



# Air Filter Field Test Training & Procedures

## Field Test Training



Training maintenance personnel is necessary to insure that proper field test procedures are conducted. When these procedures are followed, field test data will be very reliable and accurate. Any variations may alter the results and demonstrate erroneous information.

### 1. Service the Air Filter by Restriction Measurements

This procedure is imperative for reliable testing procedure and results. Proper use and installation of restriction indicators needs to be considered.

### 2. Measuring Restriction Using a Manometer

A manometer (tube, gauge or indicator) is still the most accurate method of measuring airflow restriction. Training individuals on how to use a manometer will enable the user to accurately determine the life of filters based on restriction measurement. Training will include the proper “hookup” method and how to check the accuracy of restriction indicators in the test.



### 3. Maintenance of Intake Pre-Cleaners

(Typically in off-road equipment)



Demonstrate how to check the various dust removal devices – including Vacuator™ Valves, quick release dust cups, regular dust cups and exhaust ejectors.

Demonstrate proper cleaning of this apparatus and the necessity of keeping them functioning properly to obtain maximum pre-cleaning efficiency.

*Continued on back page*

## Field Testing Procedures

### Determine Test Vehicle/Equipment

Two identical vehicles being used in same application.

**Vehicle #1.** This will be the test mechanism for the Donaldson filter. A new primary filter and a new safety filter should be installed.

**Vehicle #2.** This will be the control mechanism for the brand filter being compared. A new primary filter and a new safety filter should be installed of your current brand.

### Apply Visible Test Markings

The filters and air cleaner housings on the two vehicles should have a bold “FIELD TEST EQUIPMENT” decal. Each filter should be clearly marked with the installation date.

### Communicate Test to Maintenance Personnel

Memos should be distributed to all shop personnel to communicate the field test.

### Monitoring the Field Test

Throughout the field test, data sheets should be filled out for each test vehicle at a predetermined service level. Dates and hours in service should be documented and restriction indicators need to be checked and measurement recorded.

### Field Test Reports

The test data should be analyzed and presented to all maintenance, supervisory, planning and

purchasing personnel. The data will reflect total performance and dollars per hour cost savings based on the testing.

### Field Test Completion & Final Inspection

All filters with the test decals and data should be stored for a Donaldson Company representative for final inspection.

### Issues of Interest to Donaldson During an Air Filter Field Test

- Ability/willingness to return used filters to Donaldson for postmortem examination. *Note: This is an absolute requirement for a genuine field test*
- Life vs. standard elements (e.g., restriction vs. time)
- On-going oil analysis vs. standard elements
- Available history on life, oil analysis, current maintenance practices, fuel economy, brand usage
- Ability/willingness to run sister vehicle(s)
- Definition of operating environment (e.g. temperature, moisture, carbon, dust, etc.)
- Effect of new element on fuel economy vs. standard element (i.e., ability to measure/quantify fuel consumption differences)
- Element washing practices and willingness to provide comparative data
- Size of fleet/vehicles and quantity available for field test
- Current filter brand usage
- Willingness to provide testimonial(s) on appearance, performance, etc.
- Engine data (HP, RPM, mileage, hours, etc.)
- Current method of air filter service (e.g., gauge, indicator, calendar, time/miles/hours, etc.)
- Warranty protection

### Sample Field Test Data/Log Sheet

Unit No.	Unit Make & Model	Engine Model & HP	Field Test Dates		Field Test Hours		Restriction Measurement		Filter Brand & Part Number
			Start	End	at Start	at End	at Start	at End	



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