Alamo Group

# TK-15HD

# HEAVY DUTY

## OWNER'S MANUAL

## AND

## PARTS LIST

**TERRAIN KING CORPORATION**

**P.O. Drawer 549 Seguin, Texas 78155 (512) 379-1480**

**This Parts Manual is specially made for the following unit.**
**THD** GB **/ 5-86 Serial No._____ Model_____**
**Dealer/Customer_____**

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## PARTS LIST

**OPTIONAL EQUIPMENT**

# INTRODUCTION

YOUR TK-15HD IS BUILT WITH PRIDE AND QUALITY WORKMANSHIP. YEARS OF EXPERIENCE HAS BEEN BUILT INTO YOUR MACHINE. TAKE CARE OF YOUR MACHINE AND IT WILL GIVE YOU YEARS OF SATISFACTORY RESULTS.

THIS SERVICE AND OPERATOR'S MANUAL IS PRESENTED TO FURNISH YOU WITH NECESSARY INFORMATION FOR OPERATING AND MAINTAINING YOUR TK-15HD. IT'S PRIMARY PURPOSE IS TO ASSIST YOU IN LUBRICATING AND ADJUSTING THE MACHINE FOR DAILY AND SEASONAL OPERATION. WE ESPECIALLY WISH TO CALL YOUR ATTENTION TO THE MANY SAFETY WARNINGS LISTED IN THIS MANUAL. ALTHOUGH YOUR TK-15HD IS DESIGNED WITH THE SAFETY OF OPERATION IN MIND, POSSIBILITIES OF ACCIDENTS CANNOT BE COMPLETELY ELIMINATED UNTIL YOU UNDERSTAND AND PRACTICE ALL SAFETY PRECAUTIONS.

TIMELY SERVICE SAVES COSTLY REPAIRS AND VALUABLE TIME LOST BECAUSE OF BREAKDOWN. WHENEVER IT BECOMES NECESSARY TO MAKE REPAIRS OR REPLACEMENTS ON YOUR TK-15HD, BE SURE TO INSIST ON GENUINE TERRAIN KING PARTS. THESE PARTS ARE DESIGNED SPECIFICALLY FOR YOUR TK-15HD, UNDER CONTROLLED SPECIFICATIONS, THAT GIVES YOU LONG LASTING SERVICE TO WHICH YOU ARE ENTITLED. WHEN ORDERING PARTS, BE SURE TO INCLUDE MODEL AND SERIAL NUMBER.

# WARRANTY

WITHIN A PERIOD OF 1 YEAR FROM PURCHASE DATE, TERRAIN KING CORPORATION WILL REPLACE FOR THE ORIGINAL PURCHASER, FREE OF CHARGES, ANY PART OR PARTS FOUND, UPON EXAMINATION AT OUR FACTORY AT SEGUIN, TEXAS, TO BE DEFECTIVE UNDER NORMAL USE AND SERVICE DUE TO DEFECTS IN MATERIAL OR WORKMANSHIP.

THE WARRANTY SHALL NOT APPLY TO ANY PART OF THE PRODUCT WHICH HAS BEEN SUBJECTED TO MISUSE, NEGLIGENCE, ALTERATION, OR ACCIDENT. THIS WARRANTY DOES NOT APPLY TO UNIVERSAL JOINTS OR TO EXPENDABLE ITEMS SUCH AS BLADES.

THE WARRANTY IS NOT EFFECTIVE UNLESS THE WARRANTY CARD IS RETURNED TO TERRAIN KING WITHIN 14 DAYS OF PURCHASE. CLAIMS MUST BE FILED WITHIN 30 DAYS OF THE FAILURE. WRITTEN PERMISSION MUST BE OBTAINED TO RETURN ITEMS FOR WARRANTY CONSIDERATION. A PACKING LIST MUST ACCOMPANY EACH SHIPMENT GIVING MODEL NUMBER, SERIAL NUMBER, DATE OF SALE, HOURS OR TIME IN OPERATION, DEALER'S NAME, CUSTOMER'S NAME, AND EVENTS LEADING TO THE FAILURE.

# OPERATION SAFEGUARD

**DANGER**

**THIS EQUIPMENT IS EXTREMELY DANGEROUS**

**SERIOUS INJURY OR DEATH MAY OCCUR UNLESS CARE**

**IS TAKEN TO INSURE THE SAFETY OF BOTH THE**

**OPERATOR AND ANY OTHER PERSONS IN THE AREA.**

THE FOLLOWING IS A LIST OF SOME SAFEGUARDS WHICH SHOULD BE FOLLOWED.

1. ROTARY CUTTERS ARE CAPABLE OF THROWING OBJECTS FOR GREAT DISTANCES AND INFLICTING SERIOUS INJURY. NO BYSTANDER SHOULD BE ALLOWED WITHIN A 100 YARD RADIUS OF THE MACHINE WHEN IN OPERATION.

2. EXTREME CARE SHOULD BE TAKEN WHEN OPERATING NEAR LOOSE OBJECTS SUCH AS GRAVEL, ROCKS, AND DEBRIS. THESE OBJECTS SHOULD BE AVOIDED.

3. THE ROTATING PARTS OF THIS MACHINE HAVE BEEN DESIGNED AND TESTED FOR RUGGED USE. HOWEVER, THEY COULD FAIL UPON IMPACT WITH HEAVY SOLID OBJECTS SUCH AS STEEL GUARD RAILS, CONCRETE ABUTMENTS, ETC., CAUSING THEM TO BE THROWN AT VERY HIGH VELOCITIES. NEVER ALLOW THE CUTTING BLADES TO CONTACT SUCH OBSTACLES.

4. THE OPERATOR AND ALL SUPPORT PERSONNEL SHOULD WEAR "HARD HATS" AND "SAFETY GLASSES" AT ALL TIMES TO PROTECT THEM AGAINST FALLING OBJECTS AND ITEMS THROWN BY THE MACHINE.

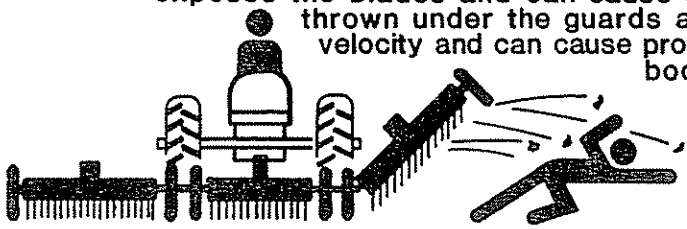
5. THE ROTATING PARTS OF THIS MACHINE CONTINUE TO ROTATE EVEN AFTER THE PTO HAS BEEN TURNED OFF. THE OPERATOR SHOULD REMAIN IN HIS SEAT FOR 60 SECONDS AFTER THE TRACTOR HAS BEEN TURNED OFF. THIS WILL ALLOW ENOUGH TIME FOR THE ROTATING MEMBERS TO COME TO REST.

6. OBJECTS SUCH AS WIRE, CABLE, ROPE, CHAINS, ETC., CAN BECOME ENTANGLED IN THE OPERATING PARTS OF THE HEAD. THESE ITEMS COULD THEN SWING OUTSIDE THE HOUSING AT GREATER VELOCITIES THAN THE BLADES CREATING AN EXTREMELY DANGEROUS CONDITION. INSPECT THE CUTTING AREA FOR SUCH OBJECTS PRIOR TO MOWING. NEVER ALLOW THE CUTTING BLADES TO CONTACT SUCH ITEMS.

# OPERATION SAFEGUARDS (cont.)

**DANGER!**

Cutting with wings raised above the ground surface exposes the blades and can cause objects to be thrown under the guards at a very high velocity and can cause property damage, bodily injury, or even death!



Wing sections should be raised only for clearance of obstructions and never for continuous mowing operations.

7. UNLOAD ALL HYDRAULIC ACTUATORS PRIOR TO DOING ANY MAINTENANCE. TO DO THIS, LOWER THE WINGS TO THE GROUND OR FASTEN THEM IN THE VERTICAL POSITION WITH THE WING SAFETY RETAINING ARM AND THE STAY PIN. THE PTO DRIVE MUST BE TURNED OFF. DO NOT REMOVE ANY DRIVELINE SHIELDS UNTIL ALL MOTION HAS STOPPED, APPROXIMATELY 60 SECONDS AFTER THE PTO HAS BEEN SHUT OFF. YOU MAY THEN PROCEED WITH MAINTENANCE. REPLACE ALL SHIELDS IN THEIR PROPER LOCATION AFTER FINISHING MAINTENANCE WORK. NEVER OPERATE THE MACHINE WITH THE SHIELDS REMOVED.

8. WHEN TRANSPORTING MACHINE BETWEEN CUTTING SITES, FASTEN WINGS IN THE VERTICAL POSITION WITH THE SAFETY RETAINING ARMS TO PROTECT THEM FROM SWINGING DOWN. A HYDRAULIC FAILURE COULD ALLOW THE WING TO SWING DOWN IF NOT FASTENED WITH THE RETAINING ARM.

9. EXTREME CARE SHOULD BE TAKEN WHEN ONE OR BOTH WINGS ARE RAISED WHILE THE MOWER IS RUNNING. THIS EXPOSES THE CUTTING BLADES, WHICH ARE EXTREMELY DANGEROUS TO ANYONE OR ANYTHING NEARBY.

10. IF THE MOWER IS TO BE OPERTED FOR A LONG PERIOD OF TIME WITH ONE WING IN THE VERTICAL POSITION, THE DRIVESHAFT TO THAT WING SHOULD BE DISCONNECTED AT THE CENTER GEARBOX. THIS WILL PREVENT THE CUTTING BLADES FROM OPERATING.

11. IF THE MOWER IS BEING OPERATED ON A STEEP SLOPE DO NOT RAISE THE WINGS UP UNTIL THE MOWER IS RETURNED TO A LEVEL GRADE. RAISING THE WINGS ON A SLOPE COULD CAUSE THE MOWER TO TURN OVER.

12. A WINCH CABLE FAILURE WHILE THE WINGS ARE BEING RAISED WOULD ALLOW THE WING TO DROP SUDDENLY. NEVER STAND OR WORK UNDER A WING THAT IS SUPPORTED ONLY BY THE WINCH. USE THE WINCH ONLY TO FULLY RAISE THE WING AND ATTACH THE RETAINING ARM OR TO FULLY LOWER THE WING. NEVER SUPPORT THE WING BY ONLY THE WINCH CABLE.

# OPERATION SAFEGUARDS (cont.)

13. THE TONGUE IS EXTREMELY HEAVY. USE THE TONGUE JACK WHEN CONNECTING, DISCONNECTING OR LIFTING THE TONGUE. NEVER TRY TO LIFT THE TONGUE BY HAND. USE THE TONGUE JACK WITH EXTREME CARE. MAKE SURE THE MOWER IS ON LEVEL GROUND. THE JACK BASE MUST BE PLACED ON A FLAT SOLID AREA OF GROUND. BE SURE THE JACK IS PROPERLY INSERTED IN JACK TUBE AND THE RETAINING PIN IS IN PLACE BEFORE JACKING. NEVER CRAWL OR WORK UNDERNEATH THE MOWER WHILE IT IS SUPPORTED BY THE JACK. IF THE MOWER MOVED OR FELL, SERIOUS INJURY COULD RESULT.

14. THE CHAINGUARDS SHOULD BE USED AND MAINTAINED IN PROPER WORKING ORDER, THE CHAINGUARDS SHOULD BE CHECKED ONCE A WEEK FOR MISSING CABLE OR CHAIN LINKS. THE MISSING ITEMS SHOULD BE REPLACED.

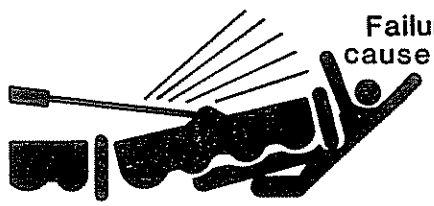
15. THE HITCH SHOULD BE EXAMINED DAILY FOR SIGNS OF WEAR OR BROKEN PARTS. A HITCH FAILURE COULD ALLOW THE MACHINE TO SEPARATE FROM THE TRACTOR AND CREATE A HAZARDOUS SITUATION.

16. TRANSPORT MOWER AT SAFE SPEEDS (10 MPH MAX.) USE FLASHING WARNING LIGHTS WHEN TOWING MACHINE ALONG HIGHWAYS. NEVER ALLOW RIDERS ON MOWER OR TRACTOR. TRANSPORT THE MACHINE WITH THE CENTER SECTION AS LOW TO THE GROUND AS PRACTICAL.

17. INSPECT THE ENTIRE MACHINE ONCE A WEEK FOR LOOSE BOLTS, WORN OR BROKEN PARTS, ETC. SERIOUS INJURY MAY OCCUR FROM NOT MAINTAINING THIS MACHINE IN GOOD WORKING ORDER.

18. THIS IS ONY A PARTIAL LIST OF SAFETY PRECAUTIONS TO FOLLOW. PERHAPS THE BEST GENERAL RULE TO FOLLOW IS ALWAYS STAY ALERT, USE COMMON SENSE AND MAINTAIN AN AWARENESS OF THE DANGERS INVOLVED IN OPERATING THIS TYPE OF EQUIPMENT.

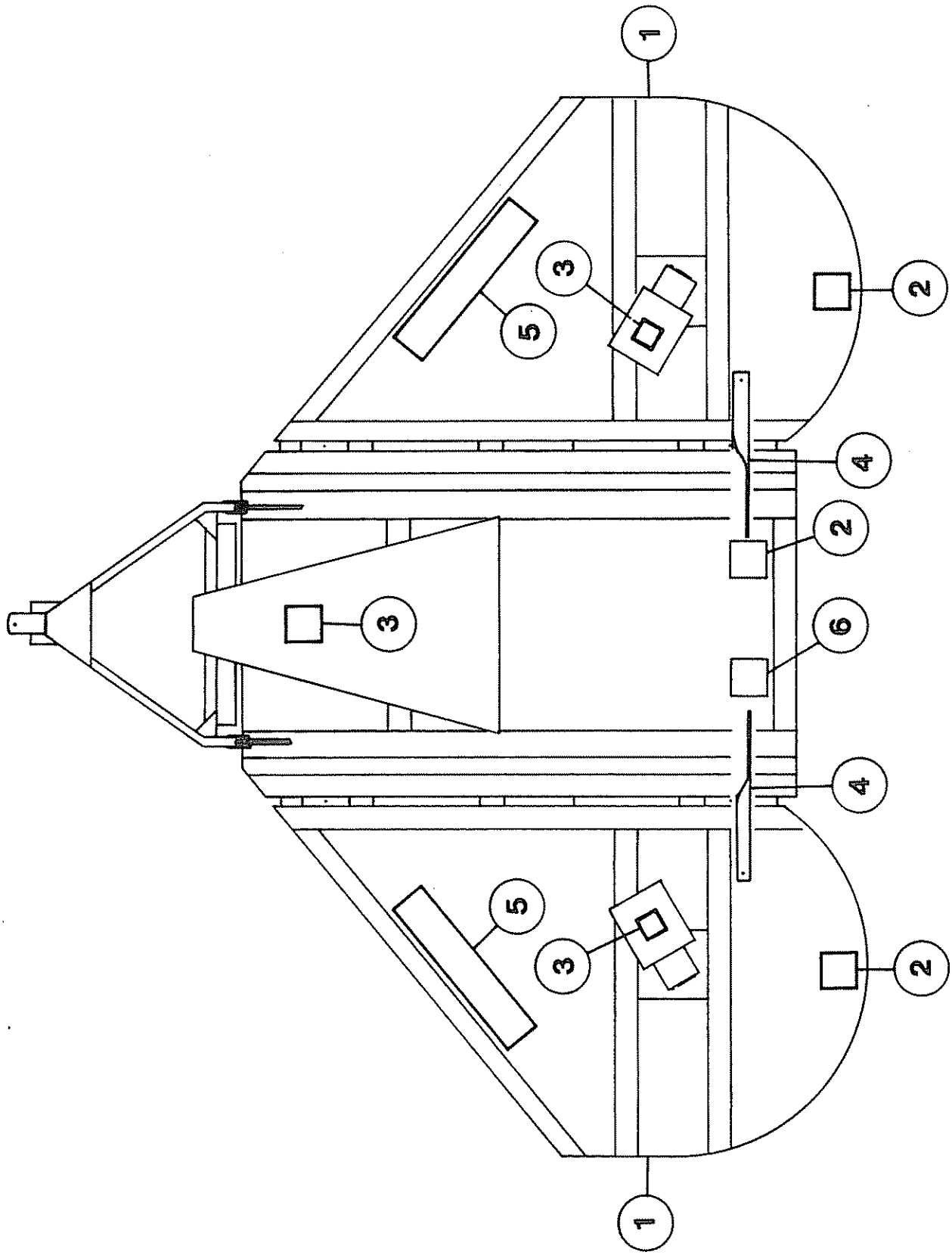
## ⚠ CAUTION



**Failure to follow safe operating practices can cause wings to fall suddenly with great force causing serious property damage, bodily injury, or even death.**

1. CHECK CAREFULLY FOR ADEQUATE OVERHEAD AND SIDE-TO-SIDE CLEARANCE. KEEP EVERYONE AWAY.
2. MAKE CERTAIN THAT CYLINDERS ARE FILLED WITH HYDRAULIC OIL ON BOTH ENDS AND/OR ARE EQUIPPED WITH FLOW RESTRICTORS AND/OR ARE EQUIPPED WITH FLOW RESTRICTORS IN CONTROL VALVE.
3. CHECK SPEED OF UNFOLDING CAREFULLY BY RAISING ONE SECTION NO MORE THAN 2 FEET, AND THEN REVERSING CONTROL LEVER FULLY AND RAPIDLY. IF SECTION DROPS TOO FAST, CHECK FOR PROPER INSTALLATION OF RESTRICTOR AND/OR MAKE CERTAIN THAT OPPOSITE END OF CYLINDER IS FILLED WITH OIL. CONTINUE TESTING BY LIFTING 2 FEET AND LOWERING WITH CONTROL LEVER FULLY REVERSED, LIFTING 4 FEET AND LOWERING, AND LIFTING FULLY AND LOWERING CAREFULLY AND SLOWLY TO THE SURFACE.
4. LEAVE TRANSPORT PINS IN PLACE. IF SECTIONS ARE FOLDED IN TRANSPORT POSITION, NEVER REMOVE TRANSPORT PINS/LOCKS UNTIL FIRST OPERATING CONTROL VALVE IN BOTH DIRECTIONS. MAKE CERTAIN THAT FLOW RESTRICTORS ARE IN THE LINES WHERE NEEDED.
5. FOLD ALL SECTIONS CAREFULLY AND COMPLETELY. INSTALL TRANSPORT PINS AND/OR LOCK CAREFULLY BEFORE MOVING.

# DECAL LOCATION DIAGRAM



# DECAL LOCATION DIAGRAM

terrain king®

(1) - p/n 00749128 - 2 REQ'D.

**DANGER**

STAND CLEAR OF WING WHEN REMOVING RETAINING ARM. WING MAY FALL SUDDENLY. CYLINDER MUST BE FILLED WITH OIL TO LOWER SLOWLY.

(4) - p/n 00753840 - 2 REQ'D

**DANGER**

THIS IS AN EXTREMELY DANGEROUS MACHINE. IT IS CAPABLE OF CAUSING SEVERE INJURY. THE PRECAUTIONS LISTED ARE MINIMUM

1 BEFORE LEAVING OPERATOR'S POSITION
SHUT OFF ENGINE
SHIFT TRANSMISSION TO A LOW GEAR SELECTION OR PARK
SET PARKING BRAKE
DISENGAGE POWER TAKE OFF
REMOVE IGNITION KEY
WAIT FOR ALL MOTION TO STOP

2 KEEP HANDS AND FEET FROM UNDER MOWER.

3 KEEP ALL SHIELDS IN PLACE.

4 TRANSPORT ONLY AT SAFE SPEEDS (10 MPH MAX.)

5 OPERATE ONLY AT SAFE DISTANCE FROM BYSTANDERS (MIN. 100 YARDS.)

6 ALLOW NO RIDERS ON MOWER OR TRACTOR.

7 USE EXTRA CAUTION WHEN OPERATING OVER ROUGH TERRAIN OR IN AREAS WHERE ROCKS OR DEBRIS ARE PRESENT

8 USE FLASHING WARNING LIGHTS WHILE TOWING THIS MACHINE ALONG HIGHWAYS.

(2) - p/n 00749117 - 3 REQ'D

**DANGER**

Rotating BLADE, Keep Hands and Feet Clear

(5) - p/n 00750978 - 2 REQ'D

**DANGER**

ROTATING DRIVE LINE

FAILURE TO HEED THESE WARNINGS MAY RESULT IN PERSONAL INJURY OR DEATH.

KEEP CLOTHING, YOURSELF AND OTHERS WELL CLEAR

DO NOT OPERATE UNLESS PTO GUARDS, TRACTOR MASTER SHIELD AND IMPLEMENT GUARDS ARE IN PLACE.

PTO GUARDS MUST TURN FREELY AND BE PROPERLY ATTACHED AND MAINTAINED.

U JOINT YOKES MUST BE SECURELY LOCKED ONTO TRACTOR AND IMPLEMENT SHAFTS.

BE SURE TRACTOR DRAWBAR AND IMPLEMENT HITCH ARE ADJUSTED CORRECTLY

GREASE TELESCOPING SHAFT REGULARLY TO MINIMIZE THRUST FORCES.

(3) - p/n 00750977 - 3 REQ'D

**CAUTION**

FOR YOUR SAFETY AND TO GUARANTEE OPTIMUM PRODUCT RELIABILITY ALWAYS USE GENUINE TERRAIN KING REPLACEMENT PARTS. THE USE OF INFERIOR REPLACEMENT PARTS MAY CAUSE PREMATURE OR CATASTROPHIC FAILURE WHICH COULD RESULT IN SERIOUS INJURY OR DEATH. IF YOU HAVE ANY QUESTIONS CONCERNING THE REPAIR PARTS YOU ARE USING CONTACT TERRAIN KING CORP. P.O. BOX 549 SEGUIN, TX. 78155 (1-512-379-1480)

(6) - p/n 02925100 - 1 REQ'D

ALWAYS MAINTAIN THE SAFETY DECALS IN GOOD READABLE CONDITION. IF THE DECALS BECOME DAMAGED OR UNREADABLE REORDER AND REPLACE THEM IMMEDIATELY.

# OPERATING INSTRUCTIONS

THE TK-15 HD MOWER WAS DESIGNED TO FILL YOUR MOWING NEEDS AND WAS BUILT TO GIVE YOU THE UTMOST IN LONG LIFE AND TROUBLE-FREE SERVICE. FOR BEST RESULTS, PLEASE OBSERVE THE SUGGESTIONS AND PRECAUTIONS GIVEN BELOW:

1. ENGAGE PTO SHAFT AT A LOW ENGINE RPM AND SPEED ENGINE UP AFTER BLADES ARE FULLY ENGAGED. NEVER ENGAGE PTO SHAFT AT A HIGH ENGINE RPM. THIS COULD CAUSE DAMAGE TO THE PTO SHAFT AS WELL AS THE DRIVESHAFTS.

2. ALWAYS RUN THE MACHINE AT THE HIGHEST POSITION WHICH WILL ENABLE YOU TO OBTAIN THE DESIRED CUTTING RESULTS. ALLOWING THE BLADES TO CUT INTO THE GROUND WILL CAUSE WEAR AND UNDUE STRAIN ON THE MOWER FRAME AND MOWER COMPONENTS.

3. IF YOU ARE MOWING IN CONDITIONS OF HEAVY GROWTH OR ROUGH GROUND WHERE THE BLADES CUT INTO THE GROUND AND THE TRACTOR ENGINE SLOWS DOWN, DO NOT SLIP THE CLUTCH TO ALLOW THE NGINE TO SPEED UP AND ENGAGE THE CLUTCH AGAIN. THIS PROCEDURE EXERTS TREMENDOUS STRAIN ON THE DRIVELINE OF THE TRACTOR AND MOWER. ALWAYS DISENGAGE THE POWER TAKE-OFF AND MOVE FORWARD OR BACKWARD UNTIL THE MACHINE IS CLEAR.

4. THE TK-15 ROTARY MOWER IS DESIGNED WITH FREE SWINGING BLADES. THIS FEATURE REDUCES THE AMOUNT OF SHOCK TRANSMITTED TO OTHER COMPONENTS. ALWAYS MAKE SURE THE BLADE CAN SWING FREELY ON THE BLADE BAR.

5. THE MOWER SHOULD BE OPERATED AT AN ENGINE SPEED THAT TURNS THE PTO AT 540 RPM. THE MOWER IS DESIGNED TO RUN AT THAT SPEED. HIGHER OR LOWER PTO SPEED CAN INCREASE THE LOAD ON THE DRIVESHAFT AND CLUTCH AND CAUSE PREMATURE FAILURE OF THE DRIVELINE. ALWAYS RUN THE TRACTOR AT A SPEED TO GIVE 540 RPM, PTO SPEED.

6. WHEN CUTTING FOLIAGE AND FINE SHREDDING IS DESIRED, RUN THE MOWER LEVEL OR SLIGHTLY LOWER IN THE REAR SO AS TO KEEP THE MATERIAL IN THE MOWER UNTIL IT IS SHREDDED. THIS WILL REQUIRE MORE POWER BUT WILL SHRED BETTER. WHEN CUTTING HEAVY FOLIAGE AND SHREDDING IS NOT DESIRED, RAISE THE REAR OF THE MOWER. THIS ALLOWS THE HIGH VOLUME OF MATERIAL TO BE DISCHARGED THUS REQUIRING MUCH LESS POWER.

7. THE TONGUE ON THE MACHINE IS DESIGNED TO HAVE A TURNING RADIUS AS SMALL AS POSSIBLE. SEVERAL FACTORS INCLUDING TIRE SIZE, REAR TIRE SPACING, FRONT TIRE SPACING, AND DRAWBAR LENGTH ALL AFFECT THE TURNING RADIUS. BY BRINGING THE FRONT AND REAR TIRES CLOSER INTO THE TRACTOR, THE TURNING RADIUS CAN BE REDUCED. THE DRAWBAR SHOULD ALSO BE IN THE EXTENDED POSITION.

   NOTE: EXCESSIVELY SHARP TURNS WHILE THE MOWER IS RUNNING CAUSE WEAR AND UNDUE STRAIN ON THE MAIN DRIVESHAFT. PREMATURE BEARING LOSS CAN OCCUR FROM CONTINUED EXCESSIVELY TIGHT TURNS.

8. DO NOT RIDE THE CLUTCH ON THE TRACTOR. MOW IN THE APPROPRIATE GEARS TO GIVE THE CORRECT GROUND SPEED.

# HYDRAULIC TROUBLE SHOOTING

1. HYDRAULIC CYLINDER OIL LEAKAGE - OIL LEAKAGE FROM THE BREATHER PLUG ON A CYLINDER INDICATES THE SEAL IN THE CYLINDER IS WORN OUT. REPLACE THE SEALS IN THE CYLINDER BEFORE PREMATURE CYLINDER DAMAGE OR LOSS OF HIGH VOLUMES OF HYDRAULIC OIL OCCURS.

2. HYDRAULIC CYLINDER NOT WORKING - IF THE HYDRAULIC CYLINDER DOES NOT WORK, FIRST CHECK THE HYDRAULIC FLUID LEVEL IN THE TRACTOR, THEN CHECK THAT THE QUICK COUPLERS ARE PROPERLY CONNECTED AND HAVE NOT SLIPPED APART. IF THE CONNECTIONS ARE GOOD, CHECK THAT THE HOSES ARE FIRMLY CONNECTED TO THE PROPER CYLINDERS AND DO NOT HAVE ANY LEAKS. IF THE CYLINDER STILL DOES NOT WORK, CHECK THE PRESSURE ON THE LINE. THE RELIEF VALVE MAY BE BYPASSING FLUID AT TOO LOW A PRESSURE. THE PRESSURE SHOULD BE AT LEAST 1800 PSI. IF CYLINDER ACTION DOES NOT OCCUR CHECK FOR LINE STOPPAGE.

3. CYLINDER WILL NOT RETRACT COMPLETELY - IF THE CYLINDER WILL NOT RETRACT COMPLETELY, REMOVE THE BREATHER PLUG ON THE CYLINDER. REMOVE ANY DEBRIS OR RESIDUE IN OR ON THE BREATHER PLUG. REPLACE THE BREATHER PLUG. TRY TO RETRACT THE CYLINDER. IF THE CYLINDER STILL WILL NOT RETRACT, CHECK THE CYLINDER FOR A BENT PISTON ROD. A BENT ROD WILL NOT ALLOW THE CYLINDER TO FUNCTION PROPERLY. REPLACE THE PISTON ROD. A BENT ROD OF A WING CYLINDER MAY OCCUR IF THE CYLINDER IS LOCKED IN PLACE WHILE MOWING. TO DO THIS YOU MUST USE A CONTROL VALVE THAT HAS "DETENTED FLOAT POSITIONS" FOR THE WING CYLINDERS. WHILE MOWING, PUSH THE WING CONTROLS INTO THE DETENTED FLOAT POSITION AND THe CYLINDER WILL MOVE IN AND OUT ALLOWING THE WING TO FLOAT UP AND DOWN WITH THE CONTOUR OF THE LAND. IF THE WING CYLINDERS ARE LOCKED INTO PLACE, EXCESSIVE STRESSES WILL BE INDUCED INTO THE DECK AND STRUCTURAL MEMBERS. IN SUCH A CASE THE WING CYLINDER CAN UNDERGO COMPRESSION LOADING WHICH WILL RESULT IN THE CYLINDER ROD BENDING.

4. OIL OVER-HEATING - IF THE HYDRAULIC OIL IN THE TRACTOR IS OVER-HEATING DUE TO THE CONTROL VALVE FOR THE TK-15, MAKE SURE YOU HAVE THE CORRECT VALVE FOR YOUR TRACTOR. IF YOUR TRACTOR HAS AN OPEN CENTER SYSTEM YOU MUST USE AN OPEN CENTER VALVE. AN OPEN CENTER VALVE ALLOWS THE FLUID TO FLOW THROUGH THE VALVE AT LOW PRESSURE UNTIL YOU MOVE THE CONTROL LEVER. THEN THE FLUID IS DIVERTED TO THE CYLINDER AND PRESSURE BUILDS UP. IF YOU USED A CLOSE CENTER VALVE THE FLOW IS BLOCKED UNTIL THE CONTROL LEVER IS MOVED. THUS THE PRESSURE BUILDS UP THE FLOWS OVER THE RELIEF VALVE CREATING HEAT. PRESENTLY ONLY "JOHN DEERE" TRACTORS USE A CLOSED CENTER VALVE SYSTEM, THE OIL WILL HEAT UP. THE SYSTEM WILL CONTINUALLY PUMP OIL THROUGH THE VALVE AT HIGH PRESSURE CREATING HEAT. IF THE RIGHT VALVE IS USED ON THE TRACTOR AND OVER HEATING STILL OCCURS, MAKE SURE THAT THE FITTINGS USED INTO AND OUT OF THE VALVE ARE THE PROPER SIZE AND ARE NOT RESTRICTING THE FLUID FLOW. WHEN YOU USE A CLOSED CENTER SYSTEM; i.e. JOHN DEERE TRACTOR, YOU MAY NEED TO RESET THE RELIEF VALVE HIGHER. IF THE RELIEF VALVE IS SET LOWER THEN THE CLOSED CENTER SYSTEM RELIEF, THE FLUID WILL FLOW OVER THE CONTROL VALVES RELIEF VALVE CREATING HEAT.

# MOWER LEVELING

TO SET THE MOWER HEIGHT AND/OR LEVEL THE MOWER FROM SIDE TO SIDE AND FRONT TO BACK, POSITION THE MOWER ON LEVEL GROUND AND FOLLOW THESE INSTRUCTIONS:

A. ATTACH THE MOWER TO THE TRACTOR WITH THE BOLTS, NUT, AND WASHERS PROVIDED. USE THE WASHERS INSIDE THE CLEVIS TO SHIM ANY DIFFERENCE BETWEEN THE CLEVIS OPENING AND THE DRAWBAR THICKNESS. TIGHTEN THE NUT ONTO THE BOLT (400 FT-LBS) SO THAT IT HOLDS THE CLEVIS STRAIGHT WITH THE DRAWBAR. (SEE PHOTO A)

B. ADJUST THE FRONT OF THE CENTER SECTION FIRST. TO ADJUST THE HEIGHT OF THE CENTER SECTION ADJUST THE LENGTH OF THE TONGUE CYLINDER PISTON ROD; i.e. USE A WRENCH FOR THE FLATS OF THE PISTON RODS TO TURN THEM IN OR OUT. (SEE PHOTO B)

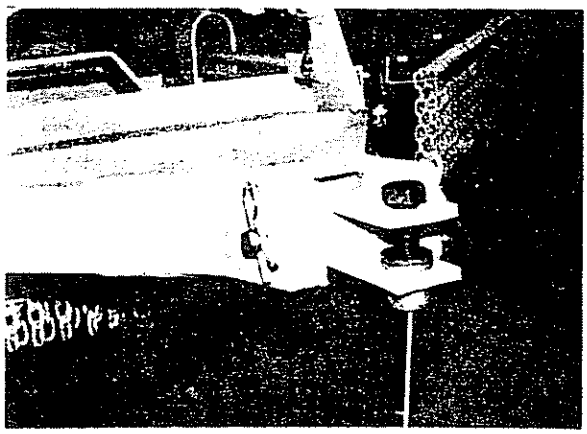


PHOTO A

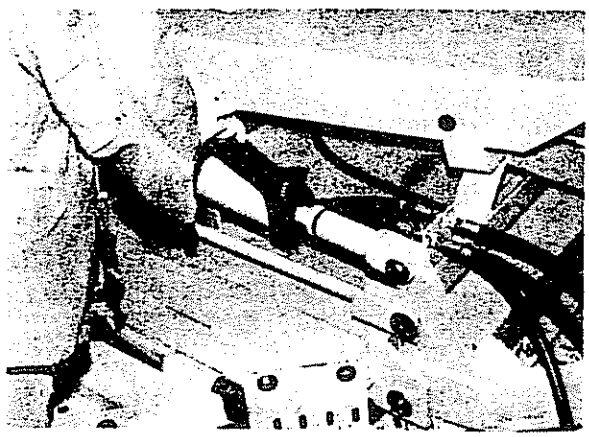


PHOTO B

NOTE: TO ADJUST THE CYLINDERS REMOVE THE FORCE ON THEM BY BLOCKING UP THE MACHINE. (SEE PHOTO C) TO DO THIS, USE THE HYDRAULIC CYLINDERS TO RAISE THE MACHINE. PLACE BLOCKS UNDER THE DECK THEN LOWER THE MACHINE ONTO THE BLOCKS. THIS WILL ALLOW EASY ADJUSTMENT OF THE CYLINDERS.

