

FAA – DER APPROVED

Service Bulletin

**Service Bulletin:** SB412-7042; Bell 412 Air Conditioner System

**Subject:** Condenser Frame Modification.

**Date:** 3 July, 2001  
13 September, 2001 Rev A

**Applicability:** Bell Helicopter Model 412 EP, HP, SP equipped with the Air Comm Corporation Air Conditioner System.

**Reference:**

1. F.A.A./S.T.C. #SR00066DE, Bell Helicopter 412 Air Conditioning System.

**Compliance:** Is **Recommended** with in **50 hours** of receiving this Service Bulletin.

**I. Discussion:**

Recently the Air Comm Corporation has made a change to the design of it's Bell 412 Air Conditioner System Condenser Frame Assembly. This change removes a small section of the Condenser Mounting Frame from the back of the Condenser Housing. Thus increasing the clearance between the Condenser Assembly and the Re-phase arms of the helicopters rotor system.

**II. Approval:**

The Technical aspects of this Service Bulletin have been FAA / DER approved.

**III. Purpose:**

The purpose of this bulletin is to provide the necessary information to modify the Condenser Frame Assembly in accordance with the details provided in this bulletin.

#### IV. Bill of Materials:

Item	Part Number	Description	Qty.
1	AN3-3A	Bolt	4
2	NAS1149F0332R	Washer	4
3	ES06022-2	Cork Insulation	4"
4	-	2"X3"X.032 Sheet Metal Plate	1
5	AN3-12A	Bolt (Fig 1-5)	4
6	AN960-10	Washer (Fig 1-5)	4
7	MS21042L3	Nut (Fig 1-5)	4

Contact the ACC Service Department to obtain the parts listed above at no charge, to complete this Service Bulletin at: Phone 303-440-4075, or Fax 303-440-6355.

#### **NOTE**

Disconnect battery and external power before starting work.

#### V. Modification of Condenser Assembly Frame .

#### **NOTE**

It is not necessary to remove the Condenser, or Condenser Frame from the aircraft to accomplish this Service Bulletin.

1. Remove the upper, and lower forward sections of the Transmission Cowlings from the cabin roof to gain access to the Condenser and Condenser Frame assembly.
2. Remove safety wire from the four (4) Condenser Frame mounting bolts located in the top of the Condenser Assembly. Remove and discard the mounting bolts. (See figures 1-1 & 1-2)

#### **NOTE**

For Serial Numbers 36130, 36132, & 36134 loosen the mounting bolts located in the top of the Condenser Frame. Removal is not required for these three aircraft. (See figures 1-3 & 1-4)

3. Loosen the Condenser Frame mounting bolts located on the back of the Condenser Housing. (This step will allow for the installation of the 2"X3"X.032 thick sheet metal plate to protect the Condenser housing from being damaged during the cutting of the Condenser Frame).
4. Measure from the apex of the bend in the Condenser Frame up 8.78 inches (See Figure #1), and Mark the location of the intended cut. Temporarily install the 2"X3"X.032 thick sheet metal plate between the Condenser Frame and the Condenser Housing. Centering the plate on the area to be cut. (Typical both sides).
5. Using a "Hack saw" or equivalent, to cut the Condenser Frame at the previously marked location. (Typical both sides).

#### **CAUTION**

Care should be taken not to damage the Condenser Housing during the cutting process.

#### **NOTE**

Where practical, remove all sharp edges from the area effected by the removal of the frame material.

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**NOTE**

For Serial Numbers 36130, 36132, & 36134, it will be necessary to make additional cuts at the top aft section of the Condenser Frame Assembly. (See figures 1-3 & 1-4).

6. Remove the .032 metal plate, and re-torque mounting bolts 50 – 60 inch lbs.
7. Install AN3-3A Bolts and NAS1149F0332R Washers in the existing bolt holes in the top of the Condenser Housing. Torque to 50 –60 inch lbs, and safety wire using .032 Safety Wire.

