

# **Chelsea PTO 590 Parts Manual**

Pro Gear and Transmission presents Chelsea 590 Series PTO parts manual to assist in identifying the parts for your Chelsea Power Take Off unit.

If you need any assistance identifying the correct Power Take Off unit for your truck and equipment, contact your Chelsea replacement part specialists at Pro Gear and Transmission.

Pro Gear stocks every part for your Parker Chelsea PTO including: PTO housings, mounts, driveshafts, gears, bearings, gaskets, cable shift cover assembly, post and plate assembly, brackets, stud kits, seal kits, lever control assembly, air shift cover assembly, direct mount pump conversion kits, stud kits including English and metric references, CAT D&H parts and much more.

Pro Gear Transmission has same day shipping and 1000's of products in stock and ready to ship internationally for your next project.

For parts or service contact the Chelsea specialists at Pro Gear & Transmission, Inc.

1 (877) 776-4600 (407) 872-1901 parts@eprogear.com

**Check Inventory** 

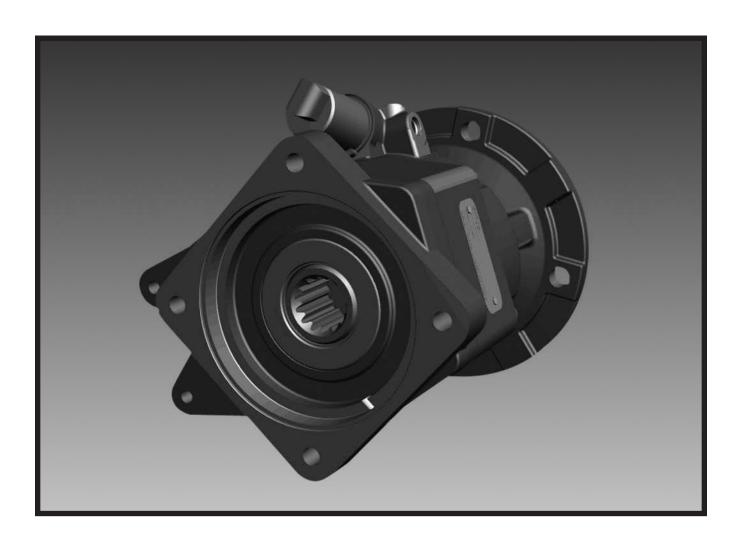
**Email Us** 

Call Us



# Parts List 590 Series

Effective: July 1, 2014 Supersedes: June 20, 2014







#### /!\ WARNING — User Responsibility

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.

The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.

To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

#### Offer of Sale

The items described in this document are hereby offered for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated in the "Offer of Sale".

