

# A-Actuator Replacement Parts



Woodward A- Actuator



A-Actuator and Pump



A-Actuator Interior

## Overview

Emerson offers a **complete line** of new replacement parts – as well as many reconditioned parts and assemblies – for the venerable Woodward A-Actuator. Parts are often **in stock** or available with only a short lead time. A properly tuned and maintained mechanical governor provides excellent frequency regulation.

Woodward A-Actuators are divided into two sizes:

- Small A-Actuators: A3 and A4
- Large A-Actuators: A5 through A8

### Small A-Actuator Parts List

Small A-Actuator Parts List	
Part Number	Description
120119	Screw – Tach Drive
120333	Rod – Speeder
120341	Disc – Speeder Rod
120343	Rod End
120451	Pin – Floating Lever
120731	Pin – Ballarm
120732	Block – Ballarm
121015	Lever – Lower Floating Direct
121267	Disc – Lower Vibrator

Small A-Actuator Parts List	
Part Number	Description
121268	Disc – Upper Vibrator
121269	Retainer – Ball
130051	Pilot Valve Bushing
140319	Pin – Roller
140354	Strainer Screen
140622	Ballarm toe roller
140623	Vibrator – Upper
140631	Vibrator – Lower
141087	Washer – Thrust

Small A-Actuator Parts List	
Part Number	Description
141092	Fiber Washer
141105	Glass – Gauge
141108	Washer – Gauge Glass
141117	Lever – Upper Floating Reverse
141118	Lever – Lower Floating Direct
141226	Vibrator – Lower
141228	Vibrator – Upper
141786	Washer
141802	Thrust Bearing Weighted Head
142280	Fork
143172	Pilot Valve Plunger
175219	Seal Assembly – Relay Stem
175634	Kit – Filter Changeover
180041	Bearing – Thrust Washer
180052	Bearing – Dashpot Link
180053	Bearing – Ballarm
180055	Bearing – Use 180124
180061	Bearing – Ball
180066	Bearing – Ball
180096	Bearing – Needle
180124	Bearing – Ballarm
180125	Bearing – Spindle

Small A-Actuator Parts List	
Part Number	Description
182082	Packing – 1-3/4 OD Chevron
183006	Bushing – Small Dashpot
183007	Bushing – Large Dashpot
183187	Bushing – Speed Droop
183273	Bushing – Speed Adjust Gear
184037	Pin – Tachometer Drive
184090	Cotter Pin
184358	Pin – Ballarm block
186063	Pilot Valve Packing (5)
188195	90K Pivot Pin
189467	1/4 Steel Ball
191404	Tapered Pilot Valve Spring
191853	Friction Spring
206144	Strainer Gasket
206181	Packing – 1/4 Square Garlock
206182	Packing – 3/16 Garlock
1010-662	Washer – Tachometer Adapter
1327-204	Pilot Valve Filter Element
1355-113	O-Ring – Strainer Nut
1355-453	O-Ring – Strainer Cup to Case
3236-030	Spacer – Bearing

Large A-Actuator Parts List

Large A-Actuator Parts List	
Part Number	Description
120044	Disc – Upper Vibrator
120045	Block – Slide
120119	Screw – Tach Drive
120332	Rod – Speeder
120334	Disc – Lower Vibrator
120340	Disc – Speeder Rod
120342	Rod End
120346	Washer – Thrust
120347	Lever – Upper Floating
120349	Lever – Lower Floating

Large A-Actuator Parts List	
Part Number	Part Number
121013	Thrust Bearing Weighted Head
121016	Lever – Lower Floating
121341	Disc – Upper Vibrator
121342	Disc – Lower Vibrator
121343	Retainer – Ball
141092	Fiber Washer
141108	Washer – Gauge Glass
141786	D – Washer
180041	Bearing – Thrust Washer
180052	Bearing – Dashpot Link



Large A-Actuator Parts List	
Part Number	Description
180053	Bearing – Ballarm
180066	Bearing – Ball
180096	Bearing – Needle
180101	Bearing – Needle
180125	Bearing – Spindle
183185	Bushing – Speed Droop
184037	Pin – Tachometer drive pin

Large A-Actuator Parts List	
Part Number	Description
184090	Cotter pin
184347	Pin – Ballarm Block
184467	Pin – Tach Drive
188194	Pivot Pin – 1/4 Dia
189463	Ball – 5/16 Dia
191853	Friction Spring
1010-662	Washer – Tachometer Adapter
3236-030	Spacer – Bearing

## Complete A-Actuator Parts List

Complete A-Actuator Parts List	
Reference Number	Description
12000-19K17	Relay Limit Blind Nut
12000-41-K	Speeder Ball Retainer
12000-46-K	Adjusting Knob
12000-47-K	Spiral Pinion Bearing
12000-52-K	Washer
12000-55	Friction Spring
12000-64	Pilot Valve Spring
12000-89XIS	Packing Gland
12000-95	Spring
12000-100	Speed Adjusting Spring
12000-101	Ball Arm Spring
12000-119	Dashpot Spring
12000-122	Spring
12000-140	Spring
12000-140	Spring
12000-141	Bypass Spring
12000-342K	Motor Pinion
12000-345KB	Motor Bracket
12000-410-K	Strainer Drain
12000-414-K	Strainer Cage
12000-415-K	Strainer Screen
12000-416-K	Strainer Rod
12000-417-K	Blind Nut

