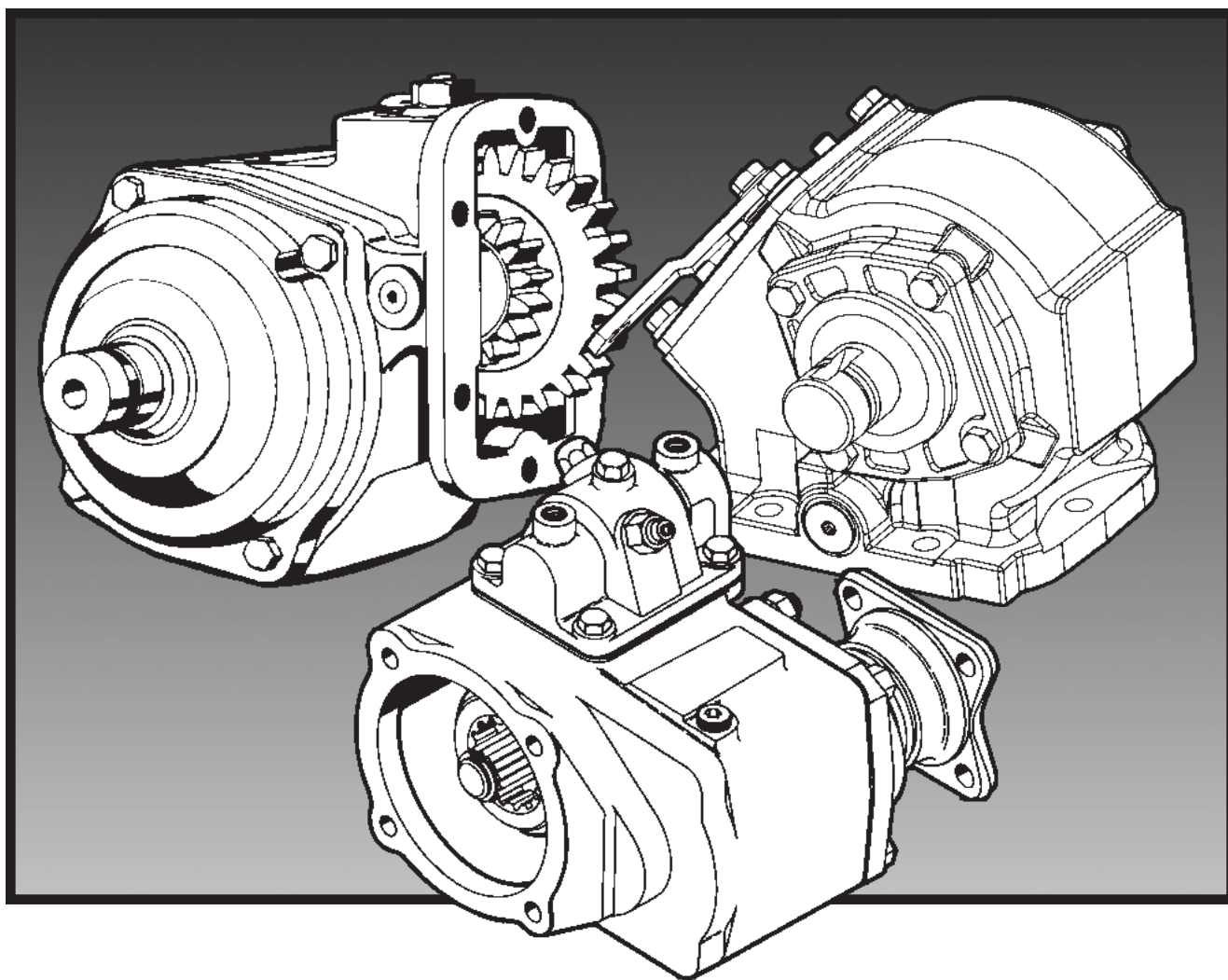


Parts List 522 Series

Effective: December 15, 2010
Supersedes: HY25-2522-M1/US Nov. 15, 2003





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.

