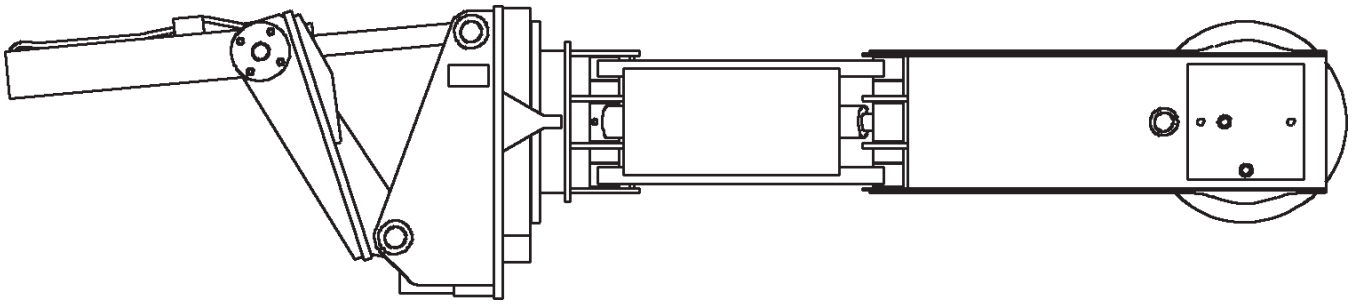
000TH15B:99900757: 20140728

# Tirehand 15B

# PARTS AND SPECIFICATIONS

**Section 1 SPECIFICATIONS**
**Section 2 PARTS**
**Section 3 REFERENCE**




## IOWA MOLD TOOLING CO., INC.

BOX 189, GARNER, IA 50438-0189
TEL: 641-923-3711
TECHNICAL SUPPORT FAX: 641-923-2424

MANUAL PART NUMBER 99900757

# REVISIONS LIST

| DATE | LOCATION | DESCRIPTION OF CHANGE |
|---|---|---|
| 20020206 | 2-6 | ADDED MOBILTAC NOTE |
| | 3-1,12 | WARRANTY |
| 20070329 | COVER, 2-3 | UPDATED OWNERSHIP STATEMENT, SERIAL NUMBER TAG. |
| 20080212 | 1-5 | ECN 10661 - REPLACED CAPACITY CHART |
| 20081231 | 1-3 | UPDATED TIREHAND SPECIFICATIONS |
| 20090723 | 1-5 | CORRECTED CAPACITY CHART |
| 20120806 | 2-13 | REMOVED 30712767 FLANGE ATTACHMENT KIT - OBSOLETE KIT |
| 20140728 | 2-6 | ECN12158 - 72063005 WAS QTY 8 |
| | 2-8 | - 51725871, 52726091 - NEW PARTS |
| | 2-9 & 2-10 | - 7253373 WAS QTY 12, NEW DRAWING EFF 4/14 |

# TIREHAND OPERATING RESTRICTIONS

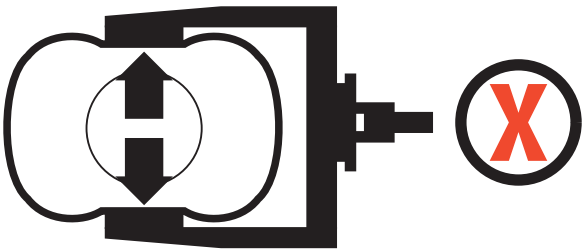
## DANGER

**FAILURE TO OBEY THE FOLLOWING WILL RESULT IN**

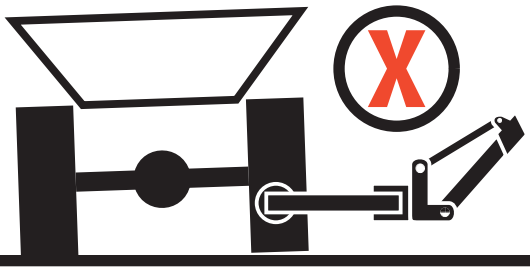
**DEATH, SERIOUS INJURY,**

**INSTABILITY OR EQUIPMENT DAMAGE**

**NEVER clamp an uninflated tire and then inflate. Damage or injury WILL result.**

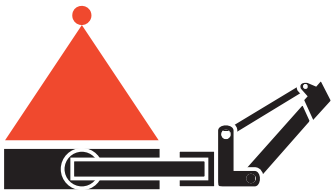


**NEVER use the unit for any jacking, pulling or dragging operation involving an object or another vehicle.**

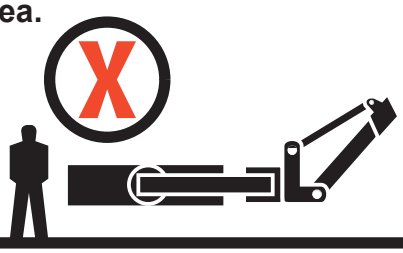


**NEVER impact-load or hammer-push with the unit.**

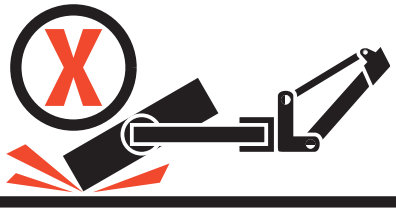
**NEVER attempt to handle tires filled with ballast. Stability or structural failure may result if the load limit is exceeded.**



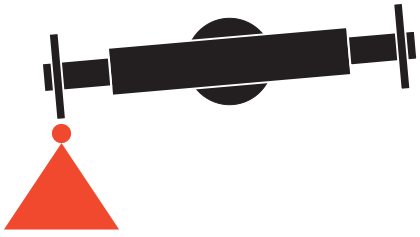
**NEVER operate the unit while persons not required for operation are in the work area.**



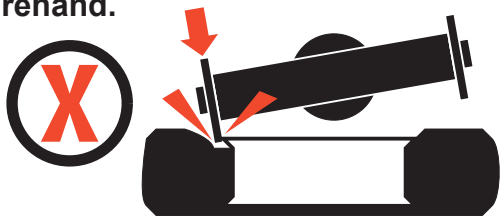
**NEVER drag the tire-the unit is designed to lift and position.**



**NEVER sling a load using one arm of the Tirehand.**



**NEVER use crane functions to break beads using only one arm of the Tirehand.**

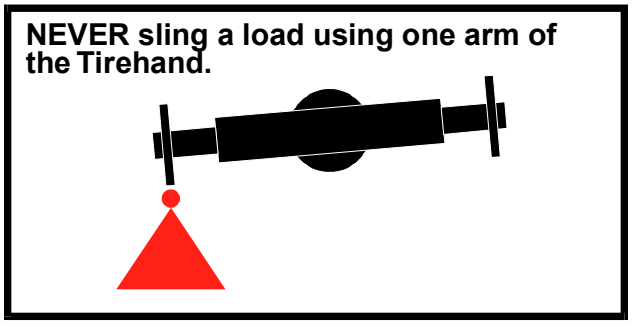


70394272

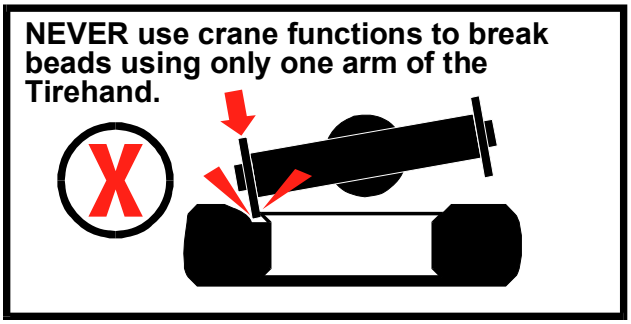
# TIREHAND OPERATING RESTRICTIONS

The Tirehand 15B mounted on the 32018 crane is intended to be a tire lifting and positioning device. There are possible misapplications of this machine that can cause serious damage to the Tirehand rotation gears. It is possible to break the teeth on the Tirehand rotation bearing by applying forces with the crane while attempting to break tire beads **with one arm** of the tire hand, or by slinging a load **under one arm** of the tire hand.

A load-carrying hook is attached to the outer boom of the 32018 for carrying loads other than tires. There is also an open clevis at the end of the extension boom on the crane that can be used for attaching slings. **Use of a single Tirehand arm for lifting or carrying a load will void the tire hand warranty.**




The rotation system on the Tirehand is designed to allow the user to manipulate large tires. It is a precision function that was not designed to apply high loads. However, the load holding valves that are built into this system to help control the tire during handling will also prevent the body of the Tirehand from rotating freely when loads are applied to a single Tirehand arm. The crane is capable of producing very large forces in the downward and outward directions. When one arm is used for bead breaking, these forces can translate into torques that attempt to rotate the body of the Tirehand. The load holding valves will not allow this to occur. In this situation, the forces that are created in the Tirehand rotation turntable are well in excess of what the gear teeth can tolerate. **Using one arm of the Tirehand for bead breaking will void the warranty of the Tirehand.**




A separate bead breaker or a push bar that carries the load to both arms of the Tirehand must be used to separate the tire from the rim. It is acceptable to use the Tirehand for holding the sidewall and flange away from the bead while O-rings and locking rings are being installed.

# INTRODUCTION - READ CAREFULLY!

This manual is provided to assist you in the identification and ordering of parts, for your IMT equipment. It contains information such as specifications, parts lists, capacities, and parts identification.

It is the user's responsibility to maintain and operate this equipment in a manner that will result in the safest working conditions possible.

Warranty of this equipment will be void on any part of the unit subjected 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 on this unit.

In addition, it is also the user's responsibility to be aware of existing Federal, State, and Local codes and regulations governing the safe use and maintenance of this equipment.

Three means are used throughout this manual to gain the attention of personnel. They are NOTE's, CAUTION's, and WARNING's and are defined as follows:

**NOTE**

A NOTE is used to either convey additional information or to provide further emphasis for a previous point.

**CAUTION**

A CAUTION is used when there is the very strong possibility of damage to the equipment or premature equipment failure.

**WARNING**

A WARNING is used when there is the potential for personal injury or death.

Treat this equipment with respect and service it regularly. These two things can add up to a safer work environment.

**NOTES**

# SECTION 1. TIREHAND 15B SPECIFICATIONS

**NOTES**

# TIREHAND 15B SPECIFICATIONS

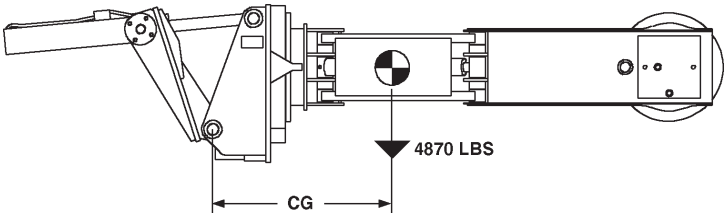
## GENERAL SPECIFICATIONS

| | |
|---|---|
| IMT CRANE WHICH TIREHAND IS DESIGNED | IMT Model 32018 (truck chassis mounted) |
| TIREHAND MAXIMUM CAPACITY | 12,000 lb (5443 kg) |
| MINIMUM STOWED WIDTH | 102” (259.1cm) |
| BODY ROTATION | 350° (6.11 Rad) |
| CLAMPING SPAN | 60" to 155" (152.4cm - 393.7cm) |
| METHOD OF CLAMPING | Parallelogram |
| CLAMPING PAD ROTATION | 360° (6.28 Rad.) continuous |
| TIREHAND TILT | +33° to -42° (+.58 to -.73 Rad.) |
| CLAMPING LOAD HOLDING VALVES | Pilot operated counterbalance valves on clamping side |
| HYDRAULIC CONTROLS | Incorporated with crane controls |
| ROTATION SYSTEM | Spur gear drive |
| TIREHAND WEIGHT | 4870 lbs (2209 kg) |
| ALLOWABLE BEAD BREAKING METHOD | Push Bar, ONLY |

## CYLINDERS

| | BORE | STROKE |
|---|---|---|
| CLAMPING | 4" (10.16cm) | 16-1/4" (41.3cm) |
| TILT 3" (7.62cm) | 5" (12.7cm) | 29-5/8" (75.2cm) |

## CENTER OF GRAVITY

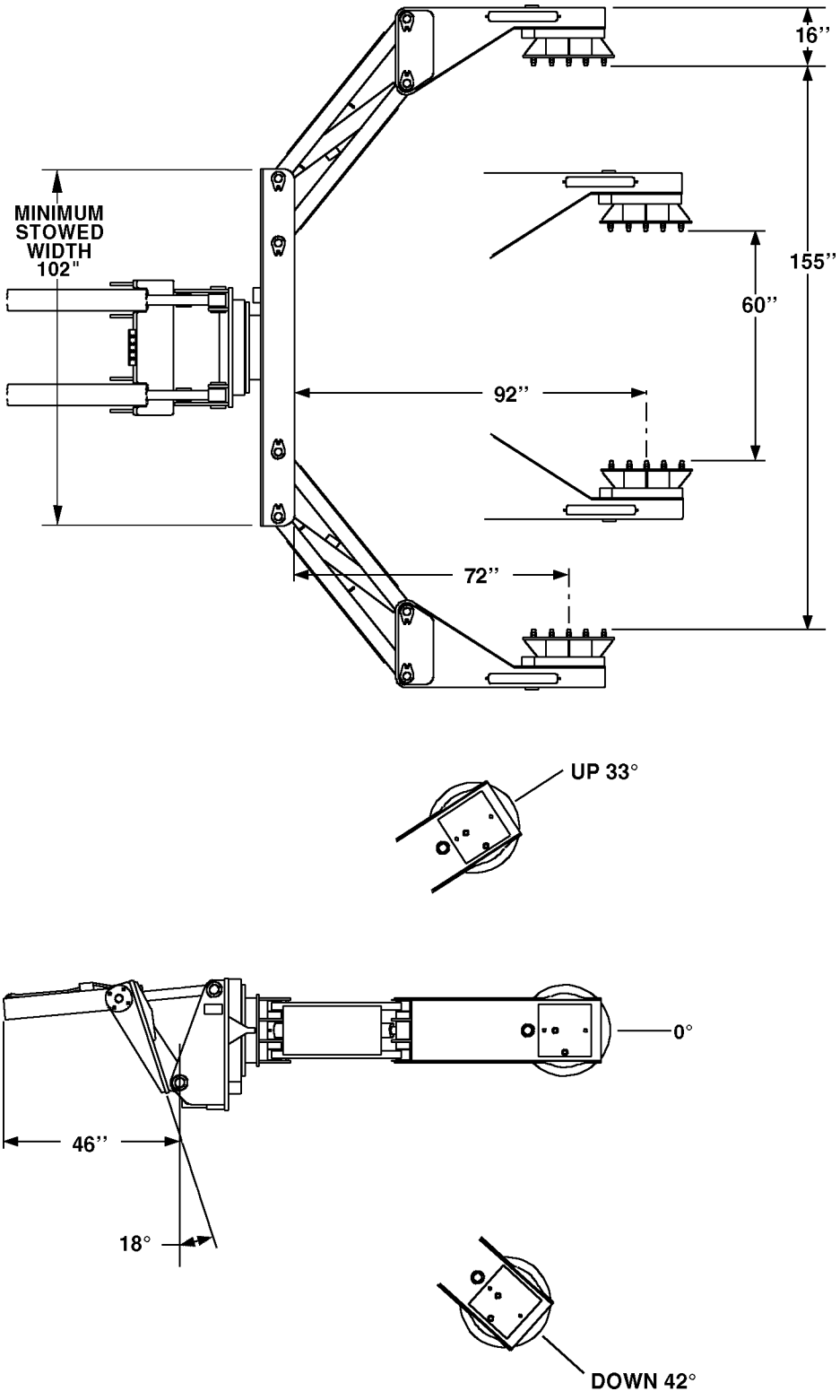



CG (ARMS EXTENDED) = 37-1/4" (94.6cm)
CG (ARMS RETRACTED) = 43-1/4" (109.9cm)

