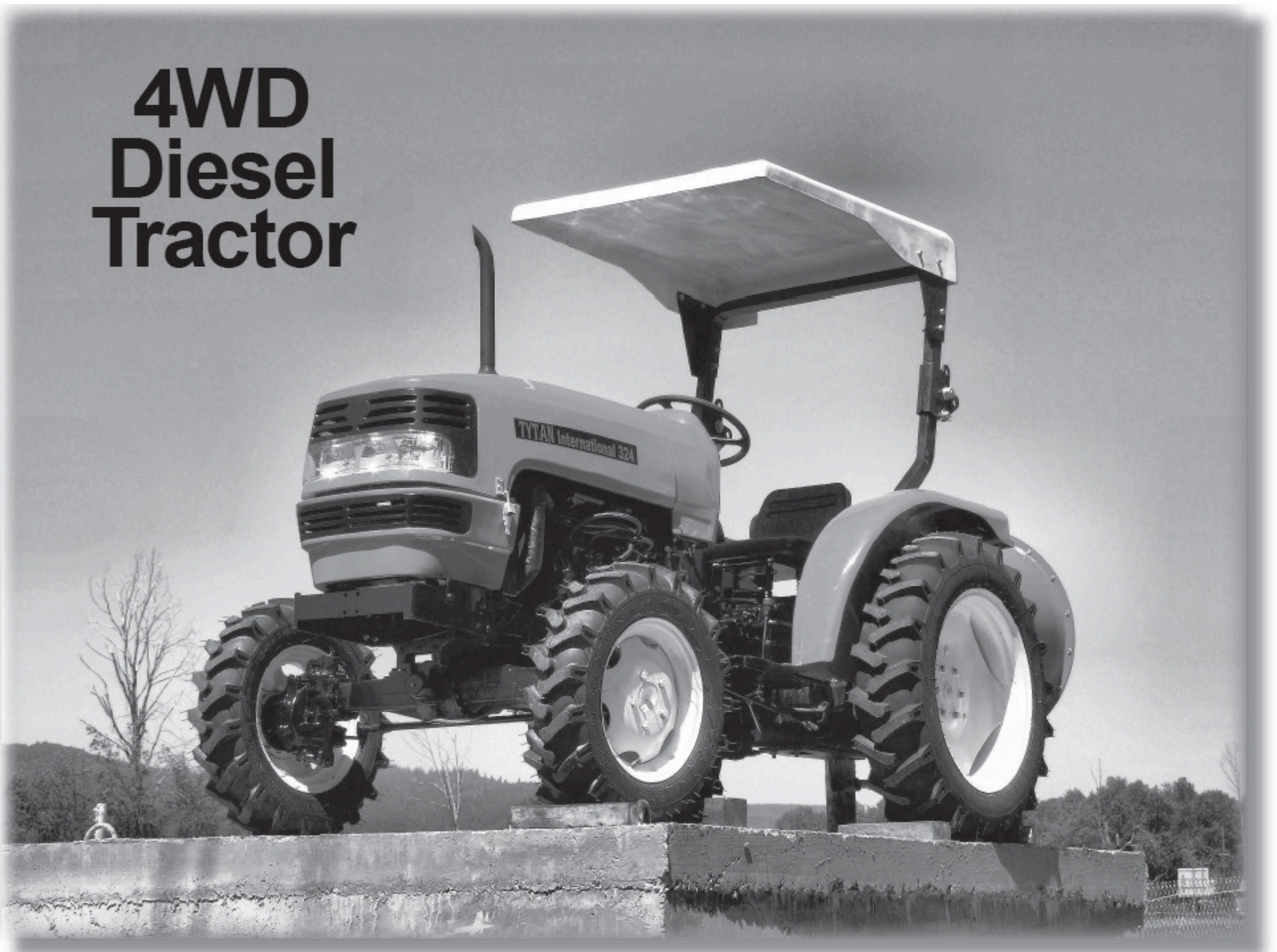


# 324

## Operation Manual

**4WD  
Diesel  
Tractor**



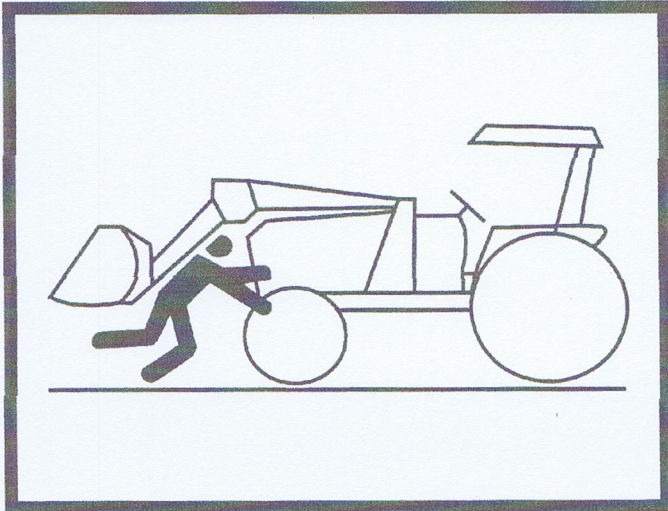
**TYTAN**  
**International**

5225 Meeker Drive - P.O. Box 1249  
Kalama, Washington 98625  
Phone - 360.673.2278 - 1.888 FARM4WD

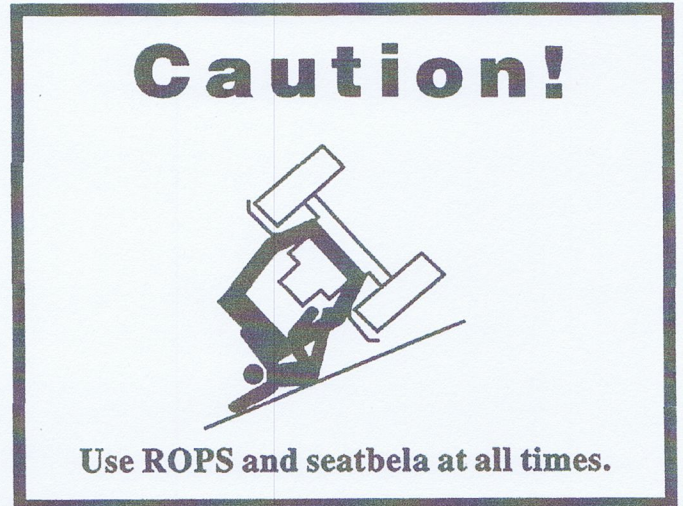


# WARNING!

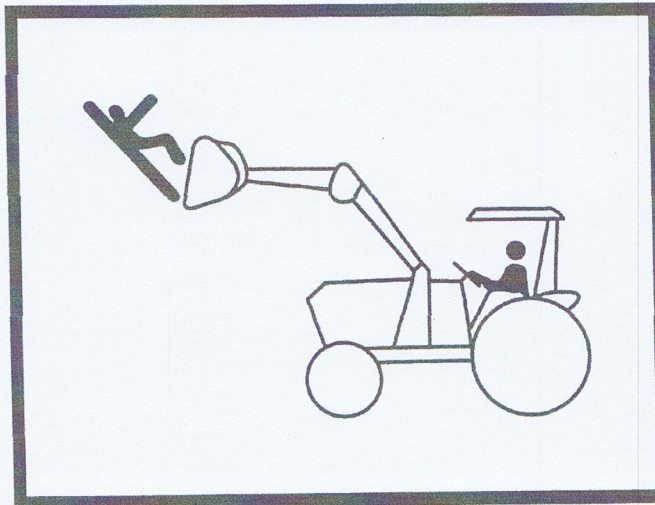
PLEASE HEED THE WARNINGS BELOW FOR YOUR SAFETY!



