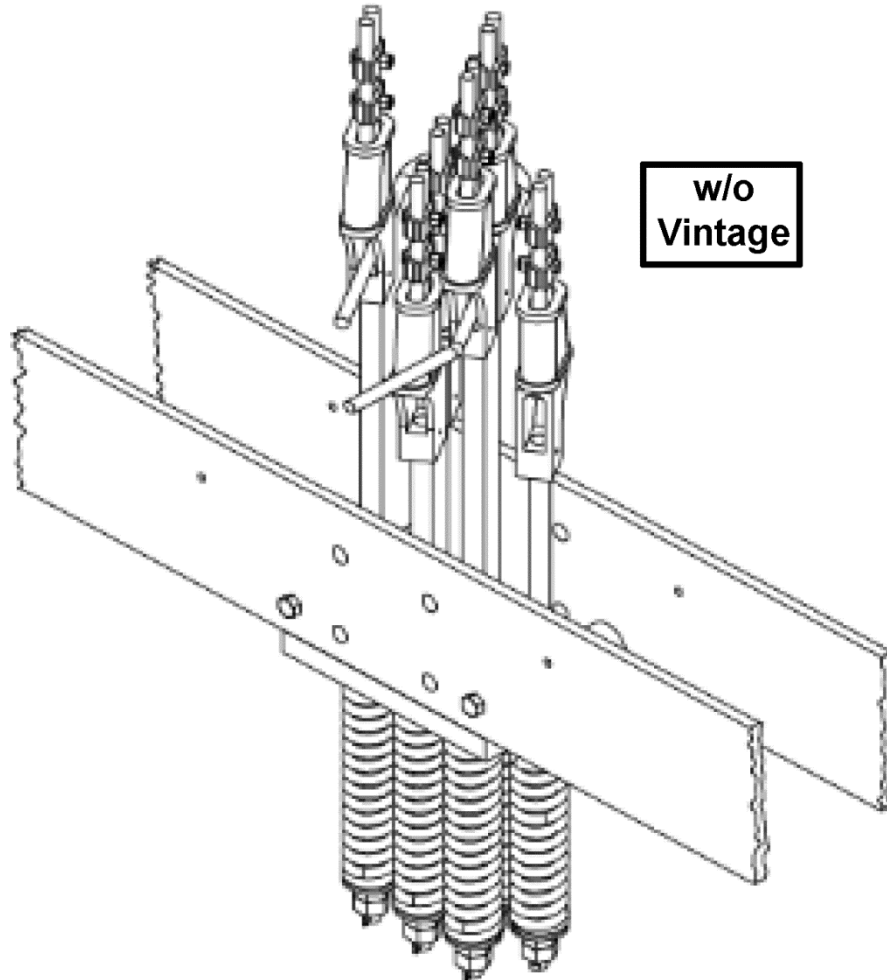


Wire Rope Terminations

Spare Parts Leaflet

11-AAA6612AW

March 6, 2019 / Page 1 of 22



OTIS

This document contains technical data
subject to EAR, ECCN = EAR99

SERVICE ENGINEERING
Otis Elevator Company
Bloomfield, Connecticut USA

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Leaflet Description

This leaflet provides information for hoist rope wedge clamp assemblies. These wedge clamp assemblies are sold as pairs with the exception of the 3/8 in. termination. They include the centering washers, nuts, springs, wedge inserts, rope clips, and cotter pin. The 3/8 in. termination is sold as a single socket and does not include a spring. The wedge clamps accommodate the following wire rope diameters: 3/8 in., 1/2 in., 13 mm, 9/16 in., 5/8 in., 16 mm, 11/16, 18 mm, 3/4 in., 7/8 in. and 22 mm. Also, included in this SPL are thimble, sockets, springs, and lower level components. For wire rope, see SPL 11-AAA712P.

Leaflet Revisions

Date Revised	Subject Matter Expert	Reason for Revision
January 28, 2015	Gary Mendrala	New SPL
April 22, 2015	Gary Mendrala	Added terminations from SPL 11-AAA712P
September 13, 2017	Gary Mendrala	Added EM100-12, -18, and -24 on p. 7
January 23, 2019	Gary Mendrala	Updated part numbers on pp. 7, 9, and 15
March 6, 2019	Gary Mendrala	Added p/n 133AR9 on p. 15

Related Drawings

Drawing No.	Title	Drawing No.	Title
229Y	Wedge Clamp 1/2, 5/8, 11/16, 3/4" Ropes with Washers	AAA231U	Wedge Clamp without Washers
ABA6612AW	Arrangement Wedge Clamp Hitches		

Related Documents

Document ID	Title
TIP 11.1-8	Restraining Wedge Clamp Shackles
SPL 11-AAA712P	Wire Rope, Coated Steel Belts, and Tools
TIP 11.1-11	Hitch Spring Alternative

Subject Matter Expert

Name	Department
Gary Mendrala	OSC Service Engineering

About Spare Parts Leaflets...

This document lists the lowest replaceable units (LRUs) for the standard version of the product. The LRUs are chosen by a team of Otis associates representing engineering and manufacturing. While goal of this document is to make parts identification as easy as possible, the document cannot be all-inclusive. Elevator and escalator contracts classified as "special" or "custom" are not addressed here. For such contracts, please refer to specified information, the contract folder, TIPs, Field Education Articles, Construction Letters, etc. for further information. If you have any suggestions about this document, please contact the subject matter expert listed on this page.

Wedge Clamp Rope Termination Replacement Guidelines

To order wedge clamp rope terminations, you need to know the following:

1. Rope Diameter
2. Wedge Clamp Shackle Length
3. Machine Type - (Reference)

Guidelines:

The following is a summary. For complete guidelines, see the latest revision of TIP 11.1-6, *Rope Wedge Socketing*.

When replacing babbitted terminations with wedge clamp terminations, alternating lengths should be ordered and installed in a high-low pattern, so that adjacent shackle heads can rotate without hitting each other. Thus half the shackles should be ordered the original length, and half at 6 in. longer or shorter (12 in. longer or shorter for 11/16 diameter and larger rope).

Length

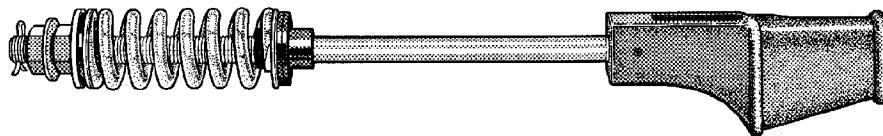
In general, order wedge clamp shackle rods in the same length as the ones they are to replace, subject to the following general observations:

Car Terminations (1:1 Roped Equipment)

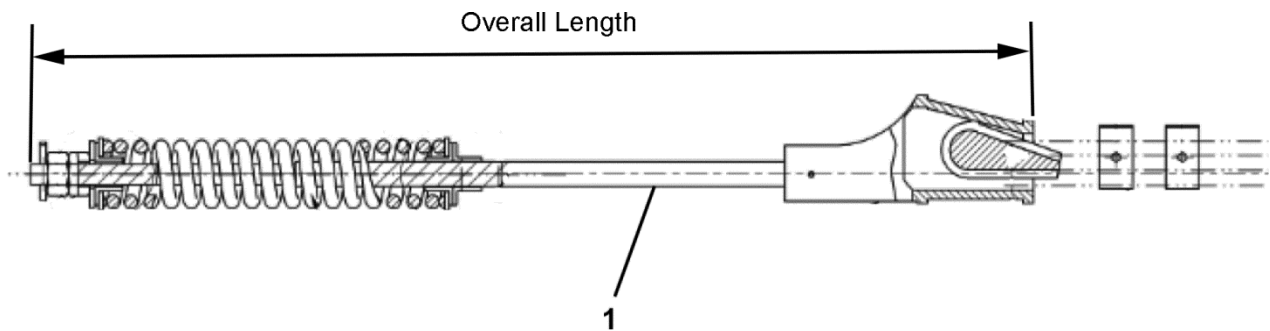
Generally, shackles should be long enough so the shackle heads emerge clear above the top of the car crosshead channels. Before ordering longer shackles, verify there is sufficient clearance at the top of the hoistway.

