



PARTS MANUAL
C-Series Crane
3001

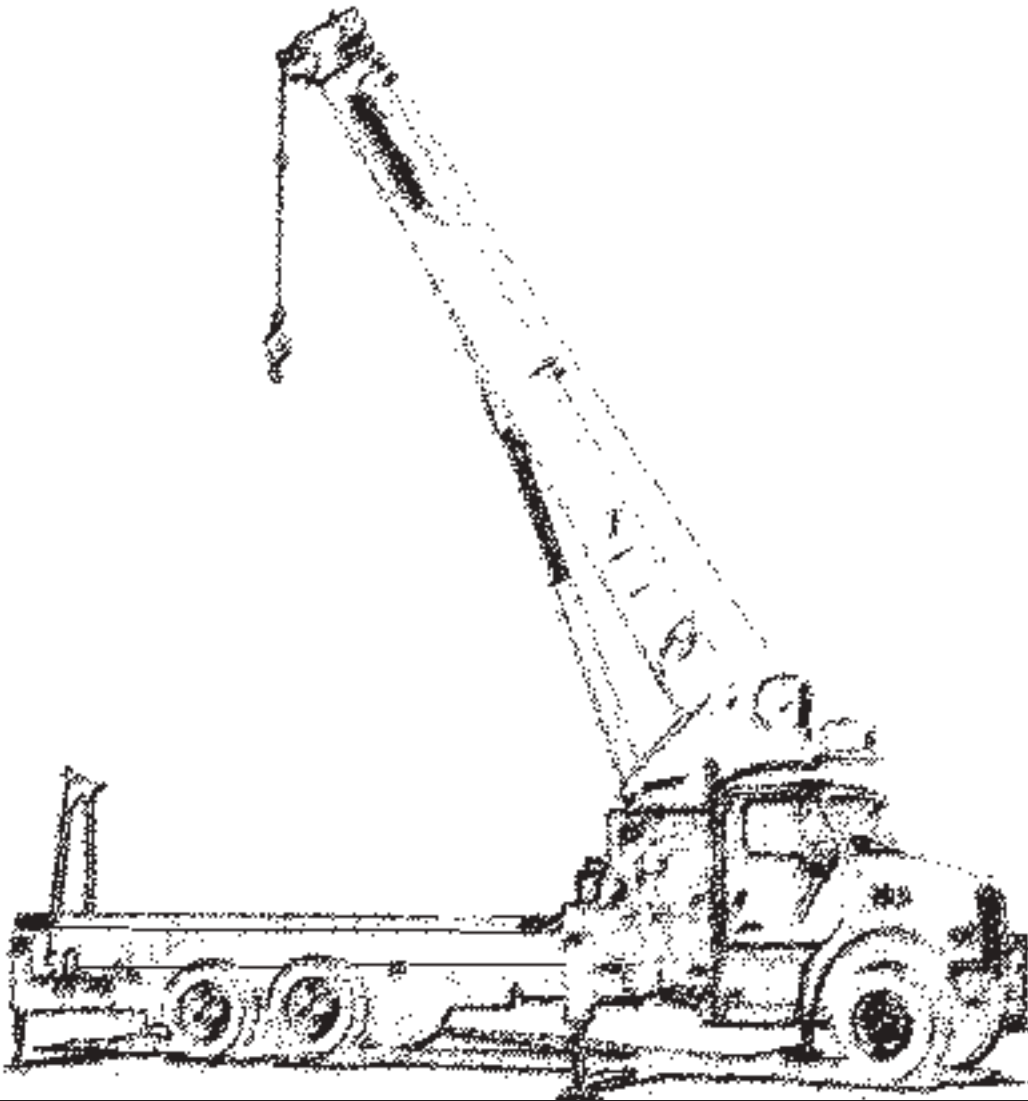


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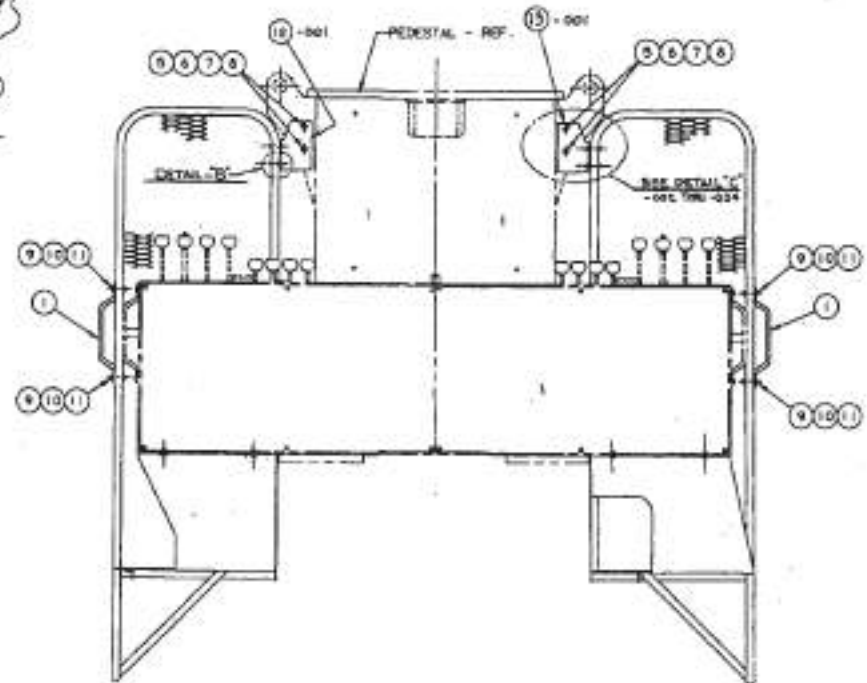
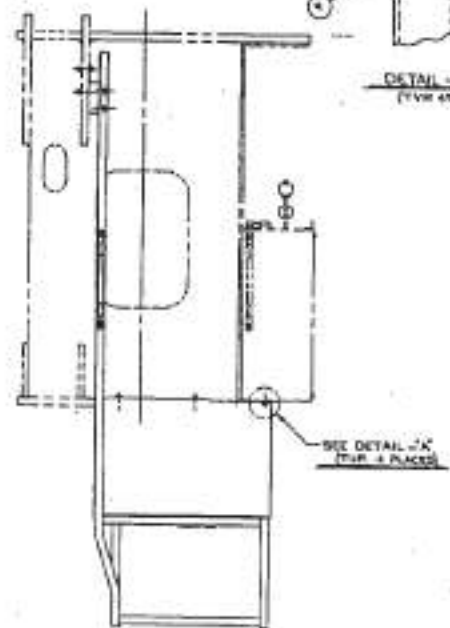
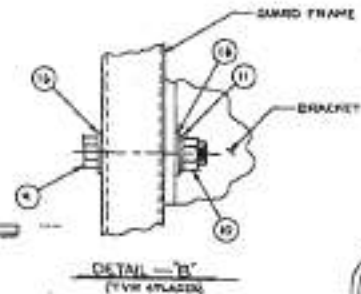
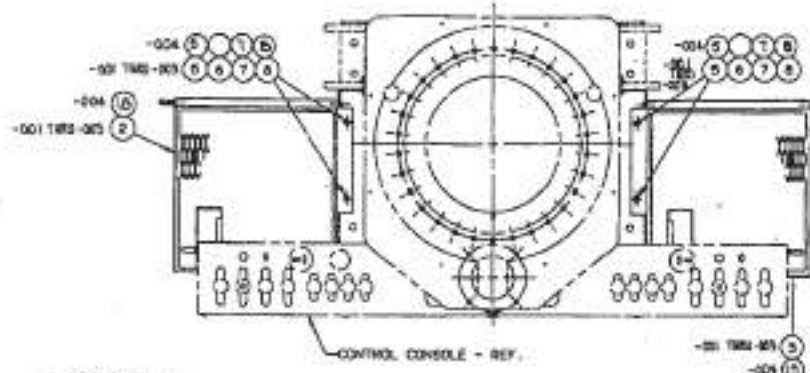
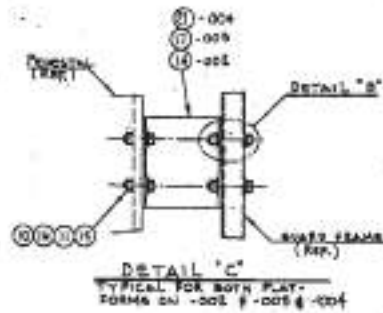
4800116-008 (B) TRUCK HARNESS PCB

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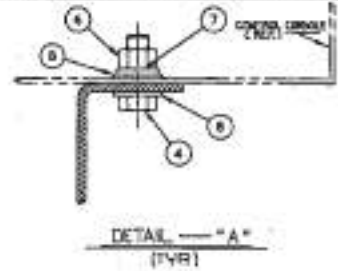
7200100-003 (NR) WIRING INST OUT & DWN O-R

7200101-002 (B) WIRING INST STABILIZER

7200136-002 (NR) SCHEMATIC, ELECTRIC 3001C DS-85 LMI



REV.		DESCRIPTION		QTY	UNIT	WEIGHT (LBS.)	ITEM
1	1	1	1	1	1	1.73	1
2	2	2	2	2	2	1.73	2
3	3	3	3	3	3	1.73	3
4	4	4	4	4	4	1.73	4
5	5	5	5	5	5	1.73	5
6	6	6	6	6	6	1.73	6
7	7	7	7	7	7	1.73	7
8	8	8	8	8	8	1.73	8
9	9	9	9	9	9	1.73	9
10	10	10	10	10	10	1.73	10
11	11	11	11	11	11	1.73	11
12	12	12	12	12	12	1.73	12
13	13	13	13	13	13	1.73	13
14	14	14	14	14	14	1.73	14
15	15	15	15	15	15	1.73	15
16	16	16	16	16	16	1.73	16
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91	91	91	91	91	91	1.73	91
92	92	92	92	92	92	1.73	92
93	93	93	93	93	93	1.73	93
94	94	94	94	94	94	1.73	94
95	95	95	95	95	95	1.73	95
96	96	96	96	96	96	1.73	96
97	97	97	97	97	97	1.73	97
98	98	98	98	98	98	1.73	98
99	99	99	99	99	99	1.73	99
100	100	100	100	100	100	1.73	100



TOTAL ASSEMBLY HEIGHT (6000257-00) 143.74 LBS.
 TOTAL ASSEMBLY WEIGHT (6000257-00) 143.68 LBS.
 TOTAL ASSEMBLY WEIGHT (6000155-00) 143.78 LBS.
 TOTAL ASSEMBLY WEIGHT (6000150-00) 143.85 LBS.

FOR FIELD REPLACEMENT OF 6000150 AND 6000155
 SUPPLY 6000150, 6000155 PLATFORMS PLUS 6000150,
 6000155 BRACKETS.

6000152-001 FOR MODEL 900, 100, 1400
 6000155-002 FOR MODEL 1100, 2200
 6000151-003 FOR MODEL 1500, 1700
 6000151-004 FOR MODEL 1800

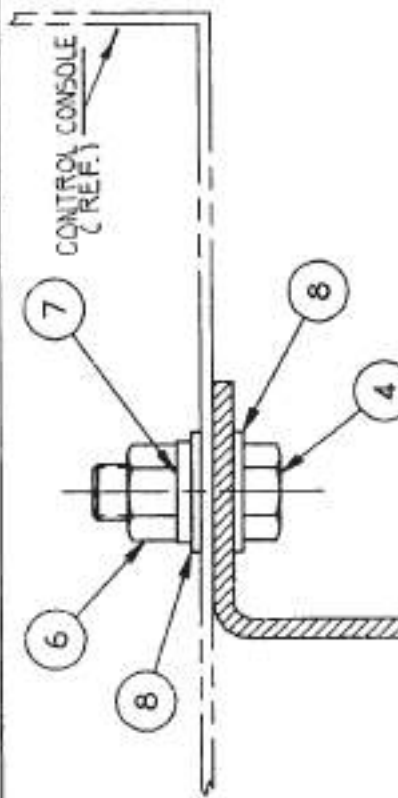
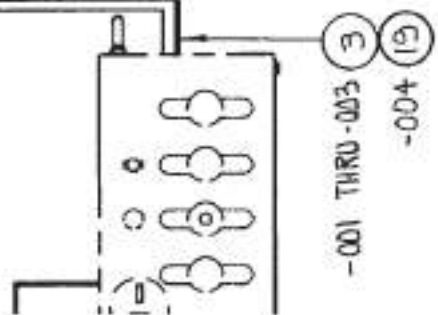
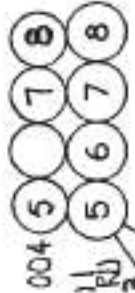
1003 - 1703 SERIES:
 USED ON CRANES BUILT
 AFTER OCT. 2001

CONTROLLED

B

BILL OF MATERIAL

No. REQ'D.			DESCRIPTION	CODE No. OR DWG. No.	WEIGHT (LBS.)	ITEM
-004-003	-002	-001				
2	2	2	GRAB HANDLE	4000105-001	.75	1
1	1	1	RIGHT PLATFORM	5000950-001	81.3	2
1	1	1	LEFT PLATFORM	5000951-001	81.3	3
4	4	4	.375 16 UNC-2A X 1.00 LG. GR. 5 BOLT	2004-061016	.03	4
4	4	8	.375 16 UNC-2A X 2.00 LG. GR. 5 BOLT	2004-061032	.05	5
4	8	12	.375 16 UNC-2B HEX NUT	2005-061000	.02	6
8	8	12	.375 LOCKWASHER	2006-060000	.01	7
12	12	16	.375 S.A.E. FLATWASHER	2008-060000	.01	8
8	8	8	.3125 18 UNC-2A X 1.75 LG. GR. 5 BOLT	2004-051028	.05	9
12	12	8	.3125 18 UNC-2B HEX NUT	2005-051000	.02	10
12	12	8	.3125 LOCK WASHER	2006-050000	.01	11
-	-	1	BRACKET, RIGHT PLATFORM	5000952-001	1.98	12
-	-	1	BRACKET, LEFT PLATFORM	5000953-001	1.98	13
-	-	2	BRACKET, R & L PLATFORM	5000962-001	1.45	14
4	4	4	.3125 18 UNC-2A X 1.25 LG GR 5 BOLT	2004-051020	.03	15
12	12	12	.3125 S.A.E. FLAT WASHER	2008-050000	.01	16
-	2	-	BRACKET R & L PLATFORM	5001411-001	1.6	17
-	-	-	RIGHT PLATFORM	5001937-001	81.3	18
-	-	-	LEFT PLATFORM	5001938-001	81.3	19
-	-	-	.375 16 UNC-2A X 2.50 LG. GR. 5 BOLT	2004-061040	.05	20
2	-	-	BRACKET, R & L PLATFORM	5000962-002	1.50	21



REVISIONS
 2-29-88 EO
 A ITEM 2 WAS 5000831. ITEM 3 WAS 5000832. ITEMS 9, 10 & 11 WERE 4 REQUIRED. ITEMS 12, 13, ADDED EN88-0045 -001
 3-8-88 E. M.
 B REV. ITEM N° 5 -001 PART N° WAS 2004-061028 ECN 88-0060
 EN 88-0391 DS 1-9-80 -003 NEW RELEASE
 EN 90-0037 -004 NEW
 EN 91-0006-1 EV 6-97
 C ITEM 2 WAS (D)
 C ITEM 3 WAS (O)
 C ITEM 5 WAS (O)
 C ITEM 6 WAS (B)
 C ITEM 18 WAS (I)
 C ITEM 19 WAS (I)
 C ITEM 20 WAS (4)
 FOR - 004

BILL OF MATERIAL					REVISIONS
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	EN 02-0018-8 DM 2/03 NEW RELEASE
1	7600005-037	1	OWNER'S MANUAL PKG	-	
2	4000781-001	1	SPRAY CAN (LT GRAY)	-	
3	4000781-002	1	SPRAY CAN (DK GRAY)	-	
4	4000781-003	1	SPRAY CAN (BLUE)	-	

NOTES:
 1. SHIP SPRAY CANS ON FACTORY PAINTED UNITS ONLY.
 DO NOT SHIP ON PRIME-ONLY KNOCKDOWNS. THESE
 ITEMS WILL BE REPLACED WITH SPECIAL PAINT IF SO
 ORDERED.

DOCUMENT CONTROL STATUS:
 ELECTRONIC FILE = CONTROLLED
 HARDCOPY = UNCONTROLLED

SCALE 1"=1" DRAWN DM CHECKED EO APPVD./DATE D.MORAVEC 2/03

MACHINE COMPLETION KIT
 SERIES 3001

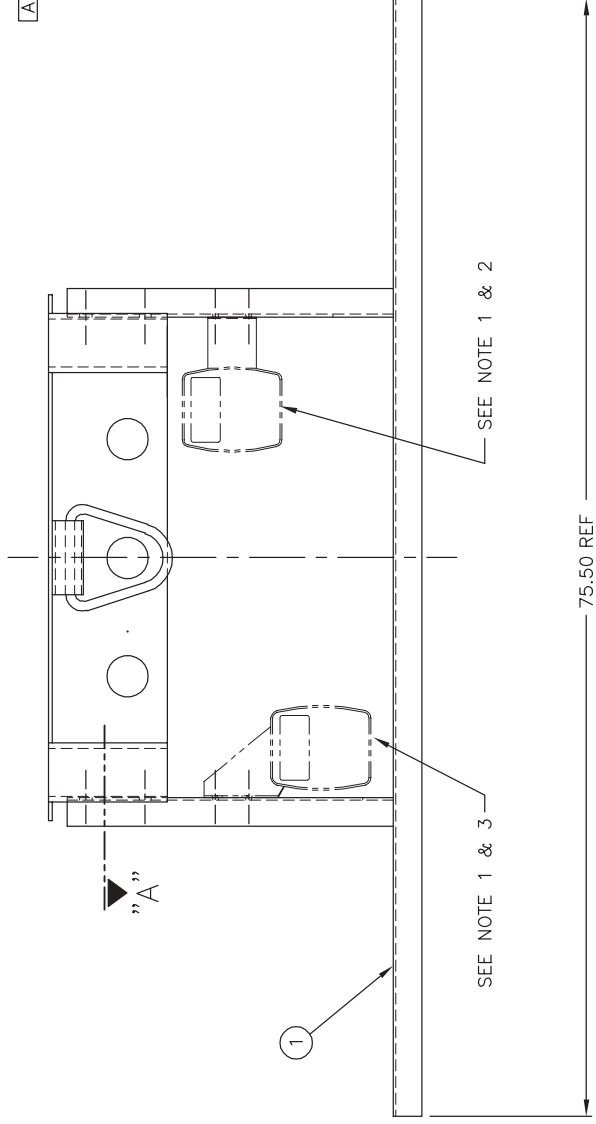
TOLERANCES (UNLESS SPECIFIED)
 $\pm 1/16$ "

6000260-033

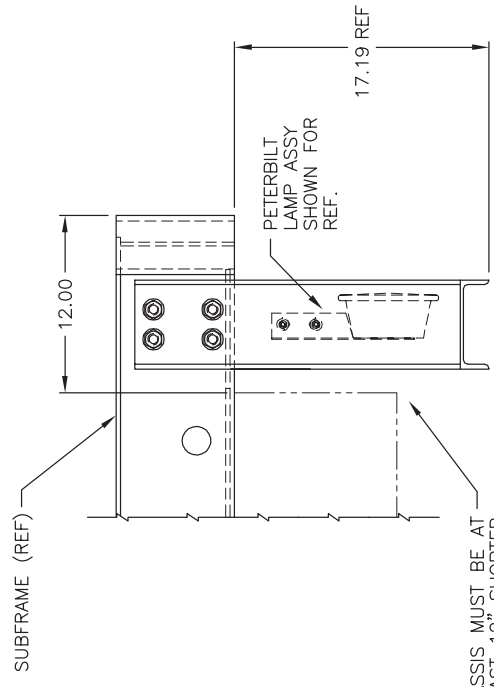
SHEET 1 OF 1

BILL OF MATERIAL				REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	
1	5001020-004	1	UNDERRIDE WELD	86.21	EN 95-0009 DAS 9-6-95 NEW RELEASE
2	2001-121024	8	BOLT 0.75NC X 1.50	0.30	EN 96-0001 DAS 1-18-96
3	2003-120000	8	FLATWASHER Ø0.75	0.05	DAS 1-18-96
4	2002-121000	8	HEX NUT	0.12	WAS P/N 2004-121028

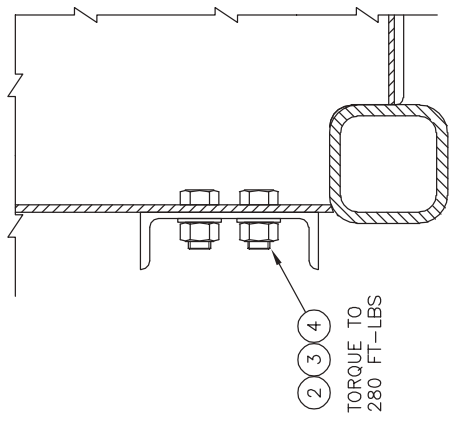
TOTAL ASSEMBLY WEIGHT 90.0 LBS.



REAR VIEW



SIDE VIEW



SECTION "A"
SCALE: 2X

NOTES:

1. RELOCATE STOP LAMPS FROM THE TRUCK CHASSIS AND INSTALL ON THE UNDERRIDE.
2. POSITION FORD STOP LAMPS ON INSIDE OF UNDERRIDE LEGS AS SHOWN. USE FORD HARDWARE FOR INSTALLATION.
3. PETERBILT LAMPS WILL HAVE TO BE RE-LOCATED AS SHOWN. USE EXISTING BOLT PATTERN WITH Ø0.38 FLATWASHER, Ø0.31 BOLT & NUT. CHECK THAT THE WIRE HARNESS IS ATTACHED TO THE CORRECT LAMP, TO TEST ACTIVATE TRUCK BLINKER AND VERIFY OPERATION.

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TOLERANCE UNLESS OTHERWISE SPECIFIED	
DECIMAL PLACES	FABRICATION
(1) PLACE 0.0	± 0.120
(2) PLACE 0.00	± 0.015
(3) PLACE 0.000	± 0.005
ANGLES	± 1' 30"
	± 0' 30"

1) ✓ MACHINING TOLERANCE APPLIES TO THIS DIMENSION
2) ∇ INDICATES A TOLERANCE TO ORIGINAL DIMENSION (MANITEX)
EXAMPLE: 3.125 ± 0.005 = USE ONE ORIGINAL PLACE TOLERANCE.

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARD COPY = UNCONTROLLED

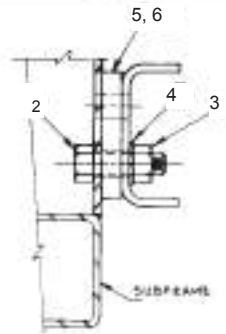


SCALE	DRAWN	CHECKED	APP'D./DATE
1"=6"	DAS	EO	EO 9/95

UNDERRIDE PROTECTION INST FOR CONVENTIONAL MOUNTED TRUCK CRANES

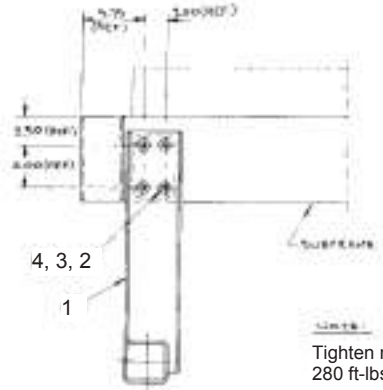
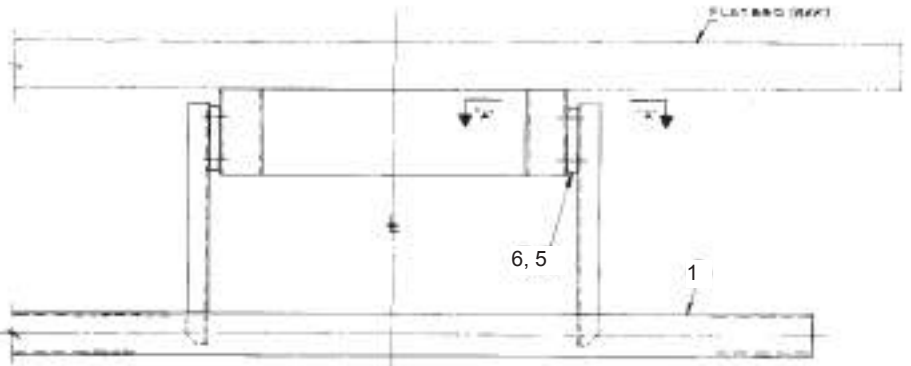
TOLERANCES (UNLESS SPECIFIED)	6000283-004
SHEET	1 OF 1

7 6 5 4 3 2 1



BILL OF MATERIAL				REVISIONS
QTY	DESCRIPTION	UNIT	QTY	REV
1	BASE RAIL PROTECTION	414	6001800	1
2	BOLT 3/4" DIA x 3 1/2" L	47	10011048	1
3	WASHER 3/4" DIA x 3/8" THK	2	100211000	1
4	WASHER 1 1/2" DIA x 3/8" THK	2	100211000	1
5	SPACER	47	100101001	1
6	SPACER	224	100101001	1

OBSOLETE 6000283-001
 Model 900, 1100
 6000283-002 Model 900, 1400, 1500
 1700, 1900, 2200
 2800



Tighten nuts to 280 ft-lbs

BASE RAIL PROTECTION
 INSTALLATION

Manitex Inc.

 BASE RAIL PROTECTION

 INSTALLATION

 6000283

Used on cranes built before 9-1995

3

2

1

BILL OF MATERIAL					ASSEMBLIES USED ON
QTY	UNIT	DESCRIPTION	WGT LBS	No CODE OR DWG. No.	
1	1	UNDER RIDE PROTECTION	147.36	5001020-001	1
8	8	BOLT 3/4" Ø x 3" LG. GR. 8	.47	2001-121048	2
8	8	HEX NUT 3/4" Ø GR. 8	.12	2002-121000	3
8	8	HARDENED FLAT WASHER	.05	1003-110000	4
2	2	SPACER	5.97	5001021-001	5
2	-	SPACER	2.24	5001021-002	6

REVISIONS

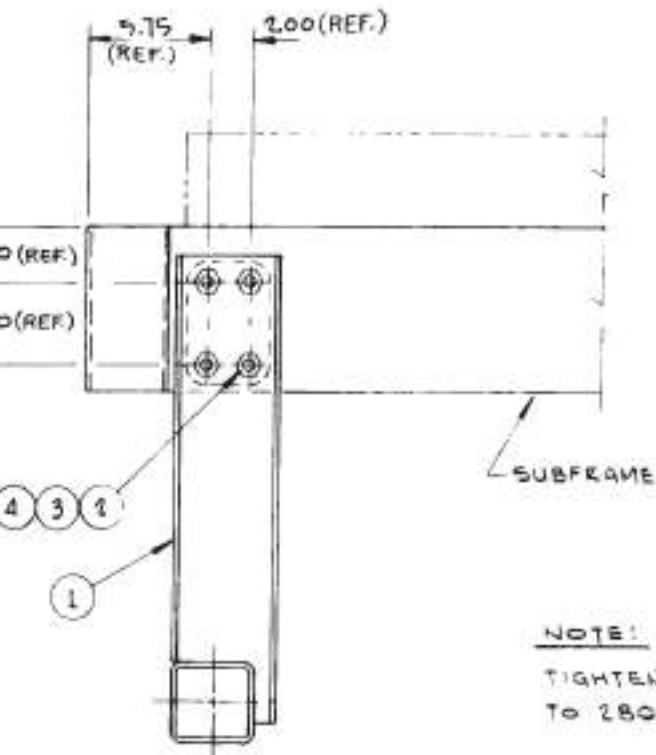
E

OBSOLETE 6000283-001

Model 900, 1100

6000283-002 Model 900, 1400, 1500
1700, 1900, 2200
2800

D



C

6000283-TAB

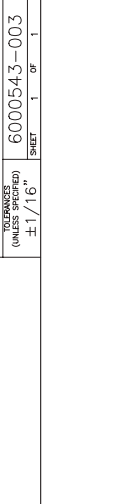
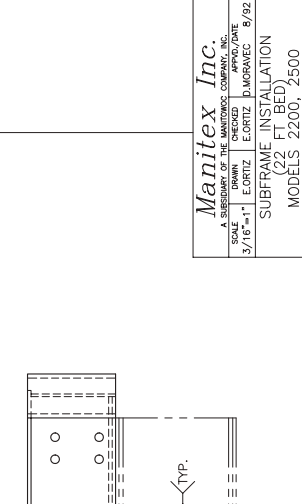
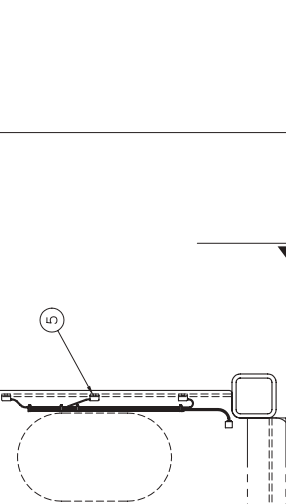
B

BILL OF MATERIAL			REVISONS		
ID#	PART NUMBER	QTY	DESCRIPTION	UNIT	DATE
1	5001963-002	1	SUBFRAME	2500	EN 9/22/08
2	5001944-001	4	CHANNEL	1.30	EN 8/11/08
3	4800095-003	3	SEALED LAMP (RED)	0.50	EN 8/11/08
4	4800094-500	3	GROMMET	0.10	EN 8/11/08
5	4800689-001	1	TAIL LIGHT HARNESS	1.00	EN 8/11/08

TOTAL WEIGHT 2507.12 LBS.
 EN 99-00017/06
 JPB 01-20-99
 C ITEM 6 WAS
 4800689-002

REVISIONS
 EN 9/22/08
 EN 8/11/08
 EN 8/11/08
 EN 8/11/08
 EN 8/11/08
 EN 8/11/08

NOTE: CENTER SUBFRAME ON TRUCK CHASSIS AND POSITION CHANNEL ITEM 2 AGAINST INSIDE OF TRUCK FRAME RAILS. WELD CHANNEL TO SUB-FRAME.



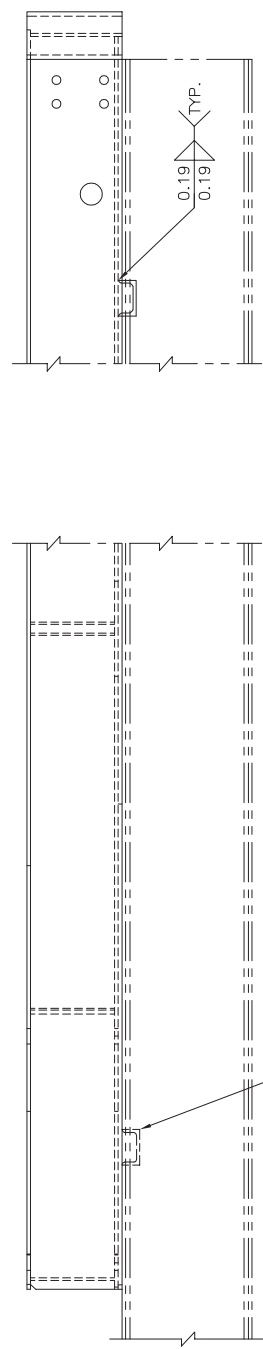
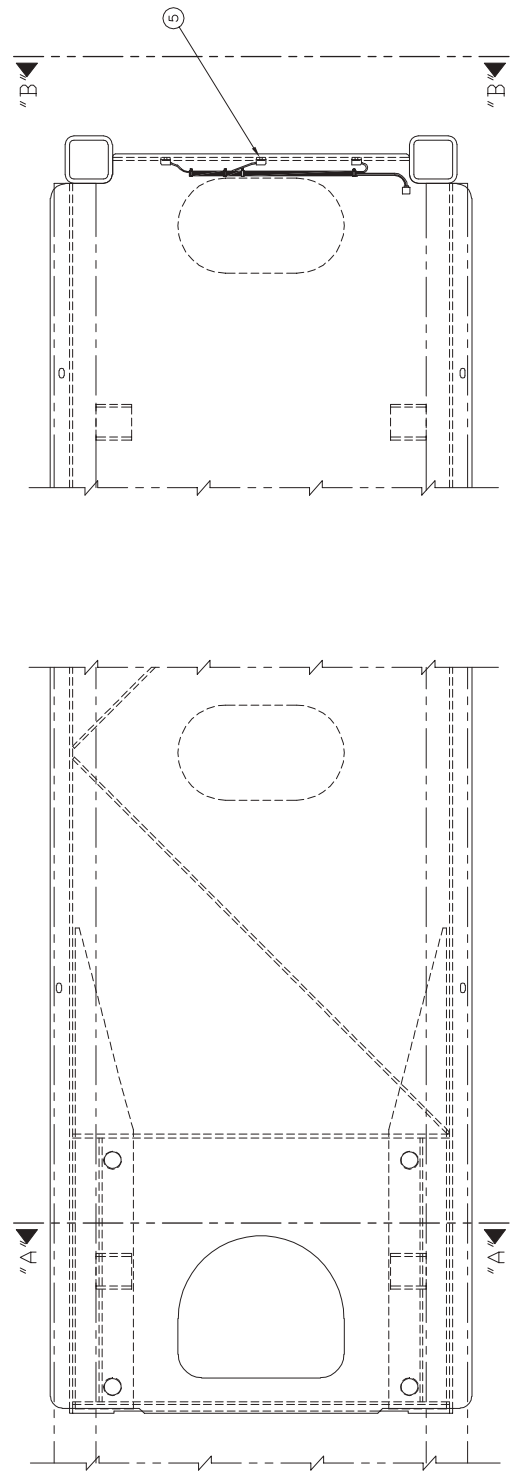
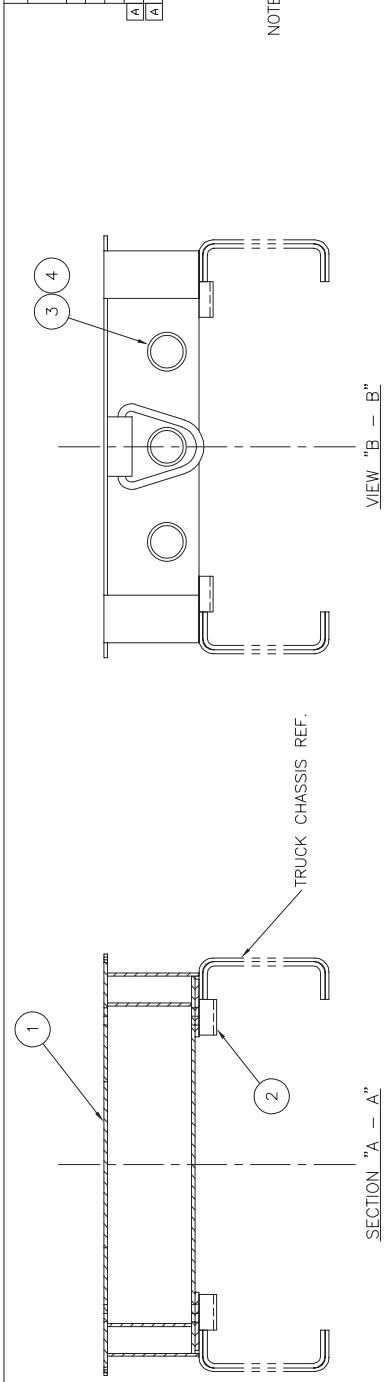
Manitex Inc.
 A SUBSIDIARY OF THE MANITEX COMPANY, INC.
 SCALE: DRAWN: CHECKED: APPROX. DATE: 3/16-11 | EORTIZ | JACOBTEC | 6/92
 SUBFRAME INSTALLATION
 MODELS 2200, 2500
 TOLERANCES (UNLESS SPECIFIED) 6000543-003
 SHEET 1 OF 1

REVISIONS	
93-0023	DAS 26-94
	NEW RELEASE
	EN 95-0008
	CB 07/15/95
	DELETE: 480094-001
	DELETE: 0702-031008
	DELETE: 2020-031008
	DELETE: 2018-031000
	ADDED: 4800689-001
	ADDED: 4800689-002
	EN 99-001/06
	IPB 01-20-99
	BT ITEM 6 WAS
	4800689-002

BILL OF MATERIAL			
ITEM NO.	PART NUMBER	QTY	DESCRIPTION
1	5001963-003	1	SUBFRAME
2	5001944-001	4	CHANNEL
3	4800095-003	3	SEALED LAMP (RED)
A 4	4800094-500	3	GROMMET MOUNT KIT
A 5	4800689-001	1	TAILLIGHT HARNESS

TOTAL WEIGHT 2418.0 LBS.

NOTE: CENTER SUBFRAME ON TRUCK CHASSIS AND POSITION CHANNEL ITEM 2 AGAINST INSIDE OF TRUCK FRAME RAILS. WELD CHANNEL TO SUB-FRAME.



CHANNEL CAN BE MOVED TO AVOID INTERFERENCE IN GENERAL AREA

DOCUMENT CONTROL STATUS:
ELECTRONIC FILED AND CONTROLLED
BY: UNCLASSIFIED

Manitex

SCALE	DRAWN	CHECKED	APPROX/DATE
3/16" = 1"	DAS	ED	J.MURPHYC 1/94

SUBFRAME INST - 22' BED
MODEL 2500
WITH OUT & DOWN O/R'S

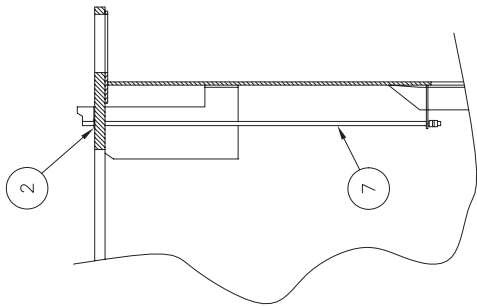
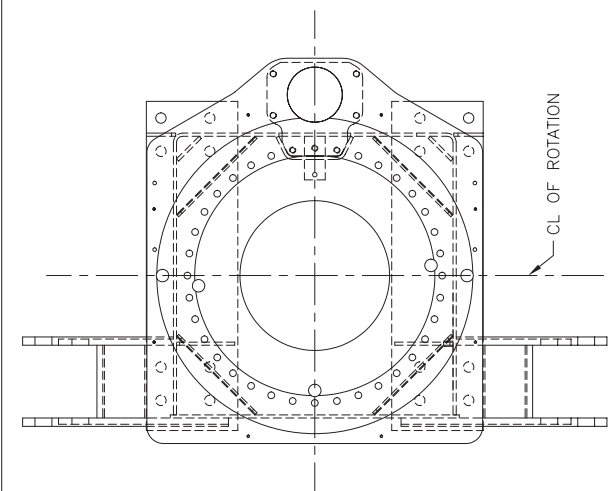
DOCUMENT NUMBER	SHEET
6000543-004	1 OF 1

CAD FILE:

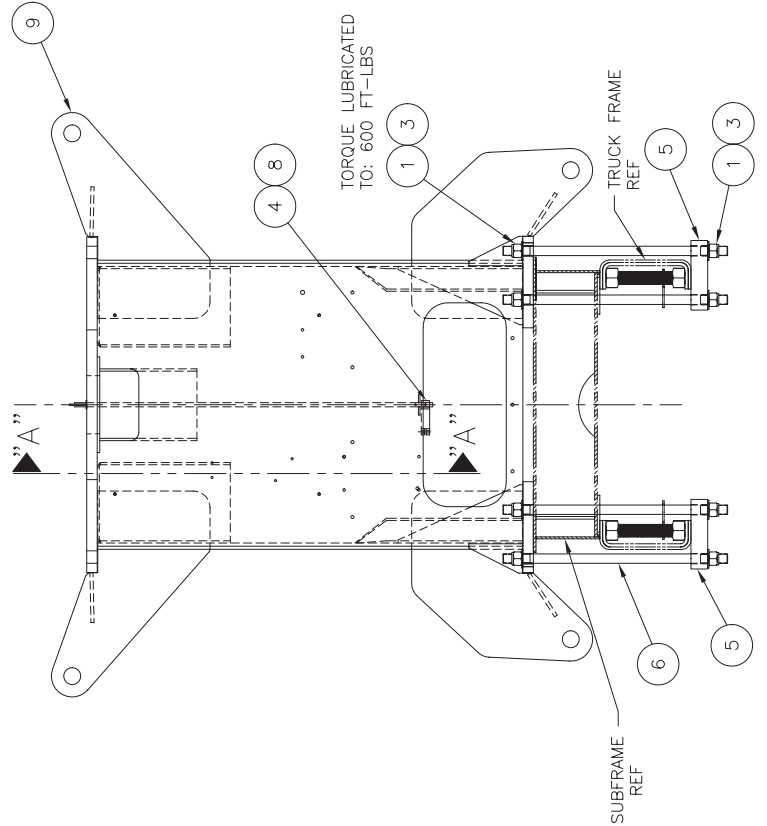
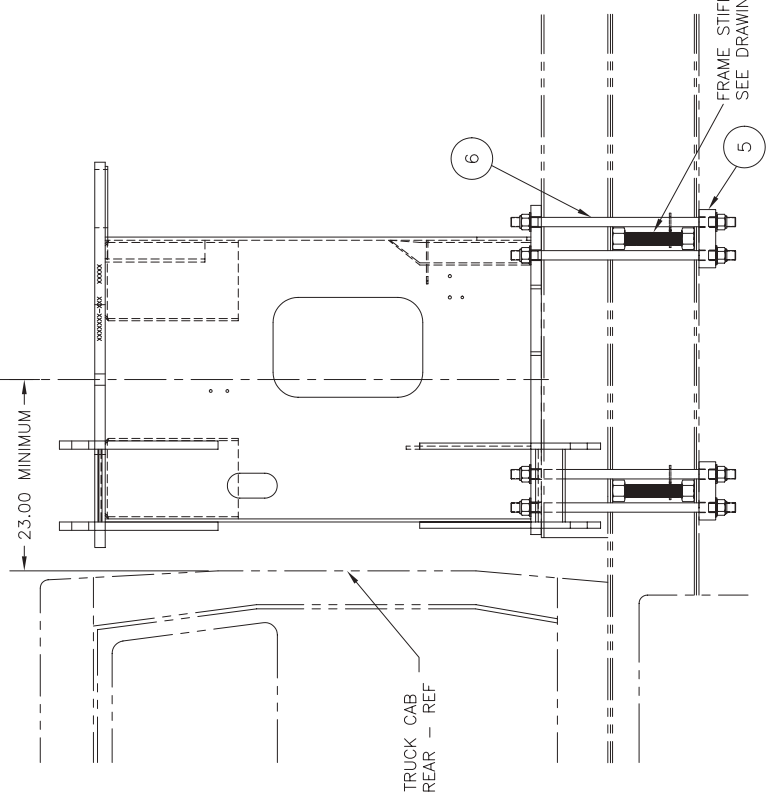
BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	2003-180000	32	FLAT WASHER	0.11
2	2008-080000	1	FLAT WASHER	0.02
3	2011-181000	32	LOCKNUT	0.44
4	2036-121200	1	PIN, SLOTTED	0.01
5	5000334-003	4	CLAMP BAR	30.44
6	5000342-020	16	THREAD ROD 1-1/8"Ø	7.60
7	5000429-003	1	TORQUE ROD	2.63
8	5000431-001	1	LEVER ARM	0.62
9	5002907-001	1	PEDESTAL WELD MACH	2102.4

TOTAL ASSEMBLY WEIGHT. 2366.6 LBS.



SECTION "A-A"

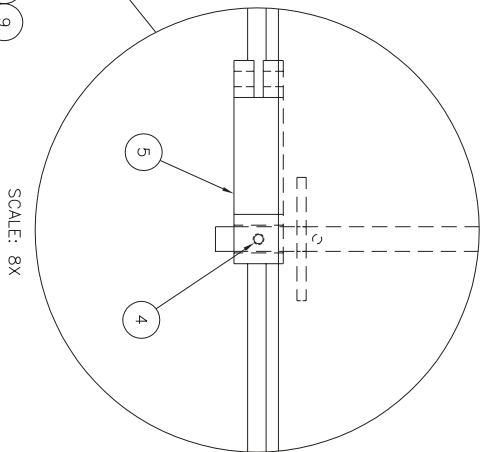
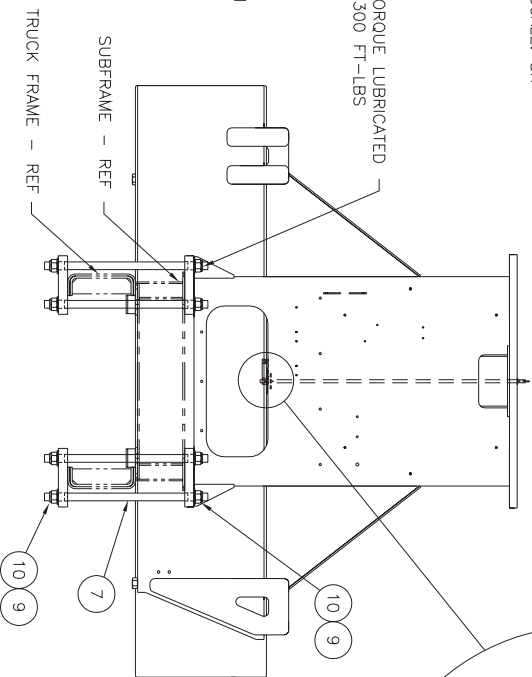
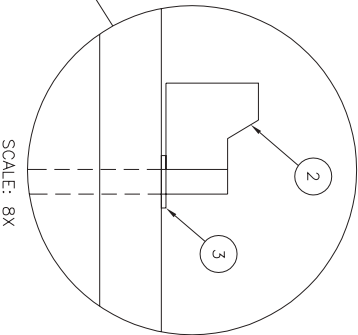
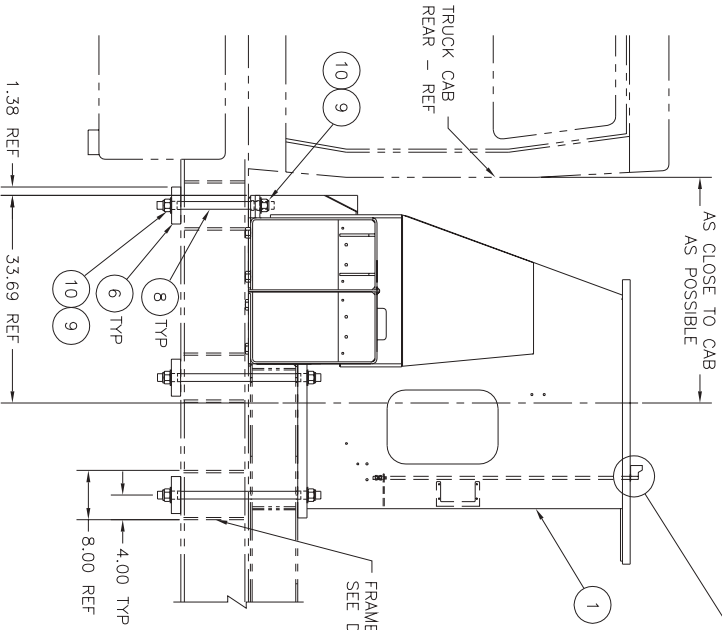
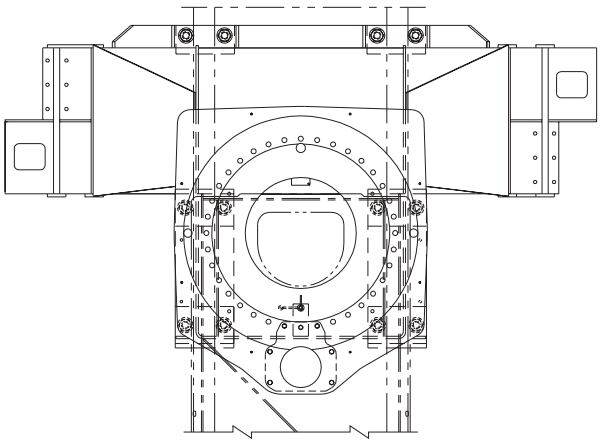


REVISIONS
EN 02-0018-7
DM 2/03
NEW RELEASE

DOCUMENT CONTROL STATUS: UNCONTROLLED
HARDCOPY = UNCONTROLLED



SCALE	DRAWN	CHECKED	DATE
1/8"=1"	DM	DM	2/03
PEDESTAL INSTALLATION FOR A-FRAME OUTRIGGERS			
TOLERANCES (UNLESS SPECIFIED)	SHEET 1 OF 1		
±1/16"	6000577-005		



BILL OF MATERIAL				REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT	EN 02-0018-14 EO 05-03 NEW RELEASE
1	5990043-011	1	PEDISTAL WELDMENT	2959.0	
2	5000429-003	1	TORQUE ROD	2.63	
3	2008-080000	1	.50 S.A.E FLATWASHER	0.02	
4	2036-121200	1	PIN, SLOTTED SPRING	0.01	
5	5000431-001	1	LEVER ARM	0.60	
6	5001934-001	6	CLAMPING BAR	17.0	
7	5000342-011	8	THD. BAR 1.25 X 26.5	9.2	
8	5000342-008	4	THD. BAR 1.25 X 19.0	6.60	
9	2120-201000	24	1.25 LOCKNUT GR.8	0.54	
10	2003-200000	24	1.25 FLATWASHER	0.16	

TOTAL ASSEMBLY WEIGHT: 3181.0 LBS.

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DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
PAPER COPY = UNCONTROLLED

SCALE	DRAWN	CHECKED	APPROV./DATE
3/32" = 1"	EO	EO	DIMORAVEC 05-03

PEDISTAL INSTALLATION
WITH OUT & DOWN
INTERMEDIATE OUTRIGGERS

TOLERANCES
(UNLESS SPECIFIED)

6000577-007

± 1/16"

SHEET 1 OF 1

BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	4000149-001	1	WARNING HORN	.40
2	2110-101012	4	RD HD SCR #10NC	.01
3	2021-100000	4	FLATWASHER #10	.01
4	2020-100000	4	LOCKWASHER #10	.01
5	2018-101000	4	HEX NUT #10NC	.01
6	4800078-003	2	RING TONGUE 16-14	.01
7	1000132-011-003	6'	WIRE MTW 16 RED	.01
8	4800092-008	6'	CONVOLUTED LOOM	.01
9	4800076-001	1	BUTT SPLICE 16-14	.01

TOTAL ASSEMBLY WEIGHT. 0.60 LBS.

EN 92-0027
DS 11-23-92
NEW RELEASE

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARD COPY = UNCONTROLLED

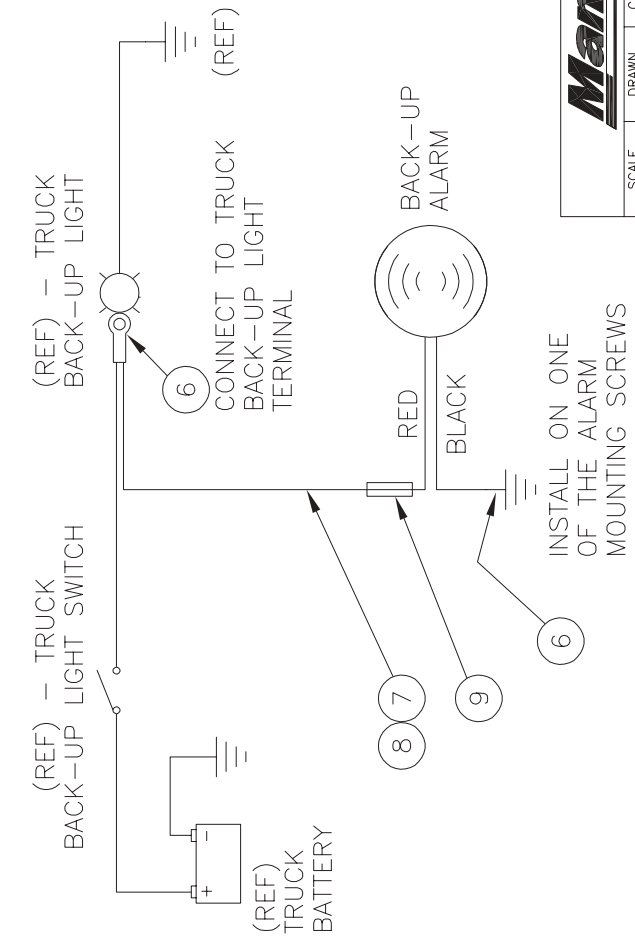
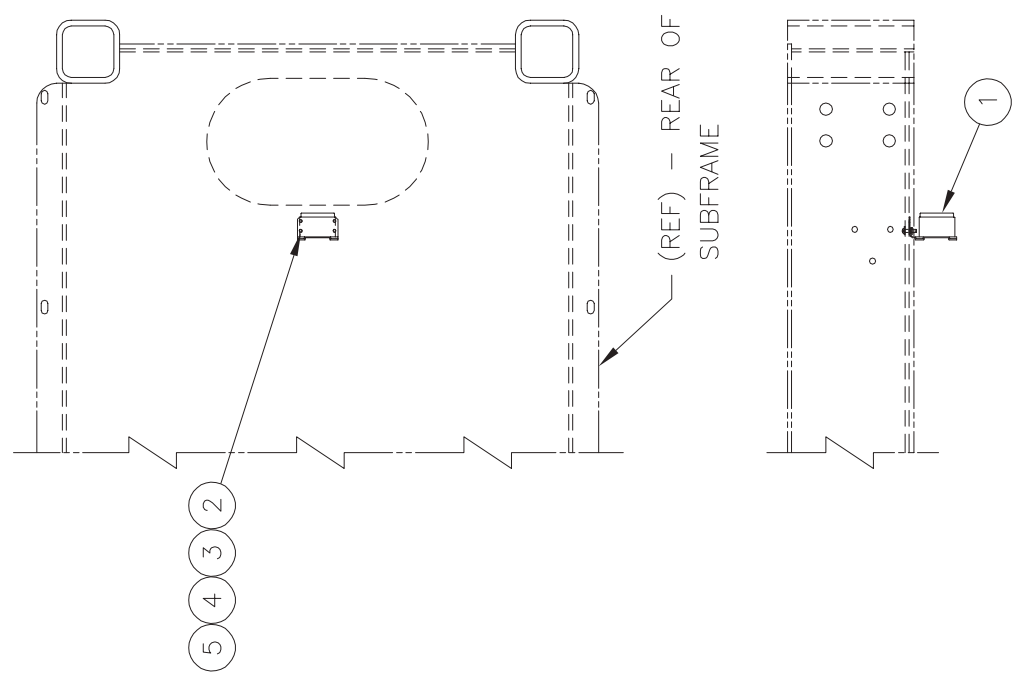
Manitex

SCALE	DRAWN	CHECKED	APPVD./DATE
1"=8"	DAS	DO	DM 11-23-92

BACK-UP ALARM
HORN INSTALLATION
ALL MODELS

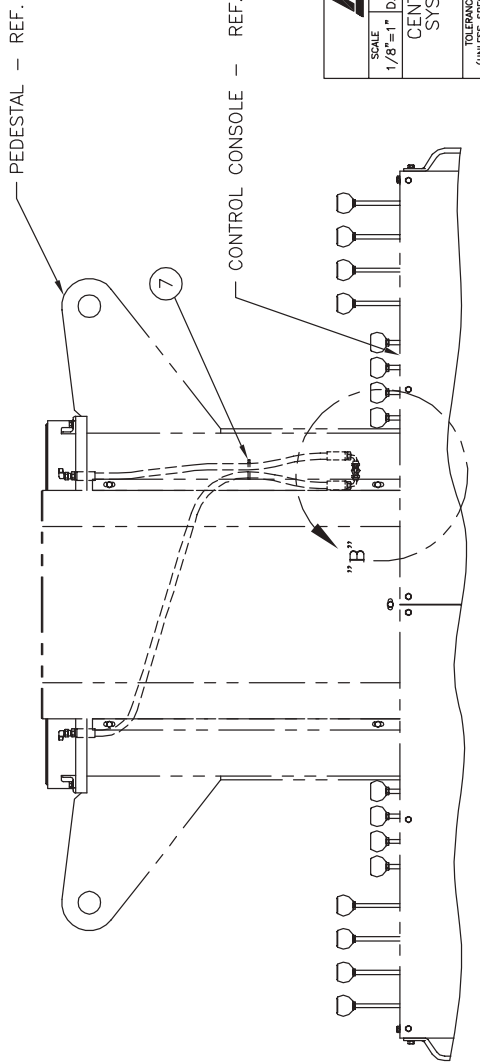
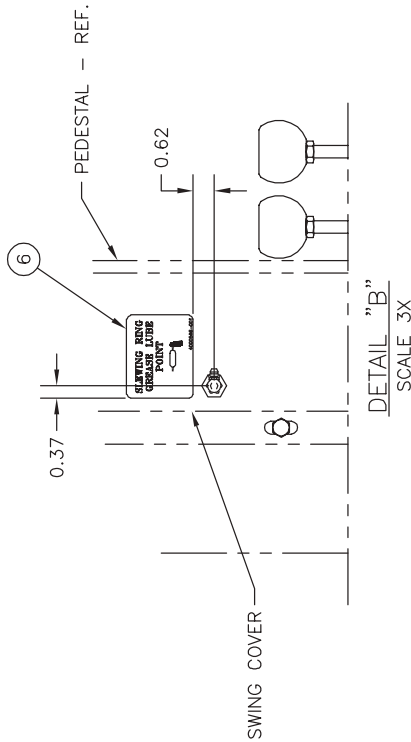
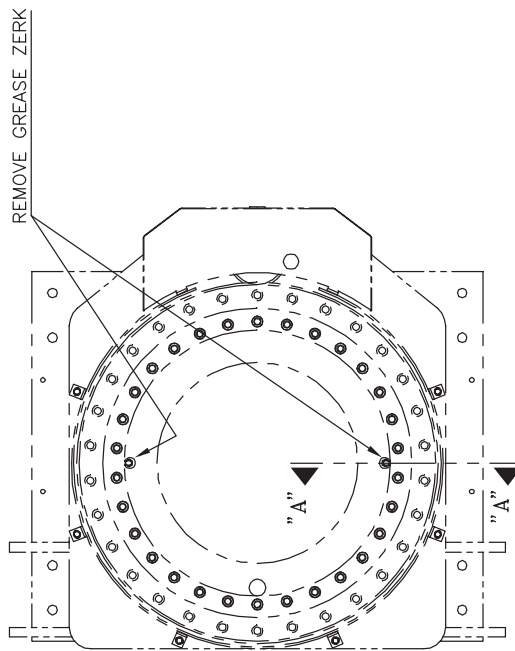
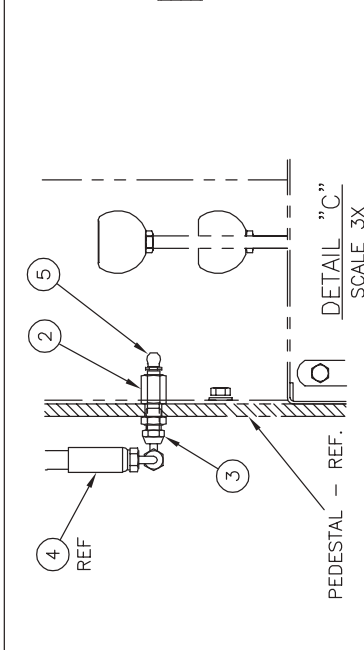
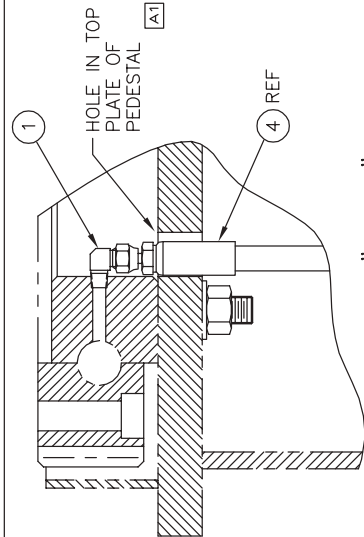
TOLERANCES
(UNLESS SPECIFIED) 6000597-001

SHEET 1 OF 1



ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	REVISIONS
1	30027-02-04	2	ADP 90° MNPT/MJIC	0.05	EN#92-0025 NEW RELEASE DS 9-2-92
2	30053-02-04	1	ADP STR BLKHD M/F JIC	0.10	EN 00-0025-4
3	30090-04-04	1	ADP TEE FJIC/MJIC	0.10	CG 11-00
4	30161-04094	2	HOSE ASSY 1/4" JIC	1.00	[A] ITEM 4 WAS 30161-04096
5	4000039-006	1	90° GREASE FITTING	0.05	
6	4000546-001	1	DECAL LUBE FTG	0.01	
7	2083-100125	2	TIE WRAP	0.01	

TOTAL INST. WEIGHT 1.38 LBS.



DESIGN CONTROL STATUS
ELECTRONIC FILE = CONTROLLED
HARD COPY = UNCONTROLLED

Mantex

SCALE	CHECKED	APPROV./DATE
1/8"=1"	D.SORIANO	E.CORTIZ D.MORAVEC 9/82

CENTRALIZED LUBRICATION
SYSTEM - INSTALLATION

RELEASES (UNLESS SPECIFIED)	SHEET	OF	TOTAL SHEETS
6000608-001	1	1	1

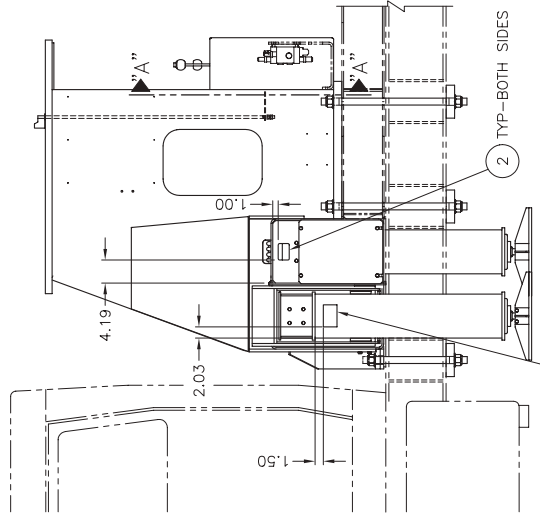
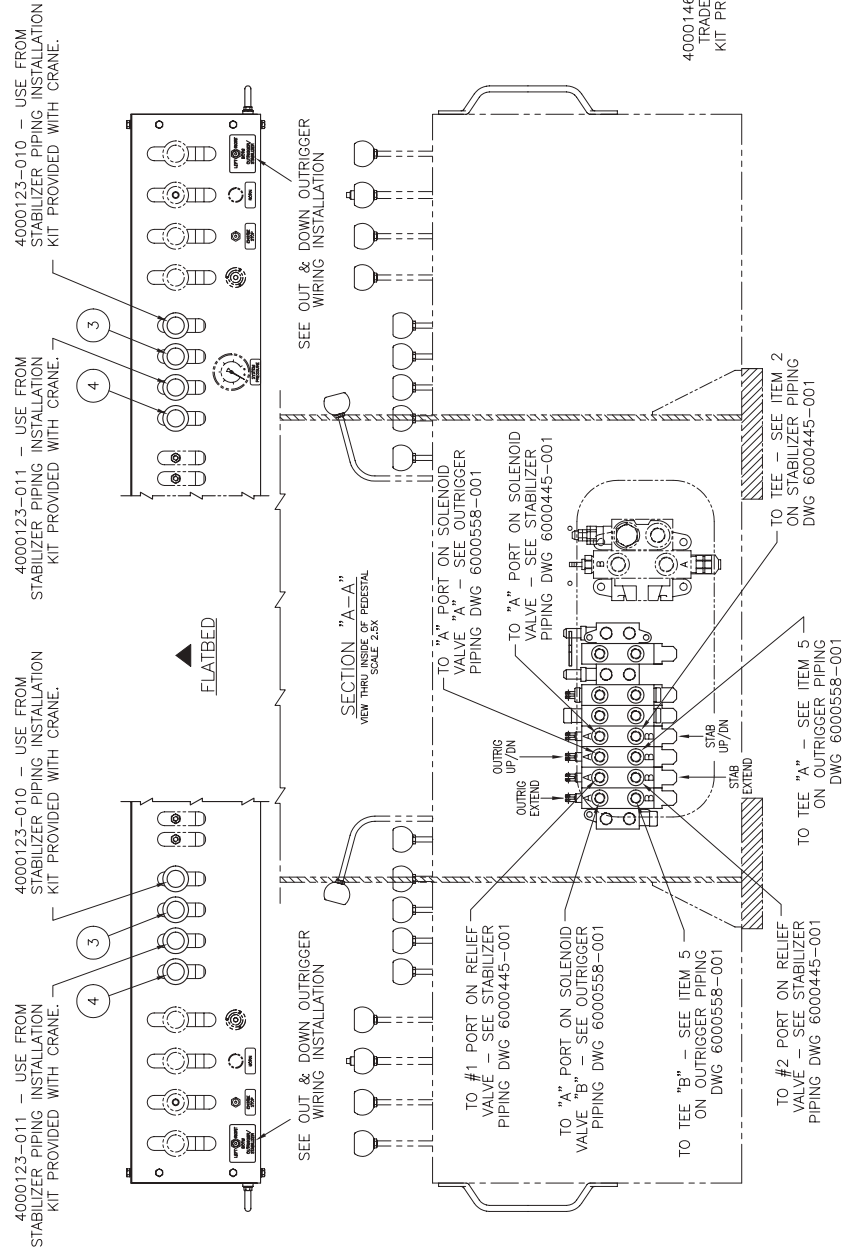
NOTES FOR OVERLAYS (P/N 7600001-024):

1. THESE OVERLAYS DESCRIBE THE CHANGES AFFECTING THE CONTROL FUNCTIONS OF THE OUTRIGGER/STABILIZER LEVERS ON THE OPERATOR'S CONSOLE.
2. THE OVERLAYS ARE DESIGNED TO COVER THE STANDARD COPY IN THE OPERATOR'S AND OWNER'S MANUAL REGARDING OPERATION OF THE OUTRIGGERS, STABILIZERS, AND STABILIZER/OUTRIGGER SELECTOR SWITCH.
3. THE OVERLAYS ARE PRINTED ON SELF ADHESIVE BACKED MEDIA; ORIGINATED BY THE TECH. SERVICES DEPARTMENT.
4. THESE ARE TO BE APPLIED DIRECTLY OVER THE CONTROLS SECTION IN THE MANUALS BEFORE THEY ARE PLACED ON THE CRANE.
5. AN OVERLAY WITH THE PART NUMBER "7600001-024" IS PLACED BESIDE THE REORDER PART NUMBER FOUND ON THE FIRST PAGE OF BOTH THE OWNER'S AND OPERATOR'S MANUALS.

BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	REVISIONS
1	4000153-001	2	DECAL, DO NOT OPER	.01	EN 92-0025 DS 8-28-92 NEW RELEASE
2	4000123-010	2	INSERT, O/R UP/DN	.01	JGC 3-2-94 [A] WSS 001024 WSS 0020
3	4000123-013	2	INSERT, O/R IN/OUT	.01	EN 97-0003-13 EO 3/27/97
4	7600001-024	1	KIT, OWRN/OP OVERLAY	.01	[B] ITEM 1 WAS 4000298-002

TOTAL ASSEMBLY WEIGHT: 39.58 LBS.



4000146-001 - USE FROM TRADEMARK & NAMEPLATE KIT PROVIDED WITH CRANE. TYP-BOTH SIDES

FORWARD CONTROL SYSTEMS
ELECTRONIC FILE - CONTROLLED
HARDCOPY - UNCONTROLLED

Manitowoc Boom Trucks, Inc.

FORM 1 (REV. 10/94)
DATE: 1/94
DRAWN BY: [blank]
CHECKED BY: [blank]
E.O. 12812

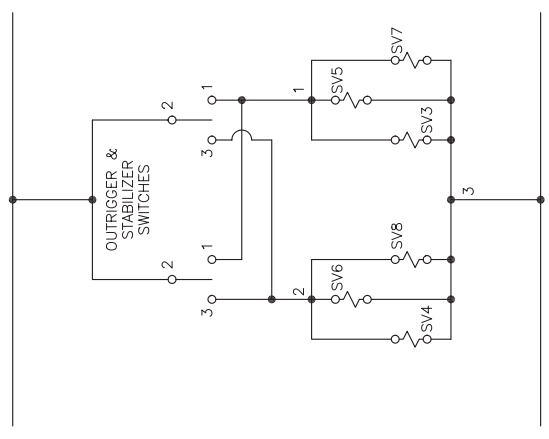
KIT COMPLETION
OUT & DOWN OUTRIGGER OPT.
MODEL 2500

TOLERANCES
(UNLESS SPECIFIED)
6000689-001
±.1/16"

SHEET 1 OF 2
CAD FILE: MTC1528B

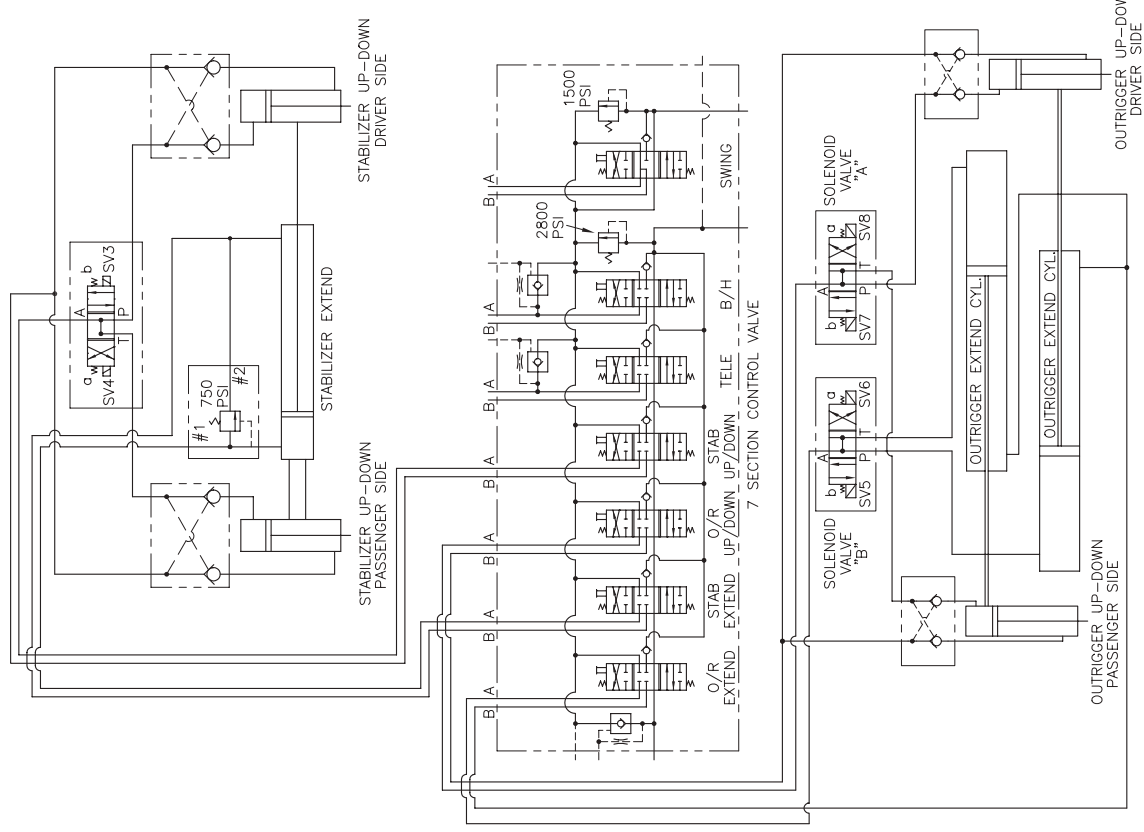
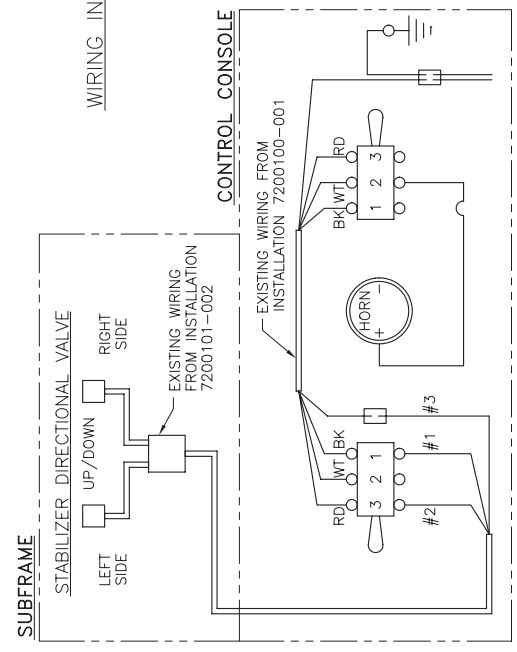
REVISIONS	
EN 93-0025	
DAS 1-28-94	
NEW RELEASE	
EN 94-0003	
JGC 3-2-94	
A SEE SHT 1	
EN 97-0003-13	
B SEE SHT 1	

- SV3 -- STABILIZER UP/DOWN R.S.
- SV4 -- STABILIZER UP/DOWN L.S.
- SV5 -- OUTRIGGER EXTEND R.S.
- SV6 -- OUTRIGGER EXTEND L.S.
- SV7 -- OUTRIGGER UP/DOWN R.S.
- SV8 -- OUTRIGGER UP/DOWN L.S.



ELECTRICAL SCHEMATIC

WIRING INSTALLATION



HYDRAULIC SCHEMATIC

MANITOWOC BOOM TRUCKS, INC.
 ELECTRONIC DRAWING - 2-DIGIT
 ELECTRONIC FILE - CONTROLLED
 HARD COPY - UNCONTROLLED

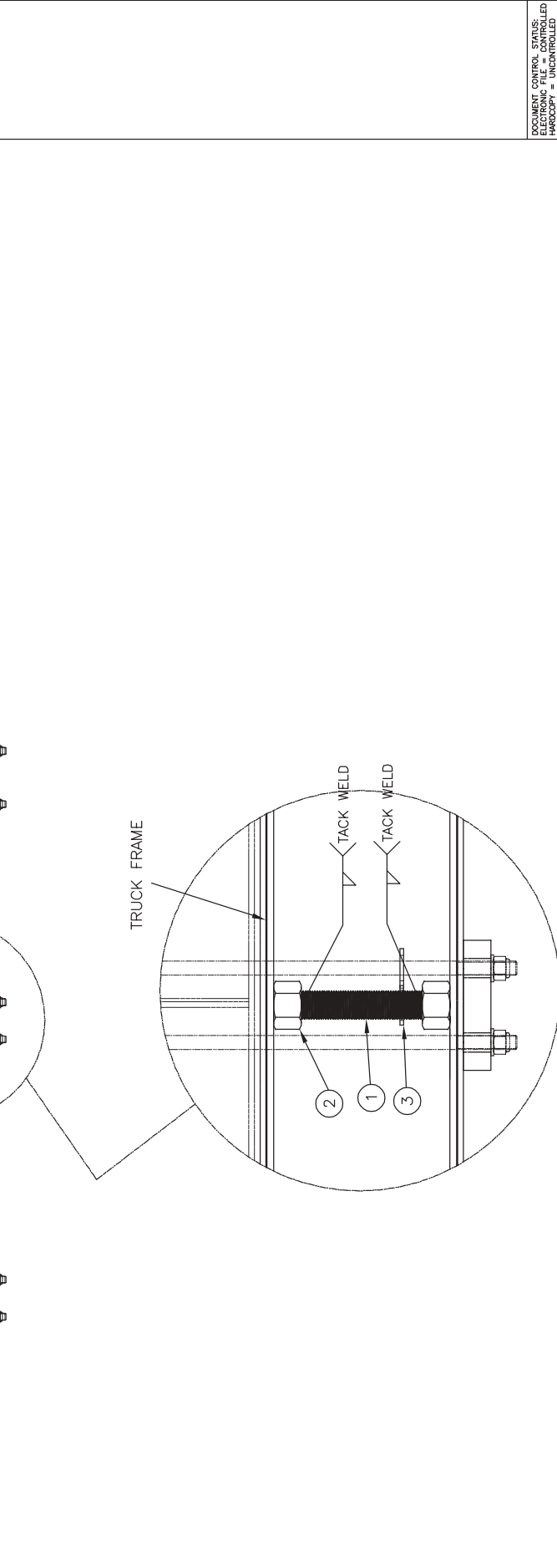
SCALE	DOWN	DESIGN	APPROV./DATE
1/8"	1/8"	1/28	

KIT COMPLETION
 OUT & DOWN OUTRIGGER OPT.
 MODEL 2500
 TOLERANCES
 (UNLESS SPECIFIED)
 6000689-001
 ±1/16"
 SHEET 2 OF 2
 CAD FILE: MTC1527B

BILL OF MATERIAL				REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	
C 1	4000724-001	8	STUD W/NUTS	7.00	EN 99-0006-6 EV 7/99 NEW RELEASE
C 2	4000724-001A	16	NUT	-	
C 3	5002808-002	8	STIFFENER BRACKET	0.32	EN 01-0001-08 EV 01/01
C 4	2004-081072	4	BOLT, 0.5"X4.5" GD 5	-	A ADDED ITEM
C 5	2011-081000	4	LOCK NUT, 0.5"	-	TWO
C 6	2008-080000	8	WASH, FLAT SAE 0.50	-	EN 01-0009-02 ET 09/01 BLADED ITEM 3

INSTALLATIONS INCLUDING MODELS WITH STANDARD OUTRIGGERS

NOTE: 1. QUANTITIES REFLECT USAGES FOR CRANES EQUIPPED WITH STANDARD STABILIZERS AND OUTRIGGERS.
 2. STUD IS NOT TO BE WELDED TO THE TRUCK CHASSIS. THE NUT SHOULD BE TACK WELDED TO THE STUD AND THE STIFFENER BRACKET SHOULD BE FREELY ATTACHED.
 TOTAL ASSEMBLY WEIGHT. 58.6 LBS.



DOCUMENT CONTROL STATUS:
 ELECTRONIC FILE = CONTROLLED
 HARD COPY = UNCONTROLLED

Mantex

SCALE	DRAWN	CHECKED	APPROV./DATE
1"=8"	EV		7/99

FRAME STIFFENER INSTALLATION
 MODELS 900 THRU 2800

TOLERANCES (UNLESS SPECIFIED)	6000719-101
± 1/16"	SHEET 1 OF 2

CAD FILE:

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TOLERANCE UNLESS OTHERWISE SPECIFIED	
DECIMAL PLACES	FABRICATION
(1) PLACE 0.0	± 0.120
(2) PLACE 0.00	± 0.060
(3) PLACE 0.000	± 0.030
ANGLES	± 1' 30" ± 0' 30"

MACHINING (1) ✓ MACHINING TOLERANCE AND/OR SURFACE FINISH DIMENSION INDICATES A TOLERANCE BY ORIGINAL DECIMAL DIMENSION (UNLESS SPECIFIED) EXAMPLE: .375 ± .005 USE ONE ORIGINAL PLACE TOLERANCE.

REVISIONS	
EN 99-0006-06	
EV 7/99	
NEW RELEASE	
EN 01-0001-08	
EV 01/01	
A	SEE SHIT 1
EN 01-0009-02	
ET 09/01	
B) ADDED VIEWS	
EN 01-0012-03	
ET 1/02	
C) CHANGED	
ALL VIEWS	

DOCUMENT CONTROL STATUS:
 ELECTRONIC FILE = CONTROLLED
 HARD COPY = UNCONTROLLED



SCALE	DRAWN	CHECKED	APP'D./DATE
1"=8"	EV		7/99

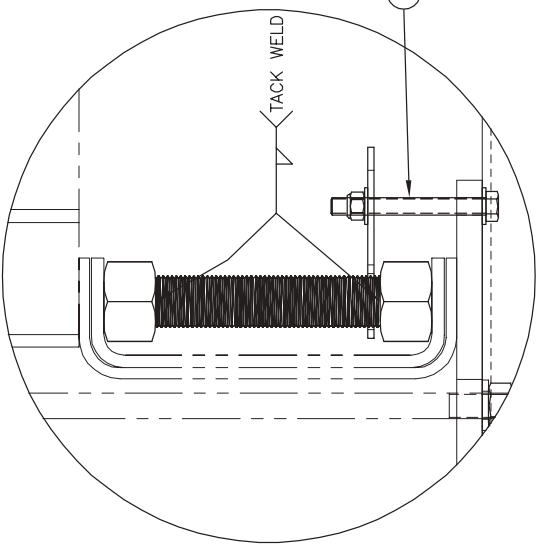
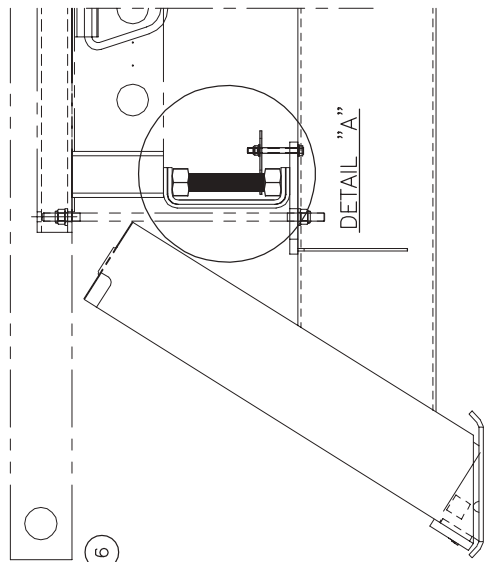
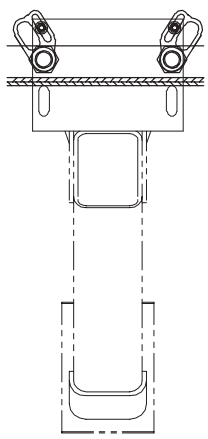
**FRAME STIFFENER INSTALLATION
 MODELS 900 THRU 2800**

TOLERANCES (UNLESS SPECIFIED)	6000719-101
± 1/16"	SHEET 2 OF 2

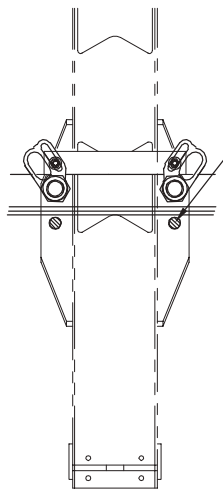
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DECIMAL PLACES	FABRICATION	TOLERANCE UNLESS OTHERWISE SPECIFIED
(1) PLACE 0.00	1) ✓	± 0.005
(2) PLACE 0.00	2) ✓	± 0.005
(3) PLACE 0.000	3) ✓	± 0.005
ANGLES		± 1.30°
		± 0.30°

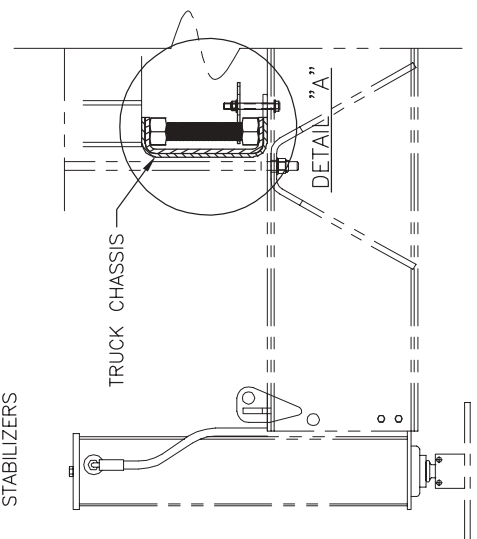
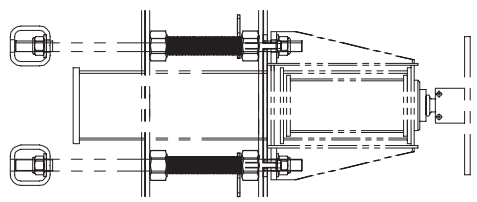
MAKING APPLIES TO THE DIMENSION AND/OR SURFACE UNLESS OTHERWISE INDICATED BY OTHER THAN INDICATED BY ORIGINAL DIMENSION SPECIFICATION
 DECIMAL PLACE TOLERANCE



DETAIL "A"
 SCALE: 3X



CENTER STIFFENER
 ON THREADED RODS



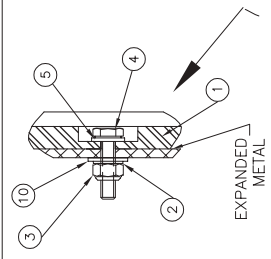
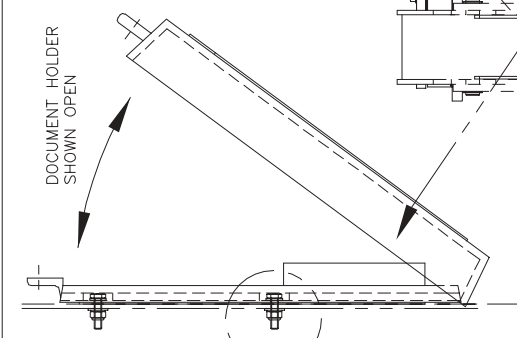
TRUCK CHASSIS

DETAIL "A"

NOTE:
 INSTALLATION INCLUDE MODELS
 EQUIPPED WITH OUT & DOWN
 STABILIZERS

REVISIONS
 EN 01-0009-05
 ET 09/01
 NEW RELEASE

BILL OF MATERIAL			
ITEM NO.	PART NUMBER	QTY	DESCRIPTION
1	4000705-001	2	DOCUMENT HOLDER
2	2007-040000	8	FLATWASHER 1/4"φ
3	2011-041000	8	LOCKNUT 1/4"φ
4	2004-041020	8	HEX BOLT 1/4"x1.25"
5	4000709-005	8	FLATWASHER RUBBER
6	SEE SALES ORDER	2	LOAD CHART
7	2127-013000	4	SPLIT RING
8	4000625-002	4	FIG. BALL CHAIN END 0.01
9	4000624-005	8	BALL CHAIN #10 0.01
10	2007-060000	8	FLATWASHER 3/8"φ

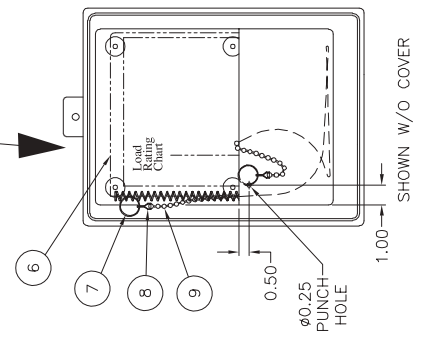
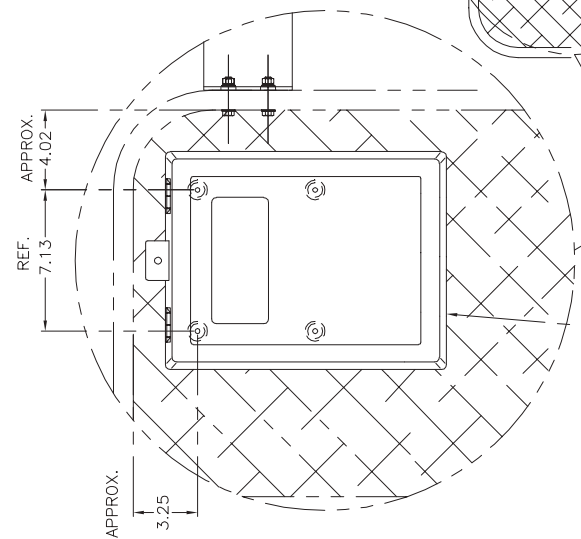


TURRET - REF

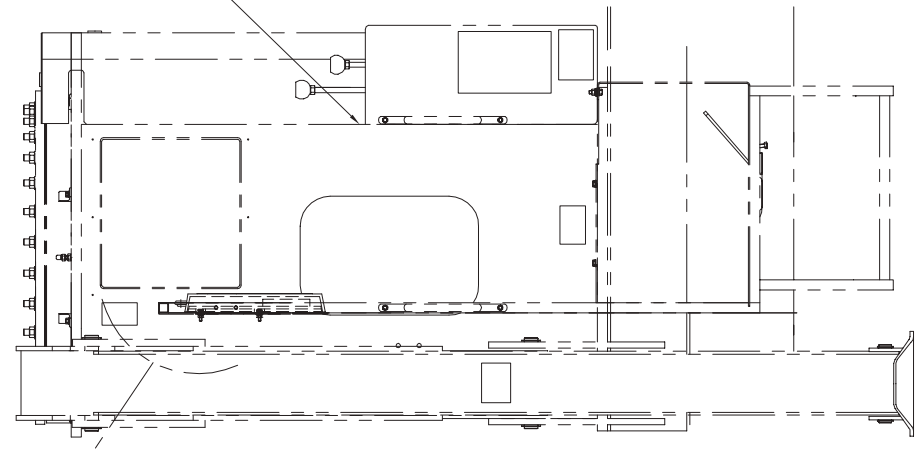
NOTE: DRIVER SIDE SHOWN, TYPICAL INSTALLATION FOR OTHER SIDE.

