NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety Aviation Engineering Division Washington, DC 20594

June 29, 2009

AIRWORTHINESS GROUP CHAIRMAN'S ERRATA AND ADDENDUM

A. ACCIDENT: DCA08MA076

 LOCATIONS:
 San Francisco International Airport, California

 DATE THE
 Description

DATE/TIME: June 28, 2008, approximately 10:15 pm local time

AIRCRAFT: Boeing 767-281SF, N799AX

B. GROUP MEMBERS:

| Chairman: | Robert L. Swaim |
|-----------|-----------------|
| | Washington, DC |

C. SUMMARY:

On June 28, 2008, about 2215 Pacific daylight time (PDT),¹ an ABX Air Boeing 767-200, registration N799AX, operating as flight 1611 from San Francisco International Airport (SFO), San Francisco, California, experienced a ground fire before engine startup.

To the Airworthiness Group Chairman's Factual Report of December 22, 2008, this document corrects one typographic error, describe a generic difference between publications and the physical airplanes, and add Boeing Service Bulletin 767-35A0034 to the docket.

D. DETAILS OF THE INVESTIGATION:

The factual report of December 22, 2008, contained section D.3.6, titled: N799AX EMERGENCY EQUIPMENT, stating:

"Two 15 pound Halon fire extinguishers were found in their mounting brackets."

The sentence should read:

¹ All times in this report are PDT based on a 24-hour clock unless otherwise noted.

"Two 9 pound Halon fire extinguishers were found in their mounting brackets."

As addendum information, ABX publications were found to have some slight generic properties through the use of one illustration to represent equipment installed in the ABX fleet of airplanes. For example, the Airworthiness Group Chairman's Factual Report Figure 39 showed the location of a 9 pound fire extinguisher in the supernumerary compartment. Rather than being located immediately to the right of the bench seating in the accident airplane, the extinguisher was located slightly closer to the exterior (R1) door.

As addendum information, attached is Boeing Service Bulletin 767-35A0034, dated September 2, 1999, with Revision 1, dated June 22, 2000.



 Number:
 767-35A0034

 Date:
 September 2, 1999

 Revision 1:
 June 22, 2000

 ATA System:
 3510

Revision Transmittal Sheet

SUBJECT: OXYGEN - Crew Oxygen - Crew Oxygen System Low Pressure Flex Hose Replacement

This revision includes all pages of the service bulletin.

COMPLIANCE INFORMATION RELATED TO THIS REVISION

No more work is necessary on airplanes changed as shown in the initial release of this service bulletin.

REASON FOR REVISION

This revision is sent to advise affected operators of the following:

The deletion of the NOTE from the Background and Reason sections.

The addition of an exception to the Effectivity section on the Summary page.

The removal of the 767-400 effectivity from the Effectivity section.

The removal of the reference to another service bulletin from the Reference section.

The addition of the vendor equivalent, oxygen hose, part numbers to the Parts Necessary For Each Airplane section.

The addition of the sleeving and tape to the Operator Supplied Parts section.

The addition of instructions to remove and install the oxygen masks and demand regulators, as well as to install sleeving and tape to the oxygen hoses, and added a NOTE for clarification if the hoses are already installed without the sleeving or tape in the Accomplishment Instructions.

The data given in Information Notice 767-35A0034 IN 01 is included in this revision.

Vertical lines are put on the left edge of each page, except in Paragraph 1.A., Effectivity, to show the location of important changes.

Pages with no vertical lines have no important changes.

REVISION HISTORY

Original Release: September 2, 1999 Revision 1: June 22, 2000



Commercial Airplane Group 767 Service Bulletin

Number: 767-35A0034 Date: September 2, 1999 Revision 1: June 22, 2000 ATA System: 3510

Summary

SUBJECT: OXYGEN - Crew Oxygen - Crew Oxygen System Low Pressure Flex Hose Replacement

CONCURRENT REQUIREMENTS

None

BACKGROUND

The changes provided in this service bulletin will help prevent damage to the low pressure oxygen flex hoses that may subjected to electrical current. An electrical grounding condition can cause the hose to melt or burn.

