

**MACHINE IDENTIFICATION AND RECORD**

OWNER'S NAME - .....

ADDRESS - .....

.....

.....

SELLING DEALER CODE - .....

DATE OF DELIVERY - .....

MACHINE S. No- .....

THE WARRANTY ON THIS MACHINE IS VALID ONLY IF THE DETAILS ARE FILLED.  
SIGNED AND STAMPED BY THE CUSTOMER.

DEALER'S SIGNATURE AND STAMP

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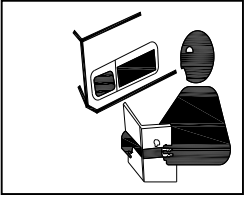
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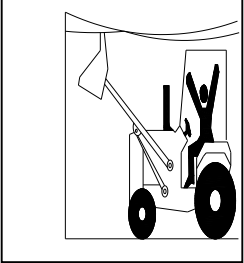
***SAFETY INSTRUCTIONS***

## SITE SAFETY



Before you start the machine inspect the working site. You could be killed or injured if the ground gives way under your machine or if piled material collapses on to it.

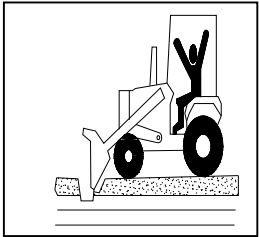
## SAFETY INSTRUCTION



Carefully read all safety message in this manual. Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction. Keep your machine in proper condition. Do not make any modifications to the machine may impair the function or safety and affect machine life.

## LEGAL LIABILITY

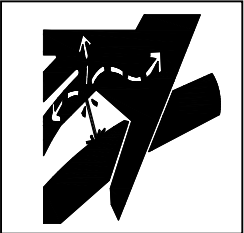
You or your company could be legally liable for any damages you may cause to public utilities. It is your responsibility to make sure that you know the locations of all public utility cables or pipes on the site, which could be damaged by your machine.



## PROTECT PEOPLE

Never allow anyone to walk or work under a raised Dozer or whole in operation. Do not use the Dozer for a work platform. Do not lift or carry anyone on Dozer or in bucket or attachment.

## CAUTION

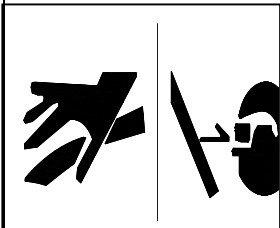


You could be electrocuted or badly burned if you get the machine or its attachment too close to electric power cables.

Before you start using the machine check with local public water supplier, local gas supplier for any buried pipelines on the site or any other harmful substance buried on the site.

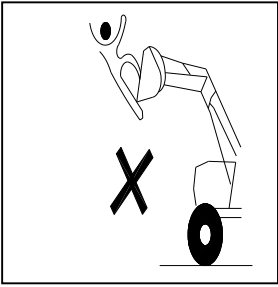
## DANGER

TO avoid body injury, do not stand below the Dozer arm raised condition.  
AVOID HIGH PRESSURE FLUIDS

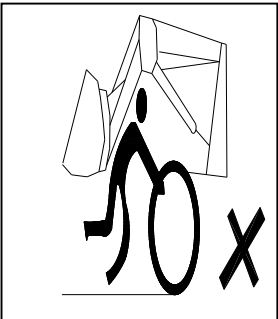


- Escaping fluid under pressure can penetrate the skin causing serious injury.
- Tighten all connection before applying pressure.
- Search for leaks with a piece of cardboard
- Protect hands and body from high - pressure fluids.

# WARNING



- Relieve pressure on system before repairing or adjusting or disconnecting.
- Wear proper hand or eye protection when searching for leaks.
- Do not consume hydraulic oil. This is Harmful for human health.
- You and others could be killed or injured if you reverse direction on the move because the change in direction will be sudden and without warning to others.
- Use only the accelerator pedal to control engine speed while driving. Do not set the speed with hand throttle
- Operating on hillside can be dangerous, especially moving across the slope. If the slope is too steep, your machine could roll over. IF you must drive across a slope, keep the attachments close to the ground. Loose surface material will change the ground conditions. Do not drive across a slope of greater than 15 degree.
- Do not do any welding on piston rods hydraulic cylinders or by placing the earth on piston rods.
- Ensure piston rod not damaged otherwise a small particle will spoil the seals inside.
- Do not push heavy trucks or dumpers with the Dozer it will cause damage to the Dozer or tractor
- Do not block the pump output hose.
- Any oil leakages in pipes do not do any welding without removing the oil inside.
- Do not stand under the Dozer up position and do not stand on the bucket.



