Read the Introduction for more information on these standards, including where to direct comments, questions, and recommendations. As new items are introduced, current items are discontinued, and/or health and safety issues arise, these standards will be revised to provide updated information. Sort by Update Date to view recent changes.

Pump – Volume, Trash 3”

NFES Status
Active
NFES #
001222
Category
Small Engine Equipment
Updated
Mon, 05/01/2017 - 12:00
Storage and Shelf Life Checks
Yes
Storage and Shelf Life Procedure
Date Last Tested (DLT) not to exceed 12 months.

Initial Inspection/Disposal Criteria

1. Visually inspect for evidence of use (dust, oil, starter seal broken), damage or missing parts.
2. Return to stock if there is no sign of use or damage and date last tested (DLT) does not exceed 12 months.
3. Refurbish as necessary if unit has been used or fueled, damaged, or shelf life is exceeded.
4. Dispose of the unit if it is not economically repairable.

Refurbishment Procedures

A. Cleaning

1. Remove dirt and oil, using detergent or degreaser as necessary.
2. Use pressure washer to remove heavy deposits of oil and grease.
3. Equipment should be repaired and tested as quickly as possible after washing to minimize rust formation on metal parts.

B. Repair

1. Check for loose and/or missing parts or mounting hardware; tighten or replace as needed.
2. Check condition of engine oil, spark plug, air filter, and fuel filter; clean or replace as needed.
3. Inspect exhaust system; make sure there are no cracks or leaks. Check for loose and/or missing parts and hardware, tighten or replace as needed.

4. Ensure all decals (operations and warning) are affixed and legible.
5. Ensure all gaskets on the pump fittings/adapters are in place and functioning properly.

C. Test for Performance

1. Ensure recoil starter functions properly. Check for damage or fraying of pull cord; repair or replace as necessary.
2. Engine should start easily, run smoothly, be free from fuel leaks, and provide sufficient power to the pump end.
3. Ensure engine controls are operational and functional; stop switch, throttle and choke.
4. Test for pump performance (see owner's manual for specific performance data).
5. Ensure pump packing or mechanical seal is not leaking, repair or replace as necessary.
6. Should any function fail a test, refer to the manufacturer's repair manual and troubleshooting guide to correct the problem.
7. Remove all gasoline from fuel tank and run engine until carburetor is completely empty of gas.
8. Remove all water from pump head.

D. Repackaging

1. Use nylon "zip-tie" to tie off (seal) starter rope to the frame.
2. Attach certification tag that indicates date last tested (DLT), property #, and name of individual certifying performance.
3. Ensure that all identification (property #, serial #, owner ID) is affixed and legible.

Pump – Volume, Trash 2"

NFES Status
Active
NFES #
000683
Category
Small Engine Equipment
Updated
Mon, 05/01/2017 - 12:00
Storage and Shelf Life Checks
Yes
Storage and Shelf Life Procedure
Date Last Tested (DLT) not to exceed 12 months.

Initial Inspection/Disposal Criteria

1. Visually inspect for evidence of use (dust, oil, starter seal broken), damage or missing parts.
2. Return to stock if there is no sign of use or damage and date last tested (DLT) does not exceed 12 months.

3. Refurbish as necessary if unit has been used or fueled, damaged, or shelf life is exceeded.
4. Dispose of the unit if it is not economically repairable.

Refurbishment Procedures

A. Cleaning

1. Remove dirt and oil, using detergent or degreaser as necessary.
2. Use pressure washer to remove heavy deposits of oil and grease.
3. Equipment should be repaired and tested as quickly as possible after washing to minimize rust formation on metal parts.

B. Repair

1. Check for loose and/or missing parts or mounting hardware; tighten or replace as needed.
2. Check condition of engine oil, spark plug, air filter, and fuel filter; clean or replace as needed.
3. Inspect exhaust system; make sure there are no cracks or leaks. Check for loose and/or missing parts and hardware, tighten or replace as needed.
4. Ensure all decals (operations and warning) are affixed and legible.
5. Ensure all gaskets on the pump fittings/adapters are in place and functioning properly.

C. Test for Performance

1. Ensure recoil starter functions properly. Check for damage or fraying of pull cord; repair or replace as necessary.
2. Engine should start easily, run smoothly, be free from fuel leaks, and provide sufficient power to the pump end.
3. Ensure engine controls are operational and functional; stop switch, throttle and choke.
4. Test for pump performance (see owner’s manual for specific performance data).
5. Ensure pump packing or mechanical seal is not leaking, repair or replace as necessary.
6. Should any function fail a test, refer to the manufacturer’s repair manual and troubleshooting guide to correct the problem.
7. Remove all gasoline from fuel tank and run engine until carburetor is completely empty of gas.
8. Remove all water from pump head.

D. Repackaging

1. Use nylon “zip-tie” to tie off (seal) starter rope to the frame.
2. Attach certification tag that indicates date last tested (DLT), property #, and name of individual certifying performance.
3. Ensure that all identification (property #, serial #, owner ID) is affixed and legible.

Pump – Portable, Wick-250

NFES Status
Active
NFES #
007650
Category
Small Engine Equipment
Updated
Mon, 05/01/2017 - 12:00
Storage and Shelf Life Checks
Yes
Storage and Shelf Life Procedure
Date Last Tested (DLT) not to exceed 12 months.

