TOMOS

TOMOS A 35

workshop manual

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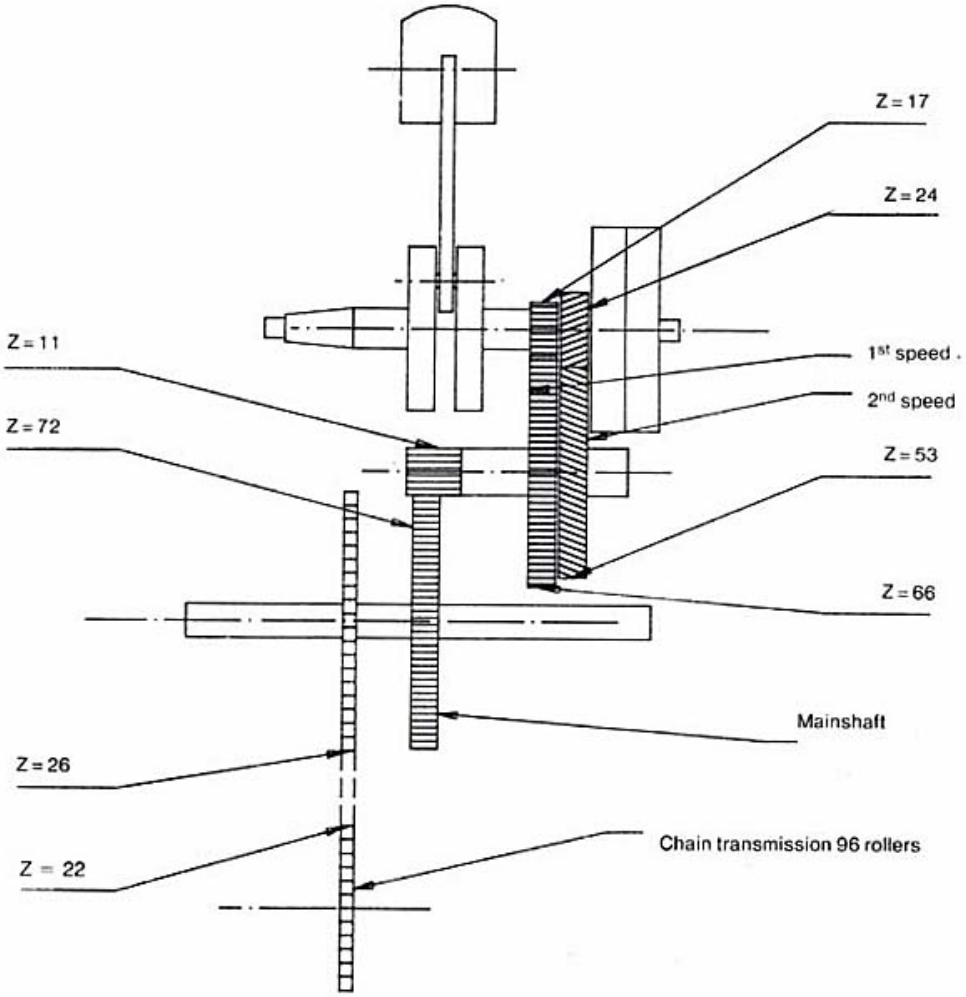
TOMOS
TWOWHEELERS & COMPONENTS
PRODUCTION, SLOVENIJA

Engine:	single cylinder, two cycle with reed valve, air cooled
Bore × Stroke:	38 × 43 mm
Piston displacement:	49 ccm
Compression ratio:	9,1 : 1
Brake horse power:	1,45 kW (5200 min^{-1})
Torque:	3,5 Nm (3500 min^{-1})
Gear box:	automatic 2-steps, with two centrifugal cluthes
Gearbox oil/quantity:	Valvomatic type A Suffix A - SAE 10 W 30/ccm 3
Ignition:	Flywheel magneto
Ignition advance:	1,5 + 0,2 mm B.T.D.C.
Contact breaker gap:	0,35-0,45 mm
Spark plug:	BOSNA F 80, BOSCH W 4A2, CHAMPION L82, NGK HS, EYQUEM 755, AC.C.42F
Spark plug gap:	**0,8mm**
Fuel:	**MIXTURE OF GASOLINE 98 - oct AND TWO STROKE OIL**

TRANSMISSION



Gear ratio 1st speed	(66/17)	i = 3.8823
Gear ratio 2nd speed	(53/24)	i = 2.4615
Gearbox ratio 1st speed	(3.88 * 72/11)	i = 25.4117
Gearbox ratio 2nd speed	(2.46 * 72/11)	i = 16.1189
Chain transmission ratio	(22/26)	i = 0,846
Total transmission ratio 1st speed	(25,4117*0,846)	i = 21.502
Total transmission ratio 2nd speed	(16.11/0.846)	i = 13.631

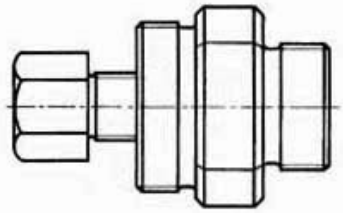
Position	Thread	TORQUE Nm	Kpm	Pound per foot
Spark plug	M14×1,25	18	1,83	13,27
Cylinder cover	M7	12	1,22	8,85
Cylinder stud bolts	M7	15	1,53	11,06
Magneto flywheel	M10×1	30	3,06	22,12
Clutch of 1st speed	M10×1	25	2,55	18,44
2nd speed driven gear	M14×1	80	9,15	59,0
Engine-frame fastening bolts	M8×1	25	2,55	18,44
RH engine cover	M6	7	0,71	5,16
LH engine cover	M6	6	0,61	4,42
Crankcase	M6	10	1,02	737
Mainshaft chain sprocket	M22	60	6,11	44,23
Swinging arm fastening screw	M12×1,25	35	3,57	25,81
Rear shock absorber	M10	25	2,25	18,44
Top fork lug	M12	35	3,57	25,81
Front and rear wheel spindle	M11×1	32	3,26	23,60

Ball bearings

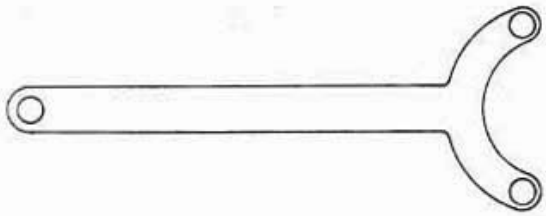
Installation:	TOMOS Code. No.	Bearing No.	Dimensions d × D × b (mm)
Crankshaft	035.070 × 2	6203-C3	17 × 40 × 12
Crankshaft	035.202	608	8 × 22 × 7
Countershaft	035.072 035.031	6201	12 × 32 × 10
Mainshaft	035.037	6006	30 × 55 × 13
Wheel axle	044.225 × 2	6201-Z	12 × 32 × 10

Seal rings

Installation	TOMOS Code. No.	Dimensions d × D × b (mm)	pcs.
Crankshaft	036.554	17 × 35 × 7	2
Mainshaft	036.620	35 × 47 × 7	1

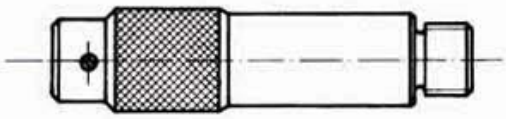


732.746
MAGNETO FLYWHEEL PULLER

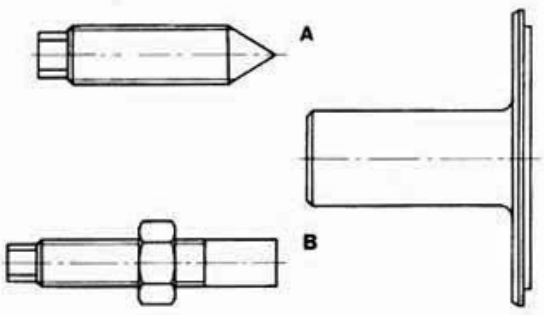


732.202
FLYWHEEL HOLDER

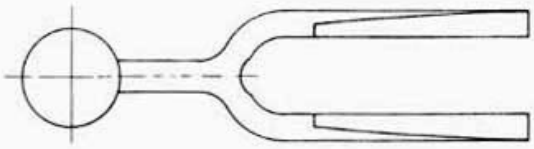
011.008
GAUGE PIN



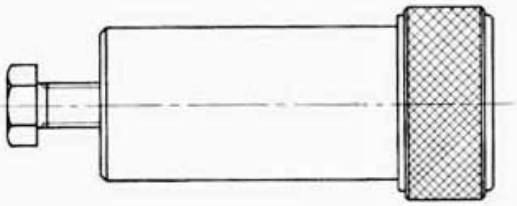
732.193
DIAL GAUGE SUPPORT



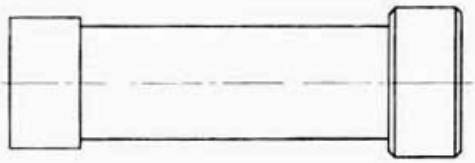
735.888
CRANKCASE DIS - ASSEMBLY TOOL



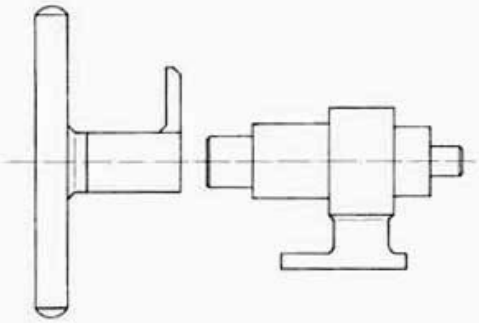
735.753
CRANKSHAFT MOUNTING FORK



731.155
CRANKSHAFT BEARING PULLER

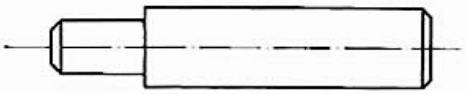
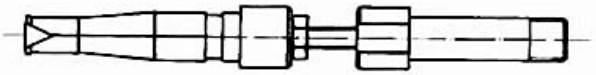
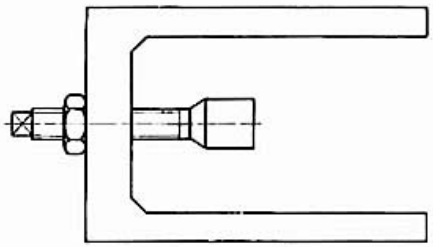
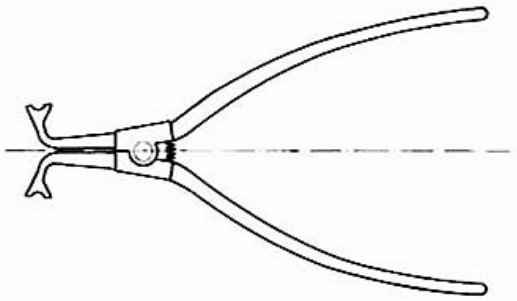
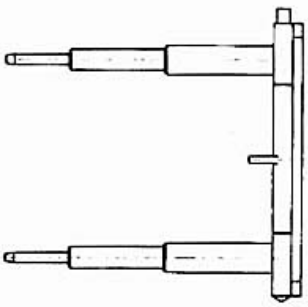


702.856
DIS - ASSEMBLY CRANKSHAFT BEARINGS



737.535
CLUTCH SPRING SETTING TOOL

737.536
ROLLER CLUTCH INSTALLER

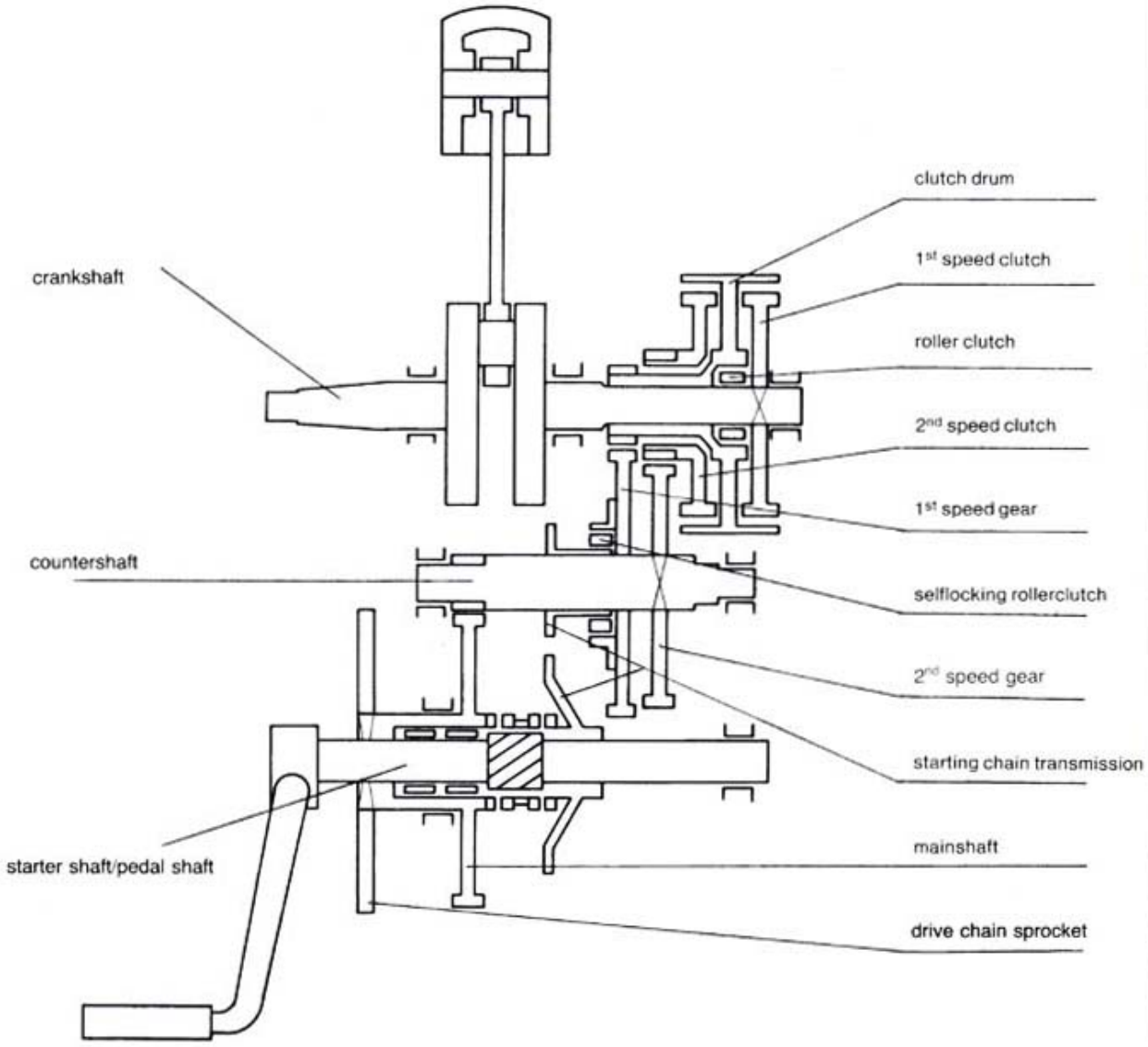
	732.367 MAINSHAFT NEEDLE BEARINGS INSTALLER
	706.485 EXTRACTOR
	706.472 EXTRACTOR BRIDGE
	736.913 BRAKE SHOES SPRING INSTALLING PLIERS
	714.011 ENGINE REPAIR STAND

This manual is intended as a help in "trouble shooting" and consequent repair procedure, which occours in exploatation due to normal wear, but in most cases due to inproper maintenance of vehicle or engine.

