

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

**Inspection and Repair of Digital Aircraft Weighing Scales (DAWS)
NSN 6670-01-389-3887, PN (AC1-25LP- 410)**

Headquarters Department of the Army, Washington, D.C.

7 JULY 2008

DISTRIBUTION STATEMENT A: Approval for public release, distribution is unlimited

NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.

1. **PURPOSE:** The purpose of this TB is to inspect all DAWS returning from Operation Iraqi Freedom/Operation Enduring Freedom (OIF/OEF) to determine the need for repair or replacement and to incorporate approved configuration changes via separately funded MWO kits.
2. **PRIORITY CLASSIFICATION.** Routine.
3. **SUMMARY OF PROBLEM.** System fatigue encountered during OIF/OEF may have caused system or component deterioration that dictates repair or replacement.
4. **REFERENCE MATERIEL.** The DAWS is a Non Developmental Item (NDI)/Commercial off the Shelf system consisting of Original Equipment Manufacturer (OEM) operator/maintainer manuals only. Calibration and repair procedures were established and approved by the Test Measurement and Diagnostic Equipment (TMDE) activity. These procedures provide guidance for maintenance above the operator/maintainer level and will be used to complete this effort.
5. **APPLICATION.** This TB shall be applied to all DAWS systems fitting the description listed in Table 1 returning from OIF/OEF. DAWS Reset will occur based on Department of the Army Master Priority List (DAMPL) sequence and will be coordinated through all applicable MACOMs.

Table 1. DAWS (Class VII, Major Item)		
DESCRIPTION	PART NUMBER	NSN
Digital Aircraft Weighing Scales	AC1-25LP-410	6670-01-389-3887

6. TRANSPORTATION.

- a. The DAWS identified for Reset will be shipped based on direction from PM AGSE and Reset PM. A Transportation Accounting Code will be provided to the unit for shipment to the Reset facility.
- b. The DAWS is not a transportability problem item as defined in AR 70-47 and can be transported by military and civilian transportation systems.

7. MAINTENANCE REQUIREMENTS.

- a. The PM AGSE will approve and fund a Modification Work Order (MWO) application that will direct DAWS from a 4 scale to 3 scale configuration and will be applied during Reset.
- b. All data plates, decals, and stencils shall be legible. Replace questionable items.
- c. Additional data plates will be attached to the exterior of the cases that includes the following information:
 - (1) National Stock Number.
 - (2) Reset facility name.
 - (3) Date of Reset.
 - (4) Serial Number.
 - (5) Box 1, or 2 of 2.
- d. **10,000 lb. Capacity Low Profile Platform Scale.**
 - (1) Inspect digital readout screen for cracks, breaks, and scratches. Replace if any cracks or breaks are detected or when viewing capabilities are impaired.
 - (2) Inspect for disfigurement due to bends and dents. Form to original shape/appearance or replace if not possible.
 - (3) Ensure charger connector, battery cap, and switches are present and serviceable. Repair or replace as required.
 - (4) Send to TMDE for calibration and/or repair.
- e. **Ramps.** Inspect for disfigurement due to bends and dents. Form to original shape/appearance or replace if not possible.
- f. **Axle Spacers (Overrun Extensions).** Inspect for disfigurement due to bends and dents. Form to original shape/appearance or replace if not possible.
- g. **Accessory Leveling Kit.** Inspect kit content for accountability and serviceability to ensure free of cracks, breaks, or bends that impact functionality. Inspect case for cuts, cracks, holes, tears, excessive wear, faulty latches, handles, and hinges that function improperly. Replace items that do not meet these criteria. The kit is composed of the following items:
 - (1) Chalk and Bag.
 - (2) Chalk Line.
 - (3) Tape Measure.
 - (4) Plumb Bob.

- (5) Level.
 - (6) Level Bar.
 - (7) Test Tube.
 - (8) Test Tube Base.
 - (8) Fuel Dipper.
 - (10) Hydrometer.
 - (11) Ruler.
 - (12) Screw Driver.
- h. **120/220 VAC Charger (4-50 ft cable).** Inspect cables for cuts, frays, opens or shorts, connector serviceability, and pin-to-pin continuity. Verify correct voltage and amperage are present at output (reference OEM manual). Replace items that do not meet these criteria.
- i. Clean all item surfaces so that they are free of dirt and grease.
9. **CORRECTION PROCEDURES.** Not applicable unless a questionable defect with the system is identified. A questionable defect will require that a Quality Deficiency Report be processed.
10. **DESIGNATION OF NSNs.** All DAWS systems processed through RESET will be assigned a new NSN.
11. **SUPPLY/PARTS.** The losing organization will be responsible for ensuring that the turn-in DAWS systems are complete by the component listing. Missing and unserviceable items on requisition will remain on requisition to fill known shortages. DA Form 2404 of any discrepancies will be included with the DAWS, to include any document numbers of parts that are missing from the system.
12. **DOCUMENTATION.** Shop travelers, pre and final inspection records, tags, and test sheets shall be used to document all processes, procedures, testing, and inspections specified and performed herein. A single document can be used to cover single or multiple items. The original paperwork shall be maintained at the Reset facility for a period of two years.
13. **TECHNICAL INSPECTION.** Reset of the DAWS systems will be accomplished by representatives who will inspect, repair, or replace the defective items. The representatives will provide all replacement items. The criteria cited in paragraph 7 represent grounds to repair or replace the identified components.
14. **QUALITY ASSURANCE.** Initial and final inspections shall be noted and documented on the final quality inspection sheet.
15. **TECHNICAL PUBLICATIONS AFFECTED.** Not applicable. Each DAWS system will include an operator/maintenance manual.

