

Cutler-Hammer

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Pages 1-28 dtd Oct. 1996

Cutler-Hammer DS and DSL Low Voltage Power Circuit Breaker Renewal Parts



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DS LOW VOLTAGE POWER CIRCUIT BREAKERS

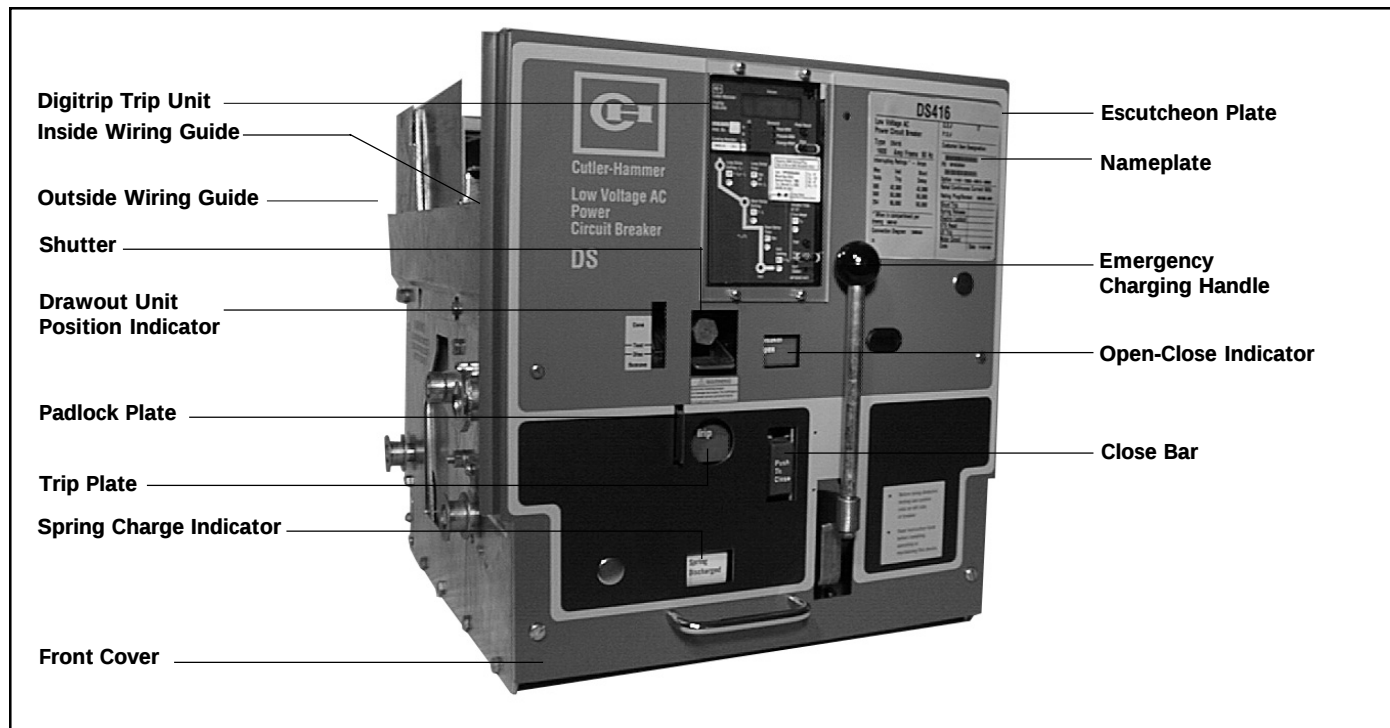


Figure 2.1 DS-416 Breaker Front View

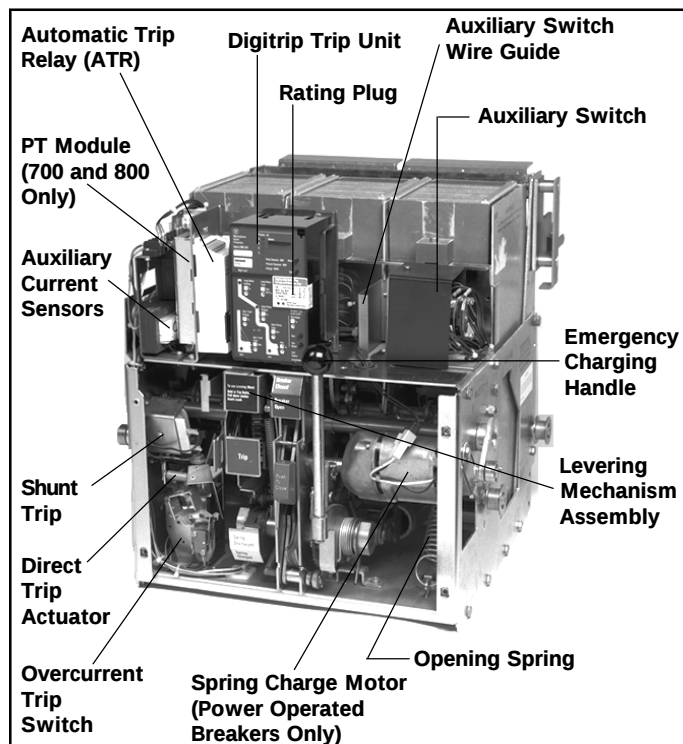


Figure 2.2 DS-416 Breaker with Front Cover Removed

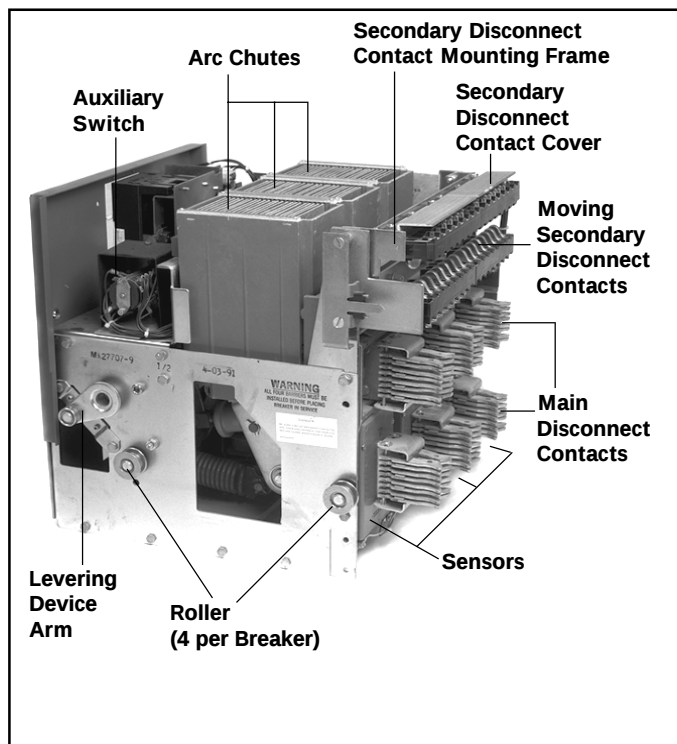


Figure 2.3 DS-416 Breaker Side View without Barriers



PROCEDURE FOR IDENTIFYING BREAKER TYPE

A breaker is identified by the data found on the nameplate. Shop Order or **S.O.** numbers were used to identify breakers until September 1990. These **S.O.** numbers were usually seven characters constructed with two numbers followed by a letter and then an additional four numbers. Examples are:

24Y7859	80Y3800
27Y3838	81Y8500
28Y5868	82Y1260

After September 1990, DS breakers were identified using three unique numbers. One is the **G.O.** (general order number), the second is a 10 character **F.N.** (feature number) and the third is a 20 character **OPTION** number. An example is:

G.O.	CG12345
F.N.	6616C31G02
Option Number:	10200 80700 00010 00000

ORDERING INSTRUCTIONS

1. Check the nameplate to identify the type of breaker you have. (If adding accessories or options to existing breakers, you must also provide the information in the procedure listed to the left.)
2. Identify the part(s) from the photos shown.
3. Determine the style number for the required parts.
4. Specify the quantity required.
5. Use the form below and order the parts from your local Cutler-Hammer distributor.
6. State the method of shipment.

Refer to Figure 2.1 for this type of nameplate.

