

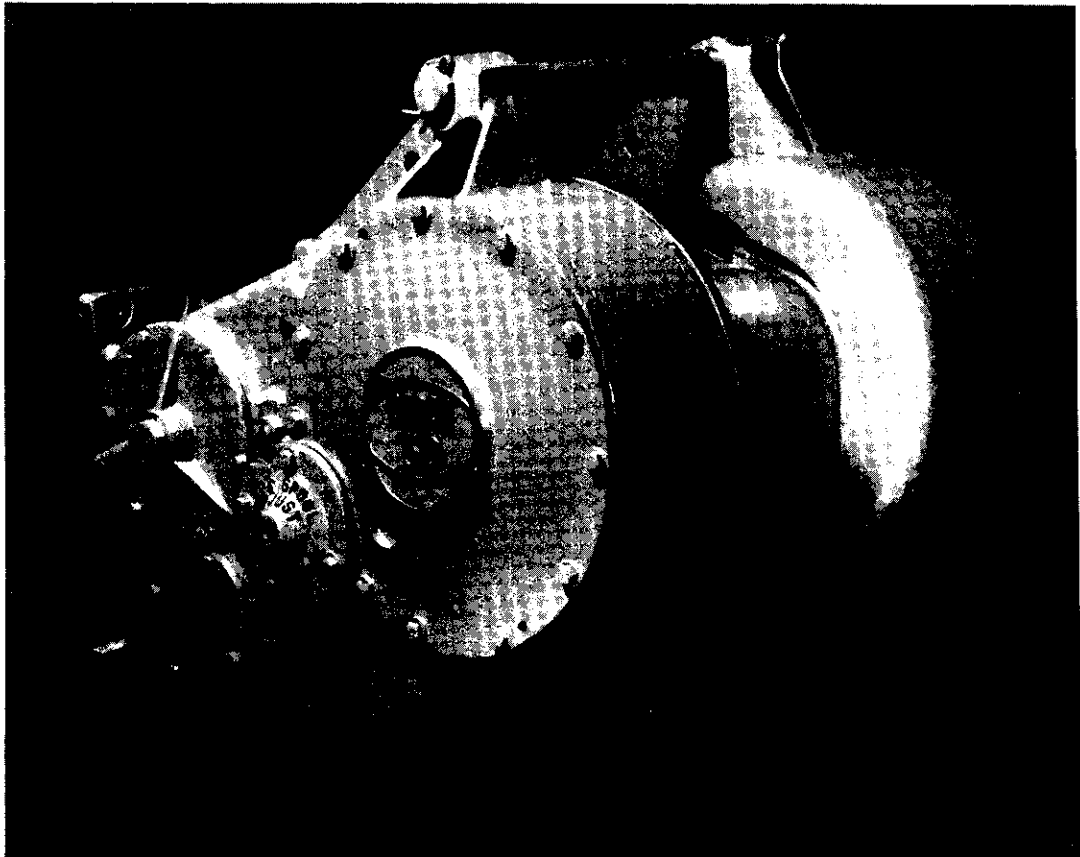
# CARCO

PARTS MANUAL

**CARCO MODEL 50-PS AND PSC WINCH**

FOR

CATERPILLAR D5 AND D5B PS AND DD TRACTOR



**CARCO** WINCH PRODUCTS

A DIVISION OF PACOR / 1400 NORTH 4TH STREET, RENTON, WA 98055 U.S.A. (206) 251-7834/TELEX: 32-8942

## Winch Specifications

### CABLE DRUM DATA:

Barrel Diameter . . . . . 10" (254mm)  
 Flange . . . . . 19-7/8" (504mm)  
 Barrel Length . . . . . 10" (254mm)

### CABLE CAPACITIES: (Wire Rope)

1/2" (13mm) . . . . . 682' (208m)  
 5/8" (16mm) . . . . . 448' (136m)  
 3/4" (19mm) . . . . . 316' (96m)

Weight . . . . . Approx. 1900-2300 lb.

### CABLE FERRULE SIZE:

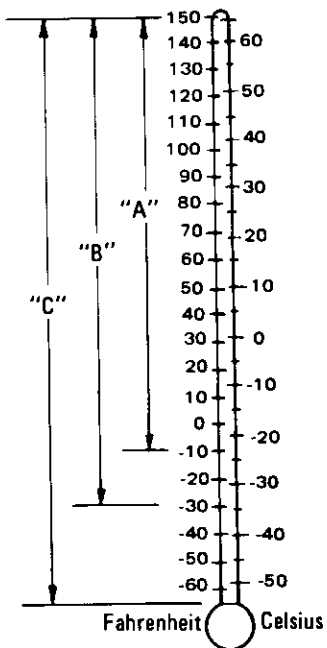
25456-1 (B4) for 1/2" Wire Rope  
 25456-2 (B5) for 5/8" Wire Rope  
 25456-3 (B6) for 3/4" Wire Rope

### OIL CAPACITY

Model 50 (Std PTO) - 73 Qts (69.0 Liters)  
 Model 50 (Low PTO) - 59 Qts (55.8 Liters)

### TEMPERATURE RANGES & RECOMMENDED LUBRICANTS

Prevailing Ambient Temperatures



- "A" MIL-L-2104C Grade 10
- "B" Dexron® II  
 Type "A" Suffix "A"  
 HTF Type "C-3"
- "C" Contact local oil supplier for proper oil.

Note: DEXRON® is a registered trademark of General Motors

Note: Park tractor unit in level condition before checking oil level.

Change oil and clean suction filter after each 1,000 hours or six months of operation, whichever occurs first.

INDEX  
**CARCO MODEL 50-PS AND PSC WINCH**  
FOR  
CATERPILLAR D5 AND D5B PS AND DD TRACTOR

	Page
ACCUMULATOR . . . . .	22,23
ARCH, INTEGRAL . . . . .	NA
BEVEL GEAR GROUP . . . . .	6
BRAKE ASSEMBLY . . . . .	17, 14, 15
CABLE, CONTROL – SHIFT AND FREE SPOOL . . . . .	8,8A
CASE AND COVERS . . . . .	12,13
CLUTCH ASSEMBLY . . . . .	16, 14, 15
CLUTCH SHAFT GROUP . . . . .	14,15
CONTROL GROUP– CONTROL STAND – CABLES – GAUGE KIT . . . . .	8,8A
CONTROL STAND . . . . .	8,8A,10,11
DRAWBAR . . . . .	12,13
DRIVE LINE, PTO . . . . .	7
DRUM GROUP, CABLE . . . . .	18,19
FAIRLEAD . . . . .	28
FERRULES . . . . .	2,18,19
FILTER, STRAINER . . . . .	26,27
FREE SPOOL CONTROL CABLE . . . . .	8,8A
FREE SPOOL GROUP . . . . .	20,21
GAUGE KIT, OPERATOR'S . . . . .	8,9
HOSES & FITTINGS, HYDRAULIC . . . . .	22, 23, 26, 27, 9
HYDRAULIC CONTROL . . . . .	22,23
MOUNTING GROUP . . . . .	7
PTO SHAFT, DRIVE LINE . . . . .	7
PUMP GROUP . . . . .	26,27
SHIFT CONTROL CABLE . . . . .	8,8A
STRAINER, SUCTION . . . . .	26,27
VALVE, ACCUMULATOR CHECK . . . . .	24,25
VALVE, HYDRAULIC CONTROL . . . . .	24, 25, 22, 23
VALVE, RELIEF . . . . .	24,25
WINCH IDENTIFICATION . . . . .	4,5
WINCH SPECIFICATIONS . . . . .	2

Note: Purchased parts, such as bearings and oil seals may be substituted with parts of equal quality on the manufacturer's recommendation, and with the approval of Carco.

**ATTENTION:** Be sure to give correct part number, part name and complete serial number of winch when ordering. Also name and model of the tractor on which the winch is mounted.

CARCO MODEL 50-PS & PSC WINCH  
WINCH IDENTIFICATION  
CATERPILLAR D5 & D5B PS & DD TRACTOR

WINCH MODEL IDENTIFICATION

The Model 50 Power Shift winch is manufactured as a Standard PTO or Low PTO, depending on tractor application.

In the Standard PTO, the bevel gear group, clutch and brake components are located in the upper bores of the winch case. See Figures 1 and 2.

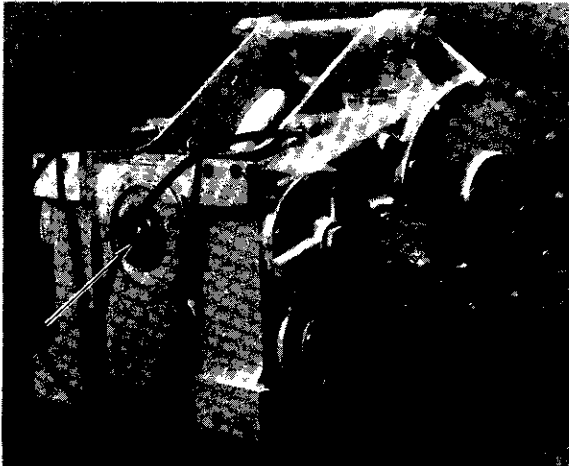


FIGURE 1

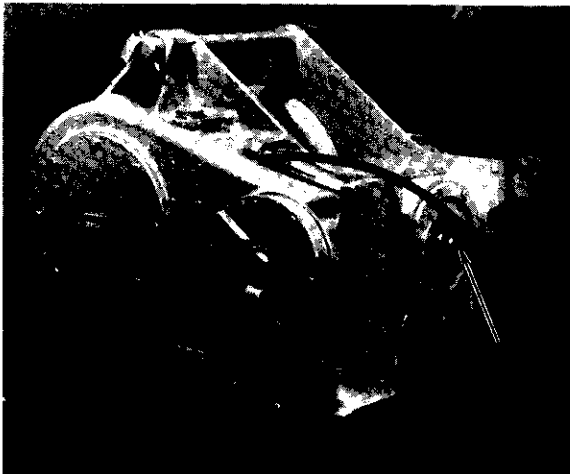


FIGURE 2

The Model 50 Low PTO winch has the bevel gear group, clutch and brake components located in the lower bores of the winch case. See Figures 3 and 4.

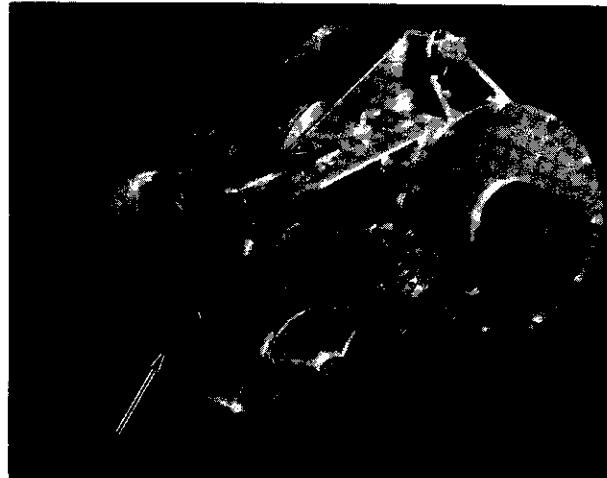


FIGURE 3



FIGURE 4

The winch identification plate is located on the right-hand side of the winch case. See Figures 5 and 6.

The winch serial number is also stamped into the upper right-hand corner of the mounting pad. See Figure 5.

**CARCO MODEL 50-PS & PSC WINCH  
WINCH IDENTIFICATION  
CATERPILLAR D5 & D5B PS & DD TRACTOR**

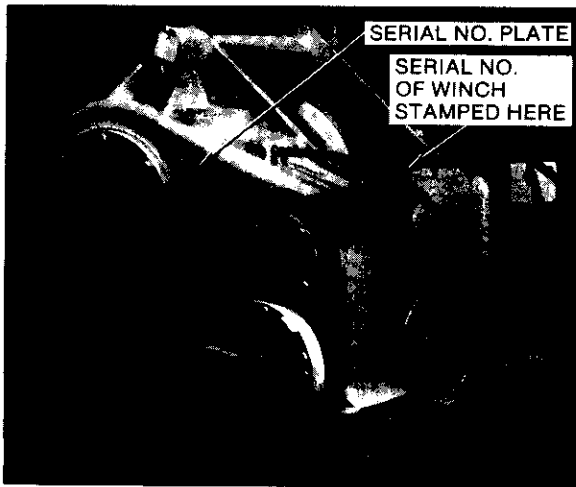


FIGURE 5

<b>CARCO</b> WINCH	
MODEL	SERIAL
50 PS C0000	5-XXX
FILL TO PROPER LEVEL APPROX <input type="text" value="XX"/> QTS	
USE ATF DEXRON® HTF TYPE C-2 OR EO MIL-L-2104C, GRADE 10	
CLEAN SUCTION FILTER AND REFILL AT TRACTOR TRANS. SERVICE INTERVALS	
<b>CAUTION</b>	
WINCH HYDRAULIC SYSTEM CONTAINS ACCUMULATORS. HIGH PRESSURE OIL MUST BE BLED OFF BEFORE SERVICING HYDRAULIC SYSTEM. CONSULT SERVICE MANUAL.	
<b>CARCO WINCH PRODUCTS</b> A DIVISION OF <b>DAVID BROWN</b> / RENTON WASHINGTON, U.S.A.	