SET THE HEIGHT OF CENTER OF THE FRONT HINGE PINS TO 16" INCHES.(SEE PHOTO D) THIS SHOULD BE THE HEIGHT WITH THE TONGUE CYLINDERS BOTTOMED OUT. TIGHTEN THE LOCKING NUT ON THE CYINDER ROD TO SET AND HOLD THE ADJUSTMENT.

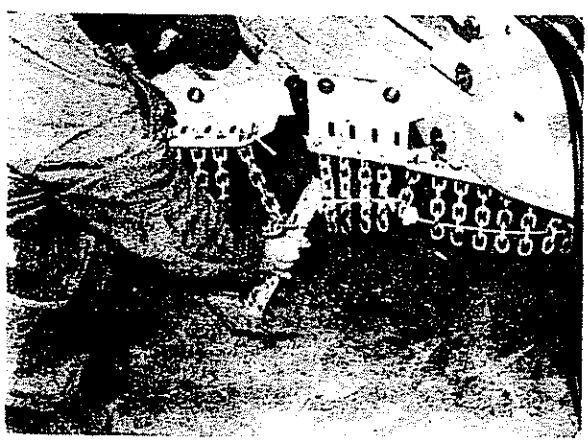


PHOTO C

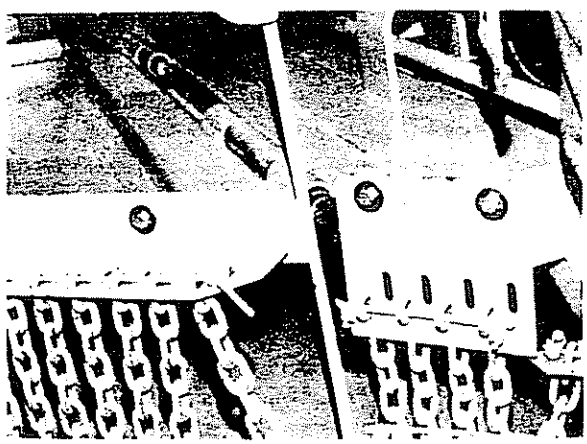


PHOTO D

# MOWER LEVELING (cont.)

C. SET THE REAR OF THE CENTER SECTION HINGE PINS TO A HEIGHT OF 17". (SEE PHOTO E) TO DO THIS LOCATE THE TURNBUCKLES TO RAISE OR LOWER THE REAR OF THE MOWER. SET THE HEIGHT OF THE REAR HINGE PINS TO 17". TIGHTEN THE LOCKING NUTS AGAINST THE TURNBUCKLES TO SET AND HOLD THIS SETTING. (SEE PHOTO F)

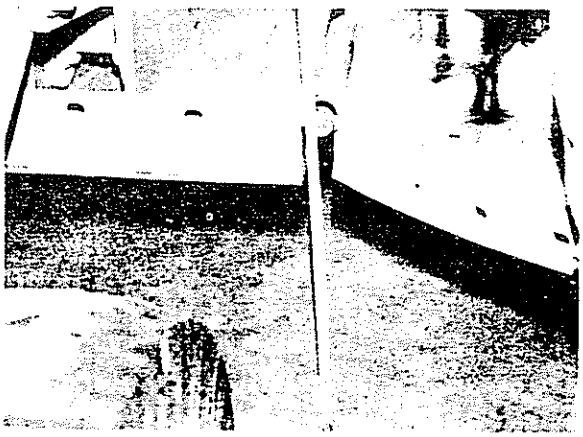


PHOTO E

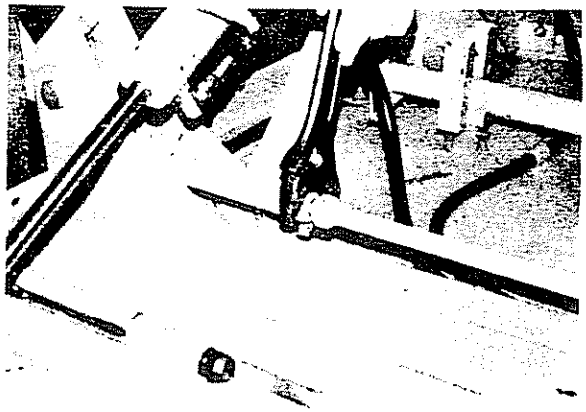


PHOTO F

D. ADJUST THE HEIGHT OF EACH WING BY ADJUSTING THE NUTS ON THE SHOCK ABSORBER RODS. MOVE BOTH OF THE NUTS UP OR DOWN THE ROD. (SEE PHOTO G) THE HEIGHT OF THE TOP OF THE SIDE BAND SHOULD BE 16". TAKE THIS MEASUREMENT AT THE OUTSIDE EDGE OF THE MOWER. (SEE PHOTO H) REMEMBER THAT THE LOWER NUT ON THE SHOCK ABSORBER ROD SHOULD BE 1/2" OFF OF THE SPRING RETAINER.

THE HEIGHT OF THE CENTER SECTION PINS NEED TO BE CHECKED AGAIN. AS WEIGHT SHIFTED THE SUSPENSION SYSTEM MAY RAISE OR LOWER. IF THE MEASUREMENTS ARE NOT THE SAME REPEAT STEPS A THROUGH D.

THIS HEIGHT ADJUSTMENT WILL GIVE A 5" CUT ON MOST GRASSES. IF A DIFFERENT MOWER HEIGHT IS DESIRED CHANGE ALL DIMENSIONS BY THE SAME AMOUNT. i.e. IF A 4" CUT IS DESIRED THE FRONT HINGE PINS WILL BE 15", THE REAR HINGE PINS WILL BE 16" AND THE WING SIDE BAND WILL BE 15".

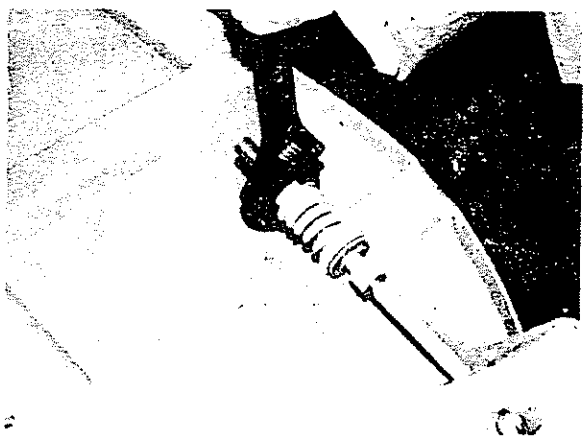


PHOTO G

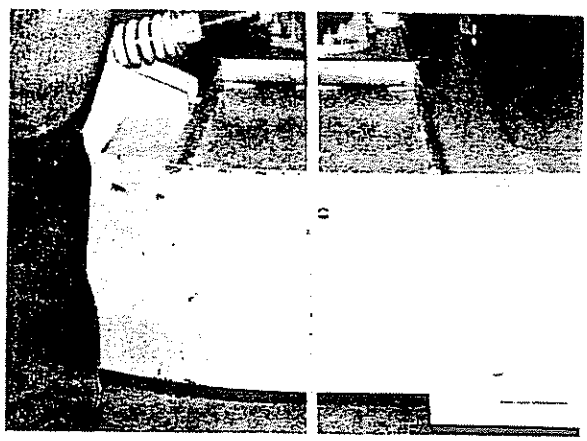


PHOTO H

# INSTRUCTIONS FOR ORDERING PARTS

THE FOLLOWING INSTRUCTIONS ARE OFFERED TO HELP ELIMINATE NEEDLESS DELAY AND ERROR IN PROCESSING PURCHASE ORDERS FOR TK-15HD PARTS:

1. THE PARTS LISTING IS PREPARED IN LOGICAL SEQUENCE ACCORDING TO THE TK-15HD BASIC MACHINE DRAWING ON THE NEXT TWO PAGES. PART NUMBERS AND REFERENCE PAGE NUMBER, FOR DETAIL DRAWING ARE GIVEN TO HELP YOU LOCATE THE PARTS AND AMOUNTS OF PARTS NEEDED.

2. THE PURCHASE ORDER MUST INDICATE THE NAME AND ADDRESS OF THE PERSON OR ORGANIZATION ORDERING THE PARTS, TO WHOM THE CHARGES ARE TO BE MADE, AND IF POSSIBLE THE SERIAL NUMBER FOR WHICH PARTS ARE BEING ORDERED.

3. THE PURCHASE ORDER MUST CLEARLY LIST THE QUANTITY OF EADH PART, THE COMPLETE AND CORRECT PART NUMBER AND THE BASIC NAME OF THE PART ONLY.

4. TERRAIN KING CORPORATION RESERVES THE RIGHT TO SUBSTITUTE PARTS WHERE APPLICABLE.

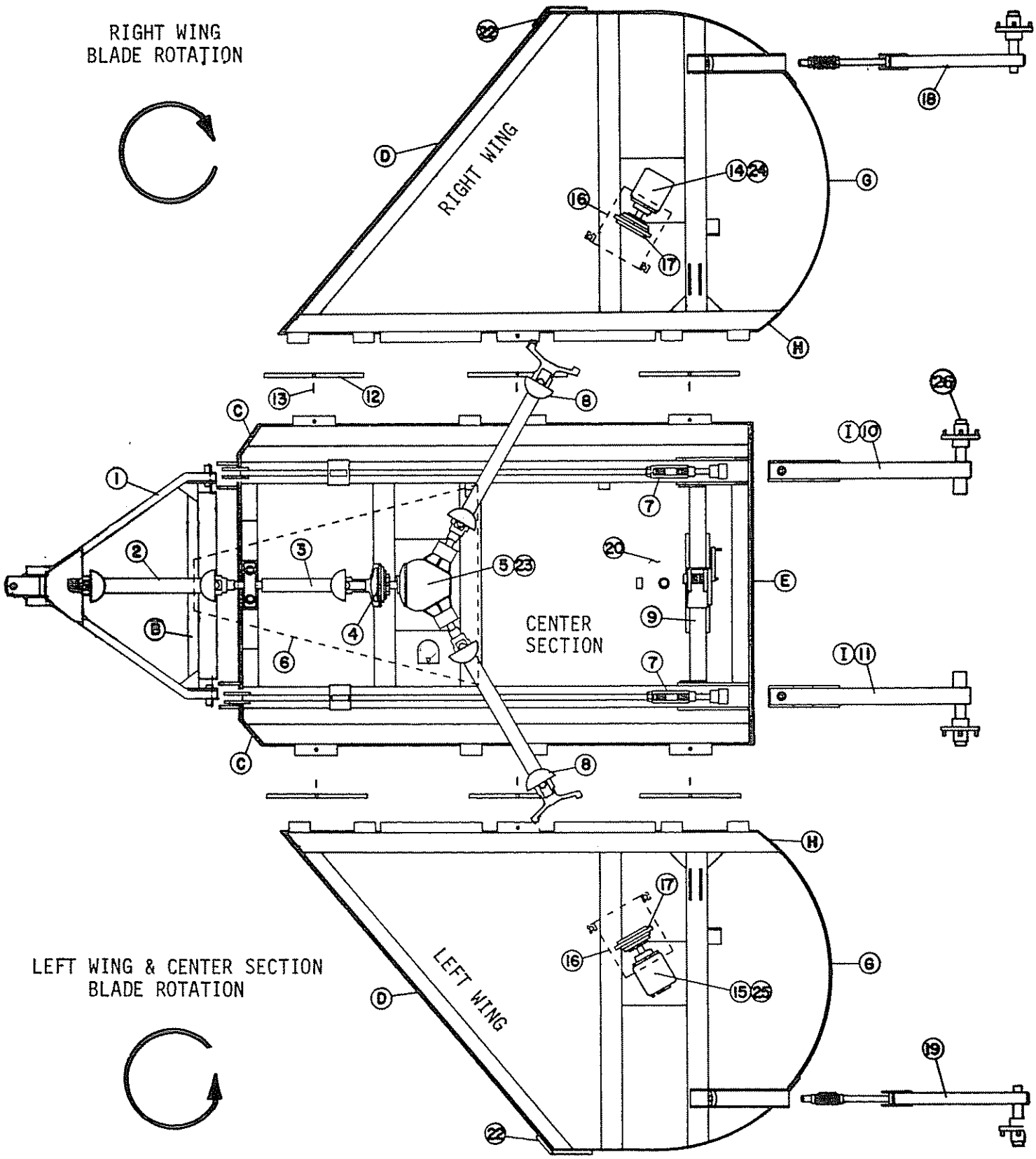
5. REQUEST QUOTATION FOR UNLISTED ITEMS WHICH ARE SPECIAL PRODUCTION ITEMS NOT NORMALLY STOCKED AND ARE SUBJECT TO SPECIAL HANDLING.

6. TERRAIN KING CORPORATION RESERVES THE RIGHT TO CHANGE PRICES WITHOUT PRIOR NOTICE.

FOR YOUR SAFETY AND TO GUARANTEE OPTIMUM PRODUCT RELIABILITY ALWAYS USE GENUINE TERRAIN KING REPLACEMENT PARTS. THE USE OF INFERIOR REPLACEMENT PARTS MAY CAUSE PREMATURE OR CATASTROPHIC FAILURE WHICH COULD RESULT IN SERIOUS INJURY OR DEATH. IF YOU HAVE ANY QUESTIONS CONCERNING THE REPAIR PARTS YOU ARE USING PLEASE CALL : TERRAIN KING CORP. P.O. BOX 549, SEGUIN, TEXAS 78155 (512) 379-1480

# PARTS LIST—

# TK-15HD BASIC MOWER



# TK-15HD BASIC MOWER

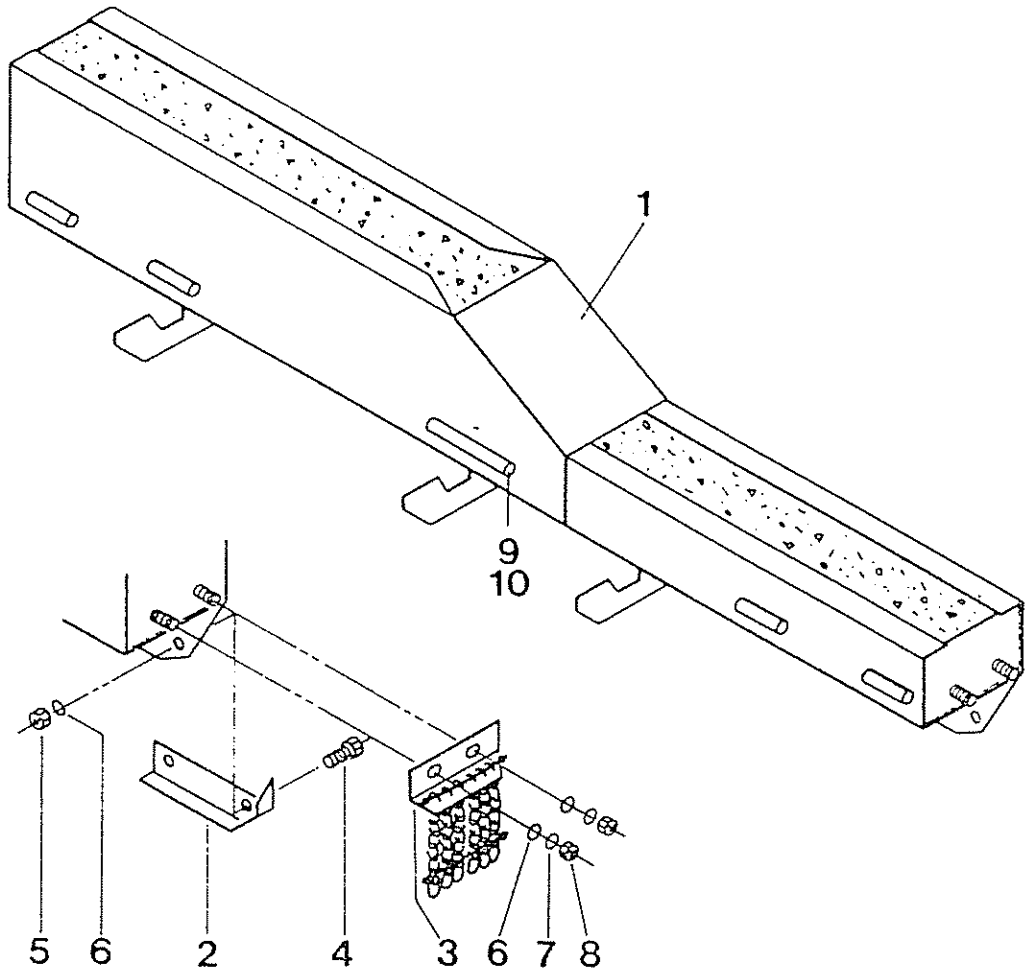
| ITEM | | PART NO. | DESCRIPTION | REQ'D | PAGE |
|---|---|---|---|---|---|
| 1 | | 00751104 | TONGUE ASSEMBLY | 1 | 17 |
| 2 | | 00754935 | MAIN DRIVESHAFT ASSEMBLY (35R) | 1 | 20 |
| 3 | | 00754934 | JACK SHAFT ASSEMBLY (35R) | 1 | 21 |
| 4 | | 00754200 | SLIP CLUTCH - CENTER SECTION | 1 | 22 |
| 5 | | 00749003 | GEARBOX ASSEMBLY - CENTER SECTION | 1 | 23 |
| 6 | | 00750909 | SAFETY SHIELD ASSEMBLY-CTR SECTION | 1 | 24 |
| 7 | | 00752563 | LEVEL LIFT ROD ASSEMBLY | 2 | 27 |
| 8 | | 00752817 | WING DRIVESHAFT ASSEMBLY (35R) | 2 | 29 |
| 9 | | -------- | WINCH STAND | 1 | 26 |
| 10 | | -------- | RH SINGLE AXLE ARM - CENTER SECTION | 1 | 28 |
| 11 | | -------- | LH SINGLE AXLE ARM - CENTER SECTION | 1 | 28 |
| 12 | | 00751042 | HINGE PIN | 6 | |
| 13 | | 00751107 | RETAINING ROLL PIN | 6 | |
| 14 | | 00752140 | RIGHT WING HD GEARBOX ASSEMBLY | 6 | 31,32 |
| 15 | | 00752141 | LEFT WING HD GEARBOX ASSEMBLY | 1 | 31,32 |
| 16 | | 00752314 | HD SAFETY SHIELD ASSEMBLY - WING | 2 | 30 |
| 17 | | 00754200 | SLIP CLUTCH - WING | 2 | 22 |
| 18 | | -------- | RIGHT WING SINGLE AXLE ARM | 1 | 34 |
| 19 | | -------- | LEFT WING SINGLE AXLE ARM | 1 | 34 |
| 20 | * | 00751123 | TONGUE JACK ASSEMBLY | 1 | 18 |
| 21 | * | 00554600 | RATCHET JACK ASSEMBLY | 2 | 19 |
| 22 | | 00750991 | SKID SHOE KIT | 1 | 36 |
| 23 | | 00750938 | BLADE BAR ASSEMBLY - CENTER SECTION | 1 | 25 |
| 24 | | 00752150 | RIGHT WING HD BLADE BAR ASSEMBLY | 1 | 33 |
| 25 | | 00752151 | LEFT WING HD BLADE BAR ASSEMBLY | 1 | 33 |
| 26 | | 00750609 | WHEEL HUB ASSEMBLY | 4 | 35 |

* THESE PARTS ARE NOT ILLUSTRATED.

**THE OPTIONS BELOW ARE NOT SHOWN**

| | | | | | |
|---|---|---|---|---|---|
| A | SEE ILLUSTRATION | | HYDRAULIC SCHEMATIC | 1 | 37,38 |
| B | " | " | CHAINGUARDS-FRONT CENTER SECTION | 1 | 46 |
| C | " | " | CHAINGUARDS-FRONT CENTER SEC-SIDE | 2 | 47 |
| D | " | " | CHAINGUARDS-FRONT WING SECTION | 2 | 48 |
| E | " | " | ENCLOSED CHAINGUARDS-REAR CTR SEC | 1 | 49 |
| G | " | " | ENCLOSED CHAINGUARDS-REAR WING SEC | 2 | 50 |
| H | " | " | RUBBER FLAP-WING SECTION-SIDE | 2 | 51 |
| I | " | " | DUAL TAIL WHEEL ASSEMBLY | 1 | 52 |

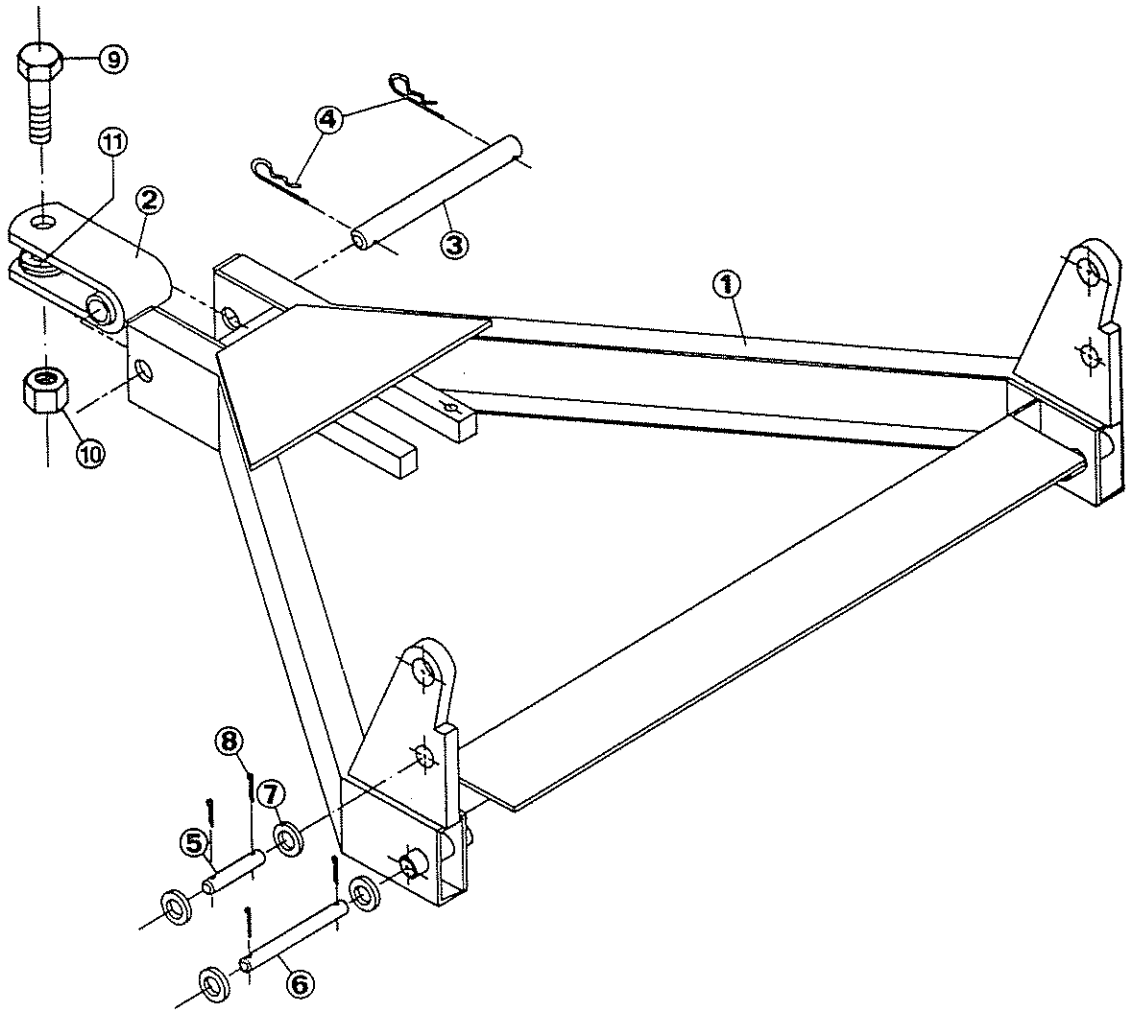
# TK-10 COUNTERWEIGHT ASSEMBLY




NOTE: FILL THE COUNTERWEIGHT
CAVITY FULL WITH CONCRETE

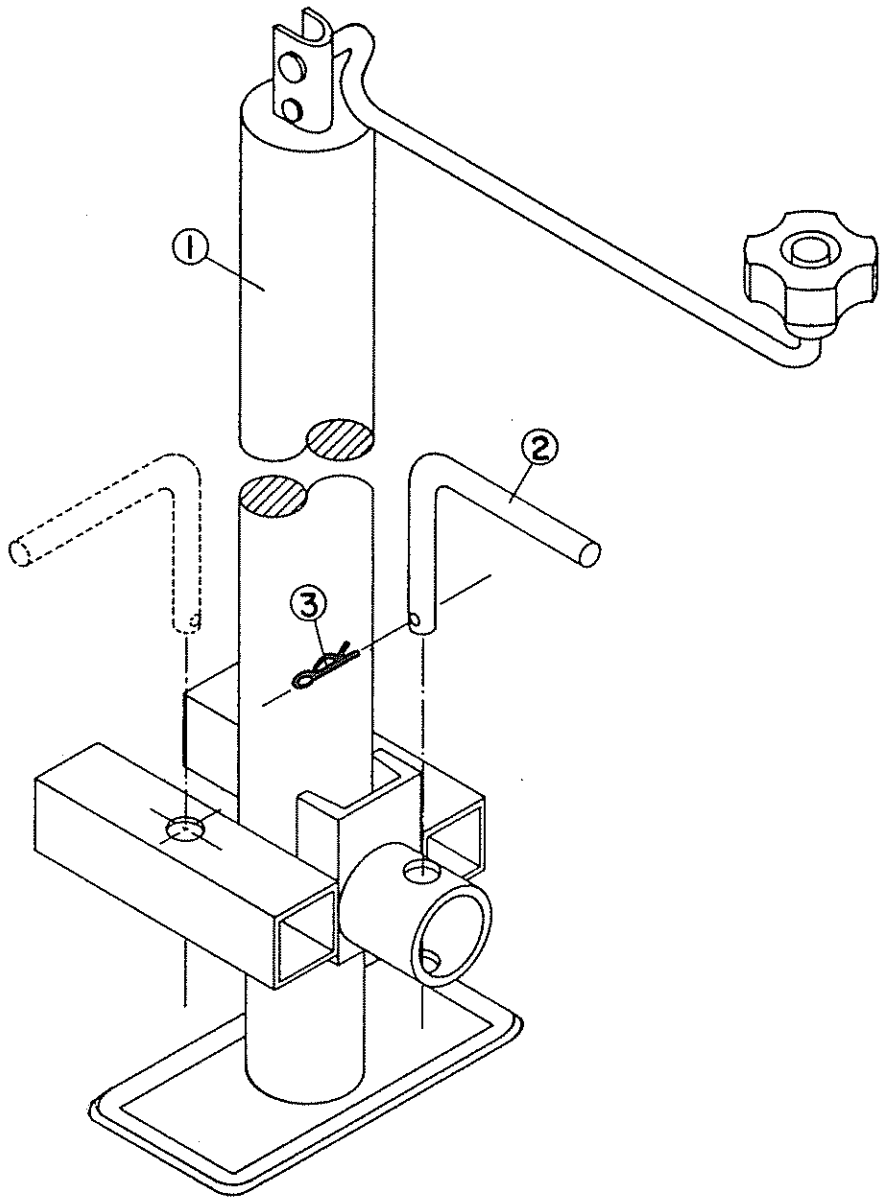
| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00750624 | LH COUNTERWEIGHT WELD (SHOWN ABOVE) | 1 |
| | 00750635 | RH COUNTERWEIGHT WELD (OPPOSITE) | 1 |
| 2 | 00750989 | LH SKID SHOE WELDMENT (SHOWN ABOVE) | 1 |
| | 00750993 | RH SKID SHOE WELDMENT (OPPOSITE) | 1 |
| 3 | 00751203 | LH CHAINGUARD (SHOWN ABOVE) | 1 |
| | 00751161 | RH CHAINGUARD (OPPOSITE) | 1 |
| 4 | 00749171 | BOLT | 2 |
| 5 | 02716500 | NUT | 2 |
| 6 | 00002700 | FLATWASHER | 4 |
| 7 | 00001300 | LOCKWASHER | 2 |
| 8 | 00001200 | NUT | 2 |
| 9 | 00751042 | HINGE PIN (NOT SHOWN) | REF |
| 10 | 00751107 | RETAINING ROLL PIN (NOT SHOWN) | REF |

# TONGUE ASSEMBLY



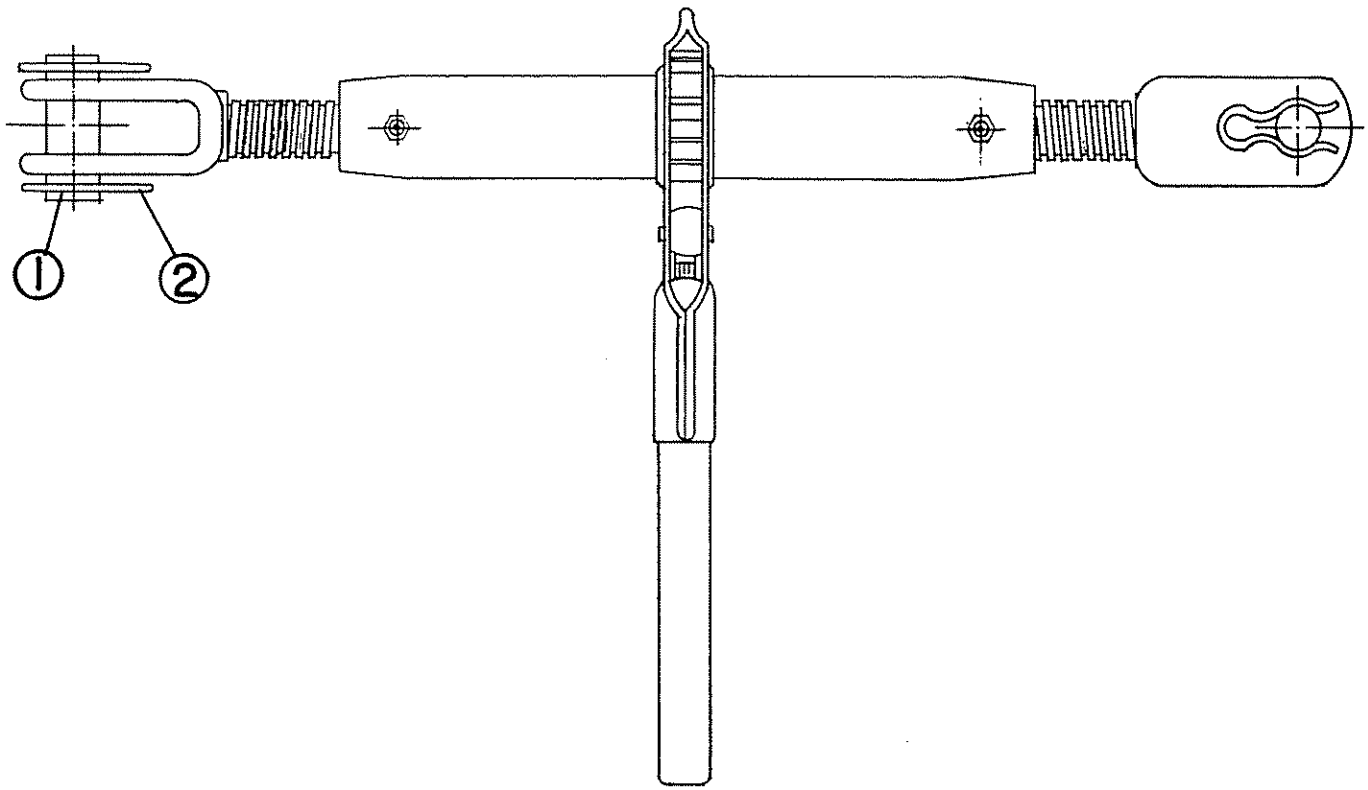

| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00751104 | TONGUE ASSEMBLY - (INCLUDES ITEMS 2,3 & 4) | 1 |
| 2 | 00748807 | TONGUE CLEVIS | 1 |
| 3 | 00752439 | CLEVIS PIN | 1 |
| 4 | 00008900 | STAY PIN | 2 |
| 5 | 00162803 | FRONT LEVEL LIFT PIN | 2-REF |
| 6 | 00162805 | TONGUE PIN | 2-REF |
| 7 | 00002701 | FLATWASHER | 8-REF |
| 8 | 00000400 | COTTER PIN | 8-REF |
| 9 | 02712500 | BOLT | 1-REF |
| 10 | 02030300 | NUT | 1-REF |
| 11 | 00606200 | WASHER | 2-REF |

