

DRILL Ø11/32" THRU
C'SINK FOR 5/16-18 F.H.S.C.S.

QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
1	6061-T6	INSTRUMENT STRAIN RELIEF MOUNTING PLATE	T11NM010
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			
Tolerances			
Angles: ± .5°			
Fractions: ± 1/64			
Decimals: .xx ± .01			
.xxx ± .005			
Hole Dia: ± .002			
* DO NOT SCALE DRAWING *			
FINISH: CLEAR ANODIZED			
QUANTITY FOR AN ASSEMBLY: 1			
QUANTITY FOR ENTIRE DUMMY: 1			
DRAWING NUMBER: T11NM010			
Page: 1/1			

REV. #	ZONE	DESCRIPTION	DATE	BY
1	B-2 & TITLE	ADDED THICKNESS DIMENSION, ADDED FINISH	6/14/99	J. POLARD

4

3

2

1

D

C

B

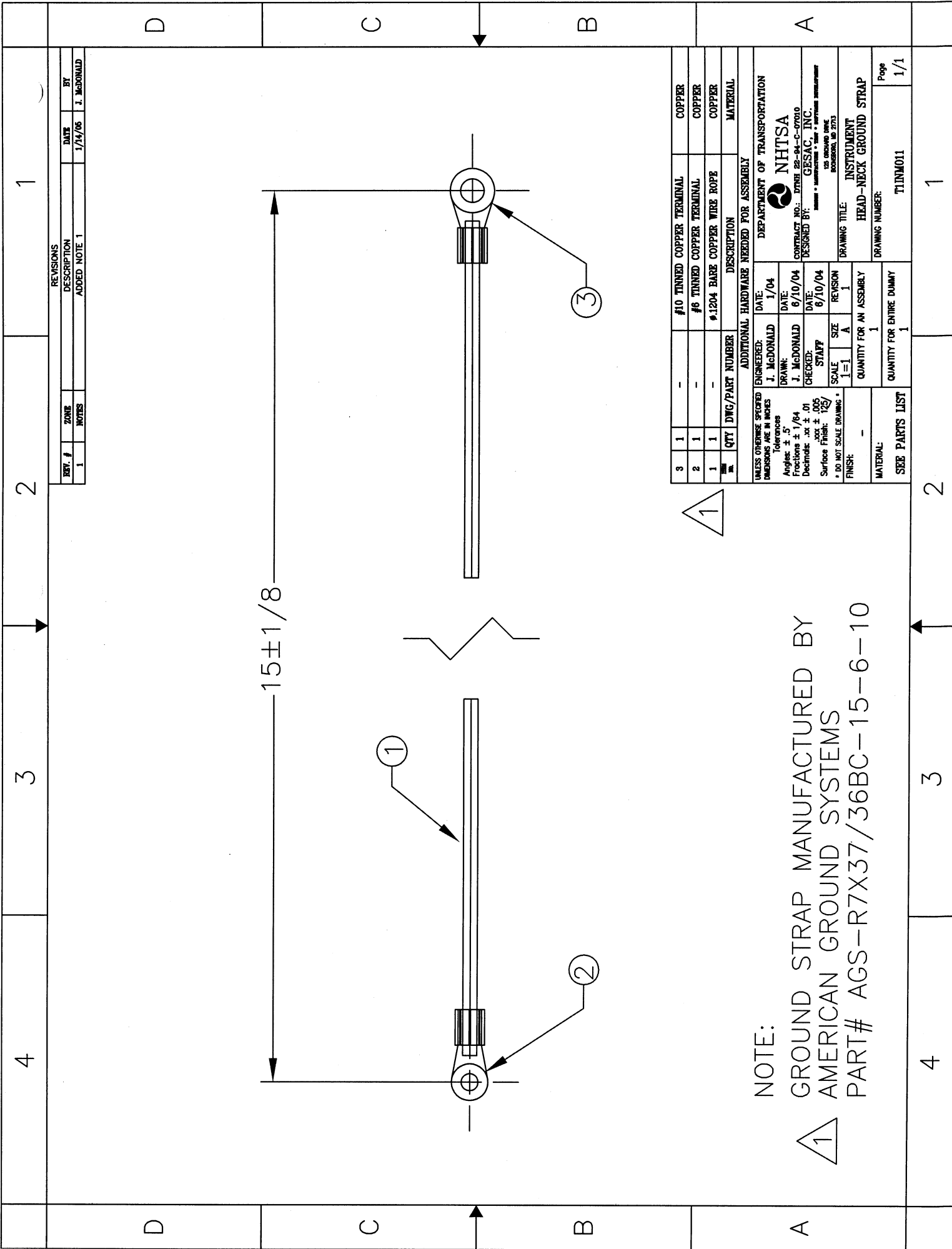
A

4

3

2

1



NOTE:

GROUND STRAP MANUFACTURED BY
 AMERICAN GROUND SYSTEMS
 PART# AGS-R7X37/36BC-15-6-10

REV. #	ZONE	DESCRIPTION	DATE	BY
1		ADDED NOTE 1	1/14/06	J. McDONALD

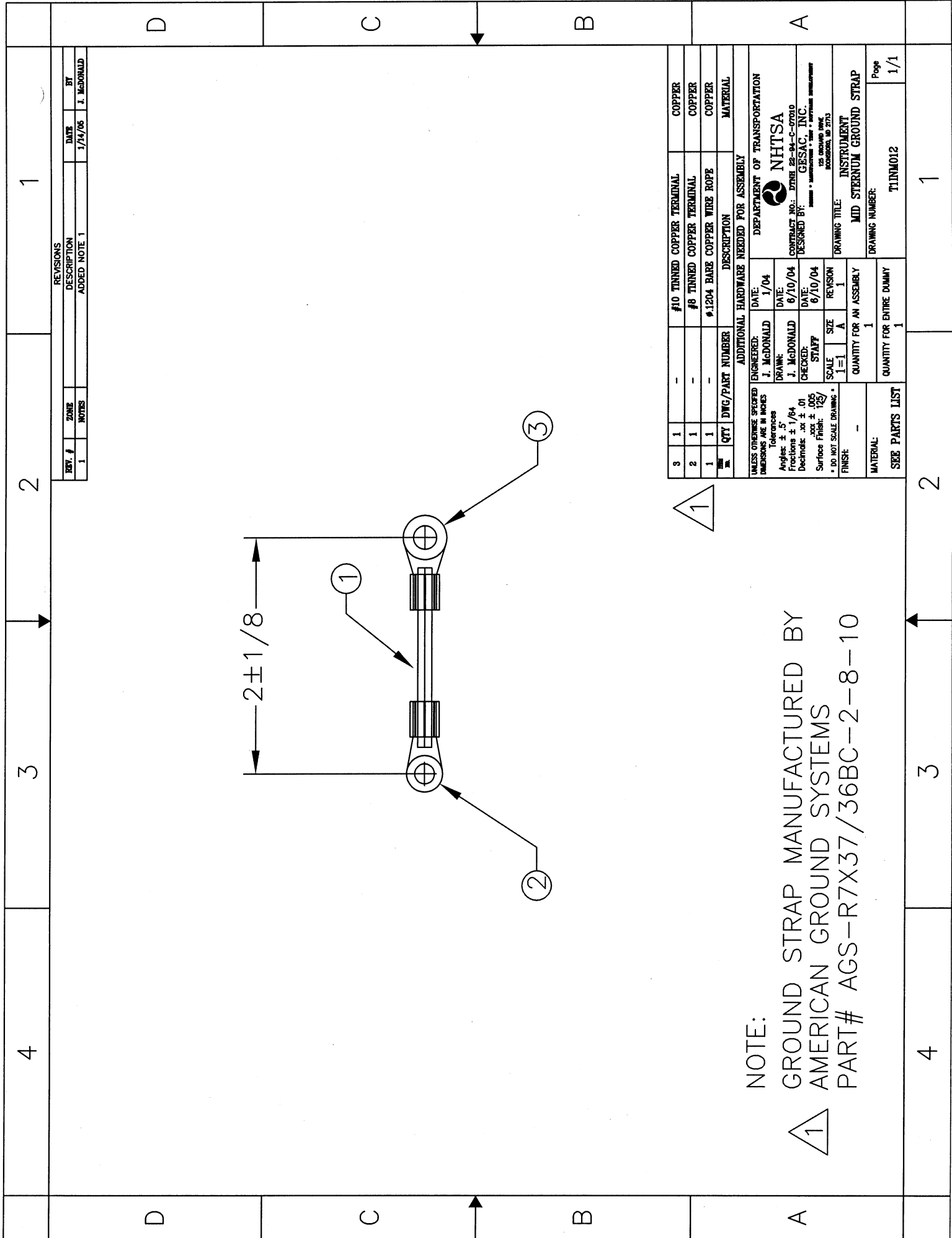
QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
3	1	#10 TINNED COPPER TERMINAL	COPPER
2	1	#6 TINNED COPPER TERMINAL	COPPER
1	1	#1204 BARE COPPER WIRE ROPE	COPPER
			MATERIAL

ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	ENGINEERED: J. McDONALD	DATE: 1/04	DEPARTMENT OF TRANSPORTATION
Tolerances	DRAWN: J. McDONALD	DATE: 6/10/04	NHTSA
Angles: ± .5°	CHECKED: STAFF	DATE: 6/10/04	CONTRACT NO.: DTNH 22-04-C-07010
Fractions: ± 1/64	SCALE: 1=1	REVISION: 1	DESIGNED BY: GESAC, INC.
Decimals: .xx ± .01	SIZE: A	QUANTITY FOR AN ASSEMBLY: 1	125
Surface Finish: 125/	* DO NOT SCALE DRAWING *	QUANTITY FOR ENTIRE DUMMY: 1	125
FINISH:			125

DRAWING TITLE: INSTRUMENT HEAD-NECK GROUND STRAP
 DRAWING NUMBER: TINM011
 Page 1/1





NOTE:

GROUND STRAP MANUFACTURED BY
 AMERICAN GROUND SYSTEMS
 PART# AGS-R7X37/36BC-2-8-10

REV. #	ZONE	NOTES	DATE	BY
1		ADDED NOTE 1	1/14/06	J. McDONALD

QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
3	1	#10 TINNED COPPER TERMINAL	COPPER
2	1	#8 TINNED COPPER TERMINAL	COPPER
1	1	#1204 BARE COPPER WIRE ROPE	COPPER

ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY	
ENGINEERED:	J. McDONALD
DATE:	1/04
DRAWN:	J. McDONALD
DATE:	6/10/04
CHECKED:	STAFF
DATE:	6/10/04
SCALE:	1"=1'
SIZE:	A
REVISION:	1
QUANTITY FOR AN ASSEMBLY:	1
QUANTITY FOR ENTIRE DUMMY:	1

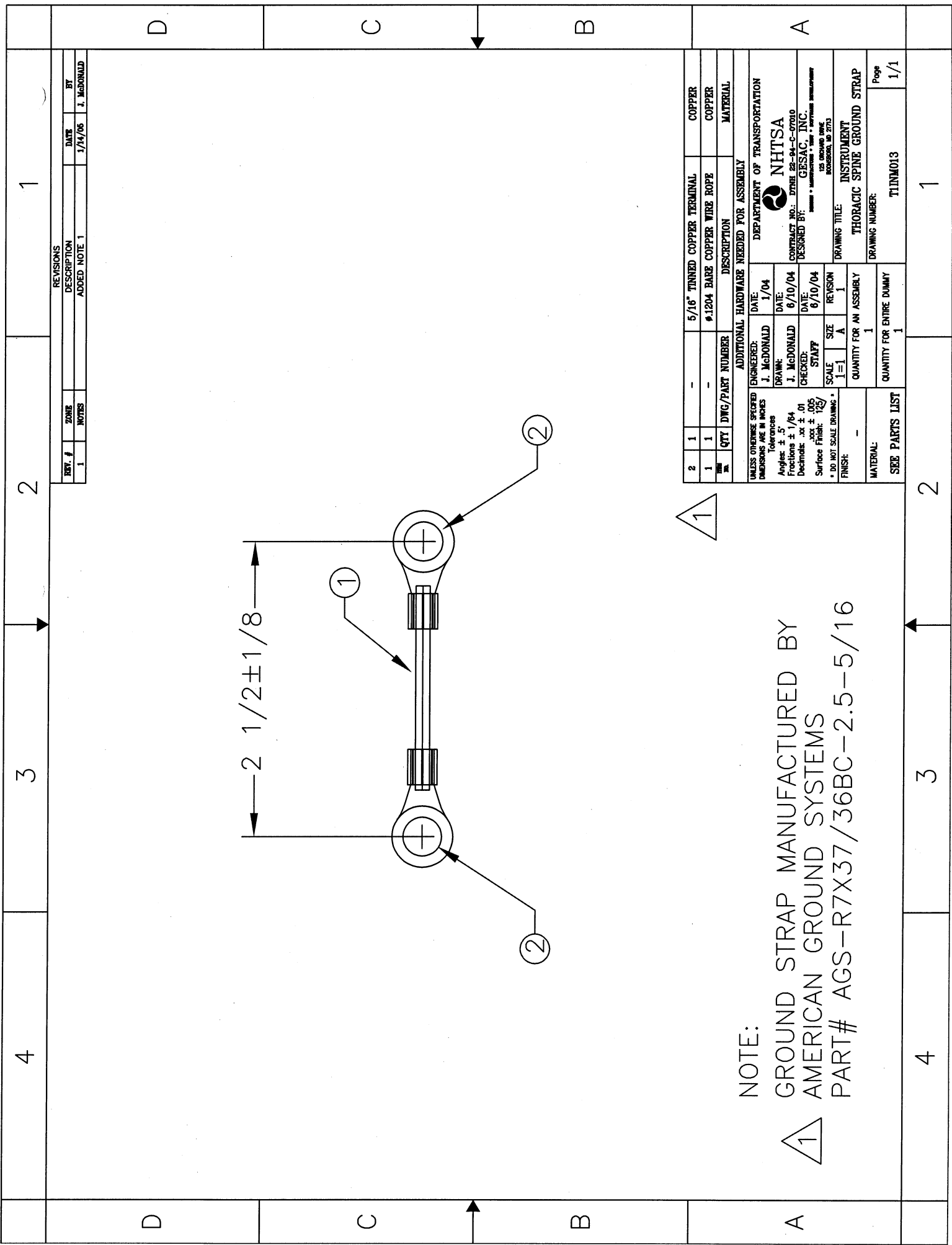
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
Tolerance	
Angles:	± .5°
Fractions:	± 1/64
Decimals:	.xx ± .01
Surface Finish:	125
FINISH:	* DO NOT SCALE DRAWING *

DEPARTMENT OF TRANSPORTATION	
NHTSA	
CONTRACT NO.: DTNH 22-94-C-07010	
DESIGNED BY: GESAC, INC.	
125 GROUND WIRE	
PROCESSING, ID 3713	
DRAWING TITLE:	INSTRUMENT
	MID STERNUM GROUND STRAP
DRAWING NUMBER:	T11NM012
Page	1/1

MATERIAL:
 SEE PARTS LIST



4	3	2	1
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NOTE:

GROUND STRAP MANUFACTURED BY
 AMERICAN GROUND SYSTEMS
 PART# AGS-R7X37/36BC-2.5-5/16

REV. #	ZONE	NOTES	DATE	BY
1		ADDED NOTE 1	1/14/06	J. McDONALD

QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
2	1	5/16" TINNED COPPER TERMINAL	COPPER
1	1	#1204 BARE COPPER WIRE ROPE	COPPER

ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY	
ENGINEERED:	J. McDONALD
DATE:	1/04
DRAWN:	J. McDONALD
DATE:	6/10/04
CHECKED:	STAFF
DATE:	6/10/04
SCALE:	SIZE A
REVISION:	1
QUANTITY FOR AN ASSEMBLY:	1
QUANTITY FOR ENTIRE DUMMY:	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
Tolerances	
Angles	± .5°
Fractions	± 1/64
Decimals	.xx ± .01
Surf. Finish	125/
FINISH:	* DO NOT SCALE DRAWING *