DS BREAKER RENEWAL PARTS ORDER FORM

Company Name and Address		Contact Person	Date	
		Purchase Order		
		Method of Shipment		
		Phone Number		
REQUIRED INFORMATION				
Shop Order				
General Order Number		Feature Number		
Option Number				
Breaker Type		Frame Amp Rating	Hertz	
Breaker Control Voltage		Motor Voltage	Trip Voltage	
PARTS LIST				
ITEM	QTY	DESCRIPTION	STYLE NUMBER	UNIT PRICE



POLE UNITS

Type DS-206, DSL-206

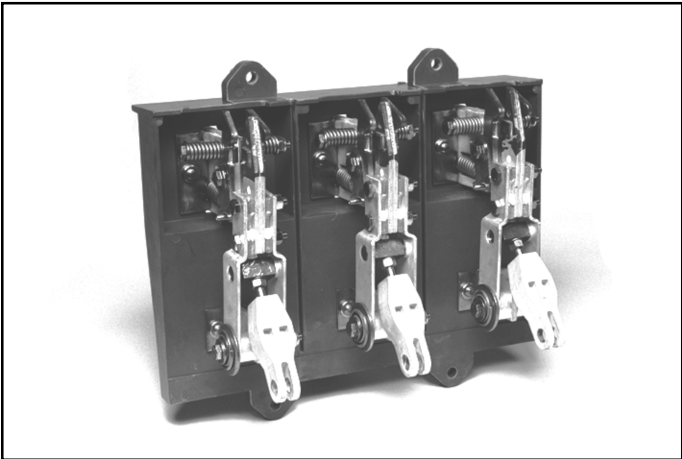


Figure 4.1 DS-206 Pole Unit Assembly Front View

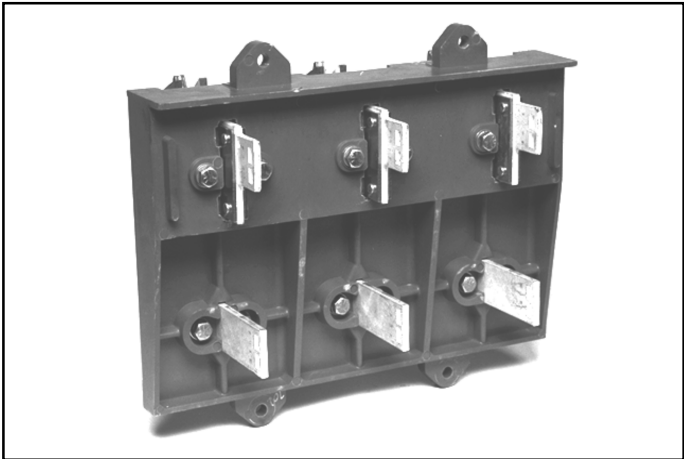


Figure 4.2 DS-206 Pole Unit Assembly Rear View

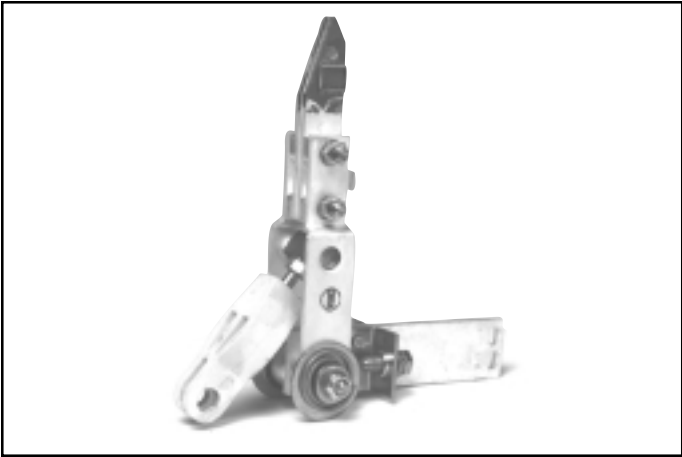


Figure 4.3 DS-206 Lower Stud Assembly

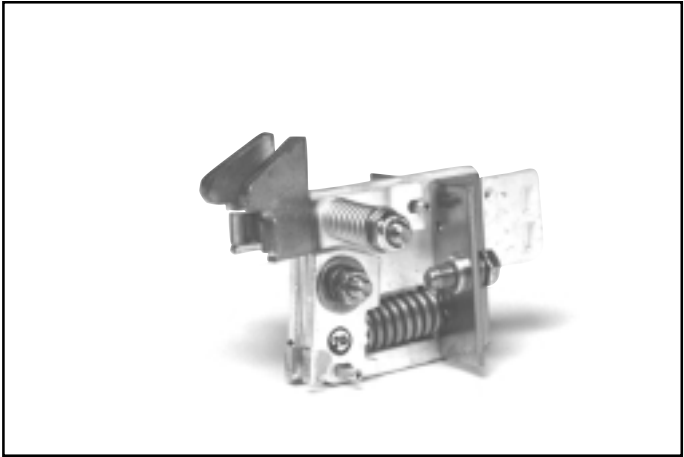


Figure 4.4 DS-206 Upper Stud Assembly

Description	Figure Number	No. Req'd Per Breaker	DS-206 Style Number	DSL-206 Style Number
Three Pole Unit Assembly	4.1, 4.2	1	140D152G05	140D152G07
A three pole unit assembly includes: Molded Base Lower Stud Assembly Upper Stud Assembly	4.3 4.4	3 3	❶ 591C652G01 591C653G01	❶ 591C652G03 591C653G03

❶ Only available in a three pole unit assembly.



POLE UNITS

Type DS-206E, DS-206H, DS-206S, DS-416, DSL-416, DS-416H, DS-416S, DS-420, DSL-420

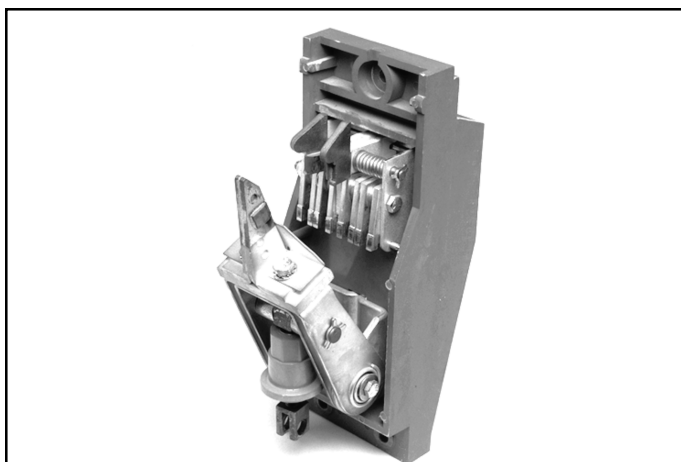


Figure 5.1 DS-840 Pole Unit Assembly

Front View

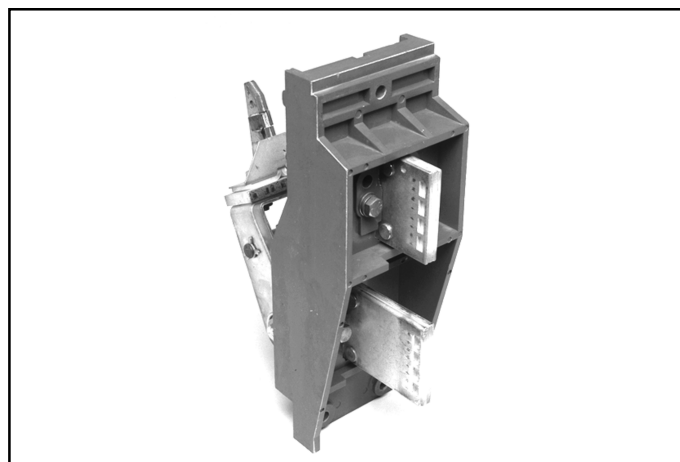


Figure 5.2 DS-416 Pole Unit Assembly

Rear View



Figure 5.3 DS-416 Lower Stud Assembly



Figure 5.4 DS-416 Upper Stud Assembly

Description	Figure Number	No. Req'd Per Breaker	DS-206H DS-416 Style Number	DSL-416 Style Number	DS-206E DS-416H DS-416S DS-420 Style Number	DSL-420 Style Number	DS206S ②
Single Pole Unit Assembly	5.1, 5.2	3	151D064G01	151D065G01	151D065G02	151D065G08	1A33539G01
A single pole unit Includes:							
Molded Base							
Lower Stud Assembly	5.3	3	① 126D298G06	① 139D633G04	① 139D633G05	① 139D633G06	①
Upper Stud Assembly	5.4	3	591C750G02	139D635G01	139D635G02	139D635G01	①

① Only available in a single pole unit assembly.

② Includes the disconnect finger assembly (Page 10).



