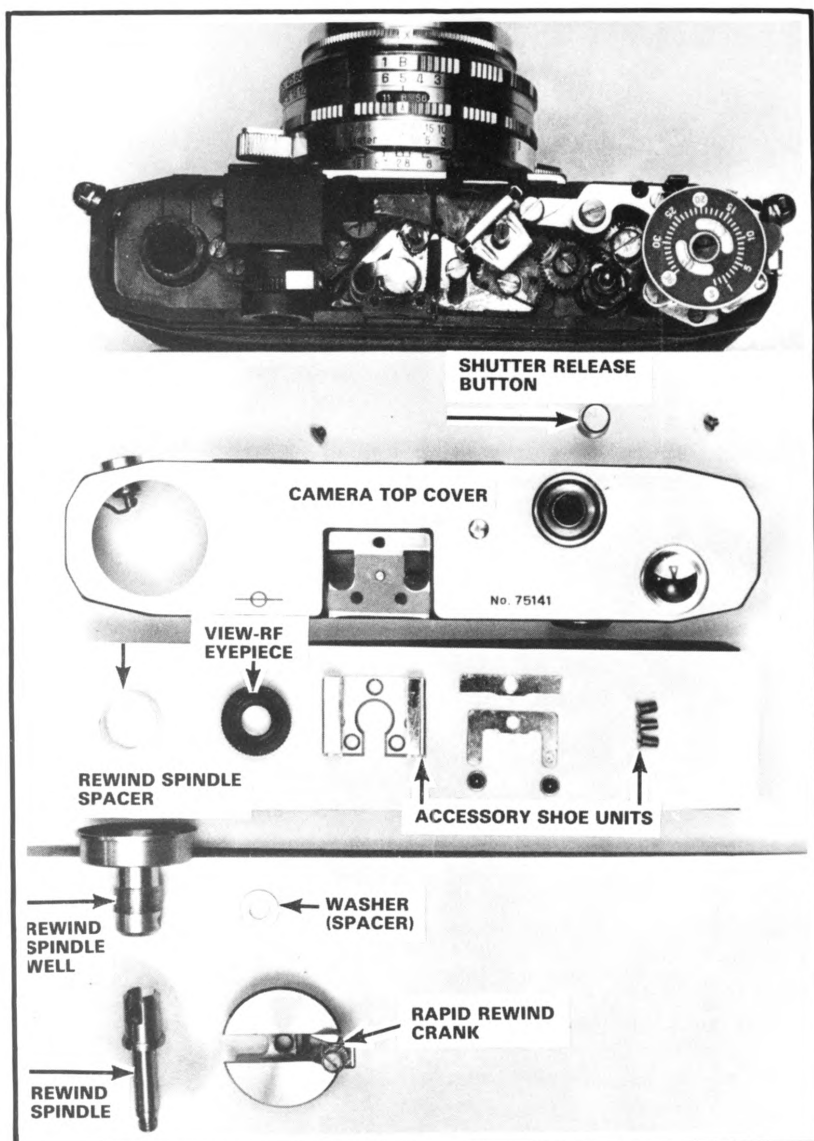




RICOH 500

By Bill Nehez

The front shutter blades on this Ricoh 500 were stuck together. Having no access to repair data on the camera, I first removed the top and bottom covers to view the front shutter attachment.

REMOVAL OF TOP COVER

Open the camera back and unscrew the rapid-rewind crank by inserting a screwdriver between the splines of the rewind shaft. Check for washers underneath the handle.

Unscrew the rewind spindle well using a spanner wrench. Remove the screw at the right end and the two screws at the rear of the accessory shoe. The forward screw holds the accessory shoe components together, photo 1, so it is not necessary to remove it.

During reassembly, don't forget to replace the two small pyramids that are at the back of the U-shaped spring plate. These pyramids protrude through holes in the shoe to give holding pressure for the flash gun shoe.

