

000AUXOR: 99900644: 20071129



Parts and Specifications
OUTRIGGERS

IOWA MOLD TOOLING CO., INC.

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TEL: 641-923-3711

MANUAL PART NUMBER 99900644

Iowa Mold Tooling Co., Inc. is an Oshkosh Truck Corporation company.

INTRODUCTION

This manual deals with information applicable to most auxiliary outrigger assemblies. For operating, maintenance and repair instructions, refer to Volume 1, OPERATION, MAINTENANCE AND REPAIR.

Before operation or the performance of any maintenance, read and understand the IMT OPERATOR'S CRANE SAFETY MANUAL which contains important information concerning operational and maintenance safety procedures. It is the user's responsibility to maintain and operate their unit in a manner that will result in the safest working conditions possible.

We recommend that this manual be kept in a safe place in the office.

This manual is provided to assist you with ordering parts for your IMT auxiliary outrigger assembly. It also contains specifications applicable to those assemblies.

Warranty of any unit will be void on any part of the unit subjected to misuse due to overloading, abuse, lack of maintenance and unauthorized modifications. No warranty - verbal, written or implied - other than the official, published IMT new machinery and equipment warranty will be valid with this unit.

NOTE

READ AND UNDERSTAND THE IMT OPERATOR'S CRANE SAFETY MANUAL BEFORE OPERATION OR PERFORMANCE OF MAINTENANCE.

SEE VOLUME 1, OPERATION, MAINTENANCE AND REPAIR FOR INFORMATION CONCERNING THE DISASSEMBLY AND REPAIR OF HYDRAULIC CYLINDERS.

REVISIONS LIST

DATE	LOCATION	DESCRIPTION OF CHANGE
20001206	3-2	ECN9000-51705983 & 51705984-ADD 7Q072114 O-RINGS
20011120	2-6-8,14,15, 30-32,40-42,44, 45,53; 3-14	ECN 8709 - NEW CYLINDER WITH IRON PISTON AND HEAD.
20011120	4-4	ECN 8780 - WARRANTY
20020131	2-54 - 60	ECN 8849 - ADDED AUX OUTRIGGERS FOR MATL HANDLING CRANES
20020204	2-46	ECN 8726 - ITEM 8 NOW HEX
20020906	2-41; 3-2,14	ECN 8993 - REPL 51705984 WITH 51714812; UPDATED 31712739, CHANGED PISTON RING ON 3B205010 CYLINDER
20021101	2-7, 15 2-59-61	ECN 8993 - CHG V-BANK, HOSES FOR 31710967, 31706425 ADDED PART NUMBER 91717271 TO DRAWING 99903406-1 THRU -3
20021230	2-24	PWR DN CYLINDER WAS 3B048870, IS NOW 3B288970
20031020	2-17,44; 3-2,3	ECN 9265 - UPDATE O/R KITS TO VB 51714813
20040920	2-50	ECB 9569 - 31718953 REPLACED 31712733
20050512	2-58 thru 2-72	ECN 9672 - 73733678 VALVE BANK REPLACED BY 73733979
20050712	2-23	ECN 9782-1 - CHANGE TO TIE ROD & CLAMP PLATE ON 31707896
20051013	2-7,15,44,57	ECN 9805-1 - CHANGE TO CYLINDERS IN OUTRIGGER KITS 31706425, 31710967, 31712739, 31714334
20070220	3-6	ECN 9805 - CYLINDER 3B142860 REPLACED BY 71411797
20071026	COVER	UPDATED WITH OSHKOSH INFORMATION
20071026	58,64,68	ECN 10536 - CHANGE POWER DOWN OUTRIGGER CYLINDER PIN LENGTH
20071129	3-15	ECN 10413 - ADDED STOP PIN TO CYLINDER 3B205010

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SECTION 1. SPECIFICATIONS

FIGURE A-1. AUXILIARY OUTRIGGER APPLICATION CHART-CRANES

		OUTRIGGER PART NUMBER - STYLE																													
		31703354-CRANK 6X4	31708412-MO/PD	31704123-PO/PD	31704124-MO/PD	31705727-MO/PD HF	31705728-PO/PD HF	90701596-FOLD DOWN	31711125-MO/MD 5X5	31711126-MO/CRANK DN 5X5	31711127-MO/PD 5X5	31711128-PO/PD 5X5	31703350-MO/MD 6X4	31707896-SPDR LEG	31710963-PO/PD TRLR SU	31712397-PO/PD FMC	31710600-PO/PD RMC	31706397-PO/PD	31712510-PO/PD REAR MT	31711349-MO/PD BFM	31711350-PO/PD BFM	31712754-PO/PD REAR LSH	31712755-PO/PD FRONT LSH	31712720-MO/PD	31712739-PO/PD 7X5	31712740-MO/PD 7X5	31712741-MO/CRANK DN 7X5	31712902-MO/MD			
DOMESTIC CRANES	METRIC CRANES																														
TELESCOPIC	320H																														
	1007																														
	1014																														
	2015																														
	2109																														
	3016																														
	5016																														
	6016																														
7025																															
ARTICULATED FIGURE 4	3000	445																													
	4300	680																													
	5200	780																													
	5800	880																													
	7200	1080																													
	9000	1295																													
	9800	1495																													
	14000	19140																													
	15000	21100																													
	18000	2595																													
32000	4490																														
TIRE HANDLING	425																														
	7415																														
	12916																														
	20017																														
	32018																														
17649																															

LEGEND:

CRANK = CRANK OPERATED
 PO = POWER OUT
 PD = POWER DOWN
 MO = MANUAL OUT

MO = MANUAL OUT
 MD = MANUAL DOWN
 HF = HIGH FRAME
 SPDR LEG = SPIDER LEG

FMC = FRONT MOUNTED CRANE
 RMC = REAR MOUNTED CRANE
 REAR = REAR MOUNT

LSH = LOAD SENSE HYDRAULICS
 NO HYD = NO HOSES OR VALVEBANK
 TRLR SU = TRAILER MOUNT SWING UP
 BFM = BELOW FRAME MOUNT

FIGURE A-2. AUXILIARY OUTRIGGER APPLICATION CHART-BODIES

BODY	OUTRIGGER PART NUMBER - STYLE																
	31705806-MO/PD	51704765-MO/MD REAR	51704766-FRONT	51707749-REAR CRANK DN	31711146-PO/PD	31705760-MO/PD	31706425-PO/PD	31709999-ELEC MO/PD	31710020-ELEC PO/PD	51704772-MO/MD	51704773-CRANK	31712731-PO/PD 7X5	31712732-MO/PD 7X5	31712733-MO/CRANK 7X5	31712886-ELEC MO/PD	31712891-MO/PD	31714334-PO/PD 7X5
9M900																	
11M900																	
11M920																	
11M925																	
11M930																	
11M940																	
DOM1-11'																	
DOM1-9'																	
DOM2-LO PRO																	
DOM2-11'																	
DOM3-12' BOBT.																	

LEGEND: CRANK = CRANK OPERATED MO = MANUAL OUT
 PO = POWER OUT MO = MANUAL OUT
 PD = POWER DOWN MD = MANUAL DOWN

**CRANES
USED ON:**
1007
2109

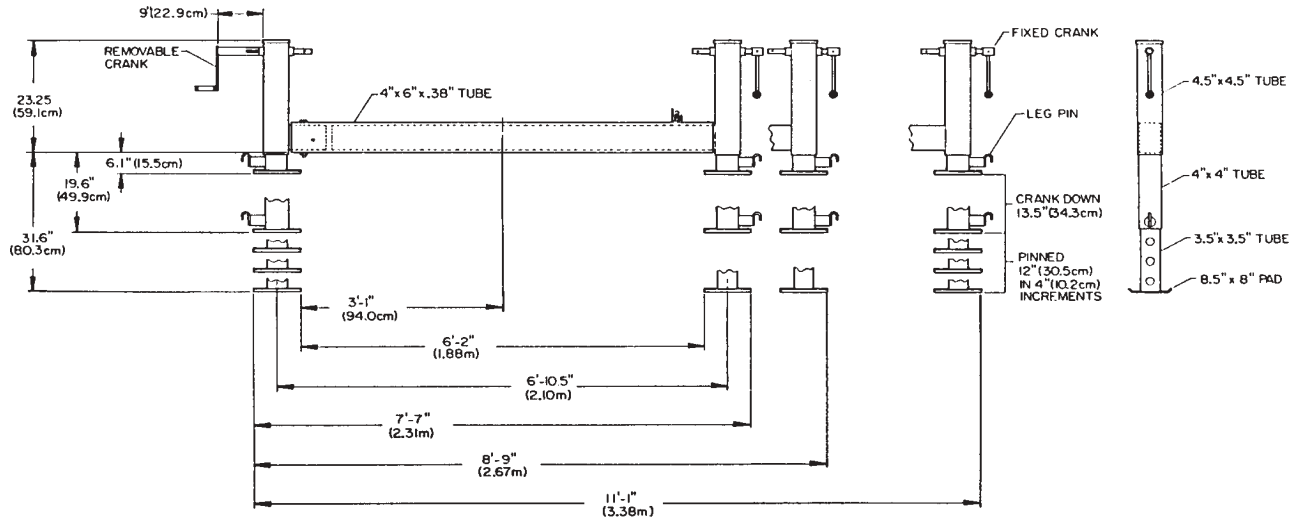
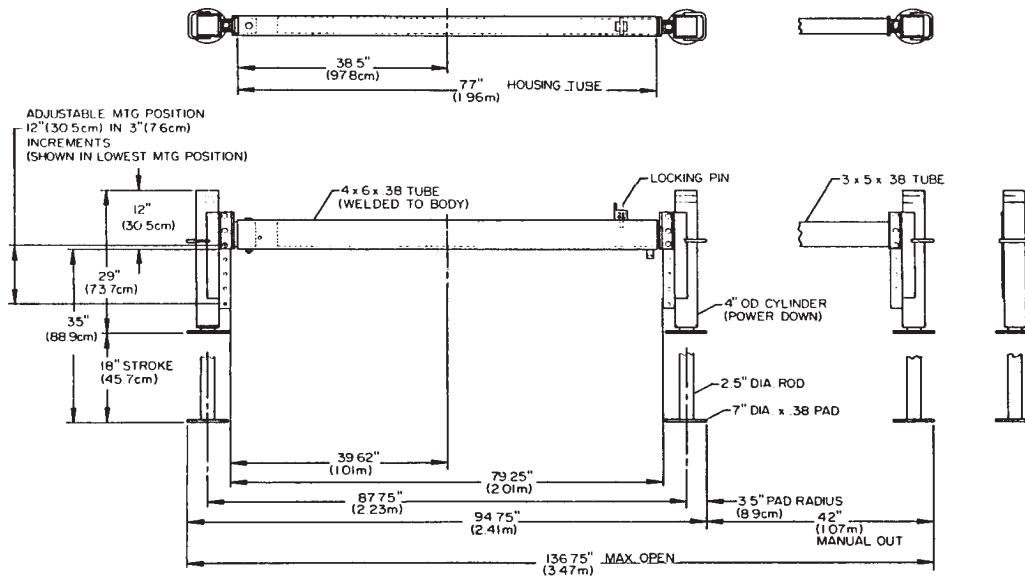


FIGURE A-3. CRANK DN (31703354)



**CRANES
USED ON:**
320H

NOTE: THE LOCKING PIN IS POSITIONED HORIZONTALLY.

FIGURE A-4. MNL OUT/PWR DN (31708412)

**CRANES
USED ON:**

- 7025
- 4300/680
- 5200/780
- 5800/880
- 7200/1080
- 9000/1295
- 9800/1495
- 18000/2595
- 425
- 7415
- 12916

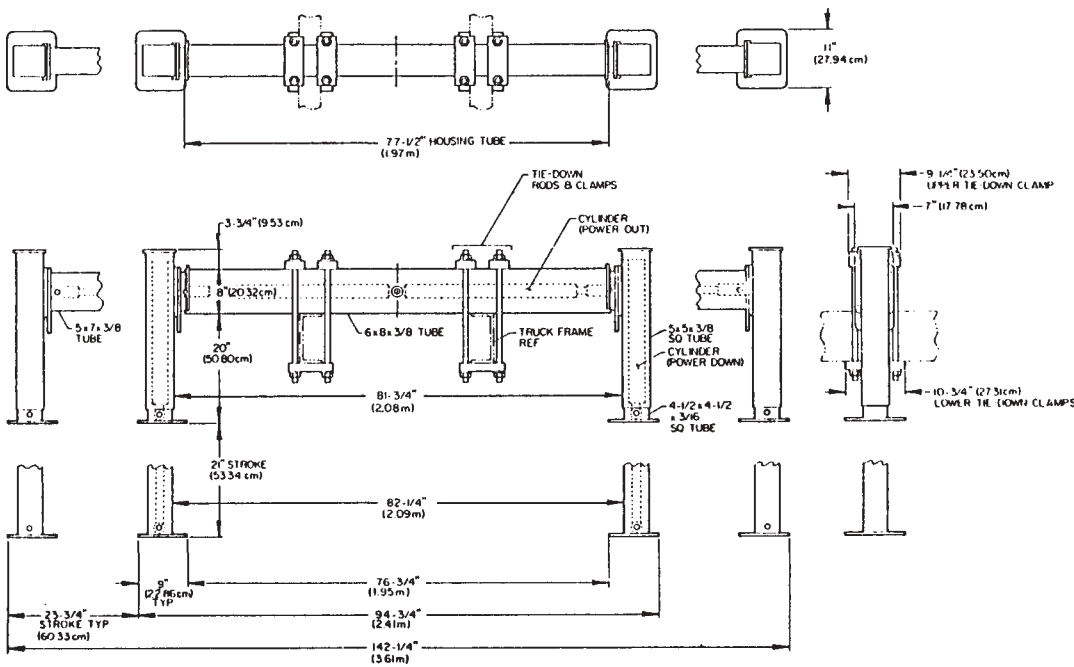


FIGURE A-5. PWR OUT/PWR DN (31704123)

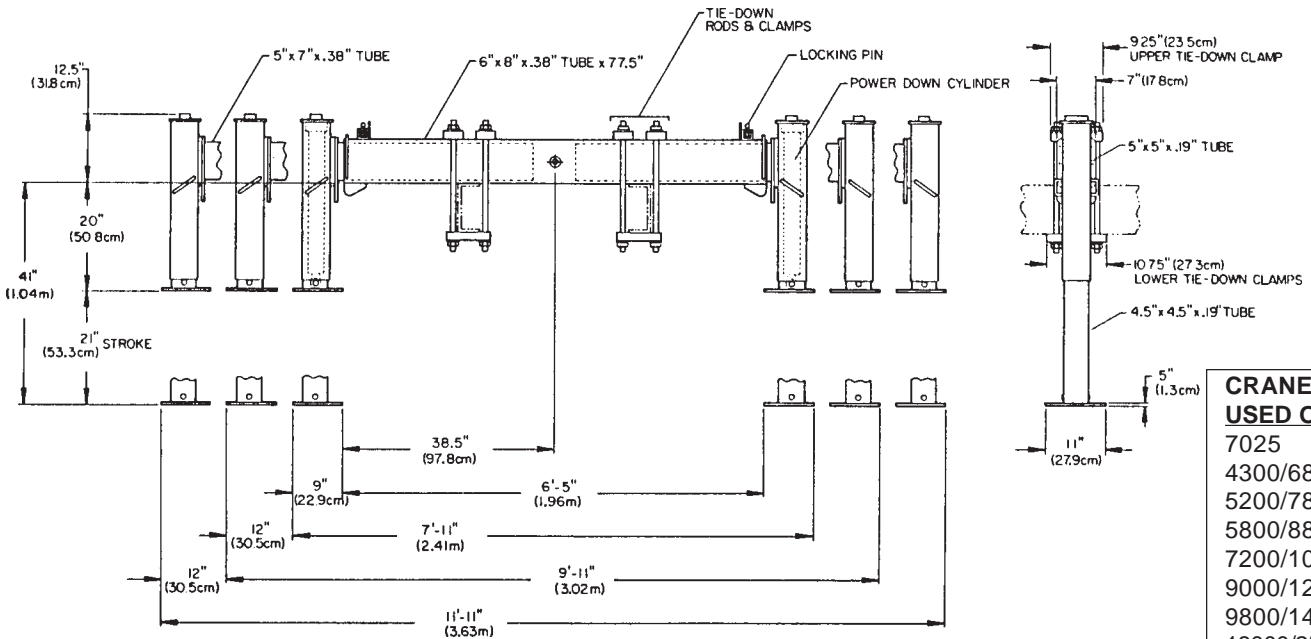


FIGURE A-6. MNL OUT/PWR DN (31704124)

**CRANES
USED ON:**

- 7025
- 4300/680
- 5200/780
- 5800/880
- 7200/1080
- 9000/1295
- 9800/1495
- 18000/2595
- 425
- 7415
- 12916

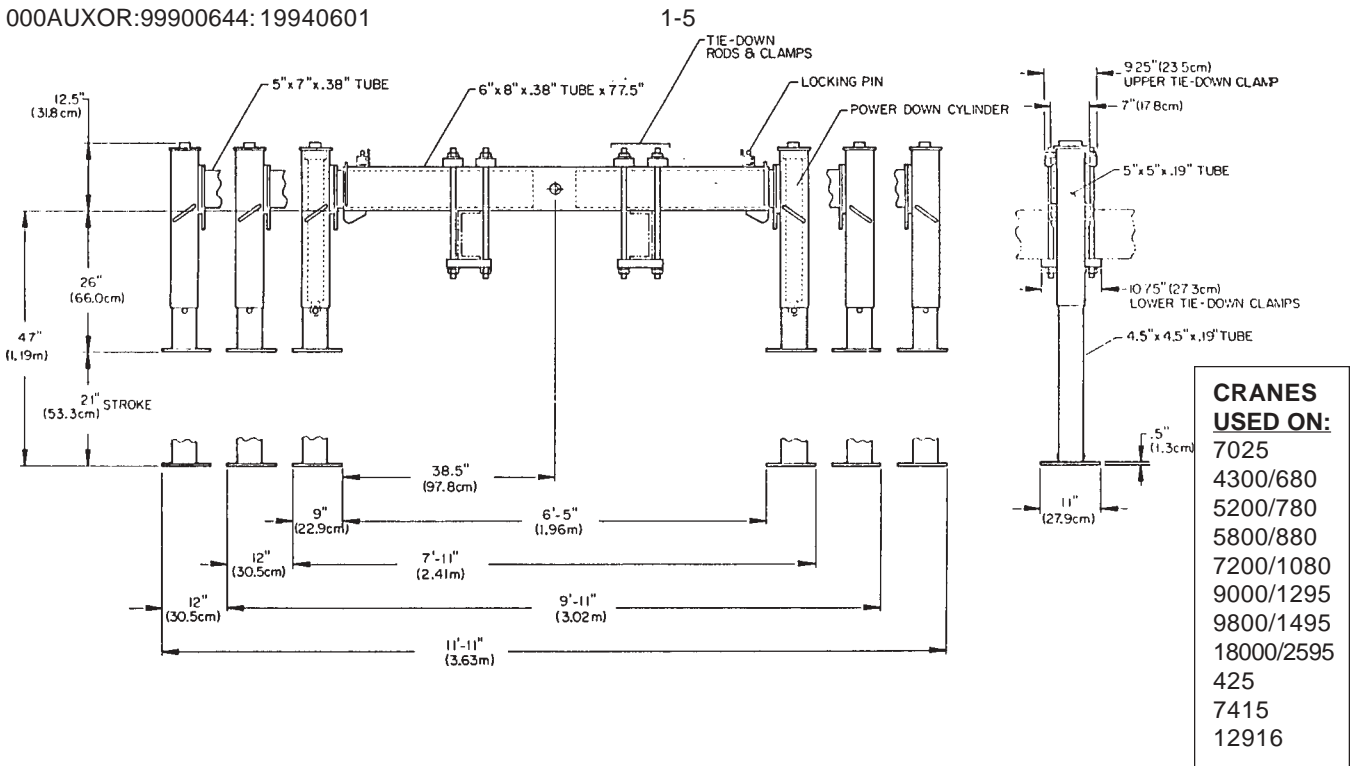


FIGURE A-7. MNL OUT/PWR DN (31705727)

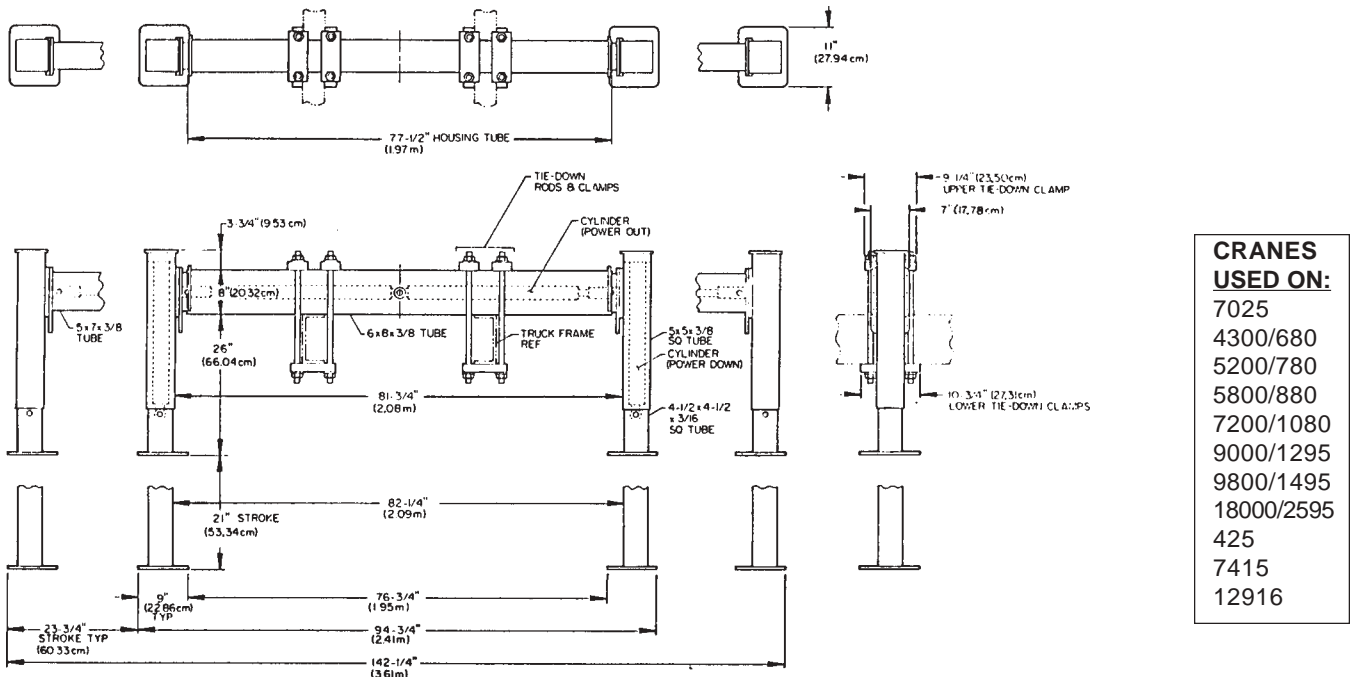


FIGURE A-8. PWR OUT/PWR DN (31705728)

CRANES USED ON: 1007

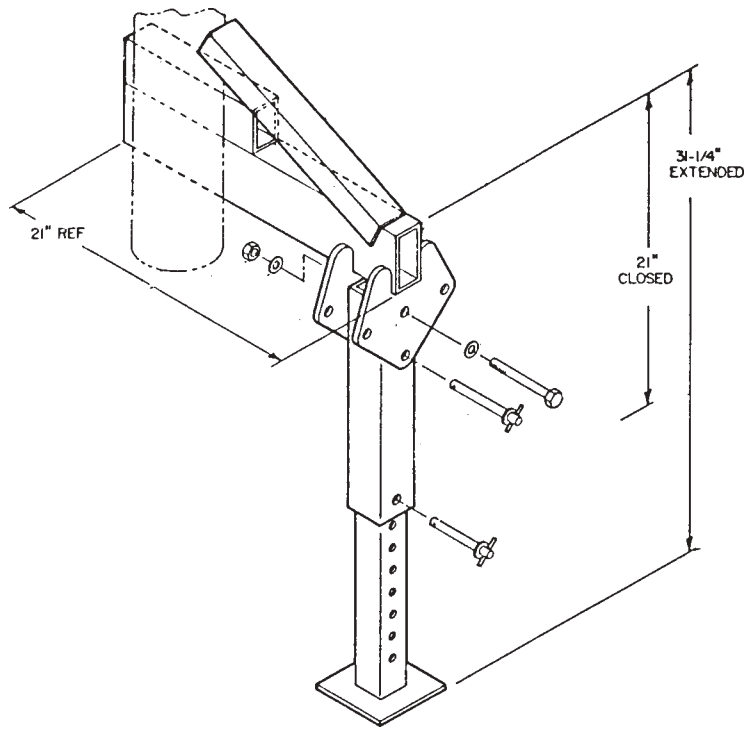


FIGURE A-9. SWING DOWN (90701596)

FIGURE A-10. NOT USED

**CRANES
USED ON:**
1014
2015
3016

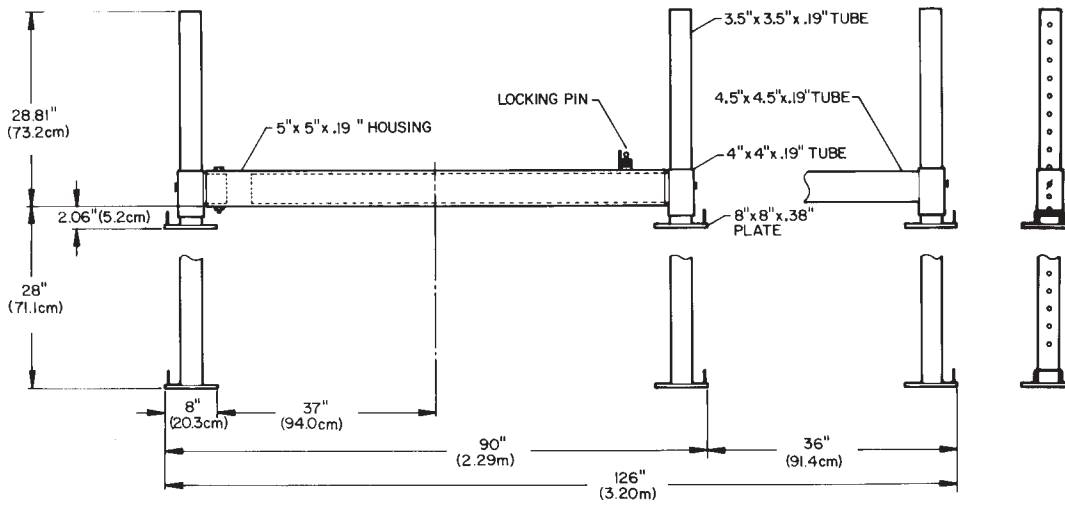


FIGURE A-11. MNL OUT/MNL DN (31711125)

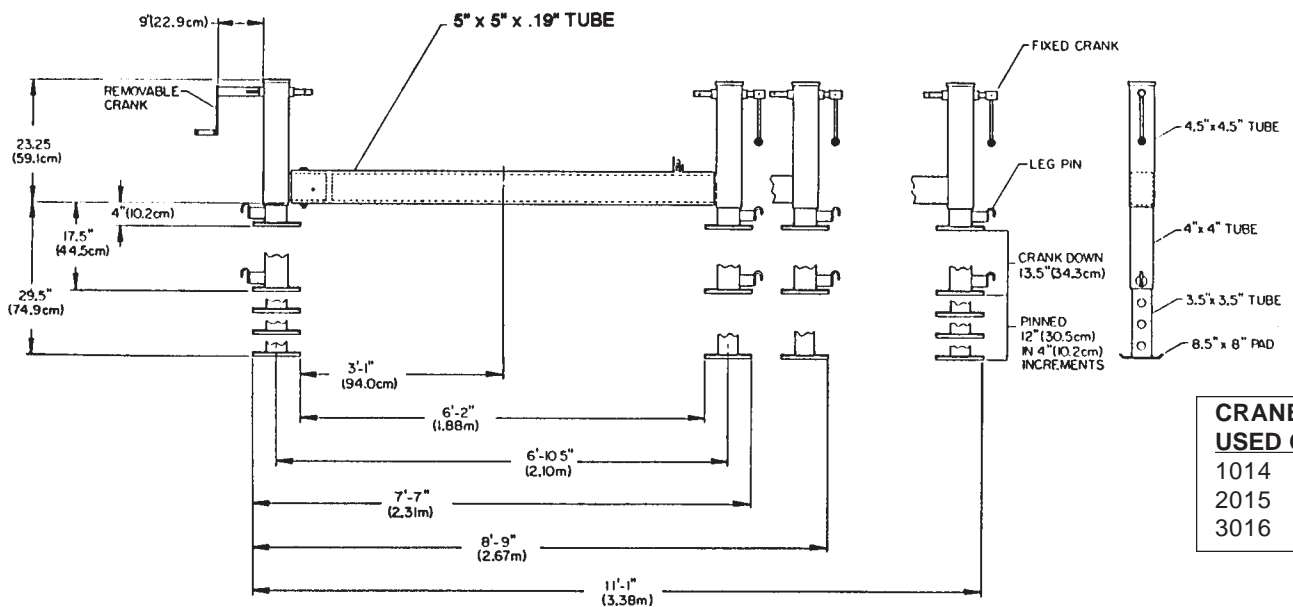


FIGURE A-12. MNL OUT/CRANK DN (31711126)

**CRANES
USED ON:**
1014
2015
3016

**CRANES
USED ON:**
1014
2015
3016

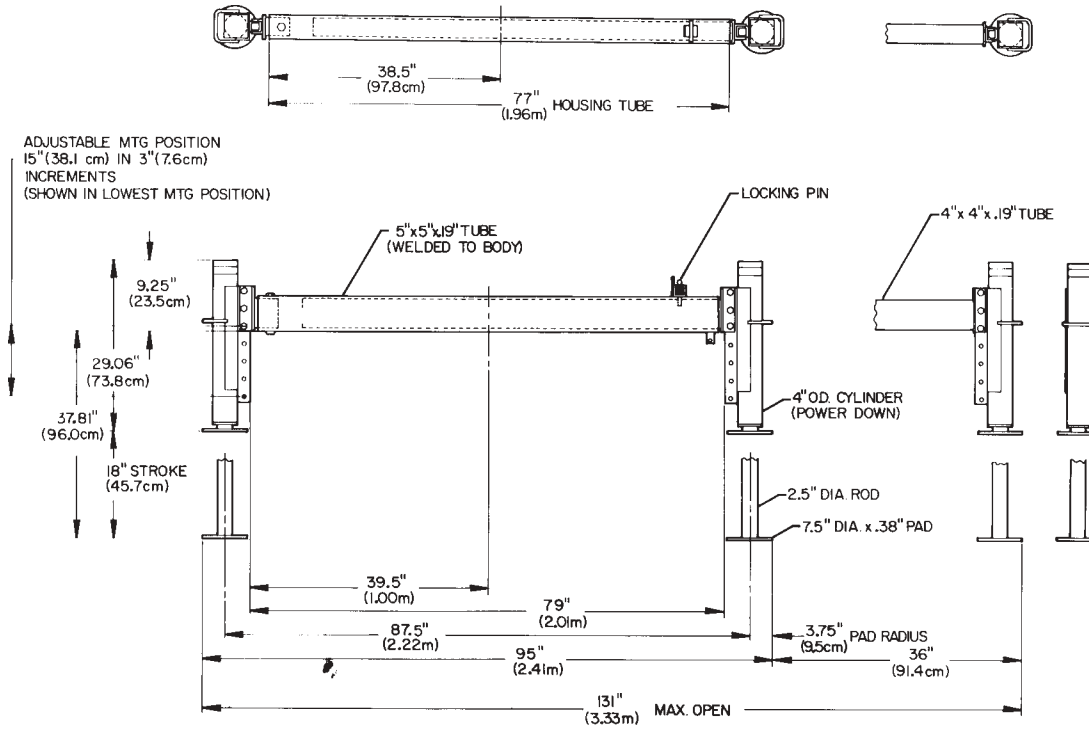
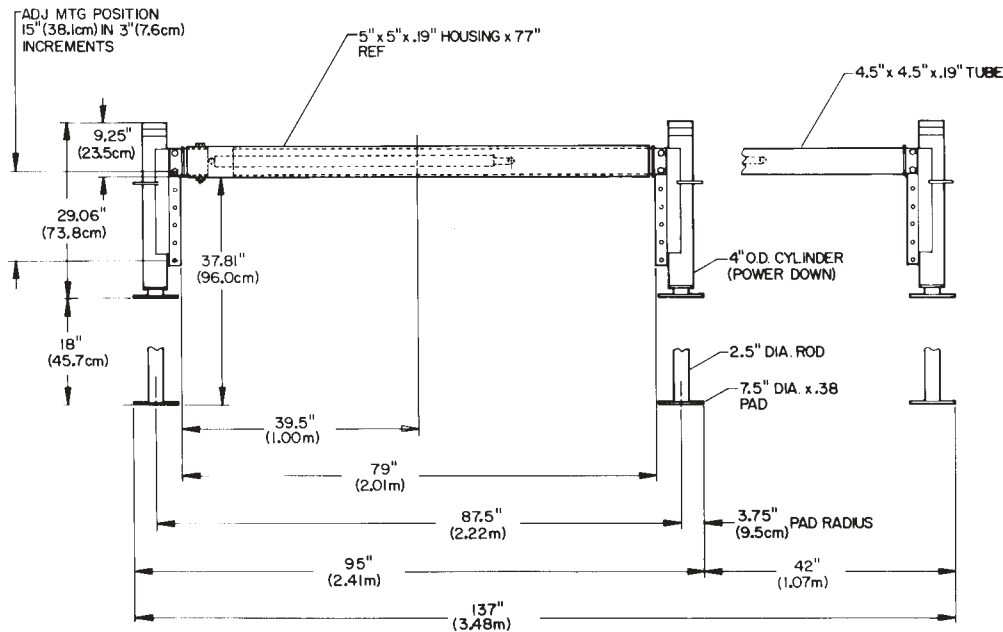


FIGURE A-13. MNL OUT/PWR DN (3171127)



**CRANES
USED ON:**
1014
2015
3016

FIGURE A-14. PWR OUT/PWR DN (3171128)

**CRANES
USED ON:**
1007
2109

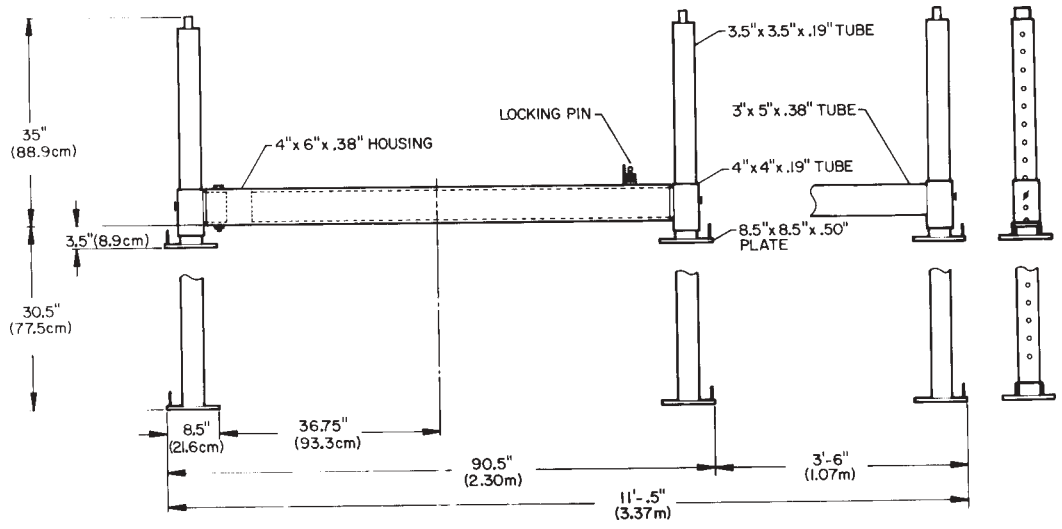


FIGURE A-15. MNL OUT/MNL DN (31703350)

	DOMESTIC	METRIC
RETRACTED SPAN	87.75"	2.23m
EXTENDED SPAN	135.75"	3.45m
PULL OUT MANUAL ARMS	24" each side	61.0cm each side
OUTRIGGER HOUSING	6" X 4" X .375"	15.2 X 10.2 X 0.95cm
OUTRIGGER ARMS	5" X 3" X .375"	12.7 X 7.6 X 0.95cm
OUTRIGGER CYLINDER STROKE	18"	45.7cm
OUTRIGGER CYLINDER BORE	3.5"	8.9cm
OUTRIGGER PAD	7.5" diameter	19.1cm diameter
OUTRIGGER SYSTEM WEIGHT	500 lbs	227 kgs

System includes 2-section valvebank

**CRANES
USED ON:**
3000
445

FIGURE A-16. MNL OUT/PWR DN (31712720)

**CRANES
USED ON:**
5016
6016

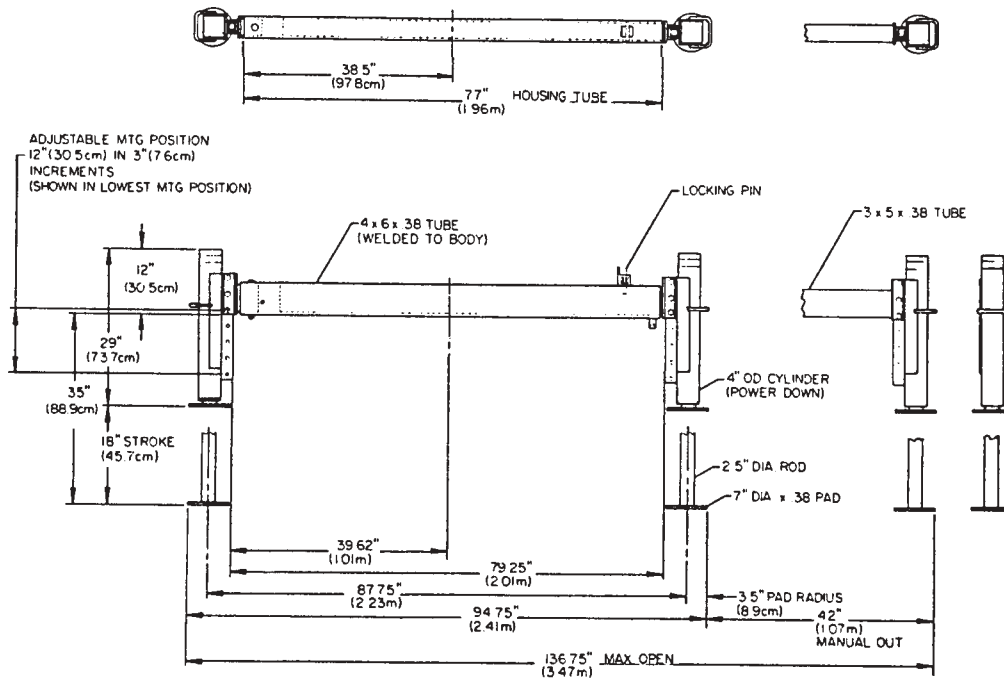


FIGURE A-17. MNL OUT/PWR DN (31710966)

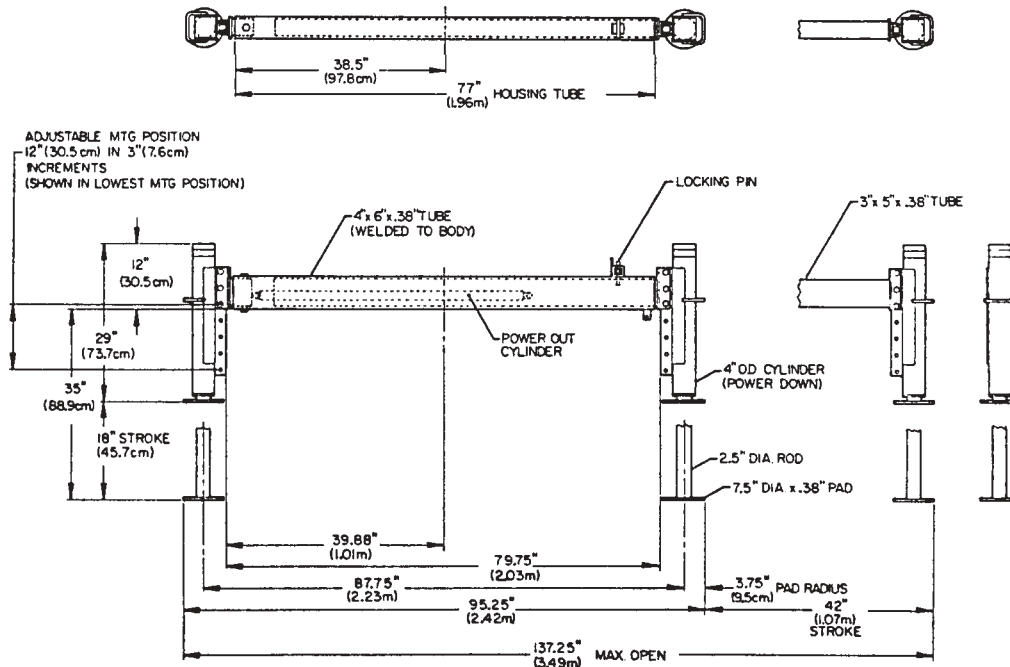
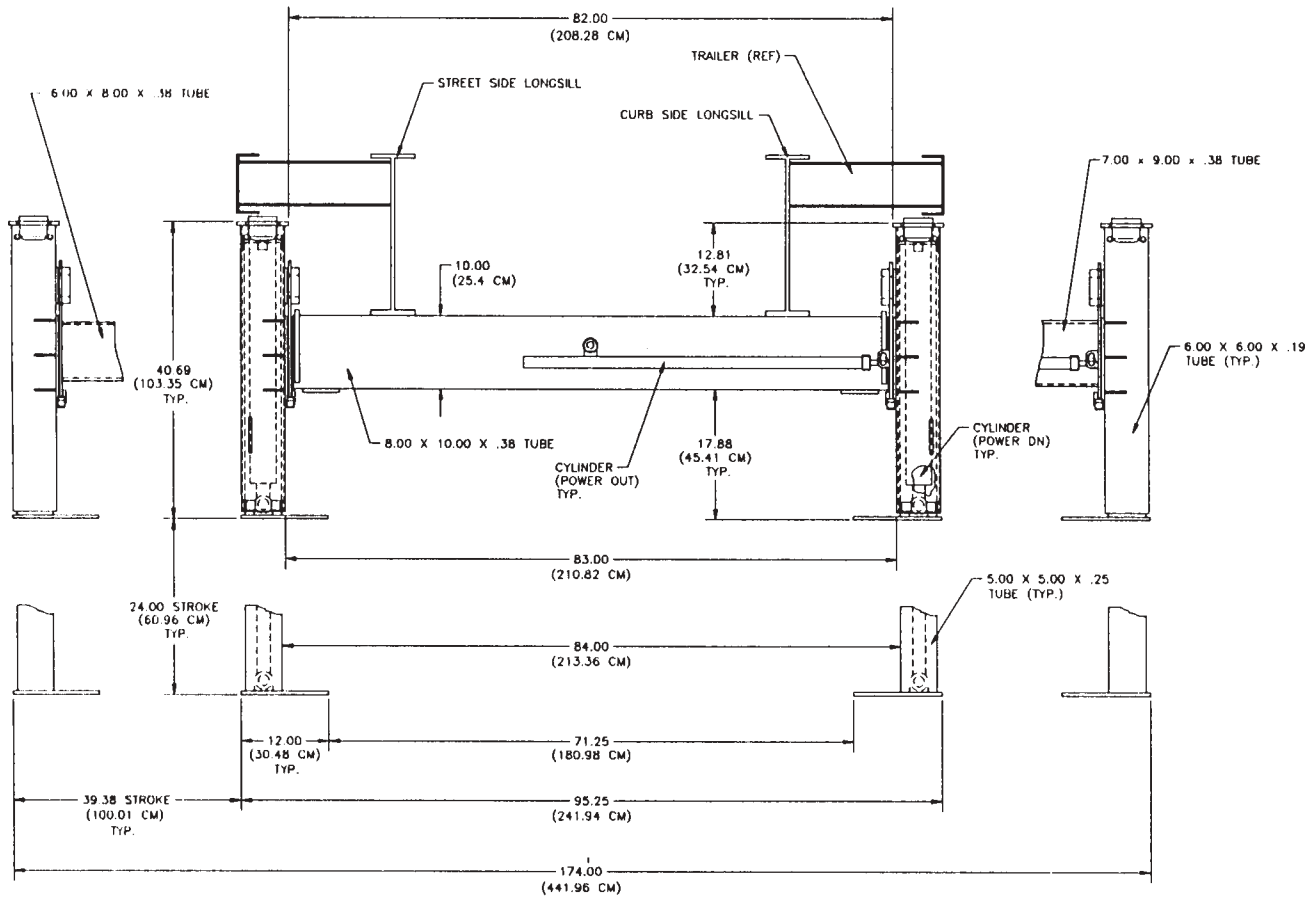


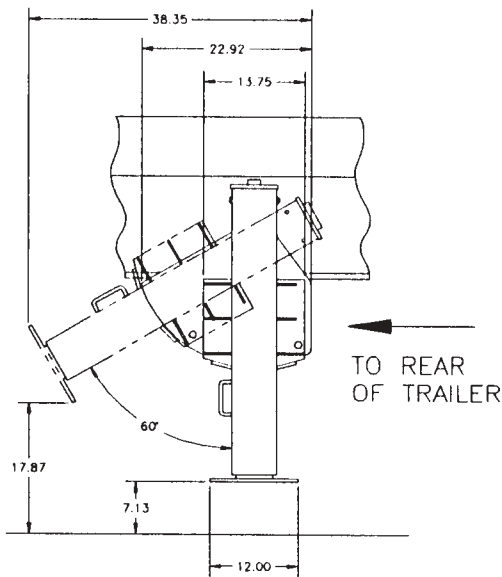
FIGURE A-18. PWR OUT/PWR DN (31710967)

**CRANES
USED ON:**
5016
6016

**CRANES
USED ON:
9800**



VIEW FROM REAR OF TRAILER



SWING IS TYPICAL ON BOTH SIDES

NOTE: MOUNTING OF AUXILIARY OUTRIGGER IS TO BE PROVIDED BY THE CUSTOMER.

FIGURE A-19. TRAILER MOUNT/SWING UP (31710963)

**CRANES
USED ON:
9800**

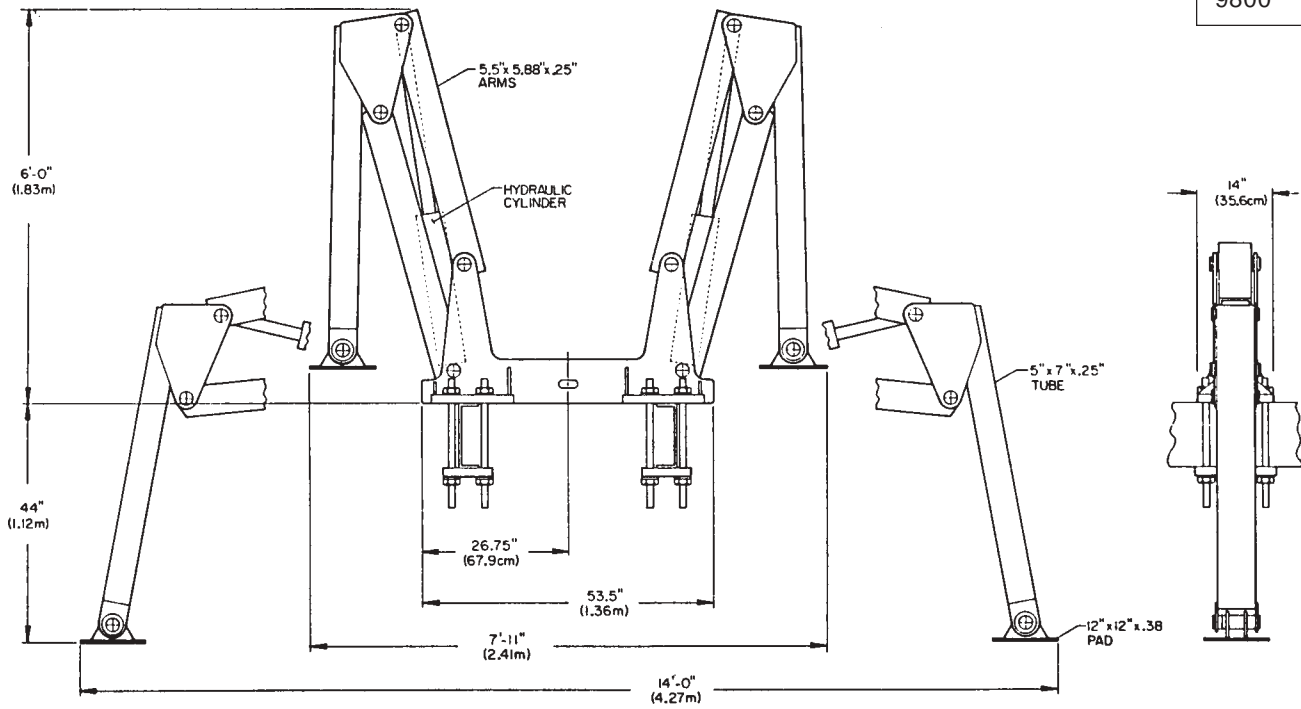
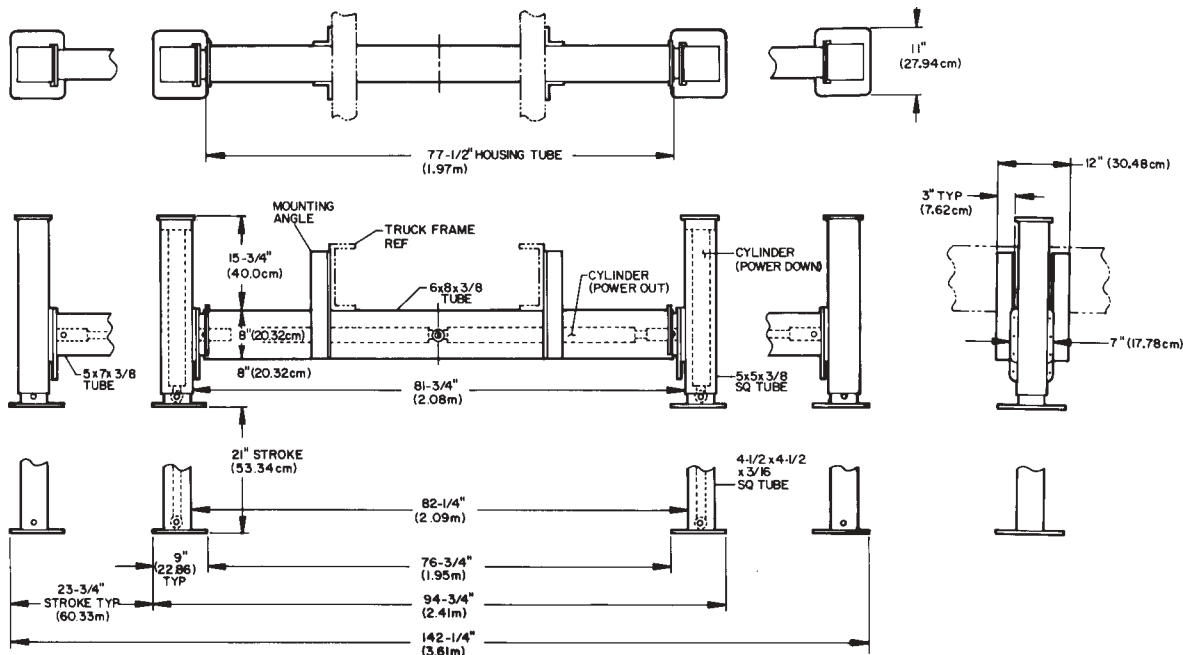


FIGURE A-20. SPIDER LEGS (31707896)



**CRANES
USED ON:
20017**

FIGURE A-21. PWR OUT/PWR DN (31712397)

**CRANES
USED ON:
20017**

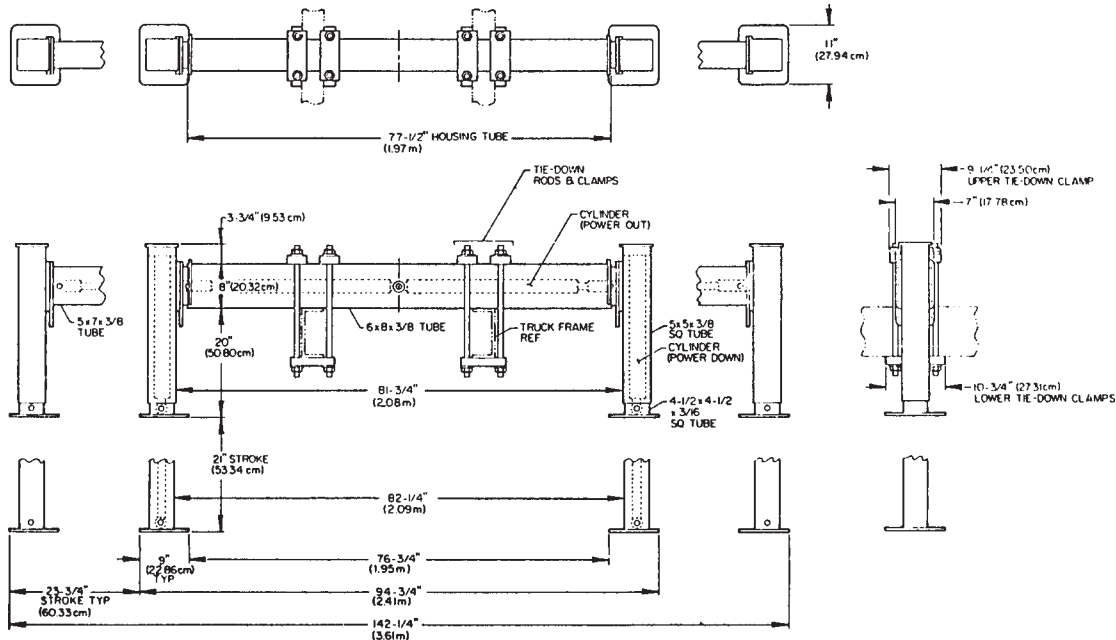


FIGURE A-22. PWR OUT/PWR DN (31710600)

**CRANES
USED ON:
32018
32030**

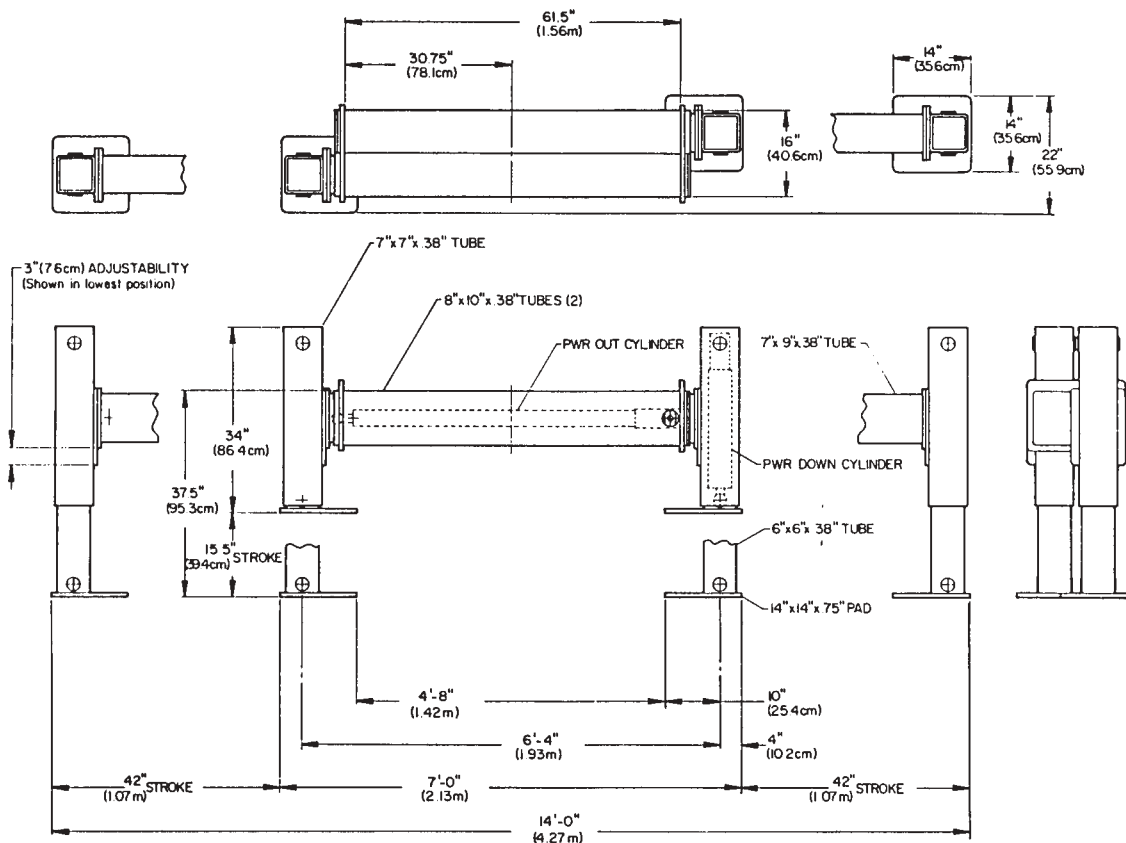


FIGURE A-23. PWR OUT/PWR DN (31706397)

**BODIES
USED ON:**
9M900
11M900

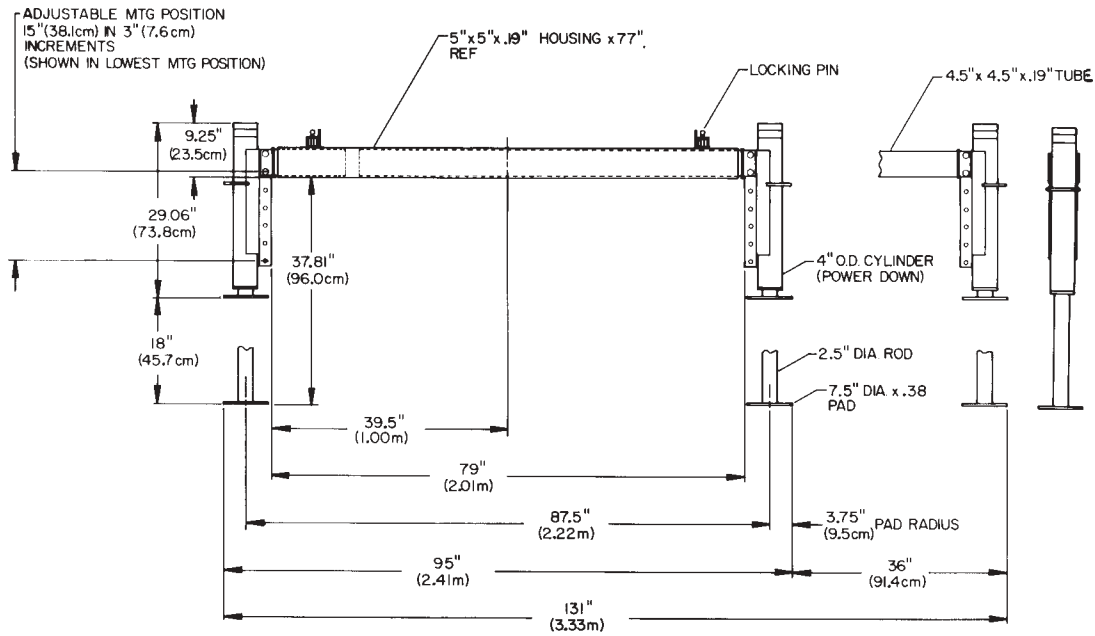


FIGURE A-24. MNL OUT/PWR DN (31705806)

**BODIES
USED ON:**
9M900
11M900

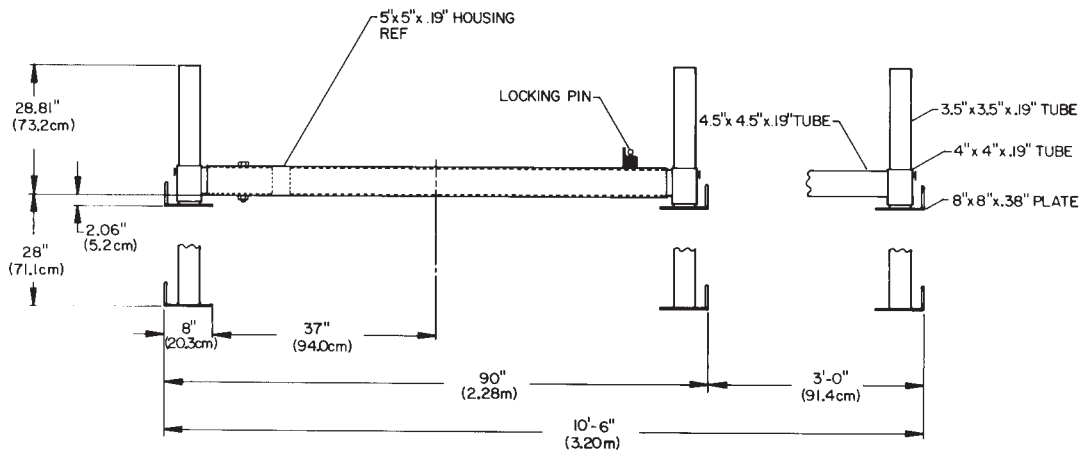


FIGURE A-25. REAR-MNL OUT/MNL DN (51704765)

