

** COPY ** COPY ** COPY ** COPY ** COPY **.COPY **COPY COPY ** COPY ** COPY
NUCLEAR PLANT MAINTENANCE WORK ORDER (1 OF 2)

1.CONTROL NO. 29003147 00 2.DATE 07/17/90 3.UNIT 2 4.SYSTEM 2403
5.MPL/TAG NO. 22403G4002 DIESEL GENERATOR 5A.REPAIR TAG _____
MPL/TAG(S) ASSOCIATED WITH SPECIAL INDICATORS
6.PROB/ THE STICKING OF SEVERAL AIR START VALVES WAS DETERMINED TO BE THE
WORK CAUSE OF THE RECENT 2A D/G FAILURE TO START.
REQ.

CONT. N NPRD "Y"

7. INITIATOR DUSTY ADAMS 8. SUPRV JP REDDING LOC 2DB1
9. MWO CLASS S EQP CLASS 015 10. UNIT STAT *Am Made* 11. FIRE PROTECT N
12. DCR N 13. NCR/DR N 14. TYPE MAINT P 15. DURATION
16. CRAFT MECH (EST/ACT) ELEC (EST/ACT) I&C (EST/ACT) CONT (EST/ACT) HP/OT (EST/ACT)
CREW 0 *4* 0 0 0 0 0
HRS. 0 *48* 0 0 0 0 0
EXP. 0 0 0 0 0 0 0
SCHED BEG *7/11/92* *29000522*
SCHED END *7/12/92* *275480*
RESP FOREMAN *W. J. ...*
17. CLR *NO* 18. WELD PERM N RWP PERM *NA*
19. QC HOLD PTS *2* 20. PROC *275480*
QC REVIEWED BY *W. J. ...* 21. PRI 24 22. LCO *2-20-264*
23. WORK * *MAINT*
INST. *MAINT*

ALL 18 AIR START VALVES ARE TO BE "POP" TESTED PRIOR TO AND IMMEDIATELY FOLLOWING THEIR NEXT SURVEILLANCE RUN. THE "POP" TEST CAN BE PERFORMED BY CONNECTING HOUSE SERVICE AIR (REGULATED TO 100PSI) TO THE 1/4" SUPPLY TUBING (COMING FROM THE AIR START DISTRIBUTOR) AT

CONT.
Y

OPS DATE 7/19/90 MNT CJP DATE 7/18/90 -----
HE mm DATE 7/17/90 ENG CJC DATE 7/17/90 SIG. GJW/bellman DATE 7/21/90
27.ACT
WORK
PERFMRD

24.INITIAE REVIEW -----
25.SPEC REV REQ N
26.MWO RELEASE FOR WORK -----

CONT.
N
HIST SUM
28.MTRL REQD ✓ 88-16-55

29. PERSON PERFORMING WORK (NAME) DATE 30. MAINTENANCE FOREMAN DATE
1. INSPECTION PERFORMED BY David Jackson 7/21/90
2. METHOD OF F.T. 13145-2 and 14950-2 DATE 7/21/90
3. PROCEDURE # 13145-2 and 14950-2 34. PERFORMED BY John DATE 7/22/90
6. PROVES OPERABILITY NA 37. METHOD USED TO PROVE OPERABILITY NA
8. SATISFY/UNSATISFY 39. IF UNSAT. CORR. ACTION NA
0. UNIT STATUS AT TIME OF FAILURE 41. TYPE FAIL NA
3. CAUSE OF FAILURE N 44. DETECT BY A 42. MODE OF FAIL A
6. EFF ON PLANT N 47. MWO STAT D 48. CAUSE A 45. EFFECT ON SYS A
0. NEW MWO NA 49. CORR ACT. NA
2. OSOS APPROVAL NA 51. OPER. ACCEPT BY John DATE 7/23/90
3. SPEC REV COMP NA DATE 7/23/90 54. MEET. # NA DATE 7/23/90
5. CLOSE OUT APPROVAL BY QC John DATE 7/23/90

B. J. Miller Tr 7
2-B-90

CONTROL NO. 29003147 00

WORK INSTRUCTIONS: POINT ENTERING SUB-COVER.

