

Chelsea PTO 420 Parts Manual

Pro Gear Chelsea 420 Series PTO parts manual to assist in identifying the parts for your Chelsea Power Take Off unit.

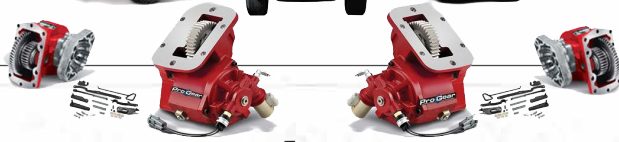
If you need any assistance identifying the correct Power Take Off unit for your truck and equipment, contact your Chelsea replacement part specialists at Pro Gear and Transmission.

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.

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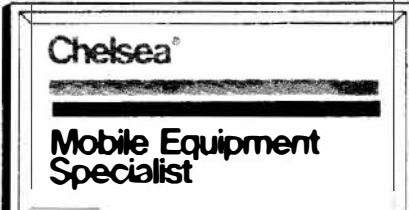
For parts or service contact the Chelsea specialists at Pro Gear & Transmission, Inc.

1 (877) 776-4600
(407) 872-1901
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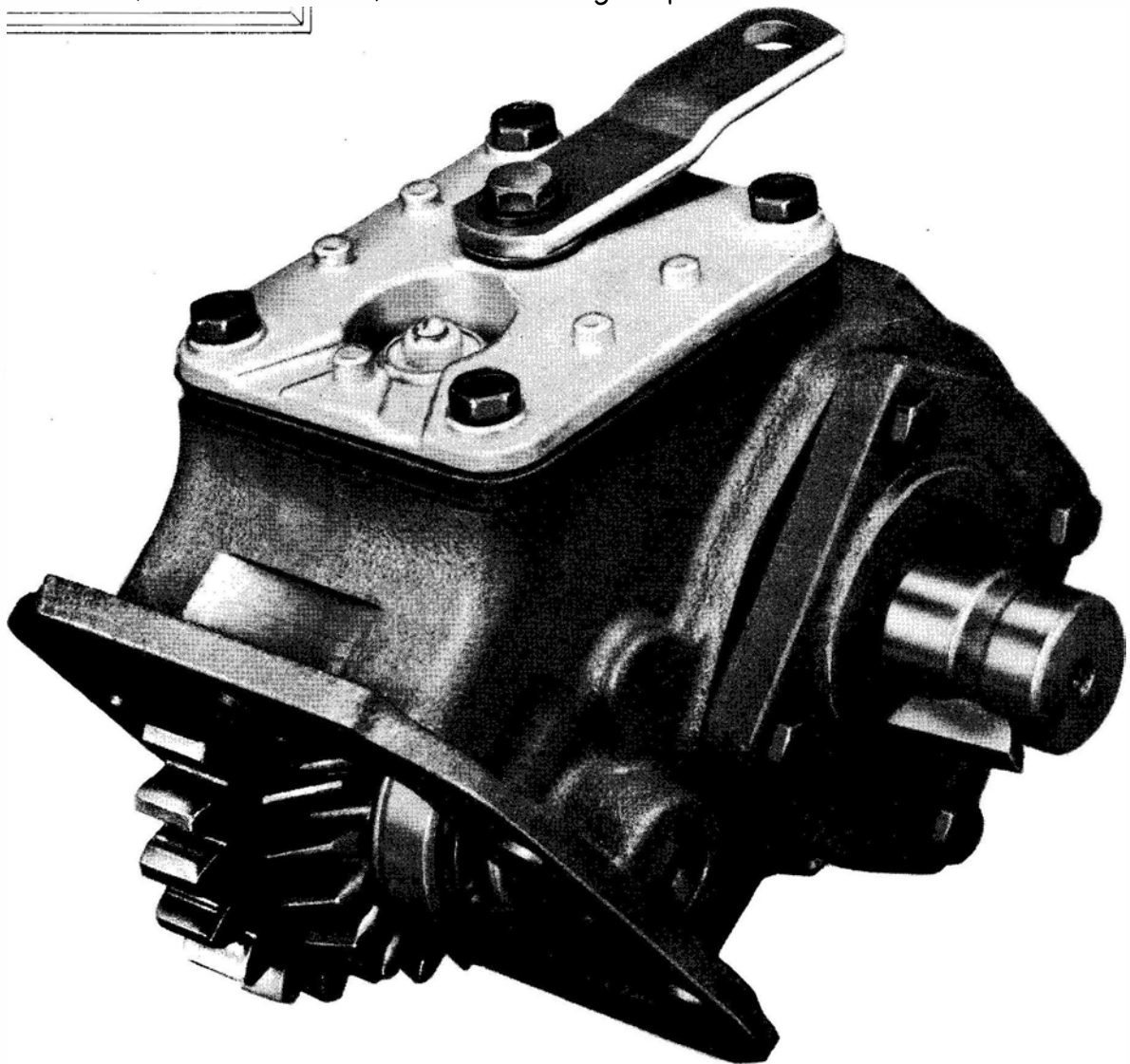


Chelsea[®]

