

## RCV CUSTOMER SERVICE

At RCV we understand the value of excellent service, and strive to promptly provide you with expert technical and sales support. Our staff is comprised of off road enthusiasts who fully understand the products we manufacture, the vehicles in which they will be installed, and the conditions in which you will use them.

## RCV HAS THE ANGLE ON ULTIMATE PERFORMANCE

Users have found our axles to not only provide far better performance and reliability than U-jointed axle shafts - they have found them to be cost effective as well. A set of high performance yoked axle shafts and U-joints cost about the same as a pair of RCV ultimate CV axles. Yet, once those yoked shafts or U-joints break they will need to be replaced, thereby exceeding the cost of the RCV axles.

So go ahead and give it all you got - big tires, big torque, big steering angles. No binding, or breakage. Only smoothness you can feel. Whether you are a hardcore competitor, or just out wheeling for fun, you can be confident RCV Ultimate CV axles won't let you down.

## TESTIMONIALS



**KEVIN SACALAS**  
Big Ugly Racing  
Ultra4 Buggy (Unlimited Ultra4 Class)

Original Ultra4 Champion 1st Place - BITD Vegas to Reno: The Long Way  
3rd Place King of the Hammers Grand Slam of Off Road Racing  
1 year - 5 races - 3 podiums 2700 Race Miles

I am a huge fan of RCV axles and especially like their strength and reliability when at tight steering angles. We torture RCV axles beyond belief and they are holding up with little maintenance - they are a proven value.



**TIM CAMERON**  
Extreme Hill Climber

I used to have bad wheel hop when turning at full lock and giving it full throttle. With RCV it's smooth as glass. I feel no shake through the steering wheel, and the steering is very smooth.



**DAVE COLE**  
Dave Cole Motorsports  
Ultra4 Buggy

Long list of podium wins in rock crawling  
Winner W.E.Rock Pro-Mod World Championship  
Winner Vegas 2 Reno  
Co-founder of Hammerking Productions

I have been running RCV Performance products since 2004, and their parts have never failed me. RCV products have gotten me through some of the most grueling desert races in the United States, and helped me win several championships.



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# RCV ULTIMATE CV AXLES FOR JEEP

## DON'T LET A BROKEN AXLE SHAFT LEAVE YOU STUCK BETWEEN A ROCK AND A HARD PLACE....



[rcvperformance.com](http://rcvperformance.com)

## ULTIMATE CV AXLES PROVIDE STRENGTH AND SMOOTHNESS FOR EXTREME OFF ROAD PERFORMANCE

RCV Performance Ultimate CV Axles for Jeep deliver the strength and smoothness you need for wheeling on the most extreme trails. Our CV axles are designed to replace universal jointed front axle shafts and eliminate a weak link in your Jeep drive train. Ultimate CV Axles provide previously unheard of strength - even when your wheels are at radical angles and you're giving it heavy throttle. With RCV there is no worry about U-joint or axle shaft breakage. RCV joint design also eliminates U-joint binding to provide smoothness in operation and help you get engine power to the ground.

Whether you're replacing broken axle shafts, or upgrading to stronger shafts before a breakdown leaves you on the side of the trail, RCV provides the strength and smoothness you need.

