YAMAHA

VMX12U
VMX12UC

Supplementary Service Manual

LIT-I1616-06-08

FOREWORD

This Supplementary Service Manual has been prepared to introduce new service and new data for the VMX12U/UC. For complete information on service procedures, it is necessary to use this Supplementary Service Manual together with following manual:

VMX12N/NC Service Manual: LIT-11616-04-67
VMX12S/SC Supplementary Service Manual: LIT-11616-04-98

VMX12U/UC
SUPPLEMENTARY SERVICE MANUAL
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1st Edition, August 1987
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Printed in U.S.A.
P/N LIT-11616-06-08

NOTICE

This manual was written by the Yamaha Motor Company primarily for use by Yamaha dealers and their qualified mechanics. It is not possible to put an entire mechanic's education into one manual, so it is assumed that persons using this book to perform maintenance and repairs on Yamaha motorcycles have a basic understanding of the mechanical concepts and procedures inherent in motorcycle repair technology. Without such knowledge, attempted repairs or service to this model may render it unfit to use and/or unsafe.

This model has been designed and manufactured to perform within certain specifications in regard to performance and emissions. Proper service with the correct tools is necessary to ensure that the motorcycle will operate as designed. If there is any question about a service procedure, it is imperative that you contact a Yamaha dealer for any service information changes that apply to this model. This policy is intended to provide the customer with the most satisfaction from his motorcycle and to conform with federal environmental quality objectives.

Yamaha Motor Company, Ltd. is continually striving to improve all models manufactured by Yamaha. Modifications and significant changes in specifications or procedures will be forwarded to all Authorized Yamaha dealers and will, where applicable, appear in future editions of this manual.

NOTE:

This Service Manual contains information regarding periodic maintenance to the emission control system for the VMX12N/NC. Please read this material carefully.

TECHNICAL PUBLICATIONS
SERVICE DIVISION
MOTORCYCLES OPERATIONS
YAMAHA MOTOR CO., LTD.

HOW TO USE THIS MANUAL

PARTICULARLY IMPORTANT INFORMATION

This material is distinguished by the following notations.

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

CAUTION: A **CAUTION** indicates special procedures that must be followed to avoid damage to the motorcycle.

WARNING: A **WARNING** indicates special procedures that must be followed to avoid injury to a motorcycle operator or person inspecting or repairing the motorcycle.

MANUAL FORMAT

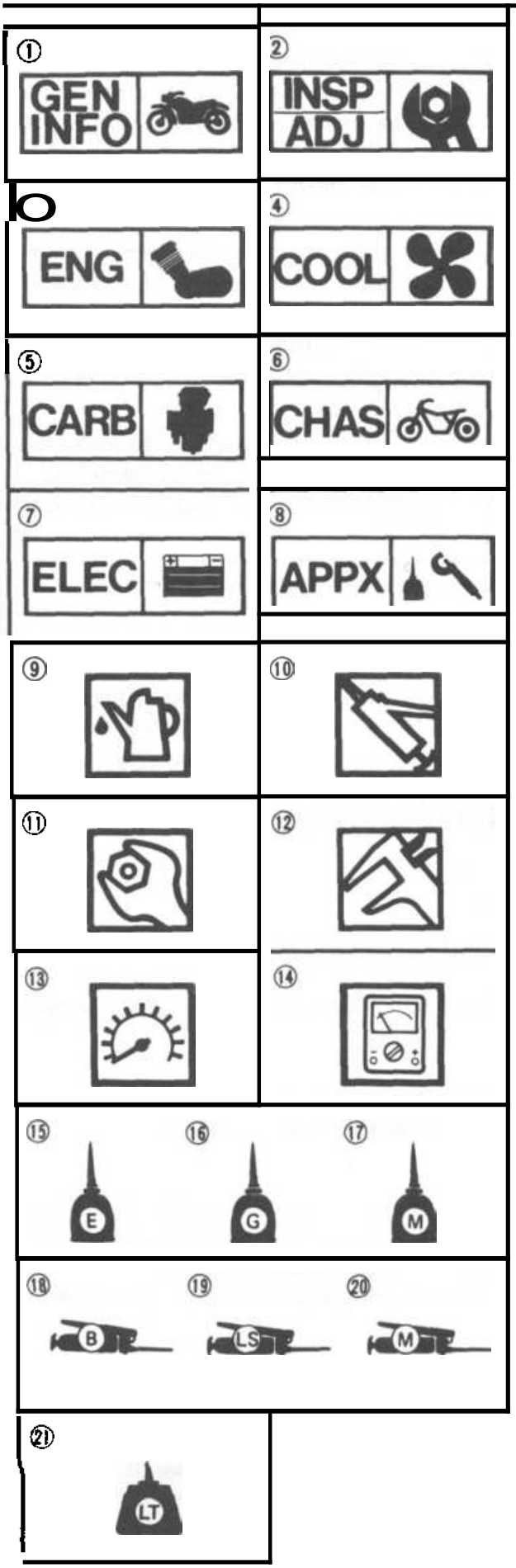
All of the procedures in this manual are organized in a sequential, step-by-step format. The information has been compiled to provide the mechanic with an easy to read, handy reference that contains comprehensive explanations of all disassembly, repair, assembly, and inspection operations.