#### DETACH DOZER SAFETY

To help prevent personal injury caused by a falling Dozer always detach on a hard surface. The Dozer must be equipped with a bucket when detaching.

# MOUNTING INSTRUCTIONS



Tool box    Stair



Tractor Rear Bracket

1. Place the tractor on flat ground.
2. Remove Tool box ,stair, Tractor rear bracket of tractor rear axel.



Chassis rear bracket



Tractor rear bracket

1. First mount the chassis rear bracket (red color) on rear axel as shown in picture
2. Mount the tractor rear bracket on the chassis rear bracket as shown in picture.

**Note-At a time of assembly keep all the nut bolt in Loose condition**

# CONNECTING THE HYDRAULIC SYSTEM



**Hyd.cylinder**



**Hose pipe**

**1. Place the hyd.cylinder on the hyd. mounting plate as shown in picture.**

**2.Connect the hose pipe(3/8"X1/2"X90XSTX700) between hyd. Cylinder and M.S. pipe line both sides.**



**Valve stand**



**M.S. Pipe line**

**1. Mount the valve stand on the chassis of RH side as shown in picture.**

**2.Mount the M. S. pipe line on the side flat as shown in picture.**

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# *OPERATING PROCEDURE*

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Joy Stick Operation (Control Lever) .....

Operating Tips .....

Loading loose Material .....

Moving the Machine with Full Bucket Load .....

Dumping the bucket .....

Detaching the Dozer the From Tractor.....

Rear Weight Carrier .....

Water Ballast .....

Method of water Ballasting .....

Tyre Pressure .....

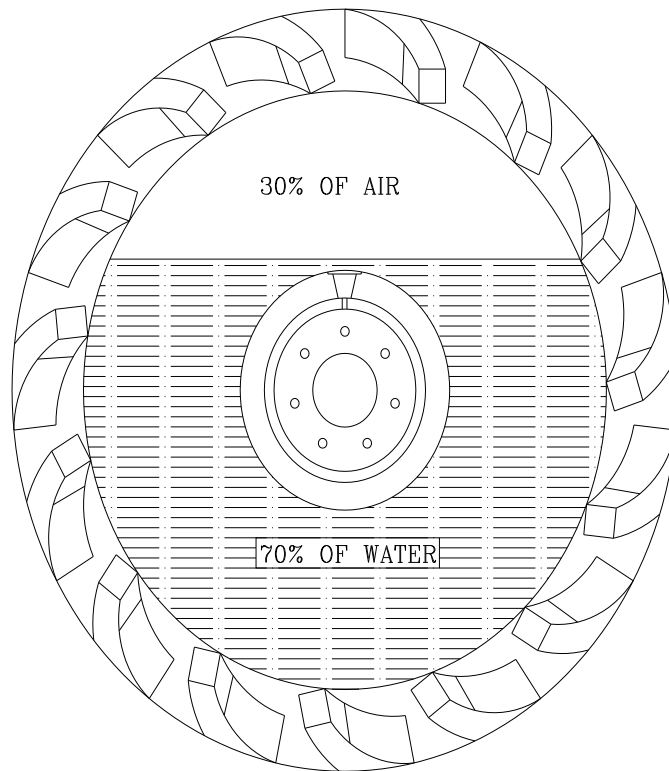
## **OPERATING TIPS**

- ❖ It is best to spend a few minutes analyzing the job at the work area.
- ❖ Set up the work cycle as short as possible less movement leads to the shorted work cycle that will improve work efficiency.
- ❖ When the Dozer is used in a specific area mark layout for parking the lorry and put a ramp with stopper for the tractor to operate with maximum efficiency.

## **LOADING LOOSE MATERIAL**

- a) Make sure the bottom of the bucket is in level with the ground.
- b) Make use of bucket level indicator provided.
- c) Move Dozer control lever to float position and move the machine forward to the pile.
- d) When the machine starts to slower, lift the bucket and roll it back.
- e) If trained driver is not operating the rear wheel slippage may take place. The rear wheel slippage can be stopped only by better driving methods. When the rear wheel starts slipping, the moment the bucket must be rolled back just adequately. Then again tractor can be moved forward after loading some volume of material again the wheels will try to slip. Now the bucket is also to be rolled back adequately. This process is to be repeated 3 to 4 times before loading the bucket fully.