For a dependable and prompt repair, follow the general rules as:
- Always use adequate tools.
- Where necessary, use a plastic mallet when dismantling individual assemblies,
- Clean individual parts prior to each check.
- Carefully clean all parts, oil movable parts, which are fitted by embossing them, and replace gaskets and sealing rings prior to re-assembly.
- Observe torque figures table when screwing on screws and nuts.

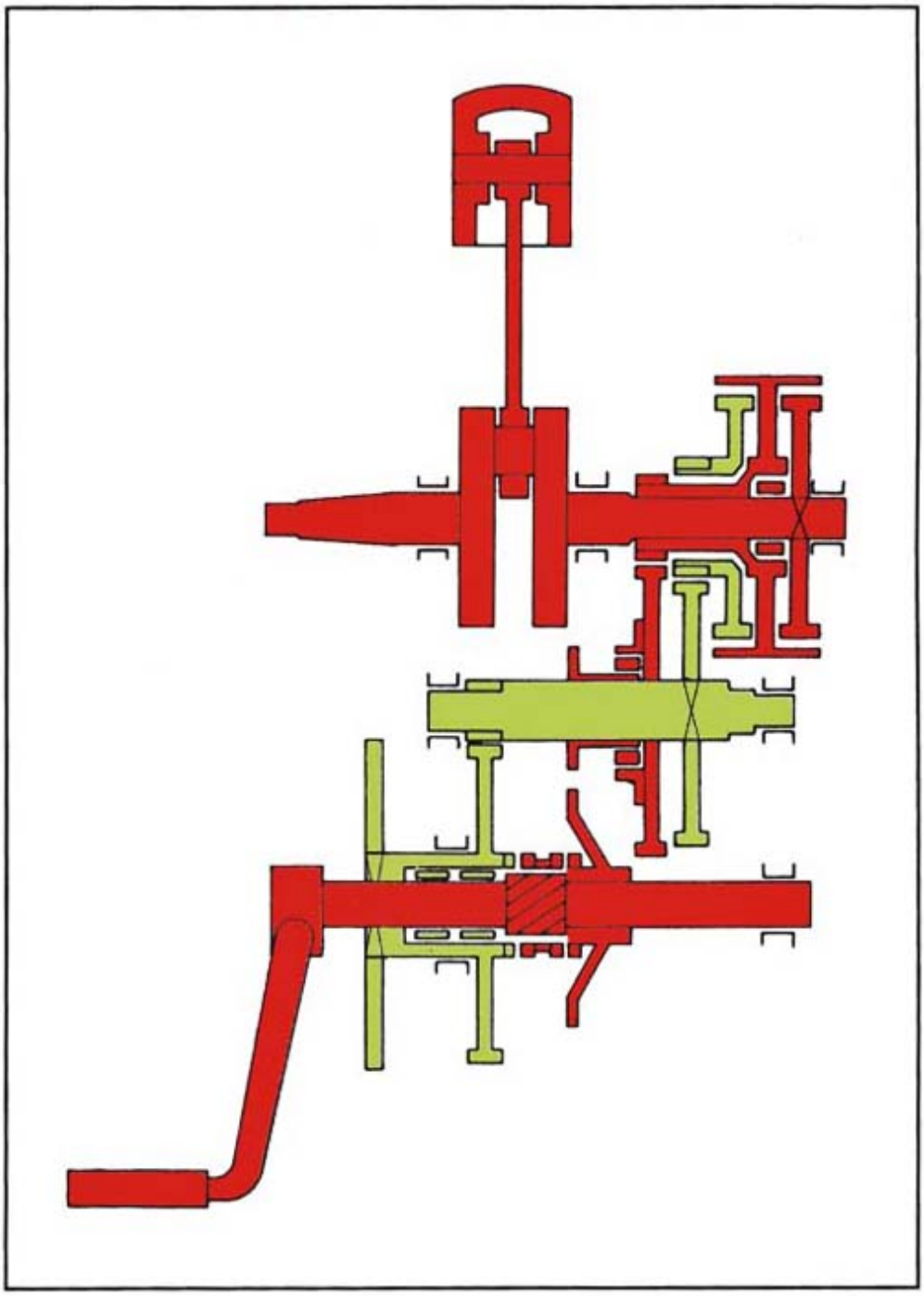
The manual shows only the execution of dis-assembly operations in which necessary special tools are needed. Dis-assembly of other parts (see explosion view in Spare parts catalogue) is meant like a common knowledge of an qualified mechanic to whom this manual is dedicated.

TRANSMISION PARTS

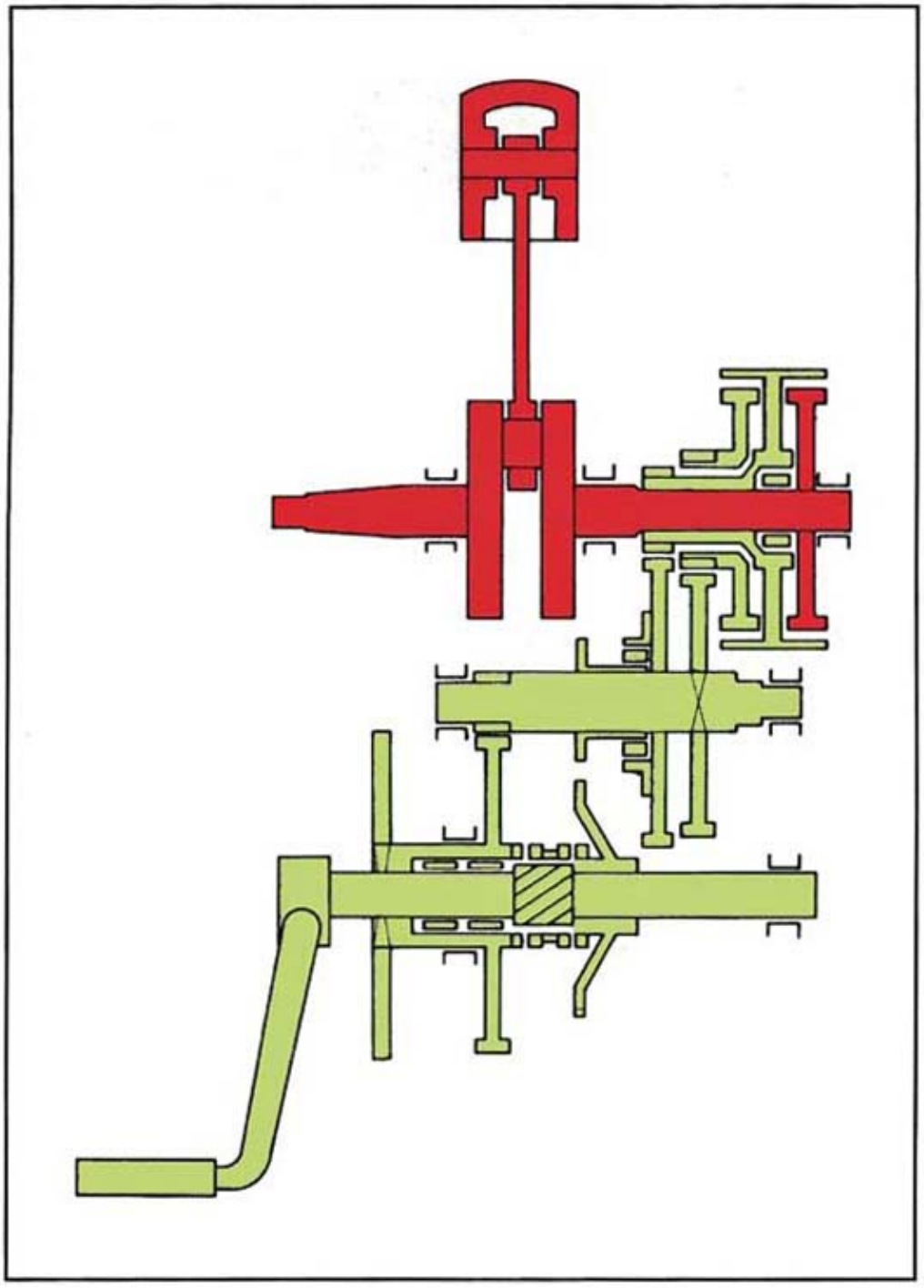


Legenda

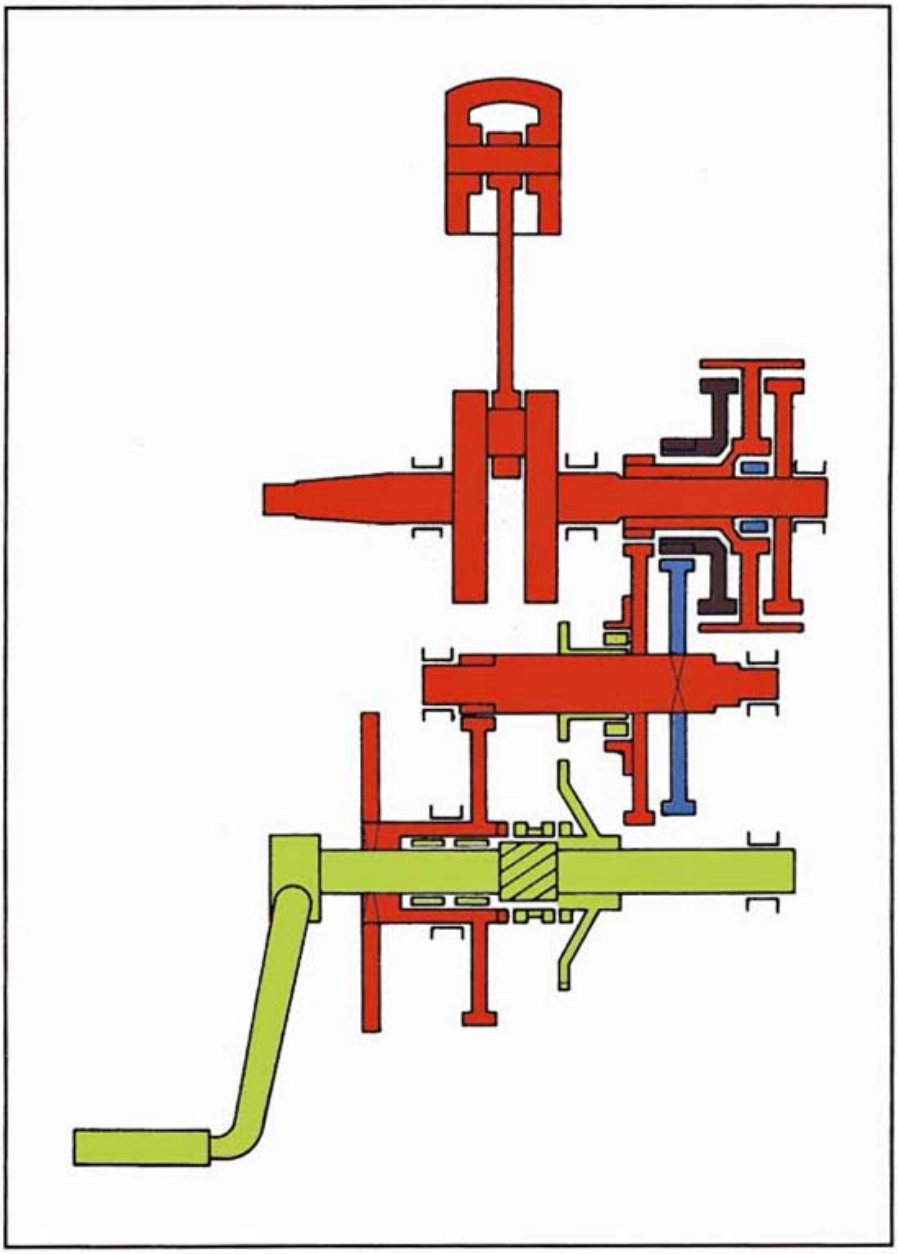
- rotating powered elements
- free rotating elements
- stand still elements



