

## 7.0 FLEET REVIEW

### 7.1 Existing Fleet

The Fleet Division of the Oakville Fire Department was surveyed and it was determined that generally, the fleet is in a good state of repair. The Department has embarked on a replacement program that has decreased the average years in service for their apparatus which has resulted in a modern fleet of vehicles. A vehicle and equipment reserve is in place to support the ten year replacement plan.

A 15-year apparatus age is generally accepted in the industry as the life expectancy of a front line vehicle, with a potential for up to five additional years of service as a reserve vehicle. The Fire Department generally follows these guidelines. However, vehicle running time and type of use have shown that a 10-year cycle is better-suited for the Town of Oakville. Since the Oakville Fire Department operates in an urban setting, it is essential that vehicles be kept up-to-date, including the latest technological improvements. This keeps maintenance costs low (e.g. less need for refurbishment or overhauls) and increases the re-sale value of vehicles that are still in good condition.

At the time of assessment, there were 14 apparatus in use within the Oakville Fire service, as listed in **Table 7.1**.

TABLE 7.1 APPARATUS AT EACH STATION AND MODEL YEAR			
Station	Vehicle	Description	Year
Station 1	Pump 211	Freightliner Superior Class A Pumper	1999
	Hazmat 1	International Anderson Hazmat truck	1989
Station 2	Pump 221	HME Seagrave Class A Pumper	2004
	Ladder 222	Spartan Smeal Aerial Ladder (reserve)	1999
Station 3	Pump 231	HME Seagrave Class A Pumper	2004
	Ladder 232	Spartan Smeal Aerial Platform	2004
	Command Unit		1995
Station 4	Pump 241	HME Almonte Class A Pumper	2002
	Tanker 243	HME Almonte Class A Pumper Tanker	2002
Station 5	Pump 251	Freightliner Superior Class A Pumper	1999
	Rescue 253*	Freightliner Almonte Heavy rescue	1996
Station 6	Pump 261	HME Almonte Class A Pumper	2002
	Aerial 262	Smeal 75 foot Aerial	2004
Station 7	Pump 271	HME Almonte Class A Pumper	2003
	Quint 207	Freightliner Nova Quintech Quint (reserve)	1995

\* Rescue 253 is a reserve vehicle

**Note:** The above table does not include small vehicles (i.e. Platoon Chief, Technical Rescue Pick Up, etc).

The hazardous material unit (Hazmat 1) is overage using either Town of Oakville average vehicle age or the industry 15-year apparatus age guideline. However, it is a less frequently used vehicle given its special function though it is placed into service as a rescue vehicle when the latter is occupied on a call. The Hazmat unit continues to fulfill its intended role though its condition and performance should be monitoring and a vehicle budgeted for eventual replacement.

## 7.2 Maintenance and Equipment

The Roads and Works Department provide fleet maintenance for the Oakville Fire Department on a rotation basis. When vehicles are brought in for repair they are serviced on a first come, first served basis by the next available mechanic, regardless of vehicle type, or relative priority. While this allows the mechanics to be well rounded in their knowledge base, fire apparatus are arguably the most highly specialized of the Town's fleet and this should be reflected in the service provided. Often some of the more specialized vehicles (i.e. aerial devices) are sent to external maintenance providers resulting in the longer "out of service" time than other apparatus.

## 7.3 Recommendations

The recommendations outlined below offer an opportunity to improve the overall condition of the fleet.

### *Dispose of Spare Quint 207*

The spare quint apparatus at Station 7 (Quint 207) is a large tandem axle, conventional cab (i.e. pumper with a telesquirt boom). The chassis has a large turning radius compared to other apparatus because of the location of its conventional cab (i.e. set back from front of vehicle). This reduces the vehicle's manoeuvrability and also means that, especially when proceeding on red traffic lights at intersections, drivers must exercise extra caution and take additional time to ease into traffic before determining whether the way is clear.

The aerial boom on this apparatus was modified to accommodate the vehicle within the station. A collapsible handrail was installed to assist in climbing the boom, but because of other defects, firefighters have been directed to not climb the boom. The aerial boom is now used solely for the purpose of directing fire flows. Given the vehicle's age and condition, it is recommended that it not be refurbished. However, the body is still in good condition and this apparatus may be useful to a smaller department with a lower call volume and could be sold. The boom would have to be re-certified.

### *Place Pump 251 in Reserve and Retire Pump 211*

Pumps 211 and 251 were purchased by the Town a number of years ago. Their inexpensive cab and chassis designs have created a number of issues. The biggest concern is the lack of suitable electrical power supply within the vehicle. The Oakville Fire Department relies on radios, infrared cameras and flashlights with in-vehicle charging capabilities. The electrical systems in both Pump 211 and Pump 251 were designed for much lower loads. The need for charging and use of emergency lights and sirens places a significant strain on the electrical system, and despite repeated repairs, problems related to overloaded circuitry remain.

