PREFACE

This manual has been prepared by the Yamaha Motor Company primarily for use by Yamaha dealers and their trained mechanics when performing maintenance procedures and repairs to Yamaha equipment. It has been written to suit the needs of persons who have a basic understanding of the mechanical and electrical concepts and procedures inherent in the work, for without such knowledge attempted repairs or service to the equipment could render it unsafe or unfit for use.

Because the Yamaha Motor Company Ltd. has a policy of continuously improving its products, models may differ in detail from the descriptions and illustrations given in this publication. Use only the latest edition of this manual. Authorized Yamaha dealers are notified periodically of modifications and significant changes in specifications and procedures, and these are incorporated in successive editions of this manual.

A10001-0*

GP760, GP1200
SERVICE MANUAL

1st Edition, March 1997

Printed in USA
LIT-18616-01-76

HOW TO USE THIS MANUAL

MANUAL FORMAT

All of the procedures in this manual are organized in a sequential, step-by-step format. The information has been complied to provide the mechanic with an easy to read, handy reference that contains comprehensive explanations of all disassembly, repair, assembly, and inspection operations.

In this revised format, the condition of a faulty component will precede an arrow symbol and the course of action required will follow the symbol, e.g.,

- Bearings
  Pitting/Damage → Replace.

To assist you to find your way about this manual, the Section Title and Major Heading is given at the head of every page.

An Index to contents is provided on the first page of each Section.

MODEL INDICATION

Multiple models are shown in this manual. These indications are noted as follows.

Model name	WaveRunner GP760	WaveRunner GP1200
	GP760	GP1200
Indication	GP760	GP1200

THE ILLUSTRATIONS

Some illustrations in this manual may differ from the model you have. This is because a procedure described may relate to several models, though only one may be illustrated. (The name of model described will be mentioned in the description).

REFERENCES

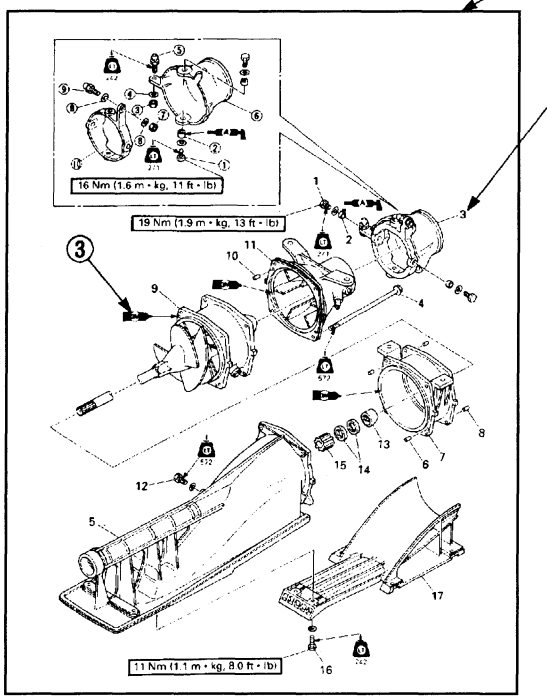
These have been kept to a minimum; however, when you are referred to another section of the manual, you are told the page number to go to.

HOW TO READ DESCRIPTIONS

1. A disassembly installation job mainly consists of the exploded diagram ①.
2. The numerical figures represented by the number ② indicates the order of the job steps.
3. The symbols represented by the number ③ indicates the contents and notes of the job. For the meanings of the symbols, refer to the next page(s).
4. The REMOVAL AND INSTALLATION CHART ④ is attached to the exploded diagram and explains the job steps, part names, notes for the jobs, etc.
5. The SERVICE POINTS, other than the exploded diagram, explains in detail the items difficult to explain in the exploded diagram or REMOVAL AND INSTALLATION CHART, the Service points requiring the detailed description ⑤, etc.

JET PUMP NOZZLE, DUCT AND INTAKE

NOZZLE, DUCT AND INTAKE
EXPLODED DIAGRAM



6-3

JET PUMP NOZZLE, DUCT AND INTAKE

REMOVAL AND INSTALLATION CHART

Step	Procedure/Part name	Q'ty	Service points
	NOZZLE, DUCT AND INTAKE DISASSEMBLY		Follow the left "Step" for removal
	Jet pump unit		Refer to the "JET PUMP UNIT REMOVAL" section.
1	Bolt (with washer)	2	
2	Collar	2	
3	Nozzle deflector assembly	1	
4	Bolt	4	
5	Intake duct	1	
6	Pin	2	
7	Housing	1	
8	Pin	2	
9	Impeller duct assembly	1	
10	Pin	2	
11	Nozzle	1	
12	Bolt (with washer)	1	
13	Spacer	1	
14	Oil seal	2	
15	Bushing	1	
16	Bolt (with washer)	6	
17	Intake screen	1	
	NOZZLE DEFLECTOR DISASSEMBLY		
⑥	Bolt (with washer)	2	6 × 20 mm
⑦	Collar	2	
⑧	Nut	1	M6
⑨	Plate washer	2	
⑩	Ball joint	1	M6
⑪	Nozzle deflector	1	
⑫	Nut	1	M8
⑬	Plate washer	2	
⑭	Ball joint	1	M8
⑮	Trim ring	1	
			Reverse the removal steps for installation.

6-4

WARNINGS, CAUTIONS AND NOTES

Attention is drawn to the various Warnings, Cautions and Notes which distinguish important information in this manual in the following ways.

⚠ The Safety Alert Symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

⚠ WARNING

Failure to follow WARNING instructions could result in severe injury or death to the machine operator, a bystander, or a person inspecting or repairing the water vehicle.

CAUTION:

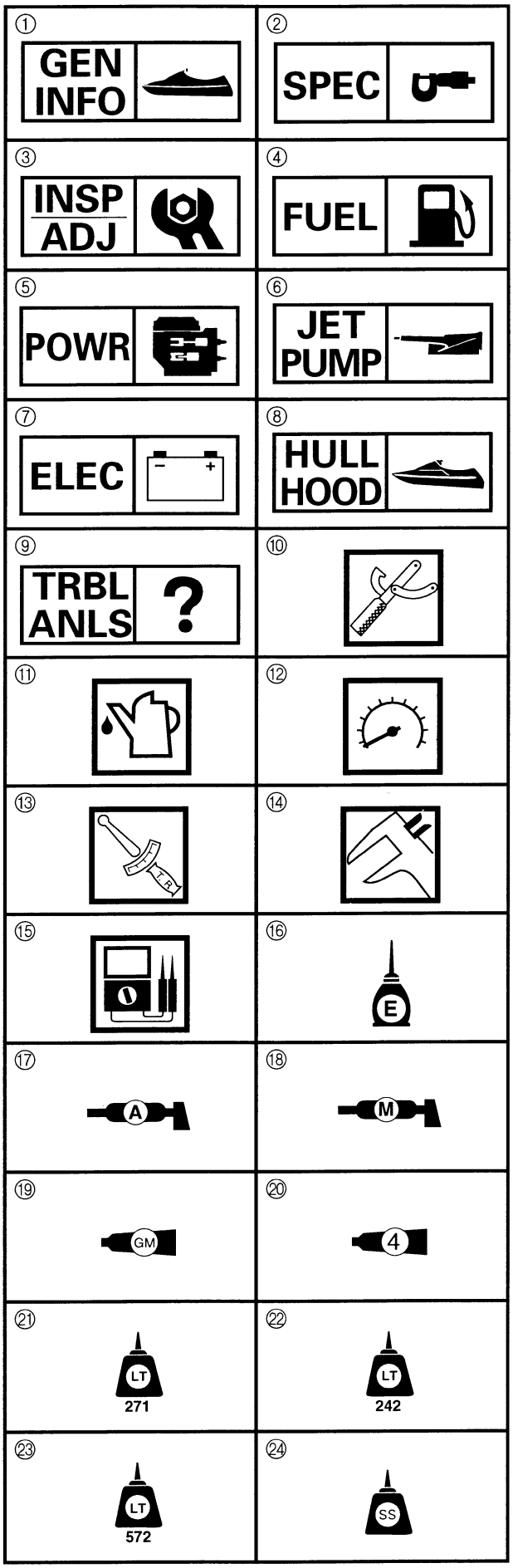
A CAUTION indicates special precautions that must be taken to avoid damage to the water vehicle.

NOTE:

A NOTE provides key information to make procedures easier or clearer.

IMPORTANT:

This part has been subjected to change of specification during production.



