

Now Serving Montana, Wyoming, North and South Dakota, and Idaho

## Maintenance

### Not Just an Oil Change

With a scheduled, well-documented maintenance program, you will be assured many additional years of emergency back-up power from your generator-system. TWEEnterprises, INC. is fully versed in such codes as NFPA and NEC. It is our policy to ensure your system is within specifications. TWEEnterprises, INC. offers more than just a superficial check on the generator, but rather a comprehensive evaluation on all components of your emergency back-up power system.

Our Scheduled Maintenance involves:

- 40+ Point Generator Inspection
- 40+ Point Engine Inspection
- 40+ Point Transfer Switch Inspection

Optional Load Bank Testing is also available.  
(See Back)

A scheduled maintenance agreement is highly recommended to verify that service has been performed on your entire emergency generator system.



## Quality Service

### The Best Techs in the Business

Our technicians are well-versed on all makes and models of generators, as well as factory-trained on Generac Power Systems. Our technicians have over 100 years of combined experience in this field and are meticulous in all aspects of their services.

With thousands of generator system installations and scheduled maintenance agreements, our service technicians travel extensively, which means reduced rates for our customers because we can divide the travel costs, and still offer our excellent, comprehensive service.

## Call Us for All Your Service Needs

To request a quote for Service or a Scheduled Maintenance Agreement, please contact us at:

1-800-955-3795

406-245-4600, ext. 16

or email us at: [Service@twegen.com](mailto:Service@twegen.com)

CUSTOMER: \_\_\_\_\_  
 Service Frequency: ( ) Quarterly ( ) Semi-annual ( ) Annual

ENGINE  
**SM INSPECTION CHECKLIST**  
 DATE: \_\_\_/\_\_\_/\_\_\_  
 Last SM Date: \_\_\_/\_\_\_/\_\_\_  
 Last SM Hours: \_\_\_\_\_

CUSTOMER: \_\_\_\_\_  
 Service Frequency: ( ) Quarterly ( ) Semi-annual ( ) Annual  
 Generator Type: \_\_\_\_\_ Model: \_\_\_\_\_ S/N: \_\_\_\_\_

Engine No. \_\_\_\_\_ Type \_\_\_\_\_ Model \_\_\_\_\_ S/N \_\_\_\_\_ Hour Meter \_\_\_\_\_

BATTERY(S) FLOAT CHARGE [ ] ADJUST IF NECESSARY BATT AGE \_\_\_\_\_

CABLE CONDITION [ ] CLEAN TERMINALS IF NECESSARY [ ]

BATTERY LOAD TEST: VOLTS [ ] TIME [ ] VOLTS [ ] TIME [ ]

CHECK BATTERY CHARGER TERMINAL STRIP

CHECK BATTERY CHARGER WIRE CONNECTORS

CHECK BATTERY CHARGER TRANSFORMER FOR OVERHEATING

CHECK AND TIGHTEN ALL HOSE CLAMPS, CHECK HOSE CONDITION

CHECK ALL ELECTRICAL CONNECTIONS, WIRES, ETC. ON ENGINE

CHECK FUEL LINES AND CONNECTIONS

CHECK GOVERNOR, ACTUATOR LINKAGES

CHECK ENGINE, GENERATOR, FRAME, RADIATOR FOR LOOSE BOLTS, MOUNTS

CHECK BELT CONDITION AND TENSION, ADJUST IF NECESSARY

CHECK OIL LEVEL (OK) [ ] LOW [ ] CHANGE OIL [ ] CHANGE FILTER(S) [ ] OIL SAMPLE TAKEN [ ]

CHECK COOLANT LEVEL (OK) [ ] LOW [ ] STRENGTH [ ] PH [ ]

CHANGE COOLANT FILTER, ADD PROPER UNITS ADDITIVE (PH)

AIR FILTER CHANGED [ ] CLEANED [ ] INSPECTED [ ]

CHANGE FUEL FILTER(S), INSPECT FOR WATER, PARTICLES, ETC.

