



PC-0065

Date: **1 October 2015**
To: **All Hydraulic Pump Division (HPD) Customers**
Subject: **P1/PD-18/28/45/140 Pumps - Product Change - Design Series B Controls**

The Parker Hydraulic Pump Division (HPD) is pleased to announce the production launch of the new Design Series B Control on the P1/PD-45 model. These new Design Series B controls are now available on four of the seven models of the P1/PD Pump Series . . . the 18, 28, 45, and 140 cc models. The Design Series B pump control launch dates for the first four models and the schedule dates for the remaining three models of the P1/PD Pump Series are shown in the table below.

P1/PD model	launch date	launch status
18	1 July 2015	completed
140	3 August 2015	completed
28	14 September 2015	completed
45	1 October 2015	completed
60	2 November 2015	schedule
75	1 December 2015	schedule
100	6 January 2016	schedule

The control design change will affect production orders of P1/PD-45 pumps starting Thursday 1 October 2015. All new orders placed for P1/PD-45 pumps on or after 1 October 2015 will be changed to specify the equivalent Design Series B control version. All existing open orders for the P1/PD-45 pumps that were placed prior to 1 October 2015 will be shipped with the Design Series A control.

The new control will be identified as Design Series B in the pump part number marked on the name plate. For example, the Design Series A part number for the **P1045PS01SRM5AL00R000PB00** pump will become **P1045PS01SRM5BL00R000PB00** with the new Design Series B control.

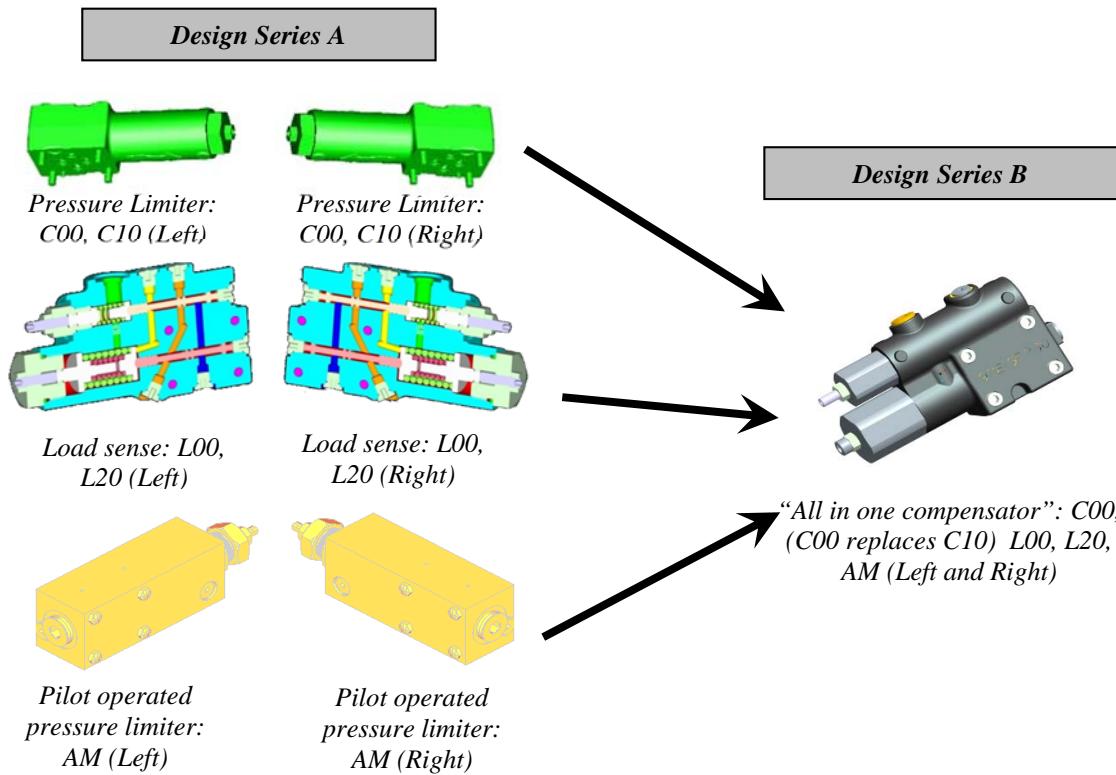
The Design Series B controls only replace the "C" Pressure Limiter, "L" Load Sensing, and "AM" Pilot Operated Pressure Limiter control options. All other control options listed in the current P1/PD Series pump sales catalog remain available and continue to be shipped as Design Series A controls.