16. DA FORM 2404, EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET.

EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET <small>For use of this form, see DA PAM 738-750 and 738-751; the proponent agency is DCSLOG</small>					
1. ORGANIZATION			2. NOMENCLATURE AND MODEL		
3. REGISTRATION/SERIAL/NSN	4a. MILES	b. HOURS	c. BOUNDS FIRED	d. HOT STARTS	5. DATE
6. TYPE INSPECTION					
7. APPLICABLE REFERENCE					
TM NUMBER		TM DATE		TM NUMBER	
TM DATE		TM NUMBER		TM DATE	
COLUMN a – Enter TM item number. COLUMN b – Enter the applicable condition status symbol. COLUMN c – Enter deficiencies and shortcomings.			COLUMN d – Show corrective action for deficiency or shortcoming listed in Column c. COLUMN e – Individual ascertaining completed corrective action initial in this column.		
STATUS SYMBOLS					
"X" – Indicates a deficiency in the equipment that places it in an inoperable status. CIRCLED "X" – Indicates a deficiency, however, the equipment may be operated under specific limitations as directed by higher authority or as prescribed locally, until corrective action can be accomplished. HORIZONTAL DASH "-" – Indicates that a required inspection, component replacement, maintenance operation check, or test flight is due but has not been accomplished, or an overdue MWO has not been accomplished.			DIAGONAL "/" – Indicates a material defect other than a deficiency which must be corrected to increase efficiency or to make the item completely serviceable. LAST NAME INITIAL IN BLACK, BLUE-BLACK INK, OR PENCIL - Indicates that a completely satisfactory condition exists. FOR AIRCRAFT - Status symbols will be recorded in red.		
<i>ALL INSPECTIONS AND EQUIPMENT CONDITIONS RECORDED ON THIS FORM HAVE BEEN DETERMINED IN ACCORDANCE WITH DIAGNOSTIC PROCEDURES AND STANDARDS IN THE TM CITED HEREON.</i>					
8a. SIGNATURE (Person(s) performing inspection)		8b. TIME	9a. SIGNATURE (Maintenance Supervisor)		9b. TIME
					10. MANHOURS REQUIRED
TM ITEM NO. <i>a</i>	STATUS <i>b</i>	DEFICIENCIES AND SHORTCOMINGS <i>c</i>		CORRECTIVE ACTION <i>d</i>	INITIAL WHEN CORRECTED <i>e</i>

17. POINTS OF CONTACT.

- a. Logistics points of contact for this TB is Mr. Rickey Clay, SFAE-AV-AS-AG, DSN 645-8391 or commercial (256) 955-8540, e-mail rickey.clay@us.army.mil. (Alt) John McGuire, SFAE-AV-AS-AG, DSN: 645-8540 or commercial (256) 955-8540, e-mail john.mcguire@peoavn.redstone.army.mil.
- b. Technical point of contact for this TB is Mr. Ed Cholewa, AMSAM-MMC-AV-SA, DSN: 897-1575 or commercial (256) 313-1575, e-mail: Edmund.Cholewa@us.army.mil.

18. REPORTING ERRORS. You can help improve this bulletin. If you find mistakes or know of a way to improve procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), located at the back of this bulletin, directly to: Commander, U.S. Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 36898-5000. A reply will be furnished to you. You may also provide DA Form 2028 information to AMCOM via e-mail, fax or the World Wide Web. Our fax number is: DSN 788-6546 or Commercial (256) 842-6546. Our e-mail address is: 2028@redstone.army.mil. Instructions for sending an electronic 2028 may be found at the back of this bulletin immediately preceding the hard copy 2028. For the World Wide Web use: <https://amcom2028.redstone.army.mil>.

By Order of the Secretary of the Army

Official:

A handwritten signature in black ink that reads "Joyce E. Morrow". The signature is written in a cursive, flowing style.

JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army
0818301

GEORGE W. CASEY, JR.
General, United States Army
Chief of Staff

These are the instructions for sending an electronic 2028

The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however only the following fields are mandatory: 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, and 27.

From: "Whomever" whomever@wherever.army.mil

To: 2028@redstone.army.mil

Subject: DA Form 2028

1 **From: Joe Smith**
2 *Unit: home*
3 **Address: 4300 Park**
4 **City:** Hometown
5 **St: MO**
6 **Zip: 77777**
7 **Date Sent:** 19--OCT--93
8 **Pub no:** 55--2840--229--23
9 **Pub Title: TM**
10 **Publication Date:** 04--JUL--85
11 *Change Number: 7*
12 *Submitter Rank: MSG*
13 **Submitter FName:** Joe
14 *Submitter MName: T*
15 **Submitter LName:** Smith
16 **Submitter Phone:** 123--123--1234
17 **Problem: 1**
18 *Page: 2*
19 *Paragraph: 3*
20 *Line: 4*
21 *NSN: 5*
22 *Reference: 6*
23 *Figure: 7*
24 *Table: 8*
25 *Item: 9*
26 *Total: 123*

27 **Text:**

This is the text for the problem below line 27.

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS <small>For use of this form, see AR 25-30; the proponent agency is ODISC4.</small>						Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/ Supply Manuals (SC/SM)	DATE 8/30/02
TO: (Forward to proponent of publication or form)(Include ZIP Code) Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM--MMC--MA--NP Redstone Arsenal, AL 35898						FROM: (Activity and location)(Include ZIP Code) MSG, Jane Q. Doe 1234 Any Street Nowhere Town, AL 34565	
PART 1 - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
PUBLICATION/FORM NUMBER TM 9-1005-433-24					DATE 16 Sep 2002	TITLE Organizational, Direct Support, And General Support Maintenance Manual for Machine Gun, .50 Caliber M3P and M3P Machine Gun Electrical Test Set Used On Avenger Air Defense Weapon System	
ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON	
1	WP0005 PG 3		2			Test or Corrective Action column should identify a different WP number.	
EXAMPLE							
<small>* Reference to line numbers within the paragraph or subparagraph.</small>							
TYPED NAME, GRADE OR TITLE MSG, Jane Q. Doe, SFC					TELEPHONE EXCHANGE/ AUTOVON, PLUS EXTENSION 788-1234		SIGNATURE

TO: (Forward direct to addressee listed in publication) Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM-MMC-MA-NP Redstone Arsenal, AL 35898	FROM: (Activity and location) (Include ZIP Code) MSG, Jane Q. Doe 1234 Any Street Nowhere Town, AL 34565	DATE 8/30/02
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PART II - REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER			DATE	TITLE				
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III - REMARKS (Any general remarks or recommendations or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)

EXAMPLE

TYPED NAME, GRADE OR TITLE MSG, Jane Q. Doe, SFC	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION 788-1234	SIGNATURE
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RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25--30; the proponent agency is ODISC4.						Use PartII(reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/ Supply Manuals (SC/SM)	DATE
TO: (Forward to proponent of publication or form)(Include ZIP Code) Commander, U.S. Army Aviation and Missile Command ATTN: AMSAM-MMC-MA-NP Redstone Arsenal, AL 35898						FROM: (Activity and location)(Include ZIP Code)	
PART 1 --ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
PUBLICATION/FORM NUMBER						DATE	TITLE
ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON	
* Reference to line numbers within the paragraph or subparagraph.							
TYPED NAME, GRADE OR TITLE						TELEPHONE EXCHANGE/ AUTOVON, PLUS EXTENSION	SIGNATURE

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TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
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The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
 1 decimeter = 10 centimeters = 3.94 inches
 1 meter = 10 decimeters = 39.37 inches
 1 dekameter = 10 meters = 32.8 feet
 1 hectometer = 10 dekameters = 328.08 feet
 1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
 1 decigram = 10 centigrams = 1.54 grains
 1 gram = 10 decigram = .035 ounce
 1 decagram = 10 grams = .35 ounce
 1 hectogram = 10 decagrams = 3.52 ounces
 1 kilogram = 10 hectograms = 2.2 pounds
 1 quintal = 100 kilograms = 220.46 pounds
 1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
 1 deciliter = 10 centiliters = 3.38 fl. Ounces
 1 liter = 10 deciliters = 33.81 fl. ounces
 1 dekaliter = 10 liters = 2.64 gallons
 1 hectoliter = 10 dekaliters = 26.42 gallons
 1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
 1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
 1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. Inch
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. Inches
 1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

<i>To change</i>	<i>To</i>	<i>Multiply by</i>	<i>To change</i>	<i>To</i>	<i>Multiply by</i>
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29.573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius °C temperature
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