

219HT Gearless Machine

Spare Parts Leaflet

06-H7050A

June 21, 2023 / Page 1 of 20

06	7050A	
Y	W/O	

Covers Versions
7050A through G7050A

06	H7050A	
Y	VINTAGE	Y 01

Covers Versions
H7050A **PRE 1976**

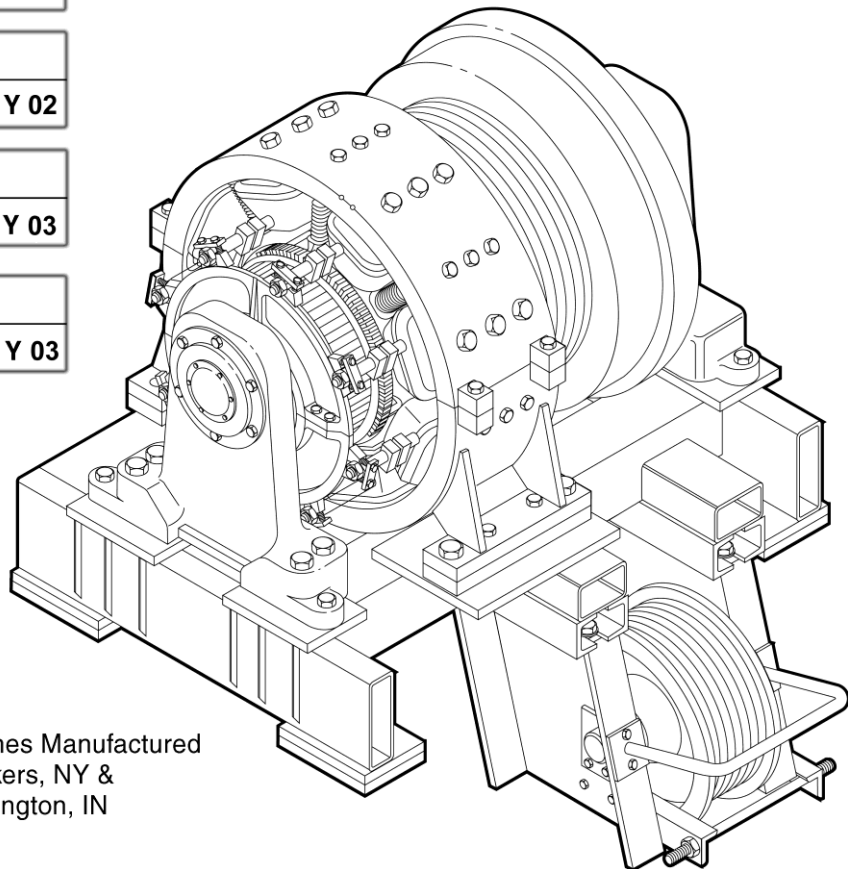
06	H7050A	
Y	VINTAGE	Y 02

Covers Versions
H7050A and J7050A **POST 1976**

06	K7050A	
Y	VINTAGE	Y 02

06	K7050A	
Y	VINTAGE	Y 03

06	L7050A	
Y	VINTAGE	Y 03



Machines Manufactured
in Yonkers, NY &
Bloomington, IN

OTIS

This document does not contain any technical
data subject to EAR or ITAR

SERVICE ENGINEERING
Otis Elevator Company
Bloomfield, Connecticut USA

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Leaflet Description

The 219HT is a DC gearless machine with an integral brake. A standard 219HT can be arranged for Single Wrap Traction (SWT) or Double Wrap Traction (DWT). This leaflet covers the service parts for the NAA manufactured 219HT machines.

Leaflet Revisions

Date Revised	Subject Matter Expert	Reason for Revision
September 1991	Jeffrey S. Costley	Update parts and artwork.
September 7, 2011	Val Sheynkman	Updated information
November 14, 2012	Val Sheynkman	Updated p. 12
June 12, 2013	Val Sheynkman	Updated p. 19
August 12, 2015	Gary Mendrala	Updated pp. 11–12
August 19, 2015	Gary Mendrala	Added p. 20
March 14, 2018	Gary Mendrala	Updated pp. 13 and 16
May 9, 2018	Gary Mendrala	Updated pp. 13–14
October 10, 2018	Gary Mendrala	Added brake kit on p. 11
January 15, 2020	Gary Mendrala	Corrected description in Ref. 2 on p. 8
January 27, 2021	Gary Mendrala	Added caliper brake shoes, shims, microswitch to p. 20
March 17, 2021	Gary Mendrala	Revised bushing part number on p. 11
June 21, 2023	Gary Mendrala	Added p/ns AAA251BV42 and AAA251BV12 on p. 12

Related Drawings

Drawing No.	Title	Drawing No.	Title
C460AY	Armature Shaft	261H	Sheave
L7050A	Assembly 219HT Machine with Internal Brake	AAA20200Q	Kit, Service Replacement Parts, 219HT Machine
B415AB	Shoe, Brake	B7050J	Arrangement & Assembly, Secondary Sheave, 219HT Machine
C330DE	Case, Magnet	7050R	Assembly & Arrangement, Deflector Sheave, 219HT Machine
AAA20236Y	Secondary Brake Assembly	AAA20236X	Secondary Brake Caliper

Related Documents

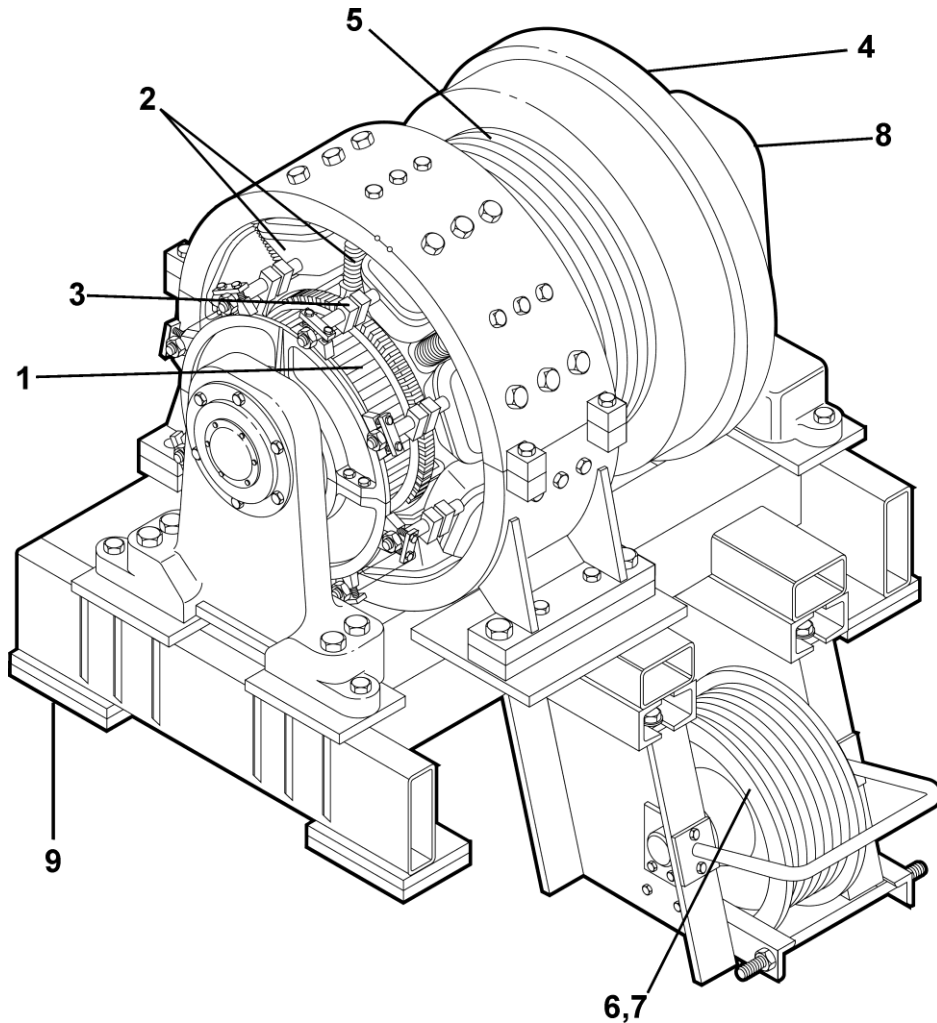
Doc ID	Title	Doc ID	Title
TIP 6.1.0-13	Gearless Machine Bearings	TIP 6.1.3-2	Brake Coil for 219HT Machine
TIP 6.1.0-14	219HT Machine Brake Eye Bolt	TIP 6.1.0-3	Gearless Machine, Core Guides, Bearings
TIP 6.1.0-15	219HT Machine Brake Release Tool	ORM 10.7.1-A	Sheave Liner Replacement
06-LX7050A	219HT Gearless Machine SPL (UK)	TIP 6.1.0-27	Installation Procedure for Rope Retainers on 155Ht and 219HT Machines
TIP 6.1.3-4	219HT Secondary Brake Installation		