## RECOMMENDED TYRE PRESSURE

1. *Front Tyres - 7.50 x 16, 8 PR*

*Recommended inflation pressure kPa (kgf/sq.cm)*

(i) *For field : 25 Lbs*

(ii) *For Road: 32 Lbs*

2. *Rear Tyres - 16.9 x 28, 12 PR (without water filling)*

*Recommended inflation pressure kPa (kgf/sq.cm)*

(i) *For field : 14 Lbs*

(ii) *For Road: 18 Lbs*

### **REAR WEIGHT CARRIER**

- Rear weight carrier is provided to store 1000 to 1300 kg of loose concrete for extended chassis Dozer.
- The more the load the balancing will be better and steering will be easier.
- The weight to be filled in 3 point weight carrier is based on tractor 3 point link lifting capacity. For additional weight add cast weight on the wheel.

### **WATER BALLAST**

- It is a must that the tractor rear tyres are water ballasted to add a weight which ensures better grip during loading of Dozer.(Ref fig. J)
- Maintain maximum possible air pressure in the front tyres (30 PSI)
- Inflation pressure of water ballasted tyres must be checked frequently as the volume of air is very less.

### **METHOD OF WATER BALLASTING**

- Jack up the tractor to take the load of tyre.
- Keep the tyre in such a position so that the valve is at 12 O'clock.
- Connect the hydroflation adapter to the valve after removing the valve core.
- Use the plunger pump to fill the tyre with 70% water. After filling remove the adapter and replace valve to inflate to the recommended pressure.
- For removing the water, turn the wheel so that the valve is at 6 O'clock position. Take off the valve and let the water flow under gravity.

### **TYRE PRESSURE**

- Rear – Water Ballasting : 8 to 10 PSI Air
- Front recommended pressure for front end Dozer is 35 PSI Air
- For construction / Industrial operations jeep tyre can be replaced for better utility instead of required tractor front tyre.
- Cast iron wheel weights are always advisable for better grip in the rear wheels.

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# *TROUBLE SHOOTING CAUSES & REMEDIES*

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NIPPLE FOR PRESSURE TESTING



GAUGE SHOWING

## TROUBLE SHOOTING CAUSES & REMEDIES

| Trouble noticed   | Problem caused & solution   |
|---|---|
| <p>1. Dozer not functioning</p> <p>2. Dozer upward movement very slow and unable to lift with load.</p> <p>3. Dozer not lifting.</p> <p>4. Dozer coming down immediately from top position.</p> <p>5. Bucket not loading or bucket loaded comes down &amp; material falls.</p> <p>6. Hydraulic cylinder not functioning (or) oil leaking</p> <p>7. Air sound noticed while operation</p> <p>8. Rear tyre slips during loading</p> <p>9. Joystick struck not going to the float position</p> <p>10. Oil heats up rapidly within few minutes.</p> | <p>1. Insufficient oil in the reservoir.<br/>If less add oil.</p> <p>2. Oil is not pumped. Check using pressure check port of the valve pressure should be 140 BAR.</p> <p>1. Check piston oil seal &amp; replace it required.<br/>2. Check pump pressure &amp; replace it required.</p> <p>1. Piston oil seal &amp; arm cylinder damaged.<br/>Replace the same.<br/>2. Pump problem, Check pump pressure.</p> <p>1. Piston seal of arm cylinder damaged.<br/>Replace the same.<br/>2. Pump problem, Check pump pressure.</p> <p>1. Piston seal of bucket cylinder damage,<br/>Replace the same the part.<br/>2. Pump problem, Check pump pressure.<br/>Send the same to your authorized service station or to the company for rectification.</p> <p>Insufficient oil fills in the tank.</p> <p>1. Water ballasts the rear wheels.<br/>2. Increase the weight in the rear weight carrier.<br/>3. Mount cast iron ballast in the rear tyre.<br/>4. Rotate the bucket upwards the moment the tyre slips.</p> <p>Remove the bottom plastic cap of the valve, adjust the screw.</p> |