A QUICK BURST OF SERVICE AIR WILL ACTUATE THE AIR START VALVE AND AN AUDIBLE METALIC "CLICK" SHOULD BE HEARD. THE QUICK RELEASE OF THIS AIR WILL ALLOW THE AIR START VALVE SPRING TO CLOSE THE VALVE; AND AGAIN AN AUDIBLE "CLICK" SHOULD BE DETECTED. THE EVIDENCE OF THESE "CLICKS" WILL ASSURE THE VALVE IS OPERATING PROPERLY.

- UPON COMPLETION OF TEST - DISCONNECT SERVICE AIR AND RECONNECT PERMANENT AIR LINE.
- IF VALVE REQUIRES REWORKING - SEE FOLLOWING WORK INSTRUCTIONS
~~RETURN MATO TO WRS FOR REVISIT~~ 7/24/90
CIP 7/17/90

- WORK INSTRUCTIONS TO BE PERFORMED IF AIR START VALVES FAIL TEST.

- PER CONVERSATIONS WITH "COOPER" THE CAPS ON AIR START VALVES CAN BE MACHINED OR LAPPED UP TO .010" FROM BOTTOM OF CAP TO OBTAIN A .001" OR LESS FLATNESS (REF. MWO 19003340 REV.2)
- REMOVE CAPS FROM ALL AIR START VALVES
- LAP OR MACHINE THE CAPS REMOVED TO OBTAIN THE RECOMMENDED FLATNESS. OR REPLACE WITH CAPS BEING REWORKED UNDER MWO 19001255.
- ALSO, HONE OR MACHINE THE PISTON TO OBTAIN A .003" DIAMETRICAL CLEARANCE BETWEEN THE CAP AND PISTON. RECORD ON 27548-C DATASHEET.
- REASSEMBLE VALVE PER 27548-C.

Craig J. Conder
7-20-90

Nuclear Plant Maintenance Work Order Continuation Sheet

MPL No. 2240344-002

MWO No. 29003147

Work Description REMOVE BONNETS FROM SUBCOOLERS

AND DISASSEMBLED AIR START CAPS AND PISTONS FROM THE AIR START VALVES. BARGE AND TARGE 7/23/90
EACH AIR START CAP/PISTON TO ENSURE INDIVIDUALITY ^{INDIVIDUALITY} ⁷⁻²⁴⁻⁹⁰
MARKED SIX PISTONS UNDER W/O ~~29001255~~ ²⁹⁰⁰³¹⁴⁷ ⁷⁻²⁴⁻⁹⁰ AT
2.247" EACH. THE RESULTS OF EACH PISTON IS
REPORTED ON DATA SHEET 1 PROCEED 27598-C
PAGE NO. 22 OF 31, VALUE * 6R, 6L, 7R, 7L, 8R AND
8L.

FURTHERMORE, 16 CAPS AND 10 PISTONS WERE
REFURBISHED UNDER W/O ~~29001255~~ ^{W/O 29001255} ^{7/23/90} THE O.D.
OF THE PISTONS AND I.D. OF THE CAPS WERE
VERIFIED BY QUALITY CONTROL @.003"

INSTALLED CAPS AND PISTONS AT 1L, 2L, 3L AND
1R, 2R AND 3R BANKS, AND TIGHTENED CAPSCREWS
TO 150 FT LBS. USING TORQUE WRENCH VP-3-2273
C/O 10/5/90. Joe Connor 7/21/90

Block 22 Cont.

Lubricated with motor oil. Received on MER 88-16052
Air starter caps and pistons and installed on air starter
valves 4 thru 8 L & R and torqued bolts to 150 FT/LBS
using torque wrenches VP3-2273 CAL Due 10-5-90 and
torque wrench VP3-2002 CAL Due 10-7-90 Connected
all air lines to air start valves. Pop tested all air
start valves using service air. All valves operated
satisfactorily. Reconnected permanent air lines ⁷⁻²¹⁻⁹⁰
installed all valve covers marked 2000 IF Housekeeping
A Lock 7-21-90

Nuclear Plant Maintenance Work Order Continuation Sheet

MPL No. 2-2403G4002

MWO No. 29003147

Work Description

Block 27 Cont

Bob tested all air start valves All Right Bank valves operated satisfactory Left Bank valves 3, 4 and 8 were a little slow to return to the closed position Foreman D. Serkewicz Believed the problem was due to Excessive Lubrication Build up that was applied during installation After several low shots of air the valves started to open and close properly maintained zone 14 throughout 21-90

