

# CLASS 9422 TYPE D2 REMOTE OR DUAL ADAPTOR KIT

For Use With Class 9422 Variable Depth Disconnect Switches and Circuit Breaker Operating Mechanisms and Class 9422, Type A9 or A10 Handle Mechanisms

## GENERAL

The Type D2 remote or dual adapter kit is designed for use on enclosures with doors hinged on the left or right side and will operate 30, 60, 100 or 200 amp disconnect switches and FA, KA, LA or MA circuit breakers.

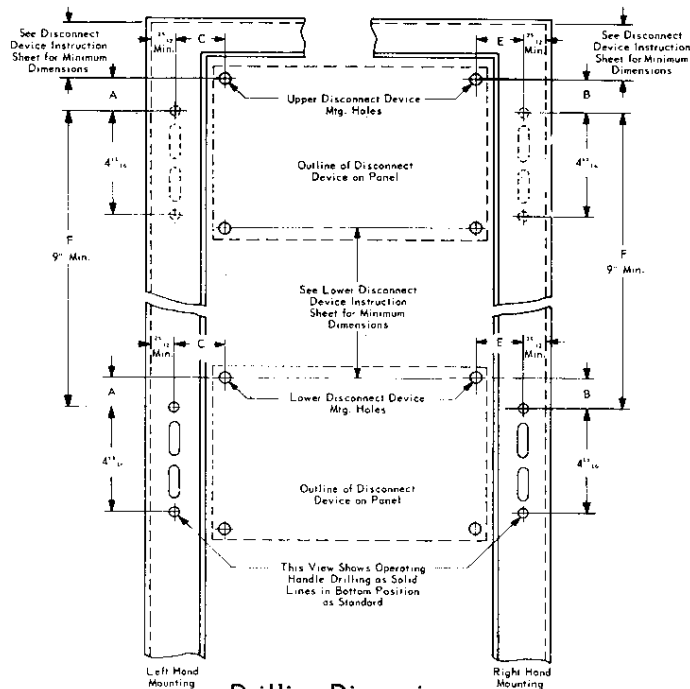
Kit allows mounting the handle mechanism a minimum of 9" below or above the disconnect device it controls. Maximum distance between disconnect device and handle mechanism is limited by length of connector rod available (see Fig. 4). Connector rod is not supplied with kit.

Kit allows operation of two disconnect switches, or two circuit breaker operating mechanisms, of the same or different sizes by a single handle mechanism mounted in line with the top or bottom disconnect device.

**NOTE:** The kit cannot operate a disconnect switch and circuit breaker operating mechanism together or a combination of FA and MA frame circuit breakers.

## ENCLOSURE CONSTRUCTION

Determine enclosure configuration and construct channels and flanges using Figures 1 and 17. Before constructing enclosure, refer to the individual instruction sheet for each Square D Class 9422 disconnect operating mechanism, and operating handle; and each Class 9423 enclosure accessory which will be installed to insure minimum dimensions are maintained.



Drilling Dimensions  
Figure 1

TABLE 1  
LOCATING DIMENSIONS  
Refer to Figures 1 and 4

TYPE	Disconnect Device SIZE	A	B	C	D** MIN.	D** MAX.	E
RC	30A. Disc. Sw.	35/64	35/64	1	10 5/8	19 1/2	1 3/32
RD	60A. Disc. Sw.	1 1/2	1 1/2	1	11 11/32	19 1/2	1 1/2
RE	100A. Disc. Sw.	2	2	2 5/16	12 1/4	20 1/4	2 3/16
TE	100A. Disc. Sw.	2 1/4	2 1/4	2 3/4	12 3/4	20 3/4	2 3/8
RF	200A. Disc. Sw.	3 1/4	3 1/4	1 21/32	13 3/4	20 11/16	2 5/8
TF	200A. Disc. Sw.	3 3/4	3 3/4	1 21/32	13 3/4	20 3/4	2 11/16
RN	FA Ckt. Bkr.	1 5/32	1 5/32	2 13/32	10 3/4	19 1/4	2 3/32
RP	KA Ckt. Bkr.	1 5/32	1 5/32	2 13/32	11 1/4	19 1/4	2 19/32
RR	LA Ckt. Bkr.	1 1/4	1 1/4	1 1/2	12 3/4	19 3/4	1 7/32
RT	MA Ckt. Bkr.	3 1/4	3 1/4	1 1/4	12 1/2	20 1/2	1 1/4

\* 60A. Disc. Sw. Mtg. Hole is 1/4" Below Centerline of Handle Upper Mtg. Hole.