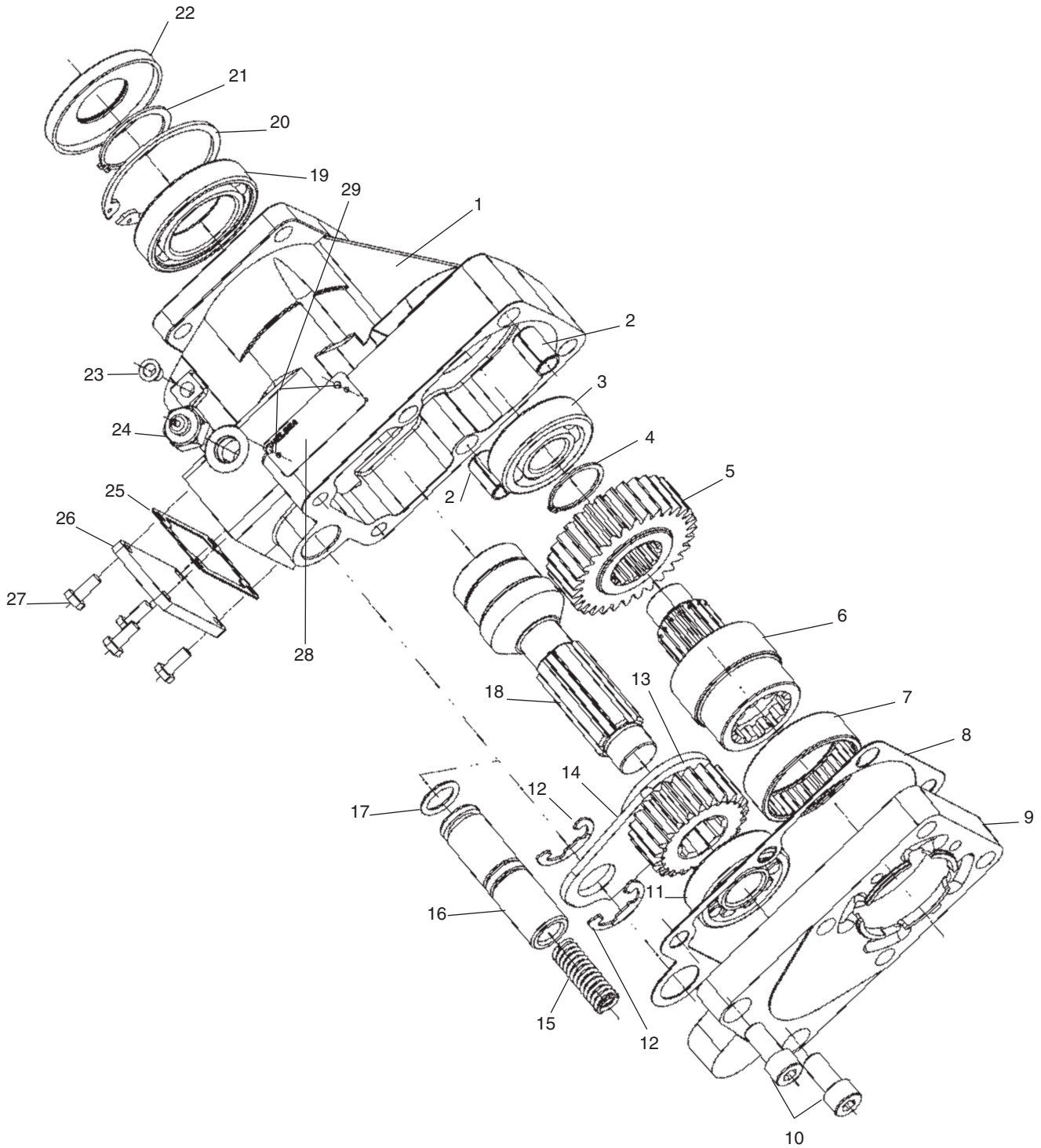
Offer of Sale

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 2010, Parker Hannifin Corporation, All Rights Reserved

Contents

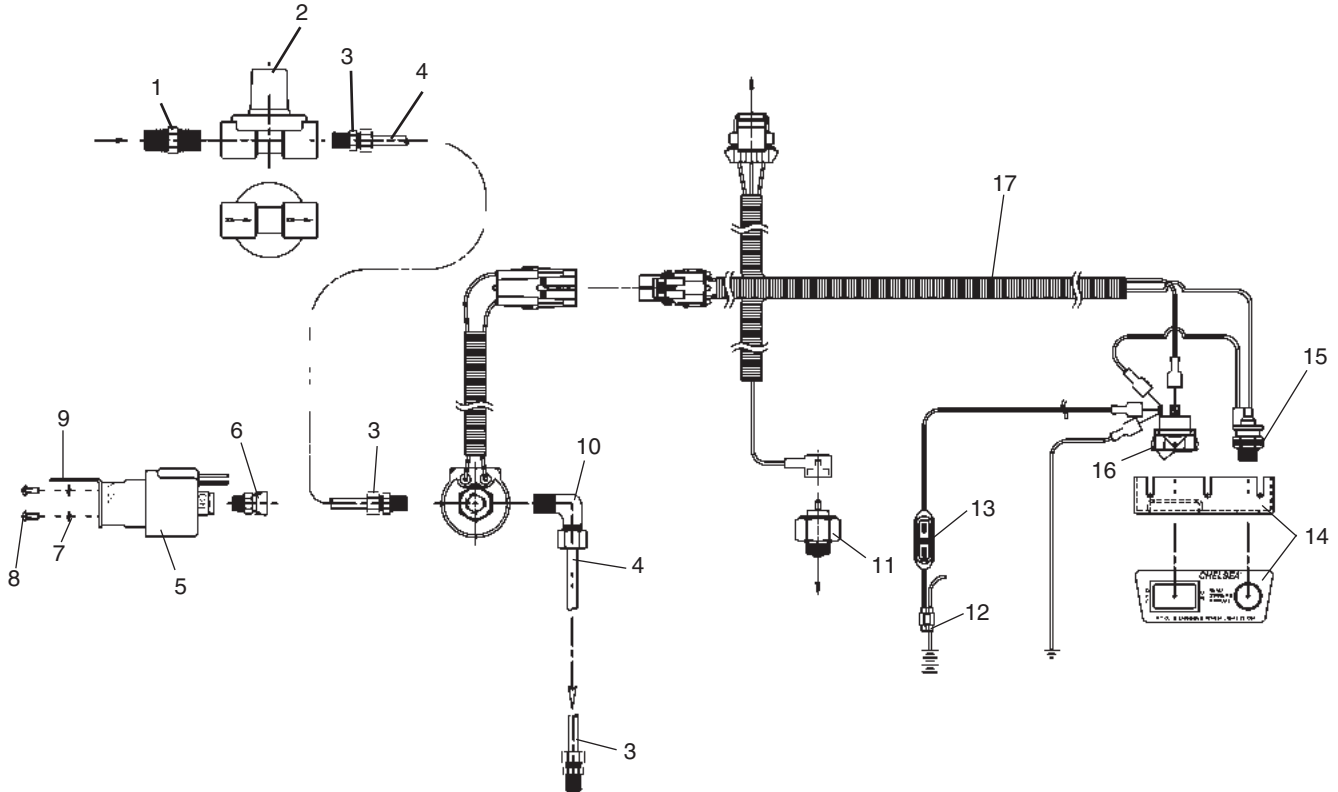
Exploded View	1
Bill of Materials	2
ZMTEC Parts	3
Input Options	4-6
Output Options	7
Model Number Designation	8
Kit Bill of Materials	9
Offer of Sale	12