MWO No: 29003147

PROCEDURE & REV No: N/A

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
1	H	RETURN MWO TO P-104 IF REVISED FOR ASSIGN- MENT OF ADDITIONAL hold points	Joe	7/10/90	Joe	7/10/90	Joe	W/A
2	H	NOTIFY Q.C. PRIOR TO IN- STALLING CAP(S) FOR Q.C. TO VERIFY ACCEPTABLE FLATNESS	Joe	7/12/90			Joe	P/A(1)
3	H	NOTIFY Q.C. PRIOR TO IN- STALLING CAP FOR Q.C. TO VERIFY THE FOLLOWING						
		a) PISTON AND CAP ARE USUALLY ACCEPTABLE (STEP 4.6.2e)	Joe	7/12/90	Joe	7-21-90	Joe	I
		b) PISTON AND CAP CLEARANCE IS SAT. (STEP 4.6.2d)	Joe	7/12/90	Joe	7-21-90	Joe	I
		c) ACCEPTABLE CAPSCREW LENGTH (STEP 4.7.4)	Joe	7/12/90	Joe	7-21-90	Joe	I
		d) CAPSCREW TIGHTEN (STEP 4.7.6)	Joe	7/12/90	Joe	7-21-90	Joe	I
		e) CAPSCREW TORQUE (STEP 4.7.7)	Joe	7/12/90			Joe	P/A

COMMENTS & IR NUMBERS: (initial and date entries)

7/12/90 Joe, IR 34469

(1) SEE IR 35534/8

Quality Control Inspection Report

VOGTLE GENERATING PLANT—UNITS 1 & 2

34669

Georgia Power

Page 1 of 1

MWO/ODR/DR No. <i>29003147</i>	Building <i>Diogen Generator Unit</i>	Procedure/Spec. No./Rev. <i>29502 C 1/1</i>
Room No./Level No. <i>274 B-2A</i>	Sys./Start-Up Designator <i>2403</i>	Tag No. <i>2. 2403-64-C03</i>
Drawing No./Rev. <i>N/A</i>	Vendor Manual Log No. <i>N/A</i>	Other <i>85022-C 2/1</i>

1. Inspector will use separate form for each completed inspection function(s) and insert original with work package, use continuation sheet 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

Method of inspection Visual

Inspected of the following points:

4.7.4. Check air start valve cap-screws - 2 3/4"

4.7.6 Torque the cap screws to 150 ft. lbs

4.7.7 See separate air start valve.

ALL WITH SET

NOTE - VP3-2273 CCH 10-5-90

VP3-2002 CCH 10-7-90

MSR 88-14032 CHAIR 4/2

Sketch

Inspection Results

☒ SAT. ☐ UNSAT—ODR/DR NO.(s):

705516A MCS191

Inspector *[Signature]* Date *7/2/90*

WHITE—Work Package

CANARY—OC Supv.

PINK—Inspector

Quality Control Inspection Report

VOGTLE GENERATING PLANT—UNITS 1 & 2

35348

Georgia Power

Page 1 of 2

MWO/ODR/DR No. 29003147	Building Maint. Shop	Procedure/Spec. No./Rev. 85022-CX, 27598-C A/O
Room No./Level No. NA	Sys./Start-Up Designator 2403	Tag No. 2-2403-64-002
Drawing No./Rev. NA	Vendor Manual Log No. NA	Other Work Order Inst.

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 Method of Inspection—Visual
 Witnessed and verified readings taken on Air Start Valve Caps
 and pistons to be replaced on 2 B Diesel. Readings are as
 listed below. Use NOTE # VP-3-2155, Col. line 1P-290, VTR51-
 1184 (Telescopic Gages); VP-3-2879, Col. line 2-17-91 (for info only)
 All work SAT. NOTE: 184 New or Refurbished caps & pistons
 were checked for flatness previously on W.O. #A9001255 and
 copy of IR #35156 is included in this package for that purpose.)
 All readings between Cap and pistons are .003"

Sketch

Inspection Results <input checked="" type="checkbox"/> SAT. <input type="checkbox"/> UNSAT—ODR/DR NO.(s):	Inspector <i>Leonard S. Ely</i>	Date 7-21-90
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EQ EVALUATION CHECKLIST