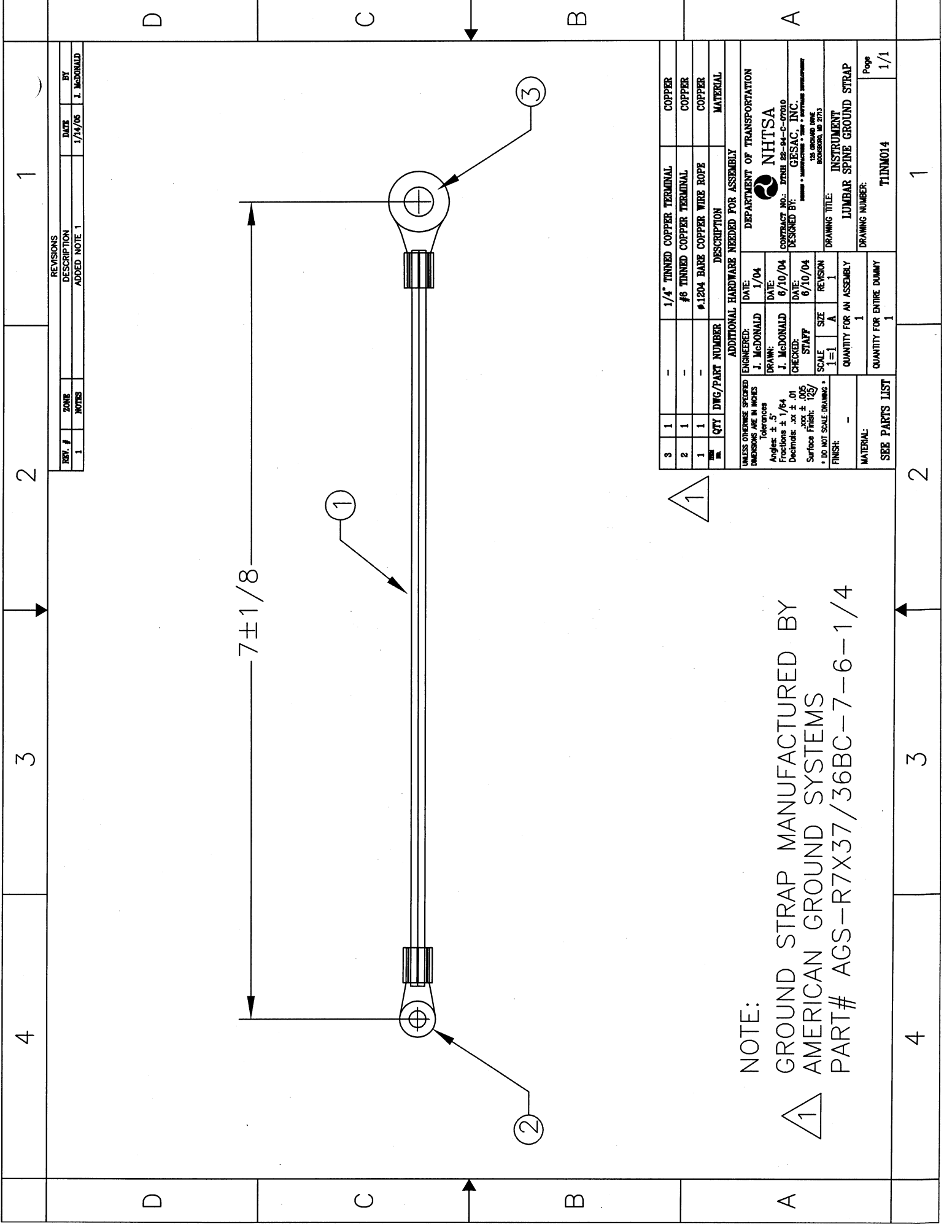
DEPARTMENT OF TRANSPORTATION	
NHTSA	
CONTRACT NO.: DTNIE 22-94-C-07610	
DESIGNED BY: GESAC, INC.	
125 BROADWAY, NEW YORK, NY 10038	
DRAWING TITLE: INSTRUMENT	
THORACIC SPINE GROUND STRAP	
DRAWING NUMBER:	TINM013
Page	1/1

1

D C B A

4 3 2 1

4 3 2 1



REV. #	ZONE	NOTES	DESCRIPTION	DATE	BY
1			ADDED NOTE 1	1/14/06	J. McDONALD

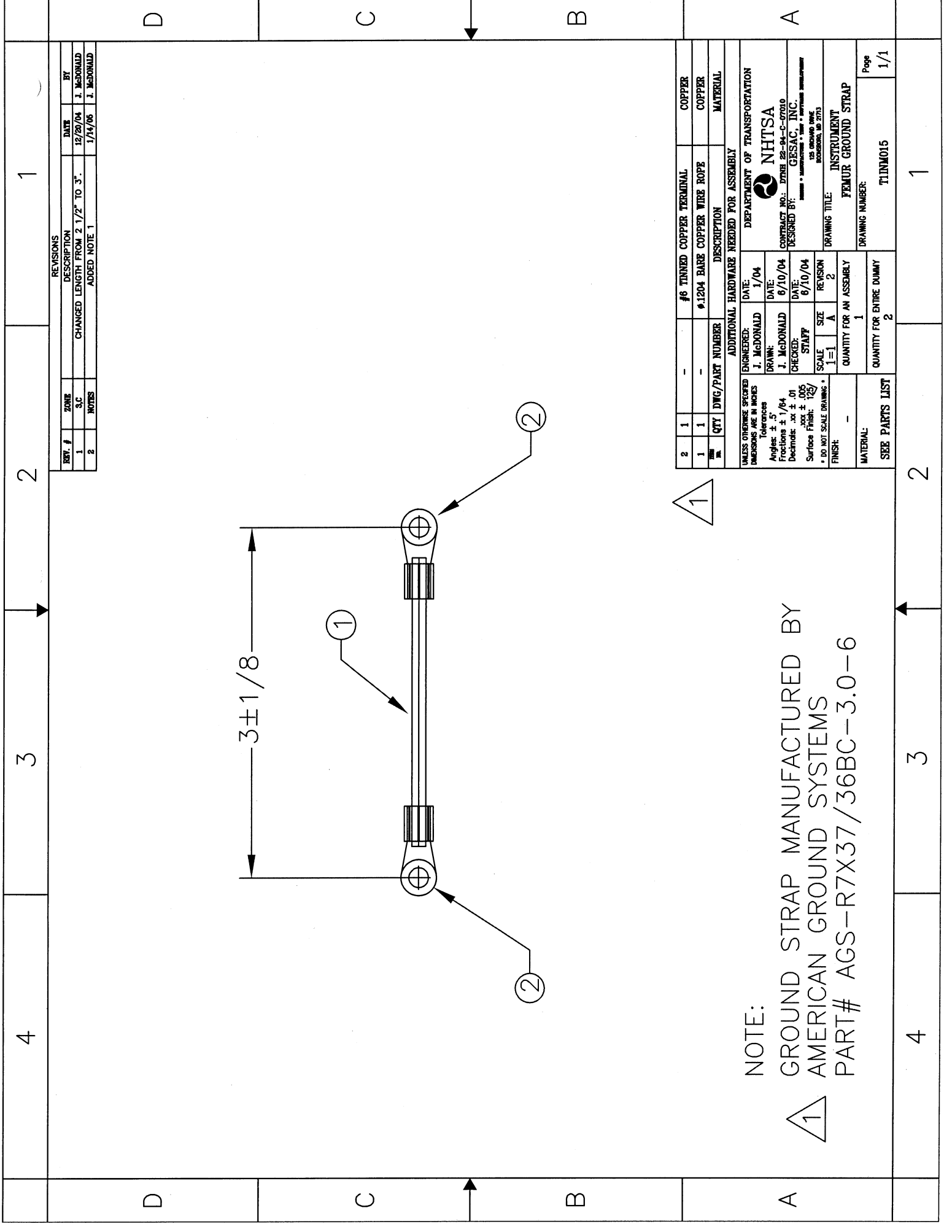
QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
3	1	1/4" TINNED COPPER TERMINAL	COPPER
2	1	#6 TINNED COPPER TERMINAL	COPPER
1	1	#1204 BARE COPPER WIRE ROPE	COPPER

UNLESS OTHERWISE SPECIFIED:		ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY	
ENGINEERED:	J. McDONALD	DATE:	1/04
DRAWN:	J. McDONALD	DATE:	6/10/04
CHECKED:	STAFF	DATE:	6/10/04
SCALE:	1=1	SIZE:	A
FINISH:		REVISION:	1
Tolerances		QUANTITY FOR AN ASSEMBLY	
Angles: ± .5°	1		
Fractions: ± 1/64	1		
Decimals: .xx ± .01	1		
Surface Finish: 125/	1		
* DO NOT SCALE DRAWING *			

DEPARTMENT OF TRANSPORTATION	
NHTSA	
CONTRACT NO.: DTRH 22-94-C-07010	
DESIGNED BY: GESAC, INC.	
125 GROUND STRAP	
ELECTRICAL, 12-2015	
DRAWING TITLE: INSTRUMENT	
LUMBAR SPINE GROUND STRAP	
DRAWING NUMBER:	T11NM014
Page:	1/1

NOTE:
 GROUND STRAP MANUFACTURED BY
 AMERICAN GROUND SYSTEMS
 PART# AGS-R7X37/36BC-7-6-1/4





NOTE:
 GROUND STRAP MANUFACTURED BY
 AMERICAN GROUND SYSTEMS
 PART# AGS-R7X37/36BC-3.0-6

REV. #	ZONE	DESCRIPTION	DATE	BY
1	3.C	CHANGED LENGTH FROM 2 1/2" TO 3".	12/20/04	J. McDONALD
2		ADDED NOTE 1	1/14/06	J. McDONALD

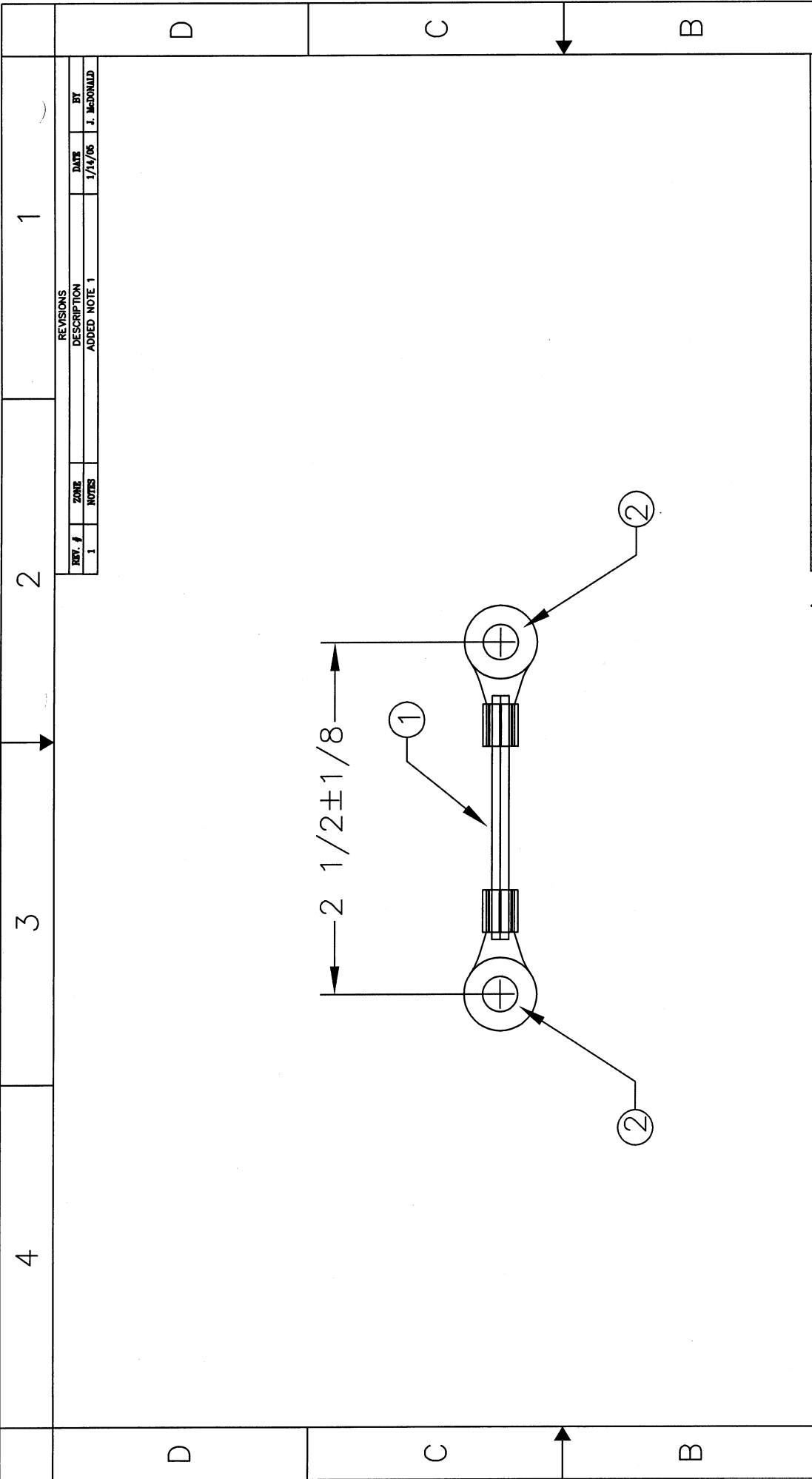
QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
2	1	#6 TINNED COPPER TERMINAL	COPPER
1	1	#1204 BARE COPPER WIRE ROPE	COPPER
			MATERIAL

ENGINEERED:	DATE:
J. McDONALD	1/04
DRAWN:	DATE:
J. McDONALD	6/10/04
CHECKED:	DATE:
STAFF	6/10/04
SCALE:	SIZE:
1=1	A
REVISION	QUANTITY FOR AN ASSEMBLY
2	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
Tolerances
Angles: ± .5°
Fractions: ± 1/64
Decimals: .xx ± .01
Surf. Finish: 125
* DO NOT SCALE DRAWING *

DEPARTMENT OF TRANSPORTATION
NHTSA
CONTRACT NO.: DTNH 22-94-C-07010
DESIGNED BY: GESAC, INC.
1000 • WASHINGTON • TALENT • INDEPENDENCE AVENUE
DESIGNED IN 2003
DRAWING TITLE:
INSTRUMENT FEMUR GROUND STRAP
DRAWING NUMBER:
T11M015
Page
1/1

MATERIAL:
SEE PARTS LIST
QUANTITY FOR ENTIRE DUMMY
1
2



NOTE:
 GROUND STRAP MANUFACTURED BY
 AMERICAN GROUND SYSTEMS
 PART# AGS-R7X37/36BC-2.5-1/4

REV. #	ZONE	NOTES	DATE	BY
1		ADDED NOTE 1	1/14/06	J. McDONALD

D C B A

QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
2	1	1/4" TINNED COPPER TERMINAL	COPPER
1	1	Ø.1204 BARE COPPER WIRE ROPE	COPPER