Complete A-Actuator Parts List	
Reference Number	Description
12000-420-K	1/4" Valve Assembly
12000-425K23A	Hand Valve Bonnet Assembly
12000-30000	Relay and Base
12000-30070	Base Side Cover
12000-30130	Base End Cover
12000-30230	Hand Valve Seat
12000-30280	Relay Bush
12000-30350	Plunger Disc
12000-30400	Relay Rod
12000-30500	Hand Valve Bonnet
12000-30560	Hand Valve Stem
12000-30600	Hand Valve Disc Sleeve
12000-30650	Hand Valve Disc
12000-30710	Hand Valve Stem Nut
12000-30750	Packing Nut
12000-30795	Relay Rod End
12000-30820	Relay Bonnet
12000-30890	Relay Bonnet Nut Cover
12000-30950	Hand Valve Nut Cover
12000-30990	Handwheel
12000-31100	Control Column
12000-31110	Door
12000-31250	Actuator Dome

Complete A-Actuator Parts List	
Reference Number	Description
12000-31570	Walking Beam
12000-31590	Walking Beam
12000-31610	Pivot Pin
12000-31630	Walking Beam Shaft
12000-31650	Governor Head Case
12000-31670	Governor Head
12000-31690	Ball Arm
12000-31695	Bearing Spacer
12000-31700	Grease Seal
12000-31710	Fly Ball
12000-31730	Spring Bar
12000-31750	Spring Nut
12000-31770	Pivot Pin
12000-31810	Bearing Nut
12000-31830	Vibrator Disc – Upper
12000-31850	Stationary Sleeve
12000-31910	Speeder Rod
12000-31930	Vibrator Disc – Lower
12000-31950	Oil Cup
12000-31970	Ball Retainer
12000-31990	Roller for Ball Arm
12000-31995	Roller Pin
12000-32010	Speeder Spring Disc
12000-32050	Pivot Screw
12000-32070	Ball Thrust Washer
12000-32070	Ball Thrust Washer
12000-32110	Upper Floating Lever
12000-32131	Lower Floating Lever
12000-32208	Stop Finger
12000-32210	Sleeve Fork
12000-32230	Stop Rod
12000-32231	Stop Rod Adjusting Nut
12000-32310	Stop Rod Ball Nut
12000-32431	Gate Limit Lever
12000-32470	Gate Limit Link
12000-32500	Gate Limit Crank
12000-32550	Internal Gear

Complete A-Actuator Parts List	
Reference Number	Description
12000-32640	Stud for Planet Pinion
12000-32660	Planet Pinion
12000-32670	Pinion and Sun Pinion
12000-32680	Handwheel Shaft
12000-32690	Control Wheel
12000-32700	Stub Shaft
12000-32720	Hand – Red
12000-32750	Hand – Black
12000-32840	Compensating Rack
12000-32860	No. 8 Taper Pin
12000-32920	Compensating Rack Bracket
12000-32940	Ball Joint
12000-32940-A	Ball Joint Assembly
12000-32950	Compensating Rod
12000-33100	Controller
12000-33100-A	Controlet
12000-33120	Control Plunger
12000-33160	Fork
12000-33220	Packing Cap
12000-33240	Control Plunger Cap
12000-33270	Closing Adjusting Screw
12000-33290	Relay Limit Adjusting Screw
12000-33400	Control Standard
12000-33420	Compensating Crank Shaft
12000-33430	Equalizing Cam
12000-33450	Equalizing Lever
12000-33470	Speeder Screw
12000-33480	Equalizer Sleeve
12000-33490	Cup Gear
12000-33500	Stop Lug Collar
12000-33510	Speed Adjusting Screw
12000-33520	Motor Gear
12000-33530	Frictional Nut
12000-33535	Friction Washer
12000-33580	Compensating Lever
12000-33600	Safety Shutdown Lever
12000-33700	Floating Lever Connecting Rod

Complete A-Actuator Parts List	
Reference Number	Description
12000-33700A	Floating Lever Connecting Rod
12000-33800	Strainer Case
12000-33800A	Pilot Valve Strainer Assembly
12000-33900	Dashpot Case
12000-33920	Dashpot Plunger
12000-33950	Plunger Rod Bonnet
12000-33960	Connecting Link
12000-33970	Spring Plunger
12000-34000	Dashpot Spring Bonnet
12000-34010	Sight Glass
12000-34020	Dashpot Needle
12000-34030	Dashpot Needle Handle
12000-34040	Bypass Lever
12000-34050	Bypass Lever Guide
12000-34060	Bypass Rod
12000-34100	Auxiliary Valve Case
12000-34100A	Auxiliary Relay Assembly
12000-34120	Auxiliary Valve Bush
12000-34140	Auxiliary Valve Plunger

Complete A-Actuator Parts List	
Reference Number	Description
12000-34160	Auxiliary Valve Connecting Fork
12000-34200	Valve Bonnet
12000-34220	Hand Valve Seat
12000-34225	Hand Valve Disc
12000-34330	Pilot Valve Plunger
12000-34340	Pilot Valve Bush
12000-34350	Packing Nut
12000-34440	Safety Lever Hand Latch
12000-34700	Piston Rod Fork
12000-34710	Pivot Pin
12000-34740	Piston Valve Seat
12000-34750	Bottom Valve Seat
12000-34770	Pump Body
12000-34780	Piston
12000-34820	Thrust Link
12000-34830	Pump Handle
12000-34850	Handle Socket
12000-34860	Valve Plunger
12000-35120	Friction Pinion

## Technical Support and Field Service Available

Is your governor hunting? Are you having trouble synchronizing? Do the gates drift while on-line? Emerson can help. Our deeply experienced, OEM-trained field service engineers are ready to answer any maintenance questions you may have and can be dispatched to your site on short notice for anything from routine troubleshooting, tuning, and calibration to a complete governor overhaul.

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