

# STEMCO®

QUICK REFERENCE

PART NUMBER 572-0011 REV. 04/10



*A Higher Standard of Performance.™*



**STEMCO®**

*A Higher Standard of Performance.™*

*an EnPro Industries company*

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# STEMCO®

LONG LIFE  
WHEEL ENDS

# SERVICEABLE, AFFORDABLE, FLEXIBLE

PLATINUM PLUS  
PERFORMANCE SYSTEM™

PLATINUM  
PERFORMANCE SYSTEM™



### **Flexible Options To Fit Your Installation Preferences**

STEMCO's Platinum Performance System™ — an integrated system of products and performance. With the Platinum Performance System™, you can extend your wheel end to a three-year or five-year limited warranty

### **Simply the Best**






Benefit from unprecedented product performance with STEMCO's exclusive, patented Guardian® HP or Discover® Seal; Pro-Torq® Advanced Axle Spindle Nut; and the tamper-proof Sentinel® or Integrated Sentinel® Hub Cap. Receive extended bearing warranty by adding STEMCO Heavy Duty Bearings.

### **Higher Performance Equals Less Maintenance**

When you specify the Platinum Performance System™, you are assured of performance that will protect your fleet and your maintenance budget. The unprecedented performance of this STEMCO system will lower your maintenance costs by reducing down-time and protecting your wheel end investment.

# PLATINUM Performance System™

## STEMCO LONG-LIFE WHEEL END SYSTEMS OFFER:




-  **Simplicity** – Proven, known wheel end design.
-  **Low Cost** – No costly equipment changes.
-  **Durability** – Uses high performance components for sealing, bearings, bearing adjustment and lubricant protection.
-  **Field Serviceable** – Standard hub, axle, lubricant and bearings.
-  **Reliability** – Address traditional wheel end failure areas with high performance technology products working as a system.

## PLATINUM PERFORMANCE SYSTEM™

- Guardian® HP or Discover® Seal
- Pro-Torq® Nut
- Sentinel® or Integrated Sentinel® Hub Cap
- Platinum Matched Bearings (optional)
- Available for OEM Spec or Fleet Retrofit
- 3 - Year Limited Warranty

## PLATINUM PLUS PERFORMANCE SYSTEM™

- Guardian® HP or Discover® Seal
- Pro-Torq® Nut
- Sentinel® or Integrated Sentinel® Hub Cap
- Heavy Duty Bearings
- Available for OEM Spec Only
- 5 - Year Limited Parts and Labor Warranty

-  All components available separately.
-  Platinum Performance System™ warranty available on new vehicle spec or aftermarket retrofit.
-  Platinum Performance System™ Plus warranty available for OEM spec only.

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**TQM**  
TOTAL QUALITY MAINTENANCE™

  
**STEMCO®**

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### GUARDIAN® HP / DISCOVER® SEALS



These high performance seals are available in a hub or a spindle mount configuration.

### HEAVY DUTY BEARINGS



STEMCO bearings ensure the highest quality, performance and reliability.

### PRO-TORQ® ADVANCED AXLE SPINDLE NUT



Extends the life of the tire, seal and bearing while enabling more accurate ABS sensor monitoring.

### INTEGRATED SENTINEL® / SENTINEL® HUB CAPS



The patented Sentinel® technology is the only technology available in the market that ensures that wheel-end lubricant is kept pristine. These tamper-proof hub caps provide an unmatched filtering system against grime, dirt and water.

# LONGER LIFE FOR THE LONGEST HAUL

**Guardian®**  
**HP**  
HUB SEALS



### **Single-Step, Error-Proof Installation**

Installation right on the axle instead of the hub bore assures positive alignment every time with virtually error-proof installation. There's no tool impact on the seal causing damage or installation-related failures. Guardian® HP is easy to remove and service, with no bearings damaged during seal removal.

### **Technologically Advanced Seal**

Guardian® HP has been developed for extra protection and greater sealing with its high performance sealing lip and superior contamination exclusion. The rubber outer diameter allows for faster hub cleaning with less corrosion damage to the hub.

### **Trailer and Axle OEM Standard Seal**

The axle installation is durable and unique with proven success for over 25 years. Enhanced features offer improved cost-per-mile performance with simple, one-step axle installation. Guardian® HP is the seal of choice in the heavy duty trailer industry.

# HUB SEALS

## GUARDIAN® HP Application Reference Guide

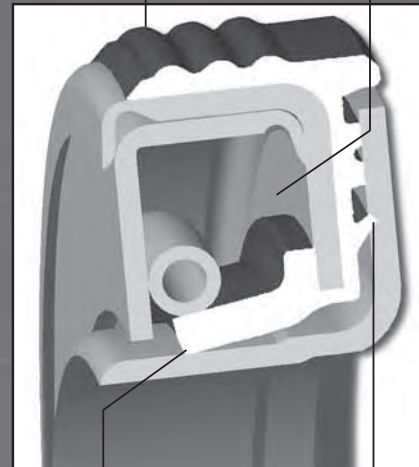


APPLICATION	GUARDIAN® HP	INNER BEARING	UNIVERSAL AXLE TOOL HEADS
19,000# Trailer Axle Standard Forge, Dana, Meritor, Eaton	307-0713	663	555-5100
Pro-Par Trailer Axle Fruehauf, Eaton P-22 Meritor TP, Dana	307-0723	HM518445	555-5023
22,500# Trailer Axle Meritor, Standard Forge, Dana Eaton	307-0743	HM218248	555-5039
12,000# Front Axle Meritor, Eaton Ford, Freightliner, Kenworth, Western Star, Navistar Peterbilt, Volvo GM	308-0836	39581 HM212044 HM212049-X HM212047	555-5062 555-5061 555-5098 555-5066
16,000# Front Axle Ford, Navistar, Mack, Meritor, White, Kenworth, Volvo GM, Western Star, Peterbilt	308-0864	6461A	555-5007
34,000# Drive Axle, Mack 44,000# Drive Axle, Mack	309-0903 309-0904	580, 582 663, HM516449-C HM516449-A	555-5072 555-5072 555-5073
38,000# 46,000# Tandem Axles, Eaton, Ford, Freightliner, Kenworth, Western Star, Peterbilt, Meritor, Navistar, Volvo GM	309-0973	594,-A 598,-A	555-507 555-5071

### GUARDIAN® HP SEAL

Three O.D. Beads  
For Easier Hub Docking

Semi-Unitized Design



High Performance  
Sealing Lip

Flexible Containment  
Exclusion Lip

Sealing lip, O.D. beads, thrust pad, and flexible containment exclusion lip are all molded as a single unit from high performance HNBR-Teflon® elastomer for fewer leak paths and better heat resistance.

## GUARDIAN® HP Interchange

GUARDIAN® HP	STEMCO	SKF	SKF PLUS	SKF LONGLIFE	NATIONAL	5 STAR	OUTRUNNER
307-0713	372-7098	40136	40133	40146	370036A	380036A	850
307-0723	372-7099	42623	42623	42631	370065A	380065A	851
307-0743	372-7097	46305	46304	46308	370025A	380025A	859
308-0836	382-8036	35066	35059	35102	370001A	380001A	847
308-0864	382-8064	43764	43763	N/A	370048A	380048A	863
309-0903	392-9094	45099	45097	45108	370022A	380022A	856
309-0904	392-9112 392-9130	42672	42671	N/A	370031A	380031A	852
309-0973	392-9131	47697	47695	47693	37003A	38003A	861

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# HUB INSTALLED

## UNITIZED DESIGN

**Discover®**



### **Increase the Performance Expectations of Wheel Ends**

The Discover® seal features a high temperature elastomeric co-polymer sealing element. The revolutionary design incorporates hydrodynamic “pumping” features to keep the lubricant where it is intended to be.

### **Maintain the Lubricant’s Integrity to Lengthen the Life of the Seal**

The premium sealing element is protected by a four-zone labyrinth to provide unmatched contaminant exclusion and performance.

### **Have Complete Confidence During the Installation Stage**

Discover® seal’s piloted entry allows an easy and square installation every time. The ridged steel case is the impact point for the tool head to maintain the internal geometries.

### **Reduce Removal Time and Effort Without Special Tools or Adjacent Component Damage**

The Discover® seal consists of a bonded, ribbed rubber OD and ID for easier removals, yet STEMCO’s patented “SMART” anti-rotation features insure positive positioning and locking of the seal to the spindle.

### **Extended Warranty Component**

Install the Discover® seal with STEMCO’s other premium wheel end components to obtain the Platinum Performance System.™ This system combines the Discover® or Guardian® HP seal, Pro-Torq® nut, and Sentinel® hub cap for a 3-year warranty.

# DISCOVER<sup>®</sup>

## High Performance...Revolutionary Design



A Higher Standard of Performance.<sup>SM</sup>  
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### DISCOVER<sup>®</sup> CROSS REFERENCE GUIDE

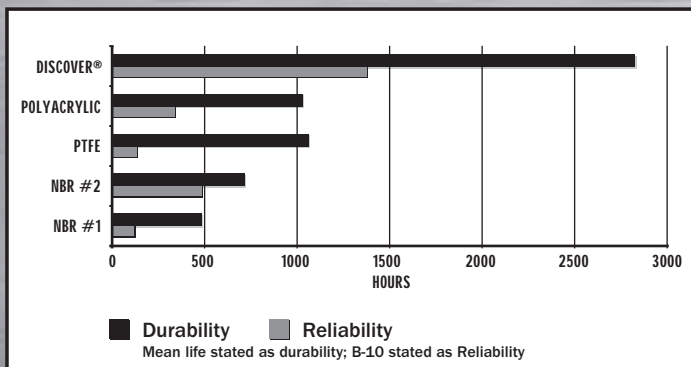
APPLICATIONS	DISCOVER <sup>®</sup> PART NUMBER	INNER BEARING	HUB TOOL PART NUMBER	BEARING GUIDE
19,000# Trailer Axle Standard Forge, Dana, Meritor, Eaton	373-0213	663	551-5313	570-0023
Pro-Par Trailer Axle, Fruehauf, Eaton P-22, Meritor TP, Dana	373-0223	HM518445	551-5401	570-0025
22,500# Trailer Axle, Meritor, Standard Forge, Dana, Eaton	373-0243	HM218248	551-5412	570-0026
12,000# Front Axle, Meritor, Eaton, Ford, Freightliner, Kenworth, Western Star, Navistar, Peterbilt, Volvo GM	383-0236	39581	551-5346	570-0017
		HM212044	551-5346	570-0018
		HM212049,-X	551-5346	570-0020
		HM212047	551-5346	570-0019
12,000# Mack Front Axle	*383-0239	641 or HM212049	551-5413	570-0020
16,000# Front Axle, Ford, Navistar, Mack, Meritor, White, Kenworth, Western Star, Peterbilt, Volvo GM	383-0264	6461A	551-5327	570-0022
34,000#, 38,000# Drive Axle, Mack	393-0203	580 or 582	551-5415	570-0023
44,000# Drive Axle, Mack	393-0204	663 or HM516449,-A	551-5414	570-0023
34,000# Drive Axle, Eaton, Ford, Navistar, Volvo GM	393-0212	47685 or 47686	551-5416	570-0023
		47678 or 5760	551-5416	570-0022
38,000#, 46,000# Tandem Axles, Eaton, Ford, Freightliner, Kenworth, Western Star, Peterbilt, Meritor, Navistar, Volvo GM	393-0273	594 or 594A	551-5320	570-0028
		598 or 598A	551-5320	570-0027

\*Also sold as 383-8239 Kit, which includes the 310-1132 shoulder bushing.

### DISCOVER<sup>®</sup> INTERCHANGE

DISCOVER <sup>®</sup>	SKF	SKF PLUS	SKF LONGLIFE	NATIONAL	5 STAR	OUTRUNNER
373-0213	40136	40133	40146	370036A	380036A	850
373-0223	42623	42622	42631	370065A	380065A	851
373-0243	46305	46304	46308	370025A	380025A	859
383-0236	35066	35059	35102	370001A	380001A	847
383-0239	39988	39977	39990	370033A	N/A	N/A
383-0264	43764	43763	N/A	370048A	380048A	863
393-0203	45099	45097	45108	370022A	380022A	856
393-0204	42672	42671	N/A	370031A	380031A	852
393-0212	38780	38779	38783	370023A	380023A	849
393-0273	47697	47695	47693	370003A	380003A	861

STEMCO Discover<sup>®</sup> vs. competitor seals (listed by main sealing lip material). Hours shown are accelerated lab life test hours.

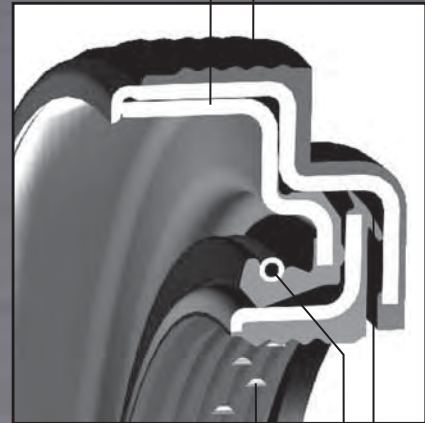


### DISCOVER<sup>®</sup>

#### Seal Design Features

Bonded Rubber OD Offers Easy Installation with "Piloted" Entry

Rugged Modular Design Avoids Installation Damage



Patented "Smart" Anti-Rotation ID "Locks" onto the Axle

High Temperature Elastomeric Co-Polymer Sealing Element Incorporating Hydrodynamic "Pumping" Features

Four Zone Labyrinth Provides Unmatched Contaminant Exclusion

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FAX: 877-244-4555

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# REVOLUTIONARY HUB-INSTALLED UNITIZED SEAL

## ***Voyager®***



### **Simpler, Quicker Installations**

The Voyager® seal features a bonded rubber OD and piloted entry ensuring an easy and square installation. The ribbed rubber OD also forms a superior seal between the seal case and the hub bore without the use of additional sealant

### **Reduce Premature Failures and Rework**

The Voyager® seal utilizes a 4-zone labyrinth contaminant exclusion system. This technology is incorporated into a fully-unitized hub-installed seal.

### **Avoid Seal Damage Upon Installation**

The Voyager® seal's thick wall steel construction allows positive hub installation without warping or bending the seal.

### **Increase Reliability through Superior Material and Design**

The temperature-resistant polymer with hydrodynamic "pumping" features keeps the lubricant where it is intended to be.

### **Eliminate "Pry-Bar" Removal and Adjacent Component Damage**

The Voyager® seal's bonded rubber ID and OD allow for easier removal, yet STEMCO's patented anti-rotation "SMART" features lock the ID surface in place.

### **Superior Contamination Resistance**

Voyager® seals resist penetration of both air and water borne contamination while allowing the seal to run cooler.

# VOYAGER<sup>®</sup>

## Voyager<sup>®</sup> Cross Reference Guide



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APPLICATION	VOYAGER <sup>®</sup> P/N	TYPE	INNER BEARING	HUB TOOL P/N	BEARING GUIDE
19,000# Trailer Axle, Standard Forge, Dana, Meritor, Eaton	373-0113	L2	663	551-5313	570-0023
Pro-Par Trailer Axle, Fruehauf, Eaton P-22, Meritor TP, Dana	373-0123	L1	HM518445	551-5401	570-0025
22,500# Trailer Axle, Meritor, Standard Forge, Dana, Eaton	373-0143	L1	HM218248	551-5412	570-0026
20,000# Trailer Axle, Meritor, Shuler	373-0144	L3	665A	551-5339	570-0024
25,000# Trailer Axle	373-0191	L2	749/643	551-5401	570-0003
Meritor Front Transit	383-0101	L2	6386 or 6389 6379	551-5420	570-0020 N/A
12,000# Front Axle, Meritor, Eaton, Ford, Freightliner, Kenworth, Western Star, Navistar, Peterbilt, Volvo GM	383-0136	L1	39581 HM212044 HM212049,-X HM212047	551-5346 551-5346 551-5346 551-5346	570-0017 570-0018 570-0020 570-0019
12,000# Mack Front Axle	*383-0139	L2	641 or HM212049	551-5413	570-0020
Navistar Front Axle, FA309, FA329	383-0153	L3	641 or HM212049 H715345	551-5419 551-5419	570-0020 570-0021
9,000# Front Axle, Navistar, FA 109 Cast Wheel '79 and Up	383-0156	L2	641 H715345	551-5344 551-5344	570-0020 571-0021
16,000# Front Axle, Ford, Navistar, Mack, Meritor, White, Kenworth, Western Star, Peterbilt, Volvo GM	383-0164	L2	6461A	551-5327	570-0022
6,000#, 7,500#, Front Axle, Navistar	383-0166	L3	JM207049 or JM205149	551-5423	570-0036 570-0033
GMC F-120 1985 and up	383-0171	L2	HM212047	551-5403	570-0019
8,000# Front Axle, GMC Topkick	383-0175	L2	JM205149	551-5417	570-0033
11,000# Front Axle, GMC Topkick	383-0176	L2	33212	551-5418	570-0031
34,000#, 38,000# Drive Axle, Mack	393-0103	L2	580 or 582	551-5415	570-0023
44,000# Drive Axle, Mack	393-0104	L2	663 or HM516449,-A	551-5414	570-0023
34,000# Drive Axle, Eaton, Ford, Navistar, White	393-0112	L2	47685 or 47686 47678 or 5760	551-5416 551-5416	570-0023 570-0022
17,000# Single and 34,000# Tandem, GMC	393-0115	L3	47686	551-5424	570-0023
Meritor Drive Transit	393-0134	L2	6580 or 6559	551-5421 551-5421	570-0025 570-0023
50,000#, 60,000# Drive Axle, Mack	393-0148	L2	687 or 780	551-5400	570-0032
38,000#, 46,000# Tandem Axles, Eaton, Ford, Freightliner, Kenworth, Western Star, Peterbilt, Meritor, Navistar, Volvo GM	393-0173	L1	594 or 594A 598 or 598A	551-5320 551-5320	570-0028 570-0027

\* Also sold as 383-8139 Kit, which includes the 310-1132 shoulder bushing.

## Voyager<sup>®</sup> Interchange

VOYAGER <sup>®</sup>	SKF	SKF PLUS	NATIONAL RED	NATIONAL GOLD	OUTRUNNER
373-0113	40136	40133	370036A	380036A	850
373-0123	42623	42622	370065A	380065A	851
373-0143	46305	46304	370025A	380025A	859
373-0144	43752	43754	370037A	N/A	853
373-0191	42624	N/A	370107A	N/A	N/A
383-0101	40086	40088	370066A	N/A	N/A
383-0136	35066	35059	370001A	380001A	847
383-0139	39988	39977	370033A	N/A	N/A
383-0153	44922	44919	370124A	N/A	855
383-0156	45103	45102	370131A	380131A	857
383-0164	43764	43763	370048A	380048A	863
383-0166	28758	N/A	370150A	N/A	N/A
383-0171	36358	36357	370011A	N/A	N/A
383-0175	N/A	N/A	370199A	N/A	N/A
383-0176	N/A	N/A	370211A	N/A	N/A
393-0103	45099	45097	370022A	380022A	856
393-0104	42672	42671	370031A	380031A	852
393-0112	38780	38779	370023A	380023A	849
393-0115	38750	N/A	370024A	N/A	848
393-0134	48690	N/A	370195A	N/A	N/A
393-0148	52658	N/A	370069A	380069A	N/A
393-0173	47697	47695	370003A	380003A	861

### VOYAGER<sup>®</sup> SEAL

Rugged Thick Wall Steel Construction Avoids Installation Damage

Hub Installed with "Piloted" Entry Features

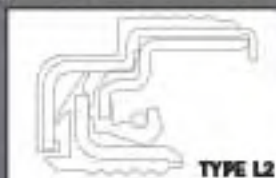


Bonded Rubber OD & ID Seals Bore & Spindle with Easier Installation & Removal

Fully Utilized Design Provides Protection of Main Sealing Lip

4 - Zone Labyrinth "Active" Contaminant Exclusion System

Temperature Resistant Polymer with Hydrodynamic "Pumping" Features



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TOTAL QUALITY MAINTENANCE<sup>SM</sup>

# LASTING PROTECTION FOR DIRT EXCLUSION

## GRITGUARD®



### **Dirt Exclusion for Extended Seal Performance**

A two-piece design, the Grit Guard® Seal features a spindle-installed deflector ring. This provides dirt exclusion for extended seal performance and insures a new surface for the sealing lip. The deflector ring can often repair a damaged or worn spindle shoulder.

### **Superior Quality Metal Case Seal**

The hub-installed metal case seal provides a metal-to-metal continuous press fit between the seal and hub. In addition, a blue bore sealant is applied to the seal to prevent minor seepage between the seal and hub.

### **Flexible and Durable Elasto-Leather Seal**

Grit Guard's Elasto-Leather sealing lip remains flexible and durable even while operating in the most grueling environments. Also, the lip rotates on the deflector ring for improved heat dissipation and less lip travel per wheel rotation.

### **Weathering the Toughest Applications**

Grit Guard® is available for the rugged, severe duty applications that other seals are not available for.



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# HUB SEALS

## GRIT GUARD® Application Reference Guide



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APPLICATION	GRIT GUARD® P/N	SEAL/RING	INNER BEARING	UNIVERSAL HEAD*/ HUB TOOL**	BEARING GUIDE
20,000# Trailer Axle, Meritor, Shuler	372-7095	2118/1510	665A	555-5069 / 551-5321	570-0024
22,500# Trailer Axle, Dana, Eaton, Meritor, Standard Forge	372-7097	2110/1504	HM218248	555-5039 / 551-5412	570-0026
19,000# Trailer Axle, Dana, Eaton, Meritor, Standard Forge	372-7098	2109/1507	663	555-5100 / 551-5313	570-0023
Pro-Par Trailer Axle, Dana, Eaton P-22, Fruehauf, Meritor TP	372-7099	2023/1503	HM518445	555-5023 / 551-5401	570-0025
19,000# Drive Axle, Eaton, Ford, GMC, Navistar, White	392-9088	2113/1517	594 or 594A	555-5076 / 551-5412	570-0028
50,000# & 60,000# Drive Axle, Mack	392-9089	2097/1516	687 or 780	555-5004 / 551-5400	N/A
34,000# Drive Axle, Mack	392-9094	2129/1511	580 or 582	555-5072 / 551-5393	570-0023
38,000#, 40,000#, 42,000# Tandem Drive Axles, Eaton, Ford, GMC, Mack, Navistar, White	392-9096	2114/1508	595 598	555-5072 / 551-5412 555-5071 / 551-5412	570-0023 570-0027
34,000# Drive Axle, Eaton, Ford, Navistar, White	392-9099	2102/1501	47685 or 47686 47678 or 5760	555-5031 / 551-5318 555-5074 / 551-5318	570-0023 570-0022
44,000# Drive Axle, Mack	392-9112	2213/1515	663 or HM516449, -C	555-5072 / 551-5364	570-0023
44,000# Drive Axle, Mack	392-9130	2213/1519	HM516449A	555-5073 / 551-5364	570-0023
38,000#, 46,000# Tandem Axles, Eaton, Ford, Freightliner, Kenworth, Meritor, Navistar, Peterbilt, Volvo, GM, Western Star	392-9131	2106/1525	594 or 594A 598 or 598A	555-5076 / 551-5320 555-5071 / 551-5320	570-0028 570-0027
38,000# Drive Axle, Eaton, GMC, Mack, Meritor	392-9132	2104/1018	495AX 33287	555-5074 / 551-5383 555-5011 / 551-5383	N/A N/A

\*Use Universal Body 555-0001 with 555 Series Tool Heads.

\*\*Use Universal Fleet Tool Handle 551-0001 with 551 Series Tool Heads.

