



50  
Years



OVER 28 000 TRANSMISSION IN SERVICE

2018 PARTS CATALOG

# 2<sup>nd</sup> Generation Transmission

For Late Models



**Late Model Transmission 2<sup>nd</sup> Generation**  
SG-1300



**Late Model Transmission 2<sup>nd</sup> Generation Muncie Length**  
Tailhousing 3" Longer to fit Muncie Length  
SG-1400



**Late Model Transmission Ball Spline 2<sup>nd</sup> Generation**  
SG-1500

## Second Generation Bert Transmission

This revolutionary design is the lowest rotating weight gear box available. The mechanism of the first and reverse are totally disengaged from rotation when it's in direct drive (high gear), so there are no wear on those parts. Reducing rotating weight creates more power to rear wheels that is greatly felt by drivers. Crate motor and limited engines series are the ones who get the most benefit from this transmission, either on dirt or pavement.

The second generation transmission delivered multiple wins in 2015 which proves it is one of the top transmissions on the market today. Champions like Billy Moyer, Tim Fuller, Chris Maden, Casey Robert, Hunter Peacock, Steve Francis, David Smith, Ray Cook, Jonathan Davenport use this transmission and have had remarkable success and wins all season long. Don't deprive your race team, use the second generation bert transmission!

## Late Model Shifter Assembly

Fits Most Late Model Chassis  
SG-1310



## Bloomquist Shifter

Fits Bloomquist Chassis Only  
SG-1311



Billy Moyer #21



# 2<sup>nd</sup> Generation Transmission

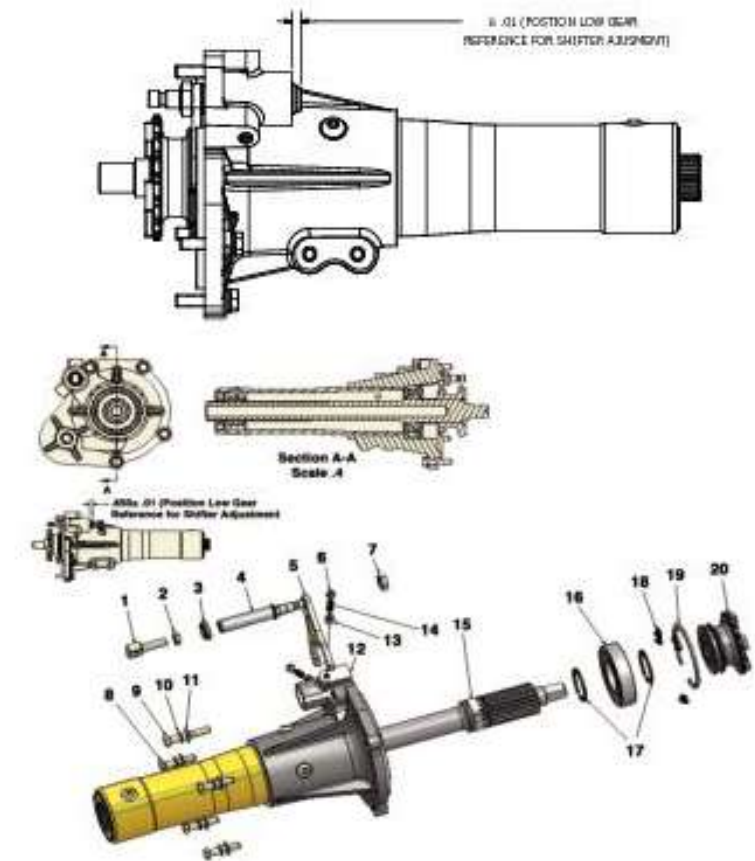
For Late Models



**Late Model Transmission 2<sup>nd</sup> Generation**  
SG-1300

## SG-1300-01 (Tail Casting Late Model Assy)

Item #	Part #	Description (Quantity)
1	SG-1151	Rod End 3/8-24 UNF (1)
2	SG-1152	Hex Jam Nut 3/8-24 UNC (1)
3	SG-1150	Shaft Seal (1)
4	SG-1102	Shifting Rod Extension (1)
5	SG-1017	Selector Fork (1)
6	SG-1157	Set Screw 7/16-14 UNC x .375 (2)
7	SG-1056	Hex Nylon Lock 1 2-20 UNF (1)
8	SG-1155	Hex Head Screw 5/16-18 UNC x 1.500 (4)
9	SG-1154	Hex Head Screw 5/16-18 UNC x 2.000 (1)
10	HLW516	Lock Washer .313 (5)
11	SG-1156	Flat Washer 5/16 (5)
12	SG-1400-05	Tail Casting Late Model Sub Assy (Sale Together) (1)
13	SG-1035-01	Plunger Small Ball 1/4 diam.
	SG-1035-02	Plunger Big Ball 5/16 diam.
14	SG-1158	Spring 5/16 (2)
15	SG-1302	Output Shaft (1)
15*	SG-1402	Output Shaft for SG-1400 (1)
16	6208ZZE	Ball Bearing (1)
17	SG-1083	Bert Part # 031 (2)
18	SG-1021	Crown Trust Washer (3)
19	SG-1160	Internal retaining ring, Bore diameter 3 5/32 (1)
20	SG-1101	Hi Selector (1)



## SG-1300-05 (Tail Casting Late Model Sub Assy)

Item #	Part #	Description (Quantity)
1	SG-1354	Shaft Seal BHH1010-AD, Same as Bert Part # 065 (1)

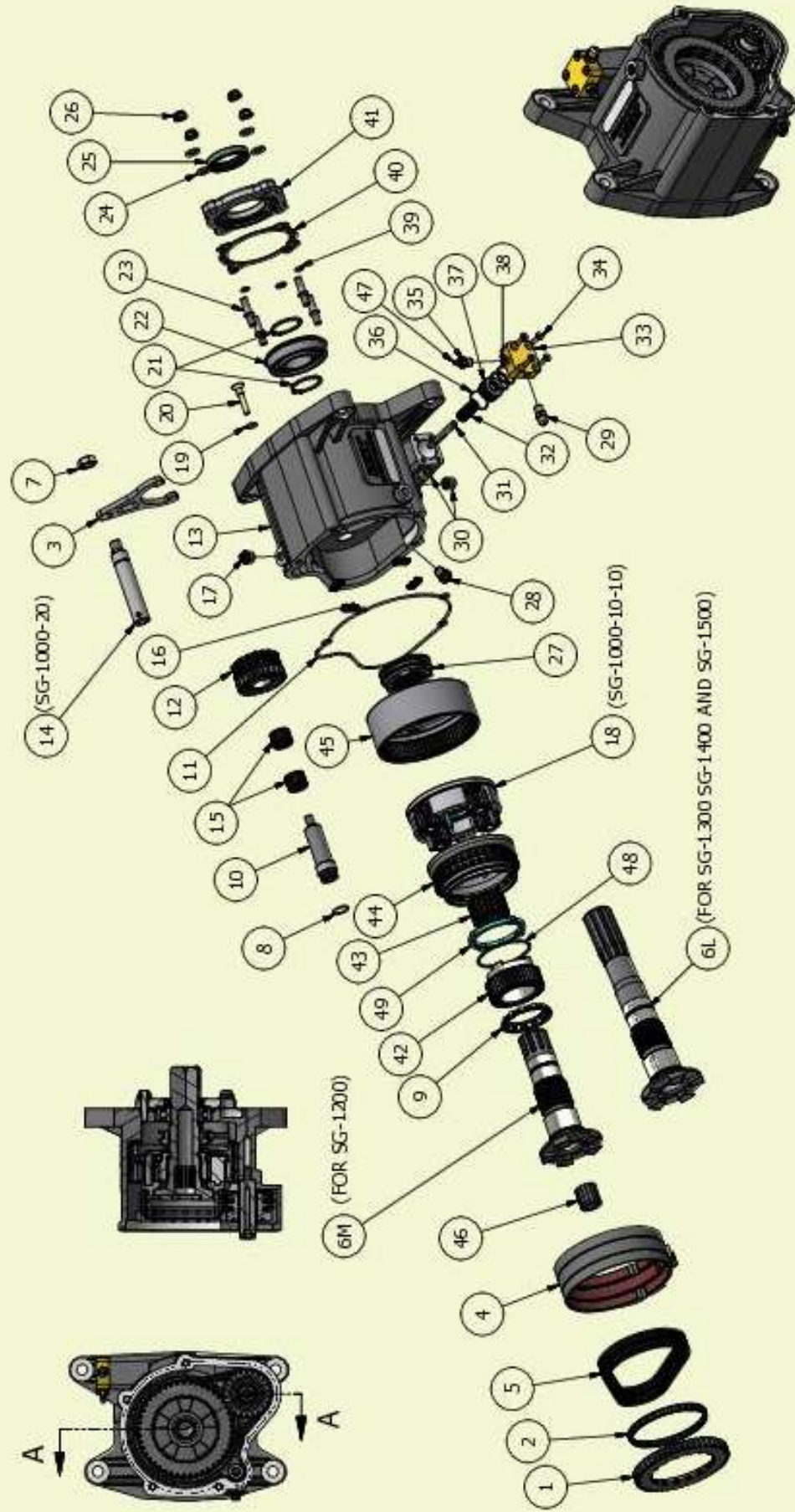




# 2nd Generation Transmission

For Late Models Exploded View

SG-1000-01 (MAIN CASTING ASSY)



# 2nd Generation Transmission

For Late Models and Modifieds Exploded View

Item	Part #	Description	Qty	Item	Part #	Description	Qty
1	SG-1029	Reverse Gear	1	22	SG-1053	Input Shaft Bearing 6207Z enr.	1
2	SG-1031-K	Reverse Bearing (Seal Together with SG-1061)	1	23	SG-1037	Front Cover Stud	4
2b	SG-1061	Steel Ball 3/16	1	24	SG-1156	Flat Washer 5/16	4
3	SG-1017	Selector Fork	1	25	SG-1052	Shaft Seal CRWA1-R	1
4	SG-1030-K	Bert Band + Band Anquer	1	26	SG-1258	Hex Nylon Lock 5/16-24 UNF	4
5	SG-1076	Double Row Chain	1	27	SG-1006	Sun Gear Selector	1
6M	SG-1002	Input Shaft (For SG-1200)	1	28	SG-1033	Band Anchor Stud	1
6L	SG-1003	Input Shaft Late (For SG-1300, SG-1400, & SG-1500)	1	29	SG-1064	Servo AN Adapter	1
7	SG-1056	Hex Nylon Lock 1/2-20 UNF	1	30	SG-1063	Magnetic Drain Plug 1/4 NPT	2
8	SG-1079	O-Ring OD 3/4 ID 5/8 with 1/16	1	31	SG-1019	Band Anchor Shaft	1
9	SG-1032-K	Carrier Truste Support Bearing	1	32	SG-1078	Piston Return Spring, OD 5/8 x 1-1/4 x w(.069 x .109)	1
10	SG-1027	Reverse Gear Shaft (Sale Together with SG-1034)	1	33	SG-1020	Servo Cover	1
11	SG-1038	Case Gasket	1	34	SG-1066	Flat Head 82 Deg #10-24 UNC x .750	4
12	SG-1028	Reverse Idler Gear	1	35	SG-1065	Servo Bleed	1
13	SG-1001	Main Casting	1	36	SG-1081	O'Ring 1/16 x 1.000 (A.P.D.N.)	1
14	SG-1000-20	Front Fork System Sub Assembl	1	37	SG-1018	Servo Piston	1
15	SG-1057	Needle Bearing 20 x 24 x 17	2	38	SG-1077	O'Ring 13/16	2
16	SG-1021	Trust Washer	4	39	SG-1082	Stud O'Ring	4
17	SG-1068	Breather	1	40	SG-1039	Gasket	1
18	SG-1000-10-10	Carrier Sub Assembly	1	41	SG-1004	Front Cover	1
19	SG-1054	O'Ring OD 9/16 Wall 1/16	1	42	SG-1012	Sun Gear	1
20	SG-1022	Front Fork Support Screw	1	43	SG-1069	Needle Bearing 40 x 45 x 27	1
21	SG-1080	External Retaining Rings, 5160-137	2	44	SG-1009	L and R Carrier	1
				45	SG-1007	Carrier Crown	1
				46	SG-1058	Needle Bearing WJ 12 x 16 x 16	1
				47	SG-1065	Servo Bleed Adapter Plug	1
				48	SG-1016	Sun Gear Trust Ring	1
				49	SG-1011	Carrier Support	1

## Bert Blue Magic Transmission Fluid

Bert Blue Magic is specially blended to insure greater bearing and gear protection, easier shifting and smoother and quieter clutch operation. Blue Magic also significantly reduces transmission operating temperature.  
Parts # TR-OIL

