

5 Brake fluid

Check the hydraulic fluid level in the front brake master cylinder reservoir. Before removing the reservoir cap and diaphragm place the handlebars in such a position that the reservoir is approximately vertical. This will prevent spillage. The fluid should lie between the upper and lower lines on the reservoir body. Replenish, if necessary, with hydraulic brake fluid of the correct specification, which is DOT 3 (USA) or SAE-J1703. If the level of fluid in either of the reservoirs is excessively low, check the pads for wear. If the pads are not worn, suspect a fluid leakage in the system. This must be rectified immediately. In the case of machines fitted with a rear disc brake, check the fluid level as described above. The reservoir is located behind the right-hand side panel.



Top up brake fluid as necessary to maintain correct level

6 Safety inspection

Give the whole machine a close visual inspection, checking for loose nuts and fittings, frayed control cables and damaged brake hoses etc.

Monthly or every 600 miles (1000 km)

Complete all the checks listed under the previous maintenance interval heading and then carry out the following.

1 Final drive chain: lubrication and adjustment

The final drive chain is of the endless type, having no joining link in an effort to eliminate any tendency towards breakage. The rollers are equipped with an O-ring at each end which seals the lubricant inside and prevents the ingress of water or abrasive grit. It should not, however, be supposed that the need for lubrication is lessened. On the contrary, frequent but sparse lubrication is essential to minimise wear between the chain and sprockets. Honda recommend the use of SAE 80 or 90 gear oil for chain lubrication, but this will be of limited value due to the speed with which it is flung off. Conventional aerosol lubricants must be avoided because the propellant used will attack and damage the O-rings, but some of the newer types, such as P.J.L. Blue Label, are suitable for use on O-ring chains and are marked as such.

In particularly adverse weather conditions, or when touring, lubrication should be undertaken more frequently.

A final word of caution; the importance of chain lubrication cannot be overstressed in view of the cost of replacement, and the fact that a considerable amount of dismantling work, including swinging arm removal, will need to be undertaken should replacement be necessary.

Adjust the chain after lubrication, so that there is approximately 15-25 mm slack in the middle of the lower run. Always check with the chain at the tightest point as a chain rarely wears evenly during service.

Adjustment is accomplished after placing the machine on the centre stand and slackening the wheel nut, so that the wheel can be drawn backwards by means of the drawbolt adjusters in the fork ends.

The torque arm nuts and the rear brake adjuster (drum braked models) must also be slackened during this operation. Adjust the drawbolts an equal amount to preserve wheel alignment. The forks ends are clearly marked with a series of parallel lines above the adjusters, to provide a simple visual check.

2 Brake wear

Check that when applied, the rear brake wear indicator is within the usable range scale marked on the brake plate. The front disc brake pads should also be examined for wear, and to this end are marked with a red line denoting the maximum wear limit. If necessary, change the pads and/or brake shoes, referring to Chapter 5 for details. Look also for signs of staining on the friction material. This may be caused by leakage from the fork leg or from the caliper seals; in either case attention must be given to locating and rectifying the source of the leak.

3 Wheel condition - wire spoked types

Check the spoke tension by gently tapping each one with a metal object. A loose spoke is identifiable by the low pitch noise generated. If any spoke needs considerable tightening, it will be necessary to remove the tyre and inner tube in order to file down the protruding spoke end. This will prevent the spoke from chafing through the rim band and piercing the inner tube. Rotate the wheel and test for rim runout. Excessive runout will cause handling problems and should be corrected by tightening or loosening the relevant spokes. Care must be taken, since altering the tension in the wrong spokes may create more problems.

4 Further maintenance checks

The following areas should be given a cursory check, taking remedial action where required. Check the electrical system, plus the headlamp beam alignment. Check the various nuts, bolts and screws for security, tightening where necessary. Check the front and rear suspension for smooth operation. Check the steering head bearings for free play. Examine all control cables and hydraulic lines, renewing any which appear worn or frayed.