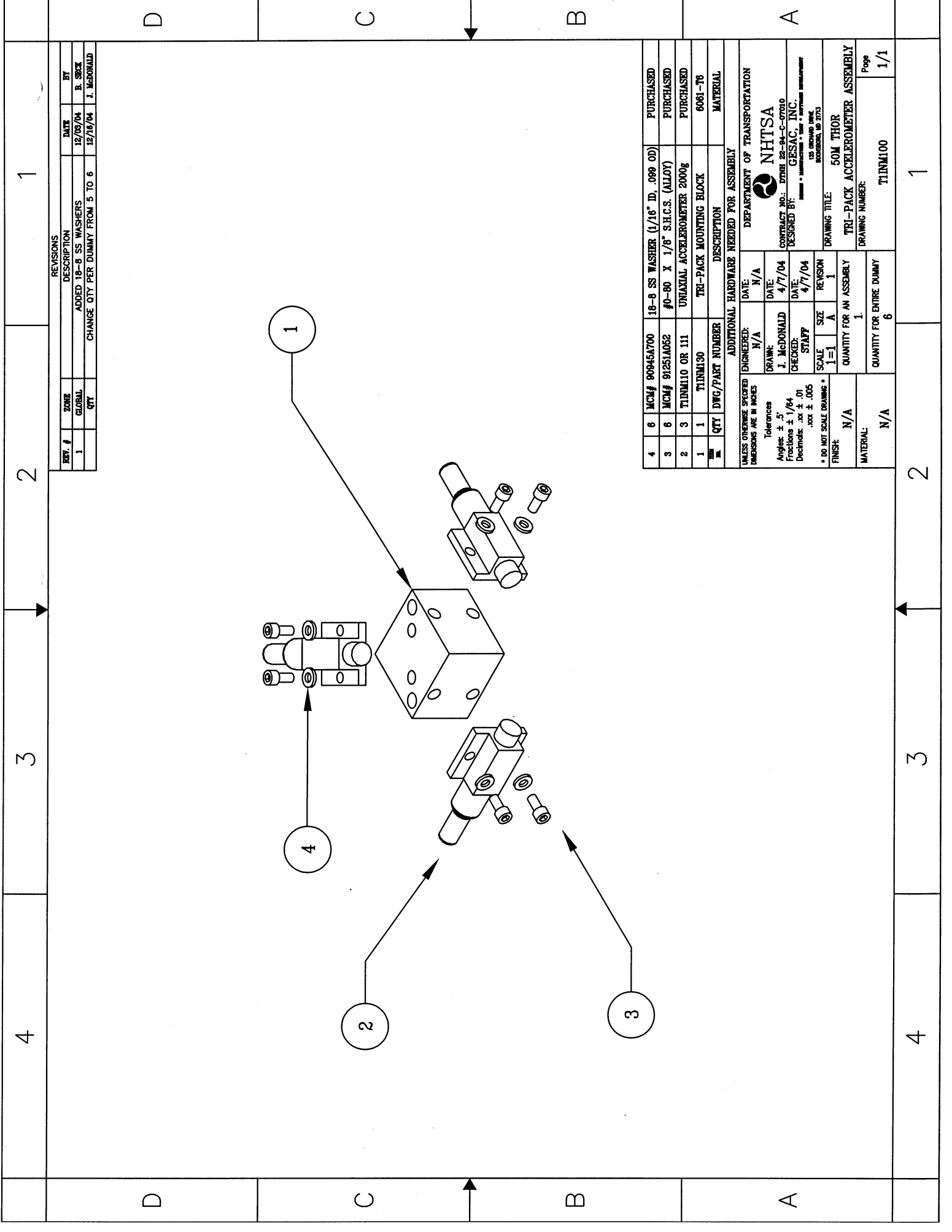
ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY	
ENGINEERED:	J. McDONALD
DATE:	1/12/04
DRAWN:	J. McDONALD
DATE:	6/10/04
CHECKED:	STAFF
DATE:	6/10/04
SCALE:	1=1
SIZE:	A
REVISION:	1
QUANTITY FOR AN ASSEMBLY:	1
QUANTITY FOR ENTIRE DUMMY:	1

UNLESS OTHERWISE SPECIFIED:	
DIMENSIONS ARE IN INCHES	
Tolerances	
Angles:	± .5°
Fractions:	± 1/64
Decimals:	.xx ± .01
Surface Finish:	125
* DO NOT SCALE DRAWINGS *	
FINISH:	-

DEPARTMENT OF TRANSPORTATION	
NHTSA	
CONTRACT NO.: DTRH 22-94-C-07010	
DESIGNED BY: GESAC, INC.	
DRAWING TITLE: INSTRUMENT	
TIBIA GROUND STRAP	
DRAWING NUMBER:	TTINM016
Page:	1/1

4 3 2 1

SEE PARTS LIST



REV. #	ZONE	DESCRIPTION	DATE	BY
1	GLOBAL	ADDED 18-8 SS WASHERS	12/09/04	R. SROCK
	QTY	CHANGE QTY PER DUMMY FROM 5 TO 6	12/16/04	J. McDONALD

NO.	QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
4	6	MCM# 90945A700	18-8 SS WASHER (1/16" ID, .099 OD)	PURCHASED
3	6	MCM# 91251A052	#0-80 X 1/8" S.H.C.S. (ALLOY)	PURCHASED
2	3	TINM10 OR 111	UNIAXIAL ACCELEROMETER 2000g	PURCHASED
1	1	TINM130	TRI-PACK MOUNTING BLOCK	6081-T6
				MATERIAL

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
ENGINEERED:	N/A
DATE:	N/A
DRAWN:	J. McDONALD
DATE:	4/7/04
CHECKED:	STAFF
DATE:	4/7/04
SCALE:	1=1
SIZE:	A
REVISION:	1
FINISH:	N/A
QUANTITY FOR AN ASSEMBLY:	1
QUANTITY FOR ENTIRE DUMMY:	6
MATERIAL:	N/A

ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY	
DEPARTMENT OF TRANSPORTATION	NHTSA
CONTRACT NO.:	DTM1 28-94-C-07010
DESIGNED BY:	GESAC, INC.
DRAWING TITLE:	50M THOR TRI-PACK ACCELEROMETER ASSEMBLY
DRAWING NUMBER:	TINM100
Page:	1/1

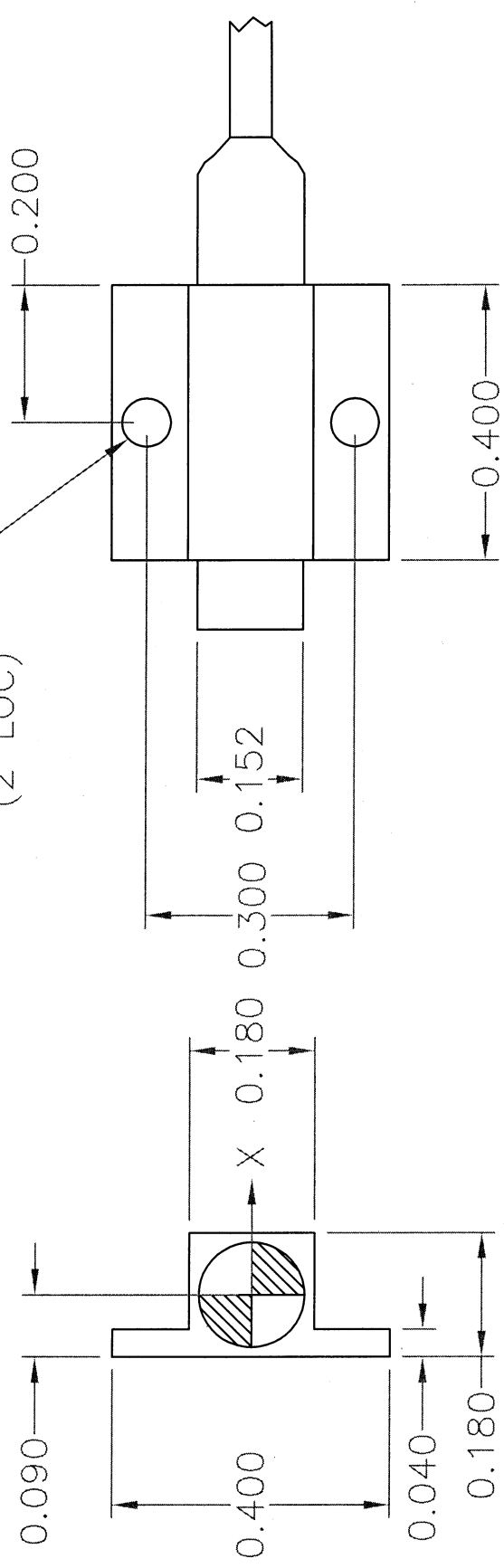
4 3 2 1

4 3 2 1

D C B A

4 3 2 1

Ø0.07 THRU
(2 LOC)



NOTES:

- 1 SPECIFICATIONS PROVIDED BELOW:
 RANGE: +/- 2000 g
 OVERRANGE: 5000 g
 SENSITIVITY: 0.2 TO 0.25 (mV/g)
 FREQUENCY RESPONSE: 4000 HZ
 NON-LINEARITY: <2%
 TRANSVERSE SENSITIVITY (MAX): 3%

2 REFERENCE SOURCES:
 EN# EGE-73BQ 2000 HD
 ED# 7264C-2K

3 DIMENSIONS SHOWN ARE FOR
 REFERENCE ONLY.

REV. #	ZONE	DESCRIPTION	DATE	BY
1	A-4	ADDED ADDITIONAL REFERENCE	5/16/01	M. ARTIS
2	A-4	CLARIFIED NOTE 2	7/18/01	C. SPAR
3	A-4	CLARIFIED NOTE 2 AND ADDED NOTES	10/9/01	C. SPAR
4	A-4	CHANGED ENDEVCO ACCELEROMETER MODEL #	6/28/02	M. ARTIS

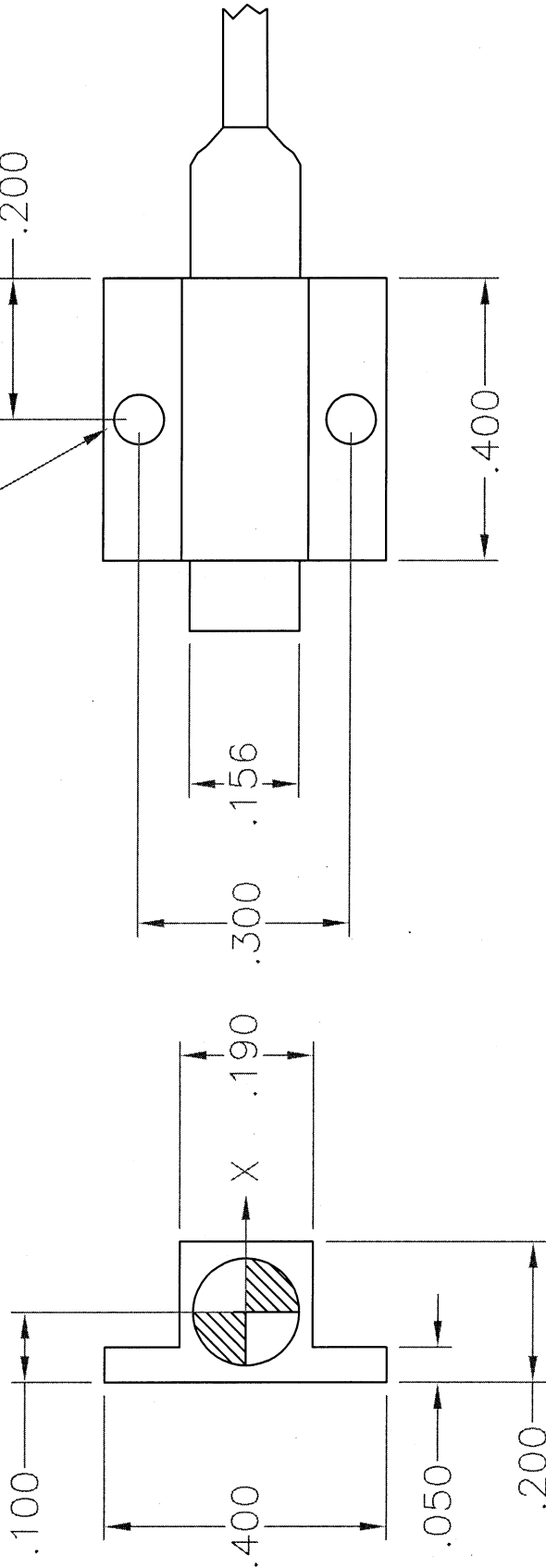
QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			
Tolerances			
Angles: ± .5°			
Fractions: ± 1/64			
Decimals: .xx ± .01			
Hole Dia: ± .002			
* DO NOT SCALE DRAWING *			
FINISH: -			
MATERIAL: SEE NOTE			
QUANTITY FOR AN ASSEMBLY AS REQUIRED			
QUANTITY FOR ENTIRE DUMMY SEE DWG.			
DRAWING TITLE: THOR UNIAxIAL ACCELEROMETER			
DRAWING NUMBER: T11M110			
Page 1/1			

D C B A

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D	C	B	A															

2X ϕ .07 THRU

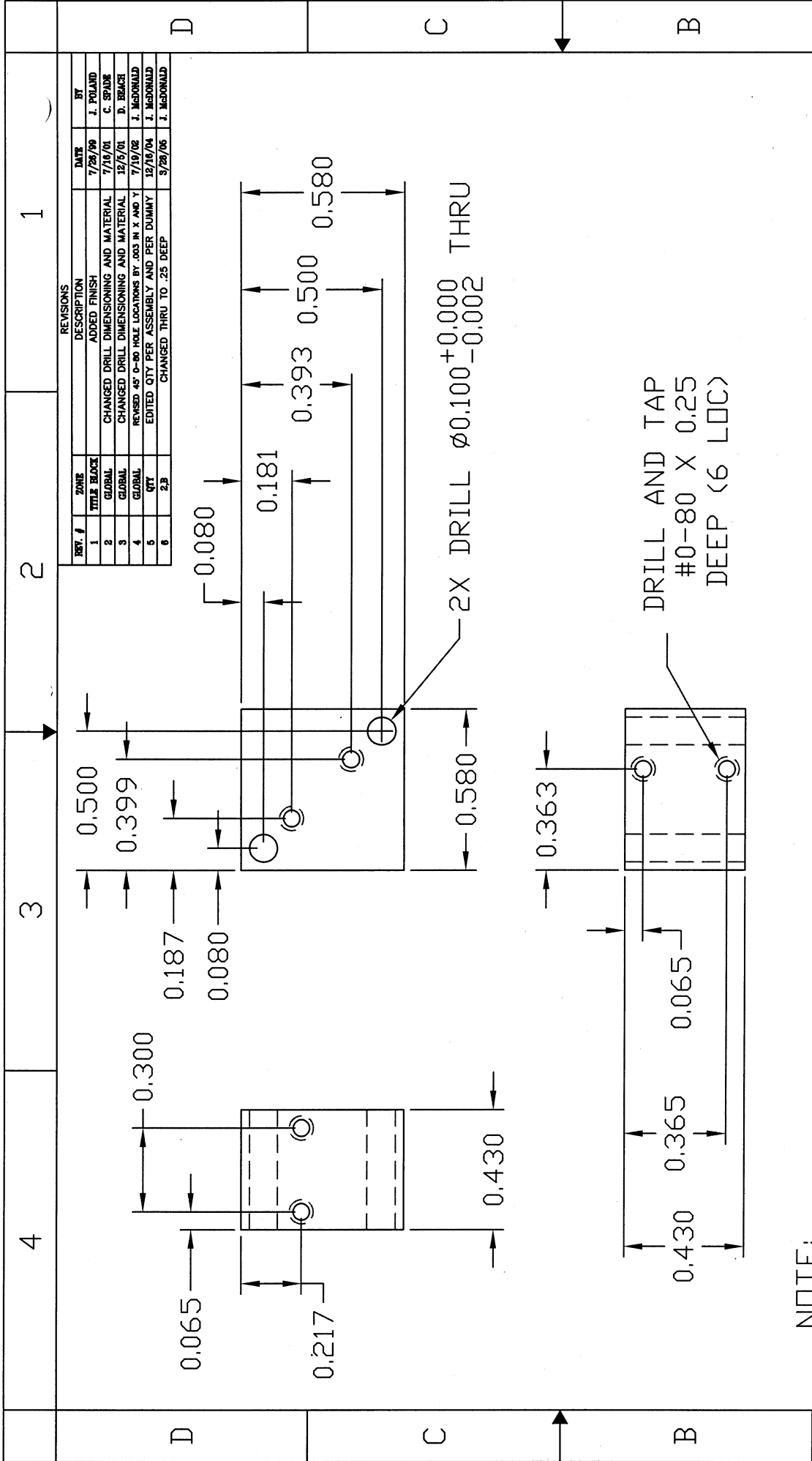


NOTE:

SPECIFICATIONS PROVIDED BELOW:
 RANGE: \pm 2000 g
 LIMITS: 10,000g IN ANY DIRECTION
 SENSITIVITY: 0.2 (mV/g)
 FREQUENCY RESPONSE: 0 TO 7000 HZ
 NON-LINEARITY: <1%
 1% TRANSVERSE SENSITIVITY

REFERENCE ENDEVCO# 7264C-2KT

QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY			
ENGINEERED:	DATE:	DEPARTMENT OF TRANSPORTATION	
DRAWN:	DATE:	NHTSA	
CHECKED:	DATE:	CONTRACT NO.: DTNH 22-94-C-07010	
SCALE:	SIZE:	DESIGNED BY: GESAC, INC.	
4=1	A	125 ORLANDO BLVD	
		BOSSBORO, MD 21753	
REVISION	N/C	DRAWING TITLE: INSTRUMENT	
AS REQUIRED		UNIAxIAL ACCELEROMETER	
QUANTITY FOR ENTIRE DUMMY		DRAWING NUMBER:	Page 1/1
SEE DWG.		TINM111	



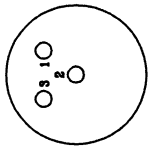
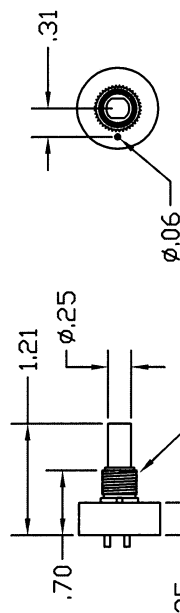
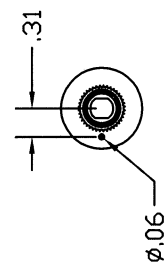

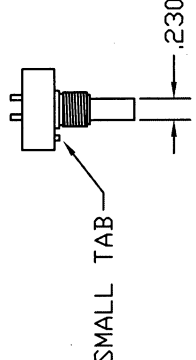
NOTE:
 THREE UNIAXIAL ACCELEROMETERS
 T11M110 CAN BE MOUNTED TO THE
 SURFACES OF THE TRI-PACK BLOCK
 TO SERVE AS A TRIAXIAL ACCELEROMETER

REV. #	ZONE	DESCRIPTION	DATE	BY
1	TITLE BLOCK	ADDED FINISH	7/28/99	J. POLARD
2	GLOBAL	CHANGED DRILL DIMENSIONING AND MATERIAL	7/10/01	C. SPADE
3	GLOBAL	CHANGED DRILL DIMENSIONING AND MATERIAL	12/5/01	D. BEACH
4	GLOBAL	REVISED 45° HOLE LOCATIONS BY .003 IN X AND Y	7/19/02	J. McDONALD
5	QTY	EDITED QTY PER ASSEMBLY AND PER DUMMY	12/16/04	J. McDONALD
6	2.3	CHANGED THRU TO .25 DEEP	3/28/06	J. McDONALD

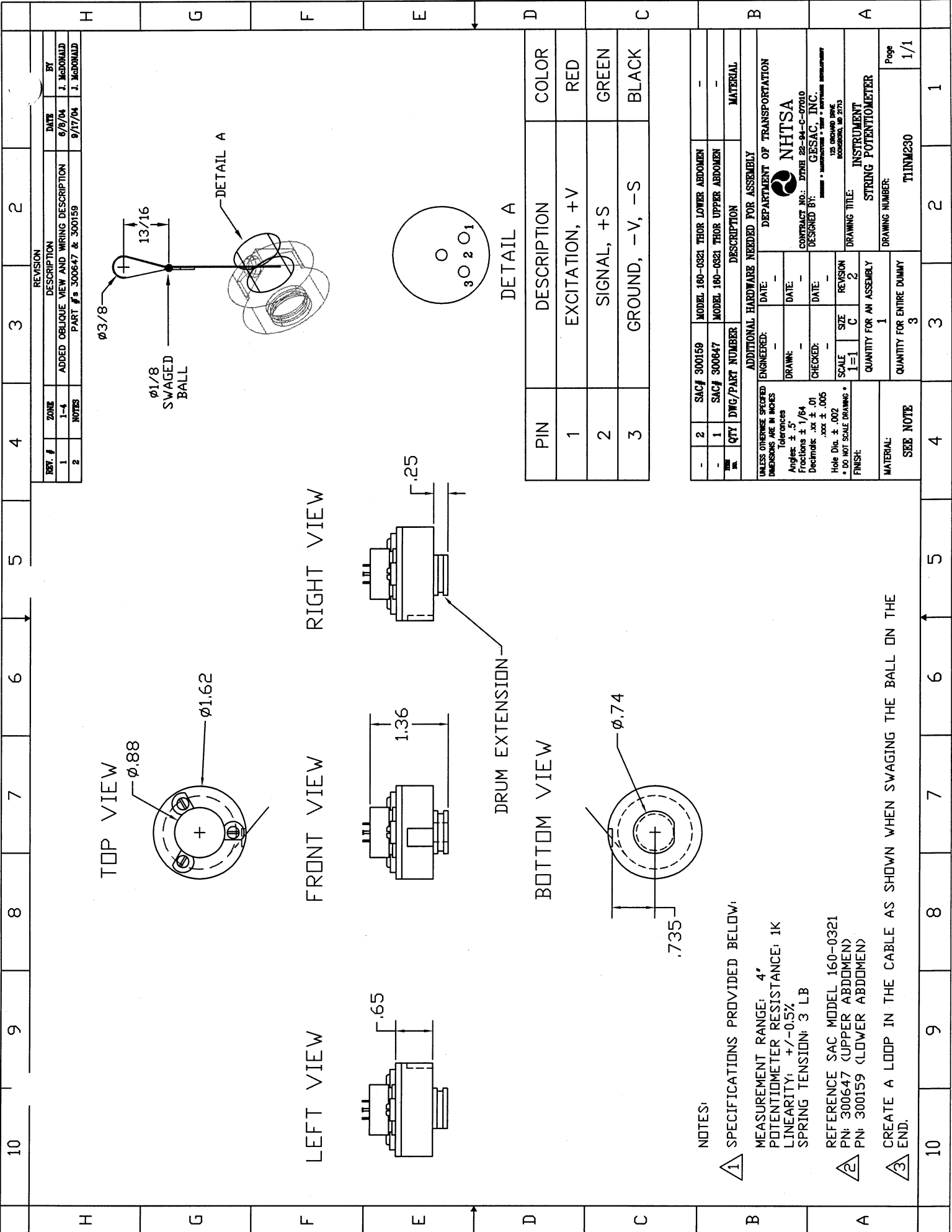
QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
7075-T6		ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY	
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
		Tolerances	
		Angles: ± .5°	
		Fractions: ± 1/64	
		Decimals: .xx ± .01	
		Decimals: .xxx ± .005	
		Hole Dia: ± .002	
		* DO NOT SCALE DRAWING *	
		FINISH:	
		2-1	A
		SCALE	
		SIZE	
		A	
		REVISION	
		6	
		DATE	
		5/10/01	
		DRAWN	
		D. BEACH	
		DATE	
		5/10/01	
		CHECKED	
		D. BEACH	
		DATE	
		5/10/01	
		DESIGNED BY:	
		GESAC, INC.	
		CONTRACT NO.:	
		DTRN 22-94-C-07010	
		DEPARTMENT OF TRANSPORTATION	
		NHTSA	
		125 BRUNNEN DRIVE	
		BOZEMAN, ID 83725	
		DRAWING TITLE:	
		THOR	
		TRI-PACK BLOCK	
		DRAWING NUMBER:	
		T11M110	
		QUANTITY FOR AN ASSEMBLY	
		1	
		QUANTITY FOR ENTIRE DUMMY	
		6	
		MATERIAL:	
		7075-T6	
		Page	
		1/1	



8	7	6	5	4	3	2	1																								
<p>REVISIONS</p> <table border="1"> <tr> <th>REV. #</th> <th>ZONE</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> </tr> <tr> <td>1</td> <td>GLOBAL</td> <td>ADDED WIRING DESCRIPTION</td> <td>6/15/64</td> <td>J. MADONALD</td> </tr> </table>								REV. #	ZONE	DESCRIPTION	DATE	BY	1	GLOBAL	ADDED WIRING DESCRIPTION	6/15/64	J. MADONALD														
REV. #	ZONE	DESCRIPTION	DATE	BY																											
1	GLOBAL	ADDED WIRING DESCRIPTION	6/15/64	J. MADONALD																											
<p>POTENTIOMETER TERMINAL LAYOUT TOP VIEW</p>																															
<p>CCW STOP CW STOP</p>																															
<p>D-HOLE DIAMETER = .0980 PERPENDICULAR TO FLAT = .0875</p>																															
<p>FRONT REAR RIGHT LEFT</p>																															
<p>NOTE:</p> <p>1 SPECIFICATIONS GIVEN BELOW: NOM. RESISTANCE: 5K LINEARITY +/- 0.4% MAX WIPER CURRENT: 100mA VIBRATION: 10G MIN SHOCK: 50G MIN</p> <p>2 REFERENCE CON# PD210-4B</p>																															
<table border="1"> <thead> <tr> <th>TERMINAL</th> <th>DESCRIPTION</th> <th>COLOR</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>EXCITATION, +V</td> <td>RED</td> </tr> <tr> <td>2</td> <td>SIGNAL, +S</td> <td>GREEN</td> </tr> <tr> <td>3</td> <td>GROUND, -V, -S</td> <td>BLACK</td> </tr> </tbody> </table>								TERMINAL	DESCRIPTION	COLOR	1	EXCITATION, +V	RED	2	SIGNAL, +S	GREEN	3	GROUND, -V, -S	BLACK												
TERMINAL	DESCRIPTION	COLOR																													
1	EXCITATION, +V	RED																													
2	SIGNAL, +S	GREEN																													
3	GROUND, -V, -S	BLACK																													
<table border="1"> <thead> <tr> <th>QTY</th> <th>DESC</th> <th>HW</th> <th>DATE</th> <th>REV</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>EXCITATION, +V</td> <td>RED</td> <td></td> <td></td> <td></td> </tr> <tr> <td>1</td> <td>SIGNAL, +S</td> <td>GREEN</td> <td></td> <td></td> <td></td> </tr> <tr> <td>1</td> <td>GROUND, -V, -S</td> <td>BLACK</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>								QTY	DESC	HW	DATE	REV	BY	1	EXCITATION, +V	RED				1	SIGNAL, +S	GREEN				1	GROUND, -V, -S	BLACK			
QTY	DESC	HW	DATE	REV	BY																										
1	EXCITATION, +V	RED																													
1	SIGNAL, +S	GREEN																													
1	GROUND, -V, -S	BLACK																													
<p>UNLESS OTHERWISE SPECIFIED: DIMENSIONS IN INCHES Tolerances Angles: ± .5° Fractions: ± 1/64 Decimals: .xx ± .01 .xxx ± .005 Surface Finish: 125 * DO NOT SCALE DRAWING *</p>																															
<p>ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY</p> <table border="1"> <thead> <tr> <th>QTY</th> <th>DESC</th> <th>HW</th> <th>DATE</th> <th>REV</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>EXCITATION, +V</td> <td>RED</td> <td></td> <td></td> <td></td> </tr> <tr> <td>1</td> <td>SIGNAL, +S</td> <td>GREEN</td> <td></td> <td></td> <td></td> </tr> <tr> <td>1</td> <td>GROUND, -V, -S</td> <td>BLACK</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>								QTY	DESC	HW	DATE	REV	BY	1	EXCITATION, +V	RED				1	SIGNAL, +S	GREEN				1	GROUND, -V, -S	BLACK			
QTY	DESC	HW	DATE	REV	BY																										
1	EXCITATION, +V	RED																													
1	SIGNAL, +S	GREEN																													
1	GROUND, -V, -S	BLACK																													
<p>DEPARTMENT OF TRANSPORTATION NHTSA CONTRACT NO.: DOT/HS 22-64-C-07010 DESIGNED BY: GESAC, INC. 12500 WILSON BLVD ROCKVILLE, MD 20850</p> <p>DRAWING TITLE: INSTRUMENT ROTARY POTENTIOMETER #1 DRAWING NUMBER: T10M210 QUANTITY FOR ENTIRE DUMMY: 21 QUANTITY FOR AN ASSEMBLY AS REQUIRED</p> <p>FINISH: - SCALE: 1" = 1" B SIZE: 1" B REVISION: 1</p> <p>MATERIAL: SEE NOTE</p>																															
<p>8 7 6 5 4 3 2 1</p>																															

	10	9	8	7	6	5	4	3	2													
H	<table border="1"> <tr> <td>REV. #</td> <td>ZONE</td> <td>DESCRIPTION</td> <td>DATE</td> <td>BY</td> </tr> <tr> <td>1</td> <td>1-2</td> <td>ADDED WIRE COLOR CODES</td> <td>6/9/04</td> <td>J. McDONALD</td> </tr> </table>										REV. #	ZONE	DESCRIPTION	DATE	BY	1	1-2	ADDED WIRE COLOR CODES	6/9/04	J. McDONALD		
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G	<p>POTENTIOMETER PIN LAYOUT</p> 																					
F	<table border="1"> <thead> <tr> <th>TERMINAL</th> <th>DESCRIPTION</th> <th>COLOR</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>EXCITATION, +V</td> <td>RED STRIPE</td> </tr> <tr> <td>2</td> <td>SIGNAL, +S</td> <td>WHITE</td> </tr> <tr> <td>3</td> <td>GROUND, -V, -S</td> <td>GRAY</td> </tr> </tbody> </table>										TERMINAL	DESCRIPTION	COLOR	1	EXCITATION, +V	RED STRIPE	2	SIGNAL, +S	WHITE	3	GROUND, -V, -S	GRAY
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2	SIGNAL, +S	WHITE																				
3	GROUND, -V, -S	GRAY																				
E	<p>LEFT VIEW</p>  <p>EXTERNAL 3/8-32 UNEF THREAD</p>																					
D	<p>FRONT VIEW</p> 																					
C	<p>REAR VIEW</p> 																					
B	<p>TOP VIEW</p> 																					
A	<p>NOTES:</p> <p>1 SPECIFICATIONS PROVIDED BELOW:</p> <p>RESISTANCE: 1 K LINEARITY: < +/-0.5% MAX WIPER CURRENT: <1mA</p> <p>2 REFERENCE VS# 20X ECS 78RBA102</p>																					

X	2	78R ECS 78RBA102 W06606	PRECISION ROTARY POTENTIOMETER	MATERIAL
QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES				
Tolerances				
Angles: ± .5°				
Fractions: ± 1/64				
Decimals: .xx ± .01				
Surface Finish: 125				
* DO NOT SCALE DRAWING *				
FINISH:				
SCALE: 1=1 C 1				
QUANTITY FOR AN ASSEMBLY				
DRAWING TITLE: INSTRUMENT ROTARY POTENTIOMETER #2				
DRAWING NUMBER: THINM220				
Page 1/1				