Initial Inspection/Disposal Criteria

1. Visually inspect for evidence of use (dust, oil, starter seal broken), damage or missing parts.
2. Return to stock if there is no sign of use or damage and date last tested (DLT) does not exceed 12 months.
3. Refurbish as necessary if unit has been used or fueled, damaged, or shelf life is exceeded.
4. Dispose of the unit if it is not economically repairable.

Refurbishment Procedures

A. Cleaning

1. Remove dirt and oil, using detergent or degreaser as necessary.
2. Use pressure washer to remove heavy deposits of oil and grease.
3. Equipment should be repaired and tested as quickly as possible after washing to minimize rust formation on metal parts.

B. Repair

1. Check for loose and/or missing parts or mounting hardware (especially the carburetor and muffler), tighten or replace as needed.
2. Inspect power-head (engine) for freeness of all moving parts, ensuring that the crankshaft, piston/cylinder and all engine bearings are not damaged.
3. Check condition of spark plug, air filter, and fuel filter; clean or replace as needed.
4. Check frame for cracks, repair or replace as necessary.
5. Inspect exhaust system; make sure there are no cracks or leaks. Check for loose and/or missing parts and hardware, tighten or replace as needed.
6. Check throttle linkage, tighten bolts as needed.
7. Ensure all decals (operations and warning) are affixed and legible.

8. Ensure “EMERGENCY RESCUE EQUIPMENT EXEMPT FROM EMISSIONS STANDARDS UNDER 40 CFR 1054.660” decal is affixed.
9. Ensure all gaskets on the pump fittings/adapters are in place and functioning properly.

C. Test for Performance

1. Ensure recoil starter functions properly. Check for damage or fraying of pull cord; repair or replace as necessary.
2. Engine should start easily, run smoothly, be free from fuel leaks, and provide sufficient power to the pump end.
3. Ensure engine controls are operational and functional; stop switch, throttle and choke.
4. Test for performance:
    - Pumps are tested with 1 ½” dia. inlet hose w/foot valve, 1 ½” dia. discharge hose and ¼” nozzle
    - Adjust carburetor: i. Set idle speed to 2400 RPM. ii. To adjust high speed mixture use full throttle and set pump output pressure to 120 PSI. Lean out adjustment screw to achieve max RPM, then richen until pressure drops 5 PSI.
    - Check max PSI with nozzle closed. Minimum pressure: 140 PSI.
5. Use loss of prime method to test engine over-speed protection cut-out switch.
6. Ensure mechanical pump seal is not leaking, repair or replace as necessary.
7. Should any function fail a test, refer to the manufacturer’s repair manual and troubleshooting guide to correct the problem.
8. Lubricate pump head bearing with specified grease.
9. Remove fuel source from engine and run engine until carburetor is completely empty of fuel.
10. Remove all water from pump end.

D. Repackaging

1. Use nylon “zip-tie” to tie off (seal) starter rope to the frame.
2. Attach certification tag that indicates date last tested (DLT), property #, and name of individual certifying performance.
3. Ensure that all identification (property #, serial #, owner ID) is affixed and legible.

Pump – Portable, Lightweight, 4 Cycle

NFES Status
Active
NFES #
006000
Category
Small Engine Equipment
Updated
Mon, 05/01/2017 - 12:00
Storage and Shelf Life Checks
Yes
Storage and Shelf Life Procedure
Date Last Tested (DLT) not to exceed 12 months.

Initial Inspection/Disposal Criteria

1. Visually inspect for evidence of use (dust, oil, starter seal broken), damage or missing parts.
2. Return to stock if there is no sign of use or damage and date last tested (DLT) does not exceed 12 months.
3. Refurbish as necessary if unit has been used or fueled, damaged, or shelf life is exceeded.
4. Dispose of the unit if it is not economically repairable.

Refurbishment Procedures

A. Cleaning

1. Remove dirt and oil, using detergent or degreaser as necessary.
2. Use pressure washer to remove heavy deposits of oil and grease.
3. Equipment should be serviced and test run as quickly as possible after pressure washing to minimize rust formation on metal parts.

B. Repair

1. Check for loose and/or missing parts or mounting hardware; tighten or replace as needed.
2. Check condition of engine oil, spark plug, air filter, and fuel filter; clean or replace as needed.
3. Inspect power-head (engine) for freeness of all moving parts, ensuring that the crankshaft, piston/cylinder and all engine bearings are not damaged.
4. Inspect exhaust system; make sure there are no cracks or leaks. Clean spark arrestor of excess carbon build-up, replace screen if damaged.
5. Ensure all decals (operations and warning) are affixed and legible.
6. Check to make sure that all gaskets on the pump fittings/adapters are in place and functioning properly.

C. Test for Performance

1. Refer to the owner’s manual for operations and specifications information specific to pump model.
2. Ensure fuel is fresh for running tests.
3. Ensure recoil starter functions properly. Check for damage or fraying of pull cord; repair or replace as necessary.
4. Ensure pump packing or mechanical seal is not leaking, repair or replace as necessary.
5. Should any function fail a test, refer to the manufacturer’s repair manual and troubleshooting guide to correct the problem.
6. Remove all gasoline from fuel tank and run engine until carburetor is completely empty of gas.
7. Remove all water from pump end. Grease pump as necessary.

D. Repackaging

1. Use nylon “zip-tie” to tie off (seal) starter rope to the frame.

2. Attach certification tag; that indicates date last tested (DLT), property #, and name of individual certifying performance.
3. Ensure that all identification (property #, serial #, owner ID) is affixed and legible.