1st Generation Transmission (LMZ/MOZ) uses 3/4 Quart  
2nd Generation Transmission uses 1/2 Quart



Steve Bernier #25

Photo : Daniel Mailhot

# 2<sup>nd</sup> Generation Transmission

For Late Models



Late Model  
Transmission  
2<sup>nd</sup> Generation  
Muncie Length  
SG-1400



# 2<sup>nd</sup> Generation Transmission

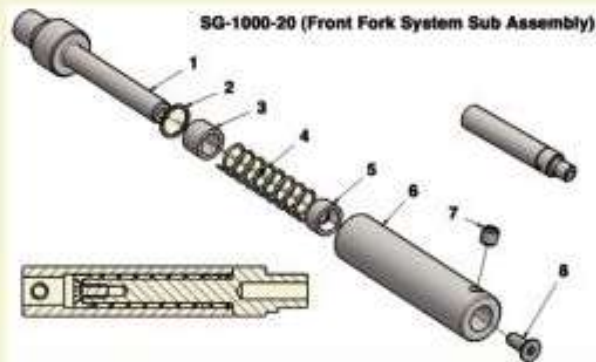
For Late Models



Late Model  
Transmission  
Ball Spline  
2<sup>nd</sup> Generation  
SG-1500



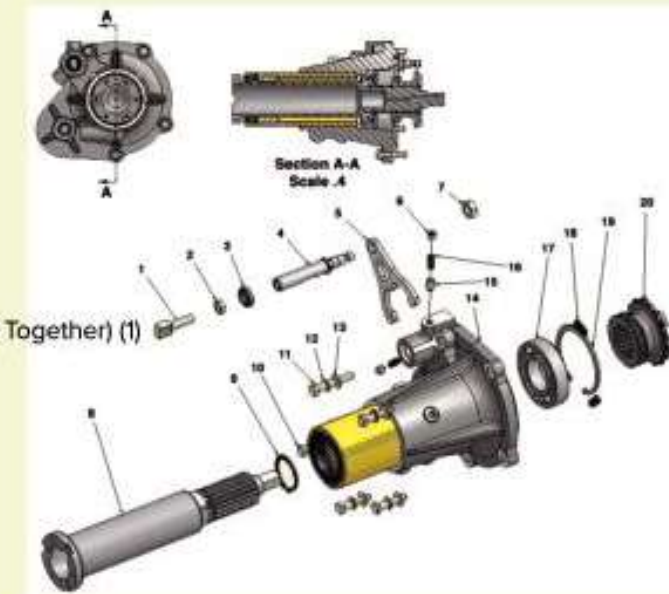
Item...	Part #	Description	Qty
1.....	SG-1070.....	Hex Head Screw 1/4-28 UNF x 1.750	4
2.....	SG-1071.....	Lock Washer 1/4	4
3.....	SG-1010.....	Carrier Washer Plate	1
4.....	SG-1008.....	Planet Carrier	1
5.....	SG-1015.....	Planet Thrust Washer	4
6.....	SG-1014.....	Planet Shaft	4
7.....	SG-1059.....	Needle Bearing .091	64
8.....	SG-1013.....	Planet Gear	4



Item...	Part #	Description	Qty
1.....	SG-1023.....	Shifting Rod	1
2.....	SG-1075.....	Internal Retaining Ring .500	1
3.....	SG-1025.....	Shifting Rod Spring Washer	1
4.....	SG-1073.....	Compression Spring OD .480 Wire .040 x 2.000	1
5.....	SG-1026.....	Shifting Rod Spring Compressor	1
6.....	SG-1024.....	Shifting Rod Spring Holder	1
7.....	SG-1072.....	Set Screw 1/4-28 UNC x .250	1
8.....	SG-1074.....	Flat Head Cap Screw 10-32 UNC x .500	1

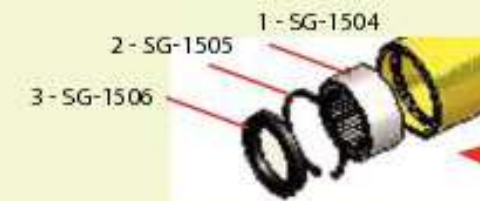
## SG-1500-01 (Tail Casting Late Model Ball Spline Assy)

Item...	Part #	Description (Quantity)
1.....	SG-1151.....	Rod End 3/8-24 UNF (1)
2.....	SG-1152.....	Hex Jam Nut 3/8-24 UNC (1)
3.....	SG-1150.....	Shaft Seal (1)
4.....	SG-1102.....	Shifting Rod Extension (1)
5.....	SG-1017.....	Selector Fork (1)
6.....	SG-1157.....	Set Screw 7/16-14 UNC x 0.375 (2)
7.....	SG-1056.....	Hex Nylon Lock 1.2-20 UNF (1)
8.....	SG-1502.....	Output Shaft (4)
9.....	SG-1053.....	Deep Groove Ball Bearing
10.....	SG-1155.....	Hex Head Screw 5/16-18 UNC x 1.500 (4)
11.....	SG-1154.....	Hex Head Screw 5/16-18 UNC x 2.000 (1)
12.....	HLW516.....	Lock Washer .313 (5)
13.....	SG-1156.....	Flat Washer 5/16 (5)
14.....	SG-1500-05.....	Tail Casting Late Model Sub Assembly) (Sale Together) (1)
15.....	SG-1035-01.....	Plunger Small Ball 1/4 diam.
	SG-1035-02.....	Plunger Big Ball 5/16 diam.
16.....	SG-1158.....	Spring 5/16 (2)
17.....	SG-1350.....	Ball Bearing
18.....	SG-1021.....	Crown Thrust Washer (3)
19.....	SG-1160.....	Internal retaining ring
20.....	SG-1101.....	Hi Selector (1)



## SG-1500-05 (Tail Casting Late Model Ball Spline Sub Assy)

Item...	Part #	Description (Quantity)
1.....	SG-1504.....	Needle Bearing HJ324120 (1)
2.....	SG-1505.....	Snap Ring (1)
3.....	SG-1056.....	CR Seal 19762 (1)



Tim McCreadie #39



# 2<sup>nd</sup> Generation Transmission

## For Dirt Modifieds



**Dirt Modified Transmission**  
2<sup>nd</sup> Generation  
SG-1200

### Second Generation Bert Transmission

10 pounds lighter than original MOZ Transmission. 50% less rotating weight. Better ratio for clutch to engage quicker. Uses same length driveshaft and coupler.



### Remote Shifter

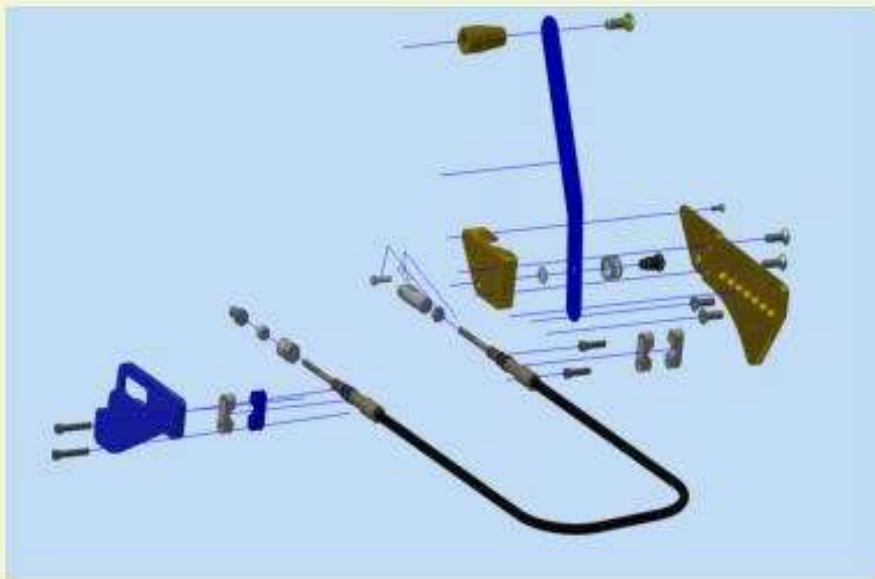
Now you can shift your race car just as easy as shifting a street car. Bert has designed a remote shifter for the east coast modified second generation trans (SG-1200), because of the single shifting rod design the use of a heavy duty cable and adapter bracket has create a great system. This shifter is handy and brings comfort to driver specially when going in and out of the cockpit.



### Optional Remote Side Shifter Kit

For SG-1200 Transmission

Description	Part #
Remote Shifter for Second Generation Transmission	78-SG
Replacement Cable Only	78-1C



Description	Part #
Regular Shifter for Second Generation Modified Trans	78-S



# 2<sup>nd</sup> Generation Transmission

## For Dirt Modifieds



### SG-1200 Tail Assenbly Exploded View

Item	Part #	Description	Qty
1	SG-1150	Shaft Seal	1
2	SG-1102	Shifting Rod	1
3	SG-1017	Selector Fork	1
4	SG-1157	Set Screw 7/16-14 UNC x .375	2
5	SG-1056	Hex Nylock 1/2-20 UNF	1
6	SG-1155	Hex Head Screw 5/16-18 UNC x 1.500	4
7	SG-1154	Hex Head Screw 5/16-18 UNC x 2.000	1
8	HLW516	Lock Washer .313	5
9	SG-1156	Flat Washer 5/16	5
10	SG-1201	Tail Casting Modified	1
11	SG-1035-01	Plunger Small Ball 1/4 diam.	2
	SG-1035-02	Plunger Big Ball 5/16 diam.	2
12	SG-1158	Detent Spring	2
13	SG-1202	Output Shaft Modified	1
14	SG-1250	Deep Groove Ball Bearing 80mm x 40mm x 23mm	1
15	SG-1251	Shaft Seal CRWA1-R, Same as Bert P/N 052	1
16	SG-1021	Trust Washer	3
17	SG-1160	Internal Retaining Ring	1
18	SG-1101	Gears Selector	1
19	SG-1252	Hex Cap Screw 3/8-24 x 1.500	1
20	SG-1253	Lock Washer 3/8	1
21	SG-1213	Yoke Washer	1
22	53-HD-K	Yoke Modified	1
23	SG-1203	Output Shaft Spacer	1



Domination of Matt Sheppard #9S at the 2017 Super DIRT Week.

# 1<sup>st</sup> Generation Transmission

NY MODIFIED

## Open Drive

Bert Open Drive Modified transmission features a compact 11" length (mounting face to yoke center)

## Closed Drive

Utilizing our proven open drive design, it incorporates a specially designed rear cover which will accept conventional Sprint Car torque ball & tube. Ultimate setup for Champ Cars & all closed drive equipped cars.

Open Drive  
MOZ



Closed Drive  
MCZ



Replacement Modified Shifter Kit  
78-M



Kayle Robidoux #46



# 1<sup>st</sup> Generation Transmission

FOR LATE MODELS

All Bert late model transmissions feature "over center" shifter for positive high gear engagement. Improved rear suspension traction with Bert ball spline transmission. All Bert transmissions now feature "dog tooth" final drive for smooth shifts and positive engagement. Model numbers starting in "Z" are "dog tooth" equipped.

## Dirt Late Model Transmission

It features an internal clutch assembly for reduced rotating weight, and new "dog teeth" gears. Trans available with optional coupler and shifter for an additional amount per item.

Late Model Trans Alum.....LMZ

Shown with optional  
shifter



## Complete Late Model Trans w/Ball Spline

Already the industry leader in racing transmissions, Bert takes the competitive package to the next level. By significantly reducing drive line bind, the Bert ball spline transmission allows the rear suspension to move faster and smoother, greatly improving traction on today's dry, slick racing surfaces.

LMZ-BS



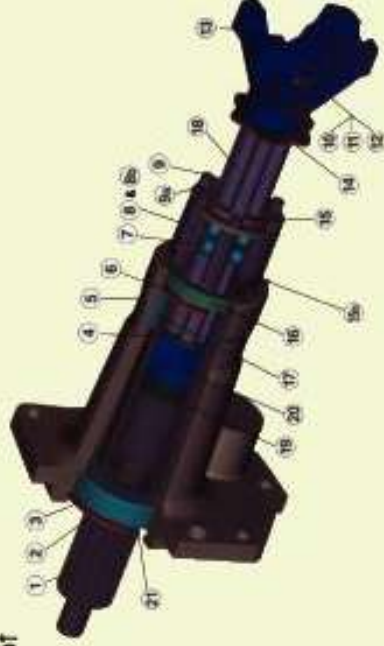
## Tail Housing Ball Spring Assembly

003-BS



# Ball Spline Tail Housing

The Bert Ball Spline Tail Housing replaces your standard slip yoke tail and brings the benefit of greatly reduced friction in the telescoping action of the driveshaft necessary for smooth rear suspension travel. All Bert Ball Splines are now manolite treated to improve hardness and prevent rust.



