

Service Letter

FAA-DER APPROVED

Service Letter: No. 335

Subject: Bell 427 Air Conditioner Compressor Drive Belt Replacement

Date: 29 November, 2000, Rev A, 15 February, 2001

Applicability: Bell Helicopter Model 427

Reference: F.A.A. / S.T.C. SR00418DE
Drawing # 427EC-300 Rev. M

Compliance: At the discretion of the operator

Background: It has come to our attention that the 3V-500 Compressor Drive Belt installed on the Bell 427 air conditioner system, has in some cases experienced cracking and fretting on the inner surface of the drive belt. In an effort to assist in the prevention of such wear, it has been determined that the replacement of this belt using a 3VX500 Drive Belt will greatly reduce the incidence of this occurrence.

Approval: The Technical aspects of this Service Letter are FAA / DER approved.

Bill of Materials of Item to be **removed**:

Item	Part Number	Description / Nomenclature	Remove
1	3V-500	Compressor Drive Belt	1

Bill of Materials of item to be **installed**:

Item	Part Number	Description / Nomenclature	Install
1	3VX500 Kevlar	*Compressor Drive Belt	1

*The use of a 3VX500 non-Kevlar Belt may be used as an acceptable alternate.

Contact the Air Comm Corporation Product Support Department to obtain the new Drive Belt.
Phone: 303-440-4075 Fax: 303-440-6355

I. Removal:

NOTE

It is necessary to remove the main rotor transmission cowling to gain access to the Compressor, and Compressor Drive Belt for replacement and adjustment.

- A. Cut safety wire on the 412AC-3012-5 Belt Tension Link, and loosen the respective Jam Nuts. (See Fig. 1-1)

NOTE

Before attempting to adjust the drive belt tension, insure that the compressor attaching bolts have been loosened to allow free movement the compressor body on the compressor mount.

- B. Adjust the Belt Tension Link to loosen the belt.

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Removal Continued

- C. Disconnect the #1 Tail Rotor Drive Shaft segment from the Tail Rotor output coupling, in accordance with the Bell Helicopter, BHT-427MM, Chapter 63-00. (See Fig. 1-2)
- D. Remove 3V-500 Compressor Drive Belt from the 427EC-3012-4 Compressor Assy., and 427EC-3500-11 Compressor Drive Pulley.

II. Installation / Replacement

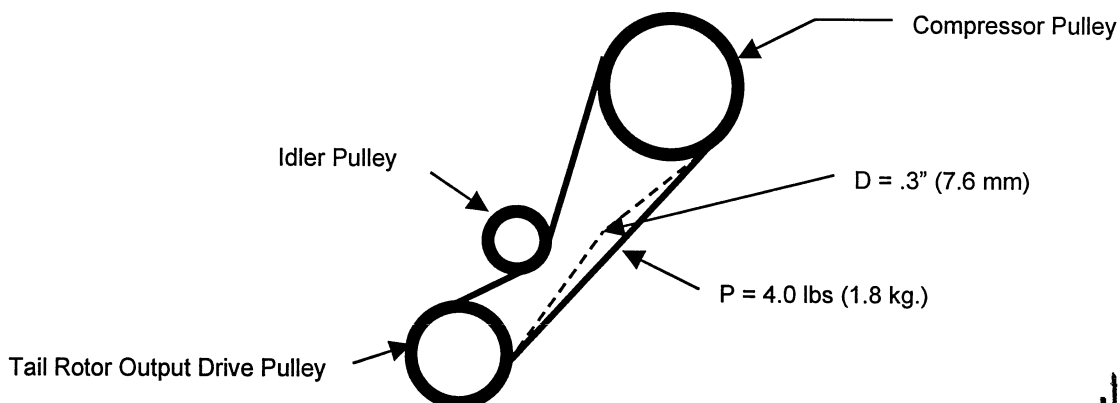
- A. Install the new 3VX500 Compressor Drive Belt on the 427EC-3012-4 Compressor Assy., and 427EC-3500-11 Compressor Drive Pulley.
- B. Reconnect the #1 Tail Rotor Drive Shaft segment to the Tail Rotor output coupling, in accordance with the Bell Helicopter, BHT-427MM, Chapter 63-00. (See Fig. 1-2)
- C. Adjust the Belt Tension Link to tighten the belt. (See Section III. Adjustment)
- D. After adjustment of belt tension, tighten Jam Nuts on the 412AC-3012-5 Belt Tension Link, and safety using .032" safety wire.
- E. Torque Compressor Mounting bolts to 95 - 110 in lbs (10.9 – 12.6 Nm)

III. Adjustment

NOTE

Proper belt tension is important to insure a long belt service life and avoid excessive loads on the compressor, and bearing assemblies.

