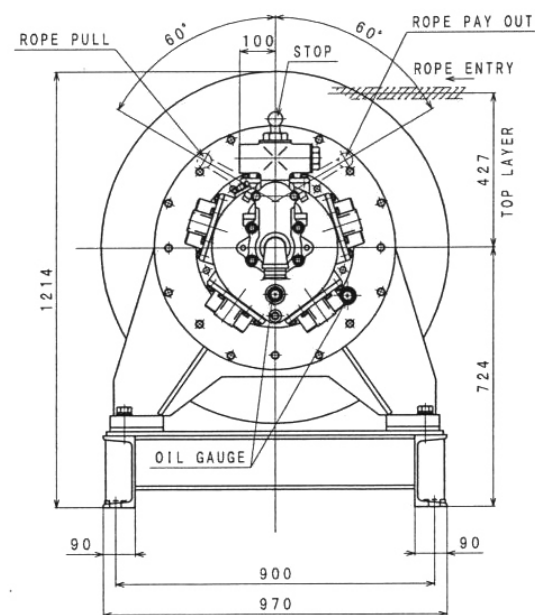
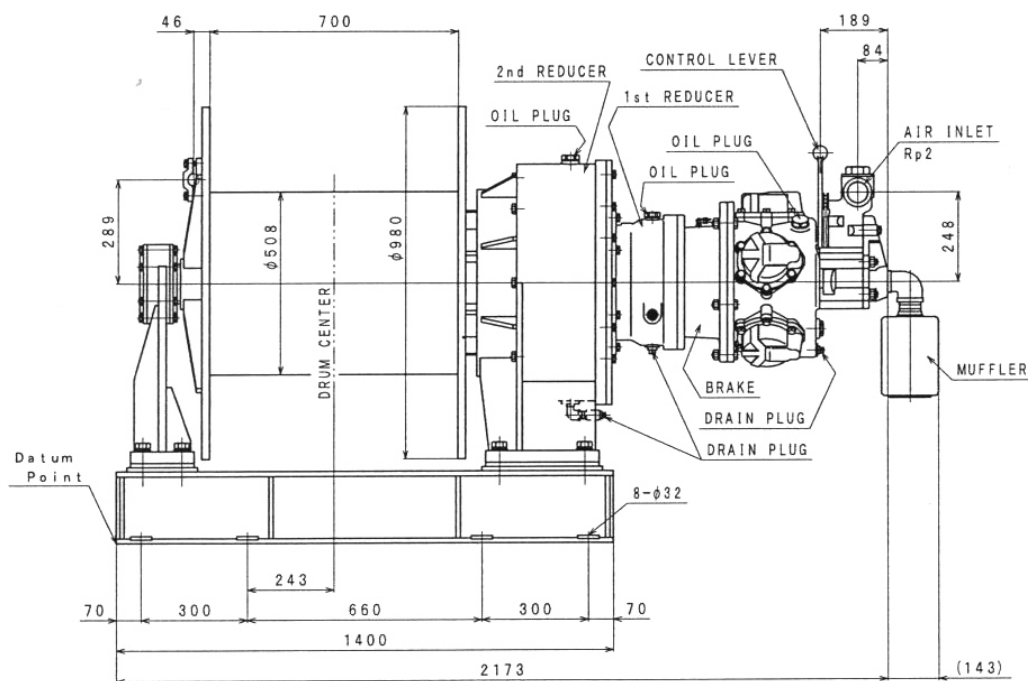




MICHIGAN PNEUMATIC TOOL, INC.

