

# **OPERATOR'S MANUAL**

## ***FRONT END LOADER***

*READ AND SAVE THIS BOOK !!*

**ANSUNG INDUSTRIAL Co., Ltd.**  
<http://www.ansung.co.kr>

# CONGRATULATIONS!

You have invested in the best implement of its type on the market today.

The care you give your Ansung implement will greatly determine your satisfaction with its performance and its service life. We urge a careful study of this manual to provide you with a thorough understanding of your new implement before operating, as well as suggestions for operation and maintenance.

If your manual should become lost or destroyed, Ansung will be glad to provide you with a new copy.  
Order from Ansung, 240-12, Yangbyun-Ri, Myang-Myun, Ansung-city, Kyunggi-Do, Korea.

As an authorized Ansung dealer, we stock genuine Ansung parts which are manufactured with the same precision and skill as our original equipment. Our trained service personnel are well informed on methods required to service Ansung equipment, and are ready and able to help you.

Should you require additional information or assistance, please contact us.

YOUR AUTHORIZED  
ANSUNG DEALER

**Ansung reserves the rights to change the specifications. The models and specifications described here can be subjected to modifications for improvements without any prior notice by the manufacturer.**

# Operator's Manual

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## **RETAIL CUSTOMER'S RESPONSIBILITY UNDER THE ANSUNG WARRANTY**

It is the Retail Customer and/or Operator's responsibility to read the Operator's Manual, to operate, lubricate, maintain, and store the product in accordance with all instructions and safety procedures. Failure of the operator to read the Operator's Manual is a misuse of this equipment.

It is the Retail Customer and/or Operator's responsibility to inspect the product and to have any part(s) repaired or replaced when continued operation would cause damage or excessive wear to other parts or cause a safety hazard.

It is the Retail Customer's responsibility to deliver the product to the authorized Ansung dealer from whom he purchased it, for service or replacement of defective parts which are covered by warranty. Repairs to be submitted for warranty consideration must be made within forty-five (45) days of failure.

It is the Retail Customer's responsibility for any cost incurred by the Dealer for traveling to or hauling of the product for the purpose of performing a warranty obligation or inspection.

### **UNDERSTAND SIGNAL WORDS**

**DANGER:** Indicates an imminently hazardous situation which, if not avoided, death or serious injury. This signal word is to be limited to the most extreme situations.

**WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

**CAUTION:** Indicates a potentially hazardous situation which, if not avoided, will result in may result in minor or moderate injury. It may also be used to alert against unsafe practices



**THIS LIMITED WARRANTY SHALL NOT APPLY:**

1. To vendor items which carry their own warranties, such as engines, tires, and tubes.
2. If the unit has been subjected to misapplication, abuse, misuse, negligence, fire or other accident.
3. If parts not made or supplied by Ansung have been used in connection with the unit, if, in the sole judgement of Ansung such use affects its performance, stability or reliability.
4. If the unit has been altered or repaired outside of an authorized Ansung dealership in a manner which, in the sole judgement of Ansung, affects its performance, stability or reliability.
5. To normal maintenance service and normal replacement items such as gearbox lubricant, hydraulic fluid, worn blades, or to normal deterioration of such things as belts and exterior finish due to use or exposure.
6. To expendable or wear items such as teeth, chains, sprockets, belts, springs and any other items that in the company's sole judgement is a wear item.

**NO EMPLOYEE OR REPRESENTATIVE OF ANSUNG IS AUTHORIZED TO CHANGE THIS LIMITED WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY UNLESS SUCH CHANGE IS MADE IN WRITING AND SIGNED BY ANSUNG'S SERVICE MANAGER, SEOUL, KOREA**

☆☆

Record the model number, serial number and date purchased. This information will be helpful to your dealer if parts or service are required.  
MAKE CERTAIN THE WARRANTY REGISTRATION CARD HAS BEEN FILED WITH ANSUNG/ SEOUL, KOREA

MODEL NUMBER \_\_\_\_\_  
SERIAL NUMBER \_\_\_\_\_  
DATE OF RETAIL SALE \_\_\_\_\_

## DEALER PREPARATION CHECK LIST

BEFORE DELIVERING MACHINE – The following check list should be completed.  
Use the Operator's Manual as a guide.

- Machine properly assembled.
- All safety decals readable (See decal page).
- All bolts tightened to torque specifications given in torque chart.
- Machine operates properly.
- Customer has appropriate mounting kit for his tractor and loader.
- Operator's manual has been delivered to owner and he has been instructed on the safe and proper use of the front end loader.

### ▲ CAUTION ▲

It is recommended that the tractor be equipped with Rollover Protection System (ROPS) and seat belt be used for all loader operations.

### ▲ WARNING ▲

To avoid serious injury or death, do not handle large heavy objects (large round bales, machinery, etc.) with this loader.

It is the responsibility of the dealer to complete the procedures listed above before delivery of this implement to the customer.

Dealer's Signature \_\_\_\_\_

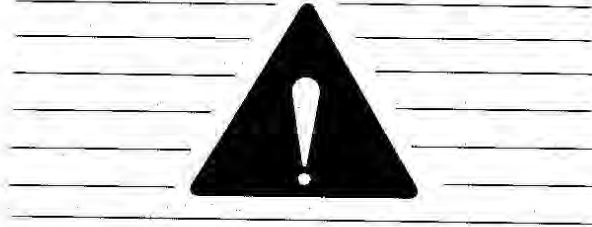
THIS CHECKLIST TO REMAIN IN OWNER'S MANUAL

It is responsibility of the dealer to complete the procedures listed above before of this implement to the customer



## IMPORTANT SAFETY PRECAUTIONS

This symbol is used to call attention to safety precautions that should be followed by the operator to avoid accidents. When you see this symbol, carefully read the message that follows and heed its advice. Failure to comply with safety precautions could result in serious bodily injury.



In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel in the operation, transport, maintenance and storage of equipment. Lack of attention to safety can result in accident, personal injury, reduction of efficiency and worst of all—loss of life. Watch for safety hazards and correct deficiencies promptly. Use the following safety precautions as a general guide to safe operations when using this machine. Additional safety precautions are used throughout this manual for specific operating and maintenance procedures. Read this manual and review the safety precautions often until you know the limitations.

### THE TRACTOR

1. Read the tractor operator's manual to learn how to operate your tractor safely. Failure to do so could result in serious injury or death and equipment damage.
2. It is recommended that tractor be equipped with Rollover Protective System (ROPS) and a seat belt be used for all loader operations.
3. When operating loader directly off tractor remotes always remove or lockout detent on tractor's hydraulic valves.  
This allows levers return to neutral position when released.
4. Add wheel ballast or rear weight for stability.
5. Move wheels to the tractor manufacturer's widest recommended settings to increase stability.



6. For better stability, use tractor with wide front axle rather than tricycle front wheels.
7. Move and turn the tractor at low speeds.
8. Stop tractor engine, place transmission in park (or neutral), engage parking brake, lower loader arms to ground, cycle all hydraulic controls to relieve pressure, allow machine moving parts to stop, remove ignition key to prevent unauthorized person from starting engine before dismounting tractor or servicing, repairing, or making adjustments to the equipment.
9. Wear personal protective equipment (PPE), such as, but not limited to, protection for eyes, ears, lungs, head, hands and feet when operating, servicing, or repairing equipment. Avoid wearing loose clothing or jewelry that may catch and entangle on equipment moving parts.

## **THE LOADER**

1. Read the loader operator's manual to learn how to operate your loader safely. Failure to do so could result in serious injury or death and equipment damage.
2. Become familiar with all the machine's controls and all the caution, warning and danger decals affixed to the machine before attempting to start or operate.
3. Improper use of a loader can cause serious injury or death.
4. Do not lift or carry anybody on the loader or in the bucket or attachment.
5. Never allow anyone to get under the loader bucket or reach through the booms when the bucket is raised.
6. Do not walk or work under a raised loader bucket or attachment unless it is securely blocked or held in position.
7. Avoid overhead wires and obstacles when loader is raised. Contacting electrical lines can cause electrocution.
8. Make sure all parked loaders on stands are on a hard, level surface.
9. Use a piece of cardboard or wood rather than hands and wear eye protection when searching for hydraulic

leaks.

Escaping hydraulic oil under pressure can penetrate skin. If oil is injected into skin, it must be surgically removed within a few hours by a doctor or gangrene may result.

