

2. Periodic Maintenance > Periodic Maintenance Chart

Maintenance Schedule

Perform the pre-ride inspection (Owner's Manual) at each scheduled maintenance period. This interval should be judged by odometer reading or months, whichever comes first.

Maintenance schedule legend

I: INSPECT AND CLEAN, ADJUST, LUBRICATE OR REPLACE IF NECESSARY
C: CLEAN
A: ADJUST
R: REPLACE
L: LUBRICATE
I: INSPECTION
D: DIAGNOSE

The maintenance schedule specifies the maintenance required to keep your XCITING 400i scooter in peak operating condition. Maintenance work should be performed in accordance with KYMCO standards and specifications by properly trained and equipped technicians. Your KYMCO dealer meets all of these requirements.

* Should be serviced by your KYMCO dealer, unless you have the proper tools, service data and are technically qualified.

** In the interest of safety, we recommend these items be serviced only by your KYMCO dealer. KYMCO recommends that your KYMCO dealer road test your scooter after each periodic maintenance service is completed.

Maintenance schedule notes:

1. At higher odometer readings, repeat at the frequency interval established here.
2. Service more frequently if the scooter is ridden in unusually wet or dusty areas.
3. Service more frequently when riding in rain or at full throttle.
4. Inspect every 12,000 mi (20,000 km) after replacement.
5. Replace every 1 year, or every 6,000 mi (10,000 km), whichever comes first. Replacement requires mechanical skill.
6. Replace every 2 years, or at the indicated odometer interval, whichever comes first. Replacement requires mechanical skill.
7. Replace every 2 years. Replacement requires mechanical skill.

2. Periodic Maintenance > Periodic Maintenance Chart

FREQUENCY ITEM		WHICHEVER COMES FIRST	ODOMETER READING									
			X 1000km	1	5	10	15	20	25	30	35	40
		X 1000mi	0.6	3	6	9	12	15	18	22	24	
Note		Month	1	6	12	18	24	30	36	42	46	
*	AIR CLEANER	Note2			R	R	R	R	R	R	R	R
	SPARK PLUGS				I	R	I	R	I	R	I	R
	THROTTLE OPERATION				I	I	I	I	I	I	I	I
	VALVE CLEARANCE				I	A	I	A	I	A	I	A
	FUEL LINE					I		I		I		I
	CRANKCASE BREATHER	Note3		C	C	C	C	C	C	C	C	C
	ENGINE OIL			R	R	R	R	R	R	R	R	R
	ENGINE OIL SCREEN				C	R	C	R	C	R	C	R
	ENGINE OIL FILTER			R	R	R	R	R	R	R	R	R
	ENGINE IDLE SPEED					D		D		D		D
	TRANSMISSION FLUID	Note5		R		R		R		R		R
	DRIVE BELT	Note4			I	I	I	R	I	I	I	R
	CLUTCH SHOE WEAR					I		I		I		I
	BRAKE FLUID	Note7			I	R	I	R	I	R	I	R
	BRAKE PAD WEAR				I	I	I	I	I	I	I	I
	BRAKE SYSTEM				I	I	I	I	I	I	I	I
	BRAKE LIGHT SWITCH				I	I	I	I	I	I	I	I
	STEERING BEARINGS				I	I	I	I	I	I	I	I
	HEADLIGHT AIM				I	I	I	I	I	I	I	I
	NUTS, BOLTS, FASTENERS				I	I	I	I	I	I	I	I
	WHEELS/TIRES				I	I	I	I	I	I	I	I
	COOLANT	Note6			I	I	I	I	I	I	R	I
	INJECTOR				D	C	D	C	D	C	D	C
	CLUTCH SHOE WEAR					I		I		I		I

Air Filter Servicing

Replace the air filter according to the Maintenance Schedule, and more often in exceptionally rainy or dusty areas.

Removal



Remove the 8 air filter cover screws with a #2 Phillips screwdriver.



Remove the air filter cover.