11. Three point linkage functions without control

12. Dozer operation jerky movement noticed

13. Hoses jumps during operation

1. Check quantity of oil, if less check level add oil.

2. Problem with the pump, service or replace

3. Oil passages are obstructed, needed to be replaced

Shut the valve provided in the tractor beneath the driver seat

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# *MAINTENANCE*

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| Sr.No | Precaution Monitor     | Check        | Function                           |
|-------|------------------------|--------------|------------------------------------|
| 1.    | Greasing all 26 nipple | Every 4 hrs. |                                    |
| 2.    | Breather               | Daily        | Clean with pressurized air..       |
| 3.    | Return line filter     | 500 hrs.     | Change if it has lost its quality. |
| 4.    | Suction strainer       | 1000 hrs.    | Clean with diesel and Refit.       |
| 5.    | Hydraulic oil grade 68 | 1500 hrs.    | Change if it has lost its quality  |



## **ROUTINE MAINTENANCE**

1. It is advisable to do daily greasing at all 32 points where grease nipples are provided for every six hours of operation. And in case of dusty worksite every 3 hours of operation greasing should be done with a greasing gun. Stop greasing when fresh grease appears at the joint. If regular greasing is not done as advised, alloy grade pins & bushes may wear out fast.
2. Check & Clean the hydraulic tank filter, once in 2 months. Change the hydraulic oil after 1500 hours of operation.
3. If a separate oil tank is provided, suction strainer is to be cleaned once in two months and to be replaced every 1500 hours of operation.
4. For every 500 hours breather should be changed.

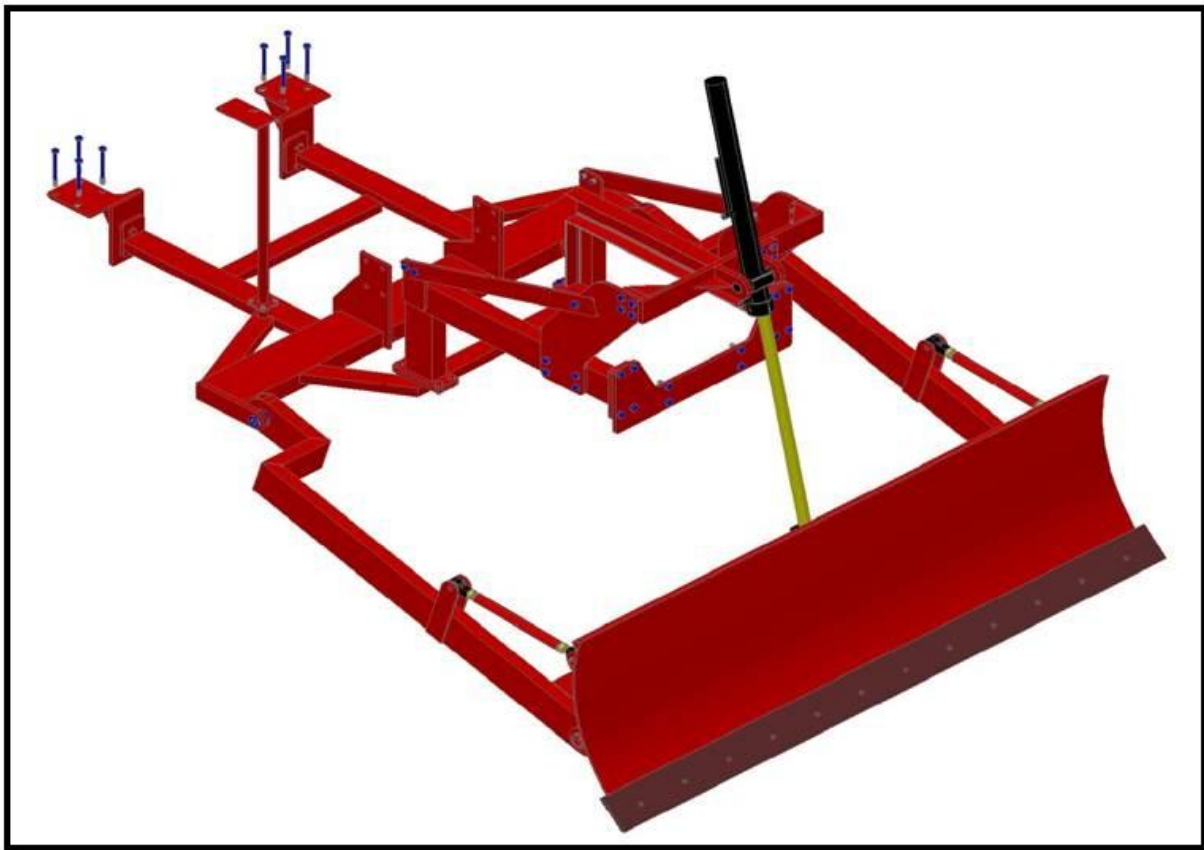
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# ***Dozer Spare Parts Catalogue***

