



MODIFIED

QUICK CHANGES AND DRIVELINE COMPONENTS



NEW FOR 2025

SNUB NOSE NORTHEAST MOD QUICK CHANGE



PAGES 4-7

HI-TORQUE STARTER FOR NORTHEAST MOD



PAGE 27

PERMANENT MOLD QC CASTINGS



PAGE 3

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THE PERMANENT MOLD ADVANTAGE

NOW AVAILABLE IN 10" AND 8" CENTERS INCLUDING THE NEW SNUB NOSE QC



We're raising the bar with all-new 10-inch and 8-inch rears that are the **strongest production quick changes** on the market.

Racers are achieving unheard of levels of mechanical grip and stressing driveline components more than ever. To ensure our rears continue landing in victory lane, our new center sections have been **structurally reinforced to strengthen high-stress areas without adding weight** to the final assembly.

But the most significant improvement is in the A356-T6 aluminum castings. **Permanent Mold casting is a state-of-the-art process that achieves stronger mechanical properties (tensile, yield, and elongation), tighter tolerances, and better density and grain structure** than is possible with the sand casting process used for all other quick change centers on the market. **The result is the strongest quick change available.**

REINFORCED CENTER SECTION FEATURES

- **Thicker and longer internal ribs** extending into the front snout and rear gear cavity
- **Dual support ribs** between the change gear cavity and the ring gear cavity
- **Larger fillets (thicker metal) at the bell mounting flanges** for added torsional strength
- **New center section weighs the same** as our previous race-winning rears



Scan QR code or click Video #03 on wintersperformance.com to watch our new Permanent Mold center sections being cast

MECHANICAL PROPERTY COMPARISON

Sand Cast ASTM A356-T6 Alum	Sand Cast ASTM AZ91E-T6 Mag	Permanent Mold A356-T6 Alum (lab tested)	% Increase vs Sand Cast Alum	% Increase vs Sand Cast Mag
Tensile: 34,000	Tensile: 34,000	Tensile: 38,400	+ 13%	+ 13%
Yield: 24,000	Yield: 16,000	Yield: 32,400	+ 35%	+ 103%
Elongation: 3.5%	Elongation: 3%	Elongation: 5%	+ 43%	+ 67%



*ASTM – American Society for Testing and Materials

**Permanent Mold center sections tested by an independent lab (report available on request).

See inside back cover of catalog or visit website for limited warranty and venue provision.

WWW.WINTERSPERFORMANCE.COM

IT'S SIMPLE:

SHORTER REAR + LONGER DRIVESHAFT EQUALS MORE STRENGTH & DURABILITY

All
Winters Mod
Quick Changes including
the Snub Nose feature
Permanent Mold center
section and side bell
castings—the strongest
production quick change
castings available



INTRODUCING THE NEW NORTHEAST MOD SNUB NOSE QUICK CHANGE

**3" Shorter
Center
Section**

**Change Gear
Interposed Between
Two Bearings**

**Billet Steel Yoke
with Yoke Support
Bearing**

**Floating Lower
Shaft with Four
Bearings**

THE MOST SIGNIFICANT ADVANCEMENT IN NORTHEAST MOD QUICK CHANGE REAR END DESIGN IN DECADES

Northeast Modified racing isn't for the faint of heart. Cars and components are stressed to the max, pushing the limits of power and performance in ways not seen in many other forms of racing.

OUR BRAND NEW SNUB NOSE QUICK CHANGE REDUCES THAT STRESS WITH A FULL-SIZE REAR THAT'S 3" SHORTER THAN A STANDARD QUICK CHANGE.

The resulting geometry is a game-changer. That extra 3" between the transmission and the quick change allows for two things: increased driveshaft length and decreased driveline angle.

The length and position we've become accustomed to in Northeast Modified construction exposes the driveshaft and U-joints to immense stress, leading to premature failure that can damage components upstream and downstream of the driveshaft. Shortening the rear and using a longer driveshaft positioned at a more moderate angle helps U-joints live longer, increasing both strength and durability.



Scan QR code or click Video #32 on wintersperformance.com to watch a video explaining the design and geometry benefits of the new NE Mod Snub Nose quick change



19"

New Northeast Mod Snub Nose Rear
(3" shorter than Full-Size Rear)



22"

Standard Full-Size Rear

NEW DRIVE YOKE BEARING



The all-new billet steel yoke is supported by its own bearing. This bearing is designed to absorb the stress put on the rear when the car is in posture, instead of transferring it to the lower shaft, which can lead to excessive flexing and decrease the life of the shaft.

DUAL BEARING-SUPPORTED LOWER CHANGE GEAR



Lower change gear is interposed between two directly adjacent bearings supporting the lower shaft. This industry exclusive design creates a floating lower shaft with four bearings, stabilizing the shaft and virtually eliminating stress at the rear gear.

See inside back cover of catalog or visit website for limited warranty and venue provision.

SNUB NOSE DIRT MODIFIED QUICK CHANGE



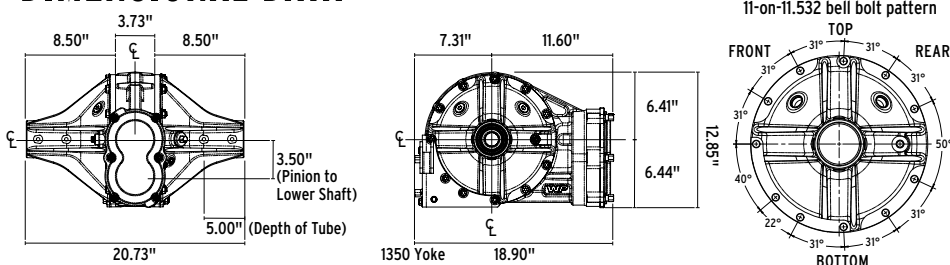
REVOLUTIONARY DESIGN PERMANENT MOLD CASTINGS THE NEW STANDARD IN NORTHEAST MOD QUICK CHANGE REARS

All 10-inch rears include Posi-Lock, Roller Nose Bearings, 1-piece drop-in race, Viton seals and ARP® ring gear bolts. Standard equipment includes a 4.86 ring & pinion and 31-spline aluminum spool. See additional options below.
Center must be used with one-piece pinion bearing cup P/N 7528.

ASSEMBLY P/N 5825PM

Our new Northeast Mod Snub Nose quick change design is nothing short of revolutionary. Three-inch shorter rear increases driveshaft length and decreases angle, saving U-joints and increasing reliability. Added bearing directly adjacent to lower change gear reduces stress and flex. Floating lower shaft is also strengthened by the bearing-supported billet steel yoke. Plus, all Snub Nose rears feature Permanent Mold center section and side bell castings—the strongest castings of any production quick change on the market. Coupled with premium components like ARP® ring gear bolts, a heat treated steel or optional 350M lower shaft, posi-lock retainer, roller nose bearings, and a 1-piece drop-in race, Winters quick changes are built for victory lane.

DIMENSIONAL DATA

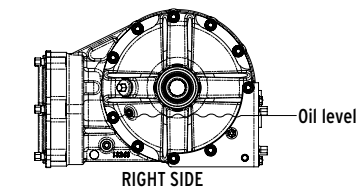


OPTIONS

Blue indicates popular options

OPTION #	MOST POPULAR OPTIONS
8111	4.12 Ring & Pinion
8106V-29	350M Lower Shaft, 29-Spline
OPTION #	TUBE OPTIONS
13419	2-7/8" Tetrad Tube (Standard Length)
13420	2-7/8" Tetrad Tubes, +2" Left Side
13421	2-7/8" Aluminum Tubes, Splined
13422	2-7/8" Aluminum Tubes, Splined, +2" Left Side
13423	Wide-5 Alum Tube, 1-Ton, Tetrad
13424	Wide-5 Alum Tube, 1-Ton, Tetrad, +2" Left Side
13425	Wide-5 Alum Tube, 1-Ton, Splined
13426	Wide-5 Alum Tube, 1-Ton, Splined, +2" Left Side
9117	2-7/8" Spacers
8201	Internal Alum Tube Seal

IMPORTANT QUICK CHANGE OILING INFO



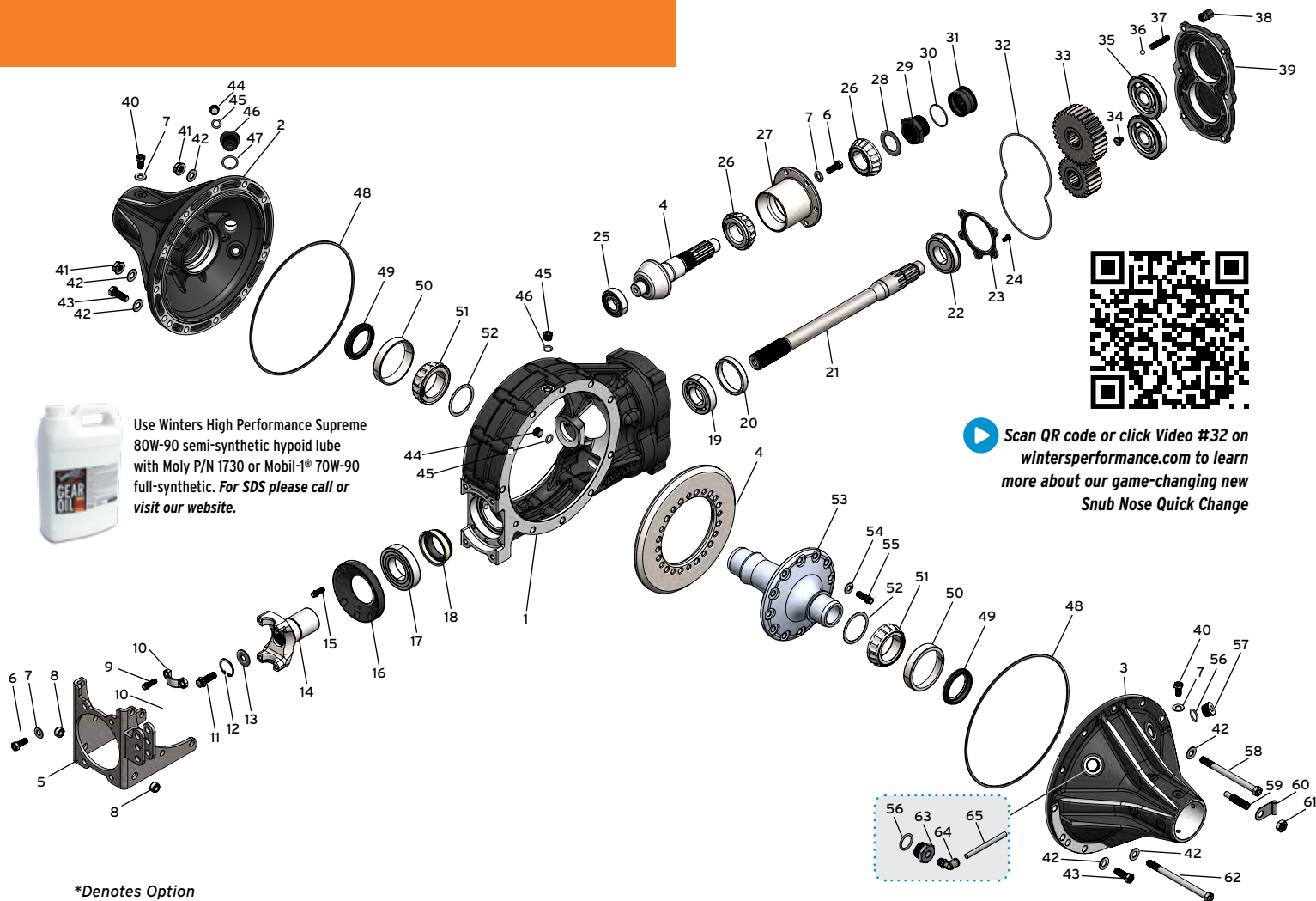
Make sure rear is level when checking oil

PROPER OIL LEVEL IS CRITICAL! Always maintain oil level at 1-1/2" below axle center line as indicated (3 quarts/2.8 liters).

Use Winters High Performance Supreme 80W-90 semi-synthetic hypoid lube with Moly P/N 1730 or Mobil-1® 70W-90 full-synthetic.



Scan QR code or click Video #30 on wintersperformance.com to watch a video explaining oil specs and showing oil check and fill locations for 8" and 10" center sections



Use Winters High Performance Supreme 80W-90 semi-synthetic hypoid lube with Moly P/N 1730 or Mobil-® 70W-90 full-synthetic. For SDS please call or visit our website.

Scan QR code or click Video #32 on wintersperformance.com to learn more about our game-changing new Snub Nose Quick Change

*Denotes Option

#	DESCRIPTION	P/N	QTY	#	DESCRIPTION	P/N	QTY
1	10" Snub Nose Center Section, Permanent Mold	13243	1	33	Quick Change Gear Set (Not included)	8500	1
2	Permanent Mold Aluminum 8-Rib Right Side Bell	12083PMSN	1	34	Retainer Bolt	12417	2
3	Permanent Mold Aluminum 8-Rib Left Side Bell	12080PMSN	1	35	Ball Bearing, Gear Cover	8659	2
4	4.86 Ratio Ring & Pinion, 10-Spline (Standard)	5400	1	36	5/16" Diameter Steel Ball, Gear Cover	7398	6
4*	4.12 Ratio Ring & Pinion, 10-Spline	5714	1	37	3/8-16 x 1-3/4" Stud, Gear Cover	7802	6
5	Front Shield, Snub Nose	13418	1	38	3/8-16 Aluminum High Nut	7794ASBK	6
6	3/8-16 x 1" HHCS	7110	10	39	Gear Cover, 6-Bolt, Forged Aluminum	12175B	1
7	3/8" SAE Flatwasher	7114	26	40	3/8-24 x 3/4" HHCS, 8-Rib Side Bell	7109S	16
8	7/16-20 Self-Clinching Nut	13417	2	41	7/16-20 Flanged Locknut, Thru-Bolt	7177	10
9	5/16-24 x 7/8" 12-Pt Cap Screw	7198	4	42	7/16" SAE Flatwasher	7178	22
10	Trunnion Cap, Drive Yoke	13247	2	43	7/16-14 x 1-3/8" HHCS	9416	2
11	7/16-20 x 1-1/4" 12-Pt Cap Screw, Yoke, ARP®	9417ARP	1	44	-6 AN Plug	7874S	3
12	Retaining Ring, Drive Yoke	7632	1	45	O-Ring	8405	3
13	Flatwasher, Drive Yoke	13278	1	46	Inspection Plug, 8-Rib Side Bell	6857-01	1
14	Drive Yoke, Steel, 28-Spline	13246	1	47	O-Ring, Inspection Plug, 8-Rib Bell, -12 AN	7454	1
15	5/16-18 x 3/4" 12-Pt Cap Screw	7195	6	48	O-Ring, 4 & 6-Rib Bell	7403T	2
16	Bearing Retainer	13244	1	49	Seal, Side Bell	7283V	2
17	Ball Bearing, Double Sealed	13351	1	50	Bearing Cup, Side Bell	7310	2
18	Seal, Double-Lip, Viton™/Teflon®	13273VT	1	51	Bearing Cone, Aluminum Spool	7340	2
19	Ball Bearing	13353	1	52	Shim Kit, Aluminum Spool	5295	1
20	Spacer, Twin Bearing	13277	1	53	Aluminum Spool, 31-Spline	5034-11A	1
21	Standard Lower Shaft, Heat Treated, 10-Spline	13259	1	54	Washer, Ring Gear, ARP®	7815ARP	12
21*	Lower Shaft, 350M, 10-Spline	13259V	1	55	Bolt, Ring Gear, ARP®	7852ARP	12
22	Ball Bearing, Shielded, w/Integral Snap Ring	13352	1	56	O-Ring	8406	2
23	Bearing Retainer	13274	1	57	-10 AN Plug	8035	1
24	1/4-20 x 1/2" BHCS	8087	5	58	7/16-20 x 5-1/2" Thru-Bolt	7176	7
25	Roller Bearing, Pinion Nose	7331	1	59	1/2-13 Adjusting Screw, Ring Gear	6149	1
26	Bearing Cone, Pinion Shaft	7308	2	60	Retainer, Breather Tube	13408	1
27	Bearing, Flanged Double Cup, Pinion	7528	1	61	1/2-13 Jam Nut, Adjusting Screw	7137A	1
28	Bearing Washer	5055	1	62	7/16-20 x 6" Thru-Bolt	7176L	4
29	Posi-Lock Nut, Pinion Shaft	6485R	1	63	Plug 7/8-14	12793	1
30	O-Ring, Posi-Lock	7445	1	64	Tube Adapter	9397	1
31	Posi-Lock Retainer, Pinion Shaft	6484	1	65	Poly Tubing, 16" Length	9409	1
32	O-Ring, Gear Cover, 6-Bolt, Forged Aluminum	8447	1				

Part Numbers in this list may vary depending on options ordered at time of purchase. Please check the assembly tag included with your rear. See inside back cover of catalog or visit website for limited warranty and venue provision.