Dead-End Terminations (2:1 Roped Equipment)

Generally, shackles should be long enough so the shackle heads emerge clear below the C-channels or I-beams used to support the hitch plates.

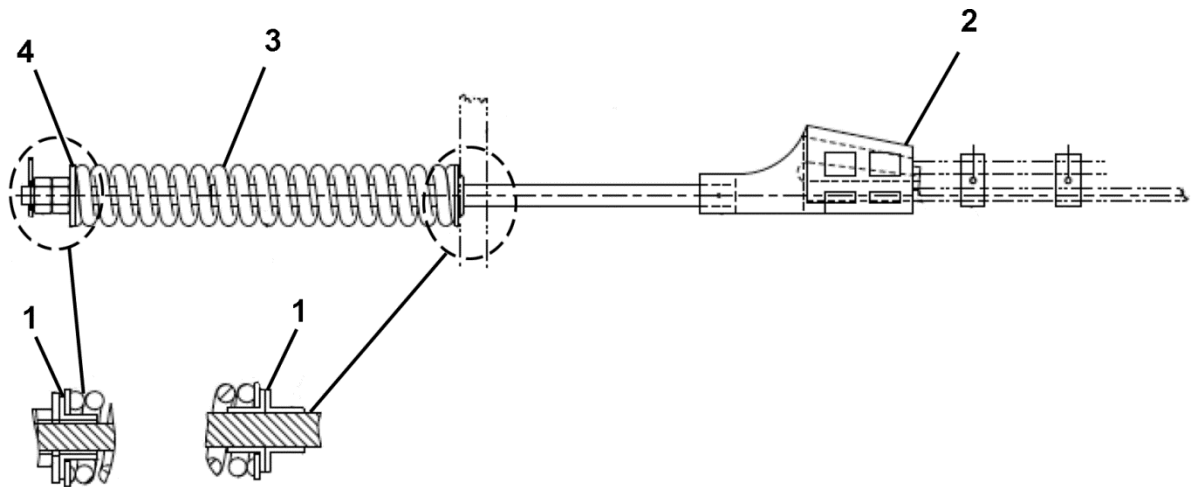


Wedge Clamp Rope Terminations Assemblies

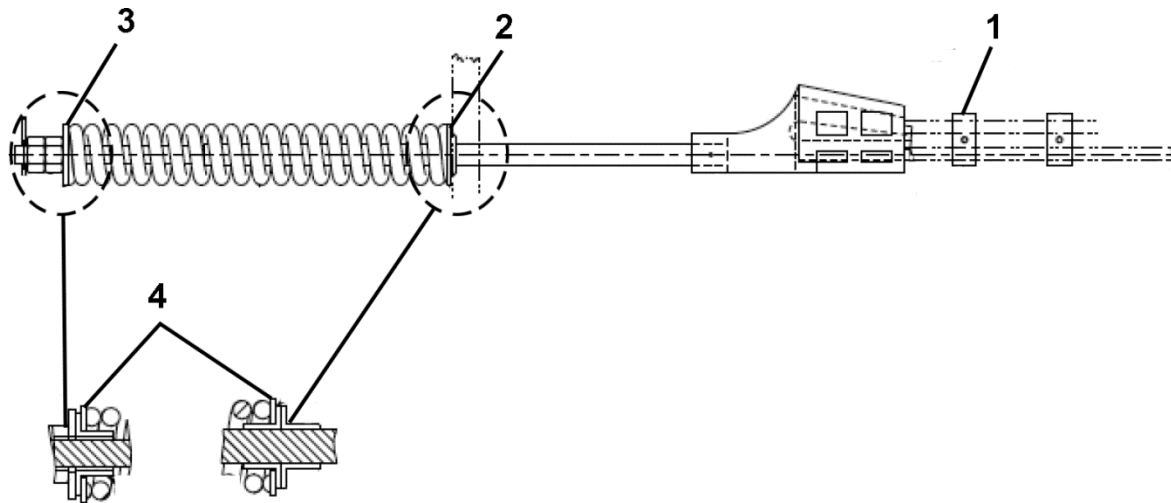


W/O VINTAGE				
REF. No.	PART No.	DESCRIPTION	ROPE DIAMETER	OVERALL LENGTH (in.)
1	ABA6612AW1	Assembly, Wedge Socket	1/2 in. (13 mm)	30.25, 36.25
	ABA6612AW2		9/16 in., 5/8 in. (16 mm)	36.25, 42.25
	ABA6612AW4		7/8 in. (22 mm)	46.50, 52.50
	ABA6612AW5		3/8 in.	17.50
	ABA6612AW6		11/16 in., 3/4 in. (18 mm)	37.50, 43.50

NOTE: Assemblies ABA6612AW 1, 2, 4, 6 are provided as pairs and include cotter pins, nuts, washers, springs sockets, wedge inserts, and retaining clips. The terminations are sold at 6 in. offset lengths in order to allow nesting in the hitch plate. Assembly ABA6612AW5 is sold as a single assembly and includes cotter pin, nuts, washers, socket, wedge insert, and retaining clips. A spring is not included in the ABA6612AW5 arrangement.



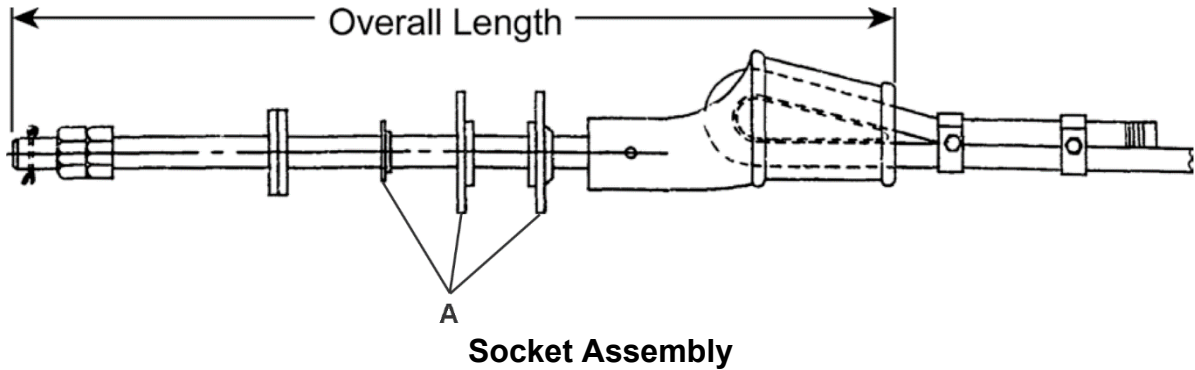
W/O VINTAGE			
REF. No.	PART No.	DESCRIPTION	APPLICATION
1	AAA321HU1	Bushing, Top Hat	1/2 in., 13 mm, 9/16 in., 5/8, 16 mm Rope Diameter
2	AAA231U10	Insert, Wedge	1/2 in., 13 mm Rope Diameter
	AAA231U11	Insert, Wedge	9/16 in., 5/8 in., 16 mm Rope Diameter
	AAA231U12	Insert, Wedge	11/16 in., 3/4 in., 18 mm Rope Diameter
	AAA231U13	Insert, Wedge	7/8 in., 22 mm Rope Diameter
	AAA231U14	Insert, Wedge	3/8 in. Rope Diameter
	3	AAA90ES1	Spring
AAA90ES2		Spring	For 11/16 in., 18 mm, 3/4 in. Ropes
90GD25		Spring	For 9/16 in., 5/8 in., 16 mm Ropes
90ND7		Spring	For 7/8 in., 22 mm Ropes
4	127AD21	Washer	For 9/16 in., 5/8 in., 16 mm Sockets