CHECK RADIATOR (INSIDE [ ] OUTSIDE [ ] CLEAN, BLOW OUT FINS

CHECK ENGINE HEATER, RECORD WORKING TEMPERATURE IN \_\_\_\_\_ OUT \_\_\_\_\_

CHECK WATER PUMP BEARING TOLERANCE [ ] LEAKAGE [ ]

CHECK FOR FLUID LEAKS

CHECK IGNITION SYSTEM CONDITION WIRES [ ]

CHECK IGNITION SYSTEM CONDITION POINTS [ ] TIMING [ ] ROTOR [ ] CAP [ ]

LUBE FAN HUB AND ALL POINTS THAT APPLY

CHECK GOVERNOR OIL CONDITION AND LEVEL

CHECK AND RECORD OIL PRESSURE: COLD [ ] HOT [ ]

CHECK EXHAUST SYSTEM: CONDENSATION [ ] SUPPORTS [ ] CONNECTIONS [ ]

CHECK TURBOCHARGER(S) RIGHT: SIDE PLAY: [ ] END PLAY: [ ] ROTATION [ ]

LEFT: SIDE PLAY: [ ] END PLAY: [ ] ROTATION [ ]

CHECK ENGINE EXHAUST COLOR: COLD [ ] HOT [ ]

CHECK RECORD ALTERNATOR CHARGE: MAX AMPS [ ] TOP VOLTS [ ]

CHECK LOUVER OPERATION, AIR FLOW

CHECK FUNCTION OF DAY TANK, SWITCHES, PUMP, ETC.

CHECK FOR CORRECT GAS PRESSURE LP [ ] NG [ ] INLET [ ] IN, OUTLET [ ] IN

STETHOSCOPE: ALTERNATOR BEARINGS

STETHOSCOPE: WATER PUMP BEARINGS

STETHOSCOPE: ROCKERS, TAPPETS, LOWER END, PISTONS, ETC.

STETHOSCOPE: TURBOCHARGER(S) RIGHT [ ] LEFT [ ]

CHECK AND RECORD HOT COOLANT TEMPERATURE [ ] F [ ]

WIPE DOWN ENGINE WITH SOLVENT IF DIRTY OR BLOW DUST OFF

START POSITION SWITCH IS IN REMOTE (AUTO) POSITION, EXCITER CB IS ON

INSPECT ALL WIRING CONDITION, ENSURE TIGHT CONNECTIONS

BLOW OUT WINDINGS WITH DRY AIR

CHECK CONDITION OF BRUSHES AND SLIP RINGS

VISUALLY INSPECT EXCITER AND GENERATOR PARTS

INSURE CLEAN AND DRY ELECTRONIC CONTROL PANEL

INSPECT CONTROL RELAYS, CONTACTS FOR CHAR OR DAMAGE

CHECK TERMINAL STRIPS FOR LOOSE CONNECTIONS

CHECK ELECTRONIC CARDS FOR CORROSION OR BAD CONNECTORS

INSURE THAT CRIMP CONNECTORS ARE SECURELY TIGHT

STETHOSCOPE: LISTEN TO GENERATOR BEARING

CHECK NFPA ALARMS AND CONTROLS Remote Alarm

OVERSPEED SHUT DOWN, SET AT [ ] RPM, HZ [ ]

TEMPERATURE and/or LOW COOLANT LEVEL SHUTDOWN [ ]

LOW OIL PRESSURE SHUTDOWN [ ]

OVERCRANK SHUTDOWN [ ]

RPM SENSOR LOSS [ ]

HI-LOW BATTERY and/or CHARGER FAILURE [ ]

OVER/UNDER VOLTAGE SHUTDOWN [ ]

EMERGENCY STOP [ ]

PRE LOW OIL ALARM [ ]

PRE HIGH COOLANT TEMP ALARM [ ]

LOW BLOCK TEMP [ ]

LOW FUEL ALARM [ ]

HIGH FUEL ALARM [ ]

