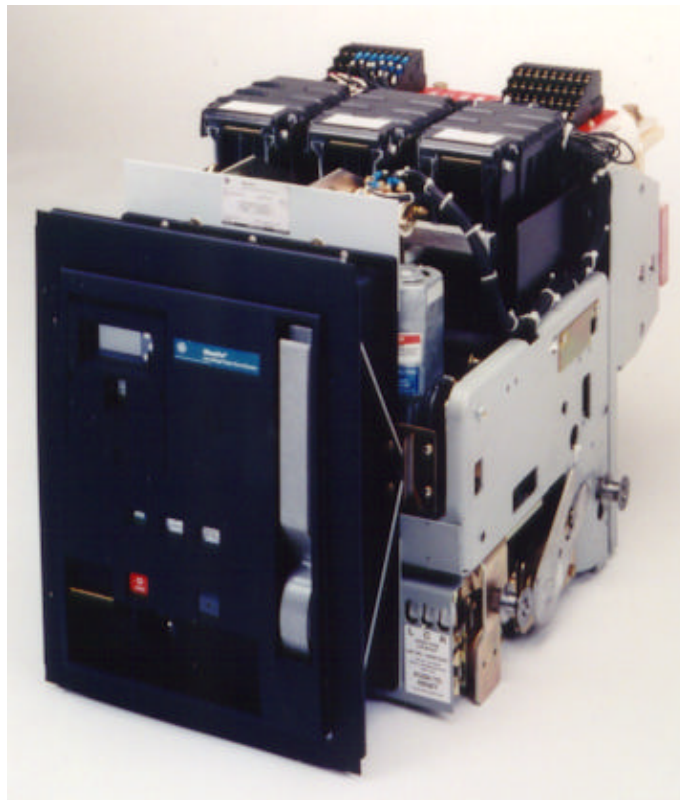


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DEF-004

WavePro™ Power Circuit Breakers 800–2000 A Frames, 240–600 Vac

Renewal Parts



 **WavePro™**
Low Voltage
Power Circuit Breakers

Introduction

This guide contains a listing of the parts and assemblies that are available as replacement parts for WavePro™ 800–2000 ampere low-voltage power circuit breakers. The listing “Qty. Req’d.” refers to the quantity of each item required for a three-pole breaker.

Renewal parts as furnished may not be identical to the original parts since design changes may have been made in the interim. The parts supplied will, however, be interchangeable with the original parts.

Removal of existing parts and assemblies and installation of renewal parts are described in DEH-136, the *Maintenance Manual* for WavePro 800–2000 ampere breakers.

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Back Frame Assemblies and Components

The Back Frame assemblies for various versions of the 800 A, 1600 A, and 2000 A frame breakers are illustrated in Figures 1, 2, 3, and 4, with catalog numbers listed in Table 1.

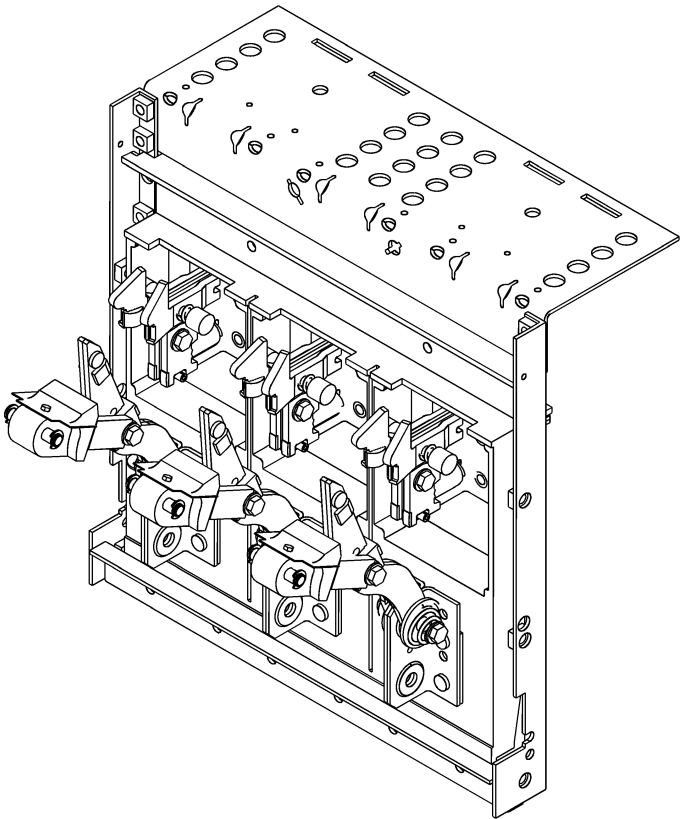


Figure 1. Back Frame assembly for WPS08 and WPF08.

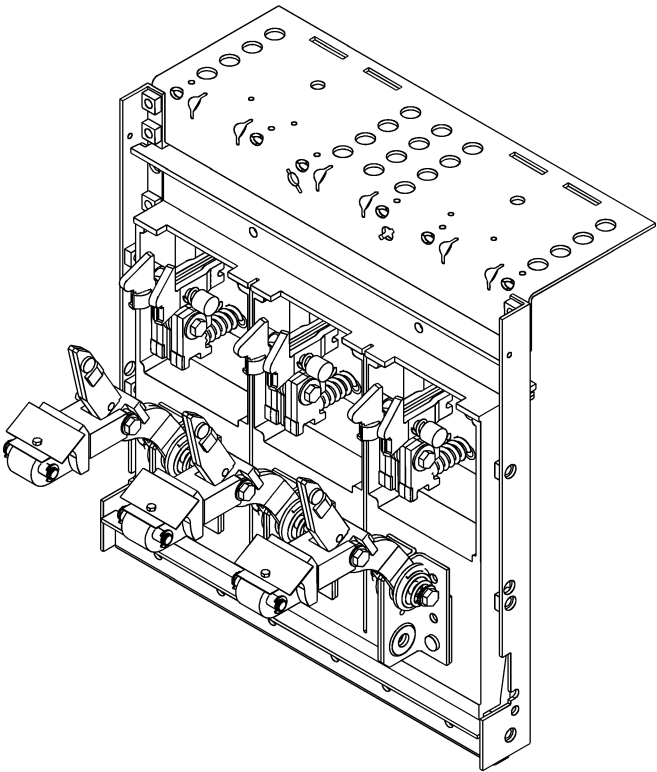


Figure 2. Back Frame assembly for WPH08.

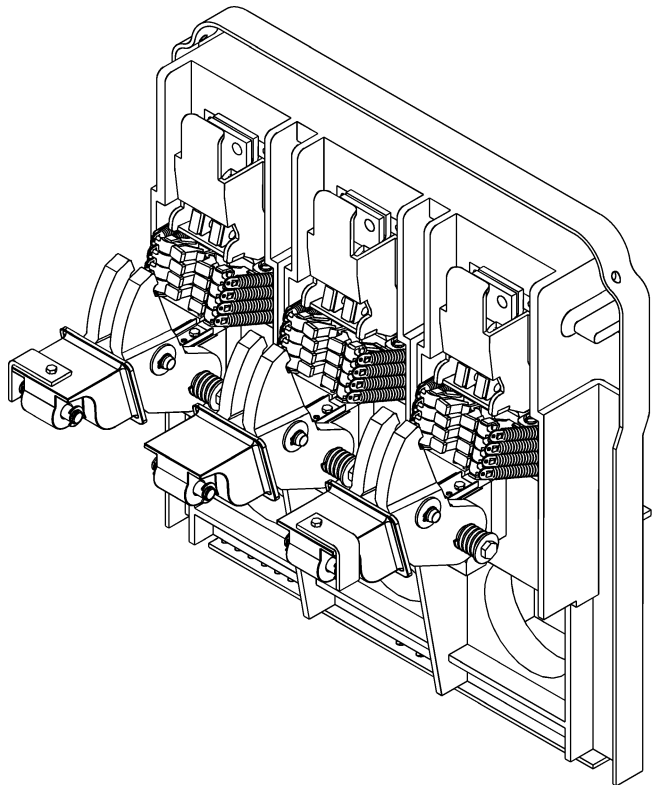


Figure 3. Back Frame assembly for WPX08, WPS16, WPF16, and WPH16.

