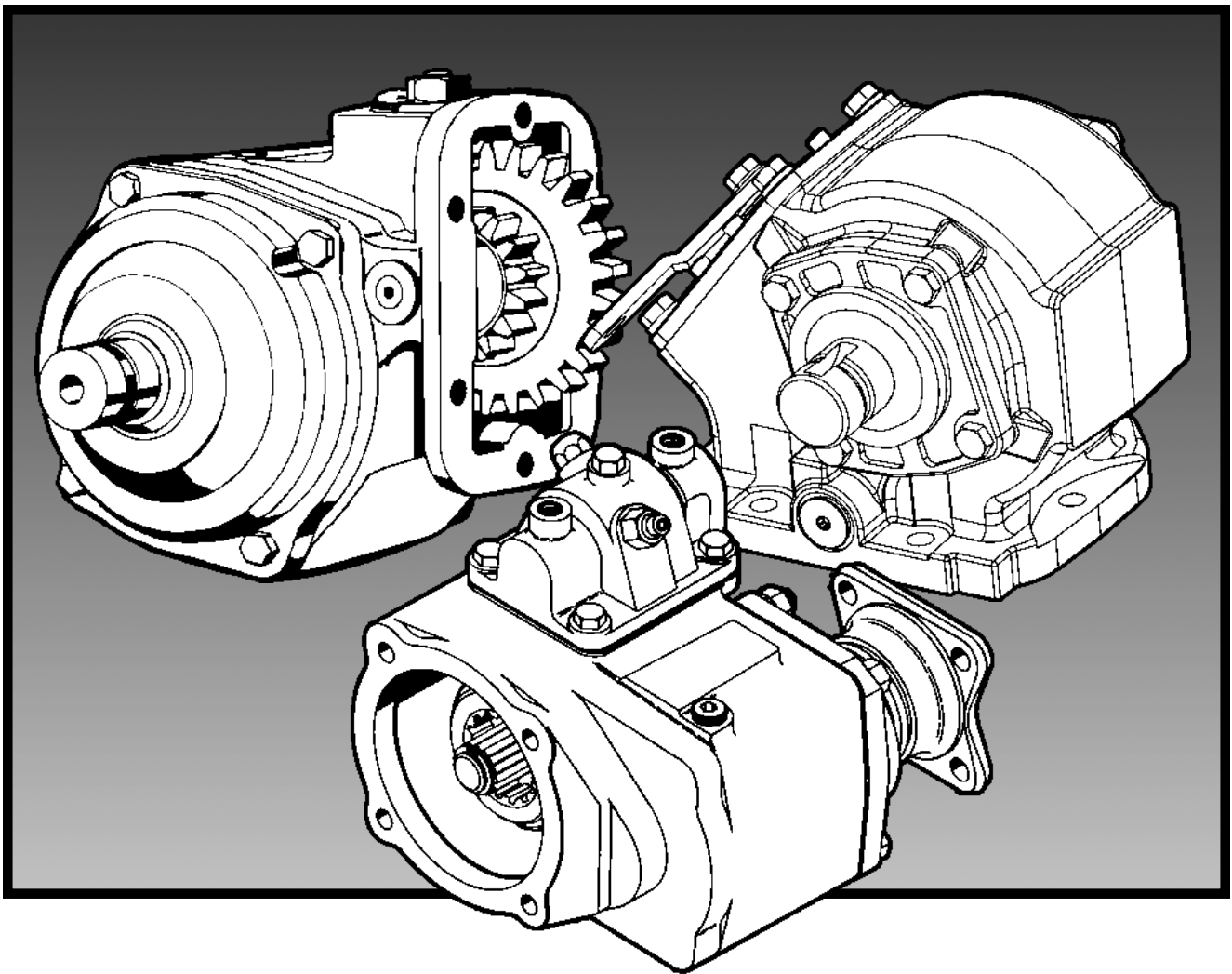


CHELSEA®

Bulletin HY25-2100-M1/US

Parts List 100 Series

Effective: February 15, 2002
Supersedes: P410-100 Dated April, 1993



Parker
Hydraulics

 **WARNING**

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The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