REF. 7.13
 APPROX. 4.02

APPROX. 3.25



NOTE: ATTACH SPLIT RINGS TO COIL BINDING OF LOAD CHART AND SECURE TO DOCUMENT HOLDER



DOCUMENT CONTROL STATUS:
 DRAWING FILED
 ELECTRONIC FILE GENERATED
 FILED



SCALE: 5/32" = 1"
 DRAWN: ET
 CHECKED: EV
 APPROX./DATE: 9/01

DOCUMENT HOLDER
 INSTALLATION

REVISIONS:
 (UNLESS SPECIFIED)
 6000776-003
 SHEET 1 OF 1

BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	1703843	2	DECAL, MTWBT SM	-
2	4000154-001	3	DECAL CAUTION READ..	-
3	4000237-001	2	DECAL, FASTEN BELT	-
4	4000240-001	2	DECAL, DO NOT USE	-

REVISIONS

EN 00-0019-07
DAS 6/00
NEW RELEASE

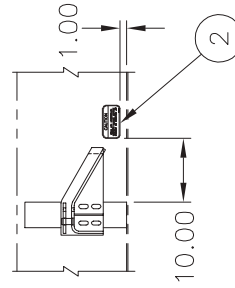
4 N.S. & F.S.

1 N.S. & F.S.



3 N.S. & F.S.

2 N.S. & F.S.



BOOM RIGHT SIDE

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARDCOPY = UNCONTROLLED



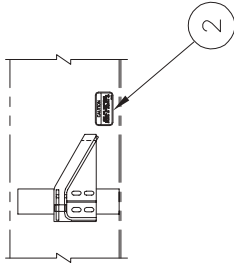
SCALE	DRAWN	CHECKED	APP'D./DATE
1"=20"	DAS	EC	D.MORAVEC 6/00

TRADEMARK & NAMEPLATE INST
JIB - FIXED

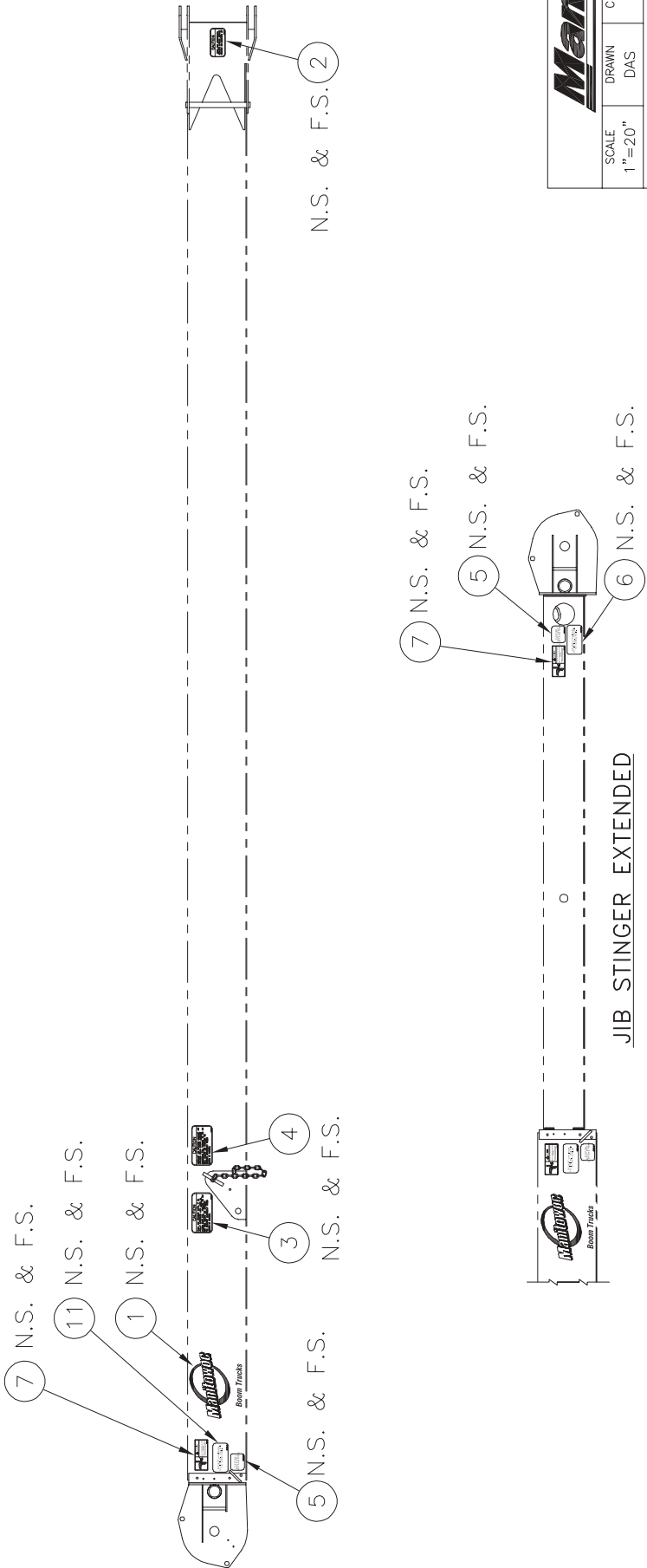
TOLERANCES (UNLESS SPECIFIED)	7000172-001
±1/16"	

SHEET 1 OF 1

BILL OF MATERIAL				REVISIONS
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	1703843	2	DECAL, MTWBT SM	-
2	4000154-001	3	DECAL CAUTION READ..	-
3	4000197-002	2	DECAL PULL JIB....	-
4	4000196-001	2	DECAL RETRACT STING.	-
5	4000237-001	4	DECAL, FASTEN BELT	-
6	4000240-001	4	DECAL, DO NOT USE	-
7	4000720-001	4	DECAL, CRUSH WARN	-



BOOM RIGHT SIDE



JIB STINGER EXTENDED

7 N.S. & F.S.

11 N.S. & F.S.

1 N.S. & F.S.

5 N.S. & F.S.

3

4

7 N.S. & F.S.


5 N.S. & F.S.

5 N.S. & F.S.

6 N.S. & F.S.

N.S. & F.S. 2

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARD COPY = UNCONTROLLED



SCALE	CHECKED	APPVD./DATE
1"=20"	EO	D.MORAVEC 6/00

TRADEMARK & NAMEPLATE INST
JIB - TELESCOPIC

TOLERANCES (UNLESS SPECIFIED)	7000172-002
±1/16"	SHEET 1 OF 1

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	REVISIONS
1	SEE WORK ORDER	1	LOAD RATING CHART		EN 03-0003-06
2	4000793-001	1	SERIAL NUMBER PLATE		LRH 03/03
3	4000749-101	1	DECAL, RH - A		NEW RELEASE
4	4000749-102	1	DECAL, RH - B		EN 02-0018-18
5	4000749-103	1	DECAL, RH - C		DM 5/03
6	4000749-104	1	DECAL, RH - D		A SEE SHEET 3
7	4000749-201	1	DECAL, LH - A		
8	4000749-202	1	DECAL, LH - B		
9	4000749-203	1	DECAL, LH - C		
10	4000749-204	1	DECAL, LH - D		
11	4000143-001	2	DECAL, CAUTION OPER		
12	4000144-001	2	DECAL, CRANE OPER		
13	4000145-001	2	DECAL, DANGER ELECT		
14	4000146-001	2	DECAL, CAUTION STAN		
15	4000147-001	2	DECAL, CAUTION STAN		
16	4000148-001	6	DECAL, DANGER ELECT		
17	4000151-001	2	DECAL, HAND SIGNAL		
18	4000152-001	1	DECAL, HYD FLUID RE		
19	4000153-001	10	DECAL, CAUTION DO N		
20	4000294-001	1	DECAL, SYSTEM PRESS		
21	4000782-004	2	DECAL, MANITEX LOGO		
22	4000237-001	2	DECAL, FASTEN BELT		
23	4000240-001	2	DECAL, DO NOT USE		
24	4000236-001	1	DECAL, VEH CERT		
25	4000186-001	1	DECAL, BOOM ANG RH		
26	4000186-002	1	DECAL, BOOM ANG LH		
27	4000782-006	2	DECAL, MANITEX GRAY		
28	4000782-001	2	DECAL, MANITEX LOGO		

SEE BOOM HOIST, BOOM TELESCOPE, AND WINCH PIPING INSTALLATIONS FOR KNOB INSERTS REQUIRED

SEE STABILIZER AND OUTRIGGER PIPING INSTALLATIONS FOR KNOB INSERTS REQUIRED

SEE OPTIONAL ACCESSORY VALVE, FRONT BUMPER STABILIZER, AND/OR HOSE REEL INSTALLATIONS FOR KNOB INSERTS REQUIRED.

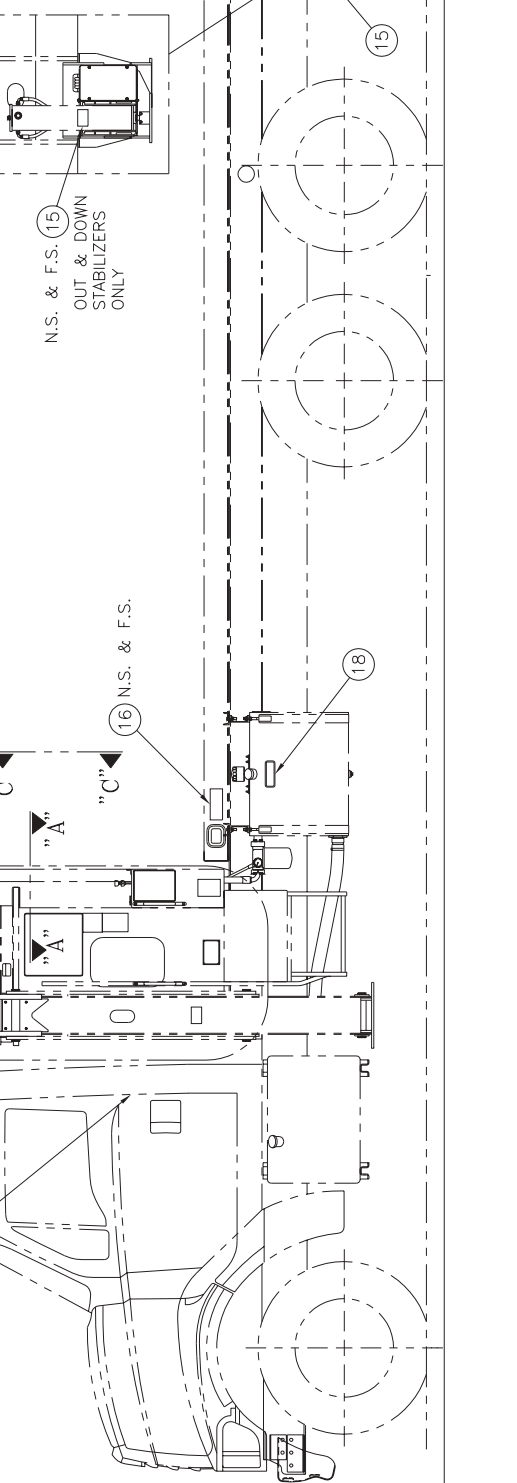
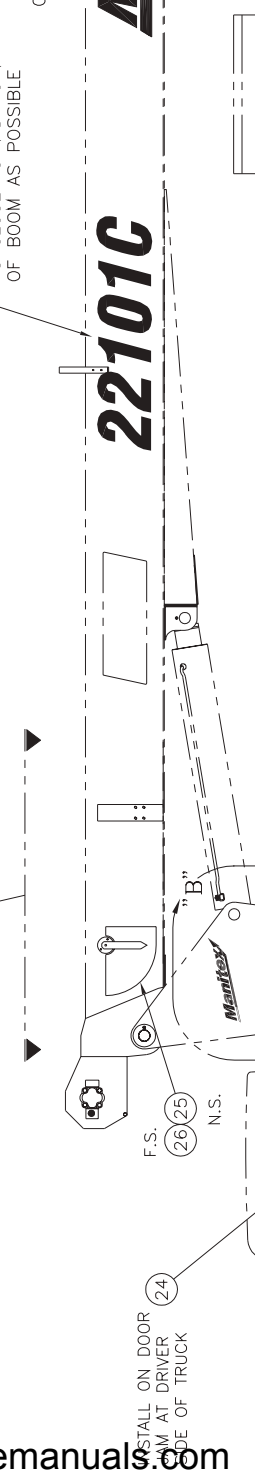
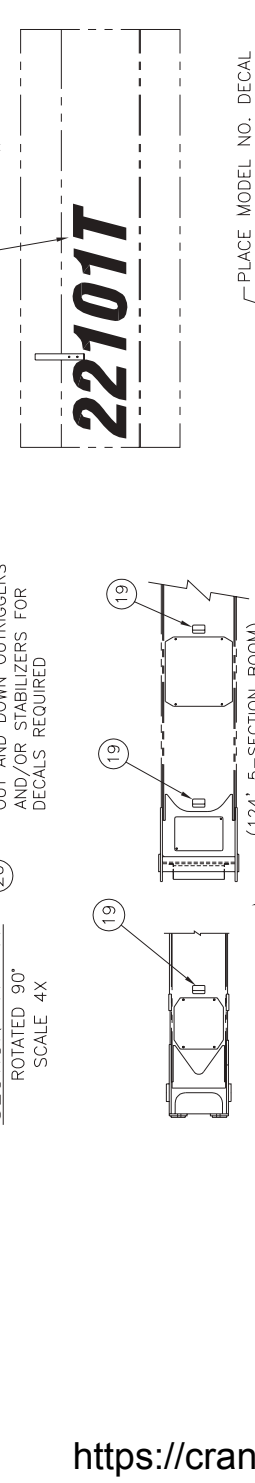
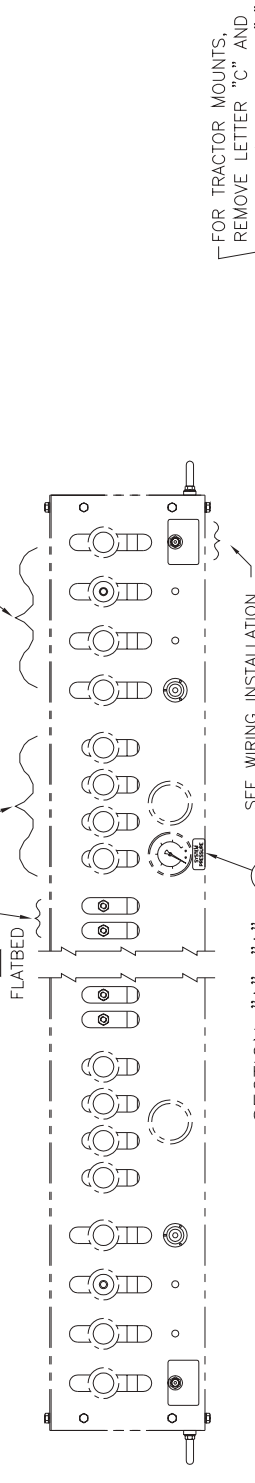
FLATBED

FOR TRACTOR MOUNTS, REMOVE LETTER "C" AND REPLACE WITH LETTER "T"

PLACE MODEL NO. DECAL AS CLOSE TO MID POINT OF BOOM AS POSSIBLE

SEE WIRING INSTALLATION, OUT AND DOWN OUTRIGGERS AND/OR STABILIZERS FOR DECALS REQUIRED

SEE BOOM HOIST, BOOM TELESCOPE, AND WINCH PIPING INSTALLATIONS FOR KNOB INSERTS REQUIRED



DOCUMENT CONTROL STATUS:
ELECTRONIC FILE - CONTROLLED
COPY - UNCONTROLLED

Manitex

SCALE	DRAWN	CHECKED	APPROV./DATE
1"=16"	LRH	EV	03/03

TRADEMARK & NAMEPLATE INST
"C" & "T" SERIES CRANES

TOLERANCES (UNLESS SPECIFIED)	SHEET
±1/16"	OF 3

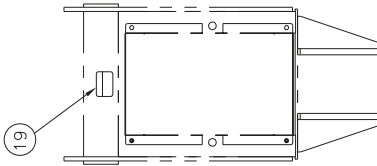
7000178-001

REVISIONS	
EN 03-0003-06	
LRH 03/03	
NEW RELEASE	
EN 02-0018-18	
DM 5/03	
A	SEE SHEET 3

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE - CONTROLLED
COPY - UNCONTROLLED

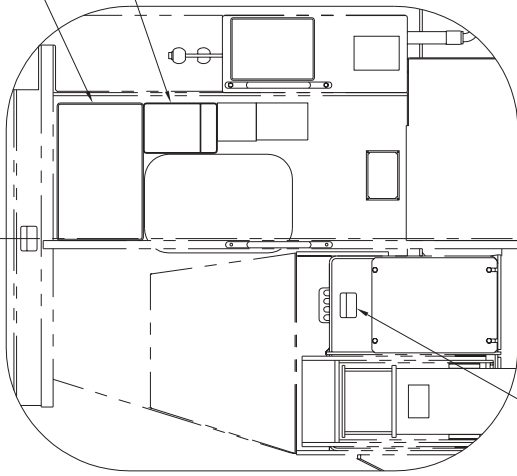


SCALE	DRWN	CHECKED	APPRD./DATE
8"=1'	LRH	EV	03/03
TRADEMARK & NAMEPLATE INST			
"C" & "T" SERIES CRANES			
FULL SPREAD OUTRIGGERS ONLY			
TOLERANCES			
(UNLESS SPECIFIED)			
±1/16"			
7000178-001			SHEET 2 OF 3



REAR VIEW OF 124'
5-SECTION BOOM

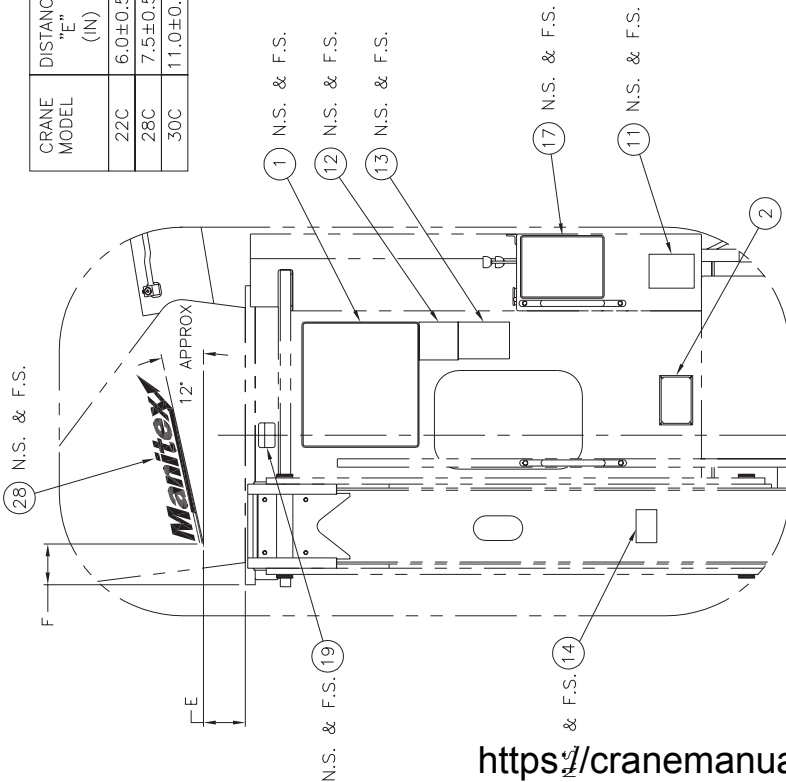
- 1 N.S. & F.S.
3000 SERIES
RATING CHART
- 1 N.S. & F.S.
3000 SERIES
RANGE DIAGRAM



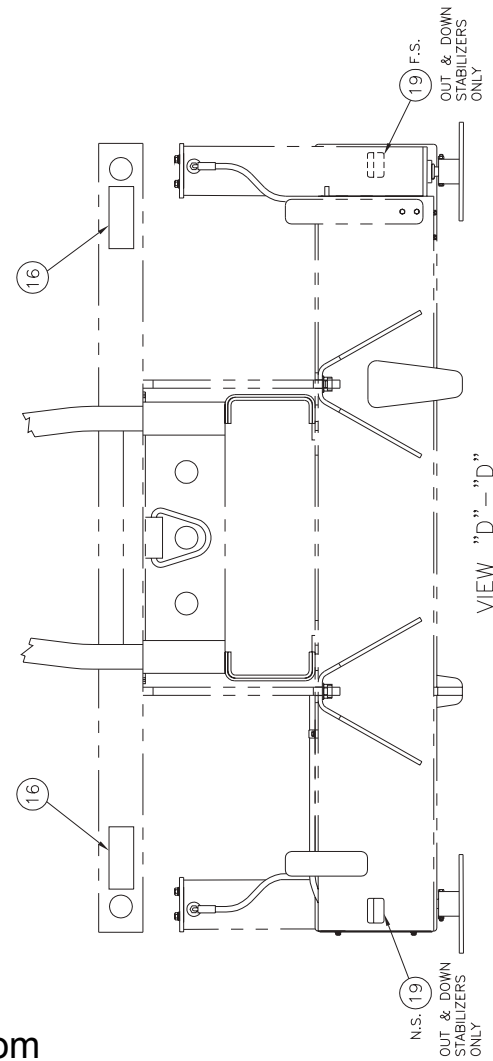
VIEW "B"
(ADDITIONAL FEATURES)

N.S. & F.S. (19)
OUT & DOWN
OUTRIGGERS
ONLY

CRANE MODEL	DISTANCE "E" (IN)	DISTANCE "F" (IN)
22C	6.0±0.5	4.0±0.5
28C	7.5±0.5	6.0±0.5
30C	11.0±0.5	4.5.0±0.5



VIEW "B"

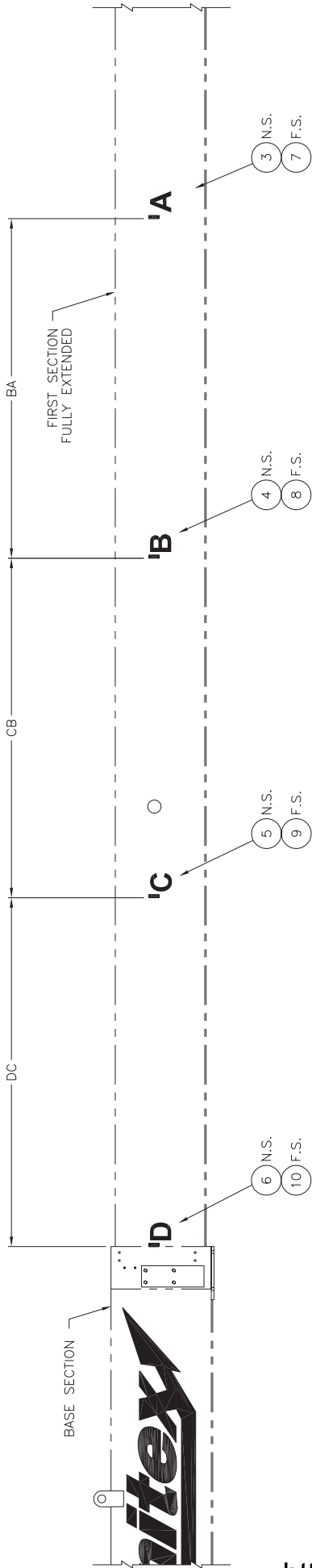


VIEW "D" - "D"

(19) F.S.
OUT & DOWN
STABILIZERS
ONLY

N.S. (19)
OUT & DOWN
STABILIZERS
ONLY

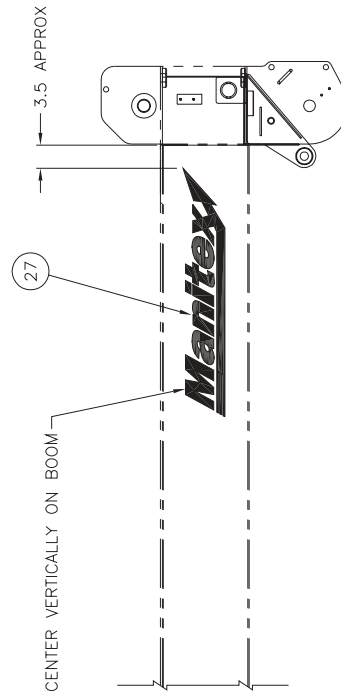
REVISIONS
 EN 03-0003-06
 LRH 03/03
 NEW RELEASE
 EN 02-0018-18
 DM 5/03
 A1 DC DIM WAS
 60.0
 A2 ADDED CRANE
 SERIES TO TABLE
 A3 ADDED MODELS
 30102, 3577,
 35100, 35124



A2

CRANE MODEL	CRANE SERIES	DISTANCE "DC" (IN)	DISTANCE "CB" (IN)	DISTANCE "BA" (IN)
1747	1703	41.75	42.25	42.25
1761	1703	54.00	54.00	54.00
1770	1703	67.00	65.50	66.00
1781	1703	56.00	56.50	56.00
2250	2201	30.00	30.00	30.00
2262	2201	48.00	48.00	48.00
2277	2201	72.00	72.00	72.00
2281	2201	53.75	52.00	52.00
22101	2201	65.75	64.00	64.00
2871	2801	64.00	60.00	60.00
2892	2801	60.00	60.00	60.00
30102	3001	68.00	68.00	68.00
3077	3000	77.00	72.00	72.00
30100	3000	64.00	64.00	64.00
30124	3000	65.15	66.00	66.00
A3 3577	3500	77.00	72.00	72.00
A3 35100	3500	64.00	64.00	64.00
A3 35124	3500	65.15	66.00	66.00

BOOM FULLY EXTENDED



BOOM POINT SECTION

DOCUMENT CONTROL STATUS:
 ELECTRONIC FILE - CONTROLLED
 UNLESS OTHERWISE SPECIFIED - UNCONTROLLED



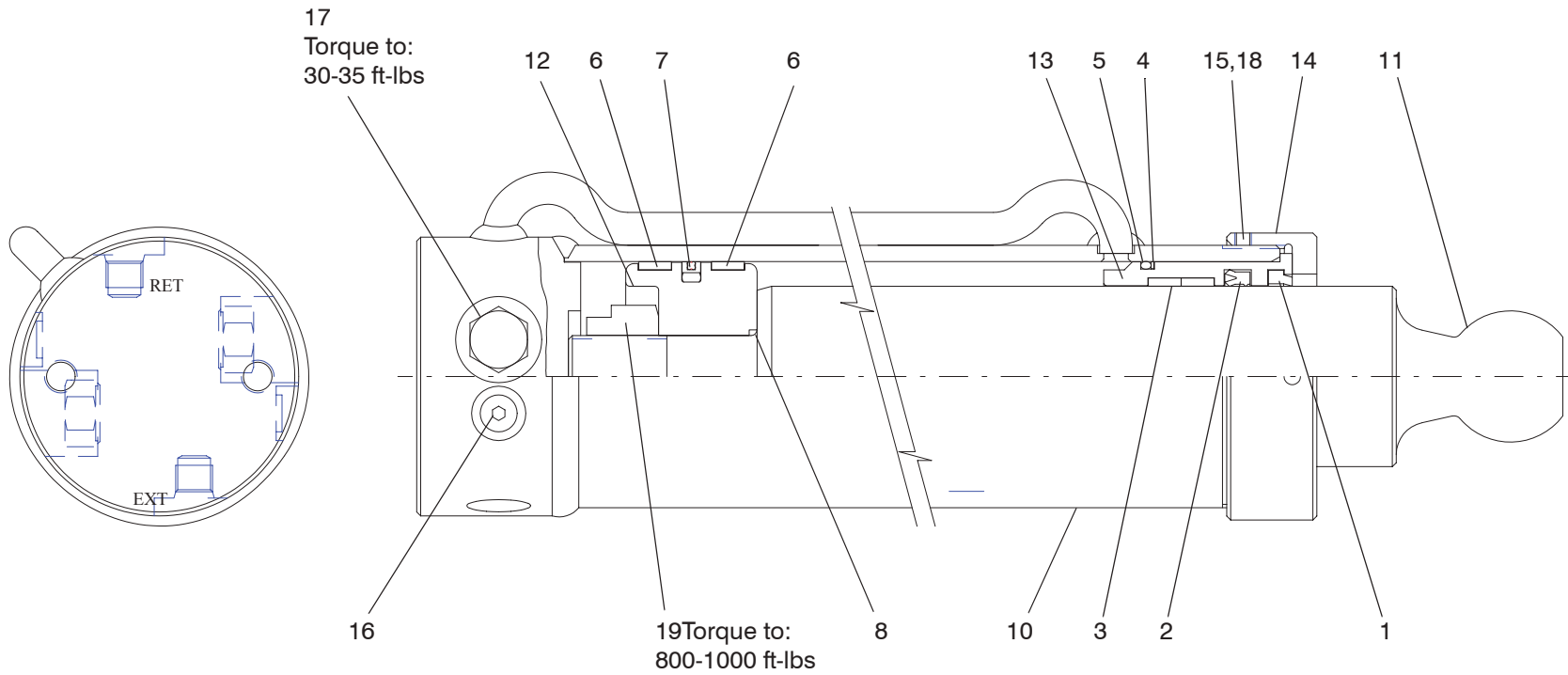
SCALE	DRWN	CHECKED	APPD./DATE
10" = 1'	LRH	EV	03/03

TRADEMARK & NAMEPLATE INST
 "C" & "T" SERIES CRANES
 FULL SPREAD OUTRIGGERS ONLY

7000178-001

TOLERANCES
 (UNLESS SPECIFIED)
 ±1/16"

SHEET 3 OF 3



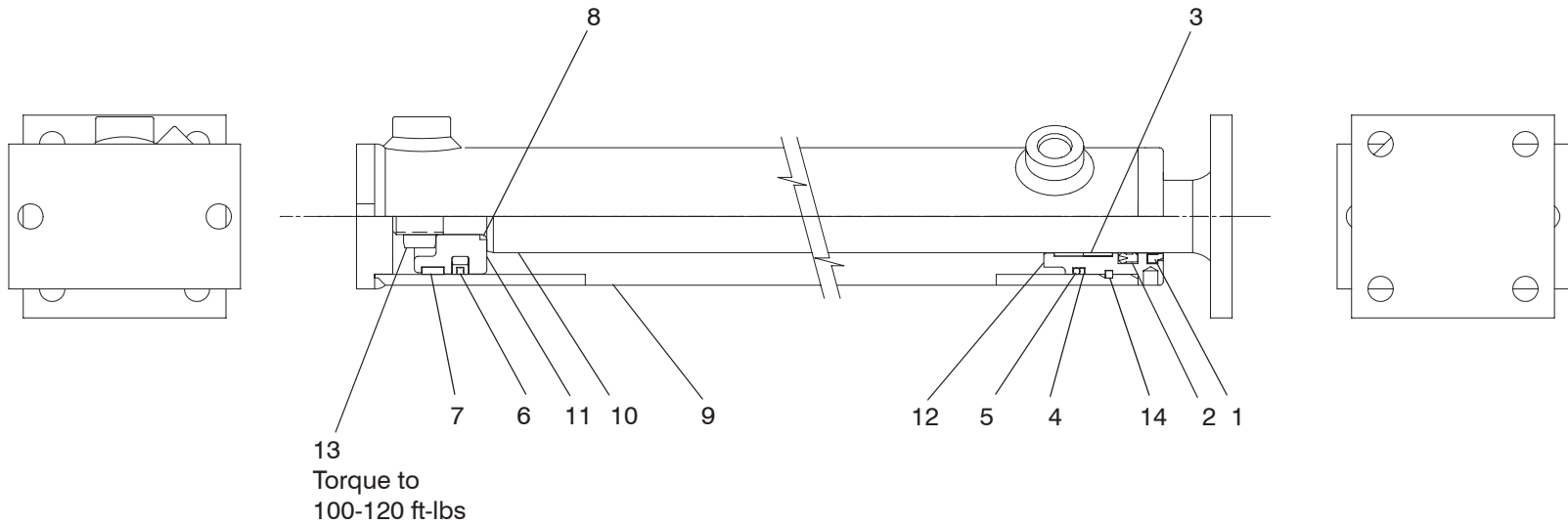
Manitex

Hydraulic Cylinder Front Stabilizer 4900166-003 (NR)

ITEM	PART #	QTY	DESCRIPTION
	4900166-513 *		SEAL KIT
	4900166-500 *		SEAL KIT (UNIVERSAL)
1	*	1	WIPER
2	*	1	ROD SEAL
3	*	2	WEAR RING
4	*	1	BACK-UP
5	*	1	O-RING
6	*	2	WEAR RING
7	*	1	PISTON SEAL
8	*	1	O-RING
9			
10	6600623	1	TUBE ASSY
11	4900166-512	1	ROD ASSY
12	4900166-514	1	PISTON
13	4900166-507	1	HEAD
14	6600942	1	HEADCAP
15	6600625	1	NYLON PLUG
16	6600626	2	PORT PLUG
17	4900113-101	2	CHECK VALVE
18	6600628	1	SETSCREW
19	6600011	1	LOCK-NUT
			Replaces 4900166-001

Hydraulic Cylinder Front Stabilizer

4900166-003 (NR)



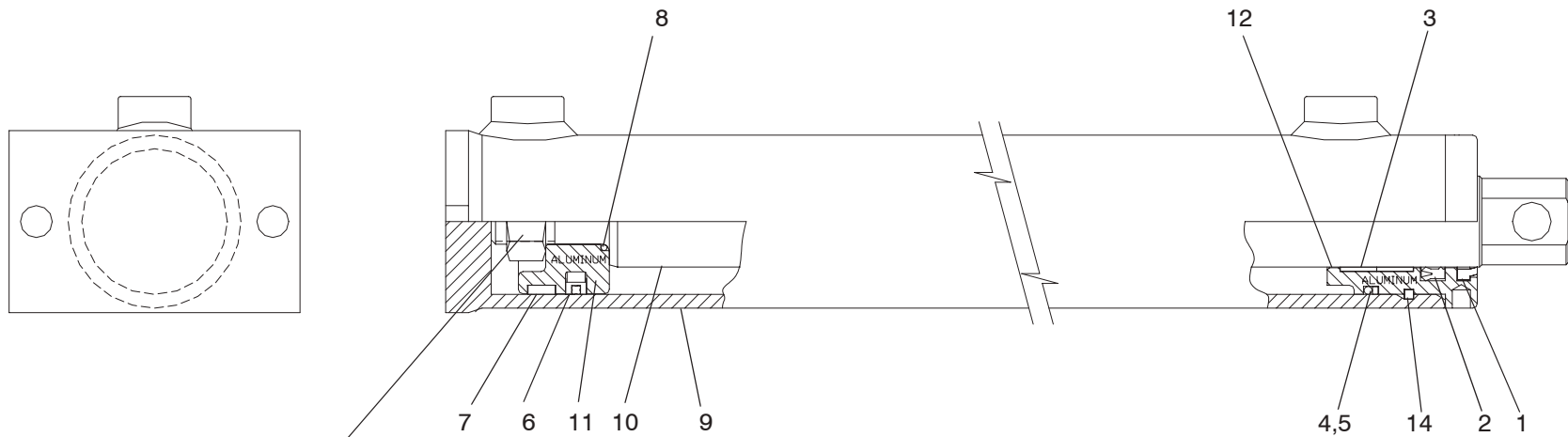
Manitex

Hyd Cylinder Outrigger Extend 4900213-001TH (B)

ITEM	PART #	QTY	DESCRIPTION
	4900213-501*	1	Seal Kit, Universal (Green or Tx Hyd)
	4900213-508*	1	Seal Kit (Tx Hyd only)
1	*	1	Wiper
2	*	1	Seal
3	*	2	Wear Ring
4	*	1	Back-Up
5	*	1	O-Ring
6	*	1	Seal
7	*	1	Wear Ring
8	*	1	O-Ring
9	6600691	1	Tube Assembly
10	6600692	1	Rod Assembly
11	6600693	1	Piston
12	4900213-506	1	Head
13	6600695	1	Lock-Nut
14	4900213-507	1	Retaining Ring
			<p>NOTE: When ordering parts, read markings on Cylinder to ensure it is a Texas Hydraulics product. Texas Hyd products are generally identified by the "TH" stamped behind the MBT part number.</p> <p>A separate parts page exists for Cylinders manufactured by Green Manufacturing.</p>

Hyd Cylinder Outrigger Extend

4900213-001TH (B)



13
Torque to
100-120 ft-lbs

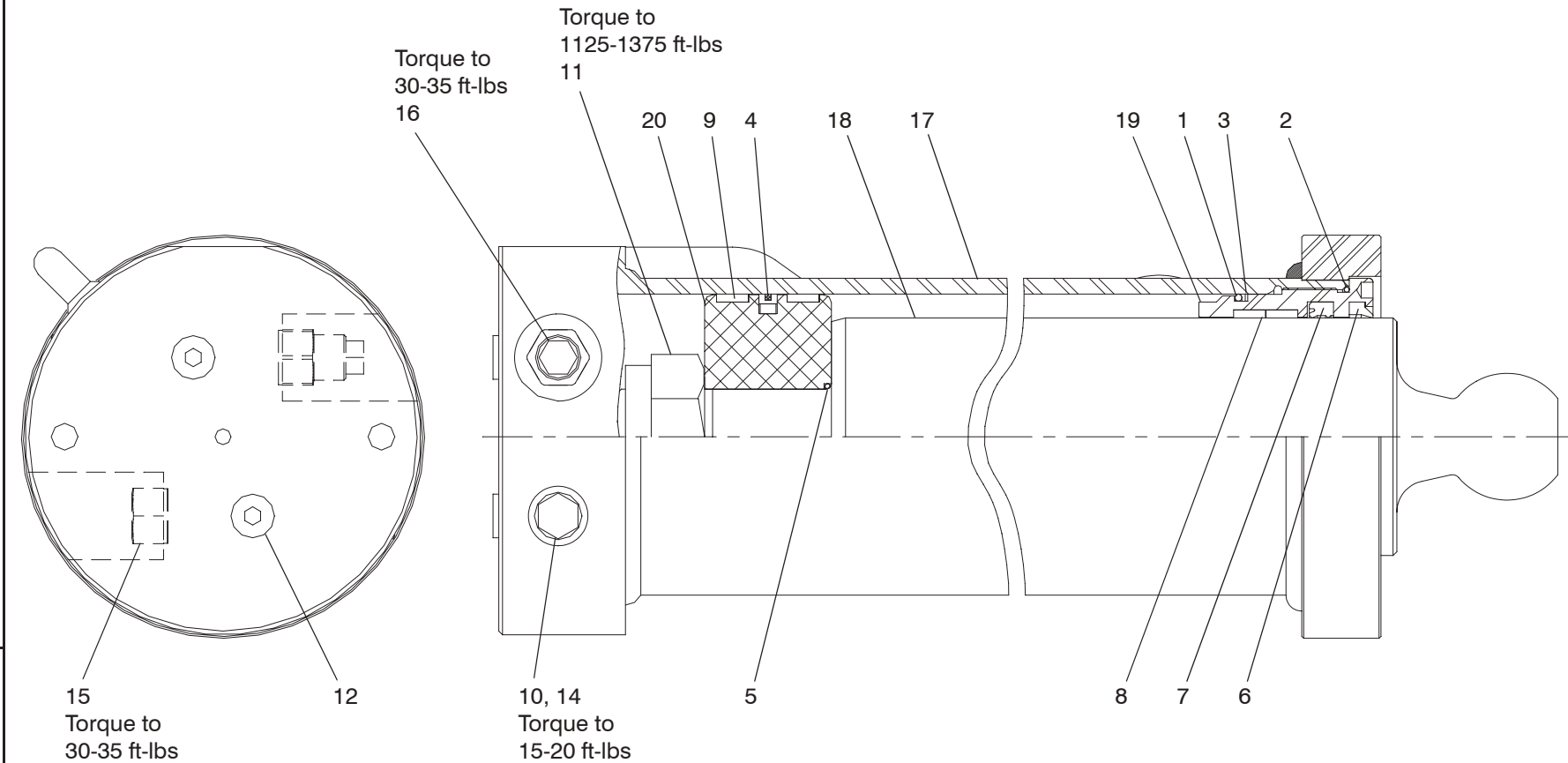
Manitex

Cylinder Outrigger & Stabilizer Extend 4900213-003TH (B)

ITEM	PART #	QTY	DESCRIPTION
	4900213-501*	1	Seal Kit, Universal (Green or Tx Hyd)
	4900213-508*	1	Seal Kit (Tx Hyd only)
1	*	1	Wiper
2	*	1	Seal
3	*	2	Wear Ring
4	*	1	Back-Up
5	*	1	O-Ring
6	*	1	Seal
7	*	1	Wear Ring
8	*	1	O-Ring
9	6601158	1	Tube Assembly
10	6601159	1	Rod Assembly
11	6600693	1	Piston
12	4900213-506	1	Head
13	6600695	1	Lock-Nut
14	4900213-507	1	Retaining Ring
			<p>NOTE:</p> <p>When ordering parts, read markings on Cylinder to ensure it is a Texas Hydraulics product. Texas Hyd products are generally identified by the "TH" stamped behind the Manitex part number.</p> <p>A separate parts page exists for Cylinders manufactured by Green Manufacturing.</p>

Cylinder Outrigger & Stabilizer Extend

4900213-003TH (B)



Hydraulic Cylinder O/R Jack

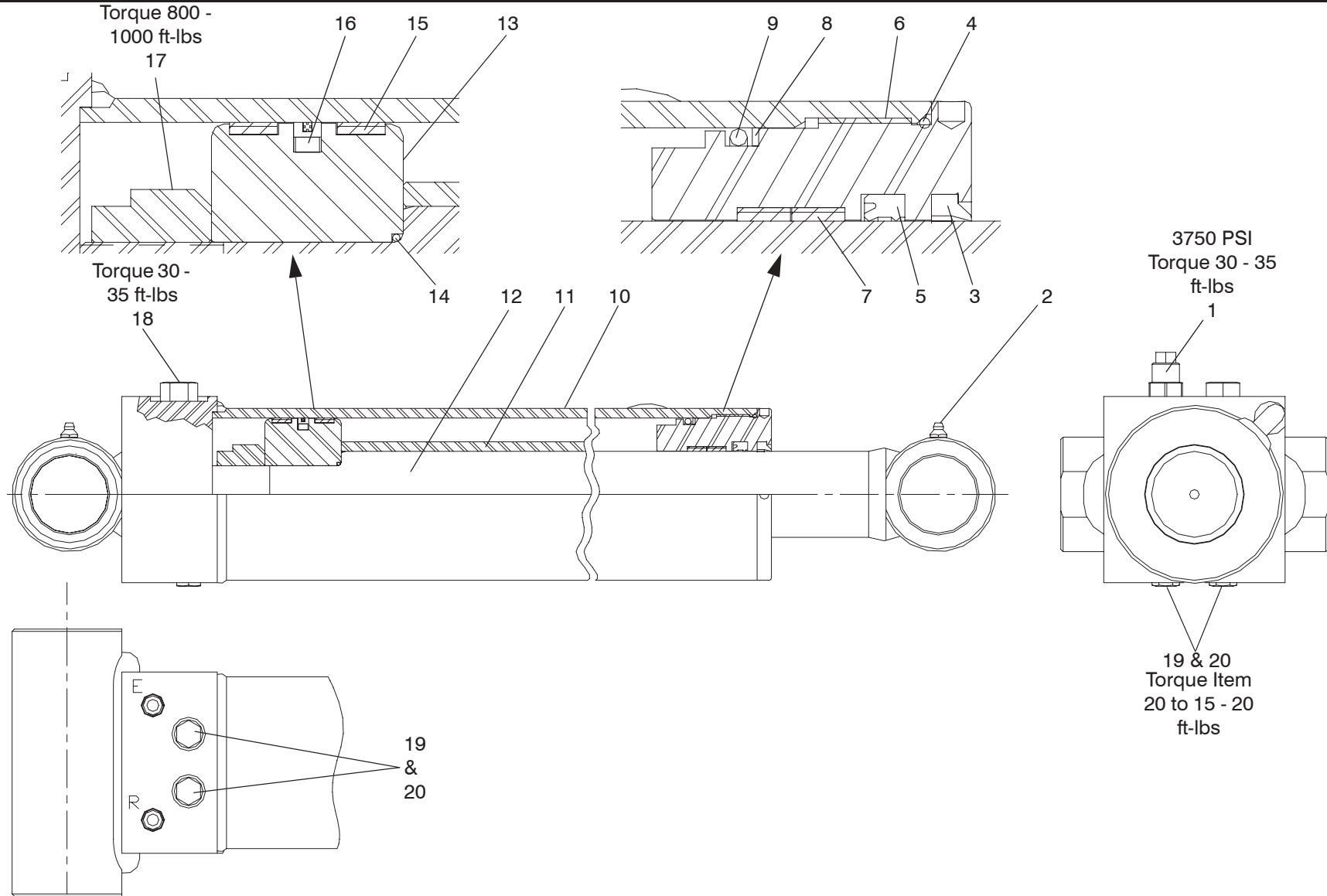
Manitex

Hyd Cylinder O/R Jack 4900214-004TH (NR)

ITEM	PART #	QTY	DESCRIPTION
	4900214-515*	1	Seal Kit
1	*	1	O-Ring
2	*	1	O-Ring
3	*	1	Back-Up
4	*	1	Seal
5	*	1	O-Ring
6	*	1	Wiper
7	*	1	Seal
8	*	2	Wear Ring
9	*	2	Wear Ring
10	7003224	2	Washer Seal
11	6600747	1	Locknut
12	6600683	2	Port Plug, Steel
13			not used
14	6600742	2	Bleeder Plug
15	4900113-101	1	PO Check Valve
16	4900113-007	1	Counterbalance Valve
17	6600748	1	Tube Assy
18	4900214-503	1	Rod
19	4900214-509	1	Head
20	6600750	1	Piston

Hydraulic Cylinder O/R Jack

4900214-004TH (NR)



4900224-004 (A)

Hydraulic Cylinder Outrigger

Manitex

Hydraulic Cylinder Outrigger 4900224-004 (A)

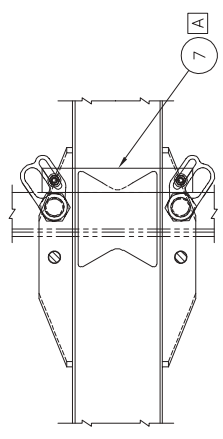
ITEM	PART #	QTY	DESCRIPTION
	6601377	1	Seal Kit (* Indicates Seal Kit Item)
1	4900113-002	1	Counterbalance Valve
2	4000039-001	2	Lube Fitting
3	*	1	Wiper
4	*	1	O-Ring
5	*	1	Seal
6	6601371	1	Head
7	*	2	Wear Ring
8	*	1	Back-Up
9	*	1	O-Ring
10	6601372	1	Tube Assembly
11	6601373	1	Spacer
12	6601374	1	Rod Assembly
13	6601375	1	Piston
14	*	1	O-Ring
15	*	2	Wear Ring
16	*	1	Seal
17	7003226	1	Locknut
18	6601376	1	PO Check Valve
19	7003224	2	Washer Seal
20	6600742	2	Bleeder Plug
	*		These are seal kit items and are not available separately.

Hydraulic Cylinder Outrigger

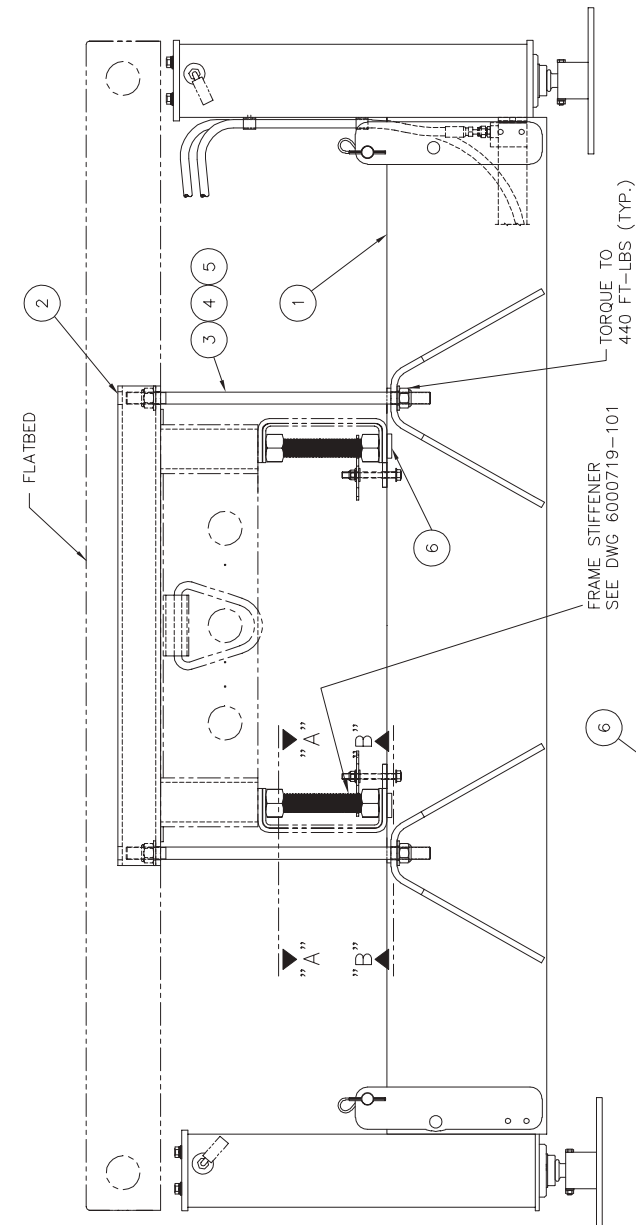
4900224-004 (A)

BILL OF MATERIAL				REVISIONS		
ITEM No.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT		
1	6000563-005	1	STABILIZER ASSEMBLY	XXX	EN 99-0005/02	
2	5000994-002	2	SQUARE TUBE	52.30	JPB 05-10-99	
3	5000342-003	4	THREADED BAR	5.50	NEW RELEASE	
4	2003-160000	8	FLATWASHER ϕ 1.00	0.08	EN 01-0012-03	
5	2011-161000	8	LOCKNUT ϕ 1.00 NC	0.30	ET 2/02	
6	5001471-001	4	PLATE	0.53	A ADDED ITM 7	
A	7	5001471-010	2	PLATE	2.64	& ITM 6 QTY WAS 6

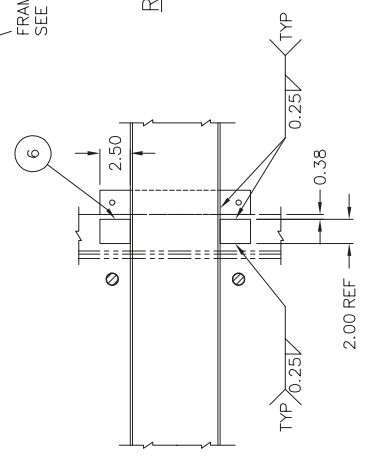
TOTAL ASSEMBLY WEIGHT. 1193.6 LBS.



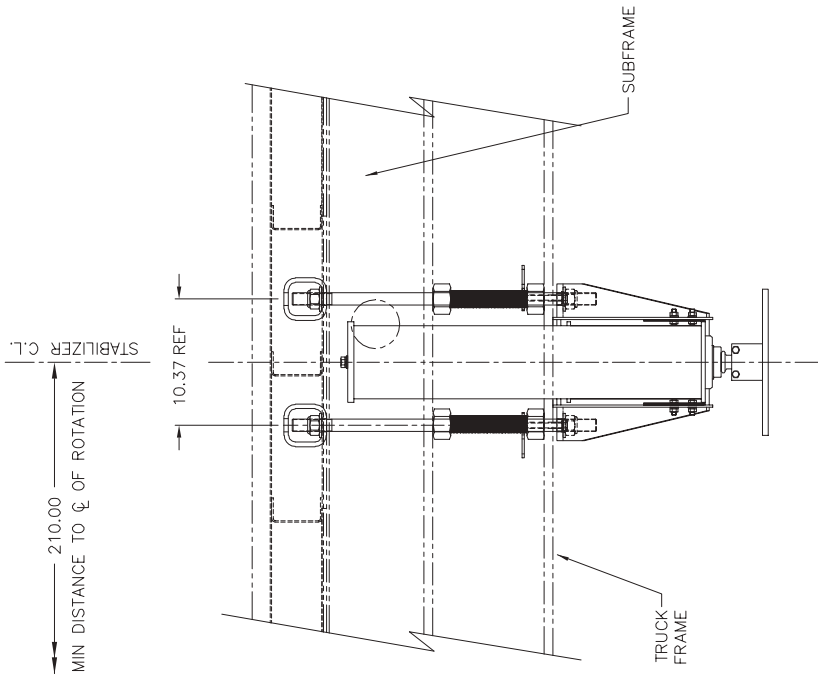
SECTION "A-A"



REAR VIEW OF TRUCK



SECTION "B-B"



DOCUMENT CONTROL STATUS:
 CONTROLLED
 UNCONTROLLED
 HARD COPY = UNCONTROLLED

Manitex

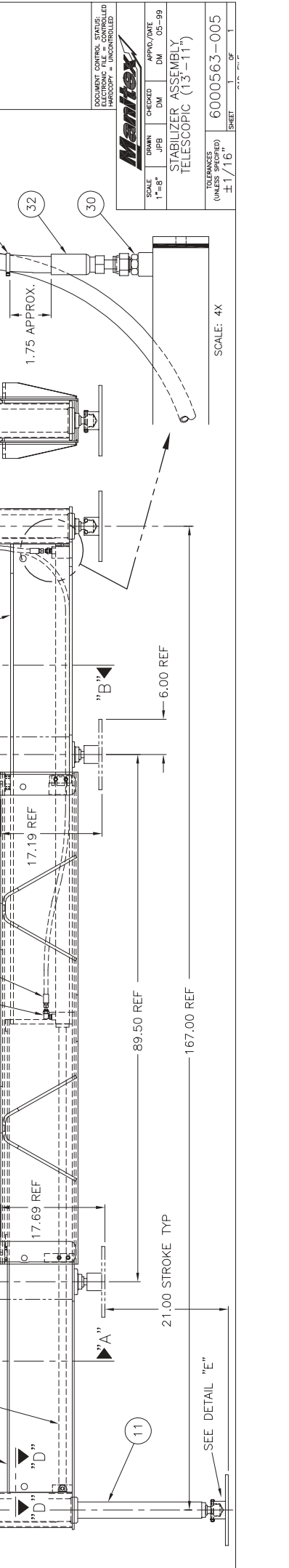
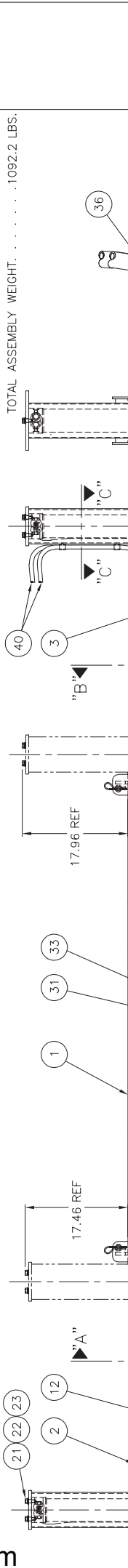
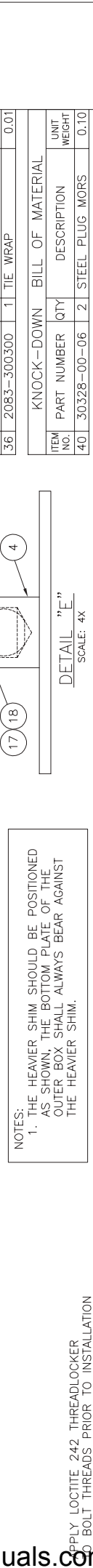
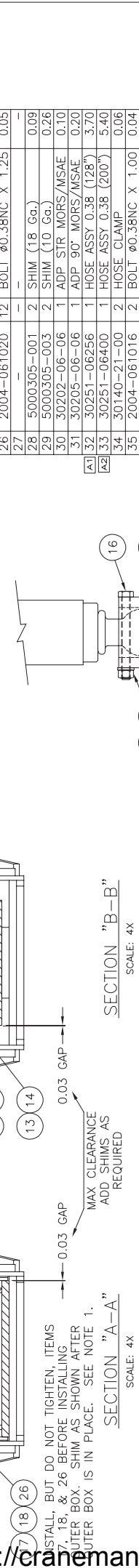
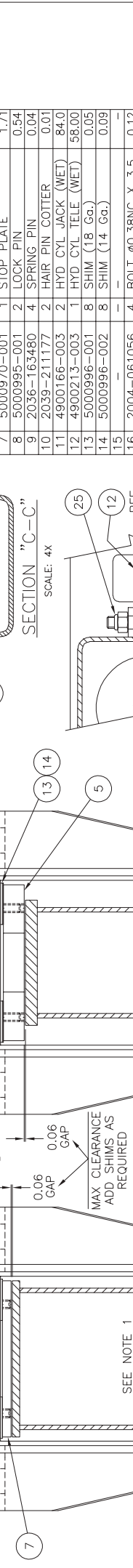
SCALE	DRAWN	CHECKED	APPROV./DATE
3/16"=1"	JPB	DM	DM 05-99

STABILIZER INSTALLATION

TOLERANCES (UNLESS NOTED)	6000562-005
	\pm 1/16"

SHEET 08

BILL OF MATERIAL				REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	EN 99-0005/02
1	5001994-003	1	MAIN BOX WELD/MT	295.65	JPB 05-10-99
2	5000945-002	1	OUTER BOX WELD/MT	241.03	NEW RELEASE
3	5000944-002	1	INNER BOX WELD/MT	262.03	EN 00 0025-4
4	5000856-001	2	FLOAT WELDMENT	19.88	CG 11-00
5	5000968-001	1	BEARING PLATE	3.17	[A] ITEM 32 WAS 30237-06282
6	5001214-001	2	STOP WELDMENT	0.98	[A2] ITEM 33 WAS 30251-06428
7	5000970-001	1	STOP PLATE	1.71	
8	5000995-001	2	LOCK PIN	0.54	
9	2036-163480	4	SPRING PIN	0.04	
10	2039-211177	2	HAIR PIN COTTER	0.01	
11	4900166-003	2	HYD CYL JACK (WET)	84.0	
12	4900213-003	1	HYD CYL TELE (WET)	58.00	
13	5000996-001	8	SHIM (18 Gg.)	0.05	
14	5000996-002	8	SHIM (14 Gg.)	0.09	
15	-	-	-	-	
16	2004-061056	4	BOLT ϕ 0.38NC X 3.5	0.12	
17	2006-060000	22	LOCKWASHER ϕ 0.38	0.01	
18	2005-061000	8	HEX NUT ϕ 0.38 NC	0.02	
19	2004-061014	4	BOLT ϕ 0.38NC X 0.88	0.04	
20	2008-060000	6	FLATWASHER ϕ 0.38	0.01	
21	2004-081020	4	BOLT ϕ 0.50NC X 1.25	0.10	
22	2008-080000	4	FLATWASHER ϕ 0.50	0.02	
23	2006-080000	4	LOCKWASHER ϕ 0.50	0.02	
24	2004-081044	1	BOLT ϕ 0.50NC X 2.75	0.17	
25	2011-081000	1	LOCKNUT ϕ 0.50 NC	0.04	
26	2004-061020	12	BOLT ϕ 0.38NC X 1.25	0.05	
27	-	-	-	-	
28	5000305-001	2	SHIM (18 Gg.)	0.09	
29	5000305-003	2	SHIM (10 Gg.)	0.26	
30	30202-06-06	1	ADP STR MORS/MSAE	0.10	
31	30205-06-06	1	ADP 90° MORS/MSAE	0.20	
32	30251-06256	1	HOSE ASSY 0.38 (128")	3.70	
33	30251-06400	1	HOSE ASSY 0.38 (200")	5.40	
34	30140-21-00	2	HOSE CLAMP	0.06	
35	2004-061016	2	BOLT ϕ 0.38NC X 1.00	0.04	
36	2083-300300	1	TIE WRAP	0.01	



NOTES:
 1. THE HEAVIER SHIM SHOULD BE POSITIONED AS SHOWN. THE BOTTOM PLATE OF THE OUTER BOX SHALL ALWAYS BEAR AGAINST THE HEAVIER SHIM.

INSTALL, BUT DO NOT TIGHTEN, ITEMS 17, 18, & 26 BEFORE INSTALLING OUTER BOX. SHIM AS SHOWN AFTER OUTER BOX IS IN PLACE. SEE NOTE 1.

APPLY LOCTITE 242 THREADLOCKER TO BOLT THREADS PRIOR TO INSTALLATION

DOCUMENT CONTROL STATUS: UNCONTROLLED
 MANIPULATION UNCONTROLLED

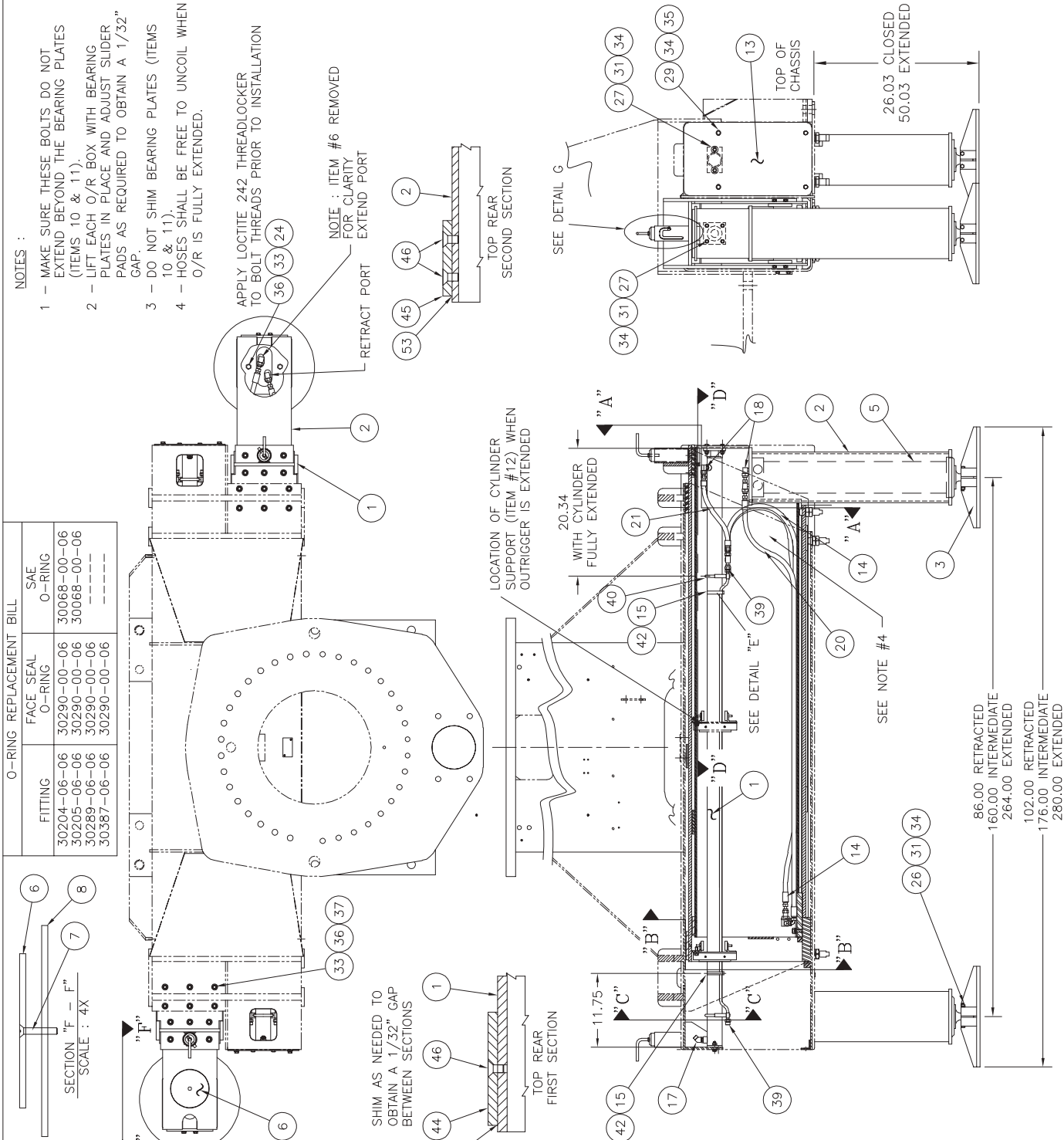
Manitex

SCALE: 1"=8"
 DRAWN: JPB
 CHECKED: DM
 APPROV. DATE: 05-99

STABILIZER ASSEMBLY
 TELESCOPIC (13-11)

REVISIONS (UNLESS SPECIFIED): 6000563-005
 SHEET 1 OF 1

O-RING REPLACEMENT BILL		
FITTING	FACE SEAL O-RING	SAE O-RING
30204-06-06	30290-00-06	30068-00-06
30205-06-06	30290-00-06	30068-00-06
30289-06-06	30290-00-06	---
30387-06-06	30290-00-06	---



BILL OF MATERIAL					REVISIONS
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	EN 01-0013-3 LAM 2/5/01 NEW RELEASE
1	5001851-003	2	O/R FIRST SECTION	555.4	
2	5001853-003	2	O/R SECOND SECTION	446.5	
3	5000856-002	2	FLOAT WELDMENT	36.30	
4	4900213-001	2	HYD. CYLINDER	72.00	
5	4900214-004	2	HYD. CYLINDER	148.0	
6	5001862-003	2	COVER PLATE	2.07	
7	2029-041024	2	FLT.HD.SCKT.BOLT	0.02	
8	5001862-004	2	PLATE (O/R COVER)	0.56	
9	5001863-001	2	MANIFOLD SUPPORT	1.15	
10	5001864-011	2	BEARING PLATE, MAIN	8.28	
11	5001864-012	2	BEARING PLATE, FIRST	6.37	
12	5001865-001	2	CYLINDER SUPPORT	3.40	
13	5001880-007	2	COVER PLATE	8.90	
14	30237-06150	2	HOSE ASSEMBLY	2.52	
15	4000168-200	0.7	VINYL TRIM	0.40	
16	4000703-001	8	SLIDER PAD THREADED	0.12	
17	30204-06-06	2	45° ADAPTER	0.20	
18	30205-06-06	6	90° ADAPTER	0.20	
19	30387-06-06	4	90° ADAPTER	0.30	
20	30237-06145	4	HOSE ASSEMBLY	1.92	
21	30251-06025	2	HOSE ASSEMBLY	1.00	
22	30251-06150	2	HOSE ASSEMBLY	2.52	
23	30289-06-06	2	ADAPTER, TEE	0.40	
24	2004-081024	4	HEX BOLT 0.50	0.12	
25	2004-081012	4	HEX BOLT 0.50	0.08	
26	2004-061056	4	HEX BOLT 0.38	0.12	
27	2004-061024	12	HEX BOLT 0.38	0.06	
28	2010-061000	2	NUT, HEX JAM	0.05	
29	2004-061012	20	HEX BOLT 0.38	0.04	
30	2004-061016	4	HEX BOLT 0.38	0.04	
31	2005-061000	16	HEX NUT 0.38	0.02	
32	4900252-009	4	O/R TUBE	1.00	
33	2006-080000	30	LOCKWASHER 0.50	0.01	
34	2006-060000	48	LOCKWASHER 0.38	0.01	
35	2008-060000	4	FLAT WASHER 0.38	0.01	
36	2008-080000	26	FLAT WASHER 0.50	0.02	
37	2004-081014	22	HEX BOLT 0.50	0.08	
38	2029-041012	16	FLT.HD.SCKT. BOLT	0.02	
39	30290-00-06	8	O-RING	0.01	
40	4000642-002	4	U-BOLT	0.05	
41	30140-06-00	8	"P" CLAMP	0.01	
42	30151-04000	4	HOSE CLAMP	0.01	
43	4000082-001	8	SLIDER PAD	0.12	
44	4000063-001	2	SLIDER PAD	0.49	
45	4000064-001	2	SLIDER PAD	0.22	
46	2029-051012	8	FLT.HD.SCKT. BOLT	0.02	
47	5001868-002	8	STOP PLATE	0.60	
48	2010-161000	8	HEX JAM NUT 1.00"	0.18	
49	5002601-011	2	OUTRIGGER PIN	5.25	
50	5002601-010	2	O/R PIN HANDLE	0.20	
51	2036-243320	2	SLOTTED SPRING PIN	0.01	
52	5002118-001	6	SHIM	0.61	
53	5000534-001	6	SHIM	0.17	

TOTAL ASSEMBLY WEIGHT. 2638.2 LBS.

DOCUMENT CONTROL STATUS:
 REVISIONS CONTROLLED
 HARD COPY UNCONTROLLED

Mantrex

SCALE: 1/8" = 1"
 DRAWN: J.ROSK
 APPROV./DATE: B.MORAVEC - 2/01

OUTRIGGER INSTALLATION
 INTERMEDIATE OUTRIGGERS

TOLERANCES (UNLESS SPECIFIED):
 ±1/16"

6000630-006
 SHEET 1 OF 2

REVISIONS
 EN 01-0013-3
 LAM 2/5/01
 NEW RELEASE

DOCUMENT CONTROL STATUS:
 MANUFACTURING - UNCONTROLLED
 HARDWARE - UNCONTROLLED

Mantex

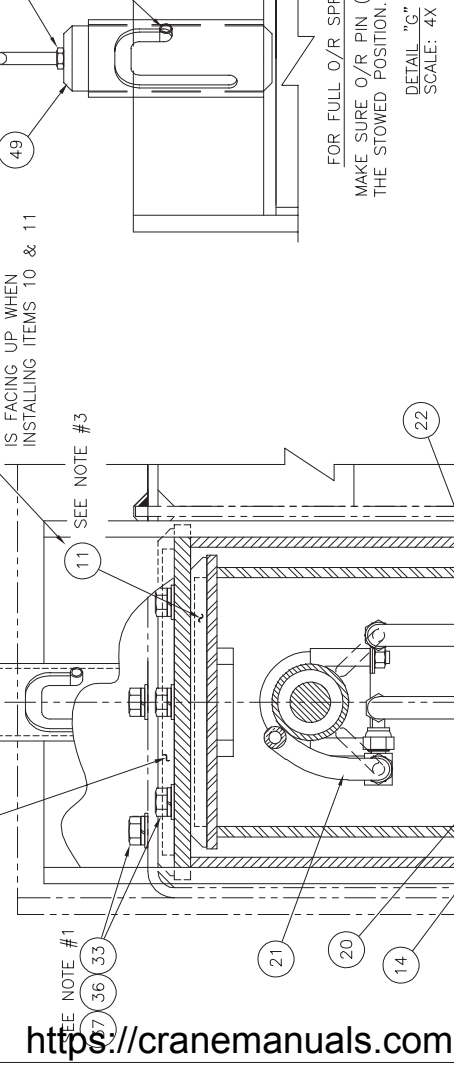
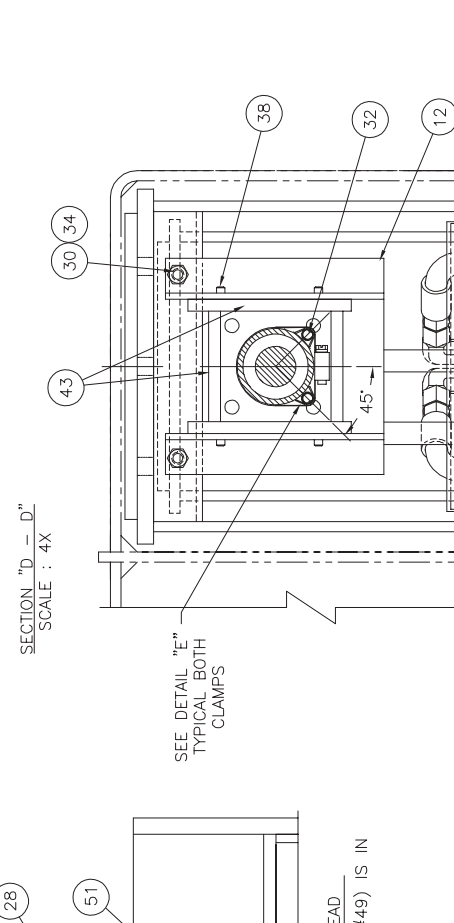
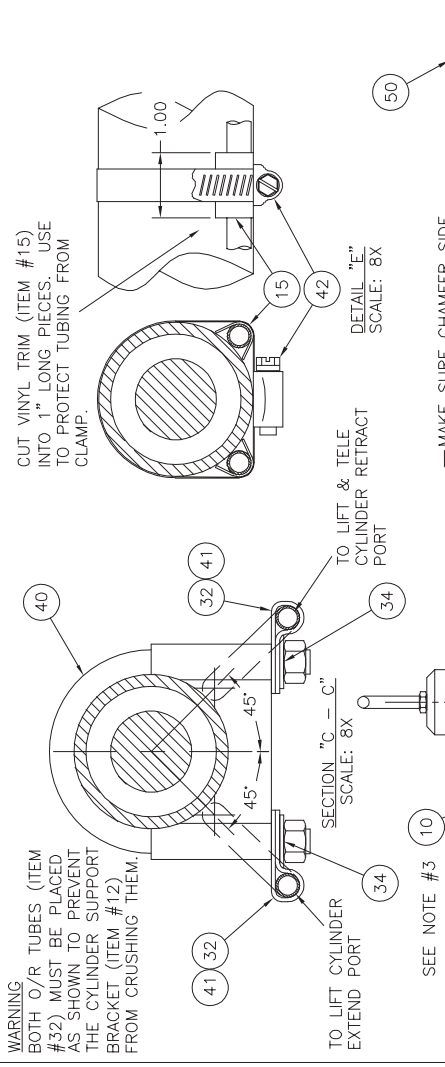
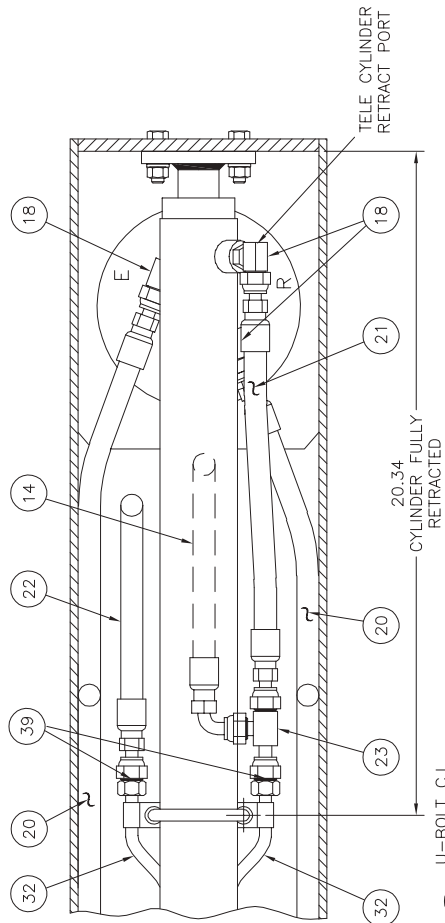
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 CHECKED J.ROSK B.MORAVEC 2/01
 DRAWN J.ROSK

SCALE: 1/8" = 1"

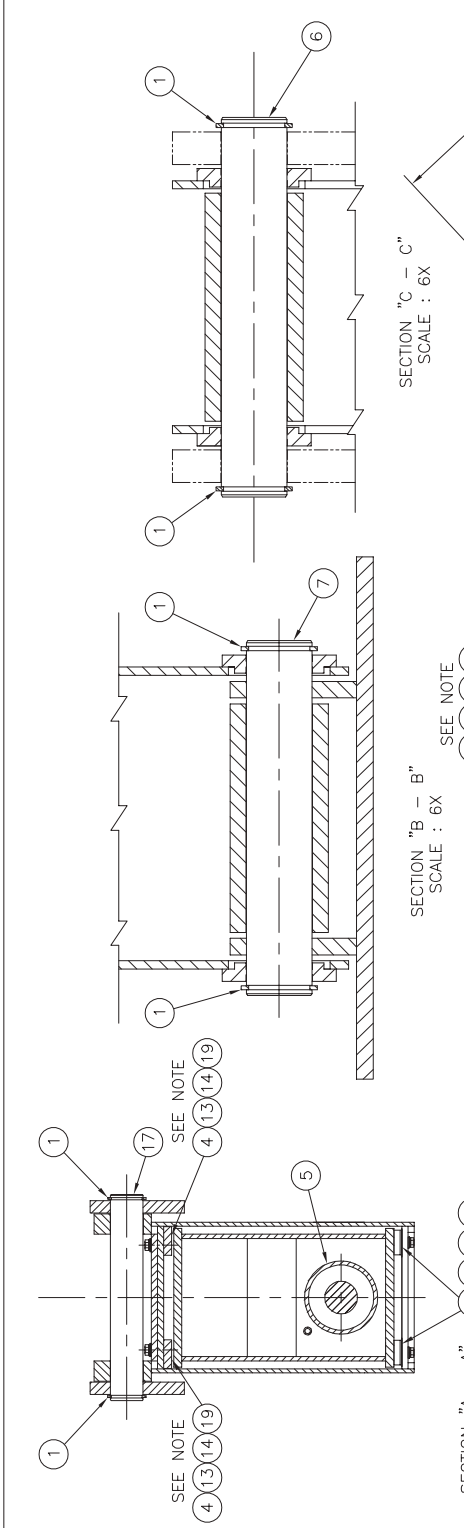
OUTRIGGER INSTALLATION
 INTERMEDIATE OUTRIGGERS

TOLERANCES
 (UNLESS SPECIFIED)
 ±1/16"

6000630-006
 2 OF 2
 SHEET



BILL OF MATERIAL			REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	4000037-200	16	RETAINING RING	.05
2	4000276-003	4	SLIDER PAD	.37
3	4000058-001	4	SLIDER PAD	.08
4	4000277-001	4	SLIDER PAD	.37
5	4900224-004	2	CYLINDER OUTRIGGER	233.0
6	5000982-002	2	O/R PIN (UPPER)	10.20
7	5000982-001	2	O/R PIN (LOWER)	9.50
8	5002902-001	2	OUTER BOX WELD	405.5
9	5002900-001	2	INNER BOX WELD	384.3
10	5000981-001	2	O/R PAD WELD	58.00
11	5002904-001	4	O/R LINK	48.00
12	2004-051012	4	BOLT .31 DIA .75 LG	.03
13	2004-061020	8	BOLT .38 DIA 1.25 LG	.05
14	2006-060000	20	WASHER, LOCK .38	.01
15	2006-050000	4	WASHER, LOCK .31	.01
16	2029-061024	12	SCREW, SCK FLT HD	.06
17	5000982-003	4	LINK PIN	11.10
18	2008-050000	4	WASHER, FLAT .31	.01
19	2008-060000	8	WASHER, FLAT .38	.01
20	2005-061000	12	NUT, HEX .38	.02



TOTAL ASSEMBLY WEIGHT:2443.3 LBS.