W/O VINTAGE			
REF. No.	PART No.	DESCRIPTION	APPLICATION
1	AAA339NL10	Assembly, Clip Includes 1 Clip and Hardware	1/2 in., 13 mm, 9/16 in., 5/8 in., 16 mm Ropes
	AAA339NL11	Assembly, Clip Includes 1 Clip and Hardware	11/16 in., 3/4 in., 18 mm Ropes
	AAA339NL12	Assembly, Clip Includes 1 Clip and Hardware	13/16 in., 7/8 in., 22 mm Ropes
	AAA339NL13	Assembly, Clip Includes 1 Clip and Hardware	3/8 in. Ropes
2	133AR4	Washer, Nylon	7/8 in., 22 mm Socket
	133AR8	Washer, Nylon	11/16 in., 3/4 in. Socket
3	133E27	Washer, Spring Seat	7/8 in., 22 mm Socket
	133E25	Washer, Spring Seat	11/16 in., 3/4 in. Socket
4	127AD22	Washer	1/2 in., 13 mm, 9/16 in., 5/8 in. Socket

Wedge Clamp Rope Termination Assembly Kit

11-AAA6612AW

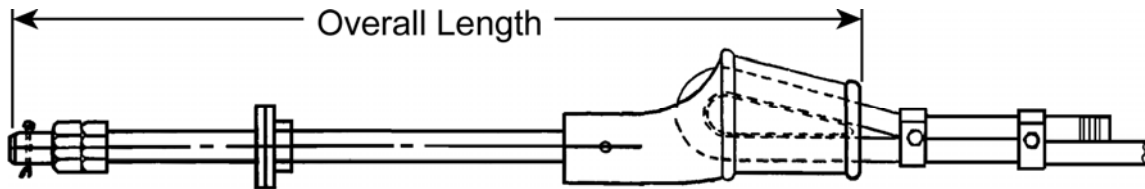


NOTE: The wedge clamp rope termination assembly kit includes socket, wedge insert, washer seats, clips, nuts and cotter pins. Kits 229Y15 through 17 do not use springs. Washers marked “A” are not included.

PART No.	ROPE DIAMETER (IN.)	TYPICAL APPLICATION	HITCH	OVERALL LENGTH (IN.)
229Y1	1/2	All	1:1 or 2:1	30.25
229Y2	1/2	All	1:1 or 2:1	36.25
229Y13	1/2	All	1:1 or 2:1	24.25
229Y14	1/2	All	1:1 or 2:1	18.25
229Y5	5/8	All	1:1 or 2:1	42.25
229Y7	5/8	All	1:1 or 2:1	24.25
229Y3	5/8	Geared, Gearless, 219HT	1:1 or 2:1	36.25
229Y4	5/8	All Geared	1:1 or 2:1	30.25
229Y6	5/8	Gearless 219HT	2:1	30.25
229Y8	11/16, 3/4	All	1:1 or 2:1	30.25
229Y9	11/16, 3/4	All	1:1 or 2:1	36.25
229Y11	11/16, 3/4	All	1:1 or 2:1	24.25
229Y10	11/16, 3/4	Gearless 269HT	1:1	43.5
229Y12	11/16, 3/4	Gearless 269HT	1:1	31.25
229Y15	10 mm, 3/8 in.	Torin, Gearless Spring not Used on 10 mm, 3/8 in. Terminations	1:1, 2:1	17.00
229Y16	10 mm, 3/8 in.		1:1, 2:1	23.00
229Y17	10 mm, 3/8 in.		1:1, 2:1	29.00

11-AAA6612AW

Compensation Rope Termination Assembly

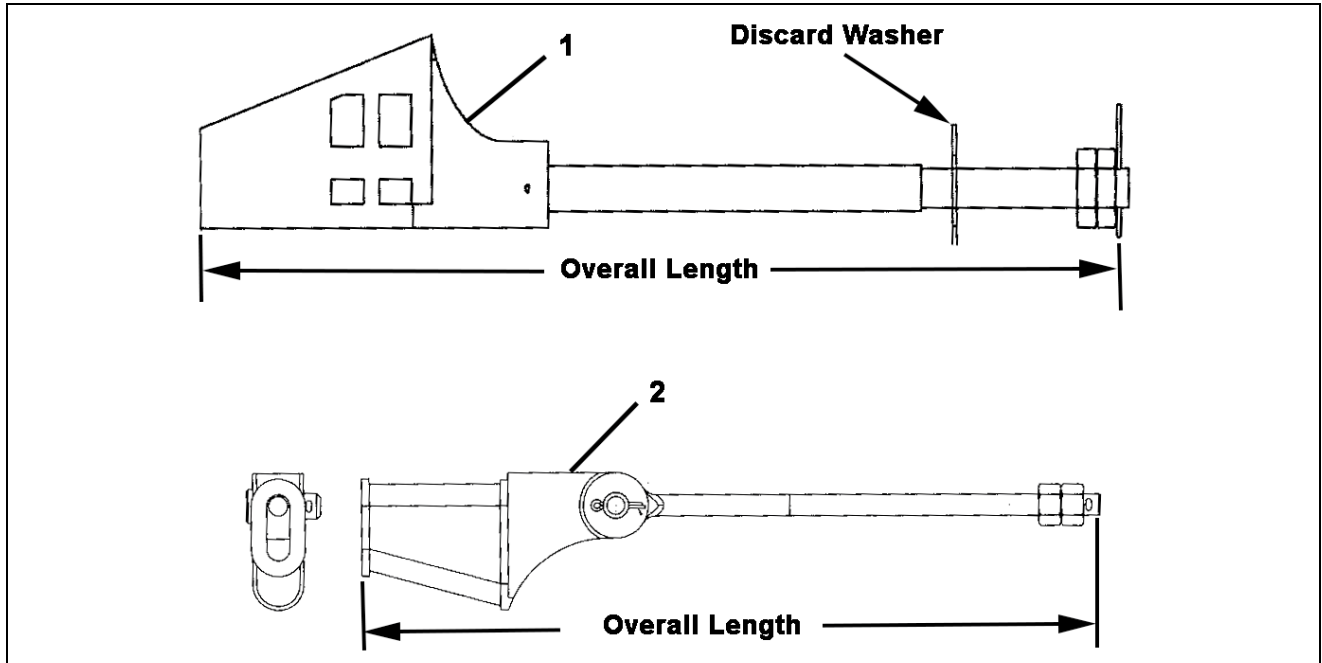


NOTE: The wedge clamp rope shackle assembly kit includes socket, wedge insert, washer seats, clips, nuts and cotter pins.

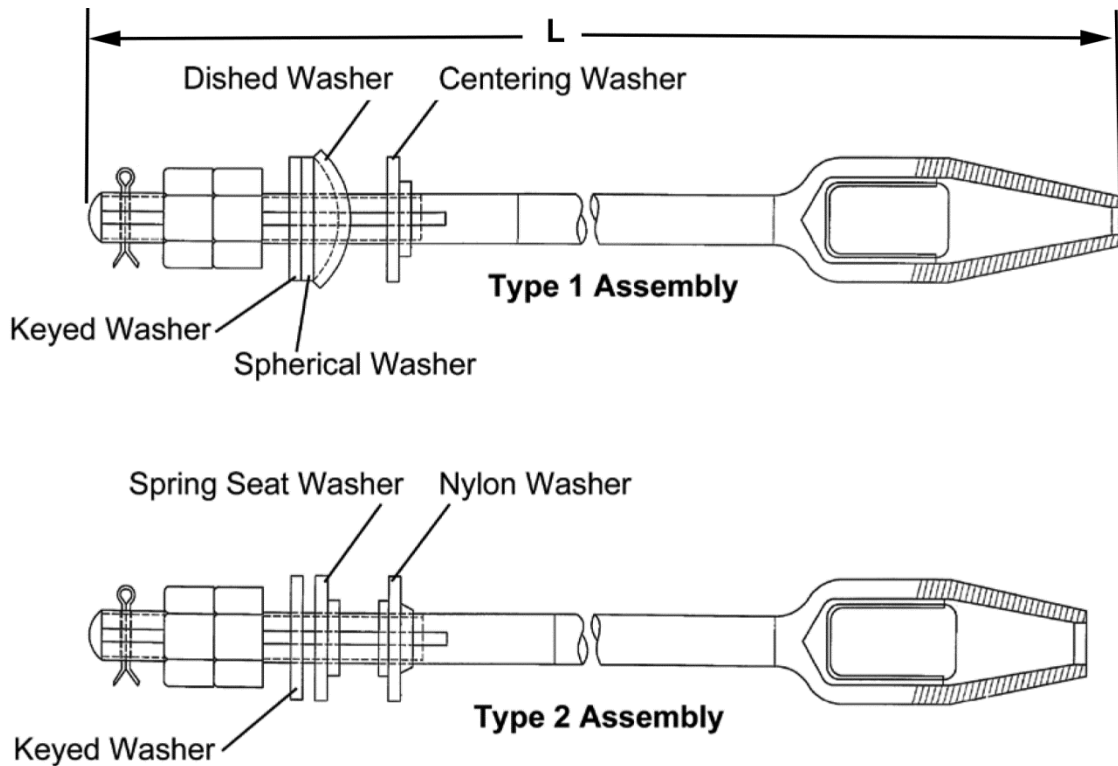
PART No.	ROPE DIA.	APPLICATION	OVERALL LENGTH (in.)
AAA25880C1	9/16, 5/8	Compensation	26.25
AAA25880C2			21.25