POLE UNITS

Type DS-632

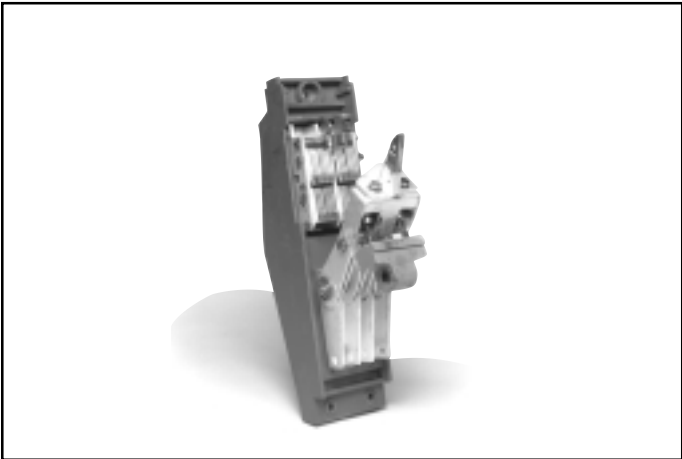


Figure 6.1 DS-632 Pole Unit Assembly Front View

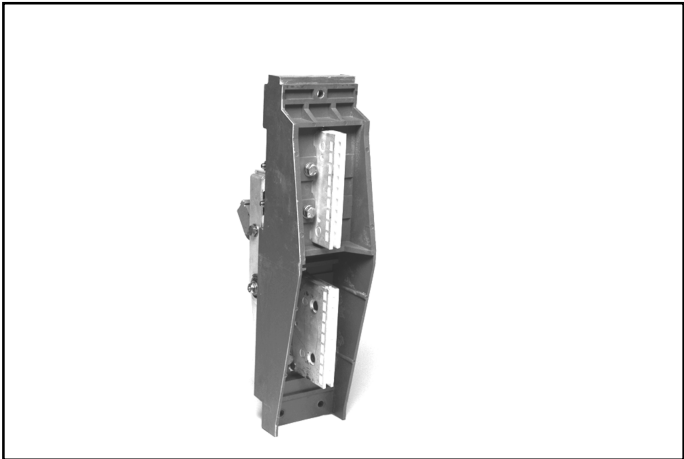


Figure 6.2 DS-632 Pole Unit Assembly Rear View

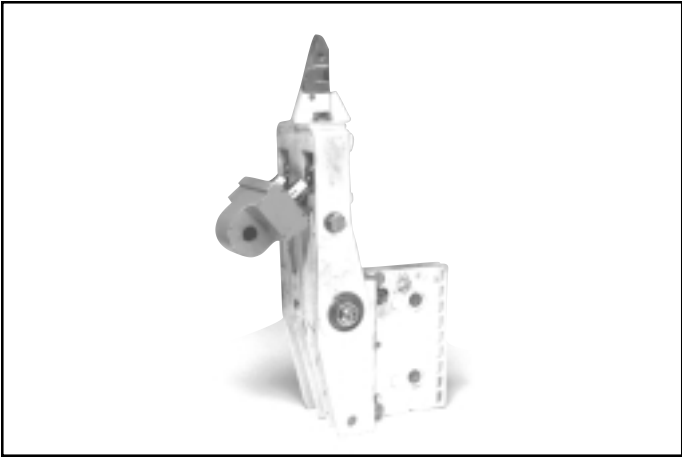


Figure 6.3 DS-632 Lower Stud Assembly

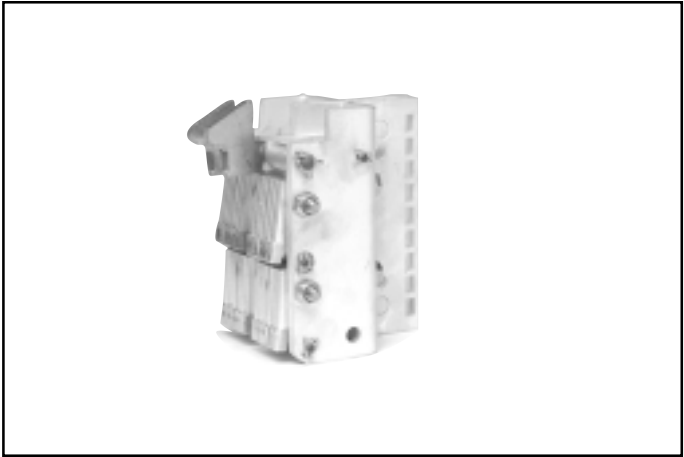


Figure 6.4 DS-632 Upper Stud Assembly

Description	Figure Number	No. Req'd Per Breaker	DS-632 Style Number
Single Pole Unit Assembly	6.1, 6.2	3	567F962G01
A single pole unit assembly includes:			❶
Molded Base			
Lower Stud Assembly	6.3	3	140D091G05
Upper Stud Assembly	6.4	3	126D299G02

❶ Only available in a single pole unit assembly.



POLE UNITS

Type DS-840

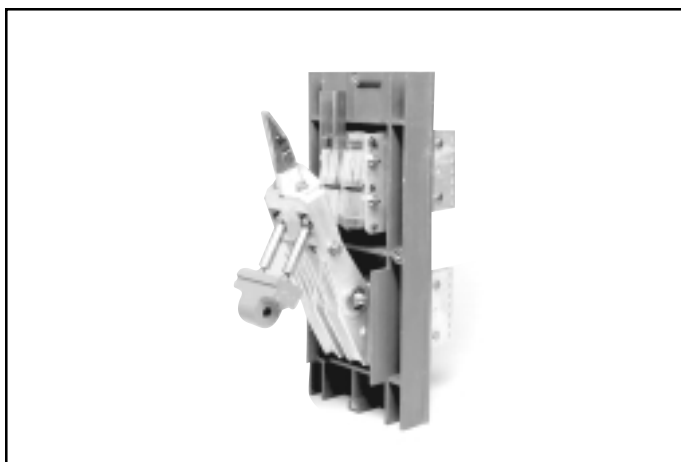


Figure 7.1 DS-840 Pole Unit Assembly

Front View



Figure 7.2 DS-840 Pole Unit Assembly

Rear View

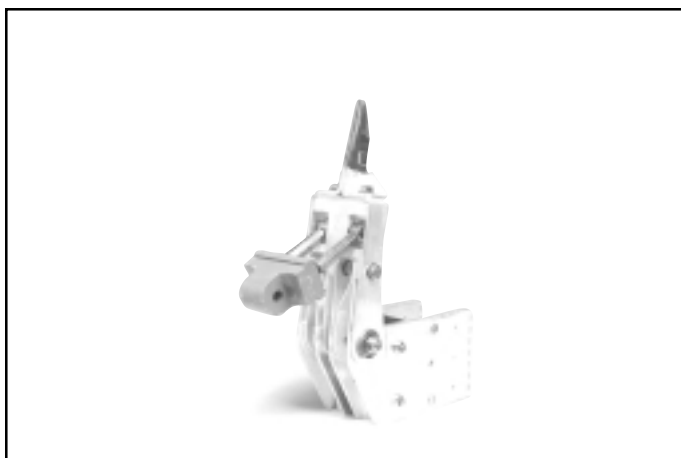


Figure 7.3 DS-840 Lower Stud Assembly

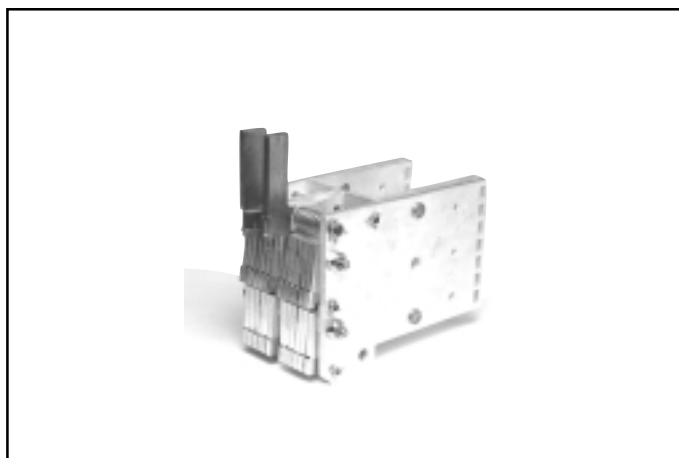


Figure 7.4 DS-840 Upper Stud Assembly

Description	Figure	No. Req'd Per Breaker	DS-840 Style Number
Single Pole Unit Assembly	7.1, 7.2	3	567F991G03
A single pole unit assembly includes: Molded Base			❶
Lower Stud Assembly	7.3	3	140D778G01
Upper Stud Assembly	7.4	3	140D779G01

❶ Only available in a single pole unit assembly.