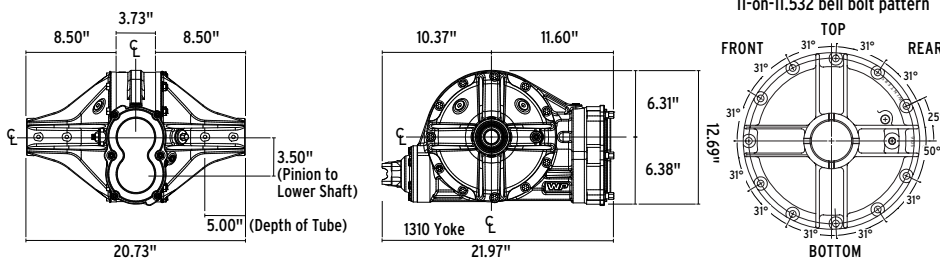
PERMANENT MOLD 6-BOLT CENTER

BIG BLOCK MOD REAR BUILT WITH OUR INDUSTRY-EXCLUSIVE PERMANENT MOLD QUICK CHANGE CENTER SECTION

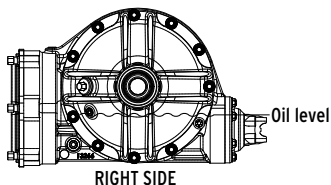
ASSEMBLY P/N 5270PM

Over nearly seven decades making speed equipment, racers have relied on Winters components for their unmatched durability and performance under even the harshest conditions. Our brand new Big Block Mod quick changes build on that reputation, using an industry-exclusive Permanent Mold center section and bells coupled with the same tried-and-true internals that have equipped race-winning cars for years, including ARP® ring gear bolts, heat treated steel or optional 350M lower shaft, posi-lock retainer, roller nose bearings, and 1-piece drop-in race, to name a few.

DIMENSIONAL DATA



IMPORTANT QUICK CHANGE OILING INFO



Make sure rear is level when checking oil

PROPER OIL LEVEL IS CRITICAL! Always maintain oil level at 1-1/2" below axle center line as indicated (3 quarts/2.8 liters).

Use Winters High Performance Supreme 80W-90 semi-synthetic hypoid lube with Moly P/N 1730 or Mobil-1® 70W-90 full-synthetic.



All 10-inch rears include Posi-Lock, Roller Nose Bearings, 1-piece drop-in race, Viton seals and ARP® ring gear bolts. Standard equipment includes a 4.86 ring & pinion and 31-spline aluminum spool. See additional options below. Center must be used with one-piece pinion bearing cup P/N 7528.

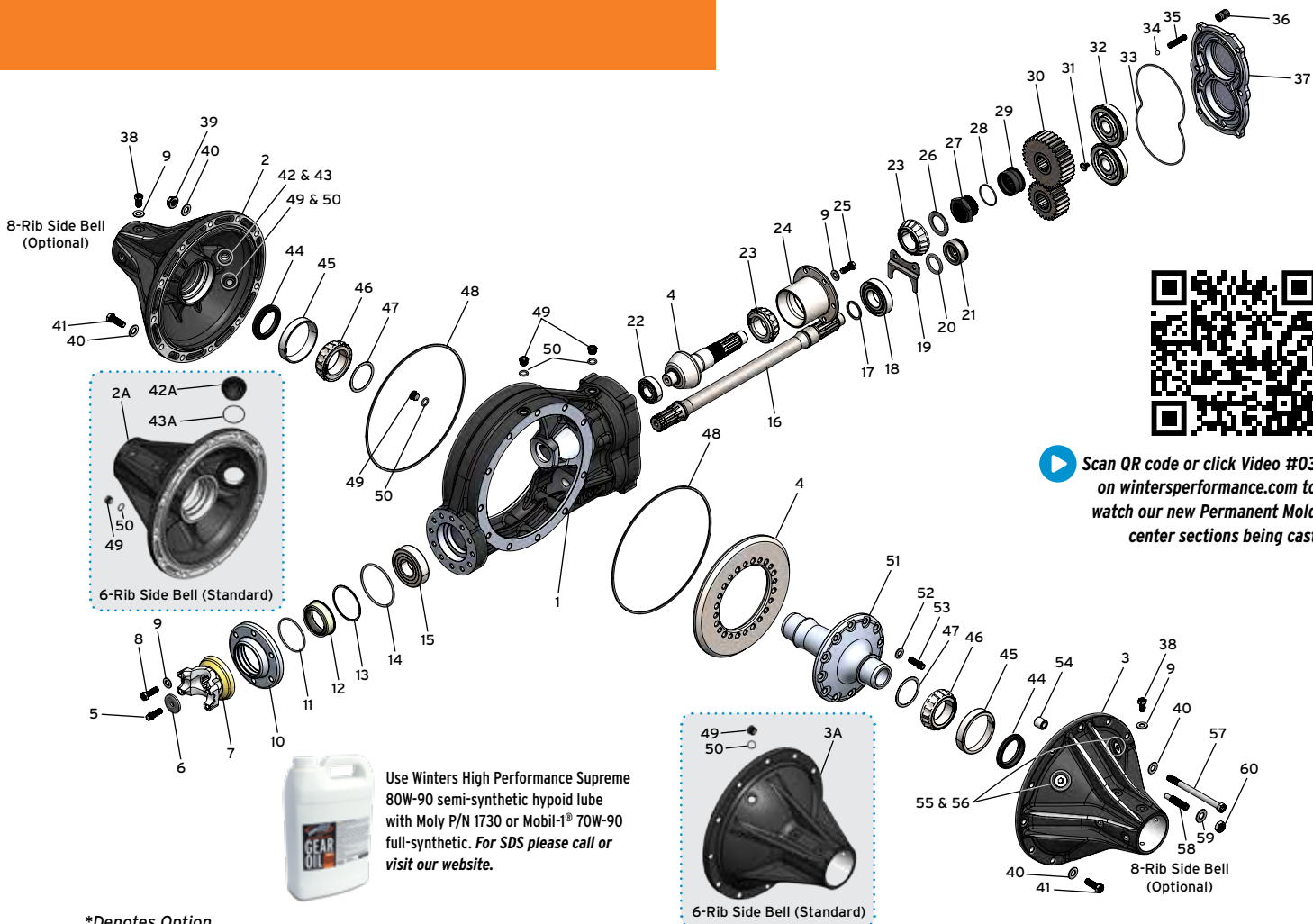
OPTIONS

Blue indicates popular options

OPTION #	MOST POPULAR OPTIONS
8111	4.12 Ring & Pinion
8208	Thermal Dispersant Coating
8218-RP	REM® Ring & Pinion
8218-BRG	REM® Bearing (# is per bearing)
8155PMHD	Heavy Duty 8-Rib Bell, Perm. Mold
8106V	350M Lower Shaft, 10-Spline
8106V-32	350M Lower Shaft, 32-Spline
8249	Long Thru-Bolts, 6"
8249L	Extra-Long Thru-Bolts, 6-1/2"
OPTION #	CENTER OPTIONS
8126	Titanium Thru-Bolts
8275	1350-Series Yoke
OPTION #	TUBE OPTIONS
13419	2-7/8" Tetrad Tube (Standard Length)
13420	2-7/8" Tetrad Tubes, +2" Left Side
13421	2-7/8" Aluminum Tubes, Splined
13422	2-7/8" Aluminum Tubes, Splined, +2" Left Side
13423	Wide-5 Alum Tube, 1-Ton, Tetrad
13424	Wide-5 Alum Tube, 1-Ton, Tetrad, +2" Left Side
13425	Wide-5 Alum Tube, 1-Ton, Splined
13426	Wide-5 Alum Tube, 1-Ton, Splined, +2" Left Side
9117	2-7/8" Spacers
8201	Internal Alum Tube Seal



Scan QR code or click Video #30 on wintersperformance.com to watch a video explaining oil specs and showing oil check and fill locations for 8" and 10" center sections



*Denotes Option

#	DESCRIPTION	P/N	QTY	#	DESCRIPTION	P/N	QTY
1	6-Bolt Center Section, Permanent Mold	13251	1	29	Posi-Lock Retainer, Pinion Shaft	6484	1
2*	Aluminum 8-Rib Right Side Bell	12083PM	1	30	Quick Change Gear Set (Not included)	8500	1
2A	Aluminum 6-Rib Right Side Bell (Standard)	1663-01PM	1	31	Retainer Bolt	12417	2
3*	Aluminum 8-Rib Left Side Bell	12080PM	1	32	Ball Bearing, Gear Cover	8659	2
3A	Aluminum 6-Rib Left Side Bell (Standard)	1663-02PM	1	33	O-Ring, Gear Cover, 6-Bolt, Forged Aluminum	8447	1
4	4.86 Ratio Ring & Pinion, 10-Spline (Standard)	5400	1	34	5/16" Diameter Steel Ball, Gear Cover	7398	6
4*	4.12 Ratio Ring & Pinion, 10-Spline	5714	1	35	3/8-16 x 1-3/4" Stud, Gear Cover	7802	6
5	3/8-24 x 1" HHCS, Drive Yoke, ARP®	7852S-ARP	1	36	3/8-16 Aluminum High Nut	7794ASBK	6
6	Retaining Washer, Drive Yoke	5037	1	37	Gear Cover, 6-Bolt, Forged Aluminum	12175B	1
7	Drive Yoke, Steel w/Integral Spacer, 10-Spline	3533	1	38	3/8-24 x 3/4" HHCS, 6 & 8-Rib Side Bell	7109S	16
7*	Drive Yoke, Steel w/Integral Spacer, 32-Spline	3536	1	39	7/16-20 Flanged Locknut, Thru-Bolt	7177	10
8	3/8-16 x 1 1/4" HHCS, Seal Plate	7107	6	40	7/16" SAE Flatwasher, Thru-Bolt	7178	22
9	3/8" SAE Flatwasher	7114	28	41	7/16-14 x 1-1/4" HHCS	7117	2
10	Seal Plate, .750" Seal	5018-01M	1	42*	Inspection Plug, 8-Rib Side Bell	6857-01	1
11	O-Ring, Seal	7474	1	42A	Inspection Plug, 6-Rib Side Bell (Std)	3261	1
12	Seal, Seal Plate, .750" Seal	7204V	1	43*	O-Ring, Inspection Plug, 8-Rib Bell, -12 AN	7454	1
13	Retaining Ring, Seal Plate, .750" Seal	7652	1	43A	O-Ring, Inspection Plug, 6-Rib Bell -20 AN (Std)	7453	1
14	O-Ring, Seal Plate	7413	1	44	Seal, Side Bell	7283V	2
15	Front Ball Bearing, Lower Shaft	7390	1	45	Bearing Cup, Side Bell	7310	2
16	Standard Lower Shaft, Heat Treated (Std)	5003	1	46	Bearing Cone, Aluminum Spools & Differentials	7340	2
16*	Lower Shaft, 350M, 10-Spline	5003-V	1	47	Shim Kit, Aluminum Spools & Differentials	5295	1
16*	Standard Lower Shaft, Heat Treated, 32-Spline	5003-32	1	48	O-Ring, 4 & 6-Rib Bell	7403T	2
16*	Lower Shaft, 350M, 32-Spline	5003-32V	1	49	-6 AN Plug	7874S	4
17	Retaining Ring, Lower Shaft	7610	1	50	O-Ring	8405	4
18	Shielded Ball Bearing, Lower Shaft	7339	1	51	Aluminum Spool, 31-Spline	5034-11A	1
19	Bearing Retainer	12062	1	52	Washer, Ring Gear, ARP®	7815ARP	12
20	Lower Shaft Spacer O-Ring	9405	1	53	Bolt, Ring Gear, ARP®	7852ARP	12
21	Spacer, Splined, 10" / 8"	12885	1	54	Thrustblock, Adjusting Screw	5010	1
22	Roller Bearing, Pinion Nose	7331	1	55	-10 AN Plug	8035	2
23	Bearing Cone, Pinion Shaft	7308	2	56	O-Ring	8406	2
24	Bearing, Flanged Double Cup, Pinion	7528	1	57	7/16-20 x 5-1/2" Thru-Bolt	7176	10
25	3/8-16 x 1" HHCS, Retaining Plate	7110	6	58	1/2-13 Adjusting Screw, Ring Gear	6149	1
26	Bearing Washer	5055	1	59	1/2" SAE Flatwasher, Adjusting Screw	7167A	1
27	Posi-Lock Nut, Pinion Shaft (15/16-20-2B Thread)	6485R	1	60	1/2-13 Jam Nut, Adjusting Screw	7137A	1
28	O-Ring, Posi-Lock	7445	1				

Part Numbers in this list may vary depending on options ordered at time of purchase. Please check the assembly tag included with your rear.

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8-INCH / 4.12 RING & PINION

THE ULTIMATE CRATE REAR WITH AN 8" RING GEAR IN AN ALL NEW PERMANENT MOLD CENTER



ASSEMBLY P/N 5270PM-8

This quick change uses our tried-and-true 8" / 4.12 ring gear. It's 20% smaller and 20% lighter, reducing flywheel weight and unsprung weight. Reduced rotational force means quicker acceleration and deceleration than is achievable with a 10" ring gear. All cars can benefit from this racer's edge, though lower horsepower cars can expect more gain than higher horsepower cars. As with our full-size 10" rears, this is based on our all-new, industry-exclusive Permanent Mold A356-T6 aluminum 8" center section and side bells.

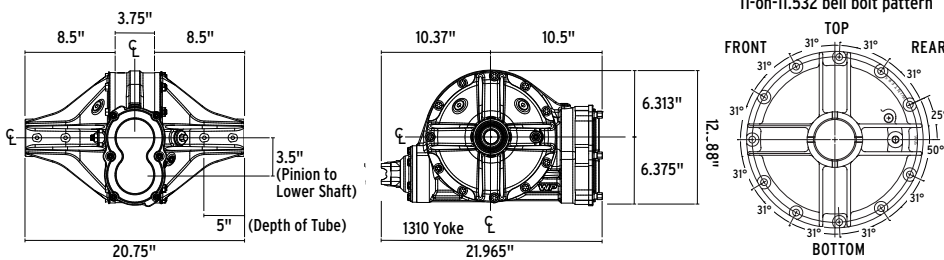
All 8-inch rears include Posi-Lock, 1-piece drop-in race and ARP® ring gear bolts. Standard equipment includes a 4.12 ring & pinion and 31-spline aluminum spool. See additional options below. *Center must be used with one-piece pinion bearing cup P/N 12852-01.*

OPTIONS

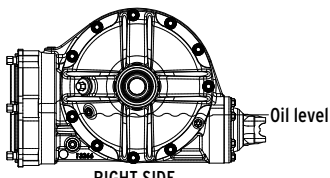
Blue indicates popular options

OPTION #	MOST POPULAR OPTIONS
8208	Thermal Dispersant Coating
8218-RP	REM® Ring & Pinion
8218-BRG	REM® Bearing (# is per bearing)
8202-V8	EDM Ring Gear (specify ratio)
8182B	Aluminum Drive Yoke
8184	HT Gun-Drilled Lower Shaft
8299	Gun-Drilled Pinion Shaft
8155PMHD	Heavy Duty 8-Rib Bell, Perm. Mold
8130	Ultralight Alum Spool
8106V	350M Lower Shaft, 10-Spline
8249	Long Thru-Bolts, 6"
8249L	Extra-Long Thru-Bolts, 6-1/2"
OPTION #	CENTER OPTIONS
8126	Titanium Thru-Bolts
8275	1350-Series Yoke
OPTION #	TUBE OPTIONS
13419	2-7/8" Tetrad Tube (Standard Length)
13420	2-7/8" Tetrad Tubes, +2" Left Side
13421	2-7/8" Aluminum Tubes, Splined
13422	2-7/8" Aluminum Tubes, Splined, +2" Left Side
13423	Wide-5 Alum Tube, 1-Ton, Tetrad
13424	Wide-5 Alum Tube, 1-Ton, Tetrad, +2" Left Side
13425	Wide-5 Alum Tube, 1-Ton, Splined
13426	Wide-5 Alum Tube, 1-Ton, Splined, +2" Left Side
9117	2-7/8" Spacers
8201	Internal Alum Tube Seal