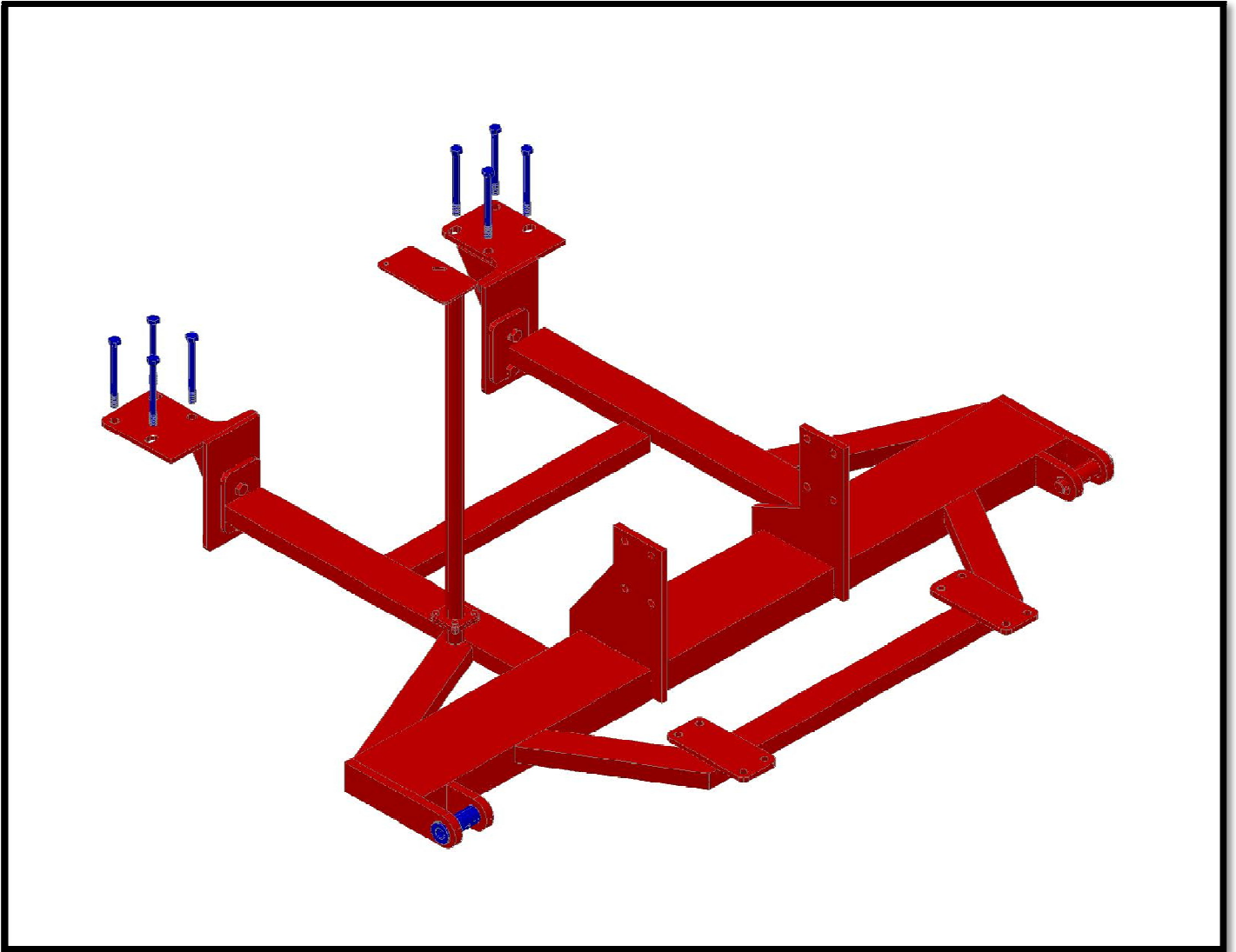
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# DOZER ASSEMBLY