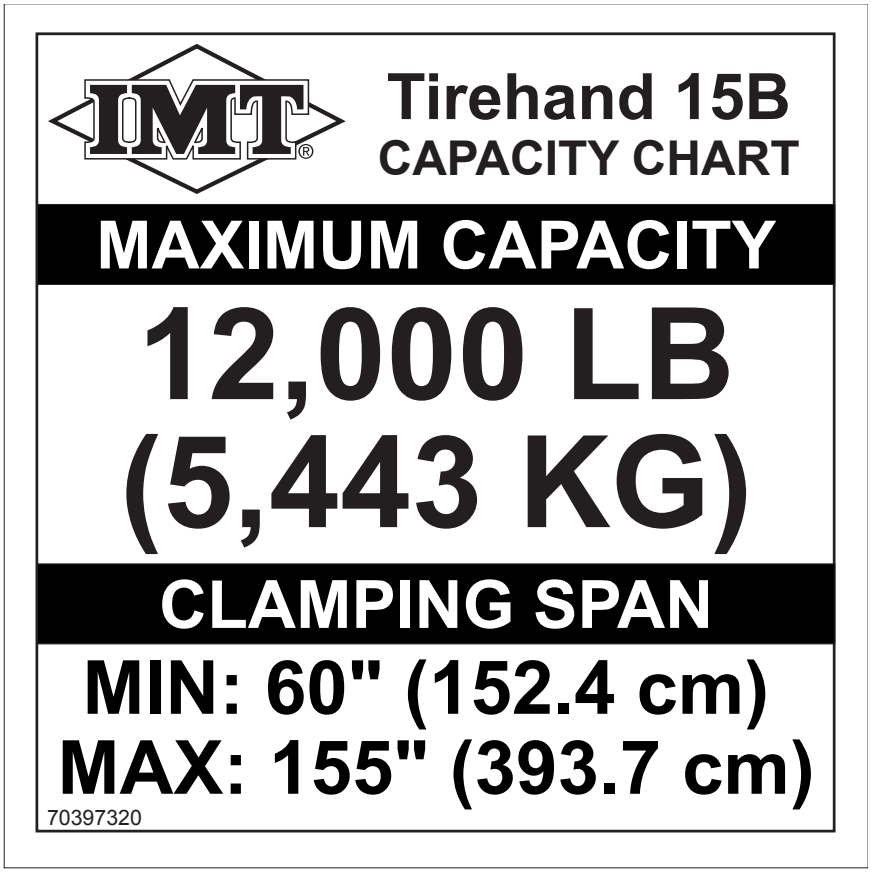
***IMT reserves the right to change specifications and design without notice. Where applicable, specifications are in accordance with SAE standards.***

**IOWA MOLD TOOLING CO., INC.**
BOX 189, GARNER, IA 50438-0189
TEL: 641-923-3711 FAX: 641-923-2424

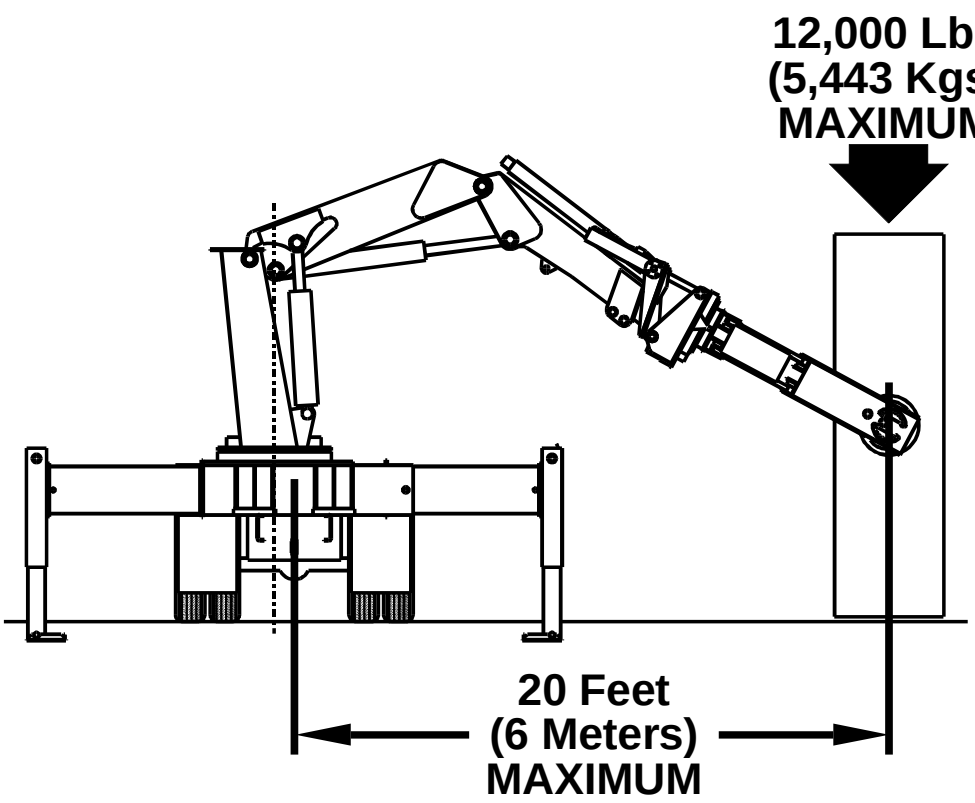
# GEOMETRIC CONFIGURATION



## CAPACITY CHART



# MAXIMUM LIFT CAPABILITY
# Model 32018 Crane with TH15B




- **Load shown is based on Crane and Tirehand structural or hydraulic capability.**
- **To assure proper stability, lift must not exceed 20 feet (6 meters) from centerline of chassis to centerline of load**
- **Working loads will be limited to those shown.**
- **Deduct the weight of any load handling devices other than Tirehand.**

**IOWA MOLD TOOLING CO., INC.**
**BOX 189, GARNER, IA 50438-0189**
**TEL: 641-923-3711**
**FAX: 641-923-2424**

70394279

# SECTION 2. TIREHAND 15B PARTS

**NOTES**

## GENERAL

This section contains the exploded parts drawings with the accompanying parts list for the assemblies used on the Tirehand-15B. These drawings are intended to be used in conjunction with those in the 32018 Crane manual and the instructions found in the REPAIR section in 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 WARNING'S, CAUTION'S AND NOTE'S CONTAINED IN THAT SECTION. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN DAMAGE TO THE EQUIPMENT, INJURY OR DEATH.

## TIREHAND IDENTIFICATION

Every Tirehand has an identification placard, as shown below, attached to the body assembly. When ordering parts, communicating warranty information or referring to the unit in correspondence, always include the assigned serial and model numbers. All inquiries should be addressed to:

Iowa Mold Tooling Company, Inc.
Box 189, Garner, Iowa 50438-0189
Telephone: 641-923-3711
Product Support Fax: 641-923-2424

## CYLINDER IDENTIFICATION

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

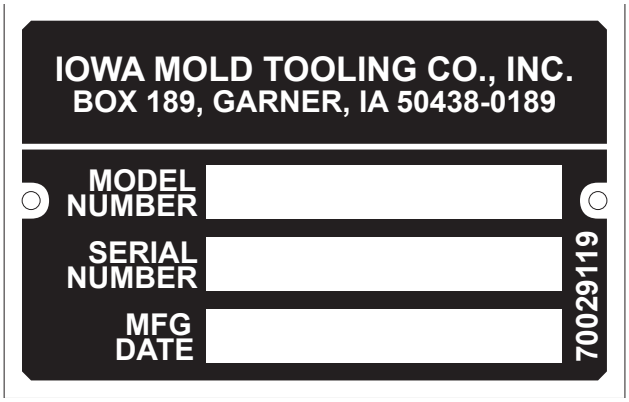
## WELDMENT INDENTIFICATION

Each of the major weldments of the Tirehand bears a stamped part number. Any time a major weldment is replaced, you must specify the complete part number as stamped on the weldment. The locations of the part numbers are shown on the next page.

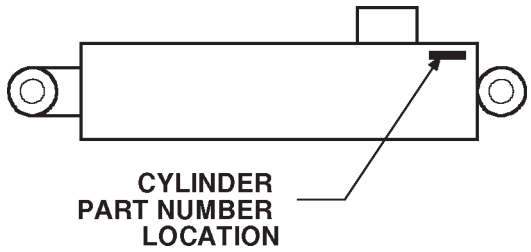
## ORDERING REPAIR PARTS

When ordering replacement parts:

1. Give the model number of the unit.
2. Give the serial number of the unit.
3. Specify the complete part number. When ordering cylinder parts or one of the main weldments, always give the stamped part number.
4. Give a complete description of the part.
5. Specify the quantity required.

