YAMAHA

VMX12S
VMX12SC

Supplementary Service Manual

LIT-11616-04-98

FOREWORD

VMX12N/NC Service Manual: LIT-11616-04-67

VMX12S/SC
SUPPLEMENTARY SERVICE MANUAL
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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 disgned 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 notation.

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

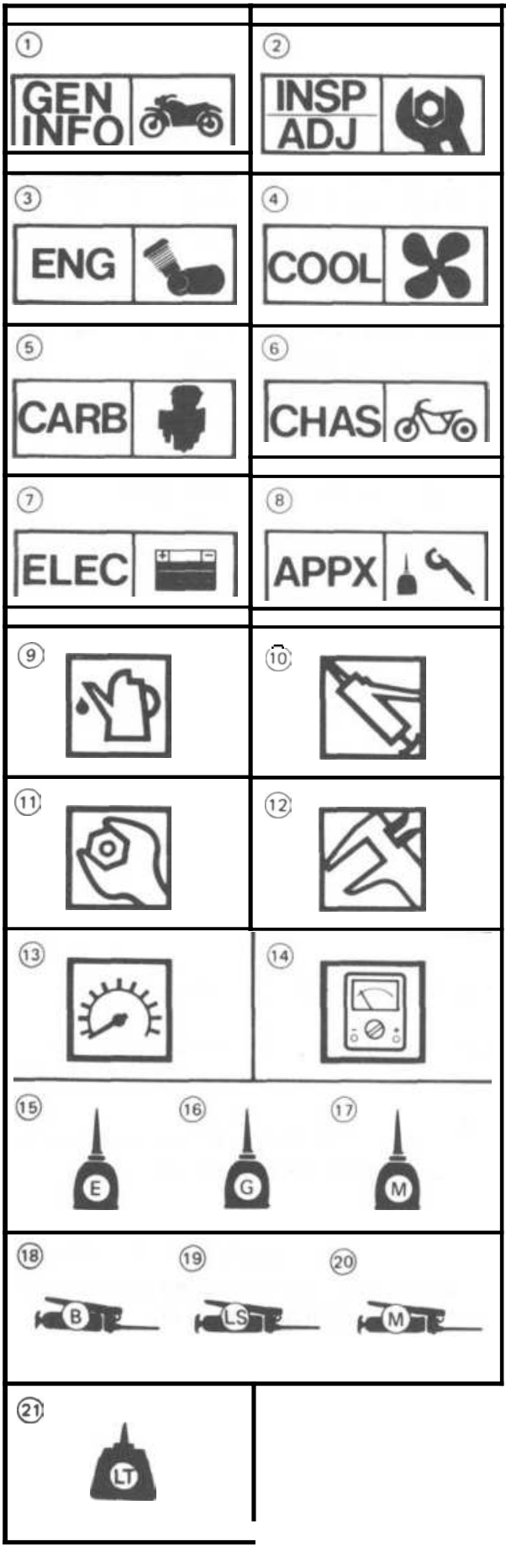
All of the procedures in this manual are organized in a sequential, step-by-step format. The information has been compiled to provide the mechanic with an easy to read, handy reference that contains comprehensive explanations of all disassembly, repair, assembly, and inspection operations.

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.

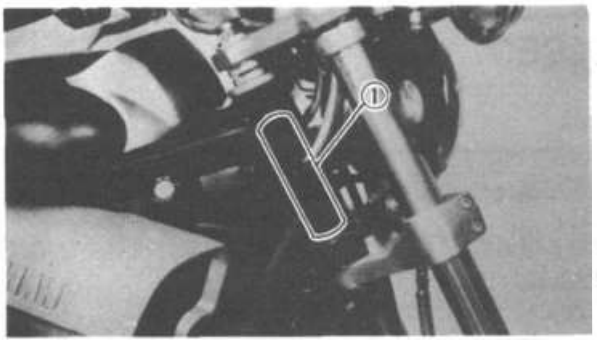
① General information
② Periodic inspection and adjustment
③ Engine
④ Cooling system
⑤ Carburetion
⑥ Chassis
@Electrical
⑧ Appendices

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

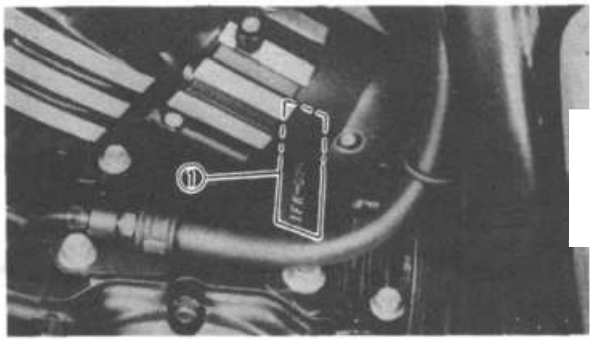
The vehicle identification number ① is stamped into the steering head pipe.