**BODIES
USED ON:**
9M900
11M900

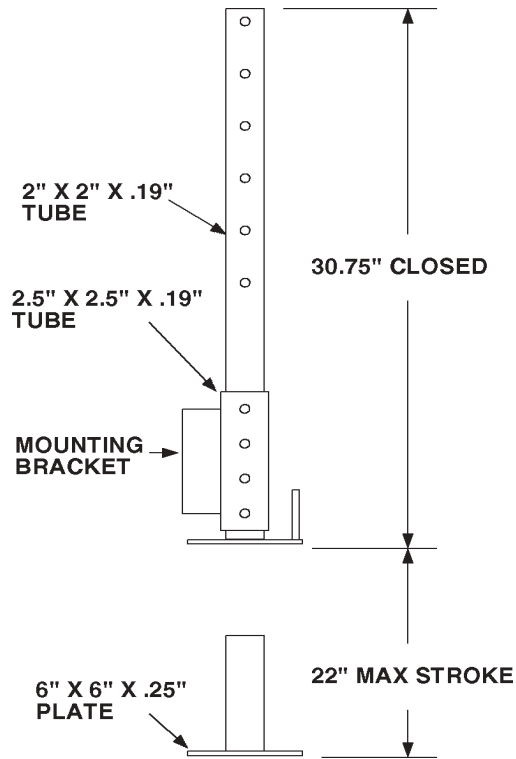


FIGURE A-26. FRONT-MNL DN (51704766)

**BODIES
USED ON:**
9M900
11M900

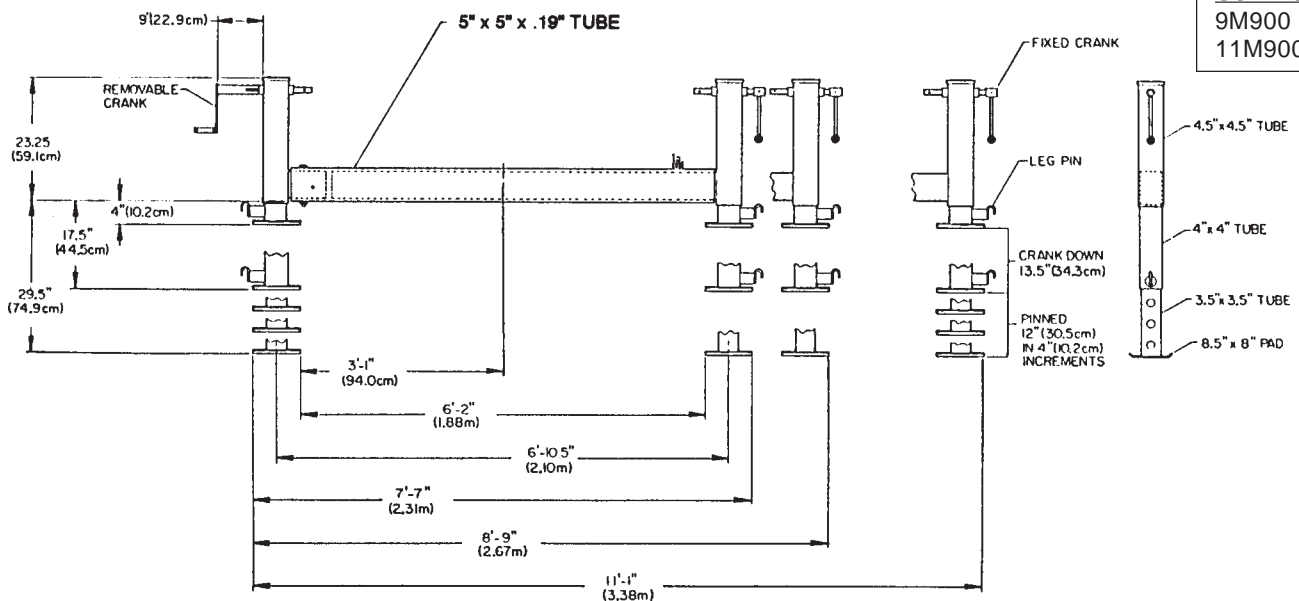


FIGURE A-27. REAR-MNL OUT/CRANK DN (51707749)

**BODIES
USED ON:**
9M900
11M900

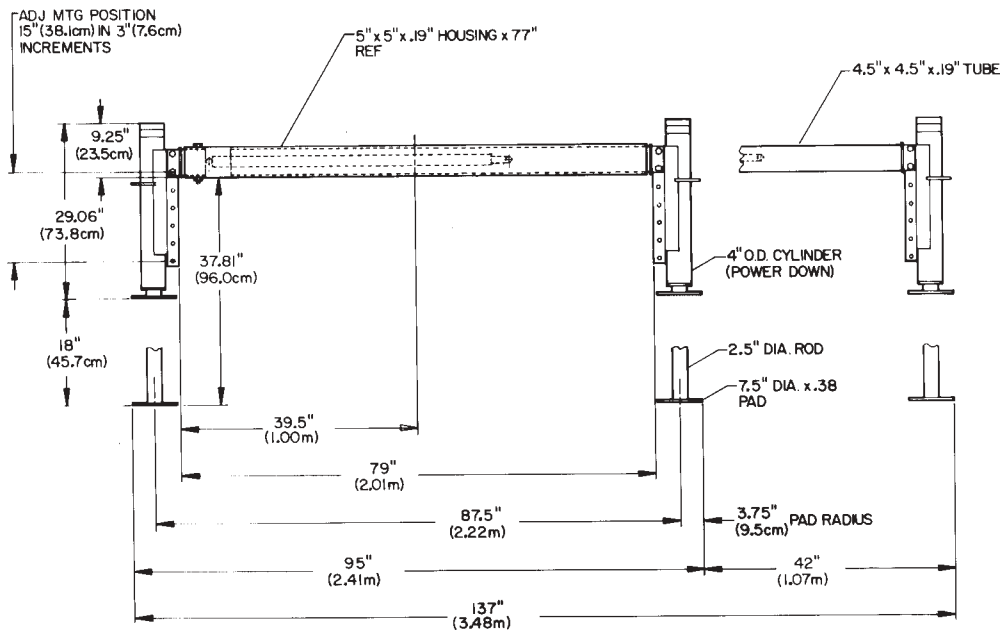
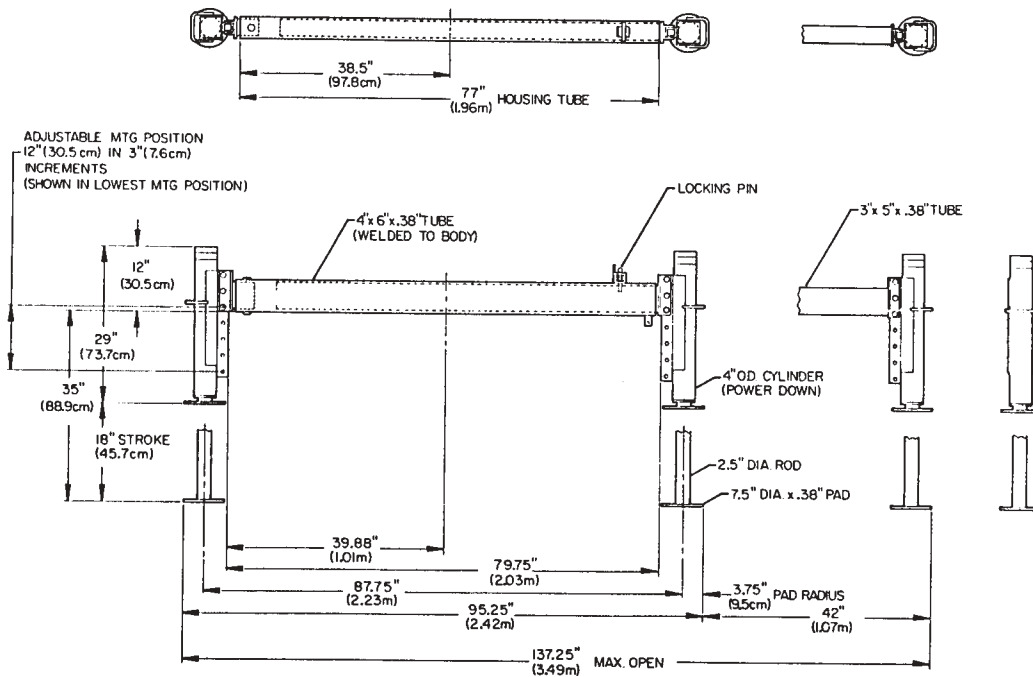


FIGURE A-28. PWR OUT/PWR DN (31711146)



**BODIES
USED ON:**
11M920
11M925
11M930
11M940
DOM1
DOM2

FIGURE A-29. MNL OUT/PWR DN (31705760)

- BODIES USED ON:**
 11M920
 11M925
 11M930
 11M940
 DOM1
 DOM2

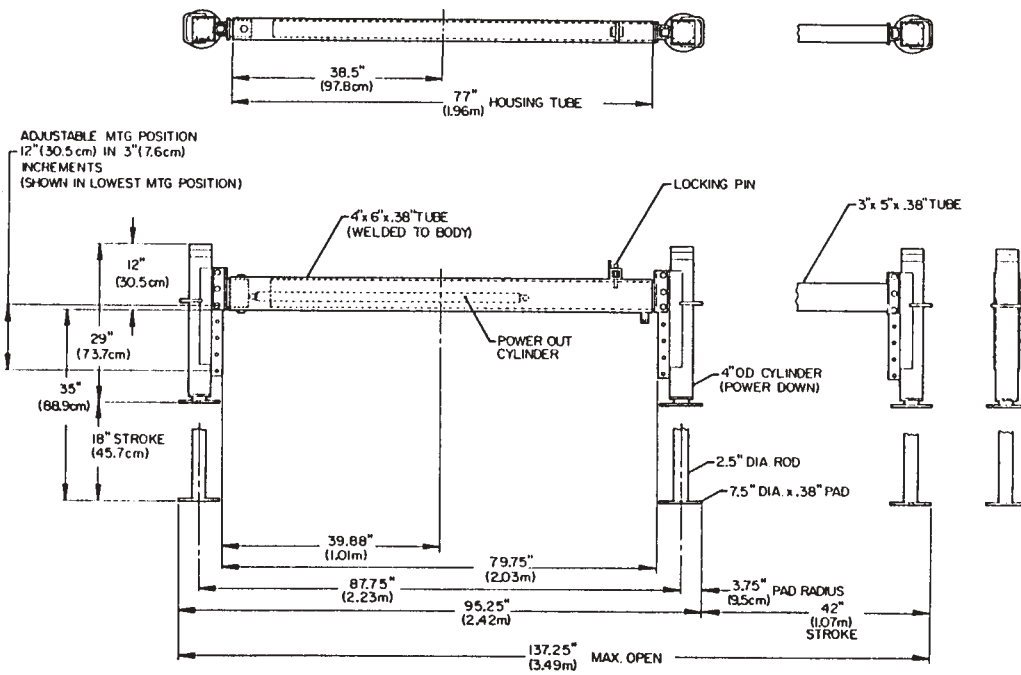


FIGURE A-30. PWR OUT/PWR DN (31706425)

- BODIES USED ON:**
 11M920
 11M925
 11M930
 11M940
 DOM2

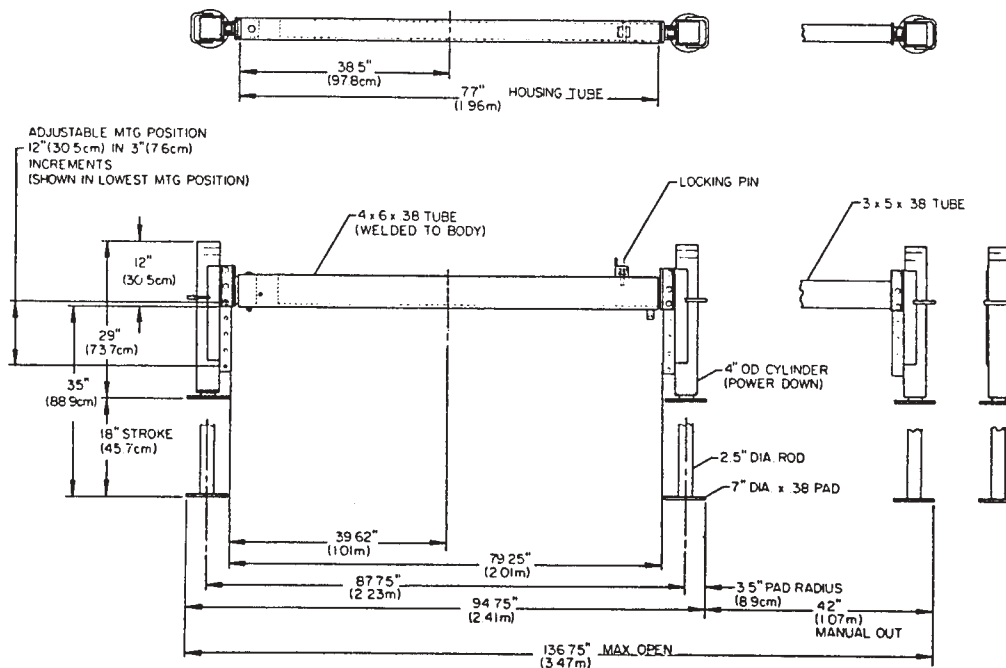


FIGURE A-31. ELECTRIC MNL OUT/PWR DN (31709999)

**BODIES
USED ON:**
11M920
11M925
11M930
11M940
DOM2

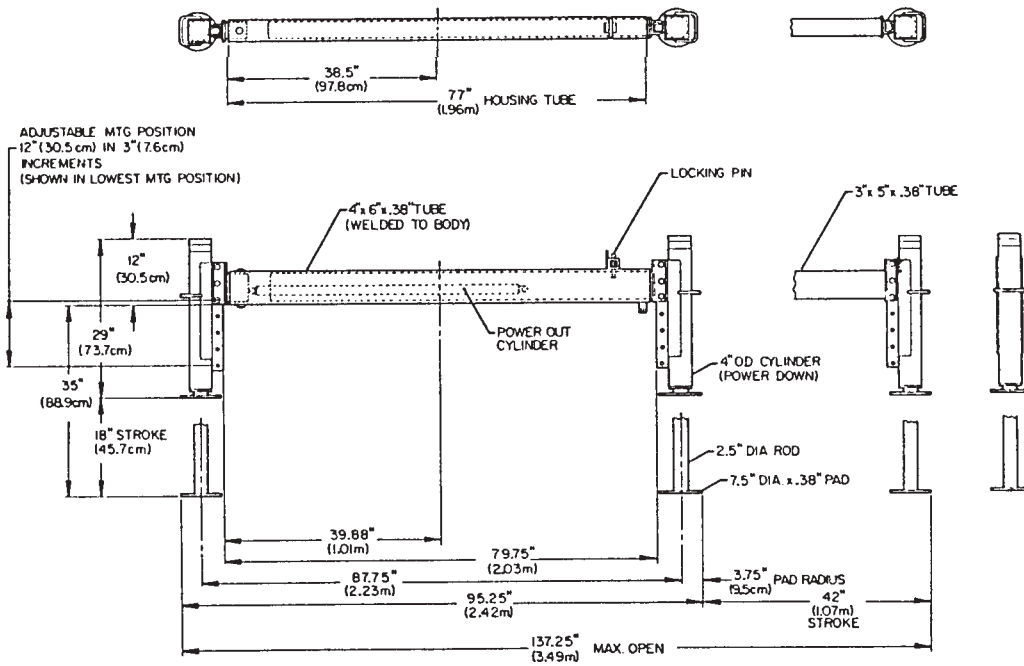


FIGURE A-32. ELECTRIC PWR OUT/PWR DN (31710020)

**BODIES
USED ON:**
11M920
11M925
11M930
11M940
DOM1
DOM2

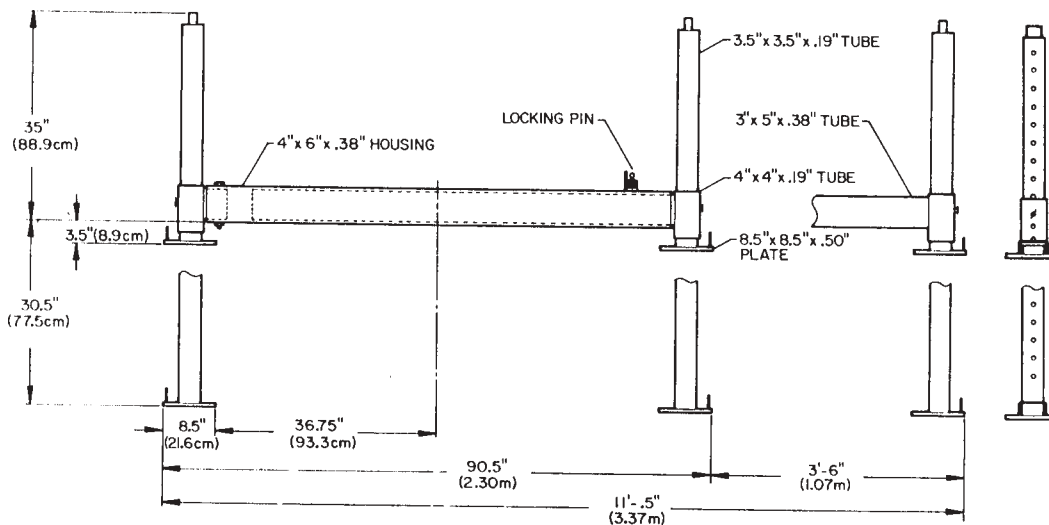


FIGURE A-33. MNL (51704772)

- BODIES
USED ON:**
- 11M920
 - 11M925
 - 11M930
 - 11M940
 - DOM1
 - DOM2

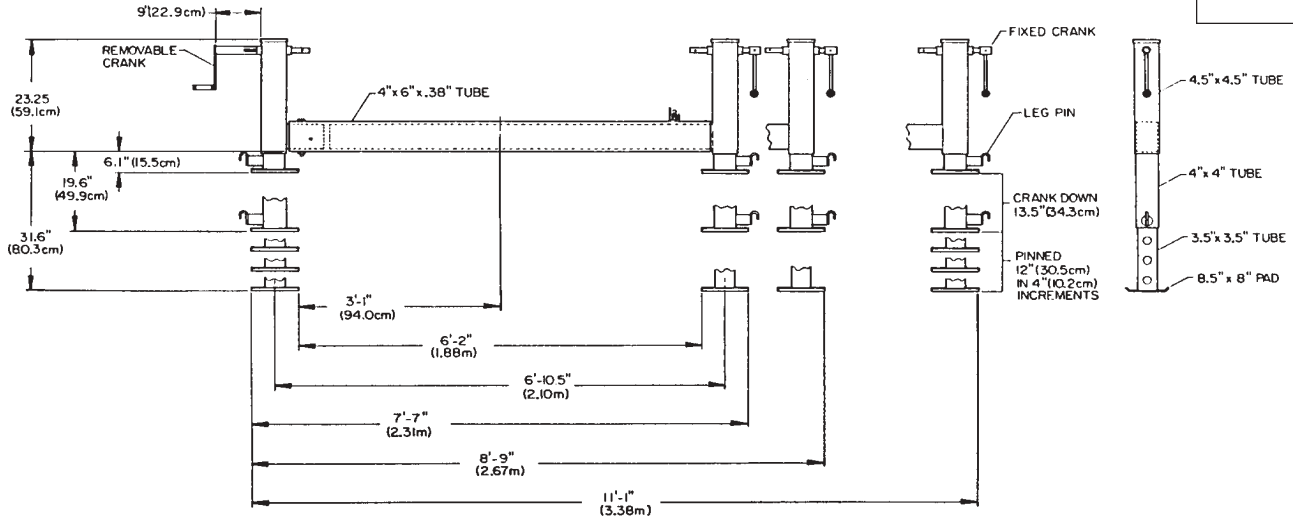
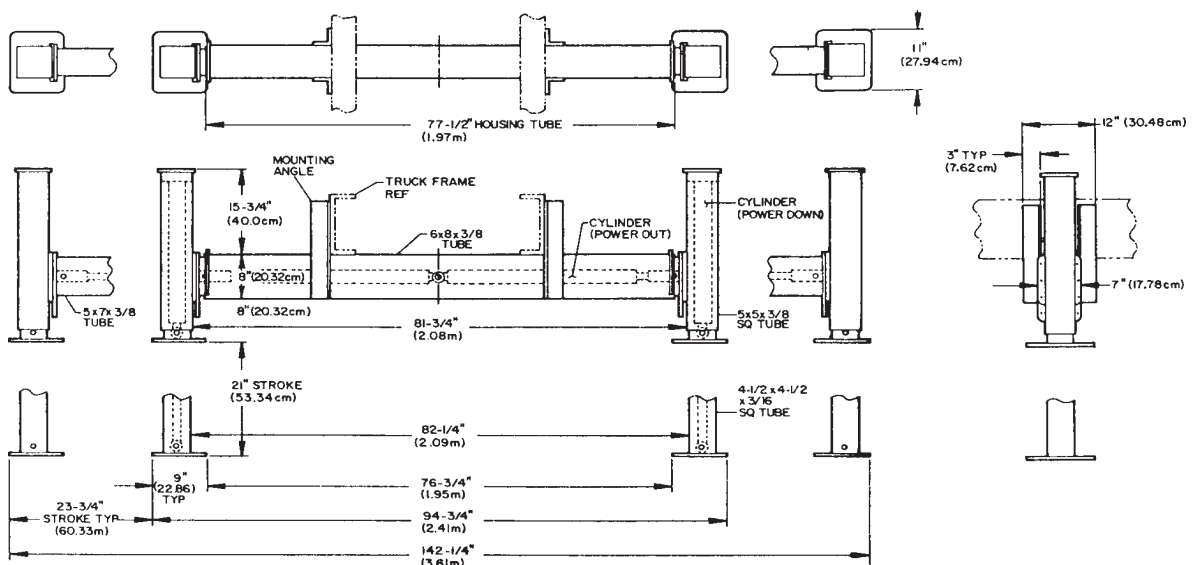


FIGURE A-34. CRANK DN (51704773)



- CRANES
USED ON:**
- 3016
 - 5016
 - 4300/680
 - 5200/780
 - 5800/880
 - 7200/1080
 - 9000/1295
 - 9800/1495
 - 14000/19140
 - 15000/21100
 - 425
 - 7515
 - 12916
 - 20017

FIGURE A-35. PWR OUT/PWR DN-BELOW FRAME MNT (31711350)

SECTION 2. PARTS LIST-OUTRIGGER ASSEMBLIES

2-1. GENERAL

This section contains the exploded parts drawings with the accompanying parts list for various auxiliary outrigger assemblies. Drawings of the associated hydraulic cylinders and valvebanks can be found in Section 3. These drawings are intended to be used in conjunction with the instructions found in the REPAIR section of Volume 1.

WARNING

DO NOT ATTEMPT TO REPAIR ANY COMPONENT WITHOUT READING THE INFORMATION CONTAINED IN THE REPAIR SECTION IN VOLUME 1. PAY PARTICULAR ATTENTION TO THE WARNINGS AND NOTES CONTAINED IN THAT SECTION. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN DAMAGE TO THE EQUIPMENT, AN INJURY OR EVEN DEATH.

2-2. CYLINDER IDENTIFICATION

To insure proper replacement parts are received, it is necessary to specify a complete number/letter sequence for any parts request. Part numbers may be checked by comparing the stamped identification of the cylinder case (Figure B-1) against the information contained in this manual. You must use the part number stamped on the cylinder case when ordering parts.

2-3. WELDMENT IDENTIFICATION

Each major weldment bears a stamped part number. Any time a major weldment is replaced, you must specify the complete part number as stamped on the weldment.

2-4. DECALS

Decals are a required component of the outrigger assemblies described in this manual and are listed in the parts lists. Placement of the decals is described in a Decal Placement chart for each assembly. It is important that any decal which may become illegible be replaced. See the IMT Crane Operator's Safety Manual for further information on this subject. The decals specific to auxiliary outriggers are shown on the following page.

2-5. ORDERING REPAIR PARTS

When ordering replacement parts:

1. Describe the variety and part number of the outrigger assembly.
2. Specify the complete part number. When ordering cylinder parts or one of the major weldments, always give the stamped part number.
3. Give a complete description of the part.
4. Specify the quantity required. All inquiries should be addressed to:
Iowa Mold Tooling Co., Inc.
Box 189, Garner, IA 50438-0189
Telephone: 641-923-3711
Technical Support Fax: 641-923-2424

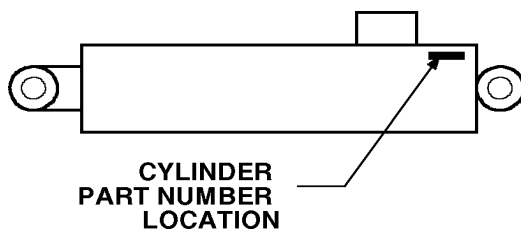


FIGURE B-1. CYLINDER PART NO. LOCATION



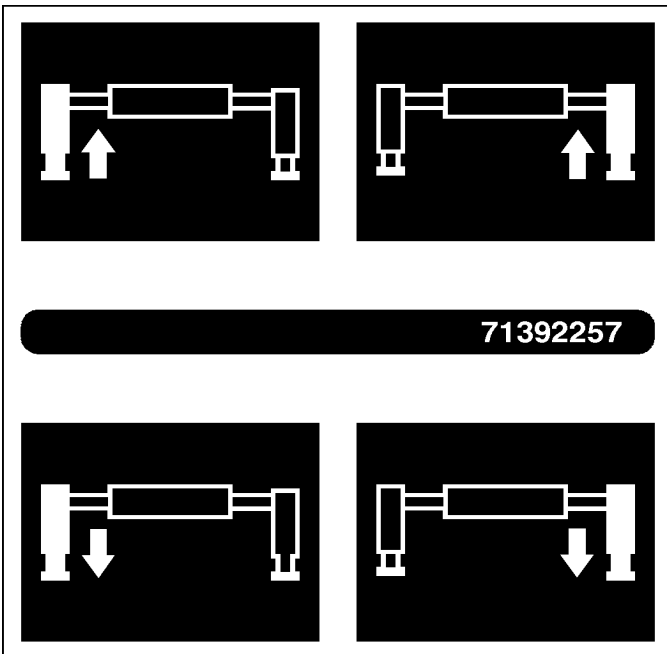
DECAL-DANGER
STAND CLEAR



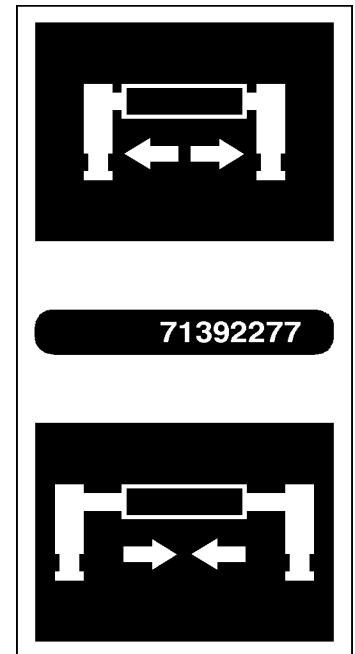
DECAL-DANGER
OUTRIGGER MOVING



DECAL-SELECTOR VALVE



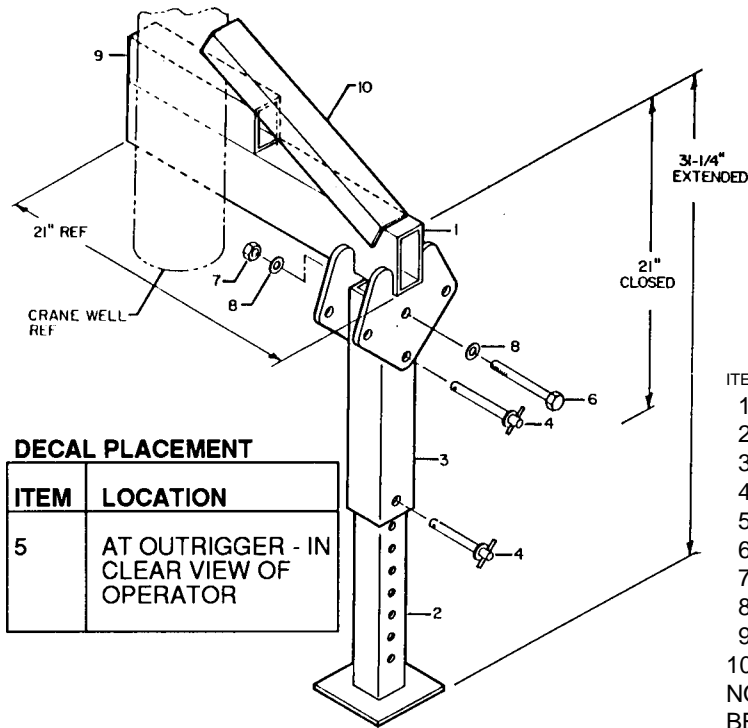
DECAL-POWER DOWN



DECAL-POWER OUT

FIGURE B-2. DECALS USED WITH OUTRIGGERS

**CRANES
USED ON:
1007**



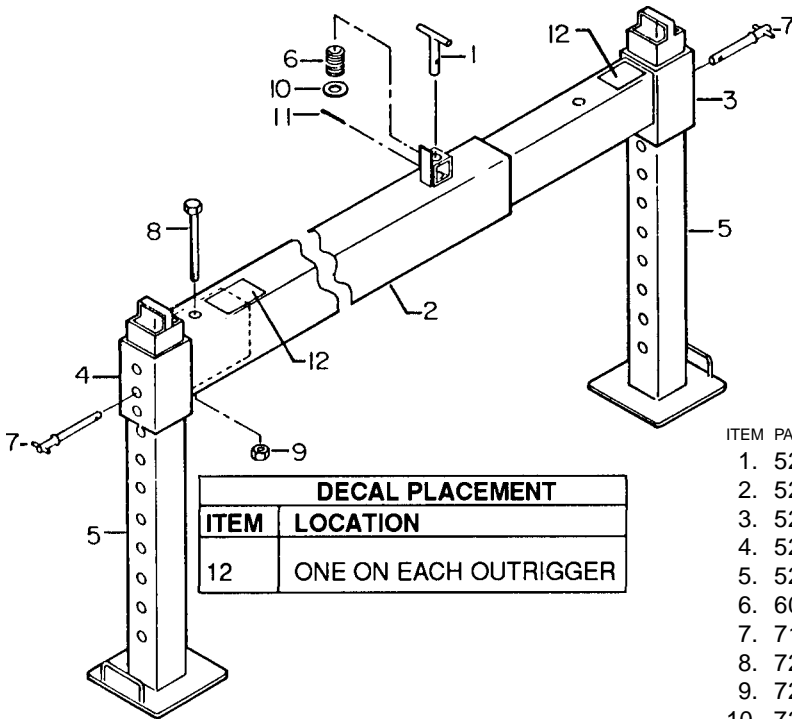
DECAL PLACEMENT

ITEM	LOCATION
5	AT OUTRIGGER - IN CLEAR VIEW OF OPERATOR

ITEM	PART NO.	DESCRIPTION	QTY
1.	52701717	SUPPORT	1
2.	52701718	LEG	1
3.	60103578	HOUSING	1
4.	71731461	QUICK RELEASE PIN	2
5.	70392864	DECAL-DANGER OR STD CLR	1
6.	72060100	CAP SCR 1/2-13X4-1/2 HH GR5	1
7.	72062080	NUT 1/2-13 LOCK	1
8.	72063005	WASHER 1/2 WRT	2
9.	60107651	TUBE 3 X 2 X .25WALL X 10	1
10.	60108334	ANGLE	1

NOTE: POSITION ITEM 10 AFTER THE CRANE HAS BEEN POSITIONED.

FIGURE B-3. AUX OUTRIGGER-MNL FOLD DN (90701596)



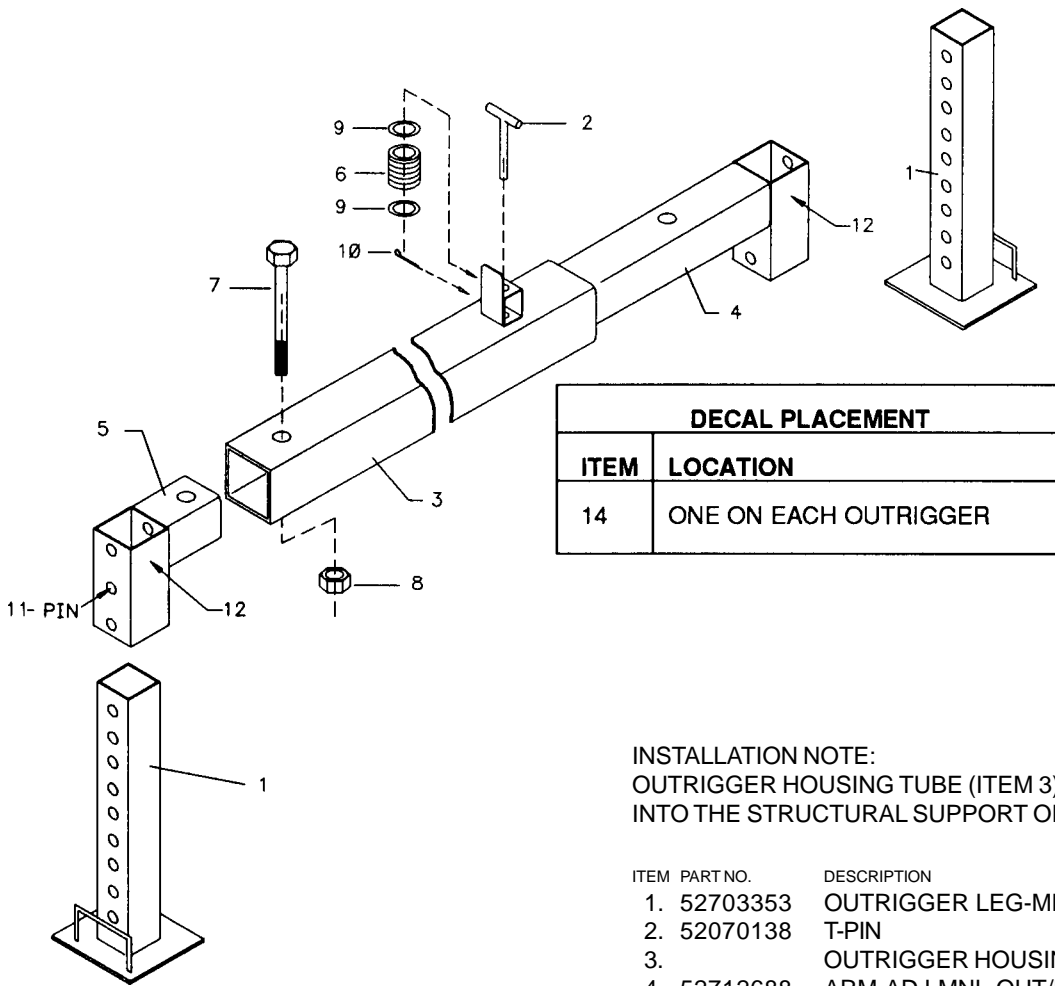
DECAL PLACEMENT	
ITEM	LOCATION
12	ONE ON EACH OUTRIGGER

ITEM	PART NO.	DESCRIPTION	QTY
1.	52070138	T-PIN	1
2.	52703334	TUBE	1
3.	52703351	ARM	1
4.	52703352	STATIONARY HOUSING	1
5.	52703353	LEG	2
6.	60010351	SPRING	1
7.	71731361	QUICK RELEASE PIN	2
8.	72060105	CAP SCR 1/2-13X7 HH GR5	1
9.	72062080	NUT 1/2-13 LOCK	1
10.	72063007	WASHER 5/8 WRT	1
11.	72066185	COTTER PIN .06X1	1
12.	70392864	DECAL-DANGER STD CLR	2

**CRANES
USED ON:
1007
2109**

FIGURE B-4. AUX OUTRIGGER-MNL OUT/MNL DN (31703350)

CRANES USED ON: 31711125	BODIES USED ON: 51704765
1014	9M900
2015	11M900
3016	



DECAL PLACEMENT	
ITEM	LOCATION
14	ONE ON EACH OUTRIGGER

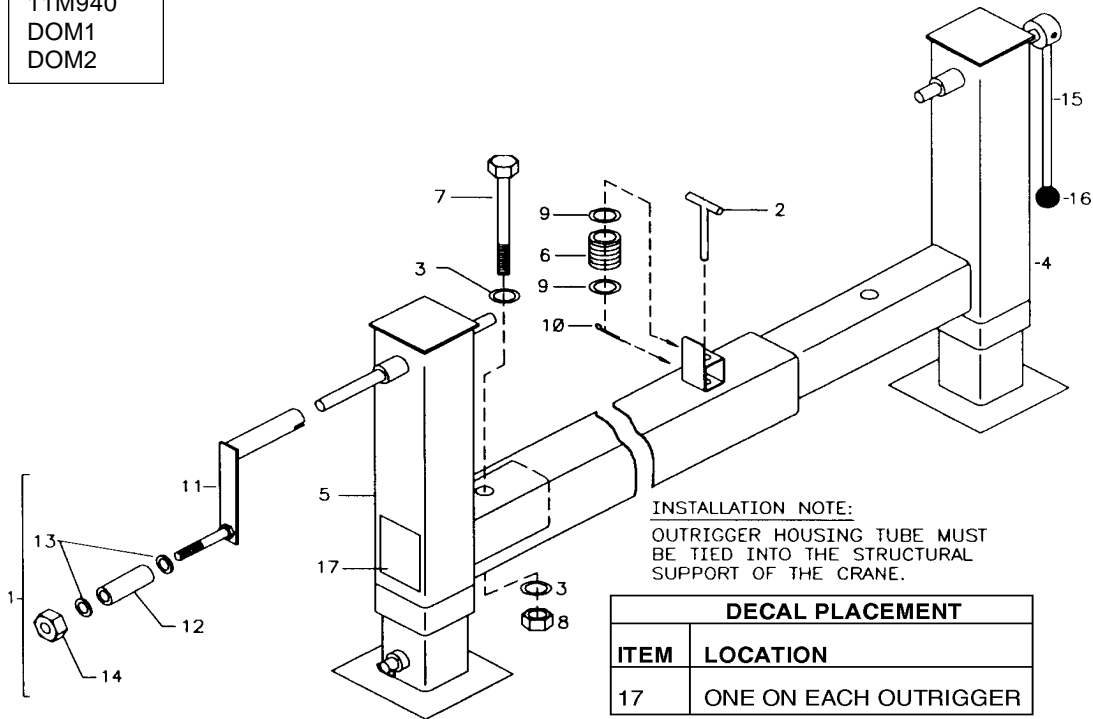
INSTALLATION NOTE:
OUTRIGGER HOUSING TUBE (ITEM 3) MUST BE TIED INTO THE STRUCTURAL SUPPORT OF THE BODY.

ITEM	PART NO.	DESCRIPTION	QTY	QTY
1.	52703353	OUTRIGGER LEG-MNL DN	2	2
2.	52070138	T-PIN	1	1
3.		OUTRIGGER HOUSING	REF	1
4.	52712688	ARM-ADJ MNL OUT/DN	1	1
5.	52712689	ARM-STAT MNL OUT/DN	1	1
6.	60010351	SPRING	1	1
7.	72060104	CAP SCR 1/2-13X6-1/2 HHGR5	1	1
8.	72062080	NUT 1/2-13 LOCK	1	1
9.	72063007	WASHER 5/8 WRT	2	2
10.	72066185	COTTER PIN 5/32X1	1	1
11.	71731461	PIN-QUICK RELEASE	2	2
12.	70392864	DECAL-DANGER STAND CLEAR	2	2

FIGURE B-5. AUX OUTRIGGER-REAR-MNL OUT & DN (51704765 & 31711125)

**CRANES
USED ON:
31703354
1007
2109**

**BODIES
USED ON:
51704773
11M920
11M925
11M930
11M940
DOM1
DOM2**



ITEM	PART NO.	DESCRIPTION	QTY	QTY
	52703334	TUBE WELDMENT	1	
1.	51705040	CRANK ASM (INCL:11-14)	1	1
2.	52070138	T-PIN	1	1
3.	72063005	WASHER 1/2 WRT		2
4.	52714179	OUTRIGGER ARM-ADJ	1	1
5.	52714180	OUTRIGGER ARM-STAT	1	1
6.	60010351	SPRING	1	1
7.	72060105	CAP SCR 1/2-13X7 HH GR5	1	1
8.	72062080	NUT 1/2-13 LOCK	1	1
9.	72063027	MACH BUSHING 5/8	2	2
10.	72066185	COTTER PIN 1/16X1	1	1
11.	52705039	CRANK WELDMENT(PART OF 1)		1REF
	1REF			
12.	60030099	ROLLER (PART OF 1)	1REF	1REF
13.	72063003	WASHER 3/8 WRT (PART OF 1)	2REF	2REF
14.	72062103	NUT 3/8-16 LOCK (PART OF 1)	1REF	1REF
15.	52703319	CRANK HANDLE	1	1
16.	71039096	KNOB 1-1/2 BLACK	1	1
17.	70392864	DECAL-DANGER STD CLR	2	2

FIGURE B-6. AUX OUTRIGGER-CRANK DN (31703354 & 51704773)

- | | | | | | |
|--------------|------------------------------------|------|--------------|-------------------------------|------|
| 1. 3B205010 | PWR DN CYLINDER | 2 | 25. 72066582 | CLAMP (SEE NOTE) | 2 |
| 2. 51394917 | HOSE 1/2X137 8F8F (PART OF 12) | 1REF | 26. 72532358 | ADPTR #8MSTR #8MJIC | 1 |
| 3. 51394693 | HOSE 1/4X130-1/2 4F4F (PART 12) | 2REF | 27. 72532365 | ADPTR #10MSTR #12MJIC | 1 |
| 4. 51394115 | HOSE 1/4X59 4F4F (PART OF 12) | 2REF | 28. 72532657 | TEE-SWVL NUT RUN 3/4JIC | 1 |
| 5. 51705983 | VALVEBANK 2-SECT (INCL:40) | 1 | 29. 72532658 | ELBOW #8MJIC #8FJIC SWVL | 2 |
| 6. 51394691 | HOSE 1/4X38-1/2 4F4F(PART 12) | 2REF | 30. 72532690 | ELBOW #4MJIC #4FJIC SWVL | 4 |
| 7. 52070138 | T-PIN | 1 | 31. 72532699 | ELBOW #6MSTR #4MJIC 90° | 2 |
| 8. 52705725 | ADJUSTABLE ARM | 1 | 32. 72532700 | ELBOW #6MSTR #6MJIC XLG 90° | 2 |
| 9. 52705726 | STATIONARY ARM | 1 | 33. 72532707 | ADPTR #4MJIC #6FJIC | 2 |
| 10. 60010351 | SPRING | 1 | 34. 72532722 | ADPTR #10MSTR #6FSTR | 4 |
| 11. 51394402 | HOSE 3/8X141 8F8F (PART OF 12) | 1REF | 35. 72532972 | ADPTR #8MJIC #12FJIC | 1 |
| 12. 51714499 | HOSE KIT (INCL: 2,3,4,6,11) | 1 | 36. 72533024 | UNION BULKHEAD | 2 |
| 13. 72053758 | ELBOW #4MSTR #4MJIC 90° | 2 | 37. 76391511 | DECAL-UP & DWN STAB. R&L | 1 |
| 14. 72053764 | ELBOW #10MSTR #8MJIC 90° | 1 | 38. 89034049 | SPIRAL WRAP-BLK (SEE NOTE) | 4' |
| 15. 72060025 | CAP SCR 5/16-18X1 HHGR5 | 3 | 39. 99900644 | MANUAL-AUX OUTRGS | 1 |
| 16. 72061760 | CAP SCR 1/2-13X7 HHGR8 | 1 | 40. 51731580 | HANDLE(INCL:41-48,PART OF 5) | 2REF |
| 17. 72060155 | CAP SCR 5/8-11X3-1/2 HHGR5 | 4 | 41. 70142648 | LEVER PIVOT(PART OF 40) | 2REF |
| 18. 72060833 | SCR 5/16-18X3/4 THRDCTG (SEE NOTE) | 2 | 42. 70142650 | LEVER SUPPORT (PART OF 40) | 2REF |
| 19. 72062080 | NUT 1/2-13 LOCK | 1 | 43. 70142651 | CTRL LEVER (PART OF 40) | 2REF |
| 20. 72062091 | NUT 5/8-11 LOCK | 4 | 44. 71392269 | KNOB (PART OF 40) | 2REF |
| 21. 72063002 | WASHER 5/16W FLAT | 5 | 45. 72062021 | NUT 5/16-18 HEX (PART OF 40) | 2REF |
| 22. 72063005 | WASHER 1/2W FLAT | 2 | 46. 72062024 | NUT 1/2-13 HEX (PART OF 40) | 2REF |
| 23. 72063027 | MACH BUSHING 5/8X14GA | 2 | 47. 72066162 | COTTER PIN .06X1 (PART OF 40) | 4REF |
| 24. 72066185 | COTTER PIN .16X1 | 1 | 48. 72661204 | CLEVIS PIN (PART OF 40) | 4REF |
| | | | 49. 72533567 | ELBOW #4MSTR #4MJIC XLG | 2 |

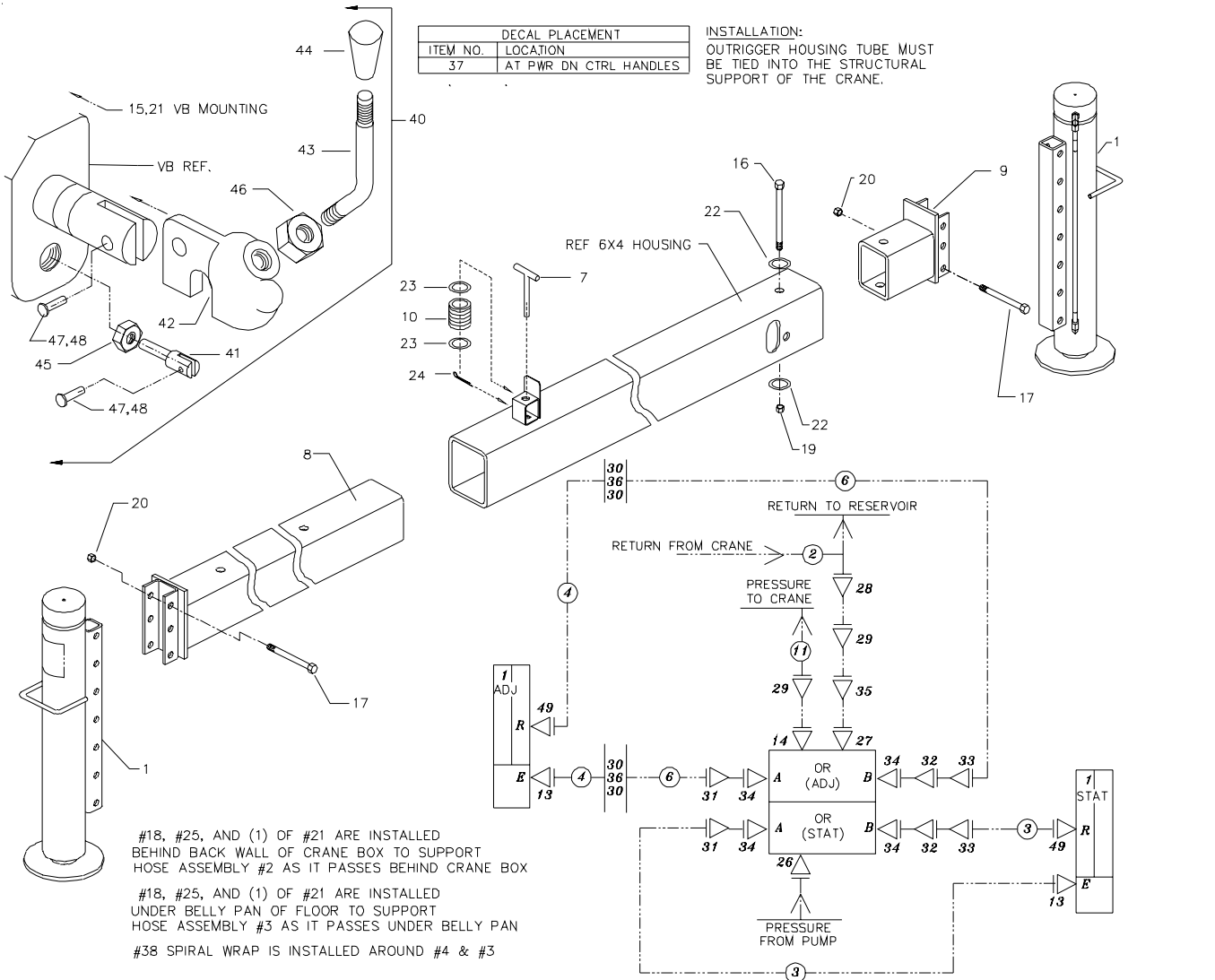
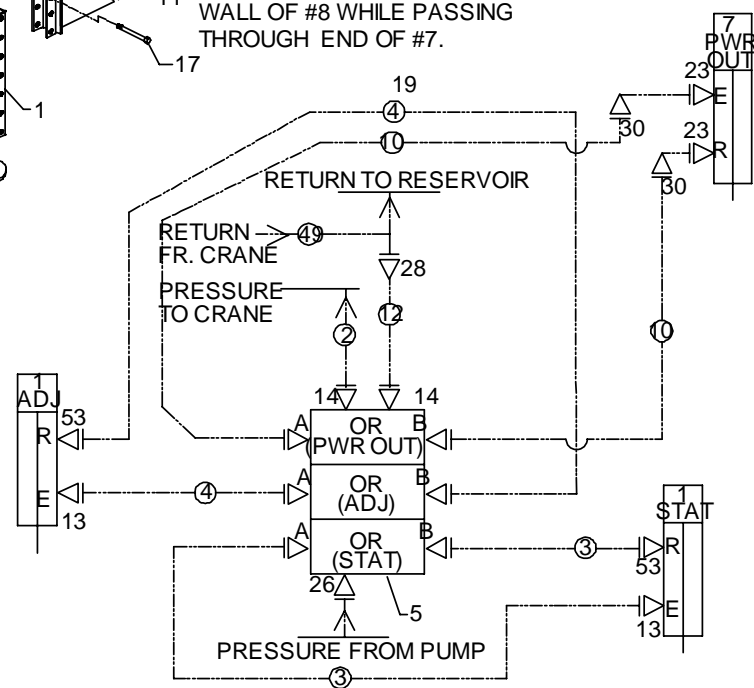
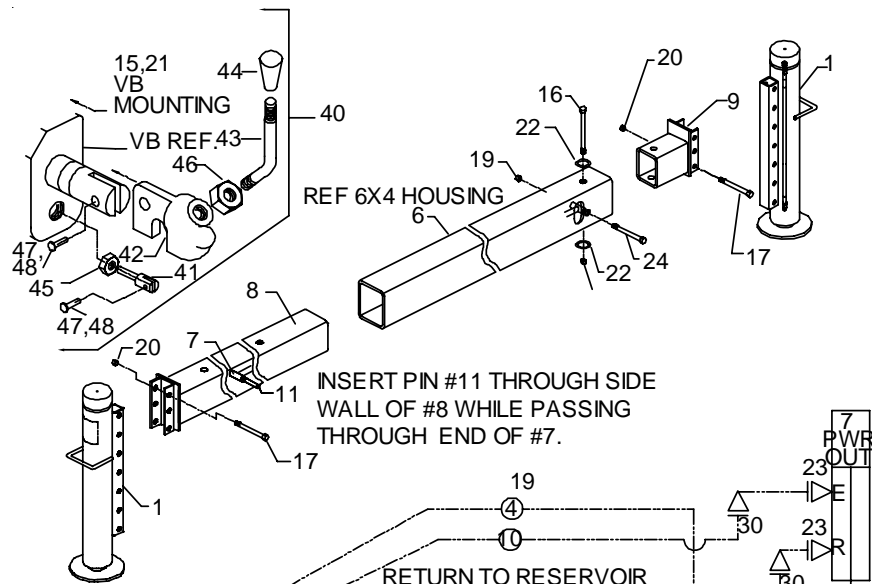


FIGURE B-7. AUX OUTRIGGERS-MNL OUT/PWR DN (31705760)

000AUXOR:99900644: REV. L 20051012

- | | | | |
|-----|----------|--|------|
| 1. | 3B205010 | PWR DN CYLINDER | 2 |
| 2. | 51394917 | HOSE ASM 1/2X137 FF | 1 |
| 3. | 51395552 | HOSE ASM 1/4X135 FJ | 2 |
| 4. | 51396280 | HOSE ASM 1/4X96 FJ | 2 |
| 5. | 51714812 | VB 3-SECT PO/PD | 1 |
| 6. | 51703334 | TUBE-OR HOUS PO | 1 |
| 7. | 71411797 | CYLINDER, PO (WAS 3B142860) | 1 |
| 8. | 52705725 | ADJUSTABLE ARM | 1 |
| 9. | 52705726 | STATIONARY ARM | 1 |
| 10. | 51396281 | HOSE 1/4X107 FJ | 2 |
| 11. | 72661473 | SPRING PIN 1/2 X 3.0 | 1 |
| 12. | 51395412 | HOSE 1/2X63.0 FJ | 1 |
| 13. | 72053758 | ELBOW #4MSTR #4MJIC 90° | 2 |
| 14. | 72532358 | ADPTR #8MSTR #8MJIC | 1 |
| 15. | 72060025 | CAP SCR 5/16-18 X 1.00 HHGR5 | 3 |
| 16. | 72061760 | CAP SCR 1/2-13X7 HHGR8 | 1 |
| 17. | 72060155 | CAP SCR 5/8-11X3-1/2 HHGR5 | 4 |
| 18. | 72060833 | SCR-THD CUT 5/16-18X 3/4 HWH
(SEE NOTE) | 2 |
| 19. | 72062080 | NUT 1/2-13 HEX NYLOC | 2 |
| 20. | 72062091 | NUT 5/8-11 LOCK | 4 |
| 21. | 72063002 | WASHER 5/16 FLAT | 5 |
| 22. | 72063005 | WASHER 1/2 FLAT | 2 |
| 23. | 72532351 | ADPTR #4MSTR #4MJIC | 4 |
| 24. | 72060101 | CAP SCR 1/2-13 X 5.00 HHGR5 | 1 |
| 25. | 72066582 | CLAMP UMP20 (SEE NOTE) | 2 |
| 26. | 72532358 | ADAPTER #8MSTR #8MJIC | 1 |
| 28. | 72532657 | TEE-SWVL NUT RUN JIC#8 | 1 |
| 30. | 72532690 | ELBOW #4MJIC #4FJIC SW | 2 |
| 36. | 71392277 | DECAL-PWR OUT | 1 |
| 37. | 76391511 | DECAL-UP & DOWN STAB | 1 |
| 38. | 89034049 | SPIRAL WRAP-BLK (SEE NOTE) | 4' |
| 39. | 99900644 | MANUAL-OUTRIGGERS | 1 |
| 40. | 51731580 | HANDLE ASM (PART OF 5) | 2REF |
| 41. | 70142648 | LEVER PIVOT (PART OF 40) | 2REF |
| 42. | 70142650 | LEVER SUPPORT (PART OF 40) | 2REF |
| 43. | 70142651 | CONTROL LEVER (PART OF 40) | 2REF |
| 44. | 71392269 | KNOB (PART OF 40) | 2REF |
| 45. | 72062021 | NUT 5/16-18 HEX JAM
(PART OF 40) | 2REF |
| 46. | 72062024 | NUT 1/2-13 HEX JAM
(PART OF 40) | 2REF |
| 47. | 72066162 | COTTER PIN (PART OF 40) | 4REF |
| 48. | 72661204 | CLEVIS PIN (PART OF 40) | 4REF |
| 49. | 51395431 | HOSE 1/2 X 90 FF | 1 |
| 50. | 70392864 | DECAL-DANGER OR | 2 |
| 51. | 70392867 | DECAL-DANGER OR MOVING | 1 |
| 52. | 71392257 | DECAL-OR P/D SS | 1 |
| 53. | 72533567 | ELVOW #4MSTR #4MJIC XLG | 2 |

2-7



#18, 21, 25 ARE INSTALLED TO SUPPORT HOSE ASSEMBLIES #3,4,10.
#38 SPIRAL WRAP IS INSTALLED AROUND #3 AND #4 NEAR #1.

DECAL PLACEMENT	
ITEM	LOCATION
36	AT P/O CONTROL HANDLE
37	AT P/D CONTROL HANDLES
50	O/R HOUSING
51	ADJUSTABLE SIDE
52	STATIONARY SIDE

FIGURE B-8A. AUX OUTRIGGER-PWR OUT/PWR DN 6X4 (31710967) (EFF 10-17-02)

000AUXOR:99900644: 20011120

2-8

1.	3B205010	PWR DN CYLINDER	2
2.	51706893	HOSE ASM 1/4X90	4
3.	51705191	HOSE ASM 1/4X96	2
4.	51703939	HOSE ASM 3/8X48	1
5.	51705984	VB 3-SECTW/PWR BYND	1
6.	51704576	HOSE ASM 3/4X72	1
7.	52705725	ADJUSTABLE ARM	1
8.	52705726	STATIONARY ARM	1
9.	51703334	HOUSING	1
10.	60107648	HOSE CLAMP	1
12.	72053764	ELBOW #10MSTR #8MJIC 90°	1
13.	72053758	ELBOW #4MSTR #4MJIC 90°	4
14.	72532699	ELBOW #6MSTR #4MJIC 90°	3
16.	72061760	CAP SCR 1/2-13X7 HHGR8	1
17.	72060155	CAP SCR 5/8-11X3-1/2 HHGR5	6
18.	72062080	NUT 1/2-13 LOCK	1
19.	72062091	NUT 5/8-11 LOCK	6
20.	72060030	CAP SCR 5/16-18X2-1/4 HHGR5	1
21.	72062109	NUT 5/16-18 LOCK	1
22.	72532358	ADAPTER #8MSTR #8MJIC	1
23.	72532365	ADAPTER #10MSTR #12MJIC	1
25.	72532722	ADAPTER #10MSTR #6FSTR	6
28.	72532700	ELBOW #6MSTR #6MJIC XLG 90° 3	
29.	72532707	ADAPTER #4MJIC #6FJIC	3
30.	70392864	DECAL-DANGER STD CLR	2
31.	70392867	DECAL-DANGER OR. MOVING	1
33.	72060102	CAP SCR 1/2-13X5-1/2 HHGR5	1
34.	72062080	NUT 1/2-13 LOCK	1
35.	3B142860	PWR OUT CYLINDER	1
36.	52706424	PIN	1
37.	72532690	ELBOW #4FJIC #4MJIC	2
38.	72532351	ADAPTER #4MSTR #4MJIC	2
39.	71392277	DECAL-PWR OUT	1
40.	71392257	DECAL-PWR DN	1
41.	70142648	LEVER PIVOT (PART OF 49)	3REF
42.	70142650	LEVER SUPPORT (PART OF 49)	3REF
43.	70142651	CONTROL LEVER (PART OF 49)	3REF
44.	71392269	KNOB (PART OF 49)	3REF
45.	72062021	NUT 5/16-18 HEX JAM (PART OF 49)	3REF
46.	72062024	NUT 1/2-13 HEX JAM (PART OF 49)	3REF
47.	72066162	COTTER PIN (PART OF 49)	6REF
48.	72661204	CLEVIS PIN (PART OF 49)	6REF
49.	51731580	HANDLE ASM (INCL:41-48,PART OF 5)	3REF

INSTALLATION NOTE

OUTRIGGER HOUSING TUBE MUST BE TIED INTO THE STRUCTURAL SUPPORT OF THE CRANE.

