

UNITED STATES MARINE CORPS

MARINE CORPS AIR BASES, EASTERN AREA CHERRY POINT, NORTH CAROLINA 28533

LF-md/ALA 11100 14 MAY 1981

Fox DIAM

From:

Commander

To:

Commanding Officer, Marine Corps Air Station (H), New River, North

Carolina 28540

Subj:

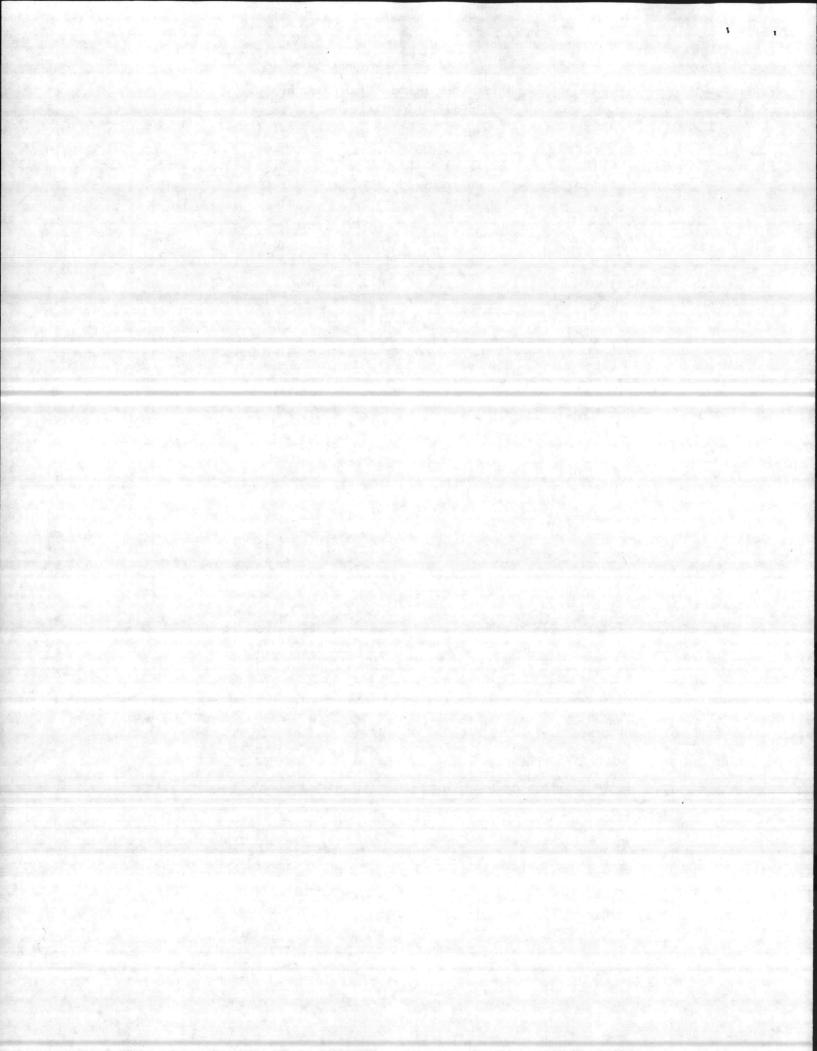
Inspection and Test Procedures for Aircraft Power Check Facilities

Encl: (1) LANTNAVFACENGCOM 1tr 1021:ASG of 22 Apr 1981 (cy)