MP-AH45-100-S1H Long Drum w/ Auto Brake



SPECIFICATIONS (at HALF DRUM)

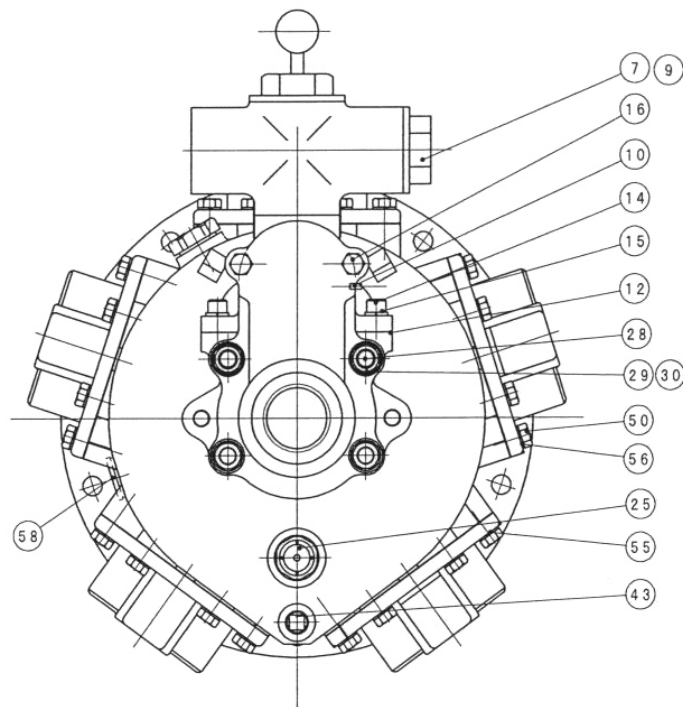
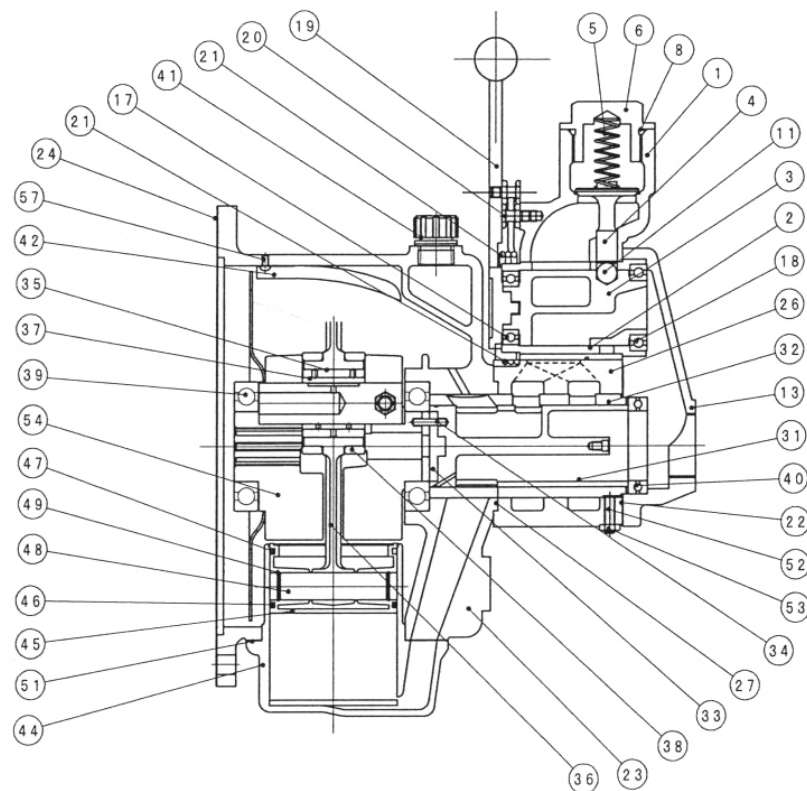
AIR PRESSURE	MOTOR POWER	ROPE PULL	ROPE SPEED	AIR CONSUMPTION	ROPE CAPACITY	LUBRICATING OIL		MASS
(MPa)	(kW)	(kN)	(m/min)	(Nm ³ /min)	(φmmxm)	MOTOR	REDUCER	(kg)
0.6	17.6	100	8.5	17	31.5x270	JIS K2213-2 Turbine Oil ISO VG32 (1400cc)	JIS K2219 Gear Oil 2 (15000cc)	about 1600

APPROVED	CHECKED	REVISED	DRAWN	PARTICULARS	OUTLINE DRAWING	DATE	03. Apr. 2009
M. M		M. M		MODEL	AH45-100-S1H	NOTE	
					AIR WINCH		
SAN-EI SEIKI SEISAKUSHO CO., LTD.					DWG. NO.	E 309-048	SCALE 1/12



MICHIGAN PNEUMATIC TOOL, INC.

