

Application Note

Technical Application Publication

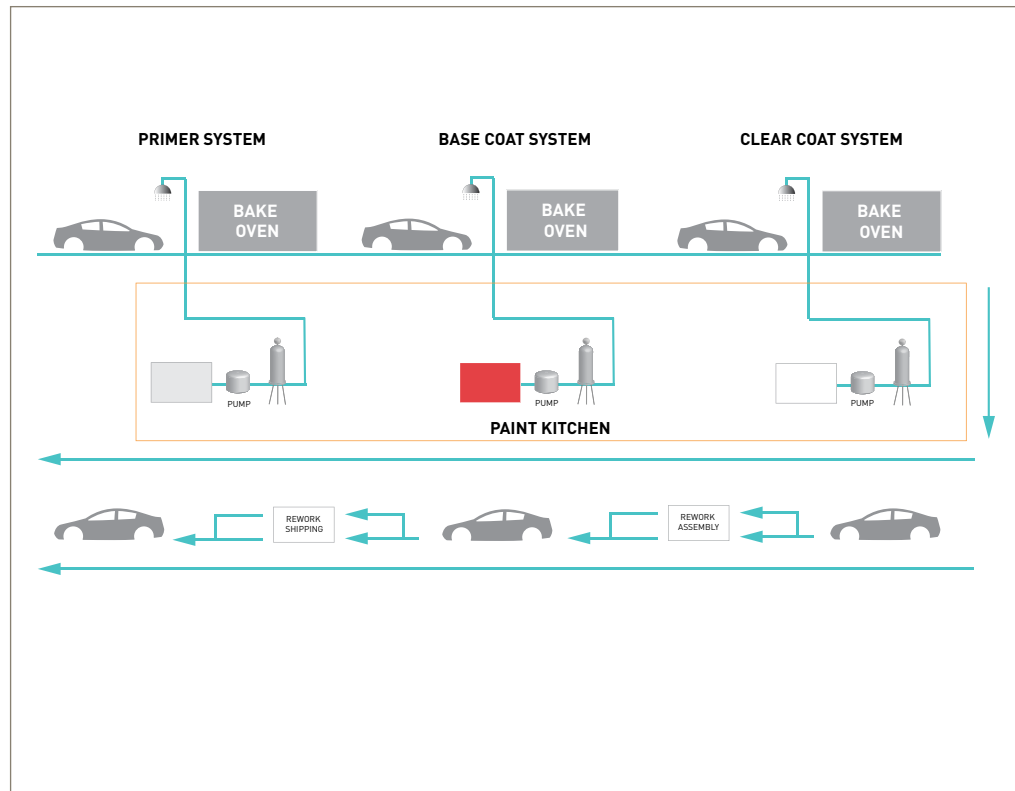
Automotive paint



Summary

Many automotive assembly plants are supplied with pre-painted parts such as grilles, mirrors, body mouldings, or spoilers from fascia plants. These parts are not to these standards as a finished automobile. If the fascia components are not to these standards, they will have to be reworked or refinished before they are integrated into the automotive assembly process. The painting process is similar to an automotive assembly plant and thus, filtration of the primer, base coat, and clear coat are extremely important.

Parker domnick hunter's innovative solution to the customer's pain not only improved his quality and reduced filter consumption it also negated the need for additional hardware and vessel purchases.



Contact information:

Parker Hannifin Corporation
domnick hunter
Process Filtration - North America
phone 877 784 2234
dhpsales.na@parker.com

Parker Hannifin Manufacturing Ltd
domnick hunter
Process Filtration - Europe
phone +44 (0)191 4105121
dhprocess@parker.com

www.parker.com/processfiltration



Key filtration challenges:

A fascia producer was a long time user of nylon monofilament (nmo) bags. The number of parts that needed costly rework or to be refinished was considered unacceptable. The customer wanted to explore ways to improve the filtration levels to ultimately reduce these expensive problems. Another problem, was the frequency of bag change-outs and the labour associated with replacing the bags every 1 to 2 days.

Even though the customer saw the benefit of using absolute rated, rigid, depth cartridges vs bags (non-rigid) surface filters), they were reluctant to install new housings to accept cartridges. Cost and plumbing requirements were a concern, since the paint kitchen, which was relatively new, would have to be changed.

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The solution

DURABOND designed to retrofit to the customer's bag housings.

The 316SS insert fit directly into the customer's size bag housing and accepted a 12" long DURABOND cartridge. The customer did not have to modify any piping or purchase additional housings for the testing or for future installation.

A base line was developed for the system's current quality rate using nmo filter bags for a paint line that had consistent quality problems. Parker supplied inserts that were put into duplexed filter bag housings for the primer, solid base coat, metallic base coat and clear coat on the paint line. DURABOND 12" cartridges, with micron ratings appropriate for the coating to be filtered, were tested in these housings.

After review of the results, the customer stated that First Time Compliance (FTC) had been reduced approximately 10%, which is directly related to quality improvements. Also,

the cartridge changeout period increased from 1-2 days for the bags to 1 month or longer using the DURABOND cartridges. The customer purchased 60 inserts and has changed their filtration to Parker domnick hunter DURABOND cartridges.