6 monthly or every 3600 miles (6000 km)

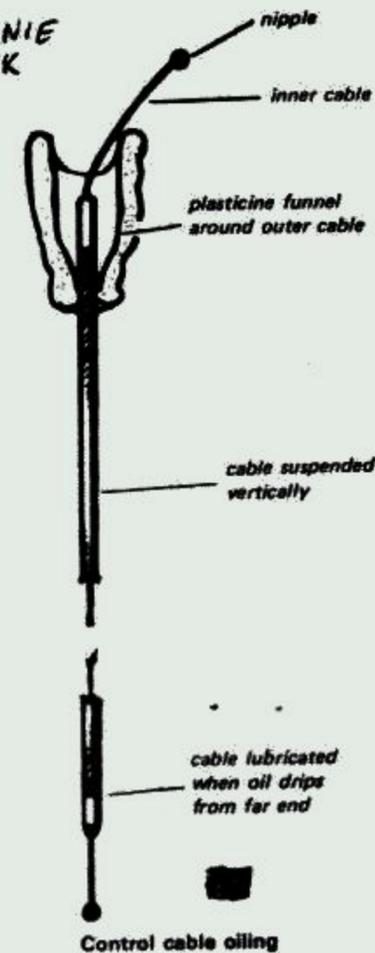
Complete all the checks in the preceding maintenance schedules and then carry out the following.

1 Engine oil and filter renewal

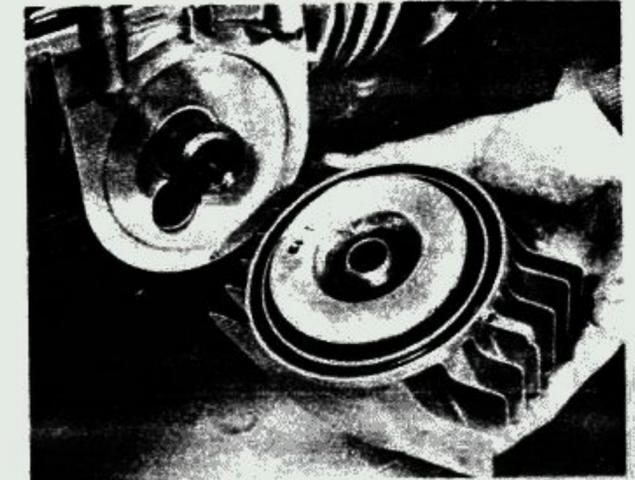
Run the engine until normal operating temperature is reached to ensure that the old oil drains quickly and completely. Place the machine on its centre stand and position a drain tray or bowl of about 1 gallon capacity beneath the sump drain plug. Release the drain bolt and filler plug, and allow the engine oil to drain.

Slacken the oil filter bolt and remove the filter housing and element. Note that some residual oil will be released, and some provision must be made to catch this. When all the oil has drained, clean the area around the drain plug and filter housing, and the inside of the filter bowl. Refit the drain plug and filter assembly. Fill the crankcase with 3.5 litre (6.0 Imp pint, 3.7 US quart) of the recommended engine oil, then run the engine for two or three minutes, checking for signs of leakage around the drain plug and filter. Stop the engine and check the oil level, adding oil where necessary to bring the level to maximum on the dipstick.

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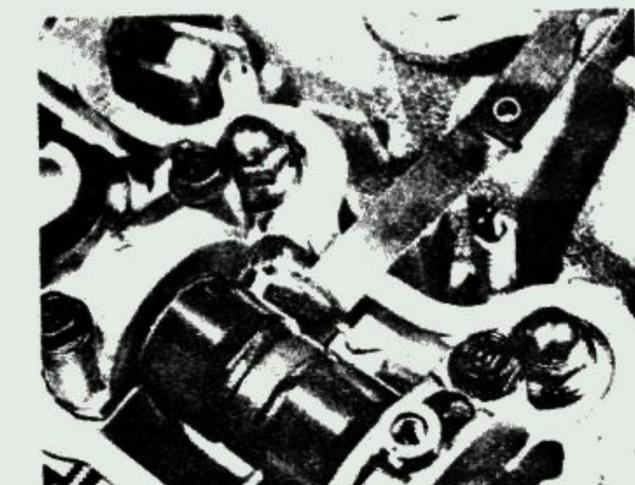
Control cable oiling



Oil filter housing and element



Replenish engine with oil until the correct amount is shown on dipstick



Check valve clearances using a feeler gauge

2 Valve clearances

It is important that valve clearances be maintained otherwise damage, or at best poor performance and noisy operation, will occur. To gain access to the camshafts, it will be necessary to detach the fuel tank and the H-shaped camshaft cover to expose the two camshafts and their associated components. Note that the engine should be cold during the clearance check.

Each valve is operated by a bucket-shaped follower which contains a shim to provide the correct clearance between it and the cam lobe. The gap should be measured with the peak of the cam lobe uppermost, at which point it should be possible to insert a feeler gauge between the bucket top and the cam lobe. The specified clearance is:

$$\begin{array}{l} 0.08 \text{ mm} + 0.05 \\ - 0.02 \end{array} \quad \begin{array}{l} (0.003 \text{ in} + 0.002) \\ - 0.001) \end{array}$$

for both the inlet and the exhaust valves. This gives a permissible range of 0.06 - 0.13 mm (0.002 - 0.005 in) in each case.

