



# MAINTENANCE MI19-27A INFORMATION

DATE: July 2019 SECTION: 26 SLIDE-OUT

SUBJECT: TWO PART SLIDE-OUT SEAL INSTALLATION

Revision: A Roller tool # were G36374GA; G36373GA, are G36374;G36373 2019-08-22

## **DESCRIPTION**

Follow these instructions to perform the installation of *two-part slide-out seals* with clip-on inflatable seal. (Figure 1) This procedure should be performed by skilled technicians and may involve slide-out adjustments.

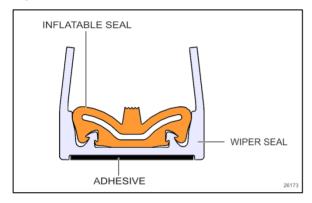


FIGURE 1: TWO-PART SLIDE-OUT SEAL

### **MATERIAL**

Required shop supplies:

Part No.	Description	Qty
680879	P-80 Grip-It Quick-Drying Temporary Lubricant, 1litre	1
682989	Anti-silicone Standox, 4 liter	1
683446	Primer, Sika 206 G+P, 1 liter	1
684685	Sealant Simson #ISR 70-03 / 310ml Cartridge	1
685332	3M Primer 94, 236ml	1

#### NOTE

Material can be obtained through regular channels.

#### **TOOLS**



FIGURE 2: HOLLOW PUNCH, ½" (LEATHER PUNCH)

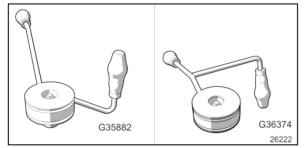


FIGURE 3: BASE WIPER SEAL ROLLER TOOLS

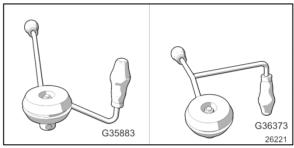


FIGURE 4: INFLATABLE SEAL ROLLER TOOLS

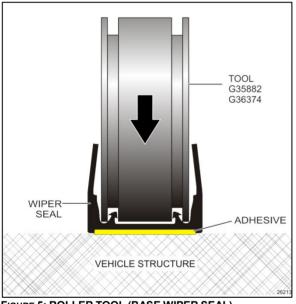


FIGURE 5: ROLLER TOOL (BASE WIPER SEAL)

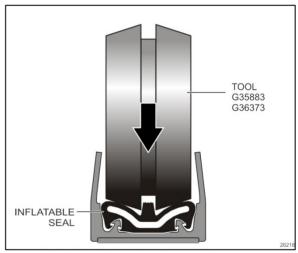


FIGURE 6: ROLLER TOOL (INFLATABLE SEAL)

#### **NOTE**

If the wiper seal does not have pre-cut holes, consult <u>IS16080</u>. The drain and air supply holes must be marked on the vehicle prior to installation and punched out in the base wiper seal after installation using a hollow punch. This will ensure proper draining of the seal and allow passage of the inflatable seal hose to the vehicle air supply.

