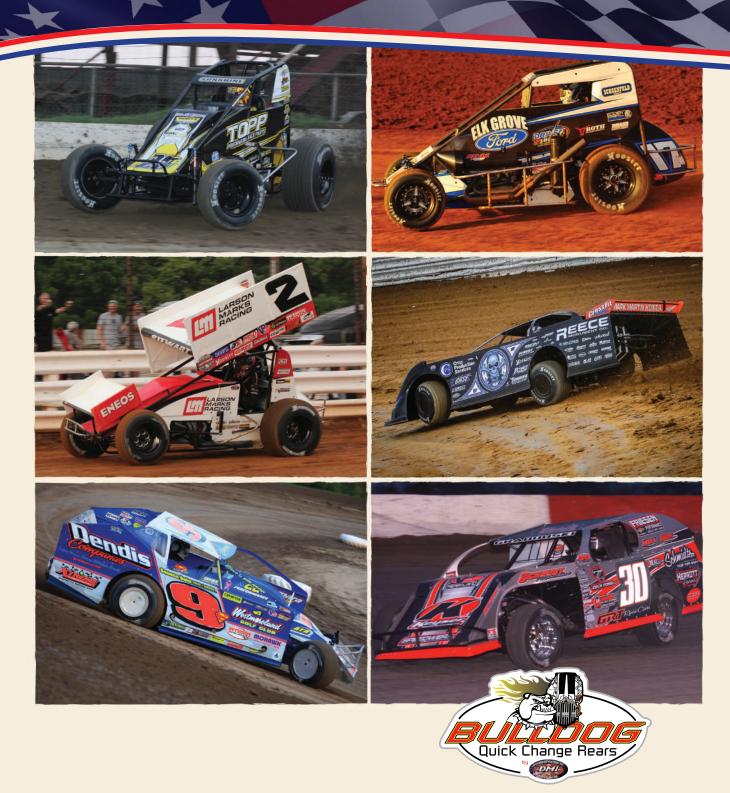
# 2018 CATALOG



Welcome to the 2018 Diversified Machine Inc. Product Guide. It's hard to believe but 2017 was the 20th anniversary of incorporation for our company in addition to our 16th year servicing the racing industry with our high quality American Made DMI and Bulldog components. Early in 2018 the 10,000th Bulldog Quick Change Rear will be shipped out the door. Thank you for your support of our products.

The past 12 months was another year of tremendous growth for the company. The 2017 build season was the busiest in our history and once the racing started there was no rest for the weary. We struggled to supply the demand for our products. As 2017 comes to close we have addressed the supply problem head on. We aggressively added four new machines in late summer. We are committed to supplying you with the products you demand. We will not be satisfied until we can boast about a 99% fill rate. I would like to extend a sincere thank you to everyone for your patience this past year in receiving your items.

We take tremendous pride in the on track results of our customers. We cherish the relationships we have developed and the friendships that have been formed. Whether it's a Monday morning phone call of a first time winner or talking to a Hall of Famer who just won their 500th race, it's a good feeling knowing we helped them achieve success. We strive to provide a product that enables you to concentrate on winning races. High quality, trouble free components allow you the time to fine tune your car and find more speed. It's that simple and something that we understand. We understand it because WE'RE the manufacturer who has raced. We can provide you and your team with more support than our competitors. PERIOD. Tech questions, resolving a problem, providing set-up guidance or lending you a hand at the track is the strongest asset of your relationship with DMI.

Just like every other year in the life of DMI, 2018 will bring new products, refinement of existing components and ways to better serve our customers. Some of the more than 15 new products include the Tetris Micro Sprint Front Hubs with Threaded Dust Caps, 44 Spline Titanium and Steel Fabricated Driveshafts, W-link straps of varying lengths and redesigned steel torque ball housings. In addition to the new products is an increased effort to help our customers through social media. In 2017 we hired Mandee Pauch as our social media coordinator and to handle our public relations. She'll work with you to help give you an extra bang for your buck as a DMI customer. Whether you're providing an off season update, sharing your race results or showcasing your recent purchase, please tag us on Twitter or in your Facebook post. The addresses are below. Feel free to send her your press releases. She'll be sure to share them on our social media outlets. In addition, you'll see Mandee at different events throughout the season. If she stops by to talk or shoot a video please give her a few seconds of your time. It's great exposure for your race team and sponsors.

On behalf of owners Jim and Tammy Haines, the great staff of Diversified Machine and Jennifer and I, thanks again for your continued support and for purchasing DMI and Bulldog products. We wish you a safe and successful 2018 racing season.





Owners, Jim & Tammy Haines



Sales Manager, Dave Ely



Customer Service, Jennifer Ely



Sales & Tech Support, Adrian Shaffer



Operations Manager, John Flory



Social Media Coordinator/Public Relations, Mandee Pauch







*BULLDOG* Quick Change







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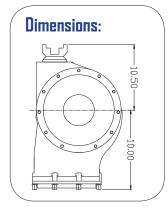




The BullDog SS-1 is the newest closed tube rear in the BullDog Quick Change Rear family. You asked for it and BullDog delivered. We started with a blank screen and put over two years of design and development into producing the shortest, quickest and strongest full size appearing rear. The rear features reduced rotating and unsprung weight and additional fuel cell clearance. Ultralight 8" ring gear and mini pinion assembly is over 2 ½ lbs. lighter straight out of the box than a standard 10" gear set. The BullDog Super Short -1 is the shortest rear available from any manufacturer. The rear is more than 1.5" shorter than our already industry leading CT-1 rear. The rear utilizes our standard side bells and tubes as well as standard 10 spline quick change gears. The pinion is supported by one piece pinion bearing cup and revolutionary pinion nose support. Crate cars and lower horsepower applications will see the largest difference in acceleration and deceleration. There are short rears and then there is BullDog Super Short! #DMIRACING

### Standard Features Include:

- O-Ringed Aluminum Gear Cover
- 100% Magnesium Castings
- Breather Assembly
- Bell to Tube Thru Bolts
- Magnetic Drain Plug
- 8" Ring and Pinion produced by the finest Italian Gear Manufacturer
- Correct Length Thru Bolts for your Application
- All Rears Built Standard with Low Drag Seals
- Heat Treated Super Short Lower Shaft
- 5 qts BullDog Blood Oil





# Popular SS-1 Options More options available- contact your DMI sales associate for a complete listing.

# Option 1- Thermal Coating

- 1-A Black Thermal Coating 6 Rib
- 1-B Black Thermal Coating 8 Rib

### Option 2- Ring & Pinion

- 2-A Lightened Ring Gear
- 2-B REM® Ring & Pinion
- 2-C REM® / Lightened Ring and Pinion

### Option 3- Lower Shaft

- 3-D Heavy Duty Lower Shaft
- 3-E Gundrilled Lower Shaft
- 3-F Gundrilled Lower Shaft w/ Aluminum End Yoke

### Option 4- Seal Plate

- 4-A Front Seal Plate Standard
- 4-B Front Seal Plate w/o 2 Counterbores
- 4-C Front Seal Plate w/o Counterbores

### Option 5- Side Bells

5-A 8-Rib Side Bells - Both Sides

# Option 6- Low Drag & Bearings

- 6-A Low Drag w/Teflon Lip Seals and Severe Duty Bearings
- 6-B Low Drag w/Teflon Lip Seals and Severe Duty Bearings w/Seal Plate Seal
- 6-L Low Drag w/Teflon Lip Seals and Severe Duty Bearings PROglide treated
- 6-M Low Drag w/Teflon Lip Seals and Severe Duty Bearings w/Seal Plate Seal PROglide treated

# Option 7- Thru Bolts

- 7-B DIRT Modified Thru Bolts w/ 4B Seal Plate
- 7-C Dirt Late Model Thru Bolts

### Option 8- Tubes

- 8-A Include SmartTube Style Tubes Specify Lengths
- 8-B Include Splined Teo Style Tubes Specify Lengths
- 8-C Include Wide 5 Tubes Specify Lengths
- 8-D Include Aluminum 8-Bolt Tubes Specify Lengths
- 8-E Include H.D. Wide 5 Tubes Specify Lengths
- 8-F Include SmartTube Style Tubes BRP Quadlock -
- Specify Lengths
- 8-G Include Steel Wide 5 Tubes Specify Lengths
- 8-I Steel GN 2.5 Tubes Specify Lengths
- 8-J Moly GN 2.5 Tubes Specify Lengths
- 8-K Steel SmartTube Style Tubes Specify Lengths
- 8-L Aluminum Thin Flange 8 Bolt Tubes Specify Lengths
- 8-M Aluminum Deuce N' Half Tubes Specify Lengths
- 8-N Steel Thin Flange 8 Bolt Tubes Specify Lengths

# Option 9- Spool

9-A Ultralight Aluminum Spool



All bearings are available with PROglide treatment. PROglide provides friction reduction. Utilizing nano particles that act as sponges for oil PROglide has achieved unimaginable results. The process adds no tolerance to the material being treated therefore the limits are nearly endless. Are you ready to ride the Glide?

# CT-1

# CT1-4.86

BullDog CT-1 4.86 Complete Rear (Less Tubes)

# CT1-4.12

BullDog CT-1 4.12 Complete Rear (Less Tubes)

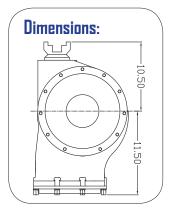


The BullDog CT-1 is the premier closed tube rear in the industry. Precision machining makes the rear the truest available. Installed tubes have zero run-out. Internal and external ribs combine to offer the strongest side bell available. The elimination of the side bell flex "provides a more free rolling rear under load." Simply, the CT-1 rear is stronger, truer and more user friendly than any other rear. All CT-1 rears are available with angular contact low drag bearings and seals, small diameter ring and pinions and other lightweight options.



### Standard Features Include:

- O-Ringed Aluminum Gear Cover
- 100% Magnesium Castings
- · Breather Assembly
- · Bell to tube thru bolts
- · Magnetic drain plug
- · Correct length Thru Bolts for your application
- 10 AN Port for fill can
- Timken® Pinion Bearings
- · Heat Treated Lower Shaft
- Three side bell studs per side allow for easy removal without complete disassembly
- 5 qts BullDog Blood Oil



# Popular CT-1 Options More options available- contact your DMI sales associate for a complete listing.

# Option 1- Thermal Coating

- 1-A Black Thermal Coating 6 Rib
- 1-B Black Thermal Coating 8 Rib

# Option 2- Ring & Pinion

- 2-A Lightened Ring Gear
- 2-B REM® Ring & Pinion
- 2-C REM® / Lightened Ring and Pinion

### **Dotion 3- Lower Shaft**

- 3-D Heavy Duty Lower Shaft
- 3-E Gundrilled Lower Shaft
- 3-F Gundrilled Lower Shaft w/ Aluminum End Yoke

### **Option 4- Seal Plate**

- 4-A Front Seal Plate Standard
- 4-B Front Seal Plate w/o 2 Counterbores
- 4-C Front Seal Plate w/o Counterbores

### Option 5- Side Bells

5-A 8-Rib Side Bells - Both Sides

### Option 6- Low Drag & Bearings

- 6-A Low Drag w/Teflon Lip Seals and Severe Duty
  Bearings
- 6-B Low Drag w/Teflon Lip Seals and Severe Duty Bearings w/Seal Plate Seal
- 6-L Low Drag w/Teflon Lip Seals and Severe Duty Bearings PROglide treated
- 6-M Low Drag w/Teflon Lip Seals and Severe Duty Bearings w/Seal Plate Seal PROglide treated

# Option 7- Thru Bolts

- 7-B DIRT Modified Thru Bolts w/ 4B Seal Plate
- 7-C Dirt Late Model Thru Bolts

### Option 8- Tubes

- 8-A Include SmartTube Style Tubes Specify Lengths
- 8-B Include Splined Teo Style Tubes Specify Lengths
- 8-C Include Wide 5 Tubes Specify Lengths
- 8-D Include Aluminum 8-Bolt Tubes Specify Lengths
- 8-E Include H.D. Wide 5 Tubes Specify Lengths
- 8-F Include SmartTube Style Tubes BRP Quadlock -
- Specify Lengths
- 8-G Include Steel Wide 5 Tubes Specify Lengths
- 8-I Steel GN 2.5 Tubes Specify Lengths
- 8-J Moly GN 2.5 Tubes Specify Lengths
- 8-K Steel SmartTube Style Tubes Specify Lengths
- 8-L Aluminum Thin Flange 8 Bolt Tubes Specify Lengths
- 8-M Aluminum Deuce N' Half Tubes Specify Lengths
- 8-N Steel Thin Flange 8 Bolt Tubes Specify Lengths

# Option 9- Spool

9-A Ultralight Aluminum Spool



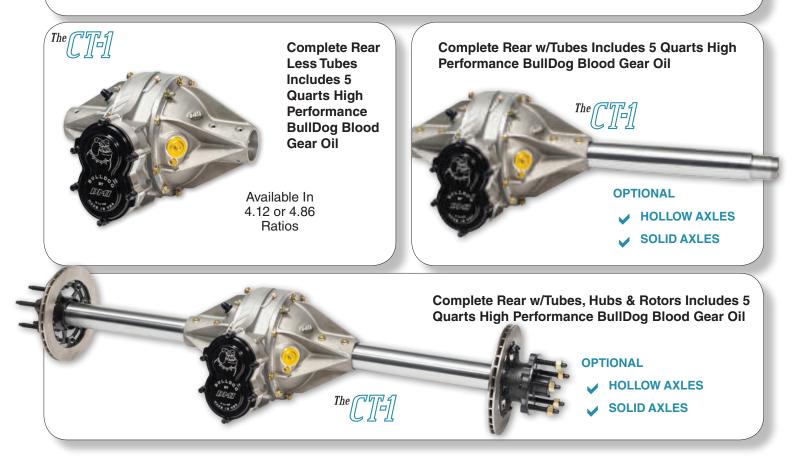
All bearings are available with PROglide treatment. PROglide provides friction reduction. Utilizing nano particles that act as sponges for oil PROglide has achieved unimaginable results. The process adds no tolerance to the material being treated therefore the limits are nearly endless. Are you ready to ride the Glide?





# The SATURDAY NIGHT SPECIAL

- 100% MAGNESIUM CENTER SECTION & BELLS O-RINGED REAR COVER W/HEAVY DUTY BEARINGS
  - MAGNETIC DRAIN PLUG FRONT SEAL PLATE INSPECTION PLUG & FILL LEVEL PLUG
  - BREATHER ASSEMBLY ALUMINUM SPOOL CORRECT LENGTH CENTER HARDWARE
    - BELL TO TUBE HARDWARE 10 AN FITTING FOR FILL CAN
      - PRECISION GROUND HEAT TREATED LOWER SHAFT



BullDog has always tried to make things as easy as possible. When IMCA legalized quick changes we took the opportunity to create two rears to simplify the ordering process. The rears are the same high quality CT-1 rears found on the previous pages. We offer the rears without tubes, with tubes so you can use the hubs and rotors from your Ford® 9" or complete with tubes, hubs and rotors. All the rears are available with solid or hollow axles. The Saturday Night Special is the rear geared to the no frills racer. The Professional Series features the most popular options chosen by racers looking to leave no stone un-turned. Either rear is more than capable of winning the IMCA Super Nationals! If you are looking to fully customize a rear for your modified look no further than the CT-1 Mod featured on page 14.



# **PROFESSIONAL SERIES**

- 100% MAGNESIUM CENTER SECTION & BELLS O-RINGED REAR COVER W/HEAVY DUTY BEARINGS
  - MAGNETIC DRAIN PLUG FRONT SEAL PLATE INSPECTION PLUG & FILL LEVEL PLUG
  - BREATHER ASSEMBLY ALUMINUM SPOOL CORRECT LENGTH CENTER HARDWARE
    - BELL TO TUBE HARDWARE 10 AN FITTING FOR FILL CAN
      - PRECISION GROUND HEAT TREATED LOWER SHAFT

# ALL PROFESSIONAL SERIES REARS INCLUDE: OF THEATHER AND THE PROFESSIONAL SERIES REARS INCLUDE:



Complete Rear Less Tubes Includes 5 Quarts High Performance BullDog Blood Gear Oil

Available In 4.12 or 4.86 Ratios Complete Rear w/Tubes Includes 5 Quarts High Performance BullDog Blood Gear Oil

The OPTIONAL

**✓** HOLLOW AXLES

**SOLID AXLES** 



# CT-1 Mod

# MOD-4.86

BullDog CT-1

4.86 Rear with Complete

Modified Package



BullDog CT-1

4.12 Rear with Complete

Modified Package



The CT-1 MOD is the complete hub to hub package for spec modifieds. Package includes the race proven CT-1 quick change, steel tubes, GN 5x5 hubs with steel drive flanges, 11.75" rotors and solid axles.

# Standard Features Include:

- Front Seal Plate
- O-Ringed Aluminum Gear Cover
- 100% Magnesium Castings
- Breather Assembly
- · Bell to tube thru bolts

- Magnetic drain plug
- Correct length Thru Bolts for your application
- I0 AN Port for fill can
- · Heat Treated Lower Shaft
- Three side bell studs per side allow for easy removal without complete disassembly
- 5 qts BullDog Blood Oil



The myth that quick change rears rob horsepower is just that...a myth! A 9" rear utilizes a hypoid ring and pinion. Hypoid ring and pinions run hotter and consume more power than the spiral bevel ring and pinions used in a quick change. Some efficiency is lost through the quick change gears but it doesn't surpass the inefficiency of the 9". When the ability to fine tune your gear ratio is taken into account the choice is obvious – quick change all the way!



Consider using steel Smart Tube style tubes in place of 2.5" GN. The hub uses an inverted drive flange requiring shorter axles- Smart Tube style is lighter, stronger and cheaper!

# 2.5" GN 5 on 5 Tube to Axle conversion

lube Length	Axle Length
22"	28.5"
23"	29.5"
24"	30.5"
25"	31.5"
26"	32.5"
27"	33.5"
29"	35.5"

A 60" centered Rear utilizes two 24" tubes. A rear with 2" offset would use a 22" and 26" for its tube lengths.

# Popular CT-1 Options More options available- contact your DMI sales associate for a complete listing.

# Option 1- Thermal Coating

- 1-A Black Thermal Coating 6 Rib
- 1-B Black Thermal Coating 8 Rib

# Option 2- Ring & Pinion

- 2-A Lightened Ring Gear
- 2-B REM® Ring & Pinion
- 2-C REM® / Lightened Ring and Pinion

### Option 3- Lower Shaft

- 3-D Heavy Duty Lower Shaft
- 3-E Gundrilled Lower Shaft
- 3-F Gundrilled Lower Shaft w/ Aluminum End Yoke

### Option 4- Seal Plate

- 4-A Front Seal Plate Standard
- 4-B Front Seal Plate w/o 2 Counterbores
- 4-C Front Seal Plate w/o Counterbores

# Option 5- Side Bells

5-A 8-Rib Side Bells - Both Sides

# Option 6- Low Drag & Bearings

- 6-A Low Drag w/Teflon Lip Seals and Severe Duty Bearings
- 6-B Low Drag w/Teflon Lip Seals and Severe Duty Bearings w/Seal Plate Seal
- 6-L Low Drag w/Teflon Lip Seals and Severe Duty Bearings PROglide treated
- 6-M Low Drag w/Teflon Lip Seals and Severe Duty Bearings w/Seal Plate Seal PROglide treated

# Option 7- Thru Bolts

- 7-B DIRT Modified Thru Bolts w/ 4B Seal Plate
- 7-C Dirt Late Model Thru Bolts

# Option 8- Tubes

- 8-I Steel GN 2.5 Tubes Specify Lengths
- 8-J Moly GN 2.5 Tubes Specify Lengths
- 8-K Steel SmartTube Style Tubes Specify Lengths

### Option 9- Spool

9-A Ultralight Aluminum Spool



All bearings are available with PROglide treatment. PROglide provides friction reduction. Utilizing nano particles that act as sponges for oil PROglide has achieved unimaginable results. The process adds no tolerance to the material being treated therefore the limits are nearly endless. Are you ready to ride the Glide?

