TASK 12-22-01-100-801-A EFFECTIVITY: ALL

- 1. External Aircraft Cleaning
 - A. General
 - (1) This task gives the procedures to remove light and heavy dirt from the ACFT external surfaces to:
 - (a) Prevent corrosion that can decrease the aircraft structure life.
 - (b) Do a thorough inspection for corrosion and other types of damage.
 - (c) Make overall appearance better.

embraer

- (d) Keep special painting scheme characteristics.
- (e) Keep visibility through windows.
- (2) The approved materials for wet-wash cleaning are:
 - SUPER BEE 20
 - SUPERSOL-10
- (3) The approved materials for dry-wash cleaning are:
 - NUPOWER II
 - AEROKLEN A70
- (4) The approved solvent to clean the pylon movable fairing and flap track fairing is:
 - MEK
- (5) The approved solvent to clean the skydrol oil is:
 - SKYKLEN 100
- (6) The approved material to clean the landing gear wheelwell is:
 - REMOVEGRAX MLS-12E.
 - NOTE: The REMOVEGRAX MLS-12E and REMOVEGRAX MLS-12 E are the same product.

DESIGNATION

FORWARD PASSENGER DOOR

- (7) The approved material to clean the flap is:
 - alcohol TT-I-735.
- (8) This maintenance technician is necessary to do this task:
 - 1 Mechanical Systems
- B. References

Filtered Serial N^o contained in this publication: 671

REFERENCE

AMM SDS 52-11-00/1

Embraer 195 - AMM 4525 Printed by FlyEmbraer - Jun 05/18 User: pbougour

12-22-01

100-801-A/300 Page 1 of 15 Rev 33 - Apr 20/18



(Continued)	
REFERENCE	DESIGNATION
AMM SDS 52-12-00/1	AFT PASSENGER DOOR
AMM SDS 52-20-00/1	EMERGENCY EXITS
AMM SDS 52-31-00/1	FORWARD CARGO DOOR
AMM SDS 52-32-00/1	AFT CARGO DOOR
AMM SDS 52-41-00/1	FORWARD SERVICE DOOR
AMM SDS 52-42-00/1	AFT SERVICE DOOR
AMM SDS 56-12-00/1	COCKPIT DIRECT-VISION WINDOW
AMM TASK 10-10-01-500-801-A/200	Aircraft Normal Parking - Maintenance Practices
AMM TASK 10-30-01-500-801-A/200	Aircraft Return to Service (Normal Parking) - Mainte- nance Practices
AMM TASK 12-22-01-100-802-A/300	Passenger Cabin Windows (External Side) - Cleaning
AMM TASK 12-22-01-100-804-A/300	Direct-Vision Windows (External Side) - Cleaning
AMM TASK 12-22-01-100-809-A/300	Windshield (External Side) - Cleaning
AMM TASK 12-22-01-100-810-A/300	Nose and Main Landing Gear - Cleaning
AMM TASK 20-00-00-910-801-A/200	Aircraft Maintenance Safety Procedures - Standard Pro- cedures
AMM TASK 24-42-02-860-801-A/200	Connection of the external AC power supply to the air- craft - Aircraft/System Configuration

C. Tools and Equipment

REFERENCE	DESIGNATION
ITEM GSE 029	TOOL - SLAT CONTROL LEVER LOCKING
Commercially available	Circuit Breaker Ring and Tag (Inoperative - Do Not Operate)
Commercially available	flannel cloth,cotton
Commercially available	Dry Compressed Air
Commercially available	Wiper cloth, lint-free

D. Consumable Materials

SPECIFICATION	DESIGNATION	PART NUMBER	REFERENCE
AMS 1526	Detergent Cleaning	AEROKLEEN A710	CPC SECTION 07
ASTM-D-740	Methyl Ethyl Ketone	MEK	CPC SECTION 07
MEP 18-005	Adhesive Masking Tape - 25 mm	MEP 18-005	CPC SECTION 05
DRYWASH CLEANER	DRYWASH CLEANER	NUPOWER II	CPC SECTION 07
MEP_21-018	Detergent	REMOVEGRAX MLS-12E	CPC SECTION 07
DPM 6410	SOLVENT	SKYKLEEN 1000	CPC SECTION 07
AMS1526	Detergent	SUPER BEE 210	CPC SECTION 07
MEP_21-012	Concentrate Liquid Detergent	SUPERSOL-10	CPC SECTION 07
TT-I-735	Grade A Isopropyl Alcohol	TT-I-735	CPC SECTION 07

