



PARTS CATALOG

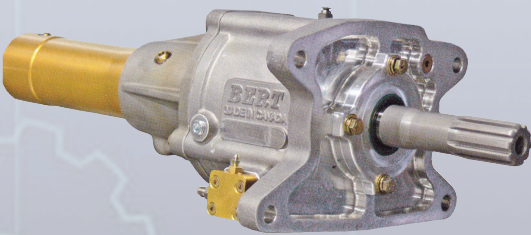
OVER 30,000 TRANSMISSIONS IN SERVICE



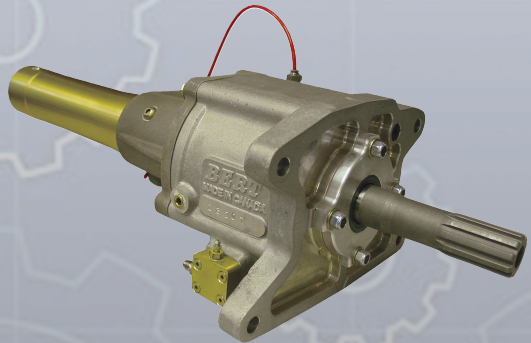
2020

2nd Generation Transmission

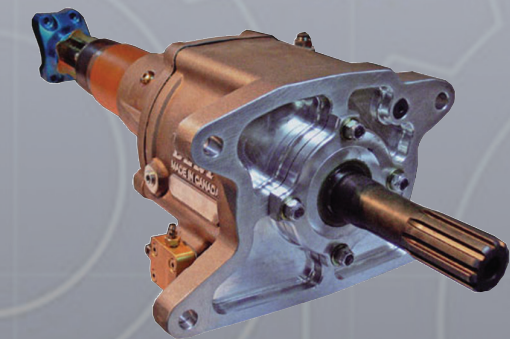
For Late Models



Late Model Transmission
2nd Generation
SG-1300
36.9 pounds

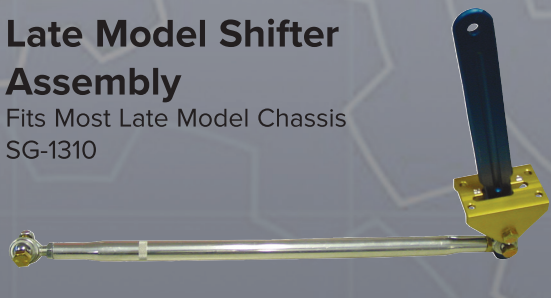


Late Model Transmission
2nd Generation
Muncie Length
Tailhousing 3" Longer to fit Muncie Length
SG-1400
37.9 pounds



Late Model Transmission
Ball Spline
2nd Generation
SG-1500
40.9 pounds

Late Model Shifter Assembly
Fits Most Late Model Chassis
SG-1310



Bloomquist Shifter
Fits Bloomquist Chassis Only
SG-1311



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.

On september 12-2019, our assembly line, Alain, Normand and Sylvie, proudly product our 30, 000 transmission. I want to thank every friends user for this incredible accomplishment.

Bert



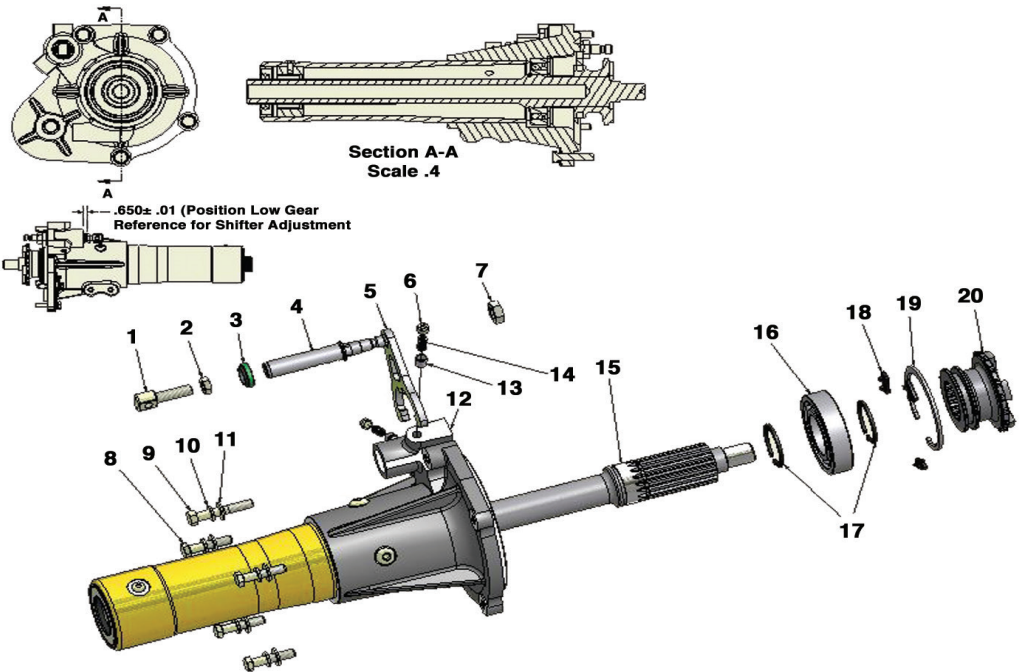
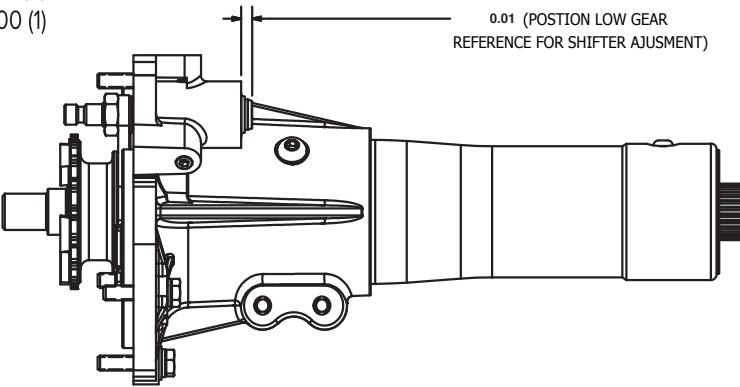
BILLY MOYER JR. #21

2nd Generation Transmission

For Late Models

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

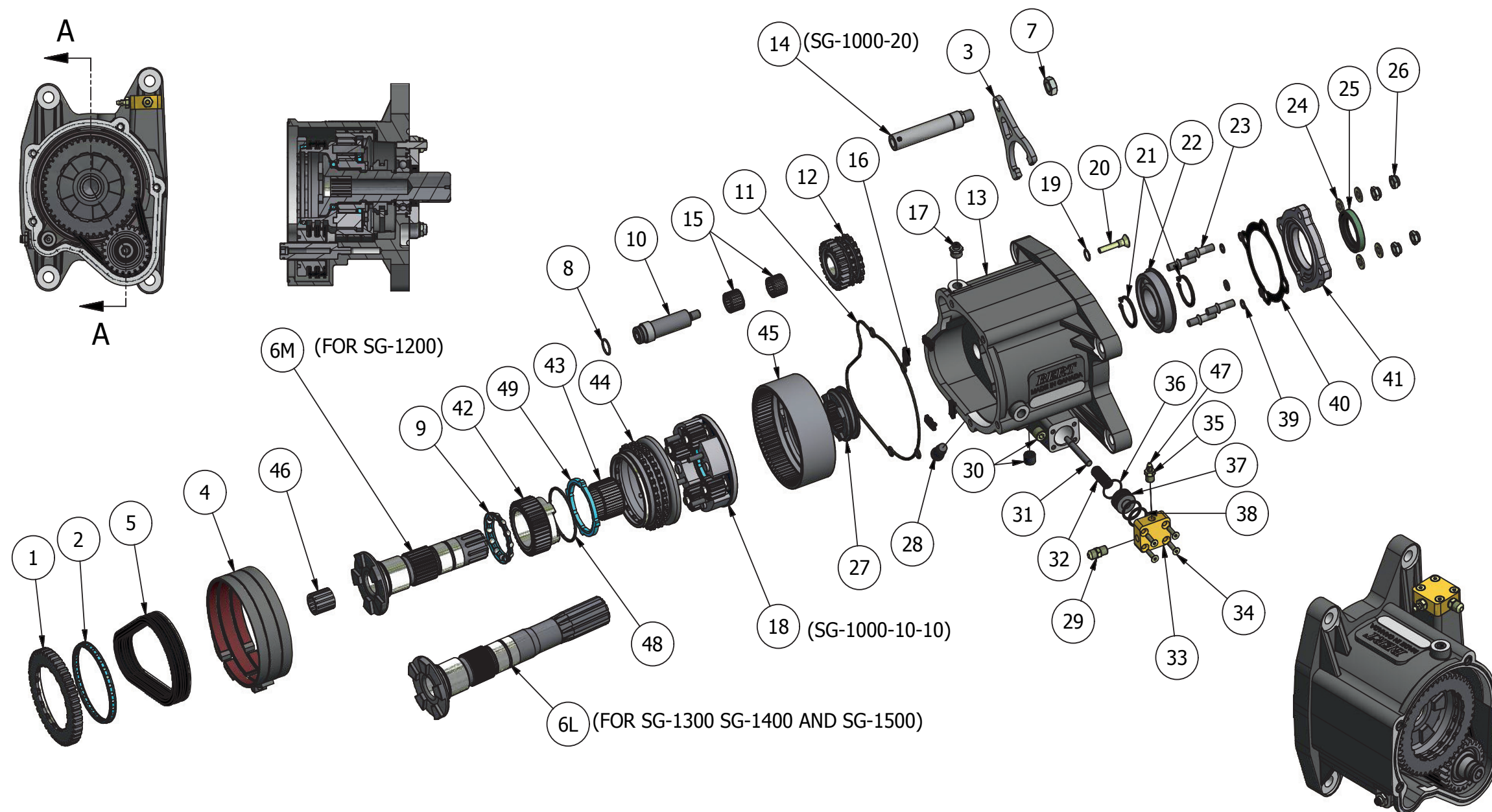
- | Item... | Part # | Description (Quantity) |
|----------|-----------------|--|
| 1..... | SG-1151..... | Rod End 3/8-24 UNF (1) |
| 2..... | SG-1152 | Hex Jam Nut 3/8-24 UNC (1) |
| 3..... | SG-1150 | Shaft Seal (1) |
| 4..... | SG-1102 | Shifting Rod Extension (1) |
| 5..... | SG-1017..... | Selector 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) |
| 21..... | SG-1354..... | Shaft seal BHH1010-AD, Same as BERT Part # 065 |



2nd Generation Transmission

For Late Models and Modifieds Exploded View

SG-1000-01 (MAIN CASTING ASSY)



