

Installation Manual  
P/N MK20306-BLK



2003-07 DODGE CUMMINS  
**MK-2 Micro-Kleen System**  
**+ Big Line Kit**

Installation Instructions

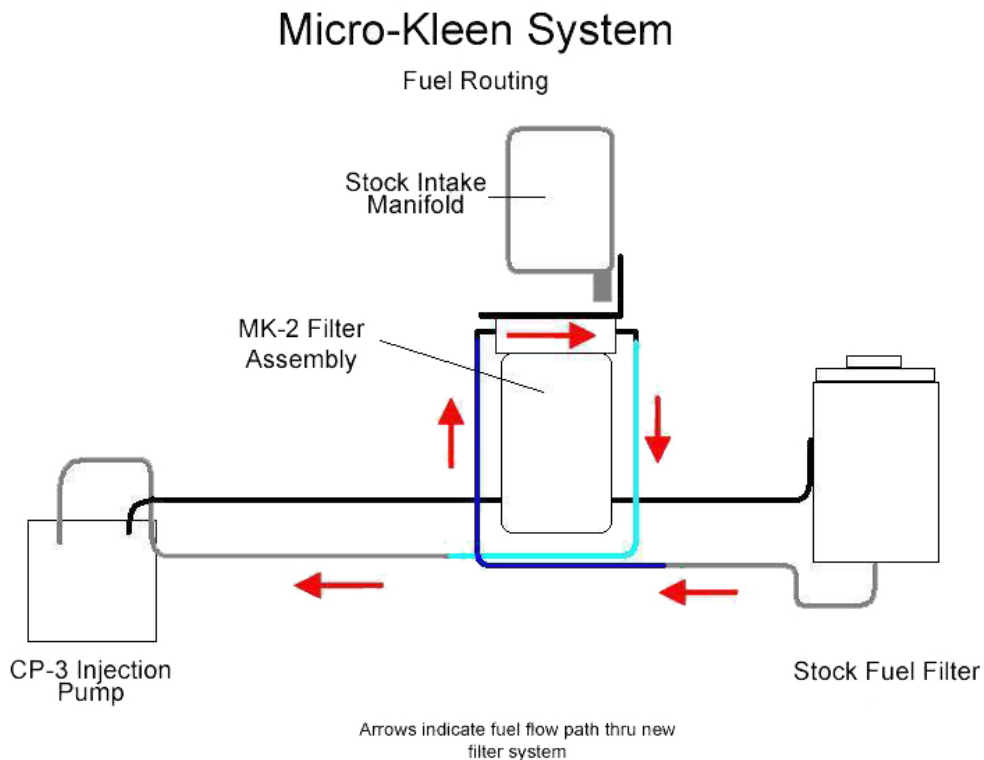
P/N MK20306-BLK  
2 Micron Fuel Filter with Big Line Kit Installation

**PLEASE READ ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION**

# Safety Guidelines!

- WARNING!** Always secure the vehicle from rolling.
- WARNING!** Always disconnect vehicle batteries before working on electrical components.
- WARNING!** Always wear safety glasses when operating power tools such as drills and grinders or using punches and chisels.
- WARNING!** Always properly secure fuel lines and wiring to prevent chaffing.
- WARNING!** Always have a fire extinguisher available when working with fuel systems.

## PLEASE WORK SAFELY!



## MK-2 Micro-Kleen + Big Line Contents



<u>Qty</u>	<u>Item Description</u>
1	GDP Mounting Bracket
1	Optional Red Backing Plate
1	Fleetguard Filter Head
1	Fleetguard FF5320 2 micron Fuel Filter
4	3/8" Mounting Bolts and Lock Washers
1	5/16" Self Threading Screw (not shown)
4	90° FJIC x 3/8" PushLok Fittings
2	1/2" MPT x MJIC Adapters
2	GDP Stainless Metric to MJIC Adapters
2	Cummins Seal Washers
1	GDP Aluminum Sender Tee
1	5' Section 3/8" Parker PushLok Hose
2	3/8" Hose Clamps

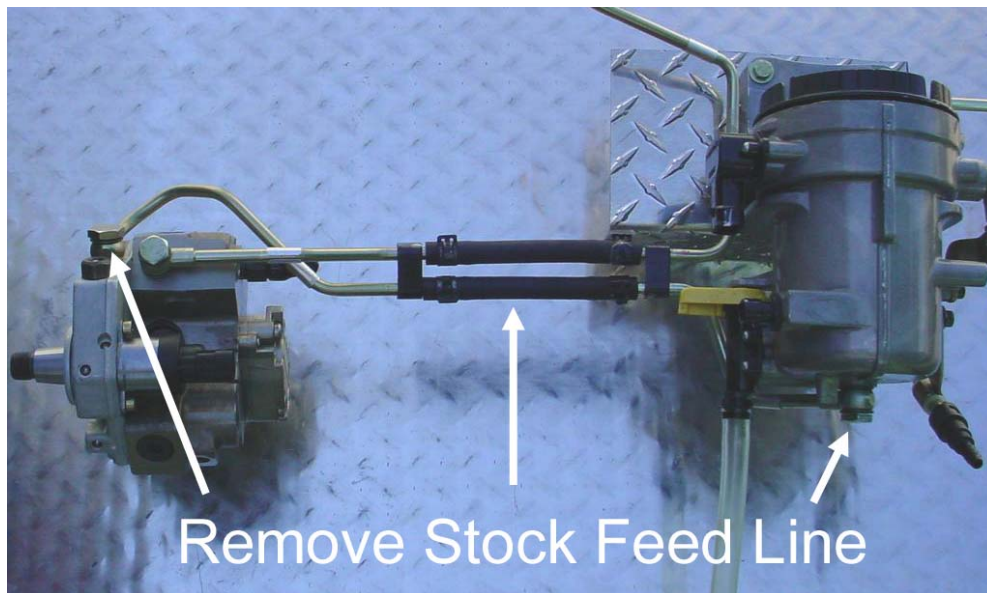
Please check your parts inventory against the above parts list before beginning your installation.