\*\* Refer to Figure 4 (Page 4) for Dimension D.

TABLE 2  
DISCONNECT DEVICE OPERATING ROD LENGTH

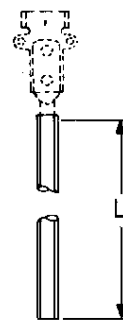
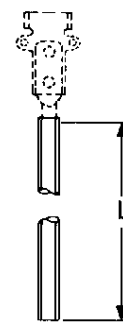
TYPE	Disconnect Device SIZE	Cutting Formula For Use With Class 9422 Type D2**
RC	30A. Disc. Sw.	L = D - 6 3/4
RD	60A. Disc. Sw.	L = D - 7 1/4
RE	100A. Disc. Sw.	L = D - 6 1/2
TE	100A. Disc. Sw.	L = D - 6 1/4
RF	200A. Disc. Sw.	L = D - 7 1/4
TF	200A. Disc. Sw.	L = D - 8
RN	FA Ckt. Bkr.	L = D - 6 1/2
RP	KA Ckt. Bkr.	L = D - 6 1/2
RR	LA Ckt. Bkr.	L = D - 6 1/2
RT	MA Ckt. Bkr.	L = D - 7

\*\* Refer to Figure 17 (Page 4) for Dimension D.

TABLE 3  
DISCONNECT DEVICE STIFFENER ROD LENGTH  
(WHEN REQUIRED)

TYPE	Disconnect Device SIZE	Cutting Formula For Use With Class 9422 Type D2**
RC	30A. Disc. Sw.	None Required
RD	60A. Disc. Sw.	None Required
RE	100A. Disc. Sw.	L = D - 8 1/2
TE	100A. Disc. Sw.	L = D - 8 1/4
RF	200A. Disc. Sw.	L = D - 9
TF	200A. Disc. Sw.	L = D - 9 1/4
RN	FA Ckt. Bkr.	None Required
RP	KA Ckt. Bkr.	None Required
RR	LA Ckt. Bkr.	L = D - 8
RT	MA Ckt. Bkr.	L = D - 8 1/2

\*\* Refer to Figure 17 (Page 4) for Dimension D.



## PRELIMINARY INSTALLATION

1. Locate and drill all holes necessary to mount disconnect device(s) (See Figure 1 and Table 1) of this instruction sheet and appropriate disconnect device instruction sheet(s).
2. Locate and drill (2) 9/32 dia. holes (see Figure 1), required to mount the Top Operator Assembly, Item 1, and all holes required to mount operating handles (see Figure 6 of instruction sheet 30072-315-35.)
3. Mount appropriate disconnect device or devices. Cut operating rod (furnished with each disconnect device) per Table 2 of this instruction sheet and stiffener rod (furnished with each disconnect device when required) per Table 3. Screw 3/8" nut supplied with disconnect device onto one end of stiffener rod and screw that end of stiffener rod into appropriate location on disconnect device. Screw operating rod into drive pin on disconnect device operating mechanism as instructed on disconnect device instruction sheet.
4. Identify all parts using the Parts List and Figure 18 on Page 4. Check to see that the correct number of parts have been included in the kit.

## REMOTE INSTALLATION (With Handle At Bottom)

Refer to Figure 6 which shows a completed installation. Do not tighten screws or nuts until told to do so.

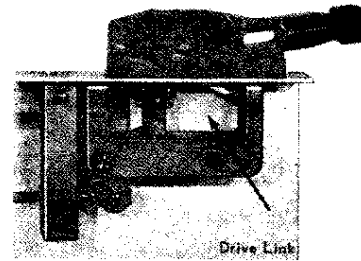
1. Mount the operating handle and the Bottom Operator Assembly, Item 2, using the (2) screws and washers included in the operating handle kit. Attach Drive Link to operating handle with cotter pin supplied with disconnect device (see Fig. 2). Mount the Top Operator Assembly, Item 1, with (2) Screws, Item 3, (2) Washers, Item 4 and (2) Nuts, Item 5. Tighten all screws and nuts.
2. Fabricate (2) connecting rods per Figure 3. Screw nuts, Item 5, onto both ends of rods. Screw rods all the way into Clevises on Top Operator Assembly and tighten nuts (see Fig. 4). Screw couplings, Item 8, onto lower end of Connecting Rods. Screw couplings, Item 8, onto 3/8" Operating Rods until snug, then tighten nuts, Item 5.
3. If a stiffener rod is required (see Table 3), screw one nut, Item 6B, onto stiffener rod. Insert stiffener rod into stiffener bracket and secure with lock washer, Item 7 and nut, Item 6A (see Fig. 5). Tighten nut E.
4. Connect and adjust operating rod of the disconnect device as follows (see Fig. 5):

