Power the blower

At The Club at Admiral’s Cove in Jupiter, Fla., where Bill Brousseau is director of golf course maintenance, a two-cylinder gasoline engine had to be replaced on a trailer-mounted Buffalo Turbine blower. Equipment manager Jim Matis came up with the idea of replacing the worn-out engine with a used, John Deere 2653, hydraulically operated reel motor.

A 10-inch-diameter pulley and a 3-inch-diameter pulley with a half-inch-wide, standard-size v-belt were used to power the blower at the same 3,600 RPMs as the engine. The reel motor was bolted to a quarter-inch thick steel plate using elongated holes so the motor could be moved back and forth to tighten the v-belt. The hydraulic hoses and fittings, which were built in-house, connect to the two-spool rear hydraulic couplers on the back of a John Deere ProGator. The engine battery still is used to change the blower nozzle direction because it’s hooked up to the alternator on the tow vehicle with pigtails to keep the battery charged at all times. The same wire mesh cover is used to keep the pulleys and v-belt protected for employee safety.

The blower RPMs are changed as needed by changing the ground speed of the tow vehicle and by using the throttle lock. The blower is significantly quieter than when it was powered by the engine.

The used reel motor cost about $65, and the labor required to install it was about eight hours.

Canada Goose cleanup

At the public, 18-hole Chemawa Golf Course in North Attleboro, Mass., which generates about 55,000 rounds annually, goose droppings were loosened with a steel drag mat then removed with a blower; but this was too time consuming. Golf course superintendent Jeff Lefebvre and equipment technician Paul Boutiette found a way to drag and blow the goose debris in a single operation to save time. A Buffalo Turbine blower was bolted to a diesel engine-powered Cushman Truckster. Four 4-inch-by-2-inch channel iron pieces were welded to the blower frame. Half-inch diameter holes were drilled through the bed of the Cushman, and four half-inch diameter nuts with washers were welded to the bottom of the bed. Half-inch-by-1.5-inch bolts were ratcheted down to hold the blower in place. The Cushman and blower are used as a dedicated unit.

The arm that holds the drag mat in an extended horizontal position on the left side of the Cushman was built using 2-inch, thin-walled box tubing — one piece is 8-feet, 6-inches long, and another identical piece is welded at a 40-degree angle. The ends are reinforced with flat stock and capped. One-inch-by-one-quarter-inch flat stock was used to make the brackets to attach the frame arm to the Cushman with half-inch diameter bolts. The ends of the tubing were drilled to accept a quarter inch bolt to act as the hinge. A child’s swing set chain was used to prevent the end from resting on the ground. A 360-degree caster wheel was bolted to the flat stock so the end of the frame wouldn’t hit the ground on steep banks near the greens. The drag mat attaches with nylon rope to a climber’s hook and clips to a welded loop near the end.

The caster wheel was painted yellow for safety reasons, and all of the other metal pieces were painted glossy black. The drag-mat frame is transported vertically when not in use and is held in place with a bracket.

It took Boutiette five hours to build the piece of equipment using materials already in stock and news materials, which cost less than $100.