Rope Termination w/o Seats

11-AAA6612AW



REF. No.	PART No.	ROPE DIAMETER (IN.)	OVERALL LENGTH (IN.)	DESCRIPTION
1	AAA231U50	1/2, 9/16, 5/8	30.25	Termination, w/o Wedge Insert
	AAA231U51	1/2, 9/16, 5/8	36.25	
	AAA231U52	1/2, 9/16, 5/8	42.25	
	AAA231U53	1/2, 9/16, 5/8	24.25	
	AAA231U54	1/2, 9/16, 5/8	30.25	
	AAA231U55	1/2, 9/16, 5/8	18.25	
	AAA231U56	11/16, 3/4	31.50	
	AAA231U57	11/16, 3/4	37.50	
	AAA231U58	11/16, 3/4	43.50	
	AAA231U59	11/16, 3/4	25.50	
	AAA231U60	11/16, 3/4	31.50	
	AAA231U61	7/8	34.50	
	AAA231U62	7/8	40.50	
	AAA231U63	7/8	46.50	
	AAA231U64	7/8	52.50	
	AAA231U65	3/8	17.00	
	AAA231U70	3/8 in. 10 mm	17.00	
	AAA231U71	3/8 in. 10 mm	23.00	
	AAA231U72	3/8 in. 10 mm	29.00	
	2	AAA231U66	1/2, 9/16, 5/8	
AAA231U67		1/2, 9/16, 5/8	21.25	
AAA231U68		25 mm	37.40	
AAA231U69	57.00			



NOTE: Nuts (cotter pins) are included in all assemblies.

PART NO.	ROPE DIA. (IN.)	TYPE	L (IN.)	WASHER TYPE	APPLICATION	HITCH
B229C4	1/2	1	18	Centered, Keyed	Car	1:1, 2:1
B229C5		1	18	Keyed, Dished, Spherical	CWT	1:1, 2:1
B229C6		1	24	Centered, Keyed	Car	1:1, 2:1
B229C7		1	24	Keyed, Dished, Spherical	CWT	1:1, 2:1
B229C8		1	30	Centered, Keyed	Car	1:1, 2:1
B229C9		2	30	Keyed, Nylon, Spring Seat	Car	1:1, 2:1
B229C10		2	30	Keyed, Spring Seat	Gearless 155HT	2:1

(Continued on next page)

See illustration on page 10.

NOTE: Type 1 incorporates spherical washers.
Type 2 incorporates flat washers.

PART No.	ROPE DIA. (IN.)	TYPE	L (IN.)	WASHER TYPE	APPLICATION	HITCH
B229D2	5/8	1, 2	24	None	All	1:1, 2:1
B229D3		1, 2	24	None	All	1:1, 2:1
B229D5		1	18	Keyed, Dished, Spherical	CWT	1:1, 2:1
B229D6		1	24	Centered, Keyed	Car	1:1, 2:1
B229D7		1	24	Keyed, Dished, Spherical	CWT	1:1, 2:1
B229D9		1	30	Centered, Keyed	Car	1:1, 2:1
B229D10		2	30	Keyed, Nylon, Spring	219HT	1:1
B229D11		1	30	Keyed, Dished, Spherical	219HT	1:1, 2:1
B229D12		2	24	Spherical	CWT	1:1
B229D17		2	30	Keyed, Spring Seat	Car	1:1, 2:1
B229D18		2	30	Keyed	Car	2:1

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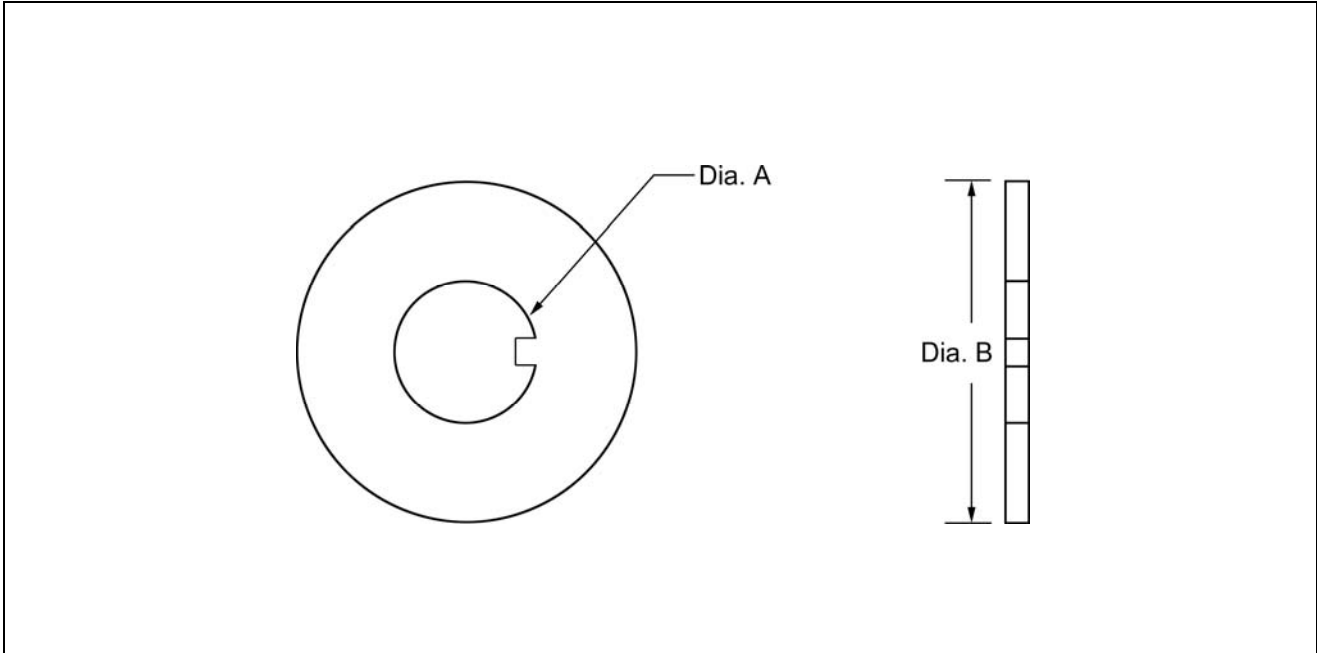
See illustration on page 10.

NOTE: Type 1 incorporates spherical washers.
Type 2 incorporates flat washers.

