

Honda/Sterling/Acura Recommended Master Kit Upgrade (Replace Belleville Spring with Alto Wave Spring)

# ALTO PART #058767-116 (Fits 116mm) OR ALTO PART #078767 (Fits 120mm)

<u>Reference</u> 116mm	FA MPLA	PF4 RO			PL5-X MP7A	MY8A M1WA	K4 MP5A
120MM	APX4 A6VA	PX4B M7ZA	mpoa Mpza	MP1A	MPX4	MPJA	AOYA

#### Failure Alert / Warning

Honda OEM design in crucial clutch pack tolerances incorporate a Belleville cushion spring with inherent interference fit characteristics. This mating surface incompatibility gouges the bottom steel plate as much as .013" (.33mm), and the piston land .002" (.05mm) to .008" (.20mm).

#### Early Warning Signs

Intermittent shift patterns may develop due to metal accumulation in the governor as well as in the apply piston reed (check) valve. Customer complaints range from harsh shifts, late and delayed shifts and most often 2<sup>nd</sup> gear "slam" develops after momentary "flat spot".

### Clutch Pack Specification Guidelines

OEM tolerances (typical) determined by dial indicator from clutch end plate to top disc: Low: .026" (.66mm) to .033" (.83mm). This allows .077" (1.77mm) tolerance. 2<sup>nd</sup>: .020" (.50mm) to .028" (.71mm) is the most common shift complaint and has .008" (.20mm) tolerance. 3<sup>rd</sup> and 4<sup>th</sup>: .016" (.24mm) to .024" (.60mm). These clutch packs both have the least engagement ravel and allow .088" (.20mm) tolerance.

#### Apply Piston Examination

Replacement of the apply piston may not be required. Metal erosion is usually limited to land area and may be as little as .002" to .003". Wear exceeding .008", showing heat discoloration, or stress fractures will require piston replacement.

#### Wave Spring Installation

The wave spring is a direct replacement part with no machining required. Install the spring into the apply piston land area. Install new friction and steel plates. Set clutch pack dimensional height to proper tolerances in each pack.



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## **Selective Steel Plate Guidelines**

To insure proper height dimensions, selective steel plates may be required. These plates are available and matched to the dimensional wave spring requirements. See table below.

Application	<u>Alto #</u>	<b>Reference</b>	<u>Over / Under Size</u>
Honda	058701-210	105mm	plus 0.1mm
Honda	058701A	105mm	minus 0.2mm
Honda	058711-210	110mm	plus 0.1mm
Honda	058711A	110mm	minus 0.2mm
Honda	058721-210	116mm	plus 0.1mm
Honda	058721A	116mm	minus 0.2mm
Honda	078701-210	120mm	plus 0.1mm
Honda	078701A	120mm	minus 0.2mm