

EDG 101

8412140471 840910
PDR ADOCK 05000322
G PDR



LIQUID PENETRANT EXAMINATION REPORT

AF Pistons

A. MATERIAL		TYPE <u>CS</u>	FABRICATED PROCESS <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> WORKED	
		GEOMETRY <input type="checkbox"/> PIPE <input type="checkbox"/> PLATE <input type="checkbox"/> ROD <input checked="" type="checkbox"/> OTHER <u>Piston</u>		
CROSS SECTION THICKNESS	MAX — INCH	MIN — INCH	SURFACE CONDITION <input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER	
1. NDE PROCEDURE <u>6.1 + 6.2</u>		TEMP. / MAT'L. <u>73°F</u>		1. <u>367</u> SUPP-1
INSPECTION MATERIALS		BRAND	DESIGNATION	BATCH NO.
1. PRE-CLEANER		<u>Magnaflux</u>	<u>SKC-NF/2C-7B</u>	<u>82D119</u>
2. PENETRANT			<u>SKL-HF/SK18</u>	<u>7D073</u>
3. EMULSIFIER AND/OR REMOVER			<u>SKC-NF/2C-7B</u>	<u>82D119</u>
4. DEVELOPER			<u>SKD-NF/2P-7B</u>	<u>83C042</u>
5. POST EXAMINATION CLEANER		<u>✓</u>	<u>SKC-NF/2C-7B</u>	<u>82D119</u>
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <u>Examined machined area on 101 Diesel Piston-SPARE</u>				
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.		
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)	
1	<u>N/A</u>	<u>None</u>	<u>Accept (No relevant inds)</u>	
2				
3				
4				
D. APPROVALS	Lilco NDE 6.2		E. Hassell / Asst. J. Pink	
	Para 4.2.2		11/4/83	
E. ATTEST	<u>E. Hassell</u>		<u>II</u>	<u>11/4/83</u>
	REGISTERED CERTIFIED PERSONNEL		LEVEL	DATE

COMPONENT I.D. 101 Diesel

SYSTEM

PLANT/LOCATION

Piston Skirt # SPARE 1R43*Emerg. Pist. Gen.

LIQUID PENETRANT EXAMINATION REPORT

A. MATERIAL		TYPE <u>C/S</u>	FABRICATED PROCESS	<input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> WORKED
CROSS SECTION THICKNESS	MAX — INCH	MIN — INCH	SURFACE CONDITION	<input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER
B. NDE PROCEDURE <u>ISO 61 + G-3</u>		TEMP. <u>73°F</u>	<u>367</u>	<u>Due 4-22-84</u>
INSPECTION MATERIALS		BRAND	DESIGNATION	BATCH NO.
1. PRE-CLEANER		<u>Magnaflux</u>	<u>SKC-NF/ZC-7B</u>	<u>82D119</u>
2. PENETRANT			<u>SKL-NF/SKLS</u>	<u>7D073</u>
3. EMULSIFIER AND/OR REMOVER			<u>SKC-NF/ZC-7B</u>	<u>82D119</u>
4. DEVELOPER			<u>SKD-NF/ZP-9B</u>	<u>83C042</u>
5. POST EXAMINATION CLEANER			<u>SKC-NF/ZC-7B</u>	<u>82D119</u>
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <u>Examined machined area on c. 4 101 Diesel</u> <u>around boss. Piston 1A</u>				
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.		
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)	
Bolt Hole 1 See Sketch	<u>N/A</u>	<u>None</u>	<u>Accept</u>	
2	<u>1/4" C.N.</u>	<u>linear</u>	<u>Reject (LDR Issued)</u>	
3	<u>N/A</u>	<u>None</u>	<u>Accept</u>	
4	<u>5/32</u>	<u>linear</u>	<u>Reject (LDR Issued)</u>	
D. ACCEPTANCE CRITERIA		<u>Like NDE 62 Para 4.2.2</u> <u>End Hassell</u> <u>11/4/73</u>		
E. ATTEST		<u>Carl Hassell</u> RESPONSIBLE CERTIFIED PERSONNEL LEVEL <u>II</u> DATE <u>11/4/73</u>		

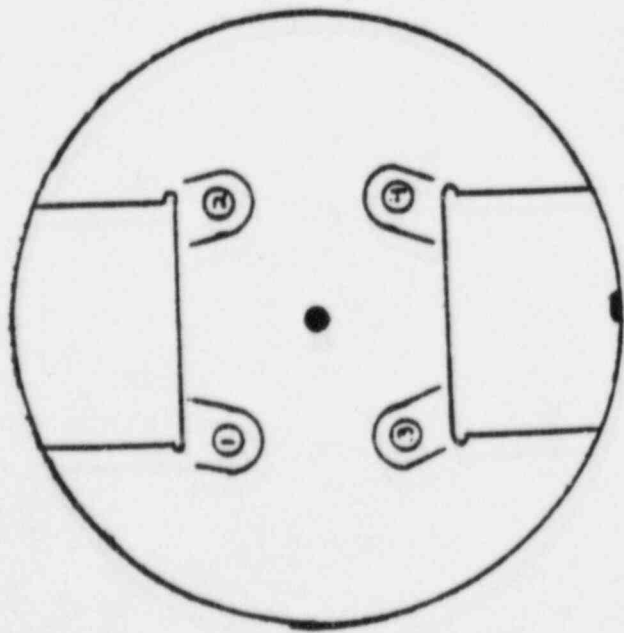
COMPONENT I.D. 101 Diesel

SYSTEM

PLANT/LOCATION

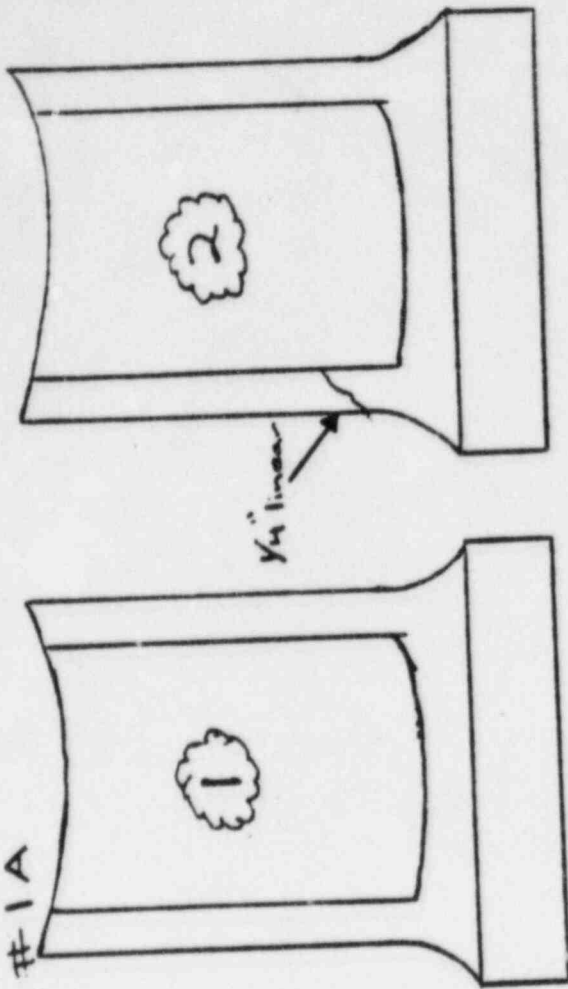
SNPS-1/Turbine Deck

Diesel #101 Piston #1A

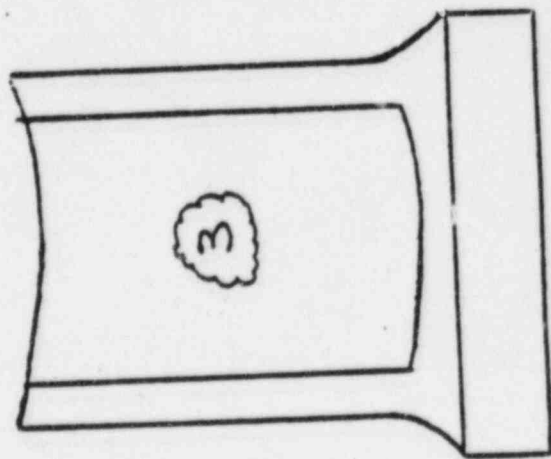
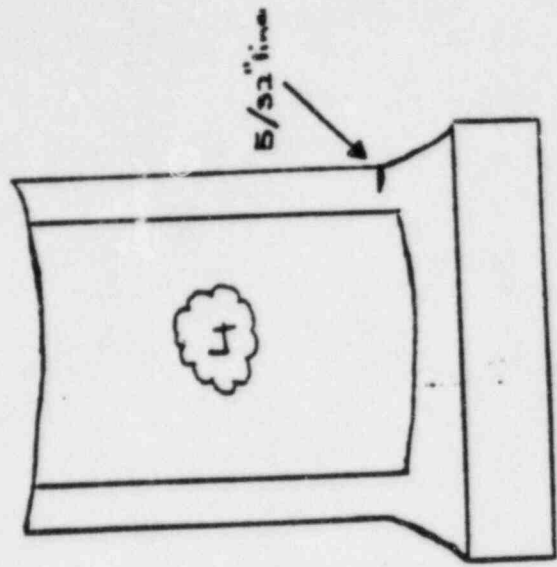


Notch Side

Overhead View



Side Views, looking out from inside



LIQUID PENETRANT EXAMINATION REPORT

A. MATERIAL		TYPE <u>C/S</u>	FABRICATED PROCESS <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> WORKED		
		GEOMETRY <input type="checkbox"/> PIPE <input type="checkbox"/> PLATE <input type="checkbox"/> ROD <input checked="" type="checkbox"/> OTHER: <u>Piston</u>			
CROSS SECTION THICKNESS	MAX — INCH	MIN — INCH	SURFACE CONDITION <input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER		
B. LDE PROCEDURE Inv. <u>61+62</u>		SURF. / MAT'L. TEMP. <u>73°F</u>		P. NO. <u>367</u> DUE <u>4-22-84</u> SERIAL NO. <u>1153</u>	
INSPECTION MATERIALS		BRAND	DESIGNATION	BATCH NO.	
1. PRE-CLEANER		<u>Magnaflux</u>	<u>SKC-NF/3C-7B</u>	<u>82D119</u>	
2. PENETRANT			<u>SKL-HF/SKL-3</u>	<u>7D073</u>	
3. EMULSIFIER AND/OR REMOVER			<u>SKC-NF/3C-7B</u>	<u>82D119</u>	
4. DEVELOPER			<u>SKD-NF/3P-9B</u>	<u>83C043</u>	
5. POST EXAMINATION CLEANER			<u>SKC-NF/3C-7B</u>	<u>82D119</u>	
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <u>Examined machined area around boss Piston-2A</u> <u>101 Diesel</u>					
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.			
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)		
<u>Bolt Hole</u> <u>1 See Sketch</u>	<u>1/4</u>	<u>linear</u>	<u>Reject (LDR Issued)</u>		
<u>2</u>	<u>N/A</u>	<u>None</u>	<u>Accept</u>		
<u>3</u>	<u>1/8 3/16</u>	<u>linear</u>	<u>Reject (LDR Issued)</u>		
<u>4</u>	<u>N/A</u>	<u>None</u>	<u>Accept</u>		
D. ACCEPTANCE CRITERIA		<u>Like NDE 62 Para 4.2.2</u> <u>II</u> <u>11/4/83</u>			
E. ATTEST		<u>Carl Hassell</u> RF SIBLE CERTIFIED PERSONNEL		<u>II</u> <u>11/4/83</u> LEVEL DATE	

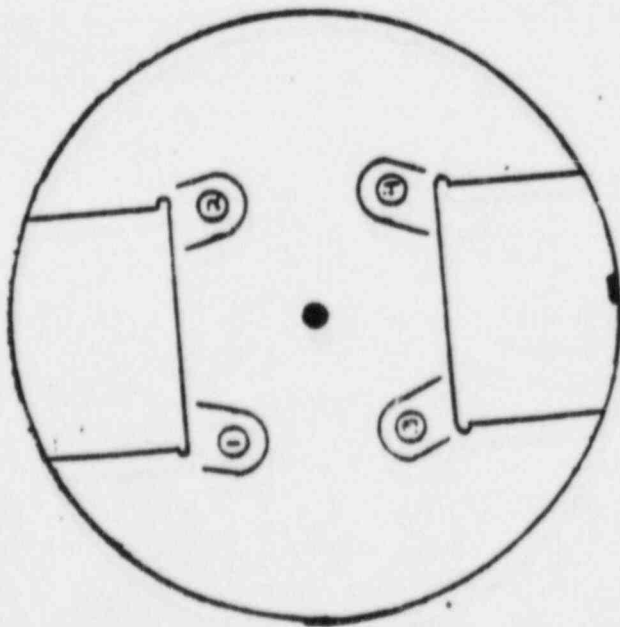
COMPONENT I.D. 101 Diesel

SYSTEM 18436 Emergency Diesel Gen

PLANT/LOCATION SNPS-1/Turbine Deck

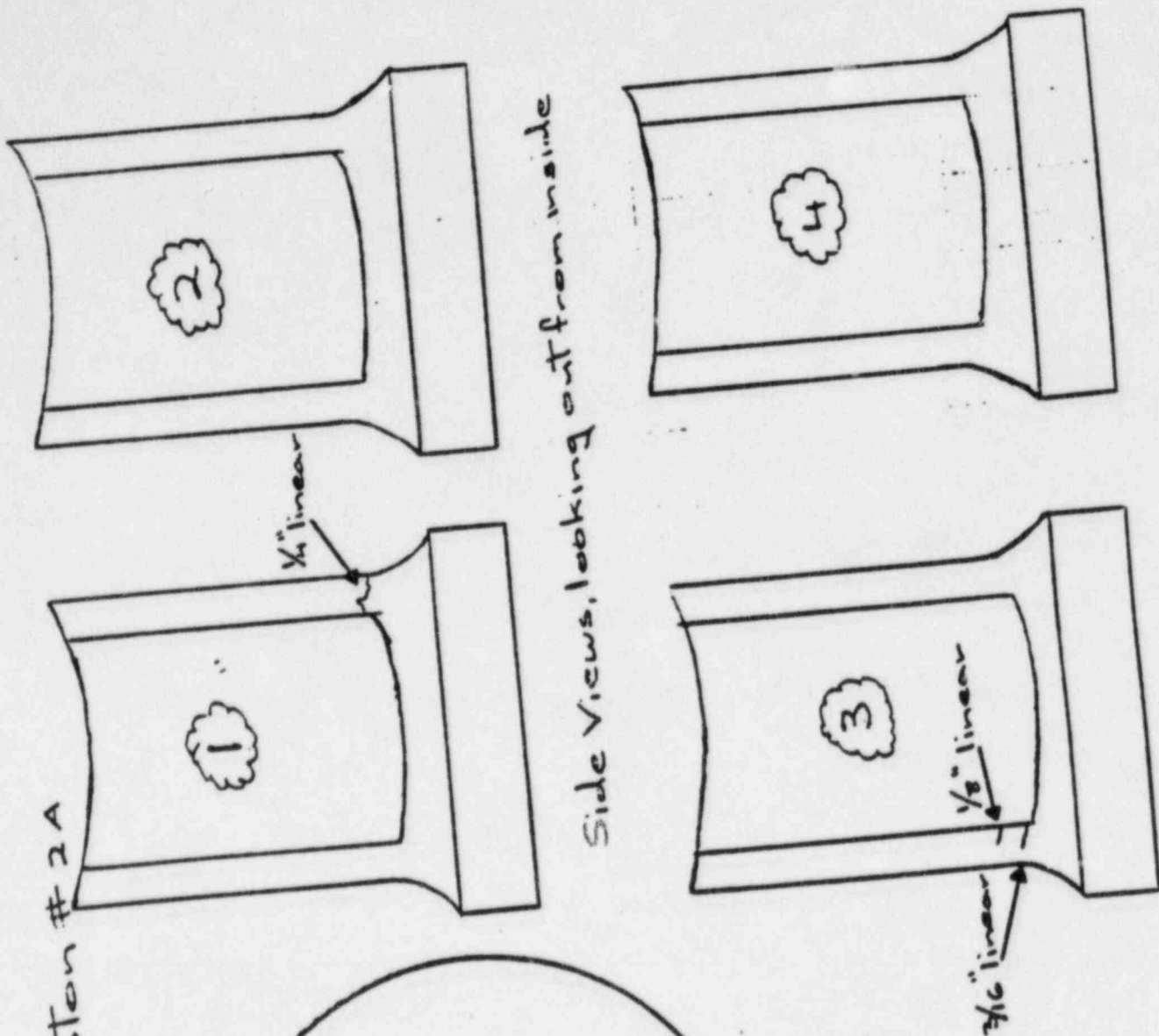
Piston Skirt #2A

Piston #101 Piston #2A



Notch Side

Overhead View

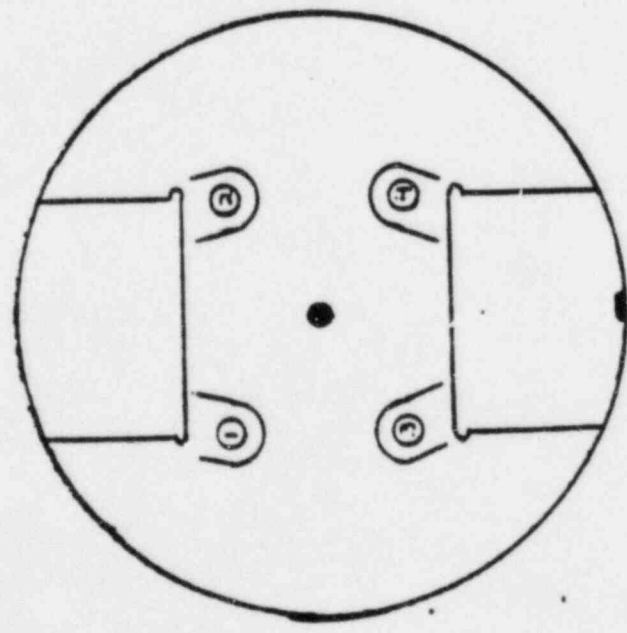


Side Views, looking out from inside

LIQUID PENETRANT EXAMINATION REPORT					
A. MATERIAL		TYPE	FABRICATED PROCESS		
		GEOMETRY	<input type="checkbox"/> PIPE <input type="checkbox"/> PLATE <input type="checkbox"/> ROD <input checked="" type="checkbox"/> OTHER: <u>Piston</u>		
CROSS SECTION THICKNESS	MAX INCH	MIN INCH	SURFACE CONDITION	<input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER	
B. LPI PROCEDURE		TEMP. / MAT'L.	P. N. 367		DATE / TIME
No. <u>51463</u>		TEMP. <u>73°F</u>	<u>Dec 4-22-84</u>		<u>843-1153</u>
INSPECTION MATERIALS		BRAND	DESIGNATION	BATCH NO.	
1. PRE-CLEANER		<u>Magnaflux</u>	<u>SKC-NF/3C-73</u>	<u>82D119</u>	
2. PENETRANT			<u>SKL-HF/SKL3</u>	<u>7D073</u>	
3. EMULSIFIER AND/OR REMOVER			<u>SKC-NF/3C-73</u>	<u>82D119</u>	
4. DEVELOPER			<u>SKD-NF/EP-73</u>	<u>83C042</u>	
5. POST EXAMINATION CLEANER			<u>SKC-NF/3C-73</u>	<u>82D119</u>	
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <u>Examined machined area on 5.5" diam. 101 Diesel Piston-3A</u>					
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.			
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)		
<u>Bolt Hole</u>					
<u>1 See Sketch</u>	<u>N/A</u>	<u>N/A</u>	<u>Accept</u>		
<u>2</u>	<u>3/16</u>	<u>linear</u>	<u>Reject (LDR Issued)</u>		
<u>3</u>	<u>N/A</u>	<u>N/A</u>	<u>Accept</u>		
<u>4</u>	<u>N/A</u>	<u>N/A</u>	<u>Accept</u>		
D. ACCEPTANCE CRITERIA		<u>ASME NDE G-2 Rev 4-72</u> <u>II</u>			
E. ATTEST		<u>Carl J. Howell</u> RT SIBLE CERTIFIED PERSONNEL LEVEL <u>II</u> DATE <u>11/4/83</u>			

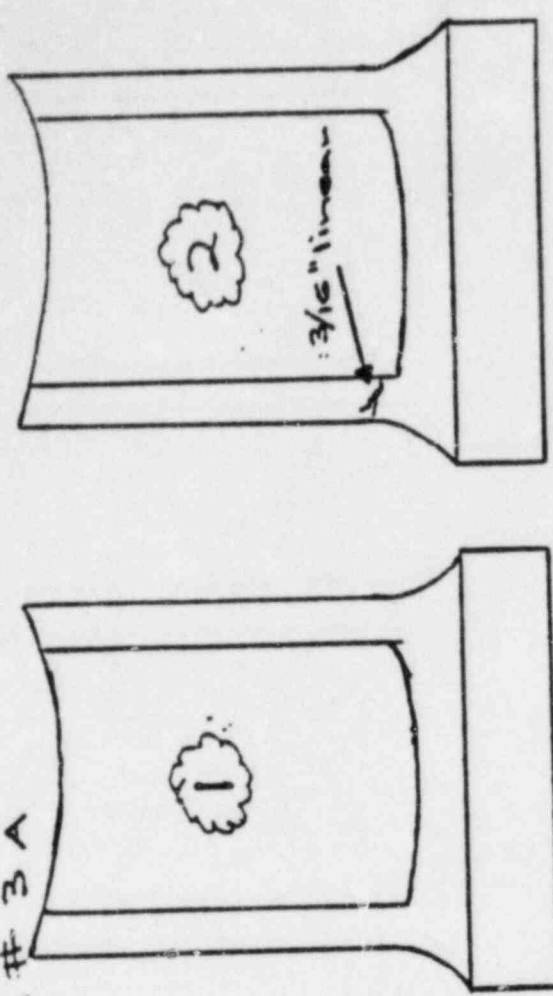
COMPONENT I.D. 101 Diesel
 Piston Skirt #3A
 SYSTEM
 IRVING Energy Dies Gen
 SNPS-1/Turbine Deck
 PLANT/LOCATION