© Copyright 2014, Parker Hannifin Corporation, All Rights Reserved



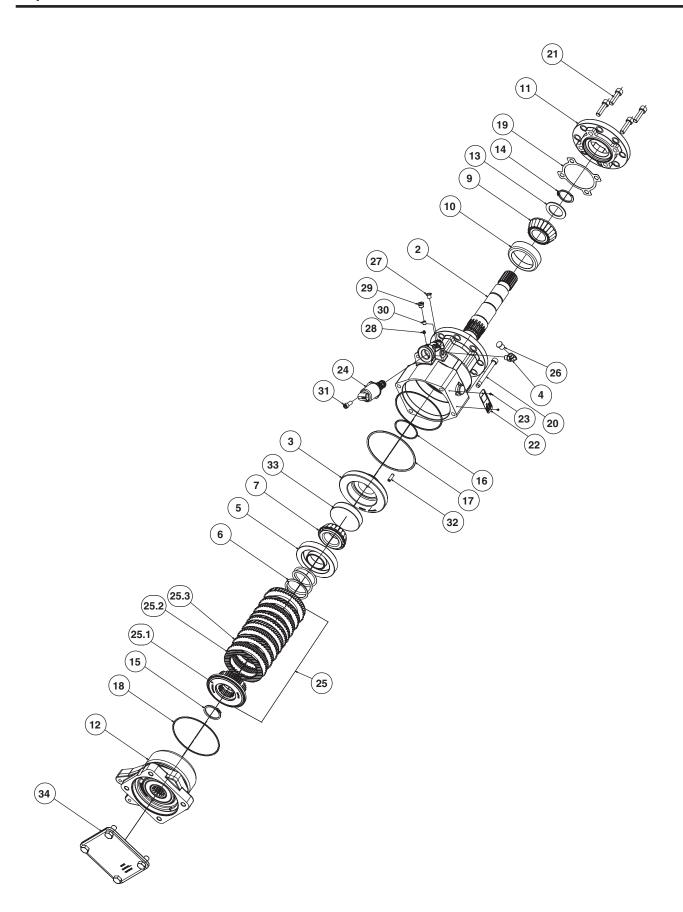
#### Bulletin HY25-2590-M1/US

#### **Contents**

# Parts List 590 Series

Exploded View	1
Bill of Materials	2
Mounting Instructions	3-4
Flange & Shaft Assemblies	5-10
Model Number Chart and Housing Dimensions	11
Kit Bill of Materials	12
Offer of Sale	16

