DATE March 3, 1982

GENERAL
USE OF SEALANTS

Yamaha Parts Distributors Inc. sells three kinds of sealants. The following information has been prepared to make clear the appropriate use of each sealant on Yamaha motorcycles.

YAMABOND #4

Yamabond #4 is used on mating surfaces that do not employ a gasket. The most common use is on the metal-to-metal joint of the crankcase halves. Yamabond #4 resists oil and gasoline well, and it dries to a semi-firm pliability. This sealant is light gray in color, and it takes little time to cure.

NOTE: Some tubes of Yamabond #4 have been packaged with Threebond® 1104 labels. This is the domestic title of this Japanese-manufactured product. The contents of the tube are the same as those of tubes with the yellow Yamabond #4 label; Threebond® 1104 and Yamabond #4 are interchangeable.

YAMABOND #5

This black, fluid sealant is applied to paper gaskets used in metal joints. Yamabond #5 should be applied in a thin layer to both sides of the gasket and both mating surfaces. After the sealant has cured, the excess can be easily removed. Yamabond #5 assists gaskets in dealing with the rapid rates of expansion and contraction to which aluminum cases are subjected.

VHT® QUICK GASKET

This product is a clear, silicone-rubber-base, adhesive sealant. The manufacturer states that it bonds to metal, glass, plastic, rubber, vinyl, and other materials. The most popular use of this sealant is to seal against water and dirt on off-road models. Areas of application include the air cleaner system and electrical wiring.

PARTS INFORMATION

PART NUMBER	DESCRIPTION	DEALER COST
ACC-11001-30-00	Yamabond #4	
ACC-11001-31-00	Yamabond #5	
ACC-11001-05-01	VHT® Quick Gasket	

DATE August 6, 1982

1982 4-STROKE MODELS
MEASURING OIL TEMPERATURE

Because oil temperature is a critical factor when using the exhaust gas analyzer, Yamaha developed a thermometer that measures oil temperature while the engine is running. The probe from this thermometer couples with the probe hole on the new-style drain plug so you can accurately monitor engine oil temperature during EGA use.

The thermometer has a high and low scale for a wide variety of uses. It can accurately measure temperatures from 0~180°C, has a virtually immediate response time, and the critical oil-temperature range is highlighted on the meter face for easy reading during EGA use.

An optional probe is also available for measuring oil temperature at the oil filler hole. The thermometer and optional probe are available from Kent-Moore.

Probe-hole drain plugs are available from your Yamaha Parts Distributors Inc. warehouse. These drain plugs are standard on some later-production 1982 models and can be retrofitted onto any Yamaha motorcycle with 14 x 1.5mm drain plugs. The plug uses a probe-hole screw to keep dirt and road grime out of the probe hole. Two types of drain plugs are available: magnetic and non-magnetic. Use the magnetic drain plug in those models with an oil-level switch. The magnet will attract any metal in the oil and prevent that metal from interfering with the operation of the oil-level switch.

To use the thermometer, remove the probe-hole screw from the drain plug, screw in the thermometer probe, start the engine, and follow standard EGA procedures. If the unit does not have a probe-hole plug, use the optional probe and measure the oil temperature at the oil filler hole. Be sure to turn off the engine when measuring engine-oil temperature at the filler hole.

Testing has revealed that the critical oil-temperature range for accurate EGA measurement varies dependent upon where the temperature is measured. If you measure oil temperature at the oil filler hole, the oil temperature must be 55~75°C in order to yield accurate EGA readings. If you measure the oil temperature at the drain plug, the critical temperature range is 50~70°C, ***except for the Vision.*** When measuring the oil temperature at the drain plug on an XZ550, the critical temperature range is 45 ~ 65°C.

Be sure the oil temperature is always within the appropriate range whenever you use the EGA. Readings will be inaccurate if the oil temperature is not within specification.

PARTS INFORMATION

PART NUMBER	DESCRIPTION	REMARKS	DEALER COST
4X7-13455-00-00	Probe-hole Drain Plug Assembly	Magnetic	
90340-14087-00	• Probe-hole Drain Plug	Magnetic	
98901-06008-00	• Probe-hole Screw		
11H-13455-00-00	Probe-hole Drain Plug Assembly	Non-magnetic	
214-11198-01-00	Drain-plug Gasket		
YU-33264	Thermometer	From Kent-Moore	
YU-33265	Optional Probe	From Kent-Moore	

1982 TWIN- AND FOUR-CYLINDER MODELS
PREDELIVERY STALE-FUEL RESIDUE REMOVAL

Some affected models that have been warehoused for a prolonged period may have a buildup of stale-fuel residue in the carburetors. This residue buildup may cause improper operation of the machine. Follow the procedure below to remove stale-fuel residue from the carburetors during predelivery setup.

AFFECTED MODELS

All XS400J, XS400RJ, XS400SJ, XS650SJ, XV750J, XV920J, XV920RJ

All XJ550J, XJ550RJ, XJ650J, XJ650LJ, XJ650RJ, XJ750J, XJ750RJ, XJ1100J

PROCEDURES

WARNING:

This procedure requires extensive handling of gasoline. Gasoline is extremely flammable. To avoid severe injury, do not allow open flames, sparks, cigarettes, or any other sources of ignition near the area in which you are working.

1. As directed by the predelivery checklist portion of the Motorcycle Purchase Registration form, drain the stale fuel from the float bowls and fuel lines and retighten the drain screws.

2. Mix one part Yamaha carburetor cleaner (ACC-11001-43-00) with three parts gasoline.

NOTE: A mixture containing more than one part carburetor cleaner to three parts gasoline is only marginally more effective than the recommended 1:3 ratio.

3. For twin-cylinder models, pour approximately 90cc of the mixture into the fuel line. Four-cylinder models should get about 180cc. ***Do not pour any mixture into the fuel tank; this cleaner is for carburetors only.***

WARNING:

If any needle valves are stuck open, some mixture may overflow the carburetors. Pour the mixture in slowly and observe the overflow lines carefully.

4. To circulate the mixture throughout the carburetors, rock the machine from side to side, fully open the choke lever, and briefly push the starter button to draw mixture into the jets and passages. Repeat this frequently.

5. After one-half hour, drain the mixture from the carburetors, reinstall the fuel line, and allow fresh gasoline into the float bowls. If the engine won't start or runs improperly, drain the gasoline from the float bowls. Install some fresh mixture, circulate the mixture throughout the carburetors, and allow the machine to sit overnight.

6. Drain the float bowls, reconnect the fuel line, and allow fresh gas into the carburetors. Proceed with normal predelivery setup.

NOTE: Although the engine will run with the mixture in the carburetors, all final carburetor settings must be made with gasoline only.

PARTS INFORMATION

PART NUMBER	DESCRIPTION	REMARKS	DEALER COST
ACC-11001-43-00	Yamaha Carburetor Cleaner	Mix 1 part with 3 parts gasoline	

WARRANTY

The warranty labor allowance for this residue-removal procedure on twin-cylinder models is 0.2 hours. The labor allowance on four-cylinder models is 0.3 hours. The problem code is 90EK. To receive credit, follow standard service-per-bulletin procedures.

TWIN- AND FOUR-CYLINDER MODELS

PREDELIVERY CARBURETOR/FUEL TANK INSPECTION & CLEANING

Effective 10/18/85, this Technical Bulletin replaces M83-007B. Please remove and destroy M83-007B. Changes include the elimination of all references to XV500K model.

Some models that have been warehoused for a prolonged period may be affected by rust and/or stale fuel residue in the fuel tank or carburetors. This condition may cause improper operation of the motorcycle.

Affected units must be inspected and appropriate steps must be taken during predelivery of the motorcycle. **Registered units require prior authorization by your Regional Technical Adviser (RTA).**

SUMMARY OF CHANGES

- The new procedures in this Bulletin must be performed on all affected models prior to delivery.
- As of the date of this Bulletin, previous procedures may no longer be used.
- A new problem code, noted in the Warranty section of this Bulletin, must be used for these new procedures. To cover requests already in process for the previous procedures, the computer cutoff date for the 90EK code will be Dec. 5, 1983. Requests bearing the 90EK problem code will be refused after that date.
- The list of affected models has been expanded.
- Pilot jets on all affected models (except XV920K, MK) must be replaced to ensure customer satisfaction. The replaced jets must be tagged and held for 90 days for warranty verification.
- Fuel tanks must be inspected on all affected models during predelivery, prior to filling the tank, turning on the petcocks, or starting the engine. This could prevent contaminants from entering the carburetors unnecessarily.

AFFECTED MODELS

1981 Models:

All	XJ550H	XJ550RH	XJ650H	XJ650LH
	XJ750RH	XS1100H	XS1100LH	XS1100SH

1982 Models:

All	XS400J	XS400RJ	XS400SJ	XJ550J
	XJ550RJ	XZ550RJ	XJ650J	XJ650LJ
	XJ650RJ	XS650SJ	XJ750J	XJ750RJ
	XV750J	XV920J	XV920RJ	XJH1100J

1983 Models:

XS400K: 12R-100101 ~ 105321
XS400RK: 16M-060101 ~ 061670
XJ550K: 5K5-100101 ~ 102137
XJ550RK: 4U8-100101 ~ 101156
XZ550RK: All
XJ650K: 5N8-050101 ~ 051302
XJ650LK: 16G-100101 ~ 101106
XS650SK: 5V4-100101 ~ 107618
XJ750K: 22R-000101 ~ 005285
XJ750MK: 33N-100101 ~ 103100
XJ750RK: 5G2-150101 ~ 152209
XV750K: 4X7-300101 ~ 304246
XV750MK: 20X-000101 ~ 003605
XV920K: 24M-000101 ~ 004701
XV920MK: 27Y-000101 ~ 003105

SPECIAL TOOLS

The following special tools and materials are required for these procedures:

Exhaust Gas Analyzer
YICS Shutoff Tool (YM-08025)
Yamaha Carburetor Cleaner
(ACC-11001-43-00)
Fuel Level Gauge (YM-01312)
Fuel Level Gauge Adapter (YM-01329)
Slide Hammer Adapter (YM-33217-17)

PROCEDURES

Fuel Tank Inspection and Cleaning

NOTE: This procedure must be done before the engine is started to prevent any existing contaminants from entering the petcock and carburetors.

1. Open the fuel tank cap and inspect the inside of the tank for rust. If no rust is apparent, resume normal predelivery; if rust is present, continue with this procedure.
2. Remove the fuel tank and drain the fuel.

3. Remove the petcock(s).

4. Rinse the tank with parts cleaning solvent to remove loose rust.

NOTE: To remove heavier rust deposits, place a handful of 8mm nuts in the tank with the cleaning solvent; gently shake the tank back and forth until the nuts dislodge the rust deposits. Remove the nuts and rinse.

5. Clean the petcock filter(s).

6. Reinstall the petcock(s), and reinstall the fuel tank.

7. Drain the stale fuel from the carburetor float bowls.

8. Install fresh fuel in the tank, start the engine, and check the machine on the EGA.

9. Test ride the machine to check for proper operation at various throttle openings and at idle.

10. If carburetion problems are diagnosed, follow the procedures in the next section.

Carburetor Disassembly and Cleaning

1. Remove the carburetors. Pay attention to the routing of cables and hoses; a simple sketch will assist you in reinstalling the carbs.

2. Using a 1/8-inch drill bit, drill the brass mixture-screw blind plugs and remove them with the slide hammer and adapter. Take care not to damage the mixture screws while drilling the plugs.

3. For reference upon reassembly, gently turn the mixture screws in until lightly seated and record the number of turns. Then remove the screws along with their springs, washers, and O-rings.

4. Number each float bowl and carb body for proper matching upon reassembly, and remove the float bowls.

5. Remove the main jet and pilot jet from each carburetor.

CAUTION:

The pilot jets on XV920K and XV920MK models *cannot be removed;* they must be thoroughly cleaned *on the carburetor.*

CAUTION:

On some models, the jets are not interchangeable among all the carburetors. Make sure that all carb components are reinstalled in the carburetor from which they were removed. Refer to the chart at the end of this Bulletin.

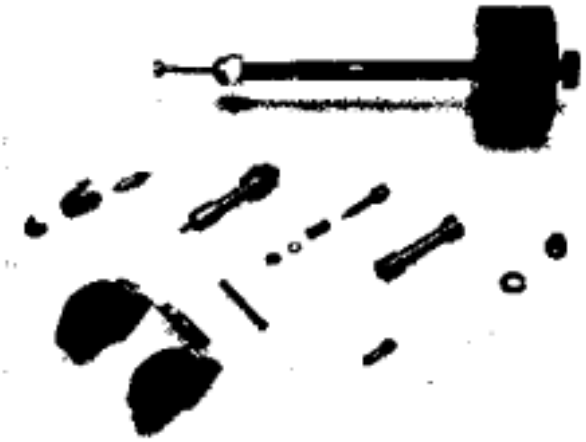
6. Remove the float pin, and remove the float and needle as an assembly from each carb.

7. Remove the valve seat from each carburetor, taking care not to damage the attached screen.

8. Remove the carb tops, springs, and slide/diaphragm assemblies. Make sure the diaphragms have no cracks or holes.

9. Remove the main nozzles.

10. Remove the enrichener assemblies.



11. Place the carb bodies right side up in a clean pan.

12. Pour a mixture of one part Yamaha Carburetor Cleaner and three parts water into the pan until the level of the mixture is about 1/4-inch below the butterfly shafts; otherwise, the seals in the shafts may be damaged by the mixture.

13. Immerse the float bowls, jets, nozzles, needle valve assemblies, and mixture screws in the cleaner. Place each slide in its carb body to allow the jet needles to soak. In addition, squirt some cleaner into the mixture screw bores to help dissolve residue in the passages. Again, make sure the mixture doesn't reach the butterfly shafts.

14. Allow the carburetor parts to soak for one hour.

15. Use a fine wire to clear the choke passage in the float bowl. Verify that the passage is clear by squirting contact cleaner into the top of the passage and watching it appear from the bottom hole.

NOTE: Compressed air will not remove all residue; a fine wire must be run through all jets and passages to ensure cleaning, and verify with contact cleaner.

16. Run the wire through the main jets and main nozzles (and the pilot jets on XV920K and XV920MK models).

17. Run the wire through the passage between the enrichener plunger hole and the float bowl chamber.

18. Finally, blow through each jet and passage with compressed air to remove any material remaining.

19. Reassemble the carburetors using new pilot jets. Make sure all correct components go into each carburetor. Refer to the chart at the end of this Bulletin. Check all jet, nozzle, and needle sizes with the appropriate service data sheet. Tag and retain the pilot jets for 90 days.

NOTE: The pilot jets in XV920K and XV920MK models are not removable; they must be thoroughly cleaned on the carburetor with a wire, and cleaning must be verified with contact cleaner and compressed air.

20. Before reinstalling the carbs, install the fuel level gauge on each carb and fill the float bowls with gasoline through the fuel line; adjust the float arms as required to achieve the proper fuel level. Make sure all drain screws on the float bowls face outward.

21. Reinstall the carburetors on the motorcycle. Make sure the air cleaner joints are properly seated on the carbs and the air filter box, and the hoses and cables are properly routed.

22. Synchronize the carburetors, set the idle speed, and set the mixture screws with the Exhaust Gas Analyzer. A chart containing the HC and CO specifications has been provided at the end of this Bulletin.

23. Install new blind plugs.

24. Test ride the machine and check for proper operation.

PART NUMBER	DESCRIPTION	REMARKS	DEALER COST
ACC-11001-43-00	Yamaha Carburetor Cleaner	1 quart	
256-14142-42-A0	Pilot Jet #42.5	All XS650; XS400H, SH, SJ	
4G0-14142-35-00	Pilot Jet #35	XJ650LJ, LK	
4G0-14142-35-A0	Pilot Jet #35	All XJ550	
4G0-14142-42-00	Pilot Jet #42.5	All XS1100; XS400J, RJ, K, RK	
4G0-14142-47-00	Pilot Jet #47.5	XJ1100J	
4G0-14142-60-A0	Pilot Jet #60	All XZ550	
4H7-14948-40-00	Pilot Jet #40	XJ650H, LH, J, RJ, K; All XJ750	
4X7-14948-41-00	Pilot Jet #41	XV920RH, RJ, J; All XV750	
28V-14991-90-00	Blind Plug	All XZ550	
3F9-14118-00-00	Blind Plug	All XS400, XJ550, XS650, XS1100, XJ1100; XJ650LJ, LK	
3J2-14118-00-00	Blind Plug	All XV750, XV920	
4L6-14118-10-00	Blind Plug	All XJ750; XJ650H, LH, J, RJ, K	

WARRANTY

Fuel Tank and Petcock Cleaning

The Problem Code for cleaning the fuel tank and petcock filters is 49; the job code is 3001. The warranty labor allowances for this procedure are 0.3 hours for twin- and four-cylinder models, and 0.5 for Turbo Secas. To receive credit, follow standard warranty request procedures. **Do not replace a fuel tank without prior Warranty Department authorization.**

Carburetor Disassembly and Cleaning

The Problem Code for carburetor disassembly and cleaning is also 49; the job code is 3050. The warranty labor allowances for this procedure are 1.8 hours for in-line twin-cylinder models, 2.0 hours for V-twins, 3.5 hours for four-cylinder models, and 4.3 hours for Turbo Secas. To receive credit, follow standard warranty request procedures.

Do not use any other codes for these procedures. Be sure to enter the part numbers on the request for the pilot jets used. Prior authorization by your RTA is required for registered units; otherwise the request will be refused.

HC AND CO SPECIFICATIONS

MODEL	MAX. CO (%)	MAX. HC (PPM)	SET CO (%)	IDLE RPM ± 50
XS400J, RJ, K, RK	5.0	500	3.0	1200
XS400H, SH, SJ	5.0	500	2.0	1200
XJ550 (all)*	7.0	500	4.0	1200
XZ550 (all)	6.0	500	2.0	1300
XJ650H, LH, J, LJ*	5.0	500	3.0	1050
XJ650RJ	5.0	500	3.0	1050
XJ650K, LK*	5.0	800	3.0	1050
XS650 (all)	6.0	500	3.0	1200
XJ750RH, J, RJ*	6.0	500	3.0	1050
XJ750K, MK, RK*	6.0	800	3.0	1050
XV750H, J, K, MK	7.0	500	3.0	1000
XV920RH, J, RJ, K	6.0	500	2.0	1000
XS1100 (all)	3.0	500	2.0	1100
XJ1100J*	6.0	500	3.0	1100

*On these models, the YICS Shutoff Tool (YM-08025) must be used to achieve the correct readings.