Description	Catalog Number			
	WPS08, WPF08	WPH08	WPX08, WPS16, WPF16, WPH16	WPS20
Back Frame	10080653G1	10080653G4	10080653G2	10080653G3

Table 1. Catalog numbers of the Back Frame assemblies.

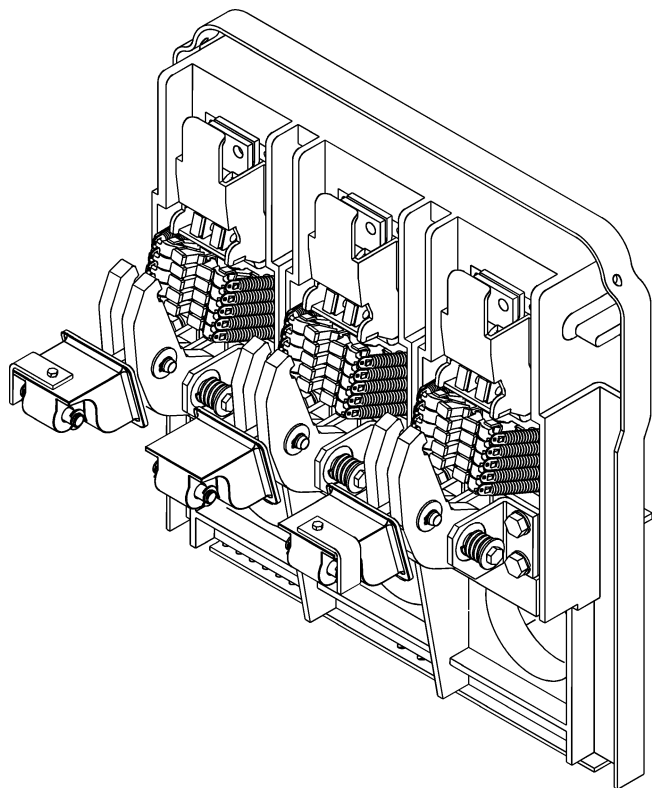


Figure 4. Back Frame assembly for WPS20.

Figures 5 and 6 are views of the Upper and Lower Contact assemblies for WPS08 and WPF08 breakers. Figures 7 and 8 are views of the Upper and Lower Contact assemblies for the WPH08 breaker. Table 2 lists the catalog numbers of the components available as renewal parts.

Description	WPF08, WPS08		WPH08	
	Qty. Reqd.	Catalog Number	Qty. Reqd.	Catalog Number
Upper Contact Assembly	3	10080654G1	3	10080654G2
Arcing Contact Spring	6	323A6157P1	6	323A6157P1
Main Contact Spring	3	323A6155P1	—	—
Main Contact Spring (Inner)	—	—	6	323A6181P1
Main Contact Spring (Outer)	—	—	6	323A6182P1
Lower Contact Assembly	3	10080655G1	3	10080665G2
Insulator-link Assembly	3	10060133G1	3	10060133G1
Movable Contact Spring	6	323A6163P1	6	323A6163P1

Table 2. Catalog numbers of the Upper and Lower Contact assemblies for WPF08, WPS08, and WPH08.

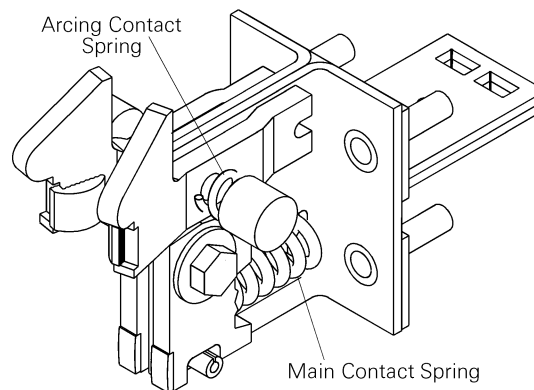


Figure 5. Upper Contact assembly for WPS08 and WPF08.

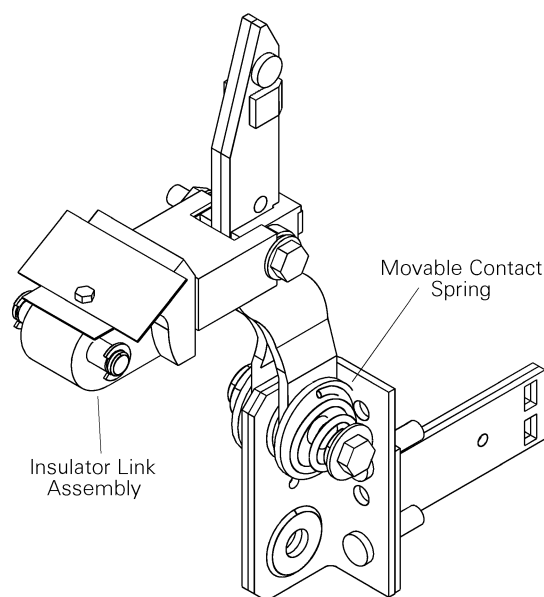


Figure 6. Lower Contact assembly for WPS08 and WPF08.

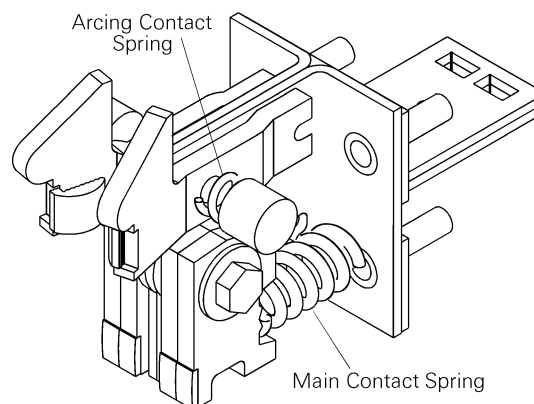


Figure 7. Upper Contact assembly for WPH08.

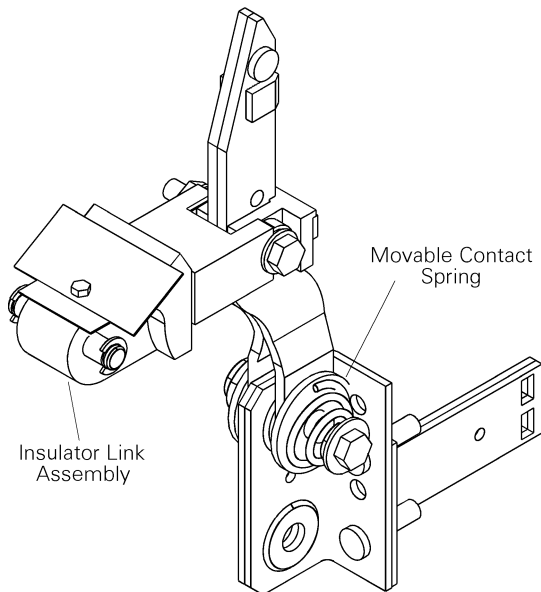


Figure 8. Lower Contact assembly for WPH08.

