

# NORMS

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NUCLEAR PLANT MAINTENANCE WORK ORDER (1 OF 2)

1. CONTROL NO. 29003038 00 2. DATE 07/11/90 3. UNIT 2 4. SYSTEM LIST  
5. MPL/TAG NO. 11ST 5A. REPAIR TAG \_\_\_\_\_  
MPL/TAG(S) ASSOCIATED WITH SPECIAL INDICATORS

6. PROB/WORK REQ. DG 2A FAILED TO START.

## ORIGINAL

CONT. N

|                               |                      |                    |
|-------------------------------|----------------------|--------------------|
| 7. INITIATOR WP STEPHENS      | 8. SUPRV WP STEPHENS | LOC LIST           |
| 9. MWO CLASS S EQP CLASS LIST | 10. UNIT STAT        | 11. FIRE PROTECT N |
| 12. DCR N                     | 13. NCR/DR N         | 14. TYPE MAINT P   |
| 15. DURATION                  |                      | 6                  |
| 16. CRAFT MECH (EST/ACT)      | ELEC (EST/ACT)       | I&C (EST/ACT)      |
| CREW                          | 4 0                  | 2 0                |
| HRS.                          | 20                   | 12                 |
| EXP.                          | 0                    | 0                  |
| SCHED BEG                     |                      |                    |
| SCHED END                     |                      |                    |
| RESP FOREMAN                  |                      |                    |
| 17. CLR <u>29003038</u>       | 18. WELD PERM N      | RWP PERM N         |

19. CC HOLD PTS Y 20. PROC Z0429-C Z2408-C Z0253-C  
 21. PRI U 22. LCO 2-90-245

23. WORK INST. INVESTIGATE/REWORK PROBLEM WITH FAILURE TO START. IF COMPONENT REPLACEMENT AND/OR CALIBRATION IS REQUIRED RETURN TO WPG FOR CORRECTIVE ACTION. PACKAGING. SEE CONT. SHT ATTACHED. 7-11-90

24. INITIATE REVIEW DATE 7/11/90 MNT AS DATE 7/11/90  
 25. SPEC REV REQ N  
 26. MWO RELEASE FOR WORK DATE 7/11/90

27. ACT WORK PERFORMED During shift on 23 starting 40 records of abnormal operations were noticed except "D.G. Failed to Start". Investigated DG 2A and found no cause for the signal not starting. MWO 29001369 is also being worked on 2A and has a header setup on the cog. cond. pal. Reported by 29002904 but they could not get to it this shift. Operating zone is 29002904.

CONT. N

HIST SUM  
 28. MTRL REQ AN 7/24/90 10282, 10268

29. PERSON PERFORMING WORK (NAME) Bill White DATE 7/13/90  
 30. MAINTENANCE FOREMAN N.E. Collins DATE 7/13/90

31. INSPECTION PERFORMED BY Bill White DATE 7/13/90  
 32. METHOD OF F.T. VERIFY SUCCESSIVE DIG SEALS AND ACCEPT CRITERIA MET FOR OSP 14980-2

33. PROCEDURE # 14980-2 34. PERFORMED BY James Flu 35. DATE 7/13/90  
 36. PROVES OPERABILITY  37. METHOD USED TO PROVE OPERABILITY OSP 14980-2

38. SATISFY/UNSATISFY Satisfy 39. IF UNSAT. CORR. ACTION N/A  
 40. UNIT STATUS AT TIME OF FAILURE N 41. TYPE FAIL C 42. MODE OF FAIL N

43. CAUSE OF FAILURE N/A 44. DETECT BY C 45. EFFECT ON SYS C  
 46. EFF ON PLANT G 47. MWO STAT D AW 49. CORR ACT. AG

50. NEW MWO NA 51. OPER. ACCEPT BY James Flu DATE 7/13/90  
 52. OSOS APPROVAL NA DATE 7/13/90

53. SPEC REV COMP NA DATE 7/13/90  
 54. MEET. # NA DATE 7/13/90  
 55. CLOSE OUT APPROVAL BY CC DATE 7/28/90

CONTROL NO. 29003028 00

| MPL/TAG NO. | SYSTEM | EQP | CLS | DESCRIPTION               | LOCATION |
|-------------|--------|-----|-----|---------------------------|----------|
| 22403G4001  | 2403   | 015 |     | DIESEL GENERATOR          | 2DB1-    |
| 22403P5DG1  | 2403   | 11J |     | DG 2A GEN CTL PNL (9PDG1) | 2DB103   |
| 22403P5DG2  | 2403   | 11J |     | DG 2A ENG CONTROL PANEL   | 2DB1-    |



Nuclear Plant Maintenance Work Order Continuation Sheet

MPL No. 2-2403-G4-001

MWO No. 29003028

Work Description Block 23:

- MEOP to support Eng in trouble shooting the DG STARTING problem.
- Remove valve cover on Eng and bar over Eng until Piston D.T.C. Problem may be oil getting into the air start line.
- IF required, disconnect line to inspect.
- Reinstall lines and valve cover upon completing work.
- IF any other work requested by Eng, Review DG Maint. Procedure for applicable hold points/steps. IF procedure applicable obtain Data Sht with QC Review from WPG. IF not document in Block 27 and contact QC for Hold Point Review (see QC Hold Point Sht).

*[Handwritten signature]* 7/11/90  
*[Handwritten signature]* 7/11/90

Block 23:

Remove residual distributor covers, inspect and remove as required Per 27601-c.

RDH 7-11-90

Block 26: *[Handwritten signature]* 7/12/90

Block 23:

Remove air start valve covers on the cylinders identified by Cooper Rep and Ray Howard.

Perform work Per Procedure 27594-c.

RDH 7-12-90

Nuclear Plant Maintenance Work Order Continuation Sheet

MPL No. 22401-64.001

MWO No. 29003028

Work Description

Block 23:

The Cap on the Air start valves need to be inspect and replace as directed by system Eng (seven caps)

7/13/90  
HOLD POINT  
7/13/90  
HOLD POINT  
7/13/90  
HOLD POINT

Remove Cap from NEW Air start valve in Warehouse.

Check the new caps for Flatness. (Using a true Flat surface)

Remove old cap (existing caps on the installed valves).

Misc. the existing piston (O.D) and misc. the I.D of New caps. Need .002" clearance.

- IF clearance is acceptable, install new cap on existing valve per 27598-C.

- Document in block 27 the valves which were inspected and which caps were replaced.

- Initiate a separate MWO to replace caps on the new Air start valves that were req. out of Warehouse.

7/13/90

Block 27 (Cont)

Cap to Piston clearance on new components may exceed the 0.003 inch requirement of 27598-C.

Justification is 0.009 clearance is acceptable on operating units. For Study 7-13-90



Nuclear Plant Maintenance Work Order Continuation Sheet

Page 1

MPL No. 22403 GYON1

MWO No. 29003028

Work Description Block 2 removed 8L subcover cover after determining which  
 air start valves were at the bottom of the air start distributor they  
 were 8L & 5L with 8L firing first. Barred engine to top dead center of the  
 compression stroke of 8L cylinder synchronous then air pulled the engine  
 approx 3 seconds. Engine railed sluggishly and kicked back slightly during roll.  
 Engine did not seem to run over much more than one revolution, after air  
 pulled the engine from the position it stopped in for approx 4 seconds. There  
 were no problems indicated. Repositioned engine at TDC of 8L cyl comp stroke  
 and air pulled engine with time by watch for 5 seconds. Engine railed over  
 several times with no problem. The engine was then started with no  
 problem. All tests above were performed with engine air isolated on right bank  
 cylinders. we then removed the two drain lines and bottom air start  
 distribution <sup>AD 7-11-90</sup> lines from the right and left bank air start distributor.  
 No oil was found in the right bank dist. or lines. Reinstalled lines on  
 right bank dist and tightened. On the left bank dist. the drain lines  
 were clear but the upper drain line fitting in the distributor showed oil  
 standing in the dist. oil was also standing in the two bottom distribution  
 lines which are 8L & 5L. Oil <sup>5</sup> was only dripping from 5L dist side but approx  
 1/2 oz was drained from 8L dist side. Removed 8L line from subcover to  
 to left oil drained from line but none did. oil was seen in line though. Ensure  
 all lines and fitting were clear and reinstalled and tightened. Did not  
 blow out line from dist. to subcover though. Engineering support  
 was present during work and <sup>Trouble #0 7-11-90</sup> fastening shooting. <sup>AD 7-11-90</sup> the <sup>AD 7-11-90</sup>  
~~sample~~ from 8L is attached to <sup>AD 7-11-90</sup> ~~AD 7-11-90~~. The oil from 8L side  
 of air start dist. is on duty supv desk. <sup>AD 7-11-90</sup> Note: No oil was in the  
 right bank air start dist but the cover gasket is leaking oil which may be the  
 reason none is building up in the distributor. <sup>AD 7-11-90</sup>

Nuclear Plant Maintenance Work Order Continuation Sheet

MPL No. 2240364001

MWO No. 29003038

Work Description Block 27: Removed the Right and Left bank air start distri-  
 ct air supply and drain lines and removed the Housing covers. Oil was behind the  
 Left bank dist cover and a very small amount was behind the Right bank cover  
 in the belt take space. Installed 0-200 PSI Temperature Gauges to the RA and RB  
 lines in 5L, 5R and 6R air start valves. Reinstalled the RA and LA dist covers  
 and supply and drain air lines so engine could be air started to trouble shoot  
 The air start valves. 210 7-12-90

Nuclear Plant Maintenance Work Order Continuation Sheet

3

MPL No. 224034001

MWO No. 29003028

Work Description Performed Functional tests on all Air start valves per instructions from vendor Rep. The vendor Rep kept notes on his (on site) evaluations of each function or non function of individual valves. We were instructed to remove the top portion of the air start valve (see block 23) #8R and did so. Micrometer readings are being taken (for information) at this time and decisions being made.

Note: Three blue shop towels are ~~loose~~ loosely packed around each of the upright pushrods at cylinder head # 8 R. Be certain to remove them prior to re-assembly of the Air start valve actuator. One tag is over the open holes around the air start valve. 7/7-7-12-90

Continuation from Block #27 cleaned & checked  
Proved gap to VALVE GAP per procedure 27 598-C  
.002 ± .002 clearance on all use pin gauges  
VP-3-2785 & on side MGS VP-3-2155 / 10-2-90  
QC verified clearances MWS 5-13-90

Block 27 Torqued Right and Left bank air start distributor covers bolts to 30 ft  
lbw 2-14-76 VP-3-2437 1/2 8-13-90 MWS 7-13-90

Block 76 MWS 7-13-90

4

Nuclear Plant Maintenance Work Order Continuation Sheet

MPL No. 22403 G4001

MWO No. 29003028

Work Description

Block # 27:

OPERATIONS RAN GENERATOR FOR ~ 1 Hr. EACH  
 AIR START VALVE WAS TESTED AT 100 PSI PILOT PRESSURE,  
 OIL TEMP. AT TIME OF TEST 169° F. FOUND SEVEN VALVES  
 NOT OPERATING PROPERLY: 1L, 4L, 5L, 1R, 6R, 7R, & 8R.  
 OBTAIN NEW VALVES MER 90-10282. REMOVED AIR START  
 CAPS FROM NEW VALVES TO REPLACE OLD CAPS. USED RB7-13-90



Nuclear Plant Maintenance Work Order Continuation Sheet

MPL No. 2-2403-64-001

MWO No. 29003028

Block 27:

Work Description Measured I.D. of seven new Air Start Valve

Caps with VP-3-2879, Due 2-17-91, obtained the following measurements # 1 = 2.250", # 2 = 2.249", # 3 = 2.249" # 4 = 2.249, # 5 = 2.250", # 6 = 2.249" # 7 = 2.250"

Measured Airstart pistons at # 1 = 2.246" # 2 = 2.246" # 3 = 2.246" # 4 = 2.246 # 5 = 2.246" # 6 = 2.246, # 7 = 2.246" with VP-3-2155

Due 10-2-90. Verified flatness of Airstart Valve caps by placing it on the granite surface plate, VP-3-3406. Due 11-15-94. (WHT 7-13-90) Ref. MER's 90-10268 and 90-10282.