- NOTE :
- TORQUE REQUIREMENTS FOR SLIDER PAD BOLTS.
APPLY LOCTITE TO THREAD BEFORE TORQUING.
1. BOLT 5/16" - 18 UNC
TORQUE TO 13 FT-LBS / 156 IN-LBS
 2. BOLT 3/8" - 16 UNC
TORQUE TO 23 FT-LBS / 276 IN-LBS
 3. THREADLOCKER (LOCTITE) PRODUCT NO. 242

DOCUMENT CONTROL STATUS:
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 DRAWING - UNCONTROLLED
 CHECKED -
 ED -
 APPROV./DATE -
 B.MORAVEC - 2/03

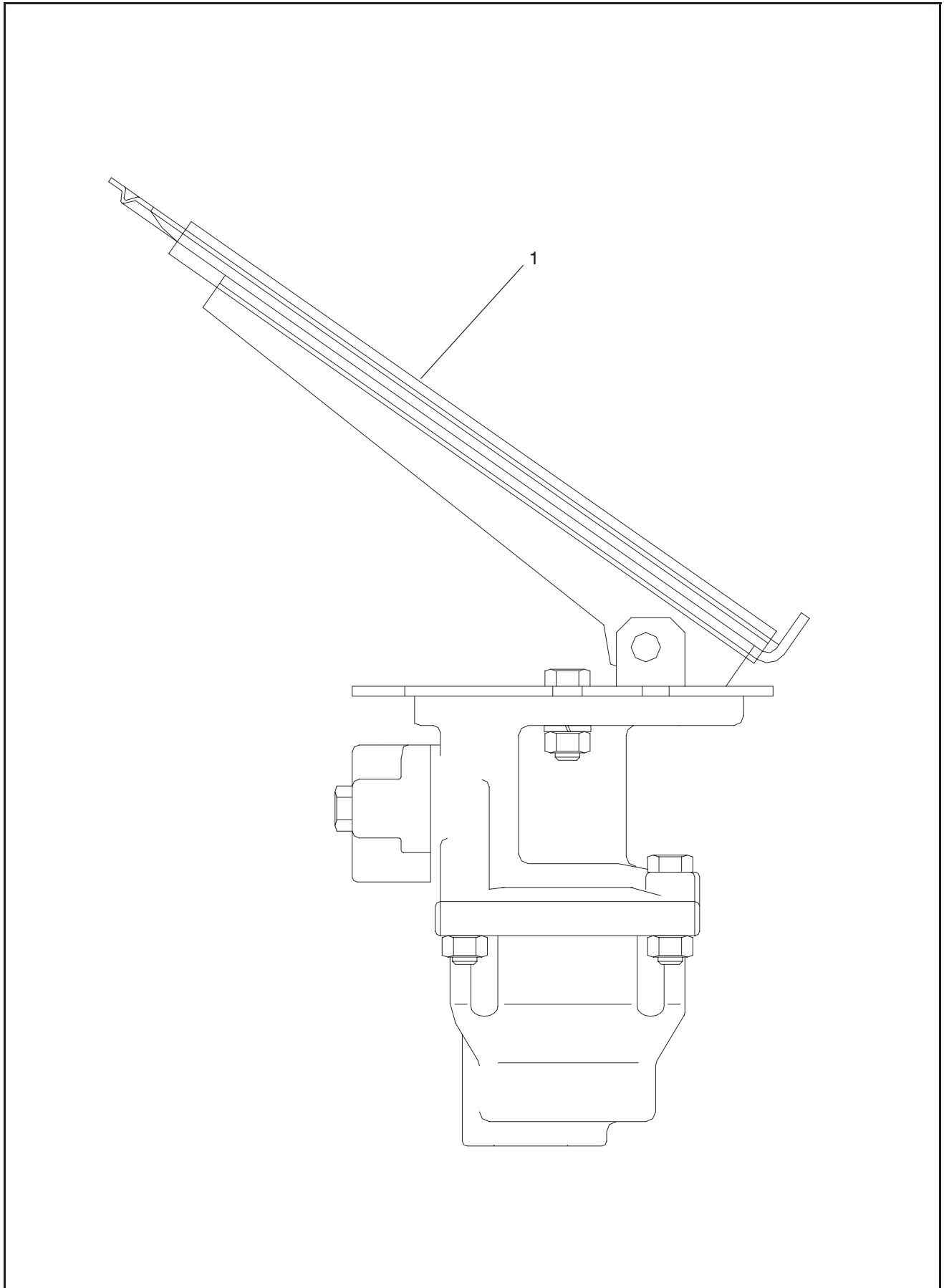
Mantex

SCALE: DRAWN 1/12" = 1" DIM

OUTRIGGER INSTALLATION
A-FRAME

TOLERANCES (UNLESS OTHERWISE SPECIFIED)
±.1/16"

6000873-001
SHEET 1 OF 1



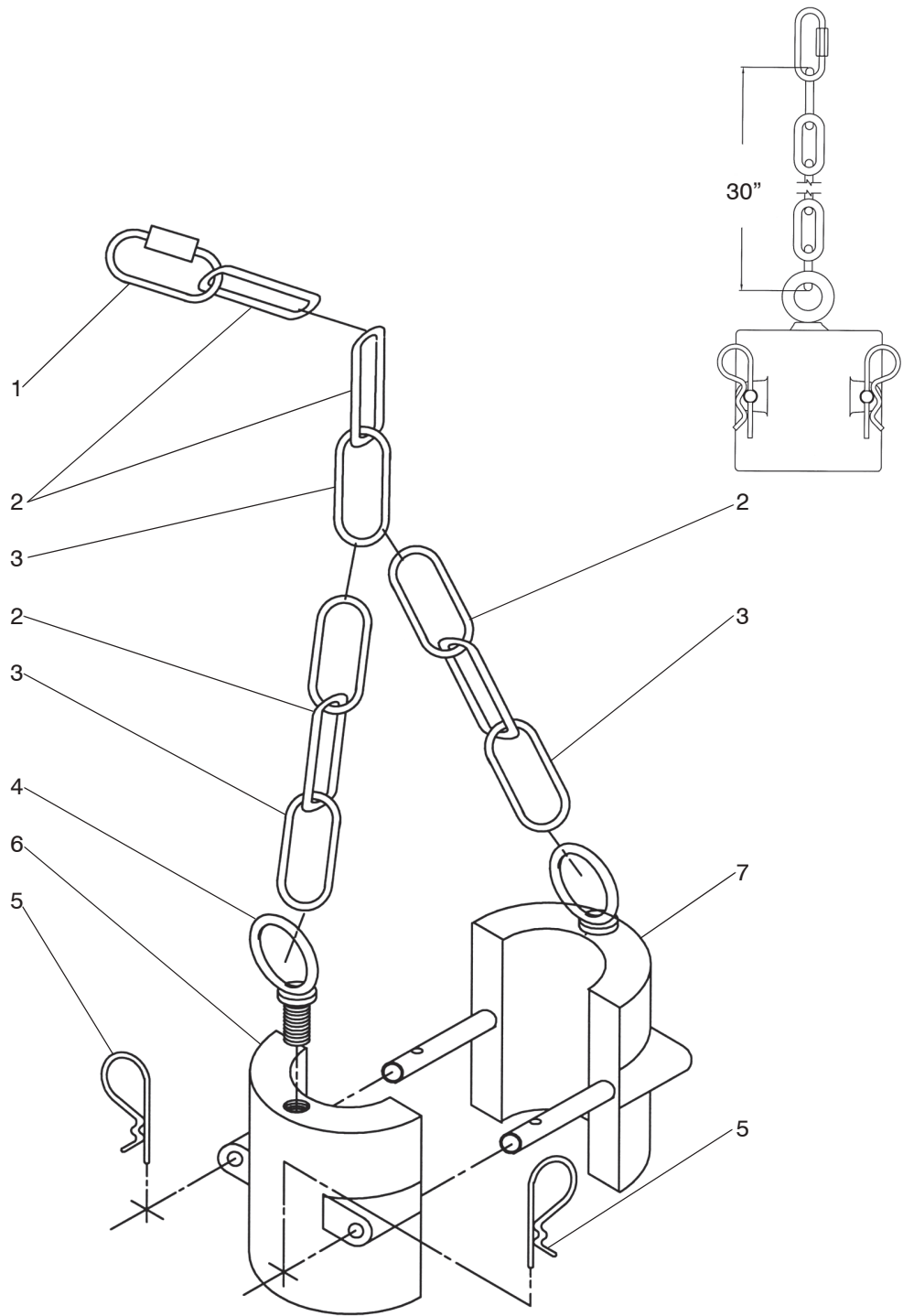
Manitex

Air Throttle Controller 4000164-001 (NR)

ITEM	PART #	QTY	DESCRIPTION
1	4000164-500	1	Seal Kit
	4000164-501	1	Foot Pedal

Air Throttle Controller

4000164-001 (NR)



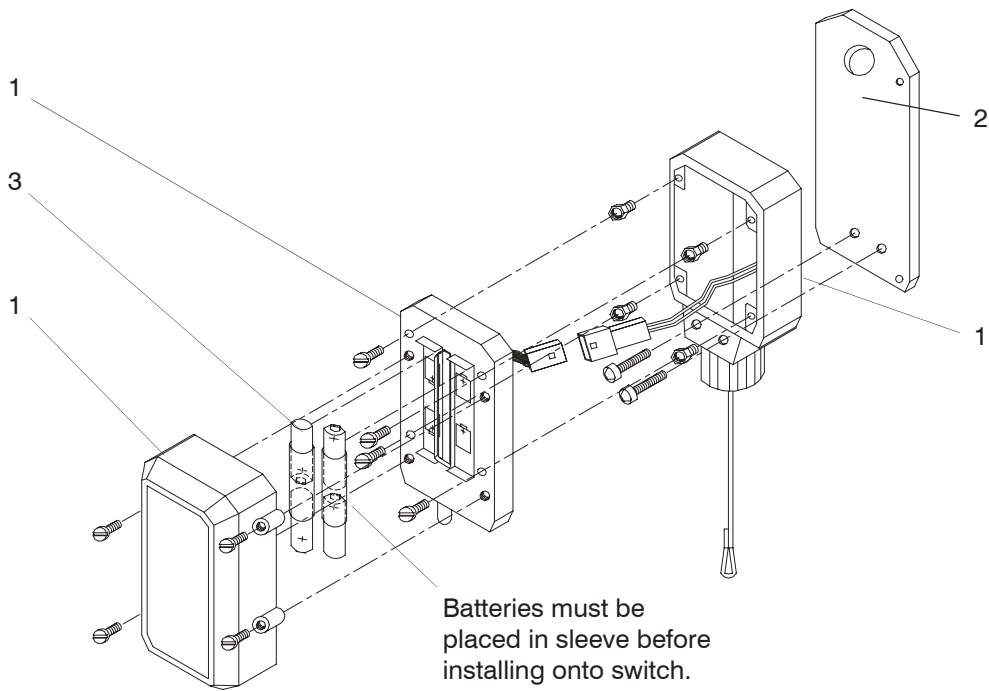
Manitex

Weight & Chain ATB 4800574-520

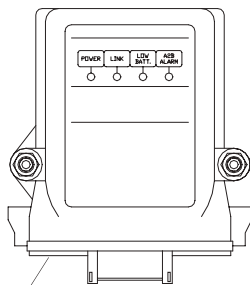
ITEM	PART #	QTY	DESCRIPTION
1	4000121-203	1	Clevis Connector 3/16"
2	6601345	1	Chain Assembly
3	4000121-102	3	Clamp, Chain - 1/4" Split Link
4	6601344	2	Eyebolt
5	2039-171148	2	Cotter Pin
6	6601346	1	Weight, Female
7	6601347	1	Weight, Male

Weight & Chain ATB

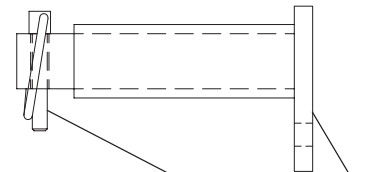
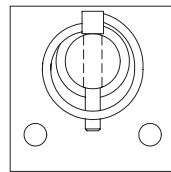
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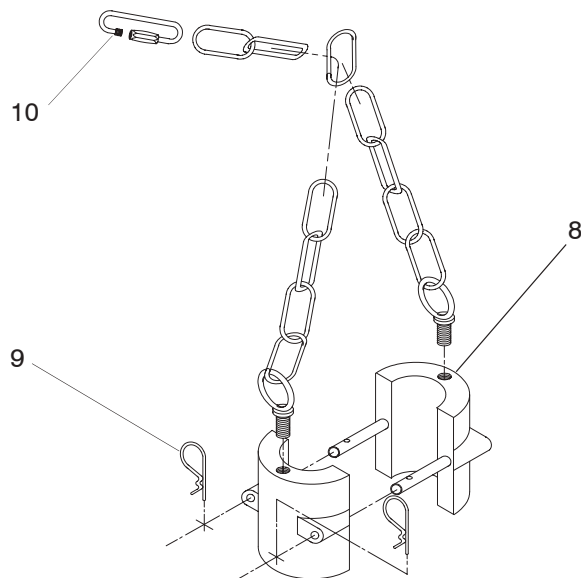
Transmitter/Switch Assembly



4 Receiver



Post, ATB Bracket



Weight Assy

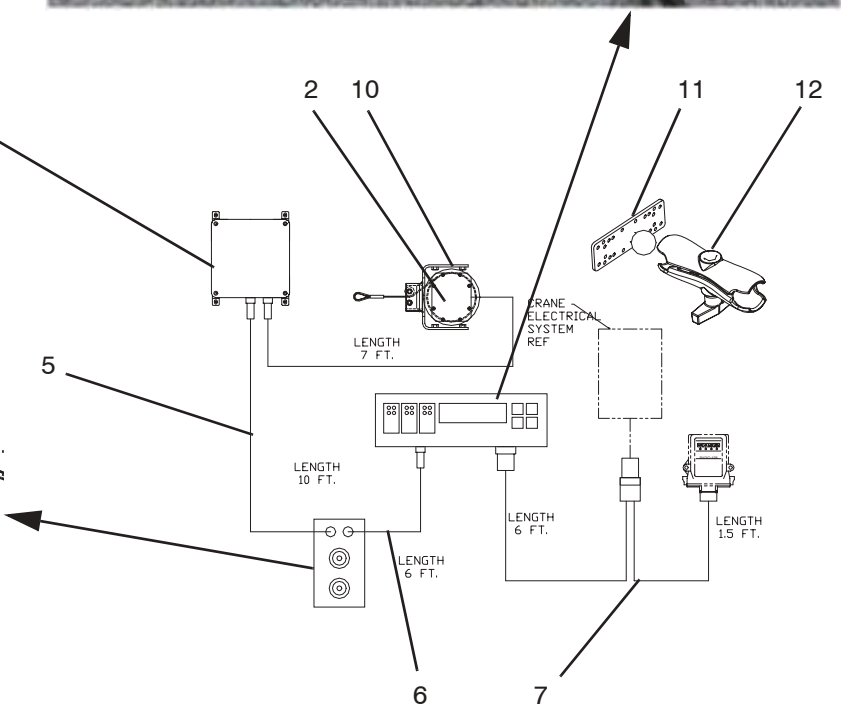
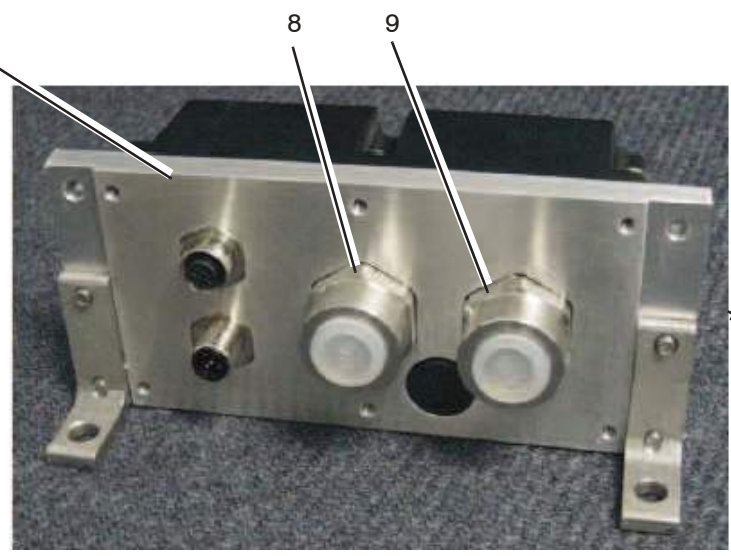
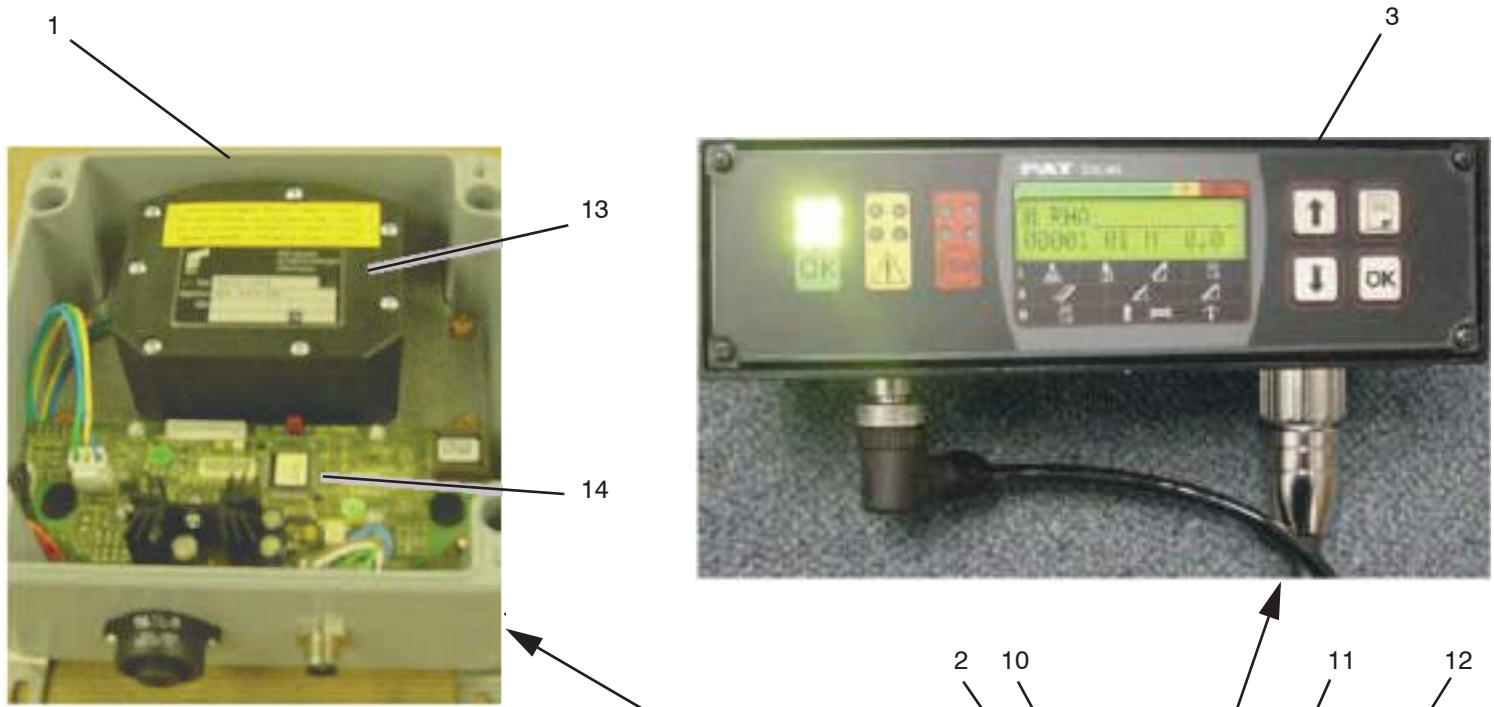
Manitex

Radio Anti-Two-Block System 4800752-001 (B)

ITEM	PART #	QTY	DESCRIPTION
1	6600915	1	Transmitter/Switch Ass'y (includes items 2 & 3)
2	6600916	1	Mounting Plate
3		4	Battery, "C" Cell 1.5V
4	6600914	1	Receiver
5			
6	6600917	1	Post
7	2125-043026	1	Lynch Pin
8	4800574-520	1	Weight Ass'y (includes item 9)
9	2039-171148	2	Cotter, Hair Pin
10	4000121-203	1	Chain Link

Radio Anti-Two-Block System

4800752-001 (B)



4800761-001 (NR)

LMI System, DS85 Complete

Manitex

LMI System, DS85 Complete 4800761-001 (NR)

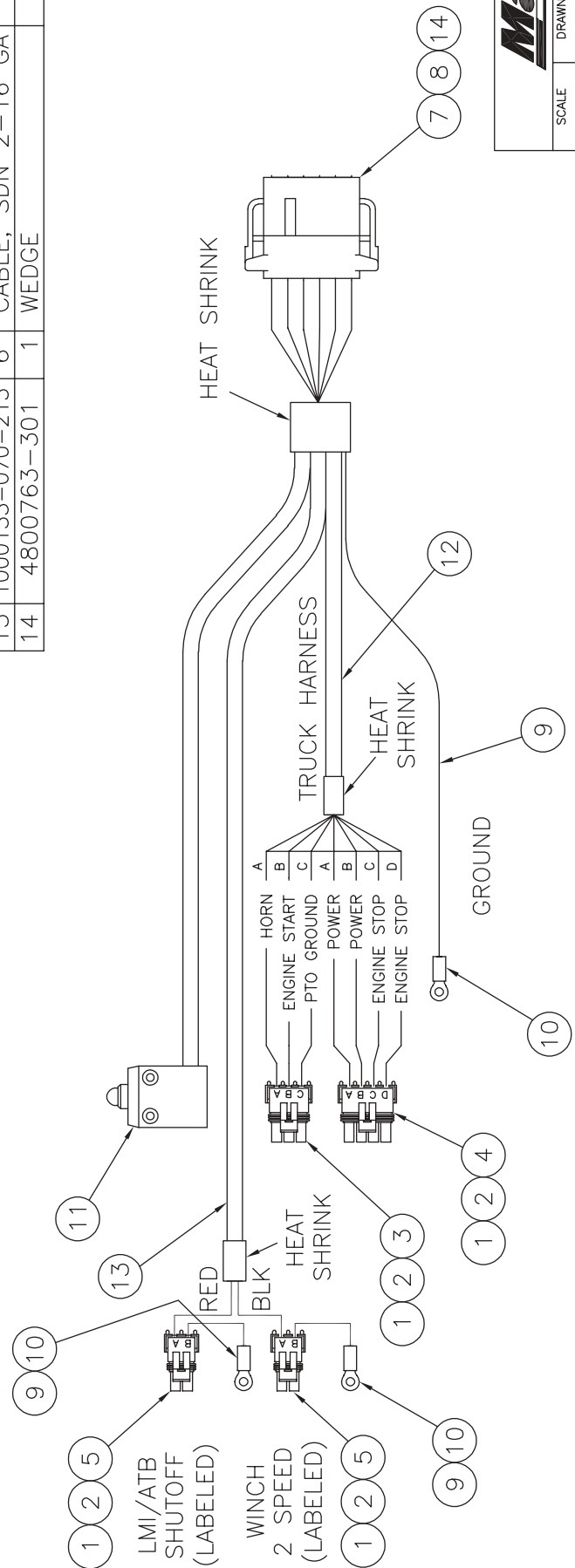
ITEM	PART #	QTY	DESCRIPTION
1	6601017	1	Angle Enclosure
2	6601018	1	Length Sensor
3	6601019	1	Display Console/CPU
4	6601020	1	Pressure Transducer Block
5	6601021	1	Cable, CAN/BUS Long - 10'
6	6601022	1	Cable, CAN/BUS Short - 6'
7	6601023	1	Cable, Power & RATB
8	4800574-531	2	Cutting Ring
9	6601025	2	Bulkhead Adaptor
10	6601026	1	Bracket, Length Sensor
11	6601027	1	Base W/Ball
12	6601028	1	Double Socket Arm
13	6601136	1	Angle Sensor
14	6601137	1	CAN-Bus Converter Board
			<p>NOTE: Item 4, Pressure Transducer Block, is available as a complete unit. The transducers are included and are not available separately.</p> <p>Item's 8 & 9, Cutting Ring & Bulkhead Adaptor, are not included with Item # 4. They must be ordered separately if required.</p>

LMI System, DS85 Complete

4800761-001 (NR)

BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	REVISIONS
1	2088-520021	11	SOC TERMINAL FEMALE	-	EN 02-0017-13 EO 01-03 NEW RELEASE
2	2088-500002	11	SEAL	-	EN 02-0017-26 EO 03-03
3	2088-520300	1	CONNECTOR 3 WAY F	-	A1 ITEM 1 WAS
4	2088-520400	1	CONNECTOR 4 WAY F	-	7 REQ'D
5	2088-520200	2	CONNECTOR 2 WAY M	-	A2 ITEM 2 WAS
6				-	9 REQ'D
7	4800763-001	1	CONNECTOR	-	A3 ITEM 5 WAS
8	4800763-201	12	SOCKETS	-	2088-510100
9	1000132-011-206	3'	WIRE,MTW 16 GA GRN	-	A4 ITEM 6 WAS
10	4800078-002	3	TERMINAL, RING 0.25Ø	-	2088-510021
11	4800539-002	1	LIMIT SW W/CABLE	-	A5 ITEM 9 WAS
12	1000133-070-711	6'	CABLE, SDN 7-16 GA	-	1' REQ'D
13	1000133-070-213	6'	CABLE, SDN 2-16 GA	-	A6 ITEM 10 WAS
14	4800763-301	1	WEDGE	-	1 REQ'D A7 ADDED COLOR CODE TO WIRES ON DEUTSCH TERMINALS 5&6 A8 ADDED ITEM 14



DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARD COPY = UNCONTROLLED



SCALE	DRAWN	CHECKED	APPVD./DATE
NONE	EO	DM	DM 01-03

ELECTRICAL HARNESS A

TOLERANCES (UNLESS SPECIFIED)	4800762-001
±1/4"	
SHEET	1 OF 1

BILL OF MATERIAL

ITEM No.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	2088-520021	1	SOC TERMINAL FEMALE	-
2	2088-500002	1	SEAL	-
3	2088-520100	1	CONNECTOR 1 WAY F	-
4	4800763-002	1	CONNECTOR	-
5	4800763-201	12	SOCKETS	-
6	1000132-011-003	5'	WIRE,MTW 16 GA RED	-
7	4800078-014	1	TERMINAL, RING 3/8"φ	-
8	4800036-001	4	PUSHBUTTON	-
9	4800127-006	2	SEAL BOOT, SWITCH	-
10	4800129-001	2	SWITCH, ROCKER	-
11	4800762-501	1	HARNESS, CONSOLE 1	-
12	4800762-502	1	HARNESS, CONSOLE 2	-
13	4800691-004	1	HARNESS, LMI/ATB	-
14	4800076-001	2	BUTT SPLICE, 16-24GA	-
15	4800448-003	1	ALARM	-
16	4800763-301	1	WEDGE	-
17	1000132-011-206	2'	WIRE,MTW 16 GA GRN	-

REVISIONS

EN 02-0017-13	EO 01-03	NEW RELEASE
EN 02-0017-26	EO 01-03	
A1	ITEM 7 WAS	
A2	ITEM 14 WAS	
A3	ADDED ITEMS	16 & 17

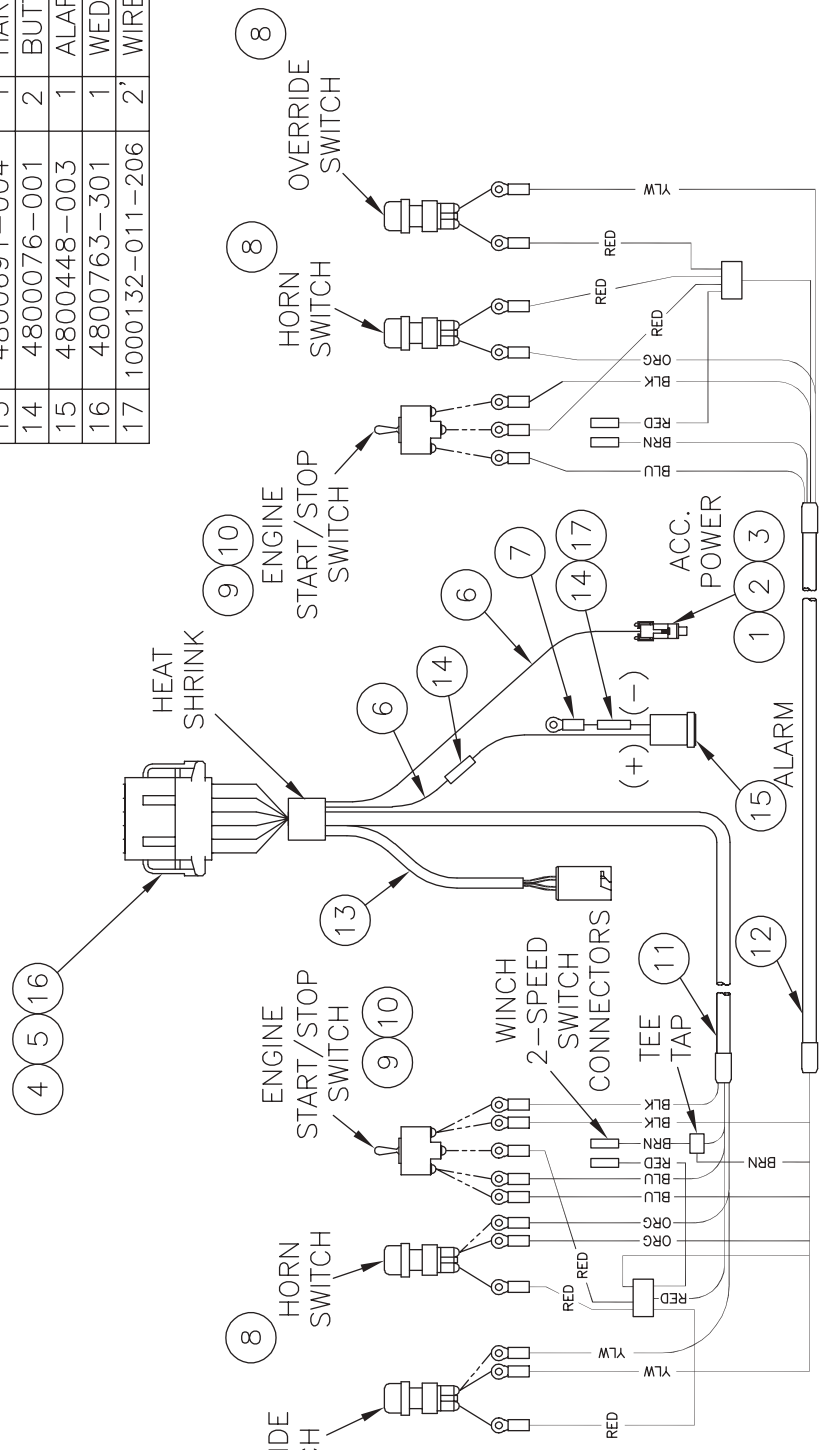
DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARD COPY = UNCONTROLLED



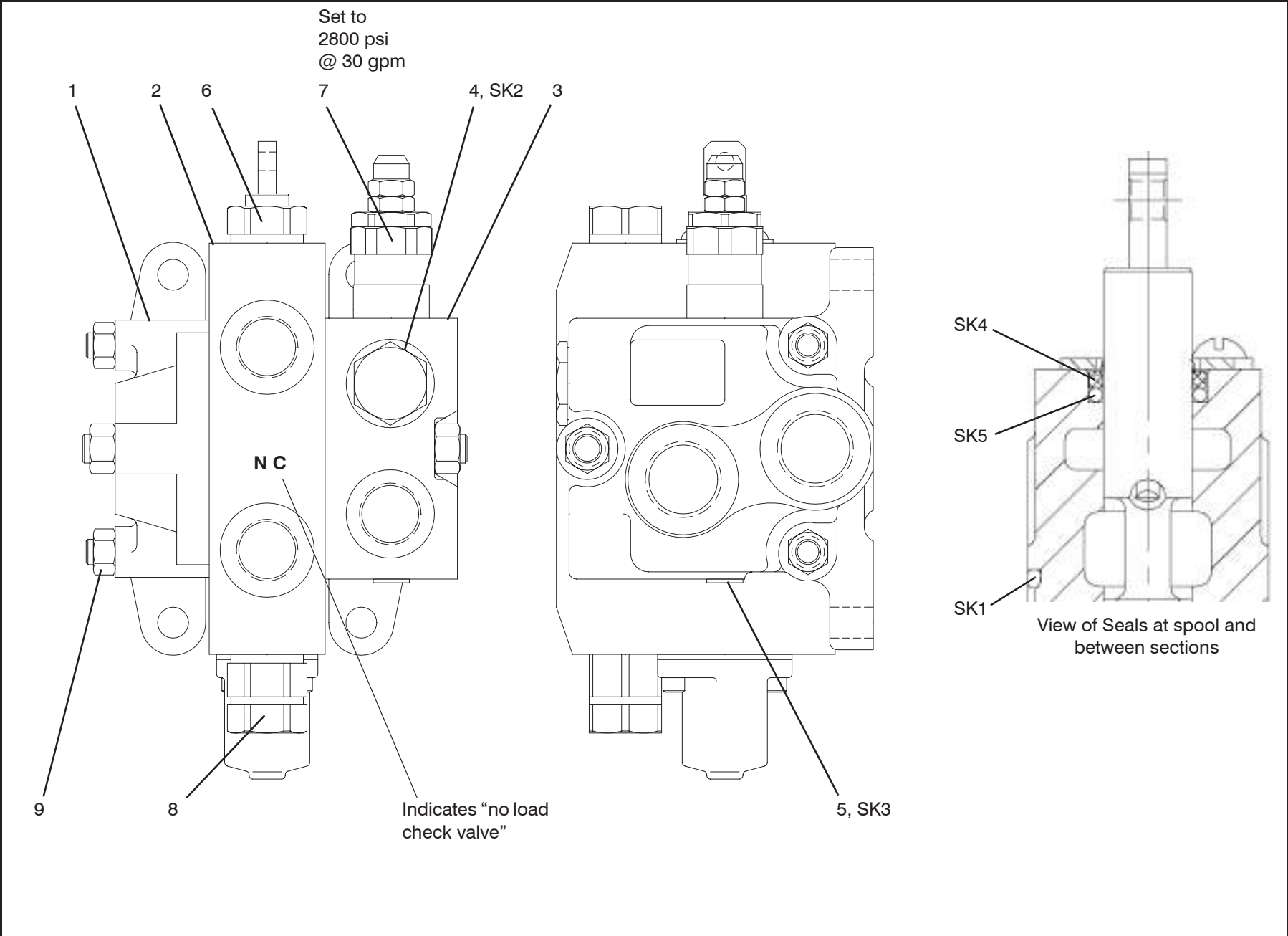
SCALE	DRAWN	CHECKED	APPVD./DATE
NONE	EO	DM	DM 01-03

ELECTRICAL HARNESS B

TOLERANCES (UNLESS SPECIFIED)	4800762-002
± 1/4"	SHEET 1 OF 1



4900057-003 (B)



Control Valve Assembly

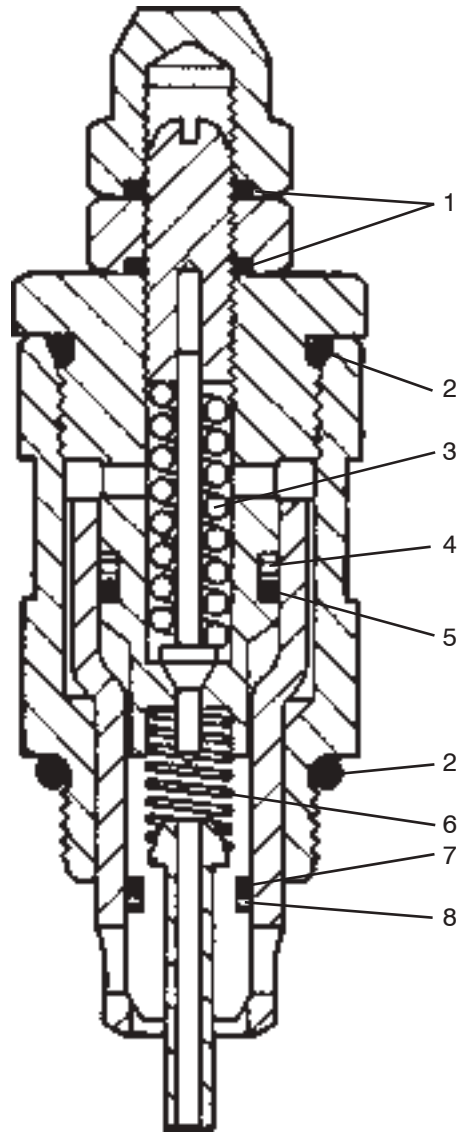
Manitex

Control Valve Assembly 4900057-003 (B)

ITEM	PART #	QTY	DESCRIPTION
	4900057-503		Seal Kit
SK1	*	2	O-Ring
SK2	*	1	O-Ring
SK3	*	1	O-Ring
SK4	*	2	Wiper
SK5	*	2	O-Ring
1	4900057-502	1	Outlet Section
2	6600822	1	Spool Section
3	4900057-500	1	Inlet Section
4	30069-00-16	1	Plug Assy
5	30069-00-04	1	Plug Assy
6	4900057-507	3	Plug, Shut-off
7	4900057-504	1	Relief Valve Cartridge (see note 3)
8	4900106-001	3	Valve, Unloading
9	4900151-001	1	Tie Rod Kit (includes hex nuts)
	4900057-532		Conversion Kit (see note 2)
<p>NOTE 1: Items #4 thru #9 are valve assembly components and may be ordered separately if desired.</p> <p>When replacing a valve/spool section assembly, these items are not included.</p> <p>NOTE 2: Install kit to convert valve to p/n 4900057-008 for use with MBT radio remote system (Addco actuators only). Conversion kit consists of spool caps and spool ends only, use existing hardware.</p> <p>NOTE 3: New relief valve must be adjusted after installation. See sheet 1 for location of relief valve and required settings.</p> <p>See Also: 6600822 4900057-504 4900106-001</p>			

Control Valve Assembly

4900057-003 (B)



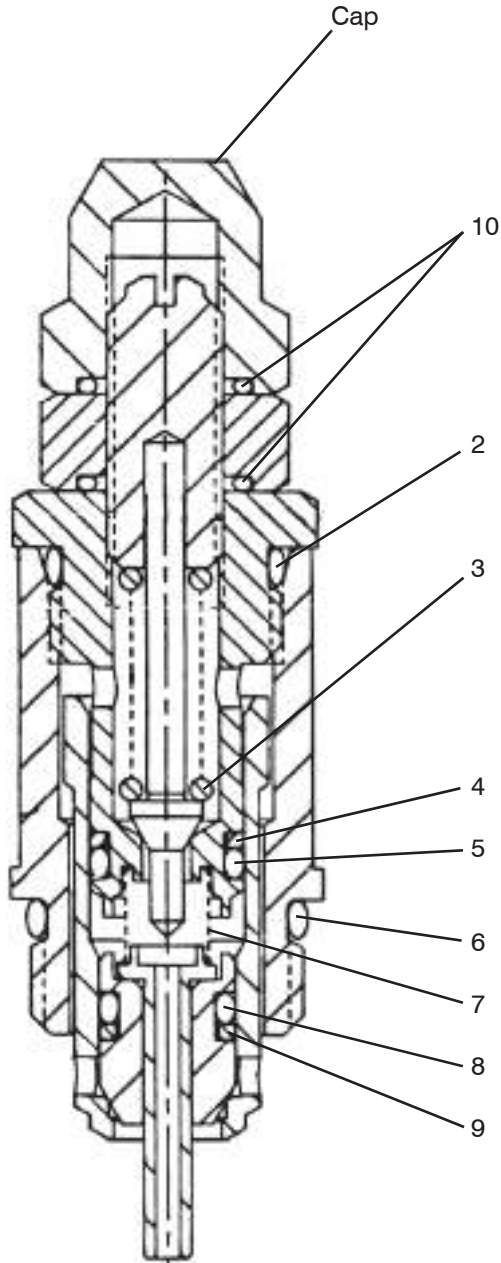
Manitex

Relief Valve Assembly 4900057-504

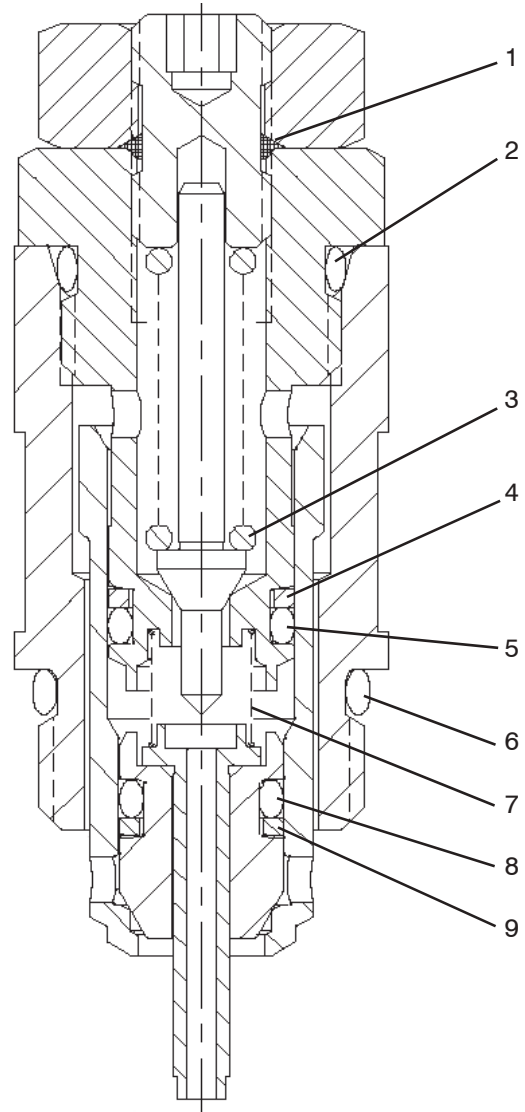
ITEM	PART #	QTY	DESCRIPTION
	4900057-505		Seal and Spring Kit
1		2	O-Ring, Adjusting cap and nut
2		2	O-Ring, Pilot Section and Housing
3		1	Spring, Pilot
4		1	Back-Up Ring, Pilot Section
5		1	O-Ring, Pilot Section
6		1	Spring, Piston
7		1	O-Ring, Main Poppet
8		1	Back-Up Ring, Main Poppet

Relief Valve Assembly

4900057-504



Relief valve with cap used up to about 8-1998



"P" version used on valves built after 8-1998

Manitex

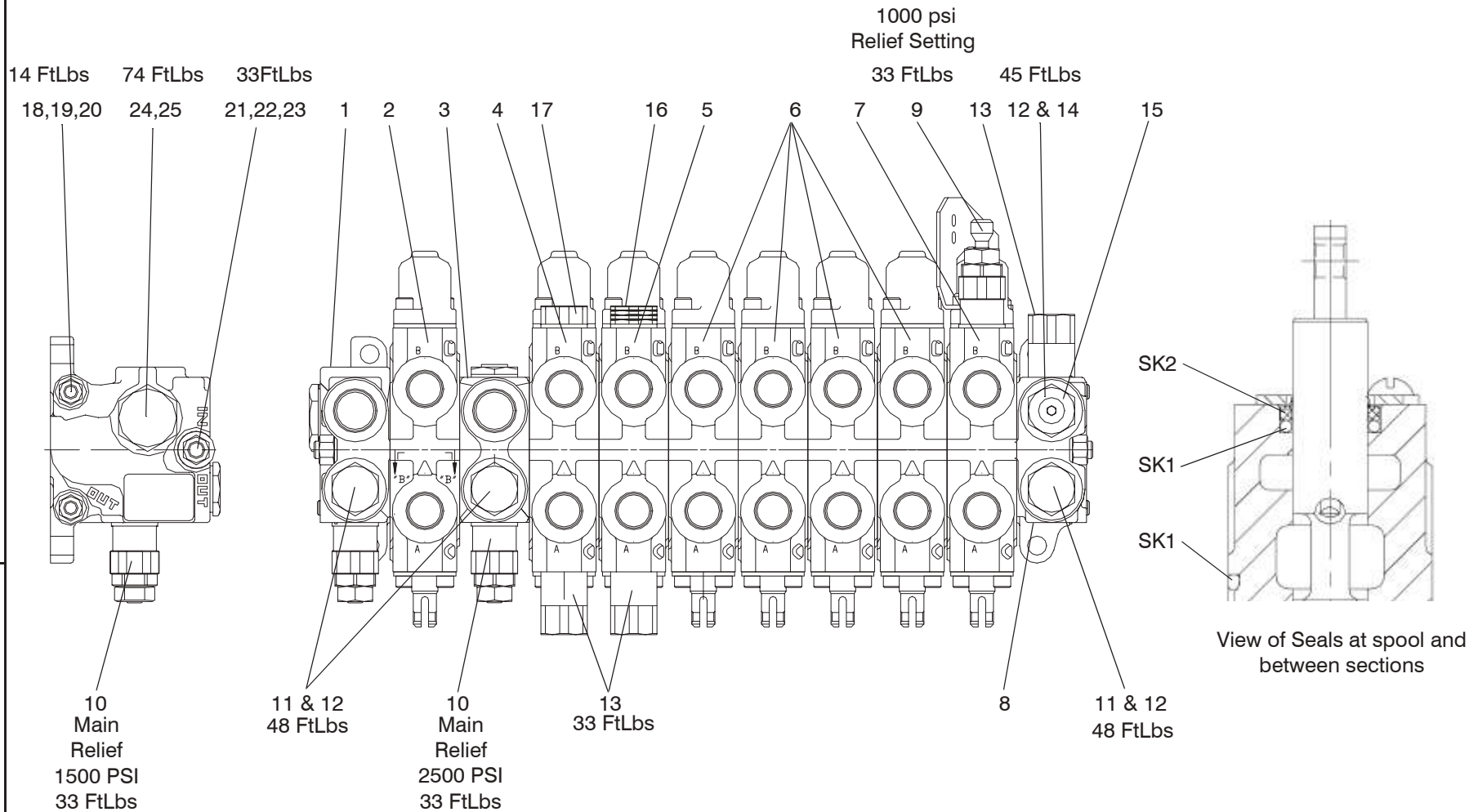
Relief Valve Assembly 4900057-510 (NR)

ITEM	PART #	QTY	DESCRIPTION
	4900058-507		Seal and Spring Kit
1		1	O-Ring, Locking Nut
2		1	O-Ring, Pilot Section
3		1	Spring, Pilot
4		1	Back-Up Ring, Pilot Section
5		1	O-Ring, Pilot Section
6		1	O-Ring, Housing
7		1	Spring, Piston
8		1	O-Ring, Main Poppet
9		1	Back-Up Ring, Main Poppet
10		2	O-Ring, Adjusting cap and nut

Relief Valve Assembly

4900057-510 (NR)

4900058-027 (A)



Control Valve Assembly

Manitex

Control Valve Assembly 4900058-027 (A)

ITEM	PART #	QTY	DESCRIPTION
	6601213		Seal Kit
SK1			O-ring
SK2			Wiper
1	4900058-500	1	Inlet Section
2	4900058-552	1	Spool Section
3	4900100-500	1	Mid-Inlet Section
4	6601196	1	Spool Section
5	4900058-555	1	Spool Section
6	4900058-553	4	Spool Section
7	6601198	1	Spool Section
8	4900058-503	1	Outlet Section
9	4900058-543	1	Relief Valve Assy
10	4900057-510	2	Relief Valve Assy
11	4900058-530	3	Plug
12	4900058-531	5	O-Ring
13	4900106-002	3	Anti-Void Assy
14	6601201	2	Plug
15	6601202	1	Plug
16	4900058-523	1	Shut-Off Plug Assy
17	4900100-502	1	Shut-Off Plug Assy
	6601214	1	Tie Rod Kit (Includes Items 18 thru 23)
18		2	Tie Rod
19		4	Nut-Special
20		4	Washer-Compression
21		1	Tie Rod
22		2	Nut-Special
23		2	Washer-Compression
24	6601211	1	Plug
25	6601212	1	O-Ring

Control Valve Assembly

4900058-027 (A)

NOTE 1

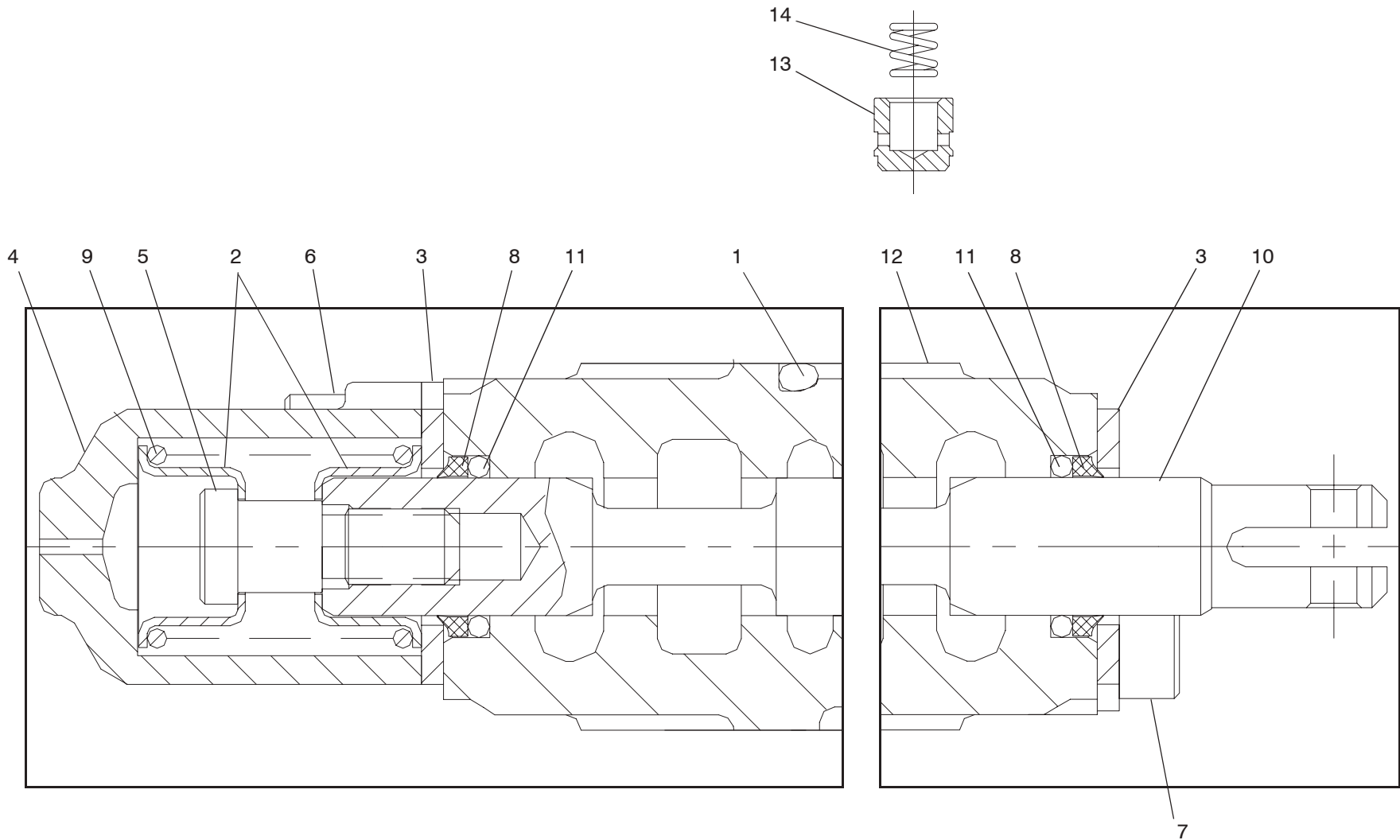
Items #9 thru #17, the tie rod kit, and items 24 and 25 are valve assembly components and may be ordered separately if desired. When replacing a valve/spool section assembly, these items are not included.

NOTE 2:

New relief valves must be adjusted after installation. See sheet 1 for location of relief valves and required settings.

See Also:

4900058-552	6601196	4900058-555
4900058-553	6601198	



Spool Section Assembly

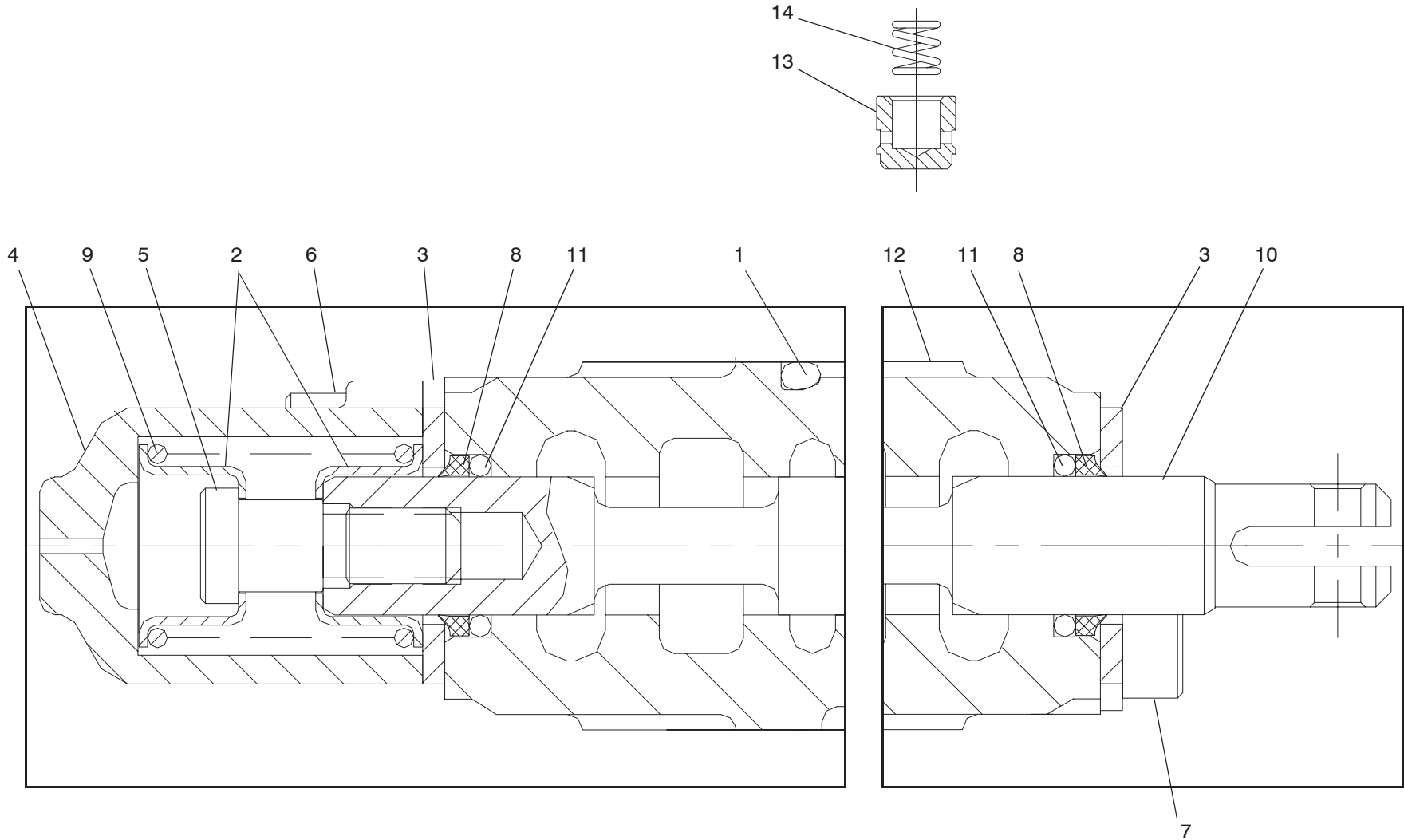
Manitex

Spool Section Assembly 4900058-552 (NR)

ITEM	PART #	QTY	DESCRIPTION
1	*	1	O-Ring
2	4900058-510	2	Spring Seat
3	4900058-513	2	Plate, Seal
4	6600840	1	Cap w/Drain Hole, Spool
5	4900058-551	1	Screw, Spool End
6	2121-041012	2	Soc Head Screw 0.25 X 0.75
7	2121.041008	2	Soc Head Screw 0.25 X 0.50
8	*	2	Wiper
9	4900058-541	1	Spring
10	**	1	Spool
11	*	2	O-Ring
12	**	1	Housing
	4900058-508	1	Load Check Kit (consists of items 13 & 14)
13	6600836	1	Poppet
14	6600837	1	Spring
			<p>* Seals are not available separately, refer to the valve assembly parts page for valve seal kit part number.</p> <p>** These items are not available separately, if these are damaged, order the complete spool section assembly.</p> <p>NOTE 1: The spool assembly consists of only those items shown here.</p> <p>Refer to valve assembly parts page for additional components available for this section.</p>

Spool Section Assembly

4900058-552 (NR)



Spool Section Assembly

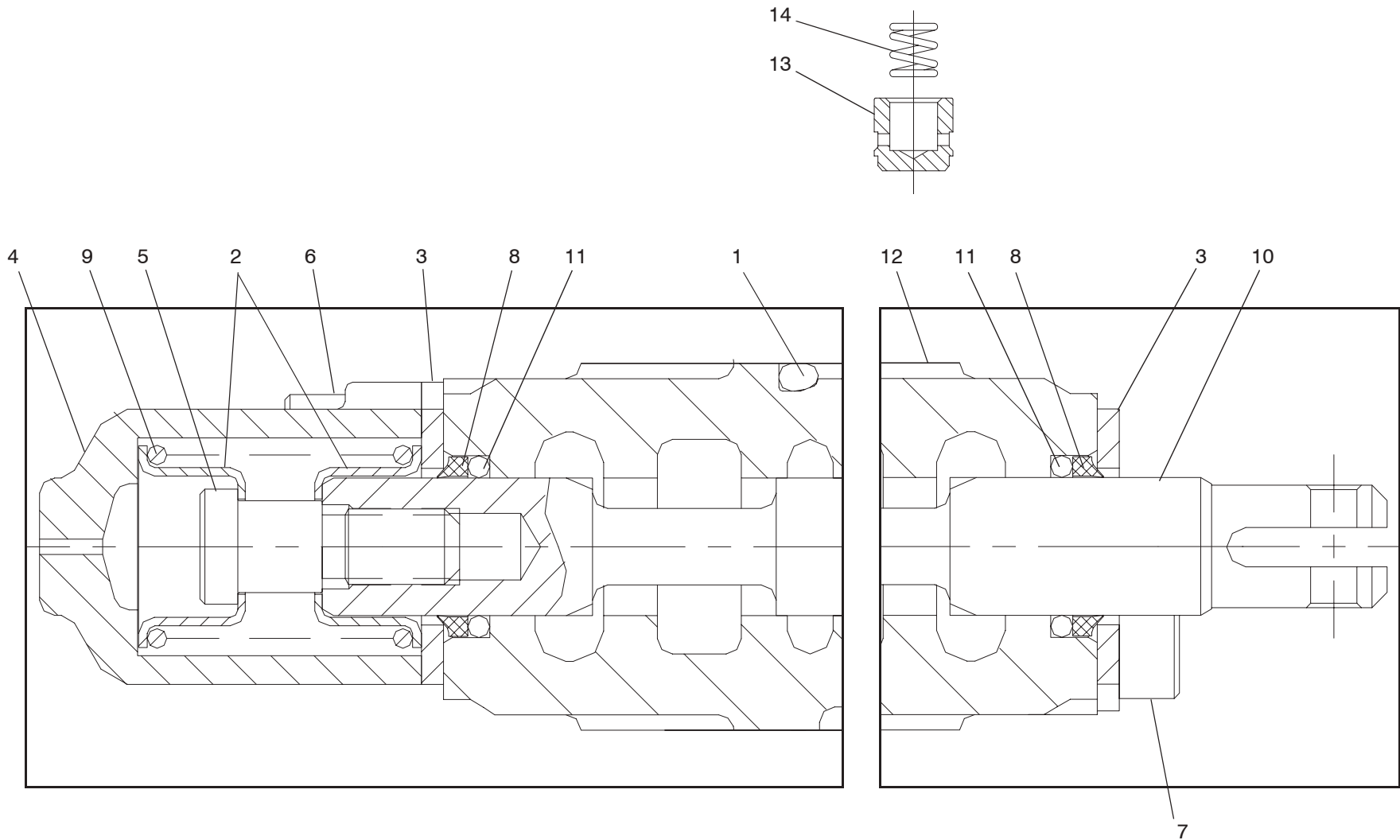
Manitex

Spool Section Assembly 4900058-553 (NR)

ITEM	PART #	QTY	DESCRIPTION
1	*	1	O-Ring
2	4900058-510	2	Spring Seat
3	4900058-513	2	Plate, Seal
4	6600840	1	Cap w/Drain Hole, Spool
5	4900058-551	1	Screw, Spool End
6	2121-041012	2	Soc Head Screw 0.25 X 0.75
7	2121.041008	2	Soc Head Screw 0.25 X 0.50
8	*	2	Wiper
9	4900058-541	1	Spring
10	**	1	Spool
11	*	2	O-Ring
12	**	1	Housing
	4900058-508	1	Load Check Kit (consists of items 13 & 14)
13	6600836	1	Poppet
14	6600837	1	Spring
			<p>* Seals are not available separately, refer to the valve assembly parts page for valve seal kit part number.</p> <p>** These items are not available separately, if these are damaged, order the complete spool section assembly.</p> <p>NOTE 1: The spool assembly consists of only those items shown here.</p> <p>Refer to valve assembly parts page for additional components available for this section.</p>

Spool Section Assembly

4900058-553 (NR)



Spool Section Assembly

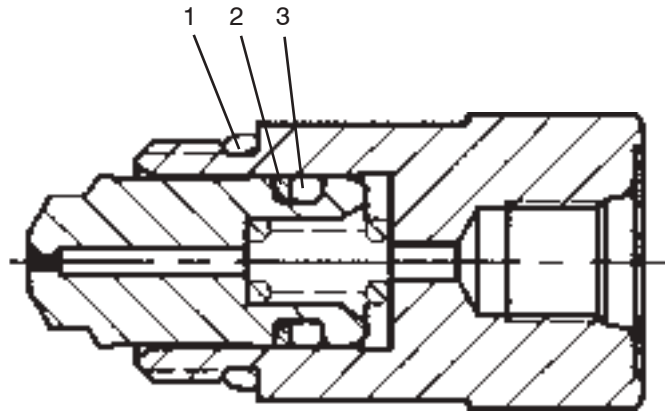
Manitex

Spool Section Assembly 4900058-555 (NR)

ITEM	PART #	QTY	DESCRIPTION
1	*	1	O-Ring
2	4900058-510	2	Spring Seat
3	4900058-513	2	Plate, Seal
4	6600840	1	Cap w/Drain Hole, Spool
5	4900058-551	1	Screw, Spool End
6	2121-041012	2	Soc Head Screw 0.25 X 0.75
7	2121.041008	2	Soc Head Screw 0.25 X 0.50
8	*	2	Wiper
9	4900058-541	1	Spring
10	**	1	Spool
11	*	2	O-Ring
12	**	1	Housing
	4900058-508	1	Load Check Kit (consists of items 13 & 14)
13	6600836	1	Poppet
14	6600837	1	Spring
			<p>* Seals are not available separately, refer to the valve assembly parts page for valve seal kit part number.</p> <p>** These items are not available separately, if these are damaged, order the complete spool section assembly.</p> <p>NOTE 1: The spool assembly consists of only those items shown here.</p> <p>Refer to valve assembly parts page for additional components available for this section.</p>

Spool Section Assembly

4900058-555 (NR)



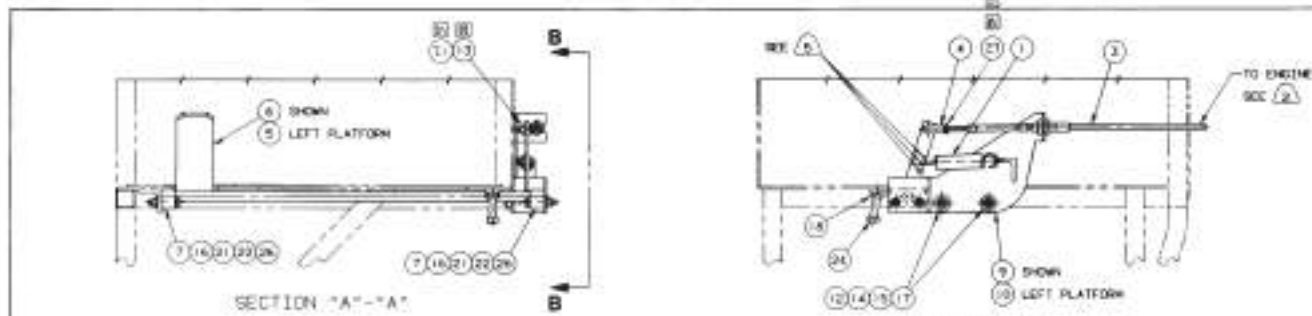
Manitex

Unloading Valve Assembly 4900106-002 (NR)

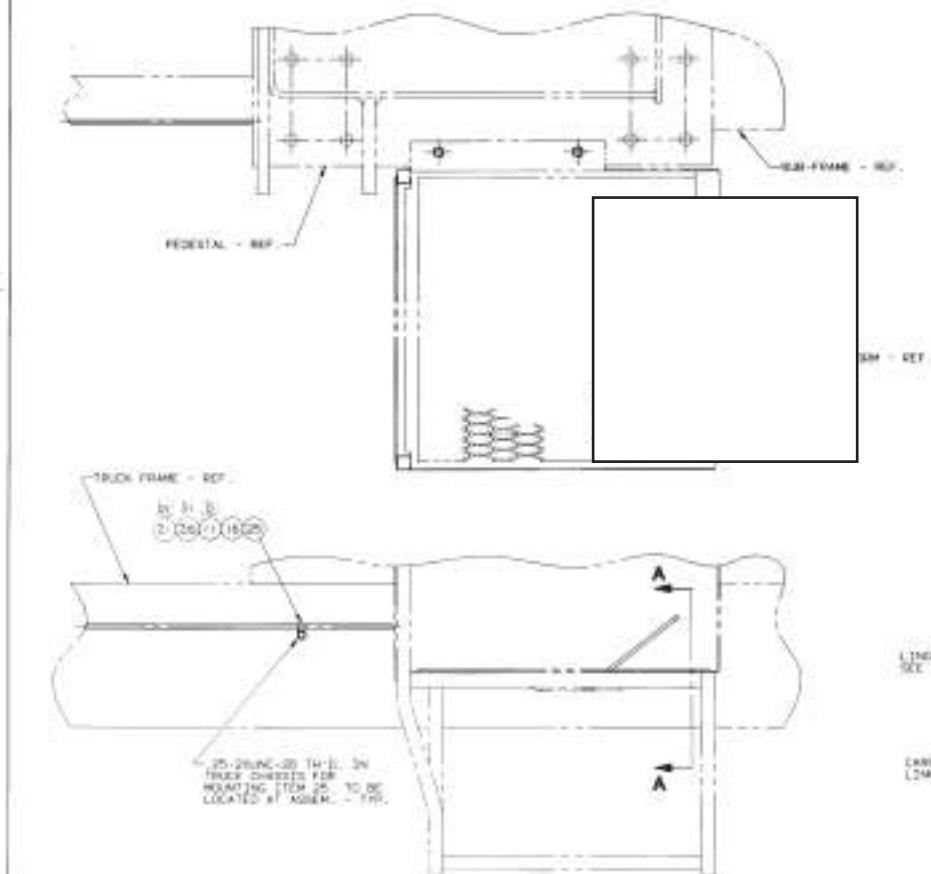
ITEM	PART #	QTY	DESCRIPTION
1	4900106-502	1	Seal Kit
2		1	O-Ring
3		1	Back-Up Ring
		1	O-Ring

Unloading Valve Assembly

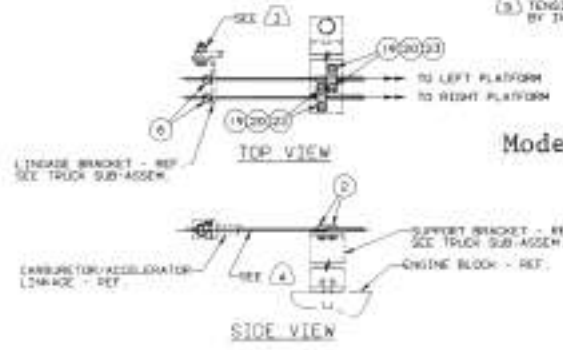
4900106-002 (NR)



QTY	DESCRIPTION	UNIT	QTY	UNIT	QTY
1	SPRING	400070-001	12		
2	CABLE CLAMP	400026-101	01		
3	THROTTLE CABLE	400030-001	2.0		
4	SMALL JOINT CONNECTION	400021-001	02		
5	THROTTLE PEDAL - L.H.	5000697-001	1.7		
6	THROTTLE PEDAL - R.H.	5000698-001	2.4		
7	40 LOCK	5000790-001	02		
8	CABLE STOP	4000807-008	02		
9	THROTTLE BRACKET - R.H.	5000640-001	1.2		
10	THROTTLE BRACKET - L.H.	5000641-001	1.2		
11	4-25-20UNC-2A X 1.00 LG. GR 5 BOLT	2004-041016	02		
12	4-3125-18UNC-2A X .88 LG. GR 5 BOLT	2004-081014	02		
13	2-25-20UNC-2B HEX. JAM NUT	2010-042000	01		
14	4-3125-18UNC-2B HEX NUT	2006-081000	02		
15	4-3125 LOCKWASHER	2006-050000	01		
16	12 25 S.A.E. FLAT WASHER	2006-040000	01		
17	4-3125 S.A.E. FLAT WASHER	2006-050000	01		
18	2-375-16UNC-2B HEX. JAM NUT	2010-061000	01		
19	4#10-24UNC-2B HEX NUT	2018-101000	01		
20	#10 LOCKWASHER	2020-100000	01		
21	25 LOCKWASHER	2006-040000	01		
22	8-25-20UNC-2A X 1.50 LG. GR 5 BOLT	2004-081004	02		
23	4#10-24UNC-2A X .42 LG. GLOTTED PHN HD BOLT	2007-101010	01		
24	2-375-16UNC-2A X 1.50 U.S. GR 5 BOLT	2004-061004	06		
25	4#10SE SUPPORT CLAMP	30140-04100	02		
26	2-25-20UNC-2B HEX NUT	2006-041000	01		
27	2#10-32 UNF 2B HEX NUT	2010-102000	01		
TOTAL ASSEMBLY WEIGHT (LBS.)					12.4



1003 - 1703 SERIES:
USED ON CRANES BUILT
AFTER OCT. 2001



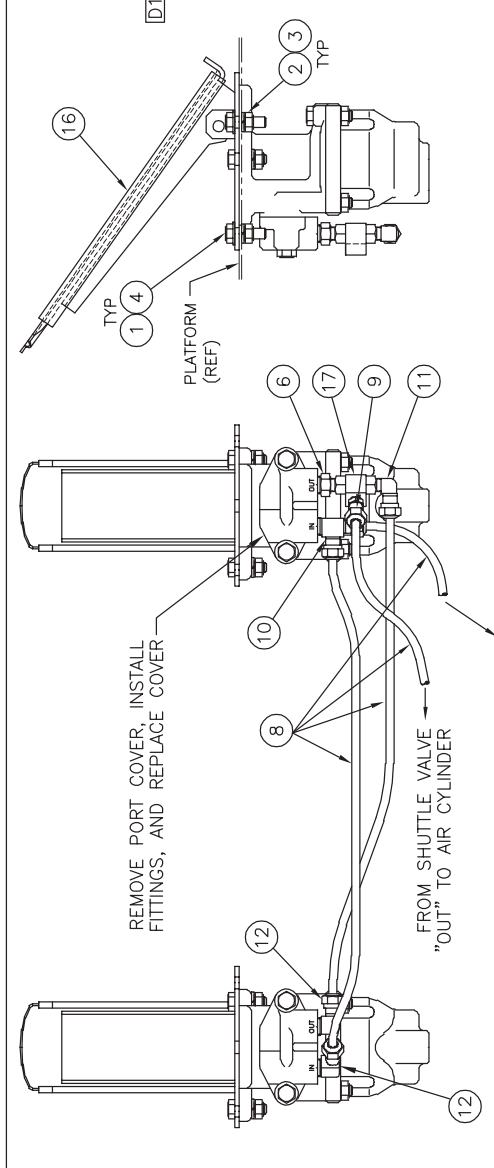
- INSTALLATION FOR RIGHT PLATFORM SHOWN. INSTALLATION FOR LEFT PLATFORM SIMILAR.
- ROUTE THE CABLE TO THE ENGINE IN A MANNER IN WHICH IT CANNOT GET ENGANLED IN MOVING PARTS OF THE TRUCK. DO NOT LET THE CABLE SAG BELOW THE TRUCK FRAME. IT COULD GET TANGLED WITH OBJECTS BEING DRIVEN OVER. DO NOT LET THE CABLE COME IN CONTACT WITH HOT ENGINE OR EXHAUST COMPONENTS. MIN. BEND RADIUS FOR CABLE IS 6.00 IN.
- DO NOT TIGHTEN NUT. LINKAGES MUST BE FREE TO MOVE INDEPENDENTLY.
- WIRE MUST RUN STRAIGHT BETWEEN END OF CASING AND ATTACHMENT TO ENGINE THROTTLE LINKAGE. IDEALLY, THE MOTION OF THE LINKAGE BRACKET SHOULD NOT CAUSE THIS WIRE TO BEND IN ANY DIRECTION.
- TENSION MAY BE ADJUSTED TO OPERATOR PREFERENCE BY INSTALLING SPRING IN OTHER HOLES.

Model 900 S/N 90001 & UP
1100 S/N 11067 & UP
1400, 1500, 1700, 1900
2200, 2800 † 2500

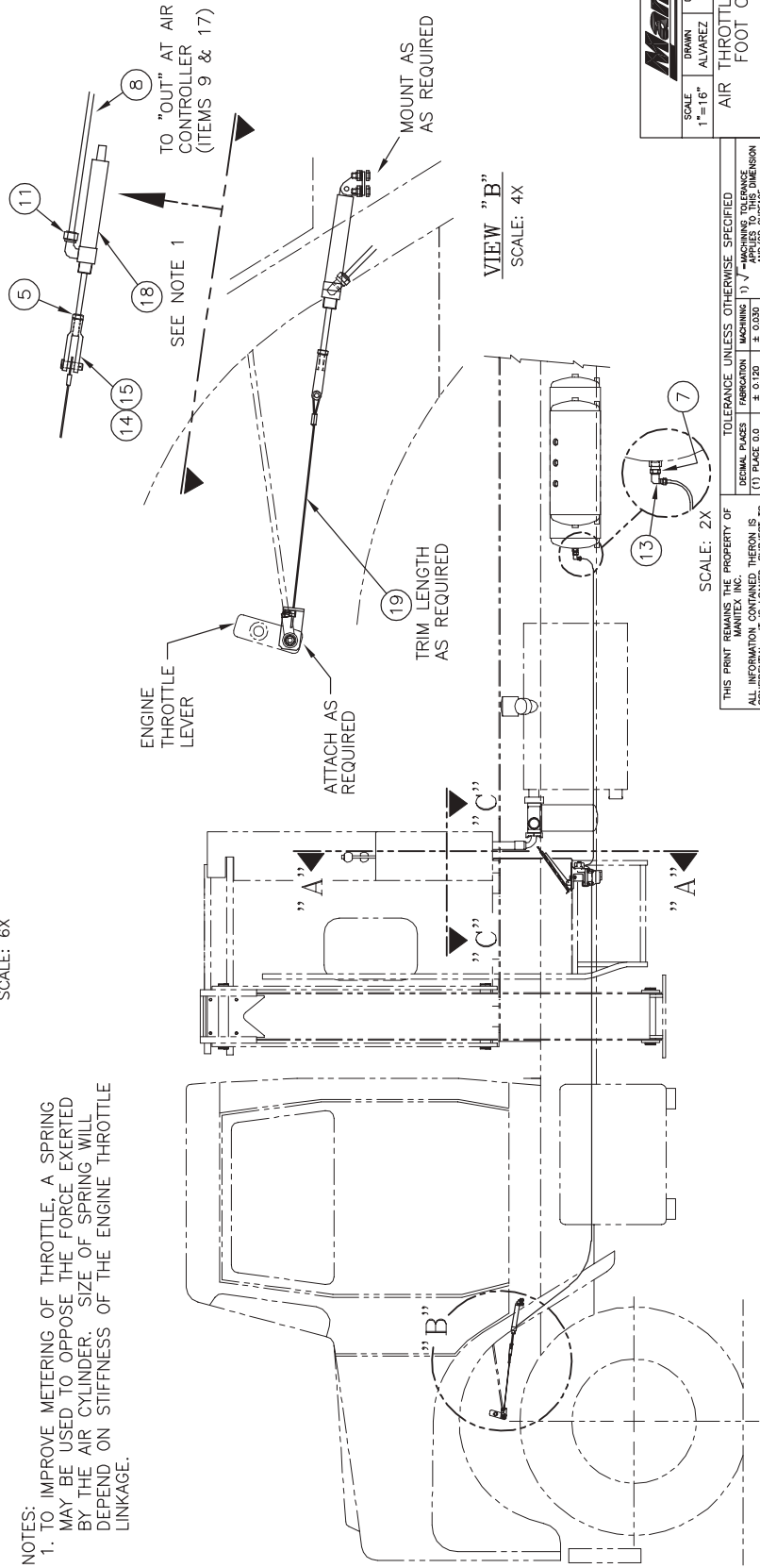
MANITEX INC.	THROTTLE INSTALLATION
ASSEMBLY	REF. 10
REV. 10	10-10-87
REV. 10	10-10-87

BILL OF MATERIAL				REVISIONS
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	2004-051016	6	BOLT ϕ .31NC X 1.00	0.03
2	2005-051000	6	HEX NUT ϕ .31NC	0.01
3	2006-050000	6	LOCKWASHER ϕ .31	0.01
4	2008-042000	6	FLATWASHER .31	0.01
5	2010-042000	1	JAM NUT ϕ 0.25 NF	0.01
6	30001-04-02	1	ADP STR MNPT/MNPT	0.10
7	30001-08-04	1	ADP STR MNPT/MNPT	0.20
8	30355-00-04	40	NYLON TUBING ϕ .25	0.50
9	30364-04-02	1	FTG STR MALE CONN	0.02
10	30365-04-04	1	FTG TEE MALE RUN	0.03
11	30366-04-02	2	FTG 90° MALE CONN	0.02
12	30366-04-04	2	FTG 90° MALE CONN	0.02
13	30367-04-04	1	FTG 90° FEM CONN	0.02
14	4000106-001	1	YOKE ADJUSTABLE	0.08
15	4000107-001	1	PIN ASSY YOKE	0.02
16	4000164-001	2	AIR CONTROLLER	6.00
17	4900134-001	1	SHUTTLE VLV 1/8 NPT	0.10
18	4900135-001	1	AIR CYLINDER	0.20
19	5002555-001	1	THROTTLE CABLE	0.10

TOTAL ASSEMBLY WEIGHT. 13.81 LBS.



NOTES:
 1. TO IMPROVE METERING OF THROTTLE, A SPRING MAY BE USED TO OPPOSE THE FORCE EXERTED BY THE AIR CYLINDER. SIZE OF SPRING WILL DEPEND ON STIFFNESS OF THE ENGINE THROTTLE LINKAGE.



DOCUMENT CONTROL STATUS:
 ELECTRONIC FILE = CONTROLLED
 THROTTLE = UNCONTROLLED

Manitex

SCALE 1"=16"
 DRAWN ALVAREZ
 CHECKED DO
 APP'D/DATE DO 10/88

AIR THROTTLE INSTALLATION
 FOOT OPERATED

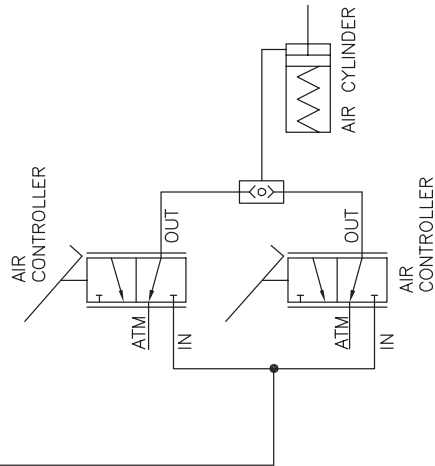
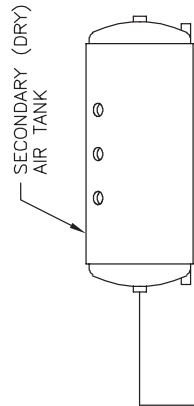
TOLERANCES (UNLESS SPECIFIED) ±1/16"
 6000396-001
 SHEET 1 OF 2
 CAD FILE: MTC17840

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TOLERANCE UNLESS OTHERWISE SPECIFIED		MACHINING	
DECIMAL PLACES	FABRICATION	(1) PLACE 0.0	± 0.030
(1) PLACE 0.0	± 0.030	(2) PLACE 0.00	± 0.015
(2) PLACE 0.00	± 0.015	(3) PLACE 0.000	± 0.005
(3) PLACE 0.000	± 0.005	ANGLES	± 1.30° ± 0.30°

EXAMPLE: 1.30° ± 0.30°

REVISIONS
A THRU C SEE SHT 1
EN 95-0007
DAS 7-6-95
REVISED CUTOUT



DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARD COPY = UNCONTROLLED



SCALE	DRAWN	CHECKED	APP'D/DATE
1"=2"	DAS	DM	DM 7/95
AIR THROTTLE INSTALLATION FOOT OPERATED			
TOLERANCES (UNLESS SPECIFIED)	6000396-001		
±1/16"	SHEET 2 OF 2		

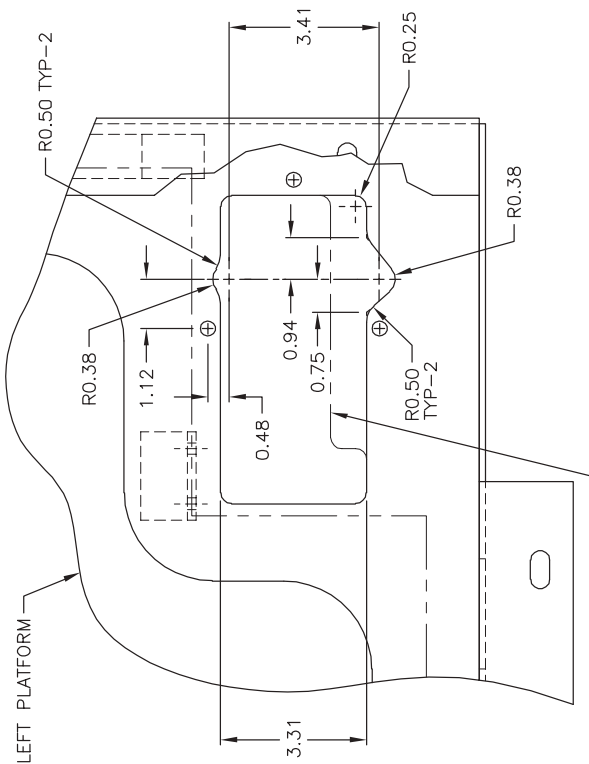
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TOLERANCE UNLESS OTHERWISE SPECIFIED	
DECIMAL PLACES	FABRICATION
(1) PLACE 0.0	± 0.120
(2) PLACE 0.00	± 0.030
(3) PLACE 0.000	± 0.010
ANGLES	± 1.30°
	± 0.30°

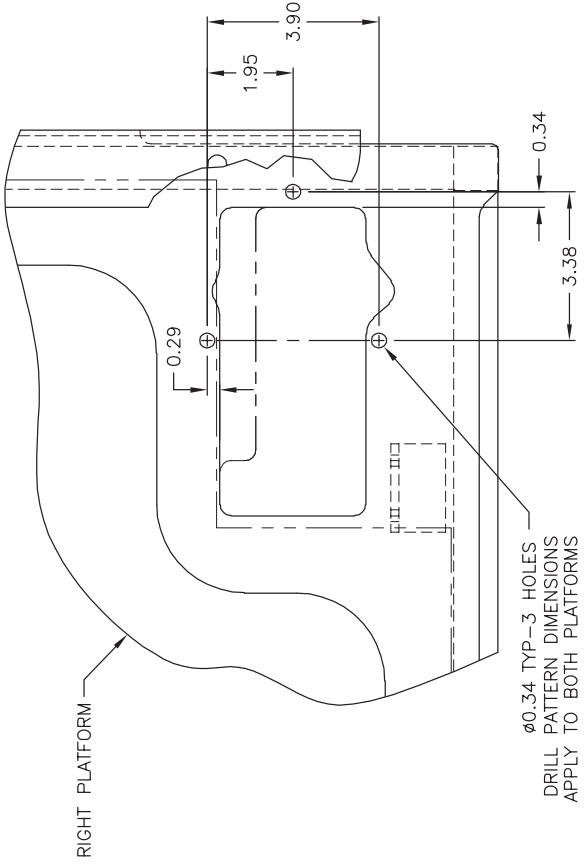
EXAMPLE: ±0.015 IN. DIMENSION
ORIGINAL DIMENSION
± 0.0005 IN. DIMENSION

DECIMAL PLACES MACHINING (1) ± 0.005 (2) ± 0.002 (3) ± 0.001

OTHER THAN INDICATED BY AND/OR SURFACE FINISH SYMBOLS



CUTOUT MODIFICATION DIMENSIONS
APPLY TO BOTH PLATFORMS

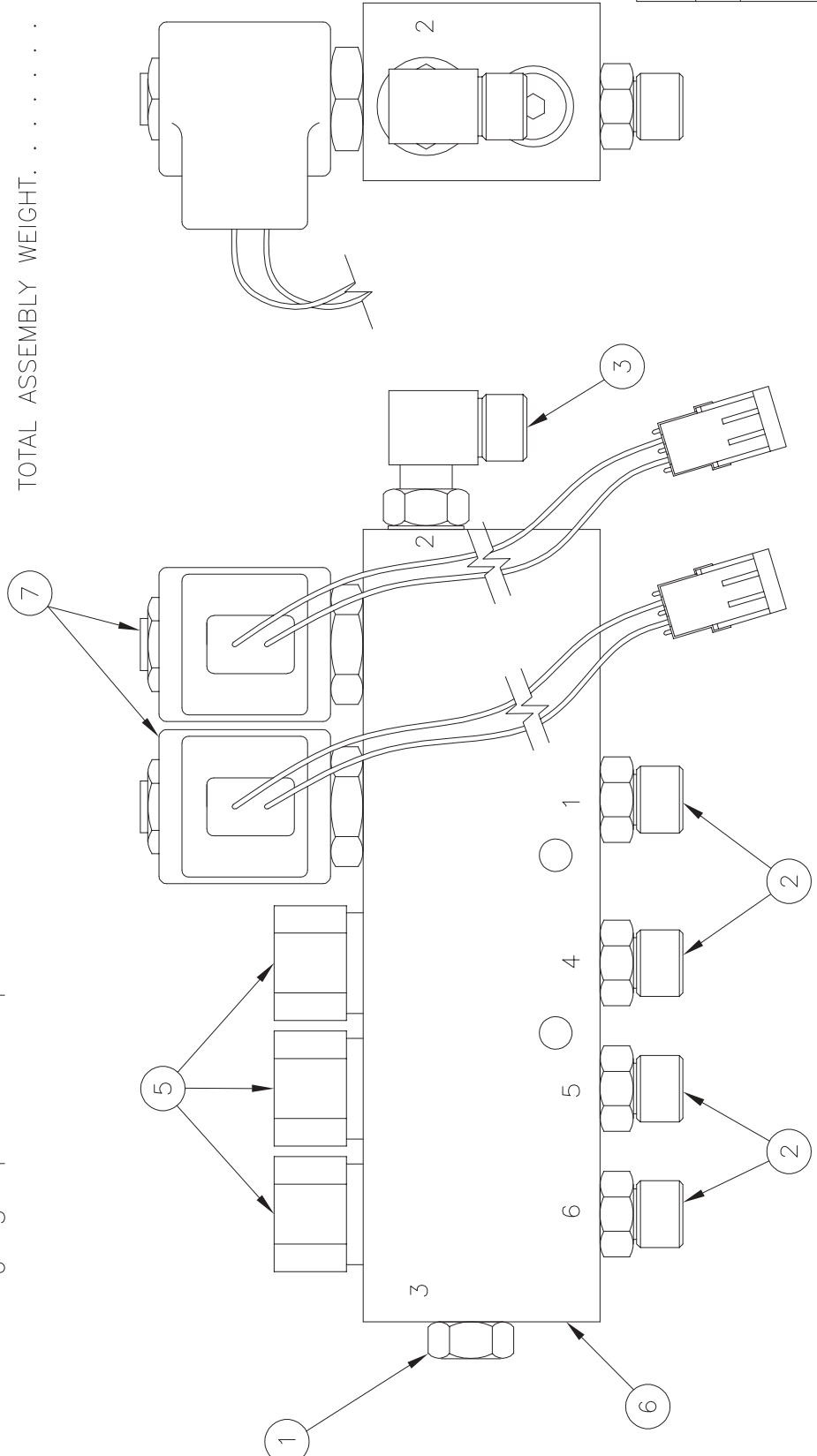
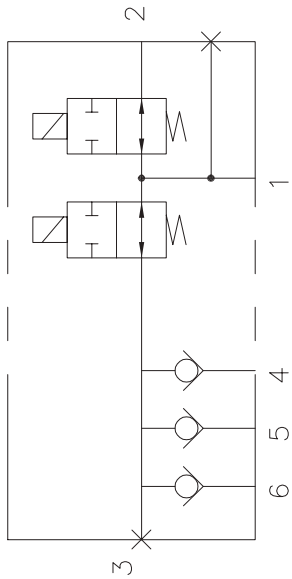


VIEW "C-C"

BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	30069-00-04	1	ADP PLUG SAE	.05
2	30202-04-04	4	ADP STR ORS/SAE	.10
3	30205-04-04	1	ADP 90° ORS/SAE	.10
4				
5	4900108-001	3	CHECK VALVE CART	.20
6	4900109-003	1	MANIFOLD BLOCK	1.44
7	4900209-004	2	VALVE SOLENOID W/P	.95

TOTAL ASSEMBLY WEIGHT. 4.49 LBS.



DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARDCOPY = UNCONTROLLED



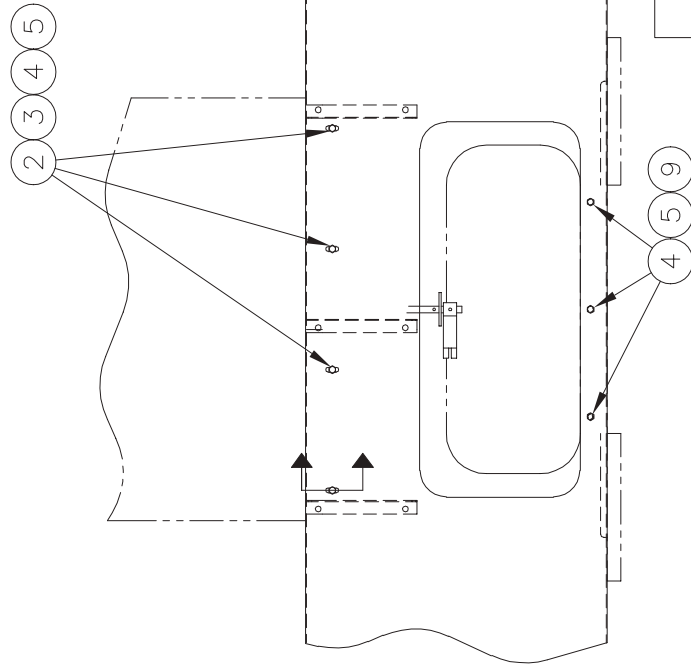
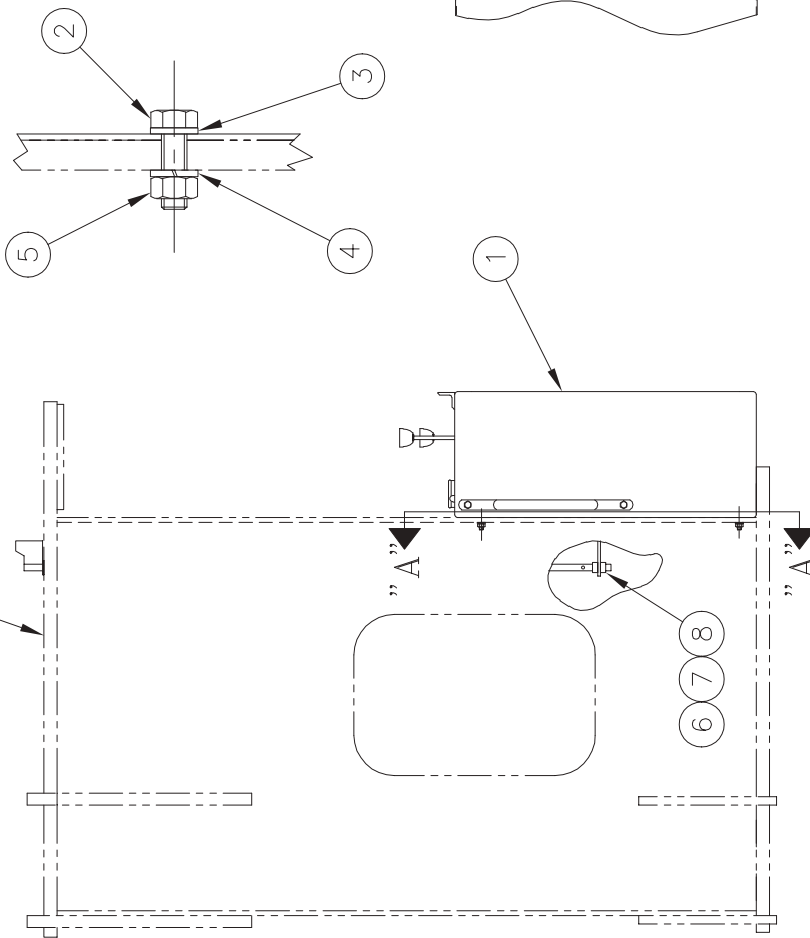
SCALE	DRAWN	CHECKED	APPVD./DATE
1" = 1"	EO	DM	DM 04-03

VALVE SUB-ASSEMBLY

TOLERANCES (UNLESS SPECIFIED)	6000519-012
SHEET	1 OF 1

TOTAL ASS'Y WEIGHT - 331.96 LBS.

