

**Service Letter**

**FAA-DER APPROVED**

Service Letter: No. 307

Subject: Air conditioning system compressor change

Date: October 31, 1995

Applicability: Bell Model 412EP Serial # 36090

Reference:

1. F.A.A./S.T.C. # SR00066DE, Bell 412 Air Conditioning System.
2. Drawing # : 412AC-302.

Compliance: Optional, at the discretion of the operator.

Background: Air Comm Corporation maintains a program to refine and upgrade its entire product line. To improve compressor service life, an alternate compressor installation has been developed. The new compressor installation will be standard on all new installations and offered as a replacement for previous installations. This document provides a Bill of Material listing and Instructions to install the compressor in the air conditioning system.

**Compressor Installation:**

Purpose: To increase service life of compressor.

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## Compressor Installation Continued :

### Bill of Materials:

Description	Qty.	Part Number
Compressor	1	ES10520-2
Bolt	2	NAS464-P6LA14
Nut	2	MS21042L6
Washer	4	AN960-616

### Compressor Installation Instructions:

1. Reclaim all refrigerant that is currently in the system by using an appropriate refrigerant recovery / recycle machine.
2. Cut safety wire on belt tension link and loosen to allow drive belt to be removed from compressor.
3. Disconnect both suction and discharge lines from the compressor by loosening the B-Nuts holding the O-ring fittings in place on the top of the compressor.
4. Remove the AN6H-47A bolt which mounts the belt tension link to the compressor.
5. Remove the NAS464-P6LA14 bolts which mount the compressor lugs to the compressor mount.
6. Remove old compressor and replace with new Sanden compressor.
7. Place NAS464-P6LA14 bolts through compressor mount ears and compressor lugs as shown in section F.F on page 7 of drawing No. 412AC-302. When placing the NAS464 bolt through the compressor lugs, make sure the stainless steel sleeves remain in place when the bolts are pushed through the lugs.
8. Hand tighten compressor mounting bolts then install belt tension link and torque in accordance with AC43-13.

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9. Place the belt over both pulleys and tension by adjusting the belt tension link.
10. Torque compressor mount lug bolts to 95-110 in - lbs.  
(2 ea. NAS464-P6LA14)
11. Tighten lock nuts on tension link and safety wire in place.
12. Any oil that was removed during refrigerant reclaiming must be replaced by adding that amount to the discharge line from the compressor.  
(smaller hose)
13. Install new O-rings on the hoses & follow the O-ring fitting installation instructions when connecting the hoses to the compressor. Tighten fittings and torque as shown on installation instructions.
14. System is now ready to be evacuated and recharged.
15. Once the system is evacuated for a minimum of 30 minutes (50 minutes is recommended) a refrigerant charge may be added to do a leak check on the system. If the system was leak free prior to changing the compressor, you may only need to check the compressor fittings for leaks. We would recommend checking all fittings that can be reached for leaks at this time to ensure a trouble free system once it is returned to service. Follow the leak checking procedures as outlined in the enclosed system leak check and charging instructions.
16. To charge the system with the correct amount of refrigerant, use the following procedure:
  - Determine ambient temperature.
  - Find static pressure which corresponds to that temperature by using the chart.
  - Add refrigerant to the aircraft A/C system until the static pressure in the system equals the static pressure found in the chart for the given temperature. (A/C system not running)

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- As refrigerant is added to the system, the pressure will continue to rise until it reaches an equilibrium pressure between the charging bottle and the aircraft system. If this pressure is below what is required, you may need to warm the charging bottle to enable more refrigerant to be forced into the aircraft system, until you reach the correct pressure. Follow all safety precautions and do not overheat the charging bottle.

**Weight & Balance:** Installation of compressor requires a change to aircraft weight & balance records.

<u>Weight</u>	<u>Arm</u>	<u>Moment</u>
+ 2.4 lb.	155.0	+ 372.0