FIGURE 6

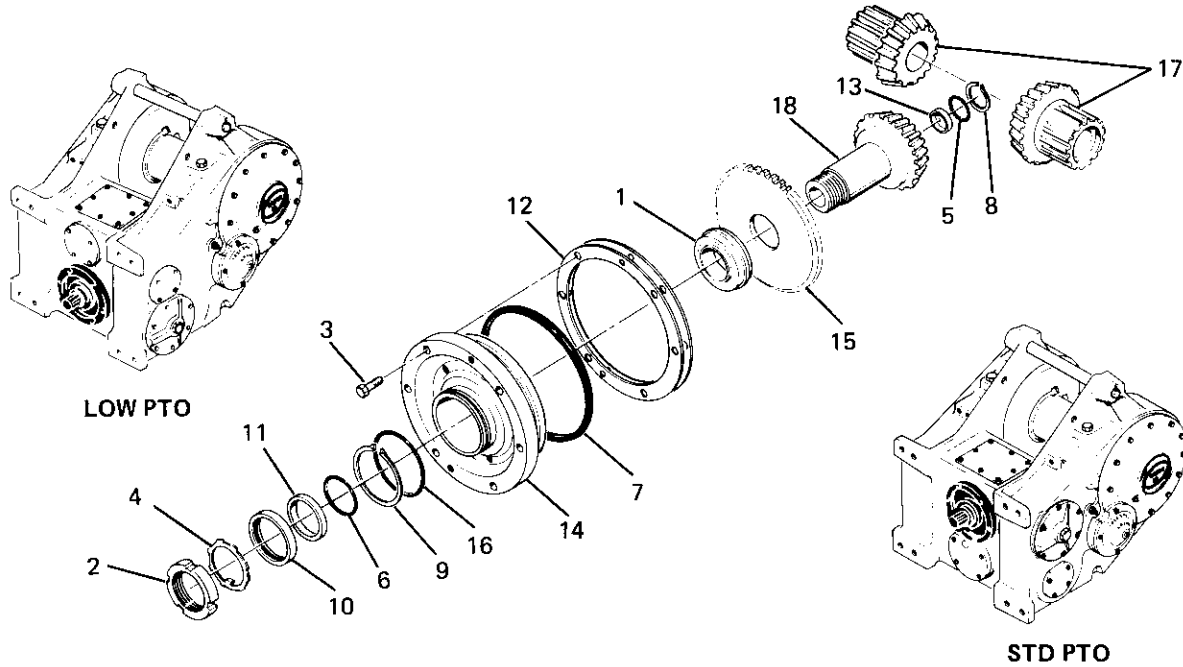
The winch model number is an important reference. By decoding the last five digits as shown, specific information is revealed as to what optional components were used when the unit was manufactured. The winch serial number and information tag has the model

and configuration details stamped in the "model" space. Example:

MODEL			
50 PS	C	0	000
MODEL 50 POWER SHIFT			
BEVEL GEAR RATIO			
A OR K = 1:1			
B OR L = 1.27:1			
C OR M = 1.64:1			
D OR N = 2.1:1			
E OR P = 2.78:1			
CABLE DRUM ROTATION			
0 = STD SPEED OVERWIND			
1 = LOW SPEED OVERWIND			
CLUTCH SHAFT GROUP			
000 = STD SPEED			
100 = LOW SPEED			

**IMPORTANT:** When repair items are needed, please include unit serial number with parts order.

CARCO MODEL 50-PS & PSC WINCH  
**BEVEL GEAR GROUP**  
 CATERPILLAR D5 & D5B PS & DD TRACTOR



**BEVEL GEAR SET 53120-0103 STD OR 53120-0104 SLOW SPEED**

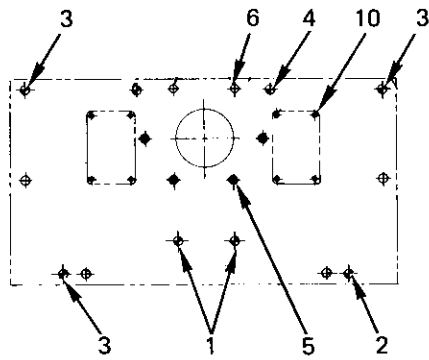
REF.	CARCO PART NO.	NAME AND DESCRIPTION	QUAN. PER UNIT
1	15312	Bearing Assembly	1
2	16041-11	Nut, Bearing Lock (AFBMA N-11, TN-11)	1
3	16047-808	Screw, Hex Hd. Cap (1/2 x 1 UNC)	6
4	16068-11	Washer, Bearing Lock (AFBMA W-11)	1
5	16262-126	O-Ring (NAT'L. 610076)	1
6	16262-139	O-Ring (NAT'L. 610092)	1
7	16262-266	O-Ring (NAT'L. 623044)	1
8	16314-137	Ring, Retaining (TRUARC N5000-137)	1
9	16314-354	Ring, Retaining (TRUARC N5000-354)	1
10	16342-27	Seal, Oil (NAT'L. 415322)	1
11	53047-0001	Spacer, Seal	1
12	53048-0001	Shim Set	1
13	53063-0011	Plug	1
14	53097-0001	Carrier	1
15	53114	Pinion, Pump	1
16	16262-346	O-Ring (NAT'L. 622749)	1
17	{ 53049-0003	Gear, Bevel (Standard Speed)	2
	{ 53049-0004	Gear, Bevel (Slow Speed)	2
18	{ 53050-0013	Pinion, Bevel (Standard Speed)	1
	{ 53050-0014	Pinion, Bevel (Slow Speed)	1

**BEVEL GEAR SET LISTINGS**

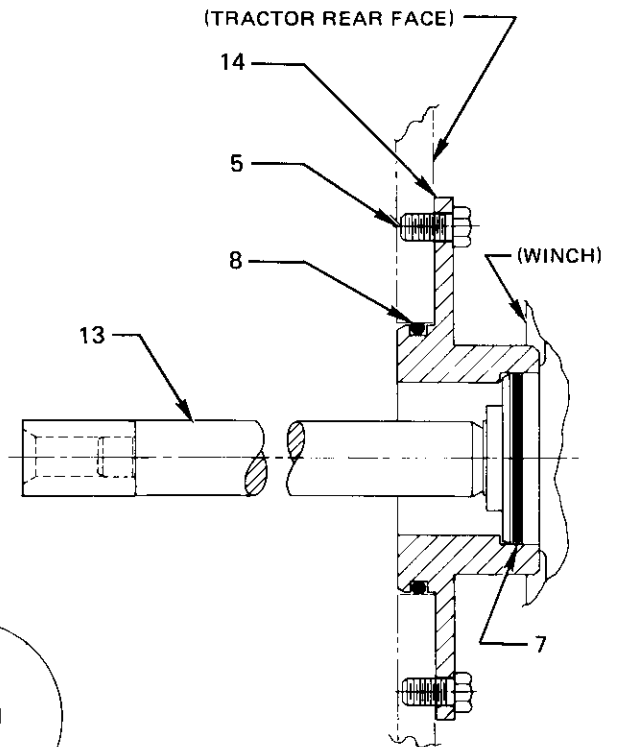
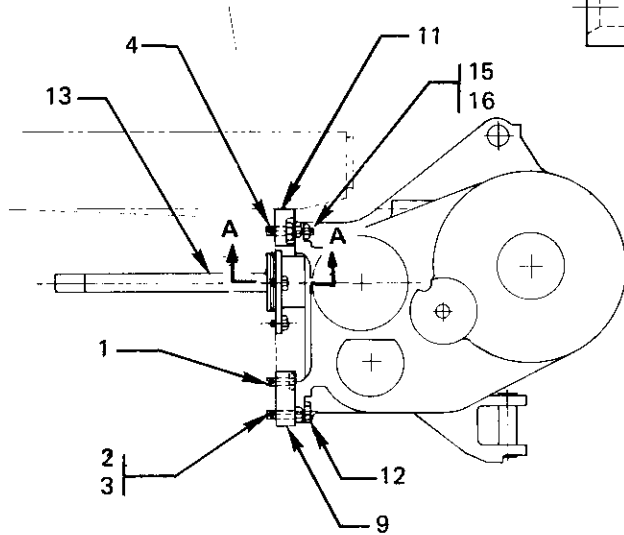
NOTE: The Bevel Gear Set above is standard for the adaption indicated. Below are gear combinations to provide a range of line speeds and pulls for various winching requirements. Important – Prior to ordering or quoting on any optional Bevel Gear Set be sure to check with factory on availability, and if the gear set would be recommended for the application.

GEAR SET NO.	BEVEL GEAR		BEVEL PINION		RATIO
	Part No.	Teeth	Part No.	Teeth	
53120-0101	53049-0001	30	53050-0011	30	1/1
53120-0102	53049-0002	33	53050-0012	26	1.27/1
53120-0103	53049-0003	36	53050-0013	22	1.64/1
53120-0104	53049-0004	38	53050-0014	18	2.11/1
53120-0105	53049-0005	39	53050-0015	14	2.76/1

CARCO MODEL 50-PS & PSC WINCH  
MOUNTING GROUP  
CATERPILLAR D5 & D5B PS & DD TRACTOR



VIEW OF TRACTOR REAR FACE  
SHOWING MOUNTING HARDWARE

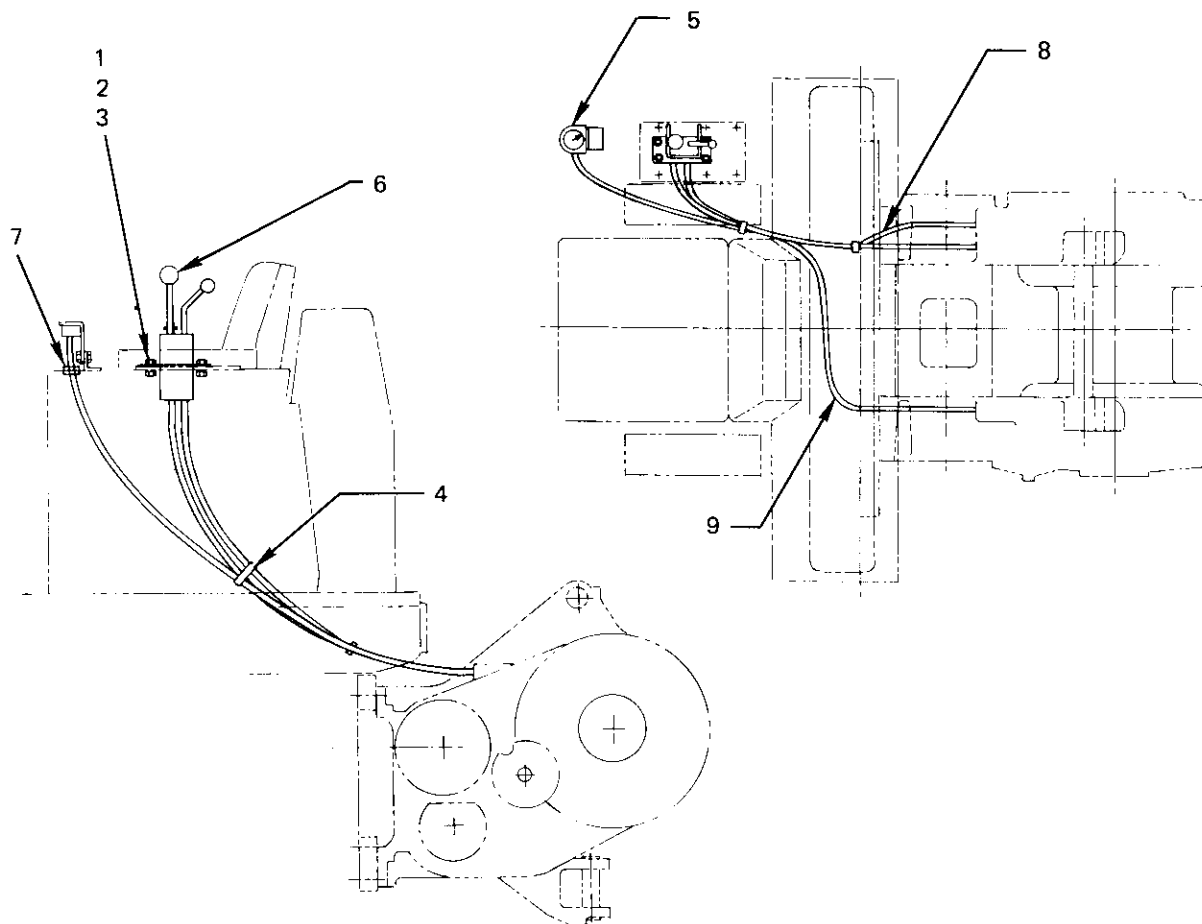


VIEW A-A

MOUNTING GROUP - 53550-53633  
CAT D5B

REF.	CARCO PART NO.	NAME AND DESCRIPTION	QUAN. PER UNIT
1	16027-1216	Screw, Hex Hd Cap (3/4 x 2 UNC)	2
2	16027-1618	Screw, Hex Hd Cap (1 x 2-1/4 UNC)	1
3	16027-1624	Screw, Hex Hd Cap (1 x 3 UNC)	3
4	16027-2018	Screw, Hex Hd Cap (1-1/4 x 2-1/4 UNC)	2
5	16047-1210	Screw, Hex Hd Cap (3/4 x 1-1/4 UNC)	4
6	16220-12	Closure-(CLOVER 209)	2
7	16262-346	O-Ring (NAT'L 622749)	1
8	16262-438	O-Ring (NAT'L 622765)	1
9	53142	Adapter, Bottom	1
10	16405-606	Screw, Button Hd Cap (3/8 x 3/4 UNC)	8
11	53087	Adapter, Top	1
12	16027-1420	Screw, Hex Hd Cap (7/8 x 2-1/2 UNC)	6
13	{ 53165-0003	Shaft Assy, PTO (POWER SHIFT ONLY)	1
	{ 53165-0004	Shaft Assy, PTO (DIRECT DRIVE ONLY)	1
14	53171	Pilot Assy, PTO	1
15	16400-14	Nut, Hex (7/8 UNC)	2
16	51495-1428	Stud (7/8 x 3-1/2 UNC)	2