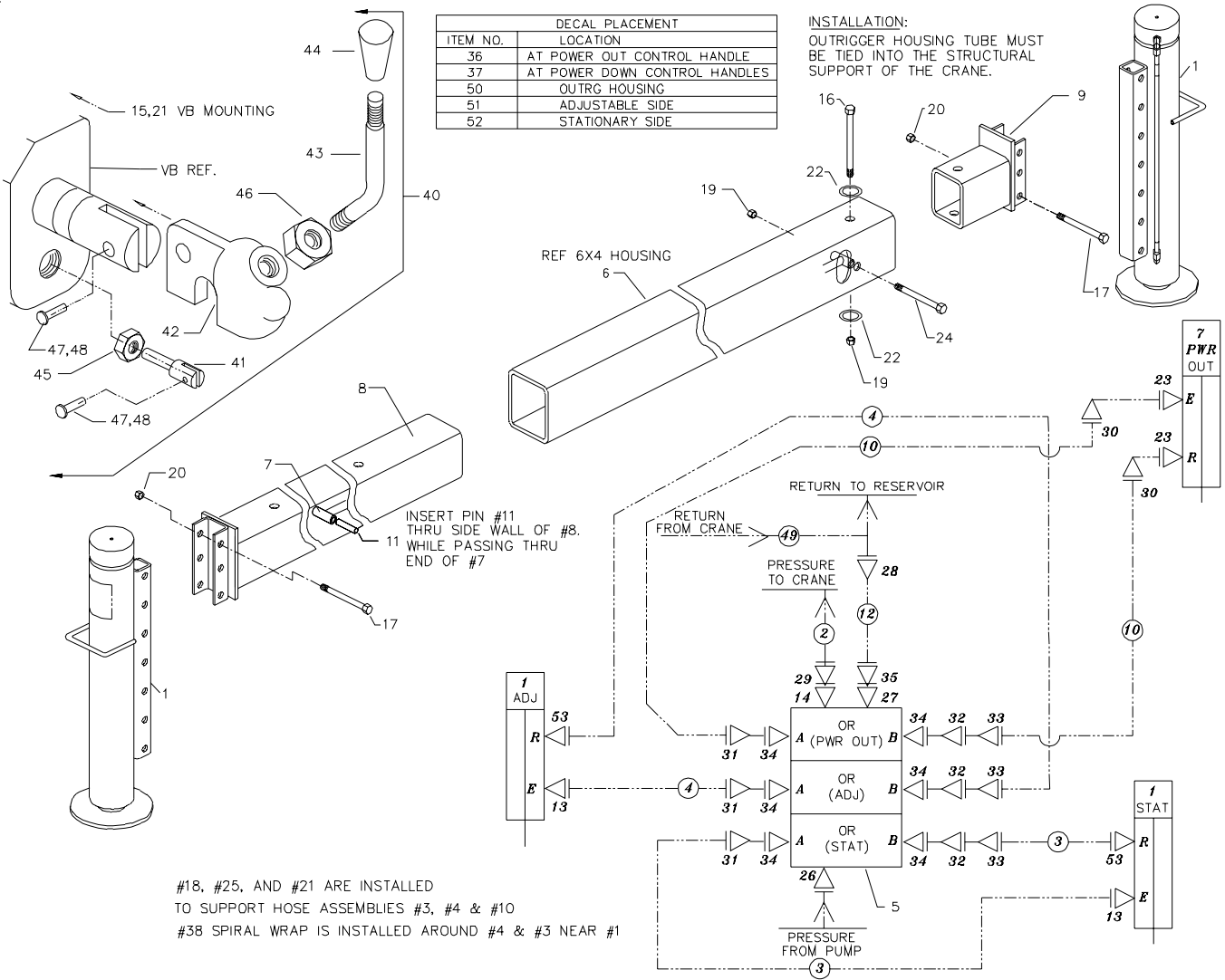
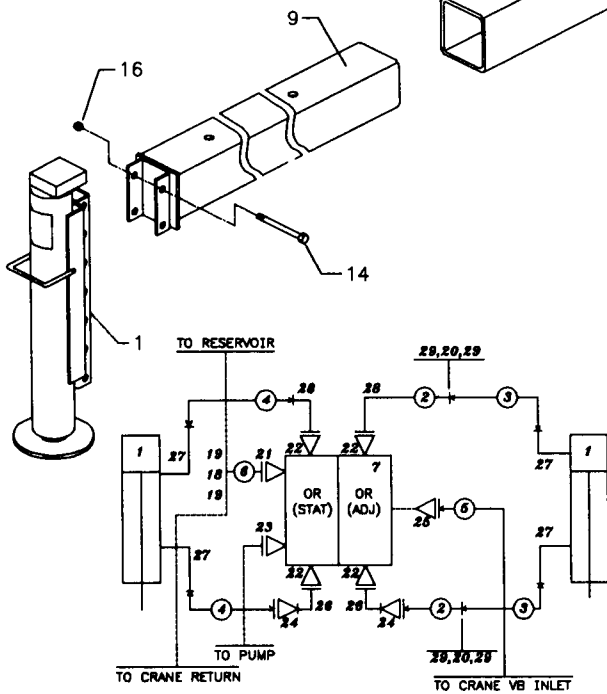
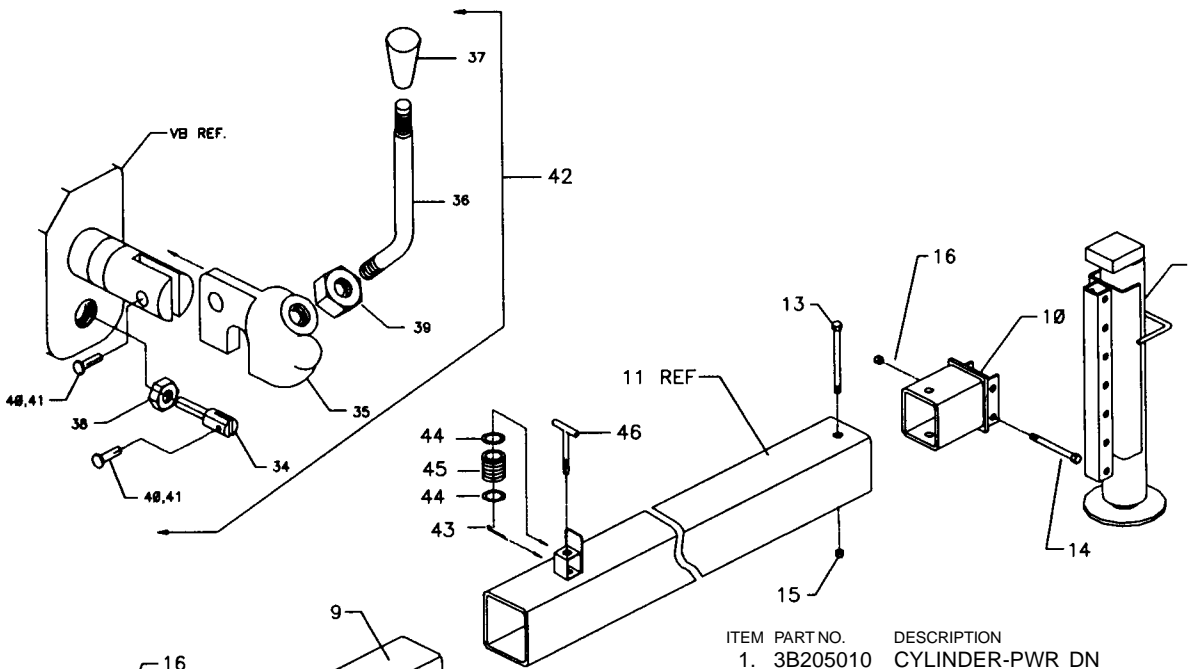


FIGURE B-8B. AUX OUTRIGGER-PWR OUT/PWR DN 6X4 (31710967) (THRU 10-16-02)

**BODIES
USED ON:**
9M900
11M900



ITEM	PART NO.	DESCRIPTION	QTY
1.	3B205010	CYLINDER-PWR DN	2
2.	51710569	HOSE ASM 1/4X36 FF	2
3.	51704024	HOSE ASM 1/4X54 FF	2
4.	51705364	HOSE ASM 1/4X128 FF	2
5.	51703939	HOSE ASM 1/2X96 FF	1
6.	51707005	HOSE ASM 3/4X39 FF	1
7.	51705983	VALVEBANK-2 SECT (INCL:42)	1
9.	52711140	ARM-ADJUSTABLE	1
10.	52711139	ARM-STATIONARY	1
11.		OUTRIGGER HOUSING	1REF
13.	72060104	CAP SCR 1/2-13X6-1/2 HHGR5	1
14.	72060155	CAP SCR 5/8-11X3-1/2 HHGR5	4
15.	72062080	NUT 1/2-13 LOCK	1
16.	72062091	NUT 5/8-11 LOCK	4
18.	72532695	TEE #12MJIC 3/4TUBE	1
19.	72053458	BARB NIPPLE 3/4MPT 3/4HOSE	2
20.	72533024	BULKHEAD UNION #4JIC W/NUT	2
21.	72532365	ADAPTER #10MSTR #12MJIC	1
22.	72532722	ADAPTER #10MSTR #6FSTR	4
23.	72532358	ADAPTER #8MSTR #8MJIC	1
24.	72532707	ADAPTER #4MJIC #6MJIC	2
25.	72053764	ELBOW #10MSTR #8MJIC 90°	1
26.	72532700	ELBOW #6MSTR #6MJIC XLG 90°	2
27.	72053758	ELBOW #4MSTR #4MJIC 90°	4
28.	72532699	ELBOW #6MSTR #4MJIC 90°	2
29.	72532690	ELBOW #4MJIC #4FJIC SWVL	4
30.	70392864	DECAL-DANGER STAND CLEAR	2
31.	70392867	DECAL-DANGER OUTGR MOVING	1
32.	71392257	DECAL-CONTROL	1
34.	70142648	LEVER PIVOT (PART OF 42)	2REF
35.	70142650	LEVER SUPPORT (PART OF 42)	2REF
36.	70142651	LEVER-CTRL HNDL (PART OF 42)	2REF
37.	71392269	KNOB (PART OF 42)	2REF
38.	72062021	NUT 5/16-18 HEXJAM (PART OF 42)	2REF
39.	72062024	NUT 1/2-13 HEXJAM (PART OF 42)	2REF
40.	72066162	COTTER PIN (PART OF 42)	4REF
41.	72661204	CLEVIS PIN (PART OF 42)	4REF
42.	51731580	HANDLE ASM(INCL:34-41,PART OF 5)	2REF
43.	72066185	COTTER PIN 5/32X1	1
44.	72063007	WASHER 5/8 WRT	2
45.	60010351	SPRING	1
46.	52070138	T-PIN	1

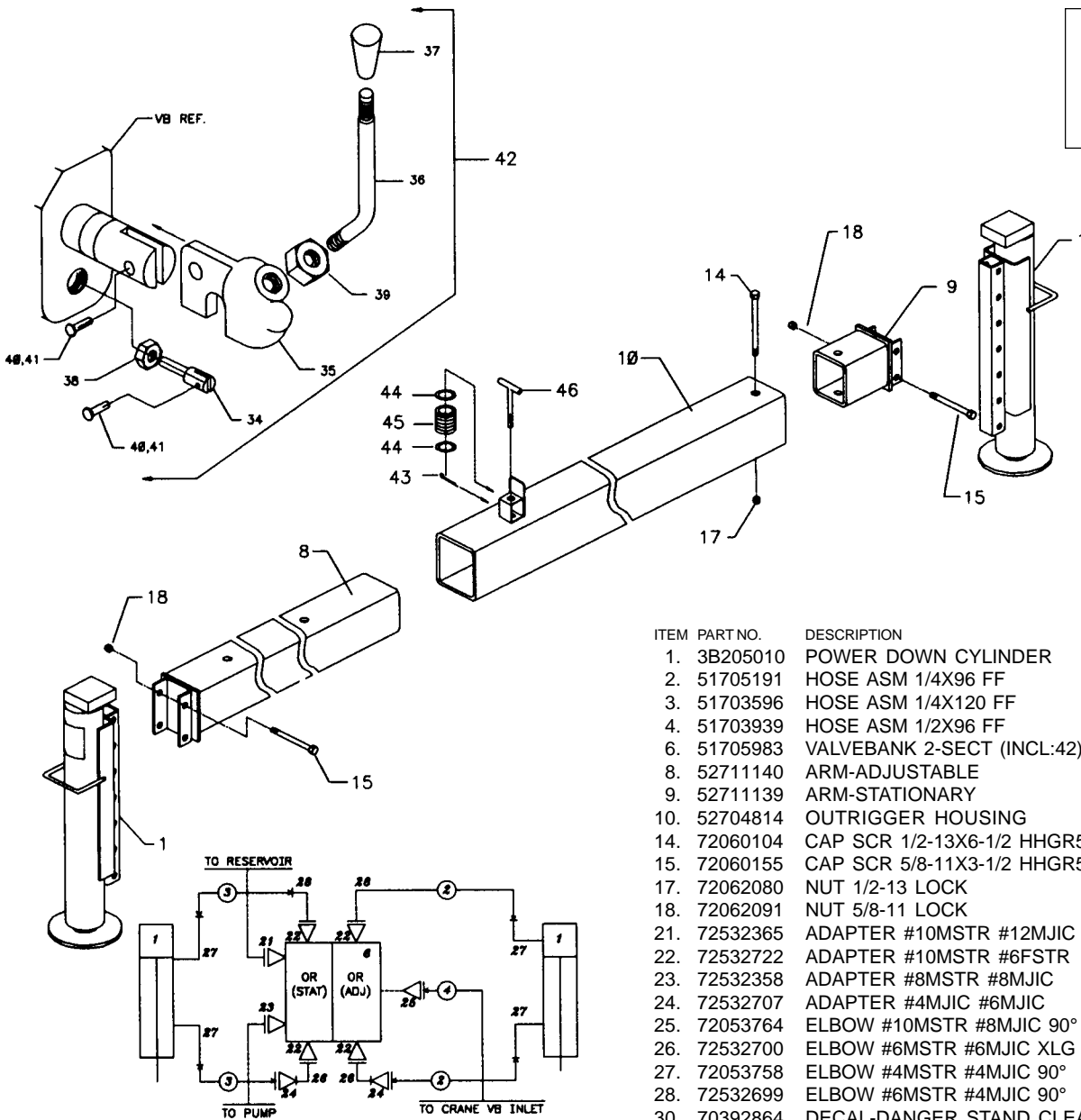
DECAL PLACEMENT	
ITEM	LOCATION
30	ONE ON EACH OUTRIGGER
31	AT OR NEAR THE NORMAL OPERATING STATION
32	AT POWER DOWN CONTROLS

INSTALLATION NOTE:OUTRIGGER HOUSING TUBE MUST BE TIED INTO THE STRUCTURAL SUPPORT OF THE CRANE.

FIGURE B-9. AUX OUTRIGGER-MNL OUT/PWR DN (31705806)

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**CRANES
USED ON:**
1014
2015
3016



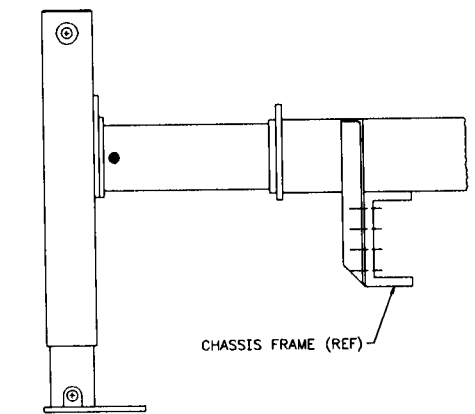
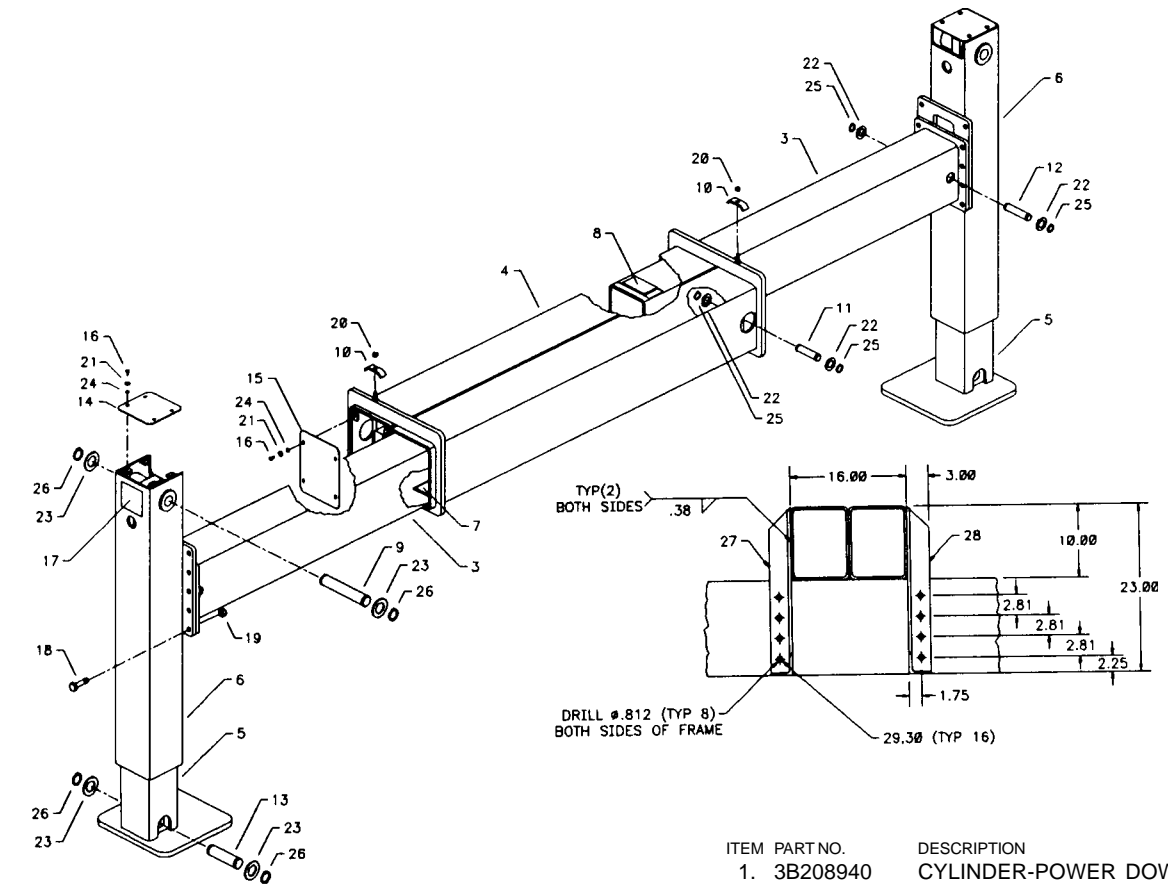
ITEM	PART NO.	DESCRIPTION	QTY
1.	3B205010	POWER DOWN CYLINDER	2
2.	51705191	HOSE ASM 1/4X96 FF	2
3.	51703596	HOSE ASM 1/4X120 FF	2
4.	51703939	HOSE ASM 1/2X96 FF	1
6.	51705983	VALVEBANK 2-SECT (INCL:42)	1
8.	52711140	ARM-ADJUSTABLE	1
9.	52711139	ARM-STATIONARY	1
10.	52704814	OUTRIGGER HOUSING	1
14.	72060104	CAP SCR 1/2-13X6-1/2 HHGR5	1
15.	72060155	CAP SCR 5/8-11X3-1/2 HHGR5	4
17.	72062080	NUT 1/2-13 LOCK	1
18.	72062091	NUT 5/8-11 LOCK	4
21.	72532365	ADAPTER #10MSTR #12MJIC	1
22.	72532722	ADAPTER #10MSTR #6FSTR	4
23.	72532358	ADAPTER #8MSTR #8MJIC	1
24.	72532707	ADAPTER #4MJIC #6MJIC	2
25.	72053764	ELBOW #10MSTR #8MJIC 90°	1
26.	72532700	ELBOW #6MSTR #6MJIC XLG 90°	2
27.	72053758	ELBOW #4MSTR #4MJIC 90°	4
28.	72532699	ELBOW #6MSTR #4MJIC 90°	2
30.	70392864	DECAL-DANGER STAND CLEAR	2
31.	70392867	DECAL-DANGER OUTRGR MOVING	1
32.	71392257	DECAL-CONTROL PO	1
34.	70142648	LEVER PIVOT (PART OF 42)	2REF
35.	70142650	LEVER SUPPORT (PART OF 42)	2REF
36.	70142651	LEVER-CTRL HNDL (PART OF 42)	2REF
37.	71392269	KNOB (PART OF 42)	2REF
38.	72062021	NUT 5/16-18 HEXJAM (PART OF 42)	2REF
39.	72062024	NUT 1/2-13 HEXJAM (PART OF 42)	2REF
40.	72066162	COTTER PIN (PART OF 42)	4REF
41.	72661204	CLEVIS PIN (PART OF 42)	4REF
42.	51731580	HANDLE ASM(INCL:34-41,PART OF 5)	2REF
43.	72066185	COTTER PIN 5/32X1	1
44.	72063007	WASHER 5/8 WRT	2
45.	60010351	SPRING	1
46.	52070138	T-PIN	1

DECAL PLACEMENT	
ITEM	LOCATION
30	ONE ON EACH OUTRIGGER
31	AT OR NEAR THE NORMAL OPERATING STATION
32	AT PWR DN CTRL HANDLES

INSTALLATION NOTE:OUTRIGGER HOUSING TUBE MUST BE TIED INTO THE STRUCTURAL SUPPORT OF THE CRANE.

FIGURE B-10. AUX OUTRIGGER-MNL OUT/PWR DN (31711127)

**CRANES
USED ON:**
32000
32018



DECAL PLACEMENT	
ITEM	LOCATION
17	ONE ON EACH OUTRIGGER

ITEM	PART NO.	DESCRIPTION	QTY
1.	3B208940	CYLINDER-POWER DOWN	2
2.	3B148860	CYLINDER-POWER OUT	2
3.	52706375	ARM	2
4.	52706385	ARM HOUSING	1
5.	52712512	LEG	2
6.	52712511	LEG HOUSING	2
7.	60030067	WEAR PAD	2
8.	60030293	WEAR PAD	2
9.	60105321	PIN	2
10.	60107648	HOSE CLAMP-SMALL	2
11.	60109500	PIN	2
12.	60109501	PIN	2
13.	60109593	PIN	2
14.	60109594	COVER	2
15.	60109595	COVER	2
16.	72060002	CAP SCR 1/4-20X3/4 HHGR5	16
17.	70392864	DECAL-DANGER STAND CLEAR	2
18.	72060816	CAP SCR 5/8-11X2-1/2 SH	16
19.	72062091	NUT 5/8-11 LOCK	16
20.	72062103	NUT 3/8-16 LOCK	2
21.	72063001	WASHER 1/4 WRT	16
22.	72063034	MACH BUSHING 1X10GA NR	8
23.	72063037	MACH BUSHING 1-1/2X10GA NR	8
24.	72063049	WASHER 1/4 LOCK	16
25.	72066125	RETAINING RING 1 EXT HD	8
26.	72066132	RETAINING RING 1-1/2 EXT HD	8
27.	60109606	MOUNTING ANGLE-REAR	2
28.	60109687	MOUNTING ANGLE-FRONT	2
29.	72060186	CAP SCR 3/4-10X2-1/2 HHGR5	16
30.	72062114	NUT 3/4-10 LOCK	16

INSTALLATION NOTE:OUTRIGGER HOUSING TUBE MUST BE TIED INTO THE STRUCTURAL SUPPORT OF THE CRANE.

FIGURE B-11. AUX OUTRIGGER-PWR OUT/PWR DN-REAR MNT (31712510)

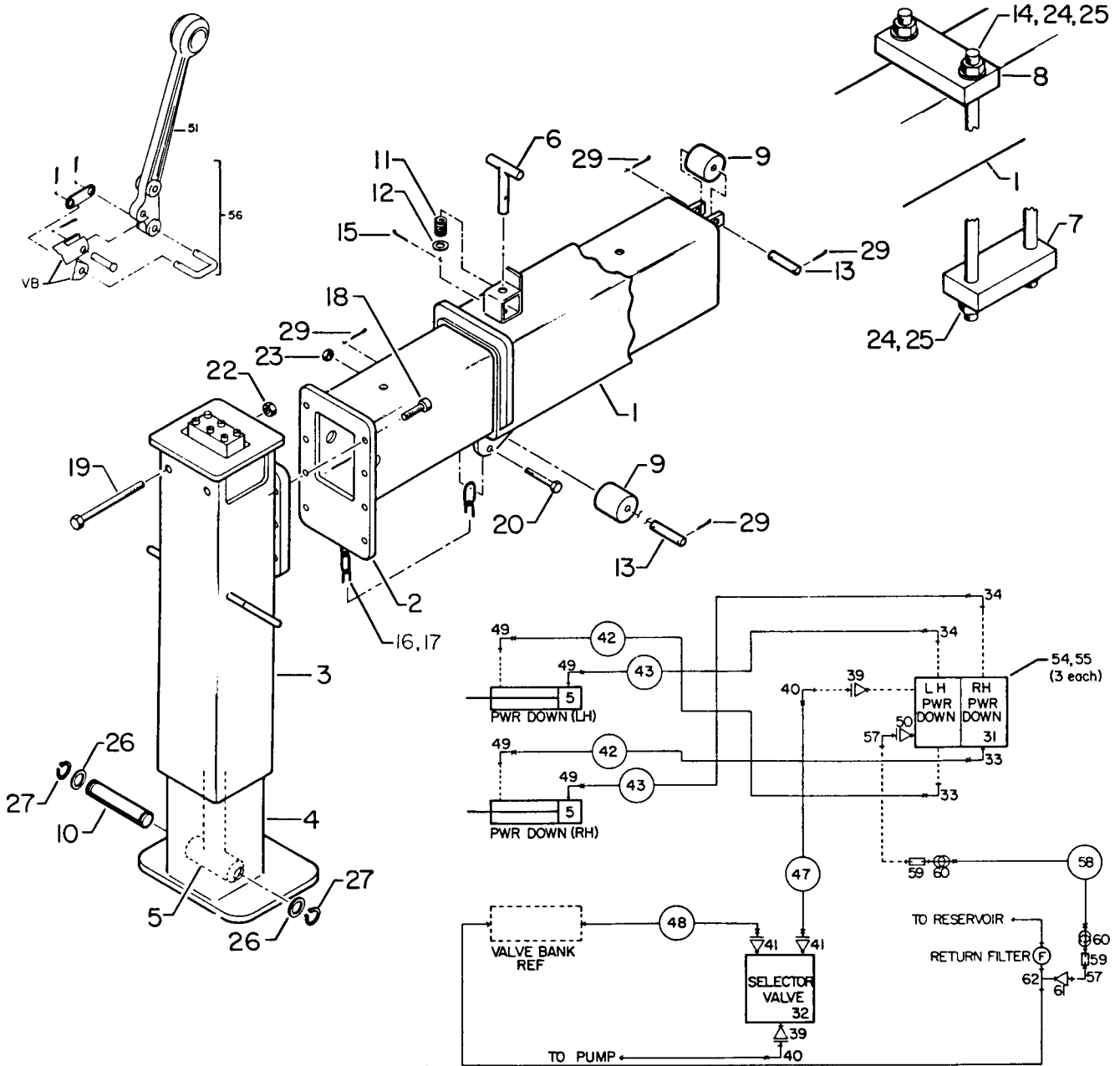
ITEM	PART NO.	DESCRIPTION	QTY STD	QTY HIGH
1.	52704109	HOUSING	1	1
2.	52701065	ARM	2	2
3.	52704867	SLEEVE	2	2
4.	52704868	LEG-STD	2	
	52705730	LEG-HIGH FRAME		2
5.	3B166820	PWR DOWN CYLINDER	2	2
6.	52070138	T-PIN	2	2
7.	60010354	CLAMP PLATE	4	4
8.	60106716	CLAMP PLATE	4	4
9.	60030053	ROLLER	4	4
10.	60106968	PIN CYL/LEG	2	2
11.	60010351	SPRING	2	2
12.	72063007	WASHER 5/8 WRT	2	2
13.	60106314	PIN ARM/ROLLER	4	4
14.	71014053	TIE-DOWN STUD 1-8X26	8	8
15.	72066185	COTTER PIN .16X1	2	2
16.	60106718	CHAIN	2	2
17.	70058060	COLD SHUT LINK	2	2
18.	72060795	CAP SCR 1/2-13X1-1/2 SH	12	12
19.	72060102	CAP SCR 1/2-13X5-1/2 HH GR5	4	4
20.	72060053	CAP SCR 3/8-16X2-3/4 HH GR5	2	2
21.	70392566	DECAL-SELECTOR VALVE	1	1
22.	72062107	NUT 1/2-13 CTR LOCK	4	4
23.	72062103	NUT 3/8-16 LOCK	2	2
24.	72062141	NUT 1-8 LOCK	16	16
25.	72063066	WASHER 1" HI-STRENGTH	16	16
26.	72063034	MACH BUSHING 1X10GA	4	4
27.	72066125	RETAINING RING 1" HD	4	4
29.	72066178	COTTER PIN .12X1	8	8
31.	51703620	VALVEBANK 2-SECT	1	1
32.	73054420	SELECTOR VALVE	1	1
33.	72532666	ELBOW 3/4MSTR 3/4MJICXLG 90°	2	2
34.	72053763	ELBOW 3/4MSTR 3/4MJIC 90°	2	2
36.	71392257	DECAL-CTRL SS	1	1
37.	70392864	DECAL-DANGER STD CLR	2	2
38.	70392867	DECAL-DANGER OR. MOVING	1	1
39.	72532669	ADAPTER 7/8MJIC 3/4MJIC	2	2
40.	72532668	ELBOW 1-1/16MSTR 7/8MJIC 90°	2	2
41.	72532360	ADAPTER 1-1/16MSTR 3/4MJIC	2	2
42.	51703032	HOSE ASM 3/8X66	2	2
43.	51703253	HOSE ASM 3/8X108	2	2
47.	51703931	HOSE ASM 1/2X312	1	1
48.	51703347	HOSE ASM 1/2X20	1	1
49.	72532779	ELBOW 9/16MSTR 3/4MJIC XLG	4	4
50.	72053747	ADAPTER 1-1/16MSTR 3/4FPT	1	1
51.	73014848	VALVE HANDLE	2	2
54.	72062109	NUT 5/16-18 LOCK	3	3
55.	72060033	CAP SCR 5/16X3 HH GR5	3	3
56.	94731839	LINK & PIN KIT	2	2
57.	72053556	STREET ELBOW 3/4NPT 90°	2	2
58.	60035170	HOSE 3/4X240	1	1
59.	72531548	BARB NIPPLE 3/4MPT 3/4BARB	2	2
60.	72066000	HOSE CLAMP #12	2	2
61.	72531836	REDUCER BUSHING 1-1/4X3/4	1	1
62.	72531994	STREET TEE 1-1/4NPT	1	1

CRANES USED ON:
31704124
7025
4300/680
5200/780
5800/880
7200/1080
9000/1295
9800/1495
18000/2595
425
7415
12916
31705727
4300/680
5200/780
5800/880
7200/1080
9000/1295
9800/1495
18000/2595
425
7415
12916

DECAL PLACEMENT	
ITEM	LOCATION
37	ONE ON EACH OUTRIGGER
38	AT OR NEAR THE NORMAL OPERATING STATION
36	AT PWR DOWN CTRL HANDLES
21	AT SELECTOR VALVE

SEE FOLLOWING PAGE FOR DRAWING

FIGURE B-12.AUX OUTRIGGER-MNL OUT/PWR DN (31704124 & 31705727)



SEE PREVIOUS PAGE FOR PARTS LIST

FIGURE B-12A. AUX OUTRIGGER-MNL OUT/PWR DN (31704124 & 31705727)

1.	3B205010	CYLINDER-PWR DN	2	24.	72060101	CAP SCR 1/2-13X5 HHGR5	1
2.	51394917	HOSE ASM 1/2X137 FF	1	25.	72066582	CLAMP (SEE NOTE)	2
3.	51395552	HOSE ASM 1/4X135 FF	2	26.	72532358	ADAPTER #8MSTR #8MJIC	1
4.	51394954	HOSE ASM 1/4X57 FF	2	27.	72532364	ADAPTER #8MSTR #12MJIC	1
5.	51714812	VALVEBANK 3-SECT (INCL 40)	1	28.	72532657	TEE 3/4JIC SWVL NUT RUN	1
6.	51395538	HOSE ASM 1/4X36 FJ	2				
7.	71411797	CYLINDER-PWR OUT (WAS 3B142860)	1	29.	72532658	ELBOW #8MJIC #8FJIC SW	2
8.	52705725	ARM-ADJUSTABLE	1	30.	72532690	ELBOW #4MJIC #4FJIC SW	6
9.	52705726	ARM-STATIONARY	1	35.	72532972	ADAPTER #8MJIC #12FJIC	1
10.	51396281	HOSE ASM 1/4X107 FF	2	36.	72533024	UNION-BULKHD #4JIC	2
11.	72661473	PIN	1	37.	76391511	DECAL-STABILIZER	1
12.	71392277	DECAL-PWR OUT	1	38.	89034049	SPIRAL WRAP (SEE NOTE)	4'
13.	72053758	ELBOW #4MSTR #4MJIC 90°	2	39.	99900644	MANUAL-OUTRIGGER	1
15.	72060025	CAP SCR 5/16-18X1 HHGR5	3	40.	51731580	HANDLE(INCL:41-48,PART OF 5)	2REF
16.	72061760	CAP SCR 1/2-13X7 HHGR8	1	41.	70142648	PIVOT-LEVER (PART OF 40)	2REF
17.	72060155	CAP SCR 5/8-11X3-1/2 HHGR5	4	42.	70142650	LEVER SUPPORT (PART OF 40)	2REF
18.	72060833	SCR 5/16-18X3/4 THRDCTG (SEE NOTE)	2	43.	70142651	LEVER-CTRL (PART OF 40)	2REF
19.	72062080	NUT 1/2-13 LOCK	2	44.	71392269	KNOB (PART OF 40)	2REF
20.	72062091	NUT 5/8-11 LOCK	4	45.	72062021	NUT 5/16-18 HEX (PART OF 40)	2REF
21.	72063002	WASHER 5/16 WRT	5	46.	72062024	NUT 1/2-13 HEX (PART OF 40)	2REF
22.	72063005	WASHER 1/2 WRT	2	47.	72066162	COTTER PIN (PART OF 40)	4REF
23.	72532351	ADAPTER #4MSTR #4MJIC	2	48.	72661204	CLEVIS PIN (PART OF 40)	4REF
				50.	72533567	ELBOW #4MSTR #4MJIC XLG	2

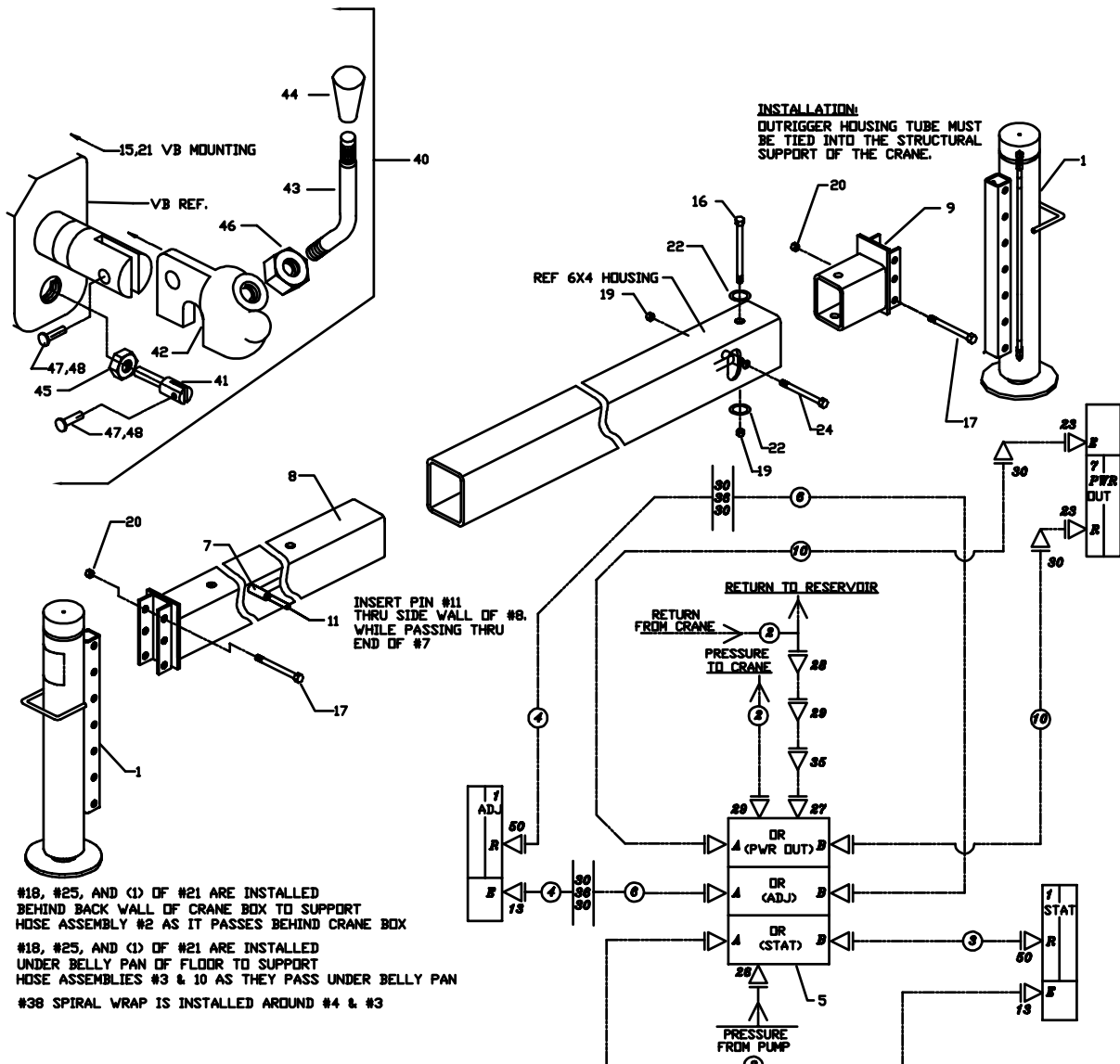


FIGURE B-13A. OUTRIGGER KIT-PWR OUT/PWR DN 6X4 (31706425) (EFF 10-17-02)

- | | | | | | |
|--------------|------------------------------------|---|--------------|------------------------------|------|
| 1. 3B205010 | CYLINDER-PWR DN | 2 | 25. 72066582 | CLAMP (SEE NOTE) | 2 |
| 2. 51703871 | HOSE ASM 1/2X134 FF | 1 | 26. 72532358 | ADAPTER #8MSTR #8MJIC | 1 |
| 3. 51705364 | HOSE ASM 1/4X128 FF | 2 | 27. 72532365 | ADAPTER #10MSTR #12MJIC | 1 |
| 4. 51705365 | HOSE ASM 1/4X56 FF | 2 | 28. 72532657 | TEE 3/4JIC SWVLNUTRUN | 1 |
| 5. 51705984 | VALVEBANK 3-SECT (PART OF40) | 1 | 29. 72532658 | ELBOW #8MJIC #8FJIC SW | 2 |
| 6. 51706152 | HOSE ASM 1/4X36 FF | 2 | 30. 72532690 | ELBOW #4MJIC #4FJIC SW | 6 |
| 7. 3B142860 | CYLINDER-PWR OUT | 1 | 31. 72532699 | ELBOW #6MSTR #4MJIC 90° | 3 |
| 8. 52705725 | ARM-ADJUSTABLE | 1 | 32. 72532700 | ELBOW #6MSTR #6MJIC 90° XLG | 3 |
| 9. 52705726 | ARM-STATIONARY | 1 | 33. 72532707 | ADAPTER #4MJIC #6FJIC | 3 |
| 10. 51707597 | HOSE ASM 1/4X105 FF | 2 | 34. 72532722 | ADAPTER #10MSTR #6FSTR | 6 |
| 11. 72661473 | PIN | 1 | 35. 72532972 | ADAPTER #8MJIC #12FJIC | 1 |
| 12. 71392277 | DECAL-PWR OUT | 1 | 36. 72533024 | UNION-BULKHD #4JIC | 2 |
| 13. 72053758 | ELBOW #4MSTR #4MJIC 90° | 2 | 37. 76391511 | DECAL-STABILIZER | 1 |
| 14. 72053764 | ELBOW #10MSTR #8MJIC 90° | 1 | 38. 89034049 | SPIRAL WRAP (SEE NOTE) | 4' |
| 15. 72060025 | CAP SCR 5/16-18X1 HHGR5 | 3 | 39. 99900644 | MANUAL-OUTRIGGER | 1 |
| 16. 72061760 | CAP SCR 1/2-13X7 HHGR8 | 1 | 40. 51731580 | HANDLE(INCL:41-48,PART OF 5) | 2REF |
| 17. 72060155 | CAP SCR 5/8-11X3-1/2 HHGR5 | 4 | 41. 70142648 | PIVOT-LEVER (PART OF 40) | 2REF |
| 18. 72060833 | SCR 5/16-18X3/4 THRDCTG (SEE NOTE) | 2 | 42. 70142650 | LEVER SUPPORT (PART OF 40) | 2REF |
| 19. 72062080 | NUT 1/2-13 LOCK | 2 | 43. 70142651 | LEVER-CTRL (PART OF 40) | 2REF |
| 20. 72062091 | NUT 5/8-11 LOCK | 4 | 44. 71392269 | KOB (PART OF 40) | 2REF |
| 21. 72063002 | WASHER 5/16 WRT | 5 | 45. 72062021 | NUT 5/16-18 HEX (PART OF 40) | 2REF |
| 22. 72063005 | WASHER 1/2 WRT | 2 | 46. 72062024 | NUT 1/2-13 HEX (PART OF 40) | 2REF |
| 23. 72532351 | ADAPTER #4MSTR #4MJIC | 2 | 47. 72066162 | COTTER PIN (PART OF 40) | 4REF |
| 24. 72060101 | CAP SCR 1/2-13X5 HHGR5 | 1 | 48. 72661204 | CLEVIS PIN (PART OF 40) | 4REF |
| | | | 49. 51703604 | HOSE ASM 3/8X138 FF | 1 |
| | | | 50. 72533567 | ELBOW #4MSTR #4MJIC XLG | 2 |

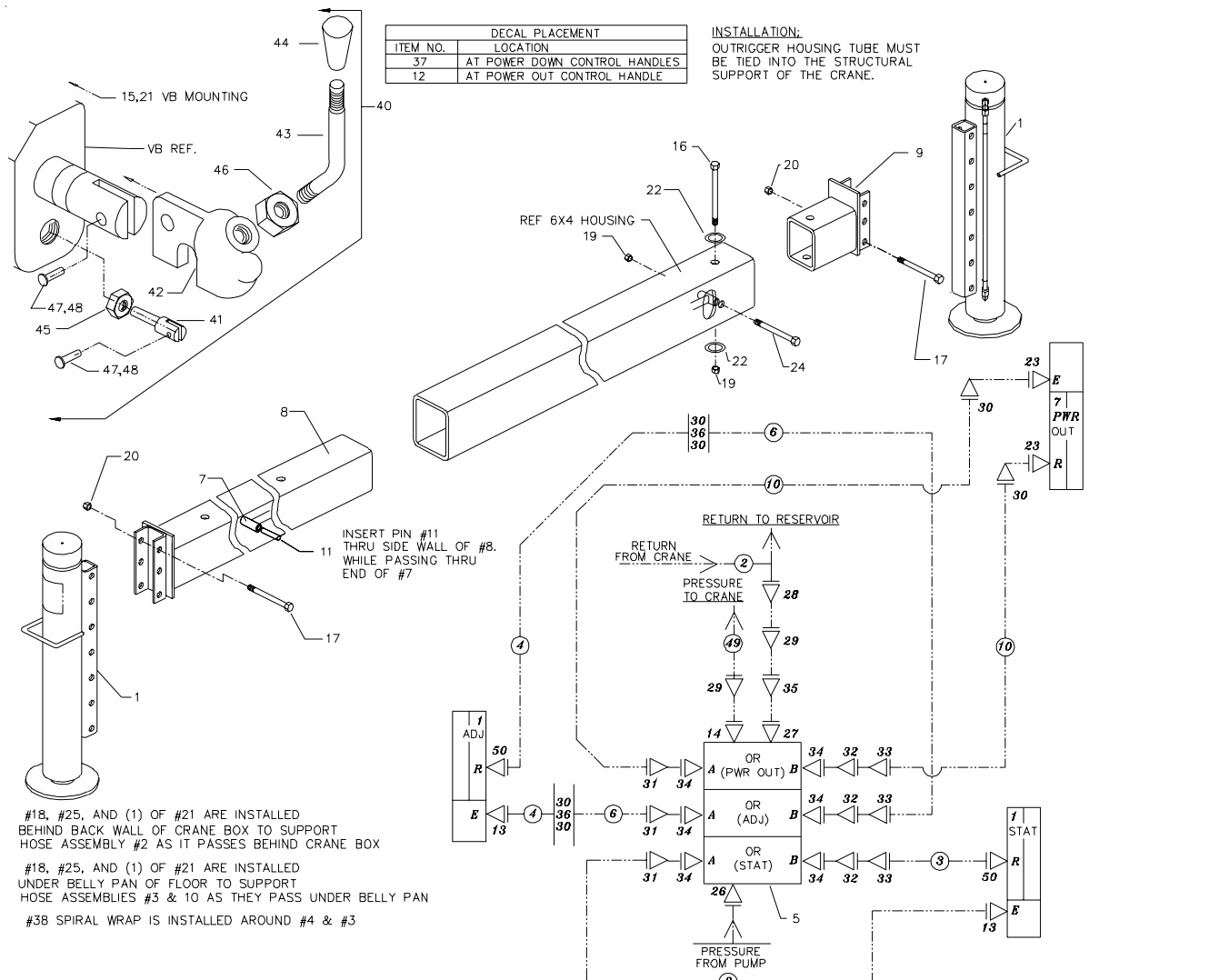


FIGURE B-13B. OUTRIGGER KIT-PWR OUT/PWR DN 6X4 (31706425) (THRU 10-16-02)

1.	3B205010	PWR DN CYLINDER	2	27.	72532365	ADPTR #10 MSTR #12MJIC	1
2.	51395431	HOSE ASM 1/2X98 FJ	1	28.	72532657	TEE, SWIVEL NUT RUN JIC 3/4	1
3.	51395552	HOSE ASM 1/4X135 FJ	2	29.	72532658	ELBOW #8MJIC #8FJIC SW	2
4.	51396280	HOSE ASM 1/4X96 FJ	2	30.	51396282	JOSE-FF 3/4X51 OAL (12-12)	1
5.	51714813	VALVEBANK 2-SECT (INCL:40)	1	35.	72532972	ADPTR #8MJIC #12FJIC	1
7.	52070138	PIN WELDMENT	1	37.	76391511	DECAL-UP & DN STAB R&L	1
8.	52705725	ADJUSTABLE ARM	1	38.	89034049	SPIRAL WRAP, BLACK	4'
9.	52705726	STATIONARY ARM	1	39.	99900644	MANUAL, AUX. OUTRIGGERS	1
10.	60010351	SPRING	1	40.	51731580	HANDLE ASM (INCL 34-41)	2REF
11.	51396184	HOSE ASM 1/2X159 FF	1	41.	70142648	PIVOT-LEVER	2REF
12.	52703334	HOUSING, OUTRIGGER	1	42.	70142650	LEVER SPT	2REF
13.	72053758	ELBOW #4MSTR #4MJIC 90°	2	43.	70142651	LEVER, CONTROL HANDLE	2REF
14.	72053764	ELBOW #10MSTR #8MJIC 90°	1	44.	71392269	KNOB, CTRL HNDL	2REF
15.	72060025	CAP SCR 5/16-18X1 HHGR5Z	3	45.	72062021	NUT 5/16-18 HEX JAM	2REF
16.	72601760	CAP SCR 1/2-13X7 HHGR8	1	46.	72062024	NUT 1/2-13 HEX JAM	2REF
17.	72060155	CAP SCR 5/8-11X3-1/2 HHGR5	4	47.	72066162	COTTER PIN	4REF
18.	72060833	SCR-THD CUT 5/16-18X3/4 HWH	2	48.	72661204	CLEVIS PIN	4REF
19.	72062080	NUT 1/5-13 NYLOC	1	49.	70392864	DECAL, DANGER OR	2
20.	72062091	NUT 5/8-11 HEX NYLOC	4	50.	70392867	DECAL, DANGER MOV OR	1
21.	72063002	WASHER 5/16 FLAT	5	51.	71392257	DECAL, OR PD SS	1
22.	72063005	WASHER 1/2 FLAT	2	52.	71392277	DECAL, OR PO	1
23.	72063027	MACHY BUSHING 5/8X14 GA NR	2	53.	72533567	ELBOW #4MSTR #4MJIC XLG	2
24.	72066185	COTTER PIN .16X1	1				
25.	72066582	CLAMP UMP20	2				
26.	72532358	ADPTR #8MSTR #8MJIC	1				

INSTALLATION NOTE

OUTRIGGER HOUSING TUBE MUST BE TIED INTO THE STRUCTURAL SUPPORT OF THE CRANE.

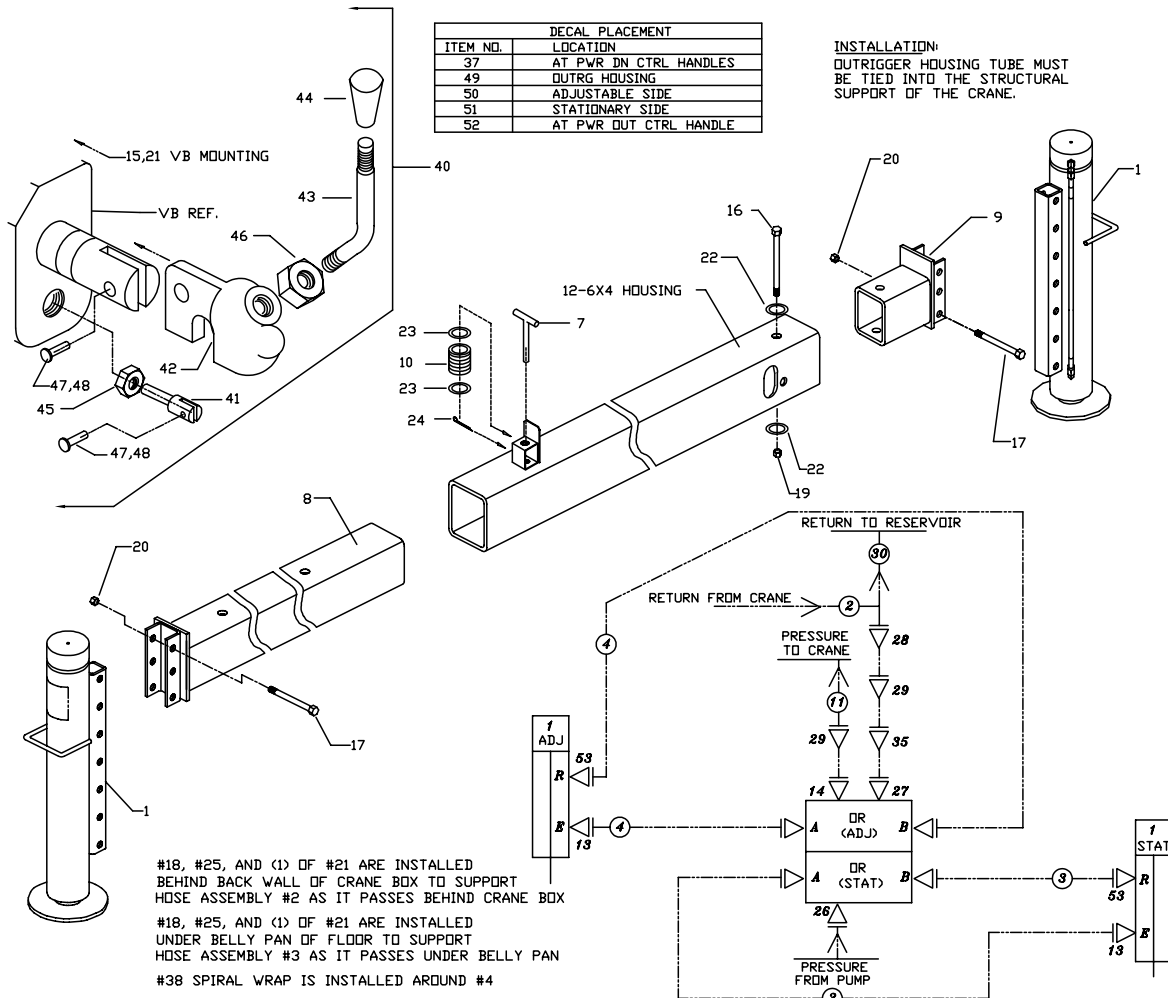


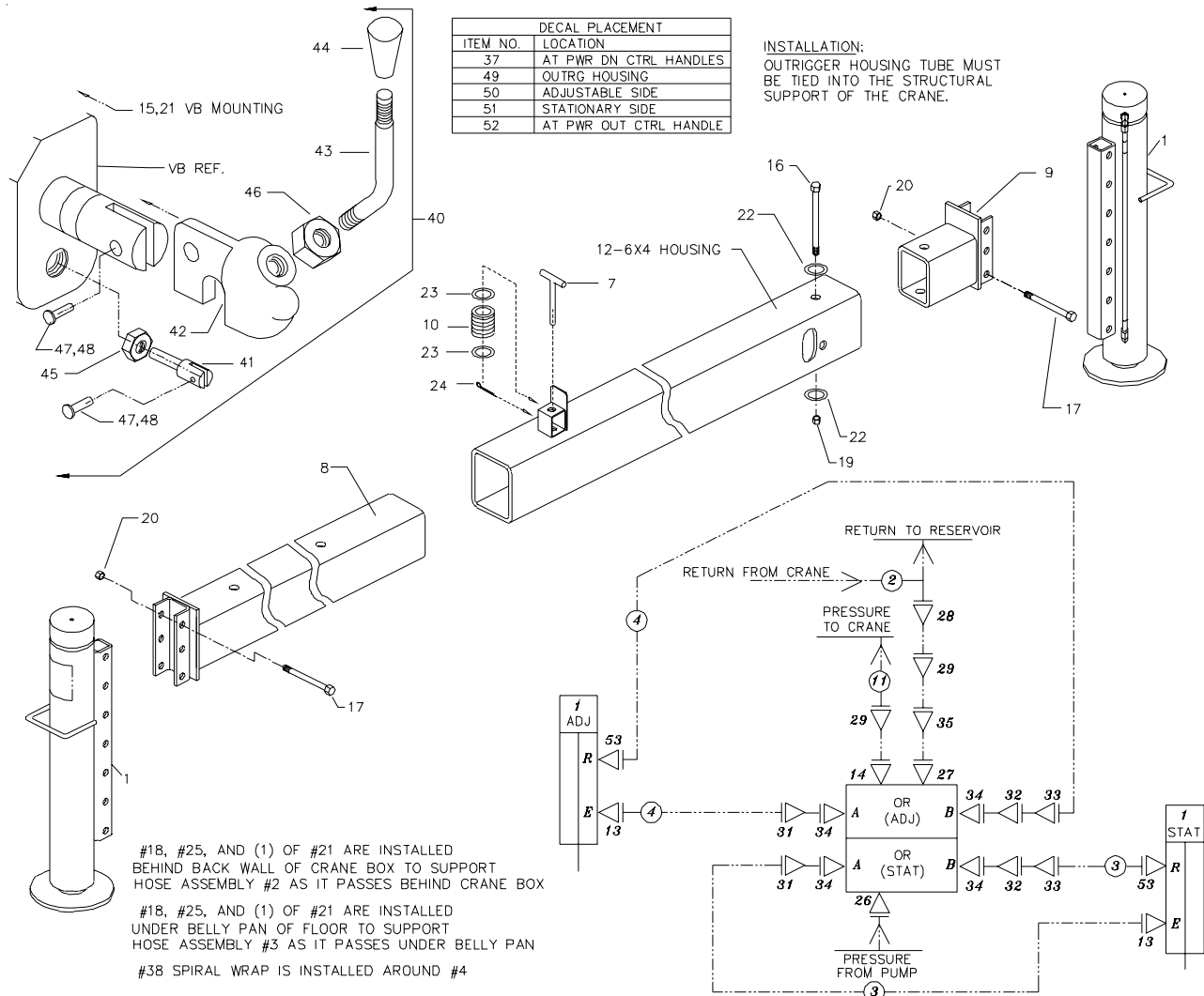
FIGURE B14-1. AUX OUTRIGGER-MNL OUT/PWR DN 6X4 (31710966) (EFF 9-03 - VB 51714813)

- 1. 3B205010 PWR DN CYLINDER 2
- 2. 51703596 HOSE ASM 1/4X120 FF 2
- 3. 51705191 HOSE ASM 1/4X96 2
- 4. 51705377 HOSE ASM 3/8X48 FF 1
- 5. 51705983 VALVEBANK 2-SECT (INCL:42) 1
- 6. 52070138 T-PIN 1
- 7. 52705725 ADJUSTABLE ARM 1
- 8. 52705726 STATIONARY ARM 1
- 9. 52703334 HOUSING 1
- 10. 60010351 SPRING 1
- 11. 72532358 ADAPTER #8MSTR #8MJIC 1
- 12. 72532365 ADAPTER #10MSTR #12MJIC 1
- 13. 72053758 ELBOW #4MSTR #4MJIC 90° 4
- 14. 72532699 ELBOW #6MSTR #4MJIC 90° 2
- 16. 72061760 CAP SCR 1/2-13X7 HHGR8 1
- 17. 72060155 CAP SCR 5/8-11X3-1/2 HHGR5 6
- 18. 72062080 NUT 1/2-13 LOCK 1
- 19. 72062091 NUT 5/8-11 LOCK 6
- 22. 72063007 WASHER 5/8 WRT 1
- 23. 72066185 COTTER PIN .16X1 1
- 24. 72066185 COTTER PIN 1
- 25. 72532722 ADAPTER #10MSTR #6FSTR 4

- 28. 72532700 ELBOW #6MSTR #6MJIC XLG 90° 2
- 29. 72532707 ADAPTER #4MJIC #6FJIC 2
- 30. 72053764 ELBOW #10MSTR #8MJIC 90° 1
- 31. 70392864 DECAL-DANGER STAND CLEAR 2
- 32. 70392867 DECAL-DANGER MOVING 1
- 33. 71392257 DECAL-PWR DN SS 1
- 34. 70142648 LEVER PIVOT (PART OF 42) 2REF
- 35. 70142650 LEVER SUPPORT (PART OF 42) 2REF
- 36. 70142651 CTRL LEVER (PART OF 42) 2REF
- 37. 71392269 KNOB (PART OF 42) 2REF
- 38. 72062021 NUT 5/16-18 HEX JAM (PART OF 42) 2REF
- 39. 72062024 NUT 1/2-13 HEX JAM (PART OF 42) 2REF
- 40. 72066162 COTTER PIN .06X1 (PART OF 42) 4REF
- 41. 72661204 CLEVIS PIN (PART OF 42) 4REF
- 42. 51731580 HANDLE ASM (INCL:34-41,PART OF 5) 2REF
- 43. 70392864 DECAL-DANGER STD CLR 2

INSTALLATION NOTE

OUTRIGGER HOUSING TUBE MUST BE TIED INTO THE STRUCTURAL SUPPORT OF THE CRANE.



