

**Thank you for purchasing your new GMPP 19212712 clutch kit
Read these instructions carefully before you install your clutch kit.**

Due to the high failure rate of cylinders we have composed these instructions to help you with your clutch install.

Your clutch and slave cylinder have been inspected before we shipped it out to you. Your slave cylinder should look just like the images below.

Please note that the black seal that the arrow is pointing to in **image 1** is only showing that much. Any more of the seal showing means the cylinder has been extended beyond its normal length of travel and should not be used.

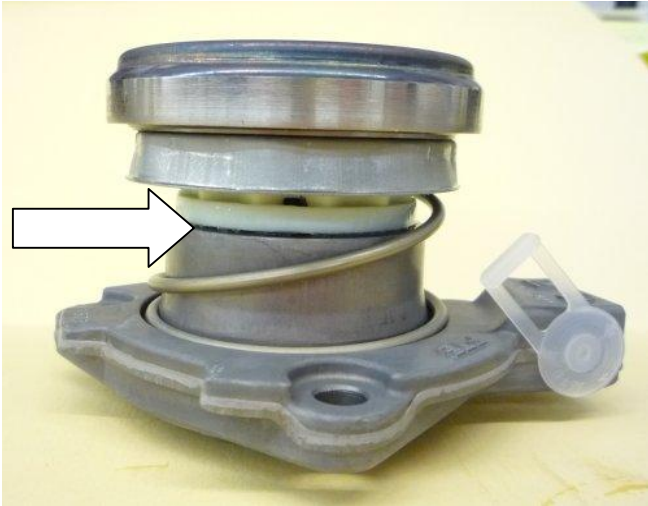


Image 1:

New Slave Cylinder (Throw out bearing)

Note: arrow pointing to seal (we will discuss this later in more detail, but this is the maximum amount of seal that should ever be seen)



Image 2:

New Slave Cylinder Top view

Note: the top retaining ring (light grey in color) as shown in the two images one above and one below. The top edge of it should be smooth and with out any ripples



Image 3:

Top of slave cylinder compressed to show retaining ring. Note how smooth and flat the retaining ring is the arrow is pointing to

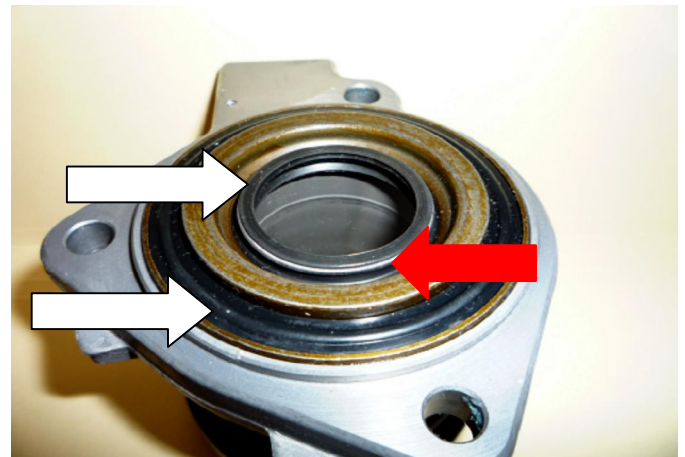


Image 4:

Bottom view of the new Cylinder
Inspect to see that both seals (White arrows) and seal spring (shown in red) are installed and are clean and free of any cuts or dirt.

Everything shown here were also inspected before we shipped your kit.

We will only warranty slave cylinders that match the criteria mentioned above.

We do not recommend cutting the old flywheel as this may cause the slave cylinder to have to travel further than its normal intended amount.

If the old flywheel needs to be cut you should replace it with a new flywheel Part number 12584343.

Do not try to pre bleed your cylinder before you install it as any excessive pressure used on the cylinder will cause it to bend the retaining ring and let the bearing assembly travel too far causing the seal to leak. Bleeding instructions are also included with the kit.

**The following images are from cylinders that have come back leaking
We will not warranty any cylinders that come back to us in this condition.**

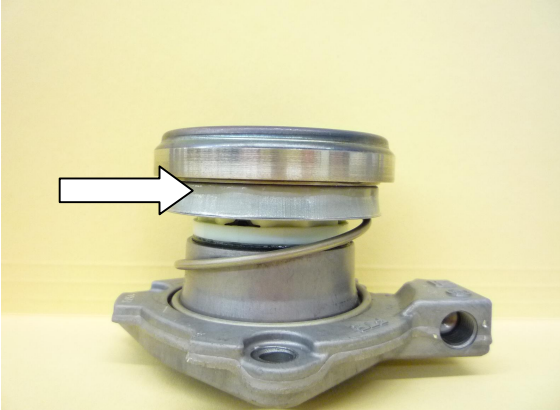


Image 5:

This cylinder has been damaged from being bench bled. Note how much more of the seal that is exposed than the one in image 1, it may seem like there isn't much more seal showing but that's all it takes for it to leak.



Image 6:

Note how the retaining ring is distorted and rippled. What happened here is the bearing section of the cylinder has been forced beyond its normal stopping point bending the retaining ring. Notice the ripple effect caused by the white piston shoulder. To help explain this look at the next image



Image 7:

These shoulders that the arrow is pointing to are what the retaining ring sits against when fully extended. The only time the cylinder would ever be extended to the retaining ring is when not installed in a vehicle. If the piston part of the cylinder is forced beyond the normal travel the retaining ring will distort as it did in image 6. When that happens the seal extends too far out from the cylinder and you get a leak, see image 5 for a seal that is has traveled too far.

In this case because the cylinder was not installed when they pressurized it, the bearing section pushed against the retaining ring distorting it and letting the seal travel beyond the normal accepted travel area.

This may also be happening to customers who have had their flywheel cut and machined causing the TOB to have to travel beyond its normal accepted travel area.

We will not warranty any cylinders that come back to us in this condition.