15b. Bert introduces a inner ball washer seal to keep the grease in the ball retainer unit and avoid the need to add grease. Thanks to Late Model star Rick Eckert for this great idea.

Number	Description	Qty
1	Output Shaft Tube	(1)
2	Front Bearing Snap Ring	(1)
3	Front Bearing	(1)
4	Steel Washer .090	(1)
5	Tailhousing Ball Spline	(1)
6	Rear Snap Ring	(1)
7	Ball Bearing 1/2"	(12)
8	Ball Bearing Unit	(1)
8b	Ball Retainer Ring Double Seal	(1)
9	Allen Cap Screw 1/4-28 2"	(6)
9a	Hi Lock Washer	(6)
10	Washer	(1)
11	Lock Washer	(1)
12	Bolt 3/8-24 1 1/2"	(1)
13	Aluminum Yoke	(1)
14	Stop Washer	(1)
15	Ball Washer Seal	(1)



New Greaseable Seal  
**3-15-KG**

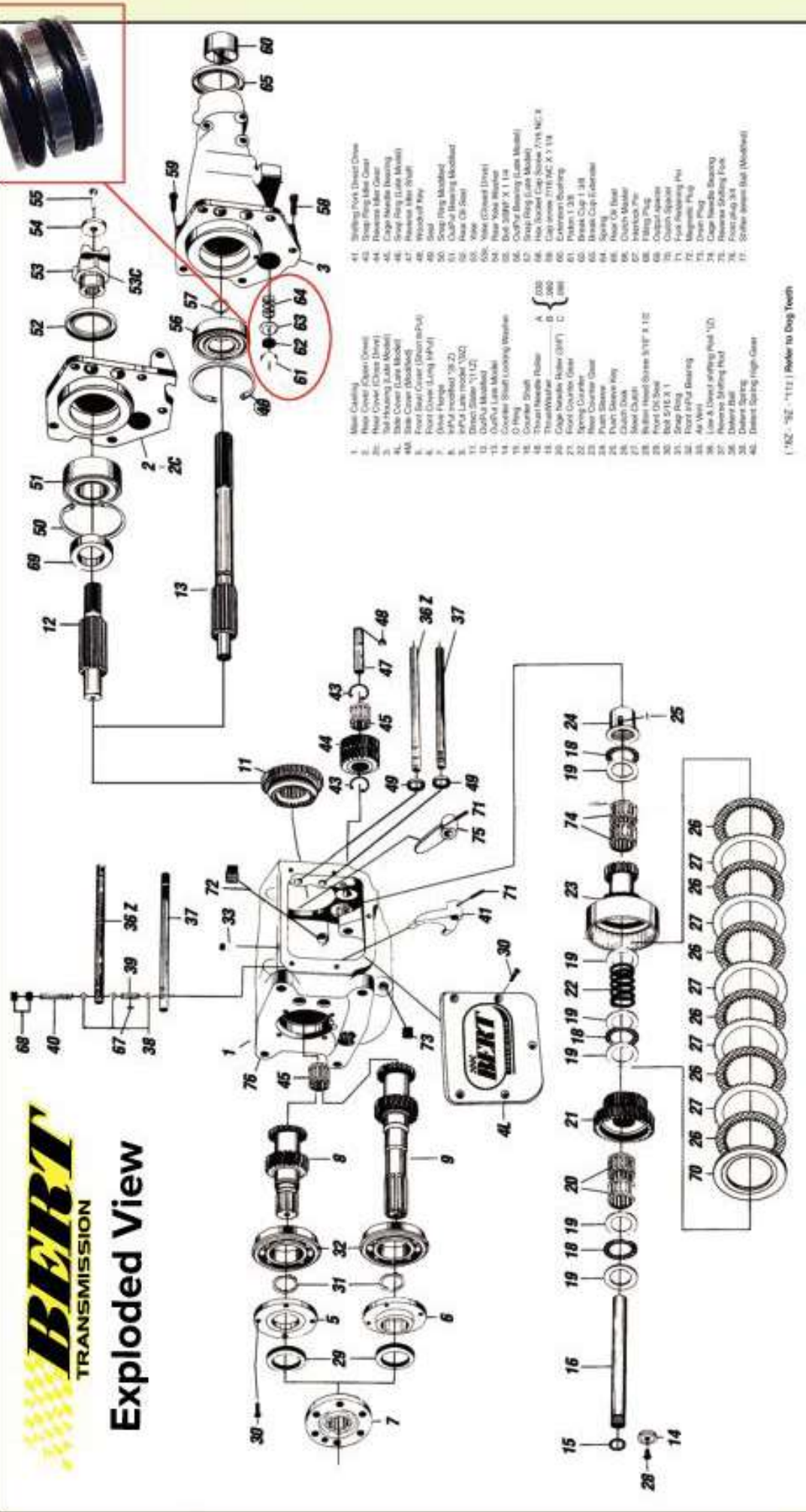
Overhauling Kit  
**3-BS-OK**

Overhauling Kit  
with 2-Seal  
**3-BS-OK-N**

Number	Description	Qty
15b	Front Seal	(1)
16	Tail Housing Seal	(1)
17	Roller Bearing	(1)
18	Ball Spline Shaft	(1)
19	Wear Ring	(1)
20	Wear Ring Support	(1)
21	Output Snap Ring	(1)



## Exploded View



# Sprint Car



## Bert Sprint Transmission

20 years ago Bert Robidoux, owner of Bert Engineering introduces the revolutionary Bert Transmission. A direct drive unit with a small internal clutch. It was and still is the closest system to a sprint car direct drive. This major innovation is now the standard in oval track racing.

Bert now brings this winning technology to the Sprint Car!

The new Bert Sprint Transmission assembly weighs less than 36 lbs, including 6-1/2" flywheels, bellhousing, starter, transmission, torque ball coupler, hydraulic clutch master.



USE AW32 HYDRAULIC OIL

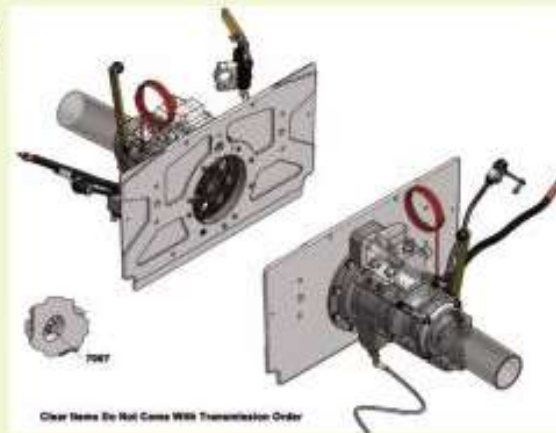
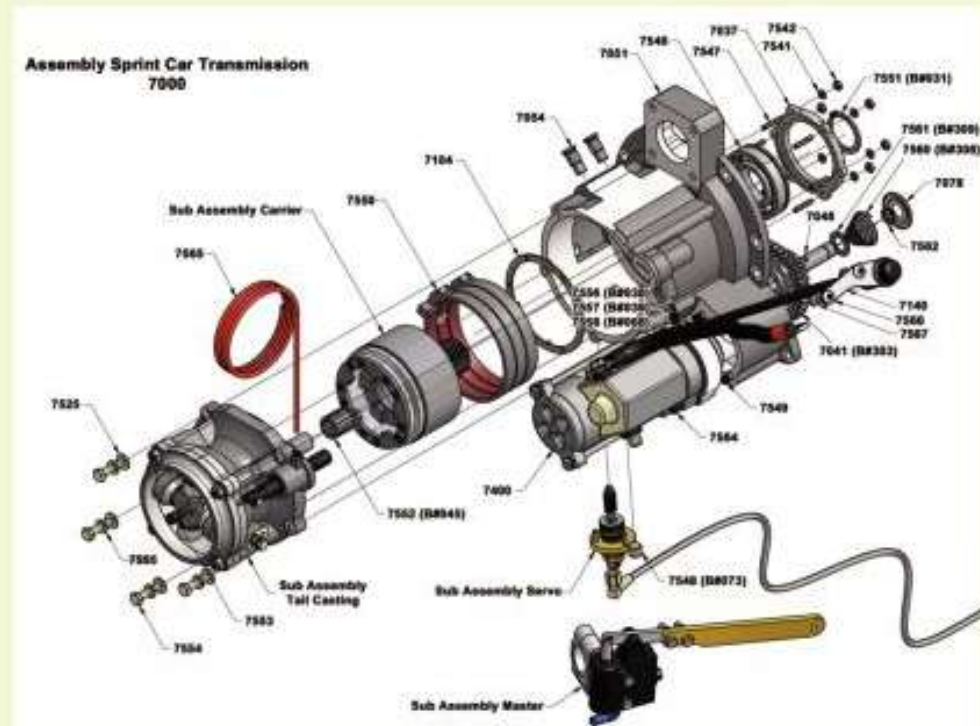
\*\*\*\* Include choice of motor plate and fly wheel.



## Bert Sprint Transmission

- All new clutch and gear system • A true neutral
- A direct drive that give you the same power response.
- One lever does it all. First, Neutral, and Direct.
- Now Sprint Cars can use the same dependable set-up that cranks up countless Late Models, Modifieds, and other race cars every weekend.
- Over all length of 9.625" from fire wall to center of U-joint.

The integrated bellhousing and transmission case has provision to accept most popular back cam driven power steering pumps. The torque ball insert replacement sleeve eliminates costly maintenance. Torque ball insert replacement available to suite different ball size and eliminate replacement of costly components.



# Sprint Car Starter



## Sprint Car Starter

Start your sprint car without using a push truck! You just simply need to take off your rear cover and pull out your gears and slip on this starter in place. It comes with a remote starter button. All you need to do is hook it to a 12V battery and you are ready to make some noise.



Part #	Description
SPC-STR	Sprint Car Starter



Alain Bergeron #88

Photo: David Mialhot

# Go-Kart



Part #	Description
K-028	Brake Disc
K-030	Rear Axle Steel
K-031	Rear Hub
K-032	Sprocket Hub
K-033	Lock Collars
K-034	Brake Disc





# Bellhousings

Northeast Modified  
Chevy/Ford



Chevy/Ford NE Modified  
Less Flywheel & Coupler  
Aluminum..300-CF-NFC  
Magnesium..300-CF-NFC-MAG

Late Model  
Chevy



Chevy Late Model  
Less Flywheel & Coupler  
Aluminum..301-C-NFC  
Magnesium..301-C-NFC-MAG

Late Model  
Ford



Ford Late Model  
Less Flywheel & Coupler  
Aluminum..301-F-NFC  
Magnesium..301-F-NFC-MAG

Northeast Modified  
Dodge



Dodge NE Modified  
Less Flywheel & Coupler  
Aluminum..300-D-NFC  
Magnesium..300-D-NFC-MAG

## Magnesium Bellhousing

For the racer who demands strength with performance, Bert's late model magnesium bellhousing provides both in a lighter and stronger package.

## Bellhousing Replacement Parts

Part #	Description
303	Idler Gear with Bushing
304	Idler Gear Bushing
305	Casting Late Model
306	Idler Gear Shaft
307	Bellhousing Plate - Late Model
308	Idler Gear Spring
309	Idler Gear Washer
310	Idler Gear Shaft Grease Fitting



# Flywheels & Couplers

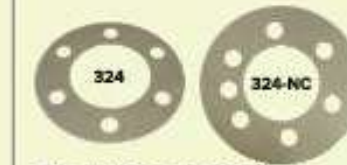
## Two Piece Flywheels & Couplers

### Couplers



### Drive Flange Late Model - Chevy

Steel Gilmer Hub	371-G
Steel HTD Hub	371-H
Aluminum Gilmer Hub	371-L-G
Aluminum HTD Hub	371-L-H



### Flywheel Shims

Flywheel Shim	324
Flywheel Shim New Chevy	324-NC

### Flywheels



### Two-Piece Flywheel

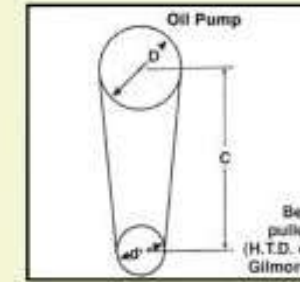
Flywheel Ring Chevy	370
Flywheel Ring Offset	
.080 more	370-NYM
Uses less shims.	