TANK LEAK/RUPTURE ALARM [ ]

NOT IN AUTO ALARM [ ]

STARTER AMP DRAW DURING OVERCRANK [ ]

GEN POWER [ ]

LINE POWER [ ]

OTHER ( ) [ ]

OTHER ( ) [ ]

CHECK NO LOAD: VOLTS [ ] A [ ] B [ ] C [ ] Freq \_\_\_\_\_ HZ, L to L \_\_\_\_\_ Volts

CHECK VOLTAGE REGULATOR, CALIBRATE IF NECESSARY

CLEAN EXTERIOR OF GENERATOR

START POSITION SWITCH IS IN REMOTE (AUTO) POSITION, EXCITER CB IS ON

GENERATOR MAIN LINE CIRCUIT BREAKER IS IN ON POSITION

**NOTES AND RECOMMENDATIONS:**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

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5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

SM INSPECTION PERFORMED BY \_\_\_\_\_

QTY	MATERIAL	TECH	ADD'L LABOR HOURS	RATE

SM INSPECTION PERFORMED BY \_\_\_\_\_

CUSTOMER: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_  
 ADDRESS: \_\_\_\_\_  
 CITY: \_\_\_\_\_ ST \_\_\_\_\_ ZIP \_\_\_\_\_

CUSTOMER: \_\_\_\_\_  
 Service Frequency: ( ) Quarterly ( ) Semi-annual ( ) Annual  
 Last SM Date: \_\_\_/\_\_\_/\_\_\_

**ENGINE/ GENERATOR DATA:**

Make \_\_\_\_\_ KW rating \_\_\_\_\_  
 Model \_\_\_\_\_ Voltage \_\_\_\_\_ Phase \_\_\_\_\_  
 S/N \_\_\_\_\_ Governor \_\_\_\_\_  
 Fuel \_\_\_\_\_

Jobsite Altitude \_\_\_\_\_ Ambient Temperature \_\_\_\_\_

A.T.S. No. \_\_\_\_\_ Type \_\_\_\_\_ Model \_\_\_\_\_ S/N \_\_\_\_\_

**AUTHORIZED TO RUN ON LOAD BY:** \_\_\_\_\_ TIME [ ] DATE [ ]

DISABLE ENGINE, DISCONNECT POWER, TRIP MLCB, PLACE ATS IN OFF OR MANUAL

REMOVE CONNECTION PANEL COVER ON GENERATOR

REMOVE POWER LEADS FROM MLCB ON ATS FEED SIDE, MARK FOR PROPER REINSTALLATION

SECURE LOAD BANK LEADS IN MLCB

DOUBLE CHECK TO ENSURE THAT LOAD BANK VOLTAGE CONNECTION IS SAME AS GENERATOR

CHECK LOAD BANK FAN FOR PROPER VOLTAGE AND CONNECTION

CHECK ENGINE OIL LEVEL [ ] AND COOLANT LEVEL [ ]

START ENGINE/GENERATOR, PLACE MLCB IN "ON" POSITION

AUTHORIZED TO RUN ON LOAD BY: \_\_\_\_\_ TIME [ ] DATE [ ]

CHECK ALL CONTROL AND FEEDER TERMINATIONS FOR LOOSE CONNECTIONS

CHECK ALL BUSS BARS AND AC LOAD CONNECTIONS FOR LOOSE CONNECTIONS AND HEAT DISCOLORATION

CHECK ARC CHUTES FOR METAL DEPOSITS, INSURE CHUTES ARE INTACT

CHECK TERMINAL STRIPS FOR LOOSE CONNECTIONS AND HEAT DISCOLORATION

ENSURE THAT CRIMP CONNECTIONS ARE SECURELY TIGHT

INSPECT ALL SENSING TRANSFORMERS FOR OVERHEATING AND LOOSE WIRES

CHECK ELECTRONIC CARD SLIDE-IN CONNECTORS FOR CORROSION AND LOOSE WIRES

INSPECT VOLTAGE SENSORS FOR DAMAGED COMPONENTS

CHECK DURATION OF RELAYS, T.D. START [ ], T.D. TRANSFER [ ], T.D. NEUT [ ]