The "C0" Pressure Limiter option for the Design Series B control has a much larger pressure adjustment range of 30 to 320 bar. As a result, the old Design Series A "C1" option with a pressure adjustment range of 20 to 80 bar has been eliminated.

The End Port "E" option is not yet available with the Design Series B control on the P1/PD-28 model. Only the Side Port "R" option and the Thru-Drive "T" option are available with the Design Series B on the P1/PD-28 model. Orders for P1/PD-28 pumps with End Ports "E" will be shipped as Design Series A until these parts become available.

The following paragraphs describe the details of the Design Series B control launch and what it means for our customers.

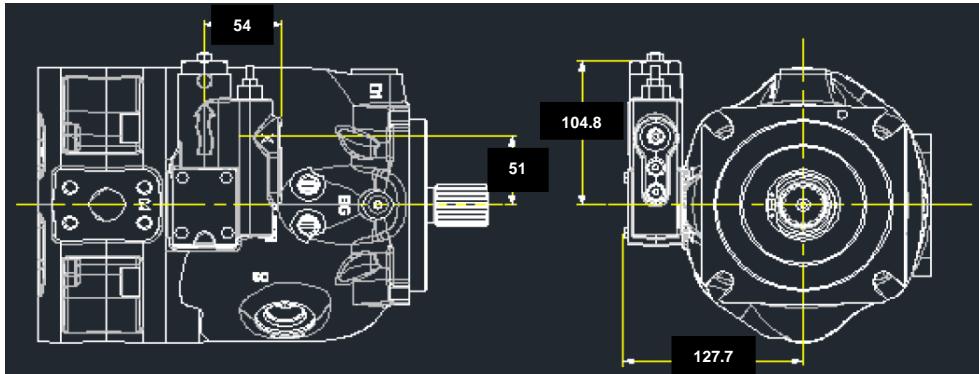
This change allows six different versions of the Design Series A pump control to be replaced with a single version of the new Design Series B pump control as shown in the illustration below. This reduced complexity enables HPD to improve quality and reduce lead-time, which will provide growth for our customers.



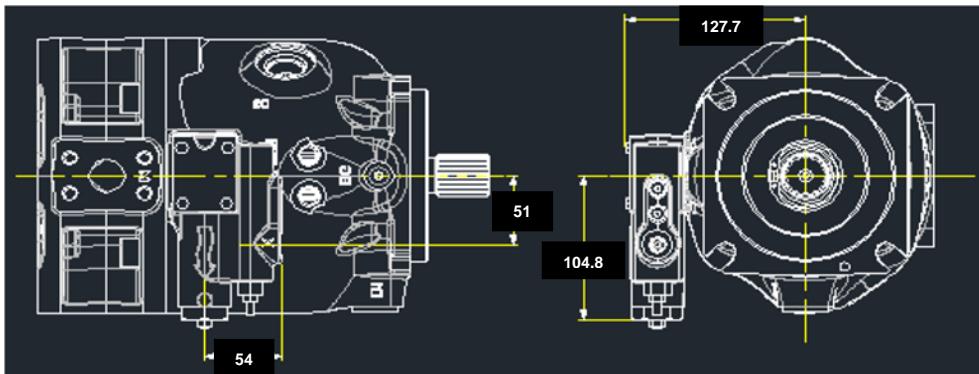
Pump Envelope Dimensions with Load Sensing L0 & L2

The new Design Series B load sensing control is smaller than the equivalent Design Series A load sensing control. Notice that the new Design Series B control does not change its mounting location when the pump direction of rotation is changed. The Design Series B control is oriented similar to the **clockwise rotation** Design Series A control. The pressure adjustments are in nearly the same location for the new Design Series B and the **clockwise rotation** Design Series A controls. **The new counter clockwise rotation Design Series B pumps should be checked for potential interference in applications where mounting space is limited.**