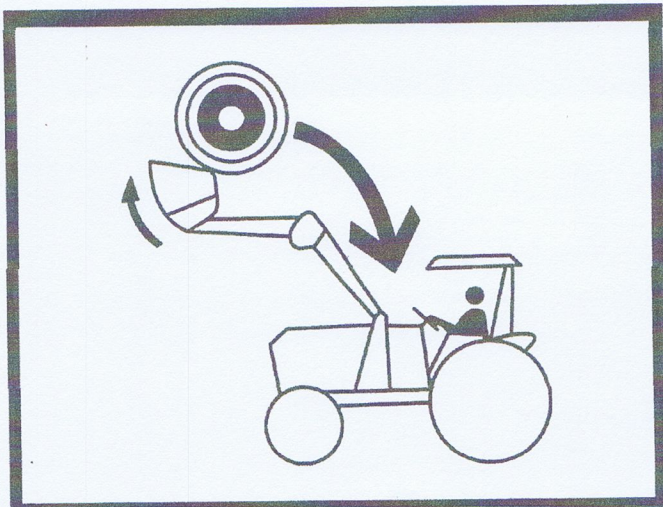
Leave the front loader in the down position when getting off tractor. Do not crawl under the front loader when in the up position.



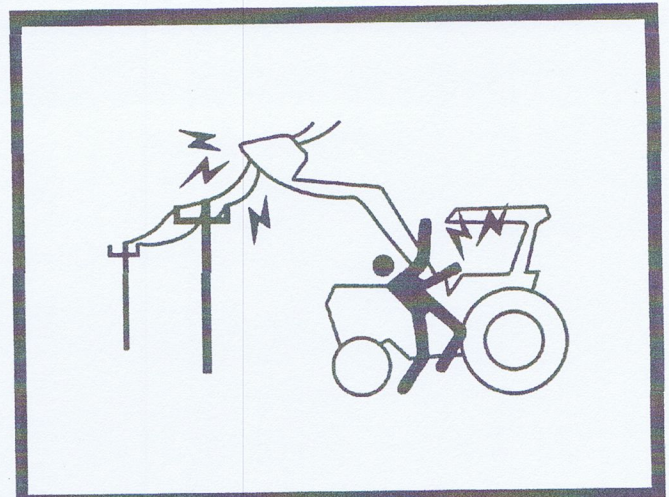
Stay away from steep locations.



Do not ride in, or on a front loader.



Do not carry items in up position without being able to see levelness of the bucket.



Do not travel with bucket in up position if possible, or you may hit live wires.



# Introduction

## Congratulations!

You have just purchased a 4WD Diesel Tractor that has many applications and that will do lots of work for you. This tractor is famous with Farmers in China for its high quality & durability. The Weifang Tractor factory prides itself in being the leader in China, using only the highest quality parts and materials.

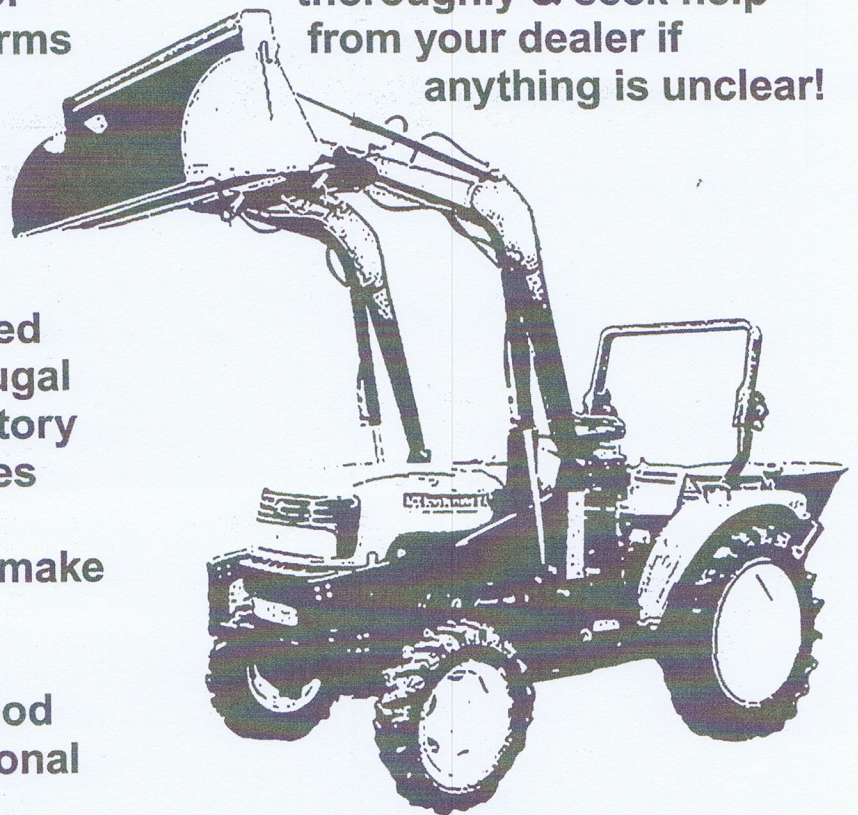
The Manufacturer, Weifang Tractor Factory was opened in 1958 to produce tractors that could last for over 20 years of heavy non stop use on its farms that work two shifts a day in most cases. That translates too many thousands of hours of usage. The engines and tractor were designed to be easily serviced in the field and to be very frugal on fuel. Weifang Tractor factory employs over 4000 employees and uses the most modern computerized machinery to make its tractors.

This tractor requires a good understanding of its operational functions, limitations and its maintenance needs. The owner is required to service

this equipment routinely. It is important that the owner reads and understands all of the information's in this manual & on his warranty card. The Tractor owner needs to know that these parts are easily supplied and will never see any hardship in getting parts as long as they keep the information's printed on the Parts manual.

We wish you best wishes for many years of satisfied usage.

Please study this manual thoroughly & seek help from your dealer if anything is unclear!





