CWA100 Pump Upgrade

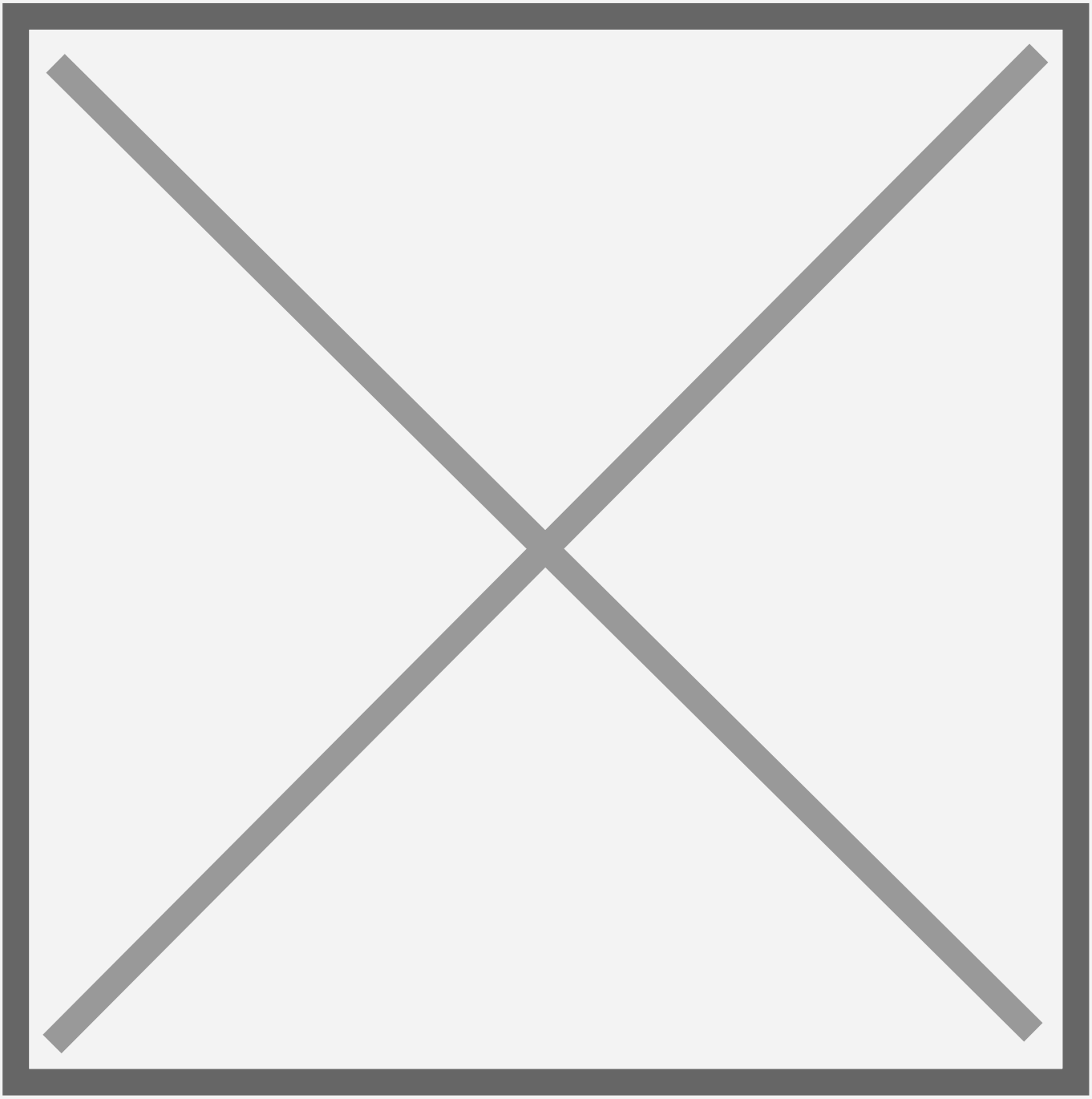
Original by BHVRDR

I have finally gotten around to writing on this topic after people have shown interest. I want to thank Tecomotive.com for making the specifications of these pumps so readily available. The data they provide is available from Pierburg, but Tecomotive graciously makes this information easy to find and decipher on their site. They also offer wiring harnesses. For more information on these pumps, please see this thread: https://mbworld.org/forums/w211-amg/...now-about.html

What is the CWA100?

The stock supercharger coolant recirculation pump in our car is an extremely robust and powerful pump, especially when flowing against head pressure. The stock pump is a Pierburg CW50. As people add additional heat exchangers, killer chillers, or increased boost, they may want improved circulation.

Here are the specifications of the stock Pierburg CWA50 and CWA100:



As you can see, the CWA100 almost doubles the flow of the CWA50. According to the technical documents, it also significantly outperforms hobby-style pumps such as the Varimax and Meziere pumps when any head pressure is encountered.