**FIGURE B14-2. AUX OUTRIGGER-MNL OUT/PWR DN 6X4 (31710966)
(THRU 9-03 - VB 51705983)**

000AUXOR:99900644: 19940601

2-19

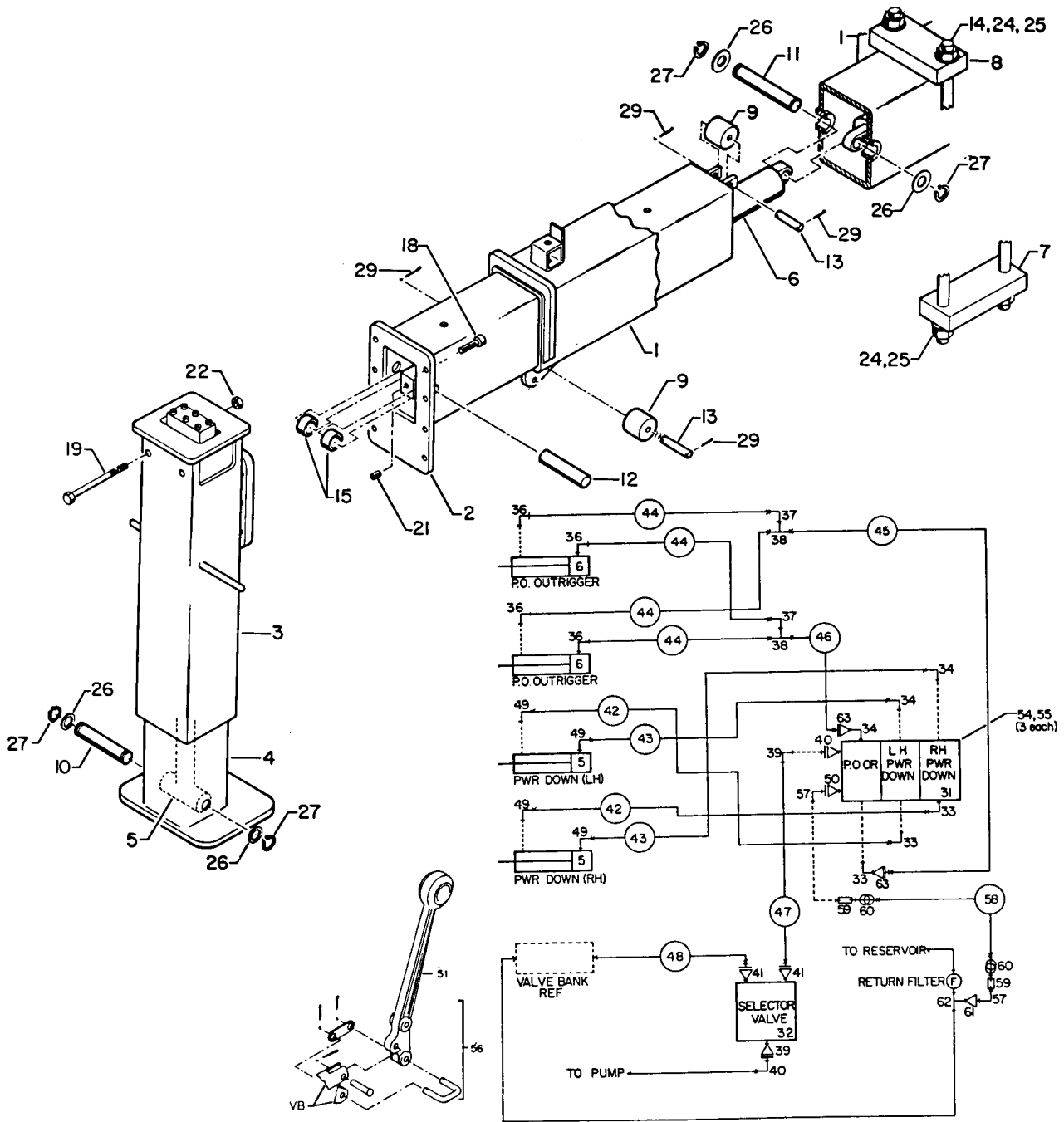
ITEM	PART NO.	DESCRIPTION	QTY	QTY
			STD	HIGH
			31704123	31705728
1.	52704109	HOUSING	1	1
2.	52701065	ARM	2	2
3.	52704867	SLEEVE	2	2
4.	52704868	LEG-STD	2	
	52705730	LEG-HIGH FRAME		2
5.	3B166820	PWR DOWN CYLINDER	2	2
6.	3B210522	PWR OUT CYLINDER	2	2
7.	60010354	CLAMP PLATE	4	4
8.	60106716	CLAMP PLATE	4	4
9.	60030053	ROLLER	4	4
10.	60106968	PIN CYL/LEG	2	2
11.	60013202	PIN CYL/HSG	1	1
12.	60106281	PIN CYL/ARM	2	2
13.	60106314	PIN ARM/ROLLER	4	4
14.	71014053	TIE-DOWN STUD 1-8X26	8	8
15.	60106380	SPACER	4	4
16.	70392566	DECAL-SELECTOR VALVE	1	1
18.	72060795	CAP SCR 1/2-13X1-1/2 SH	12	12
19.	72060102	CAP SCR 1/2-13X5-1/2 HH GR5	4	4
21.	72060581	SET SCR 3/8-16X3/4 SH	2	2
22.	72062107	NUT 1/2-13 CTR LOCK	4	4
24.	72062141	NUT 1-8 LOCK	16	16
25.	72063066	WASHER 1" HI-STRENGTH	16	16
26.	72063034	MACH BUSHING 1X10GA	6	6
27.	72066125	RETAINING RING 1" HD	6	6
28.	71392277	DECAL-PWR OUT	1	1
29.	72066178	COTTER PIN .12X1	8	8
30.	71392257	DECAL-PWR DN	1	1
31.	51703619	VALVEBANK 3-SECT	1	1
32.	73054420	SELECTOR VALVE	1	1
33.	72532666	ELBOW 3/4MSTR 3/4MJICXLG 90°	3	3
34.	72053763	ELBOW 3/4MSTR 3/4MJIC 90°	3	3
36.	72532351	ADAPTER 7/16MSTR 7/16MJIC	4	4
37.	72532690	ELBOW 7/16MJIC 7/16FJIC SWVL	2	2
38.	72532768	TEE 7/16MJIC	2	2
39.	72532669	ADAPTER 7/8MJIC 3/4MJIC	2	2
40.	72532668	ELBOW 1-1/16MSTR 7/8MJIC 90°	2	2
41.	72532360	ADAPTER 1-1/16MSTR 3/4MJIC	2	2
42.	51703032	HOSE ASM 3/8X66	2	2
43.	51703253	HOSE ASM 3/8X108	2	2
44.	51704022	HOSE ASM 1/4X13	4	4
45.	51703591	HOSE ASM 1/4X20	1	1
46.	51703590	HOSE ASM 1/4X23	1	1
47.	51703931	HOSE ASM 1/2X312	1	1
48.	51703347	HOSE ASM 1/2X20	1	1
49.	72532779	ELBOW 9/16MSTR 3/4MJIC XLG	4	4
50.	72053747	ADAPTER 1-1/16MSTR 3/4FPT	1	1
51.	73014848	VALVE HANDLE	3	3
52.	70392864	DECAL-DANGER STD CLR	2	2
53.	70392867	DECAL-DANGER OR. MOVING	1	1
54.	72062109	NUT 5/16-18 LOCK	3	3
55.	72060033	CAP SCR 5/16X3 HH GR5	3	3
56.	94731839	LINK & PIN KIT	3	3
57.	72053556	STREET ELBOW 3/4NPT 90°	2	2
58.	60035170	HOSE 3/4X240	1	1
59.	72531548	BARB NIPPLE 3/4MPT 3/4BARB	2	2
60.	72066000	HOSE CLAMP #12	2	2
61.	72531836	REDUCER BUSHING 1-1/4X3/4	1	1
62.	72531994	STREET TEE 1-1/4NPT	1	1
63.	72532665	ADAPTER 7/16MJIC 3/4FJIC	2	2

CRANES
USED ON:
31704123
7025
4300/680
5200/780
5800/880
7200/1080
9000/1295
9800/1495
18000/2595
425
7415
12916
31705728
4300/680
5200/780
5800/880
7200/1080
9000/1295
9800/1495
18000/2595
425
7415
12916

DECAL PLACEMENT	
ITEM	LOCATION
52	ONE ON EACH OUTRIGGER
53	AT OR NEAR THE NORMAL OPERATING STATION
30	AT PWR DOWN CTRL HANDLES
28	AT PWR OUT CTRL HANDLE
16	AT SELECTOR VALVE

SEE FOLLOWING PAGE FOR DRAWING

FIGURE B-15. AUX OUTRIGGER-PWR OUT/PWR DN (31704123 & 31705728)



SEE PREVIOUS PAGE FOR PARTS LIST

FIGURE B-15A. AUX OUTRIGGER-PWR OUT/PWR DN (31704123 & 31705728)

<p>CRANES USED ON: 32018 32030</p>

ITEM	PART NO.	DESCRIPTION	QTY
1.	3B020860	PWR DN CYLINDER	2
2.	3B148860	PWR OUT CYLINDER	2
3.	52706375	ARM	2
4.	52706385	ARM HOUSING	1
5.	52706388	LEG	2
6.	52706396	HOUSING	2
7.	60030067	WEAR PAD	2
8.	60030085	WEAR PAD	2
9.	60105321	PIN	2
10.	60107648	HOSE CLAMP	2
11.	60109500	PIN	2
12.	60109501	PIN	2
13.	60109593	PIN	2
14.	60109594	LEG HSG COVER	2
15.	60109595	ARM HSG COVER	2
16.	60109606	MTG ANGLE-REAR	2
17.	60109687	MTG ANGLE-FRONT	2
18.	72060002	CAP SCR 1/4-20X3/4 HH GR5	16
19.	70392864	DECAL-DANGER STD CLR	2
20.	72060186	CAP SCR 3/4-10X2-1/2 HH GR5	16
21.	72060816	CAP SCR 5/8-11X2-1/2 SH	16
22.	72062091	NUT 5/8-11 LOCK	16
23.	72062103	NUT 3/8-16 LOCK	2
24.	72062114	NUT 3/4-10 LOCK	16
25.	72063001	WASHER 1/4 WRT	16
26.	72063034	MACH BUSHING 1X10GA NR	8
27.	72063037	MACH BUSHING 1-1/2X10GA NR	8
28.	72063049	WASHER 1/4 LOCK	16
29.	72066125	RETAINING RING 1" EXT HD	8
30.	72066132	RETAINING RING 1-1/2 EXT HD	8

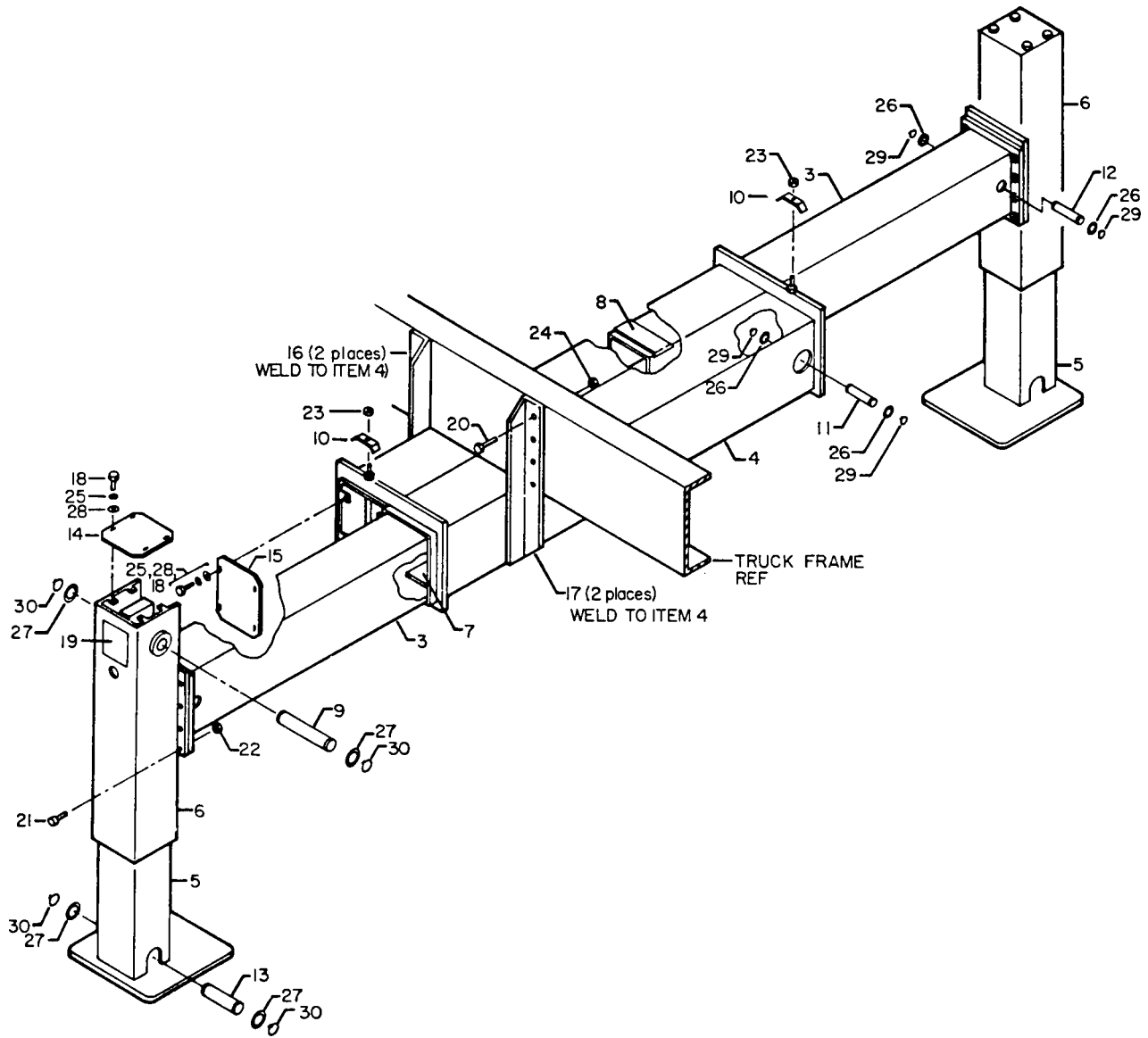
DECAL PLACEMENT	
ITEM	LOCATION
19	ONE ON EACH OUTRIGGER

NOTES:

- ALL WELDING TO BE PER AWS D14.3.

SEE FOLLOWING PAGE FOR DRAWING

FIGURE B-16. AUX OUTRIGGER-PWR OUT/PWR DN (31706397)



SEE PREVIOUS PAGE FOR PARTS LIST

FIGURE B-16A. AUX OUTRIGGER-PWR OUT/PWR DN (31706397)

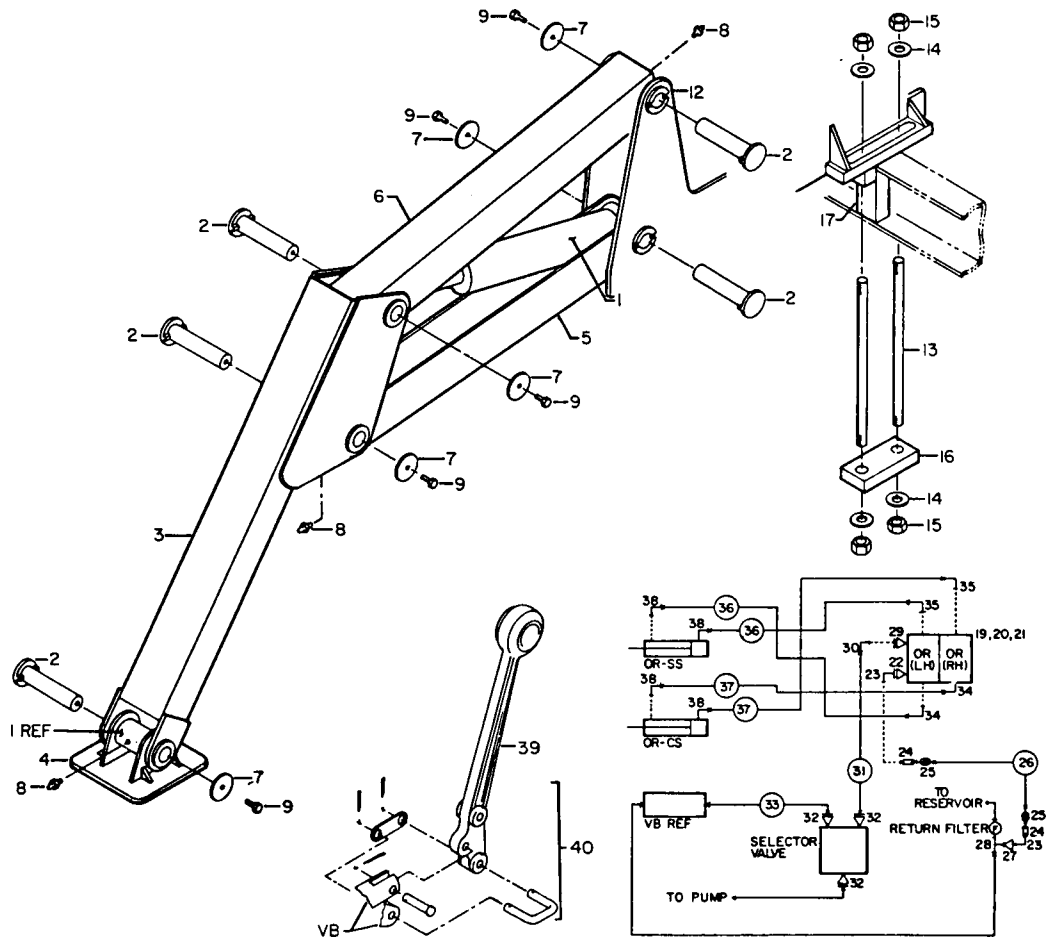
<p>CRANES USED ON: 9800</p>
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ITEM	PART NO.	DESCRIPTION	QTY
1.	3C285851	HYDRAULIC CYLINDER	2
2.	52705810	PIN	10
3.	52705793	LEG	2
4.	52705795	PAD	2
5.	52705796	BOTTOM LINK	2
6.	52705797	TOP LINK	2
7.	60106333	PIN RETAINER PLATE 2-1/2	10
8.	72053508	ZERK 1/8NPT	6
9.	72060147	CAP SCR 5/8-11X1 HH GR5	10
10.	7BF81215	BUSHING (PART OF 5 & 6)	16REF
11.	7BF81215	BUSHING (PART OF 4)	8REF
12.	52707883	OUTRIGGER FRAME	1
13.	71411789	STUD-TIE DOWN 1.25-7 X 24.00 (WAS 71014054)	8
14.	72063067	WASHER 1-1/4 HIGH STRENGTH	16
15.	72062142	NUT 1 1/4-7 STL INSERT GR5	16
16.	60128960	CLAMP PLATE (WAS 60010665)	4
17.	52706660	SUPPORT	4
19.	51703620	VALVEBANK 2-SECT	1
20.	72062109	NUT 5/16-18 LOCK	3
21.	72060033	CAP SCR 5/16-18X3 HH GR5	3
22.	72053747	ADAPTER 1-1/16MSTR 3/4FPT	1
23.	72053556	STREET ELBOW 3/4NPT 90°	2
24.	72531548	BARB NIPPLE 3/4NPT 3/4BARB	2
25.	72066000	HOSE CLAMP #12	2
26.	60035170	HOSE 3/4X240	1
27.	72531836	REDUCER BUSHING 1-1/4 3/4	1
28.	72531994	STREET TEE 1-1/4NPT	1
29.	72532668	ELBOW 1-1/16MSTR 7/8MJIC 90°	1
30.	72532669	ADAPTER 3/4MJIC 7/8FJIC	1
31.	51703931	HOSE ASM 1/2X312	1
32.	72532360	ADAPTER 1-1/16MSTR 3/4MJIC	3
33.	51703347	HOSE ASM 1/2X20	1
34.	72532666	ELBOW 3/4MSTR 3/4MJIC XLG 90°	2
35.	72053763	ELBOW 3/4MSTR 3/4MJIC 90°	2
36.	51703032	HOSE ASM 3/8X66	2
37.	51703253	HOSE ASM 3/8X108	2
38.	72532358	ADAPTER 3/4MSTR 3/4MJIC	4
39.	73014848	VALVE HANDLE	2
40.	94731839	LINK & PIN KIT	2
41.	70392864	DECAL-DANGER STD CLR	2
42.	70392867	DECAL-DANGER OR. MOVING	1
43.	71392257	DECAL-PWR DN CTRL SS	1

DECAL PLACEMENT	
ITEM	LOCATION
41	ONE ON EACH OUTRIGGER
42	AT OR NEAR THE NORMAL OPERATING STATION
43	AT PWR DOWN CTRL HANDLES

SEE FOLLOWING PAGE FOR DRAWING

FIGURE B-17. AUX SPIDER LEG OUTRIGGERS (31707896)



SEE PREVIOUS PAGE FOR PARTS LIST

FIGURE B-17A. AUX SPIDER LEG OUTRIGGERS (31707896)

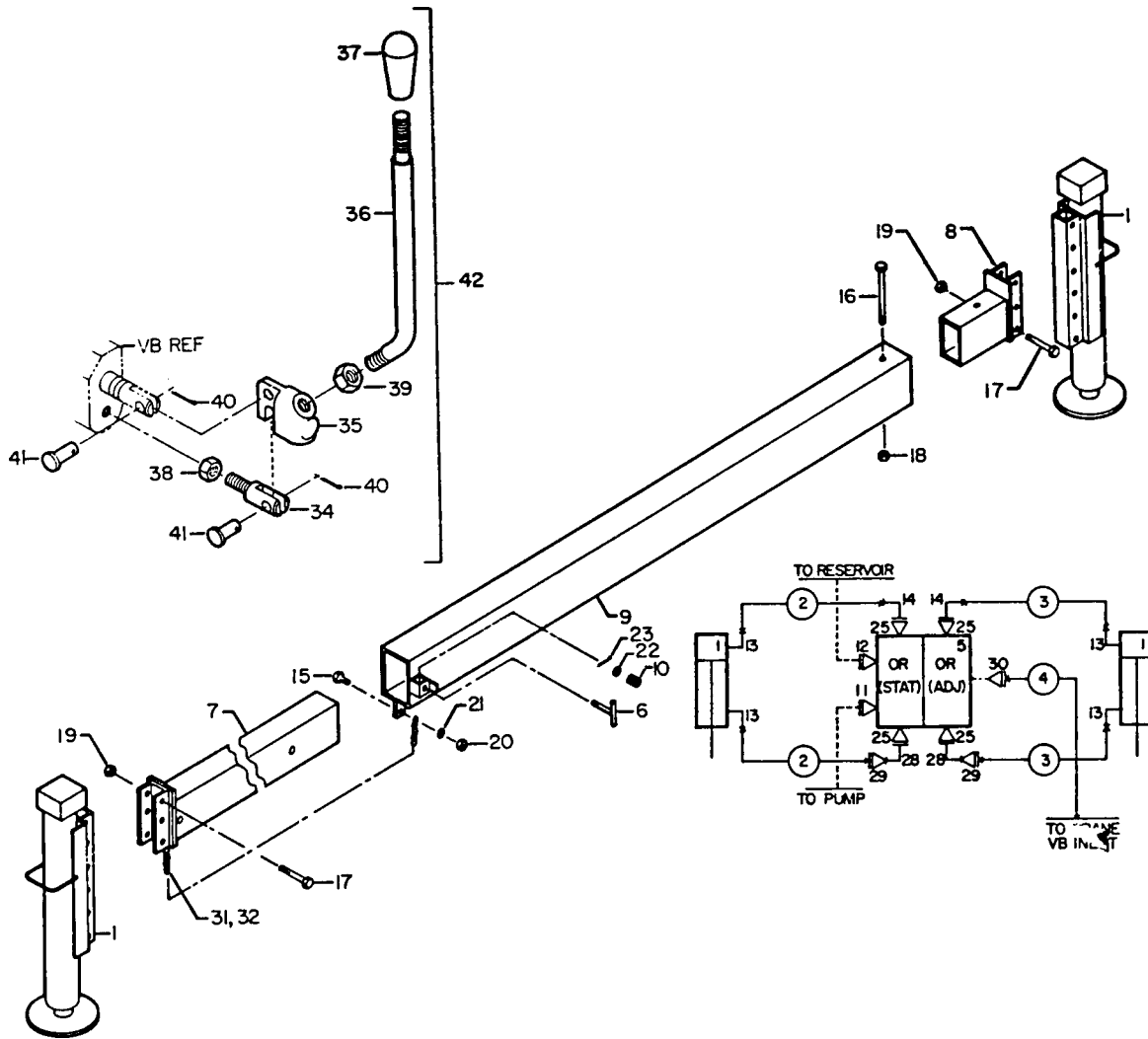
<p>CRANES USED ON: 320H</p>
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ITEM	PART NO.	DESCRIPTION	QTY
1.	3B288970	PWR DN CYLINDER (WAS 3B048870)	2
2.	51703596	HOSE ASM 1/4X120	2
3.	51705191	HOSE ASM 1/4X96	2
4.	51705377	HOSE ASM 3/8X48	1
5.	51705983	VALVEBANK 2-SECT (INCL:42)	1
6.	52070138	T-PIN	1
7.	52708411	ADJUSTABLE ARM	1
8.	52705726	STATIONARY ARM	1
9.	52708410	HOUSING	1
10.	60010351	SPRING	1
11.	72532358	ADAPTER 3/4MSTR 3/4MJIC	1
12.	72532365	ADAPTER 7/8MSTR 1-1/16MJIC	1
13.	72053758	ELBOW 7/16MSTR 7/16MJIC 90°	4
14.	72532699	ELBOW 9/16MSTR 7/16MJIC 90°	2
15.	72060026	CAP SCR 5/16-18X1-1/4 HH GR5	1
16.	72060105	CAP SCR 1/2-13X7 HH GR5	1
17.	72060155	CAP SCR 5/8-11X3-1/2 HH GR5	6
18.	72062080	NUT 1/2-13 LOCK	1
19.	72062091	NUT 5/8-11 LOCK	6
20.	72062109	NUT 5/16-18 LOCK	1
21.	72063002	WASHER 5/16 WRT	1
22.	72063007	WASHER 5/8 WRT	1
23.	72066185	COTTER PIN .16X1	1
25.	72532722	ADAPTER 7/8MSTR 9/16FSTR	4
26.	70392864	DECAL-DANGER STD CLR	2
27.	70392867	DECAL-DANGER OR. MOVING	1
28.	72532700	ELBOW 9/16MSTR 9/16MJICXLG 90°	2
29.	72532707	ADAPTER 7/16MJIC 9/16FJIC	2
30.	72053764	ELBOW 7/8MSTR 3/4MJIC 90°	1
31.	60108745	CHAIN	1
32.	70058060	COLD SHUT LINK	1
33.	71392257	DECAL-PWR DN SS	1
34.	70142648	LEVER PIVOT(PART OF 42)	2REF
35.	70142650	LEVER SUPPORT (PART OF 42)	2REF
36.	70142651	CTRL LEVER (PART OF 42)	2REF
37.	71392269	KNOB (PART OF 42)	2REF
38.	72062021	NUT 5/16-18 HEX JAM(PART OF 42)	2REF
39.	72062024	NUT 1/2-13 HEX JAM(PART OF 42)	2REF
40.	72066162	COTTER PIN .06X1 (PART OF 42)	4REF
41.	72661204	CLEVIS PIN (PART OF 42)	4REF
42.	51731580	HANDLE ASM(INCL:34-41,PART OF 5)	2REF

DECAL PLACEMENT	
ITEM	LOCATION
26	ONE ON EACH OUTRIGGER
27	AT OR NEAR THE NORMAL OPERATING STATION
33	AT POWER DOWN CONTROLS

SEE FOLLOWING PAGE FOR DRAWING

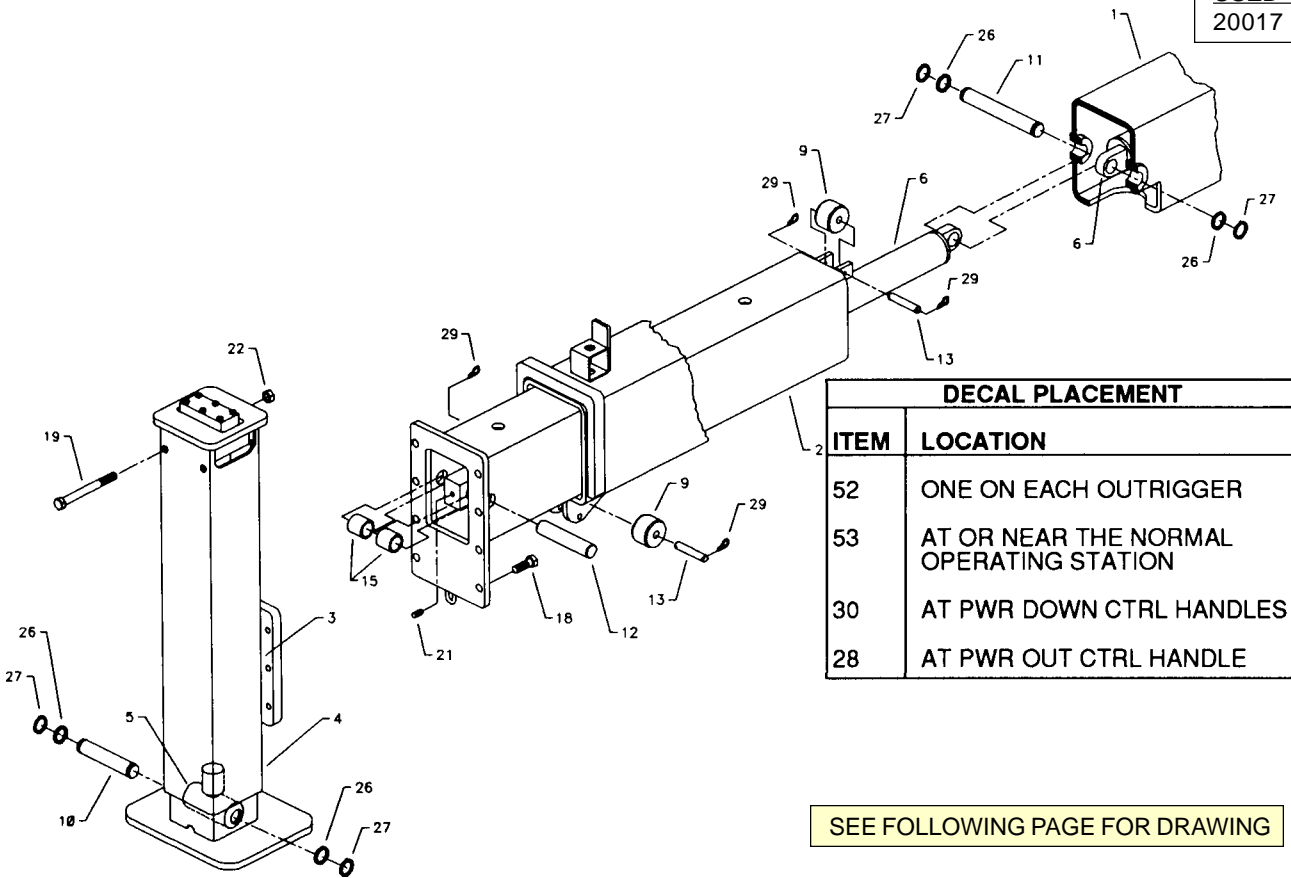
FIGURE B-18. AUX OUTRIGGER-MNL OUT/PWR DN (31708412)



SEE PREVIOUS PAGE FOR PARTS LIST

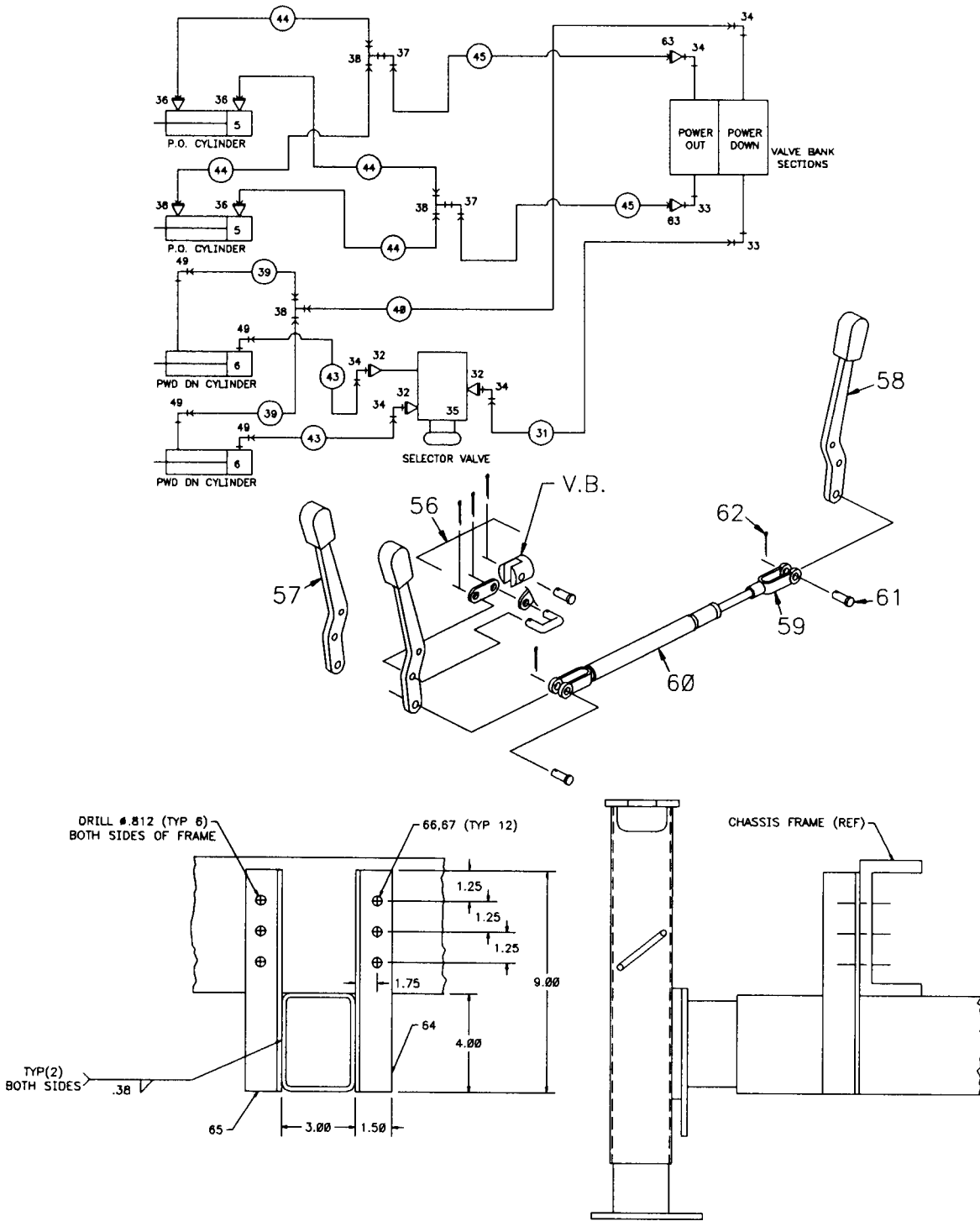
FIGURE B-18A. AUX OUTRIGGER-MNL OUT/PWR DN (31708412)

**CRANES
USED ON:
20017**



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1.	52704109	HOUSING	1	34.	72053763	ELBOW #8MSTR #8MJIC	5
2.	52701065	ARM	2	35.	73054420	SELECTOR VALVE	1
3.	52710122	SLEEVE	2	36.	72532351	ADAPTER #4MSTR #4MJIC	4
4.	52704868	LEG	2	37.	72532690	ELBOW #4MJIC #4FJIC SW	2
5.	3B166820	PWR DN CYLINDER	2	38.	72532768	TEE #4MJIC	2
6.	3B210522	PWR OUT CYLINDER	2	39.	51703602	HOSE ASM 3/8X96 FF	2
9.	60030053	ROLLER	4	40.	51703608	HOSE ASM 3/8X270	1
10.	60106968	PIN CYL/LEG	2	43.	51703938	HOSE ASM 3/8X336	2
11.	60103202	PIN CYL/HSG	1	44.	51704022	HOSE ASM 1/4X13	4
12.	60106281	PIN CYL/ARM	2	45.	51708886	HOSE ASM 1/4X286	2
13.	60106314	PIN ARM/ROLLER	4	49.	72532779	ELBOW #6MSTR #8MJIC XLG	4
15.	60106380	SPACER	4	52.	70392864	DECAL-DANGER STD CLR	2
18.	72060795	CAP SCR 1/2-13X1-1/2 SH	12	53.	70392867	DECAL-DANGER OR. MOVING	1
19.	72060102	CAP SCR 1/2-13X5-1/2 HHGR5	4	56.	94731839	LINK & PIN KIT	2
21.	72060581	SET SCR 3/8-16X3/4 SH	2	57.	70141983	CONTROL HANDLE-SHORT	2
22.	72062107	NUT 1/2-13 CTR LOCK	4	58.	70141985	CONTROL HANDLE-SHORT DVB	2
26.	72063034	MACH BUSHING 1X10GA	6	59.	52702018	CONTROL ROD - M	2
27.	72066125	RETAINING RING 1" HD	6	60.	52702016	CONTROL ROD - F	2
28.	71392277	DECAL-PWR OUT	2	61.	72066338	CLEVIS PIN	4
29.	72066178	COTTER PIN 1/8X1	8	62.	72066168	COTTER PIN .09X3/4	4
30.	71392257	DECAL-PWR DN SS	1	63.	72532665	ADAPTER #4MJIC #8FJIC	2
31.	51703729	HOSE ASM 3/8X24 FF	1	64.	60114701	ANGLE-MTG RH	2
32.	72531206	ADAPTER #10MSTR #8FSTR	3	65.	60114702	ANGLE-MTG LH	2
33.	72532666	ELBOW #8MSTR #8MJIC XLG	2	66.	72060186	CAP SCR 3/4-10X2-1/2 HHGR5	12
				67.	72062114	NUT 3/4-10 LOCK	12

FIGURE B-19. AUX OUTRIGGER -FRONT MNTD CRANE-PWR OUT/PWR DN (31712397)



SEE PREVIOUS PAGE FOR PARTS LIST

FIGURE B-19A. AUX OUTRIGGERS-FRT MNTD CRANE-PWR OUT/PWR DN (31712397)

**CRANES
USED ON:
20017**

ITEM	PART NO.	DESCRIPTION	QTY
1.	52704109	HOUSING	1
2.	52701065	ARM	2
3.	52704867	SLEEVE	2
4.	52704868	LEG	2
5.	3B166820	PWR DN CYLINDER	2
6.	3B210522	PWR OUT CYLINDER	2
7.	60010354	CLAMP PLATE	4
8.	60106716	CLAMP PLATE	4
9.	60030053	ROLLER	4
10.	60106968	PIN CYL/LEG	2
11.	60103202	PIN CYL/HSG	1
12.	60106281	PIN CYL/ARM	2
13.	60106314	PIN ARM/ROLLER	4
14.	71014053	TIE-DOWN STUD 1-8X26	8
15.	60106380	SPACER	4
16.	70392566	DECAL-SELECTOR VALVE	1
18.	72060795	CAP SCR 1/2-13X1-1/2 SH	12
19.	72060102	CAP SCR 1/2-13X5-1/2 HH GR5	4
21.	72060581	SET SCR 3/8-16X3/4 SH	2
22.	72062107	NUT 1/2-13 CTR LOCK	4
24.	72062141	NUT 1-8 LOCK	16
25.	72063066	WASHER 1" HIGH STRENGTH	16
26.	72063034	MACH BUSHING 1X10GA	6
27.	72066125	RETAINING RING 1" HD	6
28.	71392277	DECAL-PWR OUT	1
29.	72066178	COTTER PIN 1/8X1	8
30.	71392257	DECAL-PWR DN SS	1
33.	72532666	ELBOW 3/4MSTR 3/4MJIC XLG	3
34.	72053763	ELBOW 3/4MSTR 3/4MJIC	3
36.	72532351	ADAPTER 7/16MSTR 7/16MJIC	4
37.	72532690	ELBOW 7/16MJIC 7/16FJIC SW	2
38.	72532768	TEE 7/16MJIC	2
43.	51703938	HOSE ASM 3/8X336	4
44.	51704022	HOSE ASM 1/4X13	4
45.	51708886	HOSE ASM 1/4X286	2
49.	72532779	ELBOW 9/16MSTR 3/4MJIC XLG	4
52.	70392864	DECAL-DANGER STD CLR	2
53.	70392867	DECAL-DANGER OR. MOVING	1
56.	94731839	LINK & PIN KIT	3
57.	70141983	CONTROL HANDLE-SHORT	5
59.	52702018	CONTROL ROD - M	2
60.	52702016	CONTROL ROD - F	2
61.	72066338	CLEVIS PIN	4
62.	72066168	COTTER PIN .09X3/4	4
63.	72532665	ADAPTER 7/16MJIC 3/4FJIC	2

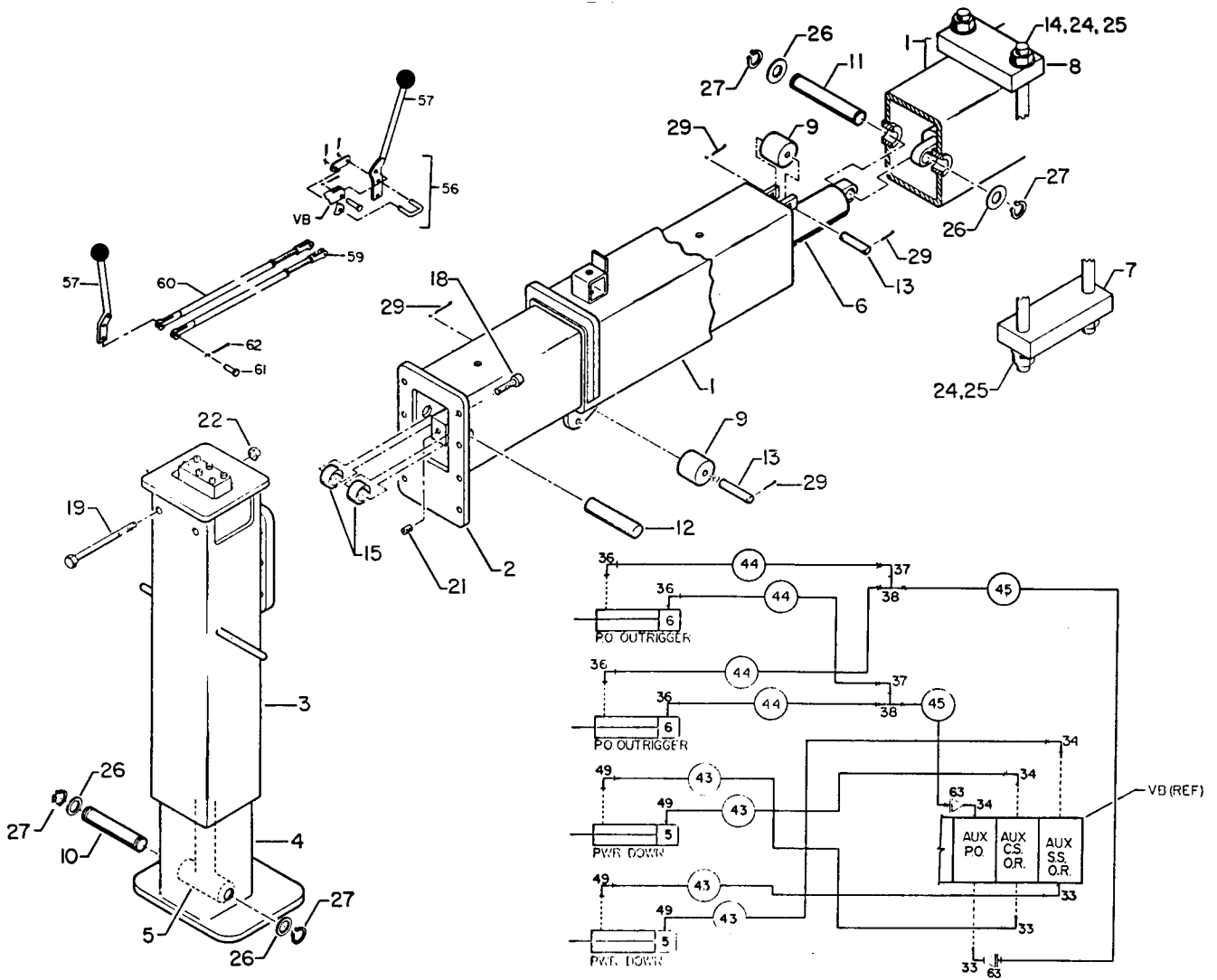
NOTES:

- AUXILIARY STREETSIDE OUTRIGGER DOES NOT GET CROSS CONTROL OR EXTRA HANDLE.
- AUXILIARY POWER DOWN CURSIDE OUTRIGGER HANDLE GETS CUT OFF AT VALVEBANK.

DECAL PLACEMENT	
ITEM	LOCATION
52	ONE ON EACH OUTRIGGER
53	AT OR NEAR THE NORMAL OPERATING STATION
30	AT PWR DOWN CTRL HANDLES
28	AT PWR OUT CTRL HANDLE

SEE FOLLOWING PAGE FOR DRAWING

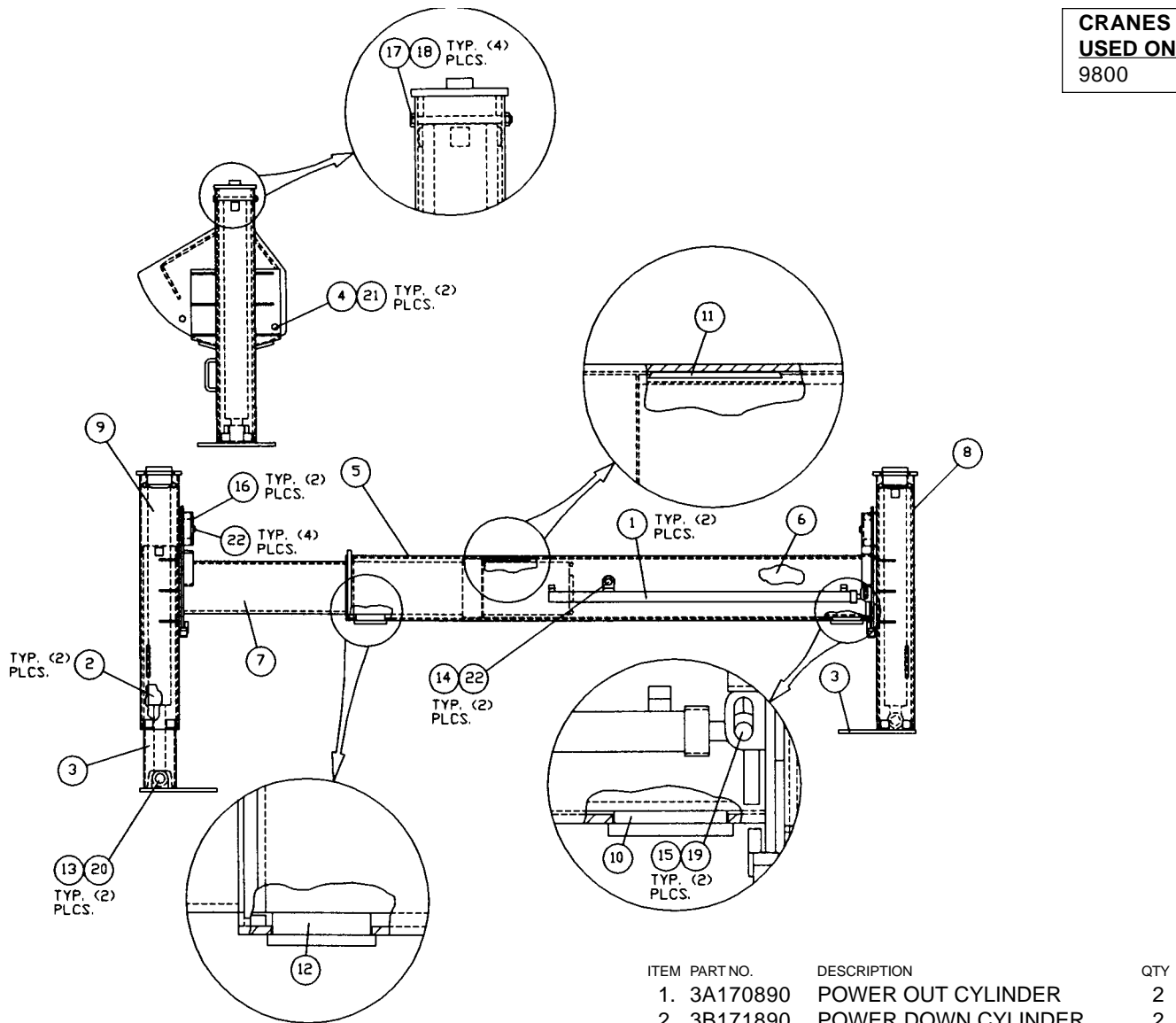
FIGURE B-20. AUX OUTRIGGERS-REAR MNTD CRANE-PWR OUT/PWR DN (31710600)



SEE PREVIOUS PAGE FOR PARTS LIST

FIGURE B-20A. AUX OUTRIGGERS-REAR MNTD CRANE-PWR OUT/PWR DN (31710600)

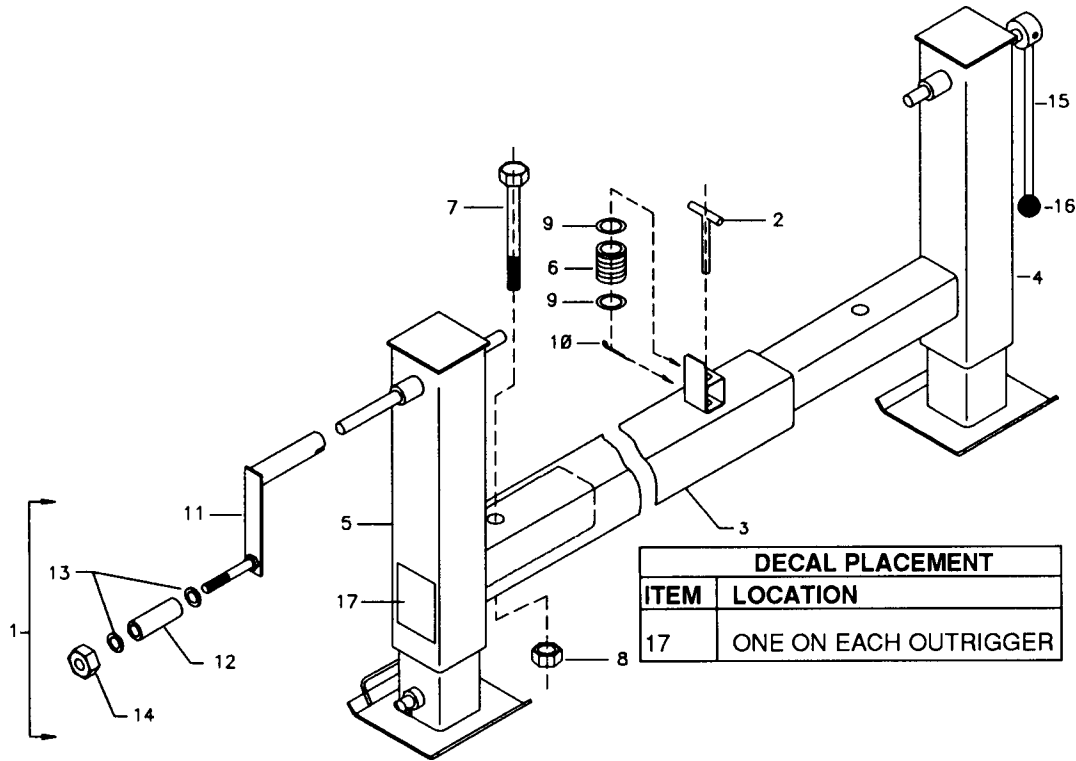
**CRANES
USED ON:
9800**



ITEM	PART NO.	DESCRIPTION	QTY
1.	3A170890	POWER OUT CYLINDER	2
2.	3B171890	POWER DOWN CYLINDER	2
3.	52709190	OUTRIGGER LEG	2
4.	52710038	PIN	2
5.	52710955	OUTRIGGER HOUSING	1
6.	52710956	OUTRIGGER ARM RH	1
7.	52710957	OUTRIGGER ARM LH	1
8.	52710958	OUTRIGGER HOUSING RH	1
9.	52710959	OUTRIGGER HOUSING LH	1
10.	60030119	WEAR PAD	1
11.	60030121	WEAR PAD	1
12.	60030149	WEAR PAD	1
13.	60104977	PIN	2
14.	60111343	PIN RETAINER PLATE 2-1/2"	2
15.	60112601	PIN	2
16.	60116363	PIN RETAINER PLATE 5"	2
17.	72060104	CAP SCR 1/2-13X6-1/2 HH GR5	4
18.	72062107	NUT 1/2-13 CTR LOCK	4
19.	72066123	RETAINING RING 3/4 EXT HD	4
20.	72066132	RETAINING RING 1-1/2 EXT HD	4
21.	72661367	QUICK RELEASE PIN W/CHAIN	2
22.	72060046	CAP SCR 3/8-16X1 HH GR5	6

FIGURE B-21. AUX OUTRIGGER-TRAILER MNT/SWING UP (31710963)

CRANES USED ON: 31711126	BODIES USED ON: 51707749
1014	9M900
2015	11M900
3016	DOM1

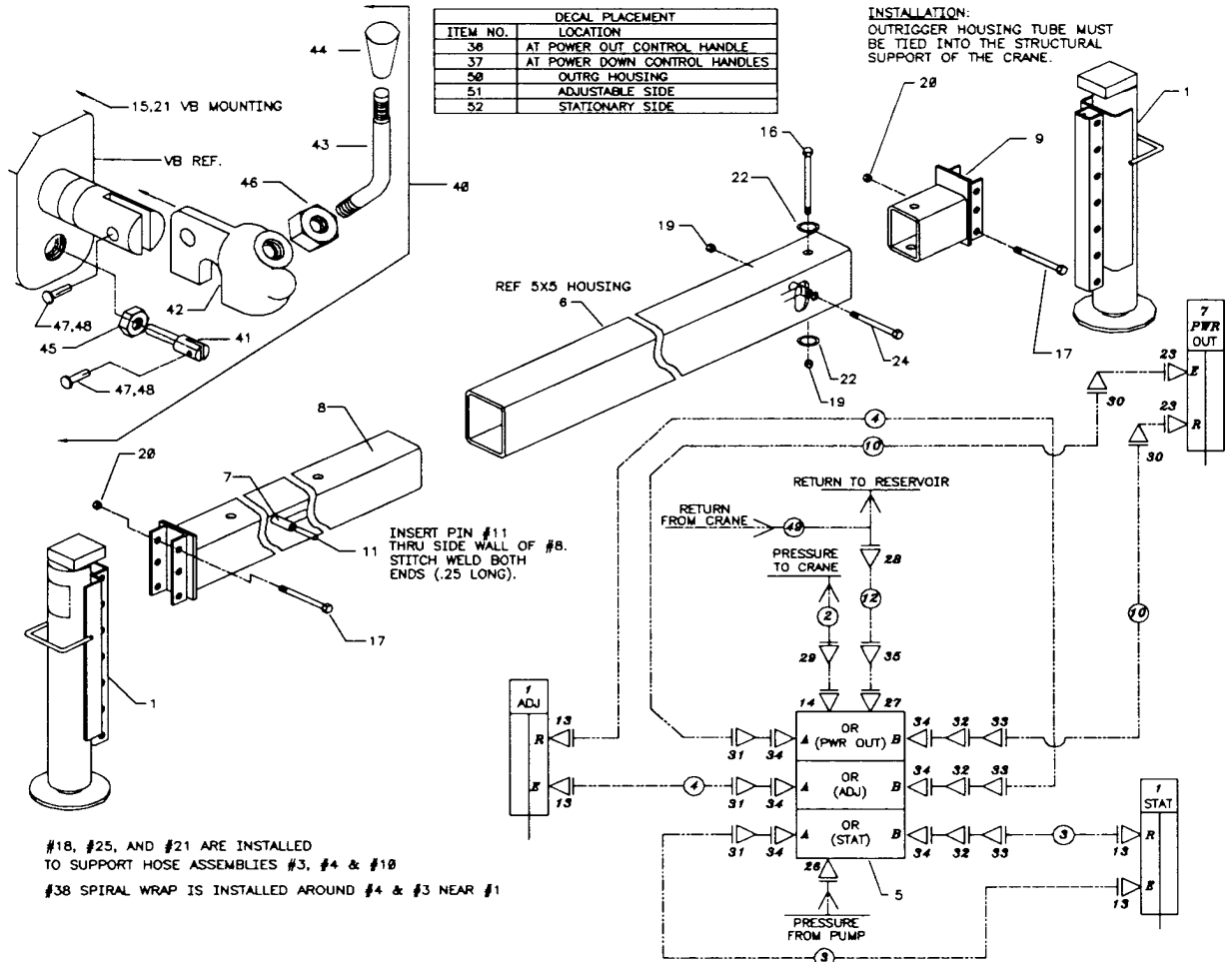


DECAL PLACEMENT	
ITEM	LOCATION
17	ONE ON EACH OUTRIGGER

ITEM	PART NO.	DESCRIPTION	QTY	QTY
1.	51705040	CRANK ASM (INCLUDES 11-14)	1	1
2.	52070138	T-PIN	1	1
3.	52704814	HOUSING	1	
		HOUSING		REF
4.	52712690	ARM-ADJUSTABLE	1	1
5.	52712691	ARM-STATIONARY	1	1
6.	60010351	SPRING	1	1
7.	72060104	CAP SCR 1/2-13X6-1/2 HHGR5	1	1
8.	72062080	NUT 1/2-13 HEX LOCK	1	1
9.	72063007	WASHER 5/8 WRT	2	2
10.	72066185	COTTER PIN 5/32X1	1	1
11.	52705039	CRANK (PART OF 1)	1REF	1REF
12.	60030099	ROLLER (PART OF 1)	1REF	1REF
13.	72063003	WASHER 3/8 WRT (PART OF 1)	2REF	2REF
14.	72062103	NUT 3/8-16 LOCK (PART OF 1)	1REF	1REF
15.	52703319	CRANK HANDLE	1	1
16.	71039096	CONTROL KNOB 1-1/2"	1	1
17.	70392864	DECAL-DANGER STAND CLEAR	2	2

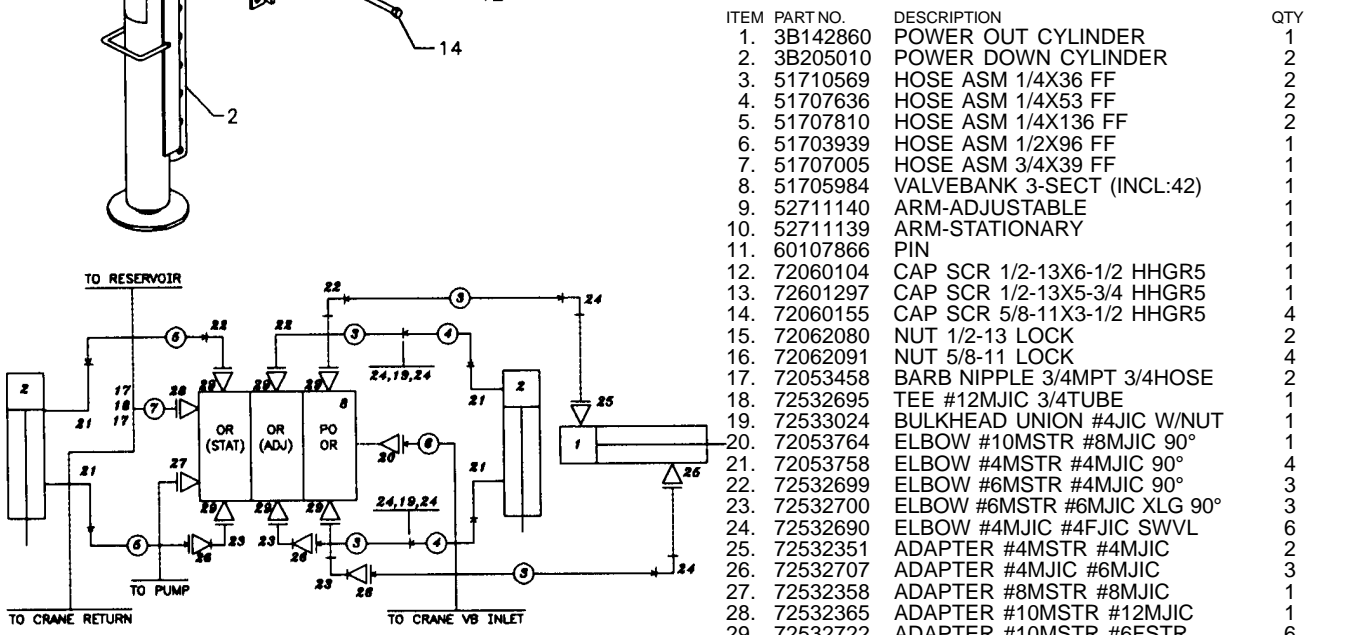
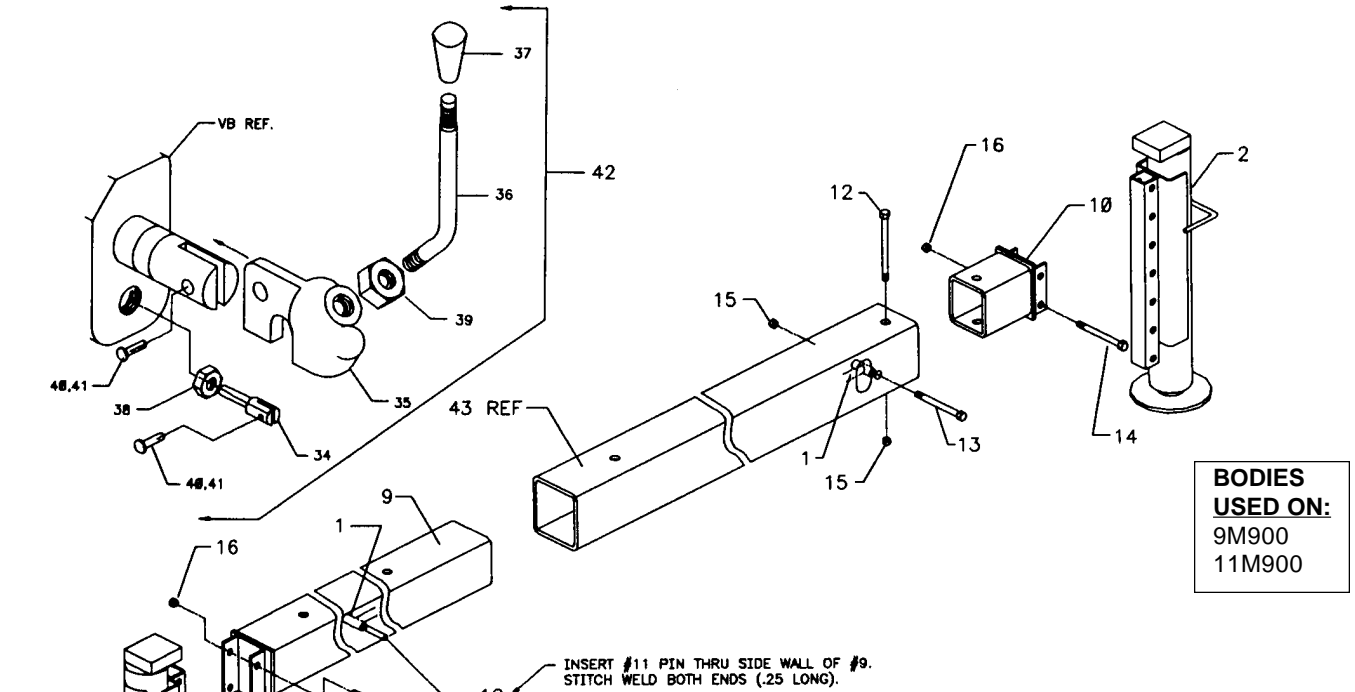
INSTALLATION NOTE:OUTRIGGER HOUSING TUBE MUST BE TIED INTO THE STRUCTURAL SUPPORT OF THE CRANE.

