



CLEAN OIL
BRIGHT IDEAS

Application Study
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Wash Oil Steel Plate, Press Machine

CJC™ Application Study

CUSTOMER

TOYOTA CORPORATION, Japan

THE SYSTEM

Washing system at stack feeder machine on
press line or stamping line.

Oil type: Wash oil

Oil volume: 3,000 L

THE FUNCTION OF THE WASH SYSTEM

Before the steel plates are pressed into shape, they are washed in oil to ensure a clean surface. The steel plate that is used to form the body of the car, is washed in the press line in order to remove the silicone, the powdered iron, the aluminium and the zinc, which falls onto the surface of the steel plate. This is necessary because the iron powder can be one of the factors responsible for defects on the surface of the steel plate being pressed.

THE PROBLEM

The aim was to minimize the number of steel plates not meeting the required quality due to contaminated oil. The customer also wanted to extend the oil life-time.

THE SOLUTION

A **CJC™ Fine Filter HDU 727/108** with a Grundfos Pump was installed with **CJC™ Filter Insert type A** with a filtration ratio of 3 µm absolute and 0.8 µm nominal, and a flow rate of 175 L/min.

The flow rate of the filter is 20-30% higher than the supply pump of the washing machine. The filter pump draws oil from the dirty tank, and passes the oil through the filter insert. The oil is returned to the clean tank. The oil overflows from the clean tank to the dirty tank.

THE RESULT

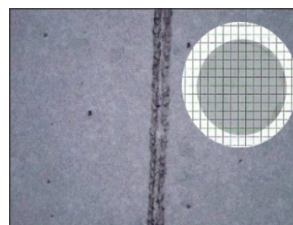
Since the installation of the CJC™ Fine Filter, no steel plates have been rejected due to quality standards.

The customer has increased oil life-time from 12 to 36 months.

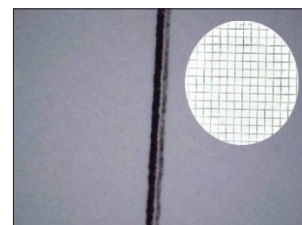


The CJC™ Fine Filter HDU 727/108 on the Press Machine

OIL SAMPLES



Oil sample
before filter test



Oil sample
after 12 days of
CJC™ Filtration

THE RESULT

Filtration Date	21.05.01	24.06.01
Particles > 5 µm	12,357	261
Particles > 15 µm	17	11
ISO 4406 Code	21/11	15/11
Color of membrane	Dark	White