Figures 9 and 10 are views of the Upper and Lower Contact assemblies for WPX08, WPS16, WPF16, and WPH16 breakers. Figures 11 and 12 are corresponding views for the WPS20 breaker. Table 3 lists the catalog numbers of the components available as renewal parts.

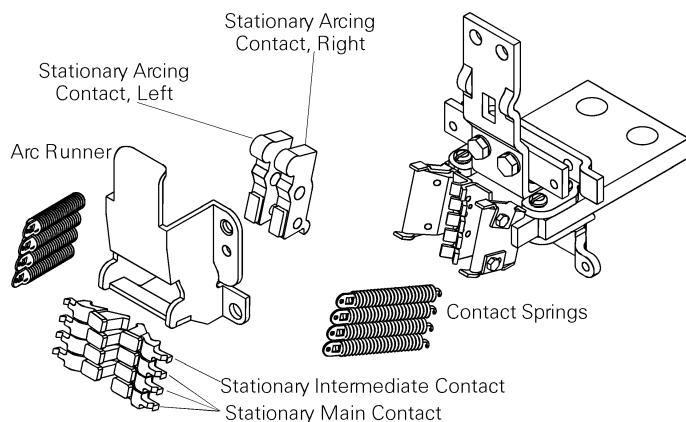


Figure 9. Upper Contact assembly for WPX08, WPS16, WPF16, and WPH16.

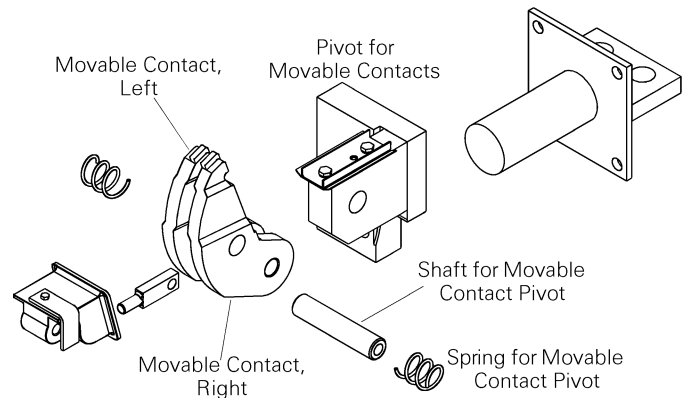


Figure 10. Lower Contact assembly for WPX08, WPS16, WPF16, and WPH16.

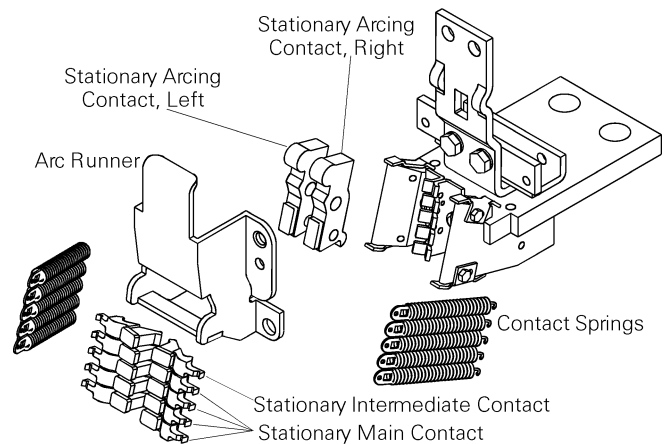


Figure 11. Upper Contact assembly for WPS20.

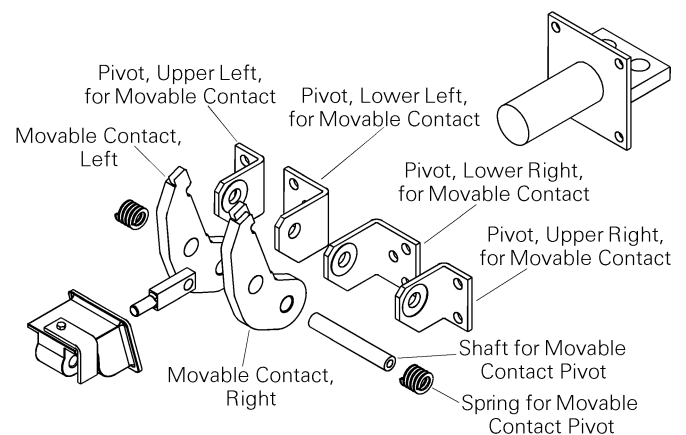


Figure 12. Lower Contact assembly for WPS20.

Description	WPX08, WPS16, WPF16, WPH16		WPS20	
	Qty. Reqd.	Catalog Number	Qty. Reqd.	Catalog Number
Contact spring	24	192A9509G1	30	192A9509G1
Stationary arcing contact, left	3	568B509G4	3	568B509G4
Stationary arcing contact, right	3	568B509G3	3	568B509G3
Plunger for stationary arcing contact	3	192A9544G1	3	192A9544G1
Spring, outer, for stationary arcing contact	3	192A6990P146	3	192A6990P146
Spring, middle for stationary arcing contact	3	192A6990P147	3	192A6990P147
Spring, inner, for stationary arcing contact	3	192A6990P148	3	192A6990P148
Pivot for stationary arcing contact	3	192A9515P1	3	192A9515P1
Stationary intermediate contact	6	192A9505G2	3	192A9505G2
Stationary main contact	18	192A9505G1	24	192A9505G1
Movable contact, left	3	192A9511G1	3	192A9977G2
Movable contact, right	3	192A9511G2	3	192A9977G1
Pivot for movable contact	3	192A9912G1	—	—
Pivot for movable contact, lower right	—	—	3	192A9972P1
Pivot for movable contact, lower left	—	—	3	192A9972P2
Pivot for movable contact, upper right	—	—	3	192A9972P3
Pivot for movable contact, upper left	—	—	3	192A9972P4
Shaft for movable contact pivot	3	192A9602P1	3	192A9985P1
Spring for movable contact pivot	6	192A6990P152	3	192A6990P190

Table 3. Catalog numbers of the individual contacts and other parts comprising the upper and lower contact assemblies for WPX08, WPS16, WPF16, WPH16, and WPS20.

Renewal Parts

Front Frame Assemblies and Components

Figures 13 and 14 show the two versions of the Front Frame Assembly, with the catalog numbers listed in Table 4.

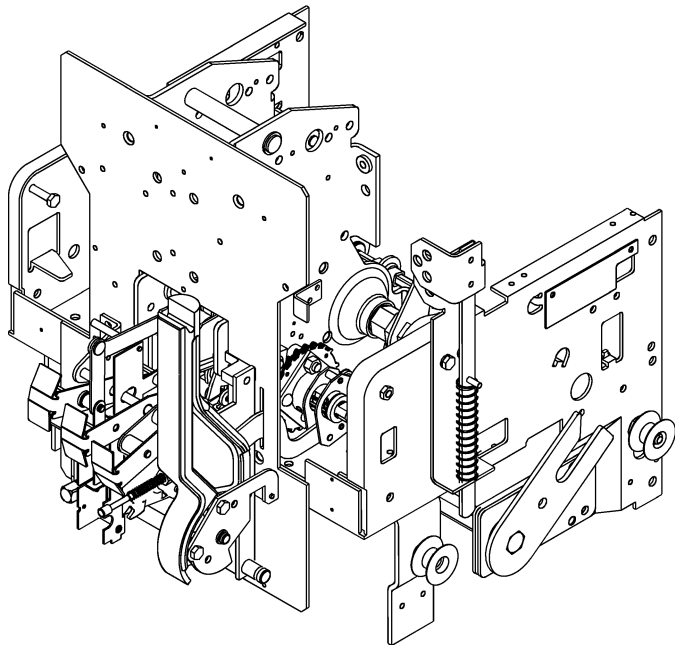


Figure 13. Front Frame Assembly for WPS08, WPF08, and WPH08..

