

YAMAHA

YTZ250

NOTE: Metric fasteners are used throughout vehicle.

CONDENSED SERVICE DATA

MODELS	YTZ250N, YTZ250S	MODELS	YTZ250N, YTZ250S
General		Tune-Up (Cont.)	
Engine Make	Own	Ignition:	CDI
Engine Type	Two-Stroke; Liquid-Cooled	Type	16° BTDC @ 2000 rpm
Number of Cylinders	1	Timing—YTZ250N	18° BTDC @ 2000 rpm
Bore	68 mm (2.667 in.)	YTZ250S	
Stroke	68 mm (2.677 in.)	Carburetor:	
Displacement	246 cc (15.0 cu. in.)	Make	Mikuni
Compression Ratio	7.7:1	Model	VM32SS
Engine Lubrication	Fuel: Oil Premix	Bore Size	32 mm (1.26 in.)
Engine Fuel: Oil Ratio	24:1	Float Height	30.3-32.3 mm (1.19-1.27 in.)
Engine Oil		Jet Needle:	
Recommendation	Yamalube R	YTZ250N	6H3
Transmission Oil		YTZ250S	6F8
Recommendation	SAE 10W-30, API SE	Clip Position:	
Forward Speeds:		YTZ250N	3rd From Top
YTZ250N	5	YTZ250S	4th From Top
YTZ250S	6	Throttle Cut-Away:	
Drive Chain:		YTZ250N	2.0
Type	520	YTZ250S	3.0
Number of Links	98	Pilot Jet:	
Tire Size—YTZ250N:		YTZ250N	#45
Front	25 x 8-12	YTZ250S	#35
Rear	22 x 11-8	Needle Jet:	
YTZ250S:		YTZ250N	P-4
Front	23 x 8-12	YTZ250S	P-2
Rear	21 x 11-9	Main Jet:	
Tire Pressure (cold)		YTZ250N	#470
YTZ250N:		YTZ250S	#320
Front	22.6 kPa (3.3 psi)	Throttle Cable Free Play ..	3-5 mm (0.12-0.20 in.)
Rear	16.7 kPa (2.4 psi)		
YTZ250S:		Sizes-Clearances	
Front and Rear	24.5 kPa (3.5 psi)	Reed Petal Stand Open	
Dry Weight (Approx.)	143 kg (315 lbs.)	(Max.)	0.6 mm (0.022 in.)
Tune-Up		Piston-to-Cylinder Wall	
Engine Idle Speed	1450-1550 rpm	Clearance	0.060-0.065 mm (0.0024-0.0026 in.)
Spark Plug:		Maximum Cylinder Bore	
NGK	B8ES	Taper	0.05 mm (0.002 in.)
Electrode Gap	0.7-0.8 mm (0.028-0.031 in.)	Maximum Cylinder Bore	
		Out-of-Round	0.01 mm (0.0004 in.)

MODELS	YTZ250N, YTZ250S
Sizes-Clearances (Cont.)	
Piston Ring End Gap:	
Top	0.35-0.50 mm (0.014-0.020 in.)
Second	0.35-0.50 mm (0.014-0.020 in.)
Piston Ring Side Clearance:	
Top	0.03-0.05 mm (0.0012-0.0020 in.)
Second	0.03-0.07 mm (0.0012-0.0028 in.)
Connecting Rod Side Clearance	
	0.25-0.75 mm (0.010-0.030 in.)
Connecting Rod Small End Side Shake	
	0.4-1.0 mm (0.016-0.039 in.)
Crankshaft Runout at Main Bearing Journal (Max.) .	
	0.03 mm (0.0012 in.)
Clutch Friction Plate Thickness (Min.)	
	2.7 mm (0.11 in.)
Clutch Steel Plate Warpage Limit	
	0.5 mm (0.002 in.)

Capacities

Fuel Tank	10.0 L (2.2 gal.)
Transmission Sump	1.00-1.05 L (1.05-1.10 qt.)
Cooling System	1.0 L (1.05 qt.)

Tightening Torques

Axle Nut:	
Front	58 N·m (42 ft.-lbs.)
Rear	100 N·m (73 ft.-lbs.)

MODELS	YTZ250N, YTZ250S
Tightening Torques (Cont.)	
Chain Sprockets:	
Drive	75 N·m (54 ft.-lbs.)
Driven	30 N·m (22 ft.-lbs.)
Clutch Nut	75 N·m (54 ft.-lbs.)
Cylinder Base Nut	35 N·m (25 ft.-lbs.)
Cylinder Head Nut	25 N·m (18 ft.-lbs.)
Engine Mounting Nuts	30 N·m (22 ft.-lbs.)
Flywheel Nut	80 N·m (58 ft.-lbs.)
Steering Stem:	
Upper Nut	85 N·m (61 ft.-lbs.)
Slotted Nut	*
Wheel Retaining Nut:	
Front	28 N·m (20 ft.-lbs.)
Rear	45 N·m (33 ft.-lbs.)

*Tighten to 45 N·m (32 ft.-lbs) then loosen ¼ turn.

Standard Screws:

6 mm	6 N·m (4.3 ft.-lbs.)
8 mm	15 N·m (11 ft.-lbs.)
10 mm	30 N·m (22 ft.-lbs.)
12 mm	55 N·m (40 ft.-lbs.)
14 mm	85 N·m (51 ft.-lbs.)
16 mm	130 N·m (94 ft.-lbs.)

LUBRICATION

All Models

ENGINE. The engine is lubricated by oil mixed with the fuel. Recommended oil is Yamalube R mixed at a fuel:oil ratio of 24:1.