10. Before disconnecting hydraulic lines, relieve all hydraulic pressure.
11. Do not tamper with the relief valve setting. The relief valve is preset at the factory. Changing the setting can cause overloading the loader and tractor and serious operator injury may result.
12. Always wear safety goggles when repairing or servicing machine.
13. When servicing or replacing pins in cylinder ends, buckets, etc., always use a brass drift and hammer. Failure to do so could result in injury from flying fragments.
14. Replace damaged or illegible safety decals. See decal page for required decals.
15. Do not modify or alter or permit anyone else to modify or alter the loader, any of its components or any loader function without first consulting your local dealer.

## **OPERATING THE LOADER**

1. It is the loader owner's responsibility to instruct and have a person read operator's manual, safety decals and become familiar with machine controls before allowing them to operate loader.
2. Do not allow children to operate the loader.
3. Before starting or operating the equipment, make a walk around inspection and check for loose or damaged components. Correct any deficiency before starting.
4. Keep the area of operation clear of all persons, particularly small children. The operator should cease operation whenever anyone comes within the operating area.
5. Operate the loader from the "Operator's Seat Only."
6. Exercise caution when operating the loader with a raised loaded bucket or fork.
7. Avoid loose fill, rocks and holes. They can be dangerous for loader operation or movement.
8. Be extra careful when working on inclines.
9. Allow for the loader length when making turns.
10. Stop the loader arms gradually when lowering or lifting.
11. Use caution when handling loose or shiftable loads.
12. Carry loader arms at a low position during transport.
13. Lower loader arms, stop engine, and lock brakes before leaving the tractor seat.
14. Operate the loader controls only when properly seated at the controls.
15. Do not use loader for handling large, heavy objects such as logs, oil drums, etc.
16. Handling large, heavy objects is dangerous due to:
  - Possibility of rolling the tractor over.
  - Possibility of upending the tractor.
  - Possibility of the object rolling or sliding down the loader arms onto the operator.

# IMPORTANT FEDERAL LAWS AND REGULATIONS\* CONCERNING EMPLOYERS, EMPLOYEES AND OPERATIONS.

\*(This section is intended to explain in broad terms the concept and effect of the following federal laws and regulations.

It is not intended as a legal interpretation of the laws and should not be considered as such).

U.S. Public Law 91-596 (The Williams-Steiger Occupational and Health Act of 1970) OSHA

## **This Act Seeks:**

"...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources..."

## **DUTIES**

### **Sec. 5 (a) Each employer—**

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act which are applicable to his own actions and conduct.

## **OSHA Regulations**

Current OSHA regulations state in part: "At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in the safe operation and servicing of all equipment with which the employee is, or will be involved." These will include (but are not limited to) instructions to:  
Keep all guards in place when the machine is in operation;

Permit no riders on equipment:

Stop engine, disconnect the power source, and wait for all machine movement to stop before servicing, adjusting, cleaning or unclogging the equipment, except where the machine must be running to be properly serviced or maintained, in which case the employer shall instruct employees as to all steps and procedures which are necessary to safely service or maintain the equipment.  
Make sure everyone is clear of machinery before starting the engine, engaging power, or operating the machine.

### **EMPLOYEE TRACTOR OPERATING INSTRUCTIONS:**

1. Securely fasten your seat belt 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 tractor manufacturers.
9. When tractor is stopped, set brakes securely and use park lock if available

#### **Child Labor Under 16 Years Old**

Some regulations specify that no one under the age of 16 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situation. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin #102.)

## SECTION I INTRODUCTION AND DESCRIPTION

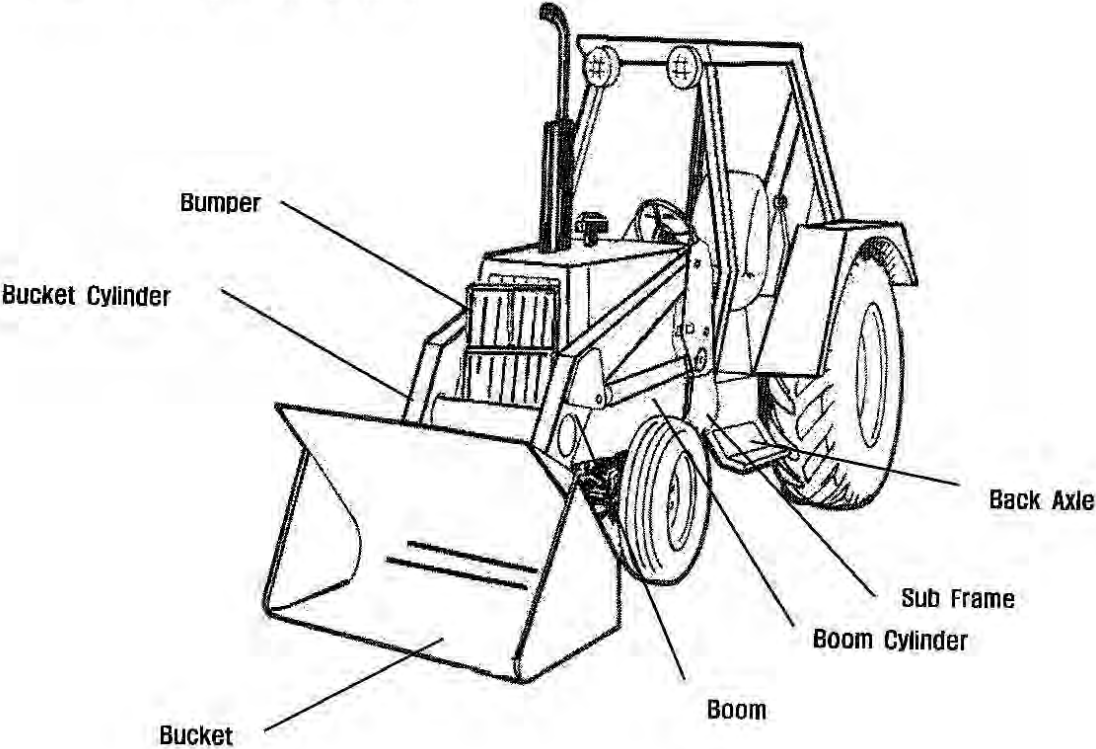
### 1-1 INTRODUCTION

We are pleased to have you as a Ansung customer. Your Front end Loader has been carefully designed to give maximum service with minimum down time. This manual is provided to give you the necessary operating and maintenance instructions for keeping your loader in top operating condition. Please read this manual thoroughly. Understand what each control is for and how to use it. Observe all safety precautions decaled on the machine and noted throughout the manual for safe operation of implement. If any assistance or additional information is needed, contact your authorized Ansung dealer.

### 1-2 DESCRIPTION

This Front End Loader is designed for four-wheel drive tractors. They are intended to lift only loose materials that will fit in the bucket. All cylinders are double-acting. Parking stands support loader so tractor can be "driven in" for quick attaching. Major components of loader are shown in Figure 1-1.

**Figure 1-1 Major Component**





## SECTION II PREPARATION FOR USE

### 2-1 ATTACHING TO TRACTOR

**▲ WARNING ▲**

WEIGHT SHOULD BE APPLIED TO TRACTOR REAR WHEELS AND/OR 3-POINT HITCH TO INCREASE STABILITY.

**▲ WARNING ▲**

TO AVOID INJURY OR DEATH:

ALWAYS CONNECT LOADER HOSES TO APPROPRIATE TRACTOR AUXILIARY OUTLET. ALWAYS REMOVE OR LOCKOUT TRACTOR'S HYDRAULIC VALVES DETENT POSITIONS FOR LEVER NEUTRAL RETURN WHEN RELEASED.