Installed new air start valve caps and original pistons. Matched caps and pistons to assure .003" clearance between cap bore and piston I.D.. Torqued all air start cap screws to 150 ft.lbs. used MTE torque wrench UP-3-2287 CDD 9/8/90. Connected air supply tubing, replaced and tightened Zomet covers. (Caps & pistons installed on 1L, 4L, 5L, 1R, 6R, 7R, & 8R cylinders) 7-13-90

Ops ran engine for ≈ 1 hr. After wards, all air start valves were tested using house service air at 100 psig. Valves opened & closed satisfactorily. Ops <sup>859</sup> 7/13/90 Engine turned over to operations.

Remaining parts of air start valves are stored in Box # 2 of shop mezz. New caps need to be ordered and entire air start valve assembly returned to stock. Bill H. 7-13-90

Plc Mantel - Housekeeping PKW 7-13-90

|                               |               |                      |
|-------------------------------|---------------|----------------------|
| Procedure No.<br>VEGP 27601-C | Revision<br>0 | Page No.<br>17 of 21 |
|-------------------------------|---------------|----------------------|

Sheet 1 of 1

POWER AND SIGNAL REMOVAL/REPLACEMENT DATA SHEET

Safety Related/QC Holdpoints

Non-Safety Related

NOTES

- a. To install jumpers and/or lift wires, other than those directly associated with the equipment tag(s)/scheme number(s) listed on the Work Order, notify the Shift
- b. Ensure that each lead (wire) is marked so it can be uniquely identified with its termination point.
- c. Independent verification is only required on safety related equipment. Place N/A in independent verification block for non-safety related equipment.
- d. If the worker leaves the immediate proximity of the work or the work is interrupted, complete and install a "Jumper and Lifted Wire" tag per 00306-C, "Temporary Jumper And Lifted Wire Control". Instead of Control Number use the Procedure number on the tag.
- e. If holdpoints do not apply, NA QC Verification block.
- f. If applicable, tags shall remain intact and will only be removed by the independent verifier.

| IDENTIFY LEADS LIFTED, JUMPERS INSTALLED, LINES OPEN, ETC. | LOCATION PANEL OR JUNCTION BOX | REMOVAL           |                                  |                   | RECONNECTION      |                                  | QC HOLD POINT     |
|--|--------------------------------|-------------------|----------------------------------|-------------------|-------------------|----------------------------------|-------------------|
|  |                                | PERFORMED BY/DATE | INDEPENDENT VERIFICATION BY/DATE | QC VERIF. BY/DATE | PERFORMED BY/DATE | INDEPENDENT VERIFICATION BY/DATE | QC VERIF. BY/DATE |
|  |                                |                   |                                  |                   |                   |                                  |                   |
|  |                                |                   |                                  |                   |                   |                                  |                   |
|  |                                |                   |                                  |                   |                   |                                  |                   |
|  |                                |                   |                                  |                   |                   |                                  |                   |
|  |                                |                   |                                  |                   |                   |                                  |                   |
|  |                                |                   |                                  |                   |                   |                                  |                   |
|  |                                |                   |                                  |                   |                   |                                  |                   |
|  |                                |                   |                                  |                   |                   |                                  |                   |

A  
N

COMPLETION SHEET

|  |   |   |
|--|---|---|
| PROCEDURE NO.<br>27601-C                           | REVISION<br>0                           | SHEET<br>1 of 4   |
| TAG NO.<br>2-2403-61-001                           | DESCRIPTION<br>Standby Diesel Generator |   |
| SERIAL NO.<br>76023                                | MANUFACTURER<br>Transamerica Delaval    | MODEL<br>DSRV-16-4  |
| TEST EQUIPMENT USED<br>See applicable "Data" Sheet |   | <input checked="" type="checkbox"/> Safety Related/QC Holdpoints apply<br><input type="checkbox"/> Non-Safety Related |

| PROCEDURE STEP | DESCRIPTION                          | MAINT. INIT/DATE | HOLD POINT (Yes/No) | QC INIT/DATE |
|----------------|--------------------------------------|------------------|---------------------|--------------|
| 4.1            | Verify Prerequisites met             | DEC 17/13/90     | Yes                 | Dec 17/14/90 |
| 4.2            | Shift Supervisor Notified            | DEC 17/13/90     | Yes                 |              |
| 4.3            | Diesel Generator Isolated and Tagged | DEC 17/13/90     | Yes                 | Dec 17/14/90 |
| 4.5.6          | Visually Check Spool & Sleeves       |                  | QC HOLD POINT       |              |
|                | 1L                                   |                  |                     |              |
|                | 2L                                   |                  |                     |              |
|                | 3L                                   |                  |                     |              |
|                | 4L                                   |                  |                     |              |
|                | 5L                                   |                  |                     |              |
|                | 6L                                   |                  |                     |              |
|                | 7L                                   |                  |                     |              |
|                | 8L                                   |                  |                     |              |
|                | 1R                                   |                  |                     |              |
|                | 2R                                   |                  |                     |              |
|                | 3R                                   |                  |                     |              |
|                | 4R                                   |                  |                     |              |
|                | 5R                                   |                  |                     |              |
|                | 6R                                   |                  |                     |              |
|                | 7R                                   |                  |                     |              |
|                | 8R                                   |                  |                     |              |
|                | N/A                                  |                  |                     |              |

| PROCEDURE STEP | DESCRIPTION   | MAINT. INIT/DATE  | HOLD POINT (Yes/No)                    | QC INIT/DATE |
|----------------|---|-------------------|--|--------------|
| 4.5.7          | Measure Spool Wear Flat                             | N/A               | HOLD POINT ATTACHED                    |              |
|                | 1L  | _____             | _____                                  | _____        |
|                | 2L  | _____             | _____                                  | _____        |
|                | 3L  | _____             | _____                                  | _____        |
|                | 4L  | _____             | _____                                  | _____        |
|                | 5L  | _____             | _____                                  | _____        |
|                | 6L  | _____             | _____                                  | _____        |
|                | 7L  | _____             | _____                                  | _____        |
|                | 8L  | _____             | _____                                  | _____        |
|                | 1R  | _____             | _____                                  | _____        |
|                | 2R  | _____             | _____                                  | _____        |
|                | 3R  | _____             | _____                                  | _____        |
|                | 4R  | _____             | _____                                  | _____        |
|                | 5R  | _____             | _____                                  | _____        |
|                | 6R  | _____             | _____                                  | _____        |
|                | 7R  | _____             | _____                                  | _____        |
|                | 8R  | _____             | _____                                  | _____        |
| 4.5.8          | Visually Check Cam<br>Left Bank<br>Right Bank       | N/A<br>N/A<br>N/A | HOLD POINT<br>HOLD POINT<br>HOLD POINT |              |
| 4.5.9          | Install Spool, Spring,<br>o-ring and cap            | N/A               | HOLD POINT                             |              |
|                | 1L  | _____             | _____                                  | _____        |
|                | 2L  | _____             | _____                                  | _____        |
|                | 3L  | _____             | _____                                  | _____        |
|                | 4L  | _____             | _____                                  | _____        |
|                | 5L  | _____             | _____                                  | _____        |
|                | 6L  | _____             | _____                                  | _____        |
|                | 7L  | _____             | _____                                  | _____        |
|                | 8L  | _____             | _____                                  | _____        |
|                | 1R  | _____             | _____                                  | _____        |
|                | 2R  | _____             | _____                                  | _____        |
|                | 3R  | _____             | _____                                  | _____        |
|                | 4R  | _____             | _____                                  | _____        |
|                | 5R  | _____             | _____                                  | _____        |
|                | 6R  | _____             | _____                                  | _____        |
|                | 7R  | _____             | _____                                  | _____        |
|                | 8R  | _____             | _____                                  | _____        |
| 4.5.10         | Connect Pilot Air Tubing<br>Left Bank<br>Right Bank | N/A<br>N/A<br>N/A | HOLD POINT<br>HOLD POINT<br>HOLD POINT |              |
| 4.5.11         | Install Air Distributor<br>Cover                    |                   |  |              |
|                | Left Bank <u>30</u> ftlbs.                          | 11/17/90          | HOLD POINT                             | 7/13/90      |
|                | Right Bank <u>30</u> ftlbs.                         | 11/17/90          | HOLD POINT                             | 7/13/90      |

VP-3-2437  
C/D 8-13-90

Handwritten signatures and dates: 7/13/90, 7/13/90



| PROCEDURE STEP | DESCRIPTION   | MAINT. INIT./DATE | HOLD POINT (Yes/No) | QC INIT./DATE  |
|----------------|---|-------------------|---------------------|----------------|
| 4.5.12         | Reconnect Lube Oil Supply<br>And Drain Tubing<br>Left Bank<br>Right Bank              | N/A               | Q.C.<br>HOLD POINT  |                |
| 4.6.10         | Check Distributor Timing<br>Left Bank<br>Right Bank                                   |                   | Q.C.<br>HOLD POINT  |                |
| 4.6.11         | Dowel Cam To Stub Shaft<br>Left Bank<br>Right Bank                                    |                   | Q.C.<br>HOLD POINT  |                |
| 4.6.12a        | Torque Hex Nut<br>Left Bank ft.lbs<br>Right Bank ft.lbs                               |                   | Q.C.<br>HOLD POINT  |                |
| 4.6.12b        | Stake Lock Tab<br>Left Bank<br>Right Bank   |                   | Q.C.<br>HOLD POINT  | N/A DC 7.19.90 |
| 4.6.12c        | Bend Lock Tab<br>Left Bank<br>Right Bank  |                   | Q.C.<br>HOLD POINT  |                |
| 4.6.13         | Reconnect Pilot Air<br>Tubing<br>Left Bank<br>Right Bank                              |                   | Q.C.<br>HOLD POINT  |                |
| 4.6.14         | Air Supply Removed<br>From Distributor<br>Left Bank<br>Right Bank                     |                   | Q.C.<br>HOLD POINT  |                |
| 4.6.15         | Install Spring and Cap<br>for Spool Number One<br>Left Bank<br>Right Bank             |                   | Q.C.<br>HOLD POINT  |                |
| 4.6.16         | Install Air Distributor<br>Cover<br>Left Bank _____ ftlbs.<br>Right Bank _____ ftlbs. | N/A               | Q.C.<br>HOLD POINT  |                |

| <u>PROCEDURE STEP</u> | <u>DESCRIPTION</u>  | <u>MAINT. INIT/DATE</u>                  | <u>HOLD POINT (Yes/No)</u>                                   | <u>QC INIT/DATE</u>                      |
|-----------------------|---|--|--|--|
| 4.6.17                | Reconnect Lube Oil Supply And Drain Tubing<br>Left Bank<br>Right Bank | <u>BKW 7/13/90</u><br><u>BKW 7/13/90</u> | Q.C. HOLD POINT<br><u>NO</u><br>Q.C. HOLD POINT<br><u>NO</u> | <u>See 7/13/90</u><br><u>See 7/13/90</u> |
| 4.8                   | Notify Shift Supervisor<br>Required maintenance is complete           | <u>BKW 7-13-90</u>                       | <u>NO</u>  | <u>See 7/13/90</u>                       |

COMMENTS/ADDITIONAL HOLD POINTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

QC has reviewed this procedure for hold points Chris O. Cheek  
Signature 7/11/90

|  |                 |
|--|-----------------|
| APPROVED <input checked="" type="checkbox"/> | DISAPPROVED ( ) |
| FOREMAN                                      | DATE            |
| <u>D.E. Adams</u>                            | <u>7/13/90</u>  |

|                            |                |
|----------------------------|----------------|
| COMPLETED BY               | DATE           |
| <u>Bill K. [Signature]</u> | <u>7-13-90</u> |