For a disconnect switch, place operating handle in ON position if right hand flange mounted, OFF position if left hand flange mounted. Screw one nut, Item 6D, onto operating rod. Insert operating rod into coupler on Top Operator Assembly, Item 1. Secure with lock washer, Item 7 and nut, Item 6C. Test handle for approximate equal free play in both ON and OFF position by measuring distance "H" from center (see Fig. 17).

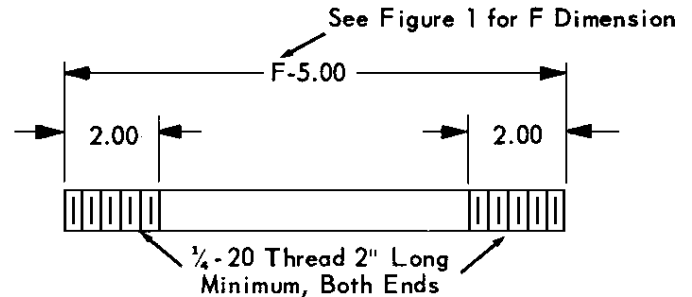
**NOTE:** Before checking OFF position for free play, depress locking lever. "H" dimension may be varied by repositioning nuts 6C and 6D. Do not turn operating rod. Increase "H" dimension in OFF position by screwing nut 6D in. Decrease by screwing out. When adjustment is attained tighten nut, Item 6C.

For a circuit breaker, screw one nut, Item 6D, onto operating rod. Insert operating rod into coupler on Top Operator Assembly, Item 1. Secure with lock washer, Item 7, and nut, Item 6C. With breaker in ON position push insulated recessed Push-To-Trip button on front of circuit breaker with a pencil or other small tool. (See the circuit breaker operating mechanism instruction sheet for the location of the Push-To-Trip button.) This will cause breaker to trip. Attempt to reset breaker by moving operating handle to OFF position. When reset, breaker will turn ON and OFF with an audible snap. If breaker does not reset place handle in OFF position and shorten distance between breaker operating mechanism and coupler, Item 9, by repositioning nuts 6C and 6D on operating rod. Do not turn operating rod. Repeat this procedure until breaker resets and turns on. When adjustment is attained, tighten nut, Item 6C.

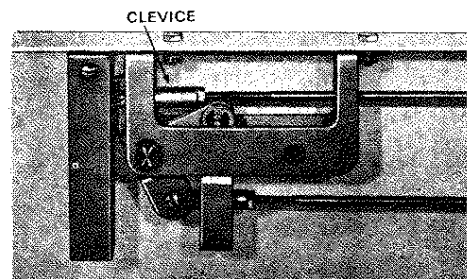
5. Check assembly for proper operation.



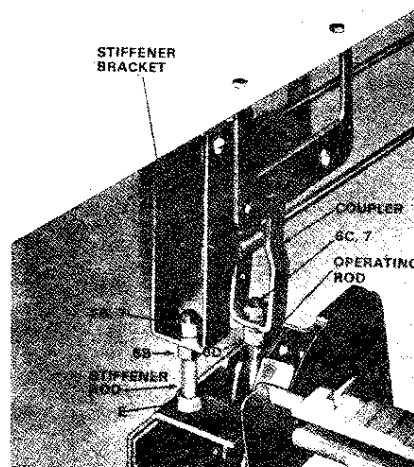
Bottom Operator and Handle Mechanism Assembly  
Figure 2