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

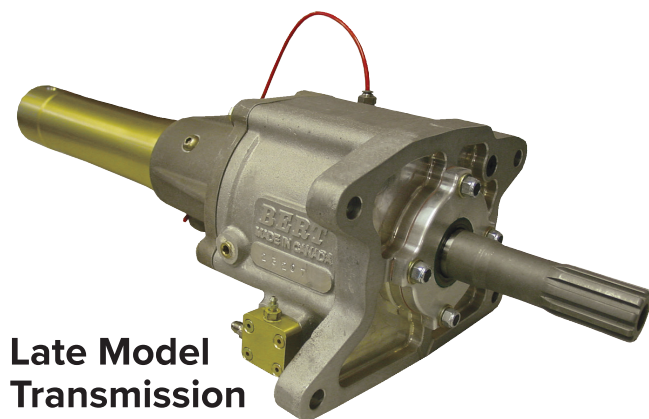


2nd Generation Transmission

For Late Models



TIM MCCREDDIE #39

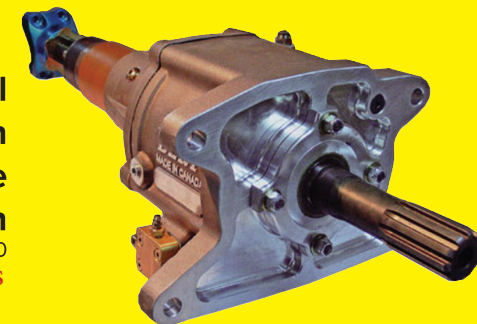


Late Model
Transmission
2nd Generation
Muncie Length
SG-1400
37.9 LBS

2nd Generation Transmission

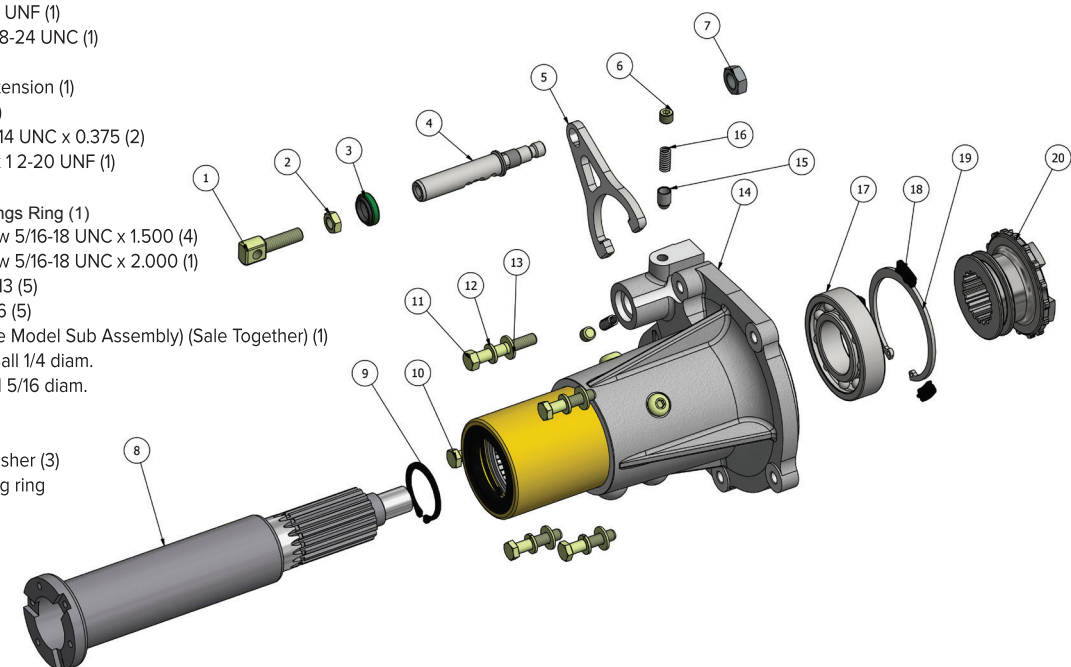
For Late Models

Late Model
Transmission
Ball Spline
2nd Generation
SG-1500
40.9 pounds



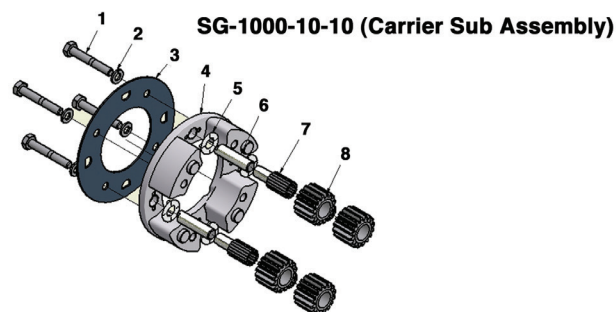
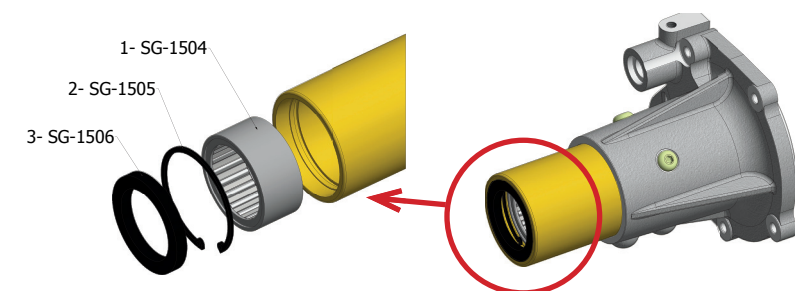
SG-1500-01 (Tail Casting Late Model Ball Spline Assy)

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-1083.....	External Retainings Ring (1)
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.....	6208ZZE.....	Ball Bearing
18.....	SG-1021.....	Crown Trust Washer (3)
19.....	HISR3532.....	Internal retaining ring
20.....	SG-1101.....	Hi Selector (1)

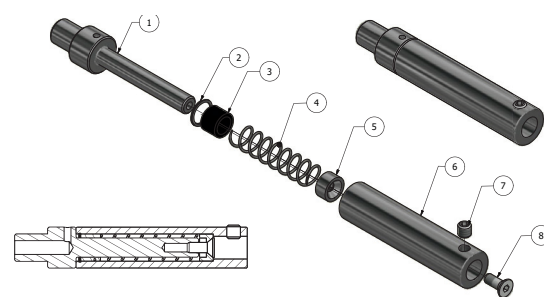


SG-1500-05 (Tail Casting Late Model Ball Spline Sub Assy)

Item...	Part #	Description (Quantity)
1.....	SG-1504.....	Needle Bearing HJ324120 (1)
2.....	SG-1505.....	Snap Ring (1)
3.....	SG-1506.....	CR Seal 19762 (1)



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

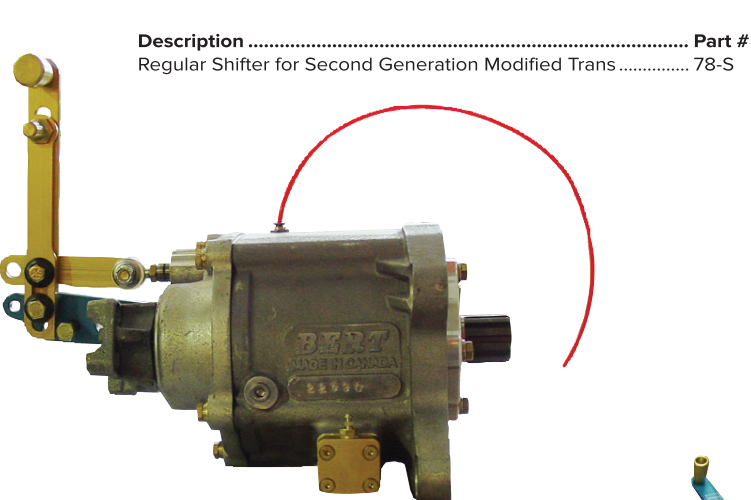


SG-1000-20

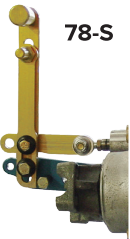
Item...	Part #	Description	Qty
1.....	SG-1023.....	Shifting Rod	1
2.....	SG-1075.....	Internal Retaining Ring .500	1
3.....	SG-1025.....	Shifting Rod Spring Washer	1
4.....	SG-1073.....	Compression Spring OD .480 Wire .040 x 2.000	1
5.....	SG-1026.....	Shifting Rod Spring Compressor	1
6.....	SG-1024.....	Shifting Rod Spring Holder	1
7.....	SG-1072.....	Set Screw 1/4-20 UNC x .250	1
8.....	SG-1074.....	Flat Head Cap Screw 10-32 UNC x .500	1



2nd Generation Transmission
For Dirt Modifieds



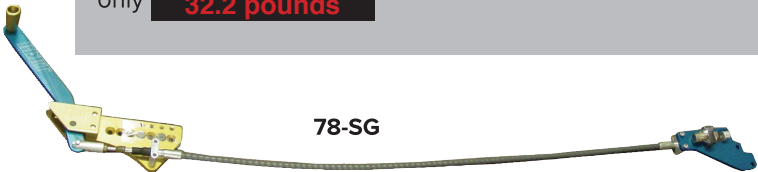
Description Part #
Regular Shifter for Second Generation Modified Trans 78-S



78-S

Dirt Modified
Transmission
2nd 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. Weights
only **32.2 pounds**

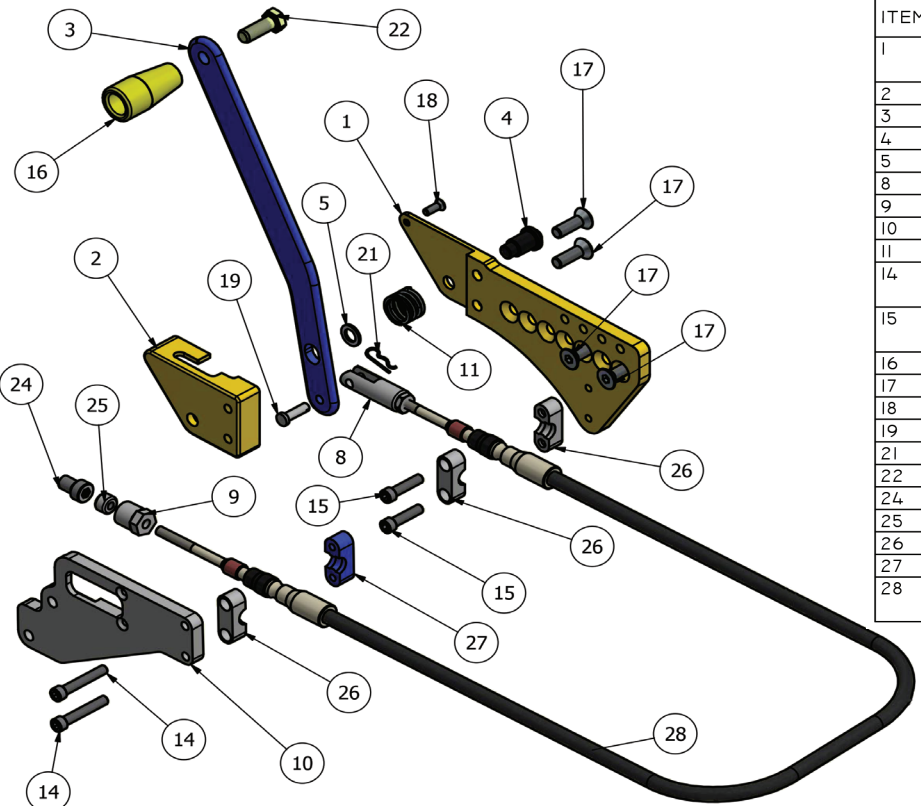


78-SG

Optional Remote Side Shifter Kit

For SG-1200 Transmission

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

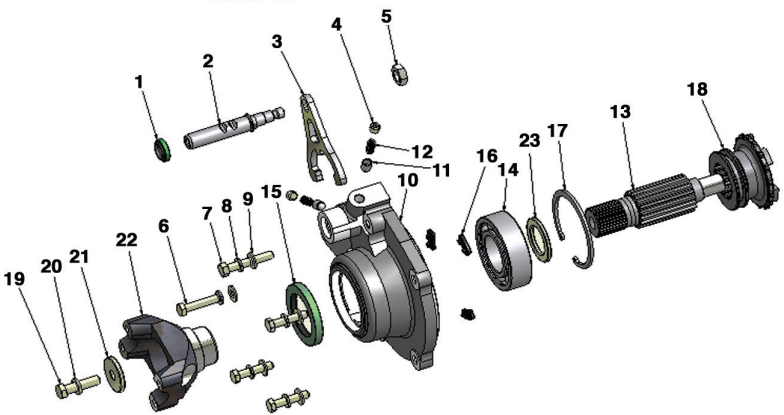


PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	SG-3001	REMOTE SHIFTER AND MASTER BRACKET
2	1	SG-3002	SHIFTER CABLE BRACKET
3	1	SG-3003	SHIFTER ARM
4	1	SG-3005	ROD
5	1	SG-3013	JAM NUTS 1/4
8	1	SG-3010	CLEVIS
9	1	SG-3012	
10	1	SG-1104	SHIFTING PLATE
11	1	SG-1358	COMPRESSION SPRING
14	2	SG-3014	SCOKET HEAD CAP SCREW 1/4 20 I.000
15	2	SG-3015	SCOKET HEAD CAP SCREW 1/4 20 I.500
16	1	SG-1210	SHIFTER HANDLE
17	4	SG-3017	COUNTER SINK 5-16-18 UNC X 1.0
18	1	SG-3018	COUNTER SINK 10-24 UNC X 0.500
19	1	SG-3019	
21	1	SG-3020	CUTTER PIN
22	1	SG-1257	HEX CAP SCREW 3/8-24
24	1	SG-3011_V3	
25	1	SG-3022	
26	3	SG-3008-CO	HALF CLAMP WITH HOLE
27	1	SG-3008-TH	HALF CLAMP WITH THREAD
28	1	CABLE ASSEMBLY	CABLE ASSEMBLY



2nd 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	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

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



Watch 2nd Generation
Assembly Instructions.