Subject Matter Expert

Name	Department
Gary Mendrala	Service Engineering, OSC

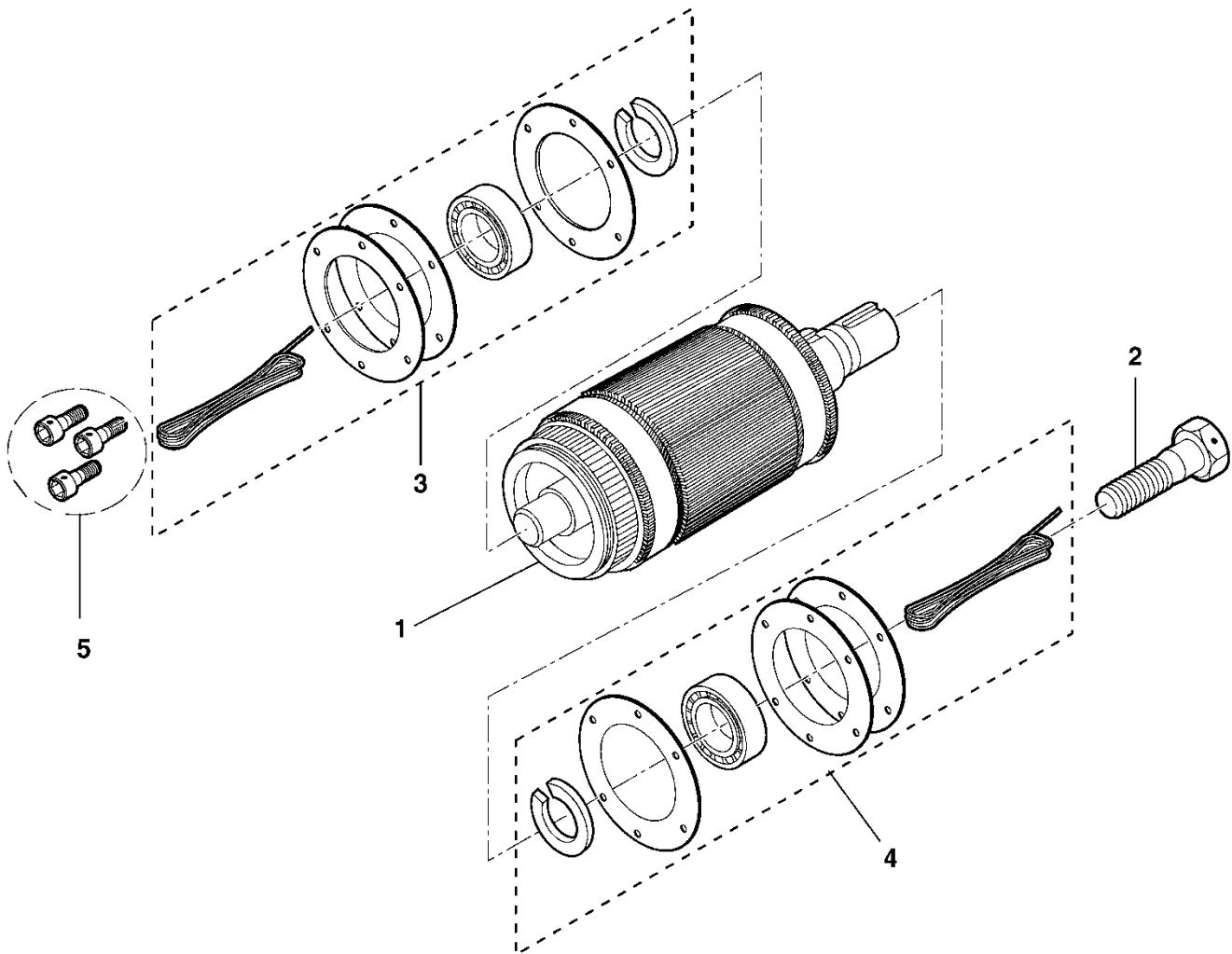
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6	13, 14, 15	Secondary Sheave (DWT)
7	16	Deflector Sheave (SWT)
8	17	Encoders and PVTs
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- - -	19	Sheave Guard for Machine

Armature Shaft Assembly

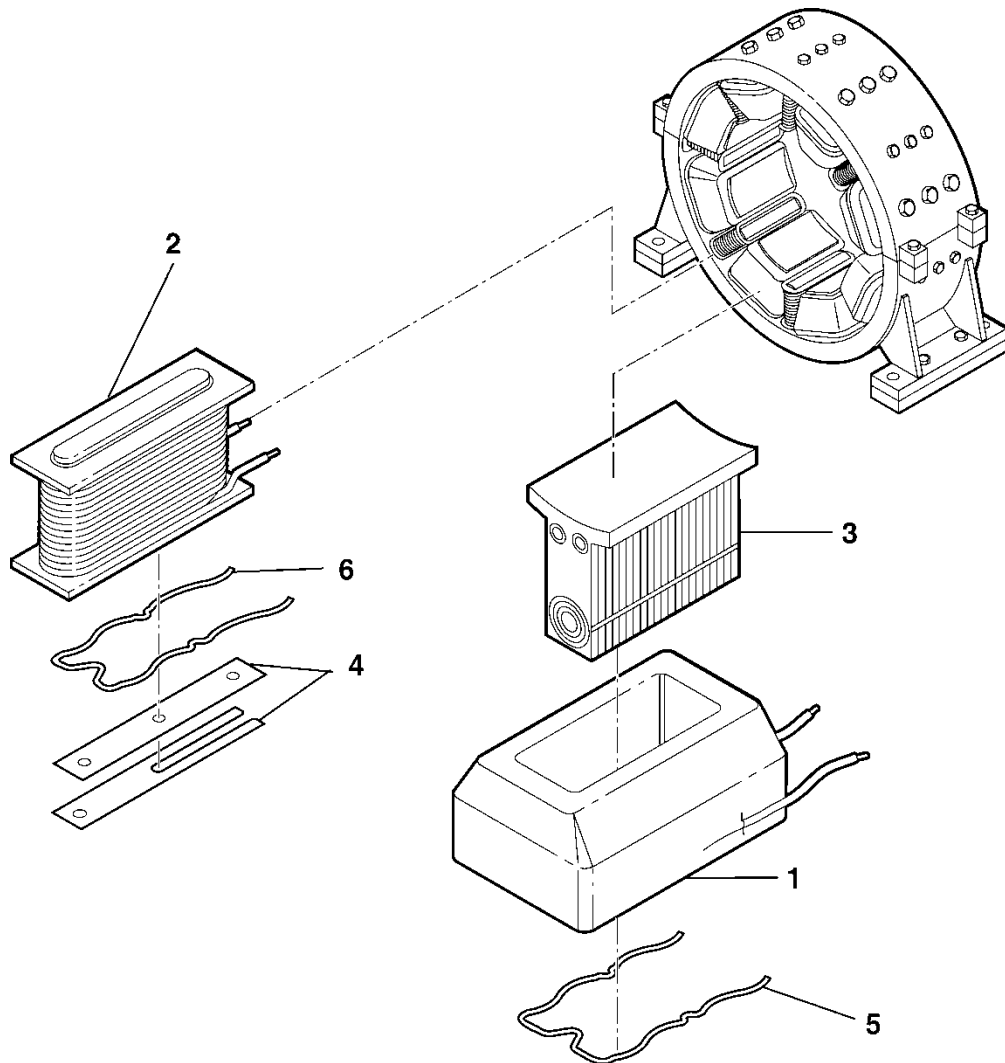


REF. NO.	VINTAGE				DESCRIPTION
	W/O	Y 01	Y 02	Y 03	
1	2063F4				Assembly, Armature, Note
	2063F5				Assembly, Armature, Note
2	58AD6				Bolt, Sheave End (3/4 in. x 2 in.)
3	2700CAR1 AAA20200Q100				Kit, Commutator End Bearing. Includes Bearing (1) $\varnothing = 9.055$ in., Gasket (3), 19-1/16 in. Wick Felt, & Safety Wire 2 ft.
4	2700CAR2 AAA20200Q101				Kit, Sheave End Bearing. Includes Bearing (1) $\varnothing = 12.598$ in., Gasket (3), 26-1/8 in. Wick Felt, & Safety Wire 2 ft.
5	58AD6 124CN7				Screws, Commutator End

NOTE: Contact OSC Spare Lending for additional information.

