[redacted]

UNCLASSIFIED

0088

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW	
1st Review Date: 9/9/98	Determination (Circle Numbers):
Authority: ☐ ADC ☒ ADD	1 Classification Retained
Name: W Sayre	2 Classification Changed to: U
2nd Review Date: 9/14/98	3 Contains No DOE Classified Information
Authority: ADD	4 Coordinate With:
Name: R B Craner	5 Contains UCAI? No
	6 Comments: OK for Prepmt

MAY 28 1959

TX-41, 3-2
Project No. T-16017
Case No. 746.00
Completed: 3-6-59
Ref. Sym: 1613(32)

INVENTORIED
AUG 6 '64

INVENTORIED
DATE 4-1-61

TO: DISTRIBUTION

Re: Static Test of Number 2 McLean Suspension System

Object of Test

The object of this test was to determine if the Number 2 McLean suspension system could adequately support the TX-41 during a drop tower test.

INVENTORIED
SEP 14 '65
3428-3

Summary of Results

The Number 2 McLean suspension system was statically proof-tested, prior to its use for the TX-41, TRM-6, drop tower testing, by applying 9.7 g (97,000 pounds) in the vertical direction and 2.7 g (27,000 pounds) in the longitudinal direction. No indication of yielding or failure was detected.

Authorization for Test

This test was authorized by a Work Order Authorization from W. Brown, 1218, to D. Williams, Jr., 1612, dated February 18, 1959. The consultant was Mr. J. M. May, 1218.

Function of Object Tested

The McLean suspension system supports the weapon in the aircraft.

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JUN 1 1959
CENTRAL RECORD FILE

Summary of Past Tests

A previous static test was performed on the TX-41, TRM-1, suspension jig by Division 1612. It is reported in a Memo from H. P. Wheeler, 1612-2 to Mr. P. F. Jones, 1218, Ref. Sym: 1612(798), Project No. TM-842, dated July 30, 1958. The No. 2 McLean suspension system is similar to the TRM-1 suspension jig except the No. 2 McLean suspension system has been reinforced. Following is the summary of results for the previous test:

"The suspension jig was statically tested with a maximum lateral load of 9.7 g (97,000 pounds) on the attached cylinder plus a maximum longitudinal load of 2.7 g (27,000 pounds + 4,000 pounds weight of test cylinder) on the cylinder. With these loads, yielding occurred on the longitudinal beams between 80 and 100 percent of maximum load."

Setup for Test

FILE
FILE TX-41
3-2

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW DOWNGRADING OR DECLASSIFICATION STAMP	
CLASSIFICATION CHANGED TO: U	AUTHORITY: R.B. Craner
Emelda Selph 9/28/98	RECORD ID: 98SN3901
PERSON CHANGING MARKING & DATE	
Carmela M Gallegos 9/25/98	DATED: 9/14/98
PERSON VERIFYING MARKING & DATE	

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Figures 1, 2 and 3 are photographs of the test setup.

The item tested was one McLean Suspension System, No. 2, Sandia Corporation Drawing No. DS(1218)92786, Douglas Aircraft Drawing Nos. 5624069, 9624092, 5624090.

The following equipment was used in the test:

1. One calibrated link.
2. One Baldwin SR-4 load cell, 50,000 pound capacity, Ser. No. 1118.
3. Two Baldwin SR-4 strain indicators, Ser. Nos. 391,905 and 199,392.
4. One Blackhawk hydraulic ram and pump, 50-ton capacity.
5. One Python hydraulic ram, capacity 200,000 pounds.
6. One Hydraulic console.

No instrumentation was used in this test.

Procedure

The suspension system was attached to the cylinder and the bolts which tighten the two belly bands around the cylinder were torqued to approximately 450 foot-pounds.

The suspension system with the attached cylinder was mounted to the static jig as shown in Figures 1, 2 and 3. A vertical load of 97,000 pounds and a longitudinal load of 31,000 pounds (27,000 pounds +4,000 pounds to compensate for the weight of the cylinder), were applied to the suspension system simultaneously. (See Figure 1). The suspension system was inspected for yielding while the load was being applied.

Results

The Number 2 McLean suspension system withstood 9.7 g (97,000 pounds) in the vertical direction and 2.7 g (27,000 pounds) in the longitudinal direction simultaneously with no signs of failure or yielding. The torque on the bolts holding the bands together was 450 foot-pounds before the test and after the test the torque was 350 foot-pounds on one band and 250 foot-pounds on the other.