Filtered Serial No contained in this publication: 671

12-22-01



E. Circuit Breaker List

TYPE	DESIGNATION	LOCATION	BUS	LOCATION TIP	MCDU PAGE
СВ	FLAP ACE 1	LHCBP	DC ESS BUS 1	FLIGHT CONTROLS	-
СВ	FLAP ACE 2	RHCBP	DC ESS BUS 3	FLIGHT CONTROLS	-
СВ	HYD1 PUMP PWR	RICC	AC BUS 2	-	HYD
СВ	HYD2 PUMP PWR	LICC	AC BUS 1	-	HYD
СВ	SLAT ACE 1	LHCBP	DC BUS 1	FLIGHT CONTROLS	-
СВ	SLAT ACE 2	RHCBP	DC ESS BUS 2	FLIGHT CONTROLS	-

F. Job Set-Up

SUBTASK 841-001-A

WARNING: MAKE SURE THAT THE AIRCRAFT IS IN A SAFE CONDITION BEFORE YOU DO THE MAINTENANCE PROCEDURES. THIS IS TO PREVENT INJURY TO PERSONS AND/OR DAMAGE TO THE EQUIPMENT.

- (1) Do the procedure to make the aircraft safe for maintenance (AMM TASK 20-00-910-801-A/200).
- CAUTION: WHEN YOU COVER AN OPENING, MAKE SURE THAT YOU HAVE A SATISFACTORY VIEW OF THE COVER FROM THE GROUND. DO NOT OPERATE THE ENGINES WITH COVERS INSTALLED BECAUSE THE COVERS CAN COME OFF AND CAUSE DAMAGE TO THE ENGINES. USE COVERS. BLACK POLYETHYLENE SHEETS. AND YELLOW VINYL ADHESIVE TAPES TO KEEP LIQUIDS OUT OF THE DRAINS OF THE AIRCRAFT AND MAKE SURE THAT YOU HAVE A SATISFACTORY VIEW OF THE COVERS FROM THE GROUND. IF YOU DO NOT REMOVE THE COVERS FROM DRAINS, DAMAGE TO THE STRUCTURE CAN OCCUR. USE BLACK POLYETHYLENE SHEETS AND YELLOW VINYL ADHESIVE TAPES TO KEEP LIQUIDS OUT OF THE AREAS THAT CONTAIN MECHANICAL, ELECTRICAL, OR HYDRAULIC COMPONENTS, LIQUIDS THAT GET INTO THESE AREAS CAN CAUSE CORROSION, FREEZE DURING FLIGHT, OR REMOVE NECESSARY LUBRICANTS. MAKE SURE THAT THE PITOT PROBE COVER IS IN GOOD CONDITIONS AND DOES NOT SHOW EVIDENCE OF DAMAGE, SPECIALLY FRAYING AROUND ITS OPENING. FRAYED FIBERS FROM THE COVER. COMBINED WITH OTHER SUBSTANCES SUCH AS DIRT, GREASE, AND FLUIDS CAN CAUSE OBSTRUCTION OF THE PROBE. MAKE SURE THAT THE MIXTURE OF WATER DOES NOT GET ON THE STEEL OR CARBON BRAKE HEAT SINKS. CONTAMINATION CAN CAUSE DAMAGE TO THE CARBON AND STEEL BRAKES.
- (2) Do the aircraft normal parking procedures (AMM TASK 10-10-01-500-801-A/200).

EMBRAER 190 AIRCRAFT 195 MAINTENANCE MANUAL

- WARNING: WHEN THE STATIC PORT IS COVERED, MAKE SURE THAT THIS CONDITION IS VISIBLE FROM THE GROUND. ALSO, ATTACH A REMOVE-BEFORE-FLIGHT TAG TO THE LEFT CONTROL YOKE IN THE COCKPIT. IF YOU DO NOT OBEY THIS PRECAUTION, ERROR TO THE AIRSPEED AND ALTITUDE SENSING SIGNALS CAN OCCUR, WHICH CAN CAUSE LOSS OF SAFE FLIGHT CONDITION.
- WARNING: DO NOT SPRAY DETERGENT OR WATER DIRECTLY INTO OR AT THE STATIC PORT. IF YOU DO NOT OBEY THIS PRECAUTION, DAMAGE TO THE STATIC PORT CAN OCCUR, WHICH CAN CAUSE LOSS OF SAFE FLIGHT CONDITION.
- WARNING: DO NOT PLACE ADHESIVE TAPE OVER THE HOLES OF THE STATIC PORT. IF YOU DO NOT OBEY THIS PRECAUTION, ERROR TO THE ALTITUDE SENSING SIGNALS CAN OCCUR, WHICH CAN CAUSE LOSS OF SAFE FLIGHT CONDITION.
- (3) Cover the static port with adhesive tape MEP 18-005 and an orange vinyl streamer that has REMOVE BEFORE FLIGHT printed on it in black letters, as follows (Figure 302):
 - WARNING: ALWAYS OBEY THE MANUFACTURER'S HEALTH AND SAFETY PRECAUTIONS WHEN YOU USE METHYL ETHYL KETONE (MEK). DO NOT GET MEK ON YOUR SKIN, IN YOUR EYES OR MOUTH, AND DO NOT BREATHE ITS FUMES. KEEP MEK AWAY FROM SPARKS, FLAMES OR SOURCES OF HEAT. PUT ON APPROVED PROTECTIVE CLOTHING, GOGGLES AND GLOVES. MEK IS POISONOUS AND FLAMMABLE, AND IF YOU DO NOT OBEY THESE PRECAUTIONS, INJURIES CAN OCCUR.
 - (a) Clean the area around the static port with MEK or equivalent, and use a lint-free wiper cloth to apply the adhesive tape.
 - (b) Cover the holes of the static port with the orange vinyl streamer.
 - (c) Apply the adhesive tape MEP 18-005 to the top and vertical edges of the orange vinyl streamer.
 - (d) Apply the adhesive tape MEP 18-005 to each vertical edge of orange vinyl streamer. Make an overlap of adhesive tape MEP 18-005 with the first strip.
 - (e) Apply the adhesive tape MEP 18-005 horizontally on the orange vinyl streamer, under the static port holes. Make an overlap of adhesive tape MEP 18-005 with the vertical strips.
- (4) Close the direct-vision windows (AMM SDS 56-12-00/1).
- (5) Close the doors as follows:
 - (a) Close the FWD passenger door (AMM SDS 52-11-00/1)
 - (b) Close the aft passenger door (AMM SDS 52-12-00/1)
 - (c) Close the FWD service door (AMM SDS 52-41-00/1)
 - (d) Close the aft service door (AMM SDS 52-42-00/1)