Bill of Materials

Item	Part #	Description	Quantity
1	1-P-599X 1-P-608X	P.T.O. Housing w/Dowel Pin..... P.T.O. Housing w/Dowel Pin ("R" Housing)	1 ?
2	379920	Dowel Pin	2
3	560990	Ball Bearing, Input Shaft.....	1
4	378098	Snap Ring, Input Shaft	1
5	5-P-1388 5-P-1389	Input Gear, "T" Ratio (31 Teeth)..... Input Gear, "V" Ratio (34 Teeth).....	1 or 1
6	3-P-967 See Chart Pg. 4 & 5	Input Shaft, "AA" Input	1 or 1
7	561016 See Chart Pg. 4 & 5	Input Bearing, Needle Roller, "AA" Input"	1 or 1
8	22-P-115	Gasket, Housing	1
9	21-P-664 See Chart Pg. 4 & 5	Rear Mounting Plate, "AA" Input.....	1 or 1
10	379676-6	Hex Capscrew, (M12 - 1.5 x 25)	2
11	561017	Bearing, Cylindrical Roller	1
12	379918	Snap Ring, Shifter Rod.....	2
13	2-P-821 2-P-822	Output Gear, "T" Ratio (23 Teeth)	1 or 1
14	32-P-183	Shifter Fork	1
15	37-P-21	Shifter Spring.....	1
16	11-P-155	Shifter Rod.....	1
17	28-P-41	O-Ring, Shifter Rod	1
18	3-P-959 See Page 7	Output Shaft, "XY"	1 or 1
19	561018	Output Bearing	1
20	379919	Snap Ring, Internal.....	1
21	378477	Snap Ring, Output Shaft.....	1
22	28-P-278	Oil Seal.....	1
23	500897-3	Shipping Plug	1
24	379652 379633	Indicator Switch, Normally Closed..... Indicator Switch, Normally Closed ("E" Shift Option).....	1 ?
25	35-P-93	Gasket, Cover Plate.....	1
26	34-P-133	Cover Plate	1
27	378429-6	Hex Capscrew, (.250" - 20 x .625").....	4
28	68-P-2	Name Plate.....	1
29	378422	Drive Screw	2
		Loose Parts	
	328388-37X	Installation Kit ("A" Shifter).....	1
	328388-47X	Installation Kit ("P" Shifter).....	1
	328388-48X	Installation Kit ("Q" Shifter)	1
	328388-82X	Installation Kit ("F" Shifter "AC" Input Only)	1
	378414	Pressure Protection Valve ("V" Shift Only).....	1
	379640	Booted connector ("V" Shifter Only)	1
	329431-1X	Gasket & Seal Service Kit ("AA", "AB", "AM" Input)	1
	329431-2X	Gasket & Seal Service Kit ("AC" Input).....	1
	329431-3X	Gasket & Seal Service Kit ("AD" Input).....	1
	329432-1X	Bearing Service Kit ("AA", "AB" & "AM" Input)	1
	329432-2X	Bearing Service Kit ("AC" & "AD" Input).....	1

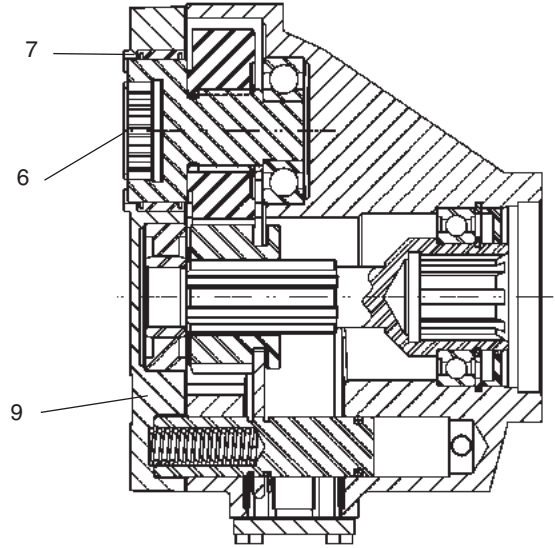
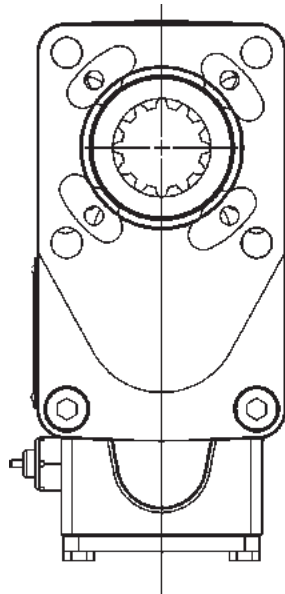
See Kit Bill of Materials on page 9-10



Item	Part #	Description	Quantity
	328388-82X	12V Electric/Air Installation Kit w/ZMTEC Wire Harness	
1	378416	Hex Nipple, (.25 - 18 NPTF).....	1
2	378414	Pressure Protection Valve	1
3	379042	Male Connector, 1/4" Tube to Male Pipe (.125" - 25 NPT).....	3
4	379044-7	Plastic Tubing	1
5	75-P-10	Solenoid, 12V.....	1
6	379106	Atmospheric Breather (.125" - 27 NPTF).....	1
7	500357-7	Lock Washer	2
8	500457-6	Round Head Slotted Screw (.438" x .190" - 32 UNF- 2A).....	2
9	379258	Bracket.....	1
10	379043	Male Elbow 90°, 1/4" Tube to Pipe (.125" - 27 NPTF).....	1
12	379257	Connector	1
17	75-P-9	Wiring Harness (includes items 13, 14, 15 & 16).....	1
13	379900	Fuse, 10 AMP	1
14	379336	Switch Bracket	1
15	378978	Indicator Light, 12V	1
16	75-P-11	Switch, P.T.O.	1