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:
VMX12S JYA1UTOO* GAOOOI01
VMX12SC. . . . . JYA1UR00 * GAOOOI01

ENGINE SERIAL NUMBER



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

NOTE:

Starting Serial Number:
VMX12S 1UT-000101
VMX12SC. 1UR-000101

NOTE:

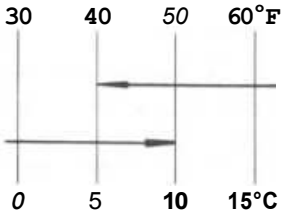
Designs and specifications are subject to change without notice.



APPENDICES

SPECIFICATIONS

GENERAL SPECIFICATIONS

Model	VMX12S/SC
Model Code Number Engine Starting Number Vehicle Identification Number	1UT VMX12SC: 1UR 1UT-000101 VMX12SC: 1UR-000101 JYA1UT00 * GA000101 VMX12SC: JYA1UR00 * GA000101
Dimensions: Overall Length Overall Width Overall Height Seat Height Wheelbase Minimum Ground Clearance	 2,300 mm (90.6 in) 795 mm (31.3 in) 1,160 mm (45.7 in) 765 mm (30.1 in) 1,590 mm (62.6 in) 145 mm (5.7 in)
Basic Weight: Weight Oil and Full Fuel Tank	 282 kg (622 lb) VMX12SC: 283 kg (624 lb)
Minimum Turning Radius:	2,790 mm (110 in)
Engine: Engine Type Cylinder Arrangement Displacement Bore x Stroke Compression Ratio Compression Pressure Starting System	 Liquid cooled 4-stroke gasoline, DOHC V-4 cylinder 1,198 cm^3 76 x 66 mm (2.992 x 2.598 in) 10.5 : 1 1,422 kPa (14.5 kg/cm^2 , 206 psi) Electric starter
Lubrication System:	Wep sump
Oil Type or Grade: Engine Oil  Final Gear Oil	 Yamalube 4-cycle oil or SAE 20W40 type SE motor oil (If temperature does not go below 5°C (40°F)) SAE 10W30 type SE motor oil (If temperature does not go above 15°C (60"F)) SAE 80 API "GL-4" Hypoid gear oil
Oil Capacity: Engine Oil: Periodic Oil Change With Oil Filter Replacement Total Amount Final Gear Case: Total Amount	 3.5 L (3.1 Imp qt, 3.7 US qt) 3.8 L (3.3 Imp qt, 4.0 US qt) 4.7 L (4.1 Imp qt, 5.0 US qt) 0.2 L (0.18 Imp qt, 0.21 US qt)
Radiator Capacity: (Including All routes)	 3.05 L (2.69 Imp qt, 3.22 US qt)
Air Filter:	Dry type element
Fuel: Type Tank Capacity: Total Reserve	 Regular gasoline 15.0 L (3.3 Imp gal, 4.0 US gal) 3.0 L (0.66 Imp gal, 0.80 US gal)

Model	VMX12S/SC	
Carburetor: Type/Manufacturer	BDS 34 x 4/MIKUNI	
Spark Plug: Type/Manufacturer Gap	DPR8EA-9/NGK, X24EPR-U9/NIPPONDENSO 0.8 ~ 0.9 mm (0.031 ~ 0.035 in)	
Clutch Type:	Wet, multiple-disc	
Transmission: Primary Reduction System Primary Reduction Ratio Secondary Reduction System Secondary Reduction Ratio Transmission Type Operation Gear Ratio: 1st 2nd 3rd 4th 5th	 Spar gear 87/49 (1.775) Shaft drive 21/27 x 33/9 (2.851) Constant mesh, 5-speed Left foot operation 43/17 (2.529) 39/22 (1.772) 31/23 (1.347) 28/26 (1.076) 26/28 (0.928)	
Chassis: Frame Type Caster Angle Traii	 Double cradle 29" 119 mm (4.7 in)	
Tire: Type Size (F) Size (R) Wear Limit	 Tubeless 110/90V 18 BRIDGESTONE G525AW/DUNLOP F20 150/90V 15 BRIDGESTONE G526BW/DUNLOP K525 1.0 mm (0.04 in)	
Tire Pressure (Cold Tire): Basic Weight: With Oil and Full Fuel Tank Maximum Load*	 282 kg (622 lb) VMX12SC: 283 kg (624 lb) 216 kg (476 lb)	
Cold Tire Pressure:	FRONT	REAR
Up to 90 kg (198 lb) Load*	235 kPa (2.4 kg/cm², 34 psi)	255 kPa (2.6 kg/cm², 36 psi)
90 kg (198 lb)* ~ 216 kg (476 lb) Load*	235 kPa (2.4 kg/cm², 34 psi)	275 kPa (2.8 kg/cm², 40 psi)
High Speed Riding	235 kPa (2.4 kg/cm², 34 psi)	255 kPa (2.6 kg/cm², 36 psi)
Brake: Front Operation Rear Operation	 Dual disc brake Right hand operation Single disc brake Right foot operation	
Suspension: Front Suspension Rear Suspension	 Telescopic fork Swing arm	



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