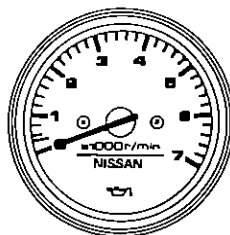
Install the meters in the dashboard so that they are easily seen and away from streaming water. A dashboard ranging from 2 to 11 mm (0.08 to 0.43 in) thick can be installed as required. If it exceeds a thickness of 11 mm (0.43 in), cut down the fitting plate accordingly.



NSW037A

(1) Tachometer (EP type)

Set the selector pointer to the "6P" mark on the back of the meter.



NSW038A

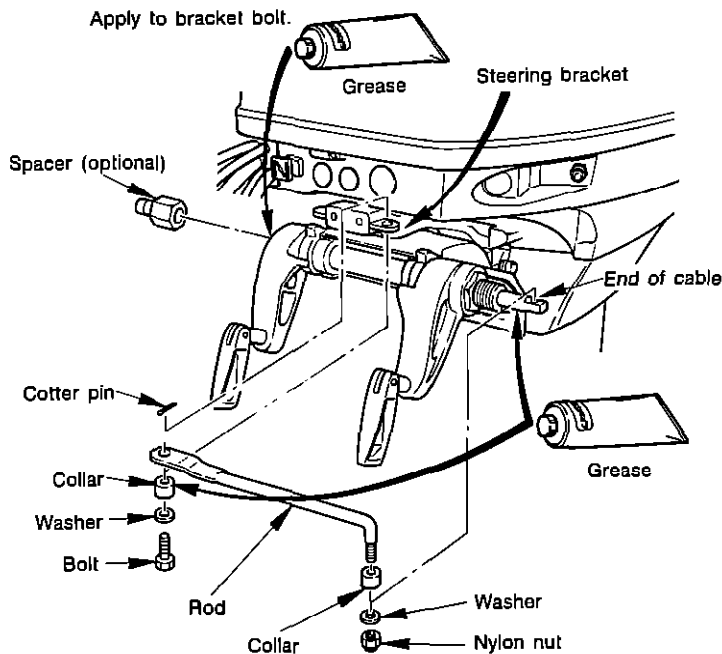
(2) Mounting angle

Install each meter at a mounting angle of 50° to 80° as shown.

DRAG LINK INSTALLATION (EP TYPE)

Improper installation of the drag link may damage the boat or hamper operation of the controls. It is advisable that the drag link be installed by your authorized Nissan marine dealer. The following figure furnishes information on the installation of the drag link. The optional spacer may be required, depending on the steering cable used.

- ① Install the rod to the end of the cable, and tighten the nylon nut so that the rod can still rotate.
- ② Install the bolt, washer and collar on the steering bracket, as shown, and install the bolt from the lower side of the rod and secure with the *upper cotter pin*.



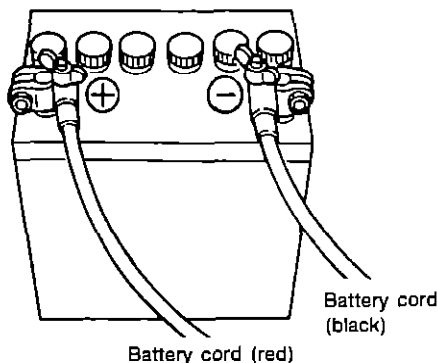
NSW041A

NOTE:

Apply a coat of grease to the frictional parts and points during installation.

BATTERY INSTALLATION

- ① Place the battery in a suitable case and secure in a location that is relatively free from shock, vibration, splashing water, etc.
- ② Connect the positive “+” (red) and negative “-” (black) cords to the battery terminal in that order. When disconnecting these cords, disconnect the negative cord first.
- ③ Use a standard battery which is rated at 12V70AH.



NSW040A

NOTE:

- The battery cords must be long enough to accommodate steering.
- Be careful not to allow the battery cords to be pinched, rubbed or fractured during steering.
- Check that the cords are connected securely. If not, the starter may not operate properly.
- Never reverse the polarity of the cords. Otherwise, damage to the charging system may result.
- Always maintain the battery in a fully charged condition.

WARNING:

When handling the battery, carefully observe the following instructions: The battery emits flammable gases. Failure to follow instructions may cause the battery to explode or result in severe burns to the skin.

● Flammables

Do not short the terminals or jump sparks across the terminals. Do not smoke near the battery.

● Recharging the battery

Select a well ventilated place.

- Do not allow battery electrolyte (sulfuric acid) to come in contact with your skin, eyes or clothing.

FIRST AID

- If battery electrolyte comes in contact with your skin or clothing, immediately rinse with running water. If it gets in your eye, immediately flush with running water and see doctor for treatment.

Warning release

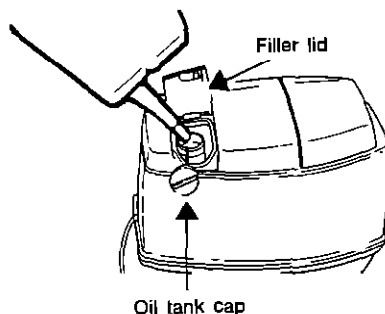
Decrease engine speed, move the boat to a safe area and turn the main switch "OFF". Refill the oil tank. The buzzer ceases when the shift lever is moved to "N" (NEUTRAL). After refilling the oil tank, start the engine and move the shift lever to "F" (FORWARD). Ensure that the warning lamp (in the tachometer) is off and the buzzer stops, or the oil lamp (on the front of the lower motor cover) is off.

NOTE:

Refill the oil tank after the engine has been stopped.

Refilling oil (Auto mixing system)

Use only genuine Nissan Motor Oil Super in the oil tank. Never mix different brands of oil as damage to the engine may result.



NSW044A

- ① Open the filler lid on the upper motor cover (EP type) or open the upper cover (EFO type).
- ② Open the oil tank cap.
- ③ Top off the oil tank with Nissan Motor Oil Super.
- ④ Tighten the tank cap securely.

CAUTION:

If gasoline is accidentally poured into the oil tank, immediately drain and consult your Nissan marine dealer.

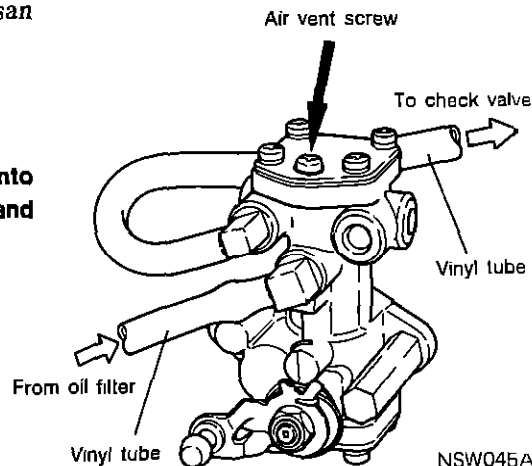
Bleeding air from oil pump (EFO and EP types)

Visually check the vinyl tube (between the oil tank and oil pump) for indications of air bubbles. If air bubbles are present, bleed air from the oil line as follows:

- Loosen the air vent screw on the oil pump. When air bubbles in the inlet tube oil disappears, tighten the air vent screw.

NOTE:

Wipe clean spilled oil completely using a cloth, and dispose of the cloth in a suitable way.



NSW045A

FUEL AND LUBRICATING OIL

Fuel

- ① Fuel Regular gasoline
- ② Fuel tank capacity 22.7 liters (6 US gal, 5 Imp gal)

Lubricating oil

- ① For the auto mixing type
(Separate refueling) (EFO and EP types)
Nissan Motor Oil Super
- ② For the mixing type (F type)



Nissan Motor Oil Super is also recommended for use in the mixing type.

Lubricating method

- ① Fuel-mixture lubrication F type

	Gasoline : oil
During run-in period	25 : 1
After run-in period	50 : 1

- ② Auto mixing system (EFO and EP types)

The lubricating oil is delivered from the oil tank to the engine via the oil pump which discharges the required amount of oil which meets the engine operation. Gasoline is delivered from a separate route to the engine.

CAUTION:

During the run-in period, prepare the specified oil/fuel mixture (50 : 1) separately even for the auto mixing type.

Oil level warning (EFO and EP types)

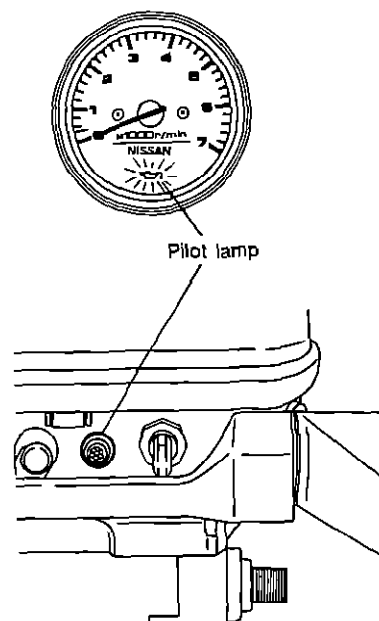
When the remaining lubricating oil drops below the specified level, the following warning units activate.