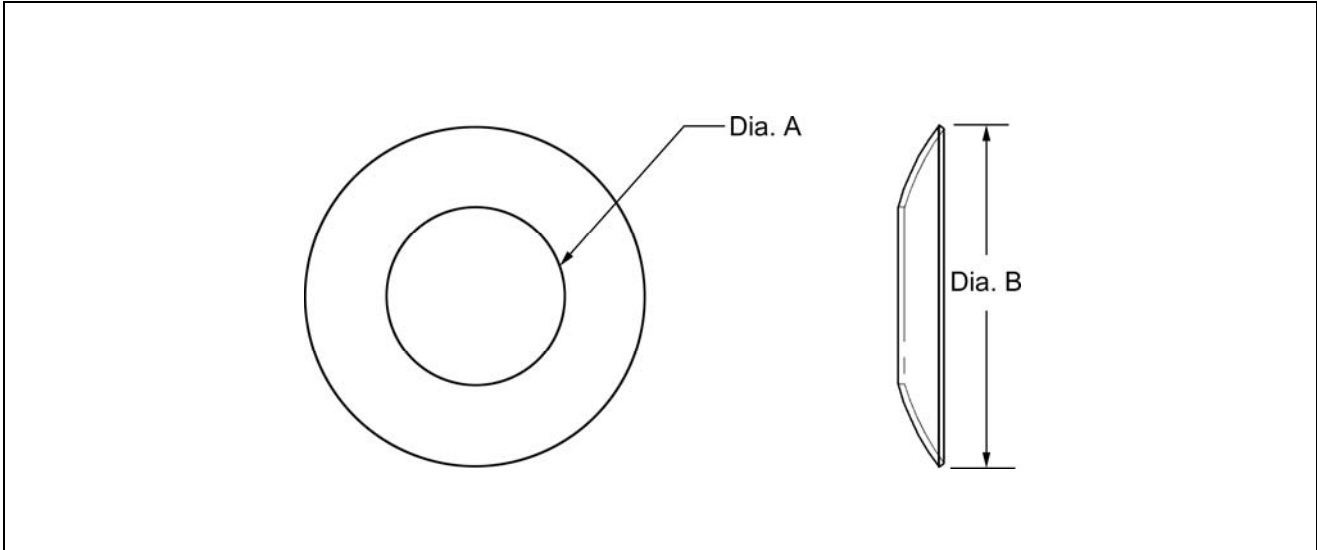
PART NO.	ROPE DIA. (IN.)	TYPE	L (IN.)	WASHER TYPE	APPLICATION	HITCH	
B229J5	11/16	1	24	Keyed, Dished, Spherical	CWT	1:1, 2:1	
B229J6		1	24	None	All	1:1, 2:1	
B229J7		1	30	Keyed, Dished, Spherical	CWT	1:1, 2:1	
B229J8		1	36	Keyed, Dished, Spherical	CWT	1:1, 2:1	
B229J9		2	36	Keyed, Spring Seat, Nylon	269HT	1:1	
B229J10		1	24	Keyed, Centered	Car	1:1, 2:1	
B229J11		1	30		Car	1:1, 2:1	
B229J12		1	36		Car	1:1, 2:1	
B229J14		2	42	Keyed, Spring Seat, Nylon	Car	1:1, 2:1	
B229E4		3/4	1	24	Centered, Keyed	Car	1:1, 2:1
B229E5			1	30	Centered, Keyed	Car	1:1, 2:1
B229E6			1	30	Keyed, Dished, Spherical	CWT	1:1, 2:1
B229E7			1	36	Centered, Keyed	Car	1:1, 2:1
B229E11		7/8	2	40	Keyed, Nylon, Spring Seat	Car	1:1, 2:1
B229E12	2		44	339HT		1:1	
B229E13	2		52	Car		1:1, 2:1	

Keyed and Dished Washers

11-AAA6612AW

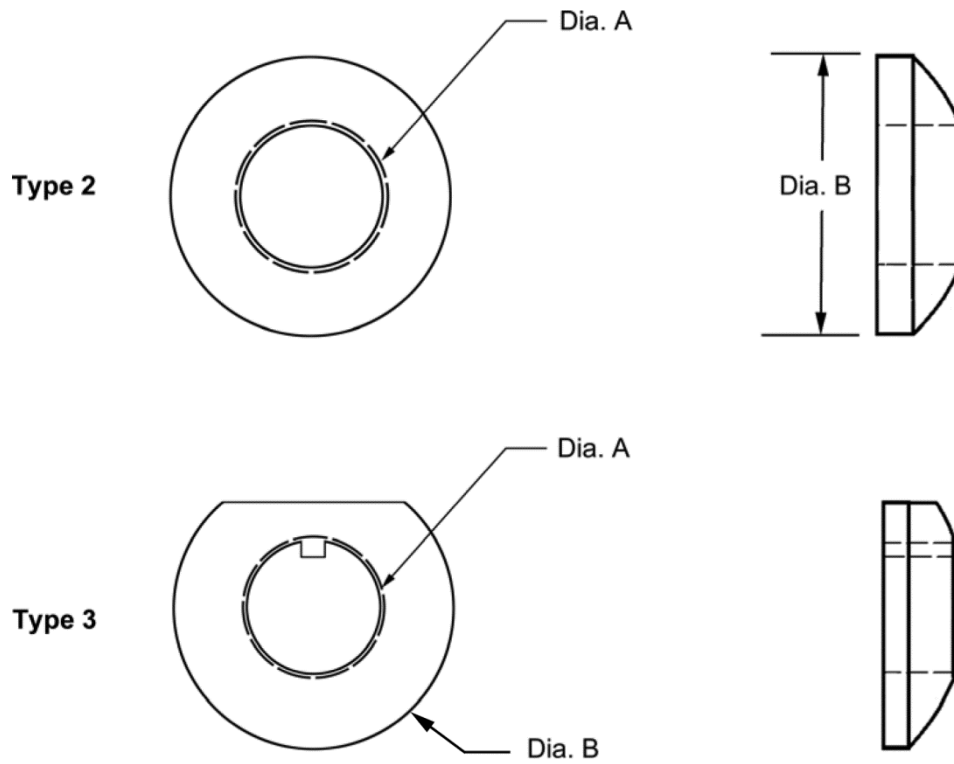


PART No.	DIA. A (in.)	DIA. B (in.)	DESCRIPTION
131BG1	0.90	2.12	Washer, Keyed
131BG2	0.78	1.68	
131BG3	1.15	2.56	
131BG4	1.40	3.37	



PART No.	DIA. A (in.)	DIA. B (in.)	DESCRIPTION
131BR1	1.00	2.00	Washer, Dished
131BR2	1.25	2.25	

