

NORTHERN WOODHEAT TRUCK MOUNTED WOOD FUEL DELIVERY EQUIPMENT

Note on visit to OBMtec, Buitenpost on Thursday 15th March 2007

Business Model

OBMtec is a family-owned mechanical engineering business in Buitenpost near Groningen in the north east of the Netherlands, where their base workshops for their Europe wide operation are located. OBMtec and a sister company, RTE, are agents for the Peterson chip blower system and Morbark wood chippers. The Buitenpost site has offices, a machinery showroom, garages, mechanical workshops, an impressive spare parts store and a range of new and used equipment.

Peterson Pacific BT40A Chip Blow Unit

The Peterson BT40 Chip Blower Truck inspected is a demonstration unit reported to be the only one in Europe. It is mounted on an articulated trailer with Hallco walking floor and is powered by a used 200 HP Cummins diesel engine mounted in front of the chip compartment. The engine, which the OBMtec engineer considered was oversized, drives the compressor that delivers the wood fuel. The BT40's chip compartment has a capacity of 40 cubic yards (30.58 cubic metres). The Peterson is a specialist machine under consideration for delivery of fuel to locations with poor or awkward access. It can be worked by a single operator.

The standard US rig is a three axle truck with the blow unit powered by the main engine via an auxiliary gearbox. A donkey engine is more suitable for UK conditions as it can be run on red diesel. One option would be to mount a donkey engine at the front end of the flat bed of a HGV2 truck. A lift axle fitted at the rear would increase manoeuvrability.

In the demonstration witnessed, air from the compressor delivered wood chips of somewhat poor quality over a horizontal distance of at least 80m or a vertical distance of 11m. Not both, however, at the same time. Thus to blow chips into the top of a silo 10m high, the truck is required to be parked right up to the base of the silo. In such a case a vertical metal pipe would be fitted permanently to the side of the silo.

An auger system at the back of the chip compartment brings the chips to the centre and paddles (upstands) on the auger shaft push the chips into the airflow from the compressor. The airflow is 3800m³ per hour which delivers chips at up to 46m³/hour. From the spout of the hose chips travel up to 20m. The controls for the chip blower are on the right hand side at the front end of the chip compartment. A radio control panel can be strapped to the operator's arm thus allowing both hands to remain free to hold the delivery hose. The rate of flow can be adjusted but the volume of chips delivered cannot be measured. During the demonstration there were three or four partial blockages. Nonetheless the chip blower was robust enough to handle an oversized chip approx. 200mm x 5mm x 3mm. Flexicurve pipes are used. These were worn and would need to be replaced. It is important to keep the flexicurve pipes as straight as possible to minimise friction.

Chip Blower Truck (cont.)

The whole of the back opens hinged left. This gives excellent access for maintenance or cleaning. It is important that any chips are thoroughly cleared from the whole system before delivering pellets because even a few chips could cause damage to a pellet boiler. OBMtec staff demonstrated that with care the unit can be effectively cleaned of any residual chips in approx 15 minutes. Therefore the Peterson is suitable for handling different materials such as wood chips, pellets and garden mulch. Such flexibility could be a distinct economic advantage.

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