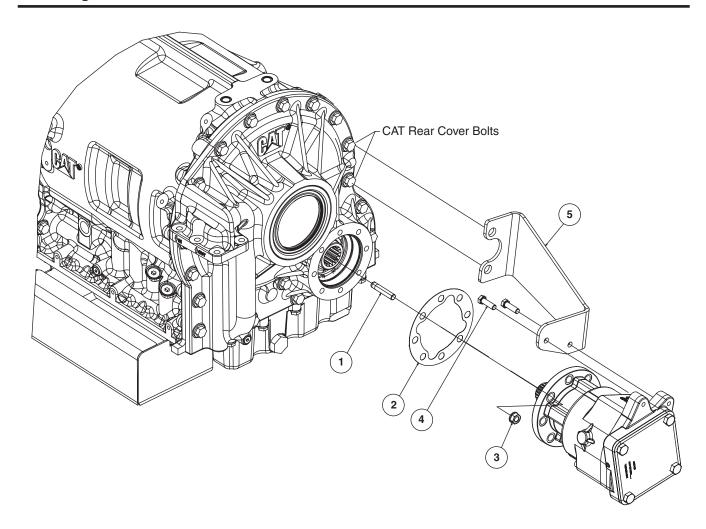
#### **Exploded View**



#### **Bill of Materials**

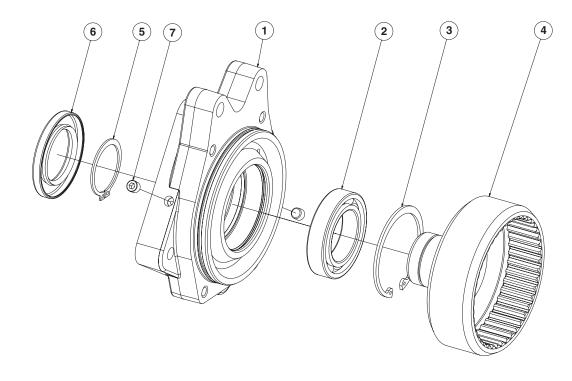
# Parts List 590 Series

Item	Part Number	Description	Qty.
1	1-P-681	Housing Standard Mount	1
2	3-P-1091	Input Shaft ("LA" Input)	
3	66-P-60	Piston	
4	379486	Elbow 90° .348" - 20	
5	66-P-59	Pressure Plate	1
6	37-P-72	Spring 2.14" x 1.941"	
7	561022	Bearing Tapered Cone 1.625" x 1.010"	
9	561023	Bearing Tapered Cone 1.500" x 1.164"	
10	561024	Bearing Tapered Cup 3.251" x .906"	
11	21-P-792	Mounting Flange ("LA" Input)	1
12	329673-1X	"CS" Assembly Output (See Pages 4-10 for other Outputs)	
13	31-P-70	Thrust Washer 1.507" x 2.167" x .094"	
14	379746	Lockring	
15	380069	Lockring	1
16	28-P-326	O-Ring 2.300" x .103"	
17	28-P-327	O-Ring 5.109" x .139"	
18	28-P-245	O-Ring 5.017" x .103"	
19	22-P-137	Gasket	
20	379433-16	Capscrew SH .375" - 16 x 3.500"	4
21	380448	Capscrew SH .4375" - 20 x 1.500"	
22	68-P-51	Name Plate	
23	378422	Drive Screw	
24	380509-12	Valve Cartridge Pressure Regulating 12V ("B" Shift) (w/Bracket 379995)	
25	329678X	Gear & Plates Kit	
25.1	2-P-858	Output Gear 36T	1
25.2	379485	Disc Friction	
25.3	380065	Clutch Plate	9
26	379564-2	Cap Thread .438"	1
27	500897-5	Shipping Plug	1
28	380008	Plug Steel Ball & Sleeve	
29	379484	Plug O-Ring Boss .438" - 20	
30	385095	Orifice Screw	
31	378447-4	Capscrew SH .312" - 18 x .750"	
32	500599-12	Roller Pin .250" x .875"	
33	561064	Bearing Tapered Cup 3.250" x .7950"	
34	329659X	Kit Cover ("XY" Output)	1 or
	329658X	Kit Cover ("AF", "AZ", "CF", "CK", "CZ", "XK" Output)	
	329654X	Kit Cover ("CS", "ZS" Output)	
		LOOSE PARTS	
	328948-44X	Installation Kit ("LA" Input)	1
	7170-120X	Mounting Kit ("LA" Input)	
	329443-12X	Installation Kit - 12 Volt	
	329075-1X	Hose Assembly	
	50-P-148	Bracket ("LA" Input)	



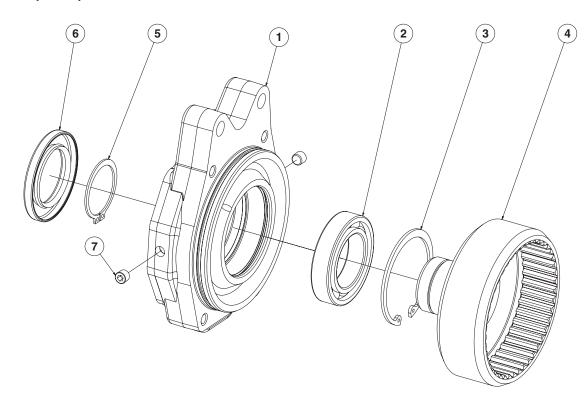
Item	Part Number	Description	Qty.
1	379429-22	Stud Metric Patched M12 - 1.75" x 2.250"	8
2	35-P-115	Gasket	1
3	379745	Nut Flange .438" - 20	8
4	378431-12	Capscrew HH .375" - 16 x 1.250"	2
5	50-P-148	Bracket CAT	1

# 329673-1X ("CS") S.A.E. "C" 4-Bolt 1-1/4" - 14 Tooth



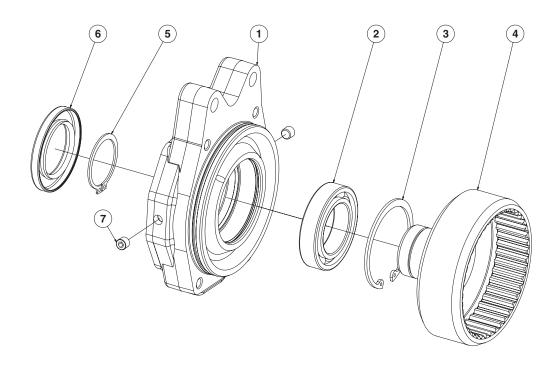
Item	Part Number	Description	Qty.
1	21-P-742	Flange Pump "CS"	1
2	561018	Bearing Ball 1.772" x 2.953" x .630"	1
3	379919	Lockring	1
4	2-P-867	Gear Output 44T 1-1/4" - 14 Tooth "CS"	1
5	379668	Lockring	1
6	28-P-278	Oil Seal 2.953" x 1.772" x .315"	1
7	379231	Plug Pipe .125" - 27	2
N.S.	329654X	Kit Cover	1

