



CLEAN OIL  
BRIGHT IDEAS

# Hydraulic Oil TENNANT Street Sweeper, Hydraulic System

## CJC™ Application Study

Application Study  
written by:

Ivan Partono  
C.C.JENSEN  
(Netherlands) A/S

In co-operation with:

Mr. Robert Franssen,  
Specken Techniek BV  
and

Mr. Sjaco Dingemans  
Maintenance Manager  
Brambles Ind. Services

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**Brambles**



### CUSTOMER

BRAMBLES Industrial Services.  
Located at Vlissingen-Oost on the Pechiney Aluminium  
Factory site.

### THE APPLICATION

TENNANT Sentinel Street Sweeper.  
Hydraulic system on board.  
**System pressure:** Max. 191 bar (2,750 psi).  
**Oil sump:** 120 litres.  
**Oil type:** Valvoline HLVP 46.

### THE PROBLEM

The working environment is extremely contaminated with fine alumina dust. Ingress of solid particles smaller than 3 micron causes extreme wear and will shorten the lifetime of the hydraulic valves, motors and pumps. The resin deposits in the system consolidate the vicious circle of oil contamination and reduce component lifetimes. Frequent oil changes and component repairs will result in high vehicle running costs.

### THE SOLUTION

A CJC™ Fine Filter HDU 15/25 PF2-Y with a flow control block was installed. The manifold technology regulates a constant flow and the pressure of oil through the CJC™ Filter Insert BG 15/25. The flow control block ensures that the system does not suffer from fluctuations and resonance by the flow off take.

### THE TEST

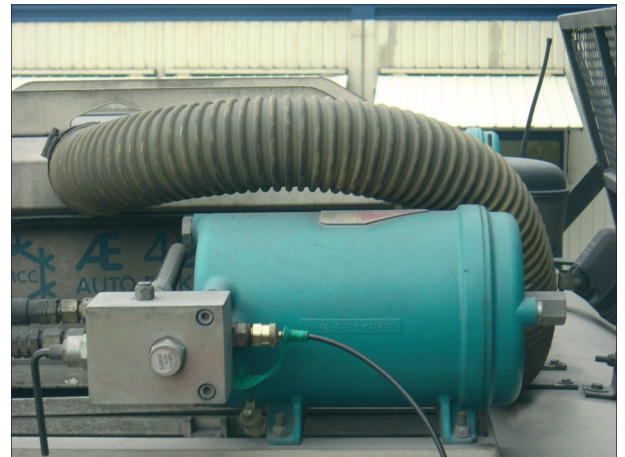
The filter has been installed on the roof of the vehicle as the best possible location. The filter unit is mounted on a hinged joint cradle, and vibration dampers have been installed. The inlet line is drawn from a manifold block in the system. The outlet line of the filter is directed back to the sump. The oil flow is set at 2 litres / minute.

### THE RESULT

Particle contamination has been tackled and ISO 16/14/11 cleanliness level was achieved within 797 running hours. The deterioration of the oil caused by resins has been arrested. The vehicle equipped with a CJC Filter is set to have an oil change after max. 5,000 hours. A longer service interval yields direct cost savings and more availability of the vehicle. Clean oil has extended the lifetime of the pumps, valves and hydro-motors.



*The Tennant Sentinel Street Sweeper.*



*The CJC™ HDU 15/25 PF2-Y  
on the roof of the street sweeper.*