It is recommended that tractor wheels be moved to the widest setting and rear ballast be applied to increase tractor stability. Three point hitch mounted weights are available from your Ansong dealer. Air pressure in front tires should be adequate for heavy loads. Refer to tractor owner's manual for further instructions. Attach loader to tractor as follows:

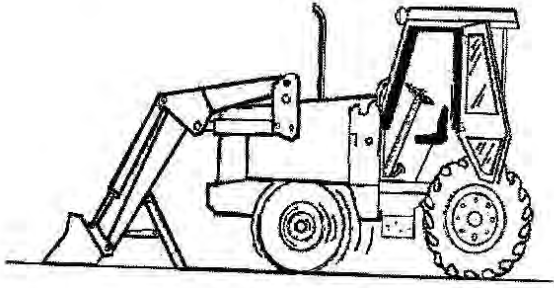


Figure 2-1 Drive Tractor Into Loader

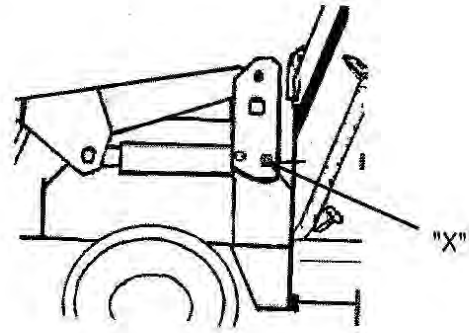


Figure 2-2 Assemble Column and Sub-Frame

- A. Slowly drive tractor into loader (Figure 2-1)
- B. Connect hydraulic hoses to tractor auxiliary outlets.
- C. Assemble Column on Boom to Sub-Frame carefully.
- D. Adjust Boom Cylinder to fix pin(X). (Figure 2-2)

## SECTION III OPERATING INSTRUCTIONS

### CAUTION

**DO NOT LIFT ROUND HAY BALES. ROUND BALES CAN ROLL DOWN LOADER ARMS CAUSING SERIOUS INJURY OR DEATH TO OPERATOR.**

### **3-1 GENERAL SAFETY**

Only qualified people familiar with this manual should operate this machine. Operator should wear hard hat, safety glasses and safety shoes. The operator should read, understand and practice all safety messages shown on the caution, warning and danger decals affixed to the loader to avoid serious injury or death. It is recommended that tractor be equipped with Rollover Protective System (ROPS) and a seat belt be used. Check for ditches, stumps, holes or other obstacles that could upset tractor or damage loader. Fluid and/or weights for rear tires is recommended for added stability. See tractor operator's manual. Three point hitch mounted weights are available from your Ansong dealer. Always turn off tractor engine, set parking brake and lower loader to ground before dismounting tractor. See page 4 for additional safety precautions.

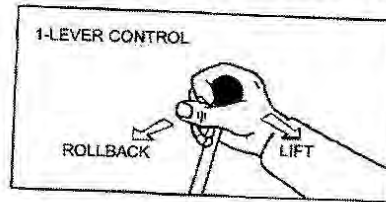
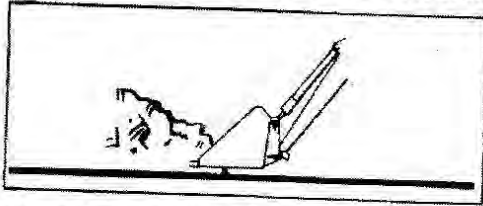
### **3-2 OPERATION**

The loader should be operated with the tractor engine running at 1200-1700 rpm. Excessive speeds are dangerous and may cause bucket spillage and unnecessary strain on both the tractor and loader.

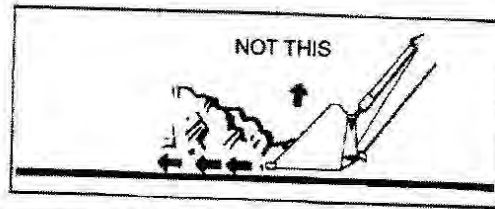
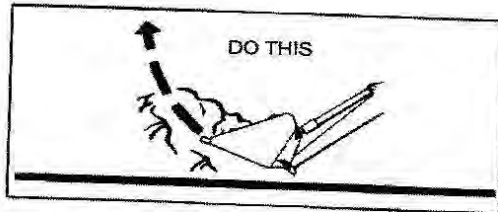
The following text and illustrations offer suggested loader and tractor operating techniques.

## FILLING THE BUCKET

Approach and enter the pile with a level bucket. Ease lever back and toward you to lift and rollback the bucket.



The lift and rollback of the bucket will increase efficiency because a level bucket throughout the lifting cycle resists bucket lift and increases breakaway effort.



**NOTE:** Do not be concerned if the bucket is not completely filled during each pass. Maximum productivity is determined by the amount of material loaded in a given period of time. Time is lost if two or more attempts are made to fill the bucket on each pass

## LIFTING THE LOAD

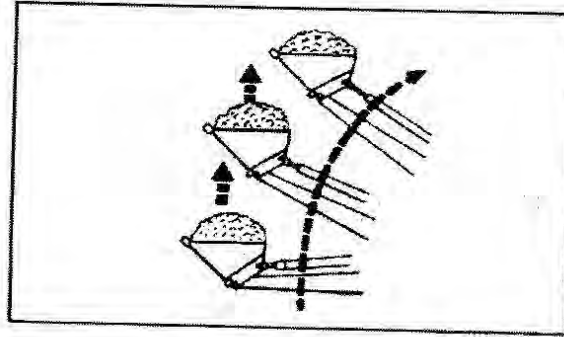
### ⚠ WARNING ⚠

DO NOT LIFT OR CARRY ANYONE IN THE BUCKET OR ON ANY OTHER POSITION OF THE LOADER OR LOADER ATTACHMENT. INADVERTENT MOVEMENT OF THE LOADER OR ATTACHMENT COULD RESULT IN SERIOUS INJURY OR DEATH FROM FALLING OR CRUSHING.

### ⚠ CAUTION ⚠

MAKE SURE MATERIAL IN BUCKET CANNOT ROLL OUT AND DOWN ON TRACTOR WHEN BUCKET IS RAISED TO FULL HEIGHT. KEEP CLEAR OF OVERHEAD OBSTRUCTIONS SUCH AS TREES, LIMBS OR POWER LINES WHEN RAISING THE BUCKET.

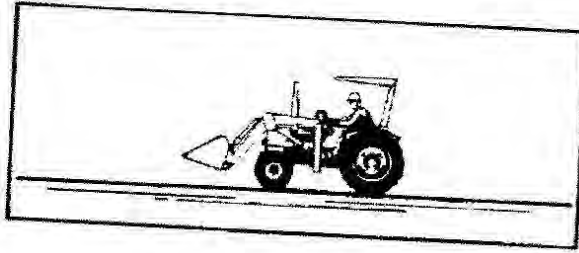
When lifting the load, keep the bucket positioned to avoid spillage.



## CARRYING THE LOAD

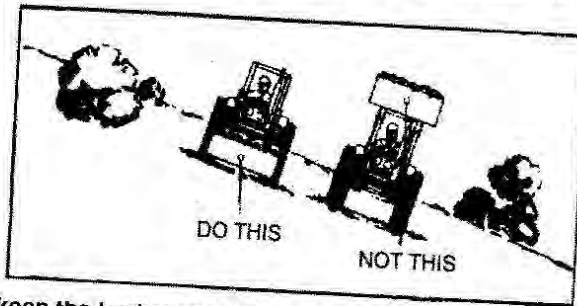
Position the bucket just below the level of the tractor hood for maximum stability and visibility, whether the bucket is loaded or empty.

Use extreme caution when operating the loader on a slope, keep the bucket as low as possible, this keeps the bucket and tractor center of gravity low and will provide maximum tractor stability.

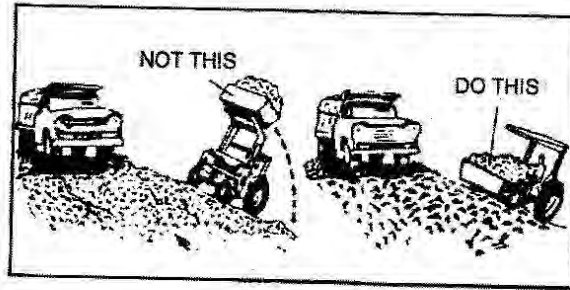


### ⚠ CAUTION ⚠

OPERATING THE LOADER ON A HILLSIDE IS DANGEROUS. EXTREME CARE IS RECOMMENDED.

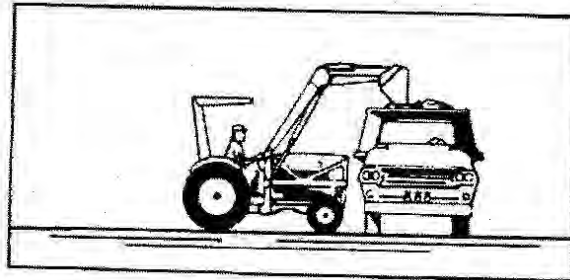


When transporting the load, keep the bucket as low as possible to avoid tipping, in case a wheel drops in a rut.



### **DUMPING THE BUCKET**

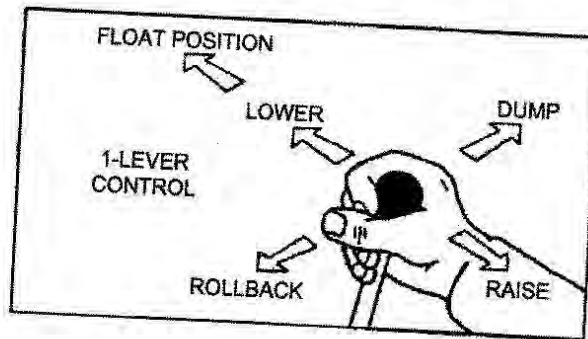
Lift the bucket high enough to clear the side of the vehicle. Move the tractor in as close to the side of the vehicle as possible, then dump the bucket.