CARCO MODEL 50-PS & PSC WINCH  
 CONTROL GROUP  
 CATERPILLAR D5 & D5B PS & DD TRACTOR



**CONTROL GROUP – 53549**  
**CAT D5B**

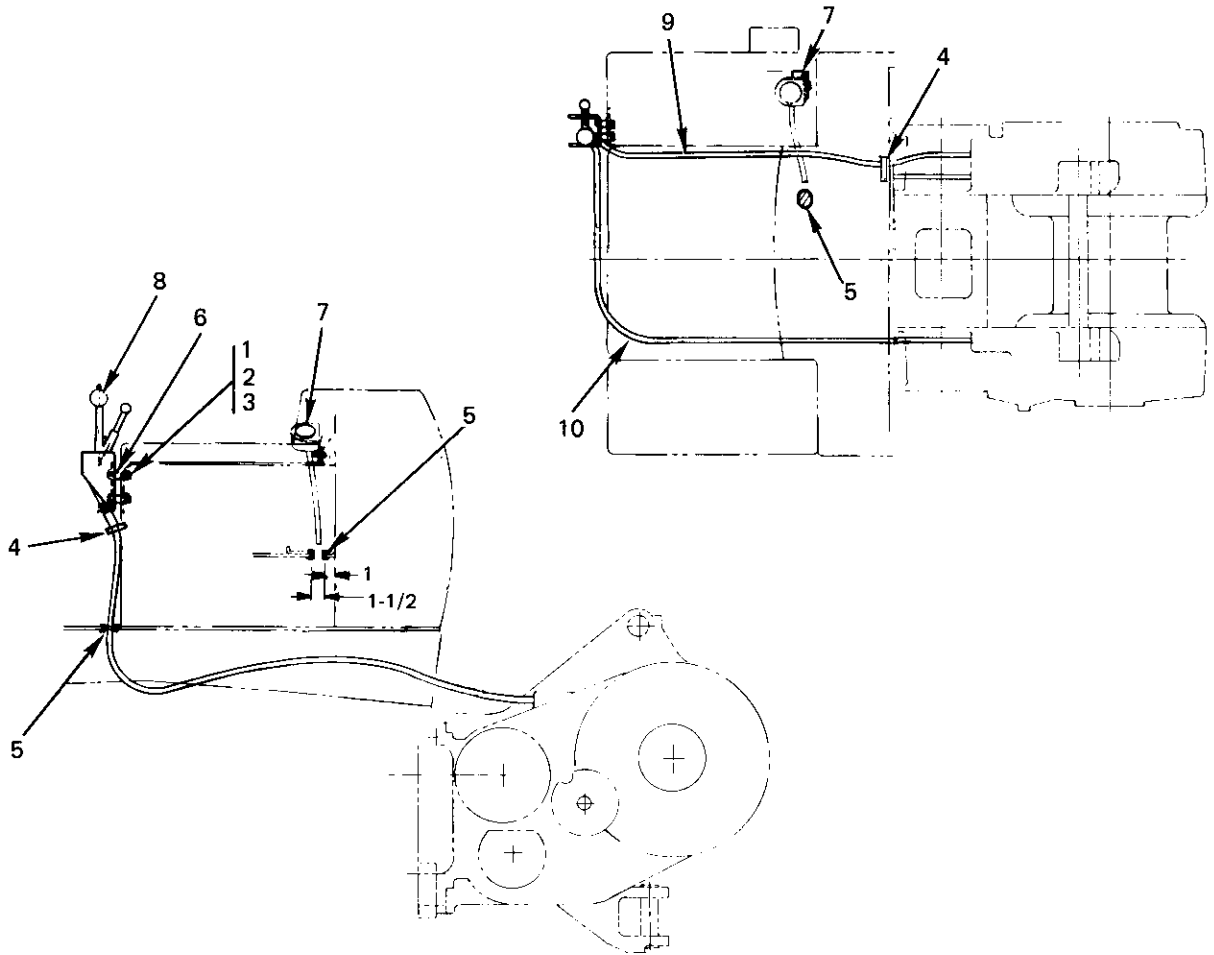
REF.	CARCO PART NO.	NAME AND DESCRIPTION	QUAN. PER UNIT
1	16033-6	Nut, Hex (3/8 UNC)	4
2	16047-608	Screw Hex Hd Cap (3/8 X 1 UNC)	4
3	16067-6	Washer, Lock (3/8)	4
4	16459-1	Strap, Retaining (ADEL 668-4-8-DR)	2
5	48944-120	* Gauge Kit, Pressure	1
6	49805-6	** Stand, Control	1
7	16528-0001	Grommet (BOYD 930-4)	1
8	52000-072	Cable, Control – Shift	1
9	52000-084	Cable, Control – Freespool	1

\*See Page 9 for components.

\*\*See Pages 10,11 for components.



CARCO MODEL 50-PS & PSC WINCH  
 CONTROL GROUP  
 CATERPILLAR D5 & D5B PS & DD TRACTOR



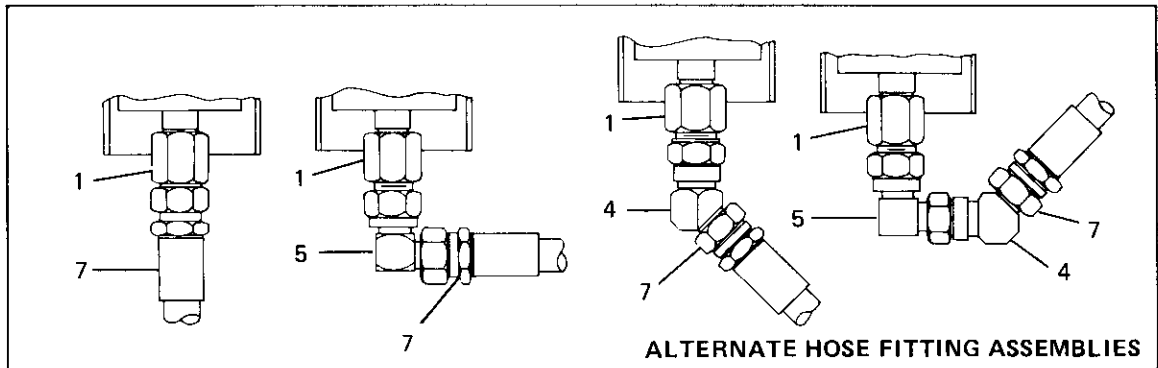
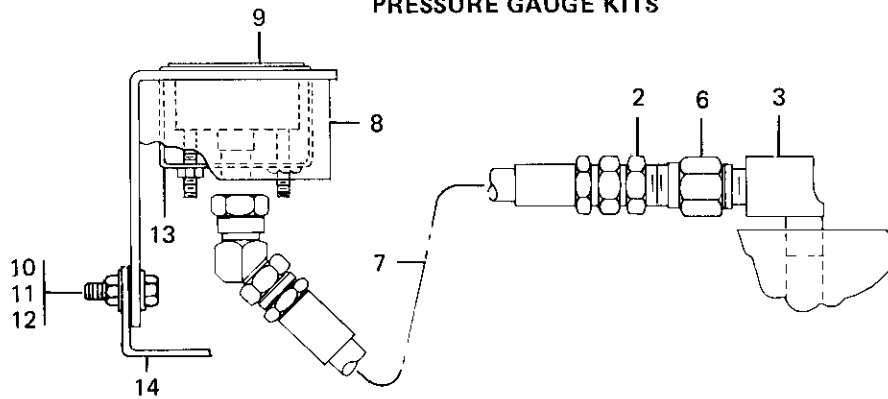
CONTROL GROUP 53710  
 CAT D5 95J & 96J

REF.	CARCO PART NO.	NAME AND DESCRIPTION	QUAN. PER UNIT
1	16033-6	Nut, Hex (3/8 UNC)	4
2	16047-614	Screw, Hex Hd Cap (3/8 UNC)	4
3	16067-6	Washer, Lock (3/8)	4
4	16459-1	Strap, Retaining	2
5	45418-16	Trim	1
6	46126-606	Spacer	4
7	48944-120	* Gauge Kit	1
8	49805-2	** Stand, Control	1
9	52000-084	Cable, Control - Shift	1
10	52000-102	Cable, Control - Freespool	1

\*See page 9 for components.  
 \*\*See page 10, 11 for components.