# **Important CT-1 Information**

Tube To Axle Conversions	
2-1/2 GN Tube	Overall Tube Length + 6.5" = Axle length
Smart Tube Style Tube	Overall Tube Length +5.44" = Axle Length
Wide 5 Tube	Overall Tube Length +6.5" = Axle Length
8 Bolt Tube	Overall Tube Length +13.5"

# Popular Wide 5 Tube Lengths

Chassis	LS Tube	RS Tube
Mastersbilt, Warrior, Barry Wright, Moyer Victory Circle	28.125"	29.125"
Bloomquist	27.125"	29.125"
Pierce & MBH	28.125"	28.125"
XR1 Rocket, Club 29	25.625"	30.125"
Capital, Longhorn, Pre XR1 Rocket, Pre 2014 Lazer	26.625"	30.125"
Lazer	27.125"	29.125"

# Popular SmartTube Style Tube Lengths

	LS Tube	RS Tube
Northeast DIRT Modified, Bicknell, Troyer, Hig	20.188"	28.060"
Teo, PMC	22.188"	28.060"

# Wide 5 vs. SmartTube Style

Axle length	Smart Tube Style Axle Length = Wide 5 Axle Length - 3"
Tube Length	Smart Tube Style Tube Length = Wide 5 Tube Length - 2"

# 2.5" GN Snout vs. SmartTube Style

Ayla langth	SmartTube Style Axle
Axle length	Length=2.5" GN Axle Length-1"
Tuba Langth	SmartTube Style Tube Length=
Tube Length	2.5" GN Tube Length+.25"

# Important Specs

Side Bell Nuts- 35 ft./lbs.

Threaded Ring Gear- 60 ft./lbs. w/ Red threadlocker

Pinion Retainer Bolts- 25 ft./lbs. Front Seal Plate Bolts- 35 ft./lbs.

Front Yoke Bolt- 35 ft./lbs. with minimum blue threadlocker

Pinion Backlash- .004-.008

Rotational Pinion Preload (No Spool) - 25 in/lbs. @ 70° F

Rotational Pinion Preload (Complete Assembly) - 35 in/lbs. @  $70^\circ$  F Starting recommendations for Shims CT-1 Left .024" Right .055"

Starting recommendations for Shims SS-1 Left .035" Right .035"

# Approximate Tube Weights (Weights may vary by tube length)

Description	Weight
SmartTube Steel	11.5 lbs.
Steel 2.5 GN	13.5 lbs.
Moly 2.5 GN	11 lbs.
SmartTube Alum	5 lbs.
Steel Wide 5	12.5 lbs.
Aluminum Wide 5	6 lbs.
Aluminum Deuce N' Half	6.5 lbs.
Heavy Steel Deuce N' Half	38.5 lbs.
Heavy Steel 2.5 GN	31.5 lbs.
Heavy Steel SmartTube	36.5 lbs.

# Weight Savings of Some Popular Options

CT-1 4.86 w/o tubes = 72 lbs.

Description	Savings
4.12 Ring & Pinion	.75 lbs.
EDM Ring Gear	.80 lbs.
9" Ring Gear	2.82 lbs.
Aluminum Yoke	1.37 lbs.
Gundrilled Lower Shaft	1.10 lbs.
Ultra-Light Aluminum Spool	.57 lbs.

All SmartTube Style Axle Tubes Built for Northeast DIRT Modified that require the birdcage timing set are installed at 0° unless requested otherwise.

All tubes insert into bell 5". When determining tube length, measure from end of tube to face of tube opening in bell and add 5".

# Important CT-1 Information

# **EDM Ring Gear**

EDM ring gears decrease weight and increase flex. Ring gear bolts should be replaced and torqued to 60ft. lbs. using blue threadlocker every 500 laps when using an EDM ring gear. EDM ring gears are not recommended in high horsepower (800+) applications.

# **Angular Contact Pinion Pack**

Angular contact pinion packs are available in place of standard issue Timken® tapered roller bearings. Angular contact pinion packs offer a 33% reduction in drag when NEW. After 2 races tapered rollers are just as free and offer superior strength. Angular contact pinion bearings require frequent inspection. Check play by grabbing pinion shaft, if play is present the bearing pack needs to be replaced. Timken® tapered roller bearings are perfect for this application and virtually bullet proof. Angular contact bearings WILL need to be replaced sometime. Choose the pinion bearing that's best for you.

### **REM**®

BullDog offers ring and pinion with REM® treatment. REM® Isotropic Superfinish Process (ISP) offers many advantages over other "Super Finishing" techniques. REM® removes the microscopic peaks created during the machining process. The treatment provides a more uniformed surface reducing friction. Regular REM® features a mirror-like finish.

# **Loaded Pinion Removal**

Heat area around the pinion until the pinion is able to freely be removed. DO NOT concentrate heat around the pinion nose bearing.

### Loaded Pinion Installation

Heat area around the pinion until the pinion freely drops in to the center. DO NOT concentrate heat around the pinion nose bearing support.

# **Closed Tube Rear Set-Up**

After installing pinion allow rear to return to room temperature. (70° F) Adjust pinion nut until 25 in/lbs rotational preload is achieved without spool. Lubricate Posi retainer O-ring and install Posi-Lock retainer on pinion nut using finger pressure only. Rotate retainer if needed to align locking splines. Attach right sidebell to center using three installed studs. Torque to 35 ft./lbs. Rotate right side down and install loaded spool with check bearings and recommended starting shims (See page 16 under Important Specs). Install left side bell and torque three studs to 35ft/lbs. Verify pinion backlash to be .004-.008 minimum when checked on 10 spline tooth of pinion, using dial indicator. Adjust spool shims accordingly until desired amount of pinion backlash is achieved. Once desired amount of pinion backlash is achieved, verify rotation pinion preload to be 35 in/lbs. with spool installed. Once set-up is complete, remove side bells. Install side bell o-rings and install spool seals utilizing red loctite. Remove spool checking bearings carefully while maintaining shim stacks. Install spool bearings using press. Re-install right side bell, bell and tube spool seal. Drop Spool into center. Lube left spool seal and install bell with ring gear back stop in place. Torque side bells to 35 ft/lbs. Tighten ring gear backstop against ring gear and back off 1/8 turn. Jam ring gear backstop nut.

# CT-1 Center Sections | Side Bells | Components

### **Center Sections**



Magnesium Center Section RRC-1000-01

Magnesium Center Section-Thermal Coated

### RRC-0900

Magnesium SS-1 Center Section

### RRC-0900-01

Magnesium SS-1 Center Section - Thermal Coated

### **Side Bells**



**RRC-1102** Magnesium Left Side 6-Rib Bell RRC-1102-01

Magnesium Left Side 6-Rib Bell-Thermal Coated



RRC-1103 Magnesium Right Side 6-Rib Bell RRC-1103-01

Magnesium Right Side 6-Rib Bell - Thermal Coated



**RRC-1107** Magnesium Left Side 8-Rib Bell RRC-1107-01

Magnesium Left Side 8-



RRC-1108 Magnesium Right Side 8- Rib Bell RRC-1108-01

Magnesium Right Side 8-Rib Bell - Thermal Coated Rib Bell - Thermal Coated

# **Center and Side Bell Components**



RRC-1034 **Breather Assembly** 



RRC-1010 Large Inspection Plug RRC-1015

Large Inspection Plug O-Ring



RRC-1016 Fill Level Plug RRC-1017 Fill Level Plug O-Ring



Magnetic " NPT Drain Plug



-8 Port to -10 Union





RRC-1037 -8 Port Plug RRC-1038 O-Ring for -8 Port Fitting





Side Bell Flange Nut RRC-1130

Side Bell Washer



Center / Side Bell Thru Bolts RRC-1124 5" RRC-1125 5.5" **RRC-1126** 6" RRC-1128 6.5" RRC-1129 7"



RRC-1117 Bolt Kit for 6 Rib Bell to Tube



**RRC-1118** Bolt Kit for 8 Rib Bell to Tube



**RRC-1104 RRC-1127** 

Side Bell Axle Seal



RRC-1104T Side Bell Axle Seal -Teflon Lip



RRC-1170 PG Side Bell Race RRC-1170REM Side Bell Race



RRC-1136 Ring Gear Back Stop Assv.

**RRC-1145** Back Stop Washer RRC-1140 Back Stop Set Screw RRC-1135

Ring Gear

Back Stop

RRC-1180 Detent for CT-1 Side Bell to Tube



To remove a bent tube from a bell, press tube out from back side. Ensure bell is free from any defects. To install new tube, heat bell until tube slips freely into place. Drill tube and install bolts. If specific tube orientation is required due to birdcage placement, utilize DMI's tube detent system. It makes proper placement a snap!

# CT-1 Spools | Components

### **Spools & Lockers**



### **Spool Bearings & Shims**



### **Front Seal Plate Assembly**





All bearings are available with PROglide treatment. PROglide provides friction reduction. Utilizing nano particles that act as sponges for oil PROglide has achieved unimaginable results. The process adds no tolerance to the material being treated therefore the limits are nearly endless. Are you ready to ride the Glide?

Look for the Ps icon throughout the catalog for availability.



Never use an EDM lightened ring gear and ultralight aluminum spool. Ultralight spools need to be carefully monitored for cracking between the holes and EDM ring gears have increased flex. The combination of the two can result in premature failures.

RRC-1173REM Side Bell Bearing for Aluminum Spool -REM® Finish

# CT-1 Rear Covers | Lower Shafts | Components

### **Rear Covers and Components**



RRC-1386B Billet Alum. Rear Cover w/ Bearings -Black





RRC-1350 PG Rear Cover Bearing

RRC-1391
Bolt for Gear
Cover Retainer



RRC-1355
Rear Cover
Stud
RRC-1345
Silicone
Sealing Ring
for Gear Cover
RRC-1340
Steel Insert
Rear Cover
Gasket



RRC-1361
Rear Cover
Nut - Black
RRC-1361B
Rear Cover
Nut - Blue
RRC-1361G
Rear Cover
Nut -Gold



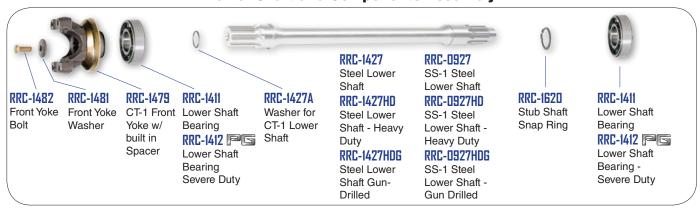
RRC-1373 Vault Lock Quick Change Rear Cover

Spline has done it again! A product so revolutionary and awesome, it will change the industry. No more timely gear changes- with the Vault Lock Quick Change Cover, gear changes take only seconds. One ¼ turn off, change gears and a ¼ turn on. Done! Vault Lock Cover fits all popular brands of rears.



Bulldog Rear Nuts are the shortest in the industry and provide more fuel cell clearance than any other manufacturer.

### **Lower Shaft and Components Assembly**





BullDog CT Lower Shafts are now precision ground. Standard lower shafts are heat treated and rated To 700 HP. If you're looking to save weight- go Gun-Drilled!

# CT-1 Ring & Pinions | Components



/				
	RRC-1300	4.12 Ring & Pinion - 12.75 lbs.	RRC 1305	4.86 Ring & Pinion - 13.55 lbs.
	RRC-1300-02	4.12 EDM Ring & Pinion	RRC-1305-02	4.86 EDM Ring & Pinion
	RRC-1300-02-05	4.12 EDM / REM® Ring & Pinion	RRC-1305-02-05	4.86 EDM / REM® Ring & Pinion
	RRC-1300-05	4.12 REM® Ring & Pinion	RRC-1305-05	4.86 EDM O.D. & I.D / Polish Ring & Pinion
	RRC-1300D	9" 4.12 REM® / EDM Ring & Pinion	RRC-1305D	9" 4.86 REM® / EDM Ring & Pinion
	RRC-1300E	9" 4.12 REM® / EDM Ring & Ultralight Pinion	RRC-1305E	9" 4.86 REM® / EDM Ring & Ultralight Pinion
	RRC-1300SG	4.12 Ring & Pinion - Super G Finish	RRC-1305SG	4.86 Ring & Pinion - Super G Finish
				/



			Ra	& P Compone	ents
RRC-1303	4.12 Ring & Pinion - 10.12 lbs.	)		•	
RRC-1303-02	4.12 EDM Ring & Pinion				
RRC-1303-02-05	4.12 EDM / REM® Ring & Pinion		0		
RRC-1303-05	4.12 REM® Ring & Pinion				
RRC-1303-SG	4.12 Super G Ring & Pinion		BBB 4888	DDG 4045	DDD 4000
_	3		RRC-1330	RRC-1315	RRC-1320
			2 Bolt Locking Tab	Pinion Bearing	Pinion Retainer

RRC-1300SG, RRC-1303SG AND RRC-1305SG RING & PINION FEATURE THE SUPER G Treatment. SUPER G treatment dramatically increases ring and pinion life in mega horsepower 410 winged sprint cars. SUPER G ring and pinions are highly recommended for any application that sees severe abuse. For more ring & pinion information see page 17. For weight-saving information see page 16.

Spacer

Flange

# CT-1 Wide 5 Tubes & Accessories

### **Aluminum Wide 5 Tubes**



<sup>\*</sup>All tubes stocked in black- other colors available on special request

### **Aluminum Deuce 'N Half Wide 5 Tubes**



Deuce N' Half Tubes provide the largest snout of any tube on the market and still utilize a conventional Wide 5 Hub with no modifications needed other than swapping out races. Deuce N' Half tubes offer a remarkable 62% increase in strength. Do NOT confuse Deuce N' Half tubes with other companies 1 ton tubes – Deuce N' Half are a ton better!

RRC- 2279- (length)
Deuce N' Half Spindle Style Aluminum
Axle Tube

# Stocking Lengths\* 25.625" 28.125" 26.625" 29.125" 27.125" 30.125"

All tubes stocked in black - other colors available on special request.

### **Steel Wide 5 Style Tubes**





RRC-2276 Aluminum Wide 5 Tubes are produced from 7068 aluminum. 7068 offers 10 ksi more tensile strength and 15 ksi more yield strength than 7075 aluminum.

# CT-1 Wide 5 Tubes & Accessories

### Steel Deuce 'N Half Wide 5 Tubes



RRC-2279- (length) H
Deuce N' Half Spindle Style
HEAVY Steel Axle Tube

Stocking Lengths

25.625"

26.625"

27.125"

### Wide 5 Hub - Rear Assembly



# Deuce 'N Half (DNH) Wide 5 Hub - Rear Assembly





To replace a tube- press out old tube. Check bell for straightness. Heat bell until new tube slips in. Wanna Save Time? Let DMI/ BullDog send you a complete tube and bell assembly.

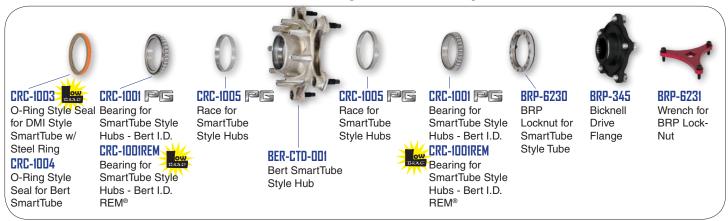
# CT-1 SmartTube Style Tubes & Accessories

### **Aluminum SmartTube Style Tubes**



All tubes stocked in black - other colors available on special request.

### **SmartTube Style Hub Assembly**





All BullDog Smart Tube Style Tubes Utilize the RRC-2205 Steel Ring. The steel ring provides many benefits. One, it keeps hubs tight preventing brake fade. Two, it provides steel surface for the seal to ride. All BullDog Smart Tube Style Tubes utilize 73 mm I.D. Bearings (2.874015"). DO NOT USE WINTERS 2.875" BEARINGS ON DMI TUBES!

# CT-1 Steel SmartTube Style Tubes & Accessories

### **Steel SmartTube Style Tubes**



RRC-2201- (length) SmartTube Style Axle Tube - Steel RRC-2201- (length) H

SmartTube Style Axle Tube - HEAVY Steel

# Stocking Lengths

22.25" 23.25"

24.25"

25.25"

26.25"



All DMI SmartTube style tubes require RRC-2205 and RRC-2206.



RRC-2205 Steel Sleeve for Seal on SmartTube



RRC-2206 O-Ring for SmartTube Steel Sleeve

BRP-6230

Locknut for

SmartTube

Style Tube

BRP

### **Ultimate SmartTube Style Large Bearing 5 on 5 Hub**



CRC-1003 O-Ring Style Seal for DMI Style SmartTube w/ Steel Ring CRC-1004

O-Ring Style Seal



CRC-1001 PG Bearing for SmartTube Style Hubs - Bert I.D.

CRC-1001REM Bearing for

SmartTube Style for Bert SmartTube Hubs - Bert I.D. REM®



CRC-1005 PG Race for

SmartTube Style Hubs

CRC-2057A Brake Adaptor

CRC-2050 Ultimate SmartTube Style Hub



Race for CRC-2056A SmartTube Steel Drive Style Hubs

Flange CRC-2059 Alum. Drive Flange



CRC-1001 PG Bearing for SmartTube Style Hubs - Bert I.D. CRC-1001REM

Bearing for SmartTube Style Hubs - Bert I.D. REM®



BRP-6231 Wrench for BRP Lock-Nut



If you're looking to save weight on your modified then SmartTube is a great choice. SmartTube style saves over 3.25 lbs. of rotating weight between the billet hubs, inverted drive flanges and shorter axles. The tubes save an additional 4 lbs. The total weight savings by going SmartTube is almost 8 lbs.of un sprung weight! Additionally, when utilizing a heavy left side tube to increase bite more gain percentage can be achieved with Smart Tube Style tubes.

# CT-1 2.5" GN Style Tubes & Accessories

# Steel 2.5" GN Style Tubes



# 2.5" GN 5 on 5 Hub Assembly



### 2.5" GN 5 on 434 Hub Assembly



# **CT-1 Miscellaneous Rear Tubes**

### **8 Bolt Tubes**



All tubes stocked in black – other colors available on special request.

### **Steel 8 Bolt Spindles**

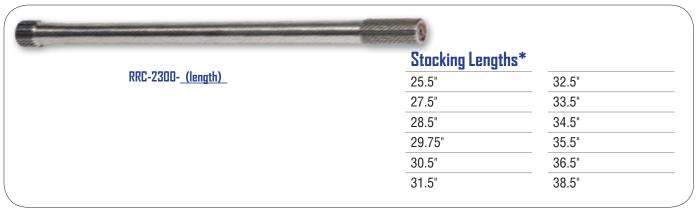




If you don't see your specific tube size as a stocked length- Don't Fret My Pet. BullDog will cut down any tube to the length you desire. Just ask your sales associate.

# **CT-1 31 Spline Axles**

**Hollow 31 Spline Axles** 



DMI Hollow axles are produced from Made in the USA 4340 that is milled and heat treated to our exact specifications. All axles are turned to the correct outside dimensions for optimum traction and reliability. Don't be fooled by black magic axles that make false promises. Trust DMI axles for the best in reliability and performance.

### **Solid 31 Spline Axles**

	Stocking Leng	ths*
RRC-2350(length)_	25.5"	32.5"
	27.5"	33.5"
	28.5"	34.5"
	29.75"	35.5"
	30.5"	36.5"
	31.5"	

<sup>\*</sup>All axles are also available in solid or gun drilled titanium

### **Axle Seals**





When installing an axle seal in a bell, a little red Loctite $^{\circ}$  on the O.D. of the seal helps ensure a positive placement.

Spline recommends replacing axles every 800-1000 laps. Paint a line on the axle when new and watch for twisting.

# **Closed Tube Frequently Asked Questions**

# 4 What is the proper oil level for a BullDog Rear and how do I fill it?

A The proper oil level varies dependant on the model. Below is a guide (all capacities are approximate)

CT-1 & SS-1 - 4qts,

CT-1 w/9" Ring Gear - 4.5qts. (Must maintain max level in this unit or pinion life will be drastically reduced)

The correct method of filling the rear is to remove the pinion inspection plug and the fill level plug located directly below the inspection plug. On all rears, both plugs are on the right side bell. Fill the rear until the fluid runs out the fill level hole. Re-install the fill level plug and add an additional 4-6 ounces of fluid. Re-install inspection plug. Both plugs only need to be "snug". Over-tightening will cause the plug(s) to stick.

# Q What is the best oil for a BullDog Rear?

A We highly recommend BullDog Blood (see page. 52) We do not re-package someone else's oil. We spent a lot of time and effort testing different formulations. Our oil is blended to our proprietary specs. If BullDog Blood isn't for you, we see good, consistent results from Driven 75w-110.

# 4 What type of quick change gears will work in a **BullDog Rear?**

A Any 10 spline quick change gear will work in the standard BullDogs. We do not recommend using helical cut gears. Always use gears with the machined lip facing out. Always install gears the same way. Never mix gear sets. Sets are machined as matched units.

# 4 How do I tell what ratio ring and pinion I have?

A The easiest way to verify ring and pinion ratio is to remove the guick change gears. Install a mark on the tire at the 12 o'clock position. Install a mark on the pinion at the 12 o'clock position. Rotate the tire by hand 1 complete revolution. Count the pinion rotation as your turning the tire. If the pinion rotates just over 4 times, you have a 4.12. If the pinion rotates almost 5 times, you have a 4.86.

