

followed by a wave washer, the lever itself and then the sealing gasket behind the lever. The sealing gasket will have to be renewed if leakage has occurred. Reassemble the tap in the reverse order. Gasket cement or any other sealing medium is not necessary to secure a petrol tight seal.

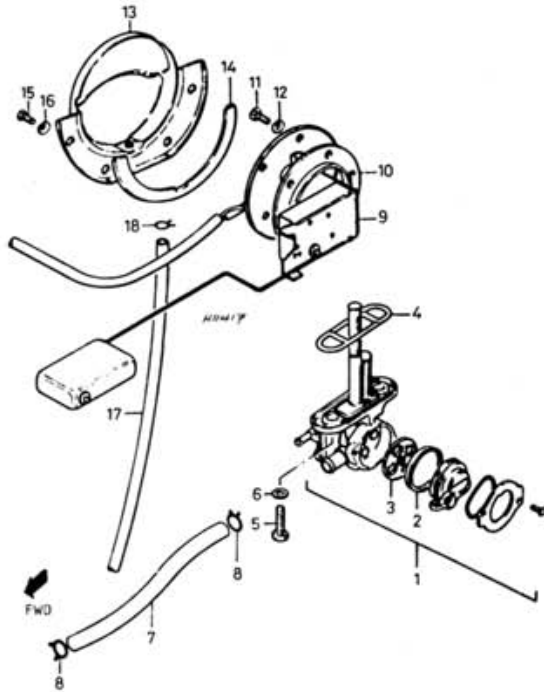


Fig. 2.1 Fuel tap and gauge – GN and GT models

Refer to Fig. 7.3 for GLT fuel tap

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|--------------------------|--------------------------|
| 1 Fuel tap assembly | 10 Sealing ring |
| 2 Tap lever gasket | 11 Bolt – 5 off |
| 3 Tap valve gasket | 12 Spring washer – 5 off |
| 4 O-ring | 13 Fuel drain plate |
| 5 Bolt – 2 off | 14 Gasket |
| 6 Sealing washer – 2 off | 15 Screw – 4 off |
| 7 Fuel delivery pipe | 16 Spring washer – 4 off |
| 8 Clip – 2 off | 17 Overflow pipe |
| 9 Fuel level gauge | 18 Clip |

4 Carburettors: removal from the machine

1 To improve access to the carburettors it is suggested that the petrol tank is removed, as described in Section 2 of this Chapter, before dismantling proper commences.

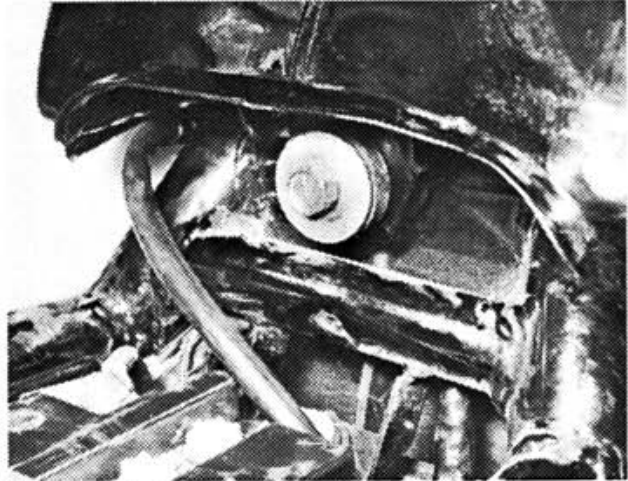
2 Before detaching the air filter box or carburettors, displace the various vent and drain tubes from the securing clips.

3 Detach the engine breather hose from the unions at the air filter box and the breather cover on the cylinder head. The hose is secured at both ends by spring clips. On the GS 850 GN model, disconnect the two throttle cables from the operating pulley at the carburettors. Both may be detached in a similar manner. Loosen the upper and lower locknuts on the cable adjuster screw and displace the adjuster and outer cable from the abutment bracket. Rotate the pulley until the inner cable nipple can be pushed out of the anchor point. On the GT/GLT models, disconnect the single throttle cable from the operating pulley on the throttle control rod by pulling the outer cable up and forwards from the cable abutment, and then detaching the nipple from the pulley. Similarly, disconnect the choke operating cable from its holder and adjustment bracket.