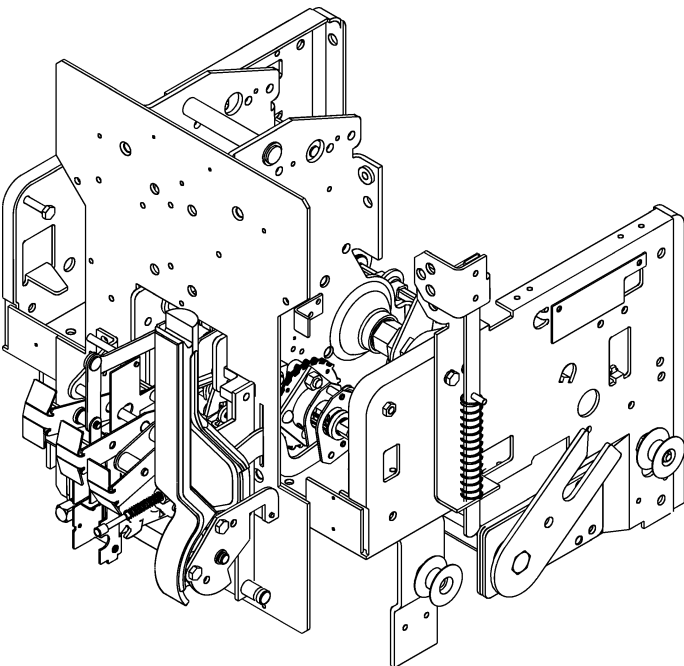


Figure 14. Front Frame Assembly for WPX08, WPS16, WPF16, WPH16, and WPS20.

Description	WPS08, WPF08, WPH08		WPX08, WPS16, WPF16, WPH16, WPS20	
	AKD-10	OEM	AKD-10	OEM
Front Frame	10057023G1	10057023G2	10057023G3	10057023G4

Table 4. Catalog numbers for the Front Frame Assemblies.

Figure 15 illustrates the Charging Handle and associated mounting hardware, with the catalog numbers listed in Table 5.

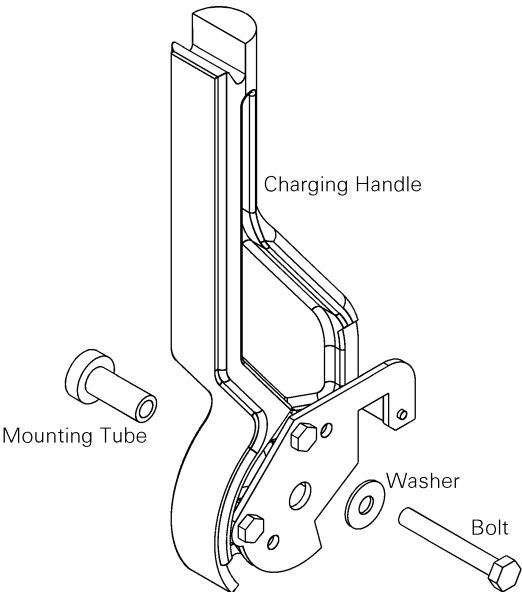


Figure 15. Charging Handle and mounting components.

Description	Catalog Number
Charging Handle	10060164G1
Bolt	N22P23036B6
Washer	N402P42B6
Handle Mounting Tube	10060138P1

Table 5. Catalog numbers of the Charging Handle and mounting hardware..

Standard Parts and Assemblies

This section lists the parts and assemblies available as renewal parts for all WavePro breakers.

Primary Disconnects

Primary Disconnect assemblies are available for WPS08, WPF08, and WPH08 breakers, as illustrated in Figure 16. Primary Disconnect assemblies for WPX08, WPS16, WPF16, WPH16, and WPS20 breakers are illustrated in Figures 17. The catalog numbers are listed in Table 6.

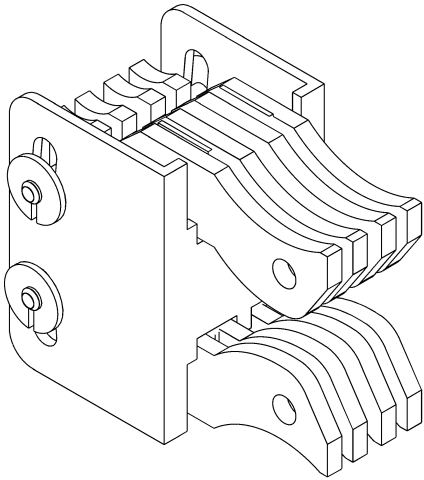


Figure 16. Connector assembly for the primary disconnect for WPS08, WPF08, and WPH08.

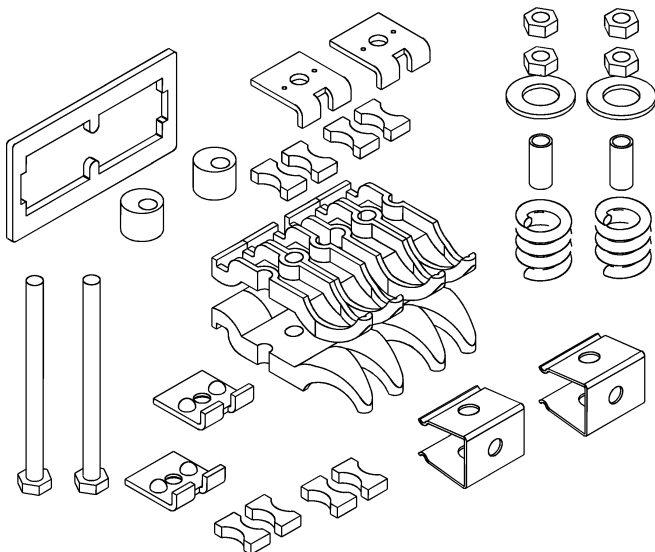


Figure 17. Connector assembly for the primary disconnect for WPX08, WPS16, WPF16, WPH16, and WPS20.

Description	Qty. Reqd.	Catalog Number	
		WPS08, WPF08, WPH08	WPX08, WPS16, WPF16, WPH16, WPS20
Primary Disconnect Assembly	3	242B7062G1	192A9668G1

Table 6. Catalog numbers of the Primary Disconnects.

Secondary Disconnects

The Secondary Disconnect block is illustrated in Figure 18, with the catalog number listed in Table 7.

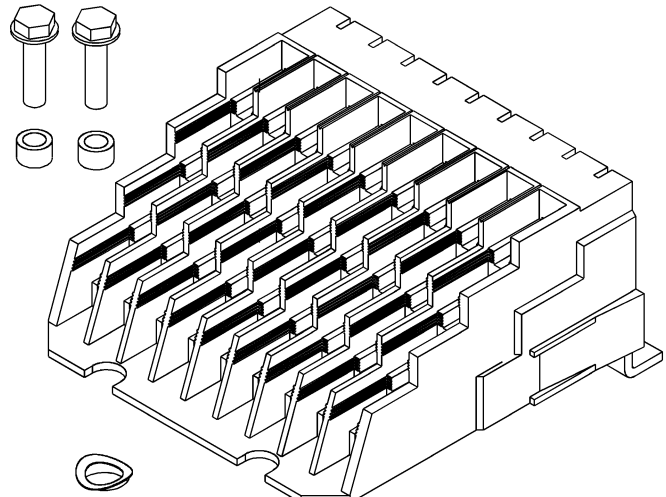


Figure 18. Secondary Disconnect.

Description	Catalog Number
Secondary Disconnect Block	10080736G1

Table 7. Catalog numbers of the Secondary Disconnect block.