One operator has reported damaged oxygen supply hoses on another Boeing model in August of 1997. This damage has occurred due to a short circuit in the 757 Audio Select Panel. It sent an electrical current through the support structure to the flight crew mask stowage box. This caused the spring inside the low pressure oxygen hose to act as an electrical conductor and heat up. This caused the hose to burn through.

Also, a similar occurrence on a 737 was reported due to improper maintenance.

This service bulletin will replace low pressure oxygen hoses with non-conductive hoses located on the flight deck. The replacement of the oxygen hoses will help prevent electrical current from passing through the supporting spring which can cause the hose to melt or burn.

Boeing Service Related Problem (SRP) 767-SRP-35-0014 is related to this service bulletin.

ACTION (PRR B12900-183)

Remove the crew oxygen boxes. Replace the existing low pressure hoses with the new non-conductive hoses. Install the crew oxygen boxes. Functional test the system.

EFFECTIVITY

All 767 airplanes, line numbers 1 through 763, except line number 758, which was accomplished in production.

COMPLIANCE

Boeing recommends compliance at the earliest opportunity when manpower, material and facilities are available.

INDUSTRY SUPPORT INFORMATION

Boeing warranty remedies are not available for the configuration changes given in this service bulletin.

MANPOWER

| Total | Elapsed Time |
|------------------|----------------|
| <u>Man-Hours</u> | <u>(Hours)</u> |
| 3.5 | 3.5 |

MATERIAL INFORMATION

None



S88678

(TYPICAL)



Commercial Airplane Group

 Number:
 767-35A0034

 Date:
 September 2, 1999

 Revision 1:
 June 22, 2000

 ATA System:
 3510

SUBJECT: OXYGEN - Crew Oxygen - Crew Oxygen System Low Pressure Flex Hose Replacement

THIS SERVICE BULLETIN IS SENT TO THE OPERATORS OF RECORD OF THE AIRPLANES SHOWN IN PARAGRAPH 1.A., EFFECTIVITY. IF AN AIRPLANE HAS BEEN LEASED OR SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OPERATOR. IF APPLICABLE SPARES HAVE BEEN SOLD, SEND THIS SERVICE BULLETIN TO THE NEW OWNER.

1. PLANNING INFORMATION

A. Effectivity

1. Airplanes

Refer to Service Bulletin Index Document D624T001, Part 3 for Airplane Variable Number, Line Number, and Serial Number data.

This service bulletin is for the airplanes shown below. An equivalent change is on subsequent production airplanes. Refer to PRR B12900-183 for data about this change.

| Airplane Mode 767-200 | els: 767-300 | 767-300F | |
|--------------------------|---------------------------|-------------|--------------------------------|
| IDENTIFICAT | ION BY CUSTOMER, | CUSTOMER CO | DDE, GROUP AND VARIABLE NUMBER |
| ABX AIR (AB) VA803 | <) VA807-VA809 | VB101-VB112 | |
| AERO CONTI VE104 | NENTE (COH) | | |
| AEROFLOT (A VS321 | ARO) | | |
| AEROMEXICO VF091 | D (AMX) VF093 | VN556 | VS211 |
| AIR ALGERIE VK131-V | (ALG) <133 | | |
| AIR ATLANTA VE041 | ICELANDIC (AID) | | |
| AIR CANADA VA701-VA | (ACN) A719 VB001-VB002 | VB201-VB202 | VN931-VN936 |
| AIR CHINA (B VE064-VE | EJ) E065 VE083-VE086 | VK161-VK164 | |
| | | | |