Remove the 7 air filter bolts with an 8 mm socket or a #2 Phillips screwdriver.



Remove the air filter from the airbox. Discard the air filter in favor of a new item.

Caution:

- The air cleaner element has a viscous type paper element. Do not clean it with compressed air.
- Be sure to install the air cleaner element and cover securely.

Installation



Fit the new air filter into place.



Insert the 7 air filter bolts. Tighten the air filter bolts securely with an 8 mm socket or a #2 Phillips screwdriver.



Install the air filter cover.



Install the 8 air filter cover screws and tighten them securely with a #2 Phillips screwdriver.

2. Periodic Maintenance > Brake Fluid

Brake Fluid

The KYMCO XCITING 400i uses DOT 4 brake fluid that should be inspected after 3,000 mi (5,000 km) of use. It should be flushed and bled every 12 months, 6,000 mi (10,000 km), whenever the brakes feel spongy, or if the brake system has been taken apart and rebuilt. Always use fresh brake fluid from a tightly sealed container.

SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

Warning: Brake fluid is very caustic and can damage paint, chrome and plastic. Wipe up any spills immediately.

Inspection



Turn the handlebars until the top of the master cylinder reservoir is level with the ground. Do this for both master cylinder reservoirs and check the level of brake fluid.

2. Periodic Maintenance > Brake Fluid

Draining

The brake bleeding process is the same for the front and rear brakes.



Remove the two master cylinder cover screws with a #2 Phillips head screwdriver.



Remove the master cylinder cover, plastic piece and rubber diaphragm. Clean and inspect the rubber diaphragm for tears or other damage. Replace as necessary.

2. Periodic Maintenance > Brake Fluid



Pull off the rubber cap over the bleeder valve and crack open the bleeder valve on the brake caliper using an 8 mm wrench. This valve is usually very tight so use a box end wrench or a 6 point socket and ratchet to prevent rounding off the head. Snug the bleeder valve back down.



Open the valve and remove the old brake fluid with a Mighty -Vac or a similar device.

2. Periodic Maintenance > Brake Fluid

Bleeding

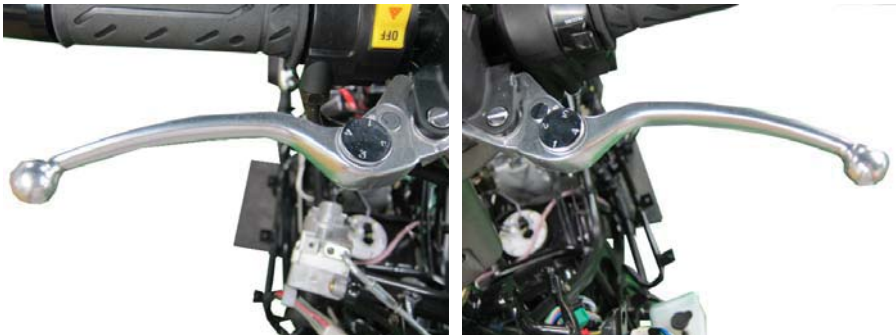


Place a length of 6 mm inside diameter clear hose on the bleeder valve and place the other end in a suitable container. A spare battery vent hose works well for this job.



Fill the brake fluid with the proper type from a fresh, newly opened container.

2. Periodic Maintenance > Brake Fluid



Pump the brake lever several times and hold the lever in. While holding the lever in, crack open the bleeder valve. The front brake lever will travel all the way to the grip and brake fluid and/or air will come out of the bleeder valve into the 6 mm hose. Tighten the bleeder valve before releasing the front brake lever. Pump the lever several times again and repeat the process.

Be certain to check the master cylinder reservoir occasionally to make sure the reservoir doesn't run dry. Add more brake fluid as necessary. Continue this process until clean brake fluid comes out of the bleeder valve and there are no air bubbles. The brake lever should feel firm.

Tighten the bleeder valve to specification and push its rubber cover over the nipple.

(Air Bleeder Valve Torque: 7.5 N-m or 5.5 lb-ft)



Make sure the reservoir has the proper amount of fluid.