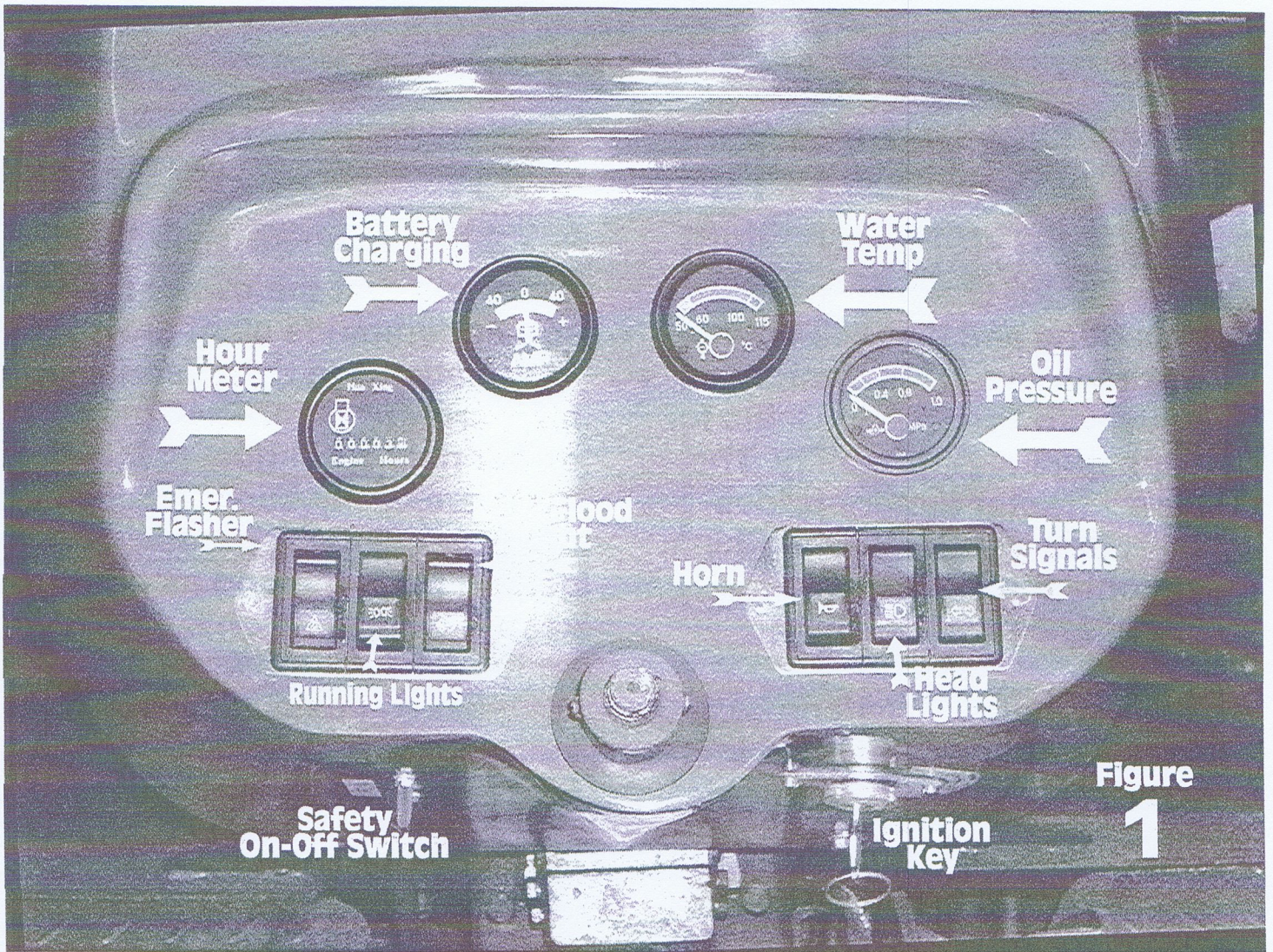


Figure 1  
1

Figure 1

- **Battery Charging** – when starting the tractor, the tractor will charge in the plus + when running and fully charged, it will run at zero. If there is a short in the wiring or failure in the alternator etc., the charging will be negative or left of the zero.
- **Hour meter** – your tractor traditionally may have 8-14 hours on it from the factory & dealership testing. The dealership is required to perform certain dealer prep tests that run the hour meter. *Do not leave your key on after using the tractor or you will also run the hour meter.*
- **Water Temperature should run about 80 degrees.** When running in a dry grass or hay field with lots of dust or dirt, your temperature may rise because of a build up on the radiator screen. Keep it clean of debris & dirt.
- **Oil Pressure** – Your oil pressure should run between .4 and .6 in normal operation. It is not uncommon for this to take a while to get functioning after starting the engine. All of the above gauges are mechanical in function and very easy and inexpensive to replace. That is the theme of this tractor.
- **Emergency flashers** are for safety use on the road
- **Running lights** are to be on when running the tractor at night..

- **Rear Flood light** is halogen and should be adjusted to focus on the tasks you are performing. Make sure it is tightened and doesn't loosen & shake.
- **Horn** - is great to notify another party of your presence
- **Head lights** - are great to find your way with and must be used at night
- **Turn Signals** - The turn signals are to let others know your intentions and must be used on the road
- **Safety Switch** - This is an on-off switch that must be in on position in order to make the key functional. Likewise with this key off it also saves you from running the battery down if the key is left on. The procedure for shutting down the tractor should always be turn the key off first and then turn the Safety switch to off position.
- **Ignition Key switch** - Please make every effort to turn this to the off position when shutting the tractor down. This key is spring loaded and shall be turned to the right on starting and then spring back to the "run" position.
- **Shut off** – please note below the safety switch & also below the fiberglass lies the red knob that is a "pull type" kill switch. It is to be pulled out to kill and make sure it moves freely back in when you release it.