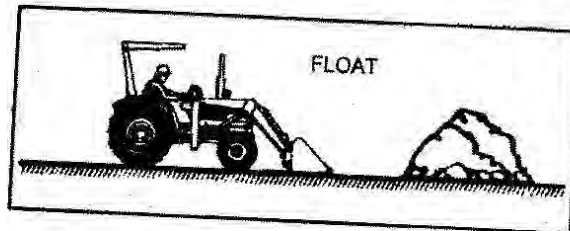
## LOWERING THE BUCKET

After the bucket is dumped, back away from the vehicle while lowering and rolling back the bucket.

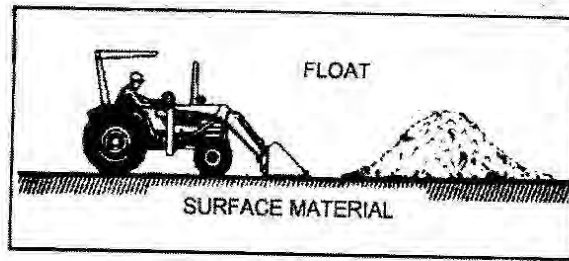


## OPERATING WITH FLOAT CONTROL

During hard surface operation, keep the bucket level and put the lift control in the float position to permit the bucket to float on the working surface. If hydraulic down pressure is exerted on the bucket, it will wear faster than normal.

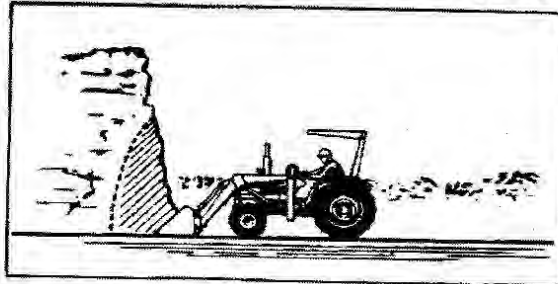


The float will also prevent the mixing of surface material with stockpile material. The float position will reduce the chance of surface gouging when removing snow or other material.

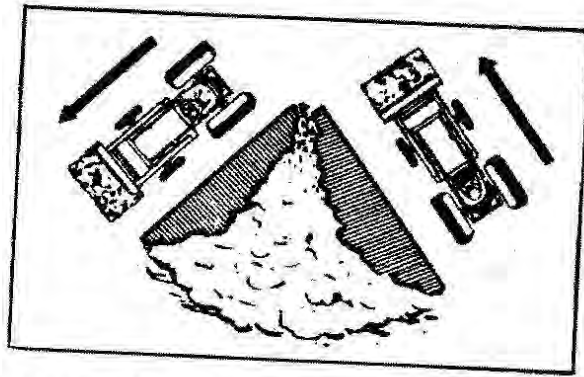


### LOADING FROM A BANK

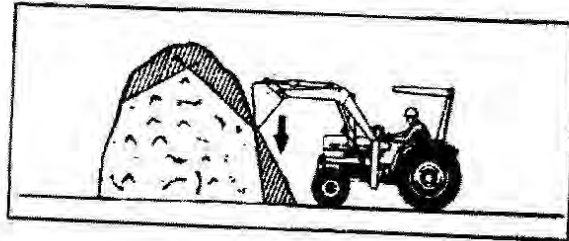
Choose a forward gear that provides sufficient ground speed for loading.



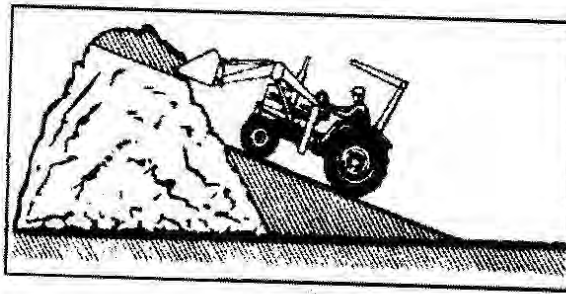
Exercise caution when undercutting high banks. Dirt slides can be dangerous. Load from as low as possible for maximum efficiency. Loader lift and breakaway capacity diminish as loading height is increased.



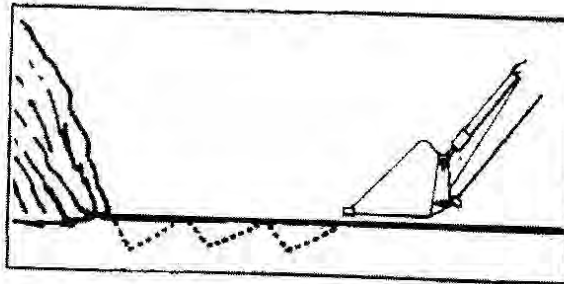
Side cutting is a good technique for cutting down a big pile.



If the pile sides are too high and liable to cause cave-in, use the loader to break down the sides until a slot can be cut over the top.

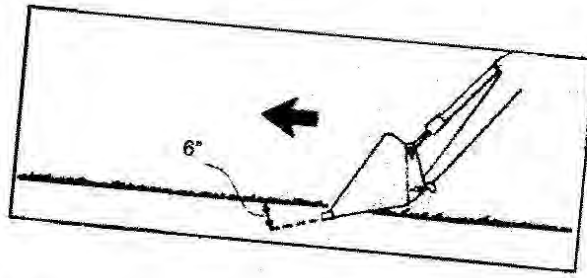


Another method for large dirt piles is to build a ramp approach to the pile.

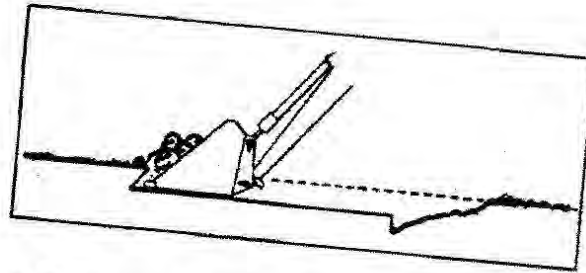


It is important to keep the bucket level when approaching a bank or pile. This will help prevent gouging the work area.

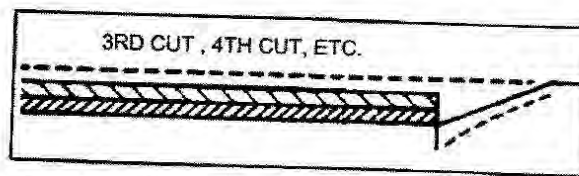
## PEELING AND SCRAPING



Use a slight bucket angle, travel forward, and hold the lift control forward to start the cut. Make a short, angle cut approximately 6" deep and break out cleanly.

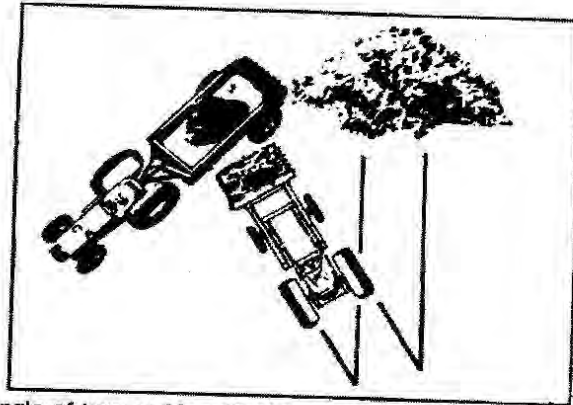


With the bucket level, start a cut at the notch approximately 2" deep. Hold the depth by feathering the bucket control to adjust the cutting lip up or down. When the front tires enter the notch, adjust the lift cylinder to maintain proper depth.



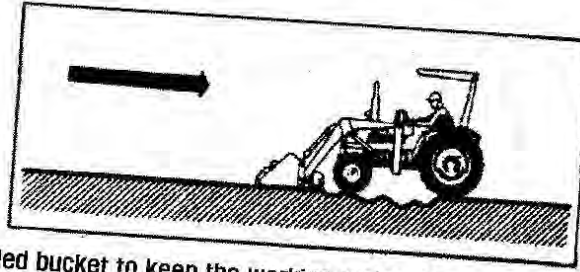
Make additional passes until the desired depth is reached. During each pass, only use the bucket control while at working depth. This will allow you to concentrate on controlling the bucket angle to maintain a precise cut.

### LOADING LOW TRUCKS OR SPREADERS FROM A PILE



For faster loading, minimize the angle of turn and length of run between pile and spreader.