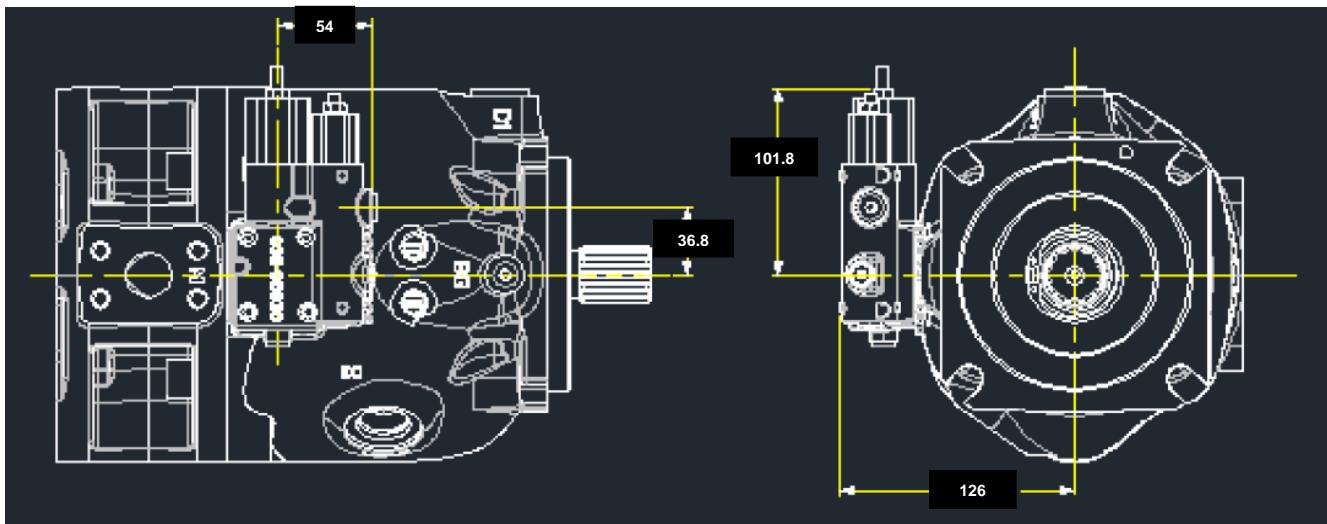
The following drawings show the dimensional differences between the Design Series A and B control when installed on a typical P1/PD-75 pump model. The control dimensional differences are the same for all seven models of the P1/PD Series pumps.