DIMENSIONAL DATA



IMPORTANT QUICK CHANGE OILING INFO



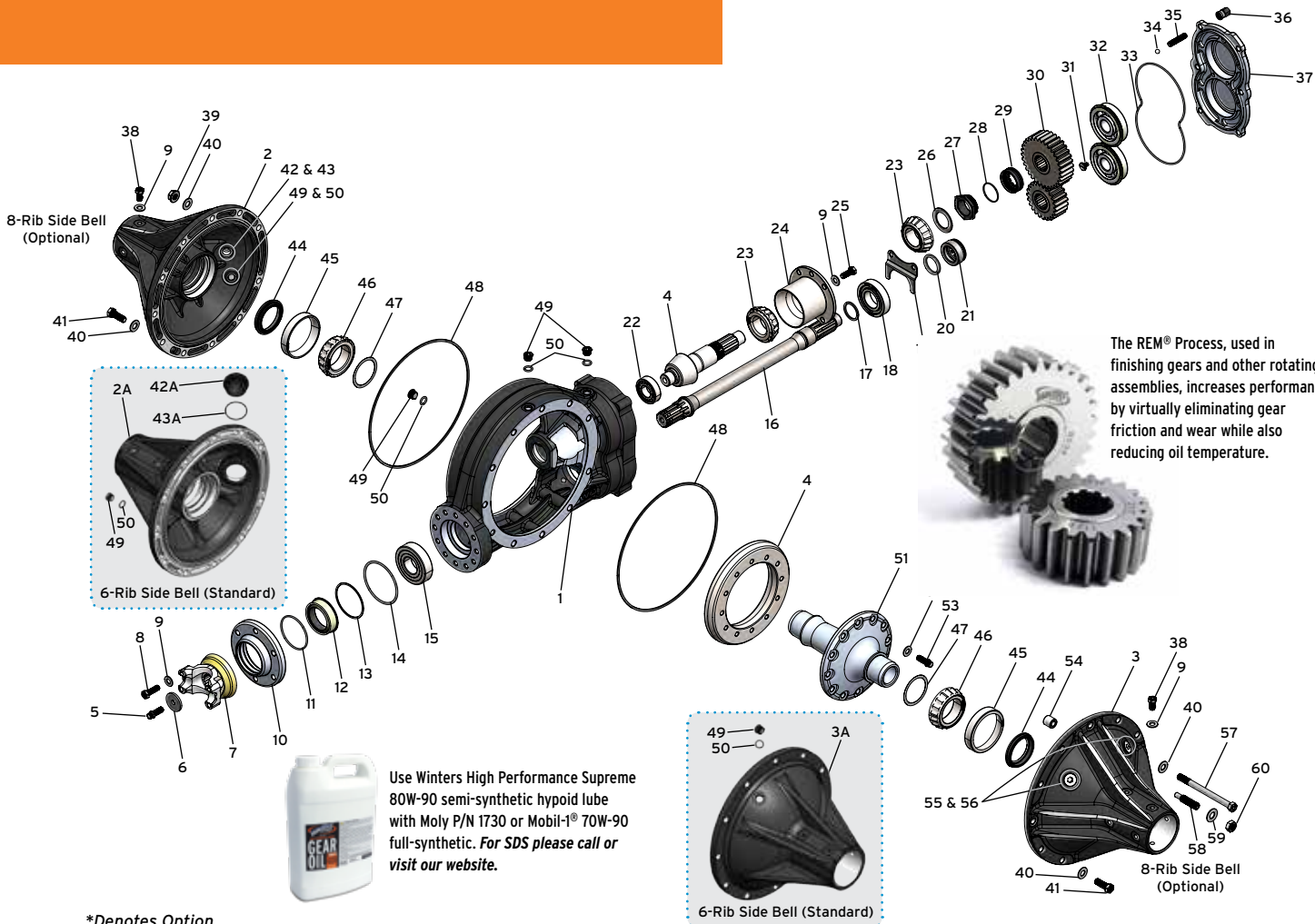
RIGHT SIDE
Make sure rear is level when checking oil

PROPER OIL LEVEL IS CRITICAL! Always maintain oil level at 1-1/2" below axle center line as indicated (3 quarts/2.8 liters).

Use Winters High Performance Supreme 80W-90 semi-synthetic hypoid lube with Moly P/N 1730 or Mobil-1® 70W-90 full-synthetic.



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*Denotes Option

#	DESCRIPTION	P/N	QTY
1	Aluminum 8" Center Section, Permanent Mold	13266	1
2*	Aluminum 8-Rib Right Side Bell	12083PM	1
2A	Aluminum 6-Rib Right Side Bell (Standard)	1663-01PM	1
3*	Aluminum 8-Rib Left Side Bell	12080PM	1
3A	Aluminum 6-Rib Left Side Bell (Standard)	1663-02PM	1
4	4.12 Ratio Ring & Pinion, 10-Spline (Standard)	65411S	1
5	3/8-24 x 1" HHCS, Drive Yoke, ARP®	7852SARP	1
6	Retaining Washer, Drive Yoke	5037	1
7	Drive Yoke, Steel w/Integral Spacer, 10-Spline	3533	1
7*	Drive Yoke, Steel w/Integral Spacer, 32-Spline	3536	1
7*	Yoke, Aluminum, 10-Spline	5038AS	1
7*	Yoke, Aluminum, 32-Spline	5038AS-32	1
8	3/8-16 x 1-1/4" HHCS, Seal Plate	7107	6
9	3/8" SAE Flatwasher	7114	28
10	Seal Plate, .750" Seal	5018-01M	1
11	O-Ring, Seal	7474	1
12	Seal, Seal Plate, .750" Seal, Viton	7204V	1
13	Retaining Ring, Seal Plate, .750" Seal	7652	1
14	O-Ring, Seal Plate	7413	1
15	Front Ball Bearing, Lower Shaft	7390	1
16	Standard Lower Shaft, Heat Treated (Std)	4951-HT	1
16*	Lower Shaft, Heat Treated, Gun-Drilled	4951-GD	1
16*	Lower Shaft, 350M, 10-Spline	4951-V	1
17	Retaining Ring, Lower Shaft	7610	1
18	Shielded Ball Bearing, Lower Shaft	7339	1
19	Bearing Retainer	12026	1
20	Lower Shaft Spacer O-Ring	9405	1
21	Spacer, Splined, 10" / 8"	12885	1
22	Roller Bearing, Pinion Nose	7331	1
23	Bearing Cone, Pinion Shaft	7308	2
24	Double Bearing Cup, Pinion Shaft	12852-01	1
25	3/8-16 x 1" HHCS	7110	6
26	Bearing Washer	5055	1
27	Posi-Lock Nut, Pinion Shaft (15/16-20-2B Thread)	1806	1
28	O-Ring, Posi-Lock	7455	1

#	DESCRIPTION	P/N	QTY
29	Posi-Lock Retainer, Pinion Shaft	1807	1
30	Quick Change Gear Set (Not included)	8500	1
31	Bearing Retainer, Bolt	12417	2
32	Ball Bearing, Gear Cover	8659	2
33	O-Ring, Gear Cover, 6-Bolt, Forged Aluminum	8447	1
34	5/16" Diameter Steel Ball, Gear Cover	7398	6
35	3/8-16 x 1-3/4" Stud, Gear Cover	7802	6
36	3/8-16 Aluminum High Nut	7794ASBK	6
37	Gear Cover, 6-Bolt, Forged Aluminum	12175B	1
38	3/8-24 x 3/4" HHCS, 6 & 8-Rib Side Bell	7109S	16
39	7/16-20 Flanged Locknut, Thru-Bolt	7177	10
40	7/16" SAE Flatwasher, Thru-Bolt	7178	22
41	7/16-14 x 1-1/4" HHCS	7117	2
42*	Inspection Plug, 8-Rib Side Bell	6857-01	1
42A	Inspection Plug, 6-Rib Side Bell (Std)	3261	1
43*	O-Ring, Inspection Plug, 8-Rib Bell, -12 AN	7454	1
43A	O-Ring, Inspection Plug, 6-Rib Bell -20 AN (Std)	7453	1
44	Seal, Side Bell	7283V	2
45	Bearing Cup, Side Bell	7310	2
46	Bearing Cone, Aluminum Spools & Differentials	7340	2
47	Shim Kit, Aluminum Spools & Differentials	5295	1
48	O-Ring, 4 & 6-Rib Bell	7403T	2
49	-6 AN Plug	7874S	4
50	O-Ring	8405	6
51	Aluminum Spool, 31-Spline	5034-11A	1
51*	31-Spline Aluminum Spool, Ultralite	5034-11UL	2
52	Washer, Ring Gear, ARP®	7815ARP	12
53	Bolt, Ring Gear, ARP®, Short	7852SARP	12
54	Thrustblock, Adjusting Screw	5010	1
55	10-AN Plug	8035	2
56	O-Ring	8406	2
57	7/16-20 x 5-1/2" Thru-Bolt	7176	10
58	1/2-13 Adjusting Screw, 4 & 6-Rib Side Bell	6149	1
59	1/2" SAE Flatwasher, Adjusting Screw	7167A	1
60	1/2-13 Jam Nut, Adjusting Screw	7137A	1

Part Numbers in this list may vary depending on options ordered at time of purchase. Please check the assembly tag included with your rear. See inside back cover of catalog or visit website for limited warranty and venue provision.

ALUMINUM WIDE-5 HUBS & AC

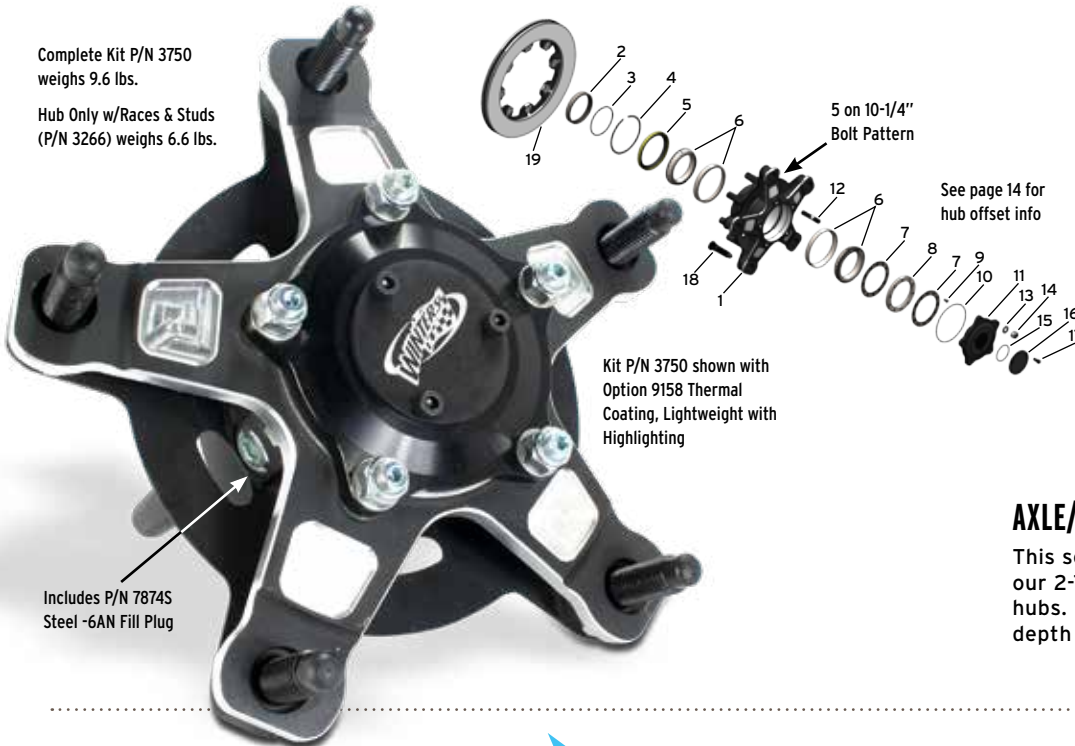
2-7/8" SPINDLE HUB KITS

REAR KIT • P/N 3750

Kit includes Permanent Mold aluminum hub, 5-bolt 7075-T6 aluminum inverted drive flange, bearings and seal kit with aluminum lock nut.

Complete Kit P/N 3750 weighs 9.6 lbs.

Hub Only w/Races & Studs (P/N 3266) weighs 6.6 lbs.



Kit P/N 3750 shown with Option 9158 Thermal Coating, Lightweight with Highlighting

Includes P/N 7874S Steel -6AN Fill Plug

KIT INCLUDES

#	DESCRIPTION	P/N	QTY
1	Rear Hub, Aluminum	3266	1
2*	Spacer	3262	1
3*	O-Ring	7490	1
4	Snap Ring	8349	1
5	Seal, Viton	7289V	1
6	Bearing Cup & Cone Set	8658	2
7	Washer	3273	2
8	Spindle Nut, Steel	3271S	1
9	10-24 x 3/8" BHCS	8740	2
10	O-Ring	7494	1
11	Drive Flange	3267	1
12	Threaded Stud, Short	2266S	5
13	Washer	7811	5
14	Locknut	7177N	5
15	O-Ring	7417	1
16	Drive Flange Cap	6581	1
17	1/4-20 x 1/2" SHCS	7892	3
18	Wheel Stud, Solid	5688	5
19*	Rotor Option	See Pg. 13	

* Sold separately

AXLE/TUBE SEAL P/N 7268

This seal must be used with our 2-7/8" Wide-5 oil-filled hubs. Install seal in tube to a depth of 3/4"-13/16"



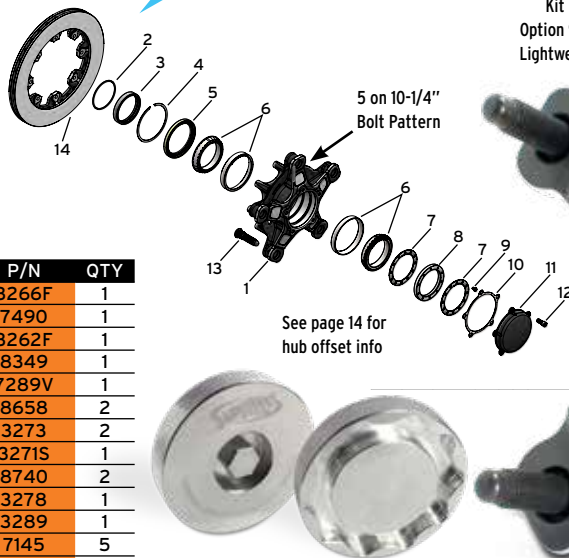
FRONT KIT • P/N 3750F

Kit includes Permanent Mold aluminum hub, 5-bolt dust cap, bearings and seal kit with aluminum lock nut.

Kit P/N 3750F shown with Option 9158 Thermal Coating, Lightweight with Highlighting

Complete Kit P/N 3750F weighs 8.2 lbs.

Hub Only w/Races & Studs (P/N 3266F) weighs 6.2 lbs.



See page 14 for hub offset info

KIT INCLUDES

#	DESCRIPTION	P/N	QTY
1	Front Hub, Aluminum	3266F	1
2*	O-Ring	7490	1
3*	Spacer	3262F	1
4	Snap Ring	8349	1
5	Seal, Viton	7289V	1
6	Bearing Cup & Cone Set	8658	2
7	Washer	3273	2
8	Spindle Nut, Steel	3271S	1
9	10-24 x 3/8" BHCS	8740	2
10	Gasket	3278	1
11	Hub Cap	3289	1
12	5/16-18 x 3/4" SHCS	7145	5
13	Wheel Stud, Solid	5688	5
14*	Rotor Option	See Pg. 13	

* Sold separately

SPINDLE NUT SOCKET P/N 13238

Includes P/N 7874S Steel -6AN Fill Plug

ACCESSORIES

SMALL-PIN SPINDLE HUB KITS

FRONT KIT • P/N 12292L

HUB WITH RACES & STUDS P/N 12290L

Complete Kit P/N 12292L
weighs 7.2 lbs. per hub

Hub Only w/Races & Studs
(P/N 12290L) weighs 5.8 lbs.

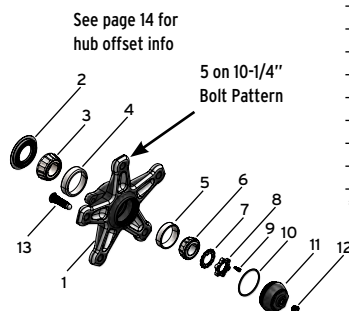


Kit includes two forged 2024-T3 aluminum hubs with dust caps, O-rings, bearings and seals. Oil & grease friendly. Accepts standard or Super Free angular contact bearings.

KIT INCLUDES

#	DESCRIPTION	P/N	QTY
1	Direct Mount Front Hub, Lightweight	12076LW	2
2	Single Lip Seal, Viton	12363	2
3	Inner Bearing Cone	7502	2
4	Inner Bearing Cup	7501	2
5	Outer Bearing Cup	8635	2
6	Outer Bearing Cone	8666	2
7*	Washer	2124	2
8*	Spindle Nut, Steel	2125S	2
9*	10-32 x 1/2" SHCS	2126	4
10	O-Ring	7424	2
11	Hub Cap	12101	2
12	Plug	7874S	2
13	5/8-11 x 2-1/2" Stud	1701	10

*Sold Separately



DUST CAP SOCKET
P/N 3153M

HUB OIL LEVEL-IMPORTANT!