FIGURE B-22. AUX OUTRIGGER-MNL OUT/CRANK DN (31711126 & 51707749)



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1.	3B205010	CYLINDER-PWR DN	2	27.	72532365	ADAPTER #10MSTR #12MJIC	1
2.	51703604	HOSE ASM 3/8X134 FF	1	28.	72532769	TEE 9/16JIC 3/8TUBE	1
3.	51705364	HOSE ASM 1/4X128 FF	2	29.	72532658	ELBOW #8MJIC #8FJIC SW	1
4.	51705191	HOSE ASM 1/4X96 FF	2	30.	72532690	ELBOW #4MJIC #4FJIC SW	2
5.	51705984	VALVEBANK 3-SECT (INCL:40)	1	31.	72532699	ELBOW #6MSTR #4MJIC 90°	3
6.	60116643	TUBE	1	32.	72532700	ELBOW #6MSTR #6MJIC 90° XLG	3
7.	3B142860	CYLINDER-PWR OUT	1	33.	72532707	ADAPTER #4MJIC #6FJIC	3
8.	52711140	ARM-ADJUSTABLE	1	34.	72532722	ADAPTER #10MSTR #6FSTR	6
9.	52711139	ARM-STATIONARY	1	35.	72532696	ELBOW #12MJIC #12FJIC SW	1
10.	51707597	HOSE ASM 1/4X105 FF	2	36.	71392277	DECAL-PWR OUT	1
11.	60107866	PIN	1	37.	76391511	DECAL-STABILIZER	1
12.	51705062	HOSE ASM 1/2X48 FF	1	38.	89034049	SPIRAL WRAP	4'
13.	72053758	ELBOW #4MSTR #4MJIC 90°	4	39.	99900644	MANUAL-OUTRIGGER	1
14.	72053764	ELBOW #10MSTR #8MJIC 90°	1	40.	51731580	HANDLE (INCL:41-48,PART OF 5)	2REF
15.	72060025	CAP SCR 5/16-18X1 HHGR5	3	41.	70142648	PIVOT-LEVER (PART OF 40)	2REF
16.	72060104	CAP SCR 1/2-13X6-1/2 HHGR5	1	42.	70142650	LEVER SUPPORT (PART OF 40)	2REF
17.	72060155	CAP SCR 5/8-11X3-1/2 HHGR5	4	43.	70142651	LEVER-CTRL (PART OF 40)	2REF
18.	72060833	SCR 5/16-18X3/4 THRD CUTTING	2	44.	71392269	KOB (PART OF 40)	2REF
19.	72062080	NUT 1/2-13 LOCK	2	45.	72062021	NUT 5/16-18 HEXJAM (PART OF 40)	2REF
20.	72062091	NUT 5/8-11 LOCK	4	46.	72062024	NUT 1/2-13 HEXJAM (PART OF 40)	2REF
21.	72063002	WASHER 5/16 WRT	5	47.	72066162	COTTER PIN (PART OF 40)	4REF
22.	72063005	WASHER 1/2 WRT	2	48.	72661204	CLEVIS PIN (PART OF 40)	4REF
23.	72532351	ADAPTER #4MSTR #4MJIC	4	49.	51703939	HOSE ASM 1/2X96 FF	1
24.	72601297	CAP SCR 1/2-13X5-3/4 HHGR5	1	50.	70392864	DECAL-DGR STD CLEAR	2
25.	72066582	CLAMP	2	51.	70392867	DECAL-DGR OR MOVING	1
26.	72532358	ADAPTER #8MSTR #8MJIC	1	52.	71392257	DECAL-PWR DN CTRL	1

FIGURE B-23. AUX OUTRIGGERS-MNL OUT/PWR DN 5X5 (31711128)



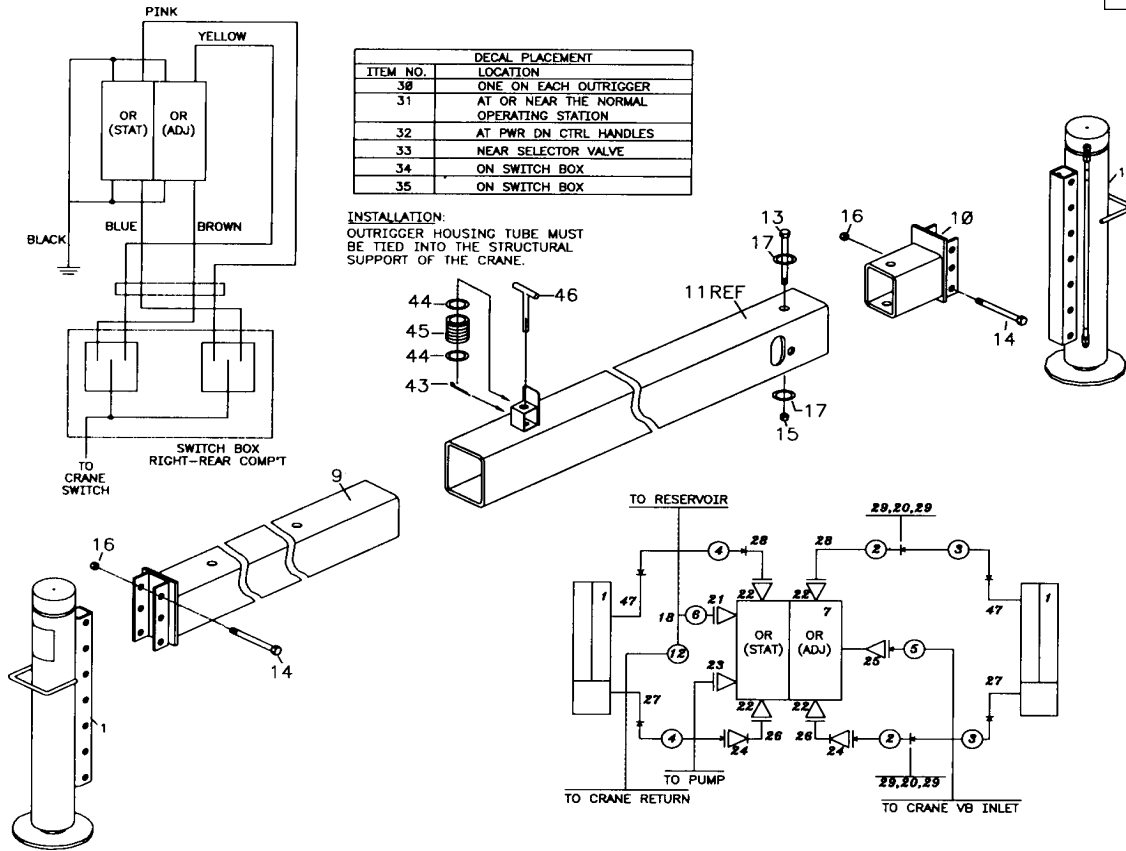
ITEM	PART NO.	DESCRIPTION	QTY
1.	3B142860	POWER OUT CYLINDER	1
2.	3B205010	POWER DOWN CYLINDER	2
3.	51710569	HOSE ASM 1/4X36 FF	2
4.	51707636	HOSE ASM 1/4X53 FF	2
5.	51707810	HOSE ASM 1/4X136 FF	2
6.	51703939	HOSE ASM 1/2X96 FF	1
7.	51707005	HOSE ASM 3/4X39 FF	1
8.	51705984	VALVEBANK 3-SECT (INCL:42)	1
9.	52711140	ARM-ADJUSTABLE	1
10.	52711139	ARM-STATIONARY	1
11.	60107866	PIN	1
12.	72060104	CAP SCR 1/2-13X6-1/2 HHGR5	1
13.	72601297	CAP SCR 1/2-13X5-3/4 HHGR5	1
14.	72060155	CAP SCR 5/8-11X3-1/2 HHGR5	4
15.	72062080	NUT 1/2-13 LOCK	2
16.	72062091	NUT 5/8-11 LOCK	4
17.	72053458	BARB NIPPLE 3/4MPT 3/4HOSE	2
18.	72532695	TEE #12MJIC 3/4TUBE	1
19.	72533024	BULKHEAD UNION #4JIC W/NUT	1
20.	72053764	ELBOW #10MSTR #8MJIC 90°	1
21.	72053758	ELBOW #4MSTR #4MJIC 90°	4
22.	72532699	ELBOW #6MSTR #4MJIC 90°	3
23.	72532700	ELBOW #6MSTR #6MJIC XLG 90°	3
24.	72532690	ELBOW #4MJIC #4FJIC SWVL	6
25.	72532351	ADAPTER #4MSTR #4MJIC	2
26.	72532707	ADAPTER #4MJIC #6MJIC	3
27.	72532358	ADAPTER #8MSTR #8MJIC	1
28.	72532365	ADAPTER #10MSTR #12MJIC	1
29.	72532722	ADAPTER #10MSTR #6FSTR	6
30.	70392864	DECAL-DANGER STAND CLEAR	2
31.	70392867	DECAL-DANGER OUTRGR MOVING	1
32.	71392277	DECAL-CONTROL PO	1
33.	71392257	DECAL-CONTROL PD SS	1
34.	70142648	LEVER PIVOT (PART OF 42)	3REF
35.	70142650	LEVER SUPPORT (PART OF 42)	3REF
36.	70142651	LEVER-CTRL HNDL(PART OF 42)	3REF
37.	71392269	KNOB (PART OF 42)	3REF
38.	72062021	NUT 5/16-18HEXJAM(PART OF 42)	2REF
39.	72062024	NUT 1/2-13HEXJAM(PART OF 42)	2REF
40.	72066162	COTTER PIN (PART OF 42)	4REF
41.	72661204	CLEVIS PIN (PART OF 42)	4REF
42.	51731580	HANDLE ASM(INCL:34-41,PART OF 5)	2REF
43.		OUTRIGGER HOUSING	1REF

DECAL PLACEMENT	
ITEM	LOCATION
30	ONE ON EACH OUTRIGGER
31	AT OR NEAR THE NORMAL OPERATING STATION
32	AT PWR OUT CTRL HANDLES AT SELECTOR VALVE
33	AT PWR DN CTRL HANDLES

INSTALLATION NOTE:OUTRIGGER HOUSING TUBE MUST BE TIED INTO THE STRUCTURAL SUPPORT OF THE CRANE.

FIGURE B-24. OUTRIGGER KIT-PWR OUT/PWR DN (31711146)

**BODIES
USED ON:**
DOM2
DOM3

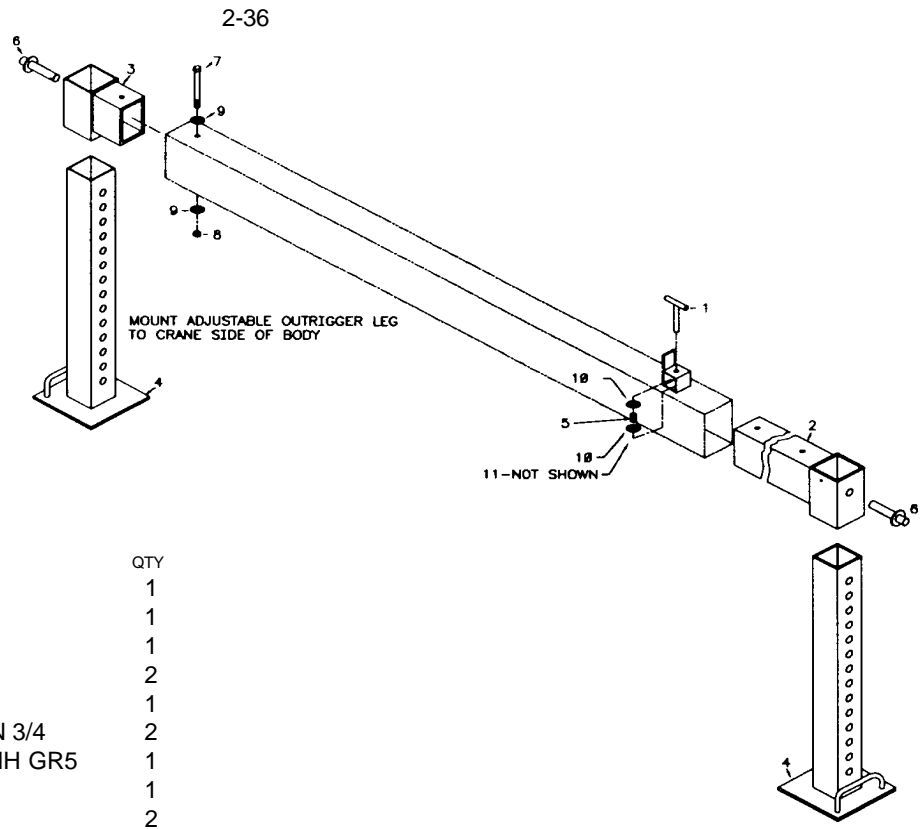


ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1.	3B205010	POWER DOWN CYLINDER	2	26.	72532700	ELBOW #6MSTR #6MJIC XLG 90°	2
2.	51710569	HOSE ASM 1/4X36 FF	2	27.	72053758	ELBOW #4MSTR #4MJIC 90°	2
3.	51704024	HOSE ASM 1/4X54 FF	2	28.	72532699	ELBOW #6MSTR #4MJIC 90°	2
4.	51705364	HOSE ASM 1/4X128 FF	2	29.	72532690	ELBOW #4MJIC #4FJIC SWVL	4
5.	51703939	HOSE ASM 1/2X96 FF	1	30.	70392864	DECAL-DANGER STAND CLEAR	2
6.	51707005	HOSE ASM 3/4X39 FF	1	31.	70392867	DECAL-DANGER OUTTRGR MOVING	1
7.	73732445	VALVEBANK 2-SECT 7GPM	1	32.	71392257	DECAL-CONTROL PD SS	1
8.	60114313	GUARD-SWITCH BOX	1*	33.	70393467	DECAL-SELECTOR VALVE	1
9.	52712735	ARM-ADJUSTABLE	1	34.	71392971	DECAL-CTRL LH	1
10.	52712736	ARM-STATIONARY	1	35.	71392972	DECAL-CTRL RH	1
11.		OUTRIGGER HOUSING	REF	36.	73054420	SELECTOR VALVE 24GPM	1*
12.	72532980	ADAPTER #8JIC IN-LINE PR SW	1	37.	77040137	TERMINAL 1/4 FSLPON 12-10GA	4*
13.	72060107	CAP SCR 1/2-13X8 HHGR5	1	38.	77040186	TERMINAL 1/4 FSLPON 16-14GA	6*
14.	72060155	CAP SCR 5/8-11X3-1/2 HHGR5	4	39.	77041197	JIC BOX	1*
15.	72062080	NUT 1/2-13 LOCK	1	40.	77041345	TOGGLE SWITCH-SGL THROW	1*
16.	72062091	NUT 5/8-11 LOCK	4	41.	77041346	TOGGLE SWITCH-DBL THROW	2*
17.	72063005	WASHER 1/2 WRT	2	42.	89044354	CABLE-14GA 6WIRE	5*
18.	72532695	TEE #12MJIC 3/4TUBE	1	43.	72066185	COTTER PIN .16X1	1
20.	72533024	UNION #4JIC 37° W/NUT	2	44.	72063027	MACH BUSHING 5/8	2
21.	72532365	ADAPTER #10MSTR #12MJIC	1	45.	60010351	SPRING	1
22.	72532722	ADAPTER #10MSTR #6FSTR	4	46.	52070138	T-PIN	1
23.	72532358	ADAPTER #8MSTR #8MJIC	1	47.	72533567	ELBOW #4MSTR #4MJIC XLG	2
24.	72532707	ADAPTER #4MJIC #6MJIC	2				
25.	72053764	ELBOW #10MSTR #8MJIC 90°	1				

* NOT SHOWN

FIGURE B-25. OUTRIGGER KIT-ELECTRIC PWR OUT/MNL DN (31712886)

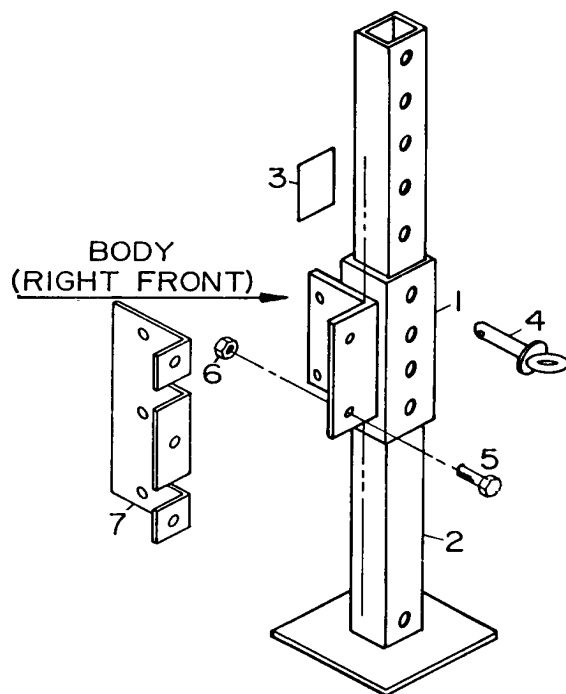
**BODIES
USED ON:**
11M920
11M925
11M930
11M940
DOM1
DOM2



ITEM	PART NO.	DESCRIPTION	QTY
1.	52070138	T-PIN	1
2.	52703351	ADJUSTABLE ARM	1
3.	52703352	STATIONARY ARM	1
4.	52703353	LEG	2
5.	60010351	SPRING	1
6.	71731361	QUICK RELEASE PIN 3/4	2
7.	72060105	CAP SCR 1/2-13X7 HH GR5	1
8.	72062080	NUT 1/2-13 LOCK	1
9.	72063005	WASHER 1/2 WRT	2
10.	72063027	MACH BUSHING 5/8	2
11.	72066185	COTTER PIN 1/16X1	1

FIGURE B-26. OUTRIGGER KIT-MNL OUT/MNL DN (51704772)

**BODIES
USED ON:**
9M900
11M900



ITEM	PART NO.	DESCRIPTION	QTY
1.	52705228	HOUSING	1
2.	52705229	LEG	1
3.	70392864	DECAL-OUTRG STAND CLEAR	1
4.	71731711	QUICK RELEASE PIN	1
5.	72060046	CAP SCR 3/8-16X1 HH GR5	4
6.	72062103	NUT 3/8-16 LOCK	4
7.	60114091	BACKING ANGLE	1

FIGURE B-27. OUTRIGGER KIT-FRONT/MNL DN (51704766)

BODIES USED ON:
11M920
11M925
11M930
11M940
DOM2

INFORMATION NOT AVAILABLE AT TIME OF PRINTING

FIGURE B-28. OUTRIGGER KIT-ELECTRIC MNL OUT/PWR DN (31709999)

BODIES USED ON:
11M920
11M925
11M930
11M940
DOM2

INFORMATION NOT AVAILABLE AT TIME OF PRINTING

FIGURE B-29. OUTRIGGER KIT-ELECTRIC PWR OUT/PWR DN (31710020)

**CRANES
USED ON:
31711349**
3016
5016
4300/680
5200/780
5800/880
7200/1080
9000/1295
425
7415

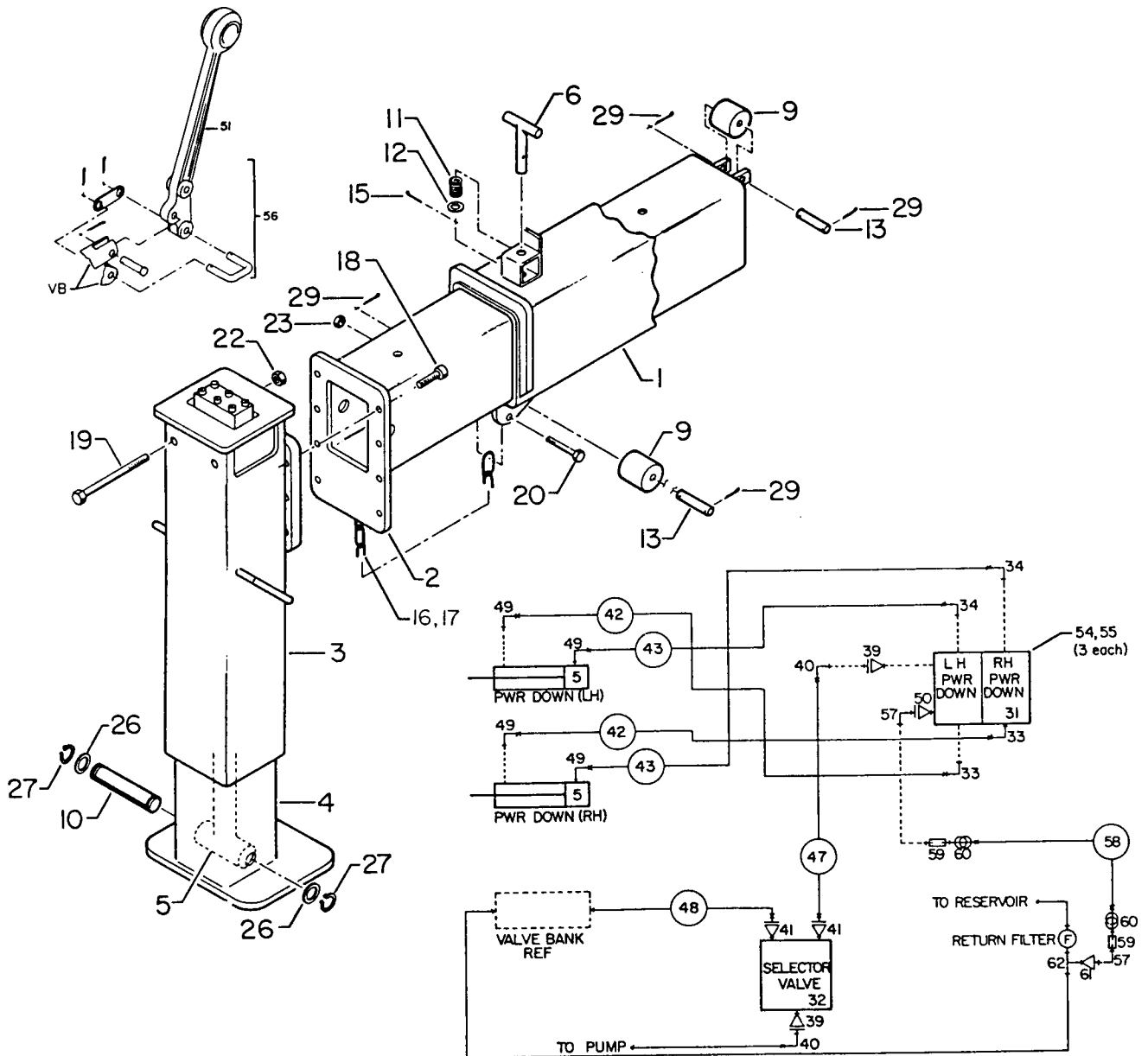
ITEM	PART NO.	DESCRIPTION	QTY
1.	52704109	HOUSING	1
2.	52701065	ARM	2
3.	52710122	SLEEVE	2
4.	52704868	LEG-STD	2
5.	3B166820	PWR DOWN CYLINDER	2
6.	52070138	T-PIN	2
9.	60030053	ROLLER	4
10.	60106968	PIN CYL/LEG	2
11.	60010351	SPRING	2
12.	72063007	WASHER 5/8 WRT	2
13.	60106314	PIN ARM/ROLLER	4
15.	72066185	COTTER PIN .16X1	2
16.	60106718	CHAIN	2
17.	70058060	COLD SHUT LINK	2
18.	72060795	CAP SCR 1/2-13X1-1/2 SH	12
19.	72060102	CAP SCR 1/2-13X5-1/2 HH GR5	4
20.	72060053	CAP SCR 3/8-16X2-3/4 HH GR5	2
21.	70392566	DECAL-SELECTOR VALVE	1
22.	72062107	NUT 1/2-13 CTR LOCK	4
23.	72062103	NUT 3/8-16 LOCK	2
26.	72063034	MACH BUSHING 1X10GA	4
27.	72066125	RETAINING RING 1" HD	4
29.	72066178	COTTER PIN .12X1	8
31.	51703620	VALVEBANK 2-SECT	1
32.	73054420	SELECTOR VALVE	1
33.	72532666	ELBOW 3/4MSTR 3/4MJICXLG 90°	2
34.	72053763	ELBOW 3/4MSTR 3/4MJIC 90°	2
36.	71392257	DECAL-CTRL SS	1
37.	70392864	DECAL-DANGER STD CLR	2
38.	70392867	DECAL-DANGER OR. MOVING	1
39.	72532669	ADAPTER 7/8MJIC 3/4MJIC	2
40.	72532668	ELBOW 1-1/16MSTR 7/8MJIC 90°	2
41.	72532360	ADAPTER 1-1/16MSTR 3/4MJIC	2
42.	51703032	HOSE ASM 3/8X66	2
43.	51703253	HOSE ASM 3/8X108	2
47.	51703931	HOSE ASM 1/2X312	1
48.	51703347	HOSE ASM 1/2X20	1
49.	72532779	ELBOW 9/16MSTR 3/4MJIC XLG	4
50.	72053747	ADAPTER 1-1/16MSTR 3/4FPT	1
51.	73014848	VALVE HANDLE	2
54.	72062109	NUT 5/16-18 LOCK	3
55.	72060033	CAP SCR 5/16X3 HH GR5	3
56.	94731839	LINK & PIN KIT	2
57.	72053556	STREET ELBOW 3/4NPT 90°	2
58.	60035170	HOSE 3/4X240	1
59.	72531548	BARB NIPPLE 3/4MPT 3/4BARB	2
60.	72066000	HOSE CLAMP #12	2
61.	72531836	REDUCER BUSHING 1-1/4X3/4	1
62.	72531994	STREET TEE 1-1/4NPT	1*
64.	60114701	ANGLE-OUTRIGGER MTG RH	2*
65.	60114702	ANGLE-OUTRIGGER MTG LH	2*
66.	72060186	CAP SCR 3/4-10X2-1/2 HHGR5	12*
67.	72062114	NUT 3/4-10 LOCK	12*

See page 2-25 for installation of items 64-67.

DECAL PLACEMENT	
ITEM	LOCATION
37	ONE ON EACH OUTRIGGER
38	AT OR NEAR THE NORMAL OPERATING STATION
36	AT PWR DOWN CTRL HANDLES
21	AT SELECTOR VALVE

SEE FOLLOWING PAGE FOR DRAWING

FIGURE B-30. AUX OUTRIGGER-MNL OUT/PWR DN-BELOW FRAME MNT (31711349)



SEE PREVIOUS PAGE FOR PARTS LIST

FIGURE B-30A. AUX OUTRIGGER-MNL OUT/PWR DN-BELOW FRAME MNT (31711349)

CRANES USED ON: 31711350
3016
5016
4300/680
5200/780
5800/880
7200/1080
9000/1295
9800/1495
14000/19140
15000/21100
18000/2595
425
7415
12916
20017

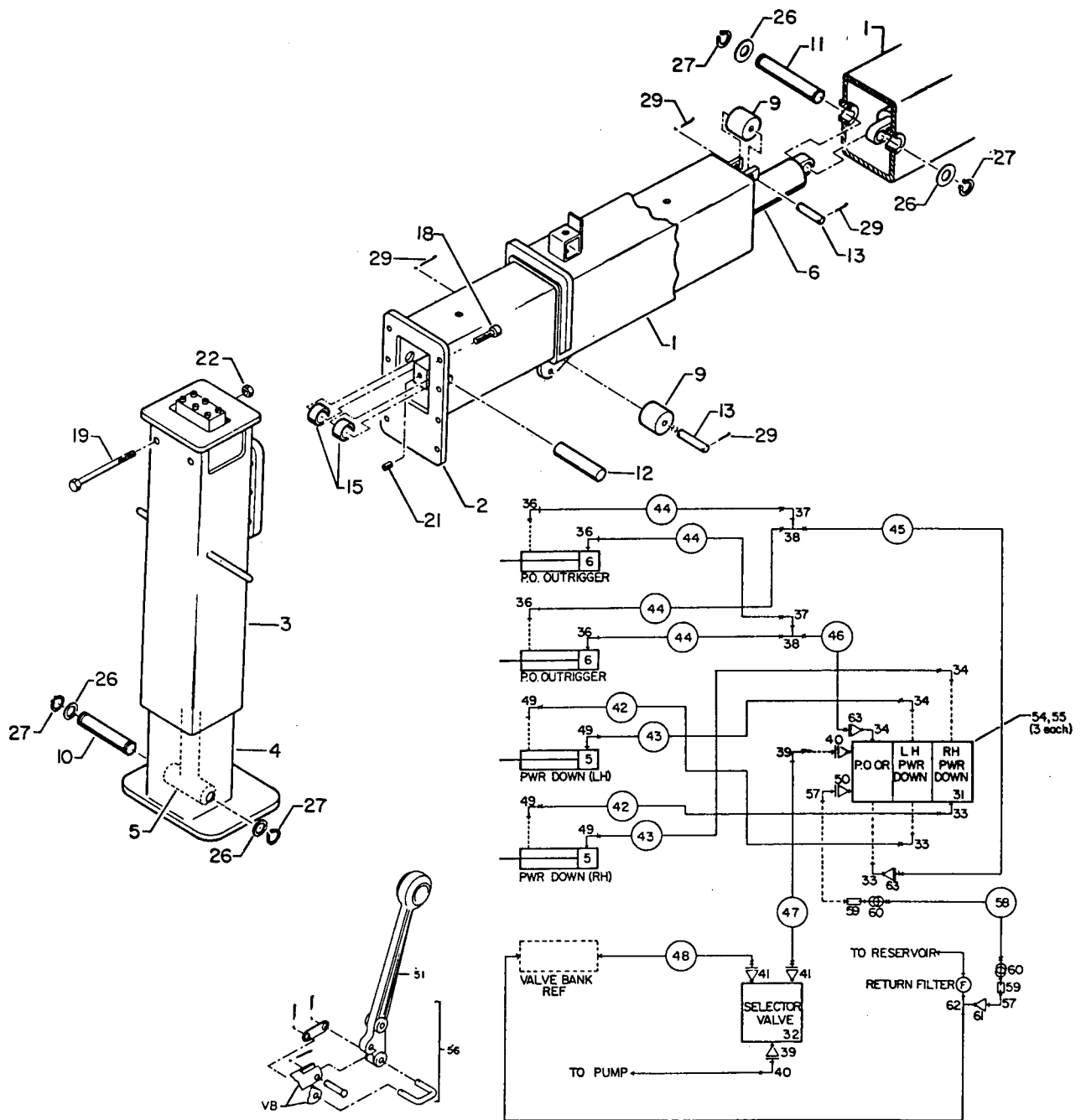
ITEM	PART NO.	DESCRIPTION	QTY
1.	52704109	HOUSING	1
2.	52701065	ARM	2
3.	52710122	SLEEVE	2
4.	52704868	LEG-STD	2
5.	3B166820	PWR DOWN CYLINDER	2
6.	3B210522	PWR OUT CYLINDER	2
9.	60030053	ROLLER	4
10.	60106968	PIN CYL/LEG	2
11.	60013202	PIN CYL/HSG	1
12.	60106281	PIN CYL/ARM	2
13.	60106314	PIN ARM/ROLLER	4
15.	60106380	SPACER	4
16.	70392566	DECAL-SELECTOR VALVE	1
18.	72060795	CAP SCR 1/2-13X1-1/2 SH	12
19.	72060102	CAP SCR 1/2-13X5-1/2 HH GR5	4
21.	72060581	SET SCR 3/8-16X3/4 SH	2
22.	72062107	NUT 1/2-13 CTR LOCK	4
26.	72063034	MACH BUSHING 1X10GA	6
27.	72066125	RETAINING RING 1" HD	6
28.	71392277	DECAL-PWR OUT	1
29.	72066178	COTTER PIN .12X1	8
30.	71392257	DECAL-PWR DN	1
31.	51703619	VALVEBANK 3-SECT	1
32.	73054420	SELECTOR VALVE	1
33.	72532666	ELBOW 3/4MSTR 3/4MJIC XLG 90°	3
34.	72053763	ELBOW 3/4MSTR 3/4MJIC 90°	3
36.	72532351	ADAPTER 7/16MSTR 7/16MJIC	4
37.	72532690	ELBOW 7/16MJIC 7/16FJIC SWVL	2
38.	72532768	TEE 7/16MJIC	2
39.	72532669	ADAPTER 7/8MJIC 3/4MJIC	2
40.	72532668	ELBOW 1-1/16MSTR 7/8MJIC 90°	2
41.	72532360	ADAPTER 1-1/16MSTR 3/4MJIC	2
42.	51703032	HOSE ASM 3/8X66	2
43.	51703253	HOSE ASM 3/8X108	2
44.	51704022	HOSE ASM 1/4X13	4
45.	51703591	HOSE ASM 1/4X20	1
46.	51703590	HOSE ASM 1/4X23	1
47.	51703931	HOSE ASM 1/2X312	1
48.	51703347	HOSE ASM 1/2X20	1
49.	72532779	ELBOW 9/16MSTR 3/4MJIC XLG	4
50.	72053747	ADAPTER 1-1/16MSTR 3/4FPT	1
51.	73014848	VALVE HANDLE	3
52.	70392864	DECAL-DANGER STD CLR	2
53.	70392867	DECAL-DANGER OR. MOVING	1
54.	72062109	NUT 5/16-18 LOCK	3
55.	72060033	CAP SCR 5/16X3 HH GR5	3
56.	94731839	LINK & PIN KIT	3
57.	72053556	STREET ELBOW 3/4NPT 90°	2
58.	60035170	HOSE 3/4X240	1
59.	72531548	BARB NIPPLE 3/4MPT 3/4BARB	2
60.	72066000	HOSE CLAMP #12	2
61.	72531836	REDUCER BUSHING 1-1/4X3/4	1
62.	72531994	STREET TEE 1-1/4NPT	1
63.	72532665	ADAPTER 7/16MJIC 3/4FJIC	2*
64.	60114701	ANGLE-OUTRIGGER MTG RH	2*
65.	60114702	ANGLE-OUTRIGGER MTG LH	2*
66.	72060186	CAP SCR 3/4-10X2-1/2 HHGR5	12*
67.	72062114	NUT 3/4-10 LOCK	12*

See page 2-25 for installation of items 64-67.

DECAL PLACEMENT	
ITEM	LOCATION
52	ONE ON EACH OUTRIGGER
53	AT OR NEAR THE NORMAL OPERATING STATION
30	AT PWR DOWN CTRL HANDLES
28	AT PWR OUT CTRL HANDLE
16	AT SELECTOR VALVE

SEE FOLLOWING PAGE FOR DRAWING

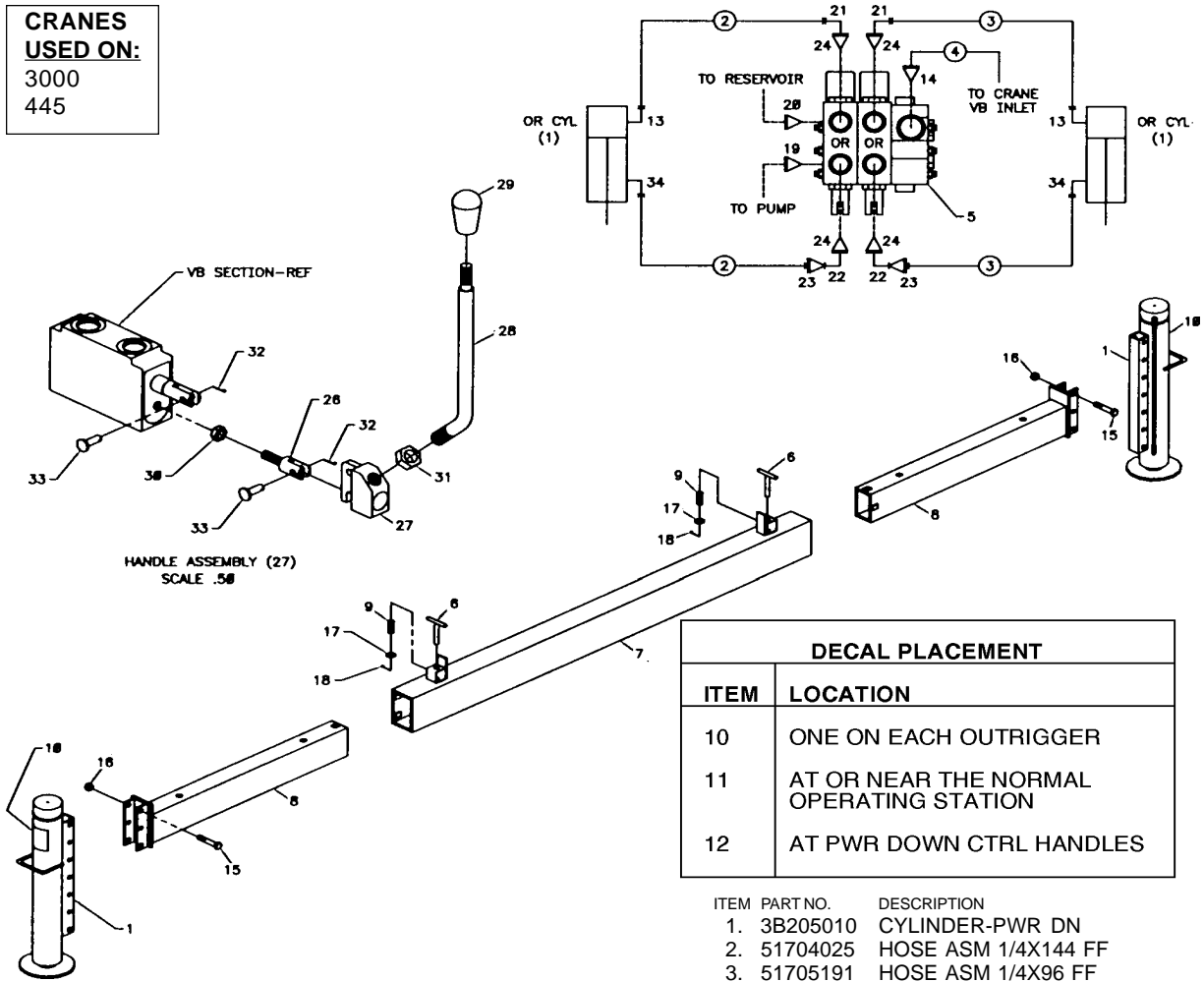
FIGURE B-31. AUX OUTRIGGER-PWR OUT/PWR DN-BELOW FRAME MNT (31711350)



SEE PREVIOUS PAGE FOR PARTS LIST

FIGURE B-31A. AUX OUTRIGGER-PWR OUT/PWR DN-BELOW FRAME MNT (31711350)

**CRANES
USED ON:**
3000
445



DECAL PLACEMENT	
ITEM	LOCATION
10	ONE ON EACH OUTRIGGER
11	AT OR NEAR THE NORMAL OPERATING STATION
12	AT PWR DOWN CTRL HANDLES

ITEM	PART NO.	DESCRIPTION	QTY
1.	3B205010	CYLINDER-PWR DN	2
2.	51704025	HOSE ASM 1/4X144 FF	2
3.	51705191	HOSE ASM 1/4X96 FF	2
4.	51705377	HOSE ASM 3/8X48 FF	1
5.	51705983	VALVEBANK-2 SECT (INCL:25)	1
6.	52070138	T-PIN	2
7.	52712778	TUBE	1
8.	52712779	ARM-ADJUSTABLE	2
9.	60010351	SPRING	2
10.	70392864	DECAL-DANGER STAND CLEAR	2
11.	70392867	DECAL-DANGER OR. MOVING	1
12.	71392257	DECAL-PWR DN SS	1
13.	72053758	ELBOW-#4MSTR #4MJIC 90°	2
14.	72053764	ELBOW-#10MSTR #8MJIC 90°	1
15.	72060155	CAP SCR 5/8-11X3-1/2 HHGR5	6
16.	72062091	NUT 5/8-11 LOCK	6
17.	72063007	WASHER 5/8 WRT	2
18.	72066185	COTTER PIN 5/32X1	2
19.	72532358	ADAPTER #8MSTR #8MJIC	1
20.	72532365	ADAPTER #10MSTR #12MJIC	1
21.	72532699	ELBOW #6MSTR #4MJIC 90°	2
22.	72532700	ELBOW #6MSTR #6MJIC XLG	2
23.	72532707	ADAPTER #4MJIC #6FJIC	2
24.	72532722	ADAPTER #10MSTR #6FSTR	4
25.	51731580	HANDLE ASM(PART OF 5,INCL:26-33)	2REF
26.	70142648	PIVOT-LEVER (PART OF 25)	2REF
27.	70142650	LEVER SUPPORT (PART OF 25)	2REF
28.	70142651	LEVER (PART OF 25)	2REF
29.	71392269	KNOB (PART OF 25)	2REF
30.	72062021	NUT 5/16-18 HEX JAM (PART OF 25)	2REF
31.	72062024	NUT 1/2-13 HEX JAM (PART OF 25)	2REF
32.	72066162	COTTER PIN 1/16X1 (PART OF 25)	4REF
33.	72661204	CLEVIS PIN (PART OF 25)	4REF
34.	72533567	ELBOW #4MSTR #4MJIC XLG	2

FIGURE B-32. AUX OUTRIGGER-PWR OUT/PWR DN (31712720)

OPTION-AUX OUTRIGGERS-PO/PD-7X5 (31712739)

(Non-IMT Mechanic Service Body Application)

ITEM	PART NO.	DESCRIPTION	QTY
1.	3B205010	CYLINDER	2
2.	51396184	HOSE ASM 1/2X159 FF	1REF
3.	51395164	HOSE ASM 1/4X135 FJ	2REF
4.	51396280	HOSE ASM 1/4X96 FF	2REF
5.	51714812	VALVE BANK (INCL: 40)	1
6.	60118680	TUBE	1
7.	71411797	CYLINDER, PO (WAS 3B142860)	1
8.	52712735	ARM-ADJUSTABLE	1
9.	52712736	ARM-STATIONARY	1
10.	51396281	HOSE ASM 1/4X107 FJ	2REF
11.	72661472	PIN-SPRING 1/2X4	1
12.	51396282	HOSE ASM 3/4X51 FF	1REF
13.	72053758	ELBOW #4MSTR #4MJIC 90°	2
15.	72060025	CAP SCR 5/16-18X1 HHGR5	3
16.	72060107	CAP SCR 1/2-13X8 HHGR5	1
17.	72060155	CAP SCR 5/8-11X3-1/2 HHGR5	4
18.	72060833	SCR-5/16-18X3/4THRDCGTG(NOTE)	2
19.	72062080	NUT 1/2-13 HEX NYLOCK	2
20.	72062091	NUT 5/8-11 HEX NYLOCK	4
21.	72063002	WASHER 5/16W FLAT	5
22.	72063005	WASHER 1/2W FLAT	2
23.	72532351	ADPTR #4MSTR #4MJIC	4
24.	72601297	CAP SCR 1/2-13X5-3/4 HHGR5	1
25.	72066582	CLAMP (SEE NOTE)	2

28.	72531205	TEE-MALE JIC 3/4-16 1/2 TUBE	1
29.	72532658	ELBOW #8MJIC #8FJIC SW	1
30.	72532690	ELBOW #4MJIC #4FJIC SW	2
35.	72533623	ELBOW #8MSTR #12MJIC 90°	1
36.	71392277	DECAL-OUTRG POWER OUT	1
37.	76391511	DECAL-UP & DOWN STAB. R&L	1
38.	89034049	SPIRAL WRAP-BLK (SEE NOTE)	4'
39.	99900644	MANUAL-AUX OUTRG	1
40.	51731580	HANDLE ASM (INCLS: 34-41) (PART OF 5)	2REF
41.	70142648	PIVOT LEVER (PART OF 40)	2REF
42.	70142650	LEVER SUPPORT (PART OF 40)	2REF
43.	70142651	LEVER-CTRL HDL (PART OF 40)	2REF
44.	71392269	KNOB-CTRL HDL (PART OF 40)	2REF
45.	72062021	NUT 5/16-18 HEX (PART OF 40)	2REF
46.	72062024	NUT 1/2-13 HEX (PART OF 40)	2REF
47.	72066162	COTTER PIN (PART OF 40)	4REF
48.	72661204	PIN-CLEVIS (PART OF 40)	4REF
49.	51395431	HOSE ASM 1/2X96 FF	1REF
50.	72532972	ADPTR #8MJIC #12FJIC	1
51.	70392864	DECAL-DGR OUTRG STD CLR	2
52.	70392867	DECAL-DGR OUTRG (MOVING)	1
53.	71392257	DECAL-OUTRG PWR DWN SS	1
54.	72533567	ELBOW #4MSTR #4MJIC XLG	2
55.	51717834	HOSE KIT OR PO/PD (7X5 AUX KIT)	1

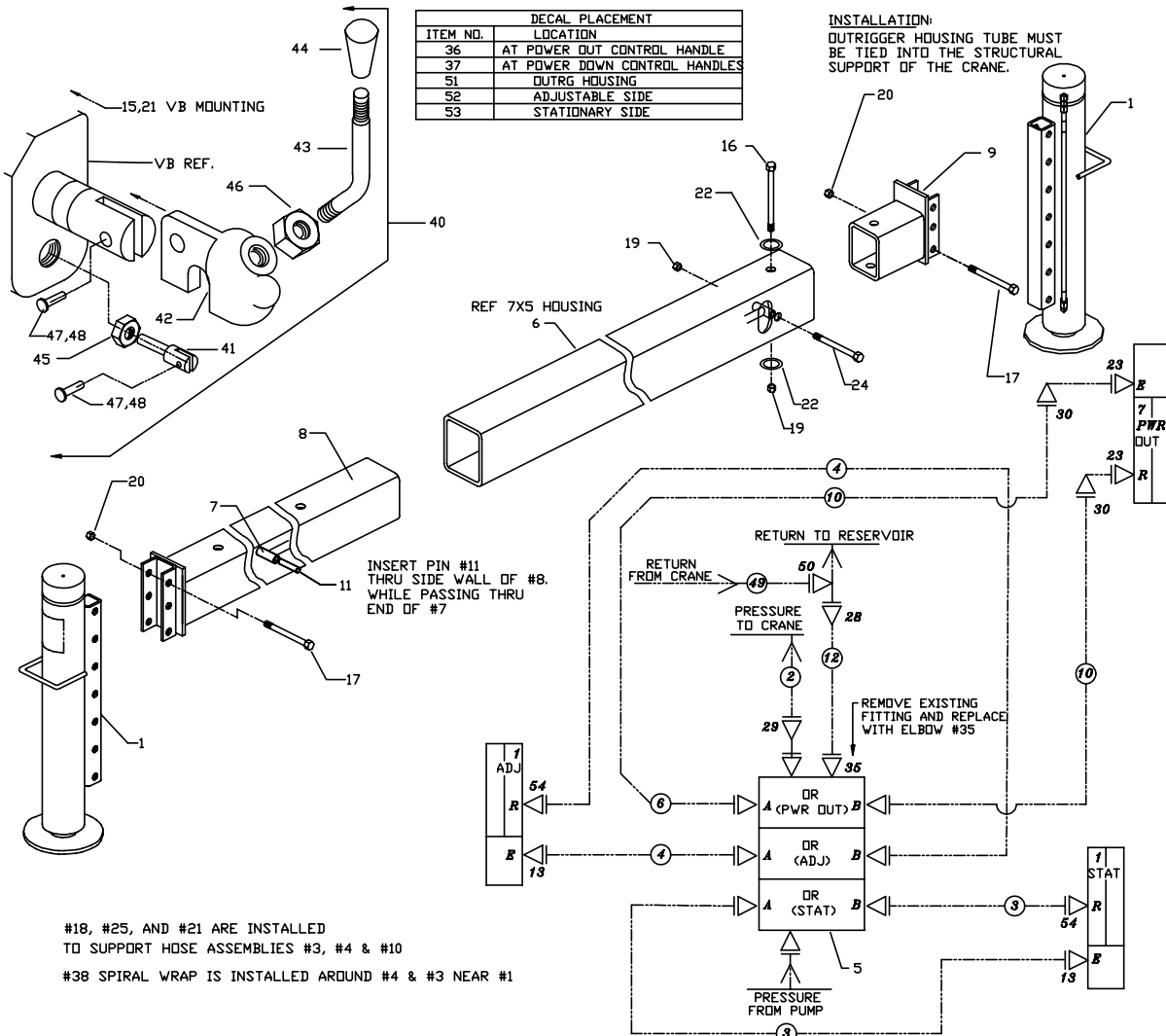


FIGURE B-33. AUX OUTRIGGER-MNL OUT/PWR DN 7X5 (31712739)

1.	3B205010	CYLINDER	2	26.	72532358	ADPTR-M STR/M JIC 8 8	1
2.	51395431	HOSE-FF .50X 98.00 OAL(8- 8)	1	27.	72532365	ADPTR-M STR/M JIC 10 12	1
3.	51395552	HOSE-FJ .25X135.00 OAL(4- 4)	2	28.	72531205	TEE-MALE JIC .75-16 .50 TUBE	1
5.	51714813	VBASM	1	29.	72532658	ELBOW-M JIC/F JIC SW 8 8	1
6.	51396280	HOSE-FJ .25X 96.00 OAL(4- 4)	2	35.	72532696	ELBOW-M JIC/F JIC SW 12 12	1
7.	52070138	PIN-WLDMT - T	1	37.	76391511	DECAL-UP & DOWN STAB	1
8.	52712735	ARM-OUTRG ADJ PWR DN 7X5	1	38.	89034049	SPIRAL WRAP-BLACK	4
9.	52712736	ARM-OUTRG STAT PWR DN 7X5	1	39.	99900644	MANUAL-AUX OUTRIGGERS	1
10.	60010351	SPRING-"T" PIN	1	40.	51731580	HANDLE ASM (INCL. 34-41)	2REF
11.	51396184	HOSE-FF .50X159.00 OAL(8- 8)	1	41.	70142648	PIVOT-LEVER	2REF
12.	51396282	HOSE-FF .75X 51 OAL(12-12)	1	42.	70142650	LEVER SUPPORT	2REF
13.	72053758	ELBOW-M STR/90/M JIC 4 4	2	43.	70142651	LEVER-CONTROL HANDLE	2REF
14.	72053764	ELBOW-M STR/90/M JIC 10 8	1	44.	71392269	KNOB-CONTROL HANDLE	2REF
15.	72060025	CAP SCR .31-18X 1.00 HHGR5Z	3	45.	72062021	NUT 5/16-18 HEX JAM	2REF
16.	72060107	CAP SCR .50-13X 8.00 HHGR8Z	1	46.	72062024	NUT 1/2-13 HEX JAM	2REF
17.	72060155	CAP SCR .62-11X 3.50 HHGR5Z	4	47.	72066162	COTTER PIN	4REF
18.	72060833	SCR-THD.CUT .31-18X.75 HWH-1	2	48.	72661204	PIN, CLEVIS	4REF
19.	72062080	NUT .50-13 HEX NYLOC ZINC	1	49.	72532972	ADPTR #8MJIC #12FJIC	1
20.	72062091	NUT .62-11 HEX NYLOC ZINC	4	50.	72532980	SWIVEL-M JIC/F JIC 8 8 IN-LINE	1
21.	72063002	WASHER .31 W FLAT	5	51.	52712734	HOUSING-OUTRG AUX 7X5	1
22.	72063005	WASHER .50 W FLAT	2	52.	70392864	DECAL-DANGER OUTRG STAND	2
23.	72063027	MACHY BUSHING .62X14 GA NR	2	53.	70392867	DECAL-DANGER OUTRG (MOV)	1
24.	72066185	COTTER PIN .16X1.00 PLAIN	1	54.	71392257	DECAL-OUTRG POWER DN SS	1
25.	72066582	CLAMP-UMP20 S464-G20	2	56.	72533567	ELBOW-M STR/M JIC XLG 4 4	2

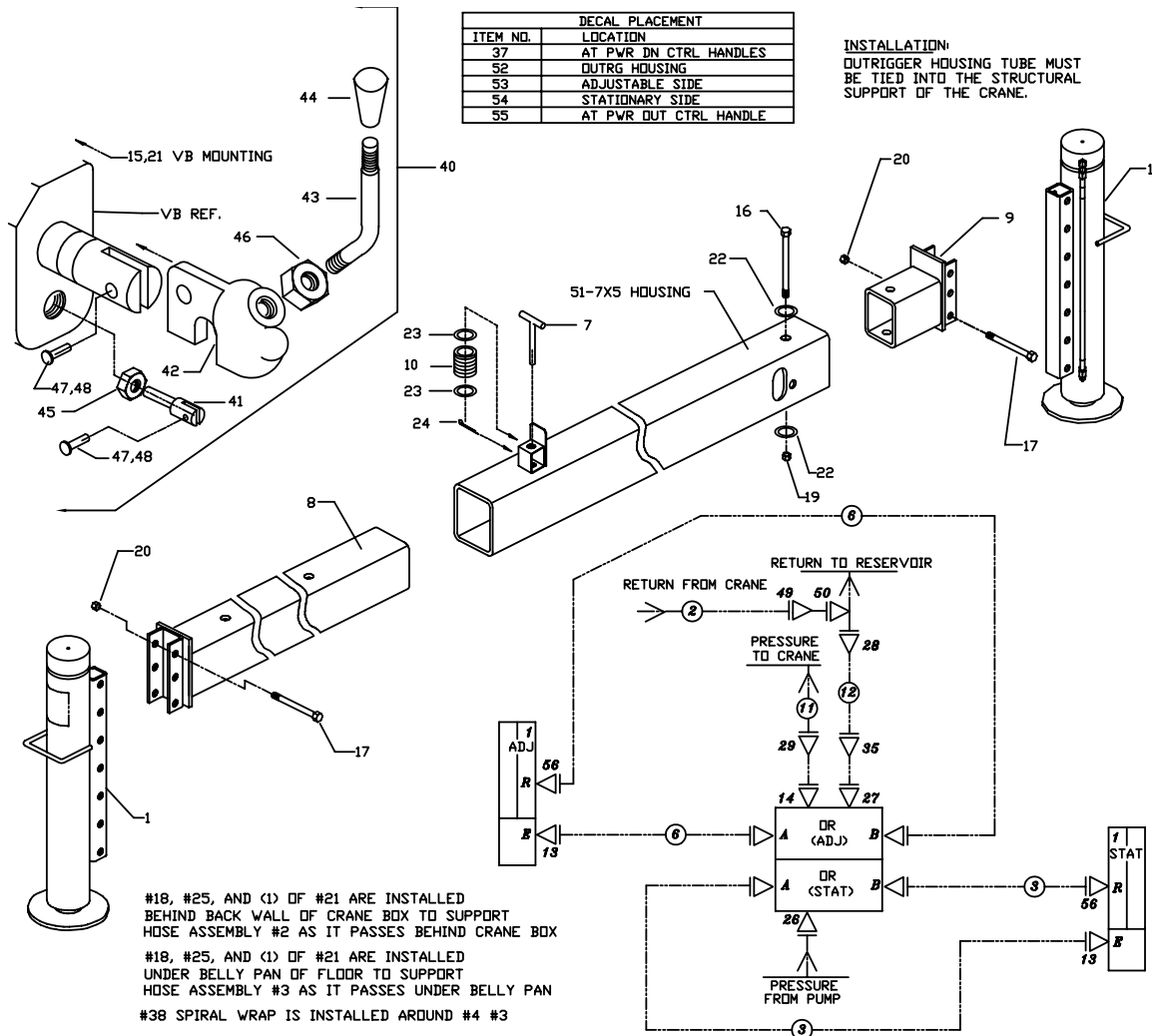
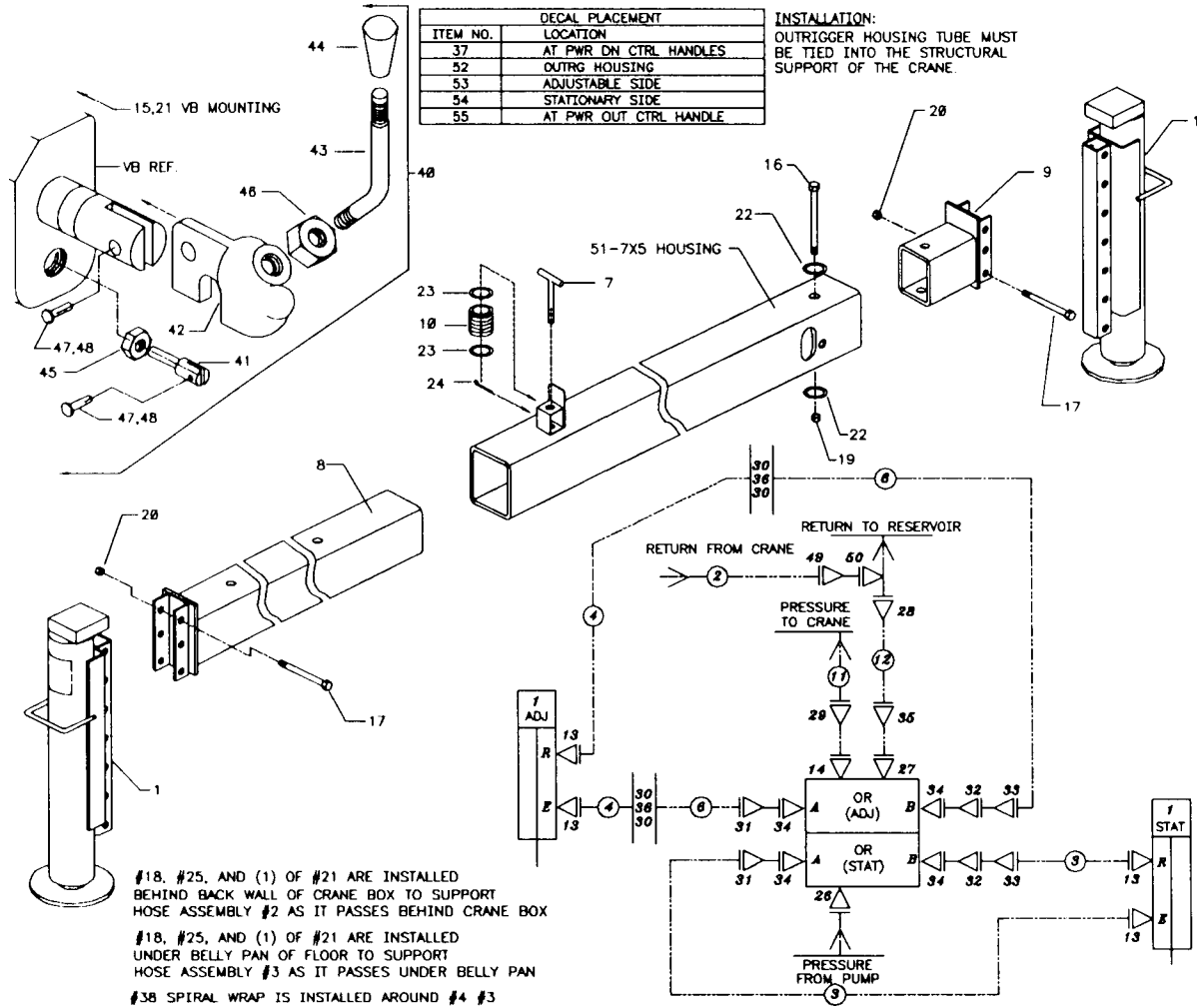
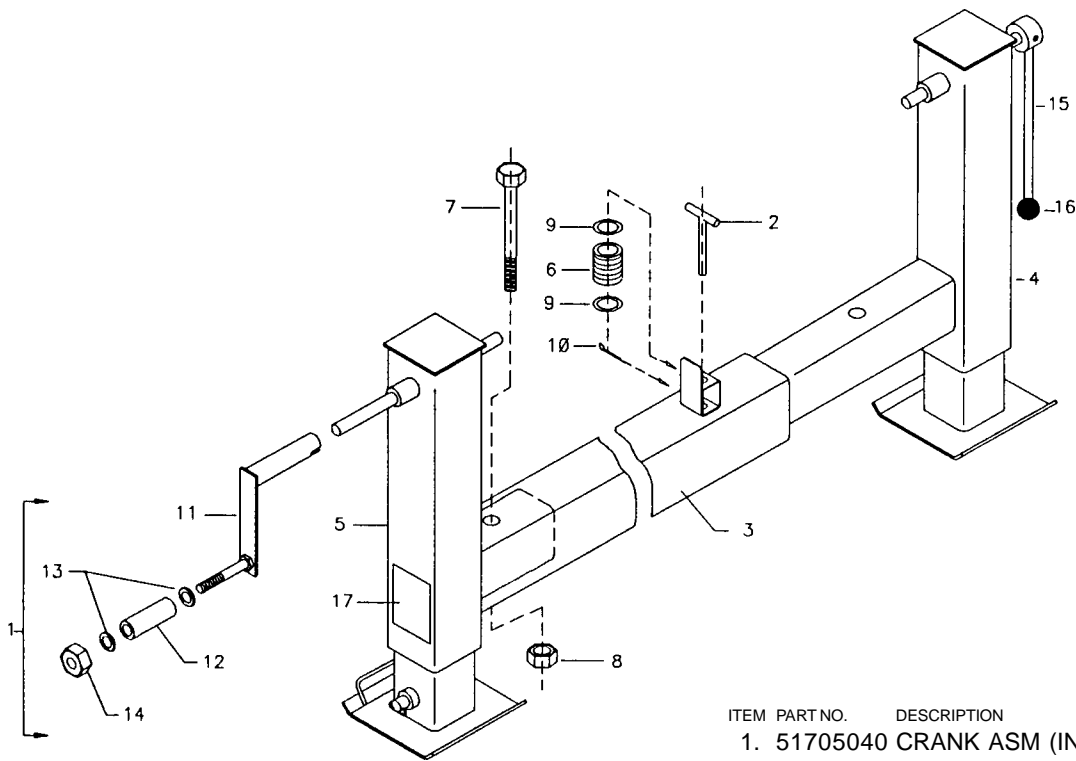


