

Chelsea PTO 410 Parts Manual

Pro Gear and Transmission presents Chelsea 410 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

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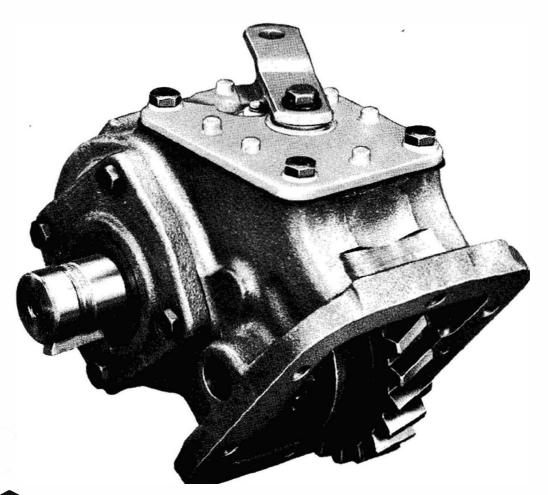


CHELSEA®

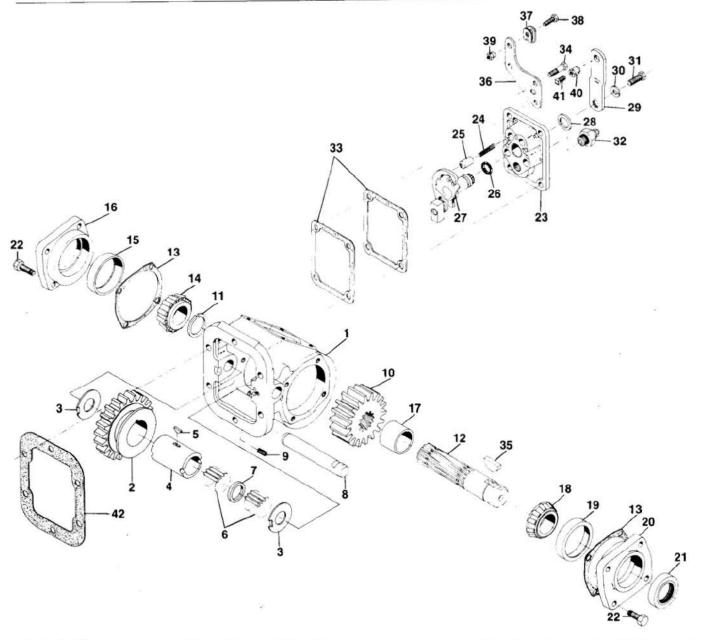
P.T.O. Parts List
P410-410
September, 1981
410 Series
Supersedes P410-41S
Dated April, 1979

Replacement Parts 410 Series Power Take-Off Manual

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







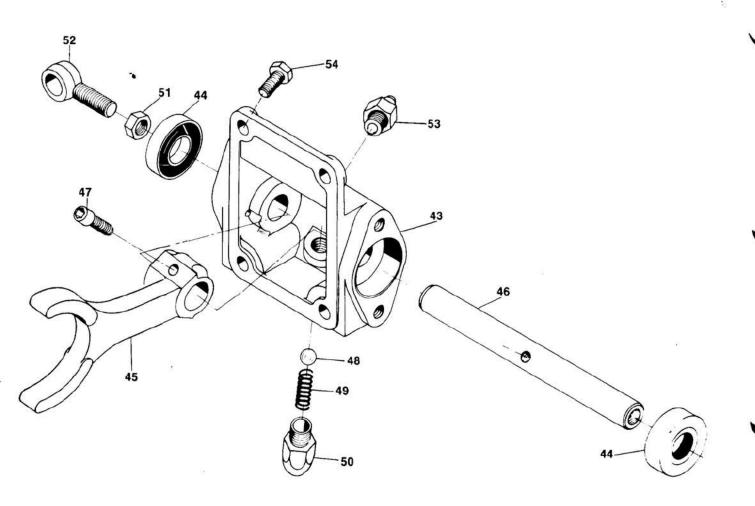
Item	Part Number	Description	Quantity
	(1-P-195	HOUSING—Standard Mount	1
1	1-P-196	HOUSING—Deep Mount	1 1
2	See Chart Pg. 10 328889X	SLIDING GEAR, Input	1
		(contains Items 3-9)	1
3	31-P-78	THRUST WASHER (13/4" Outside Diameter)	2
4	6-P-14	BEARING SLEEVE	1
5	378210	HI-PRO KEY	1
	328297-10X	NEEDLE BEARING REPLACEMENT KIT (contains Item 6)	1
6	379114	NEEDLE BEARING (two sets, 15 per set)	30
7	14-P-63	NEEDLE BEARING SPACER (.225" wide)	1
8	9-P-60	IDLER SHAFT	1
9	{378452-7 {378452-4	SET SCREW—For Standard Mount ($\frac{1}{4}$ " - 20 x $\frac{1}{2}$ ") SET SCREW—For Deep Mount ($\frac{1}{4}$ " - 20 x $\frac{5}{16}$ ")	1
10	See Chart Pg. 10	GEAR, Output	1
11	378391	LOCK RING	1
12	3-P-202	DRIVE SHAFT, Output (11/4" Round)	1
12	(22-P-24-1	BEARING CAP GASKET (.010")	A.R
13	22-P-24-2	BEARING CAP GASKET (.020") Pro Goar and Transmission, Inc. 906 West Gore St, Orlando, FL 32805	A.R