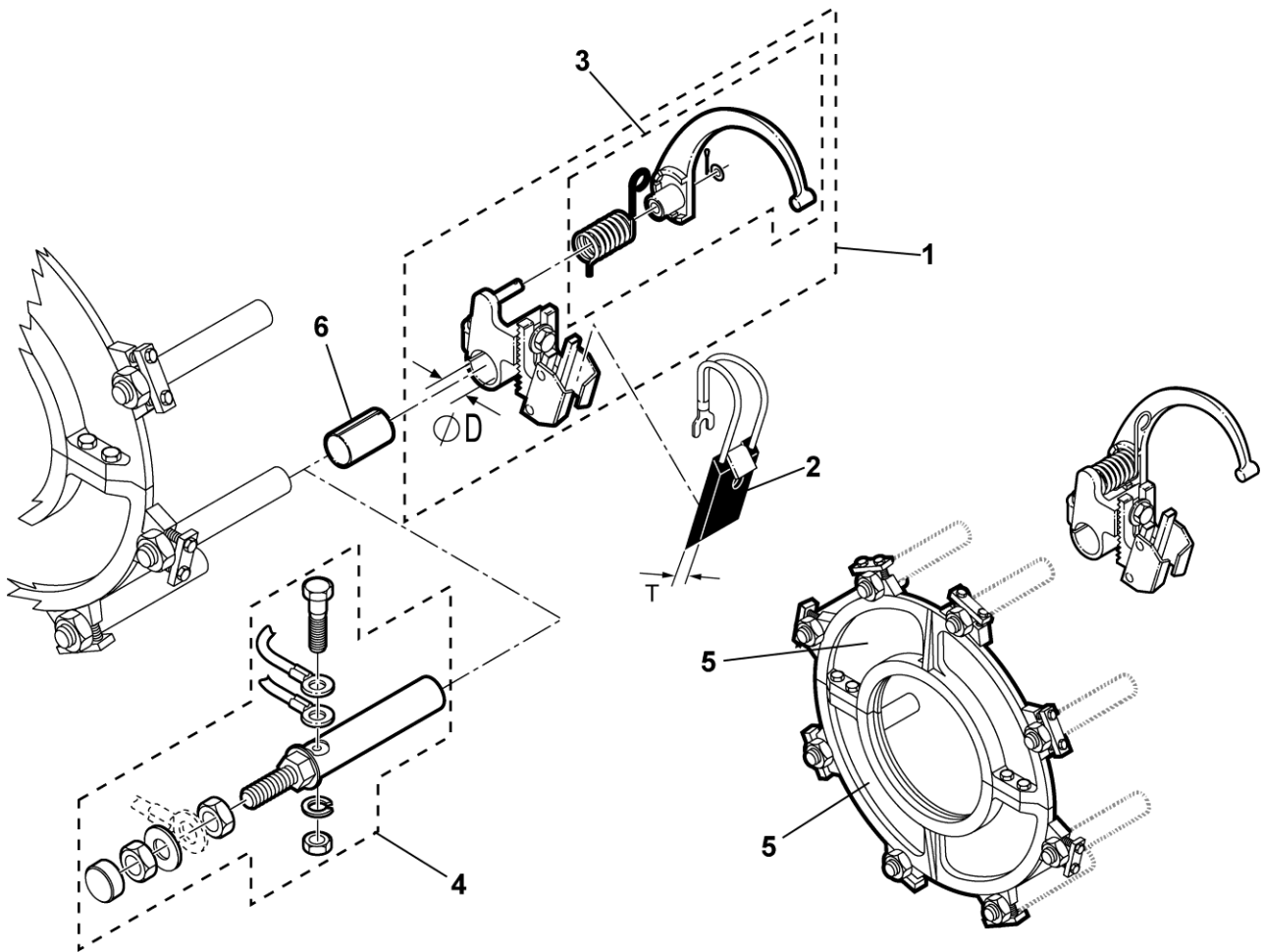
Motor Field and Interpole Coils

06-H7050A



REF. NO.	VINTAGE				DESCRIPTION
	W/O	Y 01	Y 02	Y 03	
1	221CA1				Coils, Field (set of 8)
2	219AE1				Coils, Interpole (set of 8), for Armature Type 2063F4
	219AE3				Coils, Interpole (set of 4), for Armature Type 2063F4
	219AE4				Coils, Interpole (set of 8), for Armature Type 2063F5
3	355AP1				Pole Piece, Field Coil
4	298AM5				Shim, Interpole Coils, Steel, for Armature Type 2063F4
	298PJ6				Shim, Interpole Coils, Brass, for Armature Type 2063F5
5	94AD1				Spring, Field Coil
6	94AD3				Spring, Interpole Coil

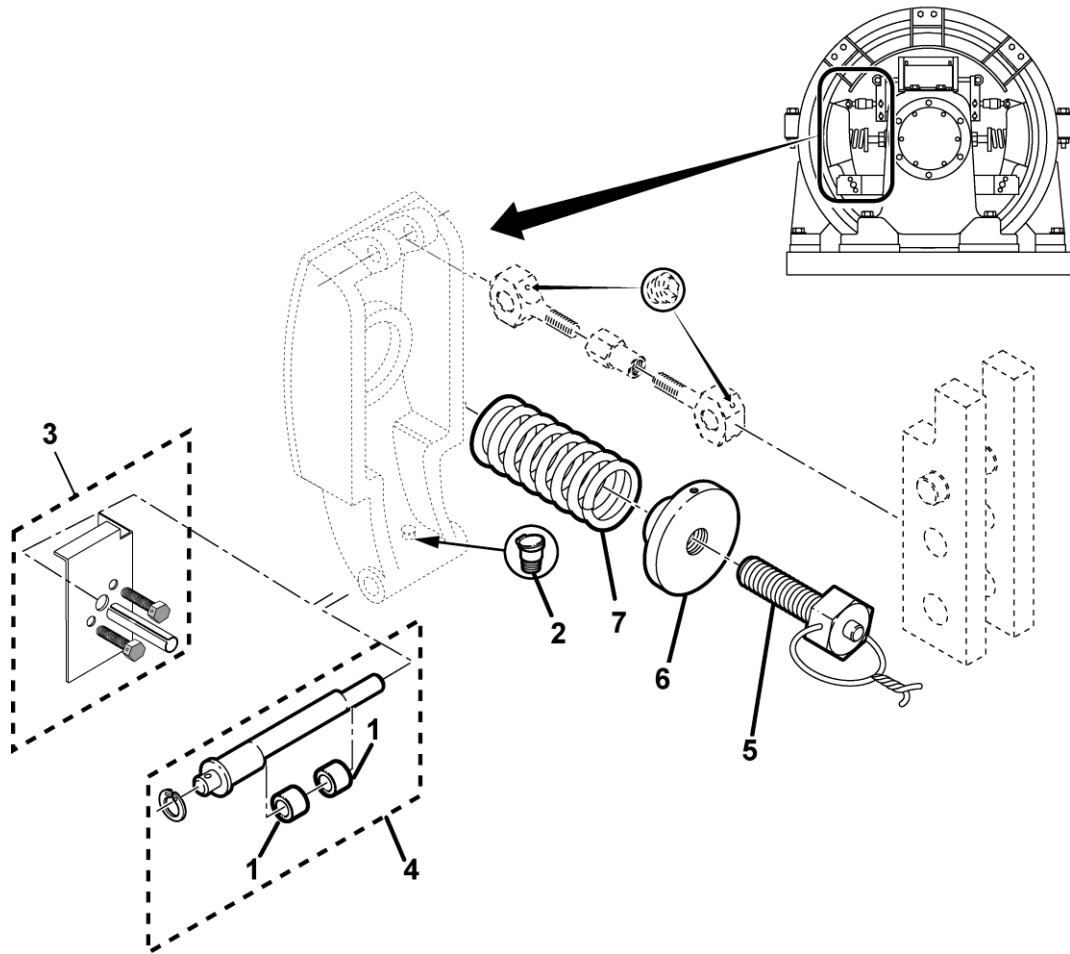
Brush Holders and Brushes



REF. NO.	TYPE		DESCRIPTION
	2063F4	2063F5	
	PART or ML		
1	6134H1	6134H3	Assembly, Brush Holder, $\varnothing D = 0.878$ in., for Elevonic 401 & Non-Elevonic
	6134H2	---	Assembly, Brush Holder, $\varnothing D = 0.903$ in., w/Insulator Strip, for Non-Elevonic
2	240T9	---	Brush, T = 0.36 in.
	---	240T10	Brush, T = 0.48 in.
3	2700CAR18 AAA20200P200		Kit, Arm Spring. Includes Spring Arm (1), Spring (1), Washer (1), & 1/16 x 1/2 in. Cotter Pin (1).
4	AAA20200Q200		Kit, Stem. Includes Stem (1), Washer (1), Protective Plug (3), 1/4-20 x 1-1/4 in. Hex Bolt (1), 1/4-20 Hex Nut (1), 1/2-20 Brass Jam Nut (2), & 1/4 in. Lockwasher (1).
5	172JW2	172JW3	Ring, Brush (half only w/o stems)
6	298DF129		Strip, Insulator

Brake Shoe, Lower Lever, & Spring

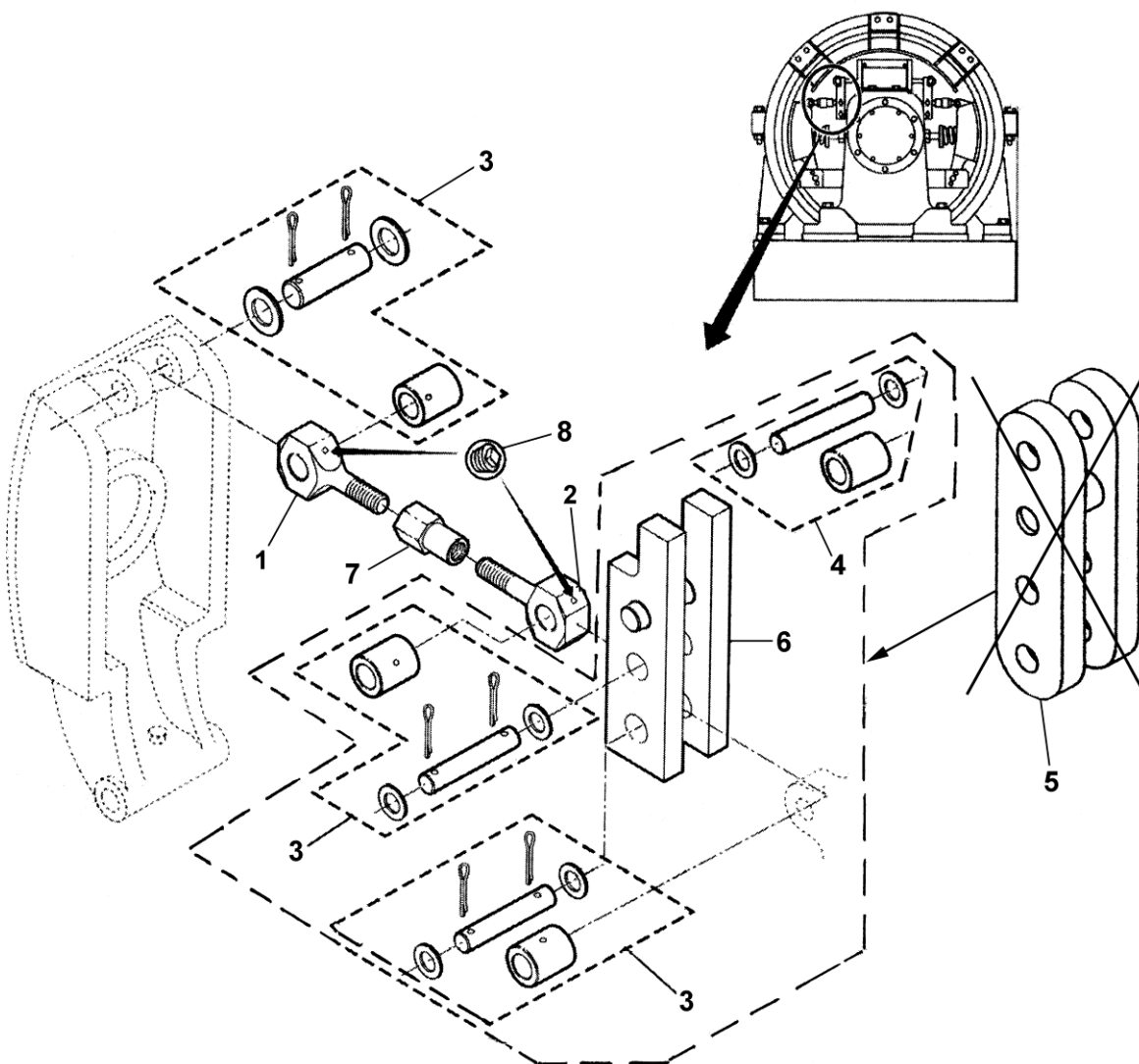
06-H7050A



REF. NO.	VINTAGE				DESCRIPTION
	W/O	Y 01	Y 02	Y 03	
1					Bushing
2					Fitting, Lubricator
3					2700CAR16 Guard, Brake (left shoe)
					2700CAR17 Guard, Brake (right shoe)
4					AAA20200Q300 Kit, Arm (Lever) Pivot Bearing. Includes Bushing (2), Pivot Pin (1), & Spring Pin (1).
5					95BY4 AAA20200Q304 Kit, Rod & Safety Wire
6					133AW1 Nut, Spring Seat, $\varnothing = 4$ in. Across Flats
7					90RD11 Spring, L = 7-3/8 in., $\varnothing = 4$ -1/16 in.