It will be necessary to set the camshafts in the correct position, as described below. Working from the right-hand side of the machine, turn the crankshaft slowly in a clockwise direction until the index mark on the exhaust camshaft end aligns with the front section of the gasket face. Check and note the clearance of the exhaust valves of cylinders 1 and 3.

Rotate the camshafts through 90°, by turning the crankshaft clockwise through 180°, then repeat the check on the inlet valves of cylinders 1 and 3.

Turn the camshafts through another 90° and check the exhaust valves of cylinders 2 and 4. Finally, rotate the camshafts by a further 90°, and check the clearance of the inlet valves of cylinders 2 and 4.

Check the list of clearances against the specified clearance limits to see which, if any, require attention. Adjustment shims are available in 0.05 mm increments, from 2.30 mm to 3.50 mm. Thus if a clearance of 0.15 mm is found and the existing shim is 2.45 mm thick, it will be necessary to fit a 2.50 mm shim to bring the clearance within limits, to 0.10 mm.

To change the shims it will be necessary to keep the appropriate pair of cam followers depressed so that the shim(s) can be withdrawn from the recess in the cam follower top(s). It is strongly recommended that the Honda tool, No 07964-4220001 is purchased for this purpose, because it allows the job to be accomplished quickly and at no risk to the machine or operator. Turn the crankshaft until the valve in question is fully open, and insert the tool between the camshaft and the appropriate pair of valves. Turn the crankshaft through 360° to position the camshaft lobe clear of the valves.

Note that care must be taken not to rotate the crankshaft so far that the opposing pair of valves is opened. If this happens, the inlet and exhaust valve heads could meet, causing damage to both.

With the appropriate valve held open, the adjustment shim can be dislodged with a small screwdriver and lifted clear using tweezers or pointed-nose pliers. All but the No 2 cylinder exhaust valve shims can be removed from the sparking plug side of the camshaft. The latter must be removed from the front of the cylinder head.

The offending shim can now be measured with a micrometer, and the appropriate replacement fitted, having referred to the list of clearances made earlier. Do not forget to recheck the setting after the holding tool has been removed.

In the event that a new shim will not give the required clearance, it is likely that the valve seat and/or valve is in need of renewal. On no account attempt to grind down existing shims or pack them with sheet shim material in an attempt to save the cost of new shims. The risk of failure in service, and the consequent damage to the engine, makes this a very false economy. For details of shim sizes refer to the accompanying table of sizes.

3 Cam chain tensioner adjustment

The camshaft drive and connecting chains are tensioned by sprung blade assemblies mounted in the chain tunnel and across the cylinder head. The tensioners are semi-automatic, adjusting to the correct tension when the lock nuts are released.

It may be noted that the procedure described here differs slightly from that given in the owners handbook. This is because a revised procedure has been found to give better results, and is now recommended by Honda for all models.

Camshaft drive chain

Start the engine and allow it to idle. Slacken both of the small domed nuts at the rear of the cylinder block to allow the tensioner to assume the correct position. Tighten the two nuts to lock the adjustment.

Camshaft connecting chain

With the engine idling, slacken the locknut and bolt at the front of the cylinder block by 1/4 turn, to allow the horizontal tensioner to assume the correct position. Tighten the bolt carefully to hold the adjustment, taking care not to over-tighten it. Retighten the locknut.

If either chain remains noisy it is likely that it has stretched to the point where it requires renewal. Refer to Chapter 1 for details of the renewal procedure.

4 Sparking plugs

Remove, clean and adjust the sparking plugs. Carbon and other deposits can be removed, using a wire brush, and emery paper or a file used to clean the electrodes prior to adjusting the gaps. Probably the best method of sparking plug cleaning is by having them shot blasted in a special machine. This type of machine is used by most garages. If the outer electrode of a plug is excessively worn (indicated by a step in the underside)

the plug should be renewed. Adjust the points gap on each plug by bending the outer electrode only, so that the gap is within the range 0.6 - 0.7 mm (0.024 - 0.028 in). Before replacing the plugs, smear the threads with graphited grease; this will aid subsequent removal. If replacement plugs are required the correct types are listed at the end of this Section.