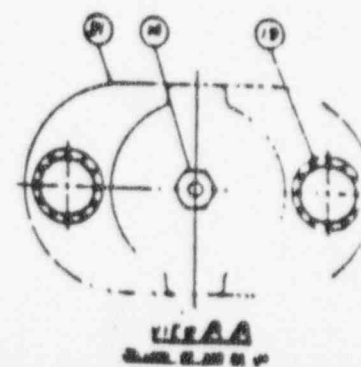
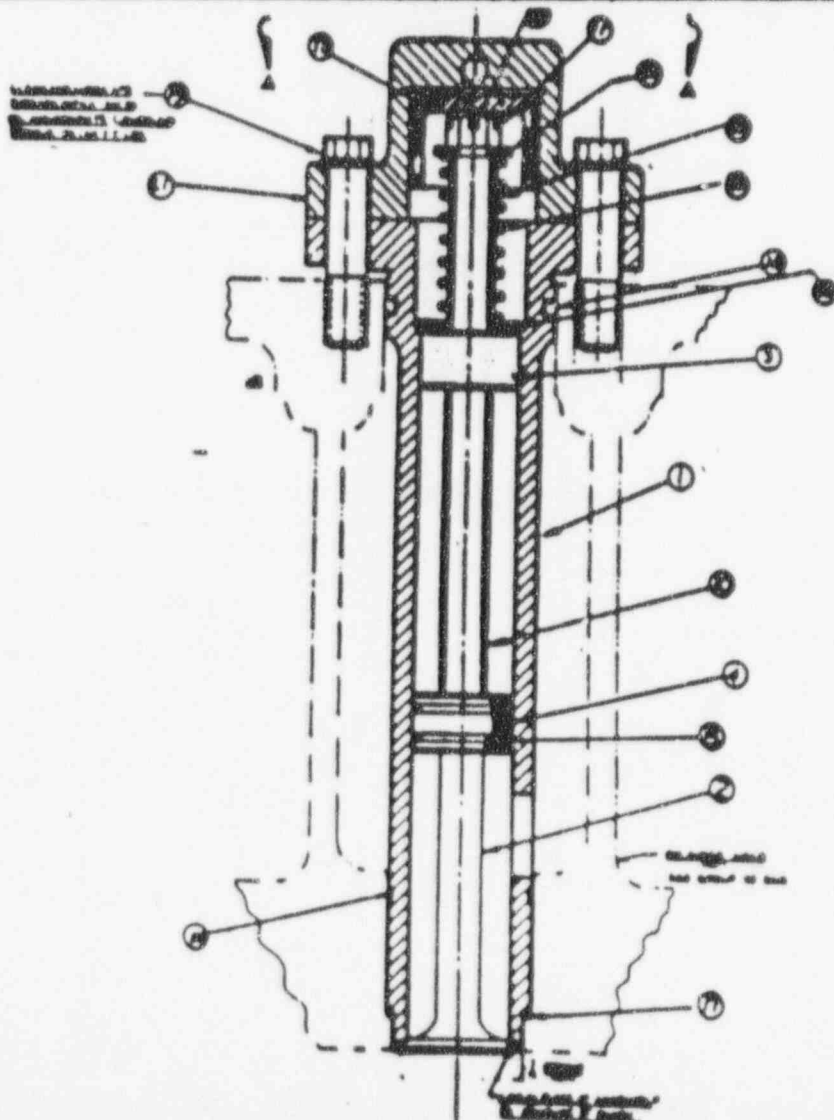
|                       |         |               |                      |
|-----------------------|---------|---------------|----------------------|
| PROCEDURE NO.<br>VEGP | 27598-C | REVISION<br>0 | PAGE NO.<br>21 of 31 |
|-----------------------|---------|---------------|----------------------|

Sheet 1 of 4

DATA SHEET 1

AIR START VALVE INSPECTION

|   |                              |
|---|------------------------------|
| COMPONENT GROUP TITLE:<br>AIR START VALVE     | PARTS GROUP NO.<br>02-359    |
| LOCATION:<br>VOGTLE ELECTRIC GENERATING PLANT | UNIT NO.<br>II               |
| TAG NUMBER:<br>2-2905-G4-001                  | ENGINE SERIAL NO.<br>76023   |
| TOTAL ENGINE HOURS:<br>428.1                  | HOURS SINCE LAST INSPECTION: |
| DATE THIS INSPECTION:<br>7/13/90              | REFERENCE STEPS:<br>4.6, 4.7 |



DATA SHEET 1

AIR START VALVE INSPECTION

ENGINE TAG NO.: 2-2403-64-001 DATE: 7-13-90

1) Step 4.6.2b,c and d: Cap To Piston Clearance

| Valve | CAP   |       | PISTON |       | Clearance | Sat | Unsat | Performed By |
|-------|-------|-------|--------|-------|-----------|-----|-------|--------------|
|       | x-x   | y-y   | x-x    | y-y   |           |     |       |              |
| 1R    | 2.249 | 2.249 | 2.247  | 2.247 | .002      | ✓   |       | Thibault     |
| 1L    | 2.249 | 2.249 | 2.247  | 2.247 | .002      |     |       | Thibault     |
| 2R    | 2.249 | 2.249 | 2.247  | 2.247 | .002      | ✓   |       | Thibault     |
| 2L    | 2.249 | 2.249 | 2.246  | 2.246 | .003      |     |       | Thibault     |
| 3R    | 2.249 | 2.249 | 2.246  | 2.246 | .003      | ✓   |       | Thibault     |
| 3L    | 2.249 | 2.249 | 2.246  | 2.246 | .003      |     |       | Thibault     |
| 4R    | 2.249 | 2.249 | 2.247  | 2.247 | .002      | ✓   |       | Thibault     |
| 4L    | 2.249 | 2.249 | 2.247  | 2.247 | .002      |     |       | Thibault     |
| 5R    | 2.249 | 2.249 | 2.247  | 2.247 | .002      | ✓   |       | Thibault     |
| 5L    | 2.249 | 2.249 | 2.247  | 2.247 | .002      |     |       | Thibault     |
| 6R    | 2.249 | 2.249 | 2.246  | 2.246 | .002      | ✓   |       | Thibault     |
| 6L    | 2.249 | 2.249 | 2.246  | 2.246 | .003      |     |       | Thibault     |
| 7R    | 2.249 | 2.249 | 2.246  | 2.246 | .002      | ✓   |       | Thibault     |
| 7L    | 2.249 | 2.249 | 2.247  | 2.247 | .002      |     |       | Thibault     |
| 8R    | 2.249 | 2.249 | 2.247  | 2.247 | .002      | ✓   |       | Thibault     |
| 8L    | 2.249 | 2.249 | 2.246  | 2.246 | .003      |     |       | Thibault     |

M&TE Serial No. VP-3-2785

Cal. Due Date 3-22-91

Clearance When New: 0.001/0.003" Replace When Over 0.009"

2) Step 4.6.2e: Valve Internals Inspection

| Valve | Comments          | Sat | Unsat | Performed By/Date |
|-------|-------------------|-----|-------|-------------------|
| 1R    | WORN AND CAP ONLY | ✓   |       | Thibault 7-13-90  |
| 1L    |                   | ✓   |       | Thibault 7-13-90  |
| 2R    |                   | ✓   |       | Thibault 7-13-90  |
| 2L    |                   | ✓   |       | Thibault 7-13-90  |
| 3R    |                   | ✓   |       | Thibault 7-13-90  |
| 3L    |                   | ✓   |       | Thibault 7-13-90  |
| 4R    |                   | ✓   |       | Thibault 7-13-90  |
| 4L    |                   | ✓   |       | Thibault 7-13-90  |
| 5R    |                   | ✓   |       | Thibault 7-13-90  |
| 5L    |                   | ✓   |       | Thibault 7-13-90  |
| 6R    |                   | ✓   |       | Thibault 7-13-90  |
| 6L    |                   | ✓   |       | Thibault 7-13-90  |
| 7R    |                   | ✓   |       | Thibault 7-13-90  |
| 7L    |                   | ✓   |       | Thibault 7-13-90  |
| 8R    |                   | ✓   |       | Thibault 7-13-90  |
| 8L    | WORN AND CAP ONLY | ✓   |       | Thibault 7-13-90  |

Q.C. HOLD POINT  
AOC 7/13/90  
J.R.#37337

Q.C. HOLD POINT  
AOC 7/13/90  
J.R.#37337



DATA SHEET 1

AIR START VALVE INSPECTIONS

ENGINE TAG NO. 2-2403-G4-001 DATE: 7/13/90

3) Step 4.6.2f and h: Valve Seat Inspection

| Valve | Valve/Seat Inspection | Bluing | Sat | Unsat | Performed By/Date |
|-------|-----------------------|--------|-----|-------|-------------------|
| 1R    |                       |        |     |       |                   |
| 1L    |                       |        |     |       |                   |
| 2R    |                       |        |     |       |                   |
| 2L    |                       |        |     |       |                   |
| 3R    |                       |        |     |       |                   |
| 3L    |                       |        |     |       |                   |
| 4R    |                       |        |     |       |                   |
| 4L    |                       |        |     |       |                   |
| 5R    |                       |        |     |       |                   |
| 5L    |                       |        |     |       |                   |
| 6R    |                       |        |     |       |                   |
| 6L    |                       |        |     |       |                   |
| 7R    |                       |        |     |       |                   |
| 7L    |                       |        |     |       |                   |
| 8R    |                       |        |     |       |                   |
| 8L    |                       |        |     |       |                   |

4) Step 4.7.4 and 4.7.6: Air start valve capscrews. ENGINE HOURS 428.1

| Cylinder | Capscrew = 2-3/4" |   | Torque     |            | Performed | Witnessed   |
|----------|-------------------|---|------------|------------|-----------|-------------|
|          | 1                 | 2 | 1          | 2          |           |             |
| 1R       |                   |   | 150 ft/lbs | 150 ft/lbs | PKW       | PKC 7/13/90 |
| 2R       |                   |   | 150 ft/lbs | 150 ft/lbs | PKW       | PKC 7/13/90 |
| 3R       |                   |   | 150 ft/lbs | 150 ft/lbs | PKW       | PKC 7/13/90 |
| 4R       |                   |   | 150 ft/lbs | 150 ft/lbs | PKW       | PKC 7/13/90 |
| 5R       |                   |   | 150 ft/lbs | 150 ft/lbs | PKW       | PKC 7/13/90 |
| 6R       |                   |   | 150 ft/lbs | 150 ft/lbs | PKW       | PKC 7/13/90 |
| 7R       |                   |   | 150 ft/lbs | 150 ft/lbs | PKW       | PKC 7/13/90 |
| 8R       |                   |   | 150 ft/lbs | 150 ft/lbs | PKW       | PKC 7/13/90 |
| 1L       |                   |   | 150 ft/lbs | 150 ft/lbs | PKW       | PKC 7/13/90 |
| 2L       |                   |   | 150 ft/lbs | 150 ft/lbs | PKW       | PKC 7/13/90 |
| 3L       |                   |   | 150 ft/lbs | 150 ft/lbs | PKW       | PKC 7/13/90 |
| 4L       |                   |   | 150 ft/lbs | 150 ft/lbs | PKW       | PKC 7/13/90 |
| 5L       |                   |   | 150 ft/lbs | 150 ft/lbs | PKW       | PKC 7/13/90 |
| 6L       |                   |   | 150 ft/lbs | 150 ft/lbs | PKW       | PKC 7/13/90 |
| 7L       |                   |   | 150 ft/lbs | 150 ft/lbs | PKW       | PKC 7/13/90 |
| 8L       |                   |   | 150 ft/lbs | 150 ft/lbs | PKW       | PKC 7/13/90 |

QC. Hold for PKC 7/13/90  
S. R. # 37357

\* \*

M&TE Serial No. W3-2373  
Cal. Due Date 10-5-90

\* Ref to 2nd 35152  
HAD TO TORQUE 7/13/90

DATA SHEET 1

ENGINE TAG No. \_\_\_\_\_ DATE: \_\_\_\_\_

5) Step 4.7.9h: Rocker Arm Capscrew Torque

| Cylinder | Rocker Arm | Capscrew | Parformed | Witnessed |
|----------|------------|----------|-----------|-----------|
|          | 1          | 2        |           |           |
| 1R       |            |          |           |           |
| 2R       |            |          |           |           |
| 3R       |            |          |           |           |
| 4R       |            |          |           |           |
| 5R       |            |          |           |           |
| 6R       |            |          |           |           |
| 7R       |            |          |           |           |
| 8R       |            |          |           |           |
| 1L       |            |          |           |           |
| 2L       |            |          |           |           |
| 3L       |            |          |           |           |
| 4L       |            |          |           |           |
| 5L       |            |          |           |           |
| 6L       |            |          |           |           |
| 7L       |            |          |           |           |
| 8L       |            |          |           |           |

M&TE Serial No. \_\_\_\_\_  
 Cal. Due Date \_\_\_\_\_

DATA SHEET 2

AIR START VALVE CAPSCREW TORQUING

ENGINE TAG No.: \_\_\_\_\_  
D.C. HOLD POINT Step 4.7.7

DATE: \_\_\_\_\_  
 ENGINE HOURS \_\_\_\_\_

| Cylinder | Capscrew |   | Did Screw Move? | Performed | Witnessed |
|----------|----------|---|-----------------|-----------|-----------|
|          | 1        | 2 |                 |           |           |
| 1R       |          |   |                 |           |           |
| 2R       |          |   |                 |           |           |
| 3R       |          |   |                 |           |           |
| 4R       |          |   |                 |           |           |
| 5R       |          |   |                 |           |           |
| 6R       |          |   |                 |           |           |
| 7R       |          |   |                 |           |           |
| 8R       |          |   |                 |           |           |
| 1L       |          |   |                 |           |           |
| 2L       |          |   |                 |           |           |
| 3L       |          |   |                 |           |           |
| 4L       |          |   |                 |           |           |
| 5L       |          |   |                 |           |           |
| 6L       |          |   |                 |           |           |
| 7L       |          |   |                 |           |           |
| 8L       |          |   |                 |           |           |

