SXV 450 – 550
Van Den Bosch Replica

SUMMARY TABLE WITH TECHNICAL DATA

FRONT FORK	
Type	Marzocchi Shiver 50
Travel	267mm
Std. adjustment hydraulic brake under compression	20 clicks from all closed
Std. adjustment hydraulic brake under extension	20 clicks from all closed
Steering angle with centred bushings	25°
Steering angle with eccentric bushings	24° - 26°
Fork offset with centred bushings	14mm
Fork offset with eccentric bushings	11mm - 17mm
REAR SHOCK ABSORBER	
Type	Mono Sachs racing
Travel	120mm
Std. spring elasticity (K)	5.8 kgf/mm
Std. adjustment hydraulic brake under compression at high speed	10 clicks from all closed
Std. adjustment hydraulic brake under compression at low speed	15 clicks from all closed
Std. adjustment hydraulic brake under extension	20 clicks from all closed
STM CLUTCH	
Calibration of primary standard spring SXV VDB 450 (wet race)	120 kg
Calibration of primary supplied spring SXV VDB 450	130 kg
Calibration of secondary standard spring SXV VDB 450 (wet race)	30 kg
Calibration of secondary supplied spring SXV VDB 450	40 kg
Calibration of primary standard spring SXV VDB 550 (wet race)	130 kg
Calibration of primary supplied spring SXV VDB 550	140 kg
Calibration of secondary standard spring SXV VDB 550 (wet race)	30 kg
Calibration of secondary supplied spring SXV VDB 550	40 kg
Wear limit clutch pack	35.00mm
PINION/SPROCKET	
Standard pinion SXV VDB 450	z=13
Supplied pinion SXV VDB 450	z=14
Standard sprocket SXV VDB 450	z=45
Supplied sprocket SXV VDB 450	z=44, z=46
Standard pinion SXV VDB 550	z=15
Supplied pinion SXV VDB 550	z=14
Standard sprocket SXV VDB 550	z=46
Supplied sprocket SXV VDB 550	z=45, z=47

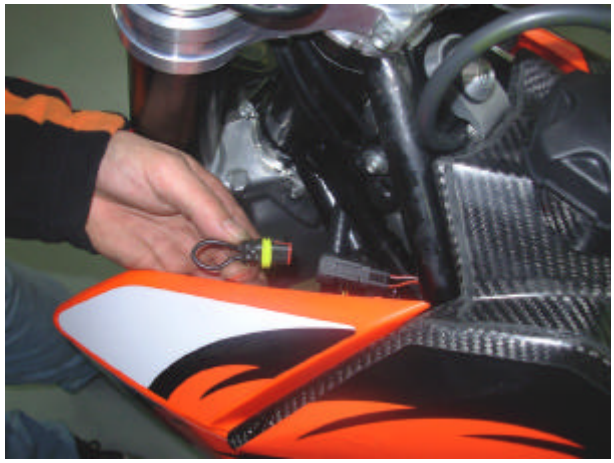
STARTING THE VEHICLE

This vehicle, having been designed for exclusive use in competitions, is equipped with a small and lightweight battery, sufficient for amperages needed during warm start-ups and for the normal operation of the engine.

For cold start it is necessary to use the external battery that comes with as an accessory to the vehicle.

- Remove the saddle.
- Disconnect the jack from the regular battery and connect it to the external battery.

- Feed the injection circuit of the vehicle by connecting the key jack on the handlebar.



- Start the engine using the ignition button on the right side of the handlebar.

- With the engine running, disconnect the external battery and reconnect the installed battery.
- To turn off the vehicle just press the off button on the left side of the handlebar.

WARNING
After use the key jack has to be disconnected.

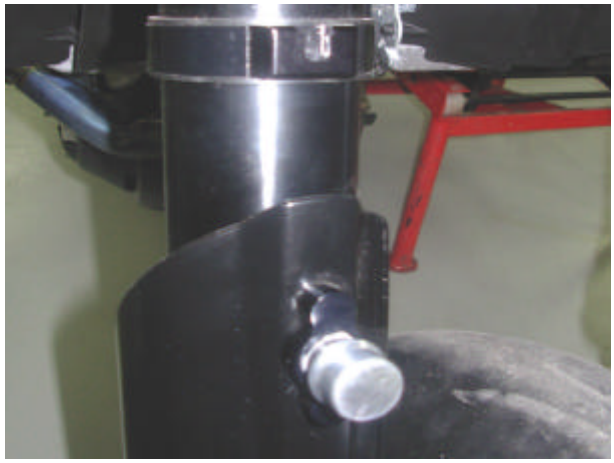
REMOTE ADJUSTMENT OF THE POSITION OF THE FRONT BRAKE LEVER

- The vehicle is prearranged for a remote adjustment of the distance of the front brake lever from the handlebar.