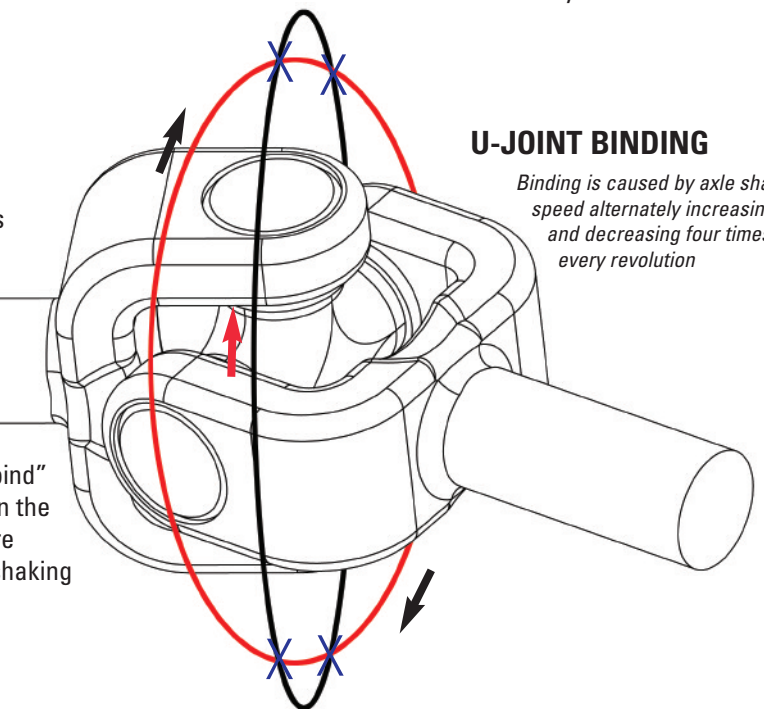
## THE LIMITATIONS OF JEEP UNIVERSAL JOINTED AXLE SHAFTS

RCV Performance products is a division of Aircraft Gear Corporation, a company that has been manufacturing drive train components for over 60 years. Our experience has shown us that in extreme off road conditions the universal jointed front axle shafts used in Jeeps are prone to breakage, and compromise traction. These problems usually occur when under throttle in a turn, and are magnified by use of large wheels and tires, increased engine power, and high axle gear ratios. Upon analysis, we found major points of weakness with the Jeep front axle shaft design: Axle shaft yoke ears are made thin due to space constraints and often break as they can't handle the stress imposed by extreme off road use. Furthermore, U-joints often break because they aren't engineered to handle hard-core off road use, and the C-clips that hold the U-joint in place can come off while under load, thereby causing failure. Problems are compounded as broken or unfastened U-joints can catastrophically damage the axle shaft yoke ears. While heavy duty U-joints are available, yoke ears still limit the strength of the axle shaft assembly.



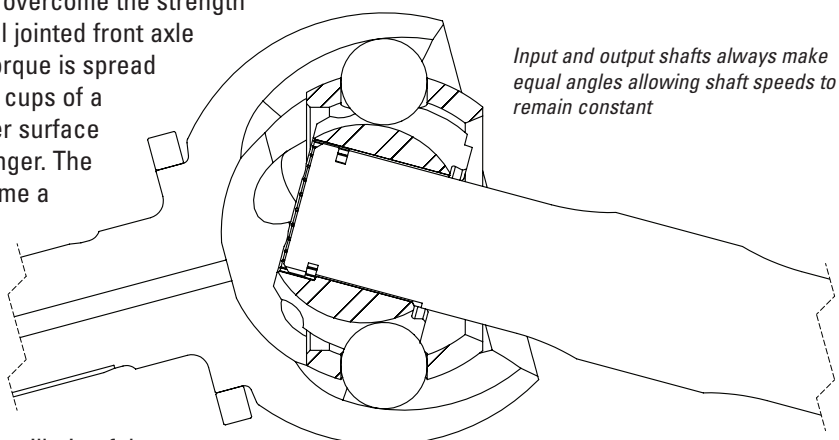
## BINDING ISSUES OF UNIVERSAL JOINTED FRONT AXLE SHAFTS.

When operating at an angle, the geometry of a U-joint is such that the speed of the axle shaft alternately increases and decreases four times every revolution. As you turn the steering wheel of your Jeep, the operating angle of the joint becomes tighter, and the speed variation of the shaft increases. This condition can be felt through the steering wheel as an oscillation, and is often termed as "knuckle-bind" or "crow-hop". Ultimately, this can break traction between the tires and the ground, as the speed of the driven wheels are rhythmically accelerated and decelerated. The resultant shaking can also cause damage to driveline components.



## CONSTANT VELOCITY JOINTS OVERCOME THE LIMITATIONS OF U-JOINTS

RCV identified the Constant Velocity joint as a potential solution for the performance problems Jeep owners are experiencing. The constant velocity (CV) joint is designed to overcome the strength and binding issues associated with a universal jointed front axle shaft. With the Rzeppa type CV joint, engine torque is spread over six bearings, rather than the two bearing cups of a U-joint. Thereby distributing force over a larger surface area and making the CV joint intrinsically stronger. The design of the CV joint allows it to always assume a position that makes equal angles with the input and output shafts. So, when the joint is operating at an angle, the shaft speeds remain constant - hence the term Constant Velocity Joint. The CV joint allows smooth application of power while the steering wheel is turned, which maximizes traction between the tire and the ground. There is no oscillation felt through the steering wheel, and the resultant smoothness is easy on driveline components.