1st 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. Earlier units can be updated, see your authorized Bert dealer or rebuilder. Over the past twenty years thousands of racers were won with Bert Transmissions. Our on-going engineering, together with the largest network of authorized distributors and rebuilders, make Bert Transmission your choice for performance and reliability lap after lap. **Note:** Fill transmission with Bert Black Magic transmission oil to 1/2 inch below fill plug. Don't use 90 wt gear lube in Bert Transmission. **Note:** Transmissions equipped with “dog tooth” final drive must have shafts rotating for shifting. **Attempting to force gear engagement with shafts not rotating may damage transmission.**

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 **43 pounds**

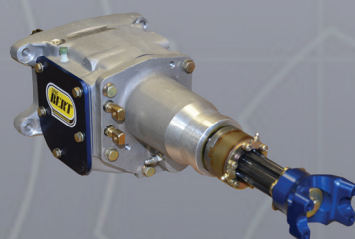
Shown with optional shifter



Complete Late Model Trans w/Ball Spline

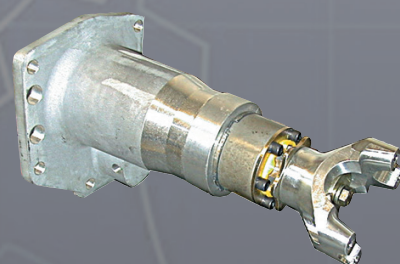
Already the industry leader in racing transmissions, Bert takes the competitive package to the next level. By significantly reducing drive line bind, the Bert ball spline transmission allows the rear suspension to move faster and smoother, greatly improving traction on today's dry, slick racing surfaces.

LMZ-BS
46.4 pounds



Tail Housing Ball Spline Assembly

003-BS



1st Generation Transmission

For Dirt Modifieds

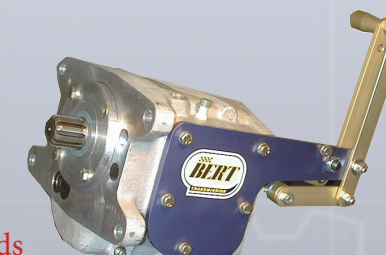
Open Drive

Bert Open Drive Modified transmission features a compact 11” length (mounting face to yoke center), with a light **38.6 pounds**. Total weight.

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
38.6 pounds



Closed Drive
MCZ
40.6 pounds



Replacement Modified Shifter Kit
78-M

YouTube

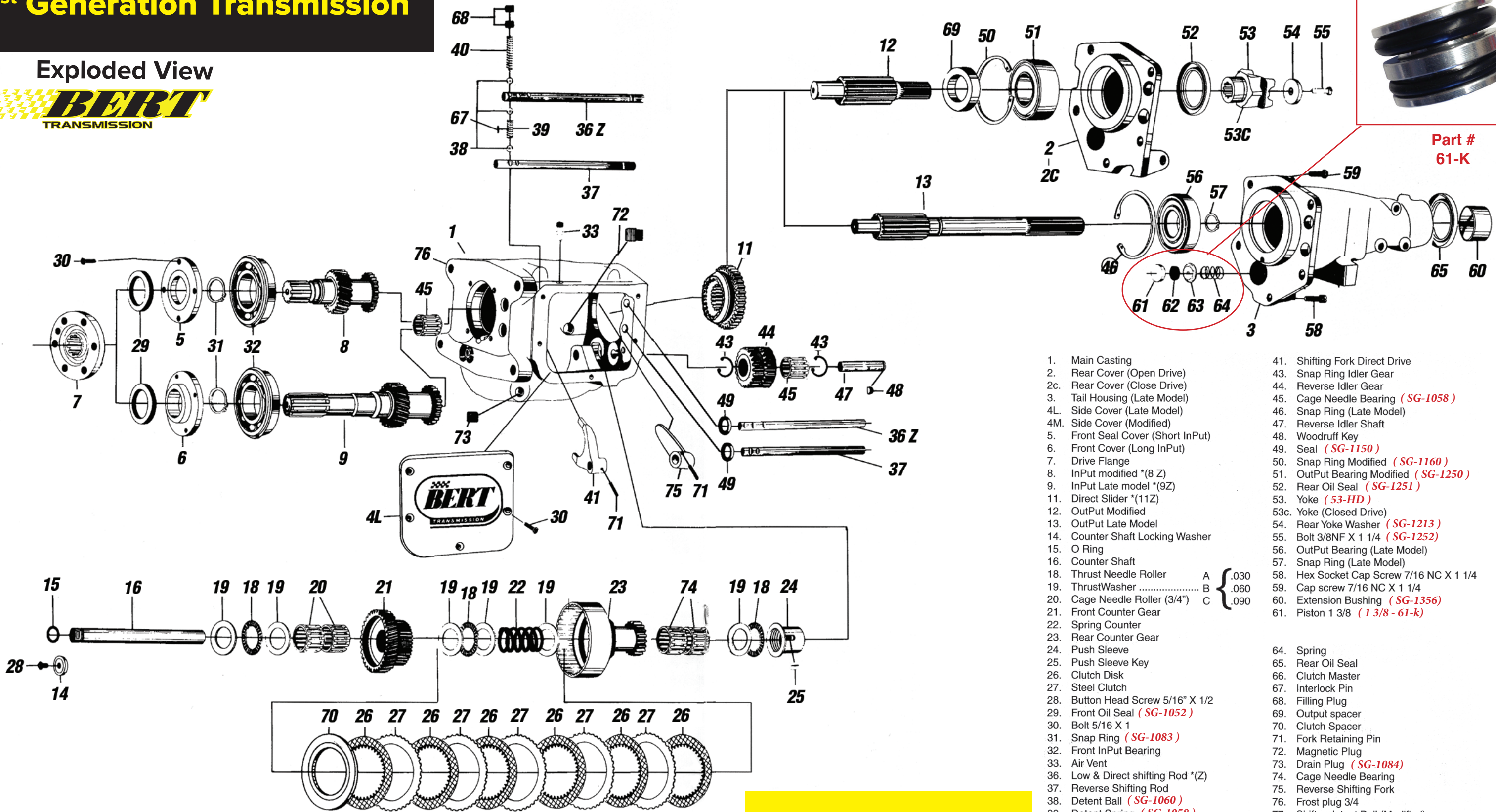
Watch how to rebuild a transmission.



KAYLE ROBIDOUX #46

1st Generation Transmission

Exploded View



Part # 61-K

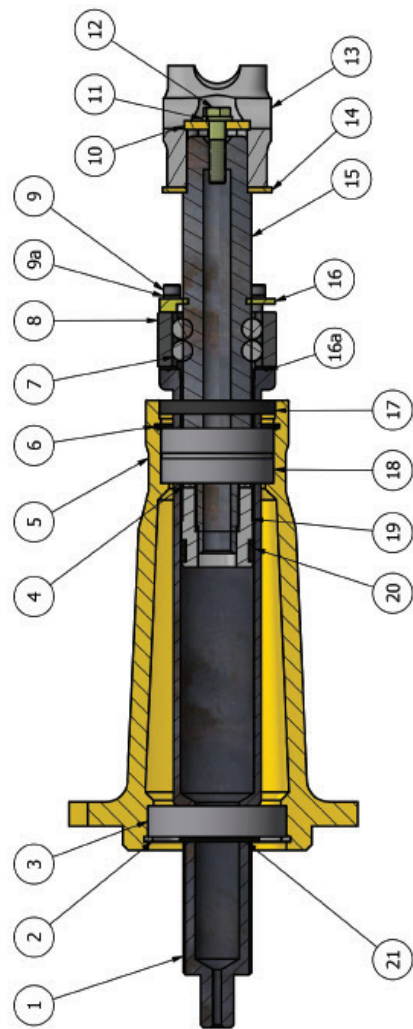
- 1. Main Casting
- 2. Rear Cover (Open Drive)
- 2c. Rear Cover (Close Drive)
- 3. Tail Housing (Late Model)
- 4L. Side Cover (Late Model)
- 4M. Side Cover (Modified)
- 5. Front Seal Cover (Short InPut)
- 6. Front Cover (Long InPut)
- 7. Drive Flange
- 8. InPut modified *(8 Z)
- 9. InPut Late model *(9Z)
- 11. Direct Slider *(11Z)
- 12. OutPut Modified
- 13. OutPut Late Model
- 14. Counter Shaft Locking Washer
- 15. O Ring
- 16. Counter Shaft
- 18. Thrust Needle Roller A { .030
- 19. Thrust Washer B { .060
- 20. Cage Needle Roller (3/4") C { .090
- 21. Front Counter Gear
- 22. Spring Counter
- 23. Rear Counter Gear
- 24. Push Sleeve
- 25. Push Sleeve Key
- 26. Clutch Disk
- 27. Steel Clutch
- 28. Button Head Screw 5/16" X 1/2
- 29. Front Oil Seal (SG-1052)
- 30. Bolt 5/16 X 1
- 31. Snap Ring (SG-1083)
- 32. Front InPut Bearing
- 33. Air Vent
- 36. Low & Direct shifting Rod *(Z)
- 37. Reverse Shifting Rod
- 38. Detent Ball (SG-1060)
- 39. Detent Spring (SG-1058)
- 40. Detent Spring High-Gear
- 41. Shifting Fork Direct Drive
- 43. Snap Ring Idler Gear
- 44. Reverse Idler Gear
- 45. Cage Needle Bearing (SG-1058)
- 46. Snap Ring (Late Model)
- 47. Reverse Idler Shaft
- 48. Woodruff Key
- 49. Seal (SG-1150)
- 50. Snap Ring Modified (SG-1160)
- 51. OutPut Bearing Modified (SG-1250)
- 52. Rear Oil Seal (SG-1251)
- 53. Yoke (53-HD)
- 53c. Yoke (Closed Drive)
- 54. Rear Yoke Washer (SG-1213)
- 55. Bolt 3/8NF X 1 1/4 (SG-1252)
- 56. OutPut Bearing (Late Model)
- 57. Snap Ring (Late Model)
- 58. Hex Socket Cap Screw 7/16 NC X 1 1/4
- 59. Cap screw 7/16 NC X 1 1/4
- 60. Extension Bushing (SG-1356)
- 61. Piston 1 3/8 (1 3/8 - 61-k)
- 64. Spring
- 65. Rear Oil Seal
- 66. Clutch Master
- 67. Interlock Pin
- 68. Filling Plug
- 69. Output spacer
- 70. Clutch Spacer
- 71. Fork Retaining Pin
- 72. Magnetic Plug
- 73. Drain Plug (SG-1084)
- 74. Cage Needle Bearing
- 75. Reverse Shifting Fork
- 76. Frost plug 3/4
- 77. Shifter detent Ball (Modified)

* Parts in (red) are common to Bert 1st generation and 2nd generation.