ARC CHUTES

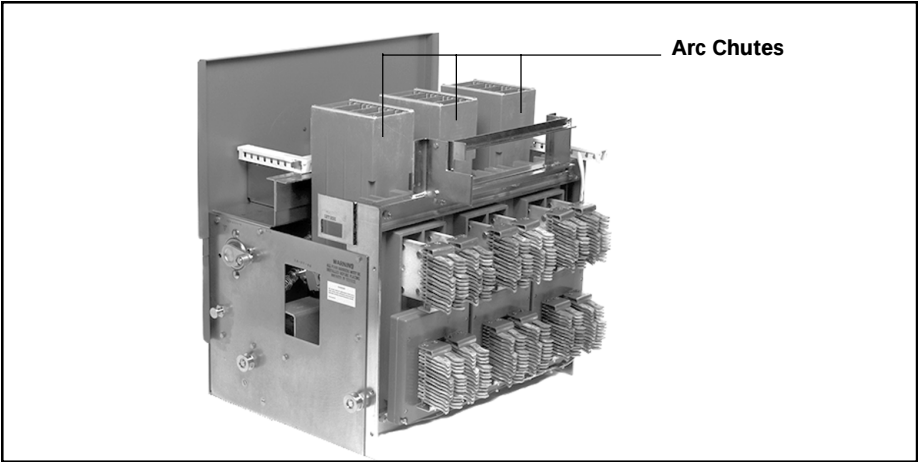


Figure 8.1 DS-840 without Barriers



Figure 8.2



Figure 8.3



Figure 8.4



Figure 8.5

Breaker Type	Figure Number	No. Req'd Per Breaker	Arc Chute Kit (Includes 3) Style Number
DS-206, DSL-206	8.2	3	1A33568G01
DS-206E, DS-206H, DS-206S DS-416, DS-416H, DS-416S, DSL-416 DS-420, DSL-420	8.3	3	1A33568G02
DS-632	8.4	3	1A33568G03
DS-840	8.5	3	1A33568G04



BARRIERS

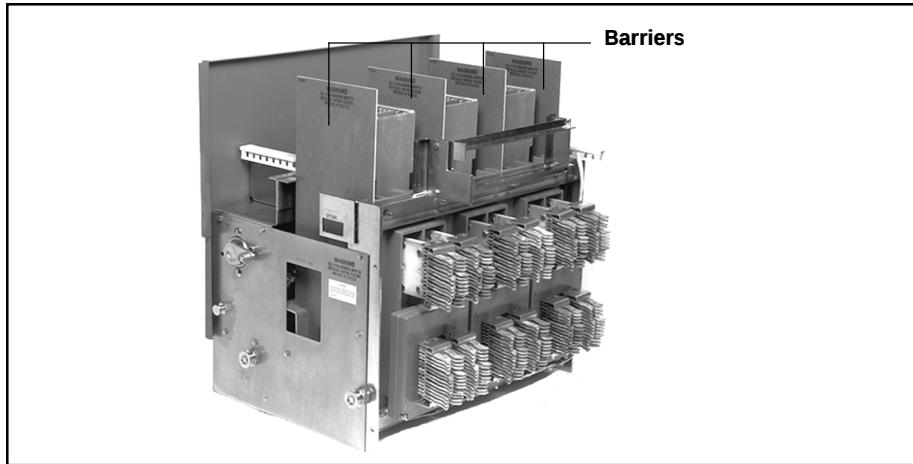


Figure 9.1 DS-840 with Barriers



Figure 9.2



Figure 9.3



Figure 9.4



Figure 9.5

Breaker Type	Figure Number	No. Req'd Per Breaker	
DS-206, DSL-206	9.2	4	
DS-206E, DS-206H, DS-206S DS-416, DS-416H, DS-416S, DSL-416, DS-420	9.3	4	
DSL-420	9.3	4	
DS-632	9.4	4	
DS-840	9.5	4	



MAIN DISCONNECT CONTACT ASSEMBLY



Figure 10.1

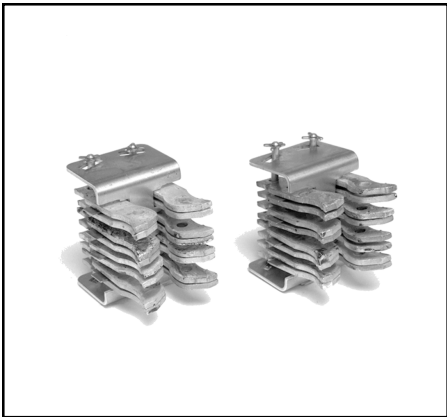


Figure 10.2

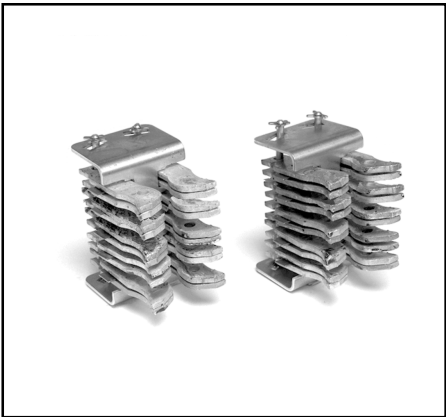


Figure 10.3



Figure 10.4



Figure 10.5

Breaker Type	Maximum Amp. Rating	Figure Number	No. Req'd Per Breaker	Main Disconnect Contact Assembly Kit ❶
DS-206, DSL-206	800	10.1	6	1A33570G01
DS-206H, DS-416, DSL-416	1600	10.2	6	1A33570G02
DS-206E, DS-416H, DS-416S, DS-420	2000	10.3	6	1A33570G03
DSL-420, DS-632	3200	10.4	6	1A33570G04
DS-840	4000	10.5	12	1A33570G05
DS-206S	800	---	6	1A33540G01

❶ A kit includes the total number of main disconnect contact assemblies required for one breaker.



MECHANISM



Figure 11.1
Levering Mechanism Assembly



Figure 11.2
Crank Kit

Description	Figure Number	No. Req'd Per Breaker	All Types DS/DSL except DSL-420, DS-632 and DS-840 Style Number	DSL-420 DS-632 Style Number	DS-840 Style Number
Levering Mechanism Assembly	11.1	1	449D224G04	449D224G04	449D224G05
Crank Kit includes: Crank Arm with Roller, Special Bolt and Elastic Stop Nut	11.2	2	3838A95G01	3838A95G02	3838A95G03