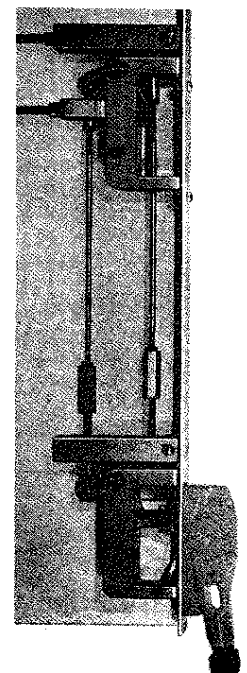
1/4" Dia. Connecting Rod Supplied By User  
Figure 3



Top Operator Assembly  
Figure 4



Connection of Stiffener  
and Operating Rods  
Figure 5



Completed Remote Installation  
Figure 6

## DUAL INSTALLATION (With Handle At Bottom)

Refer to Figure 12 which shows a completed installation. Do not tighten screws or nuts until told to do so.

1. Remove E Rings and Bearing Pin from Bottom Operator Assembly, Item 2. Reassemble with Coupler, Item 9, Bearing Pin, Item 10 and E Rings. (See Fig. 7)
2. Mount the operating handle and the Bottom Operator Assembly, Item 2, using the (2) screws and washers included in the operating handle kit. Attach Drive Link to operating handle with cotter pin supplied with disconnect device (see Fig. 8). Bend back end of cotter pin. Mount the Top Operator Assembly, Item 1, with (2) screws, Item 3, (2) washers, Item 4 and (2) nuts, Item 5. Tighten all screws and nuts.
3. Fabricate connecting rods per Figure 9. Screw nuts, Item 5, onto both ends of rods. Screw rods all the way into Clevises on Top Operator Assembly and tighten nuts (see Fig. 10). Screw couplings, Item 8, onto lower end of connecting rods. Screw couplings, Item 8, onto 3/8" operating rods until snug, then tighten nuts, Item 5.
4. If stiffener rods are required (see Table 3), screw one nut Item 6B, onto one of the stiffener rods. Insert stiffener rod into stiffener bracket and secure with lock washer, Item 7 and nut, Item 6A (see Fig. 11). Tighten nut E. Repeat procedure for second disconnect device.

5. Connect and adjust operating rods of the disconnect devices as follows (see Fig. 11):

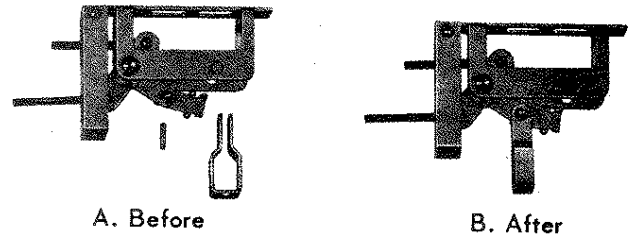
For two disconnect switches, place operating handle in ON position if right hand flange mounted, OFF position if left hand flange mounted. Screw one nut, Item 6D, onto operating rod. Insert operating rod into coupler, Item 8, on Bottom Operator Assembly, Item 2, secure with lock washer, Item 7, and nut, Item 6C. Test handle for approximate equal free play in both ON and OFF position by measuring distance "H" from center (see Fig. 17).

**NOTE:** Before checking OFF position for free play, depress locking lever. Increase "H" dimension in OFF position by screwing nut 6D in. "H" dimension may be varied by repositioning nuts 6C and 6D. Do not turn operating rod. Decrease by screwing out. When adjustment is attained tighten nut, Item 6C. Repeat the above procedure for top disconnect switch, adjusting it so that it goes on and off with the lower disconnect switch.

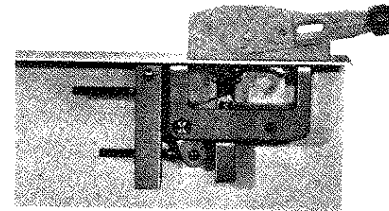
For two circuit breaker operating mechanisms, screw one nut, Item 6D, onto operating rod. Insert operating rod into coupler, Item 8, on Bottom Operator Assembly, Item 2. Secure with lock washer, Item 7, and nut, Item 6C. With breakers in ON position push insulated recessed Push-To-Trip button on front of circuit breaker with a pencil or other small tool. (See the circuit breaker operating mechanism instruction sheet for the location of the Push-To-Trip button.) This will cause breaker to trip. Attempt to reset breaker by moving operating handle to OFF position. When reset, breaker will turn ON and OFF with an audible snap. If breaker does not reset place handle in OFF position and shorten distance between breaker operating mechanism and coupler, Item 9, by repositioning nuts

6C and 6D on operating rod. Do not turn operating rod. Repeat this procedure until breaker resets and turns on. When adjustment is attained tighten nut, Item 6C. Repeat the above procedure for the top circuit breaker operating mechanism, adjusting it so that it goes on and off with the lower circuit breaker.