Conclusions

It is concluded that the No. 2 McLean suspension system is structurally adequate to withstand the loads it will be subjected to in the drop tower

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test of the TM-41, TRM-6, without failure or yielding.

L. J. Woolrich

L. J. WOOLRICH - 1612-1

C. David McGinnis

1613 Project Engineer: C. DAVID MCGINNIS - 1613-3

Approved by: R. S. HOOPER - 1613-3

LJW:1612-1:ec

DISTRIBUTION:

1/6A - P. F. Jones, 1218
Attn: J. M. May
2/6A - W. A. Gardner, 1610
3/6A - D. M. Bruce, 1282
4/6A - J. M. Wiesen, 1592
5/6A - C. L. Gomel, 5323
6/6A - R. K. Smeltzer, 4721-3

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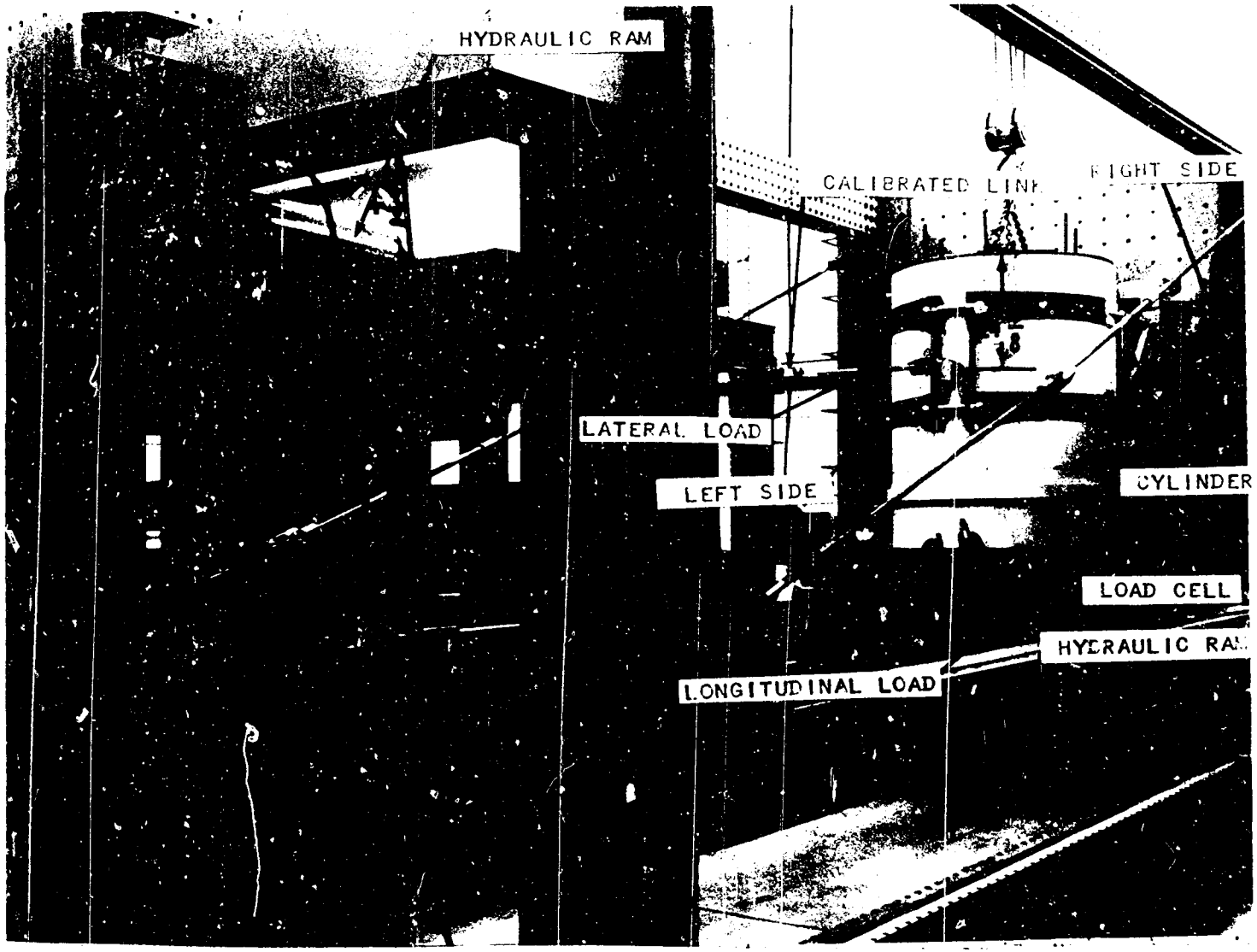

