MOTO GUZZI

V11 SPORT

WORKSHOP MANUAL
WERKSTATTHANDBUCH
ONDERHOUDS-EN
REPARATIEHANDBOEK

VARIANTEN V11 SPORT MY2003 - LE MANS MY 2003
ROSSO CORSA - CAFE SPORT - BALLABIO

STARTEN

Elektrischer Start mittels Anlassermotor (12 V - 1,2 KW), ausgestattet mit elektromagnetisch gesteuerter Kupplung.
Am Motor befestigter Zahnkranz.
START-Taste an der rechten Seite der Lenkstange.

ANTRIEBE

KUPPLUNG

Trockenkupplung mit zwei Mitnehmerscheiben. Sie befindet sich auf dem Motorschwungrad.
Hydraulische Schaltung mittels Hebels an der Lenkstange (linke Seite).

PRIMÄRANTRIEB

Schrägzahnrad, Verhältnis 1:1,6842 (z=19/32)

GETRIEBE

Sechsgang-Getriebe mit Zahnrädern für ständigen Eingriff mit Frontalkupplung.
Eingebaute elastische Kupplung.
Schaltung mit Pedalhebel auf der linken Seite des Fahrzeugs.

Übersetzungsverhältnisse des Getriebes

1. Gang = 1: 2,4000 (15/36)
2. Gang = 1: 1,7778 (18/32)
3. Gang = 1: 1,3636 (22/30)
4. Gang = 1: 1,1111 (27/30)
5. Gang = 1: 0,9655 (29/28)
6. Gang = 1: 0,8519 (27/23)

SEKUNDÄRANTRIEB

Welle mit Kardangelenk und Zahnrädern.
Übersetzungverhältnis 1: 2,9091 (11/32)
Übersetzungsverhältnis insgesamt (Motor-Rad):

1. Gang = 1: 11,7589
2. Gang = 1: 8,7103
3. Gang = 1: 6,6812
4. Gang = 1: 5,4439
5. Gang = 1: 4,7306
6. Gang = 1: 4,1737

RAHMEN

Monoträger mit rechtwinkligem Schnitt aus NiCrMo-Stahl.
Halbtragendes Kurbelgehäuse.

START

Elektrisch middels startmotor (12V - 1,2 Kw) voorzien van koppeling met elektromagnetische besturing. Getande kroon vastgehecht aan de motor.
Besturing met drukknop (START) “” geplaatst op de rechterkant van het stuur.

OVERBRENGINGEN

KOPPELING

Droog type met twee geleide schijven. Geplaatst op het vliegwiel motor.
Hydraulische bediening middels hendel op het stuur (linkerkant).

PRIMAIRE OVERBRENGING

Met helicoïdale raderwerken, rapport 1:1,6842 (z=19/32)

CTELGANG

Met zes snelheden met raderwerken steeds in verbinding met frontale koppeling.
Ingebouwde flexibele aansluiting.
Bediening met pedaalhendel geplaatst op de linkerkant van het voertuig.

RAPPORTEN VERSNELLING.

1ª versnelling = 1: 2,4000 (15/36)
2ª versnelling = 1: 1,7778 (18/32)
3ª versnelling = 1: 1,3636 (22/30)
4ª versnelling = 1: 1,1111 (27/30)
5ª versnelling = 1: 0,9655 (29/28)
6ª versnelling = 1: 0,8519 (27/23)

SECUNDAIRE OVERBRENGING

Met as met universeelkoppeling en raderwerken.
Rapport 1: 2,9091 (11/32)
Totale rapporten (motor-wiel):

1ª versnelling = 1: 11,7589
2ª versnelling = 1: 8,7103
3ª versnelling = 1: 6,6812
4ª versnelling = 1: 5,4439
5ª versnelling = 1: 4,7306
6ª versnelling = 1: 4,1737

CHASSIS

Enkele balk met rechthoekige doorsnede in NiCrMo staal.
Semidragend motorblok.

5 TABELLE WARTUNGSPLAN

MASSNAHMEN / KILOMETERSTÄNDE	1500 Km	10000 Km	20000 Km	30000 Km	40000 Km	50000 Km
Motoröl	R	R	R	R	R	R
Kartuschen-Ölfilter	R	R	R	R	R	R
Netz-Ölfilter	C	C	C	C	C	C
Luftfilter		R	R	R	R	R
Kraftstofffilter			R		R	
Kerzen	A	R	R	R	R	R
Ventilspiel	A	A	A	A	A	A
Vergasereinstellung	A	A	A	A	A	A
Schraubenbefestigung	A	A	A	A	A	A
Kraftstofftank, Hahnfilter, Leitungen		A		A		A
Getriebeöl	R	R	R	R	R	R
Öl Hinterantrieb	R	R	R	R	R	R
Welle mit Antriebskupplungen ●			A		A	
Rad- und Lenkungslager			A		A	
Öl Vordergabel	R		R		R	
Anlassermotor und Generator			A		A	
Flüssigkeit der Bremsanlage	A	A	R	A	R	A
Bremsbeläge	A	A	A	A	A	A

LEGENDE: A = Wartung - Kontrolle - Einstellung - eventueller Austausch. / **C** = Reinigung. / **R** = Austausch.
Gelegentlich die Gelenke der Schaltungen und die flexiblen Kabel schmieren; alle 1000 km den Motorölpegel kontrollieren. In jedem Fall das Motoröl, den Ölfilter und die Bremsflüssigkeit mindestens einmal im Jahr austauschen.
● Bei Kilometerständen unter 20000 km die Schmierung der Kupplungen alle 2 Jahre durchführen.

5 TABEL PERIODIEK ONDERHOUD

OPERATIES / AFGELEGDE AFSTANDEN	1500 Km	10000 Km	20000 Km	30000 Km	40000 Km	50000 Km
Olie motor	R	R	R	R	R	R
Oliefilter met cartouche	R	R	R	R	R	R
Oliefilter met net	C	C	C	C	C	C
Luchtfilter		R	R	R	R	R
Filter brandstof			R		R	
Bougies	A	R	R	R	R	R
Speling kleppen	A	A	A	A	A	A
Toevoer brandstof	A	A	A	A	A	A
Vastklemmen geheel bouten	A	A	A	A	A	A
Tank brandstof, filter kraantje, buizen		A		A		A
Olieverversing	R	R	R	R	R	R
Olie achterste overbrenging	R	R	R	R	R	R
As met overbrengingskoppelingen ●			A		A	
Kussenblokken wielen en stuur			A		A	
Olie voorste gaffel	R		R		R	
Startmotor en generator			A		A	
Vloeistof reminstallatie	A	A	R	A	R	A
Rempastilles	A	A	A	A	A	A

LEGGENDE A = Onderhoud - Controle - Regeling - Eventuele vervanging. / **C** = Schoonmaak / **R** = Vervanging.
Af en toe de articulaties van de bedieningen en de flexibele kabels smeren. alle 1000 km het oliepeil van de motor controleren. In ieder geval eens per jaar de olie van de motor, de oliefilter en de remvloeistof vervangen.
● In geval van afgelegde afstanden beneden de 20000 km de smering van de koppelingen alle 2 jaar uitvoeren.

10 COCKPITSCHEIBE (LE MANS)

Abnehmen:

- Die 8 Schrauben “A” lösen, dabei die inneren Muttern an der Cockpitverkleidung mit einem Schlüssel der Abbildung gemäß festhalten.
- Die Cockpitscheibe vom Motorrad nehmen.

Wiedereinbau:

Die Ausbauarbeiten in umgekehrter Reihenfolge durchführen.

10 KOPLAMPKAP (LE MANS)

Demontage:

- De 8 schroeven “A” losdraaien en de moeren aan de binnenkant van de kap van de koplamp met een sleutel tegenhouden zoals getoond op de afbeelding.
- De doorzichtige plaat van de koplampkap verwijderen.

Remontage:

De hierboven vermelde handelingen in de tegenovergestelde volgorde verrichten om de diverse onderdelen weer te monteren.