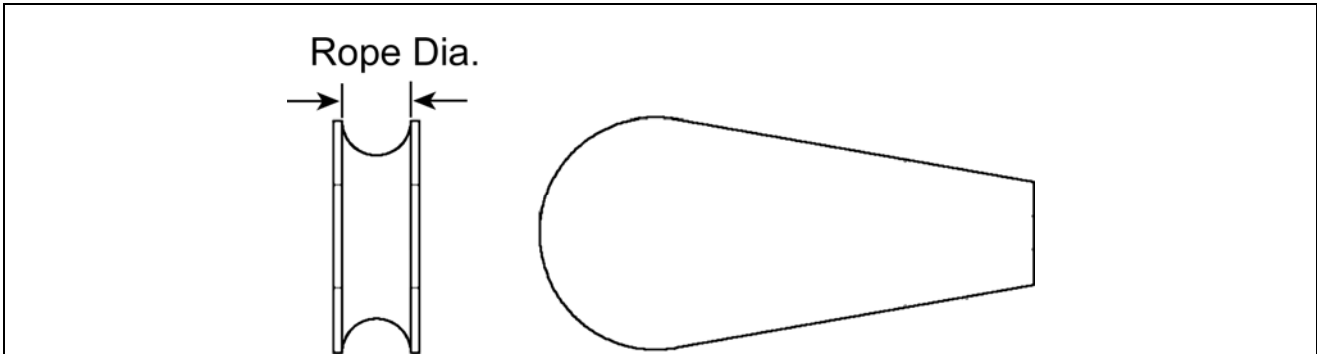
Spherical Washer



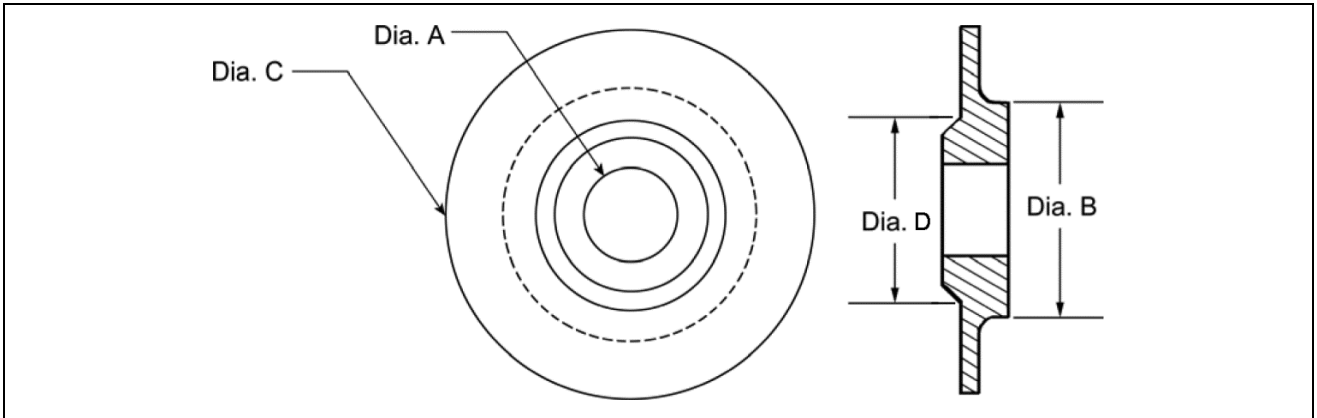
PART No.	DIA. A (in.)	DIA. B (in.)	TYPE	DESCRIPTION
131P7	0.78	2.00	2	Washer, Spherical
131P8	0.93	2.00		
131P9	1.15	2.25		
131P10	0.93	2.00	3	

Wedge Insert and Nylon Spring Seat Washer

11-AAA6612AW



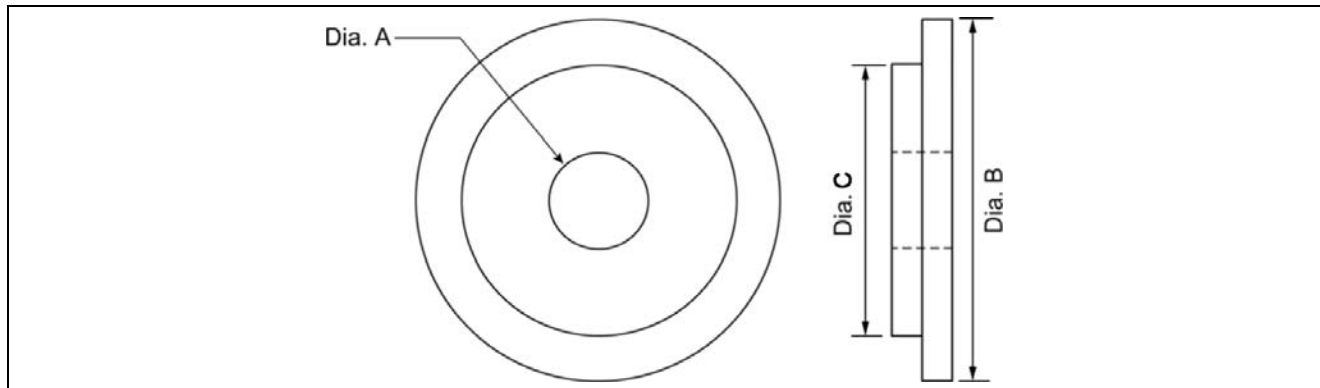
PART NO.	ROPE DIAMETER (IN.)	COLOR CODE	DESCRIPTION
AAA231U10	1/2	Blue	Insert, Wedge
AAA231U11	5/8, 9/16	Red	
AAA231U12	3/4, 11/16	Yellow	
AAA231U13	7/8	Purple	
AAA231U14	3/8 in., 10 mm	Black	
AAA231U16	25 mm	---	



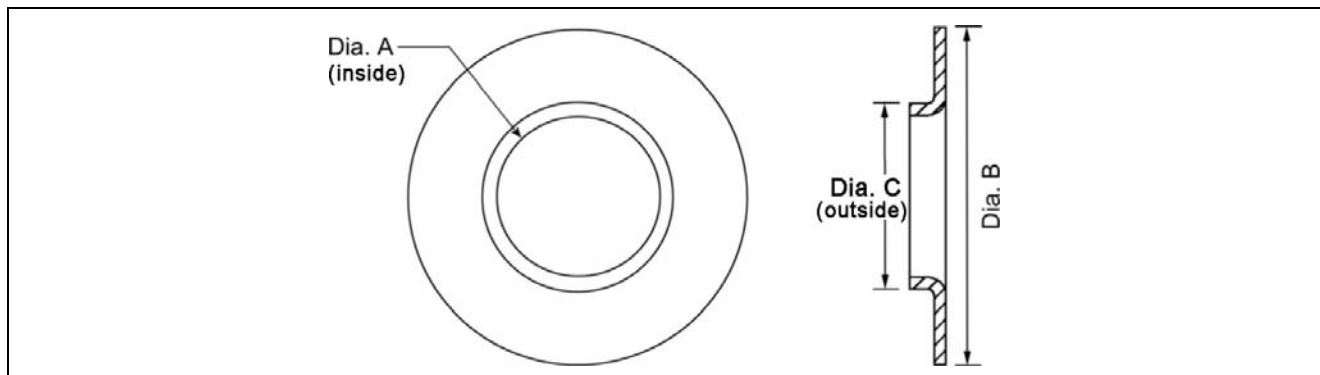
PART NO.	DIA. A (IN.)	DIA. B (IN.)	DIA. C (IN.)	DIA. D (IN.)	APPLICATION	DESCRIPTION
133AR1	0.94	2.19	3.75	1.90	229Y8 through 12	Washer, Spring Seat, Nylon
133AR3	0.81	2.15	3.67	1.81	229Y5, 7	
133AR6	0.81	1.90	3.50	1.81	---	
133AR2	1.19	2.19	3.75	1.90		
133AR4	1.44	1.88	2.60	2.16		
133AR5	0.94	1.32	2.60	1.90	AAA231U57	
133AR8	1.19	1.85	3.50	1.81	AAA231U58	
133AR9	1.44	1.56	3.71	2.16	ABA6612AW4	