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

MMO NO. 2900314-7

SECTION I

PART A ORIGINAL PART

1. DESCRIPTION D.C.
2. TAG NO. 2240364002
3. PROJECT CLASS C15
4. SPECIFICATION (EQOP) NO. XGAKO1
5. MANUFACTURER _____
6. MODEL NO. _____
7. PART NO. _____

PART B REPLACEMENT PART

1. DESCRIPTION _____
2. MEX NO. _____
3. STOCK NO. _____
4. SPECIFICATION (EQOP) NO. _____
5. MANUFACTURER _____
6. MODEL NO. 707
7. PART NO. _____
8. PO NO. _____

COMMENTS NO PARTS USED REWORK ONLY

SECTION II WORK PLANNING

1. ARE PROCEDURES, VENDOR MANUALS, DRAWINGS OR INSTRUCTIONS AVAILABLE TO DISASSEMBLE/REWORK COMPONENT? ✓ YES _____ NO _____
(Init. Date) CJP 1 7/17/90
2. ARE SPECIFICATION NUMBERS FOR ORIGINAL AND REPLACEMENT ITEMS THE SAME? CJC 7/17/90 YES _____ NO _____
3. ARE MANUFACTURER MODEL/PART NUMBERS OF THE ORIGINAL AND REPLACEMENT PARTS THE SAME? YES _____ NO _____
4. IS BULK MATERIAL LISTED ON ATTACHMENT ACCEPTABLE? YES ✓ NO _____
LIST ITEM NO. FROM ATTACHMENT IF "NO" IS CHECKED. (Init. Date) 1

(Item No.)

(Init. Date)

NOTE

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

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

Living A. Robbins 7-21-90
WFC DATE

SECTION III EQ GROUP EVALUATION

- [] PART IS ACCEPTABLE FOR USE [] PART IS UNACCEPTABLE FOR USE
JUSTIFICATION FOR ACCEPTANCE:

EQ ENGINEER

DATE

FIGURE 3

CJP 7/17/90

Q mws
10-31-88

ISSUED

ORIGINAL 1

Department/Contractor #25-100 N/O maint	Design Change No.	Date 10-31-88	Stores Register No. 8876052
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[illegible]

Ordered By <i>Sam L. King</i>	Approved By <i>MW Godfrey</i>	Filled By <i>R. P. och</i>	Received By <i>Sam L. King</i>	Date <i>10/1/58</i>
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VECP FIRE PROTECTION CHECKLIST

1. MWO NO. 29003147 2. MPL/TAG NO. 2392564.007
3. LOCATION DG. BLDG. "A" - TRAIN

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
- ☐ RCP 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 7/17/90

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

- (A) THE CONDITION IMPACTING THE FIRE PROTECTION COMPONENTS LISTED ABOVE HAS BEEN REMOVED. FPE W DATE 7/17/90
- (B) THE FIRE PROTECTION COMPONENT IS STILL IMPAIRED. FPE W DATE 7/17/90
- (C) RESTORATION OF THE IMPAIRMENT HAS BEEN TRANSFERRED (Ref:) AND THE FIRE PROTECTION LCO LOG HAS BEEN CHANGED TO REFERENCE THE NEW MWO FOR THIS IMPAIRMENT. FPE W DATE 7/17/90

FIGURE 1



ENERGY SERVICES GROUP
ENTERPRISE ENGINE SERVICES

14441 Carolina Street
PO Box 1817
San Leandro, CA 94577
(415) 614-7400

MEMO

Date: July 13, 1990

To: Ken Stokes

From: Robert Tabastan

Subject: Vogtle Electric Generating Plant

Reference: Diesel Generator Air Start Valve Capscrew Retorque

The requirement to retorque air start valve capscrews after the initial operation following a valve's installation is necessitated by the compression characteristics of the soft copper gasket used to seal between the head and valve assembly. We know from experience that bolting preload alone will not fully compress the copper gasket, cylinder pressure fluctuations acting upon the air start valve causes motion of the valve which further compresses the gasket and correspondingly reduces the preload imparted by the capscrews. This additional compression must be compensated for by retorquing the capscrews until no further gasket compression is observed. The work currently in progress at Vogtle entails removal of the capscrews and air start valve cap but does not disturb the relationship between the valve body, gasket and cylinder head, it is therefore not necessary to require a periodic hot retorque of the air start valve capscrews upon reassembly.

