



Meritor MTC3120FV / Fabco TC-143 Transfer Case Parts Manual

Pro Gear Meritor MTC3120FV / Fabco TC-143 Transfer Case Parts Manual to assist in identifying your Meritor / Fabco unit.

If you need any assistance identifying the correct transfer case unit for your truck and equipment, contact your Meritor / Fabco replacement part specialists at Pro Gear and Transmission.

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 Meritor / Fabco specialists at Pro Gear & Transmission, Inc.

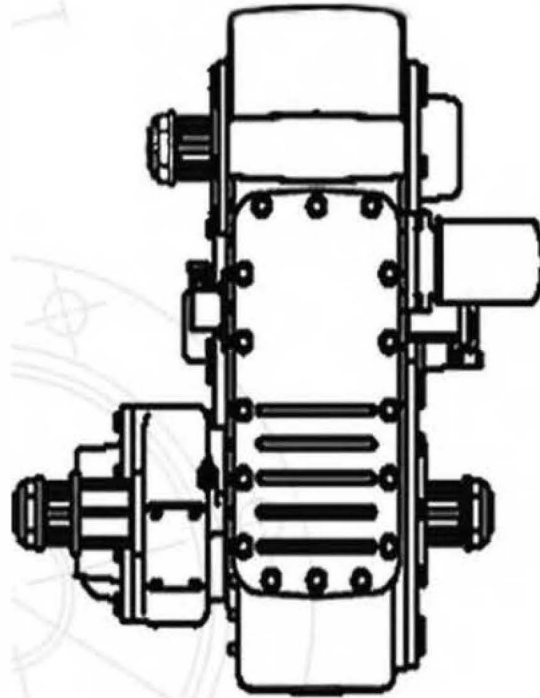
1 (877) 776-4600
(407) 872-1901
parts@eprogear.com



Fabco

FABCO AUTOMOTIVE CORPORATION

TC-143 TRANSFER CASE PARTS & SERVICE MANUAL



FABCO AUTOMOTIVE CORPORATION

Pro Gear and Transmission • 906 W. Gore St. Orlando, FL 32805 • 1 (877) 776-4600 / (407) 872-1901 • parts@eprogear.com

TABLE OF CONTENTS

SECTION		PAGE
1.0	<u>TC-143 TRANSFER CASE SERVICE MANUAL</u>	
1.1	INTRODUCTION.....	3
1.2	SPECIFICATIONS.....	3
1.3	ASSEMBLY VIEWS.....	4
2.0	<u>LUBRICATION</u>	
2.1	RECOMMENDED LUBRICANTS.....	11
2.2	INSPECTION.....	11
2.3	OIL CHANGE.....	11
2.4	DRAINING THE OIL.....	11
2.5	REFILLING THE OIL.....	11
2.6	OPERATING TEMPERATURE.....	12
3.0	<u>CLEANING & INSPECTION</u>	
3.1	CLEANING.....	13
3.2	DRYING & CORROSION PROTECTION.....	13
3.3	INSPECTION.....	13
4.0	<u>GENERAL INSTRUCTIONS</u>	
4.1	SAFETY.....	14
4.2	ASSEMBLY PRECAUTIONS.....	14
4.3	REMOVAL & INSTALLATION.....	15
5.0	<u>DISASSEMBLY</u>	
5.1	GENERAL DISASSEMBLY.....	17
5.2	DISASSEMBLY OF SUBASSEMBLIES.....	25
6.0	<u>ASSEMBLY</u>	
6.1	INTERMEDIATE & INPUT SHAFT SUBASSEMBLY & INSTALLATION.....	26
6.2	REAR OUTPUT SHAFT SUBASSEMBLY.....	32
6.3	REAR OUTPUT SHAFT INSTALLATION.....	36
6.4	SHAFT & BEARING END FLOAT ADJUSTMENT.....	39
6.5	PTO/FRONT DECLUTCH ASSEMBLY.....	40
6.6	SHIFT SHAFT ASSEMBLY.....	45
6.7	NEUTRAL SHIFTER ASSEMBLY.....	46
6.8	LUBRICATION PUMP ASSEMBLY.....	48
7.0	<u>TORQUE SPECIFICATIONS</u>	51
8.0	<u>PARTS MANUAL</u>	54
8.1	ILLUSTRATED PARTS.....	55
8.2	PARTS LIST.....	65
9.0	<u>TOOLS</u>	71

8.0 PARTS MANUAL

TABLE OF CONTENTS

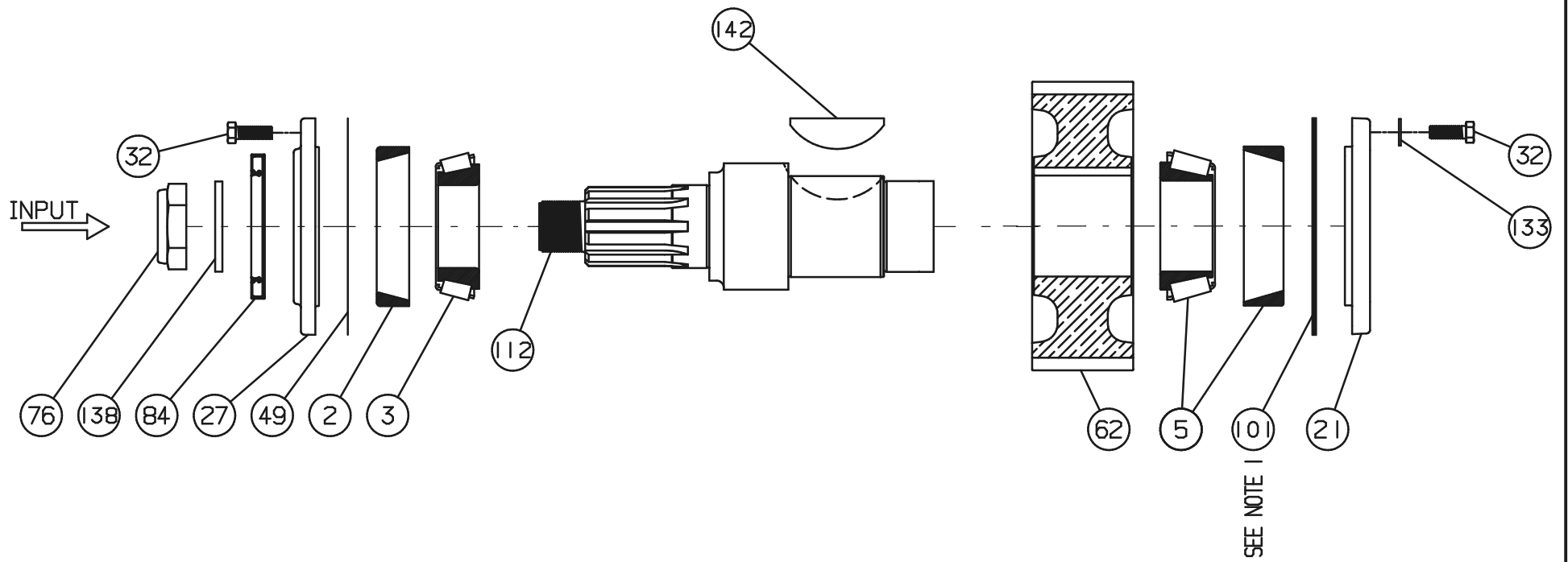
DRAWING	PAGE
MODEL #873-0031-006	
INPUT SHAFT.....	55
INTERMEDIATE SHAFT.....	56
OUTPUT SHAFT AND FRONT DECLUTCH HOUSING.....	57
CASE HOUSING.....	58
MODEL #873-0031-004	
INPUT SHAFT AND PTO HOUSING.....	59
INTERMEDIATE SHAFT.....	60
OUTPUT SHAFT AND FRONT DECLUTCH HOUSING.....	61
NEUTRAL SHIFTER.....	62
CASE HOUSING.....	63
PARTS LIST.....	64
NOTES.....	69