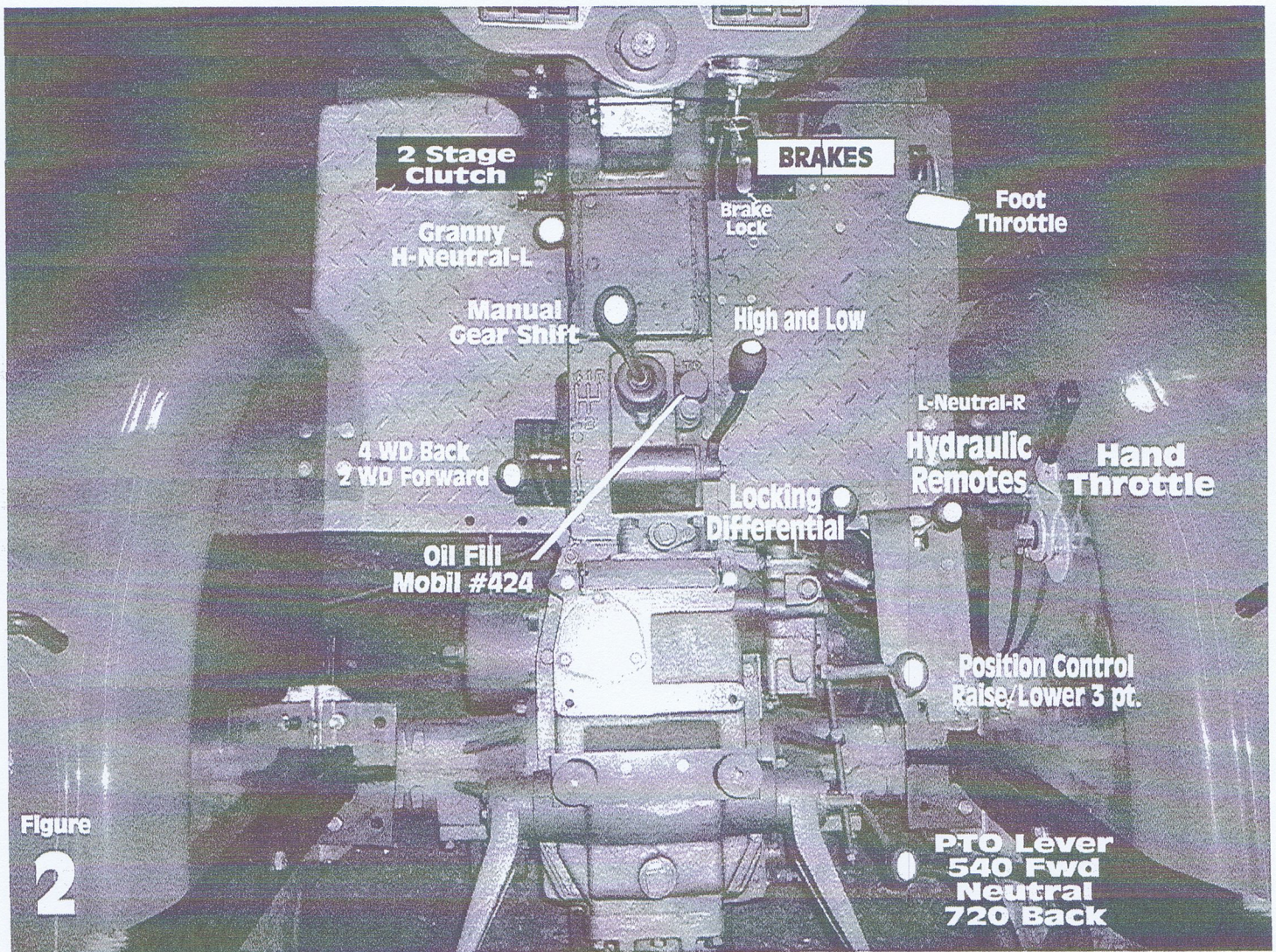


Figure  
**2**

Figure 2

**Two Stage clutch** – this means when you depress the clutch to the half way mark, that will stop the ground speed of your tractor. Pressing it further to the floor will stop the PTO. You must depress the clutch pedal all the way to the floor in order to have smooth engagement of the PTO lever. If there is any noise or roughness in that engagement with the clutch all the way to the floor, then that means there may need to be a clutch adjustment made.

**Brakes** - there are twin brake pedals that have a flip over pin connecting them. They can be depressed individually for steering but it isn't suggested. To the left of the brake pedals is a flip up locking lever to park the tractor with.

**Foot & Hand throttle** – The foot throttle is handy to use on various uses however in field use the hand throttle gives you a constant RPM while in motion. The hand throttle has an adjustment nut that can be tightened or loosened per your desire.

**Gear shift lever** - The gear pattern is seen just to the left of the shifting lever. The key here is to fully engage into your gears and to fully disengage. Otherwise if those gears are not moved to the proper positions, it is possible to jam them. The gears start out rather stiff when new but get much smoother after 75 hours.

**2WD-4WD lever** – This lever is one you don't want to

move accidentally when in operation so it is designed with a slight catch to it. In other words, pull it out towards the fender just slightly before attempting to slide it into position.

**Oil Fill** - This has a dip stick and that level should be 1/2" below the housing that the top plate attaches to. We use Mobil #424 oil which is special for this function. John Deere 303 is the only other suggested oil that meets these standards.

**High & Low lever** - This is your lever has low gear in the down position, then a neutral and up is high. The normal user has no need to use high gear. The 1<sup>st</sup> gear low is great for tilling and 4<sup>th</sup> low is great for bush hogging a field of grass.

**Granny gear** – this lever is to go into a compound low range. It will get the tractor to a super crawl. When the lever is far forward, it is in low. Then there is neutral when pulling it up and then all the way up is high range. High will keep your tractor moving at normal speeds. We suggest you keep it in the high range. This lever is optional and will be sold with the tractor only as part of a package sale.

**Locking Differential** – this is an optional lever sold only as part of a package purchase. This operates similar to Positraction. It locks both rear wheels for getting

