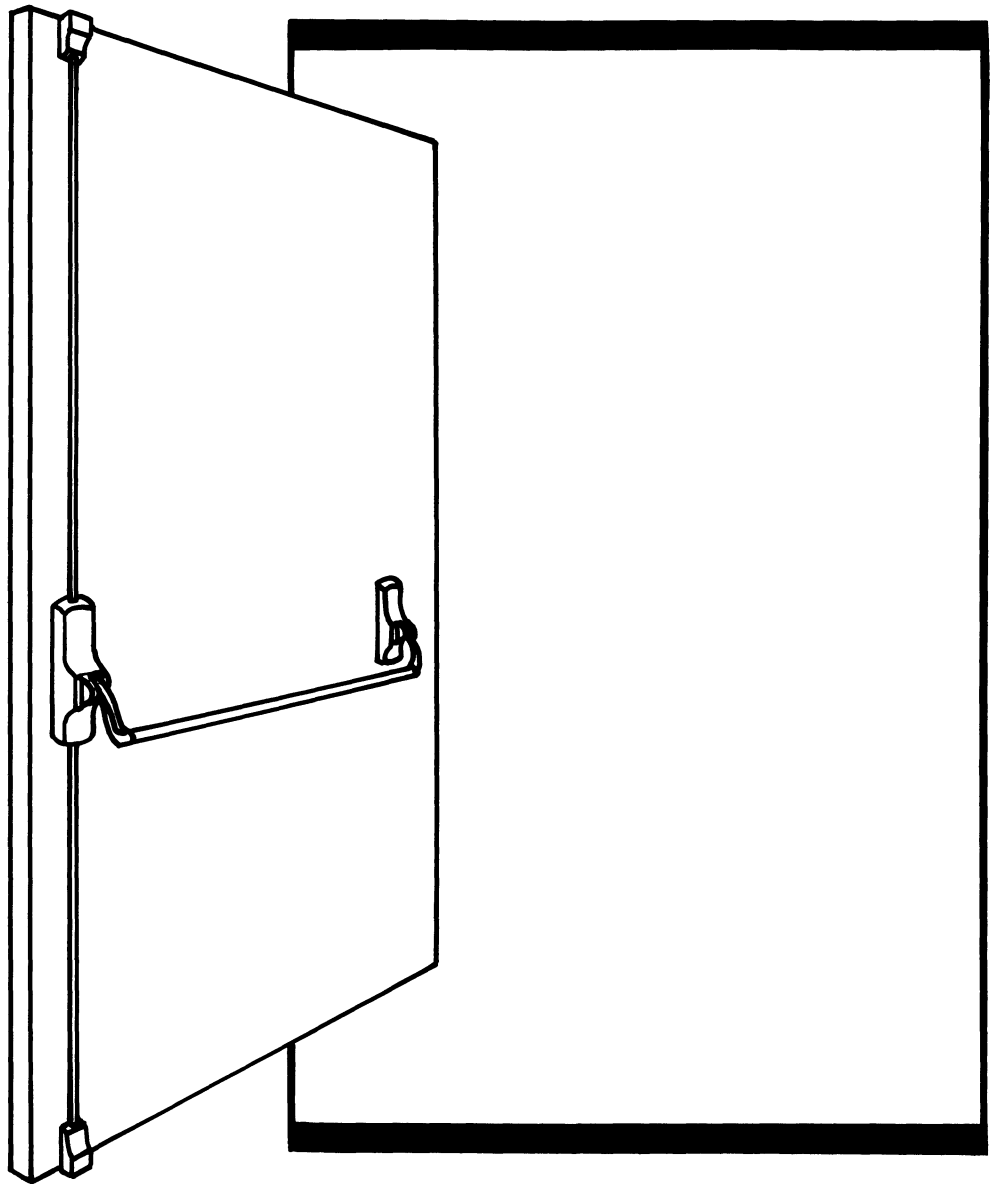


PARTS MANUAL

8827/8847

Concealed & Surface Applied
Vertical Rod Devices



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Introduction

This Manual contains product specifications, a complete listing of replaceable parts and assemblies, and general maintenance information for the 88 Series Surface Vertical and Concealed Vertical Exit devices and Fire Exit Hardware devices (F) with their auxiliary components. For your convenience, the Parts Lists refer directly to the product illustrations. The assemblies are represented by letters and the component parts are represented by numbers. The parts lists also show the quantity of parts or assemblies required for each device.

For the best possible service when ordering replacement parts or assemblies, please provide the following information:

- Part or Assembly number
- Description
- Quantity needed
- Finish desired (if available finished)
- Delivery information
- Door opening size (Parts available in variable lengths)

Send orders to:

Von Duprin
2720 Tobey Drive
Indianapolis, Indiana 46219
(317) 613-8944

or contact your local Von Duprin distributor or sales representative.

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Devices In This Manual:

- 8827 Exit Devices (Surface Vert.)
- 8827-F Fire Exit Hardware Devices (Surface Vert.)
- 8847 Exit Devices (Concealed Vert.)
- 8847-F Fire Exit Hardware Devices (Concealed Vert.)
- 8847 WDC Exit Devices (Wood Door Concealed Vert.)
- ES 8847 Exit Devices (Concealed–For use with Electric Strike)
- ES 8847 WDC Exit Devices (Wood Door with Electric Strike)

Device Functions

Function	Devices
EO–Exit Only	All
DT–Dummy Trim	8827 8847 8847 WDC
NL–Night Latch	8847 8847 WDC
TP, TP/NL–Thumbpiece K, K/NL–Knob	8827 8827-F
TL–Thumbturn Control	All
L–Lever Control	8827 8827-F 8847-F

Device Finishes

U.S. Std. Ref.	BHMA Ref.	Description
US3	605	Polished Brass–Lacquered
US4	606	Dull Brass–Lacquered
US9	611	Polished Bronze–Lacquered
*US10	612	Dull Bronze–Lacquered
US10A	—	Dull Bronze–No Lacquer
US10B	613	Dull Bronze–Oxidized–Oil Rubbed
US26	625	Polished Chrome
*US26D	626	Dull Chrome
*US27	627	Satin, Lacquered Aluminum (Except FEH)
US32	629	Polished Stainless Steel
*US32D	630	Satin Stainless Steel

*Denotes Standard Finishes

Note: Center Cases for FEH Devices are Stainless Steel only (plated to match Device finish).

Note: Some device options are no longer available. The illustrations for these options will be marked "Discontinued" and are for reference by owners with existing products.

Device Dimensions:

- Crossbar Tubing 1" O.D.
- Crossbar Height from finished floor 36^{13/16}"
- Crossbar Projection–Neutral 4^{7/8}"
- Crossbar Projection–Depressed 4"
- Center Case 8^{1/4}" × 2" × 1^{5/16}"
- End Case 6" × 1^{3/4}" × 1^{5/16}"
- Top & Bottom Latches (Vert. S.A.) 4" × 2" × 1^{7/8}"
- Vertical Rod Tubing (Vert. S.A.) 1/2" O.D.

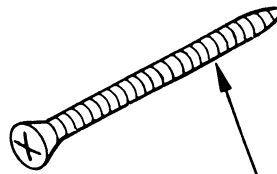
Door and Frame Specifications:

- Door Thickness 1^{3/4}" & 2^{1/4}"
- Door & Frame
Material Hollow Metal, Wood (WDC)
Composite (Vert. S.A. only)
- Door Opening–
Single Door 4'0" × 8'0" Max. (FEH)
Double Door 8'0" × 8'0" Max. (FEH)
- Stop Height 1/2" & 5/8"

Auxiliary Hardware

- Exit Device Mounting Screw
Package–900500 for Device Screw
Package–900534 for Latches (Vert. S.A.)

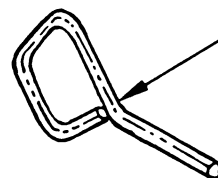
- 8847-F Device Mounting Screw
Package–900533 (2 Reqd.)



8 ea. – #10-12 × 10-24 × 2" OPHCS
for Exit Devices or

8 ea. – #10-24 × 1^{1/2}" OPHMS
for 8847-F Device

Wedge Tite Package–103868

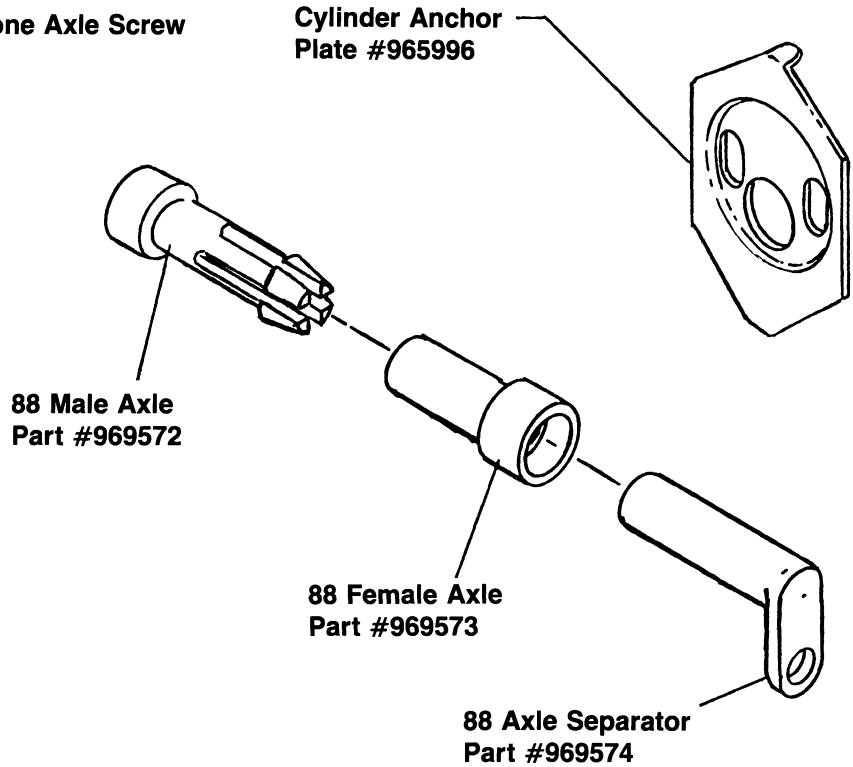


227 Dog Key

**Exit Device Lever Arm Axle
Package–103865**

**Paddle Device Lever Arm Axle
Package–108467**

(Contains only one Axle Spool & one Axle Screw Assy.)



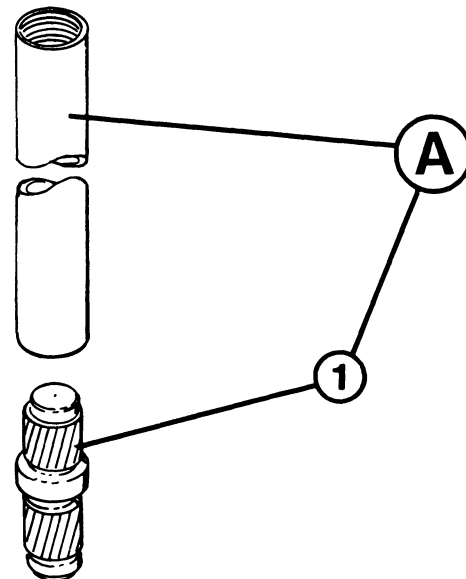
**Parts List–
Vertical Rod Extension Assemblies**

Item	Qty.	Part No.	Description	
A	1	103243	6" Rod Extension Assy.–Brz.	X
A	1	101746	6" Rod Extension Assy.–St. Stl.	X
A	1	103244	12" Rod Extension Assembly–Brz.	X
A	1	101747	12" Rod Extension Assy.–St. Stl.	X
A	1	103245	18" Rod Extension Assy.–Brz.	X
A	1	101748	18" Rod Extension Assy.–St. Stl.	X
A	1	103246	24" Rod Extension Assy.–Brz.	X
A	1	101749	24" Rod Extension Assy.–St. Stl.	X
1	1	960579	Rod Coupling	

Note: The Rod Extension Assemblies can be used with all Surface Vertical Rod Devices.