# • How often should a ring and pinion be replaced?

A The inspection plug in the right side bell is placed there for a reason. Weekly inspection of the pinion should occur. Ring gears seldom show wear. Rotate the pinion slowly while inspecting the pinion through the hole. Look at the drive side of the tooth. Small pits need to be monitored. Once you determine the pinion pits are excessive, replace the ring and pinion. As long as the unit looks pit-free, there isn't a life cycle. Use it!

# • How often should axles be replaced?

A Closed tube steel axles should be replaced every 800 laps. Paint a line on the closed tube axle and monitor it for twist. If the twist becomes excessive prior to 800 laps - replace it.

# Standard Quick Change Gears

Standard 10 Spline Quick Change Gears Are Produced From SAE 8620 Steel and Heat Treated for Strength

ICG-<u>set#</u>
Standard Quick
Change Gears



#20 gear set weighs 6.36 lbs.

To Determine Final Drive (# top teeth) / (# bottom teeth) x R&P Ratio = Final Drive

To Determine RPM (Current RPM) / (Gear Ratio) x (New Gear Ratio) = New RPM RPM 8200 5.42 5.56 8400

10 Spline Gear Ratios				
ear Set	No. of Teeth	4.12 Ring & Pinion (8-33 Teeth)	4.86 Ring & Pinion (7-34 Teeth)	
1	23/23	4.12 / 4.12	4.86 / 4.86	
2	28/27	4.27 / 3.97	5.04 / 4.69	
15	20/19	4.33 / 3.91	5.11 / 4.62	
26	29/27	4.42 / 3.84	5.22 / 4.52	
6	25/23	4.47 / 3.79	5.28 / 4.47	
25	22/20	4.53 / 3.75	5.35 / 4.42	
12	29/26	4.59 / 3.69	5.42 / 4.35	
7	26/23	4.66 / 3.64	5.49 / 4.30	
7A	24/21	4.71 / 3.61	5.55 / 4.25	
17	29/25	4.78 / 3.55	5.64 / 4.19	
8	26/22	4.87 / 3.49	5.74 / 4.11	
19	25/21	4.90 / 3.46	5.78 / 4.08	
9A	24/20	4.94 / 3.43	5.83 / 4.05	
9	23/19	4.99 / 3.40	5.88 / 4.01	
11	27/22	5.06 / 3.35	5.96 / 3.96	
3	26/21	5.10 / 3.32	6.02 / 3.92	
13	25/20	5.15 / 3.30	6.08 / 3.89	
18	29/23	5.19 / 3.27	6.12 / 3.85	
18A	28/22	5.28 / 3.26	6.22 / 3.84	
4A	23/18	5.26 / 3.22	6.21 / 3.80	
4	27/21	5.29 / 3.20	6.25 / 3.78	
20	26/20	5.36 / 3.17	6.32 / 3.74	
22	25/19	5.42 / 3.13	6.39 / 3.69	
16	28/21	5.49 / 3.09	6.48 / 3.65	
10	27/20	5.56 / 3.05	6.56 / 3.60	
34	26/19	5.64 / 3.00	6.65 / 3.55	
14	25/18	5.72 / 2.97	6.75 / 3.50	
35	24/17	5.81 / 2.92	6.86 / 3.44	
32	27/19	5.85 / 2.90	6.91 / 3.42	
24	29/20	5.97 / 2.84	7.05 / 3.35	
36	25/17	6.06 / 2.80	7.14 / 3.30	
23	27/18	6.18 / 2.74	7.29 / 3.24	
21	26/17	6.30 / 2.69	7.43 / 3.17	
27	34/22	6.37 / 2.67	7.51 / 3.14	
43	25/16	6.44 / 2.64	7.59 / 3.11	
28	30/19	6.51 / 2.61	7.67 / 3.08	
29	24/15	6.59 / 2.58	7.78 / 3.04	
30	34/21	6.67 / 2.54	7.87 / 3.00	
41	28/17	6.79 / 2.50	8.00 / 2.95	
31	35/21	6.86 / 2.47	8.10 / 2.92	
33A	27/16 24/14	6.95 / 2.44 7.06 / 2.40	8.20 / 2.88	
31A 50	28/16	7.06 / 2.40	8.33 / 2.83 8.51 / 2.78	

# **Premium Quick Change Gears**



Premium 10 Spline Quick Change Gears are produced from 9310 high strength alloy steel. The gears are then drilled for weight and REM® polished.

> QCGHD-<u>set#</u> Heavy Duty Forged Quick Change Gear-Lightened/Polished

# **GEARCHART** 24" x 18"

Laminated Gear Charts are available



# #20 gear set weighs 4.48 lbs.

(# top teeth) /	(# bottom teet	h) x R&P Ratio :	= Final Drive
`	l) / (Gear Ratio)	x (New Gear Ra	atio) = New
KPIVI			
8200	5.42	5.56	8400
	(Current RPM RPM	(Current RPM) / (Gear Ratio) RPM	

		10 Spline Gear Ratios	
Gear Set	No. of Teeth	4.12 Ring & Pinion (8-33 Teeth)	4.86 Ring & Pinion (7-34 Teeth)
1	23/23	4.12 / 4.12	4.86 / 4.86
2	28/27	4.27 / 3.97	5.04 / 4.69
15	20/19	4.33 / 3.91	5.11 / 4.62
26	29/27	4.42 / 3.84	5.22 / 4.52
6	25/23	4.47 / 3.79	5.28 / 4.47
25	22/20	4.53 / 3.75	5.35 / 4.42
12	29/26	4.59 / 3.69	5.42 / 4.35
7	26/23	4.66 / 3.64	5.49 / 4.30
7A	24/21	4.71 / 3.61	5.55 / 4.25
17	29/25	4.78 / 3.55	5.64 / 4.19
8	26/22	4.87 / 3.49	5.74 / 4.11
19	25/21	4.90 / 3.46	5.78 / 4.08
9A	24/20	4.94 / 3.43	5.83 / 4.05
9	23/19	4.99 / 3.40	5.88 / 4.01
11	27/22	5.06 / 3.35	5.96 / 3.96
3	26/21	5.10 / 3.32	6.02 / 3.92
13	25/20	5.15 / 3.30	6.08 / 3.89
18	29/23	5.19 / 3.27	6.12 / 3.85
18A	28/22	5.28 / 3.26	6.22 / 3.84
4A	23/18	5.26 / 3.22	6.21 / 3.80
4	27/21	5.29 / 3.20	6.25 / 3.78
20	26/20	5.36 / 3.17	6.32 / 3.74
22	25/19	5.42 / 3.13	6.39 / 3.69
16	28/21	5.49 / 3.09	6.48 / 3.65
10	27/20	5.56 / 3.05	6.56 / 3.60
34	26/19	5.64 / 3.00	6.65 / 3.55
14	25/18	5.72 / 2.97	6.75 / 3.50
35	24/17	5.81 / 2.92	6.86 / 3.44
32	27/19	5.85 / 2.90	6.91 / 3.42
24	29/20	5.97 / 2.84	7.05 / 3.35
36	25/17	6.06 / 2.80	7.14 / 3.30
23	27/18	6.18 / 2.74	7.29 / 3.24
21	26/17	6.30 / 2.69	7.43 / 3.17
27	34/22	6.37 / 2.67	7.51 / 3.14
43	25/16	6.44 / 2.64	7.59 / 3.11
28	30/19	6.51 / 2.61	7.67 / 3.08
29	24/15	6.59 / 2.58	7.78 / 3.04
30	34/21	6.67 / 2.54	7.87 / 3.00
41	28/17	6.79 / 2.50	8.00 / 2.95
31	35/21	6.86 / 2.47	8.10 / 2.92
33A	27/16	6.95 / 2.44	8.20 / 2.88
31A	24/14	7.06 / 2.40	8.33 / 2.83
50	28/16	7.21 / 2.35	8.51 / 2.78

# Friction Fighter Sportsman Series Quick Change Gears



Friction Fighter Sportsman Series 10 Spline Quick Change Gears are produced from high strength 9310 alloy steel and precision hobbed. The gears are lightened and REM® polished. There isn't a nicer gear set available for the money.

FFSSQCG - set#
Friction Fighter Quick
Change Gears



GEARCHART

24" x 18"

Laminated Gear

Charts are

available



# #20 gear set weighs 4.74 lbs.

To Determine Final Drive (# top teeth) / (# bottom teeth) x R&P Ratio = Final Drive

To Determine RPM
Change
Example: (# top teeth) / (# bottom teeth) x R&P Ratio = Final Drive
(Current RPM) / (Gear Ratio) x (New Gear Ratio) = New
RPM
8200 5.42 5.56 8400

		FFSSQCG 10 Spline Gear Ra	TIOS
Gear Set	No. of Teeth	4.12 Ring & Pinion (8-33 Teeth)	4.86 Ring & Pinion (7-34 Teeth)
1	23/23	4.12 / 4.12	4.86 / 4.86
2G	24/23	3.96 / 4.33	4.67 / 5.11
15G	22/21	3.94 /4.32	4.64 / 5.09
6	25/23	3.80 / 4.48	4.47 / 5.28
12	29/26	3.70 / 4.60	4.36 / 5.42
7	26/23	3.67 / 4.66	4.33 / 5.50
7G	24/21	3.61 / 4.71	4.25 / 5.55
8G	27/23	3.51 / 4.84	4.14 / 5.71
9G	24/20	3.44 / 4.95	4.05 / 5.83
11	27/22	3.36 / 5.06	3.96 / 5.96
13	25/20	3.30 / 5.16	3.89 / 6.08
4G	23/18	3.23 / 5.27	3.81 / 6.21
4	27/21	3.21 / 5.30	3.78 / 6.25
20	26/20	3.17 / 5.36	3.74 / 6.32
22	25/19	3.14 / 5.43	3.69 / 6.40
16	28/21	3.09 / 5.50	3.65 / 6.48
10	27/20	3.06 / 5.57	3.60 / 6.56
34	26/19	3.02 / 5.64	3.55 / 6.65
14	25/18	2.97 / 5.73	3.50 / 6.75
35	27/19	2.90 / 5.86	3.42 / 6.91
32	27/19	2.93 / 5.90	3.45 / 6.95
32G	26/18	2.85 / 5.96	3.36 / 7.02
37	28/19	2.80 / 6.08	3.30 / 7.16
23	27/18	2.75 / 6.19	3.24 / 7.29
21	26/17	2.70 / 6.31	3.18 / 7.43
43	28/18	2.65 / 6.42	3.13 / 7.56
28G	27/17	2.60 / 6.55	3.06 / 7.72
30	34/21	2.55 / 6.68	3.00 / 7.87
41	28/17	2.50 / 6.79	2.95 / 8.00
33G	27/16	2.45 / 6.96	2.88 / 8.20
31G	31/18	2.40 / 7.10	2.82 / 8.37
50	28/16	2.36 / 7.22	2.78 / 8.51

# Friction Fighter Quick Change Gears



Simply stated Friction Fighter 10 Spline Quick
Change Gears are the strongest, lightest, highest
quality gears available. 9310 Ultra high strength
steel, stone ground, cryogenic processed and
REM® finished - The gear mesh area is
only 1" wide eliminating friction.

GEARCHART

FFQCG-<u>set#</u>
Friction Fighter Quick
Change Gears



GEARCHART

24" x 18"

Laminated Gear

Charts are
available



# #20 gear set weighs 4.23 lbs.

To Determine Final Drive

To Determine RPM
Change
Example:

(# top teeth) / (# bottom teeth) x R&P Ratio = Final Drive

(# top teeth) / (# bottom teeth) x R&P Ratio = Final Drive

(Current RPM) / (Gear Ratio) x (New Gear Ratio) = New

RPM

8200 5.42 5.56 8400

FFQCG 10 Spline Gear Ratios			
Gear Set	No. of Teeth	4.12 Ring & Pinion (8-33 Teeth)	4.86 Ring & Pinion (7-34 Teeth)
1	23/23	4.12 / 4.12	4.86 / 4.86
2G	24/23	3.96 / 4.33	4.67 / 5.11
15G	22/21	3.94 /4.32	4.64 / 5.09
6	25/23	3.80 / 4.48	4.47 / 5.28
12	29/26	3.70 / 4.60	4.36 / 5.42
7	26/23	3.67 / 4.66	4.33 / 5.50
7G	24/21	3.61 / 4.71	4.25 / 5.55
8G	27/23	3.51 / 4.84	4.14 / 5.71
9G	24/20	3.44 / 4.95	4.05 / 5.83
11	27/22	3.36 / 5.06	3.96 / 5.96
13	25/20	3.30 / 5.16	3.89 / 6.08
4G	23/18	3.23 / 5.27	3.81 / 6.21
4	27/21	3.21 / 5.30	3.78 / 6.25
20	26/20	3.17 / 5.36	3.74 / 6.32
22	25/19	3.14 / 5.43	3.69 / 6.40
16	28/21	3.09 / 5.50	3.65 / 6.48
10	27/20	3.06 / 5.57	3.60 / 6.56
34	26/19	3.02 / 5.64	3.55 / 6.65
14	25/18	2.97 / 5.73	3.50 / 6.75
35	27/19	2.90 / 5.86	3.42 / 6.91
32	27/19	2.93 / 5.90	3.45 / 6.95
32G	26/18	2.85 / 5.96	3.36 / 7.02
37	28/19	2.80 / 6.08	3.30 / 7.16
23	27/18	2.75 / 6.19	3.24 / 7.29
21	26/17	2.70 / 6.31	3.18 / 7.43
43	28/18	2.65 / 6.42	3.13 / 7.56
28G	27/17	2.60 / 6.55	3.06 / 7.72
30	34/21	2.55 / 6.68	3.00 / 7.87
41	28/17	2.50 / 6.79	2.95 / 8.00
33G	27/16	2.45 / 6.96	2.88 / 8.20
31G	31/18	2.40 / 7.10	2.82 / 8.37
50	28/16	2.36 / 7.22	2.78 / 8.51

# **XR-1**

### XR1-4.86

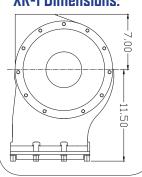
BullDog XR-1 4.86 Complete

Rear





# XR-1 Dimensions:





The BullDog XR-1 is the original BullDog Quick Change. Since being introduced in 2004, the BullDog XR-1 has raised the bar in performance, reliability and durability. The XR-1 is chosen by some of the sport's top professionals. "It takes a lick 'n and keeps on tick 'n."

# Standard Features Include:

- O-Ringed Aluminum Gear Cover
- Heat Treated Lower Shaft
- Breather Assembly

- Timken® Pinion Bearings
- Non twist one bolt shifter mount
- 3 quarts BullDog Blood Oil
- Torque Tube Studs
- · Center Section warranty
- Ease-Align Shifter Arm

# Important Specs

Side Bell Nuts- 30 ft./lbs.

Threaded Ring Gear- 60 ft./lbs. w/ Red threadlocker

Pinion Retainer Bolts- 25 ft./lbs. Pinion Backlash- .004-.008

Rotational Pinion Preload (No axle) - 25 in/lbs. @ 70° F

Rotational Pinion Preload (Complete Assembly) - 48 in/lbs. @ 70° F

Starting Recommendations for Shims Left- .080" Right - .160"

# Weight Savings of Some Popular Options

XR-1 4.86 Std Rear = 82 lbs.

Description	Savings
4.12 Ring & Pinion	.75 lbs.
EDM Ring Gear	.80 lbs.
Titanium Lower Shaft (Internal 10-10)	1.18 lbs.
Titanium Hardware	.89 lbs.
2" I.D. Axle	2.27 lbs.

# Important Driveline Lengths when using XR-1 with a 40" Engine Setback

Internal 10-10 Driveshaft - 29" w/ U-Joint Spring DMI Style Swivel Coupler Driveshaft - 26.5" w/ U-Joint Spring Winters Style Swivel Coupler Driveshaft - 27.5" w/o a U-Joint Spring Torque Tube - 27"

# Popular XR-1 Options More options available- contact your DMI sales associate for a complete listing.

# Option 1- Thermal Coating

1-A Black Thermal Coating

# Option 2- Ring & Pinion

- 2-A EDM Ring Gear
- 2-B REM® Ring & Pinion
- 2-C REM® / EDM Ring and Pinion
- 2-F Super G Ring and Pinion

### **Option 3- Lower Shaft**

- 3-A Titanium Lower Shaft for Internal 10-10
- 3-B Swivel Spline Coupler Steel Lower Shaft
- 3-C Swivel Spline Coupler Titanium Lower Shaft
- 3-D Winters Style Swivel Coupler Steel Lower Shaft
- 3-E Winters Style Swivel Coupler Titanium Lower Shaft
- 3-J 32 Spline Coupler w/ Steel Lower Shaft
- 3-K 32 Spline Coupler w/ Titanium Lower Shaft

# **Option 4- Axles**

- 4-A 2" I.D. Axle 7068 Material
- 4-F 2" I.D. Axle 7068 Material Split Bearing Style
- 4-G 2" I.D. Axle 7068 Material TSR Style
- 4-H 4-H Split Bearing Style Axle
- 4-J 1.875" I.D. Axle for 31" RR Bar
- 4-K 2" I.D. Axle for 31" RR Bar
- 4-L 2" I.D. Split Bearing Style Axle for 31" RR Bar
- 4-M 1.875" I.D. Split Bearing Style Axle for 31" RR Bar

# Option 6- Accessory Packs

6-A Accessory Pack

# Option 7- Thru Bolts

- 7-A Titanium Bolt Kit
- 7-B Titanium Side Bell Studs Only

### Option 8- Misc.

8-E PROglide Bearings



All bearings are available with PROglide treatment. PROglide provides friction reduction. Utilizing nano particles that act as sponges for oil PROglide has achieved unimaginable results. The process adds no tolerance to the material being treated therefore the limits are nearly endless. Are you ready to ride the Glide?

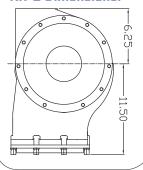


Quick Change XR2-4.12 BullDog XR-2 4.12 Complete

XR2-4.86 BullDog XR-2 4.86 Complete Rear

Rear

# **XR-2 Dimensions:**



Without Snout Adapter

The BullDog XR-2 was introduced for the 2009 Season. The XR-2 uses the same proven internal components as the XR-1. The weight savings of the XR-2 comes from its unique futuristic housing design. The snout area is strengthened by the addition of internal casting material and external ribs. The XR-2 is the clear cut choice for the weight conscious racer who still demands reliability.

### Standard Features Include:

- O-Ringed Aluminum Gear Cover
- Heat Treated Lower Shaft
- Breather Assembly
- Timken® Pinion Bearings
- Non twist one bolt shifter mount
- 3 quarts BullDog Blood Oil
- Torque Tube Studs
- Ease-Align Shifter Arm

 Aluminum Front Snout Spacer for Internal 10-10

# Important Specs

Side Bell Nuts- 30 ft./lbs.

Threaded Ring Gear- 60 ft./lbs. w/ Red threadlocker

Pinion Retainer Bolts- 25 ft./lbs.

XR-2 Snout Locking Ring- 70 ft./lbs.

XR-2 Front Spacer Plate Bolts- 35 ft./lbs.

Pinion Backlash- .004-.008

Rotational Pinion Preload (No axle) - 25 in/lbs. @ 70° F

Rotational Pinion Preload (Complete Assembly) - 48 in/lbs. @ 70° F

Starting Recommendations for Shims Left- .060" Right - .060"

# Weight Savings of Some Popular Options

XR-2 4.86 Std Rear = 78 lbs.

Description	Savings
4.12 Ring & Pinion	.75 lbs.
EDM Ring Gear	.80 lbs.
Titanium Lower Shaft (Internal 10-10)	1.18 lbs.
Titanium Hardware	.89 lbs.
2" I.D. Axle	2.27 lbs.