Pump – Fire, Portable, Lightweight, 2 Cycle

NFES Status
Active
NFES #
000124
Category
Small Engine Equipment
Updated
Mon, 05/01/2017 - 12:00
Storage and Shelf Life Checks
Yes
Storage and Shelf Life Procedure
Date Last Tested (DLT) not to exceed 12 months.

Initial Inspection/Disposal Criteria

1. Visually inspect for evidence of use (dust, oil, starter seal broken), damage or missing parts.
2. Return to stock if there is no sign of use or damage and date last tested (DLT) does not exceed 12 months.
3. Refurbish as necessary if unit has been used or fueled, damaged, or shelf life is exceeded.
4. Dispose of the unit if it is not economically repairable.

Refurbishment Procedures

A. Cleaning

1. Remove dirt and oil, using detergent or degreaser as necessary.
2. Use pressure washer to remove heavy deposits of oil and grease.
3. Equipment should be repaired and tested as quickly as possible after pressure washing to minimize rust formation on metal parts.

B. Repair

1. Check for loose and/or missing parts or mounting hardware; tighten or replace as needed.
2. Check condition of spark plug, air filter, and fuel filter; clean or replace as needed.
3. Inspect power-head (engine) for freeness of all moving parts, ensuring that the crankshaft, piston/cylinder and all engine bearings are not damaged.

4. Inspect exhaust system; make sure there are no cracks or leaks. Clean spark arrestor of excess carbon build-up, replace screen if damaged.
5. Ensure all decals (operations and warning) are affixed and legible.
6. Check to make sure that all gaskets on the pump fittings/adapters are in place and functioning properly.

C. Test for Performance

1. Refer to the owner's manual for operations and specifications information specific to pump model.
2. Check condition of fuel mix. Ensure fuel is fresh and the correct mix oil ratio is used for running tests.
3. Ensure recoil starter functions properly. Check for damage or fraying of pull cord; repair or replace as necessary.
4. Ensure pump packing or mechanical seal is not leaking; repair or replace as necessary.
5. Should any function fail a test, refer to the manufacturer's repair manual and troubleshooting guide to correct the problem.
6. Remove all gasoline from fuel tank and run engine until carburetor is completely empty of fuel.
7. Remove all water from pump end. Grease pump as necessary.

D. Repackaging

1. Use nylon "zip-tie" to tie off (seal) starter rope to the frame.
2. Attach certification tag that indicates date last tested (DLT), property #, and name of individual certifying performance.
3. Ensure that all identification (property #, serial #, owner ID) is affixed and legible.

Pump – Fire, Portable, Lightweight Backpack, 2 Cycle

NFES Status
Active
NFES #
000253
Category
Small Engine Equipment
Updated
Mon, 05/01/2017 - 12:00
Storage and Shelf Life Checks
Yes
Storage and Shelf Life Procedure
Date Last Tested (DLT) not to exceed 12 months.

Initial Inspection/Disposal Criteria

1. Visually inspect for evidence of use (dust, oil, starter seal broken), damage or missing parts.
2. Return to stock if there is no sign of use or damage and date last tested (DLT) does not exceed 12 months.

3. Refurbish as necessary if unit has been used or fueled, damaged, or shelf life is exceeded.
4. Dispose of the unit if it is not economically repairable.

Refurbishment Procedures

A. Cleaning

1. Remove dirt and oil, using detergent or degreaser as necessary.
2. Use pressure washer to remove heavy deposits of oil and grease.
3. Equipment should be repaired and tested as quickly as possible after pressure washing to minimize rust formation on metal parts.

B. Repair

1. Check for loose and/or missing parts or mounting hardware; tighten or replace as needed.
2. Check condition of spark plug, air filter, and fuel filter; clean or replace as needed.
3. Inspect power-head (engine) for freeness of all moving parts, ensuring that the crankshaft, piston/cylinder and all engine bearings are not damaged.
4. Inspect exhaust system; make sure there are no cracks or leaks. Clean spark arrestor of excess carbon build-up, replace screen if damaged.
5. Ensure all decals (operations and warning) are affixed and legible.
6. Check to make sure that all gaskets on the pump fittings/adapters are in place and functioning properly.

C. Test for Performance

1. Refer to the owner’s manual for operations and specifications information specific to pump model.
2. Check condition of fuel mix. Ensure fuel is fresh and the correct mix oil ratio is used for running tests.
3. Ensure recoil starter functions properly. Check for damage or fraying of pull cord; repair or replace as necessary.
4. Ensure pump packing or mechanical seal is not leaking; repair or replace as necessary.
5. Should any function fail a test, refer to the manufacturer’s repair manual and troubleshooting guide to correct the problem.
6. Remove all gasoline from fuel tank and run engine until carburetor is completely empty of fuel.
7. Remove all water from pump end. Grease pump as necessary.

D. Repackaging

1. Use nylon “zip-tie” to tie off (seal) starter rope to the frame.
2. Attach certification tag that indicates date last tested (DLT), property #, and name of individual certifying performance.
3. Ensure that all identification (property #, serial #, owner ID) is affixed and legible.

Pump – Fire, Portable, High Pressure w/Fuel Line

NFES Status
Active
NFES #
000148
Category
Small Engine Equipment
Updated
Mon, 05/01/2017 - 12:00
Storage and Shelf Life Checks
Yes
Storage and Shelf Life Procedure
Date Last Tested (DLT) not to exceed 12 months.

Initial Inspection/Disposal Criteria

1. Visually inspect for evidence of use (dust, oil, starter seal broken), damage or missing parts.
2. Return to stock if there is no sign of use or damage and date last tested (DLT) does not exceed 12 months.
3. Refurbish as necessary if unit has been used or fueled, damaged, or shelf life is exceeded.
4. Dispose of the unit if it is not economically repairable.

