



Advanced Wheelend Technologies

## Master Parts Catalogue

- "Optimum Contact" cam-bushings
- *SPIDER* + cam-bushings
- *Premium Performance* Heat treated cams
- *Rough & Tough tube*
- Wheel end parts
- Tool kits
- Accessories
- Individual components of tool kits



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Some items in this catalogue are patented and therefore covered under the international intellectual property protection act.

## "Optimum Contact" cam-bushings





Caution : bushings must be align-bored to proper i.d. due to s-cam bearing variance

Picture	Part # (old part #)	Euclid / Meritor / Spicer Part # equivalent	Description	Shipped with Seals / O-Rings
	<b>BBOC-15125</b> ( PM 125 )	Euclid E-536 Nylon E-667 Bronze Meritor 1225-L1208 Nylon 1225-R-512 Bronze	Bronze bushing with internal lube groove, 1-7/8" o.d. X 1 1/2" i.d. X 1 1/4" long	1/ SL-1500-DA 1/ SL-1500-DA-HD
	<b>BBOC-15125-T</b> ( PM 125-T )	Euclid E-759 Nylon E- 807 Bronze Meritor R-617003 Spicer M10WJ118 Nylon M16HD100 Bronze	Bronze bushing with internal lube groove, and external alignment slot for grease hole alignment 1-7/8" o.d. X 1 1/2" i.d. X 1 1/4" long  For spiders that have narrowed with time (BBOC 15150 too wide / no room for seals)	1/ SL-1500 1/ SL-1500-HD
	<b>BBOC-15150</b> ( PM 150-T )	Euclid E-759 Nylon E- 807 Bronze Meritor R-617003 Spicer M10WJ118 Nylon M16HD100 Bronze	Bronze bushing with internal lube groove, and external alignment slot for grease hole alignment. 1-7/8" o.d. X 1 1/2" i.d. X 1 1/2" long	1/ SL-1500 1/ SL-1500-HD
	<b>BBOC-152130</b>	Euclid E-1318-HD Nylon	Bronze Bushing with internal lube groove	2/ SL-WV-130
	<b>BBOC-152380</b> ( PM 2380 )	Spicer / DANA M10WJ237X Euclid E-9792	Bronze Bushing with internal lube groove For 1 1/2" dia. Camshafts  Hanger bracket bushing for SPICER axles	2/ SL-WV-130
	<b>BBOC-152500</b> ( PM 2500-Z )	Euclid E-2102 Nylon Meritor R617002 Nylon	Bronze Bushing with internal lube groove For 1 1/2" dia. camshafts	2/ SL-WV-130

## "Optimum Contact" cam-bushings

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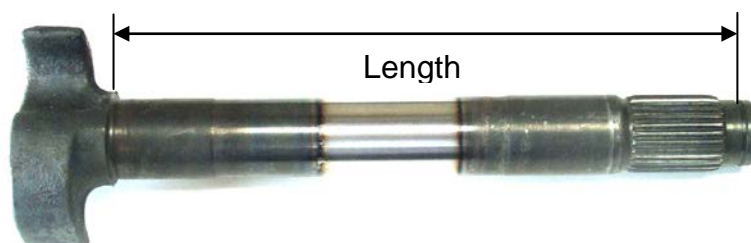
Picture	Part # (old part #)	Euclid / Meritor / Spicer Part # equivalent	Description	Shipped with Seals / O-Rings
	<b>BBOC-16125</b> ( PM 161-T )	Euclid E-2690-A Nylon E-2670 bushing kit Meritor 1225N1158 Nylon	Bronze bushing with internal lube groove, and external alignment slot for grease hole alignment. 2" o.d. X 1-5/8" i.d..X 1-1/8" long	1/ SL-1625 1/ SL-1625-HD
	<b>BBOC-16150</b> ( PM 150610 )	Euclid E-9789 Bronze Spicer M16HD106 Bronze	Bronze bushing with internal lube groove, and external alignment slot for grease hole alignment. 2" o.d. X 1-5/8" i.d. X 1 1/2" long	1/ SL-1625 1/ SL-1625-HD
	<b>BBOC-1625-RW4B</b> (PM 4158 )		Standard steel bushing fitted with a bronze bushing, ready for the "OPTIMUM-CONTACT" aligned boring system. For 1 5/8" dia. Camshafts	1/ SL-1625 1/ SL-1625-HD
	<b>BBOC-FRU-1625</b> (PM 1625-FRU-A)	Euclid E-1567-A Nylon Fruehauf AXA-0413-900	Standard 1 5/8" i.d. Fruehauf / PROPAR type bronze 2 part bushing featuring an incorporated grease seals to prevent infiltration of contaminants. 2 parts included	2/ SL-1625-FRU
	<b>BBOC-FRU-1932</b> ( PM 1932-ST )	Euclid E-1577A Nylon Fruehauf ACD-2285-900	Bronze Bushing with internal lube groove For 1-19/32" dia. Camshafts on PROPAR axles	2/ ORG-223
	<b>BBOC-NTX-15200</b> ( PM 2015-NTX )	Hendrickson INTRAAX first generation	Bronze bushing with internal lube groove, and external alignment slot for grease hole alignment. Replacement part for INTRAAX suspensions. 2" o.d. X 1 1/2" i.d. X 1 1/2" long	1/ SL-1500-02 1/ SL-1520-NTX-HD
<b>BUSHING &amp; HARDWARE KIT</b>	<b>BHK-RW4B-2130</b>	Euclid E-9079-HD	Contains <ul style="list-style-type: none"> <li>• 2 BBOC-152130</li> <li>• 2 BBOC- 1625-RW4B</li> <li>• All necessary hardware to service 1 axle</li> </ul> For Meritor TL ,TN, TQ trailer axles with 1-5/8" "S" cams (1 kit / axle)	2/ SL-1625 2/ SL-1625-HD 4/ SL-WV-130