# Important Driveline Lengths when using XR-2 with a 40" Engine Setback

Internal 10-10 Driveshaft - 29" w/ U-Joint Spring

DMI Style Swivel Coupler Driveshaft w/ Snout Spacer - 26.5" w/ U-Joint Spring

Winters Style Swivel Coupler Driveshaft w/ Snout Spacer - 27.5" w/o a U-Joint Spring

Torque Tube w/ Snout Spacer - 27"

Internal DMI Style Swivel Coupler Driveshaft w/o Snout Spacer - 29.25" w/ U-Joint Spring

Internal Winters Style Swivel Coupler Driveshaft w/o Snout Spacer - 30.5" w/o a U-Joint Spring

Torque Tube w/o Snout Spacer - 28"

# Popular XR-2 Options More options available- contact your DMI sales associate for a complete listing.

# Option 1- Thermal Coating

1-A Black Thermal Coating

# Option 2- Ring & Pinion

- 2-A EDM Ring Gear
- 2-B REM® Ring & Pinion
- 2-C REM® / EDM Ring and Pinion
- 2-F Super G Ring and Pinion

### **Option 3- Lower Shaft**

- 3-A Titanium Lower Shaft for Internal 10-10
- 3-B Swivel Spline Coupler Steel Lower Shaft
- 3-C Swivel Spline Coupler Titanium Lower Shaft
- 3-D Winters Style Swivel Coupler Steel Lower Shaft
- 3-E Winters Style Swivel Coupler Titanium Lower Shaft
- 3-J 32 Spline Coupler w/ Steel Lower Shaft
- 3-K 32 Spline Coupler w/ Titanium Lower Shaft

# **Option 4- Axles**

- 4-A 2" I.D. Axle 7068 Material
- 4-B 54-4 Beast Style Axle
- 4-F 2" I.D. Axle 7068 Material Split Bearing Style
- 4-G 2" I.D. Axle 7068 Material TSR Style
- 4-H 4-H Split Bearing Style Axle
- 4-J 1.875" I.D. Axle for 31" RR Bar
- 4-K 2" I.D. Axle for 31" RR Bar
- 4-L 2" I.D. Split Bearing Style Axle for 31" RR Bar
- 4-M 1.875" I.D. Split Bearing Style Axle for 31" RR Bar

# Option 6- Accessory Packs

6-A Accessory Pack

# Option 7- Thru Bolts

- 7-A Titanium Bolt Kit
- 7-B Titanium Side Bell Studs Only

### Option 8- Misc.

8-E PROglide Bearings

### Option 9- XR-2 Options Only

- 9-A Swivel Coupler w/ Steel Shaft & Snout Spacer
- 9-B Swivel Coupler w/ Titanium Shaft & Snout Spacer
- 9-C Winters Style Swivel Coupler w/ Steel Shaft & Snout Spacer
- 9-D Winters Style Swivel Coupler w/ Titanium Shaft & Snout Spacer





All bearings are available with PROglide treatment. PROglide provides friction reduction. Utilizing nano particles that act as sponges for oil PROglide has achieved unimaginable results. The process adds no tolerance to the material being treated therefore the limits are nearly endless. Are you ready to ride the Glide?



The BullDog XR-3 utilizes an 8" 4.12 ring and pinion that saves more than 2.5lbs compared to a conventional 10" gear. The XR-3 was developed using the latest computer F.E.A. technology to develop and engineer the rear. The rear is a direct replacement utilizing standard 10 spline quick change gears commonly used in full size rears along with conventional length driveline components. The rear offers an additional 2" of fuel cell clearance and 1.75" of seat clearance. The ring and pinion has been used successfully in applications up to 800 horsepower on both dirt and pavement. This rear is an excellent choice for RaceSaver®, 305 or 360 sprint car competitors.

# Standard Features Include:

- O-Ringed Rear Cover
- Jack Pad
- Increased Oil Reservoir
- Temperature Reducing Cooling Fins
- Billet Aluminum Front Bearing Housing
- Heat Treated Lower Shaft
- Breather Assembly

- Non Twist One Bolt Shifter Mount
- · 3 quarts BullDog Blood Oil

### Important Specs

Side Bell Nuts- 30 ft./lbs.

Threaded Ring Gear- 60 ft./lbs. w/ Red threadlocker

Pinion Retainer Bolts- 25 ft./lbs.

Pinion Backlash- .004-.008

Rotational Pinion Preload (No axle) - 25 in/lbs. @ 70° F

Rotational Pinion Preload (Complete Assembly) - 48 in/lbs. @ 70° F

Starting Recommendations for Shims Left- .062" Right - .062"

# **Weight Savings of Some Popular Options**

XR-3 4.12 Std Rear = 78 lbs.

Description	Savings
EDM Ring Gear	1.75 lbs.
Titanium Lower Shaft (Internal 10-10)	1.18 lbs.
Titanium Hardware	.89 lbs.
2" I.D. Axle	2.27 lbs.

# Important Driveline Lengths when using XR-3 with a 40" Engine Setback

Internal 10-10 Driveshaft - 29" w/ U-Joint Spring

DMI Style Swivel Coupler Driveshaft – 26.5" w/ U-Joint Spring

Winters Style Swivel Coupler Driveshaft – 27.5" w/o a U-Joint Spring

Torque Tube – 27"

# Popular XR-3 Options More options available- contact your DMI sales associate for a complete listing.

# Option 1- Thermal Coating

1-A Black Thermal Coating

# Option 2- Ring & Pinion

- 2-A EDM Ring Gear
- 2-B REM® Ring & Pinion
- 2-C REM® / EDM Ring and Pinion
- 2-F Super G Ring and Pinion

### **Option 3- Lower Shaft**

- 3-A Titanium Lower Shaft for Internal 10-10
- 3-B Swivel Spline Coupler Steel Lower Shaft
- 3-C Swivel Spline Coupler Titanium Lower Shaft
- 3-D Winters Style Swivel Coupler Steel Lower Shaft
- 3-E Winters Style Swivel Coupler Titanium Lower Shaft
- 3-J 32 Spline Coupler w/ Steel Lower Shaft
- 3-K 32 Spline Coupler w/ Titanium Lower Shaft

### **Option 4- Axles**

- 4-A 2" I.D. Axle 7068 Material
- 4-F 2" I.D. Axle 7068 Material Split Bearing Style
- 4-G 2" I.D. Axle 7068 Material TSR Style
- 4-H Split Bearing Style Axle
- 4-J 1.875" I.D. Axle for 31" RR Bar
- 4-K 2" I.D. Axle for 31" RR Bar
- 4-L 2" I.D. Split Bearing Style Axle for 31" RR Bar
- 4-M 1.875" I.D. Split Bearing Style Axle for 31" RR Bar

# Option 6- Accessory Packs

6-A Accessory Pack

# Option 7- Thru Bolts

- 7-A Titanium Bolt Kit
- 7-B Titanium Side Bell Studs Only

Skimedder

### Option 8- Misc.

8-E PROglide Bearings



All bearings are available with PROglide treatment. PROglide provides friction reduction. Utilizing nano particles that act as sponges for oil PROglide has achieved unimaginable results. The process adds no tolerance to the material being treated therefore the limits are nearly endless. Are you ready to ride the Glide?

# Important XR-1, XR-2 & XR-3 Information

#### **EDM Ring Gear**

EDM ring gears decrease weight and increase flex. Ring gear bolts should be replaced and torqued to 60ft. lbs. using blue threadlocker every 500 laps when using an EDM ring gear. EDM ring gears are not recommended in high horsepower (800+) applications.

#### **REM**®

BullDog offers ring and pinion with REM® treatment. REM® Isotropic Superfinish Process (ISP) offers many advantages over other "Super Finishing" techniques. REM® removes the microscopic peaks created during the machining process. The treatment provides a more uniformed surface reducing friction. Regular REM® features a mirror-like finish.

#### Swivel Couplers

DMI style swivel couplers must be serviced every 6-8 races. Disassemble, clean thoroughly, inspect and replace worn components. Pack liberally with DMI Swivel Coupler Lube (Part# DMI-SWILUBE) and install in coupler, insert seal and install snap ring ensuring engagement.

WP Style couplers are built standard without o-rings on the lower shaft. This enables the coupler to run in gear lube. Disassemble and inspect every 12 nights. Disassemble, clean thoroughly, inspect and replace worn components. Re-assemble with a light coat of grease, install seal and snap ring ensuring engagement. Zip tie end of seal to driveshaft.



DMI didn't guess when creating the specs every quick change rear is built to and we didn't copy the competitors. We rented racetracks, did extensive R&D and tested many different rotational pinion preloads and pinion backlash settings until we found the perfect one. DMI Bulldog Quick Changes are produced from 100% aircraft magnesium and that is a major factor in the specification we developed. We know our quick changes feel tight when new but trust us: They need to be that way to perform at their maximum potential.

# Important XR-1, XR-2 & XR-3 Information

#### Loaded Pinion Removal

Heat area around the pinion until the pinion is able to freely be removed. DO NOT concentrate heat around the pinion nose bearing.

#### Loaded Pinion Installation

Heat area around the pinion until the pinion is able to freely drop into center. DO NOT concentrate heat around the pinion nose bearing support.

#### Open Tube Rear Set-Up

After installing pinion allow rear to return to room temperature. (70° F) Adjust pinion nut until 25 in./ lbs. rotational preload is achieved without the spool. Lubricate posi-retainer o-ring and install posi-lock retainer on pinion nut using finger pressure only. Rotate retainer if needed to align locking splines. Install axle with starting shim recommendations.(Pg.36) Install sidebell and tighten four nuts to 30 ft/lbs. Verify pinion backlash to be .004"-.008" minimum when checked on 10 spline tooth of pinion using dial indicator. Adjust spool shims accordingly until desired amount of pinion backlash is achieved. Once desired amount of pinion backlash is achieved verify rotation pinion preload to be 45in/lbs. Once set-up is complete remove side bell. Install side bell seal, o-rings and axle seals. Re-install side bell with ring gear back stop in place. Torque side bell nuts to 30 ft. /lbs. Tighten ring gear backstop against ring gear and back off turn. Jam ring back stop nut.



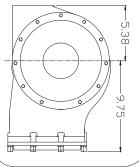




#### **BB-1 Dimensions:**

BB-3.78

44-3 Axle



The Baby BullDog is the strongest rear made for midget racing. Compared to other rears on the market, the Baby BullDog offers strength, reliability, is user friendly and doesn't leak. 7068 aircraft aluminum makes a Baby BullDog axle the strongest available - period!

#### Standard Features Include:

- Breather Assembly
- Heat Treated Lower Shaft
- Non-Twist One Bolt Shifter Mount
- O-Ringed Aluminum Gear Cover
- 3 Quarts BullDog Blood Oil
- Torque Tube Studs

• 9/16" Hex on all Plugs

#### Important Specs

Side Bell Nuts- 30 ft./lbs.

Threaded Ring Gear- 60 ft./lbs. w/ Red threadlocker

Pinion Retainer Bolts- 25 ft./lbs.

Pinion Backlash- .004-.008

Rotational Pinion Preload (No axle) - 25 in/lbs. @ 70° F

Rotational Pinion Preload (Complete Assembly) - 48 in/lbs. @ 70° F

Starting Recommendations for Shims Left- .065" Right - .055"

### Weight Savings of Some Popular Options

 $BB-1 \ 4.33 = 55 \ lbs.$ 

Description	Savings
EDM Ring Gear	.48 lbs.
Titanium Lower Shaft (Internal 10-10)	.81 lbs.
Titanium Hardware	.75 lbs.
36 Spline Axle	2.5 lbs.

Popular BB-1 Options More options available- contact your DMI sales associate for a complete listing.

#### Option 1- Thermal Coating

1-A Black Thermal Coating

#### Option 2- Ring & Pinion

- 2-A EDM Ring Gear
- 2-B REM® Ring & Pinion
- 2-C REM® / EDM Ring and Pinion

#### Option 3- Lower Shaft

- 3-A Titanium Lower Shaft for Internal 10-10
- 3-D Winters Style Swivel Coupler Steel Lower Shaft
- 3-E Winters Style Swivel Coupler Titanium Lower Shaft

#### Option 4- Axles

- 4-E 51-2 Beast Style 36 Spline
- 4-F 44-3 36 Spline

#### Option 7- Thru Bolts

- 7-A Titanium Bolt Kit
- 7-B Titanium Side Bell Studs Only

#### Option 8- Misc.

8-E PROglide Bearings



The Baby BullDog won the first race it ever ran. Bryan Clauson, Battle at the Center in December, 2011



All bearings are available with PROglide treatment. PROglide provides friction reduction. Utilizing nano particles that act as sponges for oil PROglide has achieved unimaginable results. The process adds no tolerance to the material being treated therefore the limits are nearly endless. Are you ready to ride the Glide?



#### **SMXR1-4.12**

BullDog XR-1 4.12 Complete Rear Super Mod Style

#### SMXR1-4.86

BullDog XR-1 4.86 Complete Rear Super Mod Style





The SMXR-1 is available for the ultra-tough supermodifieds. It's the first integral side bell rear available for Super Mods. The aircraft quality 7068 aluminum 60-19 axle offers superior strength over the competition. This rear was developed in conjunction with ACME Racing, many time MSA champions!

#### Standard Features Include:

- O-Ringed Aluminum Gear Cover
- Breather Assembly
- Non-Twist Shifter Mount
- 3 Quarts BullDog Blood
- Ease-Align Shifter Arm
- Front Seal Plate



BullDog Quick Change Rears released the XR-1 rear at the 2004 Performance Racing Industry Show in Indianapolis. The XR-2 was introduced at the 2008 PRI Show in Orlando. 2009 saw the introduction of the CT-1 at IMIS in Indy. The Baby Bulldog made its debut in 2012 at IMIS and the BO5 was released in PRI's return to Indy in December 2013.

# Popular SMXR-1 Options More options available- contact your DMI sales associate for a complete listing. Option 1- Thermal Coating 1-A Black Thermal Coating Option 2- Ring & Pinion 2-A EDM Ring Gear 2-B REM® Ring & Pinion 2-C REM® / EDM Ring and Pinion

All bearings are available with PROglide treatment. PROglide provides friction reduction. Utilizing nano particles that act as sponges for oil PROglide has achieved unimaginable results. The process adds no tolerance to the material being treated therefore the limits are nearly endless. Are you ready to ride the Glide?

# Open Tube | Center Sections | Side Bells | Components

#### **Center Sections**



XR-1 Magnesium Rear Center RRC-1005-01

XR-1 Magnesium Rear Center Section - Black Thermal Coated



XR-2 Magnesium Rear Center Section RRC-1006-01

XR-2 Magnesium Rear Center Section - Black Thermal Coated



XR-3 Mag Center Section RRC-0902-01 XR-3 Mag Center Section -Black Thermal Coated



RRC-4000 Baby BullDog Mag Center Section RRC-4000-01

Baby BullDog Mag Center Section - Black Thermal Coated

#### **Side Bells**



**RRC-1100** XR-1 Magnesium Side Bell w/ Brake Mount RRC-1100-01

XR-1 Magnesium Side Bell w/ Brake Mount - Black Thermal Coated



**RRC-1101** XR-2 Magnesium Sidebell w/ Brake Mount RRC-1101-01

XR-2 Magnesium Side Bell w/ Brake Mount - Black Thermal Coated



RRC-0970 XR-3 Mag Side Bell RRC-0970-01 XR-3 Mag Side Bell - Black Thermal Coated



RRC-4050 Baby BullDog Mag Side Bell RRC-4050-01

Baby BullDog Mag Side Bell -**Black Thermal Coated** 

#### XR-1, XR-2 and XR-3 Center and Side Bells Components



RRC-1034 **Breather Assembly** 



RRC-1010 Large Inspection Plug RRC-1015

Large Inspection Plug O-Ring



RRC-1016 Fill Level Plug RRC-1017

Fill Level Plug O-Ring



RRC-1020 Small Inspection Plug RRC-1025 Small Inspection Plug



3/8 Oil Drain Plug



XR-2 Snout RRC-1407 Swivel Coupler

RRC-1406 Locking Ring for

Seal for XR-2 Lower Shaft





RRC-1105 Side Bell O-Ring



RRC-1215 PG Axle Bearing Race RRC-1210 PG Axle Bearing



RRC-1109 Short Side Bell Stud RRC-1109T Short Sidebell Stud -

Titanium **RRC-1110** Side Bell Stud

RRC-1110T

Side Bell Stud - Titanium



O-Ring

RRC-1120 Side Bell Locknut RRC-1120A Side Bell Locknut -

Aluminum



RRC-1130 Side Bell Washer



**RRC-1150** Back Stop Aluminum

RRC-1146 Back Stop Washer

for CT-1 RRC-1140

Back Stop Set Screw RRC-1135

Ring Gear Back Stop



**RRC-1008** XR-2 Snout Spacer

RRC-1008A Washer for Alum. Snout

Spacer RRC-1008B

Bolt for Alum. Snout Spacer



RRC-1009 Silicone O-Ring for XR-2 Snout



RRC-1220 Axle Seal O-Ring **RRC-1217** Axle Seal



Tool



RRC-1900 Snout Locking Ring Wrench

# Open Tube Components | Rear Covers

#### **Baby BullDog Center and Side Bell Components**





RRC-4215 PS
Baby BullDog
Axle Bearing
Race
RRC-422D
Baby BullDog
Axle Seal
O-Ring
RRC-4217
Baby BullDog
Axle Seal



RRC-1475
Baby BullDog
Side Bell Stud
RRC-4210
Baby BullDog
Axle Bearing
RRC-4998
Baby BullDog
Gear Spacer
for 1" Wide
Gears



RRC-1735
Washer for
Shift Arm
RRC-4120
Baby BullDog
Side Bell
Locknut
RRC-4105
Baby BullDog
Side Bell
O-Ring

#### **Rear Covers and Components**



RRC-1386B Billet Alum. Rear Cover w/ Bearings -Black



RRC-1390 Gear Cover Bearing Retainer



RRC-4386 Baby BullDog and BO5 Rear Cover w/ Bearings



RRC-1350 PS
Rear Cover
Bearing



RRC-1391 Bolt for Gear Cover Retainer



RRC-4390 Baby BullDog and BO5 Rear Cover Bearing Retainer



RRC-1355 Rear Cover Stud



RRC-1345
Silicone
Sealing Ring
for Gear Cover



RRC-1340 Steel Insert Rear Cover Gasket



RRC-4350 PS
Baby BullDog
and BO5 Rear
Cover Bearing



RRC-1361 Rear Cover Nut - Black RRC-1361B



Rear Cover Nut - Blue RRC-1361G Rear Cover Nut -Gold



RRC-4345
Baby BullDog
and BO5
Silicone
Sealing Ring
for Gear
Cover



Spline has done it again! A product so revolutionary and awesome, it will change the industry. No more timely gear changes- with the Vault Lock Quick Change Cover, gear changes take only seconds. One ¼ turn off, change gears and a ¼ turn on. Done! Vault Lock Cover fits all popular brands of rears.



When changing gears it's a perfect time to inspect rear cover bearings, pinion bearings and stub shaft bearings for wear or damage.



BullDog was the first to utilize an o-ring to seal the rear cover.

# **Open Tube Lower Shaft Assemblies**

#### Internal 10-10 XR-1, XR-2 and XR-3



#### WP Style Swivel XR-1, XR-3 and XR-2 with Snout Adaptor



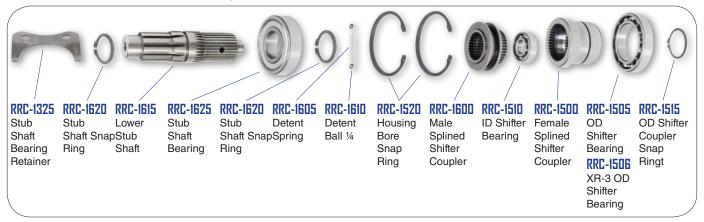
#### DMI Style Swivel XR-1, XR-3 and XR-2 with Snout Adaptor



IMPORTANT NOTE: XR-2 with internal swivel couplers use RRC-1438 (steel) or RRC-1439 (titanium) lower shafts. The XR-2 internal swivel also does not use RRC-1420 Spacer.

