

CHAPTER 4

REGULATOR AND SEAT SURVIVAL KIT OXYGEN HOSE ASSEMBLIES

Section 4-1. Description

4-1. GENERAL.

4-2. The oxygen hose assemblies are designed for use in conjunction with the seat survival kit and oxygen mask assemblies providing the aircrew with oxygen, either liquid oxygen (LOX) or Onboard Oxygen Generating System (OBOGS) and communication capabilities (figure 4-1).

4-3. CONFIGURATION.

4-4. The oxygen hose assemblies are fabricated of either a nomex weave or rubberized material covering a flexible rubber hose that is wire wound for stability. At the upper end of the seat kit to regulator hose and seat kit to console and the lower end of the regulator hose assemblies are quick disconnect fittings. The communication cord is either internal or external depending on aircraft platform (figures 4-2 and 4-3).

4-5. If failure occurs in the aircraft oxygen supply, or in case of high altitude or over water ejection, an emergency supply of oxygen will be provided by either manual or automatic actuation from the emergency oxygen cylinder located in the seat survival kit.

4-6. SUBASSEMBLIES. The major subassemblies of the OBOGS oxygen regulator hose assembly and seat kit hose assembly are:

1. Oxygen Hose Assemblies Seat Survival Kit.

- a. Cable/Keeper Assembly
 - b. Oxygen Hose, Subassembly, Short
 - c. Oxygen Hose Subassembly, Long
2. Oxygen Hose Assemblies Regulator.
 - a. Cable/Keeper Assembly.
 - b. Oxygen Hose, Subassembly

NOTE

LOX regulator and Seat Survival Kits Hose Assemblies using LOX do not have subassemblies.

4-7. REFERENCE NUMBERS, ITEMS AND SUPPLY DATA.

4-8. Figures 4-13 through 4-22 contain information on each assembly, subassembly and component part of the oxygen hose assemblies. The figure and index number references or part number, description, and units per assembly are provided in their respective figures.

4-9. APPLICATION.

4-10. The oxygen hose assemblies that are part of the survival equipment used by aircrew aboard aircraft are listed in table 4-1.

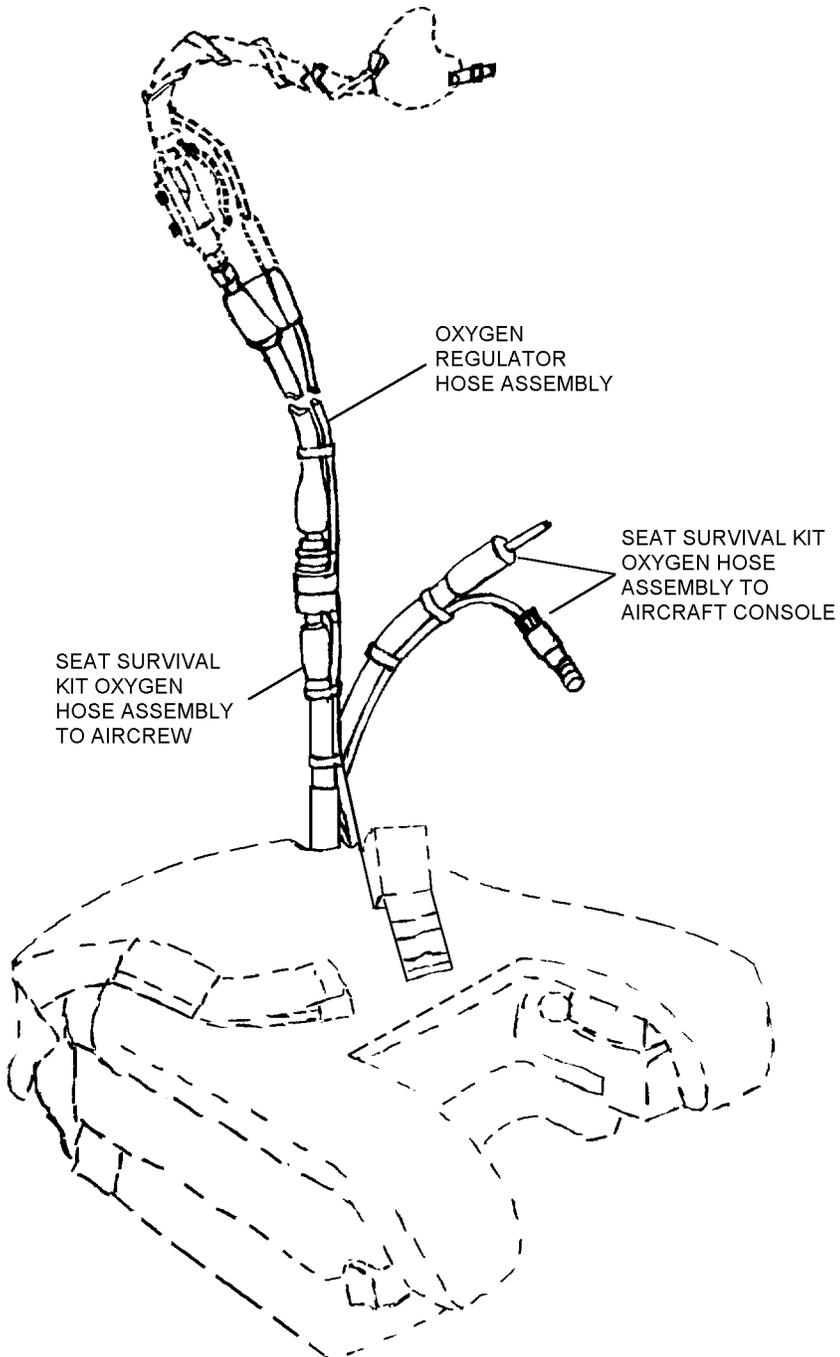


Figure 4-1. Oxygen Hose Assemblies Configuration (Typical)

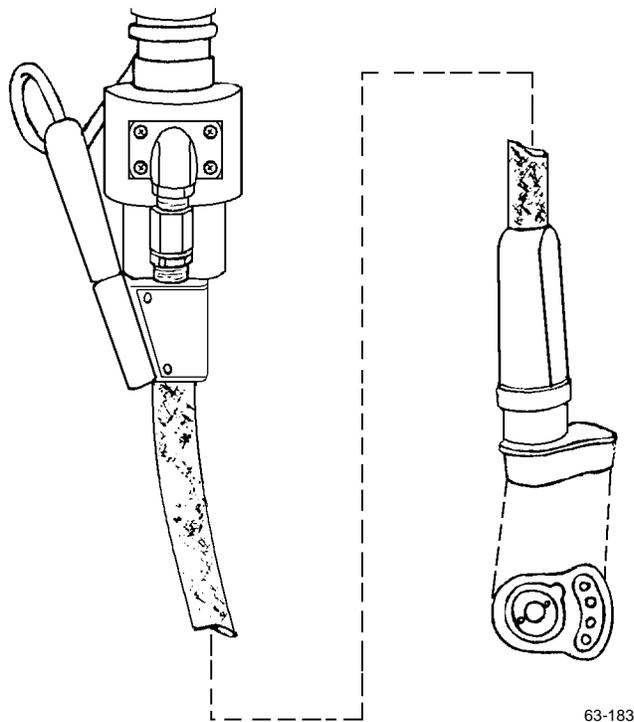


Figure 4-2. Oxygen Regulator Hose Assembly (Typical. Used for Liquid Oxygen Only)

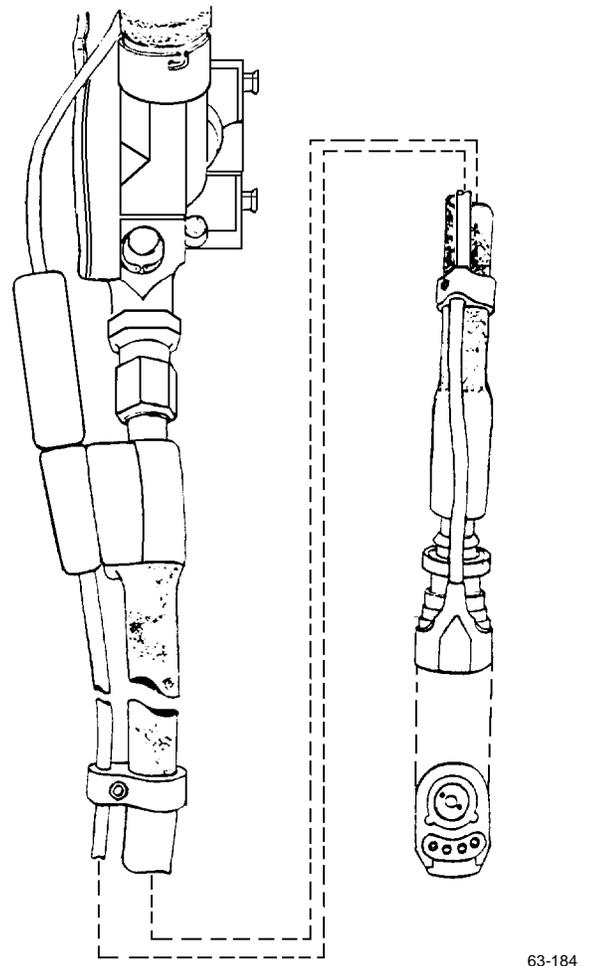


Figure 4-3. Oxygen Regulator Hose Assembly (Typical. Used for OBOGS Only)

Table 4-1. Regulator Hose Assembly Part Numbers and Application

Part Number	Aircraft Platform	OBOGS/LOX	External or Internal Communication Cord
REDAR-A10116-2	EA-6B, F-4, F-14A/B, F-18A/B/C/D, S-3A, T-2	LOX	Internal communication cord
57012-3 MBEU147722-1	F-14D, F-18C/D, T-45/A (NACES equipped)	OBOGS	External communication cord
REDAR-A11206-2	AV-8B	OBOGS	Internal communication cord

4-11. FUNCTION.

4-12. During normal flight conditions, the hose assembly supplies the aircrew with aviators breathing oxygen and a means of communication to ground crew and other aircraft/aircrewman. Oxygen flows through the hose assembly from the aircraft through the seat survival kit hose assembly i.e.; aircraft oxygen supply source to the seat survival kit hose, seat survival kit oxygen manifold, seat survival kit to regulator hose, regulator hose, regulator, mask hose, mask, reaching its final destination the aircrew. When

an aircrewman ejects from the aircraft the following series of events occur: As the ejection seat travels up the rails, the seat survival kit to console hose is disconnected and the emergency oxygen lanyard actuates the emergency oxygen in the seat survival kit. During the ejection and descent, while in the seat or after separation from the ejection seat, the aircrewman is provided with emergency oxygen until the supply is exhausted. Also, in the event of an in-flight emergency the aircrew has the capability of actuating the emergency oxygen system in the seat survival kit by pulling the actuation lanyard manually.

Section 4-2. Modifications

4-13. GENERAL.

4-14. There are no modifications to the Regulator and Seat Survival Kit Oxygen Hose Assemblies required/authorized at this time.

Section 4-3. Rigging

4-15. GENERAL.

4-16. Unless operational requirements demand otherwise, rigging of the regulator hose assemblies shall be accomplished at the Organizational Level of maintenance. All rigging shall be performed only by qualified personnel every 30 and 90 day inspection cycle.

4-17. The rigging of the seat survival kit hose assemblies shall be accomplished at the Intermediate Level of maintenance coinciding with the seat survival kit inspection cycle and shall be performed only by qualified personnel.

NOTE

Quality assurance steps are provided for critical operations. When a step is underlined, the Aircrew Survival Equipmentmen shall perform the operation and then have performance verified by Quality Assurance (QA).

4-18. RIGGING PROCEDURES.

4-19. Refer to NAVAIR 13-1-6.7-3 for procedures on rigging the regulator hose assembly to the regulator.

4-20. Refer to paragraph 4-54 for rigging the seat survival kit oxygen hose assemblies to seat survival kits.

**Section 4-4. Turnaround Daily/Preflight/Postflight/Transfer/
Special/Conditional Inspection**

4-21. GENERAL.

4-22. The Turnaround/Daily/Preflight/Postflight/Transfer Inspections on the regulator hose assemblies consist of a visual type inspection performed in conjunction with the personal issue gear. This inspection shall be performed by the aircrewmember to whom the regulator hose assemblies have been issued. The seat survival kit hose assemblies also have a visual type inspection and shall be inspected in conjunction

with the aircraft in which the survival kit is installed. The seat survival kit hose assemblies shall be inspected by line personnel (plane captain) or delegated aircrewmember who have been instructed and found qualified by the Aviator's Equipment Branch.