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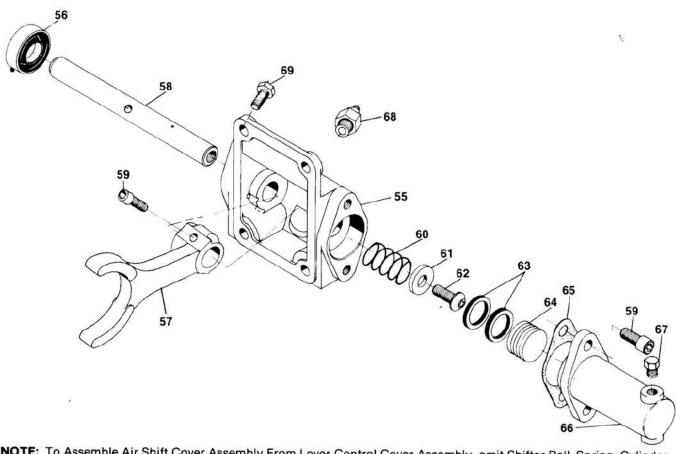
Item	Part Number	Description	Quantit
14	550532	BEARING CONE, Closed End	1
	328274X	BEARING CAP ASSEMBLY, Closed End (contains Items 15-16)	8 1
15	550221	BEARING CUP, Closed End	1
16	21-P-131	BEARING CAP, Closed End	N.S.S
17	4-P-63	DRIVE SHAFT SPACER	
18	550397	BEARING CONE, Output	1
010 00 0	328273X	BEARING CAP ASSEMBLY, Output (contains Items 19-20)	1
19	550221	BEARING CUP, Output	1
-20	21-P-130	BEARING CAP, Output	N.S.
21	28-P-52	OIL SEAL, Output	11.3.
22	378430-10	SCREW, hex head (Eslock 5/16" - 18 x 1")	8
	328818-1X	WIRE SHIFT COVER ASSEMBLY,	
	y Secretary et a	Assembly 3 & 6 (contains Items 23-32)	1
	328818-2X	WIRE SHIFT COVER ASSEMBLY,	
	2.2	Assembly 4 & 5 (contains Items 23-32)	1
23	34-P-74	SHIFTER COVER	1
24	37-P-19	SHIFTER SPRING	1
25	63-P-16	POPPET	1
26	28-P-49 328817-1X	O-RING (3/4" Outside Diameter)	1
27	328817-1X	POST & PLATE ASSEMBLY (Assembly 3 & 6)	1
28	378004	POST & PLATE ASSEMBLY (Assembly 4 & 5)	1
29	51-P-22	FLAT WASHER (1" Outside Diameter)	1
30	378003	LOCK WASHED (5/ ")	1 1
31	500409-6	LOCK WASHER (5/16")	1
32	378969	INDICATOR SWITCH	1
33	35-P-8	SHIFTER COVER GASKET (.020")	_
34	378430-10	SCREW, hex head (Eslock 5/16" - 18 x 1")	2
		LOOSE PARTS	2.0
35	500007-29	WOODRUFF KEY	
N.S.	328346-10X	WIRE CONTROL CABLE ASSEMBLY (10X = 10 Foot Cable)	1
	328380X	WIRE CONTROL MOUNTING PARTS (contains Items 36-41)	
36	50-P-17	BRACKET	4
37	50-P-19	SWIVEL BRACKET	1
38	500396-8	SCREW, hex head (1/4" - 20 x 3/4")	i
39	378326	NUT, hex (¼" - 20)	1
40	378019	PIVOT PIN	1
41	500568-4	SET SCREW (¼" - 20 x 1/2")	1
42	∮ 35-P-9-1	GASKET, housing (.010")	A.R
12	35-P-9-2	GASKET, Housing (.020")	A.R
	VARIOTO N. 1942 Sept. 2011 11 14 14 14 14 14 14 14 14 14 14 14 1	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
		GASKET & SEAL KIT	
N.S.	328356-13X	Must be Ordered Separate (contains 4 pieces Item 13;	
		2 pieces Item 33; 1 piece each Item 11, 21, 26 & 42)	1