1. The enclosure is forwarded for information and/or action as appropriate.

A. L. AMIDON

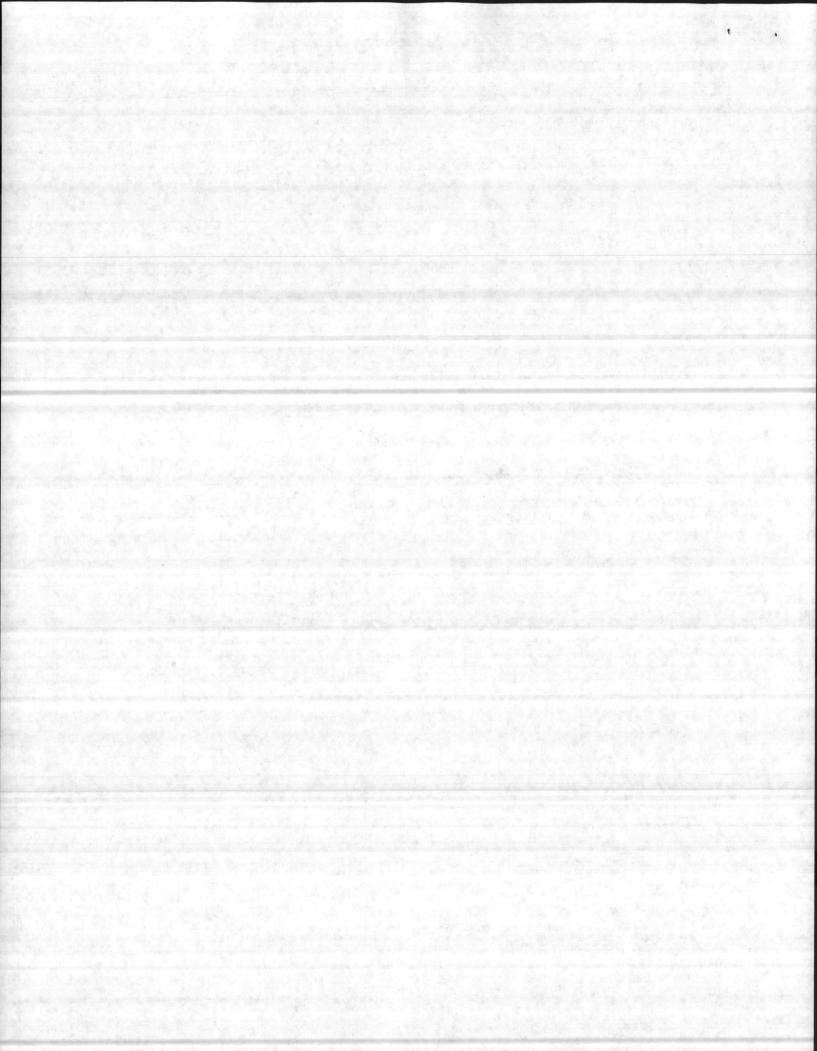
By direction



Naval Speedlette.

USE FOR URGENT

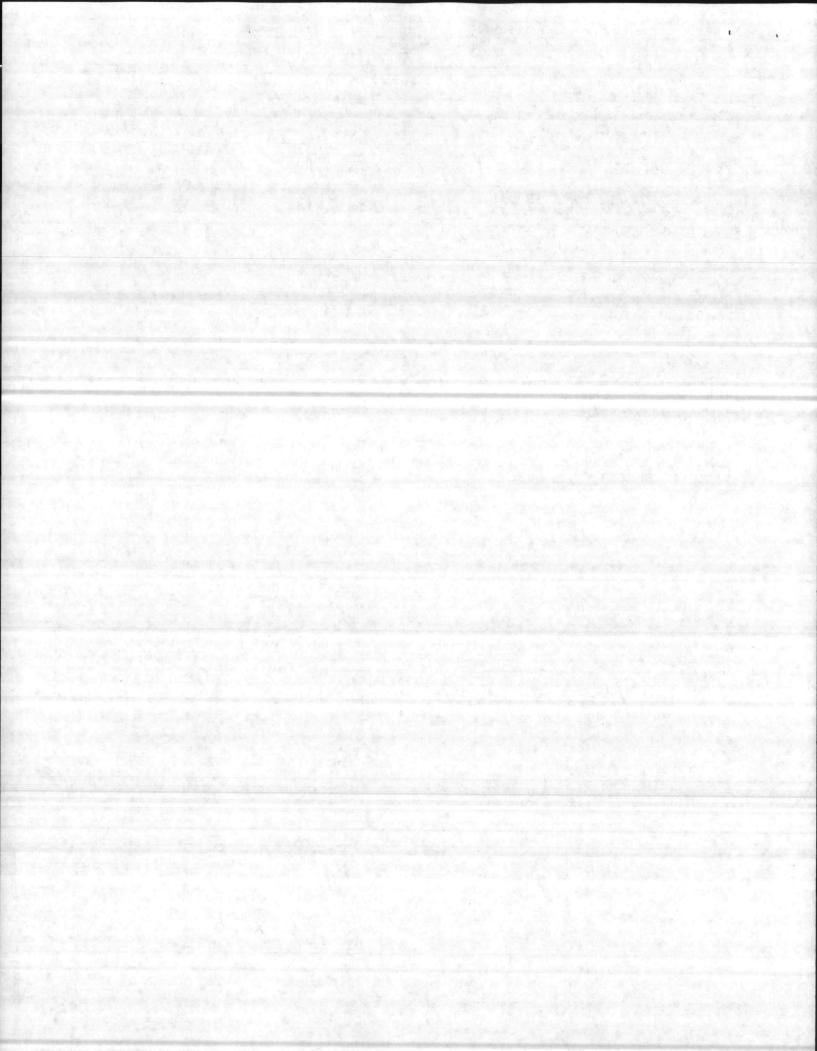
W REGULAR REGISTERED	CLASSIFICATION		DO NOT CLEAR TH COMMUNICATIONS
M MEGOLAN MEGISTERED			
AIR CERTIFIED			MSTRUCTIONS
	DATE	IN REPLY REFER TO	1. Message type phraseology is perm
SPECIAL DELIVERY	22 April 1981	1021:ASG	2. Both oddresses must be
			window envelope or bulk mailing, tended. Include attention codes, known. Use dots and brackets as for window envelope addresses.
Distribution			3. Give priority to processing, routing action required. Avoid time-conscious
			4. In order to speed processing, or identifiable, special window env OPNAV 5216/145A, Speedletter Env is provided for unclassified speed where bulk mailing is not used, window envelopes also may be use bulk mail, speedletters should be an op of regular correspondence.
ANDARD REFERENCES AND ENCLOSUR	RES. IF ANY; TEXT AND SIGNATU	JRE BLOCK	
Culi			
Subj: Inspecti	on and Test Proce	dures for Aircraft	Power Check Facilities
(a) LANI.	MAVEACENGUUM IET	10211:LJH of 21 Jan	n 80
Encl: (1) WEST	NAVFACENGCOM 0702	1077 Apr 01	
1. Reference (a	a) provided inform	ation on devolemen	ent of new guidance
current status	of CIVENCRIAR POPT	T provides additi	onal information, and interim guidance
pending final pu	iblication of MO-3	HUENEME efforts a	nd interim guidance
. S - Line Po	prication of WO-3	22, Volume 4.	
	and distributions and a first or soft		
entronomo de la composición del composición de la composición de la composición del composición de la			
		14	
		(a)	Lampen
		(e)	Langen
		(c. 1	CANPEN
		C. I	CANPEN direction
		C. I By	
TO.		C. I By	
TO		C. I By	
		C. I By	ADDRESS
• Commander		C. I By	ifrection
• Commander Atlantic Division			ADDRESS
• Commander Atlantic Division Naval Facilities	Engineering Comman		ADDRESS REPLY AS SHOWN AT LEFT;
• Commander Atlantic Division	Engineering Comman		ADDRESS REPLY AS SHOWN AT LEFT; OR, REPLY HEREON AND
• Commander Atlantic Division Naval Facilities	Engineering Comman		ADDRESS REPLY AS SHOWN AT LEFT; OR, REPLY HEREON AND
• Commander Atlantic Division Naval Facilities	Engineering Comman		ADDRESS REPLY AS SHOWN AT LEFT: OR, REPLY HEREON AND RETURN