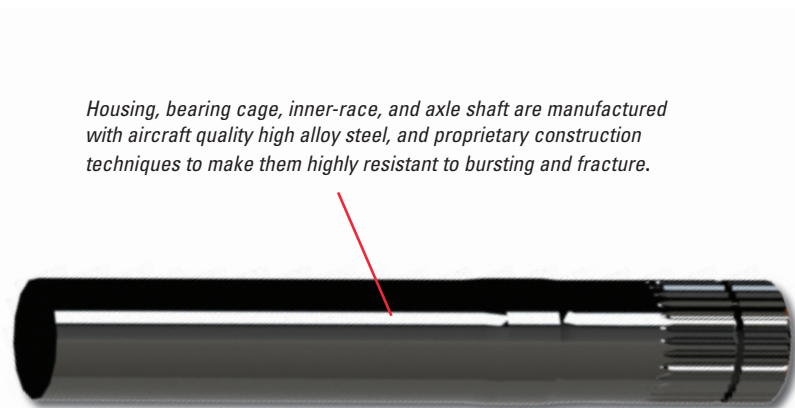


## RCV ULTIMATE CV AXLES ARE THE ULTIMATE SOLUTION

While we identified the CV joint as a potential solution for the performance problems Jeep owners were experiencing, we found there were no existing CV joints that could be used in an axle shaft design to fit Jeep applications, and that would withstand the rigors of extreme off road use. To provide a strong solution, we took what we learned and engineered the RCV Ultimate CV Axle for Jeep. Even with big tires, big power, and short gears there are no worries. With RCV you can put the power down with confidence.

## SUPER DUTY CHROMOLY DOME-MASS CAGE AND RACE WITH SPHERICAL SEALING TECHNOLOGY

Housing, bearing cage, inner-race, and axle shaft are manufactured with aircraft quality high alloy steel, and proprietary construction techniques to make them highly resistant to bursting and fracture.



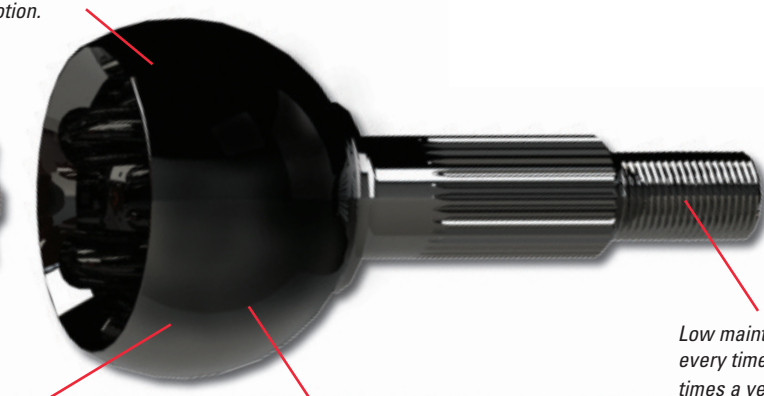
Spherical Sealing Technology (SST) utilizes a cast polyurethane cap to provide far greater resistance to punctures and tears than a rubber CV boot. SST is rock-proof, and will not bunch or balloon. This is a patented RCV technology.



Design allows tight steering angles up to 45 degrees, and provides high strength throughout range of motion.



REM Polished for reduced friction, smooth-action, and decreased wear.