Refurbishment Procedures

A. Cleaning

1. Remove dirt and oil, using detergent or degreaser as necessary.
2. Use pressure washer to remove heavy deposits of oil and grease.
3. Equipment should be serviced and test run as quickly as possible after pressure washing to minimize rust formation on metal parts.

B. Repair

1. Check for loose and/or missing parts or mounting hardware; tighten or replace as needed.
2. Inspect power-head (engine) for freeness of all moving parts, ensuring that the crankshaft, piston/cylinder and all engine bearings are not damaged.
    a. Ensure over-bored Mark-3 cylinders are marked with actual size of bore.
3. Check condition of spark plug, air filter, and fuel filter; clean or replace as needed.
    a. Re-oil foam air filter with “foam type” filter oil.
    b. Replace fuel filter on Wick 375 engine at each service.
4. Ensure Mark-3 carburetor shroud does not have a guard covering the high speed mixture screw. Either cut off the guard or replace carburetor shroud with a modern version without guard.

5. Inspect exhaust system; make sure there are no cracks or leaks. Clean spark arrestor of excess carbon build-up, replace if screen is damaged.
    a. Re-torque muffler bolts on Wick 375 engines to 18 lb. ft. at each service.
6. Ensure all decals (operations and warning) are affixed and legible.
7. Ensure “EMERGENCY RESCUE EQUIPMENT EXEMPT FROM EMISSIONS STANDARDS UNDER 40 CFR 1054.660” decal is affixed.
8. Paint exposed metal on frame, cowling, and pump body.
9. Check to make sure that all gaskets on the pump fittings/adapters are in place and functioning properly.
10. Inspect Fuel Line Assembly, refer to the refurbishment guide for NFES #000113.

C. Test for Performance

- Pumps are tested using: 1½” suction hose at pump intake and 31/64” discharge (machined square edge orifice). The use of a full bore 1½” shut-off valve will be necessary to test for maximum pump output pressure. Grade 1A liquid filled pressure gauges with 5 PSI graduation are recommended. Table 1 and Table 2 reflect minimum output pressures for refurbishing high pressure pumps as a function of elevation. A one foot lift should be used as a standard drafting height.

Table 1. Mark 3 Pump minimum output

Elevation	Shut-off pressure[1] (PSI)	Working pressure @ 31/64" orifice[2] (PSI)
0	295	135
1000	280	135
2000	270	130
3000	255	130
4000	245	125
5000	230	125
6000	215	120

[1]Based on the formula, Pressure = -0.0129 * (Elevation) + 294.24
[2]Based on the formula, Pressure = -0.0026 * (Elevation) + 135.27

Table 2. Wick 375 Pump minimum output

Elevation	Shut-off pressure[3] (PSI)	Working pressure @ 31/64" orifice[4] (PSI)
0	355	150
1000	320	145
2000	305	140
3000	295	135
4000	280	130
5000	265	125
6000	250	120

[3]Based on the formula, Pressure = -0.0138 * (Elevation) + 334.7
[4]Based on the formula, Pressure = -0.0044 * (Elevation) + 148.75

1. Ensure recoil starter functions properly. Check for damage or fraying of pull cord; repair or replace as necessary.
2. Start pump and allow engine to warm up for two minutes.
3. Ensure mechanical pump seal is not leaking, repair or replace as necessary.
4. Ensure idle speed and low speed mixture screws are properly adjusted.
5. Using full throttle set high speed adjustment by turning high speed mixture screw to achieve maximum engine RPM, then richen mixture screw until there is a drop in pump output pressure of 5-10 PSI (approx.).
    - Engine should be responsive and accelerate quickly.
    - Ensure high speed circuit of Wick 375 will achieve an overly rich condition. If not; there is an obstruction in the inlet or the high speed circuit of carburetor, clean and repair as necessary.
6. Perform shut-off pressure test at full throttle; note maximum pressure at full discharge shut-off ensuring pump output meets minimum standards as outlined in table 1 or 2 (above) depending on pump model.
7. Perform pressure test with the 31/64” square edge orifice at full throttle; note working flow pressure, ensuring pump output meets minimum standards as outlined in table 1 or 2 (above) depending on pump model.
8. Use loss of prime method to test over-speed protection cut-out switch, adjust as necessary to manufacturer specification.
9. Should any function fail a test, refer to the manufacturer’s repair manual and troubleshooting guide to correct the problem.
10. Allow engine to cool down for one minute at idle.
    - Remove fuel source and run engine until carburetor is completely empty of fuel
    - Remove all water from pump end.
11. Lubricate pump head bearing with specified grease. If pump head is fitted with a sealed shaft bearing; ensure that the pump housing is marked/ labeled appropriately.

D. Repackaging

1. Use nylon “zip-tie” to tie off (seal) starter rope to the frame.
2. Attach certification tag that indicates date last tested (DLT), property #, and name of individual certifying performance.
3. Ensure that all identification (property #, serial #, owner ID) is affixed and legible.

Pump – 2½”, 6.5 –13HP, Centrifugal

NFES Status
Active
NFES #
007648
Category
Small Engine Equipment
Updated
Mon, 05/01/2017 - 12:00

Storage and Shelf Life Checks
Yes
Storage and Shelf Life Procedure
Date Last Tested (DLT) not to exceed 12 months.