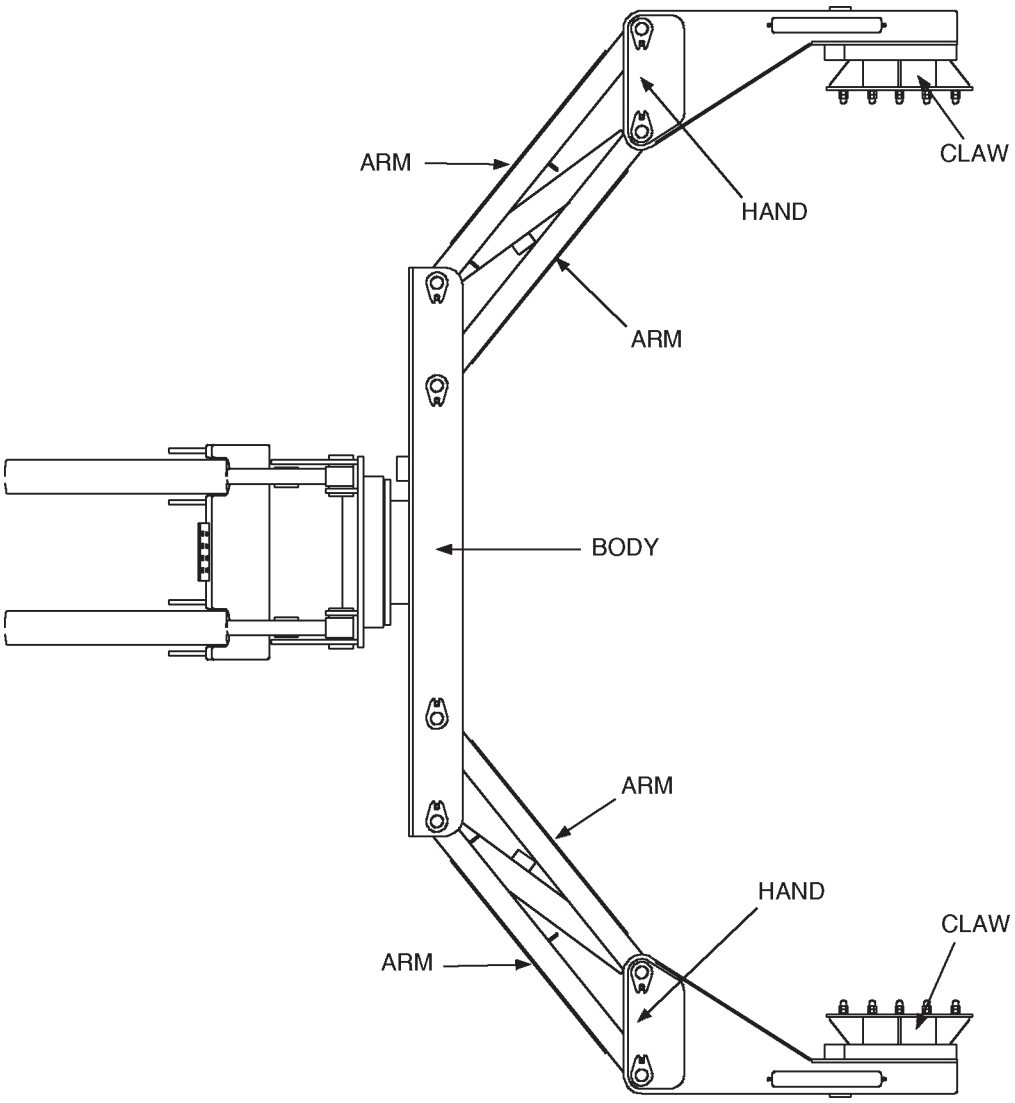



SERIAL NUMBER PLACARD



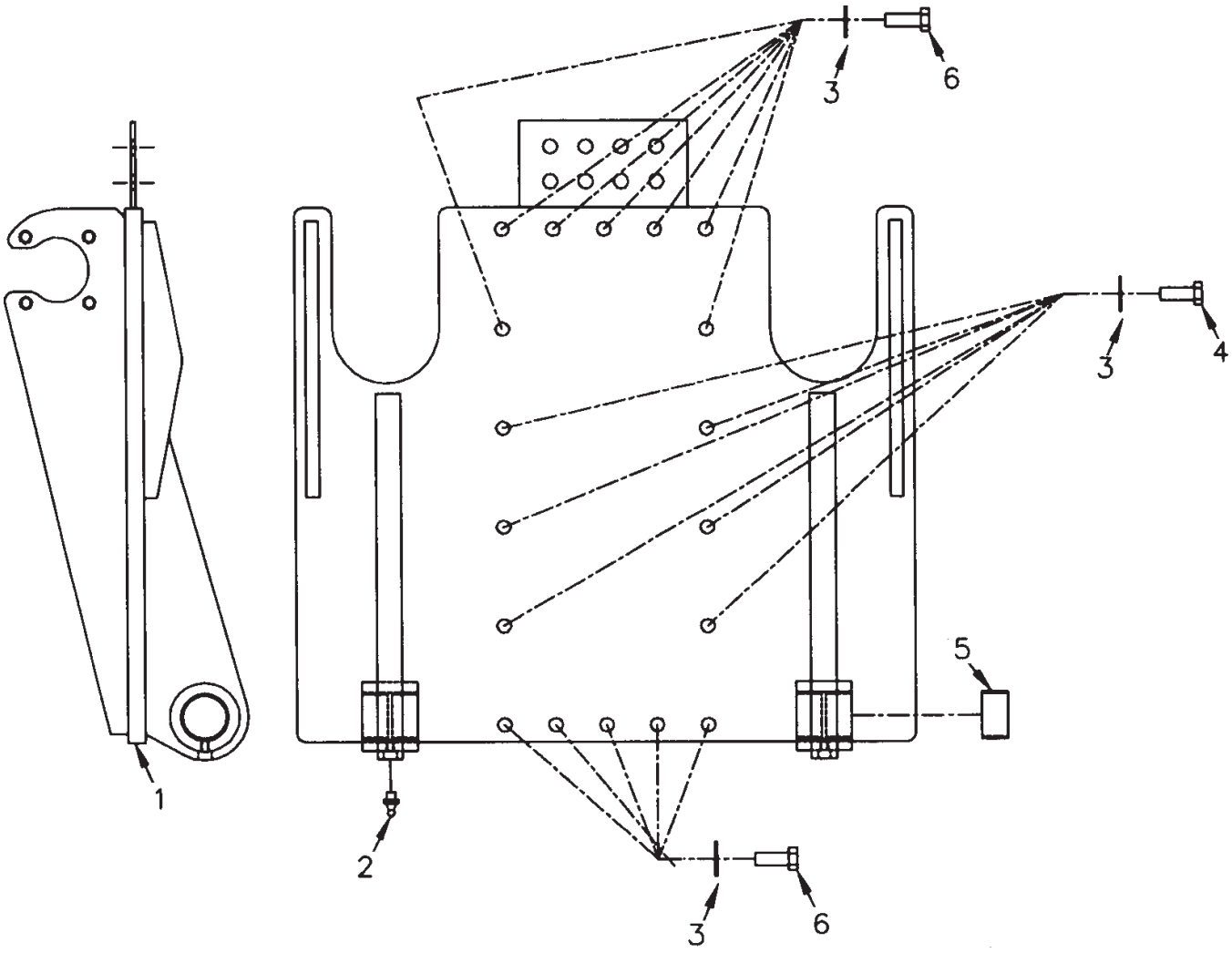

CYLINDER IDENTIFICATION

# WELDMENT PART NUMBER LOCATIONS



# MAST ASM (40710232)

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1. | 52710233 | MAST | 1 |
| 2. | 72053508 | ZERK 1/8NPT | 2 |
| 3. | 72063116 | WASHER 3/4 FLAT HARDENED | 18 |
| 4. | 72601484 | CAP SCR 3/4-10X1-3/4 HH GR8 | 6 |
| 5. | 70055219 | BEARING | 4 |
| 6. | 72060206 | CAP SCR 3/4-10X2 HHGR8 | 12 |



# BASE ASM (40712335)

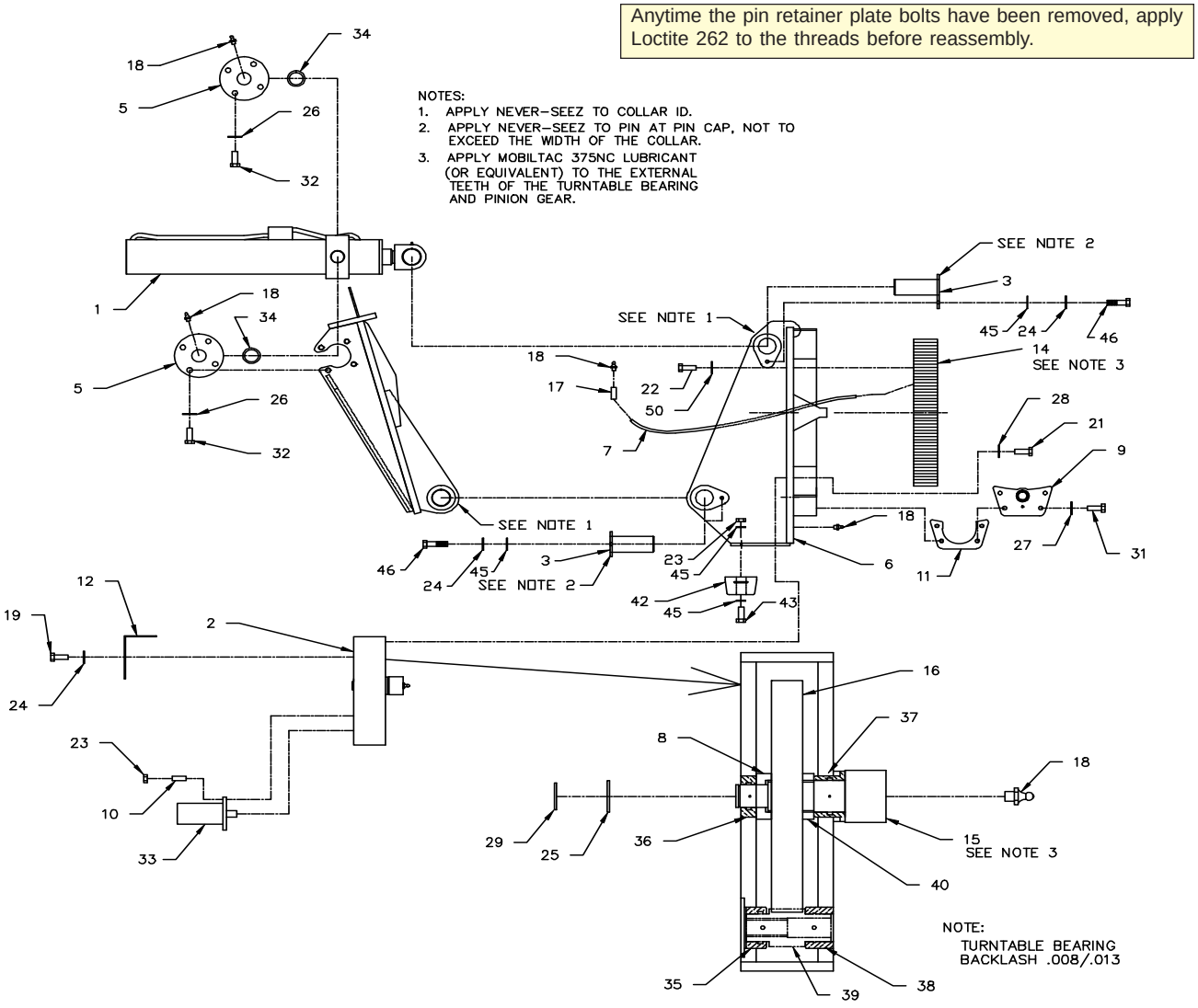
| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1. | 3C162920 | TILT CYLINDER | 2 |
| 2. | 51703568 | SPUR GEAR BOX (INCL:35-39) | 1 |
| 3. | 52715060 | PIN | 4 |
| 5. | 52710287 | CYL LOCK PLATE (INCL:34) | 4 |
| 6. | 52715061 | BASE | 1 |
| 7. | 53000703 | GREASE EXTENSION 20" | 1 |
| 8. | 60020172 | THRUST WASHER | 1 |
| 9. | 60105964 | SUPPORT PLATE | 1 |
| 10. | 60106032 | STUD 1/2-13X2 | 2 |
| 11. | 60106035 | PINION SUPPORT SPACER | 1 |
| 12. | 60106043 | SPUR GEAR BOX GUARD | 1 |
| 14. | 71056273 | TURNTABLE GEAR BEARING | 1 |
| 15. | 71056073 | PINION GEAR | 1 |
| 16. | 71056264 | INTERMEDIATE GEAR | 1 |
| 17. | 72053301 | COUPLING 1/8NPT | 1 |
| 18. | 72053508 | ZERK 1/8NPT | 7 |
| 19. | 72060089 | CAP SCR 1/2-13X3/4 HH GR5 | 2 |
| 21. | 72060151 | CAP SCR 5/8-11X2 HH GR8 | 7 |
| 22. | 72601148 | CAP SCR 7/8-9X3 HH GR8 | 23 |
| 23. | 72062080 | NUT 1/2-13 LOCK | 6 |
| 24. | 72063053 | WASHER 1/2 LOCK | 6 |
| 25. | 72063075 | MACH BUSHING 2X10GA WR | 1 |
| 26. | 72063116 | WASHER 3/4 FLAT HARD | 16 |
| 27. | 72063117 | WASHER 9/16 FLAT HARD | 4 |
| 28. | 72063119 | WASHER 5/8 FLAT HARD | 7 |
| 29. | 72066095 | RETAINING RING 2" STD | 1 |
| 31. | 72601144 | CAP SCR 9/16-12X2 HH GR8 | 4 |
| 32. | 72601484 | CAP SCR 3/4-10X1-3/4 HH GR8 | 16 |
| 33. | 73540004 | HYD MOTOR (FROM 5-15-98) | 1 |
| | 73051004 | HYD MOTOR (TO 5-15-98) | 1 |
| | 5V151830 | C'BALANCE BLOCK (TO 5-15-98) | 1 |
| | 73054538 | C'BALANCE VLV (TO 5-15-98) | 2 |
| | 72060738 | CAP SCR (TO 5-15-98) | 4 |
| | 7Q072112 | O-RING (TO 5-15-98) | 2 |
| 34. | 60020222 | BEARING (PART OF 5) | 4REF |
| 35. | 60020173 | BUSHING (PART OF 2) | 1REF |
| 36. | 60020174 | BUSHING (PART OF 2) | 1REF |
| 37. | 60020176 | BUSHING (PART OF 2) | 1REF |
| 38. | 60020177 | BUSHING (PART OF 2) | 1REF |
| 39. | 71056011 | DRIVE GEAR (PART OF 2) | 1REF |
| 40. | 60020175 | THRUST WASHER | 1 |
| 42. | 76393209 | BUMPER | 2 |
| 43. | 72060097 | CAP SCR 1/2-13X3 HHGR5 | 4 |
| 45. | 72063005 | WASHER 1/2 WRT | 12 |
| 46. | 72060092 | CAP SCR 1/2-13X1-1/2 HHGR5 | 4 |
| 50. | 72063115 | WASHER 7/8 HARD FLAT | 23 |

**WARNING**

Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Failure to replace gear-bearing bolts may result in bolt failure due to metal fatigue, causing serious injury or death.

**NOTE**

Anytime the pin retainer plate bolts have been removed, apply Loctite 262 to the threads before reassembly.

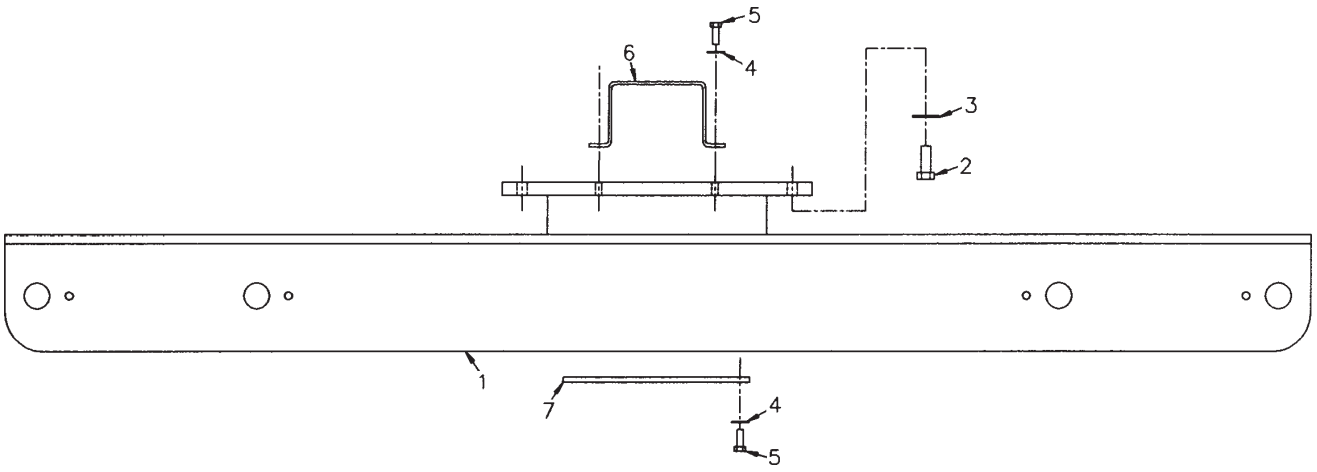


## BODY ASM (40712246)

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1. | 52712245 | BODY | 1 |
| 2. | 72060206 | CAP SCR 3/4-10X2 HH GR8 | 18 |
| 3. | 72063116 | WASHER 3/4 FLAT HARD | 18 |
| 4. | 72063005 | WASHER 1/2 WRT | 6 |
| 5. | 72060091 | CAP SCR 1/2-13X1 HH GR5 | 6 |
| 6. | 60108401 | BULKHEAD PLATE | 1 |
| 7. | 60116214 | ACCESS COVER PLATE | 1 |

**WARNING**

Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Failure to replace gear-bearing bolts may result in bolt failure due to metal fatigue, causing serious injury or death.