## GRIT GUARD® Interchange

GRIT GUARD®	SKF	SKF PLUS	NATIONAL	OUTRUNNER	TRI SEAL
372-7095	43753	43752	370037A	853	69599
372-7097	46305	46304	370025A (38)	859	69598
372-7098	40136	40133	370036A (38)	850	69597
372-7099	42623	42622	370065A (38)	851	69596
392-9088	45160	45158	370021A	307	69791
392-9089	52664	52658	370069A (38)	N/A	69781
392-9094	45099	45097	370022A (38)	856	70796
392-9096	43860	43861	370019A	854	69797
392-9099	38780	38779	370023A (38)	849	69794
392-9112	42672	42671	370031A (38)	852	69788
392-9130	42672	42671	370031A (38)	852	69788
392-9131	47697	47695	370003A (38)	861	69799
392-9132	47690	N/A	370005A	308	69757

### GRIT GUARD®

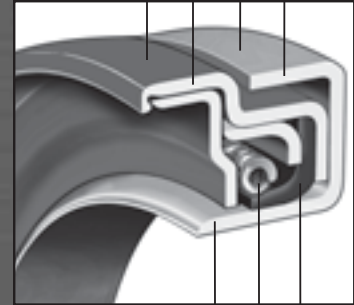
Designed to reduce maintenance and prevent unnecessary wear on expensive spindles, the Grit Guard® two-piece design provides effective and lasting protection against contamination.

Spindle installed deflector ring

Grit Guard® dust shield for improved dirt exclusion

Hub installed metal case seal

Blue bore sealant



Deflector ring provides heat sink into spindle

Spring

Elasto-Leather sealing element

STEMCO LP - USA

P.O. Box 1989 · Longview, TX 75606-1989

(903) 758-9981 · 1-800-527-8492

FAX: 1-800-874-4297 · www.stemco.com

STEMCO - Canada

5900 Ambler Drive, Units 4 & 5

Mississauga, ON L4W 2N3

(905) 206-9922 · 877-232-9111

FAX: 877-244-4555

ISO/TS 16949

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Hudson 10-317 (Rev. 09/08)



APPLICATION	GUARDIAN® GUARDIAN® HP	VOYAGER®	DISCOVER®	GRIT GUARD® STANDARD	GG/STANDARD COMPONENTS SEAL/RING	INNER BEARING	UNIVERSAL AXLE TOOL HEADS	UNIVERSAL HUB TOOL HEADS	BEARING GUIDE
19,000# Trailer Axle Standard Forge, Dana, Meritor, Eaton	307-0713	373-0113	373-0213	372-7098	2109/1507	663	555-5100	551-5313	570-0023
Pro-Par Trailer Axle Fruehauf, Eaton P-22, Meritor TP, Dana	307-0723	373-0123	373-0223	372-7099	2023/1503	HM518445	555-5023	551-5401	570-0025
22,500# Trailer Axle Meritor, Standard Forge, Dana, Eaton	307-0743	373-0143	373-0243	372-7097	2110/1504	HM218248	555-5039	551-5412	570-0026
20,000# Trailer Axle, Meritor, Shuler	307-0744	373-0144	N/A	372-7095	2118/1510	665A	555-5069	551-5321	570-0024
12,000# Meritor Front Transit	N/A	383-0101	N/A	<b>382-8001</b>	2086/1013	6386 or 6389 6379	555-5060 555-5014	551-5420	570-0020
Meritor Center Point	N/A	N/A	N/A	382-8028	2028/1028	756A	555-5067	551-5385	N/A
GMC F-120 to 1985	N/A	N/A	N/A	382-8034	2034/1034	HM212047	555-5066	551-5387	570-0019
12,000# Front Axle Meritor, Eaton, Ford, Freightliner, Kenworth, Western Star, Navistar, Peterbilt, Volvo GM	308-0836	383-0136	383-0236	382-8036	2036/1036	39581 HM212044 HM212049, -X, X1 HM212047	555-5062 555-5061 555-5098 555-5066	551-5346 551-5346 551-5346 551-5346	570-0017 570-0018 570-0020 570-0019
12,000# Mack Front Axle Navistar Front Axle, FA 309, FA 329	N/A 308-0853	383-0139 383-0153	383-0239 N/A	<b>382-8039</b> <b>382-8053</b>	2039/1038 2181/1093	641 or HM212049 641 or HM212049 H715345	NONE REQ'D 555-5060 555-5070	551-5413 551-5419 551-5419	570-0020 570-0020 570-0021
9,000# Front Axle, Navistar, FA 109 Cast Wheel '79 and up	308-0855	383-0156	N/A	<b>382-8056</b>	----	641	555-5060	551-5344	570-0020
12,000# Front Axle, Navistar	308-0856	383-0156	N/A	<b>382-8056</b>	2199/1093	H715345	555-5070	551-5344	570-0021
7,000#, 9,000# Front Axle, Ford	308-0863	N/A	N/A	382-8063	2133/1036	39581 45284	555-5062 555-5064	551-5353 551-5353	570-0017 N/A
16,000# Front Axle, Ford, Navistar, Mack, Meritor, White, Kenworth, Western Star, Peterbilt, Volvo GM	308-0864	383-0164	383-0264	382-8064	2137/1037	6461A	555-5007	551-5327	570-0022
6,000#, 7,500# Front Axle, Navistar	308-0866	383-0166	N/A	382-8066	2164/1008	JM207049 JM205149	555-5088 555-5089	551-5423 551-5423	570-0036 570-0033
Volvo FA 7.5 Front Axle	308-0870	N/A	N/A	N/A	N/A	JF7049A	555-5297	N/A	N/A
GMC F-120 1985 and up	N/A	383-0171	N/A	<b>382-8071</b>	2216/1034	HM212047	555-5066	551-5403	570-0019
8,000# Front Axle, GMC Topkick	N/A	383-0175	N/A	N/A	N/A	JM205149	NONE REQ'D	551-5417	570-0033
11,000# Front Axle, GMC Topkick	N/A	383-0176	N/A	N/A	N/A	33212	NONE REQ'D	551-5418	570-0031
34,000#, 38,000# Drive Axle, Mack	309-0903	393-0103	393-0203	392-9094	2129/1511	580 or 582	555-5072	551-5415	570-0023
44,000# Drive Axle, Mack	309-0904	393-0104	393-0204	392-9112 392-9130	2213/1515 2213/1519	663 or HM516449,-C HM516449A	555-5072 555-5073	551-5414 551-5414	570-0023 570-0023
34,000# Drive Axle Eaton, Ford, Navistar, White	309-0912	393-0112	393-0212	392-9099	2102/1501	47685 or 47686 47678 or 5760	555-5031 555-5074	551-5416 551-5416	570-0023 570-0022
17,000# Single and 34,000# Tandem, GMC	309-0915	393-0115	N/A	Refer to above 392-9099 set	----	47686	555-5031	551-5424	570-0023
Meritor Drive Transit	N/A	393-0134	N/A	<b>392-9034</b>	2061/1066	6580 6559	555-5023 555-5072	551-5421	570-0025 570-0023
15,000# Drive Axle, Ford, Meritor F-Series	309-0935	N/A	N/A	392-9035	2057/1062	33287	555-5011	551-5353	N/A
Mack Drive Axle 50,000# and 60,000#	309-0948	393-0148	N/A	392-9089	2097/1516	687 or 780	555-5004	551-5400	570-0032
GMC H/T 150 and H/T 175 Ford, Meritor H 170, 172, 175	309-0957	N/A	N/A	392-9057	2104/1018	495AX 33287	555-5074 555-5011	551-5383 551-5383	N/A N/A
38,000# Drive Axle Mack, GMC, Eaton, Meritor	309-0960	N/A	N/A	392-9132	2115/1530	598A 594A	555-5071 555-5076	551-5356 551-5356	570-0027 570-0028
34,000# Drive Axle, Meritor	309-0961	N/A	N/A	392-9095	2117/1509	580, 582 or 663A	555-5072	551-5325	N/A
19,000# Drive Axle Eaton, Navistar, Ford, GMC, White	309-0964	N/A	N/A	392-9088	2113/1517	594 or 594A	555-5076	551-5412	570-0028
Van Hool Bus	391-9066	N/A	N/A	392-9066	2115/1107	594A	555-5076	551-5356	570-0028
38,000#, 40,000# and 42,000# Tandem Drive Axles, Ford, Eaton, GMC, Mack, Navistar, White	309-0965	N/A	N/A	392-9092 392-9096	2131/1508 2114/1508	598 595	555-5071 555-5072	551-5363 551-5412	570-0027 570-0023
38,000# Drive Axle, Eaton, Meritor, White	309-0970	N/A	N/A	392-9087	2162/1502	683XA or 683 681A	555-5076 555-5071	551-5333 551-5333	570-0028 570-0027
38,000#, 46,000# Tandem Axles, Eaton, Ford, Freightliner, Kenworth, Western Star, Peterbilt, Meritor, Navistar, Volvo GM	309-0973	393-0173	393-0273	392-9131	2106/1525	594 or 594A 598 or 598A	555-5076 555-5071	551-5320 551-5320	570-0028 570-0027

## Footnotes

- SS4 Seal.
- Use 555 Series Tool Heads with Universal Tool Body 555-0001. The Axle Tool Heads Install the Standard/Grit Guard® Rings & Guardian®/SS4 Seals.
- Use 551 Series Tool Heads with new Universal Tool Handle 551-0001. The Hub Tool Installs the Standard Seal, Voyager® and Discover® Seals.
- Use with 5.687" Bore Only.
- Use with 5.500" Bore Only.
- Does not fit Mack Applications.
- Fits Mack Application Only.
- Use with Wabco ABS.
- HP Design.
- Use 551-5395 for 320-2039 seal.
- Use 551-5393 for 320-2129 seal.
- Use 551-5364 for 320-2213 seal.
- 383-8139 includes 310-1132 shoulder bushing.
- 383-8239 includes 310-1132 shoulder bushing.
- Use 551-5349 for 320-2181 seal.
- Use 551-5318 for 320-2102 seal.
- Use 551-5356 for 320-2061 seal.
- Use 551-5366 for 320-2164 seal.
- Use 551-5311 for 2086 seal.
- Does not fit 5760 Inner Bearing.
- Does not fit 6379 Inner Bearing.
- White shaded numbers indicate obsolete parts.

## SKF to STEMCO

## National to STEMCO

SKF	GUARDIAN® HP HUB-SEAL	GRIT GUARD® / STD. WHEEL SET	VOYAGER®	DISCOVER®	NATIONAL	GUARDIAN® HP HUB-SEAL	GRIT GUARD® / STD. WHEEL SET	VOYAGER®	DISCOVER®
28758	308-0866	382-8066	383-0166		370001A (380001A)	308-0836	382-8036	383-0136	383-0236
29480			383-0176		370003A (380003A)	309-0973	392-9131	393-0173	393-0273
35058	308-0836	382-8036	383-0136	383-0236	370011A		382-8071	383-0171	
35059	308-0836	382-8036	383-0136	383-0236	370022A (380022A)	309-0903	392-9094	393-0103	393-0203
35066	308-0836	382-8036	383-0136	383-0236	370023A (380023A)	309-0912	392-9099	393-0112	393-0212
35102	308-0836	382-8036	383-0136	383-0236	370024A	309-0915	392-9099	393-0115	
36357		382-8071	383-0171		370025A (380025A)	307-0743	372-7097	373-0143	373-0243
36358		382-8071	383-0171		370031A (380031A)	309-0904	392-9112	393-0104	393-0204
36365		382-8071	383-0171		370033A/AR12		382-8039	383-0139	383-0239
38748	309-0915	392-9099	393-0115		370034A	309-0973	392-9131	393-0173	393-0273
38750	309-0915	392-9099	393-0115		370036A (380036A) □	307-0713	372-7098	373-0113	373-0213
38776	309-0912	392-9099	393-0112	393-0212	370037A	307-0744	372-7095	373-0144	
38779	309-0912	392-9099	393-0112	393-0212	370048A (380048A)	308-0864	382-8064	383-0164	383-0264
38780	309-0912	392-9099	393-0112	393-0212	370065A (380065A)	307-0723	372-7099	373-0123	373-0223
38783	309-0912	392-9099	393-0112	393-0212	370066A		382-8001	383-0101	
39977/455031		382-8039	383-0139	383-0239	370069A	309-0948	392-9089	393-0148	
39979		382-8039	393-0139	393-0239	370086A	309-0973	392-9131	393-0173	393-0273
39990		382-8039	383-0139	383-0239	370107A		372-7091	373-0191	
39988/455031		382-8039	383-0139	383-0239	370124A	308-0853	382-8053	383-0153	
40086		382-8001	383-0101		370131A (380131A)	308-0856 □	382-8056	383-0156 □	
40088		382-8001	383-0101		370150A	308-0866	382-8066	383-0166	
40091		382-8001	383-0101		370182A	308-0864	382-8064	383-0164	383-0264
40129	307-0713	372-7098	373-0113	373-0213	370195A		392-9034	393-0134	
40133	307-0713	372-7098	373-0113	373-0213	370198A/AR25		382-8039	383-0139	383-0239
40136	307-0713	372-7098	373-0113	373-0213	370199A		N/A	383-0175	
40146	307-0713	372-7098	373-0113	323-0213	370211A		N/A	383-0176	
42622	307-0723	372-7099	373-0123	373-0223	370349A □	307-0713	372-7098	373-0113	373-0213
42623	307-0723	372-7099	373-0123	373-0223	376590A	307-0723	372-7099	373-0123	373-0223
42624		372-7091	373-0191						
42627	307-0723	372-7099	373-0123	373-0223					
42631	307-0723	372-7099	373-0123	373-0223					
42671	309-0904	392-9112	393-0104	393-0204					
42672	309-0904	392-9112	393-0104	393-0204					
42673	309-0904	392-9112	393-0104	393-0204					
43752	307-0744	372-7095	373-0144		301	307-0713	372-7098	373-0113	373-0213
43753	307-0744	372-7095	373-0144		302	307-0723	372-7099	373-0123	373-0223
43754	307-0744	372-7095	373-0144		303	307-0743	372-7097	373-0143	373-0243
43761	308-0864	382-8064	383-0164	383-0264	30323	N/A	392-9018	N/A	
43763	308-0864	382-8064	383-0164	383-0264	304	309-0973	392-9131	393-0173	393-0273
43764	308-0864	382-8064	383-0164	383-0264	305	308-0836	382-8036	383-0136	383-0236
43875	309-0973 □	392-9131 □	393-0173	393-0273	306	309-0912 / 309-0915	392-9099	393-0112	393-0212
44916	308-0853	382-8053	383-0153		307	309-0964	392-9088	N/A	
44919	308-0853	382-8053	383-0153		308	309-0960	392-9132	N/A	
44922	308-0853	382-8053	383-0153		847	308-0836	382-8036	383-0136	383-0236
45097	309-0903	392-9094	393-0103	393-0203	848	309-0912 / 309-0915	392-9099	393-0115	
45093	309-0903	392-9094	393-0103	393-0203	849	309-0912 / 309-0915	392-9099	393-0112	393-0212
45099	309-0903	392-9094	393-0103	393-0203	850	307-0713	372-7098	373-0113	373-0213
45102	308-0856 □	382-8056	383-0156 □		851	307-0723	372-7099	373-0123	373-0223
45103	308-0856 □	382-8056	383-0156		852	309-0904	392-9112 □	393-0104	393-0204
45108	309-0903	392-9094	393-0103	393-0203	853	307-0744	372-7095	373-0144	
45152 □	309-0973	392-9131	393-0173	393-0273	854	309-0965	392-9092	N/A	
46300	307-0743	372-7097	373-0143	373-0243	855	308-0853	382-8053	383-0153	
46304	307-0743	372-7097	373-0143	373-0243	856	309-0903	392-9094	393-0103	393-0203
46305	307-0743	372-7097	373-0143	373-0243	857	308-0856	382-8056	383-0156	
46308	307-0743	372-7097	373-0143	373-0243	858	309-0964	392-9088	N/A	
47691	309-0973	392-9098	393-0173	393-0273	859	307-0743	372-7097	373-0143	373-0243
47692	309-0973	392-9098	393-0173	393-0273	860	309-0960	392-9132	N/A	
47693	309-0973	392-9131	393-0173	393-0273	861	309-0973	392-9131	393-0173	393-0273
47695	309-0973	392-9131	393-0173	393-0273	863	308-0864	382-8064	383-0164	383-0264
47697	309-0973	392-9131	393-0173	393-0273	88319	309-0973	393-0173	393-0173	393-0273
48690		392-9034	393-0134		UZ0301E0	307-0713	392-7098	373-0113	373-0213
48691		392-9034	393-0134		UZ0302E0	307-0723	372-7099	373-0123	373-0223
52658	309-0948	392-9089	393-0148		UZ0303E0	307-0743	372-7097	373-0143	373-0243
52664	309-0948	392-9089	393-0148		UZ0304E0	309-0973	392-9131	393-0173	393-0273
					UZ0305E0	308-0836	382-8036	383-0136	383-0236
					UZ0306E0	309-0912	392-9099	393-0112	393-0212

## Outrunner to STEMCO

OUTRUNNER	GUARDIAN® HP HUB-SEAL	GRIT GUARD® / STD. WHEEL SET	VOYAGER®	DISCOVER®
301	307-0713	372-7098	373-0113	373-0213
302	307-0723	372-7099	373-0123	373-0223
303	307-0743	372-7097	373-0143	373-0243
30323	N/A	392-9018	N/A	
304	309-0973	392-9131	393-0173	393-0273
305	308-0836	382-8036	383-0136	383-0236
306	309-0912 / 309-0915	392-9099	393-0112	393-0212
307	309-0964	392-9088	N/A	
308	309-0960	392-9132	N/A	
847	308-0836	382-8036	383-0136	383-0236
848	309-0912 / 309-0915	392-9099	393-0115	
849	309-0912 / 309-0915	392-9099	393-0112	393-0212
850	307-0713	372-7098	373-0113	373-0213
851	307-0723	372-7099	373-0123	373-0223
852	309-0904	392-9112 □	393-0104	393-0204
853	307-0744	372-7095	373-0144	
854	309-0965	392-9092	N/A	
855	308-0853	382-8053	383-0153	
856	309-0903	392-9094	393-0103	393-0203
857	308-0856	382-8056	383-0156	
858	309-0964	392-9088	N/A	
859	307-0743	372-7097	373-0143	373-0243
860	309-0960	392-9132	N/A	
861	309-0973	392-9131	393-0173	393-0273
863	308-0864	382-8064	383-0164	383-0264
88319	309-0973	393-0173	393-0173	393-0273
UZ0301E0	307-0713	392-7098	373-0113	373-0213
UZ0302E0	307-0723	372-7099	373-0123	373-0223
UZ0303E0	307-0743	372-7097	373-0143	373-0243
UZ0304E0	309-0973	392-9131	393-0173	393-0273
UZ0305E0	308-0836	382-8036	383-0136	383-0236
UZ0306E0	309-0912	392-9099	393-0112	393-0212

## Footnotes

- Drive Application.
- Trailer Application.
- Front Application.
- With 364-6402.
- For IHC FA-109 1979 and up with spoke wheel, use 308-0855 Guardian Set.
- With 364-6435.
- Ring no longer available.
- White shaded numbers indicate obsolete parts.

# Guardian®/Guardian® HP to Standard/Grit Guard® and Voyager®/Discover® Hub Seal Cross Reference

Guardian® / Guardian-HP Seal No.	Inner Bearing Cone	Universal Tool Head	Standard/ Grit Guard® Set	Voyager® Discover®	Guardian®/ Guardian-HP Seal No.	Inner Bearing Cone	Universal Tool Head	Standard/ Grit Guard® Set	Voyager® Discover®
*307-0713	663	555-5100	372-7098	373-0113 373-0213	309-0912	47685 47686	555-5031	392-9099	393-0112 393-0212
*307-0723	HM518445	555-5023	372-7099	373-0123 373-0223		47678 5760	555-5074		
*307-0743	HM218248	555-5039	372-7097	373-0143 373-0243	309-0915	47685 47686	555-5031	392-9099	N/A
307-0744	665A	555-5069	372-7095	N/A	309-0935	33281 Thru 61 33287 62 Up	555-5002	392-9035	N/A
*308-0836	39581	555-5062	382-8036	383-0136 383-0236			555-5011		
308-0853	HM212044, 557A	555-5061	382-8053	383-0153	309-0948	687 780	555-5004	392-9089	393-0148
	HM212049, -X	555-5098			309-0957	495AX	555-5074	392-9057	N/A
	HM212047	555-5066				33287	555-5011	392-9132	N/A
308-0855	641	555-5060	N/A	N/A	309-0960	594A	555-5076	392-9132	N/A
308-0856	H715345	555-5070	382-8056	383-0156		598A	555-5071	392-9095	N/A
308-0863	39581	555-5062	382-8063	N/A	309-0961	580 582 663A	555-5072	392-9095	N/A
*308-0864	45284	555-5064	382-8064	383-0164 383-0264		309-0964	594 594A	555-5076	392-9088
	6461A	555-5007		383-0166	309-0965	595 598	555-5072 555-5071	392-9096	N/A
308-0866	JM207049 JM205149	555-5088 555-5089	382-8066	383-0166	309-0970	683XA 683	555-5076	392-9087	N/A
308-0870	JF7049A	555-5297	N/A	N/A		681A	555-5071	392-9131	393-0173 393-0273
*309-0903	580 582	555-5072	392-9094	393-0103 393-0203	*309-0973	594 594A	555-5076		
*309-0904	663	555-5072	392-9112	393-0104 393-0204	598 598A	555-5071			
	HM516449,-C								

\*Guardian® HP

Use Universal Tool Body 555-0001 with 555 Series Tool Heads.

## Guardian® /Guardian® HP Hub Seal Components

Oil Seal □	Deflector Ring □	Guardian®/ Guardian® HP Seal	Oil Seal □	Deflector Ring □	Guardian®/ Guardian® HP Seal
327-2701	317-1743	*307-0743	327-2713	317-1713	309-0965
327-2702	317-1702	*308-0836	327-2715	317-1756	309-0915
327-2703	317-1703	*309-0973	327-2716	317-1761	309-0970
327-2704	317-1704	*307-0713	327-2717	317-1761	309-0960
327-2705	317-1705	*307-0723	327-2718	317-1720	*309-0904
327-2706	317-1706	*309-0903	327-2719	317-1719	309-0961
327-2707	317-1707	309-0912	327-2721	317-1721	308-0863
327-2708	317-1708	308-0853	327-2724	317-1724	309-0957
327-2709	317-1709	307-0744	327-2727	317-1726	308-0866
327-2710	317-1710	308-0855	327-2728	317-1728	309-0935
	317-1706	308-0856	327-2741	317-1790	309-0948
327-2711	317-1711	*308-0864	327-2757	317-1724	308-0870
327-2712	317-1712	309-0964			

□ 327-Series Oil Seals and 317-Series Deflector Rings are component parts for the Guardian® Hub Seal.

These parts are not sold separately.

\*Guardian® HP

Shaded numbers indicate obsolete parts.