Initial Inspection/Disposal Criteria

1. Visually inspect for evidence of use (dust, oil, starter seal broken), damage or missing parts.
2. Return to stock if there is no sign of use or damage and date last tested (DLT) does not exceed 12 months.
3. Refurbish as necessary if unit has been used or fueled, damaged, or shelf life is exceeded.
4. Dispose of the unit if it is not economically repairable.

Refurbishment Procedures

A. Cleaning

1. Remove dirt and oil, using detergent or degreaser as necessary.
2. Use pressure washer to remove heavy deposits of oil and grease.
3. Equipment should be repaired and tested as quickly as possible after washing to minimize rust formation on metal parts.

B. Repair

1. Check for loose and/or missing parts or mounting hardware; tighten or replace as needed.
2. Inspect power-head (engine) for freeness of all moving parts, ensuring that the crankshaft, piston/cylinder and all engine bearings are not damaged.
3. Check condition of engine oil, spark plug, air filter, and fuel filter; clean or replace as needed.
4. Inspect exhaust system; make sure there are no cracks or leaks. Check for loose and/or missing parts and hardware, tighten or replace as needed.
5. Ensure all decals (operations and warning) are affixed and legible.
6. Ensure all gaskets on the pump fittings/adapters are in place and functioning properly.

C. Test for Performance

1. Ensure recoil starter functions properly. Check for damage or fraying of pull cord; repair or replace as necessary.
2. Engine should start easily, run smoothly, be free from fuel leaks, oil leaks, and provide sufficient power to the pump end.
3. Ensure engine controls are operational and functional; stop switch, throttle and choke.
4. Adjust carburetor by setting idle speed to 1200 RPM, Maximum engine speed is 3500 RPM.
5. Check max PSI with nozzle closed. Minimum pressure: 50 PSI.
6. Ensure pump packing or mechanical seal is not leaking, repair or replace as necessary.
7. Should any function fail a test, refer to the manufacturer’s repair manual and troubleshooting guide to correct the problem.

8. Remove all gasoline from fuel tank and run engine until carburetor is completely empty of gas.

D. Repackaging

1. Use nylon “zip-tie” to tie off (seal) starter rope to the frame.
2. Attach certification tag that indicates date last tested (DLT), property #, and name of individual certifying performance.
3. Ensure that all identification (property #, serial #, owner ID) is affixed and legible.

Pump – 1½” Multiquip, 5.5 HP

NFES Status
Active
NFES #
007647
Category
Small Engine Equipment
Updated
Mon, 05/01/2017 - 12:00
Storage and Shelf Life Checks
Yes
Storage and Shelf Life Procedure
Date Last Tested (DLT) not to exceed 12 months.

Initial Inspection/Disposal Criteria

1. Visually inspect for evidence of use (dust, oil, starter seal broken), damage or missing parts.
2. Return to stock if there is no sign of use or damage and date last tested (DLT) does not exceed 12 months.
3. Refurbish as necessary if unit has been used or fueled, damaged, or shelf life is exceeded.
4. Dispose of the unit if it is not economically repairable.

Refurbishment Procedures

A. Cleaning

1. Remove dirt and oil, using detergent or degreaser as necessary.
2. Use pressure washer to remove heavy deposits of oil and grease.
3. Equipment should be repaired and tested as quickly as possible after pressure washing to minimize rust formation on metal parts.

B. Repair

1. Check for loose and/or missing parts or mounting hardware; tighten or replace as needed.
2. Inspect power-head (engine) for freeness of all moving parts, ensuring that the crankshaft, piston/cylinder and all engine bearings are not damaged.
3. Check condition of spark plug, air filter, and fuel filter; clean or replace as needed.
4. Inspect exhaust system; make sure there are no cracks or leaks. Check for loose and/or missing parts and hardware, tighten or replace as needed.
5. Ensure all decals (operations and warning) are affixed and legible.
6. Ensure all gaskets on the pump fittings/adapters are in place and functioning properly.

C. Test for Performance

1. Ensure recoil starter functions properly. Check for damage or fraying of pull cord; repair or replace as necessary.
2. Engine should start easily, run smoothly, be free from fuel leaks, and provide sufficient power to the pump end.
3. Ensure engine controls are operational and functional; stop switch, throttle and choke.
4. Adjust carburetor by setting idle speed to 1200 RPM, Maximum engine speed is 3500 RPM.
5. Check max PSI with nozzle closed. Minimum pressure: 50 PSI.
6. Ensure pump packing or mechanical seal is not leaking, repair or replace as necessary.
7. Should any function fail a test, refer to the manufacturer's repair manual and troubleshooting guide to correct the problem.
8. Remove all gasoline from fuel tank and run engine until carburetor is completely empty of gas.
9. Remove all water from pump end.

D. Repackaging

1. Use nylon "zip-tie" to tie off (seal) starter rope to the frame.
2. Attach certification tag that indicates date last tested (DLT), property #, and name of individual certifying performance.
3. Ensure that all identification (property #, serial #, owner ID) is affixed and legible.

Pump – 1½" Floating, Waterous

NFES Status
Active
NFES #
007646
Category
Small Engine Equipment
Updated
Mon, 05/01/2017 - 12:00
Storage and Shelf Life Checks
Yes
Storage and Shelf Life Procedure
Date Last Tested (DLT) not to exceed 12 months.

Initial Inspection/Disposal Criteria

1. Visually inspect for evidence of use (dust, oil, starter seal broken), damage or missing parts.
2. Return to stock if there is no sign of use or damage and date last tested (DLT) does not exceed 12 months.
3. Refurbish as necessary if unit has been used or fueled, damaged, or shelf life is exceeded.
4. Dispose of the unit if it is not economically repairable.