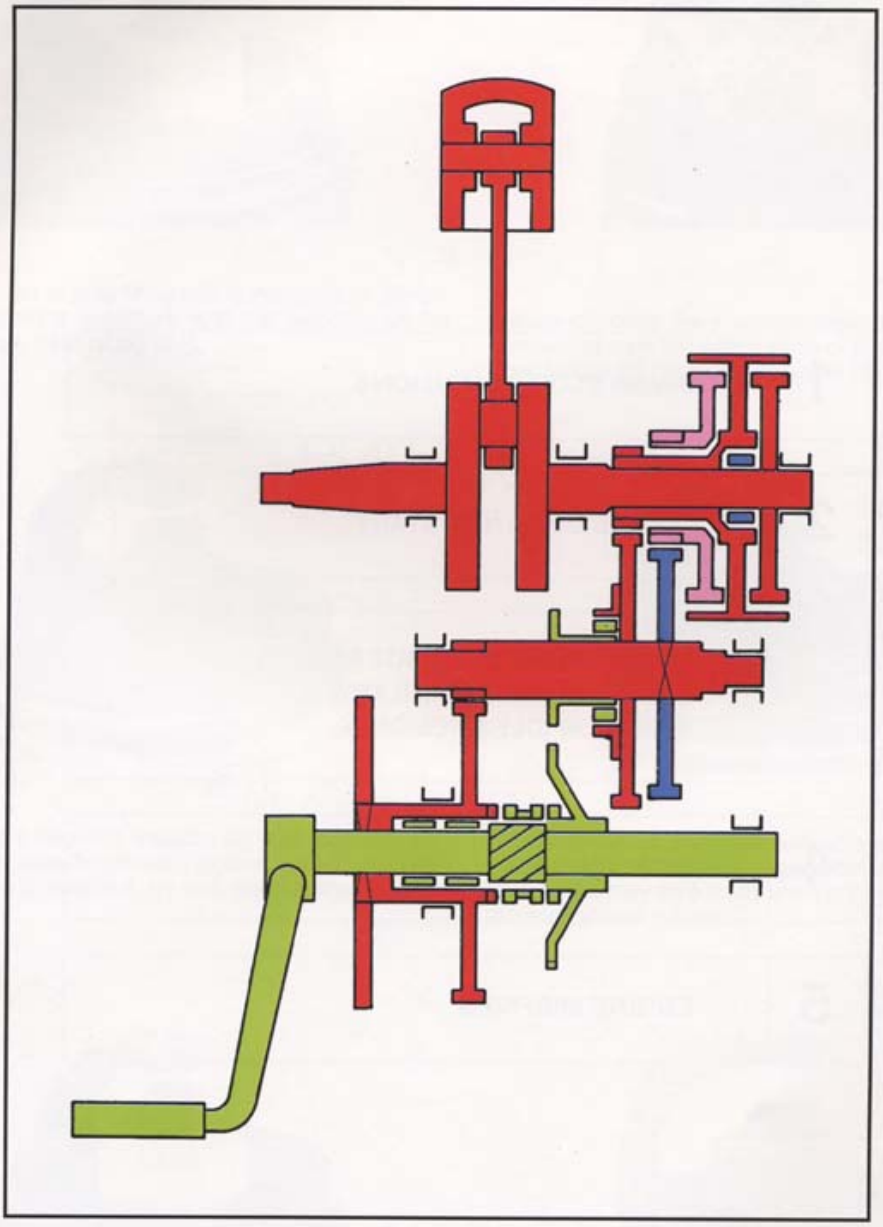
Starting



Idle run



1st speed



2nd speed

1	SPARK PLUG CONDITIONS
2	ENGINE DOES NOT START
3	ENGINE RUNS OVER BUT STALLS, ENGINE RUNS IRREGULARY, STOPS OR IDLES ROUGHLY.
4	POWER LOOS
5	ENGINE MISFIRES

A brown, tan or gray firing end is indicative of correct engine running conditions and the selection of the appropriate heat rating plug.

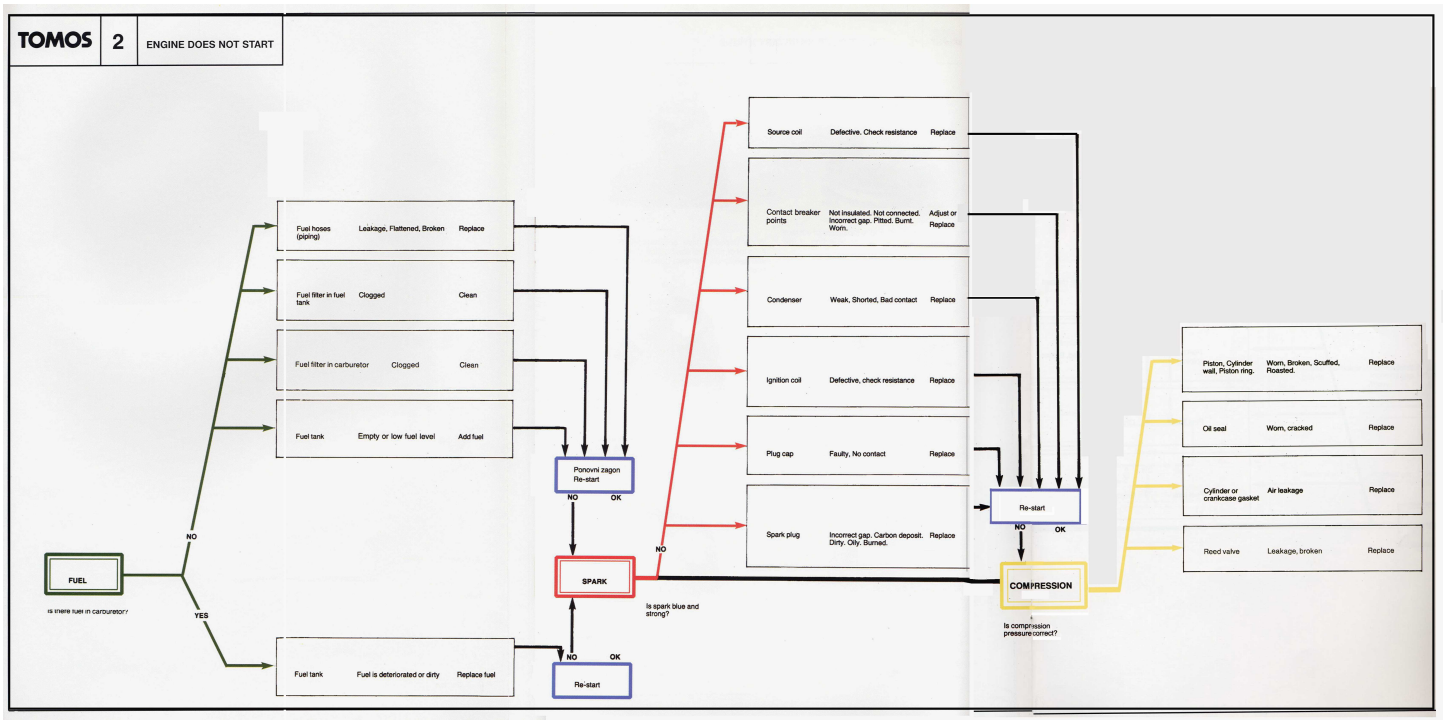
White deposits have accumulated from excessive amount of oil in the combustion or through the use of low quality oil. Remove deposits or a hot spot may from.

Black sooty deposits indicate an over-rich fuel /air mixture, or a malfunctioning ignition system. If no improvement is obtained, try one grade hotter plug.

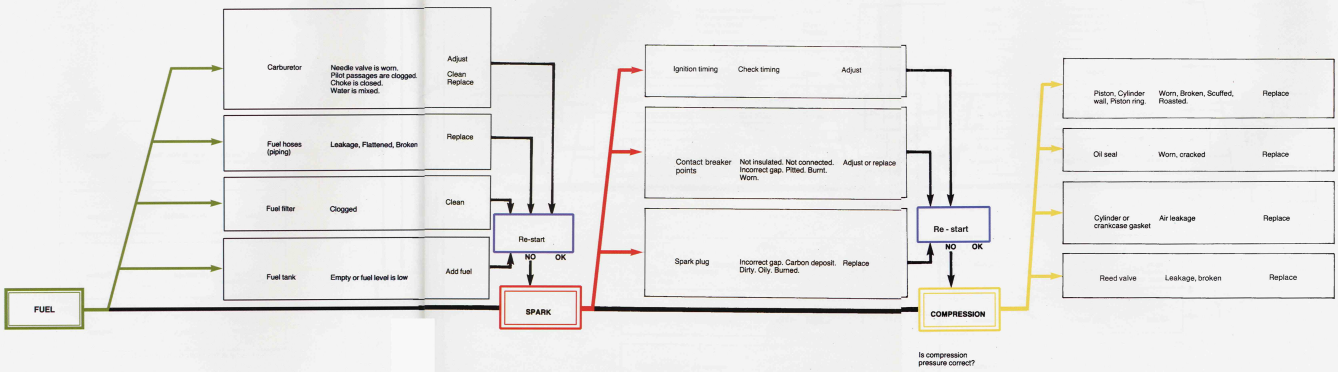
Wet, oily carbon deposits form an electrical leakage path along the insulator nose, resulting in a misfire. The cause may be a badly worn engine or a malfunctioning ignition system.

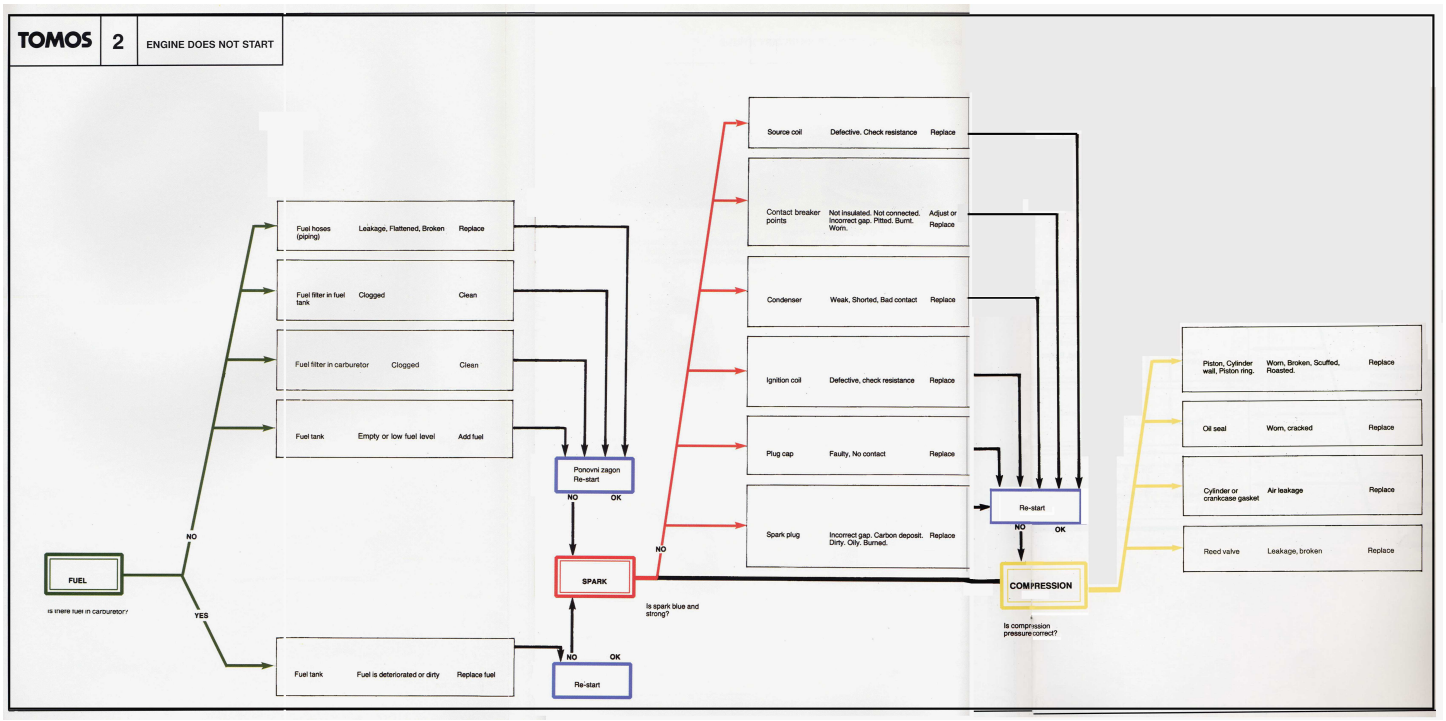
A blistered white insulator or melted electrode indicates over advanced ignition timing or a malfunctioning cooling system. If correction does not prove effective, try a colder grade plug.

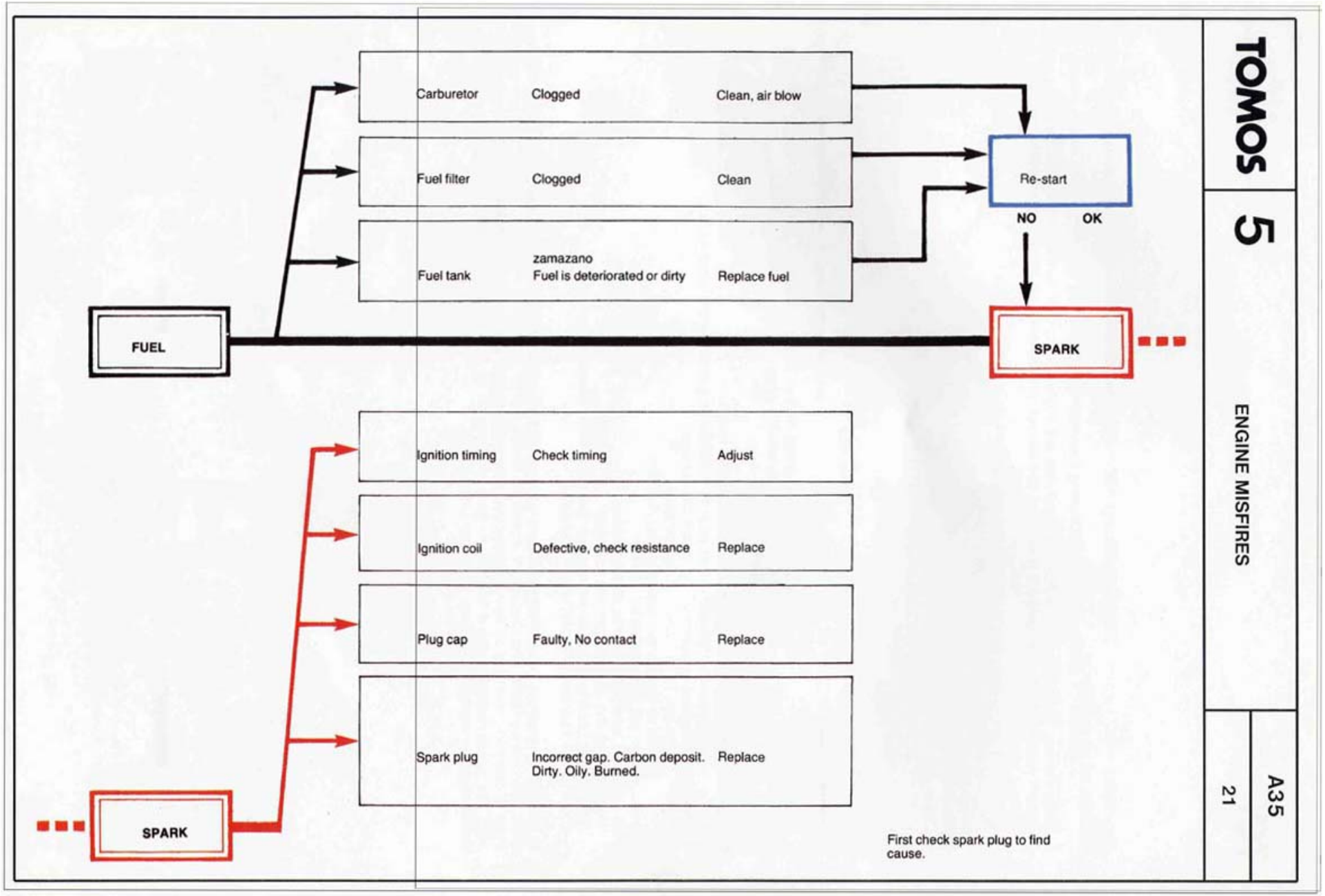
A worm spark plug not only wastes fuel but also overloads the whole ignition system because the increased gap requires higher voltage to initiate the spark. Adjust spark plug gap or replace.