Filtered Serial N^o contained in this publication: 671

12-22-01

- (e) Close the FWD cargo door (AMM SDS 52-31-00/1)
- (f) Close the aft cargo door (AMM SDS 52-32-00/1)
- (g) Close the escape hatch door (AMM SDS 52-20-00/1).
- (6) Do the step that follows, if applicable:

EMBRAER

- <u>NOTE:</u> This procedure is recommended to prevent the flow of the water or clean product directly to the gaps of the doors.
- (a) Seal the passenger, service, and cargo doors with adhesive tape or equivalent.
- G. Light Dirt Cleaning

SUBTASK 160-001-A

- <u>CAUTION:</u> PUT ON GLOVES AND GOGGLES TO PREVENT INJURY TO YOUR SKIN AND EYES. USE A SAFETY HARNESS WHEN YOU ARE ON WET SURFACES ABOVE THE GROUND.
- <u>CAUTION:</u> OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU PREPARE AND APPLY CLEANING AND DISINFECTANT SOLUTIONS. IF THESE PRODUCTS ARE STRONGER THAN THE ONES SPECIFIED, THEY CAN CAUSE DAMAGE TO THE DECORATIVE SURFACES.
- (1) Prepare the cleaning solution in a dilution ratio of 10% by volume of the approved wetwash cleaning material to the amount of water.
- CAUTION: DO NOT USE HIGH PRESSURE (MAXIMUM 70 PSI) AND DO NOT POINT THE FLOW OF WATER DIRECTLY TO THE ANGLE-OF-ATTACK SENSORS OR OTHER MECHANICAL, ELECTRICAL OR HYDRAULIC COMPONENTS. LIQUIDS THAT GET INTO THESE AREAS CAN CAUSE SERIOUS DAMAGE TO THE EQUIPMENT.
- <u>CAUTION:</u> KEEP THE NOZZLE OF THE SPRAY EQUIPMENT MORE THAN 304 mm (12 in) AWAY FROM THE SURFACE OF THE AIRPLANE. THE SPRAY CAN CAUSE DAMAGE TO THE AIRCRAFT SURFACE.
- <u>CAUTION:</u> DO NOT APPLY CLEANING SOLUTION TO LARGE AREAS THAT YOU CANNOT FULLY CLEAN BEFORE THE SOLUTION DRIES ON THE SURFACE. IF YOU DO NOT OBEY THIS PRECAUTION, STAIN CAN OCCUR ON THE SURFACE.
- (2) Apply the cleaning solution with a low-pressure spray gun, a source of dry compressed air or a soft-bristle brush.
- (3) Let the cleaning solution soak into the surface until the dirt becomes soft (approximately 5 minutes).
- <u>CAUTION:</u> DO NOT USE HIGH PRESSURE (MAXIMUM 70 PSI) AND DO NOT POINT THE FLOW OF WATER DIRECTLY TO THE ANGLE-OF-ATTACK SENSORS OR OTHER MECHANICAL, ELECTRICAL OR HYDRAULIC COMPONENTS. LIQUIDS THAT GET INTO THESE AREAS CAN CAUSE SERIOUS DAMAGE TO THE EQUIPMENT.