PEDESTAL INSTALLATION ASSEMBLY - REF.



BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	6000521-015	1	CTL CONSOLE ASS'Y	331.6
2	2004-051016	4	BOLT 0.31φ UNC X1"	0.02
3	2008-050000	4	FLATWASHER 0.31φ	0.01
4	2006-050000	7	LOCKWASHER 0.31φ	0.01
5	2005-051000	7	HEX NUT 0.31φ UNC	0.01
6	2040-041028	1	CLEVIS PIN	0.02
7	2008-040000	1	FLATWASHER 0.25φ	0.01
8	2035-041008	1	COTTER PIN	0.01
9	2004-051024	3	BOLT 0.31φ UNCX1.5"	0.02

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARD COPY = UNCONTROLLED



SCALE	DRAWN	CHECKED	APPVD./DATE
NONE	EO	DM	D.MORAVEC 04-03

CONTROL CONSOLE
INSTALLATION

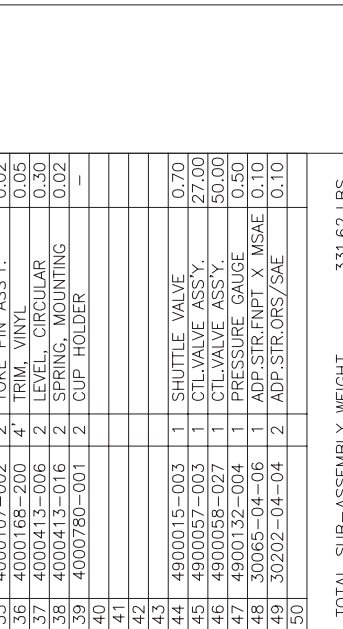
TOLERANCES (UNLESS SPECIFIED)	6000520-015
± 1/16"	SHEET 1 OF 1

SECTION "A" - "A"

BILL OF MATERIAL			REVISIONS		
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	
1	5000410-001	5	BACKING BAR	0.30	EN 02-0018-11
2	5000411-001	2	BACKING BAR	0.20	EO 04-03
3	5000427-001	2	CONSOLE COVER	18.0	NEW RELEASE
4	5000436-001	1	CONTROL ROD	5.20	
5	5000437-001	1	CONTROL ROD	5.20	
6	5000438-001	1	CONTROL ROD	5.20	
7	5000439-001	1	CONTROL ROD	5.20	
8	5000440-001	1	CONNECTING ROD	0.02	
9	5000443-002	1	CONNECTING ROD	0.09	
10	5000444-002	1	CONNECTING ROD	0.09	
11	5000445-002	1	CONNECTING ROD	0.11	
12	5000441-001	1	CONNECTING ROD	0.04	
13	5000579-006	1	CONTROL CONSOLE	111.6	
14					
15					
16	5000582-001	2	SPACER BAR	1.70	
17	5000432-002	1	SWING STOP CTL. ROD	0.10	
18	5000421-003	1	CONTROL ROD WINCH	7.70	
19	5000434-003	1	CONTROL ROD TELE	7.50	
20	5000435-003	1	CONTROL ROD BH	7.70	
21	5000433-003	1	CONTROL ROD SWING	8.00	
22					
23	5000428-003	2	CONTROL KNOB WINCH	0.20	
24					
25	5000442-001	1	CONNECTING ROD	0.05	
26	5000446-002	1	CONNECTING ROD	0.12	
27					
28	4000101-001	2	CTL. ROD SUPPORT	0.15	
29	4000102-001	5	CTL. ROD SUPPORT	0.26	
30	4000103-001	14	CONTROL KNOB	0.20	
31	4000105-001	2	GRAB HANDLE	0.75	
32	4000106-001	8	ADJ. YOKE END	0.08	
33	4000108-002	2	ADJ. YOKE END	0.13	
34	4000107-001	8	YOKE PIN ASS'Y.	0.01	
35	4000107-002	2	YOKE PIN ASS'Y.	0.02	
36	4000168-200	4*	TRIM, VINYL	0.05	
37	4000413-006	2	LEVEL, CIRCULAR	0.30	
38	4000413-016	2	SPRING, MOUNTING	0.02	
39	4000780-001	2	CUP HOLDER	-	
40					
41					
42					
43					
44	4900015-003	1	SHUTTLE VALVE	0.70	
45	4900057-003	1	CTL. VALVE ASS'Y.	27.00	
46	4900058-027	1	CTL. VALVE ASS'Y.	50.00	
47	4900132-004	1	PRESSURE GAUGE	0.50	
48	30065-04-06	1	ADP. STR. FNPT X MSAE	0.10	
49	30202-04-04	2	ADP. STR. ORS./SAE	0.10	
50					

BILL OF MATERIAL			REVISIONS		
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	
51	30202-16-16	1	ADP. STR. ORS./SAE	0.50	
52					
53	30205-04-06	2	ADP. 90 DEG. ORS./SAE	0.20	
54	30205-16-12	1	ADP. 90 DEG. ORS./SAE	0.90	
55	30205-12-12	1	ADP. 90 DEG. ORS./SAE	0.90	
56	30210-16-16	1	ADP. TEE ORS./SAE	1.00	
57	30212-16-16	2	ADP. 90 DEG. ORS. F/M	1.90	
58	30230-16083	1	HOSE ASSEMBLY 1"	4.26	
59	30231-16031	1	HOSE ASSEMBLY 1"	3.01	
60	30231-12084	1	HOSE ASSEMBLY 3/4"	5.30	
61	30237-04046	1	HOSE ASSEMBLY 1/4"	0.80	
62	30228-51008	1	HOSE ASSEMBLY 1"	2.30	
63	30251-04069	1	HOSE ASSEMBLY 1/4"	0.90	
64					
65					
66					
67	30489-12-05	1	CHECK VALVE	0.90	
68					
69					
70	2004-051010	16	BOLT HEX. 5/16"	0.03	
71	2004-051036	14	BOLT HEX. 5/16"	0.06	
72	2004-061040	3	BOLT HEX. 3/8"	0.10	
73	2004-081028	3	BOLT HEX. 1/2"	0.14	
74					
75					

BILL OF MATERIAL			REVISIONS		
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	
76	2005-061000	3	NUT HEX. 3/8"	0.02	
77	2005-081000	3	NUT HEX. 1/2"	0.05	
78					
79	2006-050000	12	LOCKWASHER 5/16"	0.01	
80	2006-060000	3	LOCKWASHER 3/8"	0.01	
81	2006-080000	3	LOCKWASHER 1/2"	0.01	
82					
83	2008-050000	26	FLATWASHER 5/16"	0.01	
84	2010-042000	7	NUT JAM 1/4"	0.01	
85	2010-081000	2	NUT JAM 1/2"	0.01	
86	2010-052000	2	NUT JAM 5/16"	0.01	
87	2010-061000	14	NUT JAM 3/8"	0.01	
88					
89					
90	2016-052044	1	THREADED STUD 5/16"	0.08	
91	2110-041112	6	SCREW, RD HD #4 SS	0.01	
92	2035-041008	7	PIN COITER	0.01	
93	2040-031012	7	PIN CLEVIS	0.01	
94	4000413-106	2	MOUNTING PLATE	0.05	
95					
96	30327-00-16	1	CAP ORS	0.45	
97	4000269-003	2	SNAP PLUG	0.01	
98					
99	2011-051000	14	NUT, LOCK 5/16"	0.01	
100	30069-00-08	2	PLUG	0.10	



TOTAL SUB-ASSEMBLY WEIGHT 331.62 LBS.

APPROVED	DATE
ED	
DRAWN	DATE
DM	
CHECKED	DATE
ED	
DESIGNED	DATE
ED	

DOCUMENT CONTROL STATUS:
 UNCONTROLLED
 UNREVISIONED
 UNAPPROVED
 UNCONTROLLED

SCALE: 3/16" = 1"
 DRAWN: DM
 CHECKED: ED
 DESIGNED: ED

CONTROL CONSOLE ASSEMBLY

APPROVED: B. MORAEC 04-03

TOLERANCES (UNLESS SPECIFIED):
 ±.1 / .16"

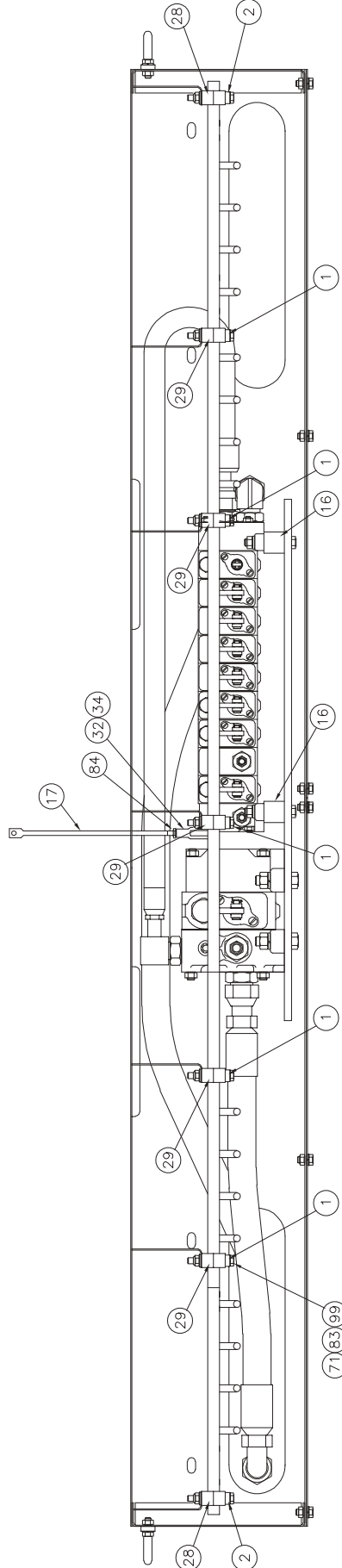
6000521-015
 SHEET 1 OF 3

- NOTES:
- ITEM 57 IS REQUIRED ONLY WHEN HYD. TANK IS MOUNTED ON PASSENGER SIDE OF TRUCK.
 - VINYL TRIM MUST BE CUT TO LENGTH AT ASSEMBLY TO FIT HOLE.
 - MAKE SURE CONTROL RODS ITEMS 4 THRU 7 AND ITEMS 18 THRU 21 ARE FREE TO ROTATE.
DO NOT OVER-TIGHTEN.

REVISIONS
 EN 02-0018-11
 EO 04-03
 NEW RELEASE

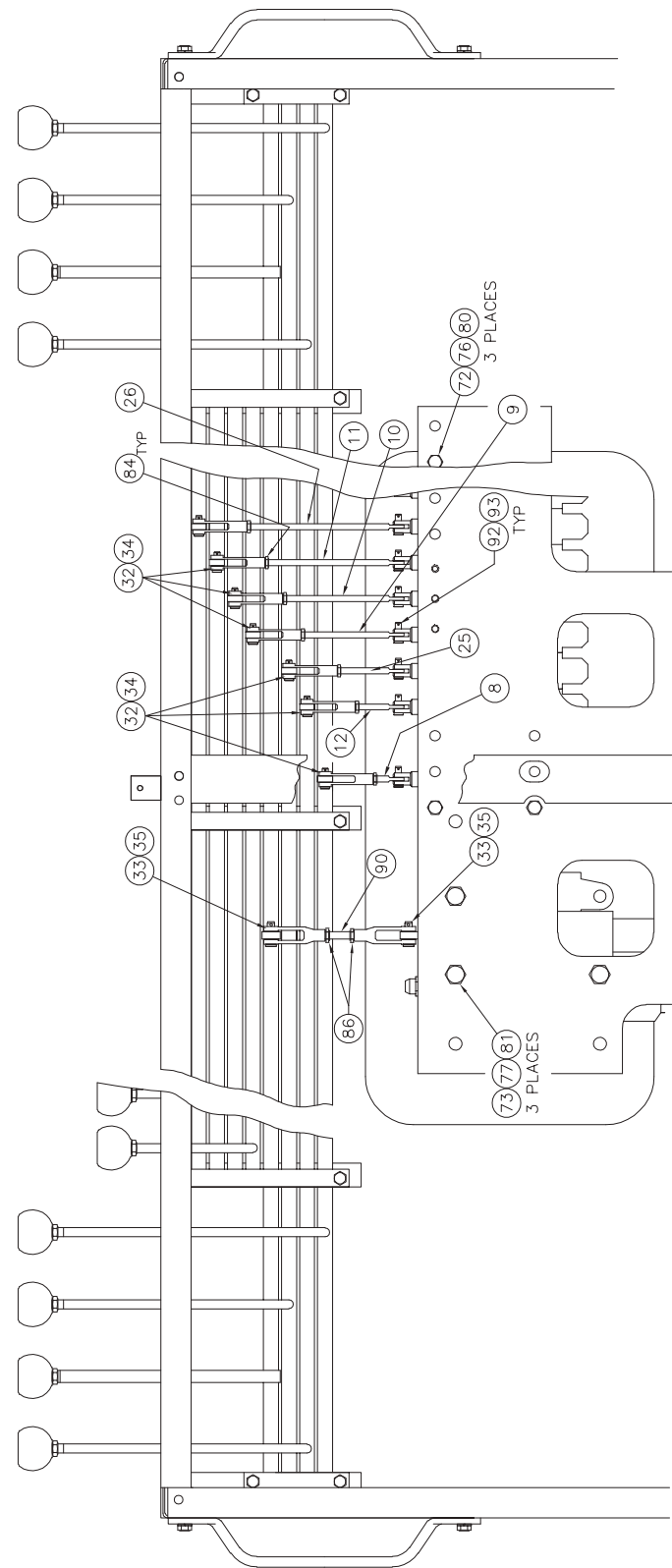
DOCUMENT CONTROL STATUS:
 DRAWING CONTROLLED
 HARD COPY UNCONTROLLED

SCALE	CHECKED	APPROV./DATE
1/4" = 1"	ED	B. MORAVEC 04-03
CONTROL CONSOLE ASSEMBLY		
TOLERANCES (UNLESS SPECIFIED)		6000521-015
±.1 / .16		SHEET 2 OF 3



SECTION "B - B"
 SCALE: 1.33X

SEE NOTE 3
 (71) (83) (99)



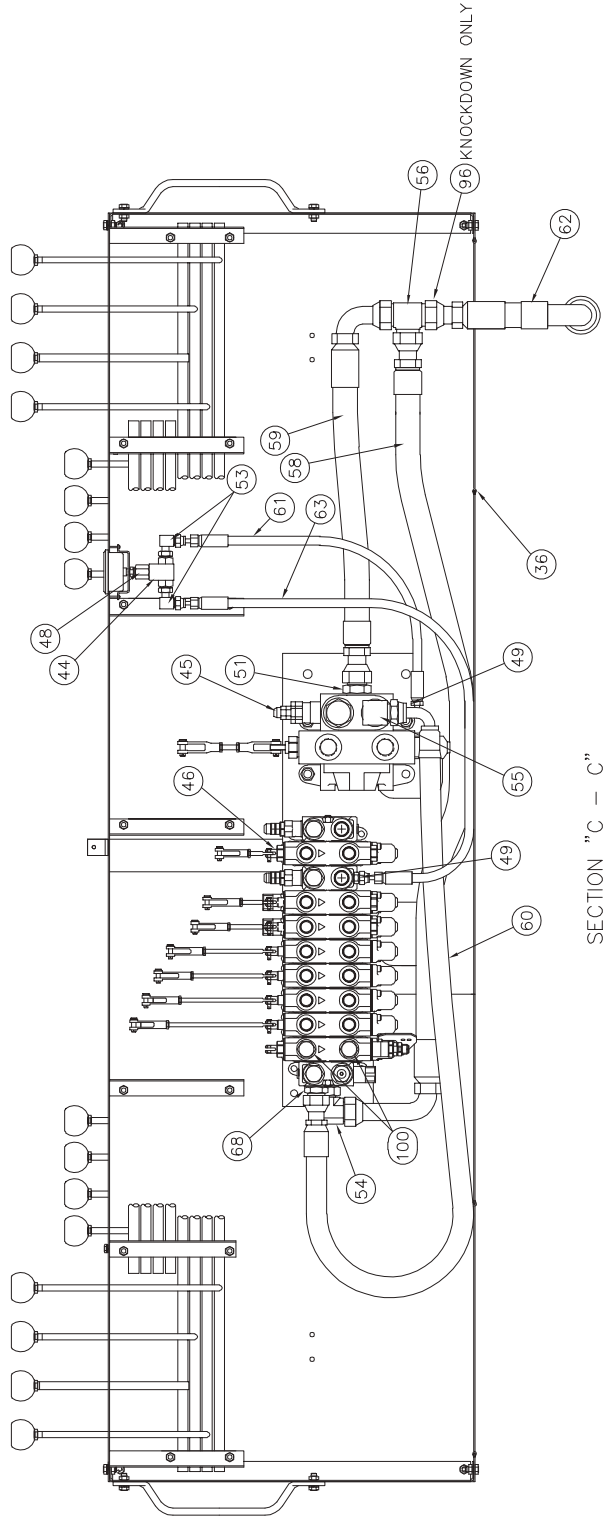
SECTION "A - A"
 SCALE: 1.5X

REVISIONS
 EN 02-0018-11
 EO 04-03
 NEW RELEASE

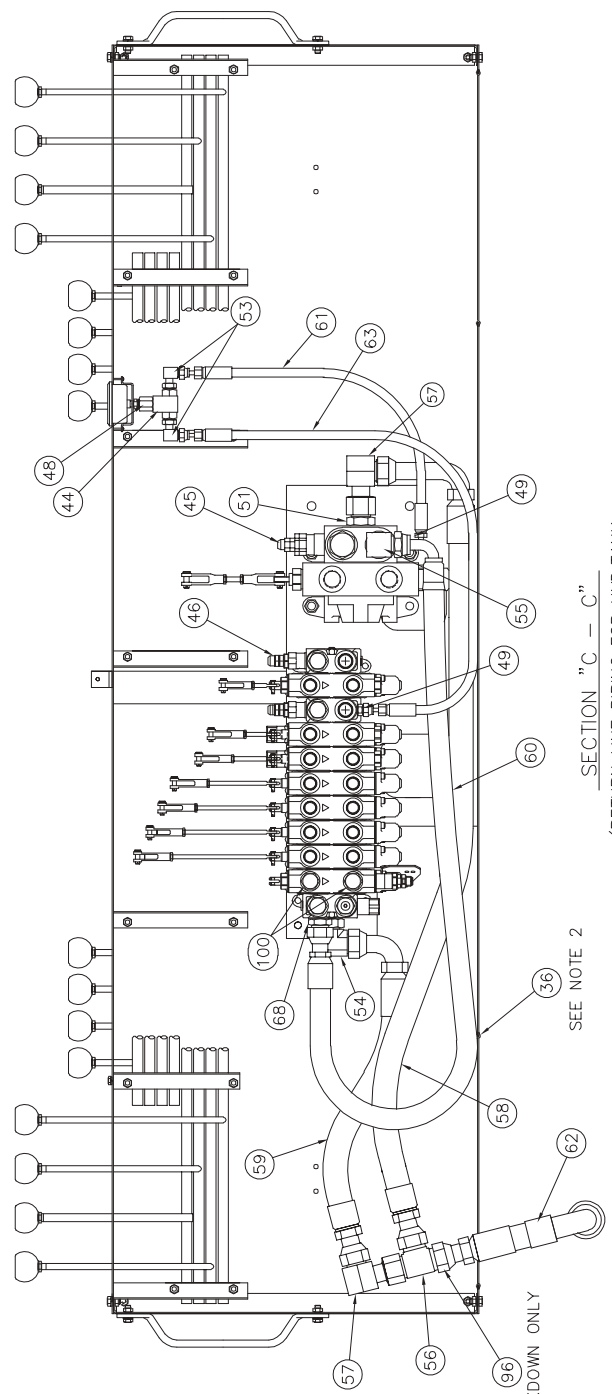
DOCUMENT CONTROL STATUS:
 MANUFACTURED
 HYDROCOPY - UNCONTROLLED



SCALE	DRAWN	CHECKED	APPROV./DATE
1/4"=1"	DM	EO	J.MORAVEC 04-03
CONTROL CONSOLE ASSEMBLY			
TOLERANCES (UNLESS SPECIFIED)			
±1/16"		3 OF 3	
6000521-015		SHEET	



SECTION "C - C"
 (RETURN LINE PIPING FOR HYD. TANK MOUNTED ON DRIVER SIDE OF TRUCK)



SECTION "C - C"
 (RETURN LINE PIPING FOR HYD. TANK MOUNTED ON PASSENGER SIDE OF TRUCK)

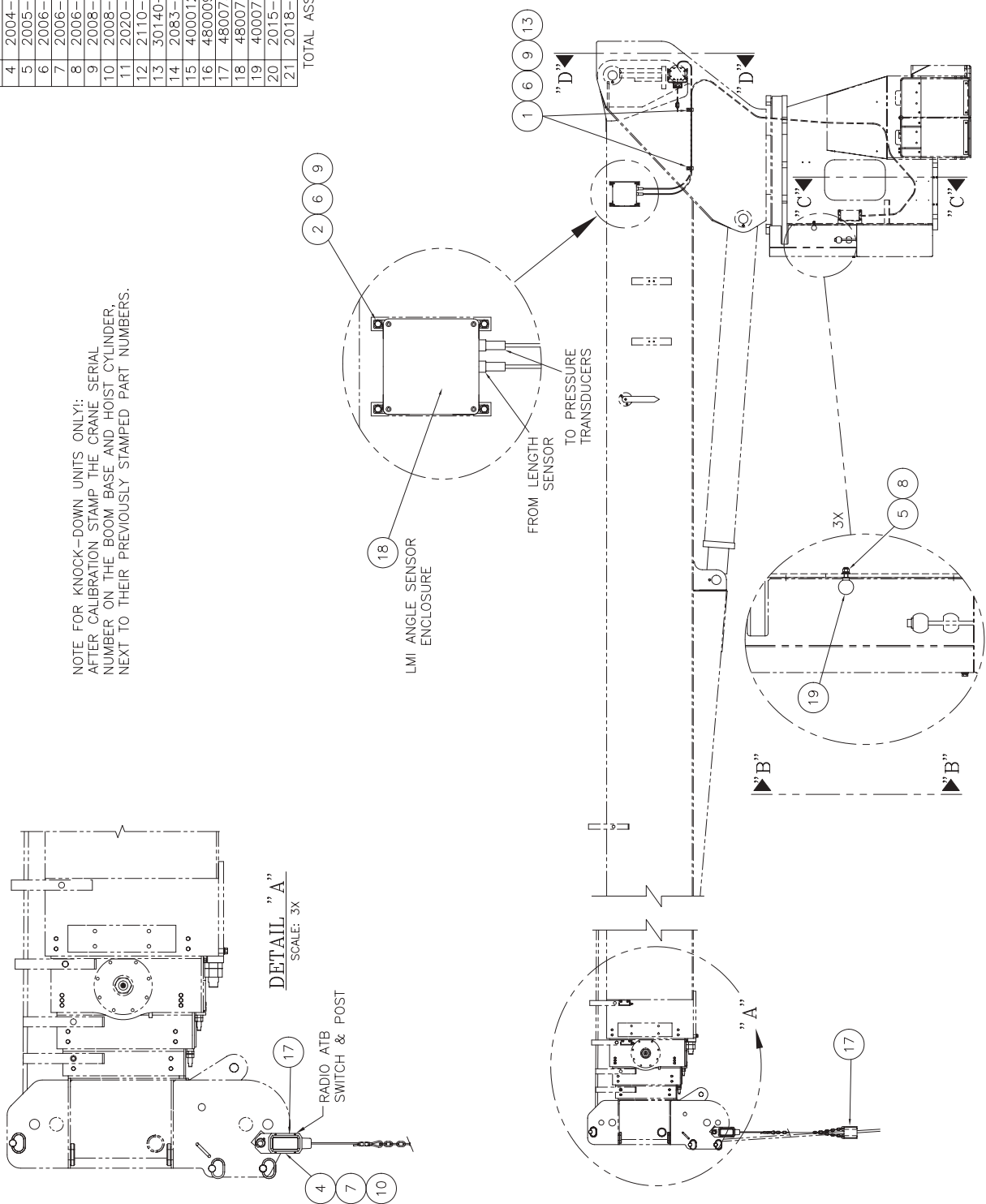
SEE NOTE 2

BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	REVISIONS
1	2004-041006	2	BOLT, HEX .25 X .38	0.01	EN 02-0017-24
2	2004-041012	4	BOLT, HEX .25 X .75	0.01	EO 03-03
3	2004-041016	2	BOLT, HEX .25 X 1.0	0.01	EN 02-0017-25
4	2004-051012	4	BOLT, HEX .31 X .75	0.03	EO 03-03
5	2005-061000	2	NUT, HEX .38	0.01	A1 ADDED ITEMS 20 & 21
6	2006-040000	8	WASHER, LOCK .25	0.01	A2 ADDED 124 FT BOOM DETAILS
7	2006-050000	4	WASHER, LOCK .31	0.01	EN 02-0018-11
8	2006-060000	2	WASHER, LOCK .38	0.01	EO 04-03
9	2008-040000	8	WASHER, FLAT .25	0.01	B ADDED 102 FT BOOM DETAILS ON
10	2008-050000	2	WASHER, FLAT .31	0.01	SHT 3
11	2020-080000	4	WASHER, LOCK #8	0.01	EN 02-0018-14
12	2110-081012	4	SCREW, #8 X .75	0.01	EO 05-03
13	30140-08-00	2	CLAMP, HOSE	0.05	C ITEM 16 WAS 4800092-008
14	2083-190400	3	TIE WRAP	0.01	
15	4000121-203	1	CHAIN LINK	0.20	
16	4800092-024	6	LOOM, CONVOLUTED	0.01	
17	4800752-001	1	RATB SYSTEM	-	
18	4800761-001	1	DS85 LMI SYSTEM	-	
19	4000779-001	2	BALL MOUNT	0.20	
20	2015-033032	1	EYE BOLT	0.10	
21	2018-101000	1	NUT, HEX #10-24	0.02	

TOTAL ASSEMBLY WEIGHT: --- LBS.

NOTE FOR KNOCK-DOWN UNITS ONLY:
AFTER CALIBRATION STAMP THE CRANE SERIAL NUMBER ON THE BOOM BASE AND HOIST CYLINDER NEXT TO THEIR PREVIOUSLY STAMPED PART NUMBERS.



DOCUMENT CONTROL STATUS: UNCONTROLLED
HARDCOPY IS UNCONTROLLED

Mantex

SCALE	DRAWN	CHECKED	APPROV./DATE
1"=16"	EO	DM	03-03

DS85
ATB/LMI INSTALLATION

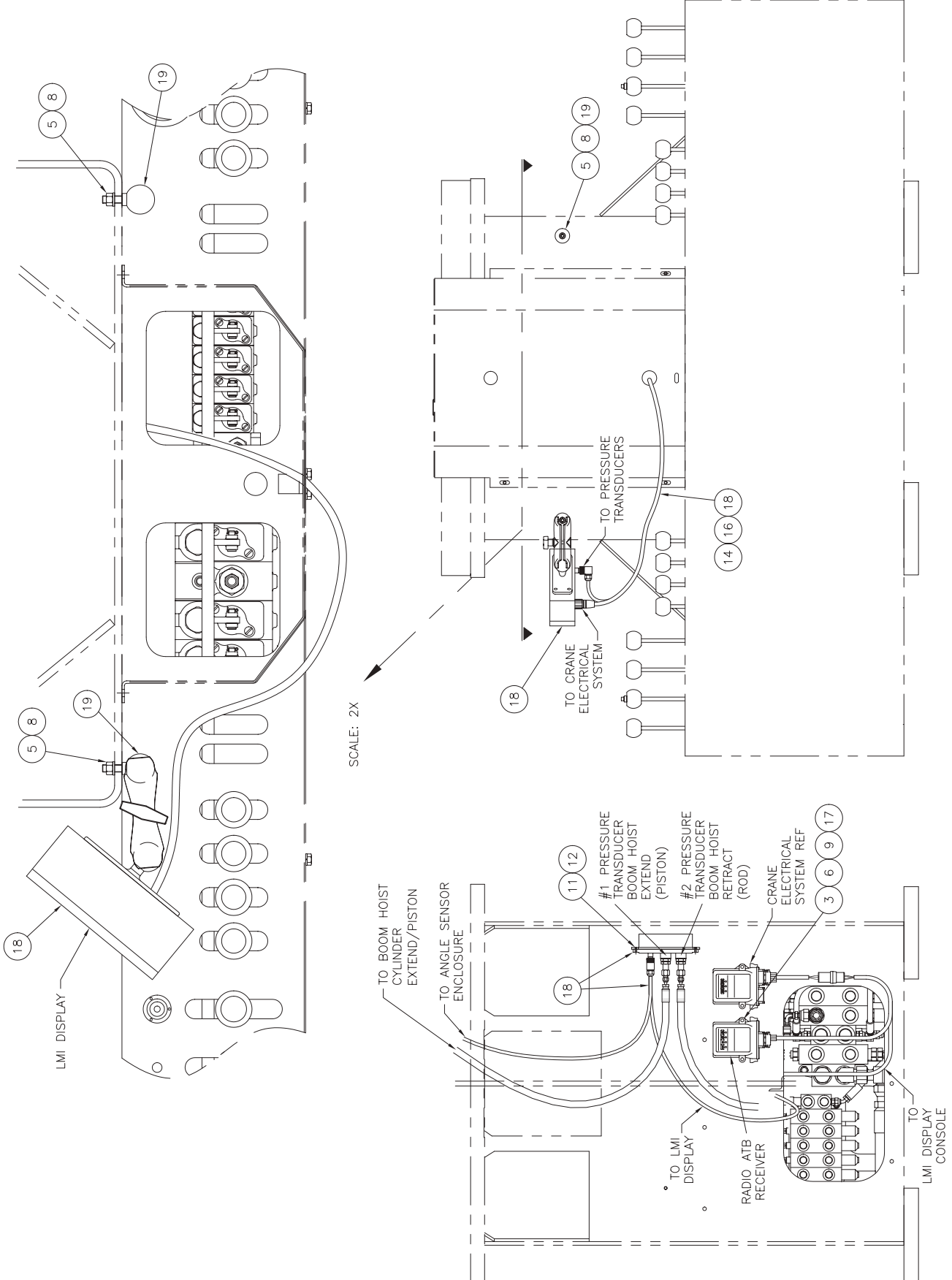
TOLERANCES
(UNLESS SPECIFIED)
11/16"

6000872-001
SHEET 1 OF 3

REVISIONS	
EN 02-0017-24	
EO 03-03	NEW RELEASE
EN 02-0017-25	
EO 03-03	
A	SEE SHT 1
EN 02-0018-11	
EO 04-03	
B	ADDED 102 FT BOOM DETAILS ON SHT 3
EN 02-0018-14	
EO 05-03	
C	SEE SHT 1

DOCUMENT CONTROL STATUS: UNCONTROLLED
 HARD COPY = UNCONTROLLED

Mantec	
SCALE	1"=5"
DRAWN	EO
CHECKED	EO
APPROV./DATE	DM 03-03
DS85	
ATB/LMI INSTALLATION	
TOLERANCES (UNLESS SPECIFIED)	±.1/16"
6000872-001	
SHEET	2 OF 3



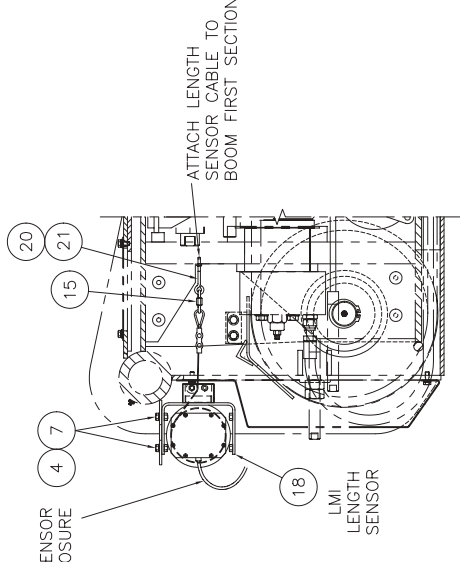
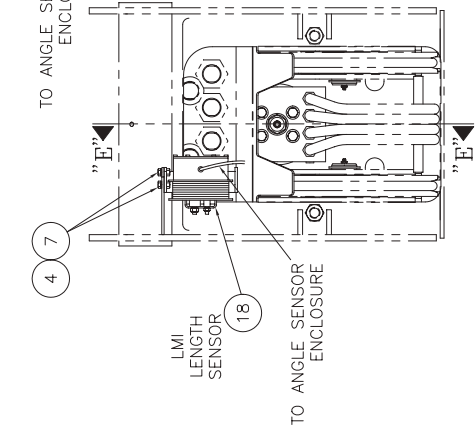
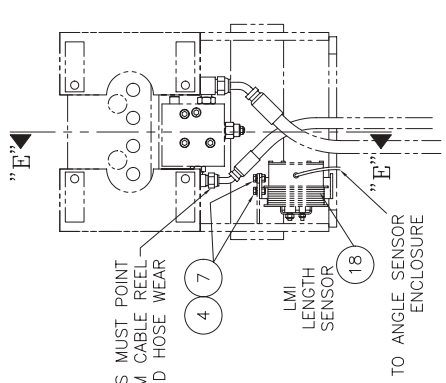
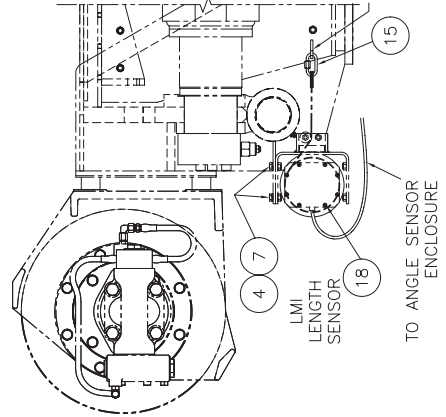
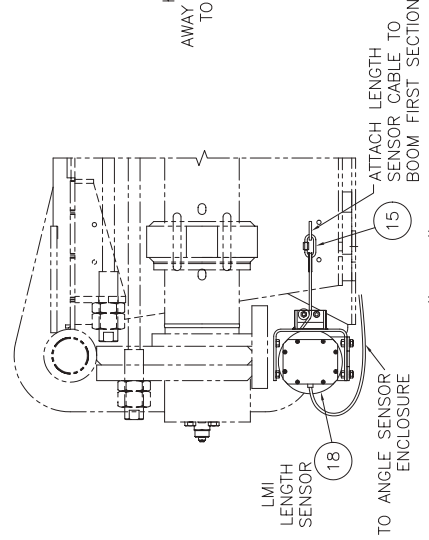
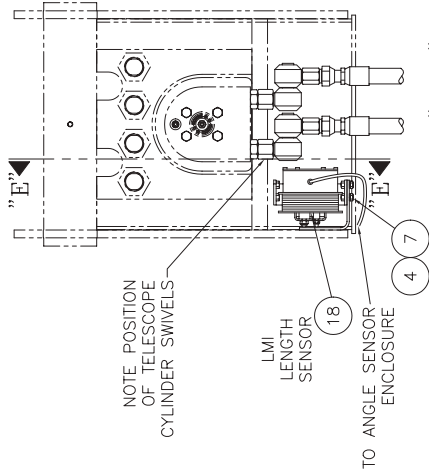
SCALE: 2X

VIEW "B-B"

SECTION "C-C"

REVISIONS	
EN 02-0017-24	
EO 03-03	
NEW RELEASE	
EN 02-0017-25	
EO 03-03	
A) SEE SHT 1	
EN 02-0018-11	
EO 04-03	
B) ADDED 102 FT. BOOM DETAILS ON SHT 3	
EN 02-0018-14	
EO 05-03	
C) SEE SHT 1	

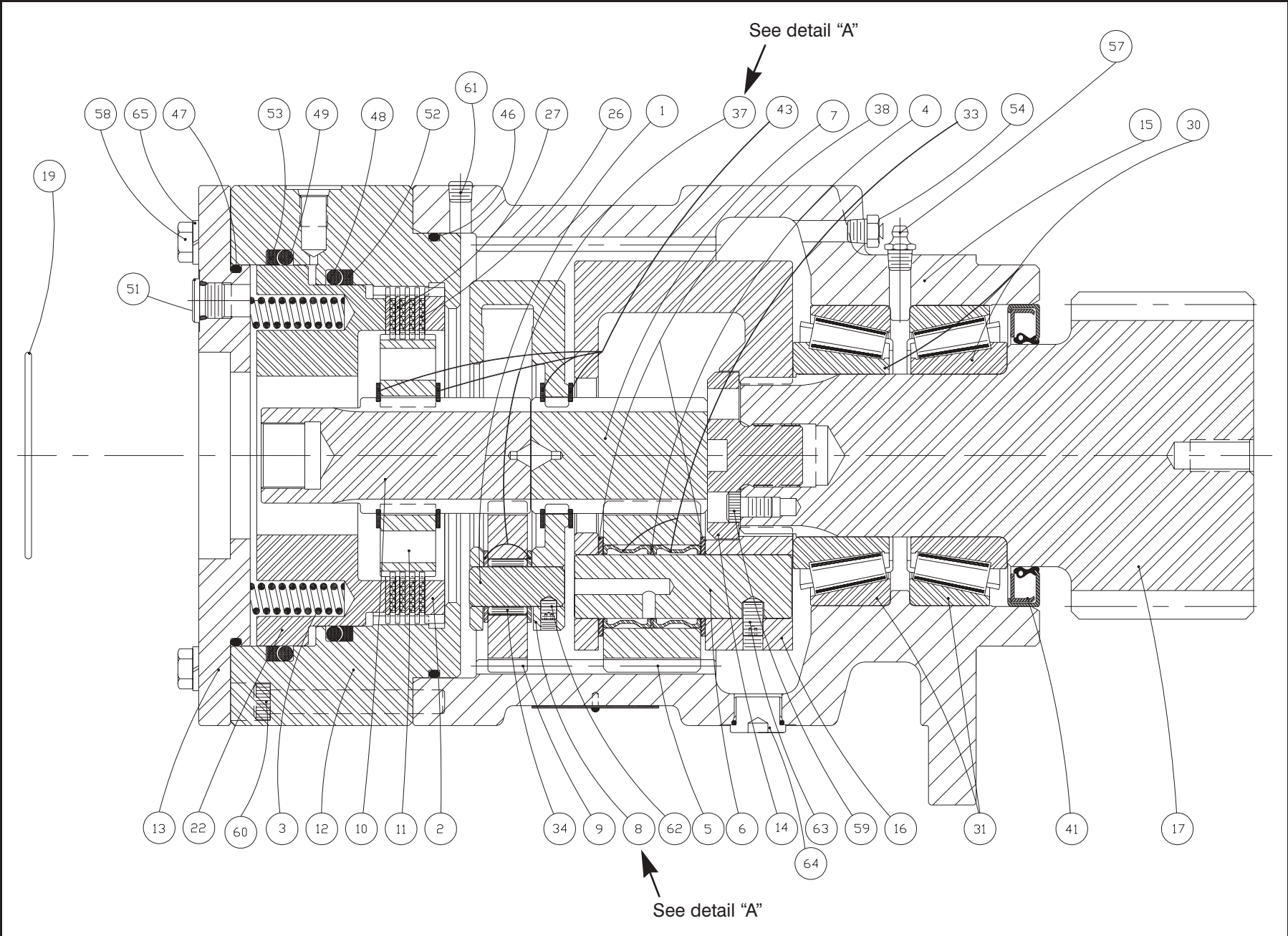
DOCUMENT CONTROL STATUS: UNCONTROLLED HARCOPY = UNCONTROLLED			
Mantex			
SCALE	DRAWN	CHECKED	APPROV./DATE
1"=16"	EO	EO	DM 04-03
DS85 ATB/LMI INSTALLATION			
TOLERANCES (UNLESS SPECIFIED)			6000872-001
11/16"			SHEET 3 OF 3



SECTION "E-E"
124 FT BOOM
SCALE: 3X [A2]

VIEW "D-D"
124 FT BOOM
SCALE: 3X [A2]

NOTE:
ITEMS 20 AND 21 ARE USED ONLY ON 124 FT BOOMS.



Gear Reducer Sub-Assy

Gear Reducer Sub-Assy

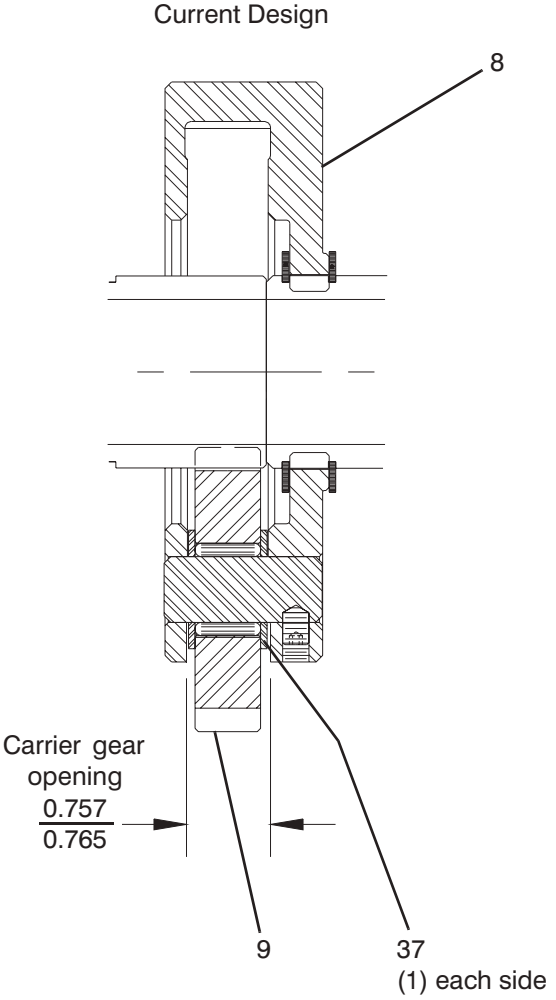
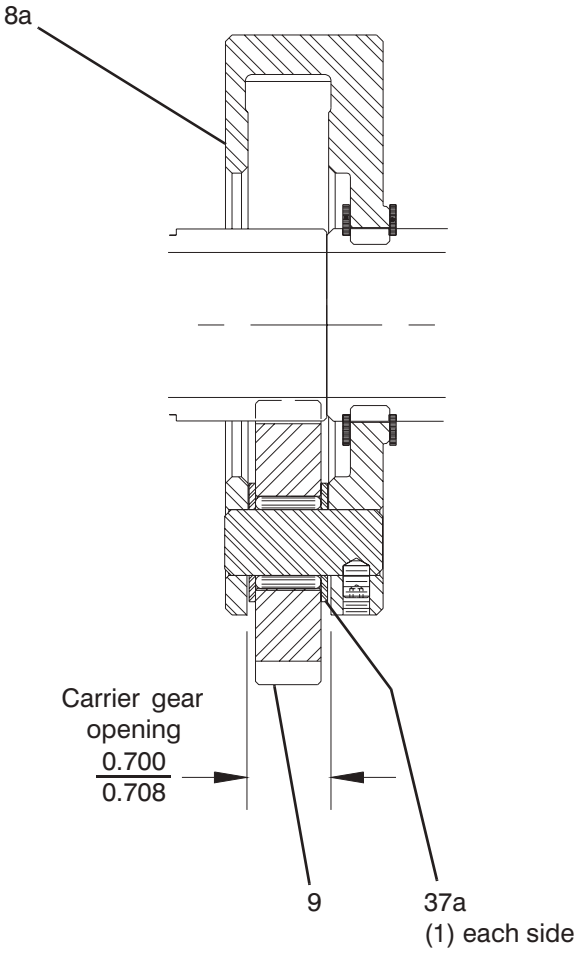
Manitex

4000049-003 (H)

Page 2 of 4

DETAIL "A"

Carrier, Primary Planet



Manitex

Gear Reducer Sub-Assy 4000049-003 (H)

ITEM	PART #	QTY	DESCRIPTION
			Boxes built after March 2001 (see note 1)
	4000049-503 *		Kit, Seal (includes item 19)
	4000049-501 **		Kit, Brake and Seal (includes 4000049-503)
1	6600983	3	Shaft, Planet
2	6601038	1	Plate, Back-up
3	**	12	Spring
4	6601040	3	Spacer
5	6601041	3	Gear, Planet
6	6601042	3	Shaft, Planet Gear
7	6601043	1	Gear, Output Sun
8	6601044	1	Carrier, Primary Planet
8a	6601084	1	Carrier, Primary Planet (see detail A)
9	6601045	3	Gear, Planet
10	6601046	1	Gear, Input
11	6601034	1	Driver, Brake
12	6601047	1	Cylinder, Brake
13	6601048	1	Cover
14	6601049	1	Special Bolt
15	6601050	1	Housing, Base, Rect
16	6601051	1	Carrier, Planet
17	6601052	1	Pinion, Output
19	30201-00152	1	Gasket, Motor
22	**	1	Piston, Brake
26	**	4	Disc, Reaction
27	**	4	Disc, Brake
30	6601056	2	Cone, Bearing
31	6601057	2	Cup, Bearing
33	6601058	6	Roller, Bearing
34	6600990	54	Roller, Bearing
37	6600991	6	Washer, Thrust
37a	6601083	6	Washer, Thrust (see detail A)
38	6601059	6	Washer, Thrust
41	*	1	Seal

Gear Reducer Sub-Assy

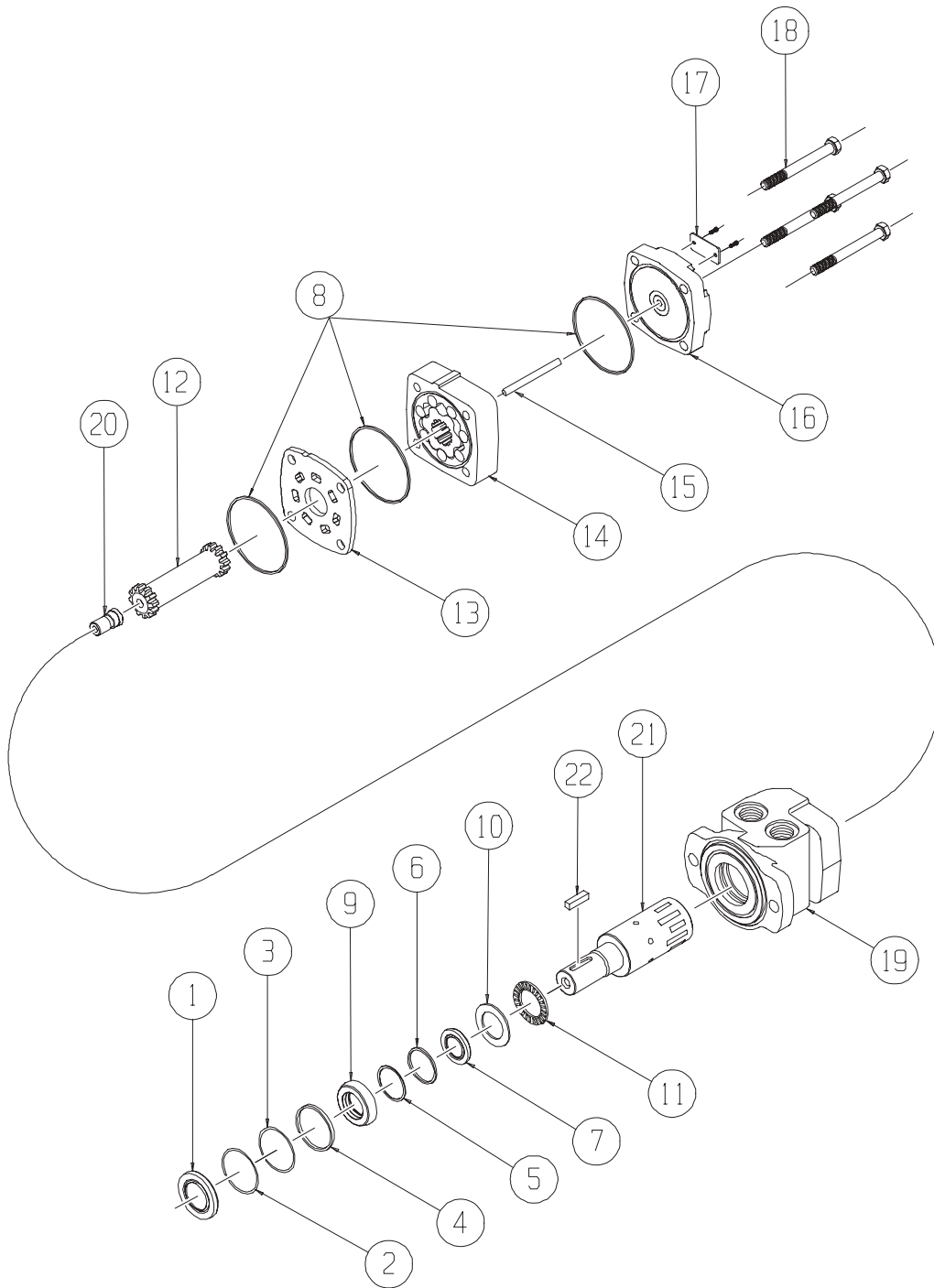
Manitex

Gear Reducer Sub-Assy 4000049-003 (H)

ITEM	PART #	QTY	DESCRIPTION
43	6601061	4	Snap Ring
46	*	1	O-Ring
47	*	1	O-Ring
48	*	1	O-Ring
49	*	1	O-Ring
51		1	Plug, #6 SAE Socket Hd
52	*	1	Back-up Ring
53	*	1	Back-up Ring
54	4000039-203	1	Vent Plug
57	4000039-010	1	Grease Zerk
58	2004-061064	6	Hex Capscrew 3/8 NC X 4 Lg Gr 5
59	6601036	1	Socket Hd Capscrew 5/16 NF X 1/2 Lg
60	6601037	2	Socket Hd Capscrew 3/8 NC X 2.75 Lg
61		1	Plug, 1/8 Pipe Hex Socket Steel
62	2031-041006	3	Setscrew, Socket Cup 1/4 NC X 3/8
63	2031-051010	3	Setscrew, Socket Cup 5/16 NC X 5/8
64		2	Plug, #8 SAE Socket Hd
65	2006-060000	6	Lockwasher, 3/8 Dia
			<p>NOTE:</p> <p>1. This sub-assembly is not available without motor and eccentric ring. To reorder the complete assembly use p/n 6000164-003.</p>

Gear Reducer Sub-Assy

4000049-003 (H)



Manitex

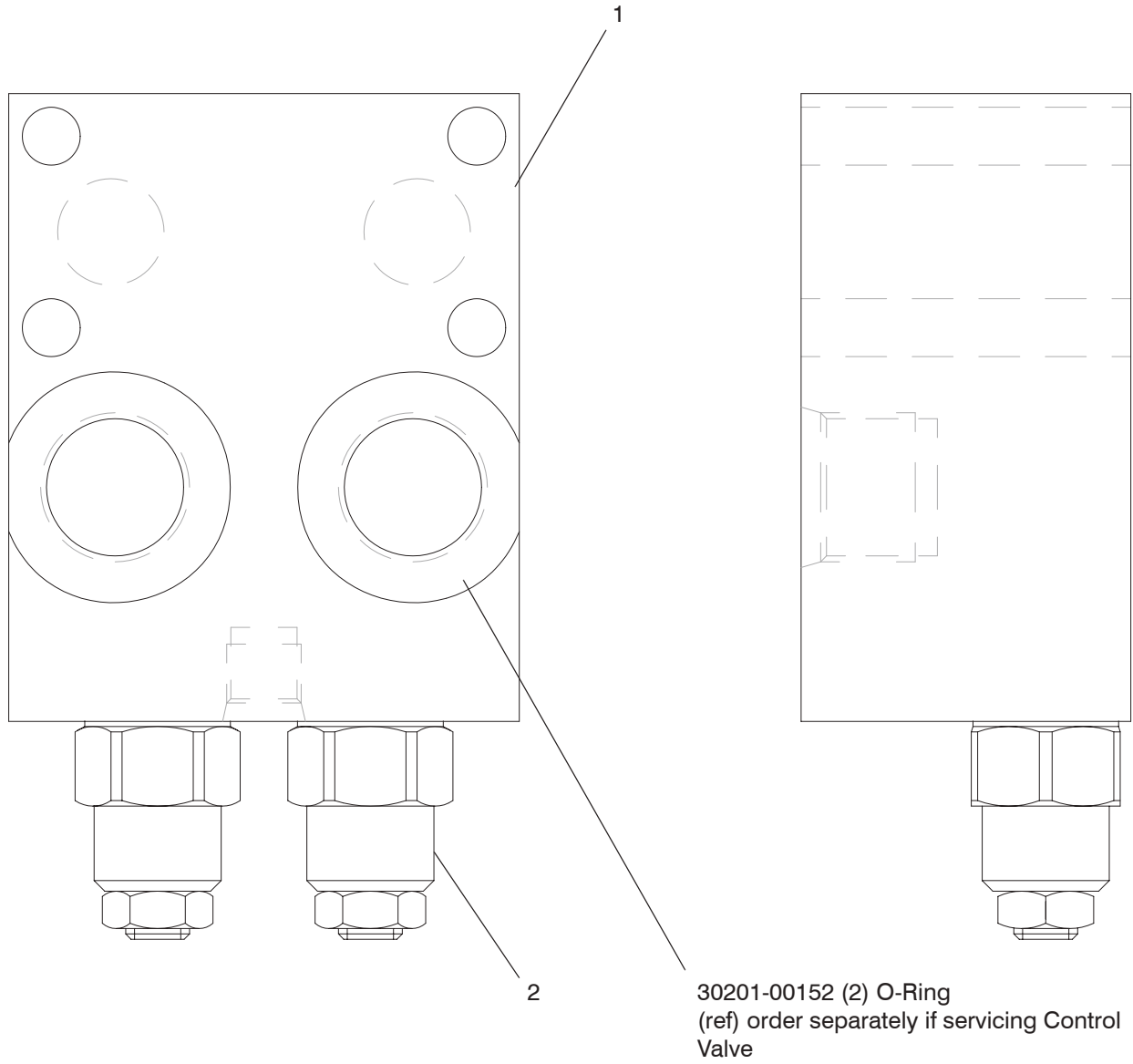
Hydraulic Motor Swing 400072-003 (E)

ITEM	PART #	QTY	DESCRIPTION
	400072-501 *		SEAL KIT, Motor (Tag dated before 090-8)
	400072-503 *		SEAL KIT, Motor (Tag dated after 091-8)
1	*	1	SEAL, Dust
2	*	1	RING, Split Wire
3	*	1	BACK-UP, Metal Shim
4	*	1	SEAL, High Pressure
5	*	1	BACK-UP, Metal Shim
6	*	1	BACK-UP, Teflon Shim
7	*	1	SEAL, Shaft
8	*	3	SEAL, Body
9		1	SEAL CARRIER
10		1	THRUST WASHER
11		1	THRUST BEARING
12		1	DRIVE LINK
13		1	WEAR PLATE
14		1	ROTOR ASSEMBLY
15		1	DRIVE LINK PIN
16		1	END COVER
17		1	TAG
18		4	BOLT
19		1	HOUSING
20		1	COOLING PLUG
21		1	SHAFT
22		1	SHAFT KEY
	400072-502		SEAL KIT, Manifold not shown

Hydraulic Motor Swing

400072-003 (E)

4900089-001 (A)



Motor Control Valve Swing

Manitex

Motor Control Valve Swing 4900089-001 (A)

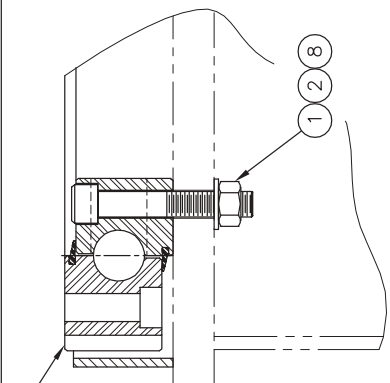
ITEM	PART #	QTY	DESCRIPTION
1	4900089-501	1	Valve Body
2	4900113-007	2	Counterbalance Valve

Motor Control Valve Swing

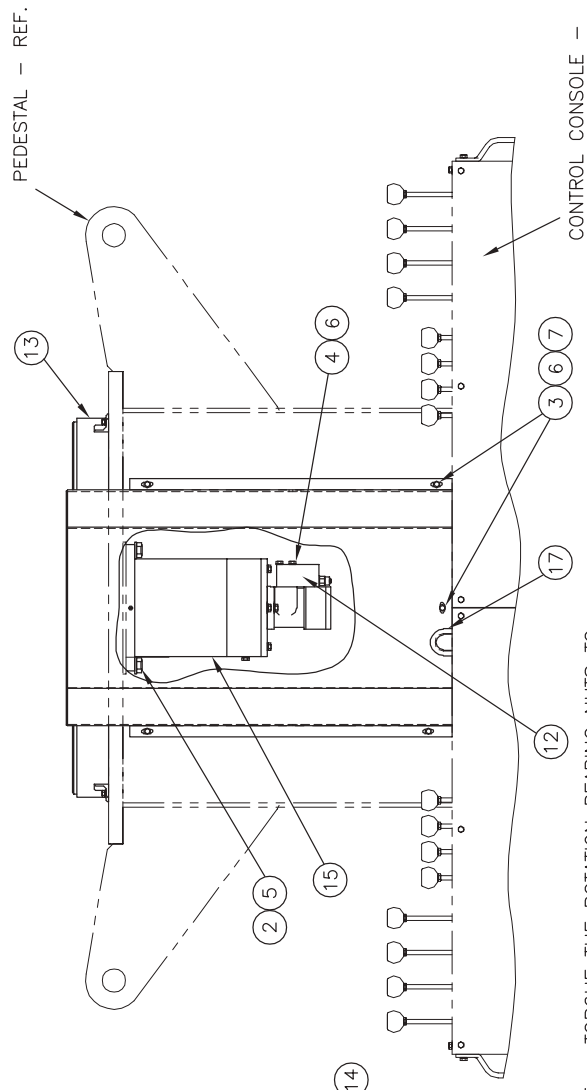
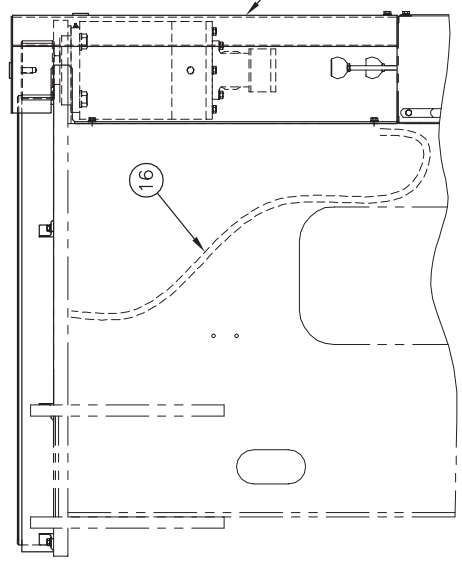
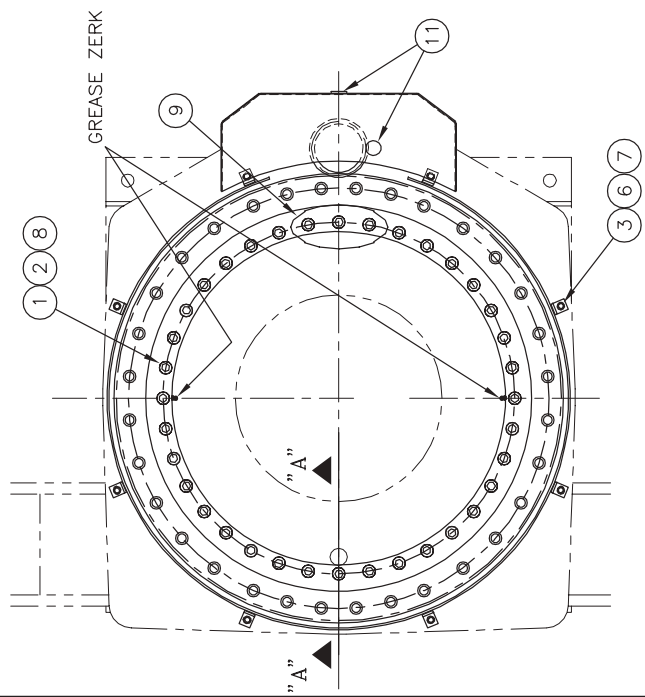
4900089-001 (A)

BILL OF MATERIAL				REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	
1	2002-121000	33	NUT, HEX 0.75	0.07	EN 02-0018-15
2	2003-120000	37	FLATWASHER, 0.75	0.03	EO 04-03
3	2004-051014	13	BOLT HEX .312	0.02	NEW RELEASE
4	2004-051040	4	BOLT HEX .312	0.06	
5	2001-121036	4	BOLT HEX .750	0.35	
6	2006-050000	17	LOCKWASHER .312	0.01	
7	2008-050000	13	FLATWASHER .312	0.01	
8	2022-121072	33	BOLT, SCKTHD 0.75	0.44	
9	2022-121064	3	BOLT, SCKTHD 0.75	0.40	
10	4000050-006	1	ROTATION BEARING	378.0	
11	4000269-102	2	SNAP IN PLUG	0.01	
12	4900089-001	1	MOTOR VALVE	4.00	
13	5001967-001	1	SWING GUARD	17.90	
14	5000967-015	1	SWING COVER	29.44	
15	6000164-003	1	GEAR REDUCER ASSY	116.5	
16	6000608-001	1	CENTRAL LUBE SYST.	-	
17	4000168-200	0.4	TRIM, VINYL	0.01	

TOTAL INST. WEIGHT 567.21 LBS.



SECTION "A - A"
(NOT TO SCALE)



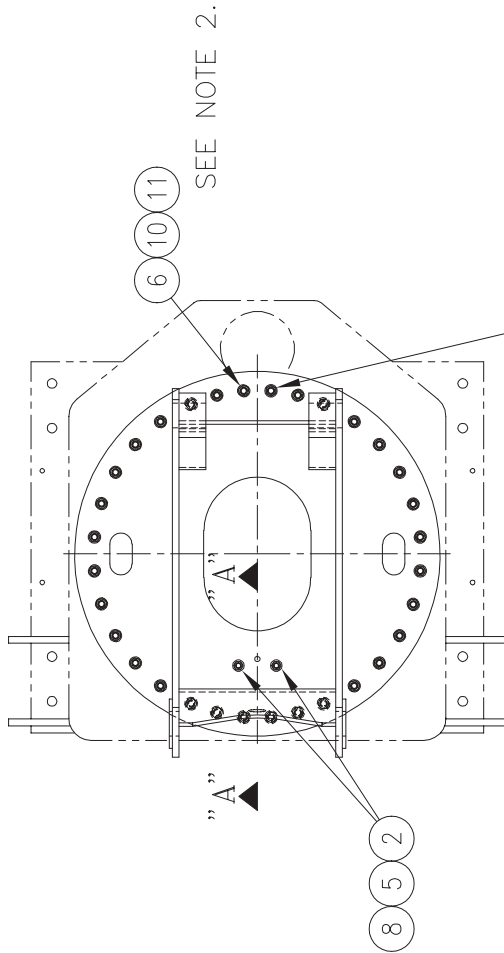
NOTES:

- 1 - POSITION THE ROTATION BEARING INNER RING LOCATING THE GREASE ZERKS DIRECTLY ABOVE THE PEDESTAL HOLES PROVIDED.
- 2 - INSTALL THE GEAR REDUCER WITH ECCENTRIC RING. DO NOT TIGHTEN HARDWARE. POSITION THE ECCENTRIC RING AT THE MIDDLE OF IT'S ADJUSTMENT.
- 3 - PUSH THE ROTATION BEARING TOWARD THE GEAR REDUCER SO THERE IS NO BACKLASH BETWEEN THE ROTATION BEARING GEAR AND THE GEAR REDUCER PINION.
- 4 - REMOVE GEAR REDUCER.
- 5 - TORQUE THE ROTATION BEARING NUTS TO 100 FT-LBS THEN RETORQUE TO 250 FT. LBS.
- 6 - REINSTALL THE GEAR REDUCER. DO NOT TIGHTEN THE MOUNTING BOLTS.
- 7 - ROTATE THE OUTER RING SO THE HIGH SPOT OF THE ROTATION BEARING GEAR (MARKED WITH PAINT) IS IN MESH WITH THE GEAR REDUCER PINION.
- 8 - ROTATE THE ECCENTRIC RING UNTIL THERE IS NO BACKLASH BETWEEN THE ROTATION BEARING GEAR AND THE GEAR REDUCER PINION.
- 9 - TORQUE THE GEAR REDUCER MOUNTING BOLTS TO 280 FT-LBS.

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARD COPY = UNCONTROLLED



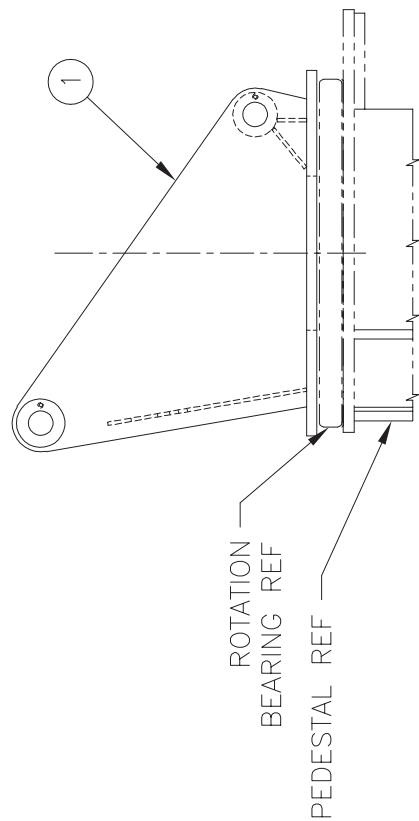
SCALE	DRAWN	CHECKED	APPROV./DATE
NTS	EO	EO	DM 04-03
SLEWING RING INSTALLATION MODEL 3001			
TOLERANCES (UNLESS SPECIFIED)	6000084-018		
SHEET	1	OF	1



HIGH SPOT OF GEAR (MARK WITH PAINT) SHOULD BE POSITIONED AS CLOSE TO THIS BOLT AS POSSIBLE.

NOTES:

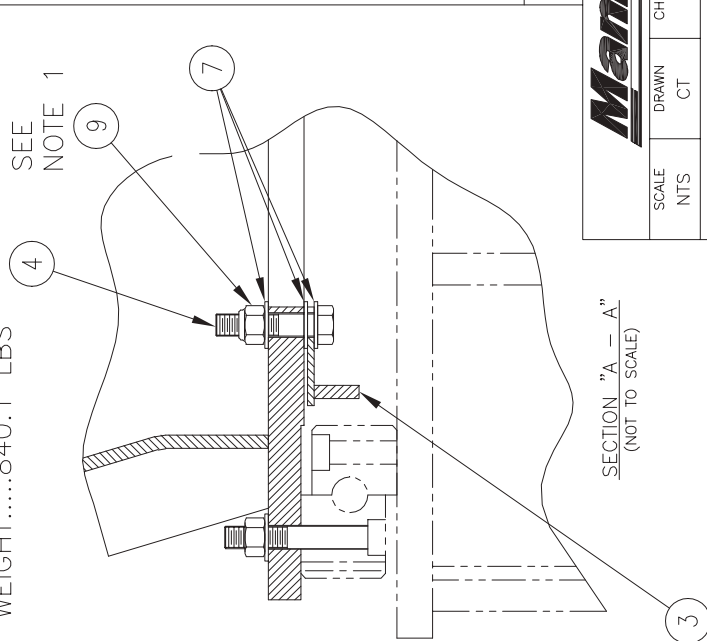
- DO NOT TIGHTEN ITEM 3 MUST BE FREE TO PIVOT.
- TORQUE ALL ROTATION BEARING BOLTS, LUBRICATED, TO 100 FT/LBS. RE-TORQUE ALL ROTATION BEARING BOLTS TO 250 FT/LBS.



TOTAL ASS'Y WEIGHT.....840.1 LBS

TOTAL WEIGHT:.....856.0

SEE NOTE 1



BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	5002749-002	1	TURRET	838.7
2	2005-101000	2	NUT, 0.63 DIA GR5	0.07
3	5000430-001	1	PIVOT ARM	0.17
4	2004-101048	1	BOLT, 0.63 GR 5	0.31
5	2022-101032	2	SOCKET HEAD SCREW	0.23
6	2022-121072	32	SOCKET HEAD SCREW	0.40
7	2003-100000	3	HARDENED WASHER	0.03
8	2006-100000	2	LOCKWASHER	0.03
9	2011-101000	1	LOCK NUT	0.07
10	2002-121000	32	HEX NUT GR8	0.07
11	2003-120000	32	HARDENED WASHER	0.03

TOTAL ASS'Y WEIGHT.....840.1 LBS

REVISIONS

EN 02-0005-05	CT 5/02	NEW RELEASE
EN 02-0012-06	NMR 12/02	ITEM 4 WAS
	A	2004-101044

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARDCOPY = UNCONTROLLED



SCALE	DRAWN	CHECKED	APPVD./DATE
NTS	CT	ET	EV 5/02

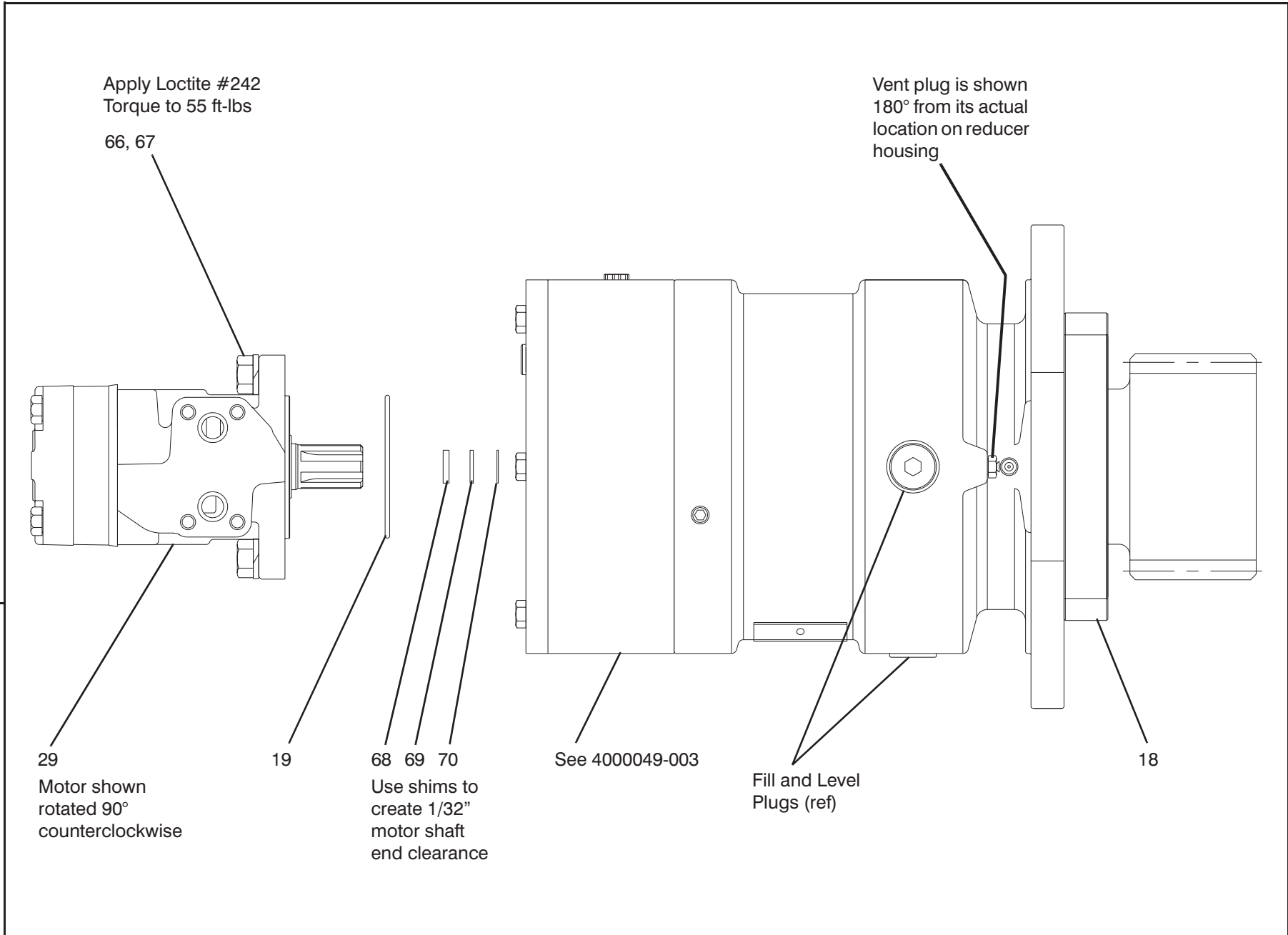
TURRET INSTALLATION
HYCAS

TOLERANCES (UNLESS SPECIFIED)	6000089-025
± 1 / 16"	SHEET 1 OF 1

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DECIMAL PLACES	TOLERANCE UNLESS OTHERWISE SPECIFIED	
	FABRICATION	MACHINING
(1) PLACE 0.0	± 0.120	± 0.030
(2) PLACE 0.00	± 0.060	± 0.015
(3) PLACE 0.000	± 0.030	± 0.005
ANGLES	± 1' - 30"	± 0' - 30"

TOLERANCE UNLESS OTHERWISE SPECIFIED
MACHINING 1) √ = MACHINING TOLERANCE APPLIES TO THIS DIMENSION
OTHER THAN INDICATED BY
ORIGINAL DECIMAL DIMENSION
EXAMPLE: ±.3125 = USE ONE
DECIMAL PLACE TOLERANCE.



Gear Reducer Assembly, Swing

Manitex

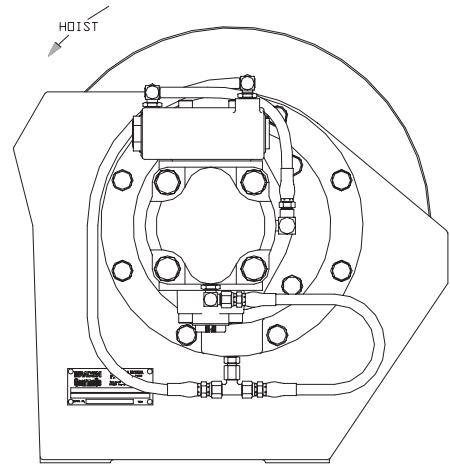
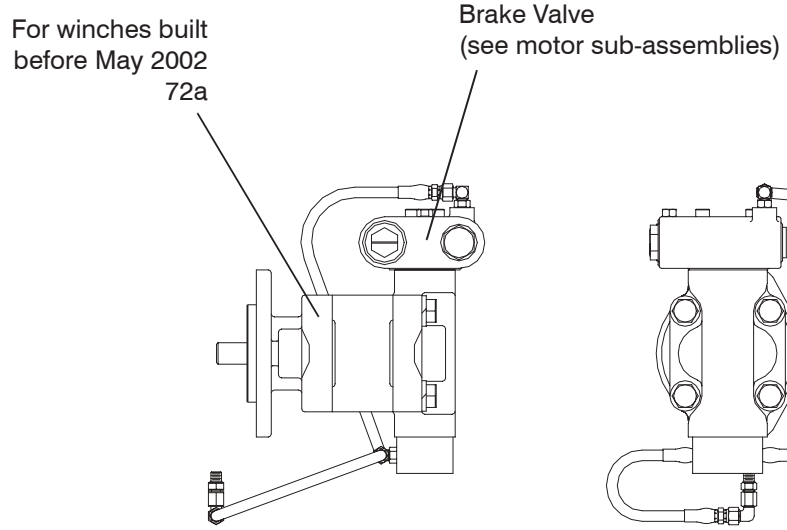
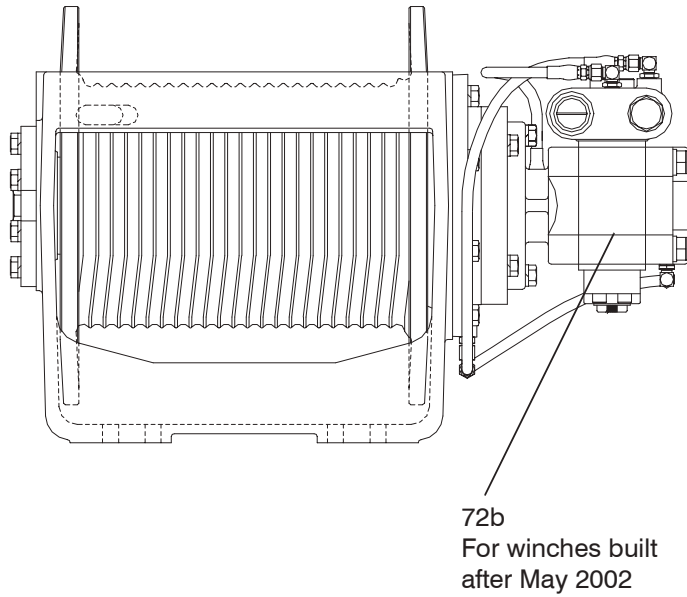
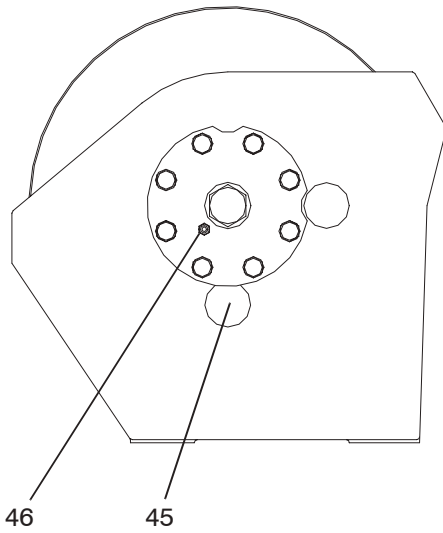
Gear Reducer Assembly, Swing 6000164-003 (E)

ITEM	PART #	QTY	DESCRIPTION
			Boxes built after March 2001
	4000049-003		Gear Reducer Sub-Assy (see note 1)
	4000049-503		Kit, Seals (see note 2)
	4000049-501		Kit, Brake & Seals (see note 2)
18	5000336-002	1	Ring, Eccentric
19	30201-00152	1	O-Ring, Motor (see note 3)
29	4000072-003	1	Motor
66	2006-080000	2	Lockwasher, 1/2 Dia
67	2004-081024	2	Hex Capscrew 1/2 NC X 1.5 Lg Gr 5
68	6601079	1	Shim (0.134)
69	6601080	1	Shim (0.074)
70	6601081	1	Shim (0.032)
			<p>NOTES:</p> <ol style="list-style-type: none"> 1. Gear reducer sub-assembly is no longer available as a separate item. See separate parts page for replacement parts. 2. Location of seal kit items are shown on parts page for gear reducer sub-assembly, see 4000049-003. 3. O-ring is also included in both seal kits above. <p>See also:</p> <p>4000049-003 4000072-003</p>

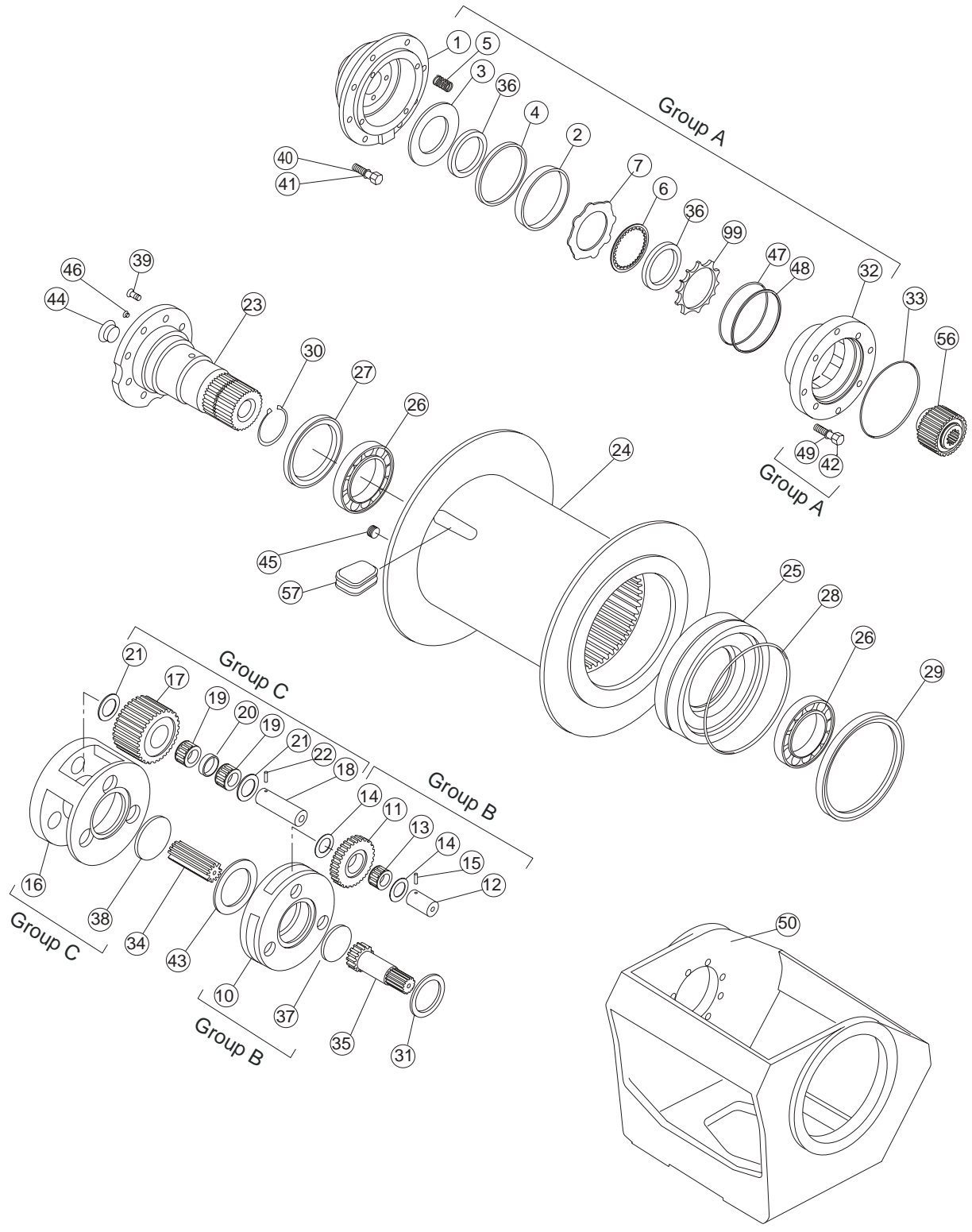
Gear Reducer Assembly, Swing

6000164-003 (E)

4000721-001 (B)



Winch Assembly



Manitex

Winch Assembly 4000721-001 (B)

ITEM	PART #	QTY	DESCRIPTION
	4000356-506		Winch Seal Kit (* indicates seal kit item)
	4000721-503		Brake Cylinder Assy - Group A (Incl. 1-7,32,36,42,47,48,49 & 99)
1	6601100	1	Brake Cylinder Housing
2	*	1	Seal
3	7009288	1	Pressure Plate
4	7009289	1	Back-up Ring
5	7009290	12	Spring
6	4000356-507-004	7	Friction Disc
7	4000356-519	8	Steel Disc
			Primary Planet Carrier Assy - Group B (Incl. 10-15 & 37)
10	7009417	1	Primary Planet Carrier
11	7009418	3	Primary Planet Gear
12	7009291	3	Primary Planet Gear Shaft
13	7002930	3	Roller Bearing
14	7009217	6	Thrust Washer
15	7002931	3	Spirol Pin
			Output Planet Carrier Assy - Group C (Incl, 16-22 & 38)
16	7009277	1	Output Planet Carrier
17	7009846	3	Output Planet Gear
18	7009292	3	Output Planet Gear Shaft
19	7009293	6	Roller Bearing
20	7009294	3	Bearing Spacer
21	7009295	6	Thrust Washer
22	4000721-511	3	Spirol Pin
23	7009297	1	Bearing Support
24	6601108	1	Cable Drum (grooved)
25	7009299	1	Cable Drum Closure
26	7002962	2	Ball Bearing
27	*	1	Oil Seal
28	*	1	O-Ring
29	*	1	Oil Seal
30	7009401	1	External Retaining Ring

Winch Assembly

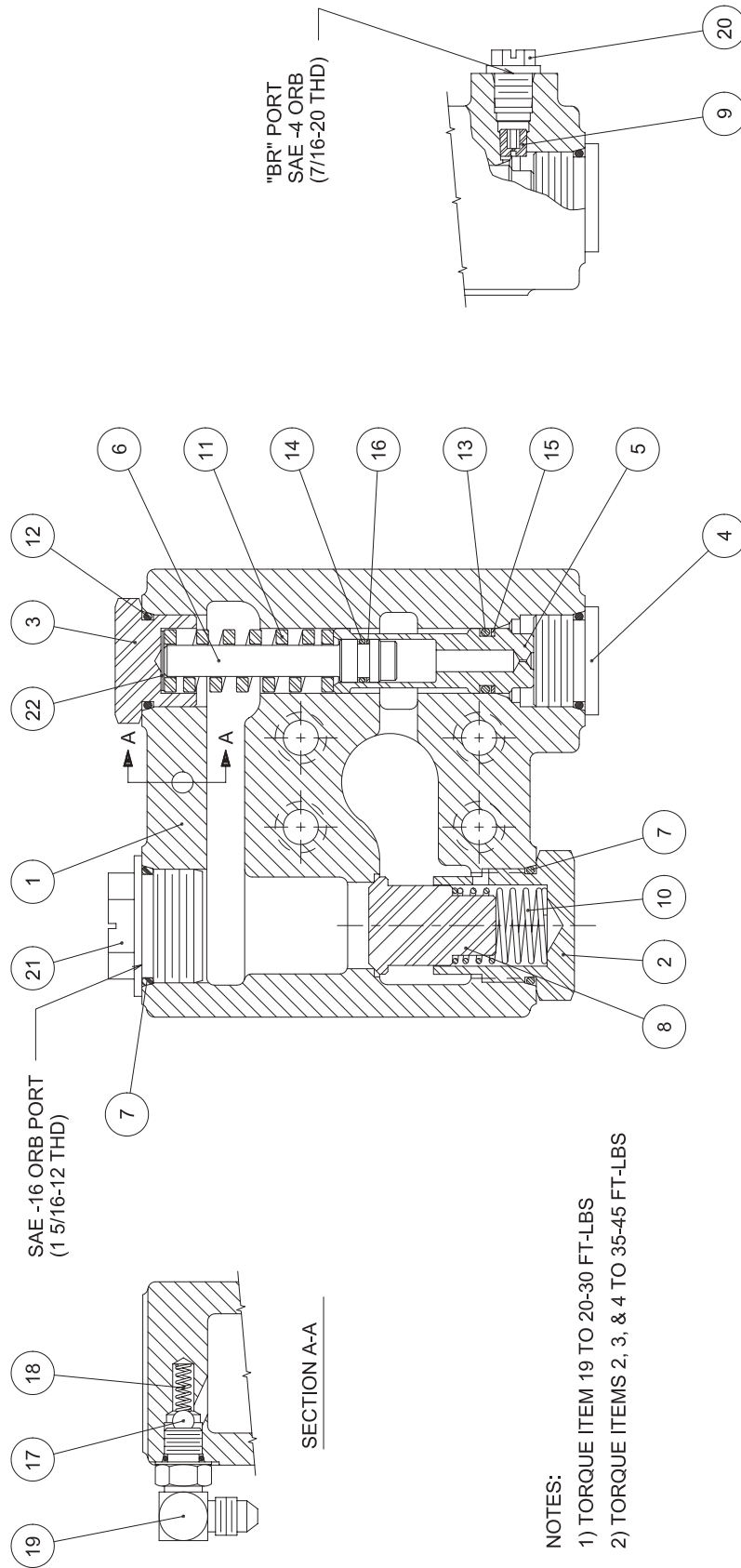
Manitex

Winch Assembly 4000721-001 (B)

ITEM	PART #	QTY	DESCRIPTION
31	4000721-521	1	Thrust Washer
32	6601091	1	Motor Support
33	7001238	1	O-Ring (included in winch seal kit)
34	7009280	1	Output Sun Gear
35	7009419	1	Primary Sun Gear
36	7009404	1	Spacer
37	7009405	1	Thrust Plate
38	7009406	1	Thrust Plate
40	2001-081024	18	Capscrew 0.50 NC X 1.50 lg Gr. 8
41	2006-080000	18	Lockwasher 0.50
42	2001-081032	4	Capscrew 0.50 NC X 2.00 lg Gr. 8
43	6601095	1	Thrust Washer
44	7009409	1	Plug, Hex Head W/O-Ring
45	7009235	1	Plug, O-Ring Flush
46	7001229	1	Vent Plug
47	*	1	O-Ring
48	*	1	Back-up Ring
49	2116-080000	4	Star Lockwasher 0.50
50	7009432	1	Base
56	7009438	1	Sprag Clutch Assembly
	NSS	1	Sprag Clutch
	NSS	1	Outer Brake Race
	NSS	1	Inner Brake Race
	7009845	2	Bronze Sprag Bearing
	7009271	2	Thrust Washer
	7009272	2	External Retaining Ring
	7002924	1	Internal Retaining Ring
57	6601104	1	Cable Wedge
72a	4000721-507	1	Motor Sub-Assy (Used up to May 2002)
72b	6601190	1	Motor Sub-Assy (Used as of May 2002)
99	4000721-516	1	Spring Spacer
	NSS -		Not Serviced Separately. If any of these items needs to be replaced, the entire Sprag Clutch must be replaced.
	*		These are seal kit items and are not available seperately.