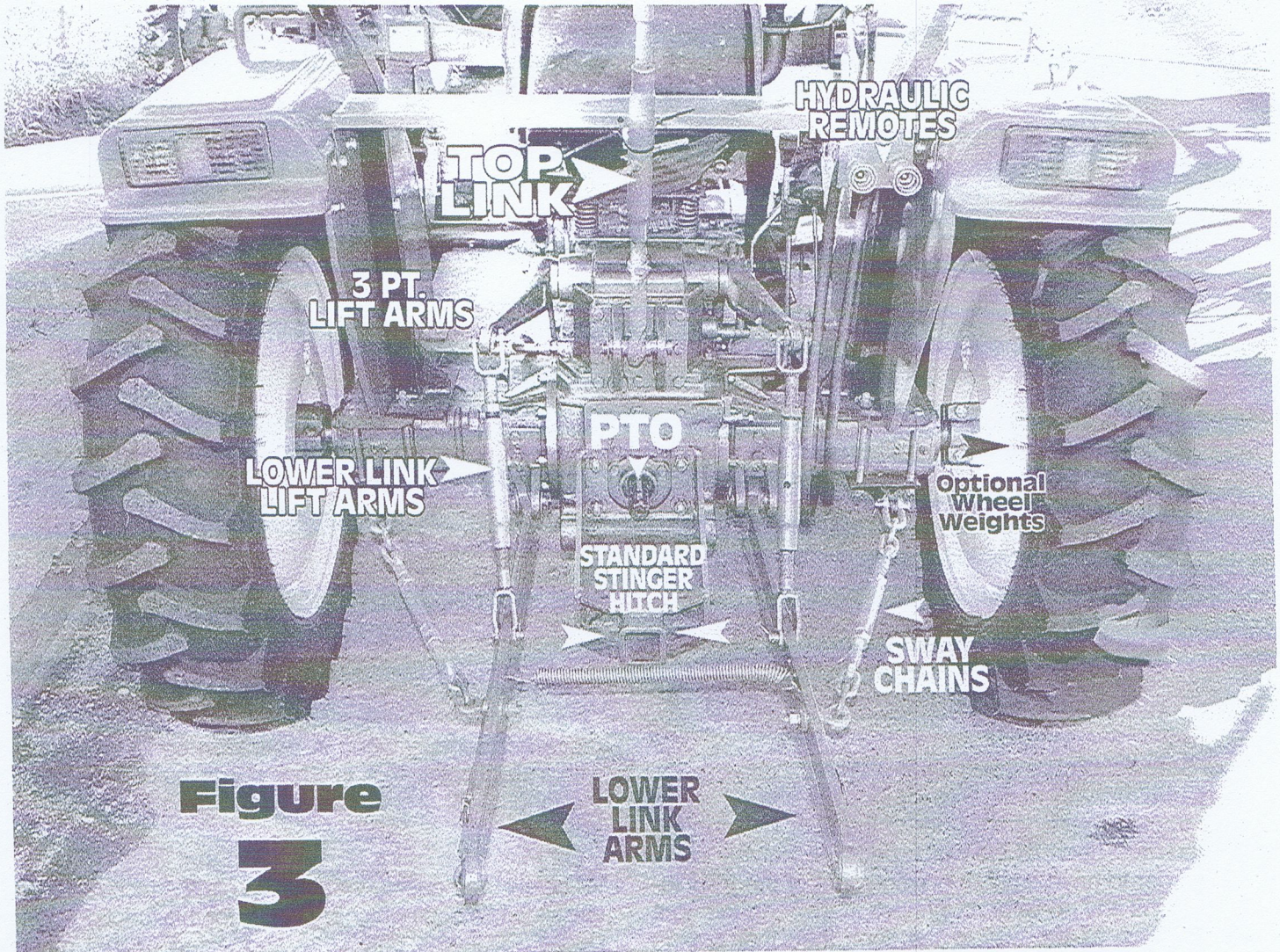


out of the toughest of conditions. It operates in addition to 4WD. It must be slipped into gear only when moving very slowly at low RPM and double clutching. Once in, it will stay in automatically without being held in until you are free of the stuck position.

Position Control is the raise & lower lever for your 3 PT implements. This lowers your implements by moving

lever forward from the neutral position and raises them when moving the lever to the back position.

PTO Engagement lever is to be left in the center position at all times unless you are planning use with a PTO run implement. Moving the lever forward puts it in 540 RPM and to the rear past neutral is the 720 RPM speed.



**Figure  
3**

**Figure 3**

**Lower Link Arms** – left & right are the items that you attach the ears of your 3 PT implement to. The ears on the implements used on this equipment are Category 1 in size. Likewise, so are the holes in these lower links.

**Top Link** – this is the top adjustable arm that attaches to the top or third attaching portion of your 3 PT on the implement. The top link is responsible for properly adjusting most implements on how they are to angle or face. Make sure once your adjustments are made that you lock them with the tightening nut.

**Lower link lift arms** – these help make sure your implement is evenly leveled or in some cases you may want the reverse. You may want a road blade to tilt and thus is of a turn buckle type design. Make sure once you have your desired adjustment, that you lock that positioning by

tightening the nut at the top.

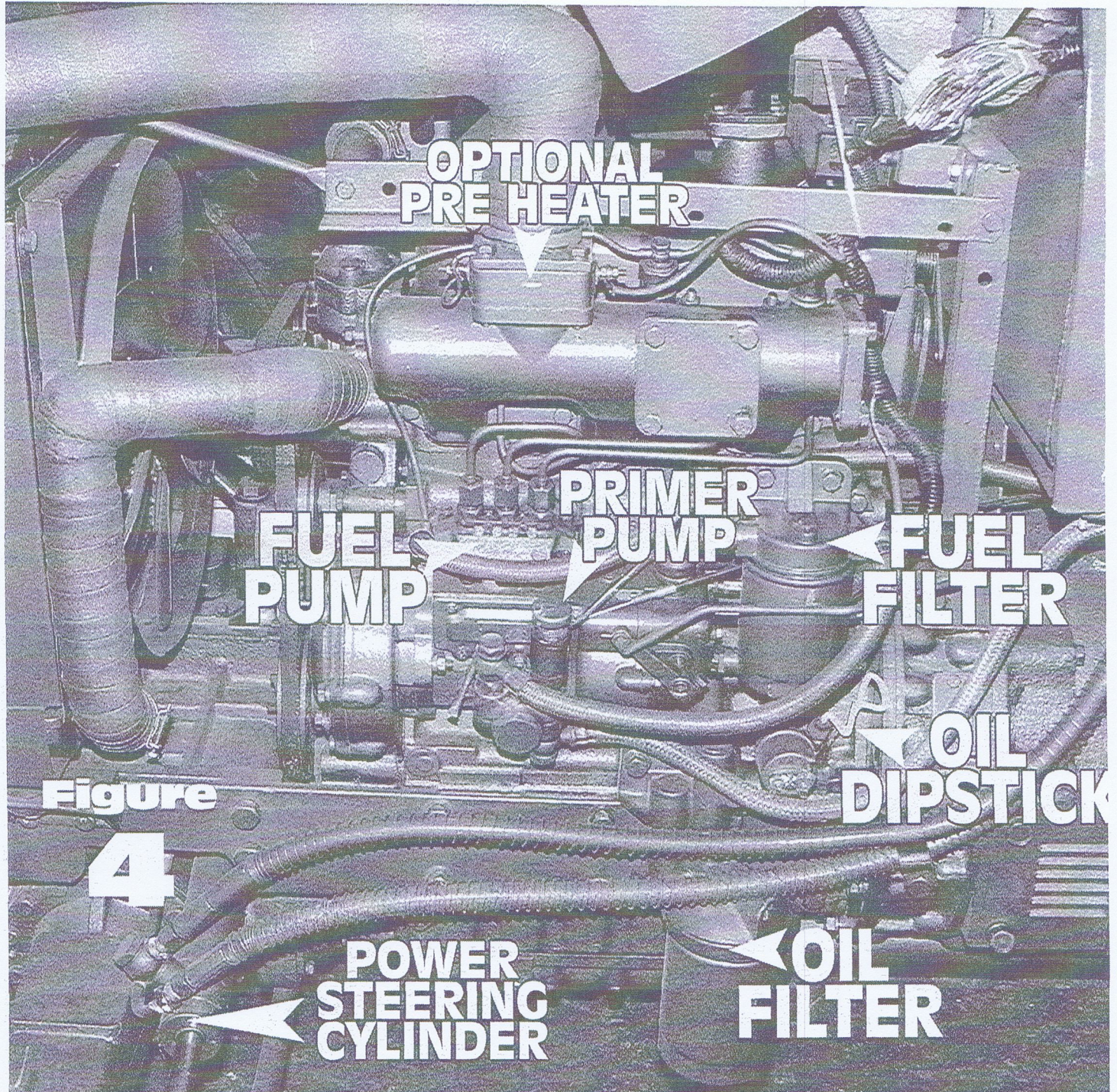
**PTO** – this is the Power take off that attaches to your implements via a shaft. It is of a standard 6 spline type that is universal. Implement shafts are made to lock onto this PTO shaft from the tractor. Have the dealer show you how this lock works on the various implements you use. Never operate this PTO when you are off the tractor. Standard PTO speed is 540 RPM or revolutions per minute. Over 90% of the implements you will use are to be used at 540 speed ONLY.

**Hydraulic Remotes** - These are controlled by a lever that will push hydraulic fluid to the port you want to use. When using a log splitter for example, one is the pressure line out and other is the return line in. The two ports may switch function depending on your position of the Hydraulic remotes lever. The lever is configured to operate.