Design Series A - clockwise rotation - L0, L2



Design Series A – counter clockwise rotation - L0, L2



Design Series B - clockwise & counter clockwise rotation - L0, L2

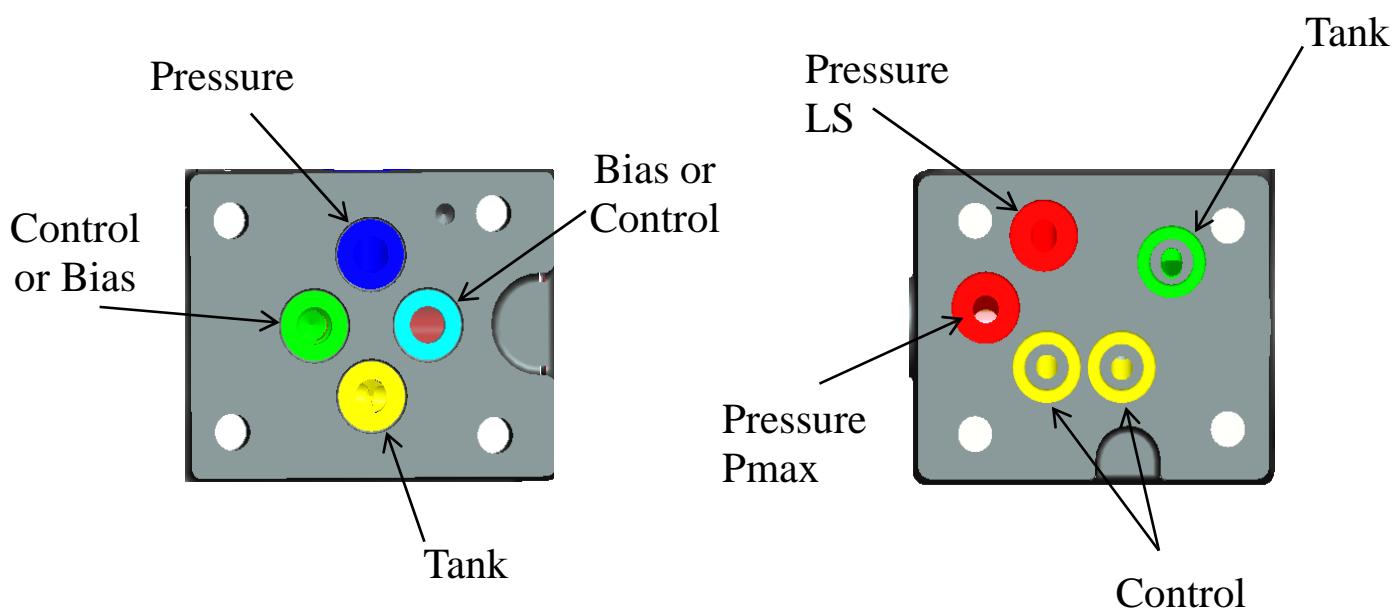
Control Interchangeability

The sealing interface between the pump control and the housing is different for the Design Series A and Design Series B pumps. This means that the two versions of the control are not interchangeable. ***The Design Series of the P1/PD pump service parts must always be matched to the Design Series of the pump being serviced.***

Design Series A

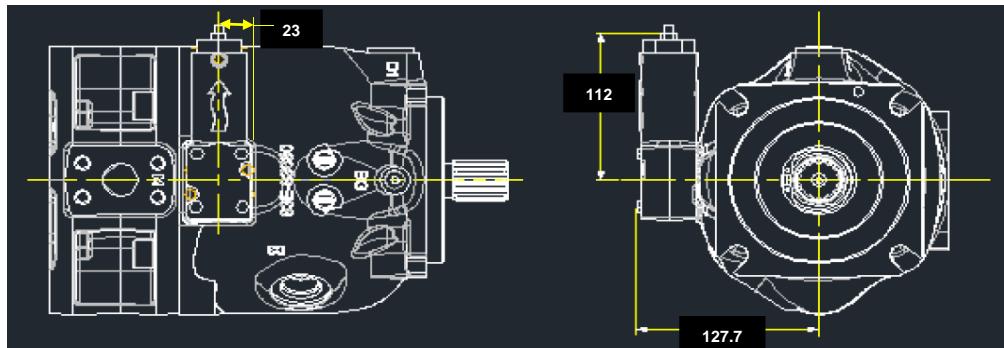


Design Series B



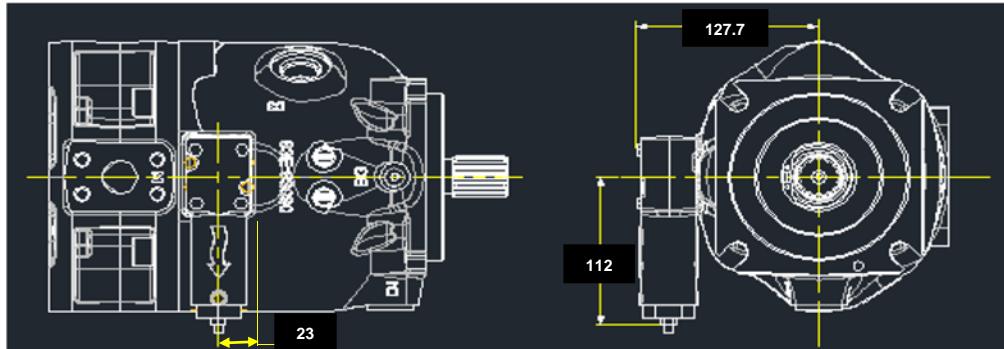
Pump Envelope Dimensions with Pressure Limiter Control C0 & C1