(*8Z - *9Z - *11Z) Refer to Dog Teeth



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.

1	Output shaft tube/ 003-01	1
2	Front bearing snap-ring/ SG-1160 (5000-315)	1
3	Front bearing / SG-1350 (6208ZZE)	1
4	Steel washer .090/ 19-C (TRC-1625)	1
5	Tail housing Ball spline/ 003-05	1
6	Rear snap ring/ SG-1505 (5000-256)	1
7	Ball bearing 1/2" / 003-07	12
8	Ball Retainer unit/ 003-08B	1
9a	High-collar lock washer 1/4" / 003-09A	6
9	Allen Cap Screw 1/4-28 2" / 003-09	6
10	Bolt 3/8-24 1 1/2" / SG-1252	1
11	Lock Washer 3/8" / SG-1253	1
12	Washer/ SG-1213	1
13	Aluminium Yoke/ 3-13 / 3-13-S steel yoke	1
14	Stop Washer/ 003-14	1
15	Ball Spline Shaft/ 003-18	1
16a	Front Seal/ 003-15-B	1
16	Ball Washer Seal/ 003-15-KG	1
17	Tail Housing Seal/ SG-1506 (SC-CR-19726)	1
18	Roller Bearing/SG-1504 (HJ324120)	1
19	Friction Bushing/ 003-20	1
20	Wear Ring/ 003-19	1
21	Output Snap-ring/ SG-1083 (5160-156)	1



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



Overhauling Kit
3-BS-OK



New Greaseable Seal
3-15-KG

Sprint Car Starter



Part #	Description
SPC-STR	Sprint Car Starter

*** Now available for Mini-Sprint. ***

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.



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!

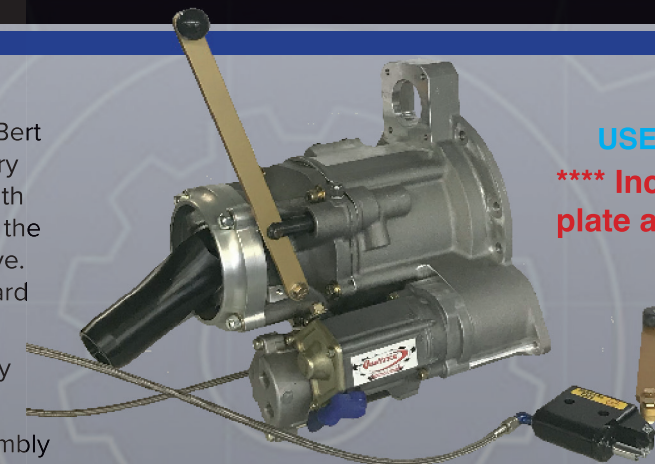
The new Bert Sprint Transmission assembly weighs less than 36 lbs, including 6-1/2" flywheels, bellhousing, starter, transmission, torque ball coupler, hydraulic clutch master.

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.

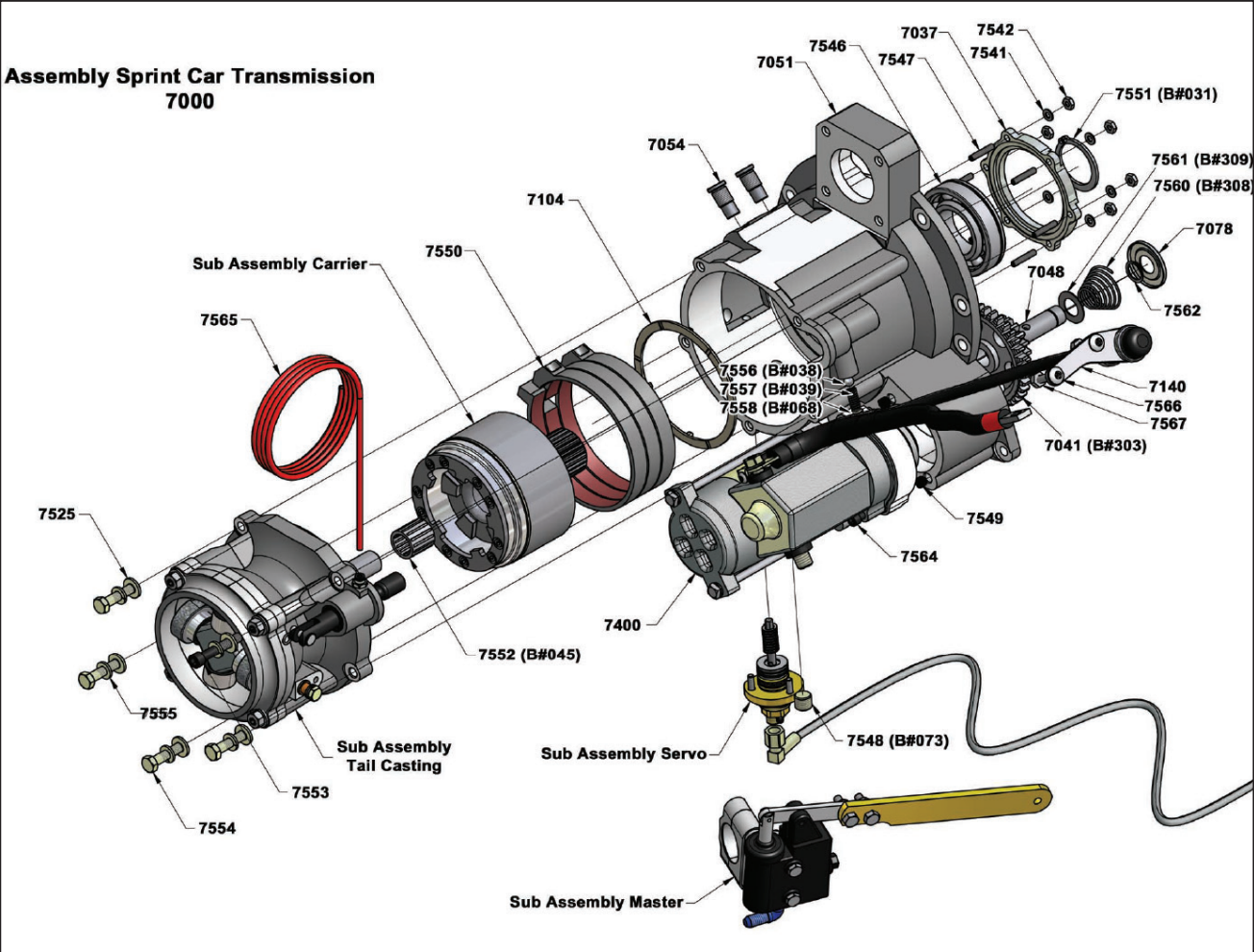
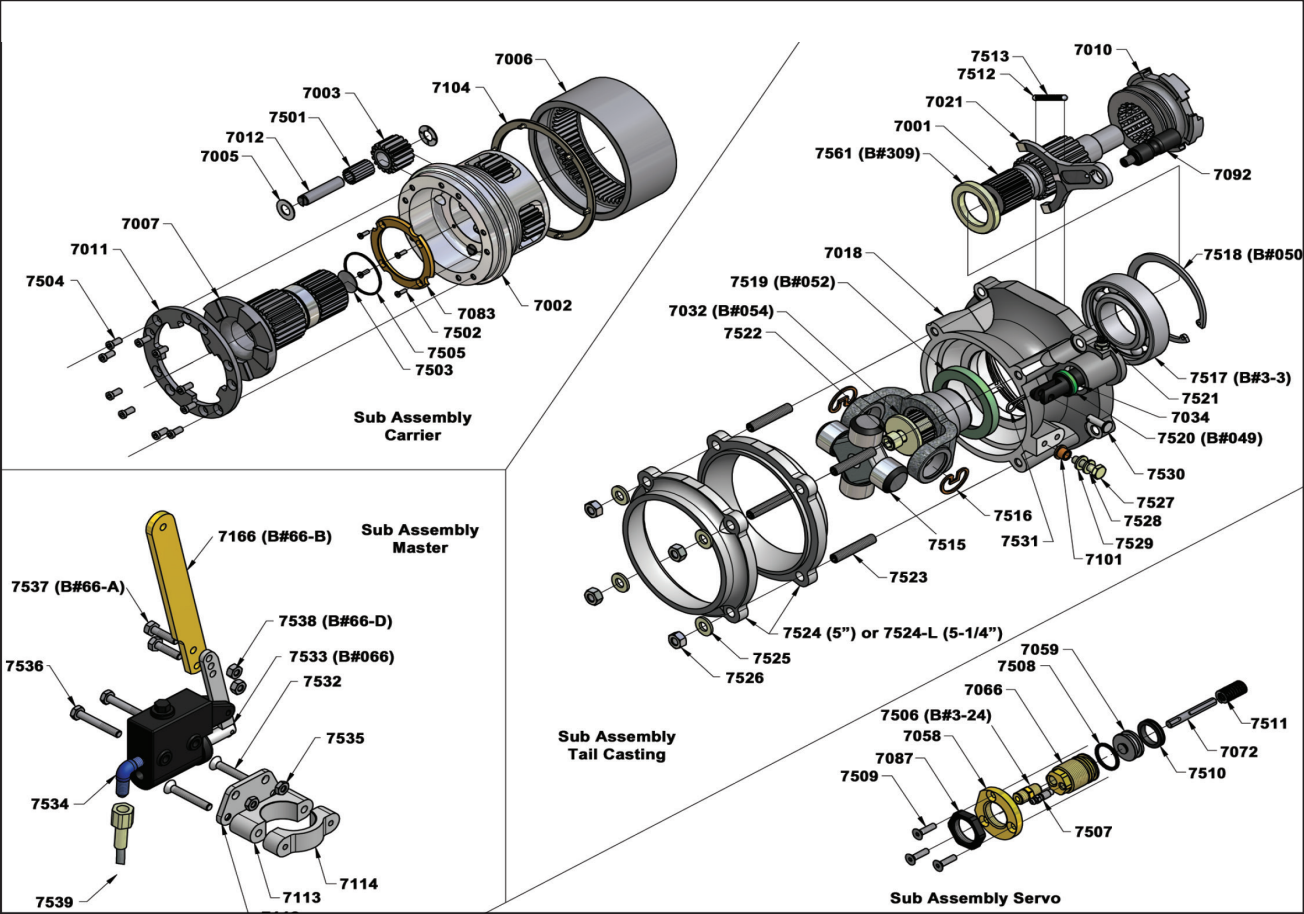
Distance from crank center to bottom 6"

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.



USE AW32 HYDRAULIC OIL
**** Include choice of motor plate and fly wheel.