MODELS WITH DIFFERING CARBURETOR COMPONENTS

Pay special attention to the following carburetors during reassembly; they have main jets and/or jet needles which vary in size from one cylinder to another.

Main Jets

XV920RH, RJ	Front: 124	Rear: 126
XV920J, K, MK	Front: 128	Rear: 126
XJ650LJ, LK	Cyls. 1 & 4: 127.5	Cyls. 2 & 3: 132.5
XZ550RJ	Front: 122.5	Rear: 127.5
XS400J, K	Right: 115	Left: 125
XS400RJ, RK	Right: 117.5	Left: 127.5

Jet Needles

XV920K	Front: Y-30	Rear: Y-31
XV920J	Front: Y-24	Rear: Y-25
XV750J, K, MK	Front: Y-22	Rear: Y-23

FUEL TANK RUST REMOVAL

The rust removal procedure presented in Technical Bulletin M83-007B is no longer to be used. If an affected unit has severe fuel tank rust, follow the procedure detailed here. This new procedure is easy to perform, removes rust extremely well, and does not require sealing the tank after use. It does not harm paint, rubber, or plastic parts. In addition, the warranty labor allowance for rust removal has been increased from 0.3 to 0.7 hours.

This procedure must be done before an unsold affected unit is started to prevent any contaminants from entering the petcock and carburetors.

AFFECTED UNITS

1981 MODELS:

All XJ550H	XJ650H	XS1100H
XJ550RH	XJ650LH	XS1100LH
	XJ750RH	XS1100SH

1982 MODELS

All XS400J	XJ550J	XJ650J
XS400RJ	XJ550RJ	XJ650LJ
XS400SJ	XZ550RJ	XJ650RJ
		XS650SJ
XJ750J	XV920J	XJ1100J
XJ750RJ	XV920RJ	
XV750J		

1983 MODELS

XS400K:	12R-100101 ~ 105321
XS400RK:	16M-060101 ~ 061670
XV500K:	All
XJ550K:	5K5-100101 ~ 102137
XJ550RK:	4U8-100101 ~ 101156
XZ550RK:	All
XJ650K:	5N8-050101 ~ 051302
XJ650LK:	16G-100101 ~ 101106
XS650SK:	5V4-100101 ~ 107618
XJ750K:	22R-000101 ~ 005285
XJ750MK:	33N-100101 ~ 103100
XJ750RK:	5G2-150101 ~ 152209
XV750K:	4X7-300101 ~ 304246
XV750MK:	20X-000101 ~ 003605
XV920K:	24M-000101 ~ 004701
XV920MK:	27Y-000101 ~ 003105

SPECIAL MATERIALS REQUIRED

Yamaha Fuel Tank Conditioner Kit (ACC-11001-44-00; contains Rust Remover and Neutralizer).

PROCEDURE

1. Remove the fuel tank and drain the fuel.

2. Fill the tank about half full with water. Very carefully pour 16 oz. of ***Yamaha Fuel Tank Rust Remover*** into the water in the tank. Then add enough water to fill the tank completely. Replace the gas cap and agitate tank to mix the solution, and then remove the gas cap.

WARNING

Leaving the gas cap on for more than one minute could cause a dangerous pressure buildup in the fuel tank.

3. Set the tank down so that its filler hole is at the highest point.

4. Allow the tank to sit containing this solution for one to four hours, depending on the severity of the rust.

5. Drain the ***Yamaha Fuel Tank Rust Remover*** from the tank, and dispose of it properly. Although most of the solution can be drained through the filler hole, the petcocks should be removed to drain completely.

6. Rinse the tank twice with clean water. If available, a pressure washer works extremely well for this.

7. Pour 16 oz. of ***Yamaha Rust Remover Neutralizer*** into the tank. Rotate the tank in order to coat the entire inside surface. Drain the tank and allow the inside to dry completely. ***Yamaha Rust Remover Neutralizer*** will coat the inside and absorb any remaining moisture.

8. Install the petcocks and put about one gallon of gasoline into the tank.

NOTE: Rust will return only if the tank is not coated properly with ***Yamaha Rust Remover Neutralizer,*** allowing moisture to remain in the

tank. Gasoline in a properly treated tank will eliminate this possibility.

NOTE: Some fuel tanks have a small amount of fuel residue accumulated in the very bottom of the tank. This is a black, solid substance caused by evaporated fuel and is not removed by this cleaning procedure. There is no rust under this substance and it is not dissolved by gasoline, so it will cause no problems.

PARTS INFORMATION

PART NUMBER	DESCRIPTION	REMARKS	DEALER COST
ACC-11001-44-00	Yamaha Fuel Tank Conditioner Kit	Kits must be ordered in multiples of **six**; each kit consists of one 16-oz. bottle of Yamaha Fuel Tank Rust Remover and one 16-oz. bottle of Yamaha Rust Remover Neutralizer	

WARRANTY

The warranty labor allowance for this procedure is 0.7 hours; enter the time under "Extra Labor." The problem code is 49. To receive credit, file a standard warranty request. This request may be combined with one for the carburetor disassembly and cleaning procedure described in Technical Bulletin M83-007B.

49
(05) What problem code best describes the failure?

0.7
HOURS TENTHS

XJ650H / LH
OWNER'S / SERVICE MANUAL CORRECTIONS

The XJ650H and the XJ650LH Owner's Manuals and the XJ650G Service Manual contain an incorrect torque specification for the middle gear drain plug. Included with this bulletin are four (4) sets of revision stickers for the Owner's Manuals and a set of Service Manual revision pages. It is extremely important that you place these stickers in the Owner's Manuals as described below. Do this when you uncrate each affected model. Contact your District Service Office if you need more stickers.

AFFECTED MODELS

XJ650H, XJ650LH

PROCEDURE

Owner's Manual Corrections

1. Page 37 of the Owner's Manual shows an incorrect torque specification for the middle gear drain plug. The correct torque specification is 1.6 m-kg.

   The enclosed sticker shows a revised chart with the correct middle gear drain plug torque. Place this sticker in the appropriate place on page 37.

2. Page 39 of the Owner's Manual also shows the incorrect middle gear drain plug torque. The enclosed sticker contains the correct torque specification (1.6 m-kg). Place this sticker in the appropriate place on page 39.

Service Manual Corrections

The XJ650H and the XJ650LH use the XJ650G Service Manual. Replace pages 17 and 134 of the XJ650G Service Manual with the enclosed revision pages. The reference number for the revision pages is MS 607. Enter this number in the log at the back of the Training Aids Catalog for future ordering reference.

GENERAL
FUEL TANK CAP

A new fuel tank cap has been installed on the affected models. A slip sheet which explains the new opening and closing procedures has been inserted in the XJ650H and the SR250H/TH owner's manuals. The new procedure is printed in the owner's manuals for all the other affected models.

AFFECTED MODELS

SR185H	All	XJ650H	4H7-110383 ~
SR250H	3Y6-117743 ~	XJ750RH	All
SR250TH	3Y6-104120 ~	XV750H	All
XJ550H	All	XV920H	All
XJ550RH	All		

To Prevent confusion, the old and new procedures are listed below.

	OLD	NEW
To open	Insert the key, push down, and turn it clockwise about 1/4 turn. The lock will be released, and the fuel tank cap can be opened.	Insert the key, and turn it clockwise 1/4 turn. The lock will be released, and the fuel tank cap can be opened.
To close	The cap can be locked by pushing it into position **with or without** the key.	Push the tank cap into position with the key inserted. To remove the key, turn it counter clockwise to the original position. **NOTE:** This tank cap cannot be closed unless the key is in the lock. The key cannot be removed if the cap is not locked properly.

XJ650H
TECHNICAL PUBLICATIONS

There will be no new or supplementary service and assembly manuals for the XJ650H. The G model service and assembly manuals (1980) should be used in their place.

MODEL	PUBLICATION	PART NUMBER	REMARKS
XJ650H (Maxim 650)	Owner's Manual	LIT-11626-02-32	
	Service Manual	LIT-11616-01-94	Same as XJ650G
	Assembly Manual	LIT-11666-01-94	Same as XJ650G
	Consumer Info.	LIT-11656-02-32	

ALL MODELS
BATTERY WARRANTIES

INTRODUCTION

Recently, many dealers have submitted warranty requests for battery failures which were caused by improper maintenance or for batteries which did not even need replacement.

DEALER ACTION SUMMARY

Make sure all dealership service and warranty personnel read this bulletin and understand which battery failures are **not covered by warranty.**

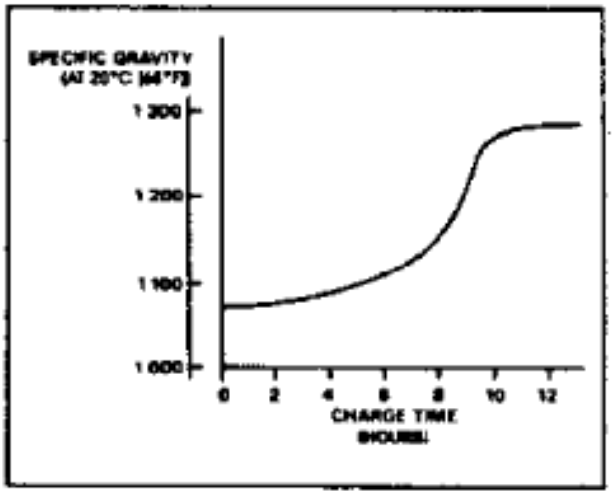
TYPES OF BATTERY FAULTS

The several types of battery conditions which are **not** considered warrantable are:

UNDERCHARGING

Very often it has been found that warranty requests have been made for batteries which were perfectly good. After testing selected samples, we have found out that many dealers have not allowed enough time to properly charge a flat battery, claiming that it would not accept a charge.

All Yamaha batteries must be charged according to instructions and at the **specified amp rates** in service manuals.



The graph illustrates the need for a battery to be charged for a sufficient length of time. You will notice that ample charging does not begin for several hours. Do not assume that a battery will not accept a charge until it has been steadily charged for a minimum of 12 hours at the proper rate.

SULFATED AND/OR OXIDIZED PLATES

Sulfated plates are caused either by a constant current drain without proper charging or allowing a battery to remain in a low state of charge over long periods of time. White- or light grey-colored deposits on the plates which cover active material can be easily seen through translucent cases. **This is a maintenance problem, and is not warrantable.**

Oxidized plates result when the fluid level is allowed to remain low and exposes the tops of the plates to air. The look is similar to that of the sulfated plates. This condition is also caused by lack of proper maintenance and is not warrantable.

SHORTED PLATES

Plates can be shorted by three things: metallic or mineral deposits; sulfate deposits; and plate contact from overcharging. None of these situations is a reason for warranty.

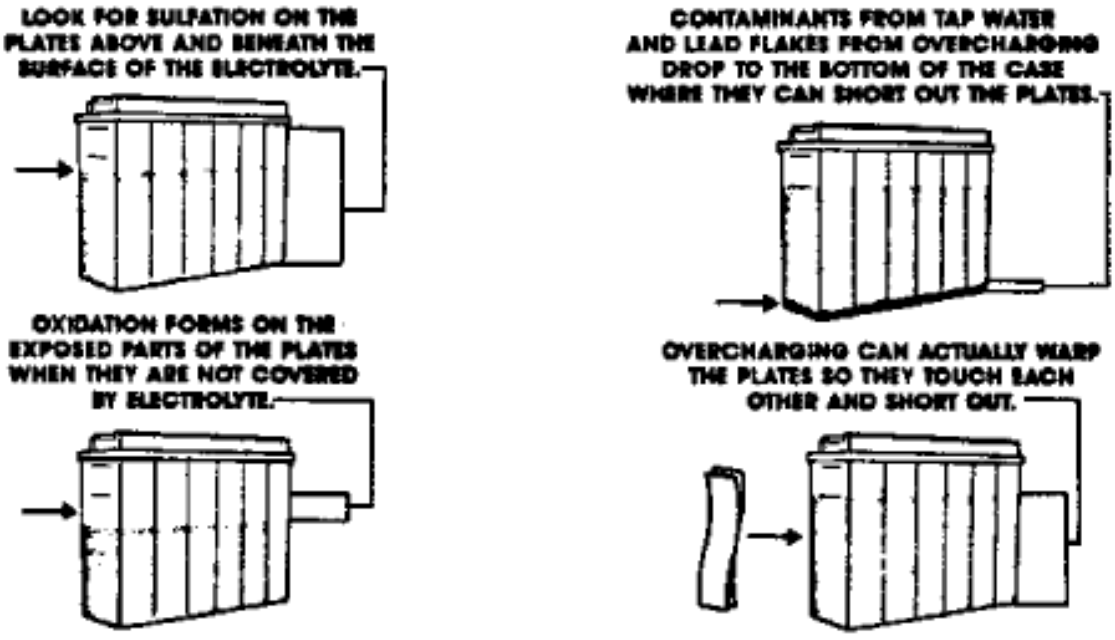
• First: metallic deposits can form in the bottom of the case as a result of overcharging. Overcharging is done by charging at too high a rate of amperage. Mineral deposits can collect at the bottom, too. Any contaminants which enter the battery will drop to the bottom of the case. This is brought about when tap water (not the required DISTILLED water) is used to fill the battery. Both these deposit types build up and contact the plates.

• Second: sulfate deposits can form to such an extent that deposits on negative plates can come in contact with those on positive plates. Non-conducting separators can have their pores penetrated by sulfates or plate material. This forms connections between the plates.

• Third: so high a charge rate can be applied to the battery that the heat developed causes the plates to actually buckle and bend into each other.

PHYSICAL DAMAGE

Examples of physical damage are a cracked case, holes worn through the case by loose mounting clamps or nearby objects, and loose terminals caused by improper removal or installation of battery cables. These items are all results of physical abuse. Unless damage of this type is detected at time of unit assembly, the battery is not warrantable.



WARRANTY

As always, warranty will pay for repair of **defects.** The following failures are **not** defects:

- Undercharging (insufficient charge)
- Sulfated or oxidized plates
- Shorted Plates caused by overcharging
- Physical Damage (except crate damage)

These failures are due to improper maintenance or abuse. They will not be covered by warranty.

If a battery is replaced because of a ***warrantable defect,*** it must be properly tagged and held for 90 days from the date the warranty request is submitted. Yamaha will be recalling a representative sample of defective batteries for evaluation by the battery manufacturers.

INTRODUCTION TO EPA

M7-069

This bulletin is intended to present a general overview of the current policies of the EPA and their effect on Yamaha's motorcycle production and you, the Yamaha motorcycle dealers', sales and service. For some of you who attended the service seminars, this will be a summary. For others this may be your introduction. Please read this bulletin carefully. If any questions arise do not hesitate to contact your District Service Representative, who can go into greater detail.

I. THE EMISSIONS REGULATIONS

A. The 1978 regulations.

The emissions regulations will apply to motorcycles with engines 50cc and larger, manufactured on or after January 1, 1978, which are designed for street use. Date of manufacture can be determined from the Federal Safety Compliance label located on the head pipe of the motorcycle.

B. These models can be further identified by two additional labels attached to the machine.

1) One label will carry EPA compliance information. The label will be located on the downtube or in the head pipe area.
2) The second label will carry tuning and service information. The label will be located near the service tools.

II. TYPES AND SOURCES OF MOTORCYCLE EMISSIONS

A. There are two basic types of pollutants that the EPA wishes to control.

1) Unburned hydrocarbons (HC).
HC is fuel that passes through the engine unburned. A small amount of HC also escapes from the fuel tank and carburetor vents. Crankcase fumes are also unburned HC due to fuel evaporating out of the motor oil. Blow-by gases enter the crankcase past the piston rings, and a small amount of fuel off the cylinder wall mixes with the motor oil after each combustion cycle. Misfiring or any engine problem that reduces combustion efficiency will increase HC emission levels.

2) Carbon monoxide (CO).
CO is a product of normal combustion. Rich fuel /air mixtures will increase CO output levels. CO is an odorless poisonous gas.

III. DEALER RESPONSIBILITIES FOR EMISSIONS CONTROL

A. Basic set-up and pre-delivery service.

Yamaha emissions controlled engines will be run, adjusted and preset for emissions control at the factory. As in the past, the dealer must perform set-up and pre-delivery servicing of the machine. Due to the new regulations we are using a new dealer set-up and pre-delivery checklist. This new sheet is included in this

package and details pre-delivery servicing. Technical bulletin number M7-067 will be issued along with one package of the new checklist forms. It will give more information on use of the new checklist. Strict adherence to these instructions is required to ensure that the EPA regulations are met. The part number for the new checklist is LIT-11161-00-78 and they are available in tablets of 50 sets for no charge.

DESCRIPTION	PART NUMBER	PRICE
Dealer Set-Up and Pre-Delivery Checklist Tablets of 50 sets	LIT-11161-00-78	No Charge Order only as necessary

DISCARD ALL OLD UNUSED CHECKLISTS. USE ONLY THE NEW CHECKLIST.

B. Basic service and periodic maintenance.

Proper periodic service adjustments and checks at the specified time intervals or odometer readings are essential to maintain minimum emissions levels. These intervals are specified in both the owner's manual and service manual for each model. Improper adjustment or lack of adjustment to these items can increase emissions output as well as decrease performance and economy. Four stroke models are equipped with idle mixture limiter caps. Do not remove them or adjust the carburetor mixture setting.

C. Tools and equipment required to service emissions control systems.

At the present time only the following items are required in addition to the hand tools and special tools necessary to perform routine service operations.

1. Vacuum sensing equipment – for carburetor synchronization
2. Timing light (strobe light) – for checking and setting ignition spark timing
3. Tachometer – for setting idle speed and checking the operation of the governor assembly.

D. Tampering with emissions controlled motorcycles.

IMPORTANT NOTE:
Tampering with the emissions control system of an emissions controlled motorcycle by a motorcycle dealer or repair shop is prohibited by the Clean Air Act.

Tampering is defined as any modification to the emission control system that causes the motorcycle to exceed the applicable emission standard.

Tampering prior to the delivery of the motorcycle to the retail purchaser subjects the dealer to a possible fine of up to $10,000. Tampering after delivery of the motorcycle to the retail purchaser subjects the dealer or repair shop to a possible fine of up to $2,500.

The tampering law does not prohibit the sale and/or use of aftermarket parts and accessories. However, for maximum protection against a tampering charge, a dealer should receive satisfactory assurances from the aftermarket manufacturer that installation of an aftermarket part or accessory will not constitute tampering.

All Yamaha parts and accessories are designed and/or tested to specific models so that their use on these models will not constitute tampering. Yamaha will not comment upon whether the use of specific non-Yamaha parts and/or accessories constitutes tampering.