Diesel #101 Piston #3A

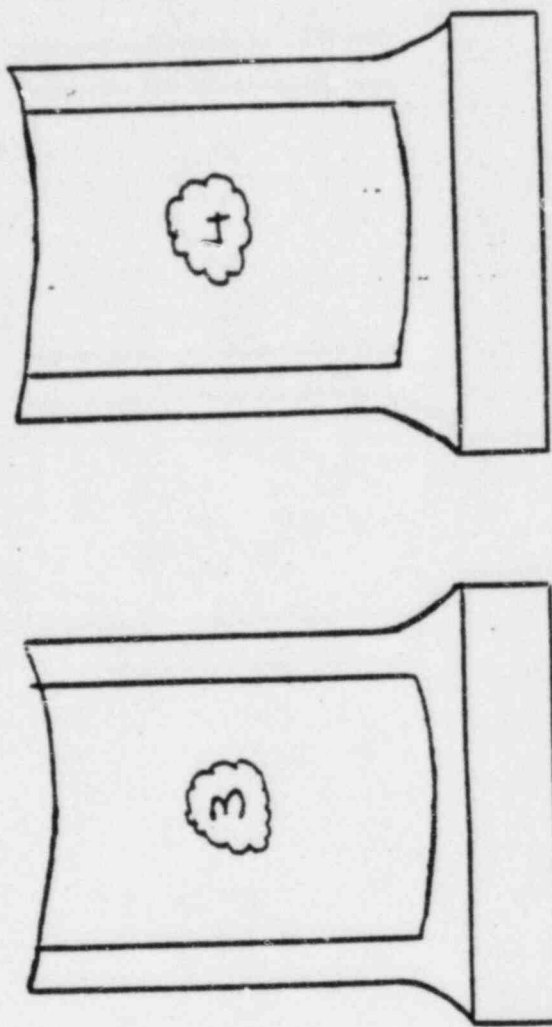


Notch Side

Overhead View



Side Views, looking out from inside

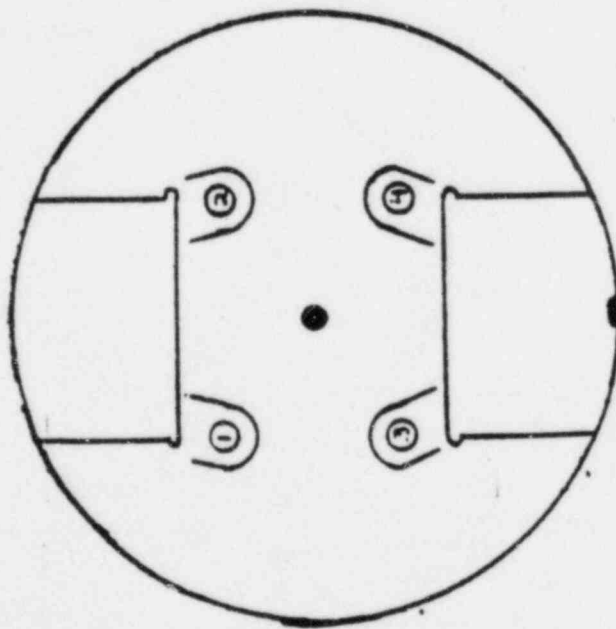




LIQUID PENETRANT EXAMINATION REPORT

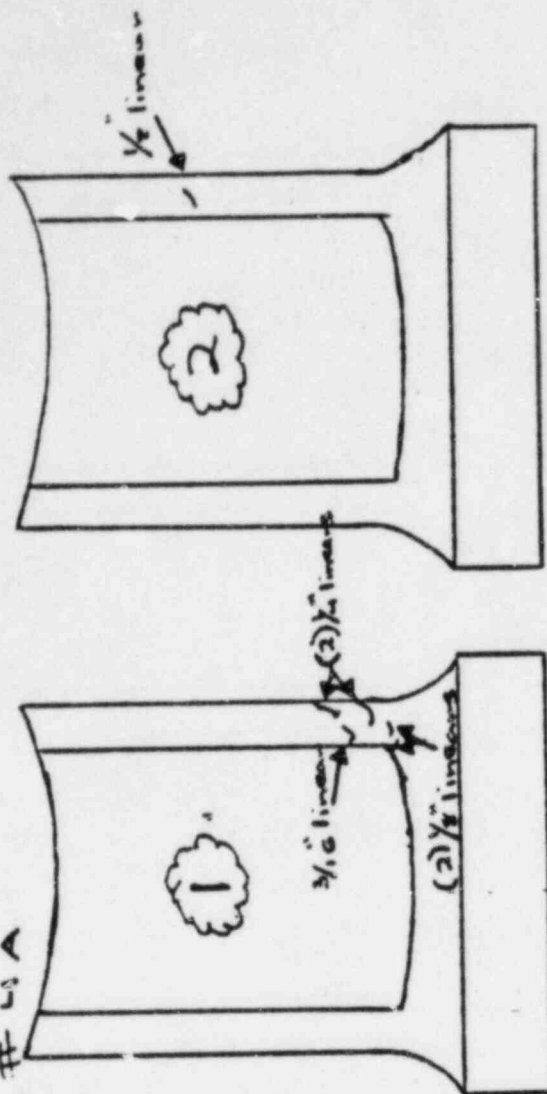
A. MATERIAL		TYPE <u>C/S</u>	FABRICATED PROCESS <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> WORKED		F. COMPONENT I.D. 101 Diesel Piston Skirt #4A SYSTEM 1843 Emergency Diesel Gen. SNPS-1/Turbo Pack
CROSS SECTION THICKNESS	MAX INCH	MIN INCH	GEOMETRY <input type="checkbox"/> PIPE <input type="checkbox"/> PLATE <input type="checkbox"/> ROD <input checked="" type="checkbox"/> OTHER: <u>Piston Skirt</u>	SURFACE CONDITION <input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER	
3. ID# PROCLAMER <u>W. 6.1+6.2</u>		TEMP. <u>73°F</u>		Due: <u>4/22/74</u>	
INSPECTION MATERIALS		BRAND	DESIGNATION	BATCH NO.	
1. PRE-CLEANER		<u>Magnaflux</u>	<u>SKS-NF/2CMB</u>	<u>83D119</u>	101 Diesel Piston-4A
2. PENETRANT			<u>SKL-HF/SKLS</u>	<u>7D073</u>	
3. EMULSIFIER AND/OR REMOVER			<u>SKS-NF/2C-7B</u>	<u>83D119</u>	
4. DEVELOPER			<u>SKD-NF/2P9B</u>	<u>83C042</u>	
5. POST EXAMINATION CLEANER			<u>SKS-NF/2C-7B</u>	<u>83D119</u>	
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <u>Examined machined area on 4A</u>					
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.			
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)		
1. Bolt Hole	(2) (2)				
1. See Skirt	$\frac{1}{16}$ $\frac{1}{4}$	linear	Reject (LDR Issued)		
2	$\frac{1}{16}$				
3	$\frac{3}{16}$ $\frac{7}{16}$				
4	$\frac{1}{4}$				
D. ACCEPTANCE CRITERIA	Lilco NDE 6.2 Pa-4.2.2		E. Hassell / Ant J. Pink II 11/4/83		
E. ATTEST	Carl Hassell RESPONSIBLE C. PERSONNEL		II LEVEL		11/4/83 DATE

Diesel #101 Piston #4A

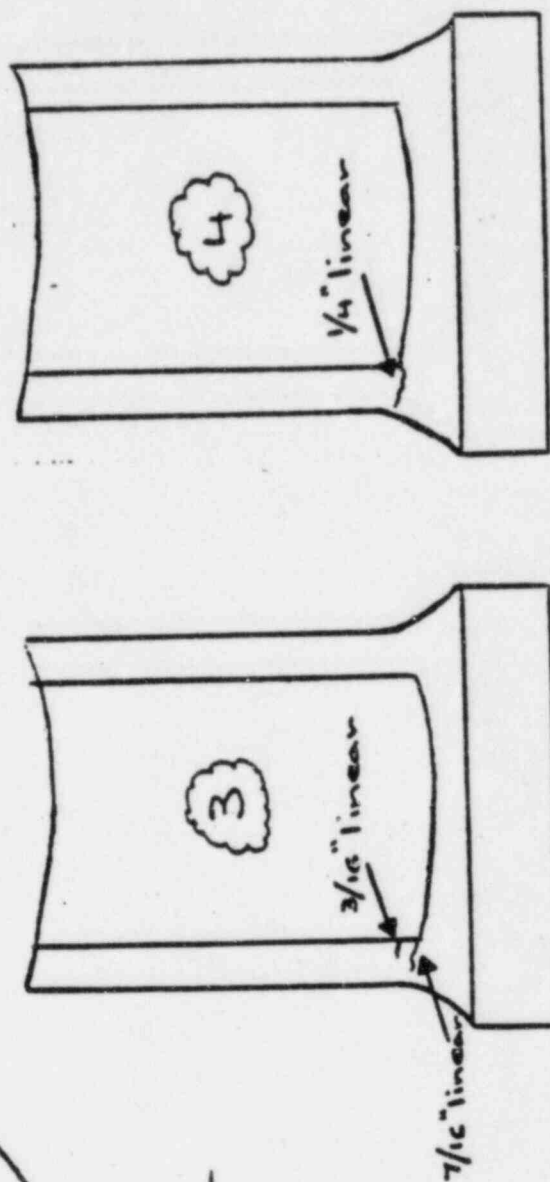


Notch Side

Overhead View



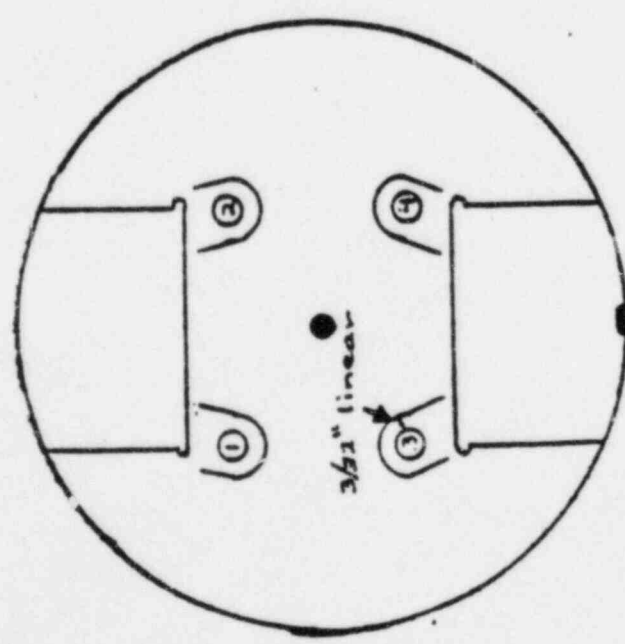
Side Views, looking out from inside



LIQUID PENETRANT EXAMINATION REPORT					
A. MATERIAL		TYPE	FABRICATED PROCESS		
		<u>C/S</u>	<input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> WORKED		
CROSS SECTION THICKNESS	MAX	MIN	SURFACE CONDITION	OTHER	
	— INCH	— INCH	<input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER		
B. NDE PROCEDURE		SURFACE / MAT'L.		TEMP.	
No. <u>61062</u>		TEMP. <u>73°F</u>		Due <u>4/22/74</u>	
INSPECTION MATERIALS		BRAND	DESIGNATION	BATCH NO.	
1. PRE-CLEANER		<u>Magnaflux</u>	<u>SKC-NF/2C-7B</u>	<u>72D119</u>	
2. PENETRANT			<u>SKL-HE/SKLS</u>	<u>7D073</u>	
3. EMULSIFIER AND/OR REMOVER			<u>SKC-NF/2C-7B</u>	<u>82D119</u>	
4. DEVELOPER			<u>SKD-NF/2D-9B</u>	<u>83C042</u>	
5. POST EXAMINATION CLEANER			<u>SKC-NF/2C-7B</u>	<u>82D119</u>	
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY					
<u>Examined machined area on C/S 101 Diesel Piston-5A</u>					
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.			
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)		
1 Bolt Hole	<u>N/A</u>	<u>None</u>	<u>Accept</u>		
2	<u>5/16</u>	<u>Linear</u>	<u>Reject (LDR Issued)</u>		
3	<u>N/A</u>	<u>None</u>	<u>Accept</u>		
4	<u>N/A</u>	<u>None</u>	<u>Accept</u>		
D. AGENCY CERTIFICATION	<u>Lilco NDE 6.2</u> <u>Para 4.2.2</u>		<u>E. Hassell / Asst. J. Pink</u> <u>II</u> <u>11/4/82</u>		
E. ATTEST	<u>Carl Hassell</u>		<u>II</u> <u>11/4/82</u>		
RE		SIBLE CERTIFIED PERSONNEL		LEVEL	DATE

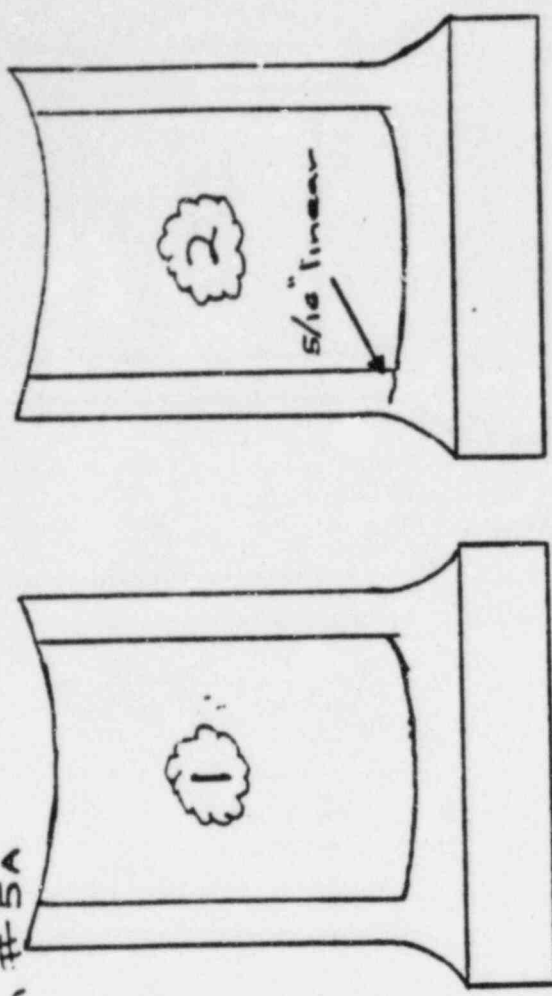
CONJUNCT I.D. 101 Diesel
Piston Shift #5A
SYSTEM
IR-3 + Emag. Dis. Gen
PLANT/LOCATION
SWPS-1 Turb. Pack

Diesel #101 Piston #5A

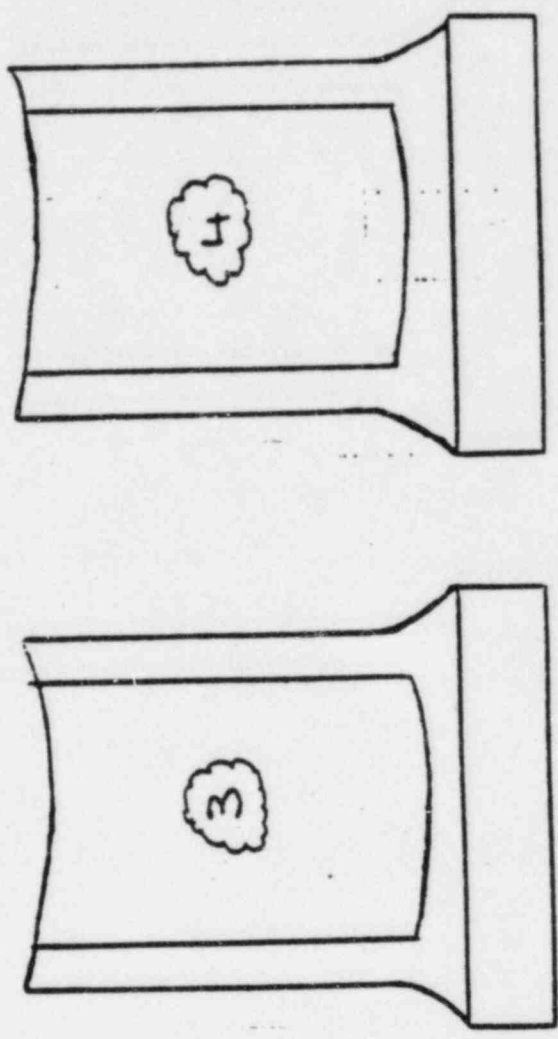


Notch Side

Overhead View



Side Views, looking out from inside





LIQUID PENETRANT EXAMINATION REPORT

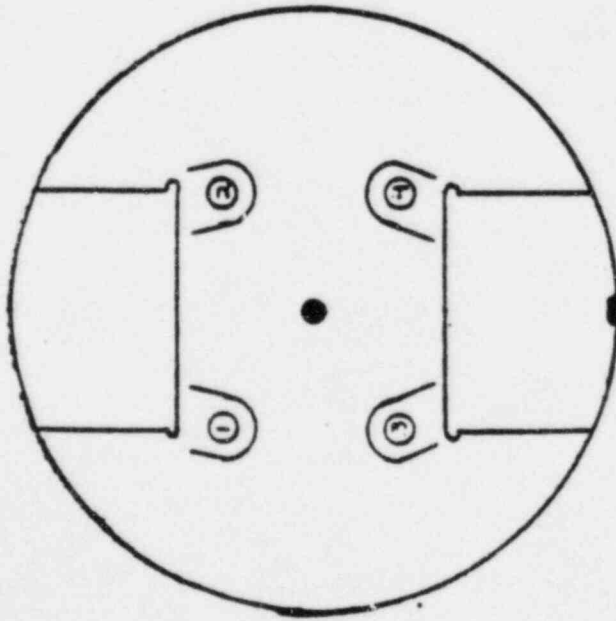
A. MATERIAL		TYPE <u>C/S</u>	FABRICATED PROCESS <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> WORKED	
		GEOMETRY <input type="checkbox"/> PIPE <input type="checkbox"/> PLATE <input type="checkbox"/> ROD <input checked="" type="checkbox"/> OTHER <u>Piston Skirt</u>		
CROSS SECTION THICKNESS	MAX INCH	MIN INCH	SURFACE CONDITION <input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER	
B. EDE PROCEDURE No. <u>G.1 + G.2</u>		SURFACE / PLAT'L. TEMP. <u>73°F</u>		DATE <u>Dec 4/22/74</u>
INSPECTION MATERIALS		BRAND	DESIGNATION	BATCH NO.
1. PRE-CLEANER		<u>Magnaflux</u>	<u>SKC-NF/2C7B</u>	<u>82D119</u>
2. PENETRANT			<u>SKL-HF/SKLS</u>	<u>7D073</u>
3. EMULSIFIER AND/OR REMOVER			<u>SKC-NF/2C7B</u>	<u>82D119</u>
4. DEVELOPER			<u>SKD-NF/EP-4B</u>	<u>83C042</u>
5. POST EXAMINATION CLEANER			<u>SKC-NF/2C7B</u>	<u>82D119</u>
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <u>Examined machined area around boss. 101 Diesel Piston-GA</u>				
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.		
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)	
<u>Bolt Hole</u> <u>See Sketch</u>	<u>N/A</u>	<u>None</u>	<u>Accept</u>	
<u>2</u>	<u>2 1/2, 1/2</u>	<u>Linear</u>	<u>Reject (LDR Issued)</u>	
<u>3</u>	<u>1/2</u>			
<u>4</u>	<u>3/16 1/4</u>			
D. ACCEPTANCE CRITERIA <u>Lilco NDE G.2</u> <u>Para 4.2.2</u>		<u>E. Hassell / Asst. J. Pink</u> <u>II</u> <u>11/4/83</u>		
E. ATTEST		<u>Carl Hassell</u> RESPONSIBLE CH. <u>ED PERSONNEL</u> <u>II</u> <u>11/4/83</u> LEVEL DATE		

COMPONENT I.D. 101 Diesel

SYSTEM 101 Diesel

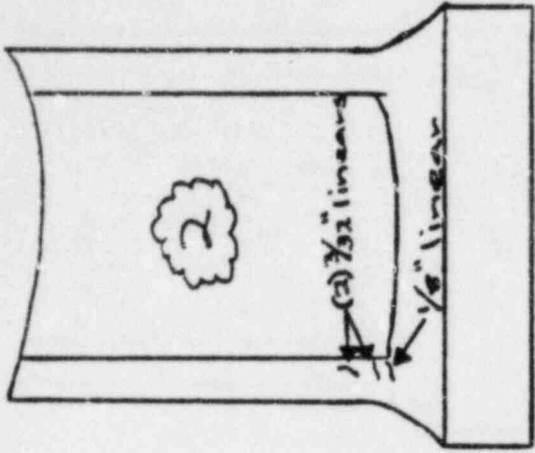
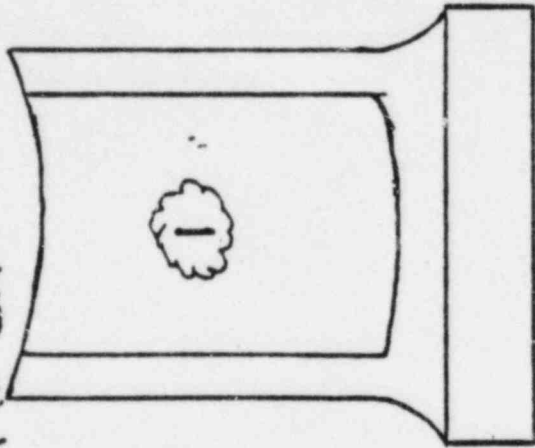
PLANT/LOCATION SVPS-1 Turb. Dept.

