



# MAJOR REPAIR AND ALTERATION

## (Airframe, Powerplant, Propeller, or Appliance)

Form Approved  
OMB No. 2120-0020

For FAA Use Only

Office Identification

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act 1958)

<b>1. Aircraft</b>	Make Piper	Model PA-22-150
	Serial No. 22-7494	Nationality and Registration Mark N3606Z
<b>2. Owner</b>	Name (As shown on registration certificate) Homer W. Landreth Michael W. Landreth	Address (As shown on registration certificate) 8640 West Sierra Pinta Dr. Peoria, AZ. 85382-8784

**3. For FAA Use Only**

The alteration/data identified herein complies with the applicable airworthiness requirements and is approved only for the above described aircraft subject to conformity inspection by a person authorized in FAR 43, section 43.7.

*W. Bruce Smith* 01/12/2005  
FAA INSPECTOR DATE WBP07SDL

**4. Unit Identification**

Unit	Make	Model	Serial No.	5. Type	
				Repair	Alteration
AIRFRAME	----- (As described in item 1 above) -----			<input type="checkbox"/>	<input checked="" type="checkbox"/>
POWERPLANT				<input type="checkbox"/>	<input type="checkbox"/>
PROPELLER				<input type="checkbox"/>	<input type="checkbox"/>
APPLIANCE	Type			<input type="checkbox"/>	<input type="checkbox"/>
	Manufacturer			<input type="checkbox"/>	<input type="checkbox"/>

**6. Conformity Statement**

<b>A. Agency's Name and Address</b> Homer W. Landreth 8640 West Sierra Pinta Dr. Peoria AZ, 85382-8784	<b>B. Kind of Agency</b> <input checked="" type="checkbox"/> U.S. Certified Mechanic <input type="checkbox"/> Foreign Certified Mechanic <input type="checkbox"/> Certified Repair Station <input type="checkbox"/> Manufacturer	<b>C. Certificate No.</b> 1977689
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D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date <i>21 January 2005</i>	Signature of Authorized Individual <i>Homer W. Landreth</i>
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**7. Approval for Return to Service**

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is  APPROVED  REJECTED

BY	<input type="checkbox"/> FAA Fit Standards Inspector	<input type="checkbox"/> Manufacturer	<input checked="" type="checkbox"/> Inspection Authorization	Other (Specify)
	<input type="checkbox"/> FAA Designee	<input type="checkbox"/> Repair Station	<input type="checkbox"/> Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection <i>1/21/05</i>	Certificate or Designation No. <i>2694968</i>	Signature of Authorized Individual <i>W. Bruce Smith</i>
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## NOTICE

*Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.*

### 8. Description of Work Accomplished

*(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)*

Aircraft PA22-150 N3606Z Serial Number 22-7494

1. Removed Delco 14 Volt Generator from the engine.
2. Removed Delco 14 Volt Voltage Regulator from the engine.
3. Modified existing Generator mounting bracket in accordance with instructions in Figure 4A. Painted completed bracket with rust inhibiting primer grey paint.
4. Modified Oil Cooler mounting bracket in accordance with instructions in Figure 4B. Painted completed bracket with rust inhibiting primer grey paint. Verified fit with Generator Mounting Bracket as illustrated in Figure 4C.
5. Installed Alternator Mount and Oil Cooler Mount Bracket onto engine at previous location utilizing 3 crankcase bolts, one rear mount bolt and lockwasher, and Oil cooler line fitting nut, as illustrated in Figure 4D.
6. Installed Denso Corporation (Previously named Nippondenso Corporation) 12 Volt Alternator Part Number 100211-1690 onto Mount Bracket using one front mount bolt and lock washer and one bolt and Lock Nut in the tensioning arm that was fabricated in accordance with the instructions in Figure 4E and painted with rust inhibiting primer grey paint. Complete assembly is illustrated in Figure 4F.
7. Replaced original equipment DPDT Master Switch and dual fuse block with 30 Amp Potter and Brumfield switch/circuit breaker P/N W31X2M1G30 and installed Potter and Brumfield W58XC4C12A3, 3 Amp Circuit Breaker adjacent to the Master Switch/Breaker. The switch, circuit breaker, and alternator were connected as shown in the attached electrical wiring diagram, Drawing 1.
8. The Alternator was functionally tested and did not interfere with any installed equipment and Avionics.
9. The total continuous electrical load was evaluated and I/AW AC43.13-1B Section 3, Para 11-33 was found to be less than 80 percent of the Alternator output, and found to be compatible with all previous aircraft modifications to date.
10. No appreciable weight and balance changes were made. Equipment list was modified to include the Alternator installation.
11. All work was performed in accordance with applicable sections of AC43.13-1B.
12. Instructions for Continued Airworthiness were provided.