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



Item	Part Number	Description	Quantity
	328833-1X	LEVER CONTROL COVER ASSEMBLY,	
		Assembly 3 & 6 (contains Items 43-53)	1
	328833-2X	LEVER CONTROL COVER ASSEMBLY,	
		Assembly 4 & 5 (contains Items 43-53)	1
43	34-P-87	SHIFTER COVER	1
44	28-P-4	OIL SEAL	2
45	32-P-145	SHIFTER FORK	1
46	11-P-112	SHIFTER SHAFT	1
47	378447-4	SCREW, hex socket (5/16" - 18 x 3/4")	1
48	378002	SHIFTER BALL	1
49	37-P-14	SHIFTER SPRING	1
50	378554	SPRING CAP	1
51	500381-3	JAM NUT, hex head	1
52	36-P-1	EYE BOLT	1
53	378969	INDICATOR SWITCH	1
54	378430-8	SCREW, hex head (Eslock 5/16" - 18 x 3/4")	4





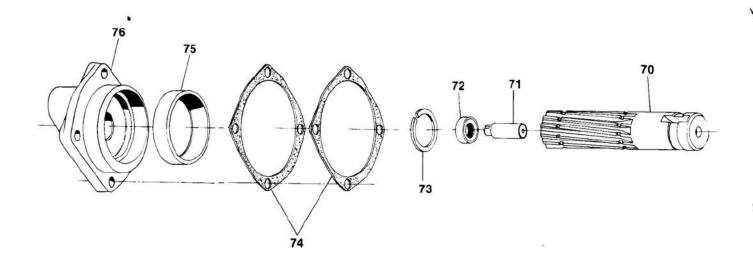
NOTE: To Assemble Air Shift Cover Assembly From Lever Control Cover Assembly, omit Shifter Ball, Spring, Cylinder End Oil Seal, Jam Nut and Eye Bolt.

Item	Part Number	Description	Quantity
	328834-1X	AIR SHIFT COVER ASSEMBLY,	
		Assembly 3 & 6 (contains Items 55-68)	1
	328834-2X	AIR SHIFT COVER ASSEMBLY,	
00000	Hara marrows	Assembly 4 & 5 (contains Items 55-68)	1
55	34-P-76	SHIFTER COVER	1
56	28-P-4	OIL SEAL (Used Only on Side Without Cylinder)	1
57	32-P-145	SHIFTER FORK	1
58	11-P-122	SHIFTER SHAFT	1
59	378447-4	SCREW, hex socket (5/16" - 18 x 3/4")	3
60	37-P-25	SHIFTER SPRING	1
61	378462	SPRING RETAINER WASHER	1
62	378908	SCREW, button head	1
63	28 P-55 28 P. 25		2
64	66-P-4	PISTON	1
65	35-P-14	CYLINDER CAP GASKET	1 1
66	65-P-14	CYLINDER CAP	1
67	500118-3	PIPE PLUG (1/8" - 27 N.P.T.)	1 1
N.S.	500897-3	SHIPPING PLUG	1
68	378969	INDICATOR SWITCH]]
69	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

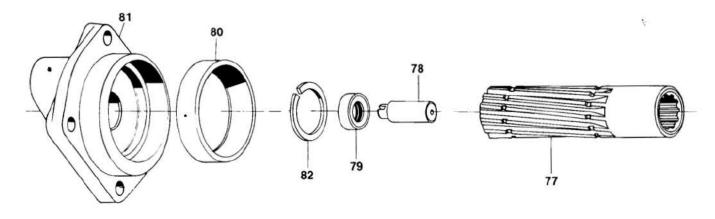
Description	Part Number	Quantity
Wire to Air for Assembly 3 & 6	328390-65X	1
Wire to Air for Assembly 4 & 5	328390-66X	1
Lever to Air All Assemblies	328390-67X	1