MECHANISM and RELATED PARTS

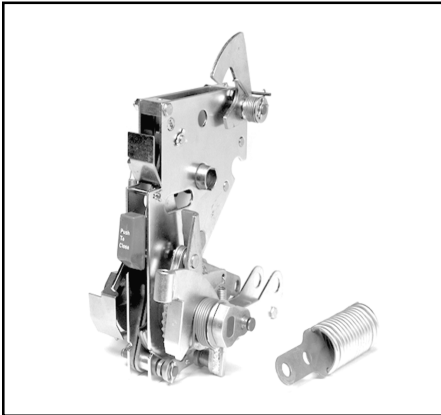


Figure 12.1
Electrically Operated with Closing Spring

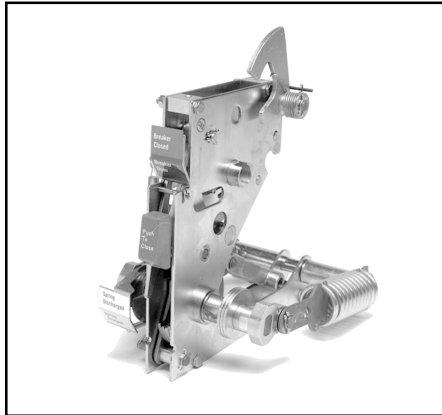


Figure 12.2
Manual Mechanism with Closing Spring



Figure 12.3
Closing Spring Assembly



Figure 12.4
Emergency Charge Handle Kit

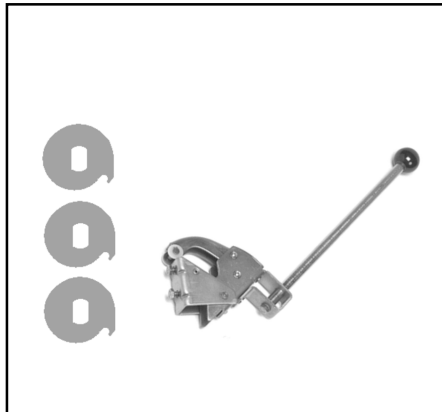


Figure 12.5
Manual Charge Handle Kit with
Charging Cams



Figure 12.6
Oscillator Assembly Kit



Figure 12.7
Opening Spring



Figure 12.8
Trip Shaft Kit



Figure 12.9
Hold Pawl and Ratchet Kit



MECHANISM and RELATED PARTS

			All DS/DSL except DS-632 and DS-840		DS-632 and DS-840	
Description	Figure Number	No Req'd Per Breaker	Electrically Operated Style Number	Manually Operated Style Number	Electrically Operated Style Number	Manually Operated Style Number
Mechanism Assembly w/o Closing Spring Includes: Main Drive Link Assembly (w/roller), Oscillator Assembly, Oscillator Reset Spring, Emergency Charge Device, Trip Latch, Trip Lever (for Motor Cutoff Switch), Trip Latch Reset Spring	12.1	1	567F759G02	N/A	567F759G04	N/A
Mechanism Assembly w/o Closing Spring Includes: Main Drive Link Assembly (w/roller), Trip Latch, Trip Lever (for Motor Cutoff Switch), Trip Latch Reset Spring	12.2	1	N/A	567F759G01	N/A	567F759G07
Closing Spring Assembly Includes: Closing Spring and Spring Ends	12.3	2			791A671G03	791A671G03
DS-206, DS-206S, DSL-206	12.3	2	349A521G01	349A521G01		
DS-206H, DS-416, DS-416S, DSL-416, and DSL-420	12.3	2	791A671G02	791A671G02		
DS-206E, DS-416H, DS-420	12.3	2	791A671G01	791A671G01		
Emergency Charge Handle Kit Includes: Emergency Charge Device, Emergency Charge Handle and Oscillator Assembly Kit	12.4 & 12.6	1	3838A96G02	N/A	3838A96G02	N/A
Manual Charge Handle Kit Includes: Manual Charge Assembly and Manual Charge Handle and Charging Cams	12.5	1	N/A	3838A96G01	N/A	3838A96G01
Oscillator Assembly Kit ② Includes: Oscillator Assembly, and Oscillator Reset Spring	12.6	1	N/A	N/A	N/A	N/A
Opening Spring	12.7	2	698B907H01	698B907H01	698B907H01①	698B907H01①
Trip Shaft Kit Includes: Trip Shaft Lever, Trip Shaft, and Trip Shaft Return Spring	12.8	1	1A33567G01	1A33567G01	1A33567G01	1A33567G01
Hold Pawl and Ratchet Wheel Kit	12.9	1	1A33579G01	N/A	1A33579G01	N/A

① Two Opening springs are required for DS-632 and DS-840

② Included in emergency charge handle kit.



CONTROL COMPONENTS



Figure 14.1
Spring Charging Motor Kit

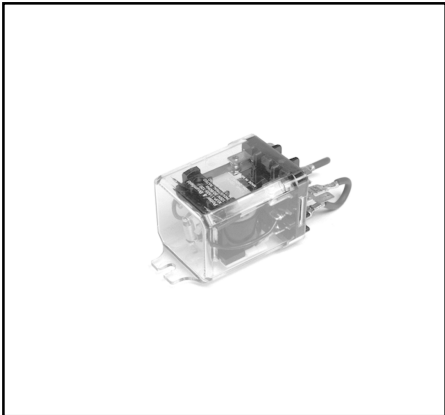


Figure 14.2
Anti-Pump Relay



Figure 14.3
Undervoltage Trip Assembly

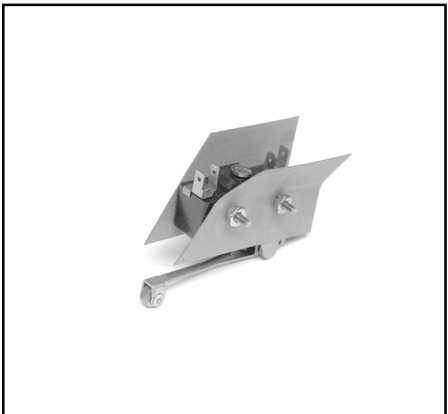


Figure 14.4
Latch Check Switch



Figure 14.5
Shunt Trip Assembly



Figure 14.6
Overcurrent Trip Switch Manual Reset



Figure 14.7
Spring Release Assembly

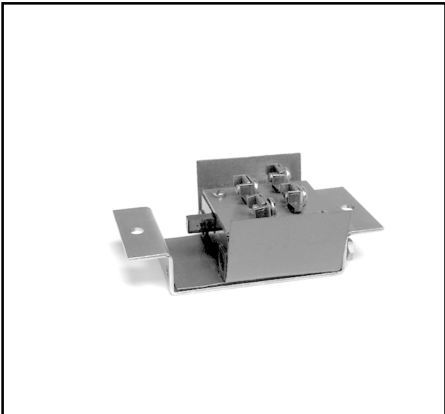


Figure 14.8
Motor Cut-Off Switch



CONTROL COMPONENTS

Description	Fig. No.	Voltage	DS/DSL except DS-840 Style Number	DS-840 Style Number
Spring Charging Motor Kit Includes: Motor Crank, Roller, Connectors, Mtg. Bracket and Hardware	14.1	48 DC 125 DC 250 DC 120 60HZ 240 60HZ	449D431G03 449D431G01 449D431G02 449D431G01 449D431G02	449D431G03 449D431G01 449D431G02 449D431G01 449D431G02
Anti-Pump Relay	14.2	48 DC 125 DC 250 DC 120 60HZ 240 60HZ	8293A06G03 8293A06G04 8293A06G05 8293A06G01 8293A06G02	8293A06G03 8293A06G04 8293A06G05 8293A06G01 8293A06G02
Undervoltage Trip Assembly w/wires ^① (Instantaneous)	14.3	120 60HZ 208 60HZ 240 60HZ 480 60HZ 48 DC 125 DC 250 DC 24 DC 115 50HZ 208 50HZ 230 50HZ 400 50HZ 415 50HZ 480 50HZ	1A33595G01 1A33595G02 1A33595G03 1A33595G04 1A33595G05 1A33595G06 1A33595G07 1A33595G08 1A33595G09 1A33595G10 1A33595G11 1A33595G12 1A33595G13 1A33595G14	1A33595G31 1A33595G32 1A33595G33 1A33595G34 1A33595G35 1A33595G36 1A33595G37 1A33595G38 1A33595G39 1A33595G40 1A33595G41 1A33595G42 1A33595G43 1A33595G44
Undervoltage Trip Assembly w/wires ^① (Time Delay)	14.3	120 60HZ 208 60HZ 240 60HZ 480 60HZ 48 DC 125DC 250DC 24 DC 115 50HZ 208 50HZ 230 50HZ 400 50HZ 415 50HZ 480 50HZ	1A33595G15 1A33595G16 1A33595G17 1A33595G18 1A33595G19 1A33595G20 1A33595G21 1A33595G22 1A33595G23 1A33595G24 1A33595G25 1A33595G26 1A33595G27 1A33595G28	1A33595G45 1A33595G46 1A33595G47 1A33595G48 1A33595G49 1A33595G50 1A33595G51 1A33595G52 1A33595G53 1A33595G54 1A33595G55 1A33595G56 1A33595G57 1A33595G58
Latch Check Switch	14.4	All	140D161G01	140D161G01

Description	Fig. No.	Voltage	DS/DSL except DS-840 Style Number	DS-840 Style Number
Shunt Trip Assembly ^① w/wires	14.5	24 DC 32 DC 48 DC 125 DC 250 DC 120 60HZ 240 60HZ For use with Capacitor Trip(125VDC)	1A33593G01 1A33593G02 1A33593G03 1A33593G04 1A33593G05 1A33593G06 1A33593G07 1A33593G08	1A33593G31 1A33593G32 1A33593G33 1A33593G34 1A33593G35 1A33593G36 1A33593G37 1A33593G38
Overcurrent Trip Switch Manual Reset (2 Cont. w/wires)	14.6	All	3752A04G01	3752A24G01
Overcurrent Trip Switch Manual Reset (3 Cont. w/wires)	14.6	All	3752A04G02	3752A24G02
Overcurrent Trip Switch Manual Reset (4 Cont. w/wires)	14.6	All	3752A04G03	3752A24G03
Overcurrent Trip Switch Electrical Reset includes coil (2 Cont. w/wires)	14.6	48 DC 115 AC 125 DC 230 AC 250 DC	3752A04G04 3752A04G05 3752A04G06 3752A04G07 3752A04G08	3752A24G04 3752A24G05 3752A24G06 3752A24G07 3752A24G08
Overcurrent Trip Switch Electrical Reset includes coil (3 Cont. w/wires)	14.6	48 DC 115 AC 125 DC 230 AC 250 DC	3752A04G09 3752A04G10 3752A04G11 3752A04G12 3752A04G13	3752A24G09 3752A24G10 3752A24G11 3752A24G12 3752A24G13
Spring Release Assembly ^{① ②} w/wires	14.7	48 DC 125 DC 250 DC 120 60HZ 240 60HZ	1A33594G01 1A33594G02 1A33594G03 1A33594G04 1A33594G05	1A33594G31 1A33594G32 1A33594G33 1A33594G34 1A33594G35
Motor Cut-off Switch Includes: Mounting Brkt. and Insulation	14.8	All	567F430G06	567F430G06

① Replacement shunt trip, spring release and undervoltage trip are complete assemblies and include mounting hardware and wire leads (not shown). If adding shunt trip, or spring release to manual breakers; an auxiliary switch (page 16), and wiring guide kit (page 23) are required. Confirm that secondary contacts exist in the rear of the breaker. All changes or additions on the breaker should be wired per the standard drawing 508B508 and indicate the change on the breaker nameplate.