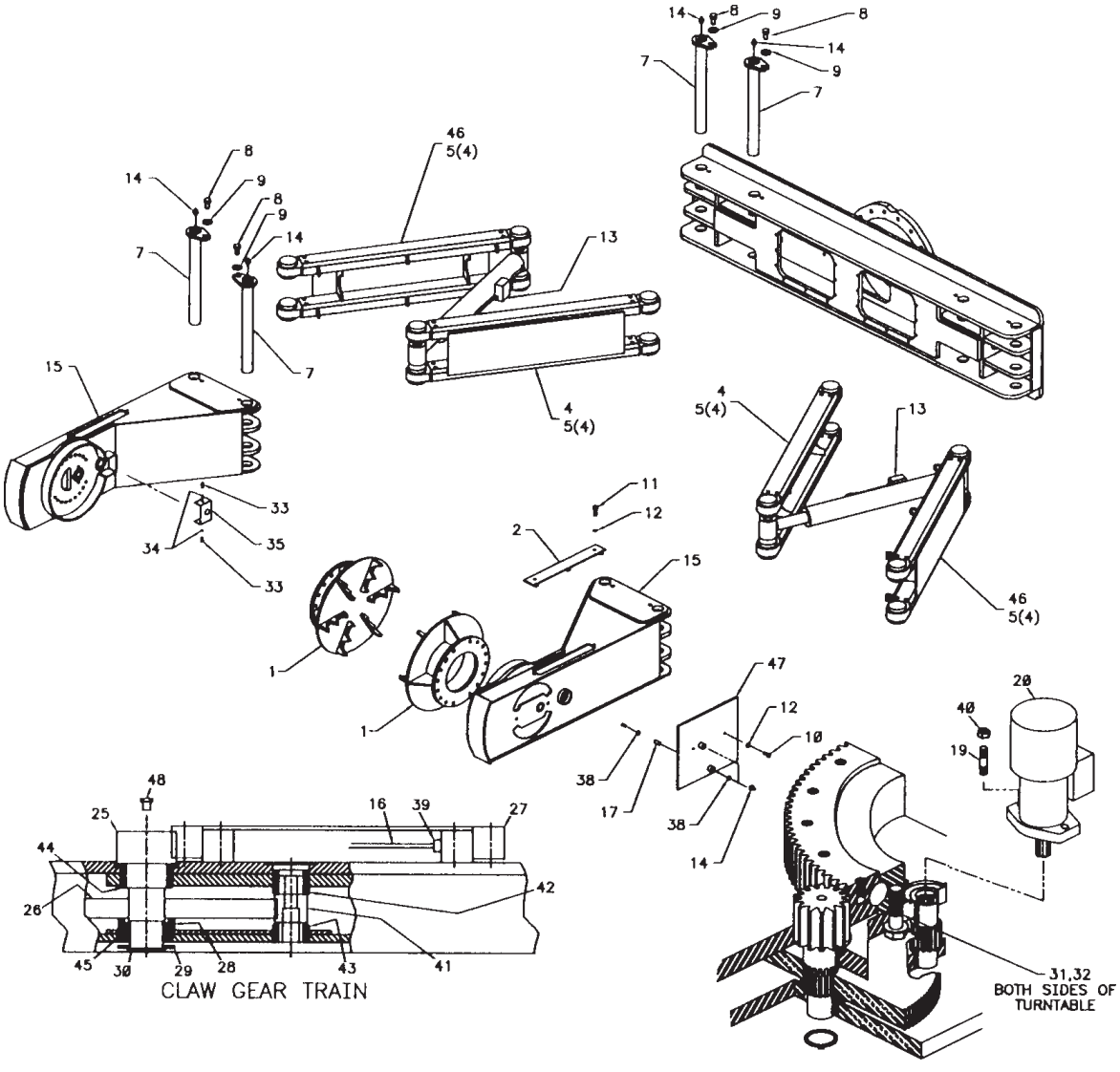


# CLAMP ASM (40712248)

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1. | 52715013 | CLAW | 2 |
| 2. | 52704284 | COVER PLATE | 4 |
| 4. | 52710356 | ARM (INCL:5) | 2 |
| 5. | 60020223 | BUSHING (PART OF 4&46) | 16REF |
| 7. | 52710354 | PIN | 8 |
| 8. | 72060183 | CAP SCR 3/4-10X1-1/2 HHGR5 | 8 |
| 9. | 72063008 | WASHER 3/4 WRT | 12 |
| 10. | 72060182 | CAP SCR 3/4-10X1 HHGR5 | 4 |
| 11. | 72060091 | CAP SCR 1/2-13X1 HHGR5 | 8 |
| 12. | 72063056 | WASHER 3/4 LOCK | 12 |
| 13. | 51725871 | CLAMP CYLINDER (FROM 4-17-14) | 2 |
| | 3B160920 | CLAMP CYLINDER (TO 4-17-14) | 2 |
| 14. | 72053508 | ZERK 1/8NPT | 22 |
| 15. | 52710358 | HAND (INCL:41-45) | 2 |
| 16. | 53000701 | GREASE EXTENSION | 2 |
| 17. | 72053301 | COUPLING 1/8NPT | 2 |
| 19. | 60106032 | STUD | 4 |
| 20. | 73540004 | HYD MOTOR (FROM 5-15-98) | 2 |
| | 73051004 | HYD MOTOR (TO 5-15-98) | 2 |
| | 5V151830 | C'BALANCE BLOCK (TO 5-15-98) | 2 |
| | 73054538 | C'BALANCE VALVE (TO 5-15-98) | 2 |
| | 72060738 | CAP SCR (TO 5-15-98) | 8 |
| | 7Q072112 | O-RING (TO 5-15-98) | 4 |
| 25. | 71056010 | PINION GEAR | 2 |
| 26. | 71056012 | INTERMEDIATE GEAR | 2 |
| 27. | 71056389 | TURNTABLE GEAR | 2 |
| 28. | 60102942 | THRUST WASHER | 2 |
| 29. | 72063035 | WASHER 1-1/4 10GA NR | 2 |
| 30. | 72066084 | RETAINING RING 1-1/4 | 2 |
| 31. | 72060151 | CAP SCR 5/8-11X2 HHGR8 | 68 |
| 32. | 72063119 | WASHER 5/8 FLAT HARD | 68 |
| 33. | 72060833 | CAP SCR 5/16-18X3/4 SLFTPG | 4 |
| 34. | 72063002 | WASHER 5/16 WRT | 4 |
| 35. | 60104763 | PINION COVER | 2 |
| 38. | 72063003 | WASHER 3/8 WRT | 4 |
| 39. | 72531826 | REDUCER BUSHING 1/4-1/8 | 2 |
| 40. | 72062080 | NUT 1/2-13 LOCK | 4 |
| 41. | 71056011 | DRIVE GEAR (PART OF 15) | REF |
| 42. | 60020115 | BUSHING (PART OF 15) | REF |
| 43. | 60020100 | BUSHING (PART OF 15) | REF |
| 44. | 60020114 | BUSHING (PART OF 15) | REF |
| 45. | 60020081 | BUSHING (PART OF 15) | REF |
| 46. | 52726091 | ARM WELDMENT (FROM 4-17-14) | 2 |
| | 52710355 | ARM WELDMENT (TO 4-17-14) | 2 |
| 47. | 52715064 | COVER | 2 |
| 48. | 72053240 | PIPE PLUG 1/8NPT | 2 |

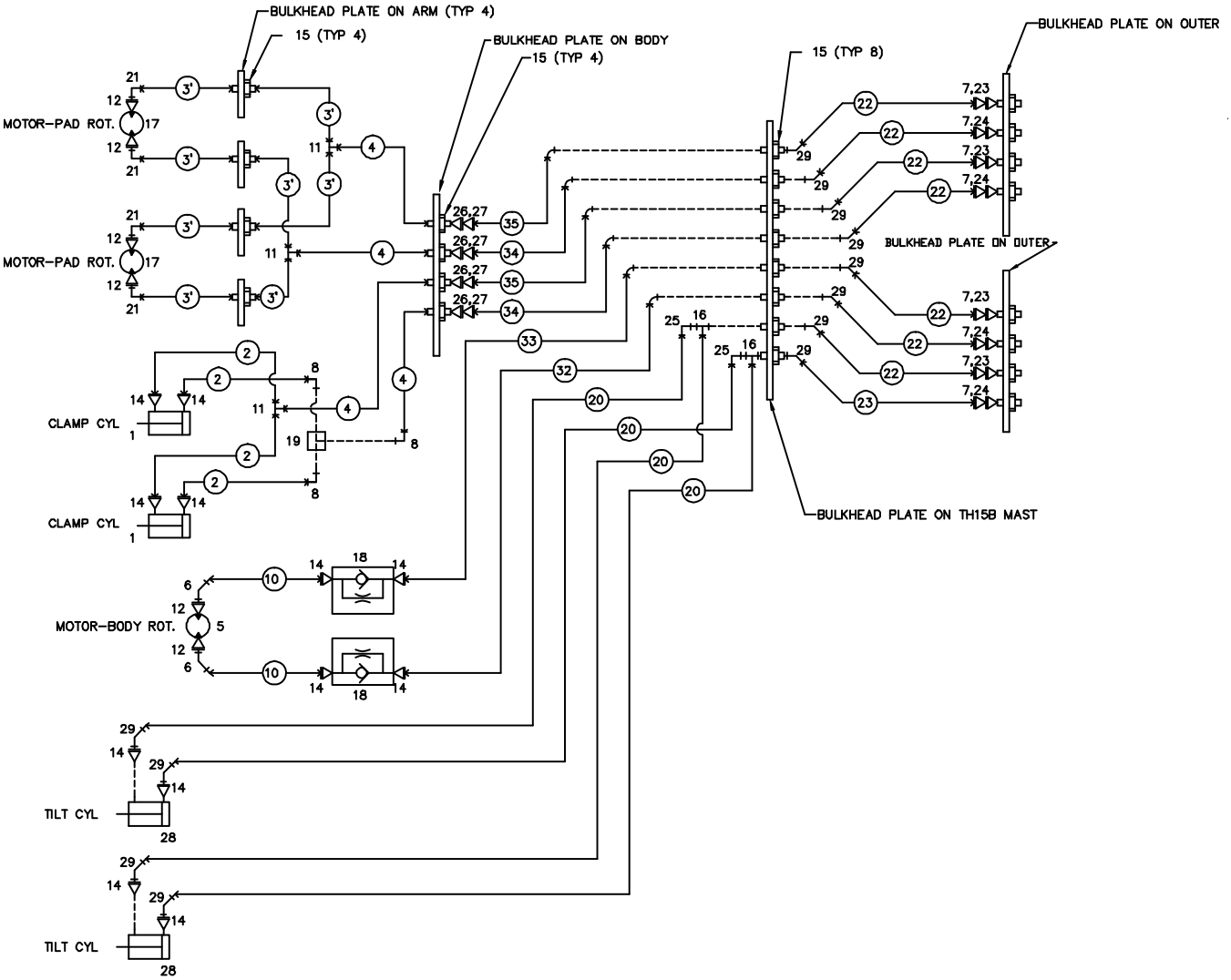
**WARNING**

ANYTIME A GEAR-BEARING BOLT IS REMOVED, IT MUST BE REPLACED WITH A NEW BOLT OF THE IDENTICAL GRADE AND SIZE. FAILURE TO REPLACE GEAR-BEARING BOLTS MAY RESULT IN BOLT FAILURE DUE TO METAL FATIGUE, CAUSING SERIOUS INJURY OR DEATH.