CARCO MODEL 50-PS & PSC WINCH  
HYDRAULIC GAUGE, HOSE & FITTINGS

PRESSURE GAUGE KITS



ALTERNATE HOSE FITTING ASSEMBLIES

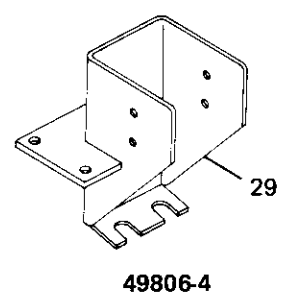
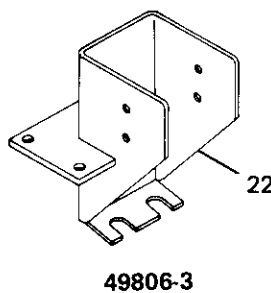
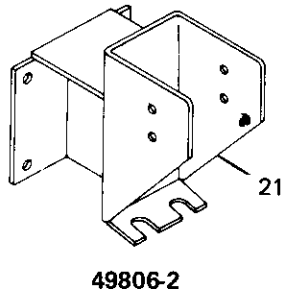
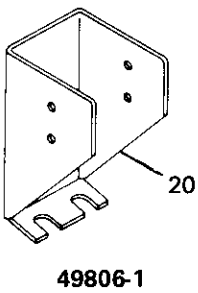
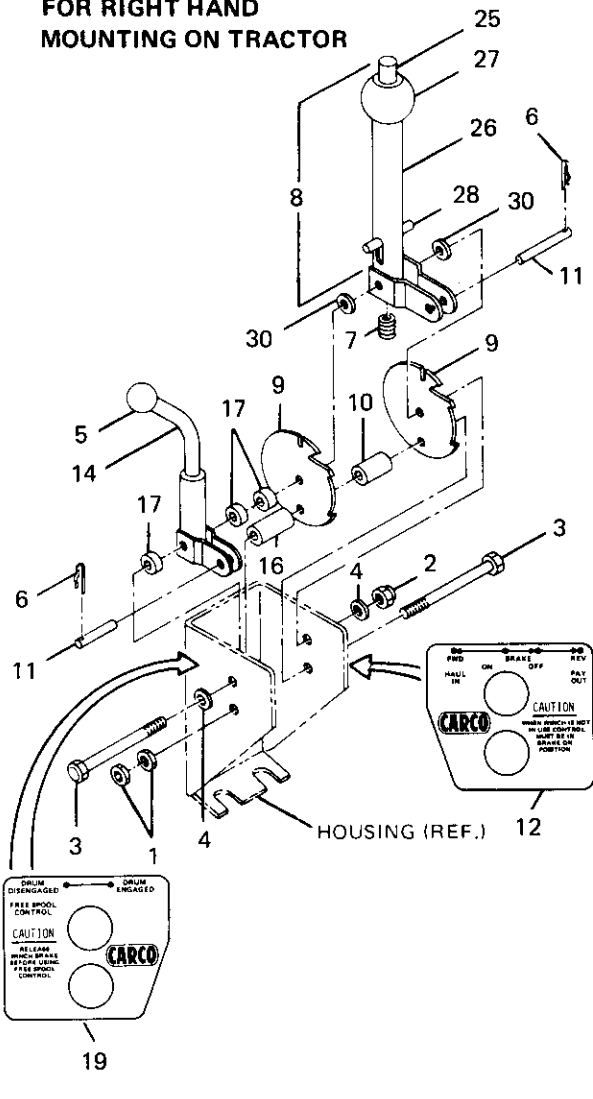
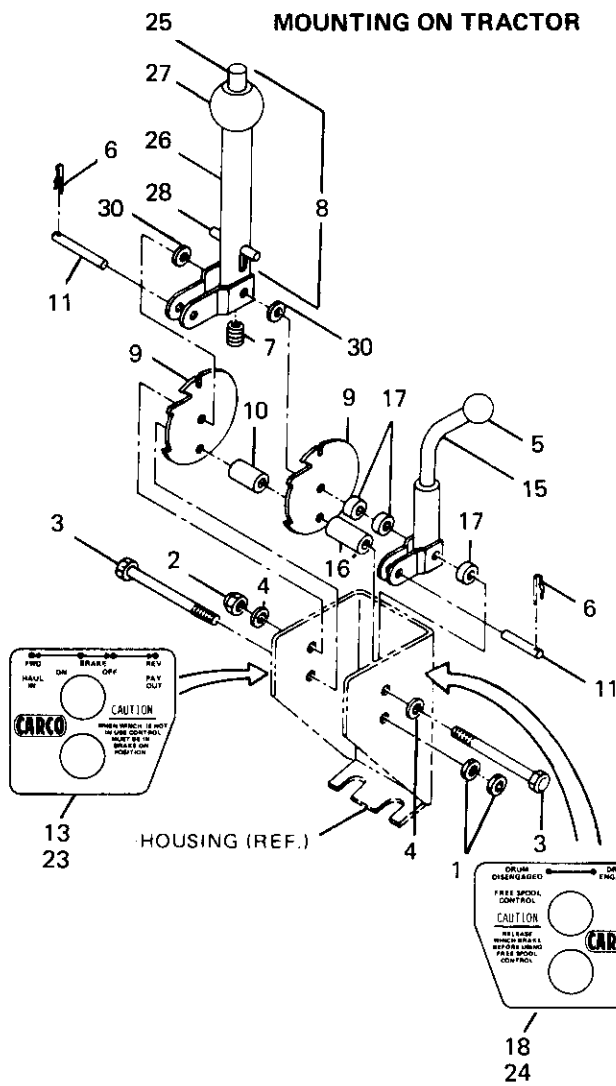
REF.	CARCO PART NO.	NAME AND DESCRIPTION	KIT NUMBER		
			48944-120	48700-120	51480-1
			QUAN. PER UNIT	QUAN. PER UNIT	QUAN. PER UNIT
1	16116-44	Adapter (WTHRD. C5255 x 4 x 4)	1	1	1
2	(Ref) 16129-44	* Connector (WTHRD. C5205 x 4 x 4)	1	1	1
3	(Ref) 16171-44	* Elbow (WTHRD. 3400 x 4)	1	1	1
4	16184-44	Union (WTHRD. C5356 x 4)	1	1	—
5	16185-44	Union (WTHRD. C5506 x 4)	1	1	—
6	(Ref) 16362-44	* Snubber (CHEMIQUIP 25B-D)	1	1	1
7	44921-120	Hose Assembly	1	1	1
8	48687	Bracket	1	1	—
9	48693-1	Gauge	1	1	1
10	16047-608	Screw, Hex Hd Cap (3/8 x 1 UNC)	1	—	—
11	16033-6	Nut, Hex (3/8 UNC)	1	—	—
12	16063-6	Washer (3/8)	1	—	—
13	49121	Bracket	1	1	1
14	49343-2	Bracket	1	—	—

\*Items 2, 3 and 6 are also shown in hydraulic control section.

**CARCO MODEL 50-PS & PSC WINCH  
CONTROL STAND ASSEMBLY**

**ODD DASH NUMBERS  
FOR LEFT HAND  
MOUNTING ON TRACTOR**

**EVEN DASH NUMBERS  
FOR RIGHT HAND  
MOUNTING ON TRACTOR**



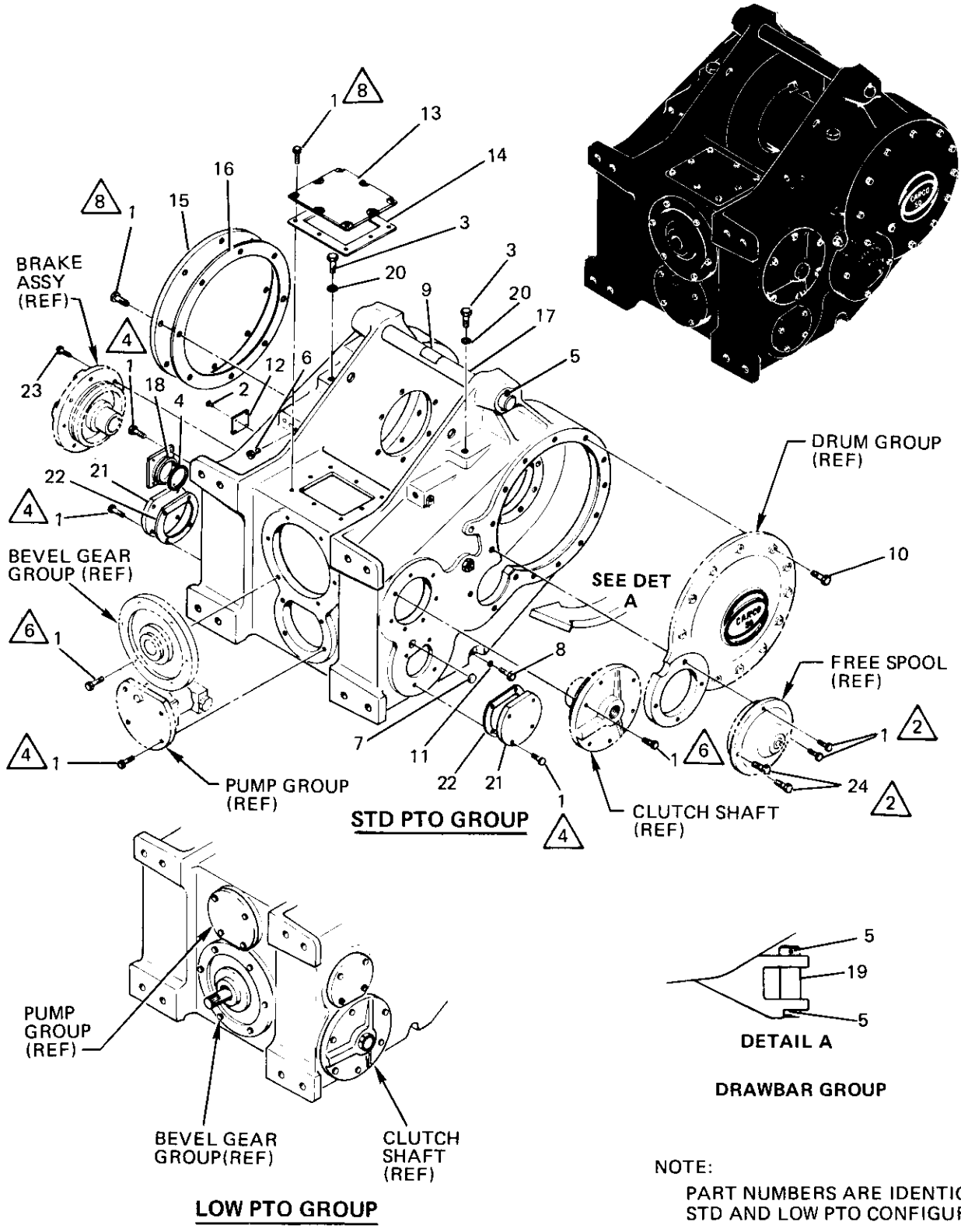
**CONTROL STAND ASSEMBLY 49805-01 THRU -09 (POWER SHIFT W/FREE SPOOL)**

CARCO MODEL 50-PS & PSC WINCH  
CONTROL STAND ASSEMBLY

REF.	CARCO PART NO.	NAME AND DESCRIPTION	QUANTITY								
			-1	-2	-3	-4	-5	-6	-7	-8	-9
1	16033-6	Nut (3/8 UNC Hex)	2	2	2	2	2	2	2	2	2
2	16039-66	Nut, Lock (ESNA 21NE-066)	1	1	1	1	1	1	1	1	1
3	16047-632	Screw, Hex Hd Cap (3/8 x 4 UNC)	2	2	2	2	2	2	2	2	2
4	16064-6	Washer (3/8)	2	2	2	2	2	2	2	2	2
5	16236-4	Knob (REID B-8)	1	1	1	1	1	1	1	1	1
6	16381-13	Pin, Hitch (WESTERN WIRE WW-13)	2	2	2	2	2	2	2	2	2
7	41403	Spring	1	1	1	1	1	1	1	1	1
8	49003 *	Lever Assy, Power Shift	1	1	1	1	1	1	1	1	1
9	49007	Plate, Lock	2	2	2	2	2	2	2	2	2
10	49804-3	Spacer	1	1	1	1	1	1	1	1	1
11	49010	Pin	2	2	2	2	2	2	2	2	2
12	49314	Plate, Power Shift Instruction (RH)		1		1		1		1	
13	49314-2	Plate, Power Shift Instruction (LH)	1		1		1				1
14	49802-2	Lever Assy., Free Spool (RH)		1		1		1		1	
15	49802-1	Lever Assy., Free Spool (LH)	1		1		1		1		1
16	49804-1	Spacer	1	1	1	1	1	1	1	1	1
17	49804-2	Spacer	3	3	3	3	3	3	3	3	3
18	49807-1	Plate, Free Spool Instruction (LH)	1		1		1				1
19	49807-2	Plate, Free Spool Instruction (RH)		1		1		1		1	
20	49806-1	Housing	1	1							
21	49806-2	Housing			1	1					
22	49806-3	Housing					1	1	1		
23	50911	Plate, Power Shift Instruction							1		
24	50912	Plate, PTO Valve Instruction							1		
25	49004 *	Rod, Push	1	1	1	1	1	1	1	1	1
26	49005 *	Handle	1	1	1	1	1	1	1	1	1
27	41404 *	Ball	1	1	1	1	1	1	1	1	1
28	16294-824 *	Pin, Spring (1/4 x 1-1/2)	1	1	1	1	1	1	1	1	1
29	49806-4	Housing								1	1
30	16009-6	Bearing, Thrust (BUNTING TW 37)	2	2	2	2	2	2	2	2	2

\*Items 25, 26, 27, 28 are included in item 8.

CARCO MODEL 50-PS & PSC WINCH  
CASE AND COVERS



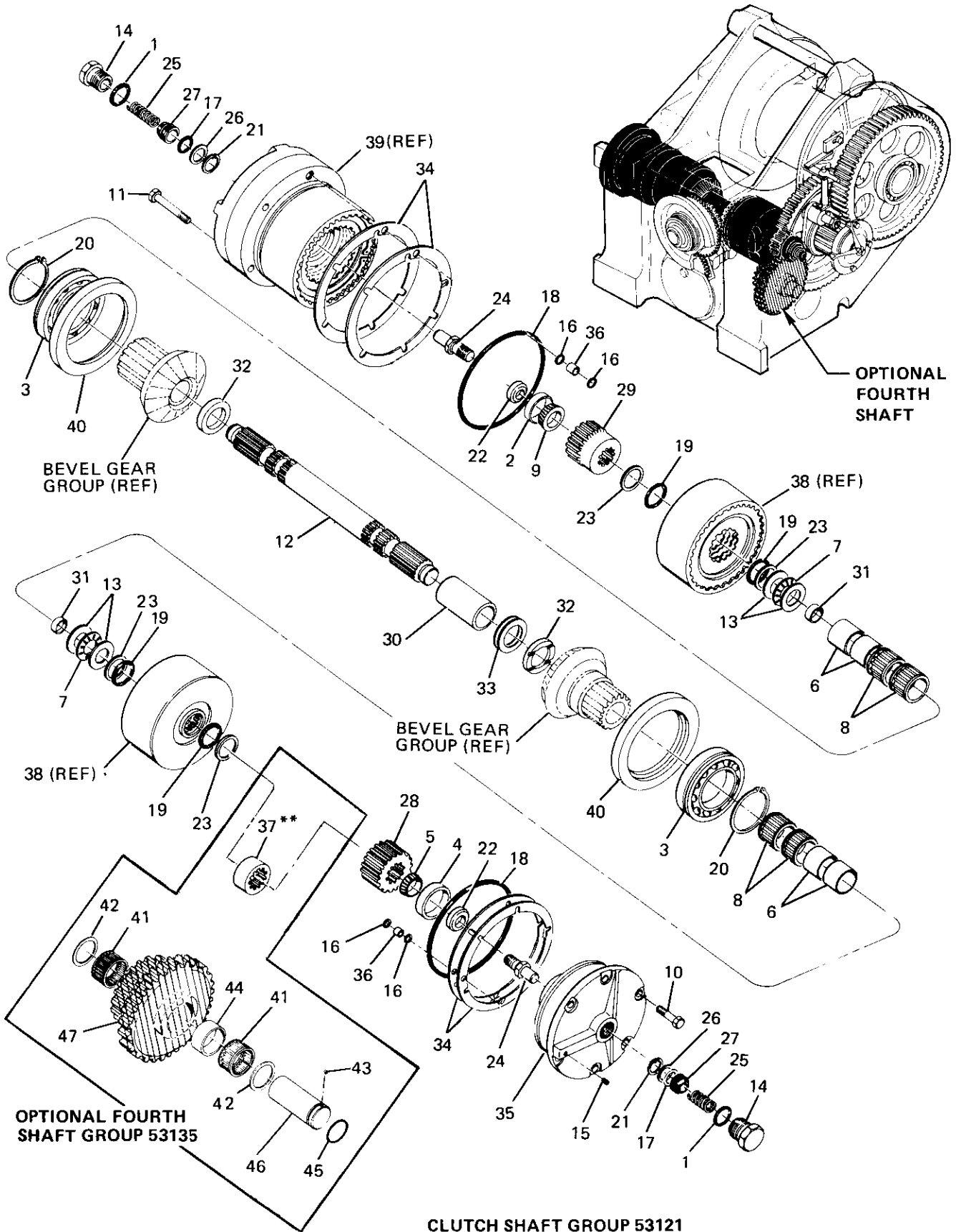
CASE AND COVERS (53136)