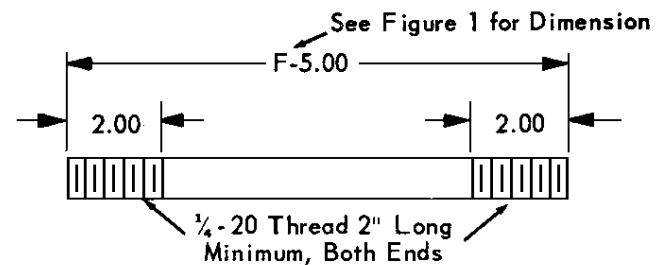
6. Check assembly for proper operation.



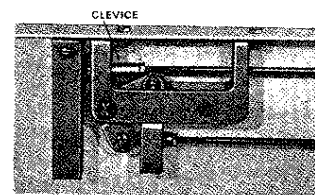
Conversion of Bottom Operator Assembly for Dual Installation  
Figure 7



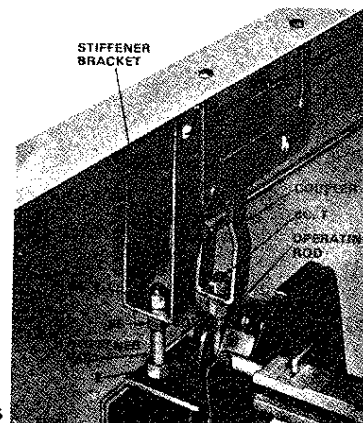
Bottom Operator and Handle Mechanism Assembly  
Figure 8



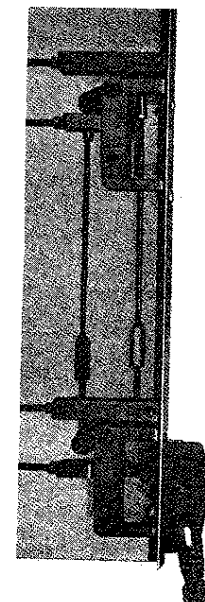
1/4" Dia. Connecting Rod Supplied By User  
Figure 9



Top Operator Assembly  
Figure 10



Connection of Stiffener and Operating Rods  
Figure 11

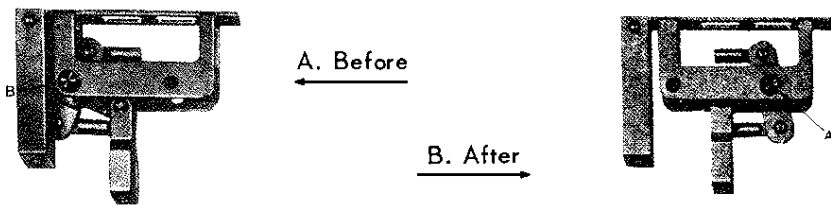


Completed Dual Installation  
Figure 12

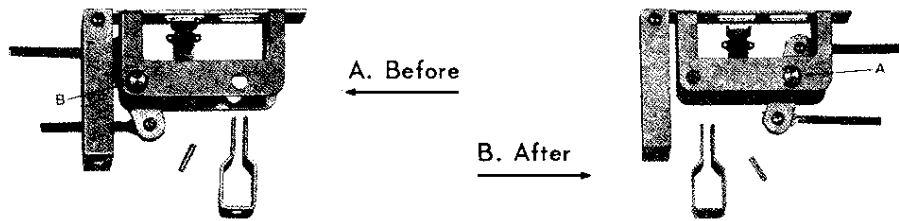
### REMOTE OR DUAL INSTALLATION (With Handle At Top)

1. Remove one E Ring and Bearing Pin at "B" on Top and Bottom Operator Assemblies. Move Bell Crank Assemblies to hole "A". Replace Bearing Pins and E Rings (see Fig. 13 and 14).