X designates items that are finished.

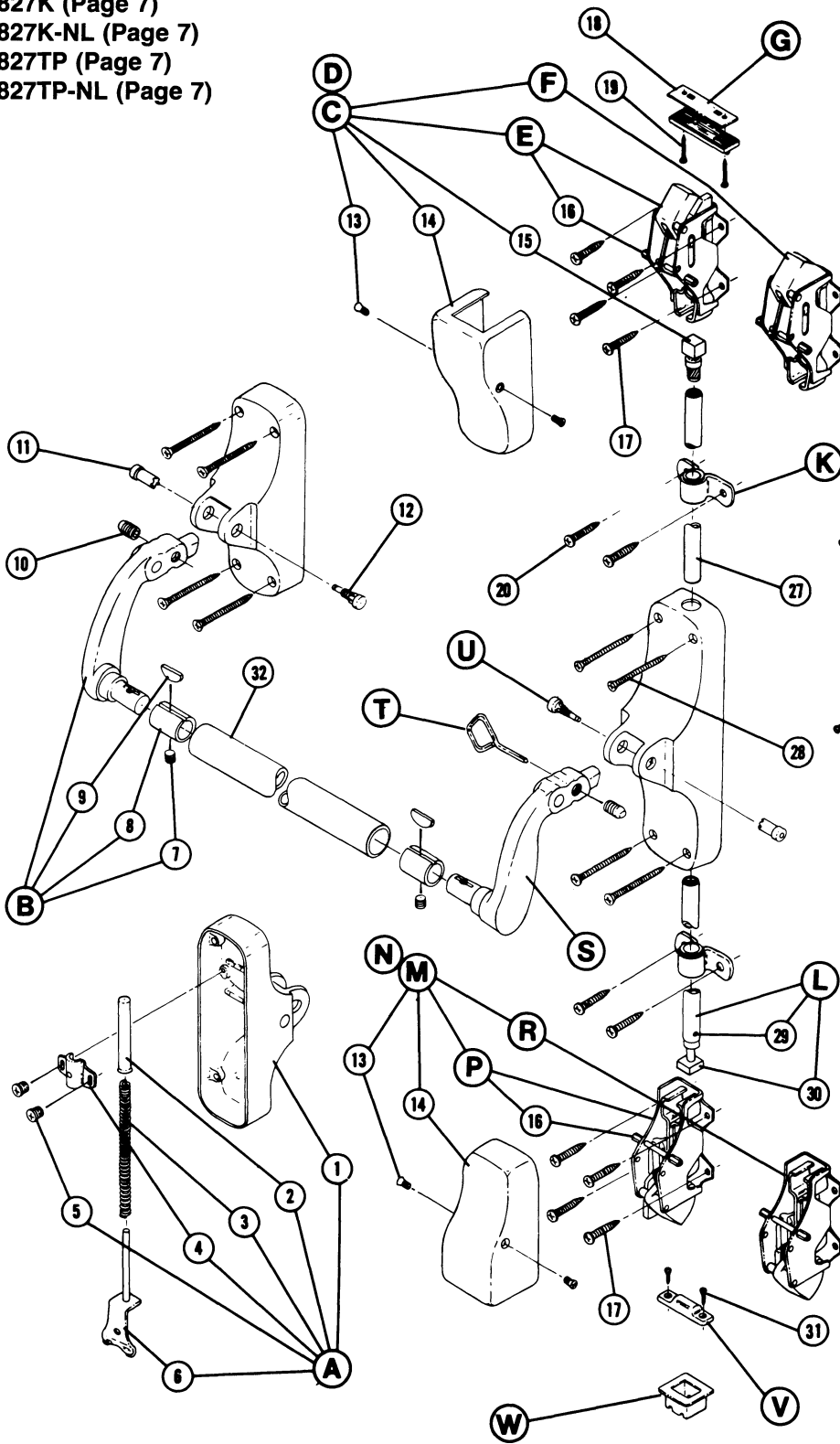
Note: For ordering parts provide the part number, description, total quantity and finish required.



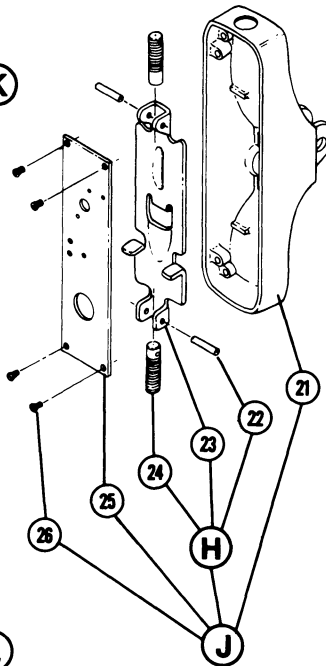
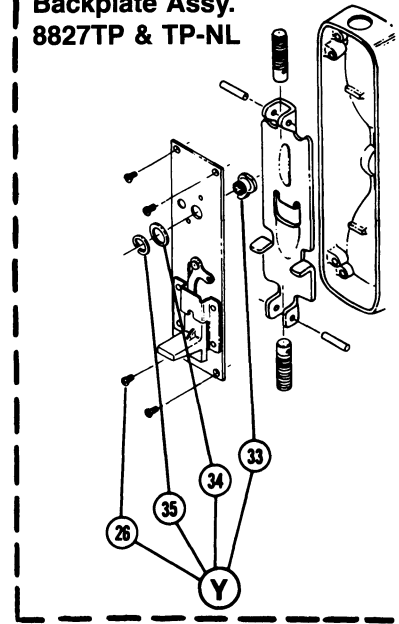
88 Vertical Rod Devices—LR, PL
8827, 8827K, 8827K-NL, 8827TP, 8827TP-NL

Parts List

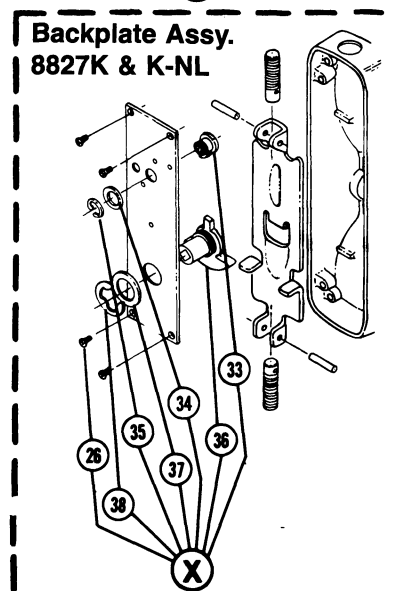
- 8827 (Page 6)
- 8827K (Page 7)
- 8827K-NL (Page 7)
- 8827TP (Page 7)
- 8827TP-NL (Page 7)



Backplate Assy.
8827TP & TP-NL



Backplate Assy.
8827K & K-NL



Parts List–8827 Vertical Rod Device–LR, PL

Reference Illustration Page 5

Item	Qty.	Part No.	Description	
A	1	101713	End Case Assy.–Brz.	X
A	1	101714	End Case Assy.–Alum.	X
A	1	101715	End Case Assy.–St. Stl.	X
B	1	100729	Lever Arm Assy.–LH–Brz.	X
B	1	100746	Lever Arm Assy.–LH–Alum	X
B	1	101487	Lever Arm Assy.–LH–St. Stl.	X
C	1	101754	Top Latch Case Assy.–LR–Brz.	X
C	1	101755	Top Latch Case Assy.–LR–Alum.	X
C	1	101756	Top Latch Case Assy.–LR–St. Stl.	X
D	1	101760	Top Latch Case Assy.–PL–Brz	X
D	1	101761	Top Latch Case Assy.–PL–Alum	X
D	1	101762	Top Latch Case Assy.–PL–St Stl.	X
E	1	101750	Top Latch Bolt & Chassis Assy.–LR	
F	1	101752	Top Latch Bolt & Chassis Assy.–PL	
G	1	030298	299 Strike Assy.–Top	X
H	1	102701	Rod Control Assy	
J	1	101707	Center Case Assy –Brz.	X
J	1	101708	Center Case Assy –Alum.	X
J	1	101709	Center Case Assy.–St. Stl.	X
K	2	101648	Rod Guide Assy.–Brz.	X
K	2	101774	Rod Guide Assy.–Alum.	X
K	2	101775	Rod Guide Assy.–St. Stl.	X
L	1	101777	Bottom Vertical Rod Assy.–Brz	X
L	1	103234	Bottom Vertical Rod Assy.–St. Stl.	X
M	1	101757	Bottom Latch Case Assy.–LR–Brz.	X
M	1	101758	Bottom Latch Case Assy.–LR–Alum.	X
M	1	101759	Bottom Latch Case Assy.–LR–St. Stl.	X
N	1	101763	Bottom Latch Case Assy.–PL–Brz.	X
N	1	101764	Bottom Latch Case Assy –PL–Alum.	X
N	1	101765	Bottom Latch Case Assy –PL–St. Stl.	X
P	1	101751	Bottom Latch Bolt & Chassis Assy.–LR	
R	1	101753	Bottom Latch Bolt & Chassis Assy.–PL	
S	1	100744	Lever Arm Assy.–RH–Brz.	X
S	1	100747	Lever Arm Assy.–RH–Alum.	X
S	1	101486	Lever Arm Assy.–RH–St. Stl.	X
T	1	103868	Wedge Tite Package	
U	1	103865	Lever Arm Axle Package	
V	1	030602	248L4 Strike Assy.	
W	1	030659	304L Strike Assy.	
1	1	960517	End Case–Brz.	X
1	1	960518	End Case–Alum.	X
1	1	960519	End Case–St. Stl.	X
2	1	951081	Spring Tube	
3	1	953630	Spring	
4	1	951910	Spring Tube Bracket	
5	2	963094	#8-32 × 5/16" PPHMS–Thd. Form.	
6	1	107682	Spring Stop Sub-Assy.	