IKS

Distribution:
NAS NORFOLK VA
NAS OCEANA VA
NAVSTA ROOSEVELT ROADS PR
MCAS CHERRY PT NC
MCB CAMP LEJEUNE NC
NAS GUANTANAMO BAY CUBA
NAS BERMUDA
NAVSTA KEFLAVIK IC
NAVSUPPACT NAPLES IT
NAVSTA ROTA SP
NAF SIGONELLA

COPY to:
CINCLANTFLT
CINCUSNAVEUR LONDON UK
COMNAVAIRLANT NORFOLK VA
COMFAIRMED
COMNAVFACENGCOM
LANTNAVFACENGCOMBRO NAPLES IT
WESTNAVFACENGCOM (Code 102)
PWC NORVA



սորորորդի հուրորորորորորորորորորորորության . . . U U N C L A S S I F I E D

ROUTINE

R 3721377 4PR 61

FM WESTNAVFACENGCOM SAN BRUNO CA

TO COMNAVAIRPAC SAN DIEGO CA CHESKAVFACENGEOM MASHINGTON DC LANTNAVFACENGEON NORFOLK VA NORTHNAVFACENGEOM PHILADELPHIA PA PWC GUAM PWC PEARL HARDOR HI PAC SAN DIEGO CA PWC SUBIC BAY RP COMNAVAIRSYSCOM WASHINGTON DC

INFO CIVENSRLAS PORT HUENEME CA COMMARCORSASESPAC CAMP H M SMITH HI WAVAIRENGCEN LAKEHURST NJ

COMNAVFACENGCOM ALEXANDRIA VA SOUTHNAVFACENGCOM CHARLESTON SC Dues THE DESIGN PACNAVFACENGCOM PEARL HARBOR HI PWC GREAT LAKES IL PWC NORFOLK VA INSPECTIONS? PWC PENSACOLA FL PWC SAN FRANCISCO CA PWC YOKOSUKA JA

Acron 12

102-A

WAR OO DE OO 15 W/P Expers COMFAIRWESTPAC ATSUGI JA COMCABWEST EL TORO CA

JNCLAS //N11000//

SECTION DI OF D2 //N11000// COMNAVFACE SCOM PASS TO 1002, 0452 (FERENCE), D4B1(JONES), 132F (CAVE) EFDS PASS TO 102 (MAINTENANCE ENGINEERING) IAVAIRSYSCOM PASS TO DOX, 09E, 0703, 06, 04 IAVAIRENGCE: PASS TO ATTENTION: DERION IUBJ: INSPECTION AND TEST PROCEDURES FOR AIRCRAFT POWER HECK TIE-DOAN FACILITIES, SHORE EMPLACED (ONLY)

- . WESTNAVFACENGEOM NOTICE 11018, 7 DEC 1979
- · COMNAVFACENGCOM 142042Z DEC 77
- . COMNAVAIRPAC SAN DIEGO CA 240624Z MAR 81 (NOTAL)
- . FONECON STAN J. LEIMANIS (10028), NAVFACENGOM, AND
- . S. TSUCHIDA (102), WESTNAVFACENGCOM, 27 MARCH 1981.