In addition to Federal anti-tampering provisions in the Clean Air Act, some states have state anti-tampering laws. You are responsible for knowing your own state laws regarding tampering.

Yamaha is concerned with preserving the environment and is continually striving to reduce emission levels while maintaining good performance and reliability. It is Yamaha's request that the dealer network also strive to minimize emissions and help increase consumer satisfaction.

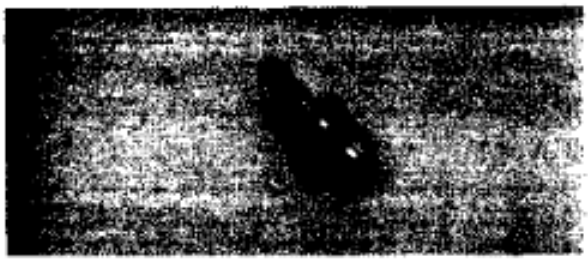
Additional information regarding emissions controls and tools and equipment will be provided from time to time as required and as information is available. Specific information for dealers who sell and service machines used at higher altitudes will be made available.

SPECIAL TOOLS
EMISSIONS-RELATED

The following tools are now available from Yamaha Parts Distributors Inc.

REPLACEMENT PROBE ADAPTOR

This tool is a replacement part for the Allen Exhaust Gas Analyzer. It is used to connect the multiprobe adaptor to multicylinder-engine exhaust systems. It is available from your YPDI warehouse.



REPLACEMENT STUD

This replacement stud for the heavy-duty Rivnut® installation tool is now available from the Cypress warehouse only.

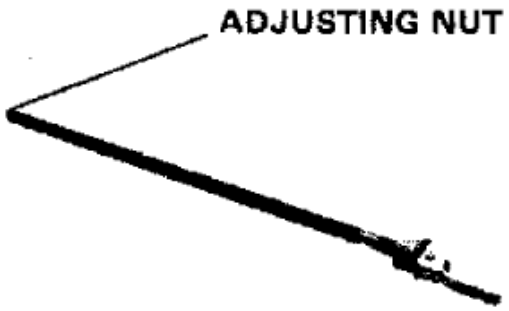
PARTS INFORMATION

PART NUMBER	DESCRIPTION	DEALER COST
TLM-11080-50-00	Probe Adaptor	
TLM-11080-45-01	Rivnut® Tool Stud	

SPECIAL TOOLS
YICS SHUTOFF TOOL

Yamaha Parts Distributors Inc. now stocks the YICS Shutoff Tool. This tool is needed when synchronizing the carburetors on models with YICS.

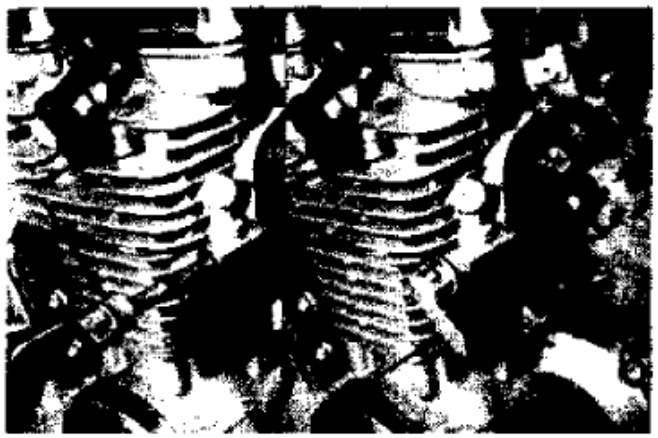
PROCEDURE



1. Remove either the left or right bolt (but not both) at the end of the YICS passage in the cylinder.

2. Lightly oil the YICS shutoff tool. Insert the tool into the passage until the grommet is against the end of the passage.

3. Flip the locking lever. If the tool is not tight in the YICS passage, remove the tool and tighten the adjusting nut as necessary.



4. With the shutoff tool properly in place, follow normal carburetor synchronization procedures.

5. Remove the YICS shutoff tool. Reinstall the passage bolt, and torque the bolt to specification.

   TIGHTENING TORQUE: 2.2 m-kg (16.0 ft-lb)

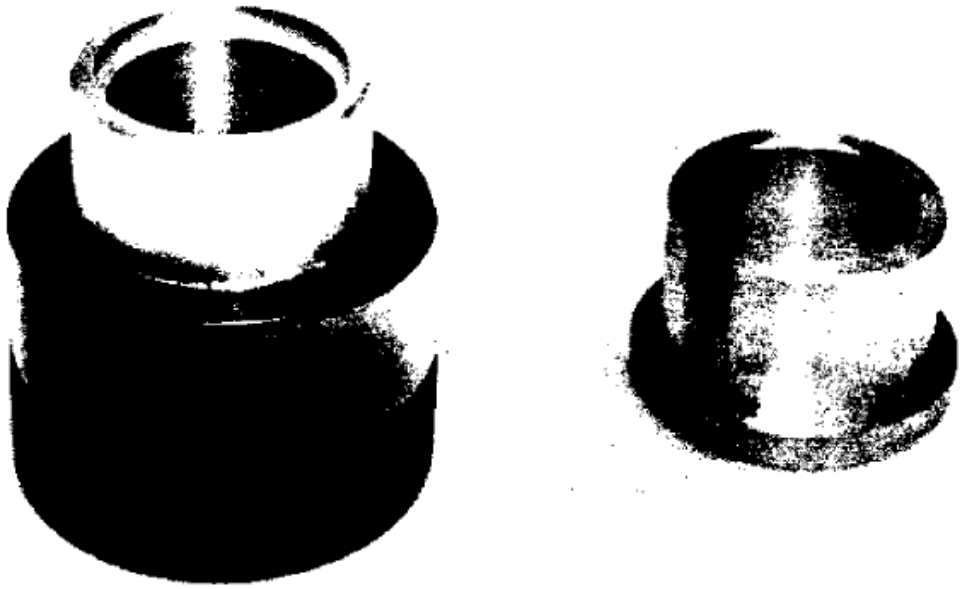
PARTS INFORMATION

PART NUMBER	DESCRIPTION	DEALER COST
TLM-11080-25-00	YICS Shutoff Tool	
TLM-11080-25-01	Replacement Seal Kit	

DATE July 15, 1981

SPECIAL TOOLS
36mm FORK TOOL (XJ750)

Yamaha Parts Distributors Inc. now stocks the fork tool required to service the Seca 750 front forks. This tool performs four functions: guide bushing alignment, guide bushing installation, oil seal installation, and dust seal installation. Instructions for using this two-piece fork tool are in the XJ750RH Supplementary Service Manual revision MS-613. Replacement drivers for the tool are available separately from the YPDI warehouse in Cypress.



PARTS INFORMATION

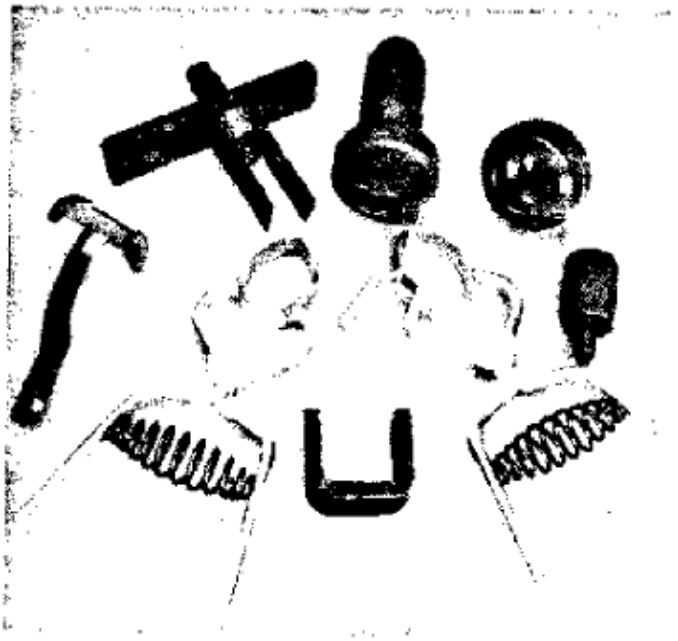
PART NUMBER	DESCRIPTION	DEALER COST
TLM-11080-10-00 TLM-11080-10-01	36mm Fork Tool • 36mm Fork Tool Driver	

XJ650
SPECIAL TOOLS

The XJ650 Special Tool Kit will be available in mid-June from your Yamaha Parts Distributors Inc. warehouse.

PARTS INFORMATION

This kit will be offered at a special low price until the initial supply of kits is exhausted. It is recommended that dealers order immediately to take advantage of this special price; the normal dealer price will be approximately 50% higher.



PART NUMBER	DESCRIPTION	DEALER COST
90890-01981-00	XJ650 Special Tool Kit	
90890-04043-00	• Rotor Holding Tool	
90890-04044-00	• Piston Ring Compressor (2)	
90890-04045-00	• Middle Drive Shaft Nut Wrench	
90890-04046-00	• Middle Drive Shaft Holder	
90890-04050-00	• Rear Drive Pinion Bearing Retainer Remover	
90890-04051-00	• Drive Pinion Holder	
90890-04052-00	• Rotor Puller Attachment	
90890-04011-00	• Damper Spring Compressor	

Ø Does not apply. Individual tools cannot be ordered at this time.

DATE November 17, 1981

EMISSION-CONTROLLED MODELS
HIGH-ALTITUDE ADJUSTMENTS

In order to comply with federal emissions regulations, Yamaha must provide high-altitude adjustment instructions to Yamaha dealers and customers in high-altitude counties. These instructions include information for changing the carburetion of applicable machines for operation in high elevations. As defined by the Environmental Protection Agency, high elevation is 4000 feet and above.

Each kit contains the instructions for modifying applicable models for a given model year as well as new emission control labels. These labels must be affixed to the motorcycle after a motorcycle has been modified for high-altitude operation. Place the new label next to the original label on the motorcycle. Both the original and new label must be clearly visible on the machine.

Five kits for each applicable model year (1978-81) are enclosed with this update. Additional kits can be ordered from the Yamaha Parts Distributors Inc. warehouse in Cypress, California. There is no charge for these kits.

PARTS INFORMATION

PART NUMBER	DESCRIPTION	DEALER COST
LIT-10061-04-81	1981 High Altitude Adjustment Kit	NC
LIT-10061-03-81	1980 High Altitude Adjustment Kit	NC
LIT-10061-02-81	1979 High Altitude Adjustment Kit	NC
LIT-10061-01-81	1978 High Altitude Adjustment Kit	NC

1992 EMISSION-CONTROLLED MODELS
HIGH ALTITUDE EMISSION ADJUSTMENTS

INTRODUCTION

This bulletin contains high altitude emissions information required by federal regulation. Yamaha provides high altitude information kits to Yamaha dealers. These kits contain information stickers and instructions for changing to optional main jet(s) on affected models used consistently at altitudes higher than 4,000 feet above sea level.

One high altitude information kit is included with this bulletin. This kit contains a sticker and jetting information sheet for each affected model. Additional kits are available at no charge from Yamaha Parts and Accessories.

DEALER ACTION SUMMARY

Install high altitude carburetor main jets only on units that will always be operated above 4,000 feet. For proper main jet installation, use the **instructions provided with the high altitude information kits.**

AFFECTED MODEL APPLICATION CHART

(See Page 2 for ADJUSTMENT RECOMMENDATION CHART)

MODEL	DISPLACEMENT	ENGINE FAMILY
TW200D, DC	196 cc	NYA019641B1
XT225D, DC	223 cc	NYA022341A3
XT350D, DC	346 cc	NYA034641A9
XJ600ED, EDC	595 cc	NYA059541BX
FZR600RD	599 cc	NYA059944WX
FZR600RDC	599 cc	NYA059944SX
XJ600SD, SDC	593 cc	NYA059J4D1
XV750D, DC	749 cc	NYA074942S4
TDM850D, DC	849 cc	NYA084942W3
FZR1000D, DC	1003 cc	NYA100344E9
XV1100D, DC	1063 cc	NYA106342SX
FJ1200BD, DC	1188 cc	NYA118844A5
FJ1200AD, FJ1200ADC	1188 cc	NYA118844B6
VMX12D	1198 cc	NYA119844AX
VMX12DC	1198 cc	NYA119844W4
XV1300D, DDC	1294 cc	NYA129444W5

PARTS INFORMATION

PART NUMBER	DESCRIPTION	DEALER COST
LIT 10061-16-81	Information Kit	N/C

NOTE: Main jets listed in the information kits must be ordered from Yamaha Parts and Accessories.

TECHNICAL BULLETIN

ADJUSTMENT RECOMMENDATION CHART

CAUTION:

Units on which high altitude main jets have been installed should not be used below 4,000 feet elevation or serious engine damage could occur. Make sure owners of modified machines are aware of this limitation.

MODEL	ORIGINAL MAIN JET	RECOMMENDED MAIN JET	PART NUMBER	
TW200D, DC	#114	#110 - #114	#110	288-14343-55-00
			#112	288-14343-56-00
			#114	288-14343-57-00
XT225D, DC	#130	#127.5 - #130	#127.5	62C-1423A-76-A0
			#130	620-14231-26-A0
XT350D, DC	PRIMARY (LEFT SIDE, #125	PRIMARY #120, #125		PRIMARY
			#120	288-14343-60-00
			#125	288-14343-63-00
	SECONDARY (RIGHT SIDE, #106	SECONDARY #102 - #106		SECONDARY
			#102	30X-14343-51-00
			#104	288-14343-52-00
			#106	30X-14343-53-00
XT600ED, EDC	PRIMARY (LEFT SIDE) #130	PRIMARY #120 - #130		PRIMARY
			#120	[illegible]
			#125	288-14343-63-00
			#130	288-14343-65-00
	SECONDARY (RIGHT SIDE) #104	SECONDARY #100 - #104		SECONDARY
			#100	30X-14343-50-00
			#102	30X-14343-51-00
			#104	288-14343-52-00
FZR600RD, RDC	#107.5	#102.5 - #107.5	#102.5	3G2-1423A-71-00
			#105	3G2-14231-21-00
			#[illegible]	3G2-1423A-72-00
XJ600SD, SDC	#102.5	#100 - #102.5	#100	620-14231-20-00
			#102.5	620-1423A-71-A0
XV750D, DC	#122.5	#120 - #122.5	#120	620-14231-24-A0
			#122.5	6.0-1423A-75-00
TDM850D, DC	#140	#135 - #140	#135	3LD-14231-27-00
			#137.5	3LD-14231-73-00
			#140	3LD-14231-28-00
FZR1000D, DC	#1 & #4 CYL. #125	#1, 4 CYL. #120 - #125	#117.5	3G2-1423A-74-00
			#120	3G2-14231-24-00
	#2 & 3 CYL. #122.5	#2, 3 CYL. #117 - 122.5	#122.5	3G2-1423A-75-A1
			#125	3G2-14231-25-00
XV1100D, DC	#1 CYL. #122.5	#1 CYL. #120 - #122.5	#120	620-14231-24-A0
			#122.5	620-1423A-75-00
	#2 CYL. #125	#2 CYL. #122.5 - #125	#125	620-14231-25-A0
FJ1200AD, A0C, D, DC	#110	#105 - #110	#105	620-14231-21-A0
			#110	620-14231-22-A0
VMX12D, DC	#152.5	#147.5 - #152.5	#147.5	3G2-1423A-80-A0
			#150	3G2-14231-30-A0
			#152.5	3G2-1423A-81-00
XVZ13DD, DDC	#125	#120, #125	#120	3G2-14231-24-00
			#125	3G2-14231-25-00

WARRANTY INFORMATION

No warranty applies. Installation of parts for high altitude use is done at the customers' option and expense.

CAUTION:

Damage to modified units caused by operation below 4,000 feet elevation will not be covered by warranty.

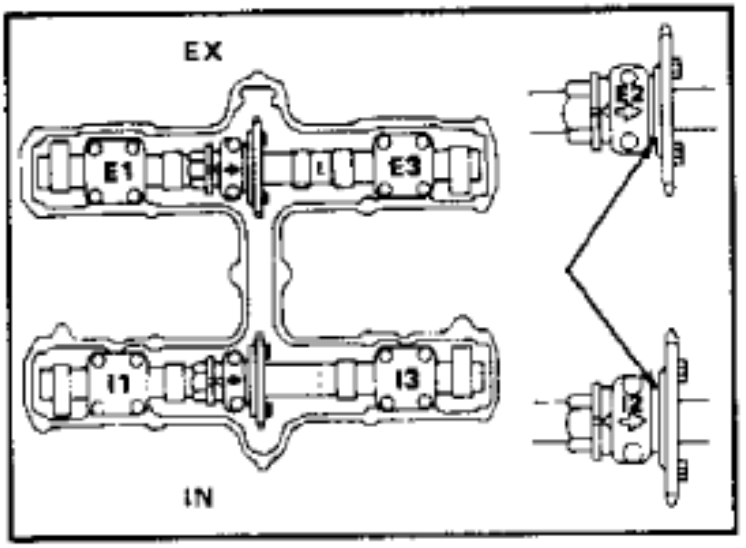
ROUTE TO [✓ SERVICE] [✓ PARTS] [ ] WARRANTY [ ] SALES

DATE February 4, 1983

XJ550/650/750
CAMSHAFT SIDE PLAY

Some owners of an affected model may complain of a tapping noise in the top end. This may be caused by excessive clearance between the thrust surface of the camshaft and the camshaft cap. If this is the case, there will be excessive camshaft side play, and the camshaft will rattle in the cylinder head.

The tapping generally occurs at idle and diminishes around 1800 rpm. It is particularly evident when an affected model with this problem is placed on its sidestand.



AFFECTED MODELS

All XJ550H, XJ550RH
All XJ650G, XJ650H, XJ650LH
All XJ750RH

If you suspect that an affected model has this problem, remove the cam cover from the engine and measure the clearance where shown in the illustration. Check this on both the intake and exhaust sides. The camshaft cap in question is the one closest to the cam chain tower. It is the cap that is machined on two sides.

If the clearance exceeds specification, replace the camshaft cap. New caps have been machined to closer tolerances to eliminate this noise.

CAMSHAFT SIDE PLAY: 0.025 ~ 0.076mm

Note the position of the arrow on the old camshaft cap, and install the new cap with the arrow pointing in the same direction. Liberally oil the cap before installation. Use the old hardware, and torque the bolts to specification.

TIGHTENING TORQUE: 1.0 m-kg

Please note that the excessive free play does not adversely affect the engine. This is strictly a customer relations problem.

