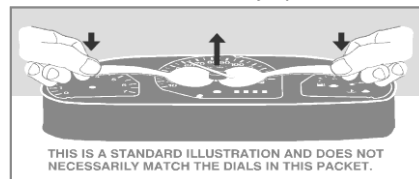


Guidelines for fitting Lockwood dials into a Miata Mk2 (Part No. 8021)

***Do not open this packet until you are absolutely sure that these dials match those in your car.
Pay particular attention to the starting and finishing numerals / calibrations on each dial.***

Equipment required: Normal hand tools, hairdryer, small shallow dish for screws etc., two teaspoons, soft leaded pencil.

- 1 **Marking the position of the needles on your new fuel, temperature and oil dials.** Start the engine. Allow it to run for 20 min. and with the engine still running, carefully note the positions of the fuel, temperature and oil needles. Now take your new dials and put a pencil mark on these three dials corresponding exactly to these positions. These marks will show you where to place the needles when you come to refit them. Make the marks at the extreme outside edge of the dials so that they will be hidden by the black mask when reassembled.
- 2 **Disconnect the negative terminal on the battery.**
- 3 **Remove the top of the steering-column cover.** On some models, this can be removed by gently easing it upwards and unclipping it. On other models, screws, located underneath, have to be removed first.
- 4 **Next, remove the instrument cluster cowl.** This is not held by screws, it is simply clipped into position. To remove it, focus on the bottom edges on each side of the steering column where it meets the dash (this can be seen when you remove the steering column cover). First, pull the left-hand side of the cowl towards you, until it becomes free, and then the right-hand side. Do this with your fingers if possible otherwise you will have to use a broad tipped screwdriver with its blade wrapped with masking tape to avoid it marking. Grip the cowl at the top with both hands, pull towards you with firm, even pressure and lift it off.
- 5 **Remove the four screws, which hold in the instrument-cluster pod.** Draw the pod forward slightly so that, by getting out of the car and looking through the windscreen, you can see the three electrical connector blocks behind it. These have to be disconnected by depressing a release tab located on each connector block. The pod can now be lifted out and taken to a work surface in a clean, well-illuminated work environment.
- 6 **Remove the transparent lens and the black mask.** Depress, and push in, the four black, spring-clips at the top of the pod, and the front will start to come away. (Slip in a piece of card to prevent the spring clips from snapping back again). Do the same with the remaining three black clips along the bottom and lift the front away.
- 7 **Marking the 'rest position' of the tacho. and speedo. needles.** Gently lift these needles, one at a time, over their rest-pegs and allow them to travel anti-clockwise until they come to rest. Mark their positions at the extreme outer edges of the original dials.
- 8 **Remove the needles.** Cut a slit in a sheet of paper and slide the paper under the hub of a needle, leaving the needle exposed but the dial faces covered (this is to protect the dial mechanism from the heat of the hairdryer). Now, take two teaspoons and carefully place the scoop ends of these spoons directly under opposite sides of the hub of this needle, exactly in line with the screws on either side of the hub (see diagram). Using these screw heads as pivots, exert steady, even, downward pressure on the handles, as illustrated, whilst an assistant applies heat from the hairdryer directly to the hub. As you do so, the needle will ease slowly from its spindle. Do not exert excessive pressure because the spindles are very delicate. Remove all of the needles in this manner. The needles are not all the same, so make careful note which spindle each needle comes from.
- 9 **If you decide to change the colour of the needles.** Leave the white paint on the underside of the needle and colour the upper surface only. Many people use a broad tipped permanent marker because this still allows the needle to illuminate at night. Choose a light colour, such as red, orange or blue.
- 10 **Fitting your new dials.** Remove the two screws, which hold the original dial in place. Transfer the pencil marks, which show the position of the speedo. and tacho. needles from the original dials to the extreme outer edge of the new tacho. and speedo. dials (where they will be hidden by the mask when it is fitted). Now fit your new dials into position securing each of them with their two screws.
- 11 **Replacing the speedo. & tacho. needles.** Take the speedo. needle and ease it gently onto its spindle in line with the pencil mark, but don't press it all the way home yet. Gently move the needle, with your finger, in a clockwise direction until it is beyond the rest-peg hole and hold it there. Take one of the new rest-pegs provided and press it into place. Release the needle to allow it to come back to rest on its peg. Follow exactly the same procedure with the tacho. needle.
- 12 **Replacing the fuel, temp. & oil gauge needles.** Return the instrument cluster to its position in your car. Reconnect the battery and the electrics, and screw the cluster into place using the four screws. Restart the engine and allow it to run for exactly twenty minutes. Taking the correct needle for each gauge, ease each one gently into position exactly in line with the pencil mark. Don't press it all the way home in case it has to be taken off again and repositioned. Switch off the engine and then turn it back on again to check that the needles are behaving as they should. Take the car on a short test-run. When you're satisfied that everything is working correctly, press all the needles completely home.
- 13 **Re-assemble everything.** Starting at step 6 above, work in reverse order to step 3.



Note. When the engine is switched off, the oil gauge needle may touch the black mask. This is quite normal and does not affect the accuracy of the gauge.

	2 Rest pegs	These dials will be a perfect fit in the majority of vehicles referred to on the label, but sometimes, minor variations occur between models during manufacture at the car plant. If this has been the case with your car, it may be necessary for you to make very slight adjustments to the new dials, using a pair of scissors or a craft knife. If more than minor adjustments are necessary, please contact us immediately. Lockwood International make replacement dials for hundreds of different models and it would be impossible to give detailed instructions for every one. The above suggestions from Lockwood customers who have fitted our dials, coupled with a little common sense should be sufficient. But no responsibility will be accepted by the vendor for any damage caused whilst fitting these dials.
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