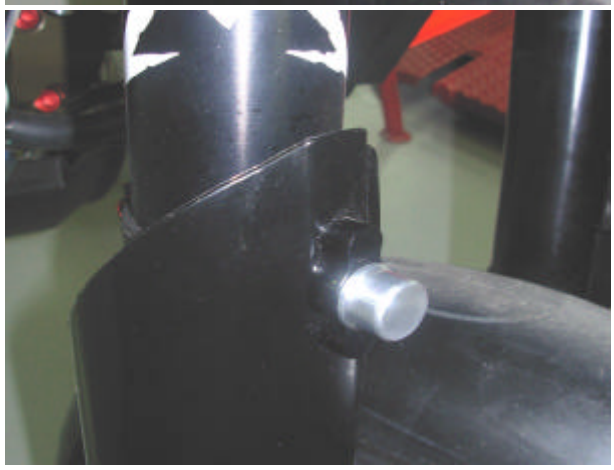
- Use the adjustment knob on the left handlebar until the desired distance is obtained.

STARTING DEVICE

- The vehicle is set up for locking the fork under compression as a launch control.
- Press the fork all the way.

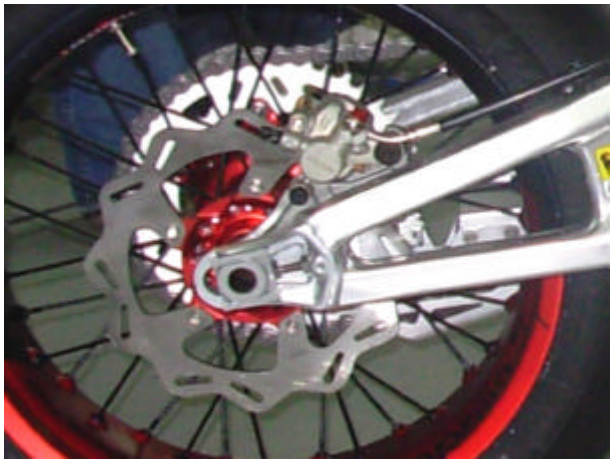


- Press on the locking pin.
- Release the fork so that the pin engages on the slot of the ring mounted on the fork.
- Release the pin.



ASYMMETRIC CHAIN TENSIONER PADS

- The vehicle is provided with two different chain sprockets.
- It is possible to replace the chain sprocket and to rotate the chain tensioner pads without having to adjust the slack of the chain again.



- Mount the chain tensioner pads in the direction indicated when installing the sprocket with more teeth.

- Mount the chain tensioner pads in the direction indicated when installing the sprocket with less teeth.

WARNING
Changing the direction of the chain tensioner pads corresponds to 1 tooth of the sprocket.

FRONT FORK

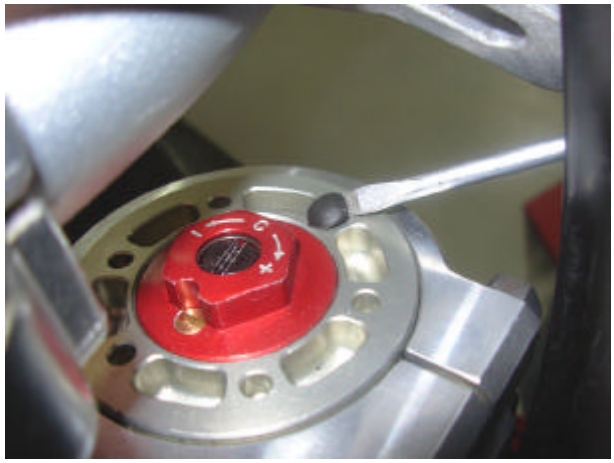
ADJUSTMENT OF THE HYDRAULIC BRAKE

- In order to adjust the hydraulic brake under compression operate on the screw shown to the side.