2. Periodic Maintenance > Brake Fluid



Place the rubber diaphragm, plastic piece and cover over the reservoir.



Thread in the reservoir cover screws and tighten them securely with a #2 Phillips screwdriver.

2. Periodic Maintenance > Compression Test

Engine Compression Test

SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

Before testing the compression make sure the cylinder head bolts are tightened securely and the valve clearance is specification.



Thread a compression tester into the spark plug hole hand tight. Hold the throttle all the way open. Crank the engine with the starter motor until the needle on the gauge stops rising. Do not crank the engine more than a few seconds.

Cylinder compression	15 kg/cm ²	228 ± 28.4 psi
----------------------	-----------------------	----------------

Low compression is an indication of excessive engine wear, possibly worn rings or poorly sealing valves, or maybe a tight valve with not enough valve clearance. High compression is possibly an indication of excessive carbon buildup on the piston or performance modifications.

Install the spark plug.

Engine Oil

SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

Caution: Hot engine oil can burn. Avoid letting used motor oil contact exposed skin.

TROUBLESHOOTING

Oil level too low

1. Natural oil consumption
2. Oil leaks
3. Worn or poorly installed piston rings
4. Worn valve guide or seal

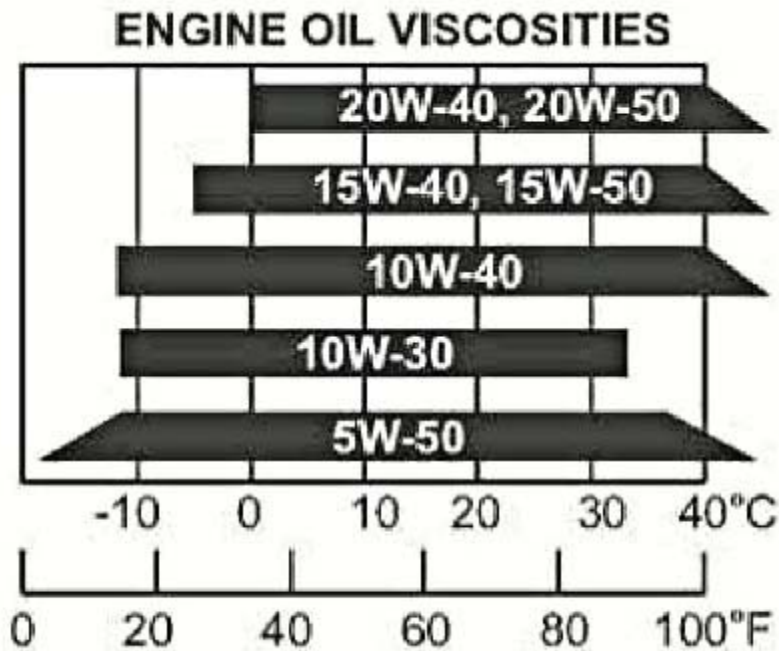
Poor lubrication pressure

1. Oil level too low
2. Clogged filter or oil passages
3. No use the specified oil

Oil Specifications

Use a fully synthetic quality 4-stroke engine oil to ensure longer service life of the scooter. Only use oils that have a SJ rating above per the API service classification.

Engine oil viscosity : SAE 5W-50



If these viscosities are not available, select an alternative engine oil according to the chart shown above.

Engine oil capacity	
At disassembly	1.5 Liter
At change	1.3 Liter

Inspection

Oil Level

Check the engine oil level each day before operating the scooter.

Place the motorcycle upright on level ground for engine oil level check. Run the engine for 2 ~ 3 minutes and check the oil level after the engine is stopped for 2 ~ 3 minutes.

2. Periodic Maintenance > Engine Oil



The oil filler cap/dipstick is located on the right side of the engine.



Remove the oil filler cap/dipstick and wipe off the oil. Inspect the O-ring and replace it as needed. Insert the dipstick in without threading it in. Remove the dipstick and check the oil level.