522AM Input**

- Eaton FS-4106
- Eaton FS-5206

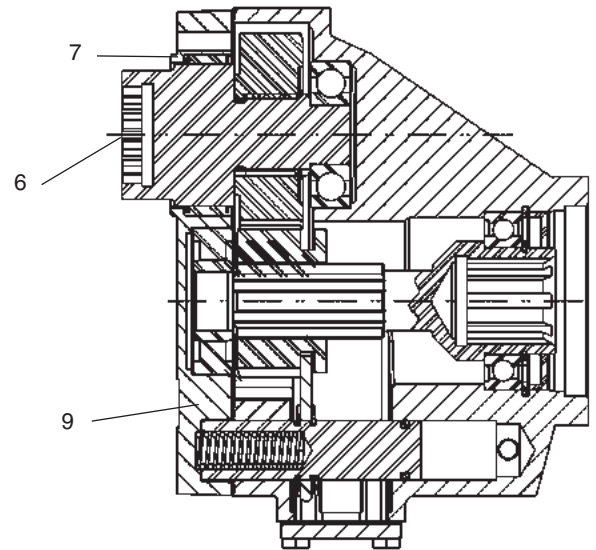
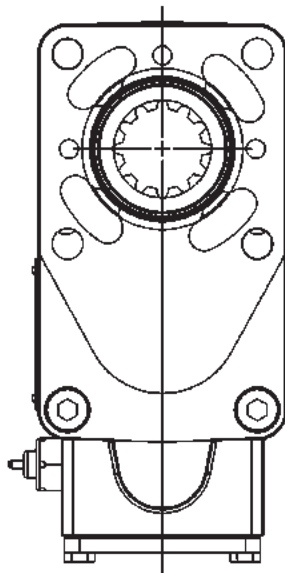


Item	Part Number	Description	Quantity
9	21-P-658	Mounting Plate.....	1
6	3-P-958	Input Shaft, (12 Tooth - 40mm Internal Spline).....	1
7	561016	Needle Roller Bearing	1
	8000-18X	P.T.O. Mounting Kit.....	1
	328952-20X	Gasket and Caution Label Kit.....	1

[See Kit Bill of Materials on page 9-10](#)

522AA Input**

- ZF 6S-850
- ZF S6-36

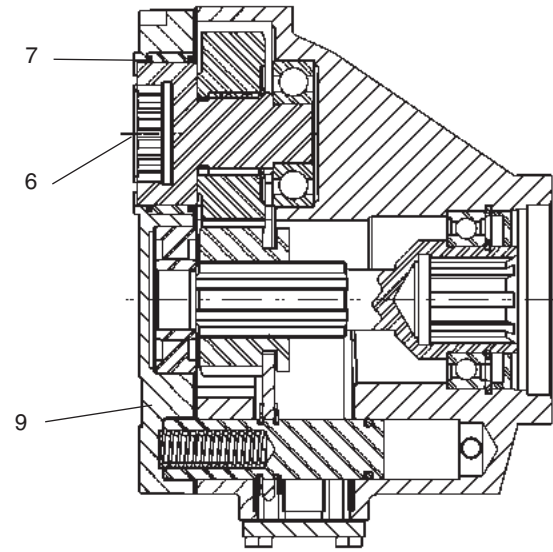
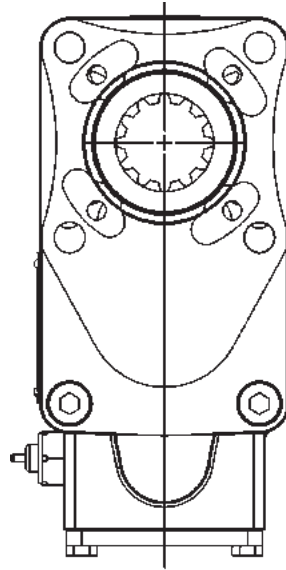


Item	Part Number	Description	Quantity
9	21-P-664	Mounting Plate	1
6	3-P-967	Input Shaft, (12 Tooth - 40mm Internal Spline).....	1
7	561016	Needle Roller Bearing	1
	8000-18X	P.T.O. Mounting Kit.....	1
	328952-20X	Gasket and Caution Label Kit.....	1

[See Kit Bill of Materials on page 9-10](#)

522AB Input**

- Iveco 2845.6
- Iveco 2855.5

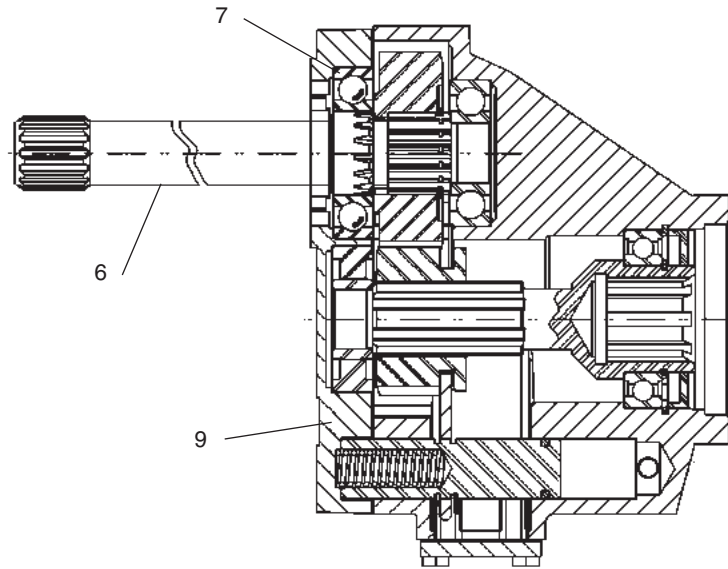
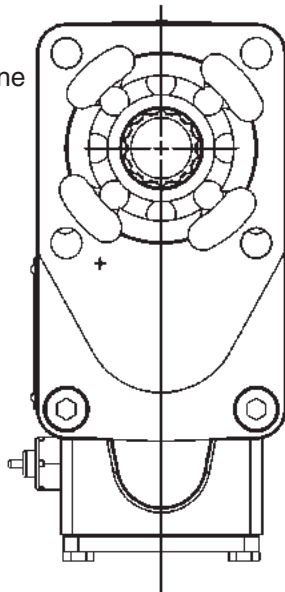