| AIR | DO (HIA) VS176 | | | | |
|-----|------------------------------|--------------------------|-------------|-------|-------|
| AIR | EUROPA (ARE VB323 |) VB328 | | | |
| AIR | EUROPE ITAL VL931-VL932 | Y (EIY) VN682 | VN811-VN812 | VN972 | |
| AIR | FRANCE (AFA) VN631-VN635 |) | | | |
| AIR | GABON (GBN) VE021 | | | | |
| AIR | MADAGASCAF VE117 | R (MAD) VS316 | | | |
| AIR | MAURITIUS (M VF001-VF002 | IAU) | | | |
| AIR | NEW ZEALANI VB324 | D (ANZ) VE101-VE103 | VN651-VN658 | VN813 | |
| AIR | PACIFIC (APC) VN676 |) | | | |
| AIR | SEYCHELLES VF051 | (ASY) VL941 | | | |
| AIR | ZIMBABWE (ZM VF061-VF062 | MB) | | | |
| AIR | 2000 (ATZ) VN921-VN922 | VS216 | | | |
| AIR | TOURS INT'L A VN951-VN953 | IRWAYS (GUE) | | | |
| ALI | TALIA (ALI) VL701-VL702 | VN422-VN427 | VS366-VS367 | VS401 | |
| ALL | NIPPON AIRW VB113-VB125 | AYS (ANA) VK081-VK113 | VN191-VN198 | VR401 | |
| AMI | ERICAN AIRLIN VA501-VA530 | ES (AAL) VN001-VN041 | VS196-VS203 | | |
| ANS | SETT AUSTRAL VB051-VB055 | IA (ANS) VB321-VB322 | VE118 | VL755 | |
| ANS | SETT WORLDW VN385 | IDE AVIATION (VN388 | (AWW) | | |
| ASI | ANA AIRLINES VK141-VK148 | (AAR) VL703 | VN753 | VR426 | VW851 |

| AVIANCA (AVI) VE171-VE172 | VF092 | VF161 | VN152 | | |
|---|------------------------------------|----------------------|-------------|-------------|-------------|
| BOEING (TBC) VA001 | VY999 | | | | |
| BRITANNIA AIRWA VB325-VB327 | YS (BRI) VB329-VB332 | VL911-VL914 | VN731 | VS051-VS054 | |
| BRITISH AIRWAYS VN111-VN127 | (BAB) VN130-VN137 | VS246-VS248 | | | |
| CANADIAN AIRLIN VN051-VN054 | ES (CDI) VN057-VN062 | VN751-VN752 | | | |
| CHINA YUNNAN AI VL871-VL873 | RLINES (YUN) | | | | |
| CITY BIRD (CBD) VN436 | VS177 | | | | |
| CONDOR (CDF) VN683-VN691 | | | | | |
| DELTA AIR LINES (VA301-VA315 VS066-VS070 | DAL) VK031-VK056 VS073-VS078 | VL753 VS266-VS272 | VN251-VN276 | VN301-VN306 | VR471-VR472 |
| EGYPTAIR (EGP) VN211 | | | | | |
| EL AL ISRAEL AIRL VB281-VB284 | INES (ELA) VF101-VF102 | | | | |
| ETHIOPIAN AIRLIN VE001-VE002 | ES (ETH) VN371 | VS306 | | | |
| EVA AIR (EVA) VB441-VB444 | VN471-VN472 | VN791-VN792 | | | |
| FIRST SECURITY E VF072 | BANK OF UTAH | (FSB) | | | |
| GULF AIR (GUL) VL003-VL006 | VN307-VN310 | VN313-VN314 | | | |
| H.M.S.F. AND AME VF180 | DEO CORP. (BV | VN) | | | |
| IBERIA AIRLINES (I VN546-VN547 | BE) | | | | |
| ITOCHU CORPORA VF181-VF184 | TION (CIT) | | | | |
| JAPAN AIRLINES (. VB371-VB373 | JAL) VK001-VK016 | VK021-VK022 | VK181 | VK186 | VR461 |