## SPIDER + Oversized O.D. Cam-Bushings

Picture	Part # (old part #)	Euclid / Meritor / Spicer Part # equivalent	Description	Shipped with Seals / O-Rings
	<b>BBSP-15125-01</b> ( PM-125-01-os ) <b>BBSP-15125-02</b> ( PM 125-02-os )	Euclid E-536 Nylon E-667 Bronze Meritor 1225-L1208 Nylon 1225-R-512 Bronze	Over sized bushing Needs "Optimum Contact" Align boring technology	Both part #'s shipped with 1/ SL-1500-DA 1/ SL-1500-DA-HD
	<b>BBSP-15150-01</b> ( PM-150610-01-os ) <b>BBSP-15150-02</b> ( PM-150610-02-os )	Euclid E-759 Nylon E- 807 Bronze Meritor R-617003 Spicer M10WJ118 Nylon M16HD100 Bronze	Over sized bushing Needs "Optimum Contact" Align boring technology	<b>BBSP-15150-01</b> 1/ SL-1500-01 1/ SL-1500-01-HD <b>BBSP-15150-02</b> 1/ SL-1500-02 1/ SL-1500-02-HD
	<b>BBSP-15151-STD</b> ( PM- 151-STD ) <b>BBSP-15152-STD</b> ( PM-152-STD )	Euclid E-759 Nylon E- 807 Bronze Meritor R-617003 Spicer M10WJ118 Nylon M16HD100 Bronze	Over sized bushing No "Optimum Contact" Align boring technology needed	<b>BBSP-15151-STD</b> 1/ SL-1500-01 1/ SL-1500-01-HD <b>BBSP-15152-STD</b> 1/ SL-1500-02 1/ SL-1500-02-HD
	<b>BBSP-16125-01</b> ( PM-161-T- 01 ) <b>BBSP-16125-02</b> ( PM-161-T-02 )	Euclid E-2690-A Nylon E-2670 bushing kit Meritor 1225N1158 Nylon	Over sized bushing Needs "Optimum Contact" Align boring technology	<b>BBSP-16125-01</b> 1/ SL-1625-01 1/ SL-1625-01-HD <b>BBSP-16125-02</b> 1/ SL-1625-02 1/ SL-1625-02-HD
	<b>BBSP-16150-01</b> ( PM-150610-01 ) <b>BBSP-16150-02</b> ( PM-150610-02 )	Euclid E-9789 Bronze Spicer M16HD106 Bronze	Over sized bushing Needs "Optimum Contact" Align boring technology	<b>BBSP-16150-01</b> 1/ SL-1625-01 1/ SL-1625-01-HD <b>BBSP-16150-02</b> 1/ SL-1625-02 1/ SL-1625-02-HD
	<b>BBSP-FRU-1625-01</b> ( PM-1625-FRU-B ) <b>BBSP-FRU-1625-02</b> ( PM-1625-FRU-C )	Euclid E-1567-A Nylon Fruehauf AXA-0413-900	Over sized bushing Needs "Optimum Contact" Align boring technology	Both shipped with 2/ SL-1625-FRU
	<b>BBSP-NTX-15200-01</b> ( PM-2015-NTX-01 ) <b>BBSP-NTX-15200-02</b> ( PM-2015-NTX-02 )	Hendrickson INTRAAX first generation	Over sized bushing Needs "Optimum Contact" Align boring technology	<b>BBSP-NTX-15200-01</b> 1/ SL-1520-NTX-01 1/ SL-1520-NTX-01-HD <b>BBSP-NTX-15200-02</b> 1/ SL-1520-NTX-02 1/ SL-1520-NTX-02-HD

## *Premium Performance*

Heavy-Duty "S" Camshafts With heat treated bearing journals



Part #	Original Part #	Head type	Head bearing journal size	Spline bearing journal size	Spline count	Length Head to groove
HTC-10002L	Meritor 2210-X-5640	Std	1-1/2"	1-1/2"	10	8-9/16
HTC-10003R	Meritor 2210-W-5639	Std	1-1/2"	1-1/2"	10	8-9/16
HTCQ-10130L	Spicer M16WKL10-236	Q+	1-1/2"	1-1/2"	10	23-1/2"
HTCQ-10131R	Spicer M16WKR10-236	Q+	1-1/2"	1-1/2"	10	23-1/2"
HTCQ-10154L	Spicer M16WKL20-205	Q+	1-1/2"	1-1/2"	28	20-3/8
HTCQ-10155R	Spicer M16WKR20-205	Q+	1-1/2"	1-1/2"	28	20-3/8
HTCQ-10158L	Spicer M16WKL20-236	Q+	1-1/2"	1-1/2"	28	23-1/2
HTCQ-10159R	Spicer M16WKR20-236	Q+	1-1/2"	1-1/2"	28	23-1/2
HTCQ-10162L	Spicer M16WKL20-242	Q+	1-1/2"	1-1/2"	28	24
HTCQ-10163R	Spicer M16WKR20-242	Q+	1-1/2"	1-1/2"	28	24
HTCQ-10168L	Spicer M16WKL25-175	Q+	1-5/8"	1-1/2"	28	17-3/8
HTCQ-10169R	Spicer M16WKR25-175	Q+	1-5/8"	1-1/2"	28	17-3/8
HTCQ-10170L	Spicer M16WKL25-205	Q+	1-5/8"	1-1/2"	28	20-3/8
HTCQ-10171R	Spicer M16WKR25-205	Q+	1-5/8"	1-1/2"	28	20-3/8
HTCQ-10172L	Spicer M16WKL25-236	Q+	1-5/8"	1-1/2"	28	23-1/2
HTCQ-10173R	Spicer M16WKR25-236	Q+	1-5/8"	1-1/2"	28	23-1/2
HTCQ-10176L	Spicer M16WKL25-242	Q+	1-1/2"	1-1/2"	28	24-1/8
HTCQ-10177R	Spicer M16WKR25-242	Q+	1-1/2"	1-1/2"	28	24-1/8
HTCQ-10226L	Eaton 810025	Q+	1-5/8"	1-1/2"	28	23-11/16
HTCQ-10227R	Eaton 810026	Q+	1-5/8"	1-1/2"	28	23-11/16