PARTS INFORMATION

PART NUMBER	DESCRIPTION	REMARKS	DEALER COST
4H7-12173-00-00	Camshaft Cap	XJ650	
4G0-12173-00-00	Camshaft Cap	XJ550; XJ750	

SERVICE COPY	SER MGR	MECH	MECH	MECH	BINDER
OFFICE COPY	GEN MGR	SALES	PARTS	BINDER	PAGE 1 OF 1

GENERAL
NEW LOCK-NUMBER LOCATION AND FORMAT

The lock/key number of the affected models has been relocated on the main switch, and the format for identifying the proper key blanks has been changed.

AFFECTED MODELS

All SR250G and XJ650G
Most 1981 street-legal models

PROCEDURE

The lock/key number on the affected models is located on the bottom of the main switch; see Photo. On most models, the number can be seen with the switch installed on the motorcycle; some models, however, require the removal of some parts to reveal the number.


LOCK/KEY NUMBER

The new lock-number format has a letter prefix indicating which key blank is to be used when cutting a new key. There are six letters used, A through F; hence, there are six types of new key blanks. After determining the prefix letter, refer to the chart below for the part number of the proper key blank.

PARTS INFORMATION

PREFIX LETTER	PART NUMBER	DESCRIPTION	DEALER COST
A	90890-55813-00	Key Blank	
B	90890-55814-00	Key Blank	
C	90890-55815-00	Key Blank	
D	90890-55816-00	Key Blank	
E	90890-55817-00	Key Blank	
F	90890-55818-00	Key Blank	

FILE GENERAL	DATE 6/27/80	BUL M80-031

The following are updated lists of previously introduced key-blank numbers and their part numbers.

LOCK/KEY NUMBER	KEY BLANK	LOCK/KEY NUMBER	KEY BLANK	LOCK/KEY NUMBER	KEY BLANK
221 ~ 227	211	3491 ~ 3500	1212	4151 ~ 4160	1221
228 ~ 234	212	3501 ~ 3530	1215	4161 ~ 4190	1221
1209 ~ 1215	221	3531 ~ 3550	1215	4191 ~ 4200	1221
1711 ~ 1725	111	3551 ~ 3580	1219	4201 ~ 4210	1220
1726 ~ 1750	911	3581 ~ 3600	1219	4211 ~ 4240	1220
1751 ~ 1775	921	3601 ~ 3630	1216	4241 ~ 4250	1220
1776 ~ 1800	151	3631 ~ 3650	1216	4251 ~ 4260	1222
2109 ~ 2115	222	3651 ~ 3680	1220	4261 ~ 4290	1222
2311 ~ 2318	412	3681 ~ 3700	1220	4291 ~ 4300	1222
2411 ~ 2418	411	3701 ~ 3730	1221	4301 ~ 4320	1211
2550 ~ 2557	522	3731 ~ 3750	1221	4321 ~ 4350	1211
2611 ~ 2625	112	3751 ~ 3760	1213	4351 ~ 4370	1213
2626 ~ 2650	912	3761 ~ 3790	1213	4371 ~ 4400	1213
2651 ~ 2675	922	3791 ~ 3800	1213	4401 ~ 4420	1212
2676 ~ 2700	152	3801 ~ 3830	1222	4421 ~ 4450	1212
2750 ~ 2757	512	3831 ~ 3850	1222	4451 ~ 4470	1214
2840 ~ 2847	511	3851 ~ 3860	1214	4471 ~ 4500	1214
3101 ~ 3130	1211	3861 ~ 3890	1214	4501 ~ 4520	1215
3131 ~ 3150	1211	3891 ~ 3900	1214	4521 ~ 4550	1215
3151 ~ 3180	1213	3901 ~ 3910	1215	4551 ~ 4570	1217
3181 ~ 3200	1213	3911 ~ 3940	1215	4571 ~ 4600	1217
3201 ~ 3230	1212	3941 ~ 3950	1215	4601 ~ 4620	1216
3231 ~ 3250	1212	3951 ~ 3960	1217	4621 ~ 4650	1216
3251 ~ 3280	1214	3961 ~ 3990	1217	4651 ~ 4670	1218
3281 ~ 3300	1214	3991 ~ 4000	1217	4671 ~ 4700	1218
3301 ~ 3330	1217	4001 ~ 4010	1216	4701 ~ 4720	1219
3331 ~ 3350	1217	4011 ~ 4040	1216	4721 ~ 4750	1219
3351 ~ 3360	1211	4041 ~ 4050	1216	4751 ~ 4770	1221
3361 ~ 3390	1211	4051 ~ 4060	1218	4771 ~ 4800	1221
3391 ~ 3400	1211	4061 ~ 4090	1218	4801 ~ 4820	1220
3401 ~ 3430	1218	4091 ~ 4100	1218	4821 ~ 4850	1220
3431 ~ 3450	1218	4101 ~ 4110	1219	4851 ~ 4870	1222
3451 ~ 3460	1212	4111 ~ 4140	1219	4871 ~ 4900	1222
3461 ~ 3490	1212	4141 ~ 4150	1219		

BLANK NUMBER	PART NUMBER	DESCRIPTION	DEALER COST
111	BKY-55901-01-11	Key Blank	
112	BKY-55902-01-12	Key Blank	
151	BKY-55927-01-51	Key Blank	
152	BKY-55928-01-52	Key Blank	
211	BKY-55903-02-11	Key Blank	
212	BKY-55904-02-12	Key Blank	
221	BKY-55905-02-21	Key Blank	
222	BKY-55906-02-22	Key Blank	
411	BKY-55909-04-11	Key Blank	
412	BKY-55910-04-12	Key Blank	
511	BKY-55913-05-11	Key Blank	
512	BKY-55914-05-12	Key Blank	
911	BKY-55925-09-11	Key Blank	
912	BKY-55926-09-12	Key Blank	
921	BKY-55929-09-21	Key Blank	
922	BKY-55930-09-22	Key Blank	
1211	90890-55801-00	Key Blank	
1212	90890-55802-00	Key Blank	
1213	90890-55803-00	Key Blank	
1214	90890-55804-00	Key Blank	
1215	90890-55805-00	Key Blank	
1216	90890-55806-00	Key Blank	
1217	90890-55807-00	Key Blank	
1218	90890-55808-00	Key Blank	
1221	90890-55811-00	Key Blank	
1222	90890-55812-00	Key Blank	

DATE April 22, 1983

1980 ~ 1983 4-STROKE MODELS
PILOT SCREW COMPONENTS AND BLIND PLUGS

Part numbers for pilot screw components and blind plugs are listed here for the 1980 through 1983 model years. These parts may be ordered from Yamaha Parts Distributors Inc. Dealer cost is shown.

XJ750H, RH, J, RJ, K, RK; XJ650J, RJ, K

DESCRIPTION	PART NUMBER	DEALER COST
Pilot Screw Kit	5H2-W1494-00-00	
Pilot Screw	NA	
O-ring	NA	
Washer	NA	
Spring	NA	
Blind Plug	4L6-14118-10-00	

ALL MODELS
TRANSMISSION SHIMMING PROCEDURES

Proper transmission shimming during reassembly is essential for proper operation and long transmission life, particularly on the large-displacement performance models. This bulletin provides information for proper transmission shimming. (This information was originally provided as part of the Powerplants 2 service school.) A listing of available shims is also included for easy reference.

AFFECTED MODELS

All Models

TRANSMISSION SHIMMING

Transmission shimming is a commonly used term which refers to the spacing of the transmission gears and shafts to allow smooth, precise shifting and proper gear engagement. In the past, transmission shimming was a common practice which was performed during any major engine repair. Today's improved machining techniques have greatly reduced the need for this. (However, you should be familiar with the steps which must be performed to do this operation correctly.) If transmission parts must be replaced, transmission shimming should be checked. This is assuming, of course, that all external shifting components have been inspected first. Refer to the appropriate service manual for this information.

The drive axle and individual gears must have minimum side-to-side play to insure proper engagement. In many cases, shims are installed at the factory. These can be identified by the codes U.R. or U.N. (use as required or use as necessary). A list at the end of this bulletin gives the available shim sizes and their part numbers.

MEASURING INDIVIDUAL GEAR SIDE PLAY

A spinning gear is usually held in place either by, 1) a circlip and shim on both sides, or 2) a circlip and shim on one side with a shouldered section of the axle on the other side. Any spinning gear should have between 0.08mm (0.003") to 0.13mm (0.005") side play for maximum efficiency. If there is no side play, the gear will bind up. If there is too much side play, the gear will move over when the sliding gear tries to engage it.

This can cause the engaging dogs to become rounded. If a shim is needed, measure the axle diameter, select the proper shim from the following list (arranged by shim sizes), and install so the spinning gear is moved toward the sliding gear that engages it (to maintain complete engagement).

WARNING

It is very important that all clearances be within specification and that all gears engage properly. Serious damage and/or injury could be done as a result of improper transmission adjustment.

MAIN AXLE SPACING

Since tightening the clutch retaining nut pulls the main axle completely to one side, adjustment of this axle is normally not necessary. (Axle cannot move from side to side.) That is, however, as long as factory installed shims are kept in place on the right end of the axle. Refer to the parts microfiche to verify size and location.

MEASURING DRIVE AXLE SIDE PLAY

On horizontally-split engines, measuring drive axle side play is a relatively easy operation since both transmission shafts can be placed in the lower engine case and the transmission operated. On vertically split engines, however, a slightly more complicated procedure is required.

1. Measure the distance between axle bearings in the case. Measure the depth of each case, from the top of the case down to the transmission bearing inner race. Adding the depth of both case halves (subtracting thickness of flat edge laid across case to assist in measurement) will give total distance between bearings.

2. Measure transmission shaft length. Measure transmission axle length from one bearing contact surface to the other bearing contact surface (across gears and circlips, if any on the outer ends.) Include standard shims that are usually included in the engine and listed in the parts book.

3. Combine measurements to determine side play. Subtract transmission axle length from total case depth. The remainder will be the amount of the side play.

EXAMPLE:

Total case depth	= 155.2mm (6.111")
Axle length	= 155.0mm (6.100")
Side-to-side play	= .20mm (.011")

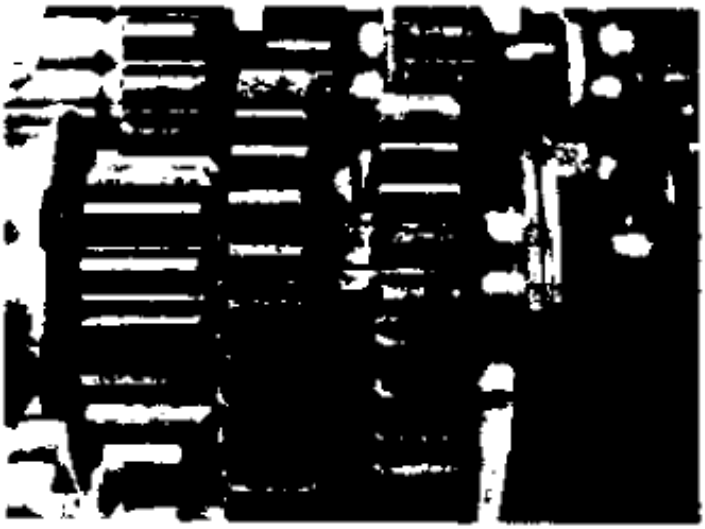
RESULTS:

.20mm (.011")	Is excessive
.08mm (.003")	recommended side play
.12mm (.008")	must be taken up

As a general rule, half the excessive side play should be taken up at each end of the axle. Select the proper shims from the parts list, combining some if necessary. If the model in question is not listed, then measure the diameter of the axle and match it with a shim of similar inner diameter and appropriate thickness.

FINAL TRANSMISSION SPACING CHECK

Whenever possible, install assembled gears and shift drum assembly into a case and rotate through all gears. Check that you have 50-75% engagement of the dogs into the slots or into the corresponding dogs.



The amount of engagement can be adjusted, either by shimming the individual gear more toward the sliding gear, or shimming the drive axle. As the axle moves over, it carries the circlipped spinning gear (or gears) toward the sliding gear(s).

TROUBLESHOOTING TRANSMISSION PROBLEMS

Less than 50% engagement of the gear dogs and slots can eventually cause the gears to separate under load, which will in turn bend the shift fork that moves the sliding gear. This will lead to frequent gear disengagement. The normal correction procedure is to replace the shift fork, sliding gear, and corresponding spinning gear. Check the guide bar for bends (straighten or replace) and shift drum fork groove for scoring or chips (replace if any noticeable damage). Be sure to replace all circlips with new ones, and install them with the rounded edge towards the gear. Next, carefully space the transmission. If all damaged parts are not replaced and tramission spacing corrected, the problem will occur again.

IMPORTANT NOTICE: Disengagement can also occur as the axle moves because of insufficient support at one end. If a transmission bearing circlip is left off, if the left-hand drive axle bearing comes loose in the case, or if a bearing retaining plate becomes bent, then additional parts must be checked and possibly replaced.

MOTORCYCLE	DATE	BUL

PARTS INFORMATION

ID (mm)	OD (mm)	THICKNESS (mm)	PART NUMBER
[illegible]	[illegible]	[illegible]	[illegible]
15.2	30.0	0.4	164-17427-00-04
15.2	30.0	0.6	164-17427-00-06
15.2	30.0	0.8	164-17427-00-08
15.2	30.0	1.0	164-17427-00-10
15.2	30.0	1.2	164-17427-00-12
[illegible]	[illegible]	[illegible]	[illegible]
17.0	26.0	0.6	156-17427-00-06
17.0	26.0	0.7	156-17427-00-07
17.0	26.0	0.8	156-17427-00-08
17.5	26.0	1.0	90201-17255-00
17.5	28.0	0.6	90201-17327-00
[illegible]	[illegible]	[illegible]	[illegible]
20.0	25.0	1.0	90201-20266-00
20.2	30.0	1.5	90201-20278-00
20.2	30.1	1.0	90201-20276-00
20.2	33.0	0.6	137-17427-00-06
20.2	33.0	0.9	137-17427-00-09
[illegible]	[illegible]	[illegible]	[illegible]
25.0	32.0	1.0	90201-25490-00
25.0	34.0	0.3	168-17428-01-03
25.0	34.0	0.5	168-17428-01-05
25.1	31.0	0.1	156-17417-00-01
25.1	31.0	0.2	156-17417-00-02
[illegible]	[illegible]	[illegible]	[illegible]
25.4	37.0	6.0	170-16154-02-00
26.2	34.0	1.0	256-17236-00-10
26.2	34.0	1.2	256-17236-00-12
27.2	34.0	1.0	90201-27349-00
28.2	34.0	1.0	90201-28665-00
30.0	44.0	0.3	156-11564-00-03

PARTS INFORMATION

ID (mm)	OD (mm)	THICKNESS (mm)	PART NUMBER
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
30.0	44.0	0.7	156-11564-00-07
30.2	36.0	1.0	90201-30398-00
30.2	40.0	2.0	90201-30602-00
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
35.2	45.0	2.0	90201-35668-00

DATE July 21, 1982

XJ650LJ
TURBO LUBRICATION SYSTEM TROUBLESHOOTING

If an XJ650 Turbo leaks oil, follow the procedures below to locate the problem.

AFFECTED MODELS

XJ650LJ Turbo

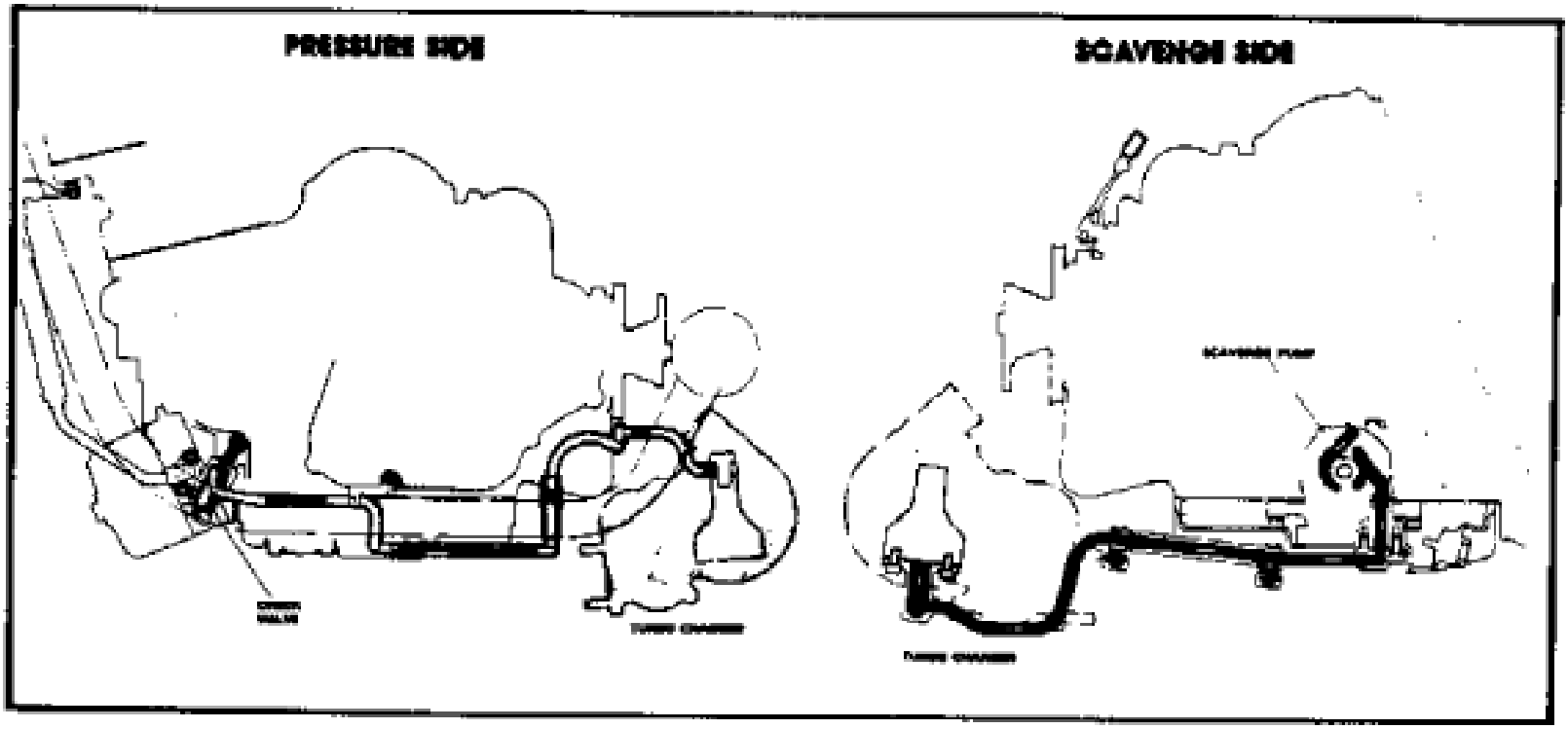
SYSTEM DESCRIPTION

As shown in the following diagrams, the turbocharger unit is lubricated by an oil line which originates at the crankshaft oil gallery. The oil passes through a check valve and an external line before reaching the turbo unit. Within the turbo unit, the oil lubricates the floating bearing on the turbine shaft. Then the oil is retrieved through another external oil line by a scavenging rotor on the oil pump.