TRANSMISSION. Recommended transmission oil is SAE 10W-30 with an API classification of SE. The manufacturer recommends changing transmission oil after initial break-in and on an annual basis thereafter. If the

vehicle is operated under hazardous conditions, then change transmission oil on a more frequent basis.

The transmission sump is filled through filler cap (F—Fig. Y10-1) opening. Oil level should be maintained at bottom of oil check plug (C) opening. Sump is drained by removing plug in underside of sump. Dry capacity of crankcase is 1.05 L (1.10 qt.) after an engine or transmission overhaul. Refilling after changing oil requires only 1.0 L (1.05 qt.) as approximately 0.05 L (0.05 qt.) of oil will be retained by crankcase castings. Tighten transmission sump drain plug to 20 N·m (15 ft.-lbs.).

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DRIVE CHAIN. The final drive chain should be lubricated with SAE 30 or SAE 50 motor oil prior to each operating interval. Incorrect chain lubricating oil may cause damage to "O" ring seals in drive chain. After each operation, the chain should be thoroughly washed in kerosene and lubricated. Any cleaning solutions other than kerosene may result in "O" ring seal damage.

Refer to DRIVE CHAIN AND SPROCKETS section for chain renewal and adjustment information.

CABLES, LEVERS AND LINKAGE. All cables, levers and linkage should be inspected daily and lubricated with Yamaha cable lube or WD-40, as needed, to provide proper operation.

AIR CLEANER ELEMENT

All Models

The air cleaner element should be removed and cleaned after initial break-in and every thirty days of operation thereafter. To remove air cleaner element, remove

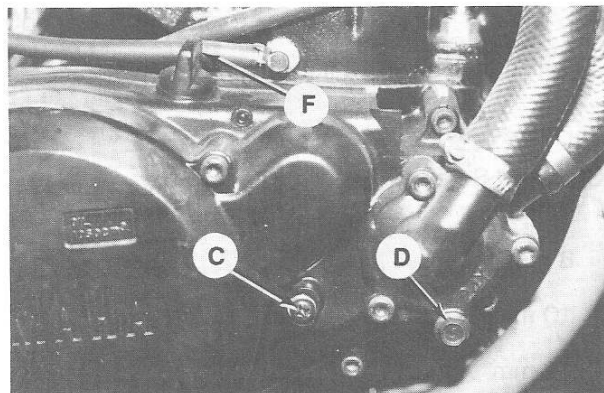


Fig. Y10-1—Fill sump through filler cap (F) opening and maintain lubricant at level of check plug (C). Loosen plug (D) to drain cooling system.

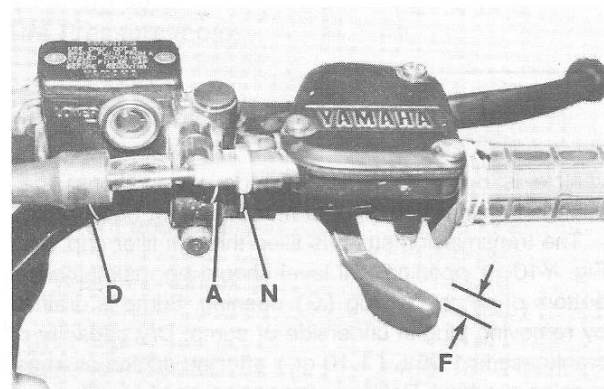


Fig. Y10-3—Throttle lever free play (F) on all models should be 3-5 mm (0.12-0.20 in.). On Model YTZ250S, adjust throttle lever free play by first sliding dust boot (D) down cable. Loosen locknut (N) and rotate cable adjuster (A).

seat and strap retaining air cleaner element cover. Withdraw cover and remove wing nut to withdraw foam element.

Separate foam element from filter frame and thoroughly clean element in a nonflammable solvent. Renew element if damage is noted. Compress element between hands to remove solvent. Saturate element in clean SAE 10W-30 motor oil and compress element to remove excess oil. Apply grease to sealing end of element so a good seal between air cleaner housing and element is obtained, then reinstall foam element by reversing removal procedures.

FUEL SYSTEM

All Models

CARBURETOR. The carburetor is connected to the throttle lever by a cable. Throttle lever free play (F—Fig. Y10-3) should be 3-5 mm (0.12-0.20 in.) measured at outer end of lever. On Model YTZ250N, adjust throttle lever free play by loosening locknut (T—Fig. Y10-4) then rotating adjuster (J). Retighten locknut (T) to secure adjustment. On Model YTZ250S, adjust throttle lever free play by first sliding dust boot (D—Fig. Y10-3) down cable. Loosen locknut (N), then rotate cable adjuster (A) until recommended free play (F) is obtained. Tighten locknut (N) to retain adjustment and install dust boot (D).

Initial setting of idle mixture screw (14—Fig. Y10-5) is one turn out from a lightly seated position. Final adjustment should be performed with engine running at normal operating temperature. The idle mixture screw meters air; turning the screw counterclockwise will lean the idle mixture. Adjust the idle speed screw so idle is approximately 1450-1550 rpm. After adjusting carburetor, check throttle lever and cable free play as outlined in previous paragraph.

Carburetor float height must be measured with the carburetor at an angle as shown in Fig. Y10-6. The float

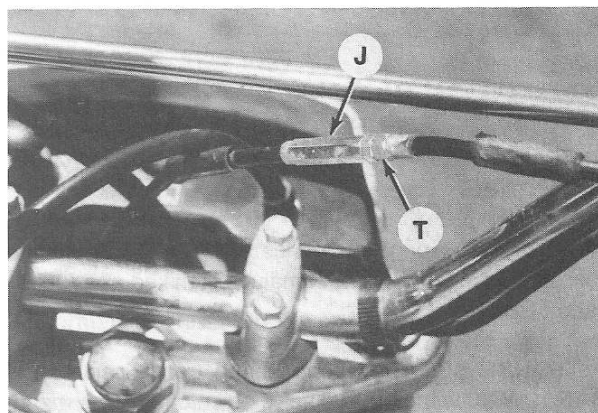


Fig. Y10-4—On Model YTZ250N, adjust throttle lever free play by loosening locknut (T) and rotating adjuster (J).

assembly should close the inlet valve without compressing the spring in the valve. Recommended float height (H) is 30.3-32.3 mm (1.19-1.27 in.). Adjust float height by bending float arm tang (T).