| K.B.A. FOUNDATIC VN312 | DN (KBA) | | | | |
|---------------------------------|-----------------------------|-------------|-------------|-------|-------------|
| KALAIR USA CORF VN311 | P (KLA) | | | | |
| KLM - ROYAL DUT VL891-VL900 | CH AIRLINES (K VS136 | (LM) | | | |
| LAM (LAM) VF162 | | | | | |
| LANCHILE AIRLINE VN063-VN064 | ES (LAN) VN531 | VN557 | VN966-VN971 | VR251 | VS131-VS133 |
| LAPA ARGENTINA VS111 | (LAZ) | | | | |
| LAUDA AIR (LAL) VS301-VS302 | | | | | |
| LAUDA AIR S.P.A. VL011 | (LDI) VN242-VN243 | VN671 | | | |
| LOT POLISH AIRLI VF041-VF042 | NES (LOT) VN291-VN293 | | | | |
| LTU (LTU) VN171-VN174 | VN381 | VS061 | | | |
| MALEV HUNGARIA VF171-VF172 | N AIRLINES (H | GA) | | | |
| MARTINAIR HOLLA VN221-VN225 | AND (MTH) VN672 | | | | |
| MID EAST JET (SK VF251 | L) | | | | |
| QANTAS (QAN) VE061-VE063 | VE066-VE069 | VN081-VN099 | VS186-VS187 | | |
| ROYAL BRUNEI AI VN372 | RLINES (RBA) VN382-VN384 | VN386-VN387 | VN637-VN638 | | |
| SAS (SAS) VF071 | VN151 | VN153-VN158 | VN163-VN168 | VN536 | |
| SHANGHAI AIRLIN VK171 | ES (SHA) VR421 | | | | |
| SKYMARK AIRLINE VS261-VS262 | ES (SKM) | | | | |
| SOBELAIR (SBL) VN421 | VN636 | | | | |

SOUTH AFRICAN AIRWAYS (SAA) VE022-VE023 SPANAIR (SPP) VN541-VN542 TACA INTERNATIONAL AIRLINES (TAC) VE116 VN732 TRANSBRASIL (TBL) VB251-VB253 VL001-VL002 VN532 TWA (TWA) VA801-VA802 VA804-VA806 VA810 VB301-VB302 VN376 VN537 VN551 VN561-VN562 VN681 VS206-VS208 UNITED AIRLINES (UAL) VA002-VA020 VN491-VN513 VS091-VS097 UPS (UPS) VR201-VR208 VW701-VW721 US AIRWAYS (USA) VE141-VE152 UZBEKISTAN AIRWAYS (UZB) VL806-VL807 VARIG AIRLINES (VAR) VE121-VE126 VN055-VN056 VN231-VN234 VIETNAM AIRLINES (VIE)

VL751-VL752 VL754

IDENTIFICATION BY VARIABLE NUMBER

| VA001-VA020 VB051-VB055 VB321-VB332 VE041-VE043 VE141-VE152 VF071-VF072 VF251 VK141-VK148 VL011 VL911-VL914 VN111-VN127 VN211-VN212 VN301-VN314 VN471-VN472 VN551 VN676 VN921-VN922 VR401 VS061 VS136 | VA301-VA315 VB101-VB125 VB371-VB373 VE061-VE069 VE171-VE172 VF091-VF093 VK001-VK016 VK161-VK164 VL701-VL703 VL931-VL932 VN130-VN137 VN221-VN225 VN371-VN372 VN491-VN513 VN556-VN557 VN681-VN691 VN931-VN936 VR421 VS066-VS070 VS176-VS177 | VA501-VA530 VB201-VB202 VB401 VE083-VE086 VF001-VF002 VF101-VF102 VK021-VK022 VK171 VL751-VL755 VL941 VN151-VN158 VN231-VN234 VN376 VN531-VN532 VN561-VN562 VN731-VN732 VN951-VN953 VR426 VS073-VS078 VS186-VS187 | VA701-VA719 VB251-VB253 VB441-VB444 VE101-VE104 VF041-VF042 VF161-VF162 VK031-VK056 VK181 VL806-VL807 VN001-VN041 VN163-VN168 VN241-VN243 VN381-VN388 VN536-VN537 VN631-VN638 VN751-VN753 VN966-VN972 VR461 VS091-VS097 VS196-VS203 | VA801-VA810 VB281-VB284 VE001-VE003 VE116-VE118 VF051 VF171-VF172 VK081-VK113 VK186 VL871-VL873 VN051-VN064 VN171-VN174 VN251-VN276 VN421-VN427 VN541-VN542 VN651-VN658 VN791-VN792 VR201-VR208 VR471-VR472 VS111 VS206-VS208 | VB001-VB002 VB301-VB302 VE021-VE023 VE121-VE126 VF061-VF062 VF180-VF184 VK131-VK133 VL001-VL006 VL891-VL900 VN081-VN099 VN191-VN198 VN291-VN293 VN436 VN546-VN547 VN671-VN672 VN811-VN813 VR251 VS051-VS054 VS131-VS133 VS211 |
|--|--|--|--|--|--|
| VS061 | VS066-VS070 | VS073-VS078 | VS091-VS097 | VS111 | VS131-VS133 |
| VS136 | VS1/6-VS1// | VS186-VS187 | VS196-VS203 | VS206-VS208 | VS211 |
| VS216 | VS246-VS248 | VS261-VS262 | VS266-VS272 | VS301-VS302 | VS306 |
| VS316 | VS321 | VS366-VS367 | VS401 | VW701-VW721 | VW851 |
| VY999 | | | | | |