2. Periodic Maintenance > Engine Oil



The level must be maintained between the upper (1) and lower level (2) marks on the oil filler cap/dipstick.



If the oil level is at or below the lower mark add more of the same type and brand of oil to the engine through the oil filler hole. If the oil level is too high remove the drain plug and the excess oil.

Servicing

Draining

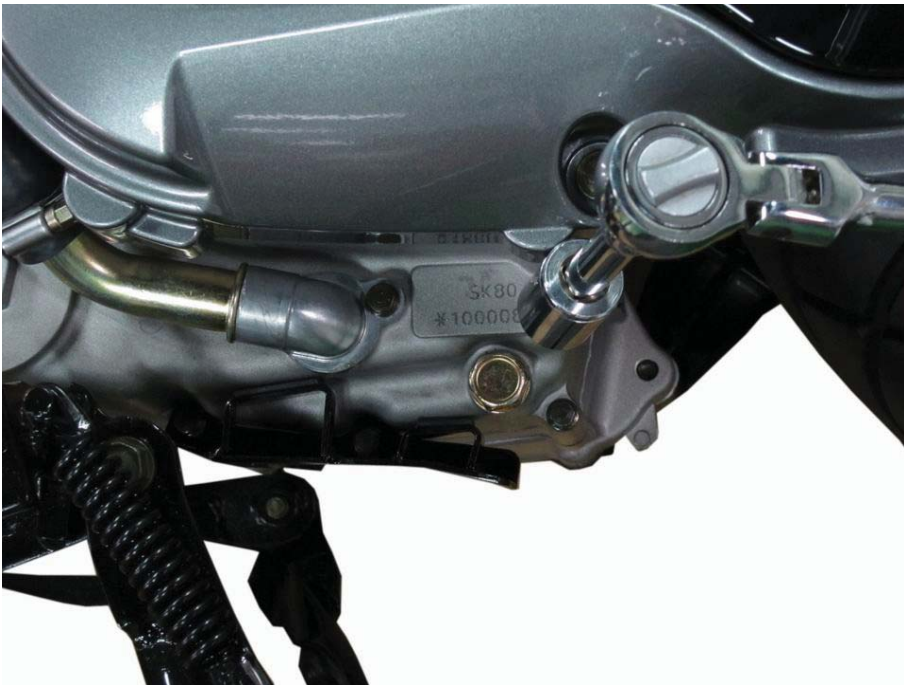
Warm the engine as with the inspection, this will heat the engine and allow the oil to drain out faster and more completely. The vehicle should be on level ground. Stop the engine.

Caution: Hot engine oil can burn. Avoid letting used motor oil contact exposed skin.

2. Periodic Maintenance > Engine Oil



Place an oil pan under the engine. The oil drain bolt is located on the left side of the engine.



Loosen the engine oil drain bolt with a 17 mm socket. Remove the bolt and allow the oil to drain into the pan.

2. Periodic Maintenance > Engine Oil



Discard the old sealing washer.



Remove the oil filler cap to allow for faster oil draining. Inspect the oil filler cap O-ring and replace it as needed.

2. Periodic Maintenance > Engine Oil



When the oil has drained completely Install the drain bolt with a new sealing washer. Tighten the drain bolt to specification with a 17 mm socket.

Item	Qty	Torque		Remarks
		kgf-m	lb-ft	
Oil Drain bolt	1	2.5	18.08	New sealing washer

Strainer Screen



Remove the oil strainer screen bolt with a 17 mm socket. Inspect the strainer screen bolt O-ring and replace it as needed.

2. Periodic Maintenance > Engine Oil



Remove the oil strainer screen.



Remove the O-rings from the oil strainer screen and inspect them. Replace the O-rings if they are in poor condition. Inspect the oil strainer screen for debris and damage. Clean it with a high flash point solvent and compressed air. Metal debris in the strainer screen can be an indicator of engine wear or damage.