Refurbishment Procedures

A. Cleaning

1. Remove dirt and oil, using detergent or degreaser as necessary.
2. Use pressure washer to remove heavy deposits of oil and grease.
3. Equipment should be repaired and tested as quickly as possible after pressure washing to minimize rust formation on metal parts.

B. Repair

1. Check for loose and/or missing parts or mounting hardware; tighten or replace as needed.
2. Ensure recoil starter functions properly. Check for damage or fraying of pull cord; repair or replace as necessary.
3. Inspect power-head (engine) for freeness of all moving parts, ensuring that the crankshaft, piston/cylinder and all engine bearings are not damaged.
4. Check condition of spark plug, air filter, and fuel filter; clean or replace as needed.
5. Inspect exhaust system; make sure there are no cracks or leaks. Check for loose or missing mounting hardware, tighten or replace as needed.
6. Check throttle float. Make sure all pieces are present and the float moves up and down freely.
7. Make sure there are no holes in the boat.
8. Check water intake for debris (weeds, sticks, etc.).
    - Make sure that the intake screen is in place and securely fastened.
9. Ensure all decals (operations & warning) are affixed and legible.

C. Test for Performance

1. Pumps are tested using a 1½” discharge and a 1/4” nozzle.
2. Set idle speed to 2400 RPM manually hold throttle float down.
3. To adjust high speed: Using full throttle, lean out high speed adjustment screw to achieve maximum RPM, then richen until pump output pressure drops 5 PSI. Minimum output pressure: 100 PSI.
4. Should any function fail a test, refer to the manufacturer’s repair manual and troubleshooting guide to correct the problem.
5. Allow engine to cool down for one minute at idle.
6. Remove all gasoline from fuel tank and run engine until carburetor is completely empty of fuel.
7. Remove all water from pump end.

D. Repackaging

1. Use nylon “zip-tie” to tie off (seal) starter rope to the carry handle.
2. Attach certification tag; that indicates date last tested (DLT), property #, and name of individual certifying performance.
3. Ensure that all identification (property #, serial #, owner ID) is affixed and legible.

Hose Roller – Gas

NFES Status
Active
NFES #
000665
Category
Small Engine Equipment
Updated
Mon, 05/01/2017 - 12:00
Storage and Shelf Life Checks
Yes
Storage and Shelf Life Procedure
Date Last Tested (DLT) not to exceed 12 months.

Initial Inspection/Disposal Criteria

1. Visually inspect for evidence of use (dust, oil, starter seal broken), damage or missing parts.
2. Return to stock if there is no sign of use or damage and date last tested (DLT) does not exceed 12 months.
3. Refurbish as necessary if unit has been used or fueled, damaged, or shelf life is exceeded.
4. Dispose of the unit if it is not economically repairable.

Refurbishment Procedures

A. Cleaning

1. Remove dirt and oil, using detergent or degreaser as necessary.
2. Use pressure washer to remove heavy deposits of oil and grease.
3. Equipment should be repaired and tested as quickly as possible after pressure washing to minimize rust formation on metal parts.

B. Repair

1. Check condition of engine oil, spark plug and air filter; clean or replace as necessary.

2. Inspect power-head (engine) for freeness of all moving parts, ensuring that the crankshaft, piston/cylinder and all engine bearings are not damaged.
3. Check for loose and/or missing parts or mounting hardware; tighten or replace as needed.
4. Inspect exhaust system; make sure there are no cracks or leaks.
5. Clean spark arrestor of excess carbon build up, replace screen if damaged.
6. Ensure all safety equipment (warning labels, metal screening, guards and shields) are in place and functioning properly.
7. Check for and repair (weld) any cracks in frame structure.
8. Lubricate bearings on pulley shafts and wheel bearing.
9. Inflate tires to proper pressure if equipped with pneumatic tires.

C. Test for Performance

1. Refer to the owner's manual for operations and specifications information specific to engine/roller model.
2. Ensure gasoline is fresh prior to starting the engine. Use a fuel stabilizer in fuel during testing to help ensure proper operation of engine at post storage start up.
3. Ensure recoil starter functions properly. Check for damage or fraying of pull cord; repair or replace as necessary.
4. Engine should start easily, run smoothly, be free from leaks (oil/fuel), and provide sufficient power to the hose rolling wheels.
5. Ensure engine operational controls are functioning properly; stop switch, throttle and choke.
6. Rolling wheels/pins should turn without v-belt slippage when foot pedals are depressed and should be easily stopped when foot pedals are released.
7. Test roller under a load by means of rolling lengths of hose.
8. Should any function fail a test, refer to the manufacturer's repair manual and troubleshooting guide to correct the problem.
9. Remove all gasoline from fuel tank and run engine until carburetor is completely empty of fuel.

D. Repackaging

1. Use nylon "zip-tie" to tie off (seal) starter rope to the frame.
2. Attach certification tag that indicates date last tested (DLT), property #, and name of individual certifying performance.
3. Ensure that all identification (property #, serial #, owner ID) is affixed and legible.
4. Attach a current "Hose Rolling" Job Hazard Analysis (JHA) to the frame.

Reference

NFES Cache Memo No. 09-01

Hose Roller – Electric

NFES Status

Active
NFES #
000633
Category
Small Engine Equipment
Updated
Mon, 05/01/2017 - 12:00
Storage and Shelf Life Checks
Yes
Storage and Shelf Life Procedure
Date Last Tested (DLT) not to exceed 12 months.