M&TE Serial No. \_\_\_\_\_  
 Cal. Due Date \_\_\_\_\_

D.C. HOLD POINT Step 4.7.7:

ENGINE HOURS \_\_\_\_\_

N A

| Cylinder | Capscrew |   | Did screw Move? | Performed | Witnessed |
|----------|----------|---|-----------------|-----------|-----------|
|          | 1        | 2 |                 |           |           |
| 1R       |          |   |                 |           |           |
| 2R       |          |   |                 |           |           |
| 3R       |          |   |                 |           |           |
| 4R       |          |   |                 |           |           |
| 5R       |          |   |                 |           |           |
| 6R       |          |   |                 |           |           |
| 7R       |          |   |                 |           |           |
| 8R       |          |   |                 |           |           |
| 1L       |          |   |                 |           |           |
| 2L       |          |   |                 |           |           |
| 3L       |          |   |                 |           |           |
| 4L       |          |   |                 |           |           |
| 5L       |          |   |                 |           |           |
| 6L       |          |   |                 |           |           |
| 7L       |          |   |                 |           |           |
| 8L       |          |   |                 |           |           |

M&TE Serial No. \_\_\_\_\_  
 Cal. Due Date \_\_\_\_\_

FOR USE WITH CONTROL NO. 29003028

DATA SHEET 2

AIR START VALVE CAPSCREW TORQUING

ENGINE TAG No.: \_\_\_\_\_

DATE: \_\_\_\_\_

Step 4.7.7

ENGINE HOURS \_\_\_\_\_

| Cylinder | Capscrew |   | Did Capscrew Move? | Performed | Witnessed |
|----------|----------|---|--------------------|-----------|-----------|
|          | 1        | 2 |                    |           |           |
| 1R       |          |   |                    |           |           |
| 2R       |          |   |                    |           |           |
| 3R       |          |   |                    |           |           |
| 4R       |          |   |                    |           |           |
| 5R       |          |   |                    |           |           |
| 6R       |          |   |                    |           |           |
| 7R       |          |   |                    |           |           |
| 8R       |          |   |                    |           |           |
| 1L       |          |   |                    |           |           |
| 2L       |          |   |                    |           |           |
| 3L       |          |   |                    |           |           |
| 4L       |          |   |                    |           |           |
| 5L       |          |   |                    |           |           |
| 6L       |          |   |                    |           |           |
| 7L       |          |   |                    |           |           |
| 8L       |          |   |                    |           |           |

M&TE Serial No. \_\_\_\_\_

Cal. Due Date \_\_\_\_\_

Step 4.7.7:

ENGINE HOURS \_\_\_\_\_

| Cylinder | Capscrew |   | Did screw Move? | Performed | Witnessed |
|----------|----------|---|-----------------|-----------|-----------|
|          | 1        | 2 |                 |           |           |
| 1R       |          |   |                 |           |           |
| 2R       |          |   |                 |           |           |
| 3R       |          |   |                 |           |           |
| 4R       |          |   |                 |           |           |
| 5R       |          |   |                 |           |           |
| 6R       |          |   |                 |           |           |
| 7R       |          |   |                 |           |           |
| 8R       |          |   |                 |           |           |
| 1L       |          |   |                 |           |           |
| 2L       |          |   |                 |           |           |
| 3L       |          |   |                 |           |           |
| 4L       |          |   |                 |           |           |
| 5L       |          |   |                 |           |           |
| 6L       |          |   |                 |           |           |
| 7L       |          |   |                 |           |           |
| 8L       |          |   |                 |           |           |

M&TE Serial No. \_\_\_\_\_

Cal. Due Date \_\_\_\_\_





COMPLETION SHEET

|  |   |                    |
|--|---|--------------------|
| PROCEDURE NO.<br>27598-C                           | REVISION<br>0   | SHEET<br>1 of 4    |
| AG NO.<br>2-2403-G9-00/                            | DESCRIPTION<br>Standby Diesel Generator   |                    |
| SERIAL NO.<br>NA                                   | MANUFACTURER<br>Transamerica Delaval  | MODEL<br>DSRV-16-4 |
| TEST EQUIPMENT USED<br>See applicable "Data" Sheet | <input checked="" type="checkbox"/> Safety Related/QC HoldPoints apply<br><input type="checkbox"/> Non-Safety Related |                    |

| PROCEDURE STEP   | DESCRIPTION   | MAINT. INIT/DATE   | HOLD POINT (Yes/No)                       | QC INIT/DATE          |
|------------------|---|--------------------|---|-----------------------|
| 4.1              | Verify Prerequisites met  | <u>RCV 7-13-90</u> | <u>NO</u>                                 | <u>RCV 7/13/90</u>    |
| 4.2              | Shift Supervisor Notified   | <u>RCV 7-13-90</u> |   |                       |
| 4.3              | Diesel Generator Isolated and Tagged                                    | <u>RCV 7-13-90</u> | <u>NO</u>                                 | <u>RCV 7/13/90</u>    |
| 4.6.2b through d | Measure Air Start Valve Cap to Piston Clearance "Data" Sheet 1, Sheet 2 | <u>*1</u>          | <u>O.C. HOLD POINT</u>                    | <u>RCV 7/13/90 *1</u> |
| 4.6.2e           | Inspect Air Start Valve Internals "Data" Sheet 1, Sheet 2               | <u>*1</u>          | <u>O.C. HOLD POINT</u>                    | <u>RCV 7/13/90 *1</u> |
| 4.6.2f           | Inspect Air Start Valve Seat For Pitting "Data" Sheet 1, Sheet 3        | <u>*1</u>          | <u>N/A <sup>RCV</sup> O.C. HOLD POINT</u> | <u>RCV 7/13/90 *1</u> |
| 4.6.2h           | Blue Air Start Valve "Data" Sheet 1, Sheet 3                            | <u>*1</u>          | <u>N/A <sup>RCV</sup> O.C. HOLD POINT</u> | <u>RCV 7/13/90 *1</u> |

\* Document on Referenced "Data" Sheet

| PROCEDURE STEP | DESCRIPTION   | MAINT. INIT/DATE | HOLD POINT (Yes/No) | QC INIT/DATE   |
|----------------|---|------------------|---------------------|----------------|
| 4.6.3          | Air Start Valves Reassembled                                |                  |                     |                |
|                | 1R  | N/A              | N/A                 | Dec 7/13/90    |
|                | 2R  |                  |                     |                |
|                | 3R  |                  |                     |                |
|                | 4R  |                  |                     |                |
|                | 5R  |                  |                     |                |
|                | 6R  |                  |                     |                |
|                | 7R  |                  |                     |                |
|                | 8R  |                  |                     |                |
|                | 1L  |                  |                     |                |
|                | 2L  |                  |                     |                |
|                | 3L  |                  |                     |                |
|                | 4L  |                  |                     |                |
|                | 5L  |                  |                     |                |
|                | 6L  |                  |                     |                |
|                | 7L  |                  |                     |                |
|                | 8L  | N/A              | O.C. HOLD POINT     | Dec 7/13/90    |
| 4.7.2          | Valve To Head Gasket Installed                              |                  |                     |                |
|                | 1R  | N/A              | N/A                 | Dec 7/13/90    |
|                | 2R  |                  |                     |                |
|                | 3R  |                  |                     |                |
|                | 4R  |                  |                     |                |
|                | 5R  |                  |                     |                |
|                | 6R  |                  |                     |                |
|                | 7R  |                  |                     |                |
|                | 8R  |                  |                     |                |
|                | 1L  |                  |                     |                |
|                | 2L  |                  |                     |                |
|                | 3L  |                  |                     |                |
|                | 4L  |                  |                     |                |
|                | 5L  |                  |                     |                |
|                | 6L  |                  |                     |                |
|                | 7L  |                  |                     |                |
|                | 8L  | N/A              | O.C. HOLD POINT     | Dec 7/13/90    |
| 4.7.4          | Air Start Valve Capscrews Inspected "Data" Sheet 1, Sheet 3 | *1               | N/A HOLD POINT      | Dec 7/13/90 *1 |
| 4.7.6          | Air Start Valve Capscrews Torqued - "Data" Sheet 1, Sheet 3 | *1               | O.C. HOLD POINT     | Dec 7/13/90 *1 |

\* Document on Referenced "Data" Sheet

Dec 7/13/90  
 J.C. #35152

| PROCEDURE<br>STEP | DESCRIPTION   | MAINT.<br>INIT/DATE | HOLD<br>POINT<br>(Yes/No)                                | QC<br>INIT/DATE    |
|-------------------|---|---------------------|--|--------------------|
| 4.7.7             | Air Start Valve Capscrews<br>Retorqued every 8 hours<br>of engine operation<br>"Data" Sheet 2 | N/A *<br>1          | SEE VENDOR<br>MEMO<br>O.C.<br>HOLD POINT / H. AS 7/27/90 | 7/27/90            |
| 4.7.9h            | Torque Rocker Arm<br>Capscrews "Data" Sheet 1,<br>Sheet 4                                     | *1 N/A              | NO   | Rec. 7/12/90<br>*1 |
| 4.7.10            | Adjust Intake And<br>Exhaust valves   | N/A                 | NO   | NO                 |
|                   | 1R  | /                   | NO   | /                  |
|                   | 2R  | /                   | NO   | /                  |
|                   | 3R  | /                   | NO   | /                  |
|                   | 4R  | /                   | NO   | /                  |
|                   | 5R  | /                   | NO   | /                  |
|                   | 6R  | /                   | NO   | /                  |
|                   | 7R  | /                   | NO   | /                  |
|                   | 8R  | /                   | NO   | /                  |
|                   | 1L  | /                   | NO   | /                  |
|                   | 2L  | /                   | NO   | /                  |
|                   | 3L  | /                   | NO   | /                  |
|                   | 4L  | /                   | NO   | /                  |
|                   | 5L  | /                   | NO   | /                  |
|                   | 6L  | /                   | NO   | /                  |
|                   | 7L  | /                   | NO   | /                  |
|                   | 8L  | N/A                 | NO   | /                  |
| 4.7.11            | Tools removed from engine   | DEA 12/13/90        | NO   | /                  |
| 4.7.12            | Cylinder head covers<br>installed   | DEA 12/13/90        | NO   | /                  |
| 4.7.13            | Main Bearing Oil Lines<br>installed   | N/A                 | NO   | /                  |
| 4.9               | Notify Shift Supervisor<br>required maintenance is<br>complete                                | DEA 12/13/90        | NO   | Rec. 7/12/90       |

\* Document on Referenced "Data" Sheet



|                               |               |                      |
|-------------------------------|---------------|----------------------|
| PROCEDURE NO.<br>VEGP 27598-C | REVISION<br>0 | PAGE NO.<br>31 of 31 |
|-------------------------------|---------------|----------------------|