Part #	Original Part #	Head type	Head bearing journal size	Spline bearing journal size	Spline count	Length Head to groove
HTC-10422L	Spicer M-16WK104-24	Std	1-1/2"	1-1/2"	28	23-1/2
HTC-10423R	Spicer M-16WK105-24	Std	1-1/2"	1-1/2"	28	23-1/2
HTC-10504L	Meritor M-2210-4329	Std	1-5/8"	1-1/2"	28	17-5/16
HTC-10505R	Meritor M-2210-4328	Std	1-5/8"	1-1/2"	28	17-5/16
HTC-10506L	Meritor 2210-F-5414	Std	1-1/2"	1-1/2"	10	20-3/8
HTC-10507R	Meritor 2210-E-5413	Std	1-1/2"	1-1/2"	10	20-3/8
HTC-10512L	Fruehauf AXA-0420-3	Std	1-5/8	1-19/32	37	21-1/8
HTC-10513R	Fruehauf AXA-0420-4	Std	1-5/8	1-19/32	37	21-1/8
HTC-10522L	Spicer M-16WK-110-9	Std	1-1/2"	1-1/2"	10	23-7/16
HTC-10523R	Spicer M-16WK-111-9	Std	1-1/2"	1-1/2"	10	23-7/16
HTC-10528L	Fruehauf AXA-0420-1	Std	1-5/8	1-19/32	37	16-1/8
HTC-10529R	Fruehauf AXA-0420-2	Std	1-5/8	1-19/32	37	16-1/8
HTC-10574L	Dana 17-593	Std	1-1/2"	1-1/2"	10	26-1/2
HTC-10575R	Dana 17-592	Std	1-1/2"	1-1/2"	10	26-1/2
HTCQ-10706L	Spicer M16WKL25-264	Q+	1-1/2"	1-1/2"	28	26-1/4
HTCQ-10707R	Spicer M16WKR25-264	Q+	1-1/2"	1-1/2"	28	26-1/4
HTC-10758L	Meritor 2210-P-4332	Std	1-5/8	1-1/2"	28	24-1/16
HTC-10759R	Meritor 2210-N-4330	Std	1-5/8	1-1/2"	28	24-1/16
HTC-10812L	Fruehauf AXA-0420-5	Std	1-5/8	1-19/32	37	23-7/8
HTC-10813R	Fruehauf AXA-0420-6	Std	1-5/8	1-19/32	37	23-7/8
HTC-10818L	Fruehauf APA-0998-1	Std	1-5/8	1-19/32	28	16-1/8
HTC-10819R	Fruehauf APA-0998-2	Std	1-5/8	1-19/32	28	16-1/8
HTC-10854L	Meritor 2210-V-6 574	Std	1-5/8	1-1/2"	28	17-5/16
HTC-10855R	Meritor 2210-U-6573	Std	1-5/8	1-1/2"	28	17-5/16
HTC-10856L	Meritor 2210-P-6594	Std	1-5/8	1-1/2"	28	20-13/32
HTC-10857R	Meritor 2210-N-6592	Std	1-5/8	1-1/2"	28	20-13/32
HTC-10858L	Meritor 2210-X-6576	Std	1-5/8	1-1/2"	28	24-1/16
HTC-10859R	Meritor 2210-W-6575	Std	1-5/8	1-1/2"	28	24-1/16
HTC-10936L	Hendrickson S-20806-1L	Std	1-1/2"	1-1/2"	28	11-1/8
HTC-10937R	Hendrickson S-20806-1R	Std	1-1/2"	1-1/2"	28	11-1/8

Part #	Original Part #	Head type	Head bearing journal size	Spline bearing journal size	Spline count	Length Head to groove
HTCQ-12032L	Hendrickson S-24636-1L	Q+	1-1/2"	1-1/2"	28	11-1/16"
HTCQ-12033R	Hendrickson S-24636-1R	Q+	1-1/2"	1-1/2"	28	11-1/16"
H12036L	Fruehauf APA-0998-5	Std	1-5/8	1-19/32	28	23-7/8
H12037R	Fruehauf APA-0998-6	Std	1-5/8	1-19/32	28	23-7/8
HTCQ-10016L	Meritor 2210-D-5360	Std	1-1/2"	1-1/2"	10	11-33/64
HTCQ-10017R	Meritor 2210-D-5359	Std	1-1/2"	1-1/2"	10	11-33/64
HTCQ-10302L	Meritor 2210-Q-7427	Q+	1-1/2"	1-1/2"	28	8-9/16"
HTCQ-10303R	Meritor 2210-P-7426	Q+	1-1/2"	1-1/2"	28	8-9/16"
HTCQ-10312L	Meritor 2210-W-7537	Q+	1-1/2"	1-1/2"	28	11-9/16"
HTCQ-10313R	Meritor 2210-V-7536	Q+	1-1/2"	1-1/2"	28	11-9/16"
HTCQ-10316L	Meritor 2210-C-7595	Q+	1-1/2"	1-1/2"	28	13-3/16"
HTCQ-10317R	Meritor 2210-B-7594	Q+	1-1/2"	1-1/2"	28	13-3/16"
HTCQ-10342L	Meritor 2210-S-7689	Q+	1-1/2"	1-1/2"	28	15-11/16"
HTCQ-10343R	Meritor 2210-R-7688	Q+	1-1/2"	1-1/2"	28	15-11/16"
HTCQ-10350L	Meritor 2210-C-6867	Q+	1-5/8"	1-1/2"	28	17-5/16
HTCQ-10351R	Meritor 2210-B-6866	Q+	1-5/8"	1-1/2"	28	17-5/16
HTCQ-10352L	Meritor 2210-G-6871	Q+	1-5/8"	1-1/2"	28	20-13/32
HTCQ-10353R	Meritor 2210-F-6870	Q+	1-5/8"	1-1/2"	28	20-13/32
HTCQ-10354L	Meritor 2210-E-6869	Q+	1-5/8"	1-1/2"	28	24-1/16
HTCQ-10355R	Meritor 2210-D-6868	Q+	1-5/8"	1-1/2"	28	24-1/16
HTCQ-10358L	Meritor 2210-U-7587	Q+	1-1/2"	1-1/2"	28	12-61/64
HTCQ-10359R	Meritor 2210-T-7586	Q+	1-1/2"	1-1/2"	28	12-61/64
HTCQ-10364L	Meritor 2210-R-8156	Q+	1-5/8"	1-1/2"	28	17-15/16
HTCQ-10365R	Meritor 2210-Q-8155	Q+	1-5/8"	1-1/2"	28	17-15/16
HTCQ-10366L	Meritor 2210-T-8158	Q+	1-5/8"	1-1/2"	28	20-13/32
HTCQ-10367R	Meritor 2210-S-8157	Q+	1-5/8"	1-1/2"	28	20-13/32
HTCQ-10368L	Meritor 2210-V-8160	Q+	1-5/8"	1-1/2"	28	24-1/16
HTCQ-10369R	Meritor 2210-U-8159	Q+	1-5/8"	1-1/2"	28	24-1/16
HTC-10506L	Meritor 2210-F-5414	Std	1-1/2"	1-1/2"	10	20-3/8
HTC-10507R	Meritor 2210-E-5413	Std	1-1/2"	1-1/2"	10	20-3/8