Winch Assembly

4000721-001 (B)



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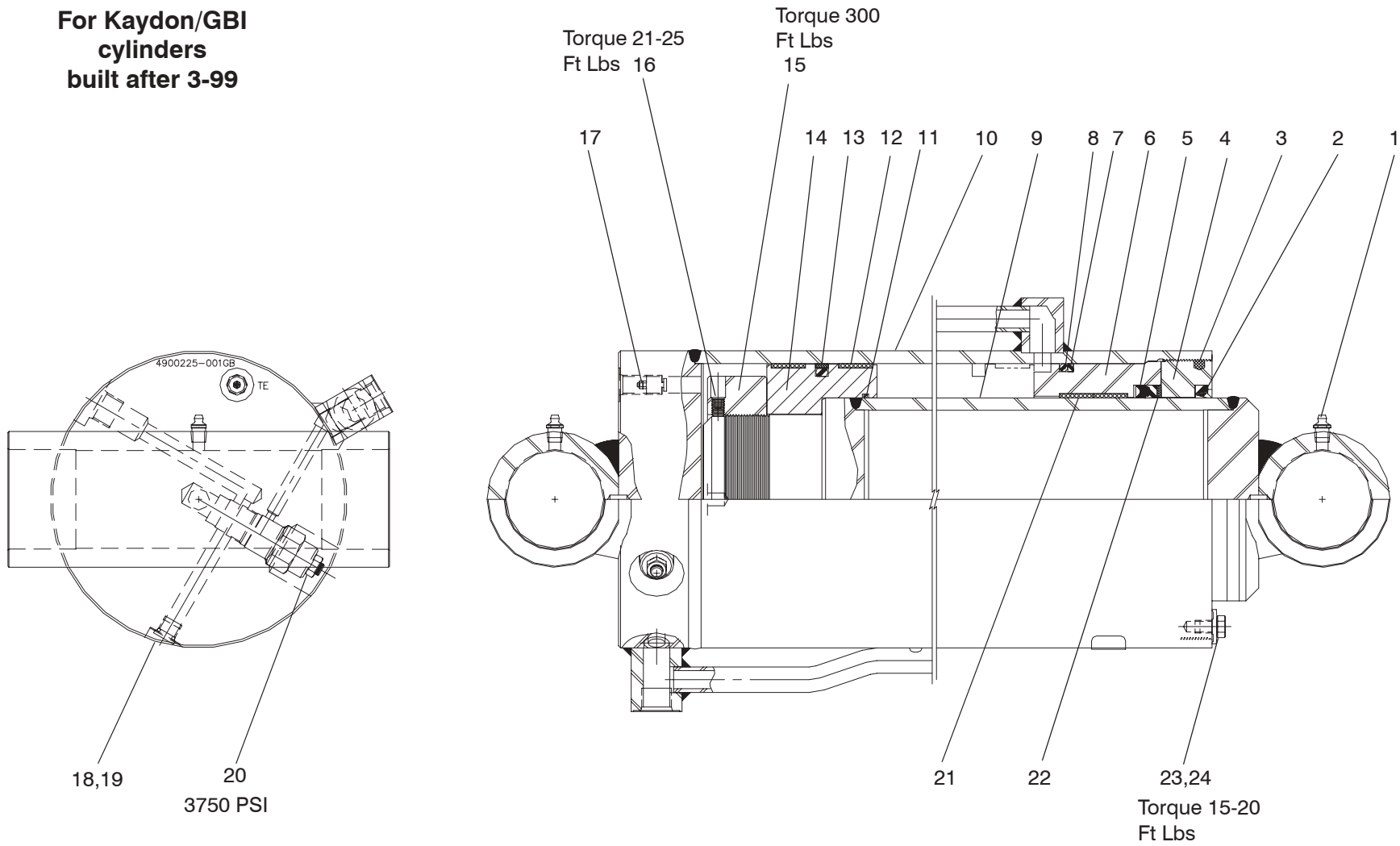
Brake Valve Assembly 4000721-500 (NR)

ITEM	PART #	QTY	DESCRIPTION
	4000721-506 *		Seal Kit
1	NSS	1	Housing
2	NSS	1	Relief Valve Retainer Cap
3	NSS	1	Spool Retainer Cap
4	NSS	1	Plug
5	NSS	1	Spool
6	NSS	1	Damper Piston
7	*	2	O-Ring
8	NSS	1	Poppet
9	7009257	1	Pilot Orifice
10	7009258	1	Spring
11	7009259	1	Spring
12	*	1	O-Ring
13	*	1	O-Ring
14	*	1	O-Ring
15	*	1	Back-up Ring
16	*	1	Back-up Ring
17	7009265	1	Check Ball
18	7009266	1	Spring
19	7009267	1	Elbow Fitting
20	NA	1	Shipping Plug
21	NA	1	Shipping Plug
22	6601180	1	Shim (as req'd, 2 max)
			NSS- Not Serviced Separately. If any of these items needs to be replaced, the entire Valve Assembly must be replaced.
			* Seal kit items not available seperately.

Brake Valve Assembly

4000721-500 (NR)

**For Kaydon/GBI
cylinders
built after 3-99**



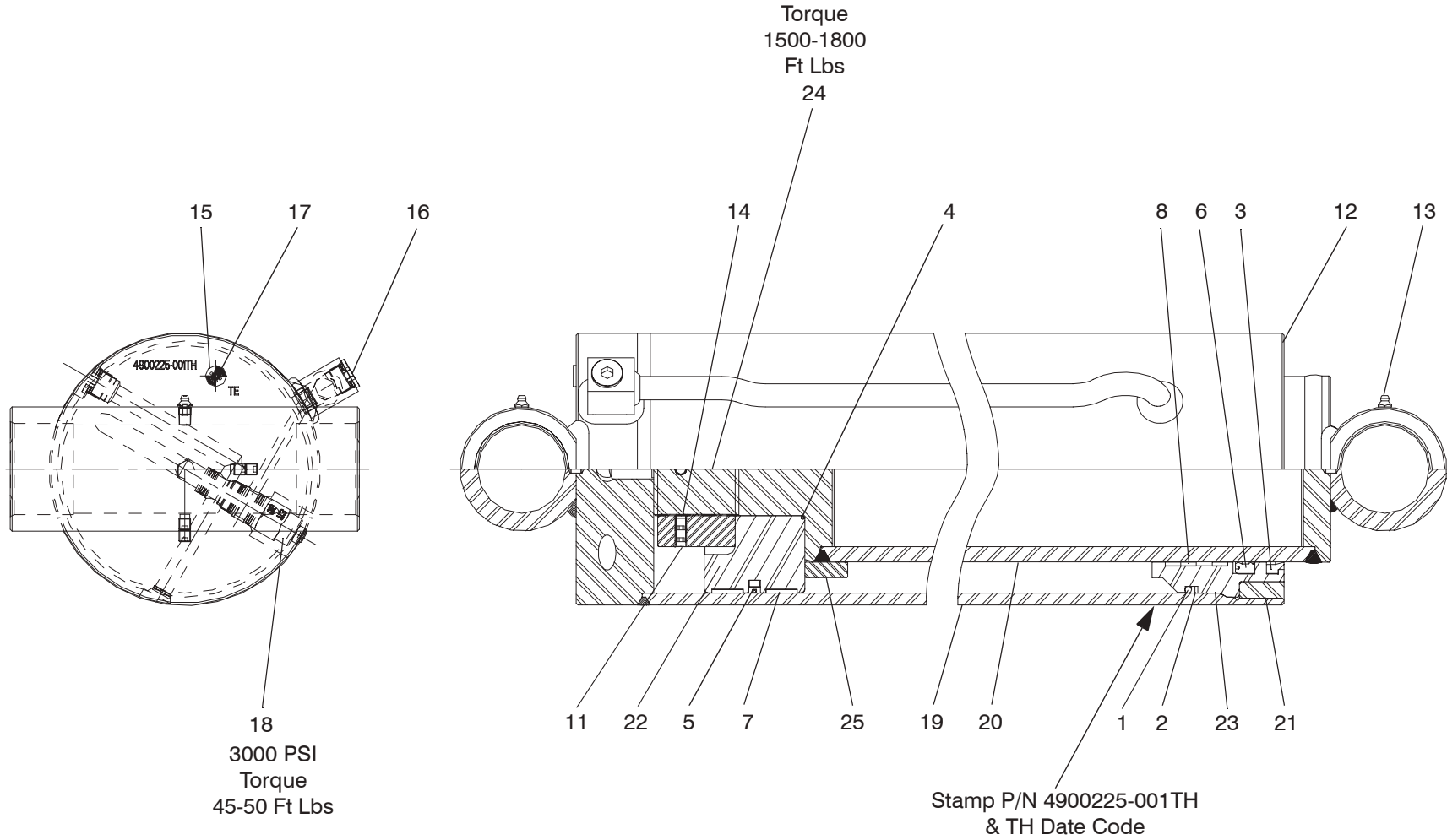
Manitex

Hydraulic Cylinder Boom Hoist 4900225-001 GBI (NR)

ITEM	PART #	QTY	DESCRIPTION
			Cylinders built after 3/99
	4900212.500*	1	Seal Kit, Universal (GBI Cylinders only)
1	4000039.001	2	Grease Fitting
2	*	1	Wiper
3	*	1	Nylon Plug
4	6600675	1	Thread Ring
5	*	1	U-Cup
6	6600674	1	Head Gland
7	*	1	Back-Up
8	*	1	O-Ring
9	6601179	1	Rod Weld
10	6601178	1	Case Weld (Barrel)
11	*	1	O-Ring
12	*	2	Wear Ring
13	*	1	Teflon Seal
14	6600661	1	Piston
15	6600672	1	Ring Nut
16	2031.061008	2	Set Screw
17	4900155.002	1	Velocity Fuse
18	*	1	O-Ring
19	6600641	1	Port Plug
20	4900113-003	1	Counterbalance Valve
21	*	2	Wear Ring
22	*	1	Back-Up
23	6600667	1	Lock Washer
24	2004-061008	1	Cap Screw
			NOTE: When ordering parts read markings on cylinder to ensure it is a Kaydon/ Great Bend product. Also verify build date code and refer to the appropriate parts page. A separate parts page exists for cylinders manufactured by Kaydon/GBI before 3/99 and also for cylinders manufactured by Texas Hydraulics.

Hydraulic Cylinder Boom Hoist

4900225-001 GBI (NR)



4900225-001 TH (NR)

Hydraulic Cylinder Boom Hoist

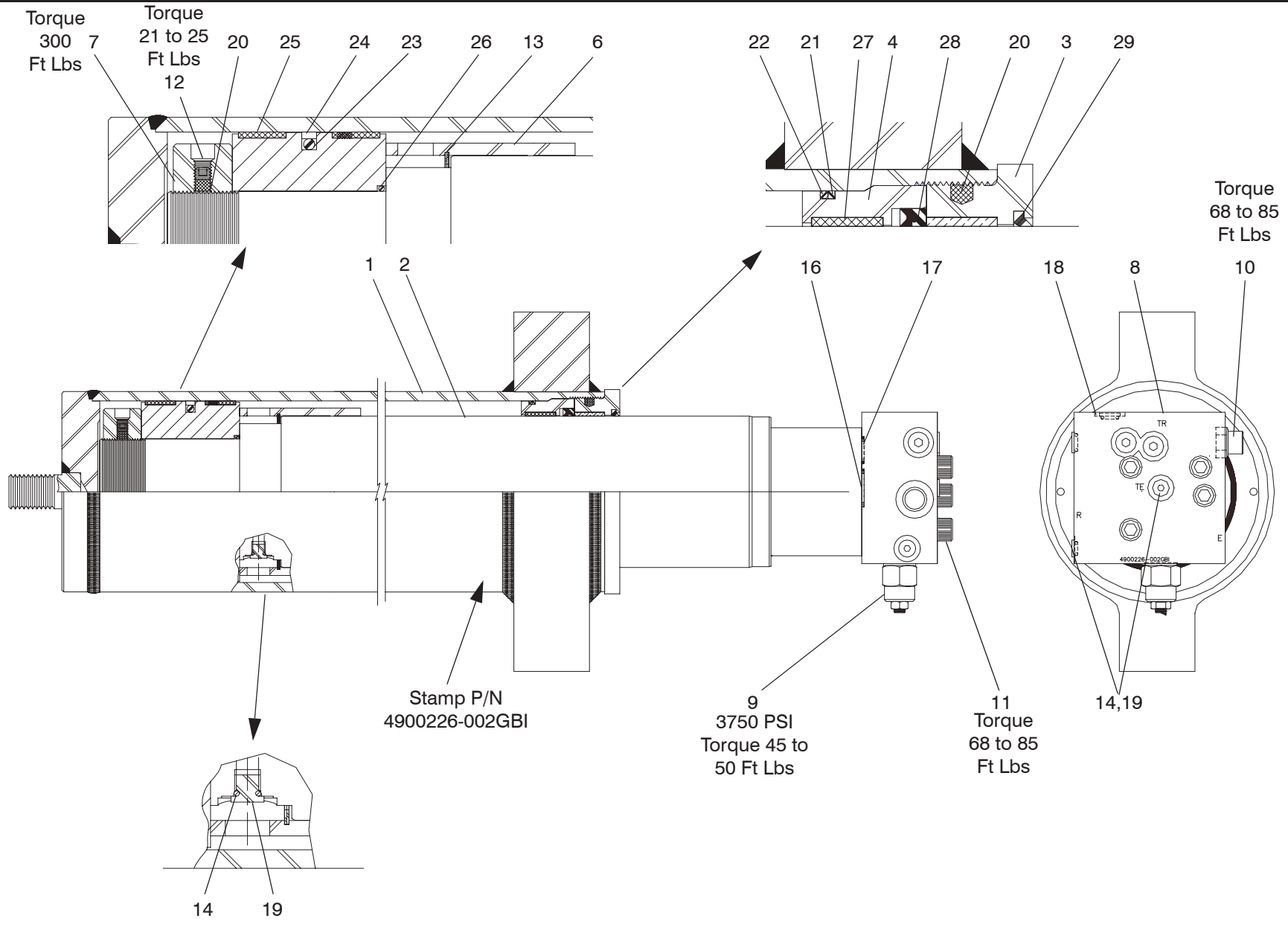
Manitex

Hydraulic Cylinder Boom Hoist 4900225-001 TH (NR)

ITEM	PART #	QTY	DESCRIPTION
	4900212-502*	1	Seal Kit, (Texas Hydraulics Cylinders only)
1	*	1	O-Ring
2	*	1	Back-Up
3	*	1	Wiper
4	*	1	O-Ring
5	*	1	Seal
6	*	1	Seal
7	*	2	Wear Ring
8	*	4	Wear Ring
9			
10			
11	6600679	4	Setscrew
12	6600680	1	Setscrew
13	6600681	2	Lube Fitting
14	6600682	2	Nylon Plug
15	6600683	1	Port Plug
16	6600684	2	Port Plug
17	4900155-002	1	Velocity Fuse
18	4900113-010	1	Counterbalance Valve
19	6601172	1	Tube Ass'y (Barrel)
20	6601173	1	Rod-Tube Ass'y
21	6601174	1	Headcap
22	6600820	1	Piston
23	6601176	1	Head
24	6600689	1	Nut
25	6601177	1	Spacer
			<p>NOTE:</p> <p>When ordering parts read markings on cylinder to ensure it is a Texas Hydraulics product. Also verify build date code and refer to the appropriate parts page.</p> <p>Separate parts pages exist for cylinders manufactured by Kaydon/GBI before and after 3/99.</p>

Hydraulic Cylinder Boom Hoist

4900225-001 TH (NR)



Cylinder Boom Telescope

Manitex

Cylinder Boom Telescope 4900226-002 GBI (NR)

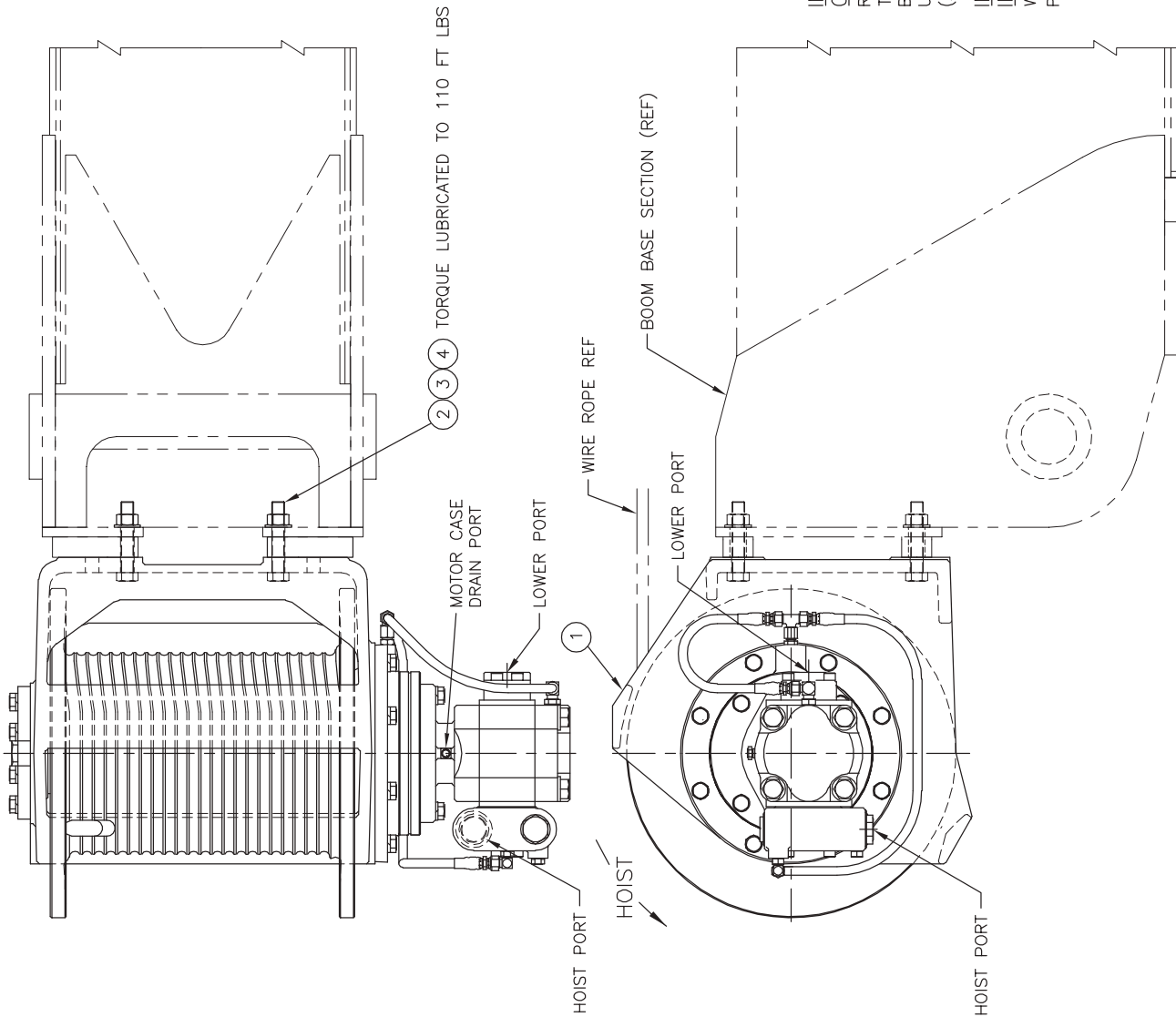
ITEM	PART #	QTY	DESCRIPTION
1	6601181	1	Case Weld (Barrel)
2	6601182	1	Rod Weld
3	6601183	1	Threaded Ring
4	6601184	1	Head
5	6601185	1	Piston
6	6601186	1	Spacer
7	6601187	1	Nut Ring
8	6601188	1	Rod End
9	4900113-003	1	Counterbalance Valve
10	4900113-301	1	Shuttle Valve
11	2022-081060	4	Socket Head Cap Screw 1/2-13UNC X 3.75 Long
12	2031-041004	1	Socket Head Set Screw 3/8-16UNC X .25 Long
13	6601189	1	Spiral ring
14	6600640	3	Plug, SAE 4
15	6600641	4	Plug, SAE 6
	4900226-515*		O-Ring Kit Rod End Manifold (Items 16 - 19 only)
16	* & **	1	O-Ring
17	* & **	1	O-Ring
18	* & **	4	O-Ring
19	* & **	2	O-Ring
	4900226-500**		Seal Kit (Includes Manifold kit above)
19	**	1	O-Ring
20	**	2	Plug, Nylon
21	**	1	Backup
22	**	1	O-Ring
23	**	1	O-Ring
24	**	1	Teflon Seal
25	**	1	Wear Ring
26	**	1	O-Ring
27	**	1	Wear Ring
28	**	1	U-Cup
29	**	1	Wiper
			NOTE: When ordering parts read markings on cylinder to ensure it is a GBI product. Also verify build date code and refer to the appropriate parts page.

Cylinder Boom Telescope

4900226-002 GBI (NR)

BILL OF MATERIAL				REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	
1	4000721-001	1	WINCH ASSEMBLY	441	EN 99-0006-5
2	2003-100000	4	FLATWASHER Ø0.63	0.05	EO 6/99
3	2004-101056	4	BOLT Ø0.63NC X 3.50	0.53	NEW RELEASE
4	2005-101000	4	HEX NUT Ø0.63NC	0.12	

TOTAL ASSEMBLY WEIGHT W/OIL . . . 443.80 LBS.



IMPORTANT:
CHECK OIL LEVEL BEFORE RUNNING MOTOR.
REMOVE THE LARGE PLUG LOCATED IN THE CENTER OF THE DRUM SUPPORT. THE OIL SHOULD BE LEVEL WITH THE BOTTOM OF THIS OPENING. IF ADDITIONAL OIL IS REQUIRED USE GEAR OIL: TEXACO MEROPA 150 OR EQUIVALENT (AGMA NO. 4EP).

IMPORTANT:
INSTALL VENT ADAPTER.
WINCH IS SHIPPED WITH VENT PLUGGED, REMOVE THIS PLUG AND INSTALL VENT ADAPTER (SHIPPED SEPARATELY).

DOCUMENT CONTROL STATUS:
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HARD COPY = UNCONTROLLED

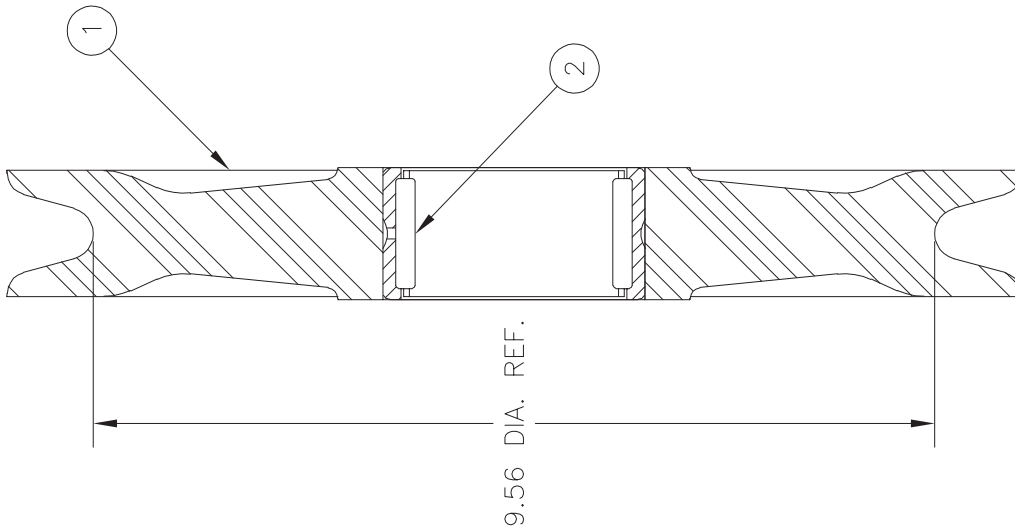


SCALE	DRAWN	CHECKED	APPROV./DATE
1/4"=1"	EO	DM	D.MORAVEC 6/99
WINCH INSTALLATION BRADEN			
TOLERANCES (UNLESS SPECIFIED)	6000092-018		
± 1/16"	SHEET	1	OF

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TOLERANCE UNLESS OTHERWISE SPECIFIED		MACHINING		FABRICATION	
DECIMAL PLACES	(1) PLACE 0.0	± 0.120	± 0.020	± 0.020	± 0.020
(2) PLACE 0.00	± 0.000	± 0.005	± 0.005	± 0.005	± 0.005
(3) PLACE 0.000	± 0.000	± 0.005	± 0.005	± 0.005	± 0.005
ANGLES	± 1' 30"	± 0' 30"	± 0' 30"	± 0' 30"	± 0' 30"

1) / MACHINING TOLERANCE AND/OR SURFACE FINISH
2) / INDICATES A TOLERANCE BY ORIGINAL DECIMAL DIMENSION
3) / USE ONE SIGNAL USE TOLERANCE



FOR MODELS: 1100, 1500, 1900
SEE EN 89-0173

TOTAL ASSEMBLY WEIGHT. 5.7 LBS.

BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	4000052-003	1	SHEAVE 0.56φ W.R.	4.7
2	4000131-002	1	BEARING HEAVY DUTY	1.0

REVISIONS

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARDCOPY = UNCONTROLLED



SCALE	DRAWN	CHECKED	APPRD./DATE
NONE	DP	JPZ	D.MORAVEC 1/87

BOOM HEAD
SHEAVE
SUB-ASSEMBLY

TOLERANCES (UNLESS SPECIFIED)	6000111-003
±1/16"	SHEET 1 OF 1

No. REQ'D		BILL OF MATERIAL		WEIGHT ITEM	
.004-.003-.002-.001		DESCRIPTION	QTY. REQ'D	(LBS.)	No.
-	-	EXTEND SHEAVE (.63 WIRE ROPE)	4000053-001	4.7	1
-	-	HEAVY DUTY NEEDLE BEARING	4000131-002	1.0	2
-	-	EXTEND SHEAVE (.63 WIRE ROPE)	4000053-002	5.5	3
-	-	INSERT	5001252-001	2.34	4
-	-	EXTEND SHEAVE (.63 WIRE ROPE)	4000053-003	7.12	5
-	-	EXTEND SHEAVE (.75 WIRE ROPE)	4000053-004	11.3	6
-	-	HEAVY DUTY NEEDLE BEARINGS	4000131-005	1.50	7
-	-	INSERT	5001252-002	6.85	8

9.56 DIA. (6000112-001)
(REF.)

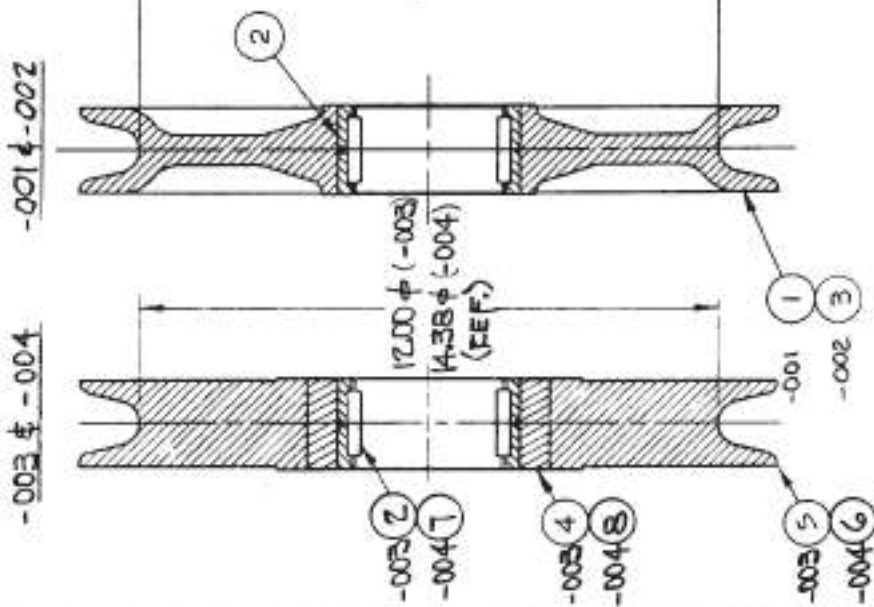
12.00 DIA. (6000112-002)
(REF.)

△ 6000112-001 IS MOD 1400
6000112-002 IS MOD 2200
6000112-003 IS MOD 2200
6000112-004 IS MOD 2800

TOTAL SUB-ASSEMBLY WEIGHT (6000112-001) — 5.7 LBS.
TOTAL SUB-ASSEMBLY WEIGHT (6000112-002) — 6.5 LBS
TOTAL SUB-ASSEMBLY WEIGHT (6000112-003) — 10.7 LBS
TOTAL SUB-ASSEMBLY WEIGHT (6000112-004) — 19.65 LBS.

4-24-87 DP
A ITEM 2 WAS
4000084-001

DATE	1-27-87
PATTERN NO.	
CODE NO.	
QTY. REQ'D	6000112



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TOLERANCE UNLESS OTHERWISE SPECIFIED

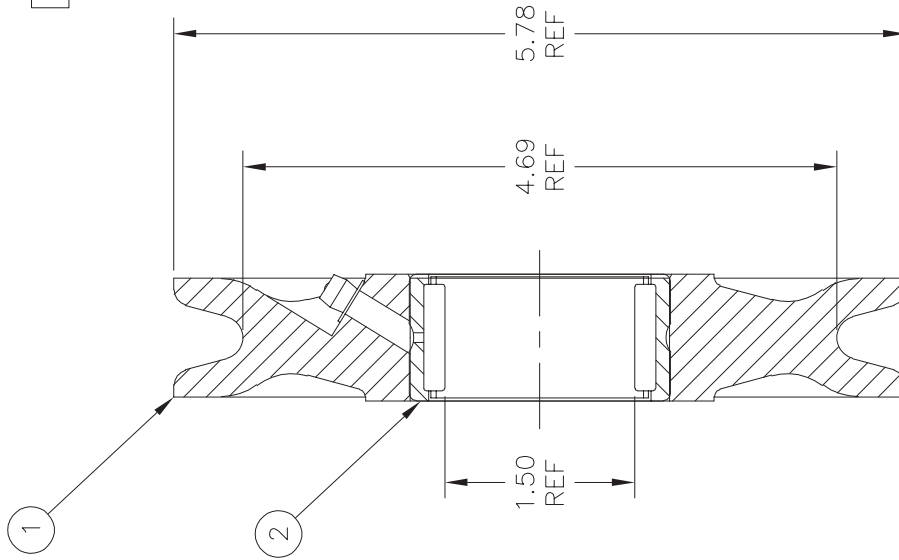
DECIMAL PLACES	FRACTIONAL DIMENSIONS	ANGLE
(1) PLACE 0.5	1/2	1/2°
(2) PLACE 0.20	1/50	1/10°
(3) PLACE 0.050	1/200	1/20°
ANGLES	1/2°	1/2°

SCALE: 6" = 1 FT
DP OR J.P.Z.
DM

MANITEX INC.
A SUBSIDIARY OF THE MANITEX COMPANY, INC.
1161 19th St. S.E. ALBUQUERQUE, N.M. 87102

BILL OF MATERIAL				REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	
1	4000054-002	1	SHEAVE RETR 5.78 OD	0.9	A DP 4/24/87 ITEM 2 WAS 4000085-001
2	4000131-001	1	BEARING, HD 1.50 ID	0.34	EN 97-0024-8 DM 1/30/98 REDRAWN ON CAD

TOTAL WEIGHT ----- 1.24 LBS



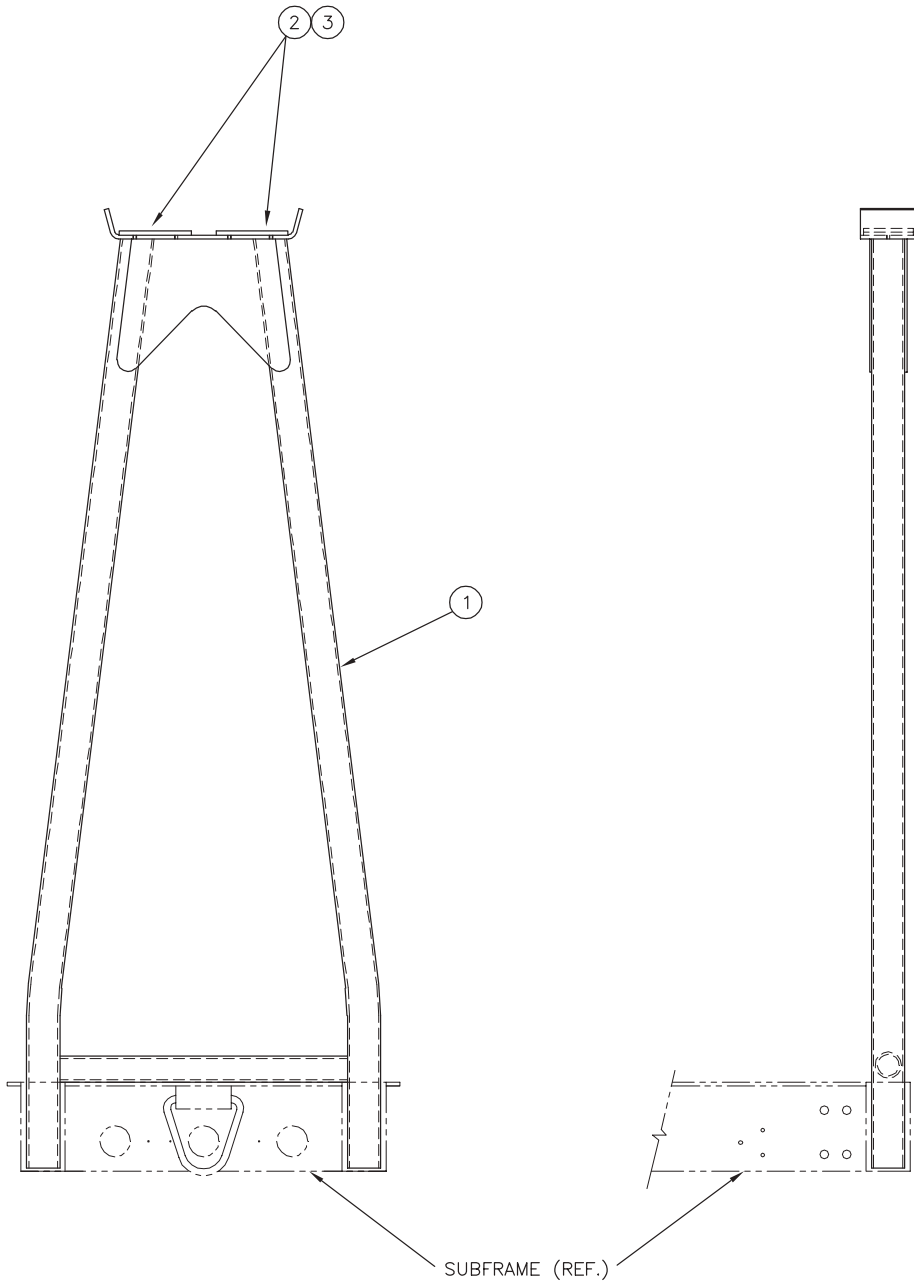
DOCUMENT CONTROL STATUS:
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HARD COPY = UNCONTROLLED



SCALE	DRAWN	CHECKED	APPVD./DATE
1"=1"	DP	JPZ	DM 1/87
RETRACT SHEAVE SUB-ASSEMBLY 0.31 DIA ROPE			
TOLERANCES (UNLESS SPECIFIED)		6000113-002	
±1/16"		SHEET	1 OF 1

TOLERANCE UNLESS OTHERWISE SPECIFIED		TOLERANCE UNLESS OTHERWISE SPECIFIED	
DECIMAL PLACES	FABRICATION	MACHINING	1) √ = MACHINING TOLERANCE TO DIMENSION AND/OR SURFACE. 2) ∇ INDICATES A TOLERANCE OTHER THAN INDICATED BY ORIGINAL DECIMAL DIMENSION. EXAMPLE: .3725 = USE ONE DECIMAL PLACE TOLERANCE.
(1) PLACE 0.0	± 0.120	± 0.030	
(2) PLACE 0.00	± 0.060	± 0.015	
(3) PLACE 0.000	± 0.030	± 0.005	
ANGLES	± 1' 30"	± 0' 30"	

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BILL OF MATERIAL			
ITEM NO.	PART NUMBER	QTY	DESCRIPTION
1	5001111-007	1	BOOM REST WLDMNT
2	2029-051016	4	SOC.FL.HD.SCREW
A 3	4000063-001	2	SLIDER PAD

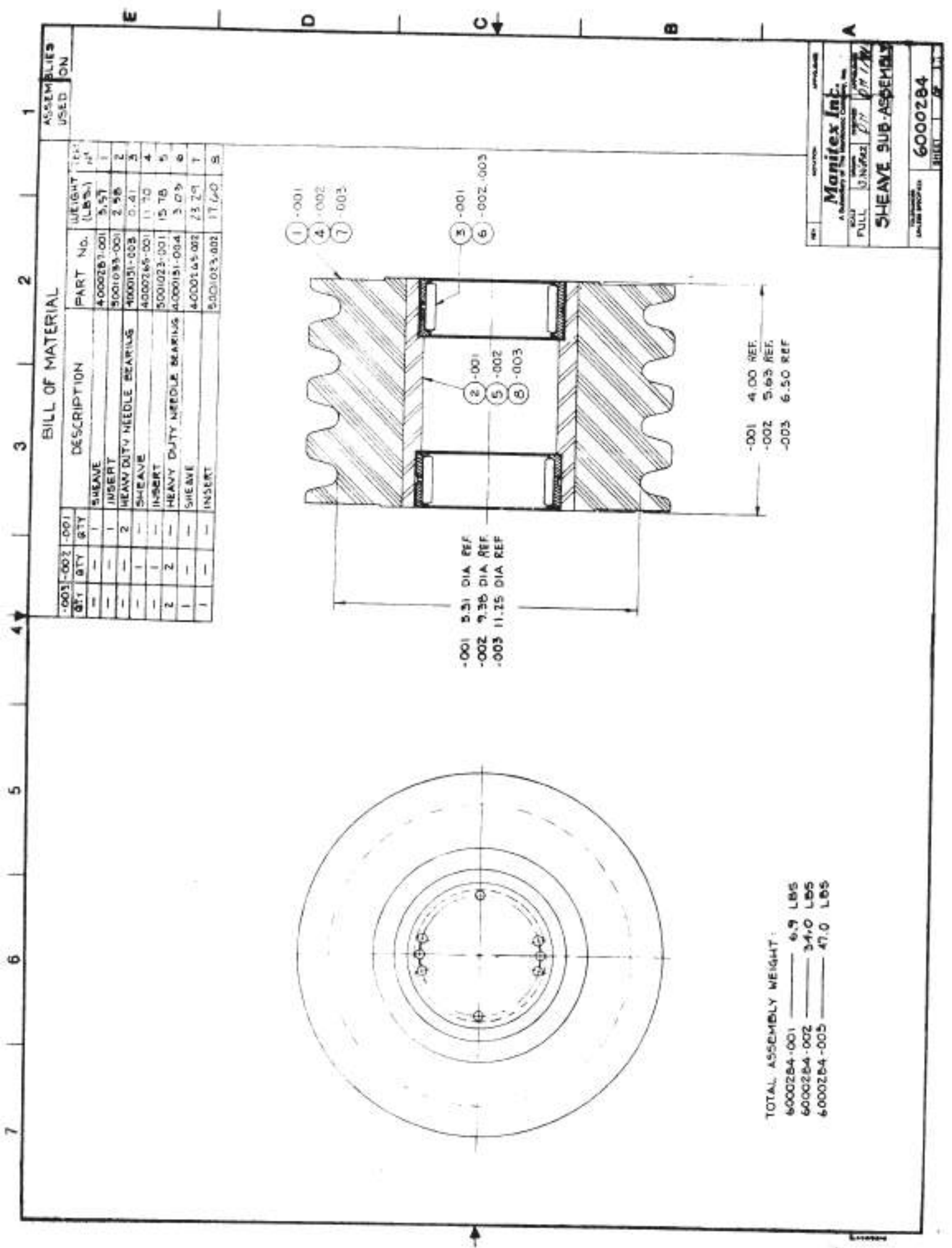
REVISIONS
EN 98-0005-08 DAS 5-14-98 NEW RELEASE
EN 02-0007-12 CT 7/02
A ITEM 3 WAS 4000064-001

TOTAL ASSEMBLY WEIGHT. . . . 137.46 LBS.

1003-1703 Series
used on cranes built
after July 2002

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARDCOPY = UNCONTROLLED

Manitex			
SCALE 1/8"=1"	DRAWN DAS	CHECKED E.ORTIZ	APPROV./DATE D.MORAVEC 5/98
BOOM REST INSTALLATION			
TOLERANCES (UNLESS SPECIFIED)		6000218-020	
SHEET		1 OF 1	



BILL OF MATERIAL

QTY	QTY	QTY	DESCRIPTION	PART No.	WEIGHT (LBS)	UNIT
1	1	1	SHEAVE	4000284-001	5.57	1
1	1	1	INSERT	5001033-001	2.98	2
1	1	1	HEAVY DUTY NEEDLE BEARING	4000151-003	0.41	3
1	1	1	SHEAVE	4000284-001	11.70	4
1	1	1	INSERT	5001033-001	15.78	5
2	2	2	HEAVY DUTY NEEDLE BEARING	4000151-004	3.03	6
1	1	1	SHEAVE	4000145-002	23.21	7
1	1	1	INSERT	5001033-002	17.60	8

-001 5.31 DIA REF
 -002 7.36 DIA REF
 -003 11.25 DIA REF

-001 4.00 REF.
 -002 5.63 REF.
 -003 6.50 REF.

TOTAL ASSEMBLY WEIGHT:
 6000284-001 ——— 6.9 LBS
 6000284-002 ——— 34.0 LBS
 6000284-003 ——— 47.0 LBS

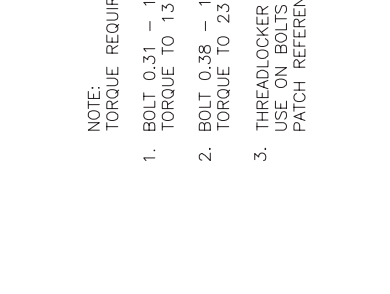
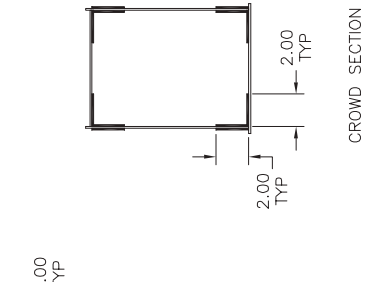
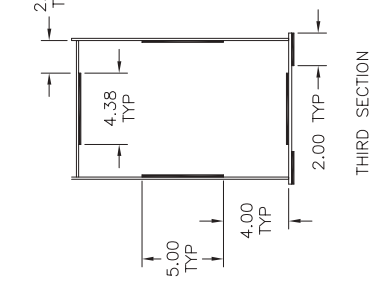
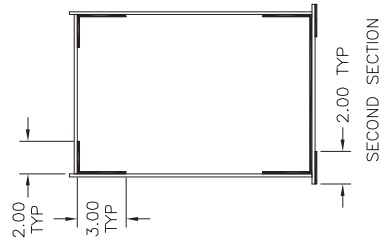
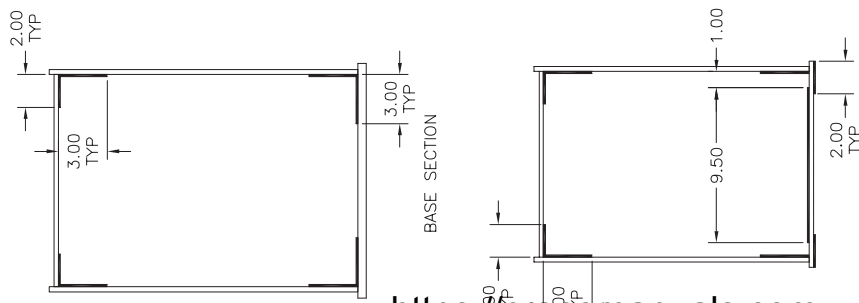
Manitex Int.
 A Division of The Manitex Group, Inc.

DATE: 03/02/02
 FULL: 03/02/02
 REV: 01/10/02

SHEAVE SUB-ASSEMBLY

PROJECT: 6000284
 SHEET: 01 OF 01

LUBRICATION PATTERNS FOR BOOM SECTIONS APPLY THIN FILM OF GREASE ACCORDINGLY



ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
81	2004-061020	8	.38 D.GR.5 BOLT 1.25LG	0.05
82	2004-081024	4	.50 D.GR.5 BOLT 1.50 LG	0.12
83	2004-101024	2	.62 D.GR.5 BOLT 1.50 LG	0.18
84	2004-081072	2	.50 D.GR.5 BOLT 4.50 LG	0.30
85	2004-081112	2	.50 D.GR.5 BOLT 7.00 LG	0.43
86	2004-101032	4	.62 D.GR.5 BOLT 2.00 LG	0.23
87	2005-041000	4	.25 HEX NUT	0.01
88				
89	2005-081000	4	.50 HEX NUT	0.05
90	2005-101000	8	.62 HEX NUT	0.10
91	2005-161000	6	1.00 HEX NUT	0.21
92	2006-040000	4	.25 LOCKWASHER	0.01
93	2006-050000	66	.31 LOCKWASHER	0.01
94	2006-060000	10	.37 LOCKWASHER	0.01
95	2006-080000	6	.50 LOCKWASHER	0.01
96	2006-100000	6	.62 LOCKWASHER	0.02
97	2008-050000	20	.31 SAE FLATWASHER	0.01
98	2008-060000	6	.37 SAE FLATWASHER	0.01
99				
100	2003-100000	6	.62 HARD FLATWASHER	0.03
101	2010-101000	6	.62 HEX JAM NUT	0.07
102	2010-161000	6	1.00 HEX JAM NUT	0.14
103	2011-181000	1	1.125 ELAS LOCK NUT	0.90
104	2013-061006	2	.38 X.38 LG SHLDR BOLT	0.05
105	2013-061012	4	.38 X.75 LG SHLDR BOLT	0.06
106	2013-061020	2	.38X1.25 LG SHLDR BOLT	0.12
107	2029-041012	4	.25D FLTHD SHCS .75 LG	0.01
108	2029-051008	2	.31D FLTHD SHCS .50 LG	0.02
109	2029-051012	8	.31D FLTHD SHCS .75 LG	0.02
110				
111	2029-061008	4	.38D FLTHD SHCS .50 LG	0.03
112	2029-061012	12	.38D FLTHD SHCS .75 LG	0.04
113	2029-061016	18	.38D FLTHD SHCS1.00 LG	0.04
114	30205-08-08	1	90° ORS ADAPTER	0.10
115	2008-200000	2	1.25 SAE FLATWASHER	0.16
116	5001248-001	2	PIN, GROOVED	0.04
117	2091-020043	4	RETAINING RING	0.01
118	30205-10-10	1	90° ORS ADAPTER	0.10

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
41	2085-106032	3	HITCH PIN BOOM HD	0.87
42	4000039-001	11	GREASE FITTING (.12 STR.)	0.01
43	4000039-006	2	GREASE FITTING (.12 90°)	0.01
44	4000037-175	6	1.75 SNAP RING	0.05
45	2091-020350	2	3.50 SNAP RING	0.10
46	5000008-006	1	KEEPER PLATE	0.12
47	4000080-020	4	STEEL SET COLLAR	0.38
48	2035-101020	2	COTTER PIN	0.02
49	2035-081016	4	COTTER PIN	0.01
50	2085-106050	1	HITCH PIN, DEAD END	1.14
51	4000059-001	12	SLIDER PAD REAR SIDE	0.28
52	5000304-004	24	SHIM (0.0478 THICK)	0.15
53	5000304-005	12	SHIM (0.0747 THICK)	0.24
54	5000304-006	12	SHIM (0.1345 THICK)	0.43
55	4000064-001	1	SLIDER PAD	0.22
56	4000082-001	2	SLIDER PAD	0.12
57	4000276-003	10	SLIDER PAD	0.35
58	5001059-004	12	SHIM (0.0478 THICK)	0.20
59	5001059-005	12	SHIM (0.0747 THICK)	0.32
60	5001059-006	6	SHIM (0.1345 THICK)	0.57
61	4000277-001	2	SLIDER PAD	0.35
62	4000289-001	16	SLIDER PAD	0.11
63	5000305-001	24	SHIM (0.0474 THICK)	0.09
64	5000305-002	24	SHIM (0.0747 THICK)	0.14
65	5000305-003	12	SHIM (0.1345 THICK)	0.26
66	5001046-001	2	PIPE SPACER (CRD SECT.)	0.95
67	5000370-002	2	PIPE SPACER (CYL BRKT)	0.53
68	5002956-001	8	CABLE GUIDE UNIV.	1.64
69				
70				
71	5001098-001	1	COVER	4.78
72	5000804-001	2	POINTER	1.80
73	4000057-002	4	SLIDER PAD	0.14
74	2001-081020	12	.5 D.GR.8 BOLT 1.25 LG	0.11
75	2003-080000	14	.50 HARD FLATWASHER	0.02
76	2003-180000	1	1.125 HARD FLATWASHER	0.10
77	2004-051008	10	.31 D. GR5 BOLT .50 LG	0.20
78	2004-051010	46	.31 D. GR.5 BOLT .62 LG	0.03
79	2004-051014	36	.31 D. GR.5 BOLT .88 LG	0.03
80	2004-061014	4	.38 D. GR.5 BOLT .88 LG	0.04

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	5001974-006	1	BOOM BASE SECTION	2487.2 NEW RELEASE
2	5001976-004	1	BOOM FIRST SECTION	1595.9 EN 02-0018-10
3	5001978-005	1	BOOM SECOND SECTION	1247.3 EN 04-03
4	5001980-004	1	BOOM THIRD SECTION	1177.4 [K1] ITEM 68 WAS 5001062-001
5	5001982-002	1	BOOM CROWD SECTION	485.5 [A2] ITEM 69 WAS 5001062-002
6	5001035-001	1	EXTEND SHEAVE BRACKET	29.57 5001062-002
7	5001036-001	1	RETRACT SHEAVE BRACKET	8.55 [A3] ITEM 70 WAS 5001062-003
8	5001037-001	1	RETRACT ROPE ANC. BRKT	6.54 5001062-003
9	5001038-001	1	EXT. ROPE BRKT 4-ROPE	6.02 [A4] ITEM 97 WAS 5001062-003
10	5001039-001	1	EXT. ROPE BRKT 2-ROPE	5.00 [A4] REQ'D
11	5001040-001	1	RET. ROPE BRKT 4-ROPE	0.72
12	5001041-001	1	PAD MOUNTING - LH.	2.65
13	5001041-002	1	PAD MOUNTING - RH.	2.65
14	5001067-001	2	MOUNTING PLATE	2.40
15	6000111-003	3	HEAD SHV. SUB-ASSY	5.70
16	6000112-003	2	EXT. SHV. SUB-ASSY	9.50
17	6000284-001	1	RET. SHV S/ASSY 4 ROPE	6.80
18	6000113-002	2	RET. SHV S/ASSY 2 ROPE	1.24
19	6000284-002	1	EXT. SHV S/ASSY 4-ROPE	34.00
20	4000132-001	2	BEARING INN. RACE 1.25"	0.20
21	4000132-002	5	BEARING INN. RACE 1.75"	0.80
22	4000132-003	2	BEARING INN. RACE 1.69"	0.30
23	4000132-004	2	BEARING INN. RACE 2.44"	2.60
24	5001097-001	1	SPACER, INN. RACE 1.69"	0.26
25	5001097-002	1	SPACER, INN. RACE 2.44"	1.22
26	4900226-002	1	CYLINDER-TEL. (WET)	1200.9
27	5001047-001	2	TEL. CYL. BRACKET	6.30
28	4000778-001	2	.62 EXT. ROPE (RT LAY)	40.5
29	4000778-002	2	.62 EXT. ROPE (LT LAY)	40.5
30	4000778-003	1	.62 EXT. ROPE (RT LAY)	42.2
31	4000778-004	1	.62 EXT. ROPE (LT LAY)	42.2
32	4000056-006	4	.31 RETRACT ROPE	6.68
33	4000327-011	2	.31 RETRACT ROPE	6.22
34	5000350-001	3	PIN (SHEAVE)	3.30
35	5001075-001	1	PIN EXT. SHEAVE 4-ROPE	19.50
36	5001072-001	1	PIN RET. SHEAVE 4-ROPE	3.50
37	5001073-001	1	PIN RET. SHEAVE 2-ROPE	4.10
38	5001074-001	1	PIN RET. ANC. - 4-ROPE	0.70
39	5001076-001	1	PIN CROWD SECTION PIVOT	4.00
40	5000353-002	2	PIN RET. ROPE RETAINER	0.20

TOTAL WEIGHT----- 8813.4 LBS.

- NOTE:
TORQUE REQUIREMENTS FOR SLIDER PAD BOLTS.
1. BOLT 0.31 - 18 UNC
TORQUE TO 13 FT-LBS OR 156 IN-LBS
 2. BOLT 0.38 - 16 UNC
TORQUE TO 23 FT-LBS OR 276 IN-LBS
 3. THREADLOCKER (LOCTITE) PRODUCT NO. 242
USE ON BOLTS WHICH DO NOT HAVE LOCKING
PATCH REFERENCE DWG 2029-TABULA

DOCUMENT CONTROL STATUS:
REVISIONS CONTROLLED
HARDWARE UNCONTROLLED

SCALE	DRAWN	CHECKED	APPROV'D/DATE
NONE	EV	DM	1/03

BOOM ASSEMBLY
SECTION 4
QUICK REEVE 102 FT

TOLERANCES
(UNLESS SPECIFIED)
±1/16

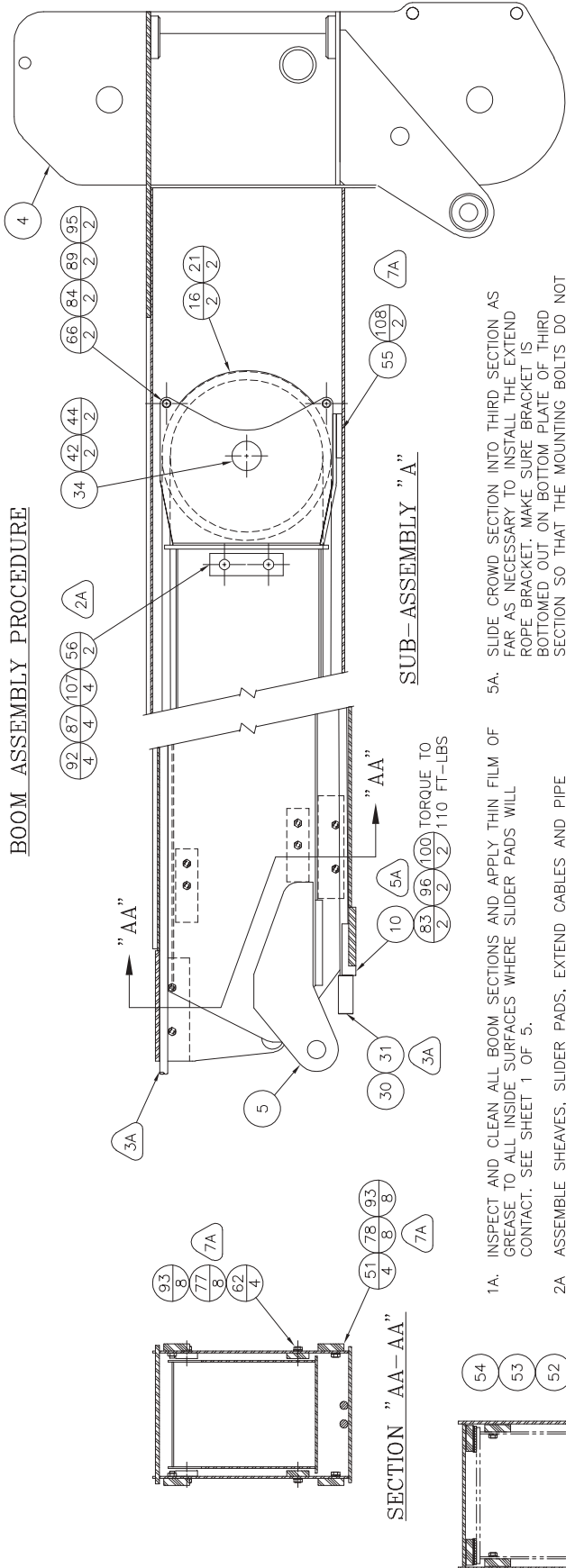
6000578-008

SHEET 1 OF 5

REVISIONS	
EN 02-0018-05	CT 1/03
NEW RELEASE	
EN 02-0018-10	EO 04-03
A) SEE SHT 1	

DOCUMENT CONTROL STATUS:		DRAWN		CHECKED		APPROVED	
REVISIONS CONTROLLED		SCALE	DATE	EV	EV	DN	DATE
UNCONTROLLED		NONE					1/03
		BOOM ASSEMBLY					
		4 SECTION					
		QUICK REEVE 102 FT					
		TOLERANCES (UNLESS NOTED)					
		±1/16					
		6000578-008					
		SHEET 2 OF 5					

BOOM ASSEMBLY PROCEDURE



SUB-ASSEMBLY "A"

SECTION "AA-AA"

SECTION "BA-BA"

SECTION "BB-BB"

- 1A. INSPECT AND CLEAN ALL BOOM SECTIONS AND APPLY THIN FILM OF GREASE TO ALL INSIDE SURFACES WHERE SLIDER PADS WILL CONTACT. SEE SHEET 1 OF 5.
- 2A. ASSEMBLE SHEAVES, SLIDER PADS, EXTEND CABLES AND PIPE SPACERS TO THE CROWD SECTION AS SHOWN. NOTE THAT SIDE SLIDER PADS MUST BE INSTALLED BEFORE SHEAVE ASSEMBLIES.
- 3A. USE SOME MEANS OF IDENTIFYING CABLES TO AVOID CROSSING OF EXTEND CABLES DURING THE ASSEMBLY PROCESS. NOTE THAT ONE ROPE IS LEFT LAY AND ONE ROPE IS RIGHT LAY.
- 4A. INSTALL SLIDER PADS TO REAR OF THIRD SECTION. DO NOT TIGHTEN.
- 5A. SLIDE CROWD SECTION INTO THIRD SECTION AS FAR AS NECESSARY TO INSTALL THE EXTEND ROPE BRACKET. MAKE SURE BRACKET IS BOTTOMED OUT ON BOTTOM PLATE OF THIRD SECTION SO THAT THE MOUNTING BOLTS DO NOT CARRY ANY SHEAR LOAD. TORQUE BOLTS TO VALUE SHOWN ABOVE.
- 6A. PULL OUT CROWD SECTION APPROX. 12 IN. AND INSTALL THE SIDE SLIDER PADS BETWEEN THE THIRD AND CROWD SECTIONS.
- 7A. SEE SHEET 1 FOR TORQUE REQUIREMENTS FOR SLIDER PAD BOLTS.

SHIM TO 0.00-0.06 CLEARANCE USING ITEMS 58, 59 & 60 AS REQUIRED

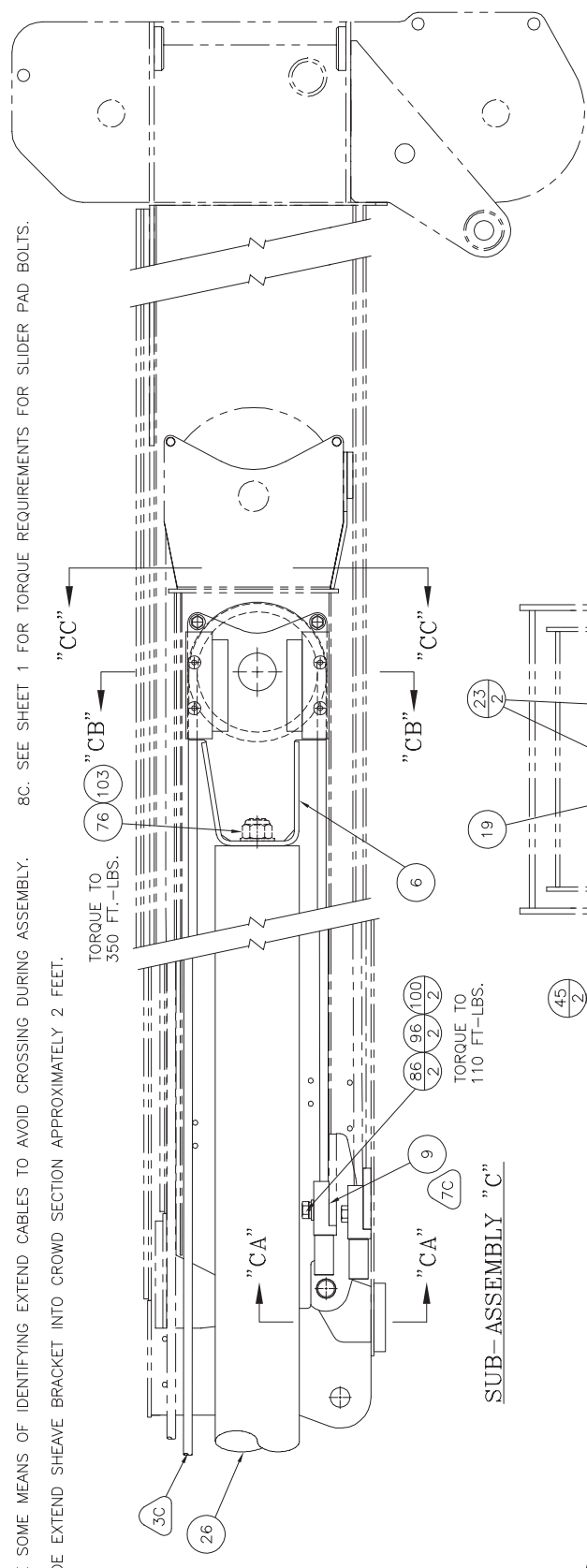
SHIM TO 0.00-0.03 USE ITEMS 52, 53, & 54 AS REQUIRED

- 1B. FIT THIRD SECTION INSIDE SECOND SECTION AND SHIM PADS TO DIMENSIONS SHOWN. TIGHTEN ALL PADS SECURELY.
- 2B. INSTALL RETRACT CABLE ON THIRD SECTION AND COIL UP EXCESS AT REAR OF THIRD SECTION.
- 3B. SLIDE THIRD SECTION INTO SECOND SECTION APPROX. 5 FT AND INSTALL BOTTOM SLIDER PADS AT FRONT OF SECOND SECTION.
- 4B. FINISH SLIDING THIRD SECTION INTO SECOND SECTION.
- 5B. SEE SHT. 1 FOR TORQUE REQUIREMENTS FOR SLIDER PAD BOLTS.

SUB-ASSEMBLY "B"

REVISIONS	
EN 02-0018-05	CT 1/03
NEW RELEASE	
EN 02-0018-10	EO 04-03
A SEE SHT1	

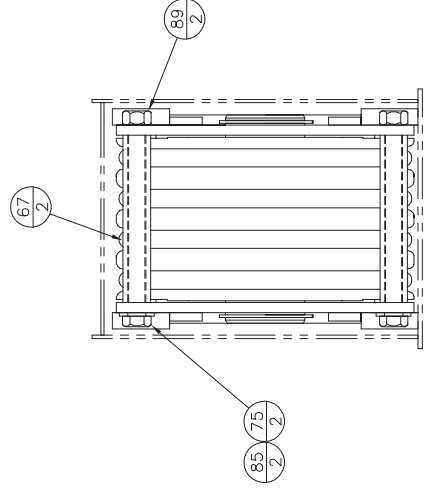
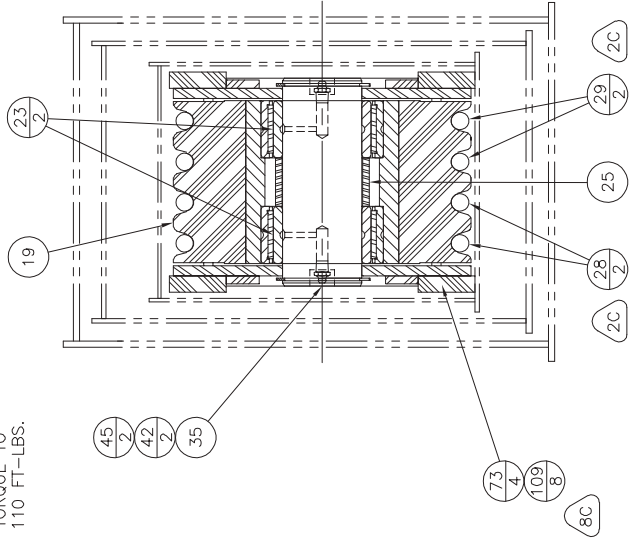
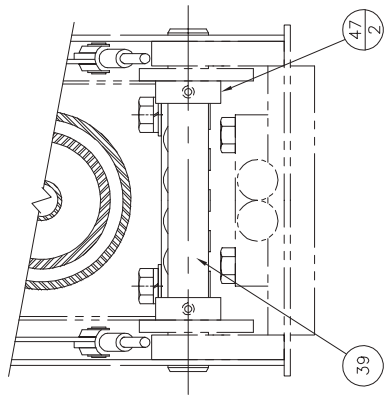
- 1C. INSTALL EXTEND SHEAVE BRACKET TO THE END OF THE TELESCOPE CYLINDER HOLDING ITS POSITION RELATIVE TO THE TRUNION ON THE OTHER END OF THE CYLINDER. TORQUE NUT TO THE SPECIFIED TORQUE LEVEL.
- 2C. INSTALL SHEAVE ASSEMBLY, EXTEND ROPES, PIPE SPACERS, AND SLIDER PADS TO THE SHEAVE CASE AS SHOWN. MAKE SURE TWO RIGHT LAY ROPES ARE ON ONE SIDE AND TWO LEFT LAY ROPES ARE ON THE OTHER SIDE OF THE SHEAVE.
- 3C. USE SOME MEANS OF IDENTIFYING EXTEND CABLES TO AVOID CROSSING DURING ASSEMBLY.
- 4C. SLIDE EXTEND SHEAVE BRACKET INTO CROWD SECTION APPROXIMATELY 2 FEET.
- 5C. RAISE CROWD SECTION AND PIN TO SECOND SECTION USING THE PIN AND SET COLLARS AS SHOWN.
- 6C. FINISH SLIDING CYLINDER INTO CROWD SECTION AS SHOWN.
- 7C. RAISE CYLINDER AS HIGH AS POSSIBLE AND, INSTALL EXTEND ROPE BRACKET. MAKE SURE BRACKET IS BOTTOMED OUT ON BOTTOM OF CROWD SECTION SO THAT THE MOUNTING BOLTS DO NOT CARRY ANY SHEAR LOAD.
- 8C. SEE SHEET 1 FOR TORQUE REQUIREMENTS FOR SLIDER PAD BOLTS.



TORQUE TO
350 FT.-LBS.

TORQUE TO
110 FT.-LBS.

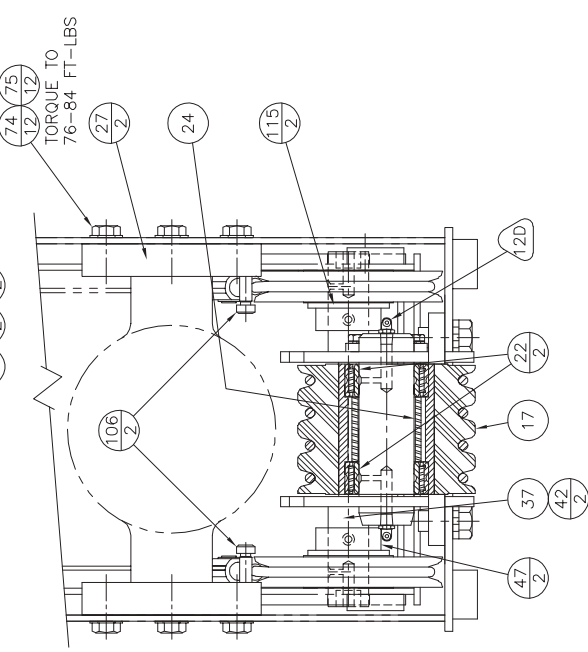
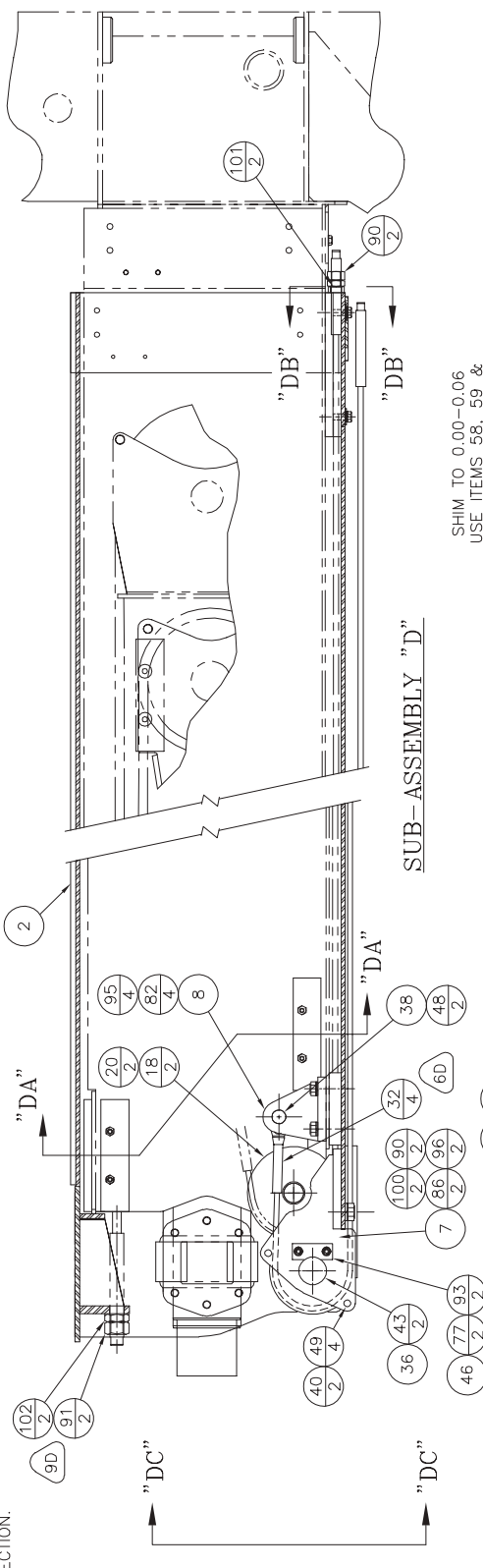
SUB-ASSEMBLY "C"



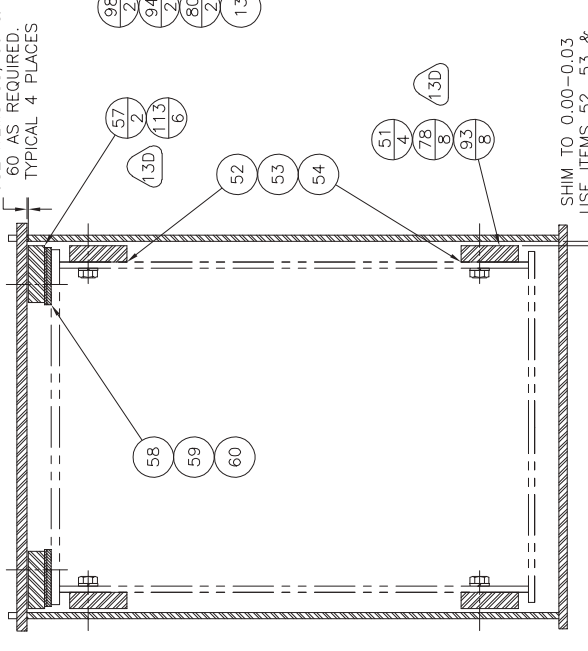
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DESIGNED	BY	ENR	1/03
DRAWN	BY	ENR	1/03
CHECKED	BY	ENR	1/03
Mantex			
BOOM ASSEMBLY			
SECTION 4			
QUICK REEVE 102 FT			
TOLERANCES (UNLESS SPECIFIED)		6000578-008	
±1/16"		SHEET 3 OF 5	

REVISIONS
EN 02-0018-05
CT 1/03
NEW RELEASE
EN 02-0018-10
EO 04-03
EA 04-03
SEE SHT1

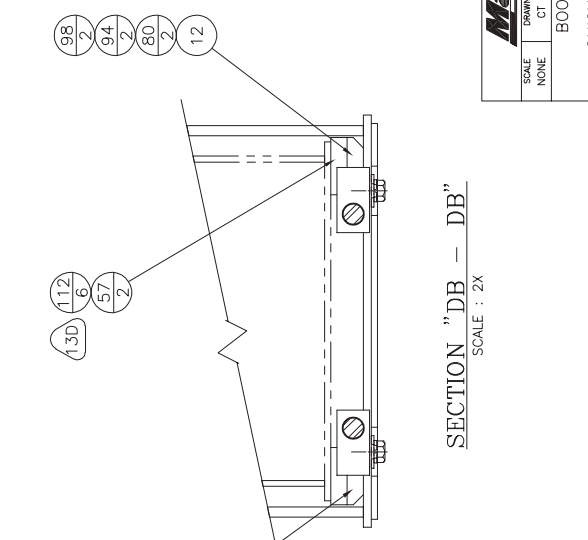
- 1D. INSTALL SLIDER PADS TO REAR OF SECOND SECTION, DO NOT TIGHTEN.
- 2D. FIT SECOND SECTION INSIDE FIRST SECTION AND SHIM PADS TO DIMENSIONS SHOWN. TIGHTEN ALL PADS SECURELY.
- 3D. INSTALL THE FOUR RETRACT ROPES TO BRACKET AND BOLT BRACKET INTO PLACE AT REAR OF SECOND SECTION.
- 4D. ATTACH RETRACT SHEAVES TO REAR OF SECOND SECTION WITH PIN AND SET COLLARS.
- 5D. BEND RETRACT CABLE FROM THIRD SECTION AROUND RETRACT SHEAVES ON SECOND SECTION.
- 6D. PUSH THE FOUR RETRACT ROPES FROM SECOND SECTION INTO FIRST SECTION WHILE SLIDING THE SECOND SECTION IN APPROX. 5 FEET.
- 7D. ASSEMBLE BOTTOM SLIDER PADS TO MOUNTING PADS AND THREAD RETRACT CABLES THROUGH BRACKET ON MOUNTING PADS. BOLT MOUNTING PADS IN PLACE AT THE FRONT OF THE FIRST SECTION AS SHOWN.
- 8D. FINISH SLIDING SECOND SECTION INTO FIRST SECTION.
- 9D. ATTACH EXTEND ROPES TO FIRST SECTION AS SHOWN. TAKE UP SLACK IN EXTEND AND RETRACT ROPES AT THIS TIME.
- 10D. ATTACH TELESCOPE CYLINDER TO FIRST SECTION WITH BRACKETS. ADJUST BRACKETS AS SHOWN AND TORQUE BOLTS TO THE SPECIFIED TORQUE LEVELS.
- 11D. INSTALL SHOULDER BOLT CABLE RETAINER TO SECOND SECTION.
- 12D. ASSEMBLE RETRACT SHEAVE TO BRACKET AND BOLT INTO PLACE AT REAR OF FIRST SECTION. MAKE SURE GREASE FITTINGS IN THE PIN ARE ALIGNED AS SHOWN.
- 13D. SEE SHEET 1 FOR TORQUE REQUIREMENTS FOR SLIDER PAD AND BOLTS.



SECTION "DC - DC"
SCALE : 2X



SECTION "DA - DA"
SCALE : 2X



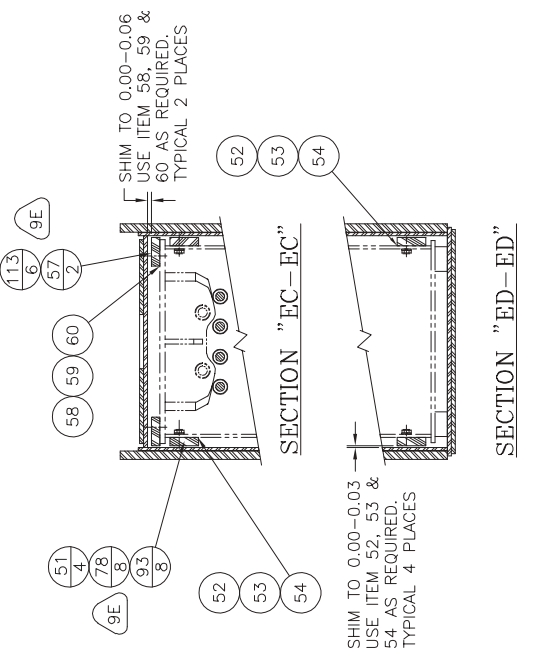
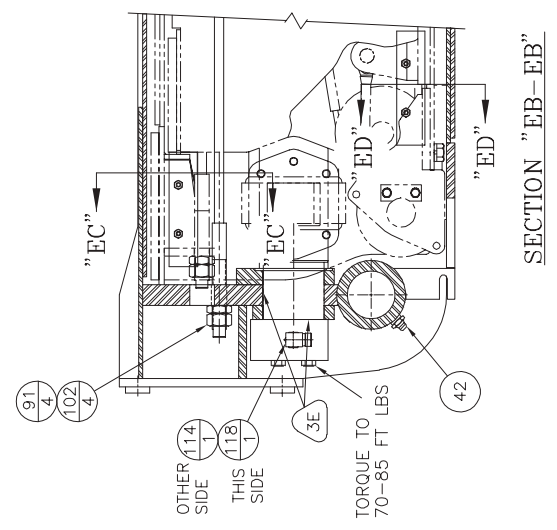
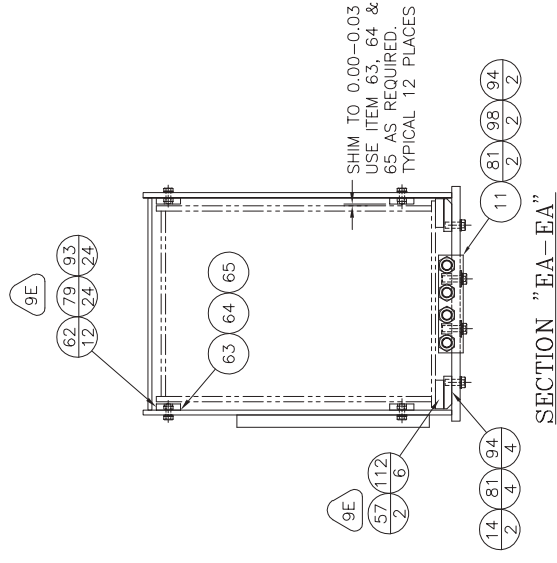
SECTION "DB - DB"
SCALE : 2X

SCALE	NONE	DRAWN	CT	CHECKED	EV	APPROV./DATE	DM	1/03
BOOM 4 SECTION ASSEMBLY								1/03
QUICK REEVE 102 FT								
TOLERANCES (UNLESS SPECIFIED)								
±1/16"								6000578-008
SHEET 4 OF 5								

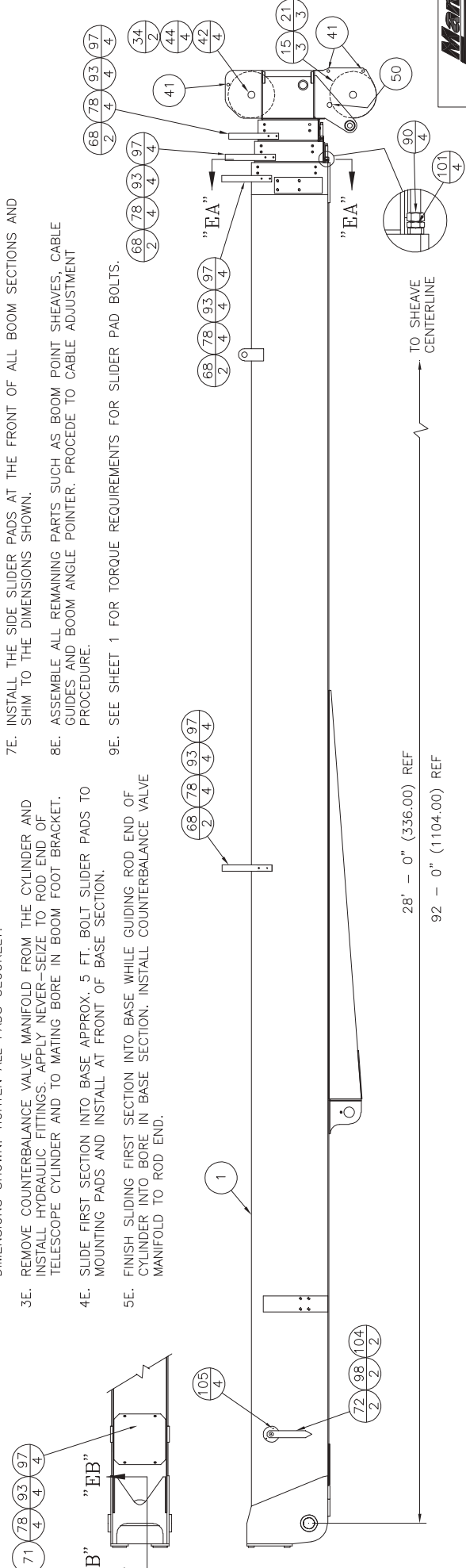


REVISIONS
EN 02-0018-05
CT 1/03
NEW RELEASE
EN 02-0018-10
EO 04-03
A) SEE SH11

SCALE	DRAWN	CHECKED	APPROV'D/TWE
NONE	CT	EV	DM
			1/03
MANITEX			
BOOM ASSEMBLY			
SECTION 4			
QUICK REEVE 102 FT			
TOLERANCES (UNLESS SPECIFIED)			
1/16"			
6000578-008			
SHEET 5 OF 5			



- 1E. INSTALL SLIDER PADS TO REAR OF FIRST SECTION. DO NOT TIGHTEN.
- 2E. FIT FIRST SECTION INSIDE BASE SECTION AND SHIM PADS TO THE DIMENSIONS SHOWN. TIGHTEN ALL PADS SECURELY.
- 3E. REMOVE COUNTERBALANCE VALVE MANIFOLD FROM THE CYLINDER AND INSTALL HYDRAULIC FITTINGS. APPLY NEVER-SEIZE TO ROD END OF TELESCOPE CYLINDER AND TO MATING BORE IN BOOM FOOT BRACKET.
- 4E. SLIDE FIRST SECTION INTO BASE APPROX. 5 FT. BOLT SLIDER PADS TO MOUNTING PADS AND INSTALL AT FRONT OF BASE SECTION.
- 5E. FINISH SLIDING FIRST SECTION INTO BASE WHILE GUIDING ROD END OF CYLINDER INTO BORE IN BASE SECTION. INSTALL COUNTERBALANCE VALVE MANIFOLD TO ROD END.
- 6E. ATTACH THE FOUR EXTEND ROPES TO REAR END OF THE BASE SECTION AND ATTACH THE FOUR RETRACT ROPES TO THE FRONT OF BASE SECTION AS SHOWN. TAKE UP SLACK IN THE EXTEND AND RETRACT ROPES AT THIS TIME.
- 7E. INSTALL THE SIDE SLIDER PADS AT THE FRONT OF ALL BOOM SECTIONS AND SHIM TO THE DIMENSIONS SHOWN.
- 8E. ASSEMBLE ALL REMAINING PARTS SUCH AS BOOM POINT SHEAVES, CABLE GUIDES AND BOOM ANGLE POINTER. PROCEED TO CABLE ADJUSTMENT PROCEDURE.
- 9E. SEE SHEET 1 FOR TORQUE REQUIREMENTS FOR SLIDER PAD BOLTS.