SYMBOLS

Symbols ① to ⑨ are designed as thumb-tabs to indicate the content of a chapter:

① General Information
② Specifications
③ Periodic Inspection and Adjustment
④ Fuel System
⑤ Power Unit
⑥ Jet pump Unit
⑦ Electrical System
⑧ Hull and Hood
⑨ Trouble analysis

Symbols ⑩ to ⑮ indicate specific data:

⑩ Special tool
⑪ Specified liquid
⑫ Specified engine speed
⑬ Specified torque
⑭ Specified measurement
⑮ Specified electrical valve
[Resistance (Ω), Voltage (V), Electric current (A)]

Symbol ⑯ to ⑱ in an exploded diagram indicate grade of lubricant and location of lubrication point:

⑯ Apply Yamaha 2-stroke outboard motor oil
⑰ Apply water resistant grease (Yamaha grease A, Yamaha marine grease)
⑱ Apply molybdenum disulfide grease

Symbols ⑲ to ㉔ in an exploded diagram indicate grade of sealing or locking agent, and location of application point:

⑲ Apply Gasket maker®
⑳ Apply Yamahabond #4 (Yamaha bond No.4)
㉑ Apply LOCTITE® No. 271 (Red LOCTITE)
㉒ Apply LOCTITE® No. 242 (Blue LOCTITE)
㉓ Apply LOCTITE® No. 572
㉔ Apply Silicon sealant

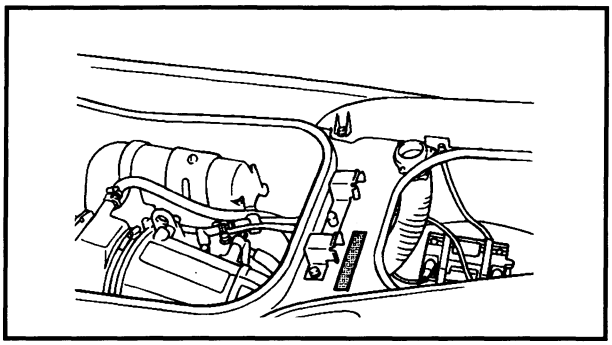
NOTE:

In this manual, the above symbols may not be used in every case.

A30000-0

INDEX

CHAPTER 1
GENERAL INFORMATION



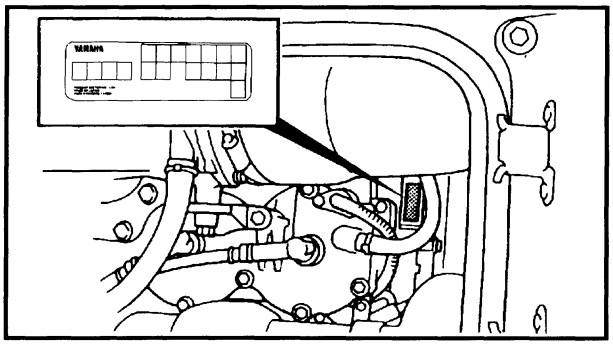
A60700-0*

IDENTIFICATION NUMBERS

PRIMARY I.D. NUMBER

The primary I.D. number is stamped on a label attached to the deck under the rear seat.

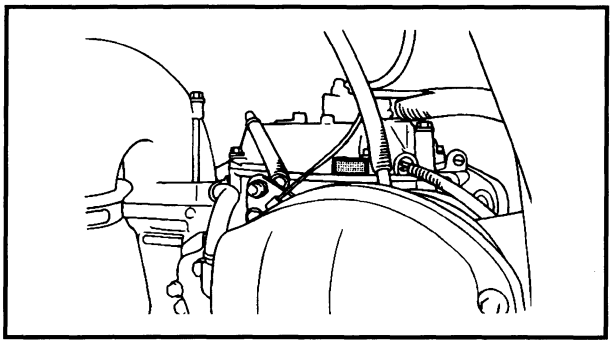
Starting primary I.D. number:
GP7: 800101 ~, 600101 ~ (EUR)
GP8: 800101 ~, 600101 ~ (EUR)



ENGINE SERIAL NUMBER

The engine serial number is stamped on a label attached to the crankcase.

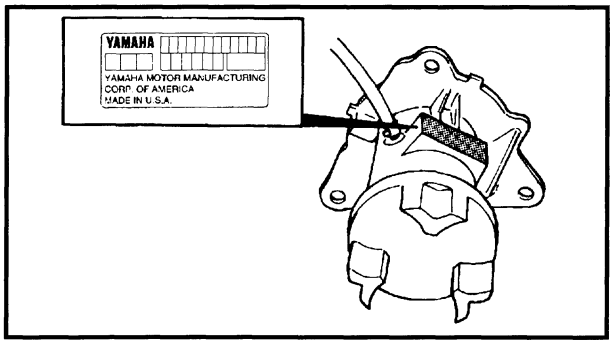
Starting serial number:
65V: 000101 ~
65U: 000101 ~

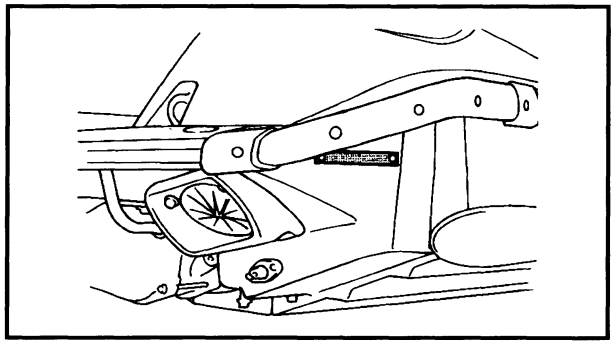


PUMP SERIAL NUMBER

The jet pump unit serial number is stamped on a label attached on the intermediate housing.

Starting serial number:
65V: 500101 ~



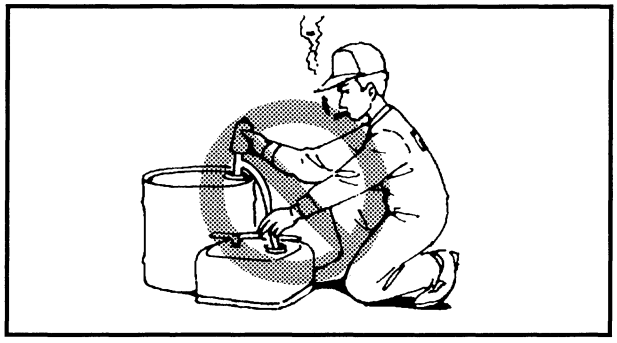


HULL IDENTIFICATION NUMBER (H.I.N.)

The H.I.N. is stamped on a plate attached to the hull beside the exhaust outlet.

SAFETY WHILE WORKING

The procedures given in this manual are those recommended by Yamaha to be followed by Yamaha dealers and their mechanics.

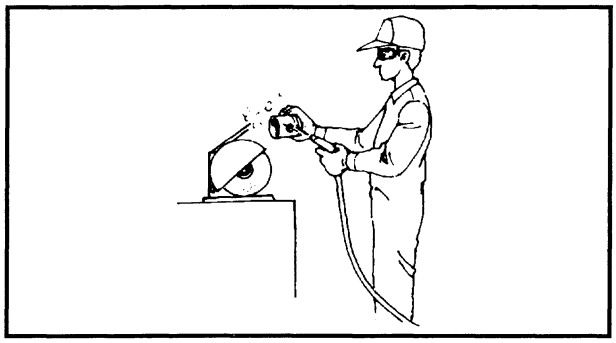


FIRE PREVENTION

Gasoline (petrol) is highly flammable.
Petroleum vapor is explosive if ignited. Do not smoke while handling gasoline (petrol), and keep it away from heat, sparks, and open flames.

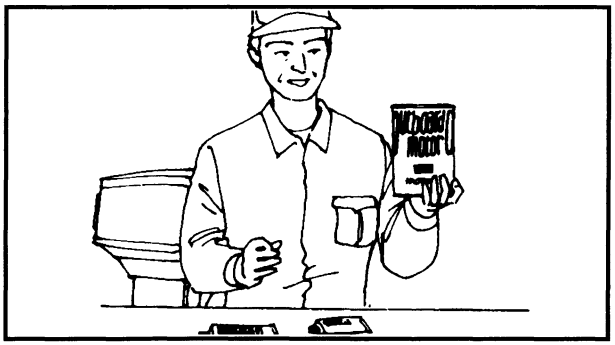
VENTILATION

Petroleum vapor is heavier than air and if inhaled in large quantities will not support life. Engine exhaust gases are harmful to breathe. When test-running an engine indoors, maintain good ventilation.