2. Periodic Maintenance > Engine Oil



Return the O-rings to the oil strainer screen and install it into the left side of the engine. Tighten the oil strainer screen cap to specification with a 17 mm socket.

Item	Qty	Torque	
		kgf-m	lb-ft
Engine oil strainer cap	1	1.0	7.2

Filter Replacement



The oil filter compartment is located on the bottom of the engine below the oil filler cap/dipstick. Ready an oil drain pan to catch any remaining engine oil.

2. Periodic Maintenance > Engine Oil



Loosen the oil filter cap with a 24 mm socket.



Remove the oil filter cap with spring and take out the used oil filter.

2. Periodic Maintenance > Engine Oil



Inspect the oil filter cap O-ring and spring. Replace the items if they are in poor condition.



Install the spring to the oil filter cap. Apply a light coat of engine oil to the oil filter cap O-ring.

2. Periodic Maintenance > Engine Oil



Pour a small amount of fresh engine oil into the oil filter. Insert the oil filter into place with the rubber seal side facing up.



Install the oil filter cap with spring. Make sure the spring fits against the filter correctly. Tighten the oil filter cap securely with a 24 mm socket.

2. Periodic Maintenance > Engine Oil

Filling



Add the oil to the engine through the oil filler/dipstick hole.

Use a fully synthetic quality 4-stroke engine oil to ensure longer service life of the scooter. Only use oils that have a SJ rating above per the API service classification.

Engine oil viscosity : SAE 5W-50

Engine oil capacity	
At disassembly	1.5 Liter
At change	1.3 Liter



General Lubrication

SAFETY FIRST: Protective gloves and eyewear are recommended at this point.



The frame lubrication points are listed below. Use general purpose grease. Apply clean engine oil or grease to cables and movable parts not specified. This will avoid abnormal noise and increase the durability of the motorcycle.

- Front Wheel Axle
- Side Stand Pivot
- Center Stand Pivot
- Rear Wheel axle

Hose Inspection



Inspect the breather hose for damage and deterioration.



Inspect the fuel hose for damage and deterioration.

2. Periodic Maintenance > Spark Plug

Spark Plug

SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

Removal



The spark plug is located on the left side of the cylinder.



Remove the spark plug wire off of the spark plug.

2. Periodic Maintenance > Spark Plug


Remove the spark plug with a spark plug with a 5/8 in socket.

Spark plug	NGK-CR7E
------------	----------

Inspection


Always check the gap of the spark plug before installation. If the gap needs to be adjusted bend the ground electrode carefully. Inspect the color of the porcelain nose of the spark plug. The color of the spark plug can indicate how the mixture is burning. A white colored plug shows a lean mixture, where a dark plug shows a rich mixture. Do not hesitate to replace a spark plug. Always replace a spark plug if any part of it is damaged.

Spark plug gap	0.6 - 0.7 mm
----------------	--------------

2. Periodic Maintenance > Spark Plug
Installation


Thread the spark plug by hand before using a socket to tighten. Torque to specification with a 5/8" spark plug socket. Do not over tighten the spark plug. The cylinder head is made out of soft metal, and it can be easily damaged.

Item	Torque
Spark plug	17.2 N-m (1.5 - 2 ft-lb, 10.84 - 14.47 kgf-m)



Install the spark plug wire over the plug.

Steering

SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

Inspection



Raise the front wheel off the ground and check that the steering handlebar rotates freely. If the handlebar moves unevenly, binds, or has vertical movement, adjust the steering head bearing.

Suspension

SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

Front Suspension



Check the action of the front shock absorbers by compressing them several times. Check the entire shock absorber assembly for oil leaks, looseness or damage.

Pre-Load Setting

Each shock absorber on the scooter has 5 spring preload adjustment positions for different load or riding conditions.

Position 1 is for light loads and smooth road conditions. Position 3 to 5 increase spring preload for stiffer rear suspension and can be used when the scooters heavily loaded. Be certain to adjust both shock absorbers to the same spring preload positions.



Use a pin spanner to adjust the rear shock spring preload. The shock absorbers are adjustable for pre-load. There are 5 settings. Position 1 is the softest and 5 is the stiffest.

