

# TECHTIPS

MOTORCYCLE

AUGUST 2000

M100-042

SUBJECTS : 1. OIL LINE CHECK VALVE — 2000-2002 CW50M/N/P

2. HEAD PIPE DISCOLORATION — 1999/2000 XVS650/1100L/AL/M/AM

3. EXHAUST PIPE GLOWING — 2000 YZF-R1M

4. STARTER SPIN — 1999/2000 XV1600L/AL/M/AM

## 1. OIL LINE CHECK VALVE — 2000-2002 CW50M/N/P

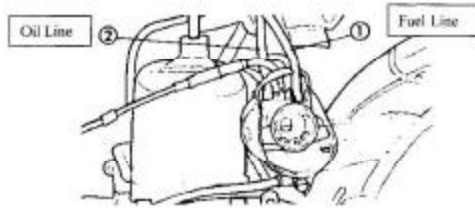
The CW50 oil tank gravity feeds 2-cycle oil to the oil pump. The line from the pump is a small diameter (3.5mm ID) tube and connects to a brass fitting on the body of the carburetor. Inside the fitting is a small spring and a steel ball that prevents the oil from being forced backwards up the tube and stops the feed when the engine is shut off.

Occasionally, the light spring pressure can be overcome by the weight of the oil in the oil tank or the steel ball valve may not be fully seated and the customer may complain of excessive smoking during cold starting after parking overnight or if the CW50 has been parked for a few days, the unit may not start at all.

A technician inspecting the problem may find an excess of oil in the float bowl where the fuel has been displaced.

It is possible to correct the problem by carefully removing the brass fitting from the carburetor, separating the (brass fitting) valve halves (they are lightly pressed together), cleaning the valve and confirming the free length of the spring is 10-11mm.

Alternatively, you may wish to remove the check ball and spring, reinstall the empty fitting. (Or you may install a nozzle, part number 824-13552-00-00). Then cut the line (2) between the carburetor and the oil pump and install an "in-line" check valve.



A suitable check valve is available from Yamaha, Part Number 6R3-13183-00-00 and will prevent the oil from leaking into the carburetor. When installing a check valve, be sure that the direction of flow through the valve is correct or severe engine damage may result. The body of the valve has a flow direction arrow moulded in it.

## ALL MOTORCYCLE DEALERS 1999, 2000 YZFR6, XV1600 ESSENTIAL TOOL SHIPMENT

APRIL 2000



M100-039

The following special tools were automatically shipped from Kent-Moore (Yamaha's Tool Supplier) as part of the essential tool program. You should have received these tools. If your dealership has not received these tools yet or if you wish to order additional tools (at regular price), please contact Kent-Moore Tools directly at 1-800-345-2233.

Illustration	Tool Number (Kent-Moore)	Models	Regular Price	Special Price	Description Application
	YM-01471	YZFR6	\$35.35	\$30.07	Frame Spanner Socket. Used for frame collar adjustment during engine removal and installation.
	YM-03170	XV1600 "Road Star"	\$36.60	\$29.80	Drive Belt Tension Gauge Used to measure belt deflection for correct tension adjustment.

Please note your dealership will be charged through your parts account in April, 2000 for \$59.87 plus applicable taxes.

## 2. HEAD PIPE DISCOLORATION — 1999-2000 XVS650/1100L/AL/M/AM

The V-Star Motorcycle series have the US EPA "49 State" specification. This means that the standard settings for carburetion are very lean, especially at engine idle.

This setting may cause the motorcycle to require a longer period of warm-up when first cold starting the engine. Discoloration of the front cylinder exhaust pipe to a yellow or blue colour is a normal action of these settings.

Discoloration may be reduced by instructing the customer to shut the enricher (choke) as soon as possible and to avoid allowing the engine to run on a fast idle speed while parked as the cooling air is no longer passing through the cooling fins and the combustion temperature will rise quickly. Setting the pilot screws to the recommended % of Carbon Monoxide (CO) using an exhaust gas analyzer will also cause the idle combustion temperature to lower and will reduce the discoloration effect and will also reduce warm-up time.

We recommend these adjustments are performed during the PDI before the pipe discolors to avoid any customer dissatisfaction.

## 3. EXHAUST PIPE GLOWING — 2000 YZF-R1M

We have received questions from technicians concerning the new R1. They have noticed that the exhaust head pipes glow to almost a cherry-red while the motorcycle is running. This should not be considered a problem. The 2000 model utilizes a thin-wall stainless steel material for the head pipes to keep the weight low. This material glows under normal exhaust temperatures.

Some other high performance Yamaha motorcycles also use thin-wall stainless steel pipes such as the WR and YZ four stroke models. You may see the pipe glow on those models also.

## 4. STARTER SPIN — 1999/2000 XV1600L/AL/M/AM

The XV1600 has its starter clutch located at the rear of the generator rotor on the right side of the engine. The rotor is located on a taper fitted rotor shaft which is geared to the crankshaft. When the starter button is depressed, the starter clutch engages and the generator shaft is turned which turns the crankshaft.

If a customer complains of starter spinning, but no engine turn, it is possible that the rotor is turning on the taper shaft. The taper may have a high spot or a particle that prevents complete mating of the taper surfaces.

Remove the rotor and using a fine valve lapping paste, spin the rotor on the shaft to mate the surfaces. Clean the lapping paste from both surfaces and dry them with contact cleaner and reassemble torquing the generator bolt to 28Nm (20ft-lb). Remember to apply threadlock (LOCTITE®) to the bolt threads.

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