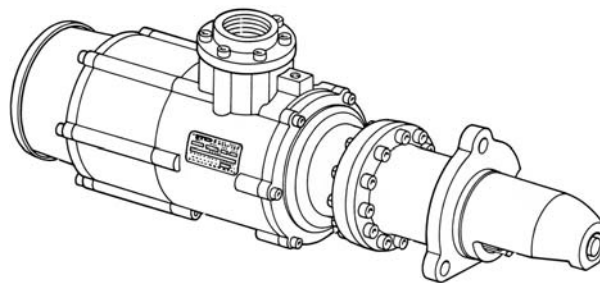


**ILLUSTRATED PARTS BREAKDOWN
for TURBOTWIN ENGINE STARTERS
MODELS: T109P/T115P**

EFFECTIVE S/N: 9611-192



IMPORTANT NOTE

The purpose of this illustrated parts breakdown is to provide part number identification of the various components of the listed starters. Only those parts which may be disassembled at the field or repair shop level are broken out and identified. Certain parts or components are "factory only" assemblies, and should not be disassembled below the level shown in this document. Do not disassemble or reassemble the starter without referring to the proper TDI TURBOTWIN service manual. The use of improper procedures, non-authorized replacement parts or incorrect tools, may result in a faulty operating starter which could affect its performance or create a hazardous condition.

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TOP ASSEMBLY PART NUMBERS COVERED IN THIS PUBLICATION

MODEL NUMBER	PART NUMBER	PRESSURE RANGE (PSIG)	NO. OF NOZZLES (ITEM 19)	DIRECTION OF ROTATION	TDI DRIVE PART NUMBER
T109P	T109-60013-P1R-1-30	60 - 150	9	R.H.	2-25482
T115P	T115-60013-P1R-1-30	30 - 90	15	R.H.	2-25482

TURBOTWIN ENGINE STARTER REPAIR PARTS LIST
MODELS: T109P / T115P

KEY NO.	DESCRIPTION	PART NUMBER
4	Screw	19F- 25028-012
5	Washer	9-93047
6	Rotor 2	2-26604
7	Woodruff Key	9-90211-006
8	Seal Spacer (3)	9-93083-001
9	Seal, Lip (2)	2-26719
10	Bearing (2)	9-91224
11	O-ring (2)	9-90001-027
12	Wave Spring Washer	9-90439
13	Nozzle 2/Containment Ring L.H.	2-27333-00R
14	O-ring	9-90001-050
15	Rotor 1	2-26603
16	Woodruff Key	9-90211-009
17	Lip Seal	2-22376
18	Screw (14)	14F-19024-008
19i	Nozzle 1, R.H. (9 Nozzles)	2-26718-09R
19ii	Nozzle 1, R.H. (15 Nozzles)	2-26718-15R
20	Pipe Plug	9-93556-004