△ INDICATES QUANTITY USED

CARCO MODEL 50-PS & PSC WINCH  
CASE AND COVERS

REF.	CARCO PART NO.	NAME AND DESCRIPTION	QUAN. PER UNIT
1	16047-808	Screw, Hex Hd Cap (1/2 x 1 UNC Grade 5)	46
2	16055-5	Screw, Drive (#10 x 3/8 Steel)	4
3	16166-20	Plug, O-Ring, Hex Hd (Includes Item 20) (WH 7237x20)	2
4	16262-236	O-Ring (NAT'L. 623012)	1
5	16288-1248	Pin, Cotter (3/8 x 3)	4
6	16378-0004	Vent, Breather (ARROW ASP-2BV)	1
7	16540-0002	Plug, Cup Expansion (1-3/4 SEASTROM 5791-22)	1
8	16166-12	Plug, O-Ring, Hex Hd (Includes Item 11) (WH 7237x12)	1
	25978	Tag, Underwind	1
9	25979	Tag, Overwind	1
10	16047-810	Screw, Hex Hd Cap (1/2 x 1-1/4 UNC Grade 5)	11
11	16262-912	O-Ring (Included w/Item 8) (NAT'L. 600501)	1
12	52126	Plate, Winch Serial No.	1
13	53044-0001	Plate	1
14	53051	Gasket	1
15	53054	Cover	1
16	53055	Gasket	1
17	53064	Bar, Tie	1
18	53068	Cover, Strainer	1
19	53101	Pin, Drawbar	1
20	16262-920	O-Ring (Included w/Item 3) (NAT'L. 600602)	2
21	53223	Cover	2
22	53224	Gasket	2
23	16047-818	Screw, Hex Hd Cap (1/2 x 2-1/4 UNC Grade 5)	6
24	16047-814	Screw, Hex Hd Cap (1/2 x 1-3/4 UNC Grade 5)	2

CARCO MODEL 50-PS & PSC WINCH  
CLUTCH SHAFT GROUP



CARCO MODEL 50-PS & PSC WINCH  
CLUTCH SHAFT GROUP

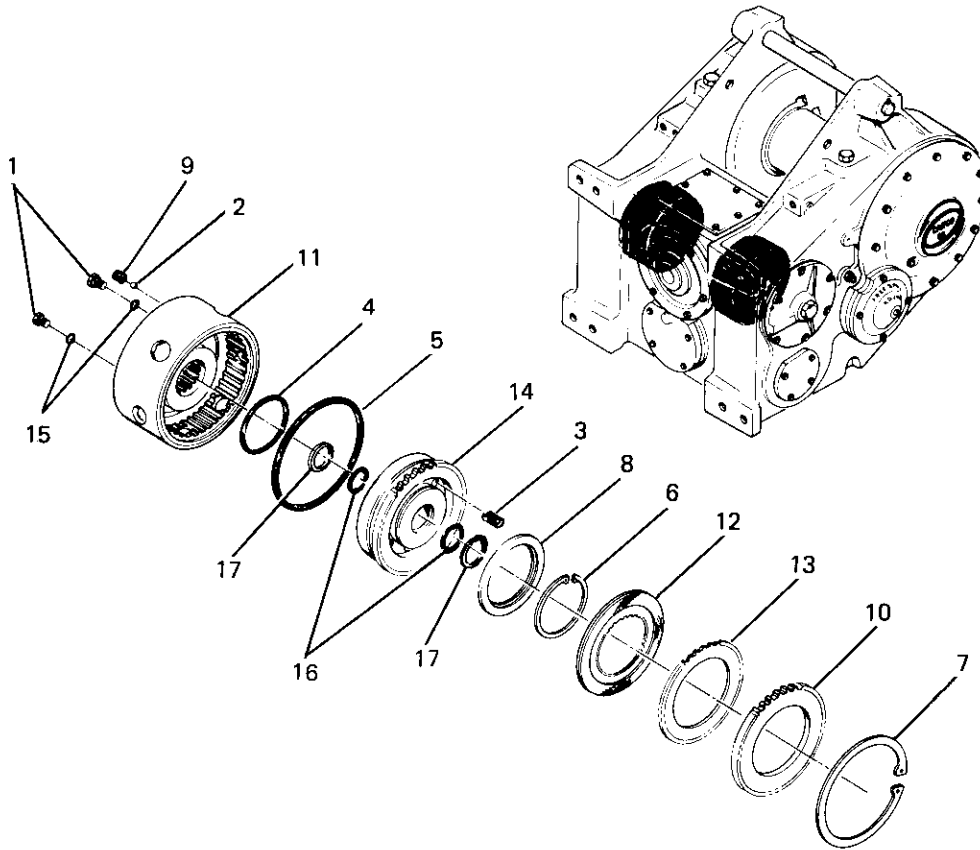
REF.	CARCO PART NO.	NAME AND DESCRIPTION	QUAN. PER UNIT
1	16262-920	O-Ring (Part of No. 14) (NAT'L. 600602)	2
2	(Ref) 15323	Cup (Also shown in Brake Assembly) (TIMKEN LM67010)	1
3	15313	Bearing, Ball (SKF 6020 NR)	2
4	15179	Cup (TIMKEN 26820)	1
5	15180	Cone (TIMKEN 26880)	1
6	15314	Race, Inner (TORRINGTON 1R3024)	4
7	15315	Bearing, Thrust (TORRINGTON NTA-3648)	2
8	15316	Bearing, Needle (TORRINGTON WJ344024)	4
9	15324	Cone (Also shown in Brake Assembly) (TIMKEN LM67048)	1
10	16047-808	Screw, Hex Hd Cap (1/2 x 1 UNC)	6
11	16047-818	Screw, Hex Hd Cap (1/2 x 2-1/4 UNC)	6
12	{ 53222	* Shaft, Clutch (Standard Unit)	1
	{ 53201	** Shaft, Clutch (Used with 4th Shaft only)	1
13	16066-01	Washer, Thrust (TORRINGTON TRD 3648)	4
14	16166-20	Plug, O-Ring, Hex Hd (WH 7236x20) (Includes #1)	2
15	16167-4	Plug, Hex Socket (1/4 NPTF)	1
16	16262-907	O-Ring (NAT'L. 600827)	8
17	16262-121	O-Ring (NAT'L. 610067)	2
18	16262-266	O-Ring (NAT'L. 623044)	2
19	16262-326	O-Ring (NAT'L. 622729)	4
20	16313-393	Ring, Retaining (TRUARC 5100-393)	2
21	16314-125	Ring, Retaining (TRUARC N5000-125)	2
22	53204	Retainer	2
23	16300-0326	Ring, Back-up (PARKER 8-326-N300-9)	4
24	53221	Shaft, Rotary Seal	2
25	44753	Spring, Seal Retaining	2
26	44940	Washer, Back-up	2
27	44949	Seal (TEFLON)	2
28	53013	Pinion	1
29	53014	Hub, Brake	1
30	53019	Spacer	1
31	53021	Spacer	2
32	53026	Washer, Thrust	2
33	53046-0001	Shim Set	1
34	53048-0001	Shim Set	2
35	{ 53103	* Carrier (Standard Unit)	1
	{ 53207	** Carrier (Used only with 4th Shaft)	1
36	53066-0001	Sleeve, O-Ring	4
37	53202	** Spacer (Used only with 4th Shaft)	1
38	(REF) 53129	Clutch Assembly (See Page 16)	2
39	(REF) 53130	Brake Assembly (See Page 17)	1
40	53015	Carrier, Bearing	2
41	15327	** Bearing, Needle (TORRINGTON B-2824)	2
42	16066-0002	** Washer (TORRINGTON TRB-2840)	2
43	16217-6	** Ball, (Steel - 3/8)	1
44	50333-0002	** Spacer	1
45	16262-222	** O-Ring (NAT'L. 622727)	1
46	53203	** Pin, Countershaft	1
47	53205	** Gear, Cluster	1

\* Used on standard unit without fourth shaft.

\*\* Used on unit with fourth shaft option.



CARCO MODEL 50-PS & PSC WINCH  
CLUTCH ASSEMBLY

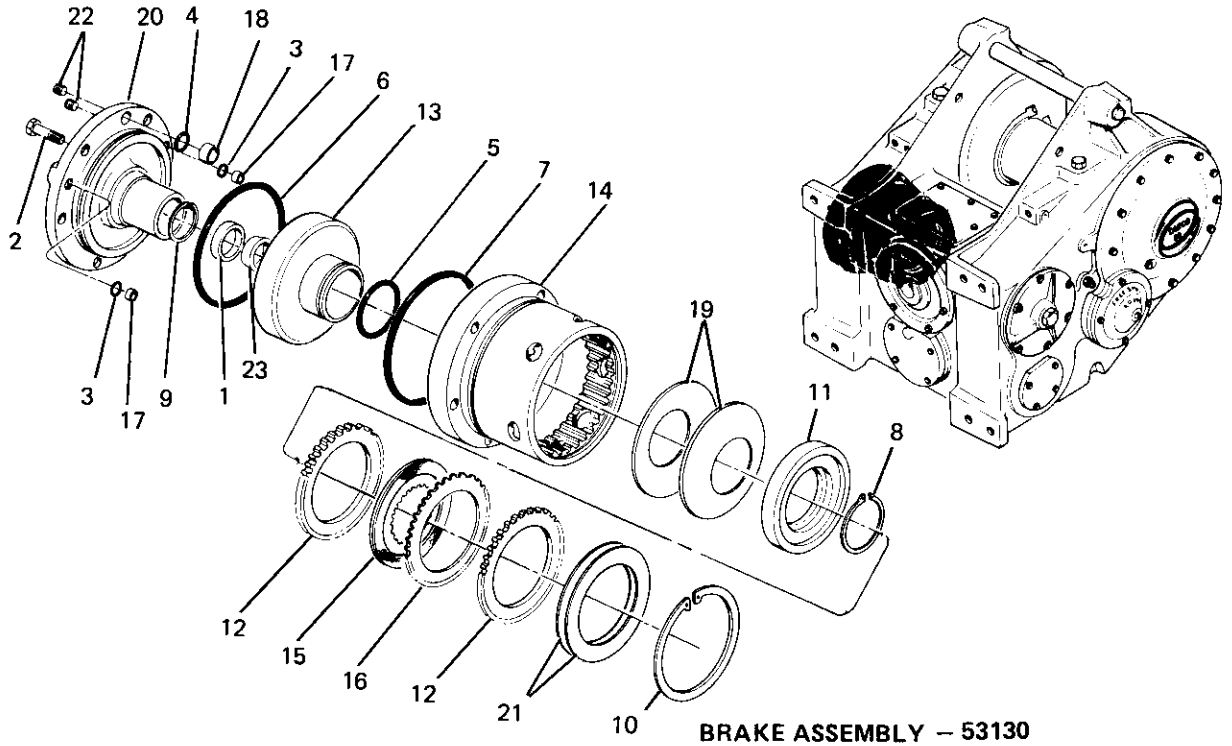


CLUTCH ASSEMBLY - 53129

REF.	CARCO PART NO.	NAME AND DESCRIPTION	QUAN. PER UNIT
-	53129	Clutch Assy (Includes the following)	1
1	16496-3	Plug, O-Ring Flush (WH 7231 x 3) (Includes #15)	2
2	16217-4	Ball (Steel - 1/4")	1
3	16240-19	Spring	8
4	16262-240	O-Ring (NAT'L. 623018)	1
5	16262-262	O-Ring (NAT'L. 623040)	1
6	16313-393	Ring, Retaining (TRUARC 5100-393)	1
7	16314-700	Ring, Retaining (TRUARC N5000-700)	1
8	53717	Retainer, Spring	1
9	53018	Seat, Valve	1
10	53020	Plate, Pressure	1
11	53034-0002	Housing Assembly	1
12	53880-0001	Disc, Friction	5
13	53062	Disc, Steel	4
14	53071	Piston, Clutch	1
15	16262-903	O-Ring (NAT'L. 600599) (Part of #1)	2
16	(Ref) 16262-326	* O-Ring (NAT'L. 622729)	2
17	(Ref) 16300-0326	* Ring, Back up (Parker 8-326-N300-9)	2