# 329673-2X ("CK") S.A.E. "B" 2 or 4-Bolt 7/8" - 13 Tooth



Item	Part Number	Description	Qty.
1	21-P-739	Flange Pump "CK"	. 1
2	561018	Bearing Ball 1.772" x 2.953" x .630"	. 1
3	379919	Lockring	. 1
4	2-P-877	Gear Output 44T 7/8" - 13 Tooth "CK"	. 1
5	379668	Lockring	. 1
6	28-P-278	Oil Seal 2.953" x 1.772" x .315"	. 1
7	379231	Plug Pipe .125" - 27	. 2
N.S.	329658X	Kit Cover	. 1

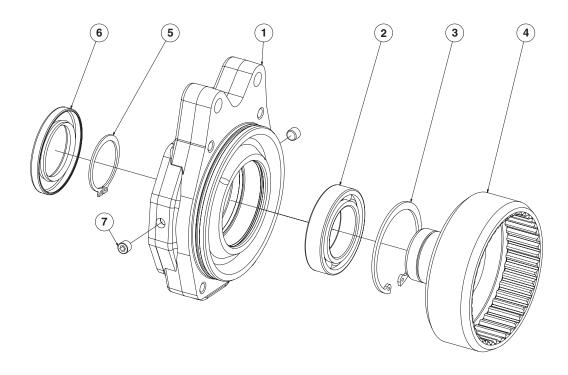
# 329673-3X ("CF") S.A.E. "B" 2 or 4-Bolt 1.00" - 15 Tooth



Item	Part Number	Description	Qty.
1	21-P-739	Flange Pump "CF"	. 1
2	561018	Bearing Ball 1.772" x 2.953" x .630"	. 1
3	379919	Lockring	. 1
4	2-P-875	Gear Output 44T 1.0" 15 Tooth "CF"	. 1
5	379668	Lockring	. 1
6	28-P-278	Oil Seal 2.953" x 1.772" x .315"	. 1
7	379231	Plug Pipe .125" - 27	. 2
N.S.	329658X	Kit Cover	. 1

# Flange & Shaft Assemblies

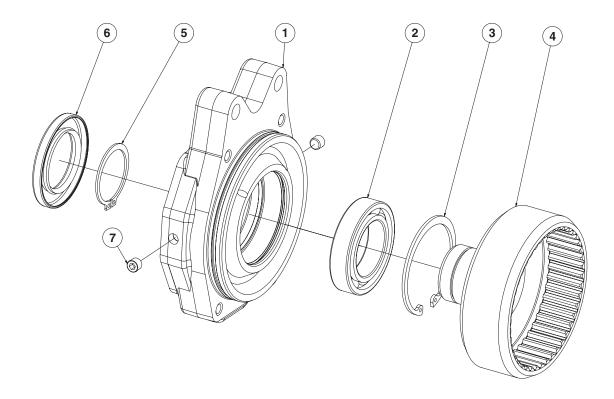
# 329609-4X ("XY") DIN 5462 4-Bolt - 8 Tooth



Item	Part Number	Description	Qty.
1	21-P-725	Flange Pump "XY" DIN 5462 4-Bolt	. 1
2	561011	Bearing Ball 1.770" x 3.346" x .748"	. 1
3	378263	Lockring	. 1
4	2-P-876	Gear Output 8 Tooth Spline	. 1
5	379555	Lockring	. 1
6	28-P-267	Oil Seal 2.627" x 1.750" x .312"	. 1
7	379231	Plug Pipe .125" - 27	2
N.S.	28-P-259X	O-Ring 3.984" x .139" (Wet Spline Pump Mounting)	. 1