**NOTE**

For Serial Numbers 36130, 36132, & 36134, replacement of bolts in top of Condenser Housing is not required. Re-torque existing Bolts 50 –60 inch lbs., and safety wire using .032 Safety Wire.

8. Apply ES06022-2 Cork Insulation to prevent moisture intrusion into the openings created in the Condenser Frame Assembly by this modification.
9. Reinstall the upper, and lower forward sections of the Transmission Cowlings to the cabin roof.

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Remove Safety Wire  
and Retaining Bolts  
(4 Pls)

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Use Hacksaw or Equivalent to  
cut the Condenser Frame 8.78 inches  
from the apex of the Frame as shown.

Loosen Condenser Frame  
attaching hardware located  
on the lower section of  
Frame.

Place the 2"X3"X.032 Sheet  
Metal Plate between the  
Condenser Frame and the  
Condenser Housing. This will  
prevent damage to the Condenser  
Housing during the cutting of the  
Condenser Frame.

8.78

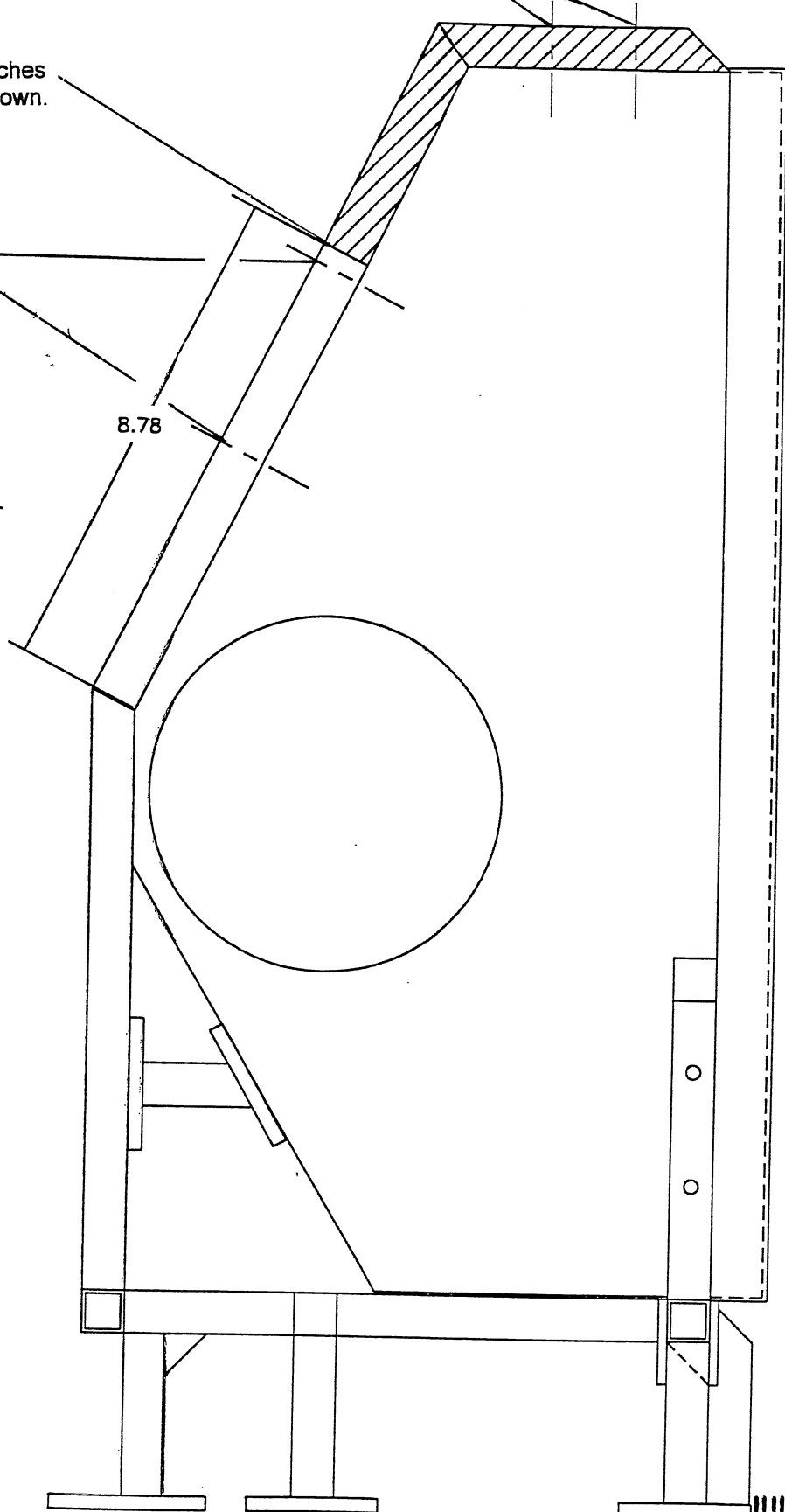
Shaded section of the  
Condenser Frame is to  
Be removed