The check valve at the crankshaft oil gallery is designed to prevent oil from flowing to the turbo unit when the engine is shut off. The seals on the turbine shaft look and work much like piston rings, functioning only when the turbo unit is operating. If the check valve does not close the oil line when the engine stops, oil can flow into the turbo unit and through the seals.

If oil then moves into the turbine side, the oil will drip out of the muffler drain hole. If oil flows into the compressor side of the turbo unit, it will be thrown into the surge tank when the machine is restarted; the oil will settle in the bottom of the surge tank to drip out of the drain valve when the engine is stopped again.

Another possible problem might be with the scavenging line. Since the turbo unit is not designed to hold much oil, the scavenging system must ensure that the oil is adequately retrieved from the unit. If the return line is restricted, this cannot be accomplished; the results will be much the same as previously described.



DATE **September 16, 1983**

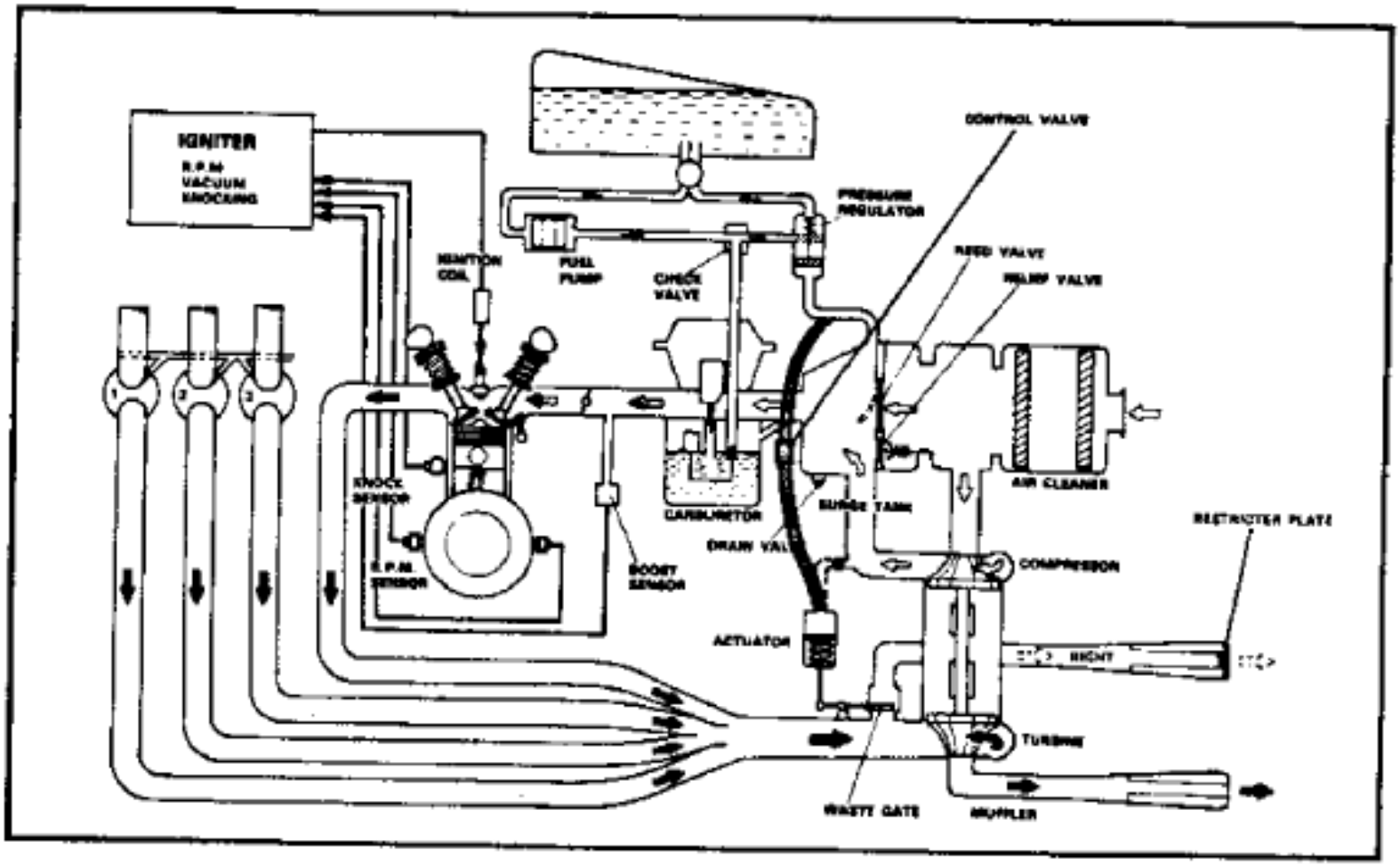
XJ650LJ, K
POWER UP KIT

To increase the power output of XJ650LJ and XJ650LK Turbo models, the factory has produced a "Power Up Kit" (16G-W0020-00-00). Within a week you will automatically receive a kit for each affected model invoiced to your dealership. In addition, you will automatically receive a kit for each Turbo Seca you order from the warehouse.

The purpose of this kit is to make these models more appealing to potential buyers by increasing horsepower approximately 18%. The components of the kit serve to increase both boost duration and boost pressure. Testing has shown it to be quite effective: After installing a kit on a standard machine, its quarter-mile time dropped from 12.3 seconds to 11.8 seconds.

You are requested to install a kit on all affected models in your inventory. The warranty on these machines is in no way affected by the installation of the kits. The kit is being supplied free of charge and should take between 15 and 30 minutes to install.

Each kit contains a set of detailed instructions. The kit consists of components for two basic modifications: The pressure that actuates the waste gate is rerouted through a new control valve which delays the opening of the gate; and a restrictor is placed in the right-hand muffler, limiting the amount of exhaust pressure that can escape unused from the system.



SERVICE COPY	SER MGR	MECH	MECH	MECH	BINDER
OFFICE COPY	GEN MGR	SALES	PARTS	BINDER	PAGE 1 OF 1

XJ750RH
AUXILIARY LAMP

Each of the affected models has an amber-colored fog lamp which may make the machine illegal for street use in many states. In order to conform to all state light-mounting requirements, install a white auxiliary lamp on all the affected models, place an "AUX LAMP" sticker at the switch on the handlebar, remove and destroy the owner's manual that came in the crate, and give the customer a new owner's manual. This service **must** be performed on all affected models during predelivery, and the fog lamp subassembly **must** be returned to Yamaha with the warranty claim. Prepaid mailing labels are enclosed with this bulletin.

Do not release any affected model to a customer unless this modification has been performed.

AFFECTED MODELS

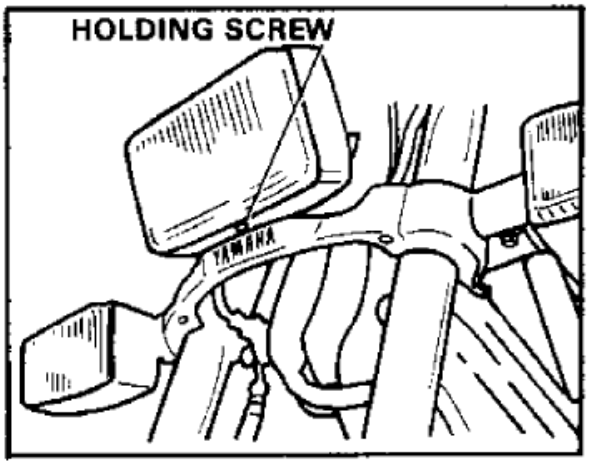
XJ750RH: 5G2-000101 ~ 007607

Dealers will automatically receive a supply of auxiliary lamp kits. Each kit includes an auxiliary lamp subassembly and a new owner's manual. A sheet of "AUX LAMP" stickers will be sent to each dealership in a separate mailing. Auxiliary lamp kits and stickers will be shipped in early March.

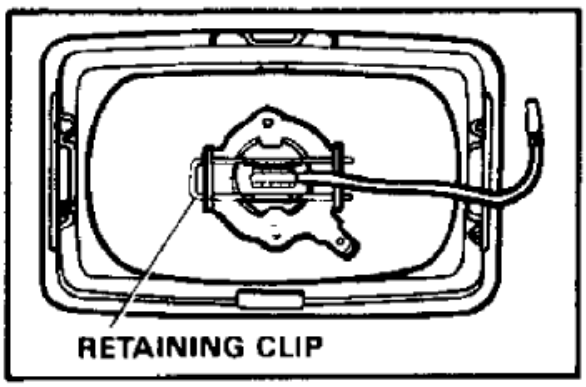
Since the initial supply of kits is limited, kits will be allocated to dealerships on the basis of units purchased. Additional kits will be shipped as they become available. Contact your regional service office or the Warranty Department if you need more auxiliary lamp kits or more prepaid mailing labels.

PROCEDURE

1. The fog light subassembly is secured to the light body by a single holding screw. Remove the holding screw, disconnect the lead wires, and remove the fog lamp subassembly.



2. Remove the retaining clip, and remove the light bulb from the fog lamp subassembly. Set the subassembly aside; it must be returned to Yamaha for warranty credit.

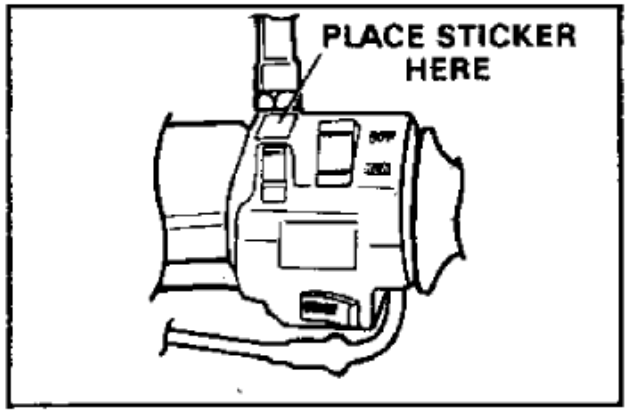


CAUTION: Do not touch the glass part of the bulb. Keep it free of all oil; otherwise the transparency of the glass, the life of the bulb, and the luminous flux will be adversely affected. If the glass is stained or dirty, thoroughly clean it with a cloth moistened with alcohol or lacquer thinner.

3. Install the bulb in the auxiliary lamp subassembly. Be sure the bulb correctly engages the locating tabs of the subassembly. Secure the bulb in place with the retaining clip.

4. Connect the two leads, and install the auxiliary lamp subassembly in the light body. Secure the subassembly in place with the holding screw.

5. With the edge of a coin, carefully scratch the words "FOG LAMP" from the top of the lamp switch on the handlebar. Clean the area with alcohol, and affix an "AUX LAMP" sticker in place over the switch.



6. Destroy the old owner's manual that came in the crate, and place a new owner's manual with the machine. Be sure the customer gets a copy of the new owner's manual when you deliver any affected model. The new manual can be identified by the inventory control number printed in the lower right-hand corner of the cover. The inventory control number for the new owner's manual is 5G2-28199-11.

WARRANTY

Dealers will receive 0.2 hours labor credit for performing this service on any affected model and returning the fog lamp subassembly to Yamaha. Submit a standard claim form, and use the codes shown below. The fog lamp subassembly must accompany the warranty claim. Use the enclosed prepaid mailing label to mail the subassembly and warranty claim to Yamaha.

PROBLEM CODE	AUTI
90CY	
PROBLEM	

WARRANTY	
JOB CODE	JOB CC
8622	
SUBLET DOLLARS	
Dollars	Cents

ALL 1980 MODELS
ENGINE/FRAME NUMBERS

For identification purposes the factory has released the following list of engine/frame numbers. On most production models, the engine and frame serial numbers are identical. Production started with the numbers listed.

NOTE: The color suffixes of multi-color models must be used for all warranty forms. Use the complete model description shown in the example below.

MODEL	DISPLACEMENT (CUBIC CENT.) ACTUAL	I.B.M. PARTS I.D. NO.	ENGINE/FRAME PREFIX/STARTING NUMBER	PREDOMINANT COLOR
STREET				
LB50PG	49	2U7	2U7-050101	Candy Blue
LC50G	49	3L9	3L9-000101	Chappy Red
LC50G	49	3L9	3L9-000101	Maxim Yellow
QT50G	49	3L8	3L5-709501	Sunshine Red
QT50G	49	3L8	3L5-709501	Majolica Blue
SR250G-B	249	3Y6	3Y6-000101	New Catalina Blue
SR250G-R	249	3Y6	3Y6-000101	Carmine Red
XS400G	391	3F8	3F8-020101	New Catalina Blue
XS400SG-B	391	3F9	3F9-000101	Black Red
XS400SG-R	391	3F9	3F9-000101	Cardinal Red
SR500G	499	3H1	3H1-000101	New Ruby Red
XS650G	653	3G0	3G0-000101	Black Gold
XS650SG-R	653	3G1	2F0-200101	Cardinal Red
XS650SG-B	653	3G1	2F0-200101	New Yamaha Black
XJ650G-B	653	4H7	4H7-000101	New Yamaha Black
XJ650G-R	653	4H7	4H7-000101	New Ruby Red
XS850G	826	3J3	3J3-000101	New Yamaha Black
XS850SG-B	826	3J2	3J2-000101	Black Blue
XS850SG-R	826	3J2	3J2-000101	New Ruby Red
XS850LG	826	4H1	4H1-000001	New Yamaha Black
XS1100G-S	1101	3H5	3H5-000101	Diamond Silver
XS1100G-R	1101	3H5	3H5-000101	New Ruby Red
XS1100SG-R	1101	3J6	3J6-000101	New Ruby Red
XS1100SG-B	1101	3J6	3J6-000101	Black Red
XS1100LG	1101	4H3	4H3-000001	New Yamaha Black

FILE GENERAL	DATE 2/22/80	BUL M80-005

MODEL	DISPLACEMENT (CUBIC CENT.) ACTUAL	J.B.M. PARTS I.D. NO.	ENGINE/FRAME PREFIX/STARTING NUMBER	PREDOMINANT COLOR
COMPETITION				
YZ50G	49	3R0	3R0-000101	Competition Yellow
YZ80G	79	3R1	3R1-000101	Competition Yellow
YZ100G	98	3R2	3R2-000101	Competition Yellow
YZ125G	123	3R3	3R3-000101	Competition Yellow
YZ250G	246	3R4	3R4-000101	Competition Yellow
YZ465G	465	3R5	3R5-000101	Competition Yellow
IT125G	123	3R9	3R9-000101	Sky Blue
IT175G	171	3R6	3R6-000101	Sky Blue
IT250G	246	3R7	3R7-000101	Sky Blue
IT425G	425	3R8	3R8-000101	Sky Blue
ENDUROS				
GT80G	72	3J8	3J8-000101	Maxim Red
DT100G-R	97	3A3	3A3-000101	Maxim Red
DT100G-S	97	3A3	3A3-000101	Frost Silver
DT125G-S	123	3J0	3J0-000101	Crystal Silver
DT125G-O	123	3J0	3J0-000101	New Eltro Orange
DT175G-R	171	3J1	3J1-000101	Maxim Red
DT175G-B	171	3J1	3J1-000101	Sapphire Blue
XT250G-W	249	3Y1	3Y1-000101	Clean White
XT250G-R	249	3Y1	3Y1-000101	Maxim Red
XT500G	499	3H6	3H6-000101	New Yamaha Black
OFF ROAD				
MX80G	72	367	367-600101	Clean White
MX100G	97	3T0	3T0-000101	Clean White
MX175G	171	3M2	3M2-100101	Clean White
TT250G	249	3Y0	3Y0-000101	Clean White
TT500G	499	2Y6	1T1-230101	New Yamaha Black
YT125G	123	3X3	3X3-000101	Competition Yellow

1980 MODELS
TECHNICAL PUBLICATIONS

MODEL	PUBLICATION	PART NUMBER	REMARKS
LB50PG (Chappy)	Owner's Manual	LIT-11626-01-95	
	Service Manual	LIT-11616-01-11	Same as LB50PE
	Assembly Manual	LIT-11666-01-11	Same as LB50PE
	Consumer Info.	LIT-11656-01-95	
LC50G (Champ)	Owner's Manual	LIT-11626-02-11	
	Service Manual	LIT-11616-02-11	
	Assembly Manual	LIT-11666-02-11	
	Consumer Info.	LIT-11656-02-11	
QT50G (Yama-hopper)	Owner's Manual	LIT-11626-01-96	
	Service Manual	LIT-11616-01-31	Same as QT50F
	Assembly Manual	LIT-11666-01-31	Same as QT50F
	Consumer Info.	LIT-11656-01-96	
SR250G (Exciter I)	Owner's Manual	LIT-11626-01-93	
	Service Manual	LIT-11616-01-93	
	Assembly Manual	LIT-11666-01-93	
	Consumer Info.	LIT-11656-01-93	
XS400G	Owner's Manual	LIT-11626-01-90	
	Service Manual	LIT-11616-01-87	Combined XS400SG Supp. to XS400F LIT-11616-XS-40)
	Assembly Manual	LIT-11666-01-19	Same as XS400F
	Consumer Info.	LIT-11656-01-90	
XS400SG	Owner's Manual	LIT-11626-01-87	
	Service Manual	LIT-11616-01-87	Combined XS400G Supp. to XS400SF (LIT-11616-XS-40)
	Assembly Manual	LIT-11666-01-87	Supp. to XS400SF (LIT-11666-01-20)
	Consumer Info.	LIT-11656-01-87	
SR500G	Owner's Manual	LIT-11626-01-88	
	Service Manual	LIT-11616-01-88	Supp. to SR500F (LIT-11616-01-50)
	Assembly Manual	LIT-11666-01-88	Supp. to SR500F (LIT-11666-01-21)
	Consumer Info.	LIT-11656-01-88	

MODEL	PUBLICATION	PART NUMBER	REMARKS
XJ650G (Maxim I)	Owner's Manual	LIT-11626-01-94	
	Service Manual	LIT-11616-01-94	
	Assembly Manual	LIT-11666-01-94	
	Consumer Info.	LIT-11656-01-94	
XS650G	Owner's Manual	LIT-11626-01-86	
	Service Manual	LIT-11616-01-75	Supp. to XS650E (LIT-11616-XS-60
	Assembly Manual	LIT-11666-01-86	Supp. to XS650E (LIT-11666-01-03)
	Consumer Info.	LIT-11656-01-86	
XS650SG	Owner's Manual	LIT-11626-01-75	
	Service Manual	LIT-11616-01-75	Supp. to XS650SF,SE (LIT-11616-01-65) & (LIT-11616-XS-60)
	Assembly Manual	LIT-11666-01-75	Supp. to XS650E (LIT-11666-01-03)
	Consumer Info.	LIT-11656-01-75	
XS850G	Owner's Manual	LIT-11626-01-79	
	Service Manual	LIT-11616-01-79	Combined XS850SG
	Assembly Manual	LIT-11666-01-79	
	Consumer Info.	LIT-11656-01-79	
XS850SG	Owner's Manual	LIT-11626-01-83	
	Service Manual	LIT-11616-01-79	Combined XS850G
	Assembly Manual	LIT-11666-01-83	
	Consumer Info.	LIT-11656-01-83	
XS850LG (Midnight Special)	Owner's Manual	LIT-11626-02-09	
	Service Manual	LIT-11616-01-79	Same as XS850G,SG
	Assembly Manual	LIT-11666-01-83	Same as XS850SG
	Consumer Info.	LIT-11656-02-09	
XS1100G	Owner's Manual	LIT-11626-01-74	
	Service Manual	LIT-11616-01-74	Supp. to XS1100E,F (LIT-11616-XS-11)
	Assembly Manual	LIT-11666-01-74	Supp. to XS1100F (LIT-11666-01-12)
	Consumer Info.	LIT-11656-01-74	
XS1100SG	Owner's Manual	LIT-11626-01-78	
	Service Manual	LIT-11616-01-74	Supp. to XS1100SF (LIT-11616-XS-11)
	Assembly Manual	LIT-11666-01-13	Same as XS1100SF
	Consumer Info.	LIT-11656-01-78	

FILE GENERAL	DATE 4/4/80	BUL M80-019

SR250G / XJ650G
HC/CO SPECIFICATIONS

This bulletin completes the HC/CO specification chart on page four (4) of bulletin M80-002. Please refer to these specifications when measuring HC/CO on the models listed on the chart below. Refer to bulletin M80-002 for the proper procedure for using an exhaust gas analyzer.