REED VALVE. A "V" type reed valve assembly located between the intake manifold and engine cylinder is used. Reed valve assembly is accessible after removing the carburetor and intake manifold.

Reed petal seats must be smooth and flat. Renew reed petals if bent, broken or otherwise damaged. Do not attempt to straighten bent petals.

Reed valve petals may stand open a maximum of 0.6 mm (0.022 in.) at the tip (Fig. Y10-8). During reassembly, align flat lower corner on reed petal assembly with flat lower corner on reed stop assembly.

FUEL STRAINER. The reserve fuel valve and the main fuel valve each contain a fuel strainer. The fuel valves

should be disassembled and the strainer cleaned after the initial break-in period and every 30 days of operation thereafter. If fuel starvation is suspected because of contaminated fuel the strainer in each fuel valve should be cleaned on a more frequent basis and the fuel tank removed and flushed. On the reserve fuel valve, remove the sediment bowl to expose the strainer. On the main fuel valve, remove the inlet fitting to expose the fuel valve.

COOLING SYSTEM

All Models

INSPECTION. The engine assembly is liquid-cooled and a two-piece radiator is used. Renew any hoses that are cracked, split or show any other damage. Inspect all other cooling system components and renew if leakage or damage is noted.

CHANGING COOLANT. The manufacturer recommends using a 50 percent water to 50 percent antifreeze

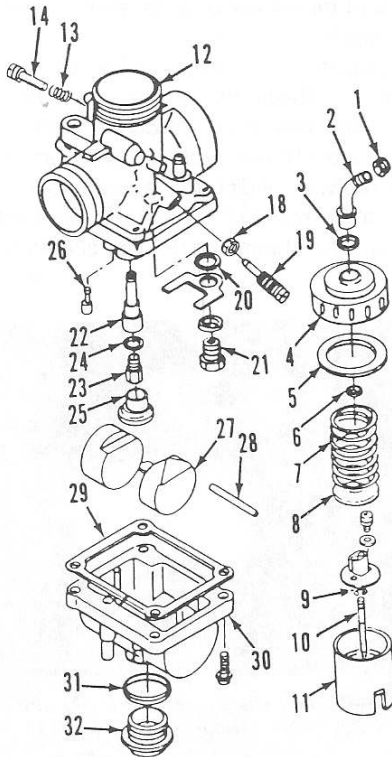


Fig. Y10-5—Exploded view of Mikuni VM32SS carburetor used on all models.

- | | |
|------------------------|----------------------|
| 1. Locknut | 19. Idle speed screw |
| 2. Cable guide | 20. Washers |
| 3. Washer | 21. Inlet valve |
| 4. Cap | 22. Needle jet |
| 5. Washer | 23. Main jet |
| 6. "E" ring | 24. Spacer |
| 7. Spring | 25. Cover |
| 8. Washer | 26. Pilot jet |
| 9. Jet needle clip | 27. Float |
| 10. Jet needle | 28. Float pin |
| 11. Throttle slide | 29. Gasket |
| 12. Body | 30. Float bowl |
| 13. Spring | 31. Gasket |
| 14. Idle mixture screw | 32. Plug |
| 18. Locknut | |

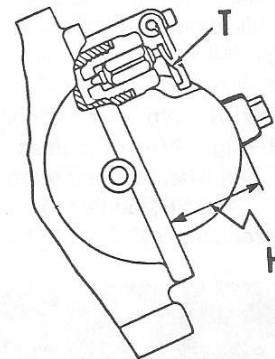


Fig. Y10-6—Tilt carburetor when measuring float height so tang (T) just touches inlet valve and valve spring is not compressed. Float height (H) should be 30.3-32.3 mm (1.19-1.27 in.). Bend tang (T) to adjust float height.

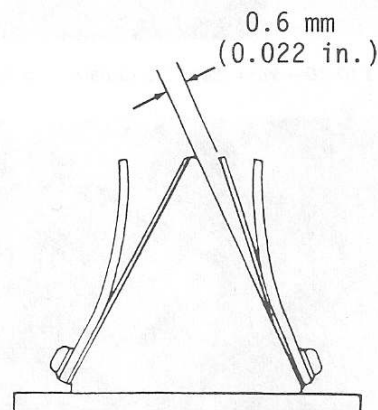


Fig. Y10-8—View showing maximum limit of reed petal stand open.

mixture in cooling system. Use an antifreeze that is designed for use in engines equipped with aluminum components. Cooling system capacity with reservoir tank at full level is 1.0 L (1.05 qt.).

To drain coolant, remove radiator cap (C—Fig. Y10-10) and loosen drain plug (D—Fig. Y10-1) in water pump housing and allow coolant to drain into a suitable container. Plug (P—Fig. Y10-11) located on right side of engine cylinder is used to completely drain cylinder water jacket.

Before refilling cooling system, install and tighten drain plugs. Pour recommended coolant mixture into radiator cap (C—Fig. Y10-10) opening.

NOTE: The vehicle may need to be operated and allowed to cool in order to remove any air pockets within system. After system has cooled, remove radiator cap (C) and complete filling of cooling system.