# Premium Performance

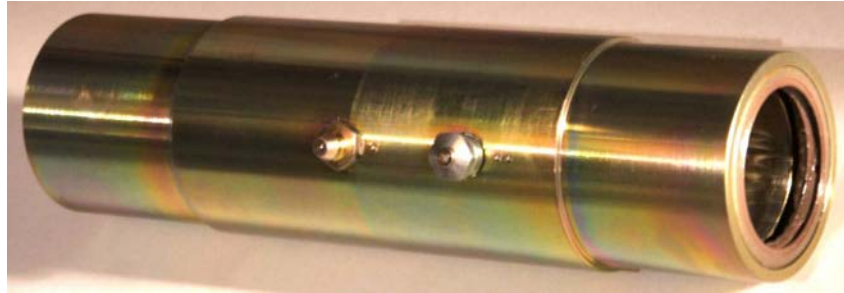
## Cross reference list

	AWT	HERCULES MFG	CATEGORY	INTL	Euclid PART #	Meritor PART #	Spicer PART #
1	HTC-10002L	H10002L	DA	5640		2210-X-5640	18-805
2	HTC-10003R	H10003R	DA	5639		2210-W-5639	18-804
3	HTCQ-10130L	H10130L	TA+	5520	E-5520	R-607177	17-509
4	HTCQ-10131R	H10131R	TA+	5521	E-5521	R-607178	17-508
5	HTC-10154L	H10154L	TB	5524	E-5524	R-607181	17-501
6	HTC-10155R	H10155R	TB	5525	E-5525	R-607182	17-500
7	HTCQ-10158L	H10158L	TA+	5526	E-5526	R-607183	17-503
8	HTCQ-10159R	H10159R	TA+	5527	E-5527	R-607184	17-502
9	HTC-10162L	H10162L	TB	8094	E-9100	R-607199	17-515
10	HTC-10163R	H10163R	TB	8093	E-9101	R-607200	17-514
11	HTC-10168L	H10168L	TB	9731	E-9731	R-607227	17-915
12	HTC-10169R	H10169R	TB	9732	E-9732	R-607228	17-914
13	HTC-10170L	H10170L	TB	7920	E-9733	R-607229	17-921
14	HTC-10171R	H10171R	TB	7921	E-9734	R-607230	17-920
15	HTC-10172L	H10172L	TA+	7929	E-9735	R-607231	17-929
16	HTC-10173R	H10173R	TA+	7928	E-9736	R-607232	17-928
17	HTC-10176L	H10176L	TA+	7923	E-10909	R-607277	17-931
18	HTC-10177R	H10177R	TA+	7922	E-10910	R-607278	17-930
19	HTC-10226L	H10226L	TB	9059	E-9059	R-607113	17-473
20	HTC-10227R	H10227R	TB	9060	E-9060	R-607114	17-472
21	HTC-10422L	H10422L	TA+	3856	E-3856	R-607171	17-483
22	HTC-10423R	H10423R	TA+	3857	E-3857	R-607172	17-482
23	HTC-10504L	H10504L	TA	4329		2210-M-4329	17-627
24	HTC-10505R	H10505R	TA	4328		2210-N-4330	17-626
25	HTC-10506L	H10506L	TA	5414	E-557	2210-E-5414	17-581
26	HTC-10507R	H10507R	TA	5413	E-556	2210-F-5413	17-580
27	HTC-10512L	H10512L	TA	4203	E-2099	R-607020	17-623
28	HTC-10513R	H10513R	TA	4204	E-2100	R-607019	17-622
29	HTCQ-10522L	H10522L	TA+	1095	E-1095	R-607002	17-575
30	HTCQ-10523R	H10523R	TA+	1094	E-1094	R-607001	17-574
31	HTC-10528L	H10528L	TA	4201	E-1563	R-607011	17-621
32	HTC-10529R	H10529R	TA	4202	E-1564	R-607012	17-620
33	HTC-10574L	H10574L	TB	7219	E-7219	R-607193	17-593,18-657
34	HTC-10575R	H10575R	TB	7220	E-7220	R-607194	17-592,18-656
35	HTC-10706L	H10706L	TB	7931			17-937
36	HTC-10707R	H10707R	TB	7930			17-936
37	HTC-10758L	H10758L	TA	4332		2210-P-4332	17-631
38	HTC-10759R	H10759R	TA	4330		2210-N-4330	17-630
39	HTC-10812L	H10812L	TA	4205	E-3861	R-607162	17-617
40	HTC-10813R	H10813R	TA	4206	E-3862	R-607161	17-616

	AWT	HERCULES MFG	CATEGORY	INTL	Euclid	Meritor	Spicer
					PART #	PART #	PART #
41	HTC-10818L	H10818L	TB	9801	E-9761	R-607163	17-615
42	HTC-10819R	H10819R	TB	9802	E-9762	R-607164	17-614
43	HTC-10854L	H10854L	TB	6574	E-9091	2210-V-6574	17-657
44	HTC-10855R	H10855R	TB	6573	E-9092	2210-U-6573	17-656
45	HTC-10856L	H10856L	TB	6594	E-9093	2210-P-6594	17-659
46	HTC-10857R	H10857R	TB	6592	E-9094	2210-N-6592	17-658
47	HTC-10858L	H10858L	TB	6576	E-6081	2210-X-6576	17-661A
48	HTC-10859R	H10859R	TB	6575	E-6082	2210-W-6575	17-660A
49	HTC-10936L	H10936L	TA	1122	E-10899	R-607267	
50	HTC-10937R	H10937R	TA	1121	E-10900	R-607268	
51	HTCQ-12032L	H12032L	TA+	2032	E-11866		
52	HTCQ-12033R	H12033R	TA+	2033	E-11867		
53	HTC-12036L	H12036L	TB	9805			
54	HTC-12037R	H12037R	TB	9804			
55	HTCQ-10016L	HQ10016L	DA+	7076	E-1148C	R-607076	
56	HTCQ-10017R	HQ10017R	DA+	7075	E-1147C	R-607075	
57	HTCQ-10302L	HQ10302L	DA+	7427	E-9649	2210-Q-7427	18-505
58	HTCQ-10303R	HQ10303R	DA+	7426	E-9650	2210-P-7426	18-504
59	HTCQ-10312L	HQ10312L	DA+	7537	E-9661	2210-W-7537	18-519
60	HTCQ-10313R	HQ10313R	DA+	7536	E-9662	2210-V-7536	18-518
61	HTCQ-10316L	HQ10316L	DA+	7595	E-9671	2210-C-7595	18-529
62	HTCQ-10317R	HQ10317R	DA+	7594	E-9672	2210-B-7594	18-528
63	HTCQ-10342L	HQ10342L	DB	9683	E-9683	2210-S-7689	18-543
64	HTCQ-10343R	HQ10343R	DB	9684	E-9684	2210-R-7688	18-542
65	HTCQ-10350L	HQ10350L	TA+	6867	E-5506	2210-C-6867	17-721
66	HTCQ-10351R	HQ10351R	TA+	6866	E-5507	2210-B-6866	17-720
67	HTCQ-10352L	HQ10352L	TA	6871	E-5508	2210-G-6871	17-723
68	HTCQ-10353R	HQ10353R	TA	6870	E-5509	2210-F-6870	17-722
69	HTCQ-10354L	HQ10354L	TA+	6869	E-5510	2210-E-6869	17-725
70	HTCQ-10355R	HQ10355R	TA+	6868	E-5511	2210-D-6868	17-724
71	HTCQ-10358L	HQ10358L	DA	7587	E-9669	2210-U-7587	18-527
72	HTCQ-10359R	HQ10359R	DA	7586	E-9670	2210-T-7586	18-526
73	HTCQ-10364L	HQ10364L	TA	7552	E-2441B	2210-R-8156	17-811
74	HTCQ-10365R	HQ10365R	TA	7551	E-2442B	2210-Q-8155	17-810
75	HTCQ-10366L	HQ10366L	TA	6871	E-2443B	2210-T-8158	17-813
76	HTCQ-10367R	HQ10367R	TA	6870	E-2444B	2210-S-8157	17-812
77	HTCQ-10368L	HQ10368L	TA	6869	E-2445B	2210-V-8160	17-815
78	HTCQ-10369R	HQ10369R	TA	6868	E-2446B	2210-U-8159	17-814
79	HTCQ-10506L	HQ10506L	TA	7082	E-1425A	R-607082	
80	HTCQ-10507R	HQ10507R	TA	7081	E-1424A	R-607081	