MODEL	MAXIMUM CO (%) Tail Pipe	(Probe)	MAXIMUM HC (ppm)	SET CO (%) Tail Pipe	(Probe)
SR250G	6.0		300	2.0	
XJ650G	4.0	(5.0)	800	2.0	(3.0)

XJ650G
CLUTCH CHATTER

Some of the affected models have exhibited a clutch "chatter" during engagement. This problem has been attributed to a lack of uniformity in friction-plate thickness. Yamaha Parts Distributors Inc. now stocks friction plates of uniform thickness to remedy this problem. Normal warranty procedures will cover friction-plate exchanges on those units which have a clutch chatter problem.

AFFECTED MODELS

XJ650G

PROCEDURE

1. Drain the oil.
2. Disconnect the clutch cable from the right-hand crankcase cover.
3. Remove the right-hand crankcase cover.
4. Remove the five 6mm clutch-spring bolts and the clutch springs, and remove the pressure plate.
5. Remove the clutch and friction plates, and reinstall the plates in the proper order using the new friction plates.
6. Reinstall the pressure plate, the clutch springs, and the clutch-spring bolts; torque the bolts to specification.

   TIGHTENING TORQUE: 1.0 m-kg (7.2 ft-lb.)

7. Reinstall the right-hand crankcase cover; be sure the gasket surfaces are clean, and use a new crankcase cover gasket.

NOTE: To ensure proper engagement of the clutch-actuation gears, position the clutch pull rod so that the gear teeth face to the rear and downward, approximately 45° from horizontal. Set the lever on the crankcase cover parallel to the gasket surface, and slip the cover onto the engine.

8. Reconnect the clutch cable to the crankcase-cover lever.
9. Reinstall the drain plug and torque it to specification.

   TIGHTENING TORQUE: 4.3 m-kg (31.0 ft-lb)

10. Refill the engine with oil to the proper level.

PARTS INFORMATION

PART NUMBER	DESCRIPTION	DEALER COST
4H7-16321-00-00	Plate, Friction	
4H7-15461-01-00	Gasket, Crankcase Cover	

WARRANTY

Normal warranty procedures will apply to this modification.

SR250G AND XJ650G
STARTER MOTOR SEALING

The starter motor housing on some of the affected models may leak water through a gap in the indexing indentations. If sufficient water accumulates in the starter motor, the starter may short-circuit across the commutator segments or across the brushes. To prevent possible damage to the starter motor, seal the indexing indentations on any affected models in your inventory or on any affected model that a customer brings in for service.

AFFECTED MODELS

All SR250G
All XJ650G

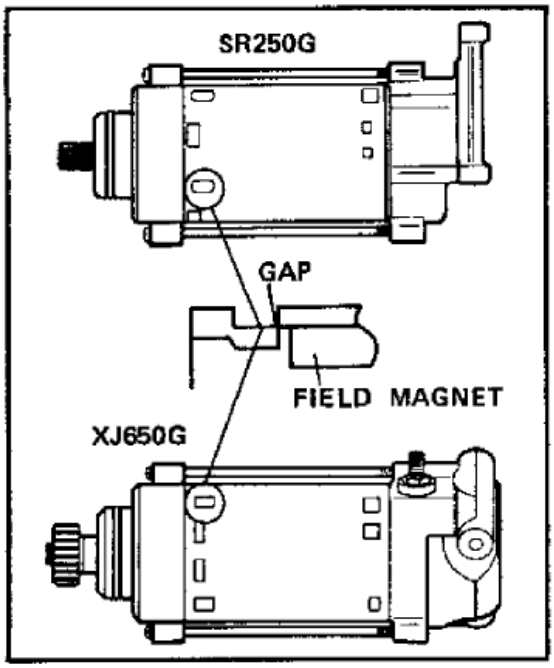
SUMMARY

A. Remove the starter motor from the motorcycle.

B. If the motorcycle has been operated, disassemble the starter motor, dry the components with compressed air, and reassemble the motor.

C. Seal the indexing indentations with the Three Bond® TB-1215 Liquid Gasket enclosed with this bulletin. One tube of sealant will seal approximately 50 starter motors.

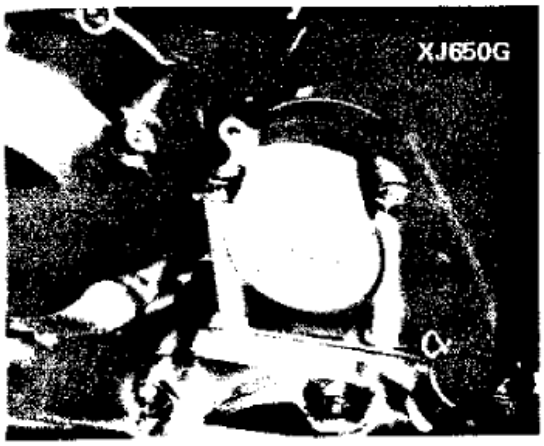
D. Reinstall the starter motor on the motorcycle.



REMOVING THE STARTER MOTOR

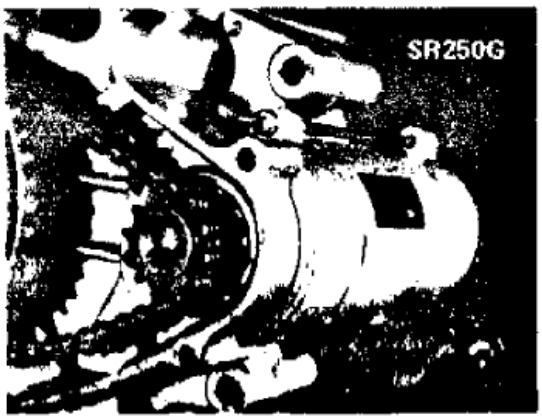
XJ650G

1. Remove the breather hose.
2. Disconnect the starter motor wire at the rear of the starter motor.
3. Remove the two starter-motor-mounting bolts and remove the starter motor.



SR250G

1. Drain the oil from the engine. Remember to drain the oil from the oil filter cavity.
2. Remove the shift lever; remove both the left and right side covers.



3. Remove the starter motor wire, and remove the two starter-motor-mounting screws.

4. Remove the starter motor. Be careful not to lose the starter-motor drive sprocket.

DISASSEMBLING THE STARTER MOTOR

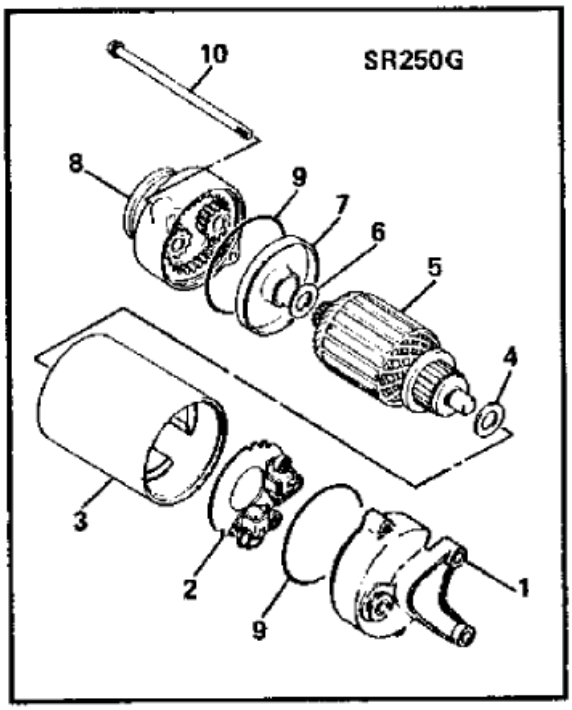
You do not have to disassemble the starter motor if the motorcycle has not been operated.

1. Remove the two starter-motor-housing screws (10).

2. Remove the end plate (1) and the brush holder (2).

3. Remove the stator assembly (3), the armature (5), and the bushing plate (7). Be careful not to loose the armature shims (4 and 6).

4. Blow dry all components with compressed air.



ASSEMBLING THE STARTER MOTOR

1. Make sure that the planetary idlers are in place in the drive-side end plate (8), and that the ring-gear holding pin correctly engages the ring gear.

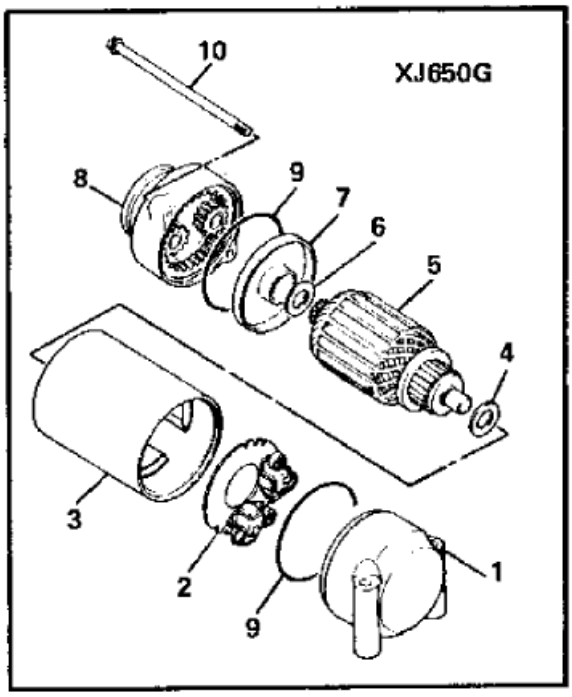
2. Install the armature in the stator assembly.

3. Install the bushing plate on the drive-side end plate; the gasket (9) must be properly seated.

NOTE: On some starter motors, the bushing plate is indexed to the ring-gear holding pin and to the stator assembly.

4. Install both shims on the armature, and install the stator assembly into the bushing plate.

5. Install the brush holder and the end plate onto the stator assembly; the gasket (9) must be properly seated. Be sure that the locating tab on the stator assembly correctly engages the brush holder and the end plate (1).



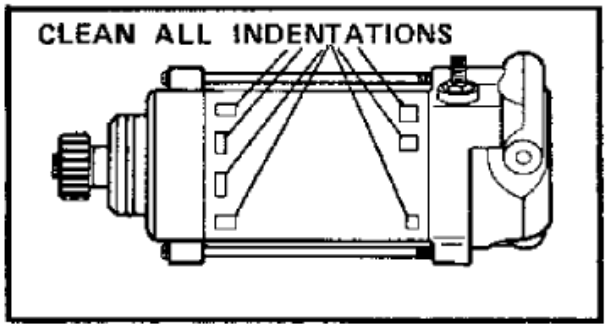
SEALING THE STARTER MOTOR

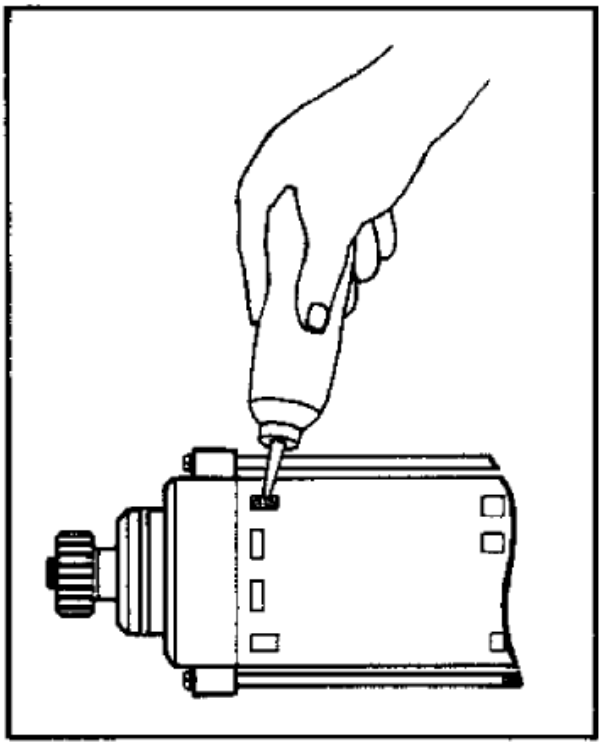
1. Clean the housing and all the indexing indentations. They must be completely clean and dry so the sealant can adhere to the housing.

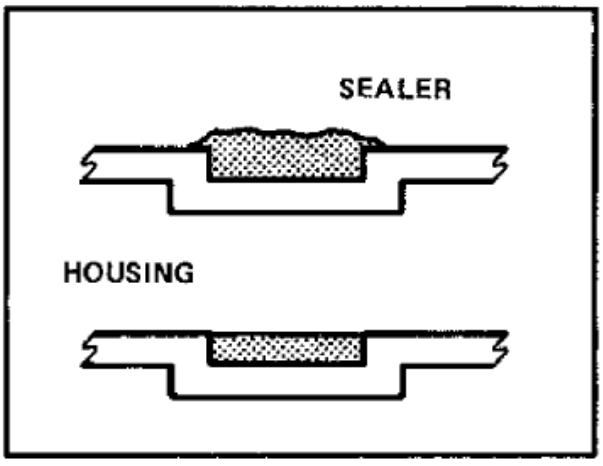
2. Fill the starter motor indentations with Three Bond® TB-1215 Liquid Gasket.

3. Remove any excess sealant from the indentations. The top of the sealant should be flush with the housing as shown in the illustration.

4. Reinstall the starter motor in the engine, but do not start the engine until the sealant is dry to the touch (approximately 30 minutes).







REINSTALLING THE STARTER MOTOR

XJ650G

1. Install the starter motor in the engine; torque both starter-motor-mounting bolts to specification.

   TIGHTENING TORQUE: 1.2 m-kg (8.8 ft lbs)

2. Reinstall the starter motor wire and the breather.

SR250G

1. Reinstall the starter motor in the engine, and install the starter-motor drive sprocket and the drive chain.

2. Install both starter-motor-mounting screws. Do not forget to install the wire clip on the lower mounting screw.

3. Reinstall the starter motor wire, and route it through the wire clip.

4. Reinstall both side covers and a new crankcase-cover gasket. Be sure that the left side cover clears the starter motor wire.

PARTS INFORMATION

PART NUMBER	DESCRIPTION	DEALER COST
3Y6-80000-GL-UE	Three Bond® TB-1215 Liquid Gasket	

WARRANTY

Dealers will receive one hour labor credit for performing this service on any affected SR250G, and 0.5 hours labor credit for any affected XJ650G. Use the Problem Code listed below. Enter the time under extra labor. It is not necessary to attach a note to the warranty claim explaining the time under extra labor. Warranty credit will be given for the oil and crankcase-cover gaskets on SR250G s.

SR250G

PROBLEM CODE	AUTI
90 BC	
PROBLEM	

ER TO FLAT RATE MANUAL			
	SUBLET LABOR (Attach Receipt)	DOLLARS	CENTS
EXTRA LABOR (Explain Above)	HOURS	TENTHS	
	1	0	

XJ650G

PROBLEM CODE	AUTI
90 BC	
PROBLEM	

ER TO FLAT RATE MANUAL			
	SUBLET LABOR (Attach Receipt)	DOLLARS	CENTS
EXTRA LABOR (Explain Above)	HOURS	TENTHS	
	0	5	

XJ750RK
ADDITIONAL PREDELIVERY SERVICE

A full touring package is standard equipment on the XJ750RK; installing these touring components on a unit is part of the assembly procedure. Before beginning assembly on an XJ750RK, remove the round steering damper from beneath the lower triple clamp; a piston-type damper must be installed with the fairing.

Two stickers are also enclosed in the crate. These stickers must be put in the appropriate places in the owner's manual before the unit is delivered to the customer.

AFFECTED MODELS

All XJ750RK

PROCEDURE

1. Uncrate the motorcycle.

2. Remove the steering damper from beneath the lower triple clamp. A single allen bolt secures it to the steering stem. Remove the allen bolt; remove and discard the round steering damper.

3. Assemble the motorcycle. Follow the instructions in the assembly manual (LIT-11666-03-40) and those in *Full Fairing Installation* and *Rear Package Installation* enclosed with the touring components. You will find it helpful to install the fairing mounting hardware before you assemble the motorcycle.

