

COCKPIT WINDSHIELD RAIN REPELLENT COATING - REMOVAL/INSTALLATION
EFFECTIVITY: AIRCRAFT WITH REPELLENT COATING INSTALLED
1. General

- A. This section gives the procedures to remove and install the windshield rain-repellent coating.
- B. If you are using mainly consumable materials of Sierracote 302®, refer to TASK 30-41-04-000-801-A and TASK 30-41-04-400-801-A.
- C. If you are using mainly consumable materials of Next Generation Surface Seal®, refer to TASK 30-41-04-000-802- A and TASK 30-41-04-400-802-A.

NOTE: Consumables DSS1027 and DSS1015 are included in GSE 544. Alternatively, you can get consumables and coating solution to perform a single application by purchasing DSS0100 kit.

- D. Equipment included in GSE 324 and GSE 504 are alternatives to the similar ones included in GSE 525 and GSE 544. The protective films (included in GSE 525) may be obtained independently under the PPG code DSS2912.
- E. The procedures in this section are given in the sequence below. The tasks identified with (♦) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	DESCRIPTION	EFFECTIVITY
30-41-04-000-801-A	SIERRACOTE 302® RAIN-REPELLENT COATING - REMOVAL	AIRCRAFT WITH REPELLENT COATING INSTALLED
30-41-04-400-801-A	SIERRACOTE 302® RAIN-REPELLENT COATING - INSTALLATION	AIRCRAFT WITH REPELLENT COATING INSTALLED
30-41-04-000-802-A	NEXT GENERATION SURFACE SEAL® RAIN-REPELLENT COATING - REMOVAL	AIRCRAFT WITH REPELLENT COATING INSTALLED
30-41-04-400-802-A	NEXT GENERATION SURFACE SEAL® RAIN-REPELLENT COATING - INSTALLATION	AIRCRAFT WITH REPELLENT COATING INSTALLED



AIRCRAFT MAINTENANCE MANUAL

TASK 30-41-04-000-801-A

EFFECTIVITY: AIRCRAFT WITH REPELLENT COATING INSTALLED

2. SIERRACOTE 302® RAIN-REPELLENT COATING - REMOVAL

A. General

- (1) This task gives the procedure to remove the cockpit windshield rain-repellent coating.
- (2) This procedure is applicable to LH and RH cockpit windshields.
- (3) If the Sierracote 302® Rain-Repellent Coating is not available, you can also use the DSS1015 or DSS0100 kit, but you will must obey to the instructions described in the AMM Task 30-41-04-000-802-A and AMM Task 30-41-04-400-802-A.

Embraer recommends that you do not mix the different chemicals and consumables with the alternative kits (DSS1015 or DSS0100).

Each DSS0100 kit contains consumable materials and coating solution to coat one windshield (alternative to DSS1015 and DSS1027).

The DSS0100 kit does not need the heating blanket, but it can be used in conjunction with heating blanket when you want to comply with the cure time to increase the coating durability, or to extend the life-time until other refurbishing.

The DS0100 kit allows windshield be coated or refurbished in one hour.

B. References

REFERENCE	DESIGNATION
ITEM GSE 324	DISPENSER, RAIN-REPELLENT
ITEM GSE 504	DISPENSER, RAIN-REPELLENT

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223		Cockpit windshield
224		Cockpit windshield

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 324	Rain-Repellent Coating - Tooling Kit	To get the orbital sander	
GSE 504	Rain-Repellent Coating - Tooling Kit	To get the orbital sander	
Commercially available	115 V Power Source	To plug the orbital sander	
Commercially available	220 V Power Source	To plug the orbital sander	



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E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand	To get access to the cockpit windshield from the outside	2
Commercially available	Vinyl Gloves	Protection for the hands	2

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
Sierracote 302® P/N 500770-101	Rain-Repellent Coating Kit	AR
DSS1015, PPG code	Rain-Repellent, Application Kit (alternative to P/N 500770-101)	2
DSS0100, PPG code	Rain-Repellent, Application Kit (alternative to P/N 500770-101)	2

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
2	Do the task	On the LH/RH cockpit windshield

I. Preparation

SUBTASK 841-002-A

- (1) Make sure that the aircraft is safe for maintenance.
- (2) Make sure the cockpit windshield electrical heat is off.
- (3) Put the workstand in position and get access to the cockpit windshield from the outside.

J. Removal (Figure 401) (Figure 402)

SUBTASK 020-002-A

- (1) Use the tape (2) to carefully mask 3.175 mm (0.125 in) of the outer edge of the windshield glass (3) surface and 3.175 mm (0.125 in) of the inner edge of the black edge hump seal (REF.). Refer to DET. B (Figure 402).

NOTE: This tape must cover the gap between the windshield glass (3) and the edge seal.

- (2) Use tape (1) to cover tape (2) and all surface of the windshield frame (4). Refer to DET. B (Figure 401).

CAUTION: USE GLOVES DURING THE REST OF THE PROCESS TO PREVENT CONTAMINATION OF THE WINDSHIELD SURFACE WITH SKIN OIL. DO NOT TOUCH THE SURFACE WITHOUT GLOVES OR WITH A CONTAMINATED GLOVE. CHANGE GLOVES WHEN RECOMMENDED.

- (3) Hand wash the outer windshield surface (5) thoroughly three times, with FX-359 IPA/Water mix and soft-tech wipers. Refer to DET. C ([Figure 402](#)).
- (4) Prepare all the outer windshield surface (5) with Cerox compound, as follows: Refer to DET. C ([Figure 402](#)).

CAUTION: DO NOT USE ALTERNATIVE COMPOUNDS, THIS CAN RESULT IN THE CONTAMINATION OF THE WINDSHIELD SURFACE AND IN LESS THAN SATISFACTORY PERFORMANCE OF THE FINISHED COATING.