* Part not shown.

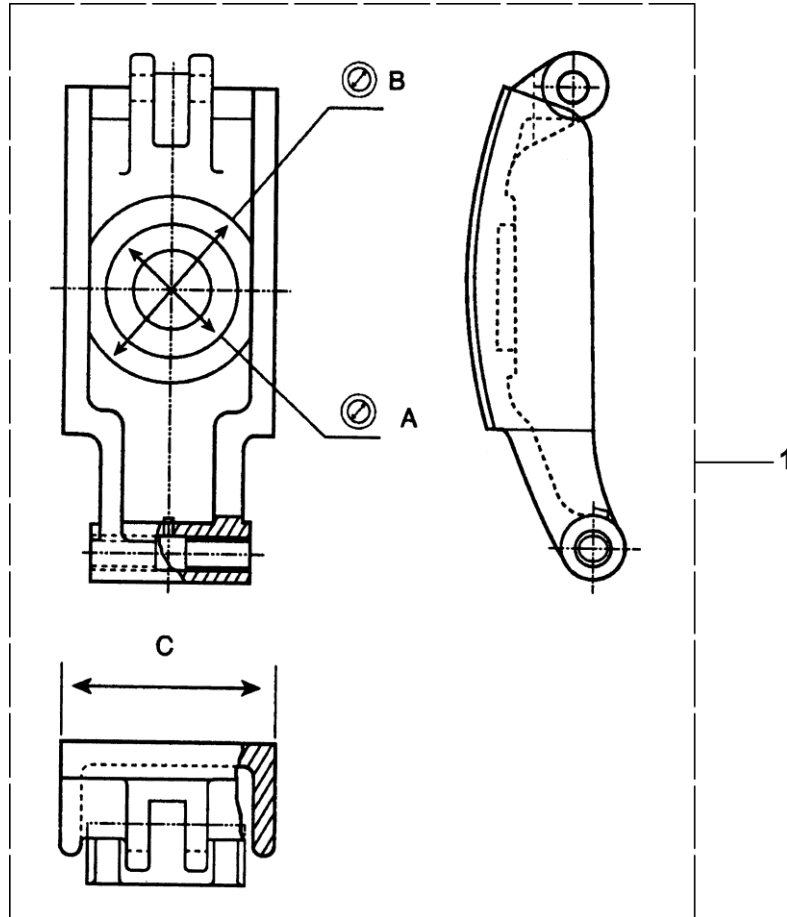
Upper Lever & Linkage



REF. N	VINTAGE				PART or ML	DESCRIPTIO		
	W/O	Y 01	Y 02	Y 03				
1					56AK4	Bolt, Eye, 7/8-9 UNRC Thread (coarse)		
2					2700CAR13 56AK2	Bolt, Eye, 7/8-14 UNRF Thread (fine)		
3					AAA20200Q301	Kit, Includes Needle Bearing (1), Non-Metallic Washer (2), Pivot Pin (1), & 1/8 x 1-1/4 in. Cotter Pin (2).		
4					AAA20200Q303	Kit, Eye Bolt Bearing, Includes Retaining Ring (2), Needle Bearing (1), & Pin (1)		
5					430CN1	Lever, Link (superseded), <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>ORDER</td></tr><tr><td> </td></tr></table> (2) of Ref. 3, (1) of Ref. 4, and (1) of Ref. 6	ORDER	
ORDER								
6					A430CN1	Lever (Link), Upper		
7					72CN1	Nut, Adjusting		
8					377DF13	Plug, Pipe		

Brake Shoe and Lining Assembly

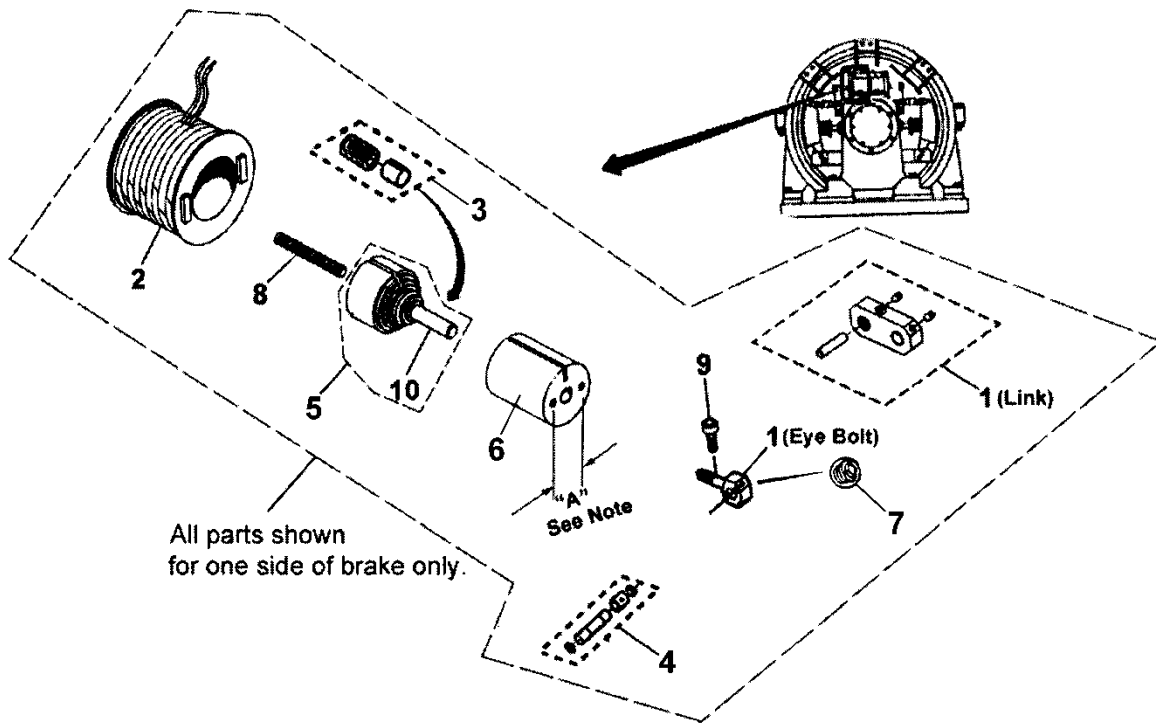
06-H7050A



REF. NO.	VINTAGE			DESCRIPTION
	W/O	Y 01	Y 02	
1	415AB2 B415AB7	---	---	Arm, Brake Shoe, A = 4.25 in., B = 5.00 in., C = 6.50 in.
	---	A415AB2 B415AB5	---	Arm, Brake Shoe, A = 3.00 in., B = 5.00 in., C = 6.75 in.
	---	---	B415AB2	Arm, Brake Shoe, A = 4.25 in., B = 6.00 in., C = 6.75 in.

NOTE: All gearless machines must use brake arms that are lined with Green Gripper lining supplied factory-bonded by OSC. See TIP 6.0-1, *Replacement of Brake Linings*.

Brake Magnet, Coils, and Cores



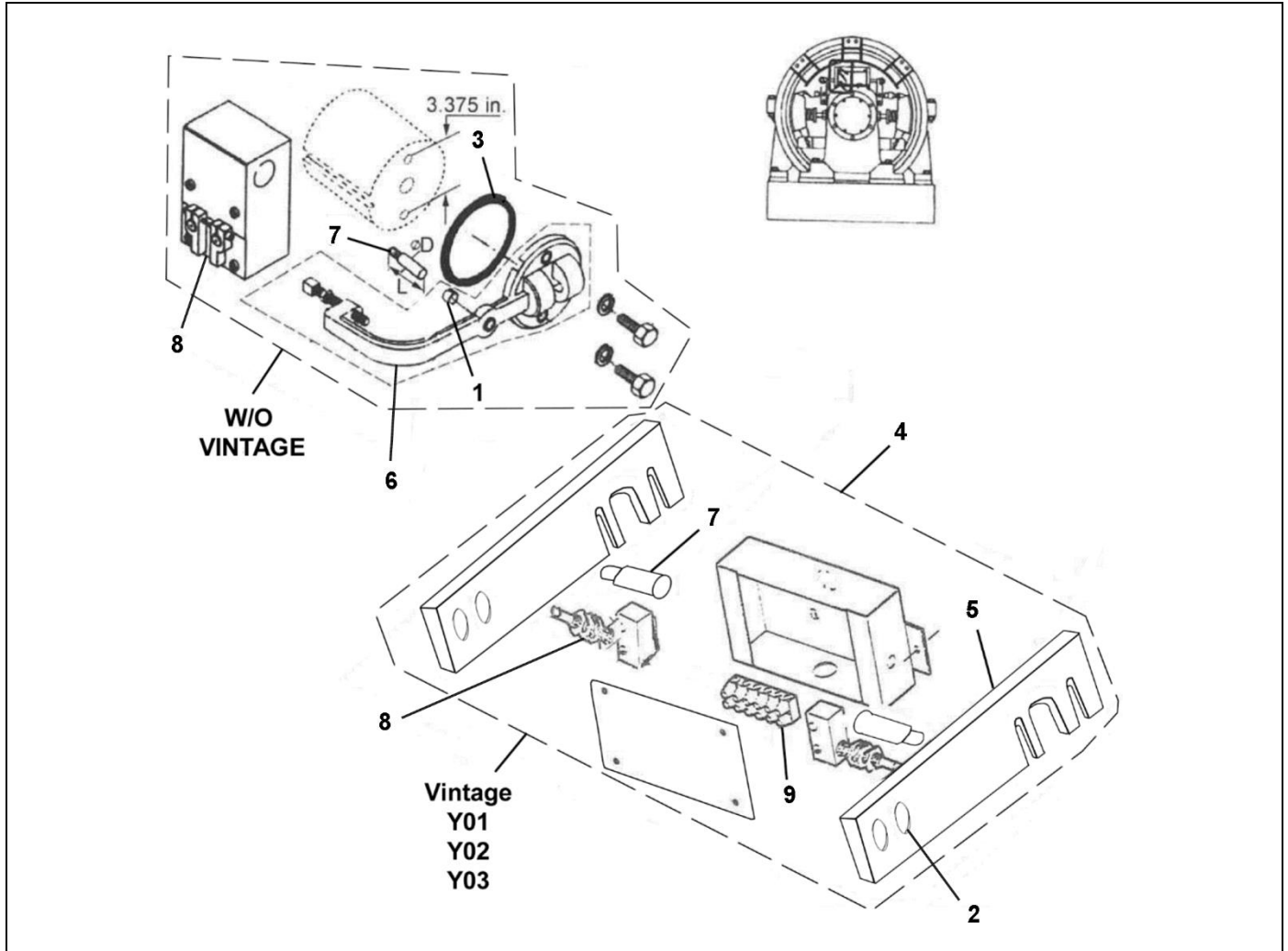
All parts shown
for one side of brake only.