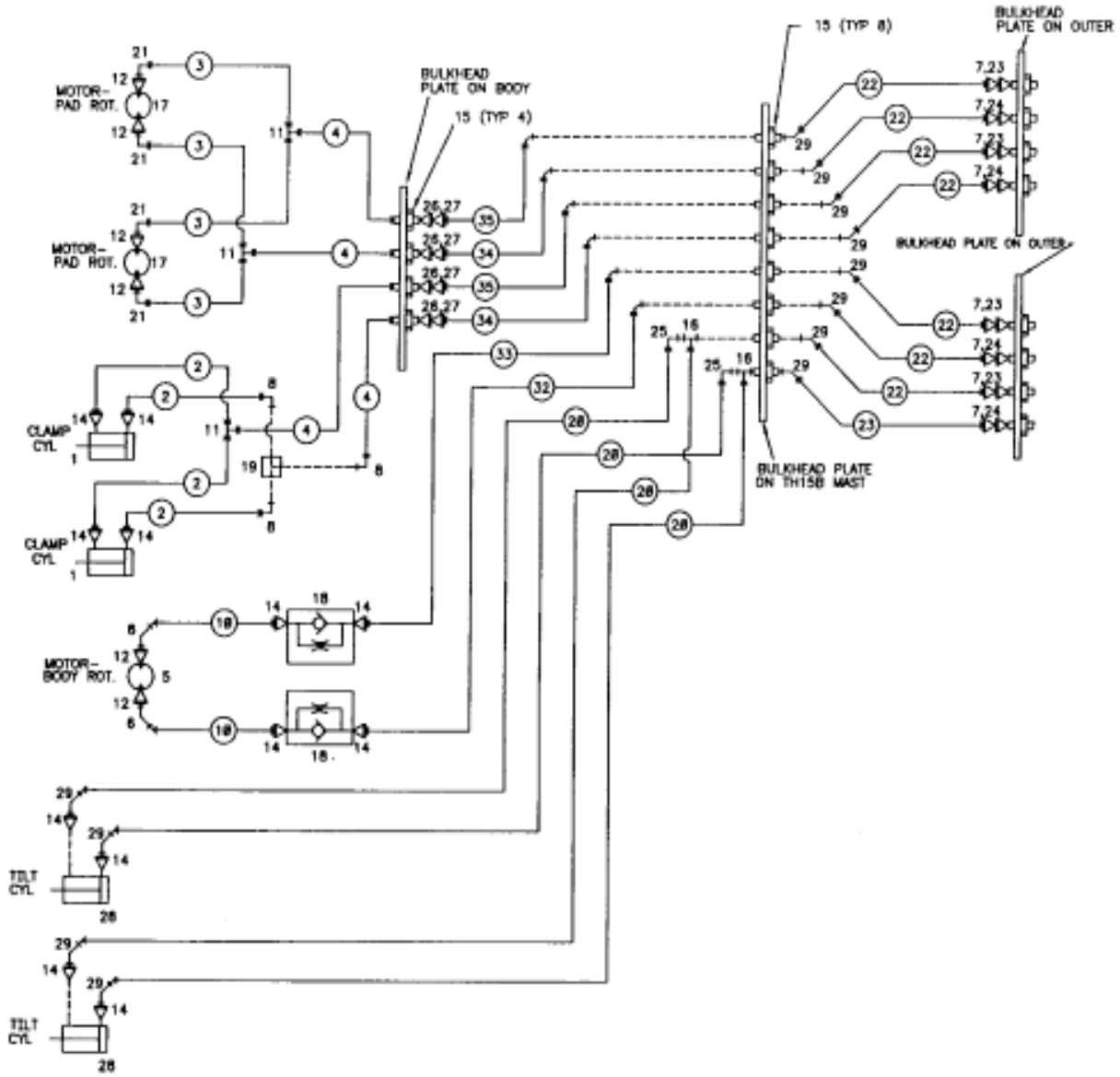
# HYDRAULIC KIT (91712250)
# (EFFECTIVE FROM 4/14)

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1. | 3B192910 | CLAMP CYLINDER | REF |
| 2. | 51394482 | HOSE ASM 3/8X61 #8F#8F | *4REF |
| 3. | 51394592 | HOSE ASM 3/8X152 #6F#8F | *4REF |
| 4. | 51394589 | HOSE ASM 3/8X13 #8F#8F | *4REF |
| 5. | 73051004 | HYDRAULIC MOTOR | REF |
| 6. | 72053776 | ELBOW #6MJIC #6FJIC 45° | 2 |
| 7. | 72053670 | ADAPTER 3/8MPT 3/4MJIC | 8 |
| 8. | 72053673 | ELBOW 3/8MSTR 3/8MJIC 90° | 3 |
| 10. | 51394590 | HOSE ASM 3/8X19 #6F#8F | *2REF |
| 11. | 72531205 | TEE 3/4MJIC | 3 |
| 12. | 72532992 | ADAPTER #4MSTR #6FSTR | 6 |
| 14. | 72532358 | ADAPTER 3/4MSTR 3/4MJIC | 12 |
| 15. | 72533373 | UNION 3/4JIC BULKHEAD | 16 |
| 16. | 72532657 | TEE 3/4JIC SWVL NUT RUN | 2 |
| 17. | 73051004 | HYDRAULIC MOTOR | REF |
| 18. | 73054921 | VALVE-FLOW CONTROL | 2 |
| 19. | 73054922 | FLOW DIVIDER VALVE | 1 |
| 20. | 51392462 | HOSE ASM 3/8X27 #8F#8F | *4REF |
| 21. | 72053760 | ELBOW #6MSTR #6FJIC 90° | 4 |
| 22. | 51394591 | HOSE ASM 3/8X50 #8F#8F | *8REF |
| 23. | 72533101 | DISCONNECT COUPLER 3/8FPT | 4 |
| 24. | 72533102 | DISCONNECT NIPPLE 3/8FPT | 4 |
| 25. | 72532658 | ELBOW 3/4MJIC 3/4FJIC SWVL | 2 |
| 26. | 72532739 | ADAPTER 3/4MJIC 3/4MJIC | 4 |
| 27. | 72532980 | ADPTR 3/4FJIC PR SW IN-LINE | 4 |
| 28. | 3C170910 | TILT CYLINDER | REF |
| 29. | 72532670 | ELBOW 3/4MJIC 3/4FJIC 45° | 18 |
| 31. | 51714055 | HOSE KIT (INCL: *) | 1 |
| 32. | 51395132 | HOSE FJ 3/8X14 #8#8 | *1REF |
| 33. | 51395133 | HOSE FJ 3/8X15 #8#8 | *1REF |
| 34. | 51395134 | HOSE FJ 3/8X36 #8#8 | *2REF |
| 35. | 51395135 | HOSE FJ 3/8X37 #8#8 | *2REF |



# HYDRAULIC KIT (91712250) (EFFECTIVE TO 4/14)

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1. | 3B192910 | CLAMP CYLINDER | REF |
| 2. | 51394482 | HOSE ASM 3/8X61 #8F#8F | *4REF |
| 3. | 51394592 | HOSE ASM 3/8X152 #6F#8F | *4REF |
| 4. | 51394589 | HOSE ASM 3/8X13 #8F#8F | *4REF |
| 5. | 73051004 | HYDRAULIC MOTOR | REF |
| 6. | 72053776 | ELBOW #6MJIC #6FJIC 45° | 2 |
| 7. | 72053670 | ADAPTER 3/8MPT 3/4MJIC | 8 |
| 8. | 72053673 | ELBOW 3/8MSTR 3/8MJIC 90° | 3 |
| 10. | 51394590 | HOSE ASM 3/8X19 #6F#8F | *2REF |
| 11. | 72531205 | TEE 3/4MJIC | 3 |
| 12. | 72532992 | ADAPTER #4MSTR #6FSTR | 6 |
| 14. | 72532358 | ADAPTER 3/4MSTR 3/4MJIC | 12 |
| 15. | 72533373 | UNION 3/4JIC BULKHEAD | 12 |
| 16. | 72532657 | TEE 3/4JIC SWVL NUT RUN | 2 |
| 17. | 73051004 | HYDRAULIC MOTOR | REF |
| 18. | 73054921 | VALVE-FLOW CONTROL | 2 |
| 19. | 73054922 | FLOW DIVIDER VALVE | 1 |
| 20. | 51392462 | HOSE ASM 3/8X27 #8F#8F | *4REF |
| 21. | 72053760 | ELBOW #6MSTR #6FJIC 90° | 4 |
| 22. | 51394591 | HOSE ASM 3/8X50 #8F#8F | *8REF |
| 23. | 72533101 | DISCONNECT COUPLER 3/8FPT | 4 |
| 24. | 72533102 | DISCONNECT NIPPLE 3/8FPT | 4 |
| 25. | 72532658 | ELBOW 3/4MJIC 3/4FJIC SWVL | 2 |
| 26. | 72532739 | ADAPTER 3/4MJIC 3/4MJIC | 4 |
| 27. | 72532980 | ADPTR 3/4FJIC PR SW IN-LINE | 4 |
| 28. | 3C170910 | TILT CYLINDER | REF |
| 29. | 72532670 | ELBOW 3/4MJIC 3/4FJIC 45° | 18 |
| 31. | 51714055 | HOSE KIT (INCL: *) | 1 |
| 32. | 51395132 | HOSE FJ 3/8X14 #8#8 | *1REF |
| 33. | 51395133 | HOSE FJ 3/8X15 #8#8 | *1REF |
| 34. | 51395134 | HOSE FJ 3/8X36 #8#8 | *2REF |
| 35. | 51395135 | HOSE FJ 3/8X37 #8#8 | *2REF |

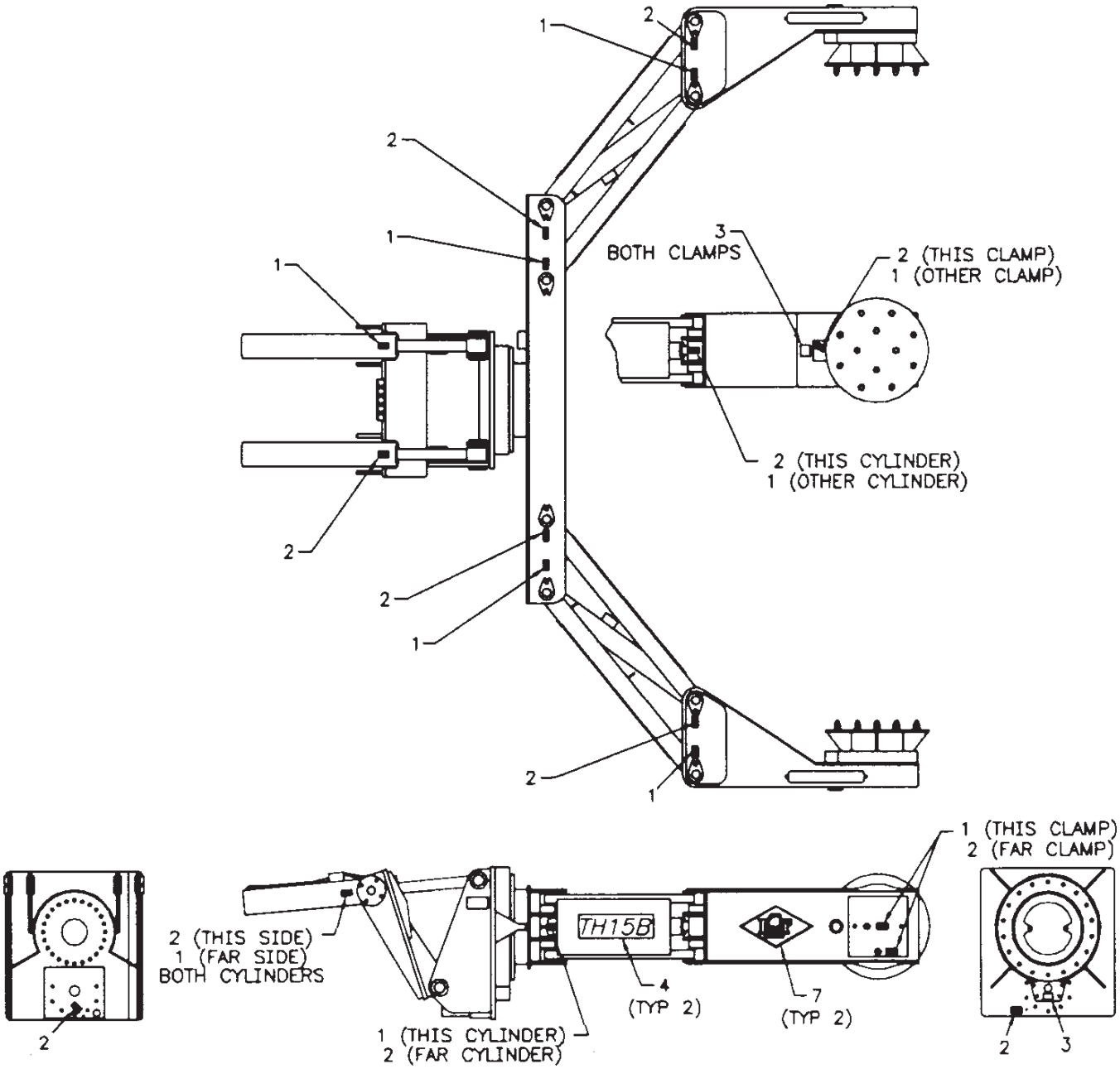


# DECAL KIT (95712251)

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1. | 70391612 | DECAL - GREASE WKLY LH | 12 |
| 2. | 70391613 | DECAL - GREASE WKLY RH | 14 |
| 3. | 70392524 | DECAL - ROTATE/GREASE | 3 |
| 4. | 71393875 | DECAL - TH-15B ID | 2 |
| 5. | 71392727 | DECAL - CONTROL SS | 1 |
| 6. | 71392728 | DECAL - CONTROL CS | 1 |
| 7. | 70392887 | IMT DIAMOND | 2 |
| 8. | 71393876 | CAPACITY PLACARD | 2 |
| 9. | 70394272 | DECAL-OP RESTRICTIONS | 2 |