- (a) Fill the bottle which contains dry Cerox Polishing Compound with clean water.
- (b) Shake vigorously the bottle to mix the compound with the water.
- (c) Add more clean water as necessary to fill the bottle to the neck.

CAUTION: BE CAREFUL TO PREVENT CONTAMINATION OF THE FELT PAD WITH DIRT OR GRIT. THE USE OF A SOILED OR CONTAMINATED PAD CAN CAUSE SCRATCHES IN THE WINDSHIELD.

- (d) Put a felt pad on the orbital sander ([ITEM GSE 324](#) or [ITEM GSE 504](#)).
- (e) Shake the bottle of the polishing compound thoroughly to mix it.
- (f) Apply sufficient compound to moist the pad on the sander.

NOTE: You must apply the compound again from time to time to make sure that the surface is kept wet. Shake the bottle vigorously before each application.

- CAUTION:**
- MAKE SURE THAT THE POWER SOURCE THAT YOU HAVE IS APPLICABLE TO THE GSE TO BE USED. GSE 324 IS APPLICABLE TO A 110V AC 60Hz POWER SOURCE AND GSE 504 IS APPLICABLE TO A 220V AC 60Hz POWER SOURCE.
 - EXCESSIVE POLISHING CAN CAUSE DAMAGE TO THE TIN OXIDE COATING NECESSARY FOR STATIC SHIELDING. THE POLISHING OPERATION IS ONLY TO REMOVE CONTAMINATION (I.E., DIRT, OIL, EXHAUST PARTICLES, ETC.) TO MAKE SURE THAT THERE IS A GOOD ADHESION OF THE NEW APPLICATION.

- (g) Put the orbital sander in position on the windshield surface (5) and turn it on.
- NOTE:** Make sure that there is no contact between the sander power cord and the glass windshield surface to prevent abrasion.
- (h) Polish as smoothly as possible the area of the windshield surface (5). To do this, use overlapping moves.

NOTE: • After the surface is ready, put the sander away from the work area.

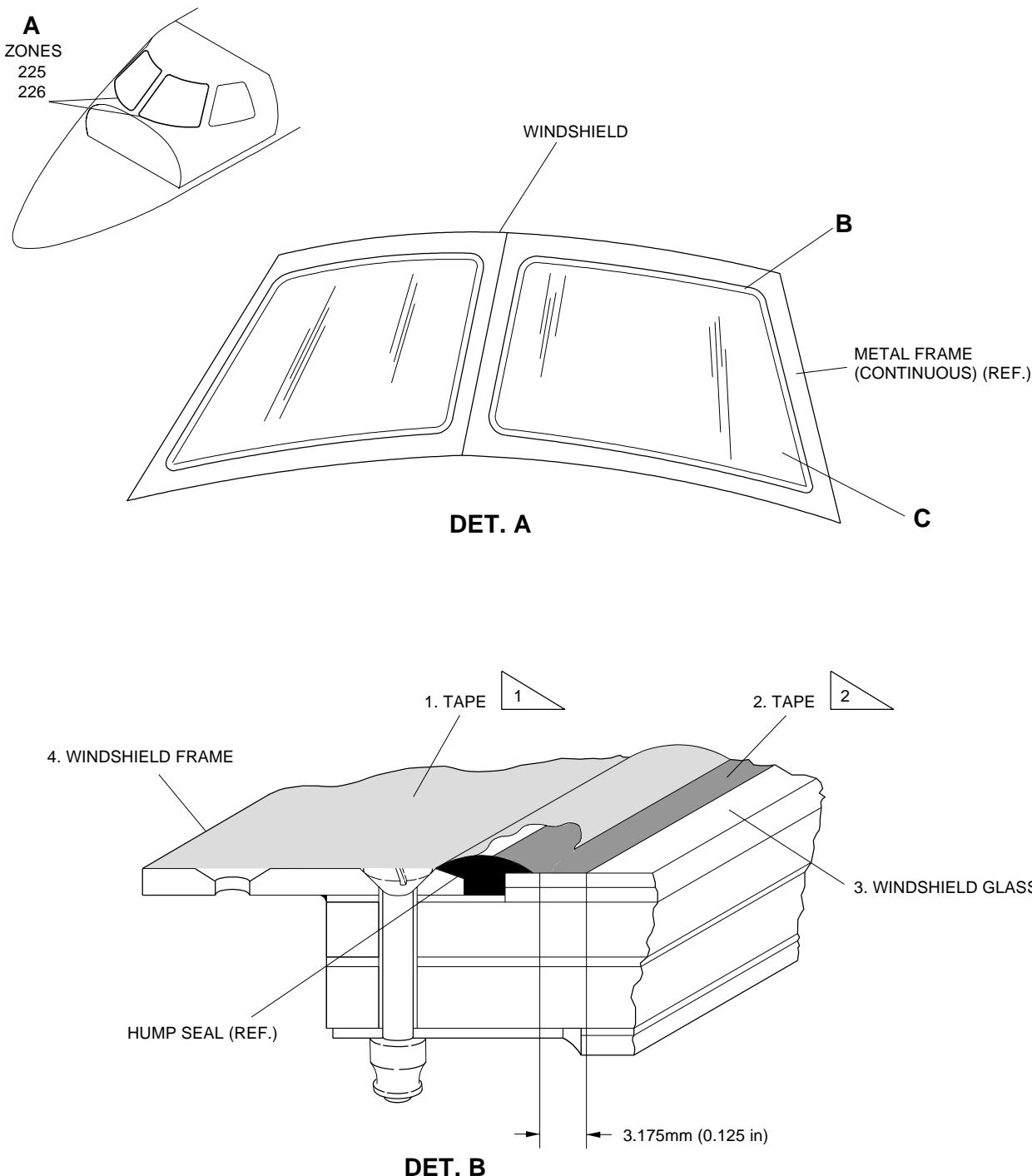
- Change the gloves. Discard the dirty gloves, wipers and pads in the disposal bag provided in the rain-repellent coating, refill kit.
- (5) Flush the polished windshield surface (5) with clean water. Refer to DET. C ([Figure 402](#)).
- (6) Hand wash the windshield surface (5) which contains cerox. To do this, use FX-359 IPA/Water mix and soft-tech wipers. Be careful to remove all the polishing compound particles. Refer to DET. C ([Figure 402](#)).