**Left-Neutral-Reverse.** - Stinger hitch – This is for towing and many other possible uses. The stinger hitch is the female receptacle that is exactly the same as on the USA built pickup trucks. It takes the standard male receiver with a ball.

**Wheel weights** - The wheel weights are optional and come in sets. Any tractor can have one or two sets added to the rear wheels. The weights are good to counter balance a front loader ,as well as assuring better traction.



**Figure 4**  
**Fuel filter** – The 390 engine that is equipped with the #324 tractor takes the CX0708 fuel filter. It is an easy spin on type.  
**Oil filter** – The Tytan #324 takes a JX0811A spin on oil filter  
**Primer pump** - this is a device to prime your fuel lines in the situation that you run your tractor out of fuel. It is screwed

down and can be unscrewed in which case it pops up from being spring loaded. By pressing it up and down you can slowly feel the pressure of the fuel coming back into prime. When done, press it down hard and screw it back down. You must get this done or you will have an air leak and keep the tractor from operating correctly.

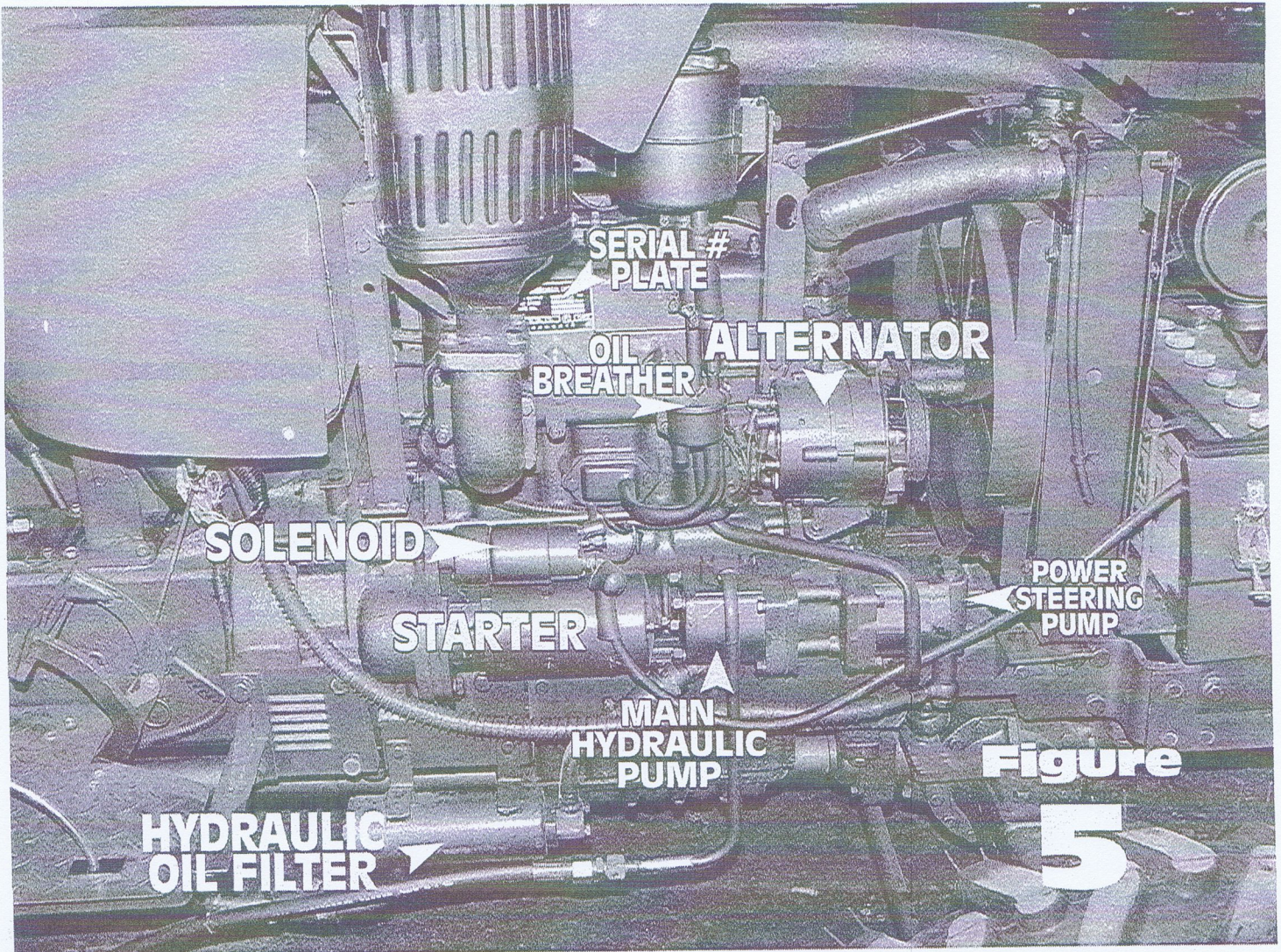
**Fuel pump** – this is designed very similar to the



Bosch type pump and controls your fuel pumping through your system. If you get too much air in your system, you may be required to open the small hex nut above the primer pump slightly. That will allow air to first be pumped out with the primer pump. When fuel starts coming out without air then tighten the hex nut. It should be tightened lightly

**Optional Pre-Heater** - the pre heater is designed to heat the air before going into the engine, so that firing in cold weather is easier. This element can be easily installed by your dealer.

**Oil dip stick** - is provided to check your engine oil. Close attention should be paid to this at all times. The suggested oil is 15-40 in a diesel type.



**Figure  
5**

**Figure 5**

**Starter** - is the item that turns the engine over to start. This item should never be power washed. Connections to the battery and starter must always be very clean for good contact. The #324 uses a Model QD138 starter.