The body support systems on both Pump 211 and Pump 251 were not designed for high impact urban use. The tank on Pump 211 has a recurring leak, despite frequent repair. It is suspected that frequent use and the urban driving conditions have contributed to the tank cracking. While Pump 251 has slightly higher mileage, its hour meter reading is lower and it does not have as many problems as Pumper 211. Pump 251 responds mainly to calls on the highway which has more forgiving driving conditions than the continual starting and stopping of driving in an urban setting that Pump 211 has experienced.

Both vehicles have conventional cab/chassis designs with similar operating problems as described for Quint 207. At intersections, drivers must exercise extra caution and take additional time to ease into

traffic before determining whether the way is clear, especially when proceeding on red traffic lights.

Pump 211 has been reported to ‘jump out of pump gear’, which means that while pumping water for firefighting purposes it suddenly stops pumping. This, coupled with the above identified problems, makes the replacement and retirement of Pump 211 a high priority. At the time of writing, a new pump was on order to replace this vehicle. Given its condition, Pump 251 should be removed from front-line service and placed on reserve as soon as possible.

#### ***Place Rescue 253 in Reserve***

Due to the rescue’s high mileage (214,000 km) was recently put in reserve.

#### ***Improve Backup Hazardous Material Unit***

When the Town’s rescue apparatus is out of service, the hazardous materials unit is placed in service as the rescue. A van is then placed in service as the “backup” hazardous material unit. The van is not equipped with a cage or compartments that would restrain equipment from moving around the vehicle. This creates a health and safety hazard for the driver. The practice should discontinue if appropriate means of restraining equipment cannot be incorporated (e.g. have van outfitted with a protection wall). Given the current age and mileage of the van it may not be cost effective to undertake such a retrofit.

Alternatively, a more suitable vehicle could be utilized as the spare hazardous material unit. During the course of the assessment of the fire department fleet it was noted that there were a number of pickup trucks available which could be used if outfitted with a cap. The Department is also exploring the purchase of a newer cube van to use as an interim hazardous material unit.

#### ***Increase Small Equipment Budget***

The small equipment of the department is generally in a good state of repair. Some complaints were noted regarding repair and replacement cycles for equipment which has lead to small equipment not being readily available for service. It was noted during the assessment that the pneumatic rescue tool from Station 2 had been out of service for more than a year. As well during the summer months the small engine repair staff is sometimes overwhelmed by service calls from the Town’s lawn maintenance program. If small equipment replacement followed a slightly more aggressive program, it would reduce out of service time.

#### ***Maintain Fire Apparatus with a Specialized Core of Mechanics***

Assigning a small core of mechanics dedicated to fire apparatus would allow for a familiarity with the complexity of these vehicles. This would result in faster diagnosis and reduced repair time which would translate into less out of service time. It is possible, under the present system that a mechanic may not be assigned to work on a fire truck for a considerable length of time. It is suggested that when two mechanics are available, the one with stronger skills in fire apparatus maintenance should be assigned the repair responsibility.

The Town’s practice of sending fire apparatus to external repair facilities for specialized work should continue (e.g. requiring an engineer’s stamp or testing upon completion of repairs).

#### ***A Rotation Program for Heavily Used Apparatus Should be Adopted***

The department’s pump fleet has varied mileage and hour meter readings due to differences in call volume and call types. By rotating higher mileage pumps to stations with lower call volumes apparatus

lifespan could be lengthened. This would ultimately present savings in both capital and maintenance costs. **Table 7.3** compares pump apparatus by model year highlighting differences in hours used and mileage.

<b>TABLE 7.3 PUMP APPARATUS USAGE</b>			
<b>Truck Number</b>	<b>Model Year</b>	<b>Hour Metre</b>	<b>Mileage</b>
Pump 221	2004	687	9099
Pump 231	2004	1152	12678
Pump 241	2003	2432	44341
Pump 261	2002	2510	44787

Station call volumes will increase and apparatus will continue to age. The department should monitor the mileage and hour meters to determine whether the useful life of apparatus can be extended through planned rotations.

### ***Summary of Recommendations***

1. Dispose of reserve Quint 207.
2. Place Pump 251 in reserve and retire Pump 211.
3. Monitor the primary Hazmat vehicle's condition and performance given its age and budget for a replacement vehicle (e.g. newer cube van).
4. Increase small equipment budget to reduce out of service time.
5. Maintain fire apparatus with a specialized core of mechanics (i.e. within corporate fleet).
6. Adopt a rotation program for heavily used apparatus.