. REF A ADVISED NEW PROCEDURES ARE BEING DEVELOPED FOR SAFE ROOF LOAD TESTING OF AIRCRAFT POWER CHECK TIE-DOWNS AT SHORE ACILITIES. NEW PROCEDURES WILL BE IN MO-322, VOL 4, WHEN

, REF B. ADVISED THOSE PARTS OF SUPERSEDED NOW 1974 MO-322,

VRIPWC NORFELK VALAL ... ACT VRILANTNAVFACE GCOM NORFOLK VA(18) ... ACT

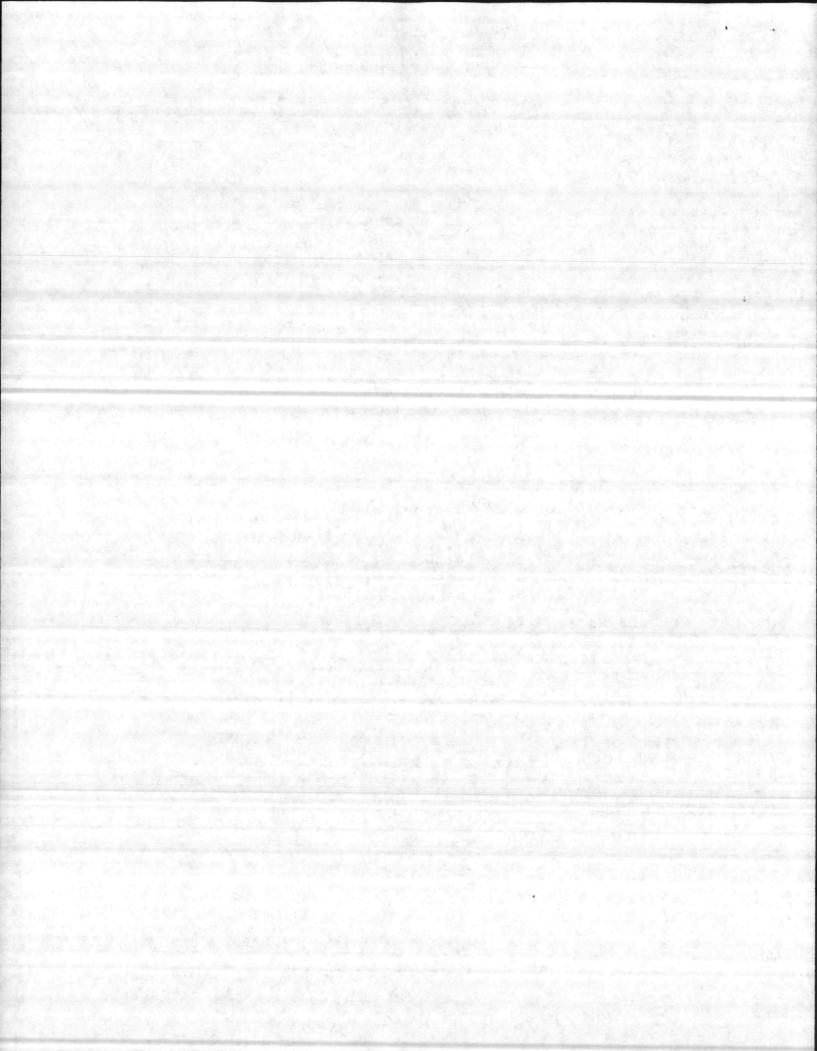
RTD:000-000/COPIES:0022

101913/097 N: AUIB34cc7

1 GF 4 MATA2612 097/23:06Z

072107Z APR 61 WESTNAVFACENGO

UNCLASSIFIED



VOL 1 ON ALL SPECIALIZED INSPECTIONS INCLUDING TIE-DOWN TESTING REMAIN APPLICABLE PENDING MO-322, VOL 4 ISSUE.

3. REF C. QUERIED NAVFACENGOM IF TIE-DOWN TESTING OF REF B. HAS SINCE BEEN WAIVED OR MODIFIED.

4. REF D. REQUESTED MESTNAVFACENGOOM TO PROVIDE REPLY TO REF C. SINCE DEVELOPMENT PROGRAM FOR NEW TESTING PROCEDURES WAS ASSIGNED TO MESTNAVFACENGOOM WITH ROTGE ASSISTANCE OF CIVIL ENGINEERING LAB (CEL) PT. HUENEME. BY REF D., COMNAVFACENGOOM REQUESTED THAT THIS MESSAGE ALSO PROVIDE ALL ADDRESSEES WITH CURRENT STATUS OF PROGRAM AND ANY OTHER INTERIM GUIDANCE PENDING FINAL PUBLICATION, OF MO-322, VOL 4.

