

Chapter 1 Engine, clutch and gearbox

Refer to Chapter 7 for information relating to the CB125 TD-J model

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Specifications

Engine

Type	Twin cylinder, air cooled, ohc
Capacity	124 cc (7.6 cu in)
Bore	44 mm (1.73 in)
Stroke	41 mm (1.61 in)
Compression ratio	9.4:1

Cylinder head

Thickness	72.75 – 72.85 mm (2.864 – 2.868 in)
Wear limit	72.60 mm (2.858 in)
Permissible gasket face warpage	0 – 0.05 mm (0 – 0.002 in)
Maximum gasket face warpage	0.1 mm (0.004 in)
Valve face width – inlet and exhaust	1.1 – 1.5 mm (0.04 – 0.06 in)
Wear limit	1.8 mm (0.07 in)

Valve clearance (cold)

Inlet	0.05 mm (0.002 in)
Exhaust	0.05 mm (0.002 in)

Valves and valve springs

Valve stem OD:	
Inlet	5.450 – 5.465 mm (0.2146 – 0.2152 in)
Exhaust	5.430 – 5.445 mm (0.2137 – 0.2144 in)
Wear limit:	
Inlet	5.42 mm (0.2134 in)
Exhaust	5.40 mm (0.2126 in)
Valve guide ID:	
Inlet and Exhaust	5.475 – 5.485 mm (0.2156 – 0.2159 in)
Wear limit	5.50 mm (0.2165 in)
Valve stem to guide clearance:	
Inlet	0.010 – 0.035 mm (0.0004 – 0.0014 in)
Exhaust	0.030 – 0.055 mm (0.0012 – 0.0022 in)
Wear limit:	
Inlet	0.08 mm (0.003 in)
Exhaust	0.10 mm (0.004 in)
Valve seat width:	
Inlet and exhaust	1.0 mm (0.04 in)
Wear limit	1.5 mm (0.06 in)
Valve spring free length:	
Outer	36.45 mm (1.435 in)
Inner	29.90 mm (1.177 in)
Wear limit:	
Outer	35.5 mm (1.398 in)
Inner	29.0 mm (1.142 in)

Camshaft and rocker gear

Cam lobe height:	
Inlet	28.094 mm (1.106 in)
Exhaust	27.675 mm (1.090 in)
Wear limit:	
Inlet	27.0 mm (1.063 in)
Exhaust	26.5 mm (1.043 in)
Camshaft journal OD	19.967 – 19.980 mm (0.7861 – 0.7866 in)
Wear limit	19.92 mm (0.7843 in)
Camshaft bush ID	20.063 – 20.083 mm (0.7899 – 0.7907 in)
Wear limit	20.20 mm (0.7953 in)
Maximum runout	0.05 mm (0.002 in)
Rocker arm spindle OD	9.978 – 9.987 mm (0.3929 – 0.3932 in)
Wear limit	9.17 mm (0.3610 in)
Rocker arm bore ID	10.0 – 10.015 mm (0.3937 – 0.3943 in)
Wear limit	10.1 mm (0.3976 in)

Cylinder barrel

Cylinder bore ID	44.00 – 44.01 mm (1.7323 – 1.7327 in)
Wear limit	44.10 mm (1.7362 in)
Gasket face warpage – maximum	0.1 mm (0.004 in)

Pistons and piston rings

Piston skirt OD	43.97 – 44.00 mm (1.7311 – 1.7323 in)
Wear limit	43.80 mm (1.7244 in)
Gudgeon pin bore ID	13.002 – 13.008 mm (0.5119 – 0.5121 in)
Wear limit	13.055 mm (0.5140 in)
Piston ring thickness – except CB125 TD models:	
Top and second	1.175 – 1.195 mm (0.0463 – 0.0470 in)
Wear limit	1.12 mm (0.0441 in)
Oil scraper	2.505 – 2.520 mm (0.0986 – 0.0992 in)
Wear limit	2.46 mm (0.0969 in)
Piston ring thickness – CB125 TD models only:	
Top and second	0.975 – 0.990 mm (0.0384 – 0.0390 in)
Wear limit	0.92 mm (0.0362 in)
Oil scraper	2.505 – 2.520 mm (0.0986 – 0.0992 in)
Wear limit	2.46 mm (0.0969 in)
Piston ring/ring groove clearance:	
Top and second	0.015 – 0.045 mm (0.0006 – 0.0018 in)
Wear limit	0.12 (0.0047 in)
Oil scraper	0 – 0.15 mm (0 – 0.0060 in)
Wear limit	0.17 mm (0.0067 in)