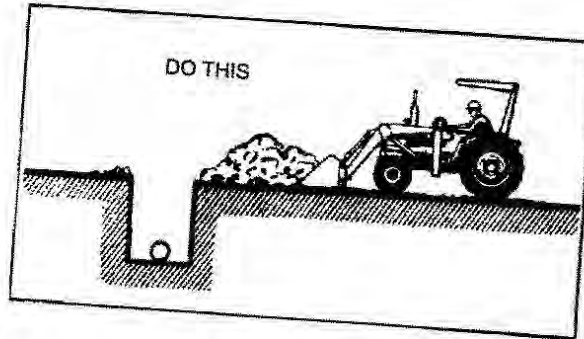
# BACKFILLING



Backgrade occasionally with a loaded bucket to keep the working surface free of ruts and holes. Hold the lift control forward in **FLOAT POSITION** so the full weight of the bucket is scraping the ground. Use only the heel of the bucket while backgrading.

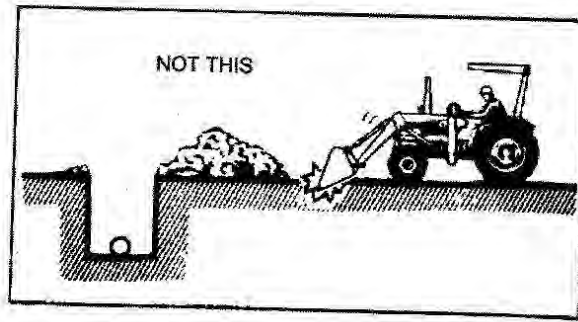
**IMPORTANT:** To prevent damage to cylinders:

- (1) Do not backgrade with bucket cylinders extended.
- (2) Always backgrade with valve in float position.



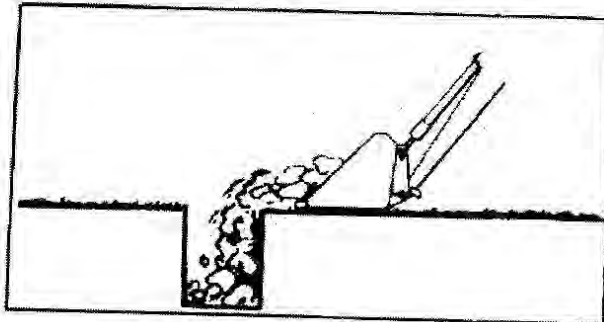
approach the pile with a flat bucket.



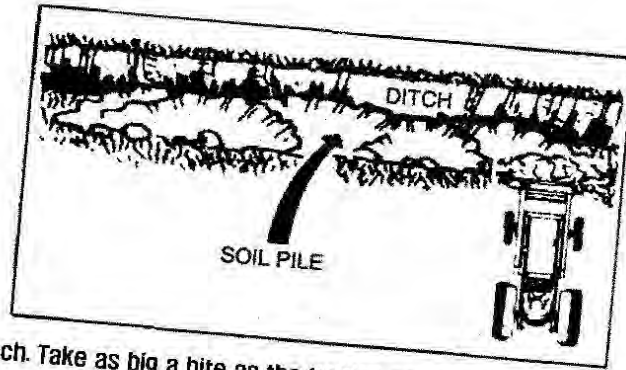


Poor methods actually move no more dirt and make it more difficult to hold a level grade.

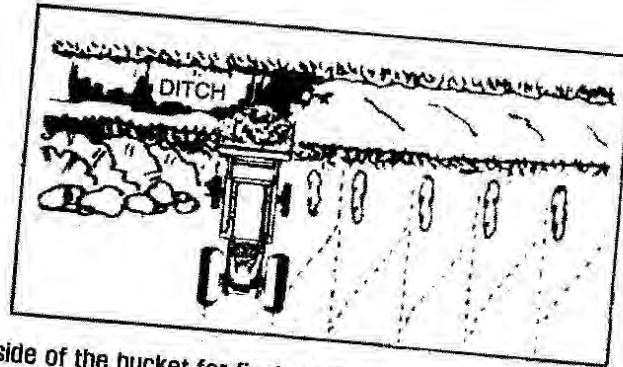
Do not use the bucket in the dumped position for bulldozing or backgrading. This method, shown above, will impose severe shock loadings on the dump linkage, the bucket cylinder, and the tractor.



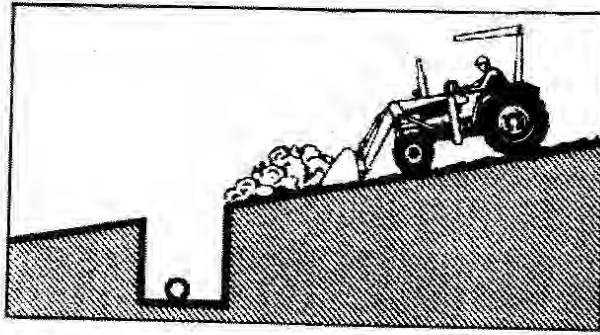
Leave dirt in the bucket because dumping on each pass wastes time.



Operate at right angles to the ditch. Take as big a bite as the tractor can handle without lugging down.



Leave dirt which drifts over the side of the bucket for final clean-up.



Pile dirt on the high side for easier backfilling on a slope.

## HANDLING LARGE HEAVY OBJECTS

### ▲WARNING▲

Do not use front end loaders for handling large, heavy objects such as large, round or rectangular bales, logs and oil drums.

Handling large heavy objects can be extremely dangerous due to:

- Possibility of rolling the tractor over.
- Possibility of upending the tractor.
- Possibility of the object rolling or sliding down the loader arms onto the operator.

### 3-3 TRANSPORTING

When transporting on road or highway, day or night, use tractor flashing warning lights unless prohibited by law. Carry load as low as possible maintaining adequate ground clearance and visibility. Reduce tractor ground speed when transporting a load. Take extra care when traveling over rough terrain or on slopes.

#### CAUTION

WHEN TRANSPORTING THE LOAD, KEEP THE BUCKET AS LOW AS POSSIBLE TO RESIST TIPPING, IN CASE A WHEEL DROPS IN A RUT. THIS WILL AVOID TIPPING AND POSSIBLE INJURY.

### 3-4 LOADER DETACHING AND STORAGE

#### NOTE

When loader hydraulics are disconnected from tractor the tractor hydraulic circuit must be completed. Failure to do so will result in tractor hydraulic pump damage.

A. Remove parking stands from storage. Raise boom and install as shown in Figure 2-1.

#### WARNING

NEVER STAND UNDER LOADER WHILE INSTALLING/REMOVING PARKING STANDS.

B. Lower boom until parking stands contact ground.

C. Extend bucket cylinders (dump) until cutting edge of bucket is firmly on the ground.

- D. Remove pin from front mounting bracket.
- E. Remove nuts and clamps securing loader sub-frame to rear mounting bracket.
- F. With tractor at IDLE SPEED carefully roll bucket back until sub-frame raises off rear bracket.
- G. Carefully activate boom cylinders until cross tube is free of pressure within front bracket channel.
- H. Disconnect hydraulic hoses.
- I. Carefully back tractor out of loader.
- J. Pin clamps back to sub-frame and place pin back in front mounting bracket for storage.
- K. Clean dirt and debris from loader. Dirt will hold moisture and cause rust.
- L. If loader is to be stored for an extended period of time, perform lubrication per paragraph 4-2 Also apply a coat of heavy grease to exposed cylinder rods to prevent rusting.

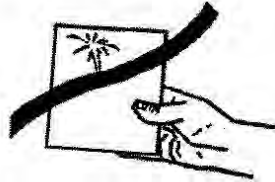
## SECTION IV MAINTENANCE

### 4-1 MAINTENANCE CHECK LIST

Perform scheduled maintenance as outlined below. Lower machine to ground, turn off tractor and set parking brake before doing maintenance inspections or work. All bolts should be torqued as recommended in torque chart on inside of back cover unless otherwise indicated.

#### ⚠ CAUTION ⚠

USE A PIECE OF CARDBOARD OR WOOD RATHER THAN HANDS AND WEAR EYE PROTECTION WHEN SEARCHING FOR HYDRAULIC LEAKS. ESCAPING HYDRAULIC OIL UNDER PRESSURE CAN PENETRATE SKIN. IF OIL IS INJECTED INTO SKIN, IT MUST BE SURGICALLY REMOVED WITHIN A FEW HOURS BY A DOCTOR OR GANGRENE MAY RESULT.



#### ⚠ WARNING ⚠

THE LOADER CAN FALL FROM HYDRAULIC SYSTEM FAILURE. TO AVOID SERIOUS INJURY OR DEATH, SECURELY SUPPORT LOADER BEFORE WORKING UNDERNEATH.