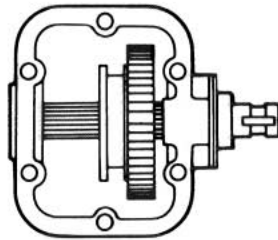
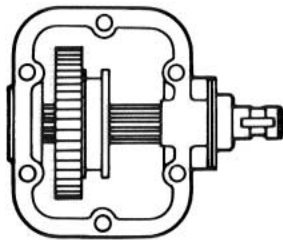
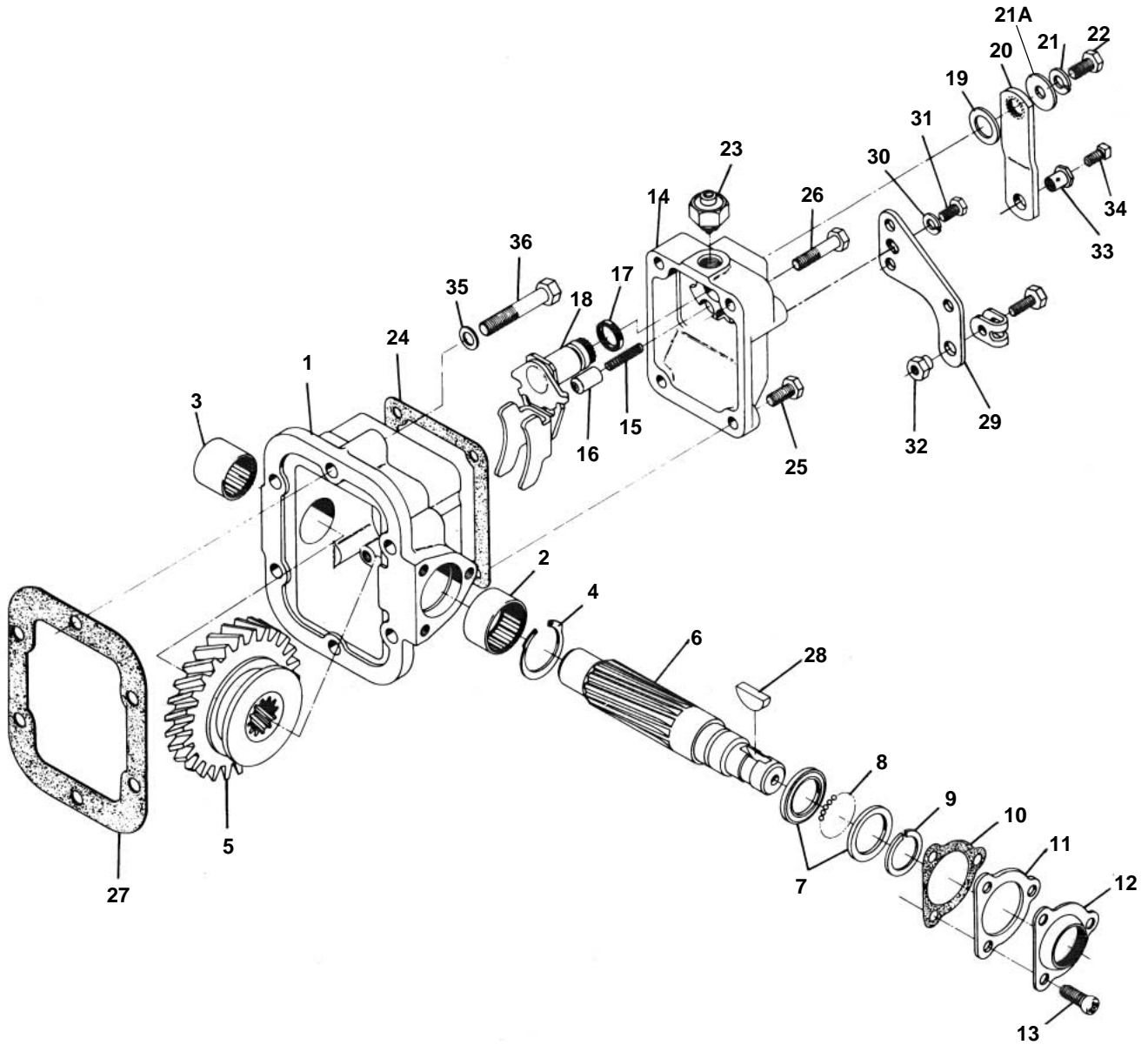
Offer of Sale

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Item	Part Number	Description	Quantity
	328852-1X	Housing & Bearing Assembly (contains items 1-4)	1
1	1-P-393	Housing	1
2	550895	Needle Bearing	1
3	550135	Needle Bearing	1
4	379124	Lockring	1
5	See Chart Pg. 7	Sliding Gear, Input	1
	See Chart Pg. 8	Driveshaft Assembly (contains items 6-9)	1
6	See Chart Pg. 8	Driveshaft	1
7	31-P-79	Thrust Washer	2
	328886X	Bearing Replacement Kit (includes items 7-9)	1
8	378108	Ball Bearings (set of 21)	1
9	378331	Lockring	1
10	22-P-69	Gasket	1
11	378106	Thrust Plate	1
12	28-P-226	Thrust Bearing Cap & Seal	1
13	378447-4	Screw, socket head with patch	3
	328751-1X	Installation Kit (Cable & Lever)	1
	328932-1X	Cable Control Cover Assembly (Assembly 3) (contains items 14-23)	1
	328932-2X	Cable Control Cover Assembly (Assembly 4) (contains items 14-23)	1
	329009X	Cable Control Cover Assembly for 100XRELX-W3/4** & 100XRFXM-W3/4** Only	1
14	34-P-102	Shifter Cover, Standard Unit	1
	34-P-106	Shifter Cover, Isuzu 100XRELX-W3/4** & Nissan 100XRFXM-W3/4** Only	1