COMMENTS/ADDITIONAL HOLD POINTS: REF. J.P. # 37337 Ac 7/13/90

QC has reviewed this procedure for hold points

Chris O'Cheek  
Signature

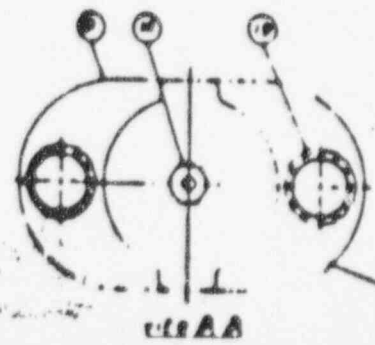
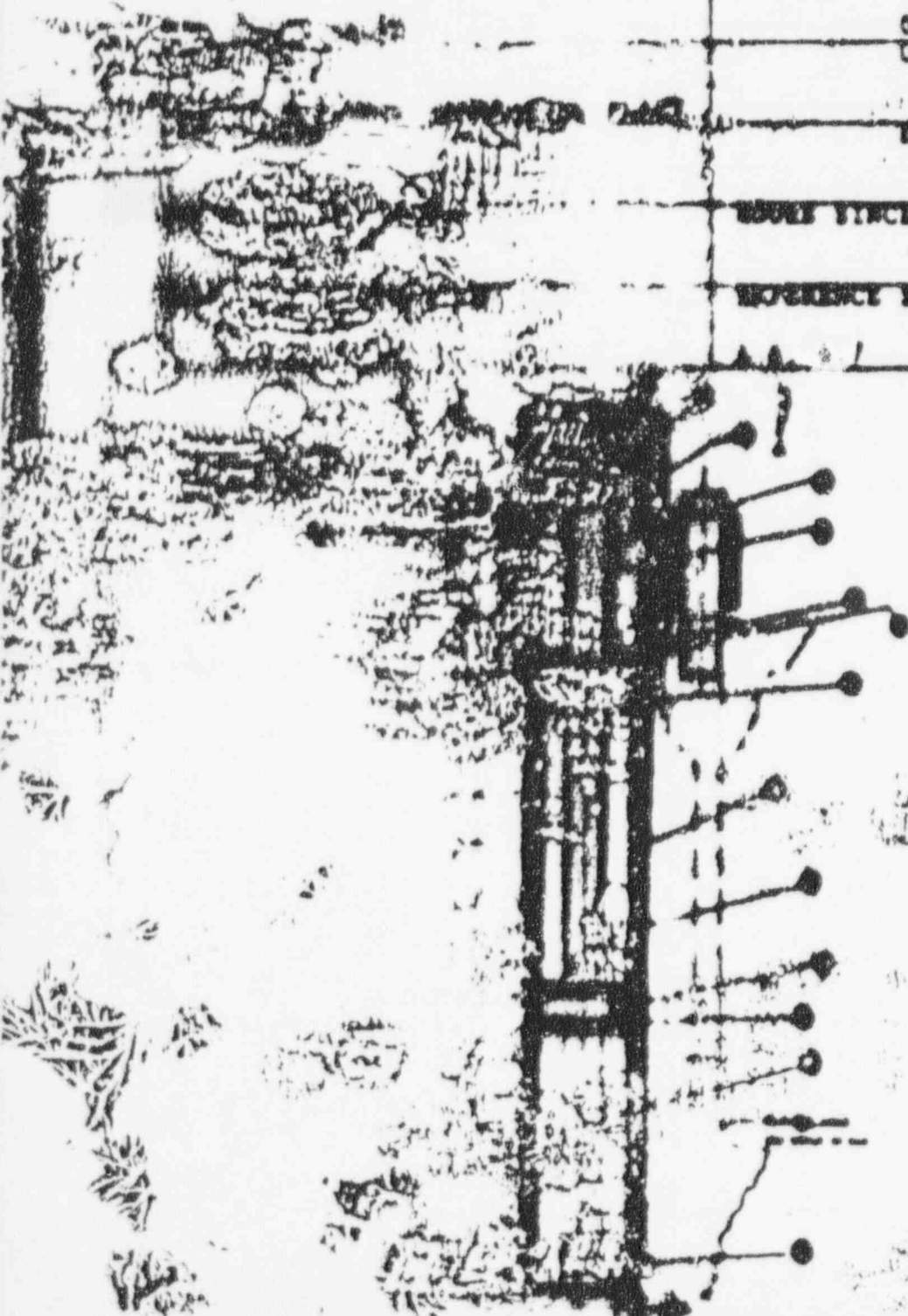
|  |                                      |
|--|--------------------------------------|
| APPROVED <input checked="" type="checkbox"/> | DISAPPROVED <input type="checkbox"/> |
| FOREMAN                                      | DATE                                 |
| <u>S.E. Adams</u>                            | <u>7/13/90</u>                       |

|                            |                |
|----------------------------|----------------|
| COMPLETED BY               | DATE           |
| <u>Bill K. [Signature]</u> | <u>7-13-90</u> |

DATA SHEET 6  
 LOW START VALUE INSPECTION

DESCRIPTION OF WORK TYPE:

|                              |
|------------------------------|
| PARTS GROUP NO.              |
| 07-359                       |
| UNIT NO.                     |
| 2                            |
| ENGINE SERIAL NO.            |
| 26035                        |
| HOURS SINCE LAST INSPECTION: |
| 1.3                          |
| REFERENCE STEPS:             |



DATA SHEET 1

AIR START VALVE INSPECTION

ENGINE TAG NO.: 2-2403 64-001 DATE: 7/15/90

CC  
HOLD POINT

Step 4.6.2b,c and d: Cap To Piston Clearance

| Valve | CAP |     | PISTON |     | Clearance | Sat | Unsat | Performed By |
|-------|-----|-----|--------|-----|-----------|-----|-------|--------------|
|       | x-x | y-y | x-x    | y-y |           |     |       |              |
| 1R    |     |     |        |     |           |     |       |              |
| 1L    |     |     |        |     |           |     |       |              |
| 2R    |     |     |        |     |           |     |       |              |
| 2L    |     |     |        |     |           |     |       |              |
| 3R    |     |     |        |     |           |     |       |              |
| 3L    |     |     |        |     |           |     |       |              |
| 4R    |     |     |        |     |           |     |       |              |
| 4L    |     |     |        |     |           |     |       |              |
| 5R    |     |     |        |     |           |     |       |              |
| 5L    |     |     |        |     |           |     |       |              |
| 6R    |     |     |        |     |           |     |       |              |
| 6L    |     |     |        |     |           |     |       |              |
| 7R    |     |     |        |     |           |     |       |              |
| 7L    |     |     |        |     |           |     |       |              |
| 8R    |     |     |        |     |           |     |       |              |
| 8L    |     |     |        |     |           |     |       |              |

M&T Serial No. \_\_\_\_\_

Cal. Due Date \_\_\_\_\_

Clearance When New: 0.001/0.003" Replace When Over 0.009"

CC  
HOLD POINT

2) Step 4.6.2e: Valve Internals Inspection

| Valve | Comments | Sat | Unsat | Performed By/Date |
|-------|----------|-----|-------|-------------------|
| 1R    |          |     |       |                   |
| 1L    |          |     |       |                   |
| 2R    |          |     |       |                   |
| 2L    |          |     |       |                   |
| 3R    |          |     |       |                   |
| 3L    |          |     |       |                   |
| 4R    |          |     |       |                   |
| 4L    |          |     |       |                   |
| 5R    |          |     |       |                   |
| 5L    |          |     |       |                   |
| 6R    |          |     |       |                   |
| 6L    |          |     |       |                   |
| 7R    |          |     |       |                   |
| 7L    |          |     |       |                   |
| 8R    |          |     |       |                   |
| 8L    |          |     |       |                   |

**DATA SHEET 1**

**AIR START VALVE INSPECTIONS**

ENGINE TAG NO. 2-2403-64-001      DATE: 7/15/90

Q.C.  
HOLD POINT

Step 4.6.2f and h: Valve Seat Inspection

| Valve | Valve/Seat Inspection | Bluing | Sat | Unsat | Performed By/Date |
|-------|-----------------------|--------|-----|-------|-------------------|
| 1R    |                       |        |     |       |                   |
| 1L    |                       |        |     |       |                   |
| 2R    |                       |        |     |       |                   |
| 2L    |                       |        |     |       |                   |
| 3R    |                       |        |     |       |                   |
| 3L    |                       |        |     |       |                   |
| 4R    |                       |        |     |       |                   |
| 4L    |                       |        |     |       |                   |
| 5R    |                       |        |     |       |                   |
| 5L    |                       |        |     |       |                   |
| 6R    |                       |        |     |       |                   |
| 6L    |                       |        |     |       |                   |
| 7R    |                       |        |     |       |                   |
| 7L    |                       |        |     |       |                   |
| 8R    |                       |        |     |       |                   |
| 9L    |                       |        |     |       |                   |

Q.C.  
HOLD POINT

4) Step 4.7.4 and 4.7.6: Air start valve capscrews. ENGINE HOURS 429.4

| Cylinder | Capscrew = 2-3/4" |   | Torque  |         | Performed | Witnessed                  |
|----------|-------------------|---|---------|---------|-----------|----------------------------|
|          | 1                 | 2 | 1       | 2       |           |                            |
| 1R       |                   |   | 150'lbs | 150'lbs | NW        | <i>[Signature]</i> 7/15/90 |
| 2R       |                   |   | ↑       |         |           |                            |
| 3R       |                   |   | N/A     |         |           |                            |
| 4R       |                   |   | ↓       |         |           |                            |
| 5R       |                   |   |         |         |           |                            |
| 6R       |                   |   | 150'lbs | 150'lbs | NW        | <i>[Signature]</i> 7/15/90 |
| 7R       |                   |   | 150'lbs | 150'lbs | NW        | <i>[Signature]</i> 7/15/90 |
| 8R       |                   | A | 150'lbs | 150'lbs | NW        | <i>[Signature]</i> 7/15/90 |
| 1L       |                   |   | 150'lbs | 150'lbs | NW        | <i>[Signature]</i> 7/15/90 |
| 2L       |                   |   | N/A     |         |           |                            |
| 3L       |                   |   | N/A     |         |           |                            |
| 4L       |                   |   | 150'lbs | 150'lbs | NW        | <i>[Signature]</i> 7/15/90 |
| 5L       |                   |   | 150'lbs | 150'lbs | NW        | <i>[Signature]</i> 7/15/90 |
| 6L       |                   |   | ↑       |         |           |                            |
| 7L       |                   |   | N/A     |         |           |                            |
| 8L       |                   |   | ↓       |         |           |                            |

M&TE Serial No. UP-3-2287  
 Cal. Due Date 9-8-90



DATA SHEET 1

ENGINE TAG No. \_\_\_\_\_ DATE: \_\_\_\_\_

<sup>O.C.</sup>  
HOLD POINT) Step 4.7.9h: Rocker Arm Capscrew Torque

| Cylinder | Rocker Arm |   | Capscrew  |           |
|----------|------------|---|-----------|-----------|
|          | 1          | 2 | Performed | Witnessed |
| 1R       |            |   |           |           |
| 2R       |            |   |           |           |
| 3R       |            |   |           |           |
| 4R       |            |   |           |           |
| 5R       |            |   |           |           |
| 6R       |            |   |           |           |
| 7R       |            |   |           |           |
| 8R       |            |   |           |           |
| 1L       |            |   |           |           |
| 2L       |            |   |           |           |
| 3L       |            |   |           |           |
| 4L       |            |   |           |           |
| 5L       |            |   |           |           |
| 6L       |            |   |           |           |
| 7L       |            |   |           |           |
| 8L       |            |   |           |           |

N A

M&TE Serial No. \_\_\_\_\_  
 Cal. Due Date \_\_\_\_\_

DATA SHEET 2

AIR START VALVE CAPSCREW TORQUING

ENGINE TAG No.: \_\_\_\_\_  
C.C. HOLD POINT Step 4.7.7

DATE: \_\_\_\_\_  
 ENGINE HOURS \_\_\_\_\_

| Cylinder | Capscrew |   | Did Screw Move? | Performed | Witnessed |
|----------|----------|---|-----------------|-----------|-----------|
|          | 1        | 2 |                 |           |           |
| 1R       |          |   |                 |           |           |
| 2R       |          |   |                 |           |           |
| 3R       |          |   |                 |           |           |
| 4R       |          |   |                 |           |           |
| 5R       |          |   |                 |           |           |
| 6R       |          |   |                 |           |           |
| 7R       |          |   |                 |           |           |
| 8R       |          |   |                 |           |           |
| 1L       |          |   |                 |           |           |
| 2L       |          |   |                 |           |           |
| 3L       |          |   |                 |           |           |
| 4L       |          |   |                 |           |           |
| 5L       |          |   |                 |           |           |
| 6L       |          |   |                 |           |           |
| 7L       |          |   |                 |           |           |
| 8L       |          |   |                 |           |           |

M&TE Serial No. \_\_\_\_\_  
 Cal. Due Date \_\_\_\_\_

C.C. HOLD POINT Step 4.7.7:

ENGINE HOURS \_\_\_\_\_

N A

| Cylinder | Capscrew |   | Did screw Move? | Performed | Witnessed |
|----------|----------|---|-----------------|-----------|-----------|
|          | 1        | 2 |                 |           |           |
| 1R       |          |   |                 |           |           |
| 2R       |          |   |                 |           |           |
| 3R       |          |   |                 |           |           |
| 4R       |          |   |                 |           |           |
| 5R       |          |   |                 |           |           |
| 6R       |          |   |                 |           |           |
| 7R       |          |   |                 |           |           |
| 8R       |          |   |                 |           |           |
| 1L       |          |   |                 |           |           |
| 2L       |          |   |                 |           |           |
| 3L       |          |   |                 |           |           |
| 4L       |          |   |                 |           |           |
| 5L       |          |   |                 |           |           |
| 6L       |          |   |                 |           |           |
| 7L       |          |   |                 |           |           |
| 8L       |          |   |                 |           |           |