Flywheel Ring Ford	370-F
Flywheel Ring Ford Windsor	370-WIN

- Two-piece design allows changing of ring gear or hub.
- Smallest & lightest flywheel available
- HTD or Gilmore hubs made from high strength steel or 7075 T6 aluminum.

## How to Determine your Belt Length



L = Belt length  
C = Center to center distance  
(to be measured on your own setup)  
D = Pitch diameter of large pulley  
d = Pitch diameter of small (Bert) pulley  
d for HTD (22 round teeth) = 2.2  
d for Gilmore (18 square teeth) = 2.15  
L = 2C + 1.57 (D + d)

Ex. If C = 8" 2C = (8" + 8" = 16)  
D = 3.5" (D + d) = (3.5" + 2.2" = 5.7")  
d = 2.2"

2 C + 1.57 (D + d)  
1.57" x 5.8" = 8.949"  
16 + 8.949 = 24.949"  
Belt Length = 24.949"

For HTD (Metric) x answer by 25.4 for belt #.0

### Drive Flange



Part #	Description
7	Chevy Coupler
7-A	Chevy Aluminum Coupler
7-B	Buick Coupler
7-BV6	Buick Coupler V-6/4.1L
7-D	Dodge 340-360 Coupler
7-DH	Dodge Hemi 8 Holes Coupler
7-F	Ford 340/360 Coupler
7-F429	Ford 429 Coupler
7-G	Chevy Coupler with Gilmer Drive
7-H	Chevy Coupler with HTD Drive
7-LS1	Chevy LS1 Coupler
7-NC	New Chevy 3 Inches Coupler
7-O	Oldsmobile 455 Coupler
7-P	Pontiac 455 Coupler
7-PIN	Pinto 1600-2000 Coupler
7-PIN2300	Pinto 2300 Coupler
7-P2000	Pontiac 2000 C.C. Coupler

## One Piece Flywheels



### 1 Pc Modified Flywheel

Description	Part #
Dodge Modified	311-D
Dodge 360 Ext. Bal.	311-D360-EXT.8
Dodge Hemi	311-DH
Ford 429/460 Modified	311-F429
Modified LS1	311-LS1
New Chevy 3"	311-NC
New Chevy 3" Ext. Bal.	311-NC-EXT
Oldsmobile Modified	311-O
Pontiac Modified	311-P
Pontiac 2000 Modified	311-P2000
Pinto 1600 & 2000 Mod.	311-PIN
Pinto 2300	311-PIN2300
Sprint Car	311SC
Flywheel Modified 454	312



### 1 Pc Late Model Gilmore Flywheel

Description	Part #
400 SB Ext Bal Gilmore	318-400
Belt Guide Washer	318-BG
Dodge Gilmore	318-D
Dodge R5 Gilmore	318-D-R5
Dodge Hemi Gilmore	318-DH
Ford R5 Gilmore	318-F-R5
Ford 429/460 Gilmore	318-F429
New Chevy 3" Gilmore	318-NC
Oldsmobile Gilmore	318-O
Pontiac Gilmore	318-P
Pontiac 2000 Gilmore	318-P2000
Pinto Gilmore	318-PIN
Pinto 2300 Gilmore	318-PIN2300



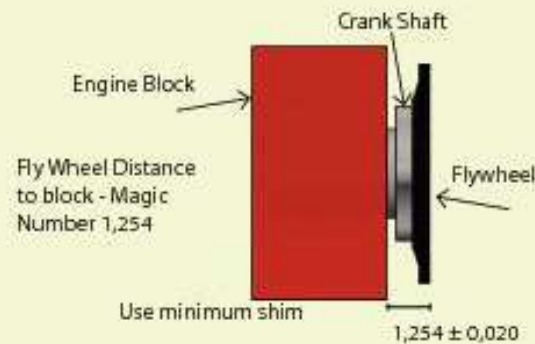
### Sprint Car Flywheel

Description	Part #
Sprint Car Toyota Flywheel	7040T
Sprint Car Crate Flywheel	CT525
Modified Crate Flywheel	CT-525-005



### 1 Pc Late Model HTD Flywheel

Description	Part #
HTD Ext. Bal. for 400C	320-400
Dodge HTD	320-D
Dodge R5 HTD	320-D-R5
Dodge Hemi HTD	320-DH
Ford R5 HTD	320-F-R5
Ford 429/460 HTD	320-F429
HTD LS1	320-LS1
New Chevy 3" HTD	320-NC
New Chevy 3" Ext. Bal.	320-NC-EXT
Oldsmobile HTD	320-O
Pontiac HTD	320-P
Pontiac 2000 HTD	320-P2000
Pinto 1600 & 2000 HTD	320-PIN
Pinto 2300 HTD	320-PIN2300
LS3	320-SL1



Mike Balcaen #10  
50 time track/series champion; over 225 victories with Bert Transmission parts.



## 1st Generation Transmission Rebuild Kits

Description	Part #
<b>Modified Basic Kit</b>	<b>90</b>
(6) Radius Tooth Clutch Disk	26
(1) Front Oil Seal	29
(1) Rear Oil Seal	52
(2) Shifter Seal	49
(1) O-ring	15
(2) Fork Retaining Pin	71
(2) Frost Plug 3/4" Cup	76

Description	Part #
<b>Modified Full Rebuild Kit</b>	<b>92</b>
(6) Radius Tooth Clutch Disk	26
(1) Front Oil Seal	29
(1) Rear Oil Seal	52
(2) Shifter Seal	49
(1) O-ring	15
(2) Fork Retaining Pin	71
(2) Frost Plug 3/4" Cup	76
(1) Front Input Bearing	32
(1) Output Bearing (modified)	51
(2) Radial Needle Roller	20
(2) Cage Needle Bearing	45
(2) Cage Needle Bearing	74
(3) Thrust Needle Roller	18
(2) Thrust Washer 90	19.090
(4) Thrust Washer 60	19.060
(1) Thrust Washer 30	19.030

Description	Part #
<b>Late Model Basic Kit</b>	<b>91</b>
(6) Radius Tooth Clutch Disk	26
(1) Front Oil Seal	29
(1) Late Model Rear Oil Seal	65
(1) Extension Bushing	60
(2) Shifter Seal	49
(1) O-ring	15
(2) Fork Retaining Pin	71
(2) Frost Plug 3/4" Cup	76

Description	Part #
<b>Late Model Full Rebuild Kit</b>	<b>93</b>
(6) Radius Tooth Clutch Disk	26
(1) Front Oil Seal	29
(1) Late Model Rear Oil	65
(1) Extension Bushing	60
(2) Shifter Seal	49
(1) O-ring	15
(2) Fork Retaining Pin	71
(2) Frost Plug 3/4" Cup	76
(1) Front Input Bearing	32
(1) Output Bearing (L/M)	56
(2) Radial Needle Roller	20
(2) Cage Needle Bearing	45
(2) Cage Needle Bearing	74
(3) Thrust Needle Roller	18
(2) Thrust Washer 90	19.090
(4) Thrust Washer 60	19.060
(1) Thrust Washer 30	19.030



Bobby Pierce #32

**IMPORTANT: Piston not include**

## «FOREVER SEAL»



SEAL-101-KIT

## Low Drag Seal

Bert engineering has been working with tiger rear ends performing tests on ways to minimize power loss through the drivetrain. One of the least expensive and effective ways to reduce power loss was the installation of Bert's new low drag seals for the wheel hubs. Use them on all four corners and save four times as much.

**REUSABLE**  
Now, no need to replace seal every time you grease the bearing. This seal can be removed and reinstall without any damage.

**FRICITIONLESS**  
Friction is the enemy of a race car, and there's almost no drag with this seal, resulting in increasing HP to your wheel!

**NEW**



- Ram finish race
- DLC finish
- High performance polymair cage

**CTD Wide Five Hubs**

Made of alloys developed for aerospace thrust reversers and turbine impellers, the BERT wide five hubs deliver strength with lightweight and good looks. The alloys used were developed for use where fracture resistance characteristics are essential. The H-beam design of the arms is very rigid, while reducing rotating weight at the outer diameter.



- NYM-H01 Kit Includes:**
- 1 x Dust Cap Kit
  - 5 x Wheel Stud
  - 2 x Cup
  - 1 x Circle Clip

- NYM-H01-RR Kit Includes:**
- 1 x Dust Cap Kit
  - 5 x Wheel Stud
  - 2 Cup
  - 2 Bearing Preloaded
  - 1 Seal CTD-005-NS
  - 1 x Spacer All grease Ready to Install

Part #	Description
NYM-H01-KIT	CTD Wide Five Hubs
NYM-H01-RR	CTD Wide Five Hubs (Race Ready)

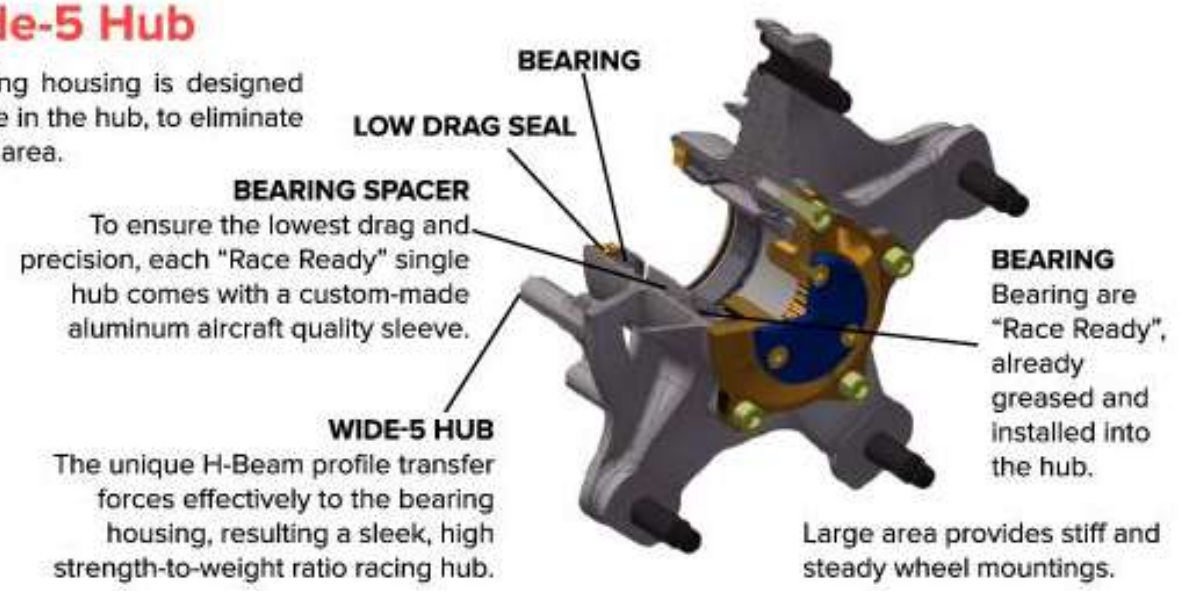
«Using the low drag system that Bert has developed has help the team concentrate on other parts of the race car needing no maintenance, easy installation and durability that it provides. While using these hubs we are freeing up valuable horse power that gives us that edge our competitors.»  
**Scott Jeffries, crew chief Billy Decker**

**Lightweight Wide-5 Hub**

Unlike other hubs, the bearing housing is designed to prevent that grease migrate in the hub, to eliminate recurrent maintenance in this area.