Warning unit

On the EP type (remote controlled), the pilot lamp in the tachometer illuminates and, at the same time, the buzzer (in the remote control box) sounds. On any other type (EFO type, etc.), the pilot lamp (on the front surface of the lower motor cover) illuminates.

NOTE:

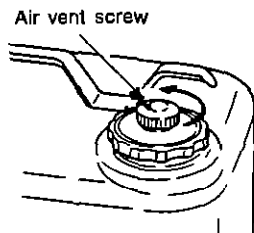
Before starting the engine, check the oil level in the tank. Top off the oil tank at all times.



NSW043A

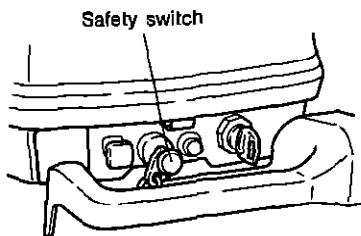
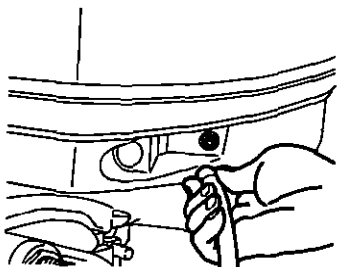
PREPARATIONS FOR STARTING THE ENGINE

- (1) Loosen the air vent screw on the tank cap.



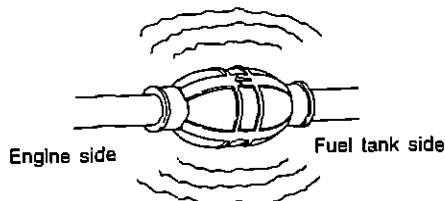
NSW046A

- (2) Connect the fuel connector to the connector on the engine side.



NSW047A

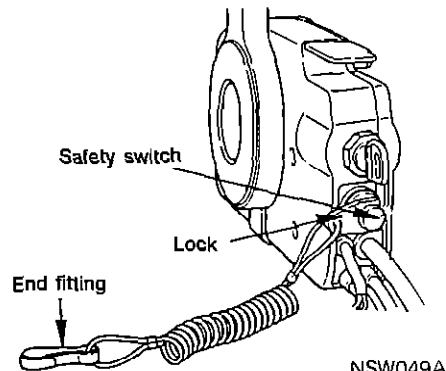
- (3) Pump the primary valve by hand to supply fuel to the carburetor.



NSW048A

CAUTION:
Never operate the engine without cooling water.

- (4) Ensure that the safety lock switch is inserted properly.



NSW049A

CAUTION:

The safety switch is designed for operator safety. When the lock is removed from the safety switch, the engine will stop. The engine does not start with the lock removed. Always hook the rope fitting of the rope to the operator's belt, etc. while boating. If the operator loses balance or thrown into the water, the lock will be pulled out to stop the engine. Do not operate the engine without cooling water.

NOTE:

Unless the control lever is set to "N" (Neutral), the free accelerator lever will not operate and the engine will not start.

OPERATION

RUN-IN OPERATION

① Total run-in period 10 hours

Time	0 ~ 10 minutes	→ 10 minutes ~ 1 hour	→ 1 hour ~ 2 hours	→ 2 hours ~ 10 hours	→ More than 10 hours
Run-in operation	Operate at idling speed (with throttle fully closed)	Operate at less than 1/2 throttle.	1-minute full throttle operation is permissible every 10 minutes. Operate at less than 3/4 throttle.	Full throttle operation is permissible for a short period of time. Operate at less than 3/4 throttle.	Normal operation
Engine speed		Approx. 3,000 rpm, min.	Approx. 4,000 rpm, min.	Approx. 4,000 rpm	Approx. 4,500 to 5,500 rpm

② Fuel mixture ratio

Type	Mixture ratio	After 10-hour run-in operation
F	25 (gasoline) : 1 (Nissan Motor Oil Super)	Fuel mixture ratio – 50 (gasoline) : 1 (Nissan Motor Oil Super)
EFO and EPO	50 (gasoline) : 1 (Nissan Motor Oil Super)	Gasoline only

NOTE:

During the run-in period, prepare the fuel mixture separately.

NOTE:

Use only high quality gasoline and genuine Nissan Motor Oil in your engine to prolong service life and ensure trouble-free operation.

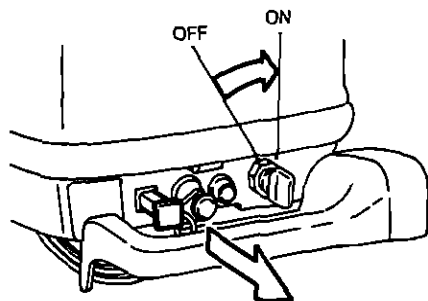
CAUTION:

- Before refilling fuel, stop the engine and place the fuel tank in a ventilated area outside the boat. Be careful not to spill fuel. When refilling the fuel tank inside the boat, wipe clean spilled fuel completely using a cloth to prevent the possibility of fire or explosion.

Dispose of the cloth in a suitable manner.

- Do not allow fuel to exceed the specified tank level.

- (7) Pull the choke knob all the way back. (F type).

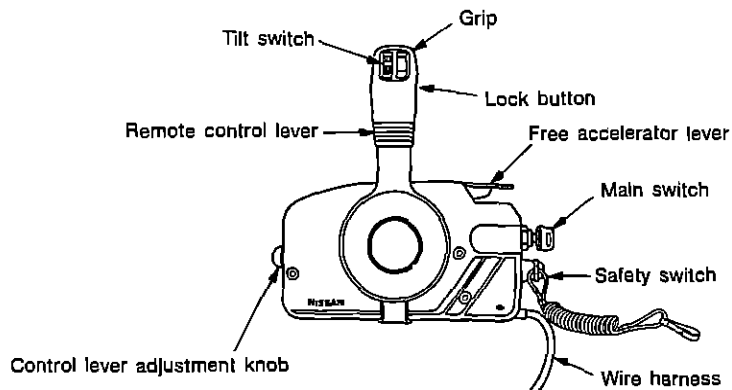


NSW055A

EP type

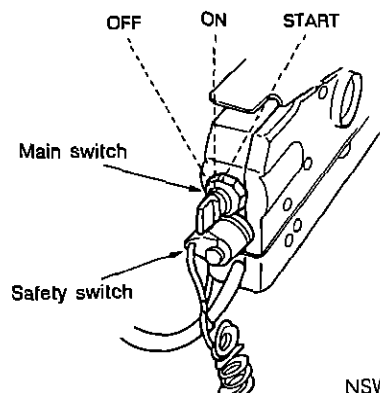
- (1) Insert the key switch into the slot.
- (2) Move the control lever to "N" (NEUTRAL) and move the free

accelerator lever up to the full throttle position. A hot engine can be started without moving the free accelerator lever.



NSW056A

- (3) Press the key into the 1st position to activate the choke. The key does not need to be pressed when the engine is hot.

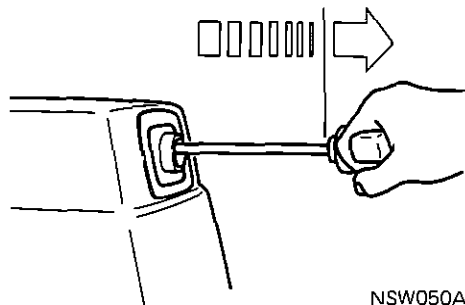


NSW057A

ENGINE STARTING

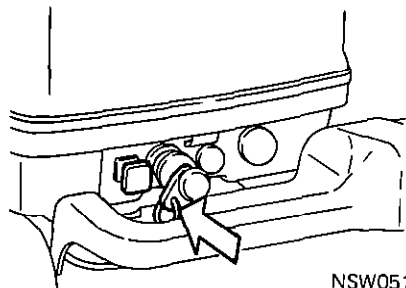
F type

- (1) Slowly pull the starter handle until resistance is felt, and then pull it forcefully in a quick motion.
- (2) After the engine starts, return the starter handle slowly.



NSW050A

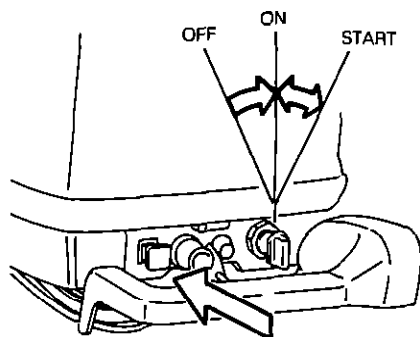
- (3) Return the choke knob (if it was pulled).
- (4) Gradually return the throttle grip so that the engine runs close to idling.



NSW051A

EFO type

- (1) Turn the key to the START position to start the engine.
- (2) After the engine starts, release the key.
- (3) Return the choke knob (if it was pulled).
- (4) Gradually return the throttle grip so that the engine runs close to idling.



NSW052A

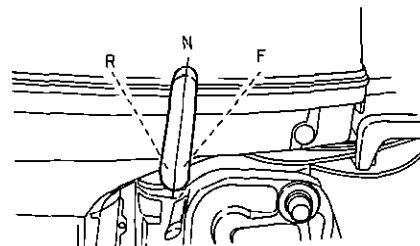
CAUTION:

- Do not operate the starter motor for more than 3 seconds at a time. Wait approximately 5 seconds before trying again. Failure to follow this rule may cause the battery to run down.
- After starting the engine, quickly release the key.