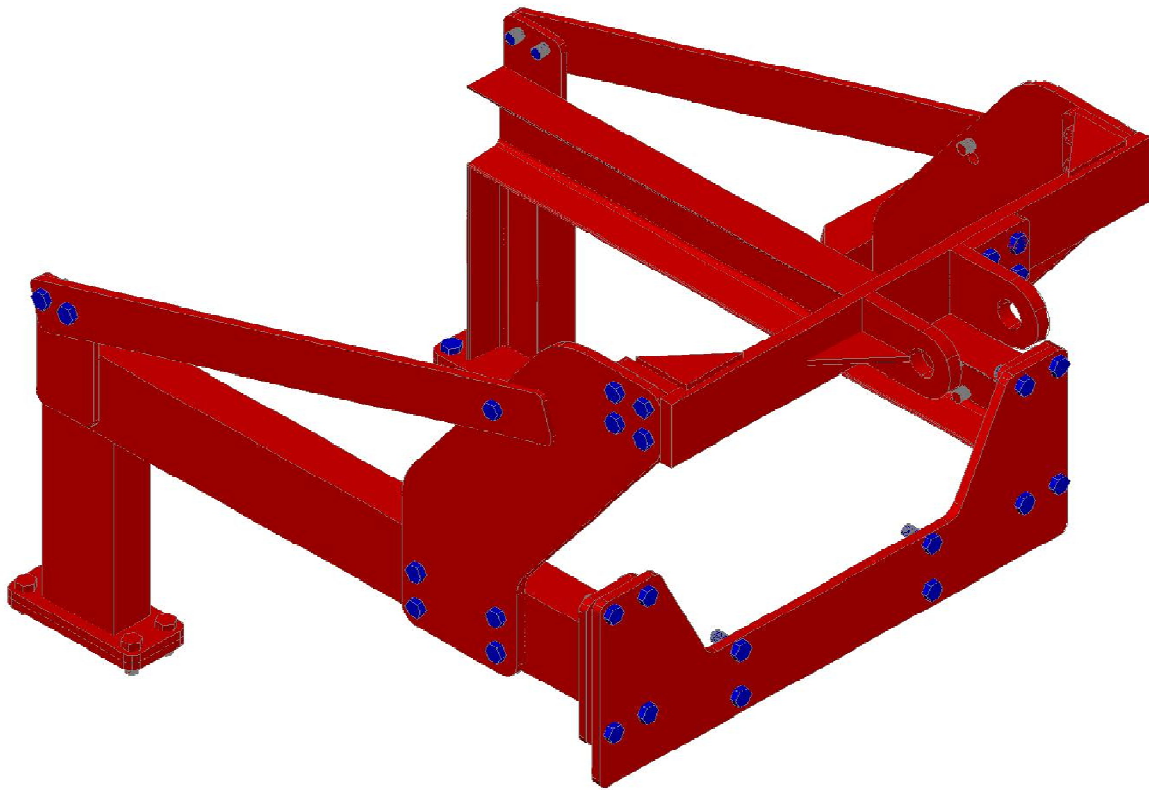
 **Mahindra** **APPLiTRAC**



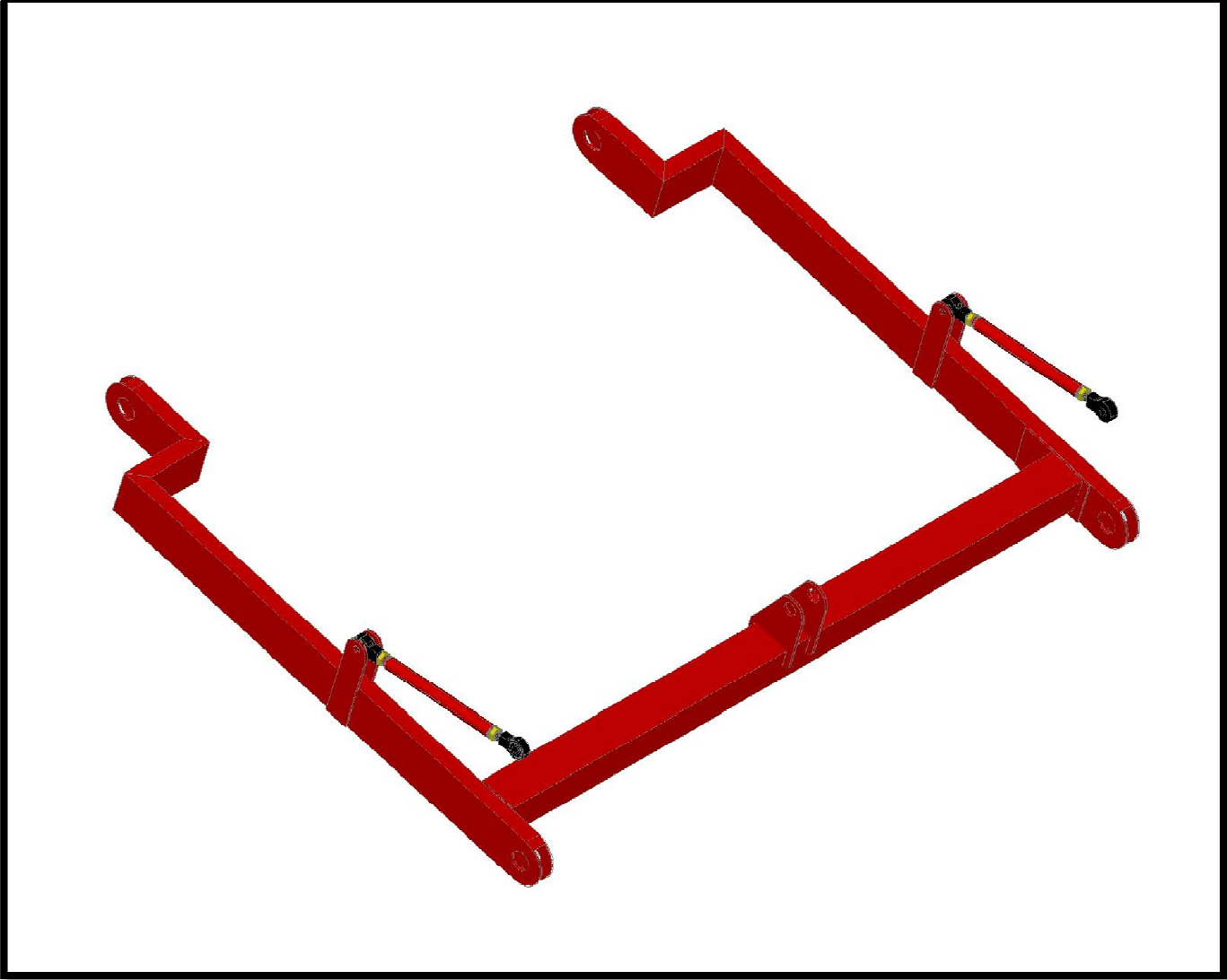
# CHASSIS ASSEMBLY



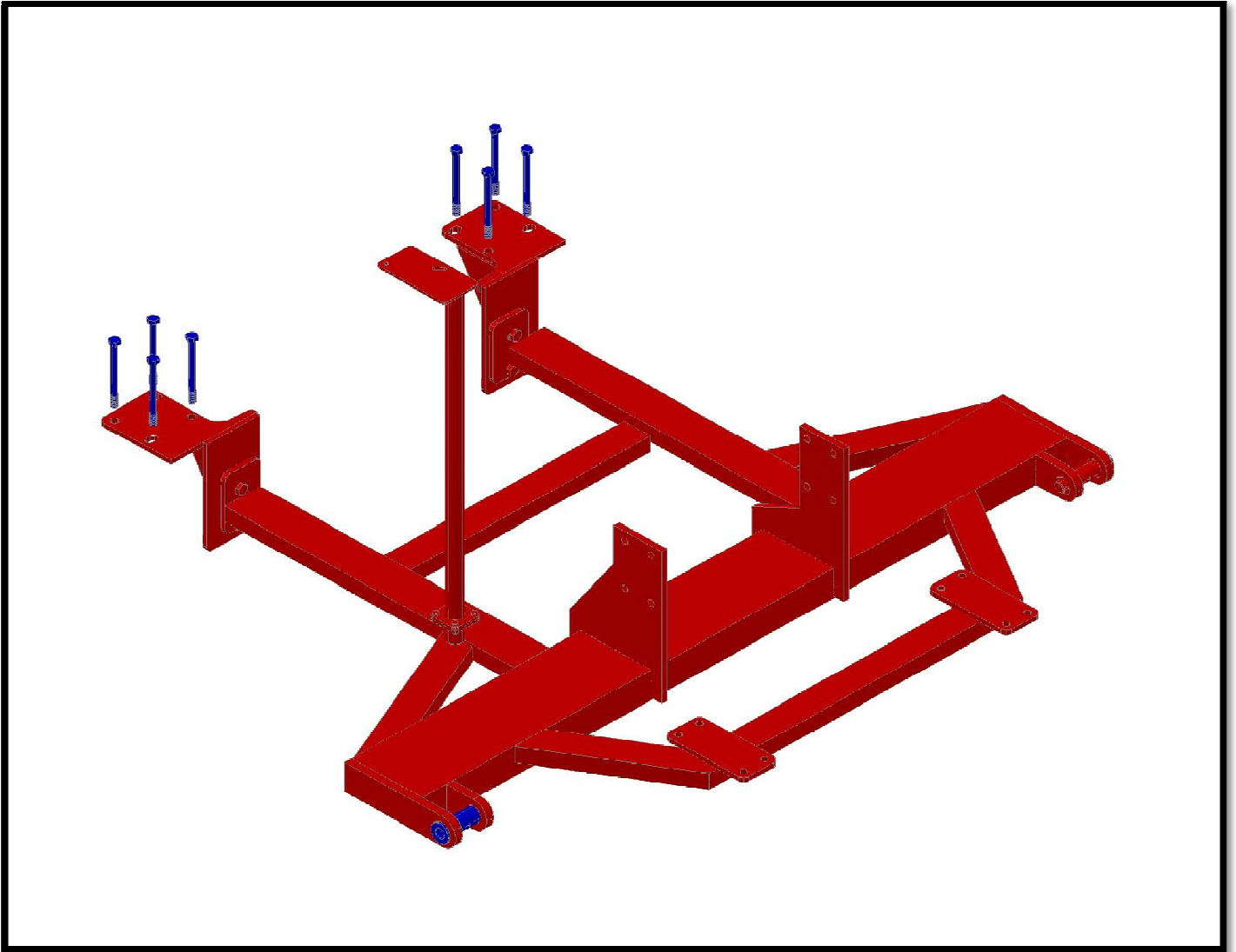
# HYD MTG.ASSEMBLY



# FRAME ASSEMBLY



# BLADE ASSEMBLY



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# **WARNING**

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- ❖ DO NOT DO ANY WELDING ON PISTON RODS OR BY PLACING THE EARTH ON PISTONE RODS.
- ❖ ENSURE PISTONE ROD IS NOT DAMAGED OTHERWISE EVEN SMALL FUR WILL SPOILE THE SEALS INSIDE
- ❖ DO NOT PUSH HEAVY OBJECTS OR LORRY WITH DOZER IT WILL CAUSE DAMAGE TO THE DOZER
- ❖ IN CASE OF OIL LEAKAGE IN PIPES DO NOT DO ANY WELDING WITHOUT REMOVING THE OIL INSIDE
- ❖ AT ANY CIRCUMSTANCES DO NOT BLOCK THE PUMP OUTPUT HOSE
- ❖ DO NOT STAND ON THE BUCKET