- CTD-001-Kit Includes:**
- 5 x Wheel Stud
  - 2 x Cup
  - 1 x Circle Clip

- CTD-001-RR Includes:**
- 1 Drive Flange CTD-016
  - 5 x Wheel Stud
  - 2 Cup
  - 2 Bearing
  - 1 Seal CTD-005-NS
  - All grease Ready to Install



**The Silverstar**



<b>Geometry:</b>	Standard Wide-5 interface Ø 10-1/4" Wheel stud circle 5 x Ø 5/8" Studs Ø 7" Rotor bolt circle 8 x Ø 5/16" Rotor bolts Ø 4.7" Drive flange/dust cap bolt circle 5 x Ø 7/16" Drive flange/dust cap bolts 3-1/2" Rotor offset (Standard for Wide-5)	<b>Bearings:</b>	2 x CTD's special tapered roller type (32 rollers) Rigid back-to-back arrangement Adjustable pre-load Maintenance free housing
<b>Design:</b>	High strength aluminum alloy Low rotation inertia Oversized mounting surfaces Sunken studs - Integrated drive flange mts	<b>Weight:</b>	4 lbs 6 ounces - Hub only 6 lbs 4 ounces - Including studs & races
		<b>Part #</b>	<b>Description</b>
		CTD-001-RR	Race Ready Rear Hub Complete Assy
		CTD-001	Rear Hub Only



Part #	Description
CTD-005	Regular Seal
CTD-005-TFE	Teflon Seal
CTD-005-NS	O'Ring Seal

**Component List**

ID	Description	Quantity	Part #	ID	Description	Quantity	Part #
A	Axle Tube (xx=Length - required - refer to SmarTube Equivalence Chart)	1	CTD-017-xx	F	Hub Lock Ring	1	CTD-006
B	Hub Assembly (Includes Wide-5 Hub and Wheel Bearing Kit - refer to SilverStar Hub Component List)	1	CTD-001 & 020	G	Hub Locknut	1	CTD-007
	Front North East Modified Hub Assembly	1	NYM-H01	H	Hub Safety Screw	1	CTD-008
C	Axle	1		I	Axle Stop	1	CTD-014
D	Drive Flange	1	CTD-016	J	Axle Stop Bolt	3	CTD-015

**Additional Components**

Description	Quantity	Part #
Cup	2	CTD-002
Bearing	2	CTD-003
Seals	1	CTD-005
Seals	1	CTD-005-NS
Seals	1	CTD-005-TFE



# Bert Modified Drive Shaft



## Modified Driveshaft Gundrilled Driveshaft

Modified Part #	Application Length	Open Drive Spline
250	14"	16 x 16
251	16"	16 x 16
252	18"	16 x 16
253	20"	16 x 16
254	22"	16 x 16
255	24"	16 x 16
256	26"	16 x 16
257	28"	16 x 16
258	30"	16 x 16

## Application Closed Drive

Modified Part #	Application Length	Open Drive Spline
259	14"	16 x 10
260	16"	16 x 10
261	18"	16 x 10
262	20"	16 x 10
263	22"	16 x 10
264	24"	16 x 10
265	26"	16 x 10
266	28"	16 x 10
267	30"	16 x 10

## Driveshaft

- A.) Gundrilled for lighter weight
- B.) Small diameter takes less room
- C.) Will not dent with stones or other debris
- D.) Fully floating at both ends (giving you a freer suspension)

# Ball Spline Drive Shaft

## Ball Spline Drive Shaft Get rid of the hidden bind

In order for the rear end to move freely, the driveshaft must be able to telescope freely. The following technical article from the SAE explains the advantage of our exclusive Ball Spline System.

To find the driveshaft lengths at the ride height, measure from the face of O.C. Yoke to face of transmission -2".

## Rolling Element Splines

Various rolling element spline mechanisms have been designed to reduce the axial force required to slip a spline while transmitting torque. While basically higher in cost, they offer numerous advantages which can justify their usage.

They show inherently much lower coefficients of friction not only while moving, but also on breakaway or starts. In result the lower thrust pulses and forces on connected components and bearings. The rolling action avoids galling and subsequent interference of mating sliding components and the resultant extremely high thrust forces. Therefore, drivetrain components failures are less apt to occur and it may even become possible to consider lighter components in the connected units. Generally these devices can be lubricated for life at assembly and not require further attention or maintenance. However, in some applications relubrication means are provided.

For ball spline part, refer to page 12.



240-(specify length) Ball Spline Driveshaft



240-9 Ball Spline Yoke

# Bolt-On Spindle

## Bert Bolt-On Spindle 8 Bolt Spindle (For Wide 5 Hubs)

Part #	Description
527	Non-Heat Treated 8 Bolt Spindle
528	Heat Treated 8 Bolt Spindle



# CTD Quick Change Side Bell

## CTD Quick Change Side Bell

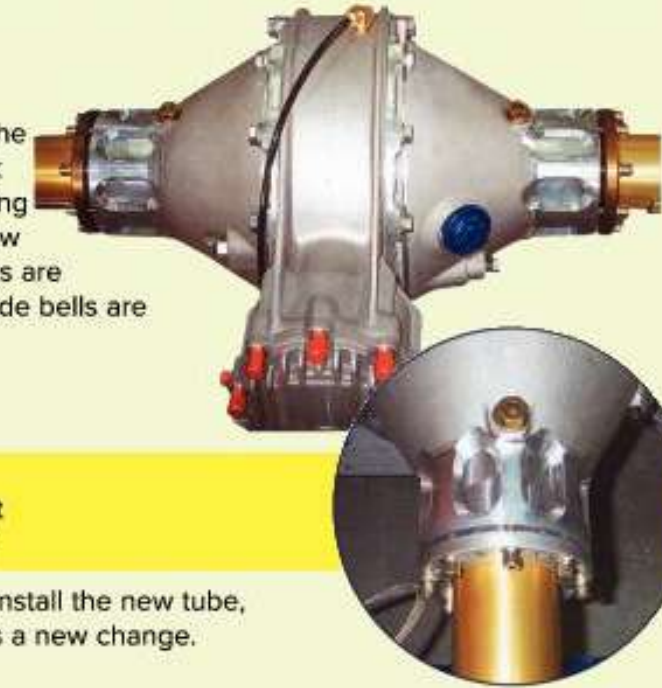
Available in aluminum or recently perfected lightweight magnesium, the CTD quick change side bells are rapidly becoming the state-of-the-art in rear drive technology. No longer does a damaged tube mean loading the car. In literally a few minutes, without heat, drilled or a press. A new tube can be installed without even draining the oil! Even the birdcages are pre-located featuring the six rib design for ring gear stability. These side bells are simply the only way to go!

- No need to remove the side bells.
- No need to press the old tube.
- Out of the side bell.
- No need to heat bell or tube.
- No drilling or tapping required.
- No need to retune birdcage.

Part #	Description
CTD-200	Right Side Bell Kit
CTD-201	Left Side Bell Kit

Just loosen CTD's patented taper lock and remove the safety pin. Reinstall the new tube, taper lock and safety pin and you are done! The setting of birdcage is a new change.

Kit included: Main bell, taper lock, safety lock pin, fastener.  
Note: A CD available for all maintenance required.



# Ball Spline Drive Shaft

## Ball Spline Drive Shaft Get rid of the hidden bind

In order for the rear end to move freely, the driveshaft must be able to telescope freely. The following technical article from the SAE explains the advantage of our exclusive Ball Spline System.

To find the driveshaft lengths at the ride height, measure from the face of O.C. Yoke to face of transmission -2".

## Rolling Element Splines

Various rolling element spline mechanisms have been designed to reduce the axial force required to slip a spline while transmitting torque. While basically higher in cost, they offer numerous advantages which can justify their usage.

They show inherently much lower coefficients of friction not only while moving, but also on breakaway or starts. In result the lower thrust pulses and forces on connected components and bearings. The rolling action avoids galling and subsequent interference of mating sliding components and the resultant extremely high thrust forces. Therefore, drivetrain components failures are less apt to occur and it may even become possible to consider lighter components in the connected units. Generally these devices can be lubricated for life at assembly and not require further attention or maintenance. However, in some applications relubrication means are provided.

For ball spline part, refer to page 12.



240-(specify length) Ball Spline Driveshaft



240-9 Ball Spline Yoke

# Bolt-On Spindle

## Bert Bolt-On Spindle 8 Bolt Spindle (For Wide 5 Hubs)

Part #	Description
527	Non-Heat Treated 8 Bolt Spindle
528	Heat Treated 8 Bolt Spindle



# Gundrilled Lower Shaft & Yokes

## Gundrilled Lower Shaft and Yokes Late Model Modified & Sprint Car Applications

Part #	Description
290	Lower Shaft Open Drive
291	Lower Shaft Closed Drive
292	Front Quick Change Aluminum Yoke

Note: Direct replacement for standard quick change rear end



NEW

## CTD Side Bell

### CTD Side Bell

Our constant R&D has once again resulted in a better mousetrap by redesigning the rear end side bell to incorporate six stiffening ribs, we achieve greater ring gear stability in a light and strong bell. Bert has acquired new state-of-the-art foundry equipment to control quality in our magnesium parts throughout the manufacturing process.

## Monocoque All Aluminum Axle

Previous Systems			SmarTube	
Axle Length	Late Model Tube Length	NY Modified Tube Length	SmarTube Tube Length (L)*	Axle Length Part #
28-1/4"	16-5/8"	15-1/8"	20-3/16"	25-1/4" CTD-017-20 3/16
29-3/4"	18-1/8"	16-5/8"	21-11/16"	26-3/4" CTD-017-22 3/16
31-1/8"	19-3/8"	17-7/8"	22-3/16"	28-1/4" CTD-017-21 11/16
32-1/8"	20-3/8"	18-7/8"	23-15/16"	29-1/8" CTD-017-24 9/16
32-5/8"	21"	19-1/2"	24-9/16"	29-5/8" CTD-017-25 1/16
33-1/8"	21-1/2"	20"	25-1/16"	30-1/8" CTD-017-26 1/16
34-1/8"	22-1/2"	21"	26-1/16"	31-1/8" CTD-017-27 1/16
35-1/8"	23-1/2"	22"	27-1/16"	32-1/8" CTD-017-28 1/16
36-1/8"	24-1/2"	23"	28-1/16"	33-1/8" CTD-017-30 1/16
37"	25-1/2"	24"	29-1/16"	34" CTD-017-20 1/16
39-1/8"	26-1/2"	25"	30-1/16"	35-1/8" CTD-017-28 1/16

**Geometry:**  
 Std Quick-Change Interface  
 Ø 3" OD (Tube section)  
 Ø 2-7/8" OD (Axle section)  
 Ø 2-1/2" ID (Entire length)  
 Tube length (L): 20-3/16" to 30-1/16"  
 (Refer to SmarTube equivalency chart)

**Design:**  
 Monocoque-Means strength & simplicity  
 High strength aluminum alloy - Al 7075  
 Low weight design  
 Oversized axle  
 Oversized driveshaft tunnel

**Bearings:**  
 2 x CTD's special tapered roller type  
 (32 rollers)  
 Floating arrangement  
 Adjustable pre-load  
 Maintenance free housing

**Weight:**  
 5 pounds flat - L= 23-15/16"

\*Specify tube length (L) when ordering.



**Tube Extractor Nut**  
CTD-024

Because the drive flange is sunk into the oversize driveshaft tunnel, SmarTubes are shorter than any other axle for the same rear end track width. This length saving also affects the driveshafts that are 3" shorter on a car using SmarTubes. Besides saving weight, this configuration reduces driveshaft torsion and improves throttle response.

Unlike some other axles, the SmarTube is CNC machined from a single piece of 7075 aluminum. The result is a very light, strong, and rigid racing axle.

SmarTubes monocoque construction eliminates the use of fasteners between the snout and tube which saves weight, simplifies assembly and increases the structural integrity of the axle. (Statement applies mostly for Modified Series)

Oversized driveshaft tunnel prevents contacts between axles and the driveshaft. This extra space also simplifies driveshaft installation and removal.

SmarTubes are designed to operate with a race proven multi-position locknut system that is steady and easy to use. It has locking position at every 1/60th of a turn for high precision bearing pre-load adjustments.



## Bert Smart Spool

Bert and CTD have been working with Tiger Rear Ends to further improve the rear drive with the innovative smart spool. The spool is bored and splined through with the industry standard 31 spline design. The outer portion of each side of the spool is machined with a larger 33 spline pattern. The smart axle is shouldered (similar to a driveshaft) eliminating the need for the axles to butt against each other. (with adjusting bolts) The result is a two inch saving in axle length. Added to the 3 inch saving of the smart drive system translates to axles which are amazing five inches shorter per side. The weight saving is equal to cutting ten inches off an axle and every bit of it is unsprung weight.