Diesel #101 Piston # GA

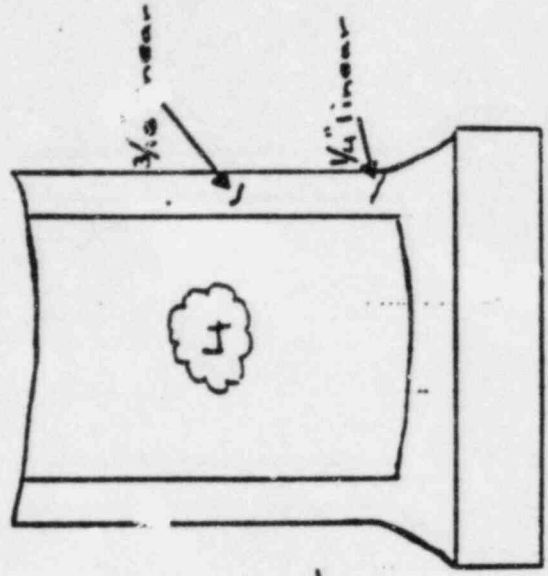
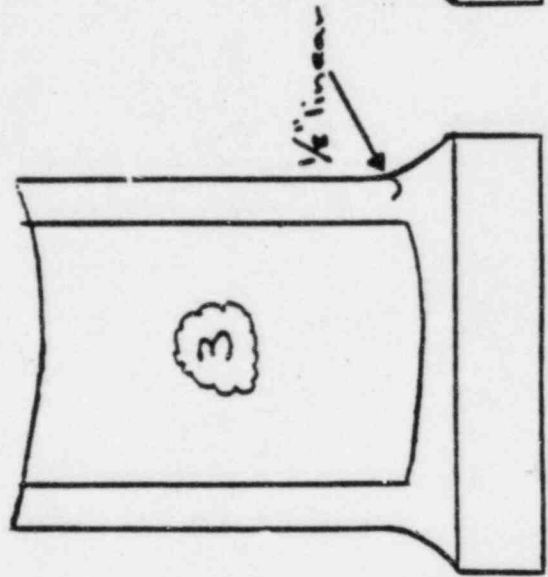


Notch Side

Overhead View



Side Views, looking out from inside





LIQUID PENETRANT EXAMINATION REPORT

A. MATERIAL		TYPE <u>C/S</u>	FABRICATED PROCESS <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> WORKED	
		GEOMETRY <input type="checkbox"/> PIPE <input type="checkbox"/> PLATE <input type="checkbox"/> ROD <input checked="" type="checkbox"/> OTHER: <u>Piston</u>		
CROSS SECTION THICKNESS	MAX <u>—</u> INCH	MIN <u>—</u> INCH	SURFACE CONDITION <input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER	
B. SIDE PROCEDURE No. <u>6.1 + 6.2</u>		TEMP. <u>73°F</u>	<u>367</u>	NO. <u>843-1142</u>
INSPECTION MATERIALS		BRAND	DESIGNATION	BATCH NO.
1. PRE-CLEANER		<u>Magnaflux</u>	<u>SKC-NF/2C-7B</u>	<u>82D119</u>
2. PENETRANT			<u>SKL-NF/3KLS</u>	<u>7D073</u>
3. EMULSIFIER AND/OR REMOVER			<u>SKC-NF/2C-7B</u>	<u>82D119</u>
4. DEVELOPER			<u>SKD-NF/2P-9B</u>	<u>83C042</u>
5. POST EXAMINATION CLEANER			<u>SKC-NF/2C-7B</u>	<u>82D119</u>
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <u>Examined machined area around boss. 101 Diesel Piston - 7A</u>				
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.		
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)	
<u>Bolt Hole</u>	<u>N/A</u>	<u>None</u>	<u>Accept</u>	
<u>Sketch</u>	<u>N/A</u>	<u>Linear</u>	<u>Reject (LDR Issued)</u>	
<u>2</u>	<u>1/16 5/32</u>	<u>None</u>	<u>Accept</u>	
<u>3</u>	<u>N/A</u>	<u>None</u>	<u>Accept</u>	
<u>4</u>	<u>N/A</u>	<u>None</u>	<u>Accept</u>	
D. ACCEPTANCE CRITERIA		<u>Lilco NDE 6.2</u> <u>Para 4.2.4</u>	<u>E. Hassell / Asst. J. Pink</u> <u>II</u> <u>11/4/83</u>	
E. ATTEST		<u>E. Hassell</u> RESPONSIBLE C. PERSONNEL	<u>II</u> LEVEL	<u>11/4/83</u> DATE

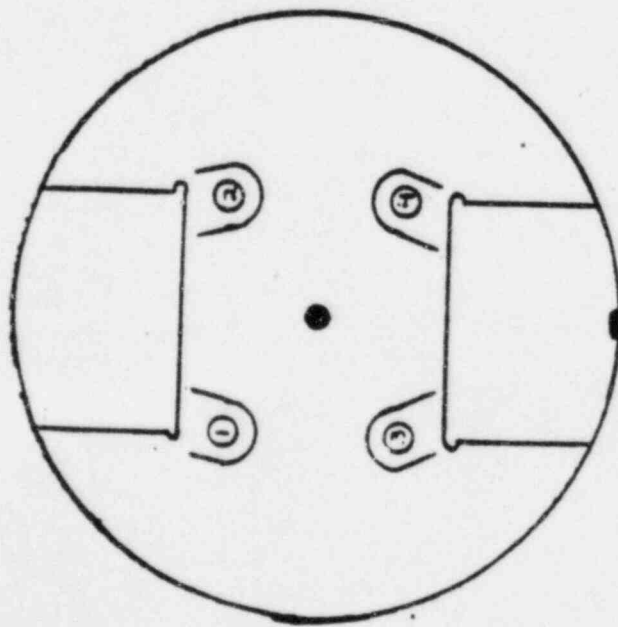
COMPONENT I.D. 101 Diesel
Piston Skirt # 7A

SYSTEM
IR43+Emerg. Dies. Gen.

PLANT/LOCATION
SUTS-1 Turb. Jack

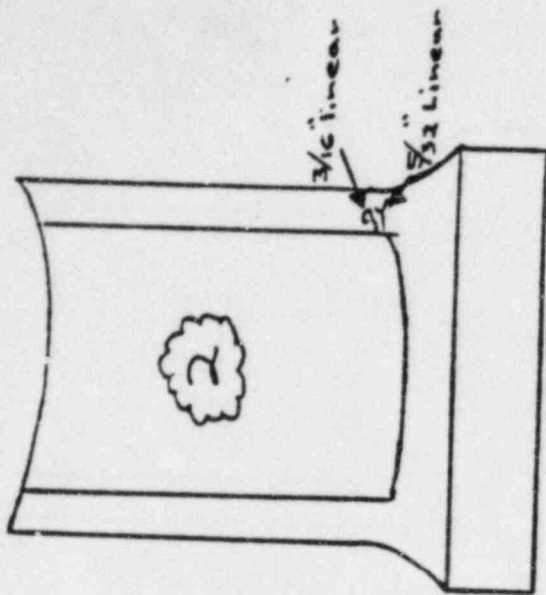
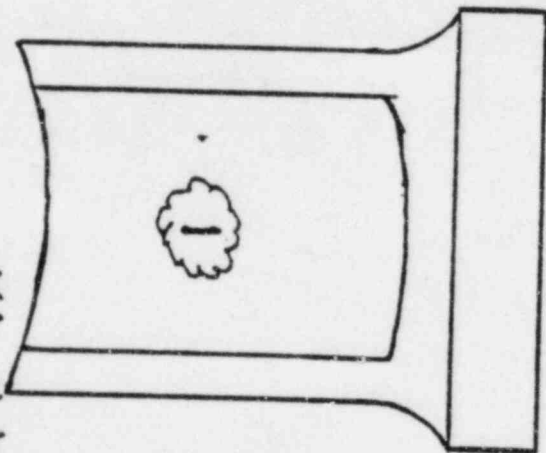
Diesel #101 Piston #7A

16, 17, 18

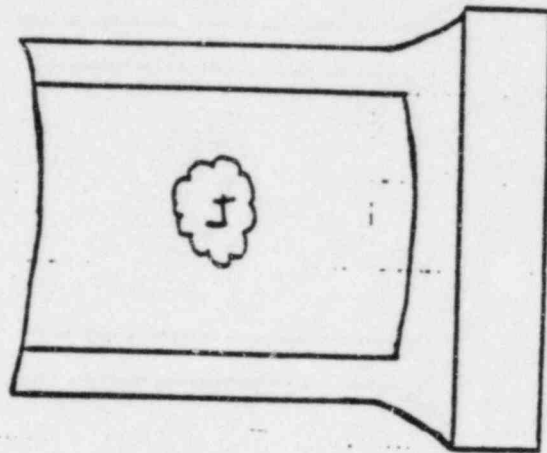
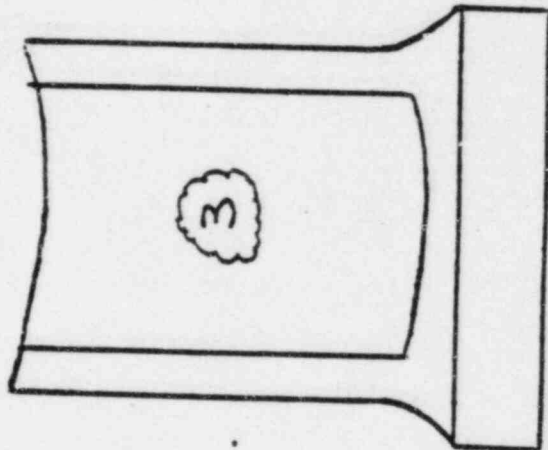


Notch Side

Overhead View



Side Views, looking out from inside



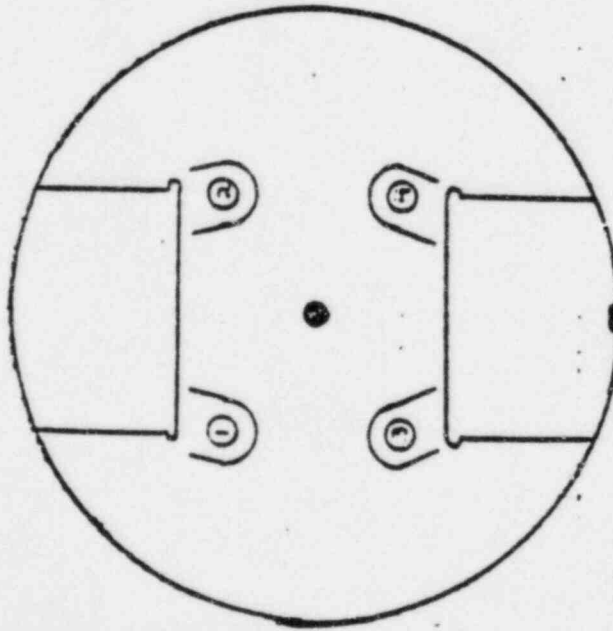
LIQUID PENETRANT EXAMINATION REPORT					
A. MATERIAL		TYPE <u>C/S</u>	FABRICATED <input type="checkbox"/> PROCESSED <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> WORKED		
		GEOMETRY <input type="checkbox"/> PIPE <input type="checkbox"/> PLATE <input type="checkbox"/> ROD <input checked="" type="checkbox"/> OTHER: <u>PISTON SKIRT</u>			
CROSS SECTION THICKNESS	MAX <u>2"</u> INCH	MIN <u>2"</u> INCH	SURFACE CONDITION <input type="checkbox"/> MACHINED <input checked="" type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER	OTHER: <u>PISTON SKIRT</u>	
<u>6.2</u>		TEMP. <u>720</u>	MATE # <u>367</u>	SURF # <u>1</u>	
INSPECTION MATERIALS		BRAND	REMARKS	DATE NO.	
1. PRE-CLEANER		<u>MAGNAFLUX</u>	<u>SKC-NF/ZC-7B</u>	<u>90/119</u>	
2. PENETRANT		"	<u>SKL-HF/SKLS</u>	<u>7/20/73</u>	
3. EMULSIFIER AND/OR REMOVER		"	<u>SKC-NF/ZC-7B</u>	<u>82/119</u>	
4. DEVELOPER		"	<u>SKP-NF/ZP-9B</u>	<u>83C042</u>	
5. POST EXAMINATION CLEANER		"	<u>SKC-NF/ZC-7B</u>	<u>82/119</u>	
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <u>PERFORMED L.P. INSPECTION IN ACCORDANCE WITH ATTACHED IOC #34 AFTER GRINDING AND BUFFING ON PREVIOUSLY REJECTED AREA (SEE ATTACHED SKETCH)</u>					
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.			
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)		
1 <u>N/A</u>					
2 <u>BOLT HOLE #2</u>	<u>2-1/16"</u> <u>4-1/32"</u>	<u>6 ROUNDED INDICATIONS</u>	<u>ACCEPTABLE</u> <u>ROUNDED INDICATIONS MEET WITH ACCEPTANCE CRITERIA OF ENCE 6.2</u>		
3 <u>N/A</u>					
4 <u>N/A</u>					
<u>N/E 6.2</u>		<u>LENNE PETROWSKY</u> <u>II</u> <u>11/5/83</u>			
E. ATTEST	<u>D. Petrowsky</u>		<u>II</u> <u>11/5/83</u>		
REVIEW TIME CERTIFIED PERSONNEL		DATE			

CONTROL I.D. 101 VESSEL
 SKIRT #7A

SYSTEM
 1R43K

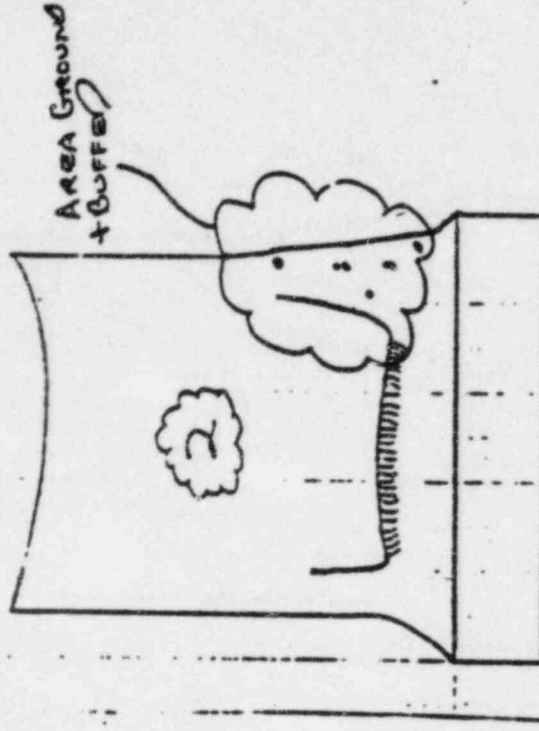
NAME/LOCATION
 SKP/63 TURBINE Deck

Diesel # 101 Piston # 7A



Notch Side

Overhead View



Side View, looking out from inside

INTEROFFICE CORRESPONDENCE #341

TO M. Herlitz	LOCATION	SUBJECT / REFERENCE / J.O. NO. EDG 101 Piston Skirt Inspection
FROM J. C. Kammerer	LOCATION	

MESSAGE: —

The purpose of this memo is to provide guidelines for NDE to be performed on the piston skirts for the 101 engine. Note, upon disassembly of the piston assemblies for inspection, break way torques will be recorded for piston crown to skirt hold down studs.

Piston inspection will be as follows:

1. OQA will perform a color contrast penetrant test. Reference attached FaAA memo.
2. FaAA will perform an informational focused field eddy current test to confirm any rejectable indications found during PT. Reference attached FaAA memo.
3. Based on the information provided by the FaAA inspection, SEO will determine whether or not indications can be removed by additional surface preparation and cleanup.
4. OQA should perform another inspection after completion of any additional surface preparation and cleanup to determine if indications still exist.

If you have any questions, please call me.

11/4/83
DATE

J. C. Kammerer
SIGNATURE

X404
TELEPHONE

REPLY:

CC MMH WDM
EdY G Rogers
P2H
R Nych
P Martin

After review of indications documented on LDR #1811, the #7A piston indication (which appears to be casting related) will be explored as required. Final LP to be documented. Work to be supervised by M. Schuster.

4/5/83

J. C. Kammerer

DATE

SIGNATURE

TELEPHONE



LIQUID PENETRANT EXAMINATION REPORT

A. MATERIAL		TYPE <u>cast</u>	FABRICATED PROCESS <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> WORMED	
		GEOMETRY <input type="checkbox"/> PIPE <input type="checkbox"/> PLATE <input type="checkbox"/> ROD <input checked="" type="checkbox"/> OTHER: <u>Piston Skirt</u>		
CROSS SECTION THICKNESS	MAX — INCH	MIN — INCH	SURFACE CONDITION <input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER	

B. IDE PROCEDURE No. <u>G.1 + G.2</u>	TEMP. <u>73°F</u>	<u>367</u> DUE <u>4/22/53</u>	<u>1142</u> No. <u>1142</u>
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INSPECTION MATERIALS	BRAND	DESIGNATION	BATCH NO.
1. PRE-CLEANER	<u>Magnaflux</u>	<u>SKC-NF/2C7B</u>	<u>82D119</u>
2. PENETRANT		<u>SKL-HF/3KLS</u>	<u>7D073</u>
3. EMULSIFIER AND/OR REMOVER		<u>SKC-NF/2C7B</u>	<u>82D119</u>
4. DEVELOPER		<u>SKD-NF/2P-9B</u>	<u>83C042</u>
5. POST EXAMINATION CLEANER		<u>SKC-NF/2C-7B</u>	<u>82D119</u>

SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY
Examined machined area on boss. 101 Diesel
Piston-8A

C. EVALUATION	REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.
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LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)
Bolt Hole 1 see sketch	<u>3/16 3/32</u>	<u>Linear</u>	<u>Reject (LDR Issued)</u>
2	<u>N/A</u>	<u>None</u>	<u>Accept</u>
3			
4			

D. APPROVAL CHINA	<u>Filco NDE G.2</u> <u>Para 4.2.2</u>	<u>Emmett/Asst. Insp.</u> <u>II</u> <u>11/4/53</u>
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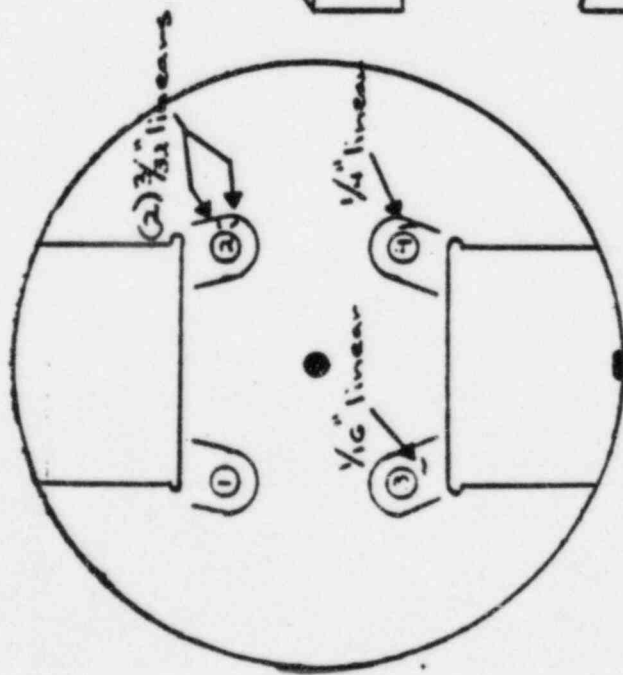
E. ATTEST	<u>Carl Hassell</u> RESPONSIBLE C: <u>ED PERSONNEL</u>	<u>II</u> LEVEL	<u>11/4/53</u> DATE
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COMPONENT I.D. 101 Diesel
Piston Skirt # 8A

SYSTEM
101 Diesel
Piston-8A

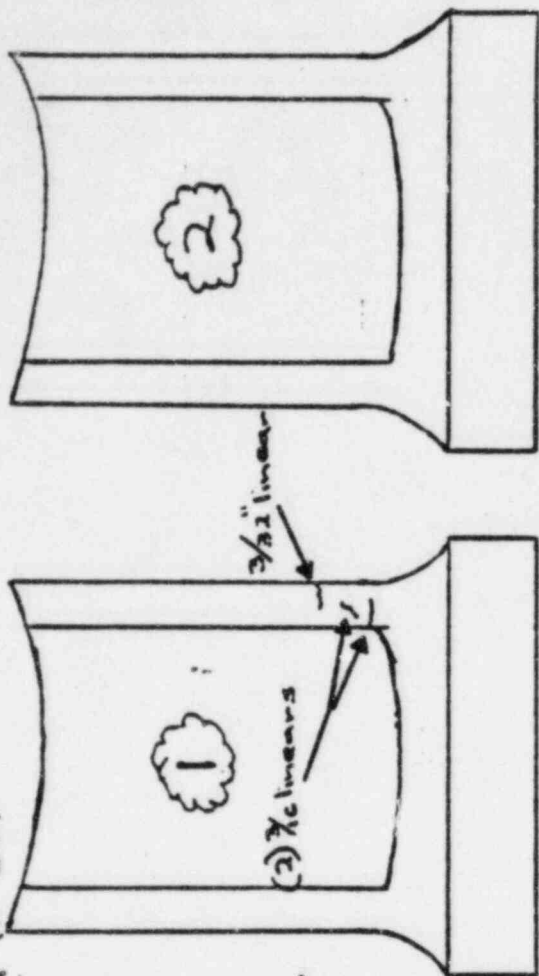
PLANT/LOCATION
SVPS-1 Turb. Bldg.

Diesel #101 Piston # 8A

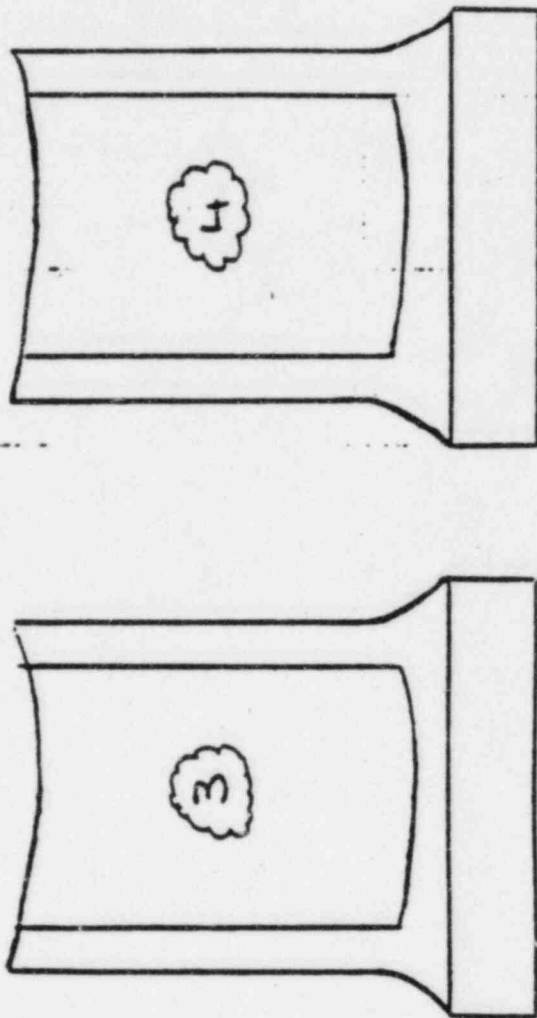


Notch Side

Overhead View



Side Views, looking out from inside



EDG 102



LIQUID PENETRANT EXAMINATION REPORT

AF PISTONS

A. MATERIAL		TYPE <u>C/S</u>	FABRICATED PROCESS	<input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> WORKED
		GEOMETRY	<input type="checkbox"/> PIPE <input type="checkbox"/> PLATE <input type="checkbox"/> ROD <input checked="" type="checkbox"/> OTHER: <u>Piston</u>	
CROSS SECTION THICKNESS	MAX — INCH	MIN — INCH	SURFACE CONDITION	<input checked="" type="checkbox"/> MACHISED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER
B. SIDE PROFILES No. <u>C.1 + C.2</u>		TEMP. <u>69° F</u>	<u>367</u>	<u>Sup. 2</u> <u>11/22/74</u> <u>R43-1144</u>
INSPECTION MATERIALS		BRAND	DESIGNATION	BATCH NO.
1. PRE-CLEANER		<u>Magnaflux</u>	<u>SKC-NF/3C-7B</u>	<u>82J083</u>
2. PENETRANT			<u>SKL-NF/SKLS</u>	<u>7D073</u>
3. EMULSIFIER AND/OR REMOVER			<u>SKC-NF/3C-7B</u>	<u>82J083</u>
4. DEVELOPER			<u>SKD-NF</u>	<u>82D111</u>
5. POST EXAMINATION CLEANER			<u>SKC-NF/3C-7B</u>	<u>82J083</u>
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <u>Examined machined area on boss.</u> <u>102 Diesel</u> <u>Piston #1B</u>				
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.		
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)	
<u>Bolt Hole</u> <u>See sketch</u>	<u>3/16"</u>	<u>Crack</u>	<u>Reject (LDR Issued)</u>	
<u>2</u>	<u>N/A</u>	<u>None</u>	<u>Accept</u>	
<u>3</u>	<u>1/4" Ø</u>	<u>Rounded</u>	<u>Reject (LDR Issued)</u>	
<u>4</u>	<u>N/A</u>	<u>None</u>	<u>Accept</u>	
D. APPROVALS	<u>Lilco NDE C.2</u>		<u>E. Hassall</u>	
	<u>Para 4.2.2</u>		<u>II</u> <u>11/8/73</u>	
E. ATTEST	<u>Carl Hassall</u>		<u>IC</u>	<u>11/8/73</u>
	CONSULE CERTIFIED PERSONNEL		LEVEL	DATE

COMPONENT I.D.