EMBRAER 190 AIRCRAFT **195** MAINTENANCE MANUAL

CAUTION: KEEP THE NOZZLE OF THE SPRAY EQUIPMENT MORE THAN 304 mm (12 in) AWAY FROM THE SURFACE OF THE AIRPLANE. THE SPRAY CAN CAUSE DAMAGE TO THE AIRCRAFT SURFACE.

(4) Fully flush with a plastic hose or equivalent and clean water, three or more times. Then, flush the surface from its top down to the bottom.

<u>NOTE:</u> If necessary, apply the solution again and rub the surface with a soft cloth, soft-bristle brush or paint brush to remove the dirt.

- (5) Dry the surface with compressed air or with a dry soft cloth.
- H. Dry Wash Cleaning

SUBTASK 160-005-A

- (1) To do the dry-cleaning with NUPOWER II, do as follows:
 - <u>CAUTION:</u> DO NOT USE THE DRY-CLEANING PROCEDURE TO CLEAN TRANSPARENCY SURFACES (ACRYLIC OR POLYCARBONATE), OTHERWISE DAMAGE CAN OCCUR.
 - <u>CAUTION:</u> PUT ON GLOVES AND GOGGLES TO PREVENT INJURY TO YOUR SKIN AND EYES. USE A SAFETY HARNESS WHEN YOU ARE ON WET SURFACES ABOVE THE GROUND.
 - <u>CAUTION:</u> OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU PREPARE AND APPLY CLEANING AND DISINFECTANT SOLUTIONS. IF THESE PRODUCTS ARE STRONGER THAN THE ONES SPECIFIED, THEY CAN CAUSE DAMAGE TO THE DECORATIVE SURFACES.
 - (a) Apply the NUPOWER II with a Cotton flannel cloth to one small area at a time.

<u>NOTE:</u> Apply wet material to the area equally.

(b) Let it dry fully.

NOTE: Wait no more than 5-10 min even in the highest humidity conditions.

- (c) Wipe the surface with a clean Cotton flannel cloth to remove the material.
- (2) To do the dry-cleaning with AEROKLEEN A710, do as follows:
 - <u>CAUTION:</u> DO NOT USE THE DRY-CLEANING PROCEDURE TO CLEAN TRANSPARENCY SURFACES (ACRYLIC OR POLYCARBONATE), OTHERWISE DAMAGE CAN OCCUR.
 - <u>CAUTION:</u> PUT ON GLOVES AND GOGGLES TO PREVENT INJURY TO YOUR SKIN AND EYES. USE A SAFETY HARNESS WHEN YOU ARE ON WET SURFACES ABOVE THE GROUND.
 - <u>CAUTION:</u> OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU PREPARE AND APPLY CLEANING AND DISINFECTANT SOLUTIONS. IF THESE PRODUCTS ARE STRONGER THAN THE ONES SPECIFIED, THEY CAN CAUSE DAMAGE TO THE DECORATIVE SURFACES.
 - (a) Prepare the cleaning solution in a dilution ratio of 10% by volume of AEROKLEEN A710 to the amount of water.



(b) Apply the cleaning solution with hand trigger spray to a small area.

NOTE: If necessary, shake the cleaning solution.

- (c) Remove immediately the dirt with a dry and clean soft cloth. Do not let the cleaning solution dry.
- I. Heavy Dirt Cleaning

SUBTASK 160-002-A

- <u>CAUTION:</u> PUT ON GLOVES AND GOGGLES TO PREVENT INJURY TO YOUR SKIN AND EYES. USE A SAFETY HARNESS WHEN YOU ARE ON WET SURFACES ABOVE THE GROUND.
- <u>CAUTION:</u> OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU PREPARE AND APPLY CLEANING AND DISINFECTANT SOLUTIONS. IF THESE PRODUCTS ARE STRONGER THAN THE ONES SPECIFIED, THEY CAN CAUSE DAMAGE TO THE DECORATIVE SURFACES.
- (1) Prepare the cleaning solution in a dilution ratio of 20% by volume of the approved wetwash cleaning material to the amount of water.
- CAUTION: DO NOT USE HIGH PRESSURE (MAXIMUM 70 PSI) AND DO NOT POINT THE FLOW OF WATER DIRECTLY TO THE ANGLE-OF-ATTACK SENSORS OR OTHER MECHANICAL, ELECTRICAL OR HYDRAULIC COMPONENTS. LIQUIDS THAT GET INTO THESE AREAS CAN CAUSE SERIOUS DAMAGE TO THE EQUIPMENT.
- <u>CAUTION:</u> KEEP THE NOZZLE OF THE SPRAY EQUIPMENT MORE THAN 304 mm (12 in) AWAY FROM THE SURFACE OF THE AIRPLANE. THE SPRAY CAN CAUSE DAMAGE TO THE AIRCRAFT SURFACE.
- <u>CAUTION:</u> DO NOT APPLY CLEANING SOLUTION TO LARGE AREAS THAT YOU CANNOT FULLY CLEAN BEFORE THE SOLUTION DRIES ON THE SURFACE. IF YOU DO NOT OBEY THIS PRECAUTION, STAIN CAN OCCUR ON THE SURFACE.
- (2) Apply the cleaning solution to the heavily dirty areas with a low-pressure spray gun, a source of dry compressed air , a soft-bristle brush or cloth.
- (3) Let the cleaning solution soak for approximately 5 minutes.
- CAUTION: DO NOT USE HIGH PRESSURE (MAXIMUM 70 PSI) AND DO NOT POINT THE FLOW OF WATER DIRECTLY TO THE ANGLE-OF-ATTACK SENSORS OR OTHER MECHANICAL, ELECTRICAL OR HYDRAULIC COMPONENTS. LIQUIDS THAT GET INTO THESE AREAS CAN CAUSE SERIOUS DAMAGE TO THE EQUIPMENT.
- CAUTION: KEEP THE NOZZLE OF THE SPRAY EQUIPMENT MORE THAN 304 mm (12 in) AWAY FROM THE SURFACE OF THE AIRPLANE. THE SPRAY CAN CAUSE DAMAGE TO THE AIRCRAFT SURFACE.
- (4) Fully flush with a plastic hose or equivalent and clean water, three or more times. Then, flush the surface from its top down to the bottom.