**Part #** CTD-200-17  
**Description** Spool

# Bert Smart Axle



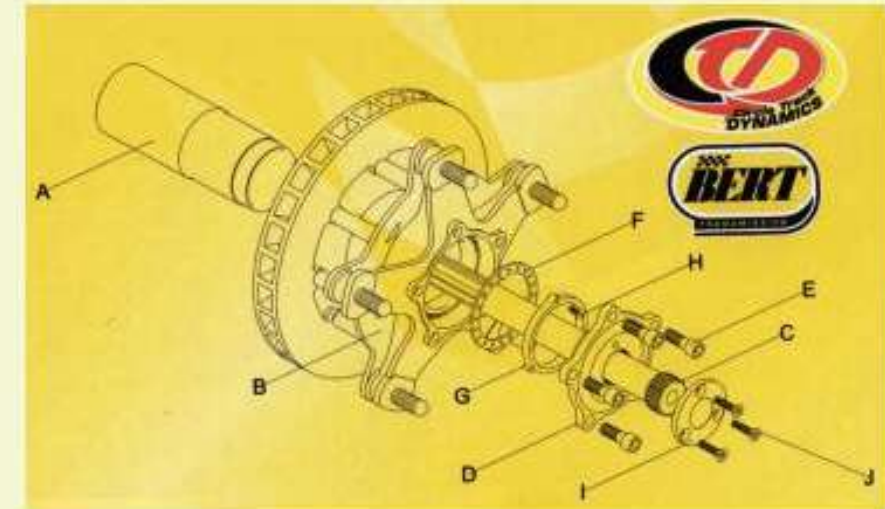
## Hub Locknut Kit CTD-021

- Contains:
- 1 Hub Locknut
  - 1 Hub Lock Ring
  - 1 Hub Safety Screw



## Lock Ring Tool CTD-010

(Highly recommended for assembly & disassembly)

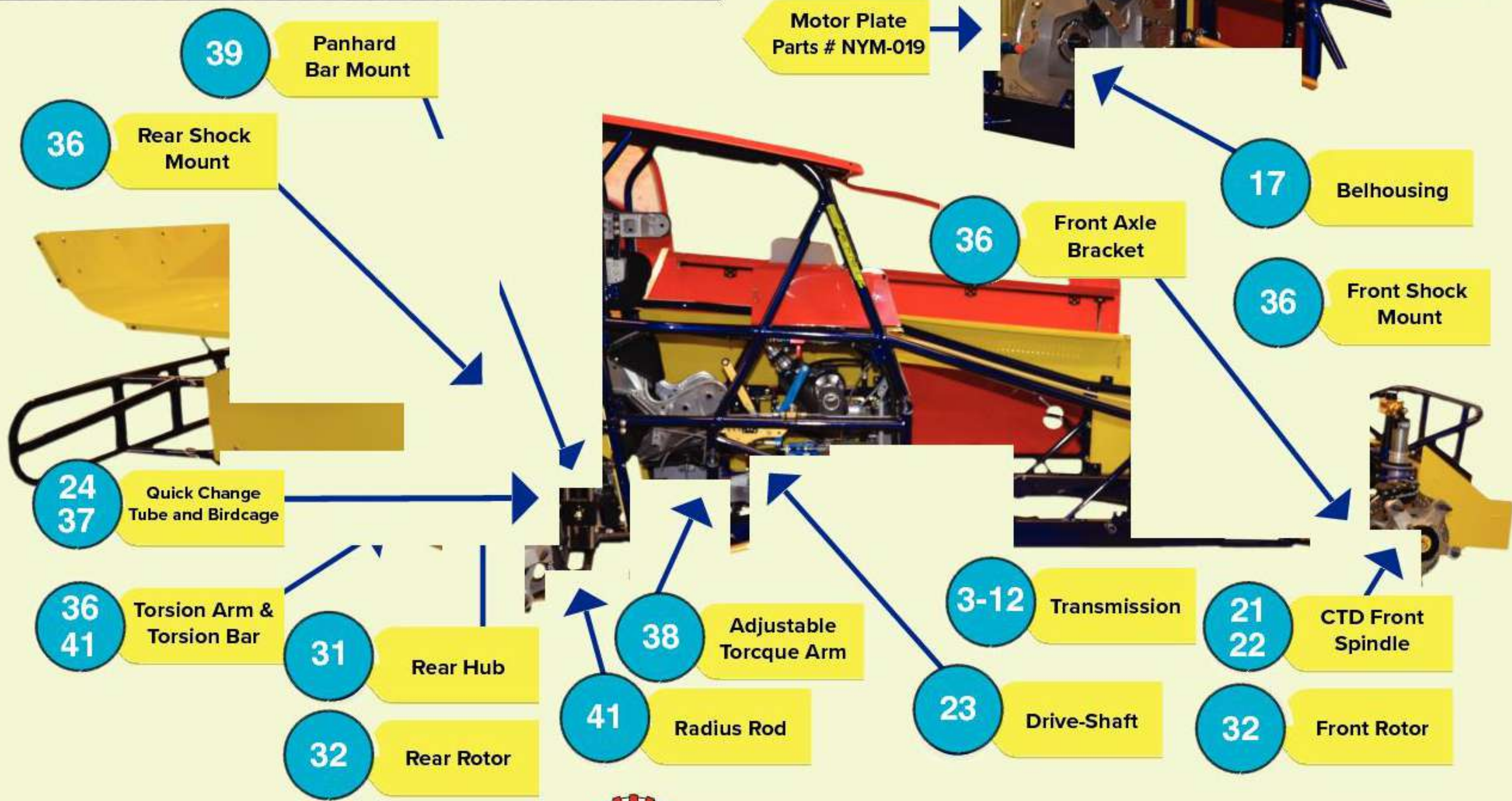


## The Smart Drive Rear Wheel Assembly

CTD (Circle Track Dynamics) a division of Bert Engineering, introduced the Smart Drive System in 2002. Since that time it has become the standard for performance-conscious drivers. Eliminating the fifty year old eight bolt spindle system immediately resulted in vastly improved reliability. The 3 inch reduction in the length of each drive axle made them lighter and reduced each drive axle for power stealing flex. The system reduces unsprung weight at each end by over ten pounds.

# BERT

TRANSMISSION



## Bert Smart Axle

The Bert smart axle has been designed to be used with the Bert smart spool. The 33 spline allows the outside diameter of the axle. It makes it larger with a wall thickness increasing strength and decreasing weight. The axle is equipped with the exclusive Bert shoulder design that allows another length reduction of 2 inches. Switching from the standard 31 spline axle to the revolutionary Bert smart axle means a 5 inch shorter axle which improves weight reduction on the CTD smart tube set up.

W5 Axle Tube	W5 Axle Length 24-31	Smart Tube Overall Length	Smart 24-31	Tube LH 24-33	Axle RH 24-33
16.625"	28-1/4"	20-3/16"	25-1/4"	22.5375"	23.900"
18.125"	29-3/4"	21-11/16"	26-3/4"	24.0375"	25.400"
19.375"	31"	22-15/16"	28-1/4"	25.2875"	26.650"
20.375"	32"	23-15/16"	29-1/8"	26.2875"	27.650"
21.000"	32-5/8"	24-9/16"	29-5/8"	26.9125"	28.275"
21.500"	33-1/8"	25-1/16"	30-1/8"	27.4125"	28.775"
22.500"	34-1/8"	26-1/16"	31-1/8"	28.4125"	29.775"
23.500"	35-1/8"	27-1/16"	32-1/8"	29.4125"	30.775"
24.500"	36-1/8"	28-1/16"	33-1/8"	30.4125"	31.775"
25.500"	37"	29-1/16"	34"	31.4125"	32.775"
26.500"	38-1/8"	30-1/16"	35-1/8"	32.4125"	33.775"

Denote Most Popular Dimension



Part #	Spline	Overall Length	Part #	Spline	Overall Length
225	24-33	22-1/2	230	24-33	27-3/8
226	24-33	24-1/2	231	24-33	29-5/8
227	24-33	25-7/16	233	24-33	31-7/8
228	24-33	26-7/8	234	24-33	32-3/4
229	24-33	27-1/16	235	24-33	33-3/4

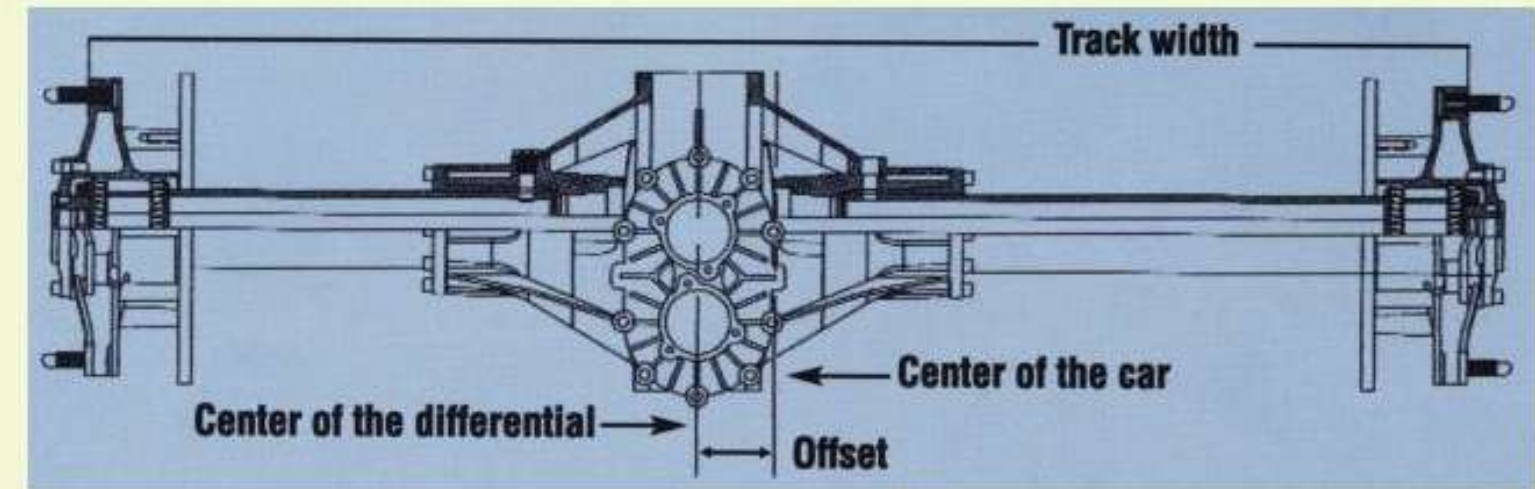


## How to find the right smart tube, axle tube, and smart axle for your car

Example: You need 60-3/4 inches of track width with 1 inch offset.

First determine your rear end track width (distance between hubs) then subtract 9.75 inches.  
 $60-3/4 - 9.3/4 = 51$  is your tube length for both sides.  
 Next step is 51 divide by 2 = 25 1/2 per side. You now want to determine each side with 1 inch offset.

left side (25 1/2 - 1" offset - 24 1/2)  
 right side (25 1/2 + 1" offset - 26 1/2)  
 This will give you the smart tube length



### How to find 33 spline axle length

Example: left side: smart tube length + 2 1/2  
 $(24 1/2 + 2 1/2 = 27 \text{ inch axle})$

right side: smart tube length + 3.812  
 $(26 1/2 + 3.812 = 30 5/16)$

### How to find 31 spline axle length for smart tube

left side and right side: smart tube length + 5.0625  
 $(\text{left } 24 1/2 + 5.0625 = 29.9/16)$   
 $(\text{right } 26 1/2 + 5.0625 = 31.9/16)$



Larry Wight #99L

Photo: Daniel Mailhot

Applications: Late Model, Modified, Sprint Car, Kart, Kart 125 cc Formula 1600 & 2000 cc

Part #	Description
540	New Wave Rotor 1/2" x 11.75 (8 Holes) <b>Application:</b> L.M. Front & Rear
541	New Wave Rotor 1/2" x 12.19 (8 Holes) <b>Application:</b> Modified Rear
543	New Wave Rotor 1/2" x 12.00 (3 Holes) <b>Application:</b> Modified Front
544	New Wave Rotor 3/8" x 12.00 (3 Holes) <b>Application:</b> Modified Front
544-1	New Wave Rotor 3/8" x 12.00 (8 Threaded Holes)
544-2	New Wave Rotor 3/8" x 12.00 (8 Holes)
544-3	New Wave Rotor 3/8" x 12.19 (8 Holes)
545	New Wave Rotor 3/8" x 11.00 (3 Holes) <b>Application:</b> Sprint Car Front
546-L	Std Billet Rotor .810 Rotor Left (12.19)
546-R	Std Billet Rotor .810 Rotor Right (12.19)
547-L	Wave Billet Rotor .810 Rotor Left
547-R	Wave Billet Rotor .810 Rotor Right



### Bert New Wave Brake Rotor

Bert engineering is offering an interesting alternative to the times spent of safety wiring your rotor bolts. The answer is the nord-lock. This unique securing system used tension to make the bolt self locking from cold to hot and from hot to cold your rotor will not loosen.

## Bert New Wave Brake Rotor



540



541



543



544



544-1



544-2



544-3



545



547-L



547-R

## Front Caliper Bracket Kit

### Front Caliper Bracket Kit

This kit includes all necessary hardware for an easier installation. The blue nut locks itself with the upper boss of the spindle, leaving only the 5/16" bolt to be tighten.



