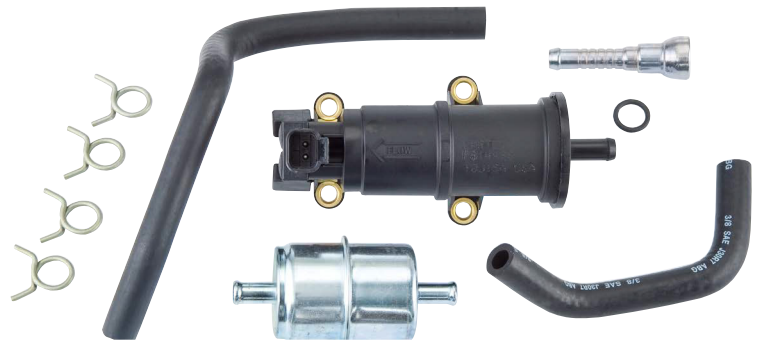


SUBJECT: 5.9 L Cummins® Engine with HPCR – Fuel Transfer Pump

Effective October, 2006: Dodge® no longer offers an external mounted fuel transfer pump for model year 2003-2004 Common Rail equipped engines. Cummins discontinued part number 4089602. This leaves the installation of Dodge in-tank fuel transfer pump modules¹ as the only OEM option. Alliant Power offers AP4089602 Fuel Transfer Pump Kit² that includes virtually the same pump as the former Cummins part number, plus installation hoses, hardware and an inline fuel filter. Hoses included with the AP4089602 kit eliminate the need to purchase a separate 3969705 hose when a pump with a non-removable inlet hose is replaced.



For reference, the table below lists part numbers and application details of Mopar in-tank fuel pump modules:

Product description	Superseded Mopar part	Current Mopar part	Tank gallons	Body type	Body type description
In tank fuel pump model	05175539AA	68003869AA	34	41	Quad cab, short box
				42	Quad cab, long box
	05175540AA	68003870AA	35	62	Standard cab, long box

The Body Code Plate is located on the right front fender rail, just behind the headlight assembly. The body type code will be found on line 4, digits 20 and 21.

² Operating characteristics of the external fuel transfer pump are described below:

- The fuel transfer pump (item 11 in the illustration on the next page) is attached to the rear of the fuel filter/water separator housing (item 10).
- The 12 volt pump is operated and controlled by the engine control module (ECM). Maximum duty cycle to the pump is 5 amps.
- When the engine is running, the transfer pump has a 100% duty-cycle with a pressure of 9.5-11.5 psi. Minimum flow is 420 ml in 10 seconds, using a DRB to actuate the pump.
- When the key is first turned on (without cranking the engine), the pump will operate for approximately 0.5 seconds and then shut off.
- The pump will also operate for up to 25 seconds after the starter is engaged, and then disengaged if the engine is not running. The pump shuts off immediately if the key is on and the engine stops running

Transfer pump specifications	
Restriction	max.6" Hg
Flow	Min 42 ml/second

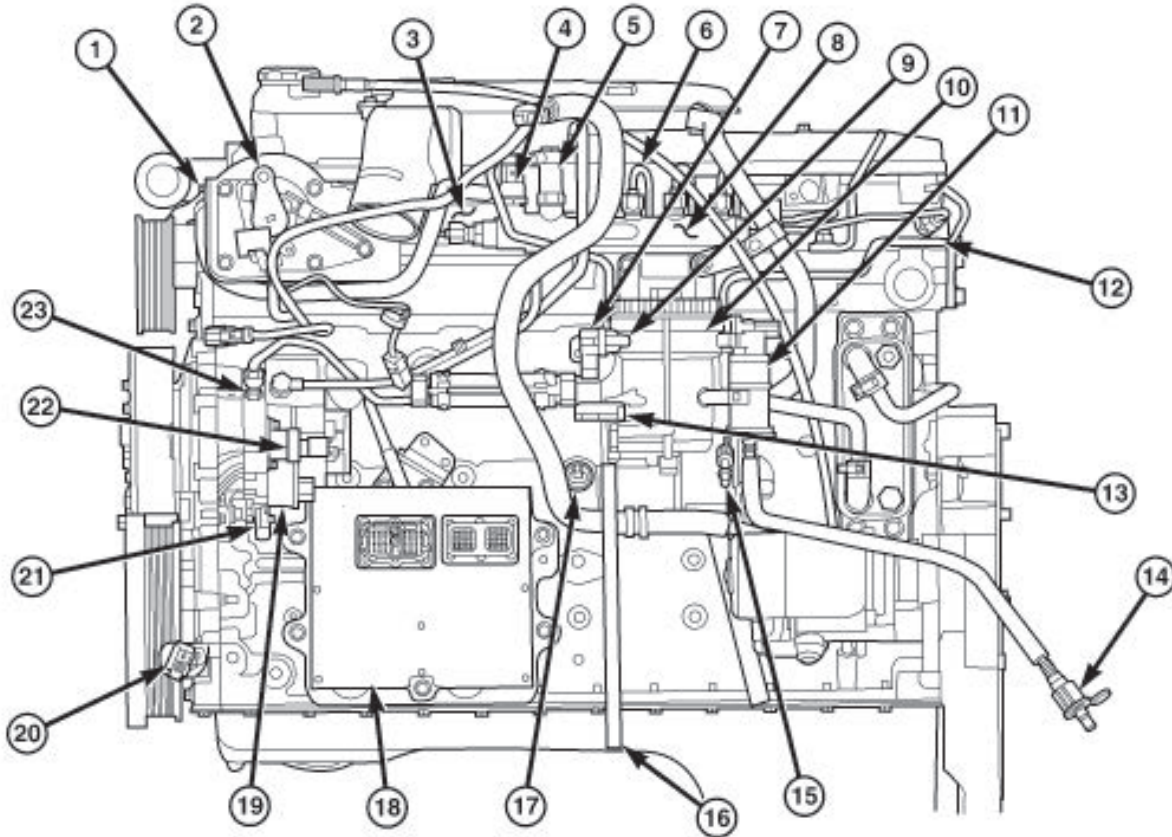


Figure 1 Diesel Fuel System Components

- | | |
|--|---|
| 1. Engine Coolant Temperature (ECT) Sensor | 12. Fuel Drain Manifold |
| 2. Throttle Lever Bellcrank and APPS (Accelerator Pedal Position Sensor) | 13. Drain Valve |
| 3. Intake Manifold Air Heater/Elements | 14. Fuel Supply Line (Low-Pressure, to Engine) |
| 4. Fuel Pressure Sensor | 15. Fuel Return Line Connection (to Fuel Tank) |
| 5. Fuel Limiting Valve | 16. Fuel Drain Tube |
| 6. High-Pressure Sensor | 17. Oil Pressure Sensor |
| 7. Fuel Heater | 18. Engine Control Module (ECM) |
| 8. High-Pressure Fuel Injector Rail | 19. Fuel Injection Pump |
| 9. Fuel Heater Temperature Sensor (Thermostat) | 20. Crankshaft Position (CKP) (Engine Speed) Sensor |
| 10. Fuel Filter/Water Separator | 21. Camshaft Position (CMP) Sensor |
| 11. Fuel Transfer (Lift) Pump | 22. Fuel Control Actuator (FCA) |
| | 23. Cascade Overflow Valve |

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