# Standard and Grit Guard® Hub Seal to Set Cross Reference

QUICK REFERENCE

Oil Seal	Axle Ring	Hub Seal Set	Inner Bearing #	Universal Tool Head	Hub Tool	Comment
320-2001	310-1095	392-9001	758	555-5069	551-5398	
			760	555-5079	551-5398	
	310-1103	392-9062	760	555-5079	551-5398	
	For trailer applications, use 310-1045 (set was 370-7019).					
320-2009	310-1028	392-9019	598	555-5071	551-5356	
	310-1079	392-9081	598A	555-5071	551-5356	
320-2012	310-1012	392-9012	47678	555-5074	551-5405	
			47686	555-5031	551-5405	See Set Remarks
			5760	555-5074	551-5405	
320-2017	310-1017	382-8017	39581	555-5062	551-5352	❑
320-2018	310-1008	372-7046	28995	555-5052	551-5351	
	310-1008	382-8018	45284	555-5064	551-5351	
320-2022	310-1050	382-8010	4595 or 39578	None	551-5381	
320-2023	310-1022	372-7022	593	None	551-5401	I Beam Axle Model 5
	310-1023	372-7023	593 & HM518445	555-5023	551-5401	Pro-Par
	310-1041	382-8060	5760 or 6461	None	551-5401	
	310-1130	372-7062	592A or 593	555-5023	551-5401	Modified No. 5 ❑
	315-1503	372-7099	HM518445	555-5023	551-5401	Grit Guard® for Pro-Par only
320-2028	310-1028	382-8028	756A	555-5067	551-5385	
320-2029	310-1018	372-7018	495AX	555-5074	551-5386	
	310-1018	392-9018	495AX	555-5074	551-5386	Ford thru 1969-70 Up use 392-9057 ❑
320-2031	310-1036	382-8025	557A OR HM212044	555-5061	551-5388	
	310-1051	382-8011	559 or 3982	None	551-5388	
320-2032	310-1032	382-8032	HM212049	None	551-5388	
	310-1036	372-7009	39250	555-5066	551-5388	
320-2034	310-1034	382-8034	HM212047	555-5066	551-5387	❑
320-2036	310-1036	382-8036	39581	555-5062	551-5346	
			557A or HM212044	555-5061	551-5346	
			HM212047	555-5066	551-5346	
			HM212049	555-5098	551-5346	
			HM212049X	555-5098	551-5346	
320-2039	310-1038	382-8039	641 or HM212049	None	551-5395 551-5413 ❑	Replaced by Voyager® Seal 383-8139 ❑
320-2041	310-1028	382-8045	756A	555-5067	551-5398	
	310-1043	372-7015	759	555-5023	551-5398	C&M K-30 Std. Forge TA-26, A-26-S
320-2046	310-1036	372-7006	567	555-5011	551-5388	
320-2050	310-1052	382-8009	45284 or 45285	555-5036	551-5347	❑
320-2051	310-1047	372-7008	560S	555-5038	551-5388	
320-2056	310-1061	382-8005	3778	555-5001	551-5302	❑
320-2057	310-1062	392-9035	33287	555-5011	551-5353	❑
	310-1063	392-9036	33281	555-5002	551-5353	❑
320-2058	310-1093	392-9033 or 6559	663, 749A	555-5072	551-5303 Separately	Gaskets Must be Ordered Separately
320-2059	See Catalog 392-9053 and/or 392-9089 Remarks.					

❑ Oil seal installs in bearing cup bore. ❑ Oil seal installs in bearing cup bore on steel hubs. On spoke wheels use seal bore. ❑ Voyager® Seal tool.

**Shaded numbers indicate obsolete part numbers.**



# Standard and Grit Guard® Hub Seal to Set Cross Reference

Oil Seal	Axle Ring	Hub Seal Set	Inner Bearing #	Universal Tool Head	Hub Tool	Comment
320-2061	310-1066	392-9034	6580	555-5023	551-5356	Gasket sold Separately
			6559	555-5072	551-5356	
320-2072	310-1064	372-7048	3984	555-5097	551-5308	
	310-1064	392-9038	3984	555-5097	551-5308	❑
320-2077	310-1104	392-9063	188931	555-5054	551-5362	
			387AS or 7451929	555-5062	551-5362	
320-2086	310-1013	382-8001	6386 or 6389	555-5060	551-5311	
			6379	555-5014	551-5311	
320-2091	SEE COMMENTS W/392-9045 SET	392-9045	33287	555-5011	551-5312	
			33281	555-5002	551-5312	
			495AX	555-5074	551-5312	
			47686	555-5031	551-5312	
320-2096	310-1007	392-9007	663 or HM516449	555-5072	551-5390	Cast housings use 392-9004
320-2097	315-1516	392-9089	687 or 780	555-5004	551-5400	Grit Guard®
320-2099	310-1089	392-9053	782	555-5016	551-5317	See Set Remarks
320-2102	315-1501	392-9099	47685 or 47686	555-5031	551-5318	Grit Guard® ❑
			47678	555-5074	551-5318	
320-2104	310-1018	392-9057	495AX	555-5074	551-5383	Ford 1970 Up Thru 1969 use 392-9018
320-2105	310-1008	382-8044	45284	555-5064	551-5351	
320-2106	315-1525	392-9131	598 or 598A	555-5071	551-5320	Grit Guard® Used with or without Wabco ABS
			594 or 594A	555-5076	551-5320	
320-2109	310-1053	392-9032	580	555-5072	551-5313	
			575	555-5074	551-5313	
	310-1057	372-7003	663	555-5031	551-5313	KB-5, KB-6 T-18-W only
	315-1507	372-7098	663	555-5100	551-5313	Grit Guard®
320-2110	315-1504	372-7097	HM218248	555-5039	551-5412	Grit Guard®
320-2111	315-1506	372-7096	787	555-5016	551-5323	Grit Guard®
320-2113	315-1517	392-9088	594 or 594A	555-5076	551-5412	Grit Guard® ❑
320-2114	315-1508	392-9096	595	555-5072	551-5412	Grit Guard® ❑
			598	555-5071	551-5412	
320-2115	310-1113	392-9020	665	555-5068	551-5356	❑
	310-1107	392-9066	592A/594A	555-5076	551-5356	Van Hool Bus Appl ❑
	315-1530	392-9132	592A/594A	555-5076	551-5356	Used with or without Wabco ABS
592A/598A			555-5071	551-5356		
320-2117	315-1509	392-9095	582 or 663A	555-5072	551-5325	Grit Guard®
320-2118	315-1510	372-7095	665A	555-5069	551-5321	Grit Guard®
320-2119	310-1036	382-8027	39581	555-5062	551-5353	
320-2125	310-1051	382-8062	39585	None	551-5388	❑
320-2129	315-1511	392-9094	580 or 582	555-5072	551-5393	Grit Guard®
320-2131	315-1508	392-9092	598	555-5071	551-5363	Grit Guard®

❑ Oil seal installs in bearing cup bore.

(Continued Next Page)

Shaded numbers indicate obsolete part numbers.

# Standard and Grit Guard® Hub Seal to Set Cross Reference

**QUICK REFERENCE**

Oil Seal	Axle Ring	Hub Seal Set	Inner Bearing #	Universal Tool Head	Hub Tool	Comment
320-2133	310-1036	382-8063	39581	555-5062	551-5353	
			45284	555-5064	551-5353	
320-2136	310-1064	372-7049	JM511946	555-5055	551-5381	
320-2137	310-1037	382-8064	6461A	555-5007	551-5327	Replaced by 383-0164
320-2162	315-1502	392-9087	681A	555-5071	551-5333	See Set Remarks
			683	555-5076	551-5333	Grit Guard®
320-2164	310-1008	382-8066	JM207049	555-5088	551-5366	
			JM205149	555-5089	551-5366	
320-2166	310-1028	382-8069	6386	None	551-5340	Volvo Front
320-2173	310-1023	372-7024	749 or 749S	555-5024	551-5401	
	315-1503	372-7091	749 or 749S	555-5024	551-5401	Grit Guard®
320-2181	310-1009	382-8052	6386A	555-5060	551-5349	
	310-1093	382-8053	641 or HM212049	555-5060	551-5349	
320-2199	310-1093	382-8056	H715345	555-5070	551-5349	
			641	555-5060	551-5344	
320-2213	315-1515	392-9112	663 or HM516449,-C	555-5072	551-5364	Grit Guard®
	315-1519	392-9130	HM516449A	555-5073	551-5364	Grit Guard®
320-2216	310-1034	382-8071	HM212011/ HM212047	555-5066	551-5403	
320-2233	310-1233	392-9111	593X/594	555-5076	551-5404	Mack Midliner

Shaded numbers indicate obsolete part numbers.

# STEMCO®

## DUALY DRAIN PAN

# CLEANLINESS MADE EASY



Part Number  
102-5001

### Simple Design

Spill-proof design locks in place - no need to hold while the axle drains. Flat bottom design eliminates spills and will not tip while on the floor. Built-in handles makes the drain pan easy to remove and carry. The large 256 ounce (2 gallons) capacity consolidates multiple disposal trips.

### Versatile Fit

Works on both 24.5 and 22.5\* wheel ends (for 22.5 wheel ends, trim pan along groove for proper fit).

### Simple Disposal

Two built-in drip proof pour spouts for easy waste disposal.

### Quality Made

Considered a "GREEN" product - the Dually Drain Pan is manufactured in the U.S.A. from recycled plastic and its use helps keep the environment clean and clear of contaminants.

  
**STEMCO®**  
*A Higher Standard of Performance.™*  
an EnPro Industries company

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**TQM™**  
TOTAL QUALITY MAINTENANCE™

# PERFORMANCE AND VALUE LEADER



**HEAVY DUTY  
BEARINGS**

#### **Value Added Bearing Program**

Through strategic alliances and strong global procurement, STEMCO Bearings meet the changing needs of today's market. STEMCO Bearings are the right mix of Performance, Convenience and Value.

#### **Consolidated Wheel End Components Provider**

The same company that provides High Performance STEMCO Wheel Seals, Pro-Torq Precision Adjusting Nuts and Hub Caps, can supply your wheel bearing needs; providing safety, reliability and performance from a single source.

#### **STEMCO Quality Bearings**

Our worldwide network of manufacturing plants is held to the highest quality standards by STEMCO and meets the ABMA specifications for bearing life calculations.

#### **Expanded Bearing Coverage**

The STEMCO product offering includes Tapered Roller Bearings, Radial Ball Bearings, Clutch Release Bearings, Individual Cups and Cones, and STEMCO Matched Bearing Sets.

#### **Long Life Warranty**

STEMCO offers a 3 or 5 year limited warranty when used in conjunction with the STEMCO Platinum Performance System or Platinum Performance System Plus.

# BEARINGS

## STEMCO Quality Bearing Reference Guide



### HEAVY DUTY TAPERED ROLLER BEARINGS

P/N	DESCRIPTION
382A	Tapered Roller Cup, Truck
387AS	Tapered Roller Cone, Truck
493	Tapered Roller Cup, Truck
552A	Tapered Roller Cup, Front Axle
555S	Tapered Roller Cone, Front Axle
557S	Tapered Roller Cone, Front Axle
563	Tapered Roller Cup, Front Axle
567	Tapered Roller Cone, Front Axle
572	Tapered Roller Cup, Truck Axle
580	Tapered Roller Cone, Truck Axle
582	Tapered Roller Cone, Truck Axle
592A	Tapered Roller Cup, Truck/Trailer
594	Tapered Roller Cone, Front Axle
594A	Tapered Roller Cone, Front Axle
598A	Tapered Roller Cone, Front Axle
653	Tapered Roller Cup, Trailer/Truck Axle
663	Tapered Roller Cone, Trailer/Truck Axle
665A	Tapered Roller Cone, Trailer/Truck Axle
742	Tapered Roller Cup, Truck Axle
749	Tapered Roller Cone, Truck Axle
3720	Tapered Roller Cup, Front Axle
3782	Tapered Roller Cone, Front Axle
3920	Tapered Roller Cup, Truck Axle
6420	Tapered Roller Cup, Front Axle
6461A	Tapered Roller Cone, Front Axle
6535	Tapered Roller Cup, Truck Axle
6580	Tapered Roller Cone, Truck Axle
15245	Tapered Roller Cup, Truck Axle
15250	Tapered Roller Cup, Truck Axle
25520	Tapered Roller Cup, Truck Axle
25580	Tapered Roller Cone, Truck Axle
25820	Tapered Roller Cup, Truck Axle
25877	Tapered Roller Cone, Truck Axle
28682	Tapered Roller Cone, Truck Axle
39520	Tapered Roller Cup, Truck Axle
39585	Tapered Roller Cone, Truck Axle
39590	Tapered Roller Cone, Truck Axle
45220	Tapered Roller Cup, Front Axle
45280	Tapered Roller Cone, Front Axle
47620	Tapered Roller Cup, Rear Axle
47679	Tapered Roller Cone, Rear Axle
47686	Tapered Roller Cone, Rear Axle
H715311	Tapered Roller Cup, Truck Axle
H715345	Tapered Roller Cone, Truck Axle
HM212011	Tapered Roller Cup, Trailer/Front Axle
HM212047	Tapered Roller Cone, Front Axle
HM212049	Tapered Roller Cone, Trailer/Front Axle
HM218210	Tapered Roller Cup, Trailer Axle
HM218248	Tapered Roller Cone, Trailer Axle
HM516410	Tapered Roller Cup, Rear Axle
HM516449	Tapered Roller Cone, Rear Axle
HM518410	Tapered Roller Cup, Trailer Axle
HM518445	Tapered Roller Cone, Trailer Axle
JM207010	Tapered Roller Cup, Truck Axle
JM207049A	Tapered Roller Cone, Truck Axle
LM102949	Tapered Roller Cone, Front Axle

### MATCHED BEARING SETS

P/N	COMPONENTS
SET047-011	HM212047 / HM212011
SET049-011	HM212049 / HM212011
SET248-210	HM218248 / HM218210
SET445-410	HM518445 / HM518410
SET449-410	HM516449 / HM516410
SET580-72	580 / 572
SET582-72	582 / 572
SET594A-92A	594A / 592A
SET598A-92A	598A / 592A
SET663-53	663 / 653
SET3782-20	3782 / 3720
SET28682-22	28682 / 28622
SET39590-20	39590 / 39520
SET45280-20	45280 / 45220
SET45284-20	45284 / 45220
SET47679-20	47679 / 47620
SET47686-20	47686 / 47620

### STEMCO MATCHED BEARING SETS

P/N	COMPONENTS
ASET047-011	KHM212047 / KHM212011
ASET049-011	KHM212049 / KHM212011
ASET248-210	KHM218248 / KHM218210
ASET445-410	KHM518445 / KHM518410
ASET449A-410	KHM516449A / KHM516410
ASET555S-52A	K555S / K552A
ASET567-563	K567 / K563
ASET580-72	K580 / K572
ASET582-572	K582 / K572
ASET594A-92A	K594A / K592A
ASET598A-92A	K598A / K592A
ASET663-53	K663 / K653
ASET687-672	K687 / K672
ASET3782-20	K3782 / K3720
ASET6461A-20	K6461A / K6420
ASET45280-20	K45280 / K45220
ASET47679-20	K47679 / K47620

### BALL/CLUTH RELEASE/TAPERED BEARING SETS

P/N	DESCRIPTION
F-01757-C	N1707
02135	N2135
02256A	N2256-N
A16	LM12749 / LM12711
A34	LM12748 / LM12710
A38	LM104949 / LM104911
105-SS1	Ball Bearing, 2 Shields
205-FF	Ball Bearing, 2 Seals
205-SS	Ball Bearing, 2 Shields
206-FF	Ball Bearing, 2 Seals
206-SS	Ball Bearing, 2 Shields
305-FF	Ball Bearing, 2 Seals
305-SS	Ball Bearing, 2 Shields
306-FF	Ball Bearing, 2 Seals
306-SS	Ball Bearing, 2 Shields

### BALL/CLUTH RELEASE/TAPERED BEARING SETS

P/N	DESCRIPTION
306-SSL	Ball Bearing, 2 Shields, Snap Ring
308-L	Ball Bearing, Snap Ring
1308-L	Ball Bearing, Snap Ring

\* Multiply last 2 numbers by 5 to get Bore Size.

### STEMCO "A" LINE BEARINGS

P/N	INDUSTRY STANDARD P/N
ASET049-011	KHM212049 / KHM212011
A212049	KHM212049
A212011	KHM212011
ASET248-210	KHM218248 / KHM248210
A218248	KHM218248
A218210	KHM218210
ASET594A-92A	K594A / K592A
A594A	K594A
A592A	K592A
ASET580-72	K580 / K572
A580	K580
A572	K572
ASET3782-20	K3782 / K3720
A3782	K3782
A3720	K3720
ASET445-410	KHM518445 / KHM518410
A518445	KHM518445
A518410	KHM518410
ASET663-53	K663 / K653
A663	K663
A653	K653
ASET047-011	KHM212047 / KHM212011
A212047	KHM212047
A212011	KHM212011
ASET45280-20	K45280 / K45220
A45280	K45280
A45220	K45220
ASET6461A-20	K6461A / K6420
A6461A	K6461A
A6420	K6420
ASET555S-52A	K555S / K552A
A555S	K555S
A552A	K552A
ASET449A-410	KHM516449A / KHM516410
A516449A	KHM516449A
A516410	KHM516410
ASET47679-20	K47679 / K47620
A47679	K47679
A47620	K47620
ASET567-563	K567 / K563
A567	K567
A563	K563
ASET582-572	K582 / K572
A582	K582
A572	K572
ASET687-672	K687 / K672
A687	K687
A672	K672
ASET598A-92A	K598A / K592A
A598A	K598A
A592A	K592A

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Contact your STEMCO Sales Representative for a complete listing of the STEMCO Bearing Line.



# Bearings to Hub Seal Set Cross Reference

CROSS REFERENCE

Inner Cup & Cone	Outer Cup & Cone	Guardian®/ Guardian® HP Seal No.	Grit Guard**/ Standard Set	Voyager® Discover®
33212	33208			383-0176
382A/387AS	LM104911/ LM104949		<b>392-9063</b>	
493/495AX	3920/ 3984		<b>392-9018</b>	
493/495AX	33287/ 33462	<b>309-0957</b>	<b>392-9057</b>	
493/495AX	39520/ 39590	<b>309-0957</b>	<b>392-9057</b> <b>392-9045</b>	
552A/559	552/526		<b>382-8011</b>	
553X/557A	3720/3782	<b>308-0836</b>	<b>382-8036</b>	<b>383-0136</b> <b>383-0236</b>
563/567	522/528		<b>372-7006</b>	
572/575	572/575		<b>392-9032</b>	
572/580	563/567	<b>309-0903</b>	<b>392-9094*</b>	<b>393-0103</b> <b>393-0203</b>
			<b>392-9032</b>	
572/580	42620/ 42687	<b>309-0961</b>	<b>392-9095*</b>	
572/582	563/567	<b>309-0903</b>	<b>392-9094*</b>	<b>393-0103</b> <b>393-0203</b>
572/582	42620/ 42687	<b>309-0961</b>	<b>392-9095*</b>	
592A/593	65320/ 65390		<b>372-7022</b> <b>372-7062</b>	
592A/594	572/580	<b>309-0964</b> <b>309-0973</b>	<b>392-9088*</b> <b>392-9131</b>	<b>393-0173</b> <b>393-0273</b>
592A/594A	572/580	<b>309-0960</b> <b>309-0964</b> <b>309-0973</b>	<b>392-9132*</b> <b>392-9088*</b> <b>392-9131</b>	<b>393-0173</b> <b>393-0273</b>
592A/594A	572/582	<b>309-0960</b>	<b>392-9132*</b>	
592A/595	572/580	<b>309-0965</b>	<b>392-9096</b>	
592A/598	572/575	<b>309-0965</b> <b>309-0973</b>	<b>392-9096*</b> <b>392-9131</b>	<b>393-0173</b> <b>393-0273</b>
592A/598A	653/665	<b>309-0965</b>	<b>392-9092*</b>	
592A/598	752/758	<b>309-0965</b>	<b>392-9092*</b>	
592A/598	HM617010/ HM617049	<b>309-0965</b>	<b>392-9092*</b>	
592A/598A	572/580	<b>309-0960</b> <b>309-0973</b>	<b>392-9132</b> <b>392-9131</b>	<b>393-0173</b> <b>393-0273</b>
592A/598A	572/582	<b>309-0960</b>	<b>392-9132*</b>	
592A/598	HM617010/ HM617049	<b>309-0960</b>	<b>392-9081</b> <b>392-9132</b>	
593X/594	593X/594		<b>392-9111</b>	
632/641	3920/3979	<b>308-0853</b>	<b>382-8053</b>	<b>383-0153</b> N/A
632/641	28622/ 28682	<b>308-0856</b>	<b>382-8056</b>	<b>383-0156</b> N/A

Inner Cup & Cone	Outer Cup & Cone	Guardian®/ Guardian® HP Seal No.	Grit Guard**/ Standard Set	Voyager® Discover®
633/641	65320/ 65385			<b>382-8039</b> <b>383-8139</b>
652/663	572/575	<b>309-0904</b>		<b>392-9112*</b> <b>392-9007</b> <b>393-0104</b> <b>393-0204</b>
653/663	553X560	<b>307-0713</b>		<b>372-7098*</b> <b>373-0113</b> <b>373-0213</b>
653/663	HM212011/ HM212049	<b>307-0713</b>		<b>372-7098*</b> <b>373-0113</b> <b>373-0213</b>
653/663A	42620/ 42687	<b>309-0961</b>		<b>372-7003</b> <b>392-9095*</b>
653/665A	HM212011/ HM212049	<b>307-0744</b>		<b>372-7095*</b>
672/681A	572/575	<b>309-0970</b>		<b>392-9087*</b>
672/683	572/580	<b>309-0970</b>		<b>392-9087*</b>
672/683XA	572/580	<b>309-0970</b>		<b>392-9087*</b>
672/687	772/780	<b>309-0948</b>		<b>392-9089*</b> <b>393-0148</b> N/A
672/687	52618/ 52400	<b>309-0948</b>		<b>392-9089*</b> <b>393-0148</b> N/A
742/749	632/643			<b>372-7091*</b> <b>372-7024</b>
742/749S	632/643			<b>372-7091*</b> <b>372-7024</b>
742/749A	653/663			<b>392-9033</b>
752/756A	HM212011/ HM212046			<b>382-8028</b> <b>382-8045</b>
752/756A	HM212011/ HM212047			<b>382-8028</b> <b>382-8045</b>
752/758	663/665			<b>392-9001</b>
752/759	742/740			<b>372-7015</b>
752/760	742/749			<b>392-9001</b>
752/760	742/749			<b>392-9062</b>
772/780	772/776	<b>309-0948</b>		<b>392-9089*</b> <b>393-0148</b> N/A
772/780	854/864	<b>309-0948</b>		<b>392-9089*</b> <b>393-0148</b> N/A
772/780	52618/ 52400	<b>309-0948</b>		<b>392-9089*</b> <b>393-0148</b> N/A
772/780	77675/ 77375	<b>309-0948</b>		<b>392-9089*</b> <b>393-0148</b> N/A
772/782	742/749			<b>392-9053</b>
832/843	632/636			<b>382-8008</b>
3720/3778	25820/ 25877			<b>382-8005</b>
3720/3778	2720/2790			<b>382-8005</b>
3920/3982	3820/3877			<b>382-8011</b>
3920/3984	453X/462			<b>392-9038</b>
4536/4595	414A/418			<b>382-8010</b>
5735/5760	572/575	<b>309-0912</b>		<b>392-9012</b> <b>393-0112</b> <b>393-0212</b>
5735/5760	39520/ 39590			<b>382-8052</b>

(Continued Next Page.)

Component part numbers obsolete, sold as sets only.