TO USE THIS ILLUSTRATED PARTS SECTION:

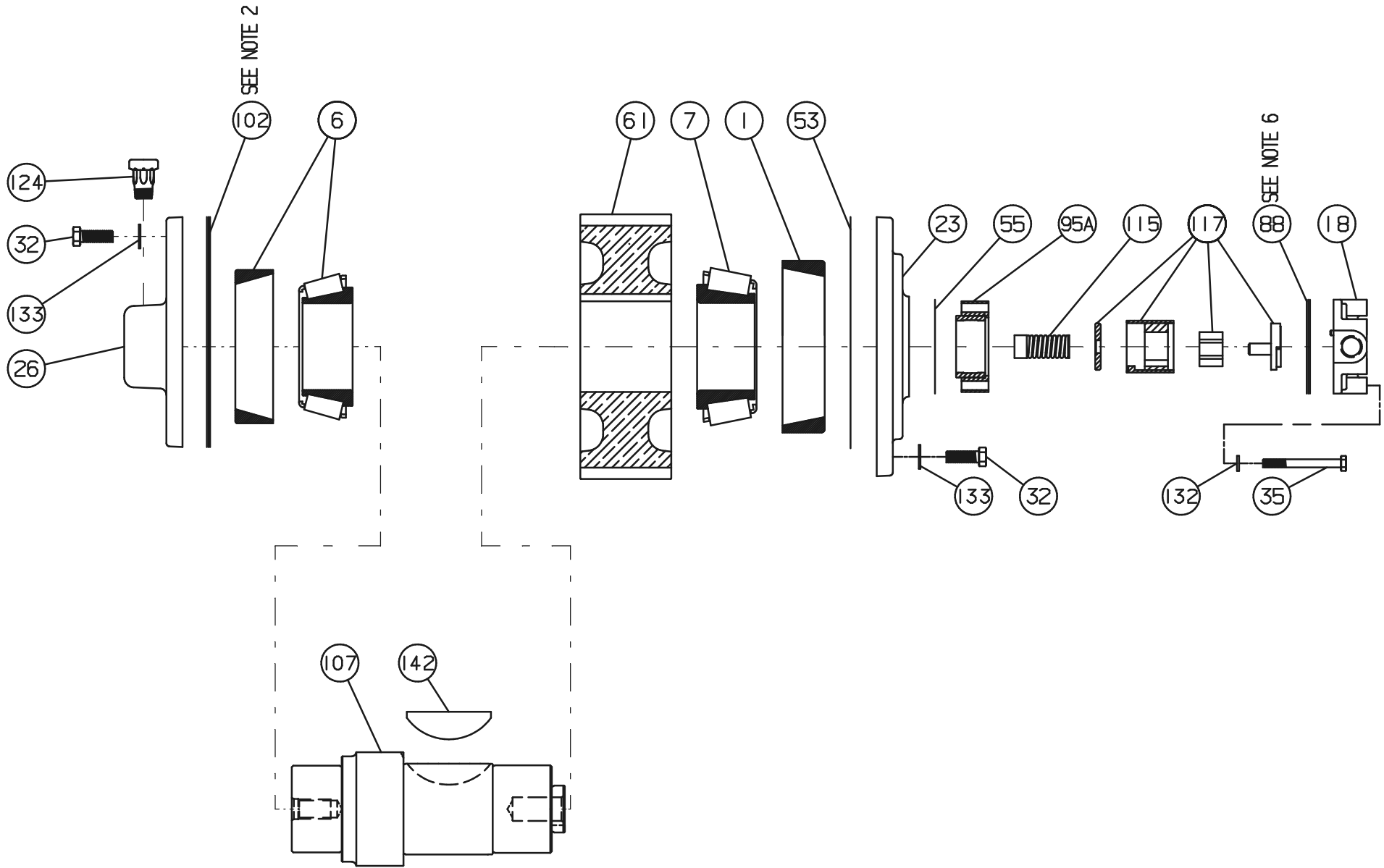
1. REFER TO THE DRAWINGS WHICH ILLUSTRATE THE REQUIRED PART
2. LOCATE THE REQUIRED PART AND NOTE THE ITEM NUMBER AND SPECIAL INSTRUCTIONS, IF APPLICABLE.
3. LOCATE THE ITEM NUMBER IN THE PARTS LIST AND REFERENCE THE FABCO PART NUMBER, SPECIFIED QUANTITY, AND DESCRIPTION.
4. BEFORE SPEAKING TO A FABCO REPRESENTATIVE, BE SURE TO LOCATE THE FABCO NAMEPLATE ATTACHED TO THE TRANSFER CASE HOUSING AND NOTE THE STAMPED MODEL-, PART-, OR SERIAL NUMBER.

THE PART NUMBERS CONTAINED IN THIS MANUAL WERE IN EFFECT AT THE TIME THE MANUAL WAS APPROVED FOR PRINTING AND ARE SUBJECT TO CHANGE WITHOUT NOTICE OR LIABILITY. FABCO AUTOMOTIVE CORPORATION RESERVES THE RIGHT TO CHANGE PARTS AT ANYTIME.