SYSTEM

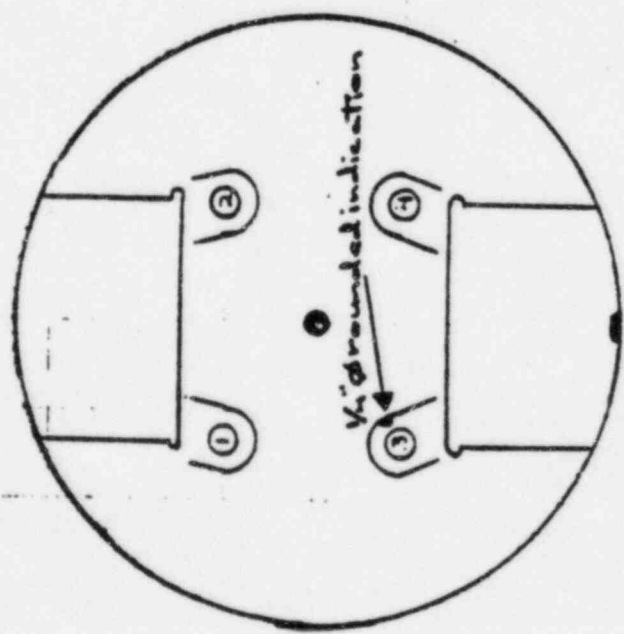
LOCATION

Piston Skirt #1B

102 Diesel Piston #1B

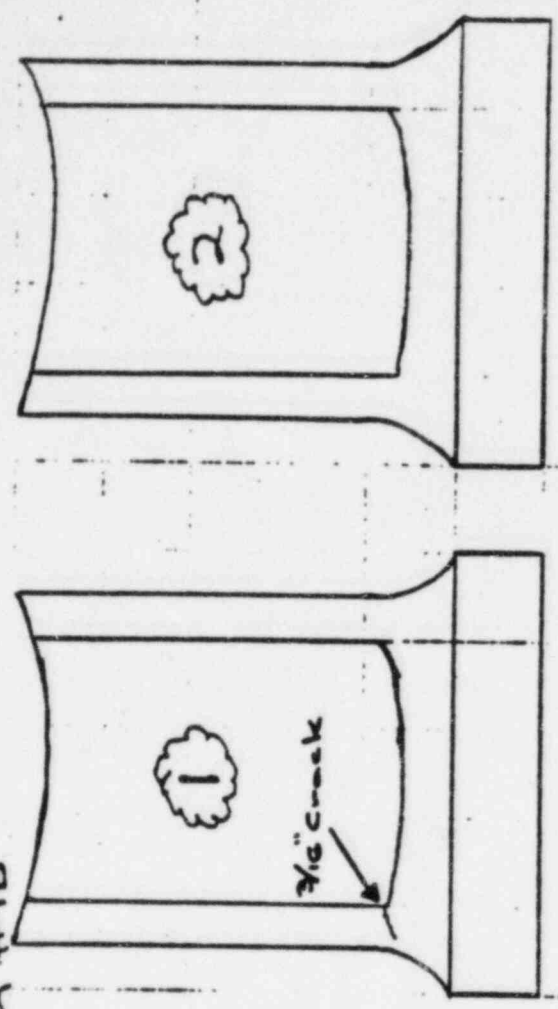
SNPS-1/Turb. Deck E1.C3

Diesel #102 Piston #1B

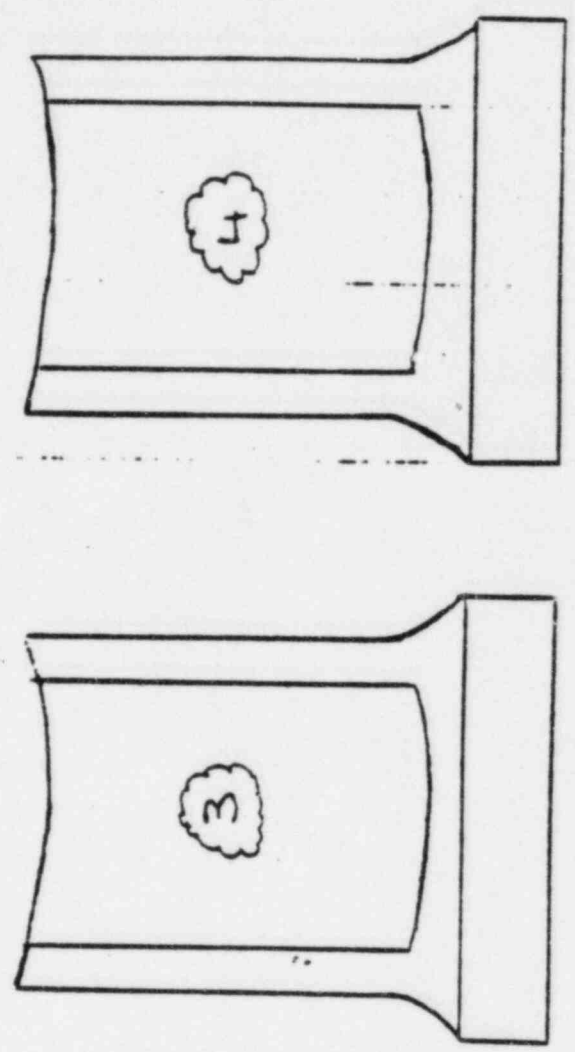


NOTE SIDE

Overhead View



Side Views, looking out from inside



LIQUID PENETRANT EXAMINATION REPORT

A. MATERIAL		TYPE C/S	FABRICATED PROCESS	<input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> WORKED
CROSS SECTION THICKNESS	MAX INCH	MIN INCH	GEOMETRY <input type="checkbox"/> PIPE <input type="checkbox"/> PLATE <input type="checkbox"/> ROD	<input checked="" type="checkbox"/> OTHER:
		SURFACE CONDITION	<input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND	<input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER
J. INSPECTION MATERIALS		TEMP. 69° F	367	Supp 2
1. PRE-CLEANER		BRAND	DESIGNATION	BATCH NO.
2. PENETRANT		Magnaflux	SKC-NF/ZC-7B	82J083
3. EMULSIFIER AND/OR REMOVER			SKL-HF/SKL6	7D073
4. DEVELOPER			SKC-NF/ZC-7B	82J083
5. POST EXAMINATION CLEANER			SKD-NF	82D111
			SKC-NF/ZC-7B	82J083
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY Examined machined area on boss 102 Diesel Piston #2B				
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.		
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)	
1. Bolt Hole	N/A	None	Accept	
2. 1/4"	1/4"	Crack	Reject (LDR-Issued)	
3. 1/8"	1/8"	Linear	Reject (LDR-Issued)	
4. N/A	N/A	None	Accept	
Lileo NDE C.2		E. Hassell		
Para 4.2.2		11/3/93		
E. ATTEST		E. Hassell		
CONSIBLE CERTIFIED PERSONNEL		LEVEL		
		DATE		

Piston Skirt #2B

SYSTEM

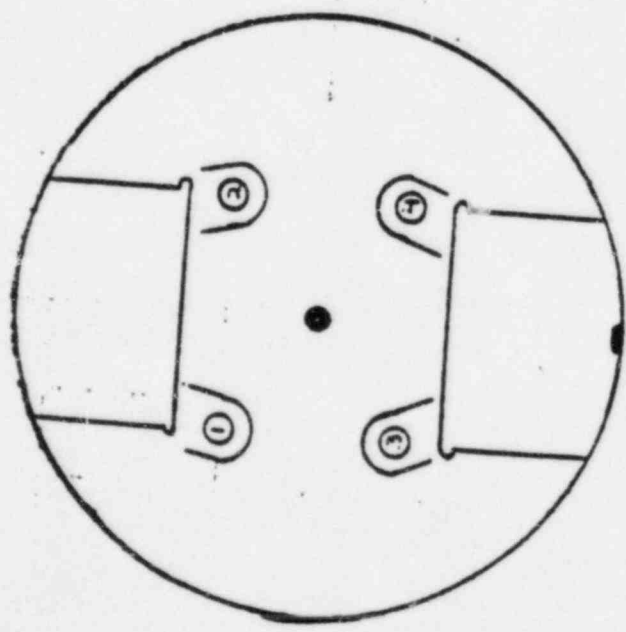
1R43+DC-102B

INFS-1/In-B Deck E1.63

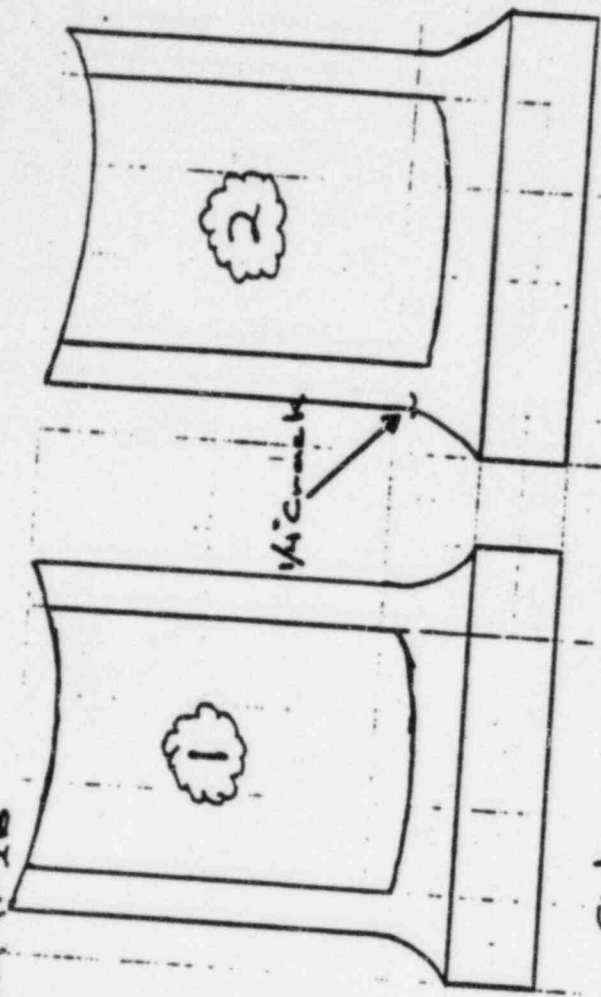
LOCAL

16 02 10

Diesel #102 Piston #28

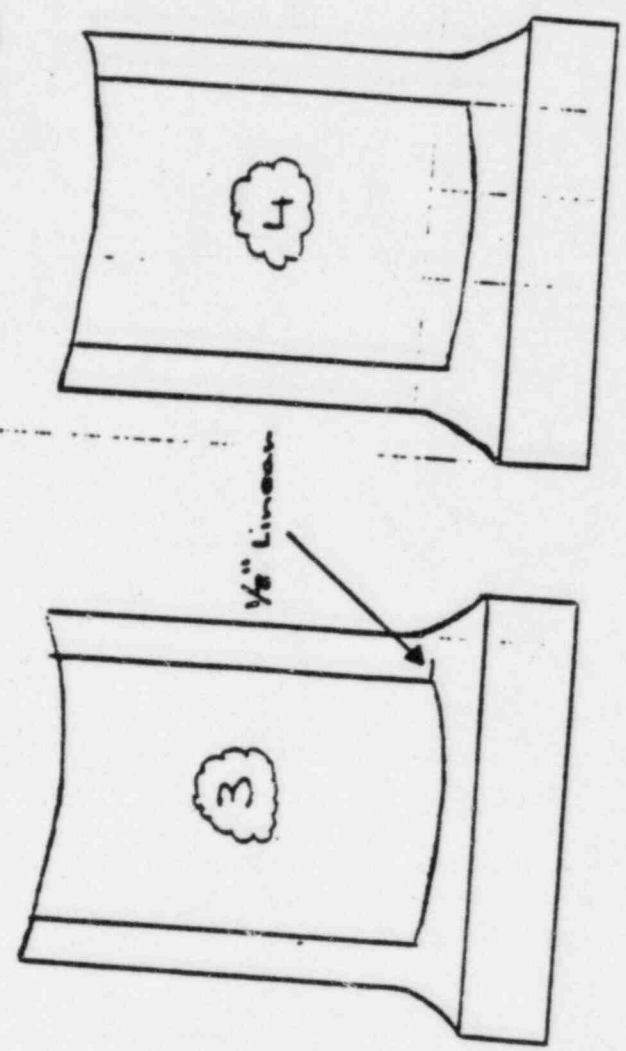


Overhead View



1/4 inch crack

Side Views, looking out from inside



1/8 inch Linear

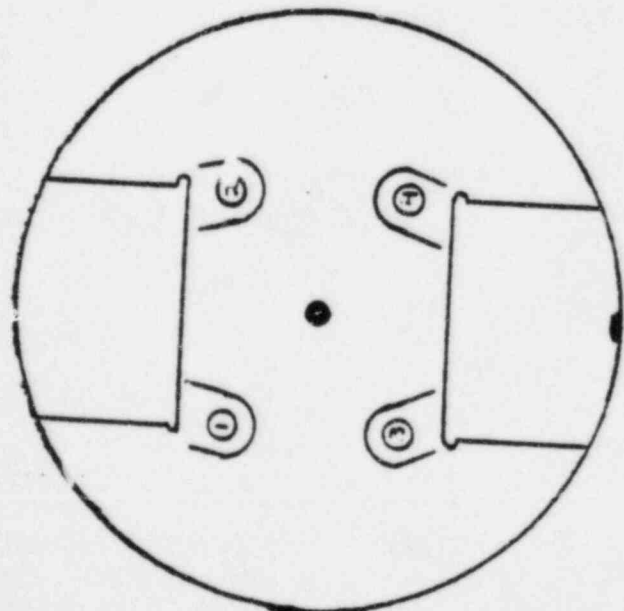
LIQUID PENETRANT EXAMINATION REPORT					
A. MATERIAL		TYPE	FABRICATED PROCESS		
		C/S	<input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> WORKED		
CROSS SECTION THICKNESS		MAX	MIN	SURFACE CONDITION	OTHER
		— INCH	— INCH	<input checked="" type="checkbox"/> MACHISED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER	
M. AND MATERIAL		TEMP		Due	
No. 61462		69°F		367 SUPP 4 R43-1144	
INSPECTION MATERIALS		BRAND	DESIGNATION	BATCH NO.	
1. PRE-CLEANER		Magnaflux	SKC-NF/2C-7B	82J083	
2. PENETRANT			SKL-HF/SKL3	7D073	
3. EMULSIFIER AND/OR REMOVER			SKC-NF/2C-7B	82J083	
4. DEVELOPER			SKD-NF	82D111	
5. POST EXAMINATION CLEANER			SKC-NF/2C-7B	82J083	
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY Examined machined ^{area} on boss. 102 Diesel Piston #3B					
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.			
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)		
Bolt Hole 1 See Sketch	1/4"	Crack	Reject (LDR Issued)		
2	N/A	None	Accept		
3	1/4" x 1/2"	Rounded	Reject (LDR Issued)		
4	N/A	None	Accept		
D. APPROVAL		Like NDEC-2 Para 4.2.2		E. Hassell 11/3/83	
E. ATTEST		E. Hassell		11/3/83	
		POSSIBLE CERTIFIED PERSONNEL		LEVEL DATE	

COMPLAINT I.D.

SYSTEM

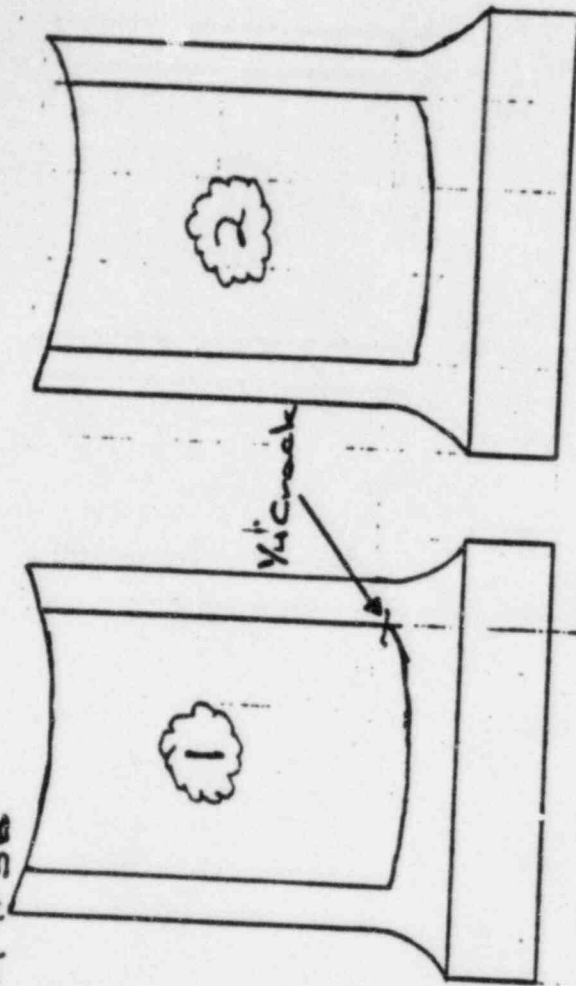
LOCATION

Diesel #102 Piston #3B

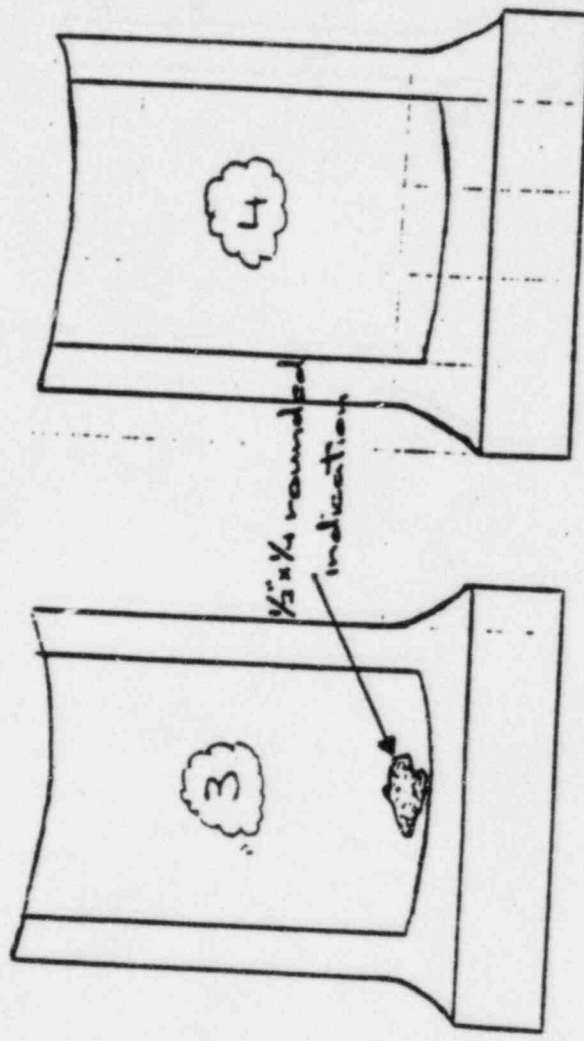


Notch side

Overhead view



Side Views, looking out from inside



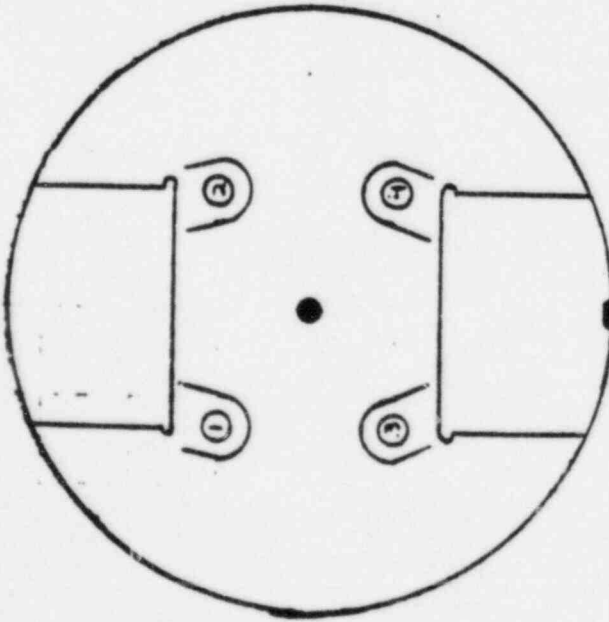


LIQUID PENETRANT EXAMINATION REPORT

A. MATERIAL		TYPE	FABRICATED PROCESS		<input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> WROUGHT
		c/s			
CROSS SECTION THICKNESS	MAX	MIN	GEOMETRY	<input type="checkbox"/> PIPE <input type="checkbox"/> PLATE <input type="checkbox"/> ROD <input checked="" type="checkbox"/> OTHER	<input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER
	— INCH	— INCH			
1. SIZE 100-1000 2. <u>G1 + G2</u>		3. TEMP. <u>69° F</u>		4. <u>Supp. 4</u> <u>Due 4/22/73</u> <u>R43-1144</u>	
INSPECTION MATERIALS		BRAND	DESIGNATION	BATCH NO.	
1. PRE-CLEANER		<u>Magnaflux</u>	<u>SKG-NF/EC-7B</u>	<u>82J083</u>	
2. PENETRANT			<u>SKL-HF/3KLS</u>	<u>7D073</u>	
3. EMULSIFIER AND/OR REMOVER			<u>SKG-NF/EC-7B</u>	<u>82J083</u>	
4. DEVELOPER			<u>SKD-NF</u>	<u>82D111</u>	
5. POST EXAMINATION CLEANER			<u>SKG-NF/EC-7B</u>	<u>82J083</u>	
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <u>Examined machined on base.</u> <u>102 Diesel</u> <u>Piston #4B</u>					
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.			
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)		
<u>Bolt Hole</u>					
<u>See sketch</u>	<u>3/16"</u>	<u>Crack</u>	<u>Reject (LDR trained)</u>		
<u>2</u>	<u>9/16"</u>	<u>Crack</u>	<u>Reject (LDR trained)</u>		
<u>3</u>	<u>N/A</u>	<u>None</u>	<u>Accept</u>		
<u>4</u>	<u>N/A</u>	<u>None</u>	<u>Accept</u>		
Lileco NDE G.2 Para 4.2.2		E. Hazzell II 11/3/53			
E. ATTEST		<u>Carl Hazzell</u> POSSIBLE CERTIFIED PERSONNEL LEVEL II DATE 11/3/53			