### **BEFORE EACH USE**

1. Inspect hydraulic lines and fittings for wear or leaks. Repair or replace if needed.
2. Inspect all pivot pins for wear. Make certain cotterpins are installed to retain each pivot pin.
3. Check all bolts for tightness.
4. Perform BEFORE EACH USE lubrication per paragraph 4-2.
5. During operation, listen for abnormal sounds which might indicate loose parts or other damage.

### **AFTER EACH USE**

1. Clean all debris from machine.

## **4-2 LUBRICATION (Figure 4-1)**

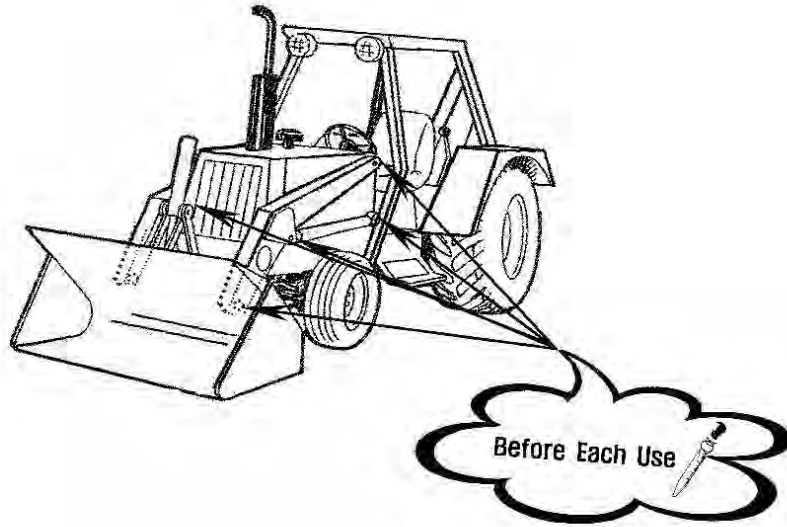
### **NOTE**

The multipurpose grease referenced in this section is an NLGI Grade 2 type grease.

### **BEFORE EACH USE**

1. Boom Pivot Pins- Apply multi-purpose grease to each fitting (1 fitting each side)
2. Boom Cylinders- Apply multi-purpose grease to each fitting (2 fittings each cylinder)
3. Bucket Cylinders- Apply multi-purpose grease to each fitting (2 fittings each cylinder)
4. Bucket Pivot Pin- Apply multi-purpose grease to each fitting (1 fitting each side)
5. Link Pivot Pin- Apply multi-purpose grease to each fitting (2 or 3 fitting each side)
6. Tractor Hydraulic Oil- Cycle boom and bucket cylinders 2 or 3 times before use then check tractor hydraulic oil level per tractor operator's manual.





**Figure 4-1 Lubrication Points**

## 4-3 HYDRAULIC SYSTEM PRESSURE REQUIREMENTS

A tractor hydraulic system pressure setting of 2400 psi is recommended for maximum efficiency and service. The Ansung control valve is pre-set at factory and should not be adjusted.

## 4-4 TROUBLESHOOTING

Troubleshooting procedures are listed in table 4-1. If the problem cannot be solved or replacement parts are necessary, contact your authorized Ansung dealer. Please have ready your machine name, model number, serial number, purchase date, and exact cause or description of problem.

TABLE 4-1

PROBLEM	POSSIBLE CAUSE	REMEDY
1. Loader slow and/or will not dump.	Hydraulic oil too heavy. Oil filter plugged. Hydraulic pump worn. Oil line restricted or leaking.  Quick couplers not properly connected. Control valve does not shift properly. Air in hydraulic system.  Cylinder leaks internally. Faulty valve.	Change to proper oil. Clean or replace filter. Repair or replace pump. Check all hoses and tubes for leaks, damage or restrictions. Replace damaged or restricted hoses or tube lines. Check connection - Replace if necessary. Inspect, clean, repair or replace valve. Cycle lift cylinders and bucket cylinders several times to free system of air. Replace seals. Replace or repair valve.

PROBLEM	POSSIBLE CAUSE	REMEDY
2. Loader chatters or vibrates when raising or lowering.	Air leak in pump inlet line.  Air in hydraulic system. Oil level too low.	Check, tighten or replace inlet line.  Cycle lift and bucket cylinders. Add oil as required.
3. Pump noisy.	Inlet line restricted or leaking.   Oil level too low. Pump worn or damaged.	Check for air leaks restrictions or collapsed hose. Tighten or replace hose. Clean filter if necessary. Add oil as required. Repair or replace pump.
4. Oil leaks.	Defective fittings or hoses. Loose Connections. Worn or damaged O-ring or wiper seal in cylinder rod end. Worn or damaged O-rings in valve.	Replace defective parts. Tighten fittings. Install a seal repair kit.  Install an O-ring repair kit.

<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>REMEDY</b>
5. Insufficient lift capacity.	<p>Improper hydraulic pump operation.</p> <p>Load is greater than boom lift capacity.</p> <p>Internal boom cylinder leakage.</p> <p>Improper hydraulic valve operation.</p>	<p>Repair or replace pump.</p> <p>Check loader specifications.</p> <p>Replace any worn parts and install a seal repair kit.</p> <p>Repair or replace valve.</p>
6. Excessive wear on bucket	<p>Bucket is riding on cutting edge instead of wear pads.</p>	<p>Use boom "FLOAT" position or bucket level indicator to ensure bucket rides on wear pads.</p>
7. Slow leakdown.	<p>Worn control valve.</p> <p>Worn cylinder piston seals.</p>	<p>Have authorized Ansong dealer replace seals.</p>
8. Hydraulic cylinders inoperative.	<p>Hose from control valve improperly connected.</p>	<p>Refer to plumbing diagrams in Section V.</p>
9. Loader lift and bucket tilt controls do	<p>Hoses improperly connected.</p>	<p>Refer to plumbing diagrams in Section V and correct hose connections.</p>

## SECTION V ASSEMBLY

### CAUTION

**THE FOLLOWING SAFETY PRECAUTIONS SHOULD BE THOROUGHLY UNDERSTOOD BEFORE ATTEMPTING MACHINE ASSEMBLY.**

1. Do not lift heavy parts or assemblies. Use crane, jack, tackle, fork trucks, or other mechanical devices.
2. Select an area for assembly that is clean and free of any debris which might cause persons working on the assembly to trip.
3. Arrange parts to be assembled neatly in the work area and have tools and other mechanical assisting devices in easy reach.
4. Inspect all parts and assemblies thoroughly and remove any sharp edges, grease, oil, or dirt which might cause pieces to slip when handling.
5. Preview the assembly instructions in your operator's manual before proceeding further.
6. If the assembly instructions call for parts or assemblies to be blocked up, use only blocking material that is in good condition and is capable of handling the weight of the assembly to be blocked. Also, insure that the blocking material is on a clean, dry surface.
7. Never put hands or any other body under blocked up assemblies if at all possible.
8. Always wear goggles or safety glasses when hammering, grinding or drilling metal parts.
9. If the assembly calls for welding or cutting, be sure that there are no flammable materials close at hand and

that bystanders have taken necessary precautions.

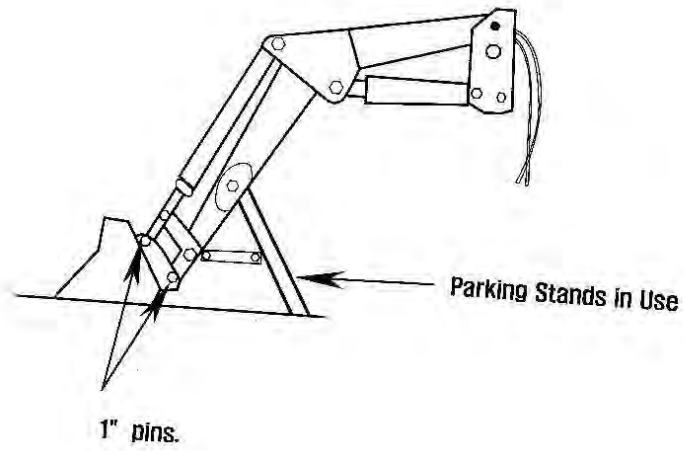
**AFTER COMPLETING ANY ASSEMBLY STEP, THOROUGHLY READ THE NEXT STEP IN THE ASSEMBLY INSTRUCTIONS BEFORE PROCEEDING WITH THAT STEP.**

10. After completing assembly, thoroughly inspect the machine to be sure that all nuts, bolts, hydraulic fittings or any other fastened assemblies have been thoroughly tightened.
11. After completing assembly be sure that all safety locking devices or guards are in place.
12. Before operating the machine, thoroughly read the operation section of this manual.
13. Before operating, read the maintenance section of this manual to be sure that any parts requiring lubrication such as gearboxes are full to avoid any possible damage.
14. Wear personal protective equipment such as, but not limited to, protection for eyes, ears, feet, hands, lungs and head when assembling the equipment. Do not wear loose clothing or jewelry that may catch on equipment moving parts.