M&TE Serial No. \_\_\_\_\_  
 Cal. Due Date \_\_\_\_\_

FOR USE WITH CONTROL NO. 29003028

DATA SHEET 2

AIR START VALVE CAPSCREW TORQUING

ENGINE TAG No.: \_\_\_\_\_  
 HOLD POINT Step 4.7.7

DATE: \_\_\_\_\_  
 ENGINE HOURS \_\_\_\_\_

| Cylinder | Capscrew |   | Did Capscrew Move? | Performed | Witnessed |
|----------|----------|---|--------------------|-----------|-----------|
|          | 1        | 2 | 2                  |           |           |
| 1R       |          |   |                    |           |           |
| 2R       |          |   |                    |           |           |
| 3R       |          |   |                    |           |           |
| 4R       |          |   |                    |           |           |
| 5R       |          |   |                    |           |           |
| 6R       |          |   |                    |           |           |
| 7R       |          |   |                    |           |           |
| 8R       |          |   |                    |           |           |
| 1L       |          |   |                    |           |           |
| 2L       |          |   |                    |           |           |
| 3L       |          |   |                    |           |           |
| 4L       |          |   |                    |           |           |
| 5L       |          |   |                    |           |           |
| 6L       |          |   |                    |           |           |
| 7L       |          |   |                    |           |           |
| 8L       |          |   |                    |           |           |

M&TE Serial No. \_\_\_\_\_  
 Cal. Due Date \_\_\_\_\_

HOLD POINT Step 4.7.7: \_\_\_\_\_ ENGINE HOURS \_\_\_\_\_

| Cylinder | Capscrew |   | Did screw Move? | Performed | Witnessed |
|----------|----------|---|-----------------|-----------|-----------|
|          | 1        | 2 |                 |           |           |
| 1R       |          |   |                 |           |           |
| 2R       |          |   |                 |           |           |
| 3R       |          |   |                 |           |           |
| 4R       |          |   |                 |           |           |
| 5R       |          |   |                 |           |           |
| 6R       |          |   |                 |           |           |
| 7R       |          |   |                 |           |           |
| 8R       |          |   |                 |           |           |
| 1L       |          |   |                 |           |           |
| 2L       |          |   |                 |           |           |
| 3L       |          |   |                 |           |           |
| 4L       |          |   |                 |           |           |
| 5L       |          |   |                 |           |           |
| 6L       |          |   |                 |           |           |
| 7L       |          |   |                 |           |           |
| 8L       |          |   |                 |           |           |

M&TE Serial No. \_\_\_\_\_  
 Cal. Due Date \_\_\_\_\_





COMPLETION SHEET

|   |   |                    |
|---|---|--------------------|
| PROCEDURE NO.<br>27598-C                                  | REVISION<br>0   | SHEET<br>1 of 4    |
| TAG NO.<br><sup>405</sup><br>23/01/04-001<br>act. 2/15/90 | DESCRIPTION<br>Standby Diesel Generator   |                    |
| SERIAL NO.<br>NA  | MANUFACTURER<br>Transamerica Delaval  | MODEL<br>DSRV-16-4 |
| TEST EQUIPMENT USED<br>See applicable "Data" Sheet        | <input checked="" type="checkbox"/> Safety Related/QC HoldPoints apply<br><input type="checkbox"/> Non-Safety Related |                    |

| PROCEDURE STEP   | DESCRIPTION   | MAINT. INIT/DATE | HOLD POINT (Yes/No) | QC INIT/DATE      |
|------------------|---|------------------|---------------------|-------------------|
| 4.1              | Verify Prerequisites met  | DEG 17/13/90     | No                  | DU 17.13.90       |
| 4.2              | Shift Supervisor Notified   | DEG 18/13/90     |                     |                   |
| 4.3              | Diesel Generator Isolated and Tagged                                    | DEG 17/15/90     |                     |                   |
| 4.6.2b through d | Measure Air Start Valve Cap to Piston Clearance "Data" Sheet 1, Sheet 2 | N/A<br>*/        | Q.C. HOLD POINT     | *✓                |
| 4.6.2e           | Inspect Air Start Valve Internals "Data" Sheet 1, Sheet 2               | N/A<br>*/        | Q.C. HOLD POINT     | *1                |
| 4.6.2f           | Inspect Air Start Valve Seat For Pitting "Data" Sheet 1, Sheet 3        | N/A<br>*/        | Q.C. HOLD POINT     | NA<br>DCU 21/1/90 |
| 4.6.2h           | Blue Air Start Valve "Data" Sheet 1, Sheet 3                            | N/A<br>*/        | Q.C. HOLD POINT     | *                 |

\* Document on Referenced "Data" Sheet

| PROCEDURE<br>STEP | DESCRIPTION   | MAINT.<br>INIT/DATE | HOLD<br>POINT<br>(Yes/No) | QC<br>INIT/DATE |
|-------------------|---|---------------------|---------------------------|-----------------|
| 4.6.3             | Air Start Valves Reassembled                                | N/A                 | QA HOLD POINT             | 12/13/90        |
|                   | 1R  | /                   | /                         | /               |
|                   | 2R  | /                   | /                         | /               |
|                   | 3R  | /                   | /                         | /               |
|                   | 4R  | /                   | /                         | /               |
|                   | 5R  | /                   | /                         | /               |
|                   | 6R  | /                   | /                         | /               |
|                   | 7R  | /                   | /                         | /               |
|                   | 8R  | /                   | /                         | /               |
|                   | 1L  | /                   | /                         | /               |
|                   | 2L  | /                   | /                         | /               |
|                   | 3L  | /                   | /                         | /               |
|                   | 4L  | /                   | /                         | /               |
|                   | 5L  | /                   | /                         | /               |
|                   | 6L  | /                   | /                         | /               |
|                   | 7L  | /                   | /                         | /               |
|                   | 8L  | N/A                 | QC HOLD POINT             | 12/13/90        |
| 4.7.2             | Valve To Head Gasket Installed                              | N/A                 | QC HOLD POINT             | 12/13/90        |
|                   | 1R  | /                   | /                         | /               |
|                   | 2R  | /                   | /                         | /               |
|                   | 3R  | /                   | /                         | /               |
|                   | 4R  | /                   | /                         | /               |
|                   | 5R  | /                   | /                         | /               |
|                   | 6R  | /                   | /                         | /               |
|                   | 7R  | /                   | /                         | /               |
|                   | 8R  | /                   | /                         | /               |
|                   | 1L  | /                   | /                         | /               |
|                   | 2L  | /                   | /                         | /               |
|                   | 3L  | /                   | /                         | /               |
|                   | 4L  | /                   | /                         | /               |
|                   | 5L  | /                   | /                         | /               |
|                   | 6L  | /                   | /                         | /               |
|                   | 7L  | /                   | /                         | /               |
|                   | 8L  | N/A                 | QC HOLD POINT             | 12/13/91        |
| 4.7.4             | Air Start Valve Capscrews Inspected "Data" Sheet 1, Sheet 3 | N/A                 | QC HOLD POINT             | 12/10/90        |
| 4.7.6             | Air Start Valve Capscrews Torqued - "Data" Sheet 1, Sheet 3 | 12/17/90            | QC HOLD POINT             | 12/13/90        |

\* Document on Referenced "Data" Sheet

3554

| PROCEDURE<br>STEP | DESCRIPTION  | MAINT.<br>INIT/DATE | HOLD<br>POINT<br>(Yes/No)                     | QC<br>INIT/DATE |
|-------------------|--|---------------------|---|-----------------|
| 4.7.7             | Air Start Valve Capscrews Retorqued every 8 hours of engine operation "Data" Sheet 2 | * see<br>N/A<br>1   | VELTOR MEMO<br>O.C.<br>HOLD POINT<br>12/13/90 | 1               |
| 4.7.9h            | Torque Rocker Arm Capscrews "Data" Sheet 1, Sheet 4                                  | N/A<br>*1           | O.C.<br>HOLD POINT<br>11/13/90                | *1              |
| 4.7.10            | Adjust Intake And Exhaust valves   | N/A                 | O.C.<br>HOLD POINT<br>11/13/90                | 1               |
|                   | 1R   | /                   | /   | /               |
|                   | 2R   | /                   | /   | /               |
|                   | 3R   | /                   | /   | /               |
|                   | 4R   | /                   | /   | /               |
|                   | 5R   | /                   | /   | /               |
|                   | 6R   | /                   | /   | /               |
|                   | 7R   | /                   | /   | /               |
|                   | 8R   | /                   | /   | /               |
|                   | 1L   | /                   | /   | /               |
|                   | 2L   | /                   | /   | /               |
|                   | 3L   | /                   | /   | /               |
|                   | 4L   | /                   | /   | /               |
|                   | 5L   | /                   | /   | /               |
|                   | 6L   | /                   | /   | /               |
|                   | 7L   | /                   | /   | /               |
|                   | 8L   | /                   | /   | /               |
| 4.7.11            | Tools removed from engine  | N/A<br>17-13-90     | O.C.<br>HOLD POINT                            | 17/13/90        |
| 4.7.12            | Cylinder head covers installed   | N/A<br>17-13-90     | O.C.<br>HOLD POINT                            | 17/13/90        |
| 4.7.13            | Main Bearing Oil Lines installed   | N/A<br>1            | O.C.<br>HOLD POINT                            | 17/13/90        |
| 4.9               | Notify Shift Supervisor required maintenance is complete                             | N/A<br>17-13-90     | /   | 17-13-90        |

\* Document on Referenced "Data" Sheet

COMMENTS/ADDITIONAL HOLD POINTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

QC has reviewed this procedure for hold points DC Lewis  
Signature

|  |                                      |
|--|--------------------------------------|
| APPROVED <input checked="" type="checkbox"/> | DISAPPROVED <input type="checkbox"/> |
| FOREMAN                                      | DATE                                 |
| D. E. Adams                                  | 7/13/90                              |

|              |         |
|--------------|---------|
| COMPLETED BY | DATE    |
| Bill K. Hill | 7/13/90 |



DATA SHEET 1  
MAINTENANCE CLEANLINESS AND HOUSEKEEPING

Maintenance Work Order No. 29003028 Date 7/13/90  
 Maintenance Cleanliness and Housekeeping Standard Required  
 B (C) D (Circle one)  
 Name of system or component requiring cleaning

CLEANLINESS STANDARDS

| B  | <u>(C)</u>                           | D                                 | INIT/DATE                                |
|--|--------------------------------------|-----------------------------------|--|
| Metal clean surface.   | Thin rust on carbon steel OK.        | Tight mill scale Carbon steel OK. | <u>MWA/7-13-90</u>                       |
| Rust allowable 2 sq/in per 1 sq/ft.  | Rust allowable 15 sq/in per 1 sq/ft. | Rust which resists brushing.      | <u>MWA/7-13-90</u><br><u>MWA/7-13-90</u> |
| *** No particulates/particles removable by brushing.   |                                      |                                   | <u>MA</u><br><u>DEA/7/13/90</u>          |
| *** No oil, grease, or other organic films removable by brushing.  |                                      |                                   | <u>MWA/7-13-90</u><br><u>MWA/7-13-90</u> |
| *** Perform closeout Step 4.3.5.b.6.   |                                      |                                   |  |
| *** No contaminants removable in large amounts by wiping.  |                                      |                                   | <u>MWA/7-13-90</u>                       |
| *** Decon tools and equipment.   |                                      |                                   |  |
| *** Finish maintenance cleaning and housekeeping using Figure 1, "Maintenance Cleanliness and Housekeeping Handout". |                                      |                                   | <u>MWA/7-13-90</u>                       |

COMMENTS: \_\_\_\_\_


|                                    |  |
|------------------------------------|--|
| <u>MW Bobzy</u> 7/13/90            | 7-13-90  |
| MAINTENANCE PERSON SIGNATURE/DATE  | DATE RESULTS REVIEWED                            |
| <u>A. E. Adams</u> 7/23/90         | ( <input checked="" type="checkbox"/> ) Approved |
| MAINTENANCE FOREMAN SIGNATURE/DATE | ( ) Disapproved                                  |

\*\*\* (for all cleanliness standards)

Quality Control Inspection Report

VOGTLE GENERATING PLANT—UNITS 1 & 2

37338

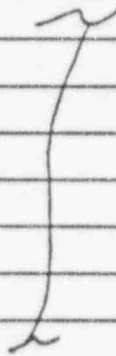
Georgia Power 

Page 1 of 1

|                                      |   |  |
|--------------------------------------|---|--|
| MWO/ODR/DR No.<br><u>2900302B</u>    | Building<br><u>DIESEL</u>               | Procedure/Spec. No./Rev.<br><u>27601-C R/O</u> |
| Room No./Level No.<br><u>A-TRAIN</u> | Sys./Start-Up Designator<br><u>2403</u> | Tag No.<br><u>2-2403-64-001</u>                |
| Drawing No./Rev.<br><u>N/A</u>       | Vendor Manual Log No.<br><u>N/A</u>     | Other<br><u>85022-2 MI</u>                     |

- Inspector will use separate form for each completed inspection function(s) and insert original with work package, use continuation sheets when needed.
- Use simple narrative type report procedure. Reference all applicable drawing numbers, specifications, special instructions, etc., connected with your inspection. Use sketches, when applicable, showing dimensions checked, alignment, physical location of defects found, etc. N/A all blocks not used.
- Upon completion of the inspection activity, enter results below and sign and date.

