

# Diesel Fuel Check Valves

CKV-7867B/N  
Revised 11-04  
Catalog Section 55  
(00-02-0121)



## CKV and PRV Series

- Problem Solvers for Diesel Engine Shutdown Systems
- Precision Made
- Stainless Steel Spring
- Compact and Simple to Install

### Description

Murphy offers two types of diesel fuel line valves: check valves and pressure relief valves.

The **CKV series check valves** are in-line, one-way valves that prevent fuel from being siphoned back into an injector or injection pump which could delay a shutdown.

There are two types of check valves: CKV2336 and CKV1WPS. The CKV2336 has a 1/4 NPT threaded male connection on each end for connecting to fuel line fittings or hoses. The CKV1WPS check valve is typically mounted in the fuel bypass line of the last fuel injector. The CKV1WPS features a hollow bolt connection and a barbed, 1/8 NPT connection for flex hose or fitting.

The **PRV series pressure relief valves**, relieve overpressure in a fuel system usually caused by closing of a solenoid fuel valve.

The PRV50 and PRV70 have a 1/4 NPT threaded connection on each end for connecting to fuel line fittings or hoses.

### Specifications

#### Materials

	Body	Seal	Spring
CKV2336	Brass	Poppet	SS
CKV1WPS	Brass	SS	SS
PRV50/PRV70	Brass	SS	SS

Note: SS=Stainless steel.

#### Opening Pressure

	Opening	Fully Opened
CKV2336	1 psi (7)	4 psi (27)
CKV1WPS	1.4 psi (10)	2 psi (14)
PRV50	17 psi (117)	25 psi (172)
PRV70	10 psi (69)	70 psi (483)

Note: metric (kPa) equivalents in parenthesis.

#### Static Pressure (all):

150 psi (1.03 MPa) maximum

#### Weight

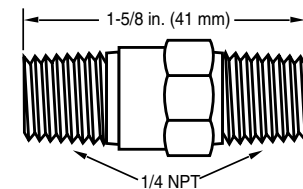
CKV2336: 1.3 oz (40.5 grams)

CKV1WPS: 1.3 oz (40.5 grams)

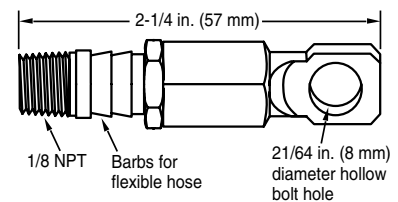
PRV50/PRV70: 1.3 oz (40.5 grams)

### Dimensions

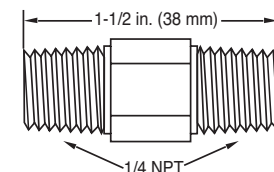
#### CKV2336



#### CKV1WPS



#### PRV50 and PRV70



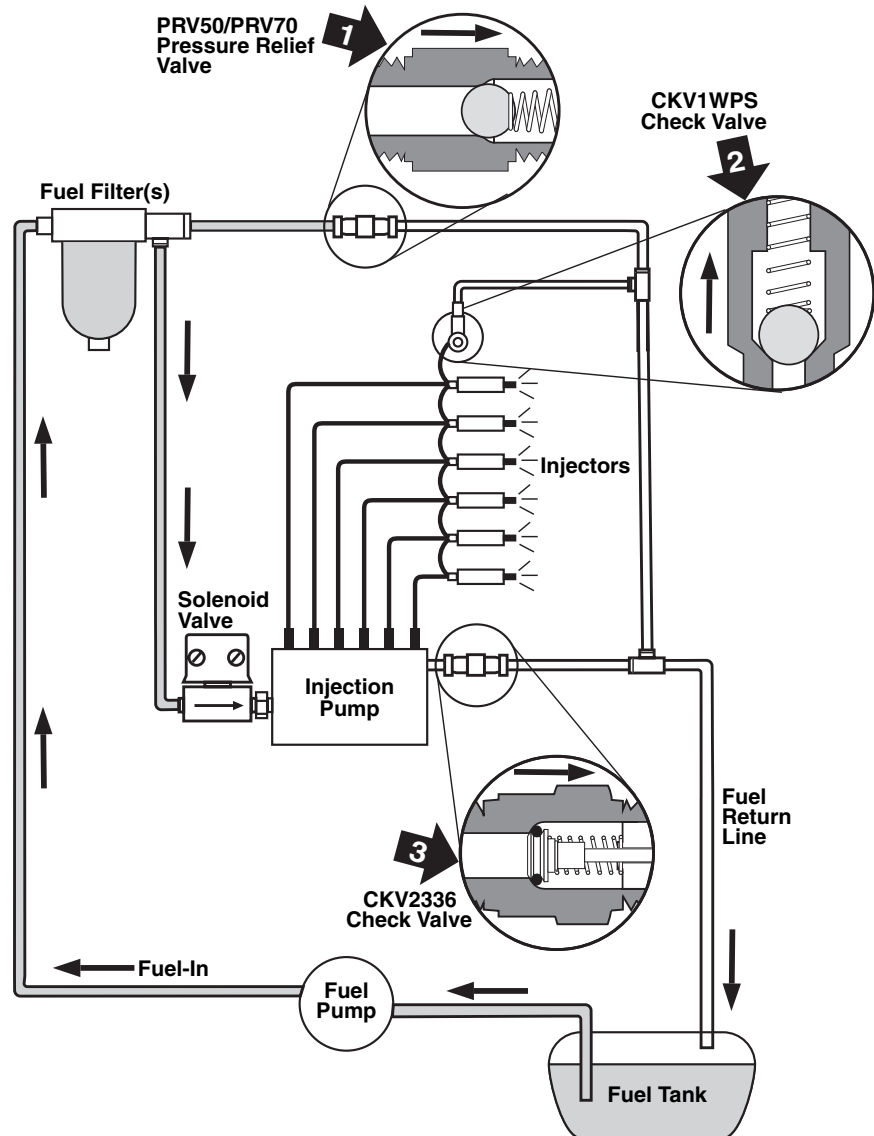
## Basic Operation

Murphy Check Valves and Pressure Relief Valves enhance at the operation of diesel engine shutdown valves by reducing the time required for complete engine shutdown after the solenoid valve closes. The diagram to the right shows a typical installation using CKV check valves and PRV pressure relief valves. **All valves are shown closed.**

Check Valves close off the fuel return line(s) to prevent fuel or air from re-entering the injection system through the bypass line(s). Models **CKV2336 (3)** is an in-line valve. Model **CKV1WPS (2)** has a 21/64 in. (8 mm) banjo fitting that attaches to the return line of the final injector. All check valves allow fuel to flow away from the injectors but close to prevent fuel from flowing in the reverse direction.

The **PRV50** and **PRV70 (1)** relieve pressure buildup in the fuel system that can cause fuel filter canisters to burst. When the solenoid valve closes to stop the engine, the fuel transfer pump will continue to produce pressure as the engine slows down to stop. This pressure buildup, if not relieved, can cause fuel filter canisters or gaskets to leak. PRV's are installed in the bypass line from the fuel filter(s) to the fuel return line.

## Typical Diesel Engine Fuel System Installation



## How to Order

Specify model number:

CKV2336

CKV1WPS

PRV50

PRV70

Note: there are no replacement parts.

## Warranty

A limited warranty on materials and workmanship is given with this FW Murphy product. A copy of the warranty may be viewed or printed by going to [www.fwmurphy.com/support/warranty.htm](http://www.fwmurphy.com/support/warranty.htm)

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