TOMOS
2
ENGINE DOES NOT START
FUEL
Is there fuel in carburetor?
NO
YES
Fuel hoses (piping)
Leakage, Flattened, Broken
Replace
Fuel filter in fuel tank
Clogged
Clean
Fuel filter in carburetor
Clogged
Clean
Fuel tank
Empty or low fuel level
Add fuel
Fuel tank
Fuel is deteriorated or dirty
Replace fuel
Ponovni zagon
Re-start
NO
OK
SPARK
Is spark blue and strong?
NO
Re-start
NO
OK
Source coil
Defective. Check resistance
Replace
Contact breaker points
Not insulated. Not connected. Incorrect gap. Pitted. Burnt. Worn.
Adjust or Replace
Condenser
Weak, Shorted, Bad contact
Replace
Ignition coil
Defective, check resistance
Replace
Plug cap
Faulty, No contact
Replace
Spark plug
Incorrect gap. Carbon deposit. Dirty. Oily. Burned.
Replace
Re-start
NO
OK
COMPRESSION
Is compression pressure correct?
Piston, Cylinder wall, Piston ring.
Worn, Broken, Scuffed, Roasted.
Replace
Oil seal
Worn, cracked
Replace
Cylinder or crankcase gasket
Air leakage
Replace
Reed valve
Leakage, broken
Replace

TOMOS | **3** | ENGINE RURNS OVER BUT STALLS. ENGINE RUNS IRREGULARLY, STOPS OR IDLES ROUGHLY.




TOMOS
2
ENGINE DOES NOT START
FUEL
Is there fuel in carburetor?
NO
YES
Fuel hoses (piping)
Leakage, Flattened, Broken
Replace
Fuel filter in fuel tank
Clogged
Clean
Fuel filter in carburetor
Clogged
Clean
Fuel tank
Empty or low fuel level
Add fuel
Fuel tank
Fuel is deteriorated or dirty
Replace fuel
Ponovni zagon
Re-start
NO
OK
SPARK
Is spark blue and strong?
NO
Re-start
NO
OK
Source coil
Defective. Check resistance
Replace
Contact breaker points
Not insulated. Not connected. Incorrect gap. Pitted. Burnt. Worn.
Adjust or Replace
Condenser
Weak, Shorted, Bad contact
Replace
Ignition coil
Defective, check resistance
Replace
Plug cap
Faulty, No contact
Replace
Spark plug
Incorrect gap. Carbon deposit. Dirty. Oily. Burned.
Replace
Re-start
NO
OK
COMPRESSION
Is compression pressure correct?
Piston, Cylinder wall, Piston ring.
Worn, Broken, Scuffed, Roasted.
Replace
Oil seal
Worn, cracked
Replace
Cylinder or crankcase gasket
Air leakage
Replace
Reed valve
Leakage, broken
Replace


TOMOS
5
ENGINE MISFIRES
A35
21
Carburetor
Clogged
Clean, air blow
Fuel filter
Clogged
Clean
Fuel tank
zamazano
Fuel is deteriorated or dirty
Replace fuel
Re-start
NO
OK
FUEL
SPARK
Ignition timing
Check timing
Adjust
Ignition coil
Defective, check resistance
Replace
Plug cap
Faulty, No contact
Replace
Spark plug
Incorrect gap. Carbon deposit.
Dirty. Oily. Burned.
Replace
SPARK
First check spark plug to find cause.

TROUBLES IN GEARBOX

* When starting, engine runs in neutral gear and also with higher number of revs clutch does not engage:
- Throttle down and restart engine (oil is still cool and dense). When driving off, throttle up gradually to reduce jerks.
- Loosen or broken retain spring of 1st speed gear selflocking clutch.
- 1st speed gear selflocking clutch cage damaged.

* When starting, the engine joggle:
- Not enough oil in the gearbox- fill up to the required level.
- Clutch drum or 1st speed clutch shoe elements damage.
- 1st speed clutch retaining nut slackened (noise at engine idle run).

* Clutch skidding (especially in cool weather):
- Uncorrect oil in gearbox - replace oil with standard.

* Clutch not shifting from the 1st into 2nd or not engaging at all:
- Engine not powerful enough-see chapter 3 - Power loss
- Excessive oil in gearbox- check level.
- Brakes not disengaging - grease control cables.
- Clutch blocked - try to operate clutch at higher number of revs with motorized bicycle supported by stand.
- Countershaft and 1st speed gear selflocking clutch seized - check the slide bearing surface.

* When shifting to 2nd gear, clutch joggle.
- Chain sagged - tighten chain.
- Not enough oil in the gearbox - fill up to the required level.

* With engine disengaged, the motorized bicycle is difficult to move forward - rearward:
- Check the 1st speed gear selflocking clutch for damage.

* With engine in idle run in rearward motion blows:
- Check the starter shaft brake spring proper function.

* Transmission not disengaged by idle run:
- Clutch drum incorporated roller clutch blocked.

* When starting the engine does not turn over:
- Starter shaft holding clamp do not engage the inner chain transmission.
- Clutch drum incorporated roller clutch damaged.

In case of transmission part damage or failure is necessary to disassemble, only the RH engine cover and procede with disassembling and checking the parts as shown further.
Prior of operation drain the oil from the gearbox, dismantle the exhaust pipe (box wrench 10 mm, wrench 13 mm), the lateral protection shield fixed at swinging arm (wrench 10 mm), and slacken the cover screws. Attention at distance washers on starter shaft and countershaft.

Slacken the protective clutch washer with a socket 19 and with special tool 732.202 remove 1st speed clutch nut (fig. 1).
Detach clutch drum by hand or by means of an standard extractor in case of bushing seizure (fig. 2).

Fig. 1

Fig. 2

The starter shaft and the countershaft are connected by a starter chain, so both shafts will have to be taken out together (fig. 3).
Remove the standard washers on the crankshaft and on the mainshaft (fig. 4).

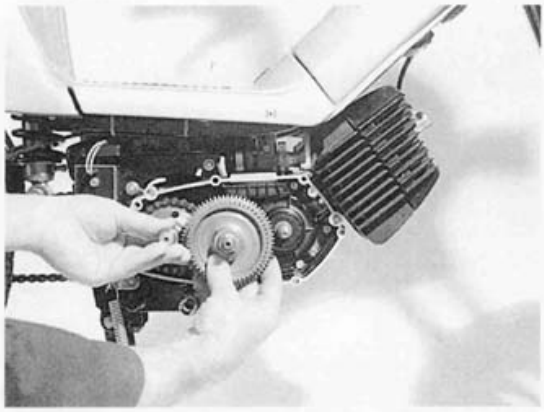


Fig. 3

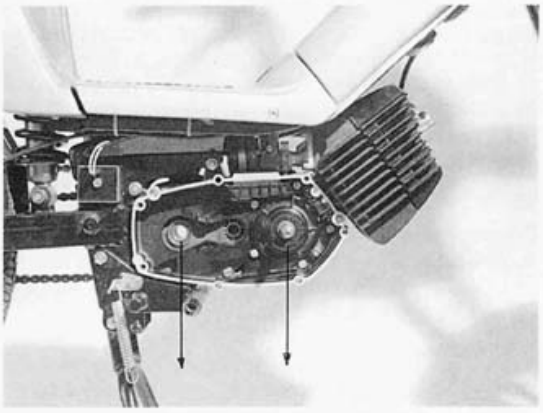


Fig. 4

Remove the sg-circlip and separate clutches 1st and 2nd speed.
Dismantle both clutches, spring is removed with a screwdriver.
In this manner brake strips are realeased, and all three shoes can be removed.
Press pins out of shoes and check brake strips, spring inside of shoes and clutch hub for excessive wear (Fig. 5).
Clutch shoes must slip freely on clutch hub. In case of use of prescribed oil quantity and quality the wear of clutch shoes linings is reduced at minimum.

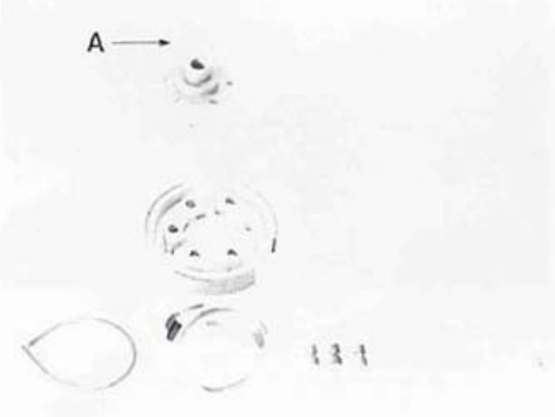


Fig. 5

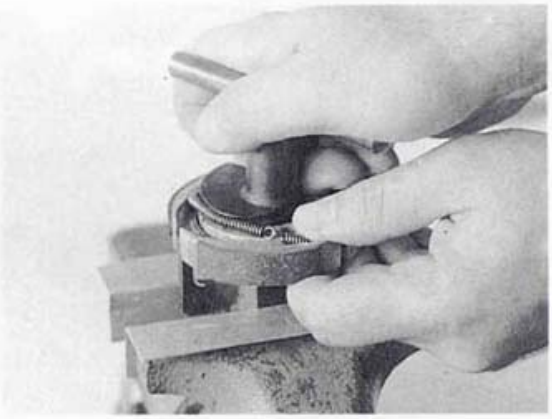


Fig. 6

At first, assemble the 1st speed clutch at reversed order of dismantling. Particular care should be taken of brake strips, they must protect each other against falling out.
Fix the main pin of the device 737.535 with the thinner part facing upwards. The spring joint must be placed in the middle of one shoe. With the lever of the device insert the spring in the shoes groove. (Fig. 6).
To assemble the 2nd speed clutch turn the device over. The clutch hub with gear must be placed in the way the gear is on bottom and the gap between two shoes fits with the pin. The manner of mounting the spring is the same as mentioned before for the 1st speed clutch.
Remove and inspect the 1st speed driven gear selflocking clutch in case of transmission troubles mentionated on page 24. Remove the sg-circlip at the countershafts toothing. Unfasten the wire spring (Fig. 9) and separate a small chain sprocket with roller cage. Remove the selflocking clutch and the rollers (Fig. 10).
In case of sliding surface damage of selflocking clutch replace the body (223.463). Check the sliding surface of selflocking clutch on countershaft.

Dismantling of the needle clutch is necessary only in case of replacement.
A new needle clutch is pressed with special tool no. 737.536 (Fig. 7).
The needle clutch must be pressed with the signed side towards the center of the clutch drum, if not it may operate in the reverse direction.

Clearance between shoes and clutch drum rim is approx. 0,4 mm. Axial clearance of the clutch drum is from 0.1 m to 0.3 mm by means of inserting in the adjusting thrust washer of 0.3 mm or 0.5 mm under the clutch (fig. 5/A).

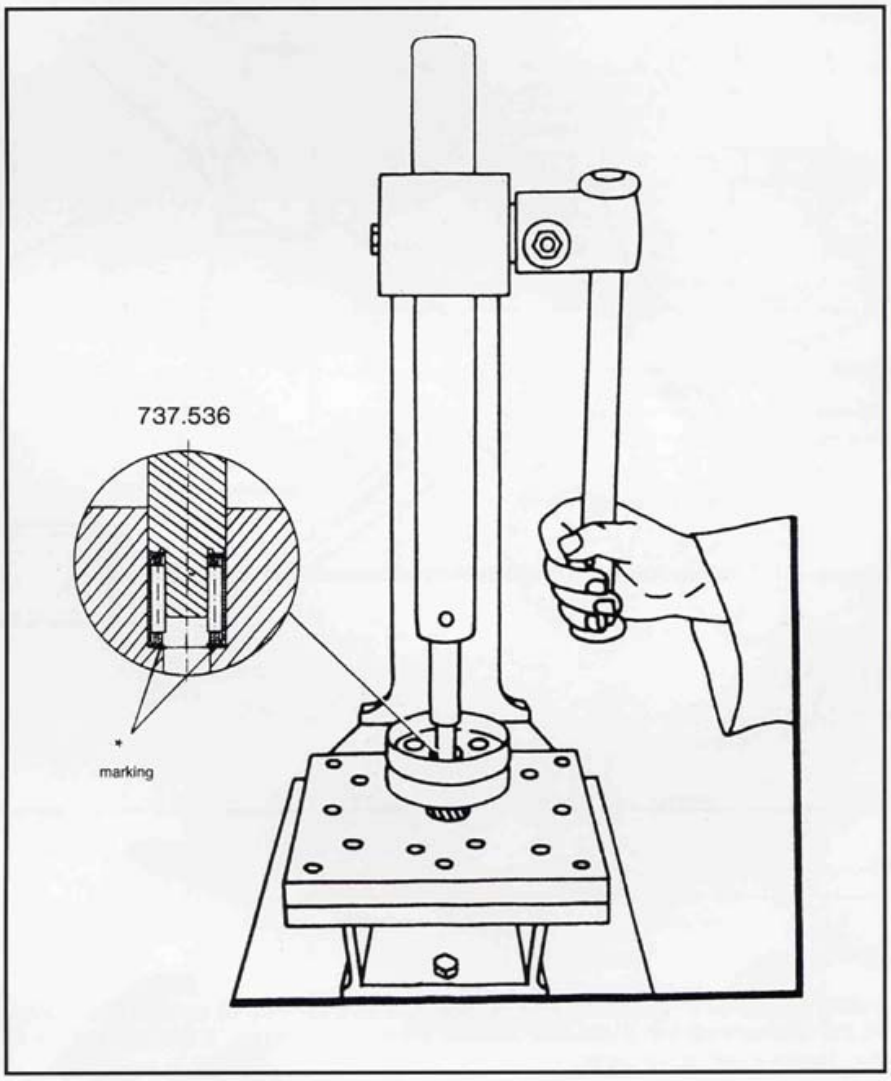


Fig. 7

If is necessary to replace chain sprocket or claw collar on pedal shaft of kick shaft, first remove protective ring (fig. 8/1) and spring washer (fig. 8/2). During assembly take care that the thinner part of collar in mounted forward or else, the brake spring slides across the chain sprocket. Check the chain for overtension or some other damage.