# Bearings to Hub Seal Set Cross Reference

Inner Cup & Cone	Outer Cup & Cone	Guardian®/ Guardian® HP Seal No.	Grit Guard**/ Standard Set	Voyager® Discover®	Inner Cup & Cone	Outer Cup & Cone	Guardian®/ Guardian® HP Seal No.	Grit Guard**/ Standard Set	Voyager® Discover®
5735/5760	45220/45287		<b>382-8060</b>		127627/1889311	49521/188933		<b>392-9063</b>	
6320/6379	552A/557S		<b>382-8001</b>	<b>383-0101</b>	7451691/7451929	7451813/7451814		<b>392-9063</b>	
6320/6386	552A/557S		<b>382-8001</b>	<b>383-0101</b>	H715311/H715345	552A/555S	<b>308-0856</b>	<b>382-8056</b>	<b>383-0156</b>
6320/6386A	532A/537		<b>382-8052</b>		H715311/H715345	3920/3979	<b>308-0853</b>	<b>382-8053</b>	<b>383-0153</b>
6320/6389	552A/557S		<b>382-8001</b>	<b>383-0101</b>	HM212010/HM212049	28622/28682	<b>308-0853</b>	<b>382-8053</b>	<b>383-0153</b>
6420/6461	612/621		<b>382-8060</b>		HM212011/HM212044	3720/3782	<b>308-0836</b>	<b>382-8036</b>	<b>383-0136</b>
6420/6461A	552A/555S	<b>308-0864</b>	<b>382-8064</b>	<b>383-0164</b> <b>383-0264</b>	HM212011/HM212047	3720/3779		<b>382-8034</b>	
6420/6461A	3920/3979	<b>308-0864</b>	<b>382-8064</b>	<b>383-0164</b> <b>383-0264</b>	HM212011/HM212047	3720/3782	<b>308-0836</b>	<b>382-8036</b>	<b>383-0136</b> <b>383-0236</b>
6535/6559	653/663		<b>392-9033</b>		HM212011/HM212049	45220/45282		<b>382-8034</b>	
			<b>392-9034</b>	<b>393-0134</b>	HM212011/HM212049	3720/3782	<b>308-0836</b>	<b>382-8036</b>	<b>383-0136</b> <b>383-0236</b>
6535/6580	653/663		<b>392-9034</b>	<b>393-0134</b>	HM212011/HM212047	45220/45282		<b>382-8034</b>	
28920/28995	25523/25580		<b>372-7046</b>		HM212011/HM212049	3720/3782	<b>308-0836</b>	<b>382-8036</b>	<b>383-0136</b> <b>383-0236</b>
33462/33281	3920/3982	<b>309-0935</b>	<b>392-9035</b>		HM212011/HM212047	45220/45282		<b>382-8034</b>	
33462/33281	39520/39585		<b>392-9036</b>		HM212011/HM212049	3720/3782	<b>308-0836</b>	<b>382-8036</b>	<b>383-0136</b> <b>383-0236</b>
33462/33287	3920/3982	<b>309-0935</b>	<b>392-9035</b>		HM212011/HM212049	45220/45280		<b>382-8032</b>	
33472/33281	3925/3984		<b>392-9045</b>		HM212011/HM212049	3720/3782	<b>308-0836</b>	<b>382-8036</b>	<b>383-0136</b> <b>383-0236</b>
33472/33287	3925/3982		<b>392-9045</b>		HM212011/HM212049X	3720/3782	<b>308-0836</b>	<b>382-8036</b>	<b>383-0136</b> <b>383-0236</b>
33821/33895	3120/3196		<b>382-8016</b>		HM218210/HM218248	HM212011/HM212049	<b>307-0743</b>	<b>372-7097</b>	<b>373-0143</b> <b>373-0243</b>
39520/39578	25520/25572		<b>382-8010</b>		JM205110/JM205149	25820/25877	<b>308-0866</b>	<b>382-8066</b>	<b>383-0166</b> <b>383-0175</b>
39520/39581	3525/3585	<b>308-0836</b>	<b>382-8036</b>	<b>383-0136</b> <b>383-0236</b>	JM207010/JM207049	25820/25877	<b>308-0866</b>	<b>382-8066</b>	<b>383-0166</b>
		<b>308-0863</b>	<b>382-8063</b> <b>382-8027</b>		HM516410/HM516449	572/575		<b>392-9007</b>	
39520/39581	26820/26878		<b>382-8017</b>		HM516410/HM516449	47620/47679	<b>309-0904</b>	<b>392-9112</b>	<b>393-0104</b> <b>393-0204</b>
39520/39585	25520/25572		<b>382-8062</b>		HM516410/HM51649A	47620/47679	<b>309-0904</b>	<b>392-9130*</b>	<b>393-0104</b> <b>393-0204</b>
45220/45284	2720/2780		<b>382-8044</b>		HM518410/HM518445	HM518410/HM518445	<b>307-0723</b>	<b>372-7099</b>	<b>373-0123</b> <b>373-0223</b>
45220/45284	2720/2786		<b>382-8009</b>		JM205149	32207			<b>383-0175</b>
45220/45284	2720/2793		<b>382-8009</b>		JM205110/JM204149A	25820/25877		<b>382-8066</b>	<b>383-0166</b>
45220/45284	2720/2796		<b>382-8009</b>		JM511910/JM510946	JM205110/JM205149		<b>372-7049</b>	
45220/45284	25820/25880	<b>308-0863</b>	<b>382-8044</b> <b>382-8063</b>		JF7049A		<b>308-0870</b>		
45220/45285	2720/2786		<b>382-8009</b>		33212	33208			<b>383-0176</b>
45220/45285	2720/2793		<b>382-8009</b>						
45220/45285	2720/2796		<b>382-8009</b>						
47620/47678	39520/39585	<b>309-0912</b>	<b>392-9012</b>	<b>393-0112</b>					
			<b>392-9099*</b>	<b>393-0212</b>					
47620/47685	39520/39590	<b>309-0912</b>	<b>392-9099*</b>	<b>393-0112</b> <b>393-0212</b>					
			<b>392-9099*</b>	<b>393-0112</b> <b>393-0212</b>					
47620/47686	39520/39590	<b>309-0912</b>	<b>392-9099*</b>	<b>393-0112</b> <b>393-0212</b>					
			<b>392-9012</b>	<b>393-0112</b>					
		<b>309-0915</b>	<b>392-9012</b> <b>392-9045</b>						

CROSS REFERENCE

Component part numbers obsolete, sold as sets only.

# Pinion Seal Specifications

## Unitized Pinion Seal Specifications and Interchange

Part #	Bore ID	Yoke Shaft OD	Tool #	Application	OE #	SKF #	National #
<b>429-0002</b>	4.500	3.500	<b>551-5360</b>	Mack Front	<b>88AX458</b>	<b>34882</b> <b>34891</b>	415991N
<b>429-0003</b>	4.562	2.625	<b>551-5001</b>	Eaton 400 Rear	<b>127721</b> <b>79470</b>	<b>26373</b> <b>26378</b>	9773
					<b>127592</b>	<b>26220</b>	
<b>429-0004</b>	3.625	2.625	<b>551-5003</b>	Eaton 400 Front	<b>127720</b> <b>63910</b>	<b>26209</b> <b>26239</b>	475003N
<b>429-0005</b>	3.751	3.003	<b>551-5004</b>	Meritor SQ100 Front	<b>A1-1205Y2729</b> <b>A1205P2590</b>	<b>29865</b> <b>29867</b> <b>30007</b>	4810V 100495 415281N
<b>429-0006</b>	4.003	2.937	<b>551-5002</b>	Eaton 402 Front	<b>210737</b> <b>127719</b> <b>A1205U1737</b>	<b>29292</b> <b>29322</b> <b>29316</b>	416654 475012N
<b>429-0007</b>	4.249	3.253	<b>551-5006</b>	Meritor R145/160 Front	<b>A1-1205X2728</b> <b>A1205R2592</b> <b>A1205P1368</b>	<b>32385</b> <b>32397</b> <b>32410</b>	4543V 100494 416470N
<b>429-0008</b>	3.537	2.751	<b>551-5007</b>	Mack Front	<b>88AX456</b> <b>A1205A1925</b>	<b>27295</b> <b>27558</b>	4874N 475322N
<b>429-0009</b>	3.996	2.751	<b>551-5008</b>	Mack Rear	<b>88AX457</b>	<b>27542</b> <b>27565</b>	415272N
<b>429-0010</b>	4.935	3.003	<b>551-5009</b>	Meritor SQ100 Rear	<b>A1-1205Z2730</b> <b>A1205N2588</b> <b>A1205H2426</b>	<b>30145</b> <b>30153</b>	3905 4562V 100263
<b>429-0011</b>	5.501	3.253	<b>551-5011</b>	Meritor RT 46-160 180, 380 Series	<b>A1205Q2591</b>	<b>32870</b>	4544V 100557
<b>429-0012</b>	4.564	3.000	<b>551-5012</b>	Eaton 344, 404, 405, 454 Front & Rear	<b>127591</b>	<b>29528</b>	

## Pinion Seal Specifications by Set Number

Set No.	Bore ID	Yoke Shaft OD	Wear Sleeve	Dust Seal	Oil Seal	Spline OD
<b>460-6001</b>	3.625	2.625	<b>419-1946</b>	<b>429-2945</b>	<b>429-2944</b>	1-3/4 1 31/32
<b>460-6002</b>	4.562	2.625	<b>419-1946</b>	□	<b>429-2983</b>	1-3/4 1 31/32
<b>460-6003</b>	3.937	2.937	<b>419-1981</b>	<b>429-2978</b>	<b>429-2977</b>	2
<b>460-6004</b>	3.542	2.750	<b>419-1982</b>	<b>429-2980</b>	<b>429-2979</b>	1-3/4 1 7/8
<b>460-6005</b>	3.875	2.750	<b>419-1982</b>	□	<b>429-2982</b>	1-3/4 1 7/8 1.96
<b>460-6006</b>	4.000	2.937	<b>419-1940</b>	<b>429-2937</b>	<b>429-2938</b>	2 2 5/32
<b>460-6007</b>	4.000	3.000	<b>419-1939</b>	<b>429-2937</b>	<b>429-2938</b>	1-31/32
<b>460-6011</b>	4.250	3.250	<b>419-1941</b>	□	<b>429-2941</b>	2-1/4
<b>460-6012</b>	4.250	3.000	<b>419-1901</b>	□	<b>429-2901</b>	Any
<b>460-6083</b>	4.250	3.250	<b>419-1983</b>	□	<b>429-2941</b>	2-1/4
<b>460-6084</b>	4.000	2.937	<b>419-1984</b>	<b>429-2937</b>	<b>429-2938</b>	2 2 5/32

□ Oil Seal & Dust Seal are an integral unit

Shaded numbers indicate obsolete part numbers.



# Axle Ring to Hub Seal Set Cross Reference

Axle Ring	Oil Seal	Hub Seal Set	Axle Ring	Oil Seal	Hub Seal Set	Deflector Ring	Guardian/GuardianHP Seal
310-1007	320-2096	392-9007	310-1062	320-2057	392-9035	317-1710*	308-0855
310-1008	320-2018	372-7046	310-1063	320-2057	392-9036	317-1743*	307-0743
310-1008	320-2105	382-8044	310-1064	320-2136	372-7049	317-1702*	308-0836
310-1008	320-2164	382-8066	310-1064	320-2072	392-9038	317-1703*	309-0973
310-1009	320-2181	382-8052	310-1066	320-2061	392-9034	317-1704*	307-0713
310-1012	320-2012	392-9012	310-1079	320-2009	392-9081	317-1705*	309-0904
310-1013	320-2086	382-8001	310-1088	320-2213	None	317-1705*	307-0723
310-1013	320-2109	None	310-1089	320-2099	392-9053	317-1706*	308-0856
310-1017	320-2017	382-8017	310-1093	320-2199	382-8056	317-1706*	309-0903
310-1018	320-2029	372-7018	310-1093	320-2181	382-8053	317-1707*	309-0912
310-1018	320-2029	392-9018	310-1093	320-2058	392-9033	317-1708*	308-0853
310-1018	320-2104	392-9057	310-1093	320-2113	None	317-1709*	307-0744
310-1022	320-2023	372-7022	310-1095	320-2001	392-9001	317-1710*	308-0855
310-1023	320-2023	None	310-1103	320-2001	392-9062	317-1711*	308-0864
310-1023	320-2173	372-7024	310-1104	320-2077	392-9063	317-1712*	309-0964
310-1026	320-2131	None	310-1107	320-2119	392-9066	317-1713*	309-0965
310-1028	320-2166	382-8069	310-1111	320-2106	None	317-1719*	309-0961
310-1028	320-2028	382-8028	310-1111	320-2115	None	317-1721*	308-0863
310-1028	320-2041	382-8045	310-1111	320-2162	None	317-1724*	309-0957
310-1028	320-2009	None	310-1117		See 392-9045 Remarks	317-1726*	308-0866
310-1032	320-2032	382-8032	310-1123		See 392-9034 Remarks	317-1728*	309-0935
310-1034	320-2034	382-8034	310-1130	320-2023	372-7062	317-1756*	309-0915
310-1034	320-2216	382-8071	310-1233	320-2233	392-9111	317-1761*	309-0970
310-1036	320-2032	372-7009	315-1501	320-2102	392-9099	317-1761*	309-0960
310-1036	320-2046	372-7006	315-1502	320-2162	392-9087	317-1790*	309-0948
310-1036	320-2031	None	315-1503	320-2023	372-7099	317-1724*	308-0870
310-1036	320-2036	382-8036	315-1503	320-2173	372-7091		
310-1036	320-2119	382-8027	315-1504	320-2110	372-7097		
310-1036	320-2133	382-8063	315-1506	320-2111	372-7096		
310-1037	320-2118	None	315-1507	320-2109	372-7098		
310-1037	320-2137	382-8064	315-1508	320-2114	392-9096		
310-1038	320-2039	382-8039	315-1508	320-2131	392-9092		
310-1041	320-2023	382-8060	315-1509	320-2117	392-9095		
310-1043	320-2041	372-7015	315-1510	320-2118	372-7095		
310-1048	320-2110	None	315-1511	320-2129	392-9094		
310-1050	320-2022	382-8010	315-1515	320-2213	392-9112		
310-1051	320-2031	382-8011	315-1516	320-2097	392-9089		
310-1051	320-2125	382-8062	315-1517	320-2113	392-9088		
310-1052	320-2050	382-8009	315-1519	320-2213	392-9130		
310-1053	320-2109	392-9032	315-1525	320-2106	392-9131		
310-1057	320-2109	372-7003	315-1530	320-2115	392-9132		
310-1061	320-2056	382-8005					

\* 317-series deflector rings are component parts for the Guardian® Hub Seal. These parts are not sold separately.

CROSS REFERENCE

Shaded numbers indicate obsolete part numbers.

## EXTEND SEAL & BEARING LIFE BY PREVENTING CONTAMINATION

### SENTINEL®



#### SENTINEL® TECHNOLOGY

Provides an unmatched filtering system to eliminate contamination of lubricant from grime, dirt or water.

##### Sentinel® Hub Cap

Provides a tamper-proof hub cap system for maximum protection and maintenance-free performance.



##### Integrated Sentinel® Hub Cap

Tamper-proof hub cap integrates the Sentinel® features into the window with fewer components and greater wheel end visibility.



##### Sentinel® ESP (Extended Service Plug)

Allows economical retrofitting of wheel ends with the benefits of STEMCO'S exclusive Sentinel® Technology.



##### Sentinel® ESP Filtered Vent

Drive axles can now be retrofitted to benefit from STEMCO'S exclusive Sentinel® Technology.



*A Higher Standard of Performance.™*  
an EnPro Industries company

# SENTINEL<sup>®</sup> TECHNOLOGY

**STEMCO<sup>®</sup>**  
A Higher Standard of Performance.<sup>™</sup>  
an EnPro Industries company

- Prevents dirt and water from contaminating the oil, thereby extending seal and bearing life.
- Dramatically reduces contaminant build-up on hub cap windows, allowing for an accurate determination of lube levels.
- Eliminates early oil breakdown by preventing water contamination as a result of submerged axles.
- Provides maximum protection for maintenance-free wheel end systems.
- Improves performance and lowers overall maintenance costs.

## SENTINEL<sup>®</sup> HUB CAP

STEMCO BASE PART NO.	OIL CAP	GREASE CAP	BOLT CIRCLE	BOLT SIZE	NO. OF BOLTS	GASKET NUMBER	OIL WINDOW KIT	GREASE WINDOW KIT
4009	348-4009	349-4009	5 1/2"	5/16"	6	330-3009	359-6112	359-6120
4013	348-4013	349-4013	5 1/2"	5/16"	5	330-3013	359-6112	359-6120
4046	348-4046	349-4046	5 1/2"	5/16"	6	330-3009	359-6112	359-6120
4075	348-4075	349-4075	6 1/4" x 8" UN(M)			330-3077	359-6112	359-6120
4095	348-4095	349-4095	5 1/2"	5/16"	6	330-3009	359-6112	359-6120
4195	348-4195	349-4195	6 3/4"	5/16"	6	330-3118	359-6112	359-6120
4281	348-4281	N/A	5 17/32"	3/8"	6	330-3122	359-6112	359-6120

## INTEGRATED SENTINEL<sup>®</sup> HUB CAP

STEMCO BASE PART NO.	OIL CAP	GREASE CAP	BOLT CIRCLE	BOLT SIZE	NO. OF BOLTS	GASKET NUMBER	OIL WINDOW KIT	GREASE WINDOW KIT
4009	356-4009	358-4009	5 1/2"	5/16"	6	330-3009	359-6145	359-6146
4013	356-4013	358-4013	5 1/2"	5/16"	5	330-3013	359-6145	359-6146
4024	356-4024	358-4024	4 1/2"	5/16"	6	330-3024	359-6143	359-6144
4025	356-4025	358-4025	5 7/8"	5/16"	6	330-3025	359-6143	359-6144
4046	356-4046	358-4046	5 1/2"	5/16"	6	330-3009	359-6145	359-6146
4075	356-4075	358-4075	6 1/4" x 8" UN(M)			330-3077	359-6145	359-6146
4080	356-4080	358-4080	6	3/8"	6	330-3060	359-6143	359-6144
4095	356-4095	358-4095	5 1/2"	5/16"	6	330-3009	359-6145	359-6146
4119	356-4119	358-4119	7	5/8"	8	330-3090	359-6145	359-6146
4150	356-4150	358-4150	4 1/2"	5/16"	5	330-3150	359-6143	359-6144
4195	356-4195	358-4195	6 3/4"	5/16"	6	330-3118	359-6145	359-6146

## SENTINEL<sup>®</sup> ESP (EXTENDED SERVICE PLUG)

STEMCO PART NO.	DESCRIPTION
359-6124	ESP Plug Blister Pack (2/pk)
359-6125	ESP Plugs (bulk pack of 50)

## SENTINEL<sup>®</sup> ESP

STEMCO PART NO.	DESCRIPTION
300-5009	340-4009 Hub Cap with ESP Plug Bulk Pack (25/box)
303-5009	343-4009 Hub Cap with ESP Plug Bulk Pack (25/box)

## SENTINEL<sup>®</sup> ESP FILTERED VENT

STEMCO PART NO.	DESCRIPTION
359-6137	Drive Axle Vent (3/8" adapter)

# SENTINEL<sup>®</sup>

To relieve vacuum, the Sentinel<sup>®</sup> interior check valve lifts slightly, drawing air through the water-resistant expanded PTFE fabric filter into the wheel end, while the duck-bill check valve remains closed, blocking dirt, grime and other contaminants from entering.



To relieve pressure, the Sentinel<sup>®</sup> duck-billed pressure relief valve opens, allowing pressure to vent out, while the umbrella check valve remains closed, stopping lubricant from leaking out and contaminants from flowing in.

STEMCO - USA  
P.O. Box 1989 · Longview, TX 75606-1989  
(903) 758-9981 · 1-800-527-8492 · FAX: 1-800-874-4297  
www.stemco.com

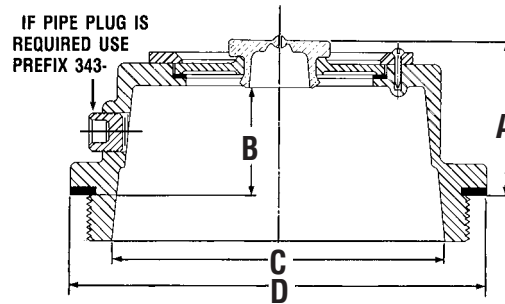
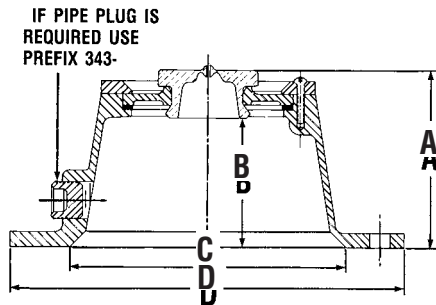
STEMCO - Canada  
5900 Ambler Drive, Units 4 & 5 · Mississauga, ON L4W 2N3  
(905) 206-9922 · 877-232-9111 · FAX: 877-244-4555

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Hudson 10-483 Rev. 03/09

**TQM**<sup>SM</sup>  
TOTAL QUALITY MAINTENANCE<sup>SM</sup>

# Hub Cap Specifications

## Hub Caps By Cap Number



Hub Cap Includes Gasket	Bolt Circle	Bolt Size	No. Of Bolts	A Height	B Inside Depth	C Flange I.D.	D Flange O.D.	Gasket Number	Window Kit
340-4002	5-1/4	3/8	3	2-7/8	2-1/8	4-3/8	6	330-3002	359-5999
340-4009 ☐	5-1/2	5/16	6	2-11/16	1-15/16	4-3/8	6-1/4	330-3009	359-5995
340-4011	6-1/8	3/8	3	2-11/16	1-15/16	4-5/16	7	330-3011	359-5995
340-4013 ☐	5-1/2	5/16	5	2-11/16	1-15/16	4-3/8	6-1/4	330-3013	359-5995
340-4015	Blank	--	--	2-11/16	1-15/16	4-3/8	6-1/4	330-3015	359-5995
340-4019	5-1/4	3/8	3	3-1/2	2-3/4	4-1/8	Not Round	330-3019	359-5995
340-4024	4-1/2	5/16	6	2-5/8	1-7/8	3-1/2	5-1/4	330-3024	359-5999
343-4025 ☐	5-7/8	5/16	6	1-3/8	5/8	4-1/4	6-1/2	330-3025	359-5999
340-4028	5	1/4	4	3-1/8	2-3/8	4	5-3/4	330-3028	359-5999
340-4031	5-1/4	5/16	6	2-7/8	2-1/8	4-3/8	6	330-3031	359-5999
340-4034	6-5/8	1/4	6	2-13/16	2-1/16	5-5/16	7-1/8	330-3034	359-5999
340-4036	5-7/8	5/16	6	2-3/8	1-5/8	5-1/8	Not Round	330-3035	359-5995
340-4042	5-1/8	5/16	6	1-7/8	1-1/8	4	5-11/16	330-3041	359-5999
340-4046	5-1/2	5/16	6	2-5/16	1-9/16	4-9/16	6-3/16	330-3009	359-5995
340-4049	5-9/16	5/16	3	2-7/8	2-1/8	3-3/4	6-3/8	330-3042	359-5999
340-4054 ☐	Blank	None	--	2-1/8	1-3/8	4-1/32	8-5/8	330-3017	359-5995
340-4059	6	5/16	6	2-5/8	1-7/8	5	6-3/4	330-3056	359-5995
343-4064 ☐	6-3/4	3/8	6	2-11/16	1-15/16	5	7-3/4	330-3079	359-5995
340-4065	3-5/8	5/16	4	2-1/4	1-1/2	2-3/4	4-1/2	330-3040	359-5990
340-4066	5-1/8	5/16	6	2-7/8	2-1/8	3-3/4	5-3/4	330-3041	359-5999
340-4075 ☐	6-1/4 X 8 UN (M)			2-5/16	1-9/16	5-3/4	6-7/8	330-3077	359-5995
343-4080 ☐	6	3/8	6	3-3/16	2-3/8	4-15/16	6-7/8	330-3060	359-5999
340-4082	6-7/8	7/16	7	2-11/16	1-15/16	5	7-3/4	330-3062	359-5995
340-4092	5-7/8	5/16	6	1-5/8	1-7/16	4-1/2	6-37/64	330-3025	359-5912
340-4095	5-1/2	5/16	6	1-13/16	1-1/16	4-9/16	6-3/16	330-3009	359-5995
340-4098	5-1/2	5/16	6	1-1/4	1-1/8	4-7/16	6-3/16	330-3009	359-5912
343-4107 ☐	7-1/4	1/4	6	2-7/8	2-1/8	6-1/4	7-7/8	330-3084	359-5995
340-4119 ☐	7	5/8	8	2-1/16	1-5/16	4-5/16	8-1/4	330-3090	359-5995
343-4122 ☐	5-1/2	5/16	6	2-11/16	1-15/16	4-3/8	6-1/4	330-3009	359-5995
340-4139 ☐	4-1/16	3/16	6	2-5/8	1-7/8	3-5/16	4-1/2	330-3094	359-5999

(Continued Next Page)

- ☐ Cannot be made with pipe plug.
- ☒ Made with pipe plug only.
- ☑ Hub cap available with hubo window, order 347-prefix. Also available **347-4342**, which is 4195 hub cap for grease applications and **347-4343** which is 4075 hub cap for grease applications, **347-4278** for 4009 grease hub cap application.
- ☑ 4009 hub cap with magnetic pipe plug (**359-5984**).