SELF-PROTECTION

Protect your eyes with suitable safety spectacles or safety goggles when using compressed air, when grinding or when doing any operation which may cause particles to fly off.
Protect hands and feet by wearing safety gloves or protective shoes if appropriate to the work you are doing.

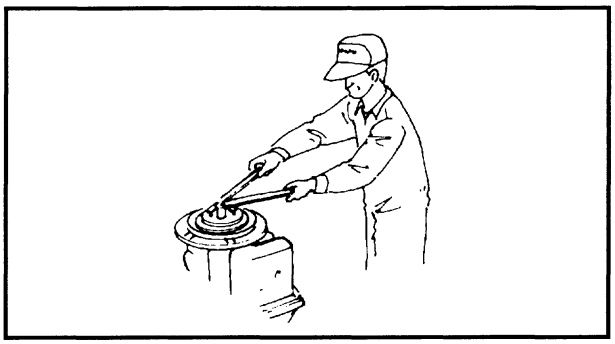


OILS, GREASES AND SEALING FLUIDS

Use only genuine Yamaha oils, greases and sealing fluids or those recommended by Yamaha.

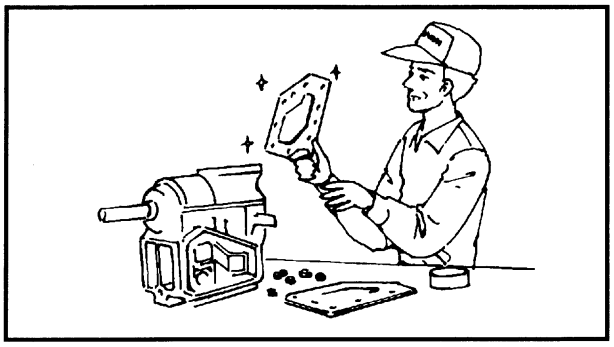
Under normal conditions of use, there should be no hazards from the use of the lubricants mentioned in this manual, but safety is all-important, and by adopting good safety practises, any risk is minimized. A summary of the most important precautions is as follows

1. While working, maintain good standards of personal and industrial hygiene.
2. Clothing which has become contaminated with lubricants should be changed as soon as practicable, and laundered before further use.
3. Avoid skin contact with lubricants; do not, for example, place a soiled wiping-rag in one's pocket.
4. Hands, and any other part of the body which have been in contact with lubricants or lubricant-contaminated clothing, should be thoroughly washed with hot water and soap as soon as practicable.
5. To protect the skin, the application of a suitable barrier cream to the hands before working is recommended.
6. A supply of clean lint-free cloths should be available for wiping purposes.

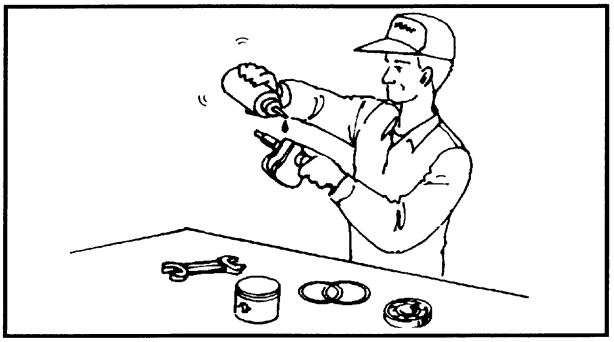


GOOD WORKING PRACTICES

1. The right tools
   Use the special tools that are designed to protect parts from damage. Use the right tool in the right manner — don't improvise.
2. Tightening torque
   Follow the torque tightening instructions. When tightening bolts, nuts and screws, tighten the larger sizes first, and tighten inner-positioned fixings before outer-positioned ones.

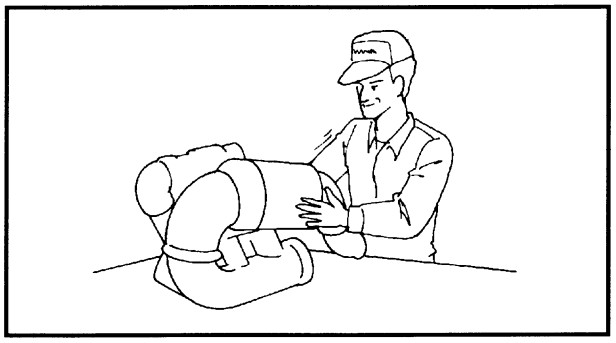


3. Non-reusable items
   Always use new gaskets, packings, O-rings, oil seals, split-pins and circlips etc. on reassembly.



DISASSEMBLY AND ASSEMBLY

1. Clean parts with compressed-air on disassembling them.
2. Oil the contact surfaces of moving parts on assembly.



3. After assembly, check that moving parts operate normally.

4. Install bearings with the manufacturer's markings on the side exposed to view, and liberally oil the bearings.

CAUTION:

Do not use compressed air to spin the bearings dry. This causes damage to the bearing surfaces.

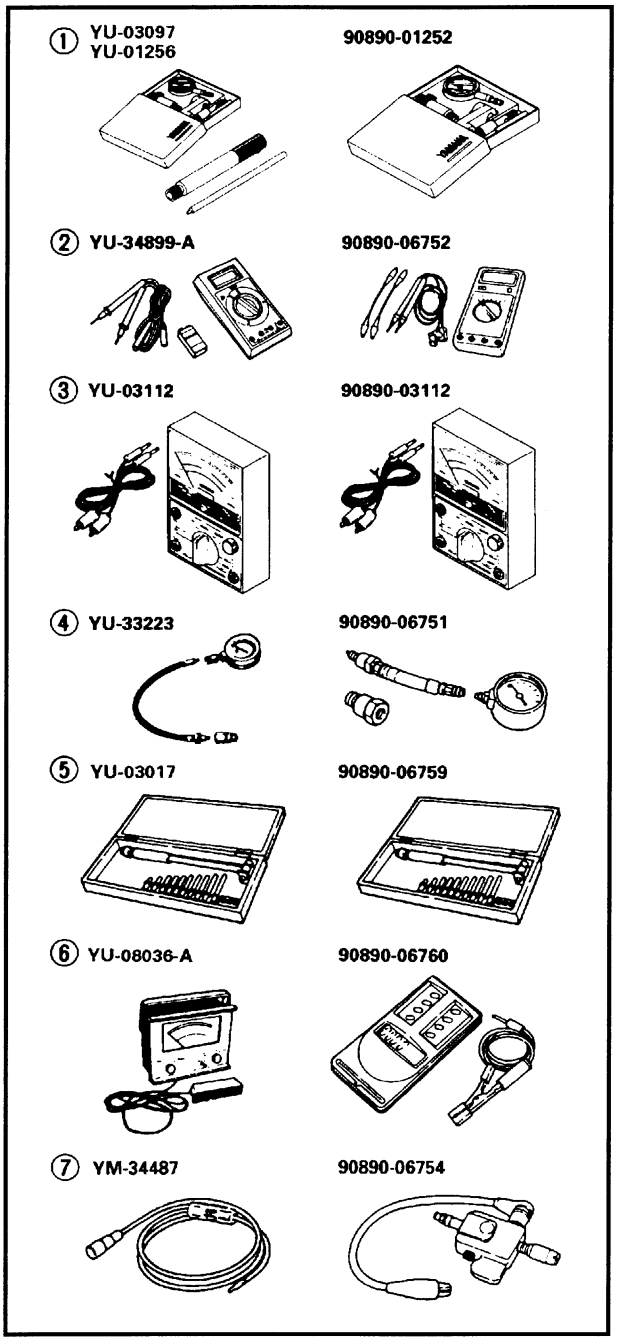
5. When installing oil seals, apply a light coating of water-resistant grease to the outside diameter.

SPECIAL TOOLS

Use of the correct special tools recommended by Yamaha will aid the work and enable accurate assembly and tune-up. Improvisations and use of improper tools can cause damage to the equipment.