- (5) Ensure that the shift lever is set to "N" (NEUTRAL).

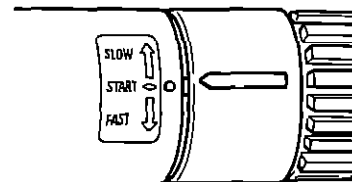
NOTE:

The starter lock mechanism does not allow the engine to start when the shift lever is set at any position other than "N" (NEUTRAL).

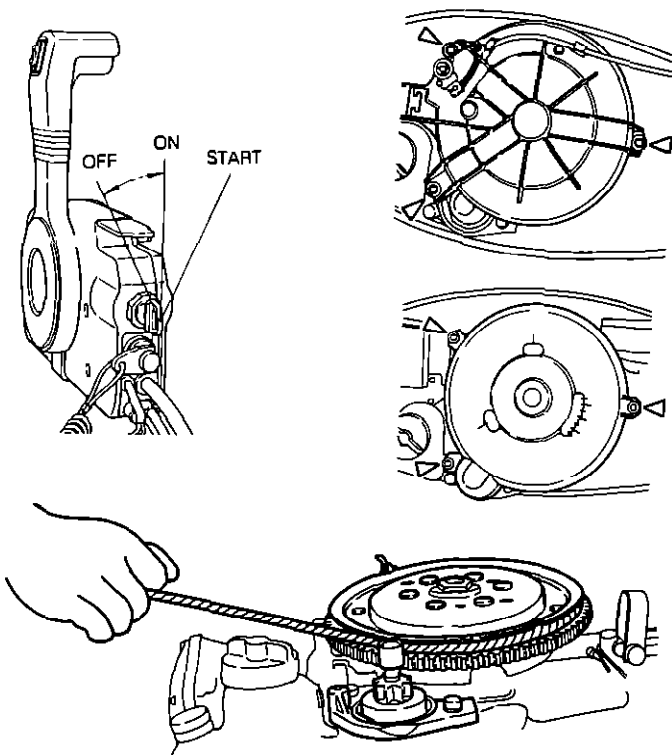


NSW053A

- (6) Turn the handle grip to the START (convex) position.



NSW054A



NSW059A

WARNING:

Be careful not to catch your clothes in the rope.

WARM-UP OPERATION

Before running the boat, warm up the engine at low speed for approximately 3 minutes to lubricate the functional parts. Failure to do so may shorten the service life of the outboard motor. During the warm-up period, check that cooling water is discharging from the inspection port.

CAUTION:

Do not continue without cooling water since the engine overheats, resulting in engine seizure.

- Engine speed
Engine idles properly when it runs at speeds as indicated in the table below.
- Do not allow engine speed to exceed the specified maximum speed range indicated in the table below.

- (4) While pressing the key, turn it to the START position to start the engine.

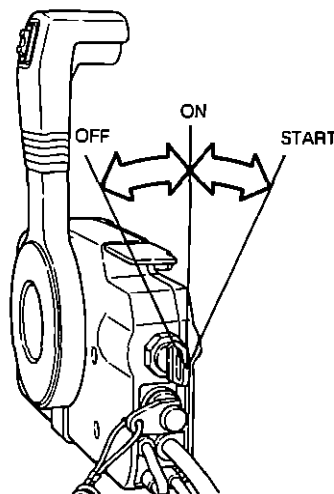
NOTE:

When restarting a hot engine, turn the key to the START position (without pressing it).

- (5) After the engine starts, release the key. It will automatically return to "ON".
- (6) Return the free accelerator lever so that the engine runs close to idling.

CAUTION:

- Do not operate the starter motor for more than 3 seconds at a time. Wait approximately 5 seconds before trying again. Failure to follow this rule may cause the battery to run down.
- After starting the engine, quickly release the key.



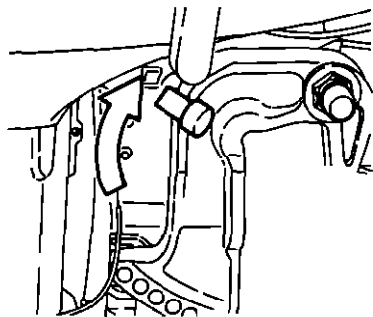
NSW058A

STARTING THE ENGINE (WHEN THE RECOIL STARTER/STARTER MOTOR FAILS)

- (1) Remove the upper motor cover.
- (2) Remove the recoil starter. (F and EFO types)
- (3) Remove the flywheel cover. (EP type)
- (4) Turn the main switch "ON". (EFO and EP types)
- (5) Wind 2 or 3 turns of the safety rope on the flywheel rotor, and pull the rope to start the engine.

NOTE:

- Ensure that the reverse lock lever is in the "LOCK" position before moving the shift lever to "F".
- Do not rev up the engine unnecessarily before moving the shift lever to "R".
- When moving the shift lever to "R", ensure that the handle grip returns to the low speed position. Otherwise, the shift lever cannot move into "R".



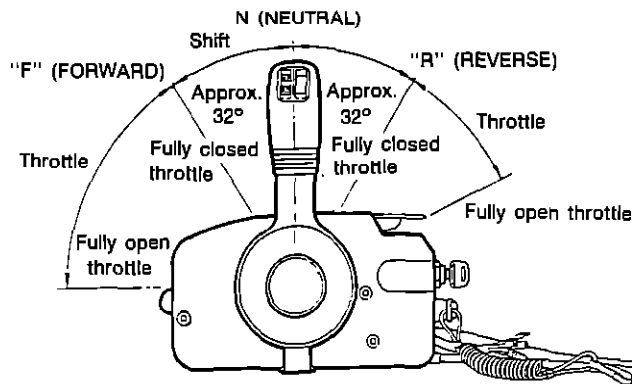
NSW062A

EP type

Forward

Pull up on the lock button completely (on the lower side of the control lever grip), and move the control lever to "F"

until it stops at the 1st position (approximately 32°). Further movement of the control lever sets the engine into the throttle operation.



NSW063A

NOTE:

Note that the control lever does not operate when the free accelerator lever is set at the fully closed throttle position.

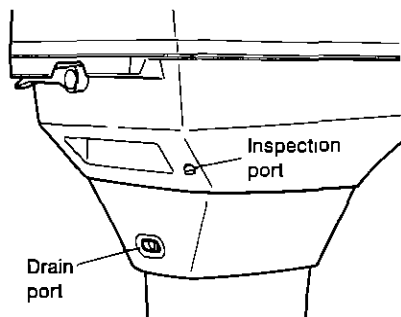
the control lever sets the engine into the throttle operation.

Reverse

Pull up on the lock button completely (on the lower side of the control grip), and move the control lever toward "R" until it stops at the 1st position (approximately 32°). Further movement of

NOTE:

- Ensure that the reverse lock lever is set at the "LOCK" position.
- Do not rev up the engine unnecessarily when backing up the boat.
- The throttle position is restricted to one-half the full throttle during reverse operation. Do not rev up the engine.



NSW060A

Clutch ON	Clutch OFF (for reference)
650 ~ 800 rpm	850 ~ 900 rpm

Model	Maximum speed range (at full throttle)
NS40D	4,500 ~ 5,500 rpm
NS50D	5,000 ~ 5,700 rpm

OVERHEAT BUZZER (OPTIONAL)

When the coolant temperature exceeds the specified setting during operation, the overheat buzzer will sound and engine speed will decrease. When this occurs, immediately return the shift or the control lever to Neutral. Check that cooling water is discharging properly from the inspection port, and then stop the engine. Check the gear case exterior for accumulation of weeds or foreign particles. Remove weeds, foreign particles, etc. as required.

EF and EFO types

Check that the overheat buzzer does not sound when the main switch is turned "ON" before starting the engine.

EP type

Check that the overheat buzzer does not sound when the main switch is turned "O" and the control lever is shifted to FORWARD or REVERSE before starting.

CAUTION:

If the buzzer sounds sporadically after starting the engine, consult the nearest Nissan marine dealer.

FORWARD AND REVERSE OPERATION

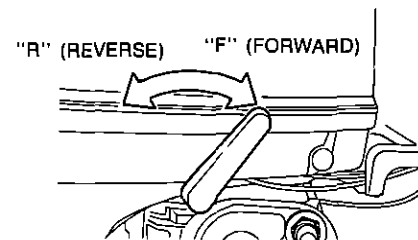
F and EFO types

Forward

Move the handle grip to the low speed position. When the engine idles at a very low speed, move the shift lever back to "F" (FORWARD).

Reverse

After the engine idles at a very low speed, move the shift lever forward to "R" (REVERSE).