Item	Part Number	Description	Quantity
9	21-P-665	Mounting Plate	1
6	3-P-958	Input Shaft, (12 Tooth - 40mm Internal Spline).....	1
7	561016	Needle Roller Bearing	1
	8000-18X	P.T.O. Mounting Kit.....	1
	328952-20X	Gasket and Caution Label Kit.....	1

See Kit Bill of Materials on page 9-10

522AC Input**

- ZF Meritor Freedomline
- ZF Astronic

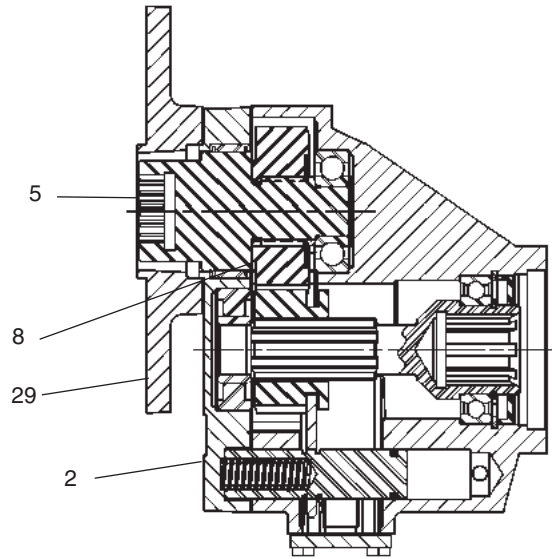
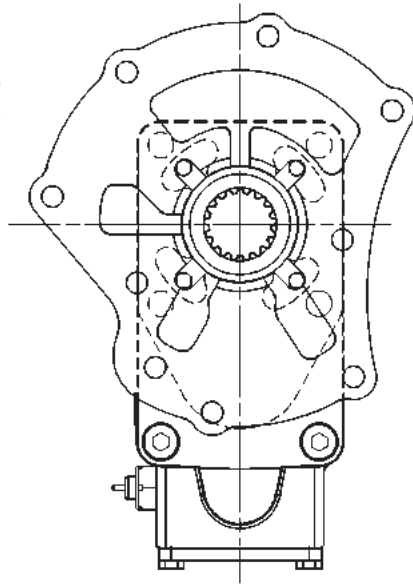


Item	Part Number	Description	Quantity
9	21-P-668	Mounting Plate	1
6	3-P-965	Input Shaft, (14 Tooth - 32mm External Spline).....	1
7	550010	Ball Bearing.....	1
	8000-18X	P.T.O. Mounting Kit.....	1
	328952-21X	Gasket and Caution Label Kit.....	1

See Kit Bill of Materials on page 9-10

522AE Input**

- Mercedes G60
- Mercedes G85



Item	Part Number	Description	Quantity
2	21-P-658	Mounting Plate ("AE" Input)	1
5	3-P-984	Input Shaft (17 Tooth - 37MM Spline)	1
8	561016	Needle Roller Bearing	1
29	26-P-74	Adapter Plate	1
	8000-18X	P.T.O. Mounting Kit	1
	328952-20X	Gasket & Caution Label Kit	1
	8000-20X	Adapter Plate Mounting Kit	1
	35-P-98	Gasket for Adapter Plate	1

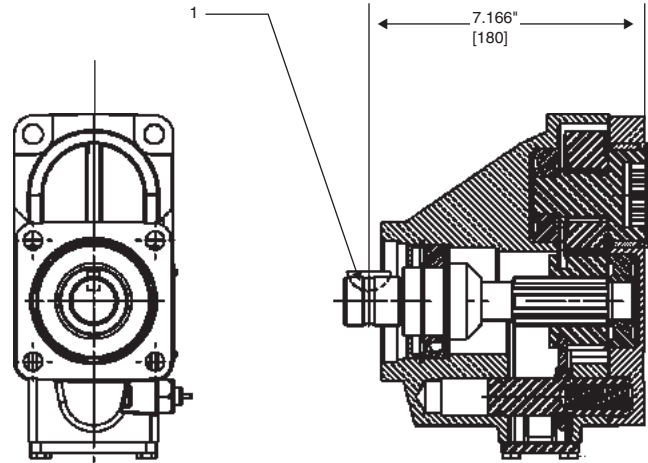
[See Kit Bill of Materials on page 9-10](#)

Output Options

Output	Shaft Part Number	Description
XD	3-P-960	1 -1/4" Round Shaft
XX	3-P-961	1 -1/4" Round Shaft S.A.E. Taper
XY	3-P-959	DIN 5462, 8 Tooth