MP-AH45-100-S1H Long Drum w/ Auto Brake



PARTS LIST: E309-034

APPROVED	CHECKED	REVIEWED	DRAWN	PARTICULARS	AIR MOTOR ASSEMBLY	DATE	MAY. 14. 2009
M. M	M. S		K. S	MODEL	AH45-100-S1H	NOTE	
					AIR MOTOR	Z09-010	
SAN-EI	SEIKI SEISAKUSHO,			DWG. NO.	E 309-033	SCALE	
	CO., LTD.						



MICHIGAN PNEUMATIC TOOL, INC.

MP-AH45-100-S1H Long Drum w/ Auto Brake

△	REVISION	DATE	B Y

No		PARTS NAME		QTY	REMARKS	No		PARTS NAME		QTY	REMARKS
1	E302-0441	Control Valve Body		1		31	E302-04433	Rotary Valve		1	
2	E302-0442	Control Valve Sleeve		1		32	E302-04434	Rotary Valve Sleeve		1	
3	E302-0443	Control Valve		1		33	E302-04435	Valve Coupling		1	
4	E302-0444	Poppet Valve		1		34	SNP-628	Spring Pin		1	φ6x28
5	E302-0445	Spring		1		35	E302-04437	Crank pin Sleeve		1	
6	E302-0446	Plug		1		36	E302-04438	Rod		5	
7	E302-0447	Plug		1		37	E302-04439	Rod Metal		1	
8	E302-0448	O Ring		1	P 60	38	E302-04440	Rod Ring		2	
9	E302-0449	O Ring		1	P 55	39	E397-24511	Ball Bearing		2	6213
10	E397-28047	Socket Set Screw		1	M6x12	40	E302-04442	Thrust Ball Bearing		1	51113
11	SB-0600	Steel Ball		1	φ19	41	E397-2803	Oil Plug		1	BM-1
12	E302-04412	Packing		1		42	E302-04444	Oil Guide		1	
13	E302-04413	Valve Cover		1		43	PHP-T40	Plug		1	1/2B
14	E302-04414	Hex. Socket Cap Screw		4	M12x30	44	E397-28017	Cylinder		5	
15	E397-28021	Spring Washer		4	φ12	45	E397-28012	Piston		5	
16	E392-00252	Hex. Bolt		2	M12x55	46	E397-28015	Piston Ring		5	
17	B-6008	Ball Bearing		1	6008	47	E397-28016	Oil Ring		5	
18	B-6010	Ball Bearing		1	6010	48	E397-28013	Piston Pin		5	
19	E302-04419	Valve Lever		1		49	E397-28014	Circlip		10	
20	E302-04420	Spring Support		2		50	E397-27450	Hex. Bolt		30	M12x35
21	E302-04421	Valve Spring		1		51	E397-28018	Cylinder Packing		5	
22	E302-04422	Valve Cover Packing		1		52	E302-04454	Socket Set Screw		1	M10x35
23	E302-04423	Crank Case		1		53	N1-10	Nut		1	M10
24	E302-04424	Crank Case Packing		1		54	E302-04456	Crank Complete		1set	
25	E397-2804	Oil Gauge		1		55	E397-28020	Washer		12	
26	E302-04428	Rotary Valve Body		1		56	E397-28021	Spring Washer		18	12
27	E302-04429	Valve Body Packing		1		57	E302-04459	Oil Guide Set Screw		2	M6x15
28	E302-04430	Valve Body Set bolt		4		58	E302-04460	Hexagon Set Plug		1	12
29	E397-2575	Nut		4	M16						
30	E302-1117	Spring Washer		4	16						