CWA100-2 versus CWA100-3

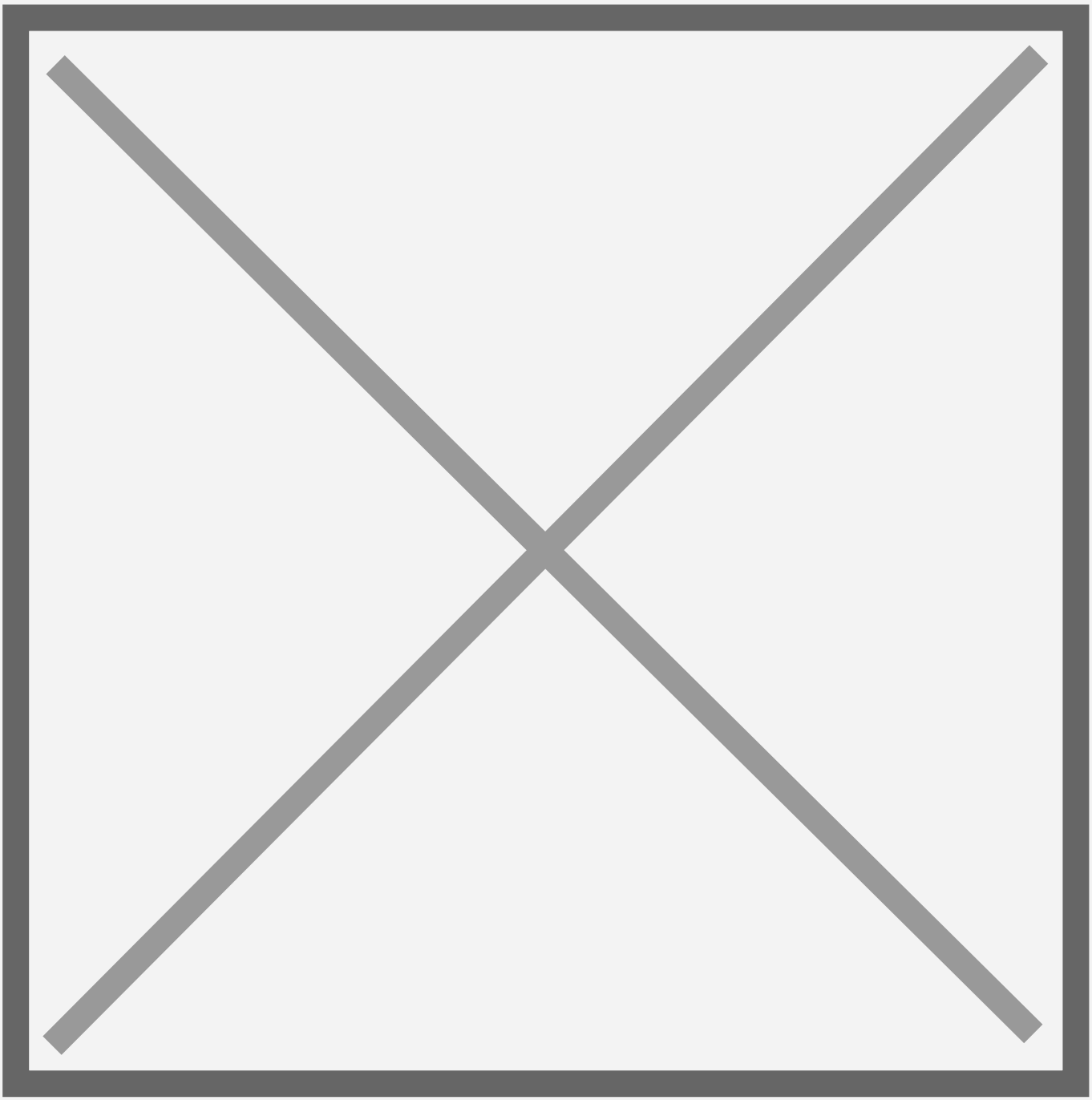
There are three different versions of the CWA100 pump, but we will focus on the currently available versions, the CWA100-2 and the CWA100-3. According to the specifications, there are no flow differences between these pumps; they should both work identically. The only differences are as follows:

- The CWA100-3 has slightly shorter water inlets and outlets.