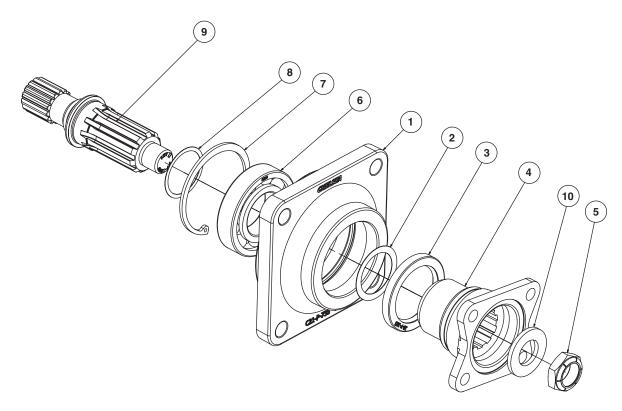
# Flange & Shaft Assemblies

# 329673-5X ("CZ") S.A.E. "B" 2 or 4-Bolt 1-1/4" - 14 Tooth



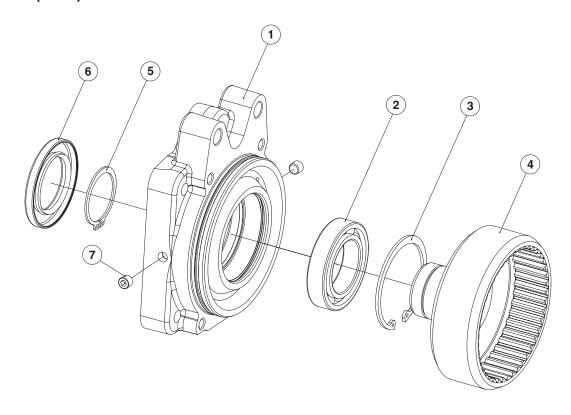
Item	Part Number	Description	Qty.
1	21-P-739	Flange Pump "CZ"	1
2	561018	Bearing Ball 1.772" x 2.953" x .630"	1
3	379919	Lockring	1
4	2-P-867	Gear Output 44T 1-1/4" - 14 Tooth "CZ"	1
5	379668	Lockring	1
6	28-P-278	Oil Seal 2.953" x 1.772" x .315"	1
7	379231	Plug Pipe .125" - 27	2
N.S.	329658X	Kit Cover	1

# 329608-1X ("XV") S.A.E. 1410 Companion Flange



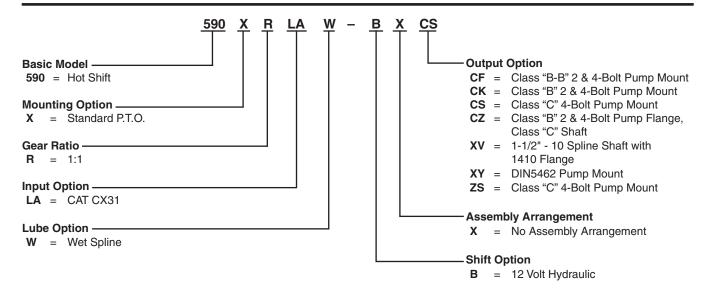
Item	Part Number	Description	Qty.
1	21-P-736	Cap Bearing "XV", "AB", "AC"	. 1
2	378161	Gasket 4600	. 1
3	28-P-283	Oil Seal 2.754" x 2.000" x .313"	. 1
4	3-1-3431	Companion Flange 1410	. 1
5	380486	Nut Nylon Lock Thin .875" - 14	. 1
6	561020	Bearing Ball 1.574" x 3.149" x .708"	. 1
7	378836	Lockring	. 1
8	35-P-103	Gasket Shaft	. 1
9	3-P-1009	Shaft Output 10T Straight	. 1
10	561020	Washer	. 1

# 329609-7X ("ZS") S.A.E. "C" 4-Bolt 1-1/4" - 14 Tooth

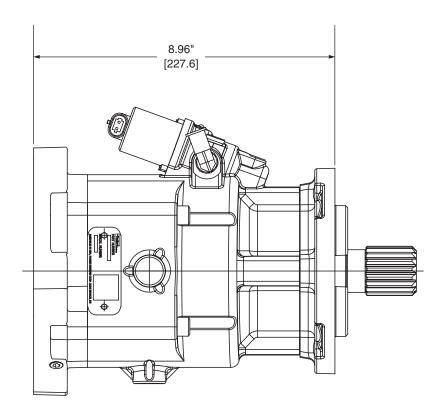


Item	Part Number	Description	Qty.
1	21-P-764	Flange Pump "ZS"	1
2	561018	Bearing Ball 1.772" x 2.953" x .630"	1
3	379919	Lockring	1
4	2-P-867	Gear Output 44T 1-1/4" - 14 Tooth "ZS"	1
5	379668	Lockring	1
6	28-P-278	Oil Seal 2.953" x 1.772" x .315"	1
7	379231	Plug Pipe .125" - 27	2
N.S.	329654X	Kit Cover	. 1