Initial Inspection/Disposal Criteria

1. Inspect for missing parts, proper foot pedal switch operation, cracks in frame structure, roller pins in place, exterior motor damage; damaged or cut power cord.
2. Verify that the protective guards are on any and all moving parts. (i.e., foot pedal shroud)
3. Return to stock if there is no sign of use or damage and date last tested (DLT) does not exceed 12 months.
4. Refurbish as necessary if unit has been used, damaged, or shelf life is exceeded.
5. Dispose of the unit if it is not economically repairable.

Refurbishment Procedures

A. Cleaning

1. Blow dust and dirt out of electric motor.
2. If needed wash with high-pressure washer (cover electric motor).
3. Let dry.

B. Repair

1. Repair cracks in frame as needed.
2. Repair or replace power cord if damaged. Ensure no exposed wire, grounding hazards or electrical shock risks.
3. Ensure all decals (operations and warning) are affixed and legible.

C. Test for Performance

1. Plug in to power source and test motor and moving parts.
2. Test roller under a load by means of rolling lengths of hose.
3. Retest after servicing motor and/or transfer case.

D. Repackaging

1. Use nylon “zip-tie” to tie off (seal) power cord to frame.
2. Attach certification tag that indicates date last tested (DLT), property #, and name of individual certifying performance.
3. Ensure that all identification (property #, serial #, owner ID) is affixed and legible.

Generator – Gasoline Engine, 3 to 6 KW w/Ground Rod

NFES Status
Active
NFES #
000709
Category
Small Engine Equipment
Updated
Mon, 05/01/2017 - 12:00
Storage and Shelf Life Checks
Yes
Storage and Shelf Life Procedure
Date Last Tested (DLT) not to exceed 12 months.

Initial Inspection/Disposal Criteria

1. Visually inspect for evidence of use (dust, oil, starter seal broken), damage or missing parts.
2. Return to stock if there is no sign of use or damage and date last tested (DLT) does not exceed 12 months.
3. Refurbish as necessary if unit has been used or fueled, damaged, or shelf life is exceeded.
4. Dispose of the unit if it is not economically repairable.

Refurbishment procedures

A. Cleaning

- Remove dirt and oil using compressed air or detergent and shop towels as necessary.

B. Repair

1. Check condition of engine oil. If engine is equipped with an engine oil filter; replace the filter at each oil change.
2. Check condition of spark plug and air filter, clean or replace as needed. Foam type air filters can be cleaned, re-oiled with “foam filter oil” and reinstalled.
3. Inspect power-head (engine) for freeness of all moving parts, ensuring that the crankshaft, piston/cylinder and all engine bearings are not damaged.

4. Check for loose and/or missing parts or mounting hardware; tighten or replace where needed.
5. Inspect exhaust system; make sure there are no cracks and or leaks.
6. Clean spark arrestor screen of excess carbon build up, replace if screen is damaged.
7. Inspect fuel tank, filler cap, fuel line and fuel filter; clean, repair and/or replace as needed.
8. Ensure that the recoil starter operates properly and that the rope is not frayed or Ensure proper condition of battery (if equipped).
9. Ensure all decals (operations and warning) are affixed and legible.

C. Test for Performance

1. Refer to the owner's manual for operations and specifications information specific to generator model.
2. Ensure gasoline is fresh prior to starting the engine. Use a fuel stabilizer in fuel during testing to help ensure proper operation of engine at post storage start up.
3. Ensure recoil starter functions properly. Check for damage or fraying of pull cord; repair or replace as necessary.
4. Engine should start easily, run smoothly, be free from fuel leaks, and provide sufficient power to the electrical generator.
5. Ensure all engine operational controls are functioning properly; stop switch, throttle and choke.
6. Test for engine performance and electrical output (see owner's manual for specific performance data).
7. Should any function fail a test, refer to the manufacturer's repair manual and troubleshooting guide to correct the problem.
8. Remove all gasoline from fuel tank and run engine until carburetor is completely empty of fuel.

D. Repackaging

1. Ensure grounding rod is attached to frame.
2. Use a nylon "zip-tie" to tie off (seal) starter rope to the frame.
3. Attach a certification tag that indicates date last tested (DLT), property #, and name of inspector certifying the performance.
4. Ensure that all identification (property #, serial #, owner ID) is affixed and legible.

Chainsaw – 20" - 24" Bar

NFES Status
Active
NFES #
000159
Category
Small Engine Equipment
Updated
Mon, 05/01/2017 - 12:00
Storage and Shelf Life Checks
Yes
Storage and Shelf Life Procedure
Date Last Tested (DLT) not to exceed 12 months

Initial Inspection/Disposal Criteria

1. Visually inspect for evidence of use (dust, oil, starter seal broken), damage or missing parts.
2. Return to stock if there is no sign of use or damage and date last tested (DLT) does not exceed 12 months.
3. Refurbish as necessary if unit has been used or fueled, damaged, or shelf life is exceeded.
4. Dispose of the unit if it is not economically repairable.

Refurbishment procedures

A. Cleaning

1. Remove dirt and oil using compressed air or detergent and shop towels as necessary.
2. Use pressure washer and degreaser to remove heavy deposits of oil and grease.
3. Equipment should be repaired and tested as quickly as possible after pressure washing to minimize rust formation on metal parts.

