

SRCS.24.10 - ATTACHMENT 1:

WINDROW PROGRAM EQUIPMENT - BACKGROUND AND ASSESSMENT

Background of initial purchase

In 2019, to deliver the Council approved Windrow Program, the City of Richmond Hill purchased 35 John Deere 324L loaders with buckets, and 35 custom Metal Pless articulating windrow clearing arms. The total cost at the time for all this equipment (machines and custom apparatus) was \$5,510,000 or \$157,431.60/unit.

Current state of the machines

Based on age alone, the 35 machines are 5 years old, or halfway through their expected useful life. However, the engine hours for all 35 machines are very low and based on usage, they are in theory, still in their first year of engine life. The average engine hours for all 35 machines are 487 hours per unit.

For the purpose of this report, City staff retained, Brandt Tractor Ltd. (Brandt), to complete a detailed inspection and assessment of all the machines. The Brandt findings concluded that all 35 machines are considered to be in "Good" condition and should outlast their 10-year expected life.

Brandt prepared a list of outstanding manufacturers recommended routine repairs. The total estimated cost to complete all of the repairs is approximately \$3,000/unit and should raise the condition rating of the machines to "Very Good".

Currently all machines are due for either their first or second Preventative Maintenance (PM) cycle. The PM service costs range from \$1,500 to \$2,500 per unit. The total estimated cost of the PM service work is \$55,000. Over the next five years, the regular PM cycles for all 35 machines are expected to cost approximately \$140,000 in total. These figures reflect the low average engine hours, as well and the attentive maintenance the machines have received to date.

Based on the above, and at the current rate, the machines can be expected to outlive their expected 10-year service life. In the alternative, if the machines were sold at auction after 10 years, they would command a premium price in excess of the originally assumed salvage value.

Note, the City's experience in recent years has been that end-of-life equipment sold at auction has returned a premium price due to inflation and supply chain challenges that continue to persist in certain industries.

Timing of Future Replacement

At the time of purchase, the City expected each machine to last 10 years - or 15,000-20,000 engine hours each.

By 2024, these machines were expected to have approximately 7,500 engine hours per unit rather than the current 218 – 1,012 engine hours. The machines therefore are currently being underutilized based on total engine hours. These machines will be 10 years old at the start of 2029 and based on engine hours are expected to have significant remaining useful life. This raises the opportunity and to increase the utilization of this equipment outside of the winter season thereby potentially deferring the need for other equipment purchases.

Based on the current condition of the equipment, the recommended future PM schedule, and the current attentive maintenance efforts, these machines would not be recommended for replacement in 2029. Staff would instead assess the potential auction value and determine at that time a revised optimum strategy for asset replacement.

Current Salvage Value & Viable Options

Using straight line depreciation and the 2019 acquisition price, these machines have a current 2024 (accounting) book value of \$2,755,000 or \$79,000 per unit. Brandt have estimated the total current trade-in value of the units to be \$3,150,000 or \$90,000 per unit. We believe the current auction value to be approximately \$100,000 per unit. Note the current 2024 price of a new unit (model 324P), which is a slight update to the model the city owns, is \$263,000 per unit, and staff therefore believe that under current market conditions, and the low engine hours, the above 2024 estimated return at auction is reasonable.

Using the same approach and assuming the market for this equipment remains stable until the planned 2029 year of disposal, these machines are expected to have a total salvage value of approximately 30% of the original purchase price - \$1,653,000 or \$47,200 per unit. As mentioned, this is higher than the normally expected salvage value due to the low engine hours and attentive maintenance the machines will continue to receive.

Conclusion / Strategies

Based on the above, and assuming the condition and reliability of the machines remains good, staff will:

- Conduct a market assessment one year prior to the planned 2029 disposal to confirm the expected salvage value of the equipment.
- Conduct an equipment condition assessment to confirm the remaining useful life.

- Based on expected maintenance costs and replacement value, determine, and recommend either an extension to the replacement cycle based on these finding or proceed with replacement and realize the higher auction value.

After conducting the above, it is expected that the replacement date will be deferred thereby allowing, if necessary, a further program re-assessment.