Part #	Description
551-K	Front Caliper Bracket Kit for 3.75 Hardware Installation Kit
553	Bolt Kit
552	Front Caliper Bracket Kit for Powerlite Caliper 11-3/4 rotor



## Clamp on Caliper Bracket

Part #	Description
CTD-054MI	Fits Superlite Caliper for 12.19" Rotor

### Clamp on Caliper Bracket

This clamp is part of the left side birdcage kit. It is available for superlight and the dynalight caliper bolt pattern.

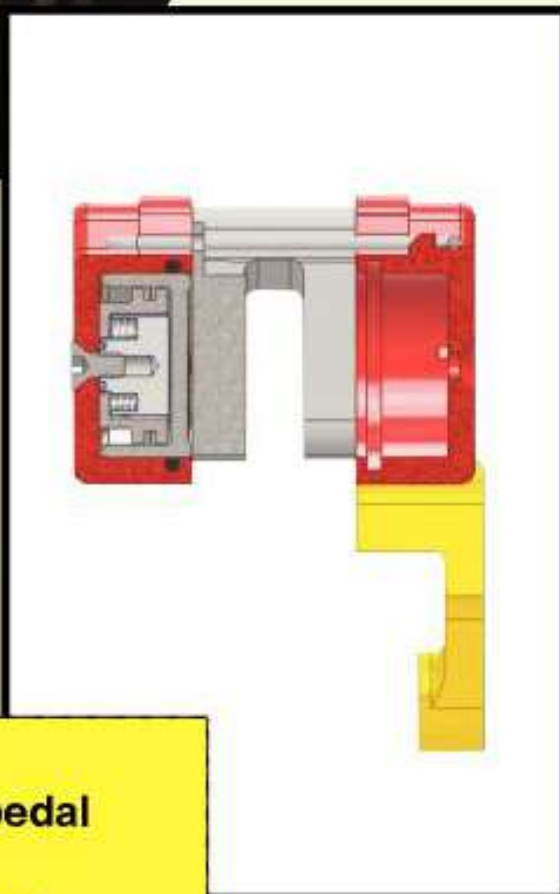




**NEW**



**Fastest Brake System**



- Bridge design : 0 flex and better pedal
- Positif piston retraction : No drag
- Cooler pads & rotor
- Longer pads life



# CTD Front Spindle



## CTD Front Spindle

Rather than use steel for the axle and then struggle with the weight of the remaining assembly. CTD's designers borrowed from the very successful SMART TUBE system and designed a spindle assembly employing the same large diameter, low drag seals and bearings rotating on an aluminum axle. With a lightweight axle with rigidity coming from it's large diameter, no compromises are needed on the rest of the spindle. When required, a steel axle model is also available.



510-CTD



504-CTD



510-CTD-STEEL



504-CTD-STEEL

Steel

Part #	Description
504-CTD	CTD Wide Five Hubs Right (Aluminum)
504-CTD-STEEL	CTD Wide Five Hubs Right (Steel)
510-CTD	CTD Wide Five Hubs Left (Aluminum)
510-CTD-STEEL	CTD Wide Five Hubs Left (Steel)

Spindle made from a 7075-T6 forging

**NEW**



Part #	Description
600-L	Spindle Assembly Left
600-R	Spindle Assembly Right
601	Center Section
602-L	Left Arm
602-R	Right Arm

# Bert Spindle



504

## Hub Assembly

Part #	Description
530	Hub Assembly

USE ROTORS : #543 / #544 / #545



## Bert Spindle Straight Axle Spindles for Modifieds

Choose your winning spindle combination. Built with space age technology, you now have the largest choice of straight axle spindles on the market.

- A) Available in 3 snout size (1) 6 pin long (2) 6 pin short (3) Wide five
- B) 3 Different King Pin Axles (1) The popular 10° inclination (2) The hot pavement pair at 4° lefthand and 6° righthand (3) Lefthand combination. Drag link and steering arm incorporated into spindle bosses.
- C) Unique serrated lefthand arm for adjustment permits quick and safe left wheel turning speed adjustments.
- D) All spindle bosses are presized and honed to fit popular .859 king pins.
- E) Bert gun drilled lightweight king pins are also available.

In case of racing mishaps causing spindle damage, spindles can be disassembled for repair with new parts, snouts, arms, bosses, & etc.

Part #	Description
500-L	10° Wide 5 L/H
500-R	10° Wide 5 R/H
501-L	10° 6 Pin Short L/H
501-R	10° 6 Pin Short R/H
502-L	10° 6 Pin Long L/H
502-R	10° 6 Pin Long R/H
503	10° Wide 5 R/H with Single Arm
504	10° 6 Pin Short R/H with Single Arm
504-CTD	10° R/H for CTD Hub
505	10° 6 Pin Short L/H with Single Arm
506	10° 6 Wide 5 L/H with Single Arm
507	10° 6 Pin Short L/H with Single Arm
508	10° 6 Pin Long L/H with Single Arm
509	10° Wide 5 Long L/H with Combo Arm
510	10° 6 Pin Short L/H with Combo Arm
510-CTD	10° L/H for CTD Hub
511	10° 6 Pin Long L/H with Combo Arm

Note: All spindle parts are available for rebuilding repair and updating.



# Shock Mounts



## Shock Mounts

These Bert Shock Mounts are heavy duty and are stronger than standard shock mounts.



Part #	Description
NYM-032	For a 1-1/4" Tube (Rear Shock)
NYM-034	For a 1-1/2" Tube (Front Shock)



# MOD Front Axle Device

## MOD Front Axle Device Front Panhard Bar Adjuster

This new unit makes the front panhard bar adjustments quick and easy with a 1/2" socket or wrench. Providing almost 3 inches of travel. It can be installed on any Northeast Modified chassis with 1-1/2" diameter shock mount.

Part #	Description
PHBF	Front Panhard Bar Adjuster



## Front Panhard Bar Axle Bracket

It can be installed on any conventional, northeast modified front axle. This bracket offers 3 fixing locations for a good panhard bar adjustments depending on track conditions.

Part #	Description
NYM-014	Front Panhard Bar Axle Bracket



## Front Axle Bracket

Made from aircraft aluminum, available in blue or black.

Part #	Description
NYM-015-BICKNELL	(Bicknell)
NYM-015-TEO	(Teo)
NYM-015-TROYER	(Troyer)

## Rear Torsion Arm

Bert engineering has taken great care to provide the racer with the highest quality torsion arms. Machined from 7075-T6, these arms include a surface hardened wear plate with rounded edges to give virtually unlimited service under the most demanding conditions.

Part #	Description
NYM-020-A	Rear Torsion Arm 19.5"
NYM-020-B	Rear Torsion Arm 21"

# Rear Torsion Arm



# Torsion Roller



## Torsion Roller

The Bert Torsion Roller are also surface harden and manolite treated. Manolite does two things. It prevents rust and increases hardness. O'Ring sealing arrangement keeps grease inside and dirt outside, to have the high quality needle bearing clean and free.

Part #	Description
NYM	Torsion Roller

# Smart Tube to Northeast Modified Torsion Bars

## Smart Tube to Northeast Modified Torsion Bars

For smart tube installation on northeast modifieds such as Teo and Bicknell these new birdcages are truly the hot set-up. Located by special keys which fit into keyways in the bracket, birdcage timing is fast and repeatable. The keys act as a fuse to shear on hard impact usually avoiding more serious damage to the tubes and suspension.

Part #	Description
CTD-050	Smart Tube to Northeast Modified Torsion Bars (Can be used for Left or Right)
CTD-050-R	Smart Tube to Northeast Modified Torsion Bars Adjustable - Right
CTD-050-L	Smart Tube to Northeast Modified Torsion Bars Adjustable - Left
CTD-050-15	Stud



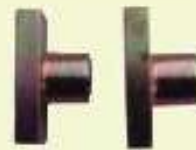
Adjustable

## Offset Key Way

When increase pinion angle for rear end rotation, timing birdcages becomes critical. With Bert's new offset keyway for birdcages, the process is simple. Available in 0, 1, 2, 3 degrees, allow you to align birdcages in a proper position.

Part #	Description
CTD-050-17-0	0 Degree
CTD-050-17-1	1 Degree
CTD-050-17-2	2 Degree
CTD-050-17-3	3 Degree

**ADD LONG KEY WAY**



Billy Decker #91

Photo: Daniel Marshall



# Smart Tube to Coil Over



## New offset keyway for Teo type rear bracket

For racer that use different pinion angle, Bert introduces an offset key way to retimed the torsion bar bracket to a straight position.

## Smart Tube to Coil-Over

For rear coil-over applications, these birdcages adapt the smart tubes to Teo, Bicknell, and similar northeast modifieds.

Part #	Description
CTD-049	Coil Over Birdcage



## Coil Over Adapter

With certain track conditions, some drivers believe that a four-coil modified is the answer. Now Bert engineering has developed a bolt-on conversion for Teo and Bicknell torsion bar cars which enables you to switch the rear to coil-over quickly, even at the track!



Part #	Description
NYM-024	Coil Over Adapter

# Coil Over Adaptor

# Adjustable Torque Arm

## Adjustable Torque Arm

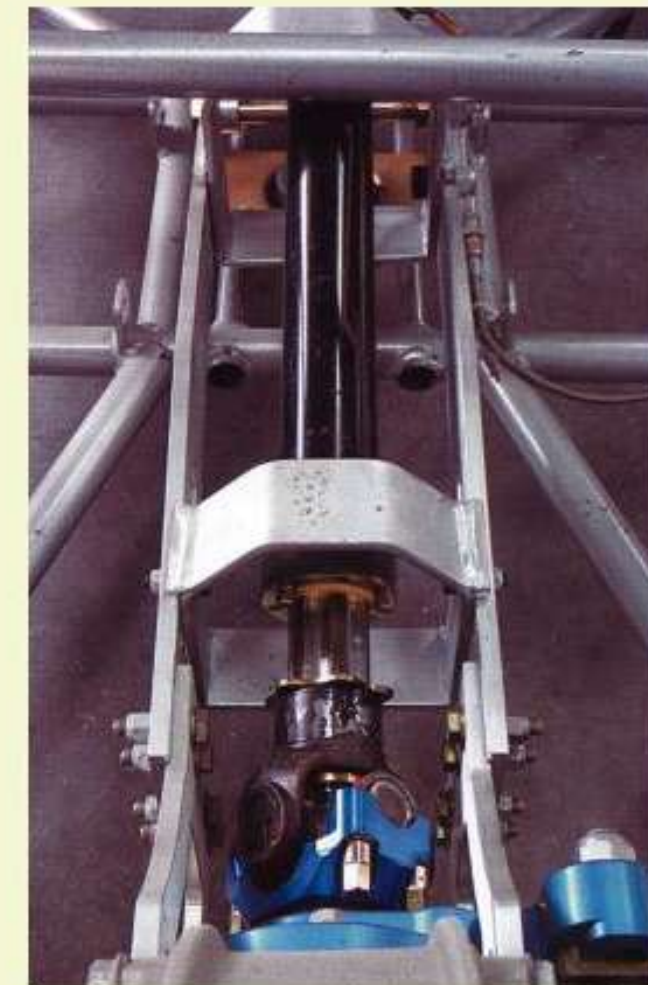
The easiest way to set up your rear end pinion angle that you need. Bert's adjustable torque arms replace anything available on the market by his unique design. The serration on both pieces prevents displacement of adjustment.

Depending on track condition or frame height changed, the pinion angle could be changed at the race track in just a few minutes.

By loosening four bolts you can increase or decrease the pinion angle of 5 degrees. Bert's two piece torque arms also include adjustment holes for the front rubber bushing. Cars equipped with a sliders allow from 28" to 31-1/2" of length.

(Only one does it all)

Part #	Description
NYM-017-02	Torque Arm Kit adjustable 2 piece



# Pinion Panhard Bracket



## Pinion Panhard Bracket

The CTD quick adjustable panhard bracket was designed to enable the panhard bar. Up and down adjustment can be change in record times. The new gear nut adjustment does not require removal of the panhard bar bolt, just loosen the bolt. A simple rotation of the gear nut will provide the needed panhard bar height with ease and speed.

Part #	Description
CTD-052-KA	Pinion Panhard Bracket

# Panhard Mount

## Panhard Bar Mount

The light mechanical design of Bert's panhard mount creates a smooth operation in a stationary or racing function. The quality of aluminum makes this device the strongest panhard mount on the market.

Part #	Description
410-B	Panhard Mount (Bicknell)
410-T	Panhard Mount (Teo/Troyer)



Frank Cozze #35



# Rear End Aluminum Yoke

## Rear End Aluminum Yoke

Bert introduced the rear end aluminum yokes specifically for the Tiger Rear Ends. This new lightweight beefed up pinion yoke comes with quality nuts.