Piston ring end gap – installed:			
Top and second	0.15 – 0.35 mm (0.0060 – 0.0138 in)		
Wear limit	0.5 mm (0.0197 in)		
Oil scraper	0.2 – 0.5 mm (0.0079 – 0.0197 in)		
Wear limit	0.7 mm (0.0276 in)		
Crankshaft			
Permissible runout	0 – 0.03 mm (0 – 0.0012 in)		
Maximum runout	0.1 mm (0.0039 in)		
Gudgeon pin OD	12.994 – 13.000 mm (0.5116 – 0.5118 in)		
Wear limit	12.98 mm (0.5110 in)		
Connecting rod small-end ID	13.016 – 13.034 mm (0.5124 – 0.5132 in)		
Wear limit	13.08 mm (0.5150 in)		
Connecting rod big-end clearance:			
Axial	0.10 – 0.40 mm (0.0040 – 0.0157 in)		
Wear limit	0.60 mm (0.0236 in)		
Radial	0.004 – 0.0012 mm (0.002 – 0.0005 in)		
Wear limit	0.05 mm (0.002 in)		
Primary drive			
Type	Gear		
Reduction ratio	3.833:1 (69/18)		
Clutch			
Type	Wet, multiplate		
No of plates:			
Friction	5		
Plain	4		
No of springs	4		
Friction plate thickness	3.0 mm (0.1181 in)		
Wear limit	2.6 mm (0.1024 in)		
Plain plate maximum warpage	0.2 mm (0.0079 in)		
Spring free length	34.2 mm (1.3465 in)		
Wear limit	33.1 mm (1.3032 in)		
Gearbox			
Type:			
Except CD125 T	5-speed constant mesh		
CD125 T only	4-speed constant mesh		
Gear ratios:		CB125 models	CD125 T model
1st		2.769:1 (36/13)	2.846:1 (37/13)
2nd		1.882:1 (32/17)	1.777:1 (32/18)
3rd		1.450:1 (29/20)	1.272:1 (28/22)
4th		1.217:1 (28/23)	1.000:1 (25/25)
5th		1.083:1 (26.24)	N/App
Selector fork claw end thickness		5.00 – 5.07 mm (0.1969 – 0.1996 in)	
Wear limit		4.70 mm (0.1850 in)	
Selector fork bore ID		12.000 – 12.018 mm (0.4724 – 0.4731 in)	
Wear limit		12.05 mm (0.4744 in)	
Selector fork shaft D		11.976 – 11.994 mm (0.4715 – 0.4722 in)	
Wear limit		11.96 mm (0.4709 in)	
Kickstart pinion ID		18.020 – 18.041 mm (0.7095 – 0.7103 in)	
Wear limit		18.07 mm (0.7114 in)	
Final drive			
Type	Chain and sprocket		
Chain size	428 ($\frac{1}{2}$ in x $\frac{5}{16}$ in)		
	CB125 T,T2, TA and TB	CB125 TD	CD125 T
Final reduction ratio	2.600:1	2.800:1	2.800:1
No of teeth	39/15	42/15	42/15
Torque wrench settings			
	kgf m	lbf ft	
Crankshaft main bearing holder	1.0 – 1.4	7 – 10	
Cylinder head retaining nuts	1.6 – 2.0	12 – 14.5	
Cylinder head retaining bolts	1.0 – 1.4	7 – 10	
Alternator rotor retaining bolt:			
CB125 T, T2, TA, and TB models	2.6 – 3.0	19 – 22	
CB125 TD, CD125 T and CM125 C	5.5 – 6.5	40 – 47	
Clutch centre retaining nut	4.0 – 5.0	29 – 36	
Primary drive gear retaining nut	4.5 – 6.0	33 – 43	
Camshaft sprocket retaining bolts	1.7 – 2.3	12 – 17	
Crankcase fastening screws	1.0 – 1.4	7 – 10	
Crankcase cover retaining screws	0.8 – 1.2	6 – 9	
Cylinder head cover retaining bolts	0.8 – 1.2	6 – 9	