#### **OVERVIEW**

Estimated labor: 4 hours

Allow time for Primer curing and inflatable joint settle-in time: up to 28 hours

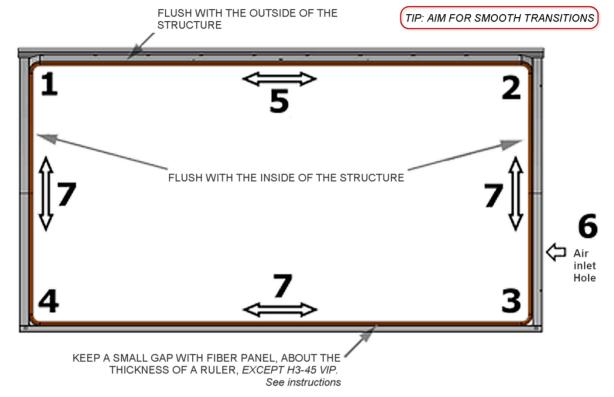


FIGURE 7: SEAL INSTALLATION POSITION AND SEQUENCE OVERVIEW

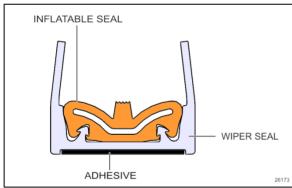


FIGURE 8: TWO-PART SEAL ASSEMBLY

#### **PROCEDURE**



#### **DANGER**

Park vehicle safely, apply parking brake, stop engine. Prior to working on the vehicle, set the ignition switch to the OFF position and trip the main circuit breakers equipped with a trip button. On Commuter type vehicles, set the battery master switch (master cut-out) to the OFF position.

Lock out & Tag out (LOTO) must be performed during set-up, maintenance or repair activities. Refer to your local procedure for detailed information regarding the control of hazardous energy.

#### **PREPARATION**

- Inspect gaps all around the slide-out. Gaps must be between 17 and 27mm.
- 2. Adjust gaps to reach the values above. Refer to maintenance manual for procedure.

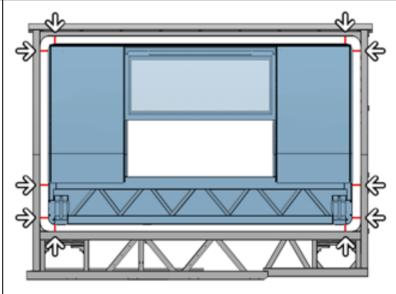


FIGURE 9

- 3. Retract the slide-out 2" inside the vehicle. Consult maintenance manual for procedure. *Heed the cautionary notes outlined in the manual before retracting.*
- 4. Remove the old slide-out seal.
- 5. Thoroughly clean the bonding surface receiving the seal adhesive with anti-silicone. Surface must be smooth, without any glue or paint residue.
- 6. Scuff the bonding surface with a very fine abrasive pad.
- 7. Clean the structure again with anti-silicone.
- 8. Mask the slide-out edge and vehicle opening all around to protect the vehicle finish.
- 9. Apply Sika 206 G+P. Apply all around the bonding surface. Minimum drying time: 4 hours.

- 10. Ensure Sika 206 is dry and clean.
- 11. Apply 3M Primer 94 at the 4 corners; *Apply with very light pressure* to avoid peeling or damaging the Sika 206 primer.





FIGURE 10

FIGURE 11

12. On the wiper seal corners locate the small rib identifying the corner mid-point. Make it more visible by marking the corners with a paint marker.



FIGURE 12

13. Also mark the midpoint of each corner on the structure.

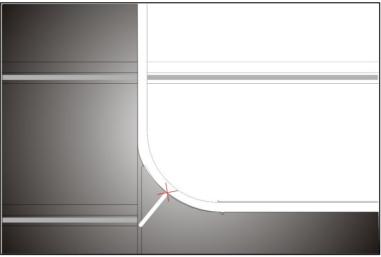


FIGURE 13: CORNER MID POINT

- 14. Mark the position of the drain holes in the structure.
- 15. Place the drain and air inlet holes aligned with the provision on the structure.

If there are no holes in the wiper seal, refer to IS-16080.

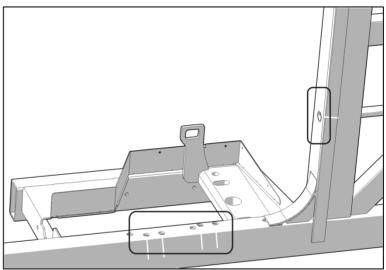


FIGURE 14: DRAIN HOLES AND AIR INLET. POSITION MAY VARY.

# BASE WIPER SEAL INSTALLATION Two people required from this point.

16. One upper corner at a time, remove the adhesive protecting film on approximately 8 inches.

Warning: Bonding occurs instantly!