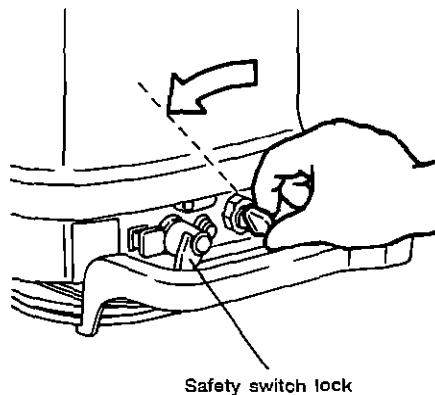
NSW061A

NOTE:

Be sure to run the engine at a very low speed (idle) before moving the shift lever.

EFO type

- ① Turn the main switch "OFF".



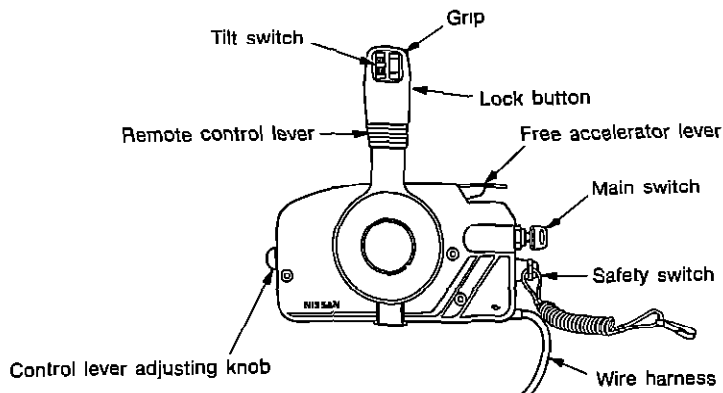
NSW067A

NOTE:

After cruising at close to full-throttle, do not bring the engine to a full stop immediately but idle it for 2 or 3 minutes.

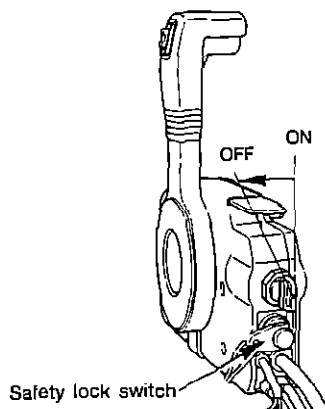
EP type

- ① Before stopping the engine, return the control lever to "N" (NEUTRAL) and operate the engine at idle for 2 or 3 minutes.



NSW068A

- ② Turn the main switch key to "OFF" or remove the safety switch lock.



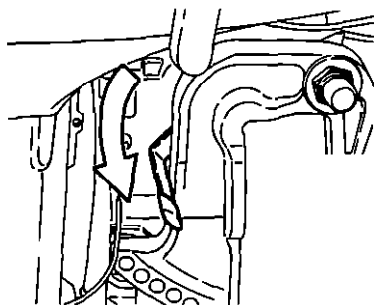
NSW069A

NOTE:

- After the engine stops, close the fuel tank valve and tighten the tank cap vent screw.
- Disconnect the fuel connector on the engine side.
- When the outboard motor is not to be used for an extended period of time, disconnect the cords from the battery.

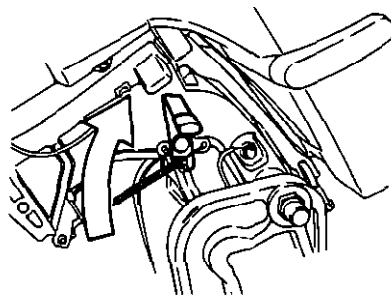
SHALLOW WATER BOATING F, EFO and EPO types (without power trim & tilt unit)

- ① Move the reverse lock lever to "RELEASE".
- ② Raise the outboard motor. It will automatically set the shallow water position.



NSW064A

- ③ To return the outboard motor to the normal cruising position, return the reverse lock lever to "LOC" and raise up the outboard motor slightly. It can then be returned to the normal cruising position.



NSW065A

EPTO type

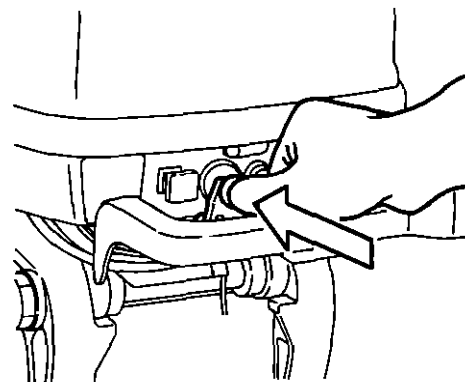
Using the same procedure which adjusts the trim angle, set the outboard motor to a position higher than the normal position.

CAUTION:

- Be sure to operate the engine at trolling speeds during shallow water boating.
- Do not expose the anti-cavitation plate to air.

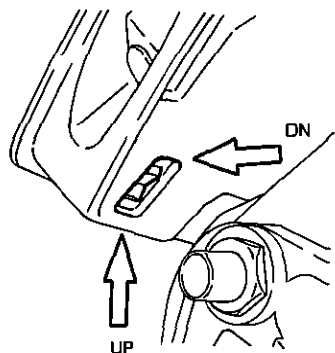
STOPPING THE ENGINE F type

- ① Push the stop switch and release it after the engine has stopped, or remove the safety switch lock.



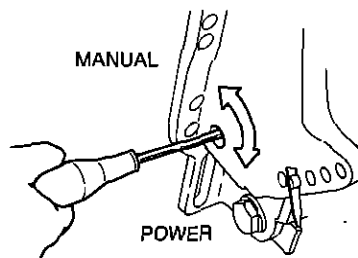
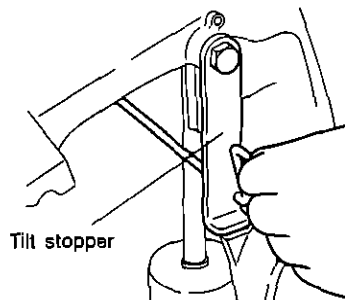
NSW066A

- ③ To tilt up, press the UP section of the power trim & tilt switch (for approximately 12 seconds) until the motor's sound changes.
- ④ To tilt down, press the DN section (for approximately 12 seconds) until the motor's sound changes.



NSW074A

- ⑤ Mooring
Tilt up the outboard motor and raise the tilt stopper to lock.



NSW075A

NOTE:

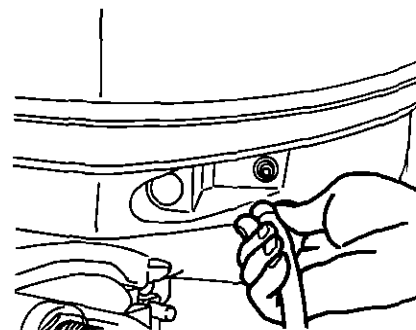
If the power trim & tilt switch does not operate due to a run down battery, turn the manual valve 2 or 3 rotations in the **MANUAL** direction using a screwdriver. The outboard motor can then be manually tilted up or down.

REMOVAL AND TRANSIT OF OUTBOARD MOTOR

- ① Stop the engine. Disconnect the fuel connector to drain fuel from the carburetor.

NOTE:

Place a cloth at the connector opening to catch fuel, and wipe traces of fuel completely.



NSW076A

MOORING (TILT UP)

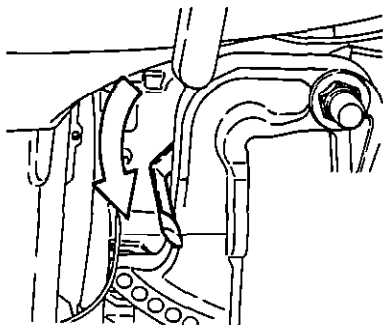
F, EFO and EPO type (without power trim & tilt unit)

When the outboard motor is not to be used for an extended period of time, or when the boat is moored in shallow water, the propeller and gear case may be damaged by striking the bottom. To avoid this, tilt the motor up as far as possible and lock with the tilt stopper.

① Disconnect the fuel connector.

② Tilting up

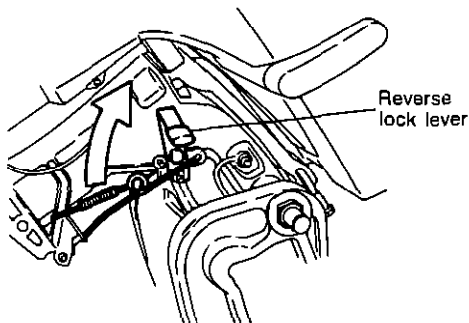
Move the reverse lock lever to "RELEASE" and tilt the motor up. It will automatically set to the tilt-up position.



NSW070A

③ Tilting down

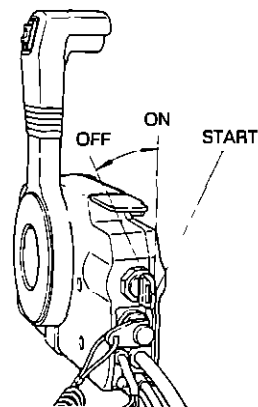
Move the reverse lock lever to "LOCK" and raise up the motor slightly and lower the motor. The reverse lock will automatically lock.



NSW071A

EPTO type

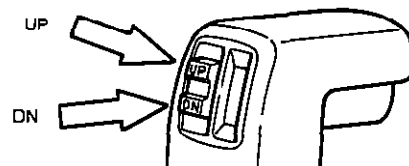
① Disconnect the fuel connector.