The coolant level in the cooling system reservoir (R—Fig. Y10-12) should be maintained at "FULL" mark. Remove filler cap (F) to add coolant.

RADIATOR CAP. Radiator cap (C—Fig. Y10-10) should have a relief opening pressure of 93-123 kPa (13.5-17.8 psi).

THERMOSTAT. A thermostat located within thermostat housing (H—Fig. Y10-13) is used. The thermostat should start to open when coolant temperature reaches 63°-67° C (145°-152° F) and be fully open when coolant temperature reaches 80° C (176° F).

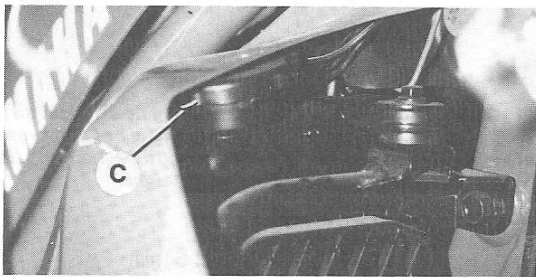


Fig. Y10-10—View identifies radiator cap (C).

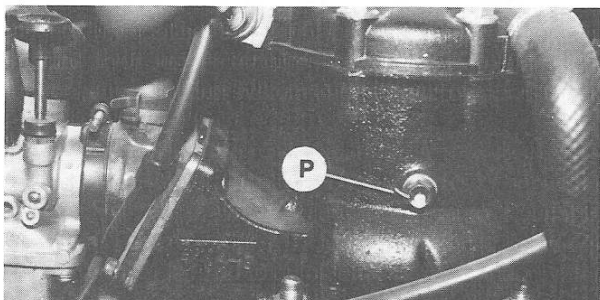


Fig. Y10-11—Remove plug (P) on right side of engine cylinder to completely drain cylinder water jacket.

IGNITION AND ELECTRICAL

All Models

IGNITION SYSTEM. All models are equipped with a pointless, capacitor discharge ignition system. A source coil located behind the flywheel provides electrical power for the ignition system. The pickup coil is also located behind the flywheel. The CDI unit and ignition coil are attached to the frame assembly.

To check ignition timing, remove spark plug and left crankcase cover (L—Fig. Y10-15). Insert a suitable dial indicator gage into spark plug hole. When the piston is 1.56-1.76 mm (0.066-0.074 in.) before top dead center (BTDC) on Model YTZ250N and 1.17-1.37 mm (0.046-0.054 in.) BTDC on Model YTZ250S, center (C—Fig. Y10-16) flywheel timing mark must align with stationary mark (M) on stator plate. If not, reach through the openings in the front of the flywheel with a suitable tool and loosen the two stator plate retaining screws. Rotate stator plate until marks are aligned, then tighten screws to retain setting.

Some ignition components can be checked using an ohmmeter. To check the pickup coil, disconnect the white/red wire and black (ground) wire between the pickup coil and CDI unit. Connect one ohmmeter lead to the white/red wire leading to the pickup coil and connect the other ohmmeter lead to black wire leading to the pickup coil. The ohmmeter reading should be 9.6-11.8 ohms.

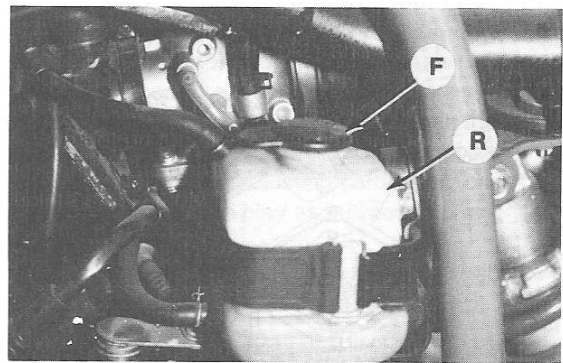


Fig. Y10-12—Cooling system reservoir (R) should be maintained at "FULL" mark. Remove filler cap (F) to add coolant.

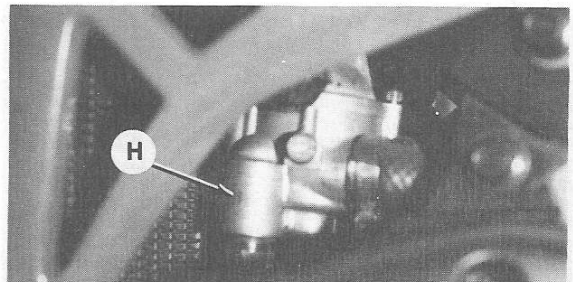


Fig. Y10-13—Thermostat is located within thermostat housing assembly (H).

To check the source coil, disconnect the brown wire and black (ground) wire between the source coil and the CDI unit. Connect one ohmmeter lead to the brown wire leading to the source coil and connect the other ohmmeter lead to black wire leading to the source coil. The ohmmeter reading should be 284-346 ohms.

Ignition coil resistance readings should be 0.66-0.92 ohms for the primary windings and 5015-6785 ohms for the secondary windings.

If the ignition system malfunctions and all components test satisfactory, replace CDI unit with a new or known to be good unit and recheck the ignition system.

ELECTRICAL SYSTEM. A lighting coil is located behind the flywheel to provide electrical power for the lights. The lighting coil should produce at least 8.5 volts AC at 1500 rpm and at least 16 volts AC at 8000 rpm. The lighting coil can be checked using an ohmmeter by connecting one ohmmeter lead to the yellow/red wire leading from the lighting coil and connecting the other ohmmeter lead to the black (ground) wire leading from the lighting coil. The ohmmeter reading should be 0.52-0.64 ohm.

The headlight is a 30W/30W unit. Two headlights are used. The taillight is a single 3.8W unit.