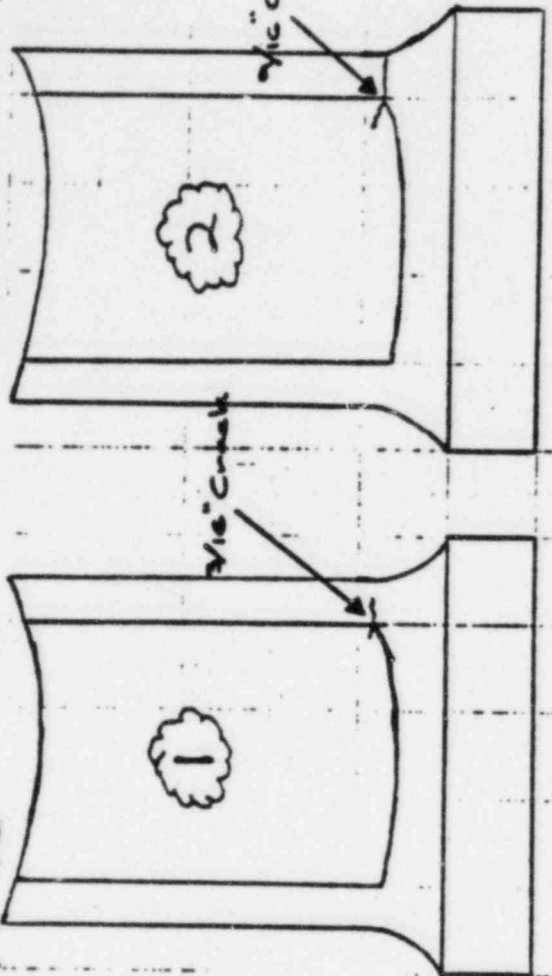
E. COMPONENT I.D.
 Piston Skirt #4B
 SYSTEM
 R43 NDE G. 102B
 LOCATION
 SNPS-1/Top Dr. E1.C3

Diesel #102 Piston #4B

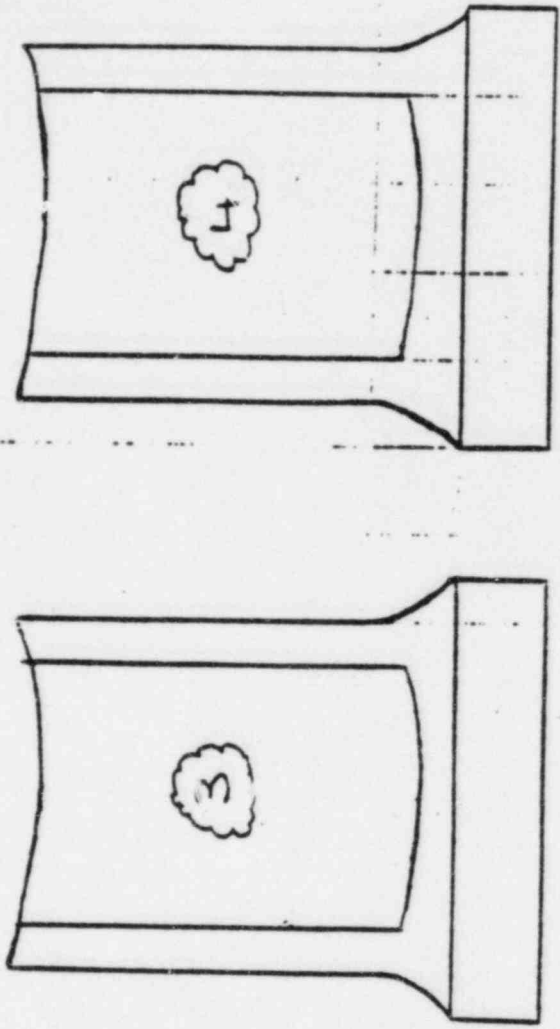


Notch Side

Overhead View



Side Views, looking out from inside



LIQUID PENETRANT EXAMINATION REPORT

A. MATERIAL		TYPE <u>C/S</u>	FABRICATED PROCESS <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> WORKED
CROSS SECTION THICKNESS	MAX — INCH	MIN — INCH	GEOMETRY <input type="checkbox"/> PIPE <input type="checkbox"/> PLATE <input type="checkbox"/> ROD <input checked="" type="checkbox"/> OTHER <u>Piston Skirt</u>
		SURFACE CONDITION <input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER	
B. INSPECTION MATERIALS		TEMP. <u>63°F</u>	<u>367</u> <u>Supp 2</u>
		BRAND	DENIGNATION
1. PRE-CLEANER			BATCH NO.
2. PENETRANT		<u>Magnaflux</u>	<u>SKC-NF/EC-7B 82T073</u>
3. EMULSIFIER AND/OR REMOVER			<u>SKL-HF/SK4 7D073</u>
4. DEVELOPER			<u>SKC-NF/EC-7B 82T073</u>
5. POST EXAMINATION CLEANER			<u>SKD-NF 82D111</u>
			<u>SKC-NF/EC-7B 82J063</u>

SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY
Examined machined area on bore. 102 Diesel Piston # 5B

C. EVALUATION

REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.

LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)
Bolt Hole <u>See Sketch</u>	<u>5/8"</u>	<u>Crack</u>	<u>Reject (LDR-Issued)</u>
<u>2</u>	<u>5/16"</u>	<u>↓</u>	<u>↓</u>
<u>3</u>	<u>1/2"</u>	<u>↓</u>	<u>↓</u>
<u>4</u>	<u>N/A</u>	<u>None</u>	<u>Accept</u>
<u>Refer to Para 4.2.2</u>			<u>E. Hassell</u>

E. ATTEST

Carl Hassell
POSSIBLE CERTIFIED PERSONNEL

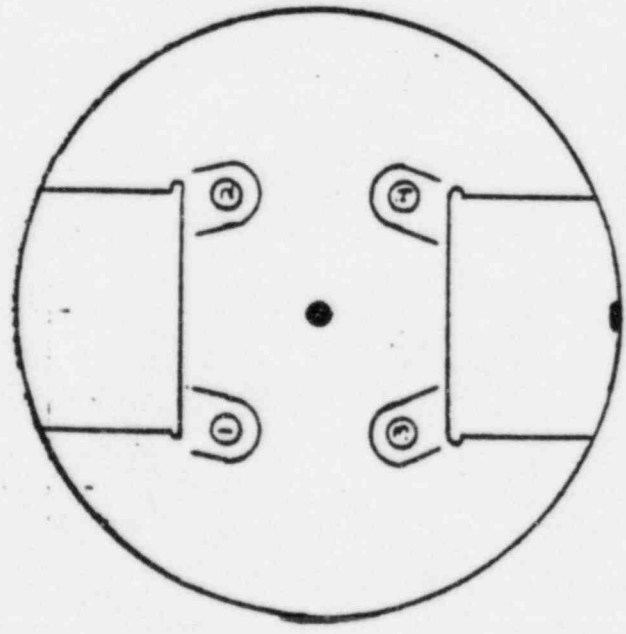
II LEVEL 11/2/83 DATE

COMPONENT I.D.
Piston Skirt #5B
SYSTEM
IR434 EDC-107B

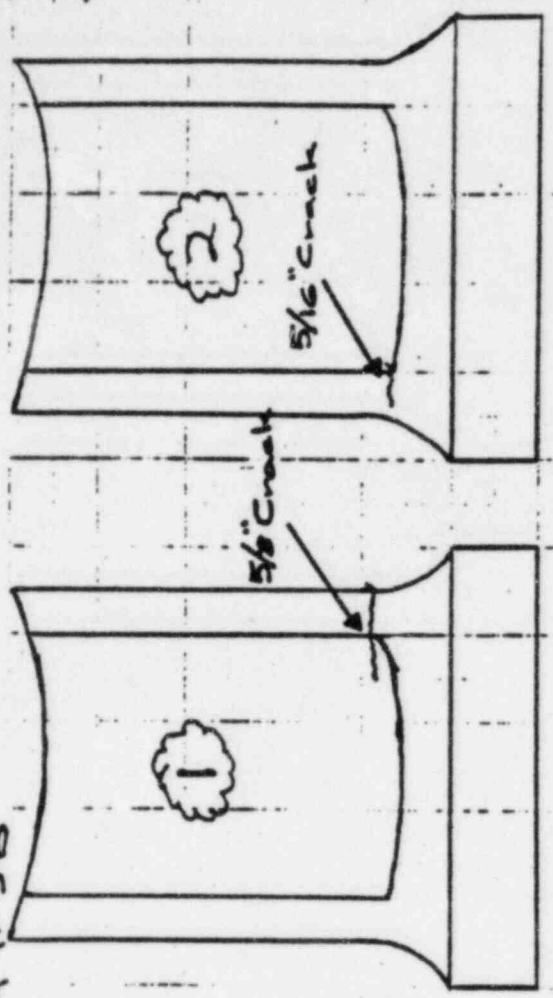
Supp-1 Turb Pn. 51.5.3
/LOCATION

46 0940

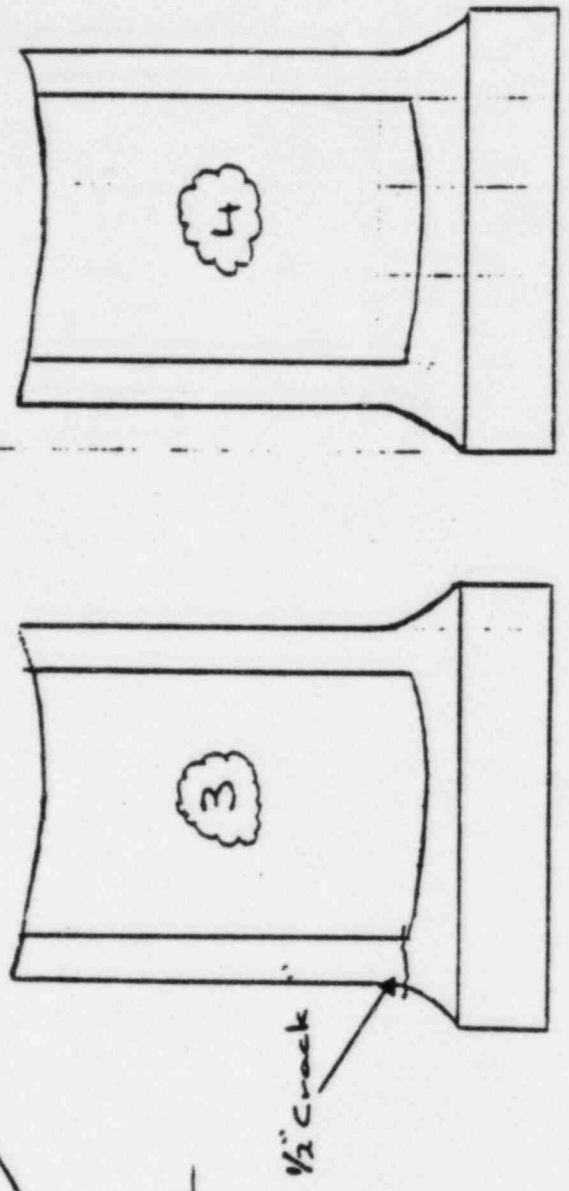
Diesel #102 Piston #5B



Overhead View



Side Views, looking out from inside



LIQUID PENETRANT EXAMINATION REPORT

A. MATERIAL		TYPE <u>C/S</u>	FABRICATED PROCESS	<input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> WORKED
CROSS SECTION THICKNESS	MAX — INCH	MIN — INCH	GEOMETRY <input type="checkbox"/> PIPE <input type="checkbox"/> PLATE <input type="checkbox"/> ROD	<input checked="" type="checkbox"/> OTHER: <u>Piston</u>
		SURFACE CONDITION	<input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER	
B. INSPECTION MATERIALS		TEMP. <u>69°F</u>	<u>367</u>	<u>Supp. 2</u>
INSPECTION MATERIALS		BRAND	DESIGNATION	BATCH NO.
1. PRE-CLEANER				
2. PENETRANT		<u>Magnaflux</u>	<u>SKC-NF/2C7B</u>	<u>82JOF3</u>
3. EMULSIFIER AND/OR REMOVER			<u>SKL-HF/SKLS</u>	<u>TD073</u>
4. DEVELOPER			<u>SKC-NF/2C7B</u>	<u>82JOF3</u>
5. POST EXAMINATION CLEANER			<u>SKD-NF</u>	<u>82D111</u>
			<u>SKC-NF/2C7B</u>	<u>82JOF3</u>
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <u>Examined machined area on boss.</u> <u>102 Diesel</u> <u>Piston #62</u>				
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.		
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)	
Bolt Hole				
1 <u>See sketch</u>	<u>N/A</u>	<u>None</u>	<u>Accept</u>	
2	<u>5/16 + 5/8</u>	<u>Crack</u>	<u>Reject (LDR Issued)</u>	
3	<u>7/8</u>	<u>Crack</u>		
4	<u>3/16</u>	<u>Crack</u>		
		<u>Linear</u>		
D. INSPECTION MATERIALS		<u>Liles NDE 6.2</u> <u>Para 4.2.3</u> <u>E. Hassell</u> <u>11/3/73</u>		
E. ATTEST		<u>Carl Hassell</u> NONSIELE CERTIFIED PERSONNEL LEVEL <u>ATI</u> DATE <u>11/3/73</u>		

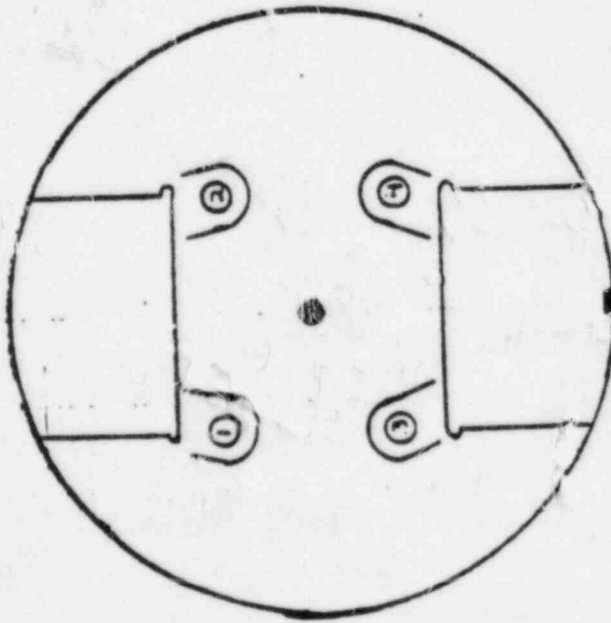
COMPONENT I.D.

SYSTEM

ACTION

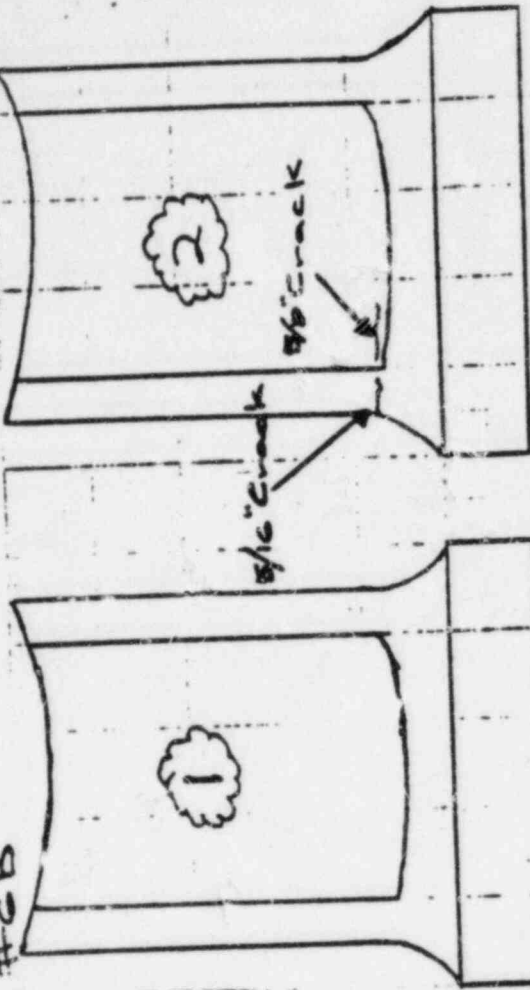
16 0940

Diesel #102 Piston #GB



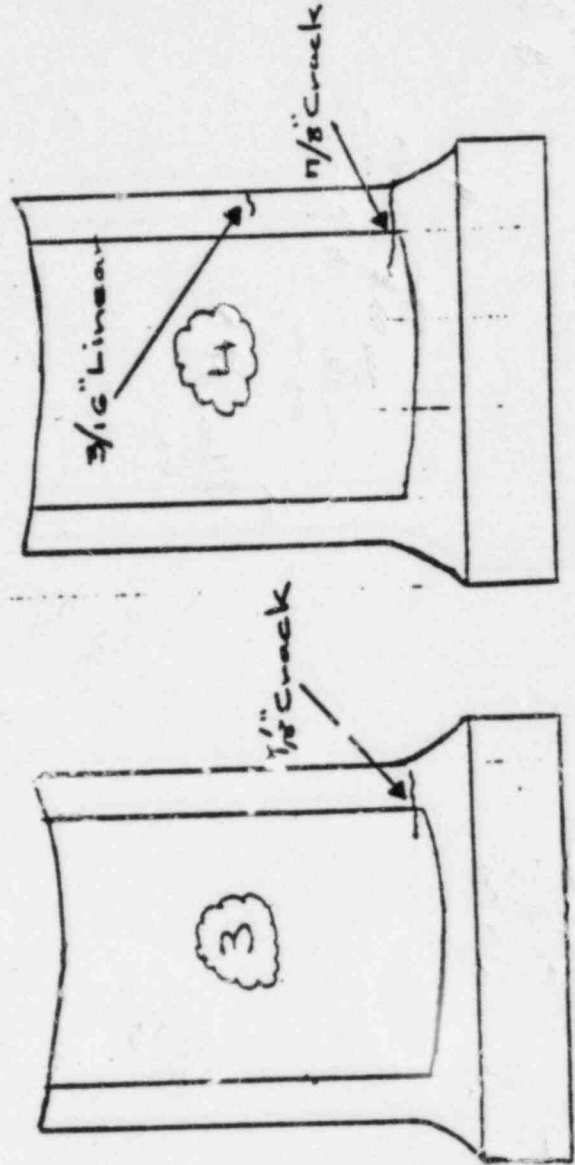
Notch Side

Overhead View



5/16" Crack

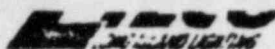
Side Views, looking out from inside



1/8" Crack

7/8" Crack

3/16" Linear



LIQUID PENETRANT EXAMINATION REPORT

A. MATERIAL		TYPE <u>C/S</u>	FABRICATED PROCESS	<input type="checkbox"/> WELDED	<input checked="" type="checkbox"/> CAST	<input type="checkbox"/> WORKED
		GEOMETRY	<input type="checkbox"/> PIPE	<input type="checkbox"/> PLATE	<input type="checkbox"/> ROD	<input checked="" type="checkbox"/> OTHER: <u>Piston</u>
CROSS SECTION THICKNESS	MAX — INCH	MIN — INCH	SURFACE CONDITION	<input checked="" type="checkbox"/> MACHINED	<input type="checkbox"/> GROUND	
				<input type="checkbox"/> AS FABRICATED	<input type="checkbox"/> OTHER	
4. HAZ. INFORMATION <u>61 + G-2</u>		MATERIAL TEMP. <u>69°F</u>		<u>367</u>	Supp 2 <u>R-3-1144</u>	
INSPECTION MATERIALS		BRAND	DESIGNATION	BATCH NO.		
1. PRE-CLEANER		<u>Magnaflux</u>	<u>SKC-NF/EC-7B</u>	<u>82J083</u>		
2. PENETRANT			<u>SKL-HF/3KLS</u>	<u>7D073</u>		
3. EMULSIFIER AND/OR REMOVER			<u>SKC-NF/EC-7B</u>	<u>82J052</u>		
4. DEVELOPER			<u>SKD-NF</u>	<u>82D111</u>		
5. POST EXAMINATION CLEANER			<u>SKC-NF/EC-7B</u>	<u>82J82</u>		
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <u>Examined machined area on boss.</u>						
<u>102 Diesel</u> <u>Piston # 7B</u>						
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.				
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)			
Bolt Hole 1 see sketch	<u>1/2</u>	<u>Crack</u>	<u>Reject (LDR Issued)</u>			
2	<u>N/A</u>	<u>None</u>	<u>Accept</u>			
3	<u>1</u>	<u>Crack</u>	<u>Reject (LDR Issued)</u>			
4	<u>N/A</u>	<u>None</u>	<u>Accept</u>			
DRAWN BY <u>Lilao NDE G-2</u>	Part <u>4.2.2</u>		<u>E. Hassall</u> <u>II</u> <u>11/3/73</u>			
E. ATTEST	<u>E. Hassall</u> NONSIBLE CERTIFIED PERSONNEL		<u>II</u> LEVEL		<u>11/3/73</u> DATE	

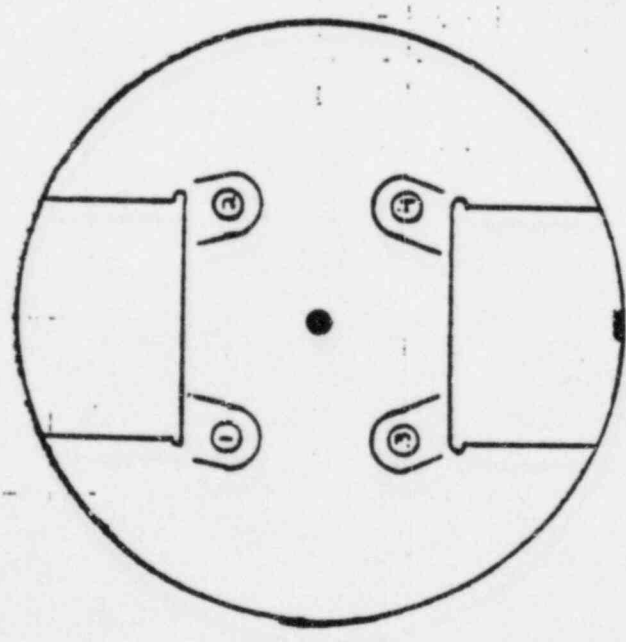
COMPONENT I.D.