Oil drain plug	3.0 – 5.0	22 – 36
10 mm engine mounting bolts	5.5 – 7.0	40 – 51
8 mm engine mounting bolts	2.0 – 2.5	14.5 – 18
Gearchange lever pinch bolt	0.8 – 1.2	6 – 9
Kickstart lever pinch bolt – CB125 T, T2, TA and TB models only	1.0 – 1.5	7 – 11
Exhaust front mounting nuts	0.8 – 1.4	6 – 10
Footrest mounting bolts – CD125 T and CM125 C models only .	2.0 – 2.4	14.5 – 17
Exhaust balance pipe clamp bolt	2.0 – 2.4	14.5 – 17

1 General description

The engine/gearbox unit fitted to the Honda 125 twins described in this Manual is robust and well-proven. It is easy to work on and has no unduly complex features which create difficulties during dismantling and reassembly.

The basic engine/gearbox unit is similar for all the models described. The engine and gearbox components are housed in a single unit formed by the aluminium alloy crankcase castings, which are split vertically instead of horizontally. The cylinder head and cylinder barrel are also of light alloy, the latter incorporating steel liners in which the cylinder bores are machined.

In common with most machines in the Honda range, and with Japanese motorcycles in general, these models feature an overhead camshaft to operate the valve mechanism. The camshaft actuates each cylinder's pair of valves, one inlet and one exhaust, by means of rockers that bear directly on the camshaft. The camshaft is itself driven by an endless duplex roller chain which passes around a sprocket situated in the middle of the crankshaft. The chain is provided with a tensioner to compensate for wear, a rubber-faced spring steel blade which bears firmly against the chain along its rear run. A rubber-faced spring steel chain guide bears against the chain front run, keeping the chain firmly under control at all times. This method of valve operation is simple to maintain, is very reliable in service, and permits the engine to run safely at higher engine speeds than would be otherwise possible.

Lubrication is provided by a small trochoid oil pump feeding the major engine components. The lubricating oil is contained in the lower portion of the crankcase which forms a combined sump and oil bath for the gearbox components. The oil is picked up from the sump through a mesh filter screen attached to the oil pump, and is circulated around the engine by the pump, which is driven by gears from the crankshaft right-hand end.

The crankshaft is a pressed-up assembly comprising three main bearings, the outer two of which are ball journals, and two pairs of full-circle flywheels with the two connecting rods riding on needle-roller big-end bearings. No small-end bearings are fitted, the gudgeon pins riding instead directly in each connecting rod small-end eye. The alternator and ignition components are mounted on the crankshaft left-hand end, while the two gear pinions which provide the primary drive and oil pump drive respectively are mounted on the crankshaft right-hand end. From the crankshaft, drive is transmitted via a wet, multi-plate clutch to a constant-mesh gearbox which has four speeds on the CD125 T model, and five speeds on the CB125 models and the CM125 C.

The CB125 T, T2, TA and TB models are fitted with a kickstart only and the CB125 TD, CD125 T, and CM125 C models have an electric starter only. The starter motor, which is mounted on the engine front left-hand side, turns the crankshaft via a one-way clutch, chain and sprockets.

2 Operations with the engine/gearbox unit in the frame

The following items can be withdrawn for repair or renewal when the engine/gearbox unit is installed in the frame:

- Cylinder head cover
- Camshaft and rocker gear
- Starter motor and drive components (where fitted)
- Alternator and ignition components
- Gearbox sprocket
- Neutral indicator switch
- Oil pump and filter screen
- Clutch assembly and gear selector external components
- Kickstart assembly (where fitted)

When carrying out several operations it is an advantage to remove the engine/gearbox complete to gain better access. This should take no more than an hour, working at a steady pace and without assistance.