# *Rough & Tough tube*

## Extra heavy duty Cam-tube system



The following parts numbers are boxed with all necessary hardware to perform installation of the cam-tube system.

Note: Puller (part # TDCK – 225 ) is necessary to install cam-tube assembly without removing the wheel hub form the axle

Part #	Description	Spider Channel	Camshaft	
			splines	side
<b>THIC-15-STD-L</b>	Replaces Hendrickson Intraax tube enclosure	Std	28	LEFT
<b>THIC-15-STD-R</b>	Replaces Hendrickson Intraax tube enclosure	Std	28	RIGHT
<b>THIC-15-01-os-L</b>	Replaces Hendrickson Intraax tube enclosure	1st over size	28	LEFT
<b>THIC-15-01-os-R</b>	Replaces Hendrickson Intraax tube enclosure	1st over size	28	RIGHT
<b>THIC-15-02-os-L</b>	Replaces Hendrickson Intraax tube enclosure	2nd over size	28	LEFT
<b>THIC-15-02-os-R</b>	Replaces Hendrickson Intraax tube enclosure	2nd over size	28	RIGHT
<b>THIC-15-STD-10L</b>	Replaces Hendrickson Intraax tube enclosure	Std	10	LEFT
<b>THIC-15-STD-10R</b>	Replaces Hendrickson Intraax tube enclosure	Std	10	RIGHT
<b>THIC-15-01-os-10L</b>	Replaces Hendrickson Intraax tube enclosure	1st over size	10	LEFT
<b>THIC-15-01-os-10R</b>	Replaces Hendrickson Intraax tube enclosure	1st over size	10	RIGHT
<b>THIC-15-02-os-10L</b>	Replaces Hendrickson Intraax tube enclosure	2nd over size	10	LEFT
<b>THIC-15-02-os-10R</b>	Replaces Hendrickson Intraax tube enclosure	2nd over size	10	RIGHT
<b>THIC-15BT-STD-L</b>	Replaces Intraax cam-bushing system (old style)	Std	28	LEFT
<b>THIC-15BT-STD-R</b>	Replaces Intraax cam-bushing system (old style)	Std	28	RIGHT
<b>THIC-15BT-01-os-L</b>	Replaces Intraax cam-bushing system (old style)	1st over size	28	LEFT
<b>THIC-15BT-01-os-R</b>	Replaces Intraax cam-bushing system (old style)	1st over size	28	RIGHT
<b>THIC-15BT-02-os-L</b>	Replaces Intraax cam-bushing system (old style)	2nd over size	28	LEFT
<b>THIC-15BT-02-os-R</b>	Replaces Intraax cam-bushing system (old style)	2nd over size	28	RIGHT
<b>THIC-15BT-STD-10L</b>	Replaces Intraax cam-bushing system (old style)	Std	10	LEFT
<b>THIC-15BT-STD-10R</b>	Replaces Intraax cam-bushing system (old style)	Std	10	RIGHT
<b>THIC-15BT-01-os-10L</b>	Replaces Intraax cam-bushing system (old style)	1st over size	10	LEFT
<b>THIC-15BT-01-os-10R</b>	Replaces Intraax cam-bushing system (old style)	1st over size	10	RIGHT
<b>THIC-15BT-02-os-10L</b>	Replaces Intraax cam-bushing system (old style)	2nd over size	10	LEFT
<b>THIC-15BT-02-os-10R</b>	Replaces Intraax cam-bushing system (old style)	2nd over size	10	RIGHT