FASTENERS

All Models

The vehicle should receive an overall inspection after the initial break-in period and every 30 days of operation thereafter. All cap screws, nuts and fasteners should be checked and tightened to proper torque specification listed in CONDENSED SERVICE DATA section or in the appropriate MAINTENANCE section.

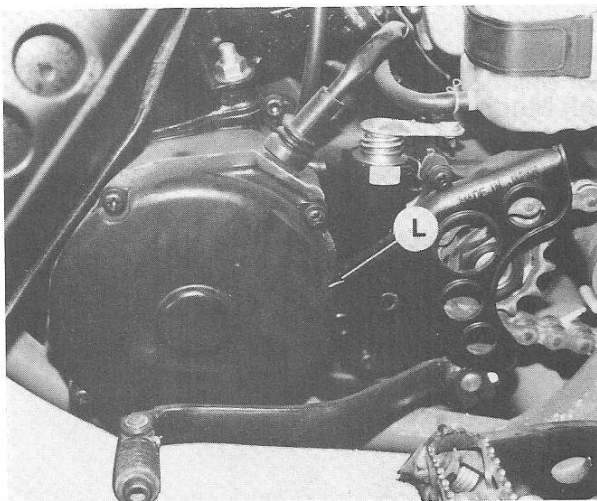


Fig. Y10-15—Remove left crankcase cover (L) to expose flywheel, ignition components and lighting coil.

CLUTCH

All Models

All models are equipped with a multiple-disc type clutch manually actuated by left handlebar lever. The clutch lever adjustment should be checked after the initial break-in period and every 30 days of operation thereafter.

The clutch lever should have 10-15 mm (0.4-0.6 in.) of free play measured at outer end of clutch lever (L—Fig. Y10-18). Clutch lever free play can be adjusted by sliding dust boot (B) down cable to expose adjuster nut and locknut. Loosen locknut (N) and rotate adjuster nut (A) until 10-15 mm (0.4-0.6 in.) free play is obtained.

Properly operated, the clutch should disengage and engage freely. Difficulty in shifting, clutch grabbing or slipping may indicate disassembly and repair of clutch unit is required.

FRONT AXLE

All Models

The front axle is supported by two roller bearings. To remove the axle assembly, first suitably support front of vehicle so front wheel is off the ground. Remove front wheel brake caliper retaining cap screws and withdraw brake caliper. Loosen axle shaft pinch screw (S—Fig. Y10-20). Remove axle shaft (A) to separate the axle and wheel assembly from the front forks.

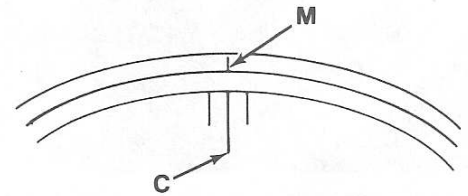


Fig. Y10-16—Center (C) flywheel timing mark must align with stationary mark (M) on stator plate when piston is positioned as specified in text.

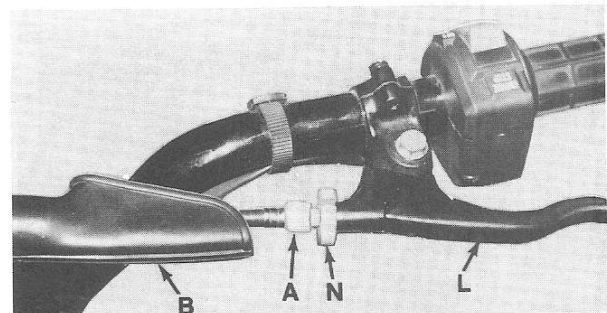


Fig. Y10-18—Slide dust boot (B) down cable. Loosen locknut (N) and rotate adjuster nut (A) until clutch lever (L) free play is 10-15 mm (0.4-0.6 in.) measured at outer end of lever.

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To service bearings, first pull grease seals from left and right axle housing bore. Drive ball bearings from axle housing using a suitable drift punch and hammer. The drift punch must be placed against outer bearing race to drive ball bearings from axle housing.

Reassemble in reverse order of disassembly. Place a coating of a lithium soap-based grease on grease seal lips prior to installation. Tighten axle shaft (A) to 58 N·m (42 ft.-lbs.). Tighten axle shaft pinch screw (S) to 20 N·m (14 ft.-lbs.).

FRONT BRAKE

All Models

A disc brake assembly is used on the front wheel. As the disc or disc pads wear, the piston within the brake caliper assembly will move out to automatically compensate for the wear, so adjustment on the front brake is not required.

BRAKE LEVER FREE PLAY ADJUSTMENT. Front brake lever free play should be 0.5-1.0 mm (0.02-0.04

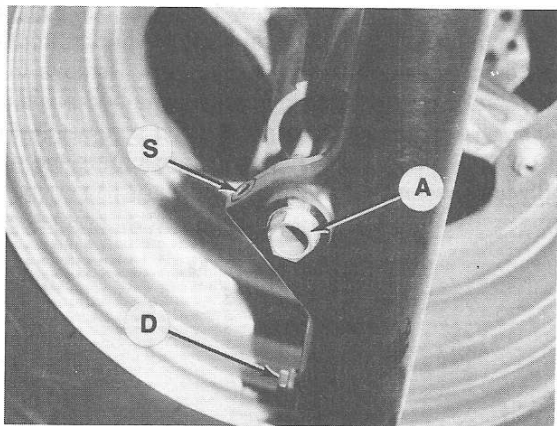


Fig. Y10-20—Axle shaft pinch screw (S) must be loosened prior to removing axle shaft (A). Remove drain plug (D) to drain oil from fork tube.

