T516: LSS Assembly Tool								
Bill of Materials								
Category	**Major Component**	**Quantity**	**Purpose**	**Part Number**	**Purchase Source**	**Price**		**Ordered?**	**Arrived?**
Vehicle	Wheel	4	Adhesion to ground	3669A	https://traxxas.com/products/parts/3669A	$	62.00	0	0
Vehicle	Control Arm	4	Connect rover to hub	9056K89	https://www.mcmaster.com/structural-framing-tubing	$	23.58	0	No
Vehicle	Wheel Hub	4	Mount wheel to arm	1654	https://traxxas.com/products/parts/1654	$	4.00	0	No
Vehicle	Strut/Shock	4	Control Motion of wheel rebound	B07P5X2H8F	https://www.amazon.com/FASTACE-Mountain-Bicycle-Shock-160x42mm/dp/B07P5X2H8F/ref=lp_6389390011_1_13?s=outdoor-recreation&ie=UTF8&qid=1572483457&sr=1-13	$	100.00	0	No
Vehicle	Chassis	1	Body of vehicle	4698T32 4698T112 9056K89	https://www.mcmaster.com/structural-framing-tubing	$	286.32	0	No
Vehicle	Motor	2	Motion of wheel			$	600.00	0	No
Robotic Arm	LewanSoul xArm Prefabricated	1	Robotic Arm (Prefabricated)	B0793PFGCY	https://www.digikey.com/short/pddb8b			0	No
Controls	MEMS Gyroscope	1				$	-	0	No
Controls	IR Distance Sensor	4	Collision/Hazard Detection			$	40.00	0	No
Controls	Radio Receiver/Transmitter Pair	1	Control device through user input			$	-	1	Yes
Computation/Signal Processing	Arduino Microcontroller	2	Includes ADC and processor necessary for calculations and analysis	8058333490083	https://store.arduino.cc/usa/mega-2560-r3	$	38.50	1	Yes
Computation/Signal Processing	Motor Drivers	2	Control Motors	L298N	https://www.amazon.com/Stepper-Driver-H-bridge-Controller-Arduino/dp/B07SGX6YR7	$	11.98	0	No
Simulation	Matlab Simscape	NA	Simuation of vehicle	NA	NA	$	-	1	Yes
Simulation	Multisim	NA	Simuation of vehicle	NA	NA	$	-	1	Yes
Electronics	Wires (Shielded)	5	Electricity Conductor	TE-273-004	https://www.superdroidrobots.com/shop/item.aspx?/24awg-shielded-4-conductor-stranded-hookup-wire-by-the-foot/2024/	$	0.39	0	No
Electronics	PCB	1	Base for multiple circuits in design (drivers, sensors)	4X6CM, 2X8CM, 5X7CM, 3X7CM	https://www.amazon.com/Teenitor-Prototype-Project-Quality-Universal/dp/B01IONQQ3Y/ref=asc_df_B01IONQQ3Y/?tag=hyprod-20&linkCode=df0&hvadid=312106042452&hvpos=1o1&hvnetw=g&hvrand=14072156796323902211&hvpone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=9011579&hvtargid=pla-569901195328&psc=1&tag=&ref=&adgrpid=62821668875&hvpone=&hvptwo=&hvadid=312106042452&hvpos=1o1&hvnetw=g&hvrand=14072156796323902211&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=9011579&hvtargid=pla-569901195328	$	8.99	0	No
Electronics	Resistors	20	Needed for circuits discussed above, assorted resistance	KIT-RMCF0402FT-05-ND	https://www.digikey.com/product-detail/en/stackpole-electronics-inc/KIT-RMCF0402FT-05/KIT-RMCF0402FT-05-ND/3025589	$	37.82	0	No
Electronics	Capacitors	20	Needed for circuits discussed above, assorted capacitance	BC3213-ND	https://www.digikey.com/product-detail/en/vishay-bc-components/HOTC-KIT-KH/BC3213-ND/5983098	$	39.60	0	No
Electronics	Wires (Non-Shielded)	5	Electricity Conductor	A132377-DS-ND	https://www.digikey.com/product-detail/en/te-connectivity-aerospace-defense-and-marine/44A0111-20-2-MX/A132377-DS-ND/2399704	$	0.57	0	No
Assembly Tools								0	No
Labor	NA	NA	NA	NA	Self Assembly	$	-		
Line Item Maturity								**88.00%**	
Project Maturity*								**0.00**	
Total Unit Cost:						$		**1,253.75**	
Total Project Cost						$		**1,253.75**	
* Note: The project maturity will be updated as pieces are bought, delivered, and assembled. As of 10/31/2019, T516 is in the design process.									