## DECAL PLACEMENT

| ITEM | LOCATION |
|---|---|
| 8,9 | NEAR EACH CRANE OPERATOR STATION IN CLEAR VIEW OF OPERATOR |



# CLAMP CYLINDER (3B160920)

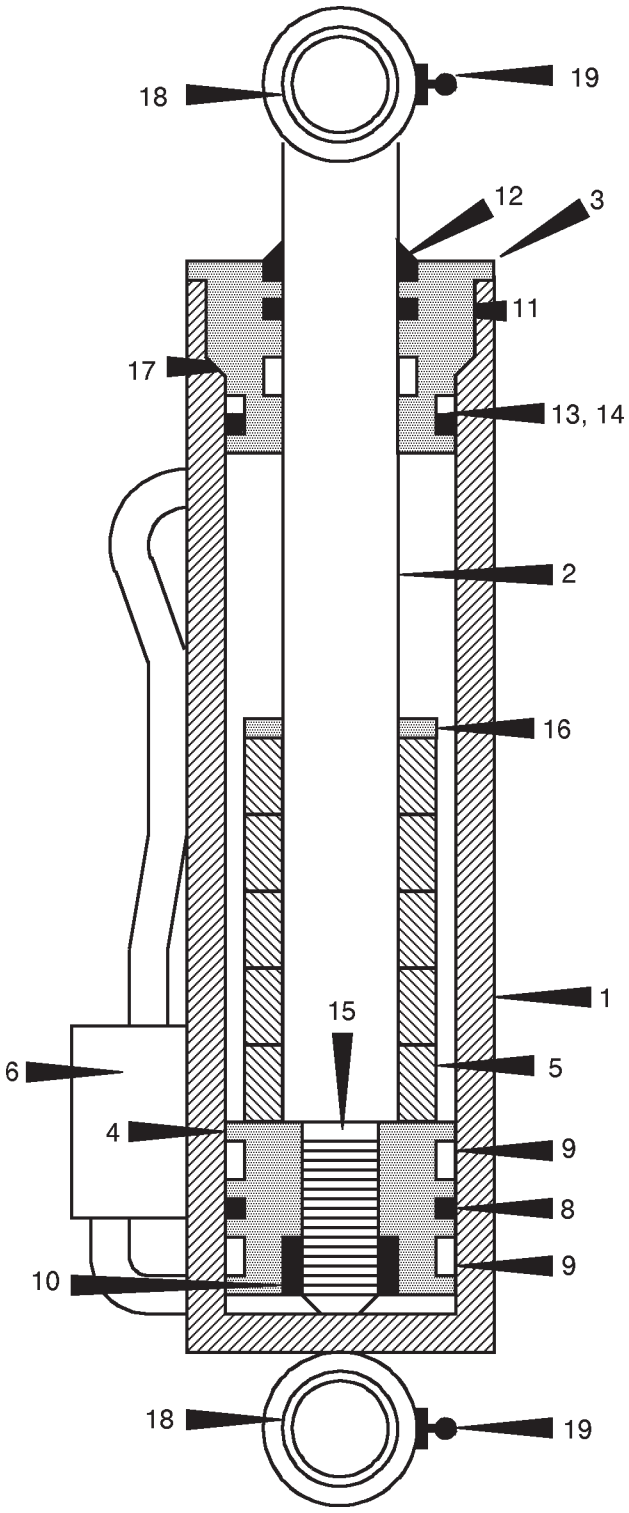
| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1. | 4B160920 | CASE ASM | 1 |
| 2. | 4G192910 | ROD ASM | 1 |
| 3. | 6H040025 | HEAD | 1 |
| 4. | 6I402144 | PISTON | 1 |
| 5. | 6C300025 | STOP TUBE | 5 |
| 6. | 73054242 | VALVE | 1 |
| 7. | 9C160920 | SEAL KIT (INCL:8-16) | 1 |
| 8. | 7T66P400 | PISTON SEAL (PART OF 7) | 1REF |
| 9. | 7T2N4040 | WEAR RING (PART OF 7) | 2REF |
| 10. | 7T61N143 | LOCK RING (PART OF 7) | 1REF |
| 11. | 7R546025 | U-CUP SEAL (PART OF 7) | 1REF |
| 12. | 7R14P025 | ROD WIPER (PART OF 7) | 1REF |
| 13. | 7Q10P342 | BACKUP RING (PART OF 7) | 1REF |
| 14. | 7Q072342 | O-RING (PART OF 7) | 1REF |
| 15. | 7Q072127 | O-RING (PART OF 7) | 1REF |
| 16. | 6A025025 | WAFER LOCK (PART OF 7) | 1REF |
| 17. | 7T2N8027 | WEAR RING (PART OF 7) | 1REF |
| 18. | 70055203 | BEARING (PART OF 1 & 2) | 4REF |
| 19. | 72053507 | ZERK 1/4-28 (PART OF 1 & 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.



# TILT CYLINDER (3C162920)

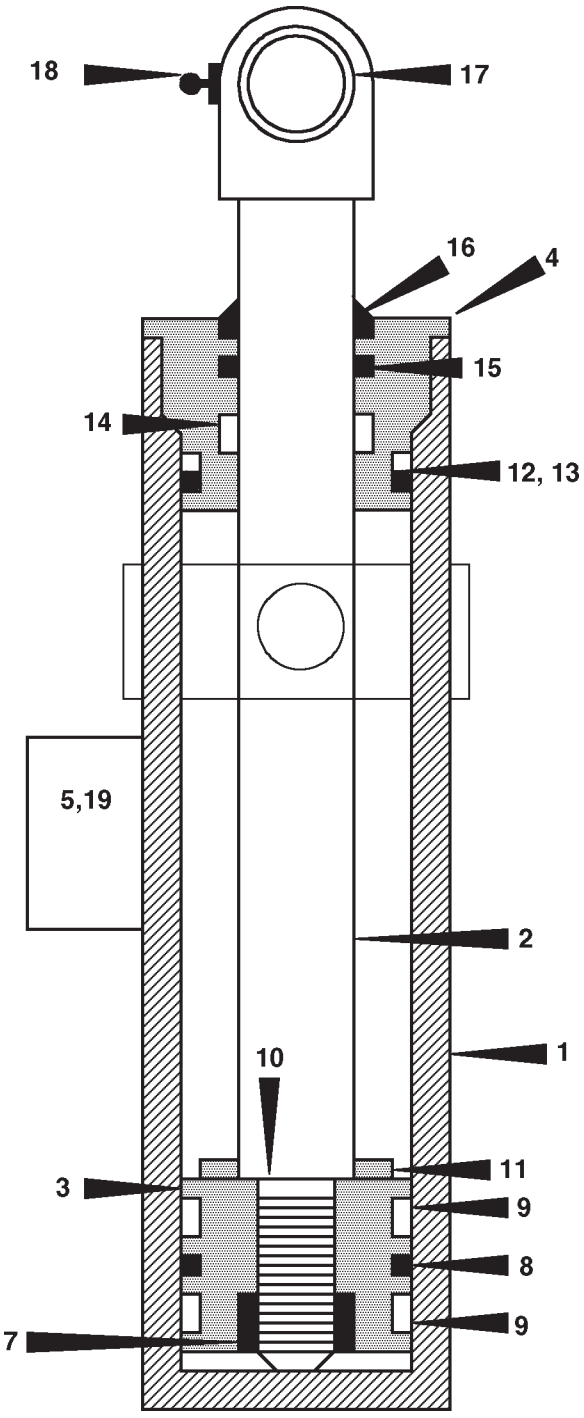
| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1. | 4C162920 | CASE ASM (INCL: 19) | 1 |
| 2. | 4G170910 | ROD ASM (INCL:17,18) | 1 |
| 3. | 6I503200 | PISTON | 1 |
| 4. | 6H050025 | HEAD | 1 |
| 5. | 73054242 | COUNTERBALANCE VALVE | 1 |
| 6. | 9C170910 | SEAL KIT (INCL:7-16) | 1 |
| 7. | 7T61N200 | LOCK RING (PART OF 6) | 1REF |
| 8. | 7T66P500 | PISTON SEAL (PART OF 6) | 1REF |
| 9. | 7T2N4050 | WEAR RING (PART OF 6) | 2REF |
| 10. | 7Q072033 | O-RING (PART OF 6) | 1REF |
| 11. | 6A025025 | WAFER LOCK (PART OF 6) | 1REF |
| 12. | 7Q072350 | O-RING (PART OF 6) | 1REF |
| 13. | 7Q10P350 | BACK-UP RING (PART OF 6) | 1REF |
| 14. | 7T2N8027 | WEAR RING (PART OF 6) | 1REF |
| 15. | 7R546025 | U-CUP SEAL (PART OF 6) | 1REF |
| 16. | 7R14P025 | ROD WIPER (PART OF 6) | 1REF |
| 17. | 70055219 | BEARING (PART OF 1,2) | 2REF |
| 18. | 72053507 | ZERK 1/4-28 (PART OF 2) | 1REF |
| 19. | 7PNPXT02 | PIPE PLUG (PART OF 1) | 3REF |

## NOTE

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

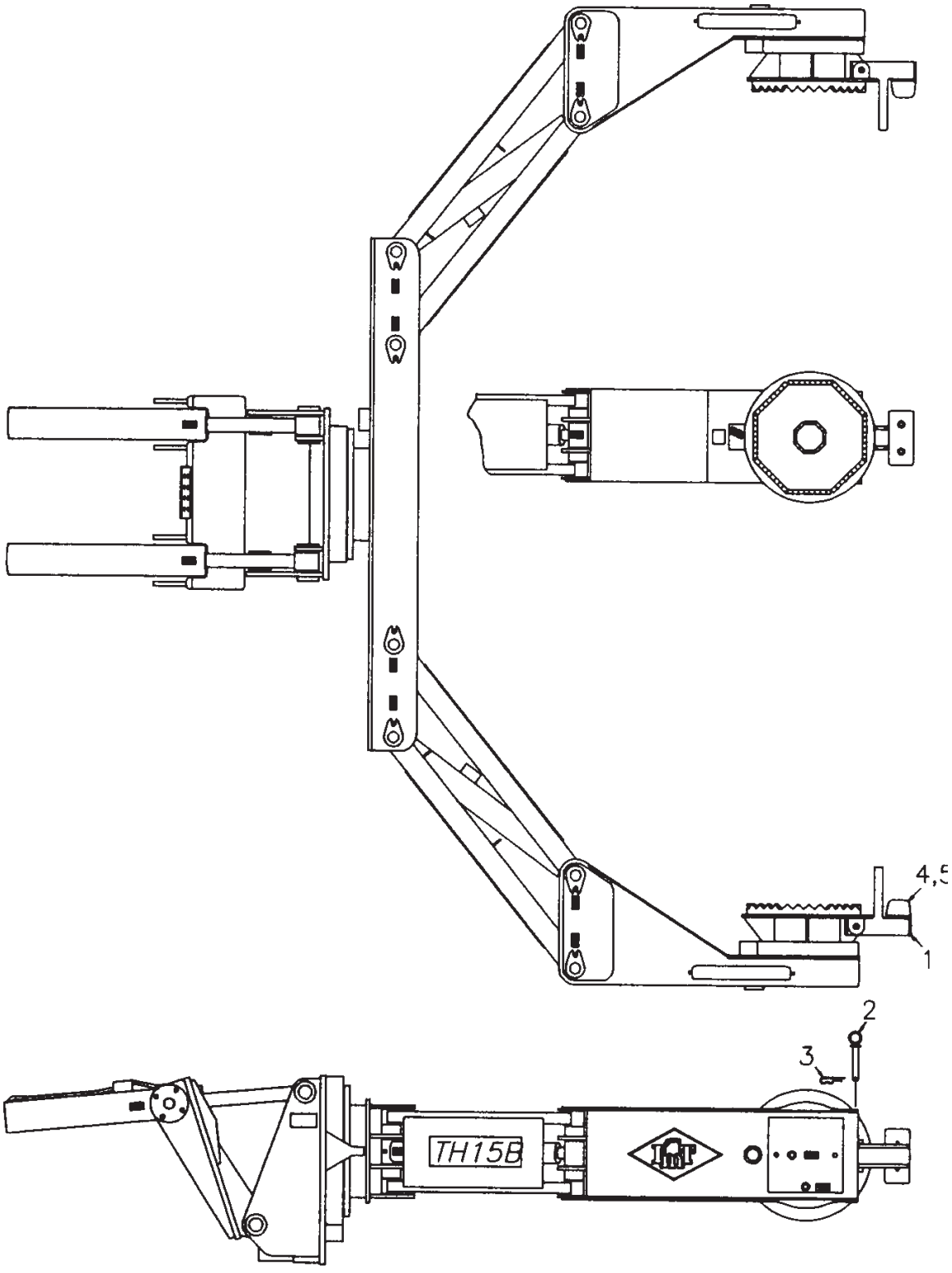
APPLY “LUBRIPLATE #630-2” MEDIUM HEAVY,MULTI-PURPOSE LUBRICANT OR EQUIVALENT TO ALL PISTON AND HEAD GLANDS, LOCK RING AND ROD THREADS BEFORE ASSEMBLY.

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



# OPTION-RIM FLANGE ATTACHMENT KIT (30712767)

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1. | 52712768 | FLANGE ARM | 2 |
| 2. | 52702082 | PIN | 2 |
| 3. | 72066145 | HAIR PIN 3/16 | 2 |
| 4. | 76393209 | RUBBER DOCK BUMPER | 2 |
| 5. | 72060095 | CAP SCR 1/2-13X2 HHGR5 | 4 |