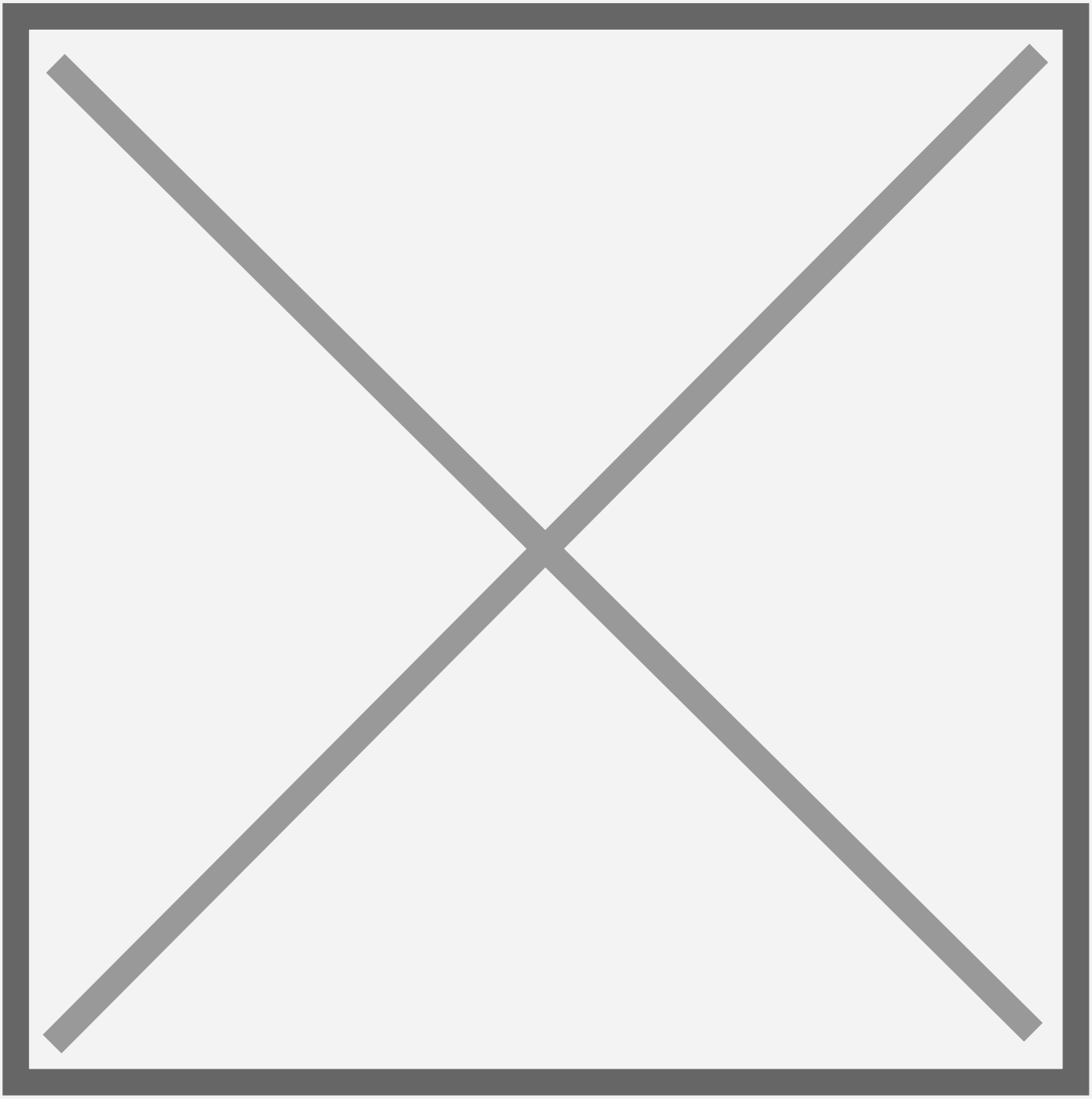
- The connectors on the CWA100-2 and CWA100-3 are different.

I have had both of these pumps.

Here is the connector/socket for the CWA100-2:



Here is the connector/socket of the CWA100-3:



Availability of the CWA100 Variants:

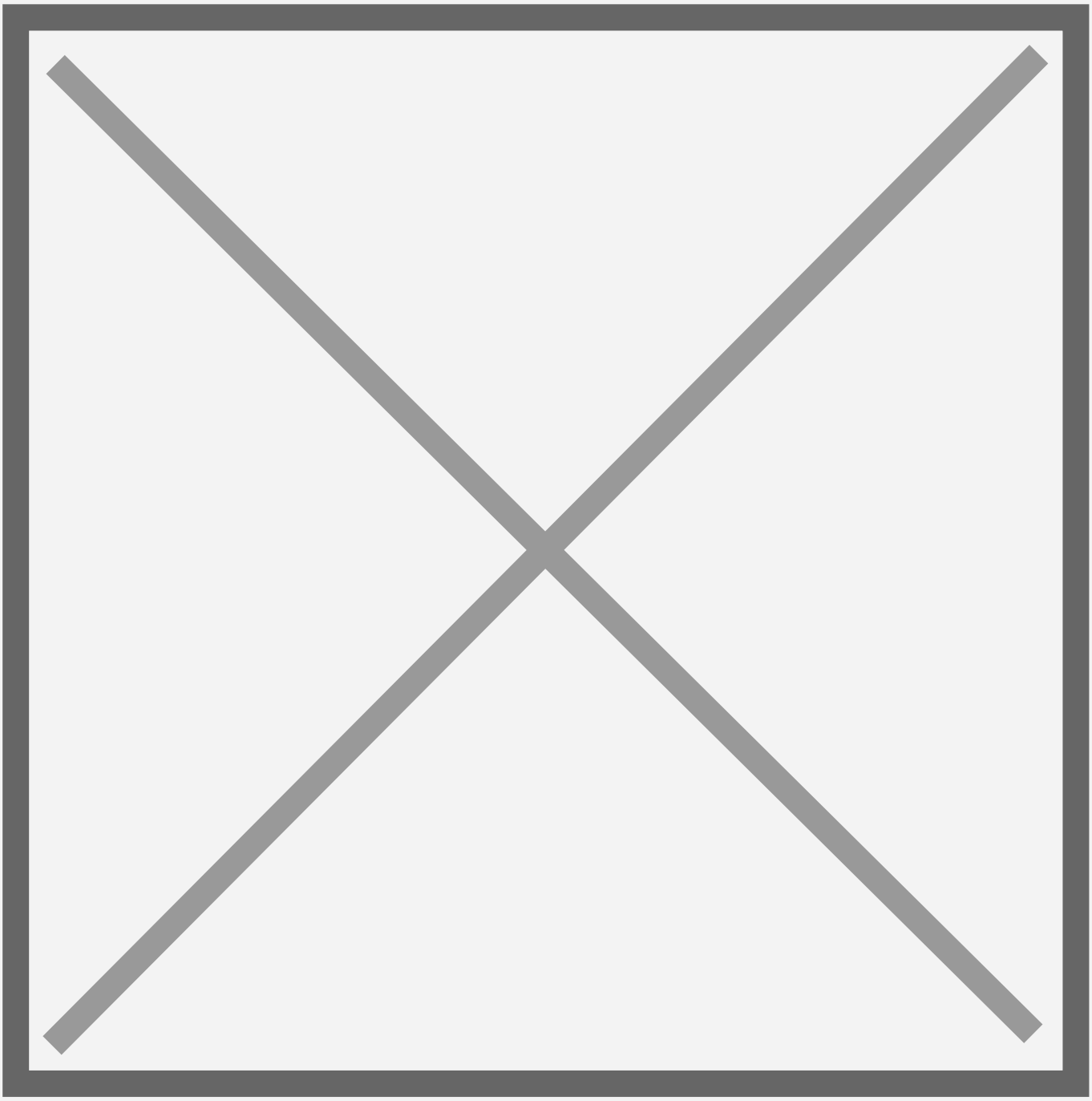
- CWA100-2: This is an old AMG pump that was used in many Mercedes-Benz supercharged applications. The Mercedes-Benz part number is: A0005000486. You can source this part from many MB dealerships as a remanufactured item in the $300 to $350 range. FCP Euro currently has it for $342, with a lifetime warranty. Tecomotive also has it available for 249 Euros, and you can buy the plug-and-play connector from them. They are a great site to support, as they have published most of the research you see here.
- CWA100-3: This is a new VAG pump used in the Audi Q7 4M hybrid overseas. The VAG part number is: 4N0965567. Interestingly, you can find this pump from salvage cars on eBay for around $75. HOP ON THIS WHILE YOU CAN!

Harnesses for Each of These Pumps

You can easily make a harness for each of these pumps.