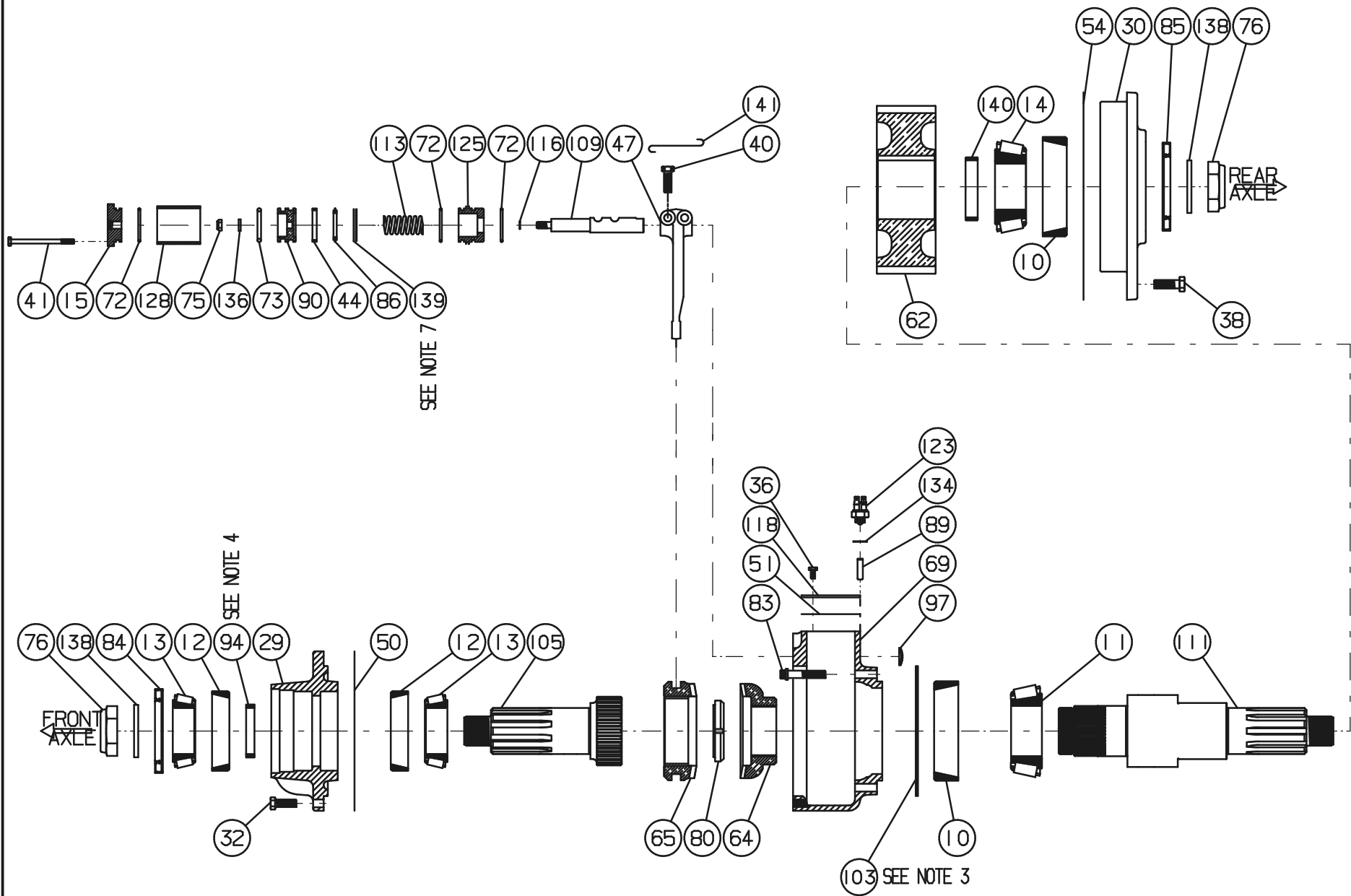
USE ONLY GENUINE FABCO PARTS



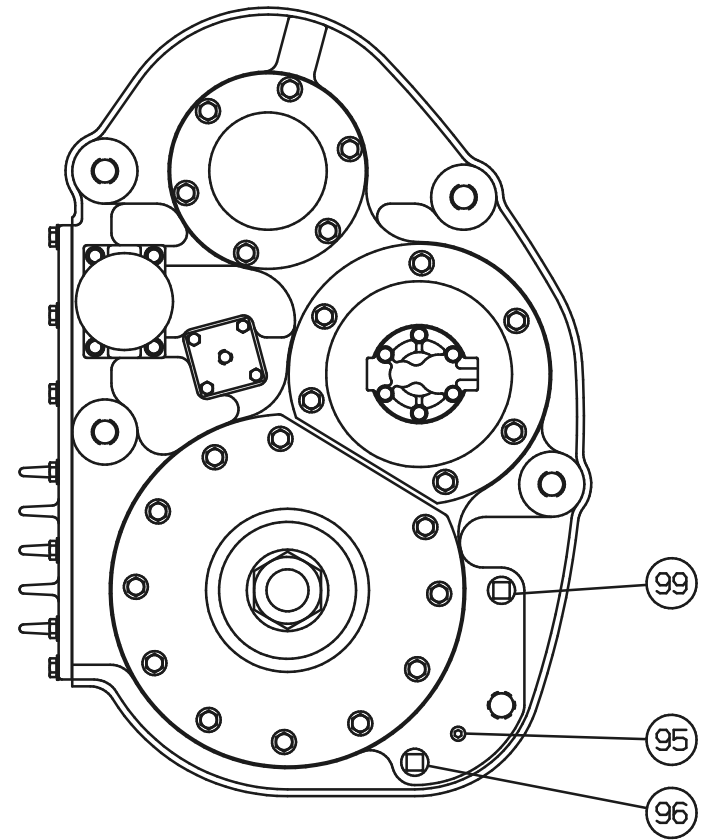
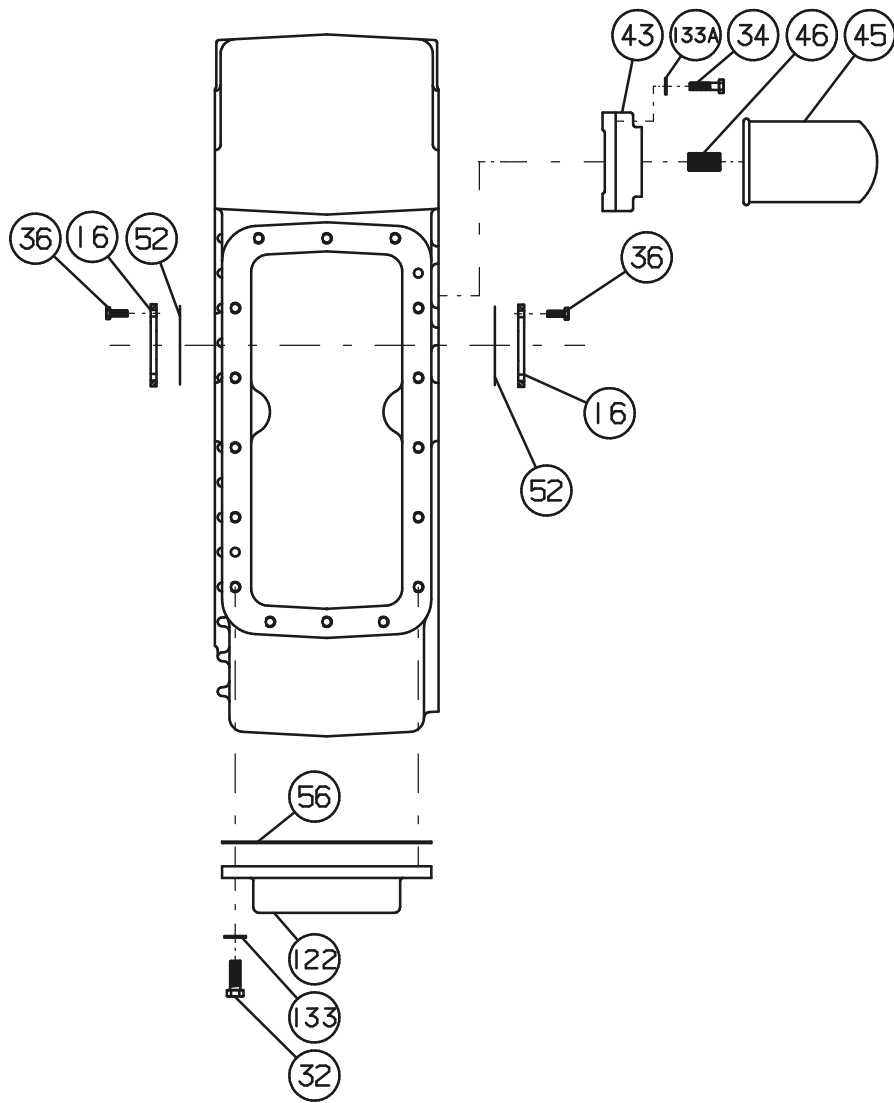
TC-143 INPUT SHAFT PARTS
873-0031-006



