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## Storage of Farm Equipment

Von H. Jarrett PhD  
*Utah State University*

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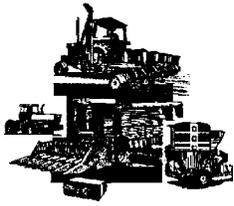
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# STORAGE OF FARM EQUIPMENT

Farm Machinery Fact Sheet FM-25

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By Dr. *Von H. Jarrett*, Extension Agricultural Engineer

## General Maintenance Tips

All equipment should be thoroughly cleaned with a high-pressure washer to remove dirt and trash residue. Accumulated trash and dirt can create fire hazards, electrical malfunctions, corrosion and rust of equipment, which may result in breakdowns next season.

Important areas to clean on all self-propelled machines are the engine compartment, heat exchangers/radiator fans and the area under the control centers.

Once equipment is clean, farmers should thoroughly service and lubricate the machine. Also check for worn belts, loose bolts, oil leaks and the condition of all hoses, in addition to operational/ performance checks. Off-season is the time to make those necessary repairs and adjustments to avoid undue downtime during the next busy season. Oftentimes, implement dealers offer service specials during the off-seasons, which can mean real savings. Watch for them.

This also is a good time to apply touch-up paint to scratched or corroded areas. Properly maintained equipment that looks good will command a higher trade-in value when the farmer decides to replace it.

Many operators follow a good cleanup with a wax job to help protect the equipment from the elements, such as corrosion and oxidation. Most importantly, when equipment is checked carefully, small problems can be identified and corrected before they cause downtime next season.

## Engine/Power Train

After cleaning the outside of the cooling system, check the coolant level amount of anti-freeze protection and its condition. Dependent upon your service interval, it may be necessary to drain the system, flush the radiator and refill with proper coolant and service the coolant filter as required, if so equipped.

Harmful acids can accumulate in your equipment's oil pan, particularly during light-load applications. These acids can damage engine compounds over the long winter months. Farmers should pay particular attention to the condition of their crankcase oil during winter operation.

Keep in mind, lightly loaded engines during cold weather face one of the most severe engine applications. The engine never really reaches its proper internal operating temperature even though the coolant temperature may be normal. Regularly service your engine and replace both oil and fuel filters.

There are several classifications of lubricants listed in the operator's manual. We suggest owners read the operator's manual thoroughly to ensure they are using the proper lubricant. We also suggest they utilize an oil sampling program to monitor wear/contamination levels in engines, transmissions and gear cases such as the Oil Laboratory Analysis. This is available at your dealerships.

Contaminants can cause extensive damage to hydraulic systems. Dealership recommends that producers analyze the hydraulic fluid in all equipment regularly and replace it as recommended. Downtime can be avoided by timely action now by checking for small leaks.

Condensation is the biggest threat to fuel systems next to using a poor grade of fuel high in sulfur content. Equipment owners should check their tractor or combine fuel tanks, as well as their farm's bulk tanks, for condensation. Drain the condensation often and keep tanks as full as possible. Always filter the fuel and keep it clean and fresh for operation.

## **Electrical**

During the busy spring season, electrical problems often are the most time-consuming to trace and repair. Winter is a good time to check for loose connections, frayed or broken wires and to repair broken gauges, lights and switches.

Although modern batteries do not have to be removed from equipment, except in extremely cold regions, cleaning the battery, its posts and cable connections is advised. On an idle machine, the battery ground cable should be disconnected from the battery to avoid corrosive buildup and possible battery discharge.

## **Harvesting Equipment**

Combine headers require special storage care. We suggest closely inspecting header units, both corn and grain types, for worn, bent or broken parts and replacing them as needed. Proper adjustment of belts and chains is critical to prolong wear.

### **Corn Heads**

Stalk roll knives should be sharpened or replaced and lubricated, and auger systems checked for proper function. Top off your corn head check up by lubricating all main points including chains and other moving parts.

### **Grain Headers**

Operators should check the reel drive, sickle wobble box drive, auger, retractable fingers and stripper bars of the grain header. Knife guards and other parts should be inspected for wear and replaced as needed. Round out the check up by lubricating and properly adjusting the grain header.

Finally, equipment tires should be cleaned and inspected for possible cuts. Check tire pressures before storing equipment and inflate them as necessary.

## **Tillage Tools**

Farmers are placing greater demands on their tillage equipment. As minimum tillage requiring chemical incorporation becomes more popular, tillage tools are growing larger and more sophisticated.

Those demands have led to more sophisticated hydraulic systems. Today's multi-wing folding units require several hydraulic cylinders to properly perform their tasks.

Many owners believe that since the hydraulic cylinder rods are chrome, they won't rust. Although cylinder rods are resistant to rust, they must be protected from the elements. Thoroughly coating all cylinder rods with a protective lubricant is advised. Rusted cylinder rods can quickly damage seals.

Before storing the unit, all ground-working tools and mold boards should be cleaned and coated with a lubricant to guard against rust.

Don't forget to check the shanks on field cultivators. Worn shank bushings or pins should be replaced. Don't go into your next season with bent or worn shanks that can leave skips in the fields.

## **Planters/Drills**

Like other equipment, planters and drills should be cleaned of any buildup, especially in the seed or fertilizer boxes. Make sure all movable parts are free and not stuck due to chemical corrosion.

Operators should check all moving parts for excessive wear. On air planters, the condition of the cutoff brush is very important and should be adjusted properly.

Finally, lubricate all moving parts and inspect all chains and other drive mechanisms for excessive wear or misalignment.

Proper off-season storage will add value to your farm equipment, increase its lifespan and decrease your operating costs.

## **Off-Season Storage Checklist**

- Thoroughly clean all equipment with a high-pressure washer.
- Lubricate all points.
- Coat all parts that rust easily, such as plow shares or chrome hydraulic cylinder rods, with a high-quality protectant.
- Inspect all equipment for broken, bent or worn parts. Repair or replace as necessary.

- Apply touch-up paint to scratched or rusted areas.
- Apply a generous coating of wax to help equipment fight the effects of the elements.
- Store equipment in a shed or under a tarp or heavy plastic if possible.

### **Self-Propelled Equipment**

- Check or drain, flush and refill the radiator with correct coolant.
- Drain engine oil and analyze it to determine the presence of contaminants.
- Check hydraulic system fluid. Replace if needed.
- Check the transmission fluid level. If needed, drain and refill. Install new filters.
- Check fuel tanks for condensation. Fill tanks with high-grade fuel.
- Disconnect battery ground cables if the machine is idle for several months.
- Check fire pressure frequently during the winter.

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