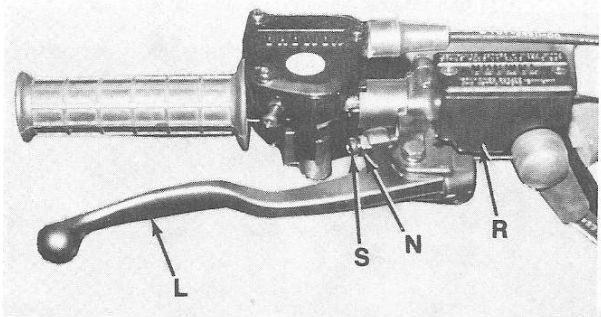


Fig. Y10-22—Loosen locknut (N) and rotate screw (S) to adjust front brake lever (L) free play. View identifies front brake master cylinder reservoir (R).

in.) measured at outer end of brake lever (L—Fig. Y10-22). To adjust, loosen locknut (N) and rotate screw (S) until recommended free play is obtained, then tighten locknut (N) to retain adjustment.

BLEEDING. Make sure reservoir (R—Fig. Y10-22) is full. Connect a bleed hose to bleed valve (B—Fig. Y10-23) on front brake caliper assembly. Route the bleed hose into a suitable container. Operate brake lever (L—Fig. Y10-22) until a hardness (fluid resistance) is felt, then open bleed valve (rotate counterclockwise). Close bleed valve prior to releasing brake lever. Continue bleeding procedure until no air bubbles are noted in discharged fluid from bleed valve.

NOTE: Make sure reservoir (R) is kept full during bleeding procedure with DOT #3 brake fluid.

When bleeding procedure is completed, add DOT #3 brake fluid to reservoir until fluid level is above "LOWER" level line on reservoir.

OVERHAUL. External determination of brake pad thickness is possible by viewing the brake pads. If more than 0.8 mm (0.032 in.) of brake pad is measured, then brake pads do not require replacement because of excessive wear. If brake pad is 0.8 mm (0.032 in.) or less in thickness, then both brake pads must be renewed.

Brake components are accessible after removing caliper mounting screws and withdrawing caliper. Push piston by hand back into caliper to allow clearance for new brake pads. Brake disc should be renewed if thickness is 3.5 mm (0.138 in.) or less, or disc runout is 0.15 mm (0.06 in.) or more. After reassembly, operate brake lever until brake lever will not pump up after continuous operation. Do not operate vehicle until correct brake operation is noted.

FRONT FORKS

All Models

AIR PRESSURE. The recommended standard air pressure within the front forks is atmospheric pressure.

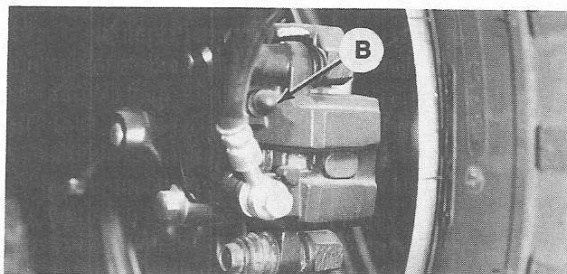


Fig. Y10-23—Front caliper bleed screw (B) is accessible after removing dust cap.

To check air pressure within the front forks, first position vehicle on a level surface. Remove protective caps (C—Fig. Y10-25) on each side and push inner poppet valves (P) to open chambers. Relieve any excess air pressure, then release inner poppet valves (P) and reinstall protective caps (C).

FLUID LEVEL. Fork fluid level should be maintained at 151 mm (5.94 in.) below top end of inner tube for standard setting. To check fluid level, proceed as follows: Apply front brake and bounce front of vehicle up and down a few times to expel any air within the fork oil. Remove both air valve protective caps (C—Fig. Y10-25) and push inner poppet valves (P) to release any air pressure on the system. Remove top plug (P) on left and right fork and withdraw short spring, washer and long spring in each fork tube. Fully compress forks, then use a tape measure or a suitable tool to measure distance from top end of inner tube to fork oil level. Add 10 weight fork oil or SEA #10 fork oil to obtain proper fluid level.

To change fork oil, remove drain plug (D—Fig. Y10-20) at bottom of each fork and allow oil to drain into a suitable container. To refill, install and tighten plug (D) and add 334 mL (11.3 oz.) of 10 weight fork oil or SEA #10 fork oil.

NOTE: Maximum fork fluid level is 210 mm (8.27 in.) and minimum fork fluid level is 146 mm (5.75 in.). As fork fluid level increases, so does front fork hardness.

STEERING

All Models

ADJUSTMENT. Check the steering by supporting the vehicle so the front wheel is off the ground and the handlebars are free to turn. If pushed lightly, the handlebars should continue to turn without binding. Check for roughness when turning which might indicate defective bearings. Push the fork legs forwards and backwards and check for play in the steering stem. If steering stem play

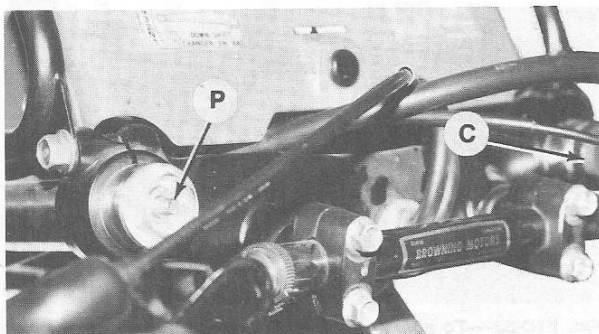


Fig. Y10-25—Remove protective cap (C) on top of each fork tube for access to air pressure poppet valve (P).

is indicated, adjust steering as follows: Loosen steering stem bracket nut (N—Fig. Y10-27). Rotate slotted steering stem nut (S) to remove steering play (tighten nut) or remove binding (loosen nut). Retighten steering stem bracket nut to 85 N·m (61 ft.-lbs.).