NSW072A

②

- A. When tilting the outboard motor up or down using the power trim & tilt switch (on the remote control box), turn the main switch "ON".
- B. When tilting the outboard motor up or down on the engine side, leave the main switch "OFF".



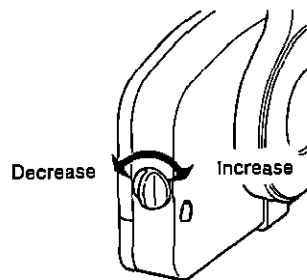
- Power trim & tilt switch (on remote control box)

NSW073A

ADJUSTMENT

CONTROL LEVER OPERATION ADJUSTMENT

Turn the throttle friction adjustment screw (on the front of the remote control box) until the control lever moves with the desired force. When the adjustment screw is turned clockwise, the force required to move the control lever increases; when it is turned counterclockwise, the force decreases.

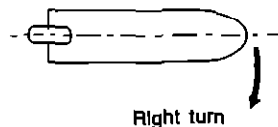
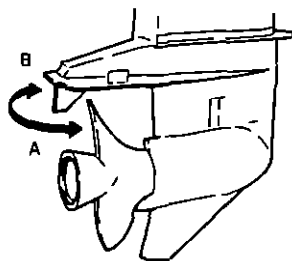


NSW078A

TRIM TAB ADJUSTMENT

Adjust the trim tab (located under the anti-cavitation plate) to provide directional stability.

- (ex. 1) When the boat tends to turn to the right, turn the trim tab to the right (as viewed from the rear of the boat). See A in the figure below.
- (ex. 2) When the boat tends to turn to the left, turn the trim tab to the left, as shown by B in the figure.

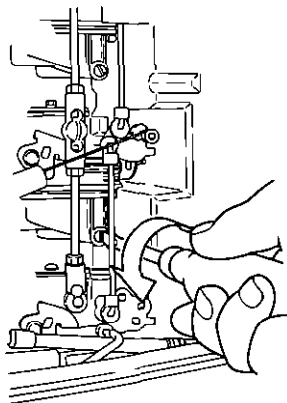


NSW079A

CAUTION:

- The trim tab serves as an anode (zinc electrode). Do not apply paint to the trim tab as it loses its corrosion preventive function.
- After properly adjusting the trim tab, tighten the bolt securely.

- ② Remove the wiring associated with the remote control box, remote steering unit, battery cords, transom mounting nuts and bolts and other accessories.



NSW077A

- ③ Dismount the outboard motor from the boat, and position it vertically. Wait until water no longer comes out of the gear case. When carrying or transporting the outboard motor from one place to another, be careful so that the propeller is not held above the engine head.

INSPECTION AND MAINTENANCE

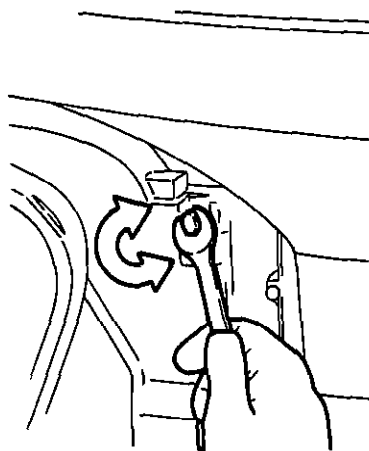
- Before and/or after the outboard motor is used, check and take corrective measures as needed, using the following chart as a guide.

DAILY INSPECTION

Systems to check	Inspection description	Remedy
Fuel and oil systems	<ul style="list-style-type: none">○ Check fuel level in fuel tank.○ Check oil level.○ Check fuel and oil filters for contamination of water or dirt.	Add fuel. Refer to page 49.
Electrical system	<ul style="list-style-type: none">○ Check spark plug electrode for carbon accumulation, wear or "bridges". (NGK B7HS-10 or Champion L82C) [Spark gap: 1.0 mm (0.039 in)]○ Check main switch for operation.○ Check safety switch for operation and lock plate for installation.○ Check battery electrolyte level.○ Check battery cords for connection.○ Check choke for operation.	Clean or replace. Repair or replace. Repair or replace. Add and recharge. Tighten or repair. Adjust.
Clutch and propeller systems	<ul style="list-style-type: none">○ Check clutch for engagement (using remote control unit).○ Check propeller for bends or damage.○ Check propeller nuts for tightness, and cotter pin for installation.	Adjust. Replace. Adjust or replace.
Others	<ul style="list-style-type: none">○ Check trim tab (anode) for corrosion or deformity.○ Check boat mounting bolts for tightness.○ Check cooling water flow after engine starts.	Replace. Tighten.

STEERING OPERATION ADJUSTMENT

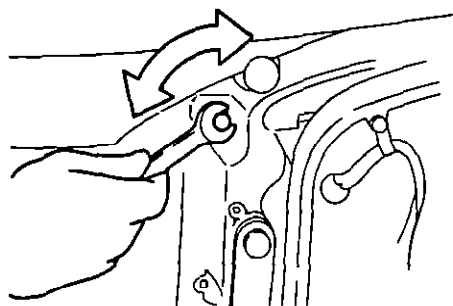
F, EFO and EP types (without
power trim & tilt unit)



NSW080A

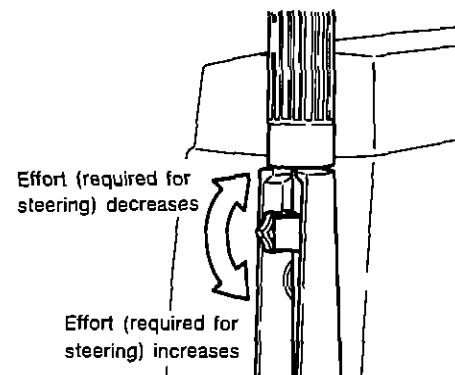
- Adjust the steering adjustment bolt located on the swivel bracket. When the adjustment bolt is turned clockwise, the force required for steering increases; when it is turned counterclockwise, the effort decreases.

EPTO type



NSW081A

THROTTLE GRIP ADJUSTMENT (F AND EFO TYPES)



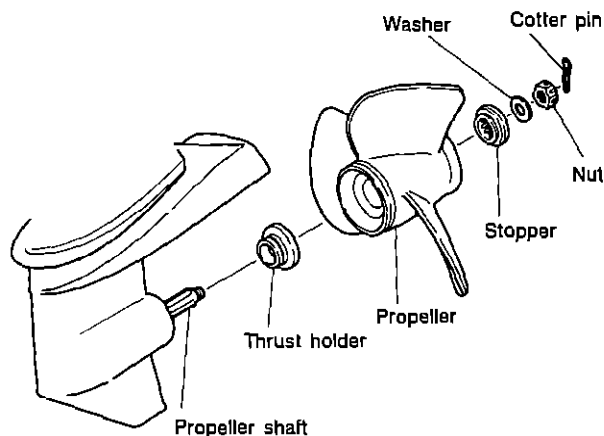
NSW082A

- Adjust the friction piece adjustment screw (located in the steering wheel) to increase or decrease the effort required to operate the throttle grip.

Propeller replacement

Use of a worn or bent propeller may hamper the satisfactory performance, resulting in poor engine operation.

- A. Remove the cotter pin, propeller nut, washer and propeller stopper.
- B. Remove the propeller.
- C. After installing a new propeller, tighten the nut securely.

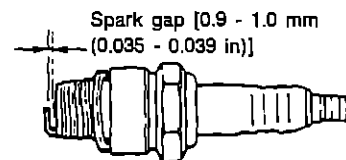


NSW084A

Spark plug replacement

Clean carbon which accumulates in the area around the center electrode of the spark plug. If the spark plug is not suitable for further use, replace with a new one.

- A. Remove the upper motor cover.
- B. Using a 21-mm socket wrench and handle, remove the spark plug by turning it counterclockwise.



NSW085A

CAUTION:

- Before removing the propeller, be sure to remove the spark plug cap.
- Apply a coat of grease to the propeller shaft during installation.
- Discard the old cotter pin; replace with a new one.

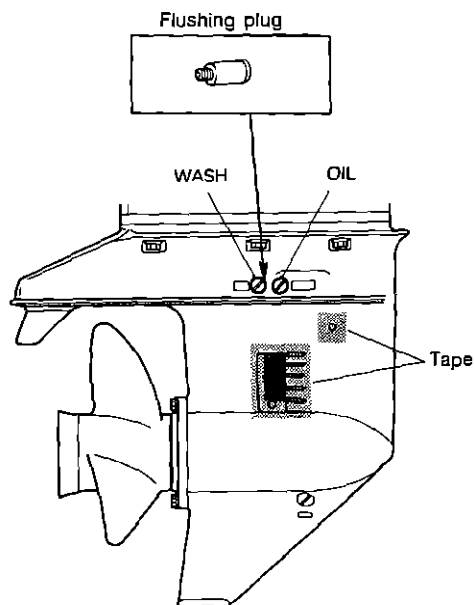
Flushing with tap water

After operation in salt or muddy water, flush the outboard exterior and cooling system using tap water.