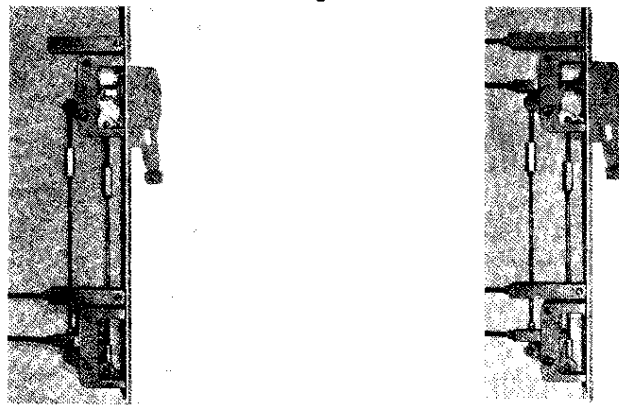
2. Follow the appropriate preceding installation instructions except the Bottom Operator Assembly now becomes the Top and vice versa (see Fig. 15 and 16).



Conversion of Top Operator Assembly  
Figure 13

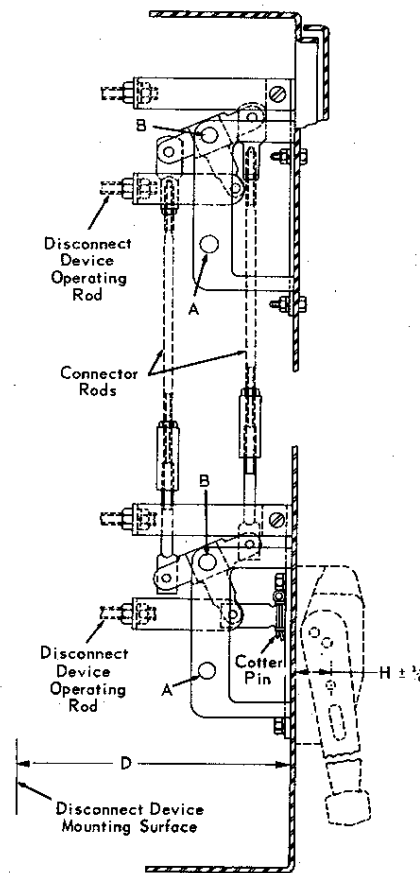


Conversion of Bottom Operator Assembly  
Figure 14



Completed Remote Installation  
Figure 15

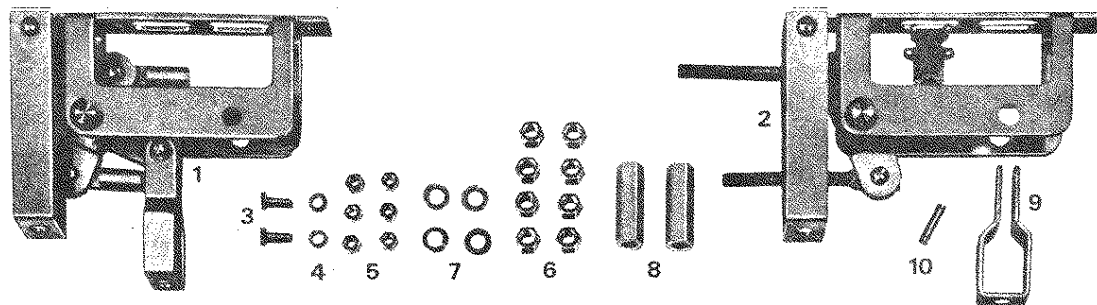
Completed Dual Installation  
Figure 16



Installation of  
Dual Adaptor  
Figure 17

### PARTS LIST

ITEM	DESCRIPTION	PART NUMBER	QTY.	ITEM	DESCRIPTION	PART NUMBER	QTY.
1	Top Operator Assembly	B31055-410-50	1	6	Nut 1/4 - 16	23001-00240	8
2	Bottom Operator Assembly	B31055-409-50	1	7	L Washer 1/8	23714-00240	4
3	Screw Assembly 1/4-20 x 1/8	21910-20181	2	8	Coupling	A31055-404-01	2
4	L Washer 1/4	23701-00200	2	9	Coupler	A31055-402-01	1
5	Nut 1/4 - 20	23001-00200	6	10	Bearing Pin	A31055-403-02	1



Parts  
Figure 18