NOTE: • Do this step again, on the areas with stain, until the surface is totally dry.
• Discard the wipers in the disposal bag supplied in the rain-repellent coating kit, refill kit.

EFFECTIVITY: AIRCRAFT WITH REPELLENT COATING INSTALLED

Cockpit Windshield Rain-Repellent Coating - Removal/Installation

Figure 401

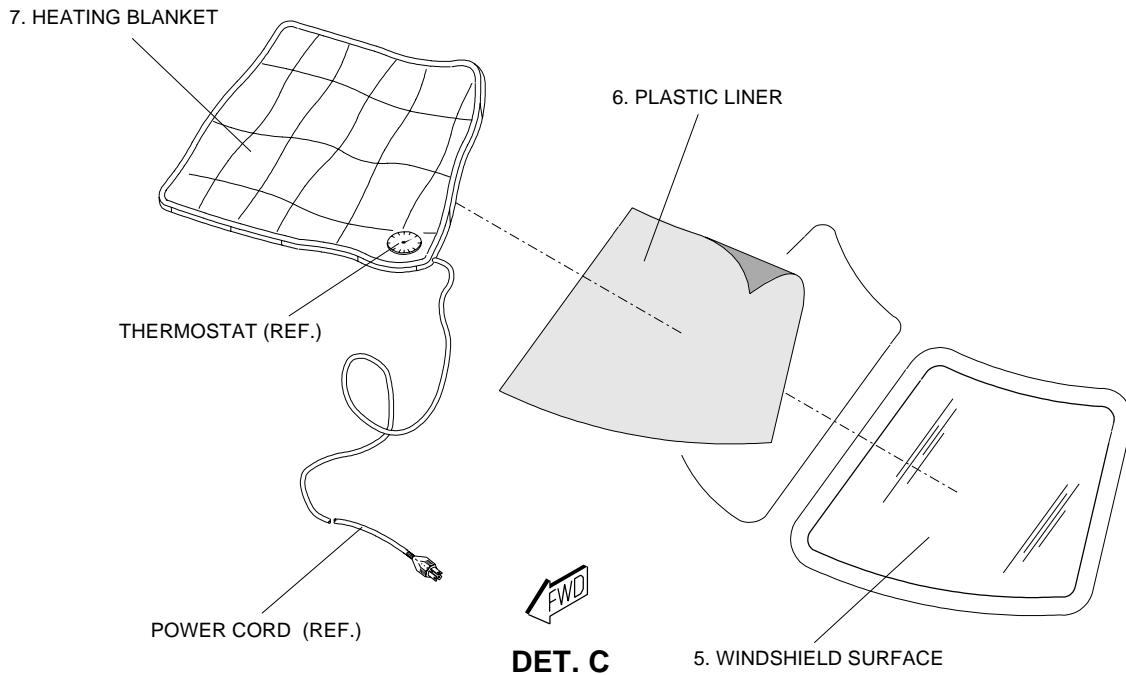


- 1 USE TAPE, 3M (#471) – 2 in WIDE – FURNISHED IN THE RAIN REPELLENT COATING – REFILL KIT.
- 2 USE TAPE, 3M (#218) – 1/4 in WIDE – FURNISHED IN THE RAIN REPELLENT COATING – REFILL KIT. 145AMM300265.MCE

EFFECTIVITY: AIRCRAFT WITH REPELLENT COATING INSTALLED

Cockpit Windshield Rain-Repellent Coating - Removal/Installation

Figure 402



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TASK 30-41-04-400-801-A

EFFECTIVITY: AIRCRAFT WITH REPELLENT COATING INSTALLED

3. SIERRACOTE 302® RAIN-REPELLENT COATING - INSTALLATION

A. General

- (1) This task gives the procedure to install the cockpit windshield rain-repellent coating.
- (2) The equipment and necessary materials used in the application procedure are in the rain-repellent coating kit.
NOTE: The Sierracote 302® Rain-Repellent Coating kit comes with the necessary materials to coat 5 windshields.
- (3) This procedure is applicable to LH and RH cockpit windshields.
- (4) If the Sierracote 302® Rain-Repellent Coating is not available, you can also use the DSS1015 or DSS0100 kit, but you will must obey to the instructions described in the AMM Task 30-41-04-000-802-A and AMM Task 30-41-04-400-802-A.

Embraer recommends that you do not mix the different chemicals and consumables with the alternative kits (DSS1015 or DSS0100).

Each DSS0100 kit contains consumable materials and coating solution to coat one windshield (alternative to DSS1015 and DSS1027).

The DSS0100 kit does not need the heating blanket, but it can be used in conjunction with heating blanket when you want to comply with the cure time to increase the coating durability, or to extend the life-time until other refurbishing.

The DS0100 kit allows windshield be coated or refurbished in one hour.

B. References

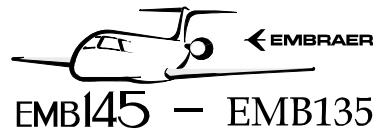
REFERENCE	DESIGNATION
AMM TASK 30-41-04-200-801-A/600	COCKPIT WINDSHIELD RAIN REPELLENT COATING - INSPECTION
ITEM GSE 324	DISPENSER, RAIN-REPELLENT
ITEM GSE 504	DISPENSER, RAIN-REPELLENT

C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223		Cockpit windshield
224		Cockpit windshield

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 324	Rain-Repellent Coating - Tooling Kit	To get the heating blanket	
GSE 504	Rain-Repellent Coating - Tooling Kit	To get the heating blanket	
Commercially available	115 V Power Source	To plug the heating blanket	



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ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	220 V Power Source	To plug the heating blanket	

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand	To get access to the cockpit windshield from the outside	2
Commercially available	Vinyl Gloves	Protection for the hands	2
Commercially available	Respirator	Protection from surface solution	2

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
Sierracote 302® P/N 500770-101	Rain-Repellent Coating Kit	AR
DSS1015, PPG code	Rain-Repellent, Application Kit (alternative to P/N 500770-101)	2
DSS0100, PPG code	Rain-Repellent, Application Kit (alternative to P/N 500770-101)	2

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
2	Do the task	On the LH/RH cockpit windshield

I. Preparation

SUBTASK 841-003-A

- (1) Make sure that the aircraft is in the same configuration as it was at the end of the removal.