15 AUSBAU - EINBAU DES MOTORAGGREGATS

Abnehmen:
Damit man zum Ausbau des Motoraggregats aus dem Motorrad übergehen kann, müssen die folgenden Komponenten ausgebaut werden:

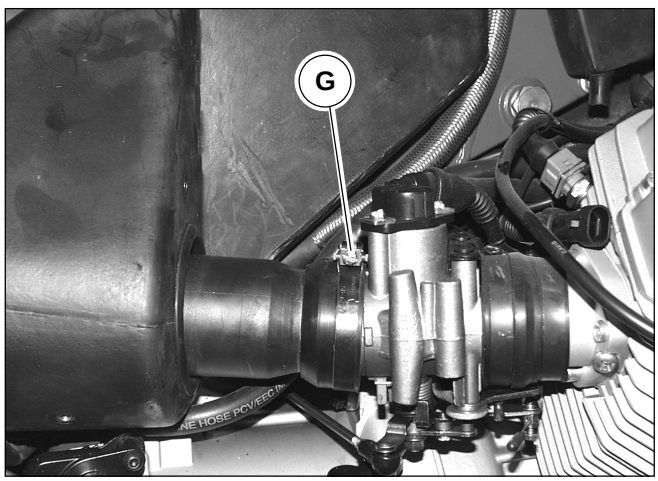
- Die Verkleidung, falls vorhanden, so wie im Kap. 9 dieses Abschnitts beschrieben;
- Kraftstofftank, wie in Kap. 3, Abschnitt I beschrieben.
- Luftfiltergehäuse, wie in Kap. 8, Abschnitt I beschrieben.
- Auspuffanlage, Abschnitt L.
- Seitenständer, wie in Kap. 4, Abschnitt H beschrieben.
- Anlassermotor, wie in Kap. 3, Abschnitt P beschrieben.
- Lenkungsstoßdämpfer, wie in Kap. 9, Abschnitt F beschrieben.
- Ölkühler, wie in Kap. 3 dieses Abschnitts beschrieben.

Nach dem Ausbau der o. g. Teile folgendermaßen fortfahren:

- Den Steckverbinder “A” des Öltemperaturfühlers auf der rechten Seite des Motorrads abtrennen.
- Die beiden Kabel “B” der Lichtmaschine abtrennen.
- Den Phasensensor “C” ausbauen, wie in Kap. 16, Abschnitt I beschrieben.
- Den Öldruckgeber “D” ausbauen.
- Den Ölentlüftungsschlauch vom Anschlussstück auf dem Kurbelgehäuse herausziehen, dazu die Schelle “E” lösen.
- Den Ölrückführschlauch “F” vom Rahmen abtrennen.
- Die Schellen “G” zur Befestigung des Klappenkörpers an den Krümmern lösen.
- Eine geeignete Stütze unter dem Motor positionieren.
- Die beiden Schrauben “H” von beiden Seiten abschrauben und abnehmen, so dass der Vorderrahmen “I” nur durch die Schrauben “L” am Rahmen befestigt bleibt.
- Die Schrauben “L” von beiden Seiten lösen, den Vorderrahmen zur Vorderachse hin drehen und ihn provisorisch an der Vordergabel befestigen.

ACHTUNG

Das vordere Schutzblech abdecken, das bei einer Berührung durch den Rahmen abgeschürft werden könnte.



15 VERWIJDERING - INSTALLATIE AANDRIJFGROEP

Verwijdering:
Om de aandrijfgroep te veriwjderen uit de moto moet men de volgende componenten demonteren:

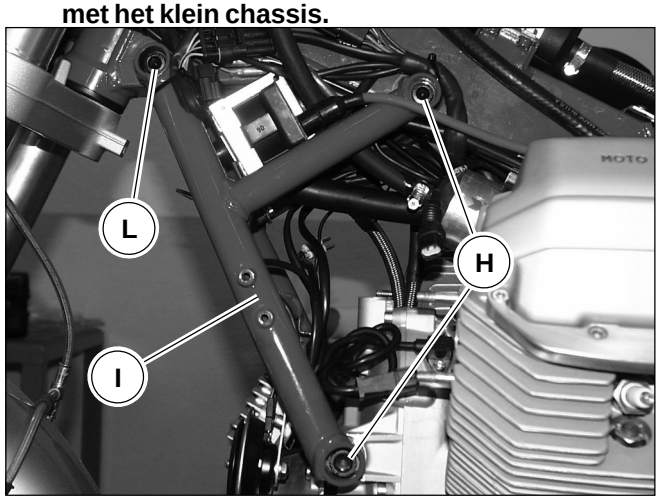
- de kuip, indien aanwezig, zoals beschreven in hoofdstuk 9 van deze sectie.
- Tank zoals beschreven in hoofdstuk 3 sectie I;
- Kast luchtfilter zoals beschreven in hoofdstuk 8 sectie I;
- Afvoerinstallatie sectie L;
- Lateraal onderstel zoals aangegeven in hoofdstuk 4 sectie 4 sectie H;
- Startmotor zoals beschreven in hoofdstuk 3 sectie P;
- Schokbreker van sturing zoals beschreven in hoofdstuk 9 sectie F;
- Olieradiator zoals aangegeven in hoofdstuk 3 van deze sectie;

Nadat alle voornoemde gedeelten verwijderd werden, als volgt tewerk gaan:

- De connector “A” van de sensor temperatuur olie geplaatst op de rechterkant van de moto loskoppelen;
- De twee kabels “B” van de wisselstroomgenerator loskoppelen;
- De sensor van fase “C” wegnemen zoals beschreven in hoofdstuk 16 sectie I;
- De transmitter oliedruk “D” wegnemen;
- Uit de aansluiting op het motorblok de buis uitlaatolie wegtrekken en hierbij het lint “E” loszetten;
- Uit het chassis de buis “F” van recuperatie olie loskoppelen;
- De linten “G” voor vasthechting smoorkleplichaam aan de collectors loszetten;
- Een adequate steun onder de motor plaatsen;
- De twee schroeven “H” losdraaien en wegnemen aan beide kanten zodanig dat het voorste klein chassis “I” alleen met de schroeven “L” vastgehecht blijft aan het chassis;
- De schroeven “L” losdraaien langs beide kanten, het voorste klein chassis doen draaien naar het voorstel en tijdelijk vasthechten aan de voorste gaffel;

OPGELET

Het voorste spatbord beschermen dat beschadigd zou kunnen worden wanneer het in contact komt met het klein chassis.



17 SICHERUNGSKLEMMENBRETT

Auf dem Klemmenbrett sind 8 Sicherungen montiert.
Vor dem Austausch der Sicherung oder der Sicherungen, muss der Defekt behoben werden, der zu ihrem Verschmoren geführt hat.

Im Folgenden sind die acht Sicherungen aufgelistet:

SICHERUNG "1": Steuergerät ECU ..... 5 A
SICHERUNG "2": Pumpe Spulen Einspritzventile ... 10 A
SICHERUNG "3": Batterielader ..... 30 A
SICHERUNG "4": Zündschloss ..... 15 A
SICHERUNG "5": Fernlicht, Abblendlicht, Hupe, Starter, Stop ..... 15 A
SICHERUNG "6": Standlicht ..... 5 A
SICHERUNG "7": Blinker ..... 5 A
SICHERUNG "8": verfügbar ..... 15 A

Austausch:

- Den Sitz abnehmen, wie in Kap. 4, Abschnitt E beschrieben.
- Den Schutzdeckel abnehmen.
- Die beschädigten Sicherungen austauschen.

17 KLEMBORD ZEKERINGHOUDER

Op het klembord zijn 8 zekeringen gemonteerd.
Voordat men de zekering of de zekeringen vervangt, moet men het defect elimineren dat de smelting ervan heeft veroorzaakt.