Item	Qty.	Part No.	Description	
7	2	963851	Wedge Tite Adaptor Screw (5/16"–18 × 5/8" Set Scr.)	
8	2	965676	Tube Attaching Ring	
9	2	956520	Attaching Ring Wedge	
10	1	968485	Dog Screw	
11*	2	969573	88 Axle–Female	
12*	2	969572	88 Axle–Male	
13	4	956010	#8-32 × 1/4" FPHMS–Brz.	X
13	4	956011	#8-32 × 1/4" FPHMS–St. Stl.	X
14	2	960548	Top & Bottom Latch Case Cover–Brz.	X
14	2	960585	Top & Bottom Latch Case Cover–Alum.	X
14	2	960586	Top & Bottom Latch Case Cover–St Stl.	X
15	1	960577	Top Rod Connector–LR	
15	1	967341	Top Rod Connector–PL	
16	4	960652	Special Chassis Nut	
17	8	965288	#10-12 × 10-24 × 1" PBHCS	
18	1	945521	Adjusting Shim	
19	2	965289	#10-12 × 10-24 × 1 1/4" OPHCS	X
20***	4	965286	#10-12 × 10-24 × 1" PTHCS–Brz.	X
20***	4	965287	#10-12 × 10-24 × 1" PTHCS–St. Stl.	X
21	1	960421	Center Case–Brz.	X
21	1	960422	Center Case–Alum.	X
21	1	960423	Center Case–St. Stl.	X
22	2	963193	1/8" × 1 1/16" Lg. Spirol Pin	
23	1	961229	Rod Control	
24	2	961283	Rod Adaptor	
25	1	952530	Back Plate	
26	4	963096	#8-32 × 3/8" Lg. FPHMS–Thd. Form	
27	1	961628	Top Vertical Rod–Brz	X
27	1	960581	Top Vertical Rod–St Stl.	X
28**	8	965291	#10-12 × 10-24 × 2" OPHCS–Brz.	X
28**	8	965292	#10-12 × 10-24 × 2" OPHCS–St Stl.	X
29	1	963585	1/8" × 1/2" Roll Pin	
30	1	960578	Bottom Rod Connector	
31	2	963008	#10-24 × 1/2" Lg. OPHMS	
32	1	060275	Cross Bar Tube–Std.–27 1/2" Lg.	X
32	1	061275	Cross Bar Tube–Knurled–27 1/2" Lg.	X
32	1	060295	Cross Bar Tube–Std.–29 1/2" Lg	X
32	1	061295	Cross Bar Tube–Knurled–29 1/2" Lg.	X
32	1	060360	Cross Bar Tube–Std.–36" Lg.	X
32	1	061360	Cross Bar Tube–Knurled–36" Lg.	X
32	1	060420	Cross Bar Tube–Std.–42" Lg	X
32	1	061420	Cross Bar Tube–Knurled–42" Lg	X
32	1	060500	Cross Bar Tube–Std.–(Longer than 42")	X
32	1	061500	Cross Bar Tube–Knurled–(Longer than 42")	X
*	1	103865	Lever Arm Axle Package	
**	1	900500	Mtg. Screw Package	X
***	1	900534	Mtg. Screw Package	X

X designates items that are finished.

Note: For ordering parts provide the part number, description, total quantity and finish required.

**Parts List–
8827K Vertical Rod Device–LR, PL
Reference Illustration Page 5**

Item	Qty.	Part No.	Description	
All items listed on pages 6 and 7 are used on this device unless otherwise noted below				
J	1	101701	Center Case Assy.–Brz	X
J	1	101702	Center Case Assy.–Alum.	X
J	1	101703	Center Case Assy.–St. Stl.	X
X	1	100511	Back Plate Assy.	
33	1	952400	Cylinder Cam	
34	1	963105	¾" × 7/16" × 1/32" Washer	
35	1	963151	Retaining Ring–X5133-43	
36	1	968833	Door Knob Hub	
37	1	952390	Back Plate Bushing	
38	1	963106	Snap Ring #5133-15	

**Parts List–
8827TP Vertical Rod Device–LR, PL
Reference Illustration Page 5**

Item	Qty.	Part No.	Description	
All items listed on pages 6 and 7 are used on this device unless otherwise noted below.				
J	1	101710	Center Case Assy.–Brz.	X
J	1	101711	Center Case Assy.–Alum.	X
J	1	101712	Center Case Assy.–St. Stl.	X
Y	1	102702	Back Plate Assy	
33	1	952400	Cylinder Cam	
34	1	963105	¾" × 7/16" × 1/32" Washer	
35	1	963151	Retaining Ring–X5133-43	

**Parts List–
8827K-NL Vertical Rod Device–LR, PL
Reference Illustration Page 5**

Item	Qty.	Part No.	Description	
All items listed on pages 6 and 7 are used on this device unless otherwise noted below				
J	1	101704	Center Case Assy –Brz.	X
J	1	101705	Center Case Assy.–Alum.	X
J	1	101706	Center Case Assy –St Stl.	X
X	1	101011	Back Plate Assy	
33	1	952400	Cylinder Cam	
34	1	963105	¾" × 7/16" × 1/32" Washer	
35	1	963151	Retaining Ring–X5133-43	
36	1	968833	Door Knob Hub	
37	1	952390	Back Plate Bushing	
38	1	963106	Snap Ring #5133-43	

**Parts List–
8827TP-NL Vertical Rod Device–LR, PL
Reference Illustration Page 5**

Item	Qty.	Part No.	Description	
All items listed on pages 6 and 7 are used on this device unless otherwise noted below.				
J	1	101907	Center Case Assy.–Brz.	X
J	1	101908	Center Case Assy.–Alum	X
J	1	101909	Center Case Assy.–St Stl	X
Y	1	102703	Back Plate Assy.	
33	1	952400	Cylinder Cam	
34	1	963105	¾" × 7/16" × 1/32" Washer	
35	1	963151	Retaining Ring–X5133-43	

X designates items that are finished.

Note: For ordering parts provide the part number, description, total quantity and finish required.

Parts List-8827-F Vertical Rod Device

Reference Illustration Page 8

Item	Qty.	Part No.	Description	
A	1	101716	End Case Assy.-Brz.	X
A	1	101717	End Case Assy -Alum	X
A	1	101718	End Case Assy.-St. Stil.	X
B	1	101000	Lever Arm Assy -LH-Brz.	X
B	1	101002	Lever Arm Assy-LH-Alum.	X
B	1	101489	Lever Arm Assy.-LH-St Stil	X
C	1	102677	Top Latch Case Assy -Brz.	X
C	1	102678	Top Latch Case Assy -Alum.	X
C	1	102679	Top Latch Case Assy -St Stil.	X
D	1	102676	Top Chassis Assy.	
E	1	102930	Soffit Latch Bolt Assy.	
F	1	102691	Center Case Assy -Brz	X
F	1	102692	Center Case Assy -Alum	X
F	1	102693	Center Case Assy -St Stil	X
G	1	102701	Rod Control Assy.	
H	2	101648	Rod Guide Assy.-Brz	X
H	2	101774	Rod Guide Assy.-Alum	X
H	2	101775	Rod Guide Assy.-St Stil.	X
J	1	103234	Bottom Vertical Rod Assy.-Brz.	X
J	1	101777	Bottom Vertical Rod Assy.-St Stil.	X
K	1	102682	Bottom Latch Case Assy.-Brz	X
K	1	102683	Bottom Latch Case Assy -Alum	X
K	1	102684	Bottom Latch Case Assy -St Stil.	X
L	1	102681	Bottom Chassis Assy.	
M	1	100999	Lever Arm Assy.-RH-Brz	X
M	1	101001	Lever Arm Assy.-RH-Alum.	X
M	1	101488	Lever Arm Assy.-RH-St. Stil	X
N	1	103865	Lever Arm Axle Package	
P	1	030659	304-L Strike	
T	1	030658	303-L Strike	
U	1	103868	Wedge Tite Package	
1	1	960912	End Case-Brz	X
1	1	960913	End Case-Alum.	X
1	1	960914	End Case-St. Stil	X
2	1	951081	Spring Tube	
3	1	953630	Spring	
4	1	951910	Spring Tube Bracket	
5	2	963094	#8-32 x 5/16" PPHMS-Thd Form	
6	1	107682	Spring Stop Sub-Assy.	
7	2	963851	Wedge Tite Adaptor Screw	
8	2	965676	Tube Attaching Ring	
9	2	956520	Attaching Ring Wedge	
10*	2	969573	88 Axle-Female	
11*	2	969572	88 Axle-Male	
12	4	956010	#8-32 x 1/4" UFPHMS-Brz.	X

Item	Qty.	Part No.	Description	
12	4	956011	#8-32 x 1/4" UFPHMS-St. Stil.	X
13	1	961206	Top Latch Bolt Cover-Brz.	X
13	1	961207	Top Latch Bolt Cover-Alum.	X
13	1	961208	Top Latch Bolt Cover-St Stil	X
14	1	960577	Top Rod Connector	
15	8	965288	#10-12 x 10-24 x 1" PBHCS-St. Stil	
16	2	963011	#12-24 x 1/2" Lg. UFPHMS	
17	1	961205	Plunger Release Bracket	X
18	2	965289	#10-12 x 10-24 x 1/4" OPHCS	X
18	2	965290	#10-12 x 10-24 x 1/4" OPHCS	X
19	1	961238	Center Case-Brz.	X
19	1	961239	Center Case-Alum.	X
19	1	961240	Center Case-St. Stil.	X
20	2	963193	1/8" x 1 1/16" Lg. Spirol Pin	
21	1	961229	Rod Control	
22	2	961283	Rod Adaptor	
23	1	952530	Back Plate	
24	4	963096	#8-32 x 3/8" FPHMS-Thd. Form.	
25***	4	965286	#10-12 x 10-24 x 1" PTHCS-Brz.	X
25***	4	965287	#10-12 x 10-24 x 1" PTHCS-St. Stil.	X
26	1	961628	Top Vertical Rod	X
26	1	960581	Top Vertical Rod	X
27**	8	965291	#10-12 x 10-24 x 2" OPHCS-Brz.	X
27**	8	965292	#10-12 x 10-24 x 2" OPHCS-St. Stil.	X
28	1	963582	1/8" x 1/2" Roll Pin	
29	1	960578	Bottom Rod Connector	
30	1	960548	Latch Case Cover-Brz	X
30	1	960585	Latch Case Cover-Alum.	X
30	1	960586	Latch Case Cover-St. Stil.	X
31	1	060275	Cross Bar Tube-Std.-27 1/2" Lg.	X
31	1	061275	Cross Bar Tube-Knurled-27 1/2" Lg.	X
31	1	060295	Cross Bar Tube-Std.-29 1/2" Lg.	X
31	1	061295	Cross Bar Tube-Knurled-29 1/2" Lg.	X
31	1	060360	Cross Bar Tube-Std.-36" Lg.	X
31	1	061360	Cross Bar Tube-Knurled-36" Lg.	X
31	1	060420	Cross Bar Tube-Std.-42" Lg.	X
31	1	061420	Cross Bar Tube-Knurled-42" Lg.	X
31	1	060500	Cross Bar Tube-Std -(Longer than 42")	X
31	1	061500	Cross Bar Tube-Knurled-(Longer than 42")	X
38	4	961218	Special Hex Stud	
39†	2	963961	1/4-20 x 1 1/4" FPHMS	
40†	2	963045	1/4-20 Expansion Anchor	
*	1	103865	Lever Arm Axle Package	
**	1	900500	Mounting Screw Package	X
***	1	900534	Mounting Screw Package	X
†	1	900279	Mounting Screw Package	X

X designates items that are finished.

Note: For ordering parts provide the part number, description, total quantity and finish required.