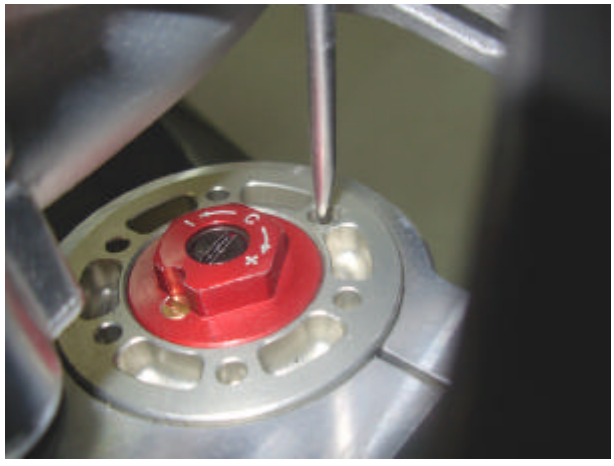
- In order to adjust the hydraulic brake in extension operate on the screw shown to the side.

DE-AERATION OF THE FRONT FORK

- To extract the air from the clutch stem, remove the dust cap on each one of the fork legs.

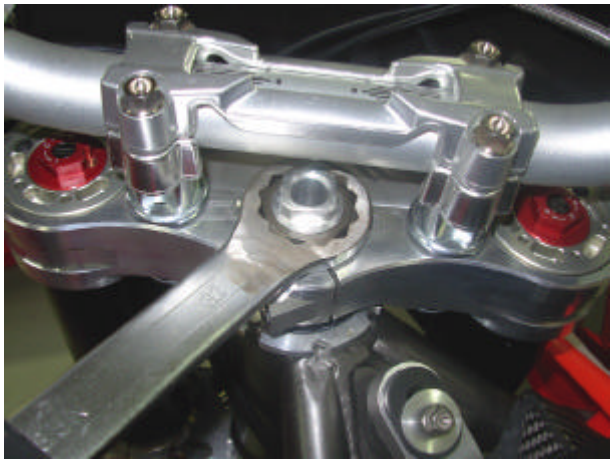


- With the help of a screwdriver open the bleed valve until the air inside is completely expelled.

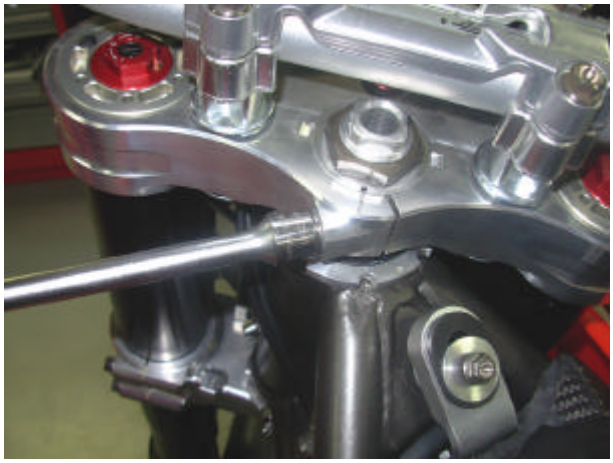


ADJUSTMENT OF THE STEERING ANGLE

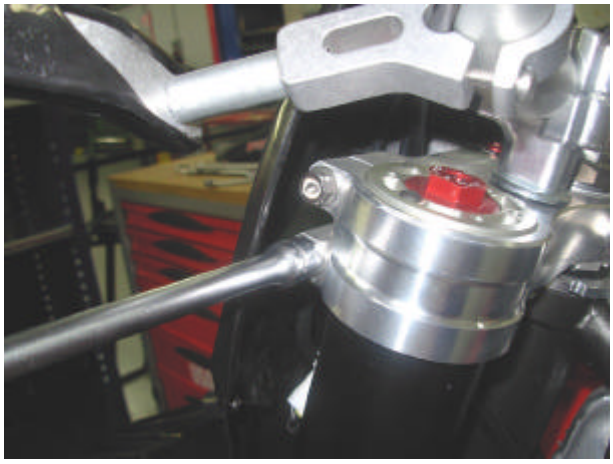
WARNING
To adjust the steering angle the eccentric bushings must be first assembled.