Caution: Always adjust the shock absorber pre-load position in sequence (1-2-3-4-5 or 5-4-3-2-1). Attempting to adjust directly from 1 to 5 or 5 to 1 may damage the shock absorber. (Pre-Load Standard Setting: Position 3)

Tires

SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

Check tires before each ride for wear and air pressure.



Check tire air pressure before riding when tires are cold.

Cold inflation tire pressure	Solo riding	Front	2.00 kg/cm ² (28.4 psi)
		Rear	2.25 kg/cm ² (32 psi)
	Dual riding	Front	2.00 kg/cm ² (28.4 psi)
		Rear	2.25 kg/cm ² (32 psi)

2. Periodic Maintenance > Tires



Replace tires if the tread depth reaches the wear mark or fails to meet the minimum tread depth.

Tires	Front wheel	120/70-15
	Rear wheel	150/70-14

2. Periodic Maintenance > Valve Adjustment

Valve Clearance

SAFETY FIRST: Protective gloves and eyewear are recommended at this point.

The valve clearance specification is only relevant if the engine is cold (below 35°C or 95°F).

Inspection



Remove the crankcase cover protector on the left side of the engine with a 8mm socket.



Remove the timing inspection cap from the right side of the engine with a large flat blade screwdriver. Inspect the O-ring on the cap and replace it as needed.

2. Periodic Maintenance > Valve Adjustment

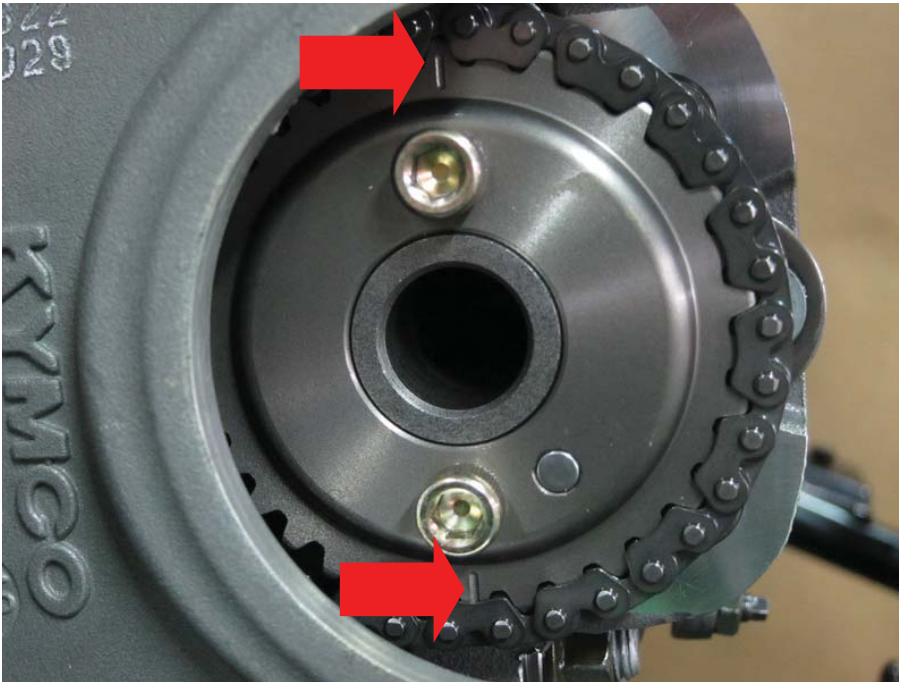


The crankshaft must be rotated until the piston is at top dead center (TDC) on the compression stroke.



Turn crankshaft clockwise until the "T" mark aligns with the index notch in the timing inspection hole.

2. Periodic Maintenance > Valve Adjustment



For correct engine timing the marks on the camshaft sprocket must be even with the cylinder head mating surface at the same time the "T" mark is lined up with the with the index notch in the timing inspection hole. Also the camshaft sprocket mounting boss should be visible above the cylinder head surface.

