



Prospeed Optima MX1 1/8 Scale Off Road Buggy LSD(Limited-Slip Differential). Item No : PSR1105

**Patent No:**

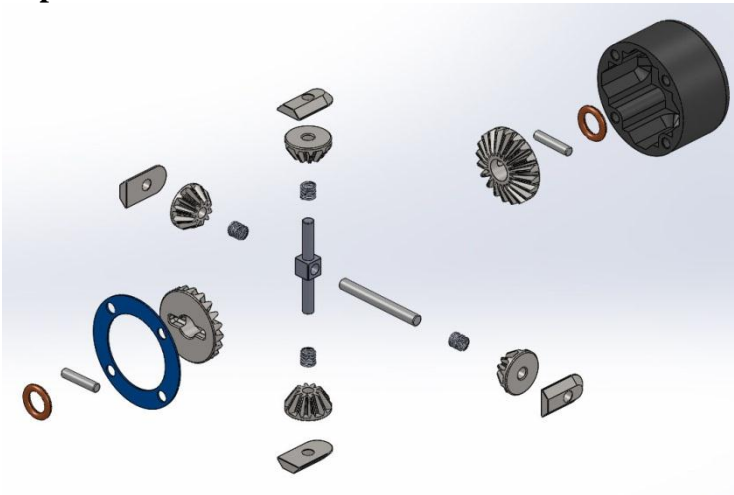
**United States : US8079929B2**

**China : 200820138057.8**

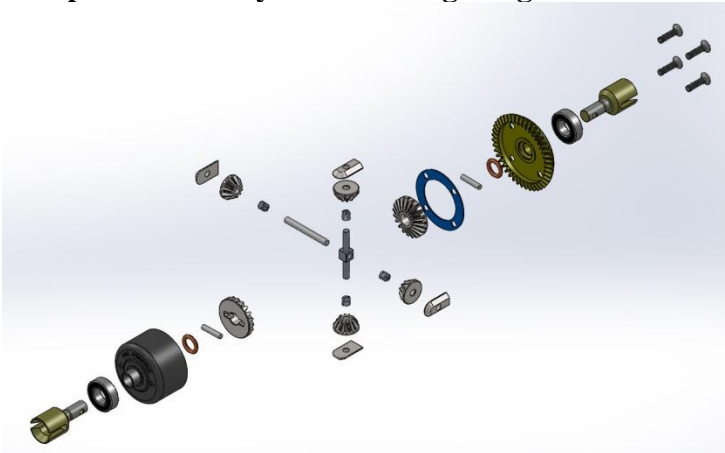
**Taiwan : I 436811**

Thank you for purchasing the Prospeed Optima MX1 1/8 Scale off road buggy LSD(Limited-Slip Differential). Please read this manual and fully understand the technical aspects of our LSD. The New design Prospeed LSD is Easy Maintenance, Affordable and it will enhance the performance of your Optima MX1.

**Exploded View Item No : PSR1105**



**Complete Assembly with Bearing/Ring Gear & Out Drive**

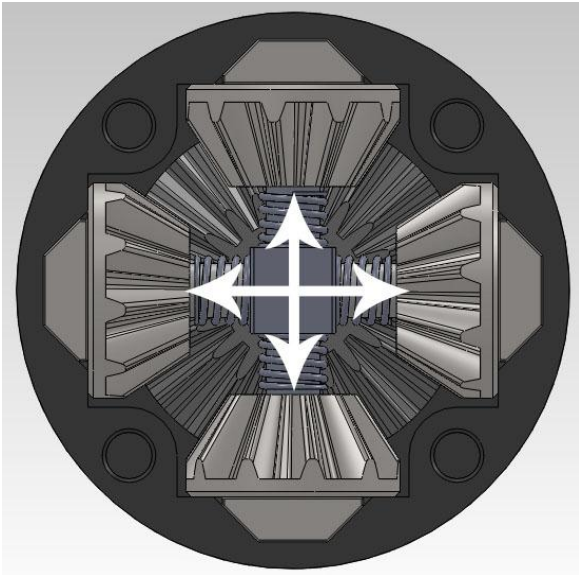


### **The Benefit OF Prospeed LSD(PSR-1105)**

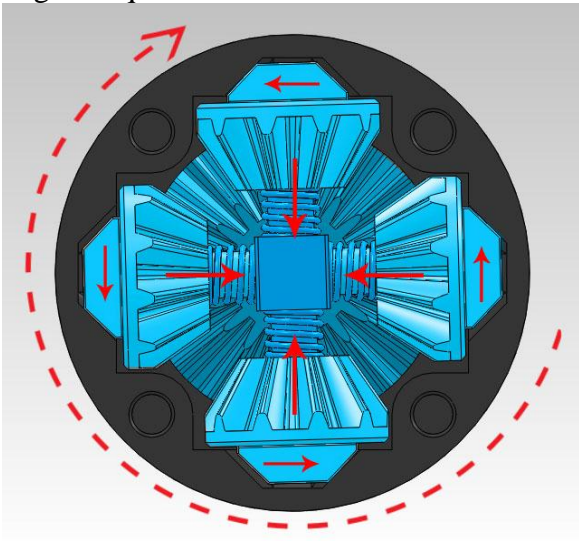
The main advantage of our LSD(PSR-1105) is demonstrated by considering the case of a standard differential in off-roading situations where one wheel has no contact with the ground. In such a case (with a standard differential), the non-contacting wheel will receive 100% of the power, while the contacting wheel will remain stationary. The torque transmitted will be equal at both wheels, and therefore, will not exceed the threshold of torque needed to move the wheel with grip. In this situation, a LSD prevents 100% of the power from being allocated to one wheel, and thereby keeping both wheels in powered rotation. It will improve the handling during cornering or on the slippery road condition.

How it work:

Normal or Low RPM



High Torque



While torque is transmitted through a bevel gear system, axial forces are also induced apart from the tangential force and the axial force tries to separate out the gear so both wheels receive the different power. With our LSD(PSR-1105) design, is to limit the independency or relative motion between the left and right axles. As show on the above right hand picture, while during the high torque or high speed spinning of the diff, 4 slider plates will force to move aside and force the bevel gears in. In this case, force developed due to the bevel gear separation action won't be that high and the diff can act like a normal differential.

### **Tuning Tips**

#PSR-1105(LSD) come with 4 per-load springs, by removing or installing these springs will change the working characteristic of your vehicle and is depending to the driver setup according to the track conditions requirements. Grease, Silicon Oil and Engine Oil can be use on this LSD but again the different viscosity of oil may act different working characteristic too. For those who like to use Grease, Team Prospeed recommends to apply certain amount of grease.(Not in full diff). And in critical slippery condition, by changing front and center normal diff to LSD diff may help the handling of the car.

Simon Yii