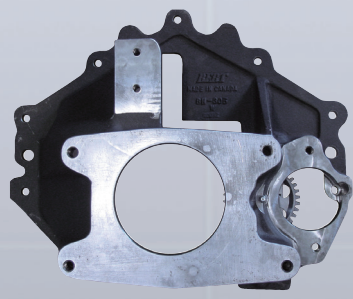
Sprint Car Transmission

Parts list for Bert Sprint Transmission			
Parts #	Description (Quantity)	Parts #	Description
SPZ	SPRINT TRANS. W/BOOST & BATT.	7117	STARTER PART TWO (1)
7001	OUTPUT SHAFT (1)	7140	STARTER BUTTON MOUNT (1)
7002	CARRIER (1)	7166	MASTER HANDLE (1) #066-B
7003	PLANETARY GEAR (4)	7400	STARTER #1 BOOST. & BATT.
7005	PLANETARY THRUST WASHER (8)	7501	PLANET NEEDLE .091"
7006	CROWN GEAR (1)	7502	HEX SOCKET FLAT HEAD CAP SCREW #4-40 UNC - .375"
7007	INPUT SHAFT (1)	7503	FROST PLUG 13/16 (NO SIDE)
7010	SELECTOR (1)	7504/7545	HEX SOCKET FLAT HEAD CAP SCREW #10-24 UNC - .5"
7011	CROWN SELECTOR RING (1)	7505	O-RING O.D. 40mm I.D. 37mm SECTION 1,5mm
7012	PLANETARY SHAFT (4)	7506	FITTING 1/8 NPT #3-24
7018	TAIL CASTING (1)	7507	BLEEDER VALVE 1/4-28 UNF
7021	SELECTOR FORK (1)	7508	O-RING O.D. 1" I.D. 13/16" SECTION 3/32
7024	SELECTOR HANDLE (1)	7509	HEX SOCKET FLAT HEAD CAP SCREW #10-24 UNC - .75"
7031	YOKE (1)	7510	PISTON SEAL
7032	YOKE WASHER (1) #054	7511	SPRING
7034	FORK SHAFT PART ONE (1)	7512	STEEL BALL 3/16
7037	INPUT BEARING COVER (1)	7513	COMPRESSION SPRING
7040	FLYWHEEL (1)	7514	STEEL BALL 1/8
7041	IDLER GEAR (1) #303	7515	U-JOINT
7042	MOTOR PLATE (1)	7516	U-JOINT LOCK CLIP
7042-S	MOTOR PLATE SPECIAL SCHNEE (1)	7517	DEEP GROOVE BEARING 80mmX40mmX18mm #3-3
7048	IDLER GEAR SHAFT (1)	7518	INTERNAL I-CLIP RETAINING RING #050
7051	BAND STOPPING PIN (1)	7519	OUTPUT SHAFT SEAL LG #052
7054	MAIN CASTING (1)	7520	FORK SHAFT SEAL SM #049
7058	SERVO STOPPING RING (1)	7521	CONNECTOR (5/32 OR 4mm X 1/8 NPT)
7059	SERVO PISTON (1)	7522	SOCKET HEAD CAP SCREW 3/8-24 UNF X 1.5"
7066	SERVO COVER (1)	7523	SET SCREW 5/16-18 UNC X 1.75"
7072	SERVO SHAFT (1)	7524	REPLACEABLE HOUSING (INNER & OUTER) 4,45"
7078	IDLER GEAR SPRING CLIP (1)	7524-L	REPLACEABLE HOUSING (INNER & OUTER) 4,5"
7083	CARRIER INPUT SHAFT WEAR PLATE (1)	7524-T	SMALL DIA TUBE
7087	SERVO LOCK RING (1)	7525	FLAT WASHER 5/16"
7092	FORK SHAFT PART TWO (1)	7526	NYLON LOCKNUT 5/16-18 UNC
7097	PUMP SOCKET AF ADAPTOR (1)	7527	HEX CAP SCREW 1/4-20 UNC X 1"
7101	SHIFT ARM BUSHING (1)	7528	LOCK WASHER 1/4"
7104	CARRIER THRUST WASHER (1)	7529	FLAT WASHER 1/4"
7111	MASTER BRACKET LONG (1)	7530	CLEVIS PIN
7113	MASTER BRACKET C-1 (1)	7531	HITCH PIN CLIP
7114	MASTER BRACKET C-2 (1)	7532	HEX FLAT HEAD CONTERSUNK SCREW 1/4-20 UNC X 1,75"
7115	TRANSFER CASE ROD (1)	7533	MASTER CYLINDER #066
7116	STARTER PART ONE (1)	7534	ALUMINIUM 90 DEG 1/8 NPT

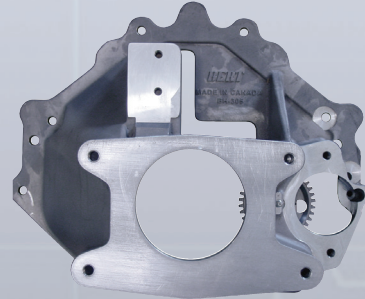
Bellhousings



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



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



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



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.

Note: Please call for other Make & Model Belhousings.

*** Also available in Dodge version # 301-D-NFC / #301-D-NFC-MAG

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



303



304



306



307
307-M



308



309



310

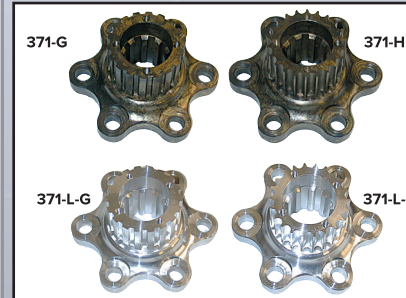
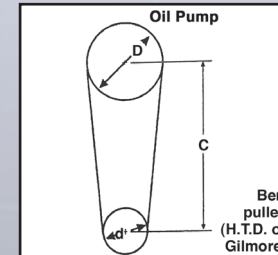
How to Determine your Belt Length

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

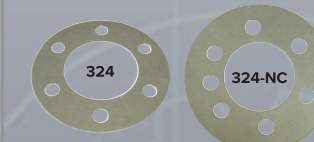
2 C + 1.57" (D + d)
1.57" x 5.8" = 8.949"
16 + 8.949 = 24.949"
Belt Length = 24.949"

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



Drive Flange 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



7

7-A



7-NC

7-LS1



7-D



7-F



Drive Flange

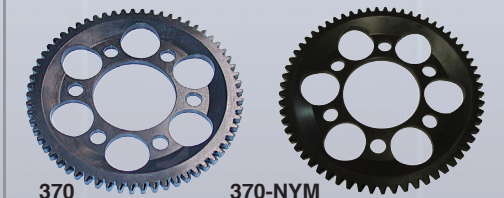
Part #	Description
7	Chevy Coupler
7-A	Chevy Aluminum Coupler
7-B	Buick Coupler
7-BV6	Buick Coupler V-6/4.1L
7-D	Dodge 340-360 Coupler
7-DH	Dodge Hemi 8 Holes Coupler
7-F	Ford 340/360Coupler
7-F429	Ford 429 Coupler
7-G	Chevy Coupler with Gilmer Drive
7-H	Chevy Coupler with HTD Drive
7-LS1	Chevy LS1 Coupler
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

Flywheels & Couplers

Two Piece Flywheels & Couplers

Couplers

Flywheels



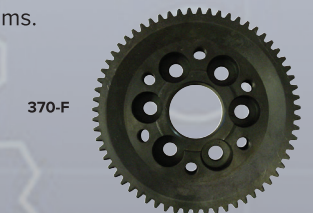
370

370-NYM

Two-Piece Flywheel

Flywheel Ring Chevy.....370
Flywheel Ring Offset

.080 more.....370-NYM
Uses less shims.



370-F

Flywheel Ring Ford.....370-F
Flywheel Ring Ford Windsor370-WIN

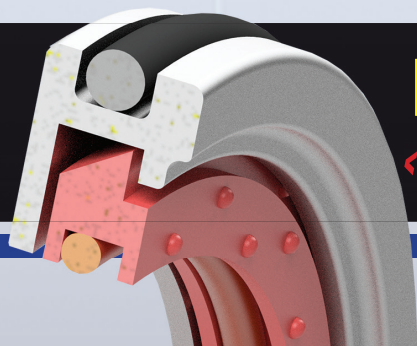
- Two-piece design allows changing of ring gear or hub.
- Smallest & lightest flywheel available
- HTD or Gilmore hubs made from high strength steel or 7075 T6 aluminum.

372-NC-EXT CRATE SPRINT Adaptor & Coupler



Fit inside regular torque ball and specify for Ontario Sprint.

Flywheels



Low Drag Seal
«FOREVER SEAL»



One Piece Flywheels



1 Pc Modified Flywheel

Description	Part #
Dodge Modified	311-D
Dodge 360 Ext. Bal.	311-D360-EXT.B
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

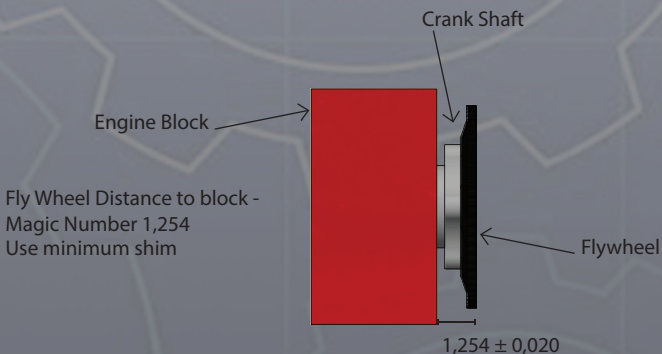
1 Pc Late Model HTD Flywheel

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



Sprint Car Flywheel

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



While your engine is on the engine stand.



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.

FRICTIONLESS

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



- Ram finish race
- All bearing components are WS2 coating finish
- High performance polymer « Torlon » cage

PART #
CTD-002-LDB
CTD-003-LDB

DESCRIPTION
Low drag wheel bearing race
Low drag wheel bearing



For better result, use **BERT BLEU MAGIC** grease **SUPER-777-ULFG**. This aerospace synthetic grease with diamond like additives is made for wheel bearing, u-joints, CV axles and Bert ball spline units.



2019 MATT SHEPPARD #9

The Silverstar

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.

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**



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:

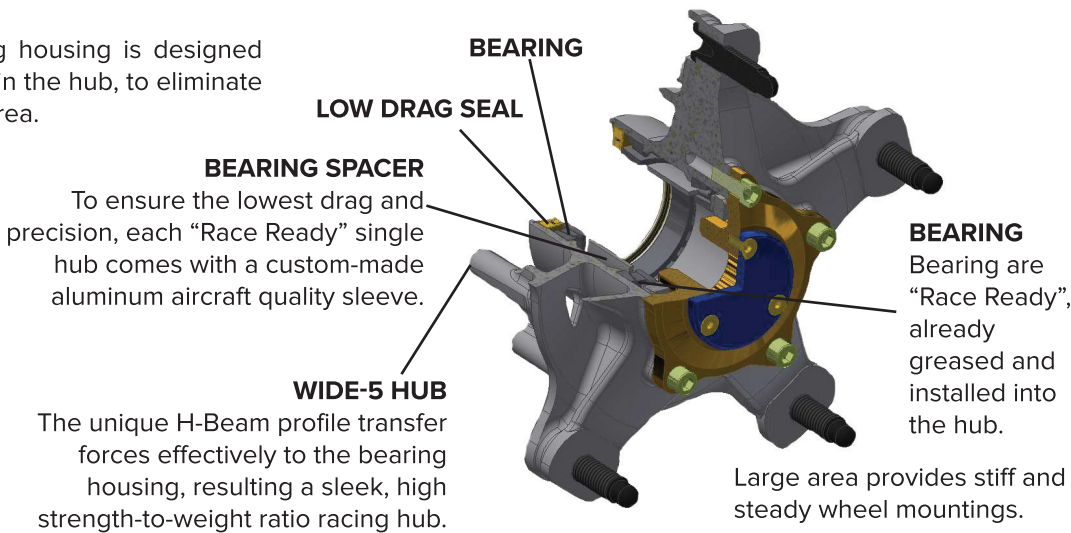
- 1 x Dust Cap Kit
- 5 x Wheel Stud
- 2 Cup
- 2 Bearing Preloaded
- 1 Seal CTD-005-NS
- 1 x Spacer All grease Ready to Install

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



Geometry:	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)	Bearings:	2 x CTD's special tapered roller type (32 rollers) Rigid back-to-back arrangement Adjustable pre-load Maintenance free housing
Design:	High strength aluminum alloy Low rotation inertia Oversized mounting surfaces Sunken studs - Integrated drive flange mts	Weight:	4 lbs 6 ounces - Hub only 6 lbs 4 ounces - Including studs & races
		Part #	Description
		CTD-001-RR	Race Ready Rear Hub Complete Assy
		CTD-001	Rear Hub Only



CTD-005-NS



CTD-005



CTD-005-TFE

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

CTD Quick Change Side Bell



Modified Driveshaft
Gundrilled Driveshaft

Modified Part #	Application Length	Open Drive Spline	Modified Part #	Application Length	Close Drive Spline
250	14"	16 x 16	259	14"	16 x 10
251	16"	16 x 16	260	16"	16 x 10
252	18"	16 x 16	261	18"	16 x 10
253	20"	16 x 16	262	20"	16 x 10
254	22"	16 x 16	263	22"	16 x 10
255	24"	16 x 16	264	24"	16 x 10
256	26"	16 x 16	265	26"	16 x 10
257	28"	16 x 16	266	28"	16 x 10
258	30"	16 x 16	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 13.