4-23. The Conditional Inspection is an unscheduled inspection required as the result of a specific situation or set of conditions: e.g., hard-landing inspection or any inspection directed by higher authority that is not ordered in technical directives.

4-24. The Special (7/14 day) Inspection shall be performed on in-service seat survival kit oxygen hose assemblies installed in aircraft and in readyroom issue. The Special (30/90 day) Inspection that is performed on the aircrew personal issued flight equipment includes the regulator hose assembly. These inspections shall be performed at the Organizational Level of maintenance by personnel assigned to the Aviator's Equipment Branch. Make necessary entries on appropriate form in accordance with the OPNAV-INST 4790.2 Series.

4-25. DAILY/PREFLIGHT/POSTFLIGHT AND SPECIAL INSPECTION PROCEDURES. These inspections consists of a visual inspection of the following:

1. Deterioration such as wear, thin spots, holes, or cracks in or near the lower portion of the molded hose adjoining the attached flare nuts.
2. Deterioration, corrosion, cracks, holes, or excessive wear in any portion of the hose or its connecting hardware.
3. Hoses for obvious damage, wear, splits, cuts, frayed fabric.
4. Quick disconnects for damage, corrosion, bent or missing pins, cleanliness and presents of foreign materials.
5. Housing for damage, cuts, nicks, discoloration, wear.
6. Fittings for damage threads, rounded hexagon flats, corrosion.
7. Electrical condition of hose assemblies when performing a Transfer and Special (30/90 day) Inspection in accordance with paragraph 4-31.
8. Condition of oxygen hose and security of attachment to kit. If repair procedures have been performed on oxygen hose assembly, check external wiring for security of attachment and check electrical condition in accordance with paragraph 4-31.

NOTE

All oxygen regulator hose assemblies and seat survival kit oxygen hose assemblies

have been designated as critical safety items and must be serialized. It is suggested that a logbook be maintained for serial numbers that have been assigned to prevent duplication of serial numbers.

Oxygen regulator hose assembly and/or seat survival kit oxygen hose assembly data and compliance previously recorded on Aircrew Personal Equipment Record (OPNAV Form 4790/159) or Seat Survival Kit Record (OPNAV Form 4790/137) shall be considered RFI until the next Phased/SDLM inspection. During acceptance inspection or at next Phased/SDLM inspection, oxygen regulator hose assembly and/or seat survival kit oxygen hose assembly data records shall be updated in accordance with paragraph 9, steps a and b.

9. Presence and legibility of serial number on quick disconnects. If not present or if illegible, proceed as follows:

a. Carefully etch a serial number using the squadron organization code and sequential number on the quick disconnect of the oxygen regulator hose that mates with the quick disconnect of the seat survival kit hose. Example serial number: S/N P9N-001. Initiate an Aircrew Systems Record OPNAV Form 4790/138 and record compliance and oxygen regulator hose assembly data on form.

b. Carefully etch a serial number using the squadron organization code and sequential number on the quick disconnect the of seat survival kit hose that mates with the quick disconnect of the lower oxygen regulator hose. Example serial number: S/N P9N-002. Initiate an Aircrew Systems Record OPNAV Form 4790/138 and record compliance and seat survival kit oxygen hose assembly data on form.

4-26. If discrepancies are found or suspected, Maintenance Control shall be notified.

4-27. Oxygen hose assemblies which do not pass inspection and cannot be repaired in the aircraft Aviator's Equipment Shop shall be removed in accordance with this chapter and applicable aircraft manual and replaced with a Ready For Issue (RFI) hose assembly. Non-RFI hose assemblies shall be discarded in accordance with local directives.

Section 4-5. Acceptance/Phased/SDLM Inspection

4-28. GENERAL.

4-29. An Acceptance Inspection shall be performed on Seat Survival Kit Hose assembly when it is placed into service or received already installed in an aircraft from another organization or SDLM. Phased/SDLM Inspection cycle of the Seat Survival Kit Hose Assembly will coincide with the seat survival kit in which the hose assembly is attached.

4-30. VISUAL INSPECTION. This inspection shall be performed prior to the functional check. Refer to [table 4-2](#).

4-31. FUNCTIONAL CHECK. This check shall be performed on all hose assemblies at each Acceptance/Special/Phased/SDLM Inspection to determine condition of hose assembly and after any replacement procedures. Perform functional check using test kit TTU-489/E, in accordance with the 17-15BC-22 Technical Manual.

NOTE

If test kit TTU-489/E is not available refer to [paragraph 4-32](#) for the electrical continuity portion of the functional test.

Materials Required

Quantity	Description	Reference Number
1	Aviator's Breathing Oxygen, Type I	MIL-O-27210

Support Equipment Required

Quantity	Description	Reference Number
1	Test Stand	TTU-489/E

NOTE

Performance of test stand is dependent upon skill of operator. It is imperative that operator be thoroughly familiar with instruments, controls, and connections that comprise systems incorporated in test stand.

When performing the electrical continuity test portion of the functional inspection refer to [figures 4-4 through 4-9](#) for the appropriate oxygen hose assembly.

Table 4-2. Inspection

Component	Task
Oxygen Regulator and Seat Kit Hose Assemblies (Figures 4-13 thru 4-22)	
Oxygen Hose Assemblies	Check hose for obvious damage, wear, splits cuts, frayed fabric (Note 1). Check quick-disconnects for damage, corrosion, bent or missing pins, cleanliness and presence of foreign material. Check housing for damage, cuts, nicks, discoloration and wear. Check fittings for damaged threads, rounded hexagon flats and corrosion. For externally mounted communication cable assemblies, check for security of attachment and other obvious damage. Check electrical condition of hose assembly using test kit TTU-489/E (Note 2).
Notes: 1. Refer to Table 4-3 , Troubleshooting for allowable limits. 2. Ensure visual inspection is performed prior to electrical check.	

4-32. To perform insulation breakdown and electrical continuity check when Test Kit TTU-489/E is not available, see figures 4-4 through 4-9 and proceed as follows:

Support Equipment Required

Quantity	Description	Reference Number
1	500 VDC Megger	—
1	Ohmmeter or equivalent	—

NOTE

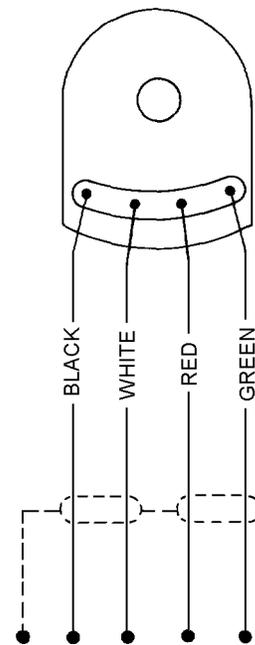
If oxygen hose assembly fails either step 1 or 2 and exhibits problems due to breakdown in integrated communications wiring, refer to paragraph 4-42 which will provide appropriate repair procedures.

1. Using a 500 VDC megger, perform insulation breakdown test. Insulation resistance shall be measured at test potential of 500 ± 50 volts dc applied for not less than 0.1 second. Check resistance between any two conductors and hose. Indication shall be 100 megaohms or greater.

NOTE

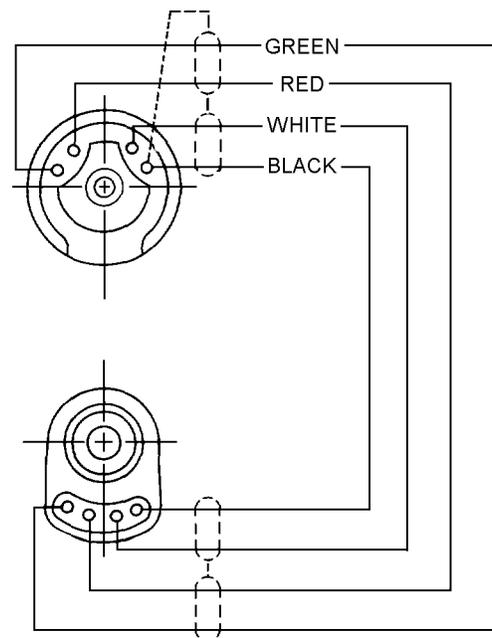
Ensure Rx1 scale is used in performance of electrical continuity check.

2. Using an ohmmeter or its equivalent, perform electrical continuity test by checking continuity of each wire at its respective termination point according to the appropriate Seat Survival Kits figures 4-4 through 4-9.



63-459

Figure 4-4. RSSK-3 Electrical Schematic



63-628A

Figure 4-5. RSSK-8 Series, SKU-2/A and SKU-12/A Electrical Schematic

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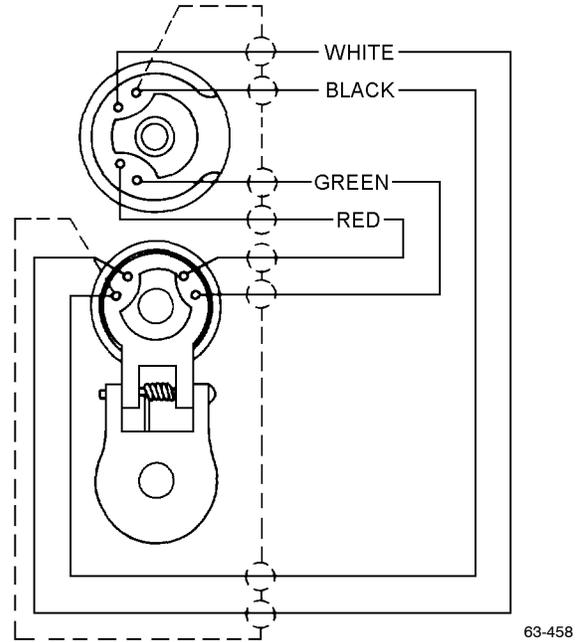
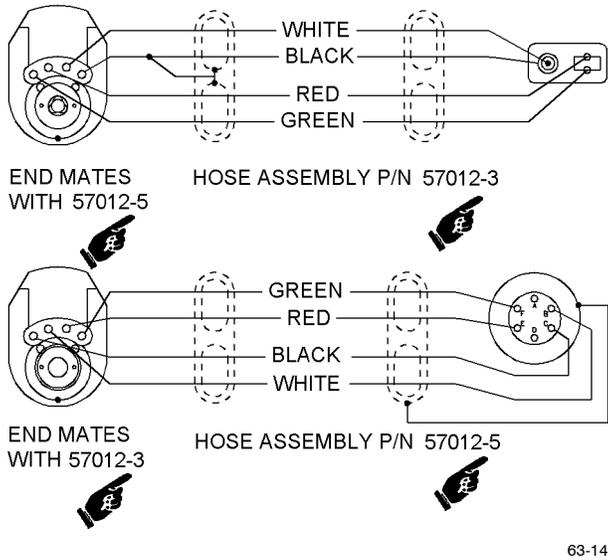


Figure 4-6. SKU-7/A, SKU-10/A and SKU-11/A Electrical Schematic

Figure 4-8. Douglas Seat Pan Electrical Schematic

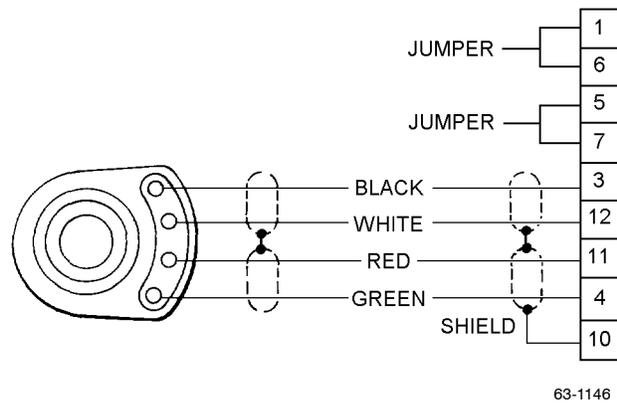
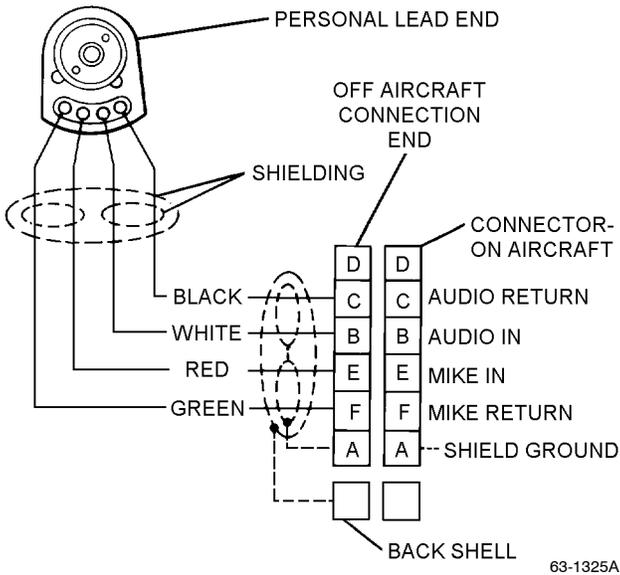


Figure 4-7. SKU-3/A and SKU-6/A Electrical Schematic

Figure 4-9. RSK-1 and RSK-1A Electrical Schematic

Section 4-6. Maintenance

4-33. GENERAL.