# Hub Cap Specifications

## Hub Caps By Cap Number

Hub Cap Includes Gasket	Bolt Circle	Bolt Size	No. Of Bolts	A Height	B Inside Depth	C Flange I.D.	D Flange O.D.	Gasket Number	Window Kit
<b>340-4149</b>	5-9/16	5/16	6	2-7/8	2-1/8	3-11/16	6-3/8	<b>330-3097</b>	<b>359-5999</b>
<b>340-4157</b>	4	1/4	4	2-1/8	1-3/8	3-1/8	4-9/16	<b>330-3102</b>	<b>NONE</b>
<b>340-4163</b>	6-1/8	5/16	6	2-11/16	1-15/16	4-5/16	7	<b>330-3104</b>	<b>359-5995</b>
<b>343-4176</b>	6	5/16	6	2-1/2	1-3/4	4-15/16	6-7/8	<b>330-3060</b>	<b>359-5999</b>
<b>340-4186</b>	5	5/16	4	2-1/8	1-3/8	4	5-3/4	<b>330-3120</b>	<b>359-5999</b>
<b>340-4195</b>	6-3/4	5/16	6	3-11/16	2-15/16	5-7/16	7-1/2	<b>330-3118</b>	<b>359-5995</b>
<b>340-4198</b>	3-7/8	5/16	6	2-1/4	1-1/2	2-3/4	4-1/2	<b>330-3119</b>	<b>NONE</b>
<b>340-4249</b>	5-1/2	5/16	6	1-13/16	1-11/16	4-7/16	6-3/16	<b>330-3122</b>	<b>359-5912</b>
<b>343-4250</b> ,	5-17/32	3/8	6	1-13/16	1-9/16	4-7/16	6-3/16	<b>330-3122</b>	<b>NONE</b>
<b>340-4263</b>	4-1/2	6mm	6	2-5/8	1-7/8	3-1/2	5-1/4	<b>330-3024</b>	<b>359-5999</b>
<b>343-4269</b>	132mm	8.5mm	6	63.5mm	53.4mm	106mm	156mm	<b>330-3128</b>	<b>359-6100</b>
<b>343-4281</b>	5-17/32	3/8	6	2-5/16	1-9/16	4-9/16	6-3/16	<b>330-3122</b>	<b>359-5995</b>
<b>343-4295</b>	110mm	8.5mm	6	67.3mm	47.0mm	88.4mm	133.3mm	<b>330-3130</b>	<b>359-5999</b>
<b>340-4305</b>	7	13/16	8	2-1/16	1-5/16	4-5/16	8-1/4	<b>330-3107</b>	<b>359-5995</b>
<b>343-4308</b> ,	4-1/2	5/16	6	2-5/8	1-7/8	3-1/2	5-1/4	<b>330-3024</b>	<b>NONE</b>
<b>343-4309</b> ,	5-1/2	5/16	6	1-13/16	1-1/16	4-9/16	6-3/16	<b>330-3009</b>	<b>359-6100</b>
<b>340-4320</b>	6-1/4 X 8 UN (M)			2-5/16	1-9/16	5-3/4	6-7/8	<b>330-3077</b>	<b>NONE</b>
<b>343-4342</b> ,	5-1/2	5/16	6	2-11/16	1-15/16	4-3/8	6-1/4	<b>330-3009</b>	<b>359-6100</b>
<b>340-4975</b> ,	6-1/4 X 8 UN (M)			2-5/16	1-9/16	5-3/4	6-7/8	<b>330-3077</b>	<b>NONE</b>
<b>340-4976</b> ,	6-1/4 X 8 UN (M)			2-5/16	1-9/16	5-3/4	6-7/8	<b>330-3077</b>	<b>NONE</b>
<b>340-4977</b>	6-1/4 X 8 UN (M)			2-5/16	1-9/16	5-3/4	6-7/8	<b>330-3077</b>	<b>NONE</b>

Cannot be made with pipe plug.

Made with pipe plug only.

Hub cap can be used with 5-1/2 or 5-9/16 bolt circle with 5/16 inch bolts.

Hub cap available with hubo window, order 347-prefix. Also available **347-4342**, which is 4195 hub cap for grease applications, **347-4343** which is 4075 hub cap for grease applications and **347-4278** which is 4009 hub cap for grease applications. Also available with Hubo window when ordered with 347 prefix. See options below.

Lexan hub caps, order in multiples of 25.

4249 with recessed vent plug.

4095 with small vent plug **359-5915**.

4009 with small vent plug **359-5915**.

4024 with small vent plug.

4975 individually boxed.

## Torque Specifications

Hub Cap Mounting Bolts			
3/16	8-10 ft. lbs.	1/2	20-24 ft. lbs.
1/4	8-12 ft. lbs.	3/4	24-28 ft. lbs.
5/16	12-16 ft. lbs.	7/8	26-30 ft. lbs.
3/8	16-20 ft. lbs.	6 MM	8-12 ft. lbs.
7/16	18-22 ft. lbs.	8.5 MM	12-16 ft. lbs.

Threaded Hub Caps	
<b>XXX-4075</b>	100 ft. lbs.
<b>340-4975</b>	50-60 ft. lbs.
<b>340-4976</b>	50-60 ft. lbs.
<b>640-0003</b>	50-60 ft. lbs.

Hubo Window Options		
STEMCO Base Part No.	Grease Cap	Oil Cap
4009	347-4278	347-4009
4075	347-4343	347-4075
4195	347-4342	347-4195

Hub Cap Components		
<b>359-6032</b>	#8 Torx Screw	25 in. lbs. Maximum
<b>359-5984</b>	3/8 Mag Plug	5-9 ft. lbs. Maximum
<b>359-5985</b>	3/8 Pipe Plug	5-9 ft. lbs. Maximum

# Hub Cap Specifications

## Sentinel® Hub Caps



STEMCO Base Part No.	Oil Cap	Grease Cap	Bolt Circle	Bolt Size	No. of Bolts	Gasket Number	Oil Window Kit	Grease Window Kit
4009	348-4009	349-4009	5-1/2	5/16	6	330-3009	359-6112	359-6120
4013	348-4013	349-4013	5-1/2	5/16	5	330-3013	359-6112	359-6120
4046	348-4046	349-4046	5-1/2	5/16	6	330-3009	359-6112	359-6120
4075	348-4075	349-4075	6-1/4 x 8 UN(M)			330-3077	359-6112	359-6120
4095	348-4095	349-4095	5-1/2	5/16	6	330-3009	359-6112	359-6120
4195	348-4195	349-4195	6-3/4	5/16	6	330-3118	359-6112	359-6120
4281	348-4281	N/A	5-17/32	3/8	6	330-3122	359-6112	359-6120

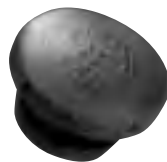
Window kit consists of window, gasket, window ring assembly/gasket and Sentinel Cap Cover P/N 359-6103.

## Integrated Sentinel® Hub Cap



STEMCO Base Part No.	Oil Cap	Grease Cap	Bolt Circle	Bolt Size	No. of Bolts	Gasket Number	Oil Window Kit	Grease Window Kit
4009	356-4009	358-4009	5-1/2	5/16	6	330-3009	359-6145	359-6146
4013	356-4013	358-4013	5-1/2	5/16	5	330-3013	359-6145	359-6146
4024	356-4024	358-4024	4-1/2	5/16	6	330-3024	359-6143	359-6144
4046	356-4046	358-4046	5-1/2	5/16	6	330-3009	359-6145	359-6146
4075	356-4075	358-4075	6-1/4 x 8 UN(M)			330-3077	359-6145	359-6146
4095	356-4095	358-4095	5-1/2	5/16	6	330-3009	359-6145	359-6146
4150	356-4150	358-4150	4-1/2	5/16	5	330-3150	359-6143	359-6144
4195	356-4195	358-4195	6-3/4	5/16	6	330-3118	359-6145	359-6146

## Sentinel® ESP (Extended Service Plug)



STEMCO BASE PART NO.	DESCRIPTION
359-6124	ESP Plug Blister Pack (2/pk)
359-6125	ESP Plugs (bulk pack of 50)

## Sentinel® ESP Filtered Vent



STEMCO BASE PART NO.	DESCRIPTION
359-6137	Drive Axle Vent (3/8" adapter)

# Hub Cap Specifications

## Hub Caps with Sentinel® ESP Plug



350-4065

Sentinel® ESP Part No.	Description	Bolt Circle	Bolt Size	No. of Bolts	Gasket P/N
350-4065*	4065 Cap, no side fill plug	3-5/8	5/16	4	330-3040
353-4065*	4065 Cap, with side fill plug	3-5/8	5/16	4	330-3040

\* Cannot use standard 340 or 343-4065 cap with ESP™ Plug. The casting has been modified to accept the ESP™, therefore, the above part numbers must be ordered to use this application with the ESP™ Plug.

## Bulk Pack Hub Caps with Sentinel® ESP Plug

Sentinel® ESP Part No.	Description	Bolt Circle	Bolt Size	No. of Bolts	Gasket P/N
300-5009	4009 Cap, no side fill plug Bulk Pack (25/Box)	5-1/2	5/16	6	330-3009
303-5009	4009 Cap, with side fill plug Bulk Pack (25/Box)	5-1/2	5/16	6	330-3009

## PSI Ready Hub Cap



Grease  
Hub Cap  
340 Series

STEMCO Base Part No.	Grease Cap	Oil Cap	Oil Cap with Magnetic Pipe Plug
4009	340-4370	343-4370	343-4374
4075	340-4371	343-4371	343-4375
4195	340-4372	343-4372	343-4376
4384	340-4384	N/A	N/A
Window Kits	359-6141	359-6140	—



Oil  
Hub Cap  
343 Series

Window kit consists of window, gasket and PSI retainer ring/gasket.

## TIREMAAX® HUB CAP



(340/343-4307)  
"N" Series Hub Cap

STEMCO Part No.	Application	Bolt Circle Diameter	No. of Bolts	Gasket P/N
340-4307	"N" series "GREASE" hub cap	5 ½"	6	330-3009
343-4307	"N" series "OIL" hub cap	5 ½"	6	330-3009
340-4311	"P" series "GREASE" hub cap	6 ¾"	6	330-3118
343-4311	"P" series "OIL" hub cap	6 ¾"	6	330-3118



(340/343-4311)  
"P" Series Hub Cap

## Hubo Bracket for Sentinel® and PSI Hub Caps

STEMCO Part No.	STEMCO Base Part No.	PSI Hub Cap Part No. (Grease)	PSI Hub Cap Part No. (Oil)	Stud Size	Height
610-0084	4195	340-4372	343-4372	5/16	5
610-0028	4009	340-4370	343-4370	5/16	5
610-0090	4075	340-4371	343-4371	*	1 7/8

\*Bracket mounts on top of window ring w/4 replacement screws included w/bracket.

# Hub Cap Specifications

## Stamped Steel Grease Hub Caps



340-5094



340-5096



340-5097

Hub Cap Includes Gasket	Bolt Circle	Bolt Size	No. of Bolts	A Height	B Inside Depth	C Flange I.D.	D Flange O.D.	Gasket Number
340-5094	5-1/2	5/16	6	2-1/2	2-13/32	4-3/8	6-1/4	330-3009
340-5096 <input type="checkbox"/>	5-1/2	5/16	6	2-1/2	2-13/32	4-3/8	6-1/4	330-3009
340-5097	5-1/2	5/16	6	2-1/2	2-13/32	4-3/8	6-1/4	330-3009
340-0044 <input type="checkbox"/>	4-1/2	5/16	6	2	1-15/16	3-5/16	5-3/16	330-3024

With Dirt Exclusion vent

Painted black

## Solid Grease Hub Cap/Duckbill Vented

STEMCO Part No.	Bolt Circle	Bolt Size	No. of Bolts	Gasket Number
352-4009	5-1/2	5/16	6	330-3009
352-4195	6-3/4	5/16	6	330-3118
362-4089*	5-1/2	5/16	6	330-3009



352-4195

\*No Duckbill Vent

## Non-Vented Grease Hub Caps

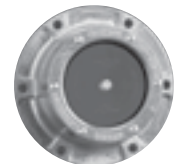
STEMCO Part No.	Application	Bolt Circle Diameter	Bolt Size	No. of Bolts	Gasket P/N
340-4321	4009 "N" Series Grease-Trailer	5 1/2"	5/16	6	330-3009
340-4322	4195 "P" Series Grease-Trailer	6 3/4"	5/16	6	330-3118



340-4321

## Dirt Exclusion Grease Hub Caps

Hub Cap Includes Gasket	Bolt Circle	Bolt Size	No. of Bolts	A Height	B Inside Depth	C Flange I.D.	D Flange O.D.	Gasket Number	* Window Kit
342-4009	5-1/2	5/16	6	2-11/16	1-15/16	4-3/8	6-1/4	330-3009	359-6095
342-4013	5-1/2	5/16	5	2-11/16	1-15/16	4-3/8	6-1/4	330-3013	359-6095
342-4024	4-1/2	5/16	6	2-5/8	1-7/8	3-1/2	5-1/4	330-3024	359-6094
342-4075	6-1/4 x 8 UN(M)			2-5/16	1-9/16	5-3/4	6-7/8	330-3077	359-6095
342-4095	5-1/2	5/16	6	1-13/16	1-1/6	4-9/16	6-3/16	330-3009	359-6095
342-4195	6-3/4	5/16	6	3-11/16	2-15/16	5-7/16	7-1/2	330-3118	359-6095
342-4249	5-1/2	5/16	6	1-13/16	1-11/16	4-7/16	6-3/16	330-3122	359-6096

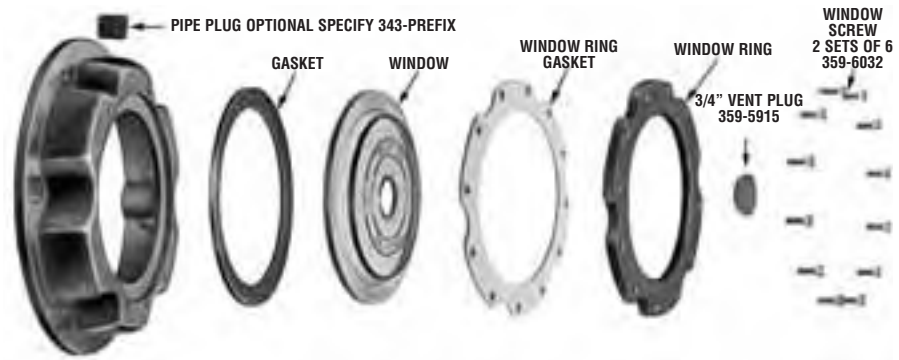


\* Window Kit consists of window, gasket and window ring gasket.

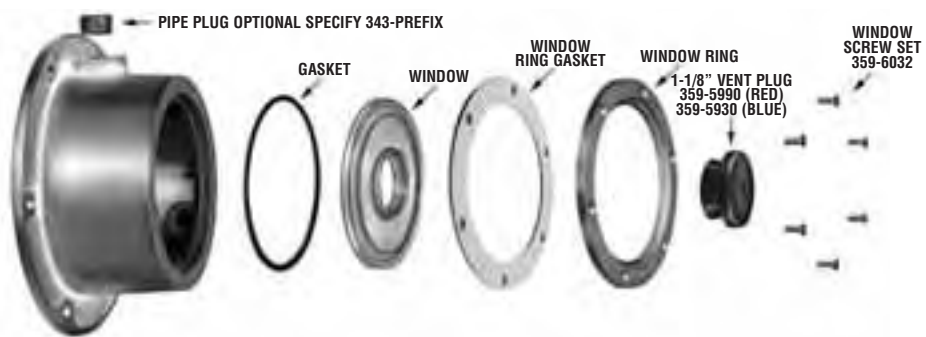


# Hub Cap Specifications

## Typical 4-3/8" Window Component Parts



## Typical 2-3/4" & 3-1/2" Window Component Parts



## Standard Hub Cap Replacement Components

Window Diameter	Window	Gasket	Window Ring	Window Ring Gasket	Vent Plug	Screw Set 6/Set	Window Kit ☐	3/8 Pipe Plug ☑
2-3/4"	359-5983	359-5996	359-5997 ☐	359-3136	359-5990 ☑	359-6032	359-5999	359-5985
3-1/2"	359-5994	359-5991	359-5992	359-3127	359-5990 ☑	359-6032	359-5995	359-5985
3-1/2"	359-5981 ☐	359-5991	359-5992	359-3127	None	359-6032	359-6117	359-5985
4-3/8"	359-5918	359-5968	359-5970	359-3137	359-5915	359-6032 ☑	359-5912	359-5985
3-1/2"	359-6049 ☐	359-5991	359-5992	359-3127	359-5915	359-6032	359-6100 ☐	359-5985

☐ Window kit consists of window, gasket, window ring gasket and vent plug.

☑ Magnetic pipe plug part number 359-5984.

☐ 5 hole window ring.

☑ Blue vent plug part number 359-5930.

☑ Window for mounting Argo, STEMCO, and Veeder-Root hubodometers (17/32" dia. hole). Be sure hub cap has pipe plug filler before mounting.

☐ Window with recessed vent plug.

☑ Two sets required.

## Dirt Exclusion Grease Hub Cap Replacement Components

Window Diameter	Window	Gasket	Window Ring	Window Ring Gasket	Screw Set 6/Set	Window Kit
2-3/4"	359-6086	359-5996	359-5997	359-3136	359-6032	359-6094
3-1/2"	359-6087	359-5991	359-5992	359-3127	359-6032	359-6095
4-3/8"	359-6088	359-5968	359-5970	359-3137	359-6032 ☑	359-6096

☑ Two sets required.

## Sentinel® Hub Cap Replacement Components

Window Diameter	Window Kit ☐	Gasket	Window Ring Gasket	Screw Set 6/Set	Magnetic Pipe Plug
3-1/2"	359-6112 ☐	359-5991	359-3127	359-6032	359-5984
3-1/2"	359-6120 ☐	359-5991	359-3127	359-6032	359-5984

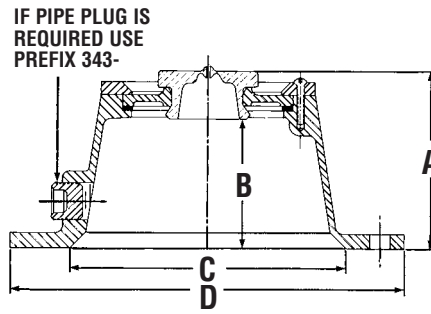
☐ Window kit consists of window, gasket, window ring with gasket and Sentinel® red cap cover part number 359-6103.

☐ Window kit for oil application.

☐ Window kit for grease application.

# Hub Cap Specifications

## Blank Hub Caps



Hub Cap Includes Gasket	Bolt Circle	Bolt Size	No. of Bolts	A Height	B Inside Depth	C Flange I.D.	D Flange O.D.	Gasket Number
340-4054	None	Blank	None	2-1/8	1-3/8	4-1/32	8-5/8	330-3017

## 4009 Hub Cap Variations

Application	Part Number	Description
Oil	343-4370	Cast aluminum hub cap with PSI face & side fill plug
Oil	347-4009	Cast aluminum hub cap with hubo window & side fill plug
Oil	348-4009	Cast aluminum hub cap with Sentinel® Technology and side fill plug
Oil	356-4009	Integrated Sentinel®
Grease/Oil	340-4009	Cast aluminum hub cap with large red fill plug & no side fill plug
Grease/Oil	343-4009	Cast aluminum hub cap with large red fill plug & side fill plug
Grease/Oil	300-4009	Cast aluminum hub cap with large red fill plug & no side fill plug in 50 unit bulk pack
Grease/Oil	303-4009	Cast aluminum hub cap with large red fill plug & side fill plug in 50 unit bulk pack
Grease	340-4370	Cast aluminum hub cap with PSI face & no side fill plug
Grease	340-5096	Stamped steel hub cap with vent
Grease	340-5097	Stamped steel hub cap with no vent
Grease	342-4009	Cast aluminum hub cap with dirt exclusion window & no side fill plug
Grease	347-4278	Cast aluminum hub cap with hubo window & no side fill plug
Grease	347-5096	Stamped steel hub cap with hubo mounting hole & vent
Grease	349-4009	Cast aluminum hub cap with Sentinel® Technology and no side fill plug
Grease	352-4009	Cast aluminum hub cap with solid top (duckbill vent) & no side fill plug
Grease	358-4009	Integrated Sentinel®

## Bulk Hub Caps

STEMCO Part No.	Standard Part No.	Bulk Qty.	Gasket Number
300-4009	340-4009	25	330-3009-Included
303-4009	343-4009	25	330-3009-Included
300-5097	340-4009	25	330-3009-Included
300-4024	340-4024	25	330-3024-Included
303-4024	340-4024	25	330-3024-Included

# Hub Cap Specifications

## 4075 Hub Cap Variations



340-4075



570-7008



340-4975

Application	Part Number	Description
Oil	340-4975	Clear polycarbonate hub cap
Oil	343-4075	Cast aluminum hub cap with side fill plug
Oil	343-4371	Cast aluminum hub cap with PSI face & side fill plug
Oil	347-4075	Cast aluminum hub cap with hubo window and side fill plug
Oil	348-4075	Cast aluminum hub cap with Sentinel® Technology & side fill plug
Oil	353-4075	Cast aluminum hub cap with Sentinel® ESP plug & side fill plug
Oil	356-4075	Integrated Sentinel®
Grease/Oil	340-4075	Cast aluminum hub cap & no side fill plug
Grease	342-4075	Cast aluminum hub cap with dirt exclusion window
Grease	340-4320	Solid cast aluminum hub cap & no side fill plug
Grease	340-4371	Cast aluminum hub cap with PSI face & no side fill plug
Grease	340-4976	Clear polycarbonate hub cap with solid face—no vent
Grease	347-4343	Cast aluminum hub cap with hubo window and no side fill plug
Grease	349-4075	Cast aluminum hub cap with Sentinel® Technology & no side fill plug
Grease	350-4075	Cast aluminum hub cap with Sentinel® ESP & no side fill plug
Grease	358-4075	Integrated Sentinel®

Screw-on Caps must have O-rings (330-3077).  
Use 570-7008 tool to tighten pro-par hub caps.