- A. The correct belt tension for the 3VX500 belt is 49 lbs. (22 kg.) this is achieved by rotating the turnbuckle portion of the 412AC-3012-5 Belt Tension Link until the proper tension is reached. This does require the aid of a belt tensioning tool (Kent-Moore® BT-33-73F Belt Tensioning Gauge, or Equivalent). (This is the preferred method of obtaining proper belt tensioning).
- B. An alternate method is to observe a .3" (7.6 mm) belt deflection when 4 lbs (1.8 kg.) is applied to the midpoint of the belt span.



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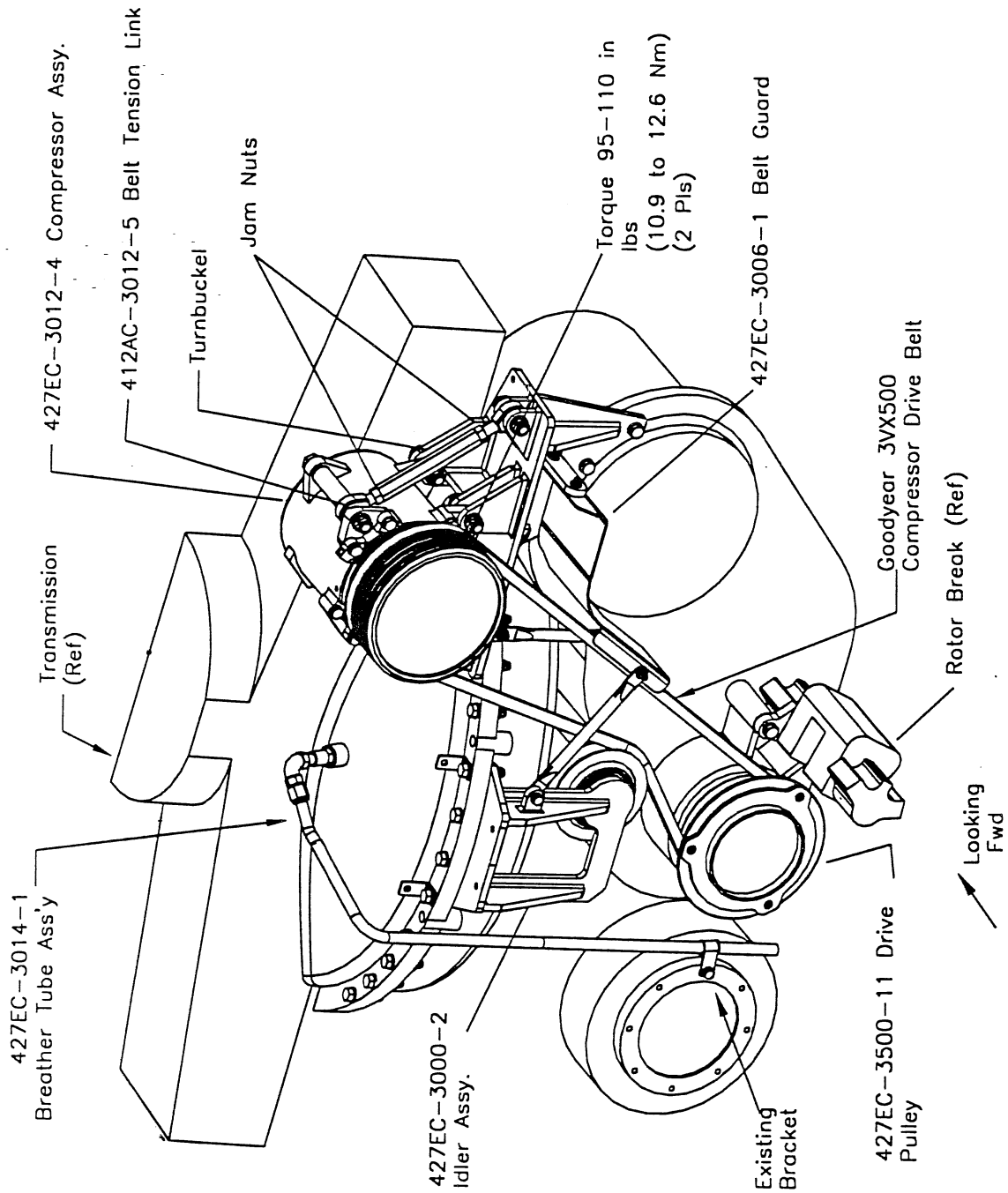


Fig. 1-1'

Refrigerant Plumbing not shown in this view for clarity.