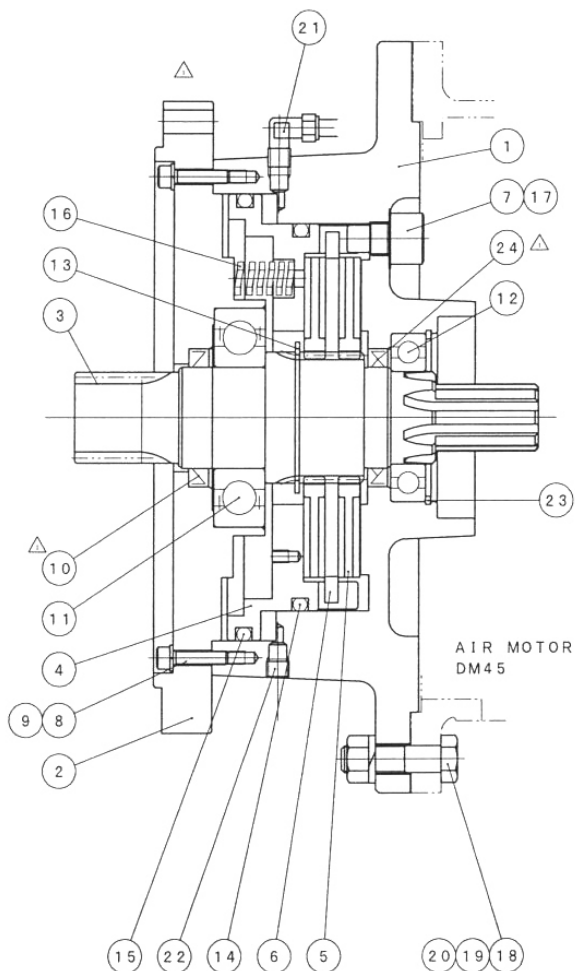
ASSEMBLY DRAWING: E309-033

APPROVED	CHECKED	REVIEWED	DRAWN	PARTICULARS	PART LIST	DATE	MAY. 14. 2009
M. M	M. S		K. S	MODEL	AH45-100-S1H	NOTE	
					AIR MOTOR	Z09-010	
SAN-EI	SEIKI SEISAKUSHO	DWG.	E309-034	△	SCALE		
	CO., LTD.	NO.					



MICHIGAN PNEUMATIC TOOL, INC.

MP-AH45-100-S1H Long Drum w/ Auto Brake



REV	REVISION	DATE	BY
1	Renewal	000412	K. S.
2	Renewal	120214	R. T.