## Hubodometer® Hub Caps

Hub Cap Includes Gasket	Gasket Part No.	Bolt Circle Diameter	Number Of Holes	Bolt Diameter	Aluminum Equivalent
640-0001*	641-0005	5-1/2	6	5/16	347-4009
640-0002*	641-0017	5-1/2	5	5/16	347-4013
640-0003*	330-3077	6-1/4 x 8 UN(M)			347-4075

\* Vented



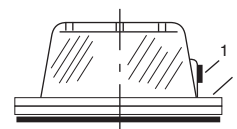
640-0001



640-0003

## Accessories

Description	Part No.
1-Pipe plug with O-ring	641-0001
2-Supporting hub cap flange 6 hole	641-0003



# Hub Cap Specifications

## Popular Hub Cap Options with Bolt Specifications

	STEMCO Base Part Number	Standard Hub Cap, No Side Fill	Dirt Exclusion, Grease	Standard Hub Cap, Side Fill	Standard Hub Cap, Hubo Window	Sentinel® Hub Cap	Sentinel® Hub Cap Grease	Solid Aluminum Grease/Vented	Integrated Sentinel® Oil	Integrated Sentinel® Grease	Bolt Circle	Bolt Size	Number of Bolts
	340	342	343	347	348	349	352	356	358				
4009	X	X	X	X	X	X	X	X	X	5-1/2	5/16	6	
4013	X	X	X	X	X	X	X	X	X	5-1/2	5/16	5	
4024	X	X	X					X	X	4-1/2	5/16	6	
4046	X		X		X	X		X	X	5-1/2	5/16	6	
4075	X	X	X	X	X	X		X	X	6-1/4 x 8 UN(M)			
4095	X	X	X		X	X	X	X	X	6	3/8	6	
4195	X	X	X	X	X	X	X	X	X	6-3/4	5/16	6	
4249	X	X	X							5-1/2	5/16	6	
4281					X	X				5-17/32	3/8	6	
4370*	X		X							5-1/2	5/16	6	
4371*	X		X							6-1/4 x 8 UN(M)			
4372*	X		X							6-3/4	5/16	6	

\*PSI Hub Cap

## Hub Cap Crossover

Competitive Part No.	Competitor's Name	STEMCO Part No.	Competitive Part No.	Competitor's Name	STEMCO Part No.	Competitive Part No.	Competitor's Name	STEMCO Part No.
1282	C/R	340-4975	401911P	Mechanex/Barrier	340-4975	DG-6F4.5	Dual Dynamics	340-4024
1612	C/R	343-4024	506085	Eaton	343-4024	DG-6F4.5P	Dual Dynamics	343-4013
1623	C/R	343-4066	506089	Eaton	343-4249	DG-6F4.5PC	Dual Dynamics	343-4024
1627	C/R	343-4019	64002	TriSeal	343-4019	DG-6F4.5S	Dual Dynamics	347-4075
1642	C/R	343-4013	64009	TriSeal	343-4009	DG-6FL	Dual Dynamics	340-4249
1643	C/R	343-4249	64009H	TriSeal	347-4009	DG-6FP	Dual Dynamics	347-4009
1665	C/R	343-4042	64013	TriSeal	343-4013	DG-6FPC	Dual Dynamics	340-4024
1681	C/R	343-4186	64024	TriSeal	343-4024	DG-6P	Dual Dynamics	340-4009
1682	C/R	343-4075	64029	TriSeal	343-4186	DG-6PS	Dual Dynamics	343-4009
1696	C/R	343-4195	64034	TriSeal	343-4034	DG-6PSC	Dual Dynamics	340-4046
1703	C/R	343-4249	64042	TriSeal	343-4042	DG-7.5P	Dual Dynamics	340-4195
1711	C/R	343-4024	64046	TriSeal	343-4046	DG-7.5PS	Dual Dynamics	343-4195
1723	C/R	343-4066	64046	TriSeal	343-4095	DG-P	Dual Dynamics	340-4075
1727	C/R	343-4019	64046	TriSeal	343-4249	DG-PS	Dual Dynamics	343-4075
1742	C/R	343-4013	64066	TriSeal	343-4066	DG-PSC	Dual Dynamics	343-4249
1743	C/R	343-4009	64075A	TriSeal	343-4075	H075	National	343-4075
1743	C/R	343-4046	64075G	TriSeal	342-4075	HS1643	Mechanex/Barrier	343-4249
1743	C/R	343-4095	64075P	TriSeal	340-4975	HU009A	National	343-4009
1753	C/R	343-4249	64249	TriSeal	343-4249	HU009A	National	343-4046
1765	C/R	343-4042	812928	Eaton	343-4095	HU013A	National	343-4013
1770	C/R	343-4034	815214	Eaton	343-4195	HU019A	National	343-4019
1781	C/R	343-4186	821338	Eaton	343-4009	HU024A	National	343-4024
1788	C/R	343-4249	821907	Eaton	343-4009	HU028A	National	343-4186
1800	C/R	347-4009	C40-4009	C/R	340-4009	HU034A	National	343-4034
1801	C/R	347-4013	C40-4009BP	C/R	300-4009	HU042A	National	343-4042
1811	C/R	343-4024	C40-4975	C/R	340-4975	HU066A	National	343-4066
1823	C/R	343-4042	C40-4975BP	C/R	340-4975	HU110A	National	343-4095
1842	C/R	343-4013	C40-5097BP	C/R	340-5097	HU110A	National	343-4249
1843	C/R	343-4009	C43-4009	C/R	343-4009	P411601	Mechanex/Barrier	343-4009
1843	C/R	343-4046	C43-4009BP	C/R	303-4009	P411605	Mechanex/Barrier	343-4095
1843	C/R	343-4095	C43-4013	C/R	343-4013	P411605	Mechanex/Barrier	343-4249
1865	C/R	343-4066	C43-4024	C/R	343-4024	P411608	Mechanex/Barrier	343-4013
1870	C/R	343-4034	C43-4042	C/R	343-4042	P411620	Mechanex/Barrier	343-4066
1890	C/R	343-4249	C43-4075	C/R	343-4075	P411622	Mechanex/Barrier	343-4042
340-009	National	340-4009	C43-4095	C/R	343-4095	P411629	Mechanex/Barrier	343-4186
340-009BK	National	300-4009	C43-4098	C/R	343-4098	P411630	Mechanex/Barrier	343-4024
340-975	National	340-4975	C43-4249	C/R	343-4249	P411640	Mechanex/Barrier	343-4034
340-975BK	National	340-4975	DG-5/6P	Dual Dynamics	340-4013	P411655	Mechanex/Barrier	343-4075
343-009	National	343-4009	DG-5/6PS	Dual Dynamics	343-4013	P411688	Mechanex/Barrier	343-4095
343-009BK	National	303-4009	DG-6F	Dual Dynamics	340-4046	P411967	Mechanex/Barrier	343-4046

COMPONENT SPECIFICATIONS

# PROGRAMMABLE FOR ANY TIRE SIZE



DataTrac® Pro  
Shown Actual Size

Program over 2500 specific tire models and sizes ensuring customer gets reliable mileage information.



### Always Have The Part Number

Stock only one part number with the programmable DataTrac® Pro and program the customer's specific requirement for any tire. With DataTrac® Pro you can also pre-set your own mileage and eliminate lead-time and pre-set charges.

### Schedule Maintenance

The DataTrac® Pro is an indispensable tool for scheduling maintenance based on actual mileage rather than time.

### Large, Easy-to-Read LCD Display

The display makes data retrieval simple and accurate. Optional flexibility of trip and life readings for precise data collection and management. Numbers automatically position upright for easy verification of mileage.

### Compact Size

The compact size makes it easy to mount and dismount tires without removing the DataTrac® Pro from the wheel.

### No Moving Parts

Provides improved reliability and durability for the most demanding vocational applications. Each unit is marked with a unique serial number providing additional security and data control.

# DATA TRAC® PRO

## AN INDISPENSABLE TOOL FOR...

- Scheduling maintenance
- Validating guarantees
- Determining lease charges
- Calculating costs-per-mile



Tire Make	Tire Model	Tire Size	STEMCO Mechanical Hubo Miles / KM	Veeder-root P/N miles / KM	DataTrac® Pro Miles/KM	*DataTrac® Pro REV - Mile/KM
Bridgestone	M726	11R22.5	650-0598/ 650-0537	777717-494/ 777727-306	600-5499/ 600-4310	499 / 310
Bridgestone	M726	11R24.5	650-0584/ 650-0528	777717-475/ 777727-294	600-5476/ 600-4296	476 / 296
Bridgestone	M726	255/70R22.5	650-0622/ 650-0549	777717-572/ 777727-350	600-5564/ 600-4351	564 / 351
Bridgestone	M726	285/75R24.5	650-0595/ 650-0537	777717-494/ 777727-306	600-5499/ 600-4310	499 / 310
Bridgestone	M726	295/75R22.5	650-0605/ 650-0541	777717-510/ 777727-316	600-5514/ 600-4320	514 / 320
Bridgestone	R194	11R22.5	650-0605/ 650-0541	777717-514/ 777727-316	600-5513/ 600-4319	513 / 319
Bridgestone	R194	11R24.5	650-0593/ 650-0534	777717-490/ 777727-306	600-5489/ 600-4304	489 / 304
Bridgestone	R194	255/70R22.5	650-0627/ 650-0552	777717-572/ 777727-359	600-5580/ 600-4361	580 / 361
Bridgestone	R194	285/75R24.5	650-0605/ 650-0541	777717-514/ 777727-316	600-5513/ 600-4319	513 / 319
Bridgestone	R194	295/75R22.5	650-0612/ 650-0545	777717-525/ 777727-326	600-5529/ 600-4328	529 / 328
GoodYear	G104	255/70R22.5	650-0627/ 650-0552	777717-572/ 777727-359	600-5579/ 600-4360	579 / 360
GoodYear	G124	11R22.5	650-0601/ 650-0537	777717-500/ 777727-310	600-5505/ 600-4314	505 / 314
GoodYear	G124	255/70R22.5	650-0626/ 650-0549	777717-572/ 777727-359	600-5572/ 600-4356	572 / 356
GoodYear	G167	11R22.5	650-0598/ 650-0537	777717-500/ 777727-310	600-5501/ 600-4311	501 / 311
GoodYear	G167	295/75R22.5	650-0605/ 650-0541	777717-514/ 777727-326	600-5515/ 600-4320	515 / 320
GoodYear	G314	11R22.5	650-0605/ 650-0541	777717-510/ 777727-312	600-5512/ 600-4318	512 / 318
GoodYear	G314	11R24.5	650-0593/ 650-0534	777717-484/ 777727-300	600-5488/ 600-4303	488 / 303
GoodYear	G314	285/75R24.5	650-0605/ 650-0541	777717-510/ 777727-316	600-5514/ 600-4320	514 / 320
GoodYear	G314	295/75R22.5	650-0613/ 650-0545	777717-520/ 777727-326	600-5529/ 600-4328	529 / 328
GoodYear	G362	11R24.5	650-0584/ 650-0528	777717-475/ 777727-300	600-5478/ 600-4297	478 / 297
GoodYear	G362	285/75R24.5	650-0598/ 650-0537	777717-500/ 777727-310	600-5501/ 600-4311	501 / 311
GoodYear	G362	295/75R22.5	650-0605/ 650-0541	777717-514/ 777727-326	600-5515/ 600-4320	515 / 320
GoodYear	G372	11R24.5	650-0584/ 650-0528	777717-475/ 777727-297	600-5476/ 600-4296	476 / 296
GoodYear	G372	285/75R24.5	650-0598/ 650-0537	777717-494/ 777727-310	600-5497/ 600-4309	497 / 309
GoodYear	G372	295/75R22.5	650-0605/ 650-0541	777717-510/ 777727-316	600-5512/ 600-4318	512 / 318
Michelin	XDA2	11R22.5	650-0598/ 650-0537	777717-500/ 777727-310	600-5502/ 600-4312	502 / 312
Michelin	XDA2	11R24.5	650-0587/ 650-0528	777717-475/ 777727-294	600-5480/ 600-4298	480 / 298
Michelin	XDA2	255/70R22.5	650-0625/ 650-0549	777717-572/ 777727-350	600-5566/ 600-4352	566 / 352
Michelin	XDA2	275/80R22.5	650-0605/ 650-0541	777717-510/ 777727-326	600-5519/ 600-4323	519 / 323
Michelin	XDA2	275/80R24.5	650-0598/ 650-0537	777717-500/ 777727-310	600-5502/ 600-4312	502 / 312
Michelin	XZA2	11R22.5	650-0601/ 650-0539	777717-510/ 777727-316	600-5510/ 600-4317	510 / 317
Michelin	XZA2	11R24.5	650-0591/ 650-0532	777717-484/ 777727-300	600-5485/ 600-4302	485 / 302
Michelin	XZA2	275/80R22.5	650-0610/ 650-0545	777717-520/ 777727-326	600-5526/ 600-4327	526 / 327
Michelin	XZA2	275/80R24.5	650-0601/ 650-0539	777717-510/ 777727-316	600-5509/ 600-4316	509 / 316
Michelin	XZE	255/70R22.5	650-0626/ 650-0549	777717-572/ 777727-359	600-5574/ 600-4357	574 / 357

## Order Yours Today!

Product	Part No.
DataTrac® Pro	600-9999
Programmer	801-6000

### Calibration and Installation

STEMCO calibrations are based at the mid-life of the tire tread (not the depth of new tire tread), one more reason we can guarantee +/- 2% accuracy over the life of the tire.

For proper calibration, all you need to know is the tire make, model and size. Refer to the chart for some of the most popular tires.

Hub caps, hub cap mounts, and universal brackets are available for all popular makes and models. For quick and easy installation, use any of three different options: (1) aluminum hub cap with hubo window, (2) grilamid Hubodometer hub cap or (3) bracket.

### Warranty

STEMCO DataTrac® Pro is warranted for 500,000 miles or 4 years, when installed in accordance with its specifications.

#### STEMCO LP - USA

P.O. Box 1989 · Longview, TX 75606-1989  
(903) 758-9981 · 1-800-527-8492 · FAX: 1-800-874-4297  
www.stemco.com

#### STEMCO - Canada

5900 Ambler Drive, Units 4 & 5 · Mississauga, ON L4W 2N3  
(905) 206-9922 · 877-232-9111 · FAX: 877-244-4555

#### ISO/TS 16949

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Hudson 10-597 · 7/09

\* Indicates the Revolutions per mile or Kilometer used to program the DataTrac® Pro from the Program Part screen.

\* If you have a DataTrac® p/n 600-1xxx for miles and 600-0xxx for kilometers, the unit contains trip. Follow conversion from DataTrac® in the table above.

\* Mechanical hubodometers are designated for use in a "range" of RPM or RPK, not a "specific" RPM or RPK. For "exact" Revolutions use DataTrac® Pro.



# RELIABLE MILEAGE INFORMATION WITH GUARANTEED ACCURACY

## HUBODOMETER®



STEMCO's drive-less Hubodometer® offers road-proven accuracy backed by a 500,000 mile warranty.

### **An Indispensable Tool**

The STEMCO Hubodometer® is an indispensable tool for scheduling maintenance, determining lease charges, validating guarantees, and calculating costs per mile.

### **Reliable Mileage Information**

Hubodometers® are calibrated to perform on over 2,500 specific tire models and sizes to further ensure reliable mileage information.

### **Spring-loaded Counterweight**

Virtually eliminates spin when tires hit bumps and potholes, your assurance of greater accuracy.

### **Preset Your Hubodometer®**

STEMCO will preset your Hubodometer® with the mileage data you require for a nominal charge. Allow 3 days for shipping.

### **500,000 Mile Warranty**

Guaranteed over-life-of-tire accuracy backed by 500,000 mile warranty



# HUBODOMETER<sup>®</sup>

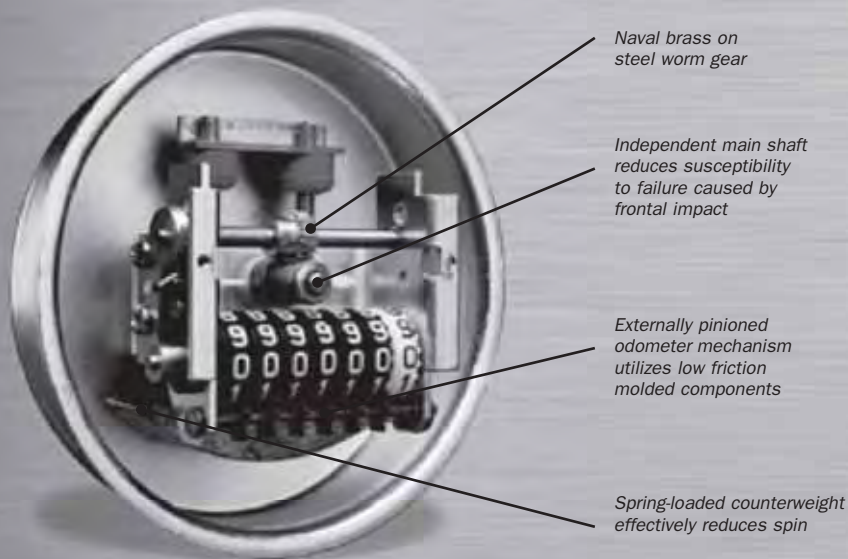
## GUARANTEED ACCURACY

**STEMCO<sup>®</sup>**  
A Higher Standard of Performance.<sup>SM</sup>  
an EnPro Industries company

### CONSTRUCTION AND DESIGN

- Main shaft is independent of front cover, greatly reducing failure caused by frontal impact.
- Unit is sealed for added durability in a moisture-controlled environment of polycarbonate and steel.
- Externally pinioned odometer mechanism utilizes low-friction molded components. These features, plus nine permanently lubricated bronze bearings, eliminate wear and ensure long life.
- Worm drive rotates parts less frequently, reducing wear.
- Rugged construction. Naval brass on steel. No plastic drive components.

### SUPERIOR DESIGN GUARANTEES $\pm 2\%$ ACCURACY



### CALIBRATION AND INSTALLATION

To ensure accurate calibration, we've worked with the engineering staffs of all major tire manufacturers. We have compiled fleet data on more than 2,500 tire models and sizes.

In addition, STEMCO calibrations are based at the mid-life of tire tread (not the depth of new tire tread), one more reason we can guarantee  $\pm 2\%$  accuracy over the life of the tire.

For proper calibration of any STEMCO Hubodometer,<sup>®</sup> all you need to know is tire make, model and size. With this information and our Tire Classification catalog (which includes radials and low-profile tires), you can quickly determine the part number for the correct Hubodometer.<sup>®</sup>

STEMCO offers a pre-set Hubodometer<sup>®</sup> program at a nominal cost. Pre-set orders are shipped within 3 working days from the Longview, Texas warehouse. For more information, contact STEMCO Customer Service.

For a FREE catalog, call STEMCO at 1-800-527-8492 or your local STEMCO distributor.

Hub caps, hub cap mounts and universal brackets are available for all popular makes and models. For quick and easy installation, use any of three different options: (1) aluminum hub cap with hubo window, (2) grilamid Hubodometer<sup>®</sup> hub cap or (3) bracket.

### WARRANTY

The STEMCO Hubodometer<sup>®</sup> is warranted for 500,000 miles when installed in accordance with its specifications. See your STEMCO distributor for details.



Aluminum Hub cap with Hubo Window



Grilamid Hubodometer<sup>®</sup> Hub Cap



Bracket Installation

STEMCO - USA  
P.O. Box 1989 · Longview, TX 75606-1989  
(903) 758-9981 · 1-800-527-8492 · FAX: 1-800-874-4297  
[www.stemco.com](http://www.stemco.com)

STEMCO - Canada  
5900 Ambler Drive, Units 4 & 5 · Mississauga, ON L4W 2N3  
(905) 206-9922 · 877-232-9111 · FAX: 877-244-4555

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**TQM<sup>SM</sup>**  
TOTAL QUALITY MAINTENANCE<sup>SM</sup>



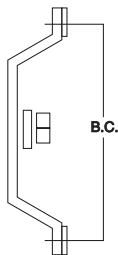
# Hubodometer® Mounts

## Popular Hubodometers® (in popularity order)

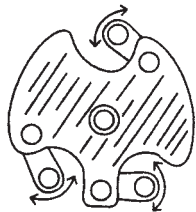


Part Number	RPM	Blank Tenths Part Number	Part Number	RPKM
650-0610	522	650-0611	650-0537	310
650-0598	500	650-0600	650-0532	300
650-0613	532	650-0614	650-0539	315
650-0601	504	650-0602	650-0545	324
650-0605	513	650-0606	650-0541	320
650-0587	480	650-0588	650-0549	357

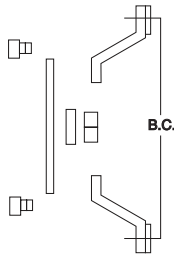
## Hubodometer® Brackets



Style A



Style C



Universal Mount

Part Number	Bolt Circle	Stud Size	Height	Part Number	Style
6100001	5 1/4	1/2	1 11/16		A
6100002	5 1/2	5/8	1 11/16		A
6100003	6 3/8 - 6 1/2	1/2 - 9/16	1 11/16		A
6100005	7 1/4	9/16	1 11/16		A
6100006	7	5/8	1 11/16		A
6100007	7	5/8	1 11/16		A
6100008	7 1/2	5/8	1 9/16		A
6100009	7 1/2	5/8	3 11/16		A
6100010	8 5/8	5/8	5 7/16	Mack Mount	A
6100011	5 1/2 - 7 1/2	1/2	1 3/4	Universal Truck Mount	
6100013	5 1/2	7/16	1/4		A
6100014	7 5/8	5/8	4 3/8		A
6100015	2 1/2 - 6 1/2	9/16	1 1/8	Car Mount (5 Stud)	C
6100016	2 1/2 - 6 1/2	5/16 .343	1 1/8	Universal Truck Mount (5 Stud)	C
6100017	5 7/32	5/8	1 11/16		A
6100022	3 9/16	1/2	1/2	Strap and Lock Assembly	
6100023	3 15/16	1/2	1		A
6100024	5 1/2	5/16 - 18 thd	4 1/2	Hardware for Berg Cap	
6100025	4 1/2 - 9	3/16	1 11/16	TMK-90 Truck Mount	
6100028	5 1/2	5/16	5	Sentinel and PSI Caps - 3 Leg	
6100029	6 3/4	5/16	6	Sentinel, PSI, AirGo Caps - 3 Leg	
6100032	7 1/4	9/16	1 1/2		A
6100058	6 1/2	1/2	4 1/2		A
6100059	4	9/16	1 1/2	For Golf Carts	A
6100065	5 1/2	5/16	3 1/2	<b>Fits 4009 Hubcap</b>	A
6100066	6 1/2	5/8	5 1/4		A
6100079	7 1/4	3/4	1 11/16		A
6100084	6 3/4	5/16	5	Sentinel and PSI Caps - 3 Leg, f/4195	
6100085	5 1/2	5/16	4	PSI Caps	A
6100090	N/A	N/A	N/A	Mounts on Top of Window Ring	
6100093	262 mm (10.31")	M10	N/A	Meritor Planetary Axle-DTrac Only	
6100094	246 mm (9.70")	M10	N/A	MAN Planetary Axle-DTrac Only	
6410023	N/A	N/A	N/A	Refurb Kit f/MAN Bracket	

## Hubodometer® Hub Caps - For Trailer Installations



640-0001



640-0003

Hub cap Includes Gasket	Gasket Part No.	Bolt Circle Diameter	Number of Holes	Bolt Diameter	Aluminum Equivalent
640-0001*	641-0005	5-1/2	6	5/16	347-4009
640-0002*	641-0017	5-1/2	5	5/16	347-4013
640-0003*	330-3077	6-1/4 x 8 UN(M)			347-4075

\* Vented

For additional Hubodometer® information, refer to [www.stemco.com](http://www.stemco.com).

# STEMCO®

# AXLE NUTS

# ADVANCED AXLE SPINDLE NUTS

## PRO-TORQ®



### **Longer Tread Life**

Fleets save tires, wheels track truer. PRO-TORQ® controls axial motion, holding bearing end play near zero while maintaining exact cup and cone alignment on the spindle. This is good news for radial tires. PRO-TORQ® delivers the adjustment precision which experts agree is needed to maximize radial tire life.

### **Extended Wheel Seal and Bearing Service**

PRO-TORQ® supports seal, bearing and axle manufacturers' specifications. With PRO-TORQ's® tight control on wheel bearing adjustment, fleets minimize premature seal failure and improve extended seal and brake lining programs. PRO-TORQ® compensates for normal bearing wear, permitting precise .001" back-off increments at scheduled preventative maintenance intervals. This keeps bearings properly aligned, running cooler and lasting longer.

### **Improves ABS**

PRO-TORQ's® reliable low end play bearing adjustment and axial motion control helps assure accurate wheel end sensor monitoring of wheel speeds on antilock braking systems.