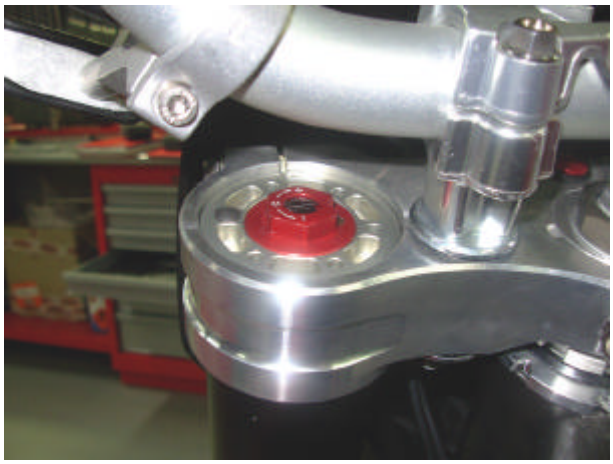
- Loosen the headstock nut.



- Loosen the screw that closes the upper plate.

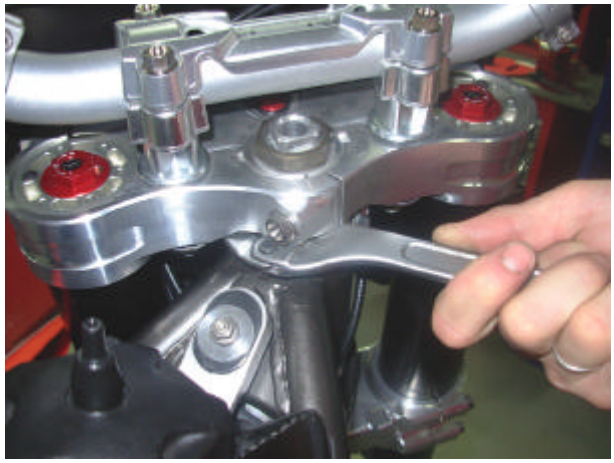


- By operating on both fork legs, loosen the tightening screws on the upper plate.

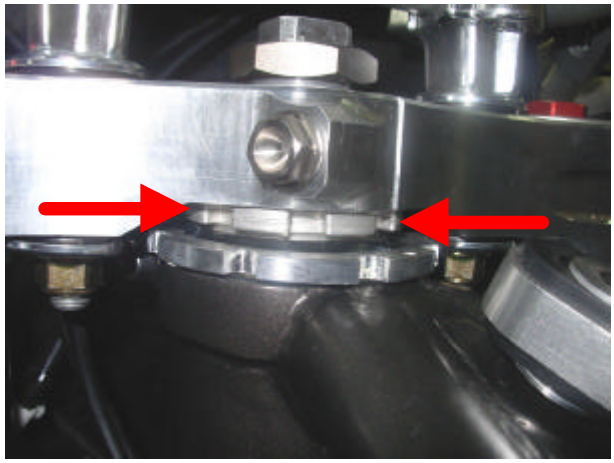


- Slightly lift the upper plate, by pulling it out by a few millimetres from the fork legs.

- Using a hook spanner, loosen the bearings preload ring nut.



- The ring nut to work on is the upper one, immediately below the steering plate.



WARNING
At this stage do not work on the ring nut for adjusting the steering angle, located immediately under the bearings preload ring gear.

- Loosen the screw that locks the lower eccentric ring nut.

- Loosen the screw that locks the upper eccentric ring nut.

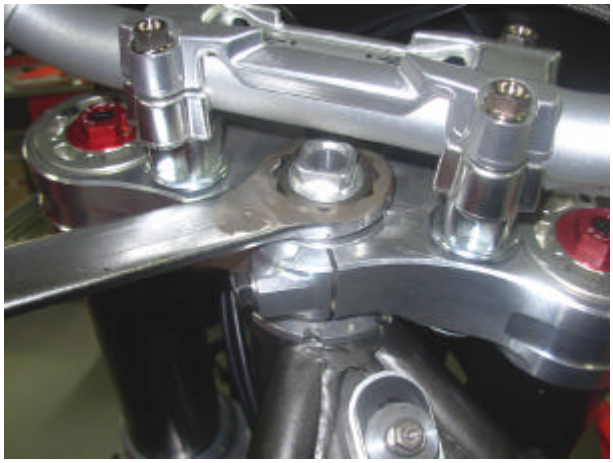
- Using a hook spanner, turn the upper eccentric ring nut by 180°.