# **Open Tube Lower Shaft Assemblies**

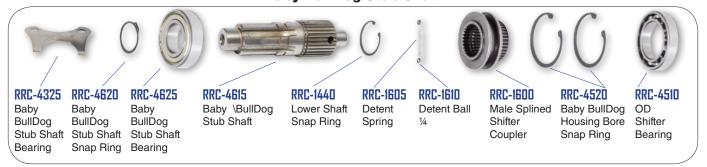
#### XR-1, XR-2 and XR-3 Stub Shaft and Shifter



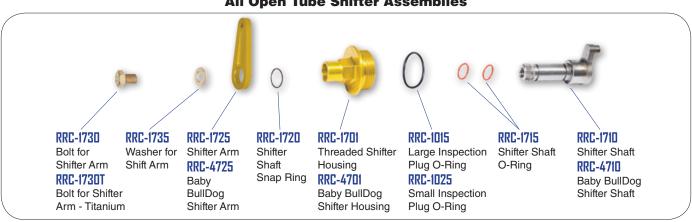
#### **Baby BullDog Internal 10-10**



#### **Baby BullDog Stub Shaft**



#### **All Open Tube Shifter Assemblies**





RRC-4300-05

3.78 Baby BullDog Ring and Pinion - REM®



/					_
	RRC-1300	4.12 Ring & Pinion - 12.75 lbs	RRC-1305	4.86 Ring & Pinion - 13.55 lbs	
	RRC-1300-02	4.12 EDM Ring & Pinion	RRC-1305-02	4.86 EDM Ring & Pinion	
	RRC-1300-02-05	4.12 EDM / REM® Ring & Pinion	RRC-1305-02-05	4.86 EDM / REM® Ring & Pinion	
	RRC-1300-05	4.12 REM® Ring & Pinion	RRC-1305-05	4.86 EDM O.D. & I.D / Polish Ring & Pinion	
	RRC-1300SG	4.12 Ring & Pinion - Super G Finish	RRC-1305SG	4.86 Ring & Pinion - Super G Finish	

RRC-1300SG AND RRC-1305SG RING & PINION FEATURE THE SUPER G Treatment. SUPER G treatment dramatically increases ring and pinion life in mega horsepower 410 winged sprint cars. SUPER G ring and pinions are highly recommended for any application that sees severe abuse. For more ring & pinion information see page 40





RRC-4305-05

4.33 Baby BullDog Ring and Pinion - REM®

# Open Tube Axles | Components

#### **Axle Bearings & Shims**



RRC-4230

.010 Axle

BullDog



RRC-4235

BullDog

Shim

Shim for Baby .012 Axle





.015 Axle

BullDog







RRC-1229 Axle Shim Kit

RRC-4229 Baby BullDog Shim Kit



RRC-1210 PG Open Tube Axle Bearing RRC-4210 🟴 Б

Open Tube Axle Bearing - Baby BullDog

#### **Open Tube Axles**



RRC-1200	Aluminum Axle 2" I.D. Long Splines w/ Spool	R
RRC-1200-TSR	Aluminum Axle 2" I.D. Long Splines w/Spool - TSR Style	R
RRC-1200-31	Aluminum Axle 2" I.D. Long Splines w/ Spool	R
RRC-1201	Aluminum Axle - Beast Style 54-4 w/ Spool	12
RRC-1201-31	XR-2 Aluminum Axle 2" I.D. Long Splines w/ Spool - 31" RS Torsion Bar	R
RRC-1202	XR-2 Aluminum Axle 2" I.D. Long Splines w/ Spool	R
RRC-1202-TSR	XR-2 Aluminum Axle 2" I.D. Long Splines w/ Spool - TSR Style	R
RRC-1203	Super 60-19 Axle	R
RRC-1204	Aluminum Axle - Beast Silver Crown Axle	R
RRC-1205	Aluminum Axle 1.875" I.D. Long Splines w/ Spool	_ <u>1</u> ;
RRC-1205-31	Aluminum Axle 1.875" I.D. Long Splines w/ Spool - 31" RS Torsion Bar	R
RRC-1206	Custom Axle - 7075 Material	R
RRC-1206HD	Custom Axle - 7068 Material	R
RRC-1207	XR-2 Aluminum Axle - Beast Style 54-4 w/ Spool	R
RRC-1208	XR-2 Aluminum Axle 1.875" I.D. Long Splines w/ Spool	R

RRC-1212	Aluminum Axle 2" I.D. Long Splines w/ Spool -
	Split Bearing Style
RRC-1212HD	Aluminum Axle Long Splines w/ Spool - Split
	Bearing Style
RRC-	Aluminum Axle 1.875" I.D. Long Splines w/ Spool
1212HD-31	- Split Bearing Style - 31" RS Torsion Bar
RRC-1212-31	Aluminum Axle 2" I.D. Long Splines w/ Spool -
	Split Bearing Style - 31" RS Torsion Bar
RRC-1213	XR-2 Aluminum Axle 2" I.D. Long Splines w/
	Spool - Split Bearing Style
RRC-1213-31	XR-2 Aluminum Axle 2" I.D. Long Splines w/
	Spool - Split Bearing Style - 31" RS Torsion Bar
RRC-1213HD	XR-2 Aluminum Axle Long Splines w/ Spool -
	Split Bearing Style
RRC-	XR-2 Aluminum Axle 1.875" I.D. Long Splines w/
1213HD-31	Spool - Split Bearing Style - 31" RS Torsion Bar
RRC-4200	31 Spline 44-3 Baby BullDog Axle
RRC-4201	31 Spline44-1 Baby BullDog Axle
RRC-4202	36 Spline 44-3 Baby BullDog Axle
RRC-4203	36 Spline 51-2 Baby BullDog Axle
RRC-4204	BO5 Aluminum Axle
RRC-4205	BO5 Aluminum Axle - Split Bearing Style

# **Open Tube - Frequently Asked Questions**

# What is the proper oil level for a BullDog Rear and how do I fill it?

A The proper oil level varies dependant on the model. Below is a guide (all capacities are approximate)

XR-1, XR-2 and XR-3 - 2.5qts. Baby BullDog - 2qts.

The correct method of filling the rear is to remove the pinion inspection plug and the fill level plug located directly below the inspection plug. On all rears, both plugs are on the right side bell. Fill the rear until the fluid runs out the fill level hole. Re-install the fill level plug and add an additional 4-6 ounces of fluid. Re-install inspection plug. Both plugs only need to be "snug". Overtightening will cause the plug(s) to stick.

# Q What is the best oil for a BullDog Rear?

A We highly recommend BullDog Blood (see page 54) We do not re-package someone else's oil. We spent a lot of time and effort testing different formulations. Our oil is blended to our proprietary specs. If BullDog Blood isn't for you, we see good, consistent results from Driven 75w-110.

# What type of quick change gears will work in a BullDog Rear?

Any 10 spline quick change gear will work in the standard BullDogs. Any 6 spline gear will work in the Baby BullDogs. We do not recommend using helical cut gears. Always use gears with the machined lip facing out. Always install gears the same way. Never mix gear sets. Sets are machined as matched units.

# A How often should a ring and pinion be replaced?

A The inspection plug in the right side bell is placed there for a reason. Weekly inspection of the pinion should occur. Ring gears seldom show wear. Rotate the pinion slowly while inspecting the pinion through the hole. Look at the drive side of the tooth. Small pits need to be monitored. Once you determine the pinion pits are excessive, replace the ring and pinion. As long as the unit looks pit-free, there isn't a life cycle. Use it!

### 4 How often should axles be replaced?

A Open tube aluminum axles should be replaced every 1000 laps.

# WP Cross Reference - Open Tube & Closed Tube

#### **Open Tube**

DMI #	<u>Description</u>	WINTERS #	DMI #	<u>Description</u>	WINTERS:
RRC-1005	Magnesium Rear Center Section	K2225XHD	RRC-1325	Rear Cover - No Bearings	K6583
RRC-1010	Large Inspection Plug	5290	RRC-1330	2 Bolt Locking Tab	2374
RRC-1015	Large Inspection Plug O-Ring	7453	RRC-1335	Pinion Retainer Bolt	7110
RRC-1020	Small Inspection Plug	6857	RRC-1340	Rear Cover Gasket	6729HD
RRC-1025	Small Inspection Plug O-Ring	7454	RRC-1355	Rear Cover Stud	7802
RRC-1030	" NPT Allen Drain Plug	7111B	RRC-1360	Rear Cover High Nut	7794A
RRC-1100	Magnesium Side Bell w/Brake Mount	K6964-02	RRC-1366	Posi-Lock Retainer	6484
RRC-1105	Side Bell O-Ring	7403T	RRC-1367	Posi-Lock O-Ring	7445
RRC-1110	Side Bell Stud	2266	RRC-1368	Pinion Washer	5055
RRC-1120	Side Bell Locknut	7177N	RRC-1369	Posi-Lock Nut - RH	6485R
RRC-1125	Side Bell Bolt - Long	7117	RRC-1400	Internal 10-10 Coupler	6676
RRC-1126	Side Bell Bolt - Short	7787	RRC-1401	Aluminum Internal 10-10 Coupler	6676A
RRC-1130	Side Bell Washer	7178	RRC-1405	10-10 External Snap Ring	7657
RRC-1135	Ring Gear Back Stop	5010	RRC-1410	10-10 Front Bearing	7531
RRC-1140	Back Stop Set Screw	6149	RRC-1415	Internal 10-10 Seal	7242
RRC-1145	Back Stop Washer	7167	RRC-1420	Internal 10-10 Bearing Spacer	6680
RRC-1150	Back Stop Aluminum Nut	7137A	RRC-1425	10-10 Internal Snap Ring	7664
RRC-1200	Aluminum Axle 2" I.D. Long Splines w/Spool	5778UL	RRC-1430	Internal 10-10 Lower Shaft	6678-01
RRC-1201	Aluminum Axle - Beast Style 54-4	5778A-54-4	RRC-1431	Internal 10-10 Lower Shaft - Titanium	6678T
RRC-1205	Aluminum Axle 1.875" I.D. Long Splines w/Spool	5778L	RRC-1435	Lower Shaft O-Ring	7452
RRC-1210	Axle Bearing	7358	RRC-1440	Lower Shaft Snap Ring	7660
RRC-1215	Axle Bearing Race	7357	RRC-1444	External 10-10 Bearing	7383F
RRC-1217	Axle Seal	7224	RRC-1445	External 10-10 Lower Shaft	6249
RRC-1220	Axle O-Ring	7433	RRC-1447	External 10-10 Coupler	5987
RRC-1225	Axle Seal Spiral Lock	7626	RRC-1500	Female Splined Shifter Coupler	6252
RRC-1229	Rear Axle Shim Kit	6115	RRC-1505	O.D. Shifter Bearing	7391
RRC-1300	4.12 Ring and Pinion w/ Posi Lock	5715	RRC-1510	I.D. Shifter Bearing	7392
RRC-1301	Ring Bolt	7852	RRC-1515	O.D. Shifter Coupler Snap Ring	7673
RRC-1302	Ring Bolt Washer	7815	RRC-1520	Housing Bore Snap Ring	7636
RRC-1305	4.86 Ring and Pinion w/ Posi Lock	5401	RRC-1600	Male Splined Shifter Coupler	6265
RRC-1310	Small Pinion Bearing	7331	RRC-1605	Detent Spring	6318
RRC-1311	Big Pinion Bearing	7308	RRC-1610	Detent Ball	7347
RRC-1312	Big Pinion Bearing Race	7307	RRC-1615	Lower Stub Shaft	6250
RRC-1315	Pinion Bearing Spacer	5020	RRC-1616	Stub Shaft - Titanium	6250T
RRC-1320	Pinion Retainer Flange	6296A	RRC-1620	Stub Shaft Snap Ring	7637
RRC-1325	Stub Shaft Bearing Retainer	6267	RRC-1625	Stub Shaft Bearing	7390

#### **Closed Tube**

DMI#	<u>Description</u>	WINTERS #	DMI #	<u>Description</u>	WINTERS #
RRC-1000	CT-1 Magnesium Center Section	K5840	RRC-1172	CT-1 Side Bell Bearing for Steel Spool	7309
RRC-1001	Front Seal Plate for CT-1	5018-01ML	RRC-1270	CT-1 Aluminum Spool	5034-11A
RRC-1002	Front Seal for CT-1 Seal Plate	7204V	RRC-1271	CT-1 Aluminum Spool - Ultralight	5034-11UL
RRC-1002T	Front Seal Plate Teflon for CT-1	7204	RRC-1300	4.12 Ring & Pinion	5714
RRC-1003	Seal O-Ring for CT-1 Seal Plate	7474	RRC-1301	Ring Gear Bolt	7852
RRC-1004	O-Ring for CT-1 Seal Plate Flange	7413	RRC-1302	Ring Bolt Washer	7815
RRC-1007	Spiralock for Seal Plate	7652	RRC-1305	4.86 Ring & Pinion	5400
RRC-1010	Large Inspection Plug	5290	RRC-1310	Small Pinion Bearing	7331
RRC-1015	Large Inspection Plug O-Ring	7453	RRC-1311	Big Pinion Bearing - Timken	7308
RRC-1011	Bolt for CT-1 Seal Plate to Center	7110	RRC-1312	Big Pinion Bearing Race	7307
RRC-1011A	Bolt for CT-1 Seal Plate to Center - NCB	7101	RRC-1315	Pinion Bearing Spacer	5020
RRC-1012	Washer for CT-1 Seal Plate to Center	7114	RRC-1320	Pinion Retainer Flange	6296A
RRC-1102	CT-1 Magnesium Left Side Bell - 6 Rib	K1663-02	RRC-1330	2 Bolt Locking Tab	2374
RRC-1103	CT-1 Magnesium Right Side Bell - 6 Rib	K1663-01B	RRC-1335	Pinion Retainer Bolt	7110
RRC-1104	CT-1 Side Bell Axle Seal	7205	RRC-1355	Rear Cover Stud	7802
RRC-1105	Side Bell O-Ring	7403T	RRC-1361B	Rear Cover High Nut - Blue	7794ASB
RRC-1107	CT-1 Magnesium Left Side Bell - 8 Rib	K5016-02M	RRC-1366	Posi-Lock Retainer	6484
RRC-1108	CT-1 Magnesium Right Side Bell - 8 Rib	K5016-05	RRC-1367	Posi-Lock O-Ring	7445
RRC-1125	CT-1 5.5" Center / Side Bell Thru Bolt	7176	RRC-1368	Pinion Washer	5055
RRC-1127	CT-1 Side Bell Flange Nut	7177	RRC-1369	Posi-Lock Nut - RH	6485R
RRC-1130	Side Bell Washer	7178	RRC-1411	CT-1 Lower Shaft Bearing	7390
RRC-1135	Ring Gear Back Stop	5010	RRC-1427	CT-1 Steel Lower Shaft	5003
RRC-1140	Back Stop Set Screw	6149	RRC-1440	Lower Shaft Snap Ring	7660
RRC-1145	Back Stop Washer	7167	RRC-1480	CT-1 Front Yoke	5038
RRC-1150	Back Stop Aluminum Nut	7137A	RRC-1481	CT-1 Front Yoke Washer	5037
RRC-1170	CT-1 Side Bell Race	7310	RRC-1482	CT-1 Front Yoke Bolt	71094
RRC-1171	CT-1 Side Bell Bearing for Aluminum Spool	7340	RRC-1485	Aluminum Spacer for under CT-1 Front Yoke	6532

# BullDog Blood High-Performance Gear Oil



BullDog Blood 75-90w Synthetic Racing Gear Oil is track tested to meet the high demands placed on today's ring and pinions. BullDog Blood is a proprietary formula that features extreme pressure additives that aid in the prevention of micro-pitting and excessive wear. BullDog Blood's non-foaming formula lowers operating temperature and is the only choice when it comes to high performance gear oil. The special additives in BullDog Blood treat the metal and dramatically increases gear life.

As Spline says, "I NEED MY BLOOD!"

#### **BullDog1**

BullDog Blood - 1 gal.

BullDog5

BullDog Blood - 5 gal.

BullDog5QT

BullDog Blood - 5 QT

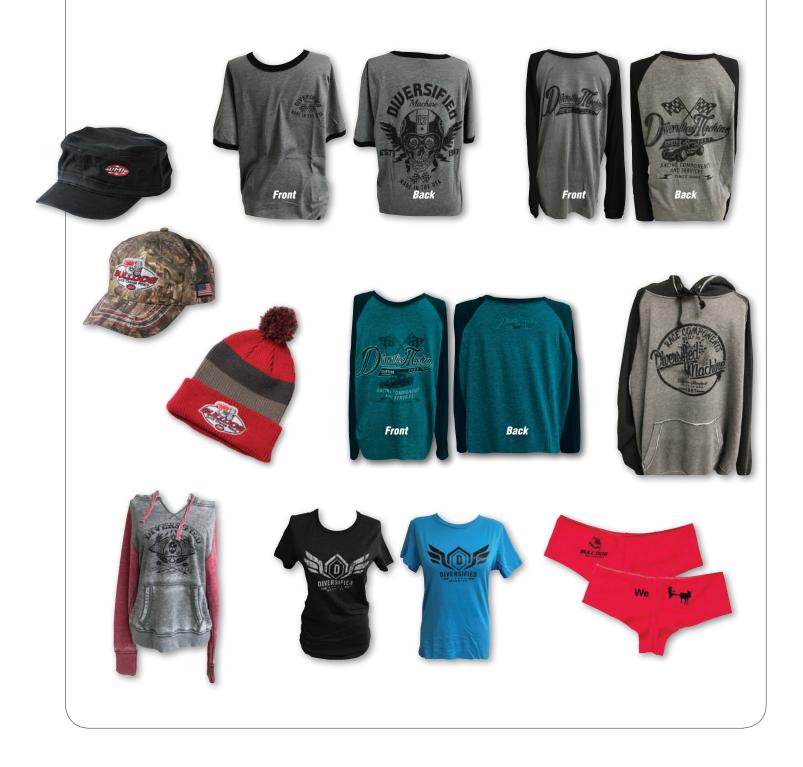
BullDogCASE

BullDog Blood - Case12 QTS

BullDogQT

BullDog Blood - QT

Show everybody you're part of the team! DMI and Bulldog apparel for men and women available for all seasons. Call today for some of the coolest race wear around.



# 600 Micro Rear Axles | Wheel Spacers | Axle Nuts

**B** = Also available in black





		icro Axles are ck Anodized	Spline	Length
	Dia	SK AHOUIZGU	Left	Right
	LRC-1251	50" Universal Micro Axle - 1.75" Spline - Black Anodized Splines	18.75"	10.75"
	LRC-1252	54.5" Universal Micro Axle - 1.75" Spline - Black Anodized Splines	18.5"	17.5"
	LRC-1253	54.5' Universal Micro Axle - 1.75" Spline - Black Anodized Splines	18.375"	18.375"
	LRC-1254	53" Universal Micro Axle - 2" Spline - Black Anodized Splines	18.5"	9.25"
	LRC-1255	53" Universal Micro Axle - 2" Spline - Black Anodized Splines	18.375"	17.375"
	LRC-1256	55.5" Universal Micro Axle - 1.75" Spline - Black Anodized Splines	18.5"	18.5"
\	LRC-1257	57" Universal Axle- 2" Spline- Black	16"	19.5"



DMI axles have always featured the industry's first large radius at the axle transition point. The radius provides extra strength where it's needed most. LRC-2598 radius spacers for axle shoulder are required before installing any other spacers.

#### 600 Micro Wheel Spacers & Axle Nuts

/			
	LRC-2610	RH Alum. Axle Nut for 1.75" Axle	
	LRC-2610B	RH Alum. Axle Nut for 1.75" Axle-Black	
	LRC-2620	LH Alum. Axle Nut for 1.75" Axle	
	LRC-2620B	LH Alum. Axle Nut for 1.75" Axle-Black	
	LRC-2598	Radius Spacers for Axle Shoulder	
	LRC-2590B	14 pc. 1.75" Axle Spacer Kit	





#### LRC-2590B Consists of:

4 LRC-2591	Inner Wheel Spacer for 1.75" Axle250" width
2 LRC-2592	Inner Wheel Spacer for 1.75" Axle500" width
2 LRC-2593	Inner Wheel Spacer for 1.75" Axle - 1" width
1 LRC-2594	Inner Wheel Spacer for 1.75" Axle - 2" width

2 LRC-2595	Outer Tapered Wheel Spacer for
2 LNU-2090	1.75° AXIE500° WIGTN
2 LRC-2596	Outer Tapered Wheel Spacer for 1.75" Axle - 1.50" width
2 LRU-2090	
1 LRC-2597	Outer Tapered Wheel Spacer for
I LNG-2091	1.75" Axle - 2.50" width

#### **600 Micro Race Components**



LRC-1962	Black Tetris Micro RF Hub - Tapered Bearings	LRC-1977BX	Black Micro LF Hub - Ball Bearings
LRC-1962X	Black Tetris Micro RF Hub - Sealed Bearings	LRC-1977X	Gold Micro LF Hub - Ball Bearings
LRC-1963	Black Tetris Micro LF Hub - Tapered Bearings	LRC-1979	Gold Micro Rear Wheel Center 1.75" Spline
LRC-1963X	Black Tetris Micro LF Hub - Sealed Bearings	LRC-1979-2	2" Gold Micro Rear Wheel Center
LRC-1964	Black Tetris Micro Hub Set - Tapered Bearings	LRC-1979B	Black Micro Rear Wheel Center 1.75" Spline
LRC-1964X	Black Tetris Micro Hub Set - Sealed Bearings	LRC-1979B-2	2' Black Micro Rear Wheel Center
LRC-1972	Gold Micro Front Hub Set - Tapered Bearings	LRC-1984	Micro Hub Bearing Race
LRC-1972A	Gold Micro Front Hub Set - No Bearings	LRC-1984X	Micro Hub Ball Bearing
LRC-1972AB	Black Micro Front Hub Set - No Bearings	LRC-1986	Micro Hub Tapered Bearing
LRC-1972B	Black Micro Front Hub Set - Tapered Bearings	LRC-1986L	Micro Hub Tapered Bearing w/ Seal
LRC-1972BX	Black Micro Front Hub Set - Ball Bearing	LRC-1992	Micro Front Hub Bolt Kit
LRC-1976	Gold Micro RF Hub - Tapered Bearings	LRC-1992A	Button Head Cap Screw
LRC-1976A	Gold Micro RF Hub - No Bearings	LRC-1992B	5/16-18 Flange Nut
LRC-1976AB	Black Micro RF Hub - No Bearings	LRC-1994	600 Micro Dust Cap O-Ring
LRC-1976B	Black Micro RF Hub - Tapered Bearings	LRC-1995	Micro Hub Dust Cap - Gold
LRC-1976BX	Black Micro RF Hub - Ball Bearings	LRC-1995B	Micro Hub Dust Cap - Black
LRC-1976X	Gold Micro RF Hub - Ball Bearings	LRC-2000	Micro Deluxe Aluminum Spindle
LRC-1977	Gold Micro LF Hub - Tapered Bearings	LRC-2035	Kingpin Bushing for LRC-2000
LRC-1977A	Gold Micro LF Hub - No Bearings	LRC-2039	Micro Steel Kingpin w/Grease Zerk
LRC-1977AB	Black Micro LF Hub - No Bearings	LRC-2045	Retaining Clip for LRC-2039 King Pin
LRC-1977B	Black Micro LF Hub - Tapered Bearings	LRC-2100	Micro Steering Arm

All bearings are available with PROglide treatment. PROglide provides friction reduction. Utilizing nano particles that act as sponges for oil PROglide has achieved unimaginable results. The process adds no tolerance to the material being treated therefore the limits are nearly endless. Are you ready to ride the Glide?