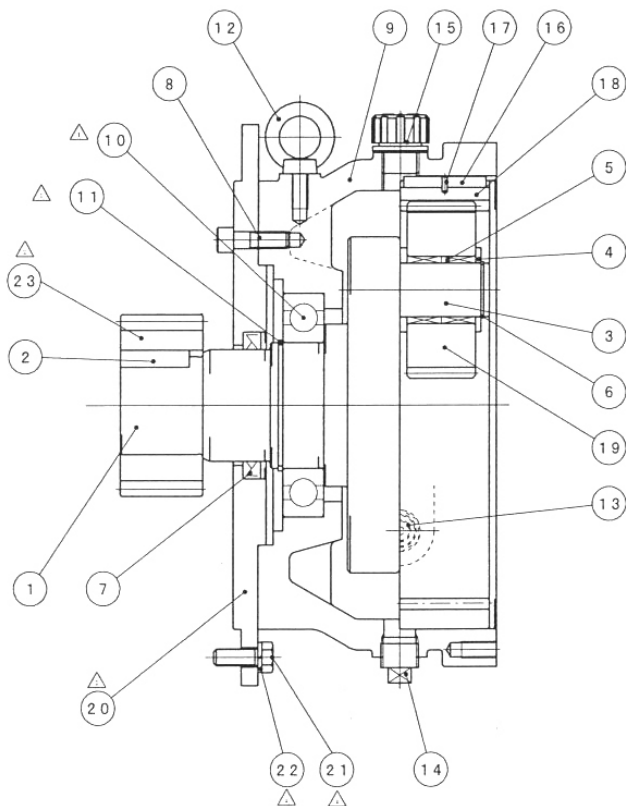
No	PARTS NAME	QTY	REMARKS
1	E309-0321 Brake Case	1	
2	E309-0322 Motor Flange	1	
3	E309-0323 Pinion	1	
4	E309-0324 Brake Piston	1	
5	E309-0325 Brake Disk	2	
6	E309-0326 Brake Plate	1	
7	E309-0327 Stopper Bolt	1	
8	CS-825 Hex. Socket Cap Screw	12	M8x35
9	SWI-8 Spring Washer	12	8
10	E309-03210 Oil Seal	1	SC608212
11	B-6312ZZ Ball Bearing	1	6312ZZ
12	B-6211ZZ Ball Bearing	1	6211
13	SR-S78 Retaining Ring	1	S78
14	OR-8.4X31.7BN70 O Ring (METRIC)	1	P210
15	OR-8.4X39.7BN70 O Ring (METRIC)	1	P245
16	E309-03216 Spring	12	LR 20x50
17	E309-03217 Seal Washer	1	DS-1-20
18	E309-03218 Hex. Bolt	5	M16x60
19	E397-2575 Nut	5	M16
20	E302-1117 Spring Washer	5	16
21	E397-28059 Tube Connector	1	B-8-PT1/4
22	PHP-T20 Hex. Socket Plug	1	1/4B
23	SR-R100 Retaining Ring	1	R100
24	E309-03224 Oil Seal	1	TC608212

APPROVED	CHECKED	REVIEWED	DRAWN	PARTICULARS	BRAKE ASSEMBLY	DATE	MAY. 14. 2009
M. M	M. S		K. S	MODEL	AH45-100-S1H	NOTE	
					AIR WINCH	Z09-010	
SAN-EI SEIKI SEISAKUSHO, CO., LTD.				DWG. NO.	E309-032	SCALE	2



MICHIGAN PNEUMATIC TOOL, INC.