REF. NO.	VINTAGE			DESCRIPTION	
	W/O	Y 01	Y 02		Y 03
1	2700CAR10	---	---	Kit, Link (w/pin, plugs)	
	---	56AK4		Bolt, Eye (for brake core)	
2	---	222EV1 222EV2	AAA234AM1	Coil, Brake, w/Core Sleeve = 8-5/8 in. (after 1992)	
		---	---	Coil, Brake, w/Core Sleeve = 8-1/2 in. (before 1993)	
---	2700CAR11			Kit (superseded), <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>ORDER</td></tr></table> Ref. 3, 5, & 8	ORDER
ORDER					
---	2700CAR6			Kit (superseded), <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>ORDER</td></tr></table> Ref. 3, 5, 6, & 8	ORDER
ORDER					
3	AAA20200Q302			Kit, Brake Core Bushing & Washers. Includes Washer (10) & Bushing (4).	
4	2700CAR9 AAA20200Q303			Kit, Eye Bolt Bearing. Includes Retaining Ring (2), Needle Bearing (1), & Pin (1).	
5	A400EG2			Magnet Core, Male w/Shaft	
6	A400EH2	---		Magnet Core, Female w/Bushing, A = 3.375 in.	
	---	B400EH2		Magnet Core, Female w/Bushing, A = 2.625 in.	
7	377DF13			Plug, Pipe	
8	96BN1			Rod	
9	---			Screw, Socket Head 1/4-20 x 3/8 in. (obtain locally)	
10	A494HN1			Shaft	

NOTE: Do not order parts unless dimension "A" has been confirmed.
"A" is distance between 1/2 in. threaded holes.

Brake Switch

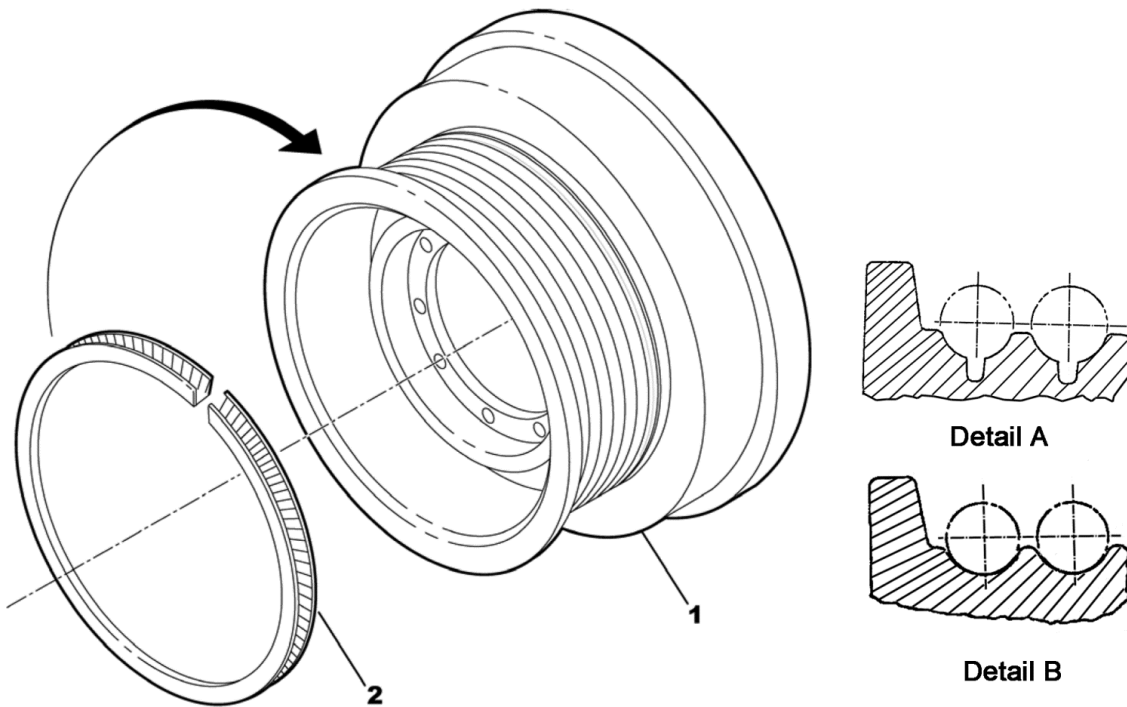
06-H7050A



REF. NO.	VINTAGE				DESCRIPTION
	W/O	Y 01	Y 02	Y 03	
*	---	299EG2			Bar (not shown)
1	242T2 AAA321GZ2 and 335AB5				Bushing
2	335E86				Bushing
3	376EE1	---			Gasket, ID = 4-5/16 in.
4	---	2700ADE3			Kit, Brake Switch. Includes: Switch, Cover, Lever, Terminal, Block, Bushing, Bar, Pin, and Fasteners.
5	288TR2				Lever, Brake Switch w/ Bushing (post-1970)
6	287BS2				Lever
7	77SN1	---			Pin, \varnothing D = 3/8 in., L = 2-3/4 in.
	---	AAA77ZG1			Pin, \varnothing D = 7/16 in., L = 2.50 in.
8	6931A1	177AP1			Switch, Brake
9	---	303G2			Terminal

* Not shown.

Drive Sheave



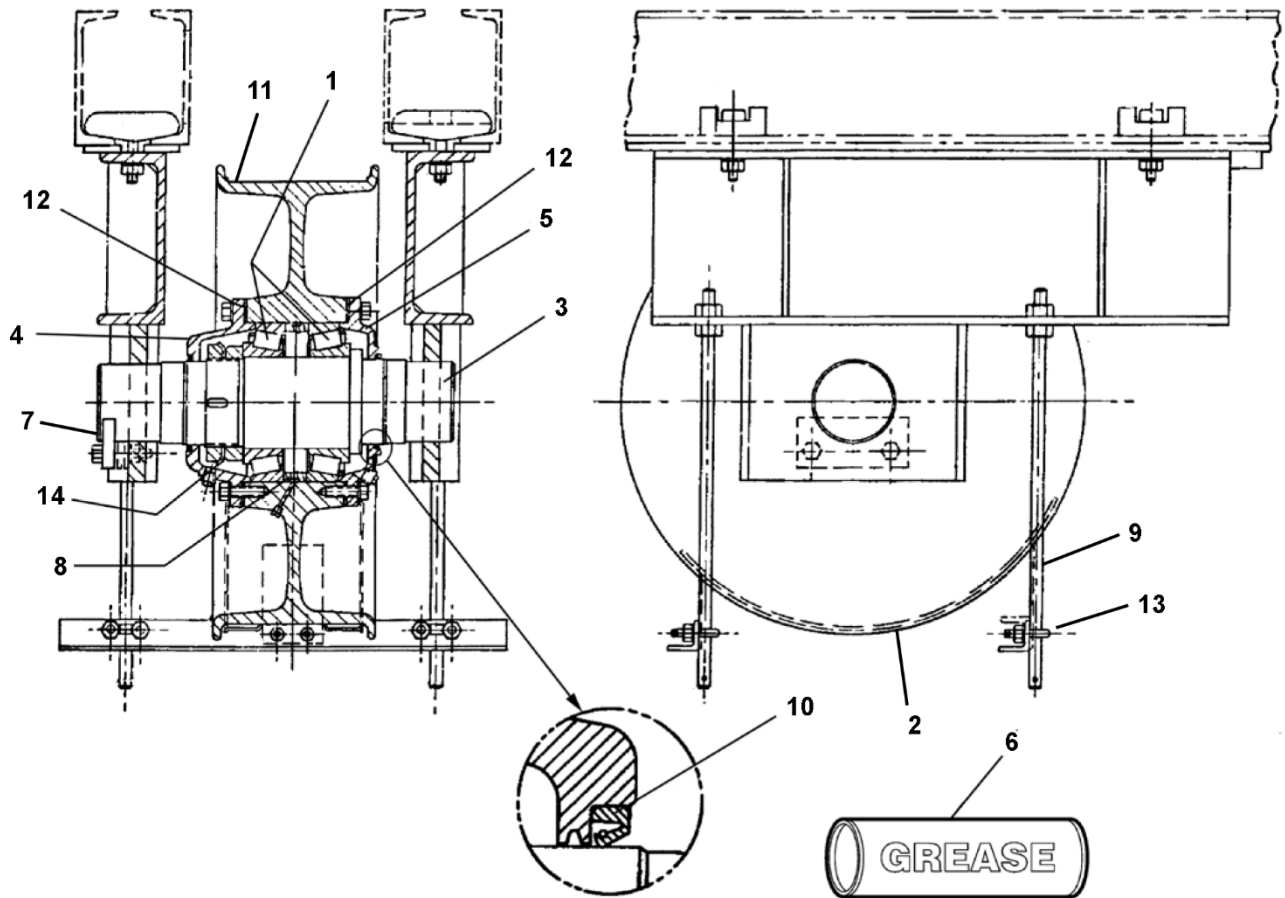
VINTAGE			
W/O	Y 01	Y 02	Y 03


REF. NO.	PART or ML	DESCRIPTION	Ø (in.)	NO. OF ROPES/ ROPE SIZE	NO. of GROVES	GROVE PITCH (in.)	REMARKS
1	261H5	Drive Sheave, Double Wrap Traction (DWT)	34	5-5/8	10	0.750	w/Undercut Groove See Detail A
	261H1			6-5/8	12		
	261H2			7-5/8	14		
	261H3			8-5/8	16		
	261H6			6-1/2	12	0.620	
	261H7			7-1/2	14		
	261H8			8-1/2	16		
	261H11			Drive Sheave, Single Wrap Traction (SWT)	34	6-5/8	
	261H9	Drive Sheave, Single Wrap Traction (SWT)	34	10-5/8	10	1.12	Grooved for Sheave Liner
2	B254BV13 AAA254BV42 B254BV33 AAA254BV42	Insert, Polyurethane, 5/8 Ropes, 34 in. Diameter, Chained					Chain
	AAA254BV12 B254BV13 AAA254BV12	Insert, Polyurethane, 5/8 Ropes, 34 in. Diameter, Joined					Used for UNITEC PARTS only

NOTE: Round seat groove with **no** undercut. This sheave is used on a limited number of contract-specific units, mostly in Canada.