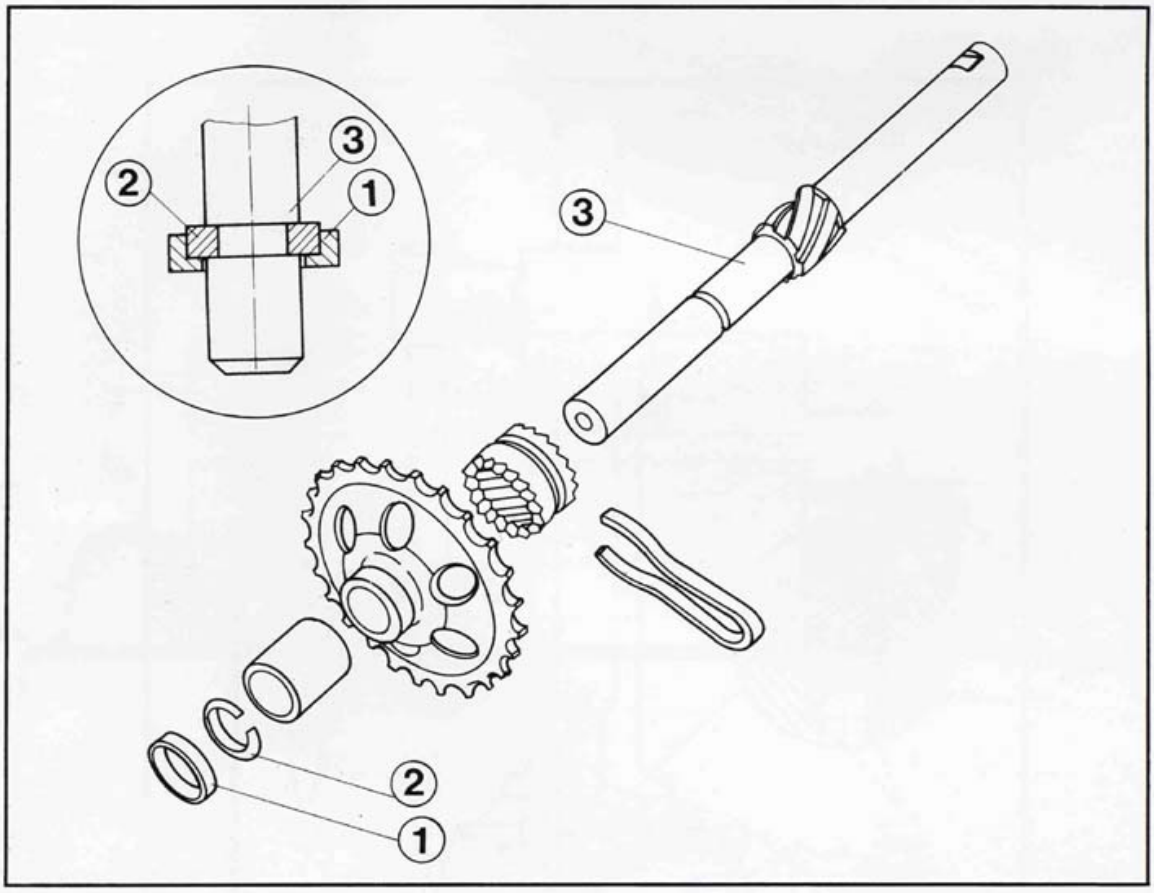


Fig. 8

A damage of sliding surface of 1st speed driven gear and countershaft may be caused due to low oil quantity in the gearbox. Fix the countershaft into a vice and unscrew the nut with wrench 19 and remove the 2nd speed gear with an extractor. Replace damaged parts.

Reassemble the countershaft in the reversed order of dismantling.
Use of grease is not suggested because it may impede the function of the selflocking clutch. Put the chain sprocket with cage so that the beginning of wire spring is turned 90° left-ward from spring nose. (fig. 9). Lock the wire spring to riveted nose on the selflocking clutch body.

Before tightening nut, it is necessary to check the proper function of the assy. Firmly hold 2nd speed driven gear with the left hand and the clutch drum with the right hand. When clutch drum rotates counterclockwise, both clutches idle, when it rotates clockwise the motion is transmited to the crankshaft (fig. 11).

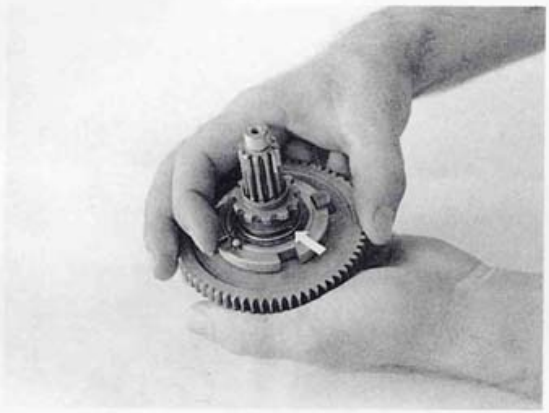


Fig. 9

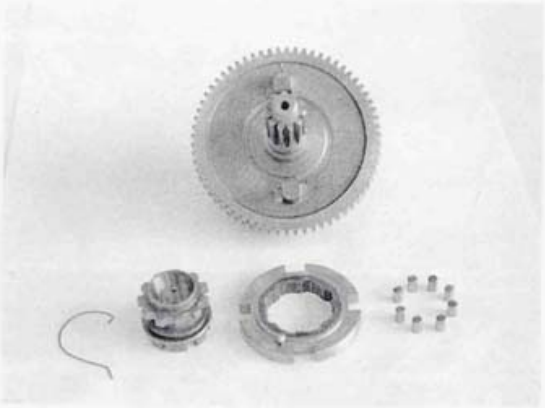


Fig. 10

Fig. 11

In case of any magneto faulty part replacement actuate with dismantling at sequent parts as follows:
- starting/lever pedal (wrench 11, plastic mallet)
- side protection shield fixed on swinging arm (wrench 10)
- engine cover (flat screwdriver)
- flywheel nut (socket wrench 17, flywheel holder=special tool 732.202=fig. 12)
- flywheel (wrench 32 and 19, flywheel extractor=special tool 732.746=fig. 13)
- stator plate (flat screwdriver)

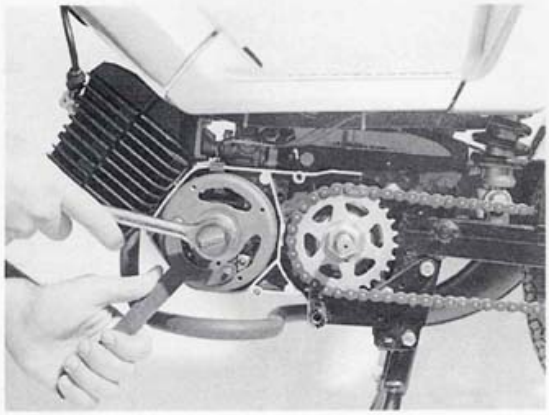


Fig. 12

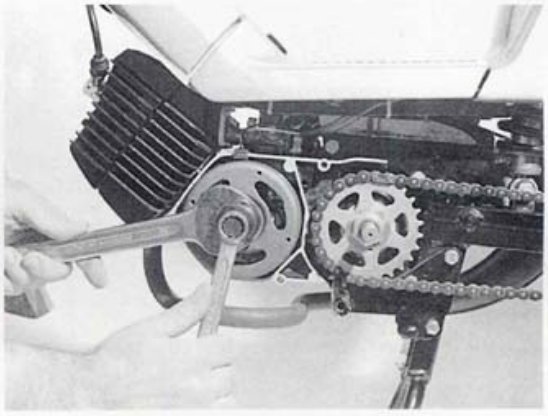


Fig. 13

For proper function of the engine is essential a correct ignition timing. The ignition advance should be $1{,}5^{+0.2\ mm}$* The most common cause of incorrect timing is due wear or damage of contact breaker points, wear of cam actuated breaker nose lever, damage of condenser. To provide the exact timing is necessary to replace faulty parts and proceed (fig. 14) as follows:

- Screw the special tool 732.193 and dial gauge 975.709 with gauge pin 011.008 into the spark plug hole. By rotating the flywheel put the piston to the T.D.C. and set the dial gauge to zero.
- With the flywheel in T.D.C. set the contact breaker points gap between 0,35 to 0,45 mm
- With a test light, buzzer or Ohm meter determine when contact breakerpoints connection is made. The testing device must be connected to the short circuit (black) wire and to the ground of the engine. At the moment of connection of the points the test battery light will glow brightly, the buzzer will change the acoustic frequence or the Ohm tester will show approx. zero Ohms.
- Rotate the flywheel in the clockwise direction until the dial gauge will show the value of 1,5 mm
- By means of oblong fixing openings rotate the stator base plate and find a contact breaker points connection - opening position (test indication).
- Tighten the stator base plate and recheck the ignition advance which should be max. 1,7 mm
- In case of excessive advance, the stator base plate should be rotated in the direction of entine rotation (see arrow of flywheel). In case of insufficient advance turn the plate in the opposite direction.
- In case of uncapable timing setting with a stator base plate rotation provide with the contact breaker points gap setting but under prescribed limits.
- For efficient spark intensity or high ignition voltage is essential a proper abris adjustament. As a matter of fact, it is the distance between the edge of the ignition coil pole shoe and the receeding magnet pole edge at the opening point of the contact breaker and it should be within the range of 12 $\pm$ 2 mm (0.473 $\pm$ 0,079 in). The gap should be measured the moment the intensity of light or sound frequency is changed on the gauge (fig. 14).

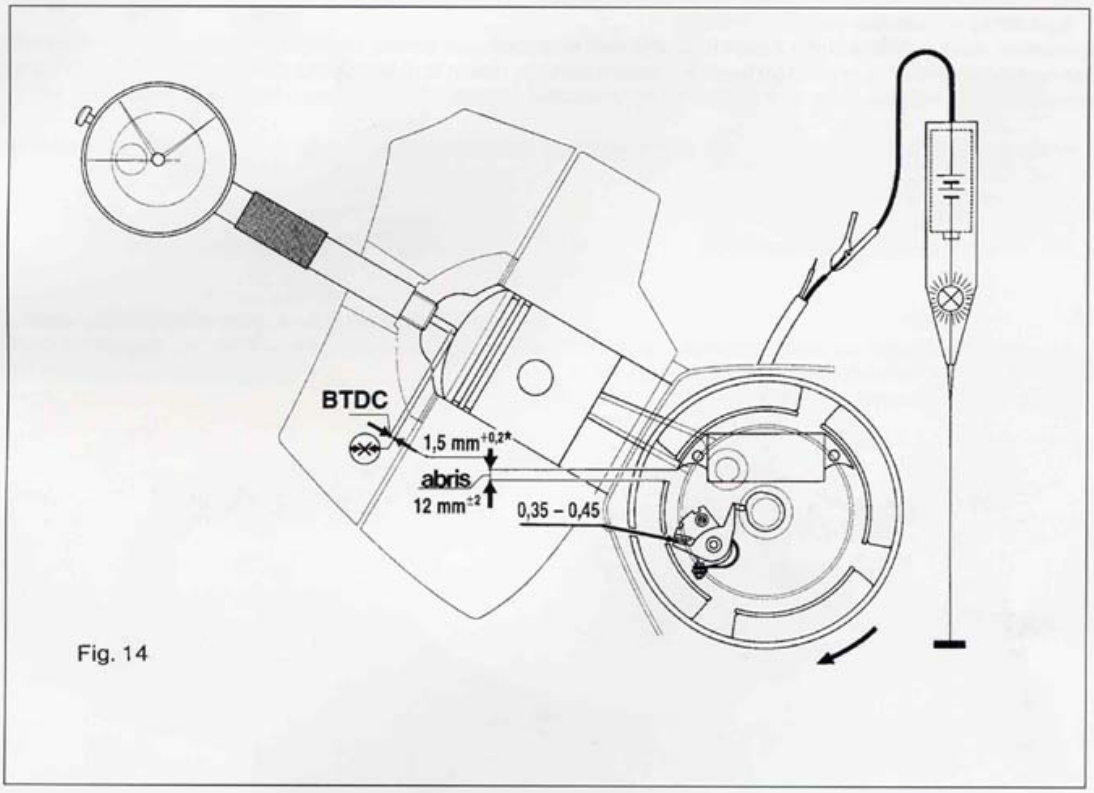


Fig. 14

Note:
For a good ignition must be provided a proper correlation between ignition advance, contact breaker points gap and abris.