Renewal Parts

Arc Chutes

The Arc Chute assemblies are illustrated in Figures 19 and 20, with the catalog numbers listed in Table 8. The Arc Chute Interphase Barrier for WPS08, WPF08, and WPH08 breakers is shown in Figure 21, with the catalog number in Table 9. The Arc Chute Interphase Barriers and Arc Chute Retainer for WPX08, WPS16, WPF16, WPH16, and WPS20 breakers are illustrated in Figure 22, with the catalog numbers listed in Table 10.

Description	Qty. Reqd.	Catalog Number		
		WPS08, WPF08, WPH08	WPX08, WPS16, WPF16, WPH16	WPS20
Arc Chute	3	161D6522G2	425D404G9	425D404G10

Table 8. Catalog numbers of the Arc Chutes.

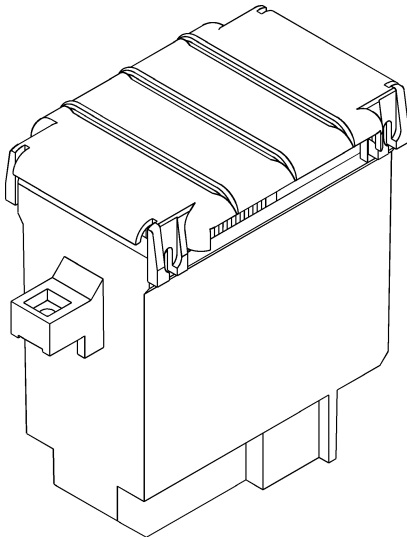


Figure 19. Arc Chute for WPS08, WPF08, and WPH08.

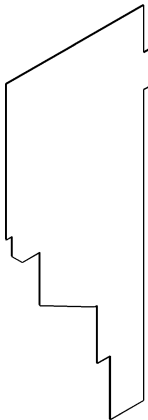


Figure 21. Arc Chute Interphase Barrier for WPS08, WPF08, and WPH08.

Description	Qty. Reqd.	Catalog Number
Arc Chute Interphase Barrier	4	201C9093P1

Table 9. Catalog number of the Arc Chute Interphase Barrier for WPS08, WPF08, and WPH08.

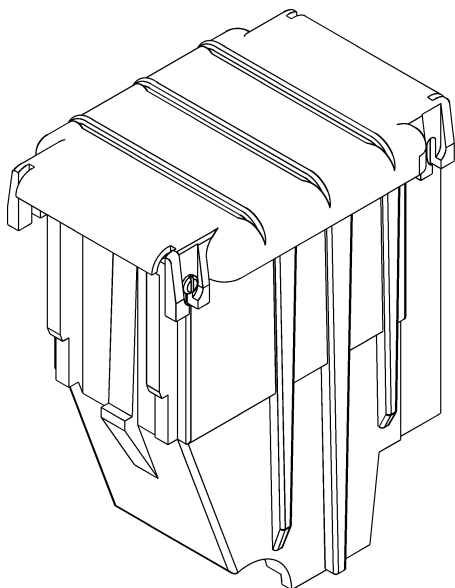


Figure 20. Arc Chute for WPX08, WPS16, WPF16, WPH16, and WPS20.

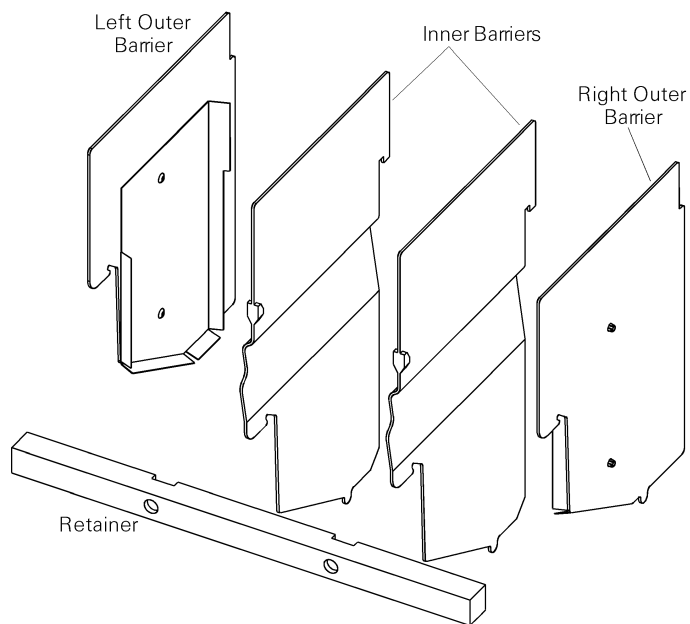


Figure 22. Arc Chute Interphase Barriers and Retainer for WPX08, WPS16, WPF16, WPH16, and WPS20.

Description	Qty. Req'd.	Catalog Number
Left Outer Interphase Barrier	1	568B408G2
Inner Interphase Barrier	2	568B545P1
Right Outer Interphase Barrier	1	568B408G1
Arc Chute Retainer	1	193A1169P1

Table 10. Catalog numbers of the Arc Chute Interphase Barriers and Arc Chute Retainer for WPX08, WPS16, WPF16, WPH16, and WPS20.

Flux Shifter

The Flux Shifter is illustrated in Figure 23, with the catalog number listed in Table 11.

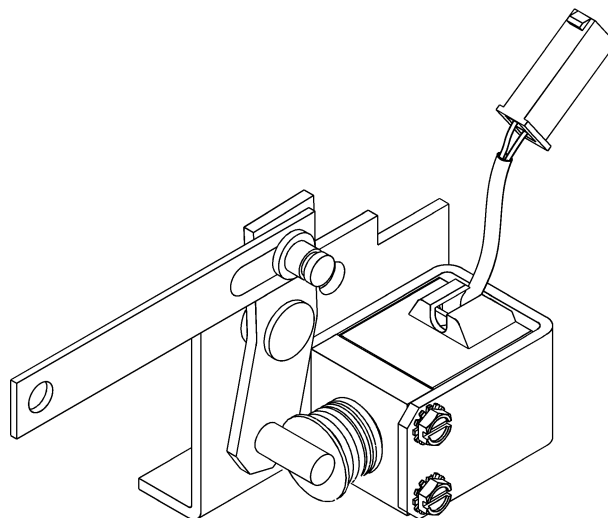


Figure 23. Flux Shifter.

Description	Qty. Req'd.	Catalog Number
Flux Shifter	1	425D366G86

Table 11. Catalog numbers of the Flux Shifters.

Renewal Parts

Current Sensor

The Current Sensor is illustrated in Figure 24, with the catalog numbers listed in Table 12. Three Current Sensors are required for a three-pole breaker.

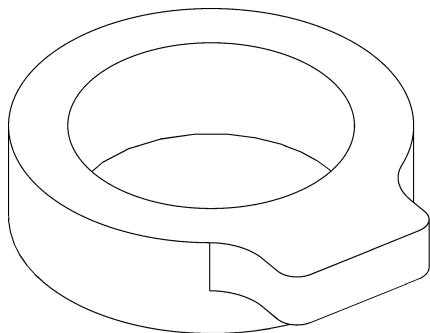


Figure 24. Current Sensor.

Current Sensor	Catalog Numbers		
	WP08	WP16	WP20
150 A	161D6536G1	—	—
400 A	161D6536G2	—	—
800 A	161D6536G3	139C4970G30	—
1600 A	—	139C4970G32	—
2000 A	—	—	139C4970G33

Table 12. Catalog numbers of the Current Sensor.