Replacement Parts 420 Series Power Take-Off Manual

Side Mounted, S.A.E. Six Hole, Two Gear-Single Speed

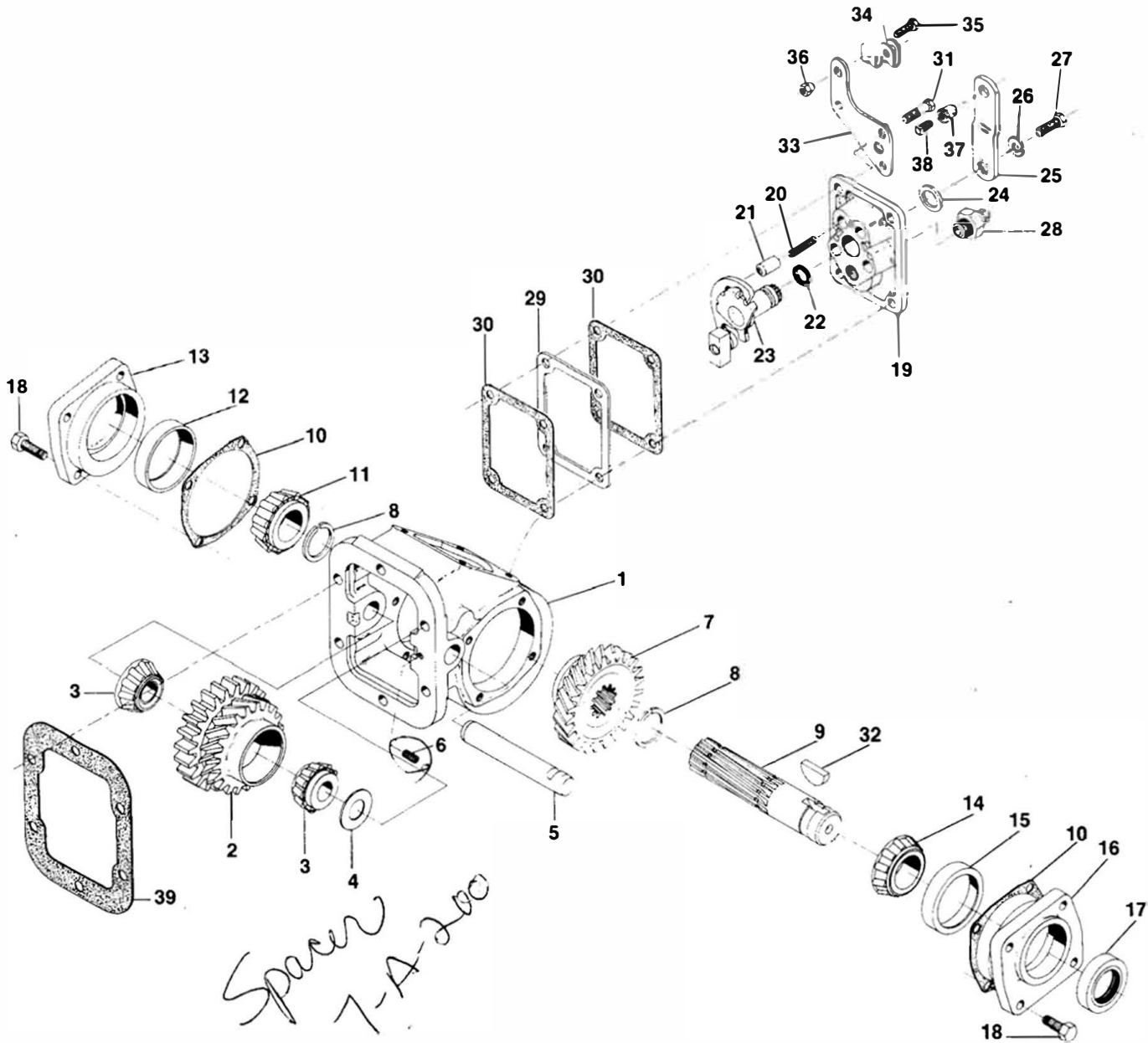
WEATHERLY INDEX 086
P.T.O. Parts List
P410-420
July, 1981
420 Series
Supersedes P410-42S
Dated November, 1978



DRIVETRAIN SERVICE DIVISION

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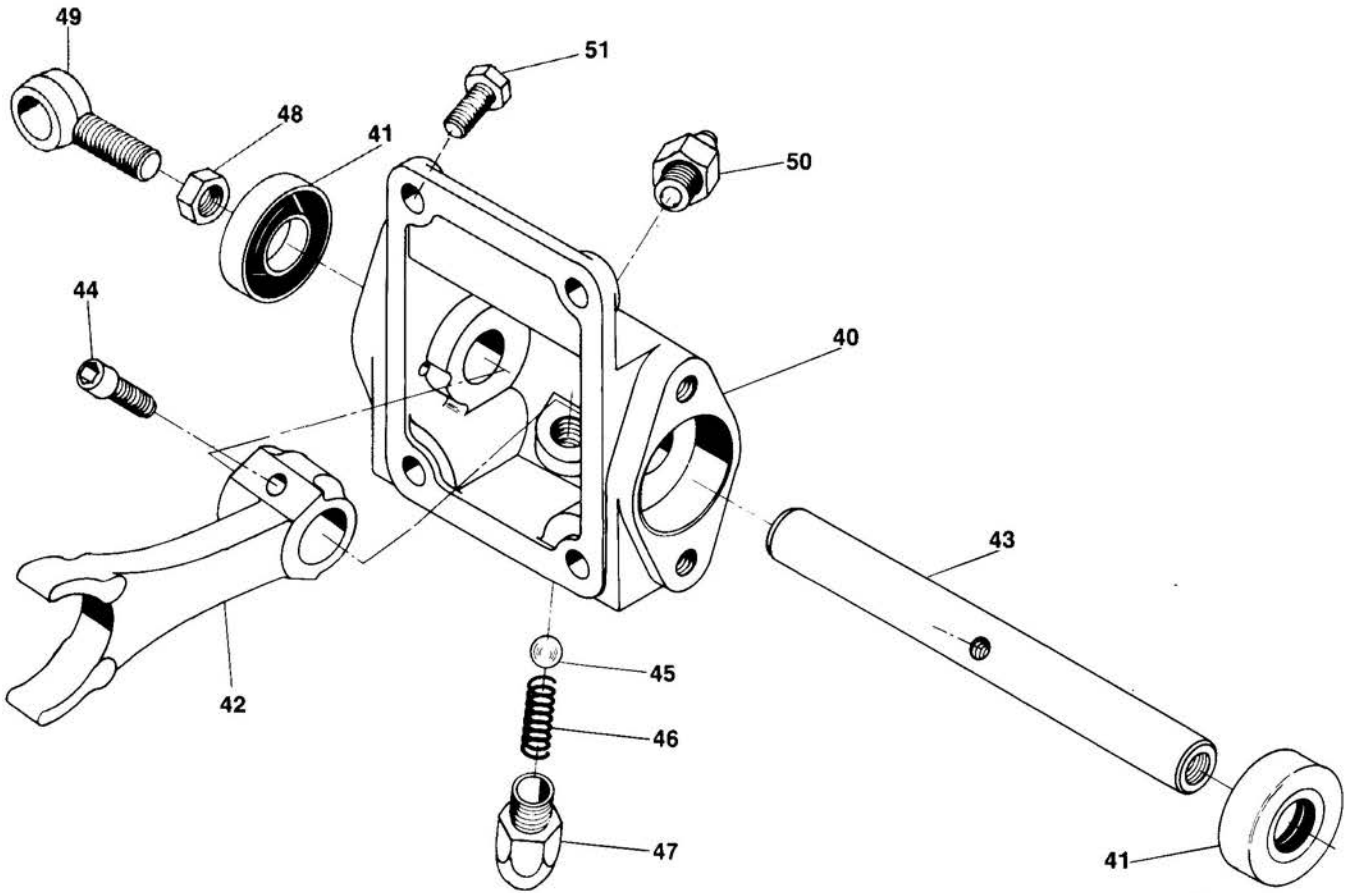
DANA CORPORATION, P.O. BOX 321, TOLEDO, OHIO 43691