In case of carburetor troubles mentioned in trouble shooting chapters No: 3, 4 and 5 on pages 19 – 21 proceed with dismatling at sequent parts as follows:
- carburetor area protection shield (detach the rubber protection sheet, slackes the screwsflat screwdriver)
- fuel tank (screw on bottom side near horn attachment on frame and on rubber elements-box wrench 10 mm)
- carburetor cpl. with air filter and rubber dust protection (screw of fixing claw - flat screwdriver) fig. 15.

The intake silencer remains between the angle supports and engine thus is necessary to remove the engine to replace it.

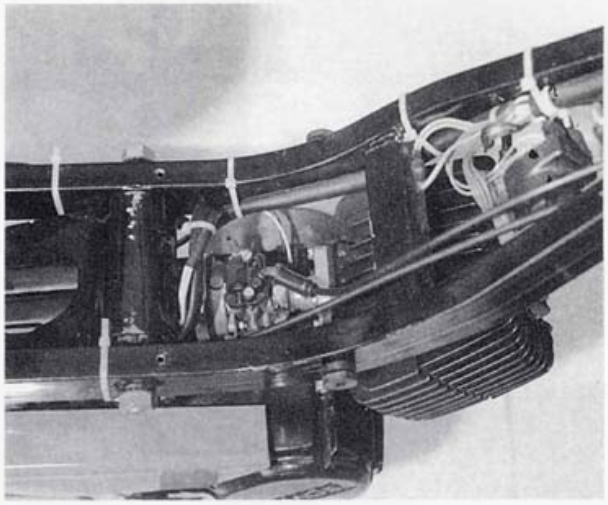
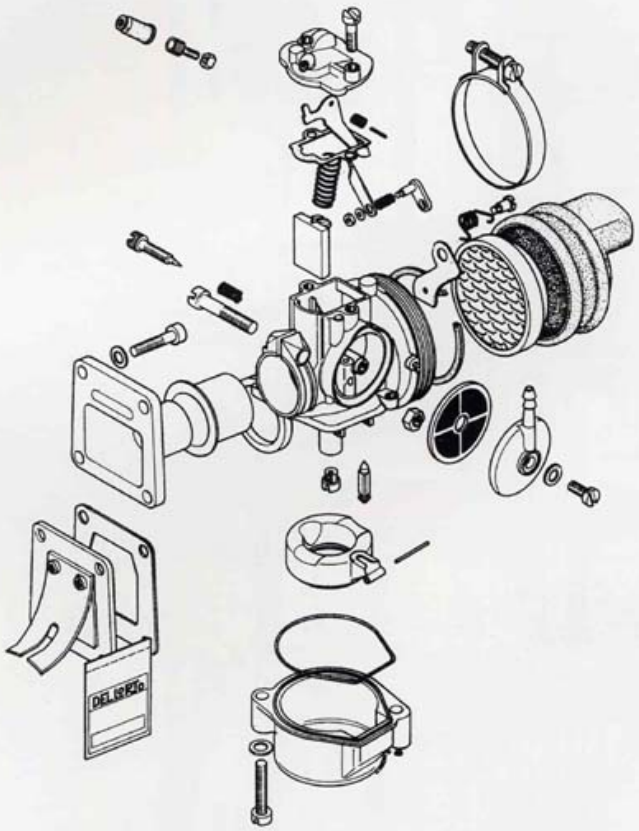


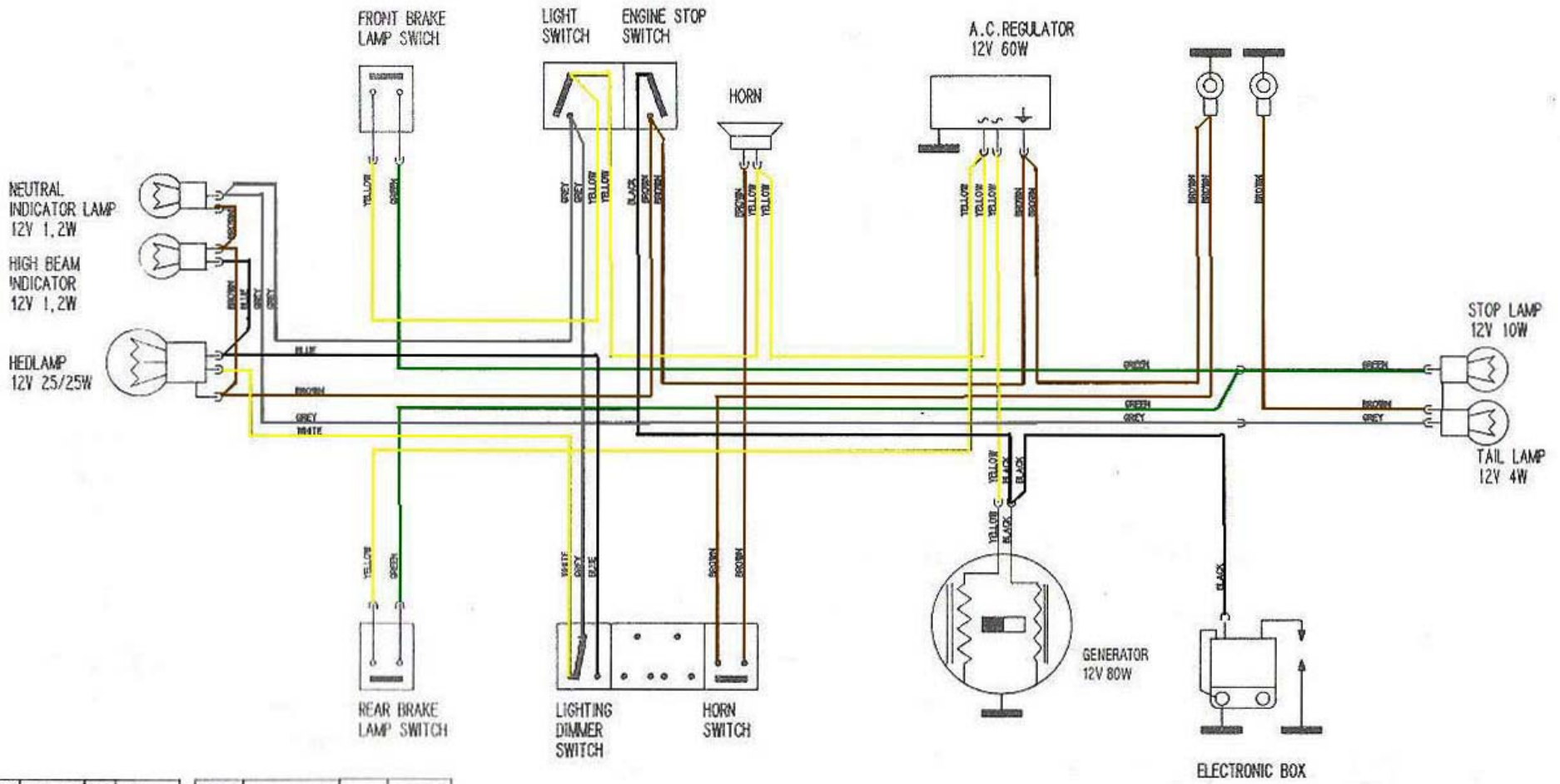
Fig. 15

Dismantle the carburetor into component parts (fig. 17). Clean the parts in gasoline (petrol) and blow them by compressed air.
Replace if necessary worn parts and carefully reassemble, especially the needle valve and float. Sligthly oil the air filter.

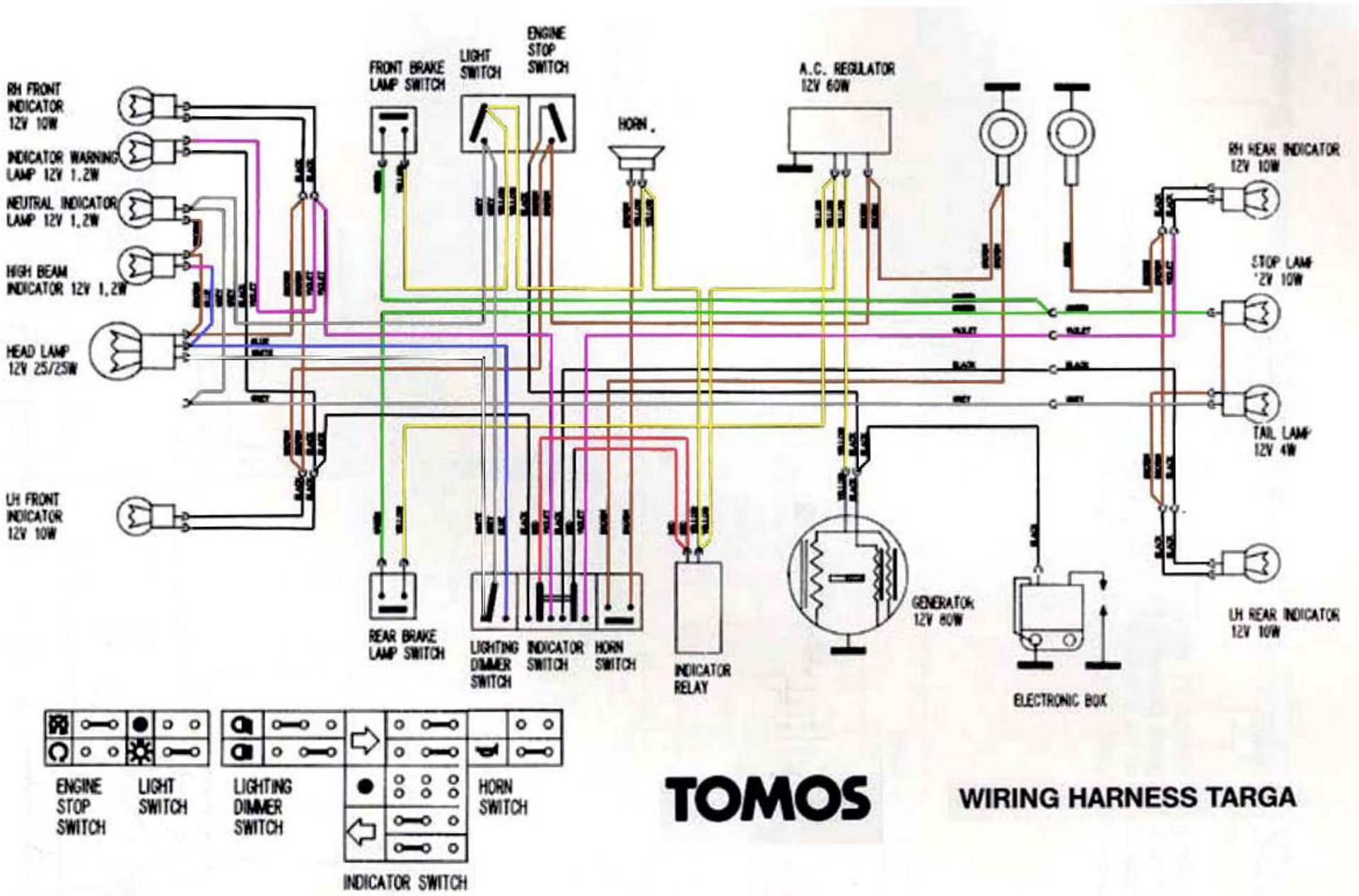


DELLORTO

FIG. 17


FRONT BRAKE LAMP SWITCH
LIGHT SWITCH
ENGINE STOP SWITCH
HORN
A.C.REGULATOR 12V 60W
NEUTRAL INDICATOR LAMP 12V 1,2W
HIGH BEAM INDICATOR 12V 1,2W
HEDLAMP 12V 25/25W
STOP LAMP 12V 10W
TAIL LAMP 12V 4W
REAR BRAKE LAMP SWITCH
LIGHTING DIMMER SWITCH
HORN SWITCH
GENERATOR 12V 80W
ELECTRONIC BOX
ENGINE STOP SWITCH
LIGHT SWITCH
LIGHTING DIMMER SWITCH
HORN SWITCH

Sprint



TOMOS

WIRING HARNESS TARGA

In case of mentionated parts troubles in trouble shooting chapters No. 2, 3 and 4 on pages 18 – 20 proceed with dismantling at sequent parts as follows:
- carburetor
- exhaust pipe
- head cover and cylinder (box wrench 11 mm)
- piston (suitable pliers and gudgeon pressing pin)

Check piston and cylinder surfaces for possible damages. With micrometer check piston dia on points d1, d2, d3 at right angles to gudgeon pin and compare the readings with the corresponding group on piston and in the table (fig. 18).

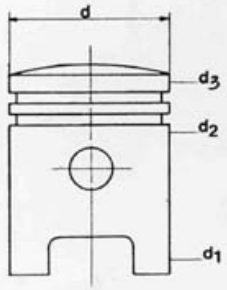


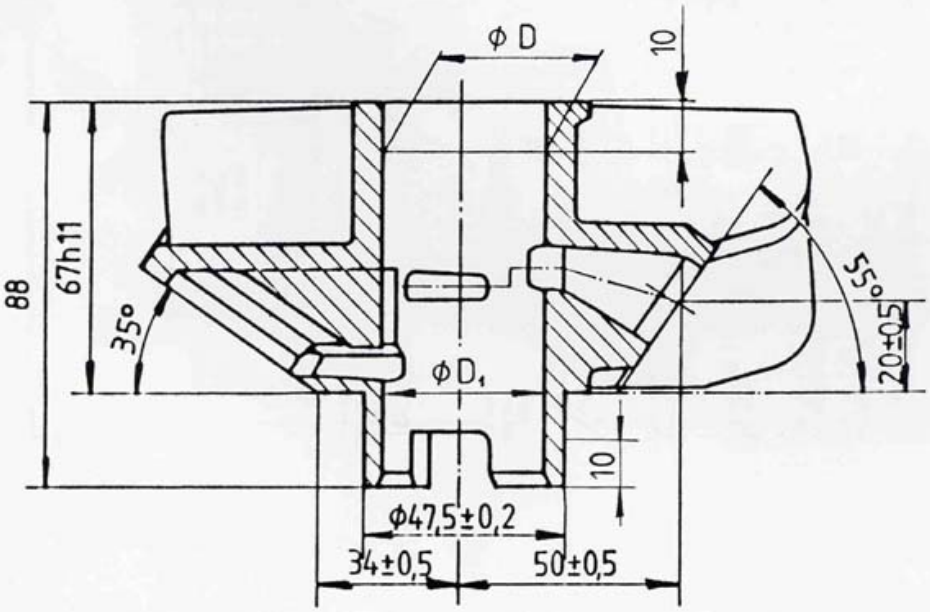
Fig. 18

Skupina Group	d1	d2	d3	ovalnost round-off	
A	37,955	37,865	37,775	0,045	mm
B	37,965	37,875	37,785	0,045	
A	1.4954	1.4919	1.4883	0.0018	in
B	1.4958	1.4923	1.4887	0.0018	

PISTON

	D		
Skupina Group	A	B	
	$38{,}010^{+0{,}01}$	$38{,}020^{+0{,}020}$	mm
	$1.500^{+0.004}$	$1.504^{+0.008}$	in

CYLINDER



Bore taper and come-shaped:
D_1 = max. 0,012 mm ($0{,}473 \cdot 10^{-3}$ in)

Upon the request of the market there is available one different pistons: 50 km/h (30 m.p.h.) - fig. 19 with its own function diagram.