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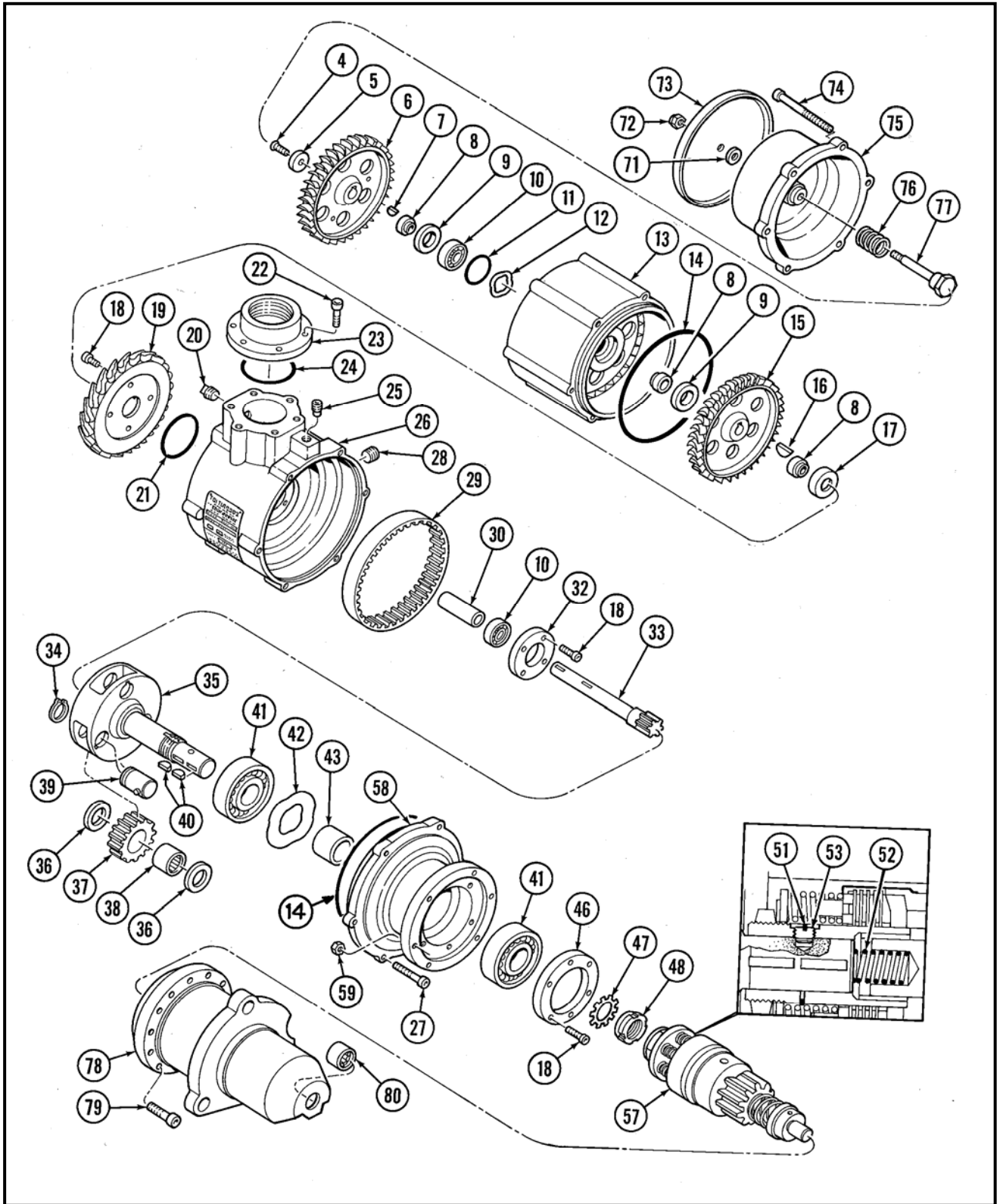
KEY NO.	DESCRIPTION	PART NUMBER
21	O-ring	9-90001-034
22	Screw (6)	14F-31218-016
23	Inlet Flange	1-18967
24	O-ring	9-90001-037
25	Set Screw (See Note 1)	52F-50013-016
26	Turbine Housing (See Note 1)	2-27045
27	Screw (6)	14F-25020-016
28	Pipe Plug	9-93501-004
29	Ring Gear (See Note 1)	1-18780
30	Bearing Spacer	9-93091-001
32	Clamping Plate	2-26750
33	Turbine Shaft	2-27238
34	Retainer Ring (3)	9-92001-001
35	Planet Gear Carrier Shaft	2P-20156-007
36	Washer (6)	9-93004
37	Planet Gear (3) (9:1 Gear Ratio)	1-18779
38	Needle Roller Bearing (3)	9-91004-001
39	Planet Shaft (3)	2P-20182
40	Woodruff Key (2)	9-90211-019
41	Bearing (2)	9-91351
42	Wave Spring Washer	9-90402-025
43	Bearing Spacer	9-93007
46	Retainer Plate	1-18817
47	Lockwasher	9-93061-007
48	Retainer Nut	9-92127-007
51	Retaining Ring	Included with item 50 or 57

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KEY NO.	DESCRIPTION	PART NUMBER
52	Spring	Included with item 50 or 57
53	Set Screw	Included with item 50 or 57
57	Inertia Drive Assembly, R.H.	2-25482
58	Gearbox Housing	1-18810
59	Lock Nut (6)	9-92107-015
71	Washer, Flat	9-93018-011
72	Nut, Hex	9-92108-003
73	Cover, Plate	2-20192
74	Screw (6)	11F-25020-072
75	Housing, Exhaust Cover	2-27069
76	Spring, Compression	9-90408-016
77	Post	2-27223
78	Drive Housing (Shortened for CAT 3500 Series)	2-25617
79	Screw (12)	11F-31218-024
80	Needle Bearing	9-91423

Note 1: These parts are recommended factory only assembled.