OVERHAUL. To separate the steering stem assembly from the frame's steering head, proceed as follows: Remove the front wheel and axle assembly, handlebars, headlight assembly, front fender, front brake hose clamp and breather hoses from steering stem. Remove left and right fork assembly, steering stem bracket nut (N—Fig. Y10-27) and remove steering bracket (B). Unscrew slotted nut (S), then remove dust cover, upper bearing cone and the 19 ball bearings from the upper end of steering head. Lower the steering stem assembly away from the steering head.

If suitable tools are available, the bearing races in the steering head and the lower bearing assembly can be removed and installed. Be sure to reinstall lower grease seal. Check the steering stem for straightness. Use a good quality medium-weight wheel bearing grease to lubricate the bearing assemblies. Reassemble components by reversing the removal procedure. Tighten slotted nut to 45 N·m (32 ft.-lbs.) to preload the steering stem bearings, then loosen slotted nut one-quarter ($\frac{1}{4}$) of a turn. Make final adjustment as outlined under ADJUSTMENT after reassembly is completed.

REAR BRAKE ASSEMBLY

All Models

A single disc brake assembly is used for both rear wheels. The running brake is operated hydraulically by a foot pedal on the lower right side.

BRAKE PEDAL HEIGHT ADJUSTMENT. Brake pedal position should be adjusted to height desired by driver. To adjust, loosen locknut (N—Fig. Y10-29) and rotate actuator rod (R) until desired pedal height is obtained, then tighten locknut (N) to retain adjustment.

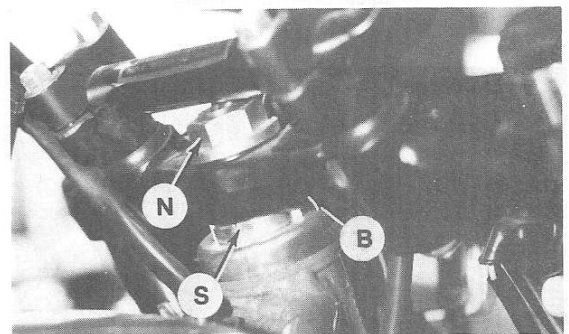


Fig. Y10-27—View identifies steering stem bracket nut (N), steering bracket (B) and slotted nut (S).

Yamaha YTZ250

BLEEDING. Make sure reservoir (R—Fig. Y10-30) is full. Connect a bleed hose to bleed valve (B—Fig. Y10-31) on brake caliper assembly. Route the bleed hose into a suitable container. Operate foot pedal until a hardness (fluid resistance) is felt, then open bleed valve (B). Close bleed valve prior to releasing foot pedal. Continue bleeding procedure until no air bubbles are noted in discharged fluid from bleed valve.

NOTE: Make sure reservoir (R—Fig. Y10-30) is kept full during bleeding procedure.

When bleeding procedure is completed, add brake fluid to reservoir (R) until fluid level is above "LOWER" level line on reservoir.

OVERHAUL. External determination of brake pad thickness is possible by viewing the brake pads. If more than 0.8 mm (0.032 in.) of brake pad is measured, then brake pads do not require replacement because of excessive wear. If brake pad is 0.8 mm (0.032 in.) or less in thickness, then both brake pads must be renewed.

Brake components are accessible after removing caliper mounting screws and withdrawing caliper. Push piston by hand back into caliper to allow clearance for new brake pads. Brake disc should be renewed if thickness is 3.5 mm (0.138 in.) or less or disc runout is 0.15 mm (0.06 in.) or more. After reassembly, operate brake foot

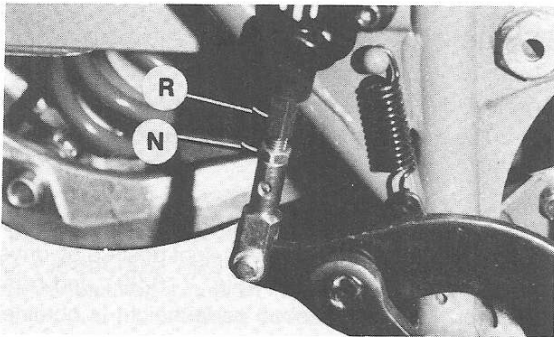


Fig. Y10-29—Loosen locknut (N) and rotate actuator rod (R) to adjust brake pedal height.

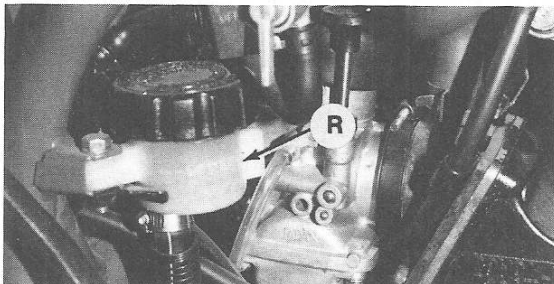


Fig. Y10-30—View identifies rear brake master cylinder reservoir (R).

pedal until pedal will not pump up after continuous operation. Do not operate vehicle until correct brake operation is noted.