SYSTEM

LOCATION

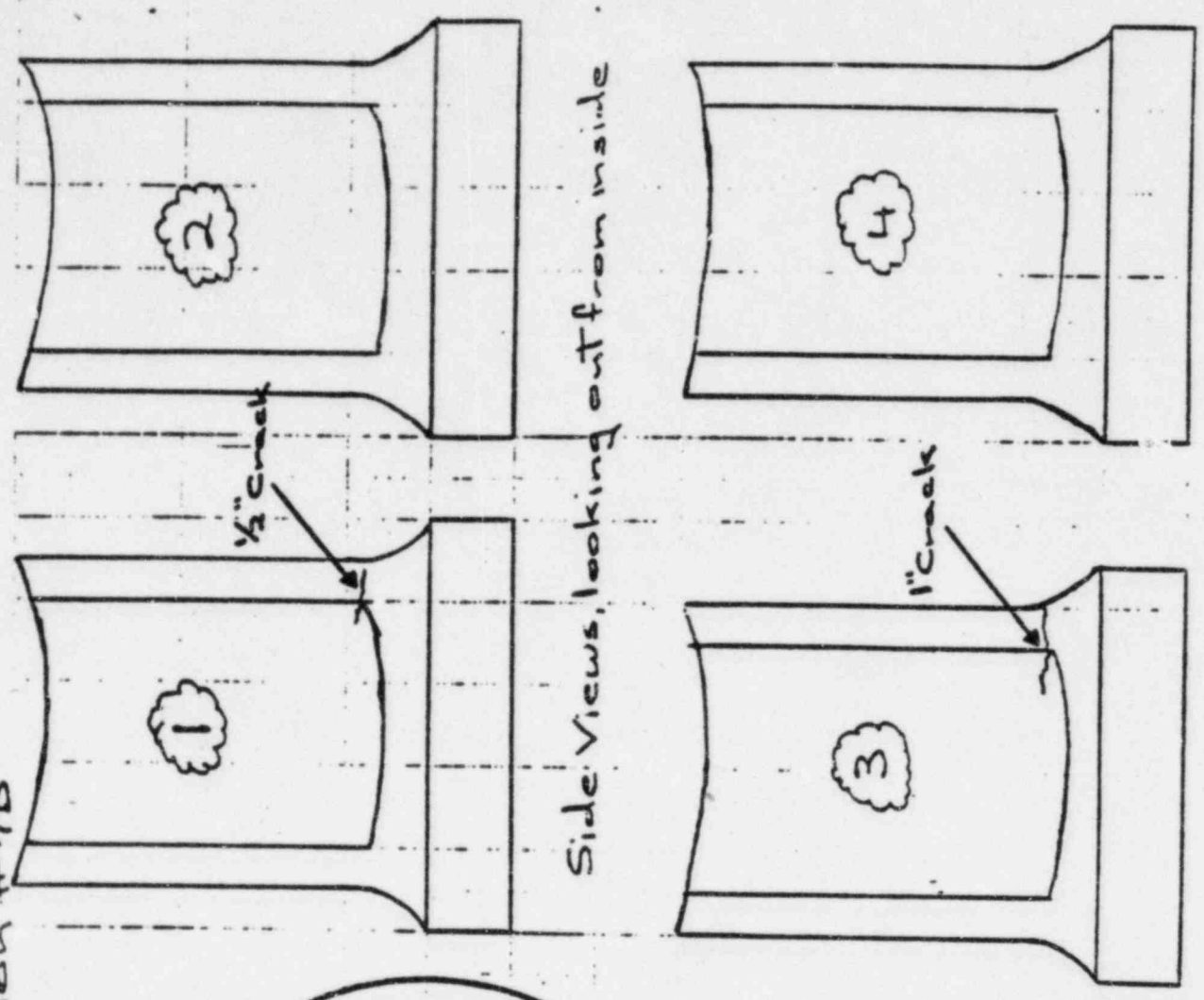
46 0/10

Diesel #102 Piston #4B



Notch Side

Overhead View



Side Views, looking out from inside

LIQUID PENETRANT EXAMINATION REPORT

A. MATERIAL		TYPE	FABRICATED PROCESS		<input type="checkbox"/> WELDED	<input checked="" type="checkbox"/> CAST	<input type="checkbox"/> WORKED
		GEOMETRY	<input type="checkbox"/> PIPE	<input type="checkbox"/> PLATE	<input type="checkbox"/> ROD	<input checked="" type="checkbox"/> OTHER	Piston Skirt
CROSS SECTION THICKNESS	MAX	MIN	SURFACE CONDITION		<input checked="" type="checkbox"/> MACHINED	<input type="checkbox"/> GROUND	
	INCH	INCH			<input type="checkbox"/> AS FABRICATED	<input type="checkbox"/> OTHER	
1. DON INFORMATION		TEMP		367		Supp. 2	
No. 61-62		69°F		Due 4/2/74		R-13-1144	
INSPECTION MATERIALS		BRAND	DESIGNATION		BATCH NO.		
1. PRE-CLEANER		Magnaflux	SKC-NF/2C-7B		82J082		
2. PENETRANT			SKL-HF/SKLS		7DC43		
3. EMULSIFIER AND/OR REMOVER			SKC-NF/2C-7B		82J083		
4. DEVELOPER			SKD-NF		82D111		
5. POST EXAMINATION CLEANER			SKC-NF/2C-7B		82J083		
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY Examined machined area on boss. 102 Diesel Piston #85							
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.					
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)				
Bolt Hole See Sketch	1/8 3/16	Linear crack	Reject (LDR Issued)				
2	N/A	None	Accept				
3							
4							
Inspector	Lileo NDE G-2		F. Hassell				
	Para 4.2.2		IP		11/2/83		
E. ATTEST	E. Hassell		IP		11/2/83		
	CONSULE CERTIFIED PERSONNEL		LEVEL		DATE		

COMPOSITE I.D.

SYSTEM

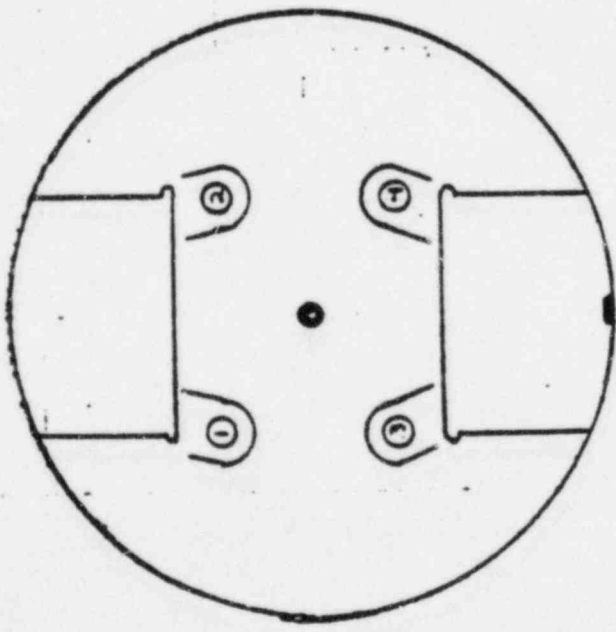
PLANT/LOCATION

Piston Skirt #85

102 Diesel - 102

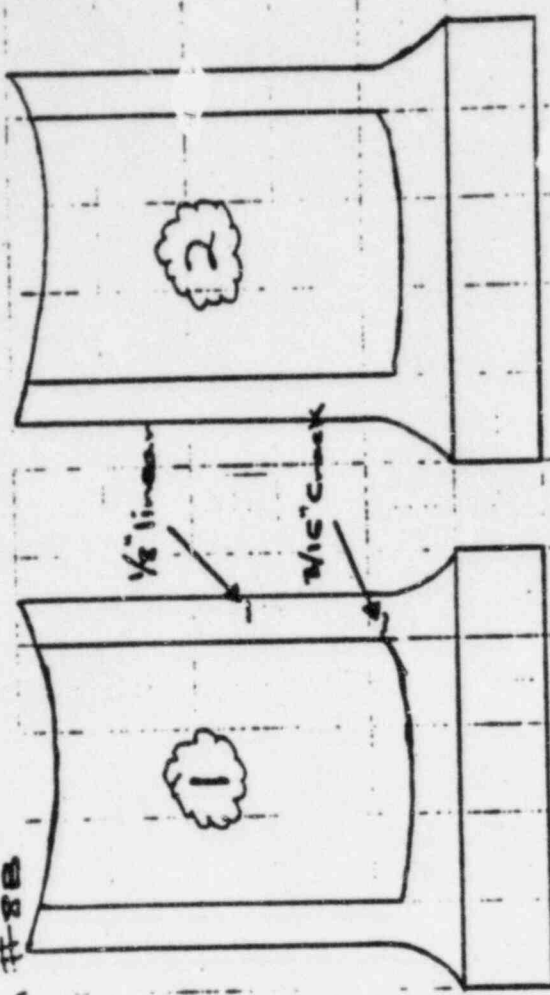
SUPS-1/Turb Diesel G-2

Diesel #102 Piston #88

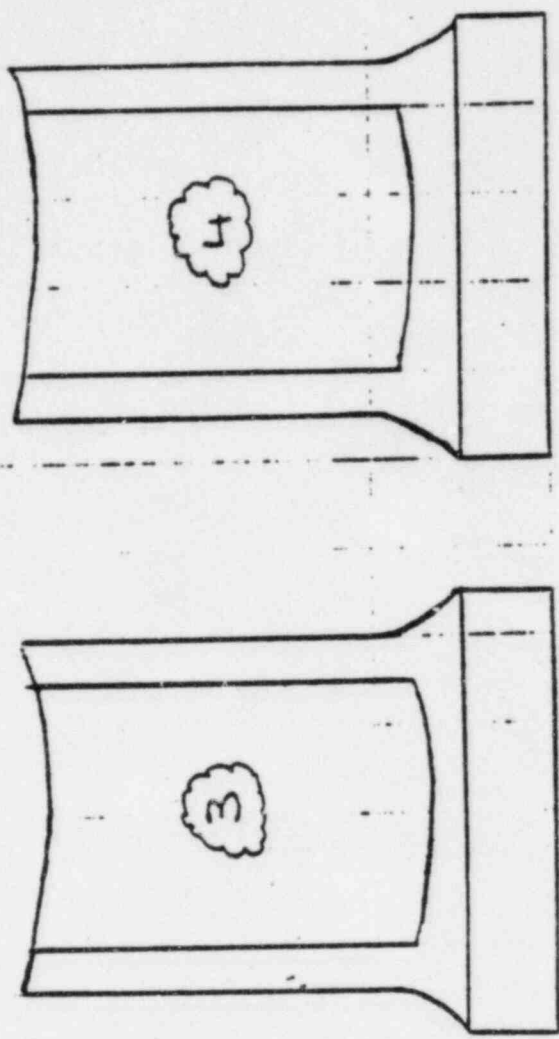


Notch side

Overhead view



Side Views, looking out from inside



EDG 103

AF PISTONS

A. MATERIAL		TYPE <i>4/s</i>	FABRICATED <input checked="" type="checkbox"/> FRAGILE <input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> FORGED	
CROSS SECTION THICKNESS		MAX — INCH	MIN — INCH	SURFACE CONDITION <input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER
<i>61462</i>		TEMP <i>69°F</i>	<i>367</i>	<i>Supp 2</i>
INSPECTION MATERIALS		BRAND	DESIGNATION	BATCH NO.
1. PRE-CLEANER		<i>magnaflux</i>	<i>SKC-NF/267B</i>	<i>82J033</i>
2. PENETRANT			<i>SKL-HP/3KL3</i>	<i>7D072</i>
3. EMULSIFIER AND/OR REMOVER			<i>SKC-NF/267B</i>	<i>82J033</i>
4. DEVELOPER			<i>SKD-NF</i>	<i>82D111</i>
5. POST EXAMINATION CLEANER			<i>SKC-NF/267B</i>	<i>82J033</i>
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <i>Examined machined area around boss</i>				
<i>103 Dies</i> <i>Piston #2C</i>				
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED, USE OTHER SIDE.		
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT IF NECESSARY)	
<i>Bolt Hole</i>	<i>(3) 3/32, 1/16</i>	<i>linear</i>	<i>Reject (LDR Issued)</i>	
<i>See Sketch</i>	<i>1/8 3/16 1/4</i>	<i>crack</i>		
<i>2</i>	<i>3/8</i>	<i>rounded</i>		
<i>3</i>	<i>5/32</i>	<i>linear</i>		
<i>4</i>	<i>3/8</i>	<i>crack</i>		
	<i>1/2</i>	<i>linear</i>		
	<i>3/32, 5/16</i>	<i>Cracks</i>		
Like NDE G 2		<i>E. H. Hall / Asst. J. C. Hall</i> <i>II</i> <i>11/9/53</i>		
E. ATTEST		<i>Carl H. Hall</i> <i>II</i> <i>11/9/53</i>		

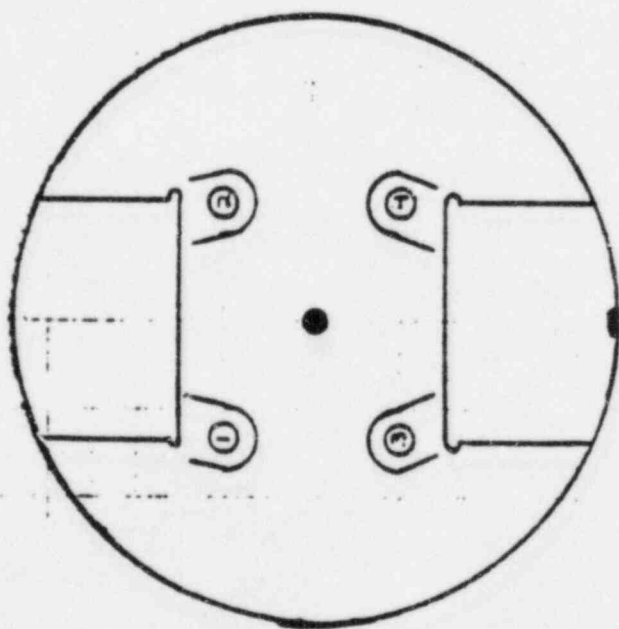
Piston Sketch #2C

IR33EDG-103

SURF. Inspect D & E

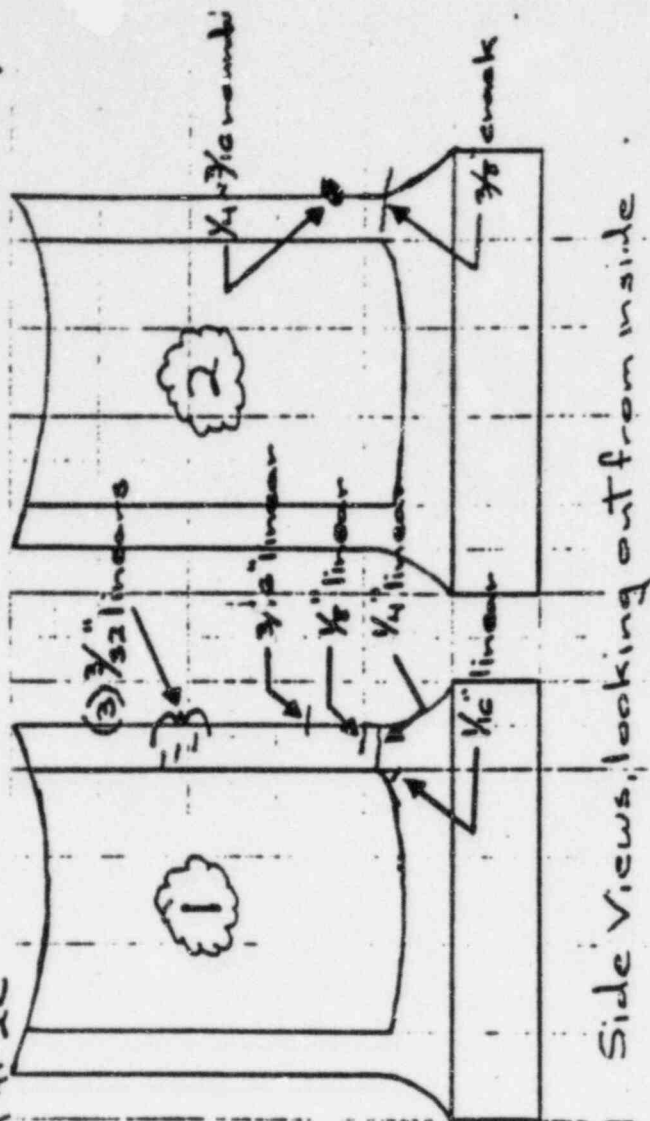
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Diesel #103 Piston #2C

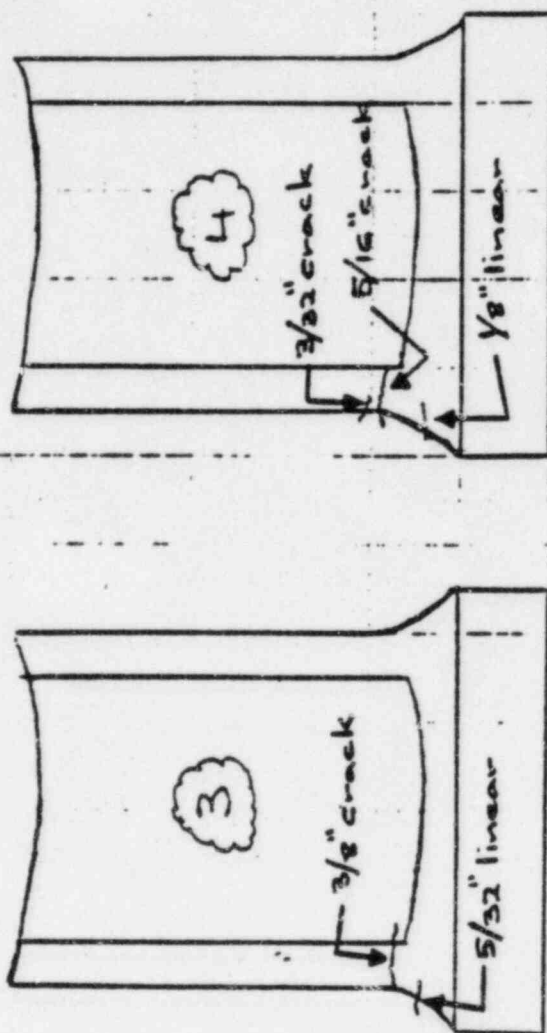


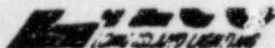
Notch Side

Overhead View



Side Views, looking out from inside





LIQUID PENETRANT EXAMINATION REPORT

A. MATERIAL		TYPE	FABRICATED PROCESS	
		<i>c/s</i>	<input type="checkbox"/> WELDED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> WORKED	
CROSS SECTION THICKNESS		MAX	MIN	SURFACE CONDITION
		— INCH	— INCH	<input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER
B. WORK INFORMATION		TEMP. / MAT'L.		367
Job: <i>G.1 + G.2</i>		TEMP. <i>62°F</i>		Due <i>4/22/84</i> Supp. 2 R43-1143
INSPECTION MATERIALS		BRAND	DESIGNATION	BATCH NO.
1. PRE-CLEANER		<i>Magnaflux</i>	<i>SKC-NF/2C7B</i>	<i>32J083</i>
2. PENETRANT			<i>SKL-HF/2K13</i>	<i>7D073</i>
3. EMULSIFIER AND/OR REMOVER			<i>SKC-NF/2C7B</i>	<i>22J083</i>
4. DEVELOPER			<i>SKD-NF</i>	<i>22D111</i>
5. POST EXAMINATION CLEANER			<i>SKC-NF/2C7B</i>	<i>22J083</i>
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <i>Examined machined area around boss</i>				
103 Pieces <u>Piston #1C</u>				
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.		
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)	
<i>Bolt Hole</i>				
<i>See Sketch</i>	<i>N/A</i>	<i>None</i>	<i>Accept</i>	
<i>2</i>	<i>N/A</i>	<i>None</i>	<i>Accept</i>	
<i>3</i>	<i>3/16</i>	<i>Linear</i>	<i>Reject (LDR Issued)</i>	
<i>4</i>	<i>N/A</i>	<i>None</i>	<i>Accept</i>	
D. INSPECTION		E. HASSALL / Asst. J. C. ...		
Like NDE G.2		Per 4.2.2		
E. ATTEST		<i>Carl Hassall</i> POSSIBLE CERTIFIED PERSONNEL LEVEL <i>II</i> DATE <i>11/9/83</i>		

COMPOSITE I.D.

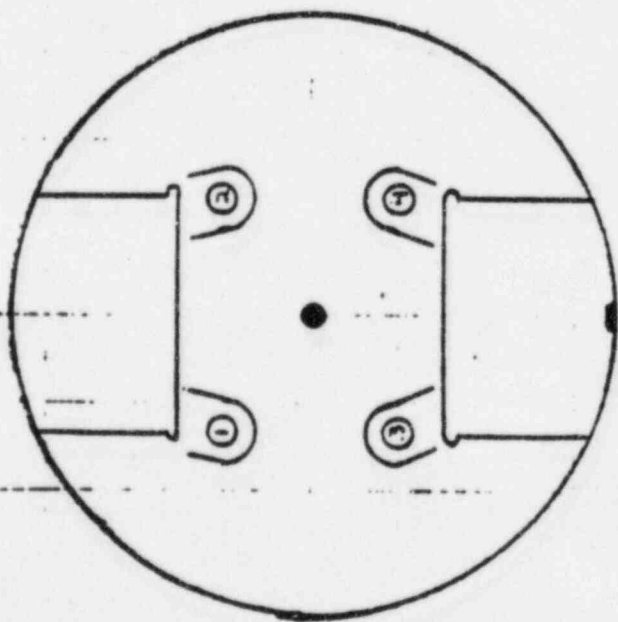
SYSTEM

PLANT ACTION

SVP-1/Inst. Dr. E.1.67

16 0940

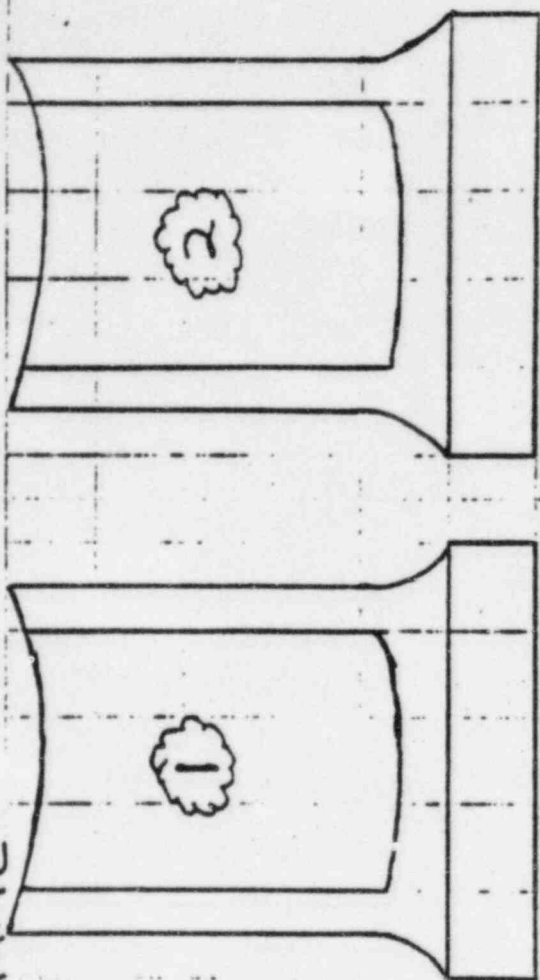
Diesel #103 Piston #1C



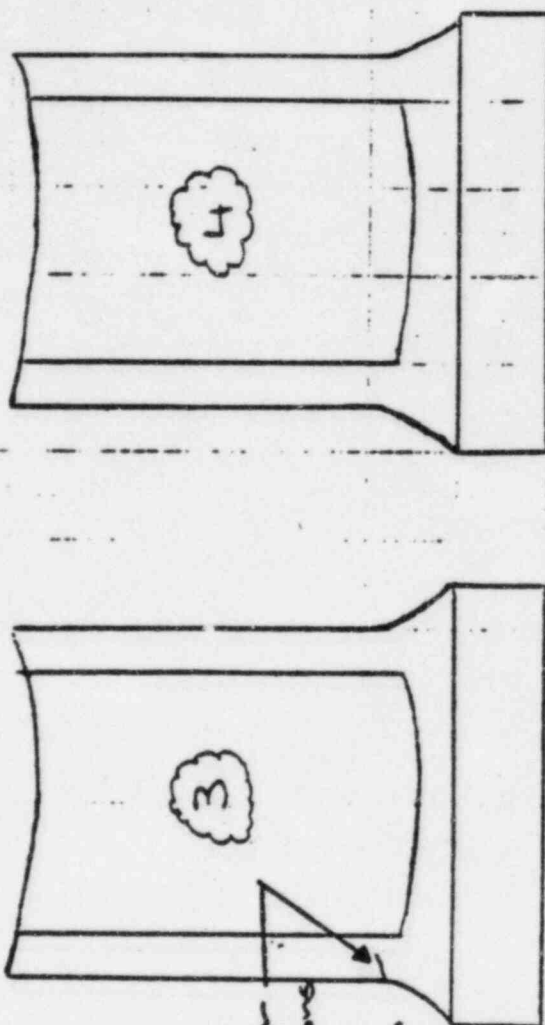
Notch Side

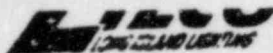
Overhead View

9/16" Linear
 Note: Started as 2 indications
 that bled into one "distinct"
 linear indication after 5 min
 dwell time.