WARNING
Accurately line up the notch on the ring nut with the point where the tubes of the frame meet (vehicle axis).

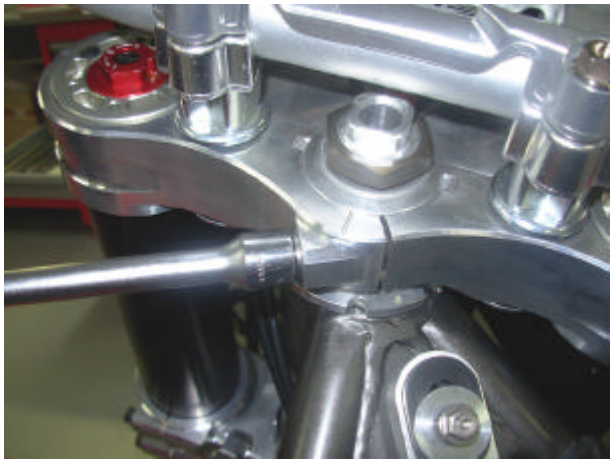
- Restore the vehicle following, in reverse, the procedure just described.

FORK OFFSET ADJUSTMENT

- Loosen the headstock nut.

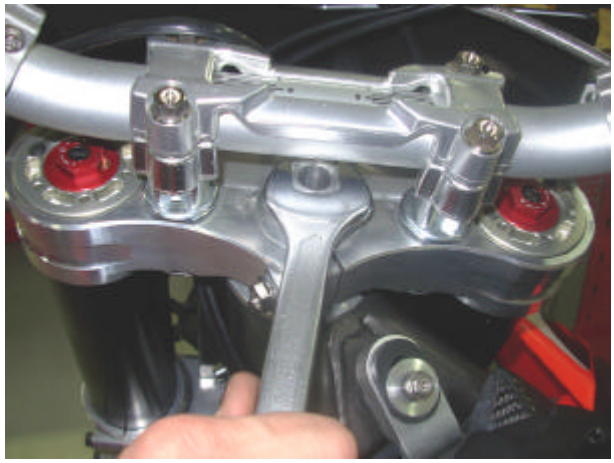


- Loosen the screw that closes the upper plate.

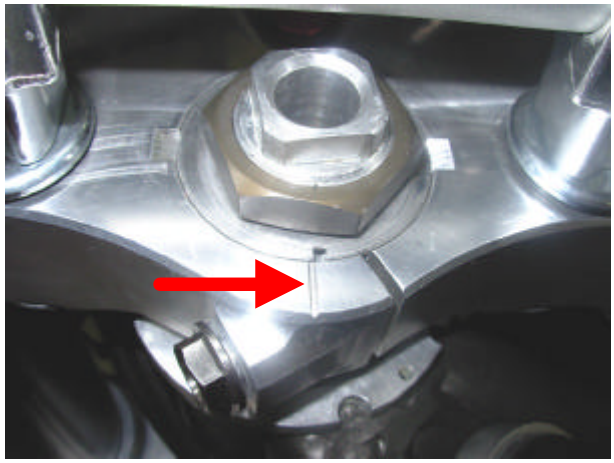


- Loosen the screw that closes the lower plate.

- Operating on the square drive nut, turn the headstock strut by 180°.

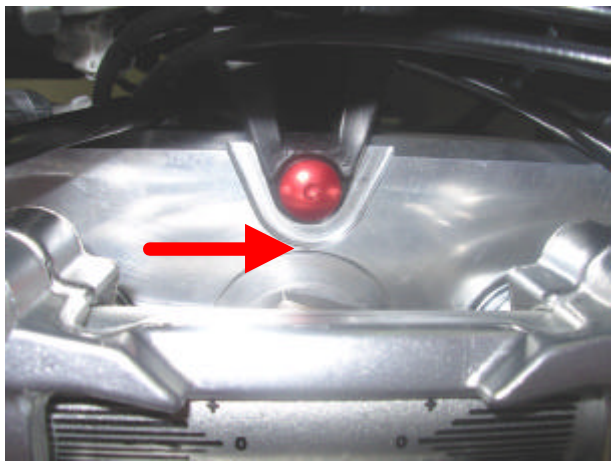


- Minimum offset reference.