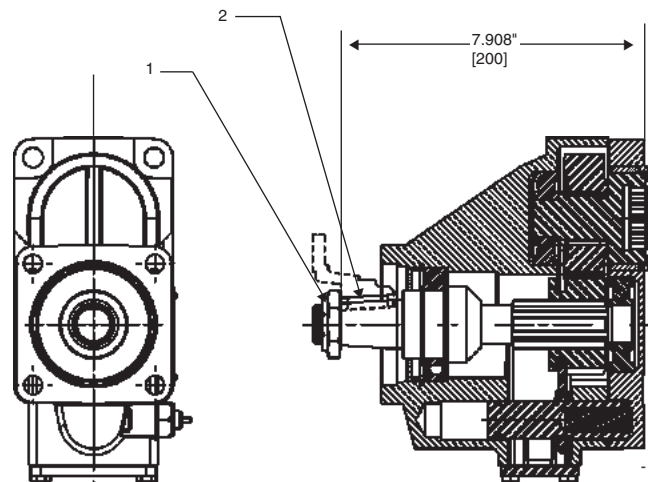
XD Output

1 = 500007-29 Woodruff Key

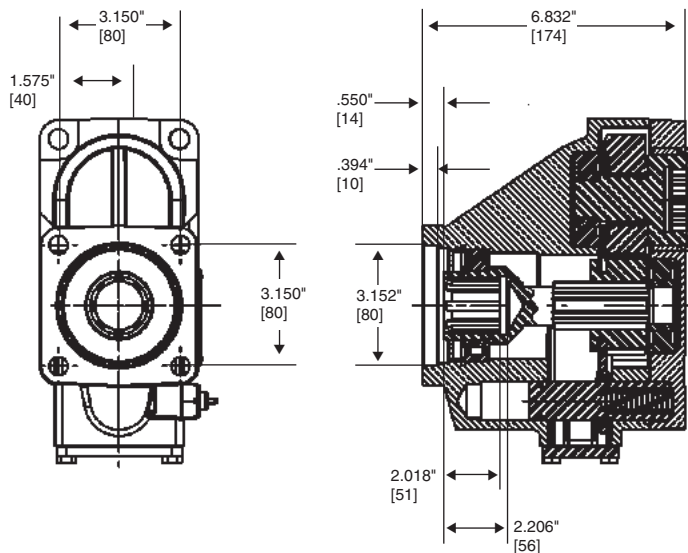


XX Output

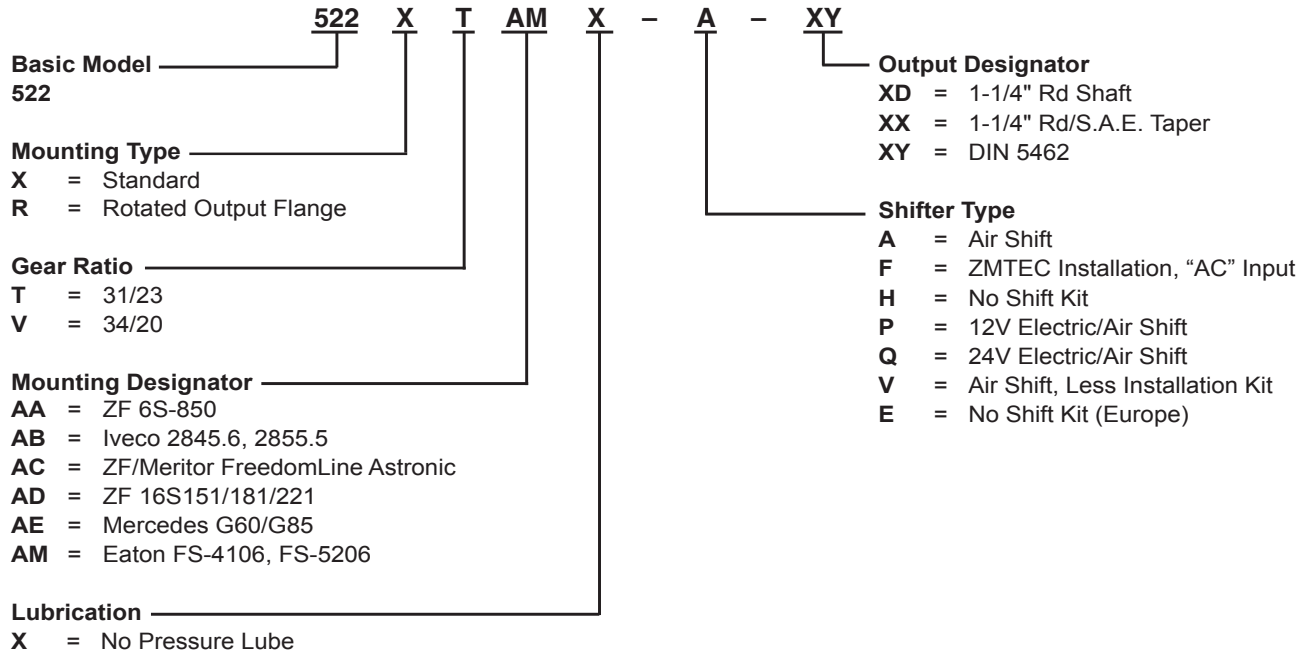
1 = 501181 Hex Lock Nut
2 = 379111 Square Key