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FIGURE 1 -- TEST SETUP FOR STATIC TEST OF [illegible]

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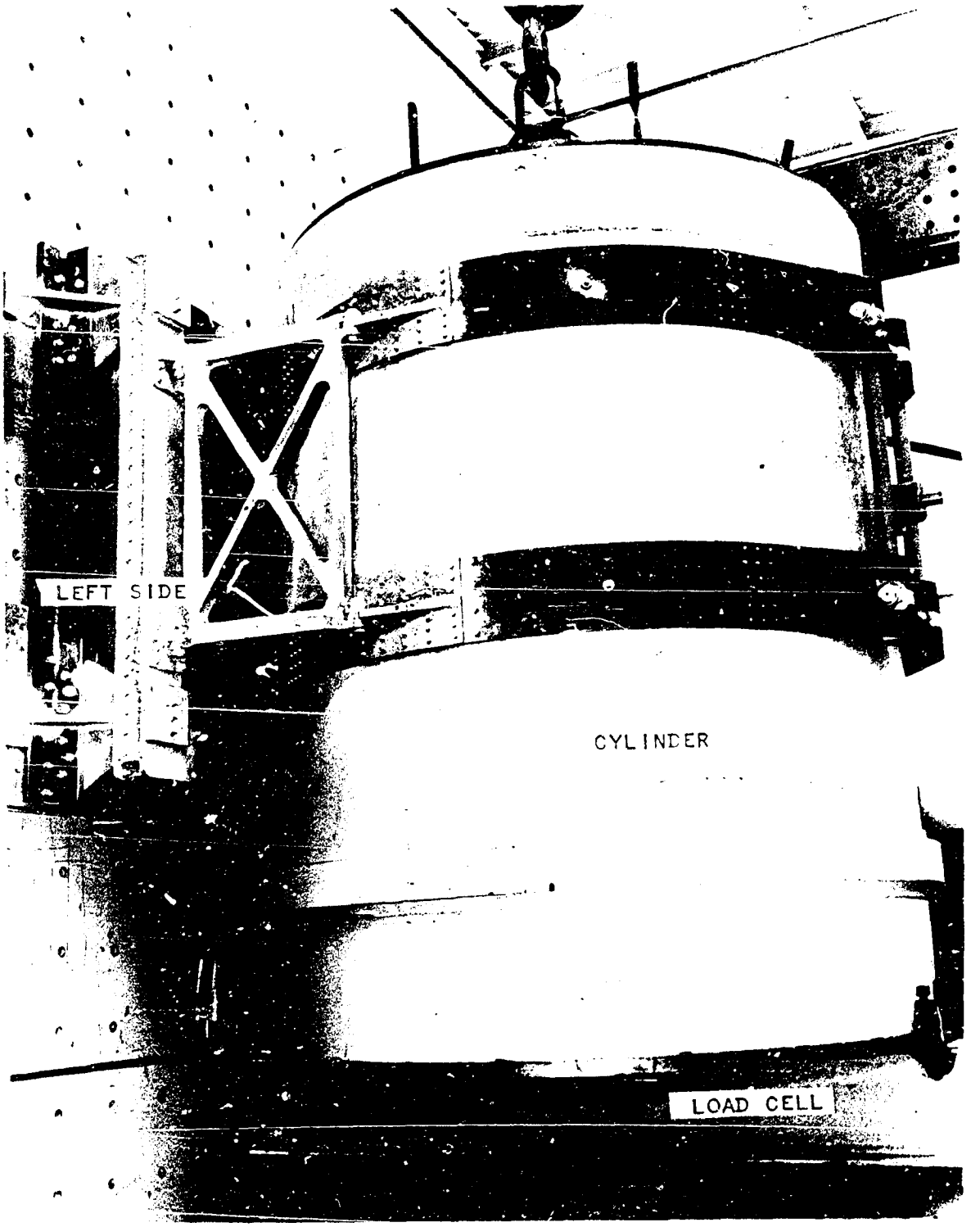