15	37-P-19	Shifter Spring	1
16	63-P-16	Poppet	1
17	28-P-191	O-Ring	1
18	328848X	Shifter Plate Assembly	1
19	378004	Flat Washer	1
20	51-P-22	Shifter Lever	1
21	500356-10	Lock Washer	1
21A	500365-22	Flat Washer (incl. w/328932-1X, 2X and 329009X)	1
22	500409-6	Screw, hex head (.312-24 x .625")	1
23	379639	Indicator Switch	1
	329218X	Indicator Switch Service Kit ("V" Option)	1
24	35-P-8	Shifter Cover Gasket	1
25	378430-10	Screw, hex head (.312-18 x 1.000")	2
26	378430-18	Screw, hex head (.312-18 x 2.000")	2
N.S.	329245X	Shift Bracket Kit (Shifter Designator "C" Only)	1
		Loose Parts	
	328948-6X	Gasket & Installation Instructions	1
27	35-P-9-1	Gasket, housing (.010")	A.R.
	35-P-9-2	Gasket, housing (.020")	A.R.
28	500007-24	Woodruff Key	1
	378414	Pressure Protection Valve ("V" Option)	1
N.S.	328346-10X	Cable Control Assembly ("W" Shifter)	1
	328380X	Cable Control Mounting Parts, "W" Shifter (contains items 29-34)	1
29	50-P-17	Bracket	1
30	50-P-19	Swivel Bracket	1
31	500396-8	Screw, hex head (.250" - 20 x .750")	1
32	378326	Nut, hex (.250" - 20)	1
33	378019	Pivot Pin	1
34	500568-4	Set Screw (.250" - 20 x .500")	1