B. Repair

1. Check for loose or missing parts and mounting hardware. Tighten or replace as necessary.
2. Ensure that the air filter is clean and dry before reinstalling. Replace the filter if it is damaged or will not come clean.
3. Replace spark plug and fuel filter if saw shows normal signs of field use. Use only solid terminal spark plugs
4. Test function of rewind starter, ensure proper engagement of engine and recoil function. Check for damage or fraying of pull cord; repair or replace as necessary.
5. Ensure all decals (operations and warning) are affixed and legible.
6. Ensure fuel geyser danger sticker is present and legible. Reference cache memo 17-2 below.
7. Inspect power-head (engine) for freeness of all moving parts, ensuring that the crankshaft, piston/cylinder, and all engine bearings are not damaged.
8. Clean muffler of excess carbon.
9. Inspect spark arrestor screen for build-up. Clean, repair or replace as necessary.
10. Replace sprocket or star drum if the wear is deep enough to catch a fingernail. Inspect clutch shoes and springs. Replace if damaged or missing. Replace clutch drum if badly burned (discolored).
11. Clean and re-grease the clutch bearing, replace if needle bearings are pitted or damaged.
12. Ensure saw chain is properly sharpened to manufacturer’s specifications after each use. Replace chain if: Cutters have been filed down to 50% or less of the original cutter length; two or more cutters are broken; tie straps are worn down to rivets; if stretched beyond tensioning abilities; or when side plate is filed back to rear attaching rivet.
13. Service the guide bar after each use. Inspect groove depth and width; true and file rails; and inspect for bends. Replace guide bar if rails are cracked, chipped, burned, or have a dip deeper than 1/16”. Inspect sprocket tip for wear and looseness. Lubricate tip if grease type.

C. Test for Performance

1. Refer to the owner’s manual for operations and specifications information specific to chainsaw model.
2. Should any function fail a test, refer to the manufacturer’s repair manual.
3. Check condition of fuel mix; ensure fuel is fresh and the correct mix oil ratio is used prior to starting the engine. Use a fuel stabilizer in fuel during testing to help ensure proper operation of engine at post storage start up.
4. Ensure recoil starter functions properly. Check for damage or fraying of pull cord; repair or replace as necessary.
5. Start saw and allow engine to warm-up at idle.
6. Ensure that there are no leaks at engine, fuel tank or bar oil tank.
7. Run saw and inspect for proper function of bar oiler and chain brake.
8. Ensure all engine controls are operational.
9. Inspect engine speed using a digital tachometer, adjust carburetor to obtain specified speed.
10. If saw chain rotates at the specified idle speed, inspect clutch for loose and or missing springs.
11. Should any function fail a test, refer to the manufacturer’s repair manual and troubleshooting guide to correct the problem.
12. Remove all fuel from fuel tank and run engine until carburetor is completely empty of fuel.
13. Remove bar and chain oil from the oil tank (local cache option).

D. Repackaging

1. Attach bar guard on cutting attachment.
2. Use a nylon “zip-tie” to tie off (seal) starter rope to the handlebar.
3. Attach a certification tag that indicates date last tested (DLT), property #, and name of inspector certifying the performance.
4. Ensure that all identification (property #, serial #, owner ID) is affixed and legible.

Blower – Mist, Leaf Blower

NFES Status
Active
NFES #
007040
Category
Small Engine Equipment
Updated
Mon, 05/01/2017 - 12:00
Storage and Shelf Life Checks
Yes
Storage and Shelf Life Procedure
Date Last Tested (DLT) not to exceed 12 months.

Initial Inspection/Disposal Criteria

1. Visually inspect for evidence of use (dust, oil, starter seal broken), damage or missing parts.
2. Return to stock if there are no signs of use or damage and date last tested (DLT) does not exceed 12 months.
3. Refurbish as necessary if the unit has been used or fueled, damaged, or shelf life is exceeded.
4. Dispose of the unit if it is not economically repairable.

Refurbishment procedures

A. Cleaning

1. Remove dirt and oil using compressed air or detergent and shop towels as necessary.
2. Use pressure washer and degreaser to remove heavy deposits of oil and grease.
3. Equipment should be repaired and tested as quickly as possible after pressure washing to minimize rust formation on metal parts.

B. Repair

- This equipment is primarily serviced at a “factory authorized” repair facility. Ensure that the servicing repair facility has a copy of this refurbishment standard.

C. Test for Performance

1. Refer to the owner’s manual for operations and specifications information specific to blower model.
2. Check condition of fuel mix; ensure fuel is fresh and the correct mix oil ratio is used prior to starting the engine. Use a fuel stabilizer in fuel during testing to help ensure proper operation of engine at post storage start up.
3. Ensure recoil starter functions properly. Check for damage or fraying of pull cord; repair or replace as necessary.
4. Engine should: Start easily, run smoothly, be free of fuel leaks, and provide sufficient power to the blower attachment.
5. Ensure all engine operational controls are functioning properly; stop switch, throttle and choke.
6. Ensure fuel geyser danger sticker is present and legible. Reference cache memo 17-2 below.
7. Test for blower performance (see owner’s manual for specific performance data).
8. Should any function fail a test, refer to the manufacturer’s repair manual and troubleshooting guide to correct the problem.
9. Remove all gasoline from fuel tank and run engine until carburetor is completely empty of fuel.

D. Repackaging

1. Use a nylon “zip-tie” to tie off (seal) starter rope to the handle grip.
2. Attach a certification tag that indicates date last tested (DLT), property #, and name of inspector certifying the performance.
3. Ensure that all identification (property #, serial #, owner ID) is affixed and legible.