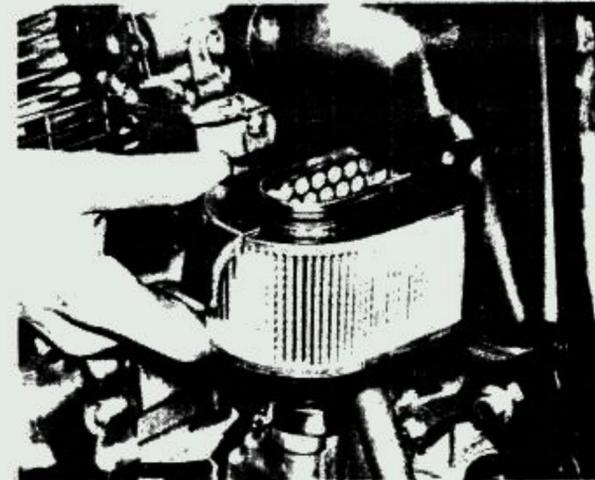
5 Air filter cleaning

Access to the filter is gained after removing the left-hand side panel. Remove the air cleaner casing cover by releasing the two screws which retain it. The element is secured by a leaf spring and can be removed after the latter has been pulled clear.

Tap the element gently to remove any loose dust and then use an air hose to remove the remainder of the dust. Apply the air current from the inside of the element only. If an air hose is not available, a tyre pump can be utilised instead. If the corrugated paper element is damp, oily or beginning to disintegrate, it must be renewed. Do not run the engine with the element removed as the weak mixture caused may result in engine overheating and damage to the cylinders and pistons. A weak mixture can also result if the rubber sealing rings on the element are perished or omitted.



Air filter can be removed by pulling the leaf spring clear ...



... and withdrawing the element

VALVE SHIM SELECTION CHART	STANDARD VALVE CLEARANCE = 0.08 +0.05 mm -0.02 mm																									
	PRESENT SHIM SIZE mm																									
VALVE CLEARANCE mm	0.01-0.05	0.06-0.13	0.14-0.16	0.17-0.21	0.22-0.26	0.27-0.31	0.32-0.36	0.37-0.41	0.42-0.46	0.47-0.51	0.52-0.56	0.57-0.61	0.62-0.66	0.67-0.71	0.72-0.76	0.77-0.81	0.82-0.86	0.87-0.91	0.92-0.96	0.97-1.01	1.02-1.06	1.07-1.11	1.12-1.16	1.17-1.21	1.22-1.26	1.27-1.31
	2.30	2.35	2.40	2.45	2.50	2.55	2.60	2.65	2.70	2.75	2.80	2.85	2.90	2.95	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50	
	2.35	2.40	2.45	2.50	2.55	2.60	2.65	2.70	2.75	2.80	2.85	2.90	2.95	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50		
	2.40	2.45	2.50	2.55	2.60	2.65	2.70	2.75	2.80	2.85	2.90	2.95	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50			
	2.45	2.50	2.55	2.60	2.65	2.70	2.75	2.80	2.85	2.90	2.95	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50				
	2.50	2.55	2.60	2.65	2.70	2.75	2.80	2.85	2.90	2.95	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50					
	2.55	2.60	2.65	2.70	2.75	2.80	2.85	2.90	2.95	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50						
	2.60	2.65	2.70	2.75	2.80	2.85	2.90	2.95	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50							
	2.65	2.70	2.75	2.80	2.85	2.90	2.95	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50								
	2.70	2.75	2.80	2.85	2.90	2.95	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50									
	2.75	2.80	2.85	2.90	2.95	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50										
	2.80	2.85	2.90	2.95	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50											
	2.85	2.90	2.95	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50												
	2.90	2.95	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50													
	2.95	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50														
	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50															
	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50																
	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50																	
	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50																		
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NOTE

- (1) Measure the valve clearance while the engine is cold.
- (2) For shim replacement, see text.
- (3) Measure old and new shims with a micrometer.
- (4) The chart is for reference purpose only. After installing new shims, recheck the valve clearance and adjust if necessary. Before rechecking, rotate the camshafts several times to seat the shims in the lifters.
- (5) If the shim thickness required exceeds 3.5 mm, there is carbon build-up on the valve seat. Remove the carbon and reface the seat.

EXAMPLE:

1. Measure valve clearance = 0.16 mm
2. Measure present shim size = 2.50 mm
3. Refer to chart. (See shaded columns)
4. Replacement shim size = 2.55 mm

PRZYKŁAD

1. Zmierzenie luzu = 0,16 mm
2. Zmierzenie wysokości przystawki = 2,50 mm
3. Tablica - wskazanie wymiaru przystawki
4. Wymiar przystawki = 2,55 mm

Valve clearance shim selection chart

TABLICA DOBÓRU GRUBOŚCI PRYSTAWKI