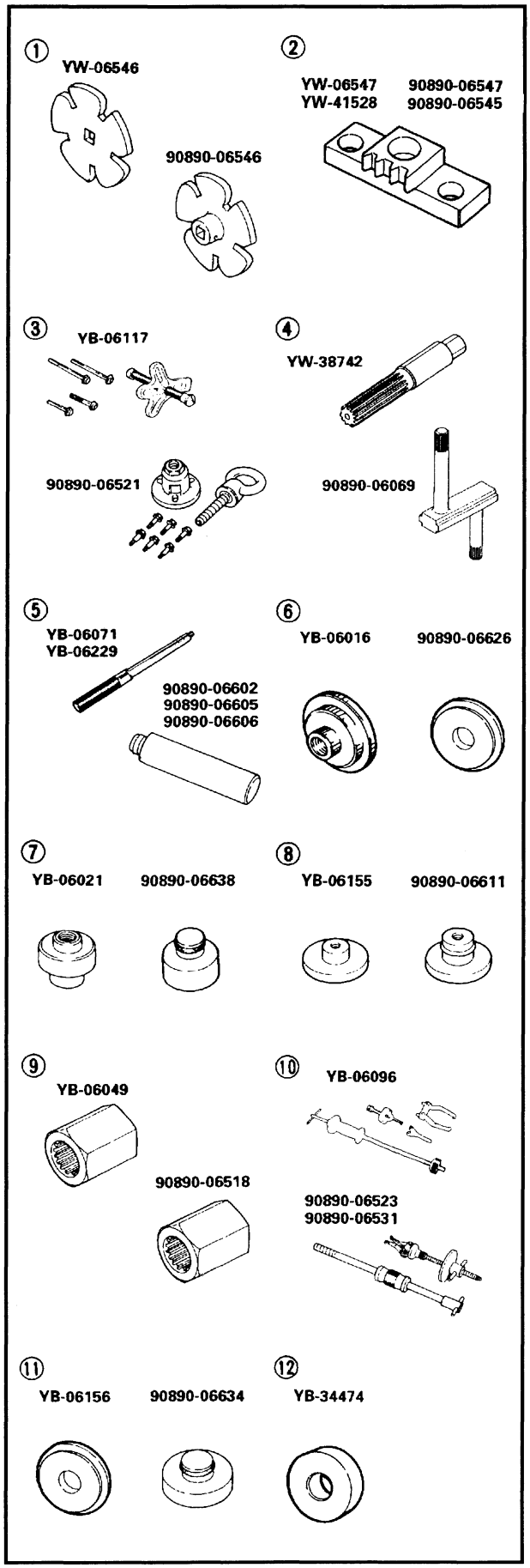
NOTE:

- For U.S.A. and Canada, use part numbers starting with "YB-", "YU-" or "YW-".
- For other countries, use part numbers starting with "90890-".



MEASURING

1. Dial gauge and stand
   P/N. YU-03097, YU-01256
   90890-01252
2. Digital multi meter
   P/N. YU-34899-A
   90890-06752
3. Pocket tester
   P/N. YU-03112
   90890-03112
4. Compression gauge
   P/N. YU-33223
   90890-06751
5. Cylinder gauge set
   P/N. YU-03017
   90890-06759
6. Engine tachometer
   P/N. YU-08036-A
   90890-06760
7. Spark gap tester
   P/N. YM-34487
   90890-06754



REMOVAL AND INSTALLATION

1. Coupler wrench
   P/N. YW-06546
   90890-06546
2. Flywheel holder
   P/N. YW-06547 (GP760),
   YW-41528 (GP1200)
   90890-06547 (GP760),
   90890-06545 (GP1200)
3. Flywheel puller
   P/N. YB-06117
   90890-06521
4. Shaft holder (Intermediate shaft)
   P/N. YW-38742
   90890-06069
5. Driver rod
   (Intermediate shaft and jet pump)
   P/N. YB-06071, YB-06229
   90890-06602
   90890-06605
   90890-06606
6. Bearing outer race attachment
   (Intermediate shaft)
   P/N. YB-06016
   90890-06626
7. Bearing attachment
   (Jet pump bushing and oil seal)
   P/N. YB-06021
   90890-06638
8. Needle bearing attachment
   (Jet pump oil seal)
   P/N. YB-06155
   90890-06611
9. Drive shaft holder (Impeller)
   P/N. YB-06049
   90890-06518
10. Slide hammer set (Jet pump bearing)
    P/N. YB-06096
    90890-06523
    90890-06531
11. Ball bearing attachment
    (Jet pump oil seal)
    P/N. YB-06156
    90890-06634
12. Bearing inner race attachment
    (Jet pump bearing)
    P/N. YB-34474

CHAPTER 2
SPECIFICATIONS

GENERAL SPECIFICATIONS

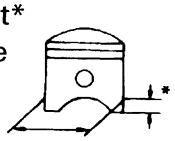
Item	Unit	Model	
		GP760	GP1200
MODEL CODE:			
Hull		GP7	GP8
Engine		65V	65U
DIMENSIONS:			
Length	mm (in)	2,860 (112.6)	2,860 (112.6)
Width	mm (in)	1,120 (44.1)	1,120 (44.1)
Height	mm (in)	970 (38.2)	970 (38.2)
Dry weight	kg (lb)	214 (472)	238 (525)
Vehicle capacity		2	2
PERFORMANCE:			
Maximum output	kW (HP)/r/min.	66.2 (90)/6,350	99.3 (135)/6,750
Maximum fuel consumption	ℓ/h (US gal/h, Imp gal/h)	38 (10.04, 8.36)	53 (14.0, 11.7)
Cruising range	hr.	1.3	1.0
ENGINE:			
Engine type		2-stroke	2-stroke
Number of cylinders		2	3
Displacement	cm^3 (cu. in)	754 (46.0)	1,131 (69.0)
Bore × stroke	mm (in)	84.0 × 68.0 (3.31 × 2.68)	84.0 × 68.0 (3.31 × 2.68)
Compression ratio		F:7.2, R:6.8 : 1	6 : 1
Intake system		Reed valve	Reed valve
Carburetor type		Mikuni BN44	Mikuni BN44
Number of carburetors		2	3
Enrichment control		Choke valve	Choke valve
Scavenging system		Loop charge	Loop charge
Lubrication system		Oil injection	Oil injection
Cooling system		Water	Water
Starting system		Electric	Electric
Ignition system		Digital CDI	Digital CDI
Ignition timing	Degree	15 BTDC ~ 22 BTDC	15 BTDC ~ 22 BTDC
Spark plug (NGK)		BR8HS	BR8HS
Battery capacity	V/kC (A•h)	12 - 68.4 (19)	12 - 68.4 (19)
Lighting coil	A/rpm	2 ~ 4/5,500	6 ~ 8/6,500
Propulsion system		Jet pump	Jet pump
DRIVE UNIT:			
Jet pump type		Axial flow, single stage	Axial flow, single stage
Impeller rotation		Counterclockwise	Counterclockwise
Transmission		Direct drive from engine	Direct drive from engine
Nozzle angle (horizontal)	Degree	23 ± 1	23 ± 1
Nozzle angle (vertical)	Degree	3 ± 12	0 ± 12
Trim system		Manual 5 positions	Manual 5 positions
Reverse system		N/A	N/A

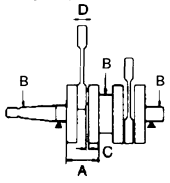
Item	Unit	Model	
		GP760	GP1200
FUEL AND OIL:			
Fuel		Regular unleaded gasoline	Regular unleaded gasoline
Fuel rating	PON*1/RON*2	86/90	86/90
Oil		2-stroke outboard motor oil	2-stroke outboard motor oil
Fuel and oil mixing ratio (wide open throttle)		50 : 1	50 : 1
Fuel tank capacity	ℓ (US gal, Imp gal)	50 (13.2, 11.0)	50 (13.2, 11.0)
Reserve capacity	ℓ (US gal, Imp gal)	8.8 (2.32, 1.94)	8.8 (2.32, 1.94)
Oil tank capacity	ℓ (US gal, Imp gal)	4 (1.06, 0.88)	4 (1.06, 0.88)