- ① Connect the furnished flushing plug to the WASH hole on the gear case, attach a rubber hose and flush the cooling system by running tap water through the hose.

NOTE:

Be sure to plug the water strainer on the gear case with tape in advance.



NSW083A

- ② While running tap water, move the control (shift) lever to "N" (NEUTRAL) and start the engine to remove salt water, dirt, etc. completely.

NOTE:

Run the engine at Idle during flushing.

NOTE:

Before using the flushing plug, remove the propeller.

CAUTION:

Before storing the outboard motor for an extended period of time, be sure to completely clean the outboard motor and flush the cooling system.

A Section	Parts to check	Inspection intervals							Description	Remarks
		Every 10 hours or semi-monthly	Every 30 hours or monthly	Every 50 hours or quarterly	Every 100 hours or semi-annually	Every year	Every 18 months	Every two years		
	Frictional (rotational) parts and grease nipples	○	○	○	○	○	○	○	Apply grease.	
	Power trim & tilt	○			○	○	○	○	Check oil and manual valve operation.	
Lubrication system	Oil tank	○			○	○	○	○	Check for leakage and damage to grip or filter.	
	Oil tube	○			○	○	○	○		
	Oil filter	○			○	○	○	○		

PERIODIC INSPECTION

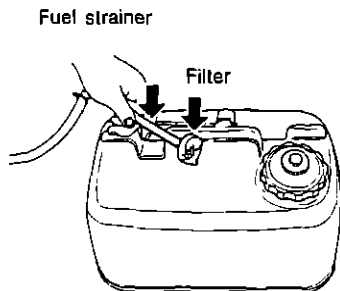
Consult your Nissan marine dealer for periodic inspection and maintenance.

A Section	Parts to check	Inspection intervals							Description	Remarks
		Every 10 hours or semi-monthly	Every 30 hours or monthly	Every 50 hours or quarterly	Every 100 hours or semi-annually	Every year	Every 18 months	Every two years		
Fuel system	Carburetor	★○			○	○	○	○	Disassemble, clean and adjust. ★ Idle adjustment	
	Fuel filter		○	○	○		○	○	Check and clean.	
	Piping	○	○	○	○	○	○	○	Check for damage or leakage.	
Ignition system	Fuel tank			○	○	○	○	○	Clean.	
	Spark plug		○		○	○	○	○	Check spark gap and decarbon.	0.9 - 1.0 mm (0.035 - 0.039 in)
	Ignition timing		○		○	○	○	○	Adjust.	
Starting system	Starter motor		○		○	○	○	○	Check for traces of salt. Check battery wiring.	
	Battery	○	○	○	○	○	○	○	Check installation, electrolyte level and specific gravity.	
	Starter rope	○	○	○	○	○	○	○	Check for wear or breaks.	
Lower motor cover system	Propeller								Check bent blades, damage or wear.	Nissan Gear Oil (SAE #80)
	Gear oil	○ Replace.		○	○	○	○	○	Replace or refill. Check water in oil.	
Bolts and nuts		○	○	○		○		○	Tighten	

NOTE:

Ensure that the oil tank and oil filter are free from water or foreign particles. If they are not, disconnect all tubes between the outboard motor's oil tank and oil pump, and drain contaminated oil.

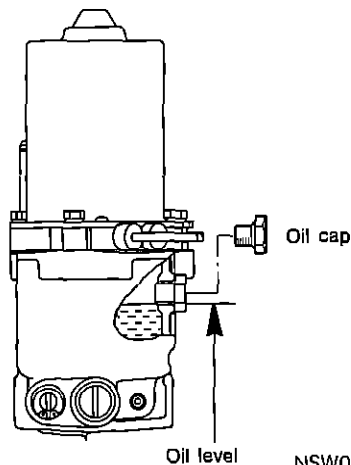
After completely draining the oil, connect the tubes and refill the oil tank with new oil. Bleed air from the oil line as outlined in the instructions on page 40.



NSW090A

Inspection of power trim & tilt oil level and lubrication method

- A. Set the reservoir tank vertical as shown and tilt the outboard motor up when checking the oil level. Remove the oil plug by turning it counterclockwise and check the oil level. The oil level is correct if it is even with the lower line of the plug hole.
- B. Use Dexron II, Automatic Transmission Fluid in the power trim & tilt unit.



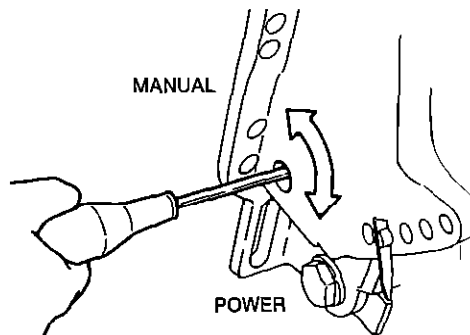
NSW091A

NOTE:

Failure of the outboard motor to tilt up or down can sometimes be caused by air in the oil.

To bleed air, proceed as follows:

- Turn the manual valve to "MANUAL" with the outboard motor installed on the boat, and manually tilt the outboard motor up and down 5 to 6 times.
- After bleeding air, tighten the manual valve by turning it to "POWER".



NSW092A

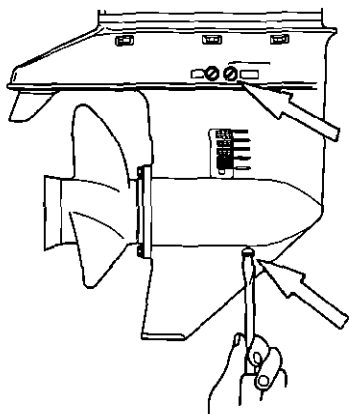
Gear oil replacement

- A. Place a container under the lower case. Remove the drain plug and the filler plug and completely drain oil into the container.

NOTE:

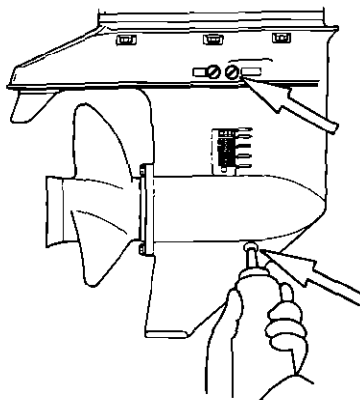
Use Nissan Gear Oil (SAE #80).

Approximate oil quantity 500 cc (16.9 US fl oz, 17.6 Imp fl oz)



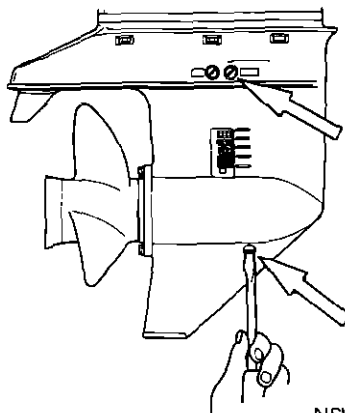
NSW086A

- B. Insert the oil container nozzle into the lower oil plug hole and refill with oil until the oil overflows at the upper oil plug hole.



NSW087A

- C. Tighten the upper oil plug. Remove the container and tighten the lower oil plug.



NSW088A

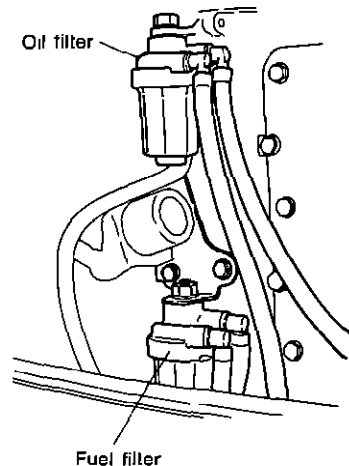
CAUTION:

When replacing gear oil, be sure to remove the spark plug cap in advance.

Filter cleaning

Two filters are used. One is on the oil tank and the other on the engine.

- A. Clean the filter in the oil tank after removing the four screws which secure the housing and detaching the housing.
- B. Clean the fuel and oil filters on the engine after removing the cups.



NSW089A

Specific gravity of electrolyte [at 20°C (68°F)]	1.120	1.160	1.210	1.250	1.280
Terminal voltage (V)	10.5	11.1	11.7	13.2	13.2
Battery condition	Fully discharged	1/4 charged	1/2 charged	3/4 charged	Fully charged

- ② Battery and battery cords for proper installation
- ③ Cleanliness of oil filter
- ④ Fuel and oil levels
- ⑤ Vinyl tubes (between oil tank and oil pump) for entry of air
- ⑥ Shift and throttle operation
- ⑦ When initially starting the outboard motor after long-term storage, warm up the engine for approximately 3 minutes. In addition, run the boat at low speeds for approximately 5 minutes, then at medium speeds for approximately 10 minutes. This will be a sure way of extending the service life of the engine.

NOTE:

After long-term storage of the outboard motor, use one tankful [22.7 liters (6 US gal, 5 Imp gal)] of mixture fuel in the fuel tank, independently of oil in the oil tank.

Mixture of regular gasoline to Nissan Motor Oil Super

50 : 1

Thereafter, use only gasoline in the fuel tank.