DRIVE CHAIN AND SPROCKETS

All Models

INSPECTION AND ADJUSTMENT. The final drive chain should be inspected and adjusted after initial break-in period and every 30 days of operation thereafter. Improper maintenance and neglect can cause early failure of both drive chain and sprockets. A master link type drive chain is used. Drive chain free play should be 30-35 mm (1.18-1.38 in.) measured midway between sprockets. Chain tension is adjusted by loosening upper and lower screws (R—Fig. Y10-33) securing axle housing to swing arm mounts and loosening left and right locknuts (K) and rotating left and right adjuster screws (S) in equal increments until chain tension is within recom-

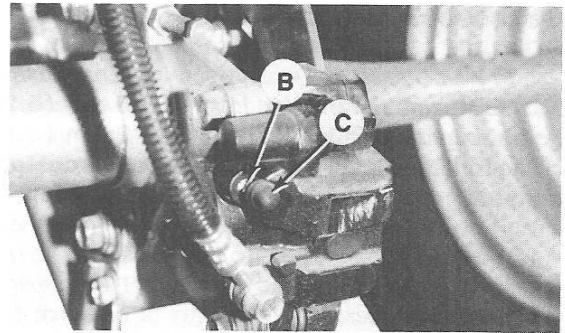


Fig. Y10-31—Rear brake caliper bleed valve (B) is accessible after removing protective cap (C).

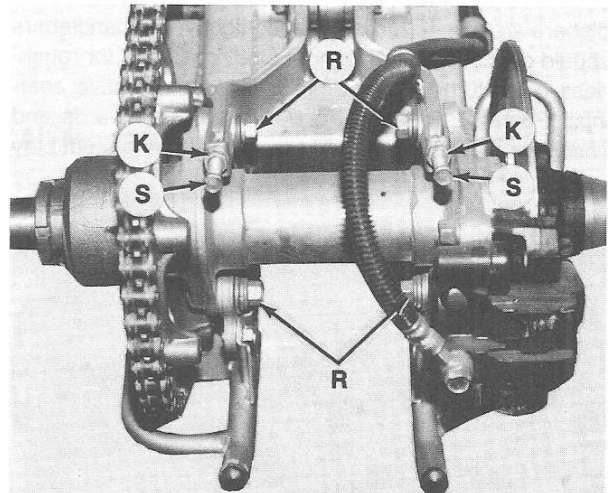


Fig. Y10-33—To adjust drive chain tension, loosen upper and lower axle housing retaining screws (R), then loosen left and right locknuts (K) and rotate adjuster screws (S) in equal increments.

mended limits. Tighten upper axle housing mounting screws to 50 N·m (36 ft.-lbs.) and lower axle housing mounting screws to 80 N·m (58 ft.-lbs.), then recheck drive chain free play.

R&R AND OVERHAUL. Loosen upper and lower screws (R—Fig. Y10-33) securing axle housing to swing arm mounts, then loosen locknuts (K) and turn adjuster screws (S) outward. Push axle housing inward to create slack in drive chain.

Remove master link clip and washer then withdraw master link. Remove drive chain and engine sprocket if needed. The left rear wheel must be removed to withdraw final drive sprocket.

Carefully examine engine and final drive sprockets for excessive wear. Worn sprockets will usually have a hooked profile. A good test is to place a new chain on a used sprocket and check the fit. Wear on sprocket sides indicates misalignment. If sprockets require renewal due to wear, always renew drive chain.

Standard drive chain is a DAIDO 520V with 98 links.

Tighten engine sprocket retaining nut to 75 N·m (54 ft.-lbs.) and secure with tab on lockwasher. Tighten final drive sprocket retaining nuts to 30 N·m (22 ft.-lbs.) and secure with tab on lockwashers. When reinstalling drive chain, install master link clip as shown in Fig. Y10-34. Adjust chain tension as previously outlined in INSPECTION AND ADJUSTMENT section.

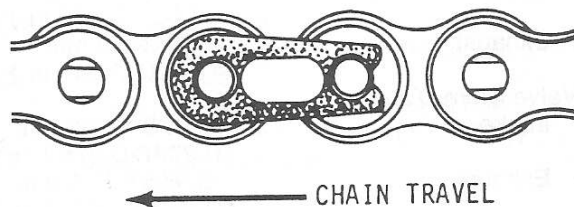


Fig. Y10-34—Install drive chain master link clip with closed end of clip towards normal direction of chain travel.

FINAL DRIVE ASSEMBLY

All Models

R&R AND OVERHAUL. Remove two cap screws securing rear brake caliper assembly and withdraw caliper. Remove drive chain as outlined under R&R AND OVERHAUL in the DRIVE CHAIN AND SPROCKETS section. Remove both rear wheels. Remove left and right rear hub assemblies. Remove four cap screws retaining axle housing to swing arm assembly and withdraw axle housing. Remove rear axle retaining nuts (H—Fig. Y10-35), then lightly tap left end of axle shaft with a soft-faced mallet to drive axle shaft out of axle housing.

Inspect axle housing seals and bearings and renew if needed. Axle shaft runout should not exceed 1.5 mm (0.06 in.). Tighten rear axle retaining nuts (H) to 133 N·m (96 ft.-lbs.). Tighten brake caliper mounting cap screws to 35 N·m (25 ft.-lbs.). Refer to appropriate sections for reassembly procedures and to TIGHTENING TORQUES in the CONDENSED SERVICE DATA section for torque values not listed in maintenance sections.

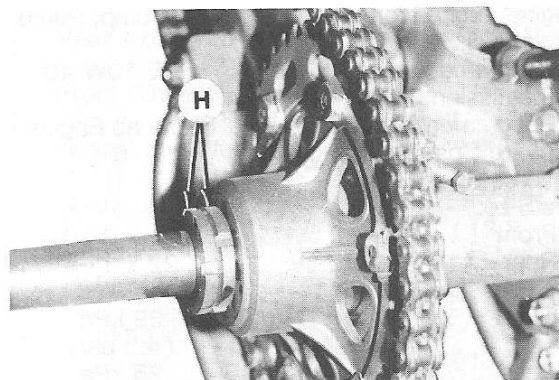


Fig. Y10-35—View identifies rear axle shaft retaining nuts (H).