**STEMCO®**

*A Higher Standard of Performance.™*  
an EnPro Industries company

# PRO-TORQ®

## Advanced Axle Spindle Nuts



**STEMCO®**  
A Higher Standard of Performance.™  
an EnPro Industries company

SPINDLE NUT APPLICATIONS	REPLACEMENT KEEPER PART NUMBER	THREAD SIZE	OUTER BEARING CONE/CUP	TOOL SOCKET
<b>TRAILER AXLE</b>				
<b>STEMCO No. 447-4723</b> Fruehauf Pro-par, Meritor TP *Axle date code post January 1, 2006	450-4723 TANG	3.480"-12	HM518445/ HM518410	4 13/16"- 8 point (OTC# 1941)
<b>STEMCO No. 447-4724</b> 22,500#-23,000# Eaton, EST 230-P, EST 225-P, P-22	450-4723 TANG	3 1/2"-12	HM518445/ HM518410	4 13/16"- 8 point (OTC# 1941)
<b>STEMCO No. 447-4743</b> 17,000#-22,500# Meritor, Dana, Eaton, Std Forge, Ingersoll	450-4743 TANG	2 5/8"-16	HM212049/ HM212011	3 3/4"- 8 point (OTC# 1925)
<b>STEER AXLE</b>				
<b>STEMCO No. 448-4836</b> 12,000# Meritor, Navistar	450-4836 D-FLAT	1 1/2"-12	3782/3720	2 1/2"- 6 point (OTC# 1921)
<b>STEMCO No. 448-4837</b> 12,000# Eaton, Ford, Meritor	450-4837 TANG	1 1/2"-18	3782/3720	2 1/2"- 6 point (OTC# 1921)
<b>STEMCO No. 448-4838</b> Meritor	450-4837 TANG	1 1/2"-12	3782/3720	2 1/2"- 6 point (OTC# 1921)
<b>STEMCO No. 448-4839</b> 12,000#, 14,300# Mack	450-4839 D-FLAT	1 5/8"-12	45280/45220	2 5/8"- 6 point (OTC# 1922)
<b>STEMCO No: 448-4840</b> Steer Spindle	450-4836 D-FLAT	1 1/2"-18	3782/3720	2 1/2"-6 point (OTC# 1921)
<b>STEMCO No: 448-4863</b> ArvinMeritor® FH Axle 16,500# GAW	450-4863 D-FLAT	2 1/4"-12	N/A	3 1/2"- 6 point (OTC# 1910)
<b>STEMCO No. 448-4864</b> 18,000#, 20,000# Mack	450-4864 D-FLAT	2"-12	555S/552A	3"- 6 point (OTC# 1906)
<b>STEMCO No. 448-4865</b> Meritor FL Series	450-4865 D-FLAT	1 3/4"-12	555S/552A 3720/3979	3"- 6 point (OTC# 1906)
<b>DRIVE AXLE</b>				
<b>STEMCO No. 449-4904</b> 34,000#, 38,000#, 44,000# Mack	450-4904 TANG	2 7/8"-12	47679/47620 575/572 567/563	4 1/8"- 6 point (OTC# 1915)
<b>STEMCO No. 449-4973</b> 34,000#-46,000# Eaton, Meritor, Dana, Navistar, 50,000# Mack	450-4973 TANG	3 1/4"-12	580/572	4 3/8"- 8 point (OTC# 1917)
<b>STEMCO No. 449-4974</b> Meritor, Eaton, Ford, Navistar	450-4743 TANG	2 5/8"-12	3984/3920 39590/39520	3 3/4"- 8 point (OTC# 1925)
<b>STEMCO No. 449-4975</b> 19,000# Dana, Navistar, Bluebird	450-4975 TANG	2 5/8"-12	3984/3920 39590/39520	3 3/4"- 8 point (OTC# 1925)

### Cost Saving Installation

For more than 10 years, leading fleets have chosen PRO-TORQ® to deliver the longer service life they expect from today's tires, wheel seals and bearings. PRO-TORQ® minimizes variability in wheel bearing adjustment, which means extended maintenance intervals and trouble-free performance from steer, drive and trailer axle wheel ends.

### Tight Control on Bearing Adjustment

PRO-TORQ® gives fleets the ability to standardize wheel end maintenance practices and makes repeatable, close tolerance bearing adjustment a reality. From mechanic to mechanic, PRO-TORQ® single nut systems and adjustment procedure will consistently secure the nut with wheel bearing adjustment accuracy in the range of .001-.003" end play.

PRO-TORQ® avoids the extremes of both preload and excessive bearing end play. It gives fleets the tightest adjustment standard in the industry.

### Faster to Install, Easier to Lock

PRO-TORQ® assures that bearings are "positive" locked in precise position the first time. That's because PRO-TORQ® uses only one nut – no jamming, juggling or time wasted while repositioning multiple nut assemblies.

Clearance in the threads of traditional "jamming" type nuts can result in a wide range of final settings. A mechanic can unintentionally impose preload on a bearing by overtightening the jamnut. As a result, the outer bearing cone can be pushed further up the spindle and out of its intended position.

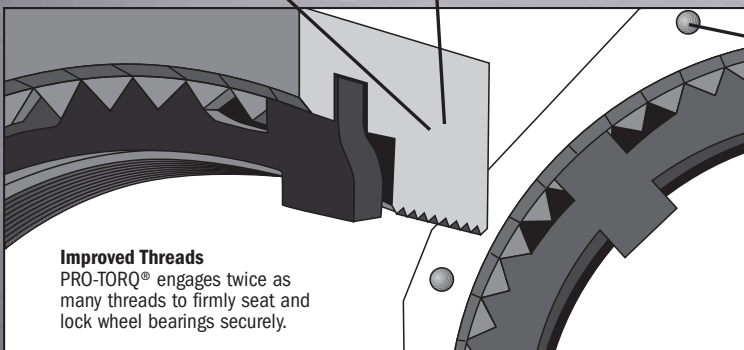
PRO-TORQ® takes the guesswork out of bearing adjustment!

#### Good Wear Resistance

Bearing contact surface is induction hardened. No washers required.

#### Flat Contact Surface

Improves wheel bearing cup and cone alignment.



#### Improved Threads

PRO-TORQ® engages twice as many threads to firmly seat and lock wheel bearings securely.

#### Highly Visible Adjustment Marks

Give mechanics precise control of nut backoff amount during installation.

#### Infinite Locking Positions

Nut and spring steel keeper mate and lock at any point on the axle spindle in .001" axial increments.

#### STEMCO LP - USA

P.O. Box 1989 · Longview, TX 75606-1989  
(903) 758-9981 · 1-800-527-8492  
FAX: 1-800-874-4297  
www.stemco.com

#### STEMCO - Canada

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Mississauga, ON L4W 2N3  
(905) 206-9922 · 877-232-9111  
FAX: 877-244-4555

#### ISO/TS 16949

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**TQM**  
TOTAL QUALITY MAINTENANCE™

# Pro-Torq® Trailer Axle Nuts

## Applications and Specifications

### STEMCO Part Number

**447-4723**

Replacement Keeper No.: 450-4723 TANG  
Tool Socket: 4 13/16" - 8 point (OTC# 1941)  
Thread Size: 3.480" - 12  
Outer Bearing Part No.: HM518445/HM518410

### FRUEHAUF AXLES

PROPAR Series

### HENDRICKSON AXLES

HP

### INGERSOLL AXLES

F24H

### MERITOR AXLES

TP Series

### STEMCO Part Number

**447-4724**

Replacement Keeper No.: 450-4723 TANG  
Tool Socket: 4 13/16" - 8 point (OTC# 1941)  
Thread Size: 3 1/2" - 12  
Outer Bearing Part No.: HM518445/HM518410

### EATON AXLES

EST 230-P, EST 225-P

### STEMCO Part Number

**447-4743**

Replacement Keeper No.: 450-4743 TANG  
Tool Socket: 3 3/4" - 8 point (OTC# 1925)  
Thread Size: 2 5/8" - 16  
Outer Bearing Part No.: HM212049/HM212011

### DANA SPICER AXLES

D-20, D-21, D-22, DD-21, DD-22, K-21, K-22, K-25, K-30

### EATON AXLES

C, C2, CD, CD2, CE, ESA-225J, EST, EST-225J, EST-230J, ETA 230C, ETA 225D, ETA 225J, H23L, H25R, HCE, HJ, HJE, J, JE, JH, LA-15, T-18C, 20L-77, 22L, 22R, 23L, 23R, 25R

### HENDRICKSON AXLES

HN

### INGERSOLL AXLES

A22T

### MERITOR AXLES

RL Series, RQ Series, TK Series, TKL Series, TKLD Series, TL Series, TLD Series, TN Series, TND Series, TQ Series, TQC Series, TQD Series

### STANDARD FORGE

A25, A26, 17,000 and 18,000 lb. Trade

### STEMCO Part Number

**448-4836**

Replacement Keeper No.: 450-4836  
Tool Socket: 2 1/2" - 6 point (OTC# 1921)  
Thread Size: 1 1/2" - 12  
Outer Bearing Part No.: 3782/3720

### DANA SPICER AXLES

D10

### EATON AXLES

X-115

### FRUEHAUF AXLES

Model 5, TKF

### MERITOR AXLES

T-1100

### STANDARD FORGE

T 8.5-S

# Pro-Torq® Steer Axle Nuts

## Applications and Specifications

### STEMCO Part Number

**448-4836**

Replacement Keeper No.: 450-4836 D-FLAT  
Tool Socket: 2 1/2" - 6 point (OTC# 1921)  
Thread Size: 1 1/2" - 12  
Outer Bearing Part No.: 3782/3720

### MERITOR AXLES

FD 900, FD 901, FD 961, FE 900, FE 903, FF 900, FF 901, FF 921, FF 931, FF 932, FF 933, FF 941, FF 942, FF 943, FF 944, FF 952, FF 961, FG 941

### NAVISTAR

I100S

### STEMCO Part Number

**448-4837**

Replacement Keeper No.: 450-4837 TANG  
Tool Socket: 2 1/2" - 6 point (OTC# 1921)  
Thread Size: 1 1/2" - 18  
Outer Bearing Part No.: 3782/3720

### EATON AXLES

EFA-12F4, EFA-13F5, E-1200I, FE 931, 12K, 13.2K

### FORD AXLES

SIFCO 12,000#, FORD 6,000#

### MERITOR AXLES

FE-931

### STEMCO Part Number

**448-4838**

Replacement Keeper No.: 450-4837 TANG  
Tool Socket: 2 1/2" - 6 point (OTC# 1921)  
Thread Size: 1 1/2" - 12  
Outer Bearing Part No.: 3782/3720

### MERITOR AXLES

Steer

\* Refer to installation instructions for part number 448-4836.

### STEMCO Part Number

**448-4839**

Replacement Keeper No.: 450-4839 D-FLAT  
Tool Socket: 2 5/8" - 6 point (OTC# 1922)  
Thread Size: 1 5/8" - 12  
Outer Bearing Part No.: 45220/45280

### MACK FRONT AXLES

FAW12, FAW12, FAW537, FAW5371, FAW14.3, FAW538, FAW10.5, FAW536, FAW5361

### STEMCO Part Number

**448-4840**

Replacement Keeper No.: 450-4836 D-FLAT  
Tool Socket: 2 1/2" - 6 point (OTC# 1921)  
Thread Size: 1 1/2" - 18  
Outer Bearing Part No.: 3782/3720

### HENDRICKSON AUXILIARY AXLE

13,000# Ultra Axle

### STEMCO Part Number

**448-4863**

Replacement Keeper No.: 450-4863 D-Flat  
Tool Socket: 3 1/2" - 6 point (OTC# 1910)  
Thread Size: 2 1/4" - 12

### ARVINMERITOR® FH AXLE

Steering Spindle  
16,500 lbs GAW

### STEMCO Part Number

**448-4864**

Replacement Keeper No.: 450-4864 D-FLAT  
Tool Socket: 3" - 6 point (OTC# 1906)  
Thread Size: 2" - 12  
Outer Bearing Part No.: 5552A/5555

### MACK FRONT AXLES

FA18, FAW18, FAW616, FA616, FA20, FAW20, FAW617, FA617, FAW16, FAW614

### STEMCO Part Number

**448-4865**

Replacement Keeper No.: 450-4865 D-FLAT  
Tool Socket: 3" - 6 point (OTC# 1906)  
Thread Size: 1 3/4" - 12  
Outer Bearing Part No.: 5552A/5555, 3979/3720

### MERITOR FRONT AXLES

FL

# Pro-Torq® Drive Axle Nuts

## Applications and Specifications

### STEMCO Part Number

**447-4743**

Replacement Keeper No.: 450-4743  
Tool Socket: 3 3/4" - 8 point (OTC# 1925)  
Thread Size: 2 5/8" - 16  
Outer Bearing Part No.: HM212049/HM212011

### MERITOR AXLES

F Series, H Series

### STEMCO Part Number

**449-4904**

Replacement Keeper No.: 450-4904 TANG  
Tool Socket: 4 1/8" - 8 point (OTC# 1917)  
Thread Size: 2 7/8" - 12  
Outer Bearing Part No.: 563/567, 572/575, 47620/47679

### MACK AXLES

S-34, S-38, S-44, S-462, SW-56, SW-57, SW-441

### STEMCO Part Number

**449-4973**

Replacement Keeper No.: 450-4973 TANG  
Tool Socket: 4 3/8" - 8 point (OTC# 1917)  
Thread Size: 3 1/4" - 12  
Outer Bearing Part No.: 580/572

### DANA SPICER AXLES

W 230-S, W 460-S

### EATON AXLES

D 380, D 381, D 380-P, D 381-P, D 400, D 401, D 400-P, D 440-P, D 401-P, D 402-P, D 451-P, D 460-P, D 480-P, D 485-P, DP 380, DP 381, DP 380-P, DP 381-P, DP 340, DP 341, DP 400-P, DP 401-P, DP 440-P, DP 460-P, DP 480-P, DP 550, DP 580-P, DP 650-P, DS 340, DS 341, DS 344, DS 380, DS 381, DS 380-P, DS 381-P, DS 400-P, DS 401-P, DS 404-P, DS 400-P, DS 460-P, DS 480-P, DS 454-P, DT 340, DT 341, DT 380, DT 381, DT 380-P, DT 381-P, DT 400-P, DT 440-P, DT 460-P, DT 480-P, RS 341, RS 381, RS 402, RS 401, RS 460, RS 461, RT 402, 44, 440P, 480P, 1911, 1919, 2011, 19500, 20500, 20501

### MACK AXLES

50,000#

### MERITOR AXLES

Q Series, QHD, QHR, QT Series, R Series, RL-170, RS Series, RT Series, S Series, S 170, S 280, SQ 100, SQ 100-P, SQD, SQDD, SQHD, SQHP, SQHR, SQR, SQW, SR 170, SR 270, SR 280, SRD, SRDD, SRHD, SSHD, SSHP, SP, STD, STDD, STHD, SU 170, SU 270, SU 280, SUHD, SW 170, SW 270, SW 280, T Series, U Series, 58000 Series, 59000 Series, 200

### NAVISTAR AXLES

14227, 14308, 14309, 14311, 14338, 14342, 14943, 14348, 14364, 14368, 14494

### STEMCO Part Number

**449-4974**

Replacement Keeper No.: 450-4743 TANG  
Tool Socket: 3 3/4" - 8 point (OTC# 1925)  
Thread Size: 2 5/8" - 12  
Outer Bearing Part No.: 3984/3920, 39590/39520

### EATON AXLES

D, DT, 32M, 34M, MF, MR, RP, RT, 17800, 17801

### FORD AXLES

18,000# Rear

### MERITOR AXLES

H-145, H-162, H-172, H-240, H-262, H-350, H-362, L-172

### NAVISTAR AXLES

14044, 14186, 14351, RA44

### STEMCO Part Number

**449-4975**

Replacement Keeper No.: 450-4975 TANG  
Tool Socket: 3 3/4" - 8 point (OTC# 1925)  
Thread Size: 2 5/8" - 12  
Outer Bearing Part No.: 3984/3920, 39590/39520

### DANA AXLES

J190S

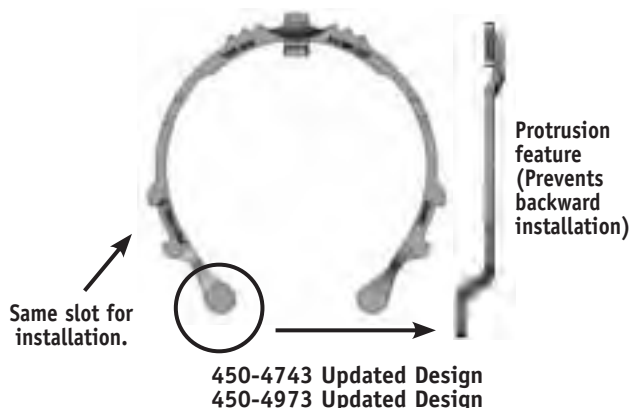
### FORD AXLES

### GMC

### NAVISTAR AXLES

### REAR AXLE SCHOOL BUS APPLICATION

19,000#



# High Performance Brake Linings



## **HORIZON SP™** The value and performance choice for highway applications.

Horizon SP was specially designed to be a cost effective solution for your long-haul needs. Horizon SP is the standard performance friction formulation for normal-duty cycles, operating environments and loads.

**Axle Rating: Horizon SP20 - 20,000 lbs. Horizon SP23 - 23,000 lbs.**



## **CREST XL™** Extra life choice for demanding highway applications.

Whether you're driving an over-the-road truck, tractor or trailer, this unique brake lining is perfect for moderate to heavy-duty long-haul applications. Crest XL exceeds the performance of the competition in the same category due to its superior formulation combined with the Wave Process.

**Axle rating: 20,000 lbs.**



## **VISTA HP™** The high performance choice for demanding applications.

If you're looking for superior performance on buses, trucks, tractors or trailers, then look no further. Vista HP offers smooth, noise-free and stable stopping power over a wide range of temperature, pressure and speed variations. As a result, Vista HP high-performance brake linings are ideally suited for the rigors of stop-and-go service.

**Axle Rating: Vista HP- 23,000 lbs. Vista HP1- 25,000 lbs.**



## **ULTRA PEAK™ BRT** Superior technology for bus, refuse and transit applications.

For maximum performance in bus, refuse and transit applications, choose Ultra Peak BRT. This high-quality brake lining has been specially formulated to run quieter and extend lining life and drum life with excellent flexural strength. Ultra Peak BRT has been FMVSS 121 rated up to 26,000 lbs. for transit platforms. In addition, extraordinary flexural strength eliminates the failure mode of friction cracking.

**Axle Rating: 23,000 - 26,000 lbs.**



## **ULTRA PEAK™ HH** Superior performance for your heavy-haul truck.

Your heavy-haul truck demands superior performance. That's why we offer Ultra Peak HH. This lining was specifically designed for severe service. This combination set includes two heavy-duty premium high-temperature products. Ultra Peak HH has high thermal diffusivity and reduces noise.

**Axle rating: 23,000 lbs.**



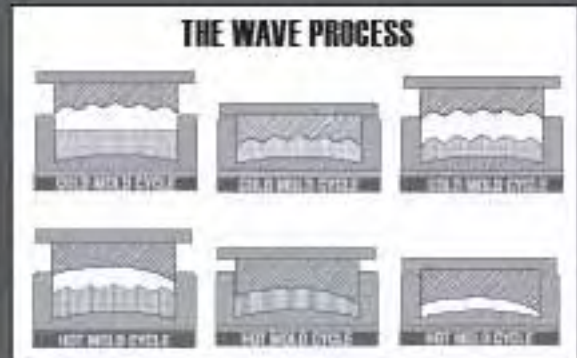
## **ULTRA PEAK™ FT** Outstanding performance for specialty applications.

For specialty applications where performance is key, Ultra Peak FT incorporates the finest raw materials and superior technology to assure maximum performance in the most severe transit and refuse environments. In addition, Ultra Peak FT offers extended brake life cycles and reduces noise.

**Axle rating: 26,000 - 29,000 lbs.**

## **CATCH THE WAVE.**

Our patented and revolutionary "Wave Process" assures higher performance and a longer life along with a lower noise level. This patented technology begins with the cold mold cycle, which creates the unique wave pattern. Hot molding then forces the waves to condense under heat and pressure. Aligning the friction density into column structures assures less heat susceptibility, which results in quieter, longer lasting brakes.



# Friction Manufacturers Interchange

		20,000 lb. AXLE MATERIALS					23,000 lb. AXLE MATERIALS					25,000 – 29,000 lb. AXLE MATERIALS		
Manufacturer	Economy	Standard	Premium	Economy	Standard	Heavy Duty Premium	High Performance Long Life	Combination Block	Severe Service	Transit	Film Transfer			
<b>STEMCO</b> 		Horizon SP20	Crest XL		Horizon SP23	Vista HP	Ultra Peak BRT	Ultra Peak HH	Vista HP1	Ultra Peak BRT (26K) Ultra Peak FT (29K)	Ultra Peak FT (29K)			
Federal Mogul ABEX	XC6085 VL20	AN6166 XL6014	EN6008-1 EL6011	VL23	AX6149	EX685 SDA6098		SMC (685/6069)	ED6028 EH6040	Metro Combo 685/697 (26K)				
Affinia Brake Pro			CM16	CM20	CM18	CM20	CM22A1	CMB42	CM29	CMT22A1 (25K) CCM2425	CCM2429 (29K)			
Carlisle	EC20 NA100	MB20	MB21 CF2000	EC23	MB44	MB23	WT56	MBC62	SD1 MB60	TG2 (26K) WT56 (26K)				
Cobreq	NABK334	NABK090	NABK102	NABK091	NABK110			NABK171F	NABK132	NABK142 (26K) NABK110 (26K)				
Fras-le	F520 F540-1	F550-1		F523	F555-1	F557		F560/F555	F587	787T (28K) F557 (26K)				

**STEMCO**  
**DUROLINE™**



**HORIZON SP™ CREST XL™ VISTA HP™ ULTRA PEAK™**

To see the full product offering of high performance friction products, visit [www.stemcoduroline.com](http://www.stemcoduroline.com)

P.O. Box 1989, Longview, Texas 75606-1989. Tel: 903-758-9981. Fax: 903-232-3508

STEMCO Duroline, Horizon SP, Crest XL, Vista HP and Ultra Peak are trademarks of STEMCO LP.

# Private Label Reference

	20,000 lb. AXLE MATERIALS			23,000 lb. AXLE MATERIALS				25,000 – 29,000 lb. AXLE MATERIALS		
	Economy	Standard	Premium	Economy	Standard	Heavy Duty Premium	High Performance Long Life	Combination Block	Severe Service	Transit
<b>STEMCO DUROLINE</b>	Horizon SP20	Crest XL		Horizon SP23	Vista HP	Ultra Peak BRT	Ultra Peak HH	Vista HP1	Ultra Peak BRT (26K) Ultra Peak FT (29K)	Ultra Peak FT (29K)
Private Label										
ArvinMeritor	F520 F540 EG1	F550-1 MG1	MA210 MA212 R201	F523 EG2	F555-1 MG2L MG2	MA310 MA312 R301 F557	F560/F555-1	R403 F587	787T (28K) F557 (26K) R685/R687 (26K)	
Bendix/Spicer	GREEN	BLUE SILVER	ES310 ES410 ES420		RED YELLOW GOLD	ES600 ES690 ES440	ES1150	ES1050		
BRF/UAP		M20			M23					
Haldex	2017 (GN) HV77	2008 (GF)	2015-2 (GR) 2025 (GW) WEDGE	2016 (GD) HV88	2023 (GH)	2020-1 (GG)	2020-2035 (GC)	2035 (GZ) 2040 (GM) 2030 (GP)	TRANS MAX (TM)	
HD America	H20F	H20		H23F	H23					
Marathon	MH	UB	DB20		FLOE	HS	MBC	TS	HST (25K) KVT (26K) MBST (26K)	
Road Leveler	STD 20	PR20		STD 23	PR23					
VIPAR	VIPRO 20K STD	VIPRO 20K PREM		VIPRO 23K STD	VIRPO 203K PREM					

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# DataTrac® Pro Installation Instructions

## HOW IT WORKS

DataTrac® Pro is an advanced mileage counter that relies on Earth's gravity for counting wheel revolutions. The DataTrac® Pro unit monitors its orientation to Earth's gravitational pull and uses this reference to recognize and count revolutions.

## INSTALLING THE UNIT

In order to prevent inadvertent counting during shipment, a new DataTrac® Pro unit will be delivered in "Ship Mode." **To wake the device**, shake it vigorously for 4 seconds. The display will turn on and a timer will begin counting down. Install the DataTrac® Pro unit before the timer reaches zero (approximately 2 minutes). This will prevent counts induced by handling vibrations. **A unit should never be installed on a wheel without first waking it up.**

## FOR FLEETS

To prevent premature wake up while repackaging, you cannot wake the device until 30 seconds after successfully programming it. The DataTrac® Pro can be programmed as many times as desired until the device is awakened by shaking it. Once the unit has been awakened the revolutions can not be changed.

## READING THE DISPLAY

The display will turn on when the vehicle is at rest. Numbers will automatically orient to read upright. This is also indicated by the icon display, e.g. mile, km, acre. The mileage reading is always in the same direction as the icon.