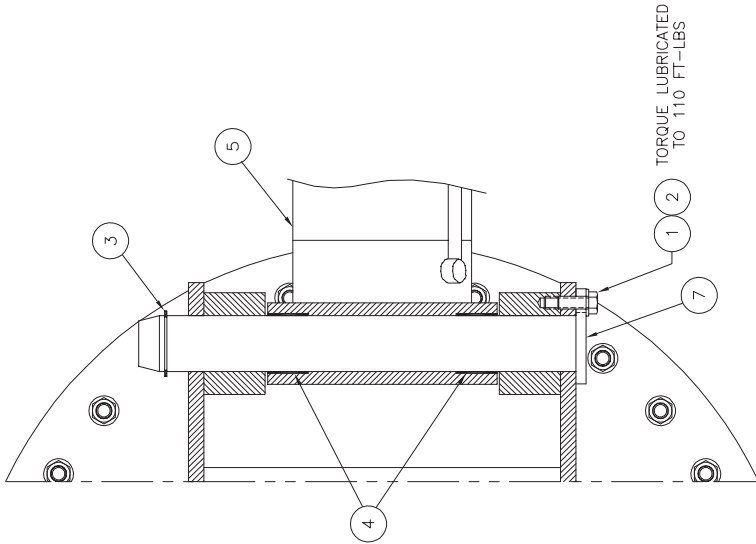


SUB-ASSEMBLY "E"
SCALE: 0.3125X

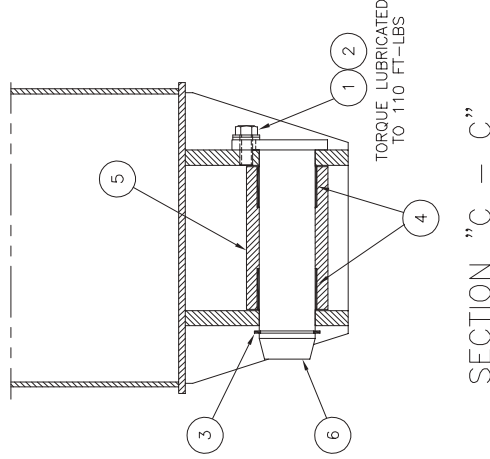
BILL OF MATERIAL				REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	EN 02-0018-05 CT 1/03 NEW RELEASE
1	2003-100000	4	FLATWASHER #0.625	0.03	
2	2004-101024	3	BOLT #0.625NC X 1.50	0.21	
3	2091-020275	3	RETAINING RING	0.05	
4	4000066-002	6	BEARING #2.75 ID	0.50	
5	4900225-001	1	HYD CYLINDER	468.00	
6	5002601-003	1	PIN	18.70	
7	5002601-005	2	PIN	36.50	
8	6000578-008	1	BOOM ASSEMBLY	8613.4	

TOTAL ASSEMBLY WEIGHT 9377.0 LBS.

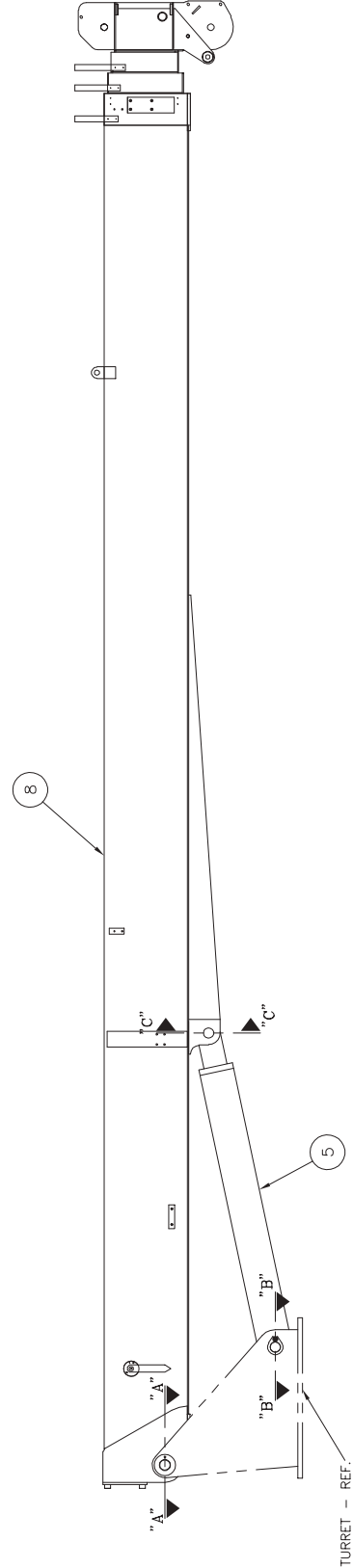
NOTE:
WEIGHT IS BASED ON CYLINDER RETRACTED
AND FULL OF OIL.



SECTION "B - B"



SECTION "C - C"



ASSEMBLY EFFECTIVE FROM: _____
SERIAL NO. _____ BUILD DATE: _____

DOCUMENT CONTROL STATUS:
REVISIONS CONTROLLED
HARD COPY UNCONTROLLED



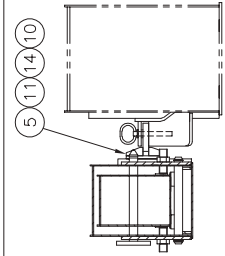
SCALE	DRAWN	CHECKED	APPROV./DATE
NTS	CT	EV	B.MORAVEC 1/03
BOOM INSTALLATION 102 FT QUICK REEVE			
TOLERANCES (UNLESS SPECIFIED)			
±1/16" SHEET			
6000740-038			

BILL OF MATERIAL				REVISIONS
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	2085-204032	1	HITCH PIN W/LYNCH	.47
2	2039-211177	4	HAIR PIN COLLER	.26
3	5000355-001	4	PIN	1.60
4	5000489-001	1	STORAGE BRACKET	14.10
5	5000491-001	1	STORAGE BRACKET	5.40
6	5000533-001	2	SHIM 18 GA. (.047)	.07
7	5000533-002	2	SHIM 10 GA. (.134)	.21
8	5000533-003	2	SHIM (.25)	.39
9	6000766-014	1	JIB ASSY. (TELE)	1178.2
10	2008-100000	12	FLATWASHER .63 DIA.	.03
11	2004-101020	8	BOLT .63 DIA X 1.25 L.	.19
12	2004-101024	4	BOLT .63 DIA X 1.50 L.	.21
13	5000490-001	1	STORAGE BRACKET	10.80
14	2006-100000	12	LOCKWASHER .63 DIA.	.01
15	5000893-001	1	JIB SAFETY STOP	4.90
16	2006-080000	2	LOCKWASHER .50 DIA	.01
17	2004-081016	2	BOLT ϕ 0.50 X 1.0	.06

TOTAL ASSEMBLY WEIGHT. 1225.6 LBS.

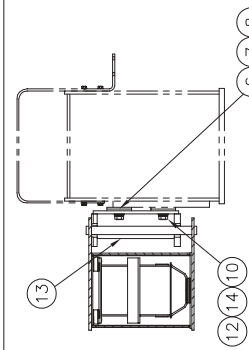
NOTES :

1. ADJUST BRACKETS (ITEMS 4 & 5) UP AND DOWN AND INSTALL SHIMS (ITEMS 6, 7 & 8) BEHIND BRACKET (ITEM 13) SO HOLES IN JIB FOOT LINE UP WITH HOLES IN BOOM HEAD. BOOM MUST BE FULLY RETRACTED AND JIB IN STORED POSITION WHEN MAKING ADJUSTMENTS.
2. FOR JIB ERECTION AND STORAGE INSTRUCTIONS SEE OWNERS MANUAL.



SECTION "B-B"

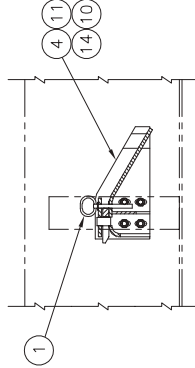
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SECTION "A-A"

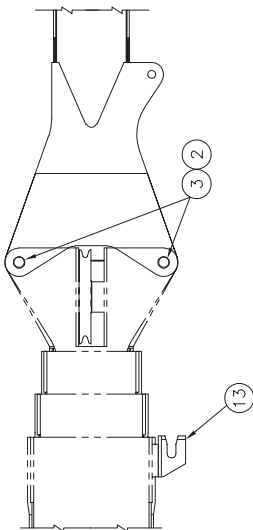
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SHIM AS REQUIRED
SEE NOTE 1



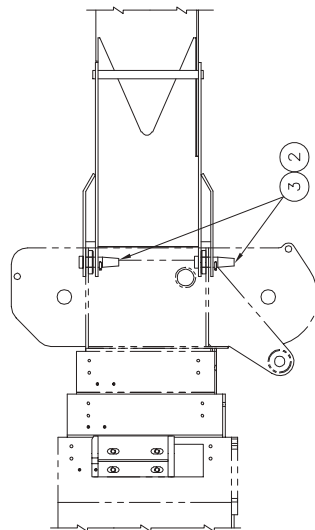
SECTION "C-C"

SCALE: 2X

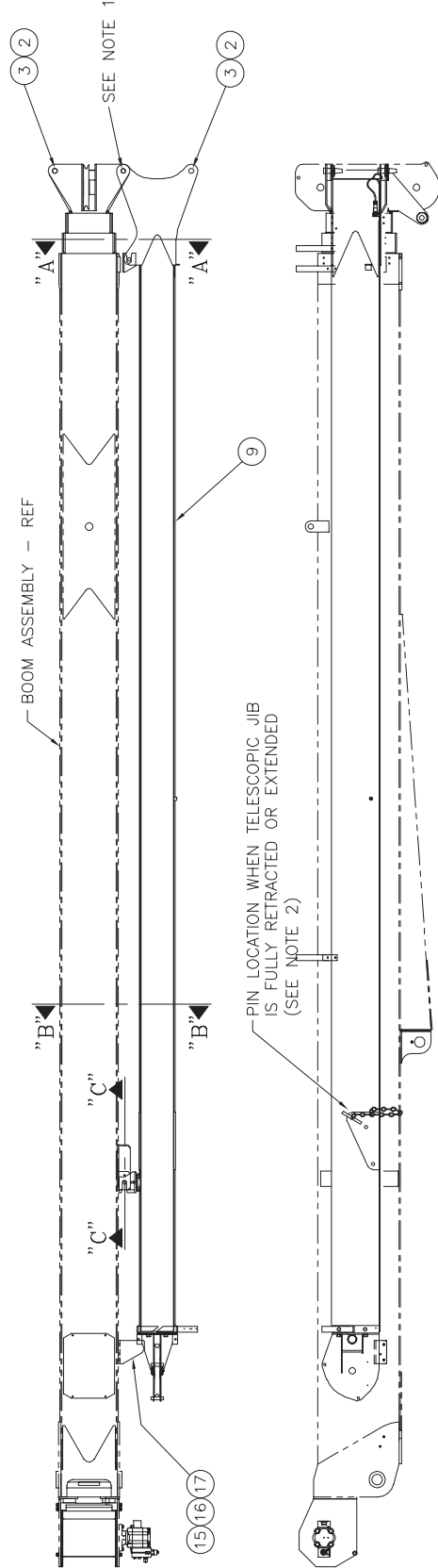


JIB IN ERECTED POSITION

SCALE: 2X
(SEE NOTE 2)



JIB IN STORED POSITION



EN 01-0029-1
DM 10/12/01
NEW RELEASE

DOCUMENT CONTROL STATUS:
REVISIONS:
HARD COPY UNCONTROLLED
ELECTRONIC UNCONTROLLED

Mantex

SCALE	DRAWN	CHECKED	APPROV'D/DATE
16 = 1"	DM	ED	B.MORAVEC 10/01

JIB INSTALLATION
TELESCOPIC 26-46 FT
WITH RADIO ATB

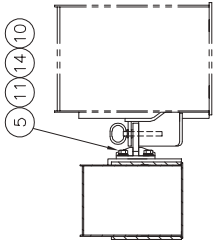
TOLERANCES (UNLESS OTHERWISE SPECIFIED)	6000765-014
±.1/.16	SHEET 1

BILL OF MATERIAL				REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	
1	2085-204032	1	HITCH PIN W/LYNCH	.47	EN 01-0029-1
2	2039-211177	4	HAIR PIN COLLER	.26	DM 10/15/01
3	5000355-001	4	PIN	1.60	NEW RELEASE
4	5000489-001	1	STORAGE BRACKET	14.10	
5	5000491-001	1	STORAGE BRACKET	5.40	
6	5000533-001	2	SHIM 18 GA. (.047)	.07	
7	5000533-002	2	SHIM 10 GA. (.134)	.21	
8	5000533-003	2	SHIM (.25)	.39	
9	6000766-015	1	JIB ASSY. FIXED	784.3	
10	2008-100000	12	FLATWASHER .63 DIA.	.03	
11	2004-101020	8	BOLT .63 DIA X 1.25 L.	.19	
12	2004-101024	4	BOLT .63 DIA X 1.50 L.	.21	
13	5000490-001	1	STORAGE BRACKET	10.80	
14	2006-100000	12	LOCKWASHER .63 DIA.	.01	

TOTAL ASSEMBLY WEIGHT. 826.7 LBS.

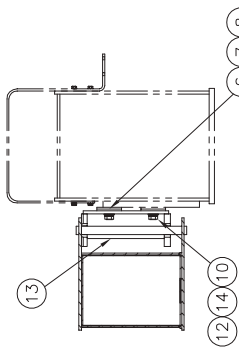
NOTES :

- ADJUST BRACKETS (ITEMS 4 & 5) UP AND DOWN AND INSTALL SHIMS (ITEMS 6, 7 & 8) BEHIND BRACKET (ITEM 13) SO HOLES IN JIB FOOT LINE UP WITH HOLES IN BOOM HEAD. BOOM MUST BE FULLY RETRACTED AND JIB IN STORED POSITION WHEN MAKING ADJUSTMENTS.
- FOR JIB ERECTION AND STORAGE INSTRUCTIONS SEE OWNERS MANUAL.



SECTION "B-B"

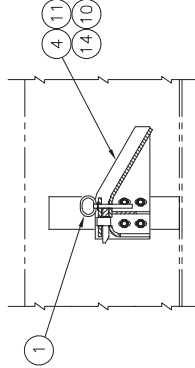
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SECTION "A-A"

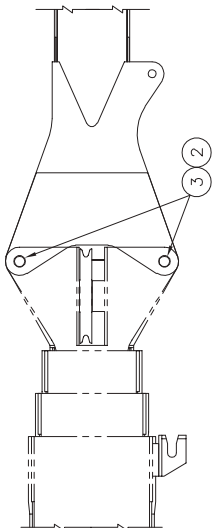
SCALE: 2X

SHIM AS REQUIRED
SEE NOTE 1



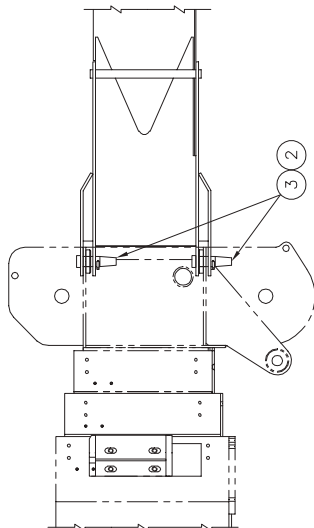
SECTION "C-C"

SCALE: 2X



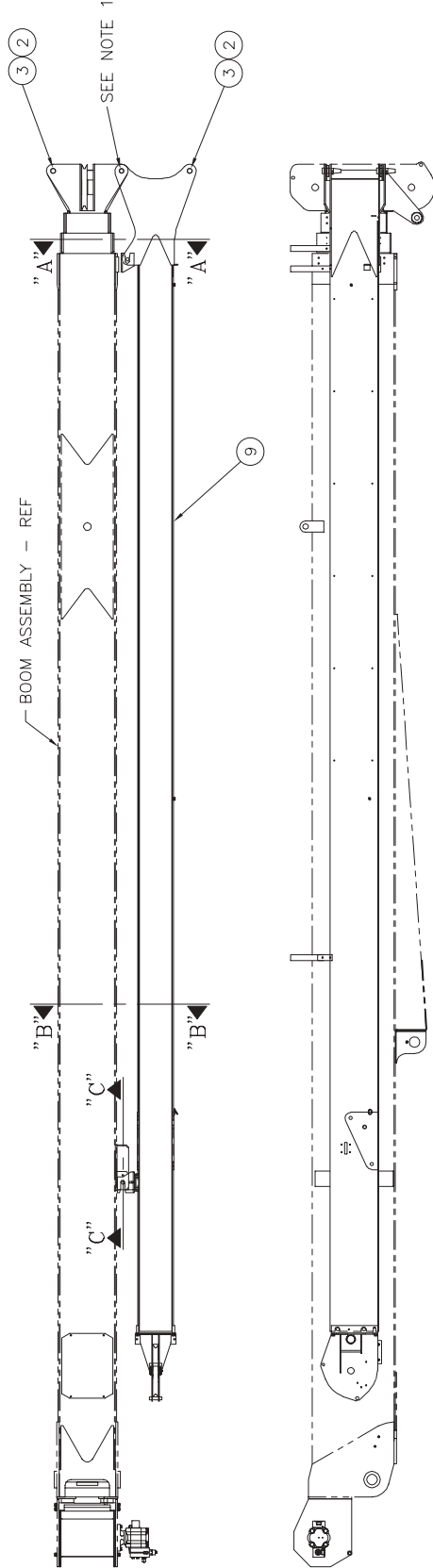
JIB IN ERECTED POSITION

SCALE: 2X
(SEE NOTE 2)



JIB IN STORED POSITION

(SEE NOTE 2)



DOCUMENT CONTROL STATUS:
 REVISIONS CONTROLLED
 HARD COPY UNCONTROLLED

Mantex

SCALE	DRAWN	CHECKED	APPROVED
16"=1"	DM	ED	DM/RAEC
			10/01

JIB INSTALLATION
 FIXED 26 FT
 WITH RADIO ATB

6000765-015

TOLERANCES
 (UNLESS OTHERWISE SPECIFIED)
 ±.1/16"

SHEET 1 OF 1

REVISIONS
EN 01-0029-1
DM 10/14/01
NEW RELEASE

BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	4000037-098	2	RETAINING RING	.01
2	4000037-175	2	RETAINING RING	.05
3	4000039-001	1	.125 GREASE FITTING	.01
4	4000057-002	4	SLIDER PAD	.27
5	2005-051000	4	HEX NUT 0.31 NC	.01
6	4000065-001	1	SLIDER PAD	.22
7	4000132-002	1	NEEDLE BEARING	.80
8	5002653-001	1	JIB BASE WELD	727.1
9	5001071-001	1	BOOM EXTENSION HD.	42.82
10	5002654-001	1	JIB STINGER WELD	368.8
11	5000304-004	2	SHIM 18 GA. (.047)	.15
12	5000304-005	2	SHIM 14 GA. (.074)	.24
13	5000304-006	2	SHIM 10 GA. (.134)	.43
14	5000347-001	1	HEAD SHEAVE PIN	2.00
15	5002140-001	1	PIN & CHAIN WELD	3.50
16	5001077-001	1	SLIDER PAD SUPPORT	7.50
17	5000353-003	1	PAD SUPPORT PIN	.30
18	5000354-002	1	STOP PIN	2.30
19	5000412-001	2	.75 DIA. PIN	.40
20	5000553-004	1	CABLE GUIDE	1.76
21	4000053-003	1	SHEAVE, EXTEND	7.12
22	5001252-001	1	INSERT	2.17
23	2004-051014	2	BOLT .31 DIA.	.03
24	2004-081016	4	BOLT .50 DIA.	.05
25	2006-050000	6	LOCKWASHER .31 DIA.	.01
26	2006-080000	4	LOCKWASHER .50 DIA.	.01
27	2008-080000	4	FLAT WASHER .50 DIA.	.01
28	2031-161048	6	JAM NUT 1.00 DIA.	.18
29	2031-161048	6	S/C SET SCR 1.00 DIA.	.67
30	2029-051008	2	S/FL HD SCR .31 DIA.	.01
31	2029-051020	8	S/FL HD SCR .31 DIA.	.02
32	2035-081016	2	COTTER PIN	.01
33	2039-171148	5	HAIR PIN COTTER	.03
34	4000131-002	1	BEARING, H.D. NEEDLE	1.00
35	2005-081000	4	HEX NUT .50 DIA.	.02
36	5000553-005	1	CABLE GUIDE	1.19

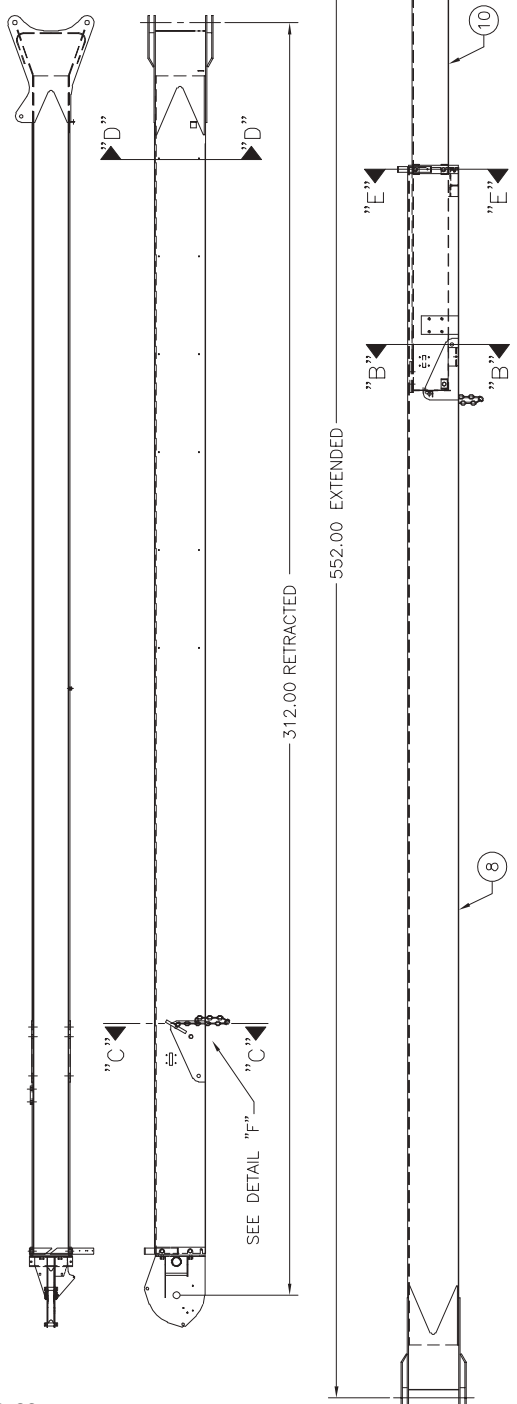
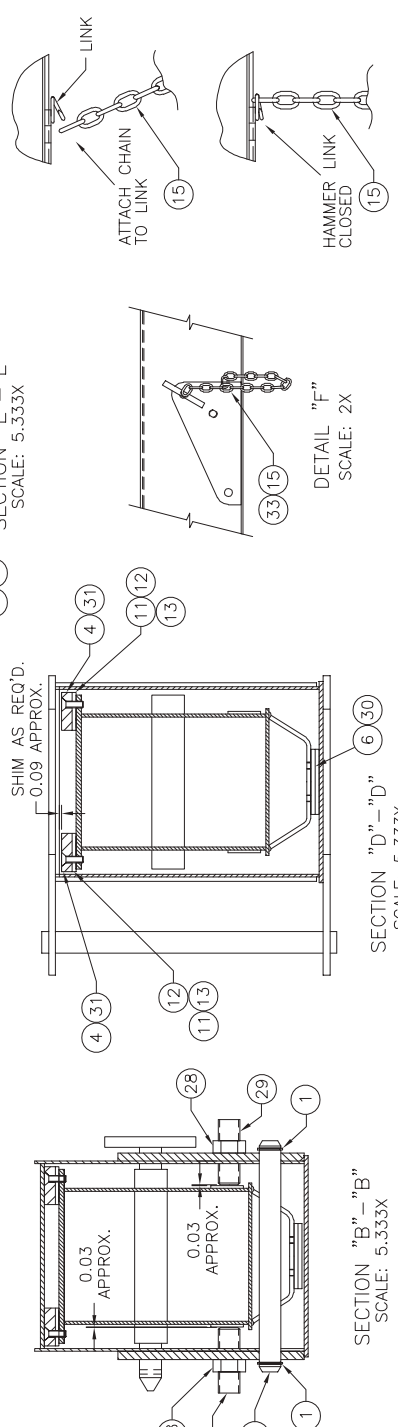
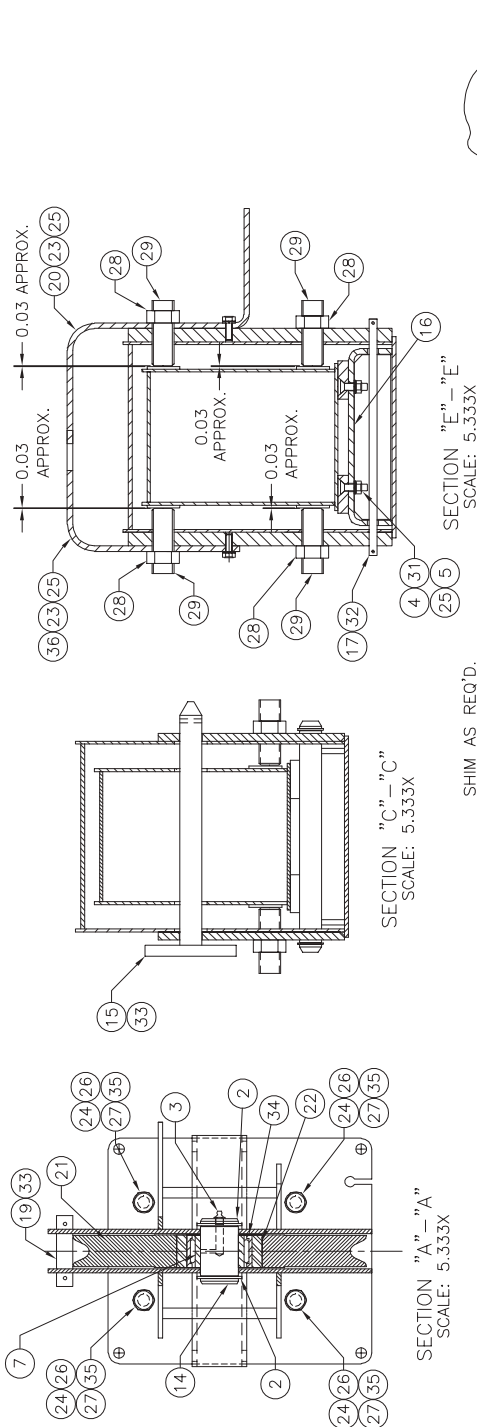
TOTAL ASSEMBLY WEIGHT. 1178.2 LBS.

NOTE: LOCTITE & SPEC.

TORQUE REQUIREMENTS FOR SLIDER PAD BOLTS. APPLY LOCTITE TO THREAD BEFORE TORQUING.

A. BOLT 5/16" - 18 UNC TORQUE 10-13 FT. LBS/156 IN. LBS.

B. THREADLOCKER (LOCTITE) PRODUCT NO. 242



DOCUMENT CONTROL STATUS:
REVISIONS: 1
HARD COPY: UNCONTROLLED

Mantex

CHECKED: APPROV./DATE
DRAWN: DM 10/14/01
ED: B.MORAVEC 10/01

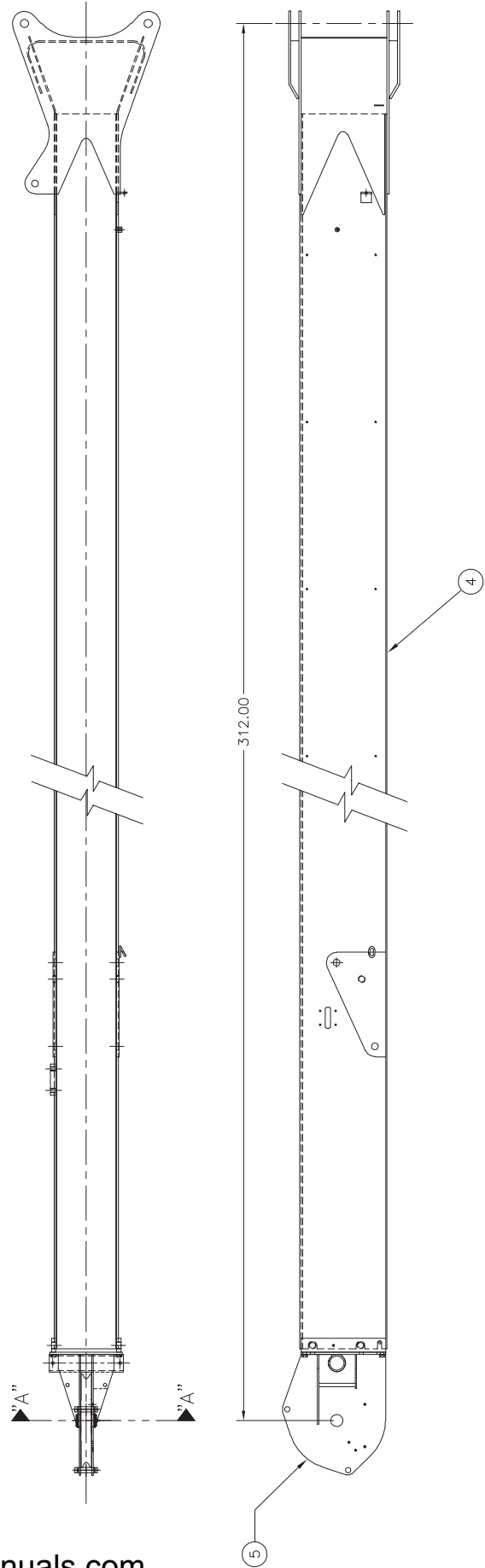
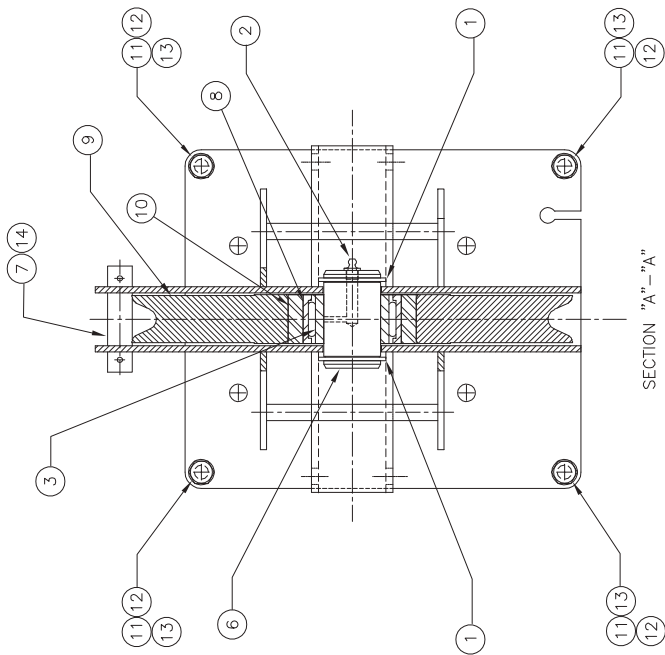
JIB ASSEMBLY
TELESCOPIC 26-46 FT
WITH RADIO ATB

TOLERANCES
(UNLESS SPECIFIED)
±1/16" 6000766-014

SHEET 1 OF 1

BILL OF MATERIAL				REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	
1	4000037-175	2	RETAINING RING	.05	EN 01-0029-1
2	4000039-001	1	0.125 GREASE FITTING	.01	DM 10/15/01
3	4000132-002	1	NEEDLE BEARING	.80	NEW RELEASE
4	5002653-001	1	JIB BASE WELD	727.1	
5	5001071-001	1	BOOM EXTENSION HD.	42.82	
6	5000347-001	1	HEAD SHEAVE PIN	2.00	
7	5000412-001	2	.75 DIA. PIN	.40	
8	4000131-002	1	BEARING	1.00	
9	4000053-003	1	SHEAVE	7.12	
10	5001252-001	1	INSERT	2.17	
11	2004-071016	4	BOLT .44 DIA.	.05	
12	2006-070000	4	LOCKWASHER .44 DIA.	.01	
13	2008-070000	4	FLAT WASHER .44 DIA.	.01	
14	2039-171148	4	HAIR PIN COTTER	.03	

TOTAL WEIGHT ----- 784.3 LBS.

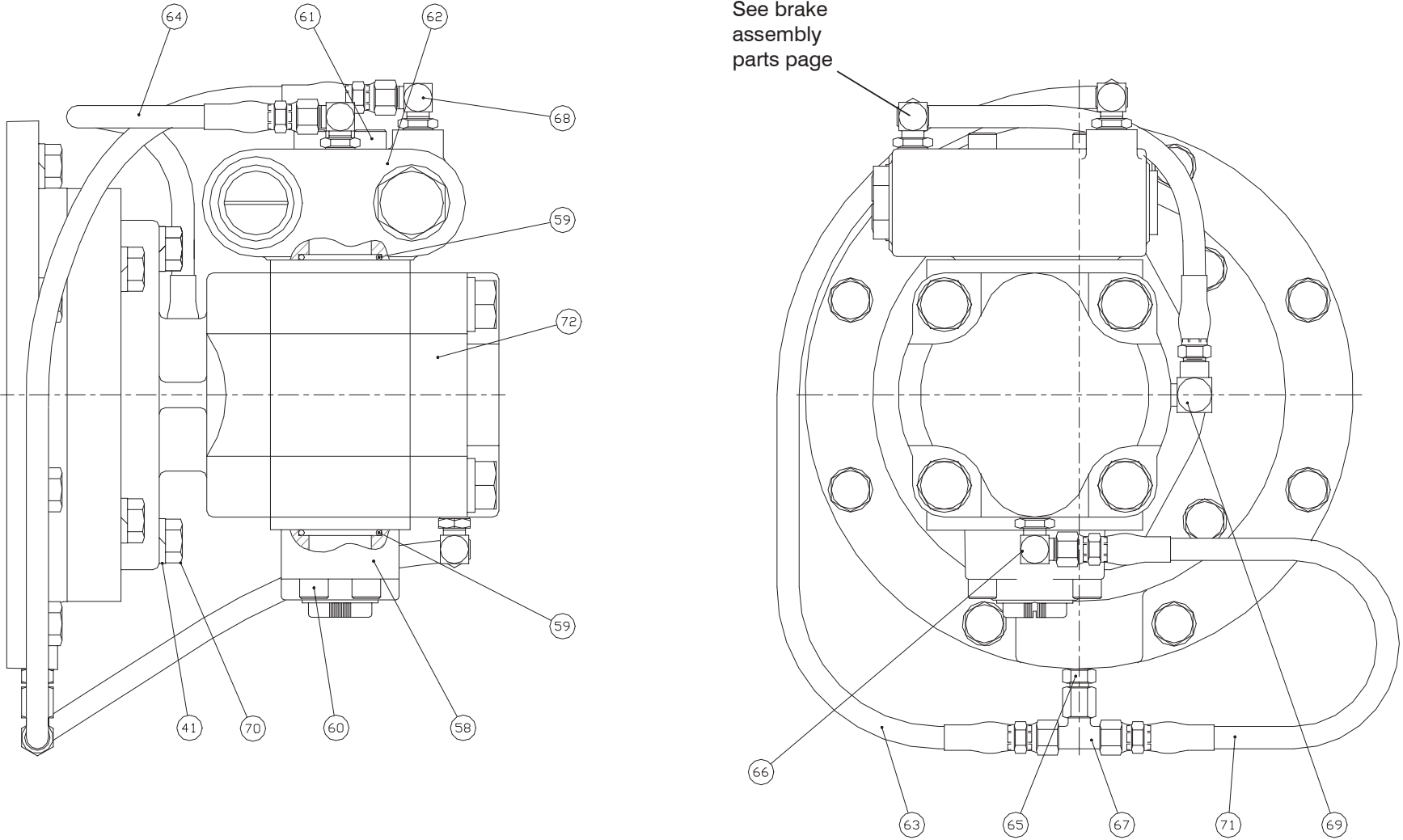


DOCUMENT CONTROL STATUS: ED
 MANUFACTURING CONTROLLED
 HARD COPY UNCONTROLLED



SCALE	DRAWN	CHECKED	APPROV'D/DATE
1/8" = 1"	DM	ED	B.MORAVEC 10/01
JIB ASSEMBLY FIXED 26 FT WITH RADIO ATB			
TOLERANCES (UNLESS OTHERWISE SPECIFIED)			6000766-015
11/16"			SHEET 1 OF 1

See brake
assembly
parts page



Motor Sub-Assembly

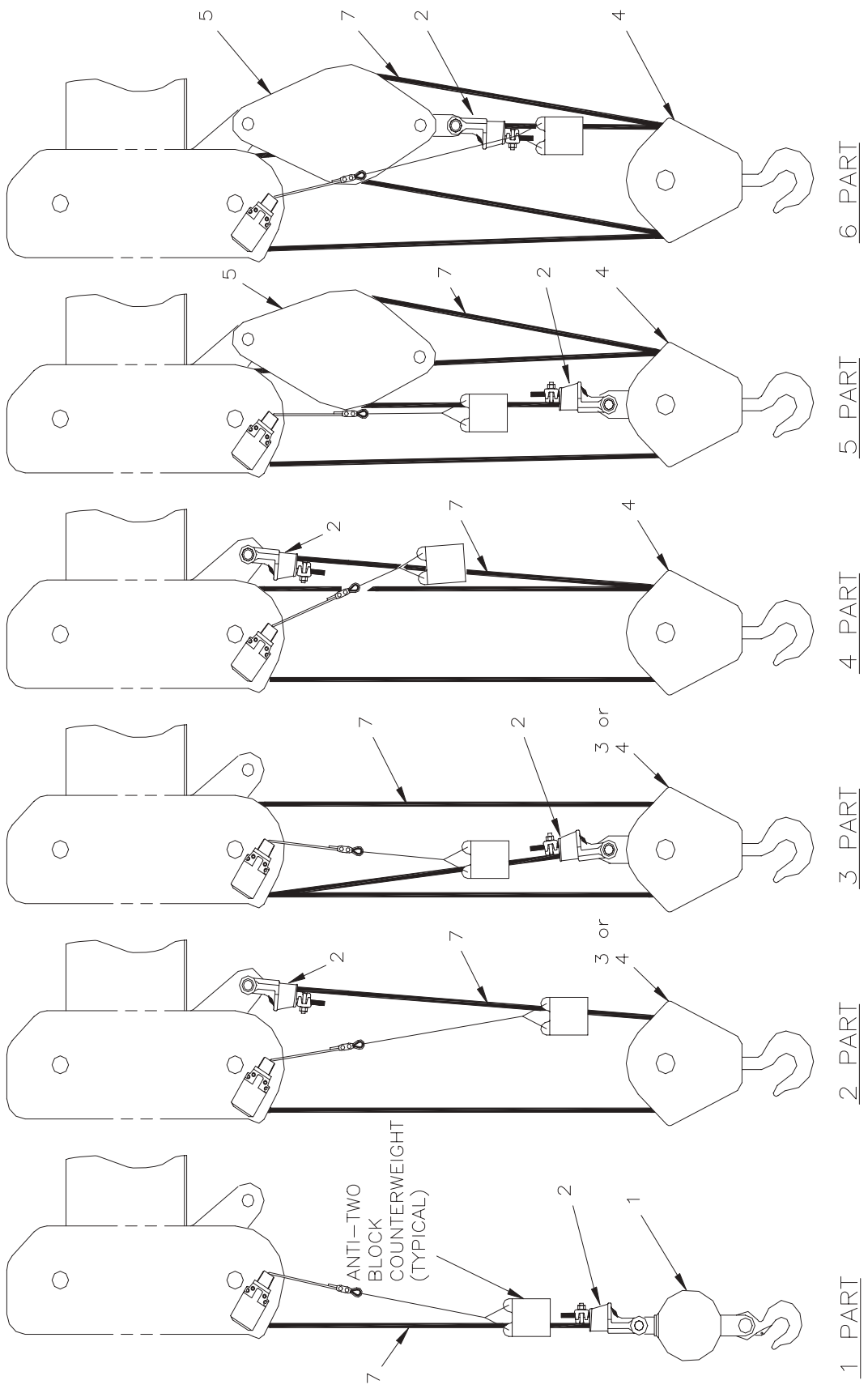
Manitex

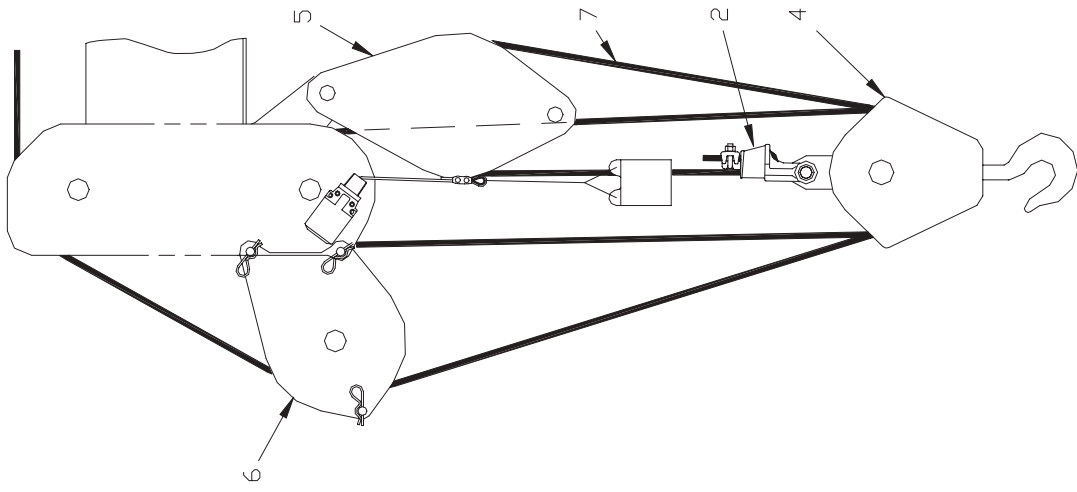
Motor Sub-Assembly 6601190 (NR)

ITEM	PART #	QTY	DESCRIPTION
41	2008-080000	2	Lockwasher
58	7009245	1	Split Flange Adapter
59	7009234	2	O-Ring
60	7009248	4	Capscrew
61	7009247	4	Capscrew
62	4000721-500	1	Brake Valve (See separate parts page)
63	7009421	1	Hose Assembly
64	7001248	1	Hose Assembly
65	7009414	1	Adapter
66	7009246	1	Elbow
67	7009415	1	Swivel Tee
68	7009267	1	Elbow
69	6601191	1	Reducer Elbow
70	2001-081024	2	Capscrew 0.50-13NC x 1.50 Gr. 8
71	7009413	1	Hose Assembly
72	7009849	1	Hydraulic Motor
	6600223		Seal Kit, Motor only

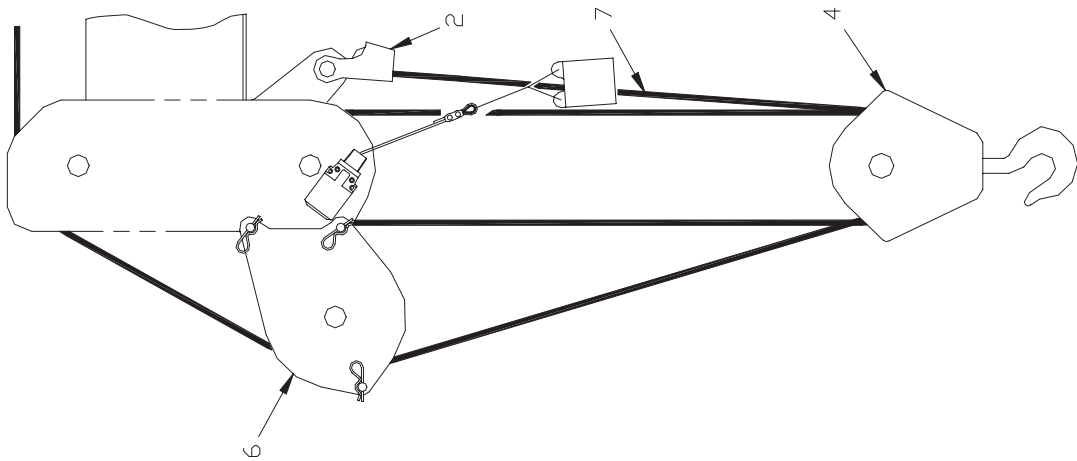
Motor Sub-Assembly

6601190 (NR)

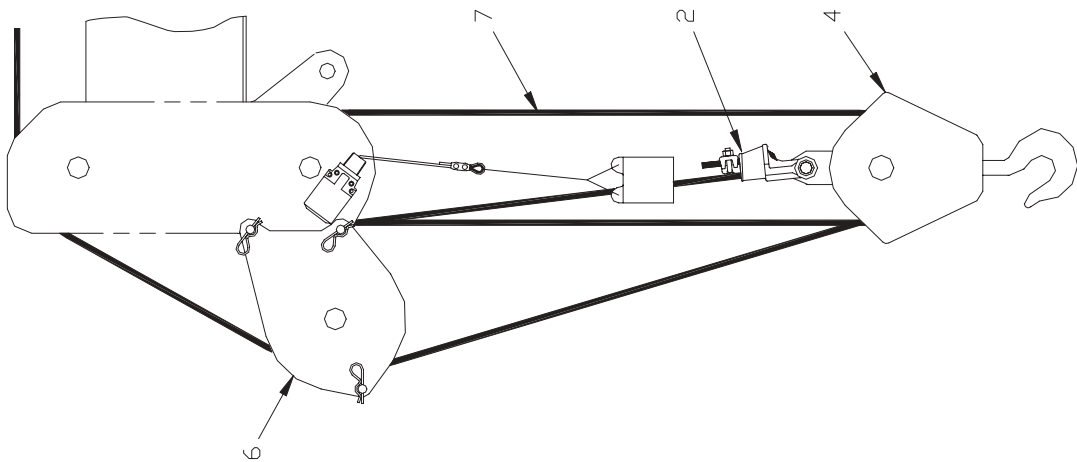




5 PART



6 PART

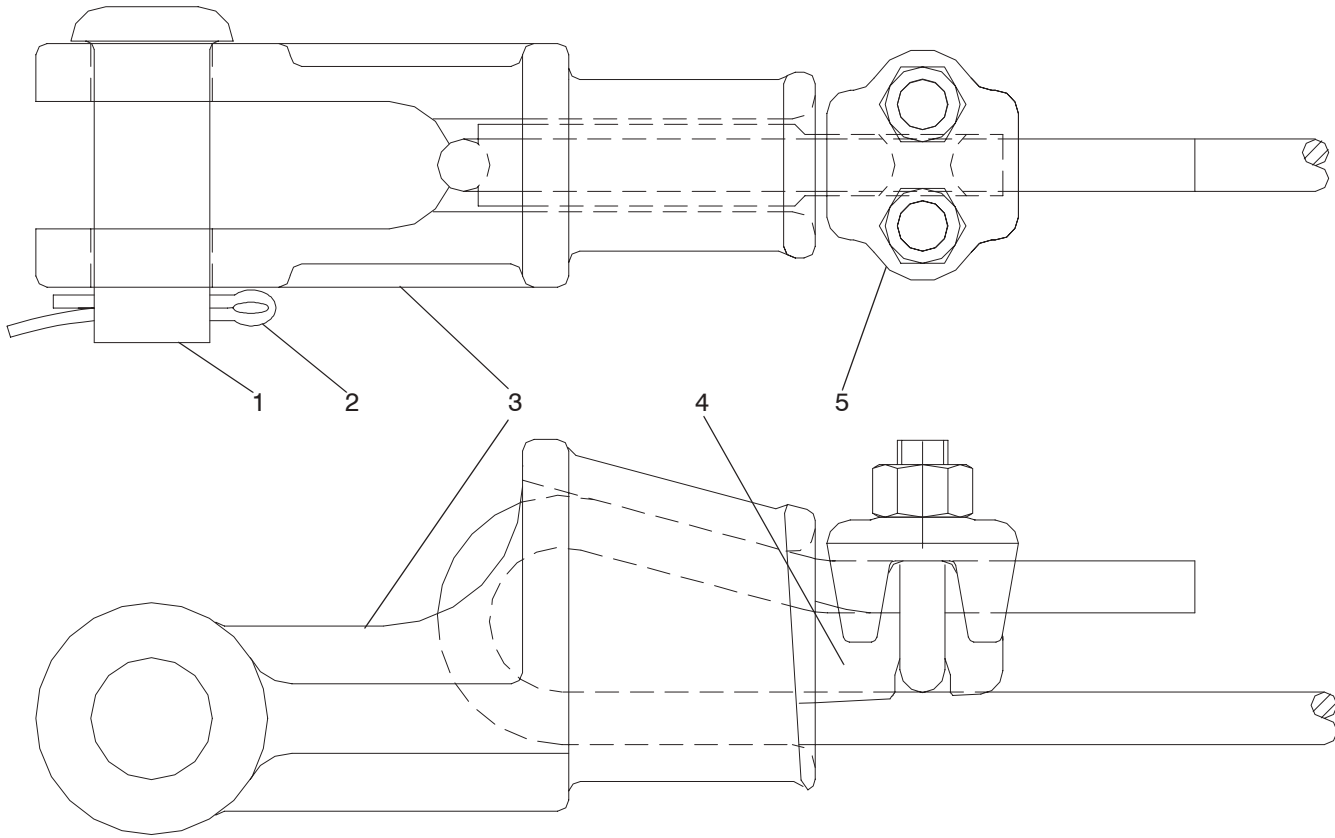


7 PART

Load Line and Tackle 3001-110/120/160

ITEM	PART #	QTY	DESCRIPTION
1	4000795-102	1	5-TON OVERHAUL BALL (1-Part Line)
2	4000775-009	1	SOCKET & WEDGE TERMINATOR, 9/16-inch diameter rope
3	4000795-001	1	LOAD BLOCK, Single Sheave (15 Ton) (2 - 3 Part Line)
4	4000795-002	1	LOAD BLOCK, Triple Sheave (30 Ton) 2 - 7 Part Line)
5	6000124-004	1	AUXILIARY SHEAVE ASSEMBLY
6	6000643-002	1	AUXILIARY SHEAVE INST
7	4000341-1090335	1	HOIST LINE, 335 ft., 9/16" EIPS 6X19 WIRE ROPE
			OPTIONAL:
7	4000345-1090335	1	HOIST LINE, 335 ft., 9/16" ROTATION RESISTANT WIRE ROPE

Load Line and Tackle



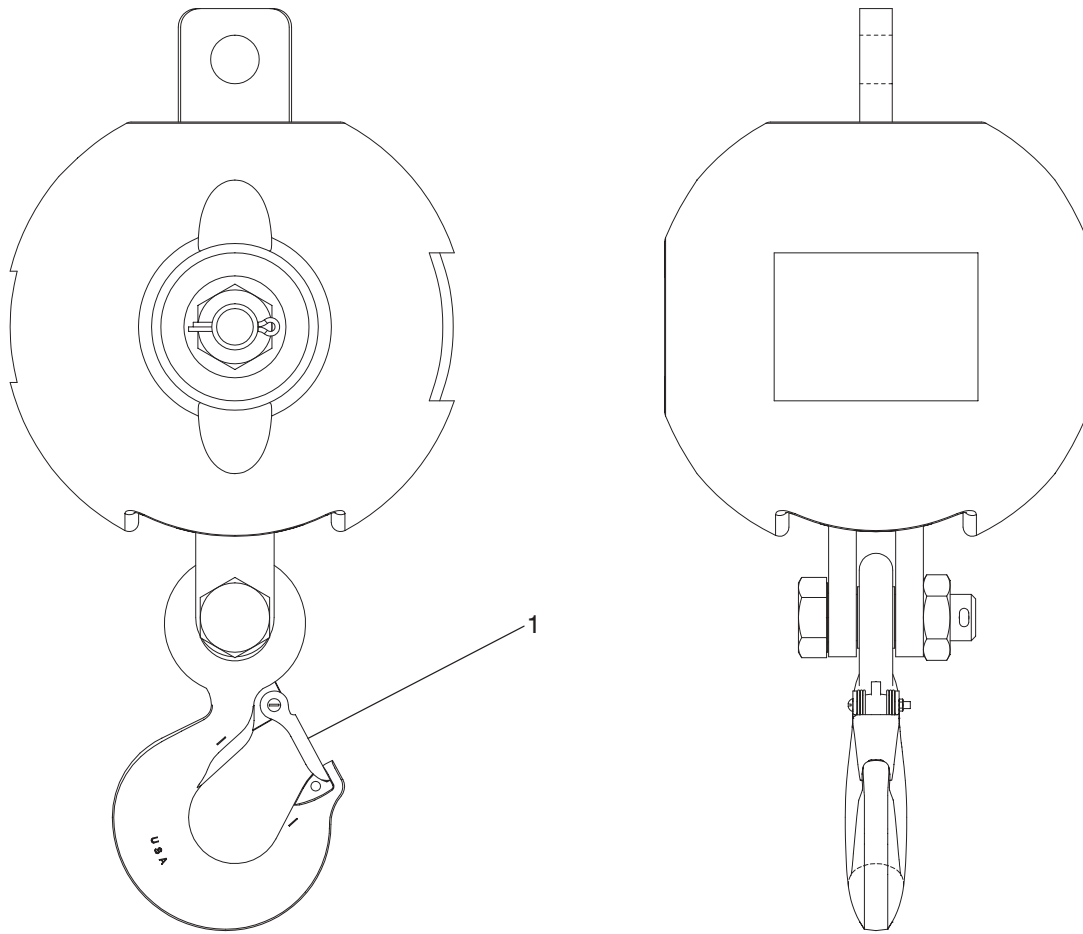
Manitex

Socket & Wedge Terminator 9/16" Rope 400775-009 (NR)

ITEM	PART #	QTY	DESCRIPTION
1	6601250	1	Socket Pin
2	6601251	1	Cotter Pin
3	6601252	1	Socket
4	6601253	1	Wedge
5	6601254	1	Clip

Socket & Wedge Terminator 9/16" Rope

400775-009 (NR)



5-TON OVERHAUL BALL (1-Part Line)

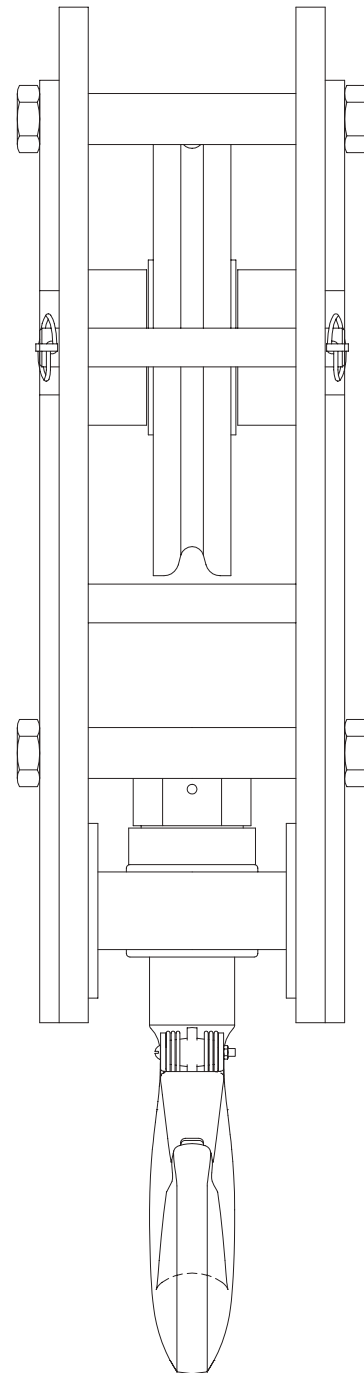
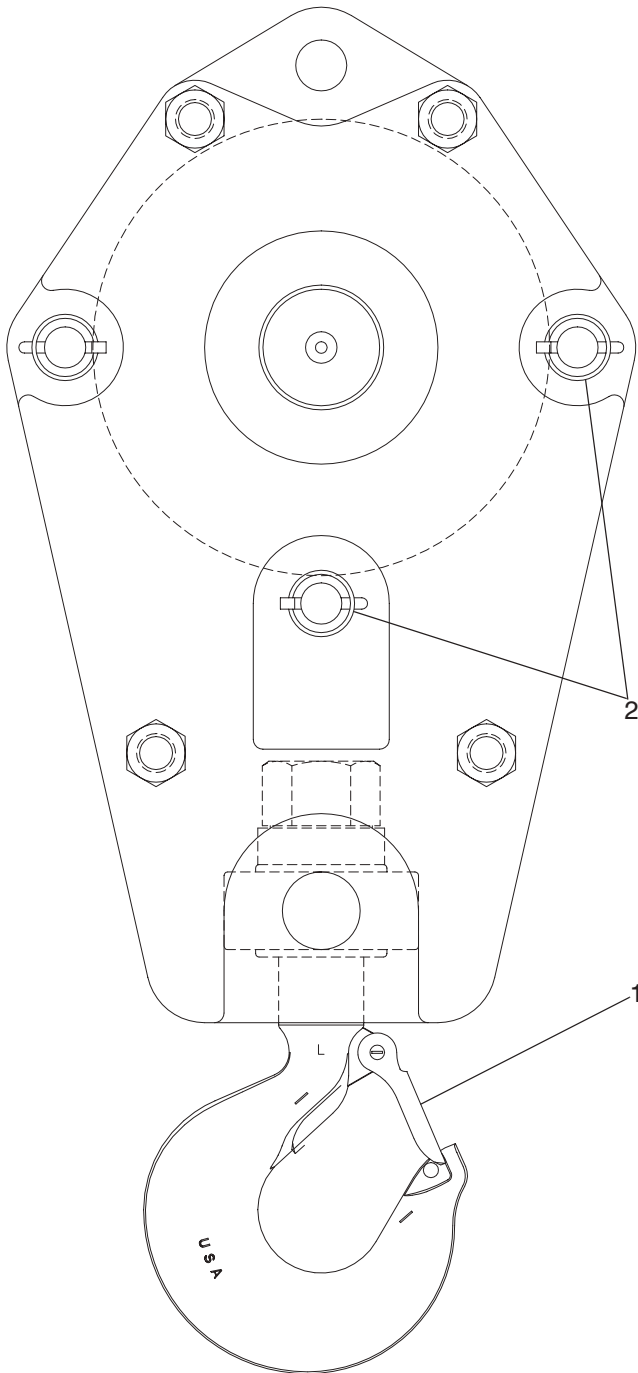
Manitex

5-TON OVERHAUL BALL (1-Part Line) 4000795-102 (A)

ITEM	PART #	QTY	DESCRIPTION
1	6601255	1	Hook Latch

5-TON OVERHAUL BALL (1-Part Line)

4000795-102 (A)



Load Block, Single Sheave (15 Ton)

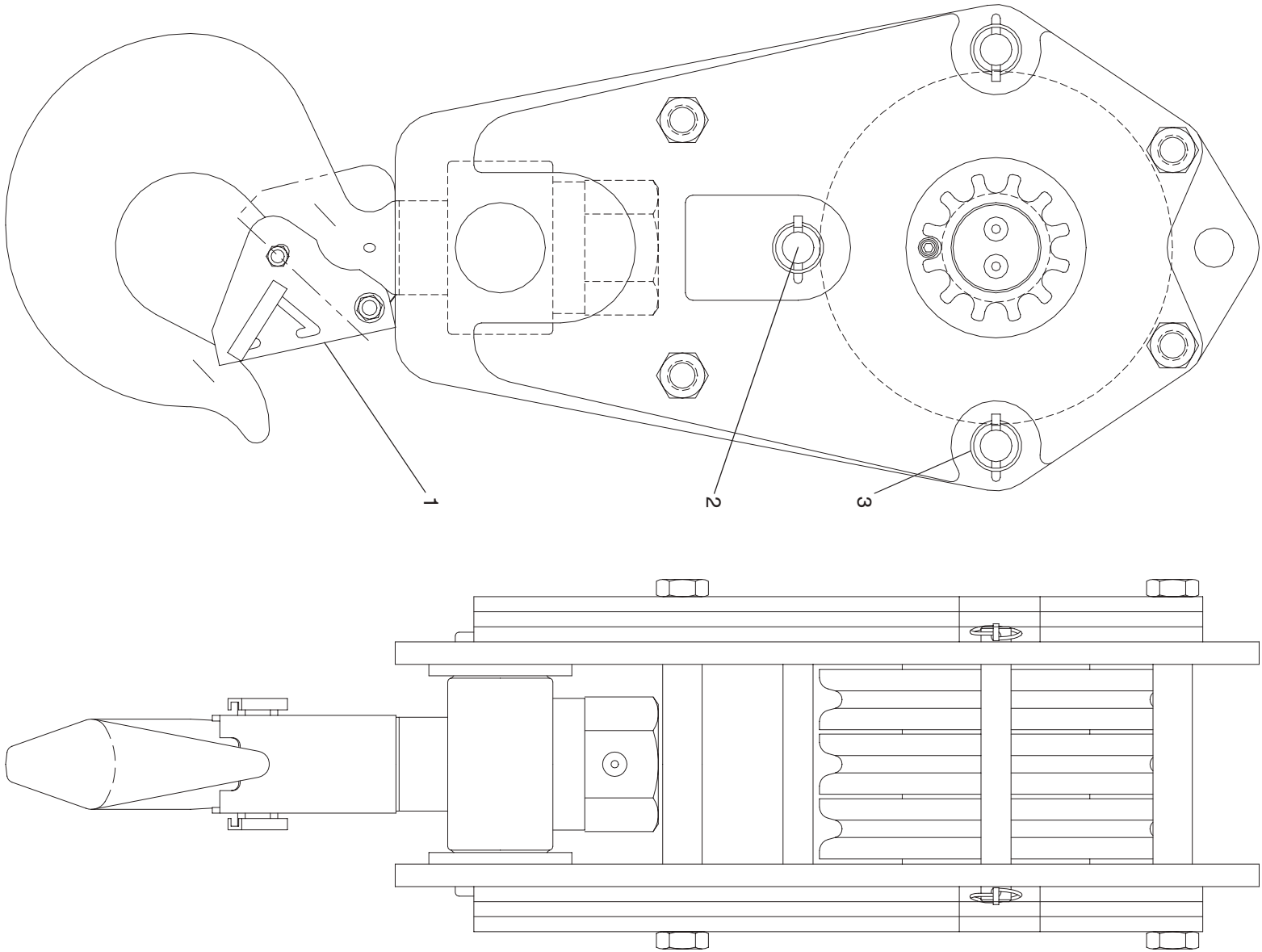
Manitex

Load Block, Single Sheave (15 Ton) 4000795-001 (A)

ITEM	PART #	QTY	DESCRIPTION
1	6601255	1	Hook Latch
2	6601256	3	Pull Pin

Load Block, Single Sheave (15 Ton)

4000795-001 (A)



Load Block, Triple Sheave (30 Ton, 9/16" Wire Rope)

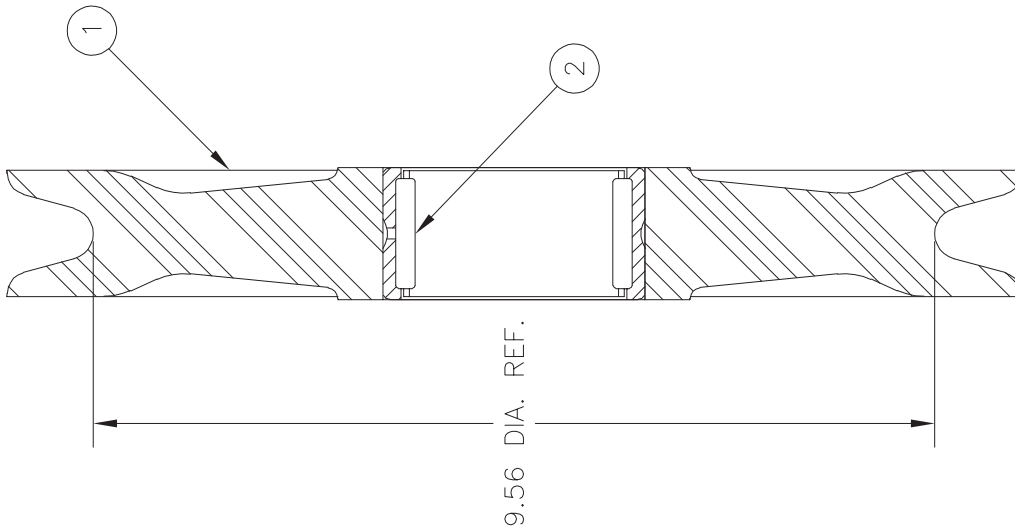
Manitex

Load Block, Triple Sheave (30 Ton, 9/16" Wire Rope) 4000795-002 (A)

ITEM	PART #	QTY	DESCRIPTION
1	6601257	1	Hook Latch
2	6601258	3	Pull Pin
3	6601508	6	Klik Pin

Load Block, Triple Sheave (30 Ton, 9/16" Wire Rope)

4000795-002 (A)



FOR MODELS: 1100, 1500, 1900
SEE EN 89-0173

TOTAL ASSEMBLY WEIGHT. 5.7 LBS.

BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	4000052-003	1	SHEAVE 0.56φ W.R.	4.7
2	4000131-002	1	BEARING HEAVY DUTY	1.0

REVISIONS

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARDCOPY = UNCONTROLLED



SCALE	DRAWN	CHECKED	APPRD./DATE
NONE	DP	JPZ	D.MORAVEC 1/87

BOOM HEAD
SHEAVE
SUB-ASSEMBLY

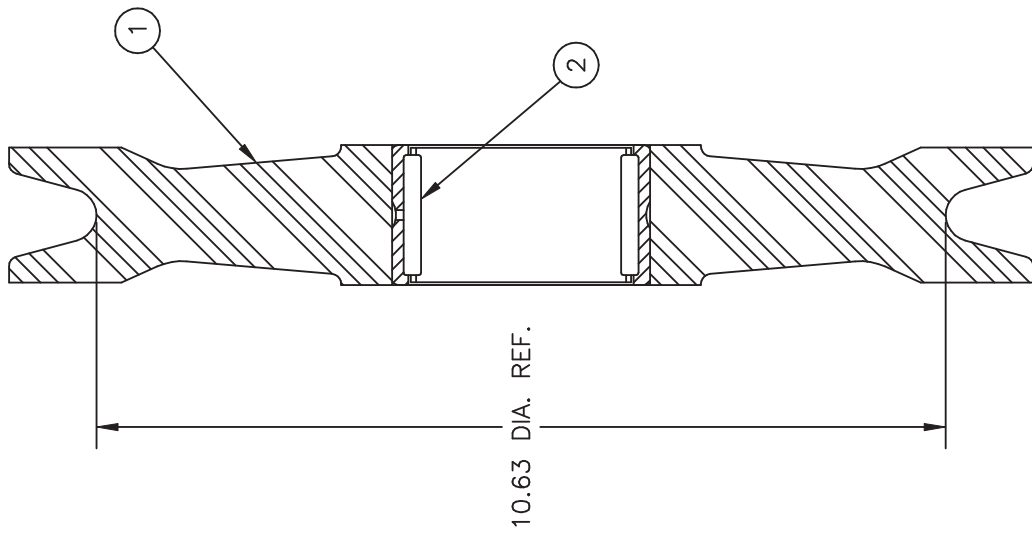
TOLERANCES (UNLESS SPECIFIED)	6000111-003
±1/16"	SHEET 1 OF 1

BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	4000052-004	1	SHEAVE 0.63φ W.R.	7.1
2	4000131-005	1	BEARING HEAVY DUTY	1.3

TOTAL ASSEMBLY WEIGHT. 8.4 LBS.

FOR MODEL: 2800



REVISIONS

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARD COPY = UNCONTROLLED

Manitowoc Boom Trucks, Inc.
A **Manitowoc** Company

SCALE	DRAWN	CHECKED	APPRVD./DATE
NONE	DP	JPZ	D.MORAVEC 1/87

BOOM HEAD
SHEAVE
SUB-ASSEMBLY

TOLERANCES (UNLESS SPECIFIED)	SHEET	OF
±1/16"	1	1

MTA1557

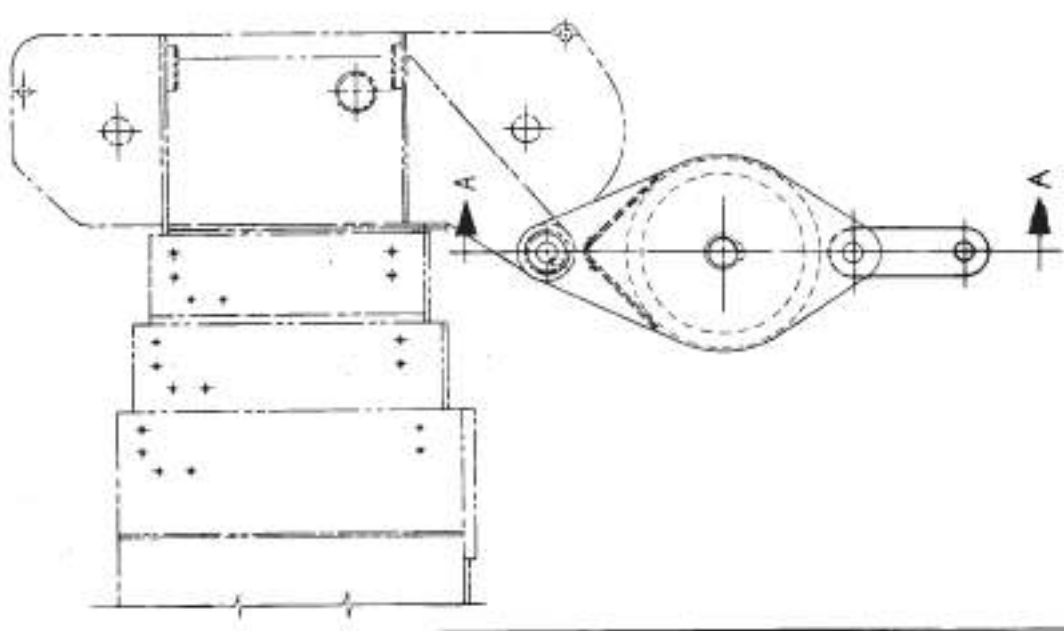
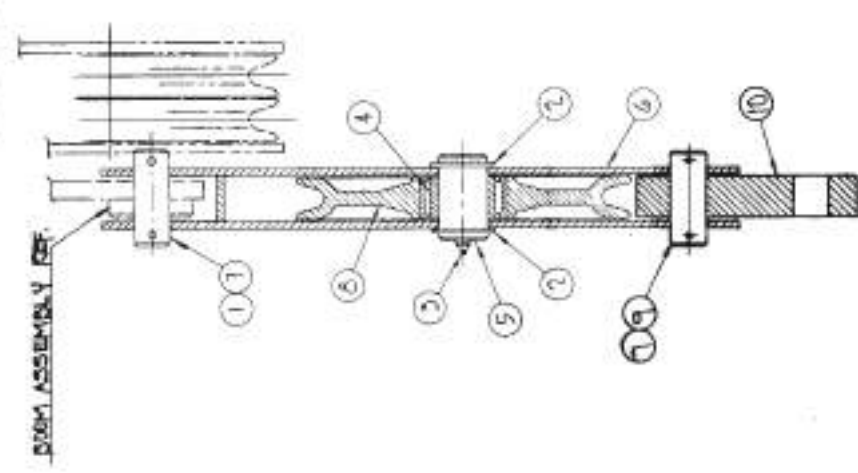
1 2 3 4 5 6 7

BILL OF MATERIAL DWG. NO. 6000124-004

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	RAW MATERIAL PART NUMBER	CITY
1	2055-10077	1	HAIR PIN COTTER	.15		
2	4000037-075	1	RETAINING RING	.09		
3	4000035-001	1	SPREAD FITTING	.01		
4	4000153-002	1	WHEEL SEARING RUBBER SLEEVE	.60		
5	5000347-001	1	HEAD SCREW PIN	1.00		
6	5000404-002	1	AUXILIARY SHEAVE BRACKET	2.150		
7	5000406-001	2	1.75 DIA. PIN	1.10		
8	6000111-003	1	300P HEAD SCREW SUBASSEMBLY	3.70		
9	2005-160032	2	COTTER PIN	.02		
10	5000420-004	1	AUXILIARY SHEAVE LINK	8.20		

TOTAL ASSEMBLY WEIGHT - 46.63 LBS.

FOR 6 PART LINE ON MODEL 2200



SECTION 'A-A'

REV. DATE

Manitex Inc.
A MANITEX COMPANY

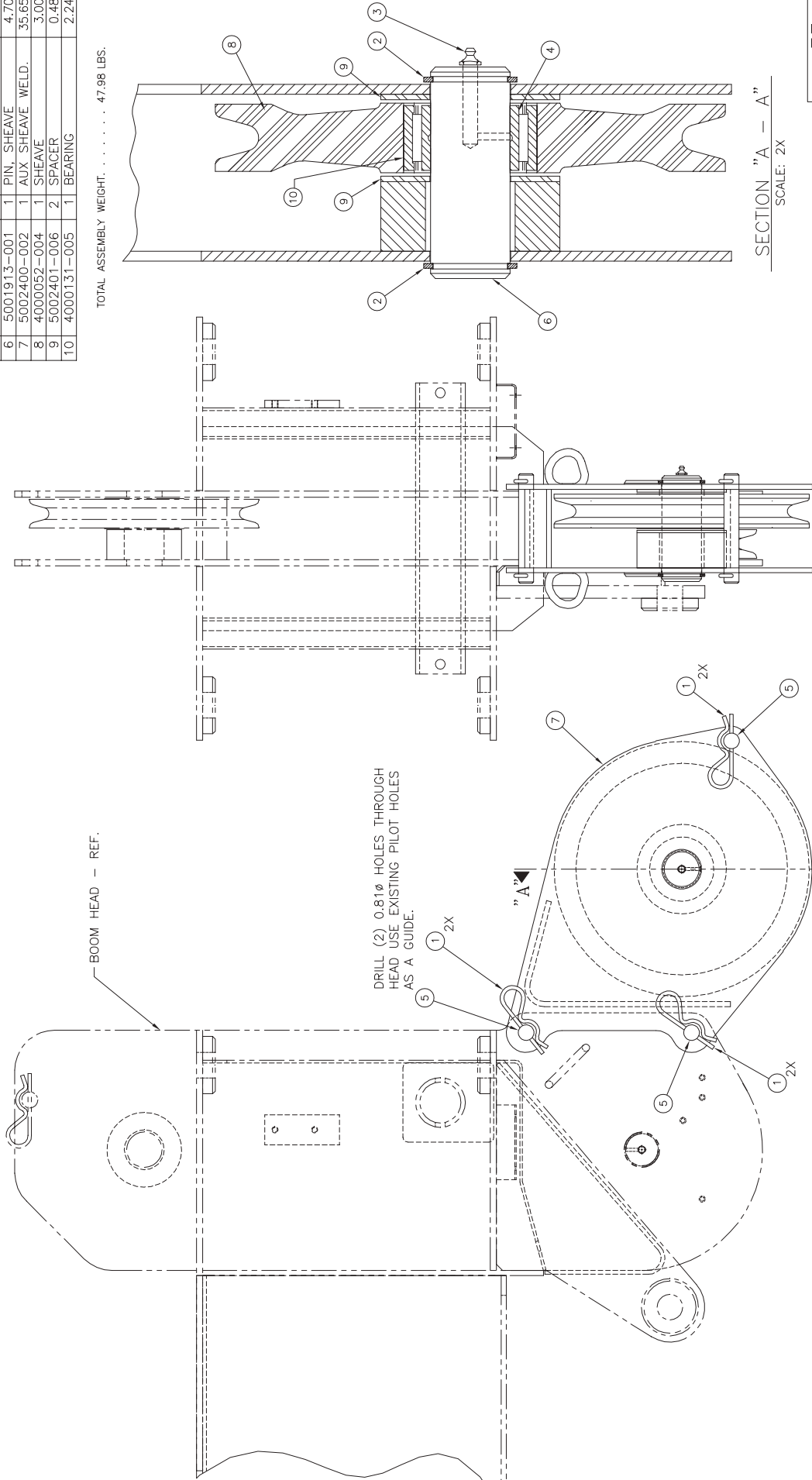
REV. DATE
ENV 56 10/19/80

AUXILIARY SHEAVE INST
MODEL 1900, 2200

TOTAL SHEETS 6000124-004
SHEET 02

BILL OF MATERIAL			REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	2039-171148	6	HAIRPIN, COTTER	.02
2	4000037-200	2	SNAP RING	.01
3	4000039-001	1	GREASE FITTING	.01
4	4000132-005	1	BEARING, INNER RACE	.80
5	5000412-004	3	PIN	.40 [A]
6	5001913-001	1	PIN, SHEAVE	4.70
7	5002400-002	1	AUX SHEAVE WELD.	35.65
8	4000052-004	1	SHEAVE	3.00
9	5002401-006	2	SPACER	0.48
10	4000131-005	1	BEARING	2.24

TOTAL ASSEMBLY WEIGHT 47.98 LBS.