CONDUCTED BY WESTNAVFACENGOM IN FYBO, NINETY PERCENT OF NAVY SHORE EMPLACED TIE-DOWNS ARE TYPE XIA. TYPE XIA IS THE SHORE PAVEMENT EMPLACED TIE-DOWN THAT IS IDENTIFIED AS THE 360 DEGREE AIRCRAFT POWER CHECK FACILITY, TYPE 1, NAVAIR DWG NO. SE 211 90. 1-1E REFERENCED IN SECTION 3, PAGE 3-17, OF MO-322, VOL 1 DATED NOV 74. ACCORDINGLY, THE SCOPE OF CURRENT CEL WORK FOCUSES ON REVISED EQUIPMENT AND PROCEDURES FOR TESTING THE NAVFAC TYPE XIA TIE-DOWN.

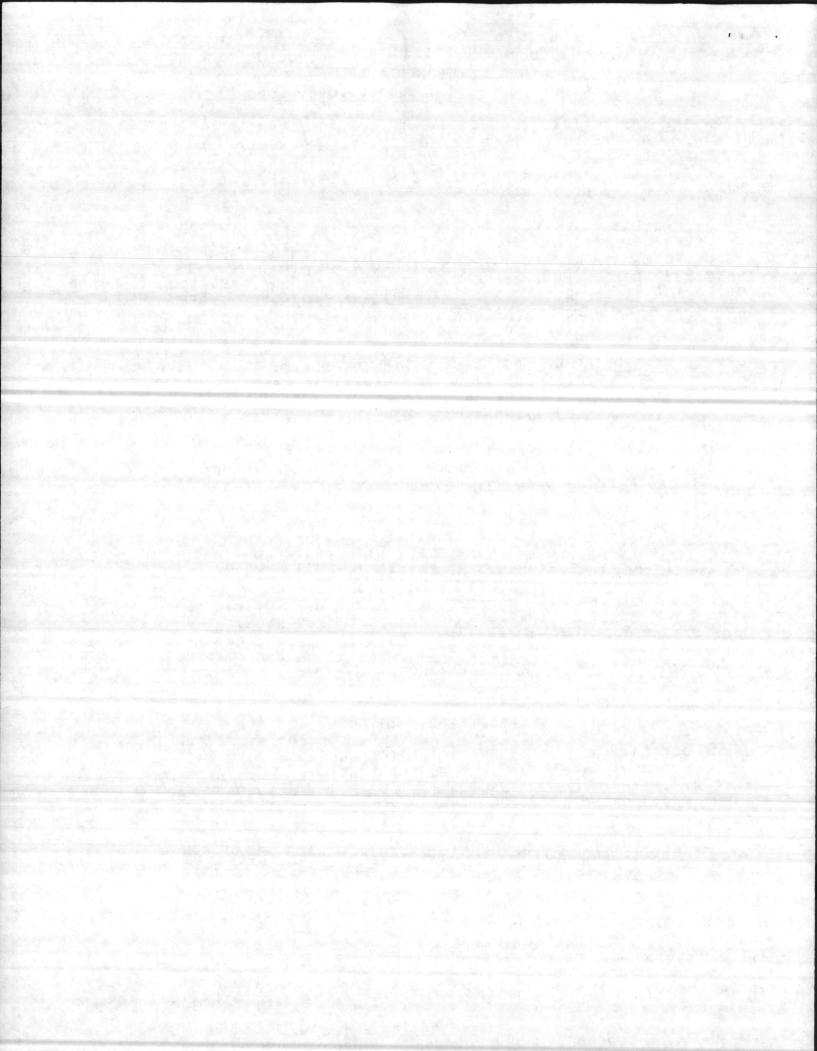
6. NEW TEST PROCEDURES: THE NEW TESTING PROCEDURES AND EQUIPMENT DEVISED BY CEL ARE COMPLETELY DIFFERENT FROM THE HAZARDOUS METHOD AND EQUIPMENT PRESCRIBED IN MO-322 VOL 1 WHICH UTILIZED SALVAGE CRANE WITH HOIST BLOCK DEVICES TO APPLY STATIC PULL LOADS. BRIEFLY, NEW METHOD WILL UTILIZE CEL DESIGNED HYDRAULIC JACK WITH SPECIAL FITTINGS MOUNTED DIRECTLY OVER THE XIA CROSS PIECE. A PROTOTYPE MODEL OF THE NEW HYDRAULIC JACK AND SPECIAL FITTINGS HAS BEEN COMPLETED AND FIELD TESTING IS CURRENTLY SCHEDULED.