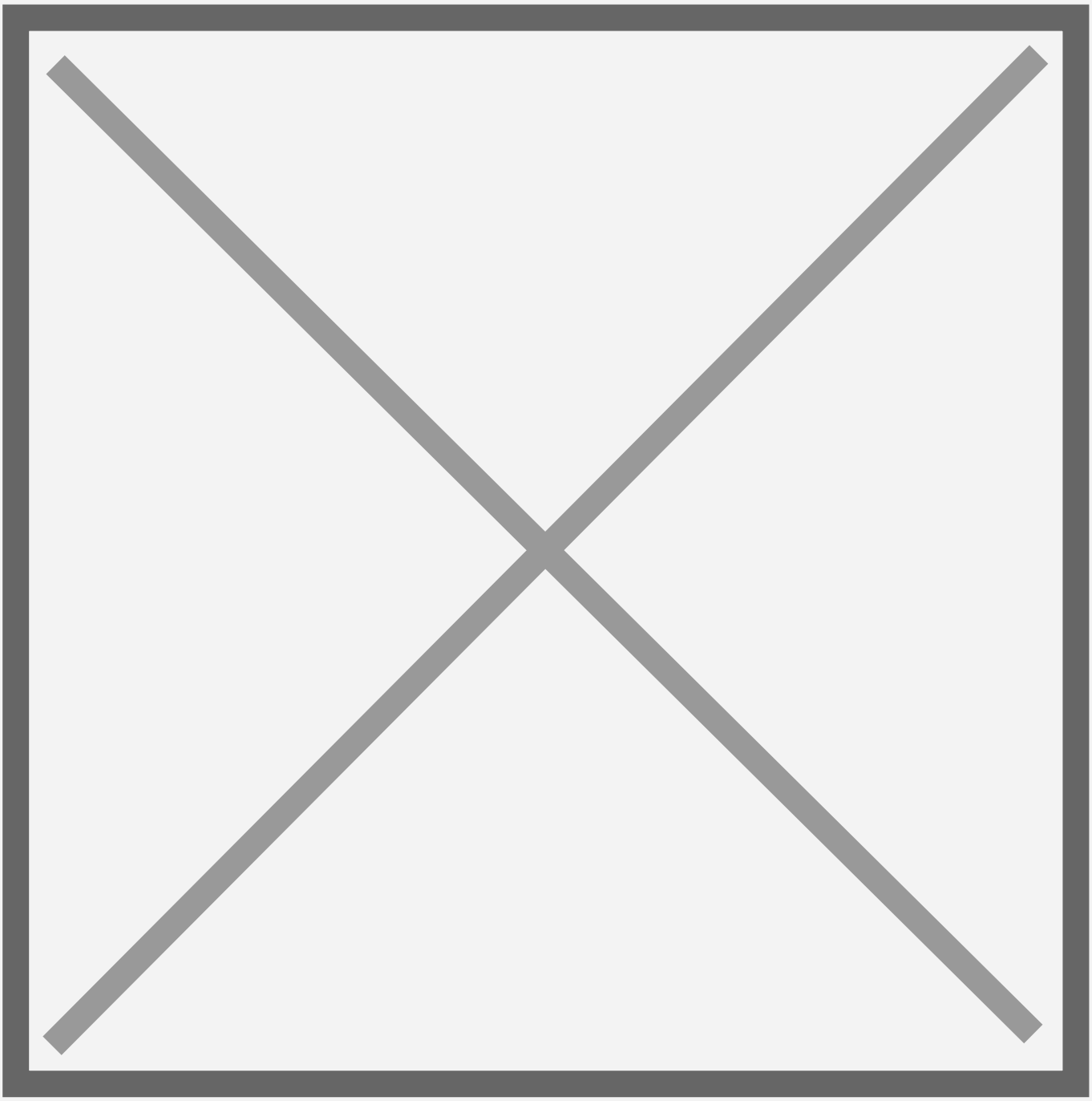
Here are the part numbers needed for the CWA100-2:

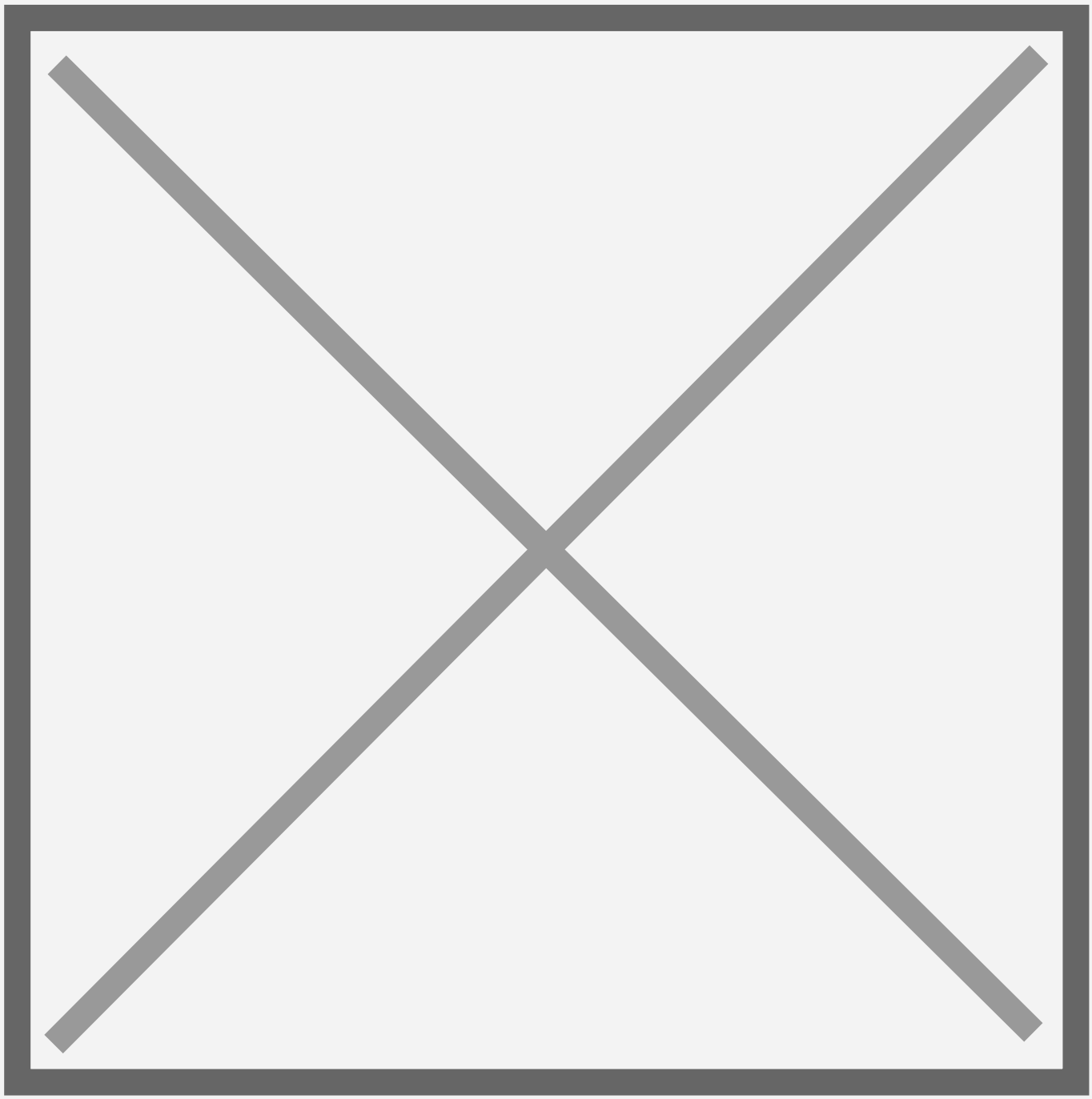
- Connector to the CWA10-2 Pump: BMW part number: 12527549033 (available at ECStuning or FCP for under $5)
- Connector to the stock harness: TE Connectivity p/n 1-1703494-1 (available on arrow.com for $1.69)



Here are the part numbers needed for the CWA100-3:

- Connector to the CWA100-3 Pump: VAG part number: 4D0971993 (available on eBay for around $8)
- Connector to the stock harness: TE Connectivity p/n 1-1703494-1 (available on arrow.com for $1.69)