Hierna worden de acht zekeringen opgenoemd:

ZEKERING "1": Centrale eenheid ECU ..... 5 A
ZEKERING "2": Pomp bobines injectoren ..... 10 A
ZEKERING "3": Opladen accu ..... 30 A
ZEKERING "4": Aan-/uitschakelaar sleutels ..... 15 A
ZEKERING "5": Koplampen, dimlichten, akoestisch signaal,start, stop ..... 15 A
ZEKERING "6": Stadslichten ..... 5 A
ZEKERING "7": Richtingaanwijzers ..... 5 A
ZEKERING "8": Leverbaar ..... 15 A

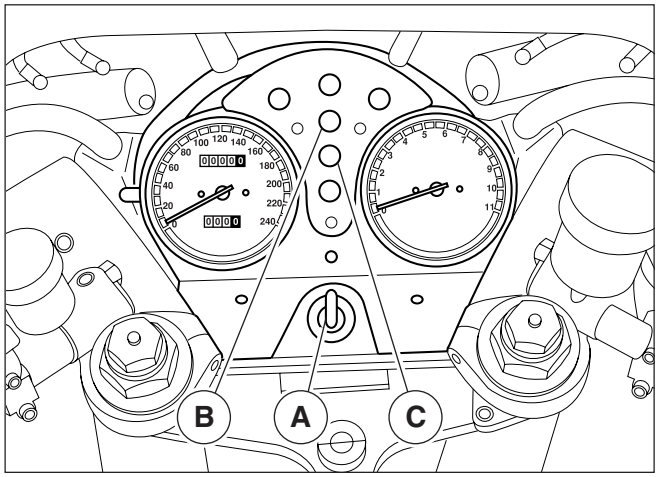
Vervanging:

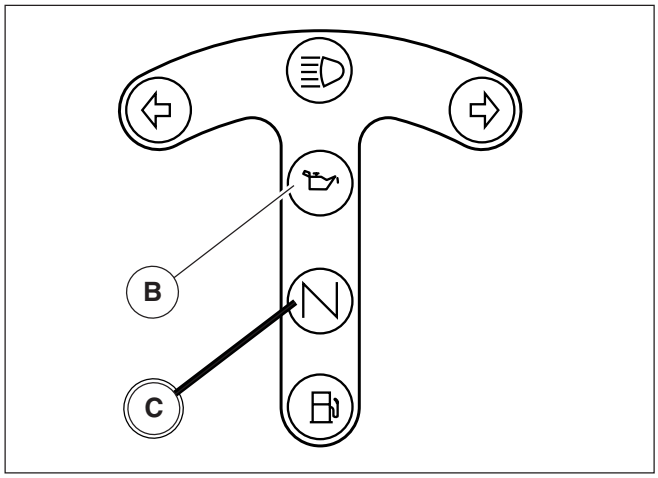
- Het zadel ewgnemen, zoals beschreven wordt in de sectie E hoofdstuk 4
- Het beschermend deksel wegnemen;
- De beschadigde zekeringen vervangen.

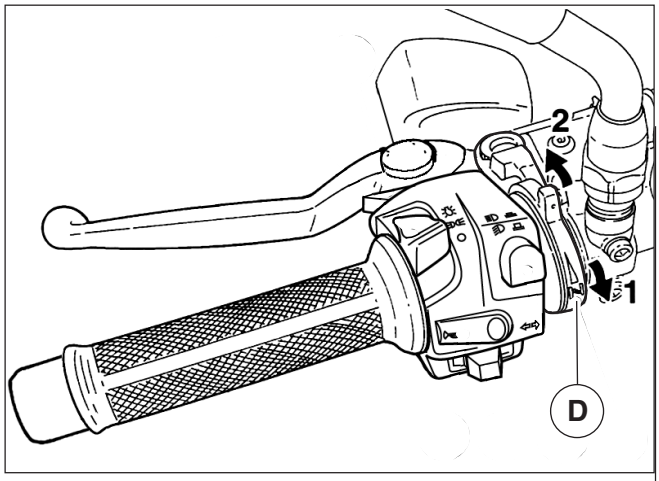
2 LUBRICANTS AND REFILLING

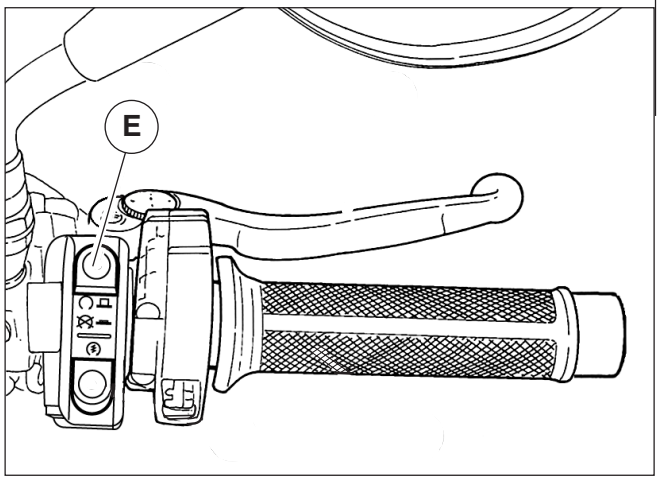
Description	Litres	Recommended products
Fuel tank (reserve 5 l about)	approx. 20,7	Unleaded Petrol (95 No - RM/min.)
Crankcase sump	3,500	“Agip RACING 4T SAE 5W-40” oil
Gearbox	0,850	“Agip Rotra SAE W/90” oil
Rear drive of which (bevel set lub.)	0,370 of which 0,350 0,020	 “Agip Rotra MP SAE 80 W/90” oil “Agip Rocol ASO/R” oil
* MARZOCCHI front fork (each leg)	0,435	Shock - Absorbers oil (SAE 10)
** MARZOCCHI front fork (each leg)	0,452	Shock - Absorbers oil (SAE 10)
° ÖHLINS front fork (each leg)	__	Shock - Absorbers oil (ÖHLINS 1309)
Braking system (front and rear) Hydraulic clutch system	 __	 “Agip Brake Fluid - DOT 4”

* For V11 Sport MY 2003 – V11 Le Mans MY2003 models
** For V11 Ballabio model
° For V11 Rosso Corsa - V11 Café Sport model





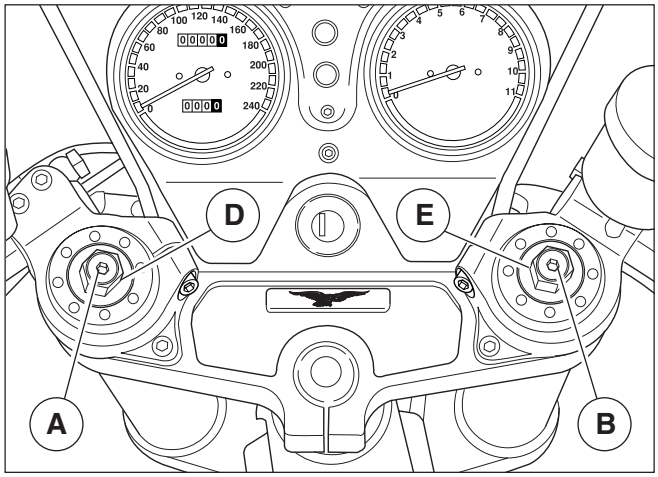


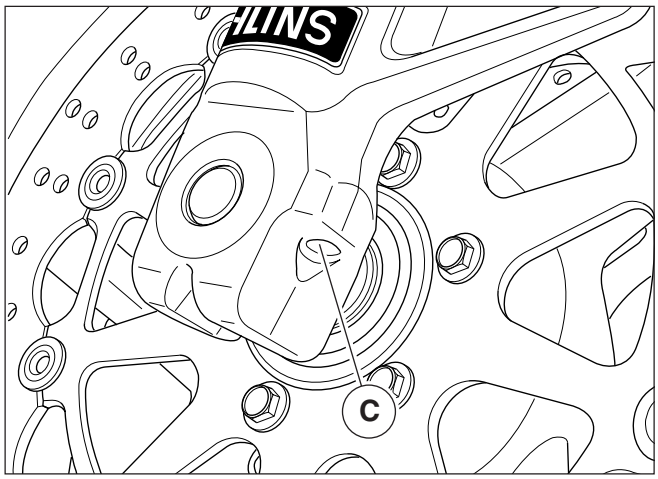


4 PRELIMINARY TESTS

Before start-up check that:

- there is sufficient fuel in the tank;
- the oil in the crankcase sump is at the correct level;
- the key “A” in the ignition switch is in the ON “” position;
- the following warning lights are on:
  red: insufficient oil pressure “B”;
  green: gearshift is in neutral “NEUTRAL” “C”;
- the “D” “CHOKE” control, when the **engine is cool**, is in the start-up position “1” ;
- the switch “E” is in run position.





10 ADJUSTING THE "ÖHLINS"TELESCOPIC FORK (V11 LE MANS ROSSO CORSA- V11 CAFÉ SPORT)

The motorcycle is provided with an hydraulic fork equipped with separate adjusters for spring preload and damping during rebound and compression

The fork is set to the following values at the factory:

- Rebound (Allen screw "C" on both fork leg bottoms): 13 clicks from "fully closed position"
- Compression (Allen screws "A" and "B" on top plugs): 13 clicks from "fully closed position"
- Spring preload (nuts "D" and "E" on top plugs): 13 turns, i.e. 13 mm.

Use only Ohlins 1309 oil.