The new Design Series B pressure limiter control remains within the pump envelope dimensions however, the control body is wider than the corresponding Design Series A pressure limiter control. Again notice that the new Design Series B control does not change its mounting location when the pump direction of rotation is changed. **The counter clockwise rotation Design Series B pumps should be checked for potential interference in applications where mounting space is limited.**



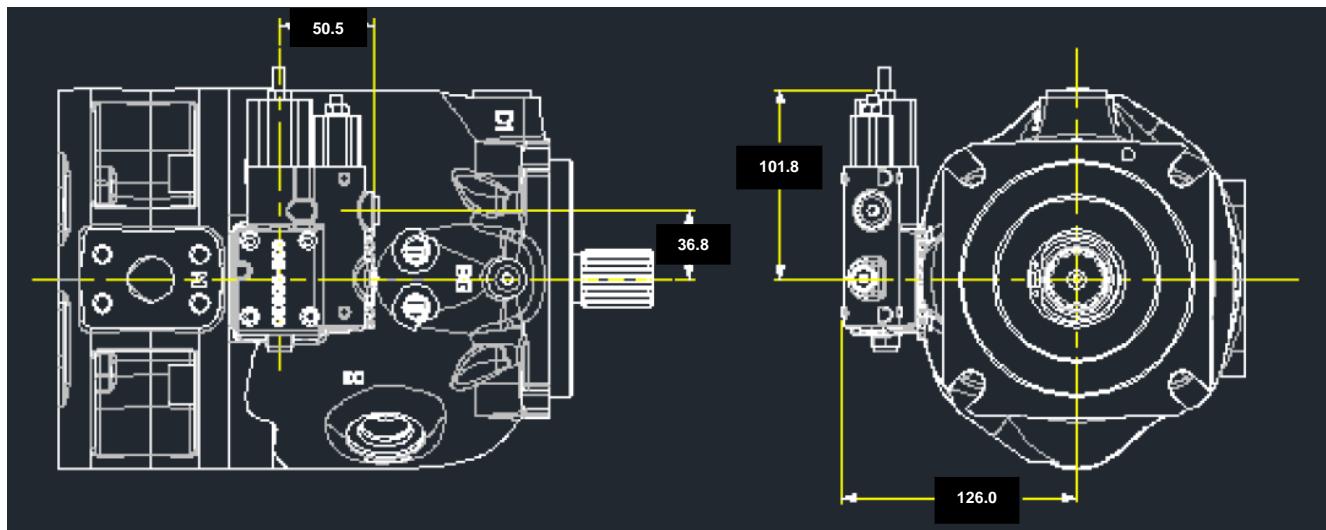
Design Series A – clockwise rotation - C0, C1