4. Place the stickers in the appropriate pages of the owner's manual. Be sure each sticker adheres to the page. The "Tires" sticker goes on page 25 of the owner's manual; the sticker beginning with "6. When transporting the motorcycle....." goes on the second page of the "SAFETY WARNINGS" at the beginning of the owner's manual.

PAGE 25

Tires
Check the tire pressure and check the tires for wear.

	FRONT	REAR
XJ750RK BASIC WEIGHT with oil and full fuel tank	217 kg (478 lb)	238 kg (525 lb)
Standard tire	Bridgestone T50 3.25H19-4PR	Bridgestone L323 130/90-16 67H
Replacement tire WARNING: These are the only tires Yamaha recommends for this model. Other tires may adversely affect handling.	Bridgestone T50 3.25H19-4PR or Yokohama A33V 3.25H19-4PR	Bridgestone L323 130/90-16 67H
Maximum load limit*	192 kg (397 lb)	208 kg (417 lb)
Cold tire pressure Up to 90 kg (198 lb) load** 90 kg (198 lb) load ~ 216 kg (476 lb) load (Maximum load) High speed riding	175 kPa 1.8 kg/cm², 28 psi) 195 kPa 2.0 kg/cm², 29 psi 225 kPa 2.3 kg/cm², 32 psi	195 kPa (2.0 kg/cm², 28 psi) 225 kPa (2.3 kg/cm², 32 psi) 245 kPa (2.5 kg/cm², 36 psi)
Minimum tire tread depth	0.8 mm (0.03 in)	0.8 mm (0.03 in)

*Total weight of motorcycle with accessories, etc.
**Total weight of passengers, cargo, excepting motorcycle.

SAFETY WARNING PAGE

6. When transporting the motorcycle in another vehicle, be sure it is kept upright and that the fuel cock(s) is turned to the "ON" or "RES" position (for vacuum type)/"OFF" position (for manual carburetor or fuel tank.
7. Never start your engine or let it run for any length of time in a closed area. The exhaust fumes are poisonous and may cause loss of consciousness and death within a short time. Always operate your motorcycle in an area with adequate ventilation.
8. Always wear a helmet, gloves, trousers (tapered around the cuff and ankle so they do not flap), and a brightly colored jacket.
9. This motorcycle is designed for use as a two-wheeled vehicle capable of carrying a rider and a passenger. The total weight of the rider, accessories, and cargo must not exceed the maximum load limit. (See Page 25.)
10. Be sure that operator and passenger feet are on the footpegs during operation.
11. It is important in maintaining control of the vehicle to keep operators hands on the handlebars at all time.

WARRANTY

There is no warranty allowance for this procedure.

DATE September 1, 1983

XVZ12TK, TDK; XJ900RK
ANTI-DIVE ADJUSTMENT PROCEDURE

The anti-dive adjustment procedure in the Service and Owner's Manuals of the affected models is incorrect. The procedures for increasing and decreasing the anti-dive effect are essentially reversed. When adjusting the anti-dive on the affected models, follow the procedure below. In addition, inform your customers of the proper procedures.

AFFECTED MODELS

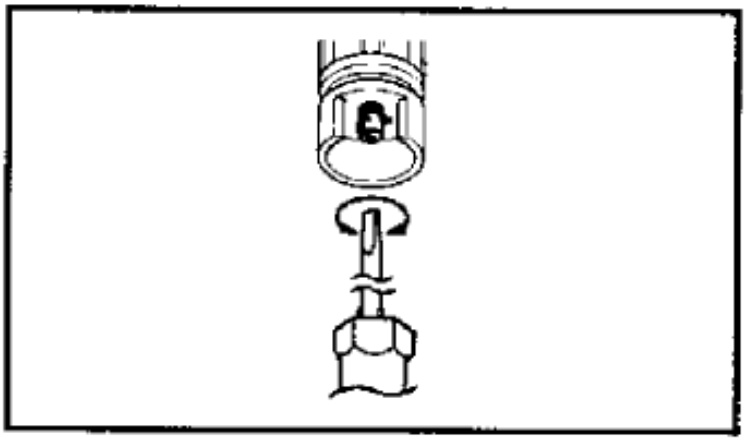
All XVZ12TK
All XVZ12TDK
All XJ900RK

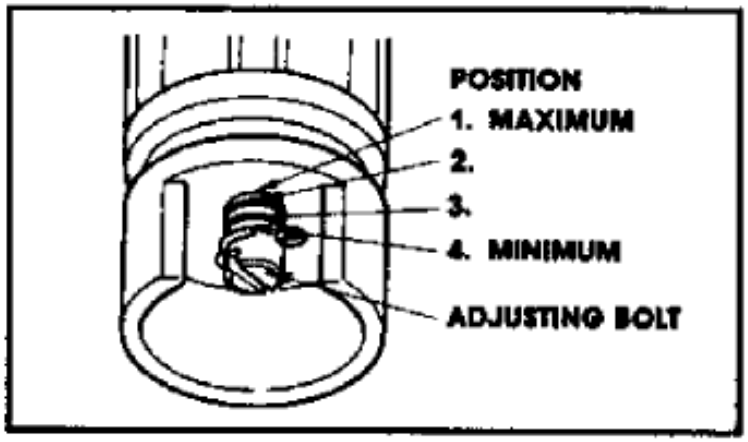
PROCEDURE

1. Remove the rubber cap from the bottom of the anti-dive unit.

2. Observe the head of the adjusting bolt through the machined slot in the bottom of the anti-dive unit. In the standard position, two lines will be visible on the adjusting bolt head. Consult the fork adjustment chart to determine the proper setting.

3. To ***decrease*** the anti-dive effect, turn the adjusting bolt ***clockwise*** until the next line appears level to the top of the machined slot.





4. To ***increase*** the anti-dive effect, turn the adjusting bolt ***counterclockwise.***

WARNING:
When the top line appears in the machined slot, the adjusting bolt will bottom in the anti-dive unit and resistance will be felt. Do not attempt to turn the adjusting bolt beyond this point, or the anti-dive unit will be damaged.

5. Replace the rubber cap.

WARNING:
The anti-dive settings must be the same on both anti-dive units. Hence, be sure to perform the above procedure on both units.

FORK ADJUSTMENT CHART

ADJUSTING BOLT POSITION	LOAD		
	SOLO RIDER	W/PASSENGER OR LUGGAGE	W/PASSENGER AND LUGGAGE
1			X
2		X	X
3	X	X	
4	X		

SERVICE COPY	SER MGR	MECH	MECH	MECH	BINDER
OFFICE COPY	GEN MGR	SALES	PARTS	BINDER	PAGE 1 OF 1

XVZ12TK/TDK; XJ900RK
STEERING HEAD NOISE

Some of the affected models may exhibit noise from the steering head area. This noise may be due to improper seating of the handle crown. In such cases, modify the steering assembly as shown here.

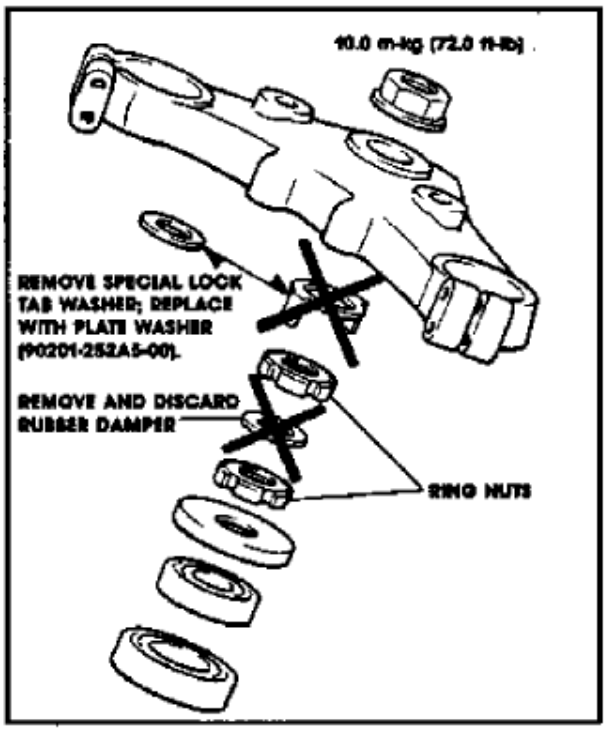
AFFECTED MODELS

All XVZ12TK
All XVZ12TDK
All XJ900RK

SPECIAL TOOLS

PART NUMBER	DESCRIPTION	REMARKS	DEALER COST
YU-33975	Ring Nut Spanner Wrench	3/8" Drive	

PROCEDURE



1. With the machine on the centerstand, remove the louvered fairing panels surrounding the steering head.

2. Remove the fairing screws on either side of the steering head, the handle crown cover, the handlebars, and the handle crown assembly.

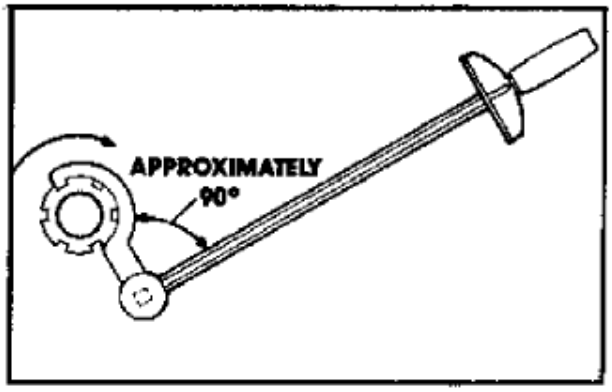
3. Remove and discard the special lock washer.

4. Remove the top ring nut, and discard the rubber washer beneath it.

5. After making sure the machine is resting on the front wheel, install a torque wrench on the ring nut spanner wrench and torque the bottom ring nut to specification to achieve the proper steering head bearing adjustment.

   TIGHTENING TORQUE: 1.0 m-kg (7.2 ft-lb)

NOTE: When using the ring nut spanner wrench, the torque wrench must be installed at a right angle to achieve the proper torque reading; see the illustration.



WARNING:

This torquing procedure must be followed to achieve the proper steering head bearing adjustment.

6. Install the top ring nut, and lock the ring nuts together by torquing the top ring nut to specification. Again install the torque wrench in the ring nut spanner wrench at a right angle.

   TIGHTENING TORQUE: 0.5 m-kg (3.6 ft-lb)

7. Install the new plate washer (90201-252A5-00) on top of the ring nuts.

8. Reinstall the handle crown assembly, handlebars, handle crown cover, fairing screws, and louvered panels.

CAUTION:

Check the routing charts in the assembly manual to ensure that all cables, hoses, and wires are properly routed. In addition, recheck all bolts for tightness after installing the handle crown.

9. Test the machine and check for proper operation.

PARTS INFORMATION

PART NUMBER	DESCRIPTION	REMARKS	DEALER COST
90201-252A5-00	Plate Washer	25.5 x 38.3 x 3.2 mm	

WARRANTY

The warranty labor allowance for this procedure on an XVZ12TK/TDK is 0.7 hours; the allowance for an XJ900RK model is 0.3 hours. Enter the time under "Extra Labor." The problem code is 77 in each case. For the extra labor explanation, descriptions of the defect and problem, and the repair reason, write "Per Bulletin M83-016."

77
(05) What problem code best describes the failure?

XVZ12TK/TDK: 0 . 7
HOURS TENTHS

XJ900RK: 0 . 3
HOURS TENTHS

DATE May 22, 1981 Revised 7/82

XS1100H, LH, SH; XJ1100J▲

DRIVE AXLE BEARING WASHER▲

This Tech Update replaces the May 22, 1981 Tech Update. Please remove and destroy the May 22, 1981 Tech Update.
▲Denotes a change from the original Tech Update.

A new-style bearing supports the right-hand side of the transmission drive axle on the affected models. This new-style bearing is a single-row ball bearing rather than a double-row bearing as used in previous XS11s. Since the new-style bearing is 3mm narrower than the bearing previously used, a collar and washer have been installed between the bearing and the crankcase to maintain the proper clearances in the transmission. This washer is directional; it must be installed with the beveled edge toward the crankcase and away from the bearing.

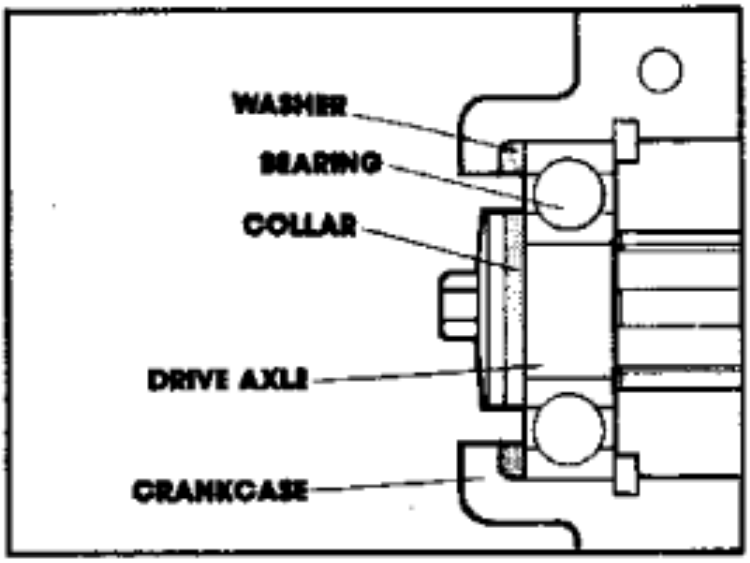
CAUTION:

If the washer is positioned improperly during assembly, the crankcase will be damaged when the drive axle bearing is installed. Be sure the bearing washer is installed correctly before pressing the drive-axle bearing into the crankcase.

AFFECTED MODELS

▲ All XS1100H, XS1100LH, XS1100SH, and XJ1100J

▲



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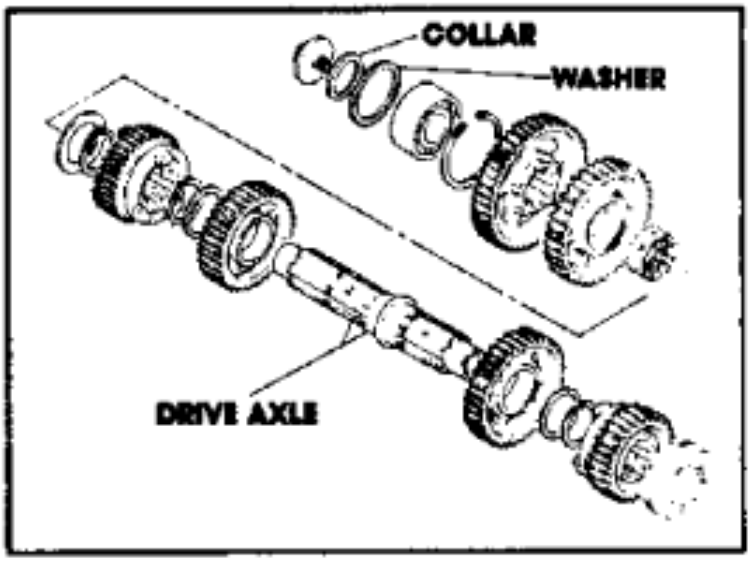


PARTS INFORMATION

▲

PART NUMBER	DESCRIPTION	REMARKS	DEALER COST
93306-20533-00	Bearing	New-style	
90387-443A8-00	Collar		
90201-252A4-00	Washer		

FJ600L/LC
PREDELIVERY REFLECTOR INSTALLATION

The affected units were shipped from the factory without the two front reflectors. These reflectors, which mount to the brake-hose bracket on each fork slider, ***must be installed prior to delivery of a machine to the customer*** in order to comply with Federal Motor Vehicle Safety Standards.

AFFECTED UNITS

NOTE: These units are identified by their ***crate number*** rather than their primary ID.

FJ600L Crate number 697032 ~ 697551
FJ600LC Crate number 028926 ~ 029059

PROCEDURE

Install a reflector on each brake-hose bracket as shown in the photo. Secure the reflector with a lock washer and nut. A reflector must be installed on both sides of each affected model ***prior to delivery to a customer.***

PARTS INFORMATION

PART NUMBER	DESCRIPTION	REMARKS	DEALER COST
4X7-85110-00-00	Front Reflector	2 needed per unit	
92903-05100-00	Spring Washer	2 needed per unit	
95301-05600-00	Nut	2 needed per unit	

NOTE: These identical parts are used on the following models:

XV920J K	XJ900RK
XV750H J K	XJ650LJ LK
XJ550RH RJ RK	XV500K

If an affected unit must be delivered and the parts have not yet arrived, they may be borrowed from one of the above models until replacement parts are available.

WARRANTY

There is no warranty labor allowance for this procedure. To receive credit for the parts, submit a standard warranty request. The problem code is 95.

MOTORCYCLE	DATE 8 13 84	M84-026

RECALL This modification has top priority. This bulletin must be performed immediately to ensure customer safety.

FJ600LC (CALIFORNIA MODELS ONLY)
FACTORY MODIFICATION CAMPAIGN

It has been determined that a defect which relates to motor vehicle safety may exist in the fuel tank of the FJ600LC. The fuel tank must therefore be replaced with one of a modified type. This possible defect relates only to ***California models*** and does not apply to FJ600L models manufactured for other states.

Dealers must not sell or deliver any FJ600LC models until the modification has been performed. Machines already sold to customers must have priority for modification.

AFFECTED MODELS

All FJ600LC (California models only)

DESCRIPTION OF DEFECT AND CORRECTION

Because of the design of the fuel tank on the affected model, if the fuel level is filled to capacity and the motorcycle is then parked on the side stand in hot sunlight, it is possible that fuel may expand to the point that it will leak out of the evaporative emissions canister. Leaking fuel may catch fire, which could lead to injury or property damage.

The modified fuel tank has increased air space at the top of the tank to allow for normal fuel expansion.

SUMMARY OF MODIFICATION

- Yamaha sends a letter to all registered owners of FJ600LC models requesting that they not ride their machines until they have had the modification performed. The letter includes a Factory Modification Notice card to be signed by the customer and dealer when the modification is completed.
- Factory Modification Notice cards for unregistered machines will be sent directly to the invoiced dealer.
- Dealer contacts all customers who have purchased an FJ600LC from his dealership if the warranty registration was not sent to YMUS prior to August 13, 1984.
- Dealer orders the number of fuel tanks needed for customer-owned machines, and those in dealer's inventory, from YPDI.
- Dealer replaces fuel tanks on all affected models brought to his dealership by customers and in his inventory. Replaced fuel tanks are tagged and held for 90 days according to normal warranty policies.
- Dealer completes Factory Modification Notice card for each machine and obtains customer's signature. Cards are then to be mailed to the Warranty Department for credit.