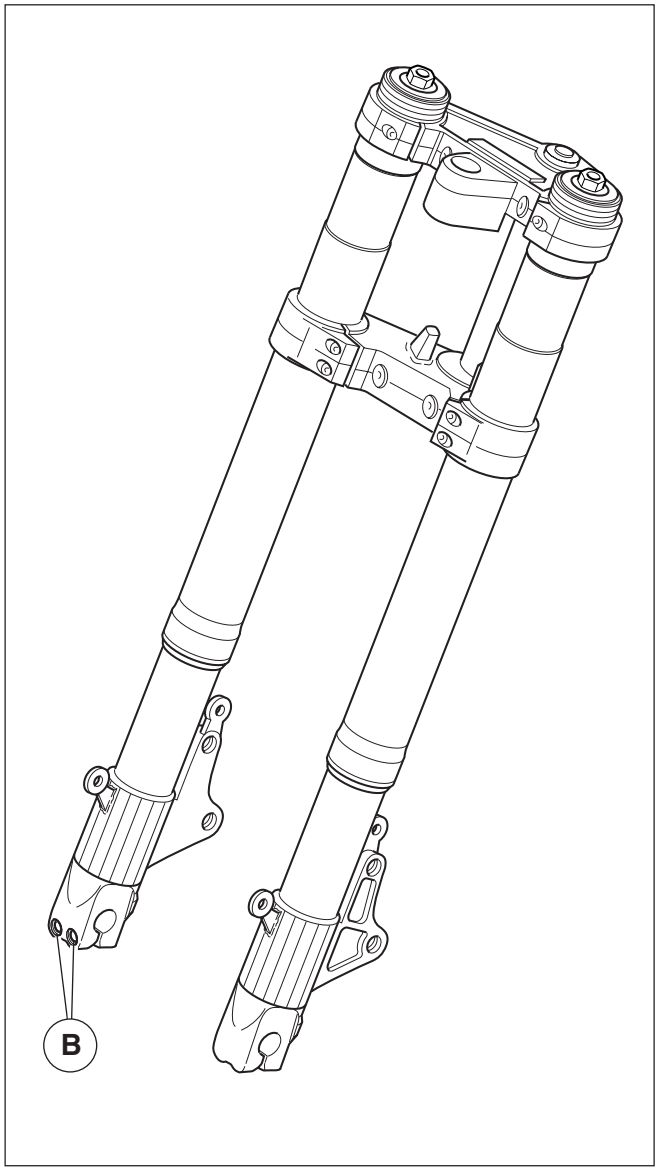
Note: do not force the adjusters beyond their stop positions.

R.H. and L.H. legs are set to the same values.

Hydraulic adjusters have their zero position at their "fully closed position", whereas spring adjusters have their zero position at their "fully open position".

At assembly, close the wheel pack (pin and clamps at leg bottom) in the end, after pumping the fork twice or thee times up and down so to adjust the forks and their parallel position one to the other.

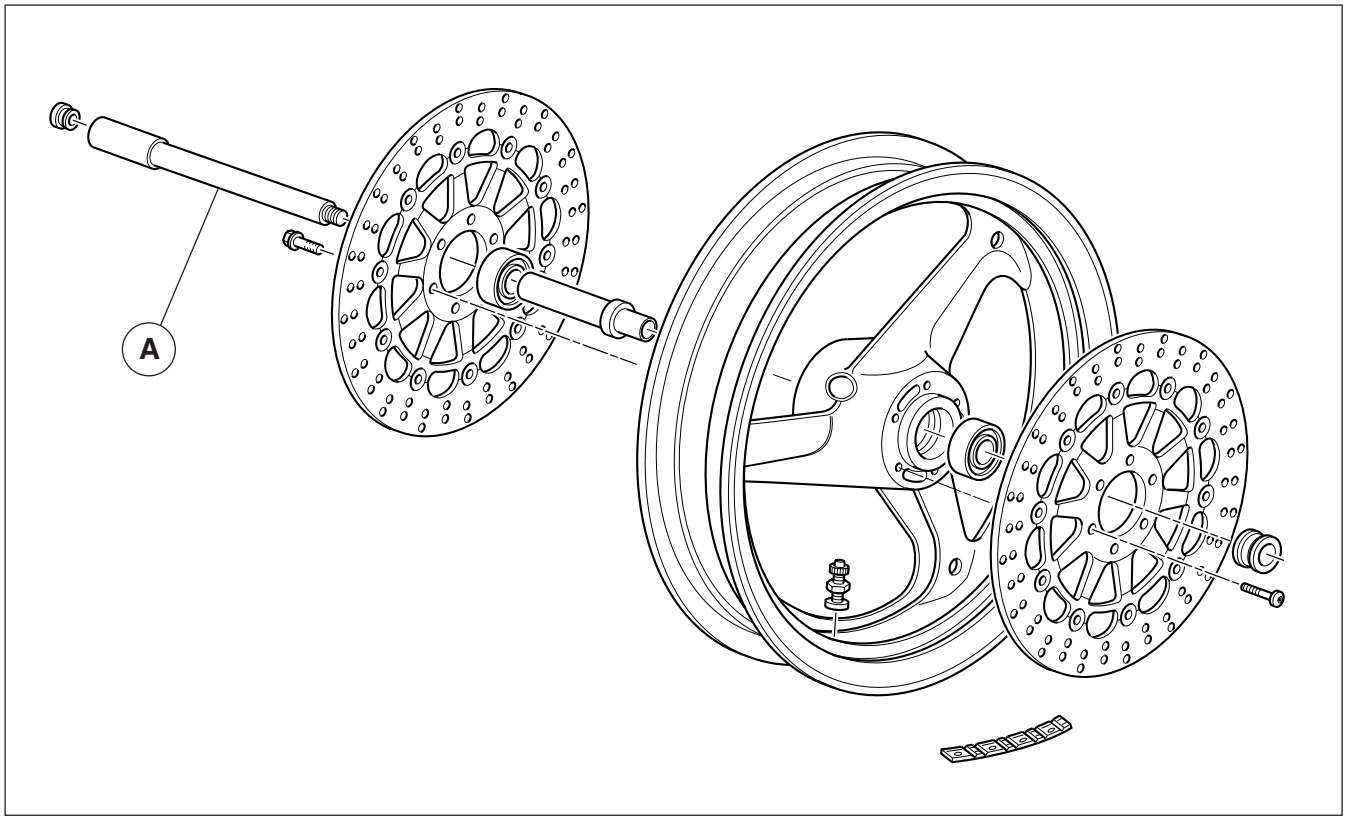
Do not change these settings so not to affect vehicle stability and safety while riding.



MARZOCCHI / ÖHLINS 1ST SERIES FORK

Spindle “A” is screwed into the LH strut which is threaded, the screws ”B” ensure the dynamic packing.