# TONGUE JACK ASSEMBLY

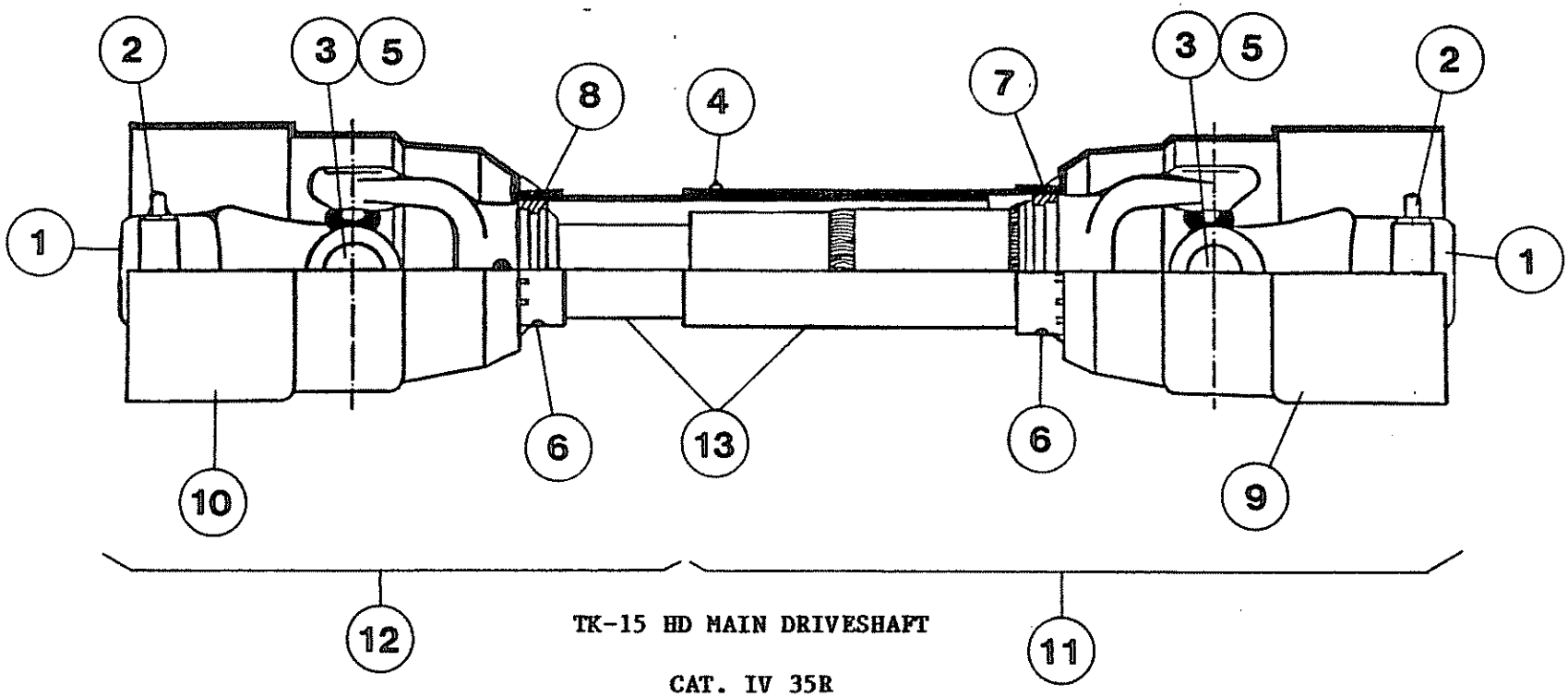



| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00751123 | JACK ASSEMBLY (ALSO INCLUDES ITEMS 2 & 3) | 1 |
| 2 | 00749892 | JACK RETAINING PIN | 1 |
| 3 | 00751658 | CLIP, HAIR PIN | 1 |

# RATCHET JACK ASSEMBLY




| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00748714 | PIN | 2 |
| 2 | 00748715 | CLIP | 4 |

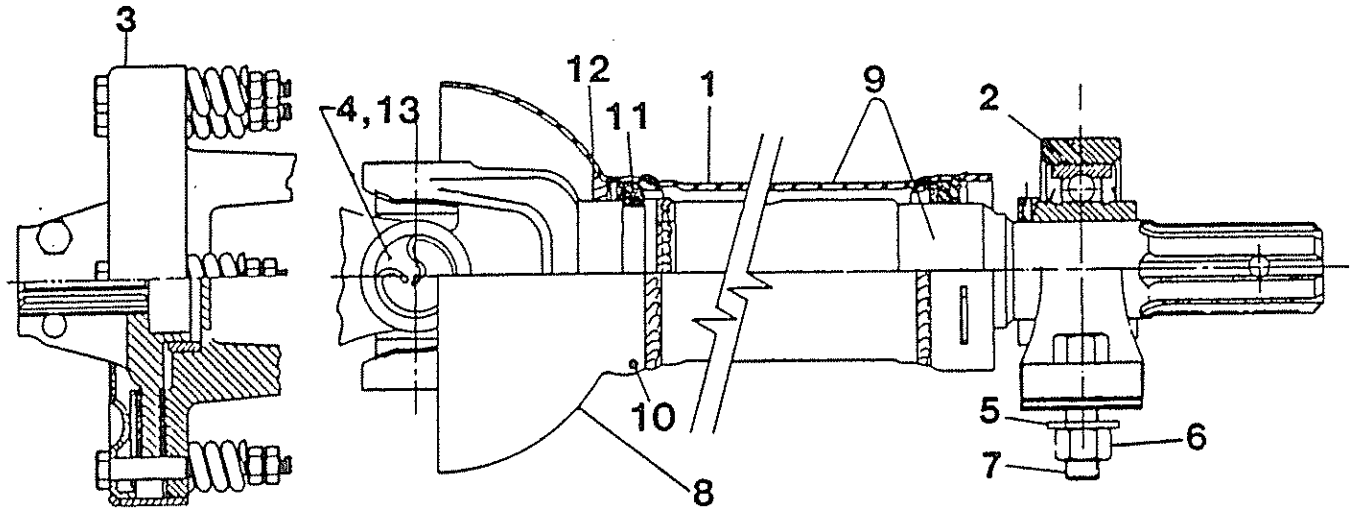



**TK-15 HD MAIN DRIVESHAFT**

**CAT. IV 35R**

**P/N 00754935**

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00752883 | OUTER YOKE 1-3/8" | 1 |
| 2 | 00752880 | PUSH PIN SET | 1 |
| 3 | 00752896 | CROSS JOURNAL SET | 2 |
| 4 | 00754335 | GREASE NIPPLE FOR TUBE | 1 |
| 5 | 00754334 | GREASE NIPPLE FOR CROSS | 2 |
| 6 | 00755173 | MOWER HALF COMPLETE & SHIELDED | 1 |
| 7 | 00755174 | TRACTOR HALF COMPLETE & SHIELDED | 1 |
| 8 | 00754330 | NYLON BOLT | 6 |
| 9 | 00754332 | LOCKING COLLAR OUTER | 1 |
| 10 | 00754331 | LOCKING COLLAR INNER | 1 |
| 11 | 00754209 | SHIELD COMPLETE OUTER | 1 |
| 12 | 00754208 | SHIELD COMPLETE INNER | 1 |
| 13 | 00754358 | SHIELD COMPLETE | 1 |
| 14 | 00755195 | OUTER YOKE 1-3/4" | 1 |



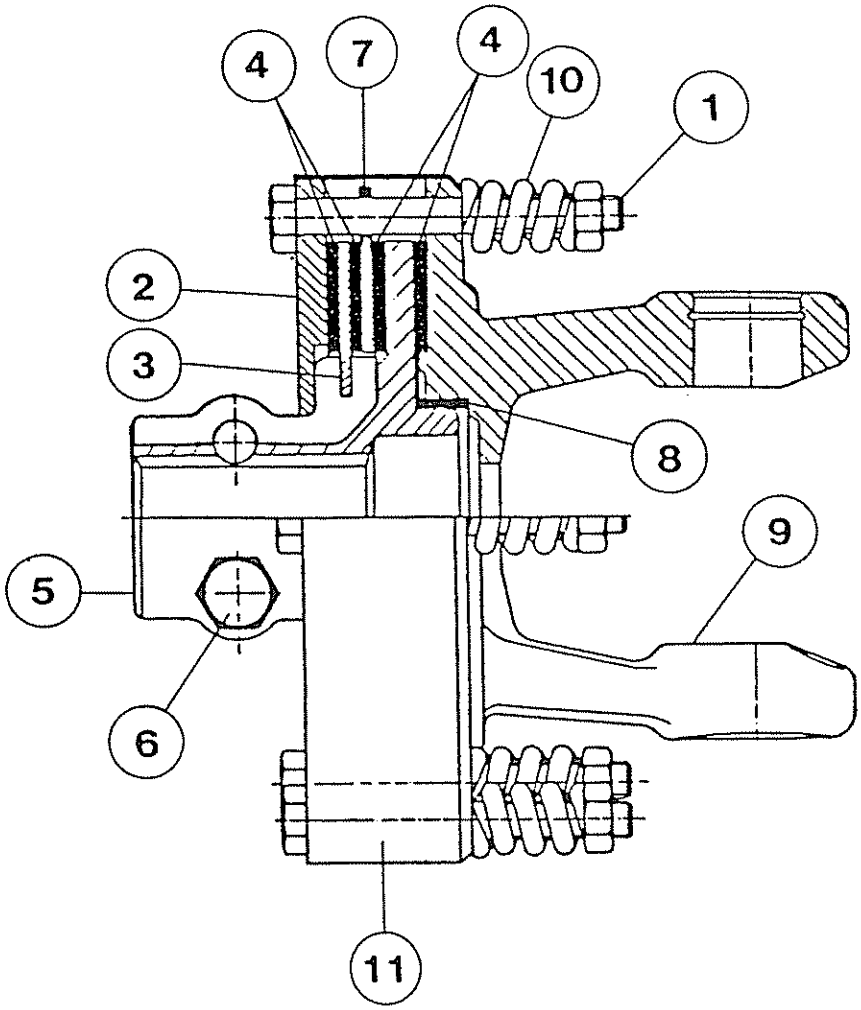

TK-15 HD JACKSHAFT

CAT.IV 35R

P/N 00754934

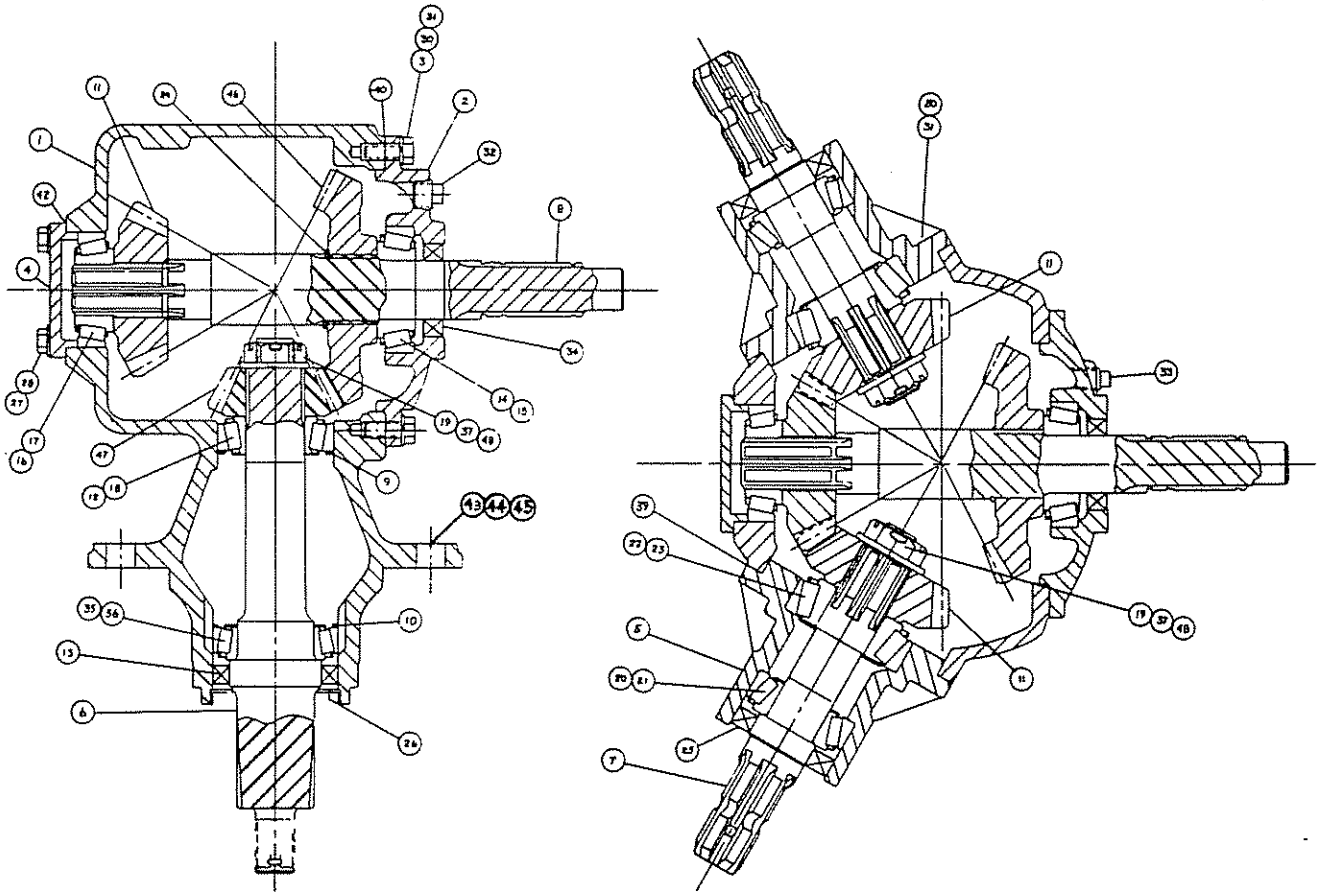
| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00754934 | JACKSHAFT | 1 |
| 2 | 00754942 | PILLOW BLOCK BEARING | 1 |
| 3 | 00754200 | SLIPCLUTCH | 1 |
| 4 | 00752896 | CROSS JOURNAL SET | 1 |
| 5 | 00001400 | FLATWASHER | 2 |
| 6 | 00695100 | LOCKNUT | 2 |
| 7 | 00750952 | BOLT | 2 |
| 8 | 00754187 | SHIELD COMPLETE | 1 |
| 9 | 00755196 | OUTER TUBE COMPLETE W/SAFETY GUARD | 1 |
| 10 | 00754330 | NYLON BOLT | 6 |
| 11 | 00754331 | LOCKING COLLAR INNER | 1 |
| 12 | 00754332 | LOCKING COLLAR OUTER | 1 |
| 13 | 00754334 | GREASE NIPPLE | 1 |

# SLIPCLUTCH P/N 00754200



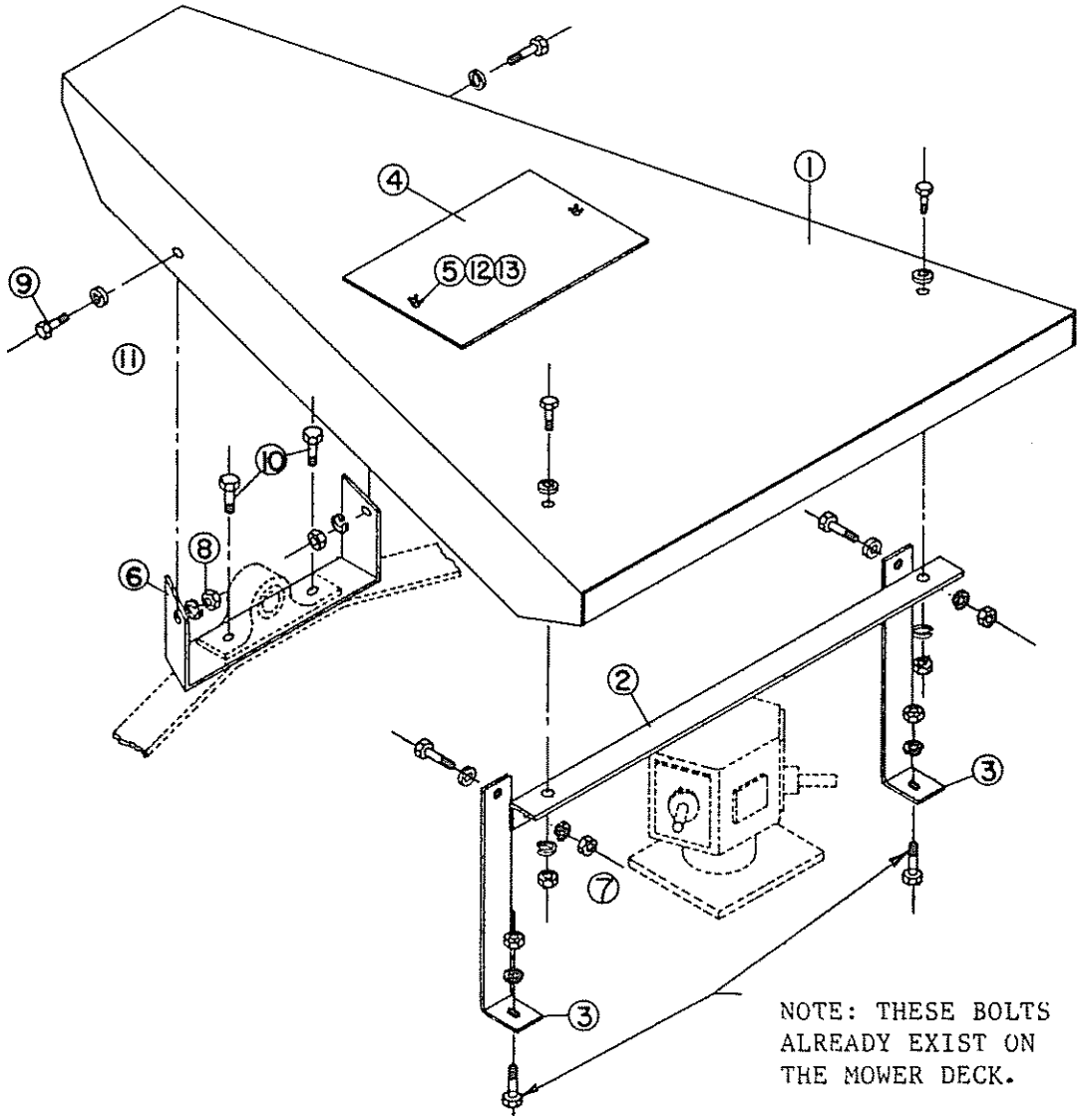

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00754199 | BOLT AND NUT SET | 8 |
| 2 | 00754203 | OUTER FLANGE | 1 |
| 3 | 00754201 | CLUTCH PLATE | 1 |
| 4 | 00754202 | DISK | 4 |
| 5 | 00754300 | BODY - FRICTION CLUTCH | 1 |
| 6 | 00752903 | BOLT AND NUT SET | 2 |
| 7 | 00754314 | PLATE WITH HOLES | 1 |
| 8 | 00754301 | SPACER | 1 |
| 9 | 00754302 | YOKE FRICTION | 1 |
| 10 | 00754303 | SPRING | 8 |
| 11 | 00754304 | DIRT SHIELD | 1 |

# GEARBOX ASSEMBLY - CENTER SECTION



| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00752368 | MAIN HOUSING | 1 |
| 2 | 00752369 | COVER | 1 |
| 3 | 00749479 | LOCKING COMPOUND | |
| 4 | 00752370 | CAP | 1 |
| 5 | 00752371 | HOUSING DIVIDER | 2 |
| 6 | 00752372 | BLADE SHAFT | 1 |
| 7 | 00752373 | DIVIDER SHAFT | 2 |
| 8 | 00752374 | INPUT SHAFT | 1 |
| 9 | 00752375 | RETAINING RING | 1 |
| 10 | 00752376 | RETAINING RING | 1 |
| 11 | 00752377 | GEAR, 17T | 3 |
| 12 | 00749488 | BEARING CUP | 1 |
| 13 | 00749489 | SEAL | 1 |
| 14 | 00749490 | BEARING CUP | 1 |
| 15 | 00749491 | BEARING CONE | 1 |
| 16 | 00749492 | BEARING CUP | 1 |
| 17 | 00749493 | BEARING CONE | 1 |
| 18 | 00749494 | BEARING CONE | 1 |
| 19 | 00749495 | COTTER | 3 |
| 20 | 00037600 | BEARING CUP | 2 |
| 21 | 00037500 | BEARING CONE | 2 |
| 22 | 00749498 | BEARING CUP | 2 |
| 23 | 00749499 | BEARING CONE | 2 |
| 24 | 00752378 | RETAINING RING | 1 |
| 25 | 00749501 | SEAL | 2 |
| 26 | 00752379 | PLUG | 1 |
| 27 | 00749503 | BOLT | 4 |
| 28 | 00012101 | LOCKWASHER | 4 |
| 30 | 00749505 | BOLT | 14 |
| 31 | 00022200 | LOCKWASHER | 14 |
| 32 | 00750208 | VENT PLUG | 1 |
| 33 | 00749508 | PLUG | 1 |
| 34 | 00749509 | SEAL | 1 |
| 35 | 00749510 | BEARING CUP | 1 |
| 36 | 00749511 | BEARING CONE | 1 |
| 37 | 00752380 | NUT | 3 |
| 39 | 00752381 | GASKET | 3 |
| | 00752383 | GASKET | 3 |
| | 00749515 | SHIM | 1 |
| 40 | 00749516 | SHIM | 1 |
| | 00752383 | GASKET | 2 |
| | 00752384 | GASKET | 1 |
| 42 | 00752385 | GASKET | 2 |
| | 00752386 | GASKET | 2 |
| 43 | 00749539 | NUT | 4 |
| 44 | 00748538 | BOLT | 4 |
| 45 | 00003901 | LOCKWASHER | 4 |
| 46 | 00752387 | GEAR, 25T | 1 |
| 47 | 00752388 | PINION, 17T | 1 |
| 48 | 00752389 | WASHER | 3 |

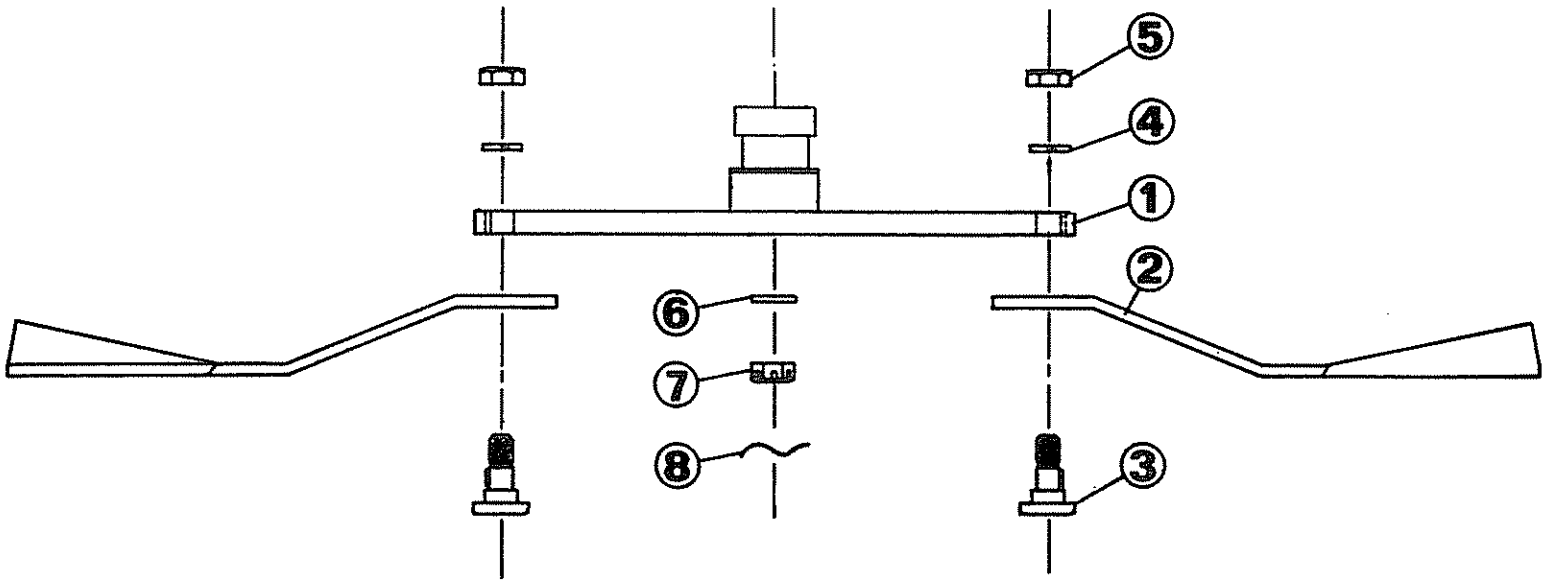
# SAFETY SHIELD ASSEMBLY
# CENTER SECTION




| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00750918 | DRIVESHAFT SAFETY SHIELD | 1 |
| 2 | 00750927 | SUPPORT ANGLE | 1 |
| 3 | 00751135 | MOUNT STRAP | 2 |
| 4 | 00750915 | INSPECTION WINDOW COVER | 1 |
| 5 | 00004000 | WINGNUT | 2 |
| 6 | 00750919 | FRONT MOUNT | 1 |
| 7 | 00022200 | LOCKWASHER | 10 |
| 8 | 00999316 | NUT | 8 |
| 9 | 00999314 | BOLT | 6 |
| 10 | 00604800 | BOLT | REF |
| 11 | 00019700 | FLATWASHER | 6 |
| 12 | 00024100 | FLATWASHER | 2 |
| 13 | 00017000 | LOCKWASHER | 2 |

# BLADE BAR ASSEMBLY - CENTER SECTION

## P/N 00750938

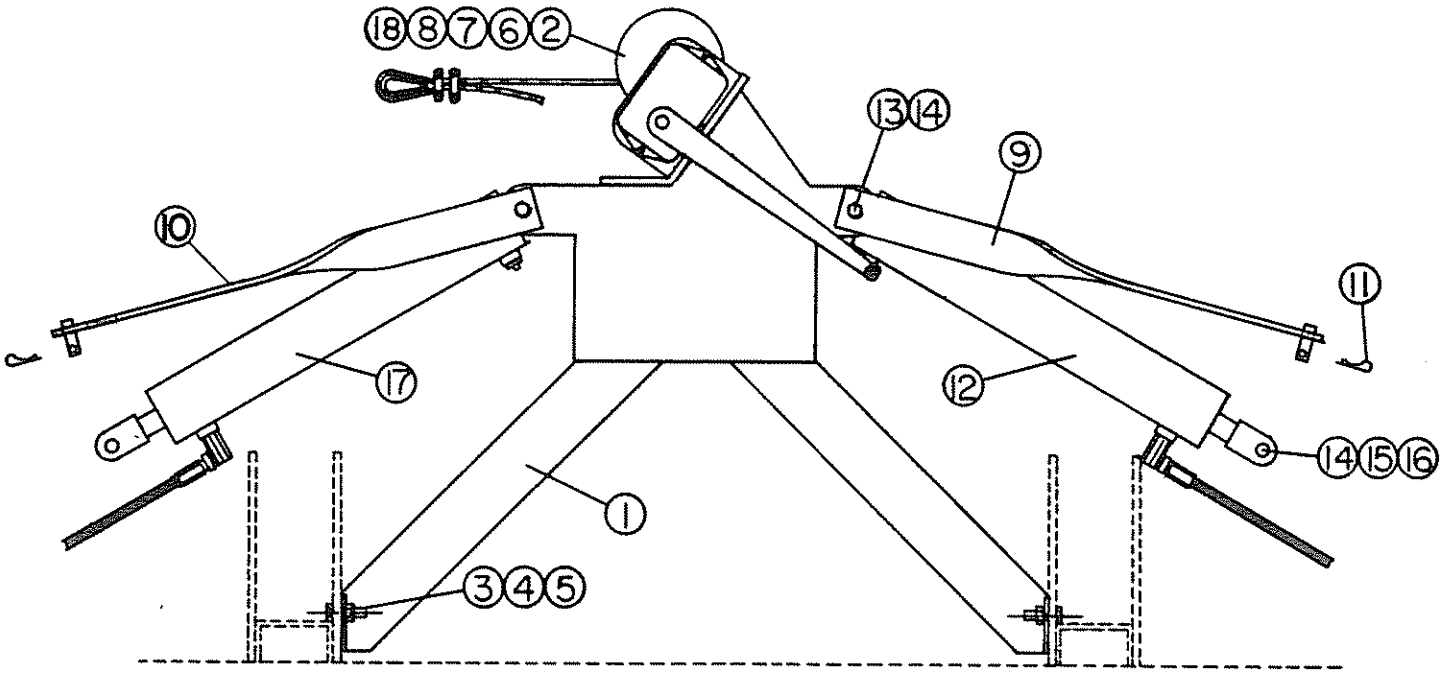



TORQUE ITEM #7
to 250 FT. LBS.

TORQUE ITEM #3
to 250 FT. LBS.

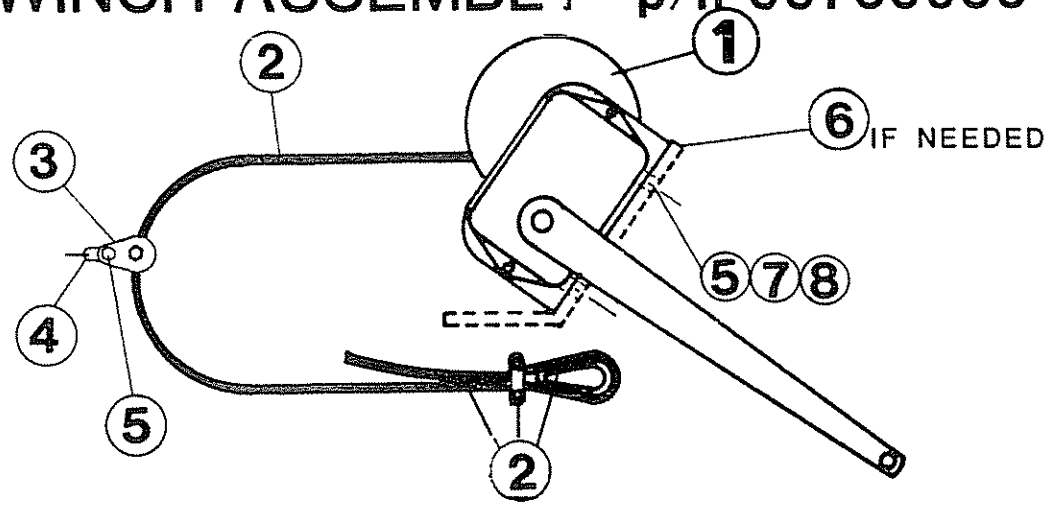
| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00750500 | BLADE BAR | 1 |
| 2 | 00750788 | UPDRAFT BLADE | 2 |
| 3 | 00752827 | BLADE BOLT | 2 |
| 4 | 00748000 | LOCKWASHER | 2 |
| 5 | 00747900 | NUT | 2 |
| 6 | 00606200 | WASHER | 1 |
| 7 | 00606100 | CASTLE NUT | 1 |
| 8 | 00751130 | WIRE RETAINER | 1 |
| | ITEM LISTED BELOW IS AN OPTION AND IS NOT ILLUSTRATED | | |
| 9 | 00750873 | SUCTION BLADE - PAN ASSEMBLY; CONSISTS OF PAN WELDMENT, BLADES AND ALL ITS HARDWARE | REF |

# WINCH STAND ASSEMBLY



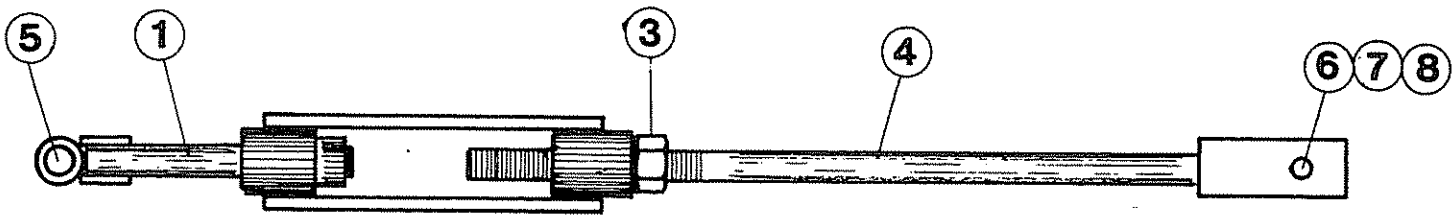

| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00750524 | WINCH & CYLINDER SUPPORT STAND | 1 |
| 2 | 00750950 | WINCH ASSEMBLY | 1 |
| 3 | 00000200 | NUT | 4 |
| 4 | 00003901 | LOCKWASHER | 4 |
| 5 | 02892100 | BOLT | 4 |
| 6 | 00015800 | LOCKNUT | 2 |
| 7 | 00011100 | FLATWASHER | 2 |
| 8 | 00011400 | BOLT | 2 |
| 9 | 00750578 | RIGHT RETAINING ARM | 1 |
| 10 | 00751131 | LEFT RETAINING ARM | 1 |
| 11 | 00008900 | STAY PIN | 2 |
| 12 | 00750585 | RIGHT WING CYLINDER KIT | OPT |
| 13 | 00059000 | BOLT | 2 |
| 14 | 00695100 | NUT | 4-REF |
| 15 | 00750311 | BOLT | 2-REF |
| 16 | 00001400 | FLATWASHER | 4-REF |
| 17 | 00750998 | LEFT WING CYLINDER KIT | OPT |