N.S. — Not Shown A.S. — As Required

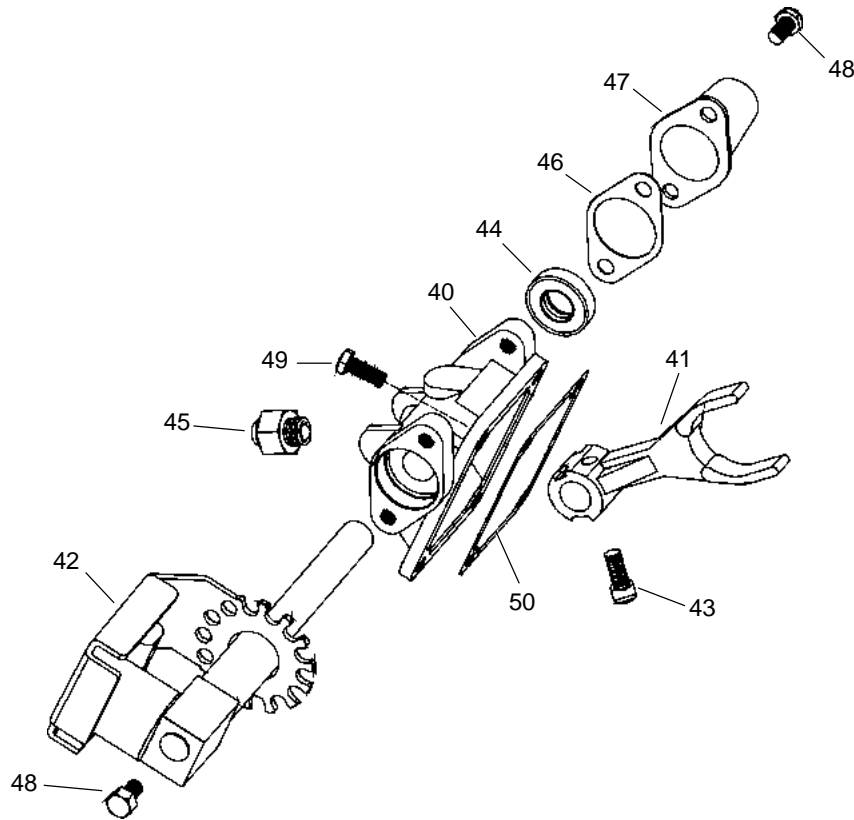
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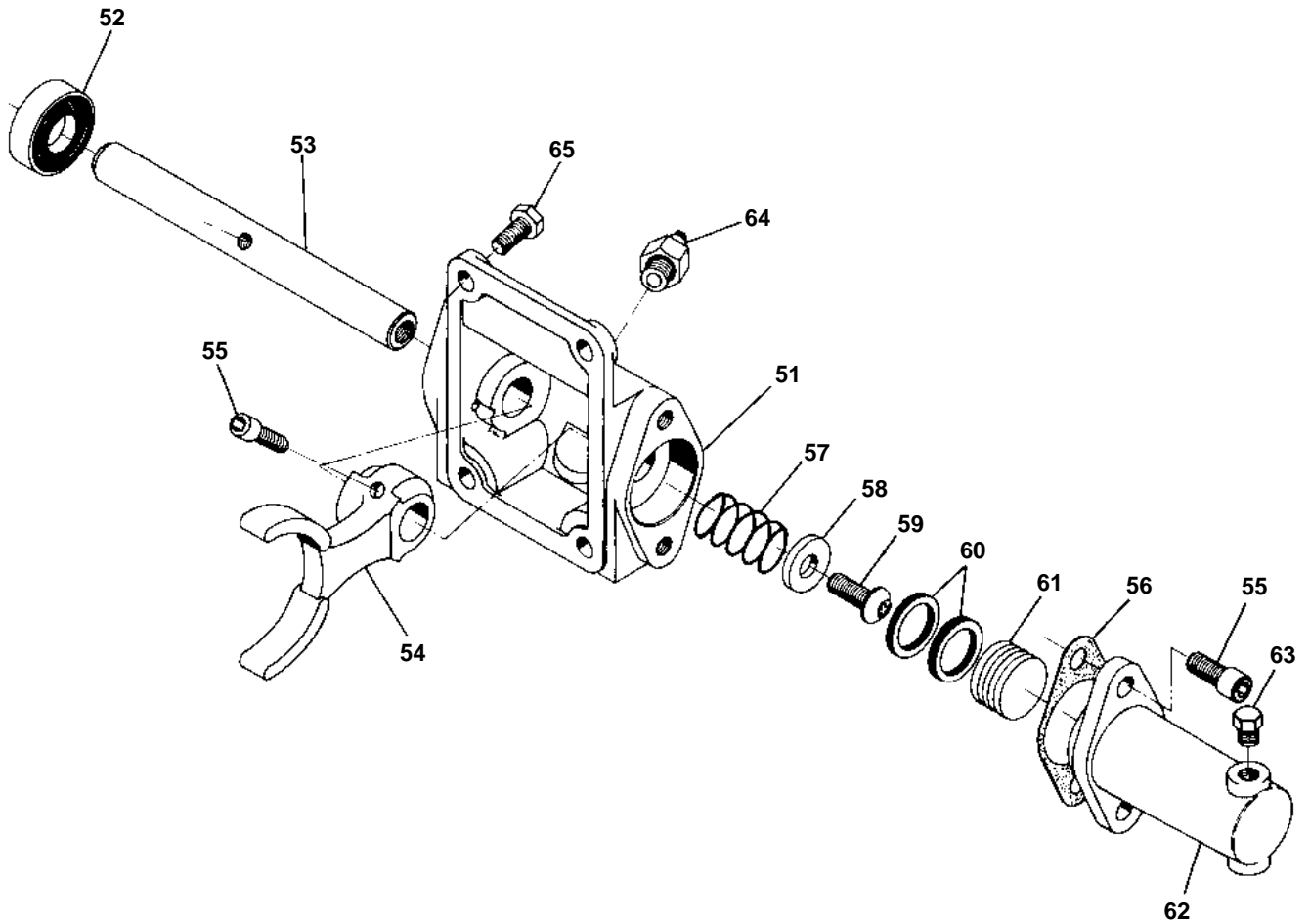
Item	Part Number	Description	Quantity
	329245X	Cable Control Bracket Kit ("C" Shifter)	1
	8000-4X	P.T.O. Mounting Kit (contains items shown below)	1
35	378774	Tablock Washer	6
36	379286-21	Screw, hex head (.375" - 16 x 2.250")	6
N.S.	7170-82X	P.T.O. Mounting Kit Metric (contains items shown below)	1
N.S.	379428-34	Stud (M10-105 & .375-24 x 3.000")	6
N.S.	379744	Flange Nut (.375-24)	6