3 Operations with the engine/gearbox unit removed from the frame

It will be necessary to remove the engine/gearbox unit from the frame in order to gain access to the following items:

- Cylinder head and valves
- Cylinder barrel and pistons
- Cam chain and cam chain tensioner components
- Crankshaft and main bearings
- Gearbox components, including the selector

4 Removing the engine/gearbox unit from the frame

1 Removal of the engine/gearbox unit is made easier if the machine is to an acceptable working height. If a hydraulic jack is available, use a stout table, bench or supported platform. 2 Place the machine securely on its centre stand. If the machine has a wheel with two blocks of wood. If the machine has a kickstand, check that it is secure. Steady with the machine.

3 Place a receptacle below the crankcase left-hand end to catch the drain plug from the lower crankcase wall and the oil from the crankcase right-hand cover. Drain the oil from the crankcase when it is warm; the oil will be thinner and so will drain more easily. Approximately 1.5 – 1.8 litres (2.6 – 3.2 pints) of oil will be drained. When the oil has drained check the condition of the drain plug, renewing it if necessary, and refit the drain plug. Tighten the recommended torque setting of 3.0 – 5.0 kgf. Whenever possible, screw back in place, finger-tight. After a component has been removed. This prevents the correct reassembly. Also have various clean containers ready in which can be put the numerous small components detached.

4 Remove the sidepanels, raise or remove the petrol tank. The sidepanels are each retained by two bolts which engage in rubber grommets set in brackets on the air filter casing, or in the base of the petrol tank on the model being dismantled. Pull away each sidepanel carefully, without damage the plastic moulding. On all CB125 models the dual seat, propping it with a piece of wood. On the CM125 C models, the seat is retained by two bolts. Use a prong at the front which engages underneath the seat mounting. Note that the two bolts fitted to the seat pass through the pillion grab handle to secure the seat. Remove the two bolts, then lift the seat away.

5 Turn the petrol tap lever to the 'Off' position. Disconnect the fuel pipe by pinching together the 'ears' of the fuel pipe and prise off the fuel pipe. On all CB125 T, T2, TA and on the CD125 T model release the petrol tank rear strap and lifting the tank upwards at the back to the mounting. On the CB125 TD and CM125 C models the tank rear by unscrewing the single bolt and lifting the tank back. Then, on all models, raise the tank and push it carefully backwards. Put the tank to one side, taking care not to damage accidentally. Check the condition of the rubbers.

6 Disconnect the battery leads at their terminals.

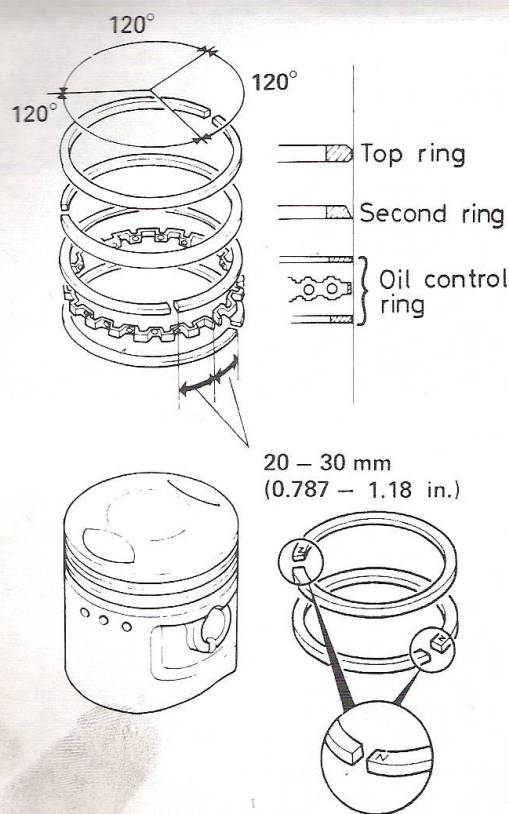


Fig. 1.17 Piston ring positioning

38 Reassembling the engine/gearbox unit: refitting the camshaft, rocker gear and cylinder head cover

1 Before reassembling the camshaft and sprocket in the cylinder head, refit the bushes to each camshaft end journal. The right-hand bush is a simple sliding fit on the end of the camshaft. The left-hand bush is retained by a thrust washer and circlip. If, as was found during dismantling, the bushes hinder camshaft movement, so making camshaft removal and refitting more difficult, the bushes can be refitted after camshaft installation. In practice it was found that camshaft refitting was far easier than camshaft removal, and could be carried out with the bushes in place. The manufacturer recommends that the bearing surfaces of the bushes and camshaft journals are coated with molybdenum disulphide before assembly to provide the necessary lubrication before the engine's own oil begins to circulate. If this is not available coat the bearing surfaces with copious amounts of clean engine oil.