[Signature]

Project Engineer

Distribution: Lance Block
Ray Howard

File: Engine S.N. 76081/24

Project Admin:

Sales:

Other:

Sheet 1 of 4

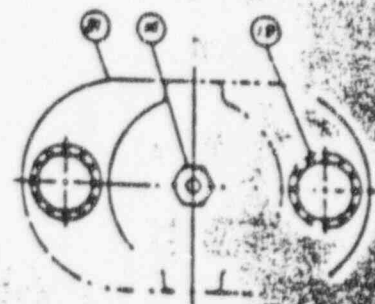
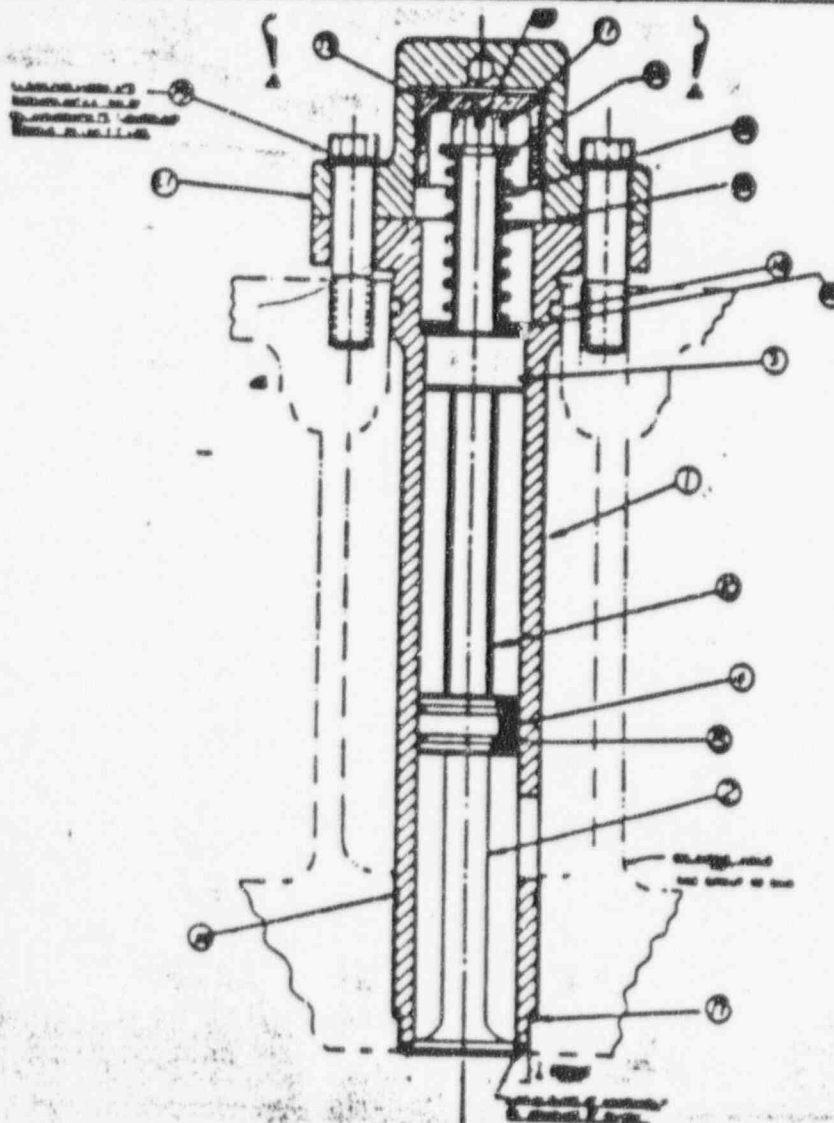
DATA SHEET 1

FOR USE WITH CONTROL NO.

29003147

AIR START VALVE INSPECTION

COMPONENT GROUP TITLE: AIR START VALVE	PARTS GROUP NO. 02-359
LOCATION: VOGTLE ELECTRIC GENERATING PLANT	UNIT NO. 2
TAG NUMBER: 2-2403-E4-002	ENGINE SERIAL NO. 76024
TOTAL ENGINE HOURS: 398.3	HOURS SINCE LAST INSPECTION: NA
DATE THIS INSPECTION: 7-21-90	REFERENCE STEPS: 4.6, 4.7



U.S.A.A.
S.A.S.S.