#### **Model Number Chart**



#### **Housing Dimensions**



# Parts List 590 Series

#### **Kits Bill of Materials**

328948-44X 328946X 35-P-115 379486 378431-12 Owners Manual	Installation Kit Caution Label Kit Gasket 90° Elbow Capscrew HH .375" - 16 x 1.25" HY25-1590-M1/US	1 2
329443-12X	12V Installation Kit	
378881	Rocker Switch	1
378978	12V Indicator Light	1
379252	Butt Connector	
379257	Splice Connector	1
379265	Grommet	1
379306	Spade Terminal	3
379336	Bracket	1
379502	Pressure Switch	1
379928	Valve Connector	1
379900	Ass'y Fuse	
379061X	Tie Wire Plastic	
379061	Wire Zip Tie Plastic	6
329443-24X	24V Installation Kit	
378881	Rocker Switch	1
379005	24V Indicator Light	1
379252	Butt Connector	
379257	Splice Connector	
379265	Grommet	1
379306	Spade Terminal	
379336	Bracket	1
379502	Pressure Switch	1
379928	Valve Connector	
379900	Ass'y Fuse	
379061X	Tie Wire Plastic	1
379061	Wire Zip Tie Plastic	6

329654X	Kit Cover ("XS" Output)	
22-P-25-2	Gasket Seal	1
34-P-284	Plate Cover	1
378433-10	Hex Capscrew	1
329658X	Kit Cover ("XK" Output)	
34-P-285	Cover Plate	1
35-P-104	Gasket Seal	1
378433-10	Hex Capscrew	4
329659X	Kit Cover ("XY" Output)	
379940	Shipping Plug	1
379943	Gasket Seal	
379579-4	Hex Capscrew	4
329678X	Gear & Plates Kit	
2-P-858	Gear Output 36T	1
379485	Disc Friction	
380065	Clutch Plate	9
7170-120X	Mounting Kit	
379429-22	M12 - 1.75" x 2.250" x .438" - 20	8
379745	Nut Flange	8

Notes	

Notes	

Notes	
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_

#### Offer of Sale

The items described in this document and other documents and descriptions provided by Parker Hannifin Corporation, its subsidiaries and its authorized distributors ("Seller") are hereby offered for sale at prices to be established by Seller. This offer and its acceptance by any customer ("Buyer") shall be governed by all of the following Terms and Conditions. Buyer's order for any item described in its document, when communicated to Seller verbally, or in writing, shall constitute acceptance of this offer. All goods, services or work described will be referred to as "Products"

- 1. Terms and Conditions. Seller's willingness to offer Products, or accept an order for Products, to or from Buyer is subject to these Terms and Conditions or any newer version of the terms and conditions found on-line at www.parker.com/saleterms/. Seller objects to any contrary or additional terms or conditions of Buyer's order or any other document issued by Buyer.
- 2. Price Adjustments; Payments. Prices stated on Seller's quote or other documentation offered by Seller are valid for 30 days, and do not include any sales, use, or other taxes unless specifically stated. Unless otherwise specified by Seller, all prices are F.C.A. Seller's facility (INCOTERMS 2010). Payment is subject to credit approval and is due 30 days from the date of invoice or such other term as required by Seller's Credit Department, after which Buyer shall pay interest on any unpaid invoices at the rate of 1.5% per month or the maximum allowable rate under applicable law. 3. Delivery Dates; Title and Risk; Shipment. All delivery dates are approximate and Seller shall not be responsible for any damages resulting from any delay. Regardless of the manner of shipment, title to any products and risk of loss or damage shall pass to Buyer upon placement of the products with the shipment carrier at Seller's facility. Unless otherwise stated, Seller may exercise its judgment in choosing the carrier and means of delivery. No deferment of shipment at Buyers' request beyond the respective dates indicated will be made except on terms that will indemnify, defend and hold Seller harmless against all loss and additional expense. Buyer shall be responsible for any additional shipping charges incurred by Seller due to Buyer's acts or omissions. 4. Warranty. Seller warrants that all products sold, other than the 590 Series, conform to the applicable Parker Chelsea standard specification for the lesser period of 2 years (24 Months) from date of service or 2-1/2 years (30 Months) from date of build (as marked on the product name plate). Seller warrants that the 590 Series will conform to the applicable Seller standard specification for the lesser period of 2 years (24 Months) from date of service or 2000 hours of usage. The prices charged for Seller's products are based upon the exclusive limited warranty stated above, and upon the following disclaimer: DISCLAIMER OFWARRANTY: THIS WARRANTY COMPRISES THE SOLE AND EN-TIREWARRANTY PERTAININGTO PRODUCTS PROVIDED HEREUNDER. SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS AND IMPLIED, INCLUDING DESIGN, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