J. Installation (Figure 401) (Figure 402)

SUBTASK 420-002-A

WARNING: THE SURFACE PREP AND COATING SOLUTIONS ARE TOXIC TO SKIN, EYES, AND RESPIRATORY TRACT. USE GOGGLES, DOUBLE VINYL GLOVES AND RESPIRATOR WHEN YOU APPLY THEM TO THE PAD. USE ONLY IN WELL VENTILATED AREAS. OBEY THE MANUFACTURES HEALTH AND SAFETY INSTRUCTIONS.

- (1) Apply the surface prep solution to the windshield surface (5), as follows. Refer to DET. C (Figure 402).

- (a) Open the surface prep solution ampule and slowly put some of its content on an application pad.
 - (b) Apply FX-398 surface prep solution with circular moves across the windshield.
- NOTE: • Two ampoules are supplied to make sure that you completely cover the surface.
- Discard the application pads in the disposal bag supplied in the rain-repellent coating kit.
- (2) Apply FX-302 rain-repellent coating solution to the windshield surface (5), as follows. Refer to DET. C (Figure 402).
- (a) Open the FX-302 coating solution ampoules part A and part B.
 - (b) Put the FX-302 coating solution ampoules part A and part B into the mixing bottle, cap the bottle and shake vigorously.
 - (c) Put the FX-302 coating solution on an application pad.
 - (d) Start at the upper inboard corner. Apply FX-302 coating solution with small circular moves across the windshield in the direction of the outboard edge, then, move down and return to the inboard edge. After you finish the circular moves, apply the solution along the edges to fully cover the surface, top to bottom and side to side.
- NOTE: Discard the application pad in the disposal bag supplied in the rain-repellent coating - refill kit.
- (3) Cure the FX-302 coating solution on the windshield surface (5), as follows: Refer to DET. C (Figure 402).
- (a) Cover the windshield surface (5) first with the plastic liner (6) and then with the heating blanket (7). Refer to [ITEM GSE 324](#) or [ITEM GSE 504](#).
- WARNING: THE SURFACE OF THE HEATING BLANKET CAN BECOME HOT ENOUGH TO CAUSE INJURY. AVOID CONTACT WITH SKIN DURING THIS OPERATION.**
- CAUTION: MAKE SURE THAT THE POWER SOURCE THAT YOU HAVE IS APPLICABLE TO THE GSE TO BE USED. GSE 324 IS APPLICABLE TO A 110V AC 60Hz POWER SOURCE AND GSE 504 IS APPLICABLE TO A 220V AC 60Hz POWER SOURCE.
- (b) Plug the heating blanket (7) to the power source and keep it for six hours at a temperature of 71°C (160°F).
- NOTE: The heating blanket has a thermostat that keeps the temperature between 60°C and 76.66°C (140°F and 170°F).
- (c) After the coating is cured, remove the heating blanket (7) and the plastic liner (6).
- (4) Remove the tapes (1) and (2) from the windshield edge.
- (5) Totally clean the surface. Use the FX-399 cleaning solution and soft-tech wipers.

- NOTE:** • In this step you must make sure that you remove all streaks from the coating.
- Discard the wipers in the disposal bag supplied in the rain-repellent coating kit - refill.

K. Follow-on

SUBTASK 842-002-A

(1) Examine the rain-repellent coating layer condition as given in [AMM TASK 30-41-04-200-801-A/600](#).

(2) If you have the rain repellent coating kit with re-coating date label, do as follows:

- Apply the re-coating date label near the windshield. Refer to instructions of the coating kit.

NOTE: Before you apply the re-coating date label, use a fine point permanent mark to write the month and year in which the coating was done.

(3) If you have the rain repellent coating kit with sticker, do as follows:

- Apply the sticker near the windshield. Refer to instructions of the coating kit.

NOTE: The sticker description: "SURFACE SEAL COATED GLASS".

(4) Remove the workstand from the work area.



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TASK 30-41-04-000-802-A

EFFECTIVITY: AIRCRAFT WITH REPELLENT COATING INSTALLED

4. NEXT GENERATION SURFACE SEAL® RAIN-REPELLENT COATING - REMOVAL

A. General

- (1) This task gives the procedure to remove the windshield rain-repellent coating.
- (2) This procedure is applicable to the LH and RH windshields.
- (3) The ambient temperature must be from 4°C to 32°C (40°F to 90°F) and humidity from 30% to 70%.
- (4) The GSE 544 is the Rain-Repellent Coating (RRC) Master Kit (P/N: DSS1040). This GSE contains:
 - Reusable equipment,
 - Replenishment supplies (one DSS1027 Master Refill Kit) for approximately 10 windshields, and
 - Chemicals (two DSS1015 Application Kits) to coat 2 windshields.

NOTE: • Refill kits DSS1015 and DSS1027 can be purchased to replenish the DSS1040 RRC Master Kit.

- The DSS1015 Application Kit (Kit A) contains supplies and chemicals to coat 1 windshield.
- The DSS1027 Master Kit Refill (kit D) contains replenishment supplies (consumables) to prepare approximately 10 windshields.

- Alternatively, you can also get consumables and chemicals to perform a single application by purchasing a new Surface Seal® DSS0100 kit.