WHEN THE MOTOR IS IMMERSSED IN WATER

If the outboard motor is dropped into the water, it must be disassembled and serviced as soon as possible. Delayed servicing may lead to rust formation inside the engine.

Conduct the following temporary procedures and ask the nearest Nissan marine dealer for overhaul.

- ① Remove the motor from the water as quickly as possible, and wash thoroughly with fresh water.
- ② Remove the spark plug. Using the starter rope, drain any water that may have entered the engine through the spark plug hole.
- ③ Drain the water from the carburetor.

- ④ After completely draining water from the engine, pour engine oil into the spark plug hole and carburetor. Then, using the starter rope, distribute oil to every functional part of the engine.

MOORING IN COLD WEATHER

After boating in cold weather (where the ambient temperature drops below 0°C (32°F), cooling water in the water pump may freeze, resulting in damage to the impellers if the boat is moored for an extended period of time.

To prevent freezing, leave the lower unit in the water or tilt the outboard motor up and drain cooling water completely. To drain, remove the safety switch lock and set the main switch key to the START position for 5 seconds to run the engine under no load.

PRE-STORAGE INSPECTION AND SERVICE

Outboard motor

- A. Flush the cooling system and completely drain water. Clean the outboard motor exterior by running tap water, and wipe traces of water off completely. Then, wipe the exterior using a cloth dampened with oil.
- B. Clean the carburetor, fuel tank and fuel pump after draining fuel completely. It is advisable to pour a richer mixture of fuel and oil into the fuel tank. This helps prevent rust formation.
- C. Remove the spark plug. Pour Nissan Engine Oil into the spark plug hole and turn the starter motor a few rotations.
- D. Throw away oil from the oil filter and clean the filter. (Keep the filter dry during the storage.)
- E. Apply a coat of grease to the propeller shaft.
- F. Drain and refill the gear case.
- G. Apply a coat of grease to all frictional parts, bolts and nuts.
- H. Apply a coat of grease to the starter motor shaft and pinion.

NOTE:

Water and salt are enemies of the electrical parts. Wipe away traces of water and salt completely using a dry cloth.

- I. Cover the outboard motor and set it vertical in a dry and cool area.

Battery

- A. Disconnect the cords from the battery.
- B. Completely clean the battery surface using running water and dry with compressed air. If necessary, wipe clean with a dry cloth.
- C. Apply grease or vaseline to the battery terminals.
- D. Charge the battery before storing it, and once a month during storage and check the electrolyte level.
- E. Cover the battery and store it in a dry and cool place.
- F. Before using the battery again, recharge completely.

INSPECTION AFTER LONG-TERM STORAGE

Before starting the outboard motor after long-term storage, it is advisable to contact your Nissan marine dealer for the before-operation inspection. When you do the before-operation inspection yourself, check the following items and take corrective measures as needed.

- ① Battery electrolyte level and specific gravity of the electrolyte
 - Measure voltage across the battery terminals or the specific gravity of the electrolyte to determine whether or not the battery is in good condition. Use the following table as a guide.

Engine will not start.	Engine starts but soon stops.	Engine idling is not steady.	Acceleration is poor.	Engine speed is abnormally high.	Engine speed is abnormally low.	Boat speed is abnormally low.	Engine overheats.	Power trim & tilt unit does not operate.	Probable cause
				•		•	•		Cavitation occurs.
				•	•	•	•		Improper propeller is used.
		•		•	•	•	•		Propeller is damaged or deformed.
				•	•	•	•		Cargo is loaded unevenly.
				•		•	•		Transom height is too high.
					•	•	•		Transom height is too low.
•	•	•			•	•	•		Throttle link is not adjusted properly.
•	•	•			•	•	•		Ignition timing is out of adjustment.
•								•	Battery is discharged, or terminals are loose or corroded.
•								•	Main switch and power trim & tilt switch are faulty.
•									Control lever is not set to "N" (NEUTRAL).
•									Safety switch lock plate is not installed.
•								•	Wiring is broken or improperly connected, or connectors do not make contact.
•									Starter motor is inoperative.
								•	Too much air is in pump chamber.

TROUBLESHOOTING

When a problem occurs, use the following troubleshooting chart as a guide. It is advisable to consult your Nissan marine dealer for checks and repairs.

Engine will not start.	Engine starts but soon stops.	Engine idling is not steady.	Acceleration is poor.	Engine speed is abnormally high.	Engine speed is abnormally low.	Boat speed is abnormally low.	Engine overheats.	Power trim & tilt unit does not operate.	Probable cause
●	●		●						Fuel tank is empty.
●	●	●	●		●	●	●		Fuel line is not properly connected.
●	●	●	●		●	●	●		Air is in fuel line.
●	●	●	●		●	●	●		Fuel line is twisted.
●	●	●	●		●	●	●		Air vent is closed.
●	●	●	●		●	●	●		Fuel filter, fuel pump or carburetor is clogged.
		●	●		●	●	●		Engine is of poor quality.
●	●	●	●			●	●		Fuel is of poor quality.
●	●								Spark plug is wet with fuel.
●	●	●	●		●	●	●		Carburetor is not properly adjusted.
●	●	●	●			●	●		Recirculation pipe is broken.
●	●	●	●		●	●	●		Wrong spark plug is used.
●	●	●	●		●	●			Spark plug is fouled and bridged.
●	●	●	●		●	●			Spark does not occur or is weak.
			●		●	●	●		Insufficient or no cooling water is supplied (due to faulty pump or clogged water inlet).
		●	●			●	●		Thermostat does not operate properly.

PROPELLERS

Light-load boat ←					→ Heavy-load boat (Propeller dimensions: D × P)					
Mark	C14.5	14	C13.5	13	12	11	10	9	8.5	7*
Size mm (in)	286 × 350 (11.3 × 13.8)	260 × 352 (10.2 × 13.9)	279 × 314 (11.0 × 12.4)	262 × 322 (10.3 × 12.7)	268 × 296 (10.6 × 11.7)	268 × 287 (10.6 × 11.3)	275 × 252 (10.8 × 9.9)	276 × 226 (10.9 × 8.9)	285 × 220 (11.2 × 8.7)	290 × 180 (11.4 × 7.1)

*: 4-blade propeller type (Others: 3-blade types)

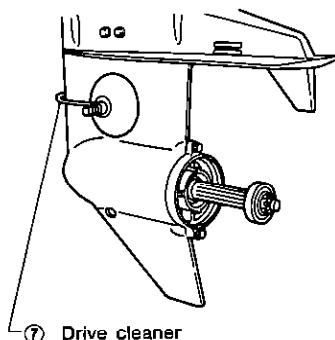
Transom
(for S and L
types on NS50D)

Transom
(for S and L
types on NS40D,
for XL type on
NS50D)

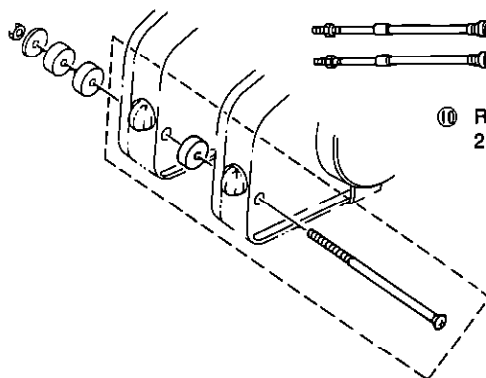
Transom
(for XL type
on NS40D)

ACCESSORIES

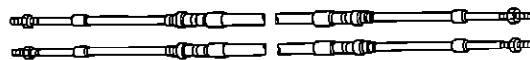
	Description		Remarks
Service tool	Tool bag	1	
	21-mm socket wrench	1	
	Socket wrench (10 x 13)	1	
	Socket wrench handle	1	
	Pliers	1	
	Screwdriver (replaceable cross-head and slot-head blade type)	1	
	Wrench (10 x 13)	1	
	Wrench (17 x 19)	1	
Spare parts	Safety rope [6 x 1,600 mm (0.24 x 62.99 in)]	1	
	Spark plug	3	(For Canada) NS40D: NGKB7HS-10 (NGKBR7HS-10) NS50D: NGKB8HS-10 (NGKBR8HS-10)
	Cotter pin	2	Pin dia. x length = 3 x 25 mm (0.12 x 0.98 in)
Other accessories	Bracket mounting bolt	4	12 mm
	Bracket mounting nut	4	12 mm
	Washers A (large) and B (small)	4 each	
	Fuel tank (with primary valve)	1	Separate type
	Flushing plug	1	For cleaning outboard motor
	Remote control box set	1	RC5A or RC5B (EP type)
	Drag link set	1	EP
	Tachometer	1	EP
	Trim meter	1	EPT0
	Meter lead wire	1	EP
	Vinyl motor cover	1	
	Owner's manual	1	



⑦ Drive cleaner
(used for flushing with water)



⑨ Twin control box kit (for two-engine mount type)



⑩ Remote control cable [19 types ranging from 2.1 to 9.1 m (7 to 30 ft.)]