② The spring release kits include the motor cut-off switch and wiring.



CONTROL COMPONENTS

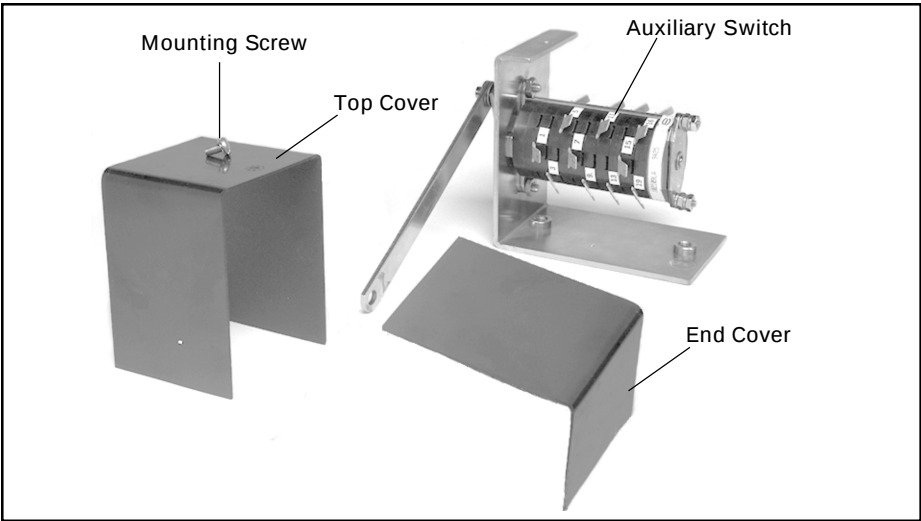


Figure 16.1
New Auxiliary Switch Assembly Kit (round) - one high

New Auxiliary Switch Assembly Kit (round)❶ (Includes mounting bracket, switch, covers, and screw)	Style Number
1 High Assembly Kit 2 High Assembly Kit	1A33571G01 1A33571G02
Additional Auxiliary Switch Assembly w/cover (rectangular)❷	
2nd Auxiliary Switch 3rd Auxiliary Switch	697B536G08 697B536G09
Replacement Auxiliary Switches Assembly (rectangular)❸ (Includes: switch, drive link and hardware)	
1st Auxiliary Switch (ABAB only) 2nd Auxiliary Switch 3rd Auxiliary Switch	697B536G04 697B536G05 697B536G06
Replacement Auxiliary Switch Only (rectangular)	
ABAB Auxiliary Switch AAAA Auxiliary Switch BBBB Auxiliary Switch AAAB Auxiliary Switch ABBB Auxiliary Switch A = N.O. B = N.C.	449D622G33 449D622G34 449D622G35 449D622G36 449D622G37

❶ When adding an auxiliary switch, be sure that the wiring guides are installed. There are three wiring guides and they are located as follows: one inside and one outside on the left side of the breaker, and one between the right side of the trip unit and the auxiliary switch. Refer to figures 2.1 and 2.2. for location and to page 23 for style numbers. Additional secondary contacts and covers may be required. Refer to figure 2.3 and page 23 for the style number.

❷ For adding to breakers with existing rectangular auxiliary switches.

❸ Used for replacement only of existing rectangular auxiliary switches.



AUTOMATIC TRIPPING SYSTEMS

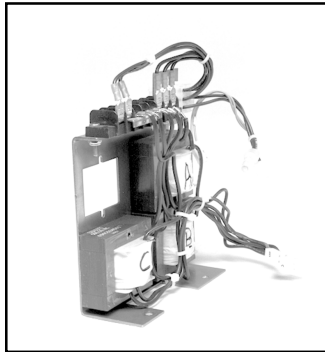


Figure 17.1
Auxiliary CT Mounting
(for use with Digitrip Mounting)

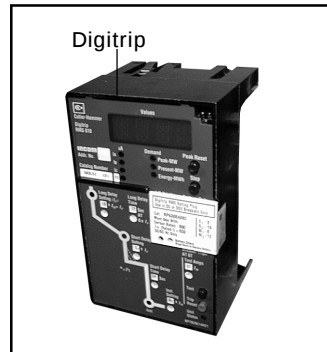


Figure 17.2
Digitrip w/Rating Plug

Auxiliary CT Mounting		
Type	Figure Number	Style Number
w/Gnd	17.1	694C740G01
w/o Gnd	17.1	694C740G02
w/Gnd for DS-632 only	17.1	694C740G05
w/o Gnd for DS-632 only	17.1	694C740G06

Digitrip (Figure 17.2)		
Trip Unit	Trip Functions	Style Number
500	LI	No Longer Available.
500	LSI	Replace
500	LS	With
500	LIG	Digitrip
500	LSG	510
500	LSIG	
600	LI	No Longer Available.
600	LSI	Replace
600	LS	With
600	LIG	Digitrip
600	LSG	610
600	LSIG	
700	LI	No Longer Available.
700	LSI	Replace
700	LS	With
700	LIG	Digitrip
700	LSG	810
700	LSIG	
800	LI	No Longer Available.
800	LSI	Replace
800	LS	With
800	LIG	Digitrip
800	LSG	810 or 910
800	LSIG	
510	LI	7829C05G01
510	LSI	7829C05G02
510	LS	7829C05G03
510	LIG	7829C05G04
510	LSG	7829C05G05
510	LSIG	7829C05G06
610	LI	7829C10G01
610	LSI	7829C10G02
610	LS	7829C10G03
610	LIG	7829C10G04
610	LSG	7829C10G05
610	LSIG	7829C10G06
810	LI	7829C08G01
810	LSI	7829C08G02
810	LS	7829C08G03
810	LIG	7829C08G04
810	LSG	7829C08G05
810	LSIG	7829C08G06
910	LI	7829C09G01
910	LSI	7829C09G02
910	LS	7829C09G03
910	LIG	7829C09G04
910	LSG	7829C09G05
910	LSIG	7829C09G06



AUTOMATIC TRIPPING SYSTEMS

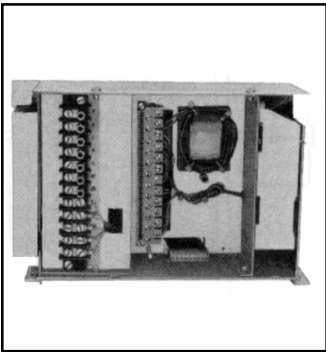


Figure 18.1
Digitrip Box
(800 Box shown)

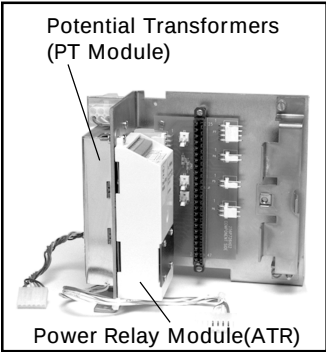


Figure 18.2
Digitrip Mounting
w/ATR and PT Module

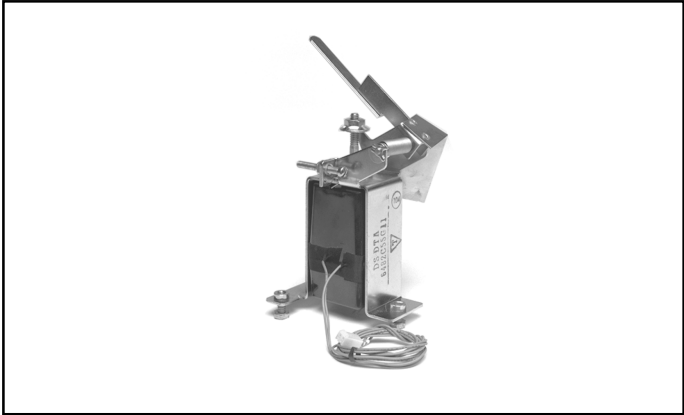


Figure 18.3

The Digitrip Box (figure 18.1) was used prior to June 1994 and on breakers identified by style series 6616C __ G02. The Digitrip Mounting (figure 18.2) was used after June 1994 and is identified by breakers with style series 6616C __ G03. This series of breakers used the Digitrip 500, 600, 700, and 800 trip units. After August 1994, the Digitrip 510, 610, 810, and 910 trip units were used and these breakers are identified by style series 6616C __ G04.