REV. #	ZONE	DESCRIPTION	DATE	BY
1	1-4	ADDED ORLOUQUE VIEW AND WIRING DESCRIPTION	9/9/04	J. McDONALD
2	NOTES	PART #'s 300647 & 300159	9/17/04	J. McDONALD

PIN	DESCRIPTION	COLOR
1	EXCITATION, +V	RED
2	SIGNAL, +S	GREEN
3	GROUND, -V, -S	BLACK

QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
2	SAC# 300159	MODEL 160-0321 THOR LOWER ABDOMEN	-
1	SAC# 300647	MODEL 160-0321 THOR UPPER ABDOMEN	-

UNLESS OTHERWISE SPECIFIED	DATE
ENGINEERED:	-
DRAWN:	-
CHECKED:	-
SCALE	1=1
SIZE	C
REVISION	2
QUANTITY FOR AN ASSEMBLY	1
QUANTITY FOR ENTIRE DUMMY	3

ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY	DEPARTMENT OF TRANSPORTATION
	NHTSA
	CONTRACT NO.: DTMB 28-84-C-07010
	DESIGNED BY: GESAC, INC.
	125 ORCHARD DRIVE ROCKFORD, IL 61155
	DRAWING TITLE: INSTRUMENT STRUNG POTENTIOMETER
	DRAWING NUMBER: T11M230
	Page 1/1

NOTES:

1 SPECIFICATIONS PROVIDED BELOW:

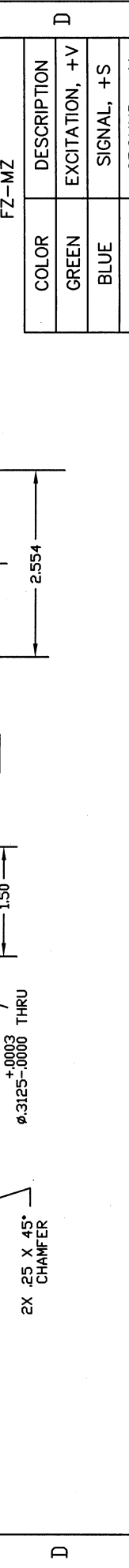
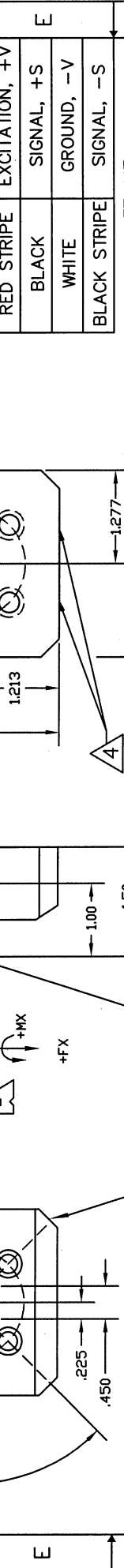
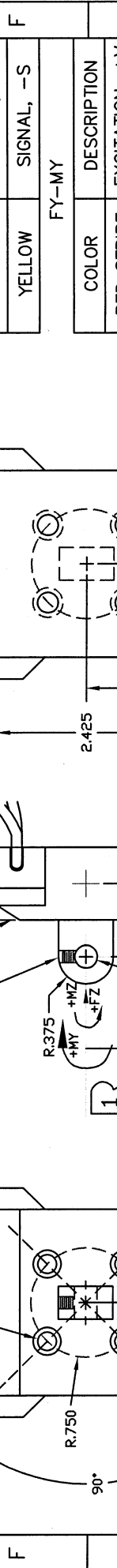
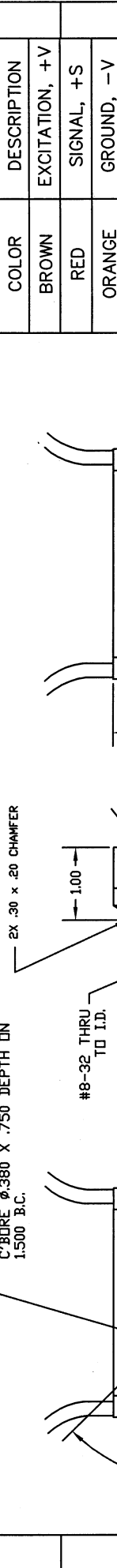
MEASUREMENT RANGE: 4"
 POTENTIOMETER RESISTANCE: 1K
 LINEARITY: +/-0.5%
 SPRING TENSION: 3 LB

2 REFERENCE SAC MODEL 160-0321
 PN: 300647 (UPPER ABDOMEN)
 PN: 300159 (LOWER ABDOMEN)

3 CREATE A LOOP IN THE CABLE AS SHOWN WHEN SWAGING THE BALL ON THE END.

10	9	8	7	6	5	4	3	2	1																									
<table border="1"> <tr> <th>REV. #</th> <th>ZONE</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> </tr> <tr> <td>1</td> <td>CS</td> <td>ADJUSTED OUTPUT POLARITY TO J211</td> <td>10/5/01</td> <td>M. ARTIS</td> </tr> <tr> <td>2</td> <td>MY</td> <td>ADDED "J" TO THE MODEL # TO STAND FOR J211</td> <td>10/5/01</td> <td>M. ARTIS</td> </tr> <tr> <td>3</td> <td>1-2</td> <td>ADDED WIRE COLOR CODES</td> <td>9/9/04</td> <td>J. MCGRAND</td> </tr> <tr> <td>4</td> <td>NOTES</td> <td>ADDED ADDITIONAL INSTRUCTION NEEDED DURING ASSEMBLY</td> <td>9/7/04</td> <td>B. SBCK</td> </tr> </table>										REV. #	ZONE	DESCRIPTION	DATE	BY	1	CS	ADJUSTED OUTPUT POLARITY TO J211	10/5/01	M. ARTIS	2	MY	ADDED "J" TO THE MODEL # TO STAND FOR J211	10/5/01	M. ARTIS	3	1-2	ADDED WIRE COLOR CODES	9/9/04	J. MCGRAND	4	NOTES	ADDED ADDITIONAL INSTRUCTION NEEDED DURING ASSEMBLY	9/7/04	B. SBCK
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<p style="text-align: center;">WIRE COLOR CODES FX-MX</p> <table border="1"> <tr> <th>COLOR</th> <th>DESCRIPTION</th> </tr> <tr> <td>BROWN</td> <td>EXCITATION, +V</td> </tr> <tr> <td>RED</td> <td>SIGNAL, +S</td> </tr> <tr> <td>ORANGE</td> <td>GROUND, -V</td> </tr> <tr> <td>YELLOW</td> <td>SIGNAL, -S</td> </tr> </table> <p style="text-align: center;">FY-MY</p> <table border="1"> <tr> <th>COLOR</th> <th>DESCRIPTION</th> </tr> <tr> <td>RED STRIPE</td> <td>EXCITATION, +V</td> </tr> <tr> <td>BLACK</td> <td>SIGNAL, +S</td> </tr> <tr> <td>WHITE</td> <td>GROUND, -V</td> </tr> <tr> <td>BLACK STRIPE</td> <td>SIGNAL, -S</td> </tr> </table> <p style="text-align: center;">FZ-MZ</p> <table border="1"> <tr> <th>COLOR</th> <th>DESCRIPTION</th> </tr> <tr> <td>GREEN</td> <td>EXCITATION, +V</td> </tr> <tr> <td>BLUE</td> <td>SIGNAL, +S</td> </tr> <tr> <td>VIOLET</td> <td>GROUND, -V</td> </tr> <tr> <td>GRAY</td> <td>SIGNAL, -S</td> </tr> </table>										COLOR	DESCRIPTION	BROWN	EXCITATION, +V	RED	SIGNAL, +S	ORANGE	GROUND, -V	YELLOW	SIGNAL, -S	COLOR	DESCRIPTION	RED STRIPE	EXCITATION, +V	BLACK	SIGNAL, +S	WHITE	GROUND, -V	BLACK STRIPE	SIGNAL, -S	COLOR	DESCRIPTION	GREEN	EXCITATION, +V	BLUE	SIGNAL, +S	VIOLET	GROUND, -V	GRAY	SIGNAL, -S
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VIOLET	GROUND, -V																																						
GRAY	SIGNAL, -S																																						



NOTES:

1 SPECIFICATIONS PROVIDED BELOW:

AXIS	CAPACITY (LBF)	SENSITIVITY (mV/V NDM)
FX	2000	1.5
FY	2000	1.5
FZ	3000	1.2
MX	2500 IN-LB	1.7
MY	2500 IN-LB	1.7
MZ	2500 IN-LB	2.0

NONLINEARITY: <1% F.S.
CROSS-TALK: <5% F.S.
REFERENCE DN MOD# 3454J DR EQUIVALENT



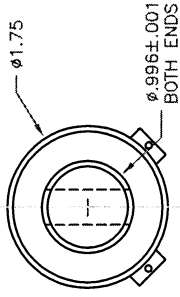
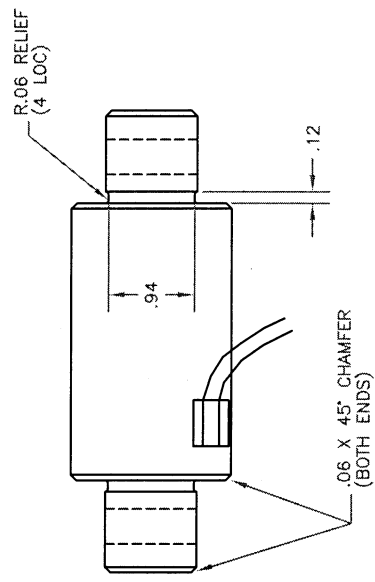
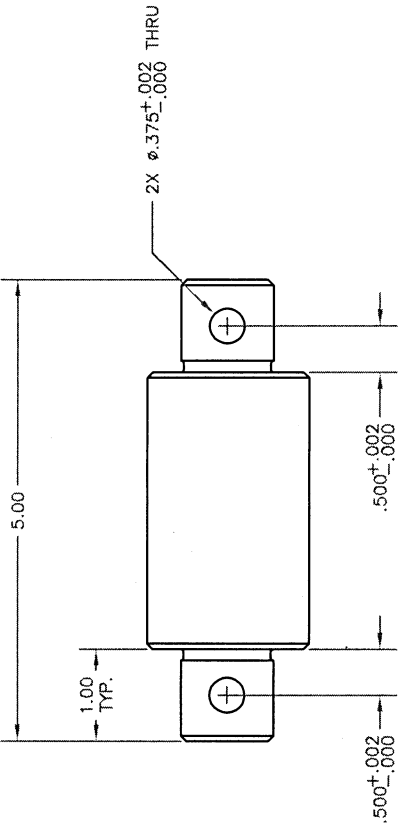
REV. #	ZONE	DESCRIPTION	DATE	BY
1	CS	ADJUSTED OUTPUT POLARITY TO J211	10/5/01	M. ARTIS
2	MY	ADDED "J" TO THE MODEL # TO STAND FOR J211	10/5/01	M. ARTIS
3	1-2	ADDED WIRE COLOR CODES	9/9/04	J. MCGRAND
4	NOTES	ADDED ADDITIONAL INSTRUCTION NEEDED DURING ASSEMBLY	9/7/04	B. SBCK

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY	
ENGINEERED:	DATE:	DEPARTMENT OF TRANSPORTATION	
DRAWN:	DATE:	NHTSA	
CHECKED:	DATE:	CONTRACT NO.: DTMB 22-94-C-07010	
SCALE:	SIZE:	DESIGNED BY: GESAC, INC.	
1=1	C	125 ORLAND DRIVE	
REVISION:	REVISION:	ANN ARBOR, MI 48106	
3	3		
QUANTITY FOR AN ASSEMBLY:	QUANTITY FOR ENTIRE DUMMY:	DRAWING TITLE: INSTRUMENT UPPER NECK LOAD CELL	Page 1/1
1	1	DRAWING NUMBER: T11M310	

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RED	SIGNAL, +S																																						
ORANGE	GROUND, -V																																						
YELLOW	SIGNAL, -S																																						
<p>FX</p> <p>4X 1/4-20 DN ϕ2.000 B.C. USEABLE THREAD .30</p> <p>DRILL AND REAM ϕ.501$^{+0.002}$ THRU ϕ2.50 O.D.</p> <p>4X ϕ.760 REAM .25 DEPTH DN ϕ1.250 B.C.</p> <p>45° CHAMFER</p> <p>1.250</p> <p>.050</p> <p>1.250</p> <p>+.FX</p> <p>+.FZ</p>																																							
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DATE	REVISION																																						
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DRAWN:	C																																						
CHECKED:	1																																						
SCALE:	1=1																																						
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REV. #	ZONE	DESCRIPTION	DATE	BY																				
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2	I-2	ADDED WIRE COLOR CODES	9/19/04	J. McDONALD																				



WIRE COLOR CODES
FX--MX

COLOR	DESCRIPTION
BROWN	EXCITATION, +V
RED	SIGNAL, +S
ORANGE	GROUND, -V
YELLOW	SIGNAL, -S
FY--MY	
COLOR	DESCRIPTION
RED STRIPE	EXCITATION, +V
BLACK	SIGNAL, +S
WHITE	GROUND, -V
BLACK STRIPE	SIGNAL, -S
FZ--MZ	
COLOR	DESCRIPTION
GREEN	EXCITATION, +V
BLUE	SIGNAL, +S
VIOLET	GROUND, -V
GRAY	SIGNAL, -S

NOTE:

- ① SPECIFICATIONS PROVIDED BELOW:
- AXIS CAPACITY (LBF)
- FX 3000
- FY 3000
- FZ 5000
- MX 3000 IN-LB
- MY 3000 IN-LB
- MZ 3000 IN-LB
- NONLINEARITY: <1% F.S.
- CROSSTALK: <5% F.S.