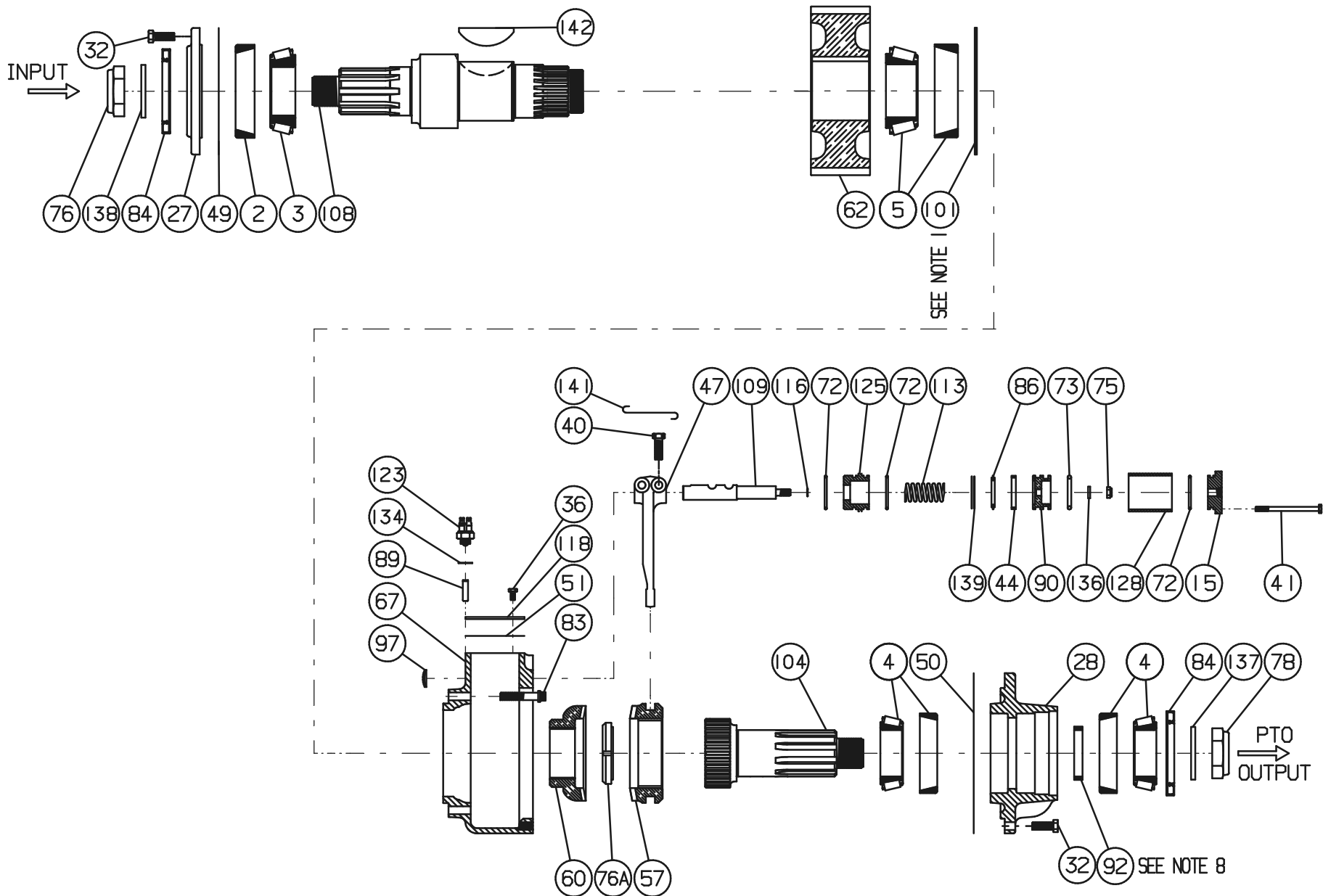
TC-143 INTERMEDIATE SHAFT PARTS
873-0031-006