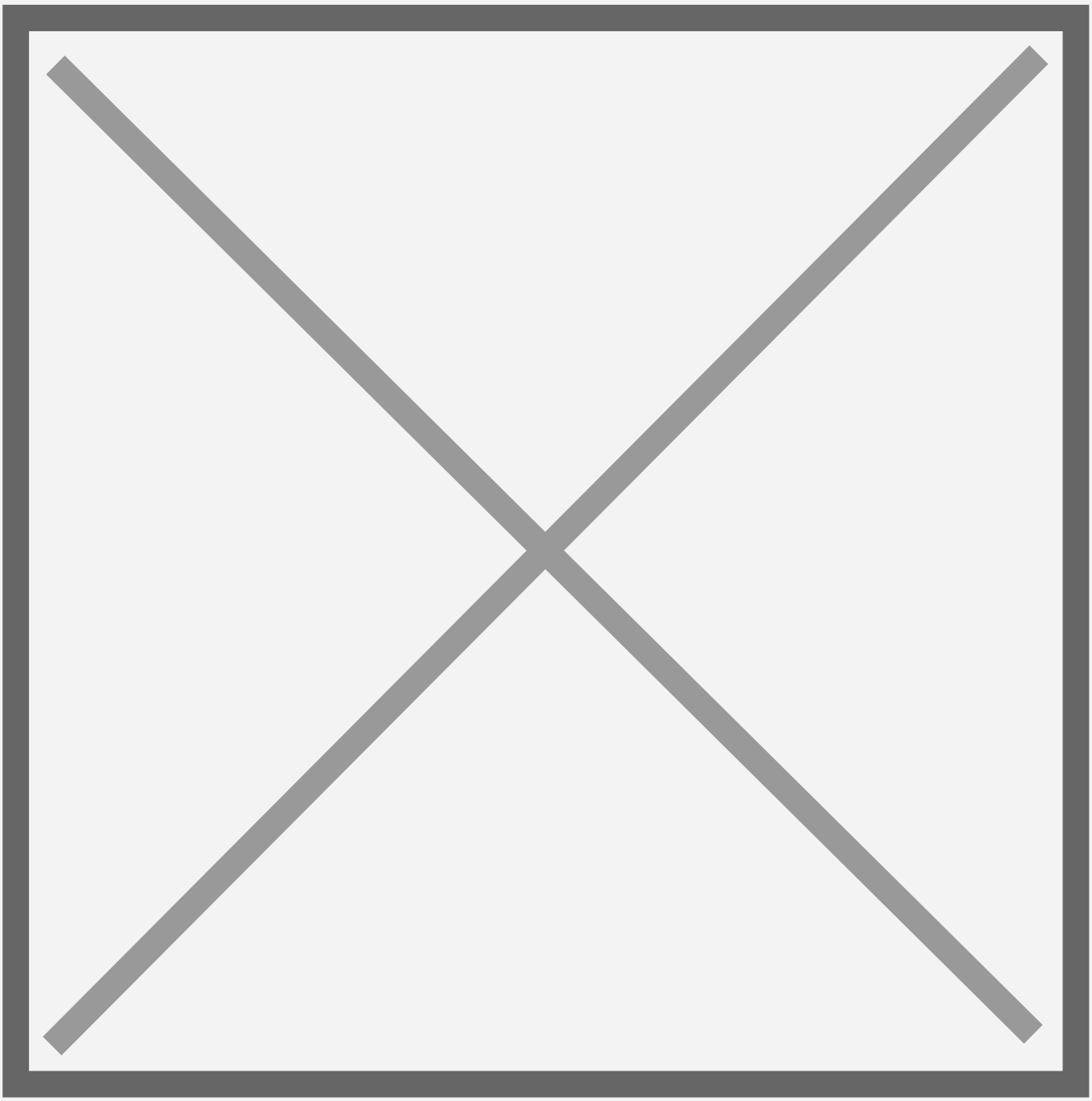




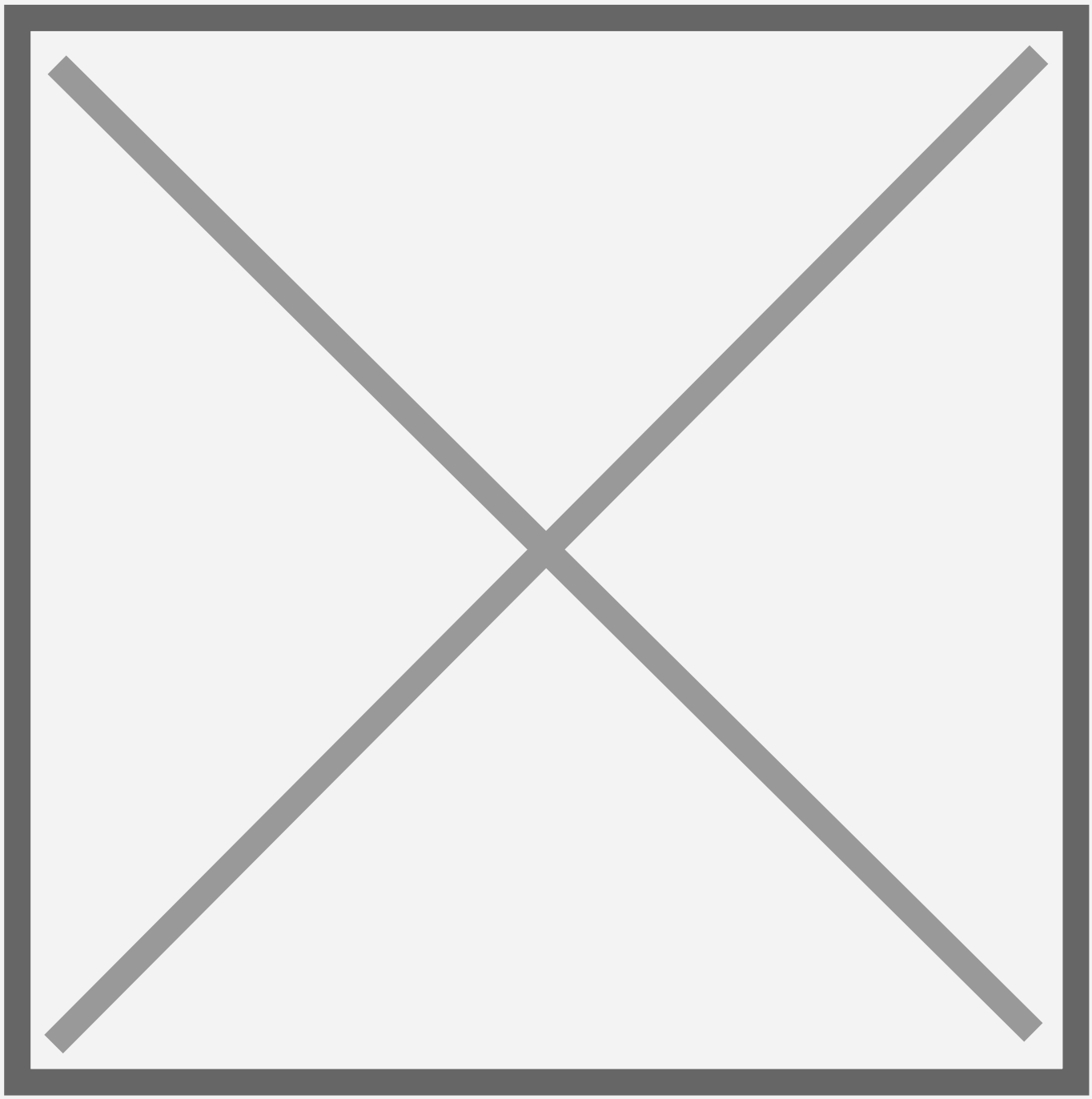
You should be able to make either of these harnesses for around $10-$15 or less.