N.S. — Not Shown

E-Z Shift



Item	Part Number	Description	Quantity
	329167X	E-Z Shift Cover Assembly (Includes Items 83 - 91)	
40	34-P-76	Shift Cover	1
41	32-P-148	Shifter Fork	1
42	329255-12X	E-Z Shift Assembly	1
43	378447-4	Allen Head Capscrew	1
44	28-P-207	Oil Seal	1
45	379639	Indicator Switch	1
46	34-P-14	Gasket	1
47	65-P-23	Shifter Shaft Cover	1
48	378430-4	Hex Capscrew (.312-18 x .500")	4
49	378430-8	Hex Capscrew (.312-18 x .750")	4
50	35-P-8	Gasket, Shifter Cover	1



Air Control

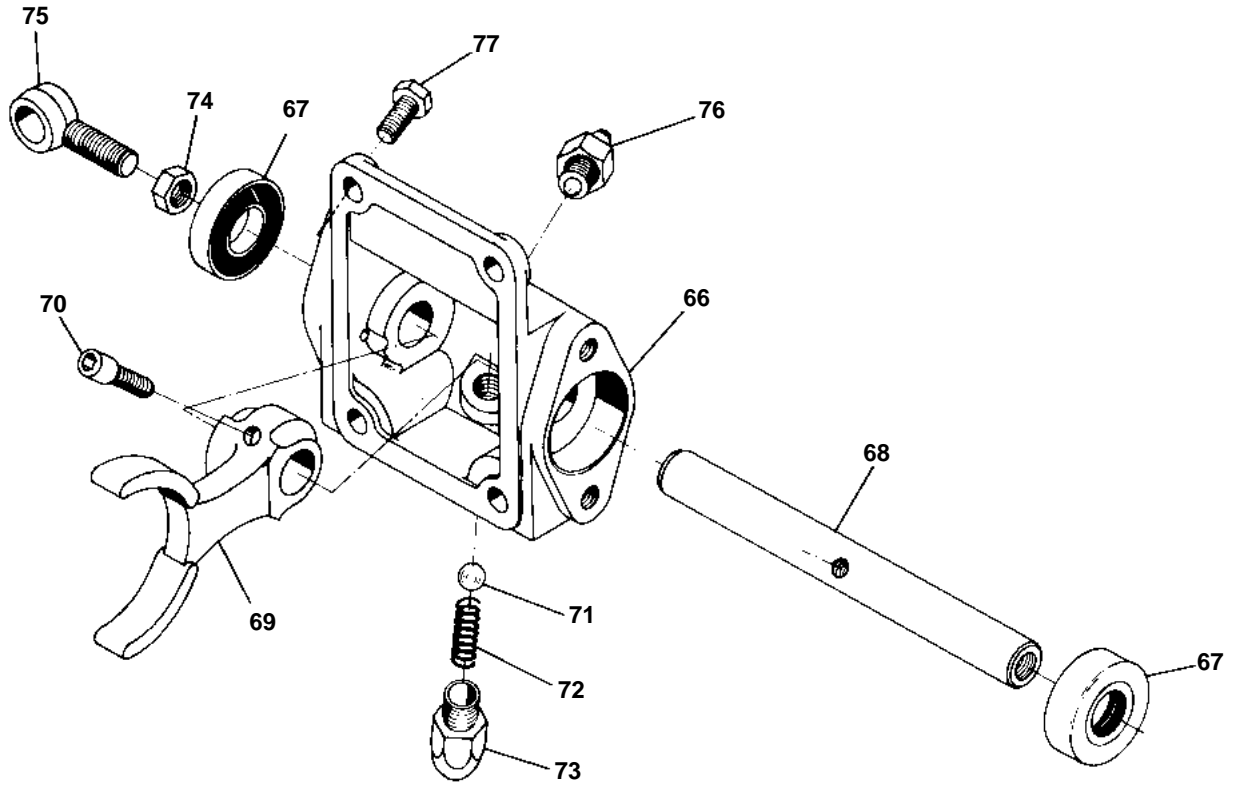
Item	Part Number	Description	Quantity
N.S.	328388-37X	Air Shift Installation Kit (Shift Option "A")	1
N.S.	328388-47X	12V Electric Over Air Installation Kit (Shift Option "P")	1
N.S.	328388-48X	24V Electric Over Air Installation Kit (Shift Option "Q")	1
N.S.	328388-65X	Air Shift Installation Kit (Shift Option "S")	1
N.S.	329214X	Air Shift Control Valve (Shift Option "S" only)	1
	328851X	Air Shift Cover Assembly (contains items 37-50)	1
51	34-P-76	Shifter cover	1
52	28-P-207	Oil seal	1
53	11-P-112	Shifter shaft	1
54	32-P-148	Shifter fork	1
55	378447-4	Screw, hex socket (.312" - 18 x .750")	3
56	35-P-14	Cylinder cap gasket	2
57	37-P-25	Return spring	1
58	378462	Return spring washer	1
59	378908	Screw, button head	1
60	28-P-256	O-Ring	2
61	66-P-22	Piston	1
62	65-P-14	Cylinder cap gasket	1
63	379231	Pipe plug (.125" - 27 NPT)	1
N.S.	65-P-23	Shifter shaft cover	1
N.S.	378430-4	Hex capscrew (.312-18 x .500")	2
N.S.	68-P-2	Name plate	1
N.S.	378422	Drive screw	2
N.S.	328948-6X	Gasket & installation instructions	1
64	378639	Indicator Switch	1
65	378430-8	Screw, hex head (Eslock .312" - 18 x .750")	4

Air Shift Conversion Kits

Description	Part Number	Quantity
Lever to Air	328390-85X	1
Cable to Air	328390-86X	1
Cable to Electric Over Air - 12V	328390-107X	1
Cable to Electric Over Air - 24V	328390-108X	1
Lever to Electric Over Air - 12V	328390-105X	1
Lever to Electric Over Air - 24V	328390-106X	1