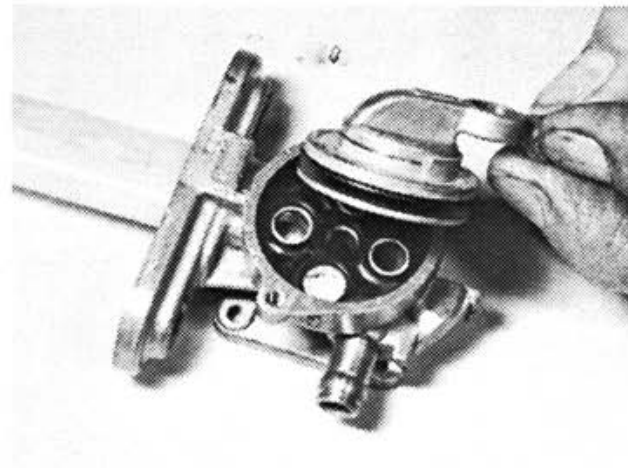
3 Loosen the screw clips which secure the air filter hoses and inlet stubs to the carburettors. Remove the two mounting bolts

from the top of the air filter box and ease the box rearwards, so that the hoses leave the carburettor mouths.

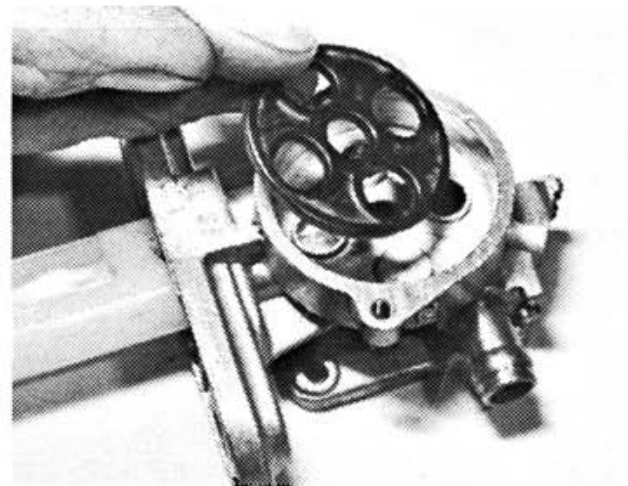
4 Remove the air filter box from the machine to the right-hand side, and then detach the carburettors as a complete unit.



2.1 A single bolt retains the rear of the petrol tank



3.4a Two small screws retain tap lever to the tap body



3.4b Renew the sealing gasket if leakage has occurred

5 Carburettors: dismantling and reassembly – GS 850 GN model

1 The carburettors are mounted on a cast aluminium bracket which also serves as a support for the choke operating link rod and the cable anchor bracket. The bracket is so arranged that partial dismantling of all the carburettors is required before they can be removed from the bracket and attended to as individual items. Whenever possible, dismantle the carburettors separately, to prevent the accidental transposition of parts.

2 Remove the tops from the four carburettors. Each top is retained by three screws. Remove the bolt which passes through the forward end of each bellcrank and locates with the throttle link shaft. The throttle shaft is located longitudinally by a claw plate, secured by a single screw to a lug projecting from the mounting bracket. Remove the claw plate and then prise out the outer blind grommets from the left-hand and right-hand carburettors. Using a pair of snipe nosed pliers, disconnect the throttle pulley return spring from the two anchor pegs. The shaft can now be pushed out of position to free the bell cranks and the pulley wheel. Note that the pulley cannot be removed completely until the carburettors are separated.

3 Place the carburettors rear face downwards and remove the two countersunk screws which hold each instrument to the mounting bracket. Lift the bracket away, if necessary moving the choke link rod slightly so that the operating arm forks clear the choke plungers.

4 The carburettors are now joined only by the fuel cross feed pipes, which are a push fit in the bodies. Before separating the individual units, mark each carburettor carefully so that on reassembly no confusion arises as to their correct positions.

5 Select one carburettor and continue dismantling as follows, following suit with the other three carburettors, in turn. Lift out the bell crank, link arm and throttle valve unit, taking care not to damage the throttle needle. The throttle valve and needle may be removed from the valve seat by removing the two tiny screws. Invert the valve and allow the needle and needle clip to fall out. Removal of the link arm from the bell crank requires that the throttle slide vertical position adjuster screw is unscrewed fully and hence the original adjustment will be lost. It is unlikely that the link arm and bell crank will require separation and it is therefore advised that these components are left as a sub-assembly.