**BEFORE OPERATING THE EQUIPMENT, IF YOU HAVE ANY QUESTIONS REGARDING THE PROPER ASSEMBLY OR OPERATION, CONTACT YOUR AUTHORIZED ANSUNG DEALER OR REPRESENTATIVE.**

### 5-1 MAINFRAME ASSEMBLY

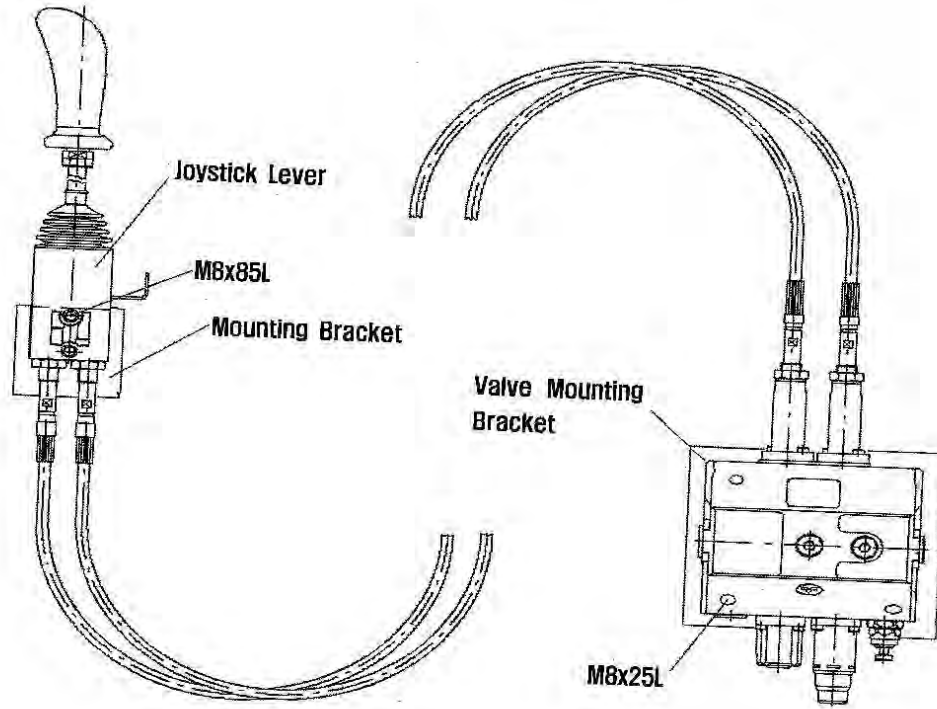
- A. Attach bucket to boom using two 1" pins. Secure pins with link pins. (Figure 5-1)
- B. Attach bucket cylinders to bucket using 1" pins. Secure pins with link pins.



[Figure 5-1]

## 5-2 CONTROL VALVE ASSEMBLY AND MOUNTING

- A. Assemble Mounting Bracket to inside of tractor.
- B. Assemble Joystick Lever to Mounting Bracket.
- C. Assemble Control Valve to Valve Mounting Bracket on Sub-frame.
- D. Assemble cable on Joystick Lever to Control Valve.



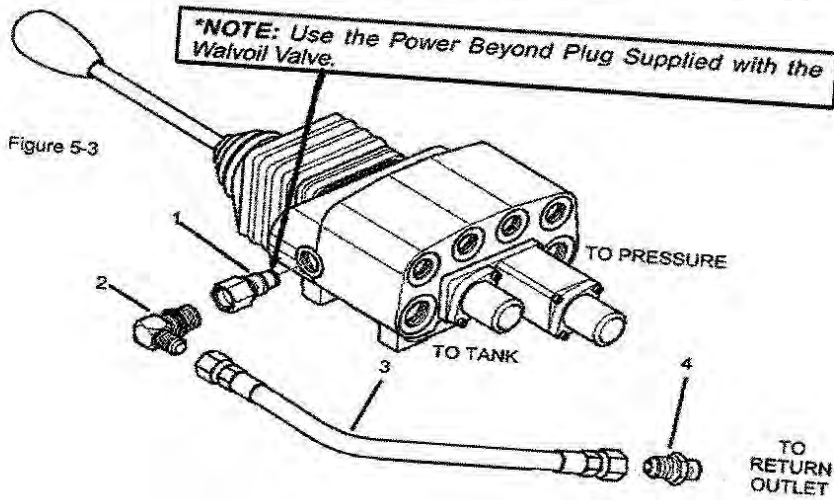


### 5-3 POWER BEYOND KIT

This Kit is provided to relieve excessive pressure on loader control valve when other implements are used while loader is still attached to tractor.

Kit Includes:

ITEM	QTY.	DESCRIPTION
1	1	Power Beyond Plug Assy.
2	1	Elbow 90° 1/2"
3	1	Hydraulic Hose 1/2"
4	1	Straight Fitting



**IMPORTANT:** When Loader hydraulics are disconnected from tractor, the tractor hydraulic circuit must be completed by connecting pressure port to return port.  
Failure to do this will cause serious damage to tractor hydraulic pump.

### **INSTALLATION INSTRUCTIONS**

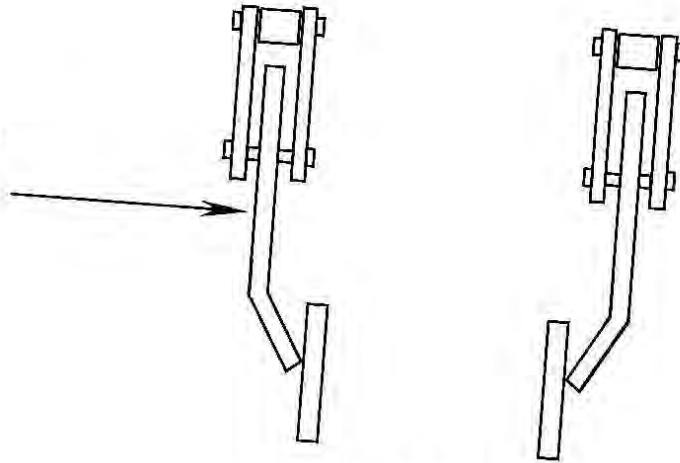
1. Remove plug from right side of valve.
2. Install power beyond plug in valve.
3. Install 90° elbow in power beyond plug.
4. Attach hydraulic hose to 90° elbow and route hose to return outlet on tractor.

**NOTE:** Additional fitting are required to attach hose to return outlet on tractor.




## **SAFETY DECALS**

To promote safe operation, Ansung supplies safety decals on all products manufactured. Because damages can occur to safety decals either through shipment, use or reconditioning, Ansung will, upon request, provide safety decals for any of our products in the field at no charge. Contact your authorized Ansung dealer for more information.


Decals 03L01, 03L02, 03L03  
and 03L04 are located on  
the left side of subframe.  
Other decals are located  
on the Boom



**REAR VIEW OF SUBFRAME**

<b>⚠ CAUTION</b>	<b>TO AVOID SERIOUS INJURY OR DEATH</b>	
	<ul style="list-style-type: none"> <li>• READ OPERATOR'S MANUAL AND DECALS BEFORE OPERATING &amp; FOLLOW ALL PRECAUTIONS.</li> <li>• ALLOW NO CHILDREN OR UNQUALIFIED PERSONS TO OPERATE EQUIPMENT.</li> <li>• ROPS (ROLLOVER PROTECTIVE SYSTEM) AND SEAT BELT EQUIPPED TRACTOR IS RECOMMENDED FOR OPERATOR USE IN ALL LOADER OPERATIONS.</li> <li>• ADD RECOMMENDED WHEEL BALLAST OR REAR WEIGHT FOR STABILITY.</li> <li>• MOVE WHEELS TO WIDEST RECOMMENDED SETTINGS TO INCREASE STABILITY.</li> <li>• OPERATE LOADER ONLY FROM "OPERATOR'S SEAT"</li> </ul>	<ul style="list-style-type: none"> <li>• STOP ENGINE, LOWER ARMS, RELIEVE ALL HYDRAULIC PRESSURE AND LOCK BRAKES BEFORE LEAVING OPERATOR'S SEAT.</li> <li>• DO NOT STAND, WORK, OR ALLOW OTHERS UNDER RAISED LOADER.</li> <li>• MOVE AND TURN TRACTOR AT LOW SPEEDS.</li> <li>• CARRY LOADER ARMS AT A LOW POSITION DURING TRANSPORT.</li> <li>• DO NOT LIFT OR CARRY ANYONE ON LOADER OR ON BUCKETS, FORKS, OR ATTACHMENTS.</li> <li>• OPERATOR SHOULD WEAR SAFETY HARD HAT, SAFETY GLASSES, SAFETY SHOES AND OTHER P.P.E. AVOID WEARING LOOSE CLOTHING OR JEWELRY THAT MAY CATCH IN MOVING PARTS.</li> </ul>
		