MP-AH45-100-S1H Long Drum w/ Auto Brake



SIGN	REVISION	DATE	B Y
△	Renewal	03/04/12	R. T
△	Correction	11/02/19	W. S

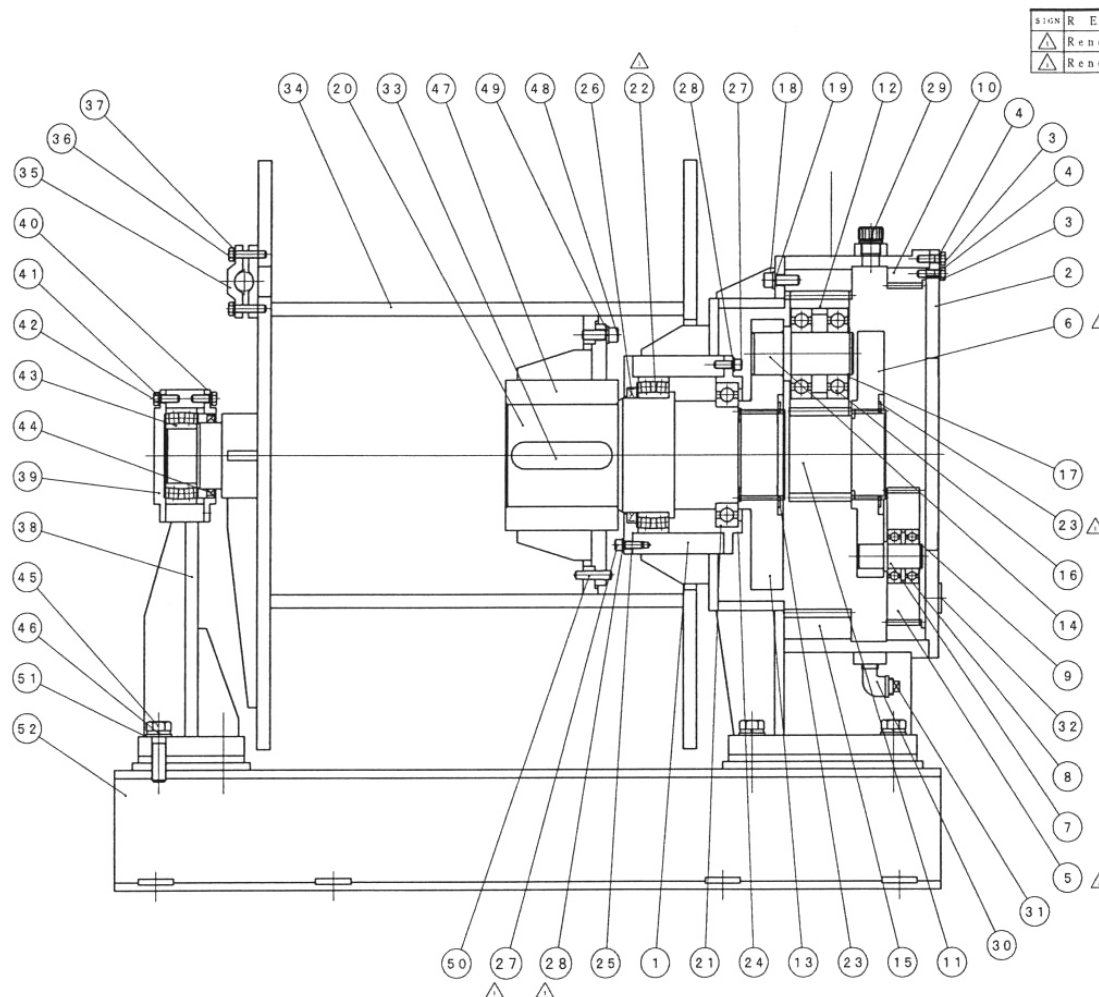
No.		PARTS NAME	QTY	REMARKS
1	E309-0351	Main Spindle	1	
2	E309-0352	Key	1	20x12x110
3	E309-0353	Gear Pin	3	
4	E309-0354	Thrust Washer	6	
5	E309-0355	Needle Bearing	6	HMK3825
6	SR-S38	Retaining Rings	3	S38
7	E309-0357	Oil Seal	1	TC8010513
8	CS-1240	Hex. Cap Screw	8	M12x40
9	E309-0359	Gear Case	1	
10	B-6218ZZ	Ball Bearing	1	6218
11	SR-S90	Retaining Rings	1	S90
12	E309-03512	Eye Bolt	1	M12
13	E397-2804	Oil Gauge	2	
14	PF21112	Plug	1	3/4B
15	E309-03515	Oil Plug	1	BM-3/4
16	E309-03516	Key	1	12x8x60
17	3030040100	Spring Pin	1	φ4x10
18	E309-03518	Internal Gear	1	
19	E309-03519	Planet Gear	3	
△ 20	E309-03520	Flange	1	
△ 21	E397-27450	Hex. Bolt	8	M12x35
△ 22	E397-28021	Spring Washer	8	12
△ 23	E309-03523	1st Pinion	1	

APPROVED	CHECKED	REVIEWED	DRAWN	PARTICULARS	ASSEMBLY DRAWING	DATE	MAY. 14. 2009
M. M	M. S	K. S	R. T	MODEL	AH45-100-S1H	NOTE	
					AIR WINCH	Z09-010	
SAN-EI				SEIKI SEISAKUSHO, CO., LTD.	DWG. NO.	E309-035	SCALE 1/3



MICHIGAN PNEUMATIC TOOL, INC.