Digitrip Box		
Type of Trip Unit	Figure Number	Style Number
500 w/Gnd	18.1	694C501G01
500 w/o Gnd	18.1	694C501G02
600 w/Gnd and ATR	18.1	694C501G03
600 w/o Gnd and ATR	18.1	694C501G04
700 w/ Gnd, ATR, and PT module	18.1	694C501G05
700 w/o Gnd, w/ATR and PT module	18.1	694C501G06
800 w/ Gnd, ATR, and PT module	18.1	694C501G05
800 w/o Gnd, w/ ATR and PT module	18.1	694C501G06

Digitrip Mounting		
Type of Trip Unit	Figure Number	Style Number
500/510 w/Gnd	18.2	694C735G01
500/510 w/o Gnd	18.2	694C735G02
600/610 w/Gnd	18.2	694C735G03
600/610 w/o Gnd	18.2	694C735G04
700/800/810/910 w/ Gnd, ATR, and PT module	18.2	694C735G05
700/800/810/910 w/o Gnd and w/ATR and PT module	18.2	694C735G06

Direct Trip Actuator (DTA)	Style Number
For use with Amptector I-A Trip System	6482C55G21
For use with Digitrip Box	6482C55G28
For use with Digitrip Mounting	6482C55G11



AUTOMATIC TRIPPING SYSTEMS

Digitrip Rating Plugs

Digitrip Rating Plugs for 500, 600, 700, 800			
Rated Current I_n	Current Sensor Rating	Hertz	Style Number
100	200	60	2613D10G01
200	200	60	2613D10G02
200	300	60	2613D10G03
250	300	60	2613D10G04
300	300	60	2613D10G05
200	400	60	2613D10G06
250	400	60	2613D10G07
300	400	60	2613D10G08
400	400	60	2613D10G09
300	600	60	2613D10G10
400	600	60	2613D10G11
600	600	60	2613D10G12
400	800	60	2613D10G13
600	800	60	2613D10G14
800	800	60	2613D10G15
600	1200	60	2613D10G16
800	1200	60	2613D10G17
1000	1200	60	2613D10G18
1200	1200	60	2613D10G19
800	1600	60	2613D10G20
1000	1600	60	2613D10G21
1200	1600	60	2613D10G22
1600	1600	60	2613D10G23
1000	2000	60	2613D10G24
1200	2000	60	2613D10G25
1600	2000	60	2613D10G26
2000	2000	60	2613D10G27
1600	2400	60	2613D10G28
2000	2400	60	2613D10G29
2400	2400	60	2613D10G30
1600	3200	60	2613D10G31
2000	3200	60	2613D10G32
2400	3200	60	2613D10G33
3000	3200	60	2613D10G42
3200	3200	60	2613D10G34
2000	4000	60	2613D10G35
2400	4000	60	2613D10G36
3200	4000	60	2613D10G37
4000	4000	60	2613D10G38
3200	5000	60	2613D10G39①
4000	5000	60	2613D10G40①
5000	5000	60	2613D10G41①
100	200	50	2613D12G01
200	200	50	2613D12G02
200	300	50	2613D12G03
250	300	50	2613D12G04
300	300	50	2613D12G05
200	400	50	2613D12G06
250	400	50	2613D12G07
300	400	50	2613D12G08
400	400	50	2613D12G09
300	600	50	2613D12G10
400	600	50	2613D12G11
600	600	50	2613D12G12
400	800	50	2613D12G13
600	800	50	2613D12G14
800	800	50	2613D12G15
600	1200	50	2613D12G16
800	1200	50	2613D12G17
1000	1200	50	2613D12G18
1200	1200	50	2613D12G19
800	1600	50	2613D12G20
1000	1600	50	2613D12G21
1200	1600	50	2613D12G22
1600	1600	50	2613D12G23
1000	2000	50	2613D12G24
1200	2000	50	2613D12G25

Digitrip Rating Plugs for 500, 600, 700, 800			
Rated Current I_n	Current Sensor Rating	Hertz	Style Number
1600	2000	50	2613D12G26
2000	2000	50	2613D12G27
1600	2400	50	2613D12G28
2000	2400	50	2613D12G29
2400	2400	50	2613D12G30
1600	3200	50	2613D12G31
2000	3200	50	2613D12G32
2400	3200	50	2613D12G33
3000	3200	50	2613D12G42
3200	3200	50	2613D12G34
2000	4000	50	2613D12G35
2400	4000	50	2613D12G36
3200	4000	50	2613D12G37
4000	4000	50	2613D12G38
3200	5000	50	2613D12G39①
4000	5000	50	2613D12G40①
5000	5000	50	2613D12G41①

Digitrip Rating Plugs for 510, 610, 810, 910			
Rated Current I_n	Current Sensor Rating	Hertz	Style Number
100	200	50/60	3D86734G01
200	200	50/60	3D86734G02
200	300	50/60	3D86734G03
250	300	50/60	3D86734G04
300	300	50/60	3D86734G05
200	400	50/60	3D86734G06
250	400	50/60	3D86734G07
300	400	50/60	3D86734G08
400	400	50/60	3D86734G09
300	600	50/60	3D86734G10
400	600	50/60	3D86734G11
600	600	50/60	3D86734G12
400	800	50/60	3D86734G13
600	800	50/60	3D86734G14
800	800	50/60	3D86734G15
600	1200	50/60	3D86734G16
800	1200	50/60	3D86734G17
1000	1200	50/60	3D86734G18
1200	1200	50/60	3D86734G19
800	1600	50/60	3D86734G20
1000	1600	50/60	3D86734G21
1200	1600	50/60	3D86734G22
1600	1600	50/60	3D86734G23
1000	2000	50/60	3D86734G24
1200	2000	50/60	3D86734G25
1600	2000	50/60	3D86734G26
2000	2000	50/60	3D86734G27
1600	2400	50/60	3D86734G28
2000	2400	50/60	3D86734G29
2400	2400	50/60	3D86734G30
1600	3200	50/60	3D86734G31
2000	3200	50/60	3D86734G32
2400	3200	50/60	3D86734G33
3000	3200	50/60	3D86734G42
3200	3200	50/60	3D86734G34
2000	4000	50/60	3D86734G35
2400	4000	50/60	3D86734G36
3200	4000	50/60	3D86734G37
4000	4000	50/60	3D86734G38
3200	5000	50/60	3D86734G39①
4000	5000	50/60	3D86734G40①
5000	5000	50/60	3D86734G41①

① For use with forced air cooled DS-840 only.



AUTOMATIC TRIPPING SYSTEMS

Current Sensors



Figure 20.1
DS-206 Sensor w/Spacer



Figure 20.2
DS-632 Sensor



Figure 20.3
DS-840 Sensor

Sensor Ampere Rating	Breaker Types	Breaker Frame Rating	Style Number ^❶
100	All DS-206, all DS-416, and all DS-420	800	151D995G01
150	All DS-206, all DS-416, and all DS-420	800	151D995G15
200	All DS-206, all DS-416, and all DS-420	800	151D995G02
300	All DS-206, all DS-416, and all DS-420	800	151D995G03
400	All DS-206, all DS-416, and all DS-420	800	151D995G04
600	All DS-206, all DS-416, and all DS-420	800	151D995G06
800	All DS-206, all DS-416, and all DS-420	800	151D995G08
1200	All DS-416, and DS-420	1600	151D995G12
1600	All DS-416, and DS-420	1600	151D995G16
2000	DS-420	2000	151D995G20
2400	DS-632	3200	151D995G23❷
2400	DS-632	3200	151D995G24❷
3200	DS-632	3200	151D995G31❷
3200	DS-632	3200	151D995G32❷
3200	DS-840	4000	588C734G02❸
4000	DS-840	4000	588C734G01
5000	DS-850	4000	588C734G03❸

DS-206 Spacer Kit (For DS-206 only. Not required for DS-206E, DS-206H or DS-206S)	794A965G01❹
--	--------------------

❶ These are replacements for sensors style 794A170G __ series, and are for phase or neutral use except as noted.

❷ For neutral use only.

❸ For phase use only.

❹ For DS-840 only.

❺ For use with forced air cooled.

❻ Kit includes 2 spacers.

Refer to Instruction Book 33-790-1G, page 63 table 4 for application of sensors.