PIN Diagrams:

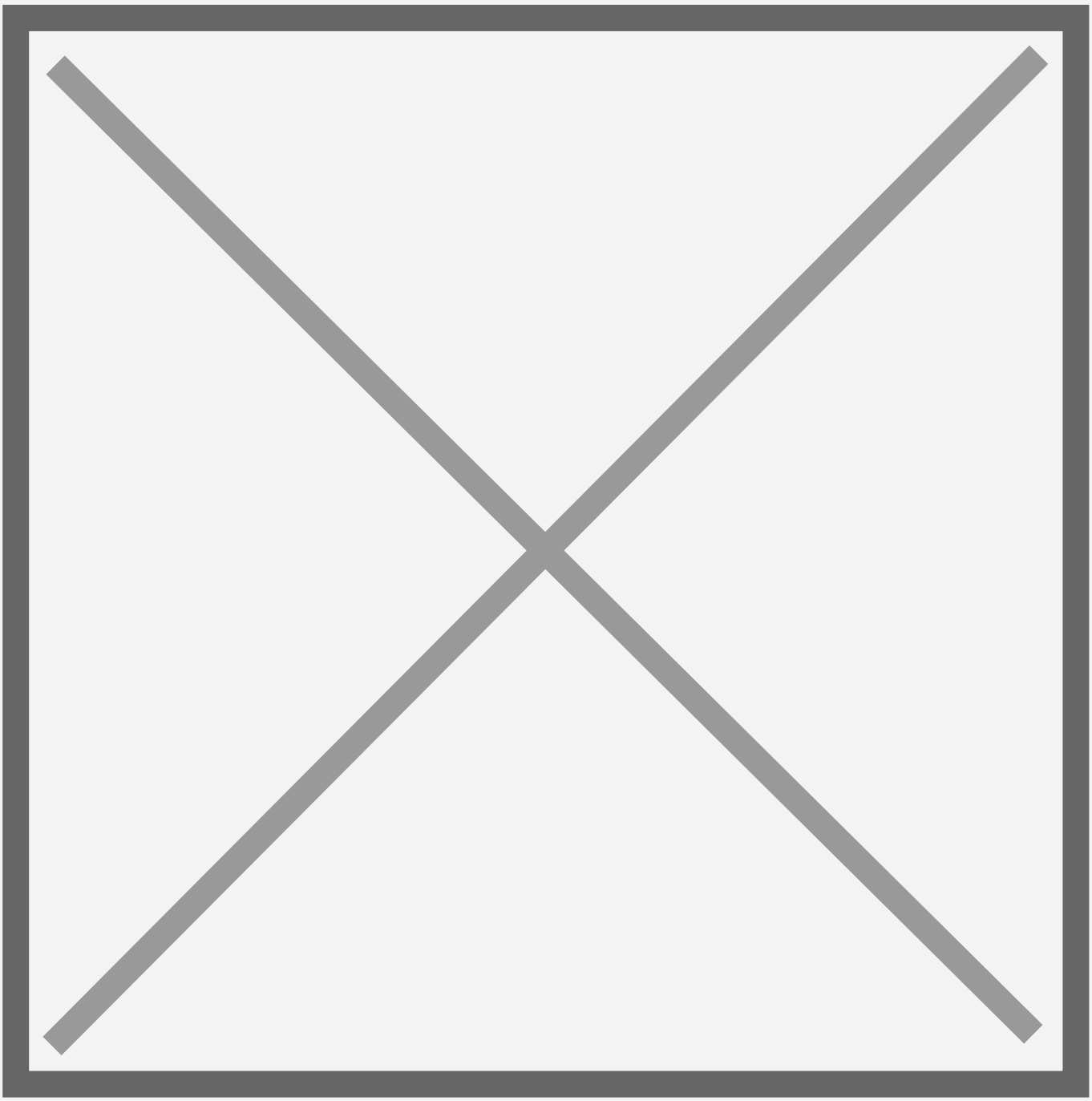
CWA50



CWA100-2



CWA100-3



https://www.youtube.com/embed/-TVmeq_L6TA?pp=ygUJYzcgb3duZXJz

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