**Parts List–
8827K-F Vertical Rod Device
Reference Illustration Page 8**

Item	Qty.	Part No.	Description	
All items listed on pages 12 and 13 are used on this device unless otherwise noted below.				
F	1	102685	Center Case Assy.–Brz.	X
F	1	102686	Center Case Assy.–Alum.	X
F	1	102687	Center Case Assy.–St. Stl.	X
S	1	100511	Back Plate Assy.	
32	1	952400	Cylinder Cam	
33	1	963105	3/4" x 7/16" x 1/32" Washer	
34	1	963151	Retaining Ring–X5133-43	
35	1	952490	Door Knob Hub	
36	1	952390	Back Plate Bushing	
37	1	963106	Snap Ring #X5133-75	
38	4	961218	Special Hex Stud	
39†	1	963961	1/4-20 x 1 1/4" FPHMS	
40†	1	963045	1/4-20 Expansion Anchor	

**Parts List–
8827TP-F Vertical Rod Device
Reference Illustration Page 8**

Item	Qty.	Part No.	Description	
All items listed on pages 12 and 13 are used on this device unless otherwise noted below.				
F	1	102694	Center Case Assy.–Brz	X
F	1	102695	Center Case Assy.–Alum.	X
F	1	102696	Center Case Assy.–St. Stl.	X
R	1	102702	Back Plate Assy.	
32	1	952400	Cylinder Cam	
33	1	963105	3/4" x 7/16" x 1/32" Washer	
34	1	963151	Retaining Ring–X5133-43	
38	1	961218	Special Hex Stud	
39†	1	963961	1/4-20 x 1 1/4" FPHMS	
40†	1	963045	1/4-20 Expansion Anchor	

**Parts List–
8827K-NL-F Vertical Rod Device
Reference Illustration Page 8**

Item	Qty.	Part No.	Description	
All items listed on pages 12 and 13 are used on this device unless otherwise noted below.				
F	1	102688	Center Case Assy.–Brz.	X
F	1	102689	Center Case Assy.–Alum.	X
F	1	102690	Center Case Assy.–St. Stl	X
S	1	101011	Back Plate Assy.	
32	1	952400	Cylinder Cam	
33	1	963105	3/4" x 7/16" x 1/32" Washer	
34	1	963151	Retaining Ring–X5133-43	
35	1	952490	Door Knob Hub	
36	1	952390	Back Plate Bushing	
37	1	963106	Snap Ring #X5133-75	
38	4	961218	Special Hex Stud	
39†	1	963961	1/4-20 x 1 1/4" FPHMS	
40†	1	963045	1/4-20 Expansion Anchor	

**Parts List–
8827TP-NL-F Vertical Rod Device
Reference Illustration Page 8**

Item	Qty.	Part No.	Description	
All items listed on pages 12 and 13 are used on this device unless otherwise noted below.				
F	1	102697	Center Case Assy.–Brz.	X
F	1	102698	Center Case Assy.–Alum.	X
F	1	102699	Center Case Assy.–St. Stl.	X
R	1	102703	Back Plate Assy.	
32	1	952400	Cylinder Cam	
33	1	963105	3/4" x 7/16" x 1/32" Washer	
34	1	963151	Retaining Ring–X5133-43	
38	1	961218	Special Hex Stud	
39†	1	963961	1/4-20 x 1 1/4" FPHMS	
40†	1	963045	1/4-20 Expansion Anchor	

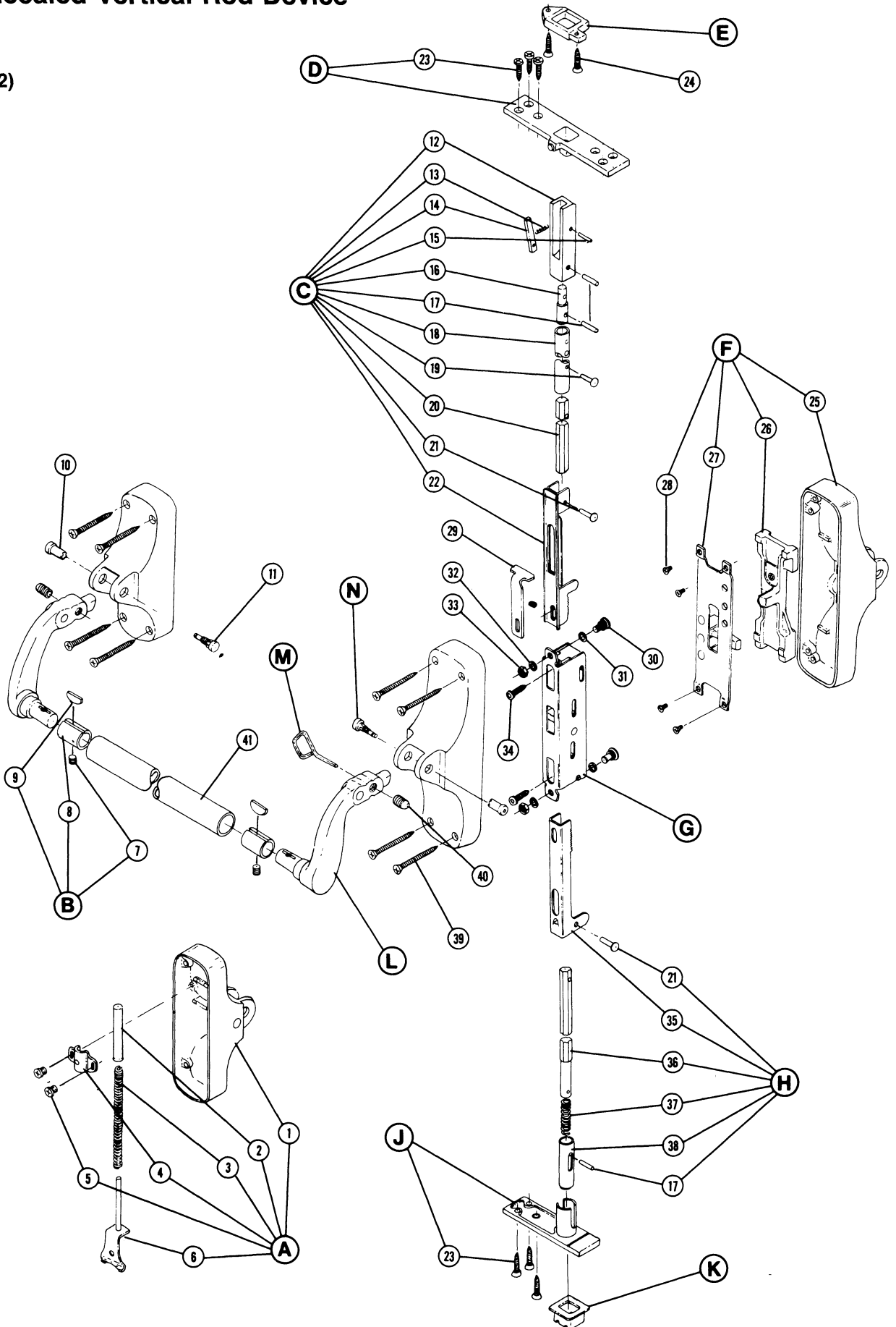
X designates items that are finished.

Note: For ordering parts provide the part number, description, total quantity and finish required.

8847 Concealed Vertical Rod Device

Parts List

(See Page 12)

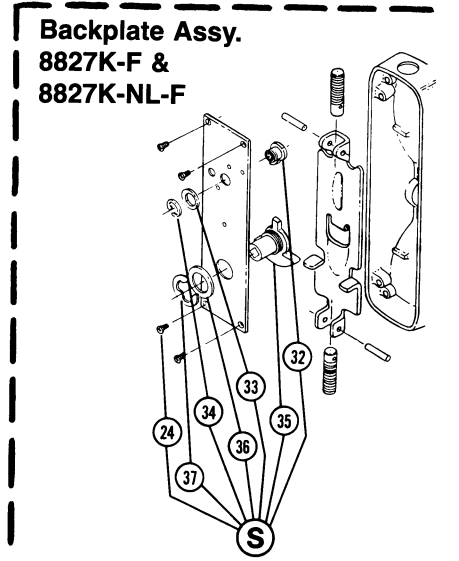
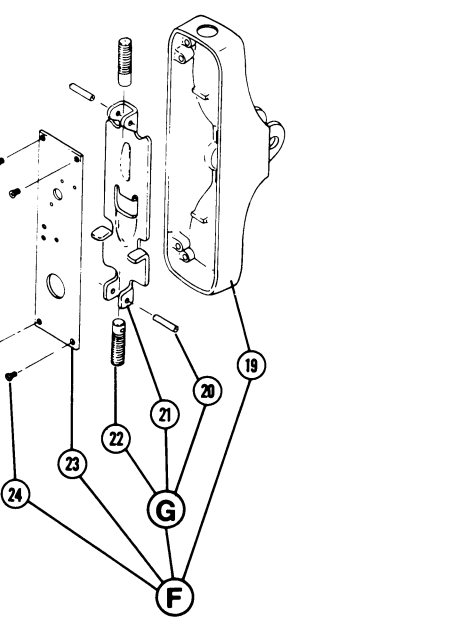
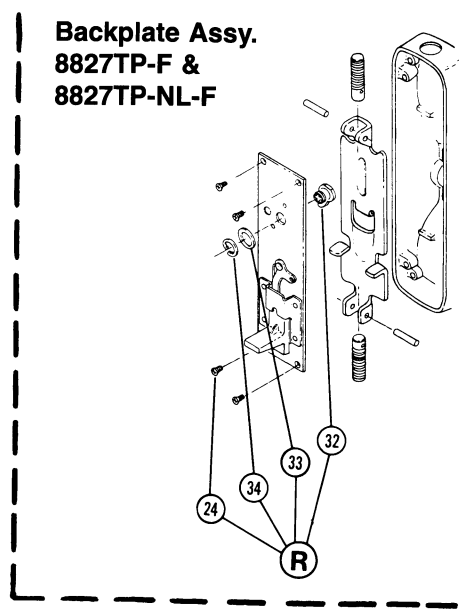
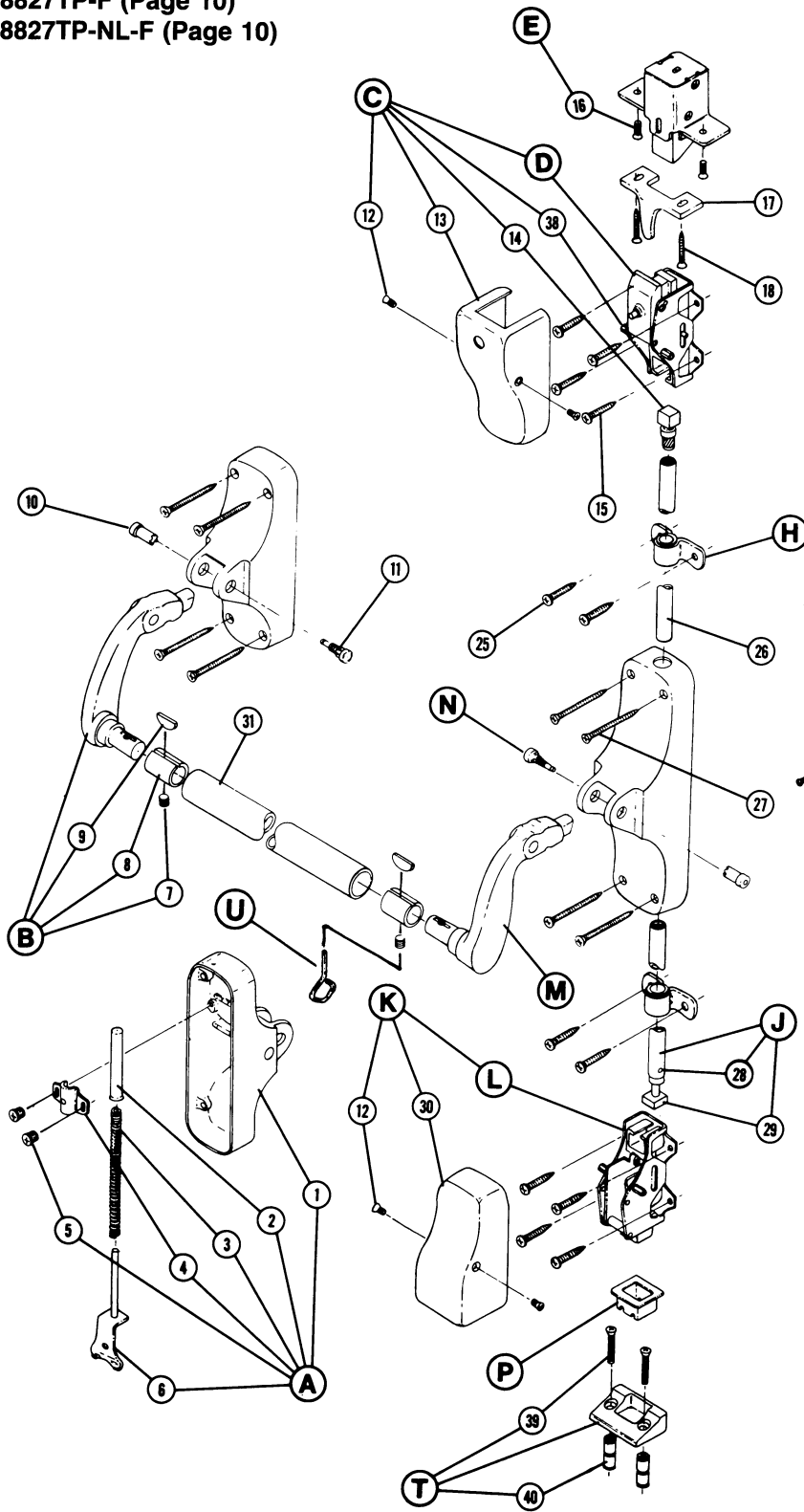