*1: Pump Octane Number
*2: Research Octane Number

MAINTENANCE SPECIFICATIONS

ENGINE

Item	Unit	Model	
		GP760	GP1200
Cylinder head:			
Warpage limit	mm (in)	0.1 (0.004)	0.1 (0.004)
Compression pressure	KPa (kg/cm²)	—	—
Cylinder:			
Bore size	mm (in)	84.00 ~ 84.02 (3.307 ~ 3.308)	84.00 ~ 84.02 (3.307 ~ 3.308)
Taper limit	mm (in)	0.08 (0.003)	0.08 (0.003)
Out of round limit	mm (in)	0.05 (0.002)	0.05 (0.002)
Wear limit	mm (in)	84.1 (3.31)	84.1 (3.31)
Piston:			
Diameter	mm (in)	83.902 ~ 83.921 (3.3032 ~ 3.3040)	83.902 ~ 83.921 (3.3032 ~ 3.3040)
Measuring point* 	mm (in)	10 (0.39)	10 (0.39)
Piston clearance	mm (in)	0.100 ~ 0.105 (0.0039 ~ 0.0041)	0.100 ~ 0.105 (0.0039 ~ 0.0041)
Wear limit	mm (in)	0.155 (0.0061)	0.155 (0.0061)
Piston pin bore inside diameter	mm (in)	20.004 ~ 20.025 (0.7876 ~ 0.7884)	20.004 ~ 20.025 (0.7876 ~ 0.7884)
Piston ring:			
Top			
Type		Keystone	Keystone
Dimensions (B × T)	mm (in)	1.5 × 3.2 (0.06 × 0.13)	1.5 × 3.0 (0.06 × 0.12)
End gap (installed) 	mm (in)	0.20 ~ 0.40 (0.008 ~ 0.016)	0.20 ~ 0.40 (0.008 ~ 0.016)
Ring groove clearance (installed)	mm (in)	0.02 ~ 0.07 (0.001 ~ 0.003)	0.02 ~ 0.07 (0.001 ~ 0.003)
2nd			
Type		Keystone	Keystone
Dimensions (B × T)	mm (in)	1.5 × 3.2 (0.06 × 0.13)	1.5 × 3.0 (0.06 × 0.12)
End gap (installed)	mm (in)	0.20 ~ 0.40 (0.008 ~ 0.016)	0.20 ~ 0.40 (0.008 ~ 0.016)
Ring groove clearance (installed)	mm (in)	0.02 ~ 0.07 (0.001 ~ 0.003)	0.02 ~ 0.07 (0.001 ~ 0.003)
Piston pin:			
Diameter	mm (in)	19.995 ~ 20.000 (0.7872 ~ 0.7874)	19.995 ~ 20.000 (0.7872 ~ 0.7874)
Wear limit		19.98 (0.786)	19.98 (0.786)

Item	Unit	Model	
		GP760	GP1200
Crankshaft assembly:			
Crank width "A"	mm (in)	61.95 ~ 62.00 (2.439 ~ 2.441)	61.95 ~ 62.00 (2.439 ~ 2.441)
Deflection limit "B"	mm (in)	0.05 (0.002)	0.05 (0.002)
Big end side clearance "C"	mm (in)	0.25 ~ 0.75 (0.010 ~ 0.030)	0.25 ~ 0.75 (0.010 ~ 0.030)
Maximum small end axial play "D" 	mm (in)	2.0 (0.08)	2.0 (0.08)
Carburetor:			
Type		Floatless	Floatless
Manufacturer		Mikuni	Mikuni
Number of carburetors		2	3
Identification mark		65V01/02	65U01/02/03
Main nozzle (M.N.)	mm (in)	3.2 (0.13)	3.2 (0.13)
Main jet (M.J.)		130 (01)/132.5 (02)	135
Pilot jet (P.J.)		115	100 (01)/95 (02)/ 97.5 (03)
Low speed screw	turns out	1-5/8 ± 1/4	1-1/4 (01, 02)/ 1-1/8 (03) ± 1/4
Throttle valve		160	140
Valve seat size	mm (in)	1.5 (0.06)	1.5 (0.06)
High speed screw	turns out	3/8 ± 1/4	1/2 (01, 03)/ 7/8 (02) ± 1/4
Trolling speed	r/min.	1,300 ± 50	1,300 ± 50
Reed valve:			
Thickness	mm (in)	0.4 (0.02)	0.5 (0.02)
Valve stopper height	mm (in)	9.0 ± 0.2 (0.35 ± 0.01)	12.5 ± 0.2 (0.49 ± 0.01)
Valve warpage limit	mm (in)	0.2 (0.01)	0.2 (0.01)

JET UNIT

Item	Unit	Model	
		GP760	GP1200
Jet pump:			
Impeller material		SUS	SUS
Number of impeller blades		3	3
Impeller pitch	degree	15.5	15.2
Impeller clearance	mm (in)	0.32 ~ 0.40 (0.013 ~ 0.016)	0.25 ~ 0.35 (0.010 ~ 0.014)
Impeller clearance limit	mm (in)	0.6 (0.024)	0.6 (0.024)
Drive shaft runout limit	mm (in)	0.3 (0.012)	0.3 (0.012)
Nozzle diameter	mm (in)	82.0 (3.228)	86.0 (3.386)

HULL AND HOOD

Item	Unit	Model	
		GP760	GP1200
Free play:			
Throttle lever free play	mm (in)	4 ~ 7 (0.16 ~ 0.28)	4 ~ 7 (0.16 ~ 0.28)
Choke cable free play	mm (in)	1 ~ 6 (0.04 ~ 0.24)	1 ~ 6 (0.04 ~ 0.24)
Trim control wheel free play	mm (in)	3 ~ 7 (0.12 ~ 0.28)	3 ~ 7 (0.12 ~ 0.28)

ELECTRICAL

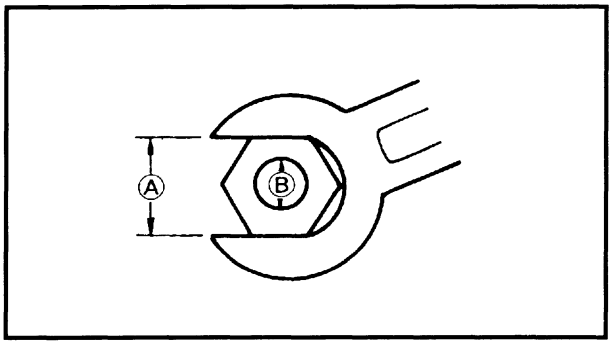
Item	Unit	Model	
		GP760	GP1200
Battery:			
Type		Fluid	Fluid
Capacity	V/kC (A•h)	12/68.4 (19)	12/68.4 (19)
Ignition timing:			
Ignition timing (at 1,200 r/min.)	degree	15 BTDC	15 BTDC
Ignition timing (at 5,500 r/min.)	degree	F: 20, R: 18 BTDC	F: 22, C: 19, R: 17 BTDC
Stator:			
Pulser coil resistance	Ω (color)	445.5 ~ 544.5 (W/R – W/B)	248.0 ~ 372.0 (B – W/R, W/B, W/G)
Charge coil resistance 1	Ω (color)	316.8 ~ 387.2 (Br – L)	172.0 ~ 258.0 (B/R – Br)
Charge coil resistance 2	Ω (color)	—	656.0 ~ 984.0 (L – B/R)
Lighting coil resistance	Ω (color)	1.14 ~ 1.40 (G – G)	0.56 ~ 0.84 (G – G)
Charging current (minimum)	A/r/min.	2 ~ 4/5,500	4 ~ 6/5,500
Ignition coil:			
Minimum spark gap	mm (in)	9 (0.35)	9 (0.35)
Primary coil resistance	Ω (color)	0.078 ~ 0.106 (Or – B)	0.048 ~ 0.072 (B/W – B)
Secondary coil resistance	kΩ (color)	14.3 ~ 30.5 (High tension cords)	2.7 ~ 4.1 (High tension cord-B)
Rectifier-regulator:			
Regulated voltage	V	14.3 ~ 15.3	14.5 ~ 15.5
Thermo switch:			
On temperature	°C (°F)	90 ~ 96 (194 ~ 205)	90 ~ 96 (194 ~ 205)
Off temperature	°C (°F)	76 ~ 90 (169 ~ 194)	76 ~ 90 (169 ~ 194)
Starter motor:			
Brush length	mm (in)	12.5 (0.49)	12.5 (0.49)
Wear limit	mm (in)	6.5 (0.26)	6.5 (0.26)
Commutator undercut	mm (in)	0.7 (0.028)	0.7 (0.028)
Limit	mm (in)	0.2 (0.01)	0.2 (0.01)
Commutator diameter	mm (in)	28.0 (1.10)	28.0 (1.10)
Limit	mm (in)	27 (1.06)	27 (1.06)
Fuse:			
Rating	V-A	12-10	12-10