⑪ Nissan Grease
(50 g and 250 g)



⑧ Propeller



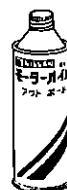
⑫ Nissan Gear Oil
(260 cc and 500 cc)



⑬ Touch-up spray



⑭ Nissan Motor Oil Super
(5 L) (EFO/EP type)

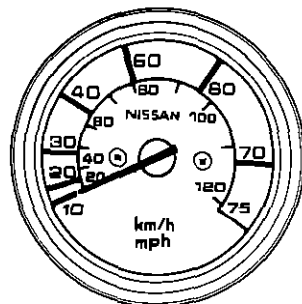


⑭ Nissan Motor Oil
(0.5 L, 1 L and 20 L)
(F type)

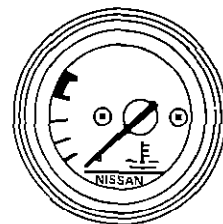
NSW094A

OPTIONAL ACCESSORIES

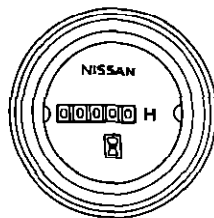
For details concerning accessories, contact the nearest Nissan marine dealer.



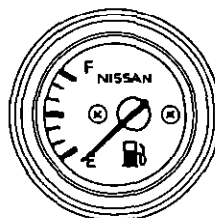
① Speedometer



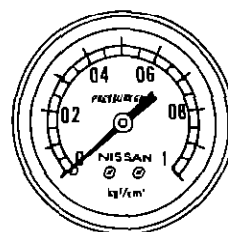
⑤ Water temperature meter



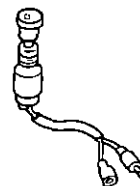
② Hourmeter (Service meter)



③ Fuel meter

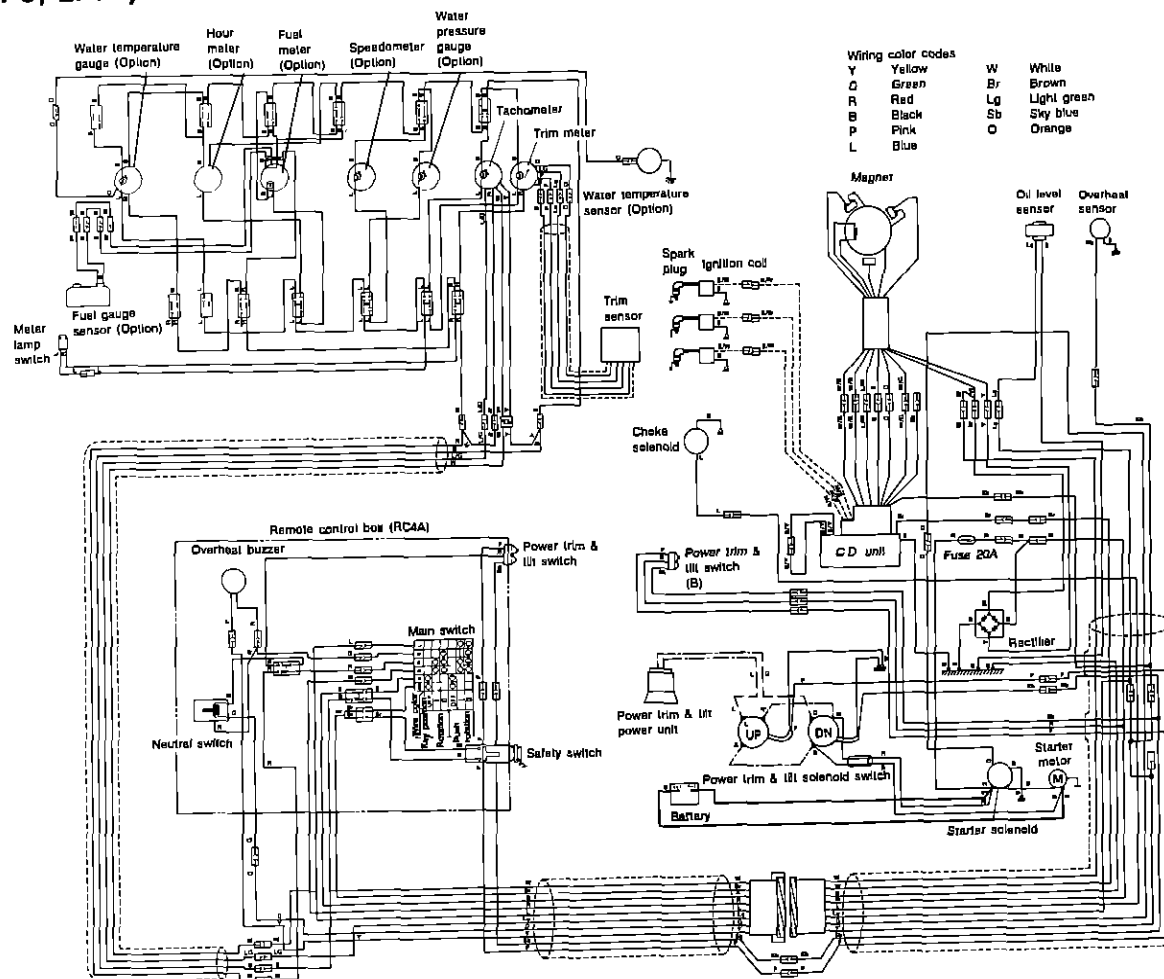


④ Water pressure meter



⑥ Meter lamp switch

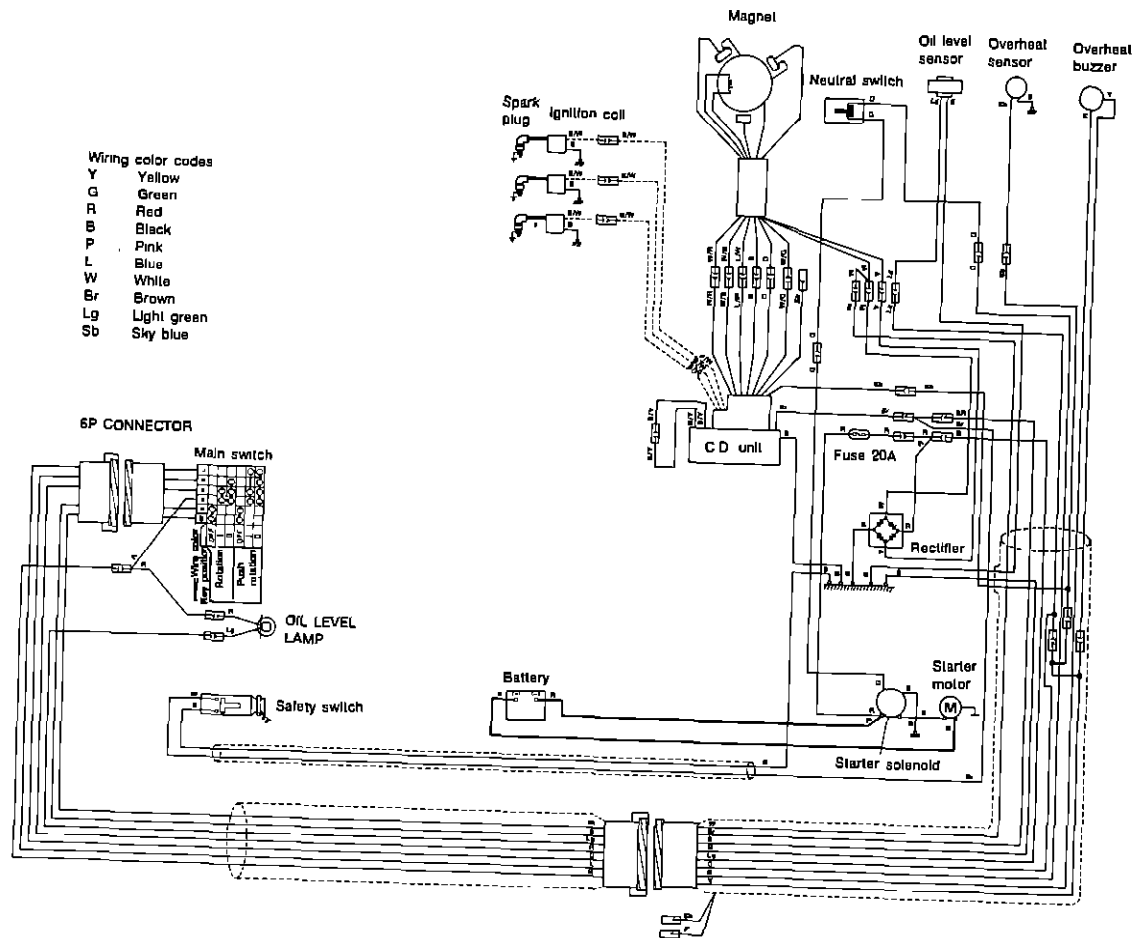
NS40 (EPO, EPTO)
NS50 (EPO, EPTO)



WIRING DIAGRAM

NS40D (F, EFO)

NS50D (EFO)





NISSAN MOTOR CO., LTD.

Tokyo, Japan

Edition: July 1987
Printing: February 1992
Printed in Japan

Pub. No. M-408-A
M-2022200-TS