- NOTE: If necessary, apply the solution again and rub the surface with a soft cloth. soft-bristle brush or paint brush to remove the dirt.
- WARNING: ALWAYS OBEY THE MANUFACTURER'S HEALTH AND SAFETY PRECAUTIONS WHEN YOU USE METHYL ETHYL KETONE (MEK). DO NOT GET MEK ON YOUR SKIN, IN YOUR EYES OR MOUTH, AND DO NOT BREATHE ITS FUMES. KEEP MEK AWAY FROM SPARKS, FLAMES OR SOURCES OF HEAT. PUT ON APPROVED PROTECTIVE CLOTHING, GOGGLES AND GLOVES. MEK IS POISONOUS AND FLAMMABLE, AND IF YOU DO NOT OBEY THESE PRECAUTIONS, INJURIES CAN OCCUR.
- To remove oil from the pylon movable fairing and flap track fairing with solvent MEK, (5) do as follows:
 - (a) Soak a soft cloth with solvent MEK and rub the dirty area.
 - (b) Remove the dirt with a dry cloth before solvent MEK dries.
- WARNING: DO NOT LET THE SKYKLEEN GET IN YOUR MOUTH OR EYES, OR ON YOUR SKIN.
 - DO NOT BREATHE THE FUMES FROM THE SKYKLEEN.
 - PUT ON PROTECTIVE SPLASH GOGGLES AND GLOVES WHEN YOU **USE THE SKYKLEEN.**
 - KEEP THE SKYKLEEN AWAY FROM SPARKS, FLAME, AND HEAT. THESE MATERIALS ARE POISONOUS AND FLAMMABLE AND CAN CAUSE INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.
- To remove the skydrol oil from the aircraft surface with solvent SKYKLEEN 1000, do (6) as follows:
 - Soak a soft cloth in solvent SKYKLEEN 1000 and rub the dirty area. (a)
 - (b) Remove the dirt with a dry cloth before solvent SKYKLEEN 1000 dries.
- CAUTION: OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU PREPARE AND APPLY CLEANING AND DISINFECTANT SOLUTIONS. IF THESE PRODUCTS ARE STRONGER THAN THE ONES SPECIFIED, THEY CAN CAUSE DAMAGE TO THE DECORATIVE SURFACES.
- To remove the remaining solvent MEK or SKYKLEEN 1000, prepare the cleaning (7) solution in a dilution ratio of 10% by volume of SUPER BEE 210 to the amount of water.
- CAUTION: DO NOT APPLY CLEANING SOLUTION TO LARGE AREAS THAT YOU CANNOT FULLY CLEAN BEFORE THE SOLUTION DRIES ON THE SURFACE. IF YOU DO NOT OBEY THIS PRECAUTION, STAIN CAN OCCUR ON THE SURFACE.
- Apply the cleaning solution with a soft-bristle brush or cloth where the solvent MEK or (8) SKYKLEEN 1000 was applied.

Filtered Serial N^o contained in this publication: 671

Copyright © by Embraer S.A. All rights reserved - See title page for details.

