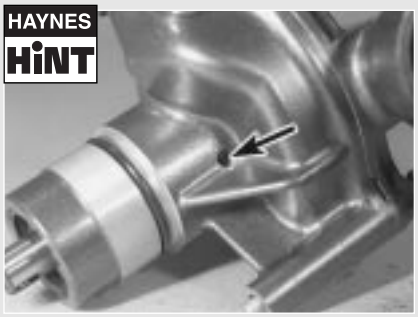
HAYNES HiNT



Periodically, check the drainage hole on the underside of the water pump – leakage from this hole indicates failure of the pump's mechanical seal

10 Start the engine and let it reach normal operating temperature, then check for leaks again. As the coolant temperature increases, the fan should come on automatically and the temperature should begin to drop. If it does not, refer to Chapter 3 and check the fan and fan circuit carefully.

11 If the coolant level is consistently low, and no evidence of leaks can be found, have the entire system pressure checked by a Triumph dealer.

15 Throttle and choke cable – checks

Throttle cable

1 Make sure the throttle grip rotates easily from fully closed to fully open with the front wheel turned at various angles. The grip should return automatically from fully open to fully closed when released.

2 If the throttle sticks, this is probably due to a cable fault. Remove the cable as described in Chapter 4 and lubricate it as described in Section 21. Install the cable, routing it so that it takes the smoothest route possible. If this fails to improve the operation of the throttle, the cable must be renewed. Note that in very rare cases the fault could lie in the carburettors rather than the cable, necessitating the removal of the carburettors and inspection of the throttle linkage (see Chapter 4).

15.3 Throttle cable freeplay is measured in terms of twistgrip rotation at the grip flange (arrowed)

3 With the throttle operating smoothly, check for a small amount of freeplay at the grip **(see illustration)**. The amount of freeplay in the throttle cable, measured in terms of twistgrip rotation, should be as given in this Chapter's Specifications. If adjustment is necessary, adjust idle speed first (see Section 3).

4 Slacken the lockwheel on the cable upper adjuster and rotate the adjuster until the correct amount of freeplay is obtained, then tighten the lockwheel against the adjuster **(see illustration)**. If it is not possible to obtain the correct freeplay with the upper adjuster, it will also be necessary to make adjustment at the lower adjuster, situated on the carburettors **(see illustration)**.

15.4a Small adjustments can be made using the throttle cable upper adjuster

5 To gain access to the lower adjuster remove the fuel tank (see Chapter 4). Prior to making adjustment at the carburettor end of the cable, fully back off the lockwheel on the upper adjuster and screw the adjuster into the throttle housing; this will create more slack in the cable and allow for future cable adjustment to be taken up with the upper adjuster.

6 Where fitted, free the spring clip from the cable adjuster locknut on the lower adjuster. Slacken the adjuster locknut and rotate the adjuster until the correct freeplay is obtained at the throttle grip (see Step 3). When the freeplay is correct, tighten the lower adjuster locknut and where fitted, secure it with the spring clip. Tighten the upper adjuster lockwheel. Install the fuel tank (Chapter 4).

Note: *Access to the lower adjuster is limited with the carburettors in situ – it is advised that they are detached from the inlet manifolds.*

7 Check that the throttle twistgrip operates smoothly and snaps shut quickly when released.

Caution: Turn the handlebars all the way through their travel with the engine idling. Idle speed should not change. If it does, the cable may be routed incorrectly. Correct this condition before riding the bike (see Chapter 4).

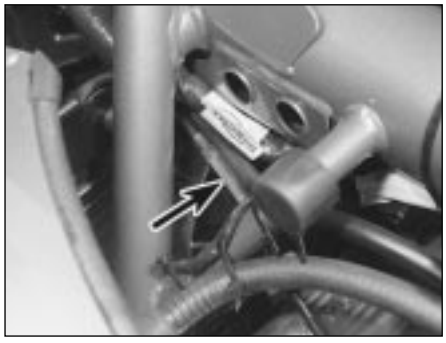
Choke cable

8 Operate the choke lever whilst observing the movement of the carburettor choke shaft on the left side of the carburettor assembly. There should be a small amount of freeplay (see Specifications) before the choke shaft contacts the choke plunger **(see illustration)**. To make adjustment, remove the fuel tank (see Chapter 4) and locate the in-line adjuster in the choke cable **(see illustration)**. Slacken its locknut and rotate the adjuster body as required; tighten the locknut.

9 If the choke does not operate smoothly this is probably due to a cable fault. Remove the cable as described in Chapter 4 and lubricate it as described in Section 21. Install the cable, routing it so it takes the smoothest route

15.4b Lower adjuster is situated on carburettor (arrowed)

15.8a Check for freeplay between the choke shaft and plunger tip (arrowed)



15.8b Choke cable adjustment is made using the in-line adjuster (arrowed)

possible. If this fails to improve the operation of the choke, the cable must be renewed. Note that in very rare cases the fault could lie in the carburettors rather than the cable, necessitating the removal of the carburettors and inspection of the choke plungers and choke shaft as described in Chapter 4.