Secondary Sheave

06-H7050A

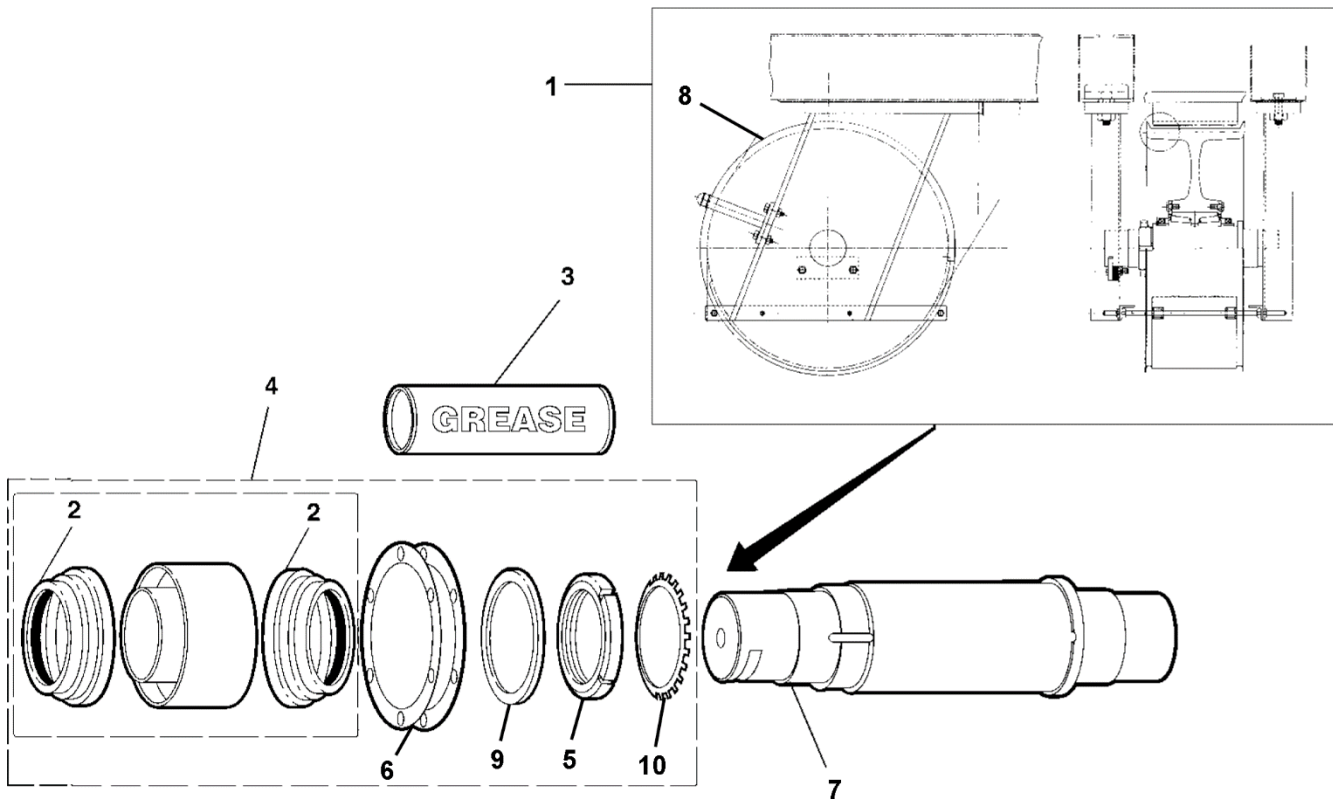



REF. NO.	VINTAGE PRE 1976		DESCRIPTION
	W/O	Y 01	
*	---		Assembly, Secondary Sheave, Type C7050D
1	209B34		Bearing (Qty. 1; Required Qty. 2)
2	A384KY1		Cover
3	B495BV2		Shaft
4	A346AER1		Cover
5	A346AES1		Cover
6	VP-420240		Grease, Otis No 12, 14.5 oz. Tube
7	386WL1		Plate, Lock
8	172JT1		Ring, Spacer
9	86E4		Rod
10	33D23		Seal (Qty. 1; Required Qty. 2)
11	---		Sheave, Type 262T,  p. 15
12	255HB33		Shim (Qty. 1; Required Qty. 14)
13	65C11		U-Bolt
14	130AA18		Washer

* Part not shown.

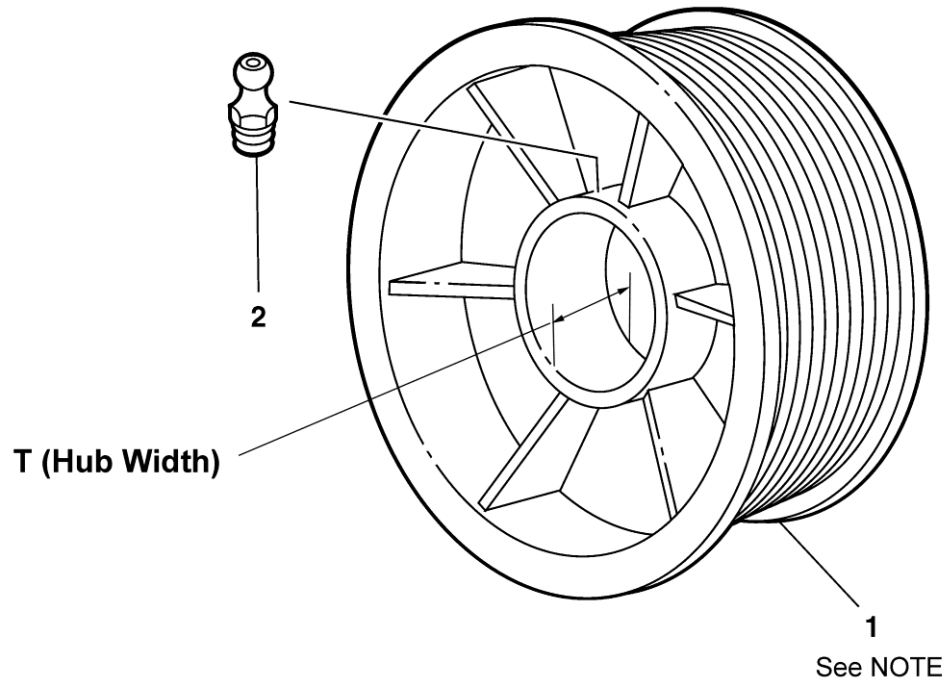
Secondary Sheave

06-H7050A



REF. NO.	VINTAGE POST 1976		DESCRIPTION
	Y 02	Y 03	
1	---	---	Assembly, Secondary Sheave, Type B7050J
2	AAA33AV1		Assembly, Seal for Bearing
3	VP-420240		Grease, Otis No. 12, 14.5 oz. Tube
4	2700CAR4 B7050J500		Kit, Secondary Sheave Bearing. Includes Roller Bearing (1), Locknut (1), Lockwasher (1), Ring (2), & Spacer (1).
5	72BV20		Locknut
6	172GJ10		Ring
7	495DA2		Shaft, w/Locknut, L = 23.75 in.
8	---		Sheave, Type 262AB,  p. 15
9	462FN1		Spacer
10	130AA21		Washer Star

Secondary Sheave



For Type 262T Sheaves T ~ 6.50 in.