# WINCH ASSEMBLY p/n 00750950



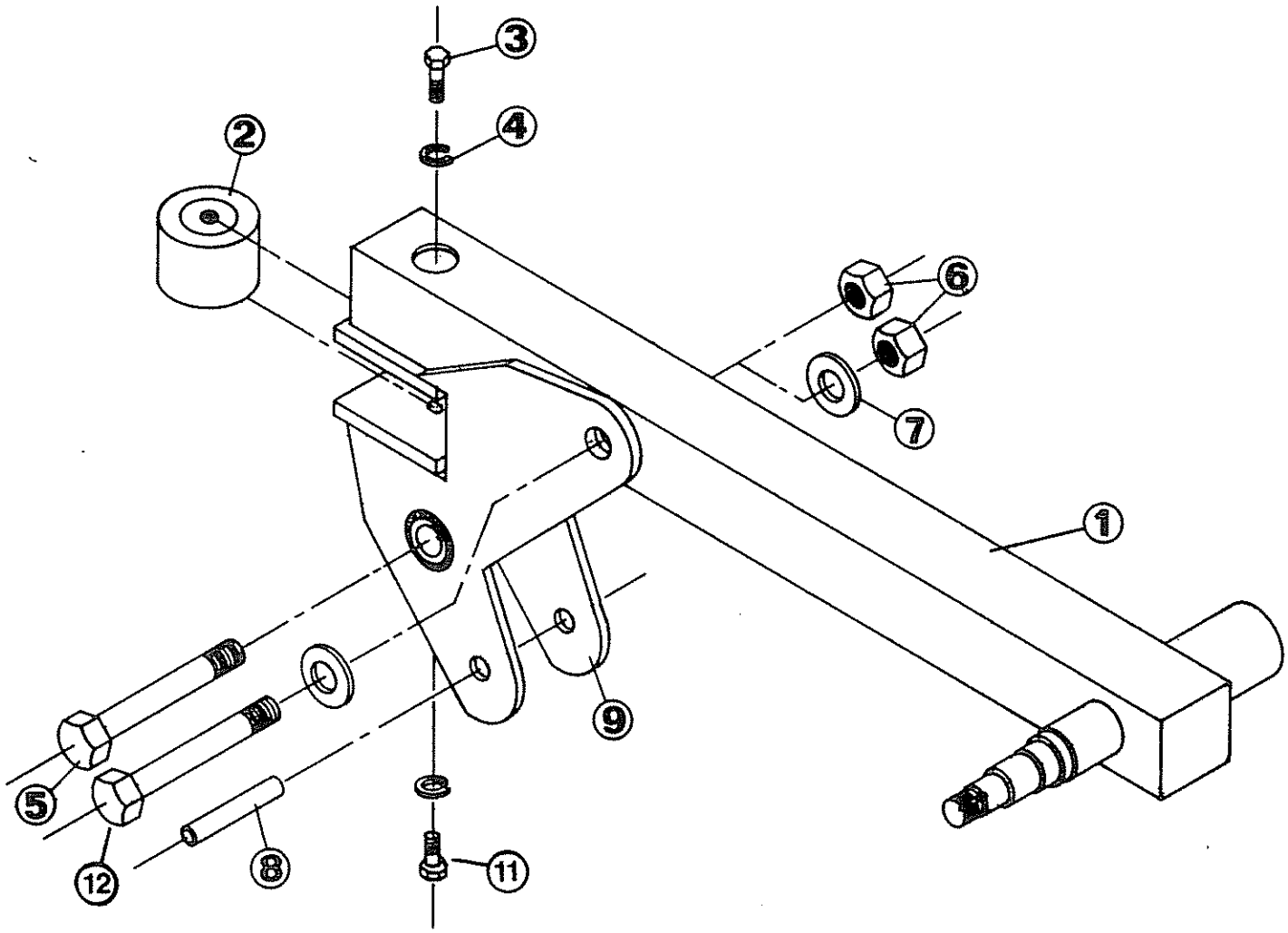

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00750936 | WINCH | 1 |
| 2 | 00000801 | WINCH CABLE ASSEMBLY: | 1 |
| | 00000800 | CABLE | 1 |
| | 02024600 | THIMBLE | 1 |
| | 00001000 | CABLE CLAMPS | 2 |
| 3 | 00753655 | PULLY & BLOCK | 1 |
| 4 | 00753656 | CHAIN | 1 |
| 5 | 00015800 | NUT | 3 |
| 6 | 00753657 | CABLE ATTACH. WELD. | 1 |
| 7 | 00023100 | BOLT | 2 |
| 8 | 00011100 | FLATWASHER | 2 |

# LEVEL LIFT ROD ASSEMBLY
## P/N 00752563




| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00752565 | TURNBUCKLE & REAR LEVEL LIFT | 1 |
| 3 | 00059500 | NUT | 1 |
| 4 | 00752564 | LIFT ROD WELDMENT | 1 |
| 5 | 00751224 | REAR LEVEL LIFT PIN | REF |
| 6 | 00162803 | FRONT LEVEL LIFT PIN | REF |
| 7 | 00000400 | COTTER PIN | REF |
| 8 | 00002701 | FLATWASHER | REF |

# SINGLE WHEEL AXEL ARM ASSEMBLY
# CENTER SECTION

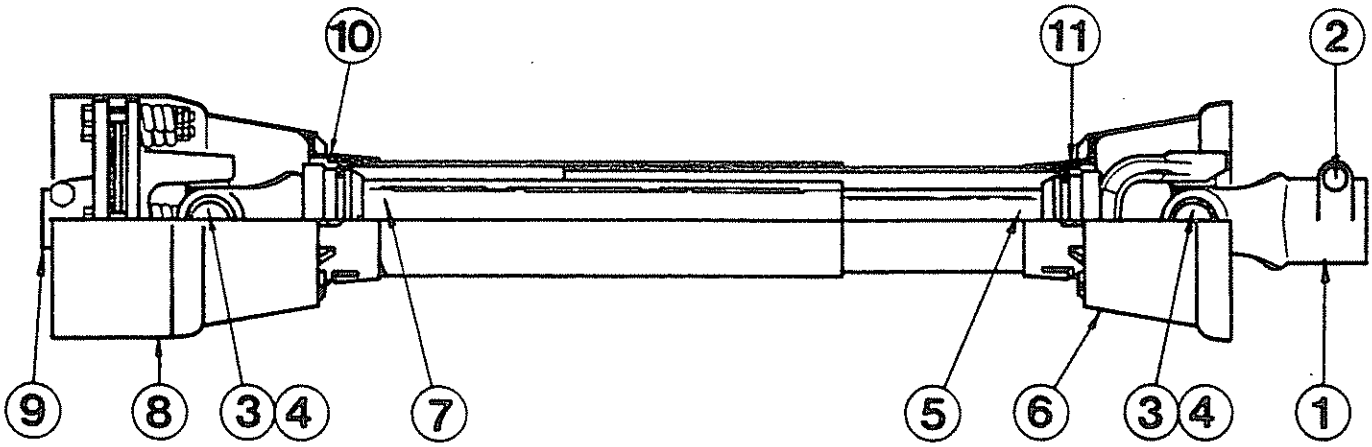



| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00752758 | RIGHT AXLE ARM WELDMENT | 1 |
| | 00752756 | LEFT AXLE ARM WELDMENT | 1 |
| 2 | 00751035 | RUBBER MOUNT DISC | 1 |
| 3 | 02774400 | BOLT | 1 |
| 4 | 00001300 | LOCKWASHER | 2 |
| 5 | 00016700 | BOLT | 2 |
| 6 | 02030300 | NUT | 2 |
| 8 | 00751224 | LINK ROD PIN | REF |
| 9 | 00751080 | SHOCK ABSORBER WELDMENT | 1 |
| 10 | 00752753 | WHEEL HUB ASSEMBLY | REF |
| 11 | 00751105 | BOLT | 1 |
| 12 | 00752278 | BOLT | 1 |

## CATEGORY IV

# WING DRIVESHAFT

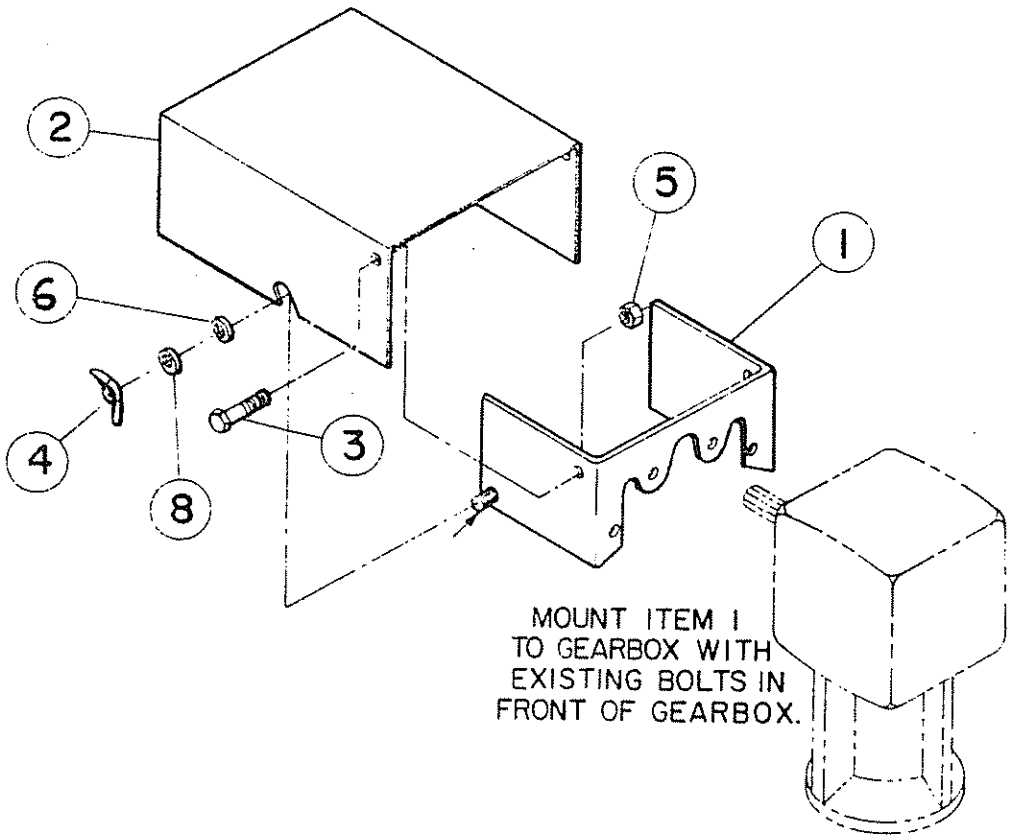
### P/N 00752817




| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00752883 | Q.D. YOKE | 1 |
| 2 | 00752880 | PUSH PIN SET | 1 |
| 3 | 00752896 | SPIDER W/SNAP RING | 2 |
| | | not illustrated | |
| 5 | 00754190 | HALF SHAFT YOKE END WITH SHIELDS | 1 |
| 6 | 00754192 | INNER SHIELD | 1 |
| 7 | 00754191 | HALF SHAFT CLUTCH END WITH SHIELDS | 1 |
| 8 | 00754193 | OUTER SHIELD | 1 |
| 9 | 00754200 | SLIP CLUTCH ASSEMBLY | 1 |
| 10 | 00754168 | SAFETY RING NUT KIT (OUTER) | 1 |
| 11 | 00754169 | SAFETY RING NUT KIT (INNER) | 1 |

# GEARBOX SAFETY SHIELD ASSEMBLY

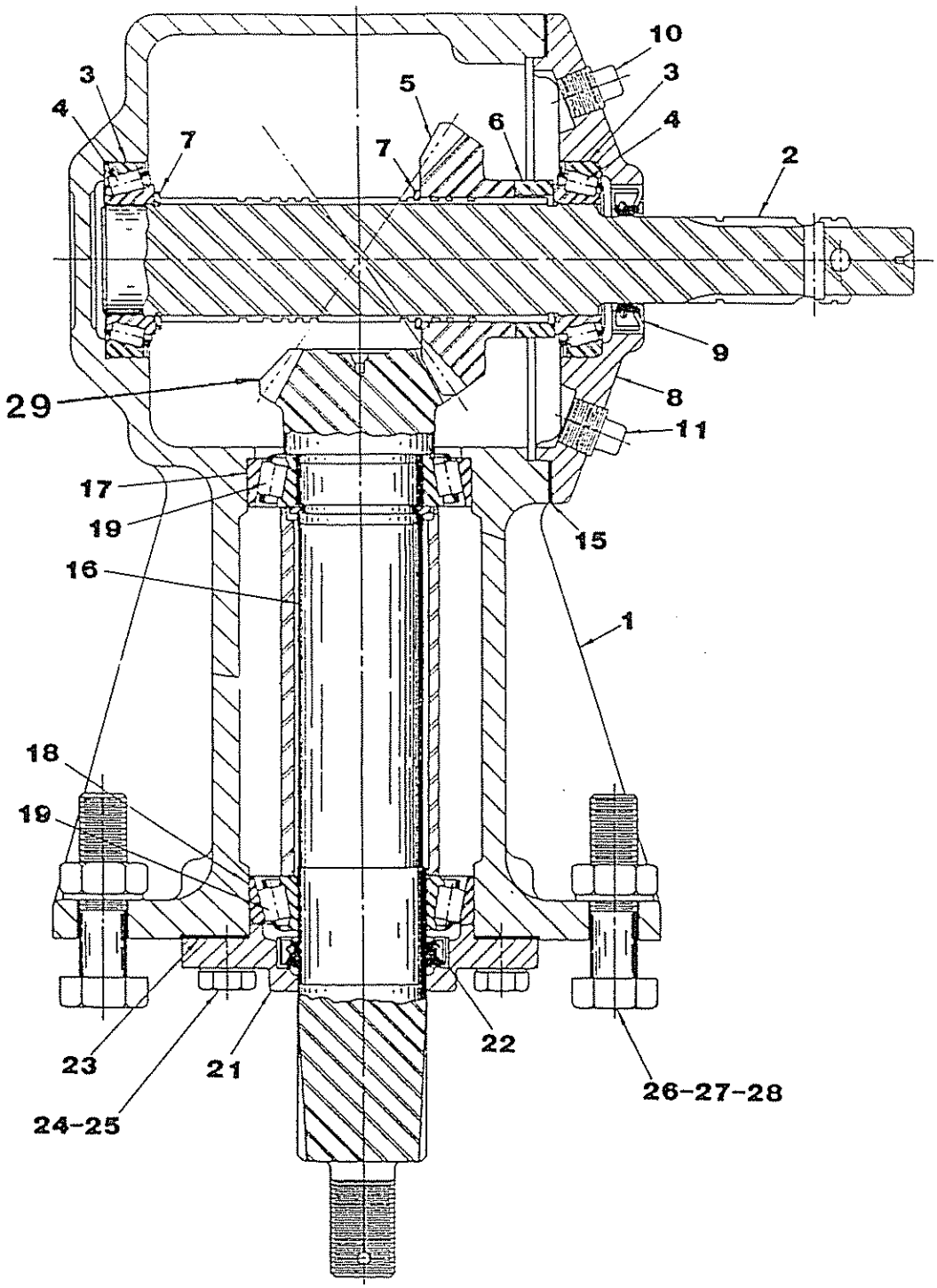
## P/N 00752314




| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00024100 | FLATWASHER | 2 |
| 2 | 00019700 | WASHER 7/16 | 2 |
| 3 | LH0B128C | NUT 7/16 | 2 |
| 4 | 00004000 | WINGNUT 1/4 | 2 |
| 5 | 00999314 | BOLT 7/16 X 1 1/4 | 2 |
| 6 | 00753016 | SAFETY SHIELD | 1 |
| 7 | 00754092 | REAR SUPPORT D.S. SAFETY SHIELD | 1 |

# WING GEARBOX ASSEMBLY

RT - 00752140A LT - 00752141A



# WING GEARBOX ASSEMBLY

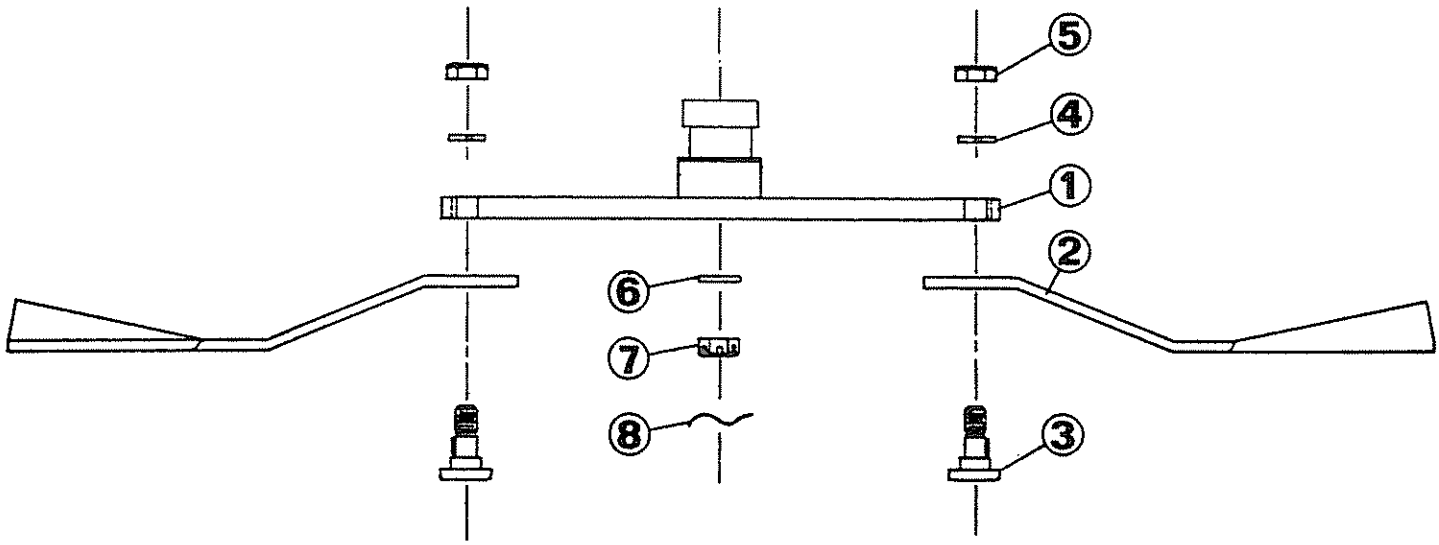
## RT - 00752140A LT - 00752141A

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00752362 | MAIN HOUSING | 1 |
| 2 | 00752363 | INPUT SHAFT | 1 |
| 3 | 00748525 | BEARING CUP | 2 |
| 4 | 00748527 | BEARING CONE | 2 |
| 5 | 00755505 | INPUT GEAR | 1 |
| 6 | 00748533 | SPACER | 1 |
| 7 | 00748526 | RETAINING RING | 3 |
| 8 | 00752365 | SIDE HOUSING | 1 |
| 9 | 00748536 | SEAL | 1 |
| 10 | 00564900 | PLUG | 1 |
| 11 | 00752307 | PLUG | 1 |
| 12 | 00752407 | PLUG (NOT SHOWN) | 1 |
| 13 | 00012101 | LOCKWASHER (NOT SHOWN) | 8 |
| 14 | 00563300 | BOLT (NOT SHOWN) | 8 |
| 15 | 00748531 | SHIM | *A/R |
| 16 | 00755507 | OUTPUT SHAFT | 1 |
| 17 | 00748537 | BEARING CUP | 1 |
| 18 | 00020600 | BEARING CUP | 1 |
| 19 | 00748522 | BEARING CONE | 2 |
| 20 | 00752156 | SPACER | 1 |
| 21 | 00752155 | BEARING RETAINER CAP | 1 |
| 22 | 00748519 | SEAL | 1 |
| 23 | 00748520 | SHIM | *A/R |
| 24 | 00001300 | LOCKWASHER | 4 |
| 25 | 02044000 | BOLT | 4 |
| 26 | 02880900 | BOLT | 4 |
| 27 | 00037200 | NUT | 4 |
| 28 | 00003901 | LOCKWASHER | 4 |
| 29 | 00755506 | GEAR | 1 |

* AS REQUIRED

# BLADE BAR ASSEMBLIES - WINGS

## RT - 00752150 LT - 00752151



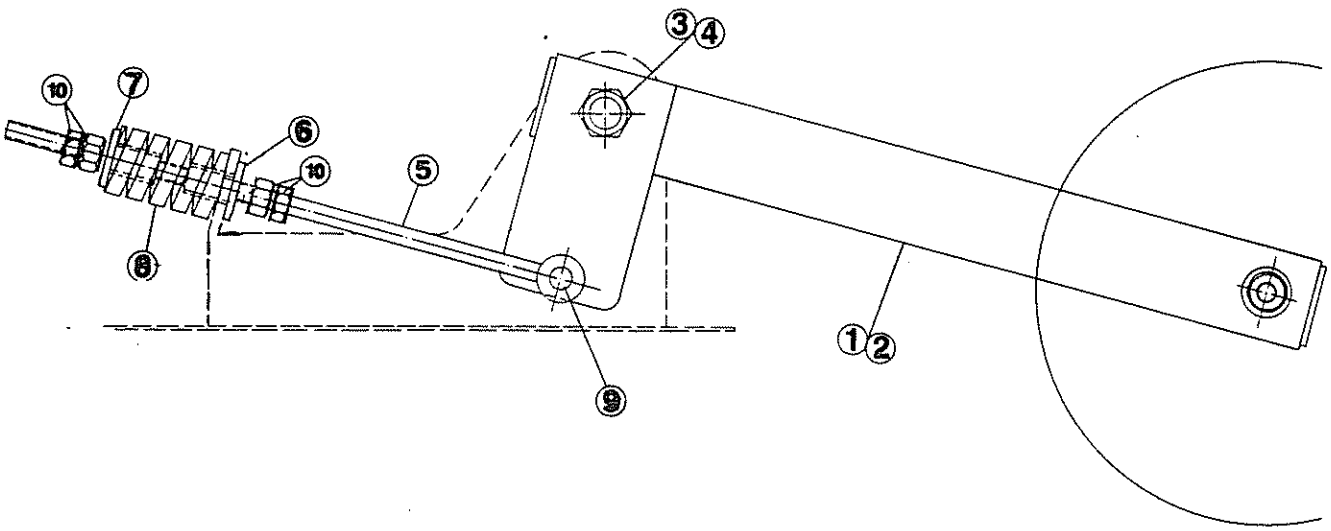

TORQUE ITEM #7
to 250 FT. LBS.

TORQUE ITEM #3
to 250 FT. LBS.

| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00752142 | BLADE BAR | 1 |
| 2 | 00750787 | RIGHT WING UPDRAFT BLADE | 2 |
| | 00750788 | LEFT WING UPDRAFT BLADE | 2 |
| 3 | 00752827 | BLADE BOLT | 2 |
| 4 | 00748000 | LOCKWASHER | 2 |
| 5 | 00747900 | NUT | 2 |
| 6 | 00606200 | WASHER | 1 |
| 7 | 00606100 | CASTLE NUT | 1 |
| 8 | 00751130 | WIRE RETAINER | 1 |
| | ITEMS LISTED BELOW ARE OPTIONS AND ARE NOT ILLUSTRATED | | |
| 9 | 00752152 | STUMP JUMPER ASSEMBLY - RIGHT WING | REF |
| 10 | 00752153 | STUMP JUMPER ASSEMBLY - LEFT WING | REF |

THESE ASSEMBLIES CONSIST OF STUMP JUMPER PAN WELDMENT, BLADES AND ALL ITS HARDWARE

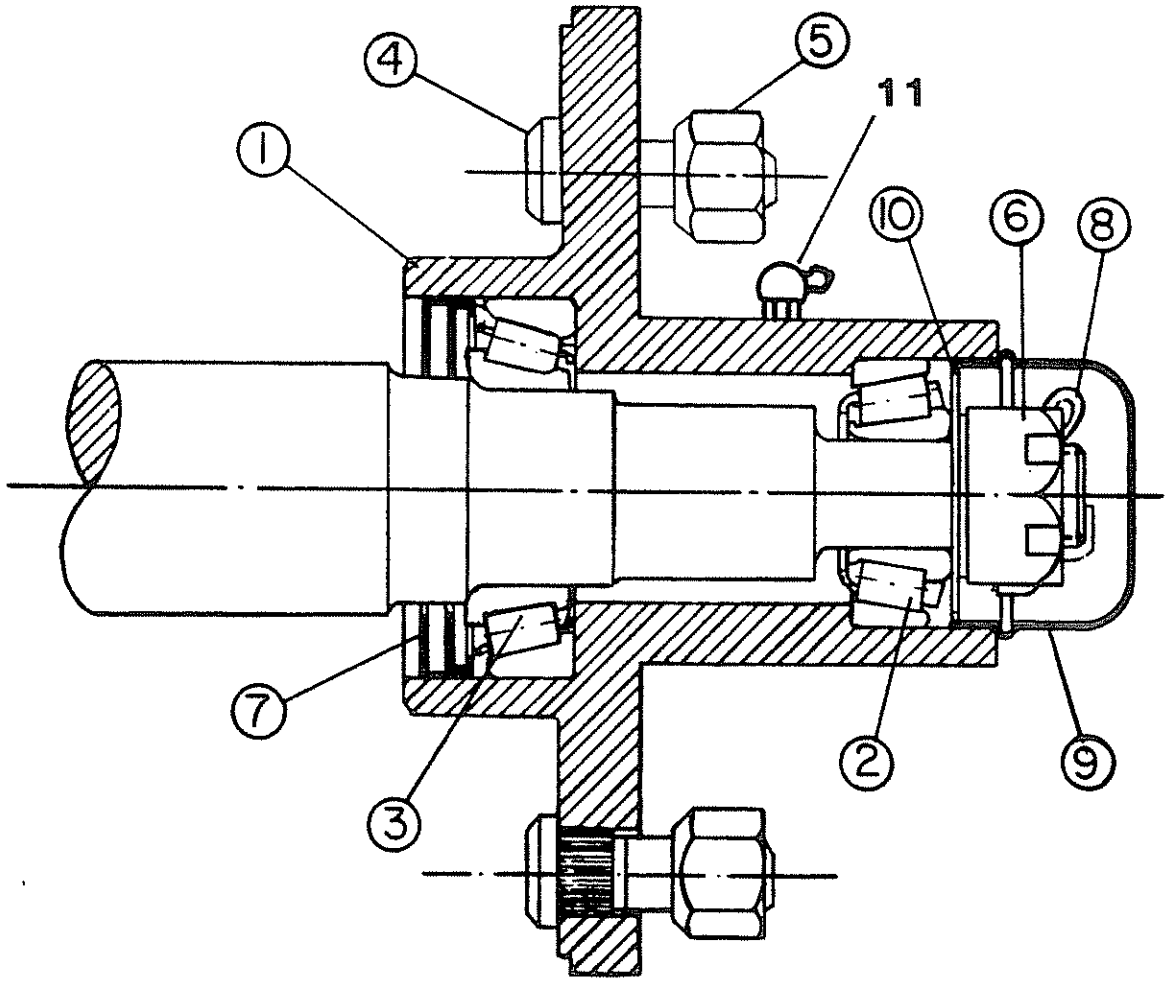
# RT & LT WING AXLE ARM ASSEMBLY




| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00752777 | AXLE ARM - LEFT WING | 1 |
| 2 | 00752778 | AXLE ARM - RIGHT WING | REF |
| 3 | 02030300 | ELASTIC STOPNUT | 1 |
| 4 | 00750479 | BOLT | 1 |
| 5 | 00750518 | SHOCK ABSORBER ROD | 1 |
| 6 | 00750727 | LONG SPRING RETAINER | 1 |
| 7 | 00750730 | SHORT SPRING RETAINER | 1 |
| 8 | 00750739 | SPRING | 1 |
| 9 | 00750481 | SHOCK ABSORBER PIN | 1 |
| 10 | 00059500 | NUT | 4 |

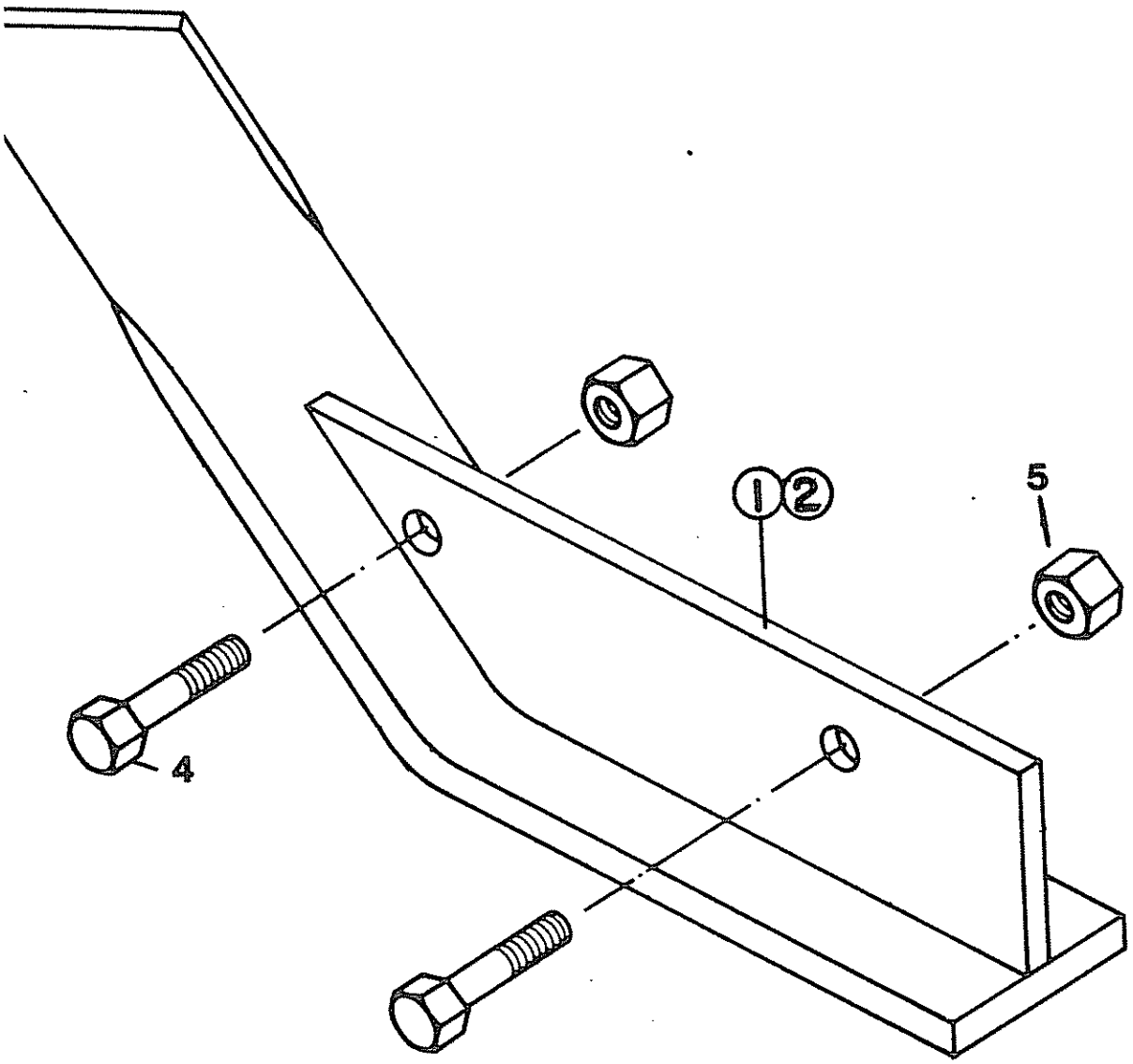
# Wheel Hub Assembly

## P/N 00752753



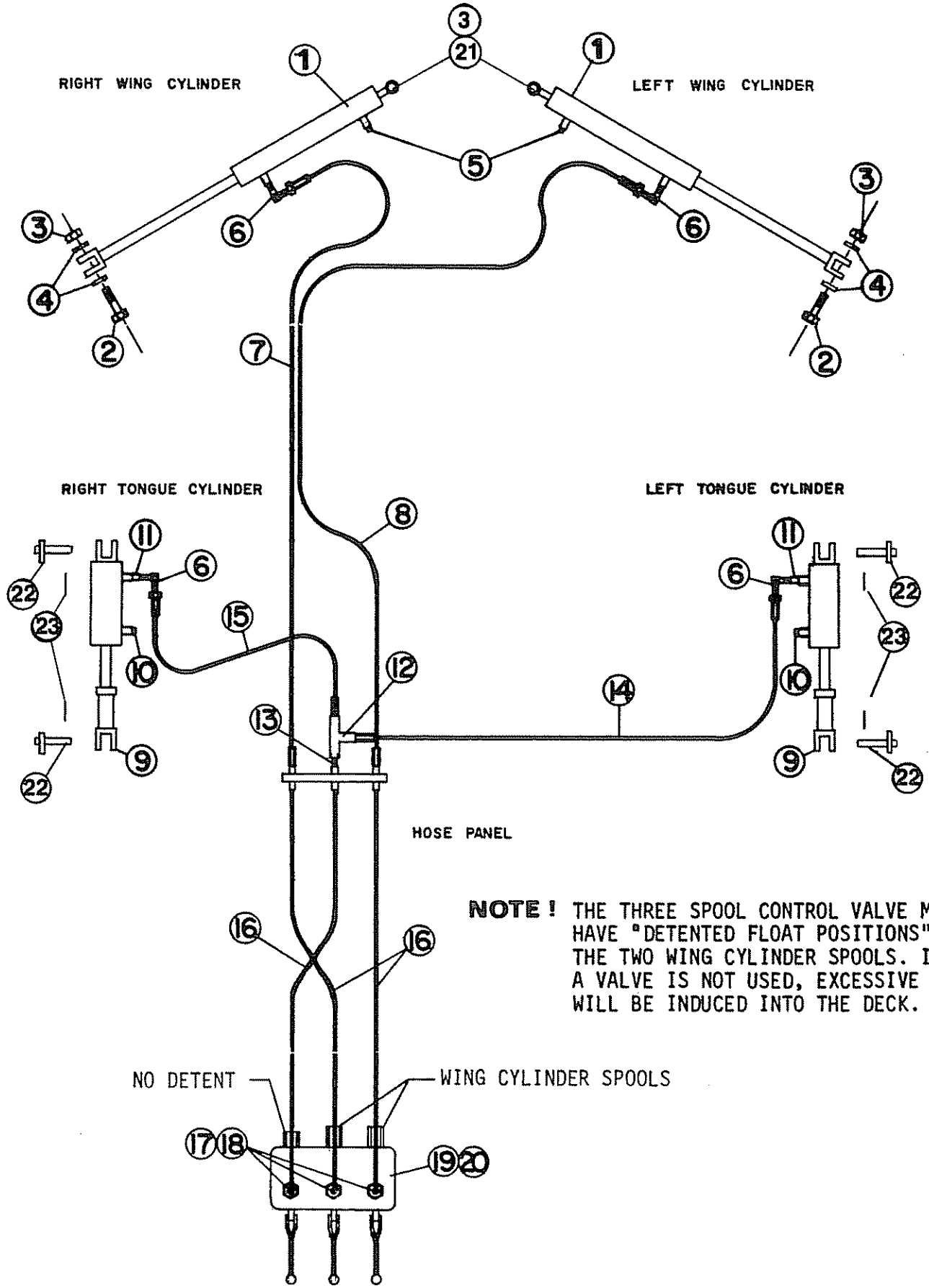

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00752752 | Wheel Hub w/cups, studs, nuts, and zerk fittings | 1 |
| 2 | 00753721 | Bearing Cone and Cup | 1 |
| 3 | 00753720 | Bearing Cone and Cup | 1 |
| 4 | 00752177 | Stud Bolt | 5 |
| 5 | 00750614 | Nut | 5 |
| 6 | 00750615 | Nut | 1 |
| 7 | 00750616 | Seal | 1 |
| 8 | 00000400 | Cotter Pin | 1 |
| 9 | 00752751 | Dust Cap | 1 |
| 10 | 00750618 | Washer | 1 |
| 11 | 00752176 | Zerk Fittings | 1 |
| 12 | 00752753 | Wheel Hub Assembly includes items 1 - 11 | 1 |