Figure 1-1 Condenser Frame Modification.

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Install AN3-3A Bolts and  
NAS1149F0332R Washers in  
existing fasteners in top of  
Condenser Assembly Housing. (4 Pls)  
Torque to 50 – 60 inch lbs., and  
re-safety Bolts using .032 Safety Wire.

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Use ES06022-2 Cork Insulation material  
to seal the opening created by the removal  
of the Condenser Frame.

Re-torque Mounting  
Hardware 50 – 60 inch lbs.

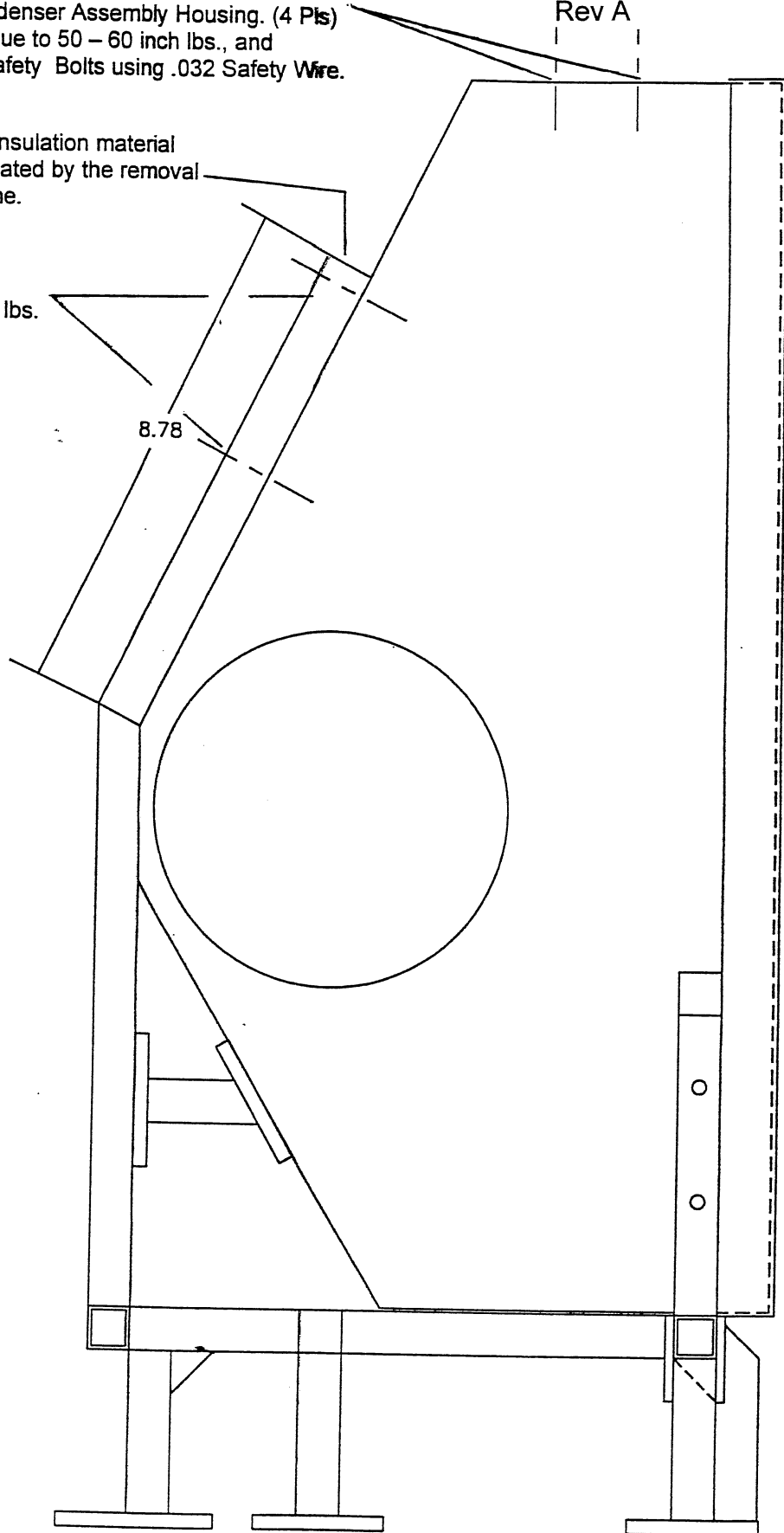


Figure 1-2 Condenser Frame Modification

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Remove Safety Wire and  
loosen Retaining Bolts. (4 Pls)


Cut the top of the Condenser Frame  
to match the contour of the Condenser  
Housing as shown.

Use Hacksaw or Equivalent to  
cut the Condenser Frame 8.78 inches  
from the apex of the Frame as shown.

Loosen Condenser Frame  
attaching hardware located  
on lower section of  
frame.

8.78

Place the 2"X3"X.032 Sheet  
Metal Plate between the  
Condenser Frame and the  
Condenser Housing. This will  
Prevent damage to the Condenser  
Housing during the cutting of the  
Condenser Frame.

Shaded section of the  
Condenser Frame is to  
be removed. 