  5. Claims; Commencement of Actions. Buyer shall promptly inspect all
- Products upon delivery. No claims for shortages will be allowed unless reported to the Seller within 10 days of delivery. No other claims against Seller will be allowed unless asserted in writing within 30 days after delivery. Buyer shall notify Seller of any alleged breach of warranty within 30 days after the date the defect is or should have been discovered by Buyer. Any action based upon breach of this agreement or upon any other claim arising out of this sale (other than an action by Seller for an amount due on any invoice) must be commenced within 12 months from the date of the breach without regard to the date breach is discovered.
- 6. LIMITATION OF LIABILITY. UPON NOTIFICATION, SELLER WILL, AT ITS OPTION, REPAIR OR REPLACE A DEFECTIVE PRODUCT, OR REFUND THE PURCHASE PRICE. IN NO EVENT SHALL SELLER BE LIABLETO BUYER FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR AS THE RESULT OF, THE SALE, DELIVERY, NON-DELIVERY, SERVICING, USE OR LOSS OF USE OF THE PRODUCTS OR ANY PART THEREOF, OR FOR ANY CHARGES OR EXPENSES OF ANY NATURE INCURRED WITHOUT SELLER'S WRITTEN CONSENT, EVEN IF SELLER HAS BEEN NEGLIGENT, WHETHER IN CONTRACT, TORT OR OTHER LEGALTHEORY. IN NO EVENT SHALL SELLER'S LIABILITY UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE OF THE PRODUCTS.
- 7. User Responsibility. The user, through its own analysis and testing, is solely responsible for making the final selection of the system and Product and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application and follow applicable industry standards and Product information. If Seller provides Product or system options, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the Products or systems.
- 8. Loss to Buyer's Property. Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which become Buyer's property, will be considered obsolete and may be destroyed by Seller after two consecutive years have elapsed without Buyer ordering the items manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.
- 9. Special Tooling. A tooling charge may be imposed for any special tooling, including without limitation, dies, fixtures, molds and patterns, acquired to manufacture Products. Such special tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the Products, even if such apparatus has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller shall have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.

  10. Buyer's Obligation; Rights of Seller. To secure payment of all sums
- due or otherwise, Seller shall retain a security interest in the goods delivered and this agreement shall be deemed a Security Agreement under the Uniform Commercial Code. Buyer authorizes Seller as its attorney to execute and file on Buyer's behalf all documents Seller deems necessary to perfect its security interest.