Each DSS0100 kit contains consumables and coating solution to coat one windshield (alternative to DSS1015 and DSS1027).

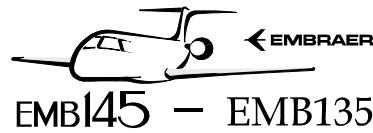
The DSS0100 kit does not need the heating blanket, but it can be used in conjunction with the heating blanket when you want to comply with the cure time to increase the coating durability, or to extend the life-time until other refurbishing.

The DS0100 kit allows that a windshield can be coated or refurbished in one hour.

- Embraer recommends that you do not mix the different chemicals and consumables between the DSS1015 and DSS0100 kits.

B. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223		Windshield
224		Windshield



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C. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 544	Rain-Repellent Coating - Master Kit	To perform the coating removal procedure	
Commercially available	220 V Power Source	To charge the orbital sander	

D. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand	To get access to the windshield from the outside	2
Commercially available	Safety Goggles	Protection for Eyes	2

E. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
DSS1027, PPG code	Kit D, Master Refill	1
DSS1015, PPG code	Kit A, Application (Chemicals & supplies to coat one windshield)	2
DSS0100, PPG code	(Chemicals & supplies to coat one windshield - alternative to DSS1015 and DSS1027)	2

F. Expandable Parts

Not Applicable

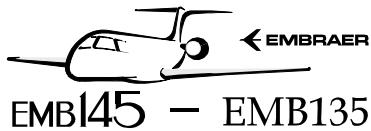
G. Persons Recommended

QTY	FUNCTION	PLACE
2	Do the task	On the LH/RH cockpit windshield

H. Preparation

SUBTASK 841-004-A

- (1) Make sure that the aircraft is safe for maintenance.
- (2) Make sure that the windshield electrical heat is off.
- (3) Put the workstand in position and get access to the windshield from the outside.
- (4) The windshield must not be too hot for you to touch it and must be away from direct sunlight while you do the application procedure.
- (5) Make sure that the orbital sander is fully charged.



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I. Removal ([Figure 403](#)) ([Figure 404](#))

SUBTASK 020-003-A

- CAUTION:** • USE GLOVES DURING THE PROCESS TO PREVENT CONTAMINATION OF THE WINDSHIELD SURFACE WITH SKIN OIL. DO NOT TOUCH THE SURFACE WITH HANDS WITHOUT GLOVES OR WITH CONTAMINATED GLOVES. CHANGE THE GLOVES WHEN RECOMMENDED.
- WHEN YOU USE THE PLASTIC CLEANING PAD, BE VERY CAREFUL NOT TO LET THE REMOVED PARTICLES COME INTO THE PAD AND BECOME A POSSIBLE CAUSE OF SCRATCHES IN THE COATING OR ON THE GLASS.

- (1) Use a soft cloth, a sponge, or soft paper towel to wash the windshield with glass cleaner such as a 50/50 mixture of isopropanol and water, or a 50/50 solution of rubbing alcohol and water.

NOTE: The Master Kit has none of the cleaning chemicals recommended for this procedure. Look for and obey the specified health and safety information on them.

- (2) Flush the surface fully with clean water.

- (3) Rub the surface dry with strokes in one direction with the aid of a moist soft cloth, moist sponge, or soft paper towel.

- (4) Carefully use quarter-inch tape (2) from the Master Kit as a protection around the glass panel of the windshield. Refer to DET. B, [Figure 403](#).

NOTE: This tape must cover the space between the windshield glass panel (3) and the edge of the seal (4).

- (5) Apply two-inch tape (1) to the windshield periphery. Partially overlap the quarter-inch tape (2) and cover the span moisture/hump seal. End at the windshield retainer or structure (5). Refer to DET. B, [Figure 403](#).

NOTE: Make sure that the masking tape is fully pushed down into position to prevent contact of chemicals with the aircraft structure.

- (6) Put a felt pad on the orbital sander.

CAUTION: DO NOT REPLACE OTHER COMPOUNDS BECAUSE THIS CAN CAUSE THE CONTAMINATION OF THE WINDSHIELD SURFACE AND THE RESULT OF THE FINISHED COATING WILL BE THEN UNSATISFACTORY.

- (7) Shake the 500ml bottle to mix the polishing slurry.

- (8) Apply approximately 10 to 20 ml of fluid to the felt pad.

NOTE: Make sure that no dirt or grit comes into contact with the felt pad before the application.

- (9) Lightly apply the felt pad onto the glass surface and operate the sander.

- NOTE:
- Apply the compound again from time to time to make sure that the surface is kept wet. Shake the bottle strongly before each application.
 - Do not let the sander power cord touch the windshield glass surface to prevent abrasion.

(10) Cover the entire glass surface with overlapping strokes.

- NOTE:
- Use long horizontal strokes followed by short vertical ones.
 - After the surface is ready, put the sander away from the work area.
 - Change the gloves. Discard dirty gloves, wipers, and pads in the disposal bag that comes in the rain-repellent coating, master kit.

(11) Flush the polished surface with deionized water.