## Mounting Options

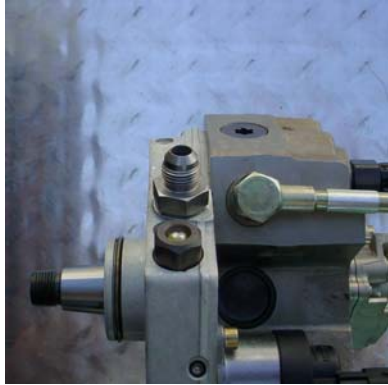
The MK-2 System offers two mounting options, directly under the intake horn or behind the intake horn just by reversing the bracket. Behind the intake manifold mounting may block the removal of the stock fuel filter during scheduled maintenance. This installation will cover the “under the intake” option.

## Preparation

- 1) Secure vehicle from rolling.
- 2) Disconnect both batteries.
- 3) Raise vehicle and support safely if needed.
- 4) Drain fuel filter housing into an approved container via the water/fuel separator.
- 5) Prepare for your installation by removing the entire supply line assembly from the bottom of the filter housing to the injection pump inlet.



- 6) Install one of the metric adapters in the bottom of the stock fuel filter housing using the supplied Cummins sealing washer. Install the other in the inlet of the injection pump. Tighten both adapters. (See photos on the following page)



CP-3 Inlet Adapter



Fuel Filter Outlet Adapter

## MK-2 + Big Line Installation

- 7) On the rear of the intake manifold you will find a factory installed stud with a harness retainer attached to it. Remove the retaining nut and harness clip. Remove the stud from the intake manifold and retain it for later use.
- 8) Under the intake manifold you will find a second mounting ear. Depending on the year of vehicle this mount may or may not have a push in clip which retains another wiring harness. Pull the retaining clip loose from this mounting tab.
- 9) This second mounting tab has a hole in it but it is not threaded. This hole must be pre-drilled to 9/32" for the self threading screw. The intake is shown below removed from the vehicle for clarity only.



- 10) From the front of the vehicle drill this mounting tab out to 9/32". The intake horn does not need to be removed from the vehicle to perform this step. If you choose to remove the intake horn for this step, make sure to use new gaskets when re-installing it. Just take your time and make sure that you are square with the mounting tab.
- 11) Install the self threading screw in the pre-drilled hole from the previous step. Fully thread the screw in and out one time to cut the new threads. This will make mounting the bracket much easier in the following steps.
- 12) Once you have determined the mounting option desired, assemble the filter head to the bracket using the supplied 3/8" mounting bolts and lock washers. Make sure that the flow direction arrows will be facing the rear of the vehicle when mounted and the port marked "Inlet" will be facing forward. (Shown with the red backing plate installed)
- 13) Install the MJIC adapters in the filter head using thread sealant or thread tape and tighten.
- 14) Bolt the filter head and bracket assembly to the intake horn using the factory stud in the stock location and the new self threading screw in the mounting tab closest to the battery.



If needed refer to the routing diagram on page 2 for the next few steps.

- 15) Install the filter onto the head and tighten to check for line clearance in the following steps.
- 16) Install one 90° PushLok fitting in the supplied hose making sure that it is fully seated. Connect this fitting to the adapter at the bottom of the stock fuel filter housing. Route this hose up to the front (inlet) of the MK-2.
- 17) Install another 90° PushLok fitting on the adapter at inlet port (front) of the filter head to measure for hose length. Angle the fitting towards the engine. Measure the new hose coming from the bottom of the filter housing and cut to length. Install the 90° PushLok fitting in the end of the new supply line from the bottom of the stock filter. Reattach the 90° fitting to the inlet of the 2 micron filter head and tighten.

**Note:** Before cutting the outlet hose to length in the next step we strongly recommend priming the system. Make sure that the filter has been tightened. Attach one end of the hose to the outlet of the filter head. Place the other end of the hose in an approved container and bump the starter. This will prime the filter without pushing excess air into the injection system and remove any small particles in the outlet line from the installation.

- 18) Using the remaining portion of fuel line repeat the connections steps for the MK-2 outlet to injection pump inlet adapter.



A Micro-Kleen System + Big Line installation is shown above. Even with the TST harness there was still plenty of room for the new MK-2.

## Finishing Up

- 19) Secure all hoses.
- 20) Prime the system by bumping the starter but do not allow the vehicle to start. Wait 20 seconds or until the pump shuts off. Repeat this step three times to purge all air from the fuel system.
- 21) Start the engine and verify fuel pressure.
- 22) Check all connections for leaks and make sure all hoses are clear of moving parts.
- 23) Test drive the vehicle.

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