XY Output



Model Number Designation



Kit Bill of Materials

329090-1X	Valve Kit	
328863X	Valve Air Control	1
378414	Valve, Pressure Protection	1
329431-1X	Service Kit, Sealing (AA,AB,AM)	
22-P-115	Gasket Housing / Backplate.....	1
22-P-117	Gasket Mounting.....	1
28-P-41	O-Ring Shifter Rod.....	1
28-P-278	Oil Seal Output Shaft.....	1
35-P-93	Gasket Cover Plate.....	1
Safety Guide	HY25-1002-M1/US	1
329431-2X	Service Kit, Sealing (AC Input)	
22-P-115	Gasket Housing / Backplate.....	1
28-P-41	O-Ring Shifter Rod.....	1
28-P-278	Oil Seal Output Shaft.....	1
35-P-93	Gasket Cover Plate.....	1
35-P-94	Gasket Mounting.....	1
Safety Guide	HY25-1002-M1/US	1
329431-3X	Service Kit, Sealing (AD Input)	
22-P-115	Gasket Housing / Backplate.....	1
28-P-41	O-Ring Shifter Rod.....	1
28-P-278	Oil Seal Output Shaft.....	1
35-P-93	Gasket Cover Plate.....	1
35-P-97	Gasket Mounting.....	1
Safety Guide	HY25-1002-M1/US	1
329432-1X	Service Kit, Bearing (AA,AB,AM)	
378098	Snap Ring (Input Shaft)	1
378477	Snap Ring (Output Shaft).....	1
379918	Snap Ring (Shifter Rod).....	1
379919	Snap Ring (Internal).....	1
560990	Ball Bearing (Input Shaft).....	1
561016	Bearing Needle Roller (Input Shaft)	1
561017	Bearing Cylindrical Roller (Output Shaft)	1
561018	Ball Bearing (Output Shaft)	1
329432-2X	Service Kit, Bearing (AC & AD)	
378098	Snap Ring (Input Shaft)	1
378477	Snap Ring (Output Shaft).....	1
379918	Snap Ring (Shifter Rod).....	1
379919	Snap Ring (Internal).....	1
550010	Ball Bearing (Input Shaft).....	1
560990	Bearing Needle Roller (Input Shaft)	1
561017	Bearing Cylindrical Roller (Output Shaft)	1
561018	Ball Bearing (Output Shaft)	1
328388-37X	Air Shift	
328388-44X	Air Shift.....	1
329090-1X	Valve Kit.....	1
379044-7	Nylon Tubing.....	1
379130	Support Bracket.....	2
68-P-27	Control Plate.....	1
379640	Booted Connector	1
328388-44X	Air Shift Kit	
378416	Hex Nipple.....	1
378978	Indicator.....	1
379042	Male Connector.....	2
379043	Male Elbow	1
379252	Butt Connector.....	2
500357-7	Lockwasher.....	8
500376-6	Nut 10-24.....	4
500448-9	Screw Slot.....	4
379900	Ass'y Fuse.....	1
379904	Push Connector	1

328388-46X	Inst Kit Parts Bag	
379900	Ass'y Fuse.....	1
378416	Hex Nipple.....	1
379042	Male Connector.....	2
379043	Male Elbow	1
379253	Ring Connector	1
379257	Splice Connector.....	1
379306	Fork Connector	4
500357-7	Lockwasher.....	2
500457-6	Slotted Screw.....	2
379904	Push Connector	1
328388-47X	12V Electric Over	
328388-46X	Inst Kit Parts Bag	1
378414	Pressure Port	1
378881	Rocker Switch.....	1
378978	Indicator.....	1
379044-7	Nylon Tubing.....	1
379252	Butt Connector	2
379258	Bracket.....	1
379303-1	Valve 12V.....	1
379336	Switch Bracket	1
379254-3	Wire, Green.....	1
379106	Breather-Cap.....	1
379640	Booted Connector	1
328388-48X	24V Electric Over	
379640	Booted Connector	1
328388-46X	Inst Kit Parts Bag	1
378414	Pressure Port	1
378881	Rocker Switch.....	1
379005	Indicator.....	1
379044-7	Nylon Tubing.....	1
379252	Butt Connector	1
379258	Bracket.....	1
379303-2	Valve 24V.....	1
379336	Switch Bracket	1
379106	Breather-Cap.....	1
379254-3	Wire, Green.....	1
328388-82X	Air Shift Kit Freedomline	
378416	Hex Nipple.....	1
379042	Male Connector.....	3
379043	Male Elbow	1
379253	Ring Connector	1
379257	Splice Connector.....	1
500357-7	Lockwasher.....	2
500457-6	Slotted Screw.....	2
378414	Pressure Port	1
379044-7	Nylon Tubing.....	1
379258	Bracket.....	1
75-P-10	Air Solenoid	1
75-P-9	Wiring Harness	1
379106	Breather-cap.....	1
328952-20X	Gasket & Installation Kit	
328946X	Caution Label Kit.....	1
379085-1	P.T.O. Instructions Decal	1
379281-1	Gasket, Envelope.....	1
79624	Product Warranty Card	1
22-P-117	Mounting Gasket.....	1
Safety Guide	HY25-1002-M1/US	1

Kit Bill of Materials

328952-21X	Gasket and Caution Label Kit	1
35-P94	Mounting Gasket.....	1
8000-18X	Stud Kit	
379676-15	Capscrew Socket Head M12 x 80 Lg (1.75 Pitch)	4
379140-7	M12 Lockwasher.....	4
8000-20X	Adapter Plate Mounting Kit	
379740-7	Capscrew Socket Head M10 x 30 LG (1.5 Pitch).....	9
379140-8	Lockwasher M10.....	7

Offer of Sale

The items described in this document and other documents or descriptions provided by Parker Hannifin Corporation, its subsidiaries and its authorized distributors are hereby offered for sale at prices to be established by Parker Hannifin Corporation, its subsidiaries and its authorized distributors. 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 such items, when communicated to Parker Hannifin Corporation, its subsidiary or an authorized distributor ("Seller") verbally or in writing, shall constitute acceptance of this offer.