Side Views, looking out from inside





LIQUID PENETRANT EXAMINATION REPORT

A. MATERIAL		TYPE <u>C/S</u>	FABRICATED PROCESS		<input type="checkbox"/> WELDED	<input checked="" type="checkbox"/> CAST	<input type="checkbox"/> WORKED
		GEOMETRY	<input type="checkbox"/> PIPE	<input type="checkbox"/> PLATE	<input type="checkbox"/> ROD	<input checked="" type="checkbox"/> OTHER: <u>Piston Skirt</u>	
CROSS SECTION THICKNESS	MAX — INCH	MIN — INCH	SURFACE CONDITION	<input checked="" type="checkbox"/> MACHINED	<input type="checkbox"/> GROUND		
				<input type="checkbox"/> AS FABRICATED	<input type="checkbox"/> OTHER		
B. EXAMINATION		/MATERIAL		367	Supp. 2		
No. <u>G.1 + G.2</u>		TEMP. <u>62°F</u>		<u>Due 4/22/84</u>	<u>R43.1143</u>		
INSPECTION MATERIALS		BRAND	DESIGNATION	BATCH NO.			
1. PRE-CLEANER		<u>Magnaflux</u>	<u>SKC-NF/ZC7B</u>	<u>82J083</u>			
2. PENETRANT			<u>SKL-HP/SKL3</u>	<u>7D073</u>			
3. EMULSIFIER AND/OR REMOVER			<u>SKC-NF/ZC7B</u>	<u>82J083</u>			
4. DEVELOPER			<u>SKD-NF</u>	<u>82D111</u>			
5. POST EXAMINATION CLEANER			<u>SKC-NF/ZC7B</u>	<u>82J083</u>			
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <u>Examined machined area around boss</u>							
<u>103 Pieces</u> <u>Piston #1C</u>							
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.					
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)				
<u>Bolt Hole</u>							
<u>See Sketch</u>	<u>N/A</u>	<u>None</u>	<u>Accept</u>				
<u>2</u>	<u>N/A</u>	<u>None</u>	<u>Accept</u>				
<u>3</u>	<u>3/16</u>	<u>Linear</u>	<u>Reject (LDR Issued)</u>				
<u>4</u>	<u>N/A</u>	<u>None</u>	<u>Accept</u>				
D. ADDITIONAL COMMENTS		<u>Like NDE G.2</u>		OPERATOR <u>E. Hassell</u> / ASST. <u>J. Cooney</u>			
		<u>Para 4.2.2</u>		DATE <u>II</u> / <u>11/9/83</u>			
E. ATTEST		<u>E. Hassell</u> POSSIBLE CERTIFIED PERSONNEL . LEVEL <u>II</u> DATE <u>11/9/83</u>					

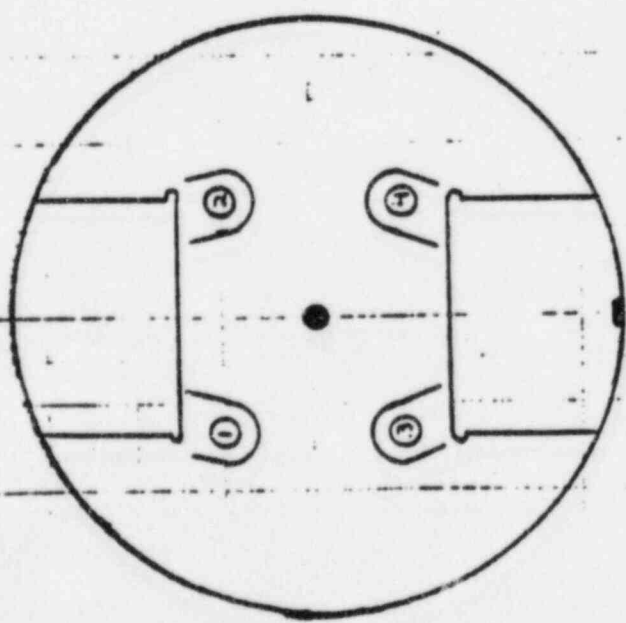
COMPLIANT I.D.

SYSTEM

PLAN. ACTION

46 0940

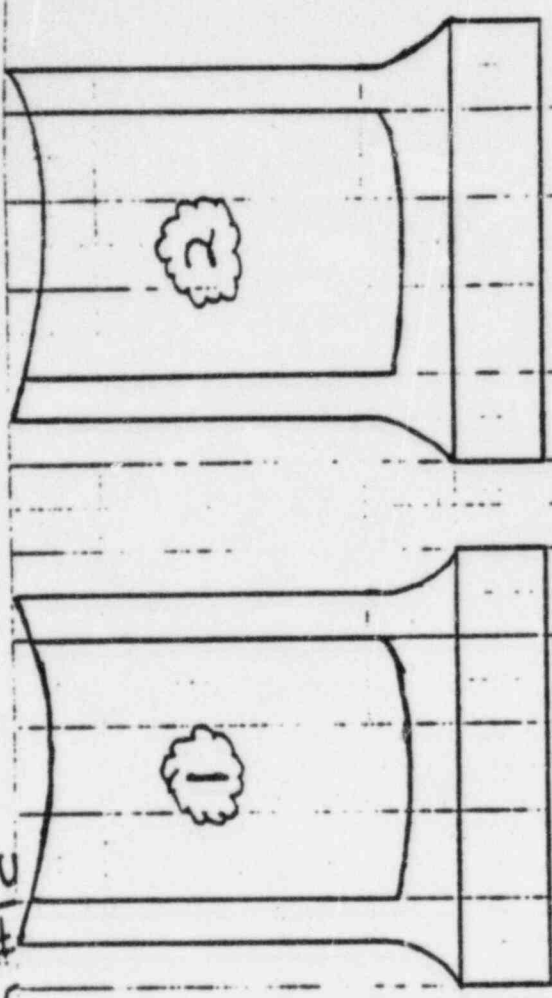
Diesel #103 Piston #1C



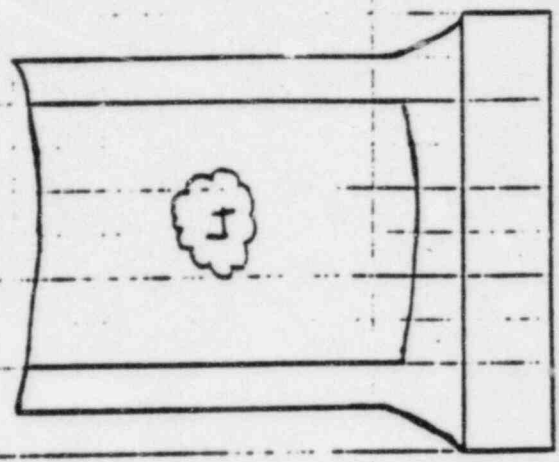
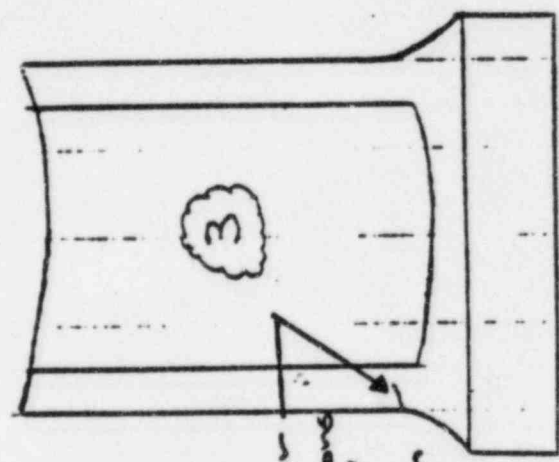
Notch Side

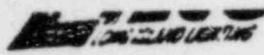
Overhead View

3/16" Linear
Note: Started as 2 indications
that bled into one "distinct"
linear indication after 5 min
dwell time.



Side Views, looking out from inside





LIQUID PENETRANT EXAMINATION REPORT

A. MATERIAL		TYPE <u>C/S</u>	FABRICATED PROCESS	<input type="checkbox"/> WELDED	<input checked="" type="checkbox"/> CAST	<input type="checkbox"/> WORKED
		GEOMETRY	<input type="checkbox"/> PIPE	<input type="checkbox"/> PLATE	<input type="checkbox"/> ROD	<input checked="" type="checkbox"/> OTHER <u>SKIRT</u>
CROSS SECTION THICKNESS	MAX — INCH	MIN — INCH	SURFACE CONDITION	<input checked="" type="checkbox"/> MACHINED	<input type="checkbox"/> GROUND	<input type="checkbox"/> OTHER
				<input type="checkbox"/> AS FABRICATED		

B. INSPECTION MATERIALS	BRAND	DESIGNATION	BATCH NO.
1. PRE-CLEANER	<u>Magnaflux</u>	<u>SKC-NF/2C7B</u>	<u>82J083</u>
2. PENETRANT		<u>SKL-HP/3K13</u>	<u>7D073</u>
3. EMULSIFIER AND/OR REMOVER		<u>SKC-NF/2C7B</u>	<u>82J083</u>
4. DEVELOPER		<u>SKD-NF</u>	<u>82D111</u>
5. POST EXAMINATION CLEANER		<u>SKC-NF/2C7B</u>	<u>82J083</u>

SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <u>Examined machined area around boss</u>			
103 Pieces <u>Piston #1C</u>			

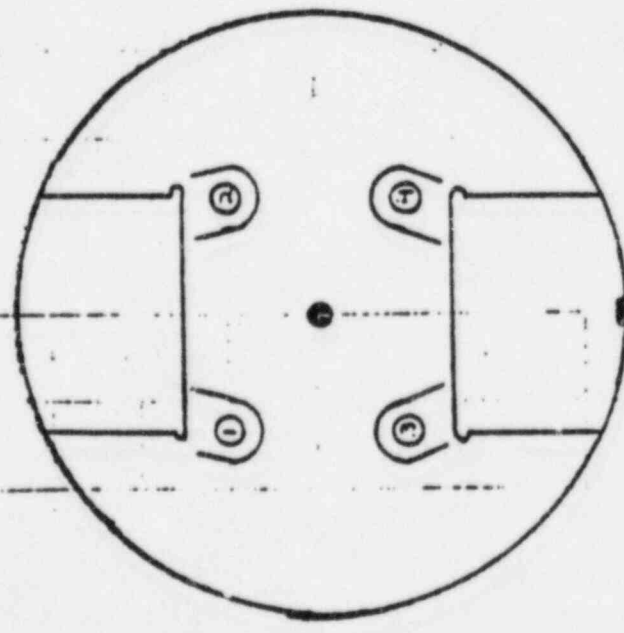
C. EVALUATION			
REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED USE OTHER SIDE.			

LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENT AS NECESSARY)
Bolt Hole 1 See Sketch	N/A	None	Accept
2	N/A	None	Accept
3	3/16	Linear	Reject (LDR Issued)
4	N/A	None	Accept
Like NDE G.2		Operator <u>E. Hassell</u> / Asst. J. Cooney	
Para 4.2.2		Level <u>II</u> Date <u>11/9/83</u>	

E. ATTEST	<u>E. Hassell</u>	LEVEL	<u>II</u>	DATE	<u>11/9/83</u>
POSSIBLE CERTIFIED PERSONNEL					

CONTINUING I.D.
 SYSTEM
 PLAN. ACTION
 5075-1/1/83 D.E.1.67

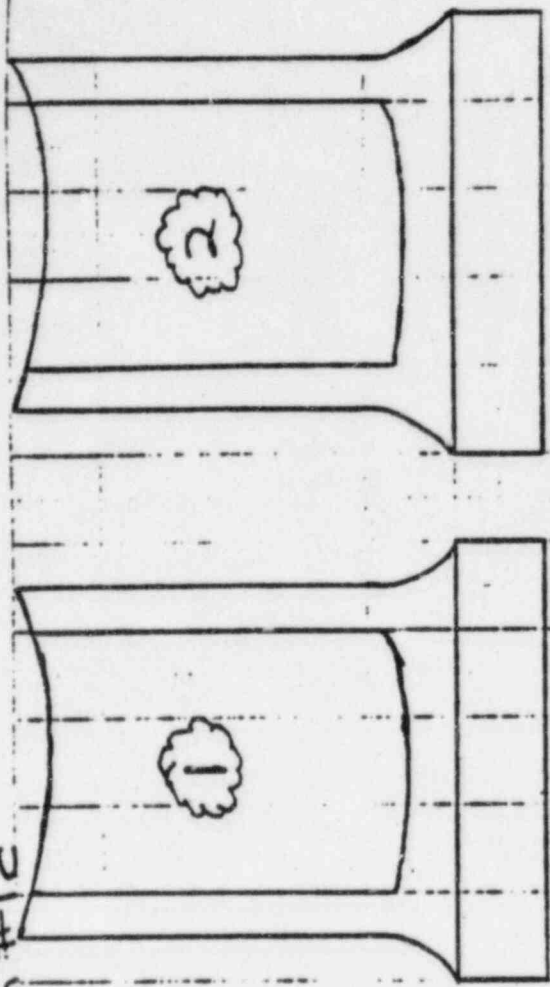
Diesel #103 Piston #1C



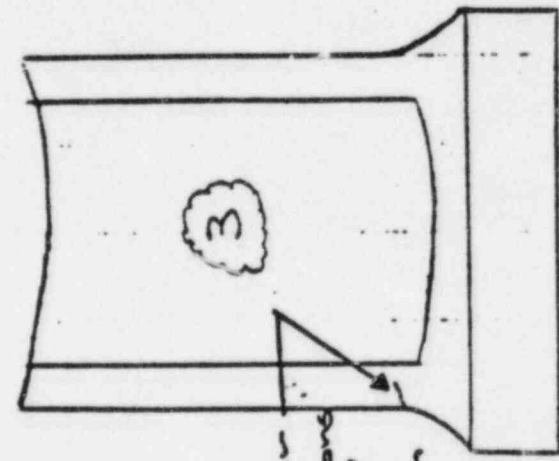
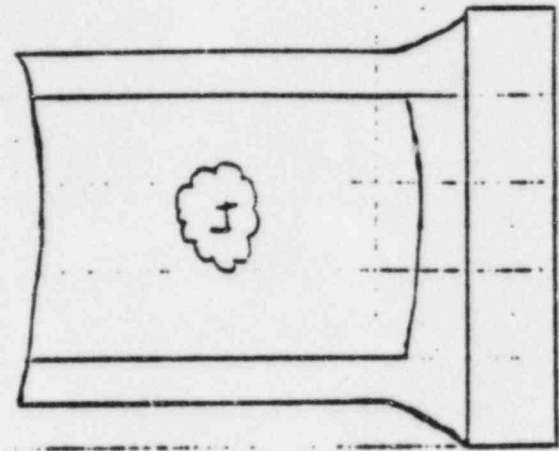
Notch side

Overhead View

3/16" Linear
Note: Started as 2 indications
that bled into one "distinct"
linear indication after 5 min
dwell time.



Side Views, looking out from inside



A. MATERIAL		TYPE <u>C/S</u>		FABRICATED <input type="checkbox"/> FUSED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> FORGED	
CROSS SECTION THICKNESS		GEOMETRY		<input type="checkbox"/> PIPE <input type="checkbox"/> PLATE <input type="checkbox"/> ROD <input checked="" type="checkbox"/> OTHER <u>PISTON</u>	
MAX <u>—</u> INCH		MIN <u>—</u> INCH		SURFACE CONDITION <input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER	
<u>G1 + G2</u>		TEMP <u>67°F</u>		<u>367</u> DATE <u>4/22/84</u> SUPP <u>2</u> R- <u>3-1143</u>	
INSPECTION MATERIALS		BRAND		DESTINATION	
1. PRE-CLEANER		<u>Magnaflux</u>		<u>SKC-NF/267B 82J083</u>	
2. PENETRANT				<u>SKL-MP/3KLS 7DC73</u>	
3. EMULSIFIER AND/OR REMOVER				<u>SKC-NF/267B 82J083</u>	
4. DEVELOPER				<u>SKD-NF 82D11</u>	
5. POST EXAMINATION CLEANER				<u>SKC-NF/267B 82J083</u>	
SKETCH OR OTHER DETAILS: USE OTHER SIDE IF NECESSARY <u>Examined machined area around boss</u>					
<u>103 Pieces</u> <u>Piston #3C</u>					
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL SPACE IS REQUIRED, USE OTHER SIDE.			
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENTS IF NECESSARY)		
Bolt Hole					
1 See Sketch	N/A	None	Accept		
2	5/32	linear	Reject (LDR Issued)		
3	3/16	linear	Reject (LDR Issued)		
4	N/A	None	Accept		
Like NDE G 2		<u>E. H. Hall / Asst. J. C. Hall</u> <u>11/9/83</u>			
E. ATTEST		<u>Carl Hall</u> <u>11/9/83</u>			

Piston Sketch #3C

IRH3EDG-103

SNP-1/10/84 D-11/83

A. MATERIAL		TYPE	FINISH			
		<i>c/s</i>	<input type="checkbox"/> POLISHED	<input type="checkbox"/> MACHINED	<input checked="" type="checkbox"/> GRIND	<input type="checkbox"/> TUMBLER
		GEOMETRY	<input type="checkbox"/> PIPE	<input type="checkbox"/> PLATE	<input type="checkbox"/> ROD	<input checked="" type="checkbox"/> OTHER
CROSS SECTION THICKNESS	MAX	MIN	SURFACE CONDITION		<input checked="" type="checkbox"/> MACHINED	<input type="checkbox"/> GROUND
	INCH	INCH			<input type="checkbox"/> AS FABRICATED	<input type="checkbox"/> OTHER
<i>61+6.2</i>		<i>27" R</i>	<i>3/27</i>		<i>Supp 2</i>	
INSPECTION MATERIALS		BRAND	DENOMINATION		BATCH NO.	
1. PRE-CLEANER		<i>Magnaflux</i>	<i>SKC-NF/2C7B</i>		<i>82J083</i>	
2. PENETRANT			<i>SKL-HF/3K12</i>		<i>7DC72</i>	
3. EMULSIFIER AND/OR REMOVER			<i>SKC-NF/2C7B</i>		<i>82J083</i>	
4. DEVELOPER			<i>SKD-NF</i>		<i>22D111</i>	
5. POST EXAMINATION CLEANER			<i>SKC-NF/2C7B</i>		<i>82J083</i>	
SKETCH OR OTHER DETAIL: USE OTHER SIDE IF NECESSARY <i>Examined machined area around boss</i>						
<div style="text-align: right;"> <i>103 Pieces</i> <i>Piston #4C</i> </div>						
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL DATA IS REQUIRED, USE OTHER SIDE.				
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND REMEDIAL / RECESSARY)			
<i>Bolt Hole</i>						
<i>1 See Sketch</i>	<i>N/A</i>	<i>None</i>	<i>Accept</i>			
<i>2</i>	<i>3/32, 3/16</i>	<i>linear</i>	<i>Reject (LPR Issued)</i>			
<i>3</i>	<i>1/4</i>	<i>linear</i>				
<i>4</i>	<i>7/16</i>	<i>Crack</i>				
<i>Like NDE G 2</i>		<i>E. H. 30211 / ASST. J. C. 11/9/83</i>				
<i>Para 4.2.2</i>		<i>II</i>				
E. ATTEST		<i>Earl Hassell</i>				
		<i>II</i>				
		<i>11/9/83</i>				

CONTINUED I.D.

CSPS

C.A.