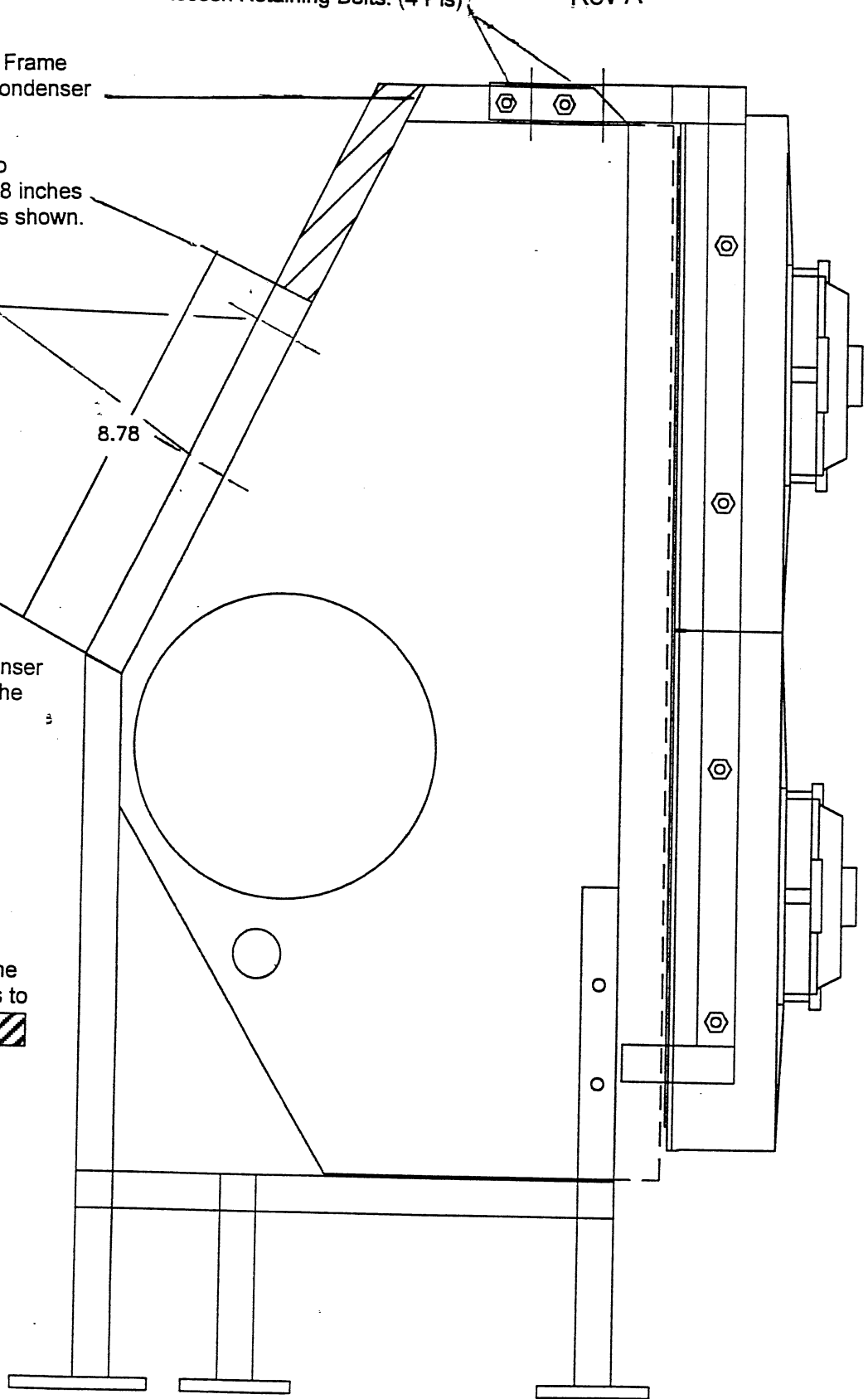


Figure 1-3 Condenser Frame Modification  
(Serial Numbers 36130, 36132, & 36134 only)

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Re-torque Retaining Bolts to  
50 – 60 inch lbs., and re-safety  
Bolts using .032 Safety Wire. (4 Pls)

Use ES06022-2 Cork Insulation material  
to seal the opening created by the removal  
of the Condenser Frame.

Re-torque Mounting  
Hardware 50 – 60 inch lbs.

