

LOCKHEED MARTIN PROPRIETARY INFORMATION



DOC. NO. 6109-928094
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DATA SHEET 1 BGM-3 SENSOR CALIBRATION USING AN ULTRADEX DIVIDING HEAD

S/N 213 , P/N 6109-300503-1

DATE 3/30/04 TIME 1300 CALIBRATED BY DR STUBBS

TREND = _____ MGAL/DAY

- (1) Output Pulses/400 Sync pulses at 0° 250 77 84 pulses
- (2) Output Pulses/400 Sync pulses at 20° 134 76 20 pulses
- (3) Output Pulses/400 Sync pulses at 340° 134 76 45 pulses
- (4) (1) ÷ 100 = 25077.84 PPS
- (5) (2) ÷ 100 = 13476.20 PPS
- (6) (3) ÷ 100 = 13476.45 PPS
- (7) ½[(5)+(6)] = 13476.325 PPS
- (8) {[(4) - (7)] x 10⁻⁶}/(1-cos(20°)) = 0.192373058 PPS/micro g
- (9) 0.980375*(8) = 5.0962178 mgal/PPS **Scale Factor** (Spec: 4.0 to 6.0 mgal/PPS)
- (10) (4) x (9) x 10⁻³ = 127.8021 gals
- (11) 980.375** - (10) = 852.5729 gals
- (12) **CALIB** output pulses/400 sync pulses = 2500288 pulses
- (13) **TEST** output pulses/400 sync pulses = 2500000 pulses
- (14) **CALIB** equivalent = [(12) x (9)] ÷ 100,000 = 127.4201 gals
- (15) **TEST** equivalent = [(13) x (9)] ÷ 100,000 = 127.4054 gals
- (16) (11) x 1000 = 852572.9 mgals **Bias** (Spec: (17) to (18))
- (17) 1000(977-25 x (9)) = 849594.6 mgals (lower limit)
- (18) 1000(983-25 x (9)) = 855594.6 mgals (upper limit)

* local gravity at Wheatfield (980.375 gals) ÷ 1000. Value must be changed if Calibration is done elsewhere.
 ** local gravity at Wheatfield (980.375 gals). Value must be changed if Calibration is done elsewhere.

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LOCKHEED MARTIN
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 2221 Niagara Falls Blvd., Niagara Falls, NY 14304

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