- 17. Align the corner marks.
- 18. Place the seal corner as flush as possible to the *exterior side of the structure*. (Figure 6)



FIGURE 15

FIGURE 16

19. Support the upper part of the seal with masking tape.



FIGURE 17

- 20. Test fit to align air inlet holes with structure.
- 21. Remove the adhesive protecting film on approximately 8 inches.
- 22. Align air inlet holes in base and structure and bond base to structure.



FIGURE 18

23. Test fit the lower corners. Align the corner marks.

Note: On H3-45 VIP vehicles, see Figure 18 for the bonding of the *lower section* of the seal.

- 24. Bond the lower corners.
- 25. Be sure to align the seal drain holes with the structure drain holes.
- 26. Progressively bond the remainder of the lower section.
- 27. *H3-45 VIP* vehicles only. Bond the lower part of the wiper seal flush to the inside of the tube round edge.

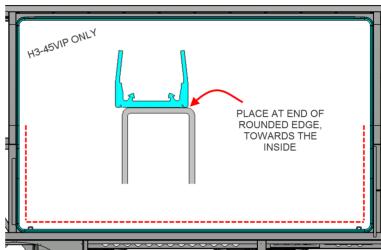


FIGURE 19: SPECIAL INSTRUCTION FOR H3-45VIP ONLY

28. Bond the upper section by starting at the middle. Evenly spread any excess or tension on both sides.

Make sure you are bonding flush to the exterior side of the structure. (Figure 6)



FIGURE 20

- 29. Test fit the remainder of the base wiper seal. Even out any slack or tension all around.
- 30. Visually inspect the corners marks and the air inlet hose to confirm everything is aligned.



FIGURE 21

- 31. Use roller tool all around.
- 32. Confirm that the drain holes in the structure are aligned with the openings in the seal base. If not, punch or cut-out the base using the marks.

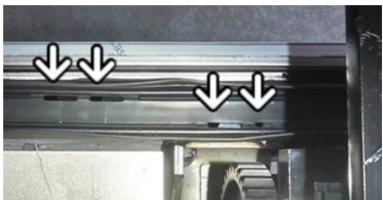


FIGURE 22

# Inflatable seal installation

- 33. Clean the base wiper seal to make sure it is free of debris.
- 34. Slip the inflation tube in the vehicle structure. Seal with #684685 Simpson ISR 70-03 sealer all round. (Figure 22)
- 35. Position the inflatable joint inside the base wiper. Even out any slack or tension all around.

**Note:** Support with tape in the upper section.

36. Between the air inlet and the nearest corner, locally clip the seal on the base. (Arrows, Figure 22)

Note: Dry clip! (no lubricant)

37. At the lower corner, insert seal in the bottom of the base, *without clipping*. (Figure 22)

**Note:** Follow this guideline for all corners; they will be clipped at the very end.

- 38. Clip seal up to the corner tangent.
- 39. To avoid creases in the corner, stretch the seal as if it were too short in length compared with the base.