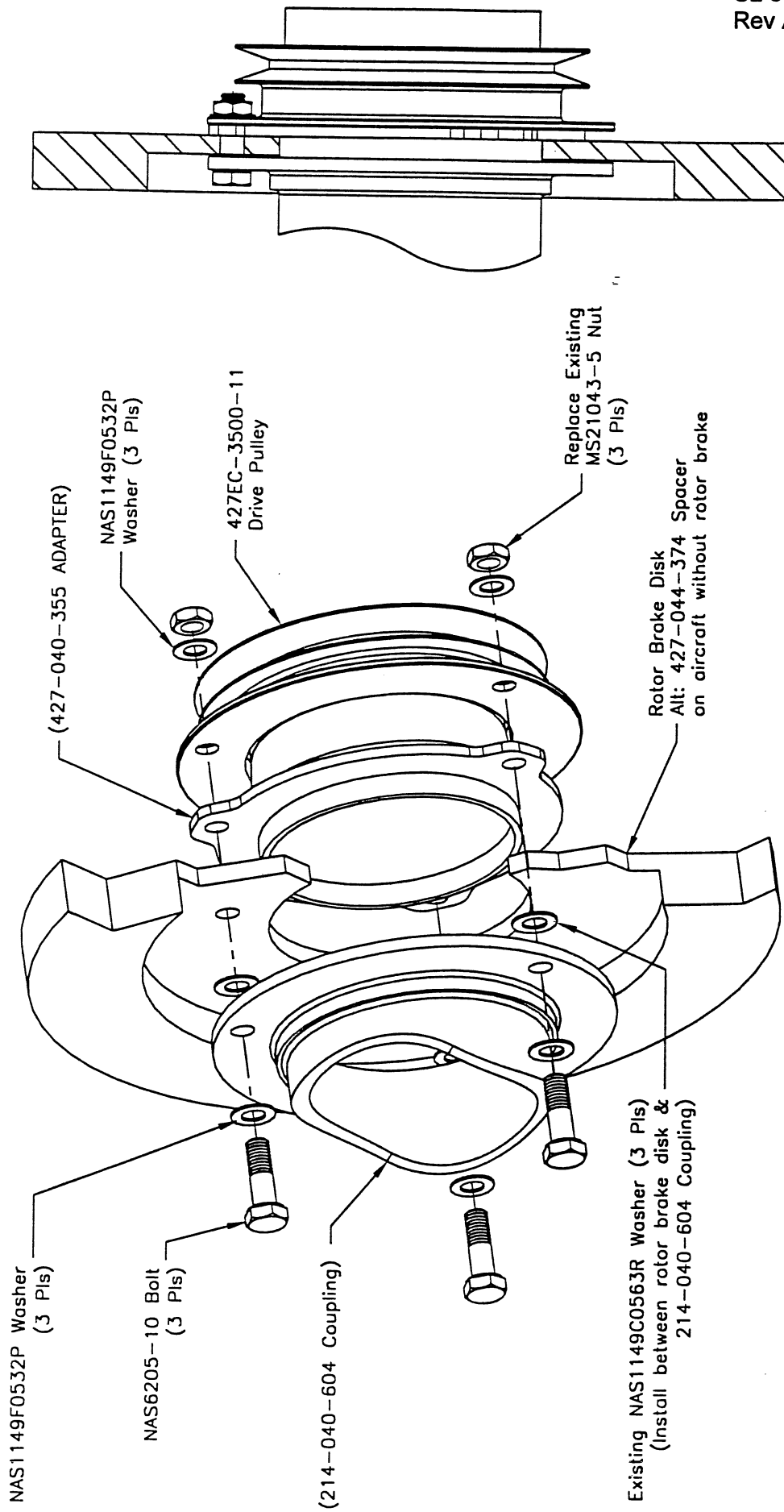


Fig. 1-2 Driveshaft Installation (Exploded / Side View)

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