WARNING
Precisely line up the notch on the eccentric bushing with the reference on the steering plate.

- Maximum offset reference.

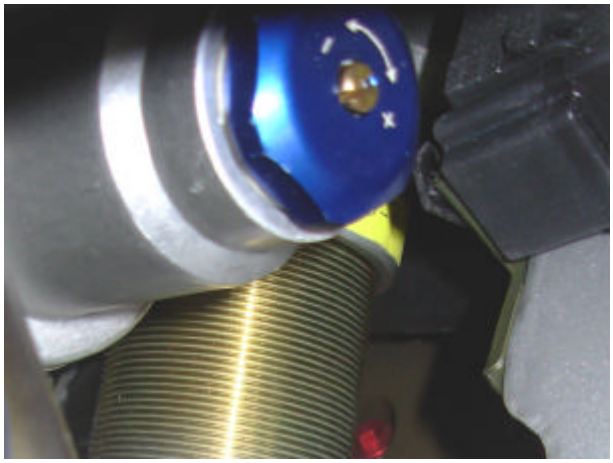


WARNING
Precisely line up the notch on the eccentric bushing with the reference on the steering plate.

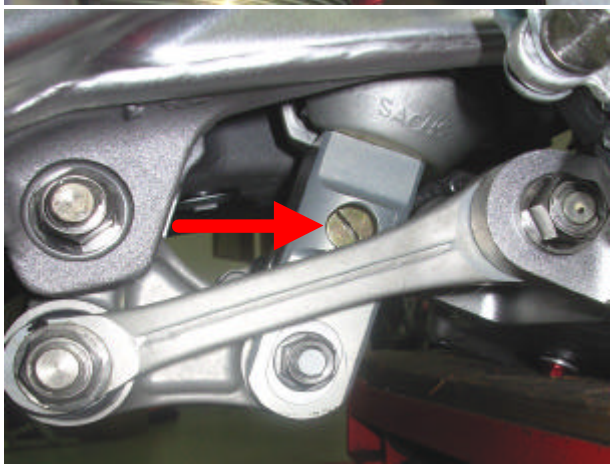
REAR MONO-ABSORBER

ADJUSTMENT OF THE HYDRAULIC BRAKE

- In order to adjust the hydraulic brake under compression turn the gold screw inside the blue knob.
- To adjust the threshold of intervention of the bypass valve (hydraulic brake in high speed compression) operate on the blue knob.

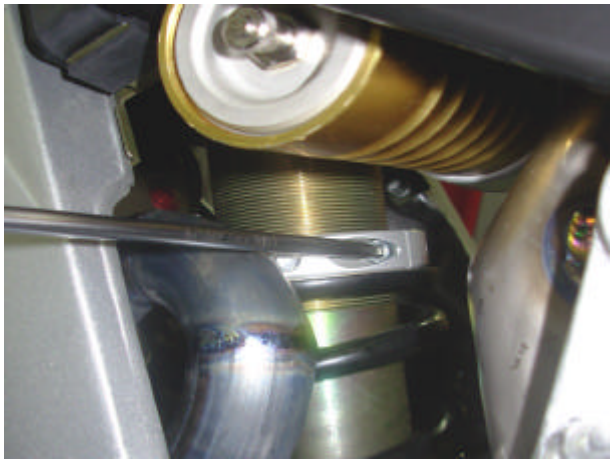


- In order to adjust the hydraulic brake in extension operate on the screw shown to the side.