Drawout Racking Mechanism

The Drawout Racking Mechanism is illustrated in Figure 25, with the catalog numbers listed in Table 13. The Drawout Trip Paddle and Drawout Roller are illustrated in Figure 26, with the catalog numbers listed in Table 14.

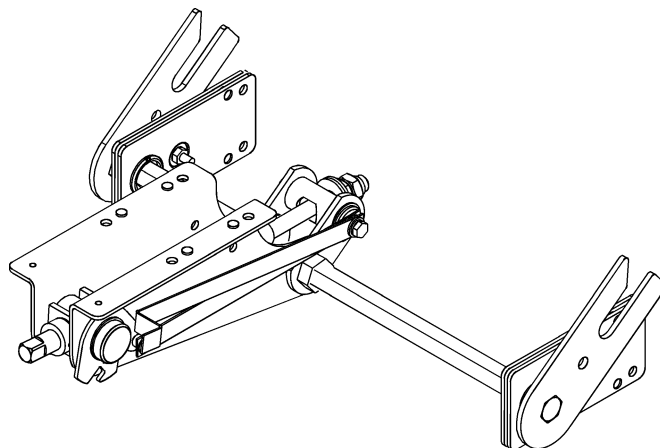


Figure 25. Drawout Racking Mechanism.

Description	Qty. Reqd.	Catalog Number
Racking Mechanism, AKD-10	1	10060041G1
Racking Mechanism, OEM	1	10060041G2

Table 13. Catalog numbers of the Racking Mechanism.

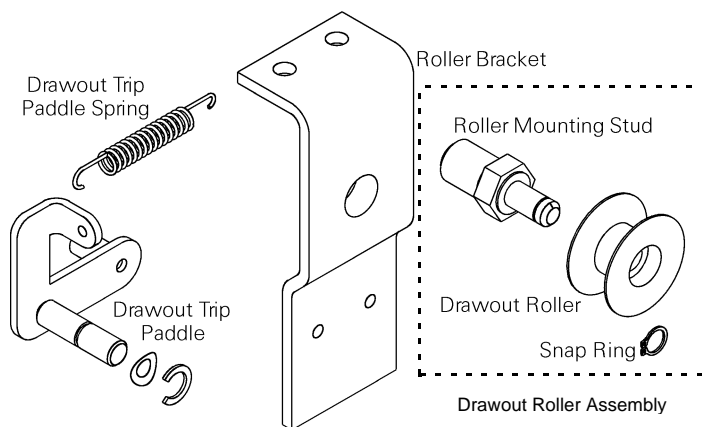


Figure 26. Drawout Trip Paddle and Roller.

Description	Qty. Reqd.	Catalog Number
Drawout Trip Paddle Assembly	1	10080673G1
Drawout Paddle Spring	1	192A6990P155
Roller Bracket	2	568B538P2
Drawout Roller Assembly	4	10083673G1

Table 14. Catalog numbers of the Drawout Trip Paddle and Roller.

Escutcheon

The Escutcheon, illustrated in Figure 27, is available in a complete kit including trim and mounting hardware or as the molded cover only. In addition, the Hidden Close Push Button and Trip Unit doors are available separately. The manual charging handle is not included with the Escutcheon. Catalog numbers are listed in Table 15.

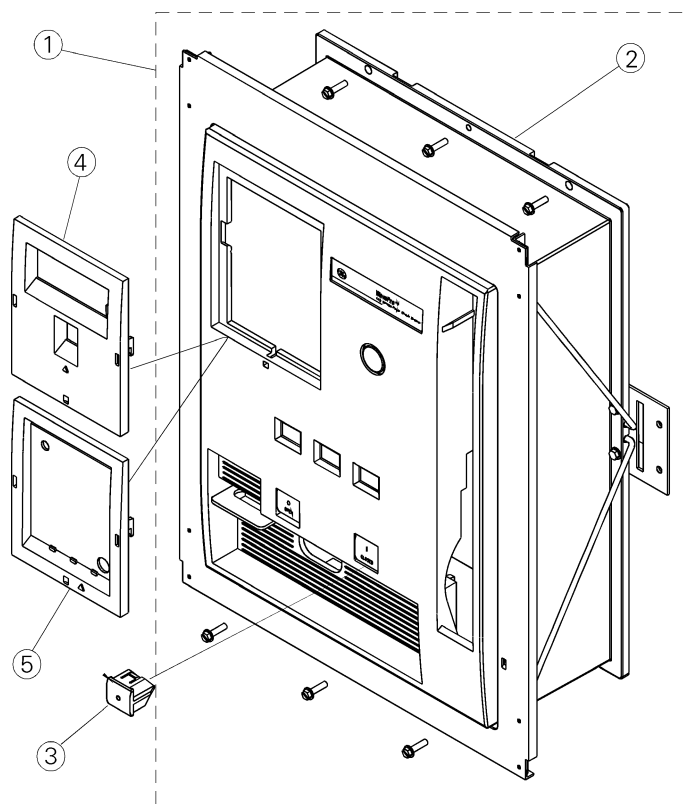


Figure 27. Escutcheon.

Drawing Key	Description	Catalog Number
1	Escutcheon Kit, complete, AKD-10	10057276G1
	Escutcheon Kit, complete, OEM	10057276G2
2	Escutcheon, molded cover only, AKD-10	10060207G1
	Escutcheon, molded cover only, OEM	10060207G2
3	Hidden Close Push Button	WPHIDONKIT1
4	Trip Unit Door, MicroVersaTrip Plus™ and MicroVersaTrip PM™	10060051P1
5	Trip Unit Door, Power+™	10055898G1

Table 15. Catalog numbers of the Escutcheon renewal parts.

Accessories

This section lists the renewal parts for the optional accessories available with WavePro breakers.

Bell Alarm

The Bell Alarm accessory, illustrated in Figure 28 can be configured with Automatic Reset or with Lockout. Renewal parts for the Bell Alarm are a complete kit, including mounting hardware, or the module only. The catalog numbers are listed in Table 16.

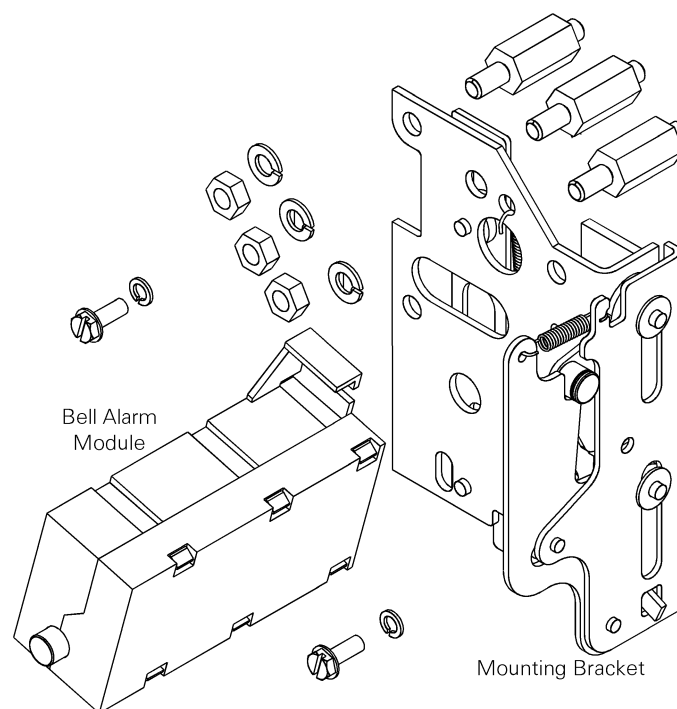


Figure 28. Bell Alarm accessory.

Description	Complete Kit	Module Only
Bell Alarm	WPBASF	10080044G1

Table 16. Catalog numbers of the Bell Alarm renewal parts.