11-AAA6612AW

Steel Spring Seat Washer and Centering Washer



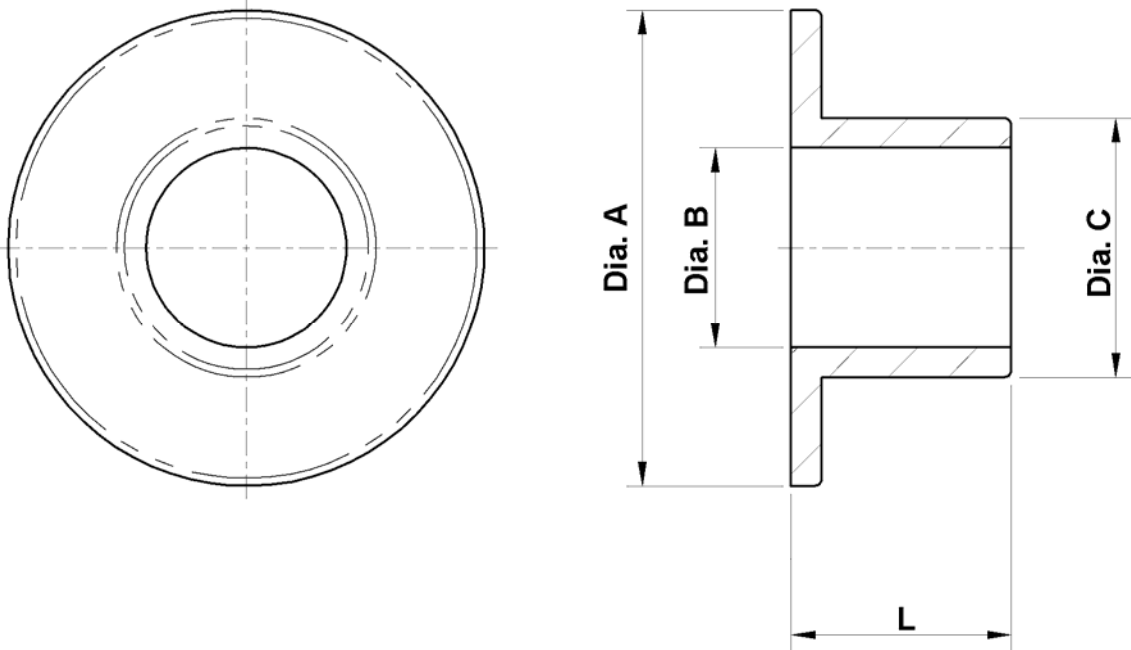
PART NO.	DIA. A (IN.)	DIA. B (IN.)	DIA. C (IN.)	APPLICATION	DESCRIPTION
133E13	0.78	3.25	2.00	---	Washer, Spring Seat, Steel
133E14	0.91	3.75	2.18	229Y8 through 12	
133E19	0.78	3.75	2.18	229Y5, 7	
133E23	0.78	3.50	1.93	---	
133E15	1.15	3.75	2.18	B229J	
133E21	1.93	3.75	2.18	B229E	
133E22	0.94	2.60	1.32	AAA231U57	
133E25	1.19	3.50	1.85	AAA231U58	
133E27	1.44	3.75	1.88	AAA231U63 AAA231U64	



PART NO.	DIA. A (IN.)	DIA. B (IN.)	DIA. C (IN.)	APPLICATION	DESCRIPTION
131BS1	0.81	1.69	0.93	229Y1 through 4, 6, 13-14	Washer, Centering
131BS2	0.93	2.12	1.05	B229D	
131BS3	1.18	2.56	1.30	B229E	

Thermoplastic Bushing

11-AAA6612AW



PART No.	DIA. A (IN.)	DIA. B (IN.)	DIA. C (IN.)	L (IN.)	DESCRIPTION
AAA321HU1	1.86	0.78	1.01	0.86	Bushing

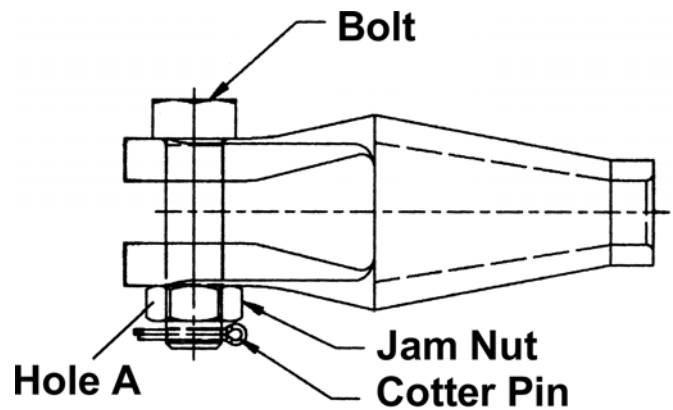
Governor Babbitted Rope, Terminations, Replacement Guidelines and Part Numbers

To order governor babbitted rope terminations, you need to know the following:

1. Rope Diameter
2. Bolt Hole Diameter "A"

Guidelines:

Babbitted rope shackles can easily be replaced by following the list below.



PART NO.	ROPE DIA. (IN.)	HOLE A (IN.)
227C3	1/2	0.500
227C4	1/2	0.375
227C7	3/8	0.500
227C8	3/8	0.375

Governor Wedge Rope Terminations, Replacement Guidelines and Part Numbers

11-AAA6612AW

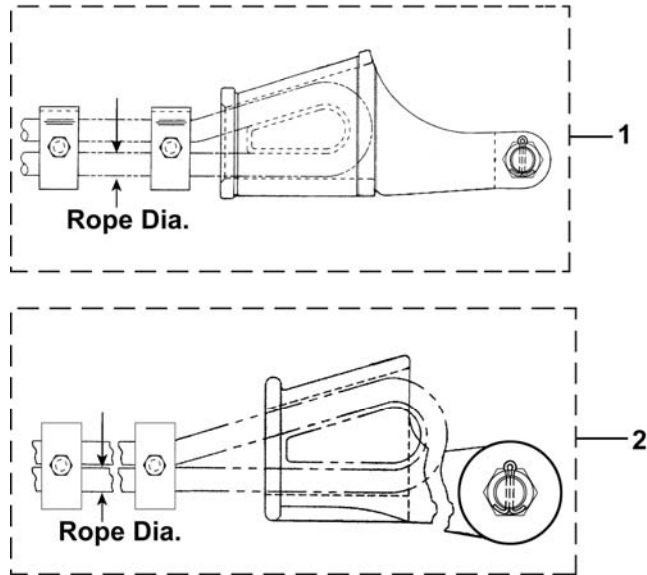
To order governor wedge rope shackles, you need to know the following:

1. Rope Diameter
2. Physical Configuration

Guidelines:

Wedge rope shackles can easily be replaced by following the list below.

NOTE: Wedge rope shackle assemblies include socket, clips, wedge, and hardware.



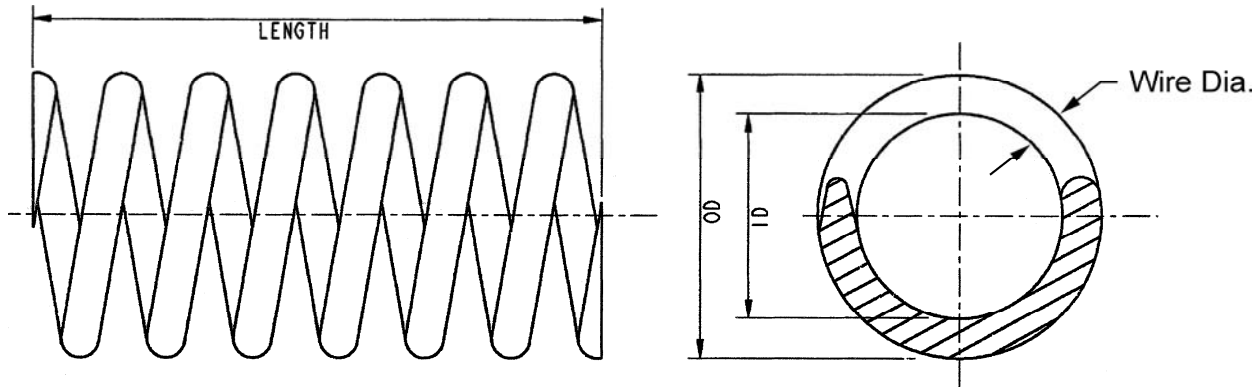
REF. NO.	PART NO.	DESCRIPTION
*	AAA227E2 AAA227E8 AAA227E13	Termination, Rope Dia. 7/16, 1/2 (in.)
	AAA227E1 AAA227E7 AAA227E9 AAA227E12	Termination, Rope Dia. 3/8 (in.)
1	AAA227E15	Termination, Rope Dia. 7/16, 1/2 (in.)
2	AAA227E14	Termination, Rope Dia. 3/8 (in.)

* Parts not shown

Termination Springs Replacement Guidelines & Part Numbers

Termination Springs Replacement Guidelines:

When ordering hitch springs, please follow the table below. If you have any concerns, please call your customer service representative for clarification.