		
03L01		

03L01

<b>⚠ WARNING</b>		
		
<b>RAISED LOADER OR BOOM CAN FALL FROM HYDRAULIC SYSTEM FAILURE. TO AVOID SERIOUS INJURY OR DEATH,</b>		
<ul style="list-style-type: none"> <li>• BLOCK UP OR SECURELY SUPPORT LOADER AND BOOM BEFORE WORKING UNDERNEATH.</li> <li>• PURGE ALL AIR FROM HYDRAULIC SYSTEM BEFORE ATTEMPTING TO RAISE OR LOWER LOADER OR BOOM.</li> <li>• STAND CLEAR IF LOWERING OR RAISING LOADER OR BOOM.</li> <li>• DO NOT USE HAND OR SKIN TO CHECK FOR HYDRAULIC LEAKS. USE CARDBOARD OR WOOD. WEAR EYE PROTECTION.</li> <li>• HIGH PRESSURE OIL LEAKS CAN PENETRATE SKIN CAUSING SERIOUS INJURY AND GANGRENE. CONSULT A PHYSICIAN IMMEDIATELY.</li> <li>• LOWER THE LOADER OR BOOM AND RELEASE HYDRAULIC PRESSURE BEFORE LOOSENING FITTINGS.</li> <li>• REFER TO OWNER'S MANUAL FOR DETAILS.</li> </ul>		
03L02		

03L02

<b>⚠ WARNING ⚠</b>	
<b>TO AVOID SERIOUS INJURY OR DEATH:</b>	
<p>Use sufficient tractor wheel ballast or rear weight and widest wheel settings for tractor stability during loader operation. See tractor owner's manual for specific recommendations or contact local dealer.</p> <p>To avoid tractor overturn : Do not handle large heavy objects (large round bales, machinery, etc.) with loader. See owner's manual for further information.</p>	
03L03	

03L03

<b>⚠ WARNING ⚠</b>	
	
<b>TO AVOID SERIOUS INJURY OR DEATH,</b>	
<ul style="list-style-type: none"> <li>• DO NOT LIFT OR CARRY ANYONE ON BUCKETS, FORKS, SPEARS OR ANY OTHER PORTIONS OF THE LOADER OR LOADER ATTACHMENTS.</li> <li>• INADVERTENT MOVEMENT OF THE LOADER OR ATTACHMENT COULD RESULT IN SERIOUS INJURY OR DEATH.</li> <li>• AVOID CONTACT WITH ELECTRICAL POWER LINES BY LOADER OR ATTACHMENTS</li> </ul>	
03L04	

03L04

**⚠ WARNING**

THESE FORKS ARE NOT INTENDED FOR USE WITH LARGE OBJECTS SUCH AS ROUND HAY BALES OR OTHER ITEMS WHICH MAY ROLL BACKWARDS AND FALL CAUSING INJURY TO THE OPERATOR

Lift only objects that are within the stated lift capacity of the loader. Refer to your owner's manuals for the loader and for this fork attachment for loader limits and other safety considerations.

03L05

03L05

**⚠ CAUTION**

BE SURE TO PURGE ALL THE AIR FROM THE HYDRAULIC SYSTEM BEFORE ATTEMPTING TO RAISE OR LOWER THIS MACHINE. REFER TO OWNER'S MANUAL FOR FURTHER DETAILS.

03L06

03L06

## TORQUE SPECIFICATIONS

Proper torque for American fasteners used on Ansung equipments.  
Recommended Torque in Foot Pounds(Newton Meter)\*

### AMERICAN Bolt Head Markings

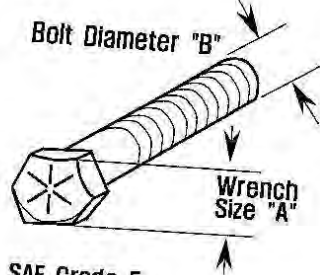


SAE Grade 2  
(No Dashes)



SAE Grade 5  
(3 Dashes)

WRENCH SIZE(IN.) "A"	BOLT DIAMETER (IN.) "B" AND THREAD SIZE	SAE GRADE 2	SAE GRADE 5	SAE GRADE 8
7/16	1/4 - 20 UNC	6(7)	8(11)	12(16)
7/16	1/4 - 28 UNF	6(8)	10(13)	14(18)
1/2	5/16 - 18 UNC	11(15)	17(23)	25(33)
1/2	5/16 - 24 UNF	13(17)	19(26)	27(37)
9/16	3/8 - 16 UNC	20(27)	31(42)	44(60)
9/16	3/8 - 24 UNF	23(31)	35(47)	49(66)
5/8	7/16 - 14 UNC	32(43)	49(66)	70(95)
5/8	7/16 - 20 UNF	36(49)	55(75)	78(106)
3/4	1/2 - 13 UNC	49(66)	76(103)	106(144)
3/4	1/2 - 20 UNF	55(75)	85(115)	120(163)
7/8	9/16 - 12 UNC	70(95)	109(148)	153(207)
7/8	9/16 - 18 UNF	79(107)	122(165)	172(233)
15/16	5/8 - 11 UNC	97(131)	150(203)	212(287)
15/16	5/8 - 18 UNF	110(149)	170(230)	240(325)
1-1/8	3/4 - 10 UNC	144(195)	266(360)	376(509)
1-1/8	3/4 - 16 UNF	192(260)	297(402)	420(569)
1-5/16	7/8 - 9 UNC	166(225)	430(583)	606(821)
1-5/16	7/8 - 14 UNF	184(249)	474(642)	668(905)
1-1/2	1 - 8 UNC	250(339)	644(873)	909(1232)
1-1/2	1 - 12 UNF	274(371)	705(955)	995(1348)
1-1/2	1 - 14 UNF	280(379)	721(977)	1019(1381)
1-11/16	1-1/8 - 7 UNC	354(480)	795(1077)	1288(1745)

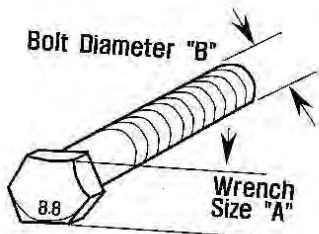


SAE Grade 5  
(3 Dashes)

1-11/16	1-1/8 - 12 UNF	397(538)	890(1206)	1444(1957)
1-7/8	1-1/4 - 7 UNC	500(478)	1120(1518)	1817(2462)
1-7/8	1-1/4 - 12 UNF	553(749)	1241(1682)	2013(2728)
2-1/16	1-3/8 - 6 UNC	655(887)	1470(1992)	2382(3228)
2-1/16	1-3/8 - 12 UNF	746(1011)	1672(2266)	2712(3675)
2-1/4	1-1/2 - 6 UNC	870(1179)	1950(2642)	3161(4283)
2-1/4	1-1/2 - 12 UNF	979(1327)	2194(2973)	3557(4820)

Proper torque for American fasteners used on Ansong equipments.  
Recommended Torque in Foot Pounds(Newton Meter).-

**METRIC**



Numbers appearing on bolt heads  
indicate ASTM class.

WRENCH SIZE(mm.) "A"	BOLT DIAMETER (mm.) "B"	ASTM 4.6	ASTM 8.8	ASTM 9.8	ASTM 10.9
8	5	1.8(2.4)		5.1(6.9)	6.5(8.8)
10	6	3(4)		8.7(12)	11.1(15)
13	8	7.3(10)		21.1(29)	27(37)
16	10	14.5(20)		42(57)	53(72)
18	12	25(34)	74(100)	73(99)	93(126)
21	14	40(54)	118(160)	116(157)	148(201)
24	16	62(84)	167(226)	181(245)	230(312)
30	20	122(165)	325(440)		449(608)
33	22		443(600)		611(828)
36	24	211(286)	563(763)		778(1054)
41	27		821(1112)		1138(1542)
46	30	418(566)	1119(1516)		1547(2096)

Use 75% of the specified torque value for plated fasteners. Use 85% of the specified torque value for lubricated fasteners.