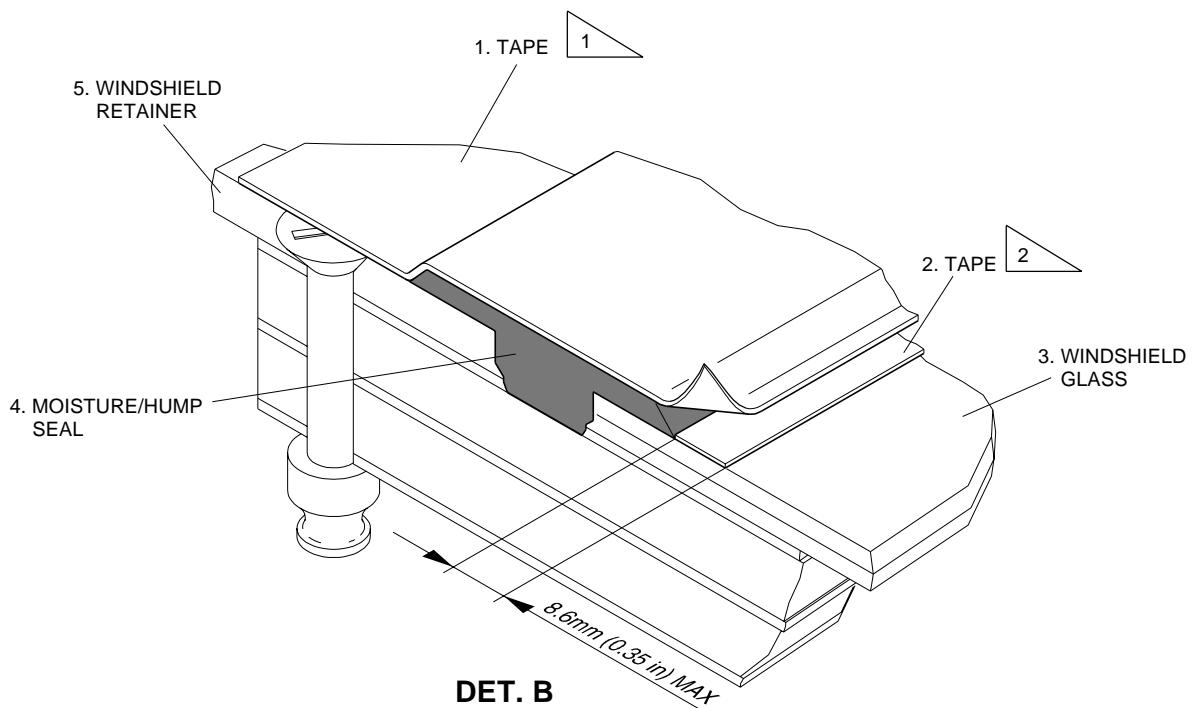
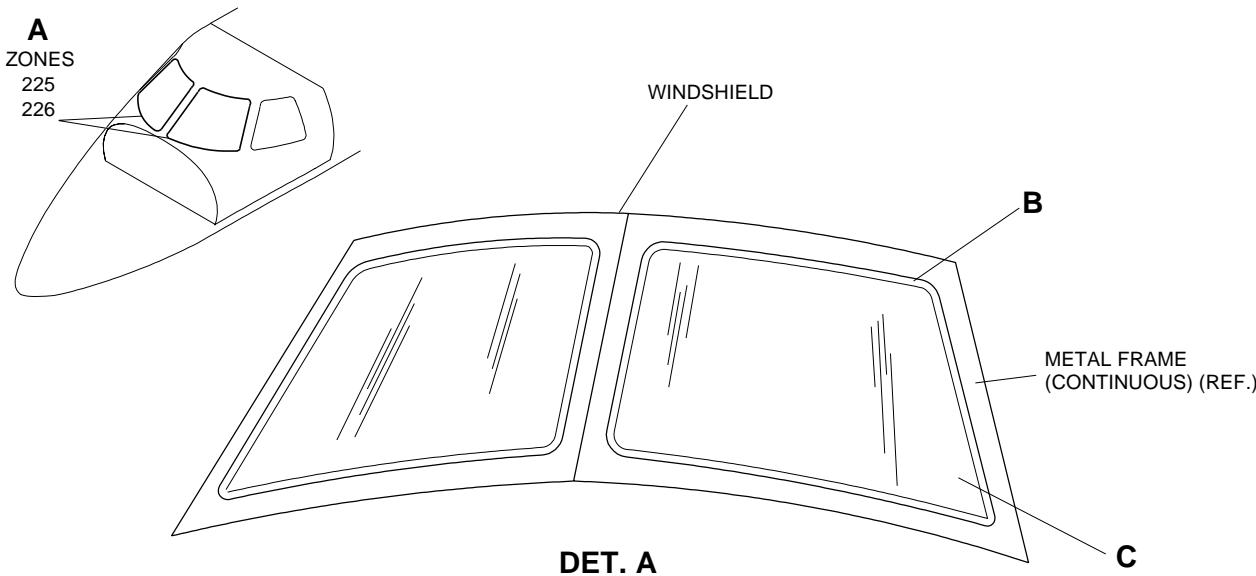
(12) Wash and dry the windshield fully to remove all signs of polishing slurry. Rub the surface until the glass is fully dry.

- NOTE:
- Do this step again, on the areas with stain, until the surface is totally dry.
 - Discard wipers in the disposal bag that comes in the rain-repellent coating kit, master kit.