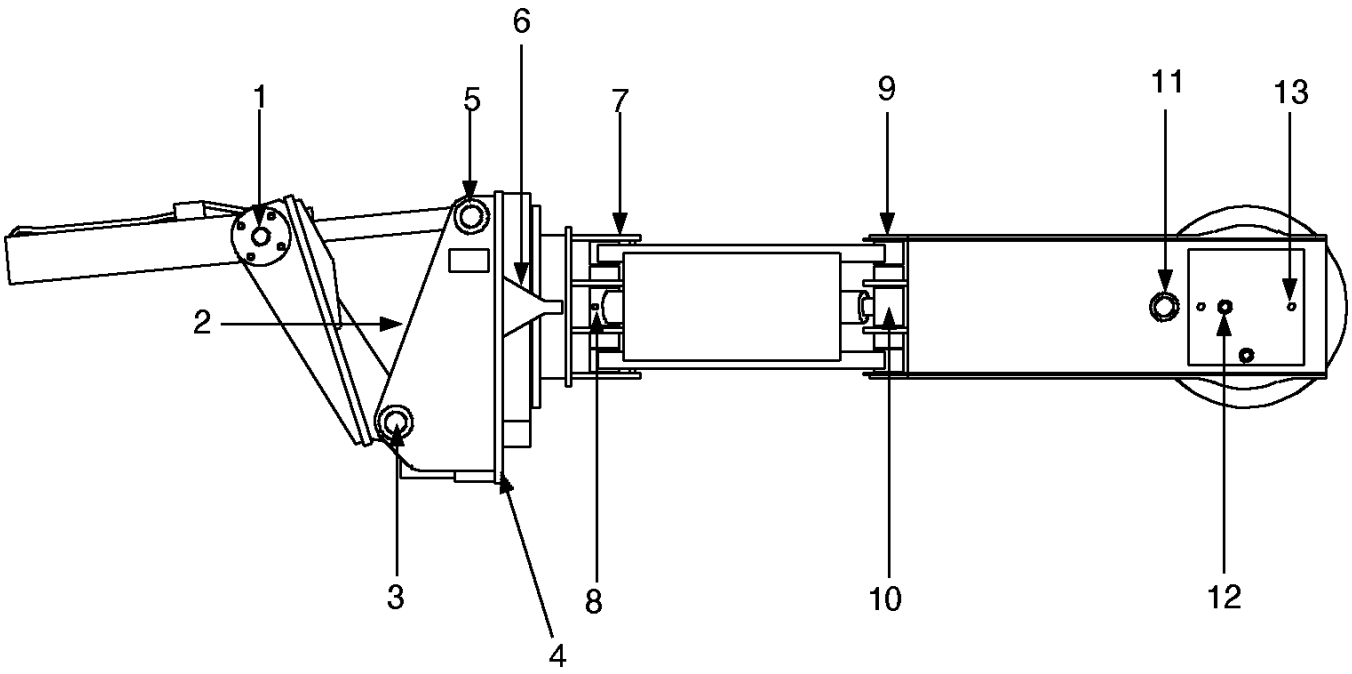


BLANK

# SECTION 3. TIREHAND 15B REFERENCE

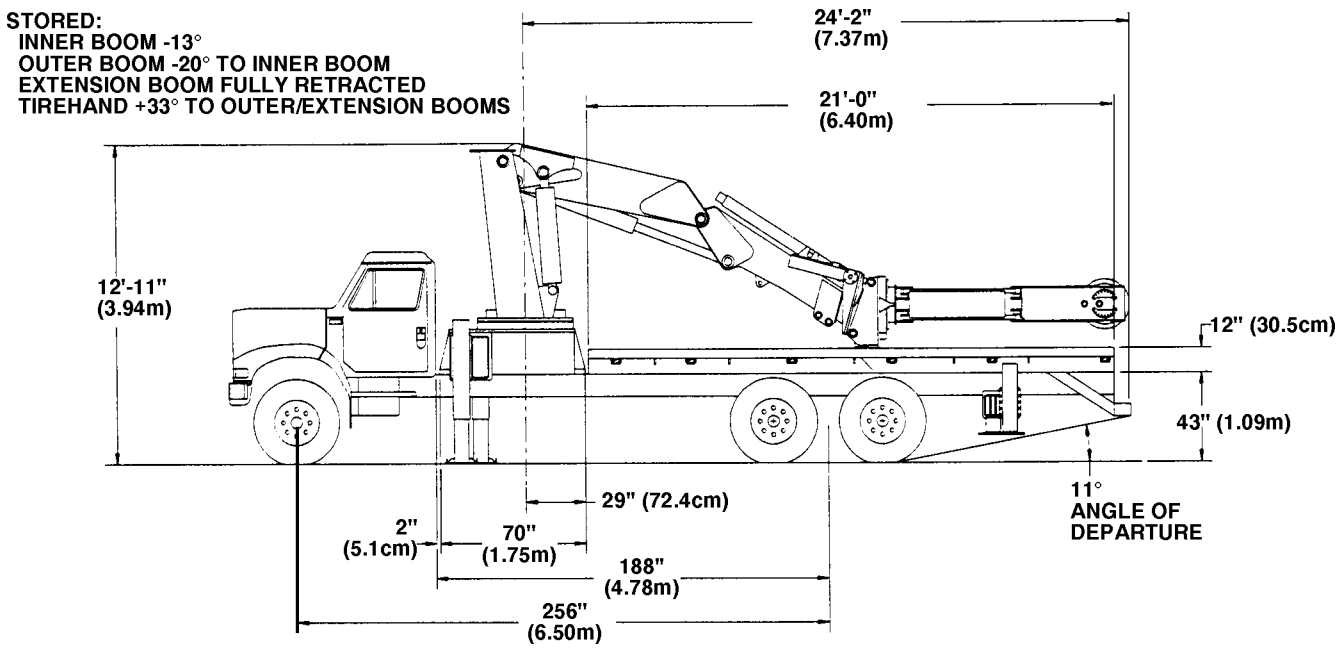
**NOTES**

# GREASE ZERK LOCATIONS & LUBRICANT REQUIREMENTS

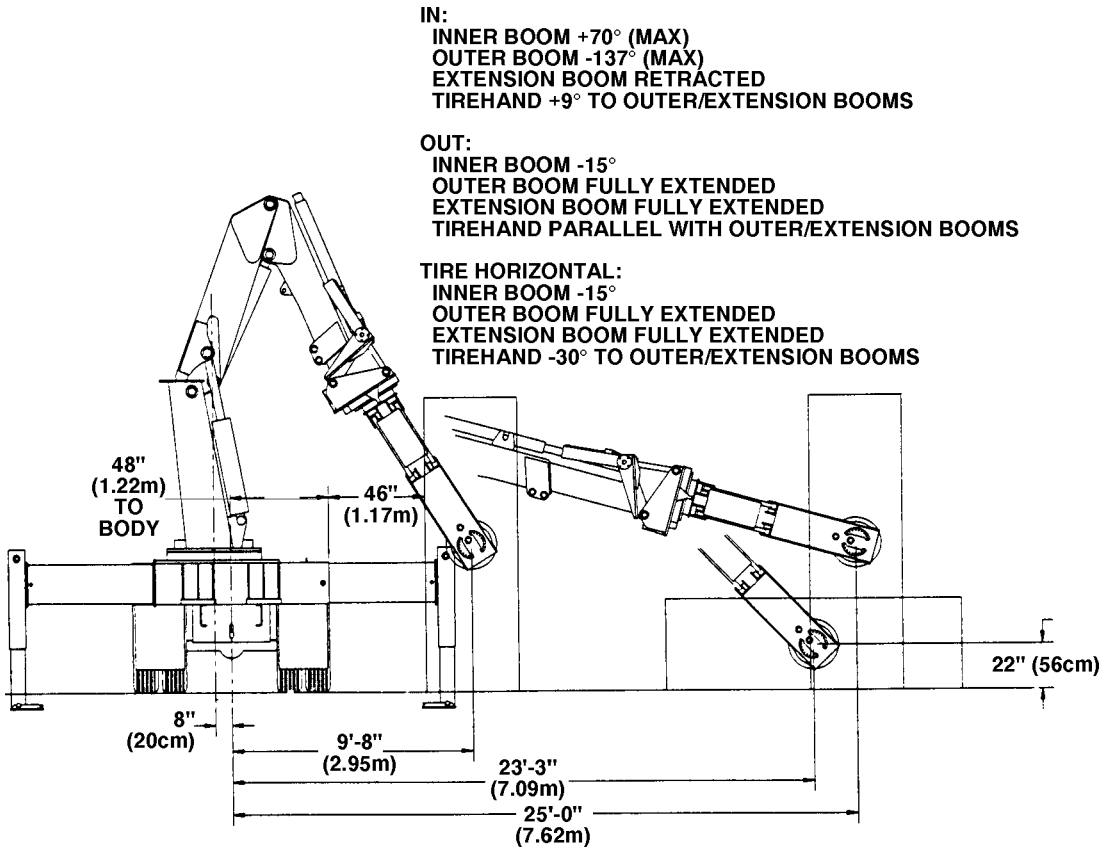



| ITEM | LOCATION DESCRIPTION | LUBRICANT | FREQUENCY |
|---|---|---|---|
| 1. | TILT CYLINDER BASE PIN | SHELL ALVANIA 2EP<br>OR<br>SHELL RETINAX “A” | WEEKLY |
| 2. | TURNTABLE BEARING GREASE EXTENSION<br>*ROTATE TIREHAND WHILE GREASING | | |
| 3. | MAST/BASE HINGE PINS | | |
| 4. | SPUR GEAR BOX ZERK (DRIVE GEAR) | | |
| 5. | TILT CYLINDER ROD | | |
| 6. | PINION GEAR | | |
| 7. | ARM PINS-TOP & BOTTOM (8 PLACES) | | |
| 8. | CLAMP CYLINDER BASE | | |
| 9. | ARM PINS-TOP & BOTTOM (8) | | |
| 10. | CLAMP CYLINDER ROD | | |
| 11. | PAD PINION ZERK | | |
| 12. | PAD DRIVE GEAR ZERK | | |
| 13. | PAD TURNTABLE GREASE EXTENSIONS<br>*ROTATE PADS WHILE GREASING | | |

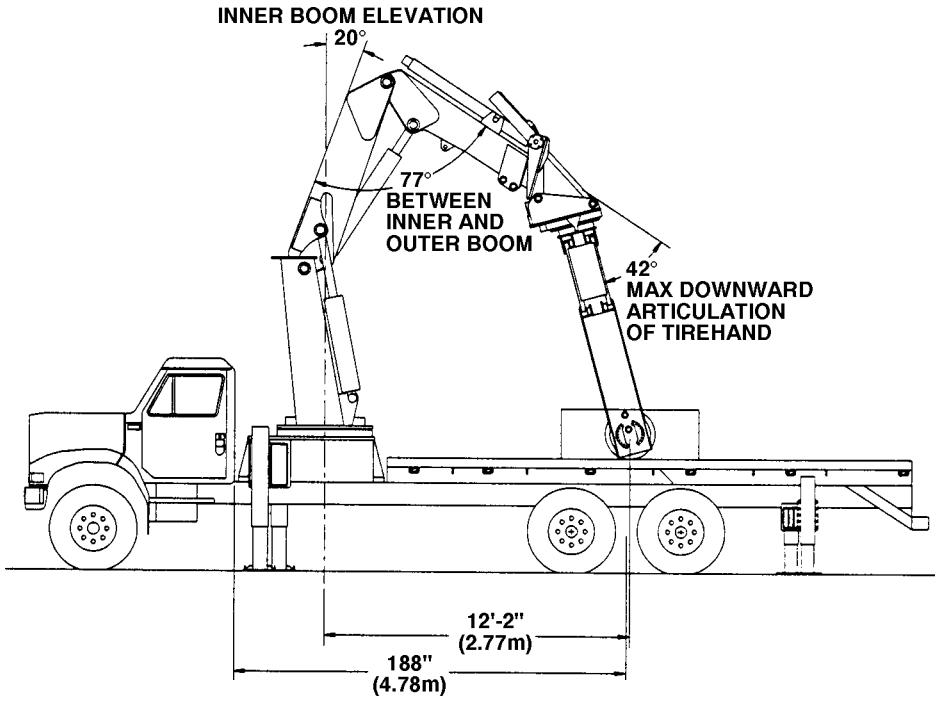
NOTE: All application points must be greased weekly under normal work loads and moderate weather conditions. Under severe operating conditions, lubrication should be performed more frequently. See Volume 1; Operation, Maintenance and Repair for additional lubrication requirements.



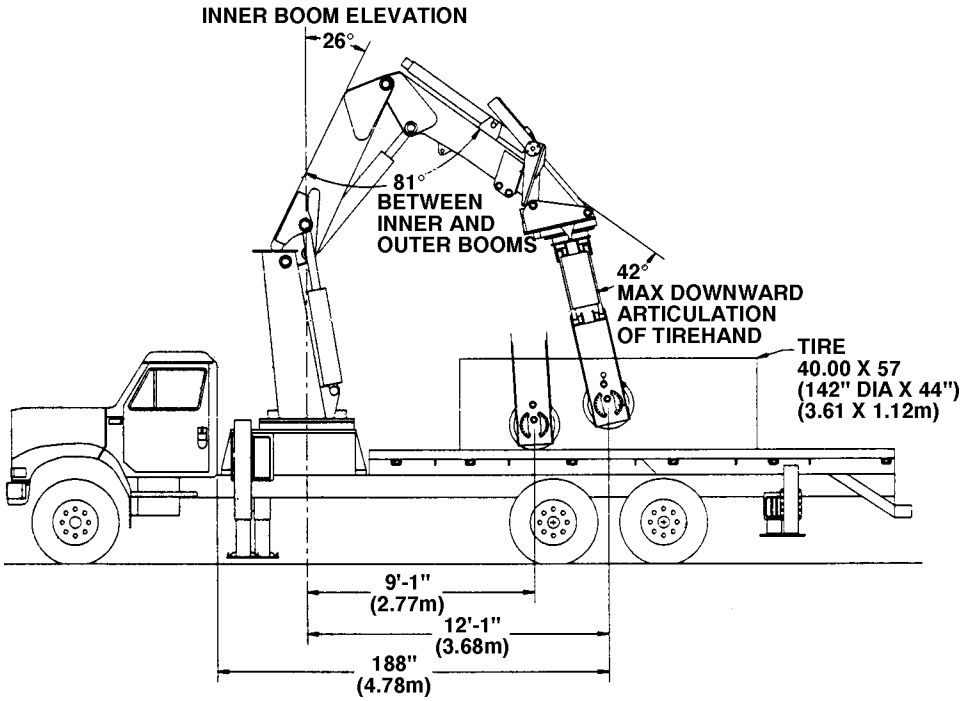

**IMT MODEL 32018 WITH TH15B - STORED POSITION**




**IMT MODEL 32018 WITH TH15B - SURFACE MOVEMENT**



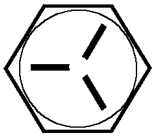

**IMT MODEL 32018 WITH TH15B - INWARD MOVEMENT**



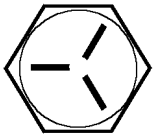

**IMT MODEL 32018 WITH TH15B - INWARD MOVEMENT (40.00 X 57 TIRE)**

# TORQUE DATA CHART - DOMESTIC

## 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, collodial 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 fatique causing serious injury or DEATH.