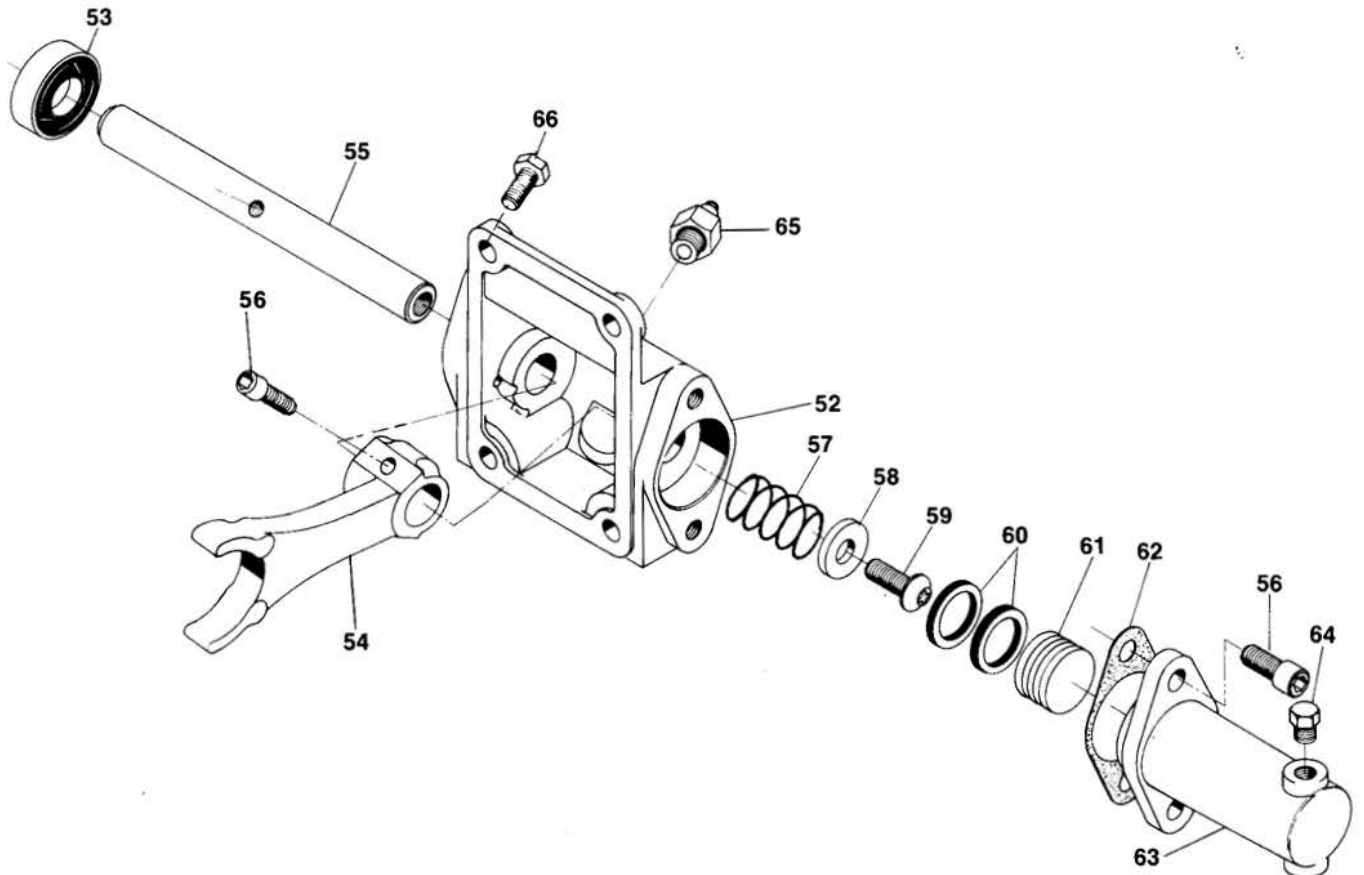
Item	Part Number	Description	Quantity
1	{ 1-P-195 1-P-196	HOUSING-Standard Mount HOUSING-Deep Mount	1 1
2	See Chart Pg.10	CLUSTER GEAR, Input	1
3	550439	BEARING CONE, Input	2
	328017X	GEAR SPACER KIT, Input (contains Item 4)	1
	{ 14-P-15-1 14-P-15-2 14-P-15-3 14-P-15-4 14-P-15-5	GEAR SPACER, Input (.055") GEAR SPACER, Input (.060") GEAR SPACER, Input (.065") GEAR SPACER, Input (.070") GEAR SPACER, Input (.075")	1 1 1 1 1
5	9-P-60	IDLER SHAFT	1
6	{ 378452-7 378452-4	SET SCREW-For Standard Mount (1/4"-20 x 1/2") SET SCREW-For Deep Mount (1/4" - 20 x 5/16")	1 1
7	2-P-559	SLIDING GEAR, Output (24 Teeth)	1
8	378391	LOCK RING.....	2
9	3-P-202	DRIVE SHAFT, Output (1 1/4" Round)	1
10	{ 22-P-24-1 22-P-24-2	BEARING CAP GASKET (.010")..... BEARING CAP GASKET (.020").....	A.R. A.R.