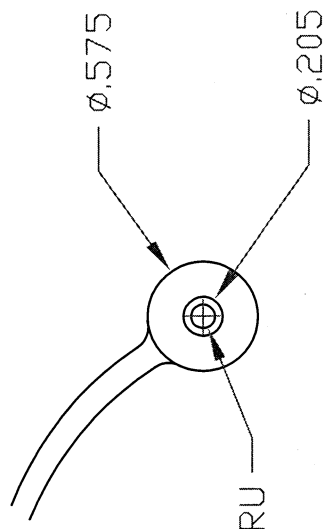
- ② REFERENCE DN# 1914 OR EQUIVALENT
- ③ OUTPUT POLARITY MUST CONFORM TO SAE J211

QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY DEPARTMENT OF TRANSPORTATION NHTSA CONTRACT NO.: DTMB 22-94-C-07010 DESIGNED BY: GESAC, INC. <small>125 ORCHARD DRIVE ROCKFORD, IL 61153</small>			
ENGINEERED:	DATE:	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
DRAWN:	DATE:	Angles: ± .5°	
CHECKED:	DATE:	Fractions ± 1/64	
SCALE:	SIZE:	Decimals: .xx ± .01	
1=1	C	.xxx ± .005	
REVISION:	2	Hole Dia. ± .002	
QUANTITY FOR AN ASSEMBLY:	1	* DO NOT SCALE DRAWING *	
QUANTITY FOR ENTIRE DUMMY:	2	FINISH:	
SEE NOTE		MATERIAL:	
		DRAWING TITLE: INSTRUMENT	
		DRAWING NUMBER: FEMUR LOAD CELL	
		DRAWING NUMBER: T11N1950	
		Page 1/1	

10	9	8	7	6	5	4	3	2	1
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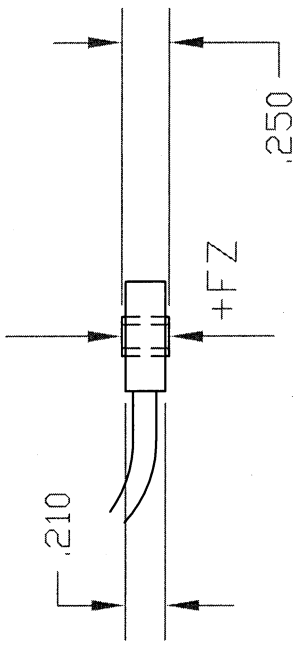
REVISIONS		DATE	BY
REV. #	ZONE	6/9/04	J. McRONALD
1	1		

DRILL $\phi.152''$ THRU



WIRE COLOR CODES

COLOR	DESCRIPTION
RED	EXCITATION, +V
WHITE	SIGNAL, +S
BLACK	GROUND, -V
GREEN	SIGNAL, -S



NOTE:

- ① SPECIFICATIONS ARE PROVIDED BELOW:
 RANGE: 3000 LBF (13345 N)
 OVERLOAD: 150%
 SENSITIVITY: 1-2 mV/V NOMINAL
 BRIDGE: 350 OHMS
- ② REFERENCE ALD# ALD-MINI-T-3K

QTY	DTG/PART NUMBER	DESCRIPTION	MATERIAL
		ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DEPARTMENT OF TRANSPORTATION	
Tolerances		NHTSA	
Angles: $\pm .5$		CONTRACT NO.: DTMB 99-04-C-0700	
Fractions: $\pm 1/64$		DESIGNED BY: GESAC, INC.	
Decimals: .xx $\pm .01$		125 BROADWAY, 5TH FLOOR	
.xxx $\pm .005$		ROCKFORD, IL 61173	
Hole Dia. $\pm .002$		DRAWING TITLE: INSTRUMENT	
* DO NOT SCALE DRAWING *		UNIAXIAL COMPRESSION LOAD WASHER	
FINISH:		DRAWING NUMBER: T11M410	
MATERIAL: SEE NOTE		Page 1/1	
QUANTITY FOR AN ASSEMBLY: 2			
QUANTITY FOR ENTIRE DUMMY: 2			
4	3	2	1

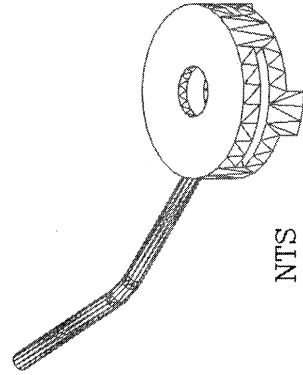
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2

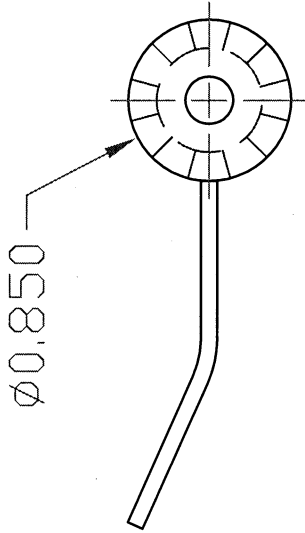
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4

REVISIONS		DATE	BY
REV. #	DESCRIPTION		
1	ADDED WIRE, ADDED NOTE 2	5/21/99	J. POLAND
20	NEW DESIGN	6/9/04	J. McDONALD

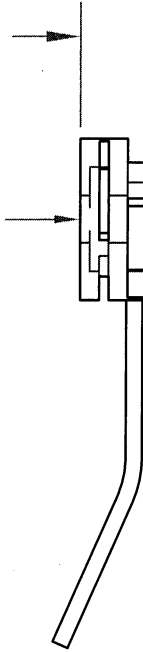


NTS



0.850

+FX



0.350

WIRE COLOR CODES

COLOR	DESCRIPTION
RED	EXCITATION, +V
GREEN	SIGNAL, +S
BLACK	GROUND, -V
WHITE	SIGNAL, -S

NOTE

- 1 SPECIFICATIONS ARE PROVIDED BELOW
RANGE: 1000 LBF (4448 N)
OVERLOAD: 150%
SENSITIVITY: 1-2mV/V NOMINAL
- 2 REF. DN MODEL# 6005 OR EQUIVALENT

QTY	DTG/PART NUMBER	DESCRIPTION	MATERIAL
ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DEPARTMENT OF TRANSPORTATION	
ENGINEERED:	DATE:	NHTSA	
DRAWN:	DATE:	CONTRACT NO.: DTRM 28-94-C-07010	
CHECKED:	DATE:	DESIGNED BY: GESAC, INC.	
SCALE	SIZE	REVISION	125 ORLAND DRIVE ROCKFORD, IL 61153
1=1	A	B0	
QUANTITY FOR AN ASSEMBLY		DRAWING TITLE: INSTRUMENT	
SEE DWG		NECK SPRING LOAD CELL	
QUANTITY FOR ENTIRE DUMMY		DRAWING NUMBER:	
AS SPECIFIED		T11M420	
SEE NOTE		Page 1/1	

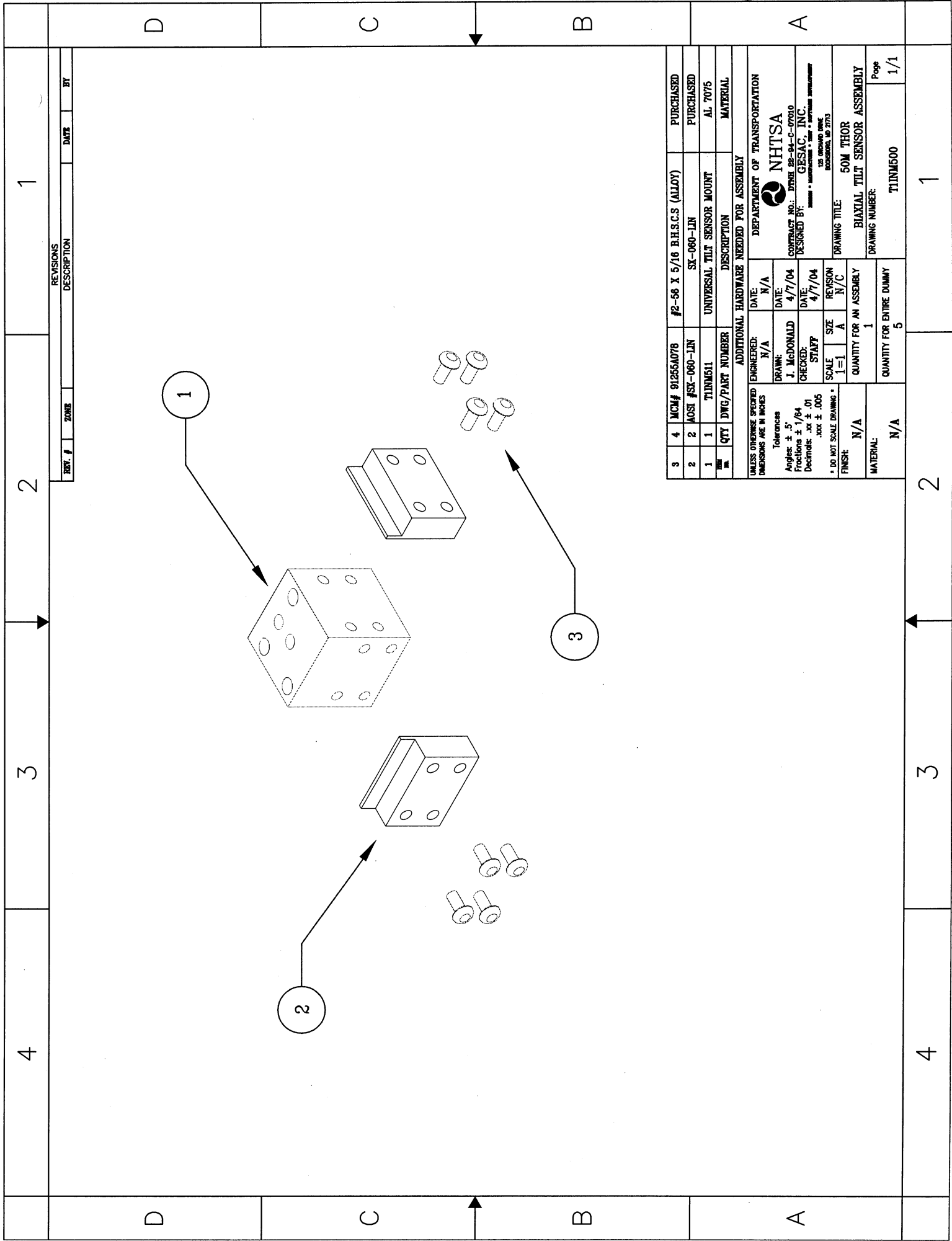
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2

3

4

8	7	6	5	4	3	2	1																																																																																
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REV. #		ZONE		REVISIONS		DATE		BY																																																																															
1	1-2	1-2	1-2	DESCRIPTION	ADDED WIRE COLOR CODES	6/9/04	J. MCGONNULD																																																																																
<p style="text-align: center;">4X DRILL AND TAP #6-32 THRU</p> <p style="text-align: center;">4X DRILL Ø.141" THRU</p> <p style="text-align: center;">C'BORE Ø.234" X .14" DEPTH</p>																																																																																							
<p style="text-align: center;">WIRE COLOR CODES</p> <table border="1"> <tr> <th>COLOR</th> <th>DESCRIPTION</th> </tr> <tr> <td>RED</td> <td>EXCITATION, +V</td> </tr> <tr> <td>GREEN</td> <td>SIGNAL, +S</td> </tr> <tr> <td>BLACK</td> <td>GROUND, -V</td> </tr> <tr> <td>WHITE</td> <td>SIGNAL, -S</td> </tr> </table>								COLOR	DESCRIPTION	RED	EXCITATION, +V	GREEN	SIGNAL, +S	BLACK	GROUND, -V	WHITE	SIGNAL, -S																																																																						
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WHITE	SIGNAL, -S																																																																																						
<p style="text-align: center;">NOTE</p> <p>1 SPECIFICATIONS ARE PROVIDED BELOW RANGE: 1000 LBF (4448 N) OVERLOAD: 150% SENSITIVITY: 1.5mV/V NOMINAL</p> <p>2 REF. DN# 4168 OR EQUIVALENT</p>																																																																																							
<table border="1"> <tr> <th>QTY</th> <th>DESC/PART NUMBER</th> <th>DESCRIPTION</th> <th>MATERIAL</th> </tr> <tr> <td></td> <td></td> <td>ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY</td> <td></td> </tr> <tr> <td></td> <td></td> <td>ENGINEERED: DATE: -</td> <td></td> </tr> <tr> <td></td> <td></td> <td>DRAWN: DATE: -</td> <td></td> </tr> <tr> <td></td> <td></td> <td>CHECKED: DATE: -</td> <td></td> </tr> <tr> <td></td> <td></td> <td>SCALE: SIZE: 1-1 B 1</td> <td></td> </tr> <tr> <td></td> <td></td> <td>REVISION: 5</td> <td></td> </tr> <tr> <td></td> <td></td> <td>QUANTITY FOR AN ASSEMBLY: 5</td> <td></td> </tr> <tr> <td></td> <td></td> <td>QUANTITY FOR ENTIRE DUMMY: 5</td> <td></td> </tr> <tr> <td></td> <td></td> <td>MATERIAL: SEE NOTE</td> <td></td> </tr> <tr> <td></td> <td></td> <td>DRAWING NUMBER: TINM430</td> <td></td> </tr> <tr> <td></td> <td></td> <td>DRAWING TITLE: INSTRUMENT</td> <td></td> </tr> <tr> <td></td> <td></td> <td>FACE LOAD CELL</td> <td></td> </tr> <tr> <td></td> <td></td> <td>DEPARTMENT OF TRANSPORTATION</td> <td></td> </tr> <tr> <td></td> <td></td> <td>NHTSA</td> <td></td> </tr> <tr> <td></td> <td></td> <td>CONTRACT NO.: DPNR 28-94-C-07010</td> <td></td> </tr> <tr> <td></td> <td></td> <td>DESIGNED BY: GESAC, INC.</td> <td></td> </tr> <tr> <td></td> <td></td> <td>155 SOUTH 9000</td> <td></td> </tr> <tr> <td></td> <td></td> <td>HOUSTON, TX 77033</td> <td></td> </tr> <tr> <td></td> <td></td> <td>DRAWING NO. 2773</td> <td></td> </tr> </table>								QTY	DESC/PART NUMBER	DESCRIPTION	MATERIAL			ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY				ENGINEERED: DATE: -				DRAWN: DATE: -				CHECKED: DATE: -				SCALE: SIZE: 1-1 B 1				REVISION: 5				QUANTITY FOR AN ASSEMBLY: 5				QUANTITY FOR ENTIRE DUMMY: 5				MATERIAL: SEE NOTE				DRAWING NUMBER: TINM430				DRAWING TITLE: INSTRUMENT				FACE LOAD CELL				DEPARTMENT OF TRANSPORTATION				NHTSA				CONTRACT NO.: DPNR 28-94-C-07010				DESIGNED BY: GESAC, INC.				155 SOUTH 9000				HOUSTON, TX 77033				DRAWING NO. 2773	
QTY	DESC/PART NUMBER	DESCRIPTION	MATERIAL																																																																																				
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REV. #	ZONE	DATE	BY

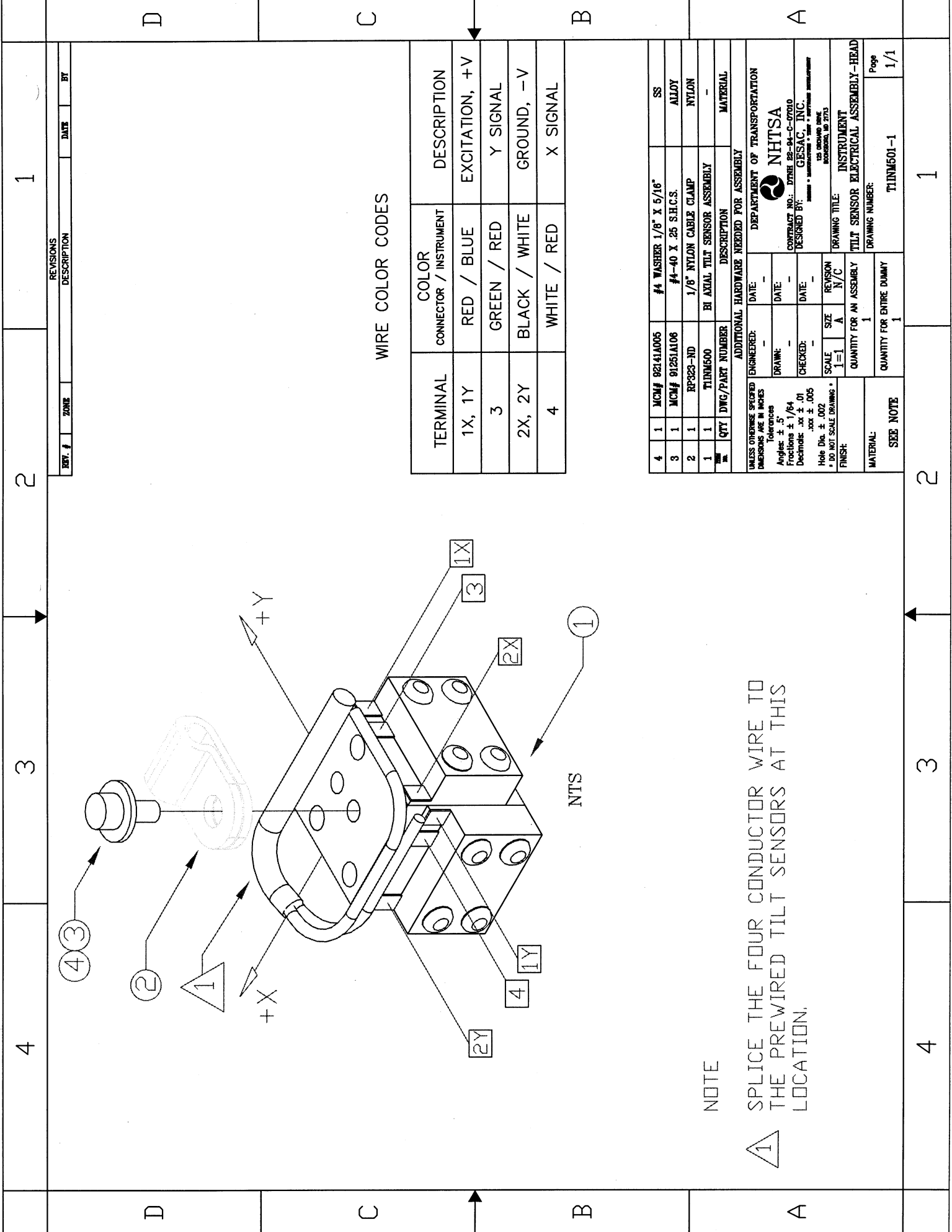
1 2 3 4

D C B A

3	4	MCN# 91256A0718	#2-56 X 5/16 B.H.S.C.S (ALLOY)	PURCHASED
2	2	MOST #SX-060-LIN	SX-060-LIN	PURCHASED
1	1	TINM511	UNIVERSAL TILT SENSOR MOUNT	AL 7075
QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL	
ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ENGINEERED: N/A	DATE: N/A	DEPARTMENT OF TRANSPORTATION
Tolerances		DRAWN: J. McDONALD	DATE: 4/7/04	NHTSA
Angles ± 5°		CHECKED: STAFF	DATE: 4/7/04	CONTRACT NO.: DTNBI 28-94-C-07010
Fractions ± 1/64		SCALE: 1=1	REVISION: A	DESIGNED BY: GESAC, INC.
Decimals: .001		SCALE: A	REVISION: N/C	100 UNIVERSITY BLVD ROCKFORD, IL 61153
* DO NOT SCALE DRAWING *		FINISH: N/A	QUANTITY FOR AN ASSEMBLY: 1	DRAWING TITLE: 50M THOR
MATERIAL: N/A		QUANTITY FOR ENTIRE DUMMY: 5	DRAWING NUMBER: TINM500	Page 1/1