# SKID SHOE ASSEMBLY
## P/N 00750991




| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00750993 | RIGHT WING SKID SHOE | 1 |
| 2 | 00750989 | LEFT WING SKID SHOE (NOT SHOWN) | 1 |
| 3 | 02716500 | NUT | 4 |
| 4 | 00749171 | BOLT | 4 |

# HYDRAULIC CIRCUIT AND HOSE PLAN

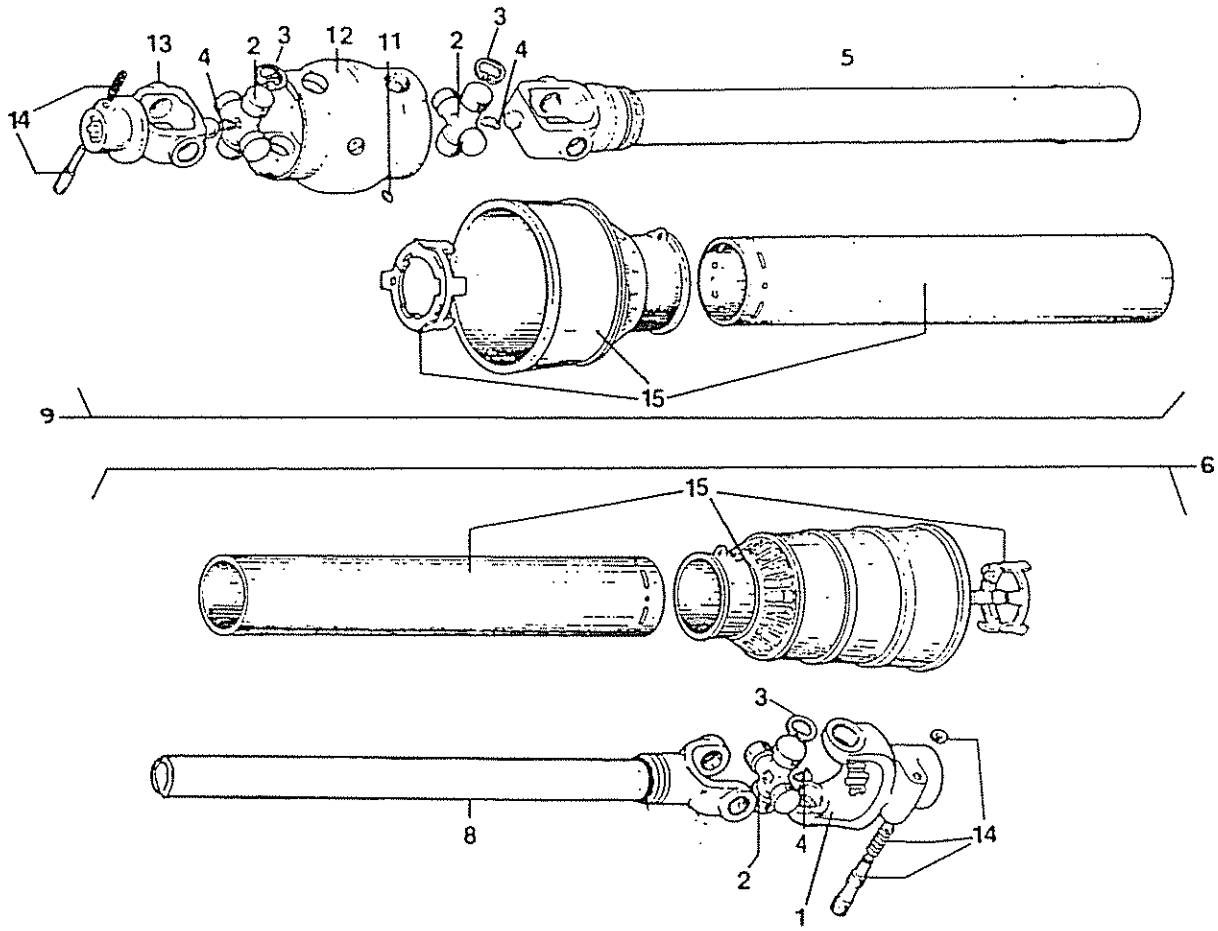



**NOTE !** THE THREE SPOOL CONTROL VALVE MUST HAVE "DETENTED FLOAT POSITIONS" FOR THE TWO WING CYLINDER SPOOLS. IF SUCH A VALVE IS NOT USED, EXCESSIVE STRESS WILL BE INDUCED INTO THE DECK.

# HYDRAULIC CIRCUIT AND HOSE PLAN

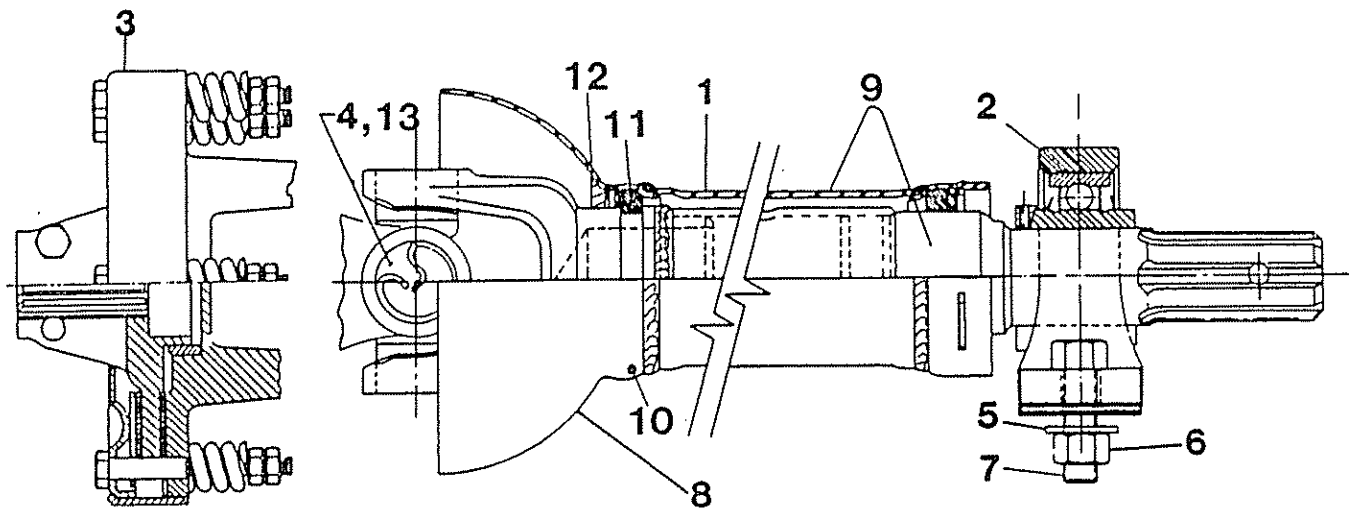
| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00750398 | WING CYLINDER | 1 |
| 2 | 00750311 | BOLT | 2 |
| 3 | 00695100 | NUT | 4 |
| 4 | 00001400 | FLATWASHER | 4 |
| 5 | 00750596 | BREATHER PLUG | 2 |
| 6 | 00035400 | FITTING | 4 |
| 7 | 00750987 | HOSE | 1 |
| 8 | 00750986 | HOSE | 1 |
| 9 | 00750395 | TONGUE CYLINDER | 2 |
| 10 | 00750208 | BREATHER PLUG | 2 |
| 11 | 00494800 | BUSHING | 2 |
| 12 | 00493900 | FITTING | 1 |
| 13 | 00750553 | FITTING | 1 |
| 14 | 00750550 | HOSE | 1 |
| 15 | 00750549 | HOSE | 1 |
| 16 | 00750997 | HOSE | 3 |
| 17 | 00750368 | QUICK DISCONNECT COUPLER | 3 |
| 18 | 00751143 | FITTING | 3 |
| 19 | 00380200 | OPEN CENTER VALVE | 1 |
| 20 | 00750382 | CLOSED CENTER VALVE | REF |
| 21 | 00059000 | BOLT | 2 |
| 22 | 00652401 | CYLINDER PIN | 4 |
| 23 | 00606000 | PIN | 4 |
| | | ===KITS BELOW (NOT SHOWN)=== | |
| 24 | 00750585 | RIGHT WING CYLINDER KIT (INC.ITEMS # 1-7) | 1 |
| 25 | 00750998 | LEFT WING CYLINDER KIT (INC.ITEMS # 1-6 AND 8) | 1 |
| 26 | 00750584 | TONGUE CYLINDER KIT (INC.ITEMS #6 AND 9-15) | 2 |
| 27 | 00750619 | HOSE KIT ASSEMBLY (INCLUDES ITEMS # 16-18) | 3 |

# MAIN CV DRIVESHAFT p/n 00754009



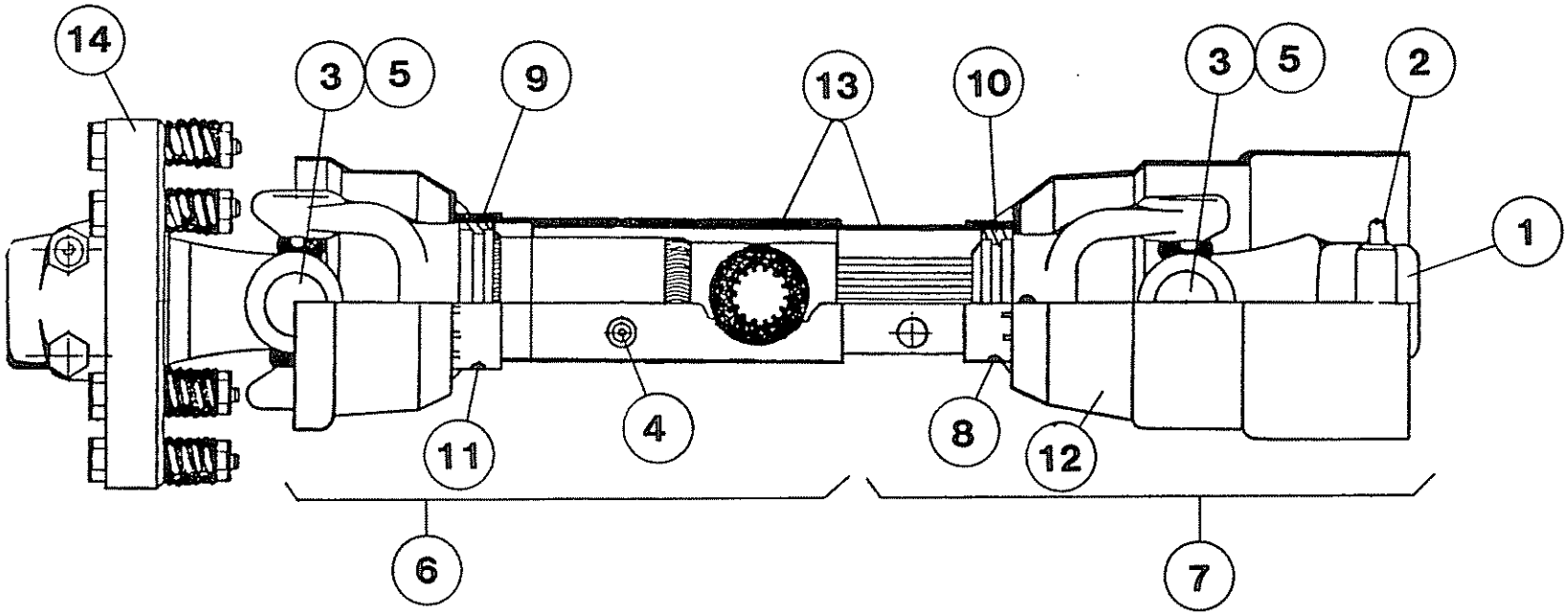

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00753908 | OUTER YOKE | 1 |
| 2 | 00753068 | CROSS BEARING | 3 |
| 3 | 00753069 | RETAINING RING | 12 |
| 4 | 00752881 | ZERK FITTING | 3 |
| 5 | 00753070 | YOKE AND OUTER TUBE | 1 |
| 6 | 00753071 | MOWER HALF ASSEMBLY | 1 |
| 8 | 00753073 | INNER TUBE WITH YOKE | 1 |
| 9 | 00753074 | TRACTOR HALF ASSEMBLY | 1 |
| 11 | 00753076 | GREASE FITTING | 1 |
| 12 | 00753077 | CENTRAL BODY | 1 |
| 13 | 00753078 | OUTER YOKE | 1 |
| 14 | 00753079 | PUSH PIN SET | 2 |
| 15 | 00753082 | COMPLETE SAFETY SHIELD | 1 |

# CATEGORY V
# JACKSHAFT ASSEMBLY



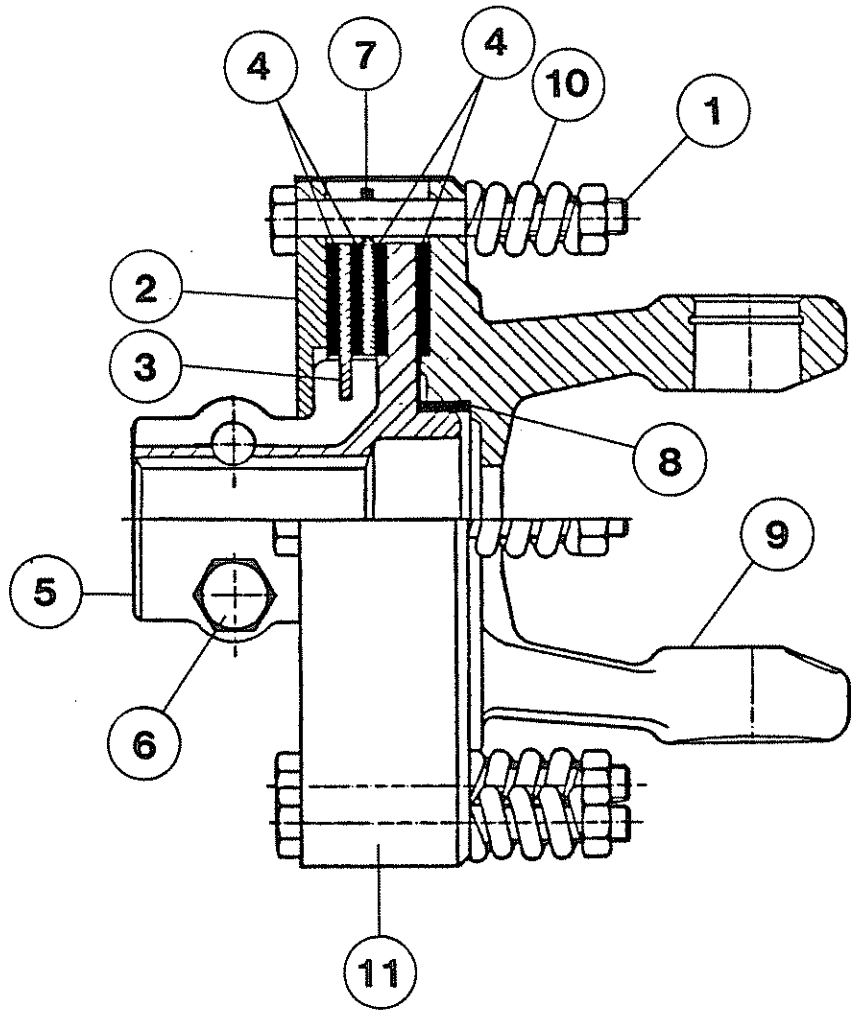

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00752794 | JACKSHAFT | 1 |
| 2 | 00749074 | PILLOW BLOCK BEARING | 1 |
| 3 | 00753881 | SLIPCLUTCH | 1 |
| 4 | 00753068 | CROSS JOURNAL SET | 1 |
| 5 | 00002700 | FLATWASHER | 2 |
| 6 | 00019400 | LOCKNUT | 2 |
| 7 | 00604800 | BOLT | 2 |
| 8 | 00754393 | SHIELD COMPLETE | 1 |
| 9 | 00754392 | OUTER TUBE COMPLETE W/SAFETY GUARD | 1 |
| 10 | 00754330 | NYLON BOLT | 6 |
| 11 | 00754331 | LOCKING COLLAR INNER | 1 |
| 12 | 00754332 | LOCKING COLLAR OUTER | 1 |
| 13 | 00754334 | GREASE NIPPLE | 1 |

# CATEGORY V
# WING DRIVESHAFT P/N 00752795




| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00753067 | OUTER YOKE | 1 |
| 2 | 00753865 | PUSH PIN SET | 1 |
| 3 | 00753068 | CROSS JOURNAL SET | 2 |
| 4 | 00754335 | GREASE NIPPLE FOR TUBE | 1 |
| 5 | 00754334 | GREASE NIPPLE | 2 |
| 6 | 00754394 | MOWER HALF COMPLETE & SHIELDED | 1 |
| 7 | 00754395 | TRACTOR HALF COMPLETE & SHIELDED | 1 |
| 8 | 00754330 | NYLON BOLT | 6 |
| 9 | 00754332 | LOCKING COLLAR OUTER | 1 |
| 10 | 00754331 | LOCKING COLLAR INNER | 1 |
| 11 | 00754396 | SHIELD COMPLETE OUTER | 1 |
| 12 | 00754397 | CHIELD COMPLETE INNER | 1 |
| 13 | 00754398 | SHIELD COMPLETE | 1 |
| 14 | 00753881 | SLIP CLUTCH | 1 |

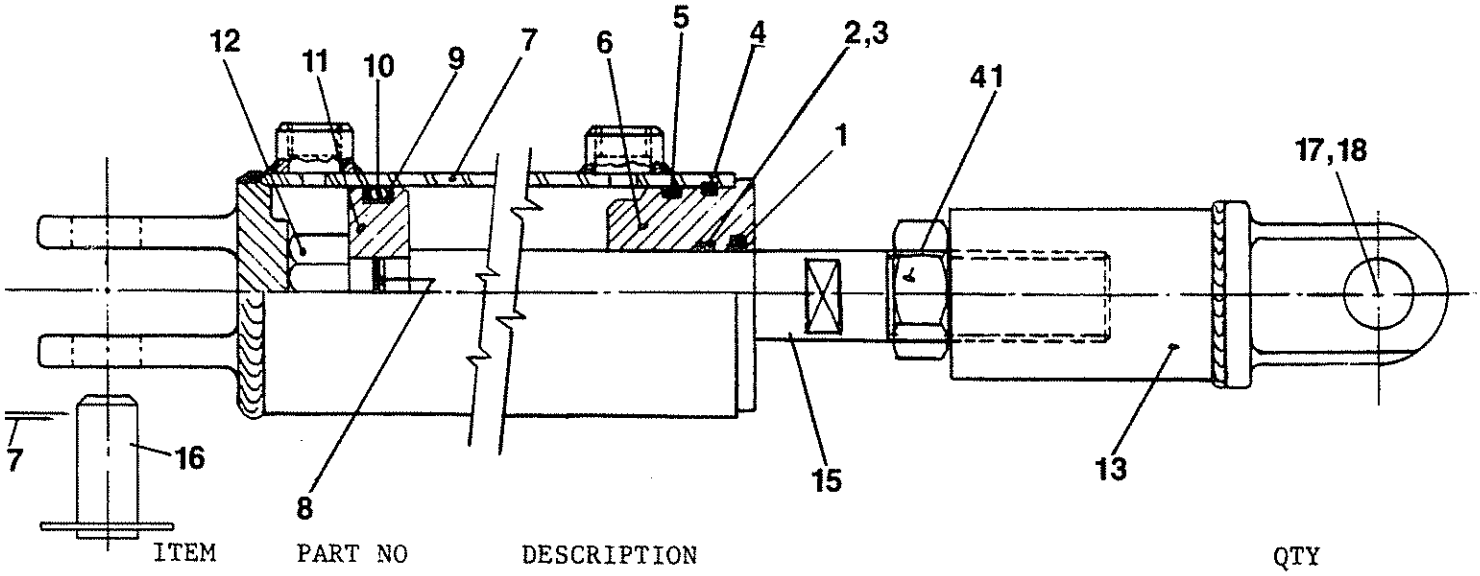
# SLIPCLUTCH P/N 00753881




| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00754199 | BOLT & NUT | 8 |
| 2 | 00754203 | OUTER FLANGE | 1 |
| 3 | 00754201 | CLUTCH PLATE | 1 |
| 4 | 00754202 | DISK | 4 |
| 5 | 00754300 | FRICTION CLUTCH (BODY) | 1 |
| 6 | 00752903 | BOLT & NUT | 2 |
| 7 | 00754314 | PLATE WITH HOLES | 1 |
| 8 | 00754301 | SPACER | 1 |
| 9 | 00754083 | YOKE FRICTION | 1 |
| 10 | 00754303 | SPRING | 8 |
| 11 | 00754304 | DIRT SHIELD | 1 |

# TONGUE CYLINDER

## P/N 00750395




| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00654100 | ROD WIPER | 1 |
| 2 | 00653900 | ROD SEAL | 1 |
| 3 | 00654000 | BACK-UP RING | 1 |
| 4 | 00653300 | LOCKWIRE | 1 |
| 5 | 00653800 | GLAND STATIC SEAL | 1 |
| 6 | 00653200 | GLAND | 1 |
| 7 | 00652801 | BARREL | 1 |
| 8 | 00653700 | ROD STATIC SEAL | 1 |
| 9 | 00653600 | BACK-UP RING | 2 |
| 10 | 00653500 | PISTON SEAL | 1 |
| 11 | 00652700 | PISTON | 1 |
| 12 | 00652600 | LOCKNUT | 1 |
| 13 | 00750601 | CLEVIS | 1 |
| 14 | 00004200 | JAMNUT | 1 |
| 15 | -------- | ROD | 1 |
| 16 | 00652401 | CLEVIS PIN | 2-REF |
| 17 | 00606000 | COTTER PIN | 2-REF |

=======KITS BELOW ARE NOT ILLUSTRATED=======

00750597 SEAL REPAIR KIT

| | | |
|---|---|---|
| (1)-GLAND STATIC SEAL | (1)-ROD STATIC SEAL | (1)-BACK-UP RING |
| (1)-ROD SEAL | (2)-BACK-UP RING | (1)-PISTON SEAL |
| (1)-ROD WIPER | (1)-LOCKWIRE | |

00750598 GLAND AND PISTON KIT

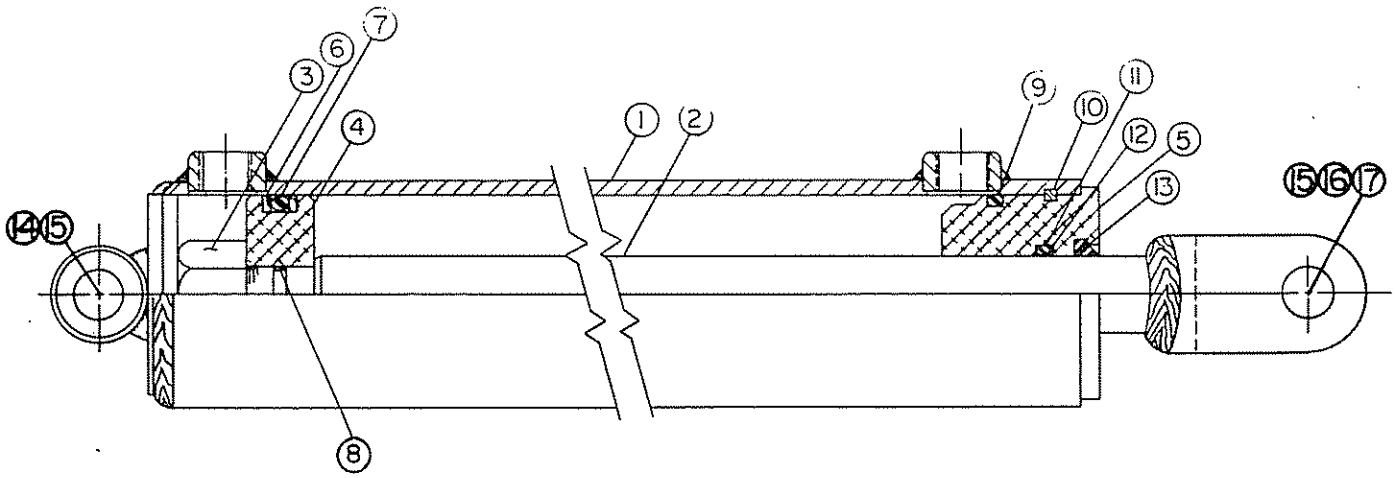
| | |
|---|---|
| (1)-GLAND | (1)-PISTON |

00750599 ROD AND LOCKNUT KIT

| | | |
|---|---|---|
| (1)-LOCKNUT | (1)-JAMNUT | (1)-ROD |

NOTE: SEE PAGE 58 FOR REPAIR PROCEDURES AND INSTALLATION INSTRUCTIONS

# WING CYLINDER
## P/N 00750398



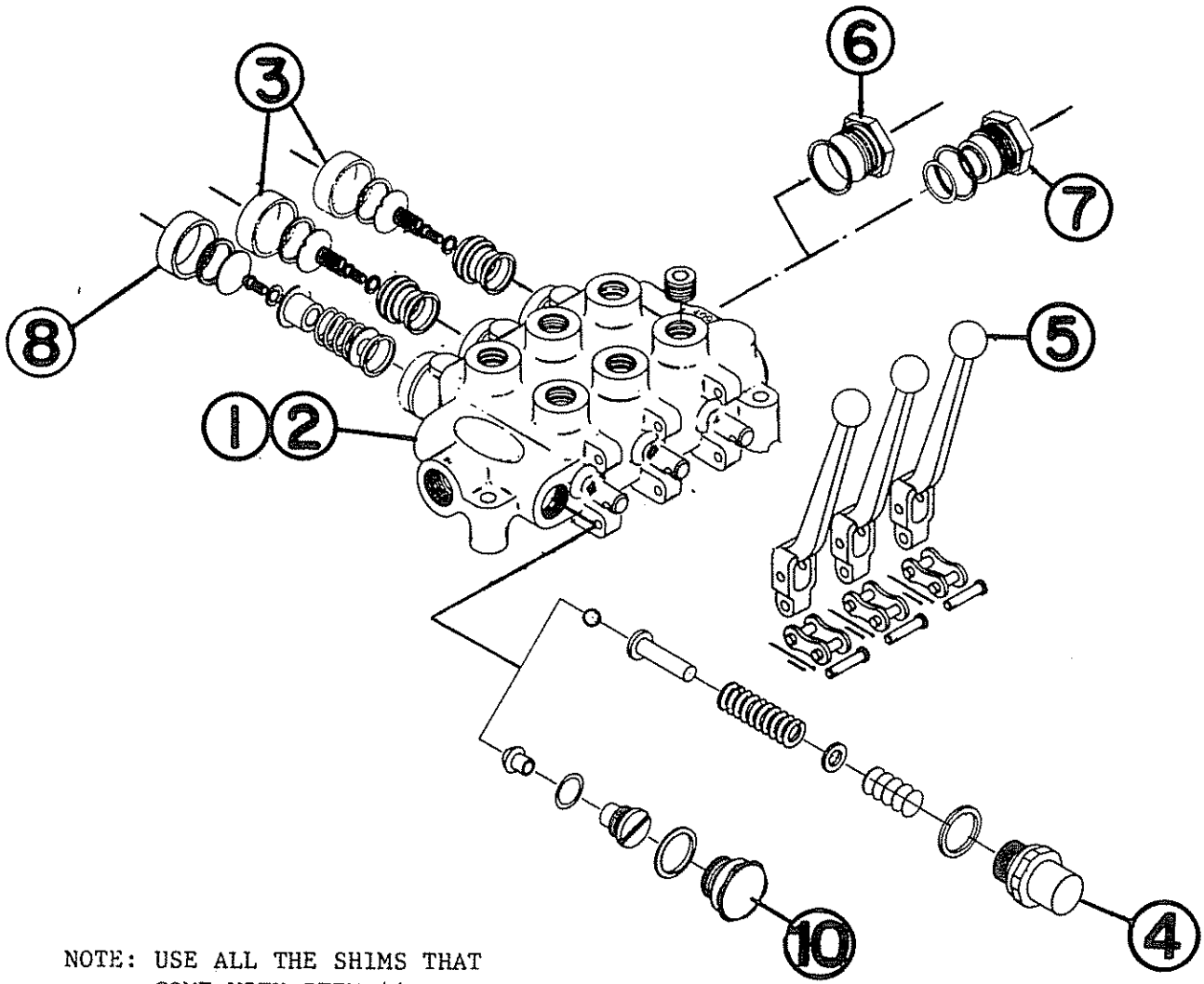

| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00750605 | BARREL ASSEMBLY | 1 |
| 2 | -------- | ROD | 1 |
| 3 | -------- | LOCKNUT | 1 |
| 4 | -------- | PISTON | 1 |
| 5 | -------- | GLAND | 1 |
| 6 | -------- | BACK-UP RING | 2 |
| 7 | -------- | PISTON SEAL | 1 |
| 8 | -------- | ROD STATIC SEAL | 1 |
| 9 | -------- | GLAND STATIC SEAL | 1 |
| 10 | -------- | LOCKWIRE | 1 |
| 11 | -------- | ROD SEAL | 1 |
| 12 | -------- | BACK-UP RING | 1 |
| 13 | -------- | ROD WIPER | 1 |
| 14 | 00059000 | BOLT | 1-REF |
| 15 | 00695100 | NUT | 2-REF |
| 16 | 00750311 | BOLT | 1-REF |
| 17 | 00001400 | FLATWASHER | 2-REF |

=======KITS LISTED BELOW ARE NOT ILLUSTRATED=======

| | |
|---|---|
| 00750602 | SEAL REPAIR KIT CONSISTS OF: ITEMS # 6-13 |
| 00750603 | GLAND AND PISTON KITS CONSISTS OF: ITEMS # 4 & 5 |
| 00750604 | ROD AND LOCKNUT KIT CONSISTS OF: ITEMS # 2 & 3 |