7. SCHEDULE FOR COMPLETION OF CEL STUDY. FINAL RESULTS OF CEL STUDY FOR TESTING THE XIA TIE-DOWN IS SCHEDULED FOR APPROXIMATELY SEP 81. STUDY WILL INCLUDE RECOMMENDATIONS FOR FREQUENCY OF TESTING, DESIGN SPECIFICATION AND COST ESTIMATE FOR TEST EQUIPMENT, PROCEDURES/METHOD OF TESTING, AND OTHER SIGNIFICANT INSTRUCTIONS. PUBLICATION AND DISTRIBUTION OF PERTINENT PAGES OF MO-322, VOL IV WILL FOLLOW IMMEDIATELY THEREAFTER.

- 8. CEL FINDINGS: FOLLOWING VALUABLE AND CRITICAL INFORMATION IS FOR ACTIVITIES AND PERSONNEL WHO REQUIRE TESTING OF XIA TIE-DOWN FACILITIES UTILIZING ANY TYPE OF EQUIPMENT. RECOMMEND READ ON.
- 9. INTERIM GUIDANCE AND RECOMMENDATIONS ON THE USE, INSPECTION AND TESTING OF TYPE XIA TIE-DOWN FACILITY:
 A. CEL ANALYSIS CALCULATED THAT XIA SAFETY FACTOR AT

101913/097. CSN: AUIB04667 2 OF 4 MATA2612 097/23:06Z

072107Z APR 81 WESTNAVFACENGC



IMULTANEOUS MAXIMUM THRUST OF BOTH ENGINES OF MOST POWERFUL NAVY AIRCRAFT ATTACHABLE IN PRESCRIBED FIELD TEST POSITION IS SLIGHTLY ABOVE 1. A SAFE WORKING FACTOR OF 2 IS RECOMMENDED. RECOMMEND IMMEDIATE LOCAL INSTRUCTION BE CONSIDERED TO LIMIT ALL POWER CHECK RUN UPS TO ONE ENGINE AT A TIME ONLY.

SIMULTANEOUS BOTH ENGINE THRUSTS AT LESS THAN MAXIMUM POWER OF LESS POWERFUL AIRCRAFT MIGHT APPEAR TO BE SAFE, BUT DUE TO DIFFERENT ANGLES OF ATTACHMENT MAY NOT CALCULATE SAFELY.

36D-5779 MAY BE ABLE TO PROVIDE SPECIFIC RELIEF SPECIFICATION FOR A PARTICULAR AIRCRAFT AND PARTICULAR SITUATION. SINCE TO UNILATERALLY LIMIT RUN UP CHECK TO ONE ENGINE AT A TIME IS REPEATED.

B. THE 45,000 POUND TEST LOAD AT 30 DEGREES TO HORIZONTAL SPECIFIED IN NOV 1974 MU-322, VOL I IS INADEQUATE TO MATCH REAL MAXIMUM AIRCRAFT PULL. A TEST LOAD AT 10 DEGREES IORIZONTAL AND NOT EXCEEDING 27,500 POUNDS ARE NEEDED. IPPLY TEST LOAD GRADUALLY TO 18,500 POUNDS, THEN IN 2000 DUND INCREMENTS TO 24,500 POUNDS, THEN IN 1000 POUND NCREMENTS TO 27,500 POUNDS. HOWEVER, TESTING SHOULD BE VOIDED IF POSSIBLE, AND MUST BE CAREFULLY DONE TO PREVENT ASILY OVERLOADING BEYOND 27,500 POUNDS AT THIS CRITICAL NGLE WITH DIFFICULT TO MANAGE CRANE CONTROL. . PRIOR TO PARAGRAPH B ABOVE TESTING, PERFORM INSPECTION OR NEED TO LOAD TEST AS FOLLOWS. CLEAN WITH WIRE BRUSH TO EMOVE RUST, EXPOSE WELDS AND ANY CRACKING OR BENDING OR IELDING. RUST ON UNDERSIDE OF X BARS MAY NOT BE COMPLETELY MOVEABLE. X BAR UNDERSIDE WELDS MAY NOT BE VIEWABLE. PICAL XIA FAILURE MODE IS WELD FAILURE AT X BAR END INNECTIONS TO RING. A TOTAL OF TEN XIA FAILURES HAVE BEEN PORTED WORLDWIDE. ONE OBSERVABLE WELD DEFECT OR CRACK OR NDING OR YIELDING IS CAUSE FOR CLOSING DOWN THAT TIE-DOWN D FURTHER LOAD TESTING IS NOT NEEDED.