MODELS:
V11 LE MANS ROSSO CORSA

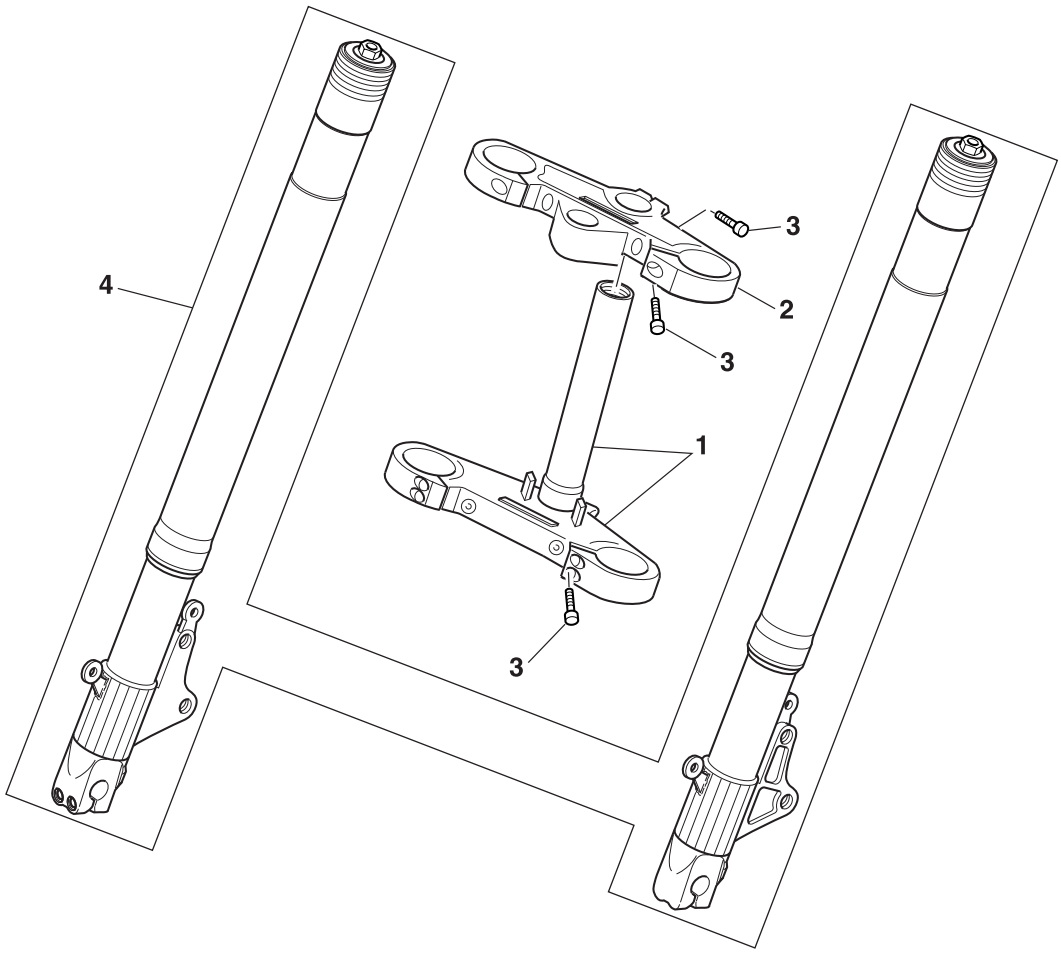


FRONT FORK “ÖHLINS” - PARTS

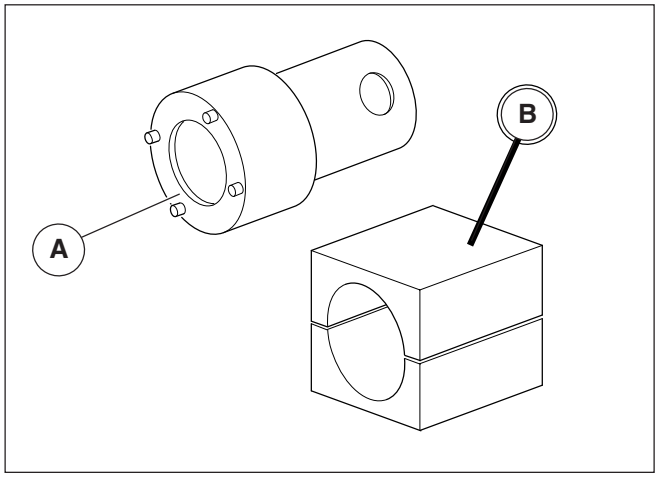
FORK “ÖHLINS”: V11 ROSSO CORSA - V11 CAFE’ SPORT

GABEL “ÖHLINS”: V11 ROSSO CORSA - V11 CAFE’ SPORT

VORK “ÖHLINS”: V11 ROSSO CORSA - V11 CAFE’ SPORT



Pos.	Descrizione
1	Fork base
2	Fork head
3	Screw
4	Fork bellows assembly

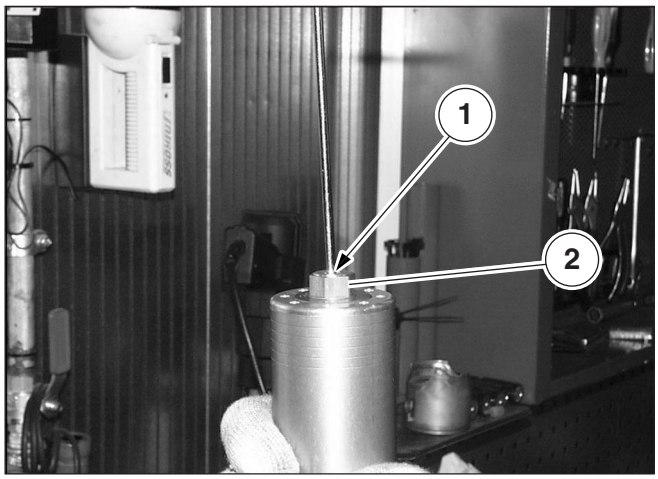


20 FRONT FORK OIL CHANGE “ÖHLINS”

IMPORTANT

The same internal components are used in both stanchions-sliders. The procedures described below apply to both fork stanchions-sliders

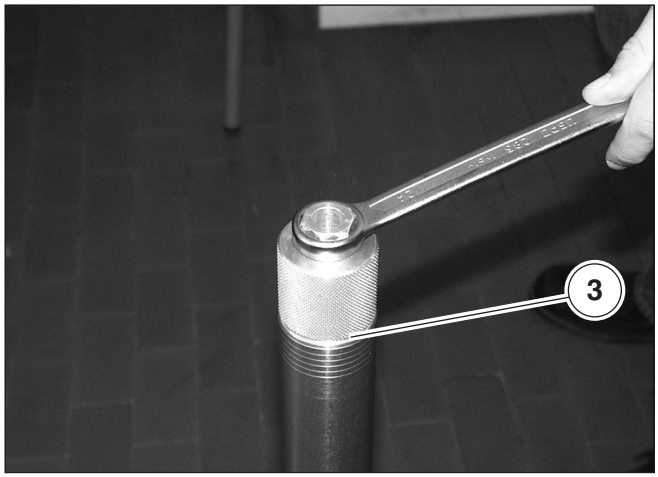
- Remove the stanchion-slider assembly, see 17 (REMOVING THE STANCHION TUBES AND SLIDERS)
- Clean stanchion and slider thoroughly.



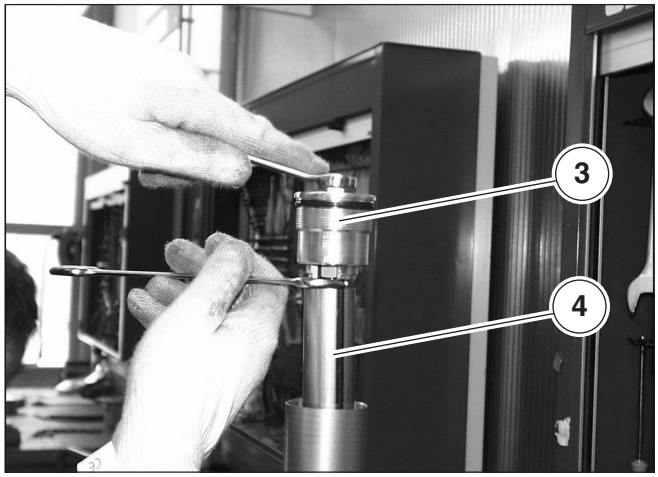
IMPORTANT

Make sure to have the special tools A (no. AP8140424) and B (no. AP8140149) and a container with a capacity greater than 550 cu. cm. ready at hand before proceeding.

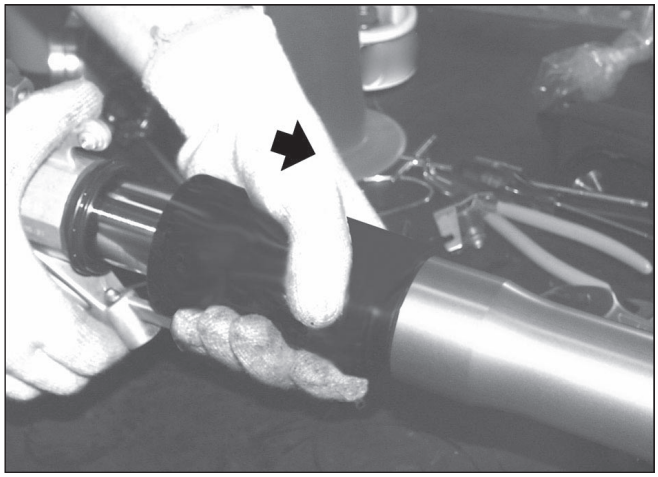
- Place the stanchion-and-slider assembly in a vice. Position the two shells of the special tool “B” to the vice jaws to protect the stanchion-and-slider assembly.
- Turn the top adjuster screw “1” fully anti-clockwise to reduce rebound damping force.
- Turn the spring preload top nut “2” fully anti-clockwise.



