### 2.11 FRONT DOOR WINDOW AND REGULATOR ASSEMBLY

## NOTE:

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To remove, test and reinstall the power window switch, depending on model variant, refer to either Section 12J-1 LOW SERIES BCM or 12J-2 HIGH SERIES BCM.

## REMOVE

1. Remove the door inner trim panel refer to 2.5 FRONT AND REAR DOOR INNER TRIM PANEL, in this Section.
2. Remove the two screws securing the inner trim panel retaining bracket to the door and remove retaining bracket. Remove inner trim retaining brackets by levering out the centre pin of bracket.
3. Carefully peel off the water deflector from the door inner panel.


Figure 1A5-23
4. Remove the three screws securing the external rear view to the door panel and while supporting the mirror, disconnect the wiring harness connector and remove the mirror.


Figure 1A5-24
5. Remove the three screws securing the speaker assembly to the door inner panel, remove speaker far enough to gain access to wiring harness connector. Disconnect wiring harness connector and remove speaker.


Figure 1A5-25
6. With window wound down approximately half way, remove drop window weatherstrip from front guide rail.

## NOTE:

It is not necessary to remove drop window weatherstrip completely, only from the front guide rail.
7. Remove the three bolts securing the front guide rail to the door panel and remove guide rail downwards, refer to Fig. 1A5-26.
8. Remove guide rail cap from top of guide rail, refer Fig. to 1A5-26.

## NOTE:

The top guide rail retaining nut is not welded to the door and when the guide rail retaining bolt is removed, this nut may become lost.
9. Gently pry the weatherstrip end cap from the rear of the door, refer Fig. 1A5-26.
10. Remove the two attaching screws securing the window regulator guide rail and slide the rail out of window regulator guide runner, refer to Fig. 1A5-27.
11. On vehicles with electrically operated window regulators, disconnect wiring harness connector from window regulator, refer to Fig. 1A5-27.
12. While having and assistant support the window, drill out rivets securing the window regulator to the door panel, slide runners out of window guide rails, and remove window regulator through door inner panel aperture, refer to Fig. 1A5-27.
13. Remove the window assembly.


Figure 1A5-26

## REINSTALL

Installation of the front door window and regulator assembly is the reverse of the removal procedure, noting the following:

1. Ensure all frictional surfaces of the window regulator assembly and associated parts are adequately lubricated with Lithium grease (to Holden Specification HN 1416).
2. Locate the regulator assembly inside the door, aligning the attaching holes in the assembly with the corresponding holes in the door inner panel. Attach the regulator assembly to the door inner panel using service replacement screws.
3. Install front guide rail cap before tightening front guide rail retaining bolt and nut.
4. Before installing door inner trim panel, adjust the front door window and regulator as per the following adjustment procedure
5. Ensure the water deflector is correctly sealed against door inner panel.
6. Ensure the door remote control handle assembly and remote control rod are engaged before final fitment, refer to Fig. 1A5-22 in this Section.


Figure 1A5-27

## ADJUST

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1. Adjust end stop, point ' $B$ ', at the rear of the door so that there is a 1 mm gap below the highest possible end stop position and tighten attaching screw to approximately 2 Nm .
2. Wind the window glass up through area 'Q' while at the same time, pressing the rail which is bonded to the rear edge of the glass, in the direction of arrow S . Continue winding window glass up until window glass is approximately 30 mm before the closed position.
3. Screw window regulator guide rail in position without imposing any stresses by tightening the rear attachment screw, point ' G ', to 7 Nm .
4. Tighten the centre attachment screw, point ' $E$ ', of the front guide rail to 7 Nm while ensuring that the window glass is held approximately 30 mm before the closed position.
5. Wind the window glass down to approximately 30 mm above the door belt moulding while at the same time, pressing the rail which is bonded to the rear edge of the glass, in the direction of arrow $S$. Tighten the bottom attachment screw, point ' $F$ ', for the front guide rail to 7 Nm .
6. Screw window regulator guide rail in position without imposing any stresses by tightening the front attachment screw, point ' H ', to 7 Nm .
7. Wind window glass up to a position where the upper edge of the glass is flush with the upper edge of the door mirror housing, as seen from outside. In this position, the upper edge of the glass must be parallel with point ' M ' of the glass run over area 'W'.
8. Check cranking load of window glass in area Z. If load feels excessive (more than 2.7 Nm ) re-adjust window glass by correcting the front guide rail attachments, points ' $E$ ' and ' $F$ '.
9. Adjust end stop, point ' $A$ ', so that the end stop contacts with the window glass and tighten attaching screw to 7 Nm .
10. With the window in the closed position, adjust end stop, point ' $J$ ', so that it contacts the toothed sector of the window regulator, then tighten attachment screw to 7 Nm .


Figure 1A5-28
11. Check upper edge of glass. If the deviation in parallelism and engagement exceeds 1 mm , re-adjust end stops at point ' $B$ ', and ' $A$ ' as necessary, so that the upper edge of the glass to the lip of the glass run at, point ' M ' is within a tolerance band of 3 to 5 mm .
12. Check the upper edge of the glass to ensure that the lip of the glass run channel, point ' M ', is parallel over the area 'W'.
The upper edge of the glass must be 4 mm above the lip of the glass run channel, point ' M ', over the area ' W '.
If either the deviation in parallelism or insertion depth exceed 1 mm , then the end stops at points ' $B$ ', and ' $A$ ' as necessary, must be readjusted so that the upper edge of the glass is 3 to 5 mm above the lip of the glass run channel, point ' M '.
13. Tighten attachment screw for end stop, point 'B' to 4 Nm .