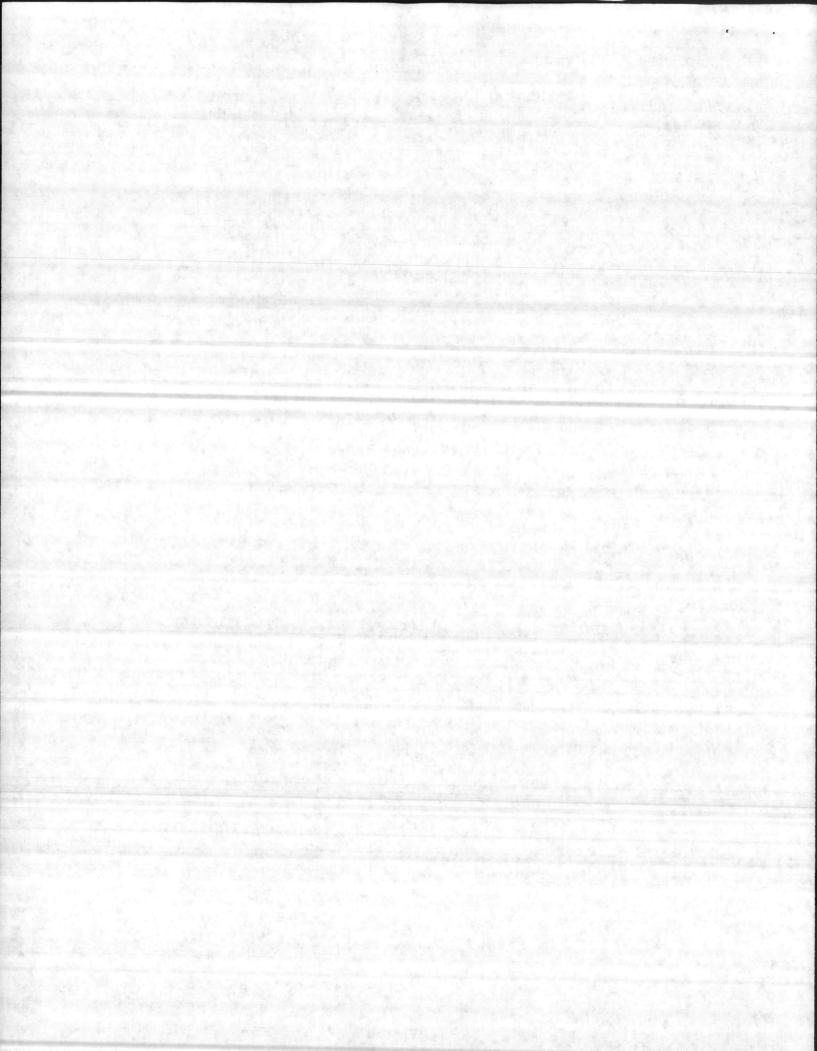
THEN MEASURE DIAMETERS OF X BARS WITH MICROMETER. A
E-DOWN WITH ANY X BAR DIAMETER OF LESS THAN 93 PERCENT OF
IGINAL DIAMETER SHOULD BE LOAD TESTED IF TIE-DOWN IS TO BE
ED TESTING CAUSED WELD DEFECT, CRACKING, OR BENDING OR
ELDING ARE CAUSE FOR REJECTION AND CLOSING DOWN THAT
VISIBLE CRACKS, DEFORMATION, OR WELD DEFECTS, IT IS
OMMENDED THAT LOAD TEST NEED NOT BE ACCOMPLISHED IN FY BI
BDFORE MID- FYB2 EXCEPT IN CASES OF INSPECTORS SUSPICION

EXAMINE SURROUNDING PAVEMNET FOR SPALLS AND OTHER TRESS. SINCE SAFETY FACTOR OF XIA EMBEDMENT IN CONCRETE OVER 4, THE CONCRETE SHOULD PRESENT NO PROBLEM AND NO T. FOR CONCRETE IS BEING INCLUDED. HOWEVER, PRIOR TO AIR, FOR EVALUATION AND ASSISTANCE, SKETCH AND PHOTOGRAPH ATION AND SIZE OF CONCRETE CRACKS WITHIN 3 FEET OF TIE-DOWN.