Part #	Description
292	Yoke
292-01	Highnut



# Bert Gundrilled and Solid Axle



## Bert Gundrilled and Solid Axle

Designed with our exclusive solid end, Bert's axles won't break and damage your expensive spool. Bert axles are built by racers for racers!



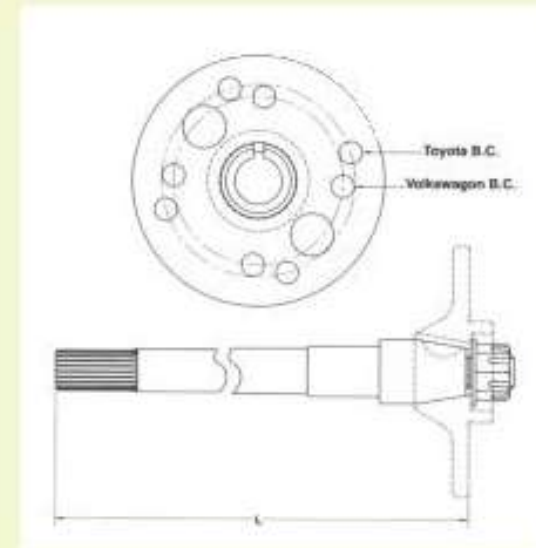
François Bernier #49

## Nobody has ever built a better axle! Gundrilled Rear Axle 31 Spline x 24 Spline

Part #	Description	Note:
208-C	25-1/4"	To order solid axle add a (S) after gun drilled axle part #.
210	28-1/4"	
210-01	29-1/8"	
211	29-3/4"	
212	31-1/8"	
213	32-1/8"	
214	33"	
215	34-1/8"	
216	35-1/8"	
217	35-5/8"	
218	36-1/8"	
219	36-5/8"	
220	37"	
221	38-1/8"	

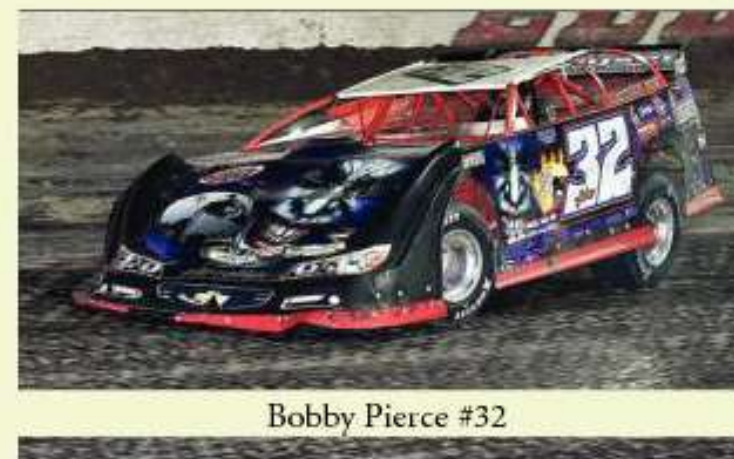
Example Part # 210-S = 28 1/4" Solid Axle

# Two Piece Axles



## Two-Piece Axles for Legends and Dwarf Cars

- A) New design, two-piece axle that puts reliability into your dwarf car
- B) Built with the same quality steel used in our superior gun drilled axles.
- C) Tapered and keyed flange uses Toyota and VW bolt circle.



Bobby Pierce #32

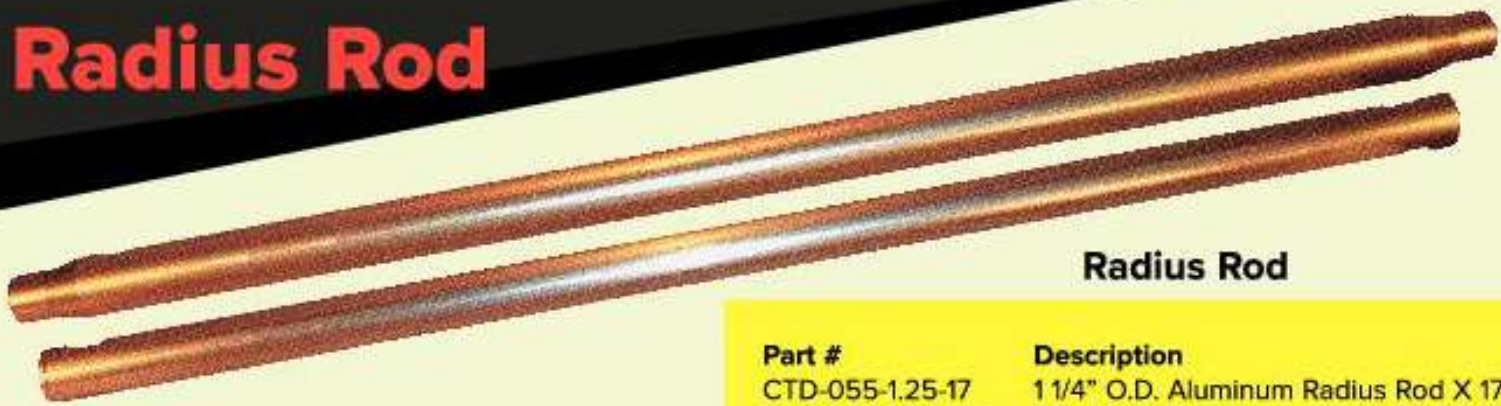
# Mud Cover



## Mud Cover

Really Tough and Extra Durable!! If this breaks, than you have more problems other than your mud cover.

# Radius Rod



Radius Rod

Part #	Description
CTD-055-1.25-17	1 1/4" O.D. Aluminum Radius Rod X 17"
CTD-055-1.25-17.5	1 1/4" O.D. Aluminum Radius Rod X 17.5"
CTD-055-1.25-18	1 1/4" O.D. Aluminum Radius Rod X 18"
CTD-055-1.25-27.5	1 1/4" O.D. Aluminum Radius Rod X 27.5"
CTD-055-1.25-28	1 1/4" O.D. Aluminum Radius Rod X 28"
CTD-055-1.25-47.5	1 1/4" O.D. Aluminum Radius Rod X 47.5"
CTD-055-1.25-48	1 1/4" O.D. Aluminum Radius Rod X 48"
CTD-055-1.25-64	1 1/4" O.D. Aluminum Radius Rod X 64"
CTD-055-1.25-65	1 1/4" O.D. Aluminum Radius Rod X 65"
CTD-055-1.25-66	1 1/4" O.D. Aluminum Radius Rod X 66"
CTD-055-1-15	1" O.D. Aluminum Radius Rod X 15"
CTD-055-1-19	1" O.D. Aluminum Radius Rod X 19"
CTD-055-1-19.5	1" O.D. Aluminum Radius Rod X 19.5"
CTD-055-1-20	1" O.D. Aluminum Radius Rod X 20"
CTD-055-1-21	1" O.D. Aluminum Radius Rod X 21"
CTD-055-1-24.5	1" O.D. Aluminum Radius Rod X 24.5"
CTD-055-1-25	1" O.D. Aluminum Radius Rod X 25"
CTD-055-1-25.5	1" O.D. Aluminum Radius Rod X 25.5"
CTD-055-1-26	1" O.D. Aluminum Radius Rod X 26"

\*Color: Black or Gold



# Hollow Anti-Roll Bar



## Hollow Anti-Roll Bar Modified and Sprint Car Application

### 30 Inches x 1-1/8" (4 Inches Shoulder)

Part #	Description
180-30	30" x 150
181-30	30" x 200
182-30	30" x 250
183-30	30" x 300
184-30	30" x 350

### 30 Inches x 1-1/8" for Anti-Roll Bar Disconnect 4 & 5-1/2 Inches Shoulder Overall Length 31-1/2"

Part #	Description
180-31.5	30" x 150
181-31.5	30" x 200
182-31.5	30" x 250
183-31.5	30" x 300
184-31.5	30" x 350

### 34 Inches x 1-1/8" (4 Inches Shoulder)

Part #	Description
190-34	34" x 300
191-34	34" x 350
192-34	34" x 400
193-34	34" x 450

### 36 Inches x 1-1/8" (4 Inches Shoulder)

Part #	Description
190-36	36" x 300
191-36	36" x 350
192-36	36" x 400
193-36	36" x 450

### 34 Inches x 1-1/8" (4 Inches Shoulder)

Part #	Description
194-01-34	34" x 500
194-02-34	34" x 550
194-03-34	34" x 600
194-04-34	34" x 650
194-05-34	34" x 700
194-06-34	34" x 750
194-07-34	34" x 800

# Bert Torsion Bar 21<sup>st</sup> Century Series

## Torsion Bar 21<sup>st</sup> Century Series Solid Bar



### Solid Torsion Bar 29 x 1-1/8

Part #	Description
162-S	29 x .875
163-S	29 x .900
164-S	29 x .925
165-S	29 x .950
166-S	29 x .975
167-S	29 x 1.000
168-S	29 x 1.025



Matt Sheppard #9S

Photo: Dankei Mailliot



# Power Steering and Alt Bracket



## Power Steering and Alternator Bracket

The simple and efficient way of installing and driving an alternator.

Power steering pump mounting bracket and hardware.



Part #	Description
364-K	Installation Kit
364-01	Power Steering Bracket
364-02	Power Steering Spacer
365-K	Alternator Installation Kit
365-02	Alternator Pulley
365-03	Alternator Water Pump Pulley
365-04	One Piece Alternator Water Pump Pulley with Fan Spacer

# Air Jacks



## Bert Aluminum Air Jacks

An aluminum bumper jack rated for 2500 lbs Wow! Hundred of units are in services on East Coast Modified, Imca, Ump Modified, Legend, and all types of Open Wheel Cars. The Bert Air Jack is a reliable tool for racers. The 95% aluminum construction makes this jack handy and easy to use. At only 60 lbs, this unit is a plus for the race teams, race track infields, race shops, or just for your daily maintenance or car cleaning. An airline kit can also be installed in the car. When installed, only one air hose is required from the air pressured source leaving the working area clear of air hose, jack stand, and floor jack. It lifts the car to 36" high in a matter of seconds and is equipped with a strong safety lock for more security. It also folds away for easy storage during transportation which is sure to please your race team.

Part #	Description
AJ-1000	Air Jack



Air Jack  
AJ-1000



AJ-BUMPER-IMCA



AJ-BUMPER IMCA EXT4



AJ-BUMPER-STR-F



AJ-RUBBER



AJ-BUMPER-NYM-F



AJ-BUMPER-NYM-R



IMCA



# Throttle Management Kit



## Throttle Management Kit

Throttle management, at your gas pedal, when properly adjusted can eliminate tire spin.

# Tire Machine



## Bert Tire Machine

The live saver! Don't waste your time to grinding, cutting or siping your tires. The Bert Tire Machine is a machine that does the work that nobody wants to do. This unique tool is easy to carry. It also has a touch screen display makes it very easy to use, simply follow the indication and make your choice.

- Grind
- Sipes
- Needling

This machine can prep any dirt tire

- Late Model
- Modified
- Sprint Car
- Dirt Oval Kart



Part #	Description
TMG	Bert Tire Machine

# Tire Bead Breaker

## Tire Bead Breaker

"After using this device for about nine years on modifieds and sprint cars for the Bert racing team, I could never go back with the conventional hand machines. It's easy and fast to use, plus it doesn't destroy the wheels."

Lee Michaelson, Bert Racing, Tire and Wheels Division

The air operated race car tire bead breaker is state of the art. Light and easy to operate, this machine will break your tire bead quickly and effortlessly separating your tire and costly aluminum rim without a scratch. It runs on any regular air compressor with 80-120 psi.



**WARNING**  
Keep hands and feet away from moving parts when using the tire bead breaker. For use by qualified professional only.

Bert from Bert Transmission is presenting the new tire machine that grinds, sips, needles, groove and more options comming soon. Mostly use for dirt track racing but can be also use for asphalt and ice and rally Style racing.

Chris Raabe #01  
2017 - 358 Modified champion at Plattsburgh  
2017 - 358 Modified champion at Cornwall Motor Speedway.



Dany Gagné #90  
2017 - Sportsman champion at Autodrome Granby & RPM Speedway  
2017 - Sportsman champion at Autodrome Drummond.



# Apparel



Front

Back

**Bert Hats**  
Adjustable.  
One Size fits all.

## Bert T-Shirts & Sweatshirt

Available in  
**Adult**

- Small
- Medium
- Large
- X-Large
- XX-Large
- XXX-Large

Prices for XX and XXX are slightly higher.

# 2017

358 Modified DIRTcar series champion

358 Modified Autodrome Drummond champion

358 Modified RPM Speedway champion



# Steve Bernard #54