2. Spares Affected

None

B. Concurrent Requirements

None

C. Reason

The changes provided in this service bulletin will help prevent damage to the low pressure oxygen flex hoses that may subjected to electrical current. An electrical grounding condition can cause the hose to melt or burn.

One operator has reported damaged oxygen supply hoses on another Boeing model in August of 1997. This damage has occurred due to a short circuit in the 757 Audio Select Panel. It sent an electrical current through the support structure to the flight crew mask stowage box. This caused the spring inside the low pressure oxygen hose to act as an electrical conductor and heat up. This caused the hose to burn through.

Also, a similar occurrence on a 737 was reported due to improper maintenance.

This service bulletin will replace low pressure oxygen hoses with non-conductive hoses located on the flight deck. The replacement of the oxygen hoses will help prevent electrical current from passing through the supporting spring which can cause the hose to melt or burn.

Revision 1 is sent to advise affected operators of the following:

The deletion of the NOTE from the Background and Reason sections.

The addition of an exception to the Effectivity section on the Summary page.

The removal of the 767-400 effectivity from the Effectivity section.

The removal of the reference to another service bulletin from the Reference section.

The addition of the vendor equivalent, oxygen hose, part numbers to the Parts Necessary For Each Airplane section.

The addition of the sleeving and tape to the Operator Supplied Parts section.

The addition of instructions to remove and install the oxygen masks and demand regulators, as well as to install sleeving and tape to the oxygen hoses, and added a NOTE for clarification if the hoses are already installed without the sleeving or tape in the Accomplishment Instructions section.

Boeing Service Related Problem (SRP) 767-SRP-35-0014 is related to this service bulletin.

D. Description

Remove the crew oxygen boxes. Replace the existing low pressure hoses with the new non-conductive hoses. Install the crew oxygen boxes. Functional test the system.

Revision 1 - No more work is necessary on airplanes changed as shown in the initial release of this service bulletin.

An evaluation form is attached to this service bulletin. Please use this form to tell us what you think of the quality of this service bulletin.

E. Compliance

Boeing recommends compliance at the earliest opportunity when manpower, material and facilities are available.

F. Approval

This service bulletin was examined by the Federal Aviation Administration (FAA). The changes specified in this service bulletin comply with the applicable Federal Aviation Regulations (FAR) and are FAA approved. This service bulletin and the FAA approval were based on the airplane in its original Boeing delivery configuration or as modified by other FAA approved Boeing changes.

If an airplane has a non-Boeing modification or repair that affects a component or system also affected by this service bulletin, the operator is responsible for obtaining appropriate regulatory agency approval before incorporating this service bulletin.

G. Manpower

The table below shows an estimate of the man-hours necessary to do this change for each airplane. This estimate is for direct labor only, done by an experienced crew. Adjust the estimate with operator man-hour data if necessary. The estimate does not include lost time. These are some examples of lost time:

- Time to adjust to the workplace
- Time to schedule the work
- Time to examine the work
- Time to cure the materials
- Time to make the parts
- Time to find the tools.

| Task | Number of Persons | Man-Hours | Elapsed Time (Hours) |
|---------------|-------------------|-----------|----------------------|
| Access | 1 | 1.0 | 1.0 |
| Replace Hoses | 1 | 1.5 | 1.5 |
| Restore | 1 | 1.0 | 1.0 |
| TOTAL FOR EAG | CH AIRPLANE | 3.5 | 3.5 |

H. Weight and Balance Changes

None

I. Electrical Load Data

Not changed

J. References

- 1. Existing Data:
 - a. Engineering Change Memo PRR B12900-183
 - b. Service Related Problem (SRP) 767-SRP-35-0014
 - c. 767 Maintenance Manual (AMM) Subject 12-15-08, 20-41-00, 35-00-00, 35-11-00, 35-11-51
- 2. Data supplied with this service bulletin:

None

3. Installation Drawings Used in the Preparation of This Service Bulletin:

| Drawing Number | <u>Title</u> |
|----------------|---|
| 232T8002 | EQUIPMENT INSTL - CREW OXYGEN |
| 278T4100 | TUBING INSTALLATION CONTROL CAB SIDEWALL RH, STA 138 THRU 249 |
| 278T4101 | TUBING INSTALLATION CONTROL CAB SIDEWALL LH, STA 138 THRU 249 |
| 278T4104 | TUBING INSTALLATION FLT INSTR PNL AND CAP PTN, STA 197 THRU 247 |
| 278T4105 | TUBING INSTALLATION CENTER CONSOLE AREA P8, P9 AND P10 |
| 278T4122 | TUBING INSTALLATION CROWN AFT RH, STA 249 THRU 431 |

These drawings were used to prepare this service bulletin. These drawings are not necessary to make the specified changes, and are not supplied with this service bulletin. These drawings may not be applicable to all airplane configurations or operators.

K. Publications Changed

| Publication | Chapter-Section |
|-------------------------------|-----------------|
| 767 Illustrated Parts Catalog | 35-11 |

L. Interchangeability and Intermixability

Refer to Paragraph 2.E., Existing Parts Accountability, for interchangeability and intermixability information.

2. MATERIAL INFORMATION

A. Material - Price and Availability

The operator can supply the parts and materials shown in Paragraph 2.C., Parts Necessary For Each Airplane. As an alternative, operators can purchase the parts from Boeing Spares. This service bulletin does not show the Boeing price and supply data.

B. Industry Support Information

Boeing warranty remedies are not available for the configuration changes given in this service bulletin.

C. Parts Necessary For Each Airplane

1. Kits:

None

2. Parts and Materials Supplied by the Operator:

| <u>QTY</u> | Boeing Part Number / Vendor Part Number | <u>Name</u> |
|------------|---|--------------------------------|
| (a) | 60B50059-606 / 38001-606 (b) | Hose Assy |
| (a) | 60B50059-607 / 38001-607 (b) | Hose Assy |
| (a) | 60B50059-608 / 38001-608 (b) | Hose Assy |
| (a) | 60B50059-610 / 38001-610 (b) | Hose Assy |
| (a) | 60B50059-613 / 38001-613 (b) | Hose Assy |
| 2 | 232T8002-100 (.750 DIA X 16 inches) (c) | Sleeve (Black) |
| 1 Roll | 232T8002-26 (d) (e) | Protective Tape |
| (a) | For hose quantity requirements, see Illustrated Pa specific configurations. | rts Catalog 35-11 for customer |
| (b) | HydraFlow (V24984) | |
| | 13529 East 166th Street | |
| | Cerritos, CA 90701-2203 (USA) | |
| (c) | See the Qualified Products List at the end of the B (BMS13-52, Type V) for supplier data. | oeing Material Specification |
| (d) | Dermagel D20 protective tops is 2/4 inches wide V | 26 vorde leng |

- (d) Permacel P29 protective tape is 3/4 inches wide X 36 yards long.
- Permacel Division, Johnson & Johnson (V99742)
 U.S. Highway 101, P.O. Box 671
 New Brunswick, NJ 08903 (USA)

D. Parts Necessary to Change Spares

None

E. Existing Parts Accountability

| Existing Part Number | RUC | Name | QTY | New Part Number | PNC | RC |
|---|-----|-----------|-----|-----------------|-----|----|
| 60B50059-70 | DIS | Hose Assy | (a) | 60B50059-606 | S | Α |
| 60B50059-81 | DIS | Hose Assy | (a) | 60B50059-607 | S | A |
| 60B50059-94 | DIS | Hose Assy | (a) | 60B50059-608 | S | A |
| 60B50059-101 | DIS | Hose Assy | (a) | 60B50059-610 | S | A |
| 60B50059-130 | DIS | Hose Assy | (a) | 60B50059-613 | S | A |
| (a) For hose quantity requirements, see Illustrated Parts Catalog 35-11 for customer specific | | | | | | |

configurations.