- CAUTION: DO NOT USE HIGH PRESSURE (MAXIMUM 70 PSI) AND DO NOT POINT THE FLOW OF WATER DIRECTLY TO THE ANGLE-OF-ATTACK SENSORS OR OTHER MECHANICAL, ELECTRICAL OR HYDRAULIC COMPONENTS. LIQUIDS THAT GET INTO THESE AREAS CAN CAUSE SERIOUS DAMAGE TO THE EQUIPMENT.
- <u>CAUTION:</u> KEEP THE NOZZLE OF THE SPRAY EQUIPMENT MORE THAN 304 mm (12 in) AWAY FROM THE SURFACE OF THE AIRPLANE. THE SPRAY CAN CAUSE DAMAGE TO THE AIRCRAFT SURFACE.
- (9) Fully flush with a plastic hose or equivalent and clean water.

190

EMBRAER

- (10) Dry the surface with compressed air or with a dry soft cloth.
- J. Flaps and Slats Cleaning

SUBTASK 160-007-A (Figure 303)

(1) Do these steps to extend the flaps and slats:

<u>WARNING:</u> MAKE SURE THAT IT IS SAFE TO ENERGIZE THE AIRCRAFT. CIRCUITS THAT ARE NOT SAFE CAN CAUSE INJURY TO PERSONS AND/OR DAMAGE TO EQUIPMENT.

- (a) Connect the external AC power supply to the aircraft (AMM TASK 24-42-02-860-801-A/200).
- <u>WARNING:</u> MAKE SURE THAT THE FLAP CANNOT BE OPERATED ACCIDENTALLY. AN ACCIDENTAL OPERATION OF THE FLAP CAN CAUSE INJURY TO PERSONS.

WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE NOT NEAR THE TRAILING EDGE FLAPS AND LEADING EDGE SLATS. INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR WHEN THESE SURFACES MOVE.

- (b) On the control pedestal, set the SFCL (1) to the FULL (DOWN) position.
- (2) Lock the SFCL (1) with the GSE 029.
- (3) On the CBP, open these circuit breakers and put a circuit breaker ring and tag (inoperative do not operate) on each one of them:
 - FLAP ACE 1-LHCBP (DC ESS BUS 1 FLIGHT CONTROLS)
 - FLAP ACE 2-RHCBP (DC ESS BUS 3 FLIGHT CONTROLS)
 - SLAT ACE 1-LHCBP (DC BUS 1 FLIGHT CONTROLS)
 - SLAT ACE 2-RHCBP (DC ESS BUS 2 FLIGHT CONTROLS)
- (4) In the middle avionics compartment, open this circuit breaker and put a circuit breaker ring and tag (inoperative do not operate) on it:
 - HYD1 PUMP PWR-RICC (AC BUS 2)
 - HYD2 PUMP PWR-LICC (AC BUS 1)

(5) With the flaps and slats extended, clean them as follows:

EMBRAER

- NOTE: During the cleaning procedure of the flaps and slats, do not expose the components (actuators, harness, skew sensor) in contact with chemicals product.
 - During the cleaning procedure of the flaps and slats, make sure that you do not remove the lubrication from the system components.
 - Do not wash the aircraft with the flaps and slats extended.
- (a) Do the manual cleaning by applying the alcohol TT-I-735 with a lint-free wiper cloth, on the area that was covered during the aircraft washing.
- (6) Do these steps to retract the flaps and slats:
 - (a) On the CBP, remove the circuit breaker ring and tag (inoperative do not operate) from each of these circuit breakers, and close them:
 - FLAP ACE 1-LHCBP (DC ESS BUS 1 FLIGHT CONTROLS)
 - FLAP ACE 2-RHCBP (DC ESS BUS 3 FLIGHT CONTROLS)
 - SLAT ACE 1-LHCBP (DC BUS 1 FLIGHT CONTROLS)
 - SLAT ACE 2-RHCBP (DC ESS BUS 2 FLIGHT CONTROLS)
 - WARNING: MAKE SURE THAT THE FLAP CANNOT BE OPERATED ACCIDENTALLY. AN ACCIDENTAL OPERATION OF THE FLAP CAN CAUSE INJURY TO PERSONS.
 - WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE NOT NEAR THE TRAILING EDGE FLAPS AND LEADING EDGE SLATS. INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR WHEN THESE SURFACES MOVE.
 - (b) Remove the GSE 029 from the SFCL (1).
 - WARNING: MAKE SURE THAT PERSONS AND EQUIPMENT ARE NOT NEAR THE TRAILING EDGE FLAPS AND LEADING EDGE SLATS. INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR WHEN THESE SURFACES MOVE.
 - (c) Set the SFCL (1) to the 0 (UP) position.
 - (d) Make sure that the flaps and slats are retracted.
- (7) In the middle avionics compartment, remove the circuit breaker ring and tag (inoperative do not operate) from each of these circuit breakers, and close them:
 - HYD1 PUMP PWR-RICC (AC BUS 2)
 - HYD2 PUMP PWR-LICC (AC BUS 1)
- K. Landing Gear Wheelwell Cleaning

SUBTASK 100-005-A

Filtered Serial N^o contained in this publication: 671

Rev 33 - Apr 20/18

THIS PAGE MUST NOT BE RETAINED FOR FUTURE REFERENCE

ONCE PRINTED,

HARD COPY IS UNCONTROLLED.