2 Pull upwards on the screwdriver or rod which retains the cam chain to draw the chain tight, then apply a spanner or socket spanner (as appropriate) to the alternator rotor retaining bolt. Rotate the crankshaft in an anti-clockwise direction until the 'T1' mark (CB125 T, T2, TA, and TB, CD125 T, and CM125 C models) or the 'TL' mark (CB125 TD models) aligns with the index mark. On CB125 T, T2, TA and TB models the timing mark is stamped on the ATU, is visible through the aperture in the contact breaker backplate, and aligns with an index mark cast in the crankcase left-hand cover, while on all other models the timing mark is stamped on the rim of the alternator rotor, is visible through the smaller, top, inspection aperture in the crankcase left-hand cover, and aligns with an index mark formed by a notch in the upper edge of the aperture. Once these timing marks are aligned

exactly, do not disturb the crankshaft until the camshaft, sprocket, and chain are secured, and make frequent checks to ensure that the timing marks are still in alignment.

3 While the method to be described is the manufacturer's recommended method, and was found to be easy in practice, it relies on the cam chain being sufficiently slack to allow clearance for the components to be inserted. It may be necessary to introduce variations to suit the peculiarities of the machine being rebuilt; for example fitting the camshaft without its bushes, securing the camshaft and sprocket, and then fitting one camshaft bush at a time. Whichever method is employed, work slowly and methodically, and never risk damaging any components by losing patience and attempting to force a part into place.

4 The camshaft left-hand end is identified by the square-cut notch (and by the circlip groove machined in it, if the bushes have not been refitted yet); the camshaft sprocket has two dots stamped in its left-hand face. Hold the camshaft sprocket in the cam chain tunnel on the left of the chain with its two dots facing to the left and the offset cutout in the sprocket centre pointing upwards.

5 Holding the sprocket and chain together with one hand, very carefully slide the camshaft through from right to left, manoeuvring it to clear the cylinder head casting and to pass it through the sprocket. When the camshaft is fully in position, push it down into the cylinder head bearing surfaces, taking care to rotate each bush so that its protruding dowel pin fits into the recess in the cylinder head, then rotate the camshaft so that the square notch is in the 3 o'clock position, i.e. parallel with the cylinder head/cylinder head cover mating surface and facing to the rear.

6 Engage the camshaft sprocket on the chain so that with the crankshaft set in its correct position, with the cam chain pulled taut on its front run, and with the camshaft set in its correct position, an imaginary line running through the two dots and the camshaft centre is exactly parallel with the flat, machined, top surface of the cylinder head when the sprocket is lifted on to the camshaft. This will require a considerable degree of care and patience, but it is essential that the timing marks are aligned with absolute accuracy. Remember to check frequently that the positions of the crankshaft and camshaft have not altered, and be careful to keep the chain taut on its front run; the tensioner will take up any chain free play on the chain rear run.

7 Oil liberally the camshaft/cylinder head bearing surfaces. Apply a few drops of thread locking compound to the threads of one of the sprocket mounting bolts, then refit the bolt to the exposed sprocket hole, tightening it to a torque setting of 1.7 – 2.3 kgf m (12 – 17 lbf ft). Rotate the crankshaft anti-clockwise until the second sprocket mounting hole emerges and fit the remaining sprocket mounting bolt in the same way as the first. When fitting the first sprocket mounting bolt, note that if the valve timing marks are accurately aligned, the mounting bolt holes in the camshaft sprocket and the camshaft flange should align automatically.

8 Keep the front run of the chain taut, using fingers on the chain rear run and rotate the crankshaft further anti-clockwise through two full rotations. Align the crankshaft timing marks again and check that the valve timing marks align exactly. If necessary, remove the two sprocket mounting bolts and start again. It is essential that the valve timing is absolutely accurate if serious engine damage is to be avoided and if full performance is to be maintained.