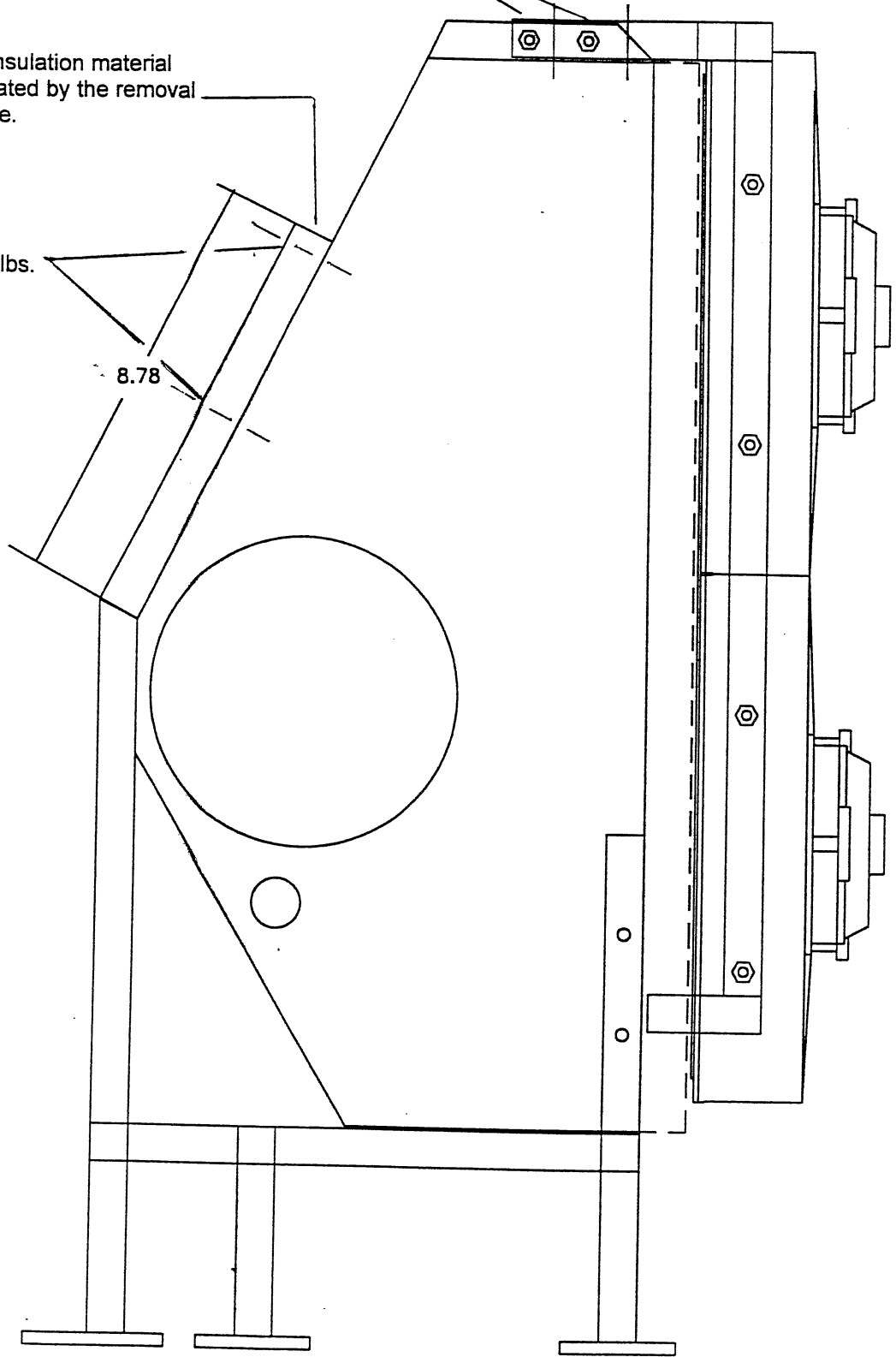


Figure 1-4 Condenser Frame Installation  
(Serial Numbers 36130, 36132, & 36134 only)

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Install AN3-3A Bolts and  
NAS1149F0332R Washers in  
existing fasteners in top of  
Condenser Assembly Housing. (4 Pls)  
Torque to 50 – 60 inch lbs., and  
re-safety Bolts using .032 Safety Wire.

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Use ES06022-2 Cork Insulation material  
to seal the opening created by the removal  
of the Condenser Frame.

Install AN3-12a Bolts (4 Pls),  
AN960-10 Washer (4 Pls),  
MS21042L3 Nut (4 Pls),  
Install as shown.  
Torque to 50 – 60 inch lbs.