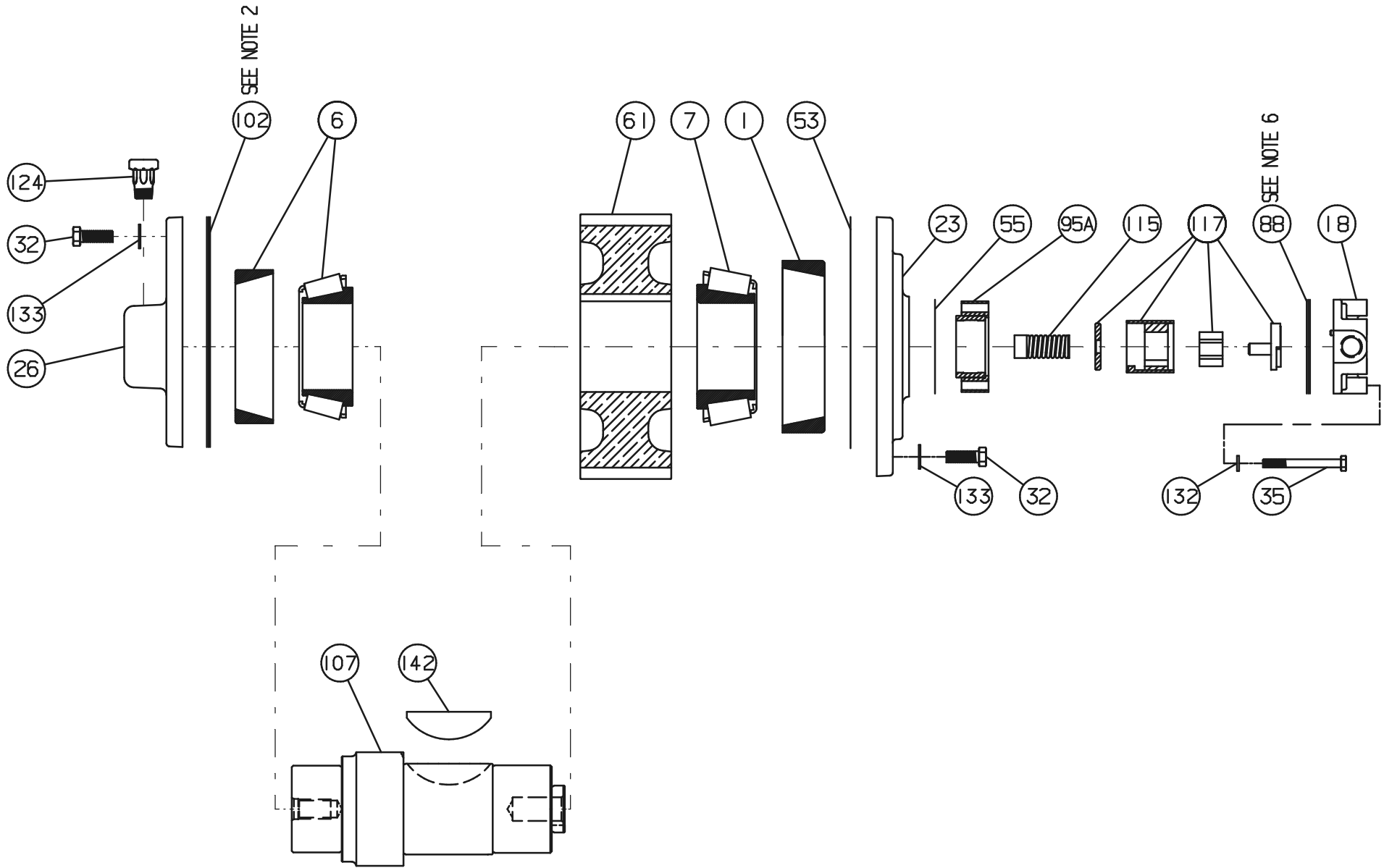
TC-143 OUTPUT SHAFT AND FRONT DECLUTCH HOUSING PARTS
873-0031-006



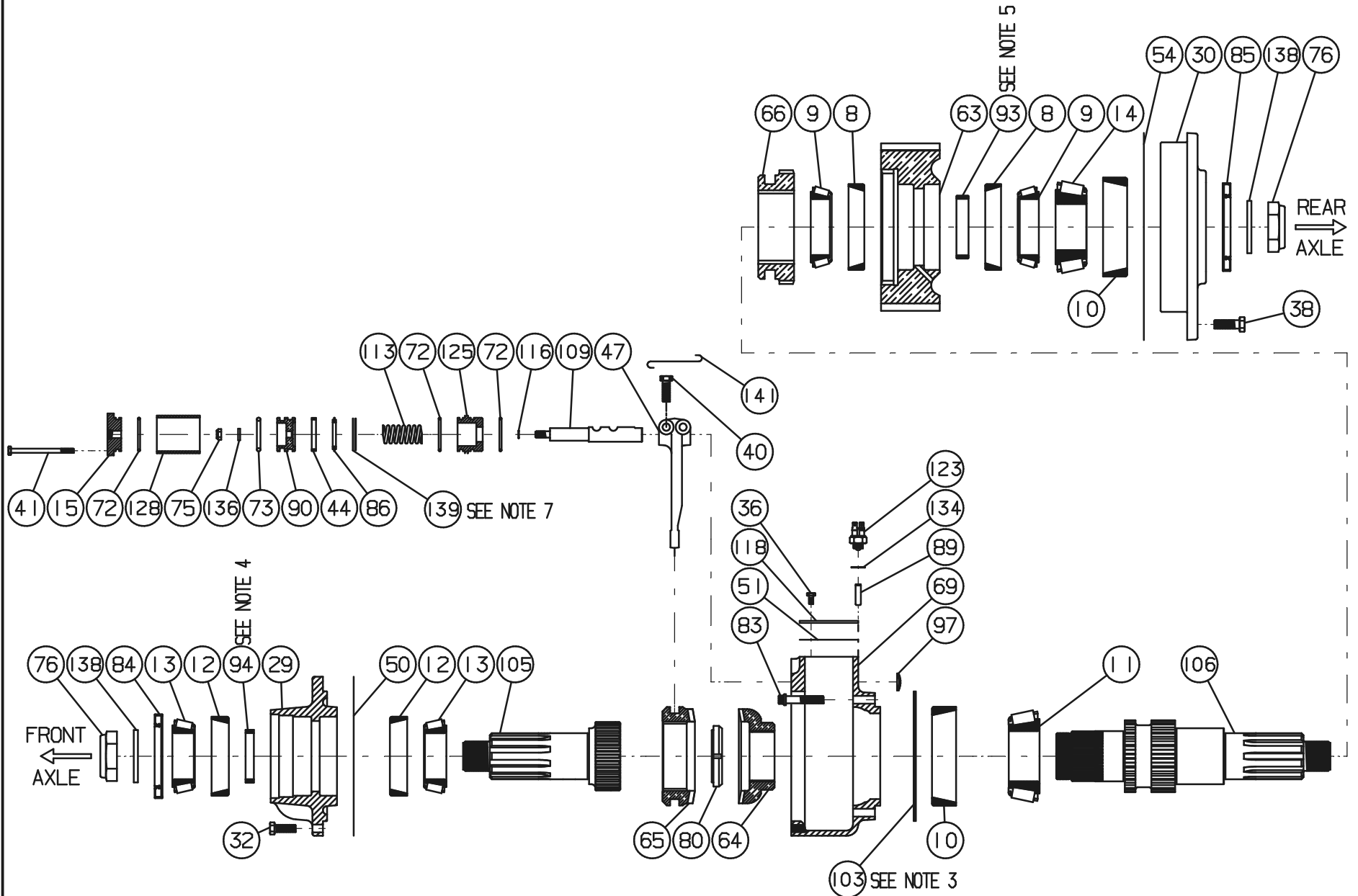
TC-143 CASE HOUSING PARTS
873-0031-006



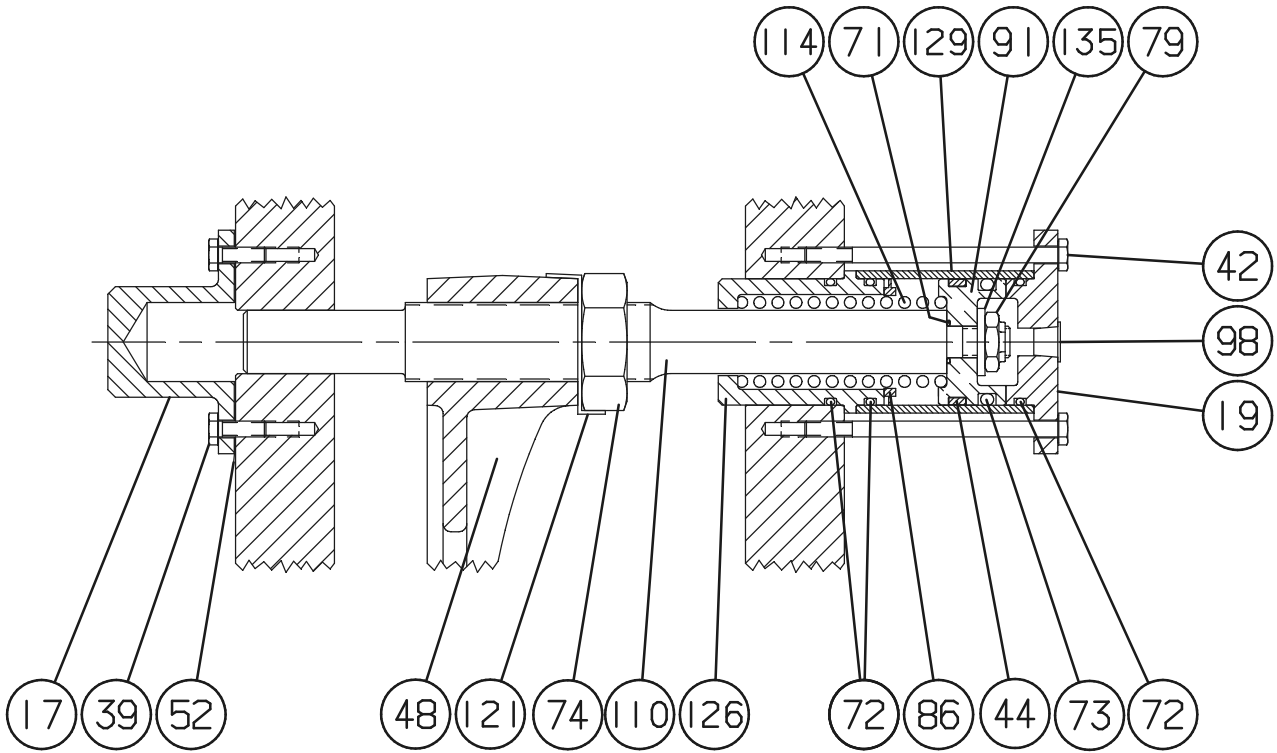
TC-143 INPUT SHAFT AND PTO HOUSING PARTS
873-0031-004