Item	Part Number	Description	Quantity
	328648X	HOLLEY GOVERNOR DRIVE CONVERSION KIT	
		(contains Items 70-76)	1
	328060X	DRIVE SHAFT & SPINNER ASSEMBLY (contains Items 70-71)	1
70	3-P-270	DRIVE SHAFT, Standard	1 1
71	378178	SPINNER	1 1
72	28-P-53	OIL SEAL	
73	378391	LOCK RING	1 1
74	122-P-24-1	BEARING CAP GASKET (010")	1 1
74	22-P-24-2	BEARING CAP GASKET (.010")	1
	328588X	BEARING CAP GASKET (.020")	1
7-		BEARING CAP ASSEMBLY (contains Items 75-76)	1
75	550221	BEARING CUP	1
76	21-P-272	BEARING CAP	N.S.S

N.S.S.-Not Sold Separately

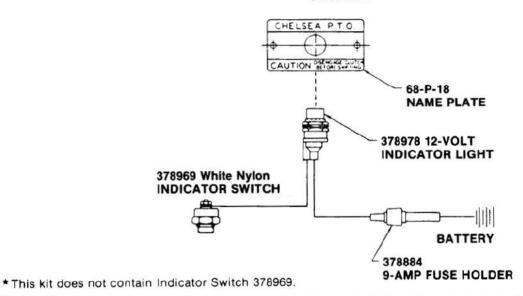




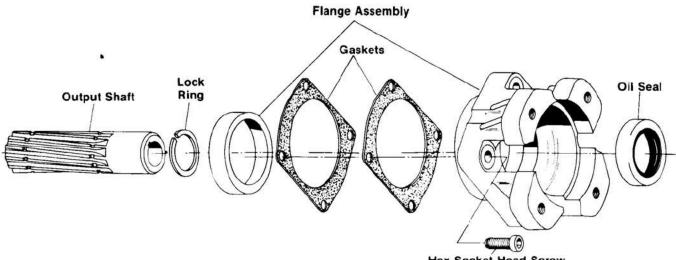
item	Part Number	Description	Quantity
	328160X	PUMP SHAFT & SPINNER ASSEMBLY (contains Items 77-78), (For Pump Suffix G)	1
	328097X	PUMP SHAFT & SPINNER ASSEMBLY (contains Items 77-78), (For Pump Suffix J,M)	1
	328096X	PUMP SHAFT & SPINNER ASSEMBLY (contains Items 77-78), (For Pump Suffix K, N, P, Q)	1
	328743X	PUMP SHAFT & SPINNER ASSEMBLY (contains Items 77-78), (For Pump Suffix L,R)	1
	/ 3-P-348	PUMP SHAFT (For Pump Suffix G)	4
120.02	3-P-311	PUMP SHAFT (For Pump Suffix J,M)	1
77	3-P-310	PUMP SHAFT (For Pump Suffix K, N, P, Q)	1
	3-P-702	PUMP SHAFT (For Pump Suffix L, R)	1
78	378178	SPINNER	1
79	28-P-53 328588X	OIL SEAL	1
		(contains Items 80-81)	1
80	550221	BEARING CUP	11
81	21-P-272	BEARING CAP	N.S.S
82	378391	LOCK RING	1

N.S.S.-Not Sold Separately

WIRE & LEVER CONTROL INDICATOR LIGHT INSTALLATION KIT 328751X*



Pro Gear and Transmission, Inc. | 906 West Gore St, Orlando, FL 32805 +1 (877) 776-4600 | +1 (407) 872-1901 www.progearandtransmission.com | www.pgttruckparts.com | parts@eprogear.com