## Wheel end related parts & accessories

PHOTO	Part #	Description
	<b>CP-5-100</b>	Cap plugs for grease fittings Prevent dirt from setting onto the fitting. Bags of 100 pcs.
	<b>CP-10-100</b>	
	<b>LPT-110</b>	1-1/2" Breather extension assy. -straight- (Heavy-duty appl.)
	<b>LPT-120</b>	2-1/2" Breather extension assy, -straight- (Heavy-duty appl.)
	<b>LPT-210</b>	1-1/2" Breather extension assy. -90 degrees- (Heavy-duty appl.)
	<b>LPT-220</b>	2-1/2" Breather extension assy, -90 degrees- (Heavy-duty appl.)
	<b>ORG-152380</b>	Heavy-duty "O - Quad-Ring" for BBOC-152380 bushing (2 for HD applications)
	<b>SLPV-25</b>	Water tight spring -loaded breather, Used in HD applications Cam-Tubes and on drive axles.
	<b>SL-1500</b>	Seal for BBOC-15150 bushing (single lipped)
	<b>SL-1500-DA</b>	Seal for BBOC-15125 bushing (single lipped) 1 per pair
	<b>SL-1500-HD</b>	Seal for BBOC-15150 bushing (double lipped) 2 for HD applications
	<b>SL-1500-DA-HD</b>	Seal for BBOC-15125 bushing (double lipped) 1 per pair
	<b>SL-1500-01</b>	Seal for BBSP-15150-01 bushing (single lipped)
	<b>SL-1500-02</b>	Seal for BBSP-15150-02 bushing (single lipped)
	<b>SL-1500-01-HD</b>	Seal for BBSP-15150-01 bushing (double lipped) 2 for HD applications
	<b>SL-1500-02-HD</b>	Seal for BBSP-15150-02 bushing (double lipped) 2 for HD applications
	<b>SL-1520-NTX</b>	Seal for BBOC-NTX-15200 bushing (single lipped)
	<b>SL-1520-NTX-01</b>	Seal for BBSP-NTX-15200-01 bushing (single lipped)
	<b>SL-1520-NTX-02</b>	Seal for BBSP-NTX-15200-02 bushing (single lipped)
	<b>SL-1520-NTX-HD</b>	Seal for BBOC-NTX-15200 bushing (double lipped) 2 for HD applications
	<b>SL-1520-NTX-01-HD</b>	Seal for BBSP-NTX-15200-01 bushing (double lipped) 2 for HD applications
	<b>SL-1520-NTX-02-HD</b>	Seal for BBSP-NTX-15200-02 bushing (double lipped) 2 for HD applications
	<b>SL-1625</b>	Seal for BBOC-16125 & 16150 bushing (single lipped)
	<b>SL-1625-01</b>	Seal for BBSP-16125-01 & 16150-01 bushing (single lipped)
	<b>SL-1625-02</b>	Seal for BBSP-16125-02 & 16150-02 bushing (single lipped)
	<b>SL-1625-HD</b>	Seal for BBOC-16125 & 16150 bushing (double lipped) 2 for HD applications
	<b>SL-1625-01-HD</b>	Seal for BBSP-16125-01 & 16150-01 bushing (double lipped) 2 for HD applications
	<b>SL-1625-02-HD</b>	Seal for BBSP-16125-02 & 16150-02 bushing (double lipped) 2 for HD applications
<b>SL-1625-FRU</b>	Seal for PM 1625-FRU-A bushing	
<b>SL-2500-HD-SWC</b>	Seal for BBOC-152500 & 152380 bushing (camshaft mounted) Heavy-Duty	
	<b>WV - 130</b>	Standard seal for BBOC-152380 & BBOC-152500 bushing.

## Using the proper dust seals for "Optimum-Contact"

All "Optimum Contact" bushings are shipped seals and / or O-Rings

"Optimum Contact" Bushings Part #	Inner seal # (shim side)	Outer seal # (Brake side)
BBOC-15125	SL-1500-DA (1 per pair)	SL-1500-DA-HD (1 per pair)
BBOC-15125-T	SL-1500	SL-1500-HD
BBOC-15150	SL-1500	SL-1500-HD
BBOC-152130	SL-WV-130	SL-WV-130
BBOC-152380	SL-WV-130	SL-WV-130
BBOC-152500	SL-WV-130	SL-WV-130
BBOC-16125	SL-1625	SL-1625-HD
BBOC-16150	SL-1625	SL-1625-HD
BBOC-1625-RW4B	SL-1625	SL-1625-HD
BBOC-FRU-1625	SL-1625-FRU	SL-1625-FRU
BBOC-FRU-1932	ORG-223	ORG-223
BBOC-NTX-15200	SL-1500-02	SL-1520-NTX-HD
THI-1500-01-os	SL-1500	SL-1500-HD
THI-1500-02-os	SL-1500	SL-1500-HD
THI-1500-STD	SL-1500	SL-1500-HD
THIC-15-01-os-L	SL-1500	SL-1500-HD
THIC-15-01-os-R	SL-1500	SL-1500-HD
THIC-15-02-os-L	SL-1500	SL-1500-HD
THIC-15-02-os-R	SL-1500	SL-1500-HD
THIC-15-STD-L	SL-1500	SL-1500-HD
THIC-15-STD-R	SL-1500	SL-1500-HD

# *SPIDER* + oversize bushing system Seal applications

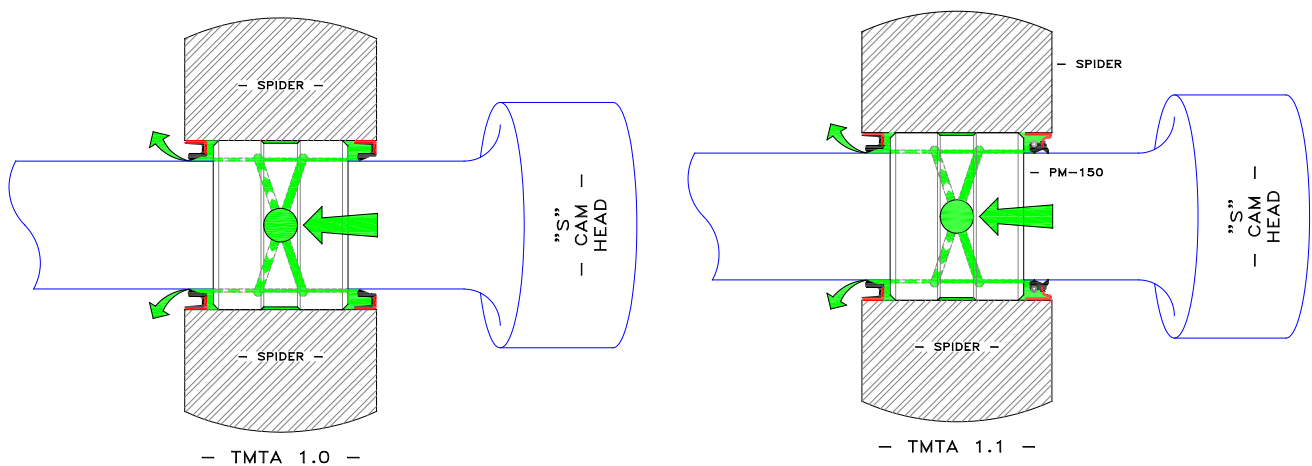
<i>SPIDER</i> + Bushings Part #	Inner seal # (shim side)	Outer seal # (Brake side)
BBSP-15125-01	SL-1500-DA (1 per pair)	SL-1500-DA-HD (1 per pair)
BBSP-15125-02	SL-1500-DA (1 per pair)	SL-1500-DA-HD (1 per pair)
BBSP-15150-01	SL-1500-01	SL-1500-01-HD
BBSP-15150-02	SL-1500-02	SL-1500-02-HD
BBSP-15151-STD	SL-1500-01	SL-1500-01-HD
BBSP-15152-STD	SL-1500-02	SL-1500-02-HD
BBSP-16125-01	SL-1625-01	SL-1625-01-HD
BBSP-16125-02	SL-1625-02	SL-1625-02-HD
BBSP-16150-01	SL-1625-01	SL-1625-01-HD
BBSP-16150-02	SL-1625-02	SL-1625-02-HD
BBSP-FRU-1625-01	SL-1625-FRU	SL-1625-FRU
BBSP-FRU-1625-02	SL-1625-FRU	SL-1625-FRU
BBSP-NTX-15200-01	SL-1520-NTX-01	SL-1520-NTX-01-HD
BBSP-NTX-15200-02	SL-1520-NTX-02	SL-1520-NTX-02-HD

## Spider dust seal installation

Install the spider dust seals in a way that they will allow grease to purge easily from the cam-bushing assembly.