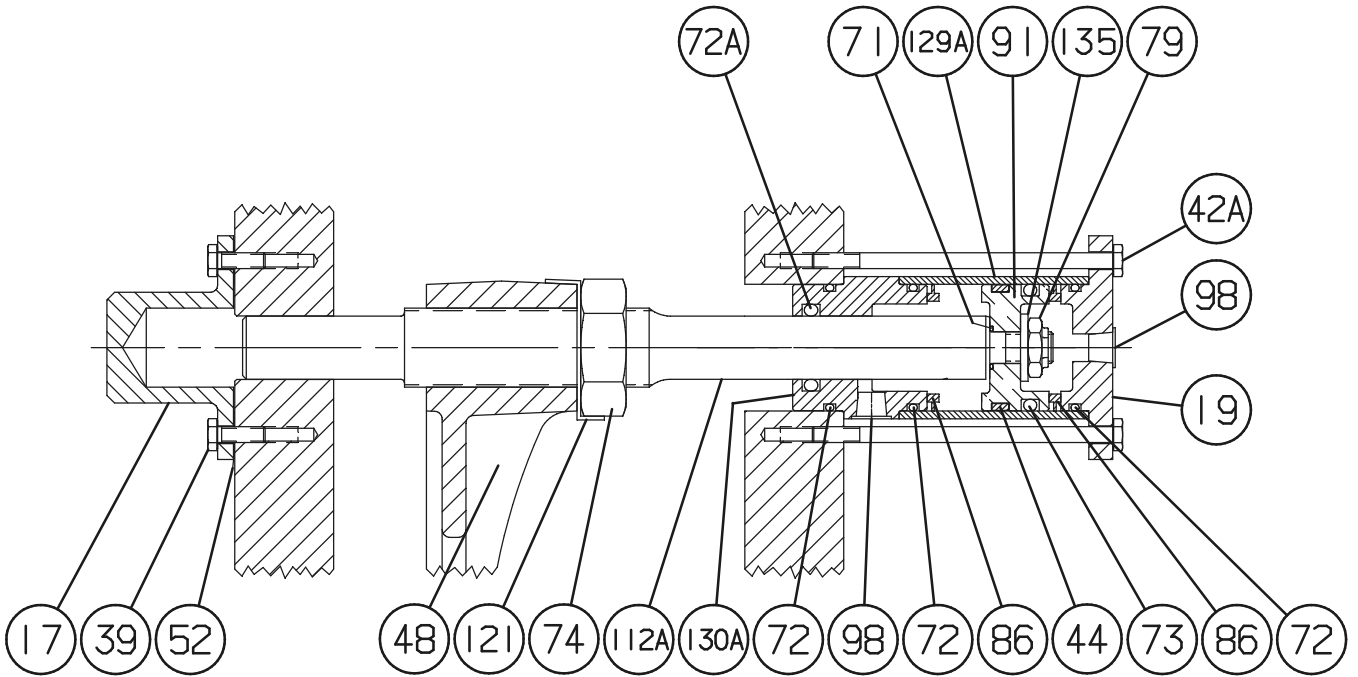
TC-143 INTERMEDIATE SHAFT PARTS
873-0031-004