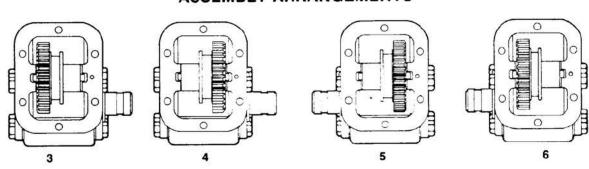


Hex	Socket	Head	Screw
1100	OCCHCE	IICau	001011

Pump Mounting Suffix Output Shaft		Flange Assembly (Includes Pump Flange & 550221 Bearing Cup)	Hex Socket Head Screw & Dimensions Quantity Required — Four	Conversion Kit ①
▲ F	3-P-349	21-P-118	378447-8 (5-a - 18 x 1 'a)	328591-6X
G	3-P-281	328580X	378447-8 1.2 - 18 x 1 2	328591-10X
J	3-P-284	328580X	378447-8 *.2 - 18 x 11:	328591-11X
K	3-P-282	328333X 2	378447-8 1.2 - 18 x 112	328591-16X
L	3-P-283	328580X	378447-8 f., - 18 x 11;	328591-18X
M	3-P-284	328583X	378447-7 file - 18 x 112 m	328591-20X
. N	3-P-282	328584X	378447-8 ft 18 x 1 7	328591-21X
0	3-P-284	328328X	378447-7 .5 ·e - 18 x 1 · 2 ·	328591-26X
P	3-P-282	328328X	378447-7 f., - 18 x 11, 1	328591-23X
03	3-P-282	328589X 4	378447-8 fig - 18 x 1 g)	328591-17X
R (5)	3-P-283	328710X	378918 Stud 4 Required)	328591-25X

- Ball Bearing Type to convert a Conventional P.T.O. to a Hydraulic Pump Mount P.T.O. is not interchangeable with tapered roller bearing type pump shaft & flange. Conversion Kits consist of all Items listed plus 550697 Closed End Ball Bearing, 21-P-287 Closed End Bearing Cap, 378237 Lock Ring.4-P-65 additional Drive Shaft Spacer, 550698 Output Ball Bearing, 28-P-54 Oil Seal, and 22-P-24-1, 22-P-24-2 Gaskets.
- 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. except 328591-6X.
- 2 328333X 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) 328589X 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



410 SERIES

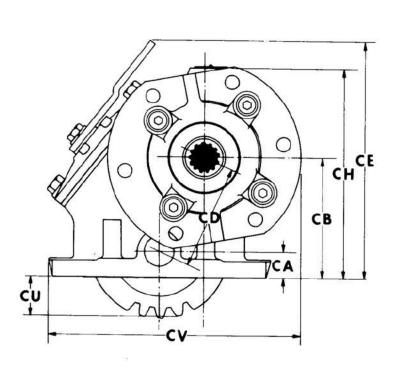
P410-410

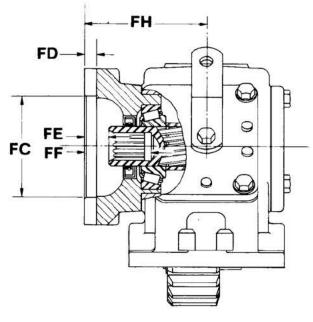
P.T.O. CASE PUMP FLANGE & SHAFT DIMENSIONS

	DANA
CU	cv
1.100"	7.250"
1 0000	7 0500

P.T.O. Series	Part Number	CA	СВ	CD	CE (d)	CH (d)	cu	cv
410XU Standard	1-P-195	.792"	3.669"	3.317"	7.500"	6.250"	1.100"	7.250"
410ZU Deep Mount	1-P-196	.572"	3.449"	3.317"	7.2187"	6.000"	1.320"	7.250
490XW Standard	1-P-195	.792"	3.603"	3.087"	7.500"	6.250"	1.100"	7.250
410ZW Deep Mount	1-P-196	.572"	3.383"	3.087"	7.2187"	6.000"	1.320"	7.250"
410XX Standard	1-P-195	.792"	3.447"	3.052"	7.500"	6.250"	1.100"	7.250
410ZX Deep Mount	1-P-196	.572"	3.227"	3.052"	7.2187"	6.000"	1.320"	7.250

(d) - Approximate Dimension for estimating clearance in installations.