240-(specify length) Ball Spline Driveshaft



240-9 Ball Spline Yoke

CTD Quick Change Side Bell

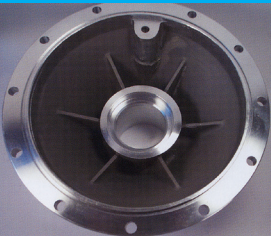
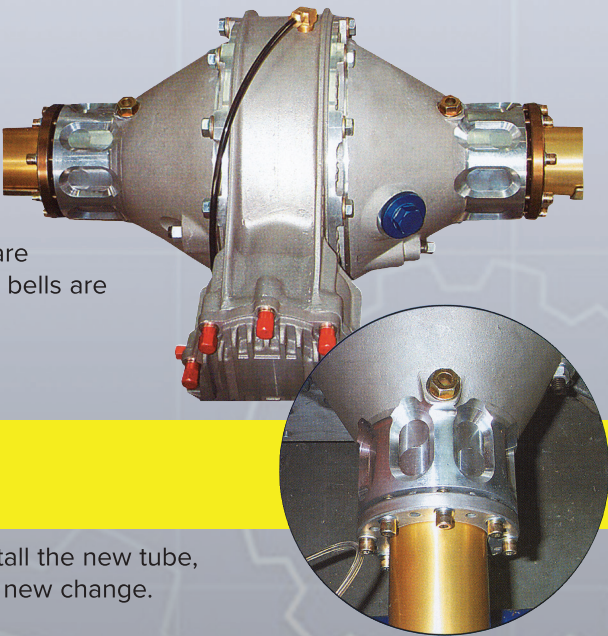
Available in aluminum or recently perfected lightweight magnesium, the CTD quick change side bells are rapidly becoming the state-of-the-art in rear drive technology. No longer does a damaged tube mean loading the car. In literally a few minutes, without heat, drilled or a press. A new tube can be installed 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.



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.

CTD Side Bell

Gundrilled Lower Shaft & Yokes



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 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

The SmarTube

www.robbykart.com



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.



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

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"

Tube Extractor Nut
CTD-024



*Specify tube length (L) when ordering.



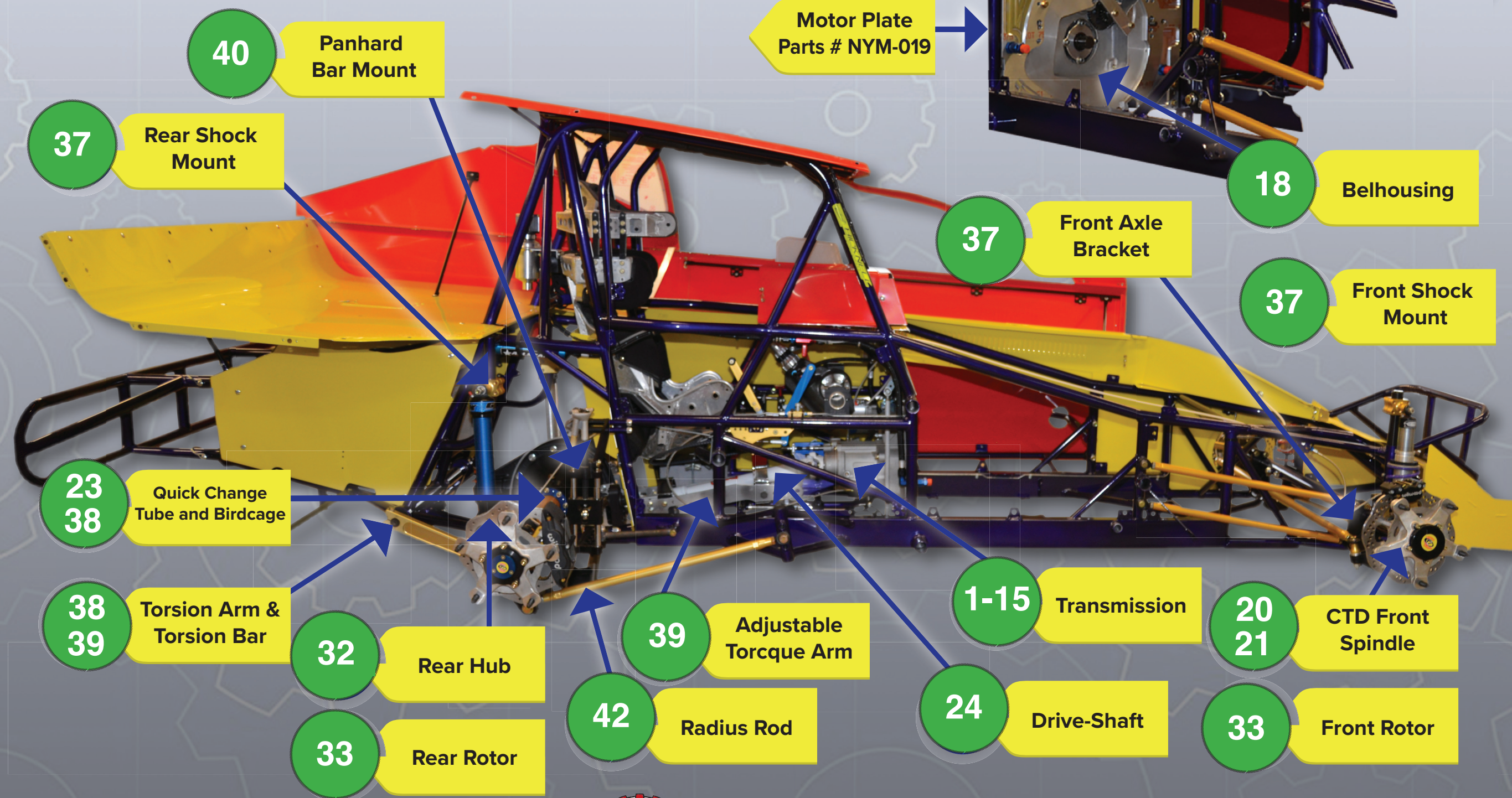
BRENDEN WALLACE #26



MATTHEW ROBIPOUX #646

BERT

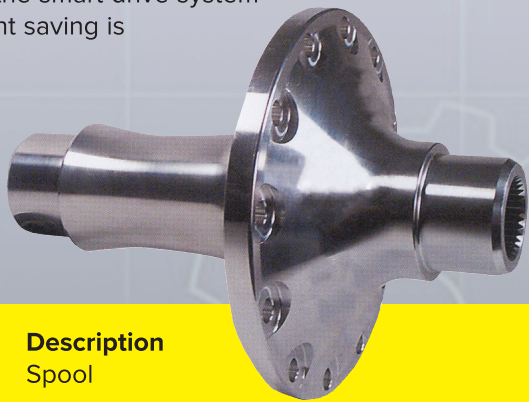
TRANSMISSION



Bert Smart Spool

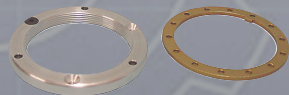
Bert Smart Spool

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.

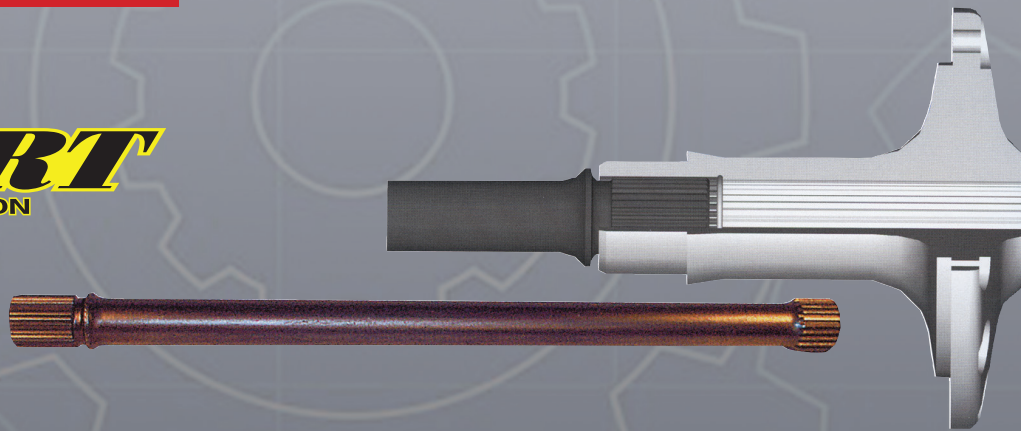
Bert Smart Axle

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
			Call for Special Length		

Bert Smart Axle

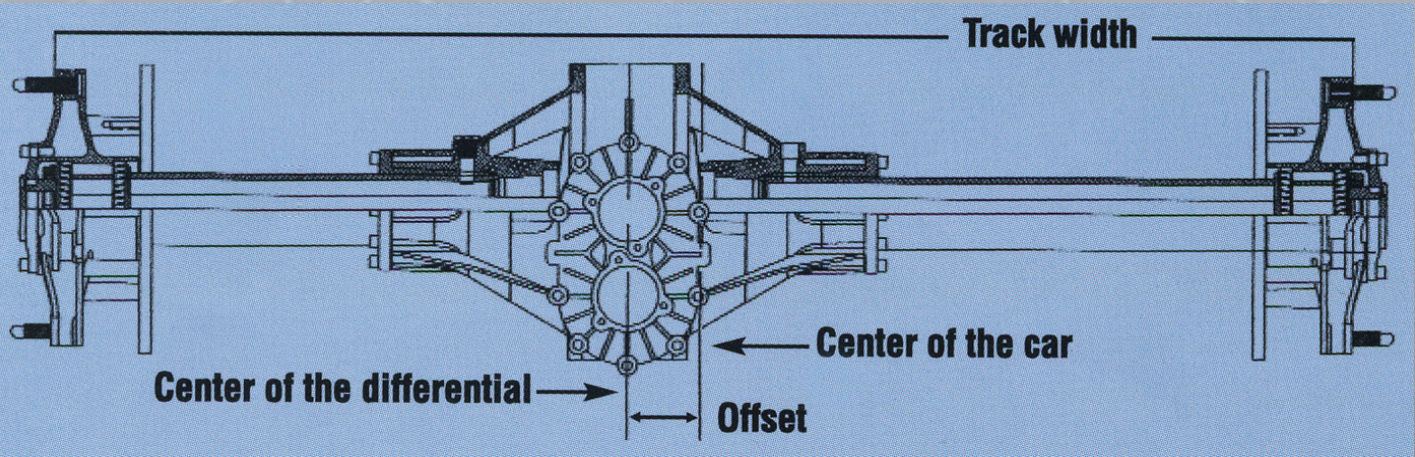


How to find the right smart tube, axle tube, and smart axle for your car

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 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
(left 24 1/2 + 5.0625 = 29.9/16)
(right 26 1/2 + 5.0625 = 31.9/16)



RYAN GODOWN #26



Bert New Wave Brake Rotor

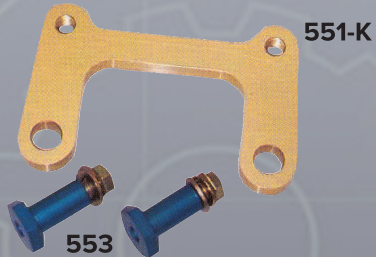
Bert engineering is offering an interesting alternative to the times spent of safety wiring your rotor bolts. The answer is the nord-lock. This unique securing system used tension to make the bolt self locking from cold to hot and from hot to cold your rotor will not loosen.

