CEMETERY EQUIPMENT MAINTENANCE

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I would like to discuss, in brief, the advantages of purchasing equipment with foresight to avoid unnecessary maintenance and selection of superior components to eliminate repairs.

Starting from the bottom up, I will begin with the wheels. There are various kinds of wheels; plastic, steel, bearing and bushing. Past experience has shown the best wheel used commercially is a steel ball bearing with fittings. This combination eliminates axle to wheel problems caused by bushing or plastic wear.

Blades are next in order and extremely important when considering performance of the machine. Balance and construction should be of prime concern. Straight blades are usually used for average cutting and do not allow for any suction of grass clippings. Furthermore, they do not provide any protection to the blade bolt or shaft from rocks or other debris. On the other hand, offset blades obtain finer cut, provide protection from objects, and delivers more suction - an important consideration when grass clippings are to be bagged.

Next we have the deck to examine where two major metals are used. First steel, which should be at least 12 gauge for strength and durability. This is especially true when we must consider the friction and wear the machine will endure from markers in the cemeteries. The stronger steel should give three to four years of service before this type of abuse would penetrate the deck.

Magnum is the second major metal used in deck construction. Because it is a light material, it does have some advantages over steel; ease of handling and maneuverability. This material, however, cannot be welded should a rock penetrate the deck or some predicament arises where the deck must be reinforced. Friction wear is much the same as steel. Handle construction is next important item; steel, again, being the most common material used. Once more, the thickness of the steel should be considered so that welding is possible and the handle is able to withstand much twisting, turning, and general abuse during operation of the machine.

Many brands use tubular steel and chrome; others obtain double strength by sliding one tube into another. On maintenance of the engine itself, I should like to discuss lubrication, the air cleaner and spark plugs.

Engine oil changes are required where temperatures are moderate and grass is damp and lush; however, where dry and dusty conditions prevail, frequent changes are necessary to obtain maximum performance of the machine.

Spark plugs should be changed - never cleaned. Sand blasting a plug or using a wire brush could result in sand or wire entering the piston walls and causing damage and wear to rings, pistons and valves. Plug replacement is much cheaper in the long run.

Basic types of air cleaners used are foam rubber or dry. Foam rubber is more efficient; oil soaked into foam attracts dust particles much like a magnet. Dry cleaners, the type used in cars, are much less useful in filtering out dirt. Never use an air gun to clean dry air cleaners; the paper will rupture allowing dust to penetrate the carburetor. Foam air cleaners should be cleansed with

soap and water, not gasoline. Even a small amount of gas left in the air cleaner will cut the strength of the oil. A dry foam cleaner should be avoided as they are worse than none at all.

Finally, a word about gasoline selection; leaded vs. non-leaded. Most gasoline contains some lead additives (tetraethyl lead) which accumulate in engine combustion chambers. Since generator sets operate at constant (governor-controlled) speeds, it is difficult for the engine to "blow out" these lead deposits through the exhaust ports as is possible with an automobile engine operating at the variable frequent servicing and maintenance than engines operating at variable speeds. Onan has run several conclusive tests with leaded gasoline vs. nonleaded gasoline on various governor-controlled engines. The first and most obvious conclusion is that engines using nonleaded gasoline run better, cleaner, longer, requiring less maintenance than if using leaded gasoline. Using non-leaded gasoline in preference to leaded gasoline helps reduce the following problems: Burned valves, sticking valves, spark plug fouling, piston wear, ring wear, cylinder wall wear, and exhaust system corrosion.

For new engines, most satisfactory results could be obtained by using non-leaded gasoline. For older engines that have previously used leaded gasoline, heads must be taken off and all lead deposits removed from engine before switching to non-leaded gasoline. If lead deposits are not removed from engine before switching from leaded to non-leaded gasoline, pre-ignition could occur causing severe damage to the engine.