\*Not Part of Clutch Assembly

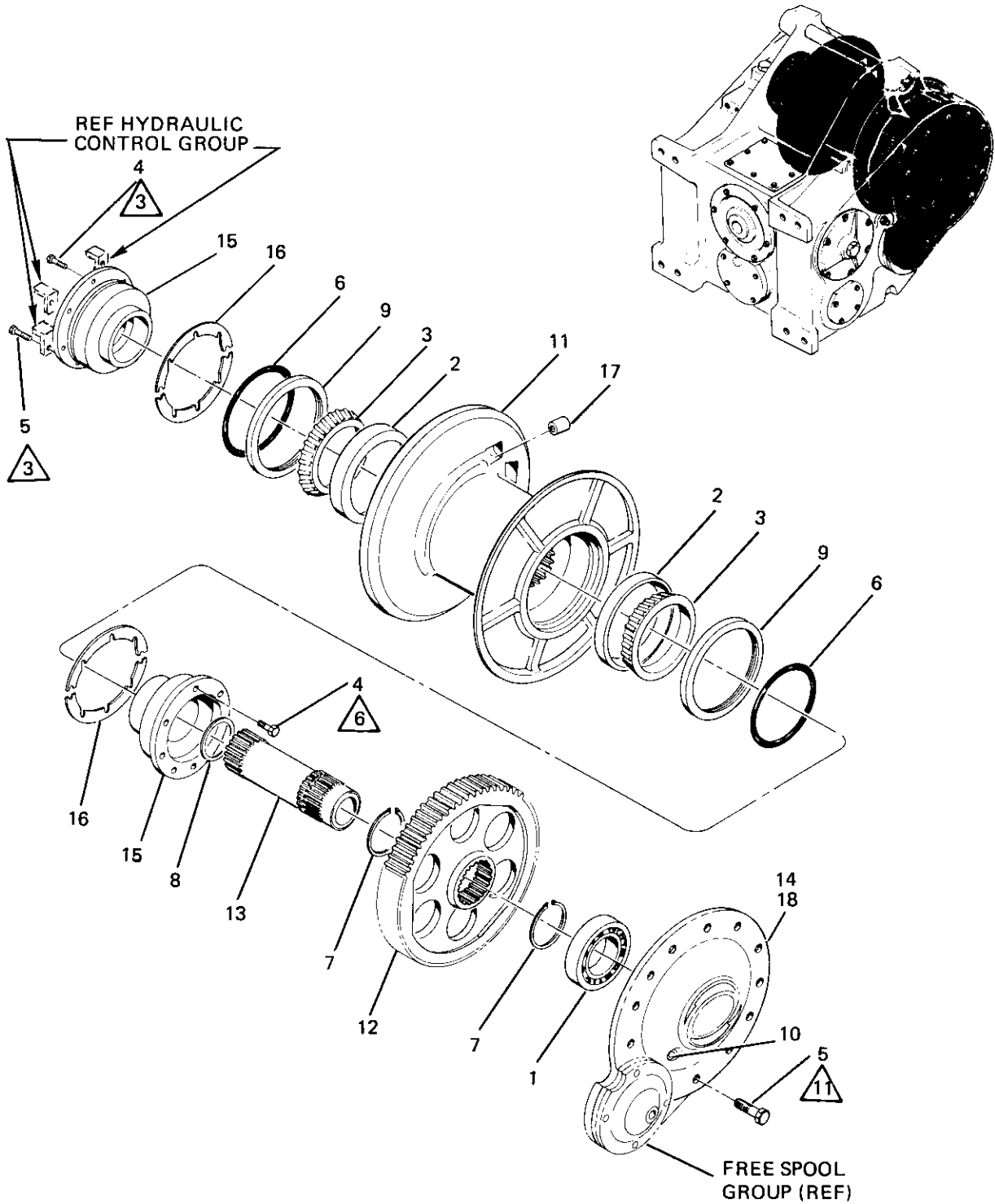
CARCO MODEL 50-PS & PSC WINCH  
BRAKE ASSEMBLY



REF.	CARCO PART NO.	NAME AND DESCRIPTION	QUAN. PER UNIT
—	<b>53130</b>	Brake Assy (Includes the following)	1
1	15323	Cup, Bearing (TIMKEN LM67010) (Also shown on Clutch Shaft Group)	1
2	16047-608	Screw, Hex Hd Cap (3/8 x 1 UNC Grade 5)	2
3	16262-907	O-Ring (NAT'L. 600827)	2
4	16262-122	O-Ring (NAT'L. 610068)	1
5	16262-238	O-Ring (NAT'L. 623016)	1
6	16262-261	O-Ring (NAT'L. 623039)	1
7	16262-262	O-Ring (NAT'L. 623040)	1
8	16313-343	Ring, Retaining (TRUARC 5100-343)	1
9	16314-125	Ring, Retaining (TRUARC N5000-125)	1
10	16314-700	Ring, Retaining (TRUARC N5000-700)	1
11	53016	Retainer, Spring	1
12	53020	Plate, Pressure	2
13	53031	Piston, Brake	1
14	53042	Housing, Brake	1
15	53880-0001	Disc, Friction	8
16	53062	Disc, Steel	7
17	53066-0001	Sleeve, O-Ring	2
18	53066-0002	Sleeve, O-Ring	1
19	53070	Spring, Disc	2
20	53105	Carrier	1
21	53708-0001	Shim Set	1
22	16167-4	Plug, Hex Socket (1/4 NPTF)	2
23	(Ref) 15324	* Cone (TIMKEN LM67048) (Also shown on Clutch Shaft Group)	1

\* Not included in brake assembly

CARCO MODEL 50-PS & PSC WINCH  
CABLE DRUM GROUP



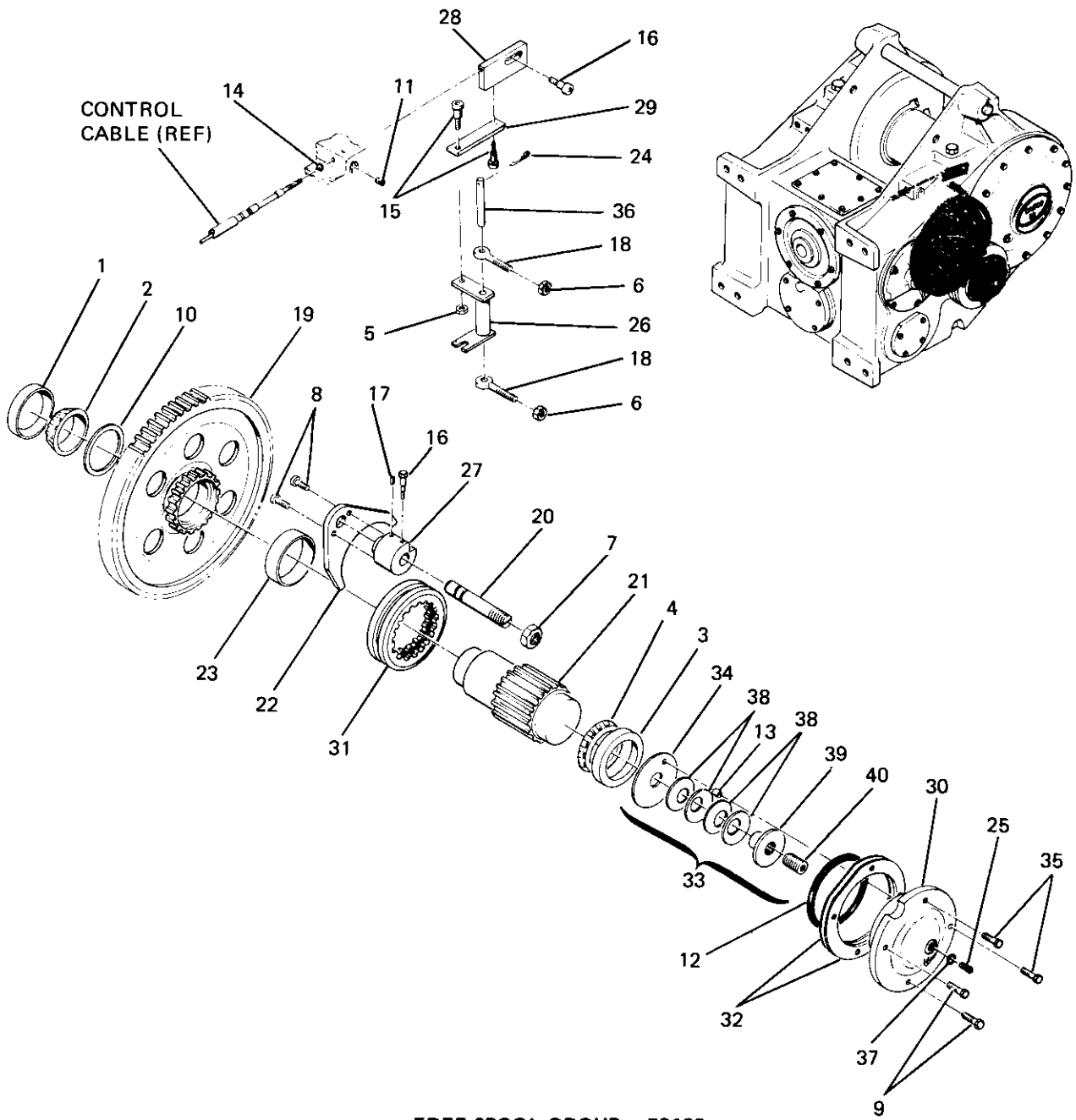
CABLE DRUM GROUP - 53127

△ INDICATES QUANTITY USED

CARCO MODEL 50-PS & PSC WINCH  
CABLE DRUM GROUP

REF.	CARCO PART NO.	NAME AND DESCRIPTION	QUAN. PER UNIT
1	15042	Bearing, Ball (SKF 6218)	1
2	15317	Cup (TIMKEN 48320)	2
3	15318	Cone (TIMKEN 48393)	2
4	16047-808	Screw, Hex Hd Cap (1/2 x 1 UNC Grade 5)	9
5	16047-810	Screw, Hex Hd Cap (1/2 x 1-1/4 UNC Grade 5)	14
6	16262-263	O-Ring (NAT'L. 62304)	2
7	16313-437	Ring, Retaining (TRUARC 5100-437)	2
8	16314-400	Ring, Retaining (TRUARC N5000-400)	1
9	16342-26	Seal, Oil (NAT'L. 415867)	2
10	16539-0010	Gauge, Oil Level	1
11	53008	Drum, Cable	1
12	53025	Gear, 2nd Reduction	1
13	53032	Shaft, 2nd Reduction Gear	1
14	53090	Carrier, Bearing	1
15	53093	Carrier, Bearing	2
16	53095-0001	Shim Set	2
17	25456-1	Ferrule, Cable (1/2") (B4)	1
	25456-2	Ferrule, Cable (5/8") (B5)	1
	25456-3	Ferrule, Cable (3/4") (B6)	1
18	16453-5	Sealant (Not Shown) (DOW CORNING Silastic No. 732 RTV5 oz. tube)	1

