

# PUT THEM AWAY HAPPY

Everyone who owns a Center Pivot, Corner, or Linear has a significant investment standing unattended during the off season. Your machine must operate during the hottest part of the year, and, in many cases, it is virtually forgotten during the winter months.

Since you can't drive them into the shed with the rest of your equipment, here are a few things you can do to make your machine's winter hibernation a happy one.

The following is a six-step program to help guide you through putting your pivot into hibernation.

## I PARKING THE PIVOT

**A. Park the pivot in the same direction as the prevailing winter wind.** This will reduce the contact area of the wind on the machine. For Corners, park the Corner arm extended into or with the wind which will leave the machine at a slight angle to the wind.

**B. Don't park the pivot in wheel tracks or down a steep incline.** All metals contract and expand with changes in temperature. A change in temperature from 85°F to -15°F can "shrink" a 2,600' machine pipeline 21". Machines over 2,000' which are subjected to extreme temperature changes should be disconnected 1/3 of the way out from the pivot. Disconnect the machine at the hitch to allow for contraction of the steel. Another option is to use skids on the pivot point and discount anchor chains. If the pivot is locked or frozen in the wheel tracks, this retraction puts stress in the pipeline. In areas of extreme temperature changes and with machine lengths in excess of 1,400', you should operate the pivot once a month. This will walk the stress out of the pipeline.

**C. Avoid parking the pivot next to a public road.** Those big tires and birds sitting on overhang cables make inviting targets.

## II THE PIVOT POINTS

**A. Turn all disconnects "off."**

**B. Pick up all exposed cords.** If you have any plug-in connections (S-0 cord), gather these up and store them in a covered area off the ground.

**C. Inspect panel boxes.** Make sure all power is "off." Open the control panel box and inspect for holes or openings. Seal any if found to prevent rodent damage. This should be done in all electric motors and electrical boxes (i.e. disconnect, pump panels, etc.). Make sure the power is "off" before attempting this process.

**D. Completely drain the pivot.** Drain the pivot and hook-up pipes to prevent freezing. If any pipes are left open, cap or plug these to eliminate any trash or small animal entry. Some areas may require pumping out the underground pipe to prevent freezing.

## III DRIVE UNITS

**A. Check or change lubricant levels in the wheel drive and center drive gearboxes.**

**B. Completely drain the span.** Remove the drain at each span and release trapped water. If water is left in the Machine, it could freeze and split the Machine pipe. Make sure you reinstall the drain and seal.

**C. Protect your motor and connections.** If you have cattle in the field with the pivot, you should consider putting an electric fence or other protection around the towers. Cattle can rub and break the stove bolts on the motor, or pull the

motor lead out of the junction box.

**D. Repack the gearbox bearings.** On towable pivots only, you should check the bearing preload and repack the hub bearing cavity.

## IV LAST REGULAR DRIVE UNIT

**A. Booster pump.** Disconnect and drain the booster pump hose and drain the pump volute case. Leave the hose disconnected and plug its open end and the pump's open end. This will eliminate the chance of fracturing the volute case (due to hose shrinkage) and prevent trash from getting into the volute case.

**B. Drain the overhang pipe.** Remove the pivot's sand trap, drain and reinstall.

## V CORNER MACHINES

**A. Drain the solenoid valve box manifold.**

**B. Drain the transfer hose.**

**C. Drain the 1/4" tubing connected to each valve.**

(This is especially necessary on older Corners without a tubing harness.)

## VI STEERABLE DRIVE UNIT

**A. Lubricate the gearboxes.**

**B. Remove the receiver and oscillator boxes.** Storing these in your shop or home will keep them from being subject to extreme cold and electrical storms.

**C. Drain the booster pump volute case.**

**D. Grease the drive unit legs.**

**E. Drain the booster pump hose and overhang.**

**F. Remove the booster pump's hose.** After removing the booster pumps hose from the volute case, plug both the volute case opening and the hose opening. This will prevent damage to the volute case due to hose shrinkage. ◀

## VALLEY GEARBOXES

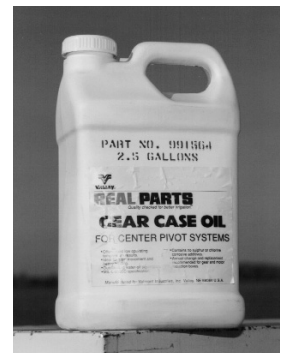
After **first season** of operation, drain and replace oil in the gearboxes. Refill the gearboxes thru the expansion chamber until level of oil is even with the bottom of the expansion chamber. (Approx. 5 qt. capacity). Thereafter, under typical operating conditions (500-1,000 hrs. year) completely change gear oil every third year.

**However,** at the end of each operating season drain any condensation or contaminated oil and fill each gearbox to the indicated level.

## ELEC. GEARMOTORS

After each season of operation, drain all oil from gearmotors. Replace plug and refill to approximately 1/2" from the fill plug with Valley Gear Lube. (Approx. 1 qt. capacity.)

The composition of various brands of lubricants contain



additives which are corrosive to bronze worm gears. Therefore, we recommend only the use of Valley Gear Lube (MIL-L-2105c 85-140 GL5), which is a compounded worm lubricant containing non-corrosive extreme pressure additives. The oil bath in worm gear cases may reach a temperature of 200°F (90°C) without alarm.