FION

Piston SKIT #4C

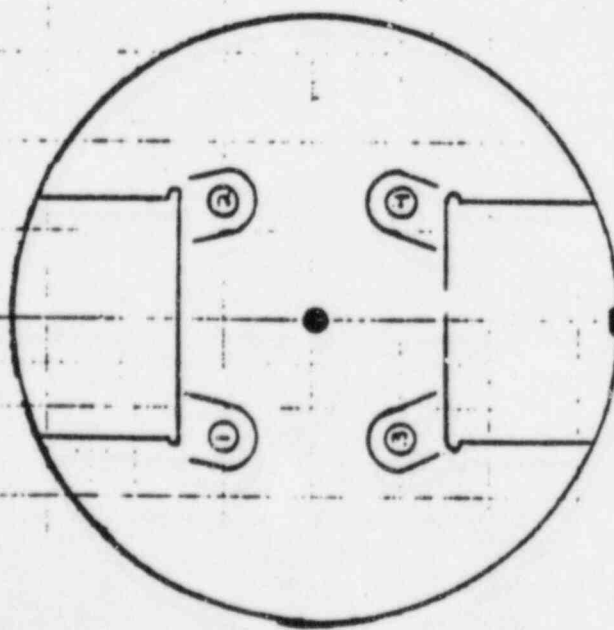
IR13MEDG-102

SNP3-1/1st P. E1C2

16 0940

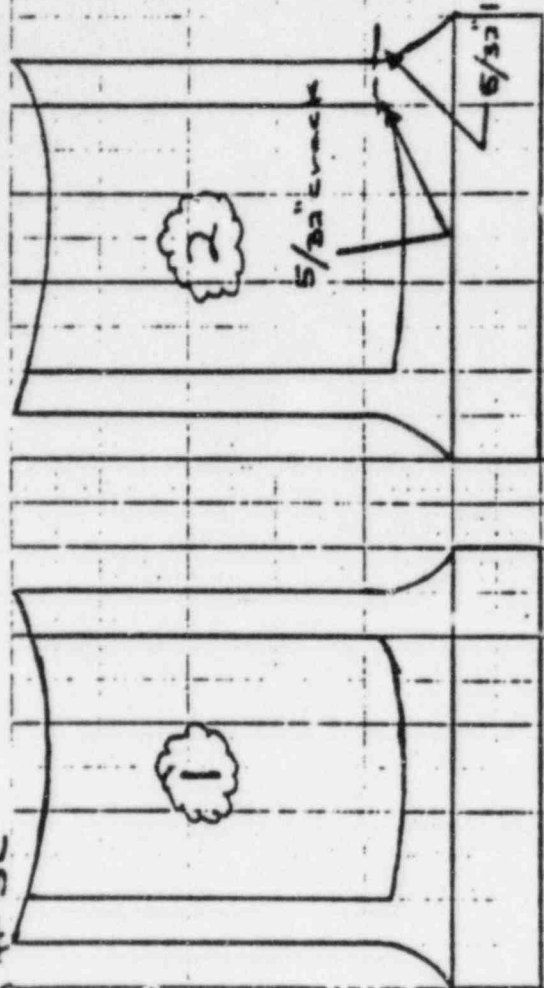
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Piston #3c

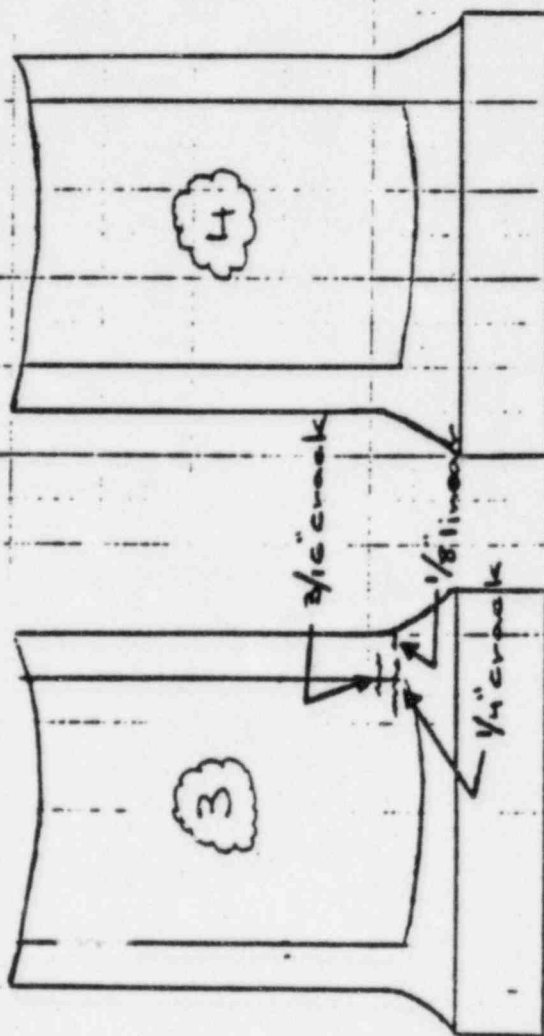


Notes Side

Overhead View

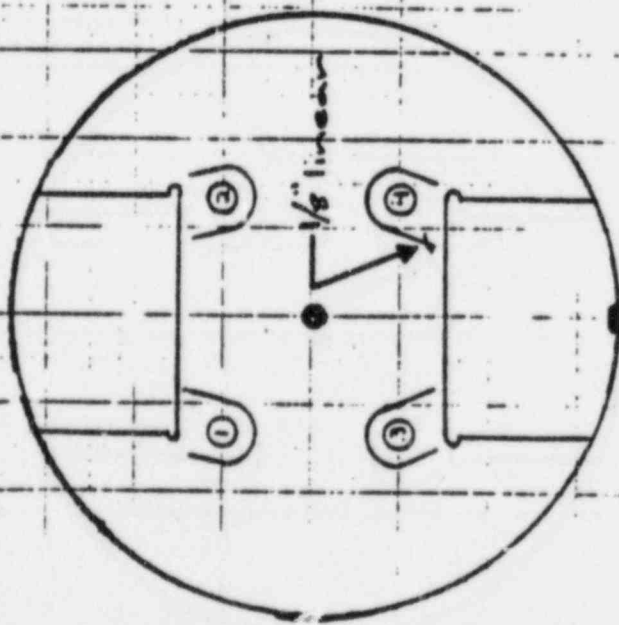


Side Views, looking out from inside



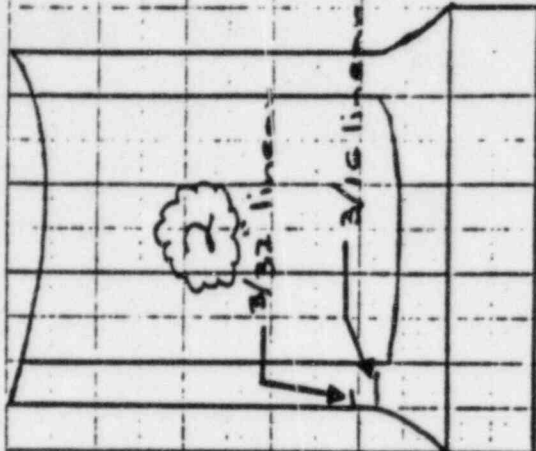
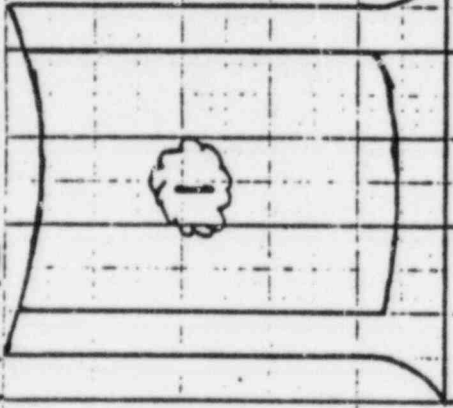
46 U/40

Diesel #103 Piston #4c

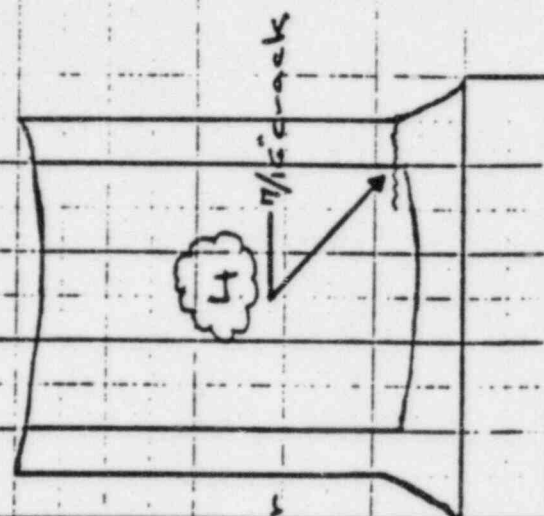
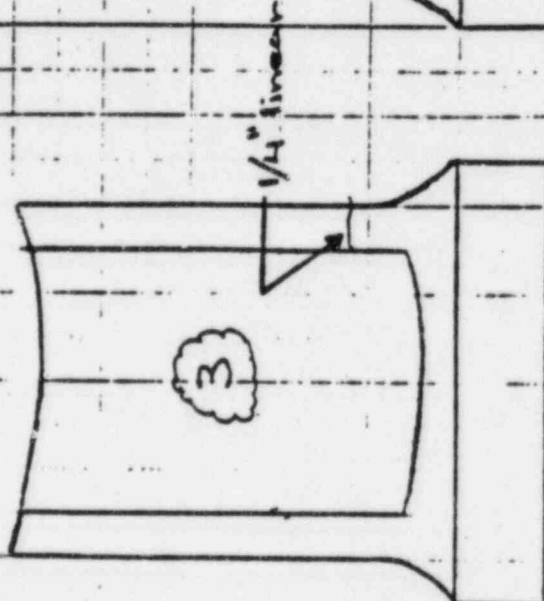


Notch Side

Overhead View



Side Views, looking out from inside



A. MATERIAL		TYPE <i>C/S</i>	FABRICATED <input checked="" type="checkbox"/> FUSED <input checked="" type="checkbox"/> CAST <input type="checkbox"/> FORGED
CROSS SECTION THICKNESS		MAX — INCH	MIN — INCH
SURFACE CONDITION		<input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> GROUND <input type="checkbox"/> AS FABRICATED <input type="checkbox"/> OTHER	
INSPECTION MATERIALS		BRAND	DESTINATION
1. PRE-CLEANER		<i>magnaflux</i>	<i>SSG-NF/267B 821083</i>
2. PENETRANT			<i>SKL-HF/3K15 7DC72</i>
3. EMULSIFIER AND/OR REMOVER			<i>SKC-NF/267B 821083</i>
4. DEVELOPER			<i>SKD-NF 82D11</i>
5. POST EXAMINATION CLEANER			<i>SKC-NF/267B 821083</i>
SKETCH OR OTHER DETAILS: USE OTHER SIDE IF NECESSARY <i>Examined machined area around boss</i>			
C. EVALUATION REPORT BELOW THOSE INDICATIONS OBSERVED AND THE BEST AVAILABLE INFORMATION REQUIRED. WHERE ADDITIONAL CLARIFICATION IS REQUIRED, USE OTHER SIDE.			
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, PER COMMENT IF NECESSARY)
<i>Bolt Hole</i>			
<i>See sketch</i>	<i>1/8 1/4</i>	<i>Cracks</i>	<i>Reject (LDR Issued)</i>
<i>2</i>	<i>1/16</i>	<i>linear</i>	
	<i>5/16</i>	<i>Cracks</i>	<i>Reject (LDR Issued)</i>
<i>3</i>	<i>N/A</i>	<i>None</i>	<i>Accept</i>
<i>4</i>	<i>3/16 1/4</i>	<i>Cracks</i>	<i>Reject (LDR Issued)</i>
	<i>Like NDE G 2</i>		
	<i>Para 4.2.2</i>		
E. ATTENT	<i>Carl Howell</i>		<i>11/9/83</i>

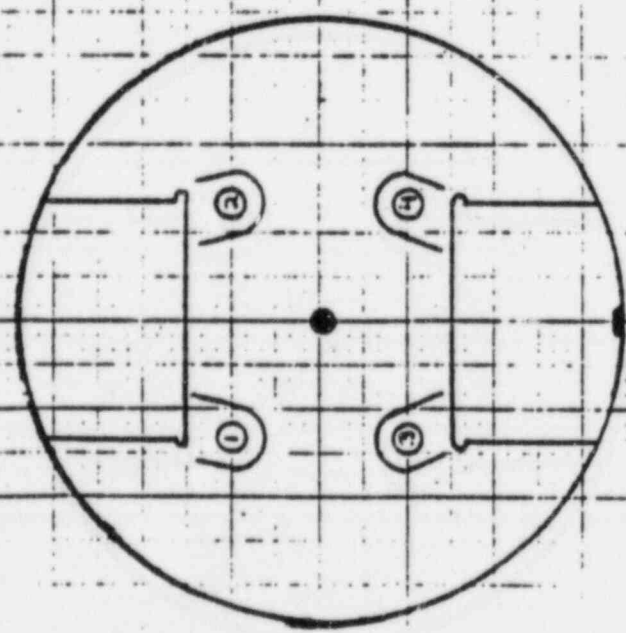
Piston Skirt #5C

IR438EDG-103

SNP-1/1000 D-1103

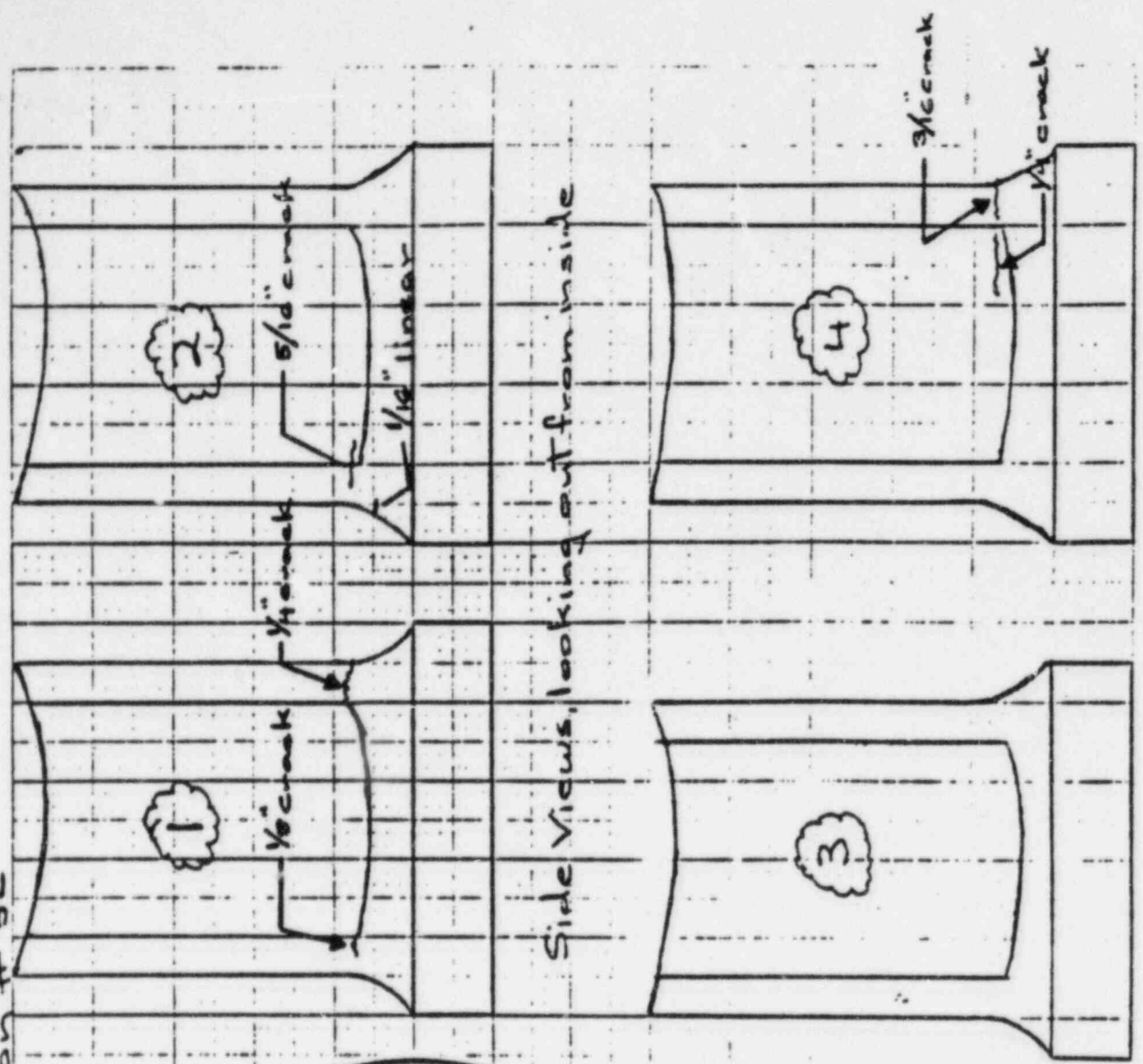
46 U940

Diesel #103 Piston #5c



Notch side

Overhead view



Side Views, looking out from inside

A. MATERIAL		TYPE	FABRICATED	WELDED	CAST	FORGED
CROSS SECTION THICKNESS		MAX	MIN	SURFACE CONDITION	MACHINED	GROUNDED
G1 + G2		MAX	MIN	AS FABRICATED		
INSPECTION MATERIALS		BRAND	DENOMINATION	BATCH NO.		
1. PRE-CLEANER		magnaflox		SKG-NF/267B	32JC83	
2. FINETRANT				SKL-MF/267B	1DC72	
3. EMULSIFIER AND/OR REMOVER				SKG-NF/267B	32JC83	
4. DEVELOPER				SKD-NF	32D11	
5. POST EXAMINATION CLEANER				SKG-NF/267B	32JC83	
SKETCH ON OTHER DETAIL: USE OTHER SIDE IF NECESSARY Examined machined area around boss						
103P1001 Piston #GC						
C. EVALUATION		REPORT BELOW THOSE INDICATIONS OBSERVED AND THE PERTINENT INFORMATION REQUIRED. WHERE ADDITIONAL DATA IS REQUIRED, USE OTHER SIDE.				
LOCATION	SIZE (INCHES)	DESCRIPTION	ACTION (ACCEPT/REJECT, AND COMMENTS IF NECESSARY)			
Bolt Hole	1/8, 3/16	linear	Reject (LDR Issued)			
1 See Sketch	3/8	crack				
2	3/32	linear				
3	3/8	crack	Accept			
4	N/A	None				
like NDE G2		E. Itasca 11/9/93 J. Pink				
Page 4-22		II 11/9/93				
E. ATTEST		Carl Itasca				

Piston SKET #CC

IR438EDG-103

SNP-1/10-10 DE 11/93

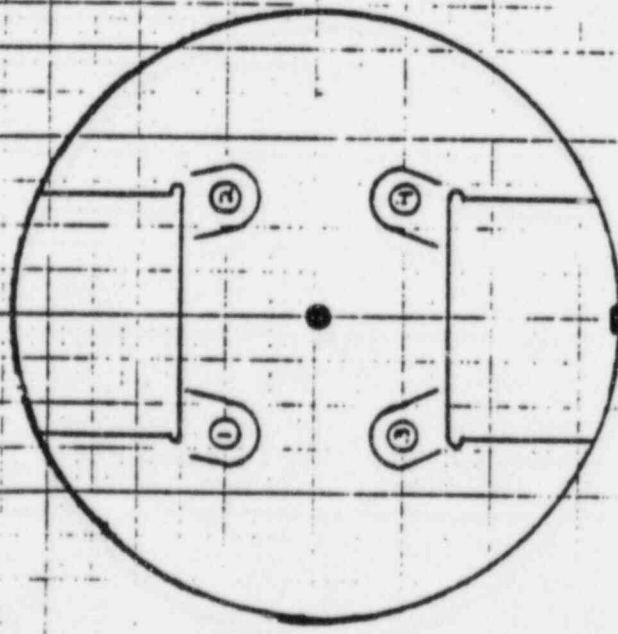
CONTRACT 1.0

CRISTEN

V.M. F103

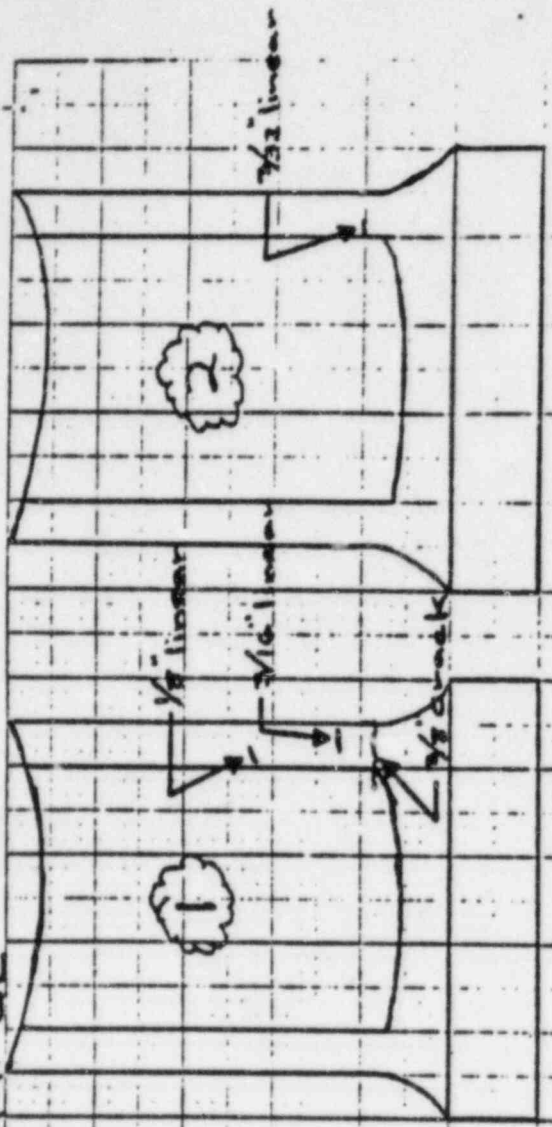
46 U94U

Diesel #103 Piston # ac

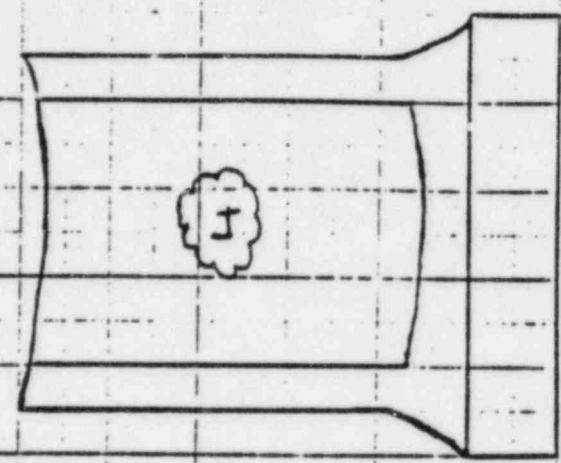
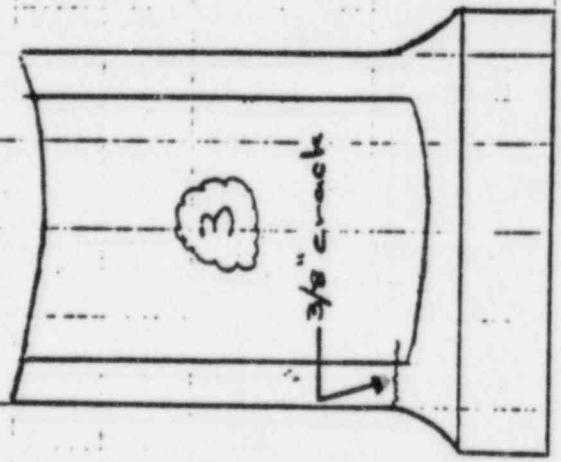


Notch Side

Overhead View

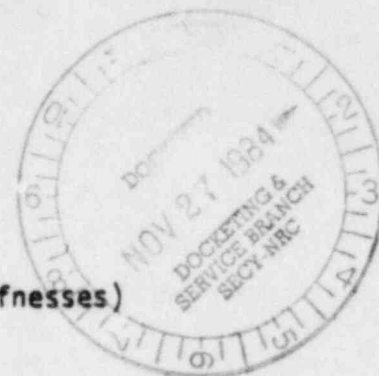


Side Views, looking out from inside



MINIMUM AND MAXIMUM STRESSES IN AE PISTON
SKIRT FOR VARIOUS PEAK FIRING PRESSURES
FOR ISOTHERMAL AND STEADY-STATE
OPERATING CONDITIONS

(initial gap equals 0.007 inch, uses "nominal" stiffnesses)



peak firing pressure, psig	isothermal		steady-state	
	q_{min} ksi	q_{max} ksi	q_{min} ksi	q_{max} ksi
1670	-59.7	1.77	-42.7	7.74
2000	-69.4	1.77	-52.3	7.74
2200	-75.1	1.77	-58.1	7.74