88 Vertical Rod Devices

8827-F, 8827K-F, 8827K-NL-F, 8827TP-F & 8827TP-NL-F

Parts List

- 8827-F (Page 9)
- 8827K-F (Page 10)
- 8827K-NL-F (Page 10)
- 8827TP-F (Page 10)
- 8827TP-NL-F (Page 10)



Parts List–8847 Concealed Vertical Rod Device

Reference Illustration Page 11

Item	Qty.	Part No.	Description	
A	1	101713	End Case Assy.–Brz.	X
A	1	101714	End Case Assy.–Alum.	X
A	1	101715	End Case Assy.–St. Stl.	X
B	1	100729	Lever Arm Assy.–LH–Brz.	X
B	1	100746	Lever Arm Assy.–LH–Alum.	X
B	1	101487	Lever Arm Assy.–LH–St. Stl.	X
C	1	104759	Top Rod Assy.	
D	1	100316	Top Plate Assy.	
E	1	030655	471 Strike Assy.	
F	1	103397	Center Case Assy.–Brz.	X
F	1	103398	Center Case Assy.–Alum.	X
F	1	103399	Center Case Assy.–St. Stl.	X
G	1	101190	Rod Control Housing Assy.	
H	1	102551	Bottom Rod Assy.	
J	1	105019	Bottom Bolt Guide Assy.	
K	1	030659	304-L Strike Assy	
L	1	100744	Lever Arm Assy.–RH–Brz	X
L	1	100747	Lever Arm Assy.–RH–Alum.	X
L	1	101486	Lever Arm Assy.–RH–St. Stl.	X
M	1	103868	Wedge Tite Package	
N	1	103865	Lever Arm Axle Package	
1	1	960517	End Case–Brz.	X
1	1	960518	End Case–Alum.	X
1	1	960519	End Case–St. Stl.	X
2	1	951081	Spring Tube	
3	1	953630	Spring	
4	1	951910	Spring Tube Bracket	
5	2	963094	#8-32 × 5/16" PPHMS–Thd. Form.	
6	1	107682	Spring Stop Sub-Assy.	
7	2	963851	Wedge Tite Adaptor Screw (5/16"-18 × 5/8" Set Scr.)	
8	2	965676	Tube Attaching Ring	
9	2	956520	Attaching Ring Wedge	
10*	2	969573	88 Axle–Female	
11*	2	969572	88 Axle–Male	
12	1	964640	Top Bolt	
13	1	953360	Trigger Spring	
14	1	969167	Top Bolt Trigger	
15	1	963130	1/8" × 5/8" Roll Pin	
16	1	966625	Rod and Bolt Connector	

Item	Qty.	Part No.	Description	
17	3	963131	3/16" × 5/8" Roll Pin	
18	1	966170	Top Rod Tube	
19	1	967224	Rod Connector Rivet	
20	1	966644	Adjustable Top Rod	
21	2	960049	Rod Connector Pin	
22	1	101149	Connector and Retainer Assembly	
23	6	965294	#12-12 × 12-24 × 1/2" × 1"–FPHMS	
24	2	963046	#8-32 × 1/2" FPHMS	
25	1	960528	Center Case–Brz.	X
25	1	960529	Center Case–Alum.	X
25	1	960530	Center Case–St. Stl.	X
26	1	103392	Latch Control Assy.	
27	1	103390	Backplate Assy.	
28	4	963096	8-32 × 3/8" Lg. PPHMS–Self Tap	
29	1	959563	Cylinder Release Bracket–RH	
29	1	960109	Cylinder Release Bracket–LH	
30	2	961136	Sex Bolt Head	
31	2	963027	1/4" I.D. SAE Flat Washer–If needed	
32	2	963593	#12 Split Lockwasher	
33	2	963169	#12-24 Hex Nut	
34	2	963125	#12-24 × 3/4" SBHCS w/Nylon Insert	
35	1	961152	Bottom Connector	
36	1	961036	Bottom Rod	
37	1	958627	Bottom Bolt Spring	
38	1	952790	Bottom Bolt	
39**	8	965291	#10-12 × 10-24 × 2" OPHCS–Brz	X
39**	8	965292	#10-12 × 10-24 × 2" OPHCS–St. Stl	X
40	2	968485	Dog Screw	
41	1	060275	Cross Bar Tube–Std.–27 1/2" Lg.	X
41	1	061275	Cross Bar Tube–Knurled–27 1/2" Lg.	X
41	1	060295	Cross Bar Tube–Std.–29 1/2" Lg.	X
41	1	061295	Cross Bar Tube–Knurled–29 1/2" Lg.	X
41	1	060360	Cross Bar Tube–Std.–36" Lg.	X
41	1	061360	Cross Bar Tube–Knurled–36" Lg.	X
41	1	060420	Cross Bar Tube–Std.–42" Lg.	X
41	1	061420	Cross Bar Tube–Knurled–42" Lg.	X
41	1	060500	Cross Bar Tube–Std.–(Longer than 42")	X
41	1	061500	Cross Bar Tube–Knurled–(Longer than 42")	X
*	1	103865	Lever Arm Axle Package	
**	1	900500	Mounting Screw Package	X

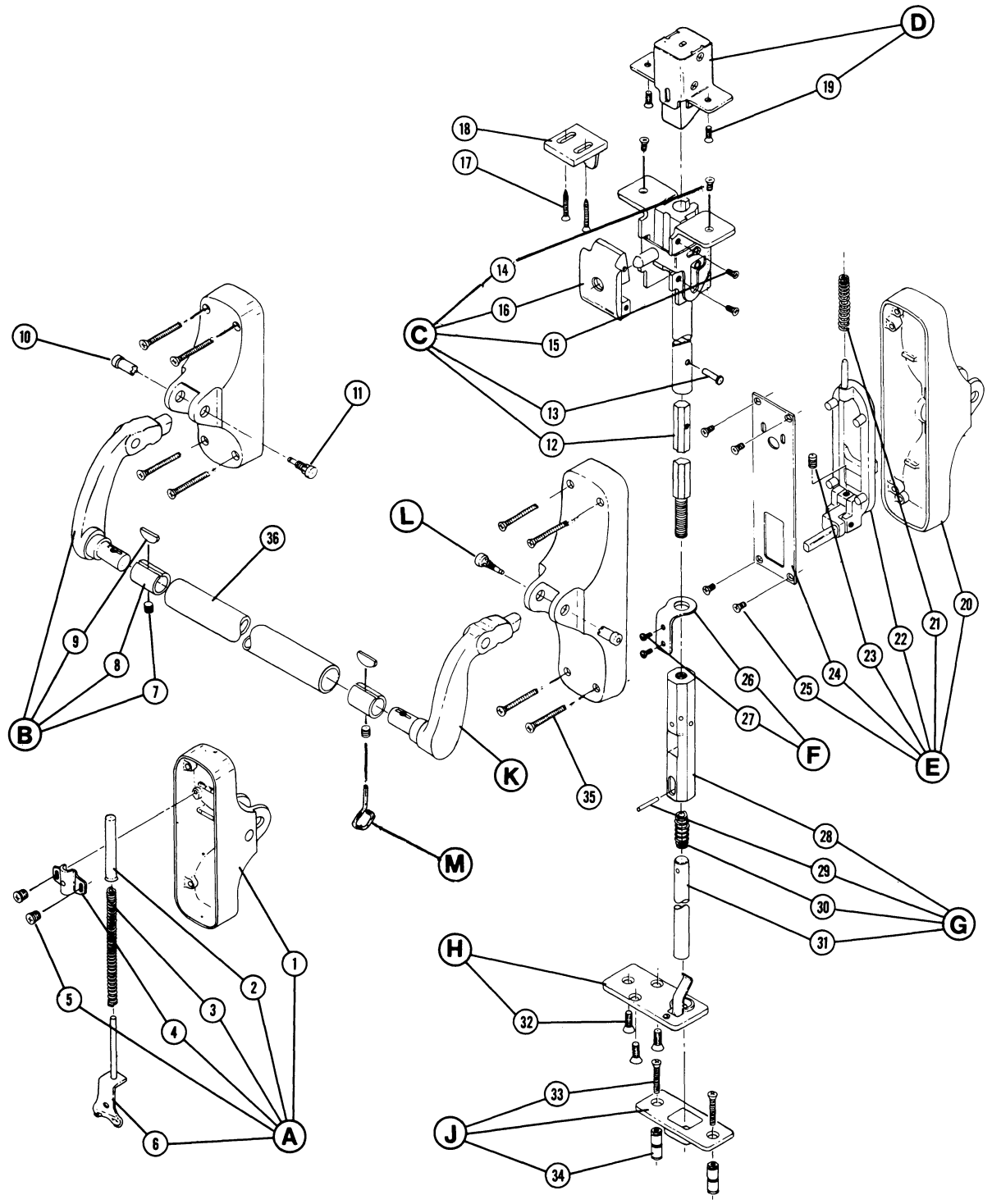
X designates items that are finished.

Note: For ordering parts provide the part number, description, total quantity and finish required.