TIGHTENING TORQUE

SPECIFIED TORQUE

Part to tightened		Part name	Size	Q'ty		Tightening torque			Remarks
				760	1200	Nm	m•kg	ft•lb	
ENGINE:									
Electric box		Bolt	M8	2	3	17	1.7	12	
Mounting bolt		Bolt	M8	4	4	17	1.7	12	271
Reed valve		Screw	M4	16	24	1	0.1	0.7	242
Exhaust ring		Bolt	M8	4	4	30	3.0	22	271
Exhaust ring stay	1st	Bolt	M10	3	–	22	2.2	16	271
	2nd					40	4.0	29	
Muffler stay		Bolt	M10	4	4	40	4.0	29	271
Muffler stay - Muffler 2	1st	Bolt	M10	2	2	2	0.2	1.4	271
	2nd					47	4.7	34	
Muffler 2		Bolt	M10	2	2	40	4.0	29	271
Muffler 1	1st	Bolt	M10	8	–	22	2.2	16	271
	2nd					40	4.0	29	
	1st	Bolt	M8	–	12	15	1.5	11	271
	2nd					30	3.0	22	
Cylinder body	1st	Bolt	M10	6	8	23	2.3	17	572
	2nd					40	4.0	29	
Cylinder head	1st	Bolt	M8	10	–	15	1.5	11	572
	2nd					36	3.6	26	
	1st	Bolt	M8	–	14	15	1.5	11	572
	2nd					32	3.2	23	
Cylinder head cover	1st	Bolt	M8	–	15	15	1.5	11	572
	2nd					30	3.0	22	
	1st	Bolt	M6	–	2	4	0.4	2.9	572
	2nd					8	0.8	5.8	
Spark plug		Bolt	M14	2	3	25	2.5	18	
Flywheel bolt		Bolt	M10	1	1	70	7.0	50	E
Crankcase	1st	Bolt	M8	8	12	15	1.5	11	572
	2nd					28	2.8	20	
Mount bracket	1st	Bolt	M10	7	7	23	2.3	17	271
	2nd					53	5.3	38	
Coupling		Nut	M27	1	1	37	3.7	27	572
Frame arrestor cover		Bolt	M6	6	8	2	0.2	1.4	572
Starter motor terminal nut		Nut	M6	1	1	5	0.5	3.6	
JET UNIT:									
Mounting bolt		Bolt	M10	4	4	34	3.4	24	242
			M6	2	2	12	1.2	8.7	
Ride plate		Bolt	M8	4	4	17	1.7	12	242
Impeller (left-hand threads)		Bolt	M20	1	1	18	1.8	13	572
Coupling		Nut	M27	1	1	37	3.7	27	572
Intermediate housing		Bolt	M8	3	3	17	1.7	12	271

Nut Ⓐ	Bolt Ⓑ	General torque specifications		
		Nm	m•kg	ft•lb
8 mm	M5	5.0	0.5	3.6
10 mm	M6	8.0	0.8	5.8
12 mm	M8	18	1.8	13
14 mm	M10	36	3.6	25
17 mm	M12	43	4.3	31



GENERAL TORQUE

This chart specifies the torques for tightening standard fasteners with standard clean dry ISO threads at room temperature. Torque specifications for special components or assemblies are given in applicable sections of this manual. To avoid causing warpage, tighten multifastener assemblies in a criss-cross fashion, in progressive stages until the specified torque is reached.

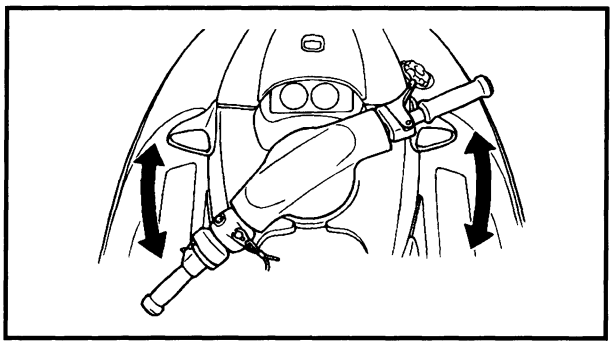
CHAPTER 3
PERIODIC INSPECTION AND ADJUSTMENT

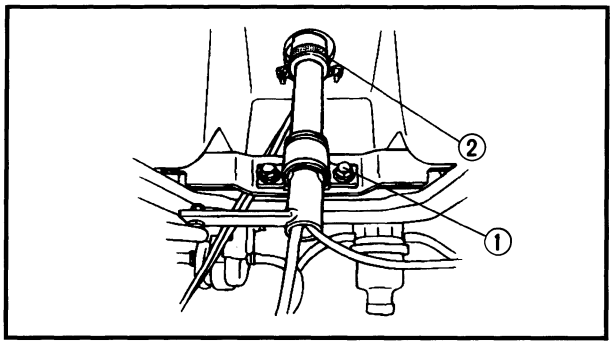
MAINTENANCE INTERVAL CHART

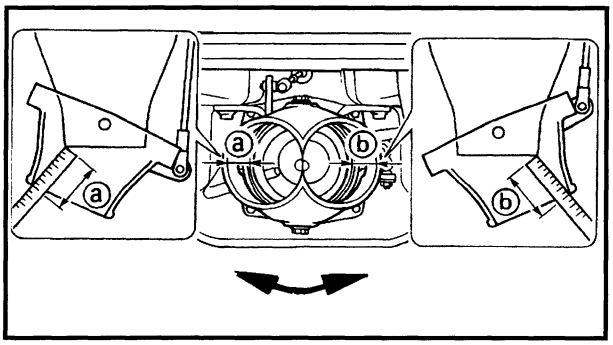
The following chart should be considered strictly as a guide to general maintenance intervals. Depending on operating conditions, the intervals of maintenance should be changed.

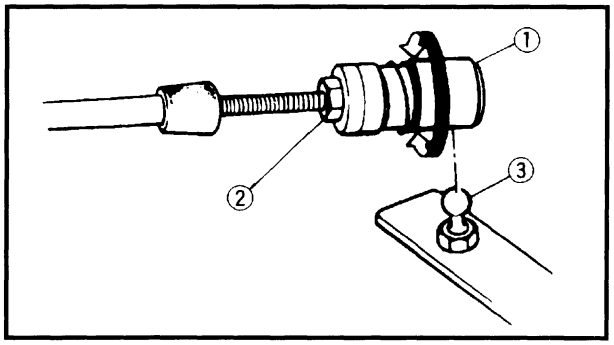
Item	Remarks	Initial		Every		Refer to page
		10 hours (Break-in)	50 hours (3 months)	100 hours (6 months)	200 hours (1 year)	
CONTROL SYSTEM:						
Steering cable	Inspection/Adjustment			○		3-2
Throttle cable	Inspection/Adjustment			○		3-3
Carburetor throttle shaft	Inspection			○		—
Choke cable	Inspection/Adjustment			○		3-4
Trim cable	Inspection/Adjustment			○		3-5
Trim system	Inspection/Adjustment			○		3-5
FUEL SYSTEM:						
Fuel tank	Cleaning				○	4-8
Fuel filter	Cleaning/Replacement	○			○	3-7
Fuel line	Inspection			○		4-1,2
Trolling speed	Inspection/Adjustment			○		3-7
Carburetor setting	Inspection/Adjustment	○		○		3-8
OIL INJECTION SYSTEM:						
Oil injection system	Inspection/Cleaning	○			○	3-9
Oil pump cable	Inspection/Adjustment			○		3-9
POWER UNIT:						
Spark plug	Inspection/Cleaning/ Adjustment	○	○	○		3-11
Cooling-water passage	Cleaning/Flashing		○			—
Coupling rubber	Inspection				○	—
ELECTRICAL:						
Battery	Inspection	○				3-12
JET PUMP UNIT:						
Impeller	Inspection		○	○		3-14
Bilge strainer	Cleaning		○	○		3-14
GENERAL:						
Bolt and nut	Retightening	○		○		—
Drain plug	Inspection/Replacement				○	3-15
Greasing point	Greasing			○		3-15
Bearing housing	Greasing	○ *1		○ *2		3-16
Starter motor idle gear	Greasing	○ *3		○ *4		3-16

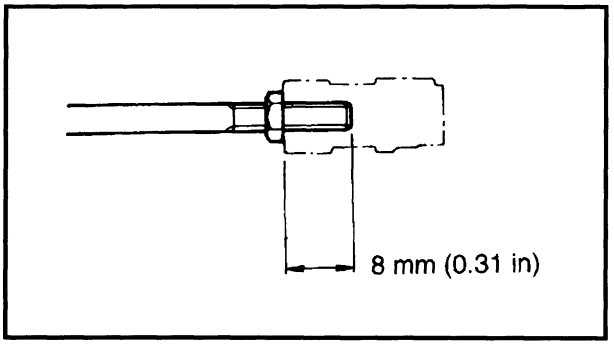
*1: Grease capacity 33.0 ~ 35.0 cm^3 (1.11 ~ 1.18 oz.)
*2: Grease capacity 6.0 ~ 8.0 cm^3 (0.20 ~ 0.27 oz.)
*3: Grease capacity 8.0 cm^3 (0.27 oz.)
*4: Grease capacity 2.0 cm^3 (0.07 oz.)