NOTE: SEE PAGE 58 FOR REPAIR PROCEDURES AND INSTALLATION INSTRUCTIONS

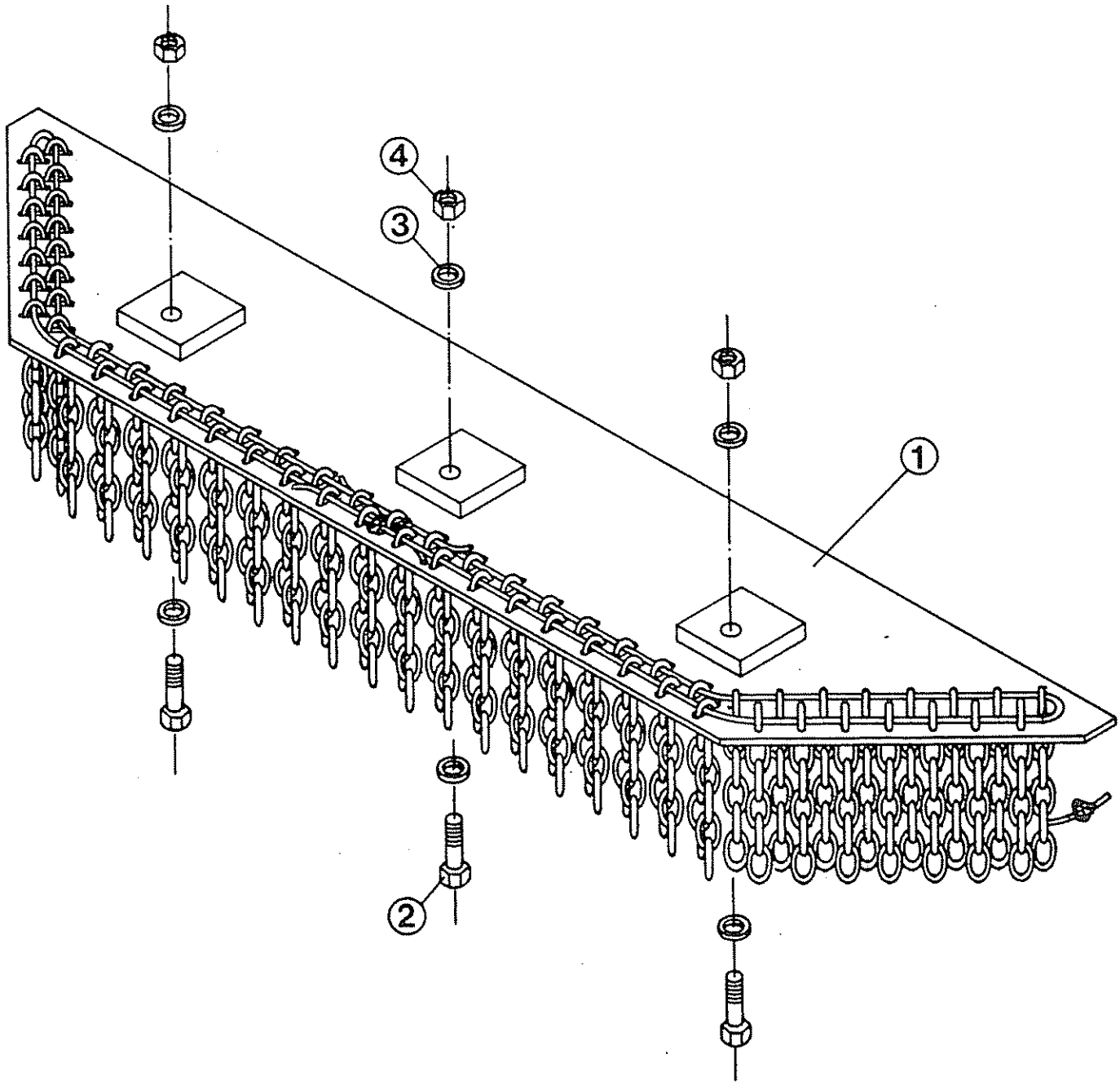
# HYDRAULIC VALVE




NOTE: USE ALL THE SHIMS THAT
COME WITH ITEM #4

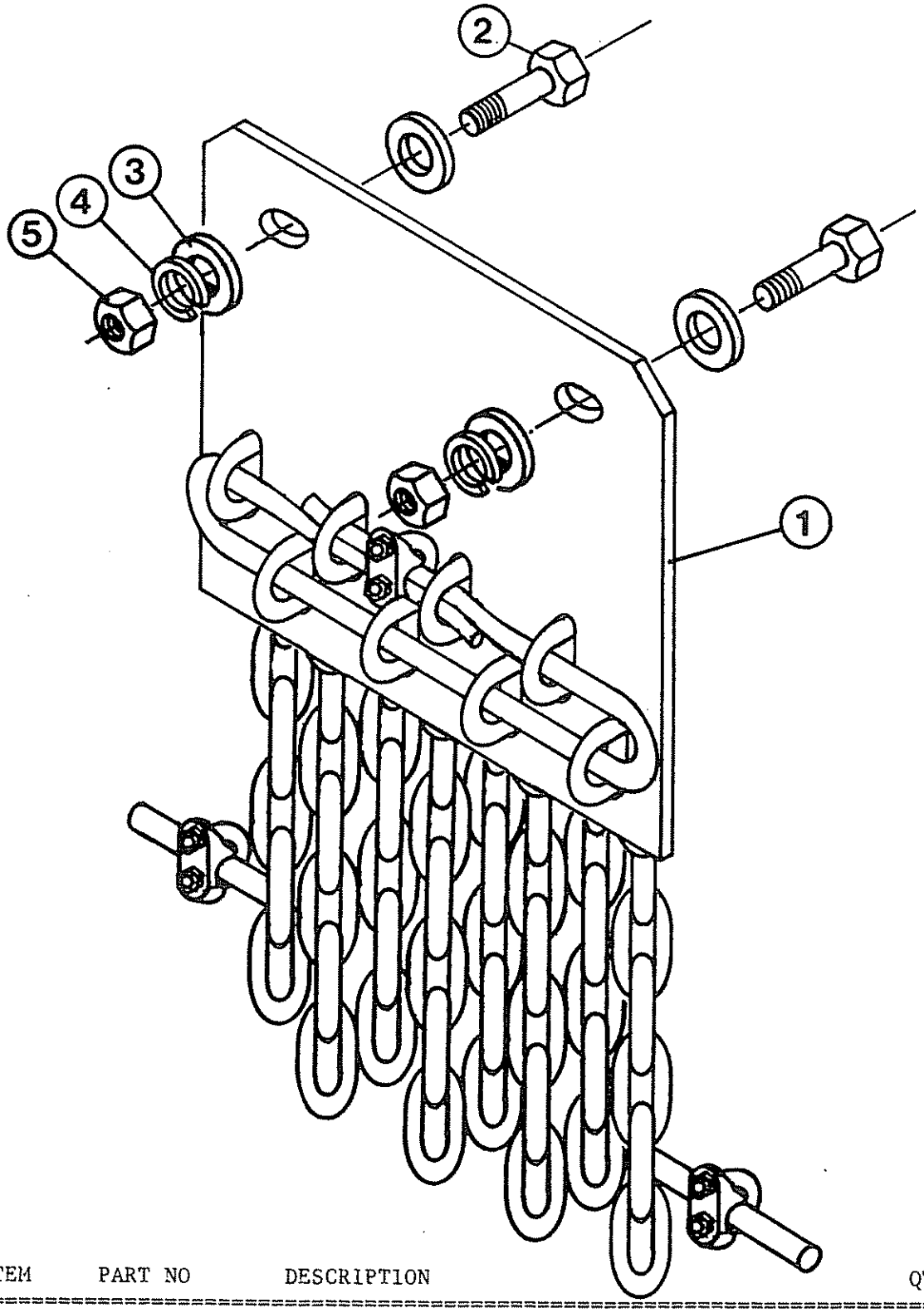
| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00380200 | OPEN CENTER VALVE | 1 |
| 2 | 00750382 | CLOSED CENTER VALVE | 1 |
| 3 | 00751139 | DETENT KIT | 2 |
| 4 | 00751140 | HIGH PRESSURE RELIEF VALVE KIT | 1 |
| 5 | 00751142 | HANDLE ASSEMBLY | 3 |
| 6 | 00751141 | POWER BEYOND PLUG (OPEN CENTER) | 1 |
| 7 | 00751002 | CLOSED CENTER PLUG | 1 |
| 8 | 00751358 | REPAIR KIT - SPRING | REF |
| 9 | 00751556 | SPOOL SEAL KIT FOR ITEM #1 | REF |
| 10 | 00752057 | NON-RELIEF VALVE PLUG (CLOSED CENTER) | 1 |

# CENTER SECTION FRONT CHAINGUARD



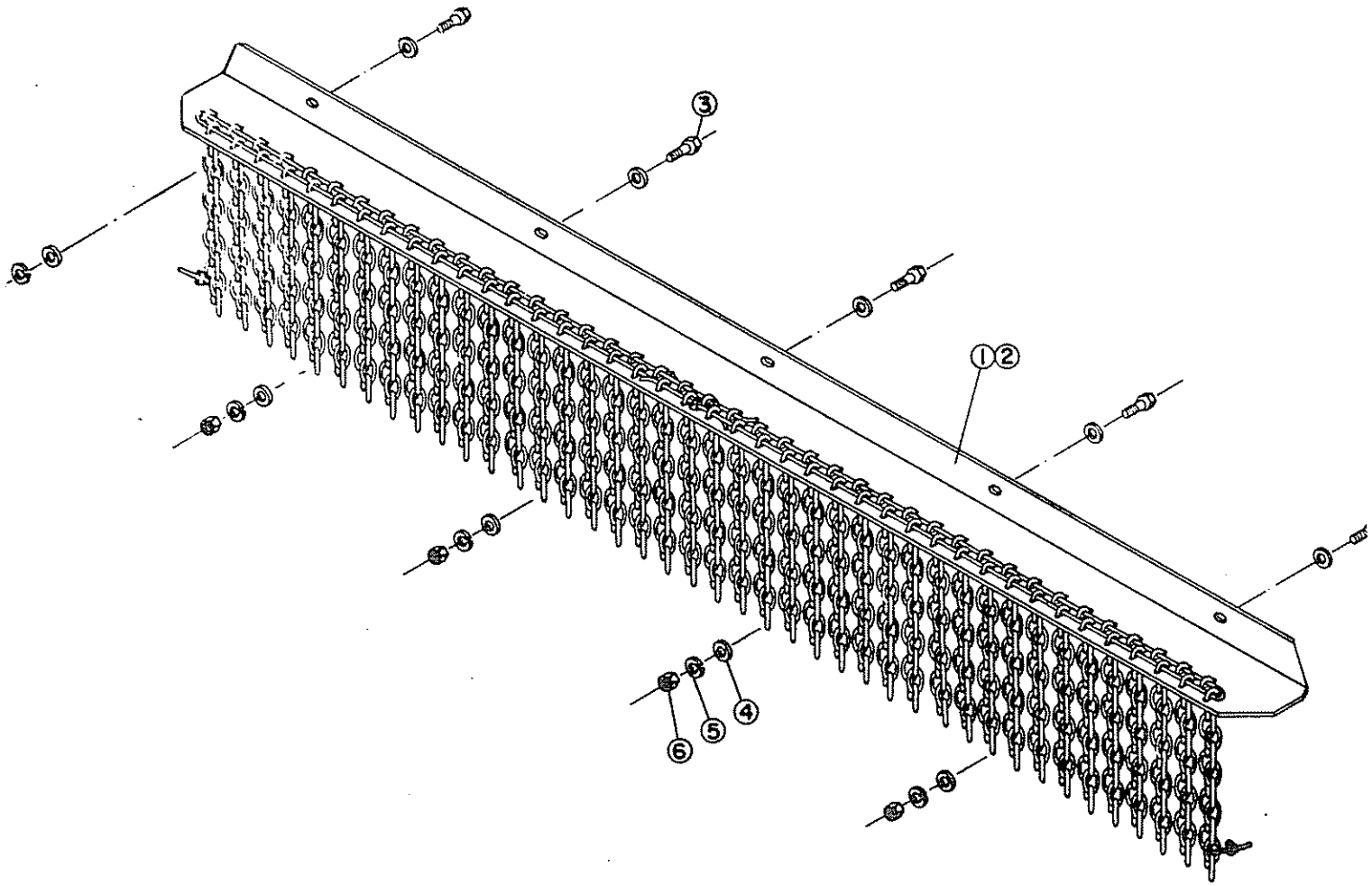

| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00751101 | DOUBLE CURTAIN CHAINGUARD ASSEMBLY | 1 |
| 2 | 00751102 | SINGLE CURTAIN CHAINGUARD ASSEMBLY | 1 |
| 3 | 00013300 | BOLT | 3 |
| 4 | 00002700 | FLATWASHER | 6 |
| 5 | 00749137 | LOCKNUT | 3 |

# CENTER SECTION FRONT SIDE CHAIN GUARD



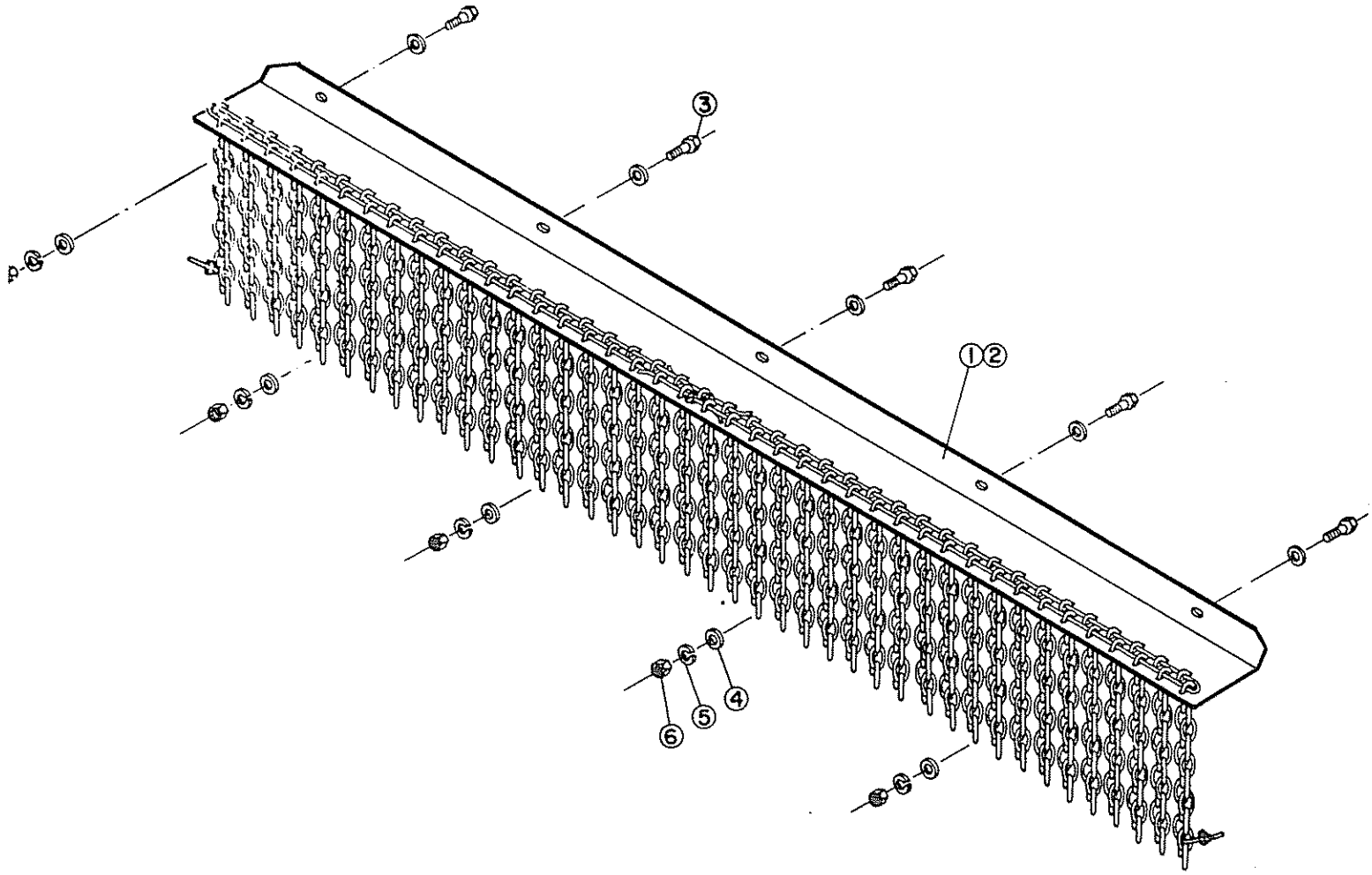

| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00751099 | DOUBLE CURTAIN CHAINGUARD ASSEMBLY | 2 |
| | 00751100 | SINGLE CURTAIN CHAINGUARD ASSEMBLY | 2 |
| 2 | 02718900 | BOLT | 4 |
| 3 | 00019700 | FLATWASHER | 4 |
| 4 | 00022200 | LOCKWASHER | 4 |
| 5 | 00999316 | NUT | 4 |

# WING FRONT CHAINGUARD



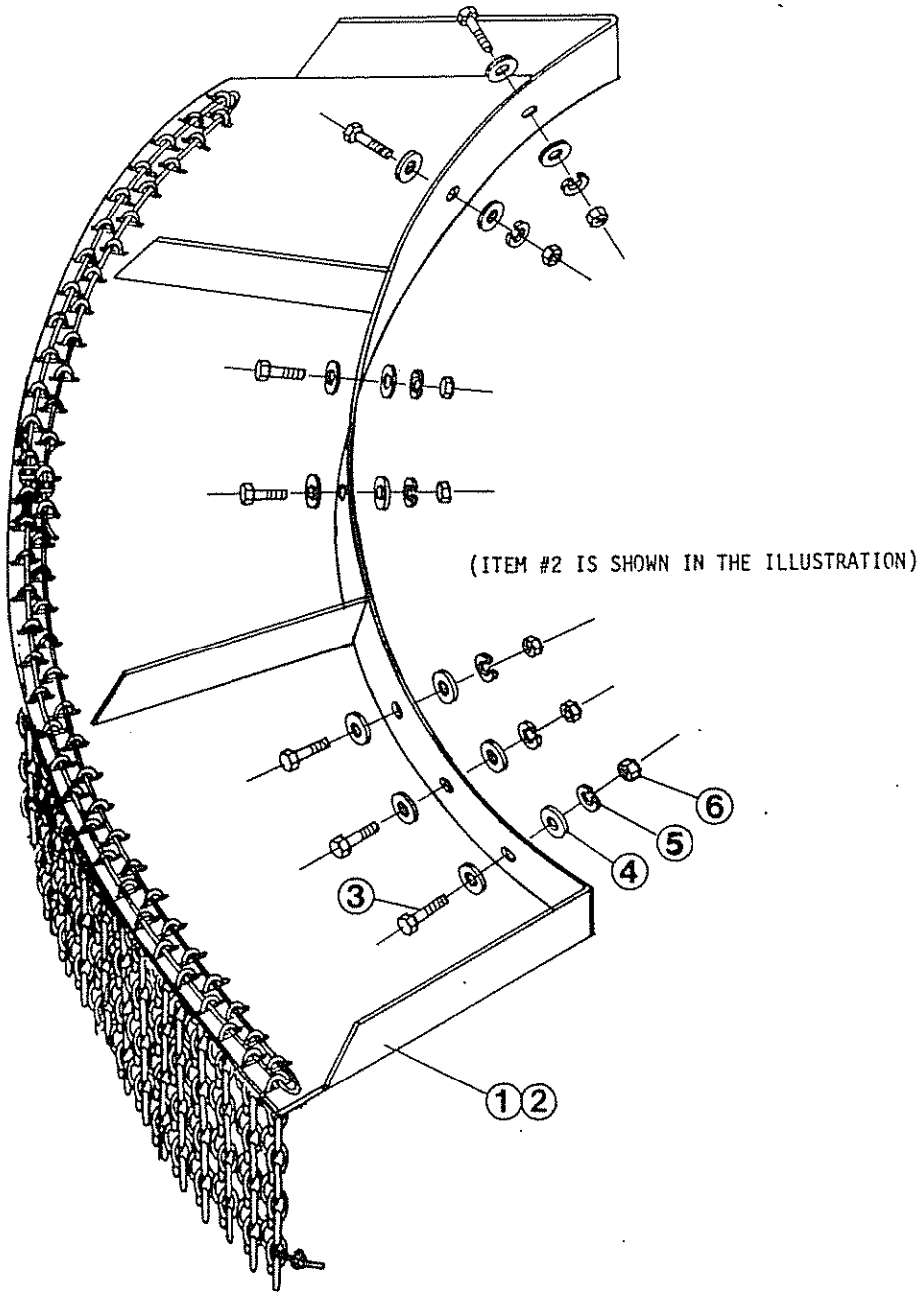

| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00750589 | DOUBLE CURTAIN ASSEMBLY | 2 |
| 2 | 00750594 | SINGLE CURTAIN ASSEMBLY | 2 |
| 3 | 02718900 | BOLT | 10 |
| 4 | 00019700 | FLATWASHER | 20 |
| 5 | 00022200 | LOCKWASHER | 10 |
| 6 | 00999316 | NUT | 10 |

# ENCLOSED CHAINGUARD ASSEMBLY
# (Rear-Center Section)



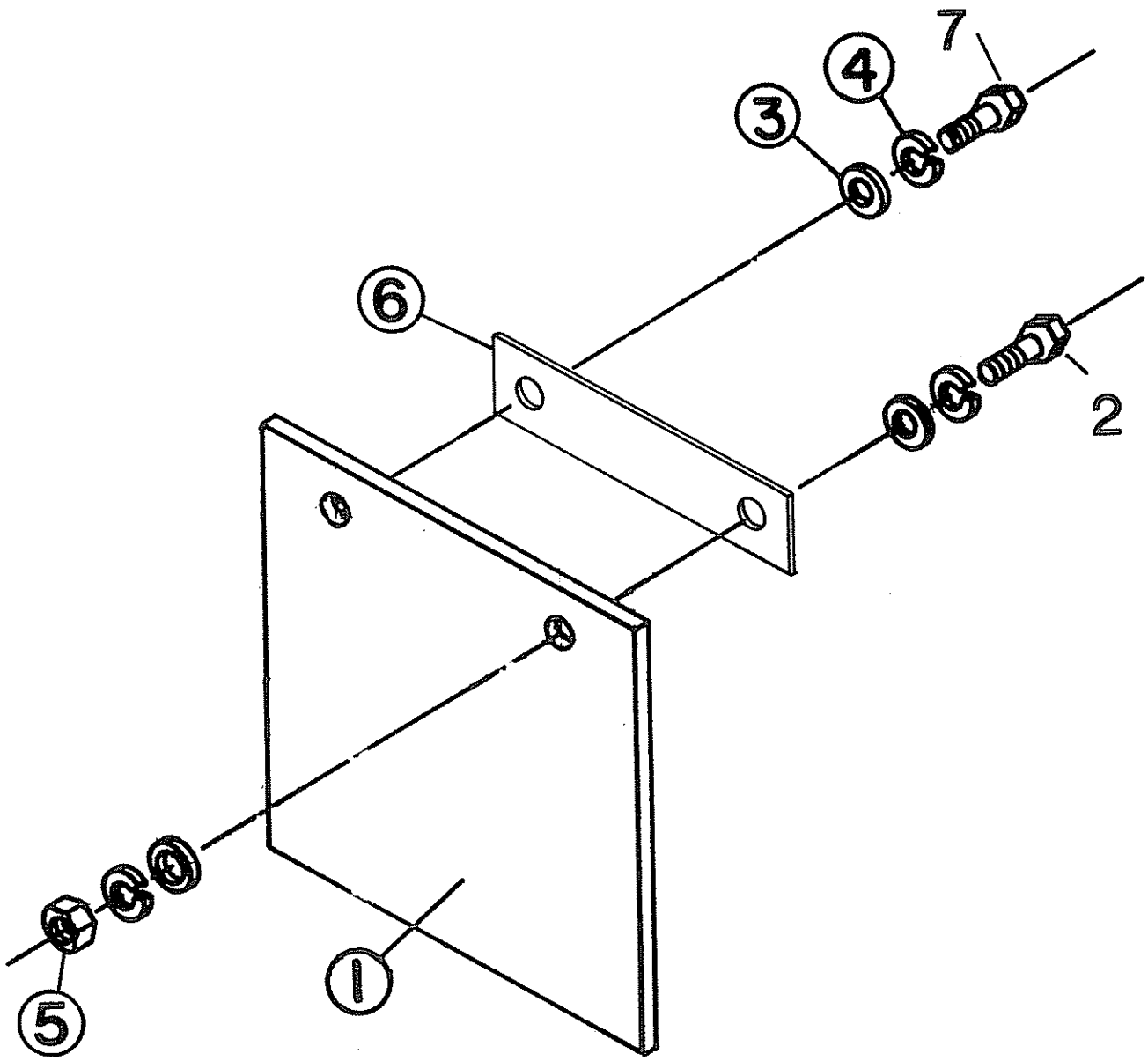

| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00751234 | DOUBLE CURTAIN | 1 |
| 2 | 00751239 | SINGLE CURTAIN | 1 |
| 3 | 02718900 | BOLT | 1 |
| 4 | 00999316 | NUT | 1 |
| 5 | 00019700 | FLATWASHER | 1 |
| 6 | 00022200 | LOCKWASHER | 1 |

# ENCLOSED CHAIN GUARD ASSEMBLY
## (Rear - Wings)



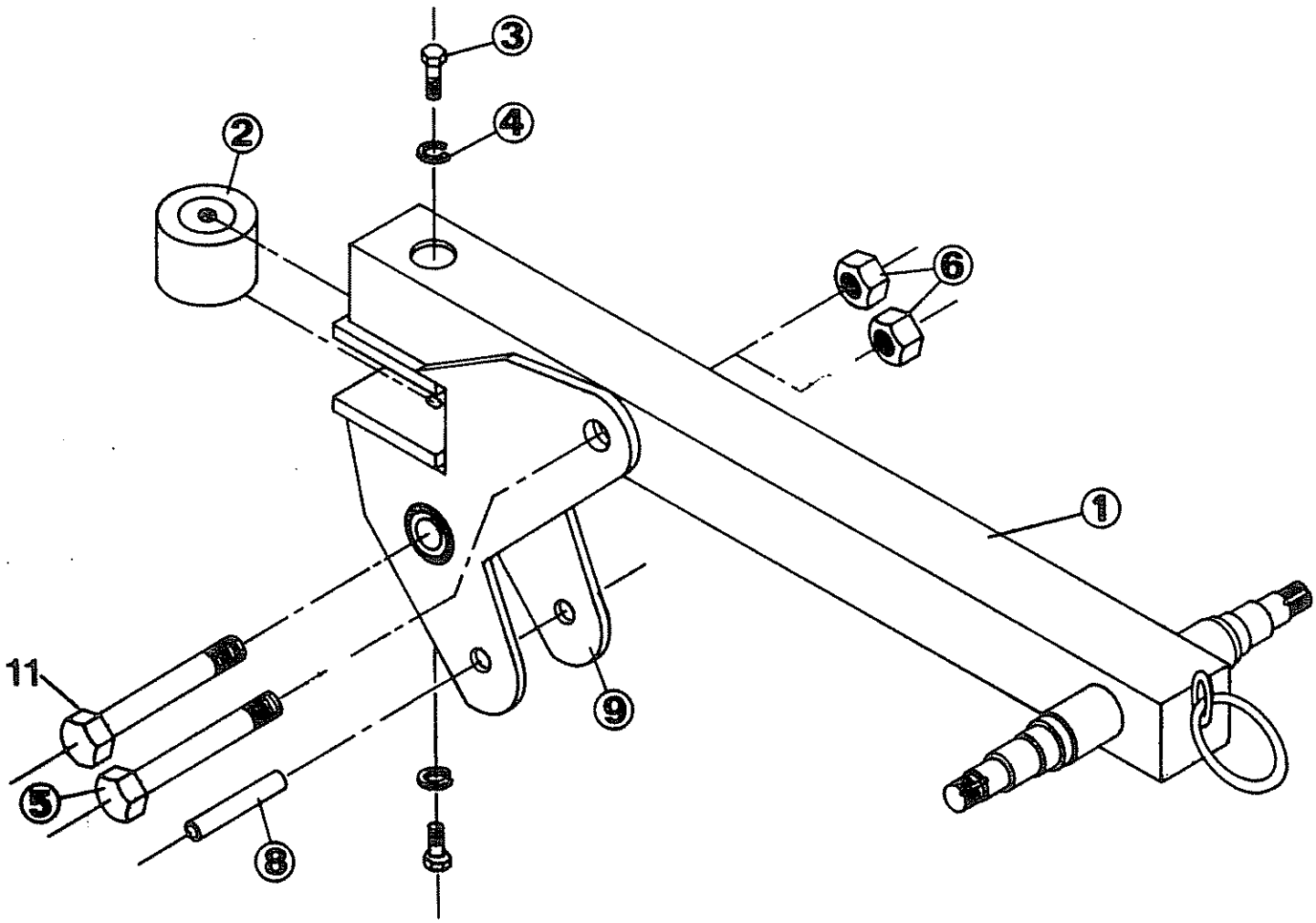

| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00751232 | DOUBLE CURTAIN RIGHT WING | 1 |
| 2 | 00751233 | DOUBLE CURTAIN LEFT WING | 1 |
| | 00751237 | SINGLE CURTAIN RIGHT WING | 1 |
| | 00751238 | SINGLE CURTAIN LEFT WING | 1 |
| 3 | 02718900 | BOLT | 7 |
| 4 | 00019700 | FLATWASHER | 14 |
| 5 | 00022200 | LOCKWASHER | 7 |
| 6 | 00999316 | NUT | 7 |

# WING RUBBER FLAP




| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00752051 | RUBBER FLAP | 2 |
| 2 | 02718900 | BOLT | 2 |
| 3 | 00019700 | FLATWASHER | 6 |
| 4 | 00022200 | LOCKWASHER | 6 |
| 5 | 00999316 | NUT | 2 |
| 6 | 00751997 | FLAP STRAP | 2 |
| 7 | 63078400 | BOLT | 2 |

# (Center Section)
# DUAL WHEEL AXLE ARM ASSEMBLY
## P/N 00751133




| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00752757 | AXLE ARM WELDMENT | 1 |
| 2 | 00751035 | RUBBER MOUNT DISC | 1 |
| 3 | 00751105 | BOLT | 1 |
| 4 | 00001300 | LOCKWASHER | 2 |
| 5 | 00016700 | BOLT | 2 |
| 6 | 02030300 | NUT | 2 |
| 8 | 00751224 | LINK ROD PIN | REF |
| 9 | 00751080 | SHOCK ABSORBER WELDMENT | 1 |
| 10 | 00752753 | WHEEL HUB ASSEMBLY | 2-REF |
| 11 | 00752278 | BOLT | 1 |

TK-15HD ASSEMBLY INSTRUCTIONS

TO ASSEMBLE YOUR NEW TK-15HD, WE ASSIST YOU WITH THE FOLLOWING DRAWINGS, AND INSTRUCTIONS. IF ASSISTANCE OF OUR EXPERIENCE IN ASSEMBLY OR CLARIFICATION OF INSTRUCTIONS IS NEEDED, CONTACT OUR ENGINEERING DEPARTMENT BY PHONE.

1. PREPARATION: FIRST UNBUNDLE AND LAY OUT PARTS AND IDENTIFY WITH ASSISTANCE OF DRAWINGS AND TEXT. PLACE SUPPORT BLOCKS UNDER FRONT AND REAR OF THE CENTER SECTION IN SUCH A WAY THAT THE DECK IS AT LEAST 10 INCHES ABOVE THE GROUND.

2. LEVEL LIFT SYSTEM:

   SEE PAGE 54 - FOR DETAILED DRAWING

   A. ATTACH THE REAR LEVEL LIFT ROD (#1) TO THE RIGHT AND LEFT REAR AXLE ARMS (#2 & #3) USING A 3/4" DIAMETER BY 3-11/16" LONG PIN (#4).

   B. INSERT THE UNIT INTO THE BRACKET WELDED ON THE CENTER SECTIONS. SECURE IN PLACE USING THE 1" X 6" BOLT (#5) AND 1" NUT(#6).

   C. ATTACH THE TONGUE ASSEMBLY (#7) TO THE CENTER SECTION WITH 3/4" X 6" LONG PIN (#8), COTTER PIN (#9), AND FLATWASHER (#10). THE ACTUATOR LUG SHOULD BE TURNED UP.

   D. THE TONGUE CYLINDER SHOULD BE ADDED NEXT (#11). THE CLEVIS ON THE ROD END OF THE CYLINDER WILL BE FASTENED TO THE TONGUE ACTUATOR LUG. THE CLEVIS OF THE BARREL END OF THE CYLINDER WILL BE FASTENED TO THE CYLINDER BRACKET ON THE CENTER SECTION. USE THE CYLINDER PINS PROVIDED. IN CASE OF THE MOWER BEING MANUAL, A RATCHET JACK TAKES THE PLACE OF THE CYLINDER.

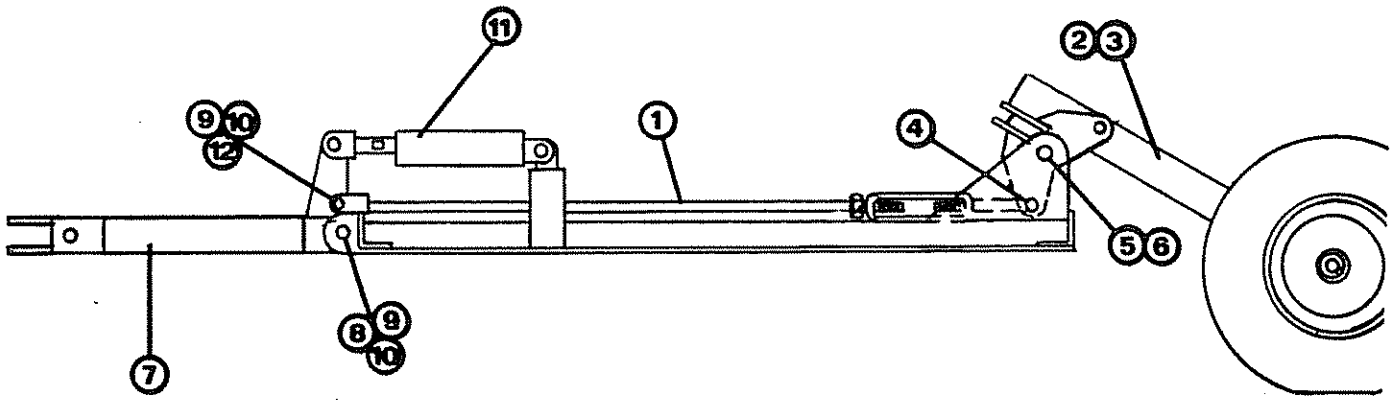
   E. CONNECT THE CLEVIS END OF THE LINK ROD (#1) TO THE TONGUE ACTUATOR LUG WITH A PIN 3/4" DIAMETER BY 3-1/4" LONG (#12), FLATWASHER (#9) AND COTTER PIN (#10).

3. WINCH AND WINCH STAND:

   SEE PAGE 26 - FOR DETAILED DRAWING

   ATTACH THE CYLINDER SUPPORT TO THE CENTER SECTION WITH A BOLT 1/2" X 1-1/2" LONG (#5), LOCKWASHER (#4), AND NUT (#3). ATTACH THE WINCH TO THE WINCH STAND WITH THE BOLT 3/8" X 1" LONG (#8), LOCKWASHER (#7), AND NUT (#6). THE WING RETAINING ARMS (#9 AND #10) AND HYDRAULIC CYLINDERS (OPTIONAL) SHOULD BE ATTACHED TO THE STAND USING A BOLT 5/8" X 5" LONG (#13), AND NUT (#14). LEAVE ENOUGH ROOM WHEN TIGHTENING UP THE NUT SO THAT THE CYLINDER MOVES FREELY. THE ROD END OF THE HYDRAULIC CYLINDER WILL BE CONNECTED TO THE WING CYLINDER LUG WITH A BOLT 5/8" X 3-1/2" LONG (#15), FLATWASHER (#16), AND NUT (#14).

# LEVEL LIFT SYSTEM




| ITEM | PART NO | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 00751227 | LEVEL LIFT ROD AND TURN BUCKLE ASSEMBLY | 2 |
| 2 | 00751518 | RIGHT REAR AXLE ARM | 1 |
| 3 | 00751512 | LEFT REAR AXLE ARM | 1 |
| 4 | 00751224 | REAR LEVEL LIFT PIN | 2 |
| 5 | 00750477 | BOLT | 2 |
| 6 | 02030300 | NUT | 2 |
| 7 | 00751104 | TONGUE ASSEMBLY | 1 |
| 8 | 00162805 | TONGUE PIN | 2 |
| 9 | 00000400 | COTTER KEY | 8 |
| 10 | 00002701 | FLATWASHER | 8 |
| 11 | 00750395 | TONGUE CYLINDER | 2 |
| 12 | 00162803 | FRONT LEVEL LIFT PIN | 2 |

4. JACK SHAFT ASSEMBLY:

SEE PAGE 21 - FOR DETAILED DRAWING

CONNECT THE SLIP CLUTCH YOKE TO THE SLIP CLUTCH ON THE CENTER SECTION GEARBOX. FASTEN WITH A 5/16" X 2-1/4" LONG BOLT (#9), LOCKWASHER (#10), AND NUT (#11). FASTEN THE PILLOW BLOCK BEARING AND SAFTEY SHIELD MOUNT (SEE DRAWING PAGE 22) DOWN WITH BOLT 1/2" X 2" LONG (#7) FLATWASHER (#5) AND NUT (#6). CONNECT THE MAIN DRIVESHAFT TO THE JACKSHAFT AND FASTEN WITH A BOLT 5/16" X 2-3/4" LONG (#13) AND NUT (#14).