Renewal Parts

Shunt Trip

The Shunt Trip accessory, illustrated in Figure 29, is available for a variety of control voltage applications. Renewal parts for the Shunt Trip are a complete kit, including mounting hardware, or the module only. The catalog numbers are listed in Table 17.

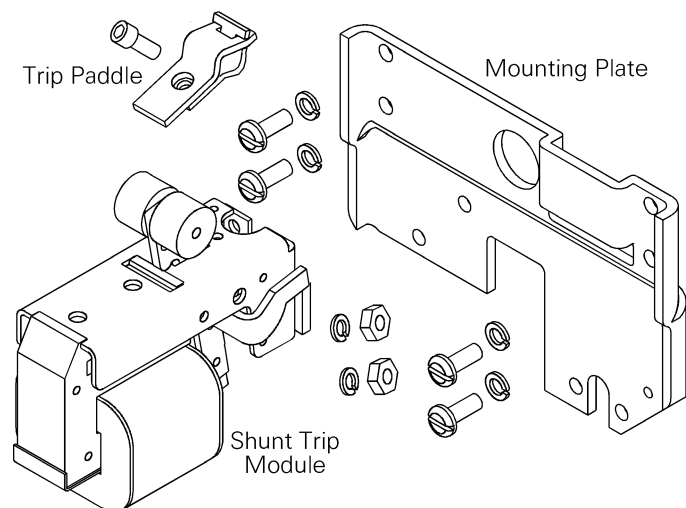


Figure 29. Shunt Trip accessory.

Shunt Trip Control Voltage	Complete Kit	Complete Kit, Shunt Trip 2	Module Only
70 Vac, 60 Hz	WPS1SF60070	—	139C4378G6
120 Vac, 60 Hz	WPS1SF60120	WPS2SF60120	139C4378G7
208 Vac, 60 Hz	WPS1SF60208	—	139C4378G10
240 Vac, 60 Hz	WPS1SF60240	WPS2SF60240	139C4378G13
120 Vac, 50 Hz	WPS1SF50120	—	139C4378G8
208 Vac, 50 Hz	WPS1SF50208	—	139C4378G11
240 Vac, 50 Hz	WPS1SF50240	—	139C4378G14
12 Vdc	WPS1SFDC012	—	
24 Vdc	WPS1SFDC024	WPS2SFDC024	139C4378G1
48 Vdc	WPS1SFDC048	—	139C4378G3
110/125 Vdc	WPS1SFDC125	WPS2SFDC125	139C4378G4
250 Vdc	WPS1SFDC250	WPS2SFDC250	139C4378G5

Table 17. Catalog numbers of the Shunt Trip accessory renewal parts.

Undervoltage Trip Device

The Undervoltage Trip Device accessory, illustrated in Figure 30, is available for a variety of control voltage applications, with and without Time Delay. Renewal parts for the Undervoltage Trip Device are a complete kit, including mounting hardware, or the module only, with the catalog numbers listed in Table 18. The Time Delay module is available separately or with the Undervoltage Trip Device, with the catalog numbers listed in Table 19.

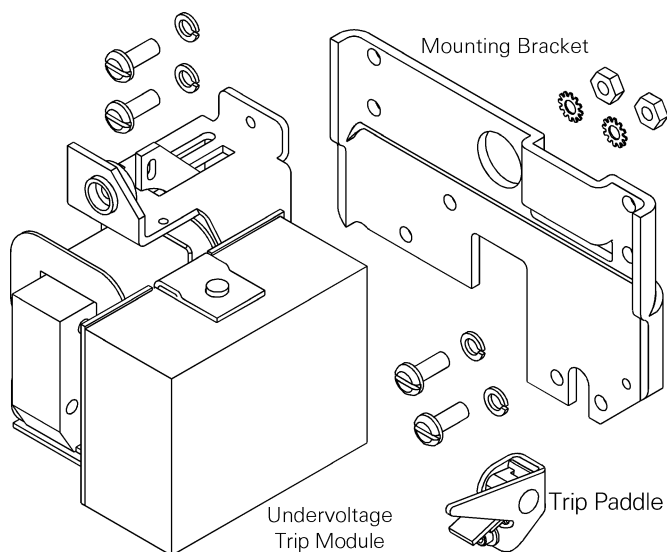


Figure 30. Undervoltage Trip Device accessory.

Undervoltage Trip Control Voltage	Complete Kit	Module Only
120 Vac	WPUVSF56120	10056791G1
240 Vac	WPUVSF56240	10056791G2
24 Vdc	WPUVSFDC024	10056791G4
48 Vdc	WPUVSFDC048	10056791G5
110 Vdc	WPUVSFDC110	10056791G6
125 Vdc	WPUVSFDC125	10056791G6
250 Vdc	WPUVSFDC250	10056791G7

Table 18. Catalog numbers of the Undervoltage Trip Device renewal parts.

Undervoltage Trip Control Voltage	Undervoltage with Time Delay	Catalog Number
125 Vdc	WPUVSFTD125	TAKYUVT1
250 Vdc	WPUVSFTD250	TAKYUVT2
208 Vac	WPUVSFTD208	TAKYUVT3
240 Vac	WPUVSFTD240	TAKYUVT3

Table 19. Catalog numbers for the Time Delay module.

Electric Lockout

The Electric Lockout accessory, illustrated in Figure 31, is available for a variety of control voltage applications. Renewal parts for the Electric Lockout are the complete kit, including mounting hardware, or the module only, with the catalog numbers listed in Table 20.

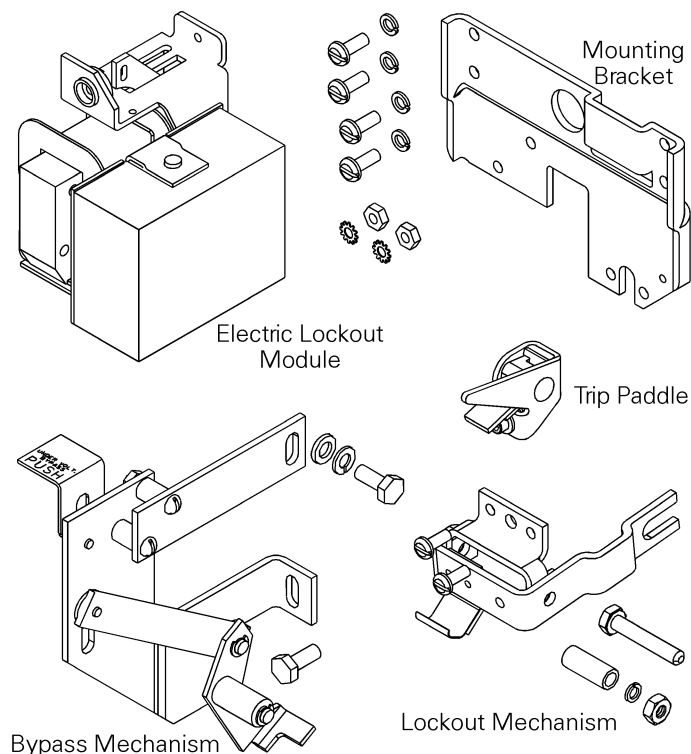


Figure 31. Electric Lockout accessory.

Electric Lockout Control Voltage	Complete Kit	Module Only
120 Vac	WPELSF56120	10056947G1
240 Vac	WPELSF56240	10056947G2
24 Vdc	WPELSFDC024	10056947G3
48 Vdc	WPELSFDC048	10056947G4
110 Vdc	WPELSFDC110	10056947G5
125 Vdc	WPELSFDC125	10056947G5
250 Vdc	WPELSFDC250	10056947G6

Table 20. Catalog numbers of the Electric Lockout renewal parts.