END

Additional Sheets Are Attached

## INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

Registration Number N3606Z  
Make and Model: Piper PA-22-150

Original Issue  
Date: 21 JAN 2005

### INTRODUCTION:

This installation consists of the replacement of the Delco 20 Amp Generator with a 40 Amp Capable Denso Alternator.

### DESCRIPTION:

Description of the installation is contained in the FAA Form 337 Dated 21 JAN 2005

### CONTROL:

The Alternator requires no external control. It is internally regulated and over voltage protected. The Field winding is protected by a 3 Amp circuit breaker. The 3 Amp Breaker limits alternator output to less than 30 Amps. The remaining electric circuits in the aircraft are as specified in Piper Drawing 14706 for the PA-22 Aircraft and previous FAA Form 337's for N3606Z.

### SERVICE INFORMATION:

There is no required servicing of this Alternator.

### MAINTENANCE INSTRUCTIONS:

In the event of a suspected malfunction, the alternator should be removed by a qualified mechanic and tested and repaired by an alternator repair facility.

### TROUBLESHOOTING:

Standard approved practices for electrical troubleshooting should be used.

### REMOVAL AND REPLACEMENT INFORMATION:

The alternator can be removed and replaced after removal of the lower engine cowling.

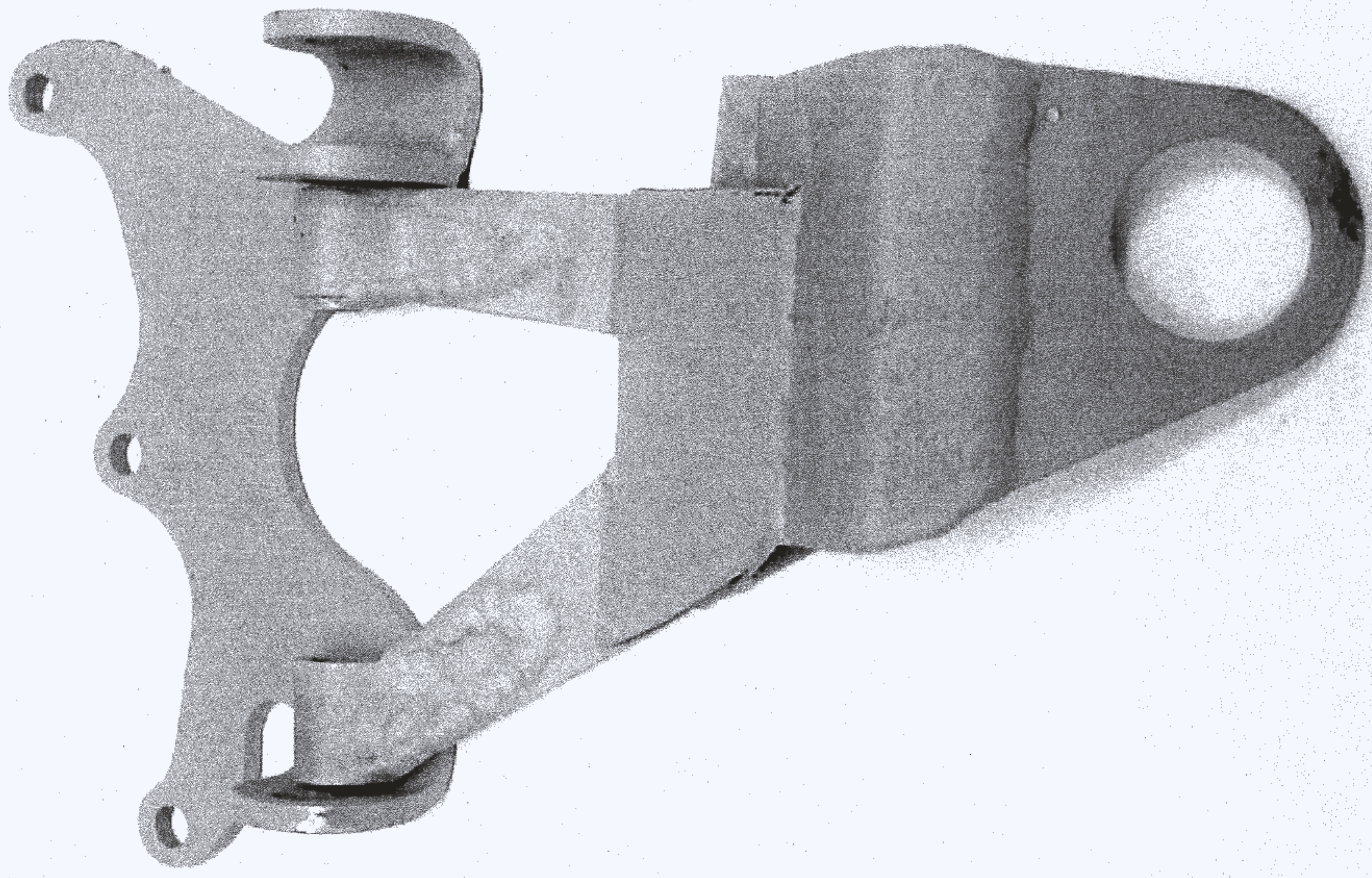
### DIAGRAMS:

Mechanical attachment drawings are attached to the FAA Form 337 for this modification. Electrical drawings are in Piper Drawings for the PA22 aircraft and previous 337's for N3606Z.

### SPECIAL INSPECTION REQUIREMENTS:

The alternator should be inspected for security and belt tension on each preflight inspection, and the proper operation should be verified by monitoring the Ammeter during operation. During 100 hour and Annual inspections all mount bolts should be checked for security and the general condition of all wiring and mechanical attachment parts should be verified. Applicable component and mounting requirements specified in AC 43-13-1B and any inspection checklist for N3606Z should be verified during these inspections.

PA22-150 N3606Z 21 JAN 2005



DEC 15 2004

Figure HC PA22 N3606Z

1182-100 IN 0616Z 21 JAN 2005

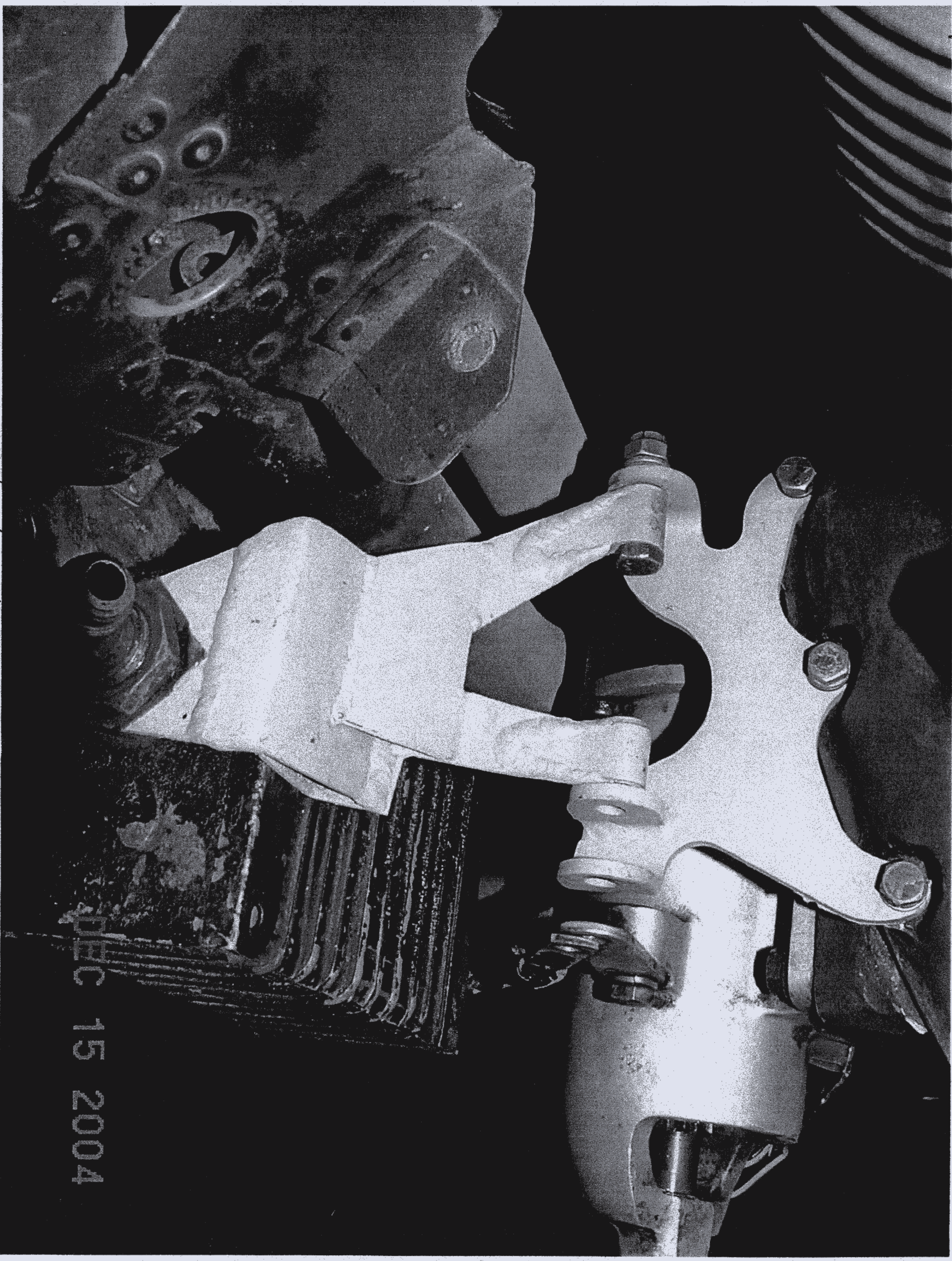


Figure 4D PA22 N3606Z 12/27/2004

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PA22-150 N3606Z 21 JAN 2005

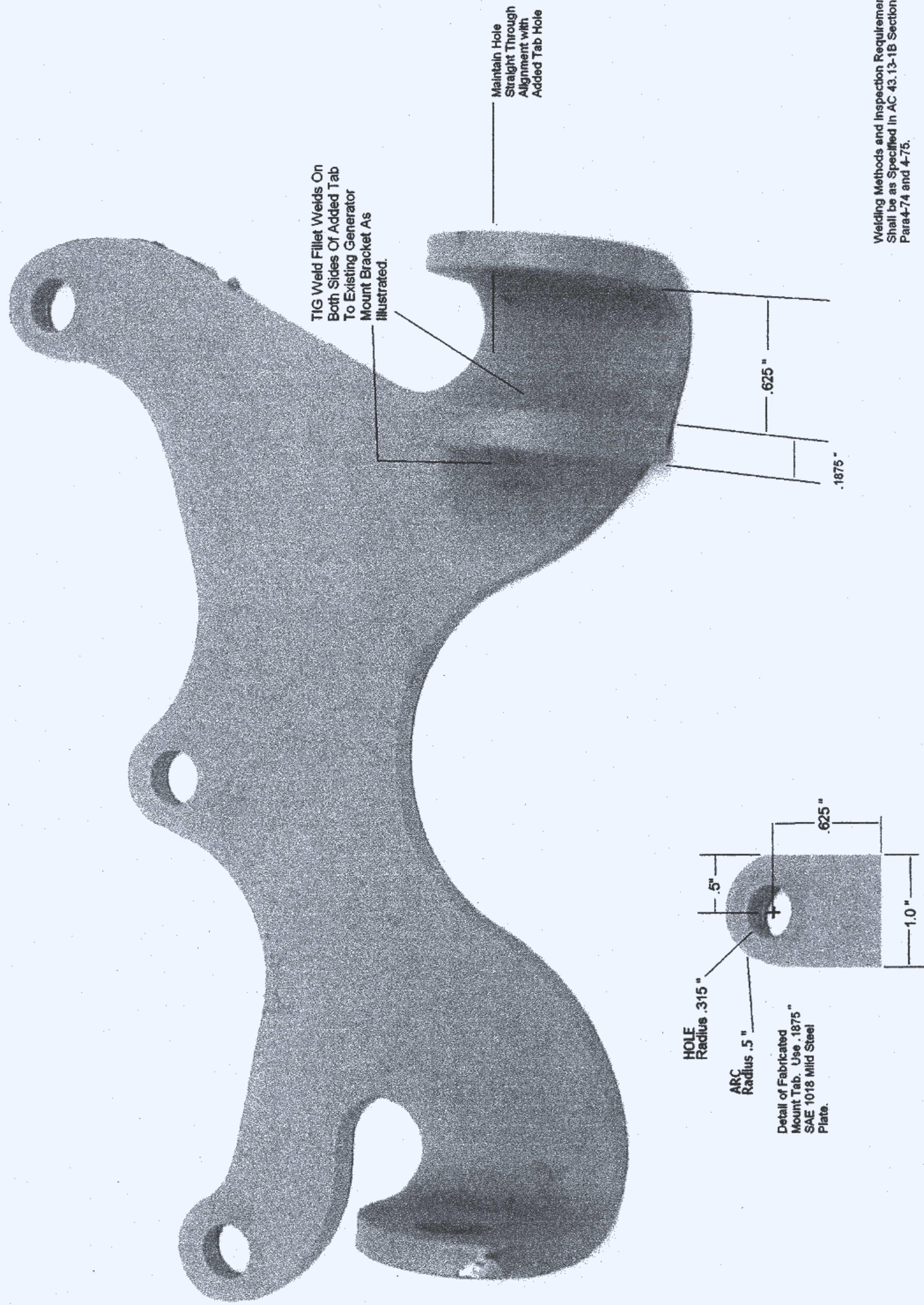


Figure 4A PA22-150 N3606Z

PA 22-150 N 36062 21 JAN 2005

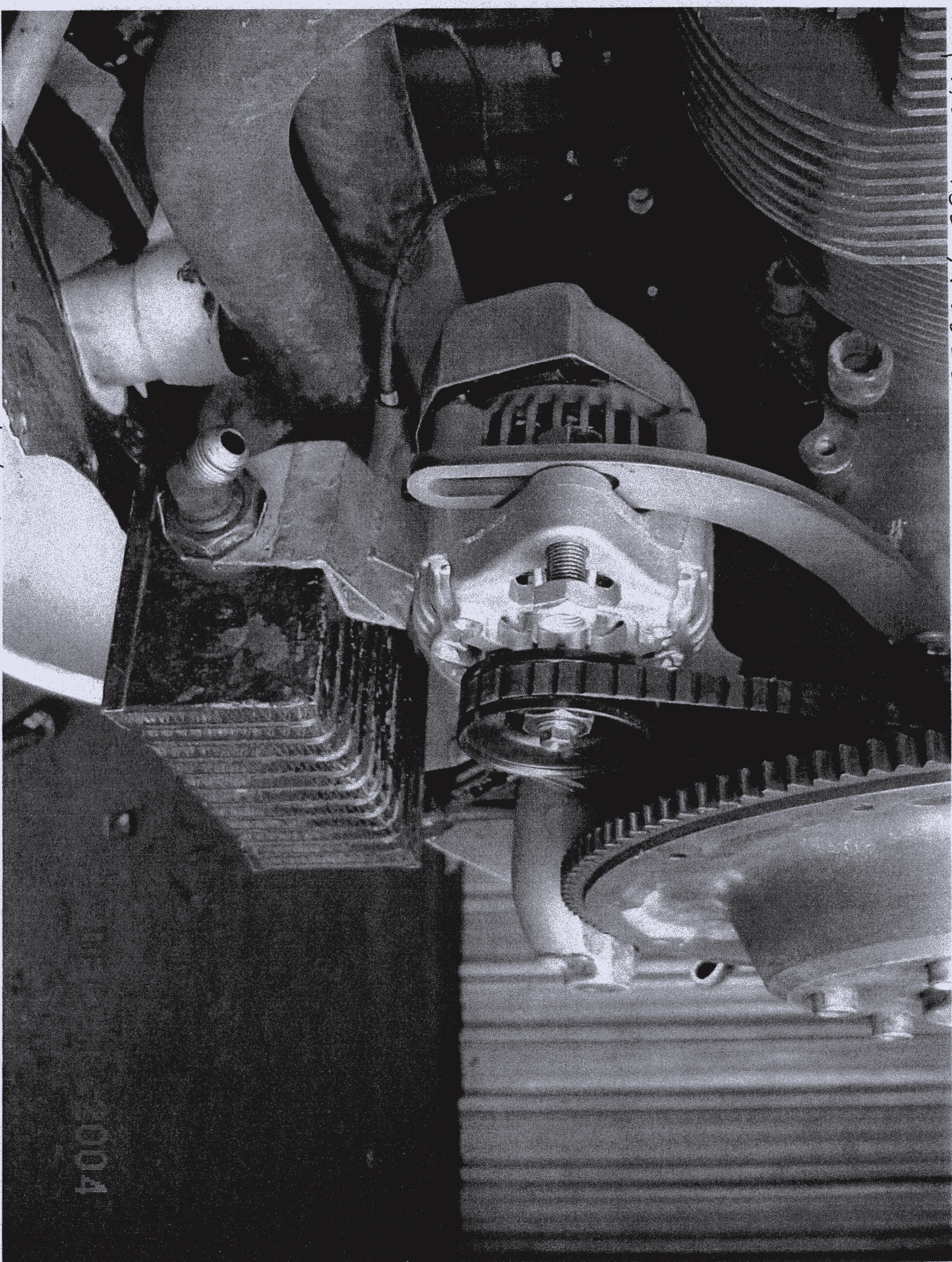


FIGURE HF 0000 N 21/1/21 12/27/2004

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