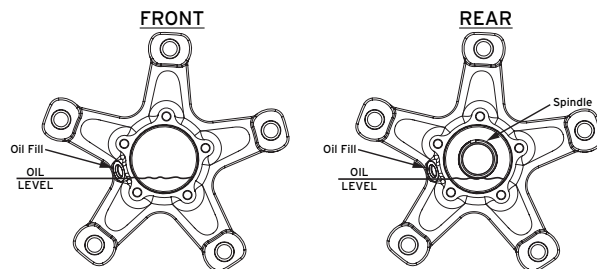
Proper oil level is critical to the performance of these hubs. To fill, rotate the hub so the Oil Fill/Level Plug is positioned at 8 o'clock.

FRONT: Fill until oil level reaches the bottom of the Oil Fill/Level Plug.

REAR: Fill until oil level reaches the bottom of the Spindle.

Over-filling will result in oil entering your side tubes.

Front and rear both use approximately 5-1/2 to 6 oz. We recommend Winters P/N 1730 SAE 80W/90 or Mobil 1® 75-90 Oil.



NOTE: Positive & Negative Camber Will Effect Fluid Level.

ROTOR OPTIONS

Choose Option # below to purchase rotor with hub assembly. Use P/N for individual rotor purchase.

OPTION #	ROTOR P/N	DIMENSION
8240	2394	.810 x 12-1/8"
8241	2394GM	.810 x 11-3/4"
8243	6608GM	1-1/4" x 11-3/4"
*8243L	6608GML	1-1/4" x 11-3/4"
*8241L	2394GML	.810 x 11-3/4"

*Drilled Rotor



3-BOLT ROTOR ADAPTER P/N 12784

Converts 3-lug to standard 8-bolt rotor.

Bolt kit with T-nuts for 12784 floating rotor P/N 9387FL

Bolt kit for 12784 fixed rotor P/N 9387FX



10-3/4" DIA. STEEL ROTOR P/N SC2710

.375" thick
3-on-5" bolt pattern

1/2-13 X 1" Flat Head
Socket Cap Screw
P/N 8394

See inside back cover of catalog or visit website for limited warranty and venue provision.

ALUMINUM WIDE-5 HUBS

WIDE-5 SPINDLE HUB KITS

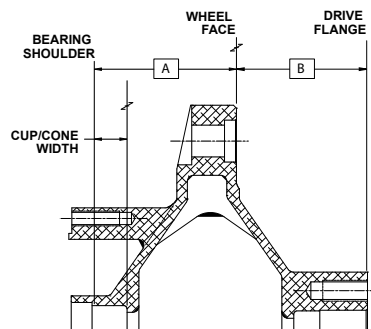
OPTIONS

P/Ns included for components that are available for individual purchase

OPTION #	PART #	HUB OPTIONS
8254-1TON*		1-Ton Bearing, Race & Lock Kit Installed
9141*		1-Ton Bearing & Race Installed
8284X8*	2266T	Titanium Drive Flange Studs
9165-8*	12862-8	Steel-Lined Drive Flange, 8-Bolt
8218S-W5		REM®-Finished Tapered Bearings
8208-H		Thermal Dispersant Coating
8204	5688T	Titanium Wheel Studs
8204H	5688TH	Titanium Wheel Studs, Gun-Drilled
8204LS	6522	Long Wheel Studs, Steel

*Only available for rear hub kits

HUB BEARING-TO-WHEEL DIMENSIONAL OFFSET INFO



KIT	HUB	A	B
3754	6690	3"	2.75"
3754F	6690	3"	2.75"
3755	6606-X5	3"	2.75"
3756	6606-X5	3"	2.75"
3755F	6606-FX5	3"	2.75"

REAR KIT • 8-BOLT P/N 3754

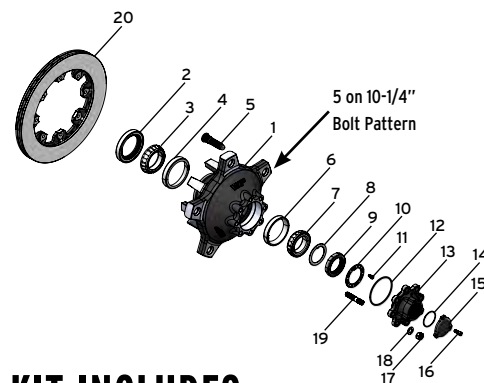
Kit includes Permanent Mold aluminum hub, 8-bolt 7075-T6 aluminum drive flange, bearings and seal kit with aluminum lock nut.

Complete Kit P/N 3754 weighs 10.4 lbs.

Hub Only w/Races & Studs (P/N 6690) weighs 7.6 lbs.



STEEL-LINED DRIVE FLANGE
P/N 12862-8 • OPTION 9165-8



KIT INCLUDES

#	DESCRIPTION	P/N	QTY
1	Hub	6690	1
2	Seal	7210	1
3	Inner Cone	7324	1
4	Inner Bearing Cup	7322	1
5	Wheel Stud, Solid	5688	5
6	Outer Bearing Cup	7323	1
7	Outer Cone	7325	1
8	Washer	1664	1
9	Nut, Aluminum	5101AT	1
10	Lockwasher	1665	1
11	10-24 x 3/8" SHCS	7938	2
12	O-Ring	7490	1
13	Aluminum Drive Flange	3230-55X8	1
14	O-Ring	7417	1
15	Flat Cap	3117	1
16	1/4-20 x 5/8" SHCS	7850	3
17	Nut	7177N	8
18	Washer	7811	8
19	Stud	2266	8
20	Rotor Options	See Pg. 9	

HUB ACCESSORIES

FLANGED WHEEL STUDS

#	DESCRIPTION	P/N	A	B	C	KNURL OD	THREAD
1	Titanium, Gun-Drilled	5688TH	2.64	2.17	0.67	0.691	5/8-11
2	Titanium, Solid	5688T	2.64	2.17	0.44	0.691	5/8-11
3	Steel, Gun-Drilled	5688H	2.64	2.17	0.44	0.691	5/8-11
4	Steel, Solid	5688	2.64	2.17	0.40	0.691	5/8-11
5	Steel, Solid, Long	6522	3.13	2.66	0.75	0.691	5/8-11



BEARING AND LOCK KITS

1-TON BEARING AND LOCK KITS Retaining Ring P/N 8328 for Seal is not included
 Kit P/N 6105-1TON 1-Ton Alum Lock Kit w/Seal & Bearings (#'s 1-7)
 Kit P/N 12549 Spindle Nut/Washer Kit (#'s 1-4)

#	DESCRIPTION	P/N	QTY
1	Nut, Aluminum	12309	1
2	Lock Washer	12307	1
3	10-24 x 3/8" BHCS	8740	2
4	Tab Washer	12308	1
5	Seal	12537	1
6	Tapered Roller Bearing & Race, Inner	12305	1
7	Tapered Roller Bearing & Race, Outer	12306	1



Note: Bearing & Race are a set and can not be sold separately

1-TON SPINDLE NUT SOCKET
 P/N 12542 2-5/8" Hex

2-7/8" BEARING AND LOCK KIT

Front Kit P/N 13428
 Rear Kit P/N 13429

#	DESCRIPTION	P/N	QTY
1	Spindle Nut, Steel	3271S	1
2	Washer	3273	2
3	10-24 x 3/8" BHCS	8740	2
4	Seal, Viton	7289V	1
5	Bearing Cup & Cone Set	8658	2
6	Snap Ring	8349	1
7	O-Ring	7494	1
8	Locknut, 7/16-20	7177N	5
9	Washer	7811	5
10	Threaded Stud, Short	2266S	5
11	5/16-18 x 3/4" SHCS	7145	5

Black = Comes with Front & Rear Kits

Blue = Rear Kit Only

Orange = Front Kit Only



DRIVE FLANGE STUD KITS

Includes Studs, and Washers

Kit P/N 12177-5 5-Bolt, Steel

Kit P/N 12177T-5 5-Bolt, Titanium

Kit P/N 12177-8 8-Bolt, Steel

Kit P/N 12177T-8 8-Bolt, Titanium

SMALL-PIN SPINDLE BEARING AND LOCK KIT

Kit P/N 13430

#	DESCRIPTION	P/N	QTY
1	Spindle Nut, Steel	2125S	1
2	Washer	2124	1
3	10-32 x 1/2" SHCS	2126	2
4	Single Lip Seal, Viton	12363	1
5	Inner Bearing	7502	1
6	Outer Bearing	8666	1
7	O-Ring	7424	1



See inside back cover of catalog or visit website for limited warranty and venue provision.

SPINDLES & ACCESSORIES

2 7/8" FORGED 7075-T6 ALUMINUM FRONT SPINDLES

P/N 3796 Right Assembly
P/N 3795 Left Assembly

#	DESCRIPTION	P/N	QTY
1	Screw	3603-01	4
2	Washer	3604	4
3	Steel Spacer	3262F	1
4	O-Ring	7490	1
5	Spindle Base & Snout	3608	1
6	Cup Plug	3639	1
7	Grease Fitting	7745	1
8	Grease Fitting	8765	1
9	Grease Fitting	8764	1
10	Seal	7289V	1
11	Grooved Washer	3624	1
12	Steel King Pin	6476	1
13	Steel King Pin Cap	1109	2

Black = Comes with both Right and Left Kits
Blue = Right Kit Only (P/N 3796)
Orange = Left Kit Only (P/N 3795)



Assembly comes with king pin and caps
Check out our 2-7/8" Front Wide-5 Hub Assembly P/N 3750F (see page 12)

GROOVED WASHER
P/N 3624

10° FORGED 2024-T3 ALUMINUM FRONT SPINDLES



P/N 12291T with Titanium Spindle Pin
P/N 12291 with Heat Treated & Ground Spindle Pin

STEEL KING PIN
P/N 6476

STEEL KING PIN CAP
P/N 1109
1/2 X 20 Thread Size

COMBO STEERING ARM, LEFT
P/N 12380

STEERING ARM, RIGHT
P/N 12381

BRAKE BRACKET
P/N 12408
3/8" Offset • Dynalite
Single Caliper
For use with 10-3/4" rotor

STEEL SPINDLE NUT ASSEMBLY
P/N 2377S



KING PIN SHIM KIT
P/N 7511-01



REPLACEMENT BUSHING
P/N 7515



DRIVE FLANGES & AXLES

DRIVE FLANGES



STEEL-LINED DRIVE FLANGE
Assembly P/N 12862-8

DESCRIPTION	P/N
Aluminum Drive Flange	12816-8
O-Ring	7464
Steel Bushing	12817
Splined Steel Insert	12818
Retaining Ring	12819
Flat Cap	12826
1/4-20 x 1/2" 12-Pt Screw	7158
O-Ring	7462

Our new steel-lined drive flange delivers the quality you can rely on from Winters parts with improvements racers have asked for, like splined steel drive inserts and steel-lined bolt holes.



ALUMINUM DRIVE FLANGE • 8-BOLT
Assembly P/N 3230-55X8
Extended Locator Lip

DESCRIPTION	P/N
Flat Cap	3117
Flange	5102-02
Flange HHCS (Need 8)	7117
SHCS for Cap	7850
O-Ring	7417
Flange Locator O-Ring	7490

Works on all Wide-5 hubs. Extended locator lip with O-ring helps keep drive flange from loosening up and eliminates the need for gaskets or seals.



INVERTED DRIVE FLANGE WITH O-RING
Assembly P/N 3698

DESCRIPTION	P/N
Flat Cap	6581
Flange	3267
Flange SHCS (Need 3)	7892
O-Ring	7417
Flange Locator O-Ring	7494

FULL FLOATING DOUBLE-SPLINED AXLES

AXLE TYPE	SPLINE	STYLE	P/N
Double-Spline	31/24	Gun-Drilled	5067G
Double-Spline	31/24	Solid	5067
Double-Spline	31/24	Gun-Drilled Titanium	5067TG
Double-Spline	31/24	Solid Titanium	5067T

WINTERS TITANIUM AXLES

Lighter than gun-drilled steel axles, titanium axles have four times the elasticity of steel. Their ability to wind up gives you a performance edge. Excellent for dirt and asphalt.

WINTERS PREMIUM STEEL AXLES

Made from the finest material and CNC machined using an automatic double-roller steady rest assuring that all axles run true and concentric. Finished with state-of-the-art heat treat and available solid or gun-drilled.

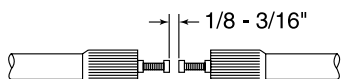
LENGTHS AVAILABLE WIDE-5 & GN Add length from chart to P/N (Ex. P/N 5067G-35)

*14"	23"	*26-1/4"	28"	29-1/2"	31"	32-1/2"	34"	35-1/2"	37"	39"	42"
*15"	24"	26-1/2"	28-1/4"	29-3/4"	*31-1/4"	*32-1/4"	*34-1/4"	*35-3/4"	*37-1/4"	*39-1/2"	42-1/2"
*16"	25"	27"	28-1/2"	30"	31-1/2"	33"	34-1/2"	36"	37-1/2"	40"	43"
*17"	*25-1/4"	27-1/4"	*28-3/4"	30-1/4"	*31-3/4"	33-1/4"	34-3/4"	36-1/4"	*37-3/4"	40-1/2"	†44"
*18"	*25-1/2"	27-1/2"	29"	30-1/2"	32"	33-1/2"	35"	36-1/2"	38"	41"	†45"
*19"	26"	27-3/4"	*29-1/4"	*30-3/4"	*32-1/4"	*33-3/4"	35-1/4"	*36-3/4"	38-1/2"	41-1/2"	

*Available Gun-Drilled Only † Not Available in Gun-Drilled



AXLE SPREADER BOLT KIT P/N 4607



1/8" - 3/16"

TORQUE SPEC

Torque jam nuts to 30 ft.-lbs.

Axles are to be positioned by means of spreader bolts as shown below. Use Grade 8 (minimum) spec. bolt with jam nut. Install into opposing ends of axles and adjust for 1/8"-3/16" total clearance with both axle retaining plates installed.

See inside back cover of catalog or visit website for limited warranty and venue provision.



P/N 6382
Gun-Drilled Axle Plug
Ext. Threads: 3/4-16
Int. Threads: 3/8-24

CENTER KITS & QUICK CHANGE

PERMANENT MOLD SPRINT CENTERS

10-INCH PM ALUMINUM SPRINT CENTER KITS

P/N 6170PM Center Kit Only

P/N 2745PM Center Kit w/Permanent Mold Bells

8-INCH PM ALUMINUM SPRINT CENTER KITS

P/N 6170PM-8 Center Kit Only

P/N 2745PM-8 Center Kit w/Permanent Mold Bells

Winters manufactures all centers to exacting tolerances. However, when replacing your center, check the side bell preload and backlash making sure that it is an exact replacement.

OPTIONS

OPTION #	MOST POPULAR OPTIONS
8111	4.12 Ring & Pinion
8218-RP	REM® Ring & Pinion
8218-BRG	REM® Bearing (# is per bearing)
8202-V8	EDM Ring Gear (specify ratio)
8299	Gun-Drilled Pinion Shaft
8184	HT Gun-Drilled Lower Shaft
8106V	350M Lower Shaft, 10-Spline
8106V-32	350M Lower Shaft, 32-Spline
8155PMHD	Heavy Duty 8-Rib Bell, Perm. Mold
8208-02	Thermal Dispersant Coating, Center Only
8208	Thermal Dispersant Coating, Center & Bells
8182B	Aluminum Drive Yoke
9116	Delete Seal Plate
OPTION #	CENTER OPTIONS
8126	Titanium Thru-Bolts
8275	1350-Series Yoke



OPTIONS To order any Full-Size 10" Center Kit with an 8" Ring & Pinion, add:

OPTION #	2nd GENERATION DESCRIPTION
9139	Pinion Nose Support, 8", Spool Only

CENTER SECTIONS

Center sections and bells are cast using our industry exclusive Permanent Mold process for the strongest production centers and bells available. See page 3 for detailed information and mechanical properties. For black Thermal Dispersant Coating on any center section, add Option 8208-02.



16.2 lbs.

10" SNUB NOSE 6-BOLT COVER
P/N 13243



16 lbs.

For use with aluminum spool only

8" 6-BOLT COVER w/Support Bearing
P/N 13266



17 lbs.