Model of the new wave brake rotor on the next page

Front Caliper Bracket Kit

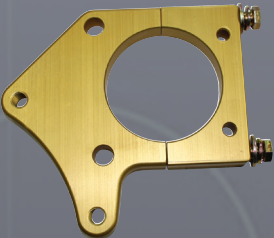
Front Caliper Bracket Kit

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

Clamp on Caliper Bracket



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.

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

Bert New Wave Brake Rotor



540

FRONT

1/2" X 11.75"

541

REAR

1/2" X 12.19"

543

FRONT

1/2" X 12.00"

544

FRONT

3/8" X 12.00"

544-1

FRONT

3/8" X 12.00"

544-2

FRONT

3/8" X 12.00"

544-3

REAR

3/8" X 12.19"

545

FRONT

3/8" X 11.00"

547-L

REAR

.810

547-R

REAR

.810

Fastest Brake System
RACE PROVING

Parts #	Description
CAL-300	Bert brake retractor single (2 pistons)
CAL-100	Bert brake retractor double (4 pistons)
CAL-304	Front bracket for CAL-300 (fit on Bert spindle)
CAL-105-LR	Rear bracket for CAL-100 left side
CAL-106-RR	Rear bracket for CAL-100 right side
CAL-109	Quad-lock for CAL-100
CAL-901	Rear bracket for CAL-100 Late Model

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

NEW

CAL-100

CAL-109

CAL-105-LR

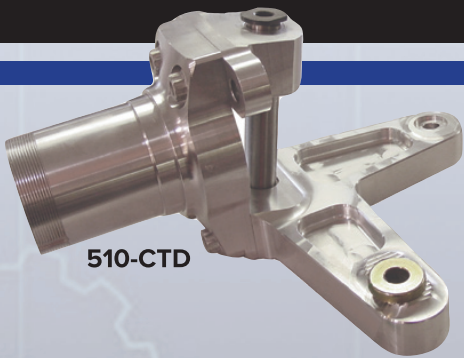
CAL-106-RR

CAL-901

CAL-304

CAL-300

CTD Front Spindle



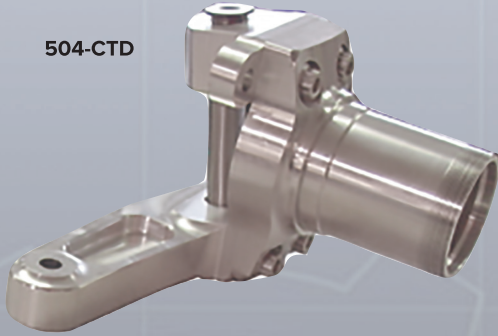
510-CTD



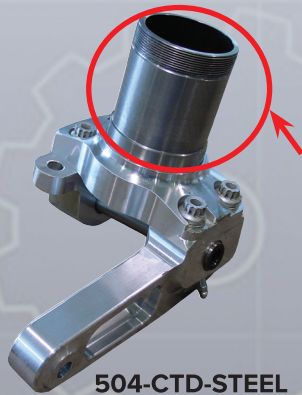
510-CTD-STEEL

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.



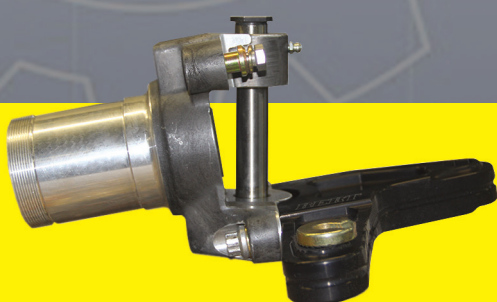
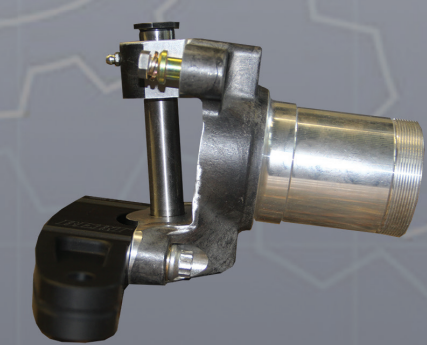
504-CTD



504-CTD-STEEL

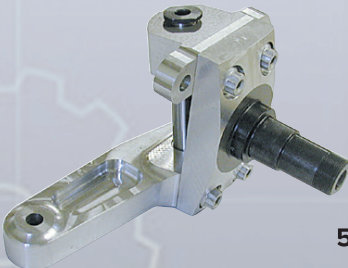
Part #	Description
504-CTD	CTD Wide Five Hubs Right (Aluminum)
504-CTD-STEEL	CTD Wide Five Hubs Right (Steel)
510-CTD	CTD Wide Five Hubs Left (Aluminum)
510-CTD-STEEL	CTD Wide Five Hubs Left (Steel)

Spindle made from a 7075-T6 forging

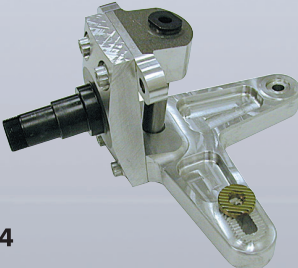


Part #	Description
600-L	Spindle Assembly Left
600-R	Spindle Assembly Right
601	Center Section
602-L	Left Arm
602-R	Right Arm

Bert Spindle



504



Hub Assem-

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

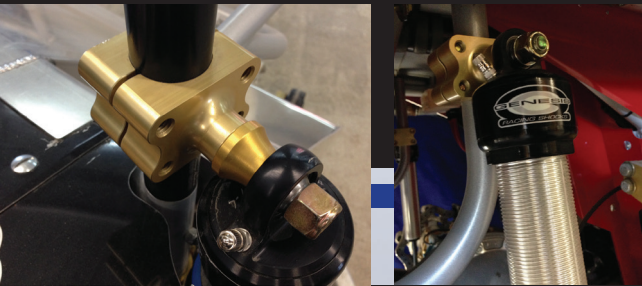
Note: All spindle parts are available for rebuilding repair and updating.



STEVE BERNIER #25

Shock Mounts

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



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)

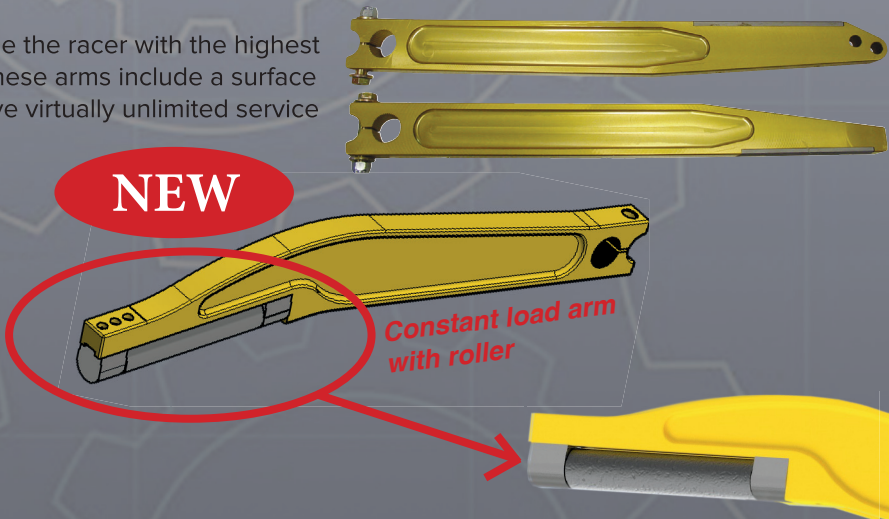
Rear Torsion Arm

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"

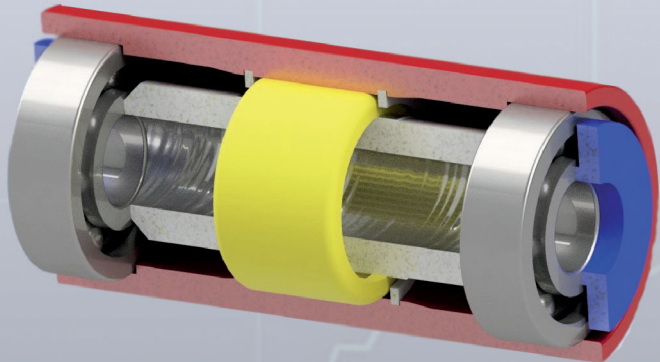
Our team of engineers developed a new bearing that is introduced to our torsion arm. This bearing along with our new roller allow the torsion arm to freely move forward and back as well as left to right keeping your car free as weight transfers through the corners.



Torsion Roller

NEW

Our team of engineers developed a new unique ridged roller that is wider allowing for more movement of the rear end. In addition this roller has a third bearing that allow it to be much more rigid without affecting the rotation of the roller



Torsion Roller

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



Part #	Description
NYM - 3B - 5	Torsion Roller
NYM - 3B	Torsion Roller (long 3")

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.

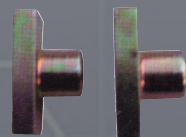
Part #	Description
CTD-050	Smart Tube to Northeast Modified Torsion Bars (Can be used for Left or Right)
CTD-050-R	Smart Tube to Northeast Modified Torsion Bars Adjustable - Right
CTD-050-L	Smart Tube to Northeast Modified Torsion Bars Adjustable - Left
CTD-050-15	Stud



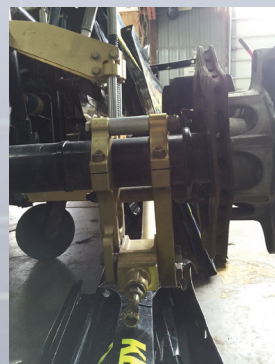
Offset Key Way

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

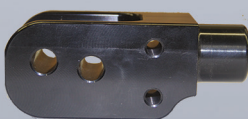


Smart Tube to Coil Over



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

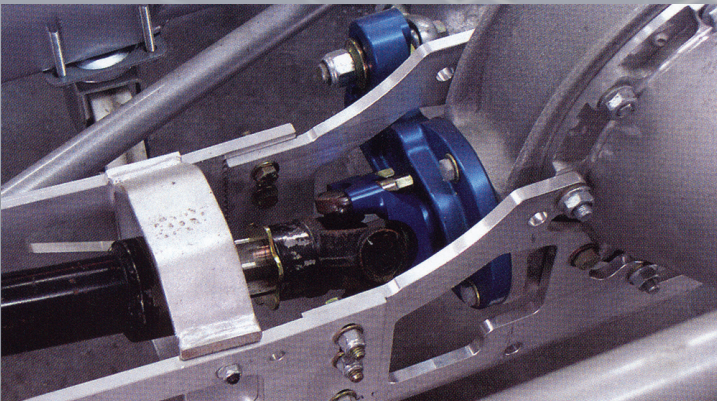
Adjustable Torque Arm

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)

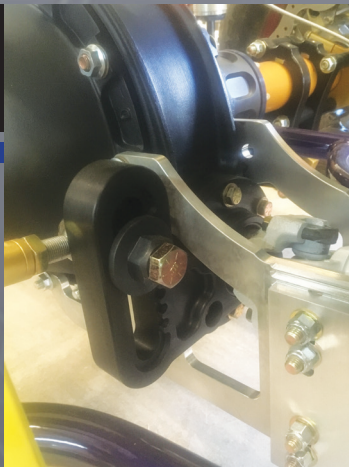


Part #	Description
NYM-017-02-LH	Left Torque Arm Kit Adjustable (2 pieces)
NYM-017-02-RH	Right Torque Arm Kit Adjustable (2 pieces)

Pinion Panhard Bracket



Part #	Description
CTD-052-KA	Pinion Panhard Bracket



Panhard Mount



Panhard Bar Mount

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

I've asked drivers, crew members and owners.