8847-F Concealed Vertical Rod Device

Parts List

(See Page 14)



Parts List–8847-F Concealed Vertical Rod Device

Reference Illustration Page 13

Item	Qty.	Part No.	Description	
A	1	101716	End Case Assy –Brz	X
A	1	101717	End Case Assy.–Alum.	X
A	1	101718	End Case Assy –St Stl.	X
B	1	101000	Lever Arm Assy –LH–Brz	X
B	1	101002	Lever Arm Assy–LH–Alum.	X
B	1	101489	Lever Arm Assy –LH–St Stl	X
C	1	105020	Top Rod & Latch Release Assy	X
D	1	102930	Soffit Latch Bolt Assy	
E	1	101698	Center Case Assy.–LH–Brz	X
E	1	101699	Center Case Assy –LH–Alum	X
E	1	101700	Center Case Assy –LH–St Stl	X
E	1	101695	Center Case Assy.–RH–Brz	X
E	1	101696	Center Case Assy.–RH–Alum	X
E	1	101697	Center Case Assy –RH–St. Stl	X
F	1	105140	Rod Guide Assy	
G	1	105666	Bottom Rod Assy	
H	1	100741	Bottom Rod Guide Assy –LH	
H	1	100743	Bottom Rod Guide Assy.–RH	
J	1	030609	301-L Strike Assy.	
K	1	100999	Lever Arm Assy –RH–Brz.	X
K	1	101001	Lever Arm Assy –RH–Alum	X
K	1	101488	Lever Arm Assy.–RH–St Stl.	X
L	1	103865	Lever Arm Axle Package	
M	1	103868	Wedge Tite Package	
1	1	960912	End Case–Brz.	X
1	1	961913	End Case–Alum.	X
1	1	960914	End Case–St. Stl	X
2	1	951081	Spring Tube	
3	1	953630	Spring	
4	1	951910	Spring Tube Bracket	
5	2	963094	#8-32 × 5/16" PPHMS–Thd. Form	
6	1	107682	Spring Stop Sub-Assy.	
7	2	963851	Wedge Tite Adaptor Screw	
8	2	965676	Tube Attaching Ring	
9	2	956520	Attaching Ring Wedge	
10*	2	969573	88 Axle–Female	
11*	2	969572	88 Axle–Male	
12	1	966169	Adjustable Top Rod	
13	1	967224	Rod Connector Rivet	
14***	2	963030	#12-24 × 3/8" BHMS	

Item	Qty.	Part No.	Description	
15	4	956011	#8-32 × 1/4" FPHMS–St. Stl.	
16	1	957750	Release Guide Cover	X
17	2	965289	#10-12 × 10-24 × 1 1/4" OPHCS	X
18	1	960113	Release Bracket	X
19	2	963011	#12-24 × 1/2" Lg UFPHMS	
20	1	960915	Center Case–Brz.	X
20	1	960916	Center Case–Alum	X
20	1	960917	Center Case–St Stl	X
21	1	958643	Spring	
22	1	100693	Latch Control Finger Assy –LH	
22	1	104367	Latch Control Finger Assy –RH	
23	1	951780	Flat Point Set Screw	
24	1	960756	Back Plate	
25	4	963096	#8-32 × 3/8" Lg. FPHMS–Thd Form	
26	1	966296	Rod Guide	
27	2	963750	#10-24 × 3/8" PSHMS	
28	1	966767	Rod Control	
29	1	963526	Spirol Pin (#187-0875 MCK)	
30	1	958817	Spring	
31	1	967910	Bottom Rod	
32	3	963103	#12-24 × 9/16" FPHMS	
33†	2	963044	1/4-20 × 1 1/4" FPHMS	
33†	1	963043	1/4-20 × 1 1/2" RHMS	
34†	1	963045	1/4-20 Expansion Anchor	
35**	8	963000	#10-24 × 1 1/2" OPHMS–Brz.	X
35**	8	963002	#10-24 × 1 1/2" OPHMS–St Stl.	X
36	1	060275	Cross Bar Tube–Std.–27 1/2" Lg	X
36	1	061275	Cross Bar Tube–Knurled–27 1/2" Lg.	X
36	1	060295	Cross Bar Tube–Std.–29 1/2" Lg.	X
36	1	061295	Cross Bar Tube–Knurled–29 1/2" Lg	X
36	1	060360	Cross Bar Tube–Std.–36" Lg.	X
36	1	061360	Cross Bar Tube–Knurled–36" Lg.	X
36	1	060420	Cross Bar Tube–Std.–42" Lg.	X
36	1	061420	Cross Bar Tube–Knurled–42" Lg.	X
36	1	060500	Cross Bar Tube–Std.–(Longer than 42")	X
36	1	061500	Cross Bar Tube–Knurled–(Longer than 42")	X
*	1	103865	Lever Arm Axle Package	
**	2	900533	Mounting Screw Package	
***	1	900541	Mounting Screw Package	
†	1	900270	Mounting Screw Package	

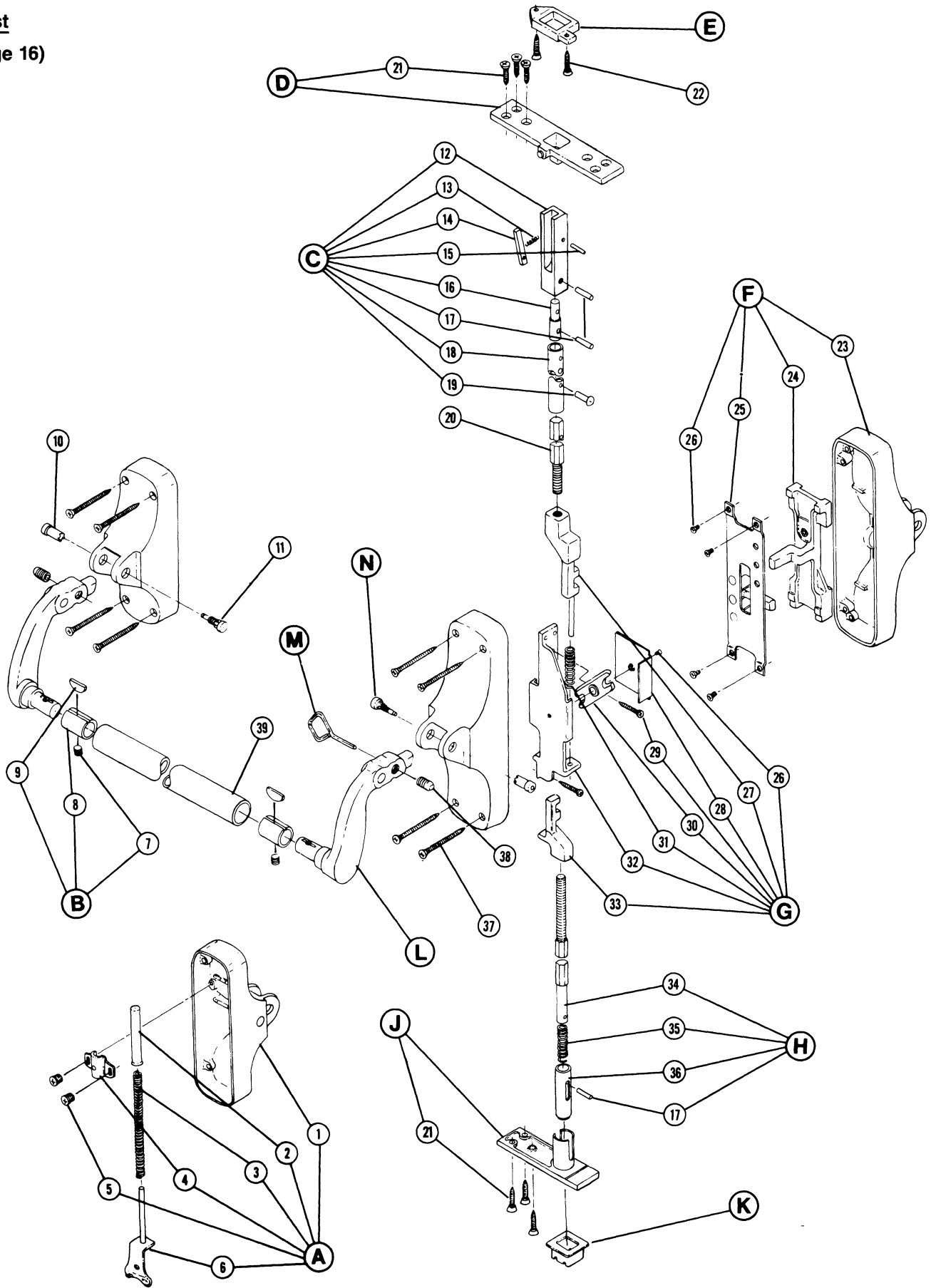
X designates items that are finished.

Note: For ordering parts provide the part number, description, total quantity and finish required.

8847WDC Concealed Vertical Rod Device

Parts List

(See Page 16)



Parts List–8847WDC Concealed Vertical Rod Device

Reference Illustration Page 15

Item	Qty.	Part No.	Description	
A	1	101713	End Case Assy.–Brz.	X
A	1	101714	End Case Assy.–Alum.	X
A	1	101715	End Case Assy.–St. Stl	X
B	1	100729	Lever Arm Assy –LH–Brz	X
B	1	100746	Lever Arm Assy–LH–Alum.	X
B	1	101487	Lever Arm Assy –LH–St Stl	X
C	1	104758	Top Rod Assy.	
D	1	100316	Top Plate Assy.	
E	1	030655	471 Strike	
F	1	103400	Center Case Assy.–RH–Brz.	X
F	1	103401	Center Case Assy.–RH–Alum.	X
F	1	103402	Center Case Assy.–RH–St Stl	X
F	1	103403	Center Case Assy –LH–Brz.	X
F	1	103404	Center Case Assy.–LH–Alum.	X
F	1	103405	Center Case Assy –LH–St. Stl.	X
G	1	100315	Latch Control	
H	1	105641	Bottom Rod Assy	
J	1	105019	Bottom Bolt Guide Assy.	
K	1	030659	304 L Strike	
L	1	100744	Lever Arm Assy –RH–Brz	X
L	1	100747	Lever Arm Assy.–RH–Alum.	X
L	1	101486	Lever Arm Assy.–RH–St. Stl.	X
M	1	103868	Wedge Tite Package	
N	1	103865	Lever Arm Axle Package	
1	1	960517	End Case–Brz.	X
1	1	960518	End Case–Alum.	X
1	1	960519	End Case–St. Stl.	X
2	1	951081	Spring Tube	
3	1	953630	Spring	
4	1	951910	Spring Tube Bracket	
5	2	963094	#8-32 × 5/16" PPHMS–Thd. Form.	
6	1	107682	Spring Stop Sub-Assy.	
7	2	963851	Wedge Tite Adaptor Screw (5/16-18 × 5/8" Set Screw)	
8	2	965676	Tube Attaching Ring	
9	2	956520	Attaching Ring Wedge	
10*	2	969573	88 Axle–Female	
11*	2	969572	88 Axle–Male	
12	1	954640	Top Bolt	
13	1	953360	Trigger Spring	
14	1	969167	Top Bolt Trigger	