4-34. This section contains procedures for troubleshooting, disassembly, cleaning, inspection of disassembled parts, repair or replacement of parts, assembly, and adjustment. Disassemble only to extent required to perform task. Work shall be performed in a clean, dust and grease-free area.

4-35. TROUBLESHOOTING.

4-36. Where troubles or operating malfunctions are encountered, locate probable cause and remedy using [table 4-3](#).

4-37. DISASSEMBLY.

4-38. Disassembly shall be only to extent necessary to perform required task and shall be inspected in accordance with [paragraph 4-41](#). Disassembly of any

oxygen hose assembly will be limited to removing and replacing from Seat Survival Kit, Oxygen Regulator and procedures set forth in [paragraphs 4-43 through 4-47](#).

WARNING

Keep working area clean and free of oil, grease, dirt, and dust which may cause fire or explosion when in contact with oxygen.

Do not disassemble any part of emergency oxygen system while system is pressurized.

NOTE

Discard all Teflon sealing tape removed during disassembly of oxygen hose assemblies.

Table 4-3. Troubleshooting

Trouble	Probable Cause	Remedy
Loss or broken communications.	Broken or misaligned pins.	Replace communications cord according to applicable hose assembly or replace hose assembly (Note 1).
	Open short circuit in hose wiring.	Replace communications cord according to applicable hose assembly.
	Corrosion on pins.	Remove corrosion in accordance with NAVAIR 16-1-540.
Torn or split oxygen hose block.	Overstressing of hose.	Maximum allowable limits of cracks less than one inch in length. Cracks should not compromise the reliability of hose.
Torn or split rubberized or material hose.	Overstressing of hose assembly.	Replace hose assembly.

Notes: 1. Depending on type hose assembly if replacement of communication cord is allowed. Refer to [paragraph 4-42](#).

4-39. CLEANING.

4-40. To clean exterior covering of the oxygen hose assembly, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Cleaning Compound	MIL-C-25769
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Lint-free Cloth	MIL-C-85043 NIIN 00-044-9281



Ensure hose ends are capped. Do not submerge hose assembly in any type of fluids. Submerging hose ends could cause contamination and promote corrosion in the electronic components.

NOTE

When using cleaning compound (MIL-C-25769) combine one part compound to three parts water. If using general purpose detergent, follow directions on container.

1. Prepare detergent or cleaning compound (MIL-C-25769) solution.
2. Using a lint-free cloth, dampen with prepared detergent or cleaning solution and apply to soiled area.
3. Allow solution to remain on surface for few a minutes, then scrub with soft brush or damp lint-free cloth.
4. Using a fresh, clean lint-free cloth, dampen cloth with fresh clean water and wipe surface thoroughly.

NOTE

Repeat steps 1 and 4 until material is clean.

5. Repeat step 4 until materials are free from all solution.
6. Allow materials to dry thoroughly.
7. If metallic hose ends are in need of cleaning, uncap hose ends.
8. Using a lint-free cloth, dampen with prepared detergent or cleaning solution and wipe clean the metallic hose ends.
9. Allow to dry thoroughly prior to recapping.

4-41. INSPECTION OF DISASSEMBLED PARTS.

4-42. Inspect disassembled hose assemblies for distortion, corrosion, or other damage in accordance with table 4-2.

4-43. REPAIR AND REPLACEMENT.

4-44. REPAIR. Repair of individual components within any assembly is authorized only in accordance with procedures outlined in this manual. For all repairs, make necessary entries on appropriate form in accordance with OPNAVINST 4790.2 Series.



Keep working area clean and free of oil, grease, dirt, and dust which may cause fire or explosion when in contact with oxygen.

Do not disassemble any part of emergency oxygen system while system is pressurized.

NOTE

Discard all Teflon sealing tape removed during disassembly of oxygen hose assemblies.

Disassembly shall be only to extent necessary to perform required task.

4-45. Repair of Seat Survival Kit Oxygen Hose Assembly for RSSK-3. To repair the oxygen hose assembly, proceed as follows:

1. Expose internal communication leads located at personal lead end fitting by making single longitudinal slice in molded rubber directly below communication pins. Carefully peel back molded rubber to gain access to leads.

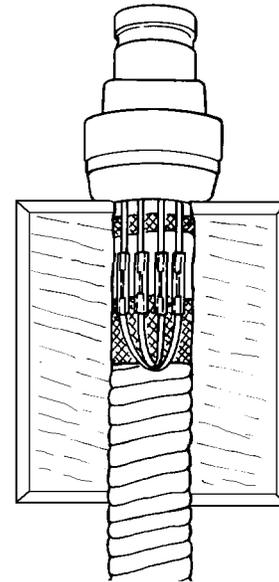
Materials Required

Quantity	Description	Reference Number
As Required	Terminal, Lug, Crimp Style, Type II, Class II	MS25036-144/145
As Required	Insulated Wire #22, Two-conductor, Twisted and Shielded	NIIN 00-184-4325
As Required	Insulated #22 Single Conductor	NIIN 00-635-3566
As Required	Strap, Tie-down	—
As Required	Electrical Tape, Vinyl Plastic	—
As Required	Electrical Insulating Sleeving	—

NOTE

Normal operating materials used in support of avionics are acceptable.

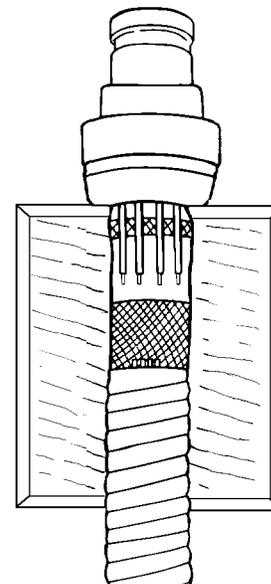
It is recommended that avionics personnel assist in the following repair actions.



63-926

Step 1 - Para 4-45

2. Clip the exposed leads at the points where they enter the hose body and at the existing splice.

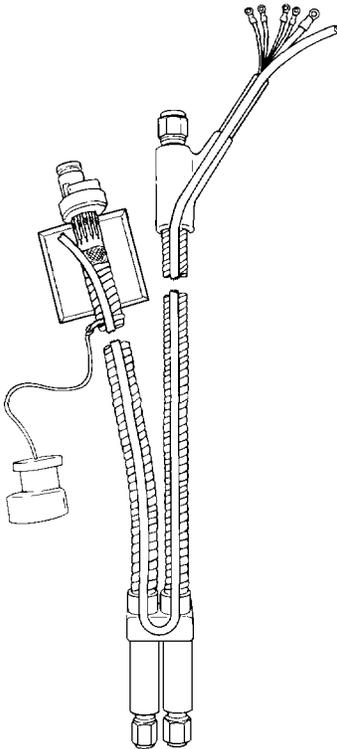


63-927

Step 2 - Para 4-45

NAVAIR 13-1-6.3-1

3. Cut two lengths of No. 22 two-conductor shielded wire or its electrical equivalent long enough so that it can be routed from one end of the oxygen hose assembly along the hose to the opposite end. Ensure a minimum of slack exists.



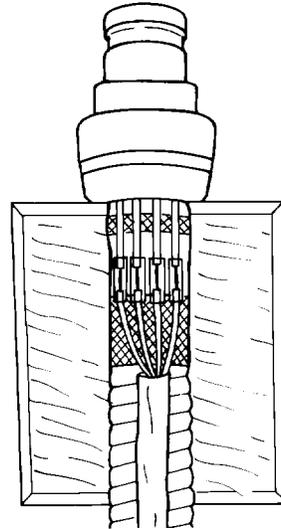
63-928

Step 3 - Para 4-45

NOTE

The wire pairs should be red and green for microphone, white for audio and black for ground. See [figure 4-4](#) to maintain electrical continuity for soldering.

4. Solder the replacement leads at the old splice locations and slide the insulation sleeving over the splice.



63-929

Step 4 - Para 4-45

5. Fold molded rubber end back in place and secure with electrical tape.

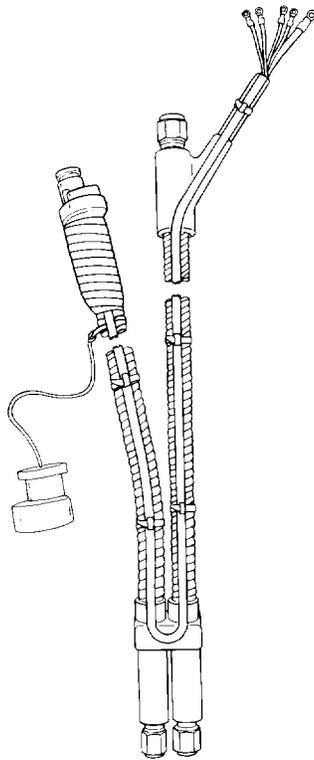


63-930

Step 5 - Para 4-45

6. Clip exposed leads at aircraft connection end where they enter hose body. Strip wire and crimp terminals on new leads.

7. Using electrical tape or wire ties, secure newly installed communication leads in place along hose body. Ensure leads are free of loops.



Step 7 - Para 4-45

4-46. Repair of Seat Survival Kit Oxygen Hose Assembly for Soft Pack/Seat Pans, RSSK-8, SKU-2/A, and SKU-12/A. To repair the oxygen hose assembly, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Insulated Wire #22 Two-conductor Twisted and Shielded	NIIN 00-184-4325
As Required	Insulated Wire #22 Single Conductor	NIIN 00-635-3566
4	Strap, Tie-down	—
As Required	Electrical Tape, Vinyl Plastic	—
As Required	Electrical Insulating Sleeving	—

63-931

NOTE

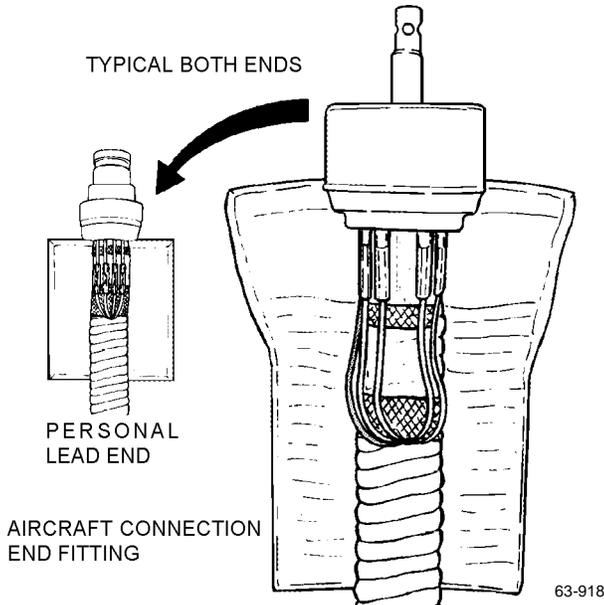
Normal operating material used in support of avionics is acceptable.

8. Perform electrical continuity test in accordance with [paragraph 4-31](#).

It is recommended avionics personnel assist in the following repair actions.