- ❖ DO NOT STAND UNDER THE DOZER



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# ***SERVICE CHECK LIST***

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|    |  |     |    |
|----|--|-----|----|
| 1  | Check Oil Leakage in all Cylinders   | YES | NO |
| 2  | Check Oil Leakage in all Cylinder Pipe & Hoses   | YES | NO |
| 3  | Open Valve cover Pour oil, Check valve clamps, M.S. Holder, Eye Bolts.                       | YES | NO |
| 4  | Clean Oil Fitters if replacement is necessary replace  | YES | NO |
| 5  | Check all chassis Structure Pins, Bolts To be in full tight                                  | YES | NO |
| 6  | Check for Grease Nipples, Damaged Nipples to be replaced.                                    | YES | NO |
| 7  | Check Bucket Teeth Sharpness if it is not sharp, replace it.                                 | YES | NO |
| 8  | Check oil level if is not full, Fill Oil. If Oil not Clean change the Oil                    | YES | NO |
| 9  | Check Dowel Pins, If broken replace it.  | YES | NO |
| 10 | Check water Ballasting Ail Pressure, Rear Weights and Wheel Weights                          | YES | NO |
| 11 | Check Free movement of joystick ,Rolling Of Bucket, Up and Down movement of Arm              | YES | NO |
| 12 | Check operating pressure by using pressure gauge If it is less or more than 140 BAR pressure | YES | NO |
| 13 | Check Comfortable seating of ARM Supporting Assembly in the Arm Assembly and Lock Perfectly  | YES | NO |
| 14 | Check esthetic damage  | YES | NO |
| 15 | machine in all Aspects is functioning up to the mark   | YES | NO |