Item	Part Number	Description	Quantity
11	550532 328274X	BEARING CONE, Closed End	1
12	550221	BEARING CAP ASSEMBLY, Closed End (contains Items 12-13)	1
13	21-P-131	BEARING CUP, Closed End	1
		BEARING CAP, Closed End	N.S.S.
14	550397 328273X	BEARING CONE, Output	1
		BEARING CAP ASSEMBLY, Output (contains Items 15-16)	1
15	550221	BEARING CUP, Output	1
16	21-P-130	BEARING CAP, Output	N.S.S.
17	28-P-52	OIL SEAL, Output	1
18	378430-10	SCREW, hex head (Eslock 5/16" - 18 x 1")	8
	328815-1X	WIRE SHIFT COVER ASSEMBLY, Assembly 3 & 6 (contains Items 19-28)	1
	328815-2X	WIRE SHIFT COVER ASSEMBLY, Assembly 4 & 5 (contains Items 19-28)	1
19	34-P-74	SHIFTER COVER	1
20	37-P-19	SHIFTER SPRING	1
21	63-P-16	POPPET	1
22	28-P-49	O-RING (3/4" Outside Diameter)	1
23	328813-1X 328813-2X	POST & PLATE ASSEMBLY (Assembly 3 & 6)	1
		POST & PLATE ASSEMBLY (Assembly 4 & 5)	1
24	378004	FLAT WASHER (1" Outside Diameter)	1
25	51-P-22	SHIFTER LEVER	1
26	378003	LOCK WASHER (5/16")	1
27	500409-6	SCREW, hex head (5/16" - 24 x 5/8")	1
28	378969	INDICATOR SWITCH	1
29	5-A-250	FIBER SPACER	1
30	35-P-8	SHIFTER COVER GASKET (.020")	2
31	378430-10	SCREW, hex head (Eslock 5/16" - 18 x 1")	4
		LOOSE PARTS	
32	500007-29	WOODRUFF KEY	1
N.S.	328346-10X	WIRE CONTROL CABLE ASSEMBLY (10X = 10 Foot Cable)	1
	328380X	WIRE CONTROL MOUNTING PARTS (contains Items 33-38)	1
33	50-P-17	BRACKET	1
34	50-P-19	SWIVEL BRACKET	1
35	500396-8	SCREW, hex head (1/4" - 20 x 3/4")	1
36	378326	NUT, hex (1/4" - 20)	1
37	378019	PIVOT PIN	1
38	500568-4	SET SCREW (1/4" - 20 x 1/2")	1
39	35-P-9-1 35-P-9-2	GASKET, housing (.010")	A.R.
		GASKET, housing (.020")	A.R.
		PTO MOUNTING STUD KIT (See P400-A For Optional Kits)	
N.S.	328170-76X	For Standard Mount	1
N.S.	328170-77X	For Deep Mount	1
		BEARING & SPACER KIT	
N.S.	328594X	Must be Ordered Separate (contains 2 pieces each Items 3 & 4; 1 piece each Items 5 & 6; 1 each 68-P-1 & 68-P-2 Nameplates)	1
		GASKET & SEAL KIT	
N.S.	328356-13X	Must be Ordered Separate (contains 4 pieces Item 10; 2 pieces Item 30; 1 piece each Item 8, 17, 22 & 39)	1

N.S.-Not shown
A.R.-As Required
N.S.S.-Not Sold Separately



Item	Part Number	Description	Quantity
	328831-1X	LEVER CONTROL COVER ASSEMBLY, Assembly 3 & 6 (contains Items 40-50).....	1
	328831-2X	LEVER CONTROL COVER ASSEMBLY, Assembly 4 & 5 (contains Items 40-50).....	1
40	34-P-87	SHIFTER COVER.....	1
41	28-P-4	OIL SEAL.....	2
42	32-P-144	SHIFTER FORK.....	1
43	11-P-112	SHIFTER SHAFT.....	1
44	378447-4	SCREW, hex socket (5/16" - 18 x 3/4").....	1
45	378002	SHIFTER BALL.....	1
46	37-P-14	SHIFTER SPRING.....	1
47	378554	SPRING CAP.....	1
48	500381-3	JAM NUT, hex head.....	1
49	36-P-1	EYE BOLT.....	1
50	378969	INDICATOR SWITCH.....	1
51	378430-8	SCREW, hex head (Eslock 5/16" - 18 x 3/4").....	4