D1913/197 AU1604667

3 OF 4 MATA2612 097/23:062

072107Z APR 81 WESTNAVFACENGO

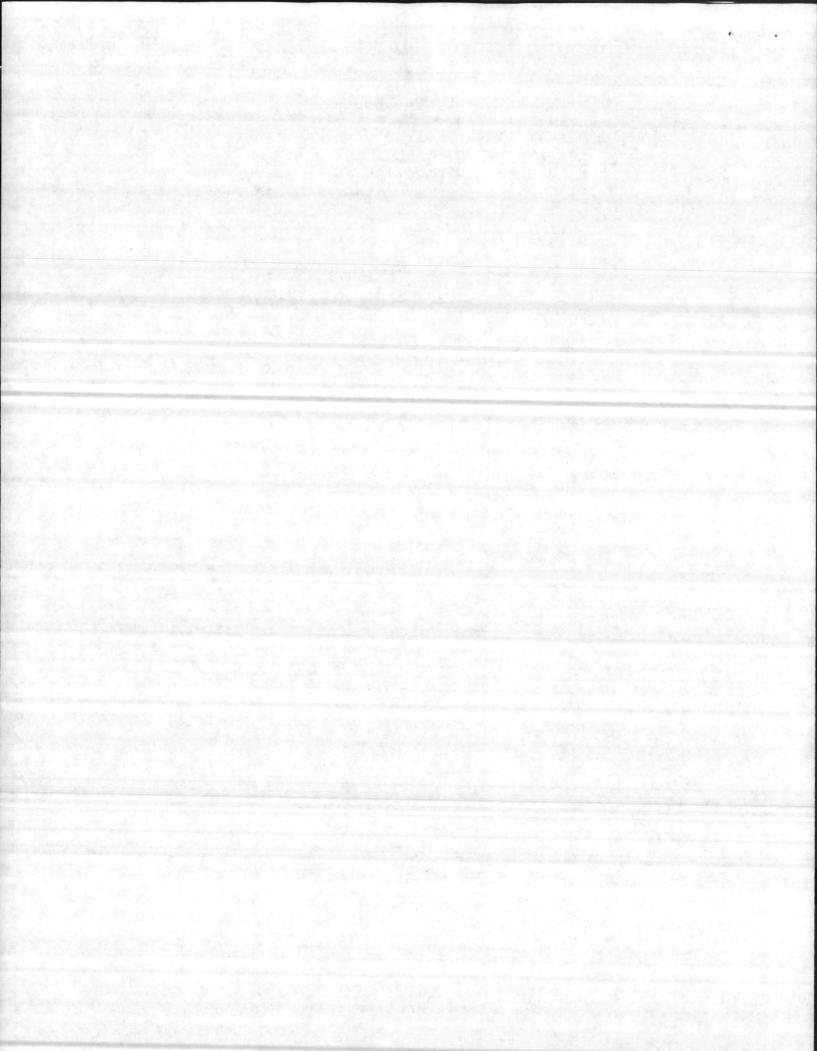


SEND CRACK IDENTIFICATION TO CODE L53, CIVENGRLAB, PORT HUENEME. RECOMMEND MAITING FOR CIVENGRLAB RESPONSE.

10. ASSISTANCE: PENDING FINAL PUBLICATION OF MO-322 VOL IV.

CORRESPONDING MITH CIVENGRLAB/L53 AND MESTNAVFACENGCOM/102

BT



ROUTINE

R. 372137Z APR 61

FM WESTNAVFACENGEOM SAN BRUND CA

TO COMMAVAIRPAC SAN DIEGO CA
CHESNAVFACENGCOM WASHINGTON DC
LANTNAVFACENGCOM NORFOLK VA
NORTHNAVFACENGCOM PHILADELPHIA PA
PWC GUAM
PNC PEARL HARBOR HI
PWC SAN DIEGO CA
PWC SUBIC BAY RP
COMMAVAIRSYSCOM WASHINGTON DC

COMNAVFACENGCOM ALEXANDRIA VA
SOUTHNAVFACENGCOM CHARLESTON SC
PACNAVFACENGCOM PEARL HARBOR HI
PWC GREAT LAKES IL
PWC NORFOLK VA
PWC PENSACOLA FL
PWC SAN FRANCISCO CA
PWC YOKOSUKA JA

INFO CIVENGRLAB PORT HUENEME CA COMMARCORBASESPAC CAMP H M SMITH HI NAVAIRENGCEN LAKEHURST NJ

COMFAIRMESTPAC ATSUGI JA

UNCLAS

FINAL SECTION OF D2 //N11000//
MAY BE NECESSARY FOR DIFFICULT TO ASSESS OR UNUSUAL SITUATIONS.
11. GENERAL INFORMATION ON OTHER TYPE TIE-DOWNS:

A. TYPE XIII TIE-DOWN HAS A CALCULATED SAFETY FACTOR OVER 5

AND NO SPECIALIZED INSPECTION IS RECOMMENDED OR PLANNED. ONLY DISMENSION INSPECTION CHECKS MAY BE CONSIDERED. ABOUT 2 PERCENT OF NAVY SHORE EMPLACED TIE-DOWNS ARE XIII.

B. STANDARDIZED TESTING FOR AV-8 HOLD DOWNS, WHEEL CHOCKS,

AND REMAINING MISCELLANEOUS TIE-DOWNS WILL BE MORE DIFFICULT AND LESS COST EFFECTIVE. NO EXAMINATIONS HAVE BEEN MADE TO DATE. THEY REPRESENT THE REMAINING 8 PERCENT OF SHORE TIE-DOWNS.

12. REQUEST ADDRESSEES DISSEMINATE ABOVE INFORMATION TO APPLICABLE ACTIVITIES IN YOUR GEOGRAPHICAL AREA OF JURISDICTION.

ST

DLVR:PAC NORFOLK VA(4)...ACT
DLVR:LANTHAVFACENGCOM NORFOLK VA(18)...ACT

RTD:000-000/COPIES:0022

101896/397 CSN:AUIA04138 1 OF MATA2605 097/23:04Z

0721072 APR 81 WESTNAVFACENGC

UNCLASSIFTED