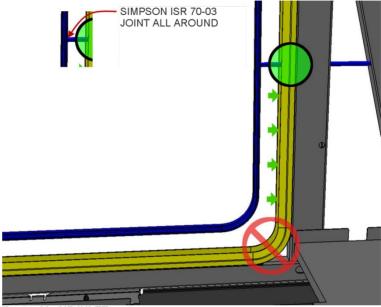


FIGURE 23: AIR INLET

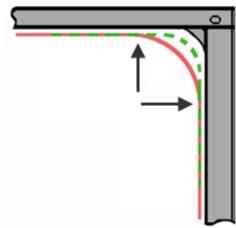


FIGURE 24

40. Spray a small amount of #680879 P80 lubricant in the base.

**Caution:** P80 application is only allowed in the straight sections, stopping one foot from the corners.

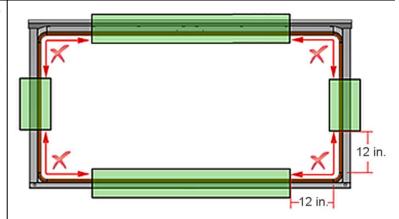


FIGURE 25

41. Begin by locally clipping the seal, at each 24 in.

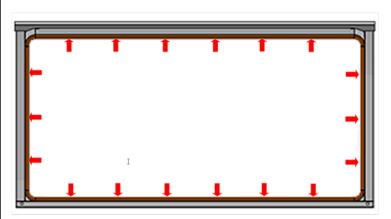


FIGURE 26

- 42. Insert the joint in the lower section.
- 43. Clip with the help of roller tool.

**Important:** Always start at the corner tangent (away from the corner) and roll towards the center.

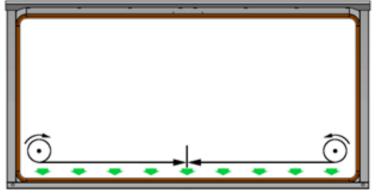


FIGURE 27

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44. Repeat the same method on all remaining sides, skipping the corners.

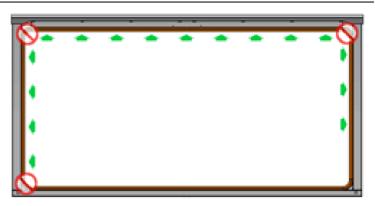


FIGURE 28

45. Clip the four corners

**Note**: If the corner is too tight and needs a bit of slack, roll the sides from the outside towards the corner.

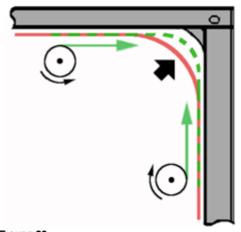


FIGURE 29

46. Confirm the seal is well clipped in the base by feeling with your fingers.

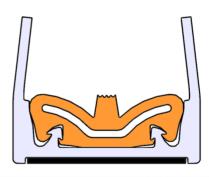


FIGURE 30

# Inflation test

- 47. On the slide-out control panel, confirm air pressure is set to 15psi.
- 48. If not, adjust the pressure relief to 15 psi.
- 49. Move the green pegs on each side of the needle to indicate the new pressure range.

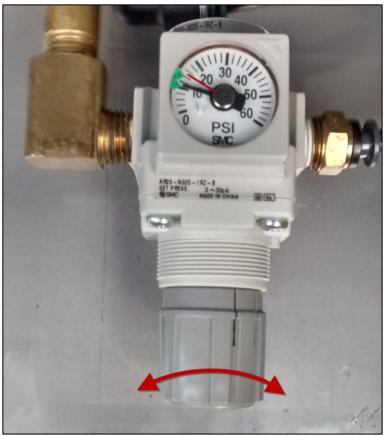


FIGURE 31: ADJUST TO 15 PSI

50. Connect the air inlet to the inflatable seal air supply, vehicle side.

**Caution:** The seal air supply tube is soft; do not squeeze it with the cable ties.



FIGURE 32

- 51. Extend the slide-out room.
- 52. Inflate the seal.
- 53. Confirm that the corners do not show any creases.

#### IF THERE ARE CREASES:

- A. Return the room inward.
- B. Unclip the inflatable seal from the corner plus along one or two feet on each side.
- C. Clip the straight sections by rolling from the corner *towards* the center.

Make sure you are stretching the corner; it should be flush with the top of the base wiper seal.

D. Clip corner in.

# IF CORNERS ARE FREE FROM CREASES:

54. Inflate the seal. Leave inflated for a settle-in period of 24h.

**Caution:** Applied pressure should not exceed 15 psi.



FIGURE 33

#### PARTS / WASTE DISPOSAL

Discard according to applicable environmental regulations (Municipal/State[Prov.]/ Federal)

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