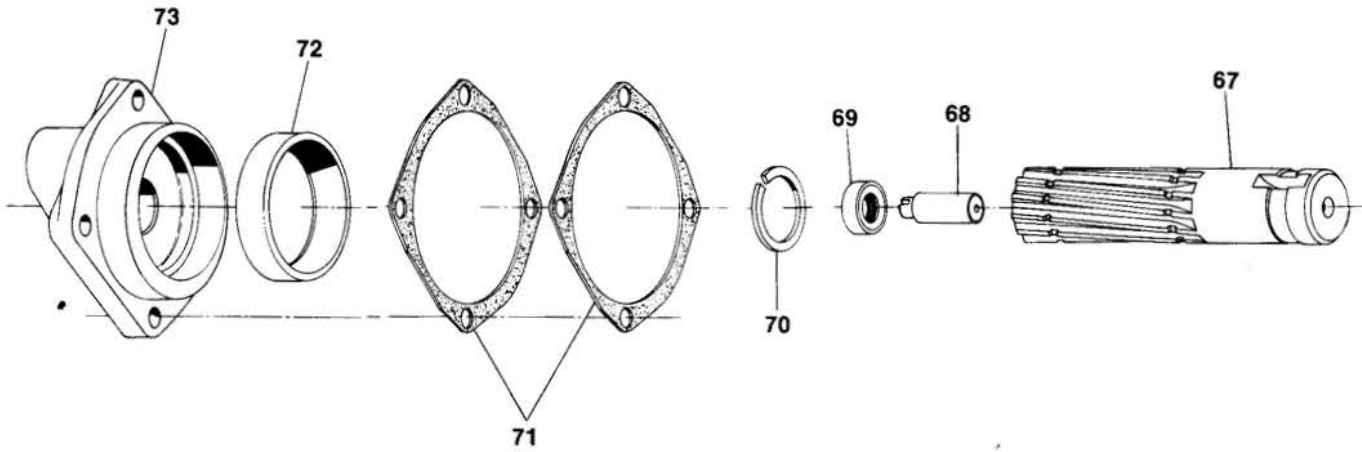
NOTE: To Assemble Air Shift Cover Assembly From Lever Control Cover Assembly, omit Shifter Ball, Spring, Cylinder End Oil Seal, Jam Nut and Eye Bolt.

Item	Part Number	Description	Quantity
	328832-1X	AIR SHIFT COVER ASSEMBLY, Assembly 3 & 6 (contains Items 52-65).....	1
	328832-2X	AIR SHIFT COVER ASSEMBLY, Assembly 4 & 5 (contains Items 52-65).....	1
52	34-P-76	SHIFTER COVER.....	1
53	28-P-4 <i>28P-207</i>	OIL SEAL (Used Only on Side Without Cylinder)	1
54	32-P-144	SHIFTER FORK	1
55	11-P-122	SHIFTER SHAFT	1
56	378447-4	SCREW, hex socket (5/16" - 18 x 3/4")	3
57	37-P-25	SHIFTER SPRING	1
58	378462	SPRING RETAINER WASHER.....	1
59	378908	SCREW, button head	1
60	28-P-55 <i>28P-41</i>	BLOCK VEE RING.....	2
61	66-P-4	PISTON.....	1
62	35-P-14	CYLINDER CAP GASKET	1
63	65-P-14	CYLINDER CAP	1
64	500118-3	PIPE PLUG (1/8" - 27 N.P.T.).....	1
N.S.	500897-3	SHIPPING PLUG	1
65	378969	INDICATOR SWITCH.....	1
66	378430-8	SCREW, hex head (Eslock 5/16" - 18 x 3/4").....	4
N.S.	328388-27X	AIR SHIFT INSTALLATION KIT	1

N.S.-Not shown

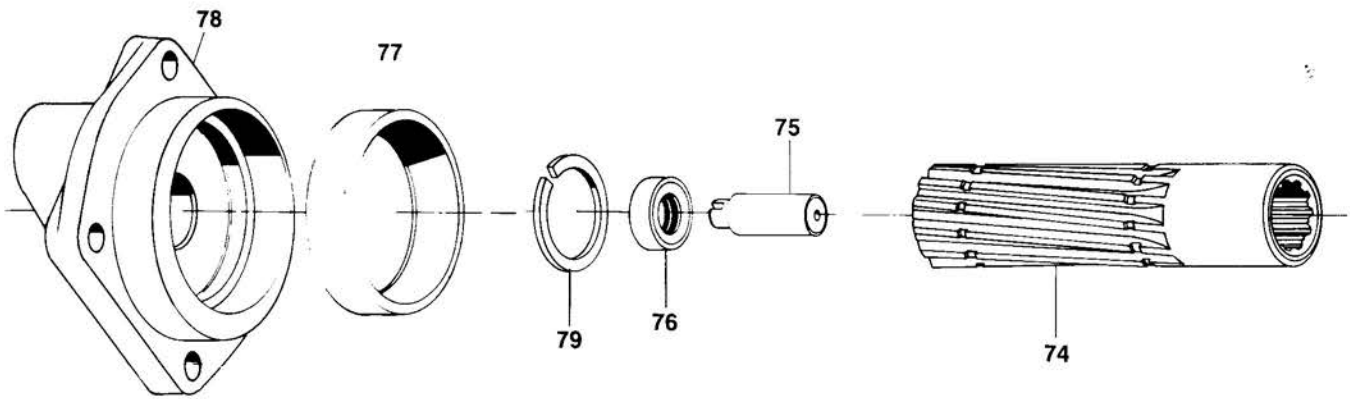
AIR SHIFT CONVERSION KITS

Description	Part Number	Quantity
Wire to Air for Assembly 3 & 6	328390-63X	1
Wire to Air for Assembly 4 & 5	328390-64X	1
Lever to Air All Assemblies.....	328390-67X	1



Item	Part Number	Description	Quantity
	328648X	HOLLEY GOVERNOR DRIVE CONVERSION KIT (contains Items 67-73)	1
	328060X	DRIVE SHAFT & SPINNER ASSEMBLY (contains Items 67-68)	1
67	3-P-270	DRIVE SHAFT, Standard	1
68	378178	SPINNER	1
69	28-P-53	OIL SEAL	1
70	378391	LOCK RING	1
71	22-P-24-1	BEARING CAP GASKET (.010")	1
	22-P-24-2	BEARING CAP GASKET (.020")	1
	328588X	BEARING CAP ASSEMBLY (contains Items 72-73)	1
72	550221	BEARING CUP	1
73	21-P-272	BEARING CAP	N.S.S.