Remarks REF. STEP 4.6.17  
VISUALLY VERIFIED THAT LUBE OIL SUPPLY AND DRAIN TUBING WAS CONNECTED ON BOTH THE LEFT AND RIGHT BANK. CONNECTIONS WERE SATISFACTORY.



Sketch  
N/A

Inspection Results  
 SAT.     UNSAT—ODR/DR NO.(s):

7066 SA ACB191    Inspector Philip O. Cheek    Date 7/13/80

Quality Control Inspection Report

Georgia Power

VOGTLE GENERATING PLANT—UNITS 1 & 2

35152

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|                                 |                                  |   |
|---------------------------------|----------------------------------|---|
| MWO/ODR/DR No.<br>29003028      | Building<br>DIESEL GEN           | Procedure/Spec. No./Rev.<br>27598-C R/O |
| Room No./Level No.<br>TRAIL "A" | Sys./Start-Up Designator<br>2403 | Tag No.<br>2-2403-64-001                |
| Drawing No./Rev.<br>N/A         | Vendor Manual Log No.<br>N/A     | Other<br>85022-C R/1                    |

1. Inspector will use separate form for each completed inspection function(s) and insert original with work package, use continuation sheets when needed.
2. Use simple narrative type report procedure. Reference all applicable drawing numbers, specifications, special instructions, etc., connected with your inspection. Use sketches, when applicable, showing dimensions checked, alignment, physical location of defects found, etc. N/A all blocks not used.
3. Upon completion of the inspection activity, enter results below and sign and date.

Remarks

Q.C. VISUALLY WITNESSED TORQUE OF AIR START VALVE CAPSCREWS TO 150 LBS FOR 6R & 8L CYLINDERS STEP 4.7.76<sup>7/13/90</sup> ENGINE HOURS ARE 428.1 AS OF 06:16 CST 7/13/90

PROCEDURE # 27601-C R/O  
STEP 4.5.11 INSTALLED AIR DISTRIBUTOR COVERS AND TORQUED 1/2"-13 BOLTS TO 30 LBS M.T.E. UPS-2437 Due 8/13/90

Sketch

Inspection Results

SAT.     UNSAT—ODR/DR NO.(s):

Inspector: *[Signature]*    Date: 7/13/90

WHITE—Work Package    CANARY—Q.C. Supv.    PINK—Inspector

MWO/ORD No./Other

2700302B

I.R.# 37337

Remarks  
WITNESSED INSTALLATION OF CAP AND PISTON  
ON AIR START VALVES IR THRU BR, INCLUSIVE.  
WITNESSED TORQUING OF AIR START CAP SCREWS  
TO 150 FT/LBS ON IR THRU BR, INCLUSIVE. REF. VP3-  
2273 DUE: 10-5-90 REF. STEP 4.7.16

WITNESSED THE TAKING OF CLEARANCE READ-  
INGS FOR AIR START VALVES IL THRU BL, INCLUSIVE.  
VP3-2785 DUE 3-22-91 NO CLEARANCE EXCEEDED .003"

VISUALLY INSPECTED THE INSIDE DIAMETER OF  
BEA CAPS AND INSPECTED THE OUTSIDE DIAMETER OF  
BEA PISTONS, NO DISCREPENCIES NOTED. STEP 4.6.2.1.e.

WITNESSED INSTALLATION AND TORQUING OF  
THE AIR START PISTON AND CAPS TO 150 FT/LBS. VP3-  
2273 DUE: 10-5-90, REF STEP 4.7.16

Inspector

Sheep A. Cheek

Date 7/13/90



Quality Control Inspection Report

VOGTLE GENERATING PLANT—UNITS 1 & 2

37337

|                                      |   |   |
|--------------------------------------|---|---|
| MWO/ODR/DR No.<br><u>2900302B</u>    | Building<br><u>DIESEL</u>               | Procedure/Spec. No./Rev.<br><u>27598-C 40</u> |
| Room No./Level No.<br><u>A-TRAIN</u> | Sys./Start-Up Designator<br><u>2403</u> | Tag No.<br><u>2-2403-G4-001</u>               |
| Drawing No./Rev.<br><u>N/A</u>       | Vendor Manual Log No.<br><u>N/A</u>     | Other<br><u>85022-C 41</u>                    |

- Inspector will use separate form for each completed inspection function(s) and insert original with work package, use continuation sheets when needed.
- Use simple narrative type report procedure. Reference all applicable drawing numbers, specifications, special instructions, etc., connected with your inspection. Use sketches, when applicable, showing dimensions checked, alignment, physical location of defects found, etc. N/A all blocks not used.
- Upon completion of the inspection activity, enter results below and sign and date.

Remarks WITNESSED CLEARANCE VERIFICATION BETWEEN THE PISTON AND CAP AND ALL MEASUREMENTS WERE SATISFACTORY. REF VP3-2785 DUE 3-22-91 NO DIFFERENCE BETWEEN THE CAP AND PISTON EXCEEDED .003". THE CLEARANCES WERE TAKEN ON THE FOLLOWING AIR START VALVES: 1R, 2R, 3R, 4R, 5R, 6R, 7R AND 8R. APPLICABLE PROCEDURE STEPS WERE 4.6.2 b THRU 4.6.2.d, INCLUSIVE


VISUALLY INSPECTED 1R THRU 8R, INCLUSIVE, CAP INSIDE DIAMETER AND PISTON OUTSIDE DIAMETER (STEP 4.6.2.e) NO DISCREPANCIES NOTED, STEP 4.6.2.e.

(SEE CONT. SHEET)

Sketch  
N/A

Inspection Results  
 SAT.     UNSAT—ODR/DR NO.(s):

Quality Control Inspection Report

Georgia Power 

VOGTLE GENERATING PLANT—UNITS 1 & 2

35154

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|                            |                                  |  |
|----------------------------|----------------------------------|--|
| MWO/ODR/DR No.<br>29003028 | Building<br>MAINT SHOP           | Procedure/Spec. No./Rev.<br>27598-C #0 |
| Room No./Level No.<br>N/A  | Sys./Start-Up Designator<br>2403 | Tag No.<br>2-2403-64-001               |
| Drawing No./Rev.<br>N/A    | Vendor Manual Log No.<br>N/A     | Other<br>85022-C #1                    |

1. Inspector will use separate form for each completed inspection function(s) and insert original with work package, use continuation sheets when needed.
2. Use simple narrative type report procedure. Reference all applicable drawing numbers, specifications, special instructions, etc., connected with your inspection. Use sketches, when applicable, showing dimensions checked, alignment, physical location of defects found, etc. N/A all blocks not used.
3. Upon completion of the inspection activity, enter results below and sign and date.

Remarks Q.C. VISUALLY WITNESSED THE FOLLOWING

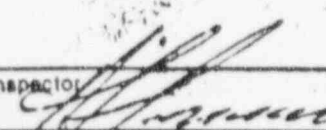
A.) I.D. MEASUREMENT OF AIR START VALVE'S CAP  
M.T.O.E. INSIDE MIC UP-3-2879 DUE 2/17/91  
NEW CAPS #1) 2.250" #2) 2.249" #3) 2.249" #4)  
2.249" #5) 2.250" #6) 2.249" #7) 2.250" ALSO VERIFIED  
CAP'S FLATNESS USING STRAIGHT MASTER PINK  
GRANITE SURFACE PLATE UP-3-3406 DUE 11/15/94

B.) O.D. MEASUREMENT OF AIR START VALVE'S PISTON  
M.T.O.E. OUTSIDE MIC'S UP-3-2155 DUE 10/2/90  
#1) 2.248" #2) 2.246" #3) 2.246" #4) 2.246"  
#5) 2.246" #6) 2.246" #7) 2.246"  
REF TO MEX #90-10282 + 90-10268 FOR NEW MATERIALS

Sketch STEP 4.7.11 VERIFIED TOOLS REMOVED  
STEP 4.7.12 CYLINDER HEAD COVERS INSTALLED  
INSTALLED AIR START VALVE'S CAPS & PISTONS  
ON TO THE FOLLOWING CYLINDERS #1R, 6R, 7R, 8R, 1L  
4L + 5L PER STEP 4.7.6 TORQUED CAPSCREWS TO  
150 LBS M.T.O.E. TORQUE WRENCH UP-3-2287 DUE 9/8/90

Inspection Results

SAT  UNSAT—ODR/DR NO. (S)

Inspector:  Date: 7/13/90

WFO No: 29003228

PROCEDURE & REV No: SEE REMARKS:

NOTIFY QUALITY CONTROL PRIOR TO PERFORMING THE WORK ACTIVITY  
OR STEP ASSOCIATED WITH THE HOLD (H) OR WITNESS (W) POINT

DO NOT BYPASS QC HOLD OR WITNESS POINTS

| STEP No. | H/W | HOLD POINT / WITNESS POINT DESCRIPTION  | ASSIGNED BY |         | NOTIFIED |         | QC ACTION |   |   |     |
|----------|-----|---|-------------|---------|----------|---------|-----------|---|---|-----|
|          |     |   | INIT        | DATE    | INIT     | DATE    | INIT      | I | W | N/A |
|          | H   | Notify QC per the preassigned hold points in the following procedure(s):<br>22408-C | TCC         | 7/1/90  |          |         |           |   |   |     |
| 1)       | H   | Notify QC Prior to placing any parts  | ABS         | 7/1/90  | ABS      | 7/13/90 | ABS       |   |   | I   |
| 2)       | H   | Notify QC Prior to receiving any receive.   | ABS         | 7/1/90  | ABS      | 7/13/90 | ABS       |   |   | I   |
| 3        | H   | Notify QC To Verify Hold Points Assigned to Block 23 And<br>27595-C                 | DCC         | 7/13/90 | ABS      | 7/13/90 | ABS       |   |   | I   |

COMMENTS & IR NUMBERS: (initial and date entries)

Blank lines for entering comments and IR numbers.