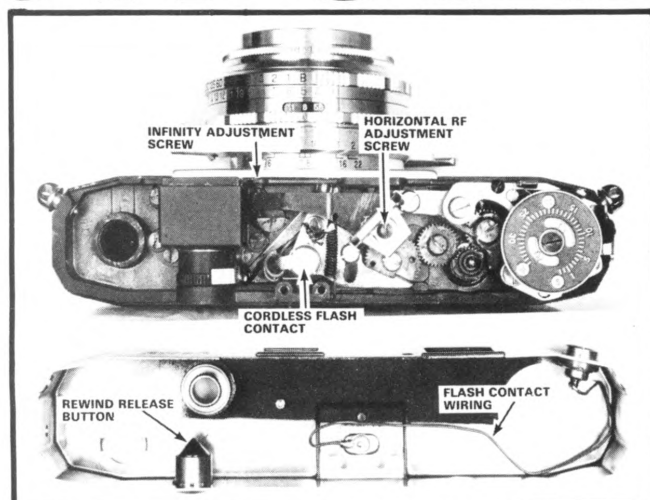


Photo 2

Do not remove the large chrome screw on the camera top; it is an access to the rangefinder horizontal adjusting screw. It is not necessary to remove the camera top to remove the shutter.

Photo 3 shows an enlarged view of the camera body upper mechanism and the underside of the camera top where you can see the circuitry from the PC contact to the accessory shoe.

Remove the bottom and back of the camera by rotating the two large locking discs. The large flat plate is the triggermatic action lever cover plate. Remove the two screws which hold it in place, and lift the plate off. Watch the motion of this mechanism as the triggermatic action lever transports the film and charges the shutter.

DISASSEMBLY OF FRONT SHUTTER

Set the front shutter at X-B and f/2.8 for reference upon reassembly. Loosen

the lock screw of the spanner flange from around the lens and remove the flange, photo 4.

Now lift off the MXV synchro setting and self-timer ring. Note the cutout on the underside of the ring that seats over the lug of the shutter coupling ring. Lift off the MXV collar. Note the extension underneath and the yoke visible within the shutter it sleeves into. Look for any spacer rings in this collar.

Lift off the MXV coupling ring; unscrew the front lens mount, and loosen the locking screw on the shutter cover plate. Then unscrew the serrated locking flange. Lift off the shutter-speed setting ring and the shutter-speed cam plate on the underside. For shutter testing purposes, the shutter-speed cam plate can be replaced and held down by threading on the serrated flange. As you do this, invert the flange so that the shoulder faces up.

If you have a shutter malfunction,

replace the cam plate and charge the shutter with the triggermatic action lever, photo 5. Trip the shutter with the body release and check the shutter action.

REMOVAL OF FRONT SHUTTER

With the camera back removed, unscrew the lens flange. Look for spacer under the flange. Now remove the shutter. Due to the "L" end of the shutter-body release lever, you will have to rotate the shutter counter-clockwise to clear the lever and swing the shutter away from the camera body. Check for spacers between the shutter and the camera body. Note the alignment pin on the shutter and the mating hole of the shutter support housing.

Remove the three screws, photo 6, and lift off the f/stop control ring. Note the hole on this ring which seats over the pin of the shutter-mechanism plate underneath. Feed the collar along the flash sync leads until it is out of the way. Also