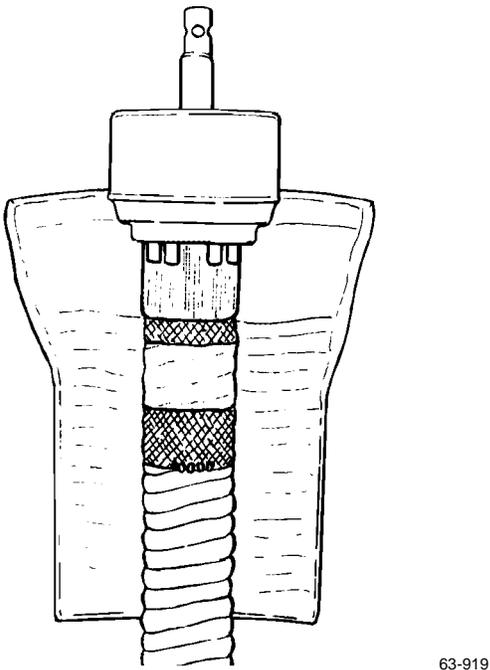
NAVAIR 13-1-6.3-1

1. Expose internal communication leads located at the aircraft connection end fitting by making a single longitudinal slice in the molded rubber directly below the communication pins. Carefully peel back the molded rubber to gain access to the leads.



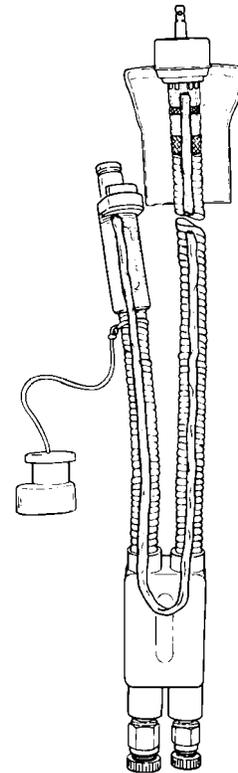
Step 1 - Para 4-46

2. Clip the exposed leads at the points where they enter the hose body and at the existing splice.



Step 2 - Para 4-46

3. Cut two lengths of No. 22 two-conductor shielded wire or its electrical equivalent long enough so that it can be routed from one end of the oxygen hose assembly along the hose to the opposite end. Ensure a minimum of slack exists.

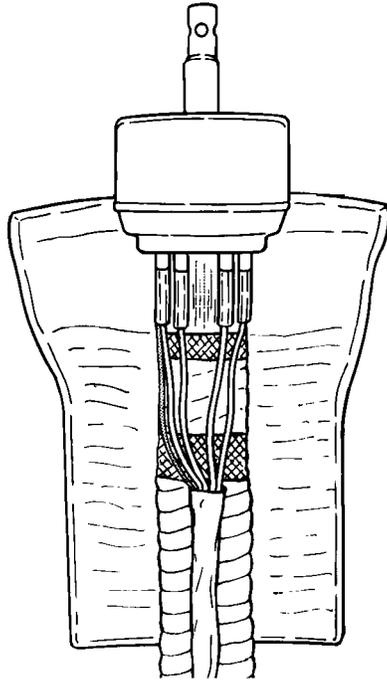


Step 3 - Para 4-46

NOTE

The wire pairs should be red and green for microphone, white for audio and black for ground. See [figure 4-5](#) to maintain electrical continuity for soldering.

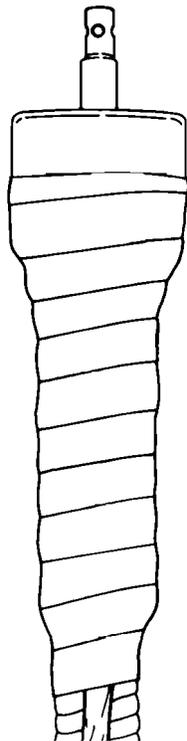
4. Solder the replacement leads at the old splice locations and slide the insulation sleeving over the splice.



63-921

Step 4 - Para 4-46

5. Fold the molded rubber end back in place and secure with electrical tape.

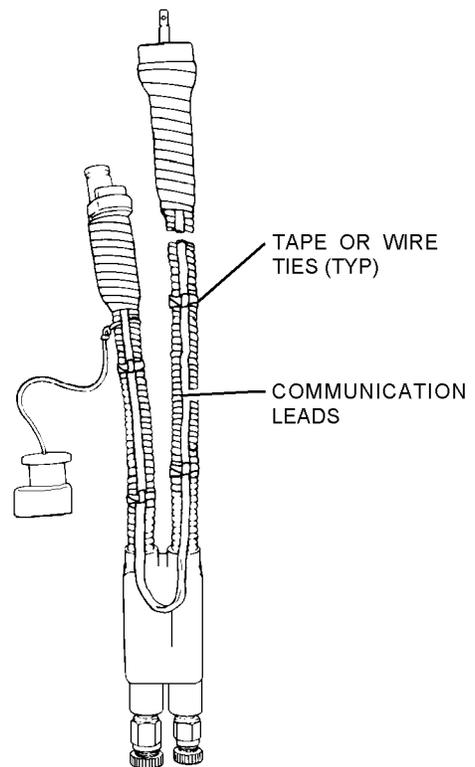


63-922

Step 5 - Para 4-46

6. Perform the above procedure for the personal lead end of the oxygen hose assembly.

7. Using electrical tape or wire ties, secure the newly installed communication leads in place along the hose body. Ensure leads are free of loops.



63-923

Step 7 - Para 4-46

8. Perform electrical continuity test in accordance with [paragraph 4-31](#).

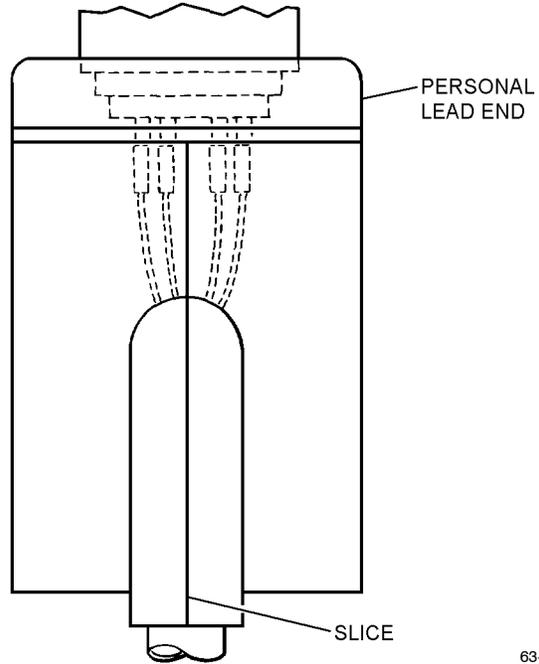
NAVAIR 13-1-6.3-1

4-47. Repair Seat Survival Oxygen Hose Assembly for SKU-3/A and SKU-6/A. To repair the oxygen hose assembly, proceed as follows:

1. Expose internal communication leads located at personal lead end connection fitting by making a single longitudinal slice in molded rubber directly below communication pins.

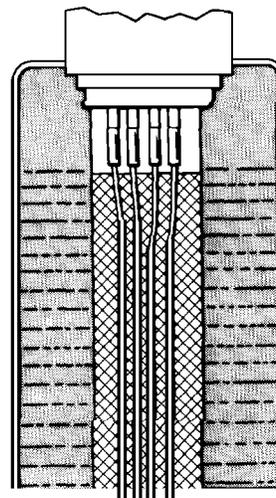
Materials Required

Quantity	Description	Reference Number
As Required	Insulated Wire #22, Two-conductor, Twisted and Shielded	NIIN 00-907-1128
As Required	Insulated Wire #22, Single Conductor	NIIN 00-635-3566
8	Strap, Tie-down	NIIN 00-027-4595
As Required	Electrical Tape, Vinyl	MIL-T-7798
As Required	Electrical Insulating Sleeving, Type B, Class 5 Plastic	MIL-I-23053 NIIN 00-284-8859 NIIN 00-567-2726



Step 1 - Para 4-47

2. Carefully peel back molded rubber to gain access to leads.



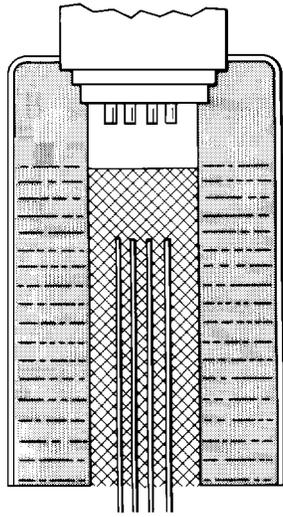
Step 2 - Para 4-47

NOTE

Normal operating material used in support of avionics is acceptable.

It is recommended avionics personnel assist in the following repair actions.

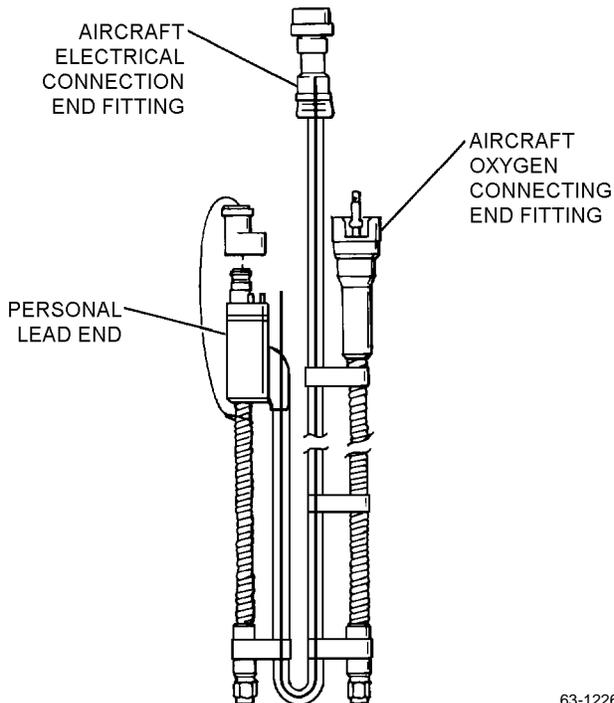
3. Clip exposed leads at points where they enter hose body and at existing splice.



63-1225

Step 3 - Para 4-47

4. Cut two lengths of No. 22 two-conductor shielded wire or its electrical equivalent long enough so that it can be routed from one end of air breathing hose assembly along hose to opposite end. Be sure a minimum of slack exists in wire.



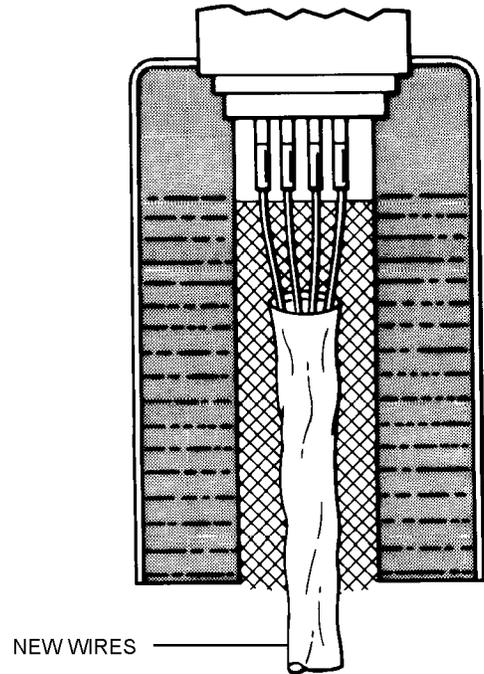
63-1226

Step 4 - Para 4-47

NOTE

The wire pairs shall be red and green for microphone, white for audio, and black for ground. Refer to figure 4-7 for electrical check and NAVAIR 01-1A-23 for soldering.

5. Add insulation sleeving, solder replacement leads at old splice locations and slide insulation sleeving over splice.



63-1227

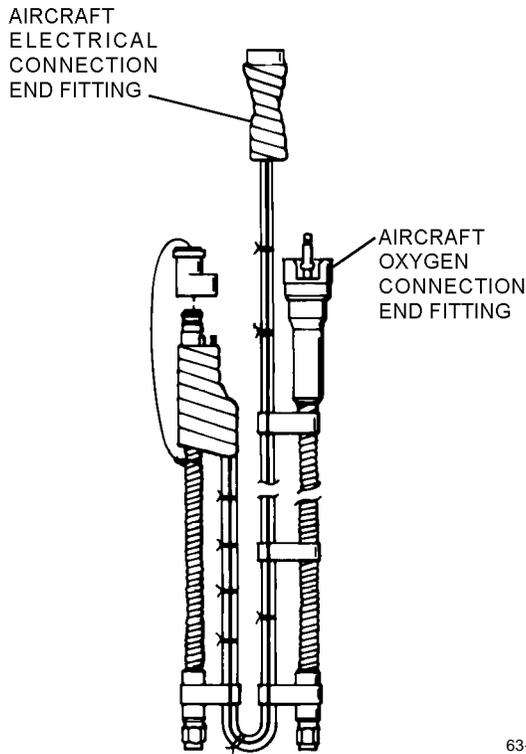
Step 5 - Para 4-47

6. Fold molded rubber end back in place and secure with electrical tape.

7. Perform a splice procedure for aircraft electrical connection end fitting.

NAVAIR 13-1-6.3-1

8. Using electrical tape or tie-down straps, secure newly installed communication leads in place along hose body. Be sure leads are free of loops.