**Alternator** - is a JF151 and is the item that generates the electricity

**Oil Breather** - is what the name says. It vents any excess heat or possibly over filled oil from the engine

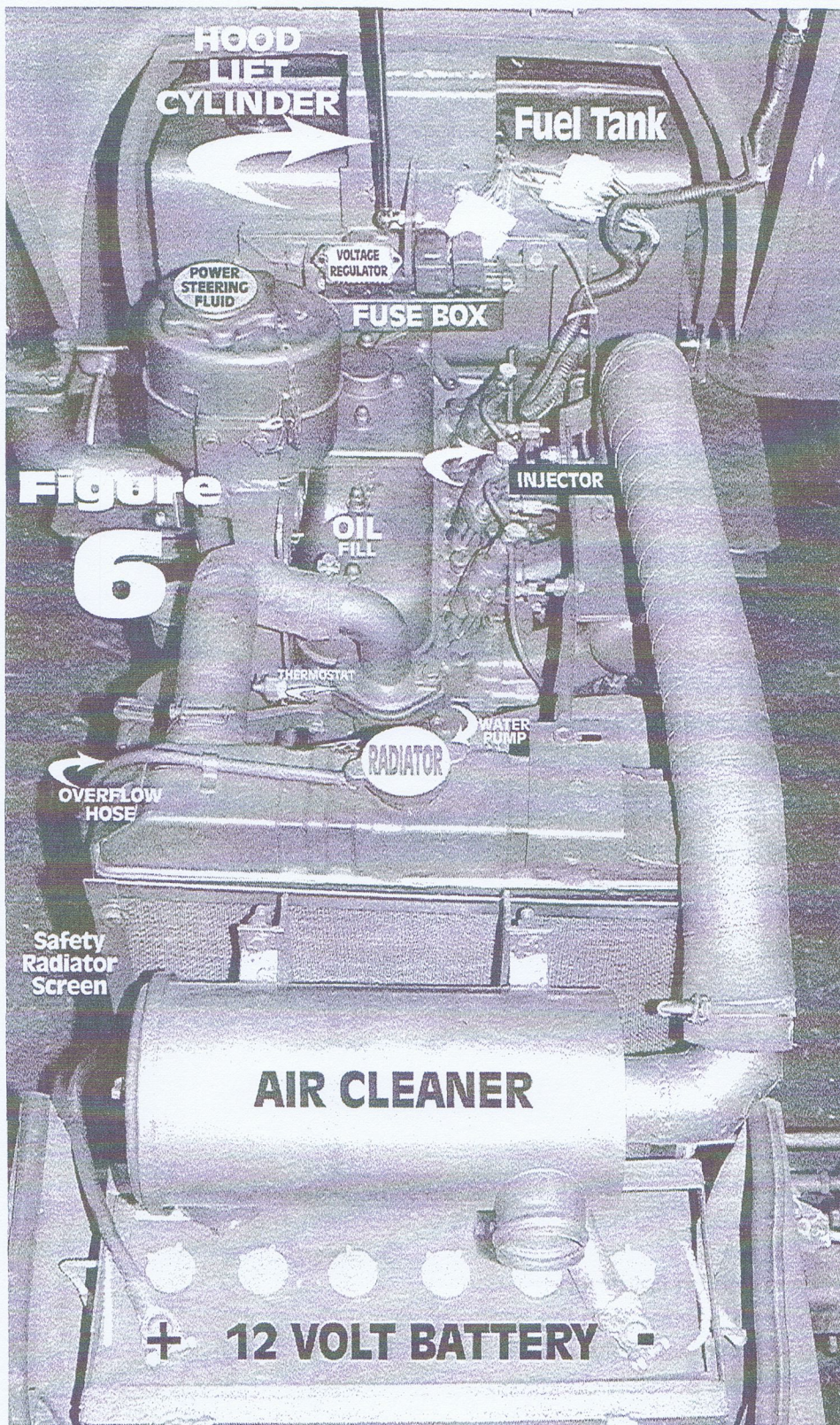
**Solenoid** - Is the top portion of a starter that controls the flow of electricity

**Power Steering Pump** - this is the item that independently pumps the exact supply needed, to the power steering distributor at the base of the steering wheel shaft. It gets its own supply located on top of the engine area. This is a "live" engine run pump.

**Main Hydraulic pump** - this is the one that supplies the front loader, 3 point, and remotes. This pump handles quite a lot of pressures from the oil and actually this is far more than anything in a car etc. You cannot disconnect any pump hoses etc. without turning off the engine and knowing what exactly you are doing, or you shall "dead end" the pump. That will cause it to break and can be deducted by the dealer. Talk with your dealer for proper instruction on disconnecting any hydraulic hoses as it can be very dangerous. This pump is run off of the engine directly and considered a live hydraulic pump.

**Hydraulic Oil filter** - this is a metal enclosed filter that is super easy to clean. The interior filter is metal and you just clean it every 200-300 hours of use, except when new. When new, it will be cleaned at the Major service at 75 hours.





**Figure 6**

**12V Battery** - is a over sized strong battery and for good reason. Diesel engines are compression run and turning over is much harder then a gas engine. This heavy duty engine is a super plus in your tractor. Keep the terminals clean with special cleaner from NAPA. The size is 8" tall x 6.5" wide x 15.75" long. The key to a battery is to keep a charger on it when its new. Use slowest charge selection only and have the "automatic" shutoff on. Bat-

teries must be fully charged. They must also be fully filled with battery acid. If the level drops at any point during your usage to below the interior plates, then chances are high your battery is going to die shortly.

**Air Cleaner** - needs checking every 75 hours unless you are in very adverse conditions. Should be replaced when debris have gotten the best of it. Usually at 150 hours is wise.

**Radiator** - should be about 1/2" below the base of the neck of where the cap attaches . The Radiator is equipped with a additional protective screen that is connected with 4 each small bolts. Screen checking should be daily when in heavy dray grass. Maybe even during use if dust/dirt is excessive. A plugged up radiator will cause overheating. Make sure your radiator fluid checks out to match your climate needs.

**Overflow hose** - it is not uncommon to see a small amount of water seeping from this when the engine is extremely worked or if you are on an incline. Just keep your eye on the radiator level after seeing it seep.

**Water pump** - is an important item that is often over greased. When you pump grease into the zerks on the water pump, make sure you quite when you feel the least resistance. By pumping the grease too hard will blow the seal easily. The water pump should be greased just a little, about every 25-50 hours depending on frequency of use.

**Oil fill** - this takes 15-40 and uses 5.75 quarts when totally dry

**Injectors** - these are the items that fire on your fuel. If they are plugged with dirty fuel, your engine will fire very roughly. When your tractor is new , make sure diesel conditioner that mentions cleaning injectors, is used in your fuel per the suggested mix. Use same at various times throughout your usage of this tractor. If you are in cold winter and your engine is having trouble firing, it may be the fuel is jelled up. Some winter areas it is suggested to use diesel #1. Otherwise use Diesel # 2. Smoking is another symptom of a bad injector. Injectors can also be cleaned or replaced by a skilled mechanic. Lines to and from the injectors should also be checked routinely for fuel leaks.

**Power Steering Fluid** - needs to be checked via the dip stick off the top of the tank. This takes power steering fluid only. If your steering becomes hard, then usually it's the fluid being low. Be careful to observe lines going to and from the power steering tank.



**Fuse box** – this is standard like a car. Use only the size currently being supplied or you may void warranty.

**Fuel tank** - is approximately 8 gallons and you should use off the top of the tank to avoid running out. This is the most frugal tractor on the market in its size. The engine needs clean and current diesel. Diesel now has had its life shortened and old diesel is a bad way to run your engine.

**Voltage regulator** - is the small little box that distrib-

utes the electrical current at exactly the voltage required by the electrical components.

**Hood lift cylinder** - is to aid in the lifting of the hood. These slow down some in cold weather and be aware of this. Its not serious. They require no oiling except to occasionally on the metal shaft to protect or prevent rust. A very light LPS 1 for example can be used.

