

## Minuteman Trucks, Inc. Diesel Particulate Filter (DPF) Cleaning Menu

### Minuteman Process:

#### ★ Inspections & Testing

- We inspect, clean, test and return the filter to the customer who sent it in. We do not exchange or substitute filters. Minuteman inspects and tests the filter at every step of the cleaning process. Cleaning results are shared with the customer and can be compared with historical recovery data.

#### ★ Overall Filter Life

- Filter life decreases when impacted ash is left in the filter cells. The deeper the impacted ash becomes, the harder it is to remove in subsequent cleanings. The risk of sintering increases when ash is left in the filter. Ash stuck in the filter causes cold cells and leads to premature soot plugging. The cleaner the filter is kept, the longer the overall life. FSX™ has repeatedly cleaned the same filters pulled annually over a four year period and returned them to the Green Tag range every time.

#### ★ Cleaning Results

- Minuteman Trucks cannot and does not guarantee or warrant that we can achieve recovery of the filter. Filters can fail for a variety of reasons as a result of operating conditions. The primary source of failure is unusual thermal events that have caused sintering, failure of the cell walls or melting of the ceramic sub-strait. Filters can also be damaged by dropping them, thermal shocking, excessive oil soaking, chips and vibration. Some filters last longer than others or can with stand higher temperatures.
- Our FSX cleaning system has an overall average cleaning success of about 95% of the filter. A recovered filter reaches Green or Orange Tag status as set by FSX statistical analysis.
- Approximately 5% of the incoming filters will move to the Red Tag range for a variety of reasons, these filters are deemed un-cleanable.

#### ★ Time Between Cleanings

- Minuteman cannot control the time between cleanings and makes no guarantees. Filters can be re-plugged within hours if the engine is malfunctioning, operating temperatures are out of specification or if the wrong fuels or lubricants are used. FSX has seen filters run 240,000 after cleaning and filters that re-plugged in two hours.

#### ★ Turn-Around Time

- Minuteman typically performs a Stage 1 Pneumatic Cleaning on an incoming filter within 8 hours.
  - *Typical Turn-Around Times:*
    - Stage 1 Pneumatic Cleaning – 24 hours
    - Stage 1 plus Stage 2 Thermal Cleaning – 48 hours
      - Oil and/or Fluid Contamination Filters – Require additional time as needed.

#### ★ Customer Pick-Up and Delivery

- Minuteman provides pick-up and delivery service with 6 delivery trucks in Eastern Massachusetts and Northern Rhode Island. This service is available under limited conditions. 24 hour turnaround time cannot be guaranteed when utilizing Minuteman's pick-up and delivery service.

#### ★ Packaging

- DPF's are very expensive filters and should be treated with care. Make sure your shipment is adequately packaged for rough motor freight conditions. The filter should be placed in a sealed bag or container. Make sure the package protects flanges or rims from denting. Do not leave the ceramic face exposed. Minuteman will repackage the filter in the materials you sent it in. If the packaging is deemed unacceptable by Minuteman shipping personnel, the filter will be repackaged and additional charges will passed on to the owner.

**Minuteman Trucks, Inc.**  
**Diesel Particulate Filter (DPF) Cleaning Menu**

**Pricing:**

★ **Stage 1 Pneumatic Cleaning (Blast It - "Air Knife" Technology)**

- Record owner & serial number
- Inspect & air flow test filter, record defects, damage & test results
- Perform cleaning, inspect filter during cleaning process for failed cells & record defects
- Test filter after cleaning & compare results to FSX Baseline Filter Matrix; Determine status as Green Tag, Orange Tag or Red Tag
- If Green Tag record results, repackage & return to customer..... **\$300.**
  - ***If Status is Orange Tag or Red Tag a Stage 2 Thermal Cleaning is required (see additional pricing below.)***

★ **Stage 2 Thermal Cleaning (Bake It - Thermal Regeneration)**

- Optional thermal process for heavily soiled DPF's not recovered effectively with Stage 1 Cleaning
- DPF's are baked at 1112°F for 12 Hours which oxidizes any soot trapped in filter & loosens ash deposits
- Removes oil or fluid residue from the filter which interferes with the Pneumatic Cleaning Process
- Perform second Pneumatic Cleaning to blow out ash freed in Thermal Cleaning
- Test Filter for air flow, record results to FSX Baseline Filter Matrix; Determine status as Green Tag, Orange Tag or Red Tag
- If Green or Orange Tag, repackage & return to customer
  - Dry Filters 12 hour bake..... **\$200.**
  - Oil or Fluid Contamination (Slight) 24 hour bake..... **\$295.**
  - Oil or Fluid Contamination (Minor) 48 hour bake..... **\$390.**
  - Oil or Fluid Soaked Pre-wash..... **\$50.**

★ **Additional Services**

- Update Engine Calibration/Score Card..... **\$105.**
- DOC (Diesel Oxidation Catalyst) Cleaning..... **\$105.**
- Sensor R & R (Exhaust Gas)..... **\$52.**
- DOC or DPF Ceramic sub-straight crack repair ..... **\$50.**
- DPF/DOC Remove & Installation (removal of complete unit & disassembly, not including misc. parts or hardware)
  - Horizontal Exhaust under Chassis..... **\$210.**
  - Under Cab in Step Well..... **\$105.**
  - Vertical Exhaust..... **\$160.**
- Aftertreatment Fuel Injector/Doser
  - Remove clean, service & flow test..... **\$275.**
- Mass Air Flow Recalibration..... **\$55.**
- OBFCT (On Board Filter Cleanliness Test), (Forced Re-Gen or Parked Re-Gen)..... **\$105.**

★ **Unsuccessful Cleaning Handling Charge: \$25.00 flat charge**

- Note: The cleaning charges under Stage 1 & 2 above are waived if we are unsuccessful in recovering the filter. The nominal handling charge of \$25. Covers a small portion of the costs we incurred attempting to salvage your filter.

*\*Prices do not include remove and install DPF, forced re-gen, after treatment injector cleaning (AFI, Doser), hardware (i.e. gaskets and v-clamps) shop supplies, sales tax or shipping costs outside Minuteman's Pick-up and Delivery Area. 24 hour turn-around time cannot be guaranteed when utilizing Minuteman's Pick-up and Delivery service.*

**For more information visit: [www.MinutemanTrucks.com](http://www.MinutemanTrucks.com)**