B

THE

S

AIRCRAFT

EMBRAER

- <u>CAUTION:</u> PUT ON GLOVES AND GOGGLES TO PREVENT INJURY TO YOUR SKIN AND EYES. USE A SAFETY HARNESS WHEN YOU ARE ON WET SURFACES ABOVE THE GROUND.
- CAUTION: USE ONLY THE SPECIFIED MATERIALS AND OBEY THE MANUFACTURER'S INSTRUCTIONS. OTHER MATERIALS CAN CAUSE DAMAGE TO THE SURFACE PROTECTION OF THE COMPONENTS AND RELATED AREA.
- <u>CAUTION:</u> OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU PREPARE AND APPLY CLEANING AND DISINFECTANT SOLUTIONS. IF THESE PRODUCTS ARE STRONGER THAN THE ONES SPECIFIED, THEY CAN CAUSE DAMAGE TO THE DECORATIVE SURFACES.
- (1) Prepare the cleaning solution in a dilution ratio of 20% of detergent REMOVEGRAX MLS-12E to 80% of water.
 - <u>NOTE:</u> If you use the wrong type of cleaning solution, it can cause hydrogen embrittlement, which can cause premature breaking of some components.
- (2) Do the nose and main landing gear wheelwell, cleaning, as follows:
 - (a) Apply the cleaning solution to a lint-free wiper cloth and wash the nose and main landing gear wheelwell with your hand.
 - NOTE: It is recommended that you clean the aircraft with your hands.
 - The use of spray of cleaning solution directly on gears, wheels, brakes, harness and connectors is not recommended.
 - The cleaning solution can go into the joints or bearings and cause premature wear and corrosion. The high pressure water and chemical solvents can force dirt, contamination, and moisture into bearings, bushed joints, actuator seals, electrical connections, faying surfaces, and structural joints, causing corrosion, increased maintenance cost, and unserviceability.
 - (b) Fully dry the nose and main landing gear wheelwell with a lint-free wiper cloth.
 - NOTE: During the cleaning procedure of the landing gear wheelwell, do not spray water on gears, wheels, brakes, harness and connectors.
 - The fluid can go into the joints or bearings and cause premature wear and corrosion.
 - Make sure that the cleaning solution was fully removed.

SUBTASK 100-006-A

- (3) If applicable, clean the nose and main landing gear (AMM TASK 12-22-01-100-810-A/ 300).
- (4) If applicable, clean the windshield (AMM TASK 12-22-01-100-809-A/300).
- (5) If applicable, clean the direct-vision windows (AMM TASK 12-22-01-100-804-A/300).

-iltered Serial No contained in this publication: 671



- (6) If applicable, clean the windows (AMM TASK 12-22-01-100-802-A/300).
- L. Job Close-Up

SUBTASK 842-001-A

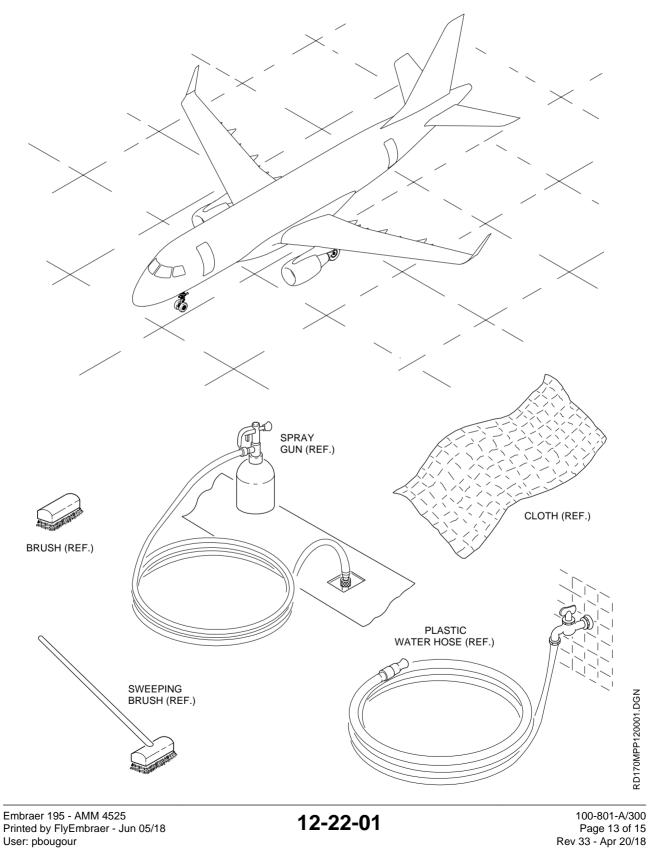
- (1) Do the steps that follow if applicable:
 - (a) Remove the adhesive tape from the forward cargo door and seals.
 - (b) Remove the adhesive tape from the aft cargo door and seals.
 - (c) Remove the adhesive tape from the forward service door and seals.
 - (d) Remove the adhesive tape from the aft service door and seals.
 - (e) Remove the adhesive tape from the forward passenger door and seals.
 - (f) Remove the adhesive tape from the aft passenger door and seals.
 - (g) Remove the adhesive tape from the emergency hatches and seals.