MP-AH45-100-S1H Long Drum w/ Auto Brake



SIZE	REVISION	DATE	BY
	△ Renewal	091120	K. S
	△ Renewal	130214	R. T

PARTS LIST: E309-031

APPROVED	CHECKED	REVIEWED	DRAWN	PARTICULARS	WINCH ASSEMBLY	DATE	MAY. 14. 2009
K. S			R. T	MODEL	AH45-100-S1H	NOTE	
					AIR WINCH	Z09-010	
SAN-EI	SEIKI SEISAKUSHO,			DWG. NO.	E309-030	SCALE	2
	CO., LTD.						



MICHIGAN PNEUMATIC TOOL, INC.

MP-AH45-100-S1H Long Drum w/ Auto Brake

REVISION	DATE	BY
△ Renewal	091120	K. S
△ Renewal	130211	R. T

No.	PARTS NAME	Q'TY	REMARKS	No.	PARTS NAME	Q'TY	REMARKS
1	E309-0301 Gear Case	1		31	PF21112 Plug	1	3/4"
2	E309-0302 Gear Case Cover	1		32	E397-2804 Oil Gauge	1	M-1B
3	E309-0303 Hex. Bolt	△ 20	M12x40	33	E309-03033 Key	1	
4	E397-28021 Spring Washer	△ 20	φ12	34	E309-03034 Drum	1	
5	E309-0305 1st Planet Gear	△ 3		35	E309-03035 Wire Clamp	1	
6	E309-0306 1st Gear Disk	1		36	E309-03036 Hex. Bolt	2	M12x55
7	E309-0307 1st Gear Pin	△ 3		37	E397-28021 Spring Washer	2	12
8	B-6308ZZ Ball Bearing	6	6308	38	E309-03038 Drum Support	1	
9	SR-S40 Retaining Ring	3	S40	39	E309-03039 Drum Support cover (a)	1	
10	E309-03010 1st Internal Gear	1		40	E309-03040 Drum Support Cover (b)	1	
11	E309-03011 2nd Pinion	1		41	E397-27450 Hex. Bolt	12	M12x35
12	E309-03012 2nd Planet Gear	3		42	E397-28021 Spring Washer	12	12
13	E309-03013 2nd Gear Disk	1		43	E309-03043 Self aligning roller Bearing	1	23218B
14	E309-03014 2nd Gear Pin	3		44	E309-03044 Oil Seal	1	TC11014014
15	E309-03015 2nd Internal Gear	1		45	E309-03045 Hex. Bolt	8	M24x85 11T
16	B-6314ZZ Ball Bearing	6	6314	46	E397-2537 Spring Washer	8	24
17	SR-S70 Retaining Ring	3	S70	47	E309-03047 Shaft Supporter	1	
18	CS-1645 △ Hex. Socket Cap Screw	8	M16x45	48	E302-23516 Hex. Socket Cap Screw	8	M16x45
19	SW1-16 Spring Washer	8	16	49	E302-23517 Spring Washer	8	φ16
20	E309-03020 Drive Shaft	1		50	E309-03050 Taper Pin	2	φ13x63
21	B-6032ZZ Ball Bearing	1	6032	51	91166A330 Washer	8	24
22	E309-03022 Self aligning roller Bearing	1	23938	52	E309-03052 Bed	1	
23	SR-S150 Retaining Ring	1	S150				
24	E309-03024 Bearing Case	1					
25	E309-03025 Oil Seal Case	1					
26	E309-03026 Oil Seal	1	TC19022516				
27	E397-27450 Hex. Socket Cap Screw	16	M12x35				
28	E397-28021 Spring Washer	16	12				
29	E397-2803 Oil Plug	1	BM-1				
30	5502-12 Street Elbow	1	3/4"				

ASSEMBLY DRAWING: E309-030

APPROVED	CHECKED	REVIEWED	DRAWN	PARTICULARS	PART RIST	DATE	MAY. 14. 2009
M. M	M. S		K. S	MODEL	AH45-100-S1H	NOTE	
					AIR WINCH	Z09-010	
SAN-EI	SEIKI SEISAKUSHO	DWG.	E 3 0 9 - 0 3 1	NO.	△ 2	SCALE	✓
	CO., LTD.						