Step 8 - Para 4-47

9. Perform electrical continuity test in accordance with [paragraph 4-31](#).

4-48. Repair (Reinforcement) of Oxygen/Communication Hose Assembly. To reinforce the oxygen hose assembly proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Sleeving, Insulation	NT-778BLK (CAGE 06090) NIIN 00-917-9823
1	Strap, Tie-down	MS3367-1-9 (CAGE 96906) NIIN 00-074-2072

Support Equipment Required

Quantity	Description	Reference Number
1	Heat Gun, Size 1	MIL-H-45193 (CAGE 81349) NIIN 00-357-1369

1. Remove lower molded rubber communication wire keeper from personal lead side of oxygen hose assembly.

2. Install approximately seven-inch length of insulation sleeving over personal lead side of oxygen hose assembly by slipping sleeving over the flare nut end and up over hose to butt against molded rubber communication lead section at top of hose ([figure 4-10](#)). Trim lower end of insulation sleeving to butt against upper edge of flare nut.

3. Shrink insulation sleeving over hose assembly using heat gun.

4. Install a second layer of sleeve insulation over the first layer by repeating [steps 2](#) and [3](#).

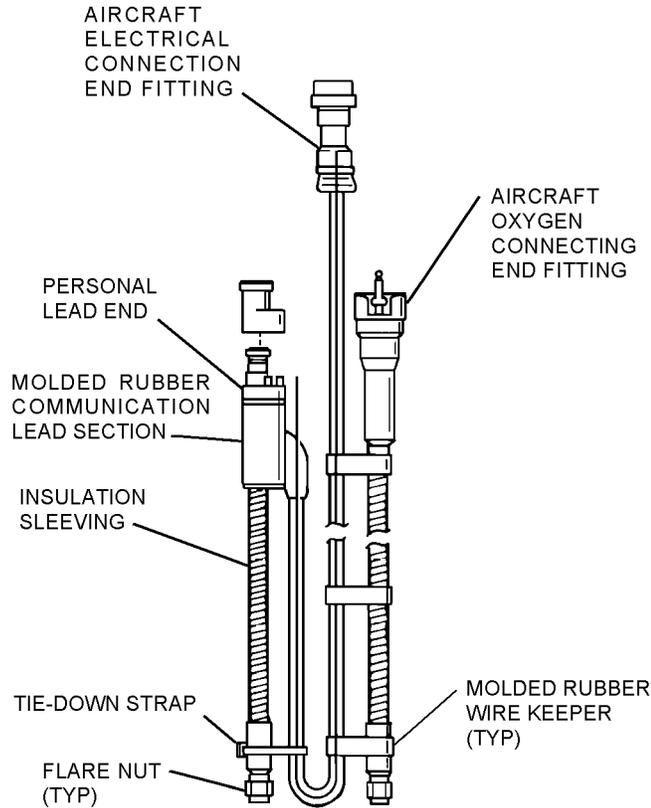
5. Install tie-down strap to replace molded rubber wire keeper removed in [step 1](#).

6. Reinstall oxygen/communication hose assembly in survival kit.

7. Document completion and date by making necessary entries on appropriate form in accordance with OPNAVINST 4790.2 Series.

4-49. REPLACEMENT. All individual parts that fail to pass inspection shall be replaced except where repair procedure is indicated. Refer to source code listing (SM&R Code) in [Numerical Index of the Illustrated Parts Breakdown](#) to aid in determining replaceable components. All adjustable components or assemblies that failed to pass respective tests shall be adjusted to meet required specifications.

4-50. Replacement of Regulator Hose Cable/Keeper Assembly (SKU-7/A, SKU-10/A and SKU-11/A). To replace the regulator hose cable/keeper assembly, proceed as follows:



63-3084

Figure 4-10. Oxygen Hose Assembly Insulation Sleeving Installation

Materials Required

Quantity	Description	Reference Number
1	Cable/Keeper Assembly	MBEU148019 57012-3-1
As Required	Adhesive, Epoxy	EA 907 NIIN 00-144-9729
As Required	Sealing, Locking, and Retaining Compound, Grade A	MIL-S-22473 NIIN 00-953-2205

Support Equipment Required

Quantity	Description	Reference Number
1	Heat Gun or Soldering Iron	—
1	Scribe	—
1	5/64-inch Allen Wrench	—

1. Remove the regulator hose cable/keeper assembly as follows:

NOTE

The cable/keeper assembly screw heads may be filled with hardened sealant. If necessary, use a heat gun and/or soldering iron and scribe to loosen the sealant enough to access the screw heads.

Retain all disconnected items and hardware unless otherwise instructed to discard.

a. If necessary, remove any hardened sealant covering screw heads.

b. At one end of the oxygen hose assembly, remove the three screws and washers that secure the cable/keeper assembly to the hose assembly.

c. At the opposite end of the hose assembly, remove the two screws from the cover.

d. Using a 5/64-inch allen wrench, remove the screws from the cable keepers. Remove cable keepers from communication cable.

NAVAIR 13-1-6.3-1

e. Remove and discard old communication cable.

2. Install the regulator hose cable/keeper assembly as follows:

NOTE

Sealing compound shall be added to the threads of all screws before reinstallation.

a. Install new communication cable.

b. Install cable keepers on cable. Using a 5/64-inch allen wrench, secure cable keepers with screws.

c. Secure hose assembly to cover using two screws.

d. At the opposite end of the oxygen hose assembly, secure the cable/keeper assembly to the hose assembly using three screws and washers.

WARNING

Uncured adhesive contains epoxy resins which can cause eye and skin irritations. Use adequate ventilation and avoid contact with eyes or skin. Wash hands thoroughly with soap and water after handling.

e. Excluding the cable/keeper screws, apply epoxy adhesive on the heads of all screws being installed as follows:

(1) Using isopropyl alcohol, clean the area where the epoxy adhesive is to be applied and allow to dry for 2 - 5 minutes.

(2) On a clean and dry mixing surface, squeeze a length of Part A resin using uniform pressure to form an even bead.

(3) Squeeze an equal length and size bead of Part B hardener parallel to the bead of Part A resin.

WARNING

Heat buildup during or after mixing is normal. Do not mix quantities greater than 250 grams as dangerous heat buildup can occur resulting in toxic fumes.

(4) Thoroughly mix Part A resin and Part B hardener until a uniform color is obtained.

(5) Using a spatula or the wooden end of a cotton swab, apply epoxy adhesive to the head of the screws making sure to fill in to the rim of the fastener inset and that no air bubbles are present under the adhesive.

(6) Allow epoxy adhesive to cure for 6 - 8 hours at room temperature.

4-51. Replacement of the Seat Kit Hose Cable/Keeper Assembly (SKU-7/A, SKU-10/A and SKU-11/A). To replace the seat kit hose cable/keeper assembly, proceed as follows:

Materials Required

Quantity	Description	Reference Number
1	Cable/Keeper Assembly, SKU-7/A	MBEU148024 57013-5-1
1	Cable/Keeper Assembly, SKU-10/A and SKU-11/A	MBEU148021 57012-5-1
As Required	Adhesive, Epoxy	EA 907 NIIN 00-144-9729
As Required	Sealing, Locking, and Retaining Compound, Grade A	MIL-S-22473 NIIN 00-953-2205

Support Equipment Required

Quantity	Description	Reference Number
1	Heat Gun or Soldering Iron	—
1	Scribe	—
1	5/64-inch Allen Wrench	—

WARNING

Uncured adhesive contains epoxy resins which can cause eye and skin irritations. Use adequate ventilation and avoid contact with eyes or skin. Wash hands thoroughly with soap and water after handling.

1. Remove the seat kit hose cable/keeper assembly as follows:

NOTE

The cable/keeper assembly screw heads may be filled with hardened sealant. If necessary, use a heat gun and/or soldering iron and scribe loosen the sealant enough to access the screw heads.

Retain all disconnected items and hardware unless otherwise instructed to discard.

- a. If necessary, remove any hardened sealant covering screw heads.
 - b. At the top of the seat kit hose assembly, remove the two screws from the cover.
 - c. Using a 5/64-inch allen wrench, remove the screws from the cable keepers. Remove cable keepers from communication cable.
 - d. Remove and discard old communication cable.
2. Install the regulator hose cable/keeper assembly as follows:

NOTE

Sealing compound shall be added to the threads of all screws before reinstallation.

- a. Install new communication cable.

- b. Install cable keepers on cable. Using a 5/64-inch allen wrench, secure cable keepers with screws.

- c. Secure the top of the seat kit hose assembly to the cover with two screws.

- d. Excluding the cable/keeper screws, apply epoxy adhesive on the heads of all screws being installed as follows:

1. Using isopropyl alcohol, clean the area where the epoxy adhesive is to be applied and allow to dry for 2 - 5 minutes.

2. On a clean and dry mixing surface, squeeze a length of Part A resin using uniform pressure to form an even bead.

3. Squeeze an equal length and size bead of Part B hardener parallel to the bead of Part A resin.

WARNING

Heat buildup during or after mixing is normal. Do not mix quantities greater than 250 grams as dangerous heat buildup can occur resulting in toxic fumes.

4. Thoroughly mix Part A resin and Part B hardener until a uniform color is obtained.

5. Using a spatula or the wooden end of a cotton swab, apply epoxy adhesive to the head of the screws making sure to fill in to the rim of the fastener inset and that no air bubbles are present under the adhesive.

6. Allow epoxy adhesive to cure for 6 - 8 hours at room temperature.

4-52. ASSEMBLY.

4-53. Assemble Seat Survival Kit Oxygen Hose Assemblies using index numbers of [figures 4-13 through 4-22](#) as a reference.

WARNING

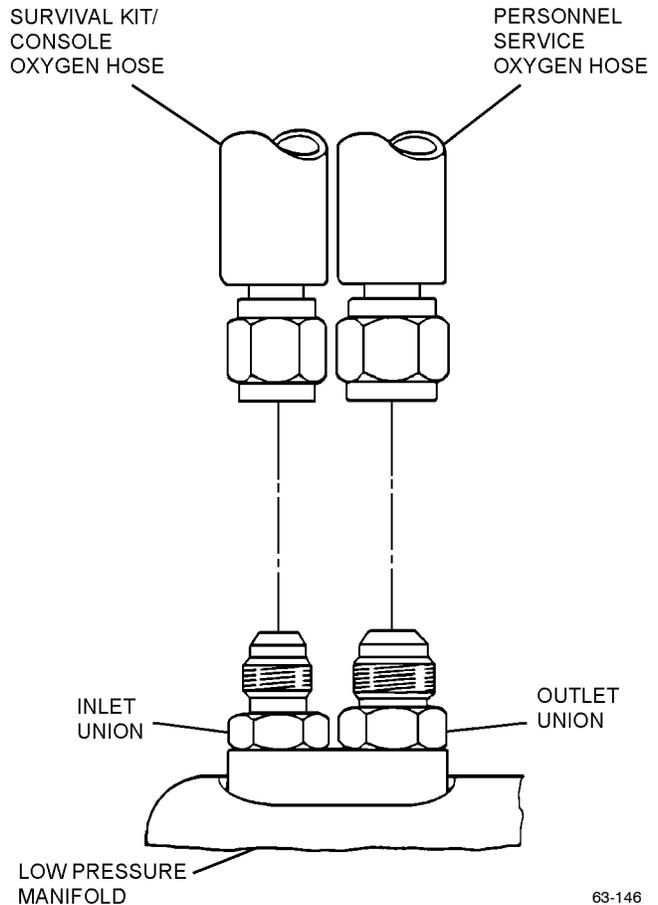
Do not use oil or any material containing oil in conjunction with oxygen equipment. Oil, even in a minute quantity, coming in contact with oxygen can cause explosion or fire. Dust, lint, and fine metal particles are also dangerous.