Item	Qty.	Part No.	Description	
15	1	963130	1/8" × 5/8" Roll Pin	
16	1	966625	Rod and Bolt Connector	
17	3	963131	3/16" × 5/8" Roll Pin	
18	1	966170	Top Rod Tube	
19	1	967224	Rod Connector Rivet	
20	1	966643	Adjustable Top Rod	
21	6	965294	#12-12 × 12-24 × 1/2" × 1" –FPHMS	
22***	2	963046	#8-32 × 1/2" FPHMS	
23	1	960528	Center Case–Brz	X
23	1	960529	Center Case–Alum.	X
23	1	960530	Center Case–St Stl.	X
24	1	103395	Latch Control Assy.–LH	
24	1	103394	Latch Control Assy.–RH	
25	1	103390	Back Plate Assy.	
26	5	963096	8-32 × 3/8" Lg. FPHMS–Self Tap	
27	1	953220	Top Rod Control–LH	
28	1	952720	Cover Plate	
29	2	963005	#10 × 1" PHSMS–Type A	
30	1	953280	Cam	
31	1	958648	Spring	
32	1	952940	Housing	
33	1	953210	Bottom Rod Control	
34	1	966916	Bottom Rod	
35	1	958627	Bottom Bolt Spring	
36	1	952790	Bottom Bolt	
37**	8	965291	#10-12 × 10-24 × 2" OPHCS–Brz	X
37**	8	965292	#10-12 × 10-24 × 2" OPHCS–St Stl	X
38	2	968485	Dog Screw	
39	1	060275	Cross Bar Tube–Std.–27 1/2" Lg	X
39	1	061275	Cross Bar Tube–Knurled–27 1/2" Lg.	X
39	1	060295	Cross Bar Tube–Std.–29 1/2" Lg	X
39	1	061295	Cross Bar Tube–Knurled–29 1/2" Lg.	X
39	1	060360	Cross Bar Tube–Std.–36" Lg.	X
39	1	061360	Cross Bar Tube–Knurled–36" Lg.	X
39	1	060420	Cross Bar Tube–Std.–42" Lg	X
39	1	061420	Cross Bar Tube–Knurled–42" Lg.	X
39	1	060500	Cross Bar Tube–Std.–(Longer than 42")	X
39	1	061500	Cross Bar Tube–Knurled–(Longer than 42")	X
*	1	103865	Lever Arm Axle Package	
**	1	900500	Mounting Screw Package	X
***	1	900541	Mounting Screw Package	X

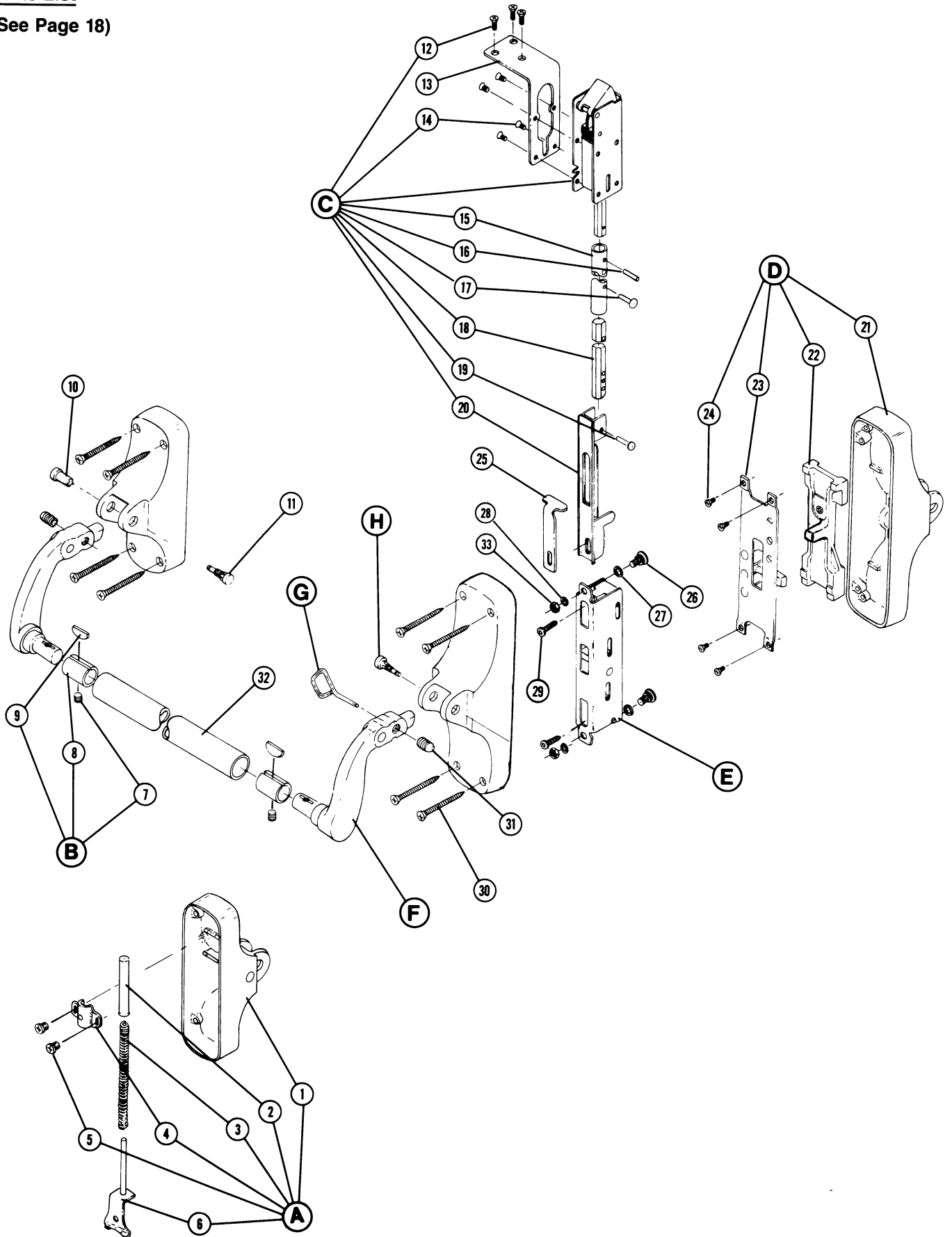
X designates items that are finished.

Note: For ordering parts provide the part number, description, total quantity and finish required.

ES8847 Concealed Vertical Rod Devices

Parts List

(See Page 18)



Parts List–ES8847 Concealed Vertical Rod Device

Reference Illustration Page 17

Item	Qty.	Part No.	Description	
A	1	101713	End Case Assy.–Brz.	X
A	1	101714	End Case Assy.–Alum.	X
A	1	101715	End Case Assy.–St. Stl.	X
B	1	100729	Lever Arm Assy.–LH–Brz.	X
B	1	100746	Lever Arm Assy.–LH–Alum.	X
B	1	101487	Lever Arm Assy.–LH–St. Stl.	X
C	1	106215	Top Rod & Latch Case Assy.	
D	1	103397	Center Case Assy.–Brz.	X
D	1	103398	Center Case Assy.–Alum.	X
D	1	103399	Center Case Assy.–St. Stl.	X
E	1	101190	Rod Control Housing Assy	
F	1	100744	Lever Arm Assy.–RH–Brz.	X
F	1	100747	Lever Arm Assy.–RH–Alum.	X
F	1	101486	Lever Arm Assy.–RH–St. Stl.	X
G	1	103868	Wedge Tite Package	
H	1	103865	Lever Arm Axle Package	
1	1	960517	End Case–Brz.	X
1	1	960518	End Case–Alum.	X
1	1	960519	End Case–St. Stl.	X
2	1	951081	Spring Tube	
3	1	953630	Spring	
4	1	951910	Spring Tube Bracket	
5	2	963094	#8-32 × 5/16" PPHMS–Thd. Form.	
6	1	107682	Spring Stop Sub-Assy	
7	2	963851	Wedge Tite Adaptor Screw (5/16-18 × 5/8" Set Screw)	
8	2	965676	Tube Attaching Ring	
9	2	956520	Attaching Ring Wedge	
10*	2	969573	88 Axle–Female	
11*	2	969572	88 Axle–Male	
12	3	963075	#10-24 × 1/2" UFPHMS	
13	1	959613	Latch Case Bracket	
14	4	963128	#10-32 × 1/4" UFPHMS	
15	1	966170	Top Rod Tube	

Item	Qty.	Part No.	Description	
16	1	963131	3/16" × 5/8" Roll Pin	
17	1	967224	Rod Connector Rivet	
18	1	967223	Adjustable Top Rod	
19	1	960049	Rod Connector Pin	
20	1	101149	Rod Connector	
21	1	960528	Center Case–Brz	X
21	1	960529	Center Case–Alum.	X
21	1	960530	Center Case–St. Stl.	X
22	1	103392	Latch Control Assy.	
23	1	103390	Back Plate Assembly	
24	4	963096	#8-32 × 3/8" FPHMS–Self Tap	
25	1	959563	Cylinder Release Bracket–RH	
25	1	960109	Cylinder Release Bracket–LH	
26	2	961136	Sex Bolt Head	
27	2	963027	1/4" I.D. Sae Flat Washer–If needed	
28	2	963593	#12 Split Lock Washer	
29	1	963125	#12-24 × 3/4" SBHCS–W/Nylon Insert	
30**	8	965291	#10-12 × 10-24 × 2" OPHCS–Brz.	X
30**	8	965292	#10-12 × 10-24 × 2" OPHCS–St. Stl.	X
31	2	968485	Dog Screw	
32	1	060275	Cross Bar Tube–Std.–27 1/2" Lg.	X
32	1	061275	Cross Bar Tube–Knurled–27 1/2" Lg.	X
32	1	060295	Cross Bar Tube–Std.–29 1/2" Lg.	X
32	1	061295	Cross Bar Tube–Knurled–29 1/2" Lg.	X
32	1	060360	Cross Bar Tube–Std.–36" Lg.	X
32	1	061360	Cross Bar Tube–Knurled–36" Lg.	X
32	1	060420	Cross Bar Tube–Std.–42" Lg.	X
32	1	061420	Cross Bar Tube–Knurled–42" Lg.	X
32	1	060500	Cross Bar Tube–Std.–(Longer than 42")	X
32	1	061500	Cross Bar Tube–Knurled–(Longer than 42")	X
33	2	963169	#12-24 Hex Nut	
*	1	103865	Lever Arm Axle Package	
**	1	900500	Mounting Screw Package	