The parts shown below are changed as shown in this service bulletin.

- RUC Recommended Use Code
 - DIS Discard the part.
- PNC Part Number Code
 - S To get a new part, use this part number in your order.
 - This is the part number after the change given in this service bulletin.
 - This part is used in production.
- RC Replacement Code
 - A Do not use the existing part to replace the new or changed part.

F. Special Tooling - Price and Availability

None

G. Special Tooling Necessary to do This Bulletin

No special tools or equipment are necessary to do the change in this service bulletin. But, maintenance and overhaul tools in the manuals given in Paragraph 1.J., References, can be necessary. Examine operator tool supply to make sure all necessary tools are available.

3. ACCOMPLISHMENT INSTRUCTIONS

GENERAL NOTES

- 1. The paragraphs identified with a letter give the general work instructions and the necessary tests. The instructions identified with numbers on the figures give the recommended sequence of steps.
- 2. Obey all of the warnings and cautions given in the specified manual sections.

WORK INSTRUCTIONS

- <u>CAUTION:</u> OXYGEN SYSTEM COMPONENTS REQUIRE SPECIAL CARE AND HANDLING PROCEDURES. REVIEW THE SAFETY AND MAINTENANCE PROCESSES SHOWN IN 767 AMM 35-00-00 PRIOR TO MAKING ANY CHANGES TO THE OXYGEN SYSTEM.
- A. Remove the oxygen masks, demand regulators, and the oxygen stowage boxes as shown in 767 AMM 35-11-51 or operator's equivalent procedure.
- B. Remove the existing low pressure oxygen hoses as shown in Figures 1, 2, 3, 4, and 5.
 - <u>NOTE:</u> If the low pressure oxygen hoses have already been installed as shown in this service bulletin, installation of the sleeving and the application of the tape is not required at this time. However, it is recommended that at the next available opportunity, the sleeving be installed and the protective tape applied to the low pressure oxygen hoses as applicable.
- C. Install the sleeving on the captain and first officer's low pressure oxygen hoses as shown in Figure 6.
- D. Apply protective tape to all other crew low pressure oxygen hoses as shown in Figure 7.
 - <u>NOTE:</u> Ensure that the hose assembly elbows and unions do not move during hose replacement. Orientation of the elbows and unions are essential in maintaining proper clearances with other structure.
- E. Install the applicable new non-conductive oxygen hoses as shown in Figures 1, 2, 3, 4, and 5.
- F. Install the oxygen stowage boxes, demand regulators, and oxygen masks as shown in 767 AMM 35-11-51 or operator's equivalent procedure.
 - G. Functional test the crew oxygen system as shown in 767 AMM 35-11-00, "Crew Oxygen High Pressure Leakage Test," "Crew Oxygen Stowage Box Test (MIC)," "Crew Oxygen Mask/Regulator Test," or operator's equivalent procedure.
 - H. Ensure the Crew Oxygen Cylinder Valve is open.
 - I. Put the airplane back to a serviceable condition.

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FIGURE 1. OXYGEN BOX HOSE TYPICAL LOCATIONS



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FIGURE 2. CAPTAIN AND FIRST OFFICER'S OXYGEN BOX HOSE REPLACEMENT



\$88623

FIGURE 2. CAPTAIN AND FIRST OFFICER'S OXYGEN BOX HOSE REPLACEMENT



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FIGURE 2. CAPTAIN AND FIRST OFFICER'S OXYGEN BOX HOSE REPLACEMENT

SHEET 3 OF 4

| STEP | TASK | NAME | REFERENCES | QTY | NOTES |
|------|---------------------|------------|------------------|-----|---|
| 1 | Remove / Keep | Oxygen Box | 767 AMM 35-11-51 | 2 | - |
| 2 | Remove / Discard | Hose Assy | 767 AMM 35-11-51 | 2 | Discard the Hose Assy after recording the part number. |
| 3 | Install | Hose Assy | 767 AMM 35-11-51 | 2 | See Existing Parts Accountability for applicable new Hose Assy. |
| 4 | Install / Kept | Oxygen Box | 767 AMM 35-11-51 | 2 | - |

The step numbers shown below agree with the numbers shown in the circle symbols in the figure.