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.

EXPLODED DIAGRAM

Each chapter provides exploded diagrams before each disassembly section for ease in identifying correct disassembly and assembly procedures.



ILLUSTRATED SYMBOLS (Refer to the illustration)

Illustrated symbols ① to ⑧ are designed as thumb tabs to indicate the chapter's number and content.

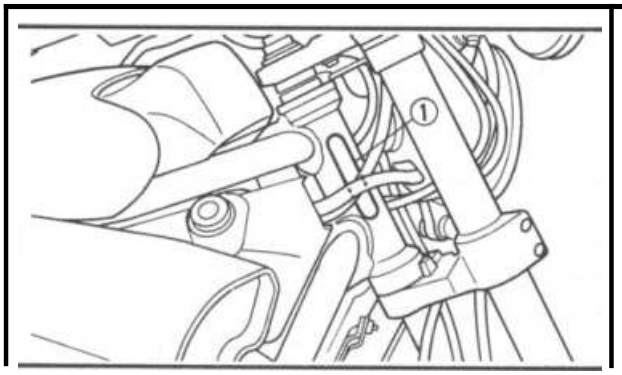
① General information
② Periodic inspection and adjustment
③ Engine
④ Cooling system
⑤ Carburetion
⑥ Chassis
⑦ Electrical
⑧ Appendices

Illustrated symbols ⑨ to ⑭ are used to identify the specifications appearing.

⑨ Filling fluid
⑩ Lubricant
⑪ Tightening
⑫ Wear limit, clearance
⑬ Engine speed
⑭ Ω, V, A

Illustrated symbols ⑮ to ㉑ in the exploded diagram indicate grade of lubricant and location of lubrication point.

⑮ Apply engine oil
⑯ Apply gear oil
⑰ Apply molybdenum disulfide oil
⑱ Apply wheel bearing grease
⑲ Apply lightweight lithium-soap base grease
⑳ Apply molybdenum disulfide grease
㉑ Apply locking agent (LOCTITE®)



GENERAL INFORMATION

MOTORCYCLE IDENTIFICATION

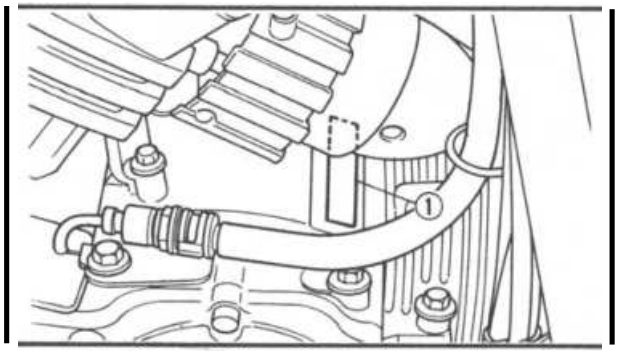
VEHICLE IDENTIFICATION NUMBER

The vehicle identification number ① is stamped into the steering head pipe.

NOTE:

The vehicle identification number is used to identify your motorcycle and may be used to register your motorcycle with the licensing authority in your state.

Starting Serial Number:	
VMX12U	JYA2WEE0 *JA000101
VMX12UC	JYA2WFC0 *JA000101



ENGINE SERIAL NUMBER

The engine serial number ① is stamped into the left side of the engine.

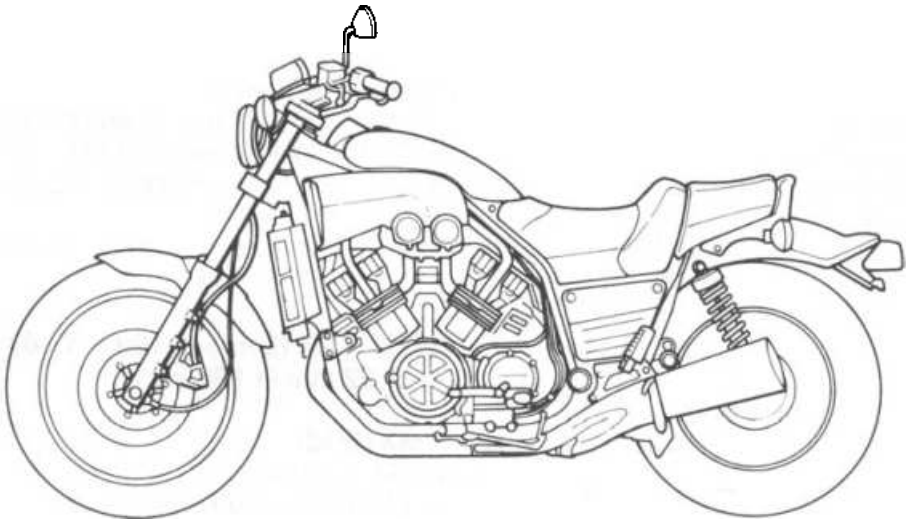
NOTE:

The first three digits of these numbers are for model identifications; the remaining digits are the unit production number.