# **Northeast Dirt Modified Components**

#### **Splined Roller Birdcages**



CRC-4000	Splined Birdcage Assy. Right
CRC-4001	Splined Birdcage Assy. Left
CRC-4010	Birdcage Inner Plate
CRC-4011	Birdcage Outer Plate
CRC-4016	Birdcage Block for Splined DMI SmartTubes
CRC-4017	Caliper Mount for Splined DMI SmartTubes
CRC-4020	Birdcage Roller Assy.
CRC-4020A	Birdcage Roller
CRC-4020C	Birdcage Roller Shaft
CRC-4022	Birdcage Roller Locator Washer
CRC-4024	Birdcage Shock Mount
CRC-4025	Birdcage Shock Mount Spacer
CRC-4026	Birdcage Outer Spacer
CRC-4030	Birdcage Brake Mount Spacer Long
CRC-4031	Birdcage Brake Mount Spacer Short
CRC-4032	Birdcage Brake Mount for 11.75" Rotor
CRC-4033	Birdcage Brake Mount for 12.19" Rotor
CRC-4035	Bearing for Birdcage Roller

#### **Solid Torsion Bar**



Rates in Stock	tor 29" Solid
.875	.950
.900	.975
.925	1.000

DMI Solid Torsion Bars are produced from Made in the USA 4340 milled and heat treated to our specifications. No Black Magic. No Voodoo. Just a great high performing bar that handles the highly stressed DIRT Mod application.



Good record keeping is a must if you want your torsion bars to perform properly. The ultra soft spring rates of Northeast Dirt Modifieds coupled with the heavy weight of the cars really stress the torsion bars. Bars should be installed at least one day before setup and scaling to ensure proper "break-in." Every 700-800 laps bars should be replaced.

# **Northeast Dirt Modified Driveline**

#### **Open Tube Driveline**



/	SRC-2316	7075 Aluminum U-Joint Yoke
	SRC-2317	Titanium U-Joint Yoke
	SRC-2335	Greaseable U-Joint Cross
	SRC-2336	Gladiator U-Joint Cross
	SRC-2339CT	Lightweight Steel U-Joint Yoke - No Spring/Washer
	SRC-2342	Steel Billet U-Joint Yoke - Long
	SRC-2464	6AL-4V Hollow Titanium Driveshaft 16-16 Spline - 18"
	SRC-2465	6AL-4V Hollow Titanium Driveshaft 16-16 Spline - 20"
	SRC-2466	Hollow Steel Driveshaft 16-16 Spline - 18"
	SRC-2467	Hollow Steel Driveshaft 16-16 Spline - 20"
	SRC-2468	Hollow Steel Driveshaft 16-16 Spline – 22"

#### 32 Spline Open Tube Driveline



/		`
	SRC-2316-32	7075 Aluminum U-Joint Yoke - 32 Spline
	SRC-2335	Titanium U-Joint Yoke
	SRC-2336	Greaseable U-Joint Cross
	SRC-2342-32	Steel Billet U-Joint Yoke - 32 Spline
	SRC-2466-32	Hollow Steel Driveshaft 32 Spline - 18"
	SRC-2467-32	Hollow Steel Driveshaft 32 Spline - 20"
	SRC-2468-32	Hollow Steel Driveshaft 32 Spline – 22"

### 32 Spline vs. 16 Spline

People often ask which spline count is better. It really comes down to personal preference. We see good results and benefits from both styles. Below are the weights for each and the yoke weights.

Description	Weight
Steel Yoke	2.07 lbs.
Aluminum Yoke	1.13 lbs.
16 Spline Hollow Steel Driveshaft	3.25 lbs.
32 Spline Hollow Steel Driveshaft	3.35 lbs.

# **Race Kits**



DMI's Race Kits are a handy way to purchase the necessary parts to build your racecar. All your favorite DMI components at a great package price — another way DMI has raised the bar in convenience and service. All race kits are available with a variety of options. Contact DMI for more details.

SRC-RRBRAKEKIT		
Right Rear B	rake Kits	
2 WIL-150-	Wilwood Purple Pad for Alum.	
9766	Rotor and Single Caliper	
1 SRC-2581	Birdcage Caliper Mount	
1 SRC-2780	Splined Right Rear Rotor 10.25" w/Holes	
1 WIL-120-	Wilwood Single Caliper - 3.25"	
10188-N	Spacing	

SRC-LFBRAKEKIT		
Left Front Bi	rake Kits	
1 WIL-120-	Wilwood Single Caliper - 3.25	
10188-N	Spacing	
1 SRC-2810	LF Caliper Mount for 10.875"	
	Rotor - w/Allen Countersunk	
1 SRC-2820	Brake Line Rock Guard	
1 SRC-2710	Front 3 - Lug Rotor 10.875"	
	w/Holes	
2 WIL-150-	Wilwood Purple Pad for Alum	
9766	Rotor and Single Caliper	

		0.00	riotor and origin baripor
<b>SRC-AXLEKIT</b>			
Complete Fro	int Axle Assy.		
1 SRC-2003	King Pin Bearing and Race Kit	1 SRC-2810	LF Caliper Mount for 10.875"
1 SRC-2085	Combo Steering Arm - 5.5" x	1 0110 2010	Rotor - w/Allen Countersunk
	1" Forward .5" x .5" Aluminum Tapered	1 SRC-2710	Front 3 - Lug Rotor 10.875" w/Holes
3 SRC-2095	Spacer		LF Caliper Mount for 10.875"
1 SRC-2100	Single Steering Arm for SRC-	1 SRC-2820	Rotor w/Allen Bolts
1 300-2100	2080 & SRC-2085	1 HDML	.5 x .625 Heavy Duty LH Heim
1 SRC-1910	2.5" Front Axle-Eagle/Maxim	8-10	, ,
	Style Tetris Front Hubs (set) for	1 HDM 8-10 1 JAM 10	.5 x .625 Heavy Duty RH Heim .625 Steel RH Jam Nut
1 SRC-1964	SRC-2000	1 JAM 10L	.625 Steel LH Jam Nut
2 SRC-2000	Aluminum Spindle w/Straight	1 RR-45.5-	Steel Tie Rod or Drag Link
	Steel Snout	ST	Stool Ho Hou of Brug Ellik
2 SRC-2039	Steel King Pin859		
2 SRC-2045B	King Pin Cap-Short		

9KP-INDNAKNKI I	
Inboard Brake Kits	
1 WIL-120-	Wilwood DynaPro Inboard
13406-N	Caliper
1 SRC-2930	Floater Style Splined Rear
1 0110 2300	Inboard Rotor Mount - 1pc.
1 SRC-0810	12" Inboard Steel Rotor810
	Width
2 WIL-150-	BP40 Pad
12248	
1 SRC-2931	Inboard Brake Spacer
1 WIL-250-	Wilwood Radial Mount
13179	William Wildlife
SRC-DRIVEKIT	

CBL-INBUYBUKIT

Complete Driveline Kit		
1 SRC-2390	Aluminum Torque Tube w/ H.D. Base - 28"	
1 SRC-2370	Aluminum Torque Ball	
1 SRC-2305	Steel Torque Ball Housing & Collar w/ insert	
1 SRC-2345	Steel/Alum. U-Joint Assy Chevy & Mopar - Gladiator Cross	
1 SRC-2430	4340 Steel Tubular Driveshaft - 30"	

# Splined Rear Wheel Centers | Wheel Spacers | Axle Nuts

#### **Splined Rear Wheel Centers**



			/
	SRC-1979	Goldstar Splined Rear Center for Weld/	)
	300-19/9	Sanders/Keizer/MPD	
	SRC-1979A	Black Widow Splined Rear Center for Weld/	
	3n0-1919A	Sanders/Keizer/MPD	
-	SRC-1979AG	Black Widow Splined Rear Center for Weld/	
	ShU-19/9AU	Sanders/Keizer/MPD - Gold	
	MDC 1070	Midget Black Widow Alum. Splined Rear	
	MRC-1979	Wheel Center - 2" 31 Spline	,

#### **Wheel Spacers & Axle Nuts**

MRC-2590	Midget 14pc. 31 Spline Spacer
MRC-2610	Right Hand 31 Spline Axle Nut
MRC-2610B	Right Hand 31 Spline Axle Nut - Black
MRC-2620	Left Hand 31 Spline Axle Nut
MRC-2620B	Left Hand 31 Spline Axle Nut - Black
SRC-2586	Outer Tapered Wheel Spacer500"
SRC-2590	10 pc. Aluminum Spacer Kit
SRC-2590B	10 pc. Aluminum Spacer Kit - Black
SRC-2600	Magnesium 10 pc. Spacer Kit
SRC-2610	Rear Aluminum Axle Nut for All Axles - RH Thread
SRC-2610B	Rear Aluminum Axle Nut for All Axles - RH Thread - Black
SRC-2620	Rear Aluminum Axle Nut for All Axles - LH Thread

SRC-2620B	Rear Aluminum Axle Nut for All Axles - LH Thread
	- Black
SRC-2630	Rear Aluminum Axle Nut w/ Spacer for All Axles -
0110 2000	RH Thread
SRC-2630B	Rear Aluminum Axle Nut w/ Spacer for All Axles -
3NG-2030D	RH Thread - Black
SRC-2640	Rear Aluminum Axle Nut w/ Spacer for All Axles -
3NU-2040	LH Thread
SRC-2640B	Rear Aluminum Axle Nut w/ Spacer for All Axles -
3NU-2040D	LH Thread - Black
SRC-2650	Rear Magnesium Axle Nut for All Axles - RH Thread
SRC-2660	Rear Magnesium Axle Nut for All Axles - LH Thread
CDC 0670	Rear Magnesium Axle Nut w/ Spacer for All Axles
SRC-2670	- RH Thread
SRC-2680	Rear Magnesium Axle Nut w/ Spacer for All Axles
3nu-2000	- LH Thread

#### SRC-2590 & SRC-2590B 10pc. Spacer Kits include:

Inner Wheel Spacer for 1.75" 2 SRC-2582 Axle - .250" width Inner Wheel Spacer for 1.75" 2 SRC-2583 Axle - .500" width Inner Wheel Spacer for 1.75" 2 SRC-2584 Axle - 1" width Inner Wheel Spacer for 1.75" 1 SRC-2585 Axle - 2" width

Outer Tapered Wheel Spacer for 1 SRC-2586 1.75" Axle - .500" width Outer Tapered Wheel Spacer for 1 SRC-2587 1.75" Axle - 1.50" width Outer Tapered Wheel Spacer for 1 SRC-2588 1.75" Axle - 2.50" width







#### MRC-2590 14pc. Spacer Kits include:

Inner Wheel Spacer for 1.75" 2 MRC-2580 Axle - .250" width Inner Wheel Spacer for 1.75" 2 MRC-2581 Axle - .500" width Inner Wheel Spacer for 1.75" 2 MRC-2582

Inner Wheel Spacer for 1.75" 1 MRC-2583

Axle - 1" width Axle - 2" width

Outer Tapered Wheel Spacer for 2 MRC-2585 1.75" Axle - .500" width Outer Tapered Wheel Spacer for 2 MRC-2586 1.75" Axle - 1.50" width Outer Tapered Wheel Spacer for 2 MRC-2587 1.75" Axle - 2.50" width Outer Tapered Wheel Spacer for 1 MRC-2588 1.75" Axle - 3.50" width



Always make sure ALL your tapered outer spacers have splines in them. Years ago, un-splined outer spacers worked ok. They no longer work and WILL allow the wheel to come loose.

### Front Hubs

#### **Sprint Car Front Hubs**



SRC-1962	Tetris Right Front Hub for SRC-2000	SRC-1984PG	Hub Bearing Race - Small - PROglide
SRC-1962		SRC-1985	Hub Bearing Race - Large
SRC-1963		SRC-1986	Hub Bearing - Small
SRC-1963	LW Tetris Flyweight Left Front Hub for SRC-2000	SRC-1986PG	Hub Bearing - Small - PROglide
SRC-1964	Tetris Front Hub Set for SRC-2000	SRC-1987	Hub Bearing - Large
SRC-1964		SRC-1988	Hub Seal for SRC-1972
SRC-1968		SRC-1990	Bearing Kit 2 ea. Bearings, Races 1 Seal for
SRC-1969			SRC-1972
SRC-1968	G Black Widow Right Front Hub for SRC-2000	SRC-1991	Bearing Kit 2 ea. Bearings, Races 1 Seal for
	- Gold	0.10 .00.	SRC-1973
SRC-1969	G Black Widow Left Front Hub for SRC-2000	SRC-1993	Front Rotor Bolt Kit
	- Gold	SRC-1994A	O-Ring for Goldstar Front Hub
SRC-1971	Black Widow Aluminum Front Hubs for	SRC-1995B	Threaded Front Hub Dust Cap for Goldstar/
	SRC-2000	0110 10000	Black Widow-Black
SRC-1971		SRC-1998	Spindle Nut Wrench
5.10 107 1	SRC-2000 - Gold	SRC-1999	Front Hub Bolt Kit
SRC-1984		0110 1333	THORETIAD DOLLINE
\ 3110-1304	Tiub beating have - Sinan		

All bearings are available with PROglide treatment. PROglide provides friction reduction. Utilizing nano particles that act as sponges for oil PROglide has achieved unimaginable results. The process adds no tolerance to the material being treated therefore the limits are nearly endless. Are you ready to ride the Glide?

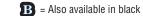


#### **Midget Front Hubs**



	SRC-1968LW	L.W. Black Widow RF Hub	
ľ	SRC-1969LW	L.W. Black Widow LF Hub	
(	SRC-1971LW	L.W. Black Widow Front Hub Set	/

# **Spindles**





			\
MRC-2000	Aluminum Midget Spindle w/ Straight Steel Snout	SRC-2020	Aluminum Spindle w/ Straight Titanium Snout
MRC-2020	Aluminum Midget Spindle w/ Titanium Snout	SRC-2030	Aluminum Spindle w/ Step Titanium Snout
MRC-2035B	Midget Bottom King Pin Bushing	SRC-2035	King Pin Bushing
MRC-2035T	Midget Top King Pin Bushing	SRC-2039	Steel King Pin859
MRC-2039	Midget Steel King Pin812	SRC-2041	Steel King Pin869
MRC-2059	Midget Titanium King Pin812	SRC-2045B	King Pin Cap - Short
SRC-1997S	Spindle Locknut Kit "Trick"	SRC-2055	King Pin Cap - Long
SRC-2000	Aluminum Spindle w/ Straight Steel Snout	SRC-2059	Titanium King Pin859
SRC-2003	Kingpin Bearing and Race Kit	SRC-2061	Titanium King Pin869
SRC-2010	Aluminum Spindle w/Step Steel Snout	SRC-1998	Spindle Nut Wrench
	•		·



Front spindle nuts should be checked after the first race. Bearings should be checked every six races to ensure proper lubrication.



Titanium Snout Spindles and Titanium King Pins save 1.06 lbs. over steel units.

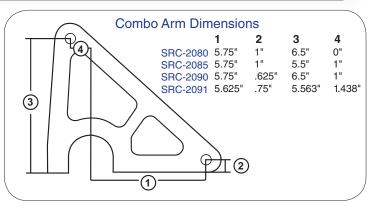
# Steering Arms | Pitman Arms

**B** = Also available in black

#### **Steering Arms**



/		
	MRC-2080	Midget Combo Steering Arm
	MRC-2085	Midget Wishbone Steering Arm
	MRC-2100	Midget Single Steering Arm
	SRC-2080	Combo Steering Arm - Standard
	SRC-2085	Combo Steering Arm - 5.5" x 1" Forward
	SRC-2090	Combo Steering Arm - 6.5" x 1" Forward
	SRC-2091	Combo Steering Arm - Maxim Style
	SRC-2095	.5" x .5" Aluminum Tapered Spacer
	SRC-2100	Single Steering Arm for SRC-2080 &
		SRC-2085
	SRC-2101	Single Steering Arm for SRC-2091
	SRC-2110	Single Steering Arm for SRC-2090
/		

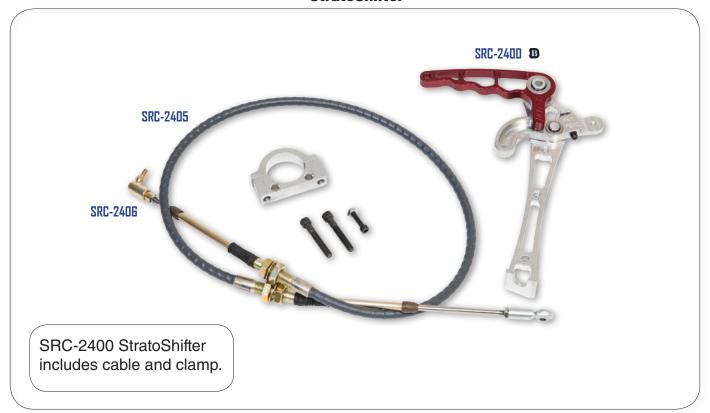


#### **Pitman Arms & Steering Mounts**



SRC-2075 SRC-2230 SRC-2235	Aluminum Mount for Half Steering Short Lightweight Pitman Arm Short Lightweight Pitman Arm - 1" Spline Angle	SRC-2253 SRC-2255	X-Long Lightweight Pitman Arm - Angle Broach X-Short Lightweight Pitman Arm - Angle Broach - 9"/10"
	Broach	SRC-2260	Long Lightweight Pitman Arm - Angle Broach
SRC-2240	Long Lightweight Pitman Arm	SRC-2280	Long Heavy Duty Pitman Arm
SRC-2250	Short Lightweight Pitman Arm - Angle Broach	SRC-2300	Long Heavy Duty Pitman Arm - Angle Broach

#### **StratoShifter**



SRC-2400	StratoShifter Assembly- Assembly includes	SRC-2405XL	48" Shifter Cable for StratoShifter/Shurlock/
	cable, quick disconnect and all hardware.		Robison
SRC-2405	45" Shifter Cable for StratoShifter/Shurlock/	SRC-2406	Shifter Cable Quick Disconnect
(	Robison	SRC-2407	10/32 Female Rod End

#### **Motor Plates**







/		
′	SRC-2825	Aluminum Front Motor Plate
	SRC-2828	Aluminum Front Motor Plate - Offset
	SRC-2830	Aluminum Front Motor Plate - Lightened
	SRC-2831	2 pc. Aluminum Motor Mount - 1 Side
	SRC-2831-2	2 pc. Aluminum Motor Mount - Set
	SRC-2832	2 pc. Aluminum Motor Mount w/ Dry
		Sump Tank Mounts
	SRC-2836	Dry Sump Tank Mounts - Set
	SRC-2840	Aluminum Rear Motor Plate - Lightened
(	SRC-2850	Aluminum Rear Motor Plate
/		

SRC-2855 SRC-2860	Aluminum Rear Motor Plate - Offset  Magnesium Rear Motor Plate
SRC-2870	Aluminum Rear Motor Plate - Lightened - J&J Style
SRC-2880 SRC-2890	Magnesium Rear Motor Plate - J&J Style Alum. Rear Motor Plate - Lightened -
SRC-2895	Maxim/Eagle Style Raised Rail Mag Rear Motor Plate - Lightened - Maxim/Eagle Style Raised Rail

# Torque Balls | Tubes | Housings

#### **B** = Also available in black

#### **Torque Balls**



/	MRC-2380	Midget Torque Ball	
	SRC-2370	Aluminum Torque Ball	
	SRC-2370XL	Aluminum Torque Ball - Extra Long	
	SRC-2380	Lightweight Aluminum Torque Ball	
	SRC-2385	Lightweight Aluminum Torque Ball for 3"(MPD) Tube	_



All Torque Tubes are available with black anodized tubes to prevent wear. New improved hardanodizing prevents torque ball galling.