10" 6-BOLT COVER
P/N 13251

E COMPONENTS

OVERHAUL KITS

Kits include all bearings, seals, and O-rings needed to rebuild your rear end

APPLICATION	BELL	COVER	P/N
Sprint Center	4 or 6-Rib	Tumbled	1209-02A
Sprint Center	8-Rib	Tumbled	1209-01A
Sprint Center	4 or 6-Rib	Heavy Duty	1209HD-02A
Sprint Center	8-Rib	Heavy Duty	1209HD-01A
Sprint Center	4 or 6-Rib	Small Brg	1209SC-02A
Sprint Center	8-Rib	Small Brg	1209SC-01A
Sprint Center	4 or 6-Rib	Big Brg	1209BC-02A
Sprint Center	8-Rib	Big Brg	1209BC-01A
8" Ring & Pinion, No Pinion Support, 2nd Generation	4, 6, or 8-Rib	Big Brg	12756
8" Ring & Pinion w/Pinion Support, 2nd Generation	4, 6, or 8-Rib	Big Brg	12757

P/Ns for assemblies with an aluminum carrier with 2.031" brg. journals



BREATHERS



Assembly P/N 12793-01

#	DESCRIPTION	P/N
1	O-Ring	8406
2	Plug 7/8-14	12793
3	Tube Adapter	9397
4	Poly Tubing, 16" Length	9409

Breather assembly for use with 8-Rib Permanent Mold bells



Assembly P/N 2966

#	DESCRIPTION	P/N
1	O-Ring	8405
2	#6-AN Fitting	8070
3	Tube Adapter	8074
4	Poly Tubing, 16" Length	8075

Breather assembly for use with 6-Rib Permanent Mold bells and centers

GEAR COVER



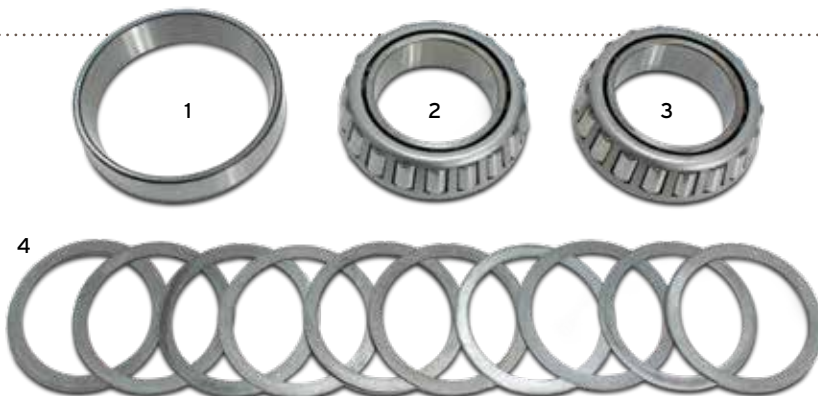
P/N 12175 Forged Aluminum, Includes (2) Bearings, (2) Retainer Bolts, and O-Ring Custom Logo Lasering Available on Request

P/N 8659 Bearing
P/N 12417 Retainer
P/N 8447 O-Ring
P/N 12185 Gasket

SPOOL COMPONENTS

SPOOL BEARINGS & SHIMS • 2.031" JOURNAL

#	DESCRIPTION	P/N	QTY
1	Carrier Bearing Race	7310	2
2	Carrier Bearing Cone (2.031"), Aluminum Spool	7340	2
3	Checking Bearing Cone (2.031")	5294	2
4	Carrier Shim Kit, 12 Shims (2.031" ID)	5295	1



See inside back cover of catalog or visit website for limited warranty and venue provision.

TUBES & BELLS

TUBES & PERMANENT MOLD BELLS



8-RIB TUBES & BELLS

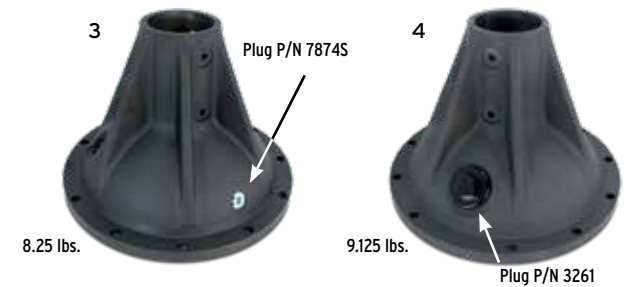
Bells shown with Option 8208-B Thermal Dispersant Coating

DESCRIPTION	P/N
8-Rib PM Alum Bell, Tetrads Tube, Right	5146PM-Ti3246T
8-Rib PM Alum Bell, Tetrads Tube, Left	5147PM-Ti3246T
8-Rib PM Alum Bell, 2-7/8" Alum Tube, Right	5146PM-Ti3246
8-Rib PM Alum Bell, 2-7/8" Alum Tube, Left	5147PM-Ti3246
8-Rib PM Alum Bell, 1-Ton Tetrads Tube, Right	5146PM-Ti3246T-1TON
8-Rib PM Alum Bell, 1-Ton Tetrads Tube, Left	5147PM-Ti3246T-1TON
8-Rib PM Alum Bell, 2-7/8" Splined Tube, Right	5146PM-Ti13406
8-Rib PM Alum Bell, 2-7/8" Splined Tube, Left	5147PM-Ti13406
8-Rib PM Alum Bell, 1-Ton Splined Tube, Right	5146PM-Ti13407
8-Rib PM Alum Bell, 1-Ton Splined Tube, Left	5147PM-Ti13407



8-RIB BELLS, PERMANENT MOLD ALUMINUM

P/N 12080PM 8-Rib, Left
P/N 12083PM 8-Rib, Right, w/Inspection Plug
Shown with Option 8208-B Thermal Dispersant Coating



6-RIB BELLS, PERMANENT MOLD ALUMINUM

P/N 1663-02PM 6-Rib, Left
P/N 1663-01PM 6-Rib, Right, w/Inspection Plug
Shown with Option 8208-B Thermal Dispersant Coating

Aluminum and steel tubes and spindles for standard 1-Ton and 2-7/8" applications



#	DESCRIPTION	CAMBER	P/N ASSEM
1	1-Ton Aluminum Tube, Splined	Straight	13407
2	2-7/8" Aluminum Tube, Splined	Straight	13406
3	2-7/8" Aluminum Tube	Straight	3246
4	1-Ton Aluminum Tube, Tetrads	Straight	3246T-1TON
5	2-7/8" Aluminum Tube, Tetrads	Straight	3246T
6	2-7/8" Steel Tube	Straight	3791

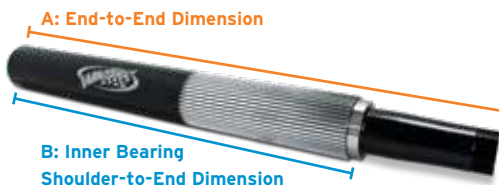
*For Tube Lengths 23-1/2" and Longer, Using 'B' Dimension or 29" + End-to-End Dimension

WALL THICKNESS COMPARISON

1-TON WIDE-5
P/N 12313 & 12313L



STD 3/4-TON WIDE-5
P/N 12313 & 12313L



PLEASE ORDER TUBES USING EITHER THE "A" OR "B" DIMENSION

A: End-to-End Dimension: Measure from end of tube to edge of bell, then add 5" to account for the portion of the tube inside the bell. Specify "end-to-end" measurement when ordering.

B: Inner Bearing Shoulder-to-End Dimension: Inner bearing shoulder locates hub assemblies. Remove hub assembly and measure from inner bearing shoulder to edge of bell, then add 5" to account for the portion of the tube that's in the bell. Specify "inner bearing shoulder-to-end" measurement when ordering.

RING & PINIONS

RING & PINION QUICK CHANGE ASSEMBLIES

10" STANDARD PINION BEARING, 12-BOLT

Assembly includes Pinion Posi-Lock Nut, Roller Nose Bearing, ARP® Ring Gear Bolt Kit, and one-piece race.



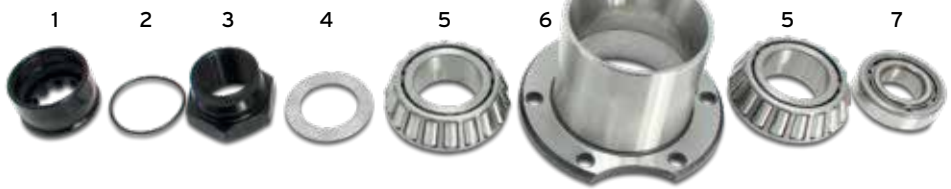
P/N 5400 4.86 R&P w/o Bearings
P/N 5401 4.86 R&P w/Bearings

P/N 5714 4.12 R&P w/o Bearings
P/N 5715 4.12 R&P w/Bearings

P/N 51457 4.57 R&P w/o Bearings
P/N 52457 4.57 R&P w/Bearings

ASSEMBLY INCLUDES

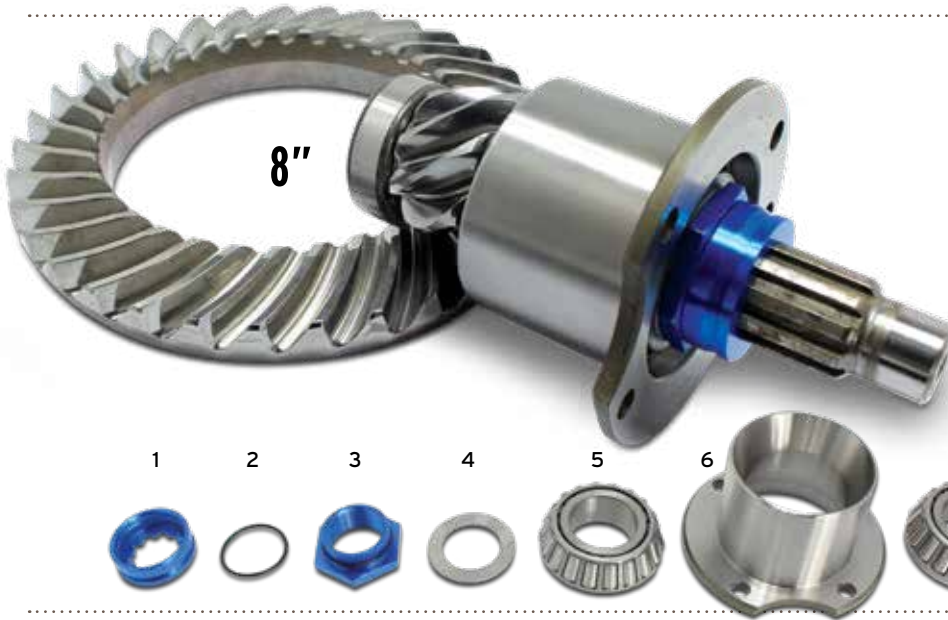
#	DESCRIPTION	P/N	QTY
1	Posi-Lock Retainer	6484	1
2	O-Ring	7445	1
3	Posi-Lock Nut (1 ⁵ / ₁₆ -20-2B Thread)	6485R	1
4	Washer	5055	1
5	Tapered Roller Bearing	7308	2
6	Flanged Bearing Race	7528	1
7	Roller Bearing	7331	1



OPTIONS

For both 10" and 8" Ring & Pinions

OPTION #	MOST POPULAR OPTIONS
8218-RP	REM® Ring & Pinion
8218-BRG	REM® Bearing (# is per bearing)
8202-XXX	EDM Ring Gear (specify ratio)
8299	Gun-Drilled Pinion Shaft



8" 2nd GENERATION RING & PINION

For Pinion Nose Support add OPTION 8143-8S

P/N 65411SB-CT 4.12 R&P w/Bearings

P/N 65411SS 4.12 R&P w/o Bearings

ASSEMBLY INCLUDES

#	DESCRIPTION	P/N	QTY
1	Posi-Lock Retainer	1807	1
2	O-Ring	7455	1
3	Posi-Lock Nut (1 ⁵ / ₁₆ -20-2B Thread)	1806	1
4	Washer	5055	1
5	Tapered Roller Bearing	7308	2
6	Pinion Cup	4871-01	1
7	Roller Bearing (only with nose support)	7331	1



POSI-LOCK

P/N 6498R (Shown in black)

For 10" R&P, right hand thread, standard

P/N 1493 (Shown in blue)

For 8" R&P, right hand thread, standard

Assemblies contain one each of parts 1-3 above



ARP® RING GEAR BOLT KIT

KIT P/N 9381 For 10" R&P

KIT P/N 9381S (Shown) For 8" R&P

See inside back cover of catalog or visit website for limited warranty and venue provision.

LOWER SHAFTS & DRIVELINE

HEAT TREATED STEEL & 350M LOWER SHAFTS



#	DESCRIPTION	P/N
1	Heat Treated Shaft, Open Drive	5003
2	Heat Treated Shaft, 32 Spline	5003-32
3	350M Lower Shaft, 10-Spline	5003-V
4	350M Lower Shaft, 32-Spline w/Spacer	5003V-32

All use Retaining Ring P/N 7610

8" SHORT QUICK CHANGE



#	DESCRIPTION	P/N
5	Heat Treated Shaft	4951HT
6	350M Lower Shaft, 10-Spline	4951V
7	Gun-Drilled Shaft	4951GD

ALUMINUM & STEEL YOKES



P/N 5038AS • ALUMINUM, 10-SPLINE Crate Cars Only
Requires Spacer P/N 6532.

Aluminum yokes are machined from high strength 7075-T6 and fitted with a stainless steel sleeve at seal contact area. Uses series 1310 (1-1/16") joint.



P/N 5038AS-32 • ALUMINUM, 32-SPLINE Crate Cars Only
Use seal P/N 7204-32-01 (included)



P/N 3533 • 1310, STEEL with INTEGRAL SPACER, 10-SPLINE
1-1/4 10-Spline Yoke • Use Dana®-Series 1310, 1-1/16" Joint



P/N 3536 • 1310, STEEL with INTEGRAL SPACER, 32-SPLINE
1-1/4 32-Spline Yoke • Use Dana®-Series 1310, 1-1/16" Joint



P/N 3588 • 1350, STEEL with INTEGRAL SPACER, 10-SPLINE
1-1/4 10-Spline Yoke • Use Dana®-Series 1350, 1-3/16" Joint



P/N 3566 • 1350, STEEL with INTEGRAL SPACER, 32-SPLINE
1-1/4 32-Spline Yoke • Use Dana®-Series 1350, 1-3/16" Joint

DIRT MODIFIED DRIVELINE • P/N 9380



32-Spline parts
are 30° P.A.

Gun-drilled from solid stock, this 32-spline drive shaft has several advantages. The 32-spline driveshaft glides effortlessly without binding under load. A large 1.275" O.D. results in less drive shaft whip, extended joint life and reduced drive shaft vibration for a much freer racecar.

#	DESCRIPTION	P/N	QTY
1	Aluminum 32-Spline Slip Yoke, Times	4865-32Timed	2
2*	Drive Shaft, Gun-Drilled, 32-32 Spline	5991-XX	1
2*	Drive Shaft, Titanium, Gun-Drilled, 32-32 Spline	5991TG	1
3	U-Bolt Assembly	3655M	2
4	Washer	3696-32	2
5	Retaining Ring	8831	2
6	Driveline Spring	5269-32	2

*Specify length when ordering

SOLID TORSION BARS

P/N 6362-XXX 29" Solid Bar

P/N 6567-XXX 26" Solid Bar

Add suffix of desired diameter from the options below to P/N

Ex. P/N 6362-825 is a 29" bar, .825" diameter



LENGTHS AVAILABLE

26"		29"	
.775	1.025	.825	1.000
.800	1.050	.850	1.025
.825	1.075	.875	1.050
.850		.900	1.075
.875		.925	1.100
.900		.950	1.125
.925		.975	

TOOLS & ACCESSORIES



**1-TON SPINDLE
NUT SOCKET**

P/N 12542 2-5/8" Hex

SPINDLE NUT SOCKET

P/N 13238



DUST CAP SOCKET

P/N 3153M (One Socket)

CHECKING BEARINGS

P/N 5138 2.00 Bearing Journal, Steel

P/N 5294 2.031 Bearing Journal, Alum.



Slip-fit bearings for ease of installation/removal during set-up. Checking Bearings are replaced with standard press-fit bearings prior to using rear end.

U-BOLT KITS

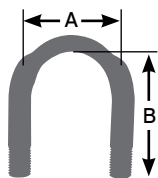
Kits Includes:

2 - U-Bolts

4 - Lock Washers

4 - Hex Nuts

Torque: 15 Ft.-Lbs.



A	B	SERIES	JOURNAL DIAMETER	P/N
1.406"	1.684"	1310	1-1/16"	5855
1.406"	1.934"	1310	1-1/16"	5855L
1.640"	2.000"	1350	1-3/16"	6999

GEAR OIL

**HIGH PERFORMANCE SUPREME
GEAR OIL**

P/N 1730

Using the correct gear oil is critical to the performance and longevity of your quick change rear end. Our High Performance Supreme Gear Oil is an 80W/90 semi-synthetic with Moly that will keep your rear properly lubricated and running cool race after race.

For SDS, please call or visit our website.



See inside back cover of catalog or visit website for limited warranty and venue provision.

FALCON SHORTY



ASSEMBLY P/N 60150
38 lbs. with options

Assembly P/N 60150 comes standard with Chevy SB & BB 18-Spline Crank Coupler (P/N 62348-18). See page 28 for optional crank couplers.