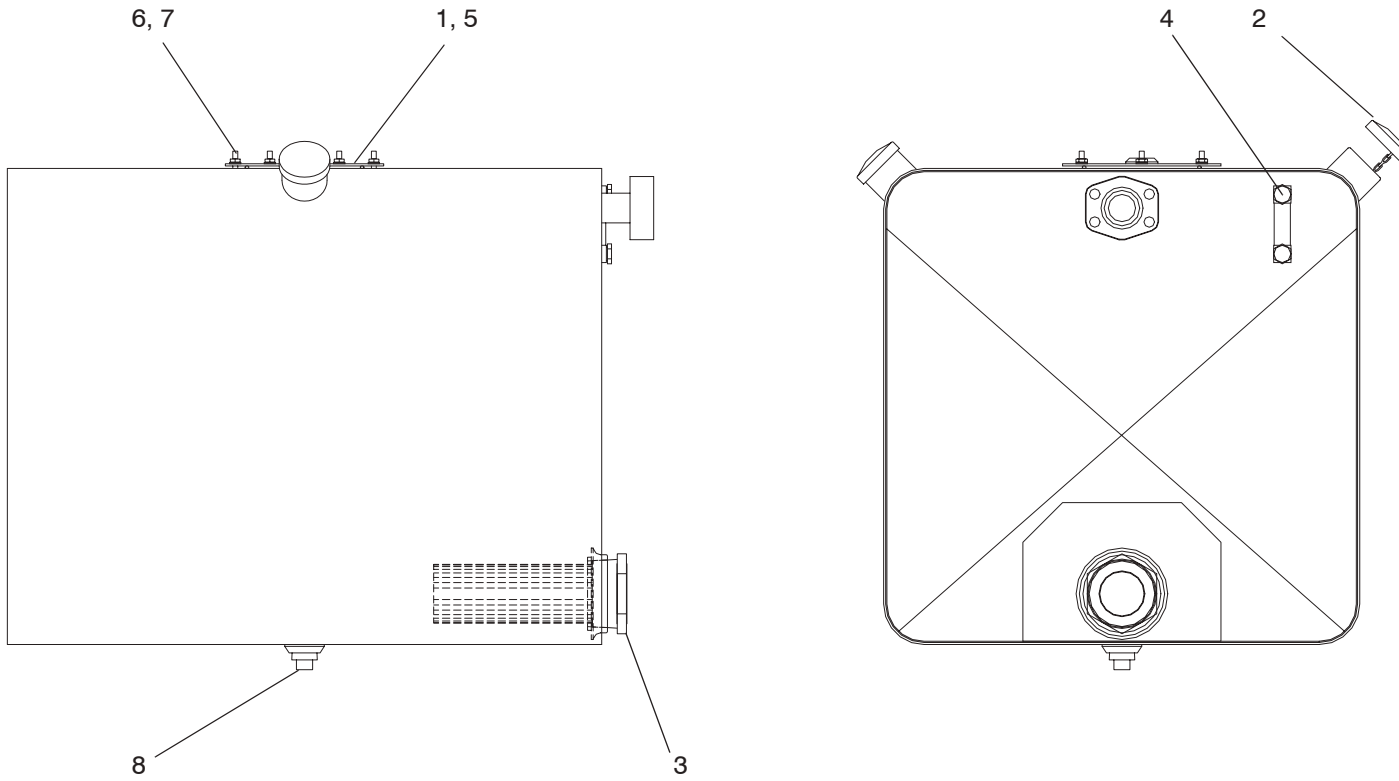


SECTION "A - A"
SCALE: 2X

REQUIRE CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARD COPY = UNCONTROLLED

SCALE	DRAWN	CHECKED	APPROV./DATE
1"=2.5"	E.ORTIZ	DAS	E.ORTIZ 2/97
AUXILIARY SHEAVE INSTALLATION AUXILIARY SHEAVE M2800			
TOLERANCES (UNLESS SPECIFIED)			
± 1/16"			
6000643-002			
SHEET _____ OF _____ CAD FILE:			

THIS PRINT REMAINS THE PROPERTY OF MANTEX INC.		TOLERANCE UNLESS OTHERWISE SPECIFIED	
ALL INFORMATION CONTAINED HEREIN IS CONFIDENTIAL AND UNCLASSIFIED. IT IS TO BE RETURNED UPON AND ON EXPRESS CONDITION DIRECTLY OR INDIRECTLY IN ANY MANNER DEEMED DETRIMENTAL TO OUR INTERESTS.	DECIMAL PLACES	FABRICATION	MACHINING
	(1) PLACE 0.0	± 0.120	± 0.020
	(2) PLACE 0.05	± 0.080	± 0.015
	(3) PLACE 0.005	± 0.020	± 0.005
	ANGLES	± 1' 30"	± 0' 30"
			± 0' 30"



Hydraulic Oil Tank 70 Gal

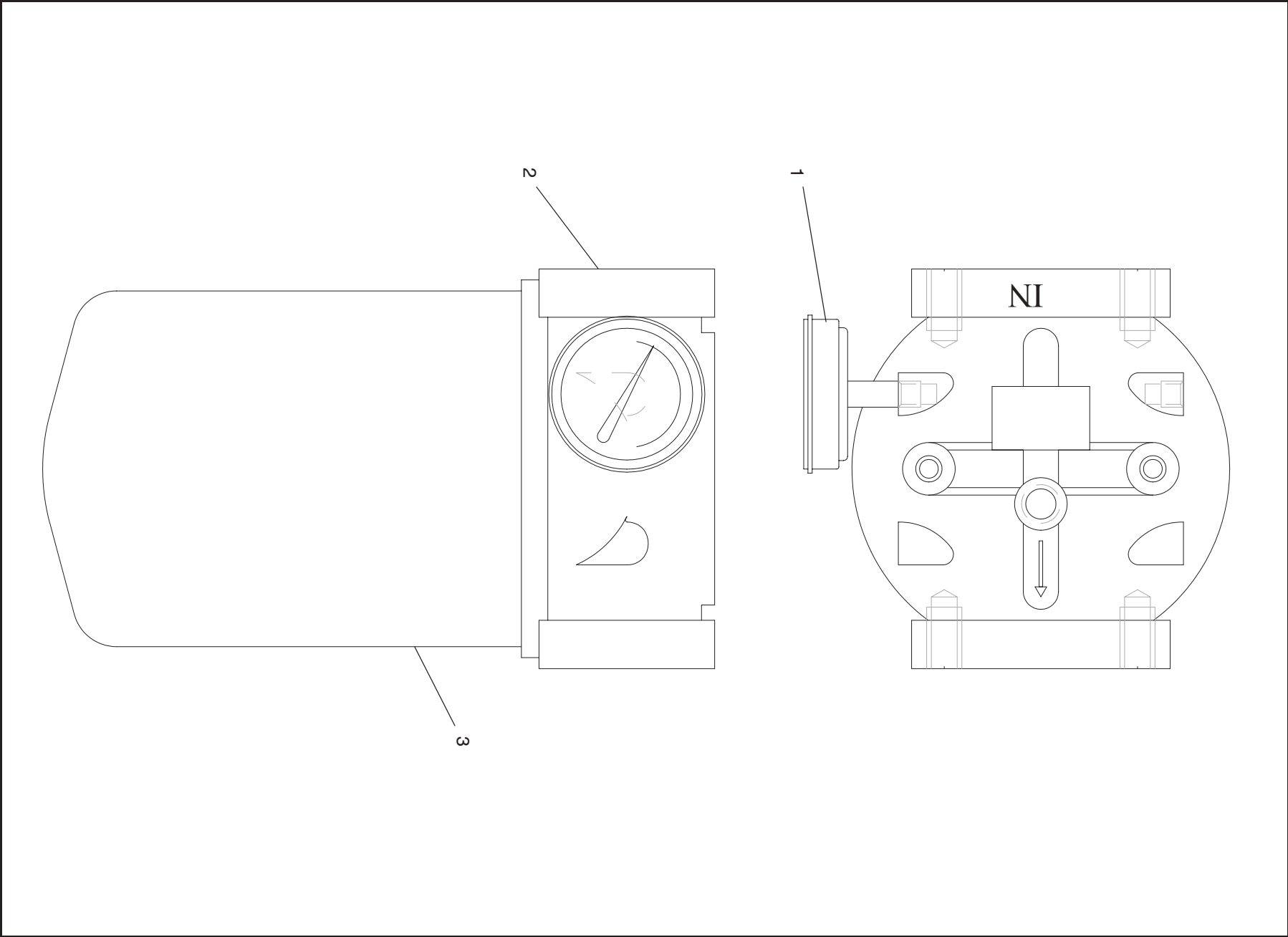
Manitex

Hydraulic Oil Tank 70 Gallon 4900055-003 (C)

ITEM	PART #	QTY	DESCRIPTION
1	4900055-505	1	Cover
2	4900055-511	2	Fill Cap Non-Vented
3	4900141-001	1	Strainer
4	4900203-008	1	Sight Gauge
5	4900055-512	1	Gasket 6" ID X .25" SQ 70 Duro
6	2005-041000	6	Nut 0.250-20 STD Flat
7	2007-040000	6	Washer 0.250 STD Flat
8	30334-02-16	1	Plug

Hydraulic Oil Tank 70 Gal

4900055-003 (C)



Manitex

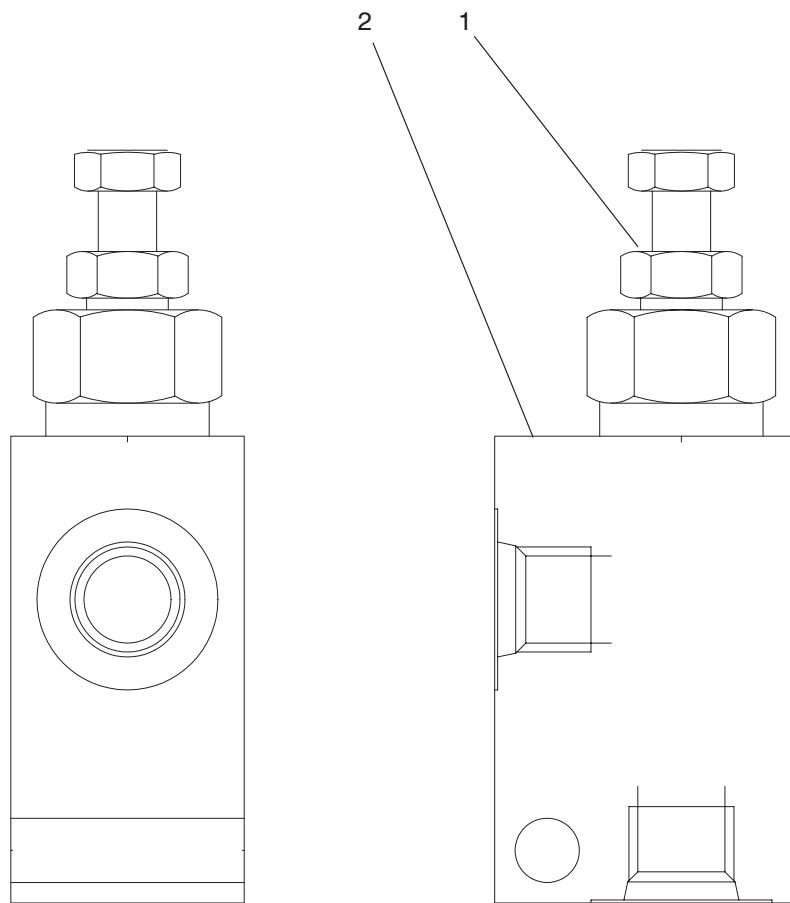
Hydraulic Oil Filter Assembly- Return Line 4900059-003 (NR)

ITEM	PART #	QTY	DESCRIPTION
1	4900059-501	1	Gauge
2	4900059-504	1	Head, Filter
3	4900059-503	1	Filter Element (w/o head or gauge)

Replaces 4900059-002

4900059-003 (NR)

Hydraulic Oil Filter Assembly- Return Line



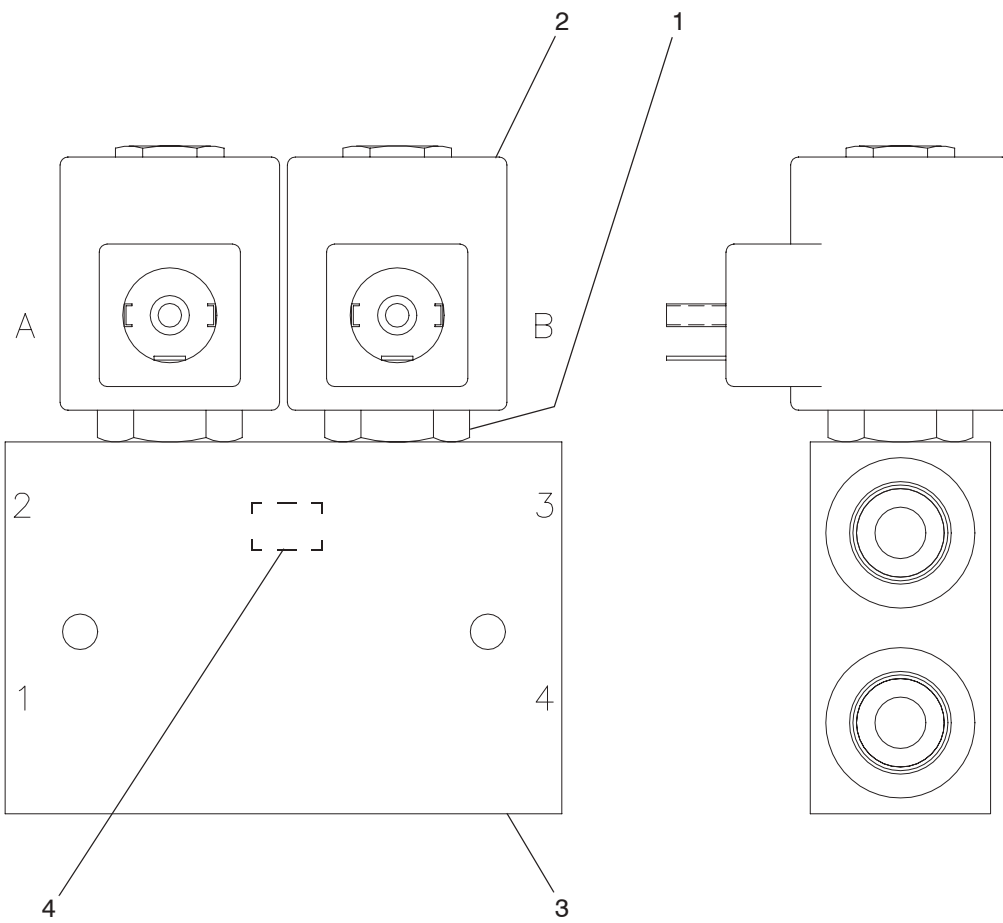
Manitex

Relief Valve Assembly 4900127-001 (NR)

ITEM	PART #	QTY	DESCRIPTION
1	4900127-502	1	Cartridge
2	4900127-601	1	Body

Relief Valve Assembly

4900127-001 (NR)



Valve, Directional Control Solenoid

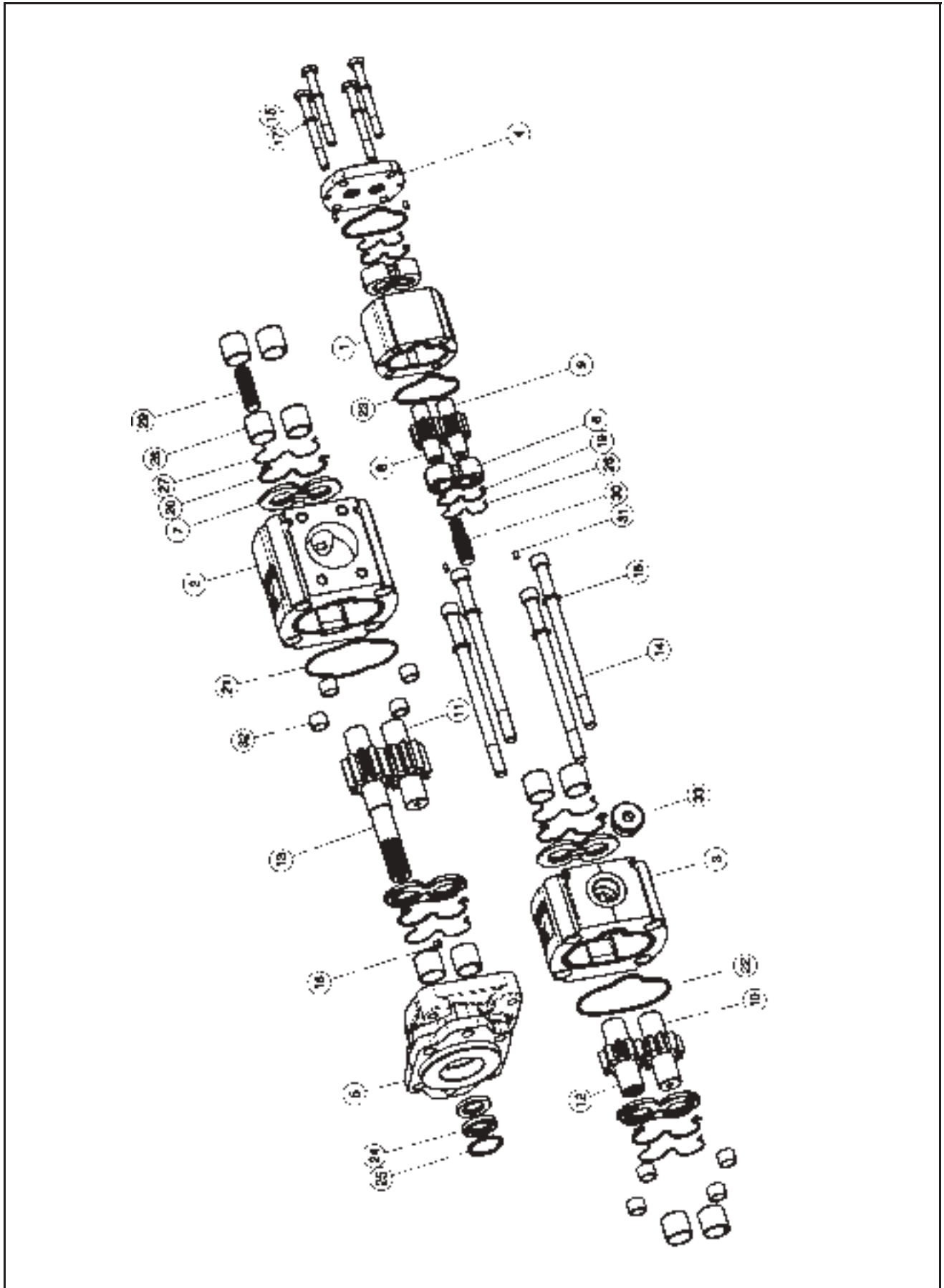
Manitex

4900254-001 (NR) Valve, Directional Control Solenoid

ITEM	PART #	QTY	DESCRIPTION
	4900255-001		Solenoid Valve (includes items 1 & 2)
1	6600854	2	Cartridge
2	6600853	2	Coil
3	4900254-501	1	Body
4	4900254-502	1	Expander Plug

Valve, Directional Control Solenoid

4900254-001 (NR)



Pump Gear 3 - Section (CCW)

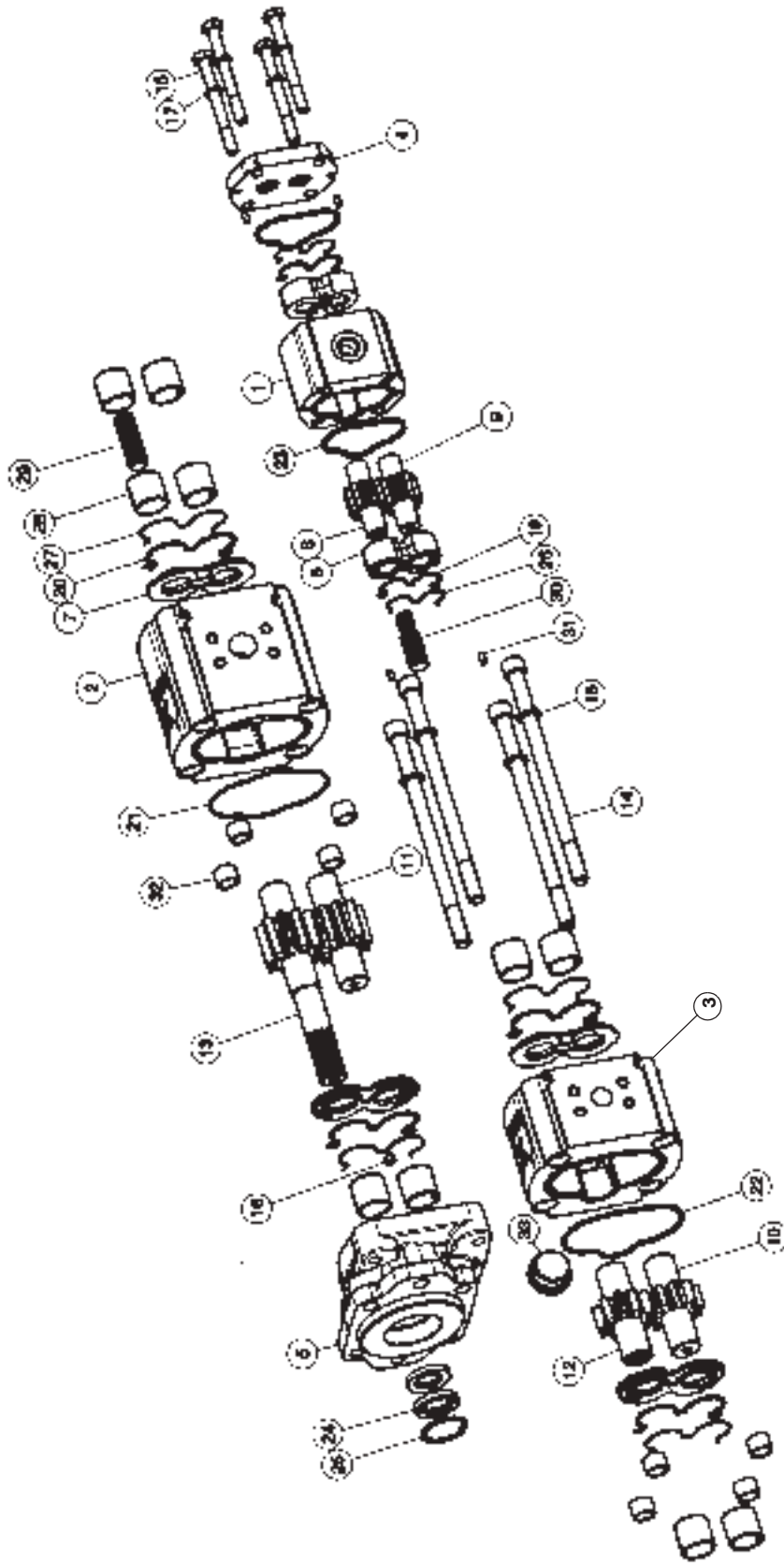
Manitex

Pump Gear 3 - Section (CCW) 4900340-001 (NR)

ITEM	PART #	QTY	DESCRIPTION
1	6601378	1	Body
2	6601379	1	Body
3	6601380	1	Body
4	6601381	1	Rear Cover
5	6601382	1	Cover
6	6601309	2	Thrust Plate
7	6601311	4	Thrust Plate
8	6601383	1	Drive Gear
9	6601384	1	Driven Gear
10	6601385	1	Driven Gear
11	6601386	1	Driven Gear
12	6601387	1	Drive Shaft
13	6601388	1	Drive Shaft
14	6601389	4	Screw TCEI M 14x225
15	6601390	4	Screw TE M 10x100
16	6601321	1	Grub Screw 1/8" NPT
17	6601322	4	Washer 10
18	6601323	4	Washer 14
	6601391		Seal Kit
19	*	2	Seal
20	*	4	Seal
21	*	1	Standard Seal
22	*	1	Seal
23	*	2	Seal
24	*	2	Shaft Seal
25	6601392	1	Ring
26	*	2	Back-Up Ring
27	*	4	Antiextrusion ring
28	6601326	10	Sleeve Bearing
29	6601393	1	Hub
30	6601329	1	Hub
31	6601330	4	Dowell Pin
32	6601332	8	Steel Bushing
33	6601394	1	Steel Plug

Pump Gear 3 - Section (CCW)

4900340-001 (NR)



Pump Gear 3 - Section (CW)

Manitex

Pump Gear 3 - Section (CW) 4900340-002 (NR)

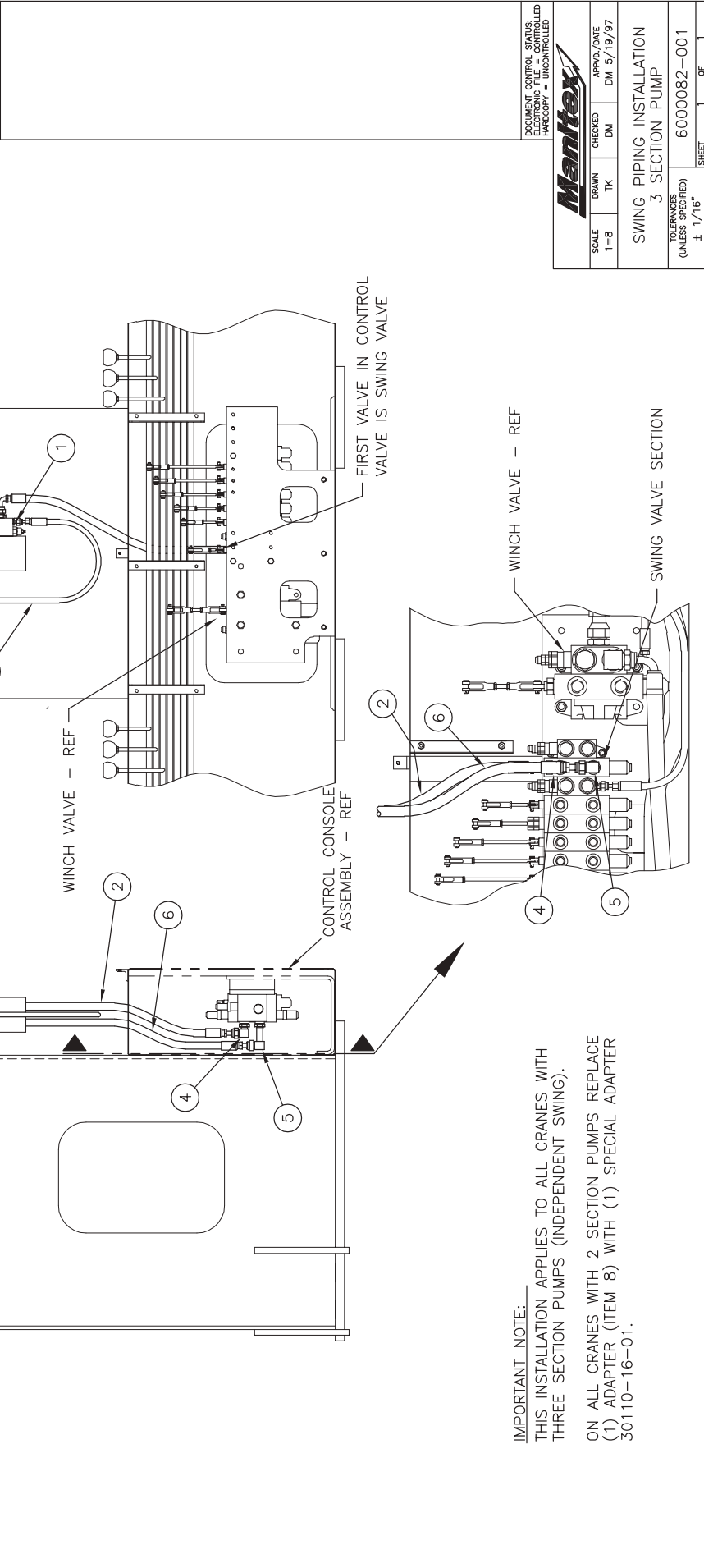
ITEM	PART #	QTY	DESCRIPTION
1	6601378	1	Body
2	6601379	1	Body
3	6601395	1	Body
4	6601381	1	Rear Cover
5	6601382	1	Cover
6	6601309	2	Thrust Plate
7	6601311	4	Thrust Plate
8	6601383	1	Drive Gear
9	6601384	1	Driven Gear
10	6601385	1	Driven Gear
11	6601386	1	Driven Gear
12	6601387	1	Drive Shaft
13	6601388	1	Drive Shaft
14	6601389	4	Screw TCEI M 14x225
15	6601390	4	Screw TE M 10x100
16	6601321	1	Grub Screw 1/8" NPT
17	6601322	4	Washer 10
18	6601323	4	Washer 14
	6601391		Seal Kit
19	*	2	Seal
20	*	4	Seal
21	*	1	Standard Seal
22	*	1	Seal
23	*	2	Seal
24	*	2	Shaft Seal
25	6601392	1	Ring
26	*	2	Back-Up Ring
27	*	4	Antiextrusion ring
28	6601326	10	Sleeve Bearing
29	6601393	1	Hub
30	6601329	1	Hub
31	6601330	4	Dowell Pin
32	6601332	8	Steel Bushing
33	6601394	1	Steel Plug

Pump Gear 3 - Section (CW)

4900340-002 (NR)

BILL OF MATERIAL				REVISIONS
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	30202-04-04	1	ORS/SAE ADAPTER	0.10
2	30237-08050	1	.50 HOSE ASSY	1.60
3	30205-04-04	1	90 ORS/SAE ADAPTER	0.10
4	30205-08-08	1	90 ORS/SAE ADAPTER	0.10
5	30206-08-08	1	90 ORS/SAE ADAPTER	0.20
6	30237-08054	1	0.50 HOSE ASSY.	1.40
7	30251-04048	1	0.25 HOSE ASSY.	0.80
8	30202-08-10	2	ORS/SAE ADAPTER	0.10
9				
10	4000123-001	2	KNOB INSERT	-

REVISIONS	
10-28-87	TK
A1	ADDED
A1	QTY WAS 2
EN	87-0796
B1	AL 10-11-89
ITEM	10 ADDED
EN	89-0014
EN	96-0007
EO	7/15/96
C1	ITEM 2 WAS
301	10-16-01
C2	ITEM 8 WAS
1	REQ'D
EN	98-0002-03
EV	2/98
D	ITEM 6 WAS
QTY.	2
D1	ITEM 2
	ADDED.
EN	00-0025-4
CG	11-00
E1	ITEM 2 WAS
30237	-08042
E2	ITEM 6 WAS
30237	-08049
E3	ITEM 7 WAS
30251	-08056



IMPORTANT NOTE:
 THIS INSTALLATION APPLIES TO ALL CRANES WITH THREE SECTION PUMPS (INDEPENDENT SWING).
 ON ALL CRANES WITH 2 SECTION PUMPS REPLACE (1) ADAPTER (ITEM 8) WITH (1) SPECIAL ADAPTER 30110-16-01.

DOCUMENT CONTROL STATUS:
 ELECTRONIC FILE = CONTROLLED
 HARD COPY = UNCONTROLLED

Manitex

SCALE	DRAWN	CHECKED	APPROV./DATE
1=8	TK	DM	DM 5/19/97

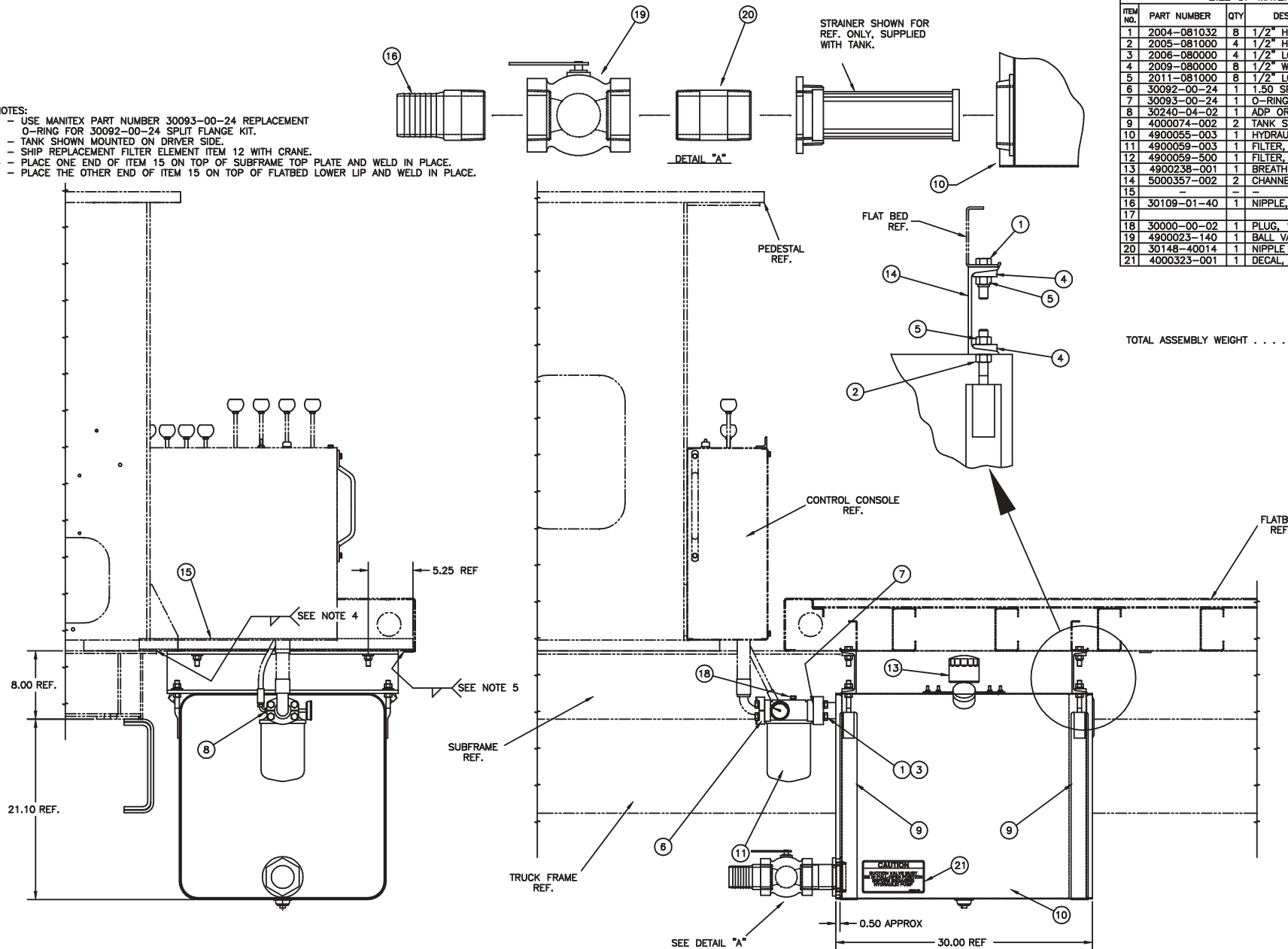
SWING PIPING INSTALLATION
 3 SECTION PUMP

6000082-001

(UNLESS SPECIFIED)
 ± 1/16"

SHEET 1 OF 1

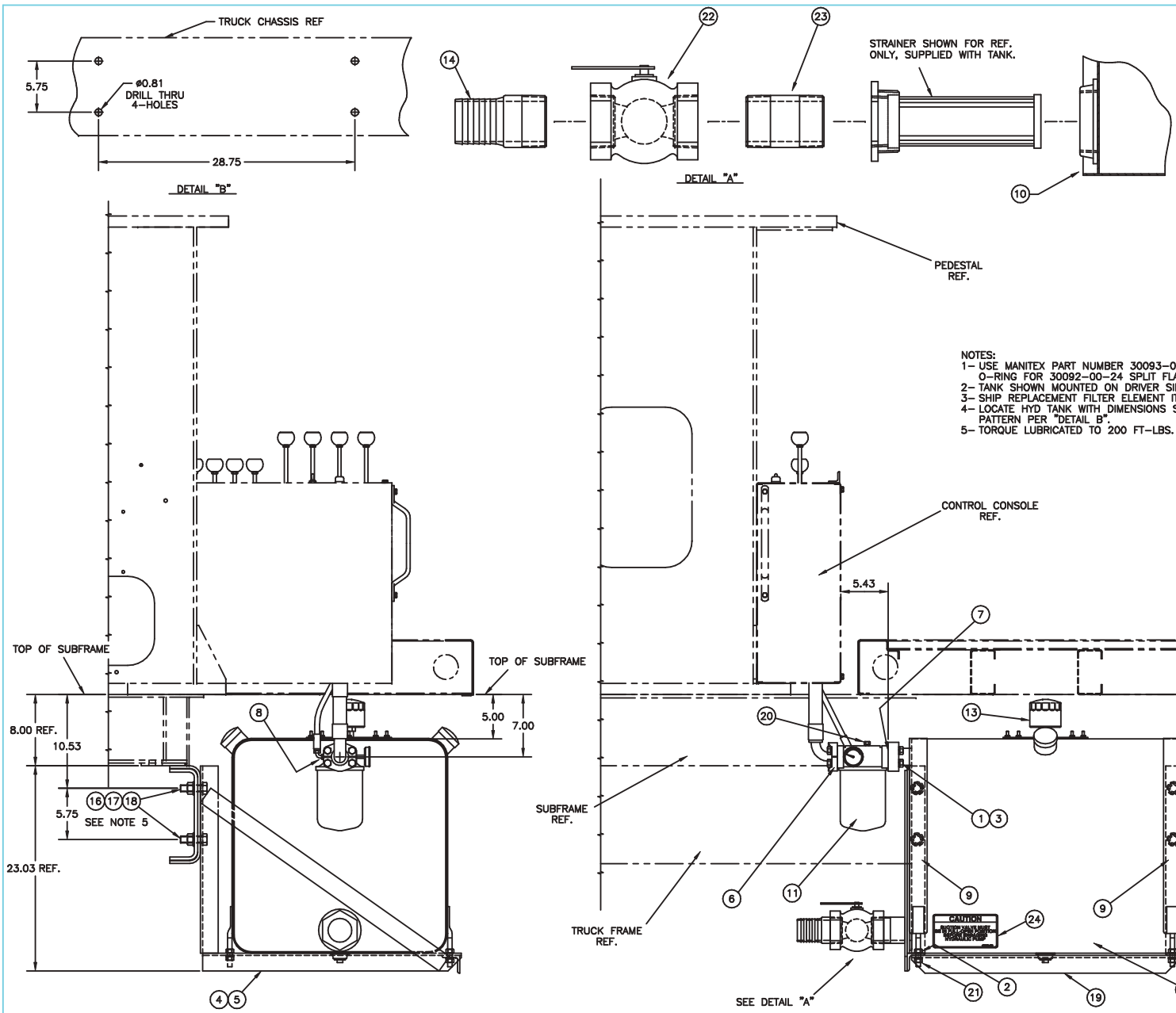
- NOTES:
 1 - USE MANITEX PART NUMBER 30093-00-24 REPLACEMENT O-RING FOR 30092-00-24 SPLIT FLANGE KIT.
 2 - TANK SHOWN MOUNTED ON DRIVER SIDE.
 3 - SHIP REPLACEMENT FILTER ELEMENT ITEM 12 WITH CRANE.
 4 - PLACE ONE END OF ITEM 15 ON TOP OF SUBFRAME TOP PLATE AND WELD IN PLACE.
 5 - PLACE THE OTHER END OF ITEM 15 ON TOP OF FLATBED LOWER LIP AND WELD IN PLACE.



BILL OF MATERIAL					REVISIONS
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	
1	2004-081032	8	1/2" HEX-BOLT	0.10	EN 96-0021 NEW RELEASE EQ 3/14/98
2	2005-081000	4	1/2" HEX-NUT	0.20	EN 97-0011-02 BY 11/97
3	2006-080000	4	1/2" LOCKWASHER	0.10	EN 98-080000 BY ITEM 2 WAS 8
4	2009-080000	8	1/2" WASHER-BEVEL	0.10	EN 98-080000 BY ITEM 5 WAS 4
5	2011-081000	8	1/2" LOCKNUT	0.07	EN 98-080000 BY ITEM 10, 20, 21
6	30092-00-24	1	1.50 SPLIT FLG KIT	1.50	EN 98-080000 BY ITEM 17 DELETED
7	30093-00-24	1	O-RING	0.01	EN 98-080000 BY ITEM 12 WAS 3000357-003
8	30240-04-02	1	ADP ORS/MNPT	0.07	EN 98-0007-01 BY 7/98
9	4000074-002	2	TANK STRAP	3.50	EN 98-0007-01 BY ITEM 15 WAS 3000357-003
10	4900055-003	1	HYDRAULIC TANK	99.00	
11	4900059-003	1	FILTER, LINE	5.00	
12	4900059-500	1	FILTER, ELEMENT	1.00	
13	4900238-001	1	BREATHER	0.85	
14	5000357-002	2	CHANNEL, MOUNTING	15.00	
15	-	-	-	-	
16	30109-01-40	1	NIPPLE, KING	1.80	
17	-	-	-	-	
18	30000-00-02	1	PLUG, 1/8" NPT	0.01	
19	4900023-140	1	BALL VALVE	-	
20	30148-40014	1	NIPPLE PIPE 2-1/2"	-	
21	4000323-001	1	DECAL, "CAUTION"	-	

TOTAL ASSEMBLY WEIGHT 175.4 LBS.

Manitex Inc.
 A DIVISION OF THE MANITEX COMPANY, INC.
 SCALE: 3/16"=1" DRAWN: E. CORTIZ CHECKED: DAS APPROVAL: 3/98
 HYDRAULIC TANK INSTALLATION
 W/ SUCTION STRAINER/ BALL
 VALVE/ STANDARD MOUNT
 MANITEX SPECIFIED 6000097-014
 ± 1/16" SHEET 1 OF 1
 080 FILE



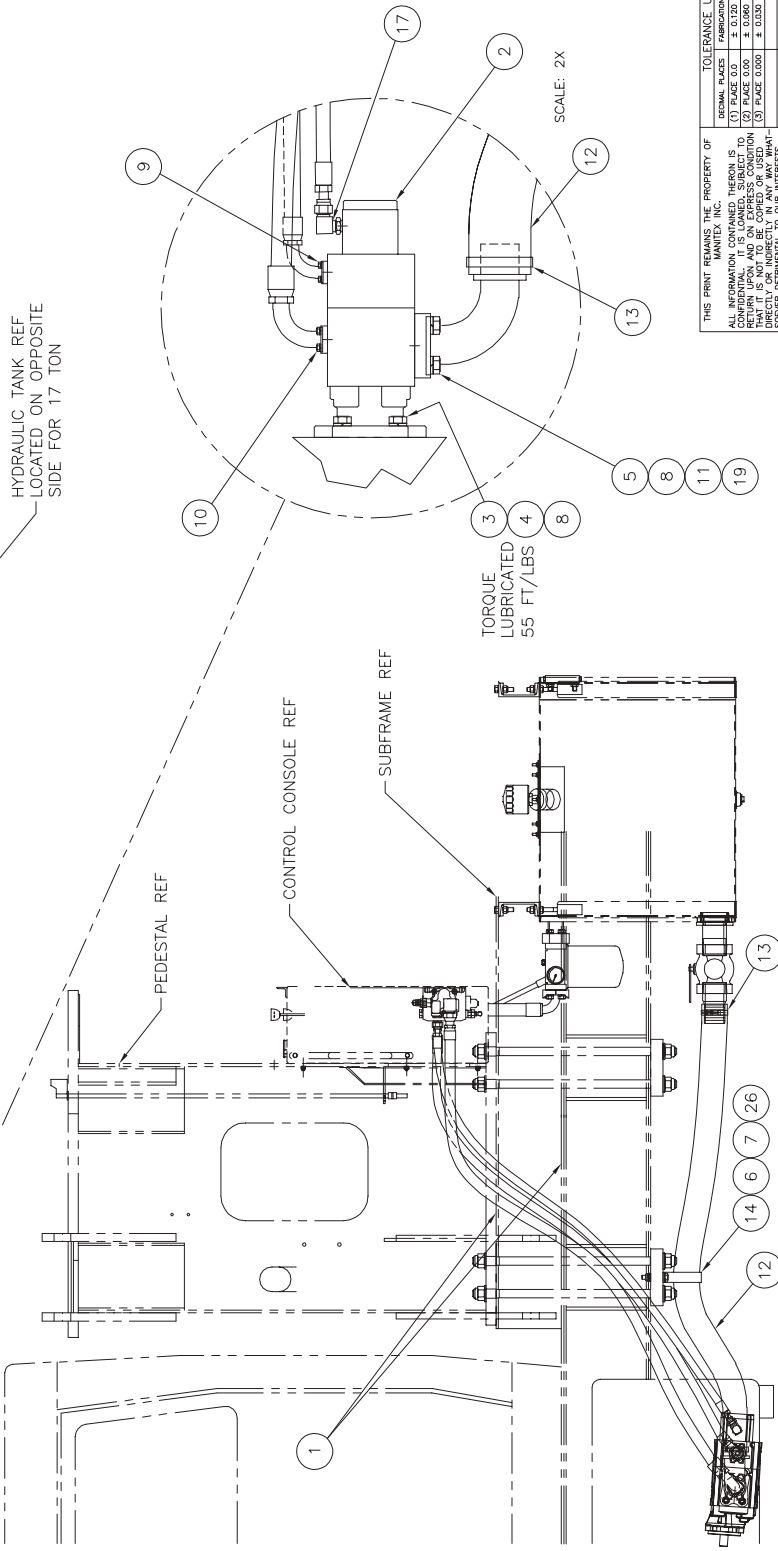
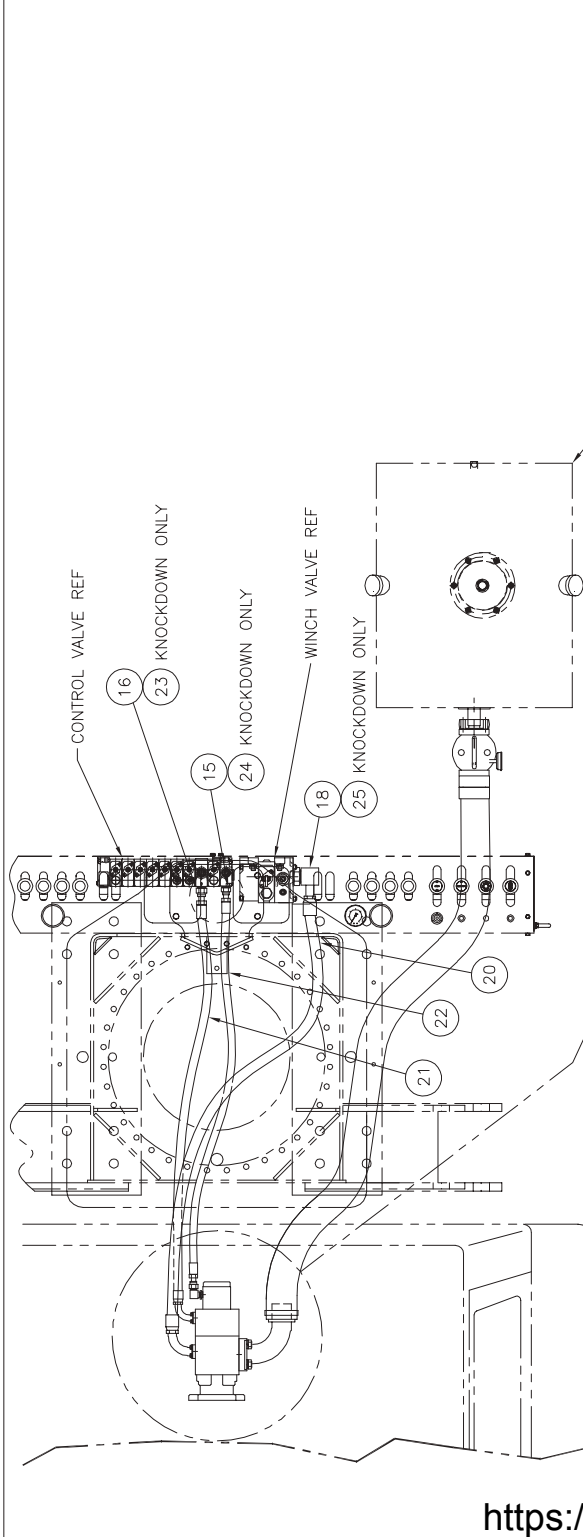
BILL OF MATERIAL					REVISIONS
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	EN/05-0021 NEW RELEASE EX 3-15-99
1	2004-081032	4	1/2" HEX-BOLT	0.10	EN 97-0011-02
2	2005-081000	4	1/2" HEX-NUT	0.20	EN 11/97
3	2006-080000	4	1/2" LOCKWASHER	0.10	EN ITEM 2 WAS 8
4	50001481-002	1	BRACKET, MOUNTING	17.90	EN ITEM 3 WAS 8
5	50001482-002	1	BRACKET, MOUNTING	17.90	EN ITEM 21, 22, 23, 24
6	30092-00-24	1	1.50 SPLIT FLG KIT	1.50	EN ITEM 18 DELETED
7	30093-00-24	1	O-RING	0.01	EN 480009-503
8	30240-04-02	1	ADP ORS/MNPT	0.07	
9	4000074-002	2	TANK STRAP	3.50	
10	4900055-003	1	HYDRAULIC TANK	99.00	
11	4900059-003	1	FILTER, LINE	5.00	
12	4900059-500	1	FILTER, ELEMENT	1.00	
13	4900238-001	1	BREATHER	0.85	
14	30109-01-40	1	NIPPLE, KING	1.80	
15					
16	2004-121040	4	HEX BOLT 3/4"	0.42	
17	2003-120000	4	FLATWASHER 3/4"	0.05	
18	2005-121000	4	HEX NUT 3/4"	0.12	
19	5001484-003	1	ANGLE	7.78	
20	30000-00-02	1	PLUG, 1/8" NPT	0.01	
21	2011-081000	4	1/2" LOCKNUT	0.2	
22	4900023-140	1	BALL VALVE	-	
23	30148-40014	1	NIPPLE PIPE 2-1/2"	-	
24	4000323-001	1	DECAL, "CAUTION"	-	

- NOTES:
 1- USE MANITEX PART NUMBER 30093-00-24 REPLACEMENT O-RING FOR 30092-00-24 SPLIT FLANGE KIT.
 2- TANK SHOWN MOUNTED ON DRIVER SIDE.
 3- SHIP REPLACEMENT FILTER ELEMENT ITEM 12 WITH CRANE.
 4- LOCATE HYD TANK WITH DIMENSIONS SHOWN, DRILL HOLE PATTERN PER "DETAIL B".
 5- TORQUE LUBRICATED TO 200 FT-LBS.

TOTAL ASSEMBLY WEIGHT 168.0 LBS.

Manitex Inc.
 A DIVISION OF THE HUNTER GROUP, INC.
 SCALE: 3/16"=1"
 DRAWN: E.LORTIZ
 DESIGNED: DAB
 APPROVED: E.LORTIZ
 DATE: 3/98
 HYDRAULIC TANK INSTALLATION W/ SUCTION STRAINER, BALL VALVE AND CHASSIS MOUNT
 REVISIONS: 6000097-016
 SHEET 1 OF 1
 QMS FILE NUMBER: 1

BILL OF MATERIAL				REVISIONS
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	4000168-450	9	VINYL TRIM	-
2	4900340-001	1	HYDRAULIC PUMP C/W	-
3	2003-080000	4	WASHER 1/2	-
4	2004-081020	4	HEX BOLT 1/2X1 1/4	-
5	2004-081028	4	HEX BOLT 1/2X1 3/4	-
6	2004-061048	1	HEX BOLT 3/8X3	-
7	2011-061000	1	LOCKNUT 3/8	-
8	2006-080000	8	LOCKWASHER 1/2	-
9	30092-00-12	1	SF KIT 3/4	-
10	30092-00-16	1	SF KIT 1"	-
11	30093-00-40	1	O-RING 2 1/2	-
12	30107-00-40	8	SUCTION HOSE 2 1/2	-
13	30108-00-40	2	HOSE CLAMP 2 1/2	-
14	30140-46-00	1	HOSE SUPPT CLAMP	-
15	30202-08-10	1	ADP 8 ORS/10 SAE	-
16	30202-12-10	1	ADP 10 ORS/12 SAE	-
17	30205-08-10	1	ADP 90° 8ORS/10SAE	-
18	30205-16-16	1	ADP 90° 16 ORS/SAE	-
19	30220-00-40	1	BEADED INSERT 2 1/2	-
20	30228-16192	1	HOSE ASSY 1"	-
21	30228-12176	1	HOSE ASSY 3/4	-
22	30251-08164	1	HOSE ASSY 1 1/2	-
23	30327-00-12	1	CAP 12 ORS	-
24	30327-00-08	1	CAP 8 ORS	-
25	30327-00-16	1	CAP 1" ORS	-
26	2008-060000	1	WASHER 3/8	-



DOCUMENT CONTROL STATUS: REVISIONS CONTROLLED
DRAWING HARD COPY UNCONTROLLED

Mantex

SCALE	DRAWN	CHECKED	APPROV./DATE
1/8" = 1"	NMR	EV	4/03

HYDRAULIC PUMP C/W
INSTALLATION

TOLERANCES
(UNLESS OTHERWISE SPECIFIED)

FINISH	± 1" - 30"	± 0"
MACHINING	± 0.005	± 0.005
WELDING	± 0.005	± 0.005
OTHER THAN INDICATED BY ORIGINAL DESIGN DIMENSION	± 0.005	± 0.005

ANGLES

± 1° - 30°	± 0° - 30°
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6000098-019
SHEET 1 OF 1

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RETURN TO MANTEX INC. IN ORIGINAL
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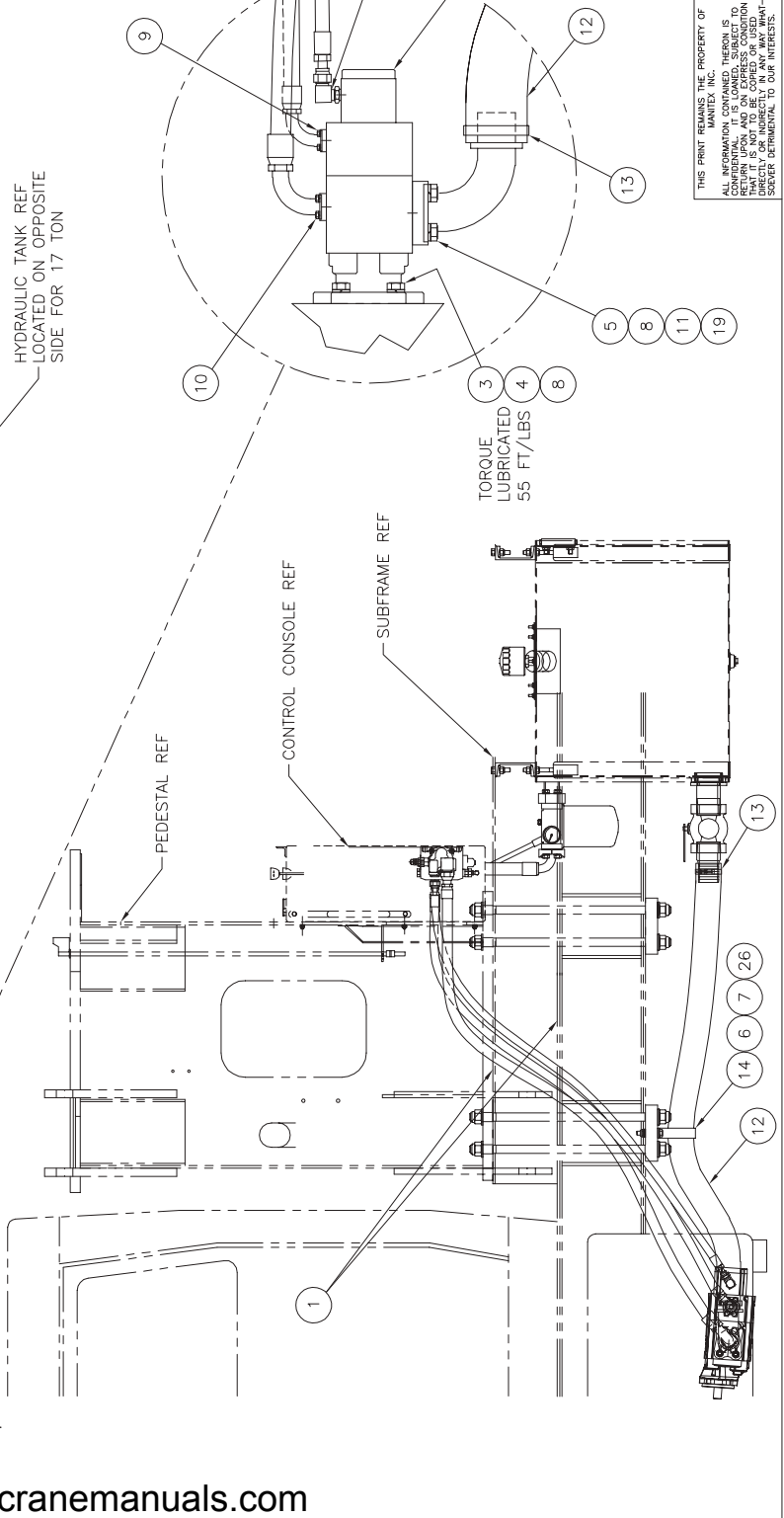
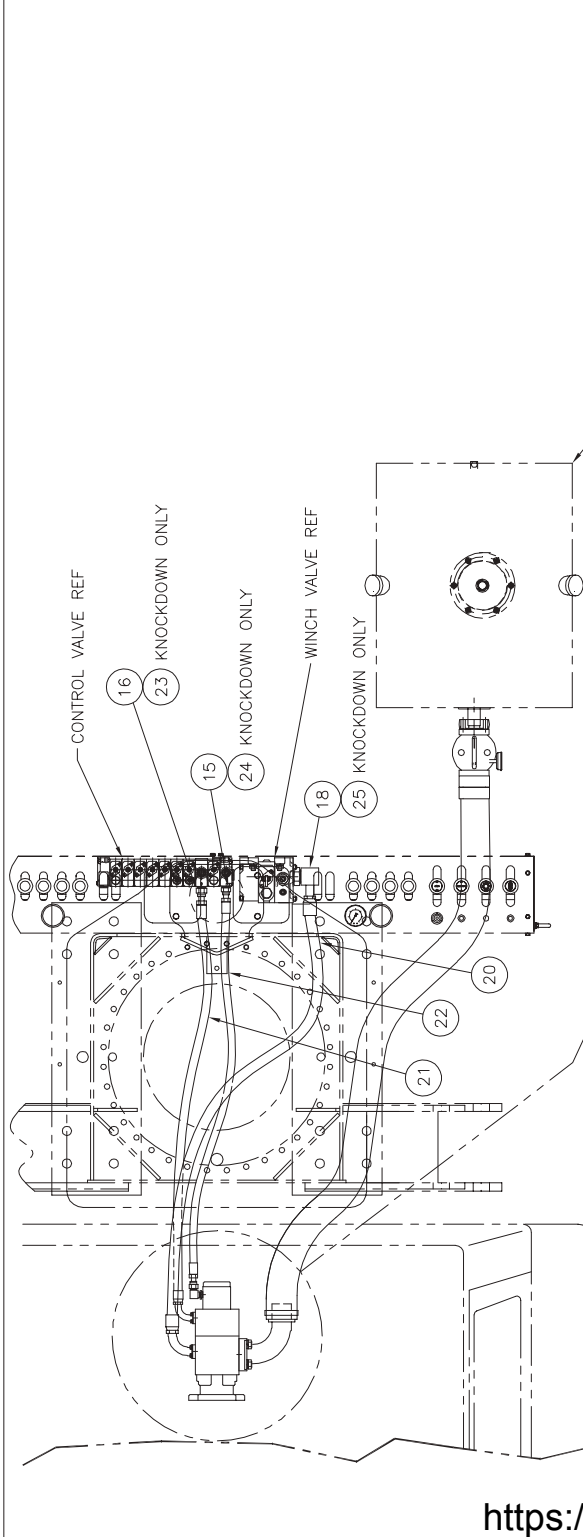
TOLERANCE UNLESS OTHERWISE SPECIFIED

DECIMAL PLACES	FABRICATION	MACHINING	1) ✓ MACHINING TOLERANCE
(1) PLACE 0.0	± 0.005	± 0.005	AND/OR SURFACE
(2) PLACE 0.00	± 0.000	± 0.000	FINISH
(3) PLACE 0.000	± 0.000	± 0.000	OTHER THAN INDICATED BY
			ORIGINAL DESIGN DIMENSION

ANGLES

± 1° - 30°	± 0° - 30°
------------	------------

BILL OF MATERIAL				REVISIONS
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	4000168-450	9	VINYL TRIM	-
2	4900340-002	1	HYDRAULIC PUMP CW	-
3	2003-080000	4	WASHER 1/2	-
4	2004-081020	4	HEX BOLT 1/2X1 1/4	-
5	2004-081028	4	HEX BOLT 1/2X1 3/4	-
6	2004-061048	1	HEX BOLT 3/8X3	-
7	2011-061000	1	LOCKNUT 3/8	-
8	2006-080000	8	LOCKWASHER 1/2	-
9	30092-00-12	1	SF KIT 3/4	-
10	30092-00-16	1	SF KIT 1"	-
11	30093-00-40	1	O-RING 2 1/2	-
12	30107-00-40	8	SUCTION HOSE 2 1/2	-
13	30108-00-40	2	HOSE CLAMP 2 1/2	-
14	30140-46-00	1	HOSE SUPPT CLAMP	-
15	30202-08-10	1	ADP 8 ORS/10 SAE	-
16	30202-12-10	1	ADP 10 ORS/12 SAE	-
17	30205-08-10	1	ADP 90° 8ORS/10SAE	-
18	30205-16-16	1	ADP 90° 16 ORS/SAE	-
19	30220-00-40	1	BEADED INSERT 2 1/2	-
20	30228-16192	1	HOSE ASSY 1"	-
21	30228-12176	1	HOSE ASSY 3/4	-
22	30251-08164	1	HOSE ASSY 1 1/2	-
23	30327-00-12	1	CAP 12 ORS	-
24	30327-00-08	1	CAP 8 ORS	-
25	30327-00-16	1	CAP 1" ORS	-
26	2008-060000	1	WASHER 3/8	-



DOCUMENT CONTROL STATUS: REVISIONS CONTROLLED
 DRAWING CONTROLLED
 HARDWARE UNCONTROLLED

Mantex

SCALE	DRAWN	CHECKED	APPROV./DATE
1/8" = 1"	NMR	EV	4/03

HYDRAULIC PUMP CW
 INSTALLATION

TOLERANCES (UNLESS OTHERWISE SPECIFIED)
 FINISHES
 DECIMAL PLACES FABRICATION MACHINING

(1) PLACE 0.0	± 0.100	± 0.050	1	✓	MACHINING TOLERANCE
(2) PLACE 0.000	± 0.005	± 0.005	2	✓	AND/OR SURFACE FINISH
(3) PLACE 0.000	± 0.005	± 0.005	2	✓	OTHER THAN INDICATED BY FINISH SYMBOL

ANGLES ± 1° 30' ± 0° 30'

6000098-020
 1/1/16
 SHEET 02 OF 02

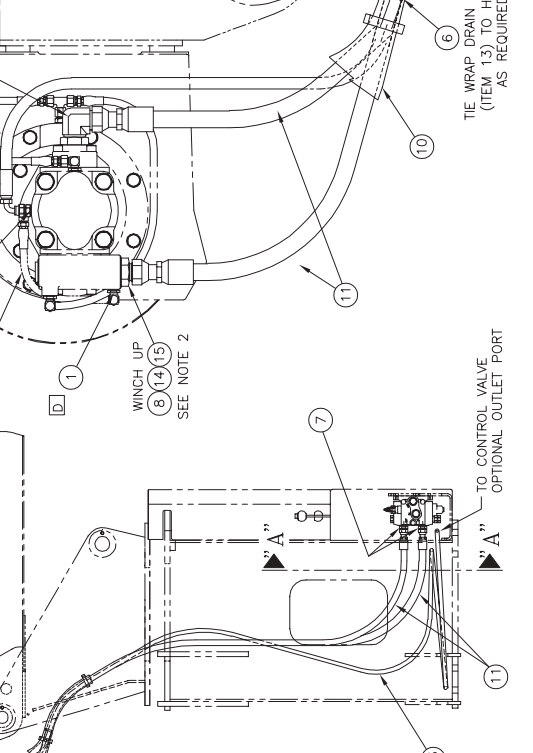
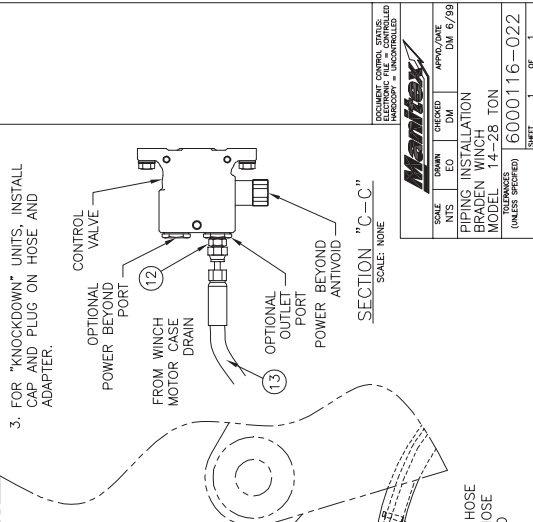
BILL OF MATERIAL			REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	30069-00-04	1	PLUG SAE	.10
2	30327-00-04	1	CAP ORS STEEL	.05
3	30328-00-04	1	PLUG ORS STEEL	.05
4	2083-100125	6	CABLE TIES	.01
5	30202-12-12	2	ADP STR MORS/MSAE	.36
6	30202-12-16	1	ADP STR MORS/MSAE	.50
7	30205-12-16	1	ADP 90° MORS/MSAE	1.00
8	30347-59000	5	SLEEVE 5 FT. LONG	—
9	30234-12324	2	HOSE ASSEMBLY	9.70
10	30202-04-04	2	HOSE ASSEMBLY	.10
11	30237-04440	1	HOSE ASSEMBLY	5.00
12	30327-00-12	2	CAP ORS	.36
13	30328-00-12	2	PLUG ORS	.36
14	4000123-003	2	DECAL WINCH PB	.01
15				
16				
17				

EN 99-0006-5
EO 7/99
NEW RELEASE
EN 99-0011-5
EO 11/99
[A] ITEM 12 WAS
30240-04-04
[K] DELETED
SECTION "B-B"
EN 00-0010-2
EO 10/00
[B] ITEM 12 WAS
REQ D
[E] ITEM 13 WAS
30251-04440
[F] ITEM 17 WAS
30215-04-04
[H] ADDED.
SECTION "C-C"

EN 00-0025-4
EO 11-00
[C] ITEM 1 WAS
30234-12248
EN 03-0013-03
EO 11/03
[D] ADDED AND
UPDATED MOTOR
REPRESENTATION

TOTAL ASSEMBLY WEIGHT: 28.7 LBS.

NOTES:
1. REMOVE AND DISCARD WINCH MOTOR DRAIN HOSE. INSTALL ITEMS 12, 13 & 1 AS SHOWN.
2. FOR "KNOCKDOWN" UNITS, INSTALL CAPS AND PLUGS ON ADAPTERS AND HOSES. TAG "WINCH UP" HOSE FOR IDENTIFICATION AT ASSEMBLY.
3. FOR "KNOCKDOWN" UNITS, INSTALL CAP AND PLUG ON HOSE AND ADAPTER.



SCALE	DRAWN	CHECKED	APPROV./DATE
NTS	ED	DM	DM 8/99
PIPING INSTALLATION			
BRADEN WINCH			
MOLESKIN 14-28 TON			
TELEPHONE 16000116-022			
(UNLESS SPECIFIED)			
SHEET	1	OF	1

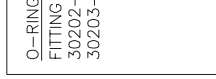
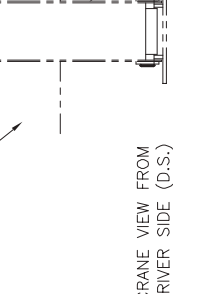
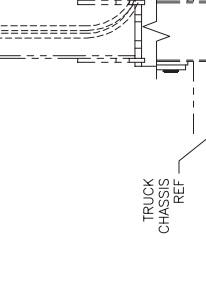
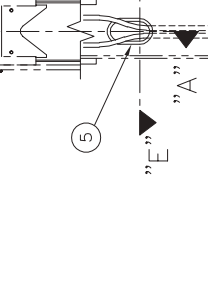
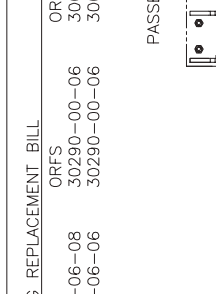
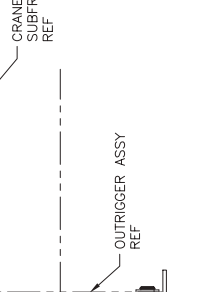
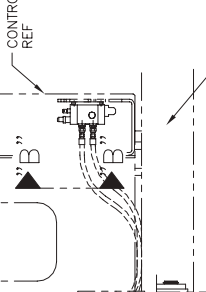
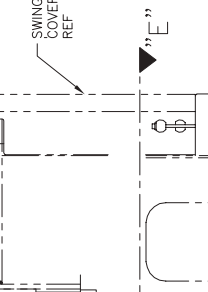
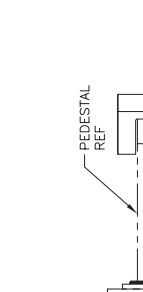
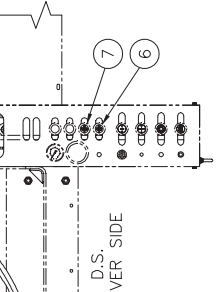
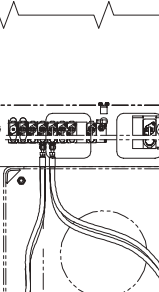
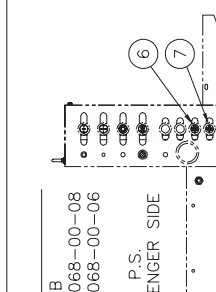
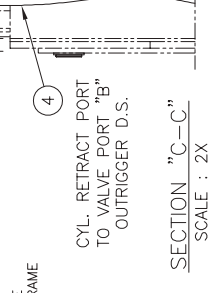
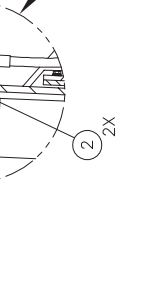
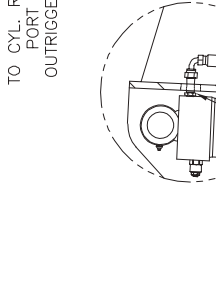
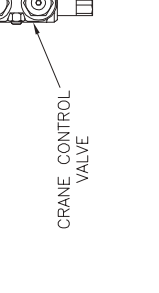
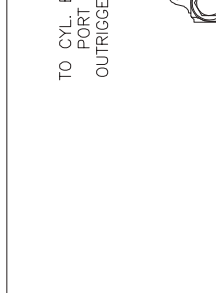
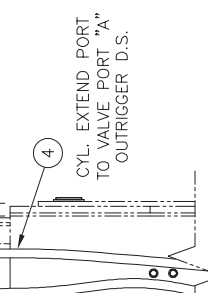
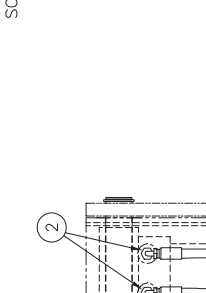
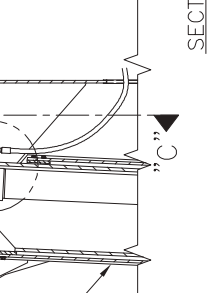
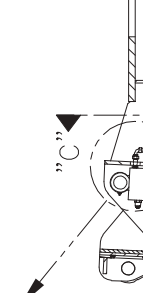
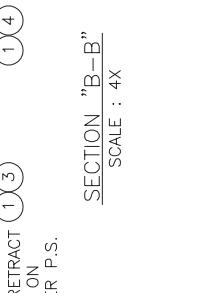
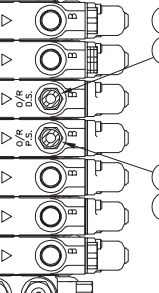
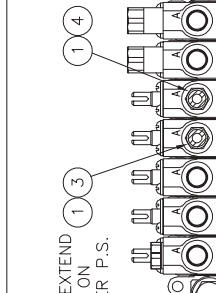
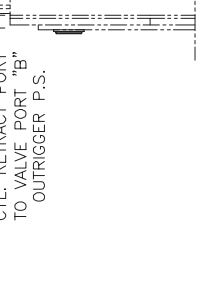
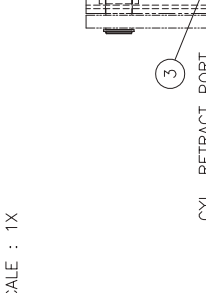
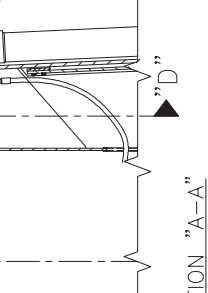
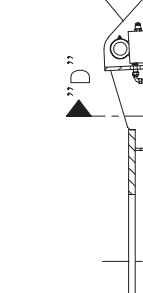
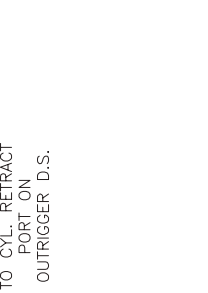
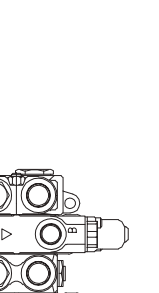
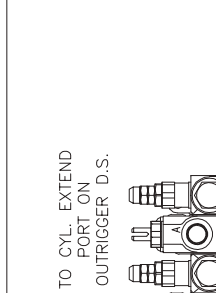
DOCUMENT CONTROL STATUS:
REVISIONS - UNCONTROLLED
Mantech

O-RING REPLACEMENT BILL		BILL OF MATERIAL		REVISIONS	
ORFS	ORB	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
30202-06-08	30068-00-08	30202-06-08	4	ADAPTER, ORS/SAE	0.10
30203-06-06	30068-00-06	30203-06-06	4	ADAPTER, ORS/SAE LG	0.15
		30237-06160	2	0.38 HOSE ASSEMBLY	2.30
		30237-06180	2	0.38 HOSE ASSEMBLY	2.46
		4000168-416	2	PROTECTIVE TRIM	0.18
		4000123-007	2	KNOB INSERT,O/R TS	0.01
		4000123-008	2	KNOB INSERT,O/R OS	0.01

TOTAL WEIGHT10.88 LBS

NOTES:

- 1- VINYL TRIM MUST BE CUT TO LENGTH AT ASSEMBLY TO FIT PEDESTAL HOLE.
- 2- THE HOSES MAY BE MADE SHORT, IF DESIRABLE, FOR FACTORY INSTALLED CRANES ONLY.
- 3- D.S. = DRIVER SIDE
P.S. = PASSENGER SIDE



SCALE NONE		DRAWN ER		CHECKED DAS		APPROVED/DATE B.MORAVEC	
OUTRIGGER PIPING ASSEMBLY							
TOLERANCES (UNLESS SPECIFIED) ±1/16"							
6000427-001							
SHEET 1 OF 1							

DOCUMENT CONTROL STATUS: REVISIONS CONTROLLED
 HARD COPY UNCONTROLLED

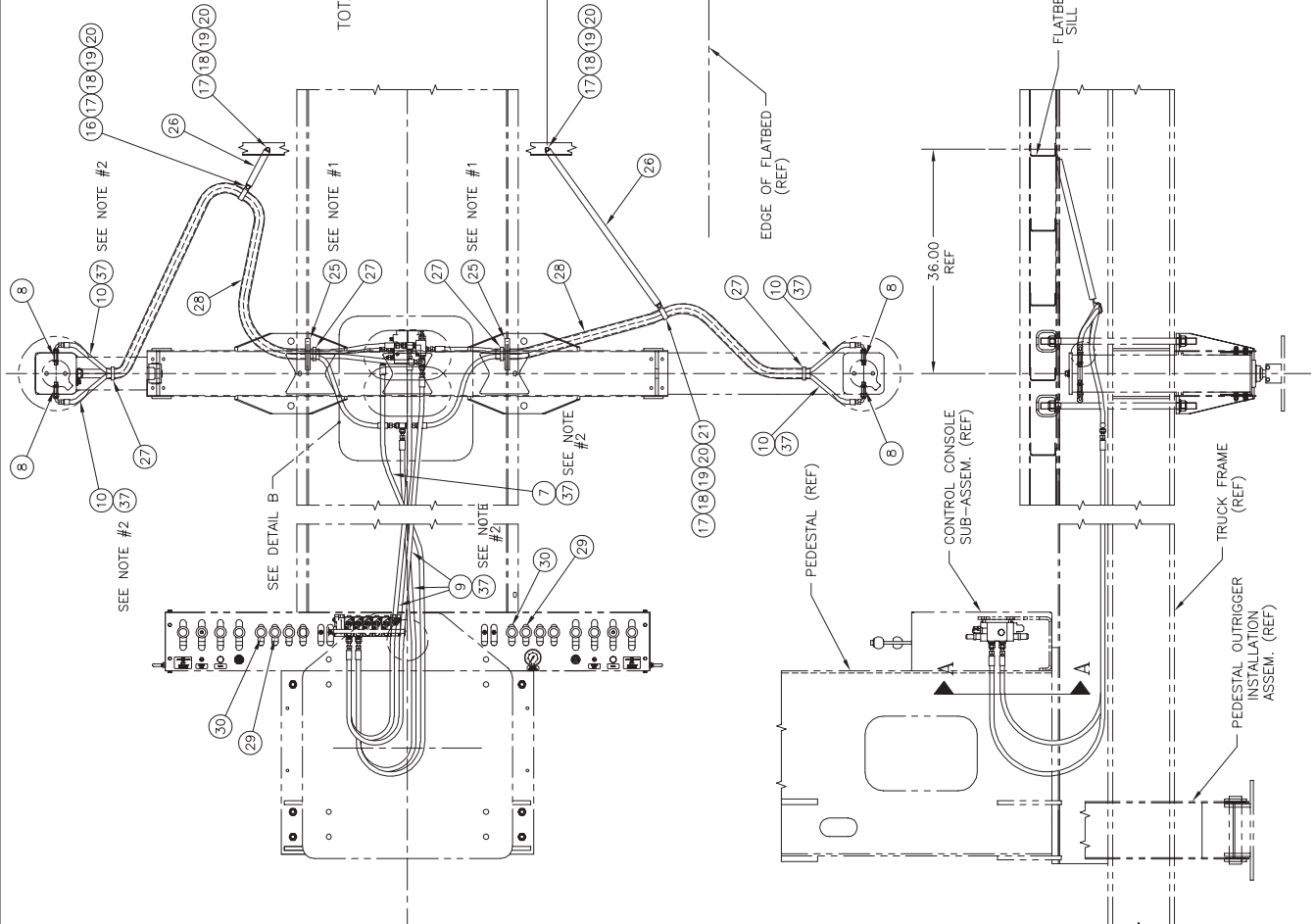
Mantec

"O" RING REPLACEMENT BILL	
FITTING	FACE SEAL "O" RING
30202.06.08	30290.00.06
30203.06.06	30065.00.08
30205.06.06	30290.00.06
30202.06.06	30065.00.06
30208.06.06	30290.00.06
30210.06.06	30068.00.08
30069.00.08	30068.00.08

NOTES:

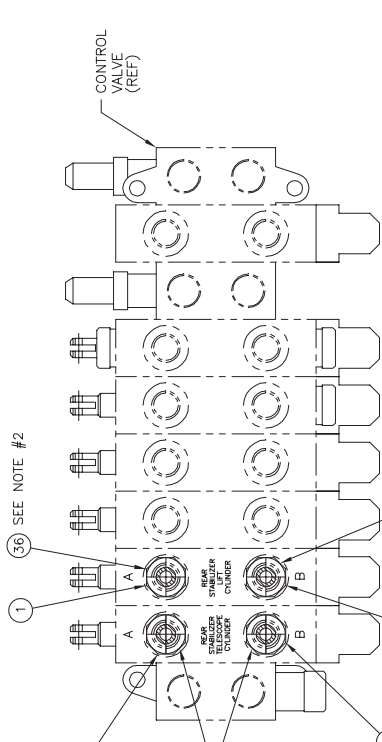
- VINYL TRIM MUST BE CUT TO LENGTH AT ASSEMBLY TO FIT HOLE.
- FOR KNOCK-DOWN ONLY.

TOTAL ASSEMBLY WEIGHT. 51.07 LBS.



BILL OF MATERIAL				REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	
1	30202.06.08	7	APT. STR ORS/SAE	0.10	EN 89-0103 ER 07-18-89 NEW RELEASE
2	30210.06.06	1	APT. TEE	0.90	EN 90-0006
3	30208.06.06	2	APT. TEE	0.90	ER 06-14-90
4	30069.00.08	1	APT. PLUG SAE	0.08	ITEM #9 WAS 30238-06470
5	---	---	---	---	---
6	---	---	---	---	---
E1	30237.06504	1	HOSE ASSEMBLY	6.50	EN 91-0011 EM 10-23-91
8	30203.06.06	4	APT. STR-L ORS/SAE	0.15	ITEM #29 WAS 4000123-
E2	30251.06504	3	HOSE ASSEMBLY	6.70	ITEM #29 WAS 4000123-
E3	30237.06228	4	HOSE ASSEMBLY	2.58	ITEM #30 WAS 4000123-
11	---	---	---	---	---
12	---	---	---	---	---
13	4900127.001	1	RELIEF VALVE	0.63	ITEM #5 QTY WAS 2
14	4900254.001	1	VALVE ASSEMBLY	3.16	ITEM #6 QTY WAS 3
15	---	---	---	---	---
16	30140.28.00	1	CLAMP, 1 3/4" ID	0.10	ITEM #11 B4
17	2004.061016	4	BOLT, HEX 0.38X1.00	0.04	DELETED WAS 30237-06240
18	2005.061000	4	NUT, HEX 0.38	0.02	ITEM #12 B5
19	2006.060000	4	WASHER, LOCK 0.38	0.01	DELETED WAS 2008-060000
20	2008.060000	4	WASHER, FLAT 0.38	0.01	DELETED WAS 30238-06396
21	30140.21.00	1	CLAMP, 1 5/16" ID	0.10	ITEM #15 B6
22	2004.041036	1	BOLT, HEX 0.25X2.25	0.04	DELETED WAS 30140-21.00
23	2004.041056	1	BOLT, HEX 0.25X3.50	0.04	ITEM #17 B7
24	2006.040000	2	WASHER, LOCK 0.25	0.01	ITEM #19 B8
25	4000168.400	2	TRIM, VINYL	0.15	ITEM #19 B8
26	4000313.001	2	SPRING, 1" DIA	0.60	ITEM #27 B9
27	2083.300300	14	CABLE TIE, 0.31X 8"	0.01	ITEM #15
E	4100033	16	SLEEVE, NYLON	0.91	EN 95-0002
29	4000123.010	2	DECAL, STAB UP/DWN	0.01	EO 02-17-95
30	4000123.011	2	DECAL, STAB IN/OUT	0.01	ITEM #37
31	2008.040000	2	WASHER, FLAT 0.25	0.01	ITEM #38 WAS 30384-00-06
32	5002263.001	1	SPACER PLATE	0.96	8-REQ'D

ITEMS FOR KNOCK-DOWN			
36	30327.00.06	4	.38 ORS CAP
37	30328.00.06	12	.38 ORS PLUG
38	---	---	---



SECTION A-A
SCALE : 4X

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE - CONTROLLED
REVISIONS: 1 OF 10

Manitex

SCALE	DRAWN	CHECKED	APPROV./DATE
1/10 = 1"	ER	US	DM 10/98

REAR STABILIZER PIPING
INSTALLATION

TOLERANCES
(UNLESS SPECIFIED IN
±.1/16

6000445-001

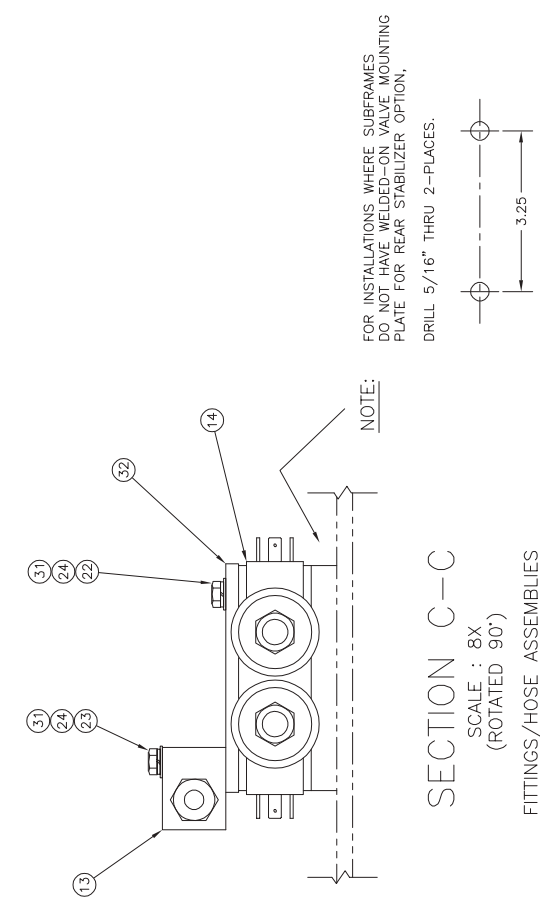
SHEET 2 OF 2
CAD FILE: MFE0010

REVISIONS	
EN 89-0103	
ER 07-18-89	NEW RELEASE
EN 90-0006	
ER 06-14-90	SEE SHT. 1
EN 91-0011	
EM 10-23-91	SEE SHT. 1
EN 95-0002	
EO 02-17-95	SEE SHT. 1
EN 97-0001/14	
JPB 01-29-97	
D1 ITEM #1	QTY WAS 4
D11 ITEM #4 WAS	30069.00.06
D2 ITEM #5	WAS 30202.06.06
D3 ITEM #6	WAS 30205.06.06
D4 ITEM #9	WAS 30238.06.480
D5 ITEM #14	WAS 4900140.001
D6 ITEMS #16 &	#21 QTY WAS 2
D7 ITEMS #17 -	#20 QTY WAS 6
D8 ITEM #22	WAS 2004.041040
D9 ITEM #23	WAS 2005.041000
QTY WAS 3	
D10 ITEM #24	QTY WAS 3
D11 ITEM #25	WAS 4000168.413
D12 ITEM #28	WAS 30347.59148
D13 ADDED	ITEMS #31 & #32
EN 00-0025/4	CC 12/00
E SEE SHT. 1	
EN 02-0007-01	CT 7/02
F SEE SHT. 1	

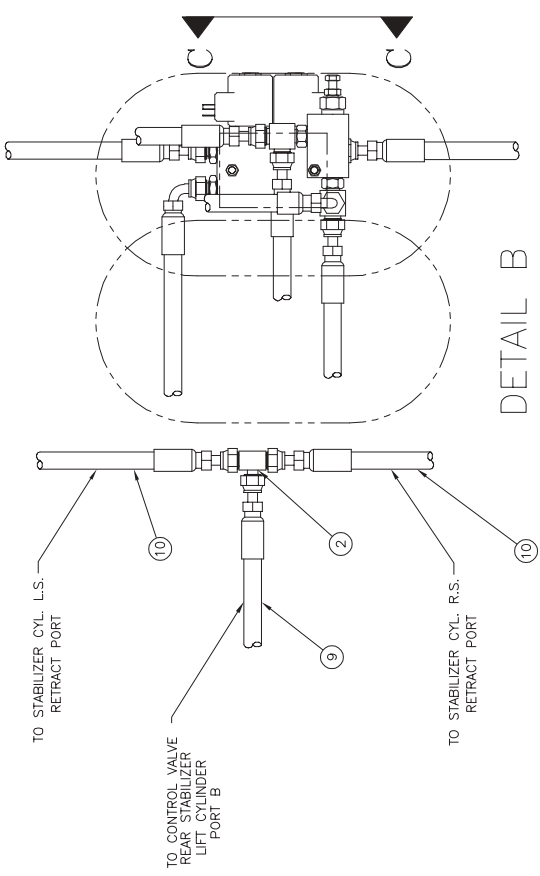
DOCUMENT CONTROL STATUS:
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 UNLESS SPECIFIED

Mantex

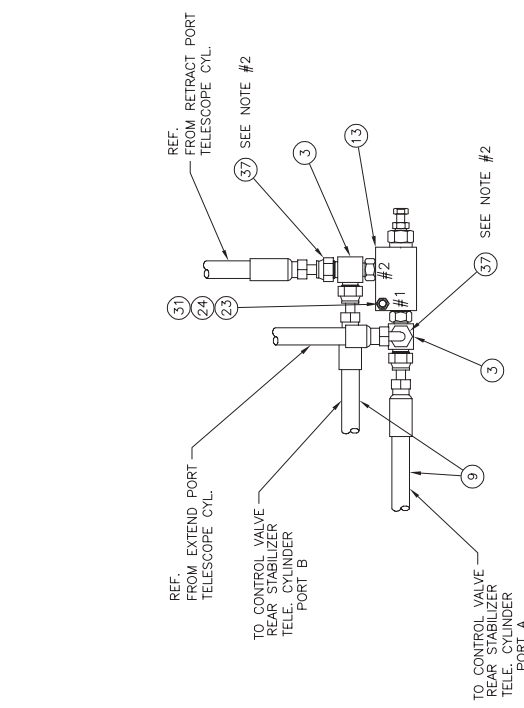
SCALE	1/16" = 1"	DESIGN	US	APPROXIMATE	10/89
DATE		DATE		DATE	
REAR STABILIZER PIPING INSTALLATION					
UNLESS SPECIFIED	6000445-001	SHEET	2	OF	3
CAD FILE: MFC0009					



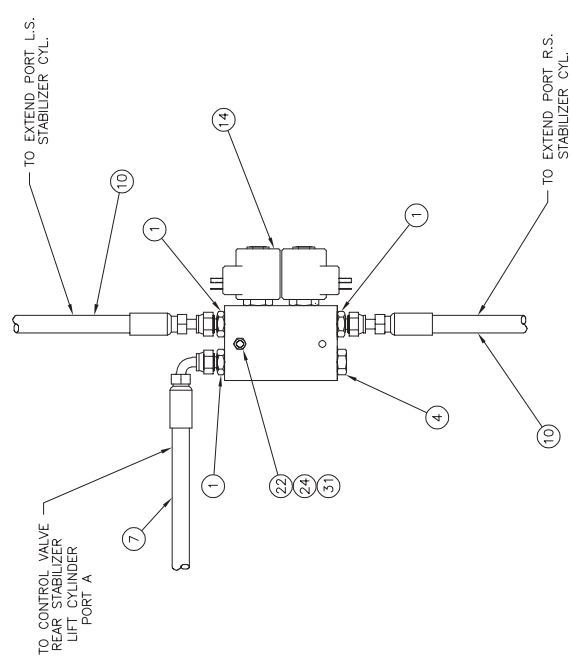
SECTION C-C
 SCALE : 8X
 (ROTATED 90°)
 FITTINGS/HOSE ASSEMBLIES
 OMITTED FOR CLARITY



DETAIL B
 SCALE : 4X



CONTROL VALVE ASSEMBLY
 (ITEM #14)
 OMITTED FOR CLARITY



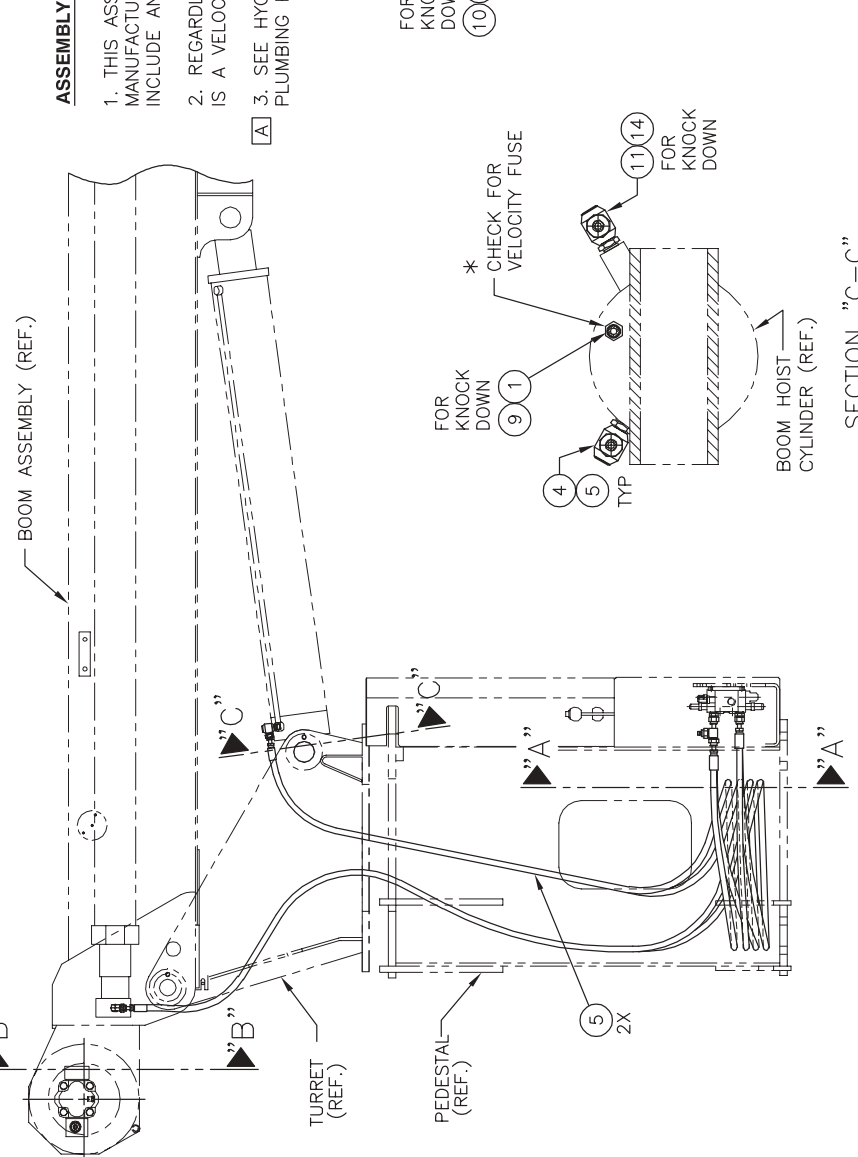
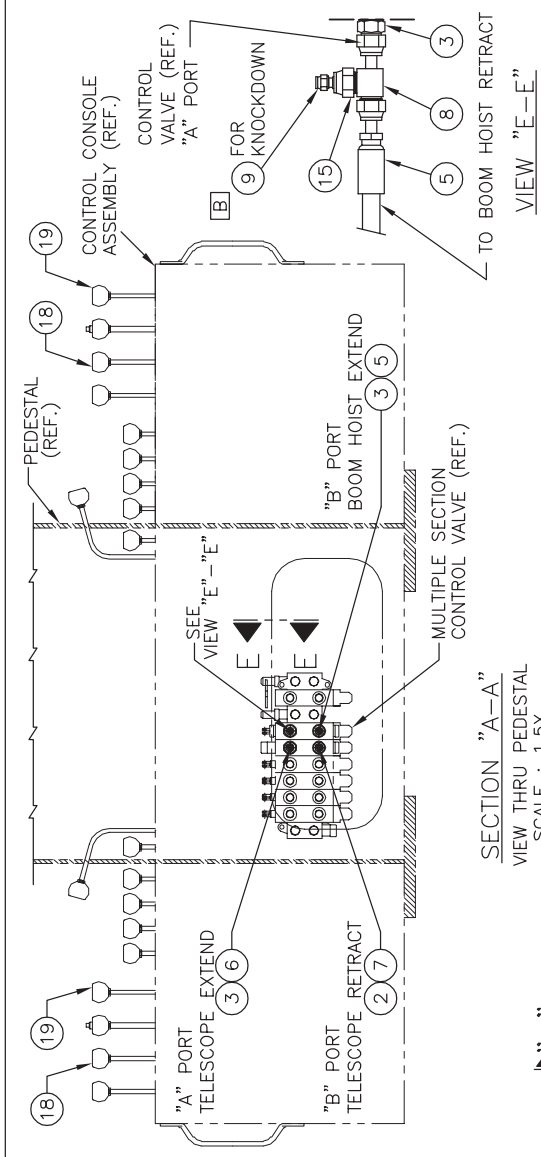
RELIEF VALVE ASSEMBLY
 (ITEM #13)
 OMITTED FOR CLARITY

BILL OF MATERIAL			REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	30202-04-06	1	ADAPTER, STR ORS/SAE	.10
2	30202-08-08	1	ADAPTER, STR ORS/SAE	.10
3	30202-10-08	3	ADAPTER, STR ORS/SAE	.15
4	30217-10-10	2	ADAPTER, 90 SWIVEL	.70
5	30234-10304	2	HOSE ASSY.	
6	30235-10359	1	HOSE ASSY. 45'	
7	30252-08359	1	HOSE ASSY. 45'	
8	30289-10-10	1	ADAPTER, TEE	.20
9	30327-00-04	2	CAP, ORS	.10
10	30327-00-08	1	CAP, ORS	.10
11	30327-00-10	3	CAP, ORS	.10
12				
13	30328-00-08	1	PLUG, ORS	.09
14	30328-00-10	3	PLUG, ORS	.09
15	30386-04-10	1	ADAPTER, REDUCER	.05
16				
17				
18	4000123-002	2	DECAL, "TELESCOPE"	.01
19	4000123-004	2	DECAL, "BOOM HOIST"	.01
20	4000168-400	1.31	VINYL TRIM	.20

TOTAL ASSEMBLY WEIGHT. 29.0 LBS.

