



**Motorcycle
Electronic Cruise Control
Repair Manual ©**

Removing the MCS850 Electric Throttle Servo for service

17 July 2024

MOTORCYCLE CRUISE CONTROLS

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WARNING: - Always ensure the bike is properly supported on the side or centre stand and cannot accidentally fall off either stand.

Locate the throttle servo on the motorcycle. Refer to your cruise control installation manual for assistance in finding where the throttle servo is located and removing fairing panels or whatever is necessary to remove the servo from the motorcycle.

Once you have found the servo (arrowed) determine how to un-mount it from the motorcycle. Refer to the installation manual for assistance.

In this case it is mounted with two large hose clamps.

In some cases you can disconnect the cable and nose from the servo with it mounted, in other cases you may have to un-mount the servo first.



Follow the electrical wire from the servo and disconnect the four-way connecting plug.

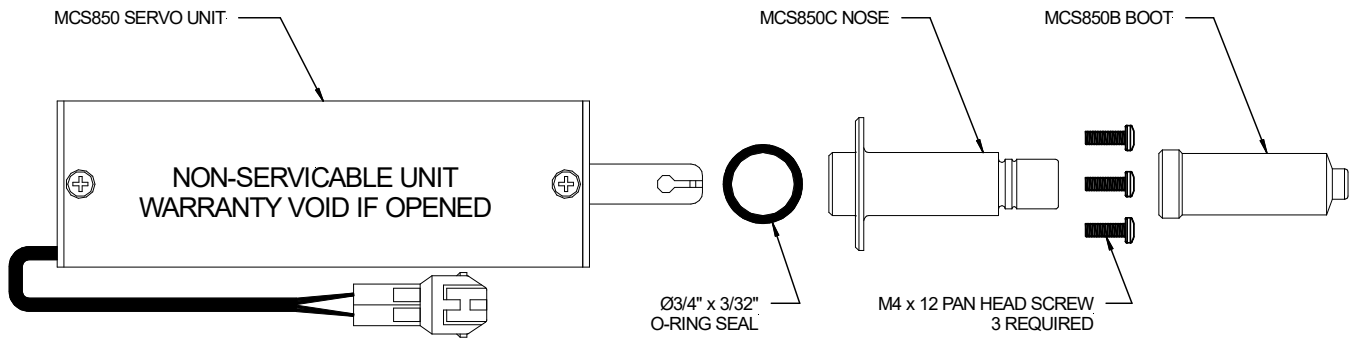


The following drawing shows the various components of the throttle servo not including any mounting hardware such as brackets and hose clamps.

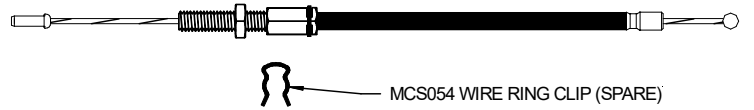
Unless any components are visibly damaged, the only part that needs to be returned for repair is the MCS850 Servo Unit.

If we are sending a replacement servo, this is what we will send, it will not have any of the other components supplied unless you specifically request them.

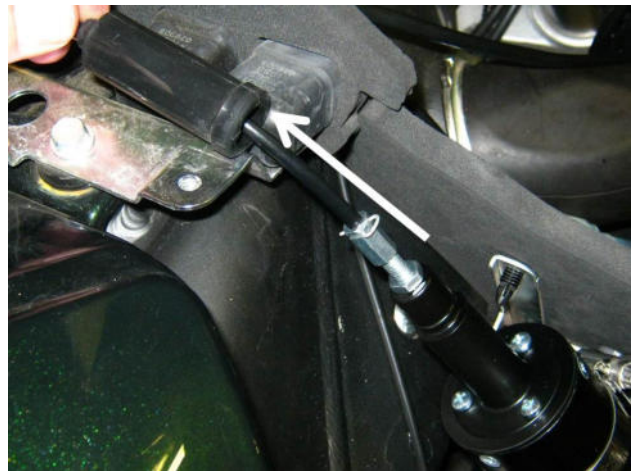
MotorCycle Cruise © - MCS850 throttle servo removal



MCS SERVO CABLE ASSEMBLY



Slide the rubber boot off the servo nose and up the servo cable so you can access the adjuster.

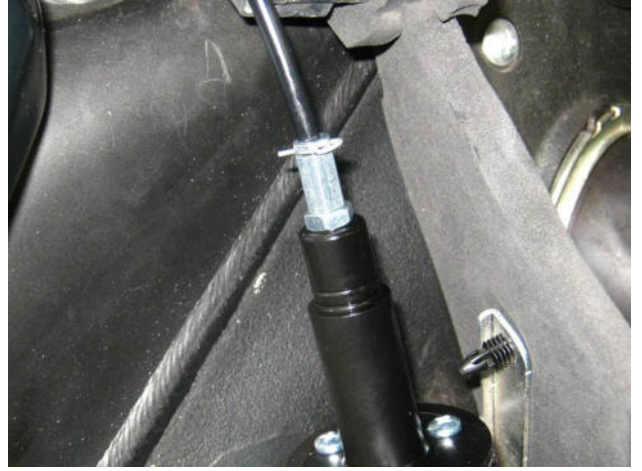


Remove the cable retaining clip.



Screw the adjuster all the way in (no thread visible) to give as much free play in the cable as possible.

Push the cable firmly into the adjuster and replace the retaining clip.



Undo and remove the three screws in the **end** of the servo.

