CLAIMS

1. A self-adjusting vehicle door lock catch assembly, comprising:

a lock catch body, comprising a base (1) and a lock cylinder (2), wherein the base (1) is provided with a bolt through-hole (3), and the base (1) comprises a first surface and a second surface opposite each other, the first surface facing a vehicle door and the first surface being provided with a slide groove; and the lock cylinder (2) is fixedly connected to the first surface of the base (1);

a floating adjustment piece (4), provided in the slide groove and configured to adjust a position of the lock catch body, wherein the floating adjustment piece (4) is provided with an opening, a diameter of the bolt through-hole (3) being greater than a diameter of the opening of the floating adjustment piece (4);

a fastener (5), configured to secure the base (1) to a sheet metal member of a vehicle sidewall, wherein the diameter of the opening of the floating adjustment piece (4) matches a size of the fastener (5); and

a limit block (6), connected to the base (1), wherein a limit groove is provided between the limit block (6) and the base (1), and the limit block (6) is configured to limit the lock catch body through the limit groove.

2. The self-adjusting vehicle door lock catch assembly according to claim 1, wherein there are two slide grooves and two bolt through-holes (3) provided in the first surface of the base (1), wherein each of the slide grooves is concentrically arranged with a respective bolt through-hole (3), with a sliding space reserved in the slide groove for the floating adjustment piece (4).

3. The self-adjusting vehicle door lock catch assembly according to claim 2, wherein the sliding space comprises:

a transverse sliding space, in which the floating adjustment piece (4) adjusts a position of the lock catch body in a Y direction, the Y direction being in line with a width direction of a vehicle body; and

a longitudinal sliding space, in which the floating adjustment piece (4) adjusts a position of the lock catch body in a Z direction, the Z direction being in line with a height direction of

the vehicle body.

4. The self-adjusting vehicle door lock catch assembly according to claim 1, wherein the fastener (5) is a countersunk bolt.

5. The self-adjusting vehicle door lock catch assembly according to claim 1, further comprising a bushing (7), provided on an inner wall of the bolt through-hole (3).

6. The self-adjusting vehicle door lock catch assembly according to claim 1, wherein a spacer (8) is provided between the second surface of the base (1) and the sheet metal member of the vehicle sidewall.

7. The self-adjusting vehicle door lock catch assembly according to claim 3, further comprising at least one base bracket (9) for supporting the base (1) in the Z direction.

8. The self-adjusting vehicle door lock catch assembly according to claim 1, further comprising an exterior trim panel (10) covering the first surface of the base (1).

9. A mounting method for a self-adjusting vehicle door lock catch assembly, applied to the self-adjusting vehicle door lock catch assembly according to any one of claims 1-8, wherein the method comprises:

pre-tightening and securing the fastener (5), which passes through the floating adjustment piece (4) and the bolt through-hole (3), to the sheet metal member of the vehicle sidewall with a first torque;

upon closing the vehicle door at a preset closing speed until a door lock is in a locked state, self-adaptively adjusting the limit block (6), the floating adjustment piece, and the fastener (5), such that the lock catch body is matched with the vehicle door;

tightening the fastener (5) with a second torque; and

removing the limit block (6) and installing an exterior trim panel (10).

10. A vehicle, comprising the self-adjusting vehicle door lock catch assembly according to any one of claims 1-8.