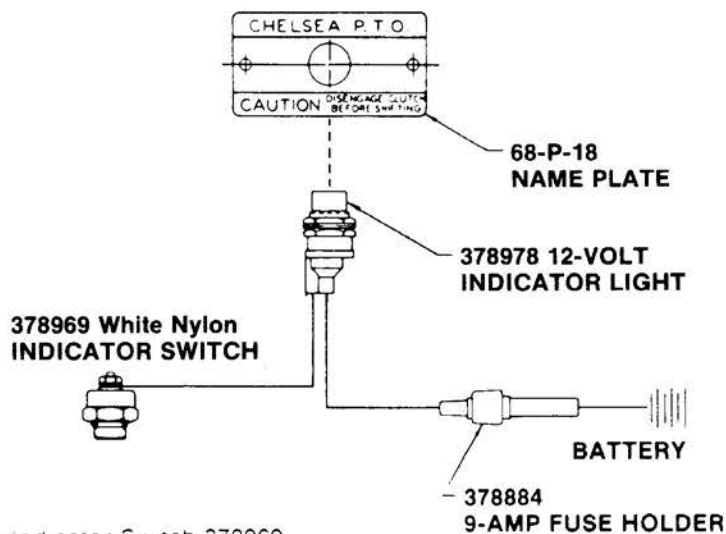
N.S.S.-Not Sold Separately



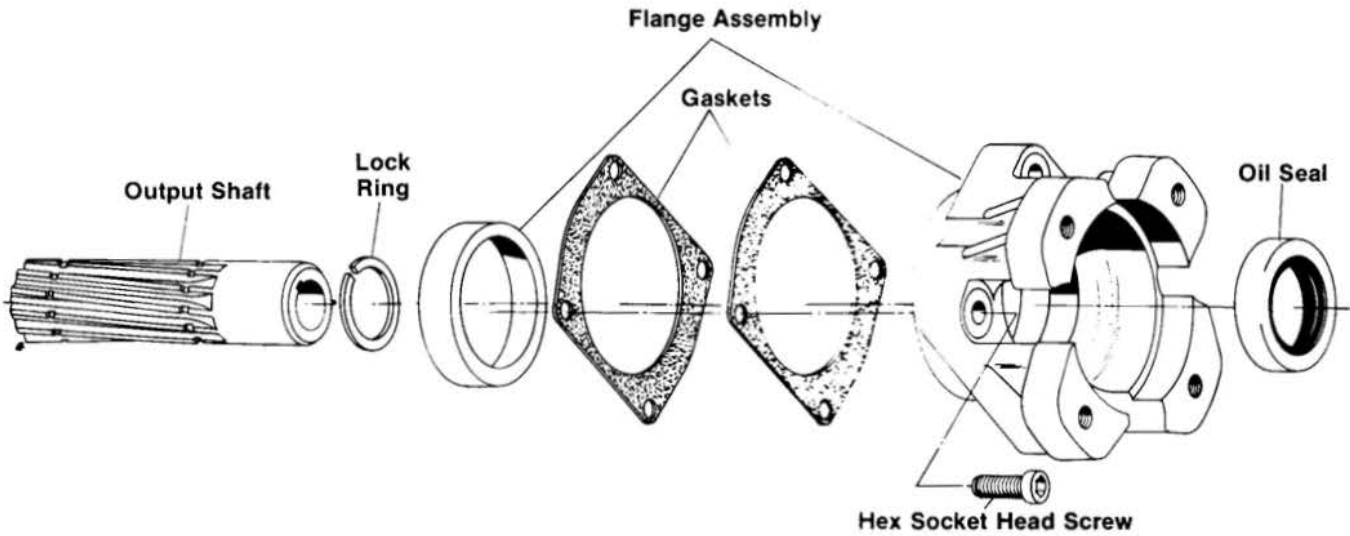
Item	Part Number	Description	Quantity
	328160X	PUMP SHAFT & SPINNER ASSEMBLY (contains Items 74-75), (For Pump Suffix G)	1
	328097X	PUMP SHAFT & SPINNER ASSEMBLY (contains Items 74-75), (For Pump Suffix J,M)	1
	328096X	PUMP SHAFT & SPINNER ASSEMBLY (contains Items 74-75), (For Pump Suffix K, N, P, Q)	1
	328743X	PUMP SHAFT & SPINNER ASSEMBLY (contains Items 74-75), (For Pump Suffix L,R)	1
74	3-P-348	PUMP SHAFT (For Pump Suffix G)	1
	3-P-311	PUMP SHAFT (For Pump Suffix J,M)	1
	3-P-310	PUMP SHAFT (For Pump Suffix K, N, P, Q)	1
	3-P-702	PUMP SHAFT (For Pump Suffix L, R)	1
75	378178	SPINNER	1
76	28-P-53 328588X	OIL SEAL	1
77	550221	HOLLEY GOVERNOR DRIVE BEARING CAP ASSEMBLY, (contains Items 77-78)	1
78	21-P-272	BEARING CUP	1
79	378391	BEARING CAP	N.S.S.
		LOCK RING	1

N.S.S.-Not Sold Separately

**WIRE & LEVER CONTROL INDICATOR LIGHT INSTALLATION KIT
 328751X***



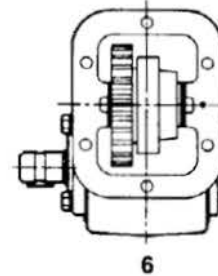
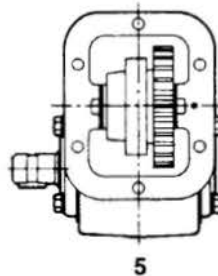
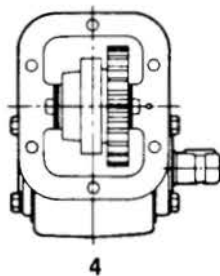
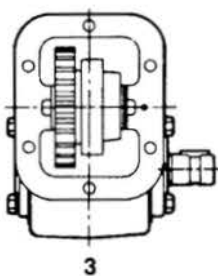
*This kit does not contain Indicator Switch 378969.