5. DRIVESHAFT SAFETY SHIELD:

SEE PAGE 24 - FOR DETAILED DRAWING

FIRST ATTACH THE REAR MOUNT STRAPS TO THE DECK (#3). NEXT ATTACH THE ANGLE SUPPORT TO THE MOUNT STRAP (#2). NEXT SET THE SAFETY SHIELD (#1) ON TOP OF THE ANGLE SUPPORT AND OVER THE FRONT MOUNT SUPPORT WHICH WAS ATTACHED IN STEP 4. FASTEN THE SHIELD DOWN WITH BOLT 7/16" X 1-1/4" LONG (#9), LOCKWASHER (#7) AND NUT (#8).

6. WING SECTIONS:

SEE PAGE 15 - FOR DETAILED DRAWING

LINE UP THE HINGES ON THE WING SECTION WITH THE HINGES ON THE CENTER SECTION AND PUSH THROUGH THE HINGE PINS (#12). USING A PUNCH OR SCREW DRIVER, LINE UP THE HOLE IN THE HINGE PIN WITH THE HOLE IN THE TUBE. DRIVE THE RETAINING ROLL PIN (#13) INTO PLACE.

7. WING AXLE ARM ASSEMBLY:

SEE PAGE 35 - FOR DETAILED DRAWING

ASSEMBLE THE WING AXLE ARM LEFT AND RIGHT (#1 & #2) BY SLIPPING EYE OF SHOCK ABSORBER BETWEEN SIDE PLATES. THE AXLE ARM SHOULD BE POSITIONED OVER THE REAR OF THE ROD. THE PIN 3/4" DIAMETER X 2-11/16" LONG (#9) SHOULD THEN BE SLIDE IN PLACE. THIS WHOLE UNIT SHOULD THEN SLIDE INTO THE AXLE ARM BRACKET WITH THE THREADED ROD BEING INSERTED INTO THE HOLE IN THE ANGLED PLATE. LINE UP AND SECURE WITH A BOLT 1" DIAMETER X 4-3/4" LONG (#4) AND NUT (#3). THE SPRING (#8), SPRING RETAINER (#7) AND NUT (#3) CAN NOW BE ASSEMBLED ON THE END OF THE ROD.

8. WING DRIVESHAFT:

SEE PAGE 29 - FOR DETAILED DRAWING

THE WING DRIVESHAFTS SHOULD BE SLIPPED ONTO THE CENTER SECTION GEARBOX AND FASTENED WITH A BOLT 5/16" X 2-3/4" LONG (#9) AND NUT (#10). THE SLIP CLUTCH YOKE SHOULD BE SADDLED UP TO THE WING SLIP CLUTCH AND ATTACH WITH A BOLT 5/16" X 2-1/4" LONG (#11), LOCKWASHER (#12) AND NUT (#17).

9. WING DRIVESHAFT SAFETY SHIELD:

SEE PAGE 31 - FOR DETAILED DRAWING

ATTACH THE FRONT SUPPORT STRAPS TO THE DECK (#12). NEXT MOUNT THE REAR SHIELD SUPPORT (#3) ONTO THE GEARBOX WITH THE EXISTING GEARBOX FLANGE BOLTS. INSTALL THE SAFETY SHIELD (#1) ONTO THE FRONT AND REAR MOUNTS USING A BOLT 7/16" X 1-1/4" LONG (#4), FLATWASHER (#7), LOCKWASHER (#6) AND NUT (#5).

10. CHAINGUARDS:

THE CHAINGUARDS (OPTIONAL) SHOULD BE MOUNTED AS SHOWN IN THE DRAWING ON PAGES 46-52.

11. LEVELING MACHINE:

SEE PAGE 10 & 11.

PREVENTIVE MAINTENANCE

FORWARD

THE FUNCTION OF THE FOLLOWING PREVENTIVE MAINTENANCE SECTION IS TO GIVE THE OWNER OF THIS MACHINE GUIDE LINES TO USE IN ORDER TO PROLONG THE MACHINE'S LIFE AND KEEP MAINTENANCE COSTS DOWN. EVERY PART AND SERVICEABLE AREA OF THE TK-15HD IS CLASSIFIED UNDER DAILY MAINTENANCE, WEEKLY MAINTENANCE, OR BI-ANNUAL MAINTENANCE. DAILY MAINTENANCE (FOR EXAMPLE) CONTAINS PARAGRAPHS AND CORRESPONDING PHOTOS WHICH REFLECT THE ITEMS AND AREAS OF THE TK-15HD THAT NEED DAILY PREVENTIVE MAINTENANCE ATTENTION OR INSPECTION. BY FOLLOWING THE PREVENTIVE MAINTENANCE PROCEDURE, THE OWNER WILL HAVE PREVENTED WEEKLY MAINTENANCE AND THE BI-ANNUAL MAINTENANCE SECTIONS WILL REFLECT THE SAME TYPE OF PREVENTIVE MAINTENANCE INFORMATION FOR THOSE PARTS AND SERVICEABLE AREAS THAT NEED WEEKLY OR BI-ANNUAL INSPECTIONS. THE OWNER SHOULD ESTABLISH A REGULAR AND THOROUGH PREVENTIVE MAINTENANCE PROGRAM USING THE DIVISION SHEETS (PAGES 57,65 & 72) OF THIS TEXT AS A CHECK LIST DURING THE INSPECTION. A FEW MINUTES SPENT ON PREVENTIVE MAINTENANCE EACH DAY CAN SAVE HOURS OF TIME AND COSTLY REPAIRS TO THE FRAME AND OTHER COMPONENTS.

ENGINEERING DEPARTMENT

TERRAIN KING CORPORATION

## DAILY MAINTENANCE

I. DAILY MAINTENANCE is intended for those items that need to be lubricated and or checked daily for proper mower operation. This maintenance should be conducted every morning before the machine is started. Thses items include:

| ITEM | DAY | | | | |
|---|---|---|---|---|---|
| | M | T | W | T | F |
| A. DRIVE LINE | | | | | |
| 1. Rotating Safety Shields | | | | | |
| 2. Drive Shafts | | | | | |
| 3. U-Joints | | | | | |
| 4. Pillow Block Bearings | | | | | |
| B. BLADES | | | | | |
| C. NUTS AND BOLTS | | | | | |
| 1. Blade Bolts | | | | | |
| 2. Blade Bar Nuts | | | | | |
| 3. Drive Shaft Bolts | | | | | |
| 4. Axle Arm Bolts | | | | | |
| 5. Winch Stand Bolts | | | | | |
| 6. Drawbar Bolt | | | | | |
| D. WHEEL BEARING SEAL INSPECTION | | | | | |
| E. HYDRAULIC HOSES AND CYLINDERS | | | | | |
| F. CLEAN OFF THE MACHINE | | | | | |

A. DRIVE LINE - THE DRIVE SHAFT AND U-JOINTS SHOULD BE INSPECTED EACH MORNING BEFORE THE MOWER IS STARTED. THE TOTAL POWER OF THIS MACHINE IS TRANSMITTED THROUGH THE DRIVE LINES; THEY MUST BE KEPT IN GOOD WORKING CONDITION.

1. SAFETY SHIELDS - THE ROTATING DRIVE SHAFT SAFETY SHIELDS SHOULD BE INSPECTED DAILY. EACH TELESCOPING DRIVESHAFT HAS TWO SHIELDS. THE SHIELDS SHOULD BE FREE OF ANY CRACKS, DENTS OR BENDS. THE SHIELDS SHOULD ROTATE WITH WONLY SLIGHT HAND PRESSURE. IF THE SHIELD REQUIRES EXTREME PRESSURE TO CAUSE ROTATION, THE BEARING AND/OR SHIELD SHOULD BE REPLACED. TO REMOVE THE SHIELDS, USE A SCREWDRIVER TO UNLOCK RETAINING GUARD COLLAR. (SEE PHOTO 1). THIS WILL ALLOW YOU TO SLIDE OFF SHIELD BELL, (SEE PHOTO 2).

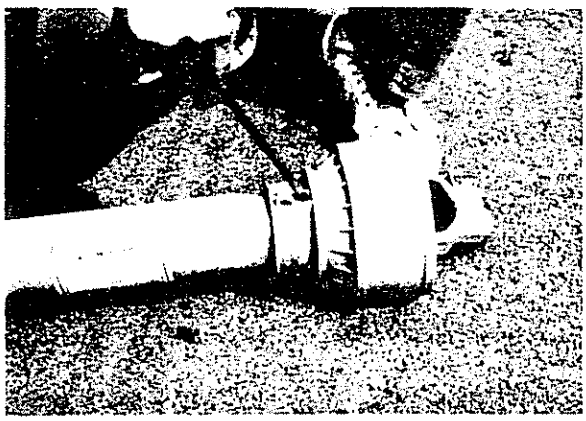


PHOTO 1

PHOTO 2

REMOVE THE SNAP RING AND SLIDE THE SHIELD OFF OF THE SHAFT, (SEE PHOTO 3). INSPECT THE RETAINING GUARD COLLAR FOR WORN AREAS OR CRACKS. IF COLLAR IS WORN OR CRACKED, REPLACE IT. IF THE SHIELD HAS ANY DENTS OR CRACKS, REPLACE THE SHIELD. WHILE THE SHIELDS ARE REMOVED, EXAMINE THE DRIVESHAFT FOR SIGNS OF ABNORMAL WEAR, BENT OR TWISTED SHAFTS, OR CRACKS IN THE SHAFTS OR TUBES, (SEE PHOTO 4). THE DRIVESHAFTS SHOULD BE CHECKED TO SEE THAT THEY TELESCOPE PROPERLY. IF THEY DO NOT TELESCOPE PROPERLY OR HAVE SIGNS OF ABNORMAL WEAR, THE SHAFT SHOULD BE REPAIRED OR REPLACED. ASSEMBLE THE SHIELD ON THE SHAFT BY REVERSING THE STEPS GIVEN FOR REMOVING THE SHIELD. WHEN ASSEMBLED, MAKE SURE THE SHIELD ROTATES FREELY. A SHIELD THAT DOES NOT FUNCTION PROPERLY MAY ENTANGLE CLOTHING AND CAUSE SEVERE BODILY HARM.

PHOTO 3

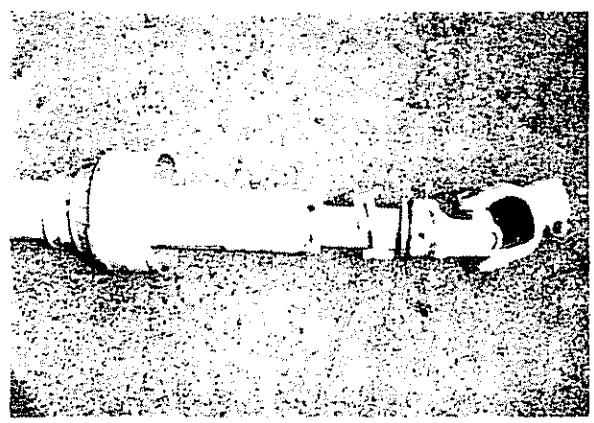


PHOTO 4

2. U-JOINT - THE U-JOINTS ON THE DRIVESHAFT CAN UNDERGO EXTREME FORCES WHEN THE UNIT IS TURNING OR WHEN THE WINGS ARE BEING RAISED. THEREFORE, IT IS IMPORTANT THAT THE U-JOINTS BE GREASED EACH DAY BEFORE THE UNIT IS STARTED. THE U-JOINTS ARE LOCATED AT EACH END OF THE MAIN AND WING DRIVESHAFTS, (SEE PHOTO 5). THE U-JOINT ASSEMBLIES ARE ACCESSIBLE BY REMOVING BOLTS FROM SAFETY SHIELDS, (SEE PHOTO #6). ONCE SAFETY SHIELDS ARE MOVED, ROTATE DRIVESHAFT SAFETY SHIELD UNTIL HOLE IN SAFETY SHIELD LINES UP WITH GREASE ZERK, (SEE PHOTO #7). USE THE NLGI, NUMBER TWO GREASE FOR LUBRICATING. INSPECT THE U-JOINT FOR EXCESSIVE WEAR, BY HOLDING THE SHAFT ON ONE SIDE OF THE U-JOINT WHILE TRYING TO ROTATE THE SHAFT ON THE OTHER SIDE OF THE U-JOINT. IF ROTATIONAL PLAY OF MORE THAN 1/32 OF AN INCH EXISTS, REPLACE THE U-JOINT BEFORE IT CAUSES SEVERE DAMAGE TO THE DRIVESHAFT.

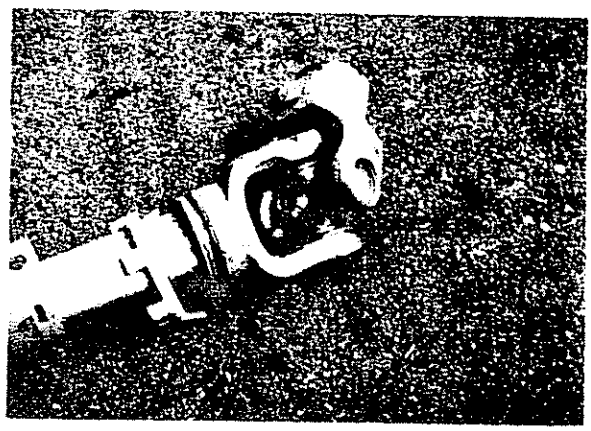


PHOTO 5

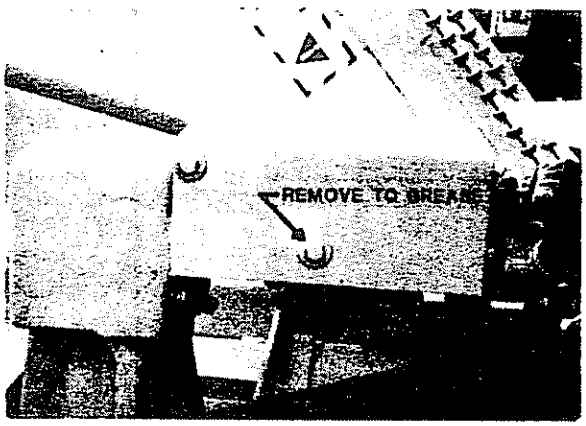



PHOTO 6

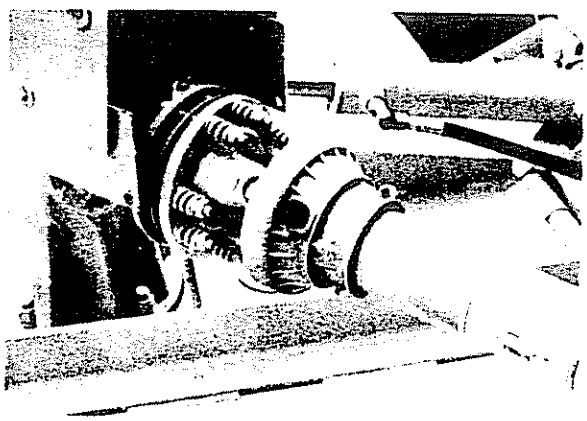


PHOTO 7

4. PILLOW BLOCK BEARING - The pillow block bearing is located at the front of the machine on the jack shaft, (See Photo 9). It can be lubricated without removing the shield. Lubricate the pillow block bearing once a day. When lubricating the pillow block bearing, do not force too much grease into the bearing or the seals will rupture. Two pumps of grease from a grease gun should be sufficient.

Check and make sure the locking collar of the bearing is in place and tight. Check that the bolts holding down the bearing are also tight. If the collar will not stay tight or if the bearing is worn, replace it immediately.

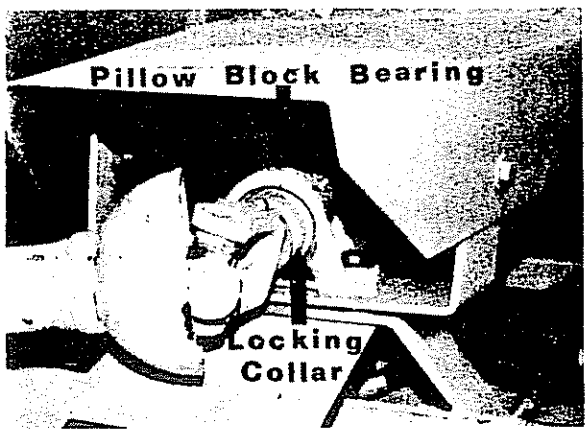



PHOTO 9

. BLADES - Inspect the blades closely each morning before start up, (See Photo 10). The blade should be free of deep chips, cracks, or abnormal bends. If the blades are sharp they will require less power while mowing. Blades should be replaced when they become excessively worn, bent, or deformed.

CAUTION: Blades should always be replaced in pairs. Blades of different weights can cause serious imbalance and damage to the machine and personnel. When replacing the blades, also replace the blade bolt, nuts and washers. Once the nut has been removed from the blade bolt, it will not fasten tightly on the bolt again.

Never weld or modify the blades. The blades are made of a high strength steel and heat treated to give maximum strength and resistance to chipping and wear. Any welding or surfacing applied to the blades can severly reduce its strength. A blade failure could result in a blade segment being thrown at high speeds out from under the machine.

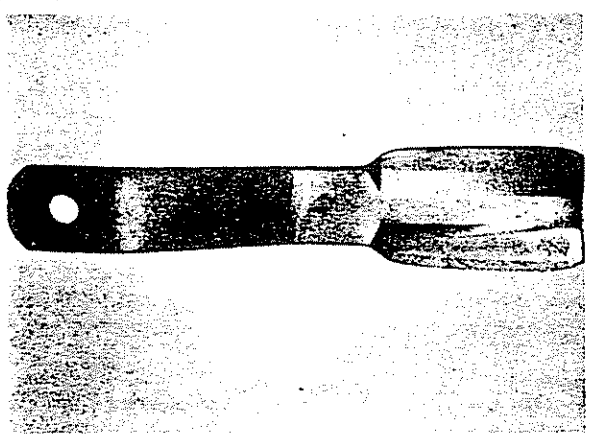


PHOTO 10

C. NUTS AND BOLTS - MOST NUTS AND BOLTS ON THE TK-151V WILL STAY TIGHT. HOWEVER, OPERATION OVER ROUGH TERRAIN CAN LOOSEN THE TIGHTEST NUT AND BOLT. IF A NUT OR BOLT BECAME LOOSE AND FAILED TO PERFORM ITS FUNCTION, A PART OF THE MACHINE COULD FAIL. CHECK THE FOLLOWING NUTS AND BOLTS FOR PROPER TIGHTNESS EACH MORNING BEFORE START UP.

1. BLADE BOLTS - (SEE PHOTO 9) THESE ARE THE BOLTS THAT FASTEN THE BLADES TO THE BLADE BAR. IF THIS BOLT BECAME LOOSE, THE BLADE COULD BE THROWN FROM THE MACHINE AT EXTREMELY HIGH SPEEDS. THIS NUT SHOULD BE TORQUED TO 250 FT/LBS.

2. BLADE BAR NUTS - (SEE PHOTO 10) THESE NUTS HOLD THE BLADE BAR ONTO THE GEARBOX SHAFT AND SHOULD HAVE A RETAINING WIRE OR COTTER PIN TO KEEP THEM FROM TURNING. THEY SHOULD BE TORQUED TO 250 FT/LBS.

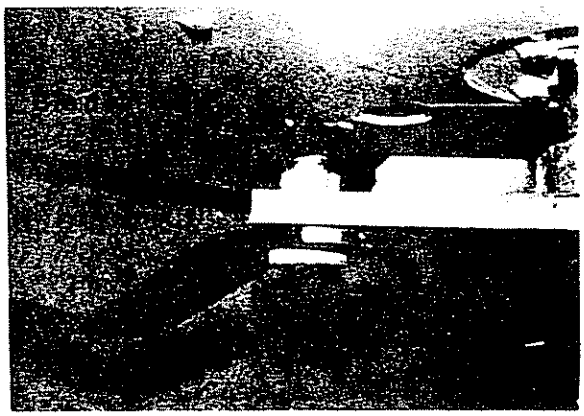


PHOTO 9

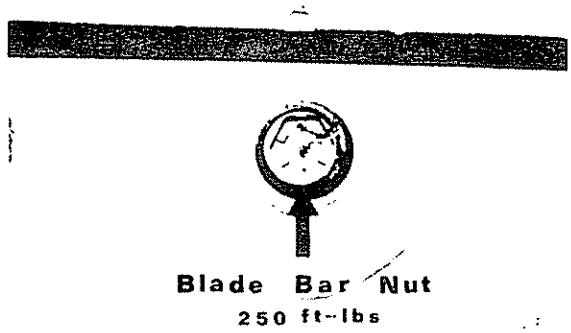



PHOTO 10

3. DRIVE SHAFT BOLTS - (SEE PHOTO 11) THESE NUTS AND BOLTS ARE USED TO FASTEN THE DRIVESHAFTS TOGETHER. FRIST CHECK THAT THE BOLTS HOLDING THE FEMALE SHAFT SPLINE ONTO THE SIDE GEARBOX AND CENTER GEARBOX ARE TIGHT. THEN CHECK THE BOLTS FASTENING THE DRIVESHAFT CLEVIS TO THE TORQUE LIMITER CLUTCH. REPLACE ANY MISSING BOLTS AND TIGHTEN ALL LOOSE NUTS AND BOLTS, (SEE PHOTO 12). IF THE DRIVESHAFT BECAME LOOSE IT COULD SWING AROUND THE DECK AND CAUSE SEVERE DAMAGE TO THE MACHINE AND DRIVESHAFT.

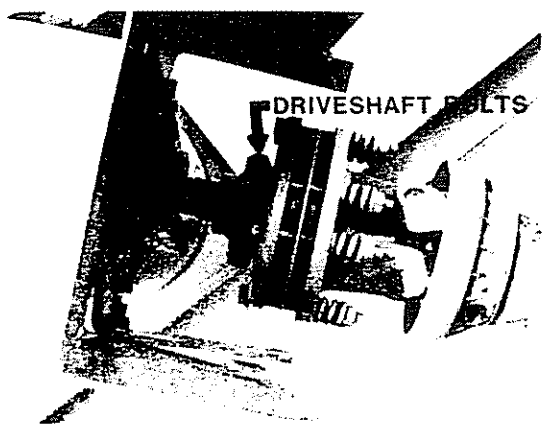



PHOTO 11

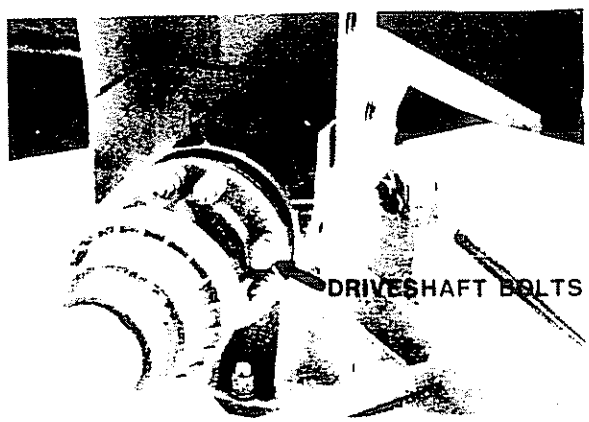



PHOTO 12

4. AXLE ARM BOLTS - (See Photo 15) Inspect the axle arm bolts for proper tightness. The nut should not be loose, DO NOT over tighten these bolts. Tighten the nut on the bolt until it contacts both ears. Then tighten it 1/2 revolution more. The axle arm must be free to move up and down. If one of these bolts slipped out, the suspension system would fail.

5. WINCH STAND BOLTS - (See Photo 16) These bolts fasten the winch stand to the deck. These bolts should be checked each morning before the machine is started. If the winch stand has any play, forward or backward, these bolts need to be tightened. Extreme forces are raised. If the bolts are loose the winch stand could twist or break.

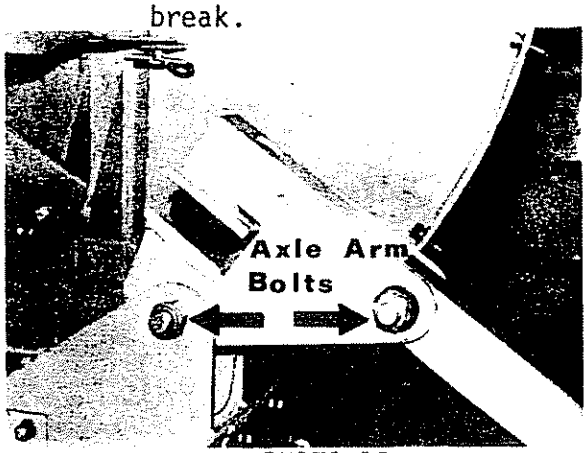


PHOTO 15

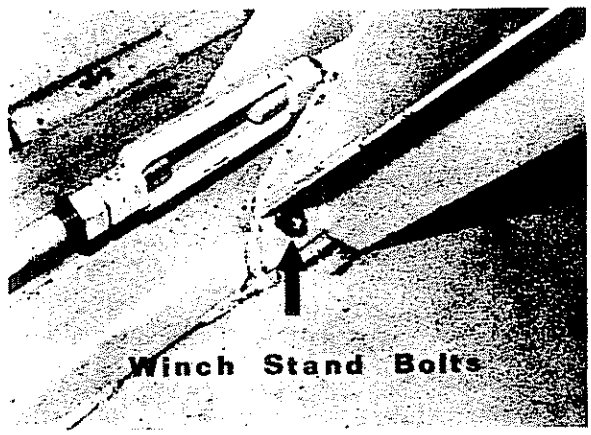


PHOTO 16

6. DRAWBAR BOLT - (See Photo 17) Inspect the drawbar bolt for proper fit. The nut should be pulled up on the bolt such that the clevis is held straight on the drawbar. Use the washers provided to shim any difference between the clevis opening and the drawbar thickness. This will assure proper action of the tongue and clevis. If the tongue clevis sags down, the nut should be tightened.

D. WHEEL BEARING SEAL INSPECTION - (See Photo 18) Check each wheel and remove all foreign material that has been wrapped around the spindle. Inspect the grease seal to see that the rubber seal is in complete contact with the metal all around the spindle. If the seal has become worn or cracked, replace it at once. A worn seal will allow the grease to seep out of the hub and the bearing will run dry and fail.

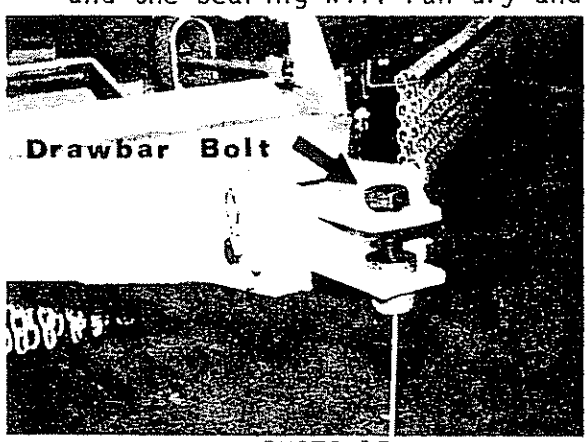


PHOTO 17

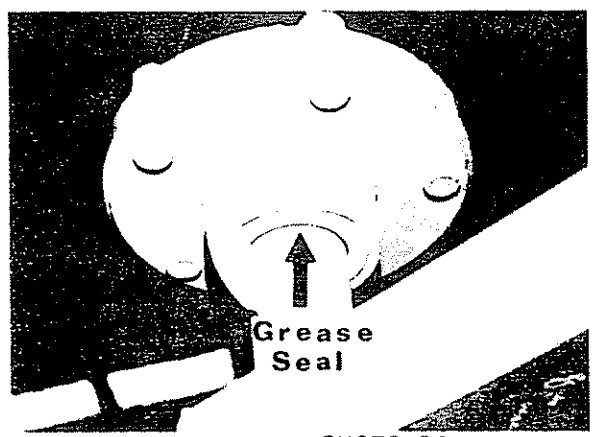


PHOTO 18

E. HYDRAULIC CYLINDERS AND HOSES - The hydraulic hoses are made with two high strength wire braids and should last several years. If they should become pinched or broken, replace them. If oil is leaking from a hydraulic fitting tighten it. If required, loosen the fitting and apply teflon tape or solution to the threads. Then retighten the fitting.

Leakage of oil around the breather plug on a cylinder indicates that the seal in the cylinder is worn out. Replace the seals in the cylinder immediately before premature cylinder damage or loss of high volumes of hydraulic oil occurs.

To replace the seals and "O" rings in a hydraulic cylinder, remove the cylinder from the machine. Anchor it in a vice being careful not to deform the cylinder walls with the jaws of the vice. Use a vice that has wooden or brass jaws to hold the cylinder, (See Photo 19). Using a wrench turn the outside cap of the cylinder counter clockwise remove the retaining wire. With the wire removed slide the piston and glands out of the cylinder, (See Photo 20).

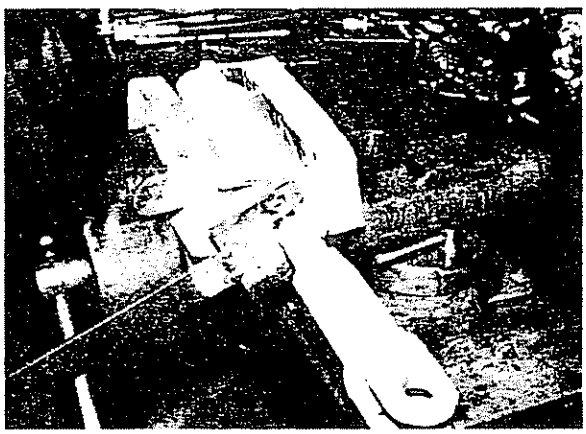


PHOTO 19

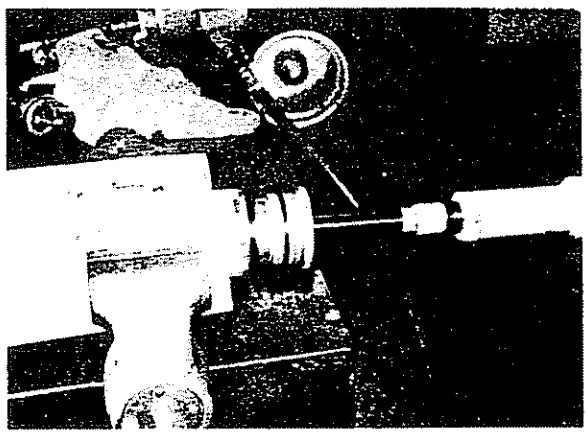


PHOTO 20

Remove the nut on the end of the piston and the glands will slide off, (See Photo 21). Replace the "O" ring and seals on both of the glands inside and outside. Remember to replace the "O" ring on the piston shaft, (See Photo 22).

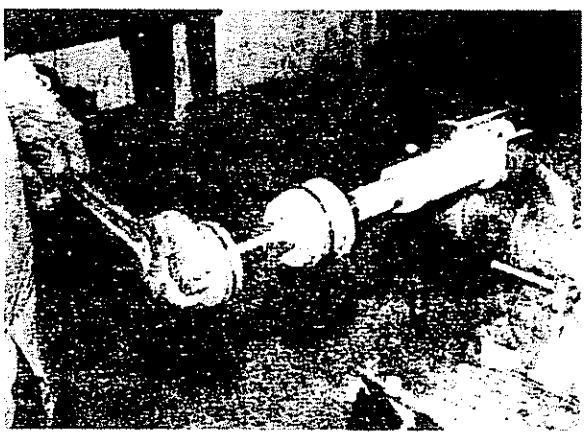


PHOTO 21

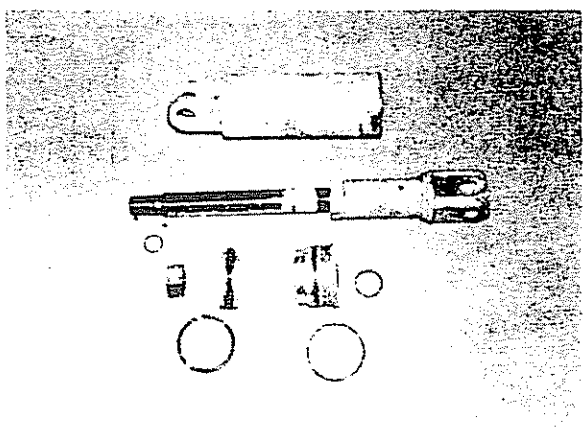


PHOTO 22

Reassemble the glands and nut on the piston and insert into the cylinder. Line up the hole in the gland with slot in the cylinder, (See Photo 23). Place the new retaining wire into the hole through the slot and turn the cap clockwise to pull the wire into place, (See Photo 24). The wire should be pulled all the way through until the upper lip contacts the side of the slot in the cylinder. The cylinder is now ready to be put back into service on the machine.

