



CLEAN OIL  
BRIGHT IDEAS

## CJC™ Application Study

Application Study  
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**Brambles**



### CUSTOMER

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

### THE APPLICATION

HYSTER Lift truck.  
Hydraulic system on board.  
**System pressure:** Max. 200 bar (2,900 psi).  
**Oil sump:** 200 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 oil samples show a contamination level up to ISO code 21/19/16. The resin deposits in the system consolidate the vicious circle of oil contamination and reduce component lifetimes. Frequent oil changes and repairs of the components result in high vehicle running costs.

### THE SOLUTION

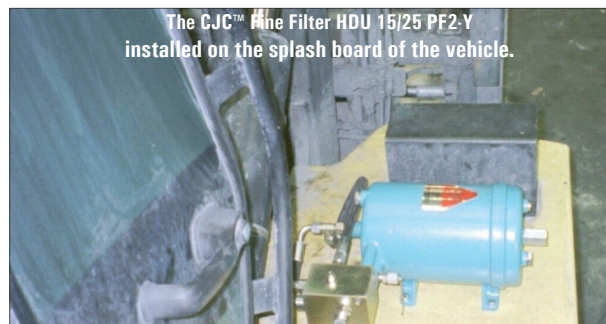
A CJC™ Fine Filter HDU 15/25 PF2-Y with a flow control block was installed. The manifold technology regulates a constant flow and the pressure of oil through the CJC™ Filter Insert BG 15/25. The flow control block ensures that the system does not suffer from fluctuations and resonance from the flow offtake.

### THE TEST

The filter was installed on the splash board as the best location. 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 cleanliness level ISO 18/14/9 achieved within 2,361 running hours. The deterioration of the oil caused by resins has been arrested. The company has a regulation demanding change of the oil after 2,000 running hours. The vehicle equipped with CJC Filter is set to have an oil change after max. 5,000 hours. A longer service interval yields direct cost savings and more vehicle availability. Clean oil has extended the lifetime of the pumps, valves, and hydro-motors.



### THE RESULT

	Before	After 1260 hours	After 2361 hours
Particles > 2 µm	1,800,000	90,000	130,000
Particles > 5 µm	380,000	63,000	15,500
Particles > 15 µm	50,000	250	400
ISO Code	21/19/16	17/16/8	18/14/9