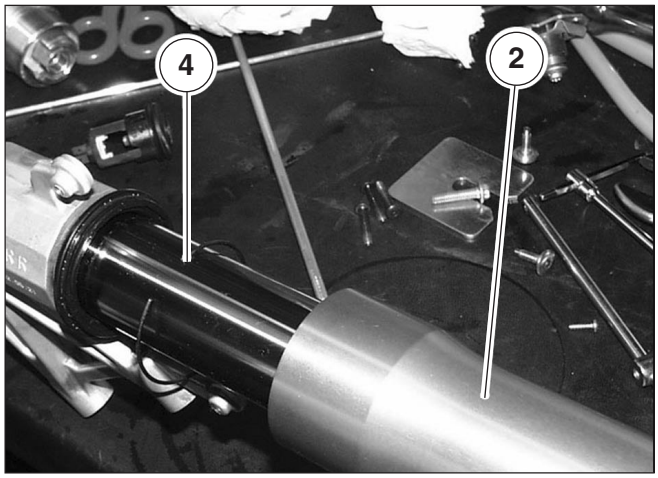
- Release the top cap “3” from the slider using the special tool “A”.
- Push down the spacer tube “4” and fit a spanner to the nut to lock out damping cylinder rotation.



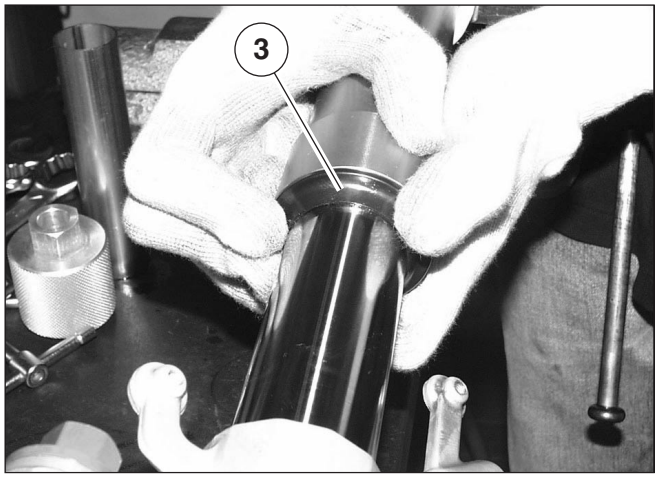
- Release and remove the top cap “3” while holding the damping cylinder with the spanner.
- Remove the spacer tube “4”.



- Position the two shells of the special tool “B - C” to the stanchion “1”, just below the oil seal “5”.
- Grasp the special tool “B - C” and push to drive the oil seal “5” into place in the slider “2”.
- Remove the tool “B - C”.



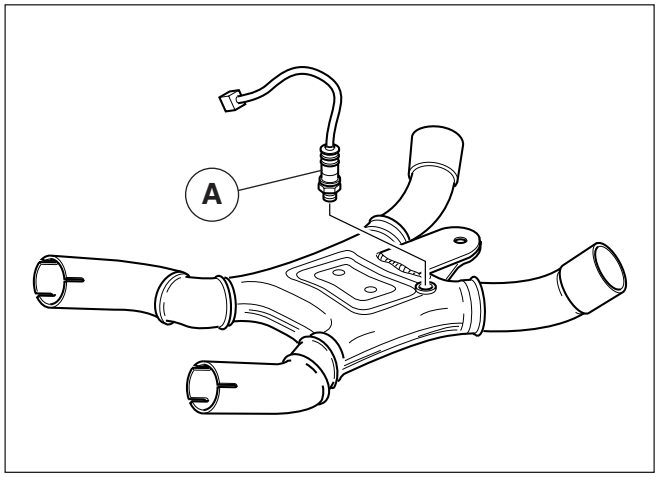
- Insert the retaining ring “4” into its groove in the slider “2”.



- Push the dust seal “3” into its seat in the slider “2” and ensure it becomes properly seated.
- Grasp the stanchion and pump it up and down slowly several times.

WARNING The stanchion must slide freely in the slider, in a smooth motion.

- Pour front fork fluid into the fork leg up to correct level, see 20.1 (FILLING THE FRONT FORK).



26 LAMBDA SENSOR

This sensor, also known as oxygen sensor, transfers the information relating to the amount of oxygen present inside the exhaust gases to the fuel supply control unit. The electronic system can thus keep an optimal air-fuel mixture ratio.

The Lambda sensor is used since to ensure a correct catalytic muffler operation, this latter shall treat the exhaust gases coming from a slightly “rich” combustion (14.5 kg of air per kg of fuel instead of the chemically correct ratio of 14.7 to 1).

The Lambda sensor emits a voltage signal that, whenever the sensor itself is reached by the exhaust gases of stoichiometric composition, will decrease a lot. The electric voltage released by the sensor is high when the gas mixture is slightly “rich” and decreases to zero when the mixture becomes slightly “weaker”.

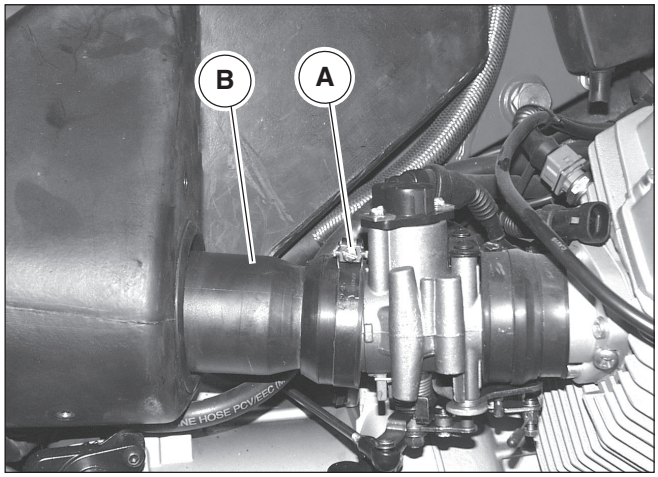
The Lambda “A” probe has a ceramic body; its end is positioned inside the expansion chamber so as to be lapped by the gases, while the other end is in direct contact with the atmosphere. The ceramic surface (zirconia) is equipped with electrodes made of a very thin foil of platinum, permeable to gases. The ceramic surface starts conducting oxygen ions at a temperature of about 300° C. If the oxygen amount starts differing at the two sensor ends, an electric voltage is originated between the two electrodes due to the special composition of this material. This allows measuring the difference in oxygen content between the exhaust gases and the outer environment. When the air-fuel mixture sent inside the combustion chamber is not correct, engine gases of burnt material still contain some oxygen. It is thus possible to adjust injection through the electronic control unit in order to make the engine always run with the optimal mixture.

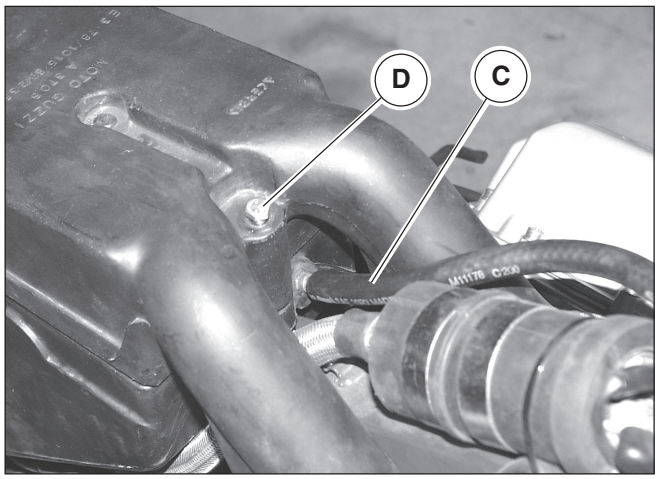
The sensor takes its name from the lambda factor = (A/F) / 14.5, so

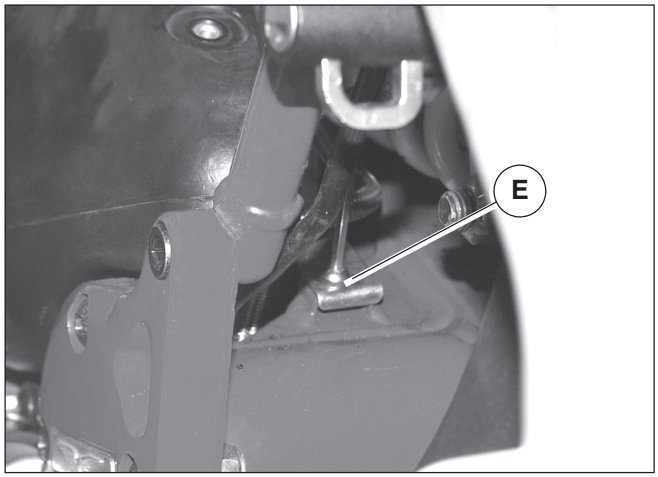
lambda = 1 means mixture in stoichiometric ratio

lambda > 1 means weak mixture

lambda <1 means rich mixture.