WFO No: *2900302B*

PROCEDURE & REV No: *27601-C R/0*

NOTIFY QUALITY CONTROL PRIOR TO PERFORMING THE WORK ACTIVITY  
OR STEP ASSOCIATED WITH THE HOLD (H) OR WITNESS (W) POINT

DO NOT BYPASS QC HOLD OR WITNESS POINTS

| STEP No. | H/W | HOLD POINT / WITNESS POINT DESCRIPTION                                    | ASSIGNED BY |                | NOTIFIED DATE |                | QC ACTION |            |
|----------|-----|---|-------------|----------------|---------------|----------------|-----------|------------|
|          |     |   | INIT        | DATE           | INIT          | DATE           | INIT      | I-W-N/A    |
| ①        | H.  | NOTIFY Q.C. PRIOR TO PERFORMING STEPS ASSIGNED AS HOLD POINTS IN 27601-C. | <i>pe</i>   | <i>7/11/90</i> | <i>pe</i>     | <i>7/13/90</i> | <i>pe</i> | <i>I</i>   |
| ②        | H.  | NOTIFY P.C. PRIOR TO PERFORMING STEPS ASSIGNED AS HOLD POINTS IN 27558-C  | <i>pe</i>   | <i>7/14/90</i> | <i>pe</i>     | <i>7/15/90</i> | <i>pe</i> | <i>I</i>   |
| ③        | H   | NOTIFY Q.C. PRIOR TO PERFORMING STEP 4.7.7 OF 27558-C FOR Q.C. TO WITNESS | <i>pe</i>   | <i>7/15/90</i> | <i>N/A</i>    | <i>N/A</i>     | <i>MS</i> | <i>N/A</i> |

COMMENTS & IR NUMBERS: (initial and date entries)

*I.R. # 37337. pe 7/11/90*

*I.R. # 37338. pe 7/13/90*



EQ EVALUATION CHECKLIST

FOR USE ON PROJECT CLASSES Q111, Q212, Q313, Q013, Q015, Q11E, Q11J, Q12E, 61J

WFO NO. 29003028

SECTION I

PART A ORIGINAL PART

- 1. DESCRIPTION DIESEL
- 2. TAG NO. 22403G4001
- 3. PROJECT CLASS OIS
- 4. SPECIFICATION (EQDP) NO. X4AK01
- 5. MANUFACTURER DELAVAL
- 6. MODEL NO. \_\_\_\_\_
- 7. PART NO. \_\_\_\_\_

PART B REPLACEMENT PART

- 1. DESCRIPTION \_\_\_\_\_
- 2. MER NO. \_\_\_\_\_
- 3. STOCK NO. \_\_\_\_\_
- 4. SPECIFICATION (EQDP) NO. \_\_\_\_\_
- 5. MANUFACTURER N/A
- 6. MODEL NO. \_\_\_\_\_
- 7. PART NO. \_\_\_\_\_
- 8. PO NO. \_\_\_\_\_

COMMENTS SEE ATTACHED BULK MAT. SHIT

SECTION II WORK PLANNING

- 1. ARE PROCEDURES, VENDOR MANUALS, DRAWINGS OR INSTRUCTIONS AVAILABLE TO DISASSEMBLE/REWORK COMPONENT? ✓ YES NO  
AD-12-11-90  
(Init. Date)
- 2. ARE SPECIFICATION NUMBERS FOR ORIGINAL AND REPLACEMENT ITEMS THE SAME? YES NO  
N/A
- 3. ARE MANUFACTURER MODEL/PART NUMBERS OF THE ORIGINAL AND REPLACEMENT PARTS THE SAME? YES NO  
N/A
- 4. IS BULK MATERIAL LISTED ON ATTACHMENT ACCEPTABLE? LIST ITEM NO. FROM ATTACHMENT IF "NO" IS CHECKED. YES NO  
NA  
(Item No.) AD 7-13-90  
(Init. Date)

NOTE

If items 2, 3, or 4 are checked No, the Checklist must be reviewed by the EQ Group.

- PART(S) ARE ACCEPTABLE FOR USE
- SEND TO EQ GROUP

[Signature]  
WFO DATE

SECTION III EQ GROUP EVALUATION

- PART IS ACCEPTABLE FOR USE  PART IS UNACCEPTABLE FOR USE
- JUSTIFICATION FOR ACCEPTANCE: N/A

EQ ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

EQ EVALUATION CHECKLIST  
FOR BULK MATERIAL

KWO NO 29003028

1. DESCRIPTION OF ITEM ASSEMBLY - AIR START, USED CAPS ONLY  
MER 90-10282 PO 259975
2. DESCRIPTION OF ITEM ASSEMBLY - AIR START, USED CAPS ONLY  
MER 90 10268 PO 29239
3. DESCRIPTION OF ITEM \_\_\_\_\_  
MER \_\_\_\_\_ PO \_\_\_\_\_
4. DESCRIPTION OF ITEM \_\_\_\_\_  
MER \_\_\_\_\_ PO \_\_\_\_\_
5. DESCRIPTION OF ITEM \_\_\_\_\_  
MER \_\_\_\_\_ PO N/A
6. DESCRIPTION OF ITEM \_\_\_\_\_  
MER \_\_\_\_\_ PO \_\_\_\_\_
7. DESCRIPTION OF ITEM \_\_\_\_\_  
MER \_\_\_\_\_ PO \_\_\_\_\_
8. DESCRIPTION OF ITEM \_\_\_\_\_  
MER \_\_\_\_\_ PO \_\_\_\_\_

REMARKS:



Material/Equipment Request — NUCLEAR OPERATIONS  
VOGTLE ELECTRIC GENERATING PLANT

ONE  
7-13-90

COPY 2

Department/Contractor: *Main* Design Change No.: \_\_\_\_\_ Date: *7-13-90* Stores Request No.: *JUL 17 50 10268*

| Description/Tag     | Stock Number      | Location         | Quantity |          | P.O. No.        | MIR No.    | Mainl. Work Order | UNIT | Account Number | Resp. Center | Anly. Code  |
|---------------------|-------------------|------------------|----------|----------|-----------------|------------|-------------------|------|----------------|--------------|-------------|
|                     |                   |                  | Ord.     | Filled   |                 |            |                   |      |                |              |             |
| <i>Basket 35009</i> | <i>11010-5310</i> | <i>0-80-G-14</i> | <i>2</i> | <i>2</i> | <i>PDU 9259</i> | <i>827</i> | <i>2400</i>       |      |                | <i>0210</i>  | <i>5021</i> |
| <i>O Ring 31291</i> | <i>29080</i>      | <i>0-80-A-1</i>  | <i>2</i> | <i>2</i> | <i>PDU 2425</i> | <i>862</i> | <i>3028</i>       |      |                |              |             |
| <i>O Ring 35011</i> | <i>31020</i>      | <i>0-66-F-8</i>  | <i>2</i> | <i>2</i> | <i>PDU 2425</i> | <i>849</i> |                   |      |                |              |             |
| <i>Assembly</i>     | <i>29060-6512</i> | <i>0-62-A</i>    | <i>2</i> | <i>2</i> | <i>PDU 2425</i> | <i>870</i> |                   |      |                |              |             |
| <i>Piston 37281</i> | <i>29010</i>      | <i>0-78-N</i>    | <i>2</i> | <i>2</i> | <i>PDU 2425</i> | <i>881</i> |                   |      |                |              |             |
|                     |                   |                  |          |          |                 |            |                   |      |                |              |             |
|                     |                   |                  |          |          |                 |            |                   |      |                |              |             |
|                     |                   |                  |          |          |                 |            |                   |      |                |              |             |
|                     |                   |                  |          |          |                 |            |                   |      |                |              |             |
|                     |                   |                  |          |          |                 |            |                   |      |                |              |             |
|                     |                   |                  |          |          |                 |            |                   |      |                |              |             |
|                     |                   |                  |          |          |                 |            |                   |      |                |              |             |
|                     |                   |                  |          |          |                 |            |                   |      |                |              |             |
|                     |                   |                  |          |          |                 |            |                   |      |                |              |             |
|                     |                   |                  |          |          |                 |            |                   |      |                |              |             |
|                     |                   |                  |          |          |                 |            |                   |      |                |              |             |
|                     |                   |                  |          |          |                 |            |                   |      |                |              |             |
|                     |                   |                  |          |          |                 |            |                   |      |                |              |             |
|                     |                   |                  |          |          |                 |            |                   |      |                |              |             |

Ordered By: *Pat* Approved By: *Ray Howard* Filled By: *Ray Howard* Received By: *Ray Howard* Date: *7-13-90*



Stock Material Return—NUCLEAR OPERATIONS  
 VOGTLE ELECTRIC GENERATING PLANT

7-13-90

Returned Date: \_\_\_\_\_  
 Design Change No.: \_\_\_\_\_

Returned From: Maint.

Return To: N.O. Warehouse

| Descriptions/Tag | Stock Number   | Quantity |          | Account | Resp Center | Anly. Code | Purchase Order | Work Order   | Unit | MIR No.    | Location  |
|------------------|----------------|----------|----------|---------|-------------|------------|----------------|--------------|------|------------|-----------|
|                  |                | Returned | Accepted |         |             |            |                |              |      |            |           |
| Piston           | 29010<br>26124 | 2        | 2        |         |             |            |                | 2480<br>3028 |      | 570<br>327 | 0-78-N    |
| Gasket           | 11010<br>5370  | 2        | 2        |         |             |            |                |              |      | 327        | D-80-C-18 |
| O-Ring           | 29080<br>22390 | 2        | 2        |         |             |            |                |              |      | 582        | D-F0-D-1  |
| O-Ring           | 31020<br>5220  | 2        | 2        |         |             |            |                |              |      | 970        | D-66-F-8  |
| Gasket           | 29040<br>22390 | 2        | 2        |         |             |            |                |              |      | 327        | D-66-F-8  |

Returned By: William M. Sullivan Date: 7-13-90  
 Approved By: J.D. Wilkes Date: 7-13-90  
 Recorded By: R.S. May  
 Date: 7/13/90  
 Recorded By: \_\_\_\_\_ Date: \_\_\_\_\_





VEGP FIRE PROTECTION CHECKLIST

1. MWO NO. 29003028 2. MPL/TAG NO. LIST

3. LOCATION U2 DIESEL TRN A

4. WILL THE WORK INSTALL, IMPAIR, MODIFY, ISOLATE, DEFEAT, OR REMOVE ANY OF THE FOLLOWING? IF THE ANSWER IS "YES" CHECK THE BOX, AND INDICATE APPROPRIATE DETAILS.

- SPRINKLER SYSTEM \_\_\_\_\_
- INTERIOR HOSE STATION \_\_\_\_\_
- HALON SYSTEM \_\_\_\_\_
- DETECTION SYSTEM \_\_\_\_\_
- EMERGENCY LIGHTING SYSTEM \_\_\_\_\_
- PERMANENT COMBUSTIBLES (CABLE, WOOD, PLASTIC, ETC.) \_\_\_\_\_
- STRUCTURAL STEEL, OR RACEWAY FIREPROOFING \_\_\_\_\_
- FIRE SUPPRESSION SUPPLY SYSTEM (PUMPS, TANKS, ETC.) \_\_\_\_\_
- CONDUIT SEALS OR EQUIPMENT ENCLOSURE (CABINET HOUSING) \_\_\_\_\_
- FIRE EXTINGUISHER \_\_\_\_\_
- COMMUNICATIONS SYSTEM \_\_\_\_\_
- OIL COLLECTION SYSTEM \_\_\_\_\_
- SEISMIC STANDPIPE SYSTEM \_\_\_\_\_

5. WILL THE WORK DEFEAT, MODIFY OR IMPAIR ANY OF THE FOLLOWING FIRE SEPARATION FEATURES? IF THE ANSWER IS "YES" CHECK THE BOX, AND INDICATE APPROPRIATE DETAILS.

- A. FIRE AREA BOUNDARY (WALL, ETC.) \_\_\_\_\_
- B. PASSIVE AREA BOUNDARY PENETRATION SEAL ASSEMBLY.
  - PENETRATION SEAL \_\_\_\_\_
  - WALL BLOCKOUT \_\_\_\_\_
  - FLOOR PLUG OR HATCH \_\_\_\_\_
  - CABLE TRAY OR CONDUIT WRAP \_\_\_\_\_
  - RADIANT ENERGY SHIELD \_\_\_\_\_
- C. ACTIVE FIRE AREA BOUNDARY PENETRATION SEAL.
  - FIRE DOOR \_\_\_\_\_
  - FIRE DAMPER \_\_\_\_\_

6. IF ALL THE ANSWERS IN BLOCKS 4 and 5 ARE "NO", STOP THE EVALUATION HERE, AND ENTER "NO" IN BLOCK 11 OF THE MWO FORM.

IF ANY QUESTIONS WERE ANSWERED "YES", ENTER "YES" IN BLOCK 11 OF THE MWO FORM.

EVALUATOR [Signature] DATE 7-11-90

POST WORK REVIEW (COMPLETE "A, B, OR C" BELOW)

- (A) ~~THE CONDITION IMPACTING THE FIRE PROTECTION COMPONENTS LISTED ABOVE HAS BEEN REMOVED.~~ FPE \_\_\_\_\_ DATE \_\_\_\_\_
- (B) ~~THE FIRE PROTECTION COMPONENT IS STILL IMPAIRED.~~ FPE \_\_\_\_\_ DATE \_\_\_\_\_
- (C) RESTORATION OF THE IMPAIRMENT HAS BEEN TRANSFERRED (Ref: \_\_\_\_\_) AND THE FIRE PROTECTION LOG LOG HAS BEEN CHANGED TO REFERENCE THE NEW MWO FOR THIS IMPAIRMENT. FPE \_\_\_\_\_ DATE \_\_\_\_\_

N/A  
FIGURE 1