N.S. — Not Shown



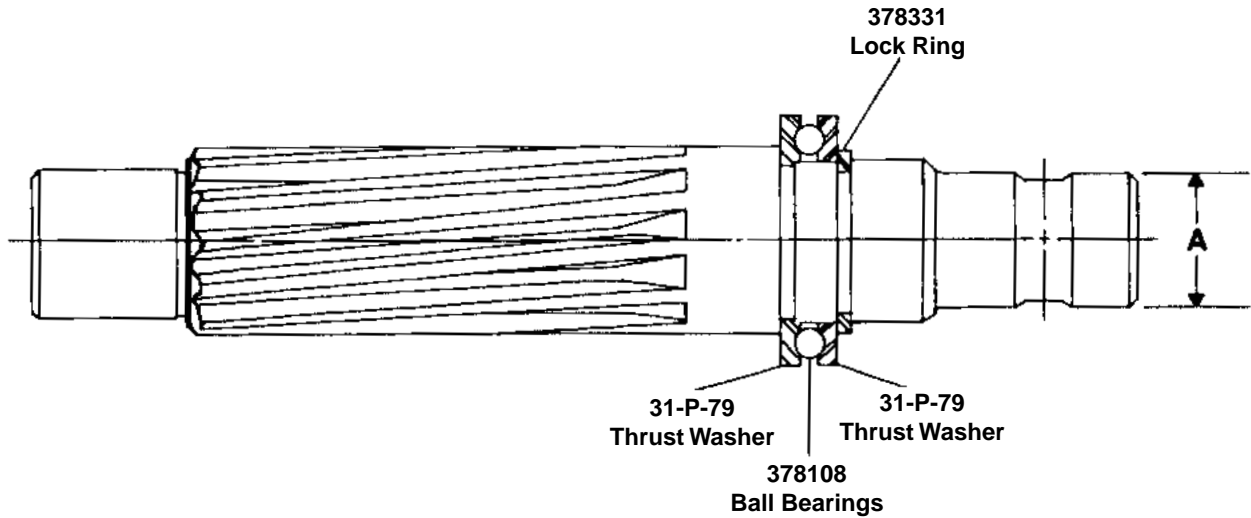


Item	Part Number	Description	Quantity
	328751-1X	Installation Kit	1
	328850X	Lever Control Cover Assembly (contains items listed below)	1
66	34-P-87	Shifter Cover	1
67	28-P-207	Oil Seal	2
68	11-P-112	Shifter Shaft	1
69	32-P-148	Shifter Fork	1
70	378447-4	Screw, hex socket (.312" - 18 x .750")	1
71	378002	Shifter Poppet	1
72	37-P-41	Poppet Spring	1
73	378554	Spring Cap	1
74	500381-3	Jam Nut	1
75	36-P-1	Eye Bolt	1
76	378639	Indicator Switch	1
N.S.	65-P-23	Shifter Shaft Cover	1
N.S.	35-P-14	Gasket	1
N.S.	378430-4	Hex Capscrew	2
77	378430-8	Screw, hex socket (.312" - 18 x .750")	4

N.S. — Not Shown

Model Number	Part Number	Gear Type	No. Teeth	Model Number	Part Number	Gear Type	No. Teeth
100XRAB	2-P-563	Spur	20T	100XRCL	2-P-629	L.H. Helix	22T
100XRAG	2-P-564	Spur	24T	100XRCU	2-P-590	L.H. Helix	24T
100XRAH	2-P-565	Spur	24T	100XRCZ	2-P-595	L.H. Helix	29T
100XRAK	2-P-687	Spur	23T	100XRDC	2-P-600	Spur	20T
100XRAP	2-P-685	L.H. Helix	22T	100XRDD	2-P-604	Spur	22T
				100XRDJ	2-P-609	L.H. Helix	28T
100XRAW	2-P-566	L.H. Helix	22T	100XRDK	2-P-610	L.H. Helix	26T
100XRBA	2-P-567	L.H. Helix	23T	100XRDM	2-P-616	L.H. Helix	18T
100XRBC	2-P-568	L.H. Helix	19T				
100XRBF	2-P-570	Spur	28T	100XRDN	2-P-617	L.H. Helix	21T
100XRBG	2-P-571	L.H. Helix	24T	100XRDS	2-P-625	L.H. Helix	28T
				100XRDU	2-P-633	L.H. Helix	29T
100XRBH	2-P-572	R.H. Helix	26T	100XREA	2-P-643	L.H. Helix	27T
100XRBJ	2-P-573	L.H. Helix	26T	100XREC	2-P-648	L.H. Helix	38T
100XRBK	2-P-574	L.H. Helix	24T	100XRED	2-P-649	L.H. Helix	34T
100XRBL	2-P-575	R.H. Helix	23T				
100XRBM	2-P-576	L.H. Helix	23T	100XREF	2-P-654	L.H. Helix	28T
				100XREL	2-P-678	R.H. Helix	23T
100XRBN	2-P-577	L.H. Helix	23T	100XRFM	2-P-718	Spur	30T
100XRBQ	2-P-578	L.H. Helix	27T	100XRFP	2-P-719	L.H. Helix	25T
100XRBR	2-P-579	R.H. Helix	27T				
100XRBS	2-P-580	L.H. Helix	27T	100XRGW	2-P-746	R.H. Helix	25T
100XRBX	2-P-581	L.H. Helix	28T				
100XRBY	2-P-582	R.H. Helix	28T				
100XRBZ	2-P-583	L.H. Helix	28T				
100XRCB	2-P-584	L.H. Helix	26T				
100XRCC	2-P-585	L.H. Helix	26T				