SUBTASK 842-006-A

- (2) Remove the cover from the static port.
- (3) Do the aircraft return-to-service (normal parking) procedures (AMM TASK 10-30-01-500-801-A/200).

190 EMBRAER 195 AIRCRAFT MAINTENANCE MANUAL

EFFECTIVITY: ALL Aircraft External Surface - Cleaning Figure 301



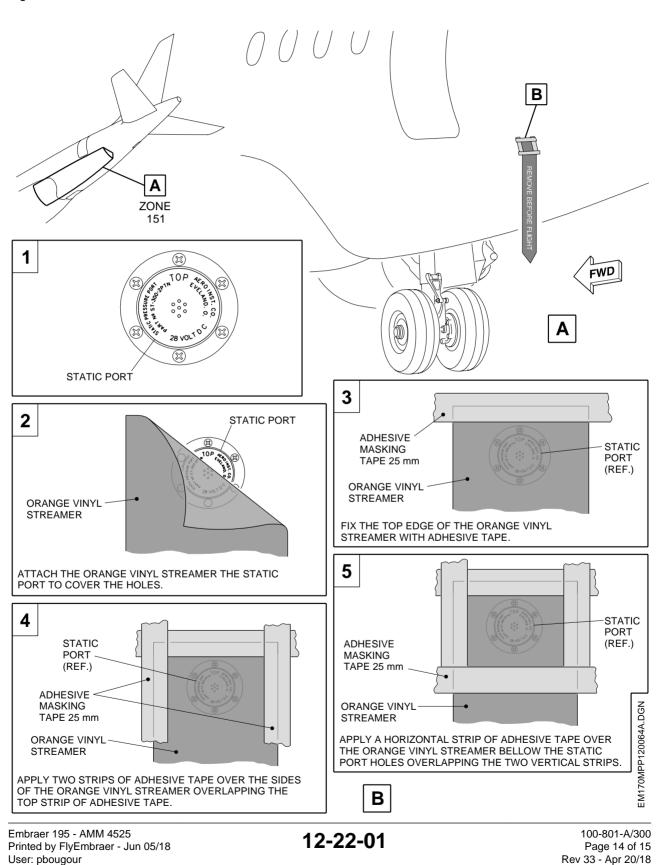
100-801-A/300 Page 13 of 15

EMBRAER 190 195

AIRCRAFT MAINTENANCE MANUAL

EFFECTIVITY: ALL Static Port - Cover Procedure Figure 302

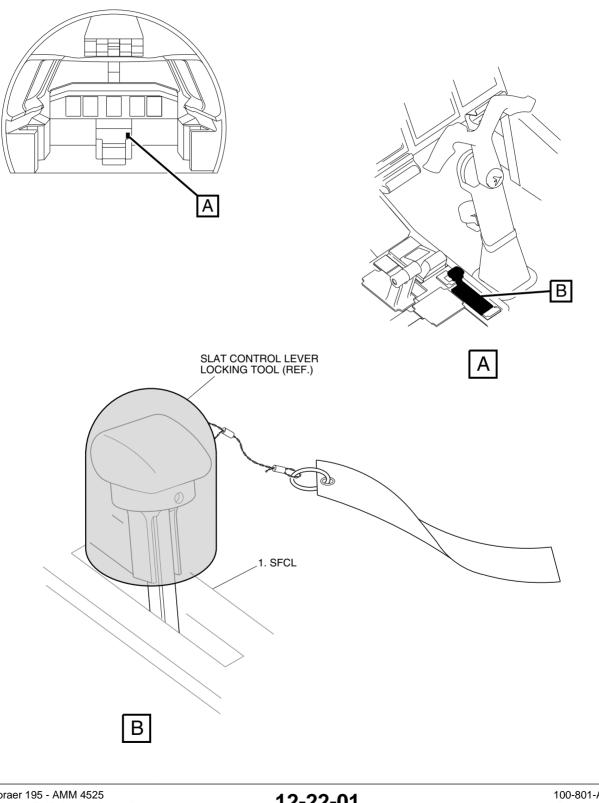
Filtered Serial No contained in this publication: 671





AIRCRAFT MAINTENANCE MANUAL

EFFECTIVITY: ALL Figure 303



Filtered Serial No contained in this publication: 671

PC170MPP270009E.CGM