Charging Motor

The Charging Motor accessory, illustrated in Figure 32, is available for a variety of control voltage applications. Renewal parts for the Charging Motor are the motor and the cut-off switch module. The catalog numbers are listed in Table 21.

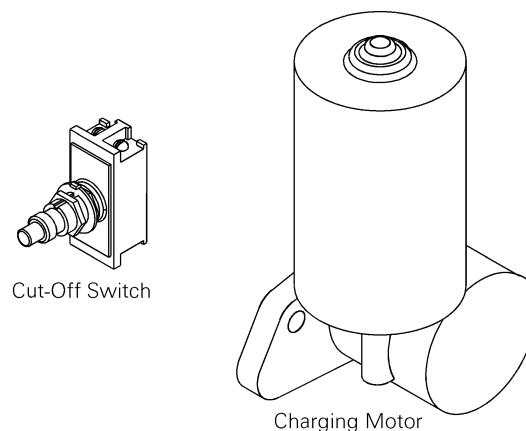


Figure 32. Charging Motor and Cut-Off Switch.

Motor Voltage	Catalog Number	
	Motor	Cut-Off Switch
110 Vdc, 120 Vac, 125 Vdc	568B596G2	192A7153P8
240 Vac, 250 Vdc	568B596G3	192A7153P8
48 Vdc	568B596G1	192A7153P8

Table 21. Catalog numbers of the Motor Operator renewal parts.

Renewal Parts

Remote Close

The Remote Close accessory, illustrated in Figure 33, is available for a variety of control voltage applications. Renewal parts for the Remote Close are the complete kit, the circuit board, and the solenoid. The catalog numbers are listed in Table 22.

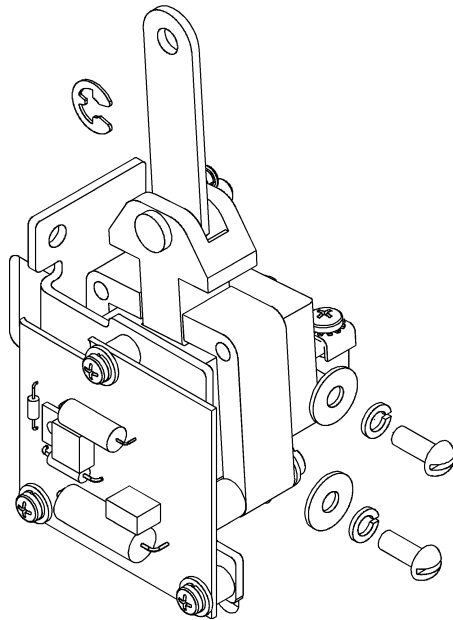


Figure 33. Remote Close accessory.

Remote Close Voltage	Catalog Number		
	Complete Kit	Circuit Board	Solenoid
120 Vac, 60 Hz	WPRCSF60120	10080367G3	10080505G1
240 Vac, 60 Hz	WPRCSF60240	10080367G4	10080505G2
120 Vac, 50 Hz	WPRCSF50120	10080367G3	10080505G1
240 Vac, 50 Hz	WPRCSF50240	10080367G4	10080505G2
48 Vdc	WPRCSFDC048	10080367G7	10080505G3
110 Vdc	WPRCSFDC110	10080367G8	10080505G4
125 Vdc	WPRCSFDC125	10080367G8	10080505G4
250 Vdc	WPRCSFDC250	10080367G8	10080505G5

Table 22. Catalog numbers of the Remote Close renewal parts.

Auxiliary Switch

The Auxiliary Switch accessory, illustrated in Figure 34, is available in two configurations of four or seven stages. The catalog numbers are listed in Table 23.

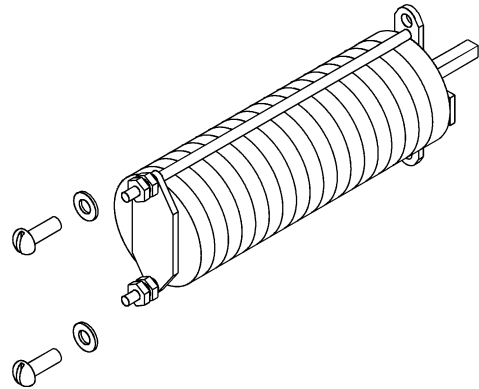


Figure 34. Auxiliary Switch accessory.

Description	Catalog Number
Auxiliary Switch, 4 stage	WPAUXSF4STG
Auxiliary Switch, 7 stage	WPAUXSF7STG

Table 23. Catalog numbers of the Auxiliary Switch.

Open-Fuse Lockout

The Open-Fuse Lockout accessory is illustrated in Figure 35, with the catalog number listed in Table 24.

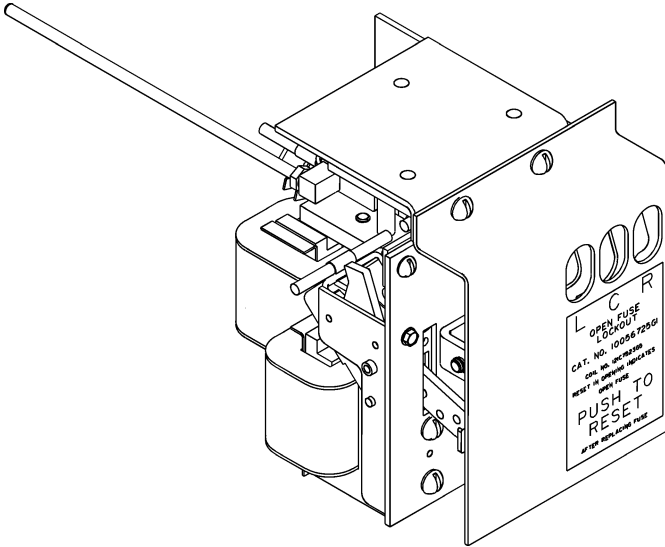


Figure 35. Open-Fuse Lockout accessory.

Description	Catalog Number
Open-Fuse Lockout	10056725G1

Table 24. Catalog numbers of the Open-Fuse Lockout.

Remote Charge-Indication Switch

The Remote Charge-Indication Switch is illustrated in Figure 36, with the catalog number listed in Table 25.

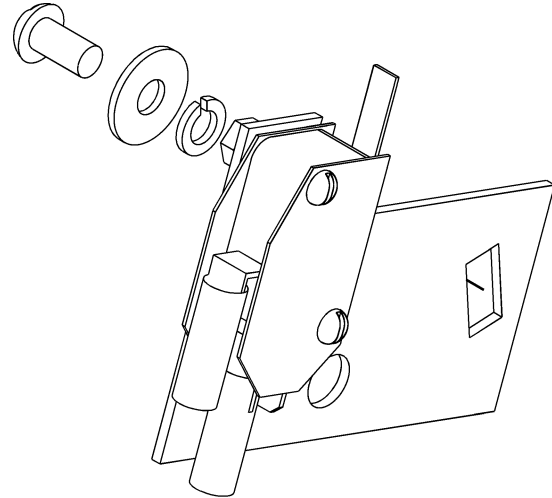


Figure 36. Remote Charge-Indication Switch.

Description	Catalog Number
Remote Charge-Indication Switch	WPRCISFKIT1

Table 25. Catalog number of the Remote Charge Indication Switch.

Renewal Parts

Trip Units

Power+™ Trip Units and MicroVersaTrip Plus™ and MicroVersaTrip PM™ Trip Units are available in a large variety of configurations. To order a replacement Trip Unit or Rating Plug for either type or a Target Module for a Power+ Trip Unit, contact GE with the catalog number from the existing unit.



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