6 Invert the carburettor and remove the four screws that hold the float chamber to its base. Remove the hinge pin that locates the twin float assembly in each carburettor, and lift away the float. This will expose the float needle. The needle is very small and should be put in a safe place so that it is not misplaced.

7 Make sure the float chamber gasket is in good condition. It should not be disturbed unless it shows signs of damage or has been leaking.

8 Unscrew the main jet from the jet holder, using a wide bladed screwdriver and then unscrew the holder itself. Note the O-ring fitted above the holder threads. Invert the carburettor body and displace the needle jet from the central bore.

9 Unscrew the pilot jet from the boss to the side of the main jet housing.

10 Note that on the US market GN model the pilot air adjusting screw **must not** be removed or adjusted. On these models, the screw is pre-set under factory conditions and cannot be re-set, when once maladjusted, except under the same conditions. See Section 6 of this Chapter for information on carburettor adjustments in relation to US Emission regulations. Reference should be made to that Section before attempting any operation controlling the jetting and/or the mixture of the carburettors. The foregoing applies equally to the pilot mixture screw on all models. Do not touch them!

11 On the UK market GS 850 GN models, provision is made for adjusting the pilot air screw. Refer to Section 10 of this Chapter for the adjustment procedure, after reassembly.

12 The starter plunger (choke) assembly is positioned in a tunnel to the side of the upper chamber. Unscrew the housing

cap and pull the starter plunger assembly out. This consists of the plunger rod, spring and plunger piece.

13 Check the condition of the floats. If they are damaged in any way, they should be renewed. The float needle and needle seating will wear after lengthy service and should be inspected carefully. Wear usually takes the form of a ridge or groove, which will cause the float needle to seat imperfectly. Always renew the seating and needle as a pair. An imperfection in one component will soon produce similar wear in the other.

14 After considerable service the throttle needle and the needle jet in which it slides will wear, resulting in an increase in petrol consumption. Wear is caused by the passage of petrol and the two components rubbing together. It is advisable to renew the jet periodically in conjunction with the throttle needle.

15 Before the carburettors are reassembled, using the reversed dismantling procedure, each should be cleaned out thoroughly using compressed air. Avoid using a piece of rag since there is always risk of particles of lint obstructing the internal passage-ways or the jet orifices.

16 Never use a piece of wire or any pointed metal object to clear a blocked jet. It is only too easy to enlarge the jet under these circumstances and increase the rate of petrol consumption. If compressed air is not available, a blast of air from a tyre pump will usually suffice.

17 Do not use excessive force when reassembling a carburettor because it is easy to shear a jet or some of the smaller screws. Furthermore, the carburettors are cast in a zinc-based alloy which itself does not have a high tensile strength. Take particular care when replacing the throttle valves to ensure the needles align with the jet seats.

18 Reassemble the carburettors by reversing the dismantling procedure. Before inserting the throttle link shaft, it should be lubricated with grease. Check the condition of the two O-rings which seal each side of the fuel transfer pipes. Renew them if there is any doubt as to their efficiency. Fit and tighten the eight carburettor mounting screws before tightening fully the through bolts which secure the bell cranks to the throttle shaft. A small amount of locking fluid should be applied to the mounting screw threads before they are inserted.

19 Before replacing the carburettors on the machine and before refitting the carburettor tops, refer to Section 8 for details of carburettor synchronisation.

6 Carburettors: Emission Control information – US models

1 All the GS 850 models marketed in the USA and introduced after January 1st 1978, are equipped with specially manufactured carburettors, containing certain components machined to extremely close tolerances. There are three specific components that are of a particularly close tolerance; the main jet, the needle jet and the pilot air jet. If replacement of any of these jets becomes necessary, a new part of the same, close tolerance type, must be obtained and fitted. To aid the operator in selecting the correct jet, the three later type jets use a different style of numerical identification. See accompanying table. The reason for the adoption of pre-set mixture adjustments and extremely close tolerance carburettor jetting, is ostensibly to enable the GS 850 to meet the US Federal Emissions Regulations. These regulations state that all the motor cycles produced after January 1st 1978, must comply with the strict statutory level of emissions. Therefore, by adjusting, resetting, or replacing the pilot air or pilot mixture screw, the emission levels may be adversely affected, thus leading to a possible infringement of State or Federal emission regulations. This could subsequently render the operator subject to a large fine. It is, therefore, strongly recommended that the advice of your local Suzuki dealer be sought, before attempting any operation controlling the jetting and/or the mixture of the carburettors.