

Moto Morini Service



Whilst this example uses a 350 Strada, the principles apply to any of the V twins or singles based on the V twin.

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Acknowledgement - This is a reformatted version of an article appearing originally in "Motorcycling Monthly" in October 1977 in the UK.

Very few motorcycles are easier to service and maintain than the Moto Morini 31/2 Strada. You don't need specialist knowledge, and apart from a strobe light, you don't need any special tools. A full service can be carried out at home in only a couple of hours. Geoff Careless took our own bike into the workshop and serviced it as follows:

Preparation

Remove the petrol tank by first disconnecting the fuel pipes from both taps, (the main electrically operated tap is on the left-hand side at the front, and the reserve tap is on the right-hand side at the rear). They both just pull off. Now pull off the electrical connections from the main fuel tap. Remove the two bolts from the front of the tank **(1)**,



remove the seat and lift off the rubber bands from the rear of the tank **(2)**,



and lift straight off (3).



Tappets

Pull off the breather tubes from both rocker covers (4).



Using an Allen key (5)



remove the Allen screws and lift off the covers (6).



The tappets will now be exposed. Remove the flywheel magneto cover from the right hand side of the engine. To do this you must first loosen the footrest using an Allen key (7)



and turn it back out of the way. Remove the small chrome chain cover (8)



and take out the four Allen screws from the main cover (9).



The cover can now be removed (10)



exposing the fly wheel.

Using the kickstart lever, turn the engine until the mark PMS 1 on the flywheel is directly in line with the mark on the crankcase. The tappets on the front cylinder can now be checked and adjusted to 0.10mm gap.

Slide a 0.10mm feeler gauge **between** the tappet screw and the top of the valve stem. It should be a pinch fit. If adjustment is needed slacken the locknut and use the small key from the toolkit to adjust the tappet screw **(11)**. Re-tighten the locknut.



Now turn the engine until the mark PMS 2 is in line, and repeat the procedure for the rear cylinder.

Replace the rocker covers and breathers, but leave the flywheel magneto cover off in order to do the timing.

Ignition Timing & Spark Plugs

Remove both spark plugs and, using a feeler gauge, set the gaps to 0.6-0.7mm. The front plug is easily accessible, but you will probably need to remove the battery or use a knuckle jointed spanner **(12)** to reach the rear one.



The ignition timing is checked by two means. Firstly the static timing. Remove the small circular cover from the left-hand side of the engine, just below the V of the two cylinders **(13)**.



Rotate the engine until the notch, marked ANT 1, on the flywheel magneto is lined up with the mark on the crankcase. Rotate the pick-up plate until the notch on the plate corresponds to the mark on the small rotor **(14)**,



then fix the plate in position.

Having replaced the spark plugs and connected a fuel supply, start the engine and set it to 6,000 rpm by holding the throttle open with the friction screw **(15)**.



Use a strobe light to check that the mark ANT 1 still corresponds with crankcase mark **(16)**.



If it does not correspond, adjust the pick-up plate slightly until it does.

When it is all lined up mark the new reference on the cover notch to coincide with the arrow on the pick-up plate shown in **(14)**.

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Lubrication

Remove the sump drain plug and allow all the old oil to drain out (17).



Whilst it is draining, take off the oil filter cover (18)



by removing the two Allen screws. Pull out the wire gauze filter (19)



and if necessary clean it with a soft brush and paraffin. Replace the filter and refit the cover. Replace and tighten the drain plug.

Remove the filler plug/dip stick (20)



and refill with 3 litres 20W/50 motor oil (21).



The swinging arm has one grease nipple on the nearside and this should be filled with grease using a grease gun (22).



Lubricate all exterior moving parts, such as stand hinges, etc., with grease or heavy oil.

Brakes

Our machine was fitted with a single disc at the front and a drum brake at the rear.

Check the brake fluid level in the reservoir by removing the top and rubber insert **(23)**.



DO NOT operate the front brake lever with the top removed. Top up if necessary. To check the disc pads properly for wear it is necessary to remove the front wheel.

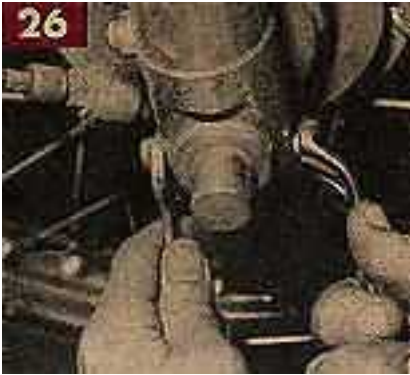
Disconnect the speedometer drive **(24)**,



remove the locknut from the end of the spindle **(25)**



loosen the pinch bolt at the bottom of the right-hand fork leg (26 ,



and remove the spindle (27).