PERIODIC SERVICE

CONTROL SYSTEM

Pivot shaft bearing inspection

1. Inspect:
   - Pivot shaft bearing
     Excessive play → Replace bearings.
     Refer to the "STEERING SYSTEM" section in chapter 8.

Inspection steps:
- Move the handlebar up and down.
- Move the handlebar back and forth.

NOTE:
Check that the pivot shaft support bolt ① is secured first.

- If the pivot shaft becomes loose, retighten the clamp ② until a satisfactory feel is obtained.

Steering cable inspection and adjustment

1. Inspect:
   - Jet nozzle clearance ⓐ, ⓑ

Inspection steps:
- Turn the handlebar lock to lock.
- Measure the clearances ⓐ and ⓑ.
- If the ⓐ and ⓑ clearances are not even, adjust the clearances.

2. Adjust:
   - Cable joint (handle side) ①

Adjustment steps:
- Loosen the lock nut ②.
- Disconnect the cable joint from the ball joint ③.
- Turn the cable joint to adjust.

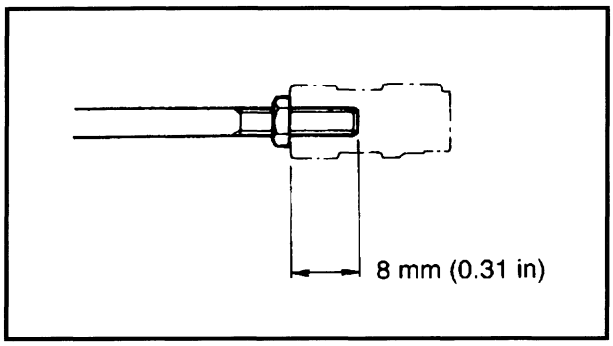
Turn in	**Clearance ⓐ is increased.**
Turn out	**Clearance ⓑ is increased.**

⚠ WARNING

The cable joint must be screwed in more than 8 mm (0.31 in).

- Connect the cable joint and tighten the lock nut.

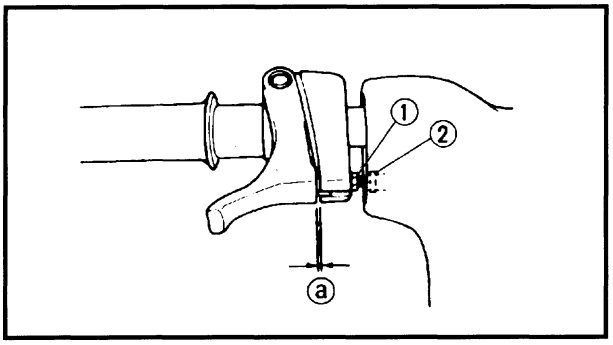
Lock nut:
7 Nm (0.7 m • kg, 5.1 ft • lb)



NOTE:
If correct adjustment cannot be obtained using the cable joint at the handlebar end adjust the cable joint at the steering nozzle end.

Throttle cable inspection and adjustment

NOTE:
Before adjusting the throttle lever free play, the trolling speed should be adjusted.



1. Measure:
   - Throttle lever free play ⓐ
     Out of specification → Adjust.

	Throttle lever free play: 4 ~ 7 mm (0.16 ~ 0.28 in)

2. Adjust:
   - Throttle lever free play

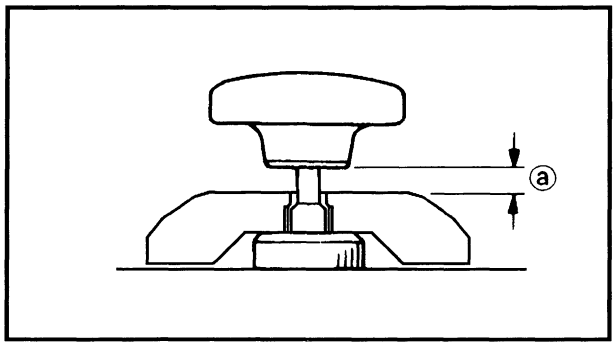
Adjustment steps:
- Loosen the lock nut ①.
- Turn the adjuster ② in/out until the specified free play is obtained.

Turn in	**Free play is increased.**
Turn out	**Free play is decreased.**

- Tighten the lock nut.

⚠ WARNING

After adjusting the free play, turn the handlebar to right and left, and make sure that the trolling speed does not increase.

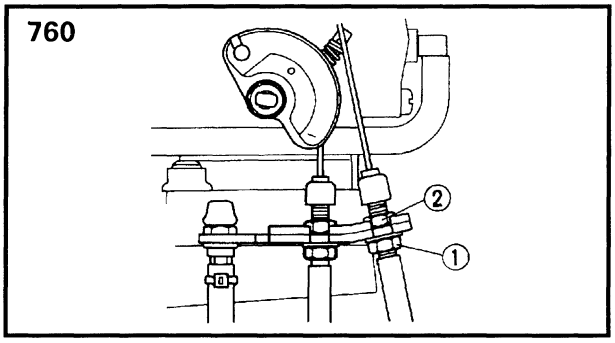


Choke cable inspection and adjustment

1. Measure:
   - Choke cable free play ⓐ
     Out of specification → Adjust.

	Choke cable free play: **1 ~ 6 mm (0.04 ~ 0.24 in)**

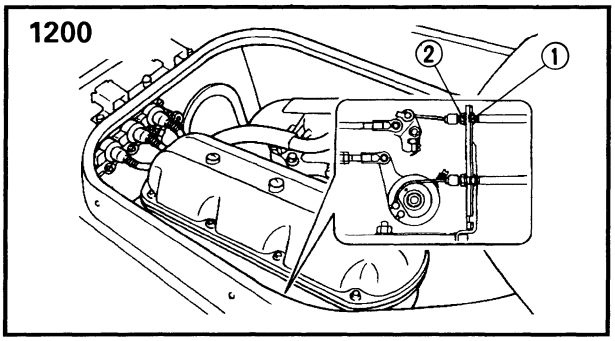
760

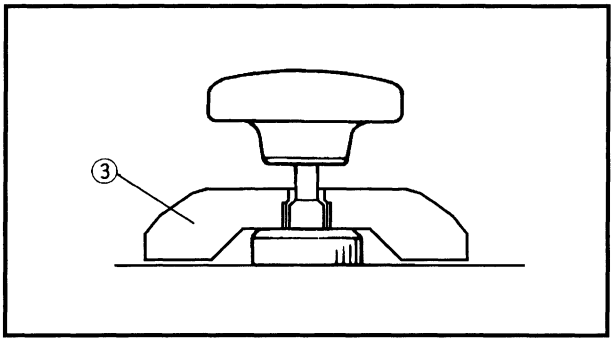


2. Adjust:
   - Choke cable free play

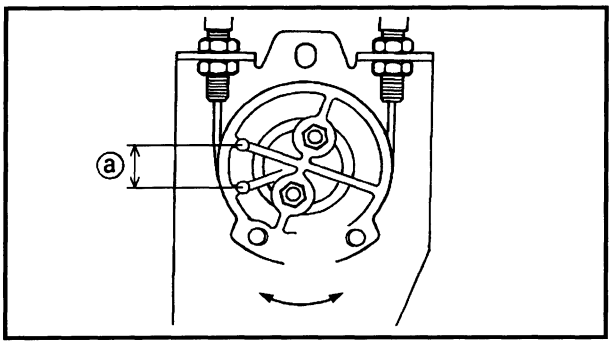
Adjustment steps:	
• Loosen the lock nut ①. • Turn the adjuster ② in/out until the specified free play is obtained.	
Turn in	**Free play is increased.**
Turn out	**Free play is decreased.**
• Tighten the lock nut.	
	Lock nut: **9 Nm (0.9 m • kg, 6.5 ft • lb)**