Pump Mounting Suffix	Output Shaft	Flange Assembly (Includes Pump Flange & 550221 Bearing Cup)	Hex Socket Head Screw & Dimensions Quantity Required — Four	Conversion Kit ①
G	3-P-281	328580X	378447-8 (5/16" - 18 x 1 1/2")	328591-10X
J	3-P-284	328580X	378447-8 (5/16" - 18 x 1 1/2")	328591-11X
K	3-P-282	328333X ②	378447-8 (5/16" - 18 x 1 1/2")	328591-16X
L	3-P-283	328580X	378447-8 (5/16" - 18 x 1 1/2")	328591-18X
M	3-P-284	328583X	378447-7 (5/16" - 18 x 1 1/4")	328591-20X
N	3-P-282	328584X	378447-8 (5/16" - 18 x 1 1/2")	328591-21X
P	3-P-282	328328X	378447-7 (5/16" - 18 x 1 1/4")	328591-23X
Q ③	3-P-282	328589X ④	378447-8 (5/16" - 18 x 1 1/2")	328591-17X
R ⑤	3-P-283	328710X	378918 Stud (4 Required)	328591-25X

- ① Conversion Kits consist of all Items listed plus 28-P-52 Oil Seal, 378391 Lock Ring, and 22-P-24-1, 22-P-24-2 Gaskets.
- ② 21-P-166 Pump Flange interferes with Air Shift Cylinder on Assembly Arrangement 3 & 5 use 'Q' Flange Assembly.
- ③ Similar to 'K' Assembly, only rotated 65°.
- ④ 21-P-269 Pump Flange interferes with Mounting Base on Deep Mount Assembly Arrangement 3.
- ⑤ 328711X Pump to P.T.O. Mounting Kit contains 4 each: 378919 Washer and 500963-1 Hex Locknut.

ASSEMBLY ARRANGEMENTS



420 SERIES

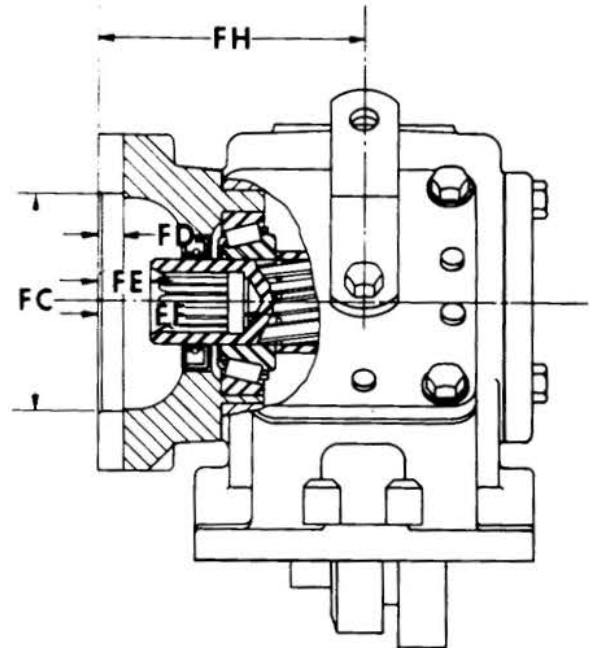
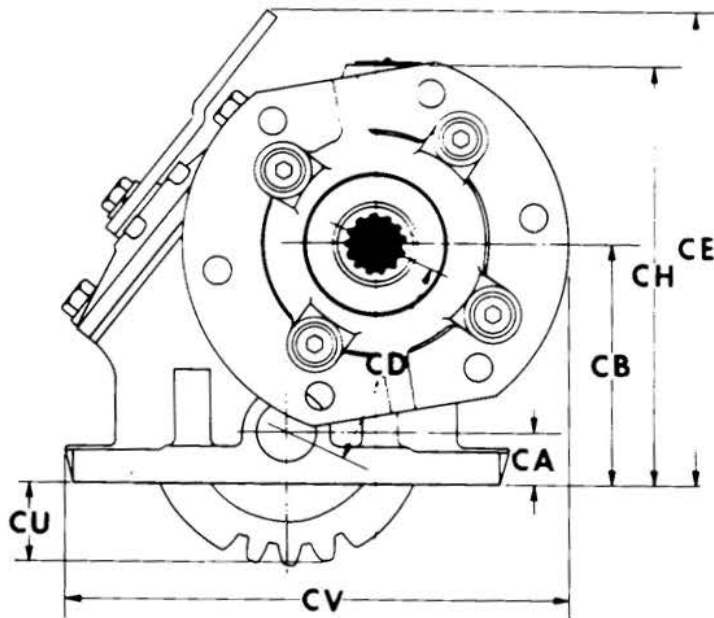


P410-420

P.T.O. CASE PUMP FLANGE & SHAFT DIMENSIONS

P.T.O. Series	Part Number	CA	CB	CD	CE (d)	CH (d)	CU	CV
420X Standard	1-P-195	.792"	3.604"	3.087"	7.500"	6.250"	1.100"	7.250"
420Z Deep Mount	1-P-196	.572"	3.384"	3.087"	7.2187"	6.000"	1.330"	7.250"