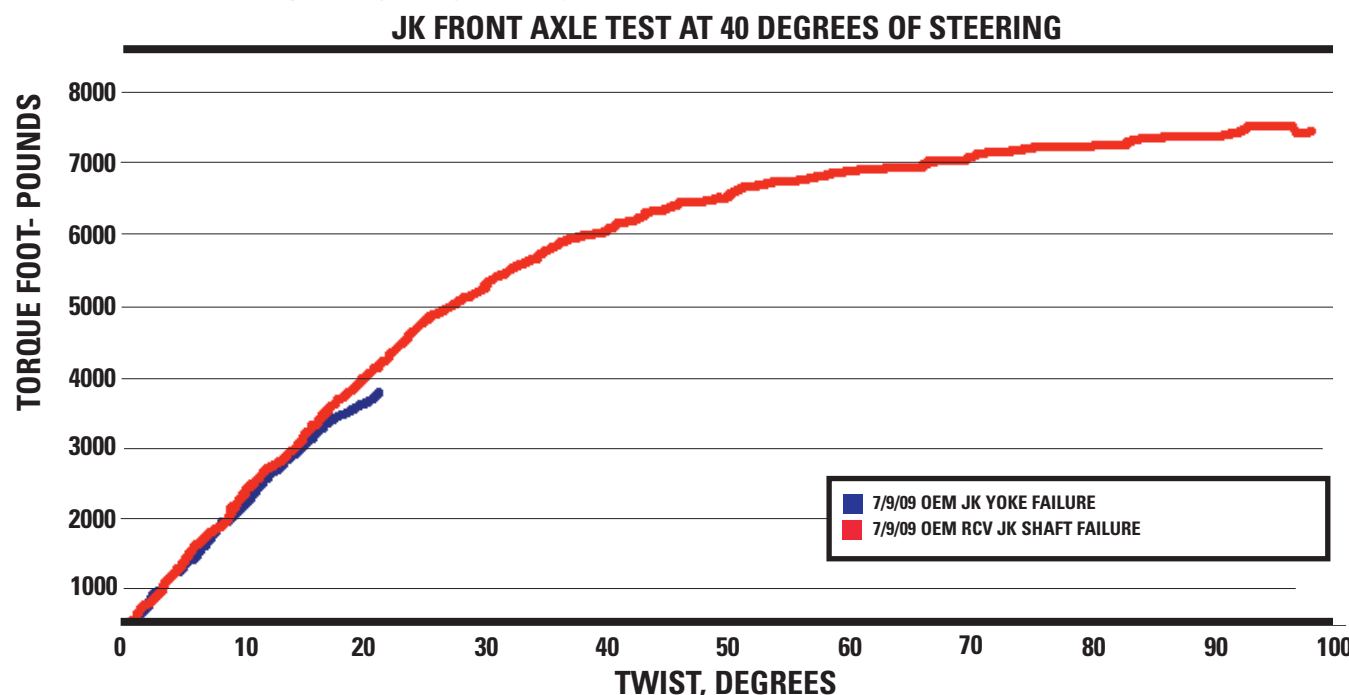


Constant Velocity joint eliminates U-joint binding - allowing smooth transfer power to the ground, and eliminating steering wheel oscillation.

Low maintenance - Unlike U-joints that must be greased almost every time you go out, Ultimate CV axles only need grease a couple times a year, and are easily serviced via a zerk fitting.

## RCV ULTIMATE CV AXLES FOR JEEP ARE TWICE AS STRONG AS JEEP OE AXLE SHAFTS.

RCV Performance Ultimate CV Axles replace the weak axle shafts on your Jeep, and are the strongest Jeep axle shaft solution available on the market - providing strength that U-joints can't match.



Test results show RCV Ultimate CV Axles for Dana 44 to be twice as strong as Jeep JK Rubicon OEM axle shafts. They're just as tough at a straight angle as they are at extreme angles - where U-jointed axles are at their weakest. An RCV equipped Dana 44 is effectively as strong as a Dana 60, without the extra weight or loss of ground clearance.



## "NO QUESTIONS ASKED" LIMITED LIFETIME WARRANTY

We are so confident in the quality and reliability of Ultimate CV Axles that we provide a "No Questions Asked" limited lifetime warranty. You break it we replace it. Have you ever been on the trail and your U-joint breaks and damages your axle shaft? What happens if two different companies manufacture the joint and the shaft? Which one do you call for the warranty? With our product there is not any confusion: One manufacturer, one warranty.