2 3 4

1



NOTE

1 SPLICE THE FOUR CONDUCTOR WIRE TO THE PREWIRED TILT SENSORS AT THIS LOCATION.

WIRE COLOR CODES

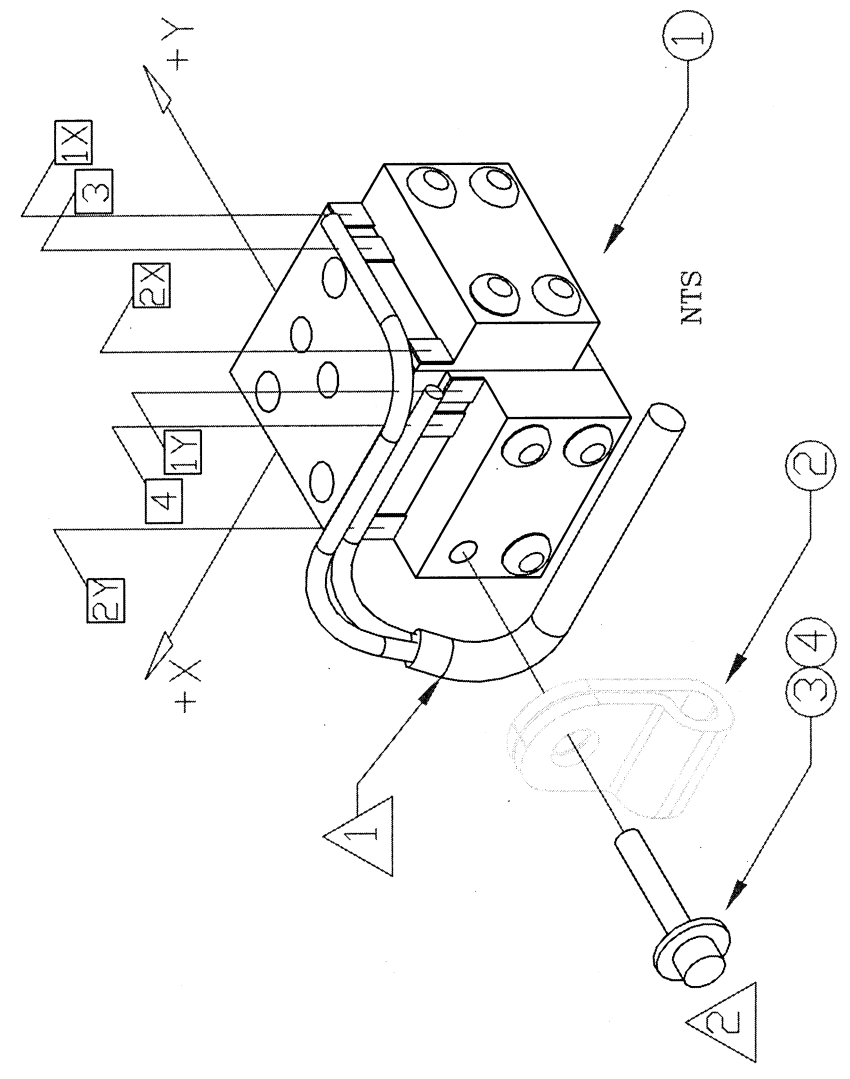
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1X, 1Y	RED / BLUE	EXCITATION, +V
3	GREEN / RED	Y SIGNAL
2X, 2Y	BLACK / WHITE	GROUND, -V
4	WHITE / RED	X SIGNAL

QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
4	MCW# 92141A005	#4 WASHER 1/8" X 5/16"	SS
3	MCW# 91251A106	#4-40 X .25 SH.C.S.	ALLOY
2	RF923-ND	1/8" NYLON CABLE CLAMP	NYLON
1	TINN600	BI AXIAL TILT SENSOR ASSEMBLY	-

ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	ENGINEERED: DATE: -	DEPARTMENT OF TRANSPORTATION
Tolerances	DRAWN: DATE: -	NHTSA
Angles: ± .5	CHECKED: DATE: -	CONTRACT NO.: DTRM 88-94-C-0700
Fractions: ± 1/64	SCALE: 1=1	DESIGNED BY: GESAC, INC.
Decimals: .xx ± .01	SIZE: A	12000 WOODBURY BLVD
.xxx ± .005	N/C	ROCKVILLE, MD 20850
Hole Dia. ± .002	REVISION: 1	DRAWING TITLE: INSTRUMENT
* DO NOT SCALE DRAWING *	QUANTITY FOR AN ASSEMBLY: 1	TILT SENSOR ELECTRICAL ASSEMBLY-HEAD
FINISH:	QUANTITY FOR ENTIRE DUMMY: 1	DRAWING NUMBER: TINN600-1
MATERIAL: SEE NOTE		Page 1/1

4	3	2	1
REVISIONS			
REV. #	ZONE	DATE	BY
DESCRIPTION			
D	C	B	A



NOTE

① SPLICE THE FOUR CONDUCTOR WIRE TO THE PREWIRED TILT SENSORS AT THIS LOCATION.

② REPLACE THE #2-56 BUTTON HEAD WITH A #2-56 SOCKET HEAD CAP SCREW AND WASHER.

WIRE COLOR CODES

TERMINAL	CONNECTOR / INSTRUMENT	COLOR	DESCRIPTION
1X, 1Y	RED / BLUE	EXCITATION, +V	
3	GREEN / RED	Y SIGNAL	
2X, 2Y	BLACK / WHITE	GROUND, -V	
4	WHITE / RED	X SIGNAL	

QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
4	MCM# 92141A003	#2 WASHER 3/32" X 1/4"	SS
3	MCM# 91251A080	#2-56 X .50 S.H.C.S.	ALLOY
2	DK# RP323-RD	1/8" NYLON CABLE CLAMP	NYLON
1	T11NM500	BI AXIAL TILT SENSOR ASSEMBLY	-

ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

FINISHES: -

ANGLES: ± 1°

FRACTIONS: ± 1/64

DECIMALS: .XX ± .01

HOLE DIA: ± .002

DO NOT SCALE DRAWING

FINISH: -

SCALE: 1=1

SIZE: A

REVISION: N/C

QUANTITY FOR AN ASSEMBLY: 1

QUANTITY FOR ENTIRE DUMMY: 1

MATERIAL: SEE NOTE

ENGINEERED: DATE: -

DRAWN: DATE: -

CHECKED: DATE: -

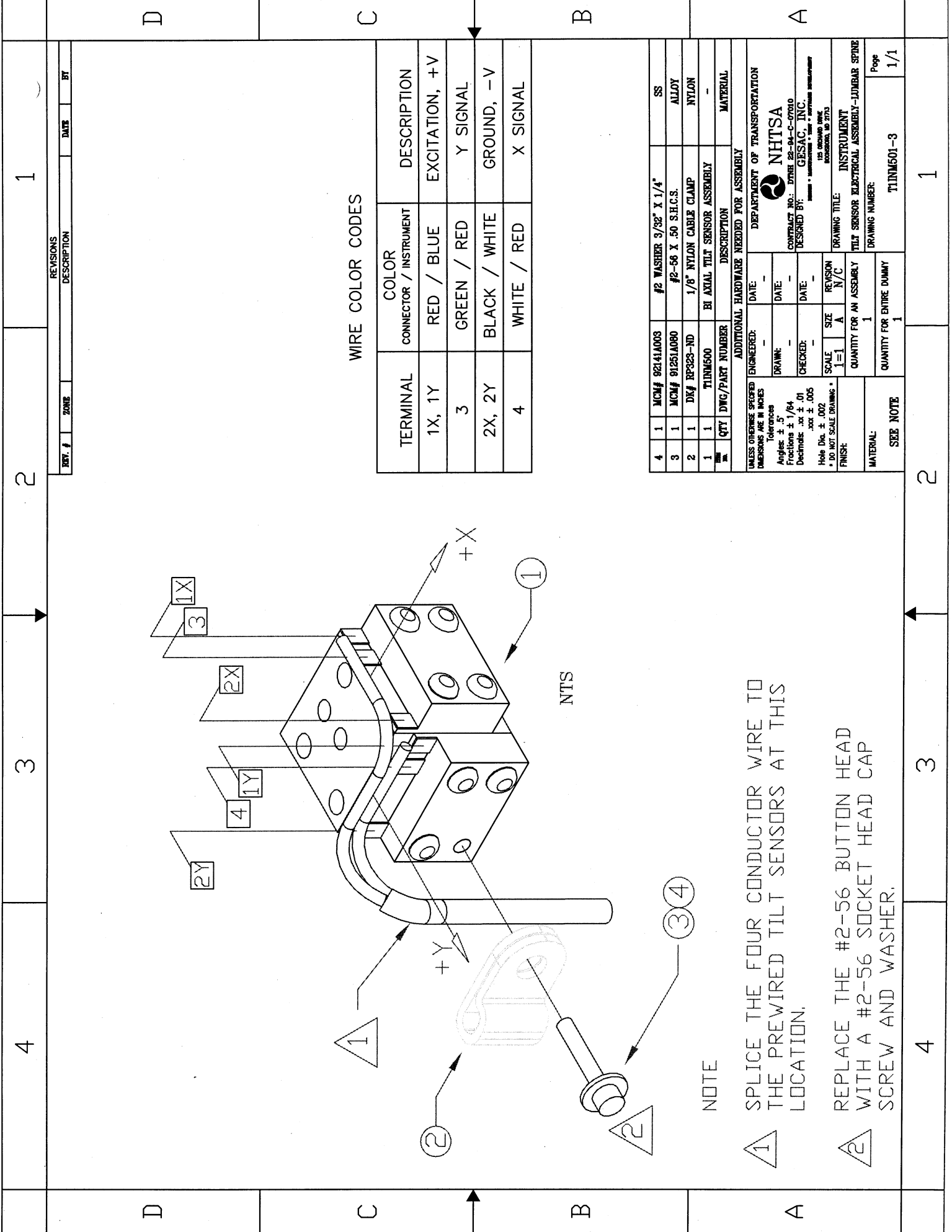
DEPARTMENT OF TRANSPORTATION
NHTSA
 CONTRACT NO.: DTMB 82-94-C-07010
 DESIGNED BY: GESSAC, INC.
 125 BROADWAY
 BOSTON, MA 02173

DRAWING TITLE: INSTRUMENT
 TILT SENSOR ELECTRICAL ASSEMBLY - HOLE, THORACIC SPINE

DRAWING NUMBER: T11NM501-2

Page: 1/1

4	3	2	1
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WIRE COLOR CODES

TERMINAL	CONNECTOR / INSTRUMENT	COLOR	DESCRIPTION
1X, 1Y	RED / BLUE	RED / BLUE	EXCITATION, +V
3	GREEN / RED	GREEN / RED	Y SIGNAL
2X, 2Y	BLACK / WHITE	BLACK / WHITE	GROUND, -V
4	WHITE / RED	WHITE / RED	X SIGNAL

QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
4	MCM# 92141A003	#2 WASHER 9/32" X 1/4"	SS
3	MCM# 91251A080	#2-56 X .50 S.H.C.S.	ALLOY
2	DK# RP323-ND	1/8" NYLON CABLE CLAMP	NYLON
1	T11NM500	BI AXIAL TILT SENSOR ASSEMBLY	-

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
 Tolerances
 Angles: ± .5°
 Fractions: ± 1/64
 Decimals: .xx ± .01
 .xxx ± .005
 Hole Dia: ± .002
 * DO NOT SCALE DRAWING *
 FINISH:

ENGINEERED: DATE: -
 DRAWN: DATE: -
 CHECKED: DATE: -
 SCALE: 1=1
 SIZE: A
 REVISION: N/C

QUANTITY FOR AN ASSEMBLY: 1
 QUANTITY FOR ENTIRE DUMMY: 1

MATERIAL: SEE NOTE

ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY

DEPARTMENT OF TRANSPORTATION
NHTSA
 CONTRACT NO.: DTRR 28-94-C-07030
 DESIGNED BY: GESAC, INC.
 1500 W. WASHINGTON ST. • ANN ARBOR, MI 48106