The outer seal must be installed with its sealing lip pointing toward the cam-bushing (**positive installation**), in order to keep the grease from entering the brake shoes and drum assembly, during lubrication, thus contaminating the brake shoes and drum.

The inner seal must be installed with its sealing lip pointing outward from the cam-bushing (**negative installation**), in order to let the grease escape from the cam-bushing assembly during lubrication. Figure 16 shows proper seal installation.



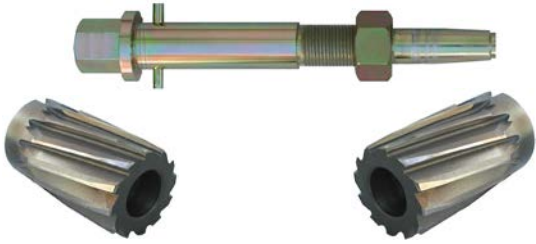



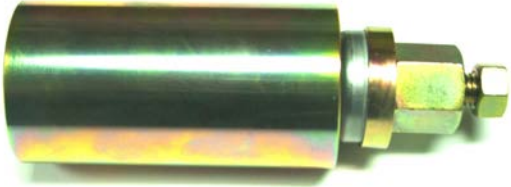


Single lip seal design

Double lip seal design

## TOOL KITS




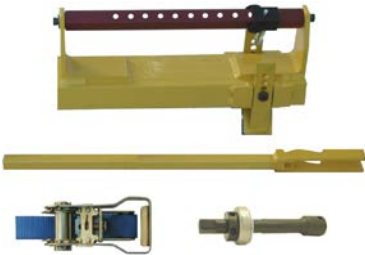

These items are sold as kits only. Replacement parts can be found in individual parts section.  
Kits are shown as examples only, real appearance may differ from printed photos,

	Part #	Description
	CO 1500	<p style="text-align: center;"><b>"OPTIMUM-CONTACT"</b>            Aligned boring tool set            For 1-1/2" dia. Camshafts ranging from  <b>8" to 27"</b>            10 pcs.</p>
	CO 1625	<p style="text-align: center;"><b>"OPTIMUM-CONTACT"</b>            Aligned boring tool set            For 1-1/2" and 1-5/8" dia. Camshafts            ranging from 8" to 27"            12 pcs.</p>
	CO 1625-CK	<p style="text-align: center;"><b>"OPTIMUM-CONTACT"</b>            1-5/8" complete conversion kit            Includes everything needed to install,            align, and align bore components for            most 1-5/8" camshafts systems            ( CO-1500 Add-on )            7 pcs.</p>
	SP-2000	<p style="text-align: center;"><i>SPIDER</i> +  <b>Spider bushing channel over sizing            tool set</b>            Performs first and second oversizes            on all spiders equipped with 1-1/2"            camshafts.            6 pcs.</p>
	SP-2125	<p style="text-align: center;"><i>SPIDER</i> +  <b>Spider bushing channel over sizing            tool set</b>            Performs first and second oversizes            on all spiders equipped with 1-1/2" and            1-5/8" camshafts.            9 pcs.</p>

	<p><b>SP-2125-CK</b></p>	<p><b>SPIDER +</b>  <b>1-5/8"</b> complete conversion kit  This ( <b>SP-2000 add-on</b> ) kit includes all the tooling needed to perform first and second oversize on all spiders equipped with <b>1-5/8"</b> camshafts.  3 pcs.</p>
	<p><b>BDK-100</b>  BDK - 100 - DA  (for drive axles)</p>	<p><b>Bushing &amp; seal driver kit</b>  Installation kit for <b>"OPTIMUM-CONTACT"</b> bushings and dust seals for <b>1-1/2"</b> camshaft applications.  9 pcs.</p>
	<p><b>BDK-200</b>  BDK - 200 - DA  (for drive axles)</p>	<p><b>Bushing &amp; seal driver kit</b>  Installation kit for <b>"OPTIMUM-CONTACT"</b> bushings and dust seals for <b>1-1/2"</b> and <b>1-5/8"</b> camshaft applications.  17 pcs.</p>
	<p><b>TMP-200</b></p>	<p><b>Precision measurement kit</b>  Includes a <b>1" to 2"</b> digital <b>micrometer</b> and a magnetic based <b>dial gauge indicator</b> conveniently encased in a rugged plastic toolbox.  3 pcs.</p>
	<p><b>TDCK-225</b></p>	<p>THIC-15 series tube puller assy. Uses cam to pull tube in spider channel without removing the wheel hub</p>
	<p><b>TDCK-12250</b></p>	<p>THI-1500 series tube puller assy.</p>
	<p><b>TPK-2250</b></p>	<p>THIC-15 tube removal puller kit</p>













## ACCESSORIES

	Part #	Description
	BTDK-200	Breather installation kit For ER-10 and ER-20 breather kits
	CDR-700	1/2" square drive conversion chuck for "RIDGID 700" power driver
	CHR-700	Mobile support dolly for "RIDGID 700" power driver
	HCZ-100	Heavy-duty cutting oil (recommended for SP-2000)
	RGD-700	<b>RIDGID "700" POWER DRIVER</b>
	TACP-2000	Forward thrust application kit ( SP-2000 add-on ) 4 pcs.
	TP-2500	<p><b>"Tube enclosure" to "OPTIMUM-CONTACT" conversion template and guide kit</b></p> <p>Hole pattern alignment template specially configured to ease conversion of centre holding brackets to refit original bushings after being modified to hold tube enclosures.  <b>Made to refit PM 2500-Z bushings.</b>                  2 pcs.</p>