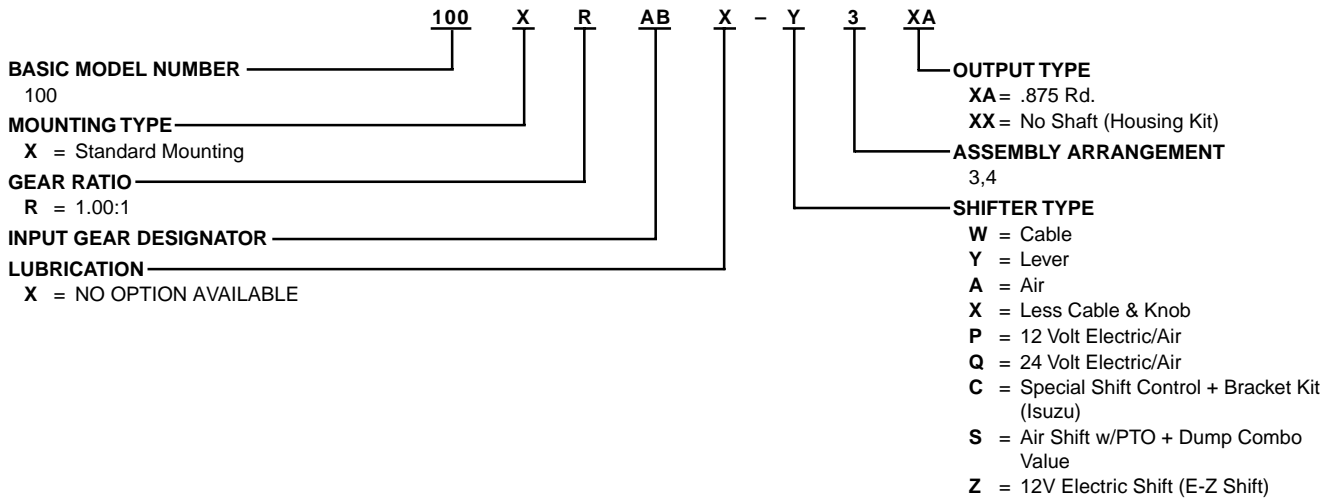
When reinstalling the Power Take-Off on the transmission, the backlash between the Power Take-Off gear and the transmission gear should be approximately 006-.012". If too few gaskets are used, the unit will whine; if too many, the unit will clatter.



P.T.O. Model Number	Driveshaft Assembly	Driveshaft (n.s.s.)	A Shaft Size	P.T.O. Model Number	Driveshaft Assembly	Driveshaft (n.s.s.)	A Shaft Size
100XRAB	328281-53X	3-P-528	0.875	100XRBD	328281-63X	3-P-516	0.875
100XRAG	328281-53X	3-P-528	0.875	100XRCE	328281-64X	3-P-500	0.875
100XRAH	328281-53X	3-P-528	0.875	100XRCC	328281-65X	3-P-496	0.875
100XRAK	328281-53X	3-P-528	0.875	100XRCL	328281-54X	3-P-494	0.875
100XRAP	328281-80X	3-P-831	0.875	100XRCD	328281-56X	3-P-532	0.875
100XRAW	328281-54X	3-P-494	0.875	100XRDC	328281-53X	3-P-528	0.875
100XRBA	328281-60X	3-P-512	0.875	100XRDD	328281-53X	3-P-604	0.875
100XRBC	328281-55X	3-P-504	0.875	100XRDJ	328281-63X	3-P-516	0.875
100XRBF	328281-53X	3-P-528	0.875	100XRDK	328281-63X	3-P-516	0.875
100XRBG	328281-56X	3-P-532	0.875	100XRDM	328281-75X	3-P-801	0.875
100XRBH	328281-57X	3-P-493	0.875	100XRDN	328281-59X	3-P-719	0.875
100XRBJ	328281-58X	3-P-508	0.875	100XRDS	328281-63X	3-P-516	0.875
100XRBK	328281-56X	3-P-532	0.875	100XRDU	328281-77X	3-P-812	0.875
100XRBL	328281-69X	3-P-697	0.875	100XREA	328281-63X	3-P-516	0.875
100XRBM	328281-59X	3-P-719	0.875	100XREC	328281-78X	3-P-827	0.875
100XRBN	328281-55X	3-P-504	0.875	100XRED	328281-56X	3-P-532	0.875
100XRBP	328281-60X	3-P-512	0.875	100XREF	328281-79X	3-P-828	0.875
100XRBR	328281-61X	3-P-520	0.875	100XREL	328281-57X	3-P-493	0.875
100XRBS	328281-60X	3-P-512	0.875	100XRFM	328281-53X	3-P-528	0.875
100XRBY	328281-62X	3-P-524	0.875	100XRFP	328281-60X	3-P-512	0.875
				100XRGW	328281-69X	3-P-697	0.875

