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| 30 | WIPER,PRESS-IN, (1-1/4) |
| 29 | WASHER |
| 28 | STUD, WS, DA, CGS, 5500 |
| 27 | SPRING, COMPRESSION |
| 26 | SPRING, COMPRESSION |
| 25 | SLEEVE, WS, DA, CGS, 5500 |
| 24 | SCREW, CAP, SOCH, 5/16-24 X 1/2, ALY, SLFLKG |
| 23 | SCREW, CAP, SOCH, 1/4-28 X 5/8, ALY |
| 22 | WIPER,SNAP-IN, (1 7/8) |
| 21 | SEAL,T, (1-7/8X1/8X2-1/8) |
| 20 | SEAL, BEVEL, 1 7/8 X 1/8 X 2 1/8 |
| 19 | BU RING,(-225) |
| 18 | BU RING,(-149) |
| 17 | BU RING,(-033) |
| 16 | RETAINER, SLEEVE, WS, DA, CGS, 5500 |
| 15 | WASHER |
| 14 | RETAINER, PISTON, WS, DA, CGS, 5500 |
| 13 | PLUNGER, WS, DA, CGS, 5500 |
| 12 | PISTON, SHUTTLE, WS, DA, CGS, 5500 |
| 11 | PIN, SPRING, COIL TYPE, 3/32 X 3/8, SST |
| 10 | O-RING, (5-142) |
| 9 | O-RING, (-906) |
| 8 | O-RING, (-149) |
| 7 | O-RING, (-033) |
| 6 | O-RING, (-029) |
| 5 | O-RING, (-016) |
| 4 | CAP, BODY, WS, DA, CGS, 5500 |
| 3 | BOLT, CONTACT, WS, DA, CGS, 5500 |
| 2 | BODY, WS, DA, CGS, CM, 5500 |
| 1 | BALL, STEEL, ALLOY, .250 |
| No. | DESCRIPTION |

| MODEL NUMBER | TOOL LIST |
|---------------------------|--|
| 10-0212-02 10-0212-02F | 1 & 1 1/8 wrenches 3/16 & 1/4 hex key 11/16 deep well socket |

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|----------------------------------|--|-----------|--------|
| INSTALLATION INSTRUCTIONS |  VEKTEK <small>VEKTEK, INC. 1334 E. SIXTH AVE. P.O. BOX 625 EMPORIA, KS. 66801 U.S.A.</small> | | |
| | INSTRUCTION SHEET, WS, DA, CGS, CM, 5500 ***** <table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">SIZE A</td> <td style="width: 60%; text-align: center; font-size: 2em;">1S1021</td> <td style="width: 20%; text-align: center;">REV B</td> </tr> </table> | SIZE A | 1S1021 |
| SIZE A | 1S1021 | REV B | |

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|---------|------------------------|---|------------|---------|
| B | 2785 | RELEASE | MAJ | 1-12-15 |
| REV | IN ACCORDANCE WITH ECN | EFFECTIVE DATE | REVISED BY | DATE |
| DRW BY: | ALUTHI | DRAWING STATUS: Released PRODUCTION APPROVED FOR RELEASED STATUS ONLY | | |
| DATE: | 8-12-10 | | | |

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|---------------------------|
| ASSEMBLIES AFFECTED |
| 10-0212-02 10-0212-02F |

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| FORM FEG041-1S.A.SIZE, REV. B |
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SHEET 1 OF 2

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2

READ ALL INSTRUCTIONS BEFORE DISASSEMBLY


REFER TO THE ILLUSTRATION ON PAGE ONE FOR COMPONENT NUMBERS AND TOOL LIST

DISASSEMBLY

1. Clamp work support body (2) in vise and using 3/16" hex key remove SHCS (23) from bottom cap (4). Remove bottom cap (4) from body (2) and remove o-ring (7) and back-up ring (17).
2. Slide shuttle piston (12) sub-assembly out of body (2). Remove wiper (22), back-up ring (19), bevel seal (20), o-rings (8) and back-up rings (18) from body (2). Remove T-seal (21) from shuttle piston (12).
3. Using 1" and 1 1/8" wrenches remove contact bolt (3) from plunger (13), remove spring (27) and o-ring (5).
4. Clamp shuttle piston (12) in vise clamping on the flats near the bottom. Remove SHCS (24) and washer (29), plunger can now be removed.
5. Using 1 1/16" deep well socket remove stud (28) from piston retainer (14) and remove o-ring (9) from stud. Remove spring (26), washer (15), and ball (1).
6. Using small flat blade screw driver, remove wiper (30) from shuttle piston (12). CAUTION: DO NOT DAMAGE INSIDE OF SLEEVE (25) OR SLEEVE RETAINER (16).
7. DO NOT REMOVE SLEEVE RETAINER (16) OR PISTON RETAINER (14) FROM SHUTTLE PISTON (12). DOING SO WILL VOID PRODUCT WARRANTY!
8. Clean all parts thoroughly and set aside to dry.

ASSEMBLY

1. Lubricate o-rings (5), (7) & (9), T-seal (21), bevel seal (20), back-up rings (17) & (19) and wiper (22) with clean hydraulic oil (Vektek 65-0010-01 or equivalent). Apply Loctite® primer N or equivalent to the threads of contact bolt (3), then allow to dry.
2. Install ball (1), washer (15), spring (26) into piston retainer (14) through top of shuttle piston (12). Install o-ring (9) on SAE 6 boss of stud (28). Torque stud into piston retainer, 30 ft-lb.
3. Press wiper (30) into top of shuttle piston (12) using only enough force to seat wiper into counterbore. CAUTION: EXCESS FORCE MAY CAUSE DAMAGE TO WIPER.
4. Slide plunger (13) into sleeve (25). Install washer (29) and SHCS (24), torque to 25 ft-lb. Install spring (27) into plunger (13). Install o-ring (5) onto contact bolt (3) and apply medium strength Loctite® (blue) to threads. Thread contact bolt (3) into plunger (13) and torque to 30 ft-lb. Plunger should freely move up and down in sleeve without binding or dragging. Spring force should return plunger to full stroke without sticking.
5. Install T-seal (21) onto shuttle piston (12) with round bulb facing out. Install back-up rings on each side of T-seal bulb. Make sure back-up rings are seated.
6. Install bevel seal (20) into body (2) with lips facing piston bore, push to bottom of groove, then install back-up ring (19). Make sure seals are not rolled. Install snap-in wiper (22) into body (2).
7. Slide shuttle piston (12) subassembly into body (2) bore. Shuttle piston should slide smoothly up and down in bore.
8. Install back-up ring (17) and o-ring (7) onto cap (4). Install cap (4) into body (2) with holes in proper orientation. Apply anti-seize to threads of SHCS (23), insert through cap and thread into body. Torque to 16 ft-lb using a criss-cross pattern.
9. Install o-rings (8) and back-up rings (18) onto body. Make sure back-up rings are not rolled.

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| VEKTEK, INC. 1334 E. SIXTH AVE. P.O. BOX 625 EMPORIA, KS. 66801 U.S.A. | | |
| INSTRUCTION SHEET, WS, DA, CGS, CM, 5500 | | |
| ***** | | |
| SIZE A | 1S1021 | REV B |
| FORM FEG035_PL.ASIZE, REV. B | | |

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SHEET 2 OF 2