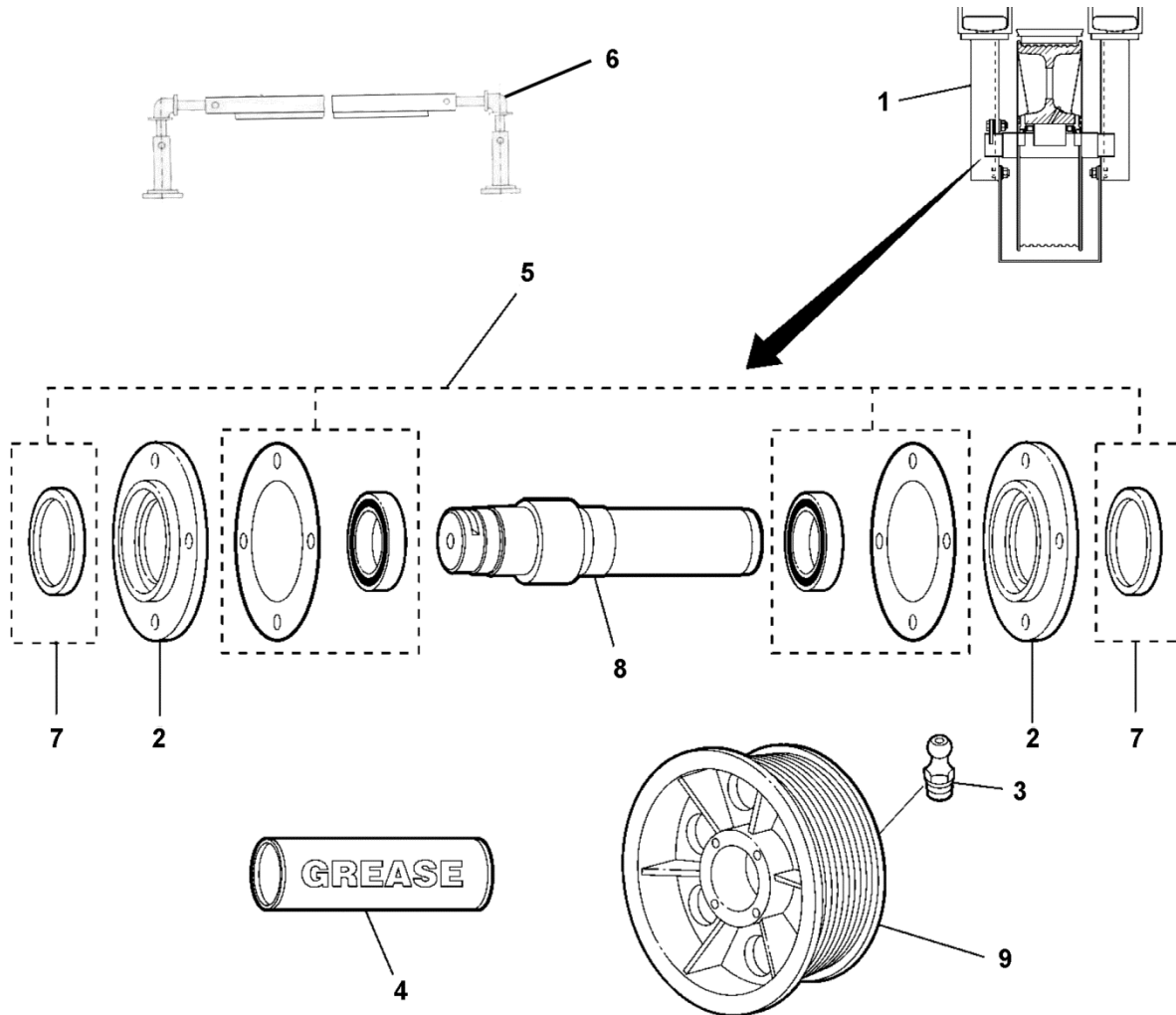
For Type 262AB Sheaves T ~ 7.25 in.

REF. NO.	VINTAGE				DESCRIPTION	Ø (in.)	NO. of ROPES	NO. of GROOVES	ROPE SIZE (in.)
	W/O	Y 01	Y 02	Y 03					
1	262T5	262AB5			Sheave, Secondary	33	5	10	0.625
	262T1	262AB1			Sheave, Secondary	33	6	12	
	262T2	262AB2			Sheave, Secondary	33	7	14	
	262T3	262AB3			Sheave, Secondary	33	8	16	
	262T6	262AB6			Sheave, Secondary	33	6	12	0.500
	262T7	262AB7			Sheave, Secondary	33	7	14	
	262T8	262AB8			Sheave, Secondary	33	8	16	
2	435C1				Lubricator, Fitting, 1/8 NPT Thread				

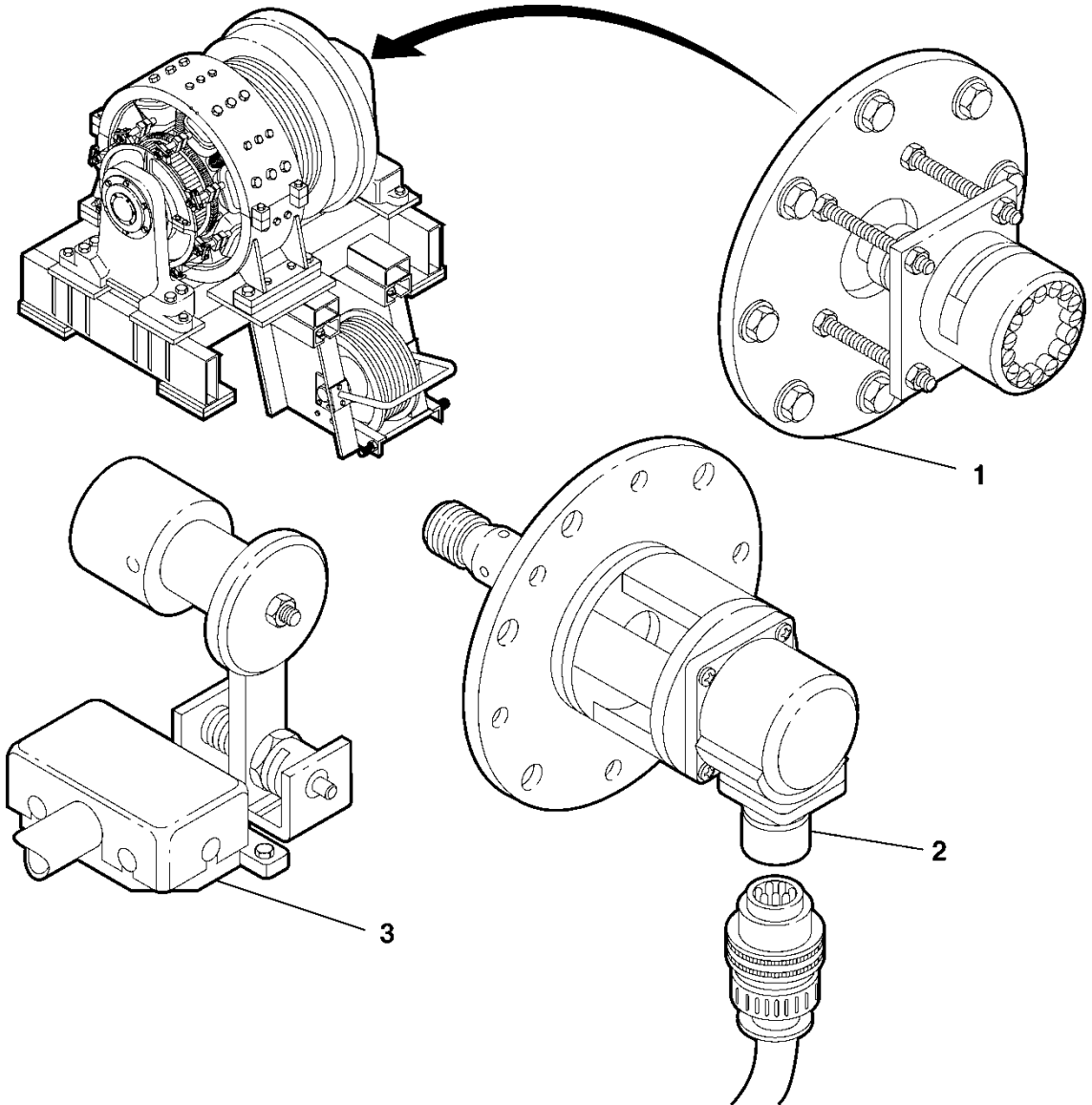
NOTE: There is no visual difference between the types 262T and 262AB sheaves. Do not use the casting number for identifying the sheave type. To identify the sheave, use sheave assemblies illustrations on pp. 13 and 14 and also hub width indicated above.




Deflector Sheave

06-H7050A



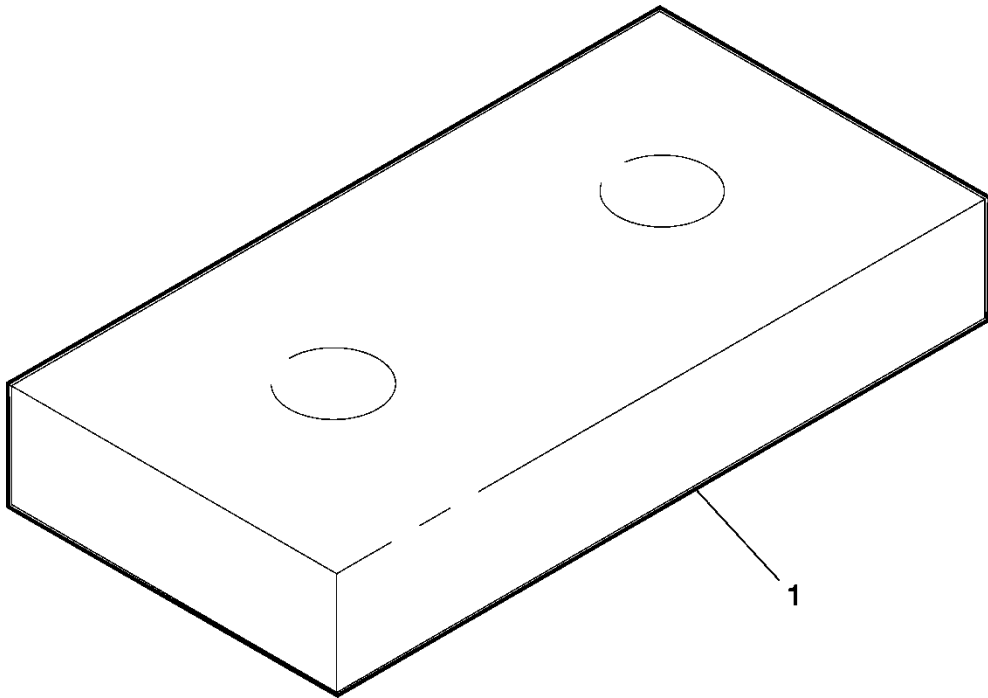
REF. NO.	VINTAGE				DESCRIPTION			
	W/O	Y 01	Y 02	Y 03				
1	---				Assembly, Deflector Sheave, Type 7050R			
2	346AGC2				Cover, $\varnothing = 7.75$ in.			
3	435C2				Fitting, Lubricator			
4	VP-420240				Grease, Otis No. 12, 14.5 oz. Tube			
---	2700CAR3				Kit (superseded), <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>ORDER</td></tr><tr><td> </td></tr><tr><td> </td></tr></table> Ref. 5	ORDER		
ORDER								
---	2700CAR5				Kit (superseded), <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>ORDER</td></tr><tr><td> </td></tr><tr><td> </td></tr></table> Ref. 5	ORDER		
ORDER								
5	7050R500				Kit, Deflector Sheave. Includes Roller Bearing (2), Vellumoid Gasket (2), & Oil Seal (2).			
6	AAA384YV3				Retainer, Rope			
7	33D24				Seal, Oil, $\varnothing = 4.00$ in.			
8	495CK5				Shaft, L = 23 in.			
9	263BJ1				Sheave, Deflector, 5/8 in. Ropes (10)			