9 Lubricate thoroughly the camshaft journals, bushes and lobes, then fill the trough beneath each pair of holes with clean engine oil. Lubricate the valve stems and springs and the rocker gear components. Note the four locating dowels which are fitted around the cylinder head studs; the two shorter dowels are fitted on the front row of studs, one on the extreme right-hand stud and the other on the inner left-hand stud, next to the cam sprocket. The two longer dowels are fitted on the rear row of studs, one on the extreme left-hand stud and one on the inner right-hand stud, also next to the cam sprocket.

10 Slacken off the tappet adjustment of all four rocker arms. Place the rocker carriers in position, noting that the 'F' mark must be fitted towards the front of the engine, and refit the eight securing nuts and their washers on the holding down studs. Tighten down the nuts, and the three previously fitted bolts evenly, in a number of steps, in the sequence given in the accompanying illustration. Tighten the eight nuts to a final torque setting of 1.6 – 2.0 kgf m (12 – 14.5 lbf ft) and the three bolts to a torque setting of 1.0 – 1.4 kgf m (7 – 10 lbf ft).

11 Check that the crankshaft timing marks are still aligned, then slacken the cam chain tensioner adjuster locknut. The tensioner assembly should drop sharply under spring tension as the tensioner

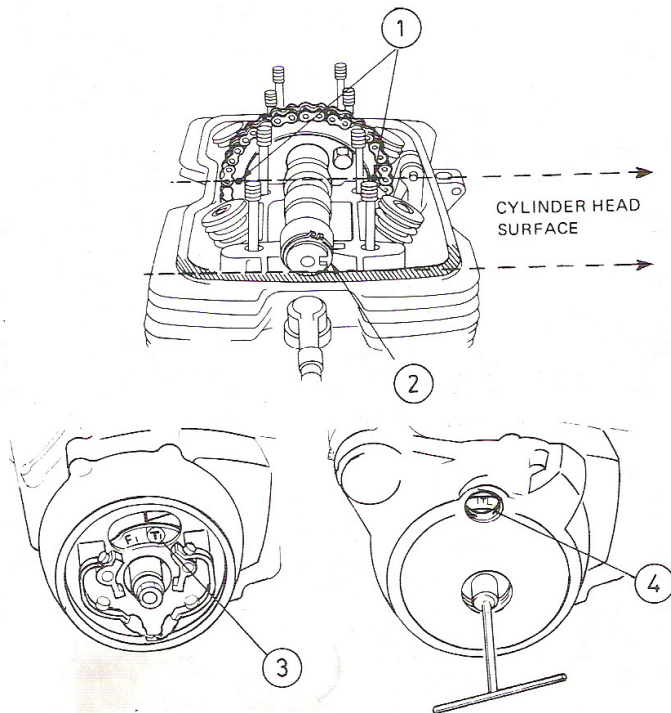


Fig. 1.18 Valve timing alignment marks

- 1 Sprocket alignment marks,
- 2 Camshaft notch
- 3 Alignment mark - contact breaker models
- 4 Alignment mark - CDI models

blade bends out to support the chain rear run and to take up any chain free play. Tighten securely the adjuster locknut.

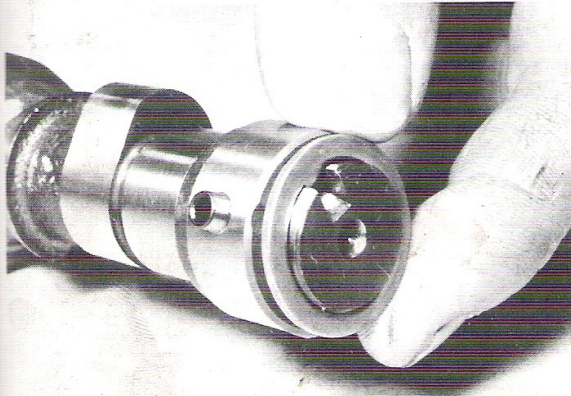
12 Place the left-hand piston on TDC on the compression stroke, ie with the crankshaft timing mark aligned as described above and with the square notch machined in the camshaft left-hand and aligned exactly parallel with the cylinder head/cylinder head cover joint surface and pointing towards the rear of the cylinder head. Set the clearance on the left-hand inlet and exhaust valves to 0.05 mm (0.002 in) using a feeler gauge.

