

THIS 10-32 CAP SCREW PROVIDED TO PREVENT THE FRONT SHAFT FROM ROTATING WHILE CHANGING THE CONTACT PLATE. REMOVE THE 10-32 FLATHEAD SCREW FROM THE BODY AND TIGHTEN THIS CAP SCREW AGAINST ONE OF THE FOUR FLATS ON THE CROWDER SHAFT. TO AVOID SHAFT DAMAGE TIGHTEN CAP SCREW TO 25 IN-LBS MAXIMUM.

THIS IS A TWO PAGE PARTS LIST.  
THIS FIRST PAGE APPLIES TO  
ASSEMBLY REVISION E AND LATER.

TORQUE TO 7 FT-LB

APPLY MEDIUM STRENGTH  
THREAD LOCKER (BLUE)  
TO THREADS.  
TORQUE TO 30 FT-LB

FOUR FLATS  
ON SHAFT

APPLY LOW STRENGTH  
THREAD LOCKER (PURPLE)  
TO THREAD.  
TORQUE TO 25 IN-LB

WHEN ORDERING  
REPLACEMENTS SEE  
CONTACT PLATE  
DIMENSIONS AND  
INFORMATION BELOW

INSTALL SEAL ON PISTON  
WITH SEAL LIP FACING  
TOWARD RETAINER

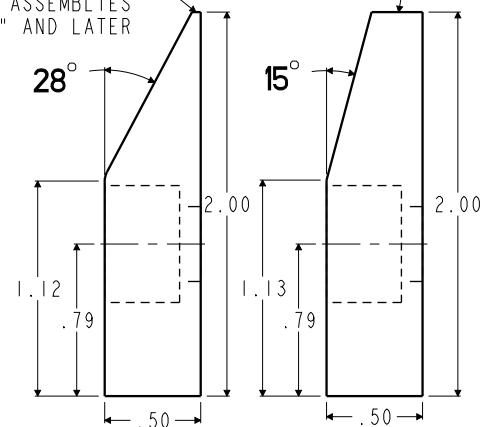
TORQUE TO 10-11 IN-LB

BODY  
NON-REPLACEMENT PART

CONTACT PLATE DIMENSIONS AND INFORMATION

81-5000-67, CONTACT PLATE  
PROVIDED WITH ASSEMBLIES  
REVISION "C" AND EARLIER

81-5000-27, CONTACT PLATE  
PROVIDED WITH ASSEMBLIES  
REVISION "D" AND LATER



NO	QTY	PART NO	DESCRIPTION	STD SEAL KIT	FKM SEAL KIT
1	1	21410074	SHCS, 3/8-16 X 3/4, ALY		
2	1	21410099	SCREW,CAP,FLTH,10-32 X 3/16,ALY,UNDERCUT HEAD		
3	1	21411035	SCREW, CAP, SOCH, 10-32 X 5/8, ALY		
4	1	21500019	SCREW, CAP, BTNH, M3 X 6, ALY		
5	1	21500200	WASHER		
6	1	23313005	SPRING, COMPRESSION		
7	1	30601144	PLUG, SOCH, SAE 4		
8	1	39010013	SEAL, BEVEL, 9/16 X 3/32 X 3/4	X	39012000
9	1	39050042	O-RING, (-011)	X	X
10	1	39051031	O-RING, (-912)	X	X
11	1	81500027	PLATE,CONTACT,CROWDER,2200,28°		
12	1	81500030	PISTON, PART CROWDER, 2200		
13	1	81500033	SHAFT, PART CROWDER, 2200		
14	1	81500034	RETAINER, PART CROWDER, 2200		
15	1	39V51004	O-RING, 5.5mm X 1mm	X	X
N/A	N/A	60159102	KIT, SEAL, STANDARD	NOTED	N/A
N/A	N/A	6V159102	KIT, SEAL, FKM	N/A	NOTED

NOTES:

1. ALL SEALS AND WIPER ARE INCLUDED IN STD OR FKM SEAL KIT.
2. APPLY LUBRICANT TO ALL SEALS PRIOR TO ASSEMBLY.

## PARTS LIST



VEKTEK, INC.  
1334 E. SIXTH AVE. P.O. BOX 625  
EMPORIA, KS. 66801 U.S.A.

ASSEMBLIES AFFECTED

PARTS LIST, PART CROWDER, 2200

15910800

15910800F

REVISION E AND LATER

SIZE

PL1594

REV

F

FORM FEG035\_PL\_ASIZE, REV. B

F	3831	RELEASE	ATHOMSEN	11-SEP-2019
REV	IN ACCORDANCE WITH ECN	EFFECTIVE DATE	REVISED BY	DATE
DRW BY: JAW	DRAWING STATUS: <b>Released</b>			
DATE: 8/4/06	PRODUCTION APPROVED FOR RELEASED STATUS ONLY			

SHEET 1 OF 2

THIS 10-32 CAP SCREW PROVIDED TO PREVENT THE FRONT SHAFT FROM ROTATING WHILE CHANGING THE CONTACT PLATE. REMOVE THE 10-32 FLATHEAD SCREW FROM THE BODY AND TIGHTEN THIS CAP SCREW AGAINST ONE OF THE FOUR FLATS ON THE CROWDER SHAFT. TO AVOID SHAFT DAMAGE TIGHTEN CAP SCREW TO 25 IN-LBS MAXIMUM.