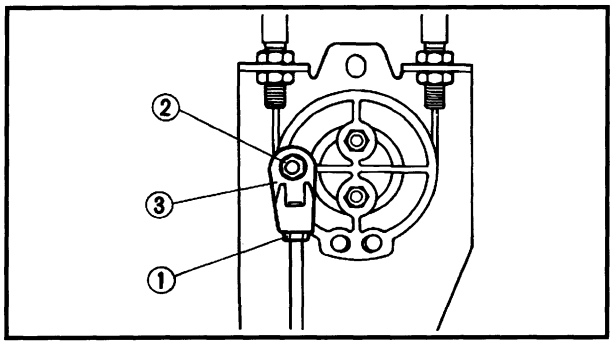
1200

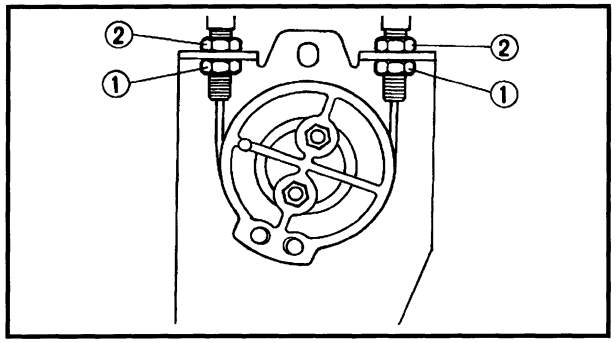


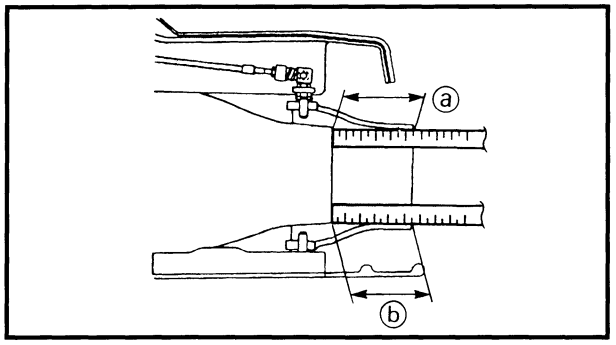


3. Inspect:
   - Pull knob farthest toward
     Knob automatically returns → Adjust.
4. Adjust:
   - Adjust nut ③
     Turn in to stop automatic return.









Trim cable inspection and adjustment

1. Measure:
   - Wheel free play ⓐ
     Out of specification → Adjust.

	Wheel free play ⓐ: **3.0 ~ 7.0 mm (0.12 ~ 0.28 in)**

Measurement steps:
- Set the trim grip in the neutral position.
- Loosen the lock nut ①.
- Remove the lock nut ② and cable joint ③.
- Measure the free play.

2. Adjust:
   - Trim control cable 1, 2

Adjustment steps:
- Set the trim grip in the neutral position.
- Loosen the lock nut ①.
- Turn the adjust nut ②.

Turn in	**Free play is decreased.**
Turn out	**Free play is increased.**

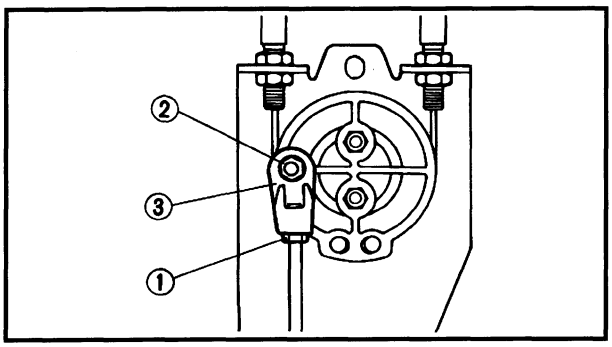
- Tighten the lock nut.

	Lock nut: **16 Nm (1.6 m • kg, 11 ft • lb)**

3. Measure:
   - Nozzle deflector set length ⓐ, ⓑ
     Out of specification → Adjust.

	Nozzle deflector set length ⓐ, ⓑ: **ⓐ = 70 ± 1 mm (2.76 ± 0.04 in)** **ⓑ = 70 ± 1 mm (2.76 ± 0.04 in)**

NOTE:
- Set the trim grip in the neutral position.
- Set the handlebar in the neutral position.



4. Adjust:
   - Trim control cable

Adjustment steps:
- Set the trim grip in the neutral position.
- Set the handlebar in the neutral position.
- Turn the cable joint ③ for adjusting.

Turn in	**Length ⓑ is increased.**
Turn out	**Length ⓐ is increased.**

⚠ WARNING

The cable joint must be screwed in more than 8 mm (0.31 in).

- Connect the cable joint and tighten the lock nut ②.
- Tighten the lock nut ①.

Lock nut:
4 Nm (0.4 m • kg, 2.9 ft • lb)

NOTE:

If correct adjustment by using the cable joint at the wheel end is not obtained, adjust the cable joint on the trim nozzle end.

FUEL SYSTEM

⚠ WARNING

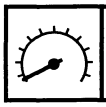
- **Stop the engine, set the fuel cock to "OFF" and loosen the fuel filler cap before a fuel system service.**
- **When removing fuel system parts, hold them in a cloth and take care that no fuel spills into the engine compartment.**

Fuel filter inspection

1. Inspect:
   - Filter element
     Contamination → Replace.
   - Filter body
     Crack/Damage → Replace.
   - Filter assembly
     Water contamination → Replace and check the fuel tank.

Trolling speed inspection and adjustment

1. Check:
   - Trolling speed
     Out of specification → Adjust.

	**Trolling speed:** **1,300 ± 50 r/min**

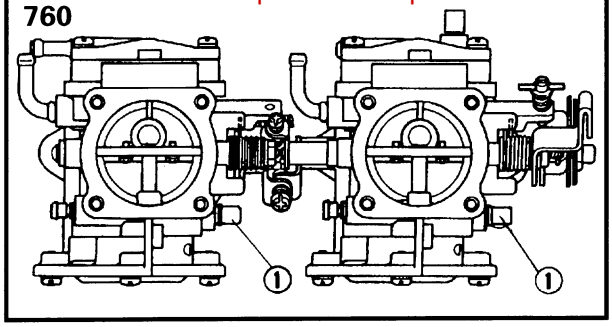
Checking steps: (vehicle on water)

- Start the engine and allow it to warm up for a few minutes.
- Attach the engine tachometer to the spark plug lead.

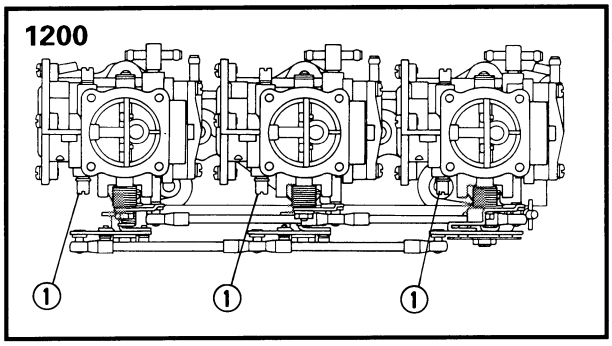
	**Engine tachometer:** **YU-8036-A/90890-06760**

- Measure the engine trolling speed.

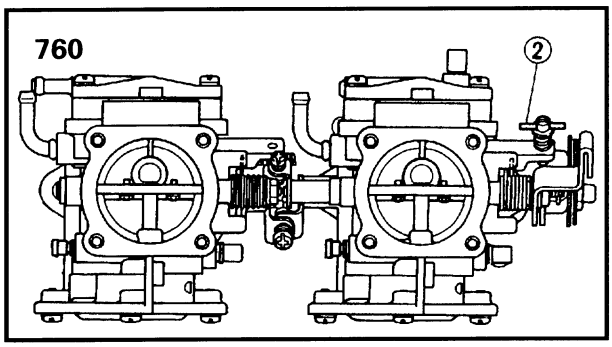
760



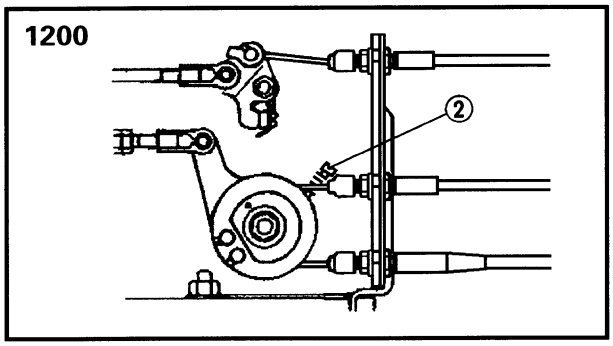
1200



760



1200



2. Adjust:
   - Trolling speed

Adjustment steps:
- Screw in the low speed screws ① until they are lightly seated.
- Back the screws out by the specified number of turns.

Low speed screw:
GP760
1-5/8 ± 1/4 turns out
GP1200
1-1/4 ± 1/4 (#1, #2)
1-1/8 ± 1/4 (#3) turns out

- Start the engine and allow it to warm up for a few minutes.
- Turn the throttle stop screw ② in or out until the specified speed is obtained.

Turning in	**Increase trolling speed.**
Turning out	**Decrease trolling speed.**