CARCO MODEL 50-PS & PSC WINCH  
 FREE SPOOL GROUP

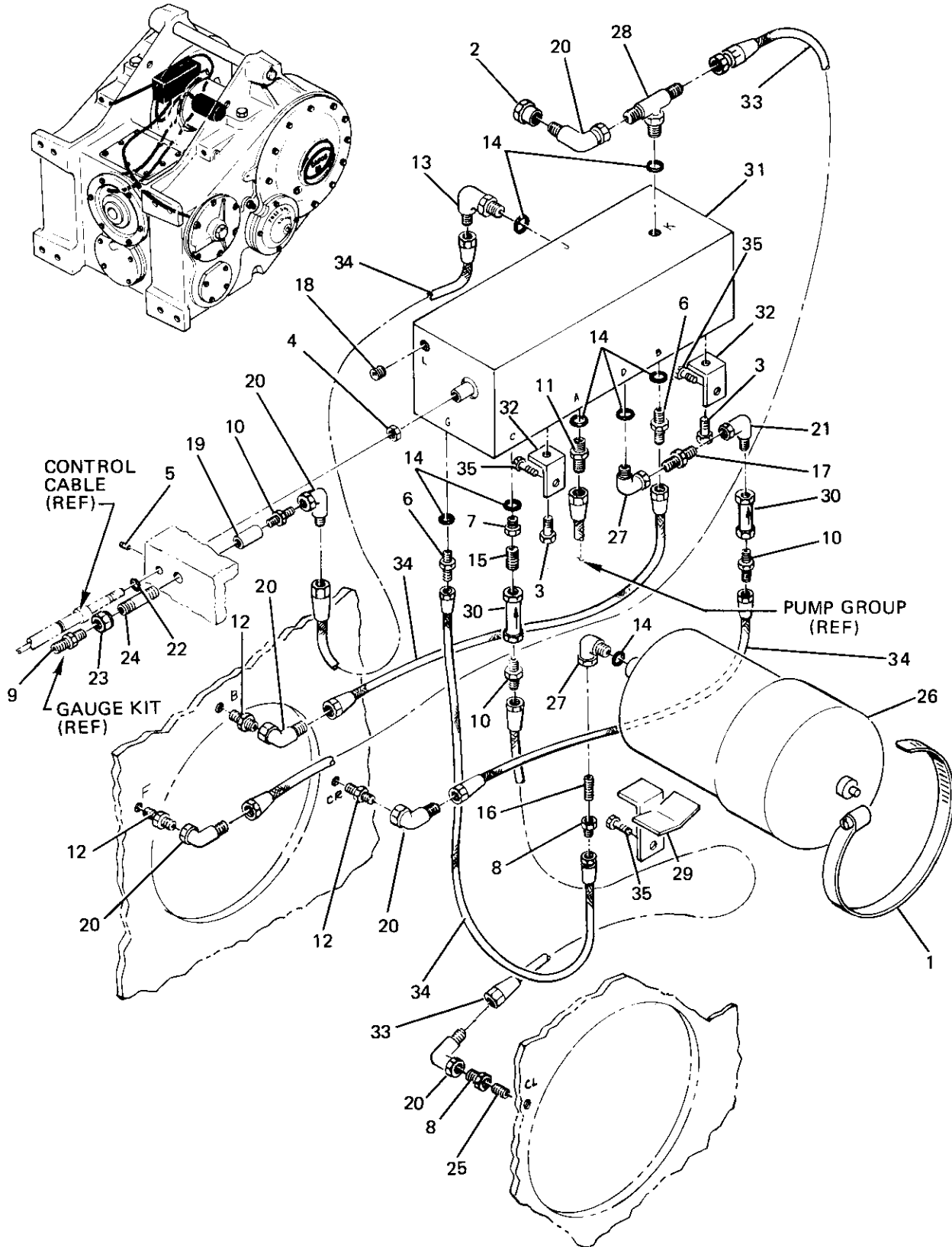


FREE SPOOL GROUP - 53126

CARCO MODEL 50-PS & PSC WINCH  
FREE SPOOL GROUP

REF.	CARCO PART NO.	NAME AND DESCRIPTION	QUAN. PER UNIT
1	15319	Cup (TIMKEN JLM 506810)	1
2	15320	Cone (TIMKEN JLM 506849)	1
3	15321	Cup (TIMKEN JLM 714110)	1
4	15322	Cone (TIMKEN JLM 714149)	1
5	16043-5	Nut, Hex Jam (5/16 UNC Grade 2)	1
6	16044-8	Nut, Hex Jam (1/2 UNF Grade 2)	2
7	16044-16	Nut, Hex Jam (1-14 Grade 2)	1
8	16047-606	Screw, Hex Hd Cap (3/8 x 3/4 UNC Grade 5)	2
9	16047-814	Screw, Hex Hd Cap (1/2 x 1-3/4 UNC Grade 5)	2
10	16066-01	Washer, Thrust (TORRINGTON TRD-3648)	1
11	16056-612	Screw, Soc Set (3/8 x 3/4 UNC Cup Point)	1
12	16262-249	O-Ring (NAT'L. 623027)	1
13	16290-1212	Pin, Dowel (3/8 x 3/4 .0002 Oversize)	1
14	16262-114	O-Ring (NAT'L. 622712)	1
15	16357-0603	Screw, Shoulder (3/8 x 3/8 5/16 UNC Thread)	2
16	16357-0804	Screw, Shoulder (1/2 x 1/2 3/8 UNC Thread)	2
17	16403-2	Plunger, Ball (CARR-LANE CL70-BP3)	1
18	16526-0001	Rod End (HEIM CHM-8)	2
19	53023	Gear, First Reduction	1
20	53027	Rail, Shift	1
21	53028	Pinion, Second Reduction	1
22	53029	Yoke	1
23	53035	Bushing	1
24	16288-312	Pin, Cotter (3/32 x 3/4)	1
25	16496-3	Plug, Flush (PARKER 3HP50N-S) (Includes #37)	1
26	53211	Bellcrank	1
27	53040	Collar, Shift	1
28	53691	Guide	1
29	53692	Link	1
30	53075	Retainer, Bearing	1
31	53091	Collar, Clutch	1
32	53094-0001	Shim Set	1
33	53132	Retarder Assembly (Includes #34, 38, 39, 40)	1
34	53080	Disc, Drag (Part of #33)	1
35	16047-808	Screw, Hex Hd Cap (1/2 x 1 UNC Grade 5)	2
36	53214	Pin	1
37	16262-903	O-Ring (NAT'L. 600599) (Part of #25)	1
38	49333-0002	Disc, Spring (Part of #33)	4
39	53058	Collar (Part of #33)	1
40	16057-620	Screw, Socket Set, 1-1/4 x 3/8 UNF (Part of #33)	1

CARCO MODEL 50-PS & PSC WINCH  
 HYDRAULIC CONTROL GROUP



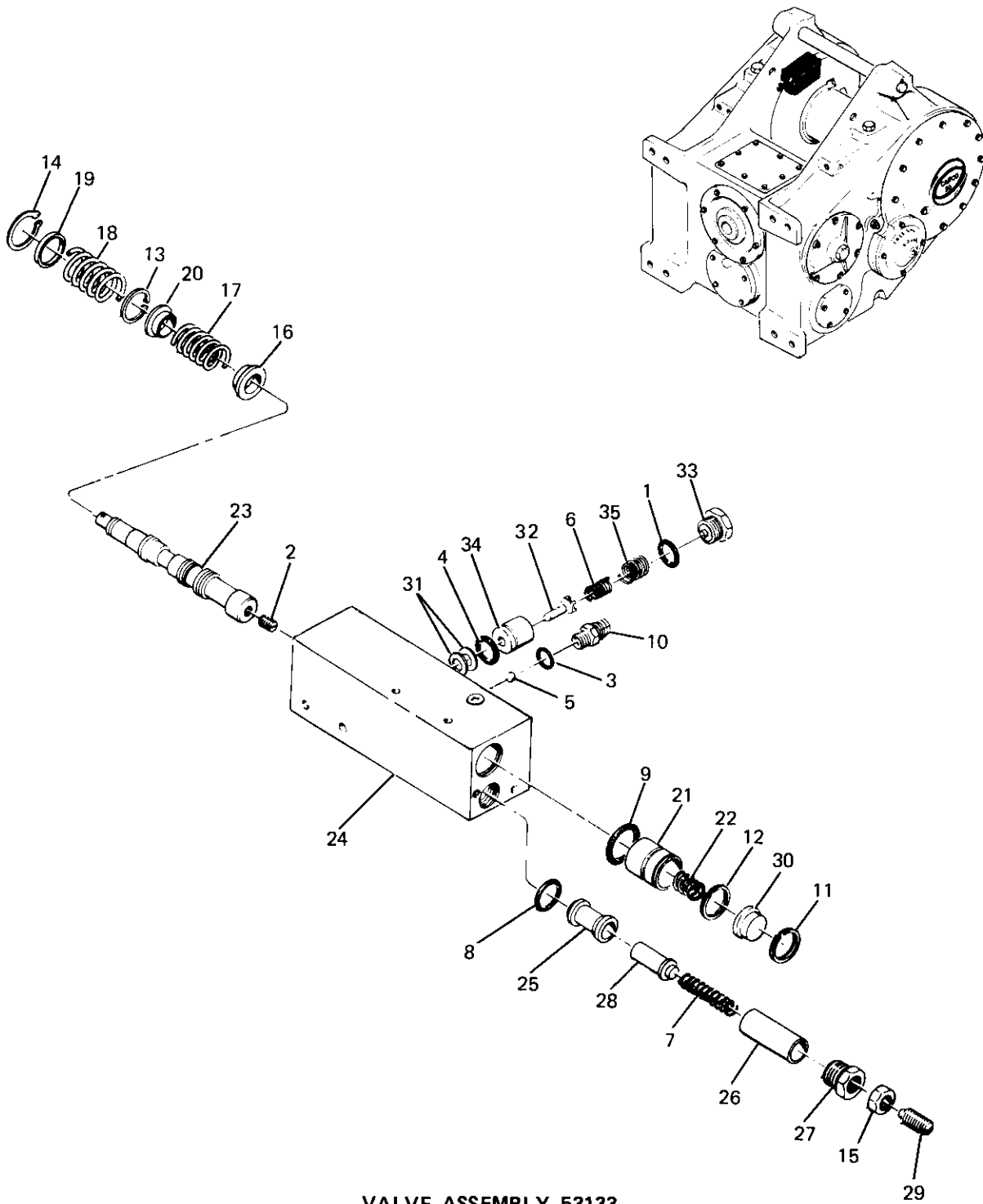
HYDRAULIC CONTROL GROUP 53137

CARCO MODEL 50-PS & PSC WINCH  
HYDRAULIC CONTROL GROUP

REF.	CARCO PART NO.	NAME AND DESCRIPTION	QUAN. PER UNIT
1	16013-18	Clamp, Hose (DUPAGE B64H)	1
2	53740	Cap	1
3	16024-0020	Screw, Hex Hd Cap (drilled head 3/8-16 x 5/8)	2
4	16034-4	Nut, Hex (1/4-28 UNF-2B)	1
5	16056-612	Screw, Soc Set (3/8 x 3/4 UNC-3A cup)	1
6	16113-88	Adapter (AIRWAY 6400-8-8)	2
7	16114-84	Adapter (WH C3269 x 8 x 4)	1
8	16116-68	Adapter (WH C5255 x 8)	2
9	16129-44	Connector (WH C5205 x 4 x 4)	1
10	16129-0048	Connector (WH C5205 x 8 x 4)	3
11	(Ref) 53069	Adapter, Ball Check (Part of #31)	1
12	16129-68	Connector (WH C5205 x 8)	3
13	16146-88	Elbow, 90° (WH C5515 x 8)	1
14	16262-908	O-Ring (NAT'L. 600503)	8
15	16158-407	Nipple, Pipe (1/4 x 7/8)	1
16	16158-624	Nipple, Pipe (3/8 x 3)	1
17	16160-0064	Nipple, Hex (WH C3069 x 6 x 4)	1
18	16167-6	Plug, Hex Soc Pipe (3/8 NPTF)	1
19	16135-4	Coupling, Pipe (1/4 NPT)	1
20	16185-88	Union, 90° (ANCHOR 8JMA-8JUFS)	6
21	16197-4	Elbow, 90° Street (WH C3409 x 4)	1
22	16262-114	O-Ring (NAT'L. 622712)	1
23	16362-44	Snubber (CHEMIQUIP 25B-D)	1
24	16158-428	Nipple, Pipe (1/4 x 3-1/2 NPT)	1
25	16158-616	Nipple, Pipe (3/8 x 2-1/2 NPT)	1
26	16475-4	Accumulator (GREER A-67547-200)	1
27	16498-0086	Elbow, 90° (WH C3459 x 8)	2
28	16545-0008	Tee (WH C5715 x 8)	1
29	53217	Bracket	1
30	51278-03	Valve, Flow Control (CIRCLE SEAL 2595-2PP .188)	2
31	(Ref) 53133	Valve Assy (See Pages 24,25)	1
32	53045	Bracket	2
33	53113-0046	Hose Assy	2
34	53113-0024	Hose Assy	4
35	(Ref) 16047-810	Screw, Hex Hd Cap (1/2 x 1-1/4 UNC Grade 5)	3



CARCO MODEL 50-PS & PSC WINCH  
VALVE ASSEMBLY



VALVE ASSEMBLY 53133

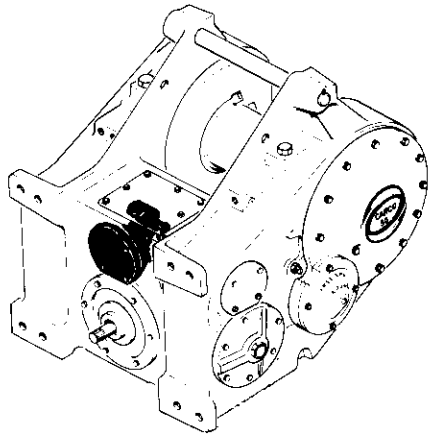
CARCO MODEL 50-PS & PSC WINCH  
VALVE ASSEMBLY