EFFECTIVITY: AIRCRAFT WITH REPELLENT COATING INSTALLED

Windshield Rain-Repellent Coating - Removal/Installation

Figure 403



1 USE TAPE 2 in WIDE – FURNISHED IN THE RAIN REPELLENT COATING – MASTER KIT.

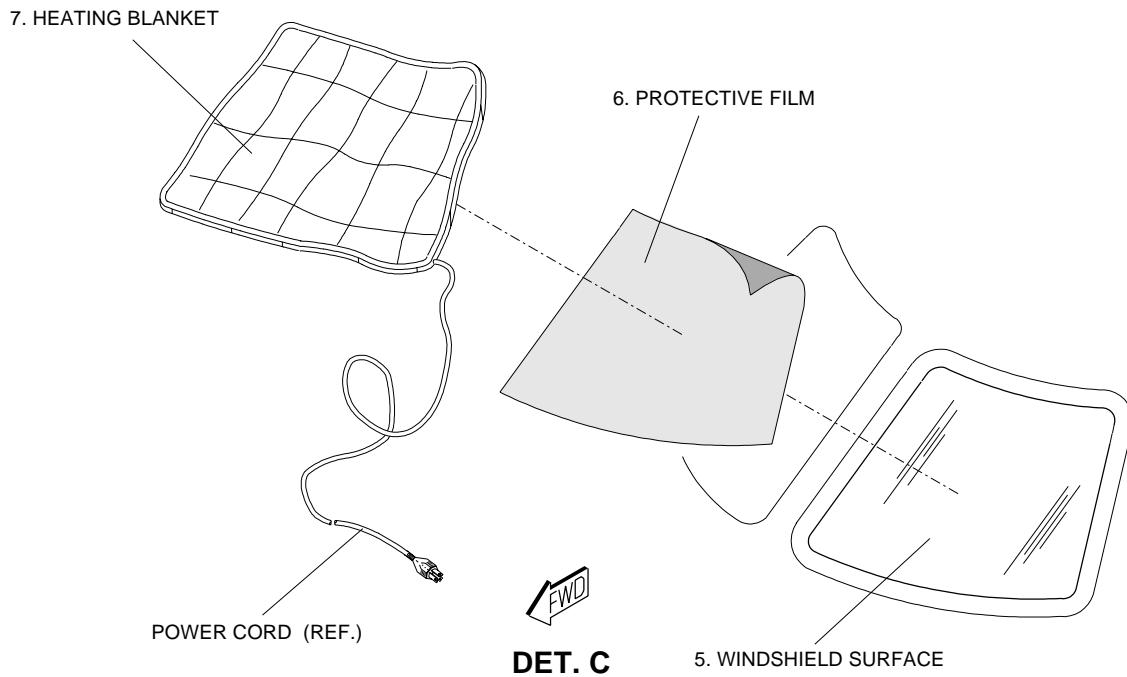
2 USE TAPE 1/4 in WIDE – FURNISHED IN THE RAIN REPELLENT COATING – MASTER KIT.

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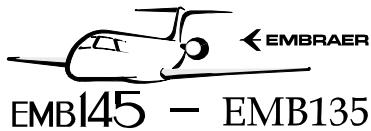
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Windshield Rain-Repellent Coating - Removal/Installation

Figure 404



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TASK 30-41-04-400-802-A

EFFECTIVITY: AIRCRAFT WITH REPELLENT COATING INSTALLED

5. NEXT GENERATION SURFACE SEAL® RAIN-REPELLENT COATING - INSTALLATION

A. General

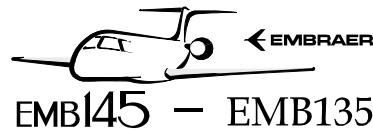
- (1) This task gives the procedure to apply the windshield rain-repellent coating.
- (2) This procedure is applicable to the LH and RH windshields.
- (3) The ambient temperature must be from 15°C to 30°C (60°F to 85°F), and humidity must be less than 45% relative humidity for maximum coating life.
- (4) The GSE 544 is the Rain-Repellent Coating (RRC) Master Kit (P/N: DSS1040). This GSE contains:
 - Reusable equipment,
 - Replenishment supplies (one DSS1027 Master Refill Kit) for approximately 10 windshields, and
 - Chemicals (two DSS1015 Application Kits) to coat 2 windshields.

NOTE: • Refill kits DSS1015 and DSS1027 can be purchased to replenish the DSS1040 RRC Master Kit.

- The DSS1015 Application Kit (Kit A) contains supplies and chemicals to coat 1 windshield.
- The DSS1027 Master Kit Refill (kit D) contains replenishment supplies (consumables) to prepare approximately 10 windshields.
- Alternatively, you can also get consumables and chemicals to perform a single application by purchasing a new Surface Seal® DSS 0100 kit.
Each DSS 0100 kit contains consumables and coating solution to coat one windshield (alternative to DSS1015 and DSS1027).
The DSS0100 kit does not need the heating blanket, but it can be used in conjunction with it when you want to comply with the cure time to increase the coating durability, or to extend the life-time until other refurbishing.
The DS0100 kit allows that a windshield can be coated or refurbished in one hour.
- Embraer recommends that you do not mix the different chemicals and consumables between the DSS1015 and DSS0100 kits.

B. References

REFERENCE	DESIGNATION
AMM TASK 30-41-04-200-801-A/600	COCKPIT WINDSHIELD RAIN REPELLENT COATING - INSPECTION



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C. Zones and Accesses

ZONE	PANEL/DOOR	LOCATION
223		Windshield
224		Windshield

D. Tools and Equipment

ITEM	DESCRIPTION	PURPOSE	QTY
GSE 544	Rain-Repellent Coating - Master Kit	To perform the installation procedure	
GSE 525	Rain-Repellent Coating - Curing Kit	To perform the installation procedure	
GSE 324	Rain-Repellent Coating - Tooling Kit	To perform the installation procedure	
GSE 504	Rain-Repellent Coating - Tooling Kit	To perform the installation procedure	
Commercially available	220 V Power Source	To plug the Heating Blanket	

E. Auxiliary Items

ITEM	DESCRIPTION	PURPOSE	QTY
Commercially available	Workstand	To get access to the windshield from the outside	2
Commercially available	Respirator	Protection from prep solution	2
Commercially available	Safety Goggles	Protection for Eyes	2

F. Consumable Materials

SPECIFICATION (BRAND)	DESCRIPTION	QTY
DSS1027, PPG code	Kit D, Master Refill	1
DSS1015, PPG code	Kit A, Application (Chemicals & supplies to coat one windshield)	2
DSS0100, PPG code	(Chemicals & supplies to coat one windshield - alternative to DSS1015 and DSS1027)	2

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
2	Do the task	On the LH and RH windshields

I. Preparation

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- (1) Make sure that the aircraft is safe for maintenance.

- (2) Make sure that the cockpit windshield electrical heat is off.
- (3) Make sure that the ambient temperature is between 15°C and 30°C (60°F and 85°F).
- (4) Monitor humidity. It must be less than 45% relative humidity for maximum coating life.
- (5) Put the workstand in position and get access to the cockpit windshield from the outside.
- (6) The windshield must not be too hot for you to touch, it and must be away from direct sunlight while you do the application procedure.