NOTE

The tamper dot on the Oxygen Hose Assembly shall be applied to the fitting in a manner which provides easy identification for inspection purposes when the seat kit is installed in the seat.

Maintenance personnel are advised to read and thoroughly familiarized themselves with each step prior to the accomplishment of the operations set forth in this procedure.

All complete assemblies not immediately being returned to service shall be sealed in plastic bags with all external fittings properly capped.



63-146

4-54. ASSEMBLY OF THE SEAT SURVIVAL KIT OXYGEN HOSE ASSEMBLIES TO SEAT SURVIVAL KITS. To assemble the seat survival kit hose assembly to seat survival kit, see figure 4-11 and proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Sealing, Locking, and Retaining Compound, Grade B, Type B	MIL-S-22473 NIIN 01-163-3483
As Required	Lint-free Cloth	MIL-C-85043 NIIN 00-044-8291

Figure 4-11. Oxygen Hose Assembly/Low Pressure Manifold Connection

1. Torque inlet tubing connector on oxygen hose assembly to 80-100 inch-pounds.
2. Rotate inboard personnel-service hose so that the communications connection is aligned at the 10 o'clock position and torque outlet tubing connector on oxygen hose assembly to 100-125 inch-pounds.
3. Apply tamper dot using sealant, MIL-S-22473 Grade B, Type B. Use any contrasting color when applying tamper dots to oxygen fittings. Ensure tamper dots are visible for inspection.

4-55. (S-3A A/C ONLY) INSTALLATION OF THE 32-INCH ELECTRICAL CABLE ASSEMBLY CX-13017/AR.

4-56. To install the 32-inch cable assembly, see [figure 4-12](#) and proceed as follows:

Materials Required

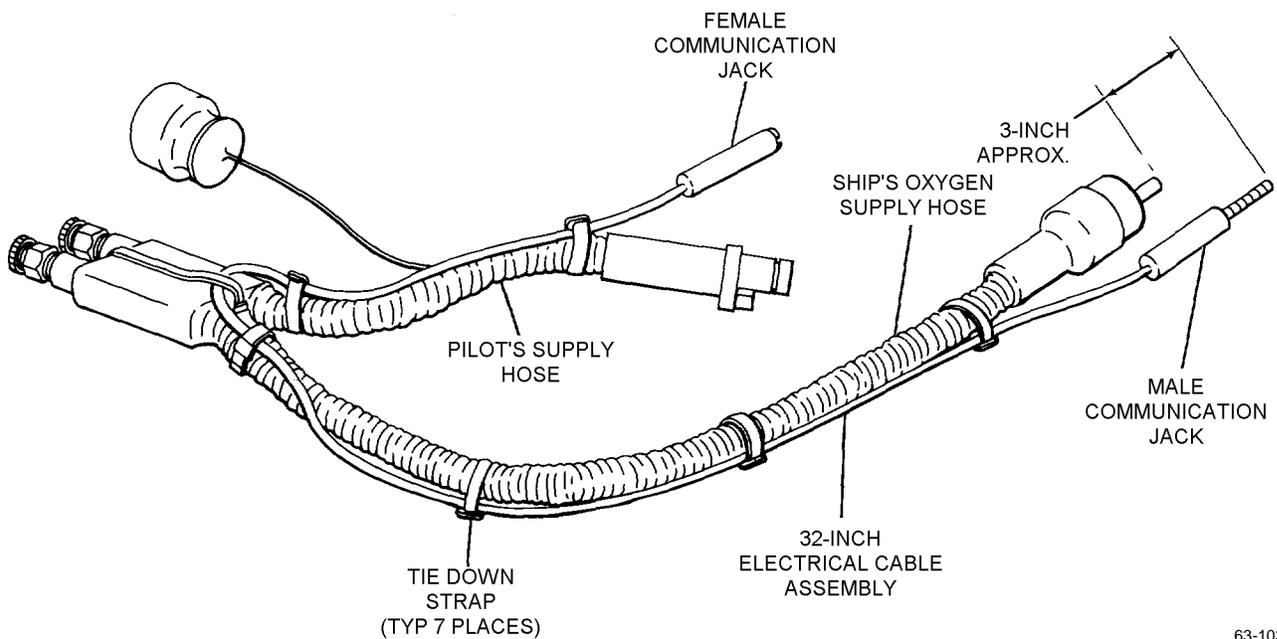
Quantity	Description	Reference Number
1	Cable Assembly CX-13017/AR 32-inch	MIL-C-81866 P/N 1099AS101 (CAGE 30003)
6	Strap, Tiedown, Electrical	MS3367-1-9
1	Strap, Tiedown, Electrical	MS3367-6-9

1. Position the 32-inch electrical cable assembly on the RSSK-8 oxygen hose assembly P/N 33D1341-2 so that the female communication jack of the electrical cable assembly is flush with the quick disconnect fitting of the pilot's supply hose.

2. The male communication jack of the 32-inch electrical cable assembly should terminate 3 inches beyond the quick disconnect fitting of the aircraft's supply hose.

3. Secure the 32-inch electrical cable assembly to the RSSK-8 oxygen hose assembly with seven tiedown straps. Ensure straps are tight.

4. Cut off excess length of the tiedown straps.



63-1037

Figure 4-12. Installation of 32-inch Electrical Cable Assembly (for S-3A Aircraft Application)

Section 4-7. Fabrication

4-57. GENERAL.

local maintenance activities. There are no fabrications required or authorized at this time.

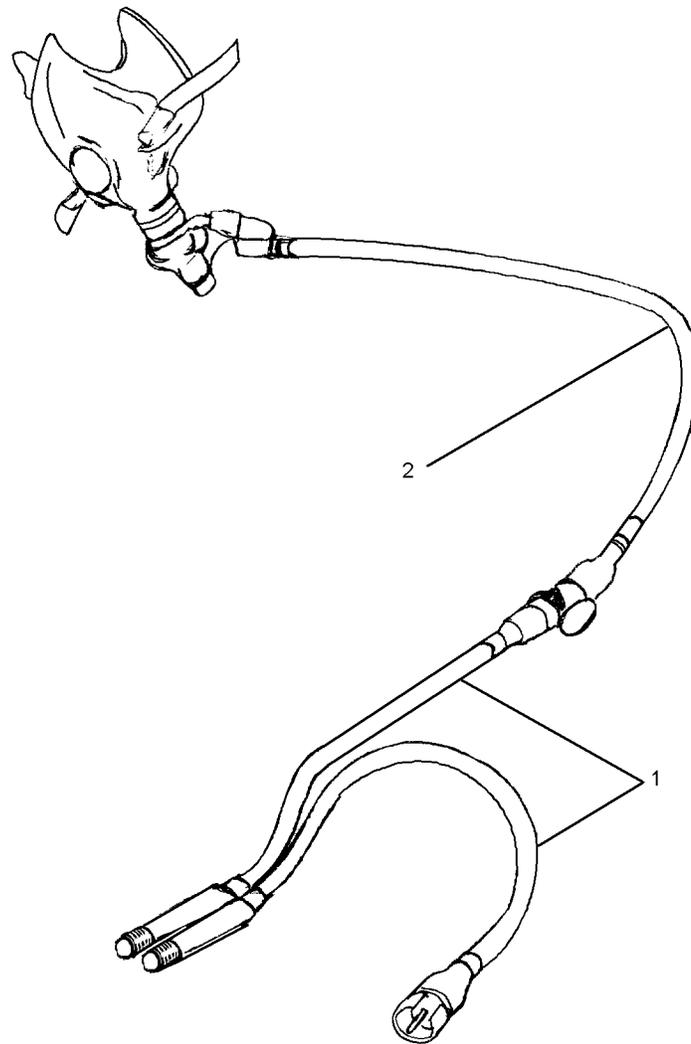
4-58. This section contains instruction for fabrication of tools and components that can be manufactured by

Section 4-8. Illustrated Parts Breakdown

4-59. GENERAL.

4-60. This section lists and illustrates the assemblies and details of all regulator hose and seat survival kit hose assemblies.

4-61. The Illustrated Parts Breakdown should be used during maintenance when requisitioning and identifying parts.

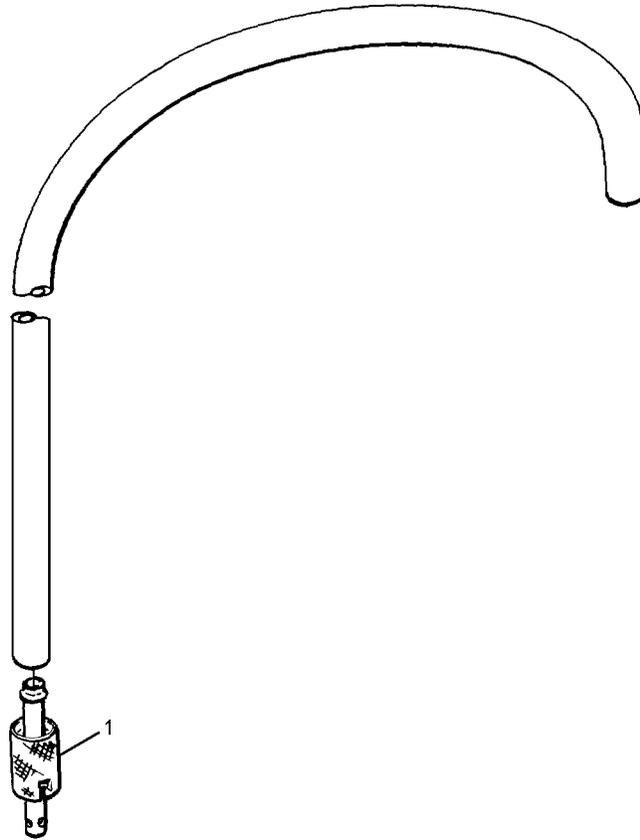


63-185

Figure 4-13. Douglas Seat Pan Oxygen Hose Assembly

NAVAIR 13-1-6.3-1

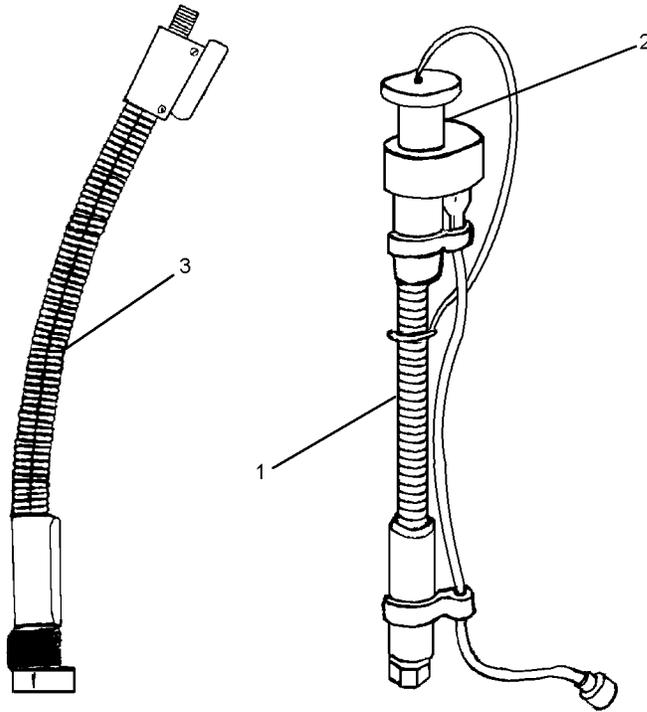
Figure and Index Number	Part Number	Description	Units Per Assembly	Usable On Code
		1 2 3 4 5 6 7		
4-13-1 -2	12081-2	. HOSE ASSEMBLY, Emergency oxygen supply (01547) (Alternate REDAR-A10566-1 (28445)) (Note 1)	1	
	REDAR-A10566-1	. HOSE ASSEMBLY, Emergency oxygen supply (28445)	1	
	REDAR-A10067-2	. HOSE ASSEMBLY, Pilot oxygen supply (Per Douglas spec cont dwg 7445438-503) (28445)	1	
Notes:		1. Aircraft incorporating ACC 82.		