29.1 AIR FILTER BOX “1”

DISASSEMBLY:

- Remove the saddle as described in section E, chapter 4
- Remove the fuel tank as described in section I, chapter 3
- Remove the side panels as described in section E, chapter 3

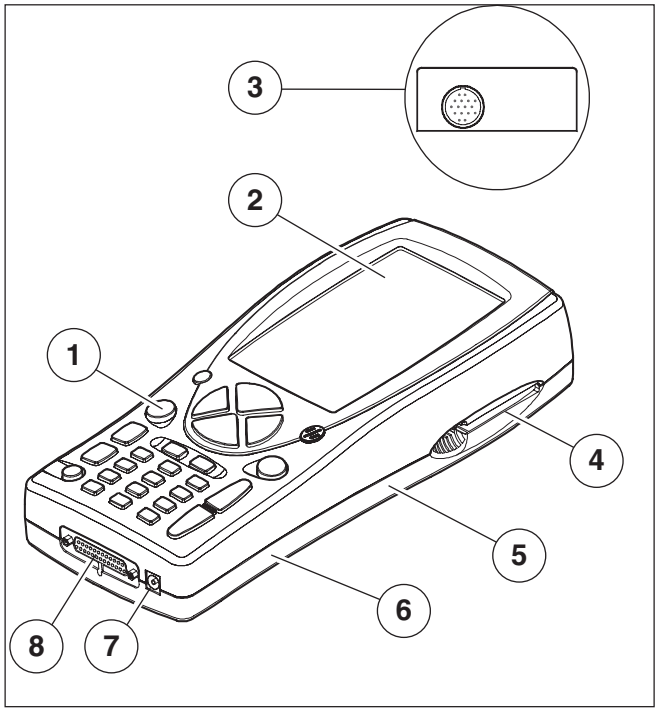
After having removed the above mentioned parts, proceed as follows:

- Loosen clamps “A” fastening the filter box to the throttle body and move the connection horns “B” in the inside of the filter box;
- Disconnect the bleeding pipe “C” positioned in the front part of the filter box;
- Unscrew screw “D” fastening it to the chassis;
- Unscrew the two rear screws “E” fastening it to the chassis, one per side;
- Remove the filter box.

To clean the air filter, see chapter 2, sectionD.

REASSEMBLY:

Carry out the described procedures for disassembly in reverse order.



32 THE AXONE 2000 DIAGNOSIS TESTER

1 Membrane keypad
2 Backlighted display (320x200) with protective screen
3 I/O upper connector
4 Reading unit
5 Interface module compartment
6 Battery compartment
7 Battery recharge outer supply
9 Parallel/serial lower connector

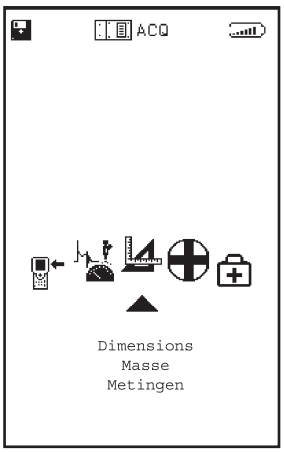
AXONE2000 is a portable and self-powered engine diagnostic computer. It is highly effective and compact; it can be used for testing both on the road and in the workshop.
The instrument can be updated with any diagnostic function required for modern repairs by adding a special memory card containing the function.
The AXONE 2000 (software version 4.0.3) diagnosis tester can be ordered under article number AP8140595 (with battery charger 230 V - 50 Hz.) or under article number AP8202311 (with battery charger 110 V - 60 Hz.).

WARNING
Some of the functions and features of AXONE 2000 are represented in the following pages. Should you require more explanations and/or information, refer to the user's manual coming with AXONE 2000.

CORRECT USE OF AXONE 2000

Observe the following safety rules in order to use your AXONE2000 correctly:

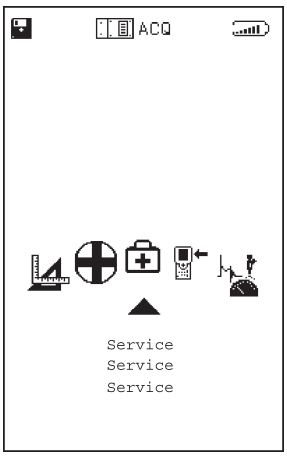
- The equipment must be used in a dry area. Do not expose it or use it near to heat sources.
- Accendere e spegnere l'apparecchio solo tramite l'apposito interruttore ON/OFF.
- Do not subject the AXONE2000 CPU to heavy shocks.
- Do not expose the AXONE2000 CPU to water or other liquids.
- Do not lay objects on the power cable and do not kink the cable.
- For frequent use, store the equipment with the power/charge cable connected.
- Disconnect the power/charge cable if you do not plan to use the equipment for a long period. (longer than one month).
- Do not use AXONE2000 with the battery charger inserted.
- Do not replace electronic modules (e.g.: OBD, ACQ, etc.) when the instrument is powered.
- Avoid sparks when connecting cables to the battery.



DIMENSIONS

It allows to use AXONE 2000 as:

- Multimeter (voltmeter – amperometer – ohmmeter – continuity test);
- Oscilloscope



SERVICE

The following functions can be accessed:

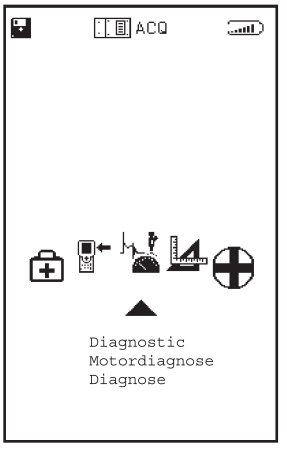
- KEYPAD
- DISABLE INSTRUMENT
- RESET SERIAL INSTRUMENT
- BIOS UPGRADE
- FIRMWARE UPGRADE
- WORKSHOP
- BATTERY
- PARALLEL
- SERIAL

The remaining functions (BIOS UPGRADE, RESET INSTRUMENT and DISABLE INSTRUMENT) are reserved to technical assistance and must not be used by the end user.

UPDATES

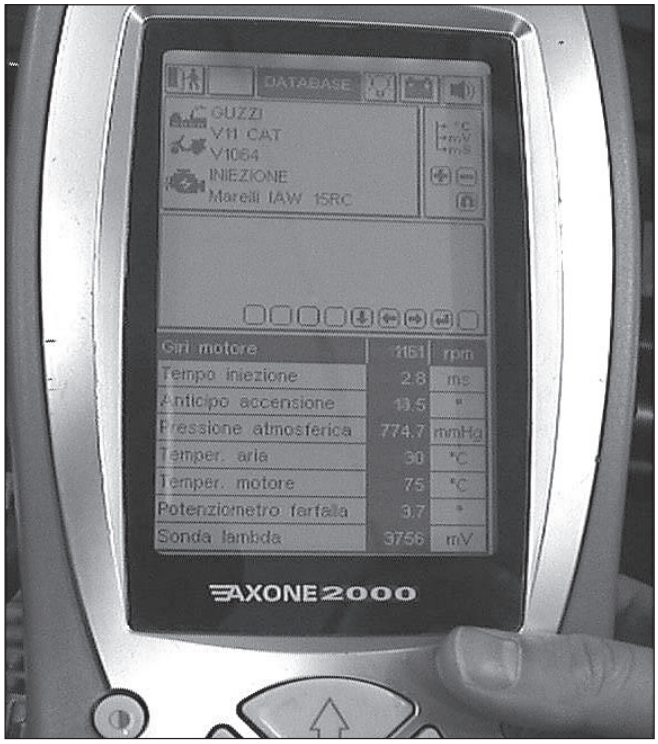
This menu can be used to upgrade the programs stored in the memory card in two different ways:

- With PC connection
- Through the Internet



DIAGNOSTICS

The “Diagnostics” functions is used to carry out traditional diagnostic procedures, i.e. physically analysing signals from various components connected to the ECU, namely sensors (ECU input signals) and actuators (output signals). Step-by-step guidance is offered for the various models.