(d) - Approximate Dimension for estimating clearance in installations



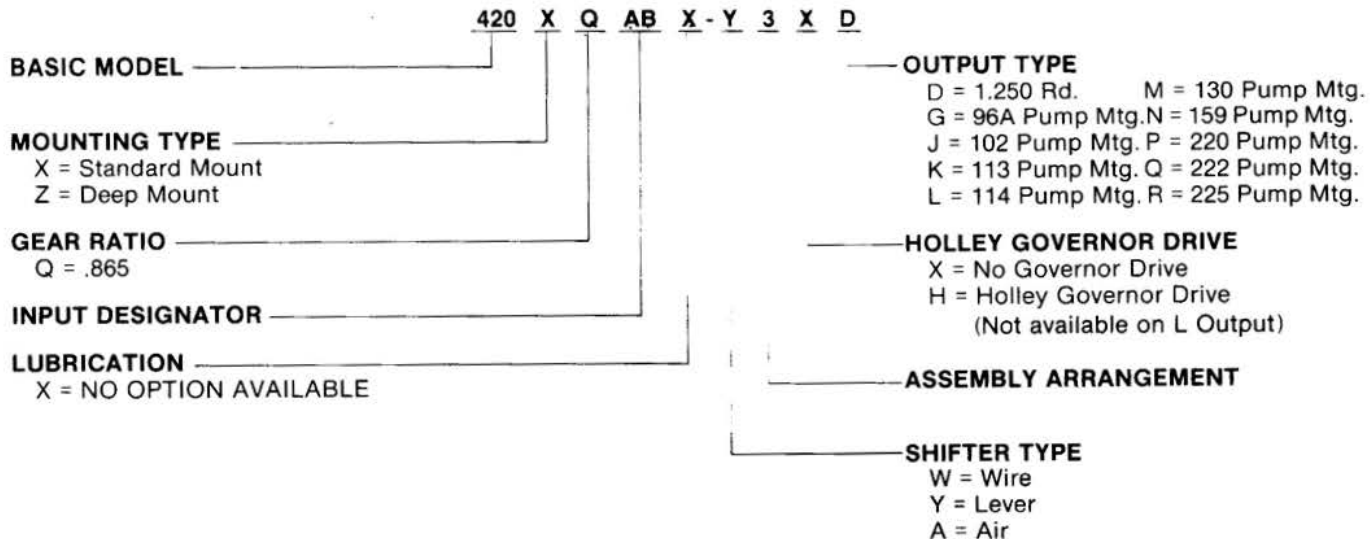
Pump Suffix	Bolt Holes			FC Female Pilot Diameter	FD Depth of Pilot	FE Face to outer end of Shaft	FF Face thru Shaft Hole	FH Face to Center of P.T.O.	Output Shaft Hole		
	Circle	Tapped Hole	Number Equally Spaced						Round Hole Dia.	Keyway Width	Spline Hole Dia.
G	4.188"	3/8"-16	4	3.251/3.253"	.562"	.469"	2.094"	4.562"	3/4"	3/16"	—
J	4.188"	3/8"-16	4	3.251/3.253"	.562"	1.406"	2.812"	4.562"	3/4"	3/16"	—
K	5.000"	1/2"-13	4	4.0005/4.0025"	.406"	.562"	1.938"	3.688"	—	—	7/8"-13T
		1/2"-13	2								
L	4.188"	3/8"-16	4	3.251/3.253"	.562"	.562"	2.062"	4.562"	—	—	7/8"-13T
M	3.250"	3/8"-16	6	2.626/2.631"	.688"	.312"	1.719"	3.438"	3/4"	3/16"	—
N	4.750"	13/32"	Drill 6	3.251/3.253"	.375"	.750"	2.125"	3.875"	—	—	7/8"-13T
P	5.000"	1/2"-13	4	3.251/3.253"	.344"	.562"	1.937"	3.688"	—	—	7/8"-13T
		3/8"-16	2								
Q	5.000"	1/2"-13	4	4.0005/4.0025"	.406"	.562"	1.938"	3.688"	—	—	7/8"-13T
		1/2"-13	2								
R	Special Assembly For Mounting To Chelsea 1438 Only, See Page 8 .										

P.T.O. Model	Input Cluster Gear	Number of Teeth	Transmission Applications	Pitch & Pressure Angle
420*QAB	5-P-590	19	Universal 5-Pitch	5/7P - 20° PA - Spur
420*QAG	5-P-589	22	Spicer 5650, 5750 & 5850 Series	6/8P - 17° 30' PA - Spur
420*QAH	5-P-583	22	Universal 6-Pitch	6/8P - 20° PA - Spur
420*QAL	5-P-601	22	Fuller T-1056A	6.2418P - 19° 17' PA - Spur
420*QAR	5-P-595	21	Spicer 6350, 6450 & 6850 Series	6P - 17° 30' PA - 26° 10' 37" L.H.
420*QBC	5-P-600	18	Clark 397-V Series	6.100P - 25° PA - 32° 16' 48" L.H.
420*QBG	5-P-587	23	Spicer 5000 Series (R. Side 8 Ho e	7P - 17° 30' PA - 28° 04' 23" L.H.
420*QBK	5-P-598	23	New Process 203 T.C.	7P - 20° PA - 28° L.H.
420*QBL	5-P-597	22	New Process 205 T.C. (L. Side)	7P - 20° PA - 30° 20' 40" R.H.
420*QBQ	5-P-584	25	Chevrolet CH-465 4 Speed & GMC	7.3449P - 20° PA - 24° L.H.
420*QBR	5-P-585	26	New Process 4 Speed Synchro-S	7.6168P - 18° 29' 22" PA - 23° 12' 57" R.H.
420*QBS	5-P-586	26	Clark 5 Speed	7.6168P - 18° 29' 22" PA - 23° 12' 57" L.H.
420*QBU	5-P-602	33	Fuller TS-1312A & TS-1308A	8.35P - 20° PA - Spur
420*QBZ	5-P-588	26	Warner T-98A	8.0829P - 20° PA - 30° L.H.
420*QCB	5-P-594	25	New Process 4 Speed 435-L Series & others	8.1160P - 20° PA - 33° 30' L.H.
420*QCF	5-P-603	33	Spicer 4800 Series	10P - 20° PA - 28° 39' 41" R.H.
420*QCJ	5-P-605	19	Saab GR-860	5.3474P - 20° PA - 17° 27' L.H.
420*QCK	5-P-604	19	Saab G-760 & GS-760 Series	5.6696P - 20° PA - 22° L.H.
420*QCR	5-P-599	17	Spicer 8341 Series	5P - 17° 30' PA - 24° 48' 42" R.H.
420*QDB	5-P-620	39	Fuller	10.1P - 20° PA - Spur
420*QDD	5-P-694	20	Spicer 1310 Series	5.8500P - 20° PA - Spur
▲ 420*KIT	—	—	—	—

▲ Includes All Parts Except Input Cluster Gear, Which Must be Ordered According to Transmission Application in P400-A

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.

CHELSEA MODEL NUMBER CONSTRUCTION



SPECIFICATIONS

Torque Rating	225 Lbs. Ft.*
Horsepower Rating	
500 RPM of Output Shaft	21.4*
1000 RPM of Output Shaft	42.8*
Approximate Weight	26 Lbs.

* - Based on Intermittent Service