004014

Figure 4-14. SP-1A Oxygen Hose Assembly

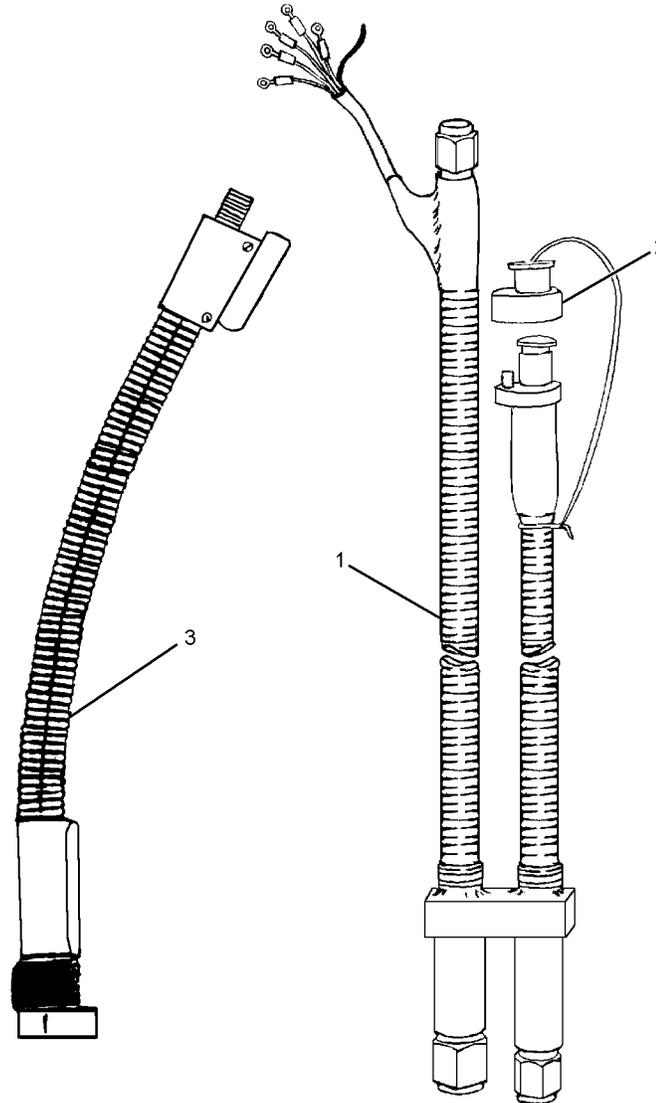
Figure and Index Number	Part Number	Description	Units Per Assembly	Usable On Code
		1 2 3 4 5 6 7		
4-14 -1	MS21964-18	HOSE AND FITTING ASSEMBLY, 28-inch	1	
	MS21964-20	. FITTING ASSEMBLY	1	



63-187

Figure 4-15. RSK-1 and RSK-1A Oxygen Hose Assemblies

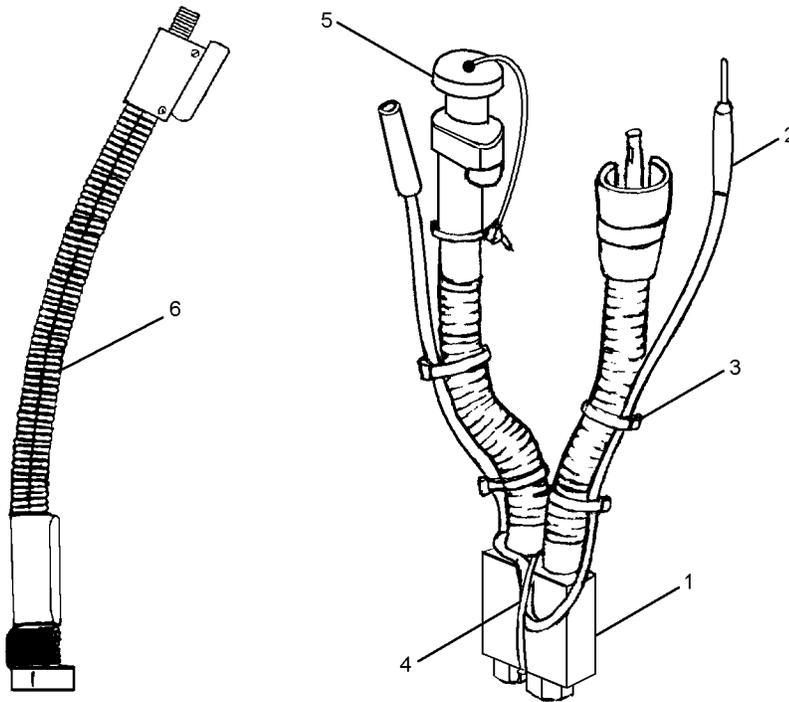
Figure and Index Number	Part Number	Description	Units Per Assembly	Usable On Code
4-15-1	33D1349-1	. HOSE ASSEMBLY (80206)	1	
-2	12031	. CAP AND LANYARD (31441)	1	
	REDAR-C10830	. CAP AND LANYARD (28445)	1	
-3	REDAR-A10116-2	. HOSE ASSEMBLY, Air Breathing (28445)	1	



63-188

Figure 4-16. RSSK-3 Oxygen Hose Assembly

Figure and Index Number	Part Number	Description	Units Per Assembly	Usable On Code
4-16-1	REDAR-A10577-1	. HOSE ASSEMBLY (28445)	1	
	33D1350-1	. HOSE ASSEMBLY (80206)	1	
-2	12031	. CAP AND LANYARD (31441)	1	
	REDAR-C10830	. CAP AND LANYARD (28445)	1	
-3	REDAR-A10116-2	. HOSE ASSEMBLY, Air Breathing (28445)	1	



63-189

Figure 4-17. RSSK-8 Series Oxygen Hose Assembly

Figure and Index Number	Part Number	Description	Units Per Assembly	Usable On Code
4-17-1	33D1341-2	. HOSE ASSEMBLY, Oxygen (80206)	1	
	58520-00	. HOSE ASSEMBLY, Oxygen (53655)	1	
-2	1099AS101	. CABLE ASSEMBLY, 32-inch (30003)	1	
		(Note 1)		
-3	MS3367-1-9	. STRAP, Tiedown, electrical (Note 1)	6	
-4	MS3367-6-9	. STRAP, Tiedown, electrical (Note 1)	1	
-5	12031	. CAP AND LANYARD (31441)	1	
	REDAR-C10830	. CAP AND LANYARD (28445)	1	
-6	REDAR-A10116-2	. HOSE ASSEMBLY, Air Breathing (28445)	1	
Notes: 1. For S-3A A/C only.				

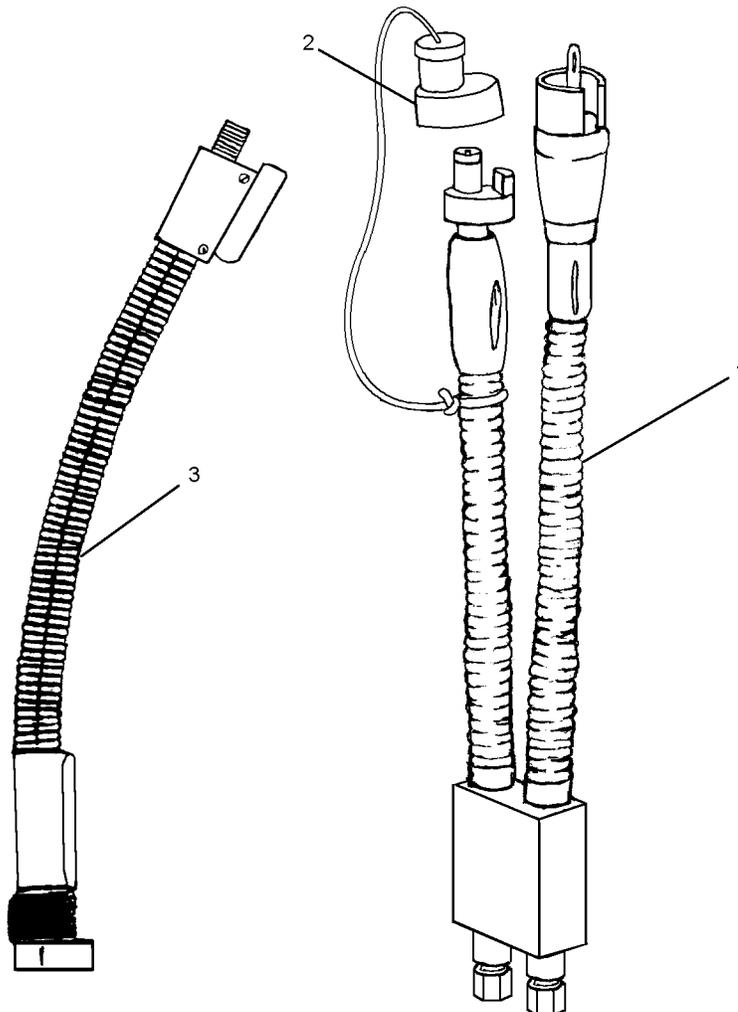
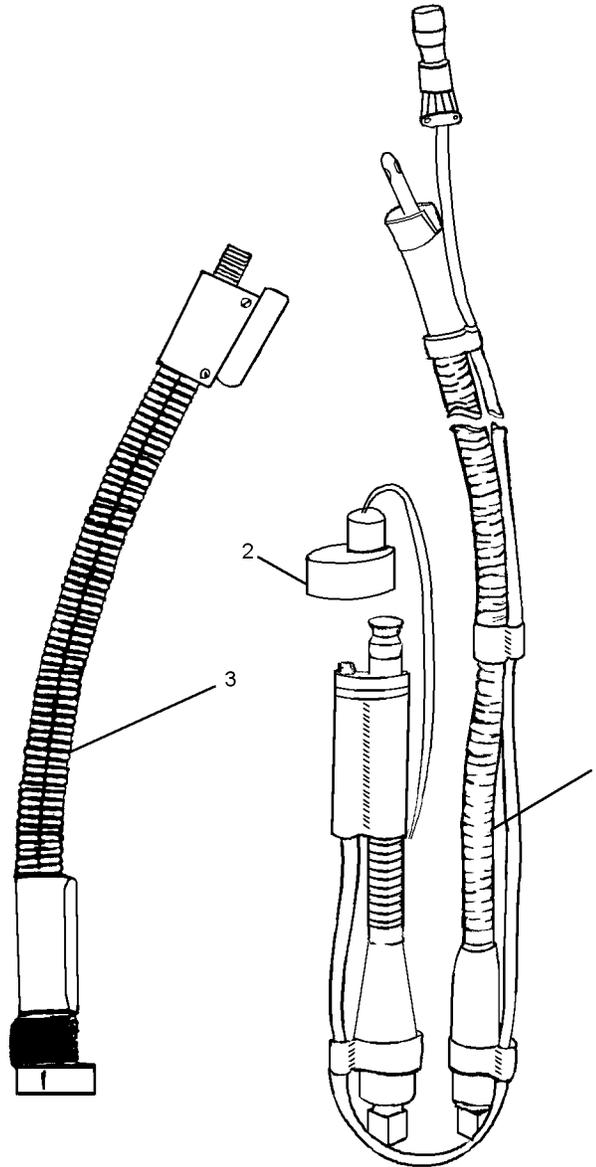


Figure 4-18. SKU-2/A and SKU-12/A Oxygen Hose Assemblies

NAVAIR 13-1-6.3-1

Figure and Index Number	Part Number	Description	Units Per Assembly	Usable On Code
		1 2 3 4 5 6 7		
4-18-1	33D1341-5	. HOSE ASSEMBLY, Oxygen	1	
-2	12031	. CAP AND LANYARD (31441)	1	
	REDAR-C10830	. CAP AND LANYARD (28445)	1	
-3	REDAR-A10116-2	. HOSE ASSEMBLY, Air Breathing (28445)	1	