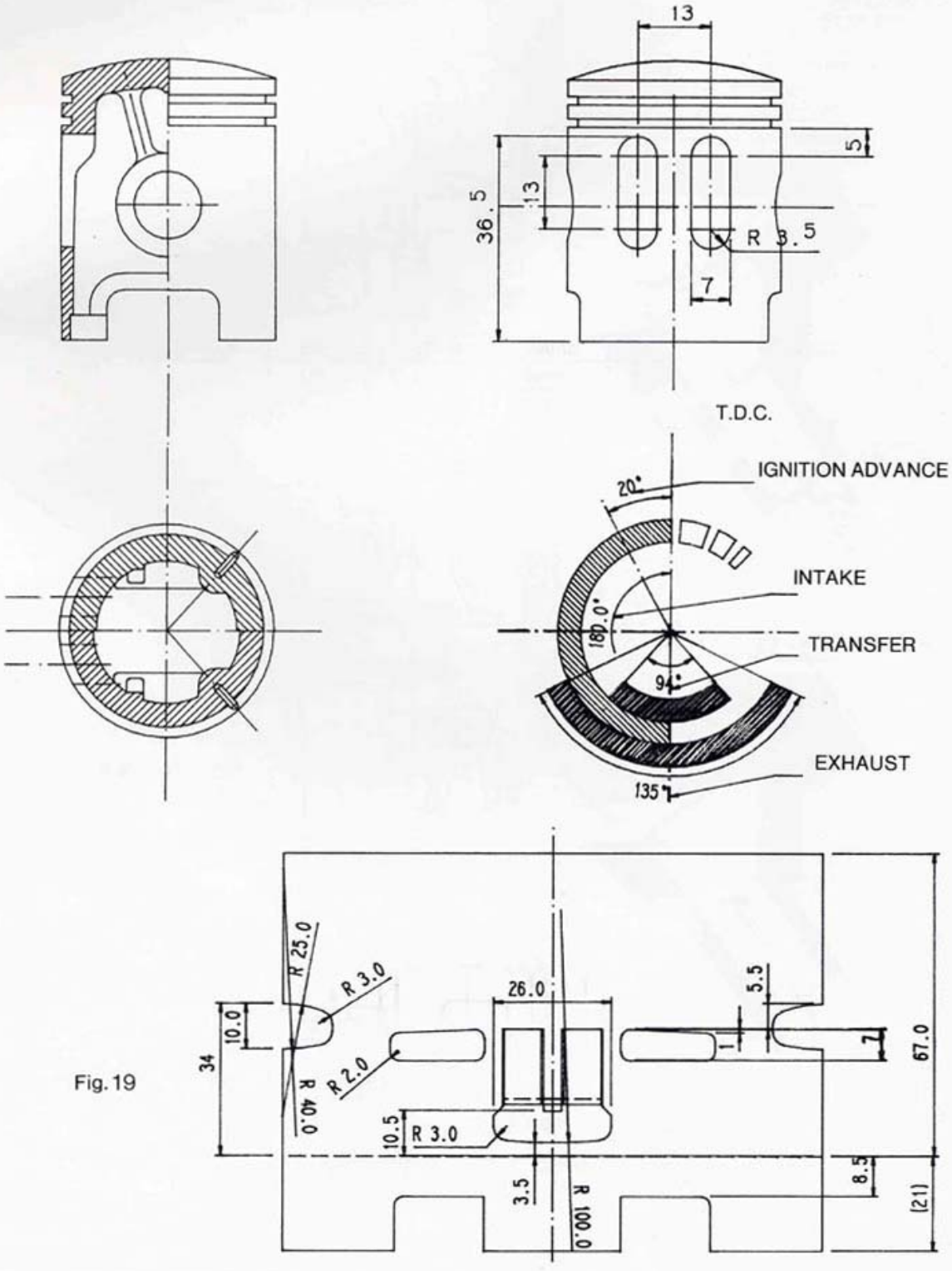
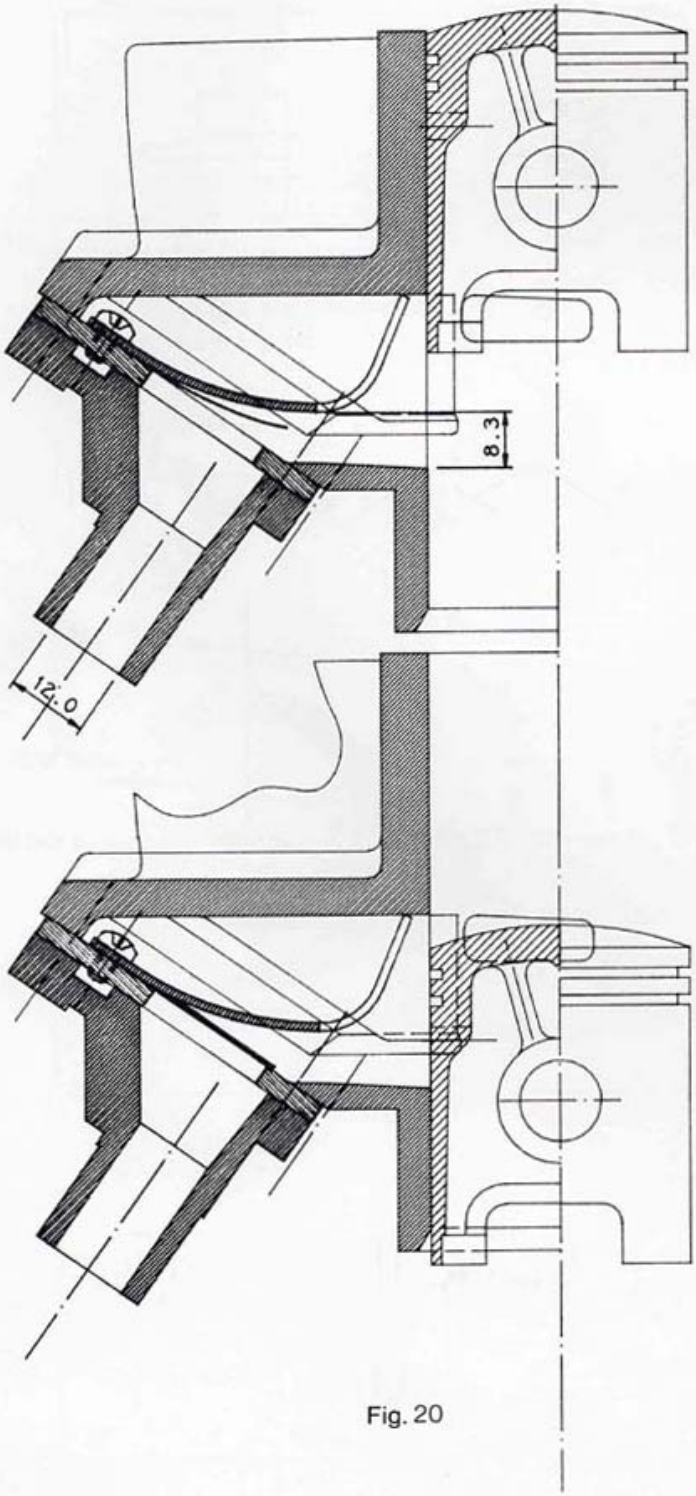


Fig. 19

Damage to reed valve may be caused also by steel material run-down (see function on fig.20, assy. parts - fig.21).



PISTON AT T.D.C.

PISTON AT B.D.C.

Fig. 20

NOTE:
Replacement of cpl. reed valve is suggested.

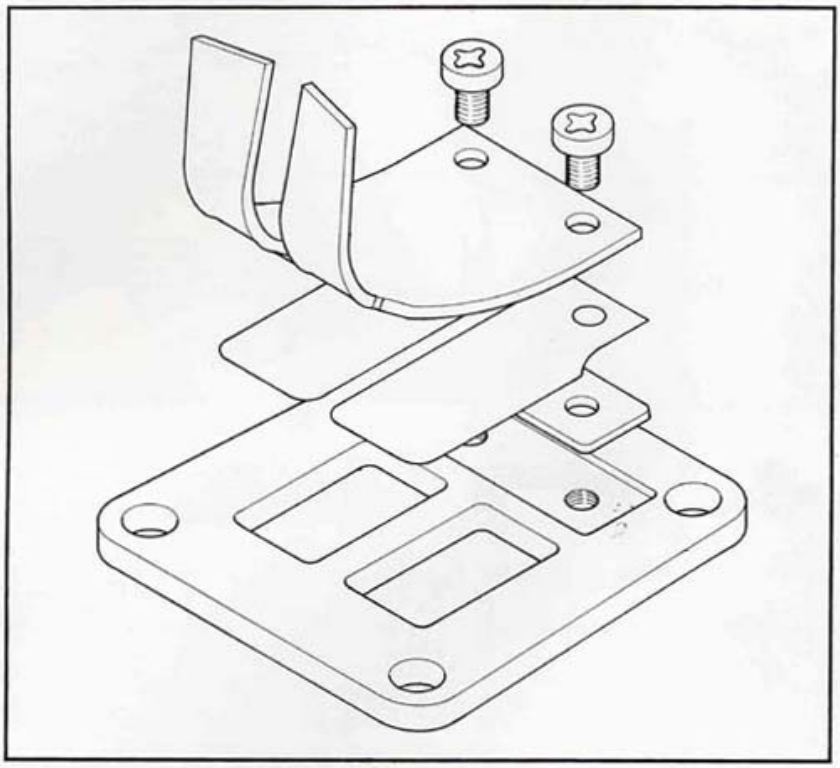


Fig. 21

Check conrod bending by help of two calippers (Fig. 22). Check the needle bearing clearance and bearing rolling surface for damage.

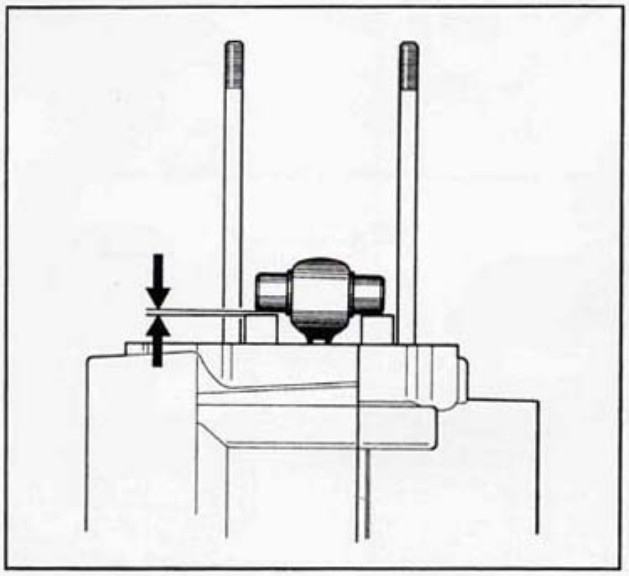


Fig. 22

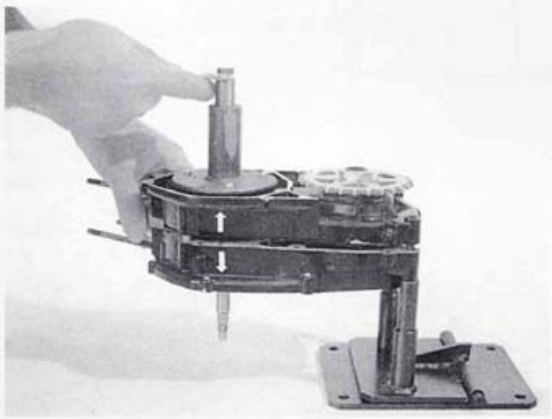


Fig. 23

Unscrew the crankcase halves connecting screws.
Install on the magneto side a case splitter tool 735.888 with the three magneto base plate fixing screw. With wrench 13 mm screw on the device A and detach both halves (fig.23).
Detach the crankshaft from the RH crankcase half with a plastic mallet (fig. 24). In case of remaining ball bearing on the crankshaft remove it with the extractor 731.155 (fig. 25).

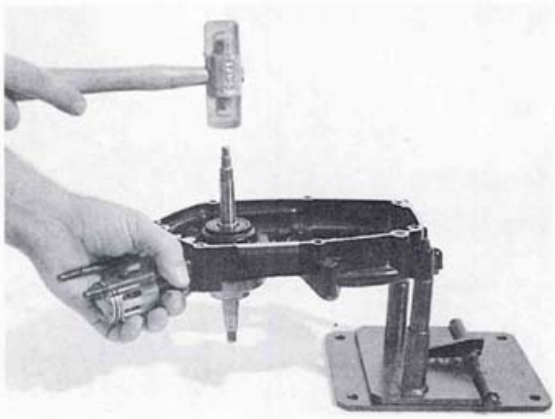


Fig. 24

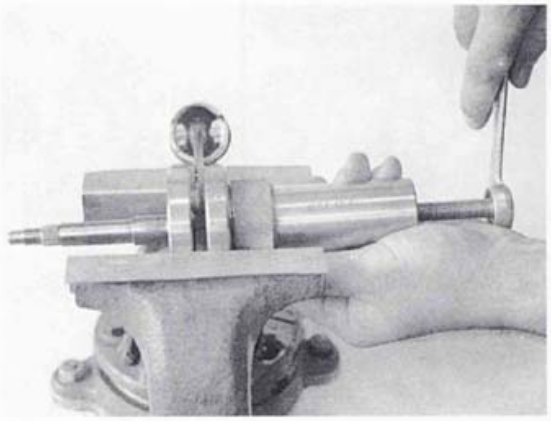


Fig. 25

Crankshaft Inspection

Check clearance of the conrod small and big end bearing assemblies.

