

ENGINE GENERATOR SET INSPECTION CHECKLIST

For use of this form see TM 5-694; the proponent agency is COE.

SECTION A - CUSTOMER DATA

| | | |
|---|------------------------|--------------------|
| 1. PLANT/BUILDING | 2. LOCATION | 3. JOB NUMBER |
| 4. EQUIPMENT | 5. CIRCUIT DESIGNATION | 6. DATE (YYYYMMDD) |
| 7. TEST EQUIPMENT TYPE/BRAND AND CALIBRATION DATE | | 8. TESTED BY |

SECTION B - EQUIPMENT DATA

| | | | |
|--|-----------------|--------------------------|--------------------------|
| 9. MANUFACTURER | 10. STYLES/S.O. | 11. VOLTAGE RATING | 12. KW RATING |
| 13. CIRCUIT BREAKER SIZE/INTERRUPTING RATING | | 14. WET BULB TEMPERATURE | 15. DRY BULB TEMPERATURE |

SECTION C - VISUAL AND ELECTRICAL/MECHANICAL INSPECTION

| 16. CHECK POINT | COND* | NOTES | CHECK POINT | COND* | NOTES |
|---------------------------------|-------|-------|--|-------|-------|
| EXTERIOR OF EQUIPMENT | | | EQUIPMENT IDENTIFICATION | | |
| COMPLETENESS OF ASSEMBLY | | | BRACING | | |
| EQUIPMENT ROTATION | | | PROPER PHASE CONNECTIONS | | |
| CHECK OIL LEVEL | | | REFERENCE DRAWINGS | | |
| CHECK FUEL LEVEL | | | WORKING CLEARANCE | | |
| PROPER EQUIPMENT GROUNDING | | | ANCHORAGE | | |
| CHECK METERS/GAUGES | | | ALL FILTERS AND VENTS CLEAR | | |
| TIGHTNESS OF BOLTED CONNECTIONS | | | CHECK EQUIPMENT ENVIRONMENTAL CLASSIFICATION | | |
| VERIFY GOVERNOR AND REGULATOR | | | CHECK FOR PROVISIONS OF SPILL CONTAINER | | |
| CHECK VIBRATION | | | CONTROL SYSTEM | | |
| CHECK BATTERIES | | | CHECK FUEL FILTER | | |
| CHECK RADIATOR FLUID | | | CHECK ALARM INDICATORS: PROPER COLOR FOR EACH FUNCTION | | |
| PROPER SYSTEM GROUND | | | | | |

SECTION D - ELECTRICAL TESTS

| 17. INSULATION RESISTANCE @ V | A-GRD | B-GRD | C-GRD | A-B | B-C | C-A |
|--|-------|-------|-------|-----|-----|-----|
| POLARIZATION INDEX RATIO = 10 MINUTE/1 MINUTE | | | | | | |
| DC OVERPOTENTIAL TEST @ V | | | | | | |

18. NOTES

1. PERFORM 5 MEASUREMENTS AT ONE MINUTE INTERVALS.
2. DC HIPOT MEASUREMENTS SHOULD BEGIN AT 20% OF MAXIMUM TEST VOLTAGE AND INCREASE IN EQUAL INTERVALS.

$\text{MAX DC TEST VOLTAGE} = R (2 \times \text{NAMEPLATE RATING}) \times 1.6$
 WHERE R = .8 FOR DC TEST ON INSTALLATION
 WHERE R = .6 FOR DC TEST AFTER SERVICE
 (TEST MEASUREMENTS SHOULD NOT EXCEED MANUFACTURER'S RECOMMENDATION)

SECTION D - ELECTRICAL TESTS (Continued)

| | | | | | | | | | | | |
|-----------------------------|----------------------------------|-----|-----|-----|-----|-----|-----------|---|---|---|---|
| 19. MEASUREMENT DESCRIPTION | VOLTAGE AND CURRENT MEASUREMENTS | | | | | | | | | | |
| | VOLTAGE** | | | | | | CURRENT** | | | | |
| | A-N | B-N | C-N | A-B | B-C | C-A | A | B | C | N | G |

| | | | | | |
|--|---------|------|------|-------|--------------------------|
| 20. LOAD TESTS AS A PERCENTAGE OF GENERATOR RATING | | | | | |
| | NO LOAD | 25 % | 75 % | 100 % | 110% (PRIME ENGINE ONLY) |
| A-N | | | | | |
| B-N | | | | | |
| C-N | | | | | |
| A-B | | | | | |
| B-C | | | | | |
| C-A | | | | | |
| A | | | | | |
| B | | | | | |
| C | | | | | |
| N | | | | | |
| G | | | | | |

21. NOTES

1. VOLTAGE MEASUREMENT TO BE MADE AFTER GENERATOR IS STARTED AND CONNECTED TO LOAD (CAN USE LOAD BANK).
2. DURING COMMISSIONING OF GENERATOR SETS OR ANY EQUIPMENT, A REPRESENTATIVE OF THE MANUFACTURING COMPANY OR SUPPLIER MUST BE PRESENT TO WITNESS AND/OR PERFORM THE TESTS.
3. ENGINE GENERATOR TESTING IS A VERY INTENSIVE PROCESS AND REQUIRES A 10 TO 14 HOUR DAY DEPENDING ON THE EQUIPMENT BEING COMMISSIONED. SUPPLIER/MANUFACTURER NORMALLY SUPPLY GENERATOR TESTING LOAD REQUIREMENTS.
4. VERIFY ALL SYSTEM CHECK POINTS DURING LOAD CHANGES AND RECORD PER SPECIFIED REQUIREMENTS AND/OR EQUIPMENT MANUFACTURER.
5. PERFORM AND RECORD ENGINE MANUFACTURER'S RECOMMENDED CHECKS AND INSPECTIONS.

*CONDITION: A=ACCEPTABLE; R=NEEDS REPAIR, REPLACEMENT OR ADJUSTMENT; C=CORRECTED; NA=NOT APPLICABLE
 **NOTE VALUE AND PHASING