In order to conserve power the display turns off at any time a vibration is detected. This means that the display will be off while the vehicle is moving. As soon as all vibration or motion stops the display will reactivate in about 5 seconds.

## DISPLAY MODES

The DataTrac® Pro unit comes equipped with three display modes: LIFE and TRIP (if programmed), and REV. To toggle the display between LIFE, TRIP and REV Modes, use the palm of your hand to cover the round bubble on the face of the unit for at least 1 second, and then uncover it. If the unit is in bright sunlight, the bubble may have to be covered with your palm to block more light from reaching the sensor. TRIP mode is displayed with tenths resolution and is indicated by display of the TRIP icon (only if unit is programmed for TRIP).

To reset the TRIP display, toggle between LIFE, TRIP and REV Modes 5 times, quickly. Note that the unit cannot toggle faster than every 1.5 seconds. To view the revolutions of the unit simply repeat the process that is used to view trip and then a screen that shows (REV XXX) will show up. The XXX is the number of revolutions per KM or MILE that the unit is programmed for. On units without TRIP there are only two screens, all others have three screens (LIFE, TRIP, and REV). As with the TRIP mode the unit will return to the mileage after 10 seconds if left in the revolutions screen.

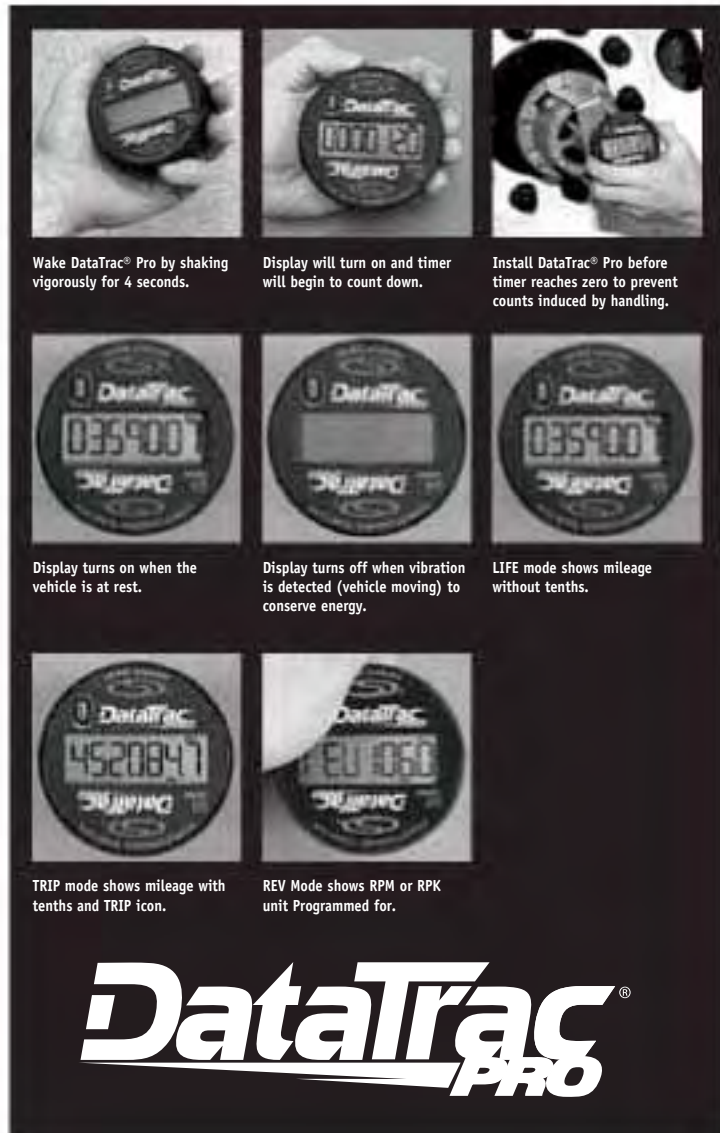
## CERTIFICATIONS

This unit complies with European EMI (CE) regulations as noted on front cover by the E11 marking.

## PRODUCT LIMITATIONS

It is important to note that this unit is designed to recognize vibrations and accelerations common to wheel rotation, therefore, it will not count accurately when held in a person's hand, which allows movement in any direction. Furthermore, this unit should not be used as a rotating shaft counter for machinery, unless the machine shaft rotates slower than 1250 RPM and has a slow acceleration profile similar to a wheel end. At all times the unit should rotate about an axis perpendicular to gravitational forces.

This unit contains a Lithium-Thionyl Chloride battery and should be disposed of according to local regulations. The battery contains less than 1 gram of lithium and is therefore classified as a non-hazardous product. Lithium-Thionyl Chloride batteries contain no poisonous materials and do not present environmental hazards when properly disposed of.



DATA TRAC® PRO INSTALLATION

# Standard/Grit Guard® Seal Installation

## STEP 1

Remove all burrs and thoroughly clean the spindle. Apply a thin layer of No. 2 sealant to the O.D. of the spindle shoulder. Place the axle ring on the spindle.

## STEP 2

Using the recommended STEMCO Universal Axle Tool, drive the axle ring on until the tool bottoms against the spindle shoulder. Make certain the axle ring is flush with the shoulder. Wipe away any excess sealant.



## STEP 3

Remove all burrs from the hub bore and thoroughly clean the entire wheel cavity.

## STEP 4

With the wheel in the horizontal position, pre-lube the inner bearing and place it into the bearing cup. **NOTE:** When using grease, pre-pack the outer bearing before placement into the hub.



## STEP 5

Apply a thin layer of No. 2 sealant to the O.D. of the seal and position the seal in the hub. Using the recommended STEMCO Universal Hub Tool, held in a vertical position, drive the seal into the seal bore until it is bottomed out. Check the clearance between the bearing cone and seal (at least 1/32nd is required).



## STEP 6

With the wheel mounted on a dolly, carefully align the bore with the spindle. Gently push the wheel assembly onto the spindle to the proper position. Pre-lube the outer bearing and push it into the bearing cup.

**NOTE:** When using grease, pre-pack the inner bearing before placement into the hub.



## STEP 7

Assemble the inner nut and tighten it to 200 ft. lbs. Rotate the wheel several times then back off nut one full turn. Make final bearing adjustment, according to TMC recommended bearing adjustment procedure. Install the appropriate axle fastener.

## STEP 8

Install the hub cap with the new gasket and fill the cavity with lubricant to the proper level. On drive axles be sure the differential oil is high enough (manufacturer's recommended level) to ensure oil flow through the tube to the wheels. It is recommended to jack one side up and then the other until flow starts. Make certain the breather plug is clear. Recheck steers and trailers to ensure proper fill levels.

# Guardian®/Guardian®HP Installation

## STEP 1

Remove all burrs from the hub bore and spindle. Thoroughly clean the entire wheel cavity. Apply a thin layer of No. 2 sealant to the O.D. of the spindle shoulder. Place the seal assembly on the spindle so the words "OIL BEARING SIDE" are facing you. **WARNING: DO NOT INSTALL THE SEAL INTO THE HUB BORE.**



## STEP 2

Using the recommended STEMCO Universal Axle Tool, drive the seal assembly on until the tool bottoms against the shoulder. Make sure the ring is flush with the axle shoulder. Wipe away any excess sealant.



## STEP 3

Dip the inner bearing in oil and place on the spindle. Note: The O.D. of the seal must be coated with a thin coat of lubricant. **NOTE: When using grease, pre-pack the inner bearing before placement into the hub.**

## STEP 4

With the wheel mounted on a wheel dolly, carefully push the wheel onto the spindle until it contacts the seal. Dip the outer bearing in oil and place it on the spindle. **NOTE: When using grease, pre-pack the outer bearing before placement into the hub.** Tighten the inner spindle nut hand tight and remove the wheel dolly.



## STEP 5

Tighten the inner nut to 200 ft. lbs. Rotate the wheel several times then back off nut one full turn. Make final bearing adjustment, according to TMC recommended bearing adjustment procedure. Install the appropriate axle fastener.



## STEP 6

Install the hub cap with a new gasket and fill the cavity with oil to the proper level. On drive axles be sure the differential oil level is high enough (manufacturer's recommended level) to ensure oil flow through the tube to the wheels. It is recommended to jack one side up and then the other until flow starts. Make certain the breather plug is clear. Recheck steers and trailers to ensure proper fill levels.

HUB SEAL INSTALLATION

# Voyager®/ Discover® Hub Seal Installation

## STEP 1

Remove all burrs from hub bore and spindle. Thoroughly clean hub cavity and spindle. **NOTE:** Do not apply a **sealant** to the spindle shoulder. Apply a light coat of lubricant to spindle surfaces.

## STEP 2

With the wheel in horizontal position, pre-lube the inner bearing and place it into the bearing cup. **NOTE:** When using grease, pre-pack the inner bearing before placement into the hub.



## STEP 3

Place the seal on the recommended STEMCO Installation Tool, with the correct head, so that the words "Air Side" face into the tool. Place the tool (with the seal correctly mounted in the tool head) over the hub bore. Use a heavy hammer to drive against the end of the tool. Drive seal into bore until complete bottoming is assured. Remove Tool. Apply a thin layer of lubricant on the I.D. surface of the seal.

**NOTE:** Do not apply lubricant to the O.D. of the seal.



## STEP 4

With the wheel mounted on a dolly, carefully align the bore with the spindle. Gently push the wheel



assembly onto the spindle to the proper position. Fill the hub cavity with lubricant until it runs over the outer bearing cup. Coat the outer bearing with lubricant and place it on the spindle and into the bearing cup. **NOTE:** When using grease, pre-pack the outer bearing before placement into the hub. **NOTE:** Support the hub with the lifting device until the outer bearing and wheel-end fastener have been installed to a hand tight condition to prevent cocking of the hub/seal.

## STEP 5

Assemble the inner nut and tighten it to 200 ft. lbs. Rotate the wheel several times then



back off nut one full turn. Make final bearing adjustment according to TMC recommended bearing adjustment procedure. Install the appropriate axle fastener.

## STEP 6

Install hub cap with new gasket, and fill cavity with the desired lubricant to the proper level. On drive axles be sure the differential oil is high enough (manufacturer's recommended level) to ensure oil flow through the tube to the wheels. It is recommended to jack one side up and then the other until flow starts. Make certain the breather plug is clear. Recheck steers and trailers to ensure proper fill levels.

# Unitized Pinion Seal Installation

## STEP 1

Remove yoke.



## STEP 2

Remove old seal and wear ring (if applicable)



## STEP 3

Remove all burrs and thoroughly clean cage bore.



**NOTE:** If installing the seal into a worn cage bore, apply a thin layer of No. 2 sealant to the OD of the seal before installation.

## STEP 4

Align installation tool with the seal and spline as shown. Hand tighten bolt/nut.



## STEP 5

Tighten until the seal flange bottoms into the cage -or- installation tool bottoms into cage (non-flange seals). Take care not to overtighten bolt/nut.



## STEP 6

Remove burrs and thoroughly clean yoke. Lube the seal ID. Install yoke as shown.



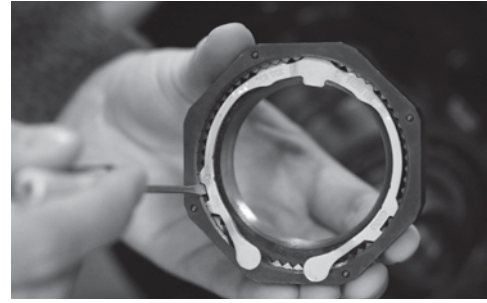
## STEP 7

Refer to axle manufacturer for yoke assembly torque requirements.



### STEP 1. Remove The Keeper From The Nut:

Use a screwdriver to carefully pry the keeper arm from the undercut groove on each side until the keeper is released.



### STEP 2. Seat the Bearing:

With hub or hub/drum only:

Using a torque wrench:

- 1 (A) Tighten the nut to 200 ft-lbs.  
Spin the wheel at least one full rotation.
- (B) Tighten the nut to 200 ft-lbs.  
Spin the wheel at least one full rotation.
- (C) Tighten the nut to 200 ft-lbs.
- 2 Back the nut off until it is loose.

With hub/drum/wheels:

Using a torque wrench:

- 1 Tighten the nut to 200 ft-lbs  
while the wheel is rotating.
- 2 Back the nut off until it is loose.



### STEP 3. Adjust The Bearing:

With hub or hub/drum only:

Using a torque wrench:

- 1 (A) Tighten the nut to 100 ft-lbs.  
Spin the wheel at least one full rotation.
- (B) Tighten the nut to 100 ft-lbs.  
Spin the wheel at least one full rotation.
- (C) Tighten the nut to 100 ft-lbs.
- 2 Back the nut off one raised face mark (according to chart).

With hub/drum/wheels:

Using a torque wrench:

- 1 Tighten the nut to 100 ft-lbs  
while the wheel is rotating.
- 2 Back the nut off one raised face mark (according to chart).



#### FINAL BACKOFF

Part Numbers	Backoff
<b>Trailer Axle Nut</b> 447-4723, 447-4724	1/8 turn
<b>Trailer Axle Nut</b> 447-4743	1/4 turn
<b>Steering Spindle Nut</b> 448-4836, 448-4838, 448-4839, 448-4863, 448-4865	1/4 turn
448-4864	1/6 turn
<b>Steering Spindle Nut</b> 448-4837, 448-4840	1/3 turn
<b>Drive Axle Nut</b> 449-4904, 449-4973, 449-4974, 449-4975	1/8 turn

## IMPORTANT

### Pro-Torq® Installation Procedure for PreSet® or LMS® Hubs:

Pro-Torq® spindle nuts may be used with PreSet® or LMS® hub assemblies.

When used with these systems, it is important to follow the hub manufacturers' product specific installation instructions. For PreSet® and LMS® hub assemblies, torque the Pro-Torq® spindle nut to a minimum of 250 ft. lbs. Engage the keeper. If the keeper can not be engaged, advance the spindle nut until it can be engaged. **DO NOT BACK OFF THE SPINDLE NUT.**

## WARNING

Failure to follow this instruction could cause the wheel to come off and cause bodily injury. The PRO-TORQ® Spindle Nut is sold as an assembly with the keeper in place. **DO NOT** attempt to place the nut on the spindle or tighten or loosen the nut on the spindle while the keeper is locked inside the nut. Doing so may deform the keeper and allow the nut to unthread during operation. **DO NOT** bend or manipulate keyway tang in any way. Doing so may cause the tang to break off in service. Failure to back off the nut will cause the bearings to run hot and be damaged.

## STEP 4. Install the Keeper:

### Orange side facing out

- 1 Insert the keeper tab into the undercut groove of the nut and engage the keyway tang in the axle keyway. Insert keeper tab with the orange side facing out.
- 2 Engage the mating teeth.
- 3 Compress and insert the keeper arms, one at a time, into the undercut groove with a screwdriver.

### For Steering Spindle Nut

448-4836, 448-4839, 448-4840, 448-4863, 448-4864, 448-4865, 448-4863, and 448-4840

- 1 Align the flat of the keeper with the milled flat on the spindle and insert the single keeper tab into the undercut groove of the nut. Insert keeper tab with the orange side facing out.
- 2 Engage the mating teeth.
- 3 Compress and insert the keeper arms, one at a time, into the undercut groove with a screwdriver.

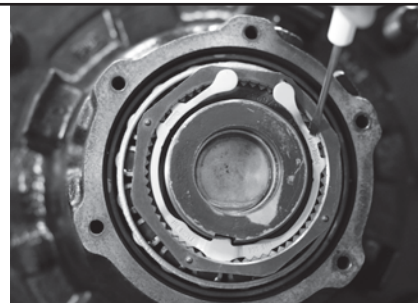


**NOTE** Recommended practice is to replace the keeper each time the Pro-Torq nut assembly is removed for maintenance purposes.

## STEP 5. Inspect the Installation:

Failure to follow this instruction could cause the wheel to come off and cause bodily injury. Make sure that the keeper tab and keeper arms are fully seated into the undercut groove. Inspect keyway tang to insure it does not contact the bottom of the keyway. If contact exists, immediately notify your PRO-TORQ® representative.

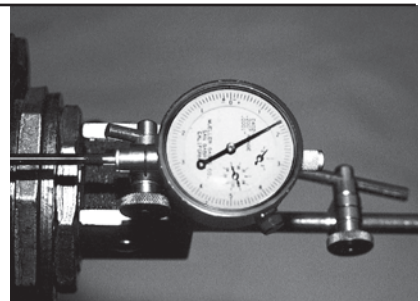
This procedure will consistently produce a bearing setting of .001" to .003" end play.



## STEP 6. Acceptable End Play:

The dial indicator should be attached to the hub or brake drum with its magnetic base. Adjust the dial indicator so that its plunger is against the end of the spindle with its line of action approximately parallel to the axis of the spindle. Grasp the wheel or hub assembly at the 3 o'clock and 9 o'clock positions. Push and pull the wheel-end assembly in and out while oscillating the wheel approximately 45 degrees. Stop oscillating the hub so that the dial indicator tip is in the same position as it was before oscillation began. Read the bearing end-play as the total indicator movement.

*\*Acceptable end-play is .001"-.005". For single nut self-locking systems, consult manufacturers' specifications. STEMCO assumes no responsibility for bearing warranty.*



## FAQS - COMMON CAUSES AND SOLUTIONS

- Q.** Is there a problem with the keeper hitting the bottom of the keyway or the flat of the spindle?
- A.** If contact exists, contact STEMCO Customer Service @ 1-800-527-8492.
- Q.** Is a washer required between the Pro-Torq® Nut and the outer bearing?
- A.** The bearing contact surface is hardened, therefore a washer is not required. One exception is a Ford 12,000# SIFCO steer axle.
- Q.** What if the teeth in the Pro-Torq® Nut do not match-up with the keeper after the final adjustment?
- A.** By very slightly loosening the nut, the teeth will engage the keeper.
- Q.** Why does my keeper have paddles?
- A.** A design improvement to help install the keeper correctly every time. More specific bearing adjustment procedures with standard adjustment nuts are addressed beginning on Page 48.

# Wheel Bearing Adjustment

## TMC's Recommended Wheel Bearing Adjustment Procedure for Standard Spindle Nuts

Proper wheel bearing adjustment is critical to the performance of wheel seals and other related wheel end products. For that reason, we are proud to be a part of TMC's Wheel End Task Force.

We are happy to bring these standards to you in the form of this technical guide.

Working together, in this way, STEMCO helps keep your rigs rolling.

The following seven step bearing adjustment recommendation for standard spindle nuts was developed by TMC's Wheel End Task Force.

It represents the combined input of manufacturers of wheel end components.

For Technical Support, call: 1-800-527-8492.

### STEP 1.

#### Bearing Lubrication:

Lubricate the wheel bearing with clean lubricant of the same type used in the axle sump or hub assembly.

### STEP 2.

#### Initial Adjusting Nut Torque:

Tighten the adjusting nut to a torque of 200 ft-lbs. while rotating the wheel.

### STEP 3.

#### Initial Back-Off:

Back the adjusting nut off one full turn.

### STEP 4.

#### Re-Torque Adjustment:

Re-Torque adjusting nut to 50 ft-lbs while rotating the wheel.

### STEP 5.

#### Final Back Off:

AXLE TYPE	THREADS PER INCH	FINAL BACK-OFF
Steer (Single Nut)	12	1/6 Turn*
	18	1/4 Turn*
Steer (Double Nut)	14	1/2 Turn
	18	1/2 Turn
Drive	12	1/4 Turn
	16	1/4 Turn
Trailer	12	1/4 Turn
	16	1/4 Turn

### STEP 6.

#### Jam Nut Torque:

AXLE TYPE	NUT SIZE	TORQUE SPECIFICATIONS
Steer (Double Nut)	Less Than 2 3/8"	200-300 ft-lbs
	2 3/8" And Over	300-400 ft-lbs
Drive	Dowel Type Washer	300-400 ft-lbs
	Tang Type Washer	200-275 ft-lbs
Trailer	Less Than 2 3/8"	200-300 ft-lbs
	2 3/8" And Over	300-400 ft-lbs

\*Install cotter pin to lock axle nut in position.

### STEP 7.

#### Acceptable End Play:

Refer to Page 21 of the STEMCO TQM Catalog for measuring end play.



# Bearing Removal and Installation

## Removal



**Step 1** Remove hub/wheel assembly from vehicle in accordance with recommended practices.

**Step 2** Remove inboard and outboard bearing cones and set aside for inspection.

**Step 3** Using a mild steel drift or cup driver, carefully drive out the bearing cups.

- Caution should be used when driving bearing cups, as drifts and other tools can damage bearings.
- Drifts can damage hub bearing bores. Be careful not to score bores while removing cups, especially when using aluminum hubs.

## Inspection



**Step 1** Inspect the hub bearing bores and shoulders for damage. The bores should be smooth and free from scoring, burrs, indications of cup spinning, or other forms of damage. Remove any burrs or raised areas using emery cloth, a file, or other appropriate tool.

**Step 2** Measure the bearing cup bore and compare to manufacturer specifications.



**Step 3** Inspect bearing cups and cones for damage. Bearings should be free from chips, contamination, and signs of excessive wear or excessive heat. Refer to bearing damage analysis literature for identifying possible bearing issues.

**Step 4** Inspect axle spindle bearing journals for any signs of damage or excessive wear. Remove any raised areas or burrs using emery cloth, a file, or other appropriate tool.

**Step 5** Journals should be measured and compared with manufacturer specifications.

## Installation



**Step 1** Thoroughly clean bearing cups and cones prior to installation.

- Do not use compressed air to spin bearing rollers as injury may result if cage does not retain the rollers.

**Step 2** Lightly coat the outside of bearing cups with oil.

**Step 3** Using a cup driver, carefully drive bearing cups into hub bearing bores. Be sure to drive cup firmly against cup shoulder in hub.

- If a cup driver is not available, a mild steel drift can be used to install bearing cups.

- Caution should be used when driving bearing cups, as drifts and other tools can damage bearings.

- NEVER use a bearing cone to drive a bearing cup. This can damage the bearings and cause premature failure.

**Step 4** Use a feeler gauge to check for gaps between cup and shoulder.

**Step 5** Inspect the bearing cups to ensure no damage occurred during installation.

**Step 6** Lubricate bearing cones according to recommended practices and proceed with installation of wheel assembly.



## **WARRANTY**

STEMCO warrants to Buyer that all components sold will be free from defects in material and workmanship. This warranty is limited to components installed on vehicles licensed for on-highway use under normal use and service. This warranty extends for a period of one year from the date of manufacture.

The Buyer's exclusive remedy under this warranty shall be the repair or replacement of STEMCO components, but not the cost of removal or installation. STEMCO reserves the right to require that all warranty claim components are available and/or returned for review and evaluation. STEMCO shall not be liable for any claim, whether arising from breach of contract or warranty or claims of negligence or negligent manufacture, in excess of the purchase price. In no event shall STEMCO be liable for special, incidental, indirect, or consequential, or collateral, losses or damages of any kind.

**This limited warranty is in lieu of all other warranties or conditions, expressed or implied, including any implied warranty of merchantability or fitness for particular purpose.**

This is the only warranty offered by STEMCO and no STEMCO employee or representative is authorized to extend additional warranty terms on behalf of STEMCO.

# STEMCO QUALITY PRODUCTS

**Guardian<sup>®</sup>  
HP**



**Voyager<sup>®</sup>**



**Discover<sup>®</sup>**



**PRO-TORQ<sup>®</sup>**



**SENTINEL<sup>®</sup>**



**SENTINEL<sup>®</sup>  
ESP**



**HEAVY DUTY  
BEARINGS**



**DataTrac<sup>®</sup>  
PRO**



**HUBODOMETER<sup>®</sup>**



**Unitized Pinion Seals**



**PLATINUM  
PERFORMANCE SYSTEM<sup>™</sup>**



**DUALLY DRAIN PAN**



**BATRF<sup>®</sup>  
BY STEMCO**

**STEMCO  
CREWSON<sup>™</sup>  
AUTOMATIC BRAKE ADJUSTER**



**STEMCO  
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*A Higher Standard of Performance.<sup>SM</sup>*

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