13 When the clearance is correct on one valve hold the adjuster in position and tighten securely the adjuster locknut. Be careful not to overtighten the locknut as it is easy to damage the adjuster threads, rendering future adjustment very difficult. When the clearance is correct the gauge should be a fairly tight sliding fit. When the first

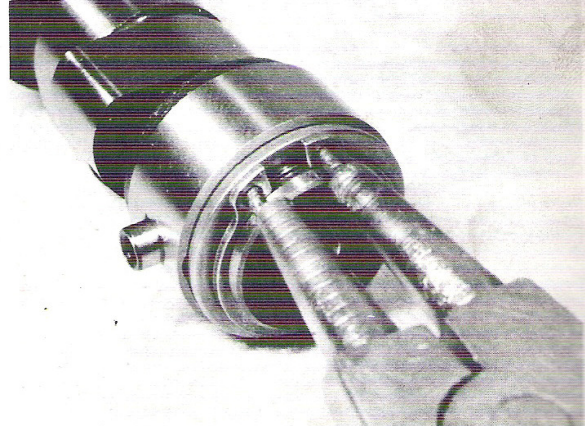
valve has been set, repeat the above procedure on the second valve.

14 The right-hand cylinder is set to TDC on the compression stroke by rotating the crankshaft anti-clockwise through 180° on all CB125 models and through 360° on the CD125 T and CM125 C models until the crankshaft 'T2' mark (CB125 T, T2, TA, and TB models), the 'TR' mark (CB125 TD models) or the 'T1' mark (CD125 T and CM125 C models), is aligned with the crankcase cover index mark. Then the clearances of both valves of the right-hand cylinder can be set, also to 0.05 mm (0.002 in), by repeating the procedure described.

15 Fit the cylinder head cover gasket and refit the cylinder head cover. Secure the cover by means of the special bolts and rubber washers. Tighten the two special bolts to a torque setting of 0.8 - 1.2 kgf m (6 - 9 lbf ft). Refit the spark plugs. Do not risk damaging the spark plug threads by overtightening the spark plugs.



38.1a Camshaft left-hand bush is retained by a thrust washer ...