J. Installation (Figure 403) (Figure 404)

SUBTASK 420-003-A

WARNING: THE PREP AND COATING SOLUTIONS ARE TOXIC TO SKIN, EYES, AND RESPIRATORY TRACT. USE GOGGLES, DOUBLE VINYL GLOVES, AND RESPIRATOR WHEN YOU APPLY THE SOLUTIONS TO THE PAD. USE ONLY IN WELL VENTILATED AREAS. OBEY THE MANUFACTURER'S HEALTH AND SAFETY INSTRUCTIONS.

CAUTION: WHEN YOU USE THE PLASTIC CLEANING PAD, BE VERY CAREFUL TO MAKE SURE THAT THE REMOVED PARTICLES DO NOT GO INTO THE PAD AND BECOME A POSSIBLE CAUSE OF SCRATCHES IN THE COATING OR IN THE GLASS.

- (1) If the removal procedure was not done or if it is the first time that the repellent coating is applied, do as follows:
 - (a) Use a soft cloth, a sponge or soft paper towel to wash the windshield with glass cleaner such as a 50/50 mixture of isopropanol and water, or a 50/50 solution of rubbing alcohol and water.

NOTE: The Master Kit has none of the cleaning chemicals recommended for this procedure. Look for and obey the specified health and safety information on them.

- (b) Flush the surface thoroughly with clean water.
 - (c) Rub the surface dry with strokes in one direction with the aid of a moist soft cloth, moist sponge, or soft paper towel.

- (d) Carefully use quarter-inch tape (2) from the Master Kit as a protection around the glass panel of the windshield. Refer to DET. B,(Figure 403).

NOTE: This tape must cover the space between the windshield glass panel (3) and the edge of the seal (4).

- (e) Apply two-inch tape (1) to the windshield periphery. Partially overlap the quarter-inch tape (2) and cover the span moisture/hump seal. End at the windshield retainer or structure (5). Refer to DET. B, (Figure 403).

NOTE: Make sure that the masking tape is fully pushed down to prevent contact of chemicals with the aircraft structure.

CAUTION: THE PREPARATION SOLUTION IS CORROSIVE TO THE AIRCRAFT STRUCTURE AND CAN CAUSE DAMAGE TO THE PAINT.

(2) Remove one surface prep ampule and two applicator pads from kit A in the master kit.

(3) Cut off a corner of the plastic tubing at the top to open the surface prep ampule.

NOTE: Cut off the top of the plastic tubing above the foam filter.

(4) Bend the ampule above the cylindrical reservoir to break the seal.

(5) Put the fluid into the prep ampule on one of the applicator pads.

(6) Apply the prep solution to the windshield surface with light overlapping strokes.

NOTE: Apply more surface prep solution to the applicator as necessary to fully cover the windshield.

(7) Cut off a corner of the plastic tubing at its top to open the coating solution ampule .

NOTE: Cut off the top of the plastic tubing above the foam filter.

(8) Bend the ampule above the cylindrical reservoir to break the seal.

(9) Put one-third of the solution into the applicator.

(10) Use quick, circular moves to rub the coating solution on the glass surface.

NOTE: • Add more solution to the applicator as it becomes dry.

• Continue the application process until the ampule is empty.

(11) If the relative humidity is less than 20%, do as follows:

1. Put fresh disposable towels on the windshield surface.

2. Spray deionized water in the towels until they become fully wet and make sure that the towels bond to the windshield.

3. Let the towels stay in the glass for 5 minutes.

4. Remove the towels from all the windshield.

(12) Put a sheet of protective film (6) on the windshield. Refer to DET. C, (Figure 404).

NOTE: Make sure that the protective film covers all the windshield surface.

(13) Use the quarter-inch tape to attach the protective film to the windshield.

(14) Apply the heating blanket (7) to the windshield. Refer to DET. C, (Figure 404).

NOTE: Heat curing of the coating system is an optional step. Heat curing will result in a more durable, longer life coating, however, the heat curing procedure can be omitted when time is limited (customer needs or choice). For heat curing instructions, do the steps (15) to (18). If you need to omit the heat cure go to step (19).

(15) Use the two-inch tape to attach the blanket to the windshield.

WARNING: THE SURFACE OF THE HEATING BLANKET CAN BECOME VERY HOT AND CAUSE INJURY. DO NOT TOUCH THE SURFACE DURING THIS OPERATION.

- (16) Connect the heating blanket (7) to a 220 V / 240 V power source and set its temperature. Refer to DET. C, (Figure 404).
- (17) Let the heating blanket stay on the windshield for eight hours to cure the coating.
- (18) After the coating is cured, remove the heating blanket (7) and the protective film (6). Refer to DET. C, (Figure 404).
- (19) Remove the two-inch and the quarter-inch masking tape.
- (20) Use disposable towels moist with cleaning solvent to remove from the windshield all haze that you can see and all tape residues.
NOTE: In this step you must make sure that you remove all streaks from the coating
- (21) Do this step again with a dry disposable towel.
- (22) Wash the windshield with deionized water and dry the windshield with disposable towels.

K. Follow-on

SUBTASK 842-003-A

- (1) Examine the rain-repellent coating for condition. Refer to [AMM TASK 30-41-04-200-801-A/600](#).
- (2) If you have the rain repellent coating kit with re-coating date label, do as follows:
 - Apply the re-coating date label near the windshield. Refer to instructions of the coating kit.
NOTE: Before you apply the re-coating date label, use a fine point permanent mark to write the month and year in which the coating was done.
- (3) If you have the rain repellent coating kit with sticker, do as follows:
 - Apply the sticker near the windshield. Refer to instructions of the coating kit.
NOTE: The sticker description: "SURFACE SEAL COATED GLASS".
- (4) Remove the workstand from the work area.