1. Terms and Conditions of Sale: All descriptions, quotations, proposals, offers, acknowledgments, acceptances and sales of Seller's products are subject to and shall be governed exclusively by the terms and conditions stated herein. Buyer's acceptance of any offer to sell is limited to these terms and conditions. Any terms or conditions in addition to, or inconsistent with those stated herein, proposed by Buyer in any acceptance of an offer by Seller, are hereby objected to. No such additional, different or inconsistent terms and conditions shall become part of the contract between Buyer and Seller unless expressly accepted in writing by Seller. Seller's acceptance of any offer to purchase by Buyer is expressly conditional upon Buyer's assent to all the terms and conditions stated herein, including any terms in addition to, or inconsistent with those contained in Buyer's offer. Acceptance of Seller's products shall in all events constitute such assent.

2. Payment: Payment shall be made by Buyer net 30 days from the date of delivery of the items purchased hereunder. Amounts not timely paid shall bear interest at the maximum rate permitted by law for each month or portion thereof that the Buyer is late in making payment. Any claims by Buyer for omissions or shortages in a shipment shall be waived unless Seller receives notice thereof within 30 days after Buyer's receipt of the shipment.

3. Delivery: Unless otherwise provided on the face hereof, delivery shall be made F.O.B. Seller's plant. Regardless of the method of delivery, however, risk of loss shall pass to Buyer upon Seller's delivery to a carrier. Any delivery dates shown are approximate only and Seller shall have no liability for any delays in delivery.

4. Warranty: Seller warrants that certain Products, namely PTOs, SEMs, and Wet Line Kits sold hereunder shall be free from defects in material or workmanship for a period of twenty four months from the date of delivery to Buyer. Seller warrants that certain Products namely Pumps, and Hydraulic Accessories shall be free from defects in material or workmanship for a period of eighteen months from the date of delivery to the Buyer. The prices charged for Seller's products are based upon the exclusive limited warranty stated above, and upon the following disclaimer: **DISCLAIMER OF WARRANTY: THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO PRODUCTS PROVIDED HEREUNDER. SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS AND IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

5. Limitation Of Remedy: SELLER'S LIABILITY ARISING FROM OR IN ANYWAY CONNECTED WITH THE ITEMS SOLD OR THIS CONTRACT SHALL BE LIMITED EXCLUSIVELY TO REPAIR OR REPLACEMENT OF THE ITEMS SOLD OR REFUND OF THE PURCHASE PRICE PAID BY BUYER, AT SELLER'S SOLE OPTION. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND OR NATURE WHATSOEVER, INCLUDING BUT NOT LIMITED TO LOST PROFITS ARISING FROM OR IN ANYWAY CONNECTED WITH THIS AGREEMENT OR ITEMS SOLD HEREUNDER, WHETHER ALLEGED TO ARISE FROM BREACH OF CONTRACT, EXPRESS OR IMPLIED WARRANTY, OR IN TORT, INCLUDING WITHOUT LIMITATION, NEGLIGENCE, FAILURE TO WARN OR STRICT LIABILITY.

6. Changes, Reschedules and Cancellations: Buyer may request to modify the designs or specifications for the items sold hereunder as well as the quantities and delivery dates thereof, or may request to cancel all or part of this order, however, no such requested modification or cancellation shall become part of the contract between Buyer and Seller unless accepted by Seller in a written amendment to this Agreement. Acceptance of any such requested modification or cancellation shall be at Seller's discretion, and shall be upon such terms and conditions as Seller may require.

7. Special Tooling: A tooling charge may be imposed for any special tooling, including without limitation, dies, fixtures, molds and patterns, acquired to manufacture items sold pursuant to this contract. 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 items sold hereunder, 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.

8. 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, may be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer placing an order for the items which are 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. Taxes: Unless otherwise indicated on the face hereof, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of the items sold hereunder. If any such taxes must be paid by Seller or if Seller is liable for the collection of such tax, the amount thereof shall be in addition to the amounts for the items sold. Buyer agrees to pay all such taxes or to reimburse Seller therefore upon receipt of its invoice. If Buyer claims exemption from any sales, use or other tax imposed by any taxing authority, Buyer shall save Seller harmless from and against any such tax, together with any interest or penalties thereon which may be assessed if the items are held to be taxable.

10. 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 Part 10. Seller will defend and indemnify Buyer against allegations of infringement of U.S. Patents, U.S. Trademarks, copyrights, trade dress and trade secrets (hereinafter '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 an item sold pursuant to this contract 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 an item sold hereunder 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 said item, replace or modify said item so as to make it noninfringing, or offer to accept return of said item 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 items 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 item sold hereunder. The foregoing provisions of this Part 10 shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.

If a claim is based on information provided by Buyer or if the design for an item delivered hereunder is specified in whole or in part by Buyer, Buyer shall defend and indemnify Seller for all costs, expenses or judgments resulting from any claim that such item infringes any patent, trademark, copyright, trade dress, trade secret or any similar right.

11. Force Majeure: Seller does not assume the risk of 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, acts of God, strikes or labor disputes, acts, laws, rules or regulations of any government or government agency, fires, floods, delays or failures in delivery of carriers or suppliers, shortages of materials and any other cause beyond Seller's control.

12. Entire Agreement/Governing Law: The terms and conditions set forth herein, together with any amendments, modifications and any different terms or conditions expressly accepted by Seller in writing, shall constitute the entire Agreement concerning the items sold, and there are no oral or other representations or agreements which pertain thereto. This Agreement shall be governed in all respects by the law of the State of Ohio. No actions arising out of the sale of the items sold hereunder or this Agreement may be brought by either party more than two (2) years after the cause of action accrues.

10/09-P



Parker Hannifin Corporation
Chelsea Products Division
8225 Hacks Cross Road
Olive Branch, Mississippi 38654 USA
Tel: (662) 895-1011
Fax: (662) 890-5379
www.parker.com/chelsea

TGI 12/10