The Falcon Shorty transmission is more compact and considerably lighter than any other transmission of its kind. It features two forward speeds, neutral, and reverse, with an integral hydraulically-applied clutch operating low and reverse. High gear is a direct-drive 1-to-1 ratio, and low gear is a 2.4-to-1 ratio. The Falcon was designed with the durability to withstand the rigors of racing, remaining in gear even under the most grueling conditions while still maintaining the best direct-drive shift quality possible. Internal clutches are the only degrading internal parts in the transmission. And as with every Winters transmissions, all rotating internals, from gears to shafts, are REM-finished.

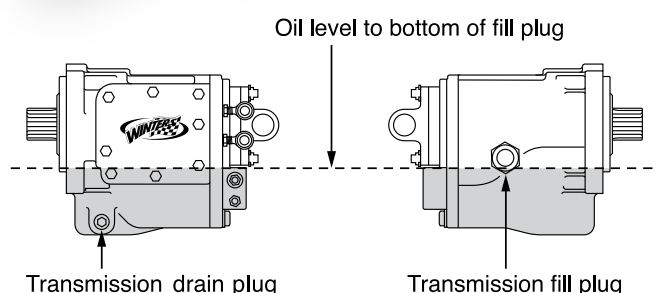
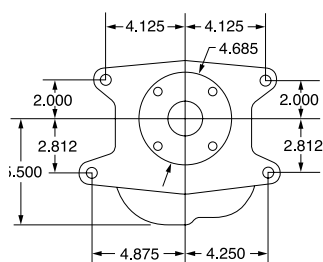
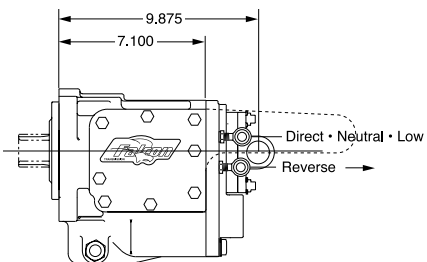
The Falcon Shorty measures 8⁷/₈" from the front of the case to center of the rear yoke, and comes complete with a crank coupler and lightweight shifter. This transmission is available in open drive only.

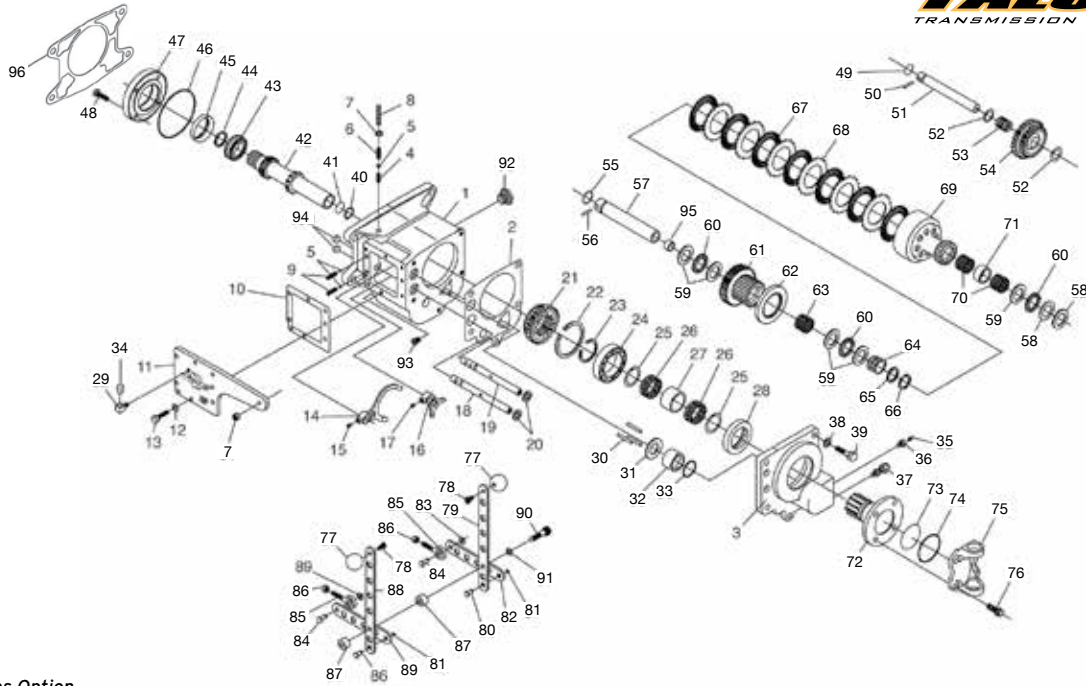


OPTIONS

P/Ns included for components that are available for individual purchase

OPTION #	PART #	HUB OPTIONS
80109	67256V	Front Seal, Viton
80110S	6726V	Rear Seal, Viton
88208S		Thermal Dispersant Coating, Shorty
8251-XX		Crank Coupler Options (See page 28)
	62482B	Hand-Operated Master Cylinder





*Denotes Option

#	P/N	DESCRIPTION	QTY REQ'D
1	61745	Transmission Case, Aluminum	1
2	62155	Gasket	1
3	61843	Rear Cover, Aluminum	1
4	62105	Shuttle Pin	1
5	67398	Detent Ball	3
6	62333	Detent Spring, Top	1
7	68031	3/8-16 Jam Nut, Detent Screw	1
8	68030	3/8-16 x 1" Detent Screw	1
9	62332	Detent Spring, Side	2
10	62156	Gasket, Side Cover	1
11	62157	Side Cover, Shorty	1
12	67127	5/16" Washer	8
13	68034	5/16-18 x 3/4" HHCS	5
13	68879	5/16-18 x 1" HHCS	3
14	61911	Shift Yoke, Low / Neutral / Direct	1
15	67837	5/16-24 x 1/2" SHSS	1
16	61691	Shift Yoke, Reverse	1
17	68027	1/4-28 x 1/2" SHSS	1
18	62212	Shift Shaft, Reverse	1
19	62211	Shift Shaft, Low / Neutral / Direct	1
20	67259	Seal, Shift Shaft	2
21	61741	Sliding Gear	1
22	67686	Retaining Ring, Rear Bearing	1
23	67685	Retaining Ring, Rear Shaft	1
24	67556	Bearing, Rear Shaft	1
25	67695	Retaining Ring	2
26	67568	Needle Bearing	2
27	62373	Aluminum Spacer	1
28	67262	Rear Seal	1
28*	67262V	Rear Seal, Viton	1
29	68036	Street Elbow, 1/8 NPT	1
30	61845	Push Rod	3
31	61906	Piston Thrust Washer	1
32	61844	Piston	1
33	67482	O-Ring, Piston	1
34	68024	Breather	1
35	65313	Bleeder	1
36	65314	Adapter, Bleeder	1
37	68042	Compression Fitting	1
38	67811	Washer	5
39	67117	7/16-14 x 1 1/4" HHCS	5
40	8304	Retaining Ring Core Plug	1
41	68026	Core Plug	1
42	61991	Main Shaft	1
43	67555	Bearing, Input Shaft	1
44	67682	Retaining Ring, Input Bearing	1
45	67256	Seal, Seal Plate	1
45*	67256V	Seal, Viton, Seal Plate	1
46	67483	O-Ring, Seal Plate	1
47	61744	Seal Plate	1
48	67195	5/16-18 x 3/4" 12pt.	4

#	P/N	DESCRIPTION	QTY REQ'D
49	67481	O-Ring, Reverse Shaft	1
50	67992	Roll Pin, Reverse Shaft	1
51	61743	Reverse Counter Shaft	1
52	68303	Retaining Ring	2
53	67563	Needle Bearing	1
54	61742	Reverse Idler Gear	1
55	67480	O-Ring	1
56	67991	Roll Pin, Counter Shaft	1
57	61737	Counter Shaft	1
58	67585	Thrust Washer, .063"	1
58*	68840	Thrust Washer, .070"	1
58*	68842	Thrust Washer, .080"	1
59	67560	Thrust Washer, .093"	5
60	67562	Thrust Bearing	3
61	61734-36	Clutch Pack Hub	1
62	61736-1	Clutch Pack Spacer, Steel	1
62*	61736	Clutch Pack Spacer, Aluminum	1
63	67591	Needle Bearing	1
64	61912	Clutch Spring	1
65	61847	Clutch Spring Spacer	1
66	67687	Retaining Ring	1
67	61853RS-7E	Clutch Disk, Friction	7
68	61852RS-6A	Clutch Disk, Steel	6
69	61735	Clutch Gear	1
70	67559	Needle Bearing	2
71	62354	Spacer	1
72	61740	Rear Flange	1
73	67990	Core Plug	1
74	67676	Retaining Ring, Core Plug	1
75	65856	Flange Yoke	1
76	67152	3/8-24 x 7/8" 12pt.	4
77	62637	Shift Knob, Black	2
78	68040	5/16-18 x 5/8" BHCS	2
79	62168	Shift Arm, Low / Neutral / Direct	1
80	62306	Linkage Pin	2
81	68301	Clip, Linkage Pin	2
82	62401	Shift Linkage, Low / Neutral / Direct	1
83	68302	Clip, Clevis Pin	2
84	62307	Clevis Pin	2
85	67580	Heim End	2
86	68032	Jam Nut, Heim End	2
87	62356	Spacer	2
88	62169	Shift Arm, Reverse	1
89	62402	Shift Linkage, Reverse	1
90	68019	Shoulder Bolt	1
91	68013	Wave Washer	2
92	68035	Fill Plug	1
93	67874	Drain Plug	1
94	68052	Case Plug	2
95	68025	Cap Plug	1
96	64334	Bellhousing Filler Plate	1

See inside back cover of catalog or visit website for limited warranty and venue provision.

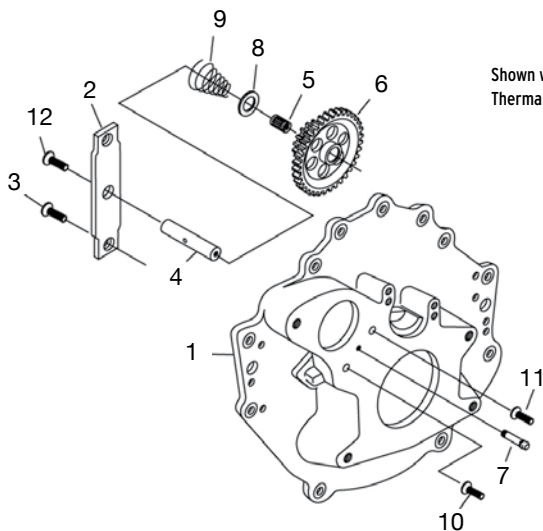
BELLHOUSINGS & RING GEARS

May Be Used With Motor Plates

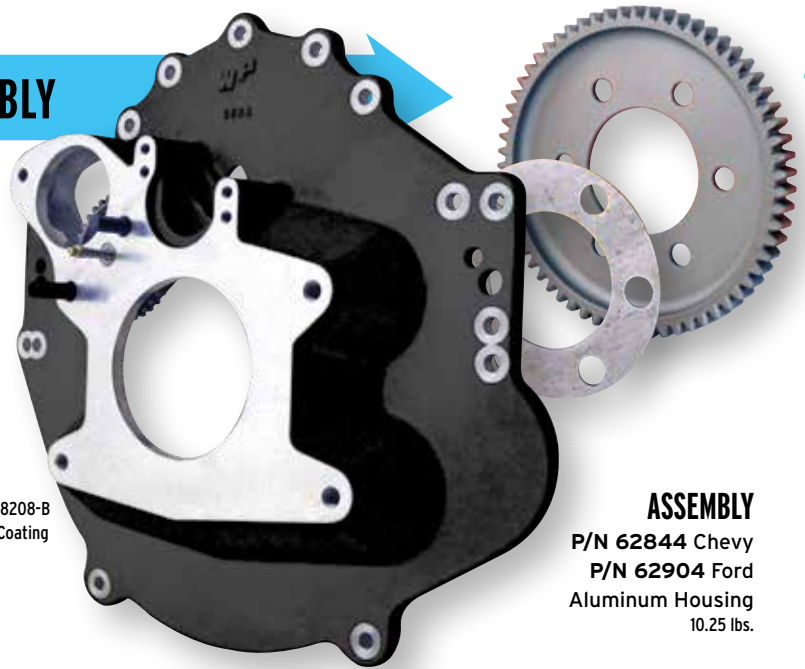
2⁵/₈" DEEP BELLHOUSING ASSEMBLY

This assembly, with reverse starter mount, accepts Falcon transmissions and other popular internal clutch transmissions with short input shafts. Assembly includes mounts for smallblock and big block camshaft-driven pumps, idler gear, 63-tooth starter ring gear, and spacer shims.

SEE BELLHOUSING INSTALLATION INSTRUCTIONS ON PAGE 31



Shown with Option 88208-B Thermal Dispersant Coating

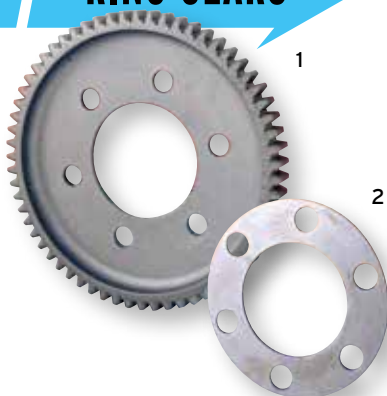


ASSEMBLY

P/N 62844 Chevy
P/N 62904 Ford
Aluminum Housing
10.25 lbs.

#	P/N	DESCRIPTION	QTY REQ'D
1	62684	Bellhousing, Chevy, Shorty, Aluminum	1
2	62686	Idler Mounting Plate, Shorty	1
3	67120	5/16-18 x 3/4" FHCS	2
4	62685	Idler Shaft, Shorty	1
5	62204	Bushing	1
6	62344	Idler Gear	1
7	62816	Grease Fitting, Long	1
8	62815	Thrust Washer	1
9	62341	Return Spring	1
10	62914	Stud, Transmission	1
11	62915	Stud, Starter	1
12	68073	1/4-28 x 5/8" FHCS	1

RING GEARS



APPLICATION	#1 RING GEAR 6-1/2" DIAMETER 63-TOOTH	#2 SHIM
Chevy SB & BB	P/N 62479-A	P/N 62320
Chevy Late SB	P/N 62479-D	P/N 62321



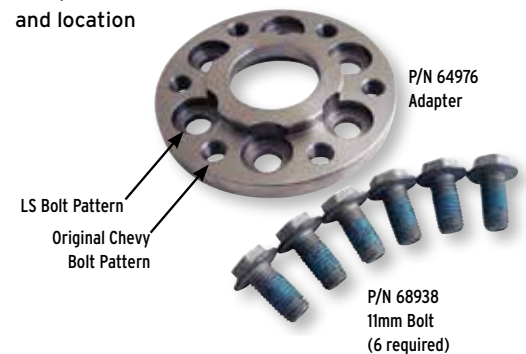
P/N 63844-18
Late Chevy 18-Spline Bell,
External Balance



P/N 62479D-1
Late Chevy Counter Weight,
External Balance

CHEVY LS-SERIES ADAPTER

Adapts LS1, LS2, LS3 (CT525), LS6, LS7 and L92 engines to original Chevy bolt pattern and location



P/N 64976
Adapter

LS Bolt Pattern
Original Chevy
Bolt Pattern

P/N 68938
11mm Bolt
(6 required)

STARTERS

HI-TORQUE STARTER P/N 13269

Introducing the Winters Hi-Torque gear reduction starter. Engineered with Northeast Modifieds in mind, the 1.4kw Winters Hi-Torque starter uses 4.4:1 gear reduction to produce 200 ft.-lbs. of torque and 1.8 horsepower—powerful enough to start engines with up to 18:1 compression! And weighing just 7.5 pounds, it's one of the lightest starters available!



STARTER INSTALLATION

Proper mounting of the starter is important because it ensures that the starter pinion will engage with the ring gear without binding and subsequently damaging the starter pinion and/or ring gear.

- **MOUNT STARTER**, making sure the mounting surface of the engine block is smooth, flat, and free of paint build up. Torque starter mounting bolts to engine manufacturer's specifications (typically 32 ft.-lbs.)
- **CHECK PINION CLEARANCE**. There should be 1/8" (.125") minimum from the backside of the ring gear to the front edge of the starter pinion teeth (Figure A). Check in at least three locations on the ring gear. If not in spec, verify that the ring gear is properly installed. ***When using an idler gear**, ensure the same .125" minimum from the backside of the ring gear to the front edge of the idler gear.
- **PULL PINION OUT TO CHECK ENGAGEMENT** with the ring gear. This can be done by either using a tool to pry the pinion out of the starter, or connect 12 VDC to the "Switch" terminal ONLY (DO NOT connect battery cable to "BAT" terminal on the starter solenoid). This engages the solenoid but does not spin the starter. **CAUTION—DO NOT leave the solenoid engaged like this for more than 3 to 5 seconds at a time or the solenoid will overheat.** After releasing the solenoid, the pinion may stay engaged in the ring gear until the engine is started. This is normal for gear reduction starters and does NOT require shimming to correct.