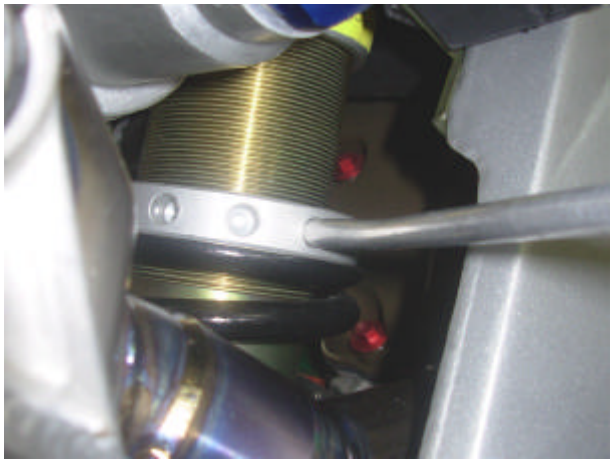


SPRING PRELOAD ADJUSTMENT (NEGATIVE)

- Loosen the locking screw of the spring pre-load adjustment ring.

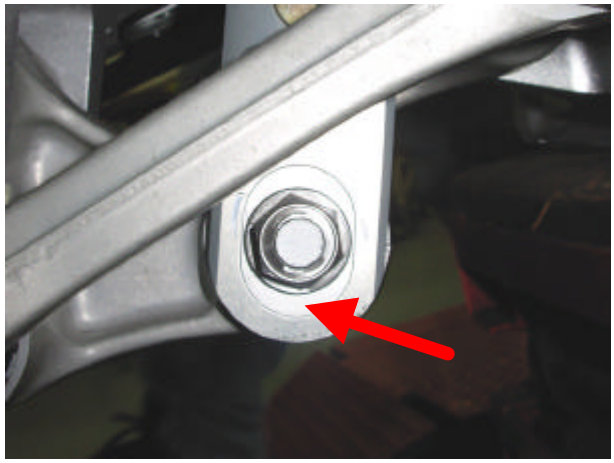


- Using the adjustment pin provided, act on the ring nut until the desired spring preload is obtained.
- At the end of the operation, tighten the locking screw.



ADJUSTMENT OF THE VEHICLE HEIGHT

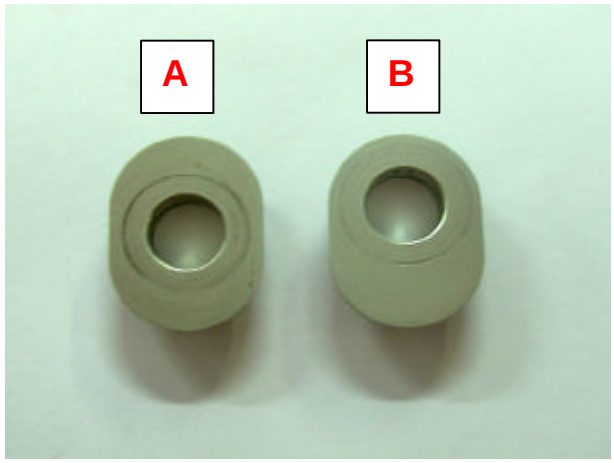
- The height of the vehicle can be adjusted on 3 different positions.
- The adjustment is obtained by replacing or by turning the position of the bushing shown in the picture.



- Two are the available bushings:

  A: Bushing for medium height

  B: Eccentric bushing for max. or min. height (depending on the direction of the assembly)



ANTIHUPPING CLUTCH

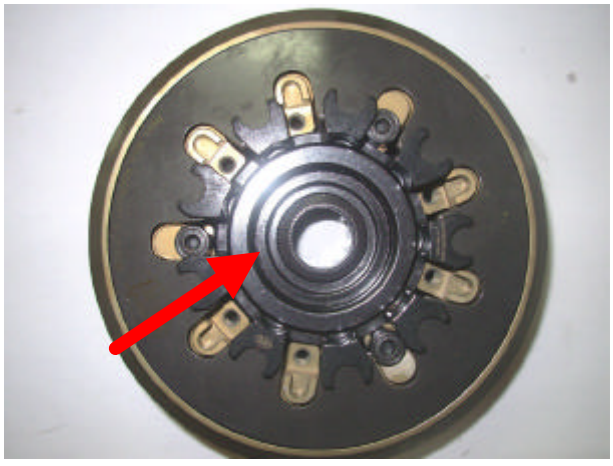
DISASSEMBLY OF THE CLUTCH FROM THE ENGINE

- Remove the six screws that secure the ergal flange.