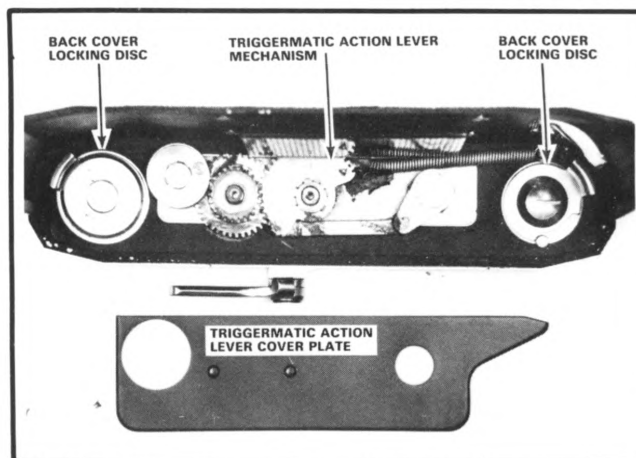


Photo 3

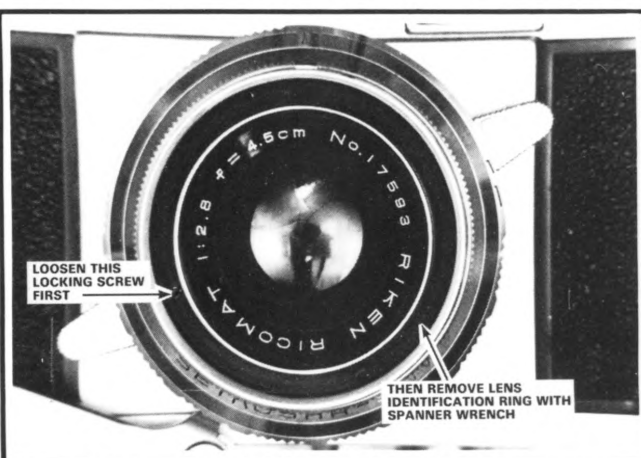


Photo 4

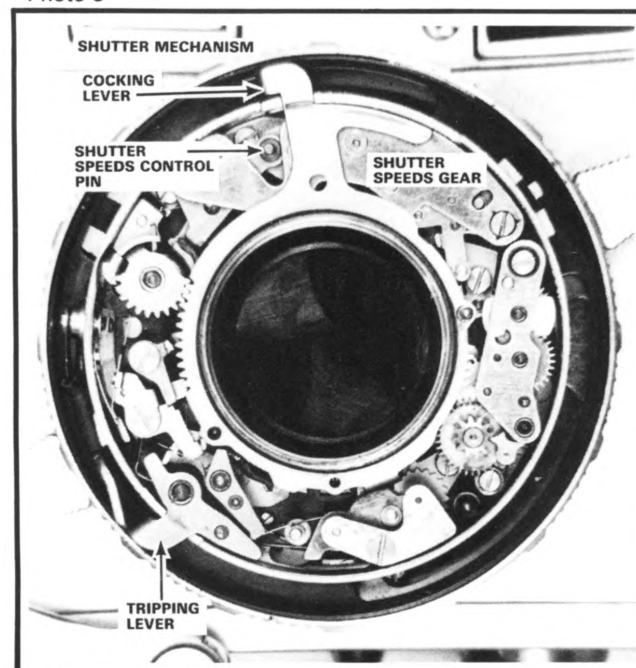


Photo 5

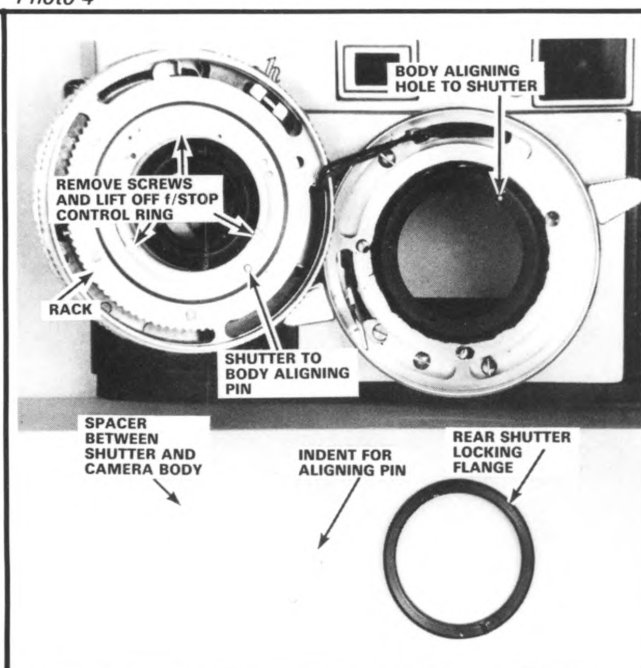


Photo 6

note the spacer ring between the shutter and the camera body. On it you'll find two cutouts used to clear the aligning pin.

Now lift off the MXV ring. You will feel a slight drag as you work it out because the MXV spring within the shutter housing rides on the control-ring lug. Together, the lug and spring hold the sync setting for the M, X or V, photo 7.

Remove the three screws holding the f/stop collar, and remove the collar, photo 8. With the front of the shutter disassembled down to the speed-control cam plate and the serrated flange, unsolder the red flash lead from the top contact and the black flash lead from the bottom contact.

With the shutter separated from the camera, remove the rear lens mount by first removing the rear lens element from the barrel. Then clamp a piece of hacksaw blade (straight edge up) into a vise. Place the slots of the lens barrel onto the

blade, and exert firm pressure to loosen the barrel from the shutter housing.