# TORQUE DATA CHART - METRIC

## FINE THREAD BOLTS

| SIZE (DIA-TPI) | BOLT DIA (INCHES) | TIGHTENING TORQUE SAE J429 GRADE 5 PLAIN (KG-M) | SAE J429 GRADE 5 PLATED (KG-M) | SAE J429 GRADE 8 PLAIN (KG-M) | SAE J429 GRADE 8 PLATED (KG-M) |
|---|---|---|---|---|---|
| 5/16-24 | 0.3125 | 3 | 2 | 4 | 3 |
| 3/8-24 | 0.3750 | 5 | 4 | 7 | 5 |
| 7/16-20 | 0.4375 | 8 | 6 | 11 | 8 |
| 1/2-20 | 0.5000 | 12 | 9 | 17 | 12 |
| 9/16-18 | 0.5625 | 17 | 12 | 24 | 18 |
| 5/8-18 | 0.6250 | 24 | 18 | 33 | 25 |
| 3/4-16 | 0.7500 | 41 | 31 | 58 | 44 |
| 7/8-11 | 0.8750 | 62 | 45 | 93 | 69 |
| 1-12 | 1.0000 | 89 | 67 | 138 | 103 |
| 1 1/8-12 | 1.1250 | 123 | 93 | 200 | 150 |
| 1 1/4-12 | 1.2500 | 171 | 129 | 278 | 209 |
| 1-3/8-12 | 1.3750 | 232 | 174 | 375 | 281 |
| 1 1/2-12 | 1.5000 | 304 | 228 | 492 | 369 |

## COARSE THREAD BOLTS

| SIZE (DIA-TPI) | BOLT DIA (INCHES) | TIGHTENING TORQUE SAE J429 GRADE 5 PLAIN (KG-M) | SAE J429 GRADE 5 PLATED (KG-M) | SAE J429 GRADE 8 PLAIN (KG-M) | SAE J429 GRADE 8 PLATED (KG-M) |
|---|---|---|---|---|---|
| 5/16-18 | 0.3125 | 2 | 2 | 3 | 2 |
| 3/8-16 | 0.3750 | 4 | 3 | 6 | 5 |
| 7/16-14 | 0.4375 | 7 | 5 | 10 | 7 |
| 1/2-13 | 0.5000 | 10 | 8 | 15 | 11 |
| 9/16-12 | 0.5625 | 15 | 11 | 21 | 16 |
| 5/8-11 | 0.6250 | 21 | 16 | 30 | 22 |
| 3/4-10 | 0.7500 | 37 | 28 | 52 | 39 |
| 7/8-9 | 0.8750 | 55 | 41 | 84 | 63 |
| 1-8 | 1.0000 | 82 | 62 | 126 | 94 |
| 1 1/8-7 | 1.1250 | 110 | 82 | 178 | 133 |
| 1 1/4-7 | 1.2500 | 155 | 116 | 251 | 188 |
| 1-3/8-6 | 1.3750 | 203 | 152 | 329 | 246 |
| 1 1/2-6 | 1.5000 | 270 | 210 | 438 | 328 |

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 kilogram-meters.

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, collodial 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.

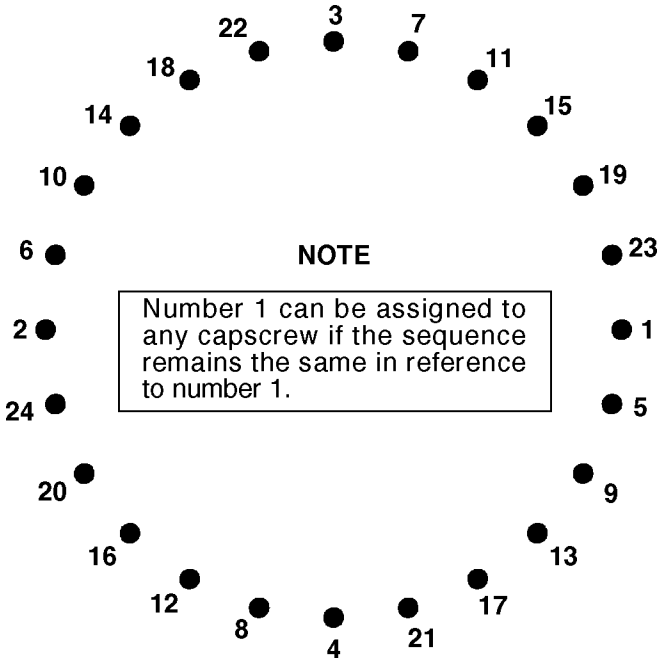
5. Torque values for socket-head capscrews are the same as for Grade 8 capscrews.

**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 fatique causing serious injury or DEATH.

# TURNTABLE BEARING FASTENER TIGHTENING SEQUENCE

Refer to the diagram below for proper tightening/torqueing sequence of the turntable bearing to the crane base and crane mast. The total quantity of cap screws varies dependent on crane model.




**TIGHTENING PROCEDURE:**

1. Refer to the Torque Data Chart to determine the proper torque value to apply to the size of capscrew used.

2. Follow the tightening sequence shown in the diagram. Note that the quantity of capscrews may differ from the diagram, but the sequence must follow the criss-cross pattern as shown in the diagram.

3. Torque all capscrews to approximately 40% of the specified torque value, by following the sequence.
   (EXAMPLE: .40 x 265 FT-LBS = 106 FT-LBS)
   (EXAMPLE-METRIC: .40 x 36 KG-M = 14.4 KG-M)

4. Repeat Step 3, but torqueing all capscrews to 75% of the specified torque value. Continue to follow the tightening sequence.
   (EXAMPLE: .75 x 265 FT-LBS = 199 FT-LBS)
   (EXAMPLE-METRIC: .75 x 36 KG-M = 27 KG-M)

5. Using the proper sequence, torque all capscrews to the listed torque value as determined from the Torque Data Chart.

# TURNTABLE BEARING INSPECTION FOR REPLACEMENT

Before a bearing is removed from a crane for inspection, one of the following conditions should be evident:

1. Metal particles present in the bearing lubricant.
2. Increased drive power required to rotate the crane.
3. Noise emitting from the bearing during crane rotation.
4. Rough crane rotation.
5. Uneven or excessive wear between the pinion gear and turntable gear.

If none of the above conditions exists, the bearing is functioning properly and need not be replaced. But, if one or more of the above conditions exists, inspection may be required. Limits are measured in "TILT" which is dependent on the internal clearances of the bearing. TILT is the most practical determination of a bearings internal clearance once mounted on a crane.

Periodic readings indicating a steady increase in TILT may be an indicator of bearing wear. Note that a bearing found to have no raceway cracks or other structural irregularities should be reassembled and returned to service.

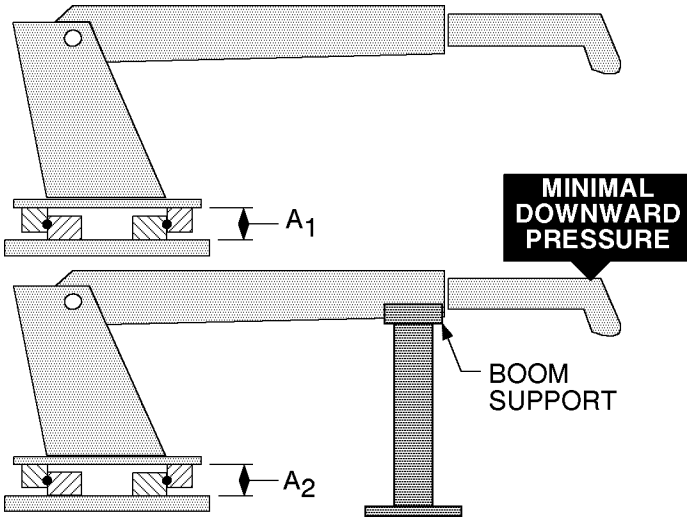
---

**TEST PROCEDURE**

STEP 1.
With the crane horizontal and fully extended, measure between the top and bottom mounting surfaces of the turntable bearing (A1), using a dial indicator for accuracy.

STEP 2.
Reverse the load by applying minimal downward pressure on the boom while the boom is in the boom support or on a solid surface. Again measure A2.

STEP 3.
Subtract A1 from A2 to determine tilt and compare the result with the accompanying chart.




## COMPARISON CHART - MODEL TO MEASURED TILT DIMENSION

**NOTE**
THE FIGURES LISTED IN THIS CHART ARE SERVICE GUIDELINES AND DO NOT, IN THEMSELVES, REQUIRE THAT THE BEARING BE INSPECTED.

IF THERE IS REASON TO SUSPECT AN EXCESS OF BEARING WEAR AND THE MEASURED TILT DIMENSION EXCEEDS THE DIMENSION LISTED, REMOVE THE BEARING FOR INSPECTION.

| | | | | | |
|---|---|---|---|---|---|
| **IMT CRANE, LOADER OR TIREHAND MODEL** | 1007<br>1014<br>2015<br>2015GH<br>2109<br>2200<br>3000<br>3016<br>321GH<br>3816<br>425<br>4300<br>5016<br>6016<br>TH7 BODY ROT'N<br>TH1449 BODY ROT'N<br>TH15B CLAMP<br>TH2551B CLAMP<br>TH2557A CLAMP | 5200<br>5200R<br>5217<br>5800<br>7020<br>7025<br>7200<br>7415<br>9000<br>TH10 BODY ROT'N<br>TH14 BODY ROT'N | 16035<br>16042<br>32018<br>32030<br>T30<br>T40 | 9800<br>12916<br>13031<br>13034<br>14000<br>15000<br>18000<br>20017<br>H1200<br>H1200RR<br>T50<br>TH2551B BODY ROT'N<br>TH2557B BODY ROT'N<br>TH2557A BODY ROT'N |
| **BALL DIA. (REF)** | .875" (22mm) | 1.00" (25mm) | 1.18"-1.25" (30-32mm) | 1.75" (44mm) |
| **TILT DIM. ($A_1$-$A_2$)** | **.060" (1.524mm)** | **.070" (1.778mm)** | **.075" (1.905mm)** | **.090" (2.286mm)** |

# RECOMMENDED SPARE PARTS LIST

## 1 YEAR SUPPLY
## TIREHAND 15B
## FOR MANUAL: 99900757

This spare parts list does not necessarily indicate that the items can be expected to fail in the course of a year. It is intended to provide the user with a stock of parts sufficient to keep the unit operating with the minimal down-time waiting for parts. There may be parts failures not covered by this list. Parts not listed are considered as not being Critical or Normal Wear items during the first year of operations and you need to contact the distributor or manufacturer for availability.

| ASSEMBLY DESIGNATION | ITEM NO. | PART NO. | DESCRIPTION | QTY | CODE | SHELF LIFE (MO) | ORDER QTY |
|---|---|---|---|---|---|---|---|
| **40710232.01.19961112** | **MAST ASM** | | | | | | |
| | 3 | 72063116 | WASHER | 18 | | | |
| | 4 | 72601484 | CAP SCR | 6 | | | |
| | 5 | 70055219 | BEARING | 4 | | | |
| | 6 | 72060206 | CAP SCR | 12 | | | |
| **40712335.01.19980204** | **BASE ASM** | | | | | | |
| | 8 | 60020172 | THRUST WASHER | 1 | | | |
| | 14 | 71056273 | TURNTABLE GEAR BEARING | 1 | | | |
| | 15 | 71056073 | PINION GEAR | 1 | | | |
| | 16 | 71056264 | INTERMEDIATE GEAR | 1 | | | |
| | 21 | 72060151 | CAP SCR | 7 | | | |
| | 22 | 72601148 | CAP SCR | 23 | | | |
| | 26 | 72063116 | WASHER | 39 | | | |
| | 27 | 72063117 | WASHER | 4 | | | |
| | 28 | 72063119 | WASHER | 7 | | | |
| | 31 | 72601144 | CAP SCR | 4 | | | |
| | 32 | 72601484 | CAP SCR | 16 | | | |
| | 33 | 73051004 | HYD MOTOR | 1 | | | |
| | 34 | 60020222 | BEARING | 4 | | | |
| | 35 | 60020173 | BUSHING | 1 | | | |
| | 36 | 60020174 | BUSHING | 1 | | | |
| | 37 | 60020176 | BUSHING | 1 | | | |
| | 38 | 60020177 | BUSHING | 1 | | | |
| | 39 | 71056011 | DRIVE GEAR | 1 | | | |
| | 40 | 60020175 | THRUST WASHER | 1 | | | |
| | 47 | 73054538 | C'BALANCE VALVE | 2 | | | |
| | 49 | 71072112 | O-RING | 2 | | | |
| | 50 | 72063115 | WASHER | 23 | | | |
| **40712246.01.19940415** | **BODY ASM** | | | | | | |
| | 2 | 72060206 | CAP SCR | 18 | | | |
| | 3 | 72063116 | WASHER | 18 | | | |
| **40712248.01.19960205** | **CLAMP ASM** | | | | | | |
| | 5 | 60020223 | BUSHING | 16 | | | |
| | 20 | 73051004 | MOTOR | 2 | | | |
| | 22 | 73054538 | C'BALANCE VALVE | 2 | | | |
| | 24 | 7Q072112 | O-RING | 4 | | | |
| | 25 | 71056010 | PINION GEAR | 2 | | | |
| | 26 | 71056012 | INTERMEDIATE GEAR | 2 | | | |
| | 27 | 71056389 | TURNTABLE GEAR | 2 | | | |
| | 31 | 72060151 | CAP SCR | 68 | | | |
| | 32 | 72063119 | WASHER | 68 | | | |
| | 41 | 71056011 | DRIVE GEAR | 2 | | | |
| | 42 | 60020115 | BUSHING | 2 | | | |
| | 43 | 60020100 | BUSHING | 2 | | | |
| | 44 | 60020114 | BUSHING | 2 | | | |
| | 45 | 60020081 | BUSHING | 2 | | | |
| **3B160920.01.19940415** | **CLAMP CYLINDER** | | | | | | |
| | 6 | 73054242 | VALVE | 2 | | | |
| | 7 | 9C160920 | SEAL KIT | 2 | | | |
| | 18 | 70055203 | BEARING | 8 | | | |
| **3C162920.01.19940415** | **TILT CYLINDER** | | | | | | |
| | 5 | 73054242 | VALVE | 2 | | | |
| | 6 | 9C170910 | SEAL KIT | 2 | | | |
| | 17 | 70055219 | BEARING | 4 | | | |

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

**IOWA MOLD TOOLING CO., INC.**
BOX 189, GARNER, IA 50438-0189
TEL: 641-923-3711
TECHNICAL SUPPORT FAX: 641-923-2424