Pump Suffix	Bolt Holes			FC	FD	FE Consta	FF	FH	Output Shaft Hole		
	Circle	Tapped Hole	Number Equally Spaced	Female Pilot Diameter	Depth of Pilot	Face to outer end of Shaft	Face thru Shaft Hole	Face to Center of P.T.O.	Round Hole Dia.	Keyway Width	Spline Hole Dia.
F	\$5.000" \$5.750"	½"-13 ½"-13	4 }	4.0005/4.0025	.406"	.516"	1.984"	3.688"	7/8″	1/4"	
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" 5.750"	½"-13 ½"-13	4 }	4.0005/4.0025	.406"	.562"	1.938"	3.688"	-	_	⁷ ∕8"-13T
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
0	{5.000" 4.188"	½"-13 ¾"-16	4 }	3.251/3.253"	.344"	.562"	1.937"	3.688"	3/4"	3/16"	-
P	{5.000'' 4.188''	½"-13 ¾"-16	4 }	3.251/3.253"	.344"	.562"	1.937"	3.688"	_	_	7∕8″-13T
Q	5.000" 5.750"	½"-13 ½"-13	4 }	4.0005/4.0025"	.406"	.562"	1.938"	3.688"	· —		7∕8″-13T
R	Special	Assembly	For Mount	ing To Chelsea 14	38 Only	See Page	e 8				