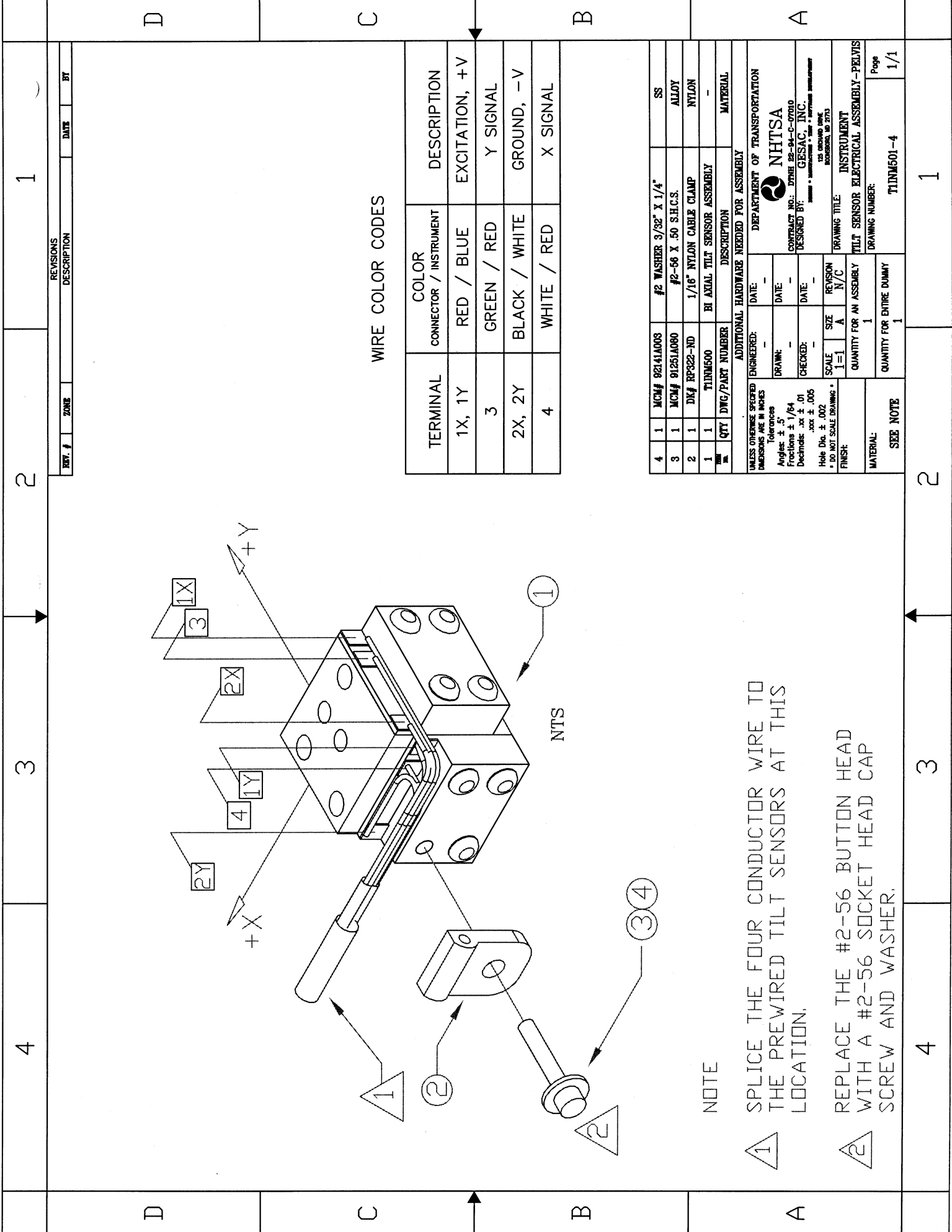
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 TILT SENSOR ELECTRICAL ASSEMBLY-LJDMBAR SPRING

DRAWING NUMBER: T11NM501-3
 Page 1/1

NOTE

1 SPLICE THE FOUR CONDUCTOR WIRE TO THE PREWIRED TILT SENSORS AT THIS LOCATION.

2 REPLACE THE #2-56 BUTTON HEAD WITH A #2-56 SOCKET HEAD CAP SCREW AND WASHER.



NOTE

1 SPLICE THE FOUR CONDUCTOR WIRE TO THE PREWIRED TILT SENSORS AT THIS LOCATION.

2 REPLACE THE #2-56 BUTTON HEAD WITH A #2-56 SOCKET HEAD CAP SCREW AND WASHER.

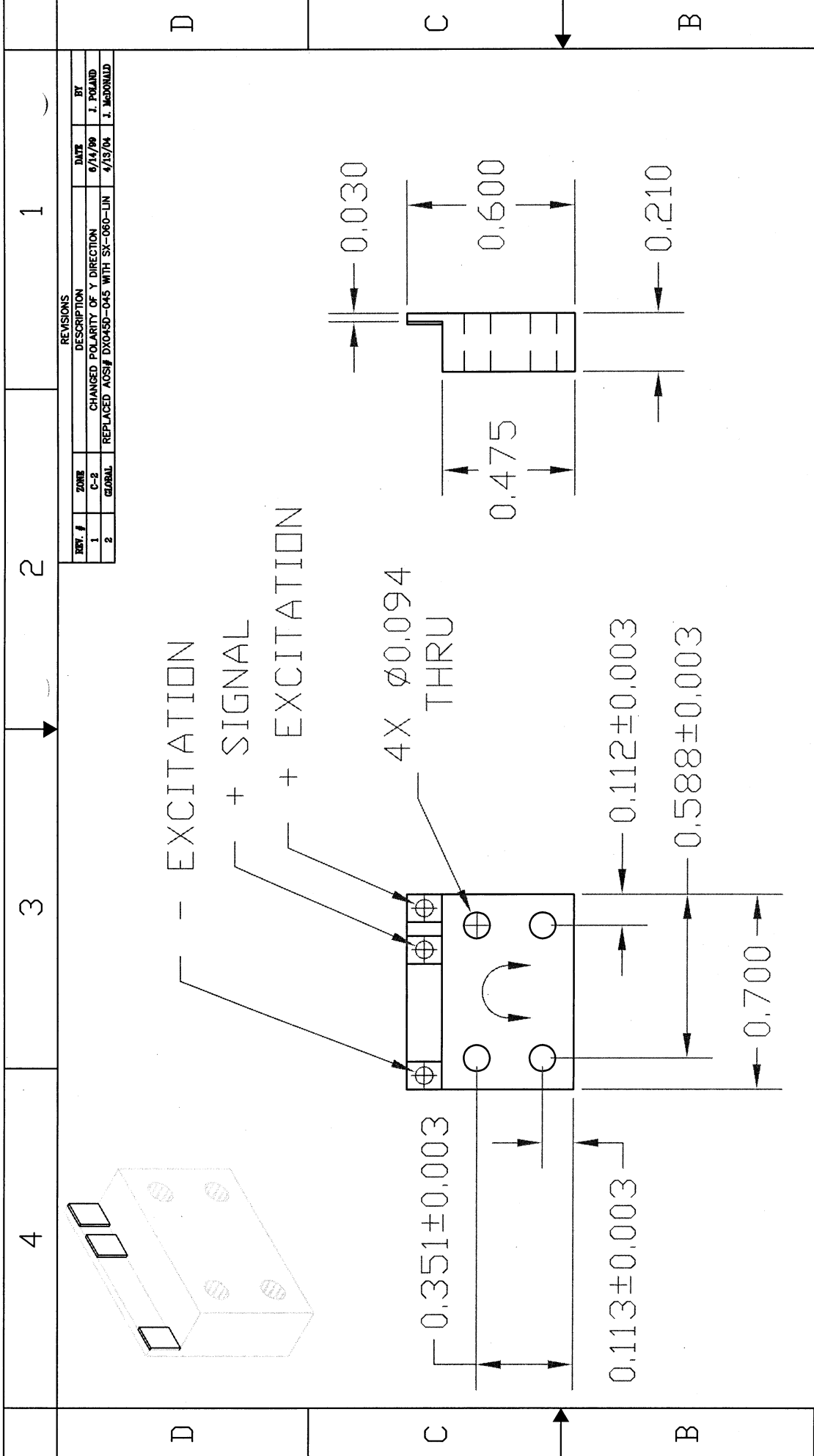
WIRE COLOR CODES

TERMINAL	CONNECTOR / INSTRUMENT	COLOR	DESCRIPTION
1X, 1Y	RED / BLUE	RED / BLUE	EXCITATION, +V
3	GREEN / RED	GREEN / RED	Y SIGNAL
2X, 2Y	BLACK / WHITE	BLACK / WHITE	GROUND, -V
4	WHITE / RED	WHITE / RED	X SIGNAL

QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
4	1	MCM# 92141A003	#2 WASHER 3/32" X 1/4" SS
3	1	MCM# 91251A080	#2-56 X .50 S.H.C.S. ALLOY
2	1	DK# RP322-ND	1/16" NYLON CABLE CLAMP NYLON
1	1	TINM500	BI AXIAL TILT SENSOR ASSEMBLY -

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		TOLERANCES	
Angles	± .5	Fractions	± 1/64
Decimals	.xx ± .01	Hole Dia.	± .002
* DO NOT SCALE DRAWING *			
FINISH:		SCALE	1" = 1" A
ENGINEERED:		DATE:	REVISION N/C
DRAWN:		DATE:	QUANTITY FOR AN ASSEMBLY 1
CHECKED:		DATE:	QUANTITY FOR ENTIRE DUMMY 1
ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY		DRAWING TITLE: INSTRUMENT TILT SENSOR ELECTRICAL ASSEMBLY-PELVIS	
DEPARTMENT OF TRANSPORTATION		DRAWING NUMBER: TINM501-4	
NHTSA		Page 1/1	
CONTRACT NO.: DTNH 22-94-C-07010		DESIGNED BY: GESAC, INC.	
100000 • WASHINGTON • TEL: 202-366-1000		FEDERAL BUREAU OF INVESTIGATION	

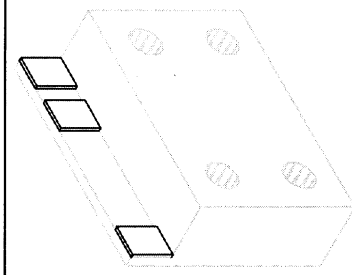
REV. #	ZONE	DESCRIPTION	DATE	BY
1				



REV. #	QTY	DWG/PART NUMBER	DESCRIPTION	MATERIAL
1			ADDITIONAL HARDWARE NEEDED FOR ASSEMBLY	
2				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES				
Tolerances				
Angles: ± .5°				
Fractions: ± 1/64				
Decimals: .xx ± .01				
.xxx ± .005				
Hole Dia. ± .002				
* DO NOT SCALE DRAWING *				
FINISH:				
ENGINEERED: DATE: -				
DRAWN: DATE: 4/13/04				
J. MCDONALD				
J. POLAND				
SCALE: SIZE REVISION				
2=1 A 2				
QUANTITY FOR AN ASSEMBLY				
2				
QUANTITY FOR ENTIRE DUMMY				
10				
MATERIAL:				
SEE NOTE				
DRAWING TITLE: INSTRUMENT TILT SENSOR				
DRAWING NUMBER: T11NM610				
Page: 1/1				

NOTE

1 REFERENCE ADS# SX-60-LIN



EXCITATION
+ SIGNAL
+ EXCITATION

4X Ø0.094
THRU

0.351±0.003

0.113±0.003

0.112±0.003

0.588±0.003

0.700

0.030

0.475

0.600

0.210

REV. #	ZONE	DESCRIPTION	DATE	BY
1	C-2	CHANGED POLARITY OF Y DIRECTION	9/14/99	J. POLAND
2	GLOBAL	REPLACED ADS# DX045D-045 WITH SX-060-LIN	4/13/04	J. MCDONALD

1

2

3

4

2

3

4

1

4

3

2

1

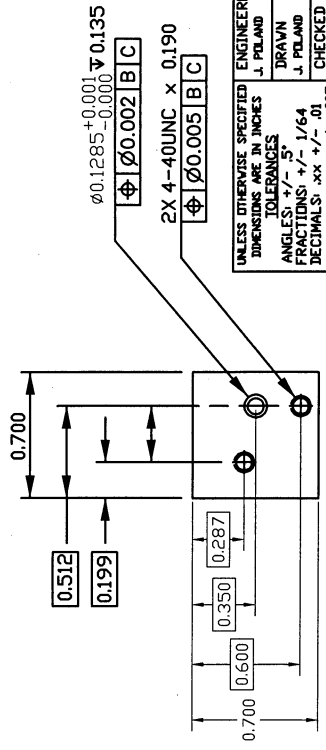
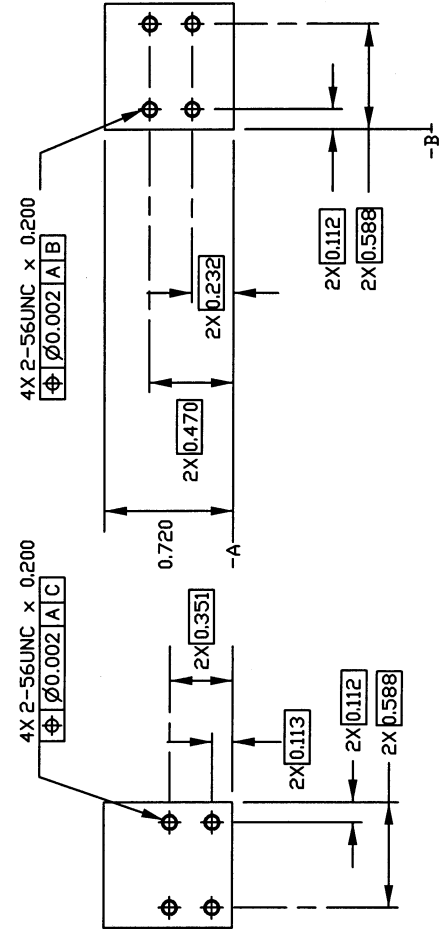
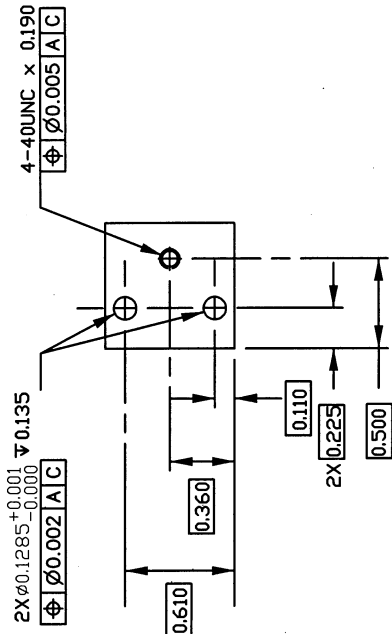
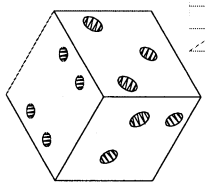
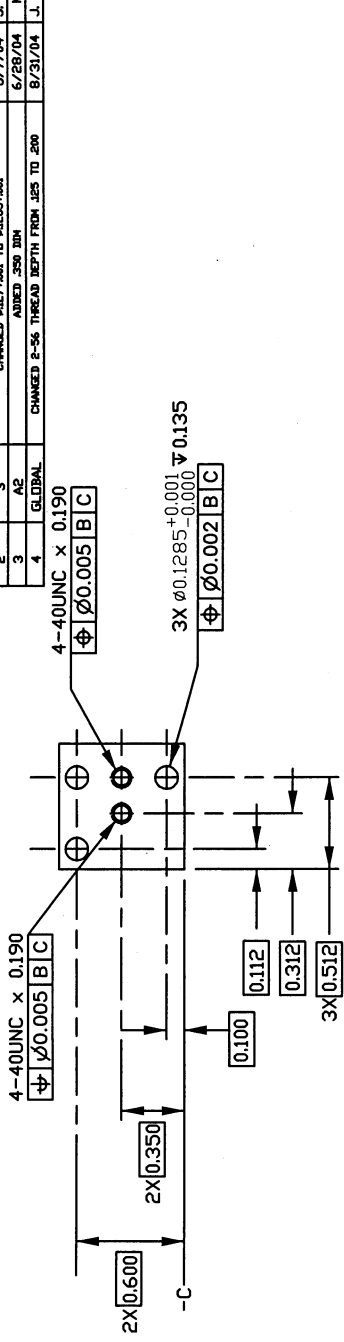
D

C

B

A

REVISIONS				
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2	3	CHANGED AL7700 TO AL205-001	6/7/04	J. McDONALD
3	A2	ADDED .500 DIA	6/28/04	M. ARTIS
4	GLOBAL	CHANGED 2-56 THREAD DEPTH FROM .25 TO .200	8/31/04	J. McDONALD



ENGINEERED J. POLAND		10/13/03	
DRAWN J. POLAND		10/13/03	
CHECKED J. FRECHRE		10/15/03	
SCALE 1/1		REVISION 4	
FINISH N/A		QUANTITY PER ASSEMBLY 1	
MATERIAL AL 7075		QUANTITY PER MANIKIN 5	
DESIGNED BY GESAC, INC. DESIGN & MANUFACTURING ENVIRONMENT 1000 W. BIRCHWOOD DRIVE ROCKFORD, IL 61103		DRAWING TITLE UNIVERSAL TILT SENSOR MOUNT	
PAGE 1/1		PART NUMBER TI1IMS11	

NOTE: HIDDEN LINES REMOVED FOR CLARITY

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