Insert a wire gauge to check for proper clearance between the ring gear and starter pinion. There should be .020" to .035" clearance from the root of the starter pinion to the tip of the ring gear tooth (Figure B). Check clearance in at least three places on the ring gear. If the clearance is too small, add one shim at a time between the starter and the engine block to bring it into spec. In many installations no shims are necessary.

- **ATTACH BATTERY CABLE AND SWITCH WIRE**. The switch wire should be capable of handling 15A (typically 14AWG wire). The battery cable must be the proper size for the length of the cable (Figure C). All connections should be clean and tight, and terminals should be soldered if possible. The ground cable to the frame should be the same size as the starter cable, and a ground strap must be installed from the frame to the engine.

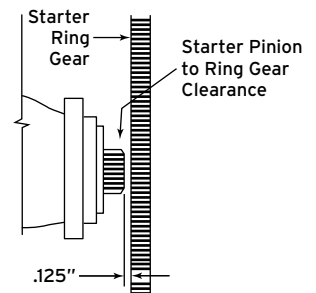


Figure A

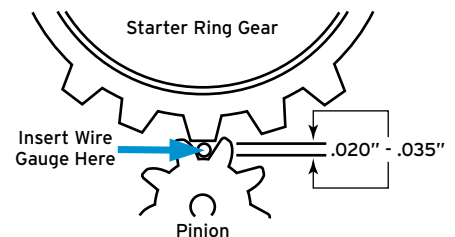


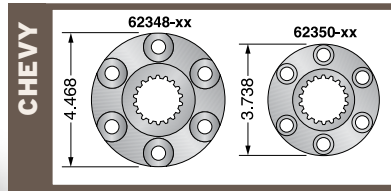
Figure B

Distance	3'	5'	7'	10'	+10'
AWG	4	2	1	0	00

Figure C

COUPLERS & U-JOINTS

CRANK COUPLERS



P/N 62348-XX Big Block & Early Smallblock
P/N 62350-XX Late Smallblock

Add prefix 8251- to any crank coupler part number when substituting in bellhousing assemblies
Example: 8251-62447 substitutes a 62887 Ford 18-spline w/HTD pulley crank coupler for the standard crank coupler.

P/N	DESCRIPTION
62348-18	Chevy SB & BB 18-Spline, Standard, Steel
62350-18	Chevy Late SB 18-Spline, Standard, Steel

U-JOINTS & U-BOLTS



- P/N 65382 • 1310-series, caps with grease fittings
1 1/16" Journal Assembly, 3 7/32" across bridge
- P/N 66847 • 1310-series, HD caps without grease fittings
1 1/16" Journal Assembly, 3 7/32" across bridge
- P/N 66996 • 1310-Series 1 3/16" Journal Assembly
3 5/8" across bearing caps



- P/N 65855 (Torque 15 ft.-lbs.)
1310-Series U-Bolt Assembly with nuts and lockwashers
- P/N 66999 (Torque 15 ft.-lbs.)
1350-Series U-Bolt Assembly with nuts and lockwashers

REBUILD KITS

Complete Kit (shown) includes clutches, O-rings, gaskets, seals and bearings
Basic Kit includes clutches, O-rings, gaskets, and seals but no bearings



COMPLETE REBUILD KIT (includes bearings)

P/N 62825-2 Falcon Shorty

BASIC REBUILD KIT (without bearings)

P/N 62824-2 Falcon Shorty

WINTERS MERCHANDISE



FOR THE WIN T-SHIRT
P/N SR13



SUPPORT T-SHIRT
P/N SR15



VINTAGE TRANSMISSION T-SHIRT
P/N SR10



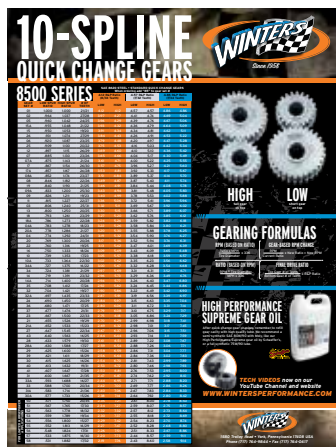
TEAM COLORS HOODIE
P/N S1GY



RACING DIVISION HOODIE
P/N S2BK



CIRCLE TRACK DECAL
5" x 2 1/2"
P/N WINTERS-DW



10-SPLINE GEAR CHART
18" x 24" • Heavy-Duty w/Grommets
P/N POSTER10

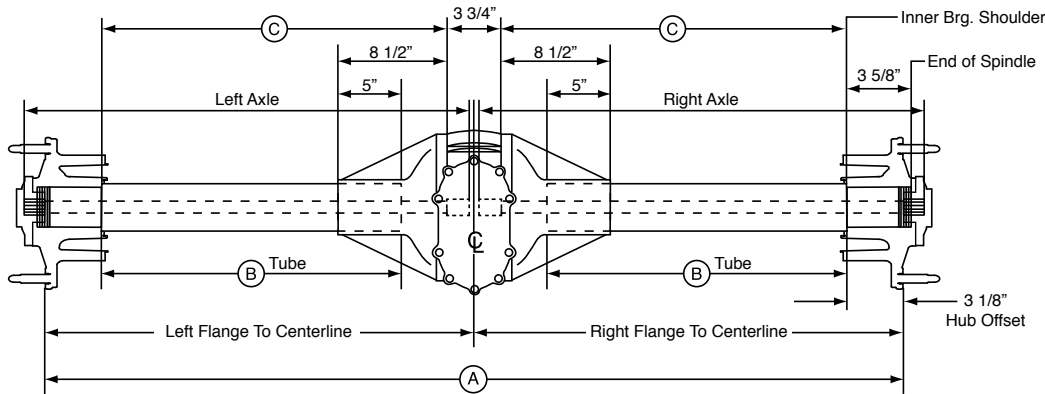


SHOP BANNER
36" x 24" • Full-Color Vinyl Banner w/Grommets
P/N BANNER1

See inside back cover of catalog or visit website for limited warranty and venue provision.

ADDITIONAL INFORMATION

WIDE-5 DIRT MODIFIED 2-7/8" DIMENSIONAL INFO

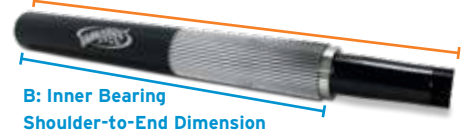


POPULAR DIMENSIONS

Tubes and axles made to order. All dimensions available.

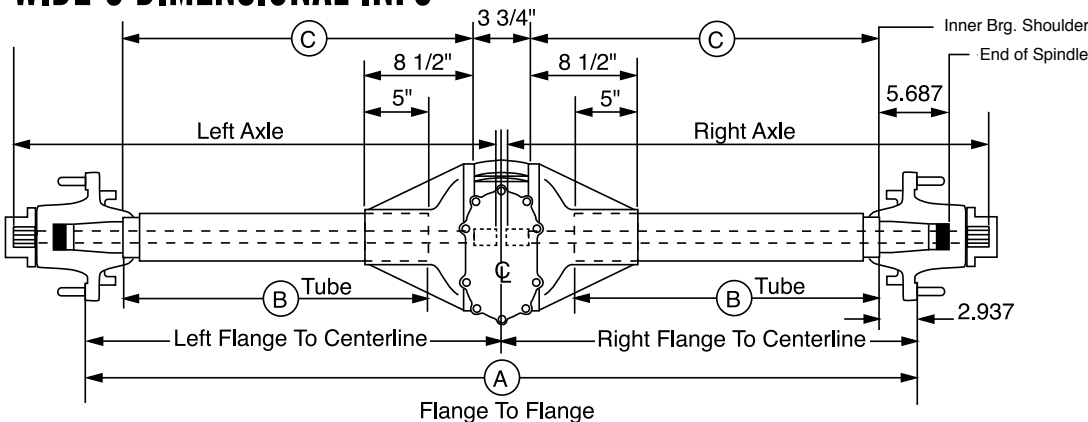
A	B	C	DOUBLE-SPLINED AXLE LENGTH (w/SPOOL)	TUBE END-TO-END LENGTH (FOR REFERENCE ONLY)
62	22.500	26.000	31.500	26.125
60	21.500	25.000	30.500	25.125
58	20.500	24.000	29.500	24.125

Overall Dimension



B: Inner Bearing Shoulder-to-End Dimension

WIDE-5 DIMENSIONAL INFO



POPULAR DIMENSIONS

Tubes and axles made to order. All dimensions available.

A	B	C	DOUBLE-SPLINED AXLE LENGTH (w/SPOOL)	TUBE END-TO-END LENGTH (FOR REFERENCE ONLY)
62	22.500	26.000	31.500	26.125
60	21.500	25.000	30.500	25.125
58	20.500	24.000	29.500	24.125
61-3/4	22.187	28.625	30-3/8	25.125

AXLE LENGTH FORMULAS

Spool

$$\text{Right Axle} = \frac{\text{Flange to Flange}}{2} + 0.500'' + \text{Offset}$$

$$\text{Left Axle} = \frac{\text{Flange to Flange}}{2} - 0.500'' - \text{Offset}$$

TUBE INSTALLATION

When installing a tube in a bell, place the tube in a 5-gallon bucket of ice. Heat the bell in an oven to 270°-300°F. Lubricate the bell bore and drop the tube into the bell. DO NOT TORCH! Annealing and/or cracking will occur.

QUICK CHANGE TORQUE SPECS

For 10" and 8" quick change rears

Ring Gear Bolts.....	60 ft.-lbs.	Tube and Bell Bolts.....	25 ft.-lbs.
Pinion Retainer Bolts.....	25 ft.-lbs.	Side Bell Thru-Bolts.....	35 ft.-lbs.
Seal Plate Bolts.....	25 ft.-lbs.	Gear Cover High Nuts.....	20 ft.-lbs.
Yoke Bolt.....	40 ft.-lbs.		

FALCON TRANSMISSION TORQUE SPECS

For Falcon Shorty transmissions

Side Plate.....	15 ft.-lbs.	Extension Housing to	
Seal Plate.....	15 ft.-lbs.	Case Bolts.....	35 ft.-lbs.
Yoke Bolt.....	65 ft.-lbs.		

BELLOUSING INSTALLATION

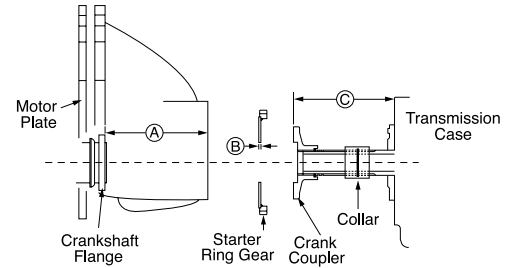
Using 18-Spline Input Shaft and Coupler with Winters Bellhousing

When using a motor plate, it must be in place before making measurements. With motor plate in place, accurately measure from rear face of crankshaft flange to rear face of bellhousing (A). Subtract thickness of starter flex plate (B) and also subtract .125" for required input shaft end clearance. Use your measurements and follow the example to find your coupler measurement (C). It is also advisable to grease the drive splines in the crank coupler and collar before assembly.

Example:	(A)	6.000
Flex Plate Thickness	(B)	-.125
Clearance		-.125
Coupler Measurement	(C)	5.750

Install 1/2"-13 x 2 1/2" studs at these two locations

P/N 62444
P/N 68039
P/N 68727 Stud and Nut Kit (2 each)



Dowel pins and pilot bushings must be lengthened to compensate for motor plate thickness. Install studs and nuts to retain transmission to flywheel housing on left side (optional at four locations).

- Place transmission in high gear (direct-drive) prior to installing transmission in bellhousing. This allows the installer to rotate the output shaft, which turns the input shaft to facilitate spline engagement with clutch splines or crankshaft drive flange.
- When using a motor plate, the plate must be flat and even with back of engine block and perfectly true and flat across chassis.
- Dowel pins must be long enough to pass through the motor plate and fully engage with bellhousing.
- Bellhousing must be aligned with engine. See bellhousing alignment instructions on page 6 of Falcon Owners Manual at www.wintersperformance.com/falcon-manual.
- Pilot bushing, if used, must be long enough to compensate for motor plate thickness.
- Remove pilot bushing from crankshaft with Falcon Transmission.
- **CAUTION - DO NOT attempt to force transmission into bellhousing with bolts. Transmission will assemble into flywheel housing if splines are aligned, assuming input shaft splines and clutch splines or crank coupler splines are compatible. DO NOT install and torque transmission retaining bolts unless transmission is solidly against bell housing.**
- Bellhousing distortion can be greatly reduced by using a support mount under the transmission extension housing. Distortion can be caused by rough track conditions, contact with walls/other cars, chassis flex, etc.

INBOARD STARTER BELLOUSINGS

- Center hole in motor plate must be large enough to clear all protrusions from back of bellhousing, minimum 13" I.D. (see Figure C).
- Adjust bell clearance to idler gear (see Figure D). Shim bell to .080/.100 clearance. Make sure starter is in place while checking clearance.
- Idler gear must slide freely on shaft.
- Check idler shaft periodically for signs of wear.
- Check alignment of idler gear to bell. By hand, push idler gear forward and engage into bell, making sure there is clearance. **It's very important to follow bellhousing alignment instructions very carefully.**
- Clean and re-grease bushing in idler gear during routine maintenance. A moderate amount of grease is correct—more is not better.
- Remember, a starter is an electric motor. Cover when washing car.

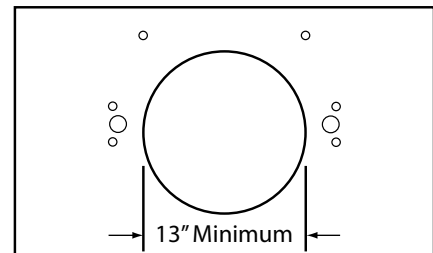


Figure C

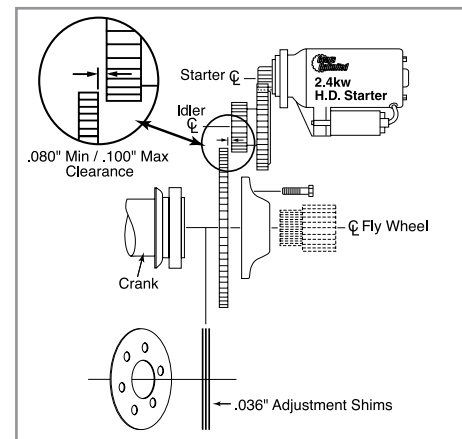
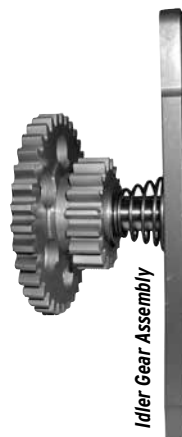


Figure D

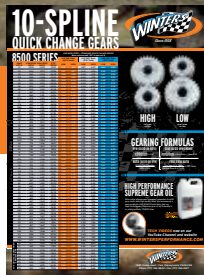
See inside back cover of catalog or visit website for limited warranty and venue provision.