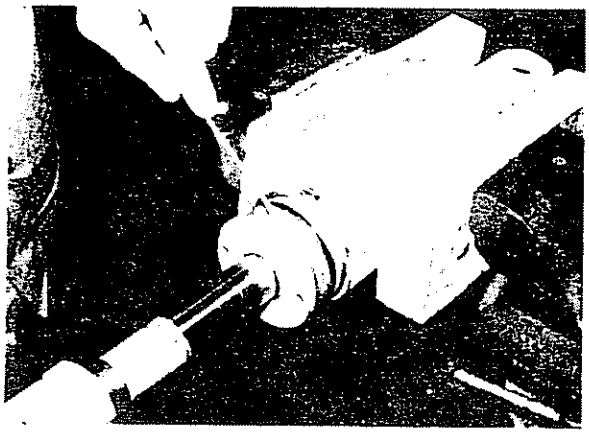


PHOTO 23

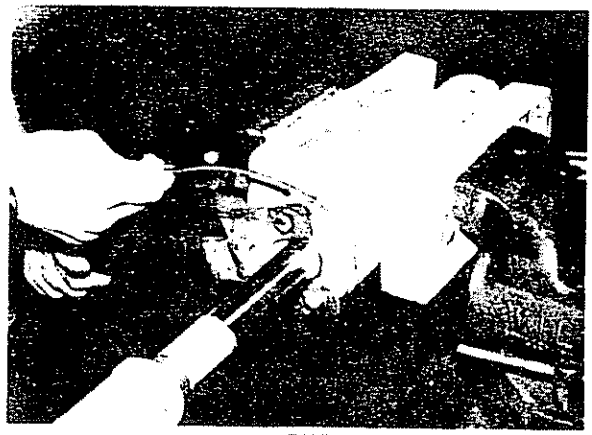


PHOTO 24

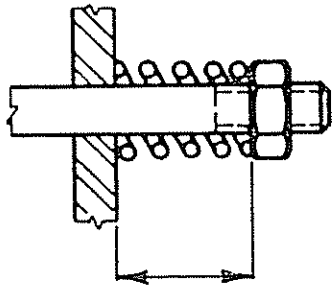
F. CLEAN THE MACHINE - The deck should be cleaned off at least once a day. Remove all foreign material from the deck and structural members. Never allow collected grass and dirt to remain on the deck. This material will decompose forming ammonia compounds which will erode the paint and metal of the deck.

## WEEKLY MAINTENANCE

II. WEEKLY MAINTENANCE is intended for those items that need to be checked once a week. This maintenance should be preformed before start-up the first morning of every new week.

| ITEM | O.K. |
|---|---|
| A. TORQUE LIMITER CLUTCHES | |
| B. GEARBOXES | |
| C. NUTS AND BOLTS | |
| 1. Gearbox Bolts | |
| 2. Safety Shield Bolts | |
| 3. Chain Guard Bolts | |
| D. PINS | |
| 1. Tongue Clevis Pin | |
| 2. Tongue Pins | |
| 3. Hinge Pins | |
| E. LEVEL LIFT RODS | |
| F. RUBBER SANDWICH MOUNTS | |
| G. WHEEL BEARING INSPECTION | |
| H. CHAIN GUARDS | |
| I. WINCH AND CABLE | |
| J. PAINT | |

A. TORQUE LIMITER CLUTCHES - (SEE PHOTO 23) AFTER THE FIRST HOURS OF OPERATION THE SLIP CLUTCH SHOULD BE CHECKED FOR EXCESSIVE SLIPPAGE, INDICATED BY THE CLUTCH RUNNING HOT. TO PROPERLY ADJUST THE SLIP CLUTCH, SPRING BOLTS SHOULD BE TIGHTENED TO THE LENGTH ILLUSTRATED BELOW. ANY INCREASE OR DECREASE IN TIGHTNESS WILL LOWER THE TORQUE RATING AND COULD CAUSE PREMATURE FAILURE.




THE SLIP CLUTCH SHOULD BE ADJUSTED AS DESCRIBED PERIODICALLY TO COMPENSATE FOR WEAR. IF THE MOWER HAS BEEN IDLE FOR AN EXTENDED PERIOD OF TIME, THE CLUTCH SHOULD BE CHECKED TO MAKE SURE THE PLATES ARE NOT FROZEN. THE CLUTCH SHOULD BE CHECKED PERIODICALLY FOR WEAR AND THE PRESENCE OF OIL, GREASE, MOISTURE, OR CORROSION ON THE DRIVING PLATES WHICH WILL GREATLY AFFECT THE EFFICIENCY AND LIFE OF THE CLUTCH DISC.

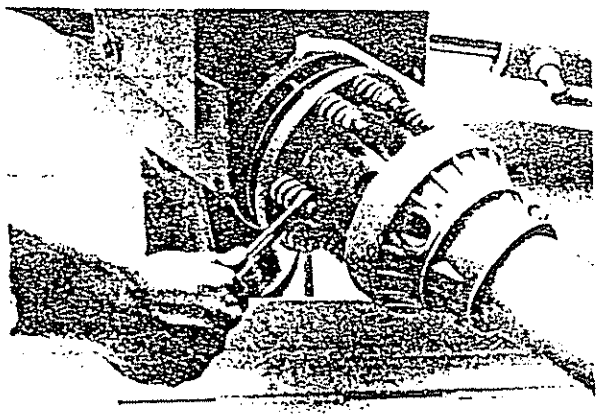


PHOTO 23

B. GEARBOXES - THE CENTER AND WING GEARBOXES ARE FILLED WITH GREASE AT THE FACTORY. THE GREASE LEVEL SHOULD BE CHECKED IN THE CENTER GEARBOX ONCE A WEEK. THE GREASE LEVEL IN THE CENTER GEARBOX SHOULD BE MAINTAINED AT THE BOTTOM CHECK PLUG. SHOULD ADDITIONAL GREASE BE REQUIRED, FILL THROUGH THE UPPER PLUG TO THE PROPER LEVEL. ON THE WING GEARBOX THE LEVEL SHOULD BE MAINTAINED WITHIN 1/2" OF THE CHECK PLUG. (SEE PHOTO 24) SHOULD ADDITIONAL GREASE BE REQUIRED, FILL THROUGH THE CHECK PLUG. FOR EITHER GEARBOX USE SNOCO 74DAEB, TEXACO NOVA OIL OR SAE 80 OR 90 WEIGHT E.P. GEARLUBE, OR TERRAIN KING SPECIAL TRANSMISSION LUBE (PART NUMBER 00-024800).

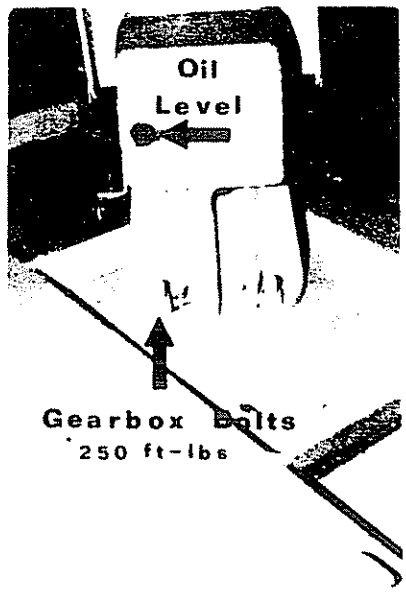



PHOTO 24

THE MAJOR CAUSE OF GEARBOX FAILURE IS LACK OF OIL, CAUSING THE BEARINGS AND GEARS TO OVERHEAT. MOST OF THE OIL IS LOST WHEN THE LOWER SEAL IS WORN OUT BY WIRE BECOMING ENTANGLED AROUND THE SHAFT AND WORKING ITS WAY INTO THE SEAL, (SEE PHOTO 25). NEVER MOW OVER WIRE, CABLE, ROPE, FENCING OR OTHER MATERIALS THAT COULD BECOME WRAPPED AROUND THE OUTPUT SHAFT. STOP THE MOWER AND REMOVE THE FOREIGN MATTER BEFORE MOWING OVER IT. IF WIRE BECOMES WRAPPED AROUND THE OUTPUT SHAFT, STOP THE MOWER AT ONCE AND REMOVE THE FOREIGN MATERIAL.

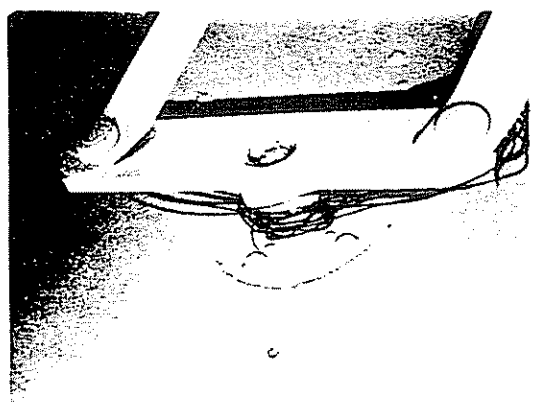


PHOTO 25

C. THE FOLLOWING NUTS AND BOLTS NEED TO BE INSPECTED THE FIRST DAY OF EACH NEW WEEK.

1. GEARBOX BOLTS - THESE BOLTS FASTEN THE GEARBOXES TO THE DECK. THEY SHOULD BE TORQUED TO A VALUE OF 100 FT./LBS.

2. SAFETY SHIELD BOLTS - (SEE PHOTO 26) THESE BOLTS FASTEN THE SAFETY SHIELD TO THE DECK AND/OR GEARBOXES. IN CASE OF AN ACCIDENT WHEN A PERSON COULD FALL AGAINST A SAFETY SHIELD, THE BOLTS NEED TO BE IN PLACE AND TIGHT TO GIVE MAXIMUM PROTECTION.

3. CHAIN GUARD BOLTS - (SEE PHOTO 27) THESE BOLTS FASTEN THE CHAIN GUARDS TO THE FRAME. IF A CHAIN GUARD FELL OFF AND WAS MOWED OVER, SERIOUS DAMAGE COULD OCCUR TO THE CHAIN GUARD, BLADES AND GEARBOX.

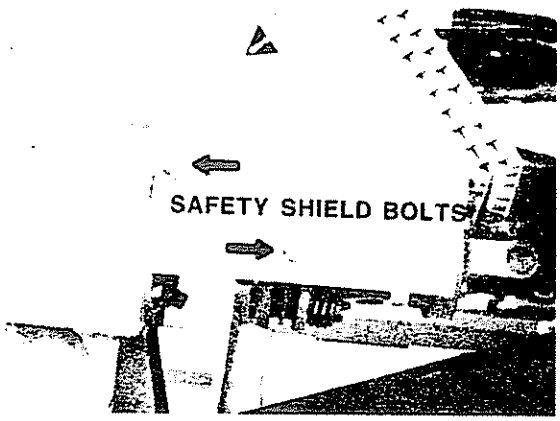



PHOTO 26

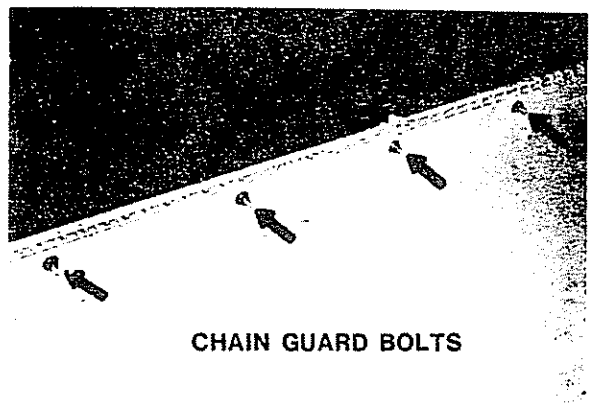



PHOTO 27

D. PINS - MANY OF THE PINS ON THE TK-15 ARE MADE OF HIGH STRENGTH STEEL. ALWAYS REPLACE PINS WITH THE PROPER TERRAIN KING PART. SUBSTITUTE PINS MAY NOT HAVE THE PROPER STRENGTH.

1. TONGUE CLEVIS PIN - (SEE PHOTO 28) THIS PIN HOLDS THE HITCH CLEVIS ONTO THE TONGUE AND IS MADE OF HIGH STRENGTH STEEL. INSPECT THIS PIN WEEKLY FOR ANY SIGNS OF BENDING OR ABNORMAL WEAR. REPLACE IF NEEDED. MAKE SURE THE STAY PINS ON EACH SIDE OF THE PIN ARE IN PLACE. IF THE TONGUE CLEVIS PIN BROKE OR SLIPPED OUT, THE MOWER COULD BREAK AWAY FROM THE TRACTOR.

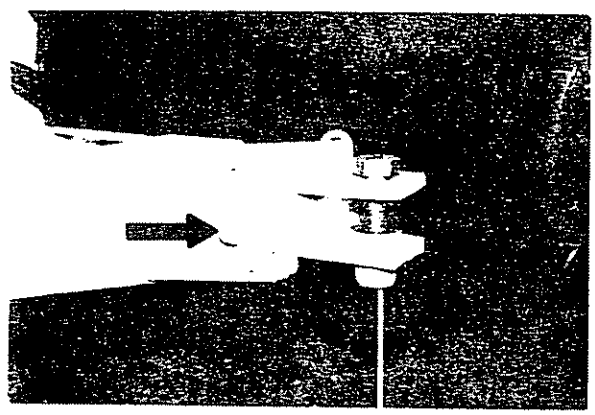


PHOTO 28

2. Tongue Pins - (See Photo 33) These pins fasten the tongue to the machine frame. Cotter pins and flatwashers retain them in place. Inspect these pins weekly and make sure the cotter pins are in place. If one of these pins failed the tongue and suspension system could be seriously damaged.

3. Hinge Pins - (See Photo 34) The hinge pins connect the wing to the center section. There is a roll pin in each of the hinge pins holding it in place. Inspect both the hinge pins and the roll pins weekly. If any of the hinge or roll pins are missing or sheared off replace them at once.

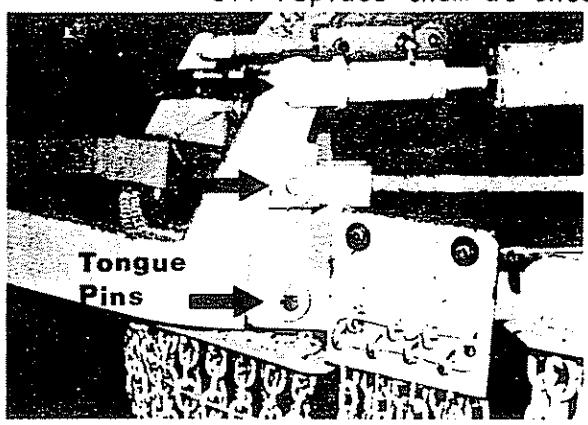


PHOTO 33

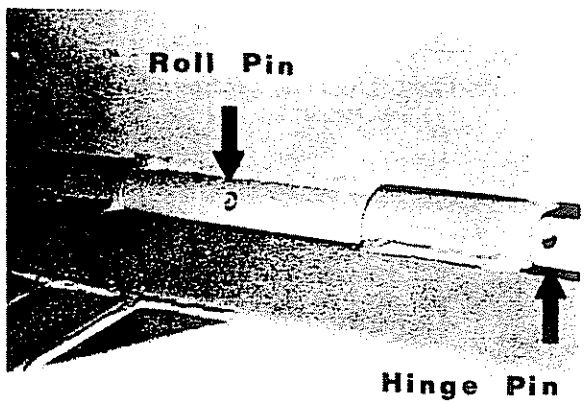


PHOTO 34

E. LEVEL LIFT RODS - (See Photo 35) Each level lift rod holds approximately twice the weight of the machine. Careful inspection of each rod and component part is important. Look for excessive wear on the front and rear level lift pins and the drilled holes they ride in. These pins are made of hardened steel and should be replaced only with the proper pins.

Bending of the level lift rods is caused by units being backed into obstructions. If the rod becomes severly bent or deformed, it should be replaced.

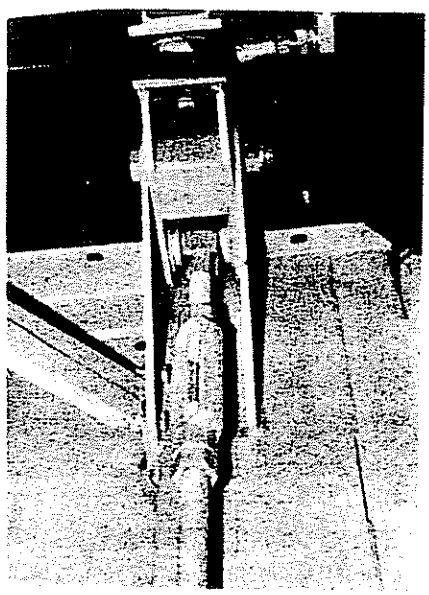


PHOTO 35

F. RUBBER SANDWICH MOUNT - (See Photo 36) The rubber sandwich mount should be examined for signs of cracks, breaks or over compression. If any of these problems exist the unit should be replaced. A good suspension will increase the service life of the machine. Never apply any type of solvent or petroleum base material to the surface of the rubber mount. The solvent could damage the mount and reduce its service life.

G. WHEEL BEARINGS - (See Photo 37) The wheel bearings were packed and properly adjusted at the factory. The wheels should be checked each week to see if they need adjustment. Use the tongue jack to lift the wheel off the ground. Grab the wheel and try to move it in and out. If any movement exists remove the wheel and inspect the bearings and re-adjust the wheel. If the wheel is operated for only a few days with it out of adjustment the bearings and hub could be worn to the point that they would need to be replaced. Re-adjustment and repacking of the wheel bearing is covered in the Bi-Annual Maintenance Section.

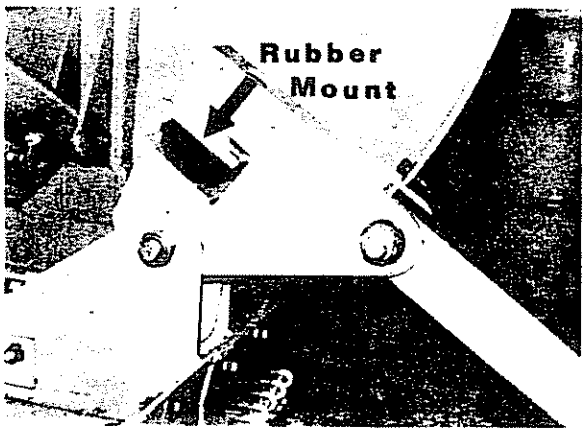



PHOTO 36

PHOTO 37

H. CHAIN GUARDS - (See Photo 38) Inspect the chain guards for any missing chains or cables. Replace any missing chains by undoing the retaining cable clamp. Slide the cable back and insert new 5/16" chain through the slot. Slide the cable back through the chains and re-fasten the cable clamp. Missing chains may allow debris to be thrown out from under the mower.

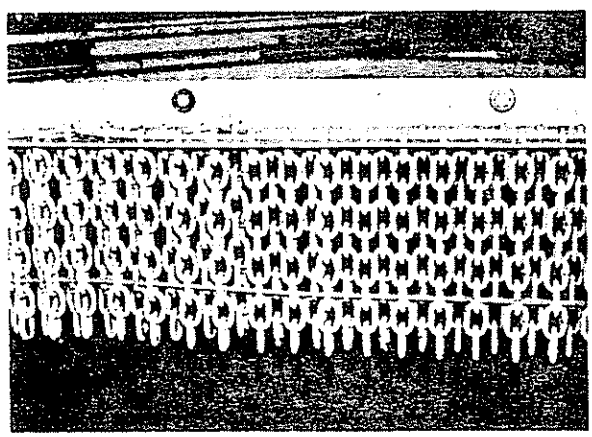


PHOTO 38

I. WINCH AND CABLE - (See Photo 39) The winch should be checked weekly. The cable should be replaced at the first signs of fraying or wire breakage. Check to see that the winch functions properly. It should make a "clicking" noise when the cable is being wound up. There should be a resistance when releasing the cable. You should not be able to unwind the winch by pulling on the cable. If the winch does not function properly replace it. If the winch failed during use, one of the wings could drop suddenly.

J. PAINT - (See Photo 40) If there are areas the paint has peeled or flaked, this area should be sanded down to the bare metal. New primer and paint should be applied to this area. Decomposing grass can be a very caustic substance. It will eat away the paint and metal and allow rust to set in. Repainting these areas will assure longer deck life.

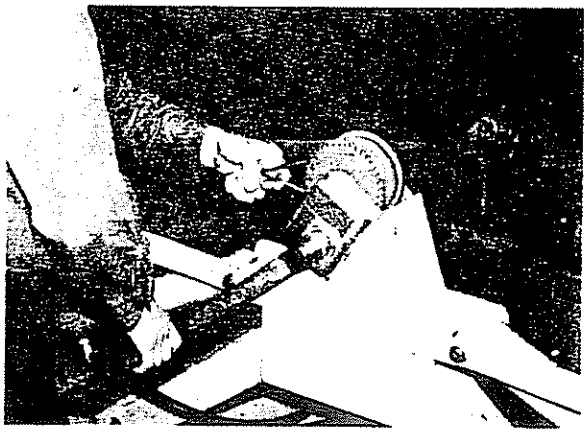


PHOTO 39

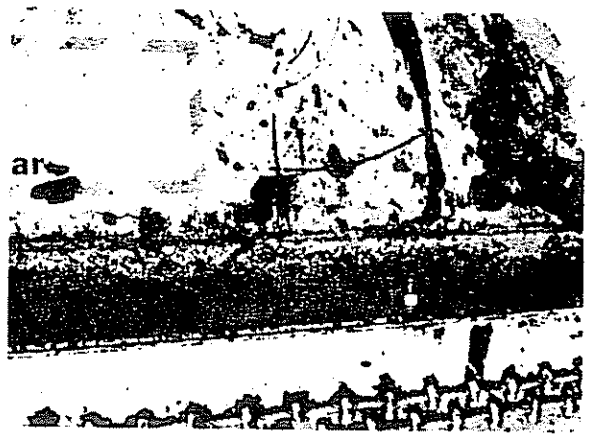


PHOTO 40

## BI-ANNUAL MAINTENANCE

III. BI ANNUAL MAINTENANCE is intended to completely service the machine. Every component part on the machine should be checked for abnormal wear and repaired or replaced if needed. The maintenance should be done once during the off mowing season in preparation for the next year. Then again half way through the mowing season. This will allow you to find any minor problems and repair them before they become major one. All of the items covered in the daily and weekly maintenance should be checked along with the important parts listed here.

| ITEM | OK |
|---|---|
| A. SKID SHOES | |
| B. REPACK WHEEL BEARING | |
| C. TONGUE CLEVIS PIN | |
| D. DRAWBAR BOLT | |
| E. LEVEL LIFT SYSTEM | |
| F. WELD INSPECTION | |
| G. PAINT INSPECTION | |

A. SKID SHOES - (See Photo 41) The skid shoes are made of a hardened steel to reduce wear and increase their service life. Premature wear can be caused by the mower wings being set too low allowing the wing skid shoes to drag on the ground continuously.

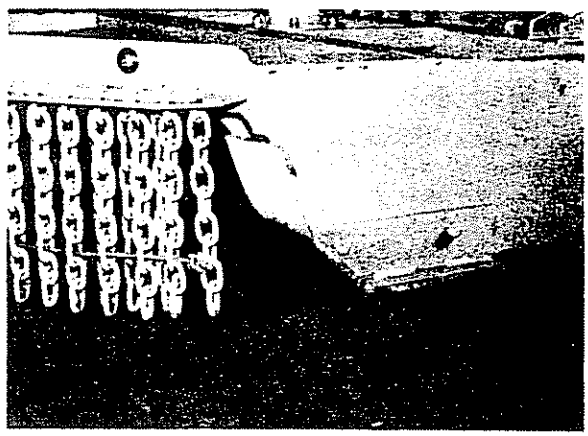


PHOTO 41

B. WHEEL BEARING - (See Photo 42) Every six months the wheel and hub should be removed. The bearings should be removed, cleaned and inspected. The bearing should be free of all signs of pitting, rust, decay or deformation. If any of these problems exist the bearings and races should be replaced. Always replace the race and the bearing as a set. If the race was pitted and only the bearing was replaced, the new bearing would develop the pitting problem again. If the bearings are in good shape, pack them with grease. Be sure to push grease into the bearing itself not just around it, (See Photo 43).

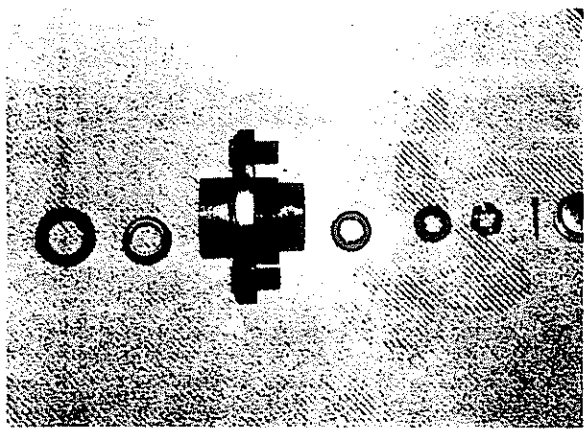


PHOTO 42

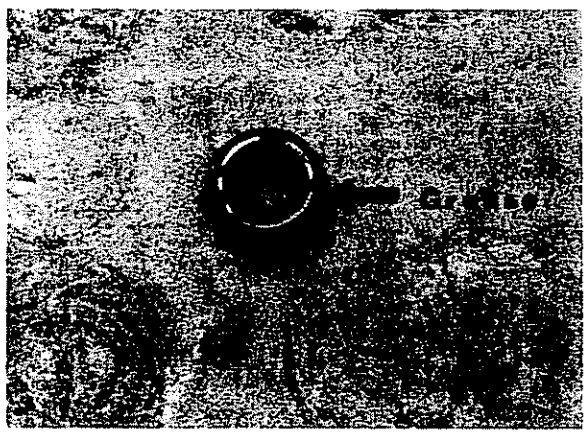


PHOTO 43

Replace the packed bearing into the hub. Always replace the old seal with a new one, whenever the bearings are removed. Tighten the nut on the spindle until a measurable resistance is felt. Line up the nut with the cotter pin hole and insert the cotter pin, (See Photo 44). Check the wheel to make sure it will turn. Then grab the wheel with both hands and pull inward and push outward, (See Photo 45). There should be no noticeable movement of the hub. If movement exists remove cotter pin and tighten the nut 1/6 turn.

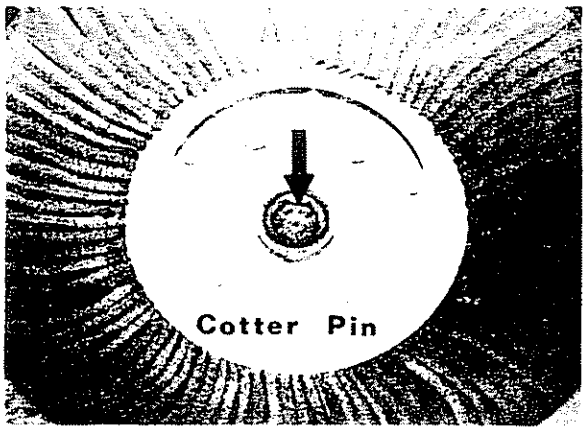



PHOTO 44

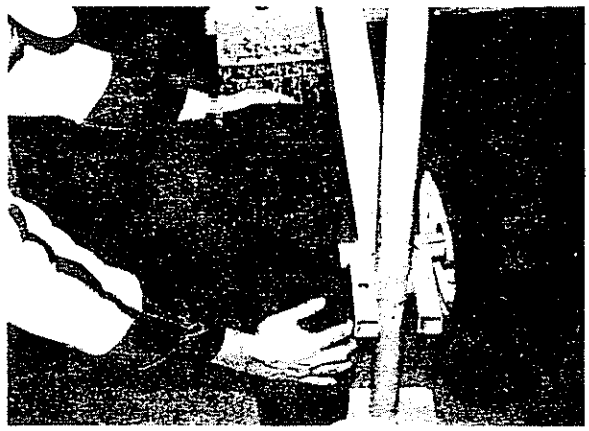


PHOTO 45

.C. TONGUE PIN - (See Photo 46) Remove the stay pins from the tongue clevis pin and remove the tongue clevis and pin. Examine for signs of abnormal wear or cracks. If any of these parts are worn, bent, or misshaped replace them. These parts hold the tractor and mower together and must be maintained in good working condition.

D. DRAWBAR BOLT - (See Photo 47) This bolt fastens the mower to the tractor drawbar. It should be removed and examined for signs of wear or cracks. This bolt should be replaced at the first sign of wear.

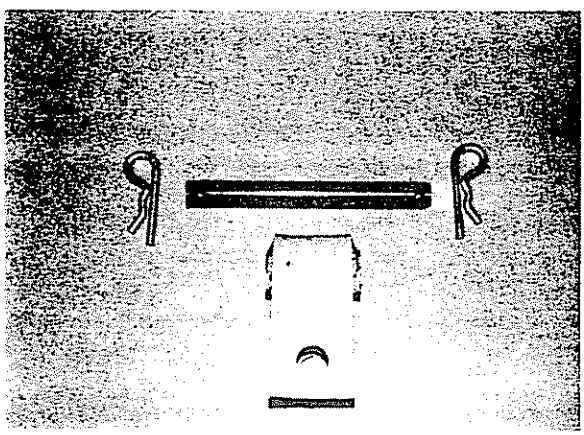


PHOTO 46

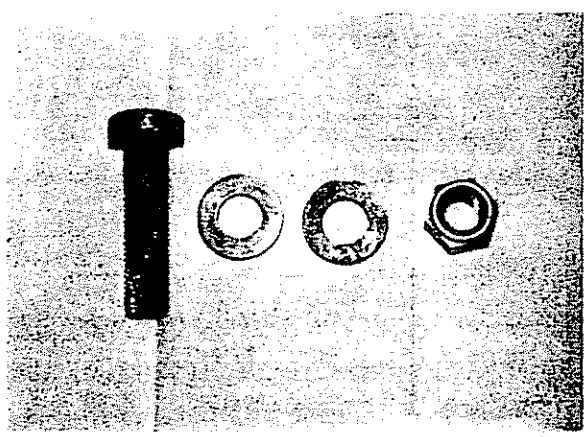


PHOTO 47

E. LEVEL LIFT SYSTEM - (See Photo 48) The level lift rods should be removed from the mower to allow for proper inspection of all components including the shock absorber weldment and the level lift pins. Check each part, expecially the level lift pins, for worn areas, mis-shaped holes, or bent components. If any of the signs are found,the parts should be replaced. Reassemble the lift rods on the mower and check that the level lift system operates properly.

F. WELD INSPECTION - (See Photo 49)The deck and structural members of the TK-15 are welded by quality craftsman using modern up to date equipment. Operating over rough terrain can induce severe stress through out the deck and structural members. All welds should be inspected for any signs of cracks or metal seperation. If any welds shows these signs it should be repaired at once. Any weld that is not repaired can develop into a severe problem that may bend or deform structural members, and cause severe mower damage.

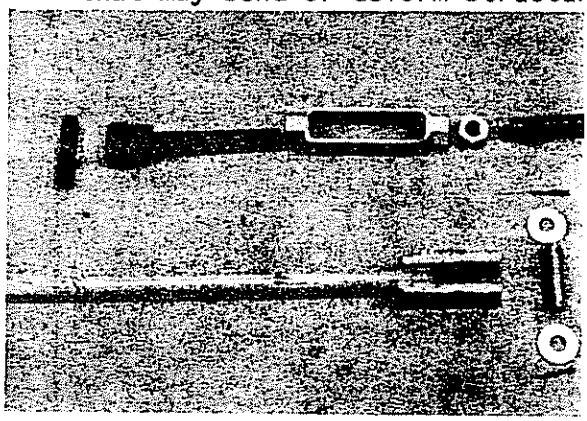


PHOTO 48

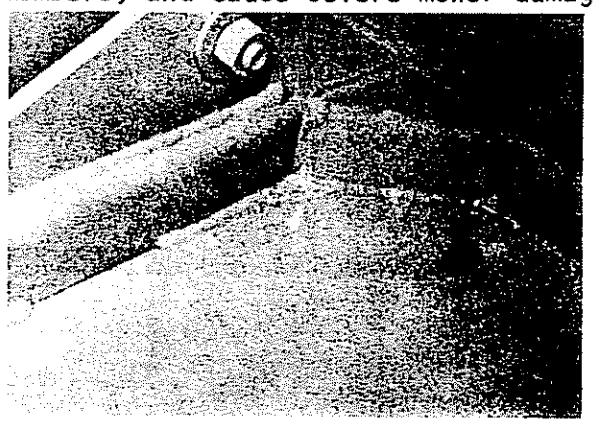


PHOTO 49

G. PAINT - (See Photo 50) This is the time to examine the paint coat thoroughly. If any of the paint has peeled off or rusted it should be repaired. First sand all rust and paint away from the deteriorated area. Then prime the bare metal with a good quality rust inhibiting primer, then paint. If need be, paint an entire section to assure protection from rust and corrosion. Some environments are much more corrosive than others. In extremely harsh conditions, the entire machine should be painted twice a year.

PHOTO 50

# MAINTENANCE RECORD SERIAL NO._____

| DATE | MACHINING HOURS | DESCRIPTION | CAUSE |
|---|---|---|---|
| | | | |

Alamo Group

# TO THE OWNER/OPERATOR/DEALER

To keep your implement running efficiently and safely, read your manual thoroughly and follow these directions and the Safety Messages in this Manual. The Table of Contents clearly identifies each section where you can easily find the information you need.

The OCCUPATIONAL SAFETY AND HEALTH ACT (1928.51 Subpart C) makes these minimum safety requirements of tractor operators:

REQUIRED OF THE OWNER:

1. Provide a Roll-Over-Protective Structure that meets the requirements of this Standard; and
2. Provide Seatbelts that meet the requirements of this paragraph of this Standard and SAE J4C; and
3. Ensure that each employee uses such Seatbelt while the tractor is moving; and
4. Ensure that each employee tightens the Seatbelt sufficiently to confine the employee to the protected area provided by the ROPS.

REQUIRED OF THE OPERATOR

1. Securely fasten seatbelt if the tractor has a ROPS.
2. Where possible, avoid operating the tractor near ditches, embankments, and holes.
3. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
4. Stay off slopes too steep for safe operation.
5. Watch where you are going - especially at row ends, on roads, and around trees.
6. Do not permit others to ride.
7. Operate the tractor smoothly - no jerky turns, starts, or stops.
8. Hitch only to the drawbar and hitch points recommended by the tractor manufacturer.
9. When the tractor is stopped, set brakes securely and use park lock, if available.

---

☑ Keep children away from danger all day, every day...

☑ Equip tractors with rollover protection (ROPS) and keep all machinery guards in place...

☑ Please work, drive, play and live each day with care and concern for your safety and that of your family and fellow citizens.

*National Safety Council* *Farm and Industrial Equipment Institute* FIEI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