

Diesel Fuel Check Valves

CKV-7867B/N
Revised 06-02
Catalog Section 55
(00-02-0121)

FWMurphy



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 three types of check valves: CKV2336, CKV0125, and CKV1WPS. The CKV2336 has a 1/4 NPT threaded male connection on each end for connecting to fuel line fittings or hoses. The CKV0125 has poly tube flareless connections on each end for connecting to fuel line tubing. 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
CKV0125	Brass	Buna	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)
CKV0125	0.3 psi (2)	16 psi (110)
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)

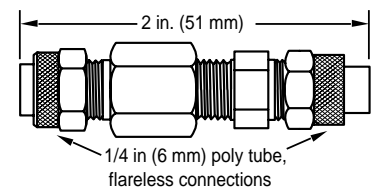
CKV0125: 1.0 oz (31.1 grams)

CKV1WPS: 1.3 oz (40.5 grams)

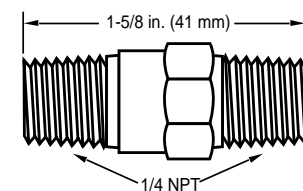
PRV50/PRV70: 1.3 oz (40.5 grams)

Dimensions

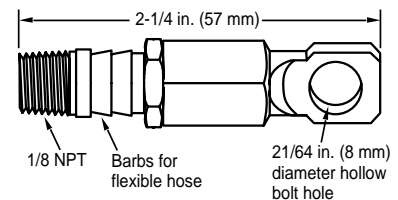
CKV0125



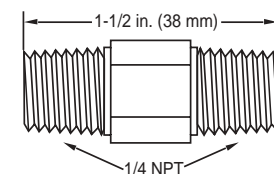
CKV2336



CKV1WPS



PRV50 and PRV70



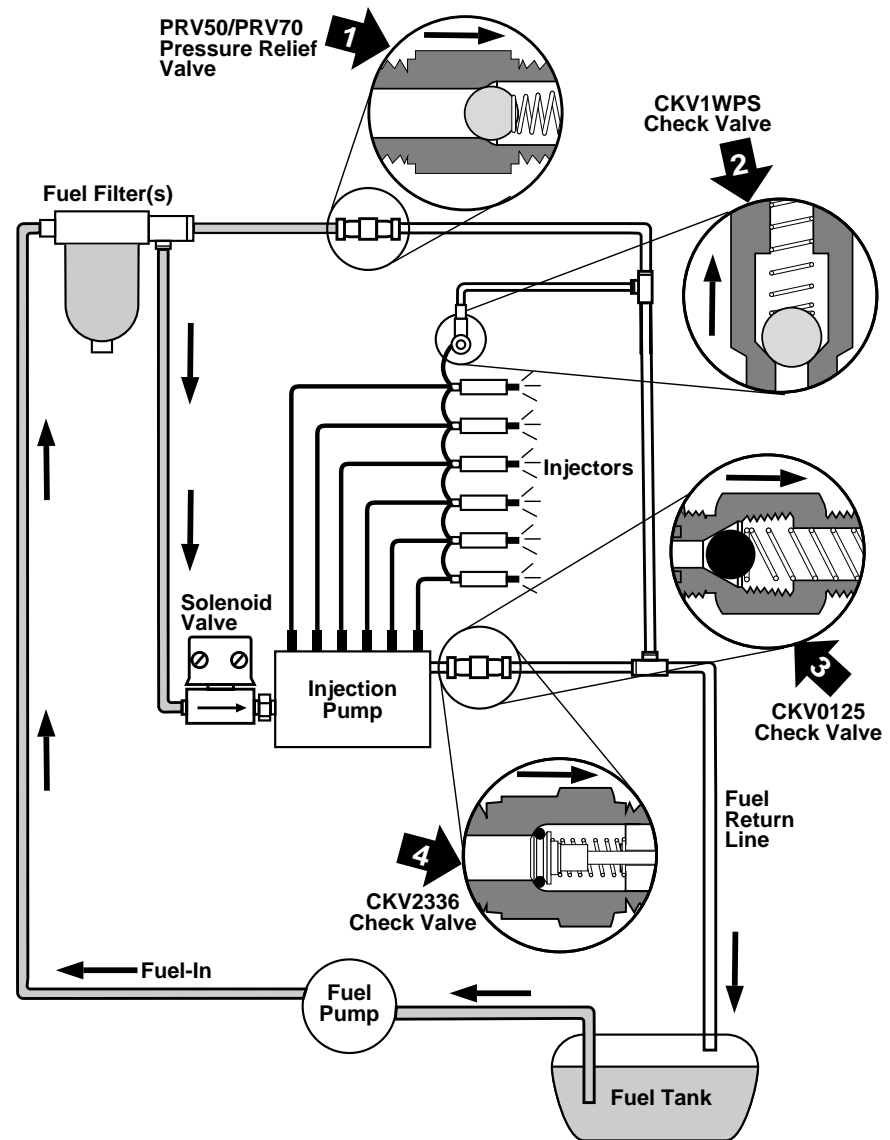
Basic Operation

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** and **CKV0125 (3) (4)** are in-line valves. 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
 CKV0125
 CKV1WPS
 PRV50
 PRV70

Note: there are no replacement parts.

Warranty

A two-year limited warranty on materials and workmanship is given with this Murphy product. Details are available on request and are packed with each unit.

murphy

FWMurphy

P.O. Box 470248
 Tulsa, Oklahoma 74147 USA
 (918) 317-4100
 fax (918) 317-4266
 e-mail sales@fwmurphy.com
 www.fwmurphy.com

CONTROL SYSTEMS & SERVICES DIVISION
 P.O. Box 1819; Rosenberg, Texas 77471; USA
 (281) 342-0297 fax (281) 341-6006
 e-mail sales@fwmurphy.com

MURPHY DE MEXICO, S.A. DE C.V.
 Blvd. Antonio Rocha Cordero 300, Fracción del Aguaje
 San Luis Potosí, S.L.P.; México 78384
 +52-444-8206264 fax +52-444-8206336
 e-mail ventas@murphymex.com.mx
 www.murphymex.com.mx

FRANK W. MURPHY, LTD.
 Church Rd.; Laverstock, Salisbury SP1 1QZ; U.K.
 +44 1722 410055 fax +44 1722 410088
 e-mail sales@fwmurphy.co.uk
 www.fwmurphy.co.uk

MURPHY SWITCH OF CALIFORNIA
 41343 12th Street West
 Palmdale, California 93551-1442; USA
 (661) 272-4700 fax (661) 947-7570
 e-mail sales@murphyswitch.com
 www.murphyswitch.com

MACQUARRIE CORPORATION
 1620 Hume Highway
 Campbellfield, Vic 3061; Australia
 +61 3 9358-5555 fax +61 3 9358-5558
 e-mail murphy@macquarrie.com.au



In order to consistently bring you the highest quality, full featured products, we reserve the right to change our specifications and designs at any time.