A to B (cw)
 23 mm to 50.5 mm
 112 mm to 101.8 mm
 127.7 mm to 126 mm



Design Series A – counter clockwise rotation - C0, C1

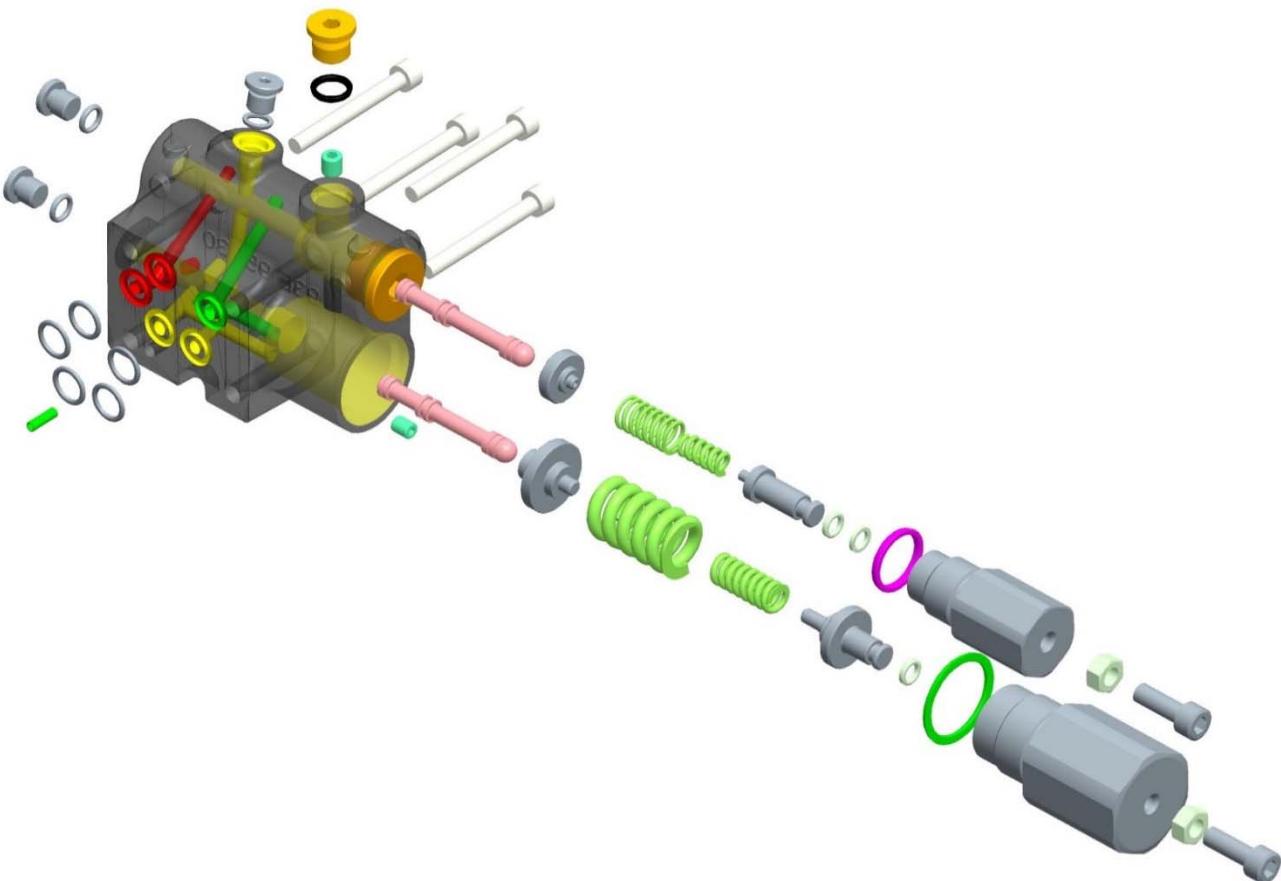
A to B (ccw)
 23 mm to 50.5 mm
 112 mm to 101.8 mm
 127.7 mm to 126 mm



Design Series B – clockwise & counter clockwise rotation - C0 (C0 covers 30 to 280 bar)