Starting Serial Number:	
VMXI2U	2WE-000101
VMX12UC	2WF-000101

NOTE:

Designs and specifications are subject to change without notice.



APPENDICES

SPECIFICATIONS

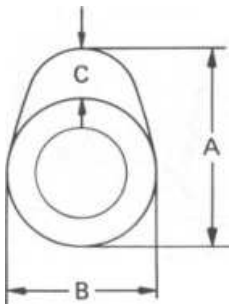
GENERAL SPECIFICATIONS

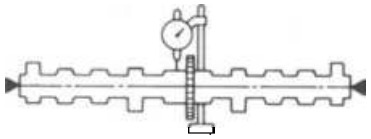
Model	VMX12U/UC
Model Code Number Engine Starting Number Vehicle Identification Number	2WE VMX12UC: 2WF 2WE-000101 VMX12UC: 2WF-000101 JYA2WEEO *JA000101 VMX12UC: JYA2WFC0 *JA000101
Basic Weight: Weight Oil and Full Fuel Tank	283 kg (624 lb) VMX12UC: 284 kg (626 lb)
Tire Pressure (Cold Tire): Basic Weight: With Oil and Full Fuel Tank Maximum Load* Cold Tire Pressure: Up to 90 kg (198 lb) Load* 90 kg (198 lb)* ~ Maximum Load* High Speed Riding	283 kg (624 lb) VMX12UC: 284 kg (626 lb) 216 kg (476 lb) VMX12UC: 215 kg (474 lb) FRONT: 235 kPa (2.4 kg/cm², 34 psi) / REAR: 255 kPa (2.6 kg/cm², 36 psi) FRONT: 235 kPa (2.4 kg/cm², 34 psi) / REAR: 275 kPa (2.8 kg/cm², 40 psi) FRONT: 235 kPa (2.4 kg/cm², 34 psi) / REAR: 255 kPa (2.6 kg/cm², 36 psi)
Brake: Front Operation Rear Operation Brake Fluid	Dual disc brake Right hand operation Single disc brake Right foot operation DOT #4 (If DOT #4 is not available #3 can be used.)

MAINTENANCE SPECIFICATIONS

Engine

Model	VMX12U/UC
Camshaft: Drive Method Cam Cap Inside Dia. Camshaft Outside Dia. Shaft-to-Cap Clearance Cam Dimensions Intake "A" < Limit > Intake "B" < Limit >	Chain drive (Center) 25.000 ~ 25.021 mm (0.9843 ~ 0.9851 in) 24.967 ~ 24.980 mm (0.9830 ~ 0.9835 in) 0.020 ~ 0.054 mm (0.0008 ~ 0.0021 in) 36.25 ~ 36.35 mm (1.427 ~ 1.431 in) < 36.15 mm (1.423 in) > 28.02 ~ 28.12 mm (1.103 ~ 1.107 in) < 27.92 mm (1.099 in) > VMX12UC: 27.97 ~ 28.07 mm (1.101 ~ 1.105 in) < 27.87 mm (1.097 in) >



Model		VMX12U/UC
Exhaust "A" < Limit > Exhaust "B" < Limit > Camshaft Runout Limit 		36.25 ~ 36.35 mm (1.427 ~ 1.431 in) < 36.15 mm (1.423 in) > 28.02 ~ 28.12 mm (1.103 ~ 1.107 in) < 27.92 mm (1.099 in) > VMX12UC: 27.97 – 28.07 mm (1.101 ~ 1.105 in) < 27.87 mm (1.097 in) > 0.03 mm (0.0012 in)
Carburetor:		
I.D. Mark		1FK00 VMX12UC: 2WF00
Main Jet	(M.J.)	# 152.5
Main Air Jet	(M.A.J.)	ϕ2.0
Jet Needle	(J.N.)	5EZ43 VMX12UC: 5EZ50
Needle Jet	(N.J.)	Y-0
Pilot Jet	(P.J.)	#37.5
Pilot Air Jet	(P.A.J.)	#90 VMX12UC: # 100
Pilot Screw	(P.S.)	Preset
Pilot Outlet	(P.O.)	0.9
Bypass	(B.P. 1)	0.8
	(B.P. 2)	0.8
	(B.P. 3)	0.9
Valve Seat Size	(V.S.)	1.5
Starter Jet	(G.S.1)	#45
	(G.S.2)	#0.8
Fuel Level		15.5 ~ 16.5 mm (0.61 ~ 0.65 in)
Engine Idling Speed		950 ~ 1,050 r/min VMX12UC: 1,050 ~ 1,150 r/min
Vacuum Pressure at Idling Speed		Above 200 mm Hg (7.90 in Hg)
Vacuum Synchronous Difference		Below 20 mm Hg (0.79 in Hg)

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IWATA, JAPAN

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