Thanks to this innovative Parker domnick hunter solution, the customer will lower their total filtration costs this year using DURABOND cartridges instead of using bags. The actual savings are much greater due to the customer only considering media costs and paint loss, and do not even consider rework and labour savings. Customer benefits are:

- Higher quality products - less rework and refinishing of the products due to paint defects
- Longer time interval between changeout of the cartridges vs bags - time and labour saving
- Reduction in paint losses



DURABOND

Polypropylene,
Polyethylene

- Fixed pore structure provides efficiency, integrity and optimum particle retention
- Silicone free construction will not change coating properties



Conclusion

- Quality improvements measured by the customers First Time Compliance (FTC) procedure
- Change-out period improved from 1-2 day to 1 month
- Paint loss reduction through less frequent change out

Parker Worldwide

Europe, Middle East, Africa

AE – United Arab Emirates, Dubai
Tel: +971 4 8127100
parker.me@parker.com

AT – Austria, Wiener Neustadt
Tel: +43 (0)2622 23501-0
parker.austria@parker.com

AT – Eastern Europe, Wiener Neustadt
Tel: +43 (0)2622 23501 900
parker.easteurope@parker.com

AZ – Azerbaijan, Baku
Tel: +994 50 2233 458
parker.azerbaijan@parker.com

BE/LU – Belgium, Nivelles
Tel: +32 (0)67 280 900
parker.belgium@parker.com

BY – Belarus, Minsk
Tel: +375 17 209 9399
parker.belarus@parker.com

CH – Switzerland, Etoy
Tel: +41 (0)21 821 87 00
parker.switzerland@parker.com

CZ – Czech Republic, Klecany
Tel: +420 284 083 111
parker.czechrepublic@parker.com

DE – Germany, Kaarst
Tel: +49 (0)2131 4016 0
parker.germany@parker.com

DK – Denmark, Ballerup
Tel: +45 43 56 04 00
parker.denmark@parker.com

ES – Spain, Madrid
Tel: +34 902 330 001
parker.spain@parker.com

FI – Finland, Vantaa
Tel: +358 (0)20 753 2500
parker.finland@parker.com

FR – France, Contamine s/Arve
Tel: +33 (0)4 50 25 80 25
parker.france@parker.com

GR – Greece, Athens
Tel: +30 210 933 6450
parker.greece@parker.com

HU – Hungary, Budapest
Tel: +36 1 220 4155
parker.hungary@parker.com

IE – Ireland, Dublin
Tel: +353 (0)1 466 6370
parker.ireland@parker.com

IT – Italy, Corsico (MI)
Tel: +39 02 45 19 21
parker.italy@parker.com

KZ – Kazakhstan, Almaty
Tel: +7 7272 505 800
parker.easteurope@parker.com

NL – The Netherlands, Oldenzaal
Tel: +31 (0)541 585 000
parker.nl@parker.com

NO – Norway, Asker
Tel: +47 66 75 34 00
parker.norway@parker.com

PL – Poland, Warsaw
Tel: +48 (0)22 573 24 00
parker.poland@parker.com

PT – Portugal, Leca da Palmeira
Tel: +351 22 999 7360
parker.portugal@parker.com

RO – Romania, Bucharest
Tel: +40 21 252 1382
parker.romania@parker.com

RU – Russia, Moscow
Tel: +7 495 645-2156
parker.russia@parker.com

SE – Sweden, Spånga
Tel: +46 (0)8 59 79 50 00
parker.sweden@parker.com

SK – Slovakia, Banská Bystrica
Tel: +421 484 162 252
parker.slovakia@parker.com

SL – Slovenia, Novo Mesto
Tel: +386 7 337 6650
parker.slovenia@parker.com

TR – Turkey, Istanbul
Tel: +90 216 4997081
parker.turkey@parker.com

UA – Ukraine, Kiev
Tel: +380 44 494 2731
parker.ukraine@parker.com

UK – United Kingdom, Warwick
Tel: +44 (0)1926 317 878
parker.uk@parker.com

ZA – South Africa, Kempton Park
Tel: +27 (0)11 961 0700
parker.southafrica@parker.com

North America

CA – Canada, Milton, Ontario
Tel: +1 905 693 3000

US – USA, Cleveland
Tel: +1 216 896 3000

Asia Pacific

AU – Australia, Castle Hill
Tel: +61 (0)2-9634 7777

CN – China, Shanghai
Tel: +86 21 2899 5000

HK – Hong Kong
Tel: +852 2428 8008

IN – India, Mumbai
Tel: +91 22 6513 7081-85

JP – Japan, Tokyo
Tel: +81 (0)3 6408 3901

KR – South Korea, Seoul
Tel: +82 2 559 0400

MY – Malaysia, Shah Alam
Tel: +60 3 7849 0800

NZ – New Zealand, Mt Wellington
Tel: +64 9 574 1744

SG – Singapore
Tel: +65 6887 6300

TH – Thailand, Bangkok
Tel: +662 717 8140

TW – Taiwan, Taipei
Tel: +886 2 2298 8987

South America

AR – Argentina, Buenos Aires
Tel: +54 3327 44 4129

BR – Brazil, Sao Jose dos Campos
Tel: +55 12 4009 3500

CL – Chile, Santiago
Tel: +56 2 623 1216

MX – Mexico, Apodaca
Tel: +52 81 8156 6000

VE – Venezuela, Caracas
Tel: +58 212 238 5422