FIGURE 2. CAPTAIN AND FIRST OFFICER'S OXYGEN BOX HOSE REPLACEMENT



FIGURE 3. RIGHT OBSERVER'S SEAT OXYGEN BOX HOSE REPLACEMENT

| STEP | TASK | NAME | REFERENCES | QTY | NOTES |
|------|---------------------|-------------|------------------|-----|---|
| 1 | Remove / Keep | Blank Panel | - | 1 | - |
| 2 | Remove / Keep | Oxygen Box | 767 AMM 35-11-51 | 1 | - |
| 3 | Remove / Discard | Hose Assy | 767 AMM 35-11-51 | 1 | Discard the Hose Assy after recording the part number. |
| 4 | Install | Hose Assy | 767 AMM 35-11-51 | 1 | See Existing Parts Accountability for applicable new Hose Assy. |
| 5 | Install / Kept | Oxygen Box | 767 AMM 35-11-51 | 1 | - |
| 6 | Install / Kept | Blank Panel | - | 1 | - |

The step numbers shown below agree with the numbers shown in the circle symbols in the figure.

FIGURE 3. RIGHT OBSERVER'S SEAT OXYGEN BOX HOSE REPLACEMENT

SHEET 2 OF 2





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FIGURE 4. LEFT OBSERVER'S SEAT OXYGEN BOX HOSE REPLACEMENT

| STEP | TASK | NAME | REFERENCES | QTY | NOTES |
|------|---------------------|------------|------------------|-----|---|
| 1 | Remove / Keep | Panel | - | 1 | - |
| 2 | Remove / Keep | Oxygen Box | 767 AMM 35-11-51 | 1 | - |
| 3 | Remove / Discard | Hose Assy | 767 AMM 35-11-51 | 1 | Discard the Hose Assy after recording the part number. |
| 4 | Install | Hose Assy | 767 AMM 35-11-51 | 1 | See Existing Parts Accountability for the applicable new Hose Assy. |
| 5 | Install / Kept | Oxygen Box | 767 AMM 35-11-51 | 1 | - |
| 6 | Install / Kept | Panel | - | 1 | - |

The step numbers shown below agree with the numbers shown in the circle symbols in the figure.

FIGURE 4. LEFT OBSERVER'S SEAT OXYGEN BOX HOSE REPLACEMENT

SHEET 2 OF 2



The step numbers shown below agree with the numbers shown in the circle symbols in the figure.

| STEP | TASK | NAME | REFERENCES | QTY | NOTES |
|------|---------------------|------------|------------------|-----|---|
| 1 | Remove / Keep | Oxygen Box | 767 AMM 35-11-51 | 3 | - |
| 2 | Remove / Discard | Hose Assy | 767 AMM 35-11-51 | 4 | Discard the Hose Assemblies after recording the part numbers. |
| 3 | Install | Hose Assy | 767 AMM 35-11-51 | 4 | See Existing Parts Accountability for the applicable new Hose Assy. |
| 4 | Install / Kept | Oxygen Box | 767 AMM 35-11-51 | 3 | - |

FIGURE 5. SUPERNUMERARY SEAT'S OXYGEN BOX HOSE REPLACEMENT



| STEP | TASK | NAME | PART NUMBER | QTY | NOTES |
|------|---------|----------------|--------------|-----|---|
| 1 | Install | Sleeve | 232T8002-100 | 2 | - |
| 2 | Apply | Protectve Tape | 232T8002-26 | AR | Permacel P29 on each end of the sleeving to prevent slipping. |

FIGURE 6. SLEEVE INSTALLATION



The step numbers shown below agree with the numbers shown in the circle symbols in the figure.

| STEP | TASK | NAME | PART NUMBER | QTY | NOTES |
|------|-------|-----------------|-------------|-----|---|
| 1 | Apply | Protective Tape | 232T8002-26 | AR | 2 layers of Permacel P29 along the full length of the low pressure oxygen hoses in all locations except the captain and first officer's position. |

FIGURE 7. TAPE APPLICATION



ATA System: 3510 Prepared By: Chris Starr Commercial Airplane Group

Number: 767-35A0034 Date: September 2, 1999 Revision 1: June 22, 2000

Evaluation Form

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