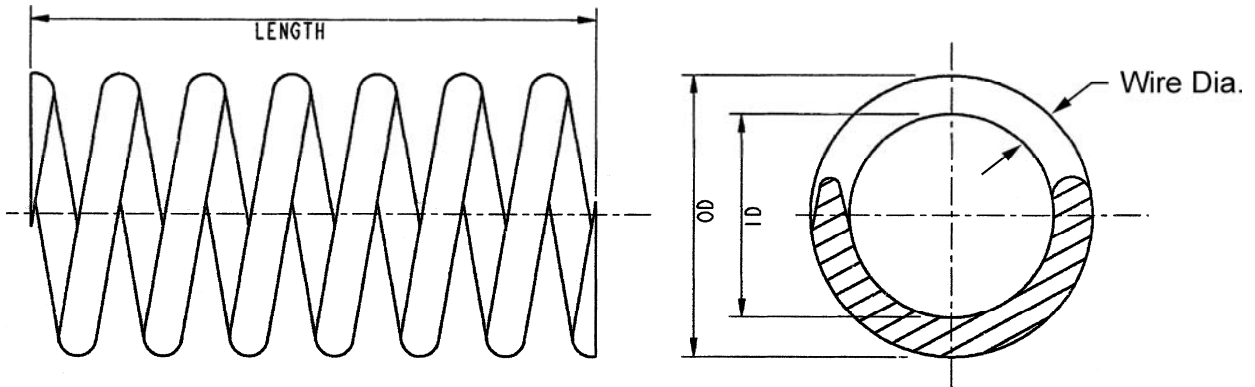
PART No.	FREE LENGTH (IN.)	ID (IN.)	OD (IN.)	WIRE DIA. (IN.)	APPROX. NO. OF ACTIVE COILS	ROPE DIA. (IN.)	TYPICAL APPLICATION	HITCH
90FD6	4-5/8	7/8	1-3/4	7/16	7	1/2	All	1:1 or 2:1
90BP1	10-5/16	1-1/4	2-1/16	13/32	17	---	Gearless 155HT	2:1
AAA90ES1	8-1/4	1-1/8	2-1/16	0.47	10.5	1/2, 5/8	---	1:1 or 2:1
90GD5	4-3/4	1-1/8	2-1/8	1/2	6	---	All	1:1 or 2:1
90GD23	9	1-1/8	2-1/8	1/2	13	---	Gearless 219HT	2:1
90GD25	8-1/2	1-1/8	2-1/8	1/2	12	1/2, 5/8	---	1:1 or 2:1
90GD18	10-1/2	1-1/4	2-1/4	1/2	13-1/2	---	---	---
90GD24	13	1-1/2	2-1/2	1/2	15-1/2	---	---	---
90GD21	10-3/8	1-9/16	2-9/16	1/2	13	---	---	---
90HD15	15-15/16	1-7/16	2-9/16	9/16	19	---	---	---
90HD10	10	2	3-1/8	9/16	10-1/2	---	---	---
AAA90EM1	9.94	2-1/8	3-7/16	21/32	8-1/2	---	Gearless 219HT	1:1

(Continued on next page)

Guidelines & Part Numbers

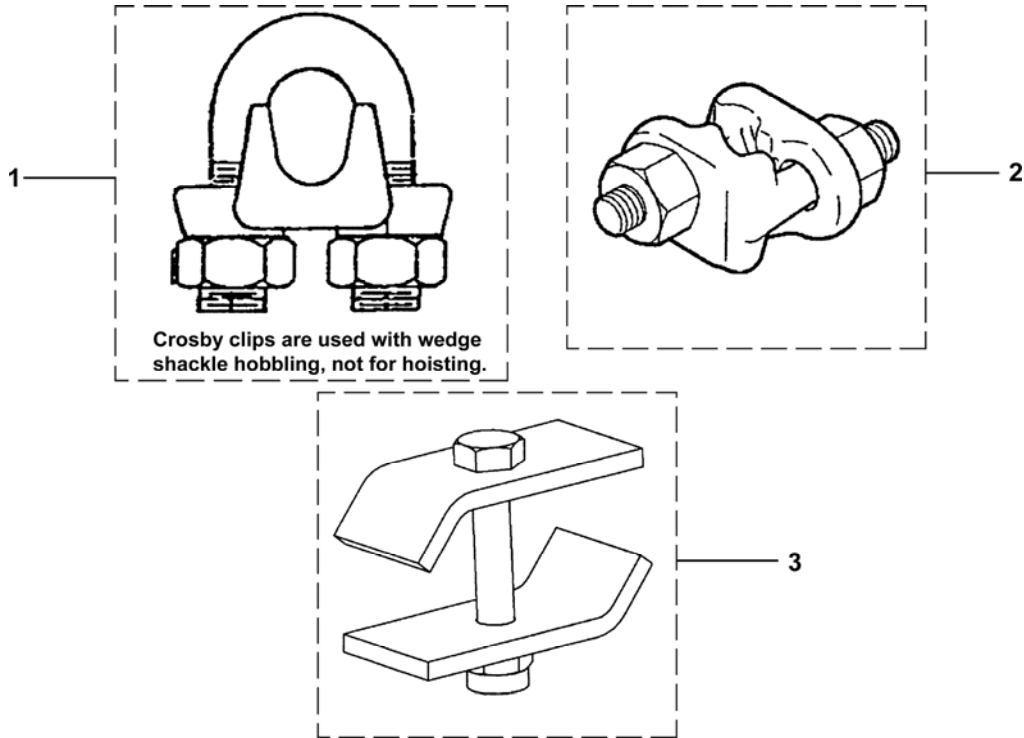
Termination Springs Replacement Guidelines:

When ordering hitch springs, please follow the table below. If you have any concerns, please call your customer service representative for clarification.



PART No.	FREE LENGTH (IN.)	ID (IN.)	OD (IN.)	WIRE DIA. (IN.)	APPROX. NO. OF ACTIVE COILS	ROPE DIA. (IN.)	TYPICAL APPLICATION	HITCH
AAA90ES2	9-1/8	2-1/16	3-1/2	0.72	7.2	11/16, 3/4	---	1:1 or 2:1
90ND7	8-1/2	2	3-5/8	13/16	6-1/3	7/8	Gearless 339HT	1:1
90KD8	12-3/4	2-3/8	3-3/4	11/16	11	11/16	Gearless 269HT	1:1
AAA90FW1 AAA90FW3	5-1/32	1-1/8	1-15/16	13/32	8	43kN CSB	Gen2	2:1
TAA90CG2	7-1/16	1-1/2	2-3/16	3/8	12-1/2	32kN CSB	Gen2	2:1
TAA90CG1	5-3/4	1-7/16	2-1/4	3/8	9-1/2	32kN CSB	Gen2	2:1
AAA90FW5	7-1/16	1-7/16	2-5/16	7/16	10	43kN CSB	Gen2	2:1
AAA90FW7	5-7/16	1-7/16	2-5/16	7/16	7-1/2	43kN CSB	Gen2	2:1
TAA90CK2	7-3/4	2-1/16	3-1/16	1/2	9-1/4	64kN CSB	Gen2	2:1
TAA90CK1	6-3/4	2-1/16	3-1/4	19/32	7-1/8	64kN CSB	Gen2	2:1

Wire Rope Clips



REF. No.	PART No.	DESCRIPTION	
1	336JW1	Clamp (Crosby Clip)	Rope Size = 1/8 in.
	336JW2		Rope Size = 3/16 in.
	336JW3		Rope Size = 1/4 in.
	336JW4		Rope Size = 3/8 in.
	336JW5		Rope Size = 1/2 in.
	336JW6		Rope Size = 5/8 in.
2	336KX1	Clamp, Wire Rope (Fist Grip)	Rope Size = 3/8 in.
	336KX2		Rope Size = 7/16 in.–1/2 in.
	336KX3		Rope Size = 9/16 in.–5/8 in.
	336KX4		Rope Size = 3/4 in.
	336KX5		Rope Size = 7/8 in.
	336KX6		Rope Size = 3/16 in.–1/4 in.
	336KX7		Rope Size = 5/16 in.
3	AAA339NL10	Clip, Retainer	Rope Diameter = 1/2 in., 9/16 in., 5/8 in., 13 mm, 16 mm
	AAA339NL11		Rope Diameter = 11/16 in. & 3/4 in.
	AAA339NL12		Rope Diameter = 13/16 in. & 7/8 in.
	AAA339NL13		Rope Diameter = 3/8 in.