PROCEDURE NO.
VEGP

27598-C

REVISION

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Sheet 2 of 4

DATA SHEET 1

AIR START VALVE INSPECTION

ENGINE TAG NO.: 2240364002 DATE: 7/21/90

O.C.
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	2.240	2.250	2.247	2.247	.003"	✓		Int 07/21/90
1L	2.250	2.250	2.247	2.247	.003"	✓		Int
2R	2.250	2.250	2.247	2.247	.003"	✓		Int
2L	2.250	2.250	2.247	2.247	.003"	✓		Int
3R	2.250	2.250	2.247	2.247	.003"	✓		Int
3L	2.250	2.250	2.247	2.247	.003"	✓		Int
4R	2.249	2.249	2.247	2.247	.003"	✓		Int
4L	2.250	2.250	2.247	2.247	.003"	✓		Int
5R	2.250	2.250	2.247	2.247	.003"	✓		Int
5L	2.250	2.250	2.247	2.247	.003"	✓		Int
6R	2.249	2.249	2.247	2.247	.003"	✓		Int
6L	2.249	2.249	2.247	2.247	.003"	✓		Int
7R	2.251	2.251	2.247	2.247	.003"	✓		Int
7L	2.251	2.251	2.247	2.247	.003"	✓		Int
8R	2.251	2.251	2.247	2.247	.003"	✓		Int
8L	2.251	2.251	2.247	2.247	.003"	✓		Int

M&TE Serial No. VP 3-2155 VP 3-2155 VP 3-2155

Cal. Due Date 10-2-90 10-2-90 10-2-90

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				
1L				
2R				
2L				
3R				
3L				
4R				
4L				
5R				
5L				
6R				
6L				
7R				
7L				
8R				
8L				

Sheet 3 of 4

DATA SHEET 1

AIR START VALVE INSPECTIONS

ENGINE TAG NO. 2340364002 DATE: 7/31/80

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					

Q.C. HOLD POINT 4) Step 4.7.4 and 4.7.6: Air start valve capscrews. ENGINE HOURS 398.3

Cylinder	Capscrew = 2-3/4"		Torque		Performed	Witnessed
	1	2	1	2		
1R	50T	50T	150"	150"	OK	WHL
2R	50T	50T	150"	150"	OK	WHL
3R	50T	50T	150"	150"	OK	WHL
4R	50T	50T	150"	150"	OK	WHL
5R	50T	50T	150"	150"	OK	WHL
6R	50T	50T	150"	150"	OK	WHL
7R	50T	50T	150"	150"	OK	WHL
8R	50T	50T	150"	150"	OK	WHL
1L	50T	50T	150"	150"	OK	WHL
2L	50T	50T	150"	150"	OK	WHL
3L	50T	50T	150"	150"	OK	WHL
4L	50T	50T	150"	150"	OK	WHL
5L	50T	50T	150"	150"	OK	WHL
6L	50T	50T	150"	150"	OK	WHL
7L	50T	50T	150"	150"	OK	WHL
8L	50T	50T	150"	150"	OK	WHL

MATE Serial No. V232224 V232007 V232078
 Cal. Due Date 10-6-80 10-7-80 10-9-80

PROCEDURE NO.

VEGP

27598-C

REVISION

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DATA SHEET 1

ENGINE TAG No.

NA

DATE:

N/A

5) 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				

M&TE Serial No.

Cal. Due Date

PROCEDURE NO.

VEGP

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Sheet 1 of 2

DATA SHEET 2

AIR START VALVE CAPSCREW TORQUING

ENGINE TAG No.:

N/A

DATE:

N/A

Step 4.7.7

ENGINE HOURS

N/A

O.C.
HOLD POINT

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

** WORK TO BE PERFORMED
N/A UNDER NEW MWO REF WRT 11158
ENGINE HOURS

O.C.
HOLD POINT

Step 4.7.7:

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

PROCEDURE NO. VEGP	27598-C	REVISION 0	PAGE NO. 26 of 31
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DATA SHEET 2

AIR START VALVE CAPSCREW TORQUING

ENGINE TAG No.: N/A

DATE: N/A

Step 4.7.7

ENGINE HOURS N/A

Q.C.
HOLD POINT

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

WORK TO BE PERFORMED UNDER

** NEW M&TE RFA WPT III 58

ENGINE HOURS

N/A

Q.C.
HOLD POINT

Step 4.7.7:

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

Sheet 1 of 1

[] 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.