Immerse the shutter in cleaning solution until it covers the blade. Charge or trip the shutter by hand to clean all of the oil and grease deposits that have worked into the blades. If more disassembly is required, remove three screws on the rear of the shutter. Free the shutter mechanism from the housing. Check to see what springs may ride against the housing and make notes of anything else that may assist you in the reassembly of the shutter.

REMOVAL OF FOCUSING MOUNT

Photo 10 shows the order of ring disassembly from the rear of the shutter.

Set the focus to three feet. Remove two chrome screws now visible through cutouts and one brass countersunk screw. Rotate the mount slightly counter-clockwise to clear the shutter trip lever end

REASSEMBLY

Replace the focusing mount assembly. The hollowed-out areas on the opposite sides of the body and lens/shutter opening allow clearance for the screws in the focusing-guide slots. Slip the flash leads through the top slot of the camera body through which the body charging lever projects.

Set the f/stop control ring in place over the focusing mount, photo 10. Sleeve the flash lead through the arc at the left and the trip lever and charging body lever through the top arc. Solder flash leads — red to top, black to bottom.

Place the f/stop indicator ring over the shutter assembly and flash wires onto the f/stop control ring, photo 10. Replace the three countersunk screws to the rear of the shutter.

Turn the shutter over so the front faces up, and replace the MXV control ring, photo 10. The extension with the hole in it