REF.	CARCO PART NO.	NAME AND DESCRIPTION	QUAN. PER UNIT
-	53133	Valve Assy	1
1	16262-912	O-Ring (NAT'L. 600501)	1
2	16057-608	Screw, Soc Set (3/8 x 1/2 UNF)	1
3	16262-908	O-Ring (NAT'L. 600503)	1
4	16262-116	O-Ring (NAT'L. 622714)	1
5	16217-8	Ball, Steel (1/2)	1
6	52392	Spring	1
7	52719	Spring	1
8	16262-210	O-Ring (NAT'L. 622715)	1
9	16262-215	O-Ring (NAT'L. 622720)	1
10	53069	Adapter, Ball, Check	1
11	16305-157	Ring, Retaining (SPIROLOX RR-157)	1
12	16308-131	Ring, Retaining (SPIROLOX RS-131)	1
13	16313-75	Ring, Retaining (TRUARC 5100-75)	1
14	16314-150	Ring, Retaining (TRUARC N5000-150)	1
15	16044-12	Nut, Hex Jam (3/4 UNC)	1
16	44259-1	Stop, Spring	1
17	45548	Spring	1
18	45549	Spring	1
19	45622	Washer	1
20	45623	Stop, Spring	1
21	NSS	* Piston	1
22	45857	Spring	1
23	NSS	* Spool, Valve	1
24	NSS	* Body, Valve	1
25	NSS	** Seat, Relief Valve	1
26	NSS	** Tube, Relief Valve	1
27	51133	Screw, Retaining	1
28	NSS	** Piston, Relief Valve	1
29	51135	Screw, Adjusting	1
30	51154	Stop, Spring	1
31	51881-10	Shim Set	1
32	51164	Piston, Accum. Check	1
33	51883-1	Retainer Assy	1
34	51886	Seat	1
35	51894	Spring	1
36	52651 (Not Shown)	Kit, Valve Spool (Items 2, 5, 9, 11, 12, 13, 14, 17, 18, 22)	1
37	52652 (Not Shown)	Kit, Relief Valve (Items 7, 8, 25, 26, 28)	1
38	52653 (Not Shown)	Kit, Accumulator Check (Items 1, 4, 8, 31, 32, 34, 35)	1

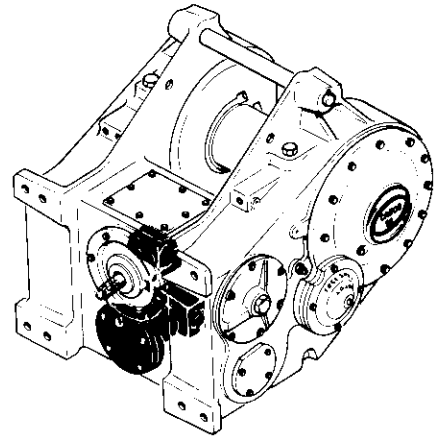
\*Items 21, 23, 24 Not Serviced Separately. Order 53133 Valve Assembly.

\*\*Available in Kit Only. See Item 37.

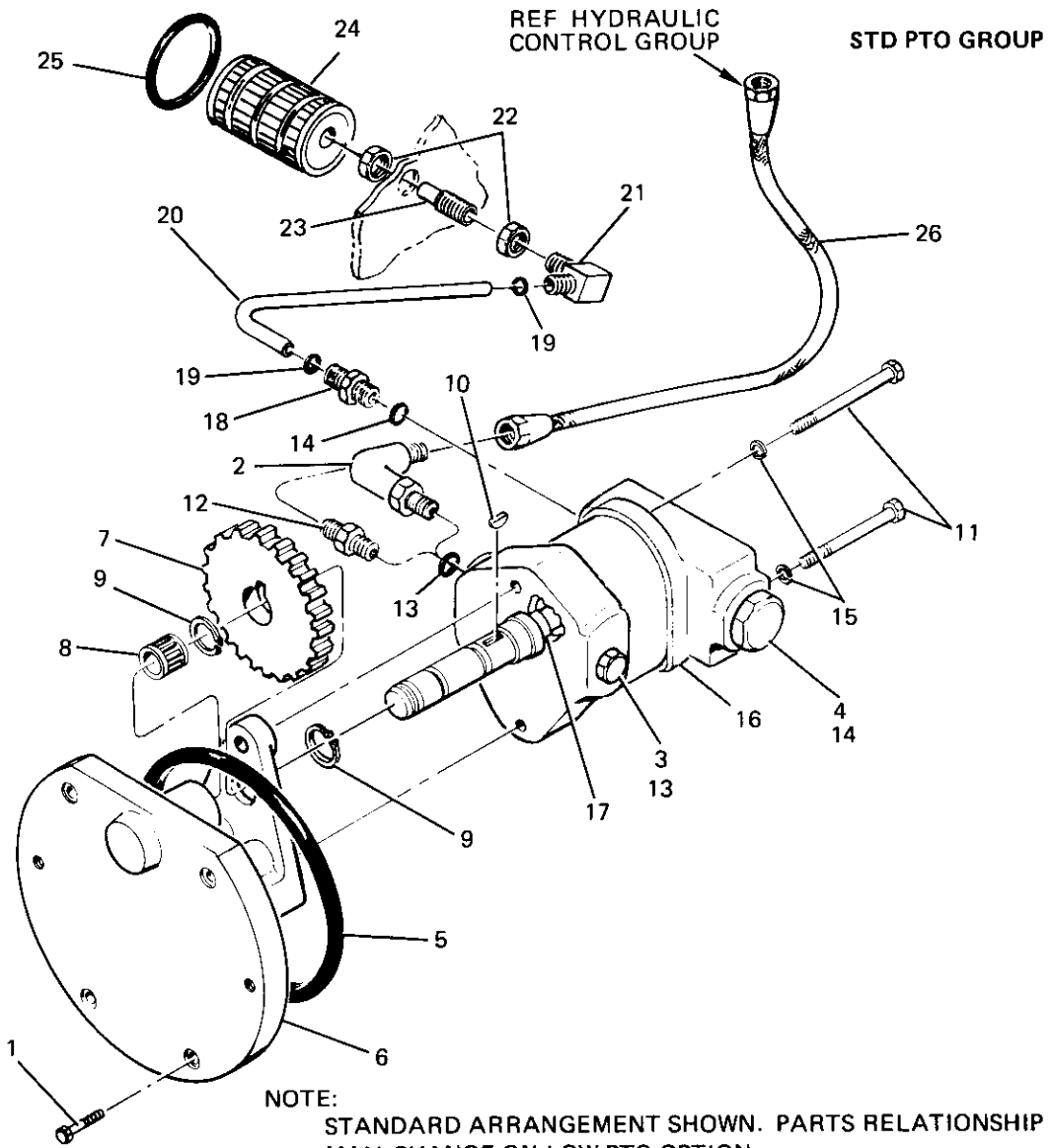
CARCO MODEL 50-PS & PSC WINCH  
PUMP GROUP



LOW PTO GROUP



STD PTO GROUP



PUMP GROUP 53122

CARCO MODEL 50-PS & PSC WINCH  
PUMP GROUP

REF.	CARCO PART NO.	NAME AND DESCRIPTION	QUAN. PER UNIT
1	16047-808	Screw, Hex Hd Cap (1/2 x 1 UNC grade 5)	4
2	16146-88	* Elbow, 90° Male (WH C5515 x 8)	1
3	16166-8	Plug, O-Ring Hex Hd (WH 7237 x 8)	1
4	16166-12	Plug, O-Ring Hex Hd (WH 7237 x 12)	1
5	16262-258	O-Ring (NAT'L. 623036)	1
6	53079	Mount, Pump	1
7	53012	Gear	1
8	15305	Bearing, Needle (TORRINGTON J1012)	1
9	16313-62	Ring, Retaining (TRUARC 5100-62)	2
10	16226-7	Key (WOODRUFF #3) (Part of #16)	1
11	16047-428	Screw, Hex Hd Cap (1/4 x 3-1/2 UNC grade 5)	2
12	16113-88	** Adapter (WH C5315 x 8)	1
13	16262-908	O-Ring (NAT'L. 600503)	2
14	16262-912	O-Ring (NAT'L. 600501)	2
15	16064-4	Washer, Plain (1/4)	2
16	{ 53140-0001	*** Pump, CCW Webster	1
	{ 53139	**** Pump, CW Webster	1
17	16284-95	Seal (WEBSTER 151-35818) (Part of #16)	1
18	53220	Connector (LENZ A105-12BT)	1
19	16262-018	O-Ring (NAT'L. 610025)	2
20	{ 51959-07	* Tube, Suction (Std PTO)	1
	{ 51959-08	** Tube, Suction (Low PTO)	1
21	16152-0012	Elbow (LENZ 405-12)	1
22	16017-0020	Nut, Lock 1-5/8-12 (WH 7924 x 20)	2
23	53218	Connector	1
24	16538-0001	Strainer (MARVEL 510-5-M-40)	1
25	(Ref) 16262-236	O-Ring (NAT'L. 623014) (REF Case and Covers)	1
26	53113-0032	Hose	1

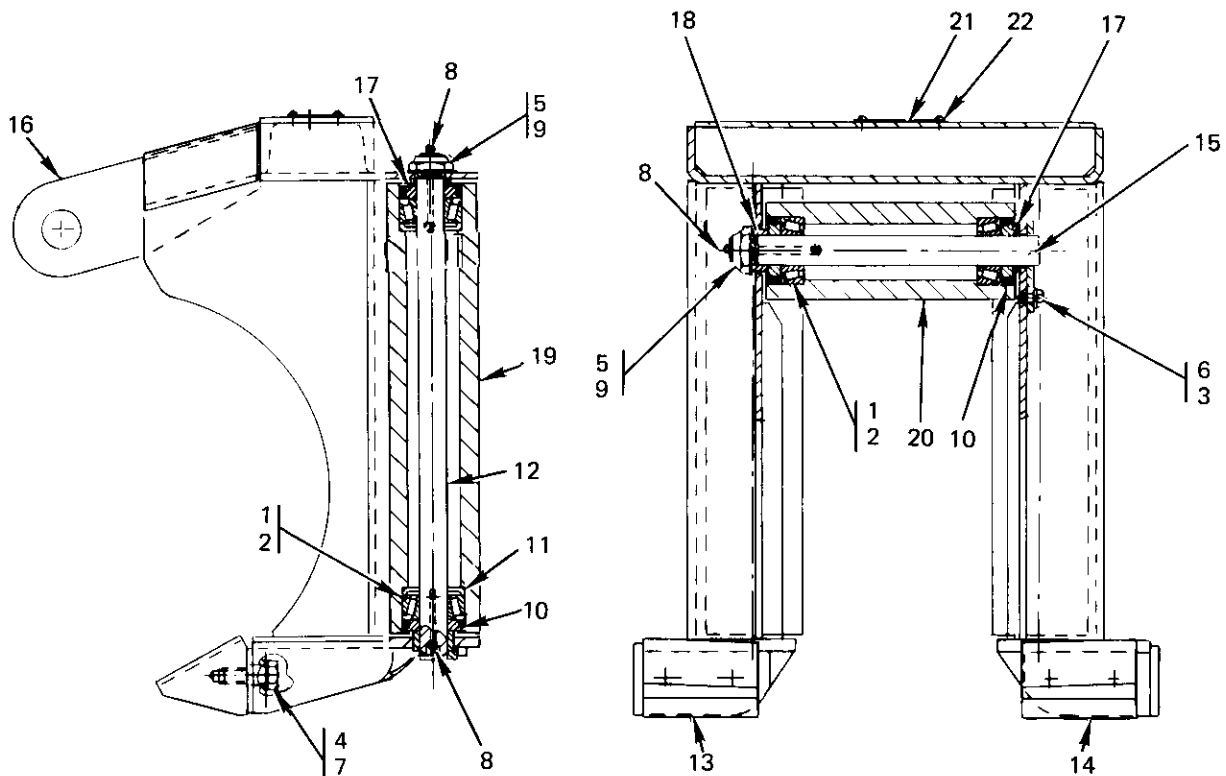
\*Used on Standard PTO only

\*\*Used on Low PTO only

\*\*\*For use on Cat, Case, IH & JD only

\*\*\*\*For use on Fiat and Komatsu only

CARCO MODEL 50-PS & PSC WINCH  
FAIRLEAD ASSEMBLY



FAIRLEAD ASSEMBLY 53249

REF.	CARCO PART NO.	NAME AND DESCRIPTION	QUAN. PER UNIT
-	53249	Fairlead Assy (includes the following):	1
1	15178	Cone, Bearing (TIMKEN 4388)	6
2	15235	Cup, Bearing (TIMKEN 4335)	6
3	16047-808	Screw, Hex Hd Cap (1/2 x 1 UNC)	1
4	16047-1418	Screw, Hex Hd Cap (7/8 x 2-1/4 UNC)	4
5	16064-24	Washer, Plain (1-1/2)	3
6	16067-8	Washer, Lock (1/2)	1
7	16067-14	Washer, Lock (7/8)	4
8	16222-2	Fitting, Grease (ALEMITE 16108L)	5
9	16533-24	Nut, Lock (ESNA 41NTE-242)	3
10	30044	Guard, Dust	6
11	30045	Retainer, Grease	4
12	53243-0001	Shaft, Vertical	2
13	53244-0001	Plate, Tap, R.H.	1
14	53244-0002	Plate, Tap, L.H.	1
15	53245-0001	Shaft, Horizontal	1
16	53248	Frame	1
17	53281-0001	Spacer	3
18	53281-0003	Spacer	1
19	53283-0002	Roller, Vertical	2
20	53283-0003	Roller, Horizontal	1
21	53449	Plate, Name	1
22	16055-5	Screw, Tapping (#10 x 3/8)	4