## RCV ULTIMATE CV AXLE SETS FOR JEEP

### JEEP CV AXLE APPLICATION GUIDE

MAKE	MODEL	YEAR	PART NUMBER	AXLE MODEL	OEM INNER SPLINE	OEM OUTER SPLINE	RCV INNER SPLINE	RCV OUTER SPLINE	OEM LEFT INNER AXLE LENGTH	OEM RIGHT INNER AXLE LENGTH	OEM OUTER STUB AXLE LENGTH	NOTES
Jeep	Wrangler (YJ)	86-'96	CVJ30	Dana 30	27	27	27	27	16.5	32.3	6.11	1,3,4
Jeep	Wrangler (TJ+LJ)	97-'06	CVJ30	Dana 30	27	27	27	27	16.5	32.3	6.11	1,3,7
Jeep	Wrangler (TJ+LJ)	97-'06	CVJ30-SUPER	Dana Super 30	30	27	30	27	16.5	32.3	6.11	1,3,7
Jeep	Wrangler Rubicon (TJ+LJ)	03-'06	CVJ44	Dana 44	30	27	30	27	16.9	31.9	6.11	1,3
Jeep	Wrangler + Unlimited (JK)	07 up	CVJ30-JK	Dana 30	27	32	27	32	18.8	34.4	6.25	1,3
Jeep	Wrangler Rubicon + Unlimited Rubicon (JK)	07 up	CVJ44-JK	Dana 44	30	32	30	32	18.7	33.4	6.25	1,3
Jeep	CJ-6, CJ-7	72-'81	CVJ30S-CJ1	Dana 30	27	27	27	27	27	14.1	8.72	2,3
Jeep	CJ-6, CJ-7	72-'81	CVJ30S-CJ1S	Dana Super 30	30	27	30	27	27	14.1	8.72	2,3
Jeep	CJ-7	82-'86	CVJ30S-CJ2	Dana 30	27	27	27	27	28.7	15.8	8.72	2,3
Jeep	CJ-7	82-'85	CVJ30S-CJ2S	Dana Super 30	30	27	30	27	28.7	15.8	8.72	2,3
Jeep	Wagoneer w/disc	74-'79	CVJ440S-WAG1	Dana 44	30	19	30	30	33.2	14.7	9.94	2,3,5,6,7
Jeep	Wagoneer w/disc	80-'92	CVJ440S-WAG2	Dana 44	30	19	30	30	15.8	32.1	9.94	2,3,5,6,7
Jeep	Grand Cherokee (WJ)	99-'04	CVJ30-WJ	Dana 30	27	27	27	27	16.5	32.3	6.11	1,3
Jeep	Cherokee (XJ)	85-'02	CVJ30-XJ	Dana 30	27	27	27	27	16.5	32.3	6.11	1,3,4,7

### NOTES

- To ensure RCV axles will fit your vehicle, please verify your current axle shaft specifications match the OEM specifications listed above. Please note in some cases RCV spline count may vary from OE. Custom splines are available upon request.
  - Ultimate CV Axles include: CV Joints, inner axles, outer stubs (as needed), SST seals & installation tool, instructions, synthetic moly grease, installation hardware
  - Axle Sets come with a black oxide coating as standard. Nickel plating is optional. Ultimate CV Axles are also available in custom configurations for Dana 30, 44, 60, and other applications(1)
- (1) Ultimate CV Axle, Unit Bearing, Super Duty Chromoly Dome - Mass Cage and Race with Spherical Sealing Technology, Shaft - Aircraft Quality High Alloy Steel  
 (2) Ultimate CV Axle, Non-Unit Bearing, Super Duty Chromoly Dome-Mass Cage and Race with Spherical Sealing Technology, Shaft - Aircraft Quality High Alloy Steel  
 (3) Part number indicates axle set - includes right and left CV axle shafts  
 (4) Eliminates disconnect - Replaces OE two-piece axle. If replacing two-piece axle will require Dana 30 27 Spline disconnect block off kit RCV-B0K  
 (5) RCV axles require 30 spline hub, or modification of 19 spline hub. Contact RCV for details.  
 (6) Please ensure your spindle splines have a minimum diameter of 1.312" to receive RCV 1.282" diameter outer stub.  
 (7) Minor clearance modifications necessary. RCV clearance gauge included to facilitate process.

## EASY INSTALLATION

RCV Ultimate CV axles for Jeeps are designed to simply fit in place of your OE axle shafts. Minor clearance modifications are only needed for SJ, TJ, LJ and XJ models. The process is simplified with use of an RCV clearance gauge included with the axle set.



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