CURRENT LIMITING BREAKERS

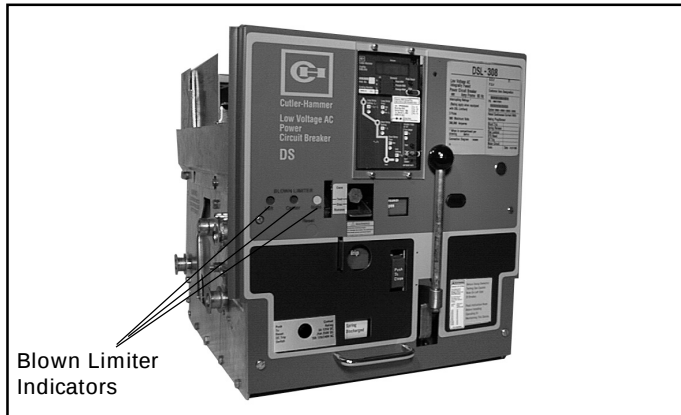


Figure 21.1
DSL-308

Front View

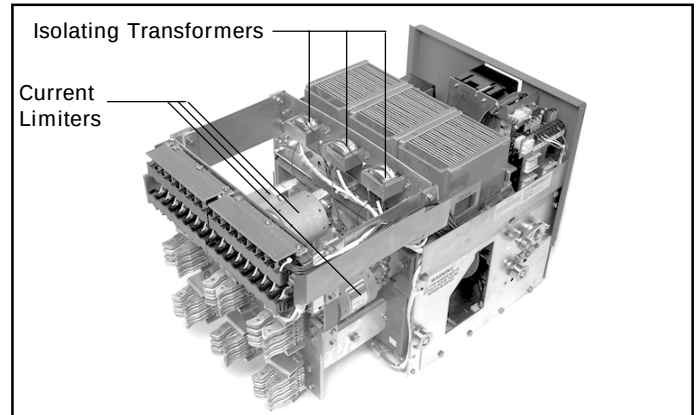


Figure 21.2
DSL-416 w/o barriers

Rear View

Description	No. Required Per Breaker	Style Number
Blown Limiter Indicator Ass'y	1	140D777G01
Blown Limiter Indicator Ass'y (For fuse truck)	1	140D777G03
Isolating Transformer Ass'y	1	591C755G01①
Isolating Transformer Only	3	795A823H01

Current Limiters			
Breaker Type	No. Required Per Breaker	Amp Rating	Style Number
DSL-206	3	150	140D316G01
DSL-206	3	200	140D316G02
DSL-206	3	250	140D316G03
DSL-206	3	300	140D316G04
DSL-206	3	400	140D316G05
DSL-206	3	600	140D316G06
DSL-206	3	800	140D316G07
DSL-206	3	1200	140D316G10
DSL-206	3	1600	140D316G11
DSL-206	3	2000	140D316G12
DSL-416	3	800	151D932G01
DSL-416	3	1000	151D932G02
DSL-416	3	1200	151D932G03
DSL-416	3	1600	151D932G04
DSL-416	3	2000	151D932G05
DSL-416	3	2500	151D932G09
DSL-416	3	3000	151D932G10
DSL-420	3	3000	151D932G10

Drawout Fuse Truck Type Current Limiters			
Truck Type	No. Required Per Breaker	Amp Rating	Style Number
DSL-3200	3	2500	5980C01G01②
	3	3000	5980C01G02②
	3	4000	5980C01G03②
DSL-4000	3	2500	5980C01G01②
	3	3000	5980C01G02②
	3	4000	5980C01G03②
	3	5000	5980C01G04②

① Includes 3 transformers.

② Limiters are mounted on a separate fuse truck.

Refer to Instruction Book 33-790-1G, page 69 table 5 for application of limiters.



ACCESSORIES and OTHER PARTS



Figure 22.1
Replacement Nameplate (DS-416 Shown)
*

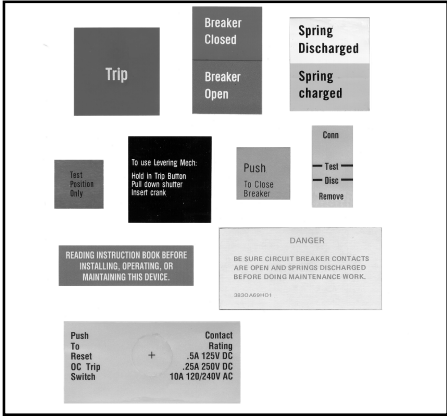


Figure 22.2
DS Breaker Label Kit
Style Number 8187A84G01

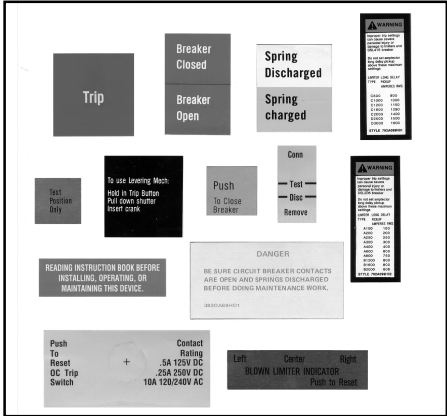


Figure 22.3
DSL Breaker Label Kit
Style Number 3831A07G01

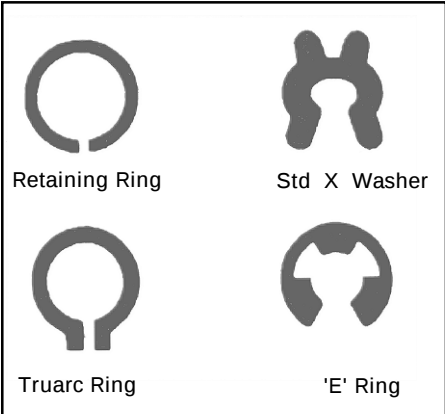


Figure 22.4
Fastener Kit
Style Number 3586A86G01 ⓘ

* Silver polyester nameplates (original may have been metal). Metal nameplates were discontinued in 1997.

ⓘ Each kit includes 84 fasteners in various sizes and quantities of the types shown in Figure 26.7.



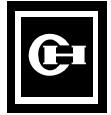
ACCESSORIES and OTHER PARTS

Description	Figure Number	Use	Application	Style Number
Replacement Nameplate *	22.1	Used to replace the nameplates on the front of the breaker	DS Dummy DS Drawout DSL Fuse Truck DS Fixed	9194D95H61 ❶ 9194D95H63 ❶ 9194D95H64 ❶ 9194D95H65 ❶ 9194D95H67 ❶
Secondary Disconnect Contact	2.3	For supplying control power	All Breakers	591C498G06
Secondary Disconnect Contact Cover	2.3	Covers top of secondary contacts	All Breakers	503B569H01
Secondary Disconnect Mounting Frame with 8 point contact block	2.3	For replacing secondary disconnect mounting frame, or for adding to breaker originally supplied <u>without</u> secondary contacts	All Breakers	591C498G07
Breaker Front Covers ❶ ❷	2.3	Covers Front of Breaker	DS small frame, draw out DS small frame, fixed DS-632 draw out DS-632 fixed DS-840 draw out DS-840 fixed DSL small frame DSL-420 DS-3200 fuse truck DS-4000 fuse truck	1A33541G41 1A33541G42 1A33541G43 1A33541G44 1A33541G45 1A33541G46 1A33541G47 1A33541G48 1A33541G49 1A33541G50
Breaker Roller Kit (double edge type) and Retaining Rings	2.3	To roll the breaker in and out of the housing (Set of four)	All Breakers	1A33578G01
Wiring Guide Kit	2.3	Guides for wiring	All DS except DS-840 DS-840 All DSL Breakers	1A33588G01 151D418G01 1A33589G01

❶ Customer is to provide the following original information: GO, P.O., Item, FN and Option numbers.

❷ Includes escutcheon & rating label.

* Silver polyester nameplates (original may have been metal), Metal nameplates were discontinued in 1997.



RECOMMENDED SPARE PARTS FOR STOCK

The quantities listed are recommended for 5 breakers of the same rating. Items 8 -10 are only required for electrically operated breakers. The reference page number contains the complete styles of the required parts. Where needed, fill in or complete the style numbers for your application and forward to your local Cutler-Hammer sales representative.

Item	Qty	Description	Reference Page Number	Style Number
1	1	Pole Unit Assembly	4-7	
2	1	Main Disconnect Contact Assembly Kit	10	1A33570G_ _
3	1	Trip Shaft Kit	13	1A33576G01
4	1	Direct Trip Actuator (DTA)	18	6482C55G_ _
5	1	Opening Spring	13	698B907H01
6	1	Fastener Kit	22	3586A86G01
7	1	Secondary Disconnect Contact	23	591C498G06
8	1	Shunt Trip Assembly	15	1A33593G_ _
9	1	Spring Release Assembly	15	1A33594G_ _
10	1	Anti-Pump Relay	15	8293A06G_ _
11	1	Spring Charge Motor Kit	15	449D431G0_ _