T.D. RETRANSFER [ ], T.D. STOP [ ], MINIMUM RUN [ ]

INPHASE TRANSFER SELECTED? YES \_\_\_\_\_ NO \_\_\_\_\_

INPHASE TRANSFER CALIBRATION CHECKED? YES \_\_\_\_\_ NO \_\_\_\_\_

CHECK UTILITY SENSOR SETTINGS, PICK UP [ ] % DROPOUT [ ] %

CHECK EMERGENCY SENSOR SETTINGS, PICK UP [ ] % of voltage, [ ] % of Freq, DROPOUT [ ] %

CHECK EXERCISER TIMER. SET TO RUN DAY \_\_\_\_\_ TIME \_\_\_\_\_ PM **W/OUT LOAD**

CHECK EXERCISER TIMER: Battery (\_\_\_\_vdc) and Trickle Charger Output (\_\_\_\_vdc)

START GENERATOR, RUN ON LOAD

CHECK START-UP AND SHUTDOWN SEQUENCING AND TIME DELAYS

CHECK MAIN SWITCH CONTACT VOLTAGE DROP, UTILITY VOLTS: [ ] A [ ] B [ ] C [ ] mvAC

CHECK MAIN SWITCH CONTACT VOLTAGE DROP, EMERGENCY VOLTS: [ ] A [ ] B [ ] C [ ] mvAC

CHECK ALL PANEL LIGHTS AND METERS TO ENSURE THEY ARE WORKING PROPERLY

VACUUM AND CLEAN A.T.S. CABINET IF NECESSARY

CHECK SWITCH POSITION NOTIFICATION AT ALARM PANEL

CHECK & RECORD UTILITY VOLTAGE: [ ] A [ ] B [ ] C [ ] L to L \_\_\_\_\_ Volts

CHECK & RECORD UTILITY AMPERAGE: [ ] A [ ] B [ ] C [ ]

LOAD AVAILABLE @ \_\_\_\_\_ AM \_\_\_\_\_ (DAY OF WEEK) \_\_\_\_\_ KW \_\_\_\_\_ % EPS RATING

CHECK AVAILABLE LOAD: VOLTS [ ] A [ ] B [ ] C [ ] Freq \_\_\_\_\_ HZ, L to L \_\_\_\_\_ Volts

CHECK AVAILABLE LOAD: AMPS [ ] A [ ] B [ ] C [ ]

LOAD AVAILABLE @ \_\_\_\_\_ PM \_\_\_\_\_ (DAY OF WEEK) \_\_\_\_\_ KW \_\_\_\_\_ % EPS RATING

RUN GENERATOR UNDER AVAILABLE LOAD FOR [ ] MIN

START POSITION IS IN AUTOMATIC (REMOTE) POSITION

ALL SWITCHES AND BREAKERS IN A.T.S. ON GENERATOR ARE IN POSITION FOR EMERGENCY DUTY

**WITH ENGINE/GENERATOR RUNNING AND STABILIZED CHECK THE FOLLOWING:**

OIL PRESSURE \_\_\_\_\_ DC AMPS \_\_\_\_\_ AC VOLTS \_\_\_\_\_ AC FREQUENCY \_\_\_\_\_

TEST IN \_\_\_\_\_ MINUTE INCREMENTS  
 LOAD TEST STARTING AT \_\_\_\_\_ AM, [ ] PM TOTAL TEST DURATION: \_\_\_\_\_ HRS

TIME	AB PHASE V/A	BC PHASE V/A	AC PHASE V/A	CALC. KW	FREQ. Hz	OIL PRESS #	WATER TEMP	DC AMPS	DC VOLTS	FUEL PRESS.

**NOTES AND RECOMMENDATIONS:**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

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6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

TESTED BY: \_\_\_\_\_

SM INSPECTION PERFORMED BY \_\_\_\_\_