[illegible]

COMPLETION SHEET

PROCEDURE NO. 27598-C	REVISION 0	SHEET 1 of 4
TAG NO. 2-2403-G9-002	DESCRIPTION Standby Diesel Generator	
SERIAL NO. 76024	MANUFACTURER Transamerica Delaval	MODEL DSRV-16-4
TEST EQUIPMENT USED See applicable "Data" Sheet	<input checked="" type="checkbox"/> Safety Related/QC HoldPoints apply <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>WLC 7/21/90</u>	<u>NO</u>	<u>PC 7/21/90</u>
4.2	Shift Supervisor Notified	<u>WLC 7/21/90</u>	<u>NO</u>	<u>PC 7/21/90</u>
4.3	Diesel Generator Isolated and Tagged	<u>WLC 7/21/90</u>	<u>NO</u>	<u>PC 7/21/90</u>
4.6.2b through d	Measure Air Start Valve Cap to Piston Clearance "Data" Sheet 1, Sheet 2	<u>SL *17-21-90</u>	<u>O.C. HOLD POINT</u>	<u>WLC *17-21-90</u>
4.6.2e	Inspect Air Start Valve Internals "Data" Sheet 1, Sheet 2	<u>SL *17-21-90</u>	<u>O.C. HOLD POINT</u>	<u>WLC *17-21-90</u>
4.6.2f	Inspect Air Start Valve Seat For Pitting "Data" Sheet 1, Sheet 3	<u>N/A *1</u>	<u>NO</u>	<u>PC 7/21/90 *1</u>
4.6.2h	Blue Air Start Valve "Data" Sheet 1, Sheet 3	<u>N/A *1</u>	<u>NO</u>	<u>PC 7/21/90 *1</u>

* Document on Referenced "Data" Sheet

PROCEDURE STEP	DESCRIPTION	MAINT. INIT/DATE	HOLD POINT (Yes/No)	QC INIT/DATE
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4.6.3 Air Start Valves
Reassembled

1R				
2R				
3R				
4R				
5R				
6R				
7R				
8R				
1L				
2L				
3L				
4L				
5L				
6L				
7L				
8L				

4.7.2 Valve To Head Gasket Installed

1R			
2R			
3R			
4R			
5R			
6R			
7R			
8R			
1L			
2L			
3L			
4L			
5L			
6L			
7L			
8L			

4.7.4 Air Start Valve Capscrews
Inspected "Data" Sheet 1,
Sheet 3

K 17-21-90	QC HOLD POINT	PM 17-21-90
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4.7.6 Air Start Valve Capscrews
Torqued - "Data" Sheet 1,
Sheet 3

K 17-21-90	QC HOLD POINT	PM 17-21-90
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* Document on Referenced "Data" Sheet

PROCEDURE STEP	DESCRIPTION	MAINT. INIT/DATE	HOLD POINT (Yes/No)	QC INIT/DATE
4.7.7	Air Start Valve Capscrews Retorqued every 8 hours of engine operation "Data" Sheet 2	SEE ** Comments N/A	HOLD N/A	7-21-90 1
4.7.9h	Torque Rocker Arm Capscrews "Data" Sheet 1, Sheet 4	N/A	NO	10-7-90 1
4.7.10	Adjust Intake And Exhaust valves			
	1R	N/A		
	2R			
	3R			
	4R			
	5R			
	6R			
	7R			
	8R			
	1L			
	2L			
	3L			
	4L			
	5L			
	6L			
	7L			
	8L			
4.7.11	Tools removed from engine			
4.7.12	Cylinder head covers installed			
4.7.13	Main Bearing Oil Lines installed			
4.9	Notify Shift Supervisor required maintenance is complete			

* Document on Referenced "Data" Sheet

PROCEDURE NO.

VEGP

27598-C

REVISIÓN

0

PAGE NO.

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COMMENTS/ADDITIONAL HOLD POINTS:

** STEP 4.7.2 To BE PERFORMED UNDER NEW MWD
REF WRT 11158

QC has reviewed this procedure for hold points

Philip D. Check
Signature 7/8/90

APPROVED (✓)	DISAPPROVED ()
FOREMAN	DATE
<i>David Seely</i>	

COMPLETED BY	DATE
<i>A. Cook</i>	7-21-90