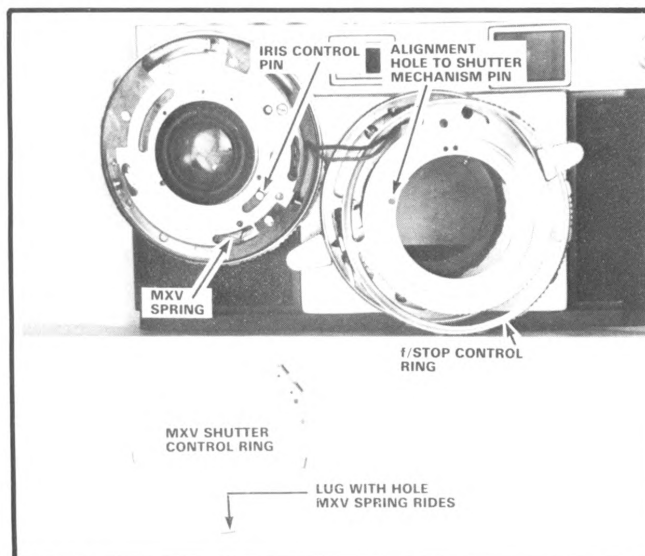


Photo 7

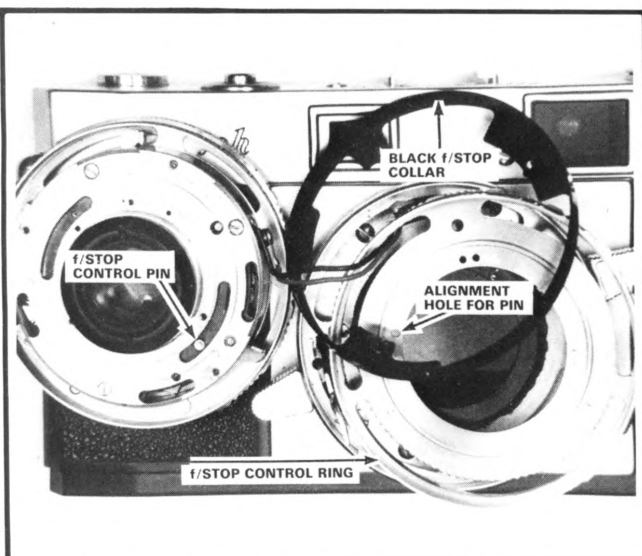


Photo 8

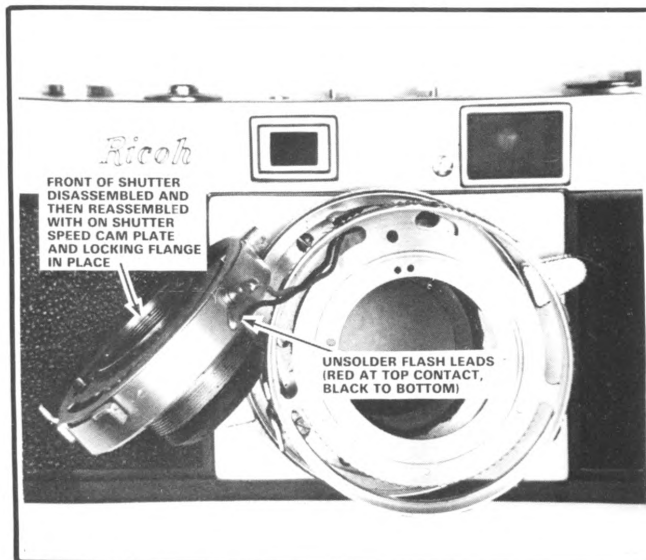


Photo 9

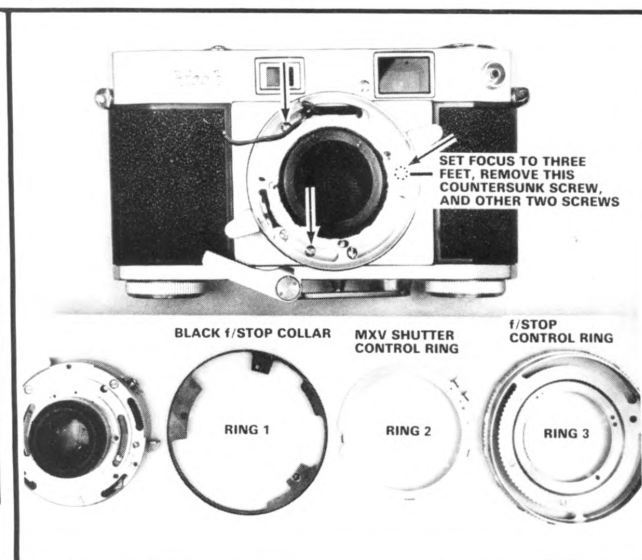
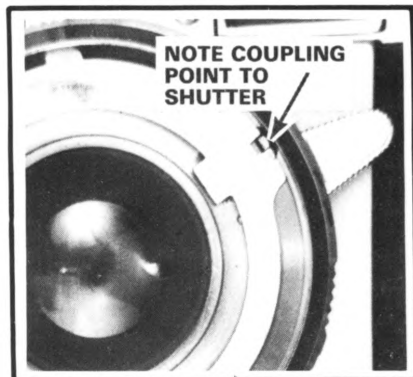


Photo 10

sleeves past the spring seen in the cutout to the left of the iris control pin, photo 7. Push the end of the beveled lever in the next cutout aside so the extension of the MXV lever sleeves into the right of the lever. Check to make sure the ring operates smoothly to its stops.

Now slide the f/control ring over the flash sync wires and the rear of the shutter, photo 10. Align the hole in the collar to the iris control pin, and replace the three edge screws, photo 7. Clean the optics and replace the rear lens.



Mount the shutter assembly on the body so that the body charging and tripping levers slip through their respective cutouts. Replace any spacers. Insert hole on the shutter rear over pin of the focusing mount. Hold the shutter in place; turn

the camera over, and drop in any spacer removed during disassembly. Replace the lens flange and tighten. Trip and charge the shutter. If it checks out, continue with reassembly.

Replace the shutter-speed setting ring making sure that its extension sleeves down next to the rack which is visible in the lower right housing cutout, photo 6. Align the cutout of the ring with the projection of the speed-setting plate. Rotate both units back and forth to verify proper alignment of all levers and pins on their cam surfaces.

Replace the decorator flange with indicator arrow. The small cutout couples to a lever at approximately 2 o'clock.

Replace the serrated locking flange of the shutter with the shoulder down. Replace the flange locking screw after the proper working pressure has been applied. Replace the MXV coupling ring — fitting the yoke and the inner mechanism together.

Clean the optics and the front lens unit and replace it. Replace the MXV ring with the window cutout sleeving its extension into the yoke of the shutter mechanism. Replace the MXV setting collar with its letter showing through the window cutout. Replace the lens identification ring and tighten securely. Screw down the locking screw.