REF. NO.	VINTAGE				DESCRIPTION
	W/O	Y 01	Y 02	Y 03	
	PART or ML				
1		---			Encoder, Shaft, Type 7119AB,  SPL 06-7119AB
2		---			Encoder, Shaft, Type AA*21430D,  SPL 06-AAA21430E
3		---			Transducer, Primary Velocity, Type HT200750,  SPL 06-HT200750-1

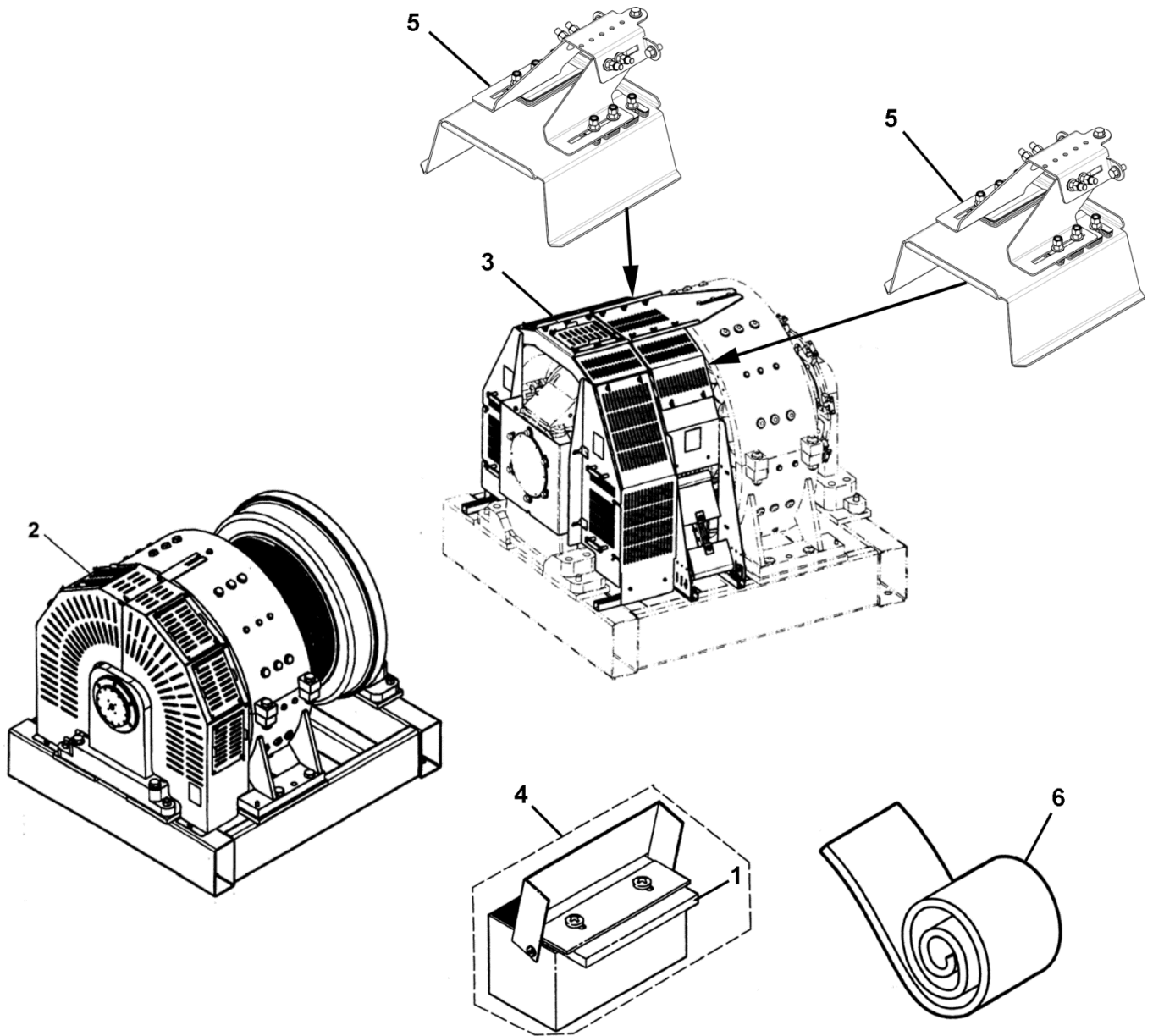
Sound Isolation




06-H7050A



REF. NO.	VINTAGE				DESCRIPTION
	W/O	Y 01	Y 02	Y 03	
1	PART or ML				
	310WB1				Pad, Rubber, 3.25 x 6 in.

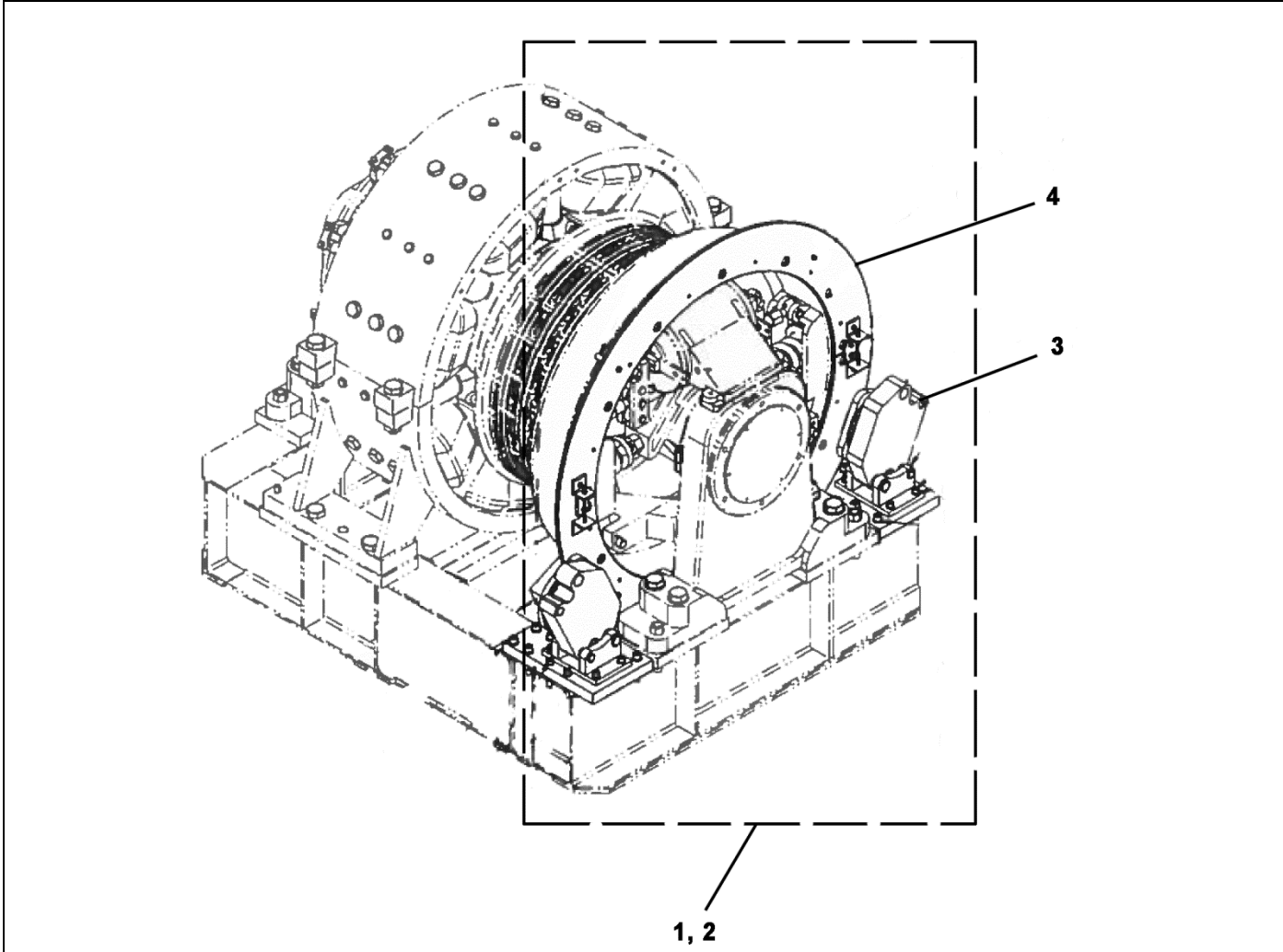
Sheave Guard for Machine



ALL VINTAGES		
REF. NO.	PART No.	DESCRIPTION
1	AAA488M7	Felt, Wick
2	---	Guard, Commutator End,  TIP 6.1.0-19
3	---	Guard, Sheave,  TIP 6.1.3-3
4	AAA508AH5	Lubricator
5	---	Retainer, Rope,  TIP 6.1.0-27
6	AAA297AY6	Strip, Carpet

Secondary Disk Brake Kit for Uncontrolled Motion

06-H7050A



REF. NO.	VINTAGE				DESCRIPTION
	W/O	Y 01	Y 02	Y 03	
1	AAA20236Y1				Assembly, Secondary Brake, with Installation Tools
2	AAA20236Y2				Assembly, Secondary Brake, without Installation Tools
*	HILL7985-31-007				Caliper, Brake Shoe (sold individually; 2 required)
3	AAA20236X1				Caliper
*	AAA21305CW1				Controller, Disk Brake (not shown)
*	HILL0592-02-012-T				Microswitch, Caliper (not shown)
4	AAA353EB1				Rotor (two Halves)
*	HILL7985-26-001				Shim, Caliper (not shown)
*	HILL7985-26-002				Shim Caliper (0.005 in. thick; not shown)