PROCEDURES

WARNING
This procedure requires extensive handling of gasoline. Gasoline is extremely flammable. To avoid severe injury, do not allow open flames, sparks, cigarettes, or any other sources of ignition near the area in which you are working.

1. Disconnect the fuel and vacuum hoses from the petcock. Connect a long piece of hose to the fuel outlet. Turn the petcock to the "prime" position and drain the fuel into a clean container. After draining the tank completely, turn the petcock to the "on" position.
2. Remove the seat and both side covers. Remove the 8mm tank mount bolt and disconnect the sending unit wires.
3. Disconnect the fuel vent hose at the roll over valve. Slide the fuel tank rearward 50mm (2 in.) and remove it from the machine.
4. Remove the fuel tank vent hose. Examine it for cracks, holes or for evidence of crimping. Be sure it is unobstructed. Install the vent line on the replacement fuel tank and be sure the hose clip is properly located.
5. Remove the fuel petcock and the sending unit from the original tank and install them on the new tank, using new plate washers on the petcock.

SERVICE COPY	SER MGR	MECH	MECH	MECH	BINDER
OFFICE COPY	GEN MGR	SALES	PARTS	BINDER	PAGE 1 OF 2

XJ600SD, SDC
STARTER IDLER GEAR BREAKAGE

INTRODUCTION

Under certain conditions when the engine is not running, the automatic fuel shutoff valve in the fuel petcock may allow fuel to pass through the carburetor and into the engine. If this occurs during engine starting, the engine may momentarily experience a hydraulic lock situation which can cause damage to the starter gear and/or starter idler gear.

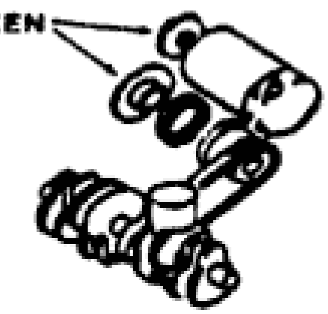
REMEDY: Replace the fuel petcock diaphragm and spring with the improved parts and install a fuel filter. These parts are packaged as a kit.

DEALER ACTION SUMMARY

MODIFY: All affected units (sold and unsold) which have not already been modified. Any unit with a fuel filter installed at the fuel pump has already been modified by the factory.

PARTS REQUIRED: Yes.

WARRANTY: Service-Per-Bulletin



AFFECTED UNITS

XJ600SD: 4DU-000101 ~ 004272
XJ600SDC: 4DU-013101 ~ 014100

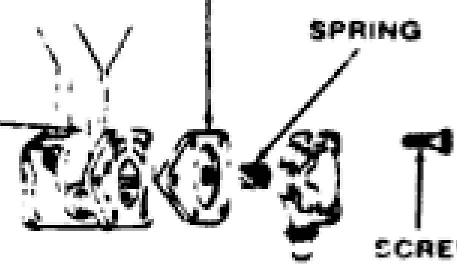
SERVICE PROCEDURES

1. Remove the seat.
2. Turn the fuel petcock to the "RES" position and remove the selector knob.
3. Remove the fuel and vacuum hoses from the fuel petcock.
4. Remove the two bolts securing the fuel tank and remove the fuel tank.
5. Drain the fuel into an approved container.

⚠WARNING

Gasoline and its vapor are highly flammable and explosive. Keep away from sparks, lit cigarettes, or flame. Work in a well ventilated area.

6. Remove the five screws securing the diaphragm to the back of the petcock. Remove the diaphragm and spring
7. Install the new diaphragm and spring. Torque the diaphragm mounting screws to 0.7Nm (6 in-lb).



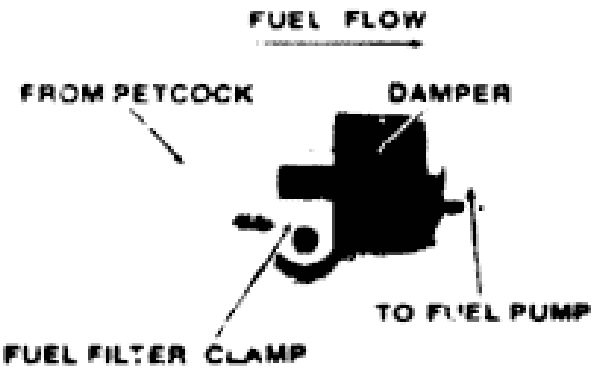
8. Install the damper from the kit onto the fuel filter as shown in Illustration A. Remove the fuel inlet hose from the fuel pump and connect it to the inlet side of the fuel filter. Note the direction of fuel flow on the filter as shown in the illustration.

   Remove the fuel pump screw indicated in Illustration B. Mount the fuel filter assembly onto the fuel pump using the filter clamp, longer panhead screw, and lock-nut from the kit. Discard the shorter screw and nut you removed from the fuel pump. Make sure the fuel filter damper contacts the fuel pump body as shown in Illustration C.

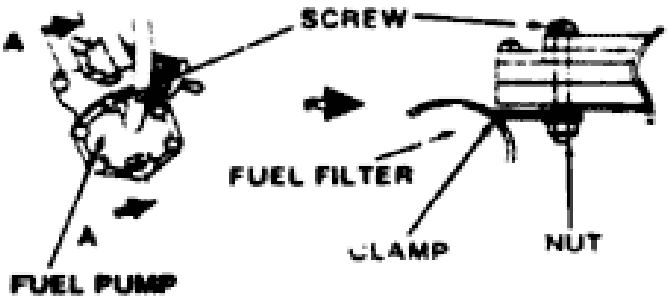
   Connect the fuel filter to the fuel pump using the supplied hose and the clamps from the kit.

   Secure the new hose to the crankcase breather hose with one of the supplied hose guides. Slip the white end of the guide over the new fuel filter hose and slide the black end of the guide onto the breather hose. Illustration D shows the completed installation.

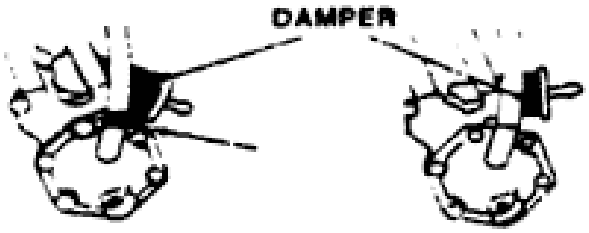
ILLUS. A

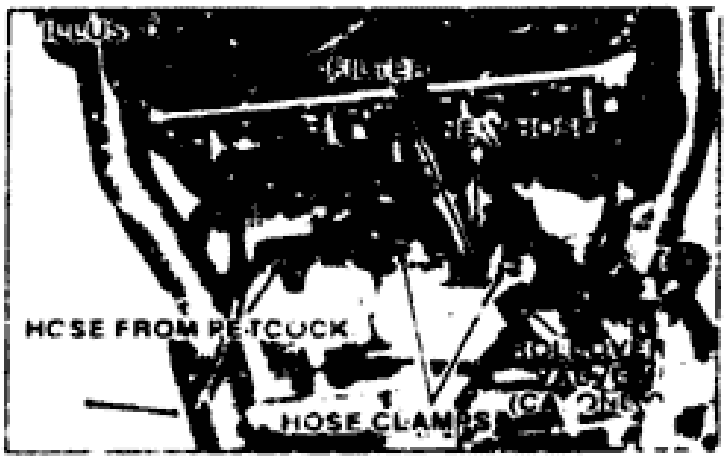


ILLUS. B FUEL FILTER MOUNTING



ILLUS. C FUEL FILTER POSITION



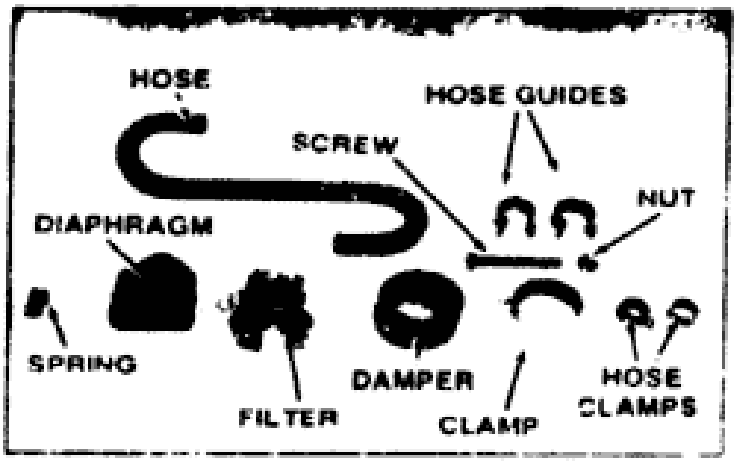


SERVICE PROCEDURES (Cont'd.)

9. **On California models only,** slip the white end of the second hose guide from the kit over the newly installed hose that connects the filter to the fuel pump. Slip the rollover valve into the black end of this hose guide and make sure it is secure. This second hose guide is not used on 49-State models.
10. Reassemble unit and make sure there are no fuel leaks.

PARTS INFORMATION

Part Number	Description	Remarks	Dealer Cost
90891-2005 7-00	Petcock diaphragm/fuel filter kit	Contains: Diaphragm assy Spring Fuel filter Fuel hose Hose Clamps (2) Filter Clamp Panhead Screw Lock-Nut Damper Hose Guide (2)	$20 55



WARRANTY INFORMATION

This modification is authorized for all affected units, regardless of ownership or warranty status

The labor allowance for this procedure is .5 hours. To receive credit for parts and labor, file a Service-Per-Bulletin Warranty Request using Problem Code **90KX**. Read the Warranty Handbook, Chapter 11, Section I, for more information about Service-Per-Bulletin Warranty Requests. As with all warranty repairs, tag and hold the original parts that were removed for 90 days from the date you submit the warranty request.

TECHNICAL BULLETIN

MOTORCYCLE	DATE 3/22/85	BULLETIN NO. M85-002

XJ700XN/NC
ADDITIONAL PREDELIVERY SERVICE

The fan blade can cut the coolant delivery hose that connects the radiator to the recovery tank on some early production units resulting in a coolant leak. This is caused by improper routing of the delivery hose during production.

All affected units must be checked for proper delivery hose routing during normal predelivery service. If the hose is misrouted, follow the procedures in this bulletin to properly route the delivery hose.

Check only those units within the affected range.

AFFECTED UNITS

XJ700XN 1AA-000101 ~ 000789
XJ700XNC 1FJ-000101 ~ 000192

PREDELIVERY SERVICE PROCEDURES

1. Remove the 6mm bolt that holds the radiator to the frame. This bolt is located at the top, and center, of the radiator.

2. With the radiator pulled forward, remove the two 6mm screws that hold the recovery tank, and its cover, to the frame.

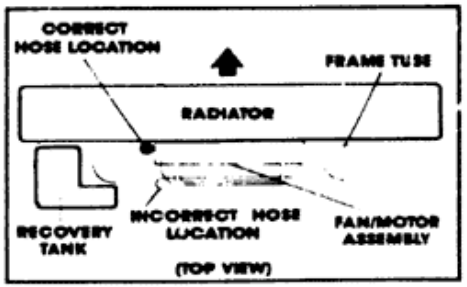
NOTE: There are two hoses on the recovery tank. The hose connected to the top of the tank is an overflow hose; it does not require rerouting. The hose connected to the bottom of the tank is the delivery hose referred to in this bulletin.

3. Examine the delivery hose for damage. If the hose is damaged, replace it. Then reassemble the hose, recovery tank, and radiator, routing the delivery hose as described in Step 4. If the hose is not damaged, reinstall the components, routing the delivery hose as described in Step 4.

NOTE: Make sure both the delivery hose and the overflow hose are properly connected to the recovery tank. Also, make sure the other end of the delivery hose is properly connected to the radiator.

4. Place the overflow hose between the frame tube and the delivery hose. **Both recovery tank hoses should be forward of the frame.**

NOTE: The delivery hose should fit into the corner formed by the radiator and fan cover. If it does not stay in this location, push the hose into the recess between the frame and the ignition coil just below the steering head.



(For additional information see reverse side)

PARTS INFORMATION

PART NUMBER	DESCRIPTION	REMARKS	DEALER COST
1AA-21816-00-00	Recovery Tank Delivery Hose	Replace only if damaged	

WARRANTY PROCEDURES

There is no warranty labor allowance for checking, or rerouting, the hose; these procedures are part of normal predelivery service. However, if a damaged hose is found, (due to contact with the fan) file a standard warranty request for the hose exchange.

SERVICE COPY	SER MGR	MECH	MECH	MECH	BINDER
OFFICE COPY	GEN MGR	SALES	PARTS	BINDER	PAGE 1 OF 2

TECHNICAL BULLETIN

MOTORCYCLE	DATE 7/1/87	BUL M87-004

ALL N, S, T, AND LATER STREET MODELS
PREDELIVERY ENGINE ADJUSTMENTS

INTRODUCTION

During predelivery, some dealers are routinely checking CO/HC with the Exhaust Gas Analyzer (EGA) and are making unnecessary carburetor adjustments.

During production, the specified Set CO listed ± 2.5% is used, and these production settings normally produce **good driveability** (proper throttle response). The set specification is provided in the Service Data only as tune-up information, not as predelivery adjustment data.

Test drive machine for **driveability** before any adjustment are made.

AFFECTED UNITS

All N, S, T, and later 4-stroke models

SUMMARY OF DEALER ACTION

Test drive all units after predelivery service. Do not hook up the EGA unless **driveability** is **poor.** A typical poor-driveability symptom is hesitation ("bogging" or "stumbling") during acceleration. Carburetion adjustment is necessary **only** if **driveability** is **poor.**

PREDELIVERY SERVICE PROCEDURE

1 Perform setup and predelivery operations per Assembly Manual.

2 Test ride the machine and check driveability.

- If **driveability** is **good,** no carburetor adjustment is necessary. Do not hook up the EGA.

If **driveability** is **poor,** then check the machine for proper CO/HC with a properly calibrated EGA, and make any appropriate repairs of carburetor adjustments as necessary. Always attempt to obtain optimum readings when the EGA is used, but see "INTERPRETATION OF EGA READINGS."

3 Replace the anti-tamper blind plugs after making any adjustment!

INTERPRETATION OF EGA READINGS

Here are some sample service data specifications:

Max CO / Max HC / Set CO	7.0% / 800 ppm / 3.0%

- **MAXIMUM** allowable CO is 7.0%.
- **MAXIMUM** allowable HC is 800 ppm.
- **SET CO** setting is 3.0%

The Set CO specification is the **OPTIMUM** setting, and is intended to be used only as a tune-up aid.

INTERPRETATION OF EGA READINGS (Cont'd.)

Production line tolerance for CO on this machine is from 0.5% ~ 5.5% (SET CO [3.0%] ± 2.5%); and any production unit having readings in this range will have **good driveability.** Just remember, as long as the CO reading is 7.0% (the maximum allowable) or less, and running well, no carburetor adjustment is necessary!

Carburetor adjustment may be done during predelivery, but **only** on units exhibiting **poor driveability.** Always replace the anti-tamper blind plugs after making any adjustment!

WARRANTY INFORMATION

This bulletin is to provide information only. No special warranty applies. If, however, carburetor adjustment is necessary, the CO/HC readings must be entered on line 14 of a warranty request.

PAGE 1 OF 2 | PAGE 2 OF 2 | ROUTE TO: ☑ SERVICE ☑ PARTS ☐ WARRANTY ☐ SALES

MOTORCYCLE	DATE 11-1-85	No. M85-022

4-STROKE STREET MODELS
EXTENDED VALVE INSPECTION INTERVALS

Some confusion has arisen as a result of valve inspection and adjustment maintenance intervals as printed in the Service and Owner's Manuals of some models. This bulletin is issued to clarify the situation.

The recommended valve inspection and/or adjustment intervals on the affected four-stroke street models has been increased. As with the previous inspection intervals, those are merely recommendations based on certification for each model. These maintenance interval recommendations allow each machine to continue efficient operation at acceptable performance levels. These intervals have been certified by the Environmental Protection Agency (EPA) and the California Air Resources Board (CARB). These extensions will make our product more desirable for the customer due to the reduced maintenance costs associated with extended service intervals.

AFFECTED MODELS

See chart below

SERVICE PROCEDURES

For actual valve inspection and/or adjustment procedures, please refer to the Service Manual.

VALVE MAINTENANCE INTERVAL UPDATE CHART

ENGINE TYPE (models)	INSPECTION INTERVALS	
	OLD	NEW
Liquid cooled, DOHC, Shim type FZ750N,S VMX12N,S XJ700XN,S XVZ12N XVZ13S FZX700S	7,500 miles	26,000 miles
Air cooled, DOHC, Shim type XJ700N,S FZ600S FJ1200S YX600S	7,500 miles	15,000 miles
Rocker arm and Tappet screw type SRX600S XV700S XV1100S	Initial 600 miles Thereafter 3,800 miles	No Change

WARRANTY

The cost of valve inspection and adjustment remains the responsibility of the customer regardless of the amount of time elapsed, or mileage accumulated, since the last inspection and/or adjustment. **Valve adjustments are not covered under warranty.**

SERVICE DEPT.	SER. MGR.	MECH.	MECH.	MECH.	BINDER
OFFICE DEPT.	GEN. MGR.	SALES	PARTS	BINDER	PAGE 1 OF 1

TECH UPDATE

DATE June 30, 1981

XJ AND XV SERIES
OIL LEVEL INDICATOR LIGHT

The oil level indicator monitors the quantity of oil in the crankcase of a motorcycle. **It does not moniter oil pressure.** The oil level indicator light acts as an early-warning system: it warns the rider well in advance that the oil level should be checked and oil added if necessary.

Under hard acceleration, the light may come on briefly. This in no way indicates that an oil level problem exists, but the level should be checked. The oil level should also be checked if the light occasionally flickers. The rider should note where the oil level is when the light begins to flicker and, if required, add oil at the first opportunity. Point out to customers that their owner's manual contains an explanation of the oil level indicator light under the Control Functions section. The manual also cautions against running the motorcycle until you know it has enough oil.

If the light comes on when the oil level is at the maximum mark there is a problem. Perform a thorough check of the oil level indicator system.

While the respective owner's manuals state that the correct oil level should be between the maximum and minimum marks on the oil level window, enough oil should be added to bring the oil level up to the maximum mark. This will ensure an adequate oil level.

AFFECTED MODELS

All XJ550H/RH; XJ650G/H/LH; XJ750RH; XV750H/920RH