## Individual parts for "OPTIMUM-CONTACT" and SPIDER +

	<b>Part #</b>	<b>Description</b>
	<b>ACP 2000</b>	Axle thrust coupler (TACP 2000)
	<b>ARCO 007</b>	Reamer holder (Arbour) for CO 1500
	<b>ARSP 008</b>	Reamer holder (Arbour) for SP 2000
	<b>ARSP 009</b>	Reamer holder (Arbour) for SP 2125 CK
	<b>BAC 1500</b>	1 1/2" bushing alignment sleeve
	<b>BAC 1625</b>	1 5/8" bushing alignment sleeve
	<b>BAC 1932</b>	1 19/32" bushing alignment sleeve
	<b>BB-500</b>	Centering bushing for TB-63
	<b>BC 2000</b>	Thrust applicator arm (TACP 2000)
	<b>C 1000</b>	CO 1500 Sliding cone
	<b>C 2000</b>	SP 2000 Sliding cone

## Individual parts for "OPTIMUM-CONTACT" and SPIDER +

	<b>Part #</b>	<b>Description</b>
	<b>DSP-500</b>	Double split collar (TPE-2000)
	<b>ER-10</b>	Breather assembly with 1" extension ( kit )
	<b>ER-20</b>	Breather assembly with 2" extension ( kit )
	<b>ES-16500</b>	Brake shoe splitter ( for 14 1/2"to 16 1/2" brakes )
	<b>EXT-16-15</b>	Cam bushing extractor for 1-1/2" and 1-5/8" cams
	<b>FLW-436</b>	Flat washer for BDK 100 (tempered steel)
	<b>FPW - 100</b>	Flap wheel 100 grit
	<b>FPW - 80</b>	Flap wheel 80 grit
	<b>HCZ-100</b>	Heavy-Duty cutting oil
	<b>LP-250</b>	1/4" O.D. Lock pin (TACP-2000)
	<b>LTY-30</b>	Low strength Loc-Tite (yellow)
	<b>MMD-200</b>	1" to 2" Digital micrometer (TMP-200)
	<b>ORG-216</b>	O-Ring for C 1500 sliding cone
	<b>ORG-218</b>	O-Ring for C 2000 sliding cone
	<b>ORG-223</b>	O-Ring for PM 1932 ST bushing
	<b>ORG-152380</b>	Heavy-duty "O - Quad-Ring" for BBOC-152380 bushing (2 for HD applications)

## Individual parts for "OPTIMUM-CONTACT" and *SPIDER* +

	<b>Part #</b>	<b>Description</b>
	<b>P 1000-06</b>	CO 1500 9" Pilot shaft
	<b>P 1000-14</b>	CO 1500 15" Pilot shaft
	<b>P 1000-26</b>	CO 1500 27" Pilot shaft
	<b>P 2000-26</b>	SP 2000 26" Pilot shaft
	<b>PDG-200</b>	Precision dial gauge (TMP-200)
	<b>PMB-200</b>	Portable magnetic base (TMP-200)
	<b>RA 1625</b>	Centering flange for 1 5/8" bushings
	<b>RC 1500</b>	Centering flange for 1 1/2" bushings
	<b>RJ 1500</b>	1 1/2" dust seal installer flange
	<b>RJ 1625</b>	1 5/8" dust seal installer flange
	<b>RT 1500-250</b>	1 1/2" bushing installer flange with 1/4" shoulder
	<b>RT 1500-313</b>	1 1/2" bushing installer flange with 5/16" shoulder
	<b>RT 1500-375</b>	1 1/2" bushing installer flange with 3/8" shoulder
	<b>RT 1625-188</b>	1 5/8" bushing installer flange with 3/16" shoulder
	<b>RT 1625-250</b>	1 5/8" bushing installer flange with 1/4" shoulder
	<b>RT 1625-313</b>	1 5/8" bushing installer flange with 5/16" shoulder
	<b>RT 1625-375</b>	1 5/8" bushing installer flange with 3/8" shoulder
	<b>SFX -20</b>	Coupler fixation strap (TACP 2000)

## Individual parts for "OPTIMUM-CONTACT" and *SPIDER* +

	<b>Part #</b>	<b>Description</b>
	<b>SR-1493</b>	1.493" Diameter shell reamer
	<b>SR-1494</b>	1.494" Diameter shell reamer
	<b>SR-1496</b>	1.496" Diameter shell reamer
	<b>SR-1497</b>	1.497" Diameter shell reamer
	<b>SR-1498</b>	1.498" Diameter shell reamer
	<b>SR-1499</b>	1.499" Diameter shell reamer
	<b>SR-1500</b>	1.500" Diameter shell reamer
	<b>SR-1503</b>	1.503" Diameter shell reamer
	<b>SR-1619</b>	1.619" Diameter shell reamer
	<b>SR-1621</b>	1.621" Diameter shell reamer
	<b>SR-1622</b>	1.622" Diameter shell reamer
	<b>SR-1623</b>	1.623" Diameter shell reamer
	<b>SR-1625</b>	1.625" Diameter shell reamer
	<b>SR-1938</b>	1.938" Diameter shell reamer
	<b>SR-2000</b>	2.000" Diameter shell reamer
	<b>SR-2060</b>	2.060" Diameter shell reamer
<b>SR-2125</b>	2.125" Diameter shell reamer	
<b>SR-2188</b>	2.188" Diameter shell reamer	
<b>SR-2240</b>	2.240" Diameter shell reamer	
	<b>TB-63</b>	Thrust bearing
	<b>TE-275</b>	2 3/4" hexagonal stubb for seal installer
	<b>TE-900</b>	9" hexagonal stubb
	<b>TF-002</b>	2 1/2" Threaded rod for seal installer tool
	<b>TF-008</b>	8" Threaded rod for BDK 100 & 200
	<b>TF-008-HD</b>	8" Threaded rod for BDK 100 & 200 Heavy-duty GR 8
	<b>TF-012</b>	12" Threaded rod for BDK 100 & 200
	<b>TF-016</b>	15" Threaded rod for BDK 100 & 200
	<b>TF-021</b>	21" Threaded rod for BDK 100 & 200 (new Rockwell 46,000 lbs drive axles)
	<b>TF-58008</b>	8" Threaded rod for BDK 100 & 200
	<b>TF-58012</b>	12" Threaded rod for BDK 100 & 200
	<b>TF-58016</b>	15" Threaded rod for BDK 100 & 200
<b>TF-58021</b>	21" Threaded rod for BDK 100 & 200 (new Rockwell 46,000 lbs drive axles)	
	<b>TPE 2000</b>	Thrust driver extension (TACP 2000)