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EXPLODED VIEW OF T109P/T115P TURBOTWIN AIR STARTER

ILLUSTRATED PARTS BREAKDOWN FOR T100-P TURBINE ASSEMBLY
Effective S/N: 0109-181

Key No.	Description	Part Number
1	Screw (6)	11F- 25020-072
2	Screen	2-28175
3	Screw	19F- 25028-012
4	Washer	9-93047
5	Rotor 2	2-26604
6	Woodruff Key	9-90211-006
7	Bearing Spacer	9-93091-005
8	Bearing (2)	9-91224
9	O-ring	9-90001-027
10	Wave Spring Washer	9-90439
11	Screw (4)	11A-37516-008
12i	Nozzle 2/Containment Ring R.H.	2-27333-00R
12ii	Nozzle 2/Containment Ring L.H.	2-27333-00L
13	O-ring	9-90001-050
14	Seal Spacer (2)	9-93083-001
15	Lip Seal (2)	2-26719
16	Rotor 1	2-26603
17	Woodruff Key	9-90211-009
18	Screw (8)	14F-19024-008
19	Nozzle 1, R.H. 9 Noz	2-26718-09R
19	Nozzle 1, R.H. 15 Noz	2-26718-015R
20	Pipe Plug	9-93556-004
21	O-ring	9-90001-034
22	Screw (6)	14F-31218-016

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Key No.	Description	Part Number
23	Inlet Flange	1-18967
24	O-ring	9-90001-037
25	Turbine Housing	2-27869
26	Pipe Plug	9-93501-004
27	O-ring (2)	9-90001-050
28	Ring Gear	2-27870
29	Bearing Spacer	9-93091-001
30	Clamping Plate	2-26750
31	Turbine Shaft	2-26554

Note 2: The T100-P gearbox and drive assemblies have not been modified.

Model	Overhaul Kit for S/N's before: 9611-191	Overhaul Kit for S/N's: 9611- 192 to 0109-180	Overhaul Kit for S/N's: 0109-181 and after
P	T10P-27620	T10P-27636	T10P-28745

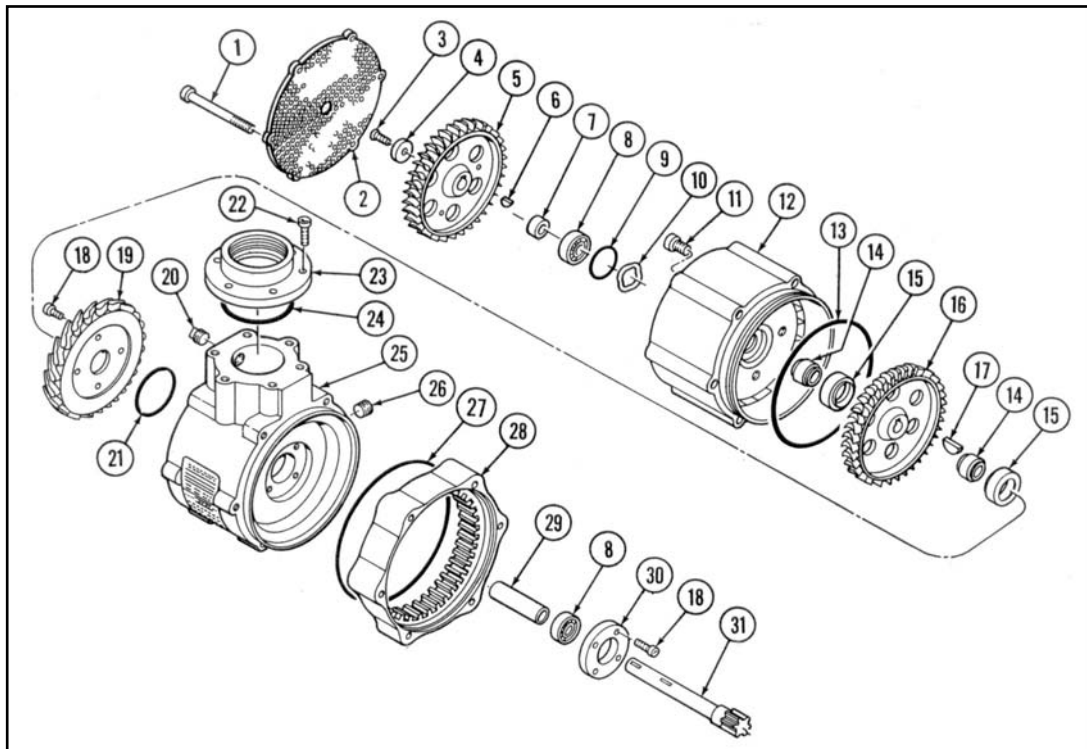


Figure 5. T100 Series Air Starter Turbine Assembly (S/N: 0109-181 and after)