If this is not the case, rotate the crankshaft 360° clockwise until the "T" mark is once again aligned with the notch on the case cover.

2. Periodic Maintenance > Valve Adjustment



Measure the valve clearance with a thickness feeler gauge. Insert the feeler gauge between the tappet adjusting screw and the valve stem. The clearance is correct when there is a light drag on the feeler gauge. The clearance is the same for the exhaust and intake valves. If the clearance is out of spec, move on to the adjustment section.

Valve clearance	IN: 0.10 mm	EX: 0.10 mm
------------------------	--------------------	--------------------

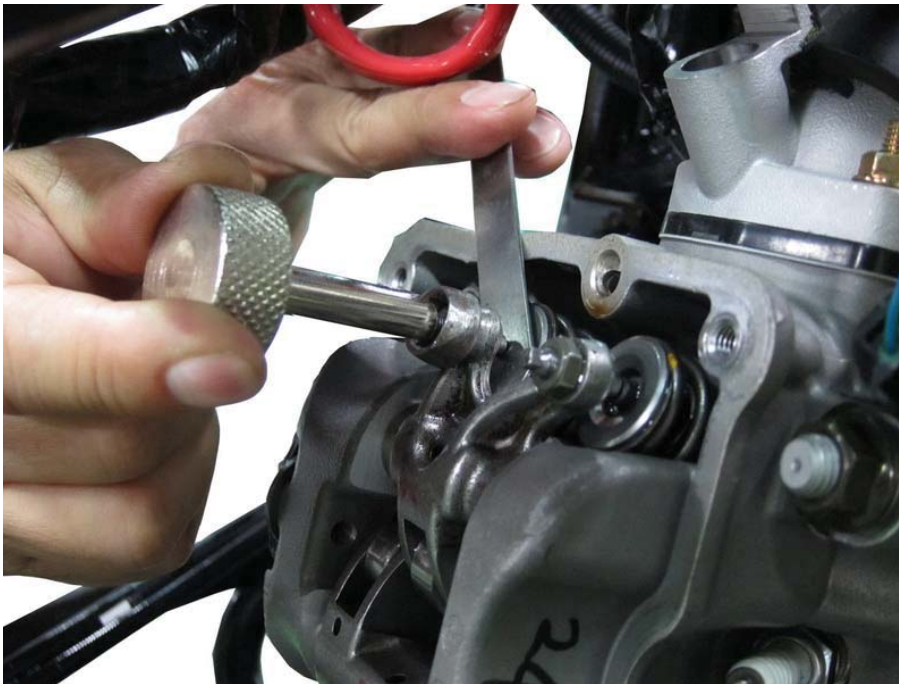
Adjustment



Use a tappet adjuster tool to adjust the valves.

2. Periodic Maintenance > Valve Adjustment

SPECIAL TOOLS		
ITEM	TOOL NO.	DESCRIPTION
TAPPET ADJUSTER	A120E000012	Tappet adjustment



Place a 9 mm box end wrench over the locknut, and loosen the locknut. If the valve clearance is tight back out the valve tappet adjusting screws with the tappet adjustment tool. If the clearance is to loose turn in the adjusting screw until there is a light drag on the feeler gauge. Hold the adjusting screw locknut in place with the wrench to make sure it doesn't interfere with the adjustment.

Lubricate the tappet adjusting screw threads with fresh engine oil. Hold the adjuster in place and tighten the locknut. Always recheck the clearance after tightening the locknut. Also, recheck after turning the engine over a full 360°.

Item	Qty	Thread size (mm)	Torque		Remarks
			kgf-m	lb-ft	
Valve adjusting lock nut	4	5	0.7-1.1	5.06-7.96	Apply oil to thread

2. Periodic Maintenance > Valve Adjustment



Make sure the O-rings on the timing plugs are in good condition. Replace it as needed. Install the timing inspection to the right side of the engine. Tighten the caps securely but not overly with a large flat blade screwdriver.