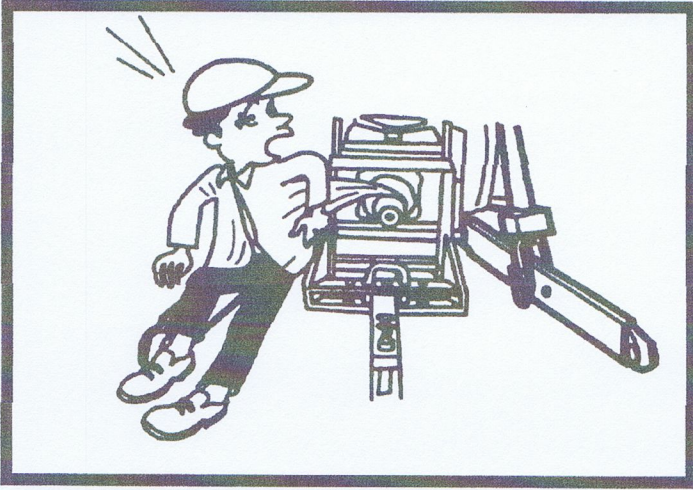
## Commandments

- Implements always should be in down position when not in use
  - Keep your tractor away from danger sloped areas
  - Fasten seat belts
  - Do not high pressure washers on the starter or electrical areas
  - Do not take on extra riders or allow inexperienced users on the tractor or implements
  - Do not exceed capabilities of tractor & implements or use other then for manufacturer's intended use.
  - Do routine maintenance & checks. Tighten things when needed. See your dealer if you need instruction on this. Do NOT over grease water pump!
  - Do not loan this tractor or have it used in Commercial use.
  - Make sure all fluids are changed routinely and up to required levels.
  - Keep the PTO in off position when you get off the tractor
  - Use primarily in low gear range unless traveling
  - Have the 4WD engaged when needed. Do not use FWD on pavement!
  - Do not force levers. Inquire about proper engagement.
  - Learn carefully about the proper set up of each implement you own.
  - Do not jerk stumps or uses dangerous to you and the machine
  - If fuses continue to blow, then get problem resolved ASAP
  - Make sure you get the important 75 hour service done by a TYTAN qualified dealer
  - Does not use the equipment for uses greater then the machines design abilities such as "full suspension" of the tractor on the 3 PT type attach backhoe? If in doubt on your needs, get the frame mounted system.
  - Don't grind on the starter continuously if the tractor will not start after a short time. If it's cold, get a heater to heat engine, fuel & oil.
  - ALWAYS turn your key off first and then the off switch after shutting the machine down by pulling the fuel kill switch.
  - Read your warranty carefully and generate questions if you have them.
  - Get additional instruction from your dealer if you have questions or operation, maintenance and use of the tractor are unclear.
  - Park your tractor under cover always and on flat ground.
  - Lubricate your tractor zeros routinely as needed with the scope of your various jobs.
  - Do not modify your tractor, as you will void warranty!
  - Wear goggles when in conditions that are possibly dangerous to your eyes.
  - Wear leather gloves or equivalent when uses the tractor in areas that they are needed.
  - Do not drink alcohol or take drugs while operating your tractor.
  - Do not lift your implements while on an inclined areas & also do not go sideways on hillsides.
  - REMEMBER to keep your dealer as your best friend and you will always be helped with open arms.
- The above warnings are all traceable & detectable, so honesty is always the best route. Your dealer can always help you if the relationship is good.



# WARNING!

PLEASE HEED THE WARNINGS BELOW FOR YOUR SAFETY!

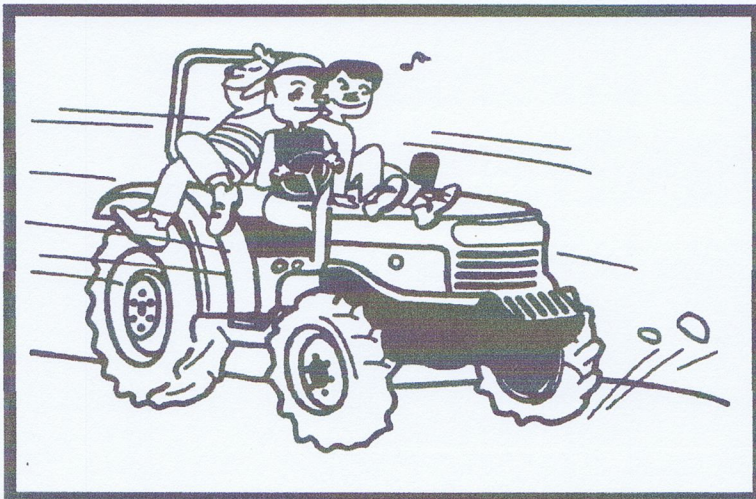
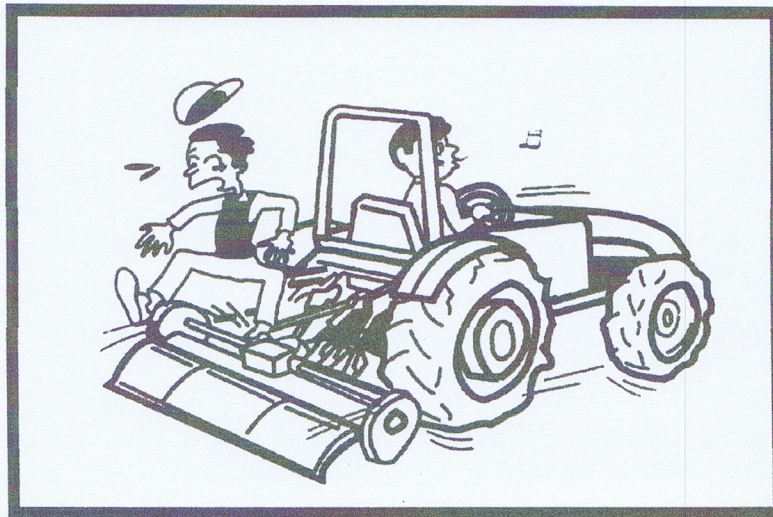


Disengage PTO before getting off tractor.

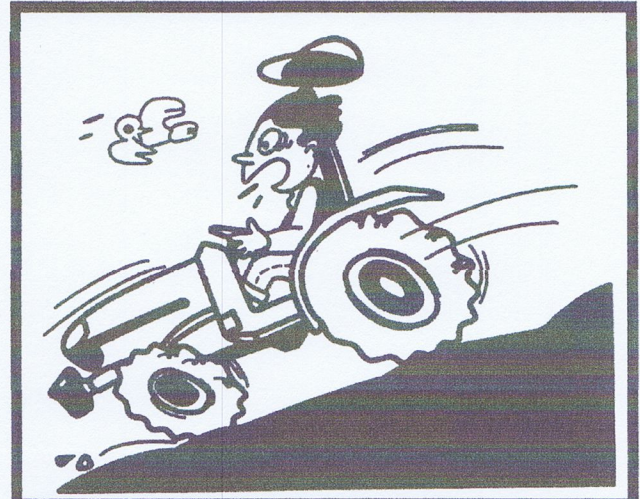


Don't open radiator cap when engine is warm.

Do not allow anyone to ride on, or be near a moving PTO implement.



Don't take extra riders.



Be at a slow, controlled speed going downhill. Do not take your tractor up or down steep inclines.