#### **Torque Tubes & Torque Ball Housings**



MRC-2390	Midget Torque Tube
MRC-2395	Midget Torque Tube - Sprint Car Style
RRC-1490	.015 Torque Tube Shim
RRC-1491	.030 Torque Tube Shim
RRC-1492	.060 Torque Tube Shim
RRC-2006	Torque Tube Stud Kit
SEALSIT-TBS1A-07	Seals-It Driveline Seal - Mag Housing
SEALSIT-TBS2A-07	Seals-It Driveline Seal - Steel Housing
SRC-2306	Torque Ball Housing Stud and Highnut Kit for
	SRC-2308
SRC-2307	Torque Ball Housing Stud and Highnut Kit for
	SRC-2305
SRC-2309	Aluminum Hard Anodized Torque Ball Inserts
SRC-2383	Big Unit XL Steel Torque Tube Assv 28"
SRC-2387	Big Unit XL Torque Tube Assy - 28"
SRC-2388	Big Unit XL Torque Tube Assy - 32"

SRC-2389	Big Unit XL Torque Tube Assy - 35"
SRC-2390	Aluminum Torque Tube w/H.D. Base - 28"
SRC-2391	Aluminum Torque Tube w/H.D. Base - 32"
SRC-2392	Aluminum Torque Tube w/H.D. Base - 35"
SRC-2393	Aluminum Torque Tube w/L.W. Base - 28"
SRC-2394	Aluminum Torque Tube w/L.W. Base - 32"
SRC-2395	Aluminum Torque Tube w/L.W. Base - 35"
SRC-2396	3" (MPD Style) Torque Tube w/L.W. Base - 28"
SRC-2397	3" (MPD Style) Torque Tube w/H.D. Base - 28"
SRC-2398	3" (MPD Style) Torque Tube w/L.W. Base - 32"
SRC-2399	3" (MPD Style) Torque Tube w/H.D. Base - 32"

# U-Joint Assemblies | Components

### **2K11 and Titanium U-Joints**



SRC-2321	TITAN Titanium U-Joint Assy. w/ Steel Yoke	SRC-2355	2K11 H.D. Alum. U-Joint Assy Chevy &
SRC-2322	TITAN Titanium U-Joint Assy. w/ Aluminum		Mopar - Gladiator Cross
	Yoke	SRC-2356	2K11 H.D. Steel/Alum. U-Joint Assy Chevy
SRC-2323	Titanium U-Joint Assembly		& Mopar - Greasable Cross
SRC-2330	TITAN Titanium U-Joint Assy. w/ Steel Yoke -	SRC-2357	2K11 H.D. Steel/Alum. U-Joint Assy Chevy
	Greasable Cross		& Mopar - Gladiator Cross
SRC-2331	TITAN Titanium U-Joint Assy. w/ Aluminum	SRC-2358	2K11 H.D. Billet Steel/Alum. U-Joint Assy
	Yoke - Greaseable Cross		Greasable Cross
SRC-2332	Titanium U-Joint Assembly - Greasable Cross	SRC-2359	2K11 H.D. Billet Steel/Alum. U-Joint Assy
SRC-2354	2K11 H.D. Aluminum U-Joint Assy Chevy		Gladiator Cross
	& Mopar - Greasable Cross		/ 5.555

#### **Standard U-Joints**



/		
,	SRC-2320	7075 Aluminum U-Joint Assy
		Chevy & Mopar - Greasable Cross
	SRC-2325	7075 Aluminum U-Joint Assy
		Chevy & Mopar - Gladiator Cross
	SRC-2340	Steel/Alum. U-Joint Assy Chevy &
		Mopar - Greasable Cross
	SRC-2345	Steel/Alum. U-Joint Assy Chevy &
		Mopar - Gladiator Cross
	SRC-2346	Billet Steel/Alum. U-Joint Assy
		Chevy & Mopar - Gladiator Cross
/		· · · · · · · /

#### **U-Joints Components**



SRC-2315	7075 Aluminum U-Joint Base
SRC-2316	7075 Aluminum U-Joint Yoke
SRC-2317	Titanium U-Joint Yoke
SRC-2318	TITAN Titanium U-Joint Base
SRC-2327	U-Joint Spring, Washer & Snap Ring for all yokes
SRC-2335	Greaseable U-Joint Cross
SRC-2336	Gladiator U-Joint Cross
SRC-2339	Lightweight Steel U-Joint Yoke
SRC-2342	Steel Billet U-Joint Yoke - Long
SRC-2352	2K11 H.D. Aluminum U-Joint Base
	I

### **Driveshafts**



	SRC-2354-44	2K11 H.D. Alum. U-Joint Assy Chevy & Mopar - Greasable Cross - 44 Spline
	SRC-2355-44	2K11 H.D. Alum. U-Joint Assy Chevy & Mopar - Gladiator Cross - 44 Spline
	SRC-2413	Steel 44 Spline WP Style Driveshaft for 40" Car - 5.84lbs.
(	SRC-2413T	Titanium 44 Spline WP Style Driveshaft for 40" Car - 3.99lbs.
\		

DMI's 44 Bulldog Drive Shaft is the only choice for racers looking for an extra-large drive shaft. Originally tested during the 2016 racing season the 44 Bulldog is an ideal choice for teams looking to keep weight to a minimum but increase the strength of the driveline. We further tested throughout the 2017 season assuring the performance and dependability you've come to expect from DMI. The fabricated shaft is offered in titanium and a very affordably priced steel version. All U-Joint assemblies come with our very strong 7075 Aluminum 2k11 base and yoke. The drive shaft offers precision and balance unmatched by the competition.

# Driveshafts



RRC-1455	WP Style Swivel Coupler Seal	SRC-2446-	Fab. Tubular D-Shaft for Swivel - 29.25"
SRC-2429	4340 Steel Tubular Driveshaft - 26.5"	29.25	Tab. Tabalar B Chart for GWIVOI 20.20
SRC-2430	4340 Steel Tubular Driveshaft - 30"	SRC-2446-30.5	Fab. Tubular D-Shaft for Swivel - 30.5"
SRC-2440	4340 Steel Tubular Driveshaft - 32"	SRC-2447-26.5	Fab. Tubular D-Shaft for Ext.10-10 - 26.5"
SRC-2441-29	Hollow 29" WP Style Swivel Driveshaft w/	SRC-2450	4340 Steel Tubular Driveshaft - 35"
	Ball - Titanium	SRC-2470	6AL-4V Tubular Titanium Driveshaft - 32"
SRC-2442-29	Hollow 29" WP Style Swivel Driveshaft w/	SRC-2480	6AL-4V Tubular Titanium Driveshaft - 30"
	Ball - Steel	SRC-2481	4340 Steel Tubuler Driveshaft for Swivel
SRC-2443	Titanium Washer for Ball Spline WP Style		Coupler - 26.5"
	Driveshaft w/ Bolt	SRC-2482	4340 Steel Tubular Driveshaft for Swivel
SRC-2444	Replacement Ball for WP Style Driveshaft		Coupler - 31"
SRC-2445-28	Fab. Tubular D-Shaft for Int. 10-10 - 28"	SRC-2483	4340 Steel Tubular Driveshaft for Swivel
SRC-2445-28.5	Fab. Tubular D-Shaft for Int. 10-10 - 28.5"		Coupler - 34.5"
SRC-2445-29	Fab. Tubular D-Shaft for Int. 10-10 - 29"	SRC-2485	6AL-4V Ti Tubular driveshaft for Swivel
SRC-2445-29.5	Fab. Tubular D-Shaft for Int. 10-10 - 29.5"		Coupler - 26.5"
SRC-2445-30	Fab. Tubular D-Shaft for Int. 10-10 - 30"	SRC-2486	6AL-4V Ti Tubular Driveshaft for Swivel
SRC-2445-31.5	Fab. Tubular D-Shaft for Int. 10-10 - 31.5"		Coupler - 31"
SRC-2445-32	Fab. Tubular D. Shaft for Int. 10-10 - 32"	SRC-2487	6AL-4V Ti Tubular Driveshaft for Swivel
SRC-2446-25.5 SRC-2446-26.5	Fab. Tubular D-Shaft for Swivel - 25.5" Fab. Tubular D-Shaft for Swivel - 26.5"		Coupler - 34.5"
SRC-2446-26.5	Fab. Tubular D-Shaft for Swivel - 20.5		Couplet C 1.0
3nu-2 <del>44</del> 0-21.3	Tab. Tubulat D-Stiatt for Swiver - 27.5		



A Titanium Driveshaft saves 1.21 lbs. over a Steel Driveshaft.

# 32 Spline Driveshafts | U-Joint Assemblies

#### **Driveshafts**



RRC-1455 SRC-2430-32	WP Style Swivel Coupler Seal 4340 Steel Tubular Driveshaft - 30" for 32	SRC-2440-32	4340 Steel Tubular Driveshaft - 32" for 32 Spline Yoke	\
	Spline Yoke	SRC-2442-29-	Hollow 29" WP Style Swivel Driveshaft w/	
SRC-2431-32	4340 Steel Tubular Driveshaft - 30" for 32	32	Ball for 32 Spline Yoke	
	Spline Yoke and 32 Spline Coupler	SRC-2443	Titanium Washer for Ball Spline WP Style Driveshaft w/ Bolt	
SRC-2432-32	4340 Steel Tubular Driveshaft - 32" for 32	SRC-2444-32	Replacement Ball for WP Style Driveshaft	
	Spline Yoke and 32 Spline Coupler	0110 2444 02	- 32 Spline	

#### **U-Joint Assemblies**



(	SRC-2316-32	7075 Aluminum U-Joint Yoke - 32 Spline
	SRC-2320-32	7075 Aluminum U-Joint Assy - Chevy &
		Mopar - Greasable Cross - 32 Spline
	SRC-2322-32	TITAN Titanium U-Joint Assy. w/ Aluminum
		Yoke -32 Spline
	SRC-2325-32	7075 Aluminum U-Joint Assy Chevy &
		Mopar - Gladiator Cross - 32 Spline
	SRC-2342-32	Steel Billet U-Joint Yoke - Long - 32 Spline
	SRC-2346-32	Billet Steel/Alum. U-Joint Assy Chevy &
		Mopar - Gladiator Cross - 32 Spline
	SRC-2354-32	2K11 H.D. Alum. U-Joint Assy -
		Chevy&Mopar - Greasable Cross - 32 Spline
	SRC-2355-32	2K11 H.D. Alum. U-Joint Assy -
		Chevy&Mopar - Gladiator Cross - 32 Spline
	SRC-2359-32	2K11 H.D. Billet Steel/Alum. U-Joint Assy
		Gladiator Cross - 32 Spline
,		



The SRC-2442-29-32 Driveshaft and SRC-2355-32 yoke is an excellent combination on a 410 winged sprint car. The increased o.d. of the shaft provides the strength. The extra large 1" i.d. provides the weight savings. When coupled with the SRC-2355-32 u-joint harmonics are limited, strength is increased and performance is achieved.

### **Aluminum Driveshafts**



Are you looking to save some rotating weight on your RaceSaver® 305? Stop looking. This is the ultimate driveline combination.

WARNING: THIS DRIVELINE MAY CAUSE YOUR HEAD TO SNAP BACK UNDER ACCELERATION!

Weight Comparison:		`
Description	Weight	
Steel 10-16 Driveshaft with steel coupler	5.76 lbs.	
Alum. 10-16 Driveshaft with alum. coupler	3.33 lbs.	
Steel 32-32 Driveshaft with steel coupler	6.05 lbs.	
Alum. 32-32 Driveshaft with alum. coupler	3.21 lbs.	

# **Driveline Frequently Asked Questions**

#### Q What is the best U-Joint for me?

A It really depends on the class. Our all aluminum U-Joints are used successfully in all classes. Steel vs. aluminum yokes is just a personal preference. If the rear crank flange only has the four lugs on it then we highly recommend 2K11 bases.

### Q How many races can I use my U-Joint assembly?

A With 410, 360 and midgets we recommend replacing U-Joint assemblies every engine freshen. 305's should not exceed 50 races with their assemblies. Our recommendations apply to all U-Joint assemblies.

### A How does the non-greasable crosses work?

A Excellent. We began using them in 2002. They offer many advantages. They are maintenance free. They keep the grease where it belongs. The cross is so well sealed the grease remains in the cross. The solid forged cross features much more strength than the cast hollow joints.

### **Q** What is the best driveline grease?

A On the torque ball assembly a #2 high temp works well. Also 20-50 motor oil works well and doesn't attract as much grease. On the splines of the Driveshaft we recommend the DMI Swivel Coupler Lube (Part # DMI-SWILUBE). DO NOT USE NEVER-SEIZE.

### A How many races should I run on my driveshaft?

A Driveshafts should be replaced every 30 races under normal racing conditions. We recommend checking the driveshaft run out every 5 races. Run out should be less than .003." In the event of a violent crash or catastrophic engine failure the driveshaft should be replaced immediately.

# Q How critical is driveshaft length?

A Driveshaft length is extremely critical. We have seen as little as .250" be a contributing factor in driveline and u-joint failures. Close is not going to get it done when cutting a driveshaft. Measure twice and cut once!! Do not think that a driveshaft cut for a 40" car will be ok to try in a 40.5" car. YOU WILL HAVE PROBLEMS!!!

### **Torsion Bars**



#### **Spring Rate Chart**

30" BAR 23" EFFECTIVE LENGTH												
	Arm Length	12"	12.5"	13"	13.5"	14"	14.5"	15"	15.5"	16"	16.5"	17"
	.900	224	206	190	176	164	153	143	134	126	118	111
	.925	250	230	213	197	183	171	160	150	140	132	124
	.950	278	256	237	219	204	190	178	166	156	147	138
	.975	308	284	262	243	226	211	197	185	173	163	153
	1.000	341	314	290	269	250	233	218	204	192	180	170
	1.015	362	333	308	286	266	248	232	217	204	191	180
	1.025	376	347	321	297	276	258	241	226	212	199	187
	1.050	414	382	353	327	304	284	265	248	233	219	206
	1.065	439	404	374	346	322	300	281	263	247	232	219

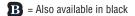
#### Rates in Stock

29" Solid	30" Hollow
.875	.750
.900	.775
.925	.800
.950	.825
.975	.850
1.000	.875
	.900
	.925
	.950
	.975
	1.000
	1.015
	1.025
e size. Also	1.050
bar used in	1.065

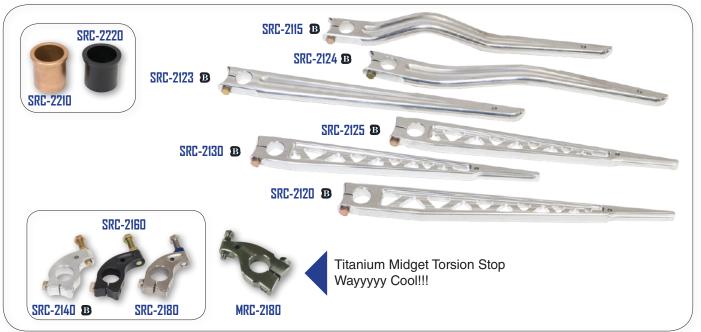


Always put the arm on the side of the bar that shows the size. Also bars should only be twisted in one direction. Therefore a bar used in the right rear corner could only ever be used in the left front corner. Left rear bars could also be used in the right front.

# Torsion Arms | Stops



#### Front Torsion Arms & Stops



	000 0445	LL (15 17 1 A "O" D 1	000 0450	AL . T . O. O.O.I''
/	SRC-2115	Left Front Torsion Arm - "S" Bend	SRC-2150	Aluminum Torsion Stop - 2" Split
	SRC-2120	Front Torsion Arm - Long	SRC-2160	Steel Torsion Stop - 1.75" Split
	SRC-2121	Anti-Rollbar Stop	SRC-2170	Steel Torsion Stop - 2" Split
	SRC-2122	Anti-Rollbar Left Front Arm (No Splines)	SRC-2180	6AL-4V Titanium Torsion Stop - 1.75"
	SRC-2122A	Anti-Rollbar Right Front Arm		Split
	SRC-2123	Heavy Duty Front Torsion Arm - Long	SRC-2190	6AL-4V Titanium Torsion Stop - 2" Split
	SRC-2124	Right Front Torsion Arm - 2" Bend	SRC-2210	Bronze Torsion Bushing for .095 Tubes
	SRC-2125	Right Front Torsion Arm 10° Broach	SRC-2211	Bronze Torsion Bushing for .120 Tubes
	SRC-2130	Front Torsion Arm - Short	SRC-2220	Plastic Torsion Bushing for .095 Tubes
	SRC-2140	Aluminum Torsion Stop - 1.75" Split	SRC-2221	Plastic Torsion Bushing for .120 Tubes
\				

#### **Rear Torsion Arms**



SRC-2683 SRC-2684	LW RR Torsion Arm - Twister Non - Wing LW LR Torsion Arm - Twister Non - Wing	SRC-2689 SRC-2689R	LW LR Torsion Arm - L.W. Eagle/Maxim LW LR Torsion Arm - L.W. Eagle/Maxim -
SRC-2685	LW RR Torsion Arm - Custom Dimensions +	0.10 2000.1	Reverse Tube
	Labor	SRC-2689W	LW LR Torsion Arm - L.W. Woodring
SRC-2685XL	LW RR Torsion Arm XL - Custom Dimensions		Sportsman
	+ Labor	SRC-2690	LW LR Torsion Arm - Custom Dimensions +
SRC-2686	LW RR Torsion Arm - Std. Eagle/Maxim		Labor
SRC-2687	LW RR Torsion Arm - L.W. Eagle/Maxim	SRC-2690XL	LW LR Torsion Arm XL - Custom Dimensions
SRC-2687R	LW RR Torsion Arm - L.W. Eagle/Maxim -		+ Labor
	Reverse Tube	SRC-2694	LW RR Torsion Arm - J&J 15"
SRC-2688	LW LR Torsion Arm - Std. Eagle/Maxim	SRC-2695	LW LR Torsion Arm - J&J 17"

#### **Birdcages**





	SRC-2553	6014 Birdcage Bearing
	SRC-2554	Birdcage Spiralock for 6014
	SRC-2570	Small Double Bearing Birdcage Set - Non
		Wing Dual Pickup
	SRC-2571	Small Double Bearing Right Birdcage - Non
		Wing Dual Pickup
	SRC-2572	Small Double Bearing Left Birdcage - Non
		Wing Dual Pickup
	SRC-2573	D6014 Birdcage Bearing
	SRC-2574	Replacement Birdcage Level
(	SRC-2575	Small Double Bearing Birdcage Set

SRC-2576	Small Double Bearing Right Birdcage
SRC-2577	Small Double Bearing Left Birdcage
SRC-2578	5914 Birdcage Bearing - 32mm
SRC-2578A	5914 Birdcage Bearing - 28mm
SRC-2578AV	5914 Birdcage Bearing - 28mm VMAC Style
SRC-2578V	5914 Birdcage Bearing - 32mm VMAC Style
SRC-2578PG	5914 Birdcage Bearing – 32mm PROglide
	Treated
SRC-2579	Birdcage Spiralock for 5914
SRC-2581	Birdcage Caliper Mount

PROglide treated birdcage bearings increase bearing life by more than 800%! SRC-2578PG is the treated replacement birdcage bearing. All birdcages and birdcage sets are available with PROglide bearings. Ask your sales associate for more details.









SRC-2598	Right Birdcage Spacer
SRC-2599	Left Birdcage Spacer - Spline Saver
SRC-2601	Splined Left Side Birdcage Spacer

SRC-2598

SRC-2599

SRC-2601

SRC-2601 Left Birdcage Spacer is splined to prevent axle wear on the splined bearing shoulder.