The front wheel can now be pulled clear (28).



The pad wear can now be easily checked (29).



If they are worn near to the wear line they must be replaced.

When reassembling the front wheel care must be taken to ensure that the pads are held open as the disc is slid in.

The rear brake is adjusted by means of the adjuster on the brake arm **(30)**.



Turn the adjuster until the brake pedal has a travel of between 1/2 inch and 1 inch **(31 & 32)**.





Rear Chain

The rear chain, should be adjusted so that there is 1 in. of play **(33)**



in the middle of the bottom run.

No split pin to remove; simply slacken off the rear spindle locknut **(34)**,



loosen the spindle nut **(35)**,



and by means of the adjusters on both sides tighten the chain as required **(36)**.



Care must be taken to adjust both sides an equal amount to keep the back wheel in line.

Lubricate the chain with an aerosol spray-on chain grease.

Front Forks

The oil in the front forks is changed by removing the drain plugs at the bottom of each leg **(37)**,



and pumping the forks to remove all the contents.

Refit the drain plugs and remove the fork leg top nuts with an Allen key **(38)**.



Refill each leg with 200 cc. SAE 30 oil.

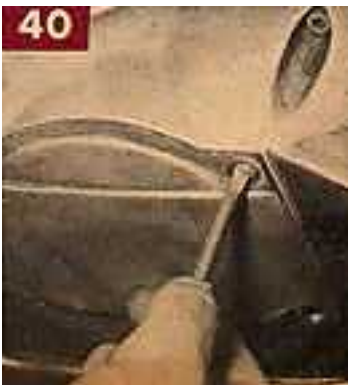
Clutch

Most of the clutch adjustment can be made with the cable adjuster on the lever, and should be adjusted to leave about 5mm of play on the lever **(39)**.



If further adjustment is required it must be made at the other, end of the cable. The adjuster is just behind the fly wheel of the magneto and can be seen in **(16)**. Loosen the locknut and adjust the arm so that there is 15mm clearance between the top of the arm and the crankcase.

To ensure that all the clutch springs are moving evenly, remove the main cover on the left-hand side of the engine **(40)**



so exposing the clutch (41).



Operate the clutch lever and check that all the springs are moving equally.

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Battery & Electrics

The battery level indicator lines are awkward to see with the battery in situ, and it is best to lift it out to check (42),



Don't overfill the battery with distilled water. If it overflows it could cause some very expensive damage to chrome and paintwork.

Vibration does cause a few electrical problems on this machine so keep an eye on the following. The indicator flasher unit (43)



is of the car type and is located behind the left-hand side panel. The fuse box and wiring harness are behind the right-hand side panel **(44)**.



The brake light switch is located at the rear, and just below the left-hand footrest **(45)**.



It is in a very exposed position and should be regularly sprayed with an ignition sealer to prevent it seizing up.

Air Filter & Carburetors

At first glance it looks to be necessary to remove the carburetors to change the air filters. In practice, it can be done by first removing the main air filter box retaining bolts **(46)**,



and then removing the screws from all around the box **(47)**.



Each side of the filter box can now be opened just far enough to remove the filters (48).



The filters are of the paper element type and should be replaced.

Remove the float bowls by taking out the retaining bolts (49)



and letting the bowls drop down (50).



Clean out the bowls and check the free movement of the floats **(51)**,



before reassembly.

Using a mirror to look into one of the air intakes, after the filter hose has been disconnected **(52)**,



check to see that both slides open **(53)**



and close **(54)**



together, when the twist grip is operated.

With the air filter connected and the engine running, turn the air screw **(55)**



until the point of fastest tick over is reached, and then slow the engine to the required tick over, about 1,000 rpm, by means of the throttle stop screw **(56)**.



This is done to each cylinder in turn with the other plug cap removed, i.e. firing on one. It should be possible for you to tell by ear when a balance has been achieved. If an even tick over is not achieved by this method try adjusting the throttle stop screws whilst running on two.

Service Schedule

Every 1,000 km (625 miles)

Check oil level

Check and lubricate chain

Check tyre pressures

Every 4,000 km (2,500 miles)

Renew oil

Check tappets gap

Clean oil filter

Check and lubricate speedometer.

clutch and brake cables

Every 8,000 km (5,000 miles)

Check play of toothed timing belt

Replace air filters

Wash and adjust carburetors

Every 20,000 km (12,500 miles)

Replace toothed belt

(every 20,000 km or after 3 years) Check and grease wheel hubs

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