- 11. Improper use and Indemnity. Buyer shall indemnify, defend, and hold Seller harmless from any claim, liability, damages, lawsuits, and costs (including attorney fees), whether for personal injury, property damage, patent, trademark or copyright infringement or any other claim, brought by or incurred by Buyer, Buyer's employees, or any other person, arising out of: (a) improper selection, improper application or other misuse of Products purchased by Buyer from Seller; (b) any act or omission, negligent or otherwise, of Buyer; (c) Seller's use of patterns, plans, drawings, or specifications furnished by Buyer to manufacture Product; or (d) Buyer's failure to comply with these terms and conditions. Seller shall not indemnify Buyer under any circumstance except as otherwise provided.
- 12. Cancellations and Changes. Orders shall not be subject to cancellation or change by Buyer for any reason, except with Seller's written consent and upon terms that will indemnify, defend and hold Seller harmless against all direct, incidental and consequential loss or damage. Seller may change product features, specifications, designs and availability with notice to Buyer.
- 13. Limitation on Assignment. Buyer may not assign its rights or obligations under this agreement without the prior written consent of Seller
- 14. Force Majeure. Seller does not assume the risk and shall not be liable for delay or failure to perform any of Seller's obligations by reason of circumstances beyond the reasonable control of Seller (hereinafter "Events of Force Majeure"). Events of Force Majeure shall include without limitation: accidents, strikes or labor disputes, acts of any government or government agency, acts of nature, delays or failures in delivery from carriers or suppliers, shortages of materials, or any other cause beyond Seller's reasonable control.
- 15. Waiver and Severability. Failure to enforce any provision of this agreement will not waive that provision nor will any such failure prejudice Seller's right to enforce that provision in the future. Invalidation of any provision of this agreement by legislation or other rule of law shall not invalidate any other provision herein. The remaining provisions of this agreement will remain in full force and effect.
- 16. Termination. Seller may terminate this agreement for any reason and at any time by giving Buyer thirty (30) days written notice of termination. Seller may immediately terminate this agreement, in writing, if Buyer: (a) commits a breach of any provision of this agreement (b) appointments a trustee, receiver or custodian for all or any part of Buyer's property (c) files a petition for relief in bankruptcy on its own behalf, or by a third party (d) makes an assignment for the benefit of creditors, or (e) dissolves or liquidates all or a majority of its assets.
- 17. Governing Law. This agreement and the sale and delivery of all Products hereunder shall be deemed to have taken place in and shall be governed and construed in accordance with the laws of the State of Ohio, as applicable to contracts executed and wholly performed therein and without regard to conflicts of laws principles. Buyer irrevocably agrees and consents to the exclusive jurisdiction and venue of the courts of Cuyahoga County, Ohio with respect to any dispute, controversy or claim arising out of or relating to this agreement.
- 18. Indemnity for Infringement of Intellectual Property Rights. Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Section. Seller will defend and indemnify Buyer against allegations of infringement of U.S. patents, U.S. trademarks, copyrights, trade dress and trade secrets ("Intellectual Property Rights"). Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that a Product sold pursuant to this Agreement infringes the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If a Product is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and option, procure for Buyer the right to continue using the Product, replace or modify the Product so as to make it noninfringing, or offer to accept return of the Product and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to Products delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any Product sold hereunder. The foregoing provisions of this Section shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.
- 19. Entire Agreement. This agreement contains the entire agreement between the Buyer and Seller and constitutes the final, complete and exclusive expression of the terms of sale. All prior or contemporaneous written or oral agreements or negotiations with respect to the subject matter are herein merged.
- 20. Compliance with Law, U. K. Bribery Act and U.S. Foreign Corrupt Practices Act. Buyer agrees to comply with all applicable laws and regulations, including both those of the United Kingdom and the United States of America, and of the country or countries of the Territory in which Buyer may operate, including without limitation the U. K. Bribery Act, the U.S. Foreign Corrupt Practices Act ("FCPA") and the U.S. Anti-Kickback Act (the "Anti-Kickback Act"), and agrees to indemnify and hold harmless Seller from the consequences of any violation of such provisions by Buyer, its employees or agents. Buyer acknowledges that they are familiar with the provisions of the U. K. Bribery Act, the FCPA and the Anti-Kickback Act, and certifies that Buyer will adhere to the requirements thereof. In particular, Buyer represents and agrees that Buyer shall not make any payment or give anything of value, directly or indirectly to any governmental official, any foreign political party or official thereof, any candidate for foreign political office, or any commercial entity or person, for the purpose of influencing such person to purchase products or otherwise benefit the business of Seller.



Parker Hannifin Corporation Chelsea Products Division 8225 Hacks Cross Road
Olive Branch, Mississippi 38654 USA
Tel: (662) 895-1011
Fax: (662) 895-1069
www.parker.com/chelsea

TGI 05/14 13C