## **Fabricated Components**

#### **Front Axles**



SRC-1900 SRC-1905 SRC-1910 SRC-1920 SRC-1930	2.5" Front Axle - J&J Style 2.375" Front Axle - Camber Split 2.5" Front Axle - Eagle/Maxim Style 52" Front Axle - Offset - Camber Split 53" Front Axle - Offset - Camber Split
SRC-1920 SRC-1930	52" Front Axle - Offset - Camber Split 53" Front Axle - Offset - Camber Split

#### **B** = Also available in black

#### **Jacobs Ladder Straps**



DMI is the first in the industry to offer different length Jacobs ladder straps. Varying length ladder straps have long been a secret adjustment teams make to change the rear roll centers and adjust the handling. Now it's available to everybody.

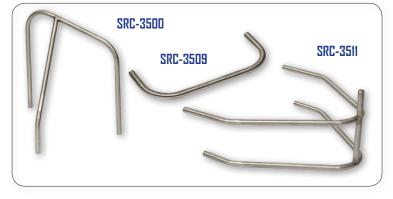
Heavy Duty Ladder Straps are perfect for tracks where you have to run the fence. Beat the fence and don't worry about breaking your straps. A must have to run the wall at Eldora!!!

#### **Jacobs Ladders**



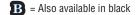
SRC-2505	4130 Steel Jacobs Ladder w/ Straps - 13.625"
SRC-2510	4130 Steel Jacobs Ladder w/ Straps - 14"
SRC-2515	4130 Steel Jacobs Ladder w/ Straps - 13.25"
SRC-2525	Titanium Jacobs Ladder w/ Straps - 13.25"
SRC-2530	Titanium Jacobs Ladder w/ Straps - 13.625"
SRC-2540	Titanium Jacobs Ladder w/ Straps - 14"
SRC-2545	Aluminum Jacobs Ladder Strap

#### **Bumpers & Nerfs**



SRC-3500 Stainless RS Shorty Nerf B	
SRC-3501 Stainless LS Shorty Nerf Ba	
SRC-3502 Stainless LS Shorty Nerf Ba	ar - Raised Rail
SRC-3503 Stainless RS Long Nerf Bar	•
SRC-3504 Stainless LS Long Nerf Bar	
SRC-3505 Stainless LS Long Nerf Bar	- Raised Rail
SRC-3506 Stainless RS Hoop Nerf Bai	,
SRC-3507 Stainless LS Hoop Nerf Bar	•
SRC-3508 Stainless LS Hoop Nerf Bar	- Raised Rail
SRC-3509 Stainless Front Bumper	
SRC-3510 Stainless Cow Catcher Fron	t Bumper
SRC-3511 Stainless Rear Bumper	<u> </u>

# Wing Valve | Components | Fuel Valve



#### **Wing Valve and Components**



SRC-2900	Straight Front Wing Post	SRC-2921	10" Wing Cylinder w/Heim	
SRC-2910	Bent Front Wing Post	SRC-2922	12" Wing Cylinder w/Heim	
SRC-2915S	Front Wing Straps - Bolt Style (set)	SRC-2923	Wing Cylinder Rod End	
SRC-2916	Front Wing Straps - Dzus Style (set)	SRC-2926	Straight Top Wing Post w/Roller	
SRC-2920	Hotwing Valve			
	,			

#### **Fuel Valve**



FRC-1000 Fuel Shut-Off Valve



DMI HotWing Valve features 20% more flow than conventional wing valves on the market. The valve remains a closed circuit when not in use eliminating potential problems.

# Brake Rotor Mounts | Inboard Brake Rotors

**B** = Also available in black

#### **Brake Rotor Mounts**



MRC-2930	Floater Style Splined Rear Inboard Hub –	SRC-2931XL	Inboard Brake Spacer Extra Long for
000 0701	31 Spline Midget	000 0000	Custom Fit
SRC-2701 SRC-2930	Splined Adaptor for 6 Pin Floater Style Splined Rear Inboard Hub -	SRC-2932	Clamp Style Splined Inboard Rotor Mount
3110-2330	Sprint Car	SRC-2934	for 8 on 7" B.C. Tri-Lock Splined Inboard Clamp
SRC-2931	Inboard Brake Spacer for .810 vented rotor	SRC-2938	42 Spline Adaptor for 8 on 7" B.C. Rotor
SRC-2931T	Inboard Brake Spacer for Ben Cook titanium		
\	rotor		

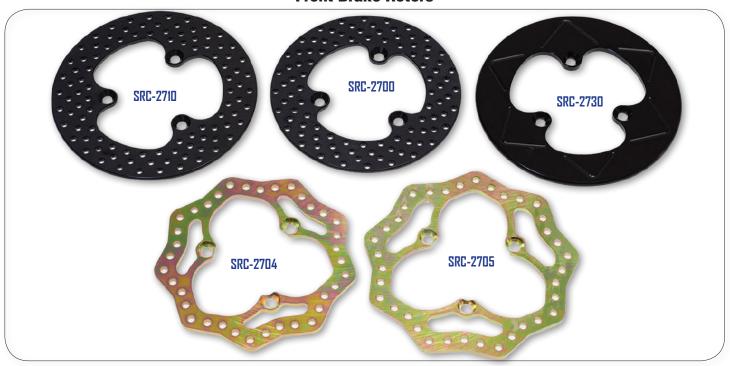
#### **Inboard Brake Rotors**



SRC-0810 SRC-0810S	12" Inboard Steel Rotor .810 Width 11.75" Vented Steel Rotor 8 on 7" B.C810 Width	SRC-2780 SRC-2785 WIL-160-	Splined Right Rear Rotor 10.125" w/ Holes Splined Right Rear Rotor 10.75" w/ Holes Wilwood Super Alloy Inboard Rotor	
SRC-0811	12" Inboard Steel Rotor810 Width - Lightened	13373		)

# Front Brake Rotors | Single Caliper Mounts

### **Front Brake Rotors**



SRC-2700	Front 3-Lug Rotor Aluminum 10.125"	SRC-2710	Front 3-Lug Rotor Aluminum 10.875"	\
	w/ Holes		w/ Holes	
SRC-2704	Front 3-Lug Rotor Steel 10.25"	SRC-2730	Front 3-Lug Rotor Aluminum 10.875"	
SRC-2705	Front 3-Lug Rotor Steel 10.75"		w/o Holes	,
				/

### **Single Caliper Mounts**



	MRC-2800	Midget Left Front Caliper Mount for 10.125"	SRC-2805	Left Front Caliper Mount for 10.875" Rotor -	
		Rotor w/Allen Bolts		Non Countersunk	
	SRC-2581	Birdcage Caliper Mount	SRC-2810	Left Front Caliper Mount for 10.875" Rotor w/	_
	SRC-2800	Left Front Caliper Mount for 10.125" Rotor w/		Allen Bolts	
\		Allen Bolts	SRC-2811	Same as SRC-2805 but for 3.75" Spindles	_
/				·	/

### DMI / BullDog 2018 PRODUCT GUIDE

### **Wilwood Brakes**



Since 1977, Wilwood has been at the forefront of high performance disc brake technology. DMI is a Master W.D. Wilwood dealer. Most popular sprint car and midget calipers are in stock. We also stock a wide array of Wilwood Brake Pads (See pages 32-33). Let DMI service you for all your Wilwood components. Competitive pricing on the most recognizable name in brakes makes DMI your #1 stop for all your stopping needs.

Wilwood- Braking Solutions for a World in Motion.

\*Please ask your DMI sales associate for a 2018 Wilwood catalog.



### **Brake Pads from Wilwood**





Braking Solutions for a World in Motion



# **smartpad**

The **BP** compound **SmartPad** series represents the latest developments and refinements in friction pad technology. Four different compounds, with incremental changes in friction values and temperature operating range, provide racers and performance driving enthusiasts with the ability to match and



optimize brake system response and performance covering applications from street performance to dedicated competition.

#### **BP-10 Low-Med Temperature & Friction**

- Baseline pad in Wilwood Bolt-On Brake Kits for hot rods, muscle cars, and most street & drag strip applications.
- Light dusting, quiet engagement pads with increased friction, response, and an extended temperature range with higher fade resistance over OE type compounds
- Soft response pad for lighter duty, economy class dirt track categories, especially in marginal traction

#### **BP-20 Med-High Temperature & Friction**

- A true dual-sport performance compound providing clean and quiet driving on the street, with an expanded temperature and friction range for competition
- Upgrade pad for our bolt-on brake kits for auto-cross, track events, and heavier weight, high speed drag cars
- Intermediate level dirt track use on limited tire, open wheel modifieds, and all types of hobby class racing

#### **BP-30 High Temperature & Friction**

- Race only compound with positive low to mid-temp range response and increased friction, fade resistance, and durability in the higher temperature ranges
- Hard braking dirt tracks, high momentum asphalt tracks, intermediate level road course applications, and all types of off-road competition with sustained high heat

#### **BP-40 X-High Temperature & Friction**

- Aggressive high friction, fade resistant, long wearing race only formula for sustained high heat applications
- Asphalt oval tracks, road courses, extreme duty dirt, and all types of offroad competition

**ROTOR COMPATIBILITY:** BP compound Smart Pads are fully compatible with all types of iron, steel, stainless, and titanium rotors when run within their respective temperature capabilities. For aluminum rotors, use **Purple Pads** or **PolyMatrix Q** only.

### **Brake Pads from Wilwood**



**PolyMatrix** compounds are long standing, time proven formulas responsible for championship winning performance in all types of amateur and professional motorsports. While time and technology advances have surpassed some of the earlier



formulas, champion race teams at all levels still rely on **PolyMatrix** for its unyielding performance within their respective temperature and friction ranges.

#### **PolyMatrix A X-High Temperature & Friction**

- Long wearing, highest friction formula with immediate aggressive response at all temperatures
- Severe duty use for oval tracks, road courses, and all other types of competition only applications

#### **PolyMatrix H X-High Temperature & Friction**

- Long wearing, high friction formula with a softer, less aggressive initial engagement response than "A"
- Severe duty use for oval track, road courses, and all other competition only applications

#### **PolyMatrix B High Temperature & Friction**

- Traditional favorite used in a wide range of sportsman oval track, road course, and off-road competition categories
- Consistent, predictable response through the temperature range after minimal warm up

#### **PolyMatrix E Medium Temperature & Friction**

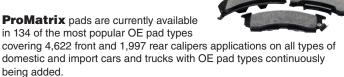
- Mid-level race compound with consistent, linear response through its full effective temperature range
- High momentum dirt tracks, fast drag cars, auto-cross, rally, and all types of off-road within its effective heat range

#### PolyMatrix Q Low-Medium Temperature & Friction

- Improved friction ceramic enhanced performance compound
- Lowest dust and noise levels for street performance
- Fully compatible compound for aluminum racing rotors



**ProMatrix** dual-sport performance compound brake pads provide the ultimate combination of clean and quiet driving with high performance braking on vehicles equipped with OE calipers.



#### **ProMatrix Med-High Temperature & Friction**

- True dual-sport performance compound for everyday street driving with the friction and heat range capabilities to handle aggressive driving on the track using OE production calipers
- Street friendly, quiet running, light dust, non-ceramic formula provides positive response with low wheel maintenance
- Track ready with low rotor abrasion, high fade resistance, and consistent response during hard braking cycles
- Drag racing, off-road, auto-cross and track events
- 4x4's, towing, fleet vehicles, and heavy wheel SUV's

### **Wilwood Specialty Compounds**

Wilwood offers purpose built specialty compounds that deliver unmatched performance on non-typical alloy rotors used in competition, recreational applications, utility vehicles, and more.

#### **Purple Pads Medium Friction & Temperature**

- Highest friction and temperature range pads available for use with aluminum rotors
- Sprints, midgets, and all lightweight open wheel competition

#### **CM High Friction & Temperature**

- Composition Metallic compound formulated to withstand sustained high heat with specialty alloy steel and low thermal conductivity rotors including stainless and titanium
- Sprint cars using titanium and stainless steel inboard brakes
- ATV's and powersports, industrial, and military applications
- High speed drag cars with steel or stainless alloy rotors.

ROTOR COMPATIBILITY: PolyMatrix compounds are fully compatible with all types of iron, steel, stainless, and titanium rotors when run within their respective temperature capabilities. For aluminum rotors, use Purple Pads or PolyMatrix Q only.

# Tools



MRC-3000	Engine Rotator Tool - Midget	RRC-1911	Female Kwik Fill w/ Cover
RRC-1900	Snout Locking Ring Tool	RRC-1912	Male Kwik Fill w/ Cover
RRC-1907	O-Ring for Threaded Plug (RRC-1908)	RRC-1913	Plastic Plug/Cap for Kwik Fill
RRC-1908	Threaded Plug to Accept Kwik Fill	SRC-1998	Spindle Nut Wrench
	Connector	SRC-2607	Rear Axle Nut Wrench w/ L.W. Adaptor
RRC-1909	Threaded Plug w/ Kwik Fill Oil Connector	SRC-2608	3" Aluminum Hex Socket
12.00	Assy. w/ Covers	SRC-3000	Engine Rotator Tool - Sprint
RRC-1910	Kwik Fill Oil Connector Assy. w/ Covers		



Always remember to remove the spark plugs before using the engine rotator turn over tool.

## DMI / BullDog 2018 PRODUCT GUIDE

### Rods & Rod Ends



#### **Rods & Rod Ends**



AF-3	Aluminum Female 10/32 Rod End
AF-5	Aluminum Female 5/16 Rod End
ALRSM8B	FK Made in the USA 1/2 x 5/8 Aluminum RH Rod End
ALRSML8B	FK Made in the USA 1/2 x 5/8 Aluminum LH Rod End
AMT8-10B2	2pc. 1/2 x 5/8 RH Aluminum Rod End - Black
AMTL8-10B2	2pc. 1/2 x 5/8 LH Aluminum Rod End - Black
AMT8-10	3 pc. 1/2 x 5/8 Aluminum RH Rod End
AMTL8-10	3 pc. 1/2 x 5/8 Aluminum LH Rod End
HDM8-10	3 pc. 1/2 x 5/8 H.D. RH Rod End

HDML8-10	3 pc. 1/2 x 5/8 H.D. LH Rod End
JAM10	5/8 Steel Jam Nut RH - 3/4" Hex
JAM10L	5/8 Steel Jam Nut LH - 3/4" Hex
MM8-10	3 pc. 1/2 x 5/8 Moly RH Rod End
MM8-10R	2 pc. 1/2x5/8 RH Moly
MML8-10	3 pc. 1/2 x 5/8 Moly LH Rod End
RSM8	FK Made in the USA 1/2 x 5/8 HD RH Rod End
RSML8	FK Made in the USA 1/2 x 5/8 HD LH Rod End
RSMX8	FK Made in the USA 1/2 x 5/8 Moly RH Rod End



Superior Bearings has been servicing and producing bearings for the motorsports industry for over 30 years. Superior is known for their commitment to quality and fair pricing. Their SBS Rod Ends are a trusted name in the industry.

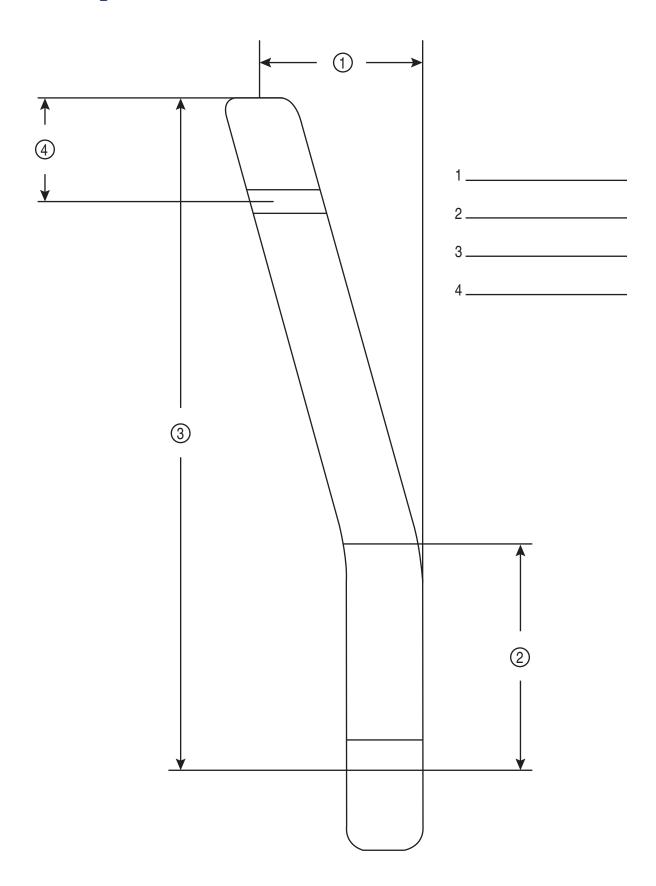


FK Rod Ends produce the highest quality Made in the USA Rod Ends in motorsports. Top Teams across the globe rely on the performance of FK to reach victory lane.



DMI offers both 2pc. and 3pc. rod ends. Both feature high quality and high strength.

# Rear Arm Diagram



### DMI / BullDog 2018 PRODUCT GUIDE

### **Tech Specs**

86-40 Maxim/Eagle/XXX/JJ 1.75 Split		87-40 Maxim/Eagle/XXX/JJ 1.75 Split	
RF	RR-21.5-1.125	RR-22.5-1.125	
LF	RR-21-1.125	RR-22-1.125	
RR	RR-24-1.000	RR-24-1.00	
LR	RR-23.5-1.000	RR-23.5-1.00	
Panhard	RR-18.5-1.125	RR-18.5-1.125	
TieRod	RR-46.0-ST	RR-46-ST	
DragLink	RR-48-ST	RR-49-ST	
RR Arm	SRC-2687	SRC-2687	
LR Arm	SRC-2689	SRC-2689	
acobs Ladder	SRC-2515/2505	SRC-2515/2505	

#### Squaring the Rear Axle:

There are many different ways to square the rear end depending upon mechanical preference and comfort. This is one popular technique utilized by many professional teams. Place the rear end in the chassis and bolt up the torque tube. Set the axles on 6" blocks if it's a standard chassis, 5" on the left side and 6" on the right if it's a raised rail car. Secure the birdcages with spacers and the wheel nuts. Measure the distance from the rear round machined portion of the torque tube to the outer edge of the chassis by placing a straight edge vertically against the frame. Center the rear end by equalizing this distance on both sides of the car. This distance should measure between 10.125" and 10.25". Now with the rear centered side-to-side, start with the right side and measure from the leading edge of the rear axle to the front edge of the motor plate. On a 39" car this measurement is 37.625", 38.625" on a 40" car. Roll the axle forward or back on the blocks to achieve the correct distance. Once you have secured that distance on the right side check the left side. Ensuring that the rear is still centered in the frame and the right side measures correct, the left side may vary by as much as .125". This is generally left to lie as is. With the radius rods connected, place a level on the flat bottom portion of each bird cage and adjust the rods so that each cage is level with the bottom frame rail. Now bring your rear arms up to each bird cage flag and adjust each rod end so that the lower bird cage bolts slide freely through the cage and the rod end. Having completed this, recheck all of your measurements to ensure that nothing was moved during the previous processes. If all measures correct bring your jacobs ladder to the rod end or clevis and adjust the rod end or clevis in or out so that the bolt also slides freely. With these operations complete check your work by ensuring the torque ball is free and the jacobs ladder is not bound. Now you are ready for race height setup blocks and stops.

# **Tech Specs**

#### Squaring the Front Axle:

Set the front axle on 4" set-up blocks, or 3" and 4" if it is a raised rail car. Offset the axle 1" to the left side by adjusting the sway bar. This gives clearance to the left front torsion arm and combo steering arm. Measure 14" from the center of the right front torsion tube to the center of the axle on both sides. After roughing in the radius rods to this measurement, measure from the leading edge of the rear axle (still on 6" blocks) to the rear edge of the front axle on the rightside. After having gained this measurement we will set the lead. Check the left side the same way and adjust the rod length so that the left measurement is equal to or up to .25" set back depending upon driver preference and size of track. With the axle now square we can adjust the caster. Place an angle finder on the right front steering arm. Adjust the top right front radius rod so that the angle reads anywhere from 6 to 10°. Again this is driver preference, some drivers like more positive feel in the front end than others. With this complete you can drop the axle down to race height set-up blocks and adjust the stops. Don't forget to set the tow. An .125" of tow out is generally the norm.



# **Thinking**

If you think you are beaten, you are If you think you dare not, you don't, If you like to win, but you think you can't It is almost certain you won't.

If you think you'll lose, you're lost For out of the world we find, Success begins with a fellow's will It's all in the state of mind.

If you think you are outclassed, you are You've got to think high to rise, You've got to be sure of yourself before You can ever win a prize.

Life's battles don't always go
To the stronger or faster man,
But soon or late the man who wins
Is the man WHO THINKS HE CAN!