38.1b ... and a circlip

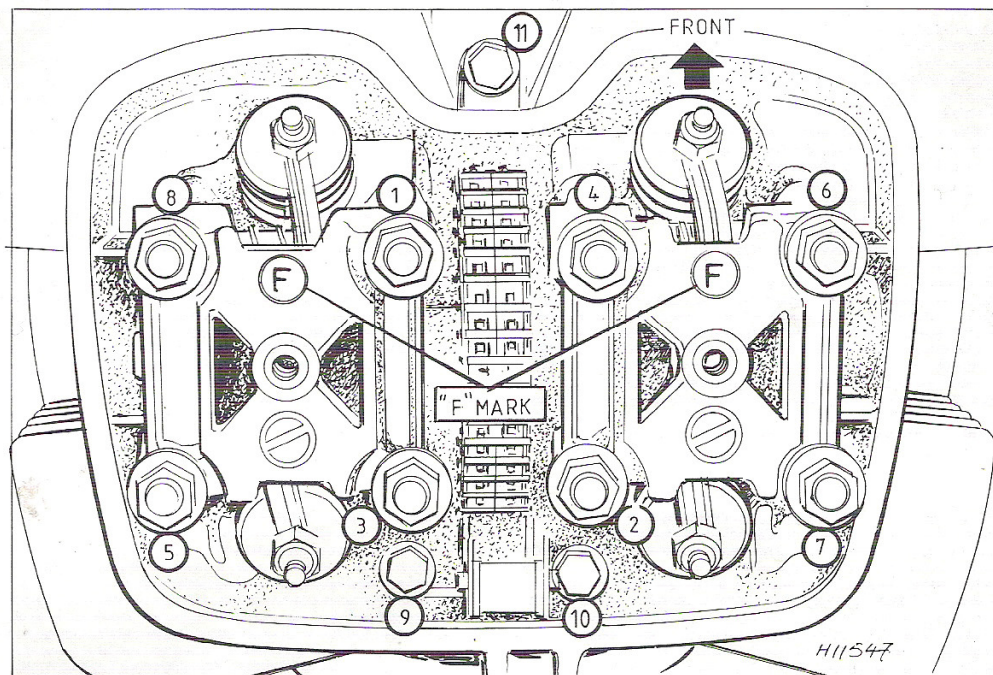


Fig. 1.19 Cylinder head nut and bolt tightening sequence

Note: Reverse this sequence for loosening

39 Refitting the engine/gearbox unit in the frame

1 Check that nothing has been omitted during the rebuilding sequences. It is better to discover any left-over components at this stage rather than just before the rebuilt engine is started.

2 If essential, the unit can be lifted by one person but assistance is useful. The unit is best fitted from the left-hand side, taking care not to topple the machine in the process.

3 With the engine held in position in the frame, insert the two larger diameter rear mounting bolts from the left-hand side of the machine. With these two bolts inserted, the engine will be supported sufficiently for it to be released from your grip. Fit the nut to the end of each bolt, ensuring that the earth lead or the clutch cable clamp is secured behind the nut of the upper bolt. **Do not** yet tighten the nuts on these bolts. Refit the engine front mounting plate to the base of the front downtube and, lifting the front of the engine slightly, insert the four bolts from the left-hand side of the machine and secure them with the four nuts. As before, do not tighten the bolts. Finally, reassemble the two plates of the cylinder head steady/engine top mounting and refit the three bolts from the left-hand side, and their retaining nuts.

4 When the engine mounting plates and all bolts and nuts have been refitted, tighten firmly but by hand only the retaining nuts of the five bolts which pass through both the crankcase or cylinder head castings and through the frame and the mounting plates. Check that the engine fits securely but without stress in its mountings, then tighten similarly the retaining nuts of the remaining four bolts. Tighten the two engine rear mounting bolts (10 mm) to a torque setting of 5.5 – 7.0 kgf m (40 – 51 lbf ft). The remaining seven (8 mm) mounting bolts are each tightened to a torque setting of 2.0 – 2.5 kgf m (14.5 – 18 lbf ft), but care must be taken to tighten first those three bolts which pass through the cylinder head or crankcase castings and the mounting plates, then the remaining four bolts which pass through the frame tubes and through the mounting plates.

5 Check that the crankcase breather hose is correctly routed so that

it is not trapped or kinked, and is secured by the clips attached to the frame for this purpose, then push the hose back onto its stub on the rear of the crankcase top surface and secure it with its spring clip. Route the main generator lead (and ignition system wiring, where this is separate) up the frame rear downtube attaching it to the frame with the various cable clamps or ties provided. Reconnect the leads to the main wiring loom. On electric start models only, pass the starter motor lead underneath the rear of the engine/gearbox unit, then up behind to fit between the swinging arm pivot and the rear of the engine/gearbox unit. On CB125 TD models, the lead then runs up the front of the air filter casing, passing between the carburettor air filter hoses, then between the air filter casing and the rear of the frame tube to pass along the battery left-hand side until it reaches the starter solenoid. On CD125 T and CM125 C models, the lead passes across the frame from left to right, running between the air filter casing and the rear mudguard to emerge in the vicinity of the starter solenoid at the rear of the battery. Secure the lead to its solenoid terminal by tightening down the retaining nut and washer, then refit the solenoid terminal cover.

6 The carburettor(s) should then be refitted, following a reversal of the method used on removal. Be very careful to avoid damaging the carburettor(s) when manoeuvring into place, especially when working on CB125 models. The choke linkage consists of a thin metal strip which extends from the cable butterfly spindle of the right-hand carburettor; this is easily bent or distorted. Great care must be taken to ensure that the linkage engages correctly on the protruding L-shaped right-hand end of the left-hand carburettor butterfly spindle and that the linkage is free to move without fouling any other component. When refitting the choke and throttle cables, ensure that the throttle valve is refitted the correct way round (where applicable) and that the cables are routed properly without kinks and that they are correctly adjusted. Check also that any fasteners disturbed during carburettor removal are correctly secured so that the induction system is free from leaks, and that any petrol pipe unions are similarly secured to prevent petrol leakage.