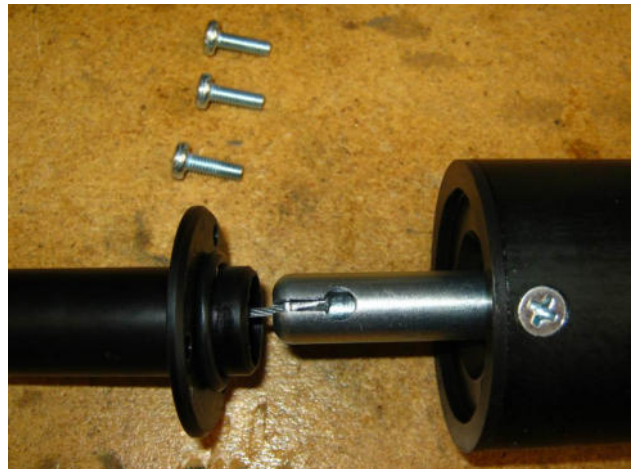
CAUTION: - Do NOT undo the three screws around the outside diameter of the servo.



Pull the servo nose away from the servo.

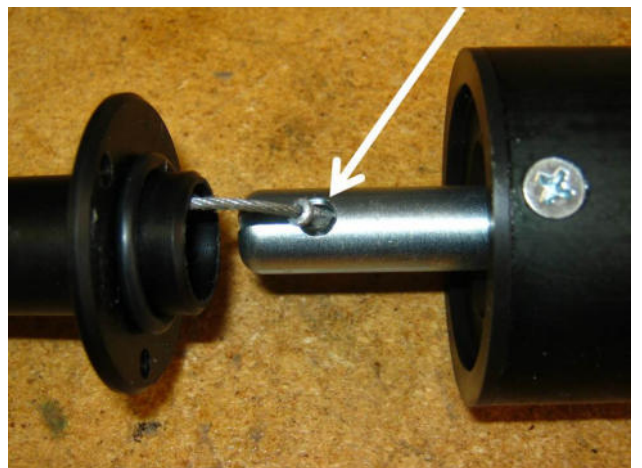
There will be tension on the cable as you pull the nose away from the servo. Pulling the cable will open the bike's throttle.

Take care not to dislodge the rubber 'O' ring on the nose.



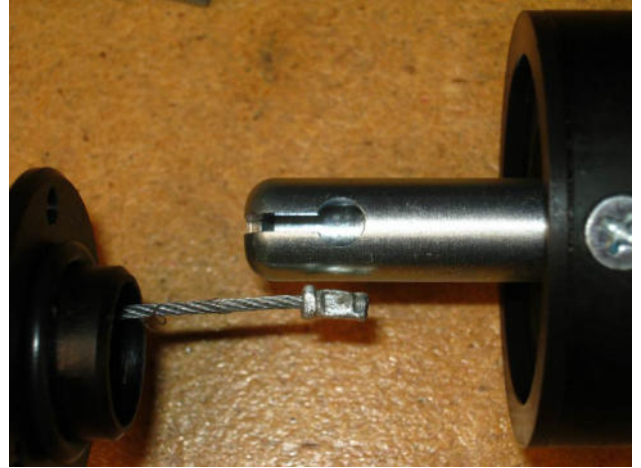
Get an assistant to apply and hold full throttle using the twist grip. This will release the tension on the servo cable.

'Unhook' the cable nipple from the 'lost motion device' in the servo.



The cable disconnected from the lost motion device.

Gently release the throttle grip so it can return to the idle position. The servo cable will retract into the servo nose as the throttle is released.



Remove the throttle servo from the motorcycle.

Take care not to lose the three screws that mount the nose to the servo and the 'O' ring fitted to the nose.

If you intend to ride the motorcycle with the servo removed:

Make sure the adjuster is screwed into the servo nose and the lock nut is tightened.

Make sure the cable is fully inserted into the adjuster and the cable retaining clip is fitted properly.

Fit the rubber boot to the servo nose correctly.

Tape over the open end of the servo nose so the servo cable nipple cannot come out and jam the throttle open.

Apply two or three layers of tape from one side around the open end to the other side of the nose.



Then wrap tape around the nose to hold the ends of the first pieces in place.



WARNING: - Tape over the end carefully and thoroughly. It is crucially important that the nipple on the end of the cable cannot protrude past the end of the nose, and also that it is not possible for an object to fall into the nose and jam the cable.

This will hold the 'O' ring as well so it won't fall off and be lost.

Secure the servo nose and servo cable to something solid on the bike using cable ties or other suitable devices.

WARNING: - All of these points must be observed to prevent a cable jam.

NOTE: - FOR SERVICE REPAIRED SERVOS.

The first production run of these servos used M4 x 12 screws (arrowed) to retain the nose of the servo.

Subsequent runs of the servos changed to larger M5 x 12 screws.

When you receive your repaired and updated servo back, the holes for these screws will be tapped with an M5 thread, and new M5 x 12 screws will be supplied with the servo.



The holes in the servo nose (still fitted to the bike) may be too small for these screws. It is necessary to CAREFULLY drill these holes with a 5 to 5.5 mm (13/64" to 7/32") diameter drill bit.

CAUTION: - Drill at high speed to prevent the drill 'catching' in the plastic while enlarging these holes.

CAUTION: - To prevent water entry into the servo:

Apply suitable 'O' ring grease to the 'O' ring when installing the servo nose to prevent water entry. Apply a thread locker/sealant to the threads of the 3 screws. The screw holes are NOT blind holes, they lead into the servo. If suitable thread locker or sealant is not used when installing these screws, water can enter the servo via the threaded holes causing the servo to fail. Use Loctite 222 (low strength - pink) or 243 (medium strength - blue) or equivalent thread locking compound on the threads of the screws to seal them.