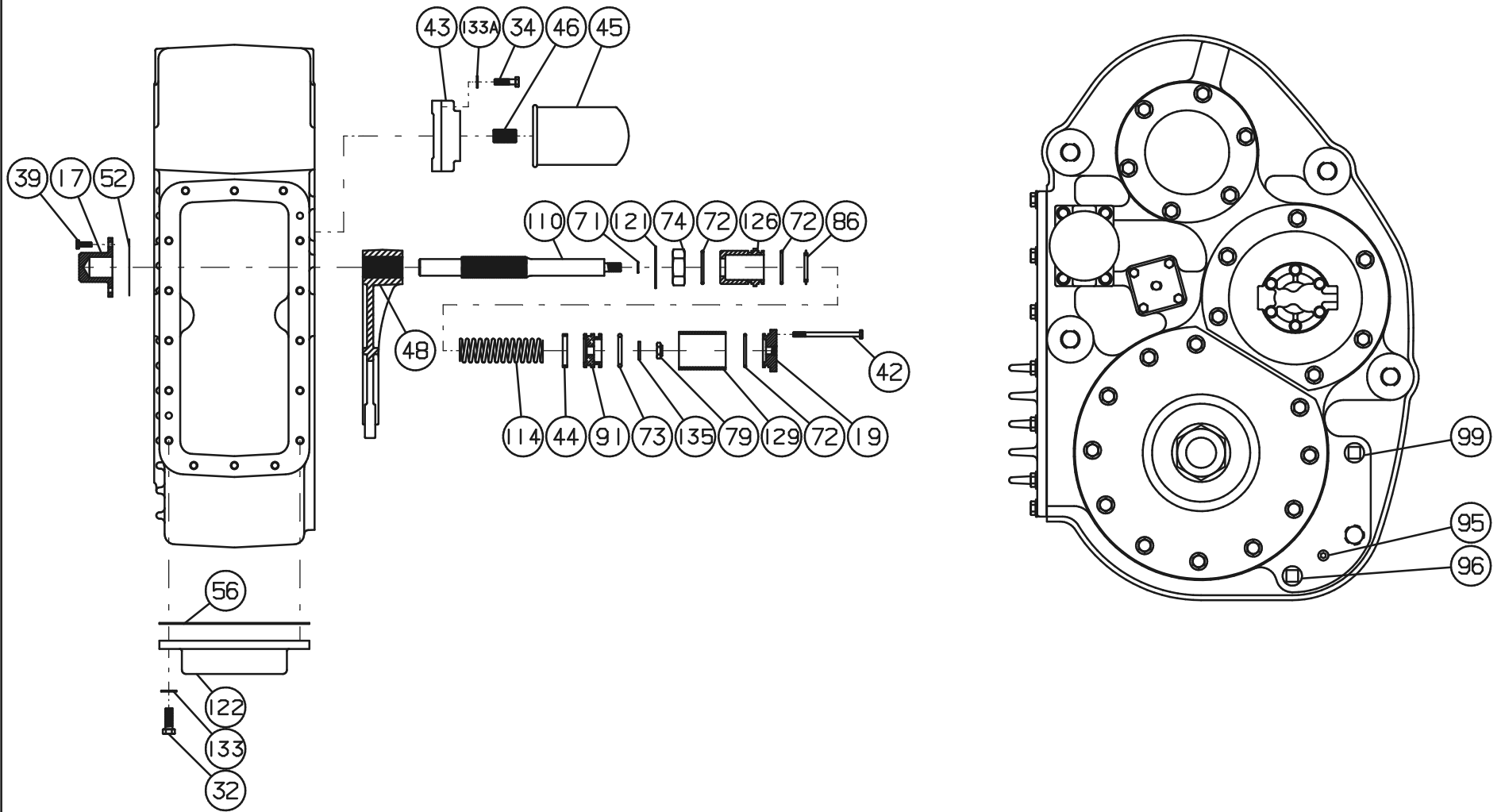
TC-143 OUTPUT SHAFT AND FRONT DECLUTCH HOUSING PARTS
873-0031-004



SINGLE ACTING SHIFT CYLINDER
873-0031-004



DUAL ACTING SHIFT CYLINDER
873-0031-101



TC-143 CASE HOUSING PARTS
873-0031-004

8.2 PARTS LIST

ITEM	PART NO.	DESCRIPTION	-006 QTY	-004 QTY
1	233-0245	BEARING CUP	1	1
2	233-0375	BEARING CUP	1	1
3	233-0489	BEARING CONE	1	1
4	233-0523	BEARING CUP & CONE ASSEMBLY	0	2
5	233-0524	BEARING CUP & CONE ASSEMBLY	1	1
6	233-0525	BEARING CUP & CONE ASSEMBLY	1	1
7	233-0526	BEARING CONE	1	1
8	233-0527	BEARING CUP	0	2
9	233-0528	BEARING CONE	0	2
10	233-0554	BEARING CUP	2	2
11	233-0556	BEARING CONE	1	1
12	233-0569	BEARING CUP	2	2
13	233-0572	BEARING CONE	2	2
14	233-0575	BEARING CONE	1	1
15	235-0352	CAP, SHIFT CYLINDER	1	2
16	235-0372	CAP, SHIFT SHAFT	2	0
17	235-0388	CAP	0	1
18	235-0492	CAP, OIL PUMP	1	1
19	235-0528	CAP	0	1
21	235-0568-002	CAP	1	0
23	235-0659	CAP	1	1
26	235-0636	CAP	1	1
27	237-0357	CARRIER	1	1
28	237-0393	CARRIER, BEARING & SEAL	0	1
29	237-0622-001	CARRIER	1	1
30	237-0624	CARRIER	1	1
32	265-0238	BOLT, 7/16-14 x 1-1/4 GR5 HH	48	50
34	265-0323	BOLT, 5/16-18 x 1-1/4 GR5 HH	4	4
35	283-0245	BOLT, 5/16-18 x 3 GR5 HH	6	6
36	265-0343	BOLT, 1/4-20 x 1/2 GR5 HH	12	8
38	265-0363	BOLT, 1/2-13 x 1-1/2 GR5 HH	11	11
39	265-0386	BOLT, 1/4-20 x 3/4 GR5 HH	0	4
40	265-0768	BOLT, 7/16-20 x 1-1/2 GR8 HH	2	4
41	265-0769	BOLT, 1/4-20 x 3-3/4 GR5 HH	4	8

8.2 PARTS LIST

ITEM	PART NO.	DESCRIPTION	-006 QTY	-004 QTY
42	265-0892	BOLT, 1/4-20 x 4 GR5 HH	0	4
42A	265-0982	BOLT, 1/4-20 x 4-3/4 GR5 HH	0	0
43	273-0764	BRACKET, OIL FILTER MTG	1	1
44	339-0223	FELT WIPER	1	3
45	345-0267	FILTER, OIL	1	1
46	356-0365	NIPPLE, .75-16 UNF x 1.5 LONG	1	1
47	367-0254	FORK, SHIFT	1	2
48	367-0278	FORK, SHIFT	0	1
49	427-0372-001	GASKET	1	1
50	427-0375	GASKET, DECLUTCH CARRIER	1	2
51	427-0376	GASKET, DECLUTCH COVER	1	2
52	427-0399	GASKET, SHIFT SHAFT CAP	2	1
53	427-0428	GASKET, INTERMEDIATE CAP	1	1
54	427-0432	GASKET	1	1
55	427-0468	GASKET, OIL PUMP	1	1
56	427-0535	GASKET, HOUSING, TC-143	1	1
57	432-0426	GEAR, CLUTCH COLLAR.	0	1
59	432-0563	GEAR, CLUTCH	0	1
60	432-0738	GEAR, PD LOCKOUT	0	1
61	432-0679	GEAR, 47 TOOTH, INTERMEDIATE, HELICAL	1	1
62	432-0682	GEAR, 45 TOOTH, UPPER, HELICAL	2	1
63	432-0722	GEAR, 45 TOOTH, HELICAL	0	1
64	432-0688	GEAR, FACE CLUTCH, FRONT DECLUTCH	1	1
65	432-0689	GEAR, FRONT DECLUTCH, SLIDING CLUTCH	1	1
66	432-0723	GEAR, COLLAR, SLIDING CLUTCH	0	1
67	478-0232	HOUSING, PTO DECLUTCH	0	1
68	478-0265	HOUSING, TRANSFER CASE	1	1
69	478-0267	HOUSING, FRT DECLUTCH	1	1
70	626-0228	DATA PLATE, SERIAL NO.	1	1
71	675-0014-B46	O-RING, .489 ID, .070 THK, BUNA-N	0	
72	675-0224-B46	O-RING	3	9
72A	675-0318	O-RING	0	0
73	675-0326-B46	O-RING	1	3
74	688-0245	NUT, 1-1/4-12 HEX 2B JAM	0	1

8.2 PARTS LIST

ITEM	PART NO.	DESCRIPTION	-006 QTY	-004 QTY
75	688-0464	NUT, 3/8-24, THIN, PLATED, HEX, LOCK.	1	2
76	688-0642	NUT, 1-3/4-16 UN-3B, HEX, SELF LOCKING	3	3
76A	688-0645	NUT, SELF LOCKING, TN13, W/DRI-LOC #201	0	1
78	688-0694	NUT, 1-1/2-12 HEX SELF LOCKING	0	1
79	688-0725	NUT, 1/2-13 HEX, THIN	0	1
80	688-0744	NUT, SELF LOCKING, W/DRI-LOC #201	1	1
83	724-0276	SCREW, DRIVE, #6 x 5/16	2	2
83	724-0677	SCREW, CAP 7/16-14 x 2-1/4, 12PT FLANGED	6	12
84	732-0333	SEAL, OIL	2	3
85	732-0428	SEAL, OIL W/REDICOAT	1	1
86	736-0747	RING, STOP, PISTON	1	3
86A	737-0540-001	KIT, PIPING, LUBRICATION, TC-143.	1	0
86B	737-0540-002	KIT, PIPING, LUBRICATION, TC-143.	0	1
87	742-0799	SHAFT, SHIFT	0	1
88	744-0324	SHIM, OIL PUMP		SEE NOTE 6
89	746-0628	DOWEL PIN, .3125 x 1-1/4 STANDARD	1	2
90	753-0232	PISTON, SHIFT	1	2
91	753-0245	PISTON, AIR SHIFT CYLINDER	0	1
92	756-0233-003	*RING, BEARING SPACER, .306 THK.		
	756-0233-004	*RING, BEARING SPACER, .311 THK.		
	756-0233-005	*RING, BEARING SPACER, .316 THK.		
	756-0233-006	*RING, BEARING SPACER, .321 THK.		SEE NOTE 8
	756-0233-007	*RING, BEARING SPACER, .326 THK.		
	756-0233-008	*RING, BEARING SPACER, .331 THK.		
	756-0233-009	*RING, BEARING SPACER, .336 THK.		
93	756-0237-001	*RING, BEARING SPACER, .719 THK.		
	756-0237-002	*RING, BEARING SPACER, .716 THK.		SEE NOTE 5
	756-0237-003	*RING, BEARING SPACER, .713 THK.		
	756-0237-004	*RING, BEARING SPACER, .710 THK.		
94	756-0287-001	*RING, BEARING SPACER, .540 THK		
	756-0287-002	*RING, BEARING SPACER, .545 THK		SEE NOTE 4
	756-0287-003	*RING, BEARING SPACER, .550 THK		
	756-0287-004	*RING, BEARING SPACER, .555 THK		
95	758-0255	PLUG	1	1

