

## MacAllister Power Systems

# LEVEL 1 INSPECTION PROGRAM

*(Recommended Annually)*

A factory trained technician from MacAllister Power Systems will perform all of the following points and take corrective action, if any, that needs to be taken. Where applicable and when permitted by the customer, during each visit we will check and/or replace the following:

1. Tightness of battery cables.
2. Cleanliness of battery cables.
3. Battery electrolyte level.
4. Battery specific gravity.
5. Battery charging equipment.
6. Generator electrical connections.
7. Generator slip rings.
8. Generator brushes.
9. Lubrication of generator bearing.
10. Engine control panel connections.
11. Generator control panel connections.
12. Control panel indicator lights.
13. Control panel fuses.
14. Day tank electrical connections.
15. Day tank piping connections.
16. Day tank pump and float system.
17. Radiator core for cleanliness.
18. Filler cap gasket and sealing surface.
19. Concentration of coolant conditioner.
20. Coolant level.
21. Antifreeze protection.
22. Lube oil level.
23. Engine electrical connections.
24. Engine fuel connections.
25. Engine cooling water connections.
26. All rubber hoses for deterioration.
27. Operation of jacket water heater.
28. Air cleaner elements.
29. Air cleaner seal.
30. Fan belt tension.
31. Fan belt condition.
32. Visually inspect automatic transfer switches.

### **We will start the Engine/Generator set and...**

33. Check operation of louvers.
34. Check for unusual noises.
35. Check for unusual vibrations.
36. Check for oil, fuel, and coolant leaks.
37. Check operation of water temperature safety.
38. Check operation of oil pressure safety.
39. Check operation of overspeed safety.
40. Check operation of crankcase breather.

### **We will operate the Engine/Generator set for 15 minutes and...**

41. Record fuel pressure at 0 and 15 minutes.
42. Record oil pressure at 0 and 15 minutes.
43. Record water temperature at 0 and 15 minutes.
44. Record voltage at all 3 phases at 0 and 15 minutes.
45. Record amperes at all 3 phases at 0 and 15 minutes.
46. Record frequency at all 3 phases at 0 and 15 minutes.
47. Observe exhaust gas for clarity.
48. Record battery charger voltage prior to cranking.
49. Record battery charger amperes prior to cranking.
50. Record battery charger recovery voltage after cranking.
51. Record battery charger recovery amperes after cranking.
52. Record starter voltage during cranking.
53. Record starter amperes during cranking.
54. Check automatic starting system.
55. Lubricate generator bearing.
56. Drain day tank water and sediment.
57. Take an engine oil sample.

## MacAllister Power Systems

# LEVEL 2 INSPECTION PROGRAM

*(Recommended Annually)*

A factory trained technician from MacAllister Power Systems will perform all of the following points and take corrective action, if any, that needs to be taken. Where applicable and when permitted by the customer, during each visit we will check and/or replace the following:

1. Check for tight battery cables connections.
2. Cleanliness of battery cables.
3. Battery electrolyte level.
4. Battery specific gravity.
5. Battery charging equipment.
6. Generator electrical connections.
7. Generator slip rings.
8. Generator brushes.
9. Lubrication of generator bearing.
10. Engine control panel connections.
11. Generator control panel connections.
12. Control panel indicator lights.
13. Control panel fuses.
14. Day tank electrical connections.
15. Day tank piping connections.
16. Day tank pump and float system.
17. Radiator core for cleanliness.
18. Filler cap gasket and sealing surface.
19. Concentration of coolant conditioner.
20. Coolant level.
21. Antifreeze protection.
22. Lube oil level.
23. Engine electrical connections.
24. Engine fuel connections.
25. Engine cooling water connections.
26. All rubber hoses for deterioration.
27. Operation of jacket water heater.
28. Air cleaner elements.
29. Air cleaner seal.
30. Fan belt tension.
31. Fan belt condition.
32. Visually inspect automatic transfer switches.

### We will start the Engine/Generator set and...

33. Check operation of louvers.
34. Check for unusual noises.
35. Check for unusual vibrations.
36. Check for oil, fuel, and coolant leaks.
37. Check operation of water temperature safety.
38. Check operation of oil pressure safety.
39. Check operation of overspeed safety.
40. Check operation of crankcase breather.

### We will operate the Engine/Generator set for 15 minutes and.....

41. Record fuel pressure at 0 and 15 minutes.
42. Record oil pressure at 0 and 15 minutes.
43. Record water temperature at 0 and 15 minutes.
44. Record voltage at all 3 phases at 0 and 15 minutes.
45. Record amperes at all 3 phases at 0 and 15 minutes.
46. Record frequency at all 3 phases at 0 and 15 minutes.
47. Observe exhaust gas for clarity.
48. Record battery charger voltage prior to cranking.
49. Record battery charger amperes prior to cranking.
50. Record battery charger recovery voltage after cranking.
51. Record battery charger recovery amperes after cranking.
52. Record starter voltage during cranking.
53. Record starter amperes during cranking.
54. Check automatic starting system.
55. Lubricate generator bearing.
56. Drain day tank water and sediment.
57. Take an engine oil sample.

### And finally we will.....

58. Clean primary fuel filters.
59. Change fuel filters.
60. Inspect air cleaner elements and air induction system.
61. Perform an oil analysis.
62. Replace water separator element.
63. Add coolant conditioner.
64. Lubricate governor linkage.
65. Change lube oil and filters.

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