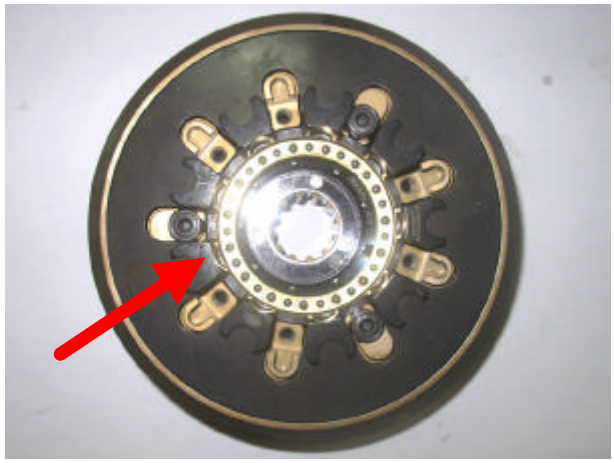
- Remove the ergal flange.

- Lock the clutch with the lock wrench (provided) and remove the nut.
- Pull out the clutch unit from the main shaft of the gear box and continue the disassembly on the bench.

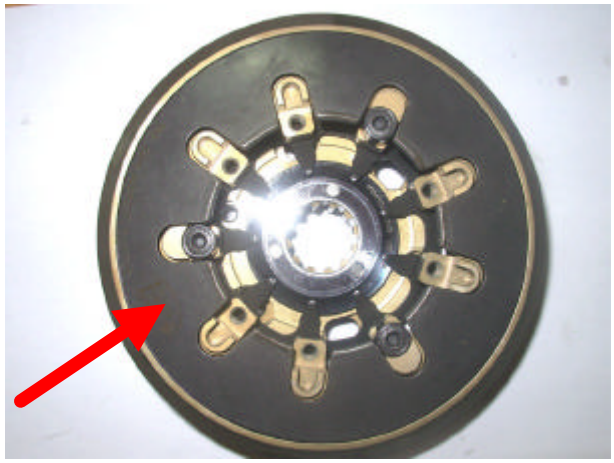
- Remove the central cup.



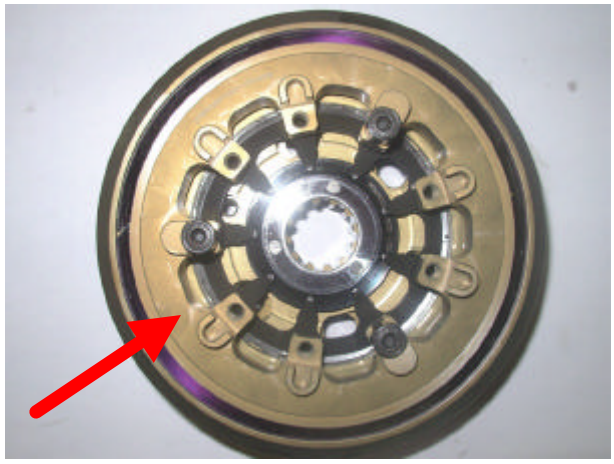
- Remove the thrust ring.



- Remove the outside spring.



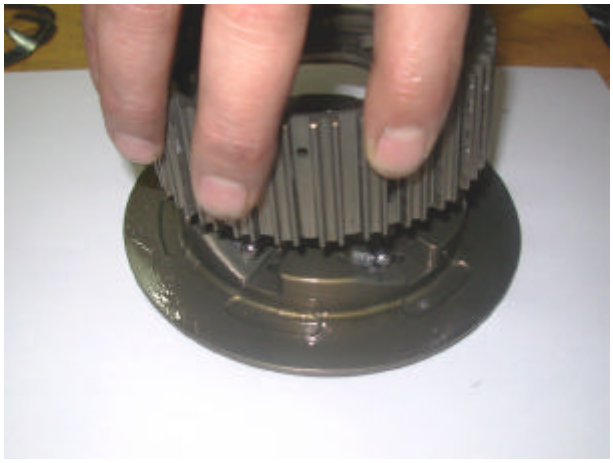
- Remove the clutch pressure plate and the complete pack of disks.



- Remove the inside spring.

- Remove the ring.

- Remove the disc drum



- Remove the six steel balls.

WARNING
The steel balls have to be greased before reassembly.

- The two springs can be replaced with springs with a different elastic constant K to adapt the response of the clutch to its requirements.