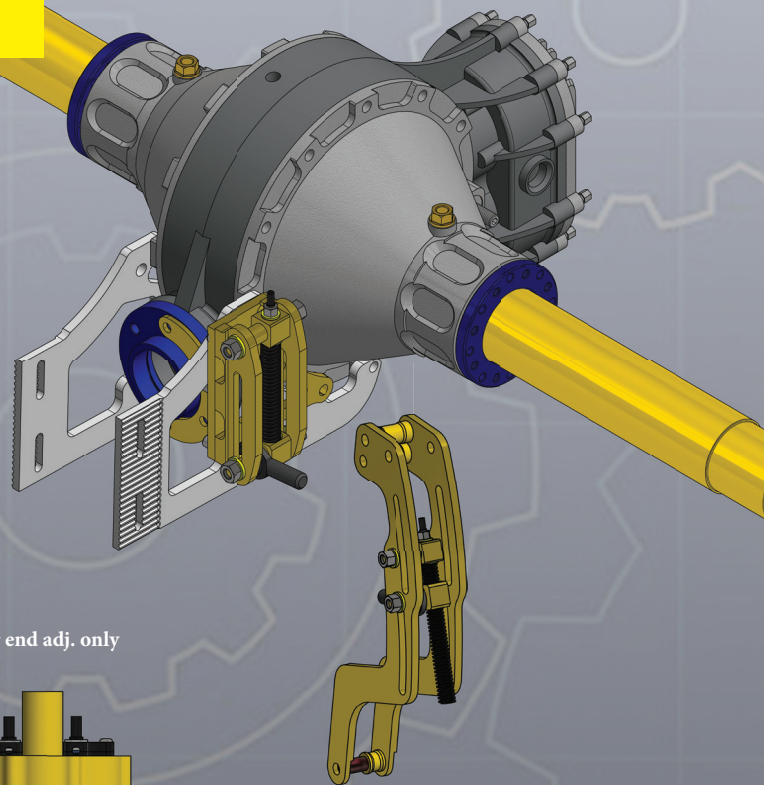
Part #	Description
410-B	Panhard Mount (Bicknell)
410-T	Panhard Mount (Teo/Troyer)

THE SMART ADJUSTER

In-car adjuster

" Panhard bar, Short Rod, "J" Bar ". They all Control the lateral chassis position to the rear end. That position can turn a car from bad to good. I asked drivers Crew members owners; They all have their own idea. " Move it from the outside, No, move it from the pinion, NO NO, move it parallelly".

We can offer you everything you DREAM of in one complete Unit.

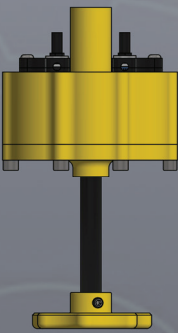


NEW

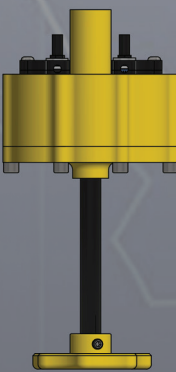
Move both adj.
at the same time

Chassis side adj. only

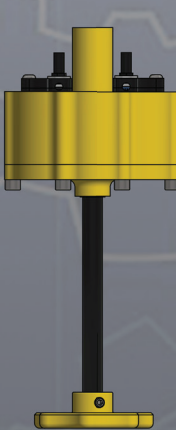
Rear end adj. only



IN



MIDDLE



OUT

Bert Gundrilled and Solid Axle

Radius Rod

JONATHAN DAVENPORT #49



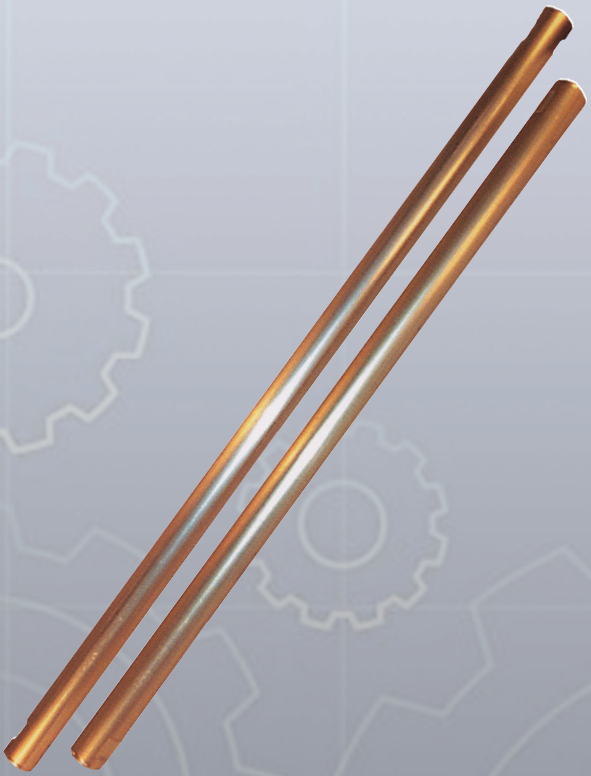
Bert Gundrilled and Solid Axle
Designed with our exclusive solid end, Bert's axles won't break and damage your expensive spool. Bert axles are built by racers for racers!

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

Part #	Description
208-C	25-1/4"
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"

Note: To order solid axle add a (S) after gun drilled axle part #.

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



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

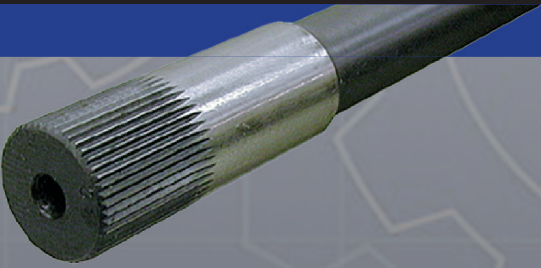


MARCEL TESSIER #24

Legends and dwarf car 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.

Bert Torsion Bar 21st Century Series
Torsion Bar 21st Century Series



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



LARRY WIGHT #99

Hollow Anti-Roll Bar



Throttle Management Kit

Hollow Sway Bar Modified & 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)

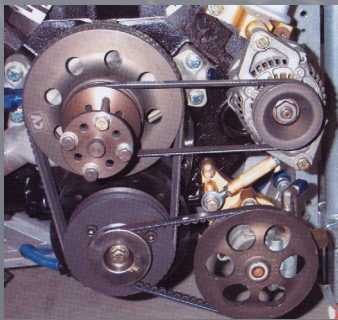
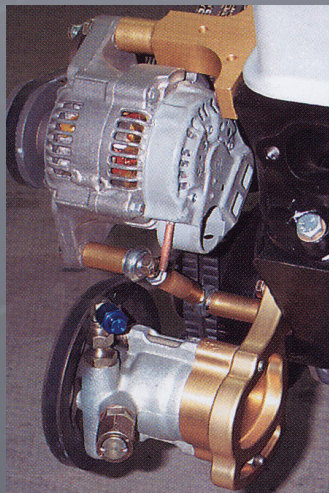
Part #	Description
190-34	34" x 300
191-34	34" x 350
192-34	34" x 400
193-34	34" x 450

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

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

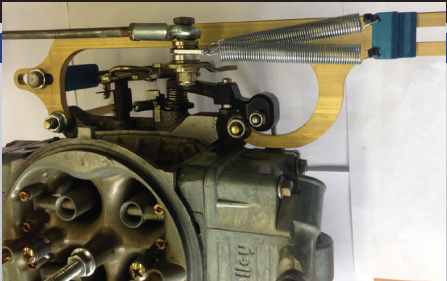
Part #	Description
190-36	36" x 300
191-36	36" x 350
192-36	36" x 400
193-36	36" x 450

Power Steering and Alt Bracket



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

Power Steering and Alternator Bracket
The simple and efficient way of installing and driving an alternator.
Power steering pump mounting bracket and hardware.



Throttle Management Kit
Throttle management, at your gas pedal, when properly adjusted can eliminate tire spin. # TM - 401

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.

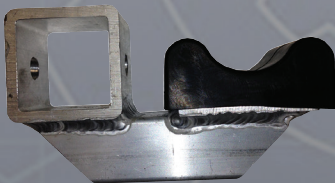


Air Jack
AJ-1000

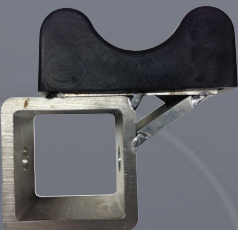
Part #	Description
AJ-1000	Air Jack



AJ-BUMPER-IMCA



AJ-BUMPER IMCA EXT4



AJ-BUMPER-NYM-F



AJ-BUMPER-NYM-R



AJ-BUMPER-STR-F



AJ-RUBBER

Hydroplane Transmission

NEW

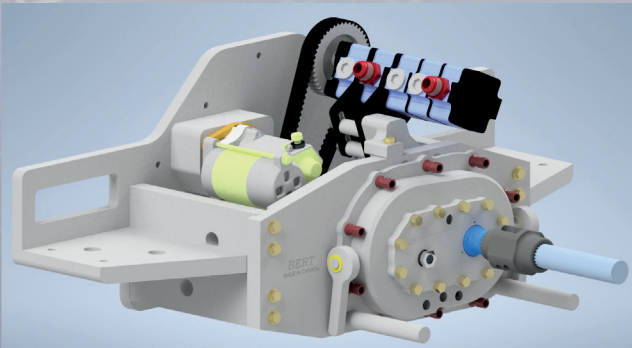


Apparel

After several years of perfecting the world of Dirt Racing, we are now revolutionizing the world of Hydroplane with our brand-new transmission. You only need to remove the front cover of the transmission to change your gear ratio to another quickly and simply.

Bert Hydroplane Transmission

- Quick change gear ratio
- Bolt-on subframe
- Lower drag coefficient



Bert T-Shirts & Sweatshirt

- Available in
Adult
- Small
 - Medium
 - Large
 - X-Large
 - XX-Large
 - XXX-Large
- Prices for XX and XXX are slightly higher.



Front



Back



Bert Hats
Adjustable.
One Size fits all.



MIKE BALCAEN #10

50 time track / series champion ; over 225 wins all with Bert Transmission on board.



NEW SECTION ON WEBSITE !

TROUBLE SHOOTING

WWW.BERTTRANSMISSION.COM

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 coming soon. Mostly use for dirt track racing but can be also use for asphalt and ice and rally Style racing.



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.



Billy Decker #91 winner of the 2019 Super DIRT Week 358 Modified race at Oswego.



2020 THE TEAM



Berthold Robidoux
President
bert@berttransmission.com
Ext: 1000



Kayle Robidoux
Vice-president
kayle@berttransmission.com



Sylvain Dagenais
Parts & Sales Manager
sales@berttransmission.com
Ext: 1400



Marc-André Picard
R/D Engineering
ma.picard@berttransmission.com
Ext : 1503



Sophie Pelletier
Shipping
sophie@berttransmission.com
Ext: 1201



Karol Laflamme
Accounting
karol@berttransmission.com
Ext: 1200

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MONDAY TO THURSDAY - 9 AM TO 5 PM
FRIDAY - 9 AM to Noon



395 St-Regis North, St. Constant
Quebec, Canada J5A 2E7
Tel. 450-638-2960 - Fax. 450-638-4098
bert@berttransmission.com - www.berttransmission.com



DAVE PARYZO COMMUNICATION

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Important Warning

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