THIS IS A TWO PAGE PARTS LIST. THIS SECOND PAGE APPLIES TO ASSEMBLY REVISION D AND EARLIER.

TORQUE TO 7 FT-LB

APPLY MEDIUM STRENGTH THREAD LOCKER (BLUE) TO THREADS. TORQUE TO 30 FT-LB

APPLY LOW STRENGTH THREAD LOCKER (PURPLE) TO THREAD. TORQUE TO 25 IN-LB

WHEN ORDERING REPLACEMENTS SEE CONTACT PLATE DIMENSIONS AND INFORMATION BELOW

WIPER NOT INCLUDED IN SEAL KITS

APPLY MEDIUM STRENGTH THREAD LOCKER (BLUE) TO THREADS. TORQUE TO 16 FT-LB

FOUR FLATS ON SHAFT

BODY NON-REPLACEMENT PART

DUE TO SHAFT DESIGN CHANGES WHEN ORDERING THIS SHAFT AS A REPLACEMENT PART FOR ASSEMBLIES REVISION D AND EARLIER REVISIONS BE CERTAIN TO ALSO ORDER CAP SCREW 21410105, SCREW, CAP, SOCH, 3/8-16 X 3/8, ALY

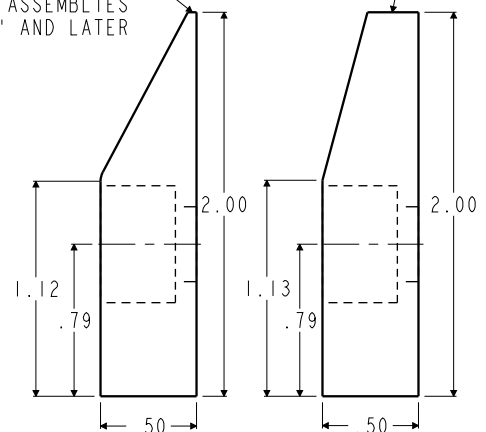
INSTALL SEAL ON PISTON WITH SEAL LIP FACING TOWARD RETAINER

CONTACT PLATE DIMENSIONS AND INFORMATION

81-5000-67, CONTACT PLATE PROVIDED WITH ASSEMBLIES REVISION "C" AND EARLIER

81-5000-27, CONTACT PLATE PROVIDED WITH ASSEMBLIES REVISION "D" AND LATER

NO	QTY	PART NO	DESCRIPTION	STD SEAL KIT	FKM SEAL KIT
1	1	21410074	SHCS, 3/8-16 X 3/4, ALY		
2	1	21410099	SCREW,CAP,FLTH,10-32 X 3/16,ALY,UNDERCUT HEAD		
3	1	21411035	SCREW, CAP, SOCH, 10-32 X 5/8, ALY		
4	1	21500019	SCREW, CAP, BTNH, M3 X 6, ALY		
5	1	21500200	WASHER		
6	1	23313005	SPRING, COMPRESSION		
7	1	30601144	PLUG, SOCH, SAE 4		
8	1	39010013	SEAL, BEVEL, 9/16 X 3/32 X 3/4	X	39012000
9	1	39012009	WIPER,PRESS-IN, (1/2)		
10	1	39050042	O-RING, (-011)	X	X
11	1	39051031	O-RING, (-912)	X	X
12	1	81500027	PLATE,CONTACT,CROWDER,2200,28"		
13	1	81500030	PISTON, PART CROWDER, 2200		
14	1	81500033	SHAFT, PART CROWDER, 2200		
15	1	81500034	RETAINER, PART CROWDER, 2200		
16	1	39V51004	O-RING, 5.5mm X 1mm	X	X
N/A	N/A	60159102	KIT, SEAL, STANDARD	NOTED	N/A
N/A	N/A	6V159102	KIT, SEAL, FKM	N/A	NOTED



NOTES:

- ALL SEALS AND THE RETAINING RING ARE INCLUDED IN STD OR FKM SEAL KIT WITH THE EXCEPTION OF THE WIPER NOT BEING INCLUDED IN THE SEAL KITS.
- APPLY LUBRICANT TO ALL SEALS PRIOR TO ASSEMBLY.

## PARTS LIST



VEKTEK, INC.  
1334 E. SIXTH AVE. P.O. BOX 625  
EMPORIA, KS. 66801 U.S.A.

ASSEMBLIES AFFECTED

15910800

15910800F

REVISION D AND EARLIER

PARTS LIST, PART CROWDER, 2200

SIZE

A

PL1594

REV

F

FORM FEG035\_PL\_ASIZE, REV. B

F	3831	RELEASE	ATHOMSEN	11-SEP-2019
REV	IN ACCORDANCE WITH ECN	EFFECTIVE DATE	REVISED BY	DATE
DRW BY: ABC	DRAWING STATUS: <b>Released</b>			
DATE: XX-YY-ZZ	PRODUCTION APPROVED FOR RELEASED STATUS ONLY			

SHEET 2 OF 2