FIGURE B-34-1. AUX OUTRIGGER-MNL OUT/PWR DN 7X5 (31712740) (EFF 9-03 - VB 51714813)



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1.	3B205010	POWER DOWN CYLINDER	2	29.	72532658	ELBOW #8MJIC #8FJIC SW	1
2.	51703939	HOSE ASM 1/2X96 FF	1	30.	72532690	ELBOW #4MJIC #4FJIC SW	4
3.	51705364	HOSE ASM 1/4X129 FF	2	31.	72532699	ELBOW #6MSTR #4MJIC 90°	2
4.	51705365	HOSE ASM 1/4X56 FF	2	32.	72532700	ELBOW #6MSTR #6MJIC XLG 90°	2
5.	51705983	VALVEBANK 2-SECT (INCL:40)	1	33.	72532707	ADAPTER #4MJIC #6MJIC	2
6.	51706152	HOSE ASM 1/4X36 FF	2	34.	72532722	ADAPTER #10MSTR #6FSTR	4
7.	52070138	T-PIN	1	35.	72532696	ELBOW #12MJIC #12FJIC SW	1
8.	52712735	ARM-ADJUSTABLE	1	36.	72533024	UNION-BULKHD #4JIC	2
9.	52712736	ARM-STATIONARY	1	37.	76391511	DECAL-STABILIZER	1
10.	60010351	SPRING	1	38.	89034049	SPIRAL WRAP (SEE NOTE)	4'
11.	51705639	HOSE ASM 1/2X150 FF	1	39.	99900644	MANUAL-OUTRIGGER	1
12.	51703296	HOSE ASM 3/4X48 FF	1	40.	51731580	HANDLE (INCL:41-48)(PART OF 5)	2REF
13.	72053758	ELBOW #4MSTR #4MJIC 90°	2	41.	70142648	LEVER PIVOT (PART OF 40)	2REF
14.	72053764	ELBOW #10MSTR #8MJIC 90°	1	42.	70142650	LEVER SUPPORT (PART OF 40)	2REF
15.	72060025	CAP SCR 5/16-18X1 HHGR5	3	43.	70142651	LEVER (PART OF 40)	2REF
16.	72060107	CAP SCR 1/2-13X8 HHGR5	1	44.	71392269	KNOB (PART OF 40)	2REF
17.	72060155	CAP SCR 5/8-11X3-1/2 HHGR5	4	45.	72062021	NUT 5/16-18 JAM (PART OF 40)	2REF
18.	72060833	SCR 5/16-18X3/4 THRDCTG(NOTE)	2	46.	72062024	NUT 1/2-13 JAM (PART OF 40)	2REF
19.	72062080	NUT 1/2-13 LOCK	1	47.	72066162	COTTER PIN 1/16X1 (PART OF 40)	4REF
20.	72062091	NUT 5/8-11 LOCK	4	48.	72661204	CLEVIS PIN (PART OF 40)	4REF
21.	72063002	WASHER 5/16 WRT	5	49.	72532972	ADAPTER #8MJIC #12FJIC	1
22.	72063005	WASHER 1/4 WRT	2	50.	72532980	ADAPTER #8JIC PR SW IN-LINE	1
23.	72063027	MACH BUSHING 5/8X14GA	2	51.	52712734	OUTRIGGER HOUSING 7X5	1
24.	72066185	COTTER PIN 5/32X1	1	52.	70392864	DECAL-DANGER STAND CLEAR	2
25.	72066582	CLAMP (SEE NOTE)	2	53.	70392867	DECAL-DANGER OR MOVING	1
26.	72532358	ADAPTER #8MSTR #8MJIC	1	54.	71392257	DECAL-PWR DN CTRL	1
27.	72532365	ADAPTER #10MSTR #12MJIC	1	55.	71392277	DECAL-PWR OUT CTRL	1
28.	72531205	TEE #8MJIC 1/2TUBE	1	56.	72533567	ELBOW #4MSTR #4MJIC XLG	2

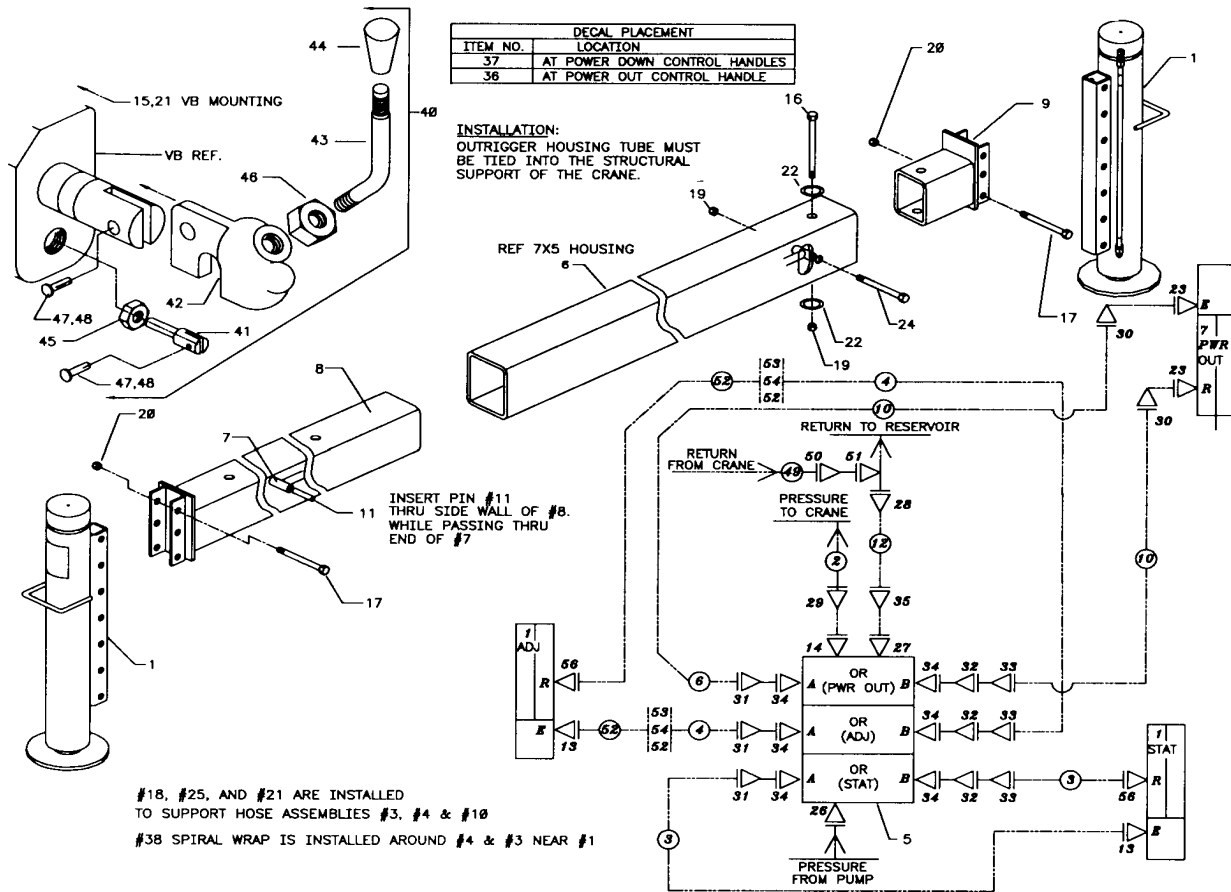
**FIGURE B-34-2. AUX OUTRIGGER-MNL OUT/PWR DN 7X5 (31712740)
(THRU 9-03 - VB 51705983)**



ITEM	PART NO.	DESCRIPTION	QTY
1.	51705040	CRANK ASM (INCL:11-14)	1
2.	52070138	T-PIN	1
3.	52712734	OUTRIGGER HOUSING 7X5	1
4.	52712737	ARM-ADJUSTABLE	1
5.	52712738	ARM-STATIONARY	1
6.	60010351	SPRING	1
7.	72060107	CAP SCR 1/2-13X8 HHGR5	1
8.	72062080	NUT 1/2-13 LOCK	1
9.	72063007	WASHER 5/8 WRT	2
10.	72066185	COTTER PIN 5/32X1	1
11.	52705039	CRANK (PART OF 1)	1REF
12.	60030099	ROLLER (PART OF 1)	1REF
13.	72063003	WASHER 3/8 WRT (PART OF 1)	2REF
14.	72062103	NUT 3/8-16 LOCK (PART OF 1)	1REF
15.	52703319	CRANK HANDLE	1
16.	71039096	KNOB	1
17.	70392864	DECAL-DANGER STAND CLEAR	2

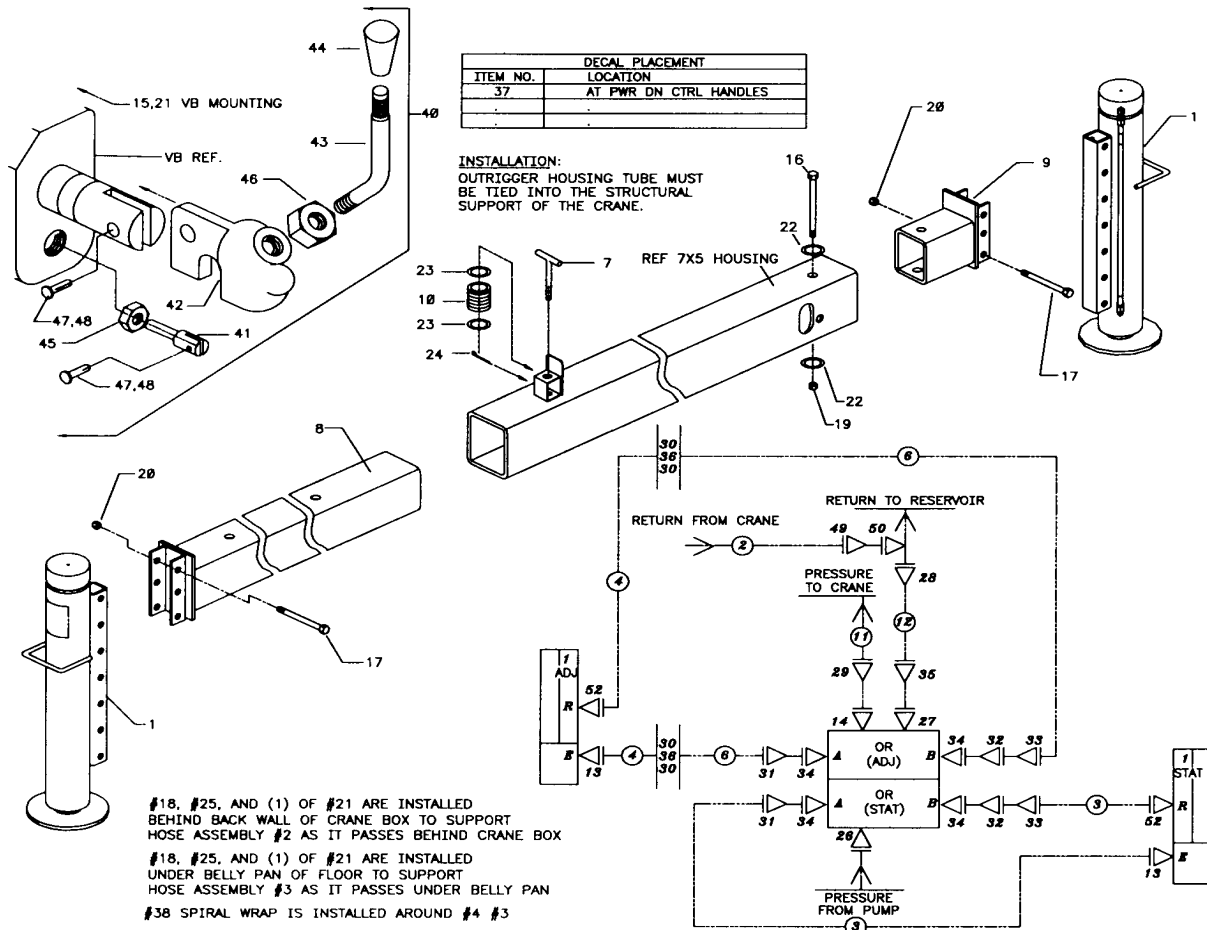
INSTALLATION NOTE:OUTRIGGER HOUSING TUBE MUST BE TIED INTO THE STRUCTURAL SUPPORT OF THE CRANE.

FIGURE B-35. AUX OUTRIGGER-MNL OUT/CRANK DN 7X5 (31712741)



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1.	3B205010	CYLINDER-PWR DN	2	29.	72532658	ELBOW #8MJIC #8FJIC SW	1
2.	51394690	HOSE 1/2X153 8F8F (PART OF 55)	1REF	30.	72532690	ELBOW #4MJIC #4FJIC SW	2
3.	51394693	HOSE 1/4X130-1/2 4F4F (PART 55)	2REF	31.	72532699	ELBOW #6MSTR #4MJIC 90°	3
4.	51394691	HOSE 1/4X38-1/2 4F4F(PART OF 55)	2REF	32.	72532700	ELBOW #6MSTR #6MJIC 90° XLG	3
5.	51705984	VALVEBANK 3-SECT (INCL:40)	1	33.	72532707	ADAPTER #4MJIC #6FJIC	3
6.	60118680	TUBE	1REF	34.	72532722	ADAPTER #10MSTR #6FSTR	6
7.	3B142860	CYLINDER-PWR OUT	1	35.	72532696	ELBOW #12MJIC #12FJIC SW	1
8.	52712735	ARM-ADJUSTABLE	1	36.	71392277	DECAL-PWR OUT	1
9.	52712736	ARM-STATIONARY	1	37.	76391511	DECAL-STABILIZER	1
10.	51394914	HOSE 1/4X108 4F4F (PART OF 55)	2REF	38.	89034049	SPIRAL WRAP (SEE NOTE)	4'
11.	72661472	PIN	1	39.	99900644	MANUAL-OUTRIGGER	1
12.	51394915	HOSE 3/4X48 12F12F (PART OF 55)	1REF	40.	51731580	HANDLE (INCL:41-48,PART OF 5)	2REF
13.	72053758	ELBOW #4MSTR #4MJIC 90°	2	41.	70142648	PIVOT-LEVER (PART OF 40)	2REF
14.	72053764	ELBOW #10MSTR #8MJIC 90°	1	42.	70142650	LEVER-SUPPORT (PART OF 40)	2REF
15.	72060025	CAP SCR 5/16-18X1 HHGR5	3	43.	70142651	LEVER-CTRL (PART OF 40)	2REF
16.	72060107	CAP SCR 1/2-13X8 HHGR5	1	44.	71392269	KOB (PART OF 40)	2REF
17.	72060155	CAP SCR 5/8-11X3-1/2 HHGR5	4	45.	72062021	NUT 5/16-18 HEXJAM (PART OF 40)	2REF
18.	72060833	SCR 5/16-18X3/4 THRDCTG(NOTE)	2	46.	72062024	NUT 1/2-13 HEXJAM (PART OF 40)	2REF
19.	72062080	NUT 1/2-13 LOCK	2	47.	72066162	COTTER PIN (PART OF 40)	4REF
20.	72062091	NUT 5/8-11 LOCK	4	48.	72661204	CLEVIS PIN (PART OF 40)	4REF
21.	72063002	WASHER 5/16 WRT	5	49.	51394916	HOSE 1/2X99 8F8F (PART OF 55)	1REF
22.	72063005	WASHER 1/2 WRT	2	50.	72532972	ADAPTER #8MJIC #12FJIC	1
23.	72532351	ADAPTER #4MSTR #4MJIC	2	51.	72532980	ADAPTER #8JIC PR SW IN-LINE	1
24.	72601297	CAP SCR 1/2-13X5-3/4 HHGR5	1	52.	51394115	HOSE 1/4X59 4F4F (PART OF 55)	2REF
25.	72066582	CLAMP (SEE NOTE)	2	53.	72532690	ELBOW #4MJIC #4FJIC SW	4
26.	72532358	ADAPTER #8MSTR #8MJIC	1	54.	72533024	UNION-BULKHD #4JIC	2
27.	72532365	ADAPTER #10MSTR #12MJIC	1	55.	51714497	HOSE KIT (INCL: 2,3,4,10,12,49,52)	1
28.	72531205	TEE 3/4MJIC 1/2TUBE	1	56.	72533567	ELBOW #4MSTR #4MJIC XLG	2

FIGURE B-36. AUX OUTRIGGER-PWR OUT/PWR DN 7X5 (31712731)



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1.	3B205010	POWER DOWN CYLINDER	2	26.	72532358	ADAPTER MSTR MJIC	1
2.	51394916	HOSE 1/2X99 8F8F (PART OF 51)	1REF	27.	72532365	ADAPTER #10MSTR #12MJIC	1
3.	51394693	HOSE 1/4X130-1/2 4F4F(PART 51)	2REF	28.	72531205	TEE #8MJIC 1/2TUBE	1
4.	51394115	HOSE 1/4X59 4F4F (PART OF 51)	2REF	29.	72532658	ELBOW #8MJIC #8FJIC SW	1
5.	51705983	VALVEBANK 2-SECT (INCL:40)	1	30.	72532690	ELBOW #4MJIC #4FJIC SWVL	4
6.	51394691	HOSE 1/4X38-1/2 4F4F (PART OF 51)	2REF	31.	72532699	ELBOW #6MSTR #4MJIC 90°	2
7.	52070138	T-PIN	1	32.	72532700	ELBOW #6MSTR #6MJIC XLG 90°	2
8.	52712735	ARM-ADJUSTABLE	1	33.	72532707	ADAPTER #4MJIC #6MJIC	2
9.	52712736	ARM-STATIONARY	1	34.	72532722	ADAPTER #10MSTR #6FSTR	4
10.	60010351	SPRING	1	35.	72532696	ELBOW #12MJIC #12FJIC SW	1
11.	51394690	HOSE 1/2X153 8F8F (PART OF 51)	1REF	36.	72533024	BULKHEAD UNION #4JIC W/NUT	2
12.	51394689	HOSE 3/4X51 12F12F (PART OF 51)	1REF	37.	76391511	DECAL-STABILIZER	1
13.	72053758	ELBOW #4MSTR #4MJIC 90°	2	38.	89034049	SPIRAL WRAP (SEE NOTE)	4'
14.	72053764	ELBOW #10MSTR #8MJIC 90°	1	39.	99900644	MANUAL-OUTRIGGER	1
15.	72060025	CAP SCR 5/16-18X1 HHGR5	3	40.	51731580	HANDLE (INCL:41-48) (PART OF 5)	2REF
16.	72060107	CAP SCR 1/2-13X8 HHGR5	1	41.	70142648	LEVER PIVOT (PART OF 40)	2REF
17.	72060155	CAP SCR 5/8-11X3-1/2 HHGR5	4	42.	70142650	LEVER SUPPORT (PART OF 40)	2REF
18.	72060833	SCR 5/16-18X3/4 THRDCTG(NOTE)	2	43.	70142651	LEVER (PART OF 40)	2REF
19.	72062080	NUT 1/2-13 LOCK	1	44.	71392269	KNOB (PART OF 40)	2REF
20.	72062091	NUT 5/8-11 LOCK	4	45.	72062021	NUT 5/16-18 JAM (PART OF 40)	2REF
21.	72063002	WASHER 5/16 WRT	5	46.	72062024	NUT 1/2-13 JAM (PART OF 40)	2REF
22.	72063005	WASHER 1/2 WRT	2	47.	72066162	COTTER PIN 1/16X1 (PART OF 40)	4REF
23.	72063027	MACH BUSHING	2	48.	72661204	CLEVIS PIN (PART OF 40)	4REF
24.	72066185	COTTER PIN 5/32X1	1	49.	72532972	ADAPTER #8MJIC #12FJIC	1
25.	72066582	CLAMP (SEE NOTE)	2	50.	72532980	ADAPTER #8JIC PR SW IN-LINE	1
				51.	51714498	HOSE KIT (INCL: 2,3,4,6,11,12)	1
				52.	72533567	ELBOW #4MSTR #4MJIC XLG	2

FIGURE B-37. OUTRIGGER KIT-MNL OUT/PWR DN 7X5 (31712732)

**FIGURE B-38. OUTRIGGER KIT-MNL OUT/CRANK DN 7X5 (31712733)
(REPLACED BY 31718953 9-21-04)**

ITEM	PART NO.	DESCRIPTION	QTY
1.	51705040	CRANK ASM (INCL:11-14)	1
2.	52070138	T-PIN	1
3.		OUTRIGGER HOUSING	REF
4.	52712737	ARM-ADJUSTABLE	1
5.	52712738	ARM-STATIONARY	1
6.	60010351	SPRING	1
7.	72060107	CAP SCR 1/2-13X8 HHGR5	1
8.	72062107	NUT 1/2-13 LOCK HEX	1
9.	72063027	MACH BUSHING 5/8	2
10.	72066185	COTTER PIN 5/32X1	1
11.	52705039	CRANK (PART OF 1)	1REF
12.	60030099	ROLLER (PART OF 1)	1REF
13.	72063003	WASHER 3/8 WRT (PART OF 1)	2REF
14.	72062103	NUT 3/8-16 LOCK (PART OF 1)	1REF
15.	52703319	CRANK HANDLE	1
16.	71039096	KNOB	1
17.	70392864	DECAL-DANGER STAND CLEAR	2
18.	72063005	WASHER 1/2 WRT	2

INSTALLATION NOTE: OUTRIGGER HOUSING TUBE MUST BE TIED INTO THE STRUCTURAL SUPPORT OF THE CRANE.

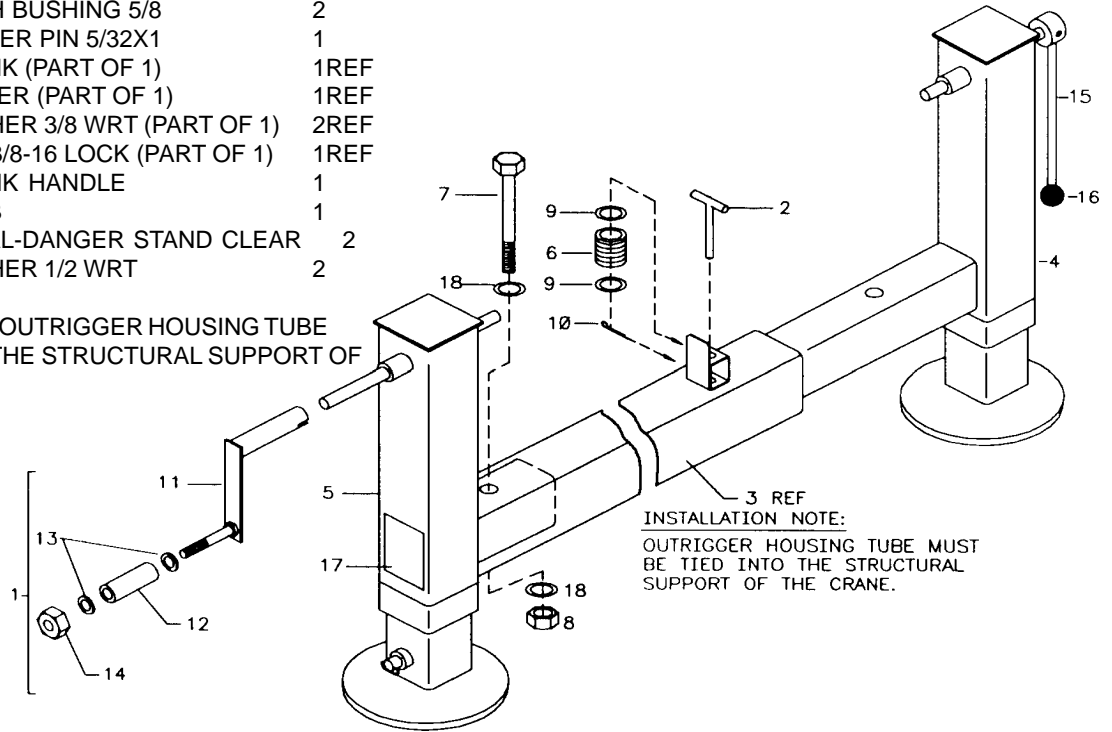
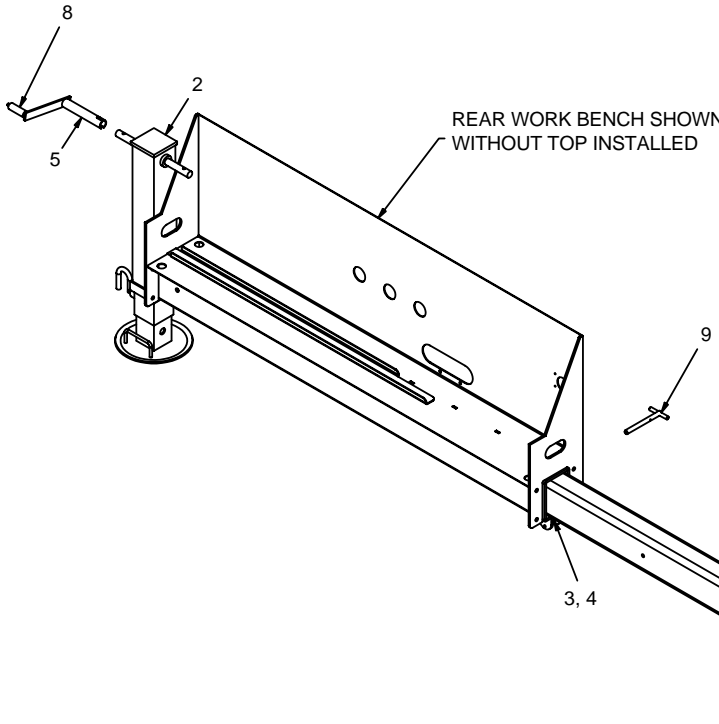
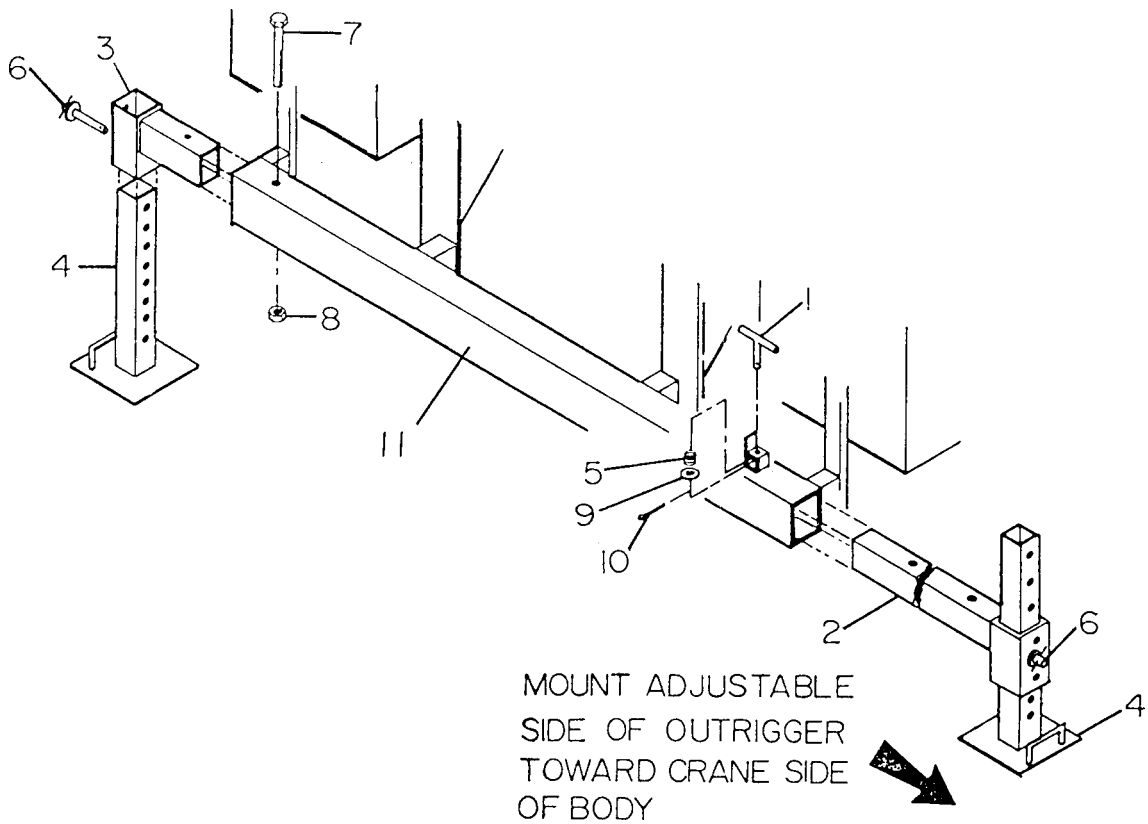


FIGURE B-38A: MNL OUT/CRANK DN 7X5 (31718953)



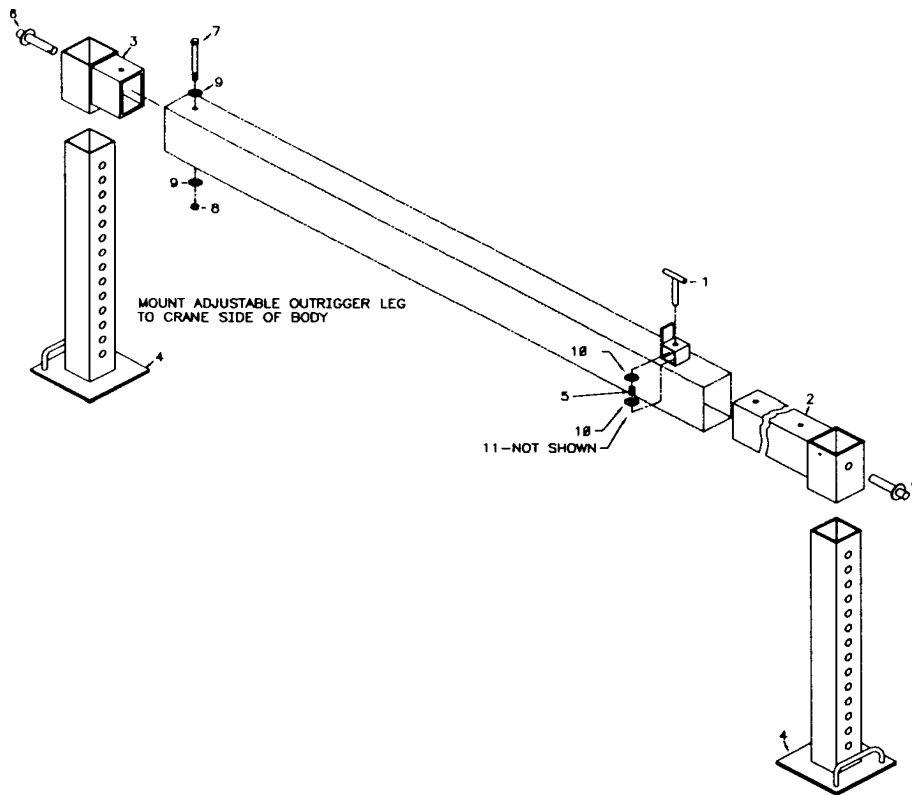
ITEM	PART NO.	DESCRIPTION	QTY
1.	52712737	ARM, OR ADJ MAN CRANK	1
2.	5212738	ARM, OR STAT MAN CRANK	1
3.	60106314	PIN	1
4.	60030053	ROLLER	1
5.	52705039	CRANK, WELDMENT	1
6.	52703319	CRANK HANDLE, WLDMT	1
7.	71039096	KNOB, CONTROL	1
8.	60030099	ROLLER	1
9.	52718725	PIN WELDMENT	1



ITEM	PART NO.	DESCRIPTION	QTY
1.	52070138	T-PIN	1
2.	52712889	ARM-ADJUSTABLE	1
3.	52712890	ARM-STATIONARY	1
4.	52703353	LEG	2
5.	60010351	SPRING	1
6.	71731361	T-PIN-QUICK RELEASE	2
7.	72060107	CAP SCR 1/2-13X8 HHGR5	1
8.	72062080	NUT 1/2-13 LOCK	1
9.	72063007	WASHER 5/8 WRT	1
10.	72066185	COTTER PIN 1/16X1	1
11.	52712734	OUTRIGGER HOUSING 7X5	1

INSTALLATION NOTE:OUTRIGGER HOUSING TUBE
MUST BE TIED INTO THE STRUCTURAL SUPPORT OF
THE CRANE.

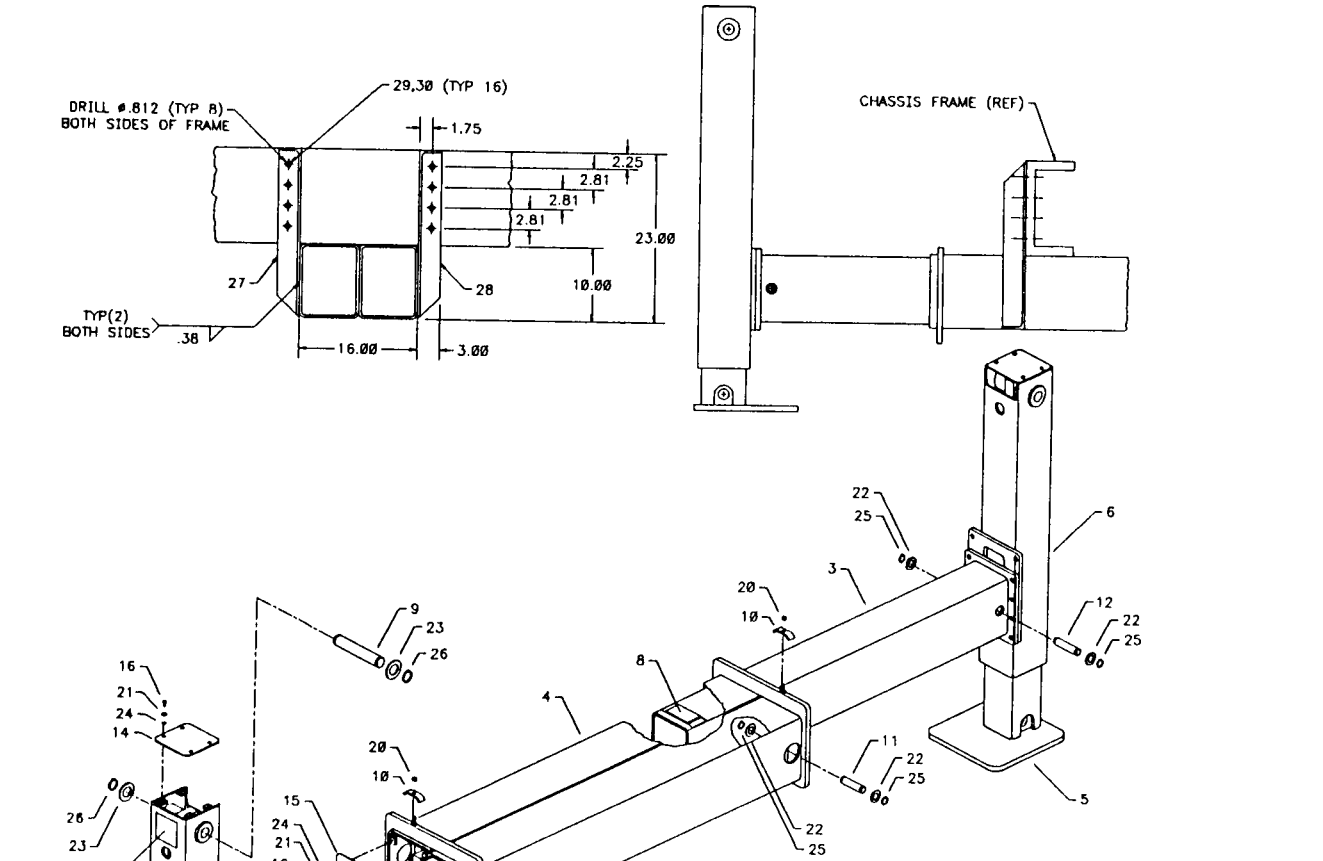
FIGURE B-39. AUX OUTRIGGER-MNL OUT/MNL DN 7X5 (31712902)



ITEM	PART NO.	DESCRIPTION	QTY
1.	52070138	T-PIN	1
2.	52712889	ARM-ADJUSTABLE	1
3.	52712890	ARM-STATIONARY	1
4.	52703353	LEG	2
5.	60010351	SPRING	1
6.	71731361	T-PIN-QUICK RELEASE	2
7.	72060107	CAP SCR 1/2-13X8 HHGR5	1
8.	72062080	NUT 1/2-13 LOCK	1
9.	72063005	WASHER 1/2 WRT	2
10.	72063027	MACH BUSHING 5/8	2
11.	72066185	COTTER PIN 1/16X1	1

INSTALLATION NOTE:OUTRIGGER HOUSING TUBE MUST BE TIED INTO THE STRUCTURAL SUPPORT OF THE CRANE.

FIGURE B-40. OUTRIGGER KIT-MNL OUT/MNL DN 7X5 (31712891)

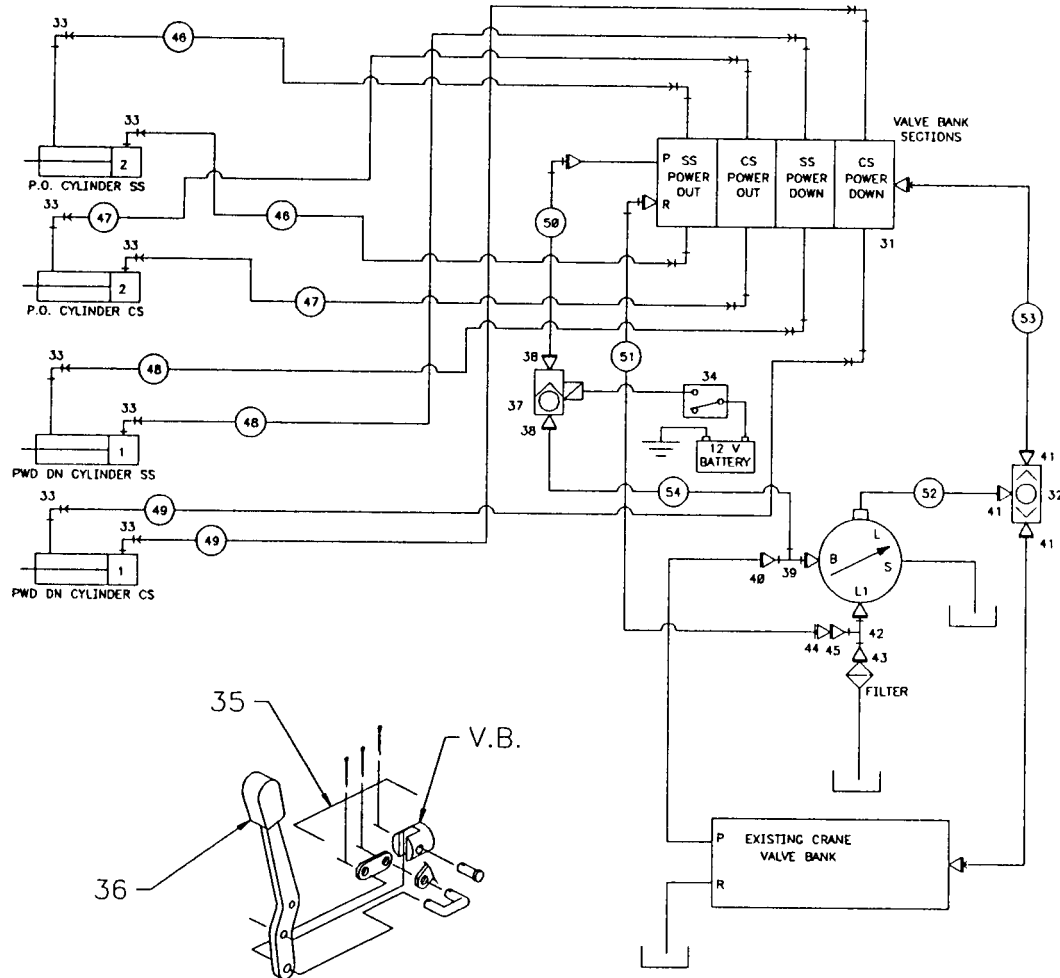


ITEM	PART NO.	DESCRIPTION	QTY
1.	3B020860	CYLINDER-POWER DOWN	2
2.	3B148860	CYLINDER-POWER OUT	2
3.	52706375	ARM	2
4.	52706385	ARM HOUSING	1
5.	52706388	LEG	2
6.	52706396	LEG HOUSING	2
7.	60030067	WEAR PAD	2
8.	60030293	WEAR PAD	2
9.	60105321	PIN	2
10.	60107648	HOSE CLAMP-SMALL	2
11.	60109500	PIN	2
12.	60109501	PIN	2
13.	60109593	PIN	2
14.	60109594	COVER	2
15.	60109595	COVER-ARM HSG	2
16.	72060002	CAP SCR 1/4-20X3/4 HHGR5	16
17.	70392864	DECAL-DANGER STAND CLEAR	2
18.	72060816	CAP SCR 5/8-11X2-1/2 SH	16
19.	72062091	NUT 5/8-11 LOCK	16
20.	72062103	NUT 3/8-16 LOCK	2
21.	72063001	WASHER 1/4 WRT	16
22.	72063034	MACH BUSHING 1X10GA NR	8
23.	72063037	MACH BUSHING 1-1/2X10GA NR	8
24.	72063049	WASHER 1/4 LOCK	16
25.	72066125	RETAINING RING-EXT 1HD	8
26.	72066132	RETAINING RING-EXT 1-1/2HD	8
27.	60109606	ANGLE-MTG AUX REAR	2
28.	60109687	ANGLE-MTG AUX FRONT	2
29.	72060186	CAP SCR 3/4-10X2-1/2 HHGR5	16
30.	72062114	NUT 3/4-10 LOCK	16

SEE FOLLOWING PAGE FOR DRAWING

INSTALLATION NOTE:OUTRIGGER HOUSING TUBE MUST BE TIED INTO THE STRUCTURAL SUPPORT OF THE CRANE.

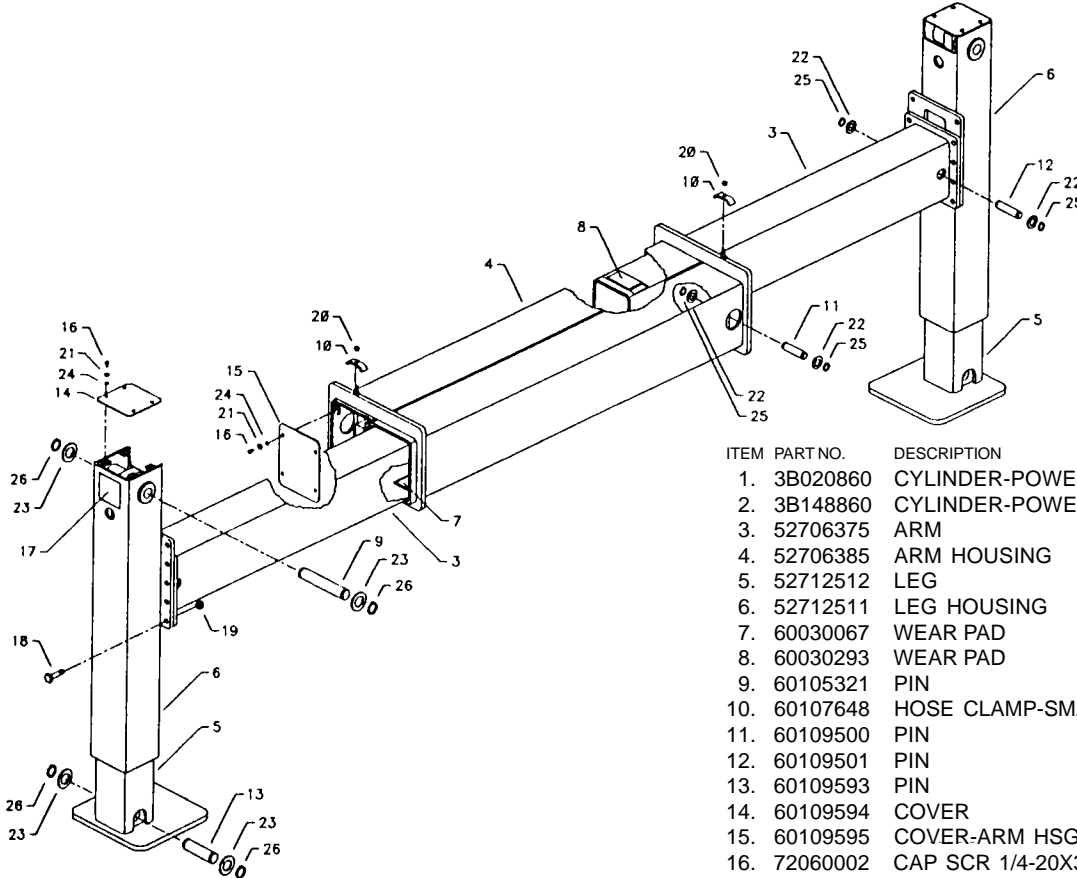
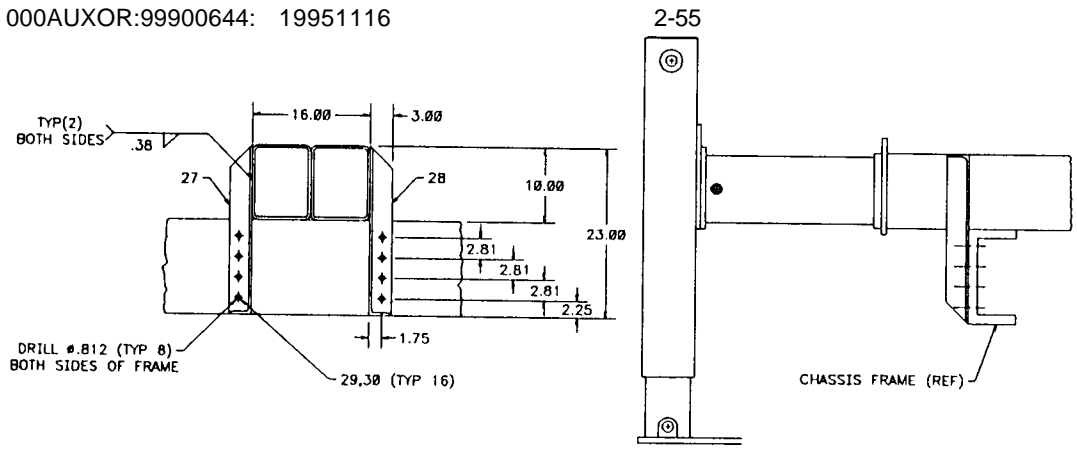
FIGURE B-41. OUTRIGGER KIT-PO/PD REAR MNT LOAD SENSE HYD (31712754)



ITEM	PART NO.	DESCRIPTION	QTY
31.	51710778	VB-4 SECT LOAD SENSE	1
32.	73054785	SHUTTLE VALVE	1
33.	72053763	ELBOW #8MSTR #8MJIC	8
34.	77041347	SWITCH-SPST MOMENTARY	1
35.	94731839	LINK & PIN KIT	1
36.	73014848	HANDLE-VB	4
37.	73054576	SOLENOID CHECK VALVE	1
38.	72532358	ADAPTER #8MSTR #8MJIC	2
39.	72532657	TEE #8JIC RUN	1
40.	72533437	ADAPTER #8MFACE #8FJIC	1
41.	72532353	ADAPTER #6MSTR #4MJIC	3
42.	72053615	TEE 1-1/4NPT	1
43.	72053211	NIPPLE 1-1/4NPT X CLOSE	1

ITEM	PART NO.	DESCRIPTION	QTY
44.	72053677	ADAPTER 1MPT #12MJIC	1
45.	72531837	REDUCER BUSHING 1-1/4 1NPT	1
46.	51706440	HOSE ASM 1/2X68 FF	2
47.	51706441	HOSE ASM 1/2X117 FF	2
48.	51706465	HOSE ASM 1/2X98 FF	2
49.	51706439	HOSE ASM 1/2X165 FF	2
50.	51706448	HOSE ASM 1/2X45 FF	1
51.	51711685	HOSE ASM 3/4X360 FF	1
52.	51706152	HOSE ASM 1/4X36 FF	1
53.	51710205	HOSE ASM 1/4X340 FF	1
54.	51712753	HOSE ASM 1/2X300 FF	1
56.	70392867	DECAL-DANGER OR MOVING	1
57.	71392257	DECAL-CTRL PWR DN	1
58.	71393885	DECAL-CTRL PWR OUT	1

FIGURE B-41A. OUTRIGGER KIT-PO/PD REAR MNT LOAD SENSE HYD (31712754)

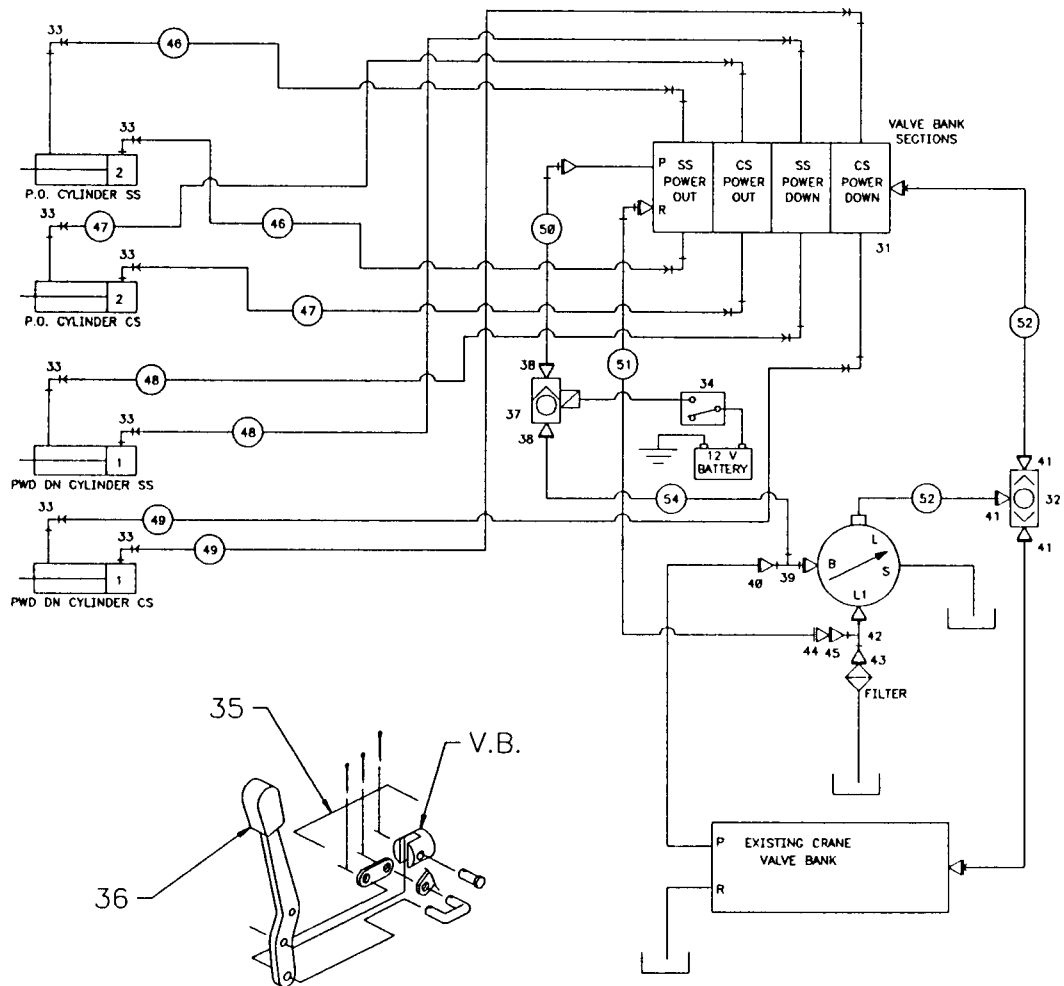


ITEM	PART NO.	DESCRIPTION	QTY
1.	3B020860	CYLINDER-POWER DOWN	2
2.	3B148860	CYLINDER-POWER OUT	2
3.	52706375	ARM	2
4.	52706385	ARM HOUSING	1
5.	52712512	LEG	2
6.	52712511	LEG HOUSING	2
7.	60030067	WEAR PAD	2
8.	60030293	WEAR PAD	2
9.	60105321	PIN	2
10.	60107648	HOSE CLAMP-SMALL	2
11.	60109500	PIN	2
12.	60109501	PIN	2
13.	60109593	PIN	2
14.	60109594	COVER	2
15.	60109595	COVER-ARM HSG	2
16.	72060002	CAP SCR 1/4-20X3/4 HHGR5	16
17.	70392864	DECAL-DANGER STAND CLEAR	2
18.	72060816	CAP SCR 5/8-11X2-1/2 SH	16
19.	72062091	NUT 5/8-11 LOCK	16
20.	72062103	NUT 3/8-16 LOCK	2
21.	72063001	WASHER 1/4 WRT	16
22.	72063034	MACH BUSHING 1X10GA NR	8
23.	72063037	MACH BUSHING 1-1/2X10GA NR	8
24.	72063049	WASHER 1/4 LOCK	16
25.	72066125	RETAINING RING-EXT 1HD	8
26.	72066132	RETAINING RING-EXT 1-1/2HD	8
27.	60109606	ANGLE-MTG AUX REAR	2
28.	60109687	ANGLE-MTG AUX FRONT	2
29.	72060186	CAP SCR 3/4-10X2-1/2 HHGR5	16
30.	72062114	NUT 3/4-10 LOCK	16

SEE FOLLOWING PAGE FOR DRAWING

INSTALLATION NOTE:OUTRIGGER HOUSING TUBE MUST BE TIED INTO THE STRUCTURAL SUPPORT OF THE CRANE.