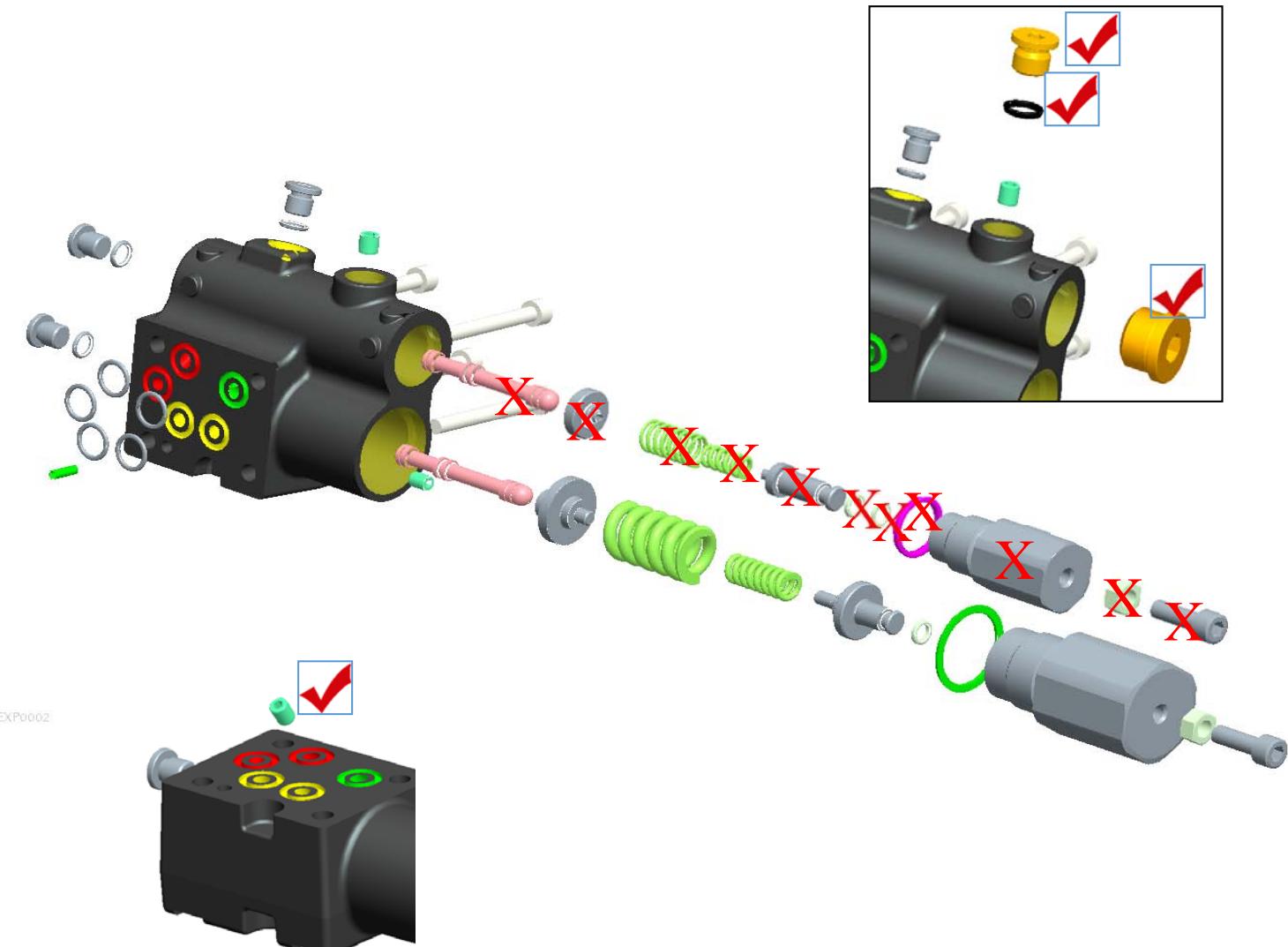
Load Sensing Control L0 & L2 Design and Performance

An exploded view of the Design Series B Pressure Limiter and Load Sensing Control L0 and L2 are shown below. These control parts function in the same way as the Design Series A parts and the catalog response and performance data for the Design Series B control is essentially the same as the performance of the corresponding P1/PD pump models with the Design Series A controls.



Pressure Limiter Control C0 Design and Performance

An exploded view of the Design Series B Pressure Limiter Control C0 is shown below. The C0 control is made from the L0 Load Sensing Control by removing the parts marked with the letter "X" and adding the parts marked with a "check mark". These Pressure Limiter Control parts function in the same way as the Design Series A Pressure Limiter Control parts and the catalog response and performance data for the Design Series B control is essentially the same as the performance of the corresponding P1/PD pump model with the Design Series A Pressure Limiter Control.



Pilot-Operated Pressure Limiter Control AM Design and Performance

An exploded view of the internal parts of the Design Series B Pilot-Operated Pressure Limiter Control AM are shown below. The AM control is made from the L0 Load Sensing Control by replacing the parts as shown on the drawing below. These Pilot-Operated Pressure Limiter Control parts function in a similar way as the Design Series A Pressure Limiter Control parts and the catalog response and performance data for the Design Series B control is essentially the same as the performance of corresponding P1/PD pump model with the Design Series A Pilot-Operated Pressure Limiter Control.