10-SPLINE QUICK CHANGE GEARS

8500 SERIES

SAE 8620 STEEL • STANDARD QUICK CHANGE GEARS
When ordering add "85" to gear set # (example 8501)

GEAR SET #	LOW SPUR RATIO	HIGH SPUR RATIO	# OF TEETH	4.12 R&P Ratio (8/33 Teeth)		4.57 R&P Ratio (7/32 Teeth)		4.86 R&P Ratio (7/34 Teeth)	
				LOW	HIGH	LOW	HIGH	LOW	HIGH
01	1.000	1.000	21/21	4.12	4.12	4.57	4.57	4.86	4.86
02	.964	1.037	27/28	3.97	4.27	4.41	4.74	4.69	5.04
05	.960	1.042	24/25	3.96	4.29	4.39	4.76	4.67	5.06
15A	.955	1.048	21/22	3.93	4.32	4.36	4.79	4.64	5.09
15	.950	1.053	19/20	3.91	4.34	4.34	4.81	4.62	5.11
26	.931	1.074	27/29	3.84	4.43	4.26	4.91	4.53	5.22
06	.920	1.087	23/25	3.79	4.48	4.20	4.97	4.47	5.28
25	.909	1.100	20/22	3.75	4.53	4.16	5.03	4.42	5.34
12	.897	1.115	26/29	3.69	4.60	4.10	5.10	4.36	5.42
07	.885	1.130	23/26	3.65	4.66	4.04	5.17	4.30	5.49
07A	.875	1.143	21/24	3.61	4.71	4.00	5.22	4.25	5.55
17	.867	1.154	26/30	3.57	4.75	3.96	5.27	4.21	5.60
17A	.857	1.167	24/28	3.53	4.81	3.92	5.33	4.17	5.67
08A	.852	1.174	23/27	3.51	4.84	3.89	5.37	4.14	5.70
08	.846	1.182	22/26	3.49	4.87	3.87	5.40	4.11	5.74
19	.840	1.190	21/25	3.46	4.91	3.84	5.44	4.08	5.78
09A	.833	1.200	25/30	3.43	4.94	3.81	5.48	4.05	5.83
09	.826	1.211	19/23	3.40	4.99	3.78	5.53	4.02	5.88
11	.815	1.227	22/27	3.36	5.06	3.72	5.61	3.96	5.96
03	.806	1.240	25/31	3.32	5.11	3.69	5.67	3.92	6.02
13	.800	1.250	20/25	3.30	5.15	3.66	5.71	3.89	6.07
18	.793	1.261	23/29	3.27	5.20	3.62	5.76	3.85	6.12
18A	.786	1.273	22/28	3.24	5.24	3.59	5.82	3.82	6.18
04A	.783	1.278	18/23	3.22	5.26	3.58	5.84	3.80	6.21
20A	.778	1.286	21/27	3.20	5.30	3.55	5.88	3.78	6.25
04	.774	1.292	24/31	3.19	5.32	3.54	5.90	3.76	6.27
20	.769	1.300	20/26	3.17	5.36	3.52	5.94	3.74	6.31
22	.760	1.316	19/25	3.13	5.42	3.47	6.01	3.69	6.39
16	.750	1.333	18/24	3.09	5.49	3.43	6.09	3.65	6.48
10	.739	1.353	17/23	3.05	5.57	3.38	6.18	3.59	6.57
10A	.733	1.364	22/30	3.02	5.62	3.35	6.23	3.56	6.62
34A	.727	1.375	16/22	3.00	5.67	3.32	6.28	3.54	6.68
34	.724	1.381	21/29	2.97	5.69	3.31	6.31	3.52	6.71
14	.719	1.391	23/32	2.96	5.73	3.29	6.36	3.49	6.76
14A	.714	1.400	20/28	2.94	5.77	3.26	6.40	3.47	6.80
35	.708	1.412	17/24	2.92	5.82	3.24	6.45	3.44	6.86
32	.704	1.421	19/27	2.90	5.86	3.22	6.49	3.42	6.90
32A	.697	1.435	23/33	2.87	5.91	3.19	6.56	3.39	6.97
24	.690	1.450	20/29	2.84	5.97	3.15	6.63	3.35	7.04



GEAR CHART POSTERS

This complete list of quick change gears is available in an 18" x 24" poster printed on grease-resistant, heavy-duty paper with grommets for easy hanging in your shop or rig
P/N POSTER10 (see page 33)

STANDARD QUICK CHANGE GEARS (continued) When ordering add "85" to gear set #				4.12 R&P Ratio (8/33 Teeth)		4.57 R&P Ratio (7/32 Teeth)		4.86 R&P Ratio (7/34 Teeth)		
GEAR SET #	LOW SPUR RATIO	HIGH SPUR RATIO	# OF TEETH	LOW	HIGH	LOW	HIGH	LOW	HIGH	
36	.680	1.471	17/25	2.80	6.06	3.11	6.72	3.31	7.14	
37	.677	1.476	21/31	2.79	6.08	3.10	6.75	3.29	7.17	
23	.667	1.500	22/33	2.75	6.18	3.05	6.86	3.24	7.29	
21	.655	1.526	19/29	2.70	6.29	2.99	6.98	3.18	7.41	
21A	.652	1.533	15/23	2.69	6.32	2.98	7.01	3.17	7.45	
27	.647	1.545	22/34	2.67	6.37	2.96	7.06	3.15	7.51	
43	.640	1.563	16/25	2.64	6.44	2.93	7.14	3.11	7.59	
28	.633	1.579	19/30	2.61	6.51	2.89	7.22	3.08	7.67	
28A	.630	1.588	17/27	2.59	6.54	2.88	7.26	3.06	7.71	
29	.625	1.600	15/24	2.58	6.59	2.86	7.31	3.04	7.77	
39	.621	1.611	18/29	2.56	6.64	2.84	7.36	3.02	7.83	
30	.615	1.625	16/26	2.54	6.70	2.81	7.43	2.99	7.89	
40	.613	1.632	19/31	2.53	6.72	2.80	7.46	2.98	7.93	
41	.607	1.647	17/28	2.50	6.81	2.76	7.53	2.95	8.00	
31	.600	1.667	21/35	2.47	6.87	2.74	7.62	2.92	8.10	
33A	.593	1.688	16/27	2.44	6.95	2.71	7.71	2.88	8.20	
33	.588	1.700	20/34	2.42	7.00	2.69	7.77	2.86	8.26	
31A	.583	1.714	21/36	2.40	7.06	2.67	7.83	2.84	8.33	
30A	.577	1.733	15/26	2.38	7.14	2.64	7.92	2.80	8.42	
FOR LIMITED HORSEPOWER APPLICATIONS	50	.571	1.750	20/35	2.35	7.21	2.61	8.00	2.78	8.50
	51	.567	1.765	17/30	2.34	7.27	2.59	8.07	2.75	8.57
	52	.563	1.778	18/32	2.32	7.32	2.57	8.12	2.73	8.64
	53	.559	1.789	19/34	2.30	7.37	2.55	8.18	2.72	8.69
	54	.556	1.800	15/27	2.29	7.42	2.54	8.23	2.70	8.74
	55	.552	1.813	16/29	2.27	7.47	2.52	8.28	2.68	8.80
	56	.548	1.824	17/31	2.26	7.51	2.51	8.33	2.67	8.86
	57	.533	1.875	16/30	2.20	7.73	2.44	8.57	2.59	9.11
	58	.531	1.882	17/32	2.19	7.76	2.43	8.60	2.58	9.14

HIGH
tall gear
on top



LOW
short gear
on top

GEARING FORMULAS

RPM (BASED ON RATIO)

$$\frac{\text{Ratio} \times \text{MPH}}{\text{Tire Diameter}} \times 336$$

GEAR-BASED RPM CHANGE

$$\frac{\text{RPM}}{\text{Current Ratio}} \times \text{New Ratio} = \text{New RPM}$$

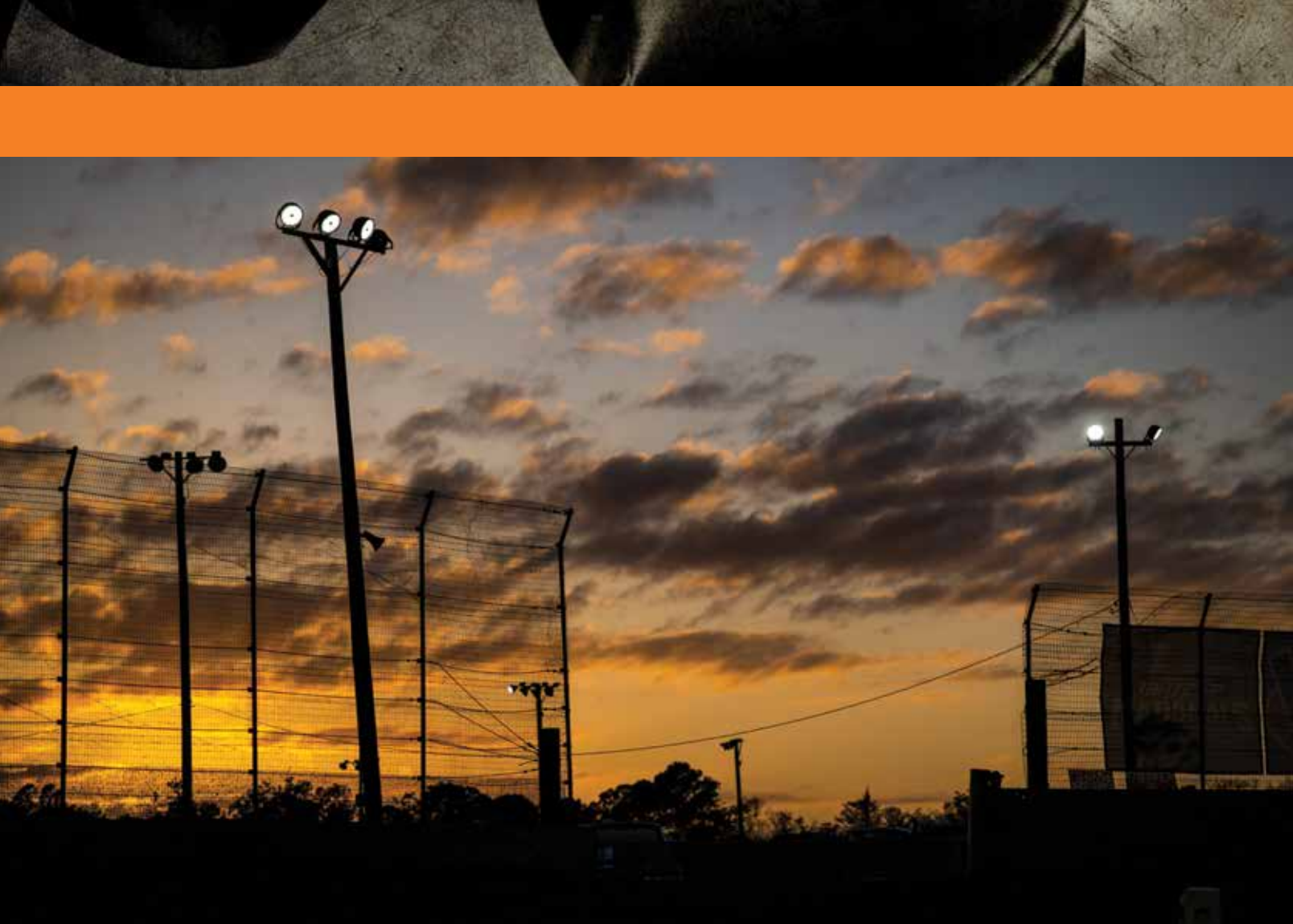
RATIO (BASED ON RPM)

$$\frac{\text{RPM} \times \text{Tire Diameter}}{\text{MPH} \times 336}$$

FINAL DRIVE RATIO

$$\frac{\text{Top Gear \# of Teeth}}{\text{Bottom Gear \# of Teeth}} \times \text{R\&P Ratio}$$

See inside back cover of catalog or visit website for limited warranty and venue provision.



ORDERS & RETURNS

ORDER POLICY

- Please provide your customer number. If you are a new customer, one will be provided.
- Order by part number. Winters will not be responsible for incorrect orders placed by description only.
- Specify shipping instructions - otherwise use our discretion.
- Refused orders will have a \$25.00 handling charge and applicable freight charges billed to the customer's account.
- Special orders cannot be canceled after the order is in process.
- PLEASE NOTE: Part numbers are listed showing required quantity. If two or more quantities are listed, you must order two or more of that part number.

RETURN POLICY

All returns must include a Return Authorization Number (RA#). Issuing of an RA# does not constitute a guarantee of credit or replacement. Credit, refund or replacement will only be issued after an inspection and determination at our discretion. No returns are accepted on special order merchandise, obsolete products, damaged, used or altered merchandise. Returns will not be accepted after six (6) months from date of purchase.

ALL RETURNED MERCHANDISE MUST INCLUDE:

- RA# clearly written on outside of box/boxes
- Customer number, name & phone number
- Copy of invoice
- Written explanation of reason for return
- Specify Credit, Refund or Replacement
- Except for seller's error, returned merchandise is subject to a 15% restocking fee up to 90 days from date of purchase, and a 25% restocking fee from 91 days to 6 months.
- Returns must be freight pre-paid (except seller's error).
- Returned parts must be packaged properly to avoid damage in transit.
- SHIPPING DAMAGES MUST BE REPORTED IMMEDIATELY TO YOUR CARRIER.
- SHORTAGE CLAIMS MUST BE REPORTED IMMEDIATELY.
- SAVE YOUR PACKAGING.

LIMITED WARRANTY

BACKGROUND Winters Performance Products, Inc., referred to herein as Winters, manufactures parts and equipment which are purchased by persons in various industries, who may install and use Winters parts and equipment in applications which may not be suitable for that Purchaser's intended purpose. Purchaser understands, recognizes and acknowledges that all parts and equipment manufactured or sold by Winters are exposed to many, varied and unforeseeable uses and conditions. As a consequence, Winters can make no promise, warranty, affirmation or representation as to the performance of its parts or equipment, nor does Winters make any description of the parts or equipment sold to Purchaser, nor does Winters make any description or affirmation of fact concerning any sample or model of parts or equipment except as specifically set forth in this Limited Warranty. As further consideration for Purchaser using Winters' parts or equipment, Purchaser acknowledges that, due to differing conditions and circumstances under which all parts and equipment are installed and used, Purchaser is not relying on Winters' skill and judgement to select or furnish the proper part or equipment. Purchaser expressly affirms that it is relying on its own expertise, skill, and judgement to select, purchase and install parts or equipment which are suitably safe and durable for their intended purpose. Purchaser assumes all risks associated with the performance of Winters' parts.

LIMITED WARRANTY Winters warrants to Purchaser that any part or equipment manufactured by Winters ("a Part") will conform to the description of such Part contained in the catalog most recently published by Winters prior to the time of sale of such part or equipment to Purchaser ("the Description"). WINTERS MAKES NO OTHER WARRANTY, EITHER EXPRESS OR IMPLIED WITH RESPECT TO ANY PART. WINTERS EXPRESSLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE OR PURPOSE AND EXPRESSLY DISCLAIMS ANY WARRANTY AS TO THE PERFORMANCE OF ANY PART. The liability of Winters for breach of the foregoing warranty is limited to repair or replacement of any Part determined to fail to conform to its Description prior to installation and use. The burden of establishing that any Part fails to conform to its Description shall be upon Purchaser. In order to be entitled to repair or replacement of any Part, Purchaser must (i) inspect the part upon receipt; and (ii) notify Winters in writing of the defect PRIOR TO INSTALLATION OF THE PART. In no event shall Winters be liable hereunder for any Part which has been installed. Purchaser assumes all risks relating to a Part once such Part is installed. WINTERS SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES (INCLUDING BUT NOT LIMITED TO LOST PROFITS) OR FOR LOSS OR DAMAGE DIRECTLY OR INDIRECTLY ARISING FROM THE USE OF A PART. Every claim under this Limited Warranty shall be deemed waived unless made in writing within ninety (90) days of delivery of the Part by Winters to Purchaser. Purchaser acknowledges that, due to the multiple uses of Parts, it is impossible for Winters to predict the performance of any Parts once installed or the suitability of any Parts for any particular use. Purchaser expressly acknowledges its obligation to inform all users (customers) of the above disclaimer.

INDEMNITY AGAINST THIRD PARTY CLAIMS PURCHASER HEREBY AGREES TO INDEMNIFY AND HOLD HARMLESS WINTERS FROM AND AGAINST ANY AND ALL CLAIMS, LIABILITY, LOSS AND DAMAGES, INCLUDING ATTORNEYS FEES, MADE BY ANY THIRD PARTY AGAINST WINTERS RELATING TO A PART OR THE USE OF ANY PART. Purchaser understands and agrees that no officer, director, employee or agent of Winters (including but not limited to any vendor, dealer or distributor) has any authority to make any statements contrary to the terms of this Limited Warranty. Winters specifically disavows any statements contrary to what is written above.

CHOICE OF LAW/VENUE This Limited Warranty shall be governed by and construed in accordance with the laws of the Commonwealth of Pennsylvania. Any legal action which may arise as a result of disputes, controversies, or claims arising out of or related to this Limited Warranty or the purchase or use of any Part shall be litigated exclusively in the Court of Common Pleas of York County, Pennsylvania or the United States District Court for the Middle District of Pennsylvania.

MISCELLANEOUS This writing constitutes the full, complete and final statement of Winters' Limited Warranty for Parts. All prior oral and written correspondence, test data, negotiations, representations, understandings and the like regarding Parts are merged in this writing and extinguished by it. This Limited Warranty may not be altered, amended, extended or modified except by a writing signed by the President or Vice President of Winters. Winters' failure at any time to enforce any of the terms and conditions stated herein shall not constitute a waiver of any of the provisions herein. This Limited Warranty shall not be assigned by Purchaser. Winters' responsibility for merchandise shipped via common carrier ceases upon delivering the order to the carrier. Winters is not responsible for merchandise lost or damaged in transit. Purchaser must file a claim with the delivery carrier for merchandise lost or damaged during transit. Winters will assist Purchaser by supplying any information necessary for submission of a claim. It is the responsibility of the Purchaser to comply with all laws and regulations, Federal, State and Local, governing resale of products sold by Winters. NSF Charge: \$38.00 per returned check/payment. Repayments must be made by cashier check or money order.

On request, all parts in Winters Performance Products, Inc. inventory and/or catalog are available in super strength heat treated steel (300,000/350,000 P.S.I. tensile strength) at extra cost and special order. Refer to machinery handbook for strengths of other materials.

RACING IS A DANGEROUS SPORT THAT CAN RESULT IN SERIOUS INJURY OR DEATH. THE ULTIMATE RESPONSIBILITY FOR PARTICIPANT AND VEHICLE SAFETY LIES WITH THE PARTICIPANT.

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