FIGURE B-42. OUTRIGGER KIT-PO/PD FRONT MNT LOAD SENSE HYD (31712755)



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
31.	51710778	VB-4 SECT LOAD SENSE	1	44.	72053677	ADAPTER 1MPT #12MJIC	1
32.	73054785	SHUTTLE VALVE	1	45.	72531837	REDUCER BUSHING 1-1/4 1NPT	1
33.	72053763	ELBOW #8MSTR #8MJIC	8	46.	51706440	HOSE ASM 1/2X68 FF	2
34.	77041347	SWITCH-SPST MOMENTARY	1	47.	51706441	HOSE ASM 1/2X117 FF	2
35.	94731839	LINK & PIN KIT	1	48.	51706465	HOSE ASM 1/2X98 FF	2
36.	73014848	HANDLE-VB	4	49.	51706439	HOSE ASM 1/2X165 FF	2
37.	73054576	SOLENOID CHECK VALVE	1	50.	51706448	HOSE ASM 1/2X45 FF	1
38.	72532358	ADAPTER #8MSTR #8MJIC	2	51.	51708700	HOSE ASM 3/4X60 FF	1
39.	72532657	TEE #8JIC RUN	1	52.	51706152	HOSE ASM 1/4X36 FF	1
40.	72533437	ADAPTER #8MFACE #8FJIC	1	54.	51712756	HOSE ASM 1/2X60 FF	1
41.	72532353	ADAPTER #6MSTR #4MJIC	3	56.	70392867	DECAL-DANGER OR MOVING	1
42.	72053615	TEE 1-1/4NPT	1	57.	71392257	DECAL-CTRL PWR DN	1
43.	72053211	NIPPLE 1-1/4NPT X CLOSE	1	58.	71393885	DECAL-CTRL PWR OUT	1

FIGURE B-42A. OUTRIGGER KIT-PO/PD FRONT MNT LOAD SENSE HYD (31712755)

ITEM	PART NO.	DESCRIPTION	QTY
1.	3B205010	PD CYLINDER	2
2.	71411797	PO CYLINDER (WAS 3B142860)	1
3.	51714141	HOSE KIT (INCL:4-10)	1
4.	51394688	HOSE-FF 1/2X147 (PART OF 3)	1
5.	51394689	HOSE-FF 3/4X51 (PART OF 3)	1
6.	51394690	HOSE-FF 1/2X153(PART OF 3)	1
7.	51394691	HOSE-FF 1/4X38.5(PART OF 3)	2
8.	51394692	HOSE-FF 1/4X107(PART OF 3)	2
9.	51394693	HOSE-FF 1/4X130.5(PART OF 3)	2
10.	51394694	HOSE-FF 1/4X58.5(PART OF 3)	2
11.	52712735	ARM-ADJ PWR DN	1
12.	52712736	ARM-STAT PWR DN	1
13.	71392277	DECAL-PWR OUT	1
14.	72053758	ELBOW #4MSTR #4MJIC 90°	2
15.	72060025	CAP SCR 5/16-18X1 HHGR5	3
16.	72060107	CAP SCR 1/2-13X8 HHGR5	1
17.	72060155	CAP SCR 5/8-11X3-1/2 HHGR5	4
18.	72062080	NUT 1/2-13 LOCK	2
19.	72062091	NUT 5/8-11 LOCK	2
20.	72063002	WASHER 5/16 WRT	5
21.	72066582	CLAMP	2
22.	72531205	TEE #8MJIC 1/2	1
23.	72532351	ADAPTER #4MSTR #4MJIC	2
24.	72532972	ADAPTER #8MJIC #12FJIC	1
25.	72532980	ADAPTER PR-IN-LINE	1
26.	72533024	UNION #4JIC	2
27.	72601297	CAP SCR 1/2-13X5-3/4 HHGR5	1
28.	72661472	PIN-SPRING	1
29.	76391511	DECAL-UP & DN	1
30.	89034049	SPIRAL WRAP	4FT
31.	99900644	OUTRIGGER MANUAL	1
32.	72063005	WASHER 1/2 WRT	2
33.	51714317	VB ASM 3-SECT PO/PD	1
34.	72533567	ELBOW #4MSTR #4MJIC XLG	2
35.	70392864	DECAL-DGR OUTRG STD CLR	2

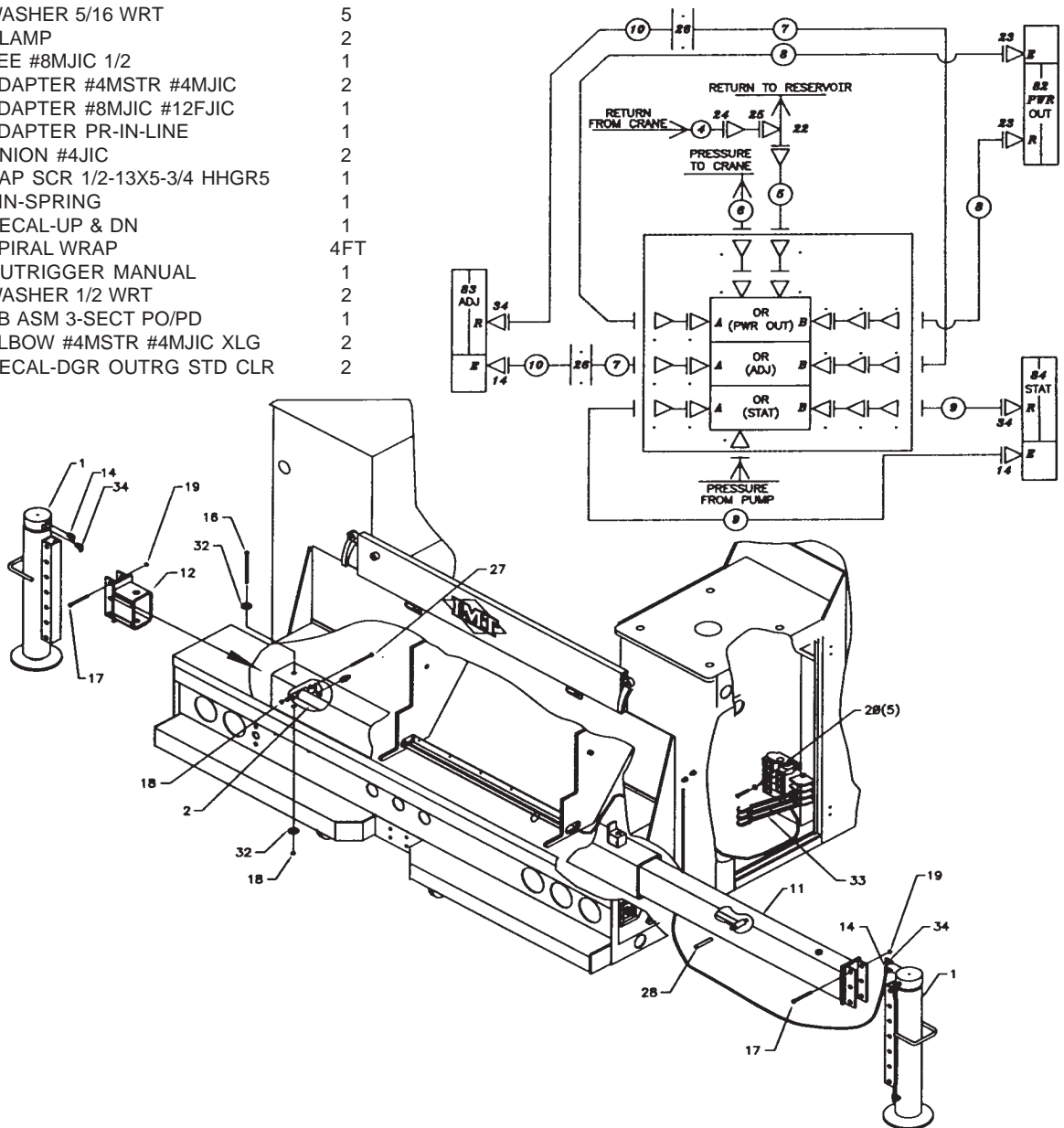
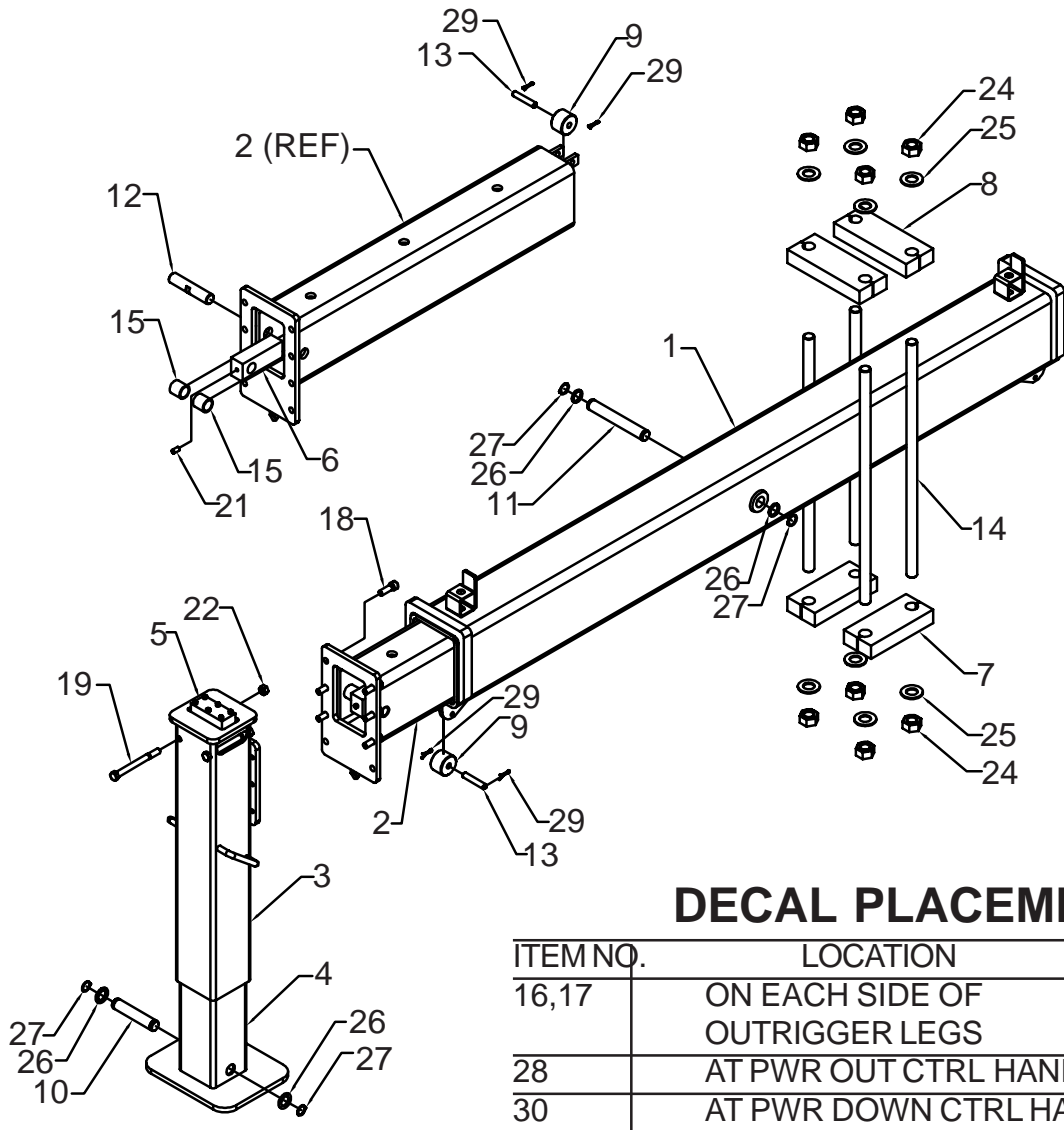


FIGURE B-43: OUTRIGGER KIT-PWR OUT/PWR DN 7X5 (31714334)

1.	52704109	OUTRG HSG WELDMENT	1
2.	52701065	OUTRG ARM WELDMENT	2
3.	52704867	OUTRG HSG WLDMT 525/725	2
4.	52704868	OUTRG LEG WLDMT 525/725	2
5.	3B166820	CYL-2.5/1.5	2
6.	3B210522	CYL-2.0/1.2	2
7.	60010354	CLAMP PLATE	4
8.	60106716	CLAMP PLATE	4
9.	60030053	ROLLER UHMW 1/2X2/1.38	4
10.	60106970	PIN-A 1.25X5.4	2
11.	60103202	PIN-A 1.0 X 7-1/8	1
12.	60106281	PIN-F 1.0 X 4-7/8	2
13.	60106314	PIN-O 1/2 X 2-3/4	4
14.	71014053	STUD-TIE DOWN	8
15.	60106380	PIPE-1.00 SCH 40 X 1-1/4	4
16.	70392864	DECAL-DANGER OUTRG	2
17.	70392867	DECAL-DANGER OUTRG MOV	2
18.	72060795	CAP SCR 1/2-13X 1.5 SH PLN	12

19.	72060102	CAP SCR 1/2-13 X 5.5 HH GR5Z 4	
21.	72060581	SET SCR 3/8-16 X 3/4 SH PLN	2
22.	72062107	NUT 1/2-13 HEX	4
24.	72062141	NUT 1.00 - 8 HEX LOCK	18
25.	72063066	WASHER 1.00 HI-STR	16
26.	72063034	MACHY BUSHING 1.00 X 10	6
27.	72066125	RETAINING RING-EXT 1.00	6
28.	71392277	DECAL-OUTRG POWER OUT	1
29.	72066178	COTTTER PIN 1/8	8
30.	71392257	DECAL-OUTRG PWR DN SS	1

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DECAL PLACEMENT

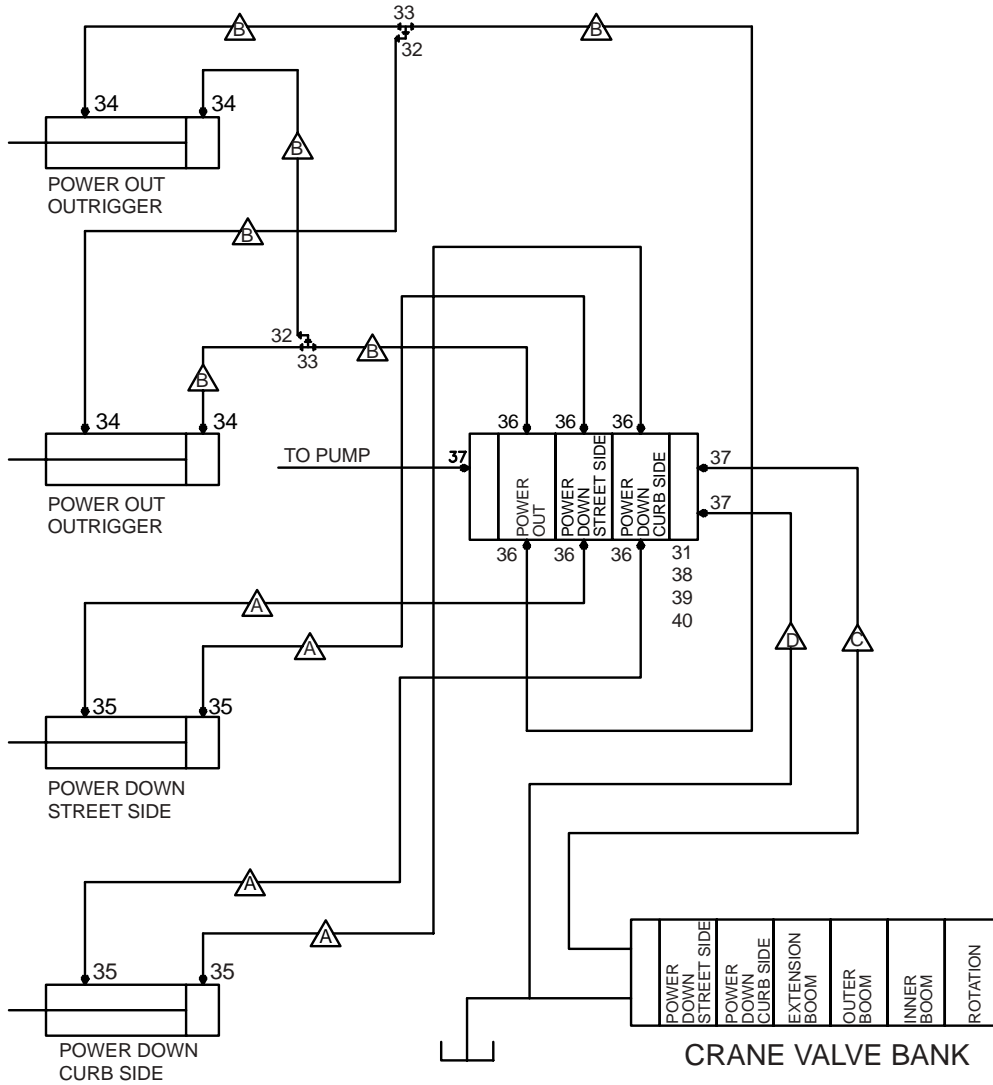
ITEM NO.	LOCATION
16,17	ON EACH SIDE OF OUTRIGGER LEGS
28	AT PWR OUT CTRL HANDLE
30	AT PWR DOWN CTRL HANDLE

**FIGURE B-44: AUX O/R PO BEHIND CAB MNT-REAR CRANE (99903388-1)
(REPLACED BY 99903685 MARCH 2005)**

31.	73733678	VALVE BANK - 3 SEC RS270 MAN	1
32.	72532690	ELBOW #4MJIC #4FJIC SW	2
33.	72532768	TEE-MALE JIC .44-20 1/4 TUBE	2
34.	72532351	ADPTR-#4MSTR #4MJIC	4
35.	72532799	ELBOW #6MSTR #8MJIC XLG	4

36.	72533737	ELBOW #10 MSTR #6MJIC 90°	6
37.	72532366	ADPTR #12MSTR #12MJIC	3
38.	72060056	CAP SCR 3/8-16 X 4.00 HH GR5	3
39.	72062103	NUT 1/4-20 HEX NYLOC ZINC	3
40.	72063003	WASHER 3/8 FLAT	6

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NOTES:

1. HYDRAULIC HOSES AND HOSE ROUTINGS ARE THE RESPONSIBILITY OF THE INSTALLER. FOLLOW THE GUIDELINES BELOW FOR SPECIFICATIONS ON HOSE SIZES AND PSI REQUIREMENTS.

- HYDRAULIC HOSE SIZE = 3/8 WITH A MINIMUM OF 2500 PSI
- HYDRAULIC HOSE SIZE = 1/4 WITH A MINIMUM OF 2500 PSI
- HYDRAULIC HOSE SIZE = 3/4 WITH A MINIMUM OF 4700 PSI
- HYDRAULIC HOSE SIZE = 3/4 WITH A MINIMUM OF 200 PSI

FIGURE B-45: AUX O/R PO BEHIND CAB MNT-REAR CRANE (99903388-2)

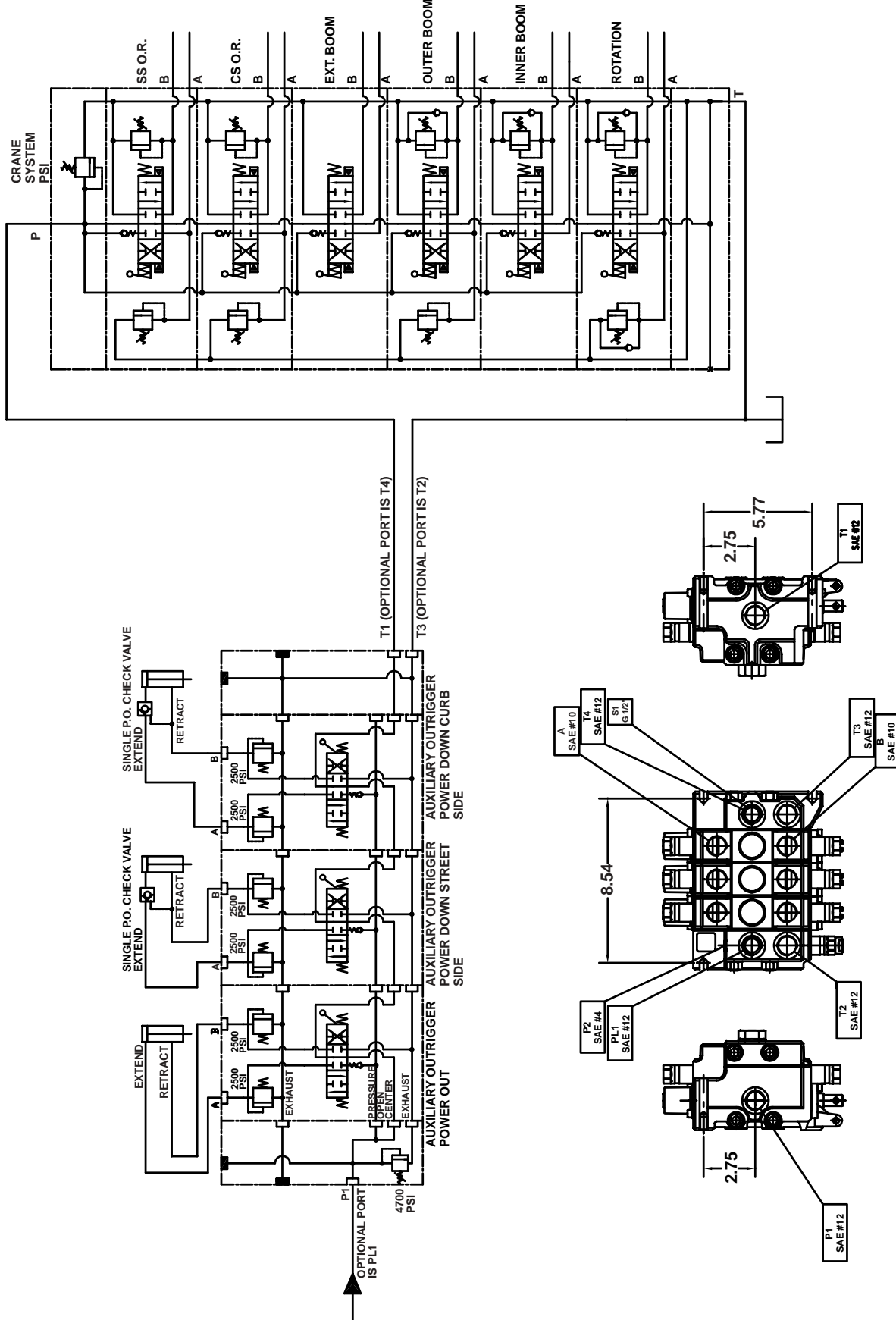


FIGURE B-46: AUX O/R PO BEHIND CAB MNT-REAR CRANE (99903388-3)

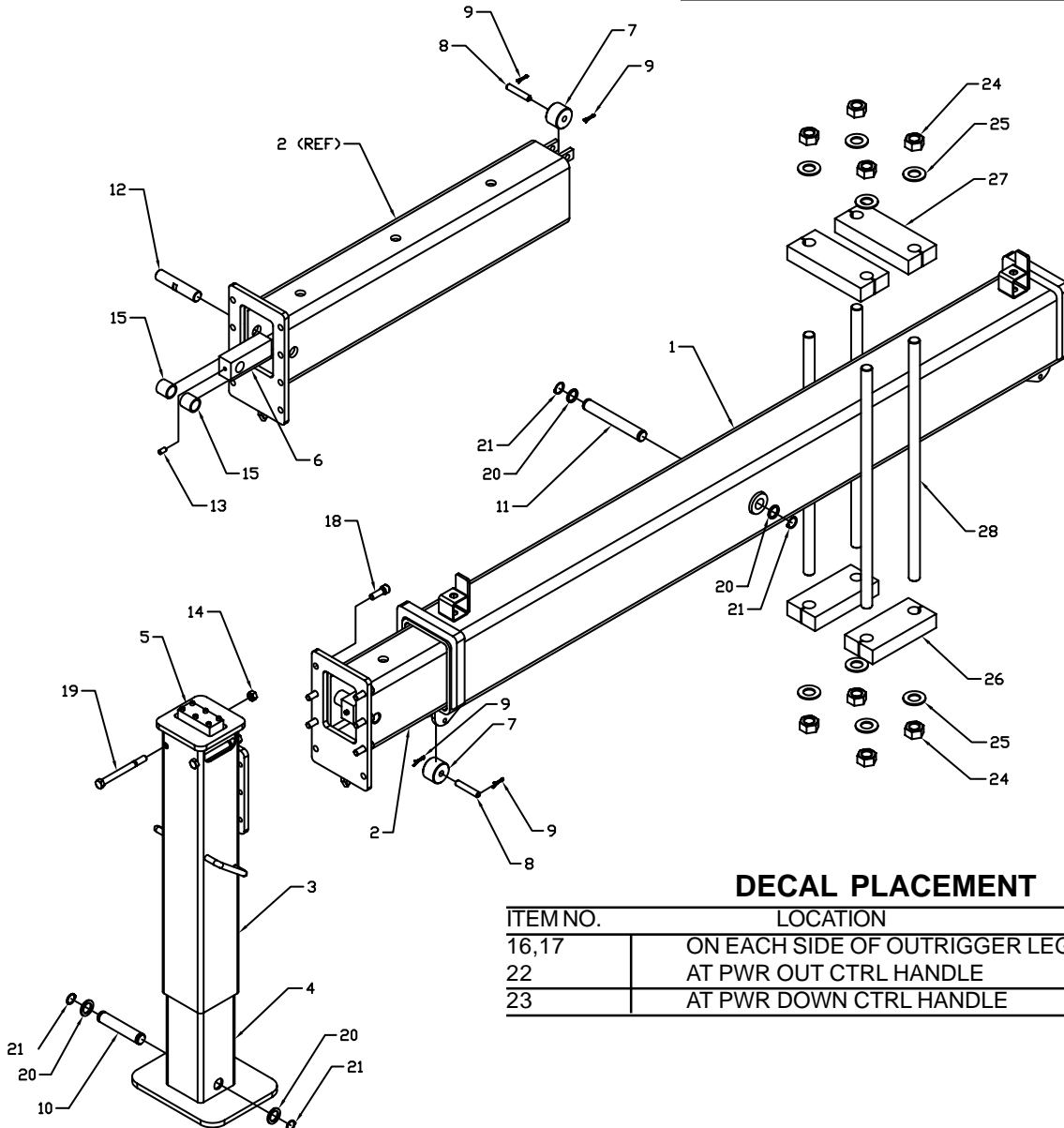
OUTRIGGER ASSEMBLY 91719335 (DWG 99903685)

1.	52704109	OUTRG HSG WELDMNT	1
2.	52701065	OUTRG ARM WELDMNT	2
3.	52704867	OUTRG HSG WLDMT 525/725	2
4.	52704868	OUTRG LEG WLDMT 525/725	2
5.	3B166820	CYL-2.5/1.5	2
6.	3B210522	CYL-2.0/1.2	2
7.	60030053	ROLLER	4
8.	60106314	PIN	4
9.	72066178	COTTER PIN	8
10.	60106968	PIN-A 1X5-1/8	2
11.	60103202	PIN-A 1.0 X 7-1/8	1
12.	60106281	PIN-F 1.0 X 4-7/8	2
13.	72060581	SET SCREW 3/8-16X3/4 SH PL	2
14.	72062107	NUT 1/2-13 HEX CENTER LOCK	4
15.	60106380	PIPE-1.00 SCH 40 X 1-1/4	4

16.	70392864	DECAL-DANGER OUTRG	2
17.	70392867	DECAL-DANGER OUTRG MOV	2
18.	72060795	CAP SCR 1/2-13X 1.5 SH PLN	12
19.	72060102	CAP SCR 1/2-13 X 5.5 HH GR5Z	4
20.	72063034	MACHY BUSHING	6
21.	72066125	RETAINING RING, EXT 1" HD	6
22.	71392277	DECAL-O/R POWER OUT	1
23.	71392257	DECAL-O/R POWER DOWN SS	1
24.	72062141	NUT 1-8 HEX LOCK STIN GR5	16
25.	72063066	WASHER 1.00 HI-STR	16
26.	60010354	CLAMP PLATE	4
27.	60106716	CLAMP PLATE	4
28.	71014053	STUD, TIE DOWN 1X26	8

(NOTE: OUTRIGGER ASSEMBLY 91719335 REPLACES OUTRIGGER ASSEMBLY 91717270; DRAWING 99903685 REPLACES 99903388)

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DECAL PLACEMENT

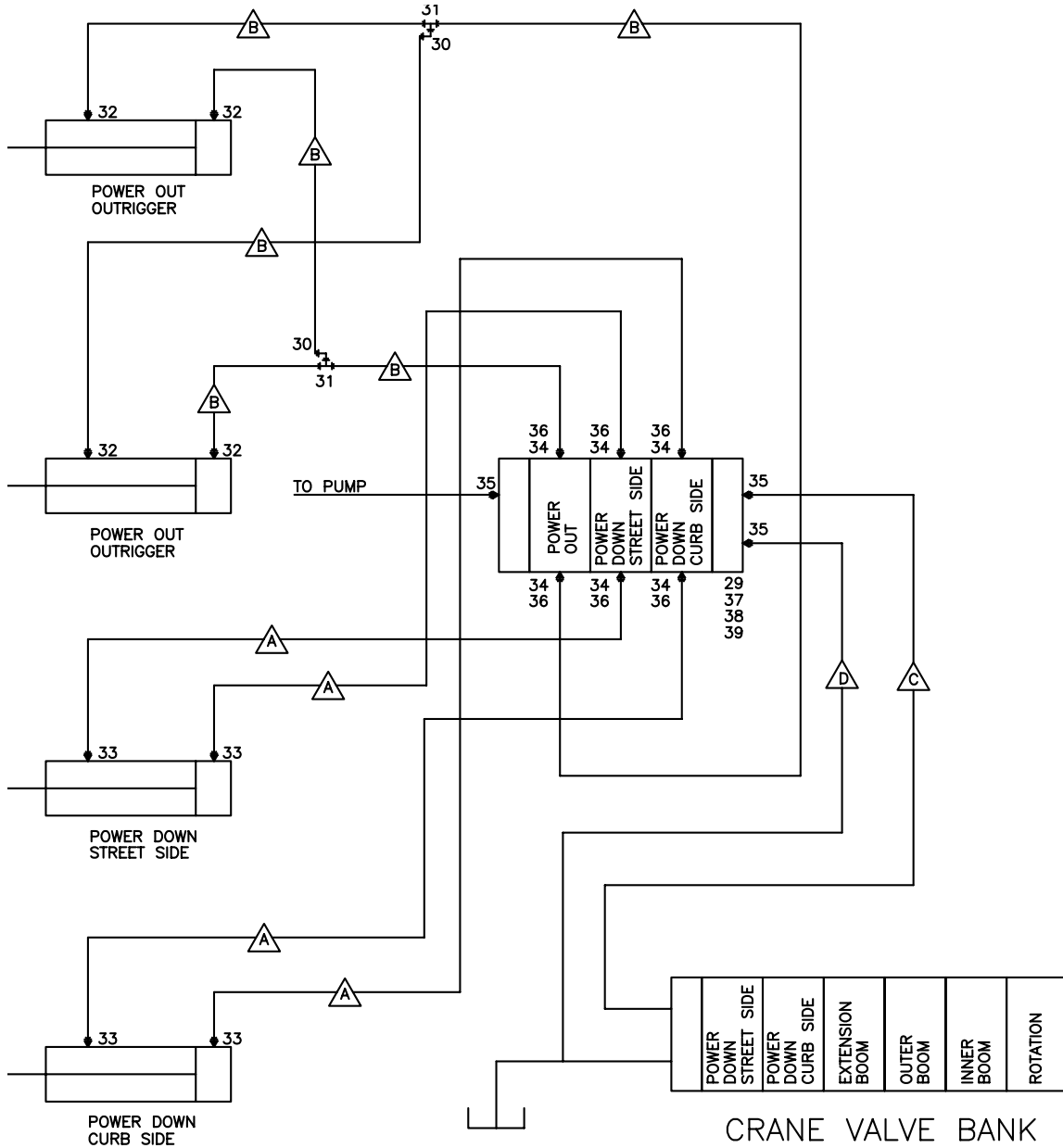
ITEM NO.	LOCATION
16,17	ON EACH SIDE OF OUTRIGGER LEGS
22	AT PWR OUT CTRL HANDLE
23	AT PWR DOWN CTRL HANDLE

FIGURE B-47: AUX O/R PO BEHIND CAB MNT-REAR CRANE (91719335-1/99903685-1)

29. 73733979	VALVEBANK - 3 SEC	1
30. 72532690	ELBOW #4MJIC #4FJIC SW	2
31. 72532768	TEE-MALE JIC .44-20 1/4 TUBE	2
32. 72532351	ADPTR-#4MSTR #4MJIC	4
33. 72532799	ELBOW #6MSTR #8MJIC XLG	4
34. 72534415	ELB #12 MBSPPSTR #8MJIC 90°	6

35. 72532366	ADPTR #12MSTR #12MJIC	3
36. 72532790	ADPTR #6MJIC #8FJIC	6
37. 72060056	CAP SCR 3/8-16X4 HHGR5Z	3
38. 72062103	NUT 1/4-20 HEX NYLOC	3
39. 72063003	WASHER 3/8 FLAT	6

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NOTES:

1. HYDRAULIC HOSES AND HOSE ROUTINGS ARE THE RESPONSIBILITY OF THE INSTALLER. FOLLOW THE GUIDELINES BELOW FOR SPECIFICATIONS ON HOSE SIZES AND PSI REQUIREMENTS.

- △A - HYDRAULIC HOSE SIZE=0.38 WITH A MINIMUM OF 2500 PSI
- △B - HYDRAULIC HOSE SIZE=0.25 WITH A MINIMUM OF 2500 PSI
- △C - HYDRAULIC HOSE SIZE=0.75 WITH A MINIMUM OF 4700 PSI
- △D - HYDRAULIC HOSE SIZE=0.75 WITH A MINIMUM OF 200 PSI

FIGURE B-48: AUX O/R PO BEHIND CAB MNT-REAR CRANE (91719335-2/99903685-2)

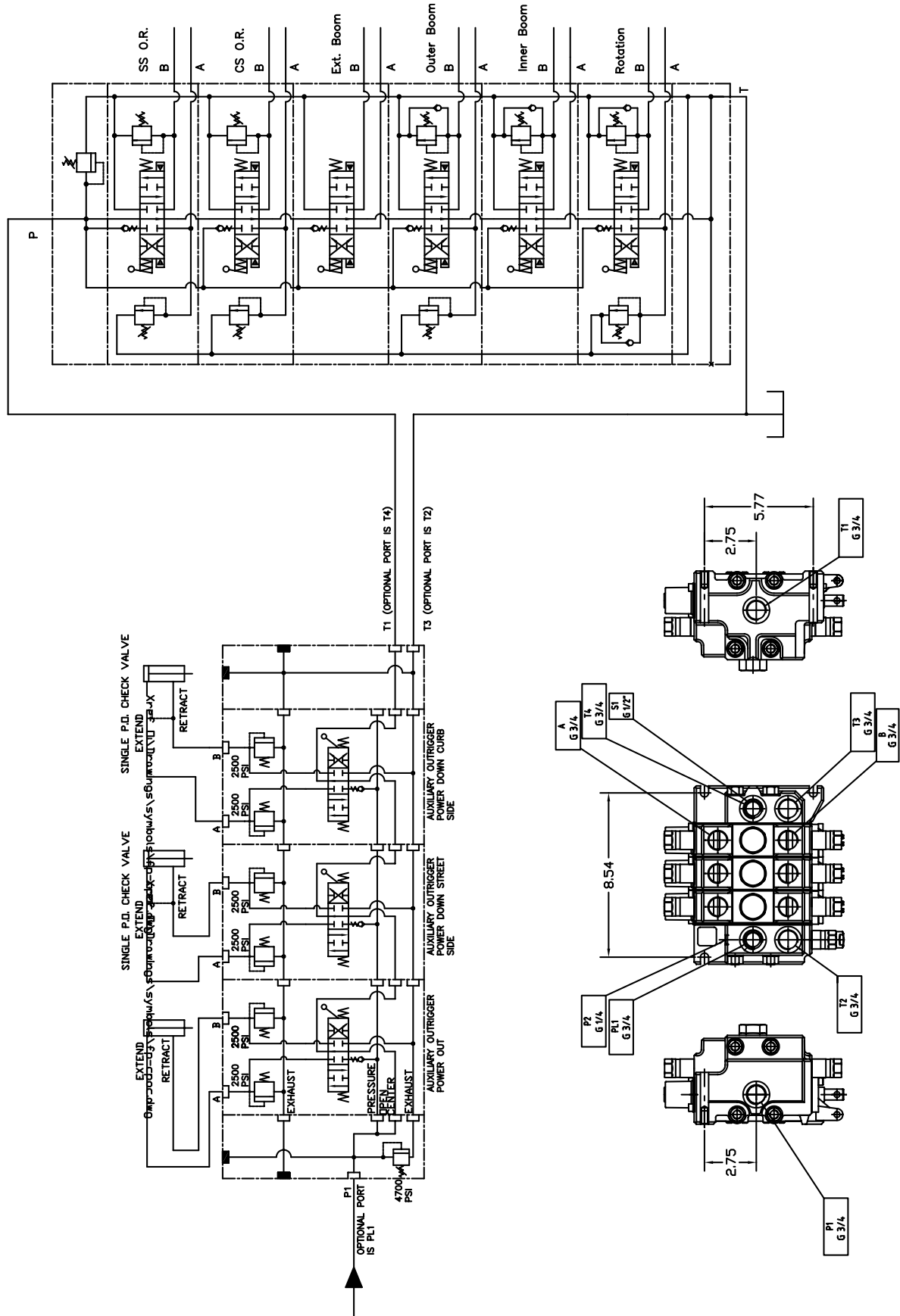
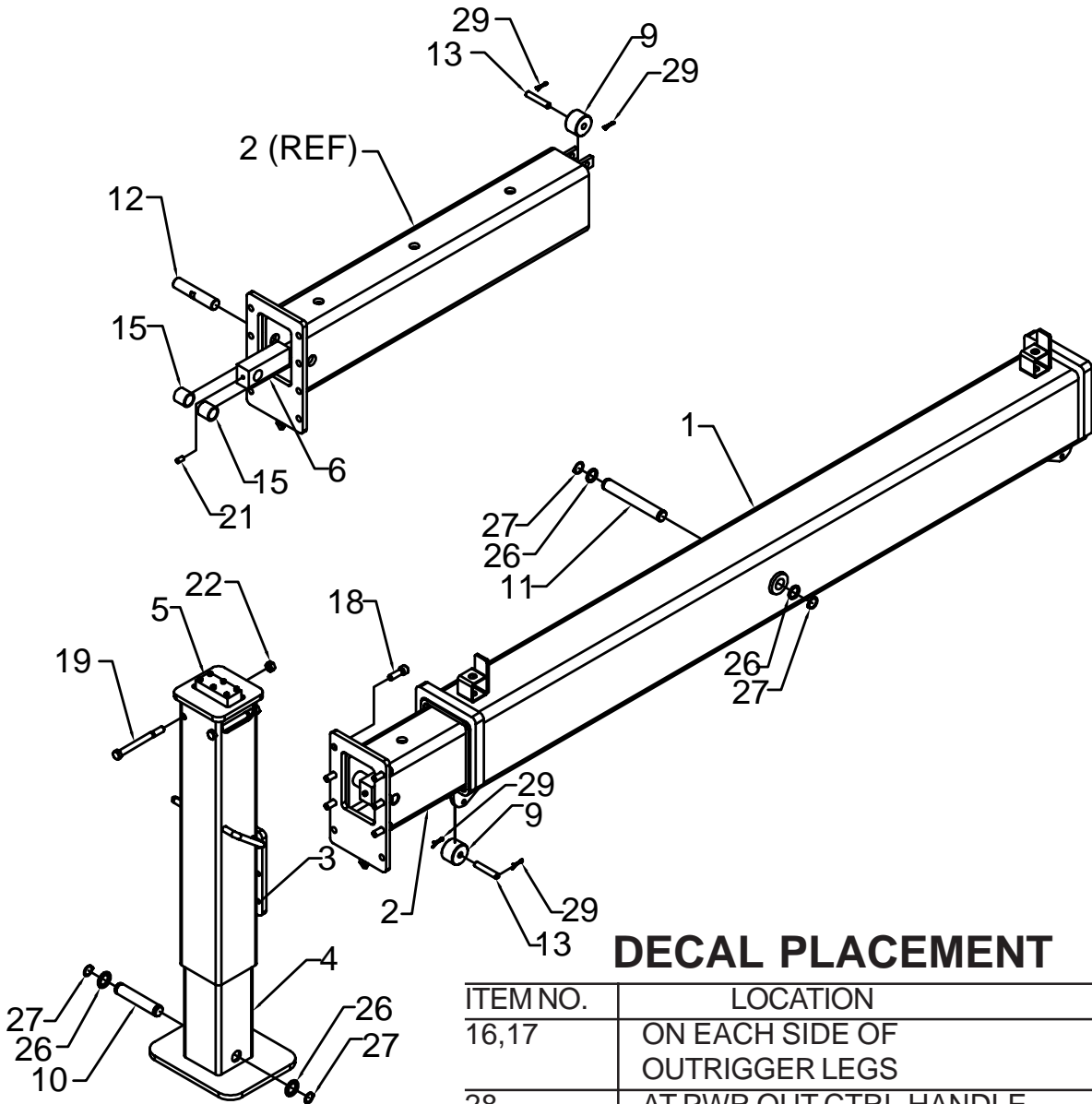


FIGURE B-49: AUX O/R PO BEHIND CAB MNT-REAR CRANE (91719335-3/99903685-3)

1.	52704109	OUTRG HSG WELDMENT	1
2.	52701065	OUTRG ARM WELDMENT	2
3.	52710122	OUTRG HSG WLDMT 20017	2
4.	52704868	OUTRG LEG WLDMT 525/725	2
5.	3B166820	CYL-2.5/1.5	2
6.	3B210522	CYL-2.0/1.2	2
9.	60030053	ROLLER UHMW 1/2X2/1.38	4
10.	60106970	PIN-A 1.25X5.40	2
11.	60103202	PIN-A 1.0 X 7-1/8	1
12.	60106281	PIN-F 1.0 X 4-7/8	2
13.	60106314	PIN-O 1/2 X 2-3/4	4
15.	60106380	PIPE-1.00 SCH 40 X 1-1/4	4
16.	70392864	DECAL-DANGER OUTRG	2

17.	70392867	DECAL-DANGER OUTRG MOV	2
18.	72060795	CAP SCR 1/2-13X 1.5 SH PLN	12
19.	72060102	CAP SCR 1/2-13 X 5.5 HH GR5Z	4
21.	72060581	SET SCR 3/8-16 X 3/4 SH PLN	2
22.	72062107	NUT 1/2-13 HEX	4
26.	72063034	MACHY BUSHING 1.00 X 10	6
27.	72066125	RETAINING RING-EXT 1.00	6
28.	71392277	DECAL-OUTRG POWER OUT	1
29.	72066178	COTTTER PIN 1/8	8
30.	71392257	DECAL-OUTRG PWR DN SS	1

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DECAL PLACEMENT

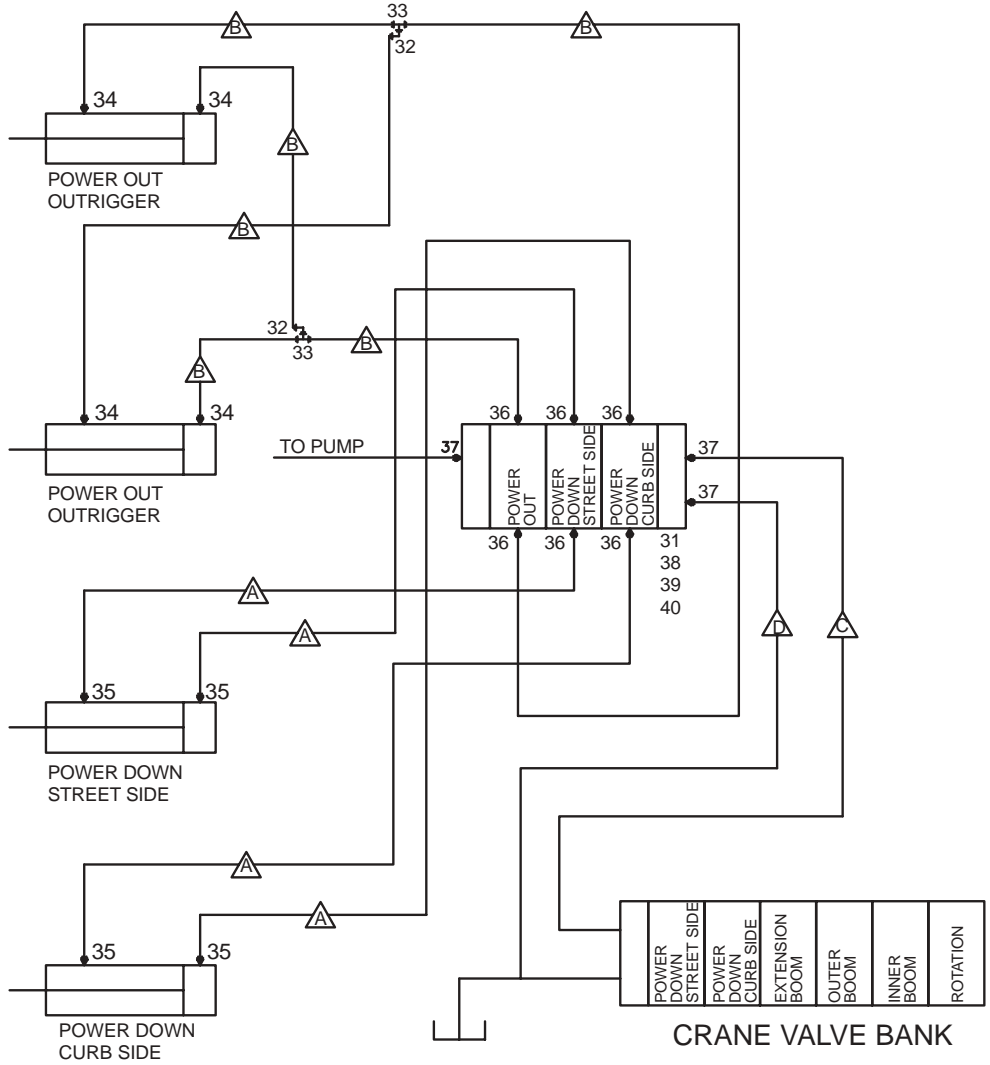
ITEM NO.	LOCATION
16,17	ON EACH SIDE OF OUTRIGGER LEGS
28	AT PWR OUT CTRL HANDLE
30	AT PWR DOWN CTRL HANDLE

**FIGURE B-50: AUX O/R PO REAR MNT - BEHIND CAB CRANE (91717271-1)
(DRAWING NUMBER 99903406-1)
(REPLACED BY 91719336 MARCH 2005)**

31. 73733678	VALVE BANK - 3 SEC RS270 MAN	1
32. 72532690	ELBOW #4MJIC #4FJIC SW	2
33. 72532768	TEE-MALE JIC .44-20 1/4 TUBE	2
34. 72532351	ADPTR-#4MSTR #4MJIC	4
35. 72532799	ELBOW #6MSTR #8MJIC XLG	4

36. 72533737	ELBOW #10 MSTR #6MJIC 90°	6
37. 72532366	ADPTR #12MSTR #12MJIC	3
38. 72060056	CAP SCR 3/8-16 X 4.00 HH GR5	3
39. 72062103	NUT 1/4-20 HEX NYLOC ZINC	3
40. 72063003	WASHER 3/8 FLAT	6

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NOTES:

1. HYDRAULIC HOSES AND HOSE ROUTINGS ARE THE RESPONSIBILITY OF THE INSTALLER. FOLLOW THE GUIDELINES BELOW FOR SPECIFICATIONS ON HOSE SIZES AND PSI REQUIREMENTS.

A- HYDRAULIC HOSE SIZE = 3/8 WITH A MINIMUM OF 2500 PSI

B- HYDRAULIC HOSE SIZE = 1/4 WITH A MINIMUM OF 2500 PSI

C- HYDRAULIC HOSE SIZE = 3/4 WITH A MINIMUM OF 4700 PSI

D- HYDRAULIC HOSE SIZE = 3/4 WITH A MINIMUM OF 200 PSI

**FIGURE B-51: AUX O/R PO REAR MNT - BEHIND CAB CRANE (91717271-2)
(DRAWING NUMBER 99903406-2)**

41.	60114701	MTG ANGLE - RH	2
42.	60114702	MTG ANGLE - LH	2
43.	72060186	CAP SCR 3/4-10 X 2.5 HH GR5	12
44.	72062114	NUT 3/4-10 HEX NYLOC ZINC	12

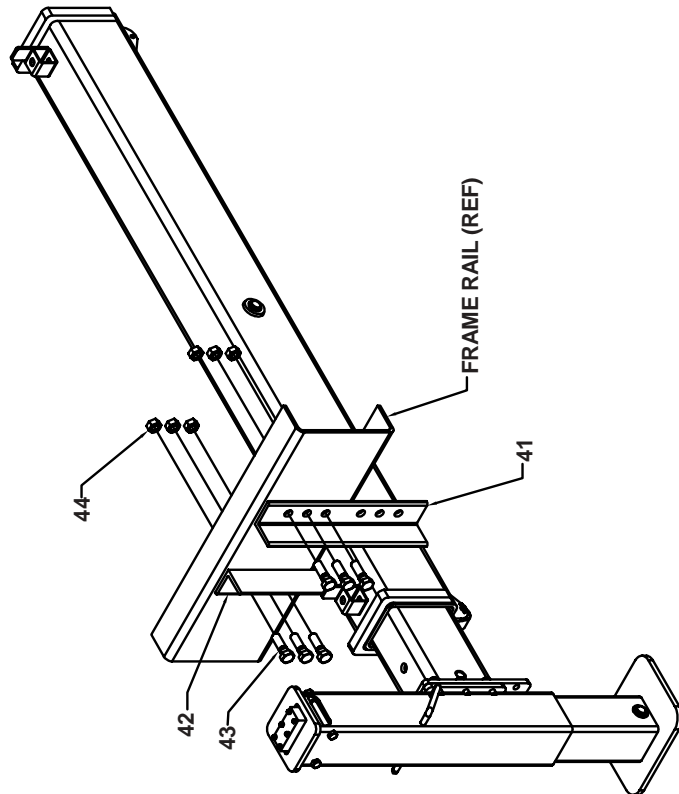
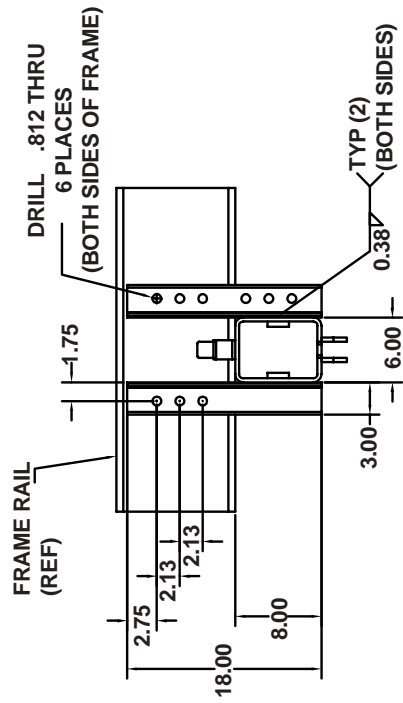


FIGURE B-53: AUX O/R PO REAR MNT - BEHIND CAB CRANE (99903406-4)

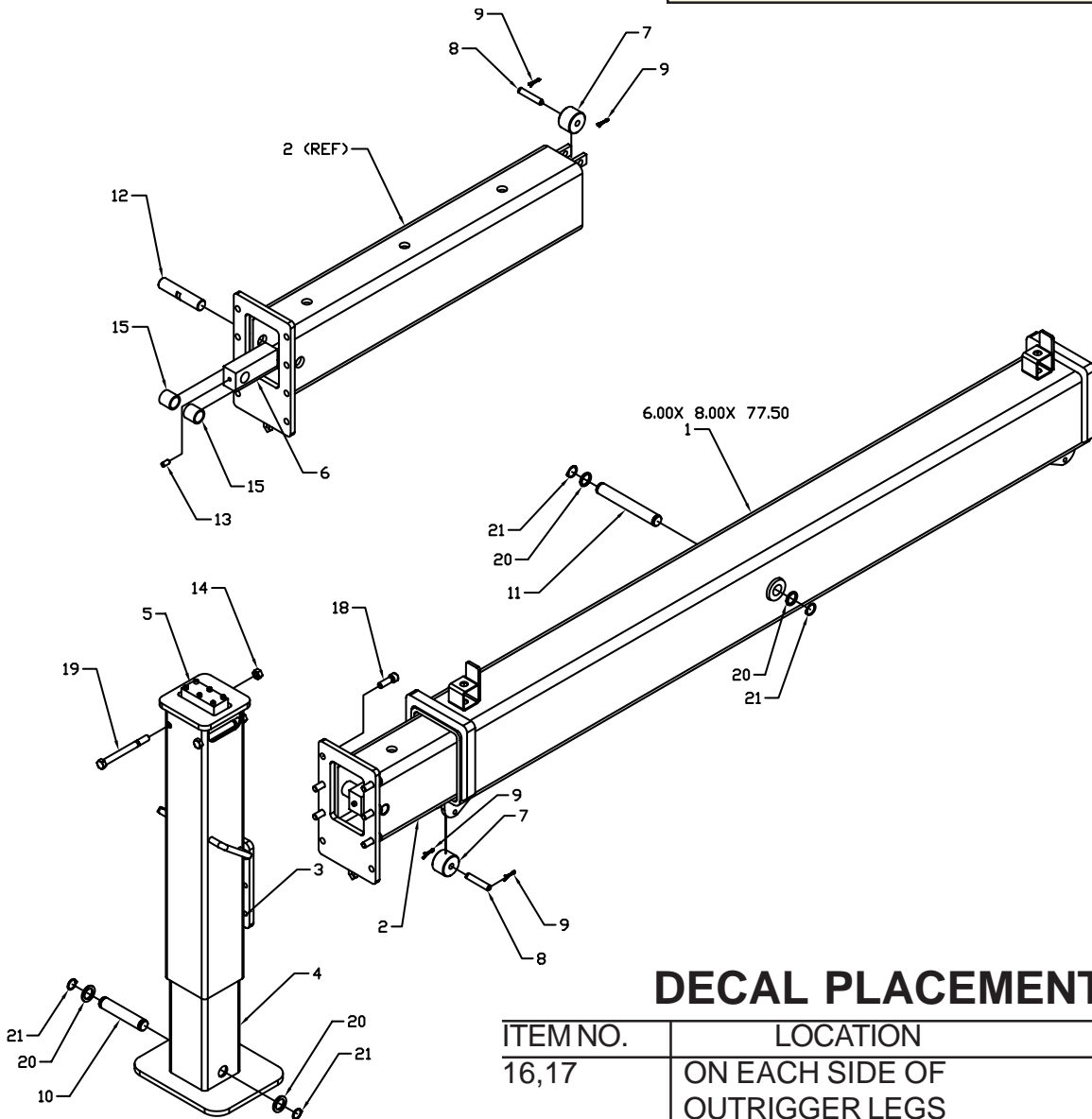
**OUTRIGGER ASSEMBLY (91719366)
(DWG. 99903686)**

- 1. 52704109 OUTRG HSG WELDMENT 1
- 2. 52701065 OUTRG ARM WELDMENT 2
- 3. 52710122 OUTRG HSG WLDMT 20017 2
- 4. 52704868 OUTRG LEG WLDMT 525/725 2
- 5. 3B166820 CYL-2.5/1.5 2
- 6. 3B210522 CYL-2.0/1.2 2
- 7. 60030053 ROLLER UHMW 1/2X2/1.38 4
- 8. 60106314 PIN 4
- 9. 72066178 COTTER PIN 8
- 10. 60106970 PIN-A 1.25X5.4 2
- 11. 60103202 PIN-A 1.0 X 7-1/8 1
- 12. 60106281 PIN-F 1.0 X 4-7/8 2
- 13. 72060581 SET SCR 3/8-16X3/4 SH PLAIN 2

- 14. 72062107 NUT 1/2-13 HEX CENTERLOCK 4
- 15. 60106380 PIPE-1.00 SCH 40 X 1-1/4 4
- 16. 70392864 DECAL-DANGER OUTRG 2
- 17. 70392867 DECAL-DANGER OUTRG MOV 2
- 18. 72060795 CAP SCR 1/2-13X 1.5 SH PLN 12
- 19. 72060102 CAP SCR 1/2-13 X 5.5 HH GR5Z 4
- 20. 72063034 MACHY BUSHING 6
- 21. 72066125 RETAINING RING-EXT 1.00 6
- 22. 71392277 DECAL-OUTRG POWER OUT 1
- 23. 71392257 DECAL-OUTRG PWR DN SS 1

(NOTE: OUTRIGGER ASSEMBLY 91719336 REPLACES OUTRIGGER ASSEMBLY 91717271; DRAWING 99903686 REPLACES 99903406)

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DECAL PLACEMENT

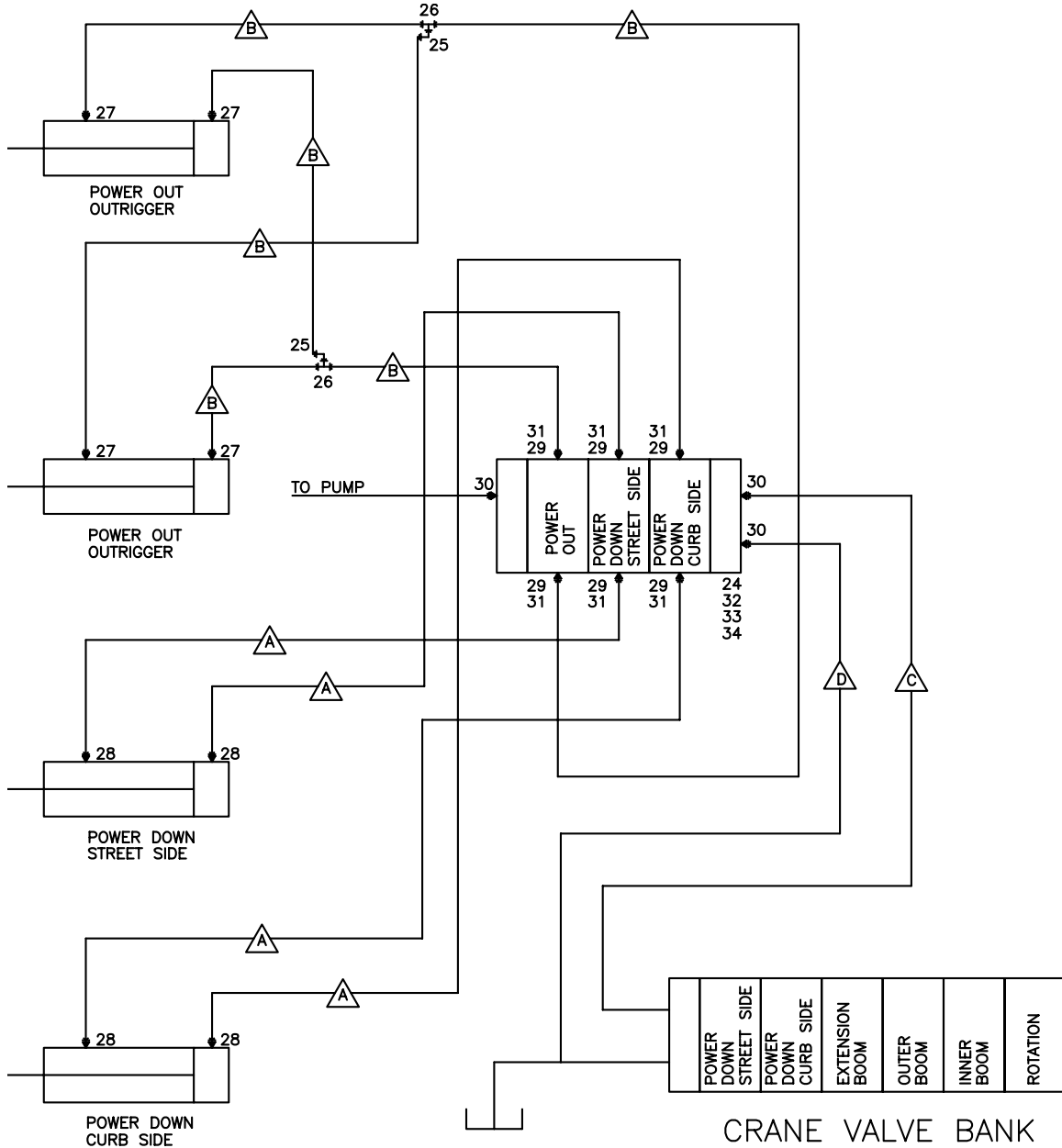
ITEM NO.	LOCATION
16,17	ON EACH SIDE OF OUTRIGGER LEGS
22	AT PWR OUT CTRL HANDLE
23	AT PWR DOWN CTRL HANDLE

**FIGURE B-54: AUX O/R PO REAR MNT - BEHIND CAB CRANE (91719366-1)
(DRAWING NUMBER 99903686-1)**

24. 73733979	VALVE BANK - 3 SEC RS270 MAN	1
25. 72532690	ELBOW #4MJIC #4FJIC SW	2
26. 72532768	TEE-MALE JIC .44-20 1/4 TUBE	2
27. 72532351	ADPTR-#4MSTR #4MJIC	4
28. 72532799	ELBOW #6MSTR #8MJIC XLG	4
29. 72534415	ELBOW #12MBSPPSTR #8MJIC 90	6

30. 72533626	CONNECTOR	3
31. 72532790	ADPTR #6MJIC #8FJIC	6
32. 72060056	CAP SCR 3/8-16X4 HHGR5Z	3
33. 72062103	NUT 1/4-20 HEX NYLOC ZINC	3
34. 72063003	WASHER 3/8 FLAT	6

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NOTES:

1. HYDRAULIC HOSES AND HOSE ROUTINGS ARE THE RESPONSIBILITY OF THE INSTALLER. FOLLOW THE GUIDELINES BELOW FOR SPECIFICATIONS ON HOSE SIZES AND PSI REQUIREMENTS.

- △A - HYDRAULIC HOSE SIZE=0.38 WITH A MINIMUM OF 2500 PSI
- △B - HYDRAULIC HOSE SIZE=0.25 WITH A MINIMUM OF 2500 PSI
- △C - HYDRAULIC HOSE SIZE=0.75 WITH A MINIMUM OF 4700 PSI
- △D - HYDRAULIC HOSE SIZE=0.75 WITH A MINIMUM OF 200 PSI

**FIGURE B-55: AUX O/R PO REAR MNT - BEHIND CAB CRANE (91719366-2)
(DRAWING NUMBER 99903686-2)**

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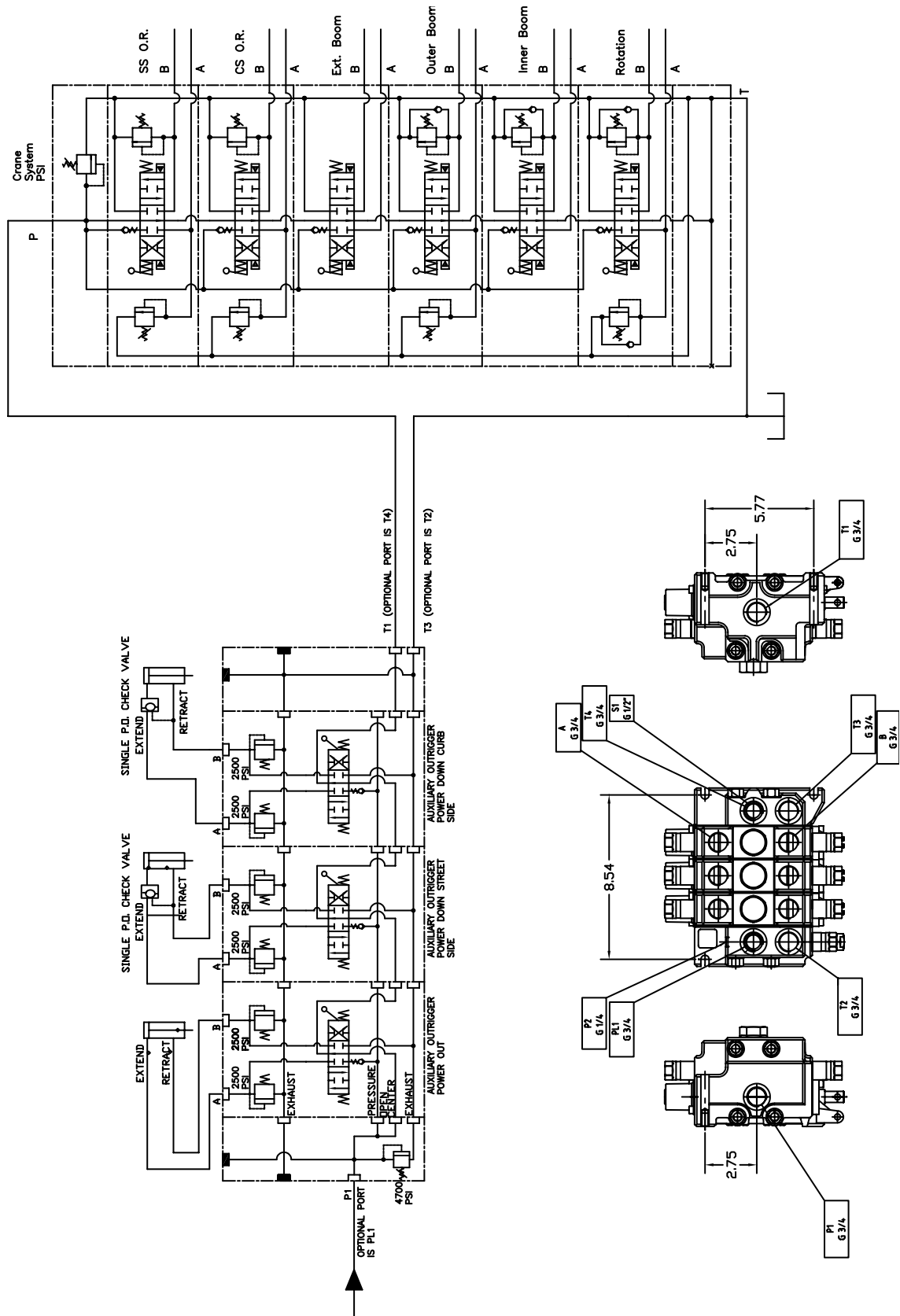
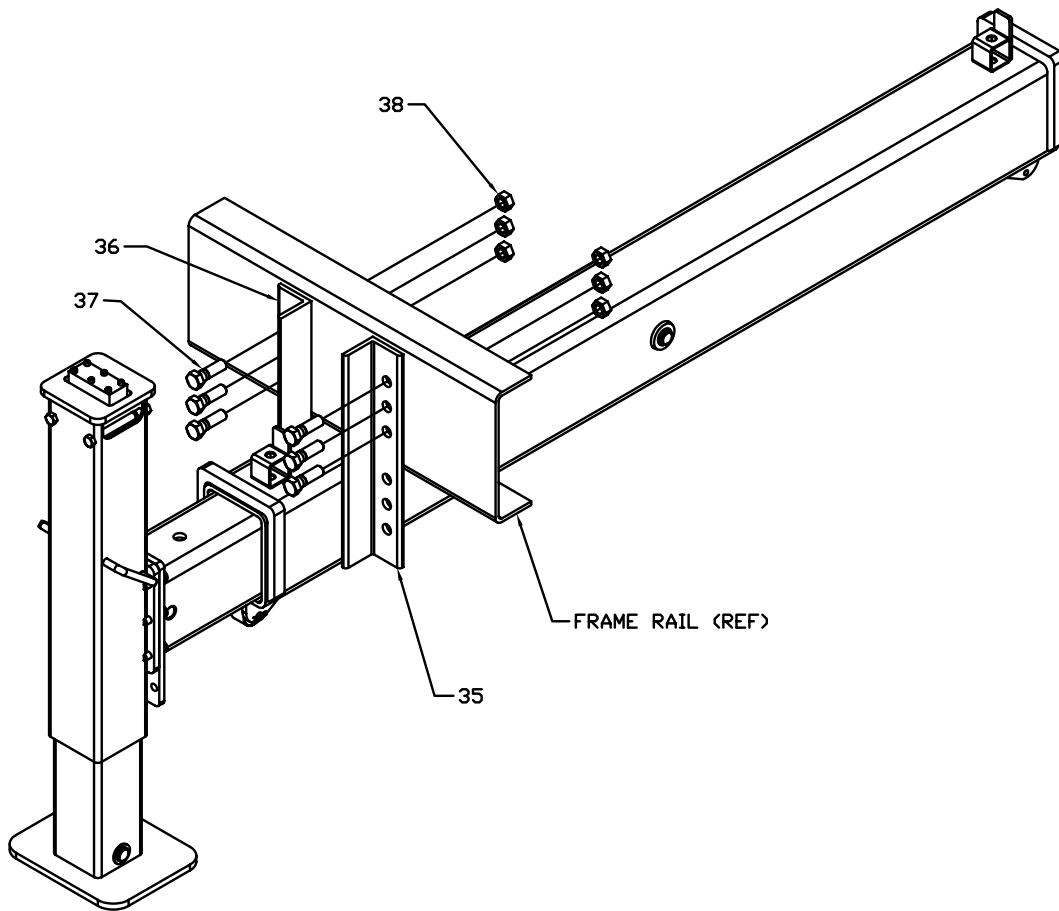
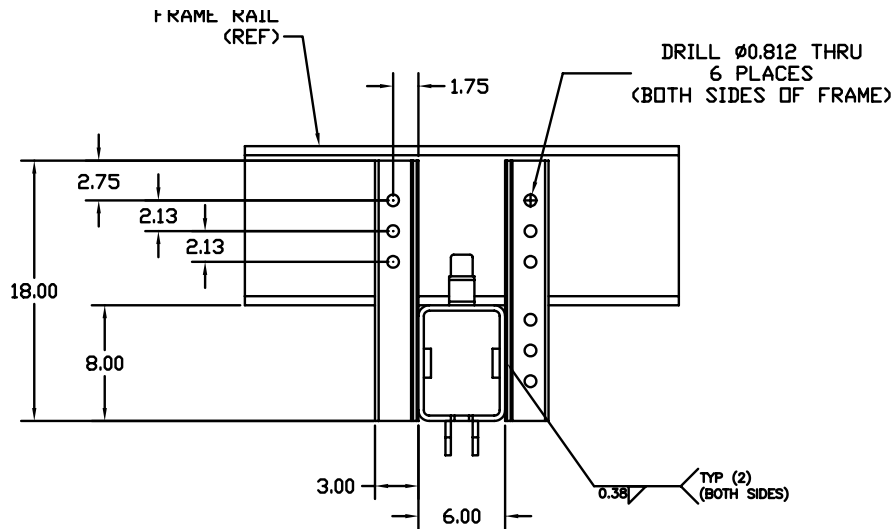


FIGURE B-56: AUX O/R PO REAR MNT - BEHIND CAB CRANE (91719336-3)
(DRAWING NUMBER 99903686-3)

000AUXOR:99900644: 20050510

2-71

35.	60114701	MTG ANGLE - RH	2
36.	60114702	MTG ANGLE - LH	2
37.	72060186	CAP SCR 3/4-10 X 2.5 HH GR5	12
38.	72062114	NUT 3/4-10 HEX NYLOC ZINC	12



**FIGURE B-57: AUX O/R PO REAR MNT - BEHIND CAB CRANE (91719336-4)
(DRAWING NUMBER 99903686-4)**

SECTION 3. PARTS LIST-VALVEBANKS & CYLINDERS

3-1. GENERAL

This section contains the exploded parts drawings with the accompanying parts list for the valvebanks and hydraulic cylinder assemblies. These drawings are intended to be used in conjunction with the instructions found in the REPAIR section of Volume 1.