DANA

410 SERIES P.T.O. — MODEL, GEAR & PITCH DATA

P410-410

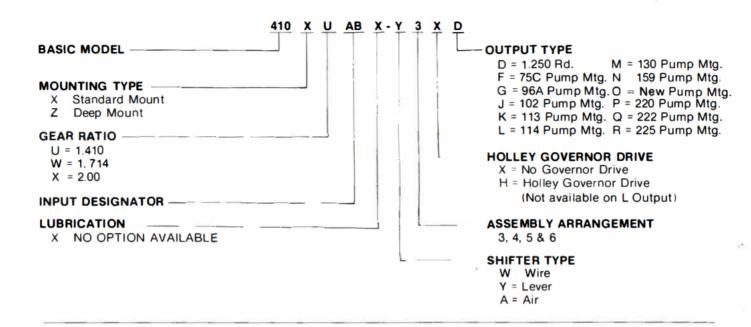
			P.T.O. — MODEL, GEAR & PITCH DATA				
P.T.O. Model	Input Sliding Gear	No. of Teeth		Pitch & Pressure Angle	Output Gear	No. of Teeth	
•			410*U — MEDIUM	SPEED			
410*UAB	5-P-255		Universal 5-Pitch	5P-20° PA-Spur	2-P-221	1 14	
410*UAG	5-P-262	22	Spicer 5650, 5750 & 5850 Series	6P-17° 30′ PA-Spur	2-P-228	111	
410*UAH	5-P-256	22	Universal 6-Pitch	6/8P-20° PA-Spur		17	
410*UAR	5-P-261	21	Spicer 6350, 6450 & 6850 Series	6P-17° 30′ PA-26° 10′37″ L.H.	2-P-222	17	
410*UAW ①	5-P-266		New Process 541-GD (R. Side)	6P-20° PA-17° 40'41" L.H.	2-P-227 2-P-232	15	
410*UBG	5-P-421	24	Spicer 5000 Series (R. Side 8-Hole)	7P-17° 30′ PA-28° 4′23″ L.H.	1000		
410*UBH	5-P-264	25	Spicer 3150, 3550 & 3850 Series	7F-17 30 FA-20 423 L.H.	2-P-394	18	
410*UBJ	5-P-258		Spicer 3150, 3550 & 3850 Series	7P-20° PA-20° R.H.	2-P-230	19	
410*UBQ	5-P-357	25	Chauralat Old 405 4 2	7P-20° PA-20° L.H.	2-P-224	19	
410*UBR			Chevrolet CH-465 4 Speed & GMC	7.3449P-20° PA-24° L.H.	2-P-357	19	
410 UDN	5-P-341	26	New Process 4 Speed	7.6168P-18° 29'22" PA-			
440*1100	5 5 656		Synchro-Shift & Clark	23° 12′57" R.H.	2-P-320	20	
410*UBS	5-P-259	26	New Process 4 Speed	7.6168P-18° 29'22" PA-			
Part 2022 (2012) 22 (2012)	Contraction of the Contraction	3,596331	Synchro-Shift (420)	23° 12′57" L.H.	2-P-225	21	
410*UBY	5-P-260	26	Warner T-98	8.0829P-20° PA-30° R.H.	2-P-226	21	
410*UBZ	5-P-263	26	Warner T-98A	8.0829P-20° PA-30° L.H.	2-P-229	21	
410*UCB	5-P-275	25	New Process 4 Speed 435-L Series	SISSEST 20 11 00 E.T.	2-1-225	21	
	0 . 2/0	20	& others	8.1160P-20° PA-33° 30′ L.H.	2-P-251	19	
410*UDD	5-P-688	20	Spicer 1310 Series	5.8500P-20° PA-Spur	2-P-602	16	
			410*W — HIGH S	I			
410*WAC	5-P-574	19	Fiat 2860				
410*WAG	5-P-262			5.34737P-22° 30' PA-Spur	2-P-555	14	
410*WAH		22	Spicer 5650, 5750 & 5850 Series	6P-17° 30' PA-Spur	2-P-239	14	
	5-P-256		Universal 6-Pitch	6/8P-20° PA-Spur	2-P-233	14	
410*WAW ①	DAZ-131 "VIDERASTS	21	New Process 541-GD (R. Side)	6P-20° PA-17° 40'41" L.H.	2-P-378	14	
410*WBA	5-P-267	22	IHC (F-51, F-51C) T-32, T-33,	6.5400P-18° 27'54" PA-			
	12-72-7 20200		T-34 & T-35 Series	23° 26′48″ L.H.	2-P-241	15	
410*WBH 410*WBJ	5-P-264 5-P-258	25 25	Spicer 3150, 3550 & 3850 Series	7P-20° PA-20° R.H.	2-P-238	15	
410 VVD0	J-F-236	25	Chevrolet 4 Speed & Spicer 3150,				
440*14/04	5 D 000		3550 & 3850 Series	7P-20° PA-20° L.H.	2-P-235	15	
410*WBN	5-P-269	22	New Process 5 Speed	7.1952P-16° 53'01" PA-		-	
			Synchro-Shift (540)	33° 30' L.H.	2-P-243	14	
410*WBQ	5-P-357	25	Chevrolet CH-465 4 Speed & GMC	7.3449P-20° PA-24° L.H.	2-P-356	16	
410*WBR	5-P-341	26	New Process 4 Speed & Clark	7.6168P-18° 29'22" PA-		85	
		1		23° 12′57" R.H.	2-P-321	17	
410*WBS	5-P-259	26	New Process 4 Speed	7.6168P-18° 29'22" PA-			
			Synchro-Shift (420)	23° 12′57" L.H.	2-P-236	17	
410*WBY	5-P-260		Warner T-98	8.0829P-20° PA-30° R.H.	2-P-237	17	
410*WBZ	5-P-263	26	Warner T-98A	8.0829P-20° PA-30° L.H.	2-P-240	17	
410*WCB	5-P-275	25	New Process 4 Speed 435-L Series				
1			& others	8.1160P-20° PA-33° 30' L.H.	2-P-252	16	
410*WDD	5-P-688	20	Spicer 1310 Series	5.8500P-20° PA-Spur	2-P-601	19	
	0.000	20	410*X — EXTRA HIG	L	2-1-001	13	
			TIO X — EXTRA FIIG	IN SPEED			
	5-P-509		Spicer 5650, 5750 & 5850 Series	6/8P-17° 30' PA-Spur	2-P-499	12	
410*XAH 2	5-P-299	24	Universal 6-Pitch	6/8P-20° PA-Spur	2-P-436	12	
410*XBA ③	5-P-303	23	I.H.C. 5 Speed	6.5400P-18° 27'54" PA-			
				23° 26′48″ L.H.	2-P-269	12	
410*XBN ③	5-P-302	23	New Process 5 Speed	7.1952P-16° 53'01" PA-		12	
	10 0 000000		Synchro-Shift (540)	33° 30′ L.H.	2-P-268	12	
410*YOR	E D 450	67		20:30 10:00 NAMED (3000 00 000000000	1000	
410*XCB ①	5-P-450	27	New Process & others	8.1160P-20° PA-33° 30′ L.H.	2-P-328	14	
				The state of the s			

①Filler Block 7-A-062 required to mount P.T.O. with 1-P-195 Housing ②Filler Block 7-A-032 required to mount P.T.O. with 1-P-195 Housing ③Filler Block 7-A-125 required to mount P.T.O. with 1-P-195 Housing

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.

410 SERIES CHELSEA MODEL NUMBER CONSTRUCTION





SPECIFICATIONS

	410*U	410* W	410*X
Torque Rating	125 lbs. ft.*	110 lbs. ft.*	85 lbs. ft.*
Horsepower Rating			
500 RPM of Output Shaft	11.9*	10*	8*
1000 RPM of Output Shaft	23.5*	20*	16*
Approximate Weight	26 Lbs.		

^{*-}Based on Intermittent Service