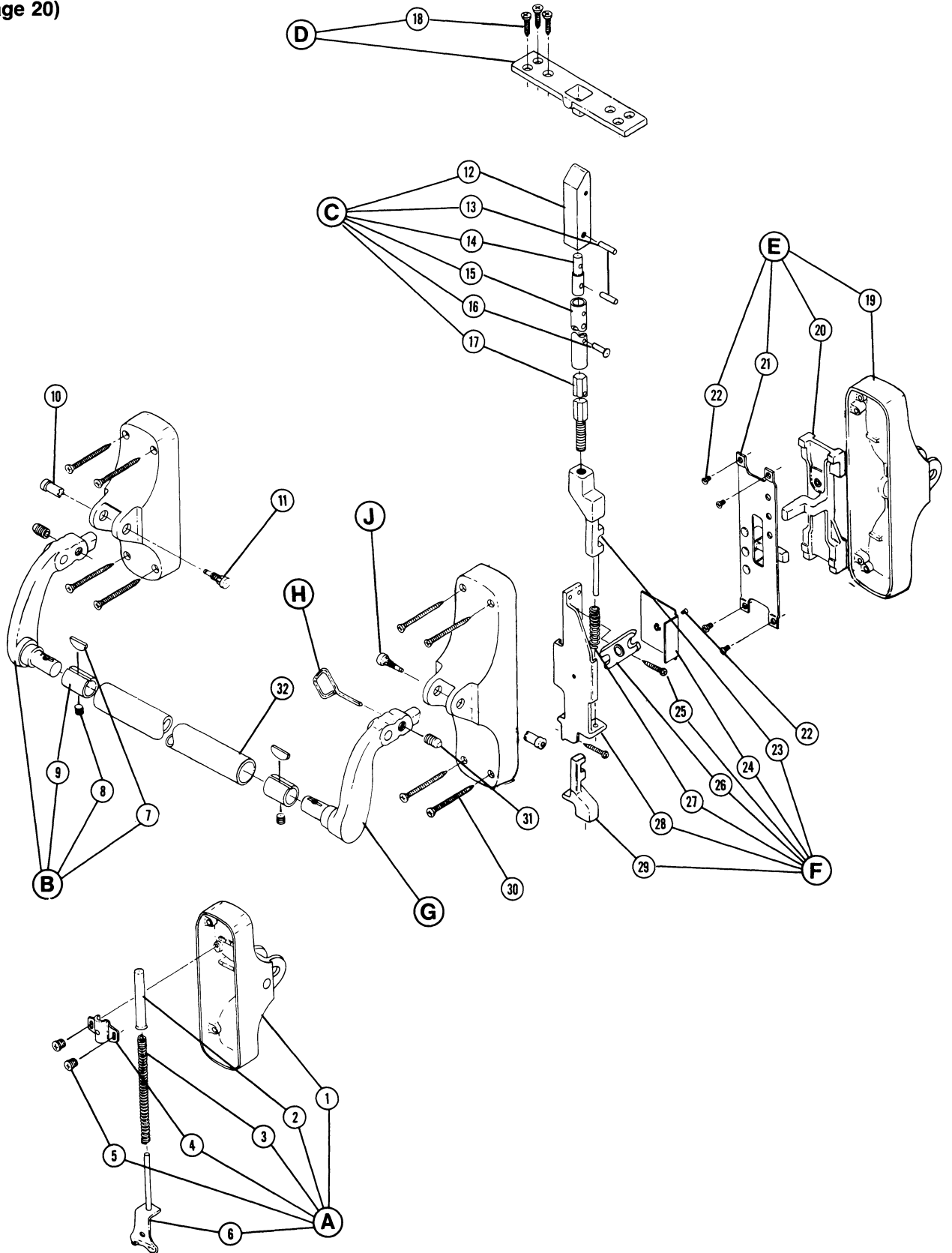
X designates items that are finished.

Note: For ordering parts provide the part number, description, total quantity and finish required.

ES8847WDC Concealed Vertical Rod Device

Parts List

(See Page 20)



Parts List—ES8847WDC Concealed Vertical Rod Device

Reference Illustration Page 19

Item	Qty.	Part No.	Description	
A	1	101713	End Case Assy.—Brz.	X
A	1	101714	End Case Assy.—Alum.	X
A	1	101715	End Case Assy.—St. Stl	X
B	1	100729	Lever Arm Assy—LH—Brz.	X
B	1	100746	Lever Arm Assy—LH—Alum.	X
B	1	101487	Lever Arm Assy.—LH—St. Stl	X
C	1	105082	ES Top Rod Assy	
D	1	104589	ES Top Bolt Guide Assy	
E	1	103400	Center Case Assy.—RH—Brz.	X
E	1	103401	Center Case Assy.—RH—Alum.	X
E	1	103402	Center Case Assy.—RH—St. Stl	X
E	1	103403	Center Case Assy.—LH—Brz.	X
E	1	103404	Center Case Assy.—LH—Alum.	X
E	1	103405	Center Case Assy.—LH—St. Stl	X
F	1	100315	Latch Control	
G	1	100744	Lever Arm Assy—RH—Brz.	X
G	1	100747	Lever Arm Assy—RH—Alum.	X
G	1	101486	Lever Arm Assy.—RH—St. Stl.	X
H	1	103868	Wedge Tite Package	
J	1	103865	Lever Arm Axle Package	
1	1	960517	End Case—Brz.	X
1	1	960518	End Case—Alum.	X
1	1	960519	End Case—St. Stl.	X
2	1	951081	Spring Tube	
3	1	953630	Spring	
4	1	951910	Spring Tube Bracket	
5	2	963094	#8-32 × 5/16" PPHMS—Thd. Form	
6	1	107682	Spring Stop Sub-Assy.	
7	2	956520	Attaching Ring Wedge	
8	2	963851	Wedge Tite Adaptor Screw	
9	2	965676	Tube Attaching Ring	
10*	2	969573	88 Axle—Female	
11*	2	969572	88 Axle—Male	
12	1	966573	Top Bolt	

Item	Qty.	Part No.	Description	
13	2	963131	3/16" × 5/8" Roll Pin	
14	1	966625	Rod & Bolt Connector	
15	1	966170	Top Rod Tube	
16	1	960049	Rod Connector Pin	
17	1	966643	Adjustable Top Rod	
18	3	965294	#12-12 × 12-24 × 1/2" × 1" FPH Comb.	
19	1	960528	Center Case—Brz	X
19	1	960529	Center Case—Alum.	X
19	1	960530	Center Case—St. Stl.	X
20	1	103395	Latch Control Assy—LH	
20	1	103394	Latch Control Assy.—RH	
21	1	103390	Back Plate Assy.	
22	5	963096	#8-32 × 3/8" Lg. FPHMS—Self Tap	
23	1	953220	Top Rod Control	
24	1	952720	Cover Plate	
25	2	963005	#10 × 1" PHSMS—Type A	
26	1	953280	Cam	
27	1	958648	Spring	
28	1	952940	Housing	
29	1	953210	Bottom Rod Control	
30**	8	965291	#10-12 × 10-24 × 2" OPHCS—Brz.	X
30**	8	965292	#10-12 × 10-24 × 2" OPHCS—St. Stl.	X
31	2	968485	Dog Screw	
32	1	060275	Cross Bar Tube—Std.—27 1/2" Lg	X
32	1	061275	Cross Bar Tube—Knurled—27 1/2" Lg.	X
32	1	060295	Cross Bar Tube—Std.—29 1/2" Lg	X
32	1	061295	Cross Bar Tube—Knurled—29 1/2" Lg	X
32	1	060360	Cross Bar Tube—Std.—36" Lg.	X
32	1	061360	Cross Bar Tube—Knurled—36" Lg.	X
32	1	060420	Cross Bar Tube—Std.—42" Lg.	X
32	1	061420	Cross Bar Tube—Knurled—42" Lg.	X
32	1	060500	Cross Bar Tube—Std.—(Longer than 46")	X
32	1	061500	Cross Bar Tube—Knurled—(Longer than 46")	X
*	1	103865	Lever Arm Axle Package	
**	1	900500	Mounting Screw Package	

X designates items that are finished.

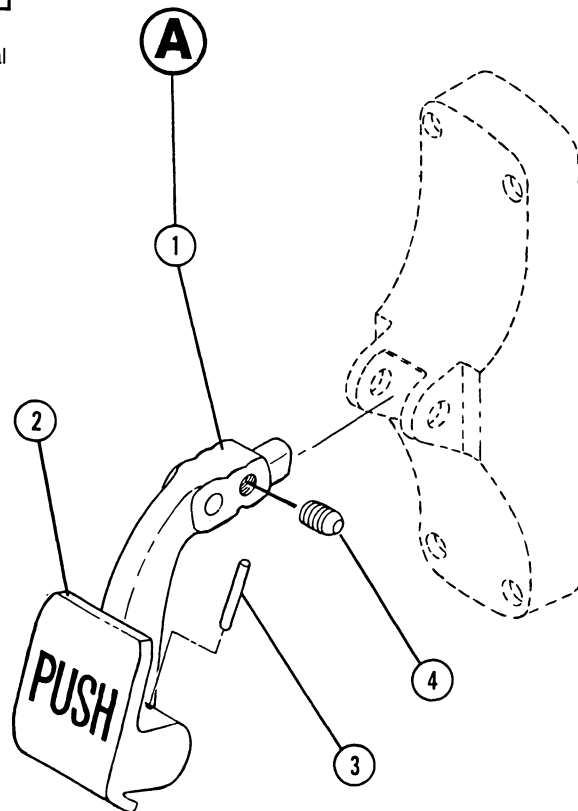
Note: For ordering parts provide the part number, description, total quantity and finish required.

Parts List-88 Vertical Paddle Device

Item	Qty.	Part No.	Description	
A	1	103901	88 L/Arm & Paddle Assy. RH-Brz.	X
A	1	103902	88 L/Arm & Paddle Assy. RH-Alum.	X
A	1	103903	88 L/Arm & Paddle Assy. RH-St. Stl.	X
A	1	103904	88 L/Arm & Paddle Assy. LH-Brz.	X
A	1	103905	88 L/Arm & Paddle Assy. LH-Alum.	X
A	1	103906	88 L/Arm & Paddle Assy. LH-St. Stl.	X
1	1	960408	Paddle Lever Arm RH-Brz.	X
1	1	960409	Paddle Lever Arm RH-Alum.	X
1	1	961006	Paddle Lever Arm RH-St. Stl.	X
1	1	960406	Paddle Lever Arm LH-Brz.	X
1	1	960407	Paddle Lever Arm LH-Alum.	X
1	1	961005	Paddle Lever Arm LH-St. Stl.	X
2	1	960186	Paddle RH-Brz.	X
2	1	960187	Paddle RH-Alum	X
2	1	960188	Paddle RH-St. Stl.	X
2	1	960189	Paddle LH-Brz.	X
2	1	960190	Paddle LH-Alum.	X
2	1	960191	Paddle LH-St. Stl.	X
3	1	963577	$\frac{5}{32}'' \times 1\frac{1}{8}''$ Spirol Pin	
4	1	968485	Dog Screw	

X designates items that are finished.

Note: For ordering parts provide the part number, description, total quantity and finish required



88 Series Vertical Exit and Fire Exit Hardware Device Product Maintenance

Although the 88 series Vertical devices are designed for many years of service and maintenance requirements are minimal, proper care at regular intervals will help to extend the service life of the product for many more years. This is especially important in extremely heavy traffic areas or adverse weather conditions where frequent operational inspection, cleaning and lubrication of working components is recommended.

Periodic Inspection:

1. Check the device for smoothness of operation. Any binding or dragging may indicate worn parts or the need for lubrication.
2. Check the device for full extension of the Latch Bolt ($\frac{5}{8}$ ") and full retraction during operation. Short extension may indicate binding, or vertical rods out of adjustment and insufficient retraction would indicate worn parts or vertical rods out of adjustment. The latch bolt should also retract fully when dogged.

Appearance Care (as necessary):

The 88 Vertical device finishes are durable and should not require special attention for many years, although periodic cleaning may be recommended in high traffic areas or when devices are exposed to adverse climate conditions.

- A. Non-Lacquered finishes (Bronze)
The device should be wiped with a small amount of vegetable oil on a soft cloth.
- B. Lacquered Finishes (Bronze & Aluminum)
Wiping with a soft damp cloth is sufficient to clean these devices.
- C. Stainless Steel Finishes
These devices may be cleaned with a mild soap or non-abrasive cleaner.

Lubrication:

Devices are lubricated before delivery. Periodic lubrication can add years to product life by inhibiting excessive wear of working parts. For normal to heavy traffic areas a good quality commercial grease is sufficient for proper device operation. For devices exposed to adverse weather conditions or an abnormally high exposure to dust and dirt, a graphite or silicone-based lubricant can be used at more frequent intervals.