WARNING

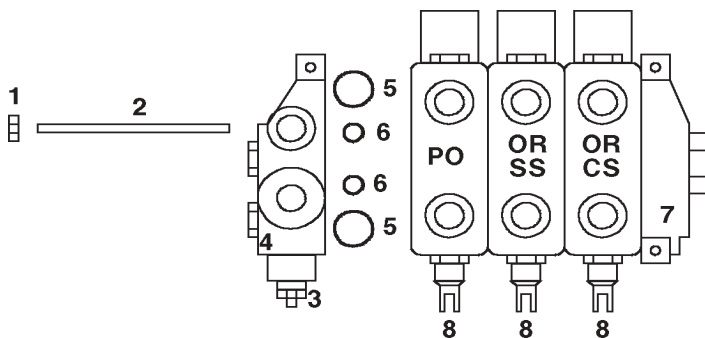
DO NOT ATTEMPT TO REPAIR ANY COMPONENT WITHOUT READING THE INFORMATION CONTAINED IN THE REPAIR SECTION IN VOLUME 1. PAY PARTICULAR ATTENTION TO THE WARNINGS AND NOTES CONTAINED IN THAT SECTION. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN DAMAGE TO THE EQUIPMENT, AN INJURY OR EVEN DEATH.

3-2. ORDERING REPAIR PARTS

When ordering replacement parts:

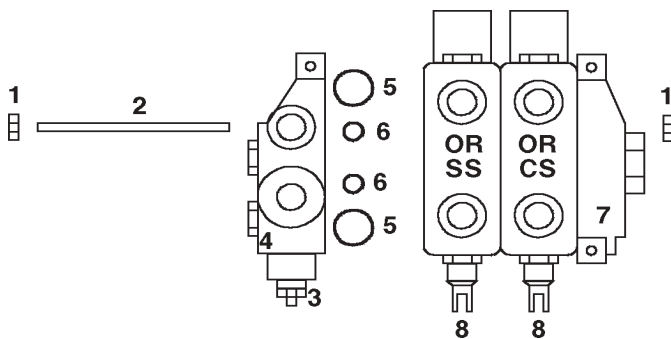
1. Describe the variety and part number of the outrigger assembly.
2. Specify the complete part number. When ordering cylinder parts or one of the major weldments, always give the stamped part number.
3. Give a complete description of the part.
4. Specify the quantity required. All inquiries should be addressed to:

Iowa Mold Tooling Co., Inc.
 Box 189, Garner, IA 50438-0189
 641-923-3711



ITEM	PART NO.	DESCRIPTION	QTY
1	72062037	NUT	6
2	73014594	STUD	3
3	73054643	MAIN RELIEF 2300PSI	1
4	73731424	END CAP - LH	1
5	7Q072021	O-RING LG	8
6	7Q072019	O-RING SM	8
7	73731241	END CAP - RH W/CONV PLUG	1
8	73054432	TANDEM VALVE SECTION	3

FIGURE C-1. VALVEBANK ASM-4WAY 3SPOOL (51703619)



ITEM	PART NO.	DESCRIPTION	QTY
1	72062037	NUT	6
2	73014594	STUD	3
3	73054643	MAIN RELIEF 2300PSI	1
4	73731424	END CAP - LH	1
5	7Q072021	O-RING LG	6
6	7Q072019	O-RING SM	6
7	73731241	END CAP - RH W/CONV PLUG	1
8	73054432	TANDEM VALVE SECTION	2

FIGURE C-2. VALVEBANK ASM-4WAY 2SPOOL (51703620)

1.	51705983	VALVEBANK, 2 SECTION	1
2.	72053763	ELBOW #8MSTR #8MJIC 90°	1
3.	72532358	ADPTR #8MSTR #8MJIC	1
4.	72532358	ADPTR #8MSTR #8MJIC	1
5.	72532792	ADPTR #8MSTR #4MJIC	4

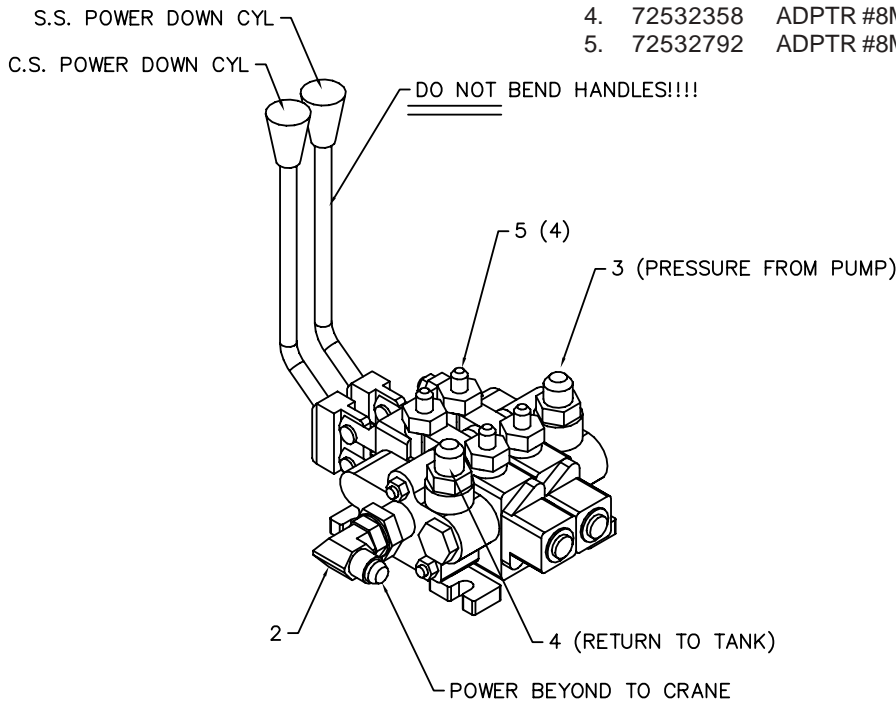
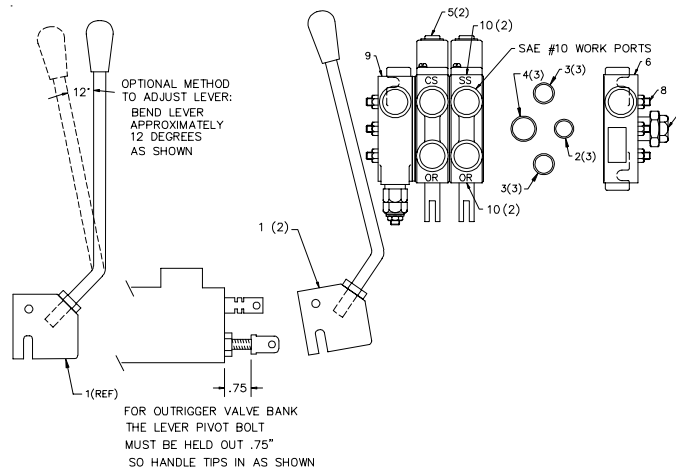


FIGURE C-3A. VALVEBANK ASM-2 SECTION (51714813)



CH PRODUCTS (6021048):

1.	73540073	HANDLE ASM	2
2.	7Q072017	O-RING	3
3.	7Q072018	O-RING	6
4.	7Q072021	O-RING	3
5.	73540074	VALVE SECTION	2
6.	73540075	END COVER-RH	1
7.	73540076	ADPTR-POWER BEYOND	1
8.	73540078	TIE ROD KIT-TWO SECTION	1
9.	73540077	END COVER-LH	1
10.	7Q072114	O-RING	4

GRESEN (V12-320-C):

1.	51731580	HANDLE ASM	2
2.	7Q072017	O-RING	3
3.	7Q072018	O-RING	6
4.	7Q072021	O-RING	3
5.	73054490	VALVE SECTION	2
6.	73540010	END COVER-RH	1
7.	73731763	ADPTR-POWER BEYOND	1
8.	94731590	TIE ROD KIT-TWO SECTION	1
9.	73054488	END COVER-LH	1
10.	7Q072114	O-RING	4

FIGURE C-3. VALVEBANK ASM-2 SECTION (51705983)

- 1. 51705984 VALVEBANK - 3 SECTION 1
- 2. 72053763 ELBOW #8MSTR #8MJIC 90° 1
(WAS 72053764 - ELBOW #10MSTR #8MJIC 90°)
- 3. 72532358 ADPTR-#8MSTR #8MJIC 1
- 4. 72532358 ADPTR-#8MSTR #8MJIC 1
(WAS 72532359-ADPTR #10MSTR #8MJIC)
- 5. 72532792 ADPTR #8MSTR #4MJIC 6
(WAS 72533589-ADPTR #10MSTR #4MJIC)

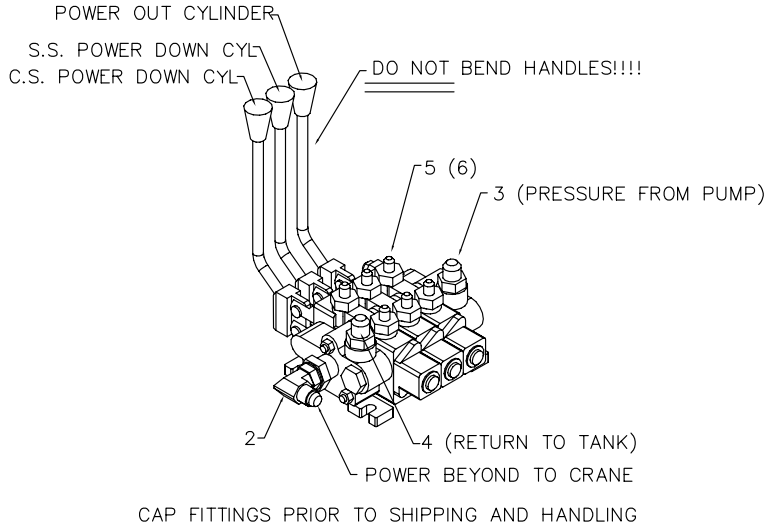
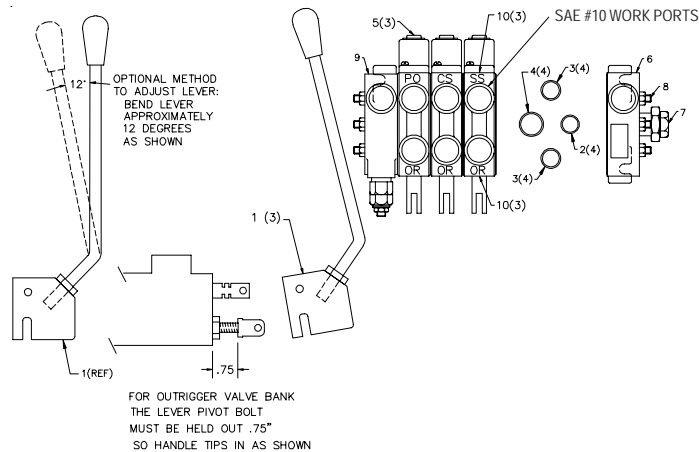


FIGURE C-4. VALVEBANK ASM-3 SECTION O/R (51714812)

20001206



CH PRODUCTS (6021047):

- 1. 73540073 HANDLE ASM 3
- 2. 7Q072017 O-RING 4
- 3. 7Q072018 O-RING 8
- 4. 7Q072021 O-RING 4
- 5. 73540074 VALVE SECTION 3
- 6. 73540075 END COVER-RH 1
- 7. 73540076 ADPTR-POWER BEYOND 1
- 8. 73540079 TIE ROD KIT-TWO SECTION 1
- 9. 73540077 END COVER-LH 1
- 10. 7Q072114 O-RING 6

GRESEN (V12-513-B):

- 1. 51731580 HANDLE ASM 3
- 2. 7Q072017 O-RING 4
- 3. 7Q072018 O-RING 8
- 4. 7Q072021 O-RING 4
- 5. 73054490 VALVE SECTION 3
- 6. 73540010 END COVER-RH 1
- 7. 73731763 ADPTR-POWER BEYOND 1
- 8. 94731764 TIE ROD KIT-TWO SECTION 1
- 9. 73054488 END COVER-LH 1
- 10. 7Q072114 O-RING 6

FIGURE C-4A. VALVEBANK ASM-3 SECTION (51705984)

NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

APPLY "LUBRIPLATE #630-2" MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT OR EQUIVALENT TO ALL PISTON AND HEAD GLANDS, LOCK RING AND ROD THREADS BEFORE ASSEMBLY.

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.

ITEM	PART NO.	DESCRIPTION	QTY
1.	4B048870	CASE ASM	1
2.	4G048870	ROD ASM	1
3.	7PNPXT02	PIPE PLUG (PART OF 1)	4REF
4.	73054004	VALVE	1
5.	72060708	CAP SCR 1/4-20X1-1/4 SH	6
6.	6H035025	HEAD	1
7.	6I035125	PISTON	1
8.	7Q072338	O-RING (PART OF 17)	1REF
9.	7Q10P338	BACK-UP RING (PART OF 17)	1REF
10.	7T2N8027	WEAR RING (PART OF 17)	1REF
11.	7R546025	ROD SEAL (PART OF 17)	1REF
12.	7R14P025	ROD WIPER (PART OF 17)	1REF
13.	7T65I035	PISTON RING (PART OF 17)	2REF
14.	7T61N125	LOCK RING SEAL (PART OF 17)	1REF
15.	7T66P035	PISTON SEAL (PART OF 17)	1REF
16.	6A025025	WAFER LOCK (PART OF 17)	1REF
17.	9C142020	SEAL KIT (INCL:8-16,19)	1
18.	6C150025	STOP TUBE	1
19.	7Q072151	O-RING (PART OF 17)	1REF

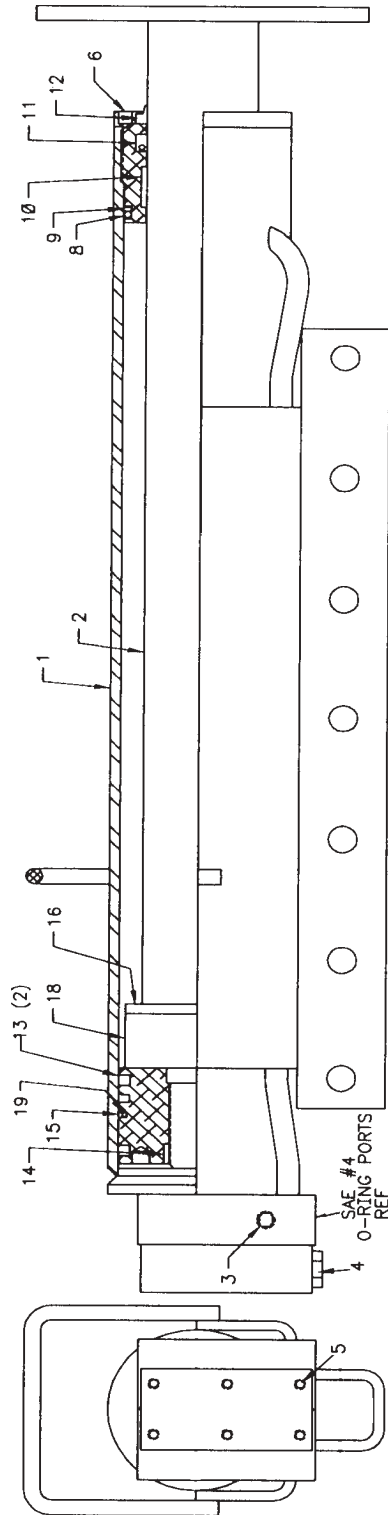
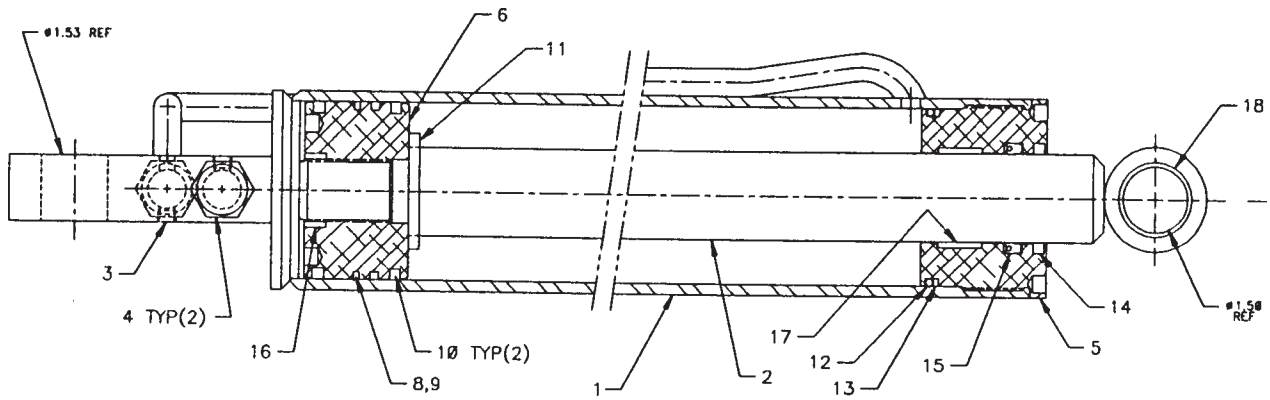


FIGURE C-5. CYLINDER-PWR DN (3B048870)



ITEM	PART NO.	DESCRIPTION	QTY
1.	4B020860	CASE ASM (INCL:3)	1
2.	4G020860	ROD ASM (INCL:17)	1
3.	7PNPXT02	PIPE PLUG 1/8NPT (PART OF 1)	2REF
4.	73054304	C'BALANCE VALVE 10GPM	2
5.	6H040020	HEAD	1
6.	6I040143	PISTON	1
7.	9C161623	SEAL KIT (INCL:8-16)	1
8.	7Q072153	O-RING (PART OF 7)	1REF
9.	7T66P040	PISTON SEAL (PART OF 7)	1REF
10.	7T65I040	PISTON RING (PART OF 7)	2REF
11.	6A025020	WAFER LOCK (PART OF 7)	1REF
12.	7Q072342	O-RING (PART OF 7)	1REF
13.	7Q10P342	BACKUP RING (PART OF 7)	1REF
14.	7R14P020	ROD WIPER (PART OF 7)	1REF
15.	7R546020	U-CUP SEAL (PART OF 7)	1REF
16.	7T61N143	LOCK RING (PART OF 7)	1REF
17.	7T2N8022	ROD WEAR RING (PART OF 7)	1REF
18.	7BF81215	BUSHING (PART OF 2)	2REF

NOTE

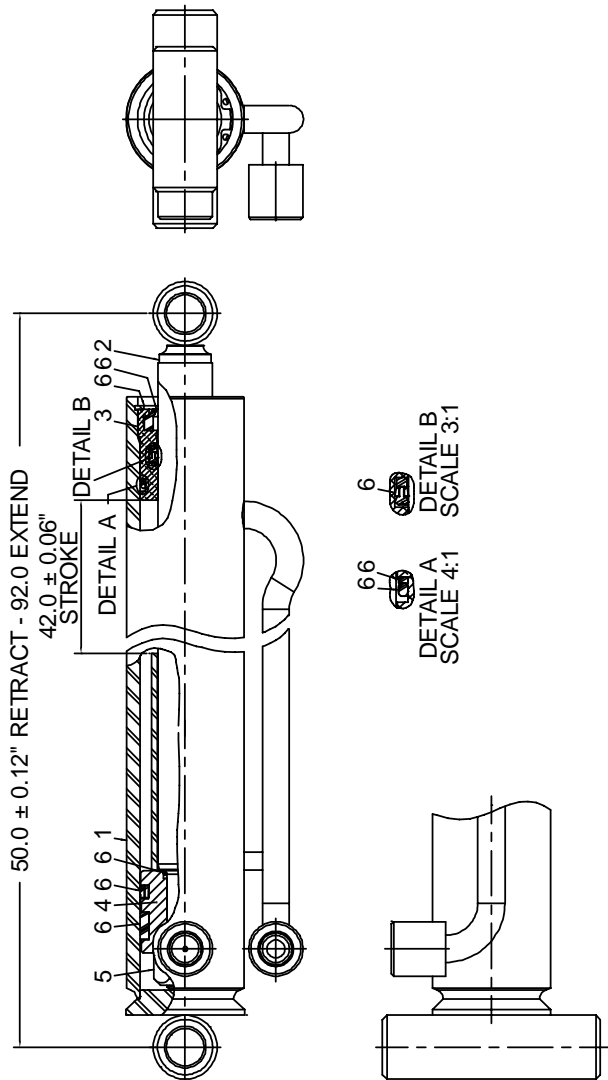
IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

APPLY "LUBRIPLATE #630-2" MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT OR EQUIVALENT TO ALL PISTON AND HEAD GLANDS, LOCK RING AND ROD THREADS BEFORE ASSEMBLY.

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.

FIGURE C-6. CYLINDER-PWR DN (3B020860)

**FIGURE C-7. CYLINDER-PWR OUT (71411797)
EFF. 10-2005**



71411797 CYLINDER DATA

EXTENDED	1.23 IN ² , 0.22 GAL
RETRACTED	0.79 IN ² , 0.14 GAL
CASE	1.25 BORE X ø1.63
ROD	ø 0.750
DRY WEIGHT	19.7 LB
TEST PRESSURE	3000 PSI
OPERATING PRESSURE	2500 PSI
PORTS	SAE #4 O-RING BOSS (7/16-20 UNF-2B)
CYLINDER TUBE	
BURST PRESSURE	20,000 PSI
TORQUE	TORQUE LOCKNUT (#6) WITH THREADLOCK COMPOUND TO 35-40 FT-LB

71411797 PARTS LIST

1.	71411933	CASE WELDMENT	1
2.	71411934	ROD WELDMENT	1
3.	71411935	HEAD GLAND	1
4.	71411936	PISTON	1
5.	-REF-	LOCKNUT 1-14 UNS	1
6.	94396794	SEAL KIT	1

**PARTS LIST - CYLINDER-PWR OUT
(3B142860) (REPLACED BY 71411797 IN
OCTOBER 2005)**

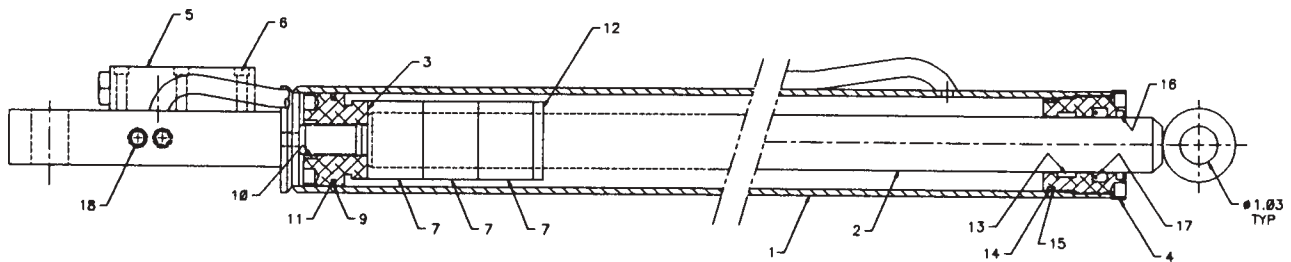
ITEM	PART NO.	DESCRIPTION	QTY
1.	7Q072021	O-RING (PART OF 13)	1REF
2.	7T66P012	PISTON SEAL (PART OF 13)	1REF
3.	6I012050	PISTON	1
4.	7Q072214	O-RING (PART OF 13)	1REF
5.	7Q10P214	BACK-UP RING (PART OF 13)	1REF
6.	7R100750	ROD SEAL (PART OF 13)	1REF
7.	6C125007	STOP TUBE	1
8.	4G142860	ROD ASM	1
9.	4B142860	CASE ASM	1
10.	7R13P007	ROD WIPER (PART OF 13)	1REF
11.	72066029	RETAINING RING	1
12.	6H012007	HEAD	1
13.	9B050608	SEAL KIT (INCL:1,2,4-6,10)	1

NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

APPLY "LUBRIPLATE #630-2" MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT OR EQUIVALENT TO ALL PISTON AND HEAD GLANDS, LOCK RING AND ROD THREADS BEFORE ASSEMBLY.

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.



ITEM	PART NO.	DESCRIPTION	QTY
1.	4B148860	CASE ASM (INCL:18)	1
2.	4G148860	ROD ASM	1
3.	6I0025087	PISTON	1
4.	6H025015	HEAD	1
5.	73054004	VALVE	1
6.	72060708	CAP SCR 1/4-20X1-1/4 SH	6
7.	6C150015	STOP TUBE	3
8.	9B101214	SEAL KIT (INCL:9-17)	1
9.	7T66P025	PISTON SEAL (PART OF 8)	1REF
10.	7T61N087	LOCK RING SEAL (PART OF 8)	1REF
11.	7Q072137	O-RING (PART OF 8)	1REF
12.	6A025015	WAFER LOCK (PART OF 8)	1REF
13.	7T2N8015	WEAR RING (PART OF 8)	1REF
14.	7Q072228	O-RING (PART OF 8)	1REF
15.	7Q10P228	BACK-UP RING (PART OF 8)	1REF
16.	7R14P015	ROD WIPER (PART OF 8)	1REF
17.	7R546015	ROD SEAL (PART OF 8)	1REF
18.	7PNPXT02	PIPE PLUG (PART OF 1)	2REF

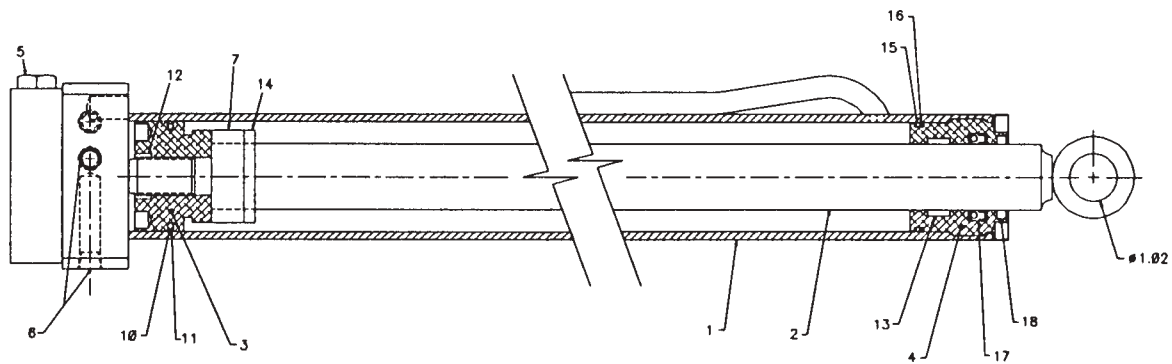
NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

APPLY "LUBRIPLATE #630-2" MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT OR EQUIVALENT TO ALL PISTON AND HEAD GLANDS, LOCK RING AND ROD THREADS BEFORE ASSEMBLY.

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.

FIGURE C-8. CYLINDER-PWR OUT (3B148860)



ITEM	PART NO.	DESCRIPTION	QTY
1.	4B166820	CASE (INCL:6)	1
2.	4G166820	ROD	1
3.	6I025087	PISTON	1
4.	6H025015	HEAD	1
5.	73054004	VALVE	1
6.	7PNPXT02	PIPE PLUG 1/8 (PART OF 1)	3REF
7.	6C075015	STOP TUBE	1
8.	72060708	CAP SCR 1/4-20 X 1-1/4 SH	6
9.	9B101214	SEAL KIT (INCL:10-18)	1
10.	7Q072137	O-RING (PART OF 9)	1REF
11.	7T66P025	PISTON SEAL (PART OF 9)	1REF
12.	7T61N087	LOCK RING SEAL (PART OF 9)	1REF
13.	7T2N8015	WEAR RING (PART OF 9)	1REF
14.	6A025015	WAFER LOCK (PART OF 9)	1REF
15.	7Q072228	O-RING (PART OF 9)	1REF
16.	7Q10P228	BACK-UP RING (PART OF 9)	1REF
17.	7R546015	ROD SEAL (PART OF 9)	1REF
18.	7R14P015	ROD WIPER (PART OF 9)	1REF

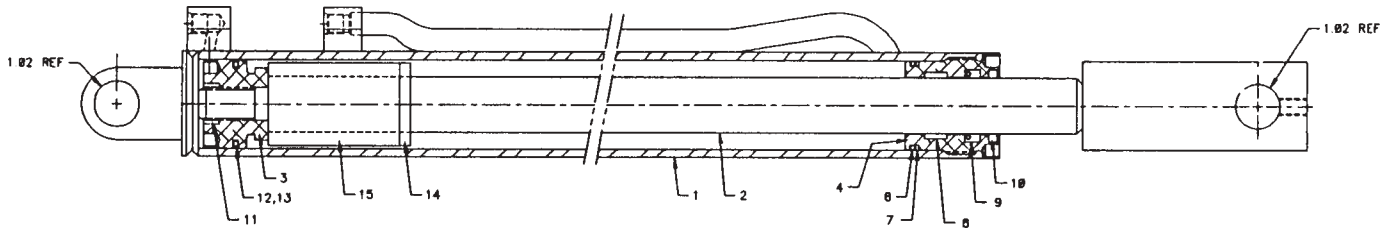
NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

APPLY "LUBRIPLATE #630-2" MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT OR EQUIVALENT TO ALL PISTON AND HEAD GLANDS, LOCK RING AND ROD THREADS BEFORE ASSEMBLY.

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.

FIGURE C-9. CYLINDER-PWR DN (3B166820)



ITEM	PART NO.	DESCRIPTION	QTY
1.	4B210522	CASE ASM	1
3.	6I020075	PISTON	1
4.	6H020012	HEAD	1
5.	9B081012	SEAL KIT (INCL:6-14)	1
6.	7Q072224	O-RING (PART OF 5)	1REF
7.	7Q10P224	BACK-UP RING (PART OF 5)	1REF
8.	7T2N8012	WEAR RING (PART OF 5)	1REF
9.	7R546012	ROD SEAL (PART OF 5)	1REF
10.	7R14P012	ROD WIPER (PART OF 5)	1REF
11.	7T61N075	LOCK RING SEAL (PART OF 5)	1REF
12.	7Q072129	O-RING (PART OF 5)	1REF
13.	7T66P020	PISTON SEAL (PART OF 5)	1REF
14.	6A025012	WAFER LOCK (PART OF 5)	1REF
15.	6C300012	STOP TUBE	1

NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

APPLY "LUBRIPLATE #630-2" MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT OR EQUIVALENT TO ALL PISTON AND HEAD GLANDS, LOCK RING AND ROD THREADS BEFORE ASSEMBLY.

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.

FIGURE C-10. CYLINDER-PWR OUT (3B210522)

NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

APPLY "LUBRIPLATE #630-2" MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT OR EQUIVALENT TO ALL PISTON AND HEAD GLANDS, LOCK RING AND ROD THREADS BEFORE ASSEMBLY.

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.

ITEM	PART NO.	DESCRIPTION	QTY
1.	7PNPXT02	PIPE PLUG	2REF
2.	7Q072155	O-RING (PART OF 22)	1REF
3.	7T66P045	PISTON SEAL (PART OF 22)	1REF
4.	7T65I045	PISTON RING (PART OF 22)	2REF
5.	7T61N143	LOCK RING SEAL (PART OF 22)	1REF
6.	6I045143	PISTON	1
7.	6A025025	WAFER LOCK (PART OF 22)	1REF
8.	4G285850	ROD ASM (INCL:17-19)	1
9.	4C285851	CASE ASM (INCL:17-19)	1
10.	7Q072345	O-RING (PART OF 22)	1REF
11.	7Q10P346	BACK-UP RING (PART OF 22)	1REF
12.	70392332	ROD COVER	1
13.	7R546022	ROD SEAL (PART OF 22)	1REF
14.	7R14P022	ROD WIPER (PART OF 22)	1REF
15.	6H045022	HEAD	1
16.	73054304	VALVE	1
17.	7BF81015	BUSHING (PART OF 8 & 9)	4REF
18.	7BF81215	BUSHING (PART OF 8 & 9)	4REF
19.	72053507	ZERK 1/4-28 (PART OF 8 & 9)	4REF
20.	72066062	HOSE CLAMP	1
21.	72661299	HOSE CLAMP	1
22.	9C181823	SEAL KIT (INCL:2-5,7,10,11,13,14)	1

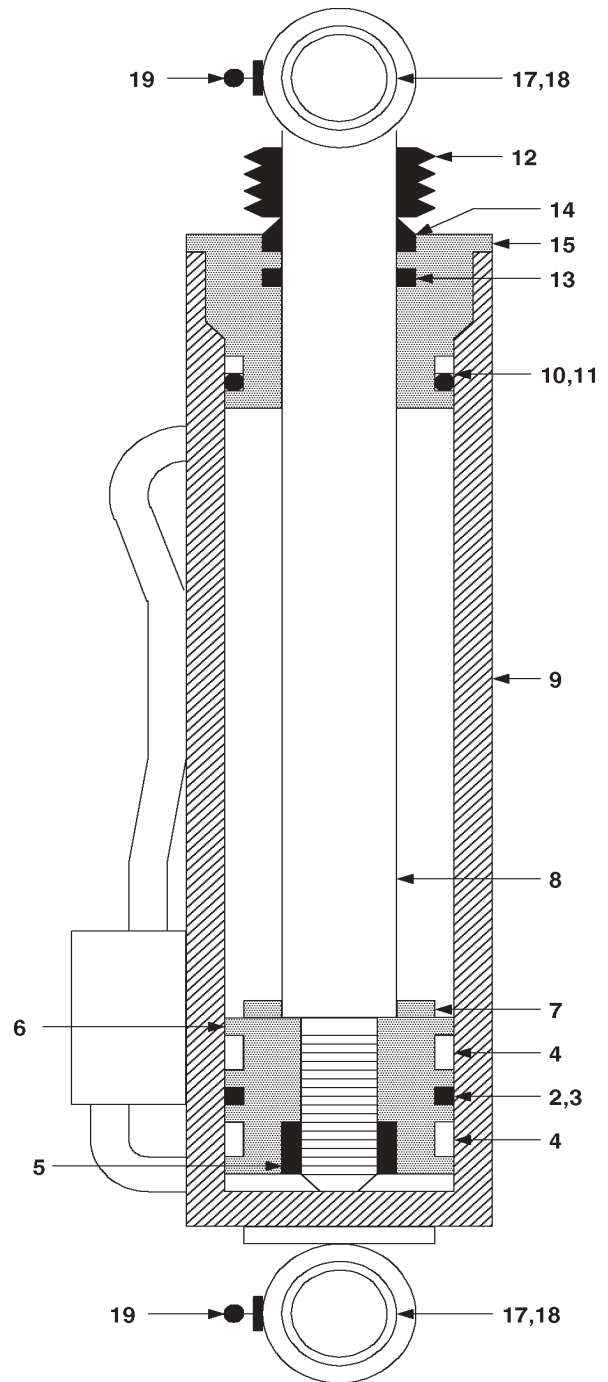


FIGURE C-11. CYLINDER (3C285851)

NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

APPLY "LUBRIPLATE #630-2" MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT OR EQUIVALENT TO ALL PISTON AND HEAD GLANDS, LOCK RING AND ROD THREADS BEFORE ASSEMBLY.

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.

ITEM	PART NO.	DESCRIPTION	QTY
1.	4A170890	CASE ASM	1
2.	4G170890	ROD ASM	1
3.	M6I012050	PISTON	1
4.	6H125075	HEAD	1
5.	72066029	RETAINING RING 1-5/16 INT STD	1
6.	9A050608	SEAL KIT (INCL:7-12)	1
7.	M7T66P012	PISTON SEAL (PART OF 6)	1REF
8.	M7Q072014	O-RING (PART OF 6)	1REF
9.	7Q072214	O-RING (PART OF 6)	1REF
10.	7Q10P214	BACK-UP RING (PART OF 6)	1REF
11.	7R100750	U-CUP SEAL (PART OF 6)	1REF
12.	7R13P007	ROD WIPER (PART OF 6)	1REF
13.	6C075007	STOP TUBE 3/4	1
14.	6C125007	STOP TUBE 1-1/4	3

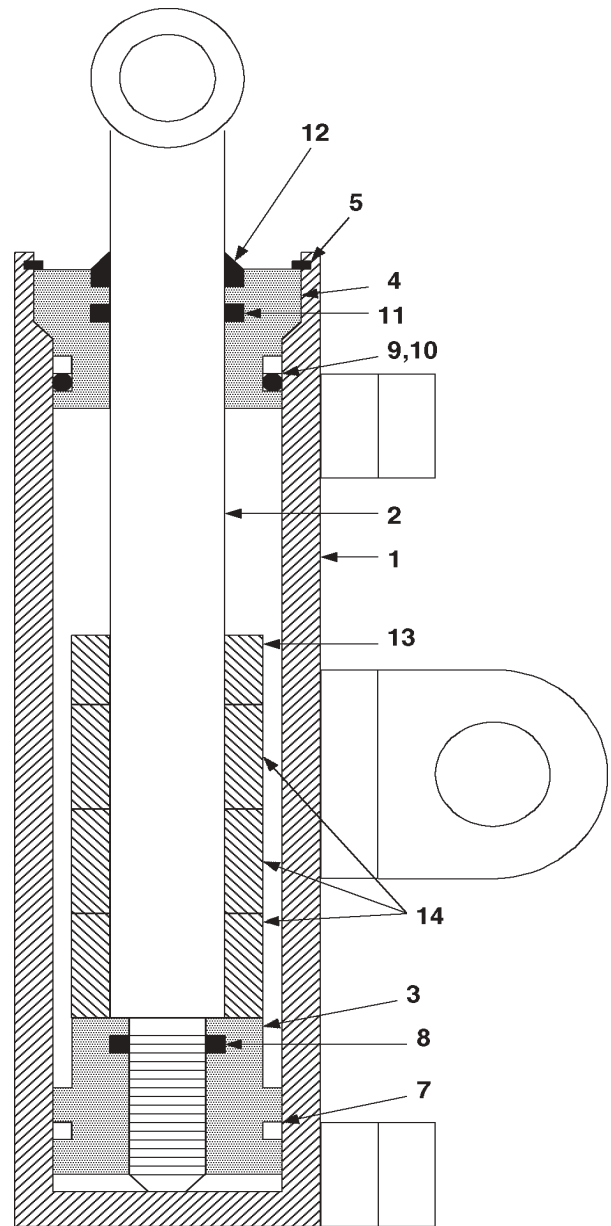


FIGURE C-12. PWR OUT CYLINDER (3A170890)

NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

APPLY "LUBRIPLATE #630-2" MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT OR EQUIVALENT TO ALL PISTON AND HEAD GLANDS, LOCK RING AND ROD THREADS BEFORE ASSEMBLY.

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.

ITEM	PART NO.	DESCRIPTION	QTY
1.	7PNPXT02	PIPE PLUG (PART OF 9)	3REF
2.	7Q072145	O-RING (PART OF 18)	1REF
3.	7T66P030	PISTON SEAL (PART OF 18)	1REF
4.	7T65I030	PISTON RING (PART OF 18)	2REF
5.	7T61N106	LOCK RING SEAL (PART OF 18)	1REF
6.	6I030106	PISTON	1
7.	6C300017	STOPTUBE	1
8.	4G171890	ROD ASM	1
9.	4B171890	CASE ASM (INCL:1)	1
10.	7Q072334	O-RING (PART OF 18)	1REF
11.	7Q10P334	BACK-UP RING (PART OF 18)	1REF
13.	7R546017	ROD SEAL (PART OF 18)	1REF
14.	7R14P017	ROD WIPER (PART OF 18)	1REF
15.	6H030017	HEAD	1
16.	73054004	VALVE	1
17.	6A025017	WAFER LOCK (PART OF 18)	1REF
18.	9C121417	SEAL KIT (INCL:2-5,10-14,17)	1
19.	72060708	CAP SCR 1/4-20X1-1/4 SH	6
20.	6C150017	STOPTUBE	1
21.	6C075017	STOPTUBE	1

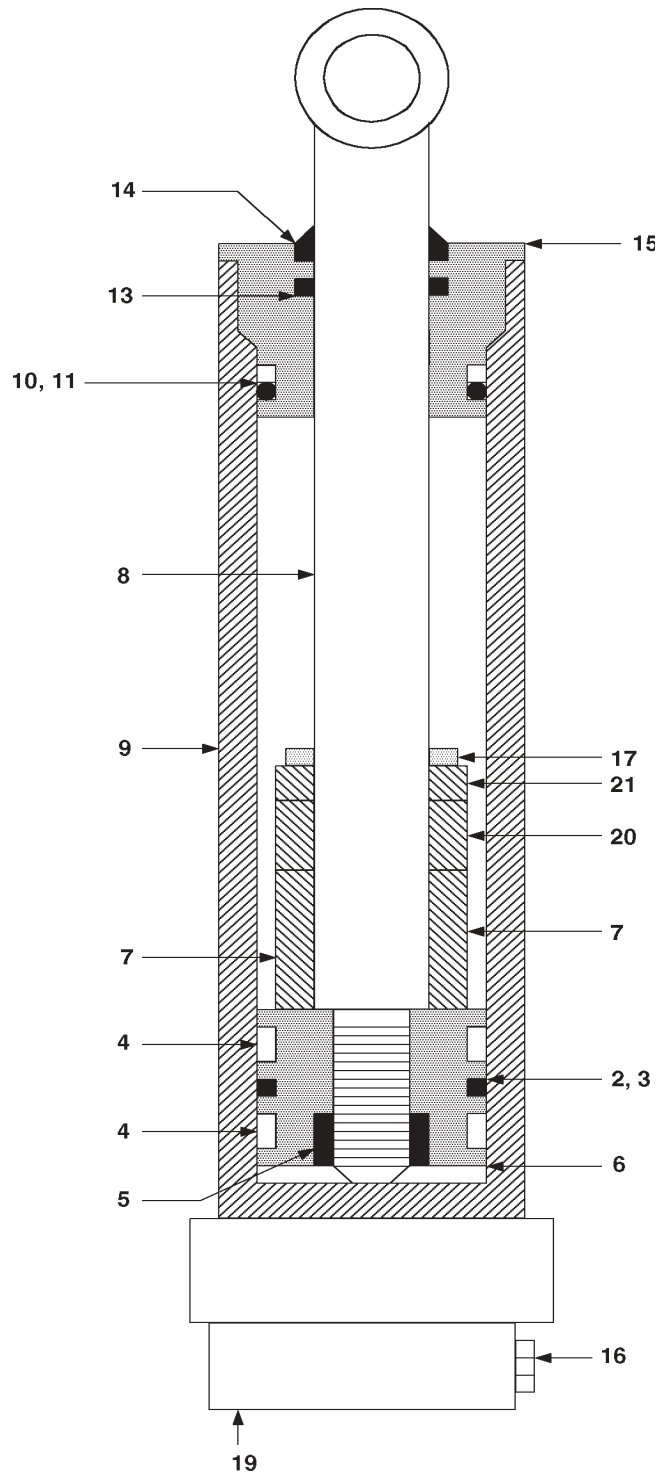


FIGURE C-13. CYLINDER-PWR DN (3B171890)

NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

APPLY "LUBRIPLATE #630-2" MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT OR EQUIVALENT TO ALL PISTON AND HEAD GLANDS, LOCK RING AND ROD THREADS BEFORE ASSEMBLY.

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.

ITEM	PART NO.	DESCRIPTION	QTY
1.	4B208940	CASE ASM	1
2.	4G208940	ROD ASM (INCL:4)	1
3.	73054304	COUNTERBALANCE VALVE	2
4.	7BF81215	BUSHING (PART OF 2)	2REF
5.	6I402144	PISTON	1
6.	6H040020	HEAD	1
7.	9B015930	SEAL KIT (INCL:8-17)	1
8.	7T66P400	PISTON SEAL (PART OF 7)	1REF
9.	7T2N4040	WEAR RING (PART OF 7)	2REF
10.	7T61N143	LOCK RING (PART OF 7)	1REF
11.	7Q072127	O-RING (PART OF 7)	1REF
12.	7Q10P342	BACKUP RING (PART OF 7)	1REF
13.	7Q072342	O-RING (PART OF 7)	1REF
14.	7T2N8022	ROD WEAR RING (PART OF 7)	1REF
15.	7R546020	U-CUP SEAL (PART OF 7)	1REF
16.	7R14P020	ROD WIPER (PART OF 7)	1REF
17.	6A025020	WAFER LOCK (PART OF 7)	1REF
18.	6C075020	STOP TUBE 3/4"	1
19.	6C300020	STOP TUBE 3"	2

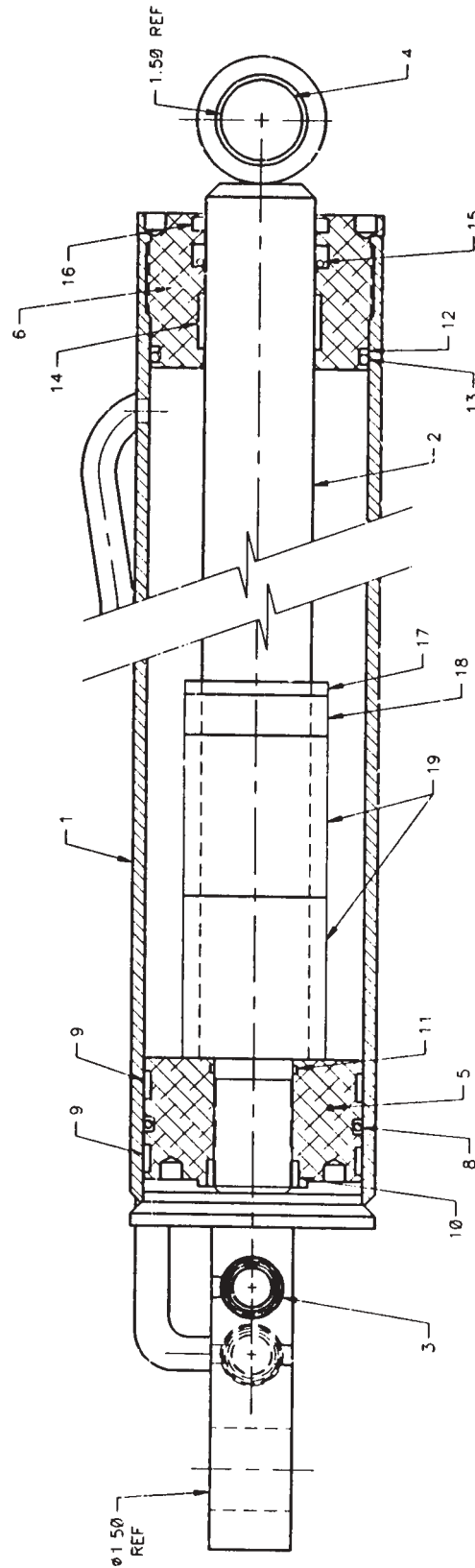
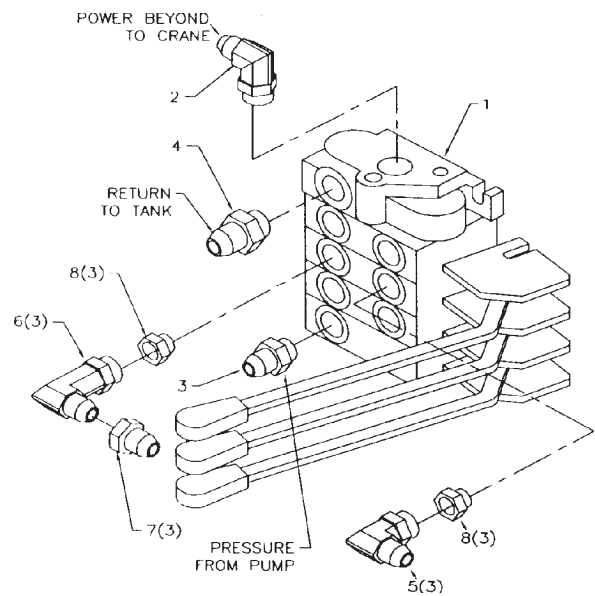
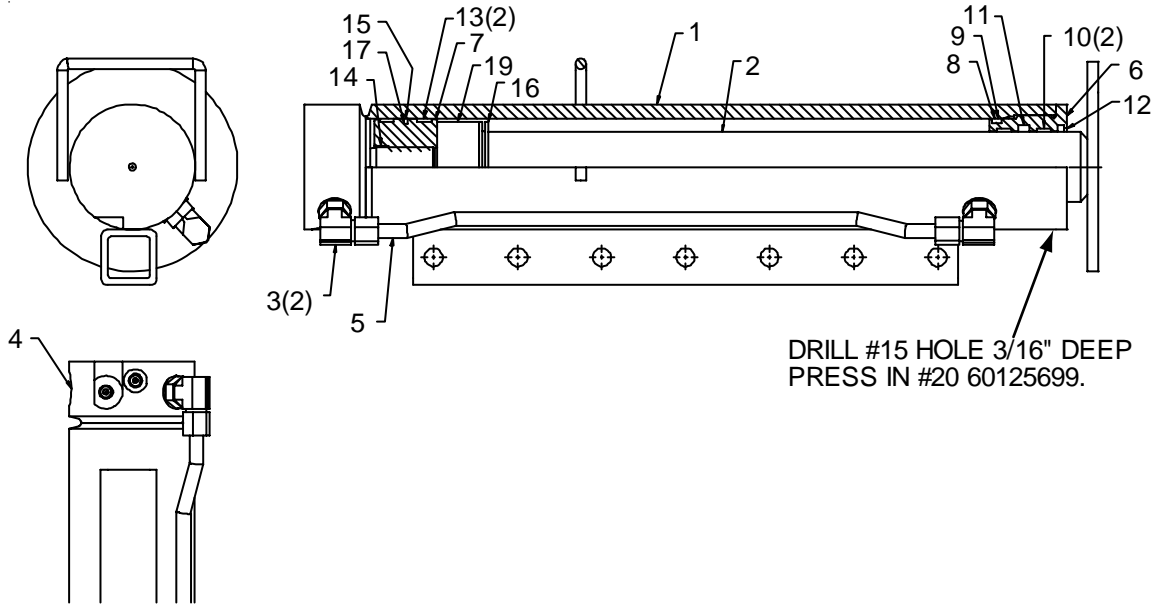


FIGURE C-14. CYLINDER-PWR DN (3B208940)

ITEM	PART NO.	DESCRIPTION	QTY
1.	51705984	VALVEBANK	1
2.	72053764	ELBOW #10MSTR #8MJIC 90°	1
3.	72532358	ADAPTER #8MSTR #8MJIC	1
4.	72532365	ADAPTER #10MSTR #12MJIC	1
5.	72532699	ELBOW #6MSTR #4MJIC 90°	3
6.	72532700	ELBOW #6MSTR #6MJIC XLG	3
7.	72532707	ADAPTER #4MJIC #6FJIC	3
8.	72532722	ADAPTER #10MSTR #6FSTR	6



VALVEBANK ASM-3 SECTION PO/PD (51714317)



NOTES

- 1) APPLY "NEVER-SEEZ" REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO THREADS ON CLYINDER HEAD ONLY. KEEP AWAY FROM SEALS.
- 2) APPLY "LUBRIPLATE" NO. 630-2 MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT TO ALL PISTON, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS.
- 3) TO AVOID DOWNTIME, REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE CYLINDER IS DISASSEMBLED.

1.	4B205010	CASE ASY	1
2.	4G048870	ROD ASY	1
3.	72053763	ELL #8MSTR #8MJIC 90°	1
4.	73054681	CHECK VALVE	1
5.	5P288970	PORT TUBE	1
6.	6HD35025	HEAD	1
7.	6ID35125	PISTON	1
8.	7Q072338	O-RING	1REF
9.	7Q10P338	BACKUP RING	1REF
10.	7T2NX427	WEAR RING	2REF
11.	7R546025	U-CUP SEAL	1REF
12.	7R14P025	ROD WIPER	1REF
13.	7T2N4035	PISTON RING	2REF
14.	7T61N125	NYLON LOCK RING	1REF
15.	7T66P035	PISTON SEAL	1REF
16.	6A025025	WAFER LOCK	1REF
17.	7Q072151	O-RING	1REF
18.	9D142020	SEAL KIT (INCL. 8-17)	1
19.	6C015025	STOP TUBE	1
20.	60125699	PIN-LOCK TUBE	1

CYLINDER (3B205010)

SECTION 4. INSTALLATION

4-1. TYPICAL INSTALLATION

1. Be certain the engine is shut off before installing outriggers.
2. To achieve adequate stability when the crane is located behind the cab, the auxiliary outriggers should be mounted behind the rear axle. When the crane is mounted behind the rear axle, the auxiliary outriggers should be mounted behind the cab.
3. Position the outriggers at the designated location. If used, install the tie-down studs and lock nuts to secure the outriggers to the chassis. Torque the studs to 200 ft-lbs (27.66 kg-m).
4. Mount the outrigger valvebank, if used, near the location of the outriggers. Mount the selector valve, if used, on the driver's side of the chassis within supplied hose length of the valvebank. Check parts list for hose length.
5. Connect the hoses according to the hydraulic schematic. Route the hoses to provide adequate length to allow the outriggers to fully extend and retract. Keep hoses from pinch points and locations where crimping may occur.
6. Purge the air from the hydraulic system according to the information in Volume 1, Operation, Maintenance and Repair, of the crane manual.
7. Check for leaks in the hydraulic system. Repair if necessary.
8. Check the level of the hydraulic fluid in the reservoir. Add hydraulic fluid if necessary.

NOTE

AUXILIARY OUTRIGGER ASSEMBLIES DESIGNED FOR USE ON MECHANIC'S BODIES REQUIRE THE WELDING OF THE HOUSING TO THE CHASSIS. TIE-DOWN BOLTS ARE NOT USED WITH THESE ASSEMBLIES.

NOTE



SOME LARGER AUXILIARY OUTRIGGER ASSEMBLIES (CRANE MODELS 20017, 32018 & 32030) MAY REQUIRE THE INSTALLATION OF MOUNTING ANGLES. SEE SPECIFIC OUTRIGGER ASSEMBLY DRAWING FOR THOSE REQUIREMENTS.

CAUTION



TORQUE MOUNTING STUDS TO 200 FT-LBS. DO NOT TORQUE TO VALUES SHOWN ON TORQUE CHART.

TORQUE DATA CHART

FINE THREAD BOLTS

SIZE (DIA-TPI)	BOLT DIA (INCHES)	TIGHTENING TORQUE			
		 SAE J429 GRADE 5		 SAE J429 GRADE 8	
		PLAIN (FT-LB)	PLATED (FT-LB)	PLAIN (FT-LB)	PLATED (FT-LB)
5/16-24	0.3125	19	14	27	20
3/8-24	0.3750	35	26	49	35
7/16-20	0.4375	55	41	78	58
1/2-20	0.5000	90	64	120	90
9/16-18	0.5625	120	90	170	130
5/8-18	0.6250	170	130	240	180
3/4-16	0.7500	300	225	420	315
7/8-11	0.8750	445	325	670	500
1-12	1.0000	645	485	995	745
1 1/8-12	1.1250	890	670	1445	1085
1 1/4-12	1.2500	1240	930	2010	1510
1-3/8-12	1.3750	1675	1255	2710	2035
1 1/2-12	1.5000	2195	1645	3560	2670

COARSE THREAD BOLTS

SIZE (DIA-TPI)	BOLT DIA (INCHES)	TIGHTENING TORQUE			
		 SAE J429 GRADE 5		 SAE J429 GRADE 8	
		PLAIN (FT-LB)	PLATED (FT-LB)	PLAIN (FT-LB)	PLATED (FT-LB)
5/16-18	0.3125	17	13	25	18
3/8-16	0.3750	31	23	44	33
7/16-14	0.4375	49	37	70	52
1/2-13	0.5000	75	57	105	80
9/16-12	0.5625	110	82	155	115
5/8-11	0.6250	150	115	220	160
3/4-10	0.7500	265	200	375	280
7/8-9	0.8750	395	295	605	455
1-8	1.0000	590	445	910	680
1 1/8-7	1.1250	795	595	1290	965
1 1/4-7	1.2500	1120	840	1815	1360
1-3/8-6	1.3750	1470	1100	2380	1780
1 1/2-6	1.5000	1950	1460	3160	2370

When using the torque data in the charts above, the following rules should be observed.

1. Bolt manufacturer's particular specifications should be consulted when provided.
2. Flat washers of equal strength must be used.
3. All torque measurements are given in foot-pounds. To convert to inch-pounds, multiply by 12.
4. Torque values specified are for bolts with residual oils or no special lubricants applied. If special lubricants of high stress ability, such as Never-Seez compound graphite and oil, molybdenum disulphite, colloidal copper or white lead are applied, multiply the torque values in the charts by the factor .90. The use of Loctite does not affect the torque values listed above.
5. Torque values for socket-head capscrews are the same as for Grade 8 capscrews.

WARNING

Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Once a bolt has been torqued to 75% of its proof load and then removed, the torque coefficient may no longer be the same as when the bolt was new thus giving indeterminate clamp loads after torquing. Failure to replace gear-bearing bolts may result in bolt failure due to metal fatigue causing serious injury or DEATH.

FIGURE D-1. TORQUE DATA CHART

The information within this manual has been compiled and checked but errors do occur. To provide our customers with a method of communicating those errors we have provided the Manual Change Request form below. In addition to error reporting, you are encouraged to suggest changes or additions to the manual which would be of benefit to you. We cannot guarantee that these additions will be made but we do promise to consider them. When completing the form, please write or print clearly. Submit a copy of the completed form to the address listed below.

MANUAL CHANGE REQUEST

DATE	PRODUCT MANUAL	MANUAL PART NO.
SUBMITTED BY		
COMPANY		
ADDRESS		
CITY, STATE, ZIP		
TELEPHONE		

ERROR FOUND

LOCATION OF ERROR (page no.): _____

DESCRIPTION OF ERROR: _____

REQUEST FOR ADDITION TO MANUAL

DESCRIPTION OF ADDITION: _____

REASON FOR ADDITION: _____

MAIL TO: IOWA MOLD TOOLING Co., Inc.
Box 189,
Garner IA 50438-0189
ATTN: Technical Publications

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