ASSEMBLY / INSTALLATION NOTES:

1. THIS ASSEMBLY/INSTALLATION APPLIES TO CYLINDERS MANUFACTURED BY TEXAS HYDRAULICS ONLY. THESE CYLINDERS INCLUDE AN INTERNAL VELOCITY FUSE.
2. REGARDLESS OF CYLINDER MANUFACTURER, MAKE SURE THERE IS A VELOCITY FUSE IN THE PORT MARKED WITH AN "*".
3. SEE HYCAS OR LMI INSTALLATION DRAWINGS FOR ADDITIONAL PLUMBING REGARDING THE BOOM HOIST HYDRAULIC CIRCUIT.



DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HANDCOPY = UNCONTROLLED

Manitex

SCALE	DRAWN	CHECKED	APPROV./DATE
NONE	JPB	DM	DM 6/97

BOOM HOIST AND TELESCOPE CYLINDER PIPING INST.
STD. ROTATION

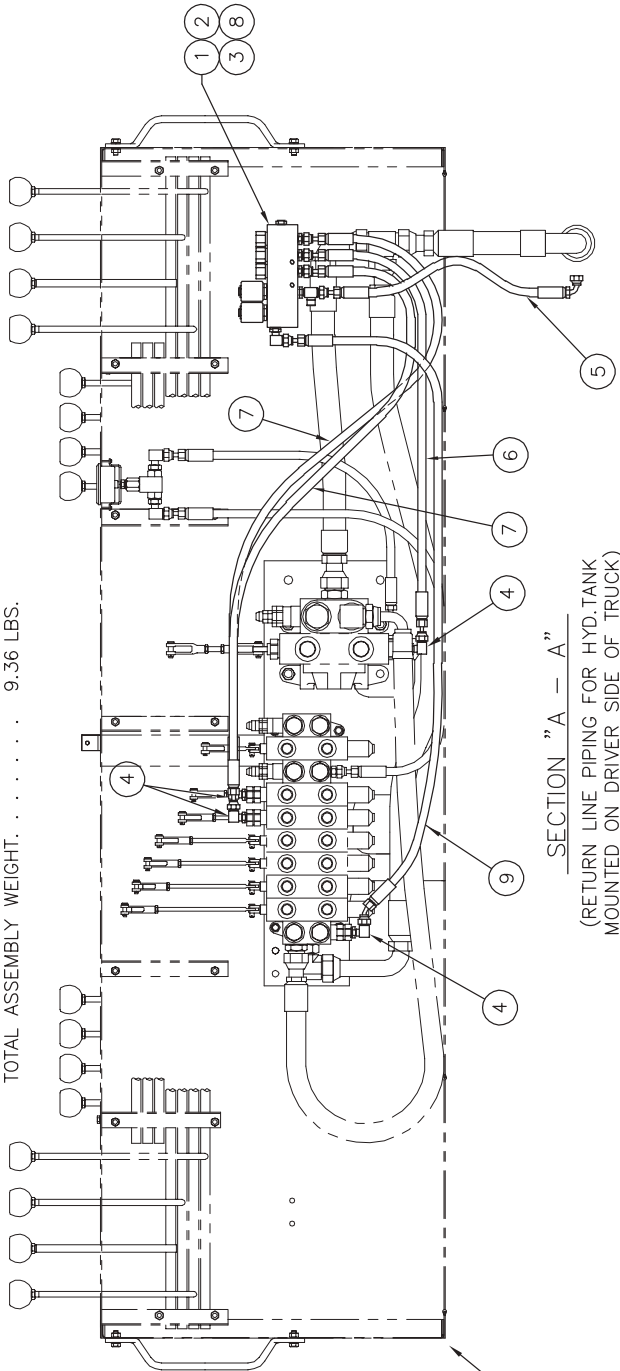
TOLERANCES (UNLESS SPECIFIED) 6000609-003

SHEET 1 OF 1

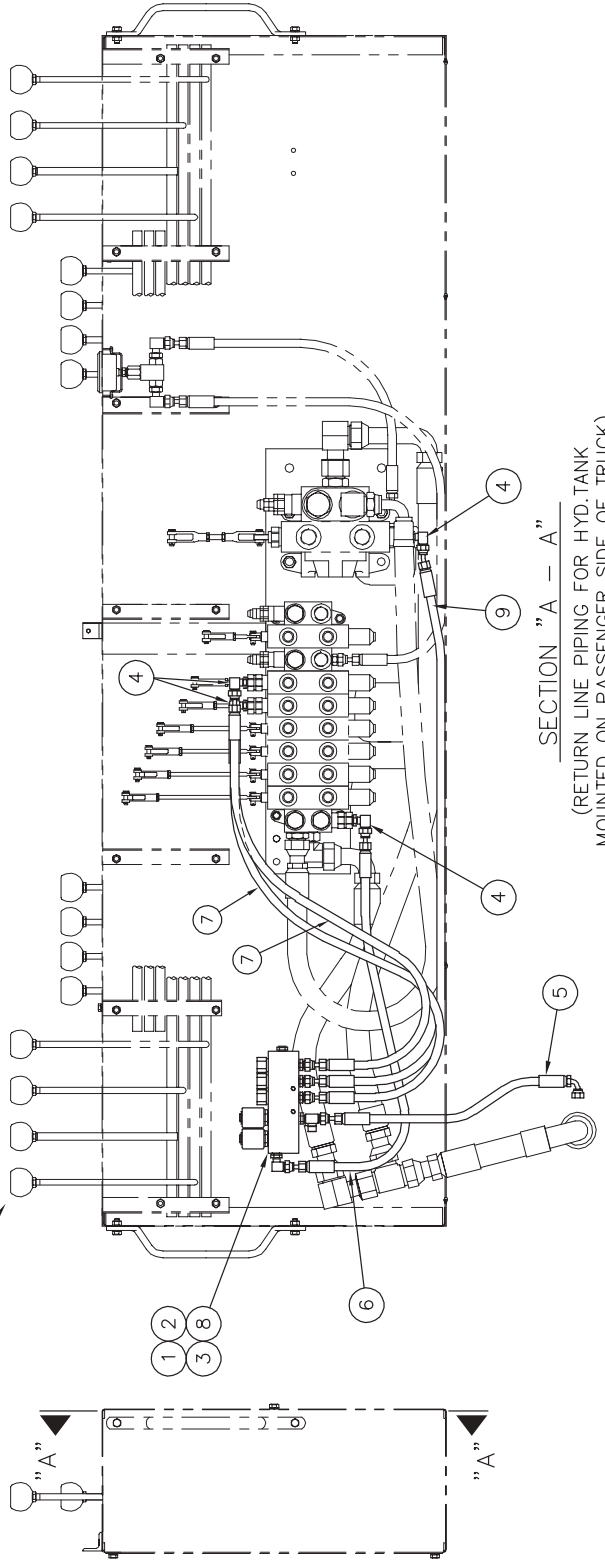
BILL OF MATERIAL				REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	EN 02-0018-13 EO 04-03 NEW RELEASE
1	2004-041040	2	BOLT HEX. 1/4"	0.01	
2	2005-041000	2	NUT HEX. 1/4"	0.01	
3	2006-040000	2	LOCKWASHER 1/4"	0.01	
4	30205-04-04	4	ADP.90 DEG. ORS/SAE	0.10	

BILL OF MATERIAL				REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	EN 02-0018-13 EO 04-03 NEW RELEASE
5	30237-04046	1	HOSE ASSEMBLY 1/4"	0.60	
6	30251-04059	1	HOSE ASSEMBLY 1/4"	0.90	
7	30251-04087	2	HOSE ASSEMBLY 1/4"	1.02	
8	6000519-012	1	VALVE SUB-ASS'Y	4.34	
9	30252-04064	1	HOSE ASSEMBLY 1/4"	1.02	

TOTAL ASSEMBLY WEIGHT. 9.36 LBS.



SECTION "A - A"
(RETURN LINE PIPING FOR HYD. TANK
MOUNTED ON DRIVER SIDE OF TRUCK)



SECTION "A - A"
(RETURN LINE PIPING FOR HYD. TANK
MOUNTED ON PASSENGER SIDE OF TRUCK)

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARD COPY = UNCONTROLLED

Manitex

SCALE	DRAWN	CHECKED	APPROV./DATE
1"=6"	EO	DM	04-03

HYDRAULIC INSTALLATION
LMI WITH O/L SHUT-OFF
WEATHERPACK SOLENOIDS

TOLERANCES
(UNLESS SPECIFIED) 6000755-003
±1/16" SHEET 1 OF 1

ITEM	PART #	DESCRIPTION	ASSY WHERE USED / ITEM	QTY	ITEM	PART #	DESCRIPTION	ASSY WHERE USED / ITEM	QTY	ITEM	PART #	DESCRIPTION	ASSY WHERE USED / ITEM	QTY	REVISIONS	
1	30065.04.06	APT, STR FNPT	6000521-012/48	1	20										EN 00-0025-4 CG 11/00 NEW RELEASE	
2	30069.00.04	ADAPTER, PLUG	6000519-007/1	1	21	30228.51008	HOSE ASSY GH781	6000521-012/62	1						EN 01-0011-15 ET 11/01	
3	30069.00.08	APT, PLUG SAE	6000521-012/100	2	22	30230.16083	HOSE ASSY GH781	6000521-012/58	1						A] ADDED P/N 30228-51008	
4	30202.04.04	APT, STR ORS/SAE			23	30231.12084	HOSE ASSY GH781	6000521-012/60	1						EN 02-0032-1 EV 10/02	
5	30202.06.08	APT, STR ORS/SAE	6000427-001/1 6000446-001/1	4 4	24	30231.16031	HOSE ASSY GH781	6000521-012/59	1						B1] QTY WAS 8 B2] QTY WAS 5 B3] QTY WAS 2 B4] ITEM 20 WAS 30212.16.16	
6	30202.08.08	APT, STR ORS/SAE	6000609-003/2	1	25	30237.04046	HOSE ASSY GH663	6000521-012/61 6000775-002/5	1 1							
7	30202.08.10	APT, STR ORS/SAE	6000098-002/15	1	26	30447.04094	HOSE ASSY GH663	6000584-020/35	1							
8	30202.10.08	APT, STR ORS/SAE	6000609-003/3	3	27	30251.04059	HOSE ASSY GH663	6000755-002/6	1							
9	30202.12.10	APT, STR ORS/SAE	6000098-002/15	1	28	30251.04069	HOSE ASSY GH663	6000521-012/63	1							
10	30202.12.12	APT, STR ORS/SAE	6000116-022/7	2	29	30251.04087	HOSE ASSY GH663	6000755-002/7	2							
11	30202.16.16	APT, STR ORS/SAE	6000521-012/51	1	30	30252.04064	HOSE ASSY GH663	6000755-002/9	1							
12	30205.04.04	APT, 90 ORS/SAE	6000755-002/4 6000519-007/3 6000116-002/12	4 1 1	31	30289.10.10	ADP, TEE	6000609-003/8	1							
13	30205.04.06	APT, 90 ORS/SAE	6000521-012/53	2	32	30386.04.10	ADP #10-4	6000609-003/15	1							
14	30205.08.08	APT, 90 ORS/SAE	6000082-001/4	1	1. PLUGS IN ABSENCE OF FRONT BUMPER STABILIZER OPTION											
15	30205.12.12	APT, 90 ORS/SAE	6000521-012/55	1												
16	30205.16.12	APT, 90 ORS/SAE	6000521-012/54	1												
17	30205.16.16	APT, 90 ORS/SAE	6000098-002/18	1												
18	30206.08.08	APT 90-L ORS/SAE	6000082-001/5	1												
19	30210.16.16	APT, TEE ORS 3X	6000521-012/56	1												

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARDCOPY = UNCONTROLLED



SCALE NTS	DRAWN CG	CHECKED	APPVD./DATE 11/00
CONSOLE HOSE & ADAP KIT WORK CENTER 21 MODEL 22LMI & 2801			
TOLERANCES (UNLESS SPECIFIED) 6000797-021			
SHEET 1			OF 1

ITEM	PART #	DESCRIPTION	ASSY WHERE USED / ITEM	QTY
1	30027.02.04	ADAPTER,90 DEG	6000608-001/1	2
2	30053.02.04	ADAPTER BLKHD	6000608-001/2	1
3	30083.06.04	ADAPTER, PLUG	6000584-020/30	2
4	30090.04.04	ADAPTER	6000608-001/3	1
5	30161.04094	HOSE ASSY	6000608-001/4	2
6	30202.04.04	APT, STR ORS/SAE	6000082-001/1	1 A
7	30202.08.10	APT, STR ORS/SAE	6000082-001/8	2
8	30203.06.06	APT, STR ORS/SAE	6000427-001/2	4 B
9	30205.04.04	APT, 90 ORS/SAE	6000082-001/3	1
10	30234.10304	HOSE ASY(GH781)	6000609-003/5	2
11	30234.12324	HOSE ASY(GH781)	6000116-022/11	2
12	30235.10359	HOSE ASY(GH781)	6000609-003/6	1
13	30237.04440	HOSE ASSY	6000116-22/13	1
14	30237.06164	HOSE ASSY	6000427-001/3	2
15	30237.06184	HOSE ASSY	6000427-001/4	2
16	30237.08054	HOSE ASSY	6000082-001/6	1
17	30237.08050	HOSE ASSY	6000082-001/2	1
18	30251.04048	HOSE ASSY	6000082-001/7	1
19	30414.04194	HOSE ASSY	6000584-020/34	1
20	30252.08359	HOSE ASSY	6000609-003/7	1

<https://cranemanuals.com>

REVISIONS

EN 00-0025-4
CG 11/00
NEW RELEASE

EN 01-0014-5
EV 7/30/01
A ADDED
30202-04-04

EN 02-0032-1
EV 10/02
B ADDED
30203-06-06

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARDCOPY = UNCONTROLLED



SCALE NTS	DRAWN CG	CHECKED	APPVD./DATE 11/00
PEDESTAL HOSE & ADAP KIT WORK CENTER 22 MODEL 2201CL & 2801CL			
TOLERANCES (UNLESS SPECIFIED)			6000797-022
SHEET			1 OF 1

ITEM	PART #	DESCRIPTION	ASSY WHERE USED / ITEM	QTY
1	30202.04.04	APT, STR	6000116-22/12	1 <input type="checkbox"/>
2	30202.12.16	APT, STR	6000116-022/8	1
3	30205.08.08	APT, 90 DEG.	6000599-005/114	1
4	30205.10.10	APT, 90 DEG.	6000599-005/118	1
5	30205.12.16	APT, 90 DEG.	6000116-022/9	1

REVISIONS

EN 00-0025-4
 CG 11/00
 NEW RELEASE
 EN 02-0032-1
 EV 10/02
 A] QTY WAS
 (2)

DOCUMENT CONTROL STATUS:
 ELECTRONIC FILE = CONTROLLED
 HARD COPY = UNCONTROLLED



SCALE NTS	DRAWN CG	CHECKED	APPVD./DATE
			11/00
BOOM & WINCH HOSE KIT WORK CENTER 23 MODEL 2201 & 2801			
TOLERANCES (UNLESS SPECIFIED)			6000797-023
SHEET			1 OF 1

ITEM	PART #	DESCRIPTION	ASSY WHERE USED / ITEM	QTY
1	30202.06.06	APT, STR ORS/SAE	6000563-005/30	1
2	30205.06.06	APT, 90 ORS/SAE	6000563-005/31	1
3	30251.06256	HOSE ASSY	6000563-005/32	1
4	30251.06400	HOSE ASSY	6000563-005/33	1
5	30203.06.06	APT, STR ORS/SAE	6000445-001/8	4
6	30140.21.00	HOSE CLAMP	6000563-005/34	2

A

A

REVISIONS
EN 00002504
CG 11/00
NEW RELEASE
EN 01001108
ET 11/01
A ADDED ITEMS
5 & 6

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARDCOPY = UNCONTROLLED



SCALE	DRAWN	CHECKED	APPVD./DATE
NTS	CG		11/00
STABILIZER HOSE KIT			
WORK CENTER 26			
MODEL 2801			
TOLERANCES (UNLESS SPECIFIED)			6000797-026
SHEET			1 OF 1

ITEM	PART #	DESCRIPTION	ASSY WHERE USED / ITEM	QTY
1	30069.00.08	ADAPTER, PLUG	6000445-001/4	1
2	30202.06.08	ADAPTER,	6000445-001/1	3
3	30208.06.06	APT, TEE	6000445-001/3	2
4	30210.06.06	APT, TEE	6000445-001/2	1
5	30237.06226	HOSE ASSY	6000445-001/10	4
6	30237.06504	HOSE ASSY	6000445-001/7	1
7	30251.06504	HOSE ASSY	6000445-001/9	3
8	4100033	NYLON SLEEVE	6000445-001/28	16 FT.








REVISIONS

EN 02-0032-1
 EV 10/02
 NEW RELEASE

DOCUMENT CONTROL STATUS:
 ELECTRONIC FILE = CONTROLLED
 HARD COPY = UNCONTROLLED



SCALE NTS	DRAWN CG	CHECKED	APPVD./DATE
			11/00
TRUCK PREP HOSE/ ADPT KIT WORK CENTER 24 MODEL 2801			
TOLERANCES (UNLESS SPECIFIED)		6000797-824	
SHEET		1	OF 1

ITEM	PART #	DESCRIPTION	ASSY WHERE USED / ITEM	QTY
1	30240-04-02		6000097-030/8	1
2	30092-00-16		6000098-002/10	1
3	30092-00-12		6000098-002/9	1
4	30093-00-40		6000098-002/11	1
5	30140-46-00		6000098-002/14	2
6	30205-08-08		6000098-002/17	1
7	30108-00-40	HOSE CLAMP	6000098-002/13	2
8	30228-16192	HOSE ASSY	6000098-002/20	1
9	30228-12176	HOSE ASSY	6000098-002/21	1
10	30251-08164	HOSE ASSY	6000098-002/22	1
11	30347-59000	NYLON SLEEVE	6000116-022/10	5'
12	30202-04-06		6000609-003/1	1

REVISIONS
EN 02-0032-1
EV 10/02
NEW RELEASE

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARDCOPY = UNCONTROLLED



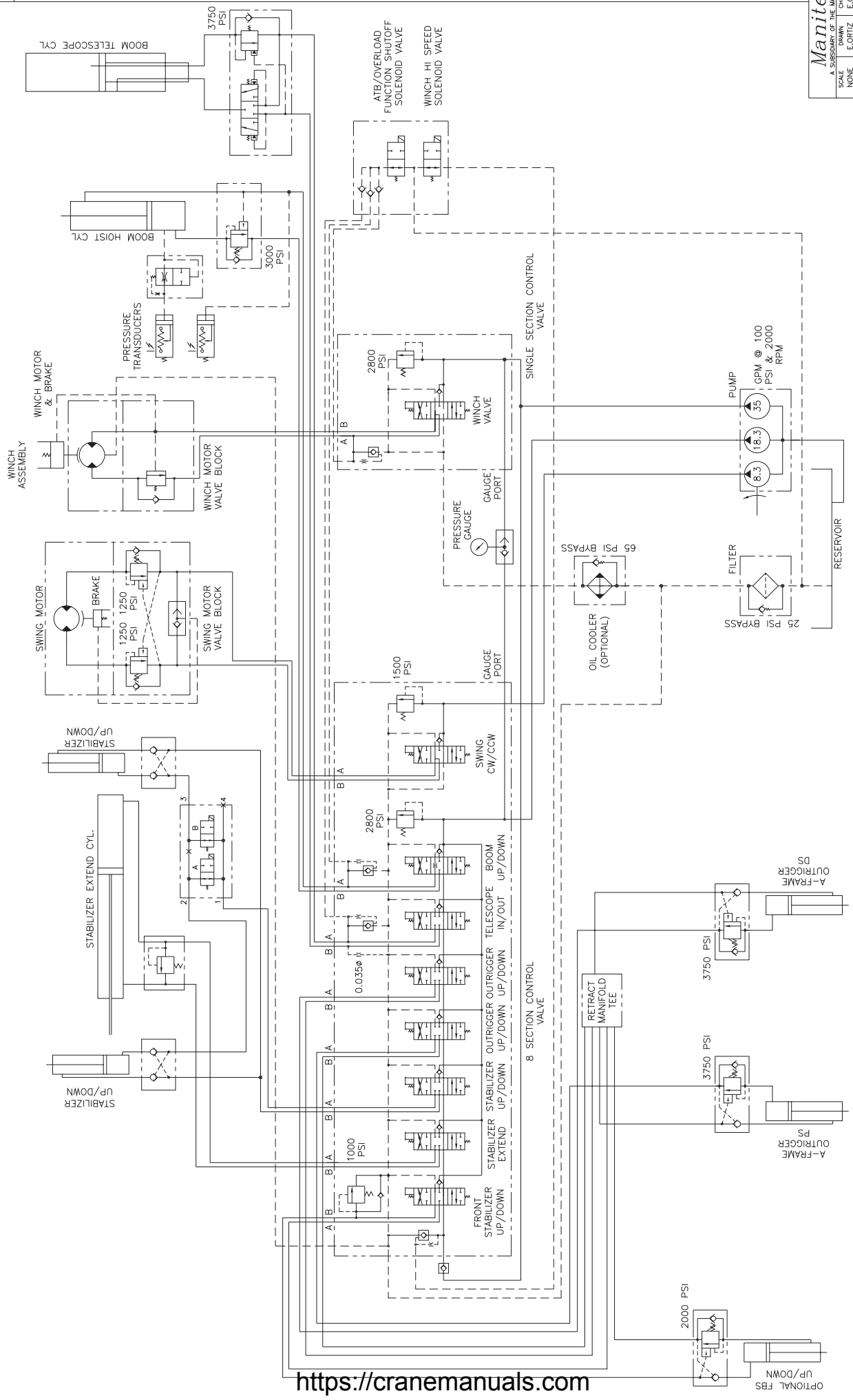
SCALE	DRAWN	CHECKED	APP'D./DATE
NTS	CG		11/00

RIG BOX HOSE & ADAP KIT
MOUNTED UNIT WORK CENTER 25
MODEL 2201CL 2601CL 2801CL

TOLERANCES (UNLESS SPECIFIED)	SHEET	OF
6000797-925	1	1

REVISIONS
 EN 02-0018-19
 EO 08-03
 NEW RELEASE

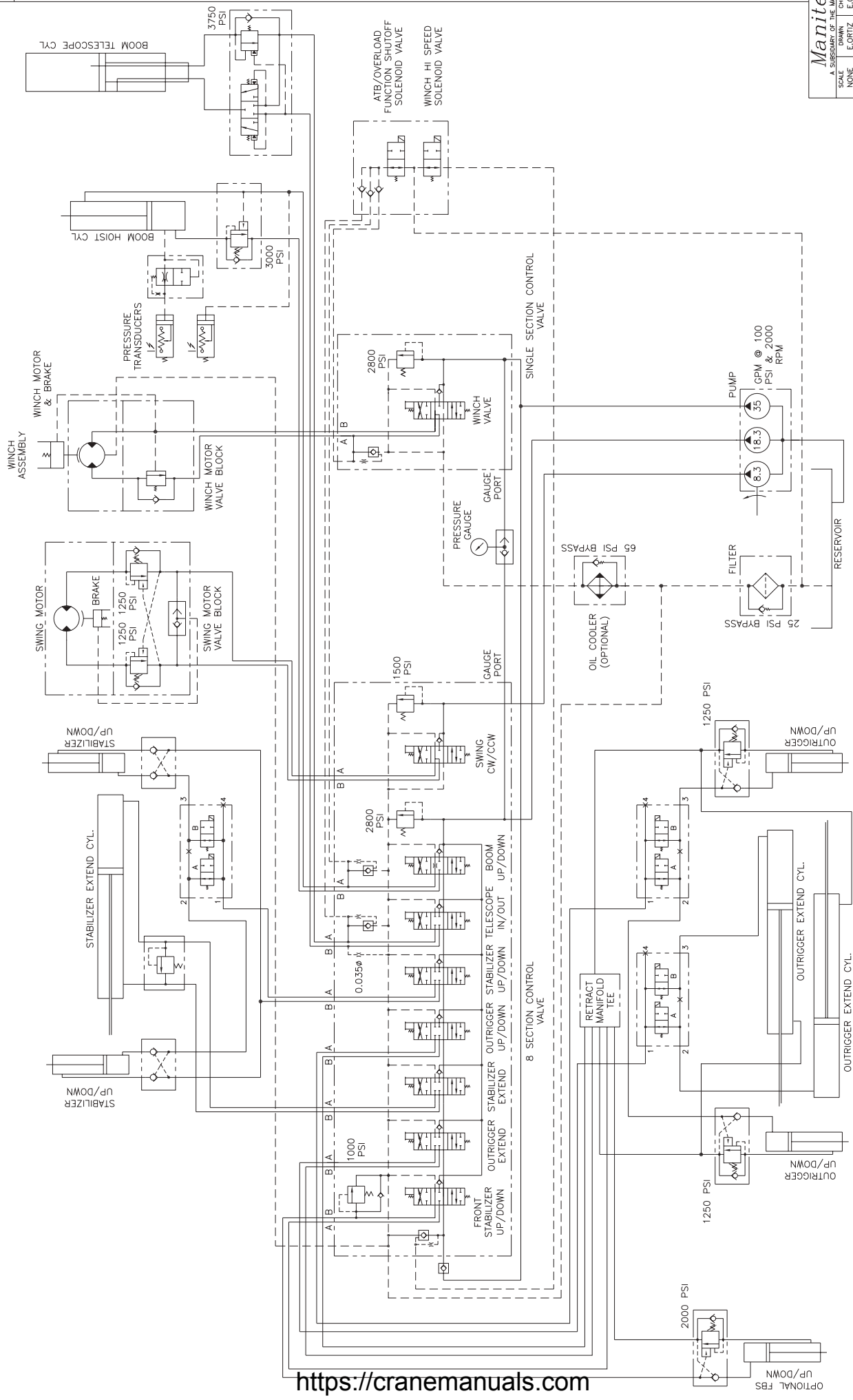
Manitex Inc.			
A SUBSIDIARY OF THE MANITOWOC COMPANY, INC.			
SCALE	DRAWN	CHECKED	APPROV./DATE
NONE	E. ORTIZ	E. ORTIZ	D. MORAVEC 08-03
HYDRAULIC SCHEMATIC			
MODEL 3001C WITH STD			
A-FRAME OUTRIGGERS			
TOLERANCES (UNLESS SPECIFIED)			
7100082-001			SHEET
± 1/16"			1 of 2



<https://cranemanuals.com>

REVISIONS
 EN 02-0018-19
 EO 08-03
 NEW RELEASE

Manitex Inc.			
A SUBSIDIARY OF THE MANITOWOC COMPANY, INC.			
SCALE	DRAWN	CHECKED	APPROV./DATE
NONE	E.ORTIZ	E.ORTIZ	D.MORAVEC 08-03
HYDRAULIC SCHEMATIC			
MODEL 3001C WITH OPTIONAL			
OUT & DOWN OUTRIGGERS			
TOLERANCES			
(UNLESS SPECIFIED)			
7100082-001			SHEET
			2 of 2



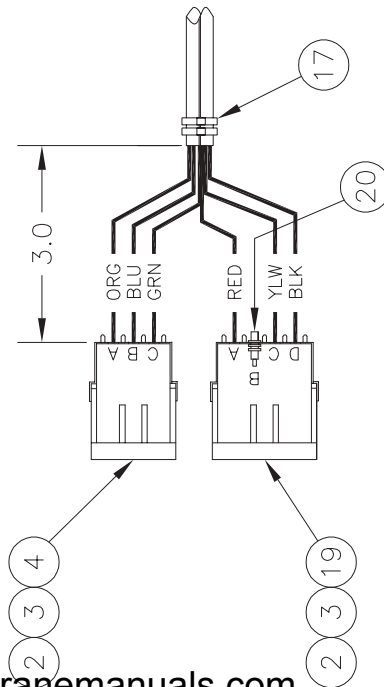
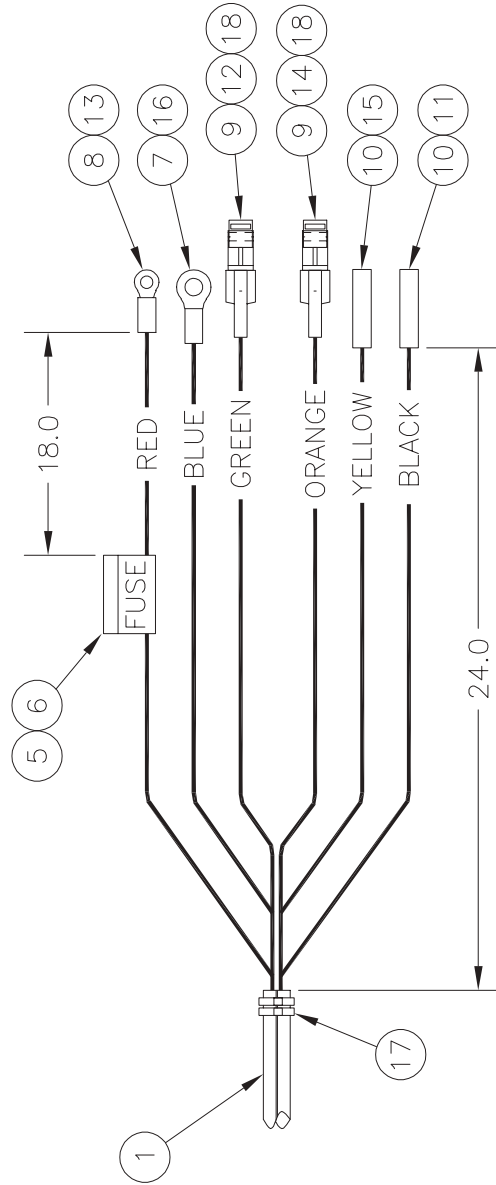
<https://cranemanuals.com>

BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
11	1000132-011-601	20'	WIRE, 14 GA. BLACK	-
12	1000132-011-606	20'	WIRE, 14 GA. GREEN	-
13	1000132-011-603	20'	WIRE, 14 GA. RED	-
14	1000132-011-604	20'	WIRE, 14 GA. ORANGE	-
15	1000132-011-605	20'	WIRE, 14 GA. YELLOW	-
16	1000132-011-607	20'	WIRE, 14 GA. BLUE	-
17	2083-100125	4	CABLE TIE 0.13x6.00	-
18	4800673-002	2	TEE TAP CONN.	-
19	2088-510400	1	CONNECTOR 4 WAY M	-
20	2088-500010	1	CAVITY PLUG	-

BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT	REVISIONS
1	4800092-016	20	LOOM, 1/2" DIA.	-	EN 02-0017-13 EO 01-03 - NEW RELEASE
2	2088-510021	7	SOC TERMINAL MALE	-	EN 02-0017-26 EO 03-03
3	2088-500002	7	SEAL	-	-
4	2088-510300	1	CONNECTOR 3 WAY M	-	-
5	4800718-001	1	FUSE HOLDER	-	-
6	4800719-003	1	FUSE, 7.5 AMP	-	-
7	4800078-014	1	RING TERM 3/8"-14G	-	-
8	4800078-003	1	RING TERM #10-14G	-	-
9	4800674-003	2	CONNECTOR, QK MALE	-	EN 02-0017-32 EO 07-03
10	4800076-001	2	BUTT SPLICE 16 GA	-	B1] ITEM 5,6,8 WERE 2 REQ'D B2] ITEM 6 WAS 4800719-005 B3] ITEM 13 WAS 40 FT. REQ'D B4] ADDED ITEM 20



WIRING TABLE:

WEATHERPACK PIN- WIRE COLOR - END CONNECTOR

ITEM 4 PIN A - ORANGE - ITEM 9,14,18

ITEM 4 PIN B - BLUE - ITEM 7,16

ITEM 4 PIN C - GREEN - ITEM 9,12,18

ITEM 19 PIN A - RED - ITEM 5,6,8,13

ITEM 19 PIN B - CAVITY PLUG - ITEM 20

ITEM 19 PIN C - YELLOW - ITEM 10,15

ITEM 19 PIN D - BLACK - ITEM 10,11

DOCUMENT CONTROL STATUS:
ELECTRONIC FILE = CONTROLLED
HARDCOPY = UNCONTROLLED



SCALE	CHECKED	APPROV./DATE
NONE	DM	DM 01-03
DRAWN	DM	
EO		

TRUCK
HARNES

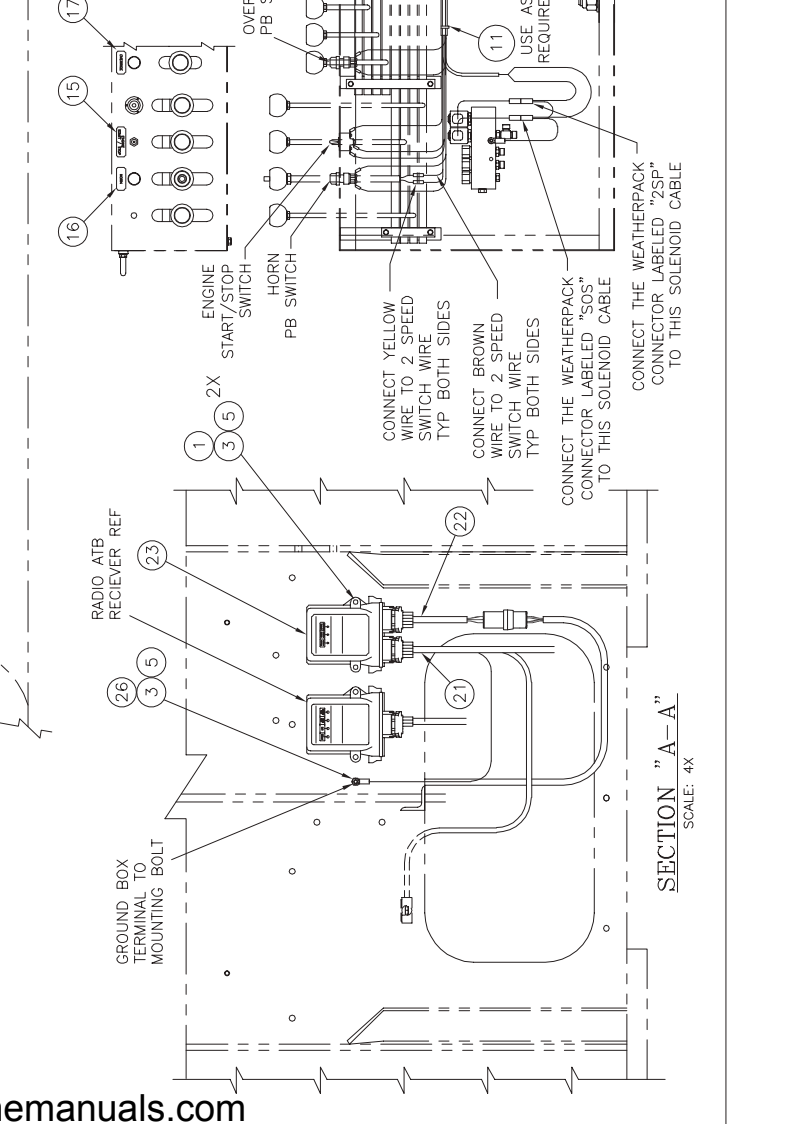
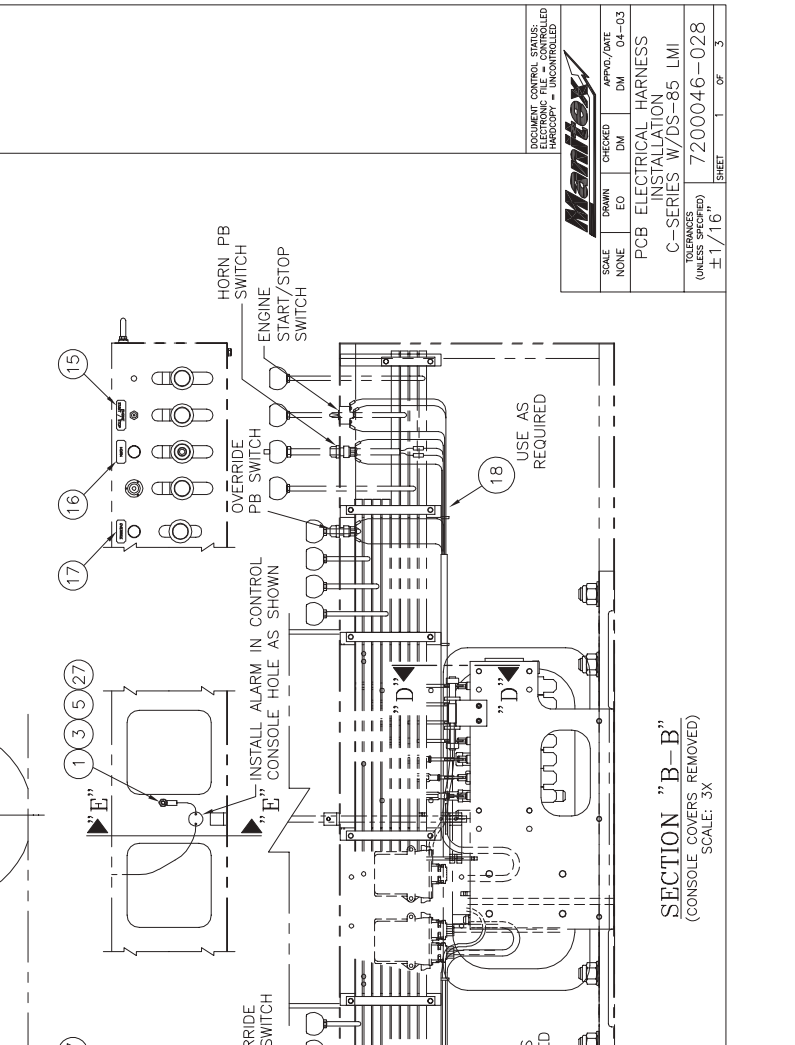
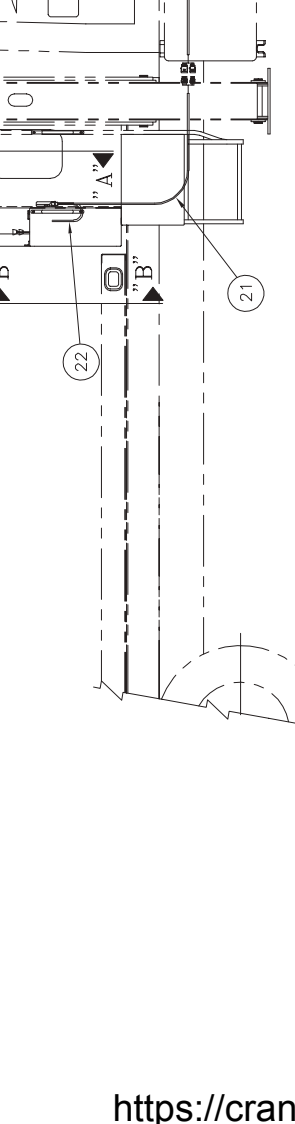
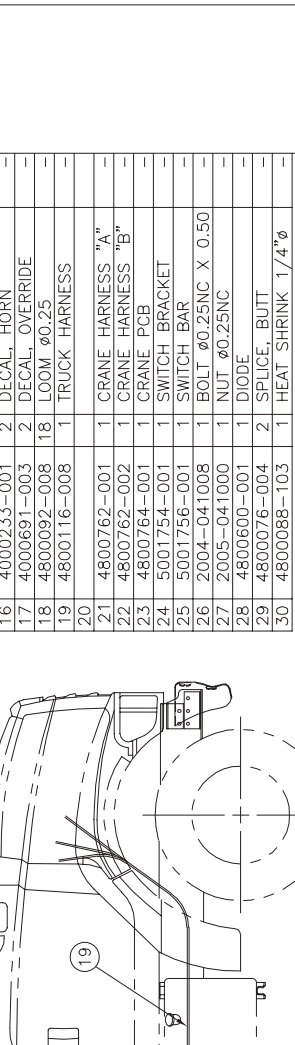
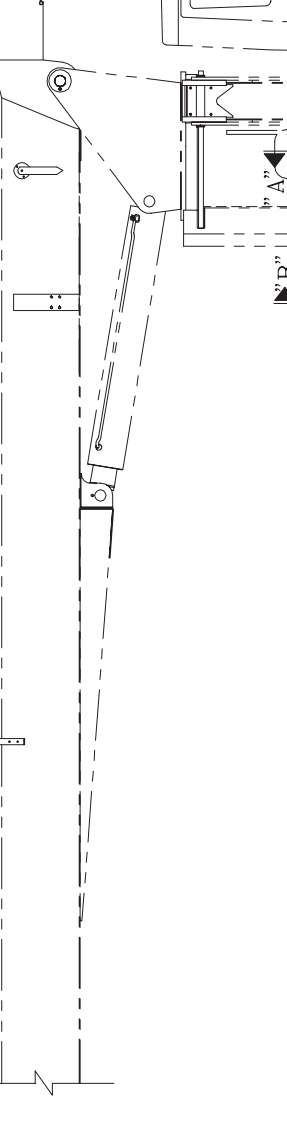
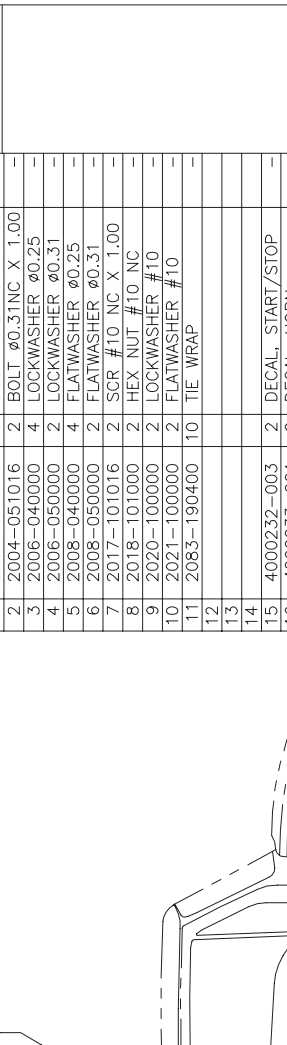
TOLERANCES
(UNLESS SPECIFIED)
± 1/4"

SHEET 1 OF 1

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DECIMAL PLACES	FABRICATION	MACHINING	TOLERANCE UNLESS OTHERWISE SPECIFIED
(1) PLACE 0.0	± 0.120	± 0.030	1) √ = MACHINING TOLERANCE AND USE SURFACE DIMENSION
(2) PLACE 0.00	± 0.060	± 0.015	2) ∇ INDICATES A TOLERANCE OTHER THAN INDICATED BY ORIGINAL DECIMAL DIMENSION
(3) PLACE 0.000	± 0.030	± 0.005	EXAMPLE: .375 = USE ONE DECIMAL PLACE TOLERANCE.
ANGLES	± 1' 30"	± 0' 30"	

BILL OF MATERIAL			REVISIONS
ITEM NO.	PART NUMBER	DESCRIPTION	UNIT WEIGHT
1	2004-041016	BOLT ϕ 0.25NC X 1.00	EN 02-0018-11
2	2004-051016	BOLT ϕ 0.31NC X 1.00	EO 04-03
3	2006-040000	LOCKWASHER ϕ 0.25	NEW RELEASE
4	2006-050000	LOCKWASHER ϕ 0.31	
5	2008-040000	FLATWASHER ϕ 0.25	
6	2008-050000	FLATWASHER ϕ 0.31	
7	2017-101016	SCR #10 NC X 1.00	
8	2018-101000	HEX NUT #10 NC	
9	2020-100000	LOCKWASHER #10	
10	2021-100000	FLATWASHER #10	
11	2083-190400	TIE WRAP	
12			
13			
14			
15	4000232-003	DECAL, START/STOP	
16	4000233-001	DECAL, HORN	
17	4000691-003	DECAL, OVERRIDE	
18	4800092-008	LOOM ϕ 0.25	
19	4800116-008	TRUCK HARNESS	
20			
21	4800762-001	CRANE HARNESS "A"	
22	4800762-002	CRANE HARNESS "B"	
23	4800764-001	CRANE PCB	
24	5001754-001	SWITCH BRACKET	
25	5001756-001	SWITCH BAR	
26	2004-041008	BOLT ϕ 0.25NC X 0.50	
27	2005-041000	NUT ϕ 0.25NC	
28	4800600-001	DIODE	
29	4800078-004	SPLICE, BUTT	
30	4800088-103	HEAT SHRINK 1/4 ϕ	



SCALE	DRAWN	CHECKED	APPROV./DATE
NONE	DM	DM	04-03
PCB ELECTRICAL HARNESS			
INSTALLATION			
C-SERIES W/DS-85 LMI			
TOLERANCES (UNLESS NOTED)			
±1/16"			
7200046-028			
SHEET			
OF 3			

DOCUMENT CONTROL STATUS: REVISIONS CONTROLLED
 HARNESS UNCONTROLLED

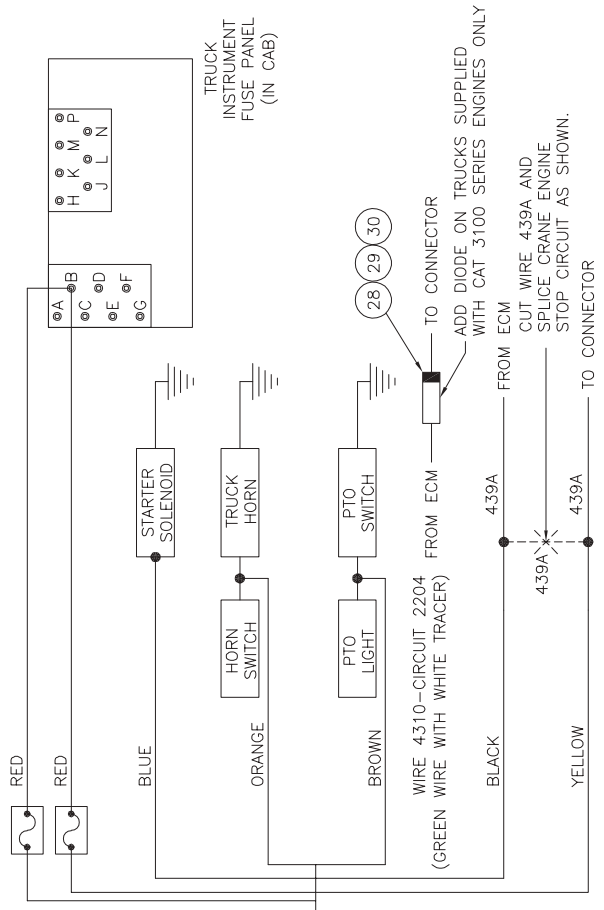
Mantrex

SECTION "A-A"
 SCALE: 4X

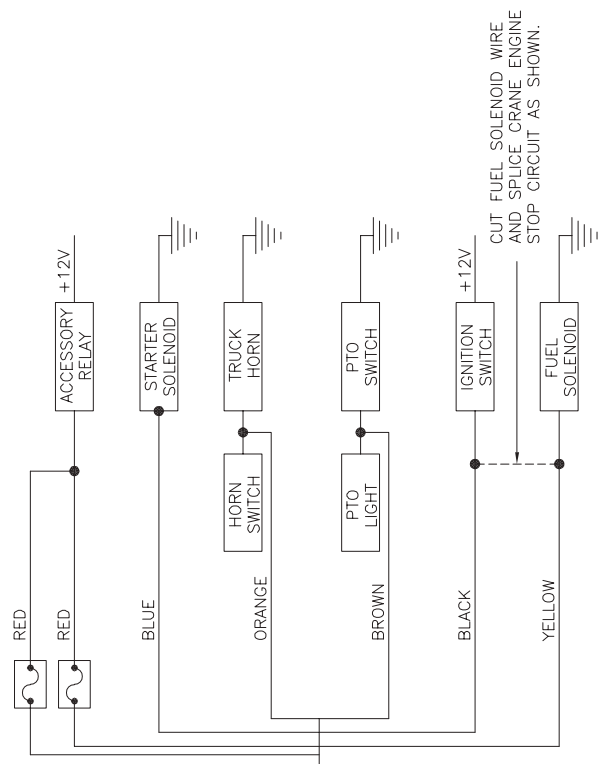
SECTION "B-B"
 (CONSOLE COVERS REMOVED)
 SCALE: 3X

REVISIONS
 EN 02-0018-11
 EO 04-03
 NEW RELEASE

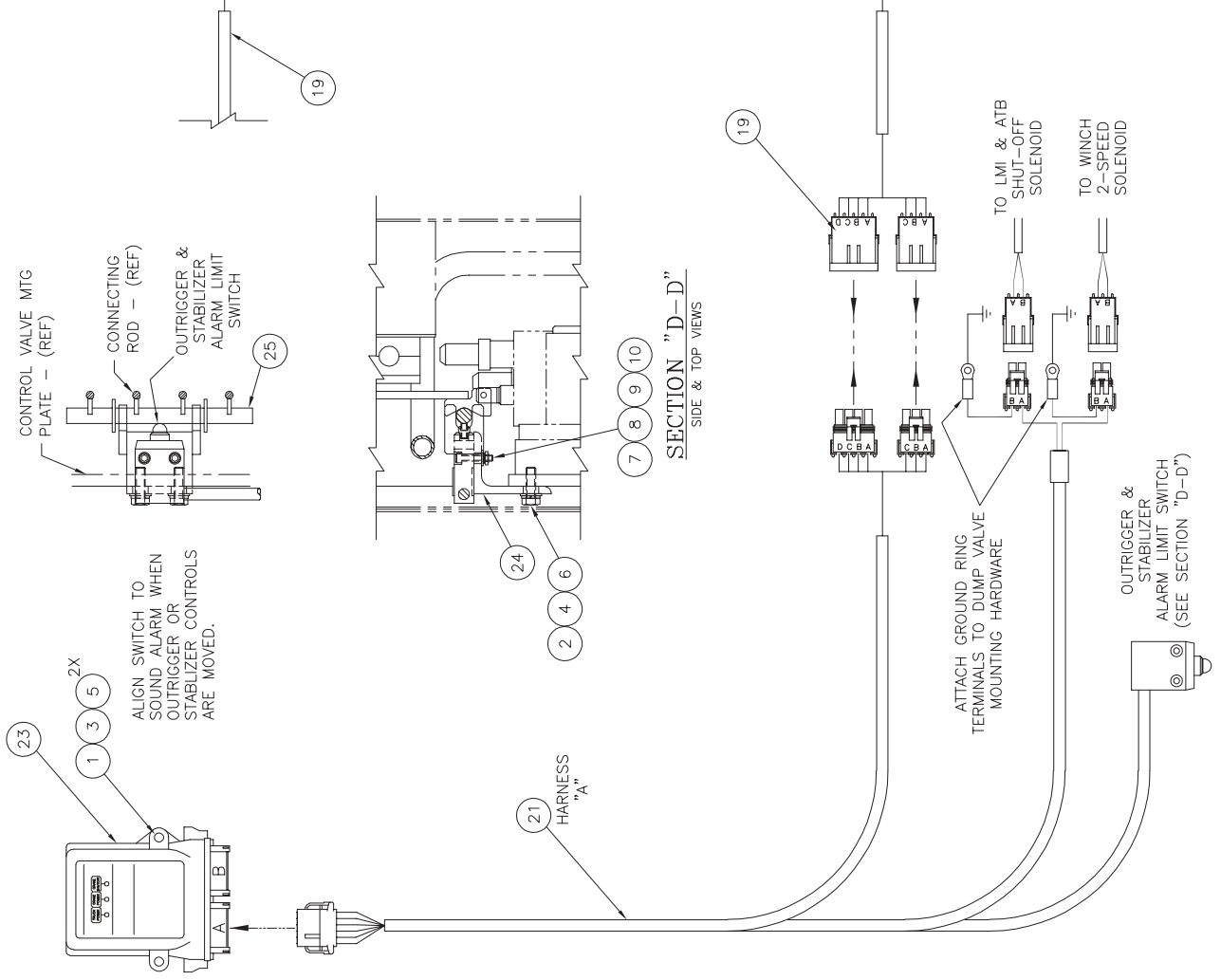
SCALE	DRAWN	CHECKED	APP'D	DATE
1"=2'	DM	DM	DM	04-03
Mantex				
PCB ELECTRICAL HARNESS INSTALLATION C-SERIES W/DS-85 LMI (UNLESS SPECIFIED) 7200046-028				
TOLERANCES UNLESS SPECIFIED				SHEET
				2 OF 3



TRUCK WIRING DIAGRAM
 STANDARD STERLING L17500 & L19500

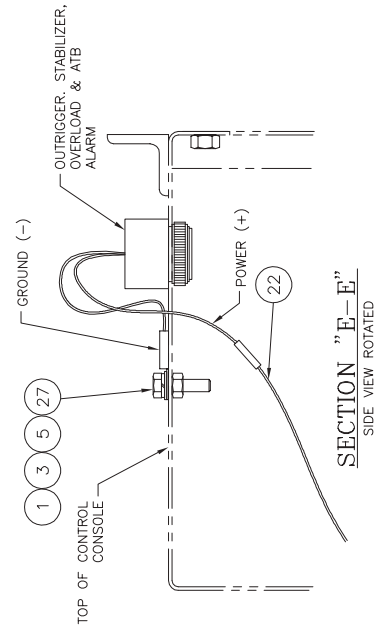
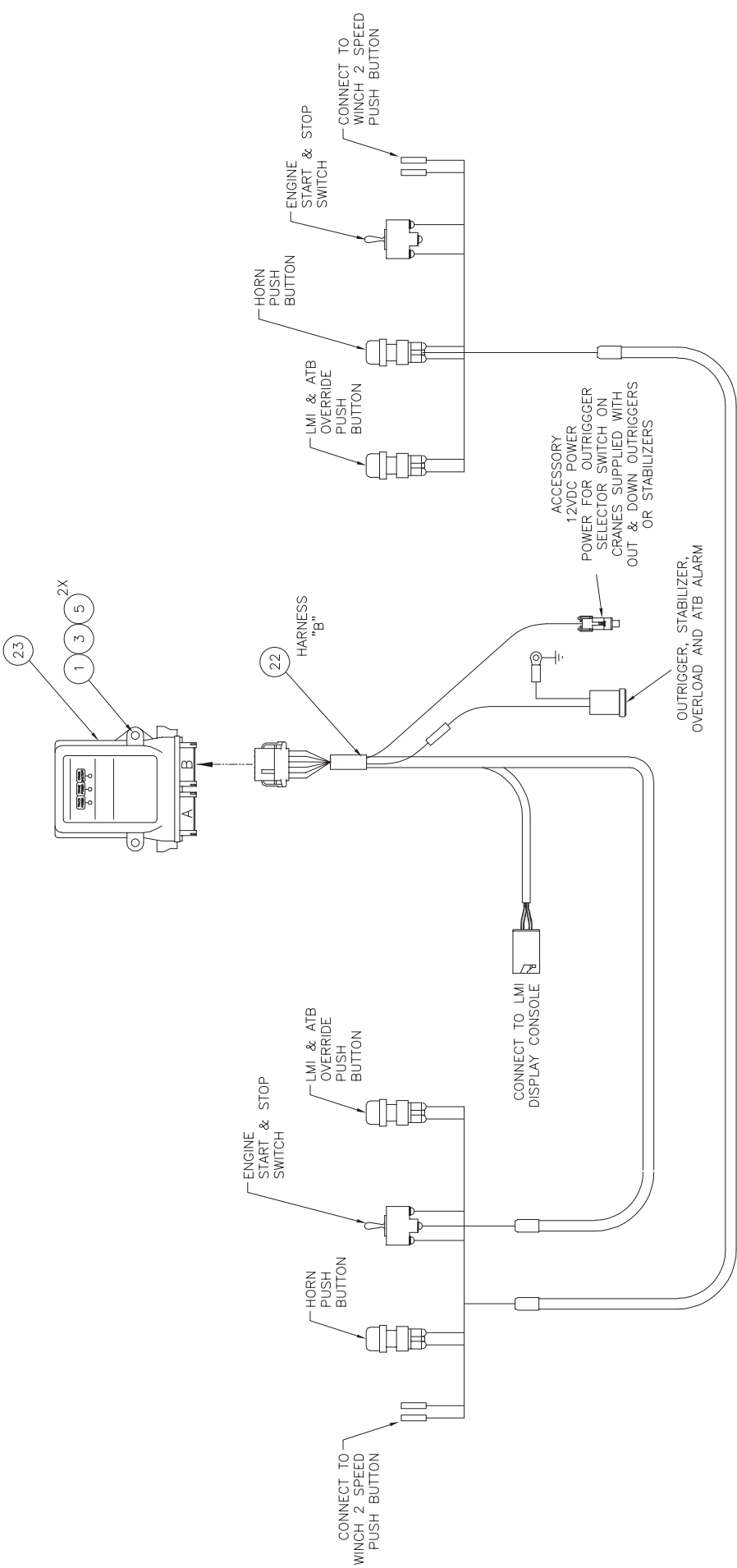


TRUCK WIRING DIAGRAM
 ALL OTHER TRUCKS



REVISIONS
 EN 02-0018-11
 EO 04-03
 NEW RELEASE

SCALE	DRAWN	CHECKED	APPROV./DATE
1"=2'	DM	DM	04-03
PCB ELECTRICAL HARNESS INSTALLATION C-SERIES W/DS-85 LMI			
TOLERANCES (UNLESS OTHERWISE SPECIFIED)			7200046-028
SHEET			3 OF 3



BILL OF MATERIAL			REVISIONS	
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	4800551-003	2	HARNES, DIR VLV	3.00
2	4800078-008	4	#8 RING #22-16 Ga	.01
3	4000298-002	2	DECAL O/R & STAB	.01

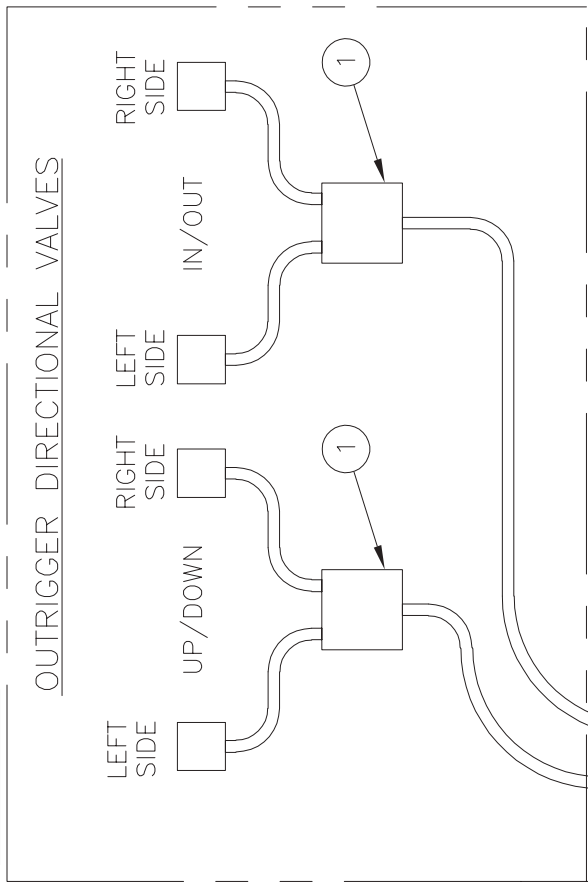
REVISIONS		
EN 97-0004-13	EO 4/97	NEW RELEASE

TOTAL ASSEMBLY WEIGHT. 6.06 LBS.

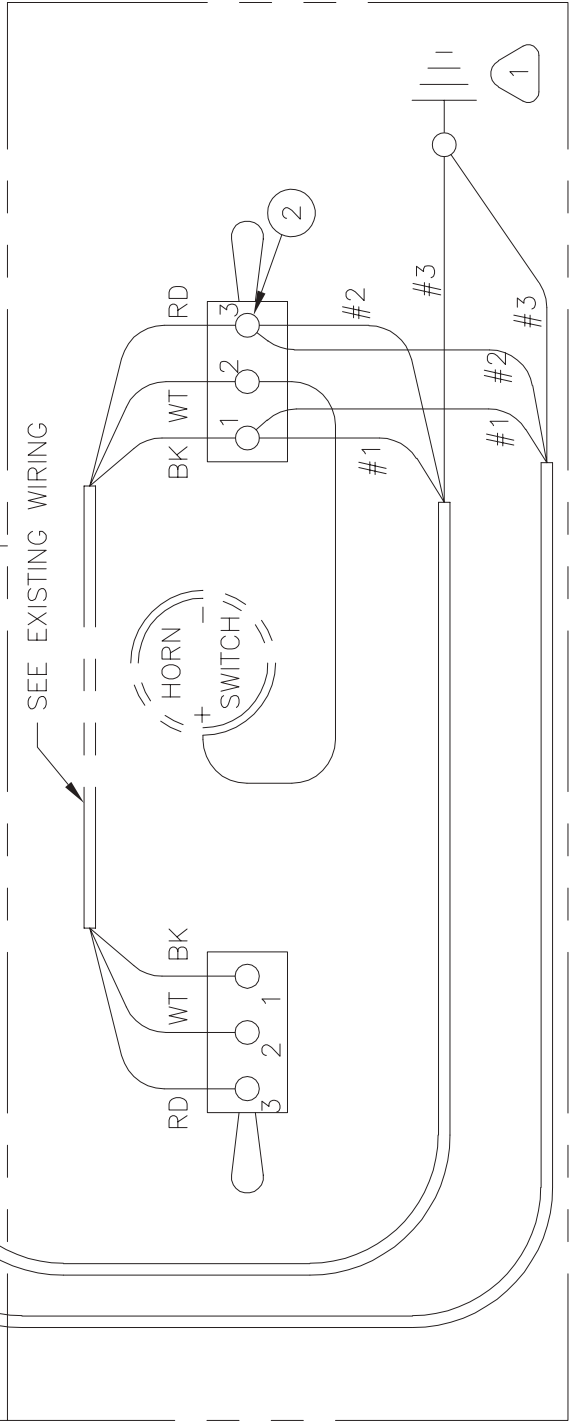
Ⓛ GROUND TO MANIFOLD BLOCK AT CONTROL CONSOLE.

NOTE:
DUE TO LIMITATIONS IN THE RIGBOX CONTROL OF THE MATERIALS COMPUTER SYSTEM, IT WAS NECESSARY TO HAVE TWO IDENTICAL WIRING INSTALLATIONS 7200101-001 & 7200100-003

PEDESTAL



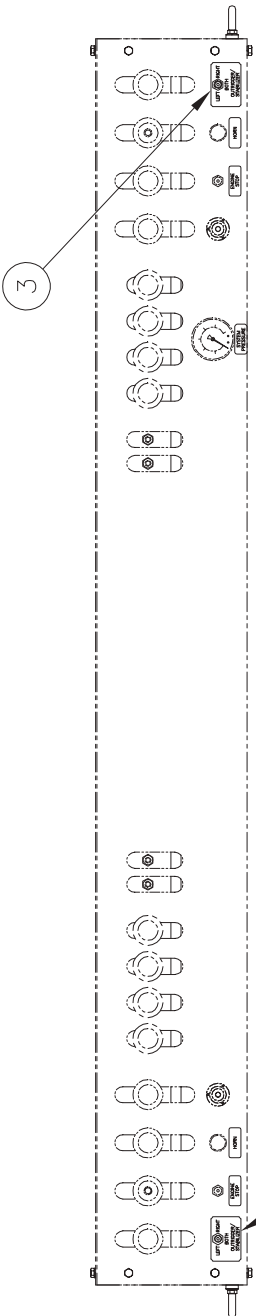
CONTROL CONSOLE



Manitex Inc.			
A SUBSIDIARY OF THE MANITOWOC COMPANY, INC.			
SCALE 1"=1"	DRAWN E.ORTIZ	CHECKED DAS	APPVD./DATE E.ORTIZ 4/97
WIRING INSTALLATION OUT & DOWN O/R 2200 & 2500			
TOLERANCES (UNLESS SPECIFIED) ±1/16"			7200100-003
SHEET 1 OF 2			

REVISIONS
EN 97-0004-13
EO 4/97
NEW RELEASE

REPLACE EXISTING DECAL
WITH ITEM 3



REPLACE EXISTING DECAL
WITH ITEM 3

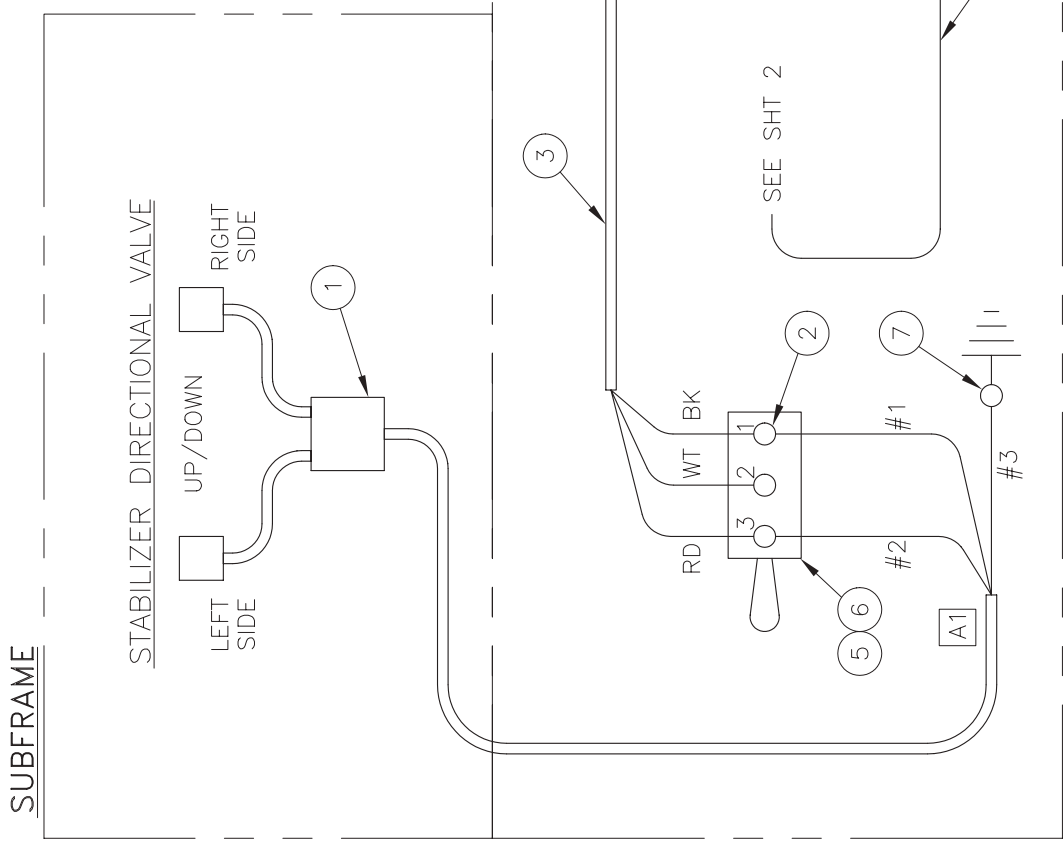
<i>Manitex Inc.</i>			
A SUBSIDIARY OF THE MANITOWOC COMPANY, INC.			
SCALE 1/8=1"	DRAWN E. ORTIZ	CHECKED DAS	APP'D./DATE E. ORTIZ 4/97
WIRING INSTALLATION OUT & DOWN O/R 2200 & 2500			
TOLERANCES (UNLESS SPECIFIED) ± 1/16"			
7200100-003		SHEET 2	OF 2
CAD FILE: MTA1285			

BILL OF MATERIAL				REVISIONS
ITEM NO.	PART NUMBER	QTY	DESCRIPTION	UNIT WEIGHT
1	4800551-003	1	HARNESS, DIR VLV	3.00
2	4800078-008	2	#8 RING #22-16 Ga	.01
3	4800139-001	1	HARNESS, STAB CONS	.05
4	4800126-026	1	JUMPER WIRE	.01
5	4800129-001	2	TOGGLE SWITCH	.10
6	4800127-006	2	BOOT SEAL	.01
7	4800078-010	1	1/4" TONGUE #22-16	.01
8	4000298-001	2	DECAL, STAB CTRL	.01
9	4800674-001	1	CONN. MALE INSUL.	.01
10	4800673-002	1	TEE TAP	.01

REVISIONS	
DAS 1-28-93	NEW DRAWING
EN 95-0001	
DAS 1-6-94	
A	ADDED
A1	ATTACHED
	WIRING TO SWITCH AWAY FROM HORN WIRE
EN 97-0003-13	
EO 3/97	
B1	SEE SHT 2
B2	ADDED ITEMS 9 & 10
B3	SEE SHT 2

TOTAL ASSEMBLY WEIGHT. 3.33 LBS.

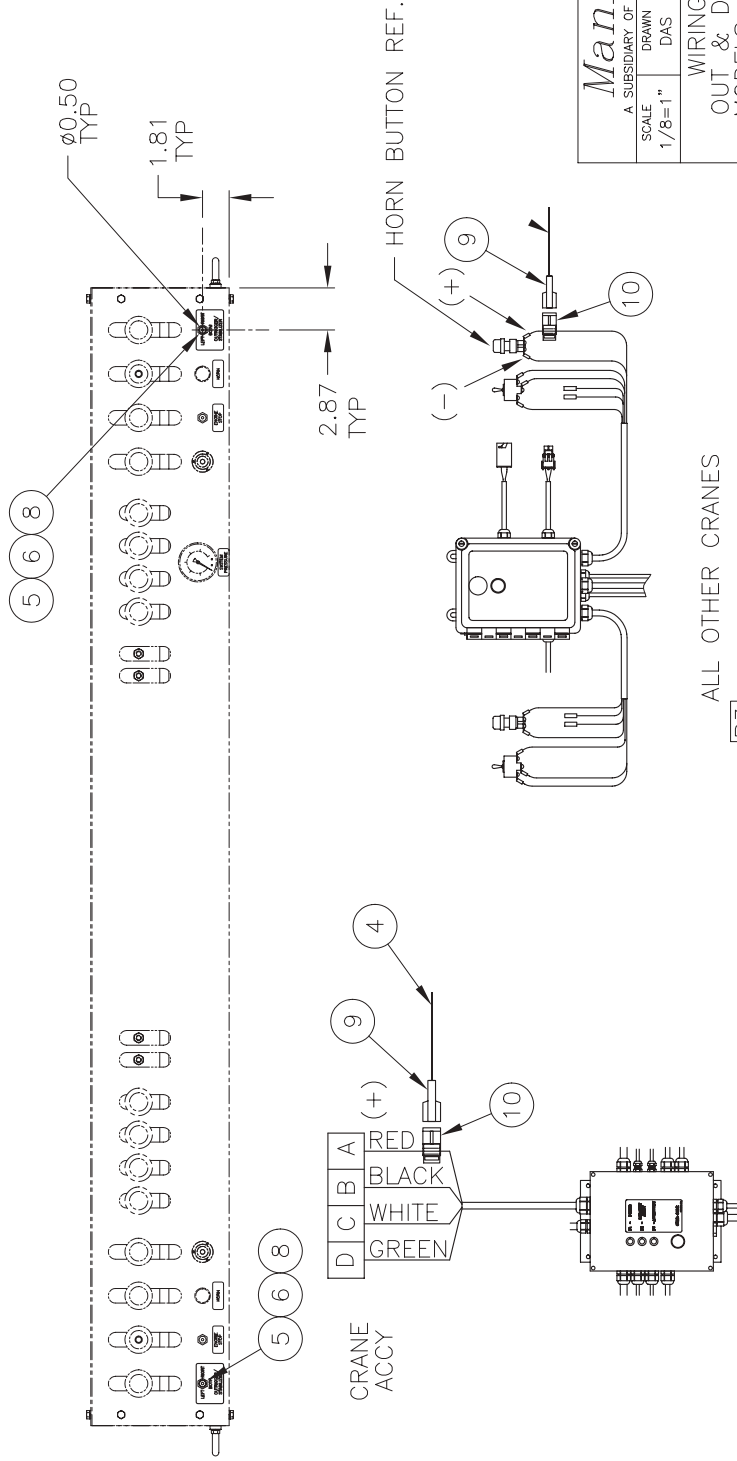
CONTROL CONSOLE



Manitex Inc.
 A SUBSIDIARY OF THE MANITOMOC COMPANY, INC.
 SCALE 1"=1"
 DRAWN: DAS
 CHECKED: EO
 APPVD./DATE: DM 1/28
 WIRING INSTALLATION
 OUT & DOWN STABILIZERS
 MODELS 1400 THRU 2500
 TOLERANCES (UNLESS SPECIFIED) 7200101-002
 SHEET 1 OF 2

A2 NOTES:

1. ON MODELS 900-1800 EQUIPPED WITH OUT/DOWN OUTRIGGERS OR OUT/DOWN STABILIZERS, IF REQUIRED DRILL HOLES IN LOCATIONS SHOWN ON CONTROL CONSOLE FOR SELECT SWITCHES (ITEM 5).
2. ON MODELS 900-2500 EQUIPPED WITH BOTH, OUT/DOWN OUTRIGGERS AND OUT/DOWN STABILIZERS, USE DECAL 4000298-002. DECAL -002 IS SUPPLIED WITH THE WIRING INSTALLATION FOR THE OUT/DOWN OUTRIGGERS.
3. ON MODELS 900-1800 EQUIPPED WITH BOTH, OUT/DOWN OUTRIGGERS AND OUT/DOWN STABILIZERS, ITEMS #3,4,5,6 & 8 SUPPLIED IN THIS INSTALLATION, MAY BE CREDITED BACK TO STOCK.



B3 CRANES EQUIPPED WITH ECAS

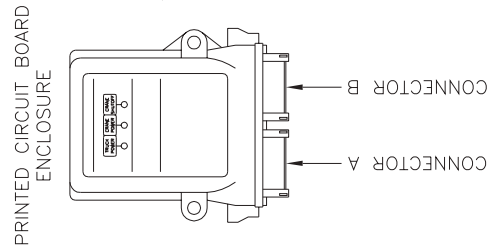
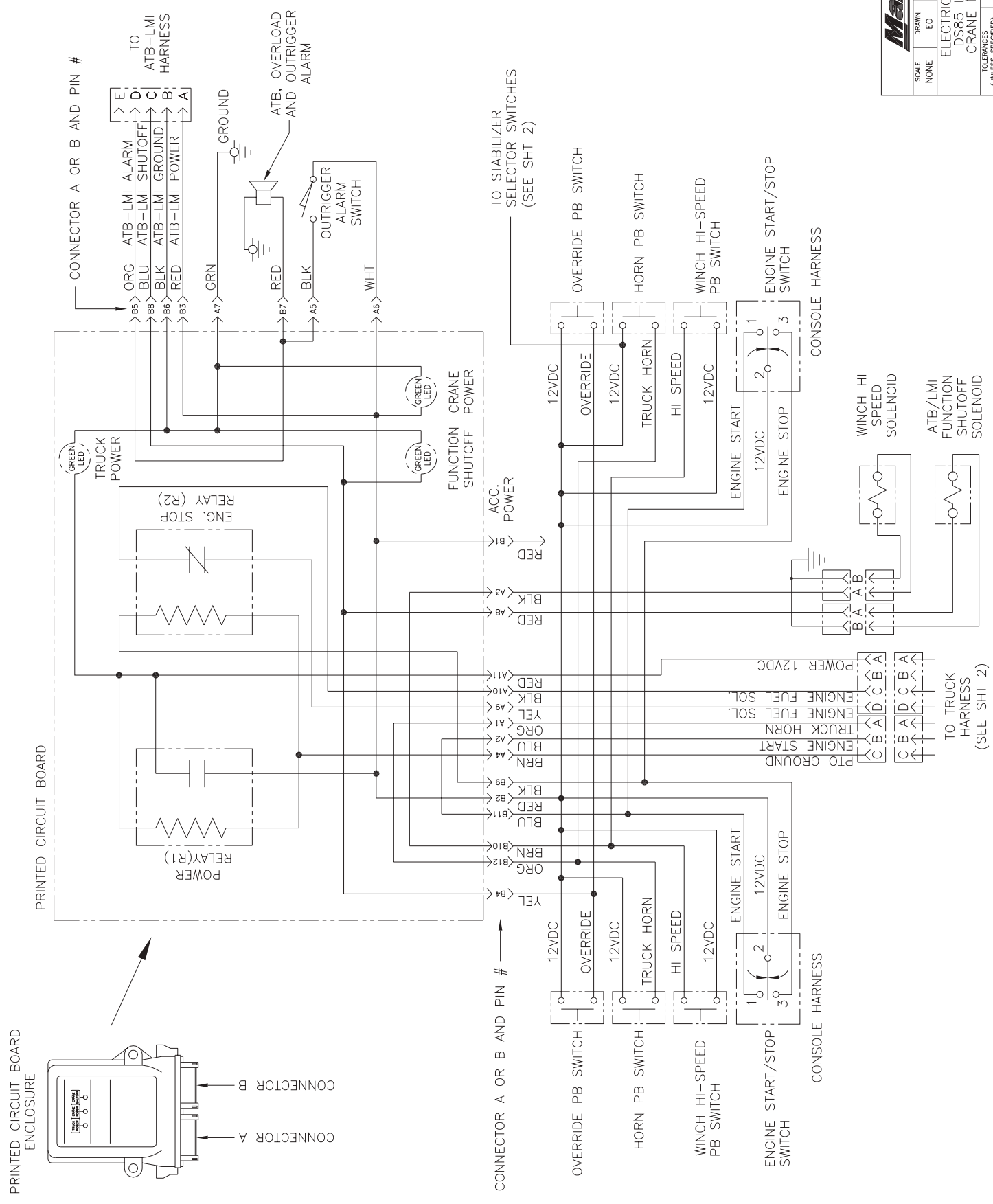
ALL OTHER CRANES **B3**

REVISIONS	
EN 95-0001	
DS 1-6-94	
A2 ADDED SHT 2 & ADDED NOTES	
EN 97-0003-13	
EO 3/97	
B1 REVISED NOTES	
B2 SEE SHT 1	
B3 ADDED WIRING	

Manitex Inc.			
A SUBSIDIARY OF THE MANITOWOC COMPANY, INC.			
SCALE 1/8=1"	DRAWN DAS	CHECKED CEM	APPVD./DATE EO 1/95
WIRING INSTALLATION OUT & DOWN STABILIZERS MODELS 1400 THRU 2500			
TOLERANCES (UNLESS SPECIFIED)	7200101-002		
SHEET	2	OF	2
CAD FILE: MTC1683B			

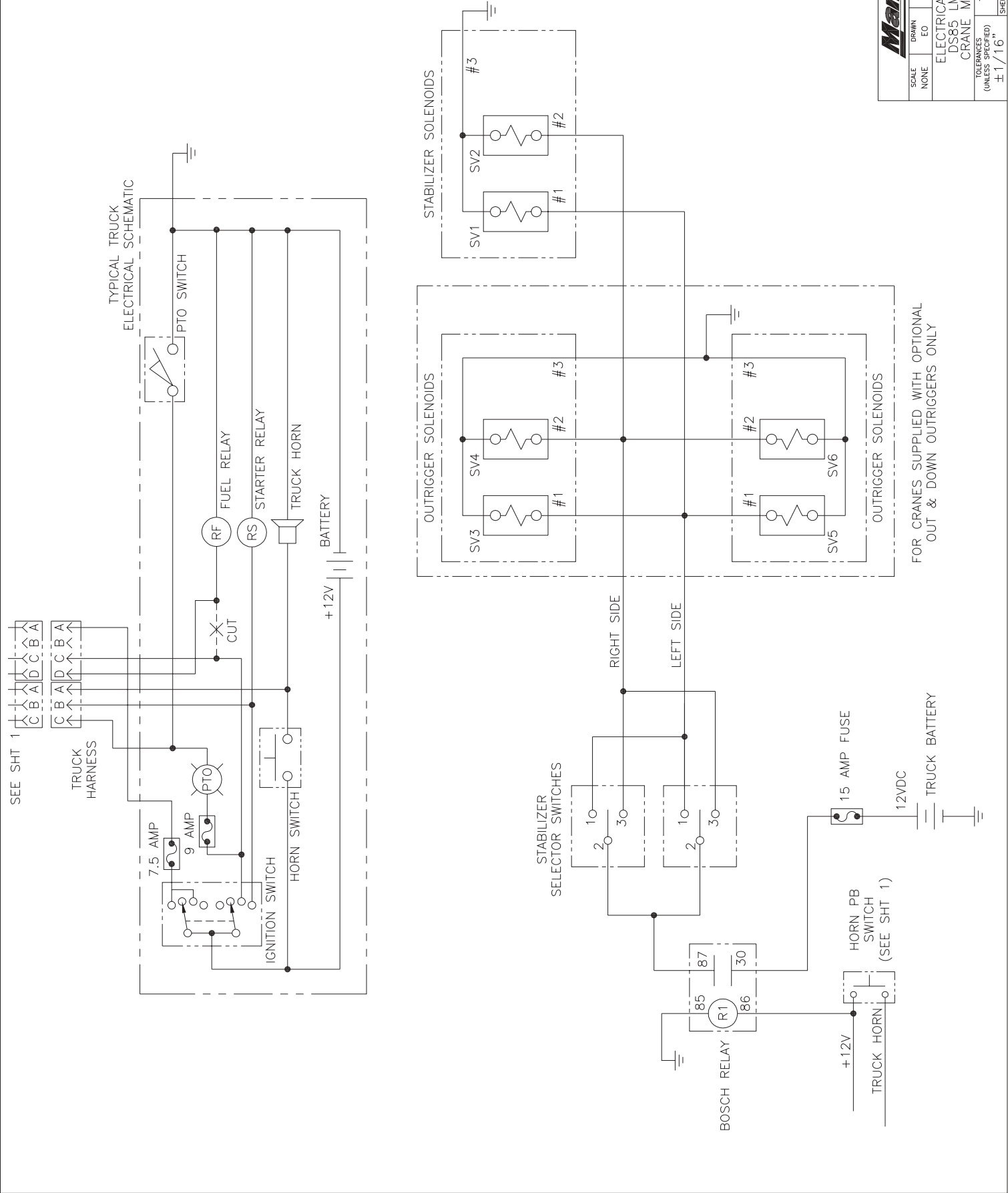
REVISIONS
 EN 02-0018-19
 EO 08-03
 NEW RELEASE

DOCUMENT CONTROL STATUS: FILED HARD COPY = UNCONTROLLED	
Manitex	
SCALE NONE	DRAWN EO
CHECKED EO	APP'D./DATE D.MORAVEC 08-03
ELECTRICAL SCHEMATIC DS85 LMI AND PCB CRANE MODEL 3001C	
TOLERANCES (UNLESS SPECIFIED) ±1/16"	7200136-002
SHEET 1	OF 3



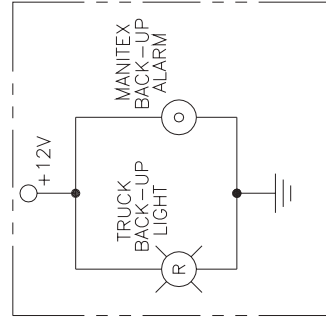
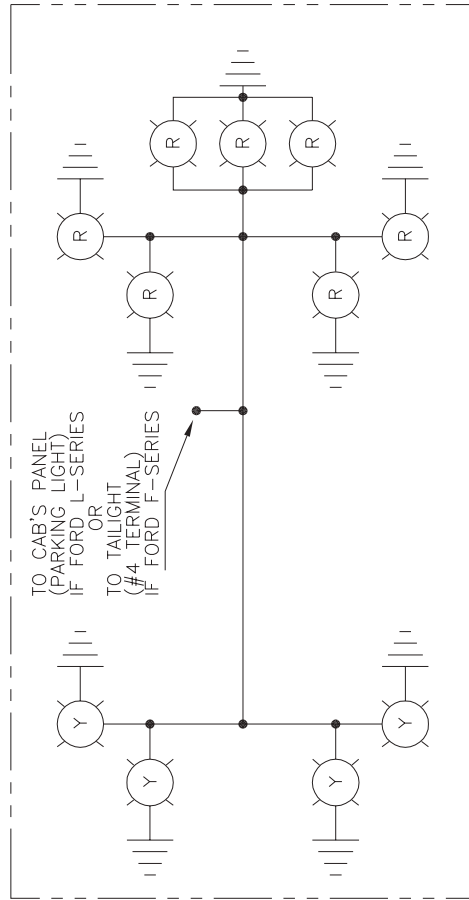
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TOLERANCES (UNLESS SPECIFIED) ±1/16"	7200136-002
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FOR CRANES SUPPLIED WITH OPTIONAL
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