8.2 PARTS LIST

ITEM	PART NO.	DESCRIPTION	-006 QTY	-004 QTY
95A	756-1324	SUB-ASSEMBLY, RING & BEARING	1	1
96	758-0274	PLUG, 3/4 NPT SQUARE SCKT HEAD MAGNET	1	1
97	758-0328	PLUG, WELCH 1in	1	2
98	758-0338	PLUG, 1/4 NPT, PLASTIC	1	3
99	758-0352	PLUG, 3/4 PIPE SQUARE EXTERNAL HEAD	1	1
100	762-0288	RING, SNAP	0	1
101	744-0278	*SHIM, CORAL .030 THICK		
	744-0279	*SHIM, PINK .015 THICK		SEE NOTE 1
	744-0282	*SHIM, BLUE .005 THICK		
	744-0283	*SHIM, RED .002 THICK		
102	744-0332	*SHIM, CORAL .030 THK		
	744-0333	*SHIM, PINK .015 THICK		SEE NOTE 2
	744-0334	*SHIM, BLUE .005 THK		
	744-0335	*SHIM, RED .002 THICK		
103	744-0357-001	*SHIM, RED .002 THK		
	744-0357-002	*SHIM, BLUE .005 THK		SEE NOTE 3
	744-0357-003	*SHIM, PINK .015 THICK		
	744-0357-004	*SHIM, CORAL .030 THK		
104	776-0237	SHAFT	0	1
105	776-0287	SHAFT	1	1
106	776-0288	SHAFT	0	1
107	776-0289	SHAFT	1	1
108	776-0292	SHAFT	0	1
109	776-0296	SHAFT,SHIFT, FRONT DECLUTCH	1	1
110	776-0297	SHFT SHFTR NEUTRL SINGL ACTNG CYL.	0	1
111	776-0298	SHAFT	1	0
112	776-0299	SHAFT	1	0
112A	776-0345	SHFT SHFTR NEUTRL DUAL ACTNG CYL.	0	0
113	777-0477	SPRING, HELICAL COMPRESSION	1	2
114	777-0486	SPRING, H-U S.S.	0	1
115	777-0536	SPRNG ASSY, LUB PMP PRSS RELIEF	1	1
116	782-0288	O-RING, PISTON	1	2
117	786-0296	PUMP CARTRIDGE	1	1
118	792-0866	PLATE, DECLUTCH COVER	1	2

8.2 PARTS LIST

ITEM	PART NO.	DESCRIPTION	-006 QTY	-004 QTY
121	793-0464	PLATE, SHIFT FORK NUT, LOCKING	0	1
122	793-0473	COVER	1	1
123	798-0245	SWITCH, INDICATOR LIGHT	1	2
124	836-0223	VENT, BREATHER 3/8 NPT	1	1
125	883-0482	TUBE, SHIFT CYLINDER ADAPTER	1	2
126	883-0683	TUBE, ADAPTER, SHIFT CYLINDER.	0	1
127	883-0887-001	TUBE, SHIFT CYLINDER 2.75 LG.	0	1
128	883-0887-017	TUBE, FR DECLTCH SHFT CYLNDR 2.568	1	1
129	883-0887-018	TUBE, NEUTRAL SHIFT CYLINDER 2.810	0	1
129A	883-0887-019	TUBE, NEUTRL SHFT CYLNDR, DUAL ACTNG	0	1
130	883-0992	TUBE, SHIPPING	0	1
130A	883-0993	TUBE, SHIFT CYLINDER ADAPTER	0	0
131	883-0997	TUBE, SHIPPING	3	3
132	927-0299	WASHER, 5/16 , SPRNG LOCK (SPLIT)	6	6
133	927-0347	WASHER, 7/16 SAE PLAIN	34	28
133A	927-0364	WASHER, 5/16 SAE, FLAT, PLAIN	4	4
134	927-0427	WASHER, COPPER, SEALING	1	2
135	927-0553	WASHER, 1/2, HARDENED, PLATED.	0	1
136	927-0643	WASHER, SHIFT SHAFT, 3/8 I.D.	1	2
137	927-0775-005	WASHER, FLAT, HARDENED	0	1
138	927-0775-006	WASHER, FLAT, HARDENED	3	3
139	927-0822	WASHER, NYLON PISTON STOP	SEE NOTE 7	
140	927-0839	WASHER	1	0
141	947-0223	WIRE, LOCK, 18 GA	1	2
142	966-0327	KEY, WOODRUFF, HARDENED	3	2

NOTES:

1. SELECT SHIMS, ITEM 101, TO ACHIEVE .003 TO .008 END FLOAT ON UPPER SHAFT:
744 278, .030 THICK, CORAL
744 279, .015 THICK, PINK
744 282, .005 THICK, BLUE
744 283, .003 THICK, RED.
2. SELECT SHIMS, ITEM 102, TO ACHIEVE .003 TO .008 END FLOAT ON INTERMEDIATE SHAFT:
744 332, .030 THICK, CORAL
744 333, .015 THICK, PINK
744 334, .005 THICK, BLUE
744 335, .003 THICK, RED.
3. SELECT SHIMS, ITEM 103, TO ACHIEVE .003 TO .008 END FLOAT ON REAR OUTPUT SHAFT:
744 357 004, .030 THICK, CORAL
744 357 003, .015 THICK, PINK
744 357 002, .005 THICK, BLUE
744 357 001, .003 THICK, RED.
4. SELECT SPACER RING, ITEM 94, TO ACHIEVE .003 TO .008 END FLOAT ON FRONT OUTPUT SHAFT:
756 287 001, .540 THICK
756 287 002, .545 THICK
756 287 003, .550 THICK
756 287 004, .555 THICK.
5. SELECT SPACER RING, ITEM 93, TO ACHIEVE .000 TO .002 END FLOAT ON REAR OUTPUT SHAFT GEAR:
756 237 001, .719 THICK
756 237 002, .716 THICK
756 237 003, .713 THICK
756 237 004, .710 THICK.
6. ITEM 88, 744 324 SHIM, SELECT REQUIRED QUANTITY AS FOLLOWS:
SEE SECTION 6.8 FOR LUBE PUMP ASSEMBLY INSTRUCTIONS.
7. ITEM 139, 927 822 WASHER, SELECT REQUIRED QUANTITY AS FOLLOWS:
WITH AIR APPLIED TO THE FRONT DECLUTCH SHIFT CYLINDER, AND WITH THE CLUTCH GEARS HELD TOGETHER, THERE SHOULD BE A MINIMUM OF .002" CLEARANCE BETWEEN BOTH SIDES OF THE SHIFT FORK AND THE SLIDING CLUTCH GEAR GROOVE. READJUST QUANTITY OF WASHERS AS NECESSARY.
8. SELECT SPACER RING, ITEM 92, TO ACHIEVE .003 TO .008 END FLOAT ON PTO OUTPUT SHAFT:
756 233 003, .306 THICK
756 233 004, .311 THICK
756 233 005, .316 THICK
756 233 006, .321 THICK
756 233 007, .326 THICK
756 233 008, .331 THICK
756 233 009, .336 THICK.