FIGURE 2 -- TEST SETUP FOR STATIC TEST OF NO. 2 MCLEAN SUSPENSION SYSTEM

D# 108725

PROJECT NO. T-16017
REF. SYM: 1613(32)

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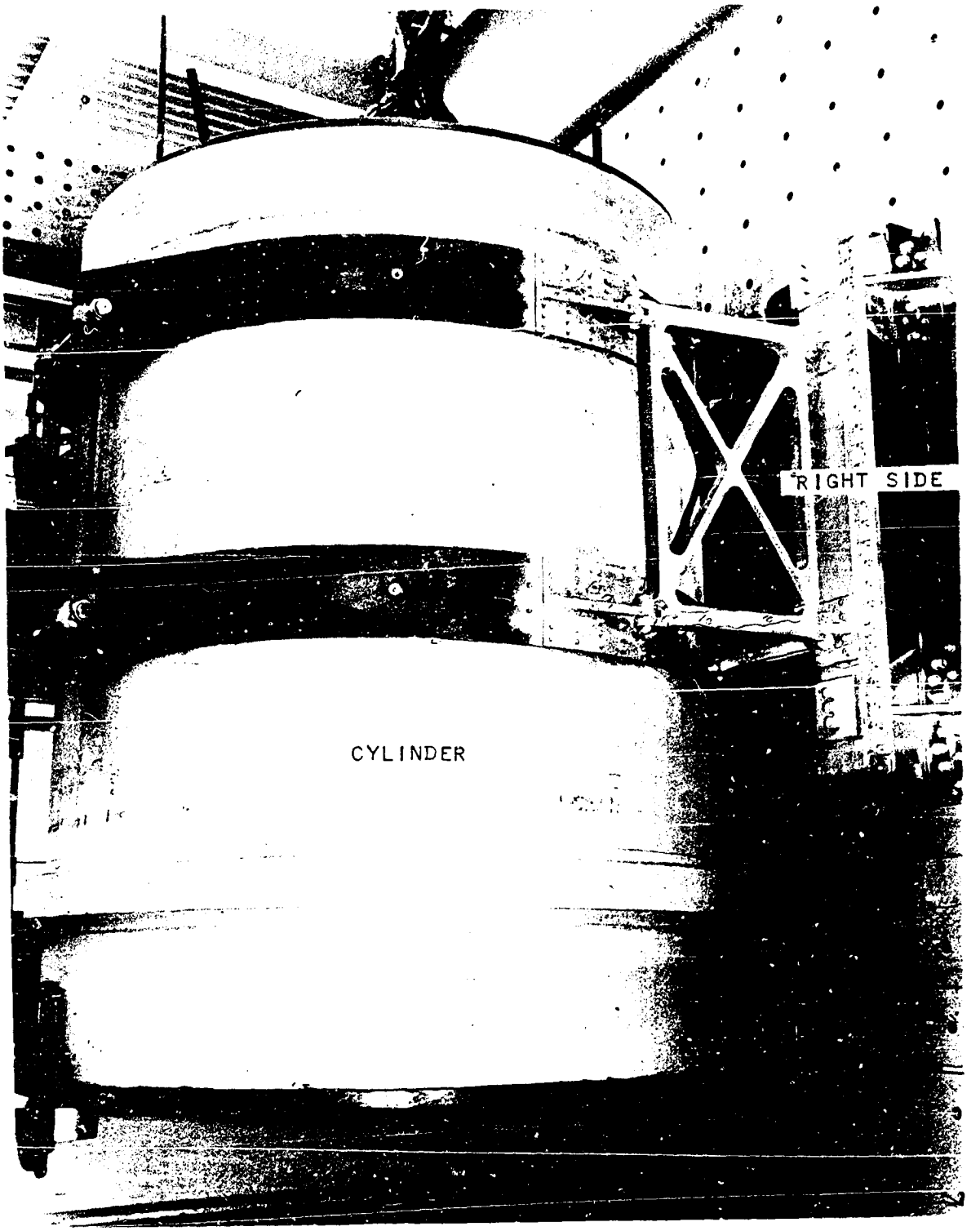

FIGURE 3 -- TEST SETUP FOR STATIC TEST OF NO. 2 MCLEAN SUSPENSION SYSTEM

D# 108726

PROJECT NO. T-16017
REF. SYM: 1613(32)