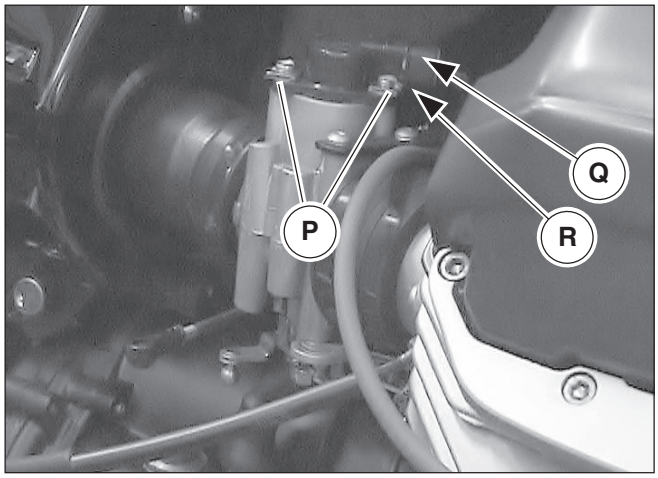
- Gradually open both by-pass screws so as to reach an idling speed of 1,100 ± 50 RPM (read value on AXONE2000), after having selected the rpm parameter, by keeping the vacuum balance;

Engine temperature shall be between 70 and 80°C

- Disconnect the vacuometer and check idling speed;
- Switch off and disconnect AXONE2000;

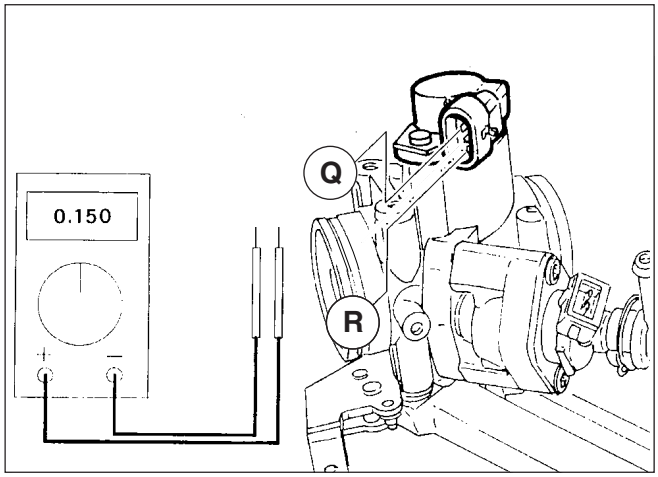
No special procedure is needed to switch off AXONE2000: simply press “ON/OFF” “11” from any menu.

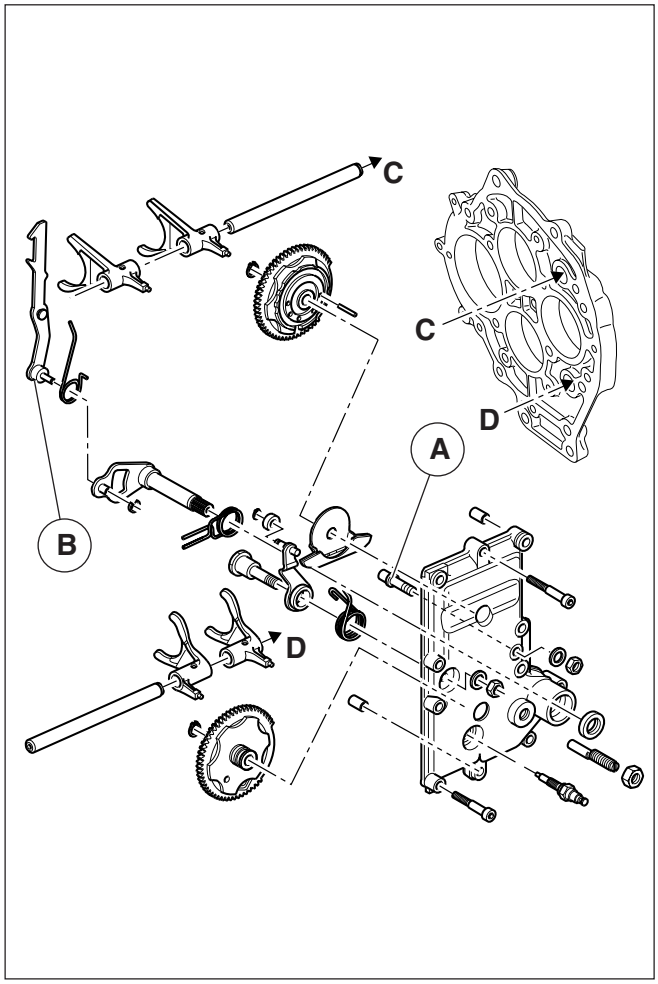
AXONE2000 may jam during operation.
If this is the case, turn the key to “OFF”, switch off AXONE2000 by pressing “ON/OFF” “E”, disconnect upper connector and wait for a few seconds before connecting the tester to control unit again.



If once this procedure is over the idling speed is not within the specified limits, use a tester to check the throttle position sensor as follows:

- fully close the throttle duct (throttle angle 0°);
- turn the ignition key to ON;
- install the tester probes inside the throttle position sensor connector across terminals “Q” and “R” and check that the voltage reading is 150mV +/- 15mV.
- If the throttle position sensor reading does not fall inside the above values, loosen fastening screw “P” and proceed to correct re-positioning.





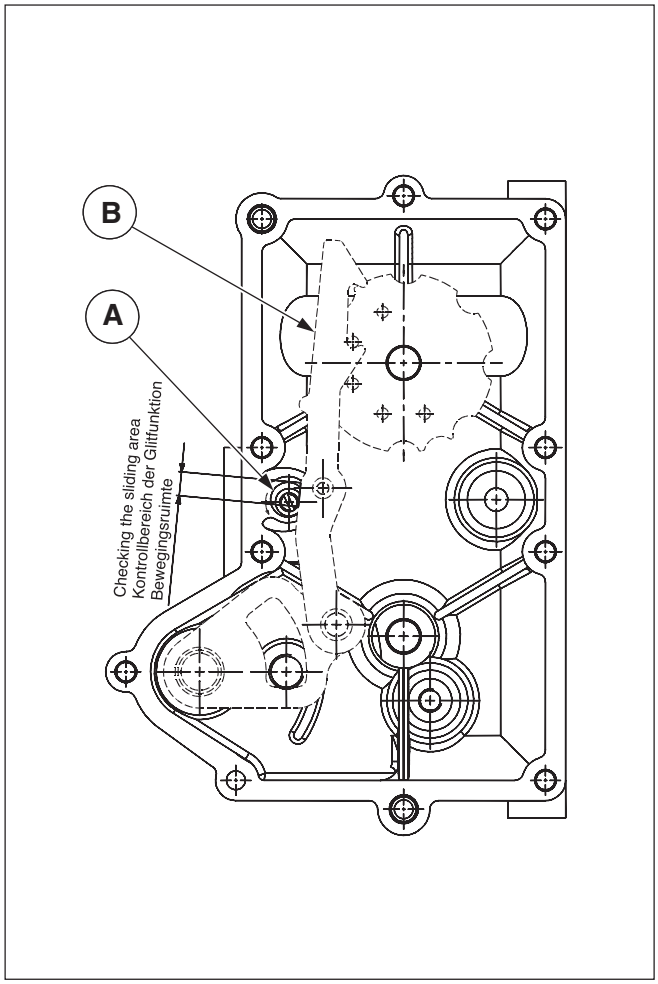
36 GEARBOX

Contrary to the previous model, the gearbox is equipped with a special adjusting eccentric “A” used to adjust gear selector hook “B” position. Gear selection will thus be improved and more accurate.
Disassembly, overhaul and reassembly operations are kept unchanged, but for the following procedure.

36.1 Pre-selector cover

Reassembly and fitting:

- Install pre-selector;
- Fit neutral switch;
- Insert left wheel into the special shaft and move it to the neutral position;
- Check that hook can easily engage;
- Proceed to wheel correct positioning by meshing the tooth and the slot marked with a dot. Fit wheel onto shaft;
- Fit snap rings inside their seats on shafts;
- To check wheels correct operation, adjust hook position on right wheel;
- Position hook “B” upwards and then turn eccentric “A” counter-clockwise with a screwdriver to move it towards hook “B’;
- Check that the area between eccentric “A” and hook “B” – marked on the drawing – is free;
- Position the complete cover on the gearbox and apply sealant;
- Tighten retaining screws to the torque specified in the table of sub-section 4 of section B;



CAUTION
When fitting the pre-selector cover, make sure that gear is in neutral.