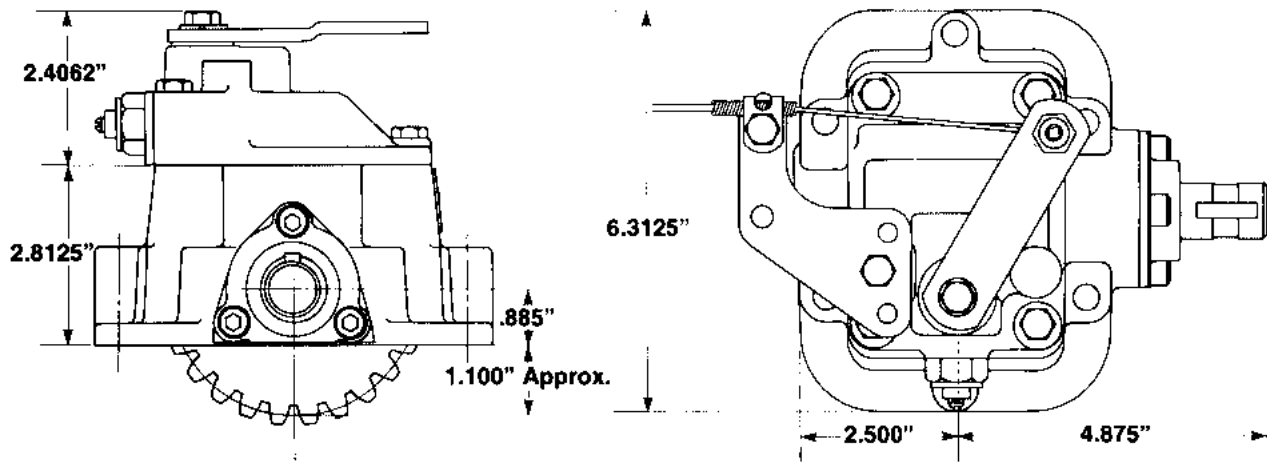
n.s.s.—Not sold separately. Order Driveshaft Assembly shown. All Driveshaft Assemblies consist of one Driveshaft, one 378331 Lockring, two 31-P-79 Thrust Washers, and one set of 378108 Ball Bearings.

Model Number Designation

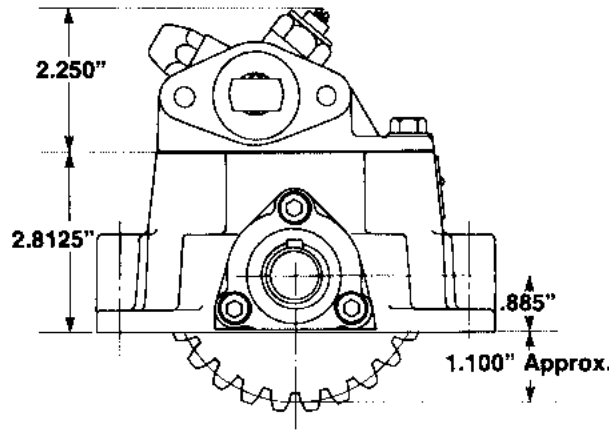


P.T.O. Case Dimensions

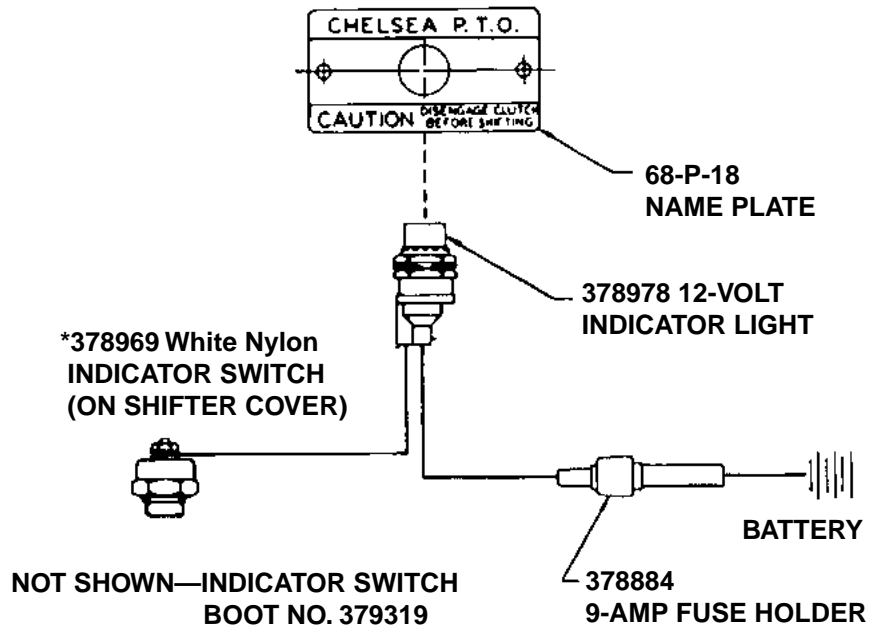
CABLE CONTROL



AIR & LEVER CONTROL



Cable & Lever Control Indicator Light Installation Kit 328751X



* — Not included in 328751X

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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 the items sold hereunder shall be free from defects in material or workmanship for a period of:

(A) All Power Take-Off units one (1) year from date of installation.

(B) Except 267, 277, 278, 242, 244, 250, 251 and 859 series two (2) years from date of installation. **THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO ITEMS PROVIDED HEREUNDER. SELLER MAKES NO OTHER WARRANTY, GUARANTEE, OR REPRESENTATION OF ANY KIND WHATSOEVER. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR PURPOSE, WHETHER EXPRESS, IMPLIED, OR ARISING BY OPERATION OF LAW, TRADE USAGE, OR COURSE OF DEALING ARE HEREBY DISCLAIMED. NOTWITHSTANDING THE FOREGOING, THERE ARE NO WARRANTIES WHATSOEVER ON ITEMS BUILT OR ACQUIRED WHOLLY OR PARTIALLY, TO BUYER'S DESIGNS OR SPECIFICATIONS.**

5. Limitation Of Remedy: SELLER'S LIABILITY ARISING FROM OR IN ANY WAY 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 ANY WAY 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.

9/01-P



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