Check the crankshaft between the center of a horisontal alignment tool and measure the out-of – round on all the points indicated in fig. 26.
Permissible out-of-round snould be within 0.02 mm (0,008 in) at check points 2 and 0.01 mm (0.004 in) at check points 1 and 4. Check if the crankshaft conical part is damaged, inspect the thread on semiaxles and the key-way.

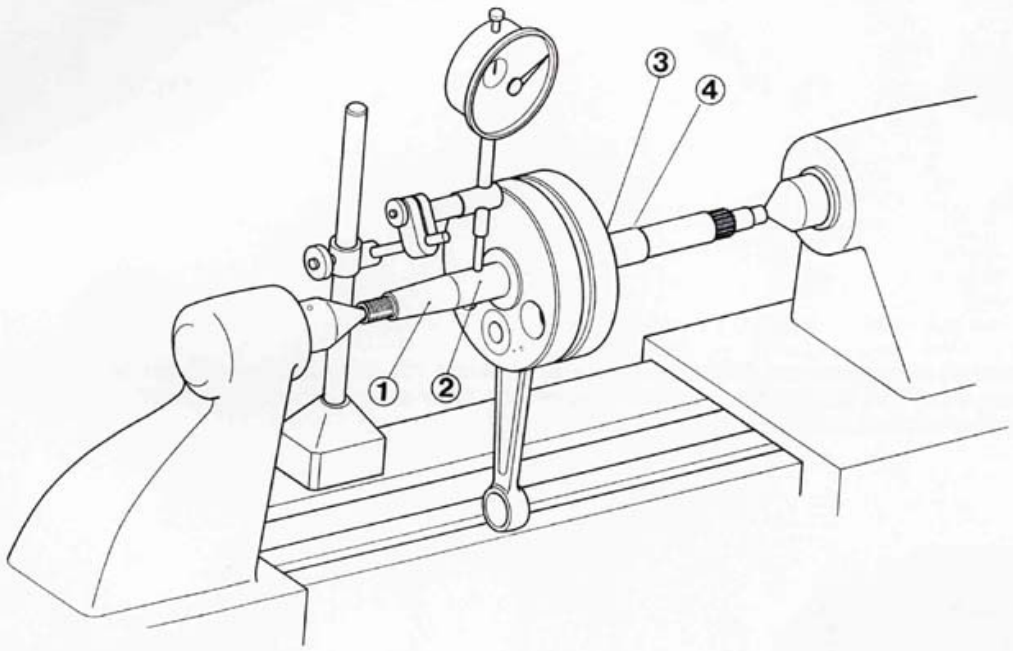


Fig. 26

Note
As required, centering is only carried out with a copper hammer, grip pliers and two levers.

Check both crankcase halves for possible damages or distorsions, particularly the joint surfaces, to avoid later leaking of oil from gearbox.
Check all bearings, if clearance is noticed, the bearings must be replaced.
Remove seal rings by screwdriver. For disassembly of ball bearings and seal rings assembly alternatively use a pressing pin 702.856 (fig. 27 and 28).

Fig. 27

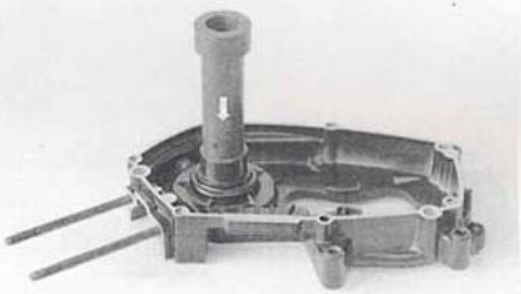


Fig. 28

Crankshaft is impressed in crankcase halves by extractor 735.888 actuating with screw B (fig. 29 and 30) - wrench 24 and 13. In case of machine press assembly is necessary a use of crankshaft insert forks 735.753 to prevent crankshaft deflection.

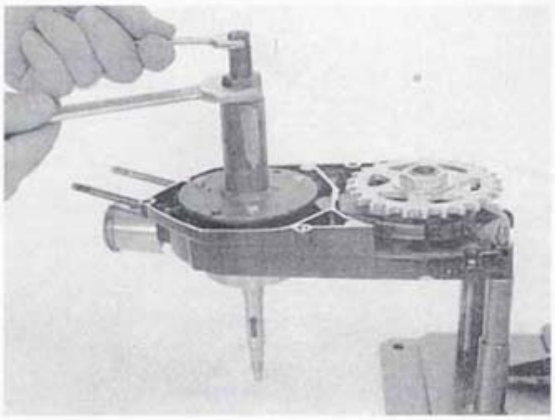


Fig. 29

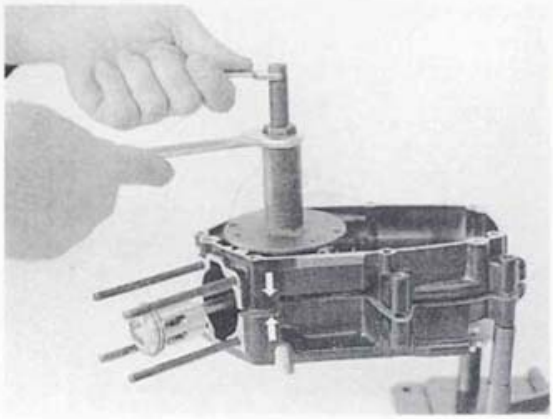


Fig. 30

In case of mainshaft toothing damage replace it. Slacken the chain sprocket nut by a wrench 30 mm and using the special tool 732.202 (fig. 31). Knock out the mainshaft by plastic mallet.

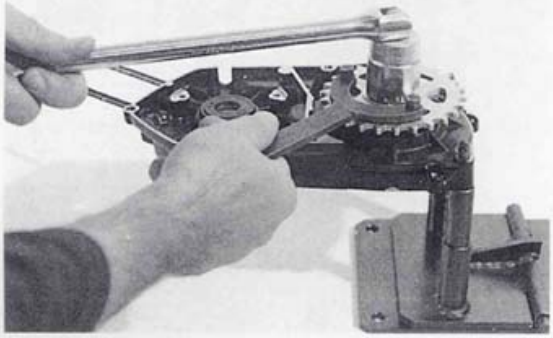


Fig. 31

In case of needle bearings or seal ring (incorporated in first needle bearing, code 035.502) damage knock out them by suitable tool but pay attention not to damage bearing lying surface on mainshaft.
Pay attention on sequence assembly of needle bearings (fig. 32) by machine press tool and special tool 732.367.

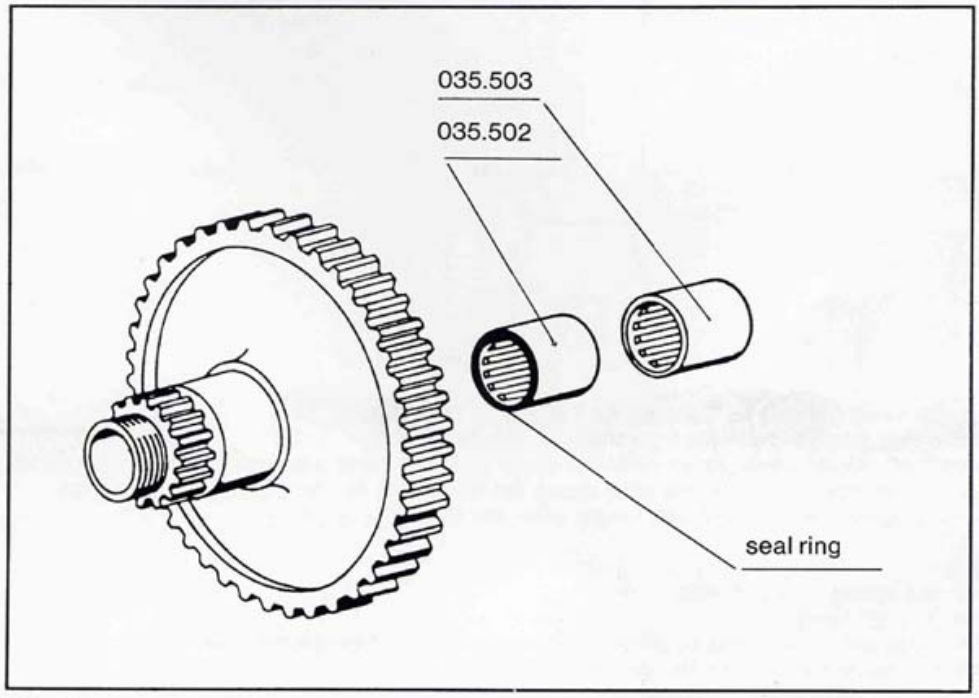


Fig. 32

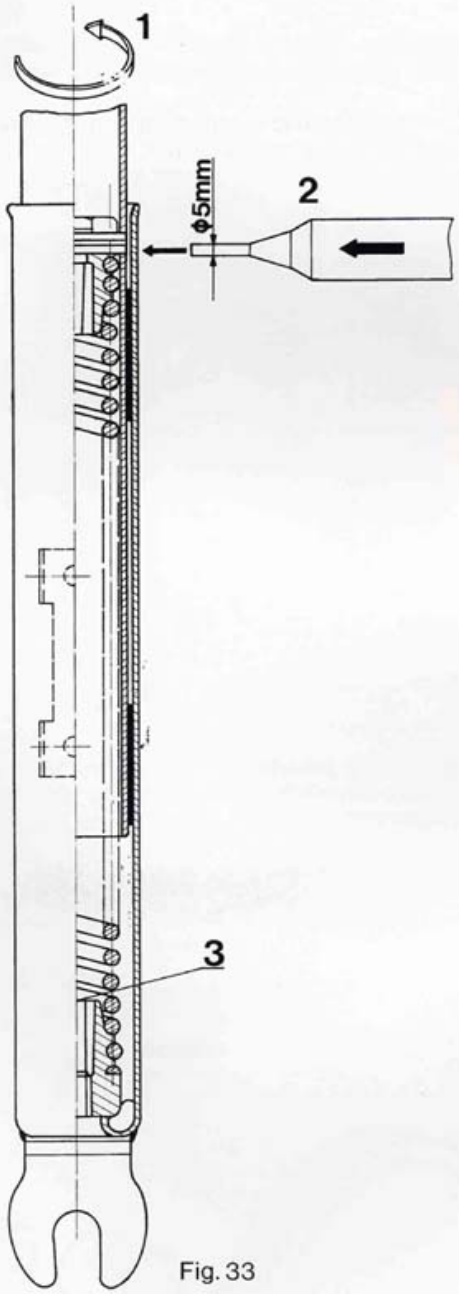


Fig. 33

The front fork lower leg can be removed as it is shown in fig. 33.
- by unscrewing remove lower leg from the front fork (fig.33/1)
- the spring will remain attached either to the upper or to the lower screwed plug - remove by unscrewing
- the upper plug should be removed after taping out the elastic pin (fig.33/2)
- the lower plug can be removed with longer allen key (9 mm), (fig.33/3)

Checking:
Lenght of new spring: L = 215 mm
Wear limit: L = 200 mm
Check the outer and inner surfaces of the stanchions for sign of excessive wear.
Check for excessive play and for the straightness of the fork legs.
Reassemble in reverse order of dismantling.
The spring and sliding surfaces should be greased with water resistant grease (LIS 2)

Wheels are cast aluminium alloy type. No special maintenance is required as usual ball bearings greasing and wear checking.
Brakes are drum type (fig. 34) thus there is a periodically need of linings dust (non asbestos) cleaning; cable controls, brake operating cam and brake shoes support pin greasying. Disassembly of brake shoes is easier with pliers - special tool 736.913.

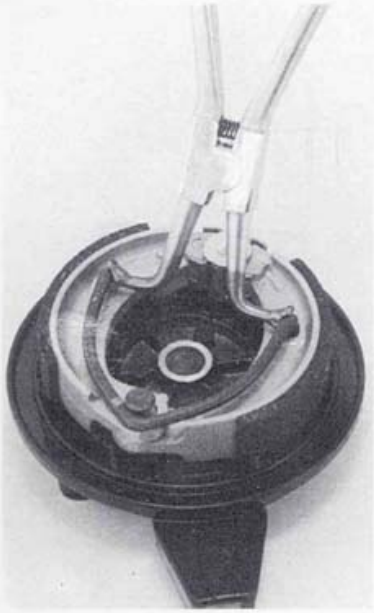


Fig. 34

After assembly or repair of models with oil pump you must keep to the following instructions:
The pump is connected to the magneto nut on the crankshaft by a special clutch.

- Unscrew the bleed screew on the oil pump and wait until oil from the tank under the seat flows to the pump. The screw is then screwed on (fig. 35).
- Pour approx. 1 l gas mixture in the ratio od 1:50 (2% oil) into the fuel tank and start the engine. Let the engine run of for approx. 5 min so as to make the oil pump push oil to the engine.
- Fill up the fuel tank with regular gas.
  Take care lest oil level in the oil tank does not fall under the marking MIN. Pay special attention to the routing of the oil lines to and from the oil pump. If the outflow line is crimped, oil will not reach the carburetor causing severe engine damage.

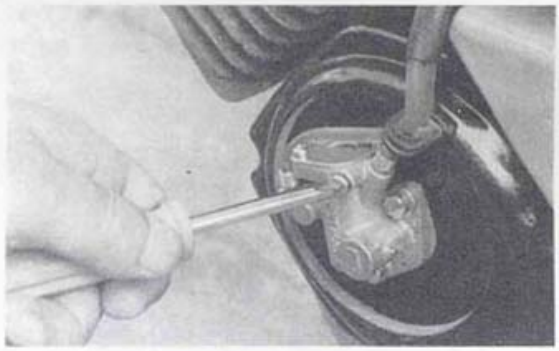


Fig. 35