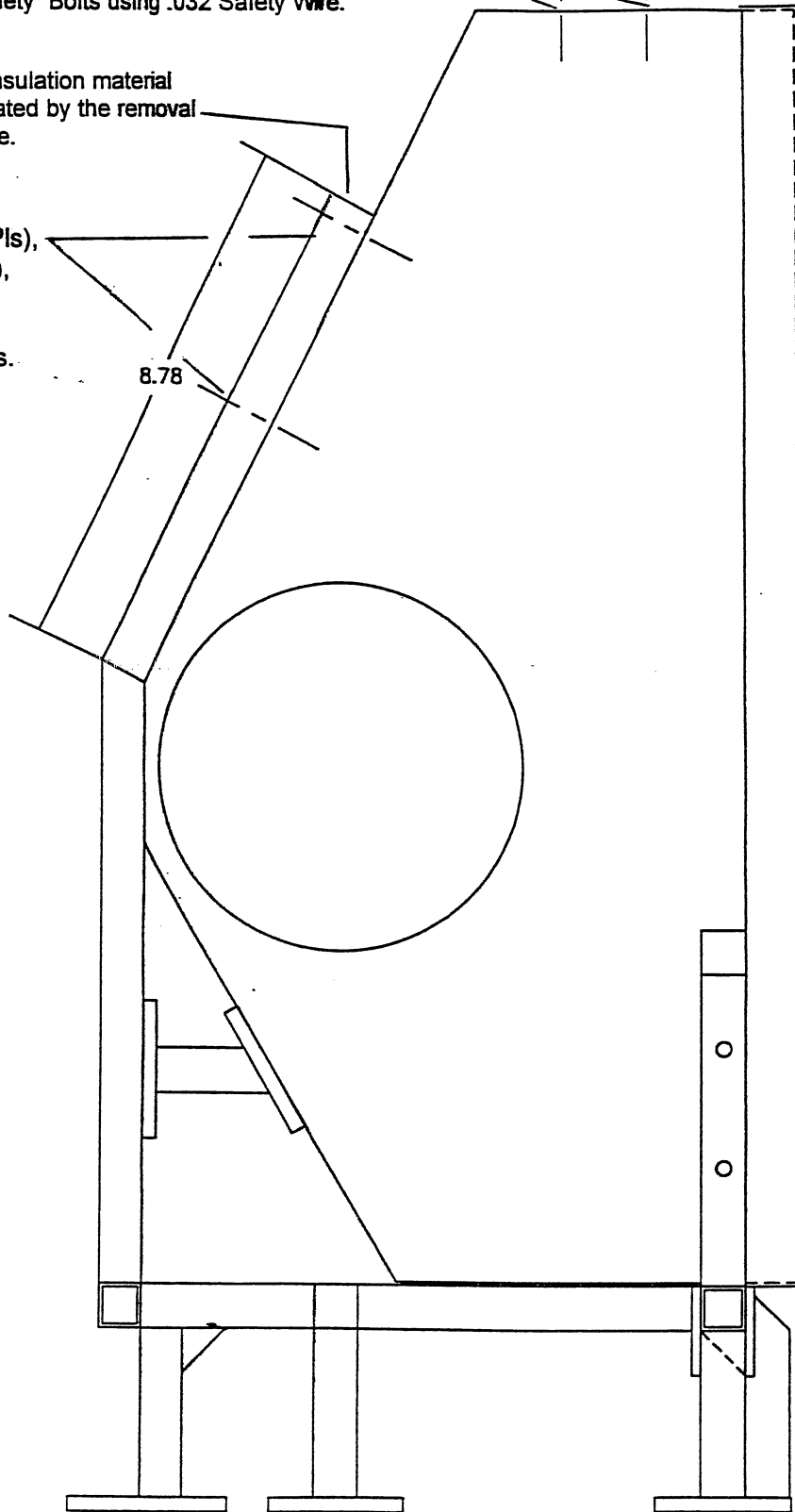


Figure 1-5 Condenser Frame Modification  
(For Condensers not equipped with existing internal mounting brackets to accommodate  
attaching hardware of condenser frame.)

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