16 Carburettors – synchronisation

Warning: Petrol is extremely flammable, so take extra precautions when you work on any part of the fuel system. Don't smoke or allow open flames or bare light bulbs near the work area, and don't work in a garage where a natural gas-type appliance is present. If you spill any fuel on your skin, rinse it off with soap and water. When you perform any work on the fuel system, wear safety glasses and have a fire extinguisher suitable for a Class B type fire (flammable liquids) on hand.

Warning: Take great care not to burn your hand on the hot engine when accessing the gauge take-off points on the inlet manifolds. Do not allow exhaust gases to build up in the work area; either perform the check outside or use an exhaust gas extraction system.

1 Carburettor synchronisation is simply the process of adjusting the carburettors so they pass the same amount of fuel/air mixture to each cylinder. This is done by measuring the vacuum produced in each cylinder. Carburettors that are out of synchronisation will result in decreased fuel mileage, increased engine temperature, less than ideal throttle response and higher vibration levels.

2 To properly synchronise the carburettors, you will need a set or three or four (according to the number of cylinders) vacuum gauges or a manometer (see the 'Specialist Tools' section of *Tools and Workshop Tips* in the Reference section at the end of this Manual). If you don't have access to either of these test instruments, leave the task to a Triumph dealer.

3 Position the bike on its centrestand; where only a sidestand is fitted, support the bike using an auxiliary stand. Start the engine and let it run until it reaches normal operating temperature, then shut it off.

16.5 Disconnect the fuel tap vacuum pipe from No. 3 carburettor (Mikuni carburettor shown)

16.6 Disconnect the caps from vacuum take-off points on the other carburettors (Keihin carburettor shown)

4 Remove the fuel tank (see Chapter 4).

5 Disconnect the fuel tap vacuum hose from the vacuum take-off stub of No. 3 carburettor **(see illustration)**. **Note:** *This does not apply to Thunderbird, Thunderbird Sport, Adventurer, Legend TT or Tiger models which have a gravity-fed fuel tap*.

6 On California models, disconnect the evaporative loss system hoses from the vacuum take-off stubs, having labelled them for easy reconnection. On all other models, remove the blanking caps from the vacuum take-off stubs **(see illustration)**.

7 Connect the gauge hoses to the take-off stubs. Make sure there are no air leaks as false readings will result. Position the vacuum gauges across the instruments or steering head so that they are horizontal **(see illustration)**. The manometer usually has a strap which enables it to be hung from the handlebar.

8 Arrange a temporary fuel supply, either by using a small temporary tank or by using extra long fuel pipes to the now remote fuel tank on a nearby bench. Turn the fuel tap to the PRI position (the ON position on Thunderbird, Thunderbird Sport, Adventurer, Legend TT and Tiger models).

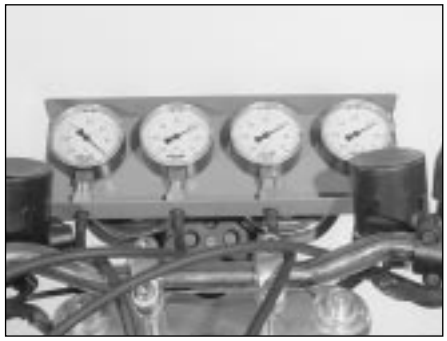
9 Start the engine and make sure the idle speed is correct. If it isn't, adjust it (see Section 3). If the gauges are fitted with damping adjustment, set this so that the needle flutter is just eliminated but so that they can still respond to small changes in pressure.

10 The vacuum readings for all of the cylinders should be the same, or at least within the tolerance listed in this Chapter's Specifications. If the vacuum readings vary, adjust as necessary. Cylinder No. 2 is the base carburettor on 3 cylinder engines, and cylinder No. 3 on 4 cylinder engines. Set the base carburettor using the idle adjuster screw, then balance all other carburettors to its setting as follows using the synchronisation screws.

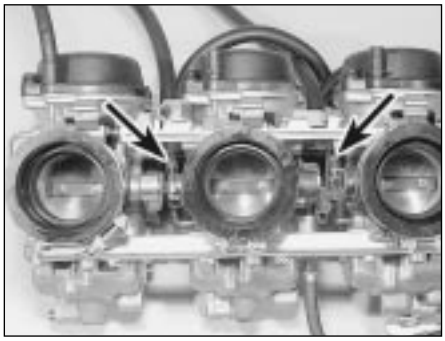
11 The carburettors are adjusted by the two (3 cylinder engines) or three (4 cylinder engines) screws situated in-between each carburettor, in the throttle linkage **(see illustration)**. **Note:** *Do not press down on the screws whilst adjusting them, otherwise a false reading will be obtained.* When all the carburettors are synchronised, open and close the throttle quickly to settle the linkage, and recheck the gauge readings, readjusting if necessary.

12 When the adjustment is complete, recheck the vacuum readings and idle speed, then stop the engine. Remove the vacuum gauge or manometer. Install the blanking caps, fuel tap vacuum hose and evaporative loss hoses (as applicable).

13 Detach the temporary fuel supply and install the fuel tank (see Chapter 4).



16.7 Position the vacuum gauges where they can be easily seen



16.11 Synchronising screw locations on 3 cylinder engine (arrowed)

17 Fuel system – checks

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