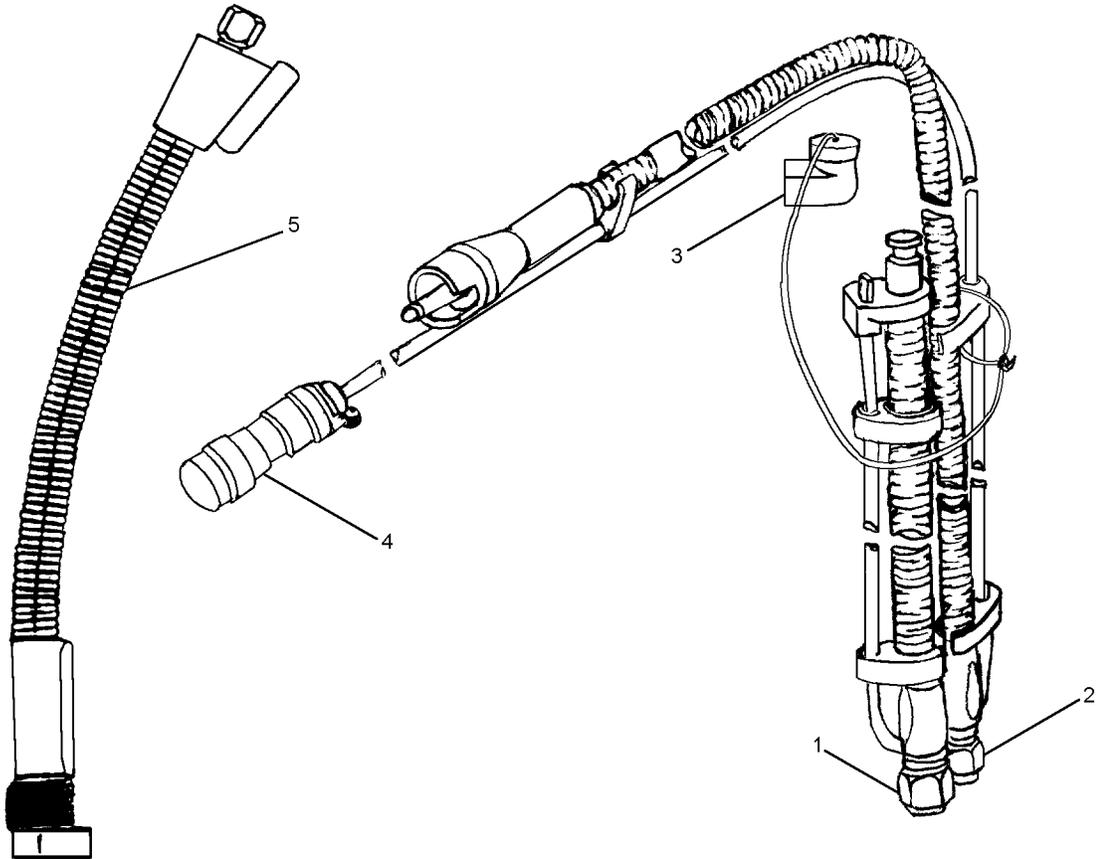
63-191

Figure 4-19. SKU-3/A Oxygen Hose Assembly

Figure and Index Number	Part Number	Description	Units Per Assembly	Usable On Code
4-19-1	REDAR-A11259-1	. HOSE ASSEMBLY, Airduct, air breathing (28445) (Note 1)	1	
-2	12031	. CAP AND LANYARD (31441)	1	
	REDAR-C10830	. CAP AND LANYARD (28445)	1	
-3	REDAR-A10116-2	. HOSE ASSEMBLY, Air Breathing (28445)	1	
Notes: 1. To prevent receipt of incorrect hose assembly from supply, include Advice Code 2B (do not substitute) on requisition.				



Figure 4-20. Deleted



63-193

Figure 4-21. SKU-6/A Oxygen Hose Assembly

Figure and Index Number	Part Number	Description	Units Per Assembly	Usable On Code
4-21	REDAR-A11226-1	HOSE ASSEMBLY (After ACC 489) (28445)	1	
	14073-19	HOSE ASSEMBLY (24632)	1	
-1	REDAR-A11227-1	. HOSE ASSEMBLY, Quick disconnect (28445) . . .	1	
	14073-21	. HOSE ASSEMBLY, Quick disconnect (24632) . . .	1	
-2	REDAR-A11228-1	. HOSE ASSEMBLY, Breakaway (28445)	1	
	14073-23	. HOSE ASSEMBLY, Breakaway (24632)	1	
-3	12031	. CAP AND LANYARD (31441)	1	
	REDAR-C10830	. CAP AND LANYARD (28445)	1	
-4	14073-15	. ELECTRICAL CONNECTOR	1	
-5	REDAR-A11206-2	. HOSE ASSEMBLY, Oxygen Generator (28445) . .	1	

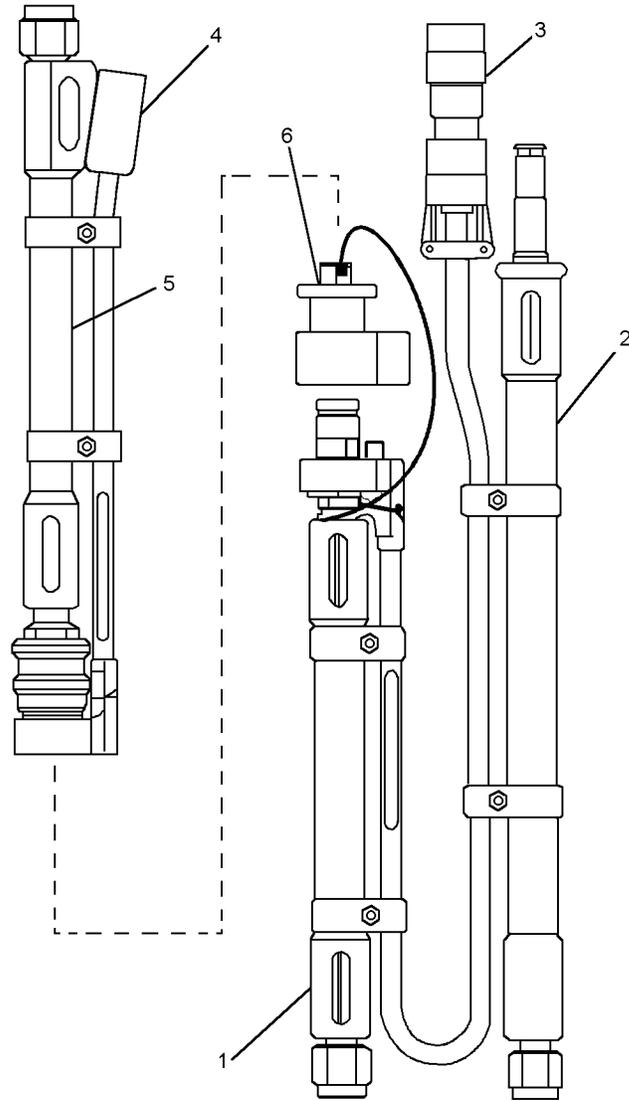


Figure 4-22. SKU-7/A, SKU-10/A, and SKU-11/A Oxygen Hose Assemblies

Figure and Index Number	Part Number	Description	Units Per Assembly	Usable On Code
		1 2 3 4 5 6 7		
4-22	MBEU147723-1	HOSE ASSEMBLY, Oxygen seat kit, SKU-7/A (U1604)	1	
	57013-5	HOSE ASSEMBLY, Oxygen seat kit, SKU-7/A (24984) (Note 1)	1	
	MBEU147724-1	HOSE ASSEMBLY, Oxygen seat kit, SKU-10/A, . . . SKU-11/A (U1604)	1	
	57012-5	HOSE ASSEMBLY, Oxygen seat kit, SKU-10/A, . . . SKU-11/A (24984) (Note 1)	1	
-1	MBEU148025	. OXYGEN HOSE SUBASSEMBLY, Seat kit to regulator hose, SKU-7/A	1	
	57013-5-2	. OXYGEN HOSE SUBASSEMBLY, Seat kit to regulator hose, SKU-7/A	1	
	MBEU148022	. OXYGEN HOSE SUBASSEMBLY, Seat kit to regulator hose, SKU-10/A, SKU-11/A	1	
	57012-5-2	. OXYGEN HOSE SUBASSEMBLY, Seat kit to regulator hose, SKU-10/A, SKU-11/A	1	
-2	MBEU148026	. OXYGEN HOSE SUBASSEMBLY, A/C console to seat kit, SKU-7/A	1	
	57013-5-3	. OXYGEN HOSE SUBASSEMBLY, A/C console to seat kit, SKU-7/A	1	
	MBEU148023	. OXYGEN HOSE SUBASSEMBLY, A/C console to seat kit, SKU-10/A, SKU-11/A	1	
	57012-5-3	. OXYGEN HOSE SUBASSEMBLY, A/C console to seat kit, SKU-10/A, SKU-11/A	1	
-3	MBEU148024	. CABLE/KEEPER ASSEMBLY, SKU-7/A	1	
	57013-5-1	. CABLE/KEEPER ASSEMBLY, SKU-7/A	1	
	MBEU148021	. CABLE/KEEPER ASSEMBLY, SKU-10/A, SKU-11/A	1	
	57012-5-1	. CABLE/KEEPER ASSEMBLY, SKU-10/A, SKU-11/A	1	
	MBEU147722-1	HOSE ASSEMBLY, Regulator, SKU-7/A, SKU-10/A, SKU-11/A (U1604)	1	
	57012-3	HOSE ASSEMBLY, Regulator, SKU-7/A, SKU-10/A, SKU-11/A (24984) (Note 1)	1	
-4	MBEU148019	. CABLE/KEEPER ASSEMBLY	1	
	57012-3-1	. CABLE/KEEPER ASSEMBLY	1	
-5	MBEU148020	. OXYGEN HOSE, SUBASSEMBLY, Regulator	1	
	57012-3-2	. OXYGEN HOSE, SUBASSEMBLY, Regulator	1	
-6	TBD	. CAP AND LANYARD ASSEMBLY (Note 2)	1	
Notes:		1. Hose assembly ordered separately. 2. Must open purchase cap and lanyard assembly using drawing number ML251 from Hydroflow Inc., 13259 East 166th Street, Cerritos, CA 90701.		

NUMERICAL INDEX

Part Number	Figure and Index Number	SM&R Code	Part Number	Figure and Index Number	SM&R Code
MBEU147722-1	4-22	PAOOO	TBD	4-22-6	
MBEU147723-1	4-22	PAOOO	1099AS101	4-17-2	
MBEU147724-1	4-22	PAOOO	12ES10002-17	4-18-2	
MBEU148019	4-22-4	PAOZZ	12ES10002-19	4-18-2	
MBEU148020	4-22-5	PAOZZ	12031	4-15-2	PAOZZ
MBEU148021	4-22-3	PAOZZ		4-16-2	PAOZZ
MBEU148022	4-22-1	PAOZZ		4-17-5	PAOZZ
MBEU148023	4-22-2	PAOZZ		4-18-3	PAOZZ
MBEU148024	4-22-3	PAOZZ		4-19-2	PAOZZ
MBEU148025	4-22-1	PAOZZ		4-20-2	PAOZZ
MBEU148026	4-22-2	PAOZZ		4-21-3	PAOZZ
MS21964-18	4-14		12081-2	4-13-1	PAOGG
MS21964-20	4-14-1		14073-15	4-21-4	
MS3367-1-9	4-17-3		14073-19	4-21	
MS3367-6-9	4-17-4		14073-21	4-21-1	
REDAR-A10067-2	4-13-2		14073-23	4-21-2	
REDAR-A10116-2	4-15-3		33D1341-2	4-17-1	PAOGG
	4-16-3			4-20-1	PAOGG
	4-17-6		33D1341-5	4-18-1	PAOGG
	4-18-3		33D1349-1	4-15-1	
	4-19-3		33D1350-1	4-16-1	
	4-20-3		57012-3	4-22	PAOOO
REDAR-A10566-1	4-13-1		57012-3-1	4-22-4	PAOZZ
REDAR-A10577-1	4-16-1		57012-3-2	4-22-5	PAGZZ
REDAR-A11206-2	4-21-5		57012-5	4-22	PAOOO
REDAR-A11226-1	4-21	AOOOG	57012-5-1	4-22-3	PAOOO
REDAR-A11227-1	4-21-1		57012-5-2	4-22-1	PAOZZ
REDAR-A11228-1	4-21-2		57013-5-1	4-22-3	PAOZZ
REDAR-A11259-1	4-19-1	PAOGG	57012-5-3	4-22-2	PAOZZ
REDAR-C10830	4-15-2		57013-5	4-22	PAOOO
	4-16-2		57013-5-2	4-22-1	PAOZZ
	4-17-5		57013-5-3	4-22-2	PAOZZ
	4-18-3		58520-00	4-17-1	XBGZZ
	4-19-2				
	4-20-2				
	4-21-3				