



LOADER'S OPERATOR MANUAL

LX85

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OPERATOR'S MANUAL

Summit LX85 Front End Loader

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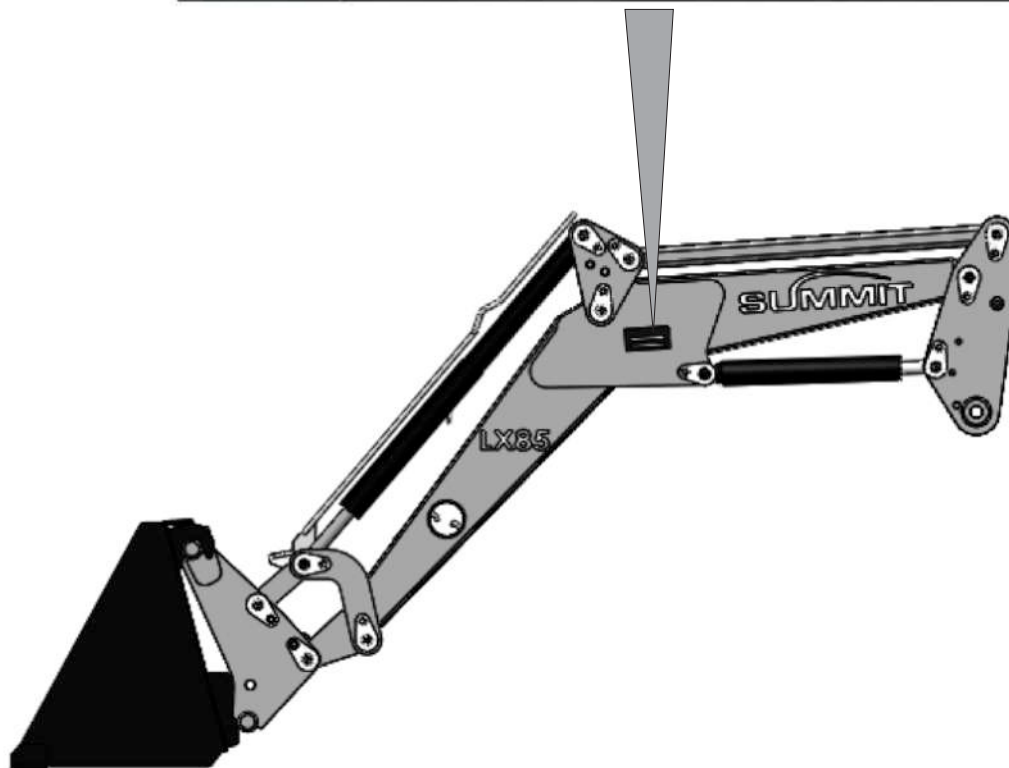
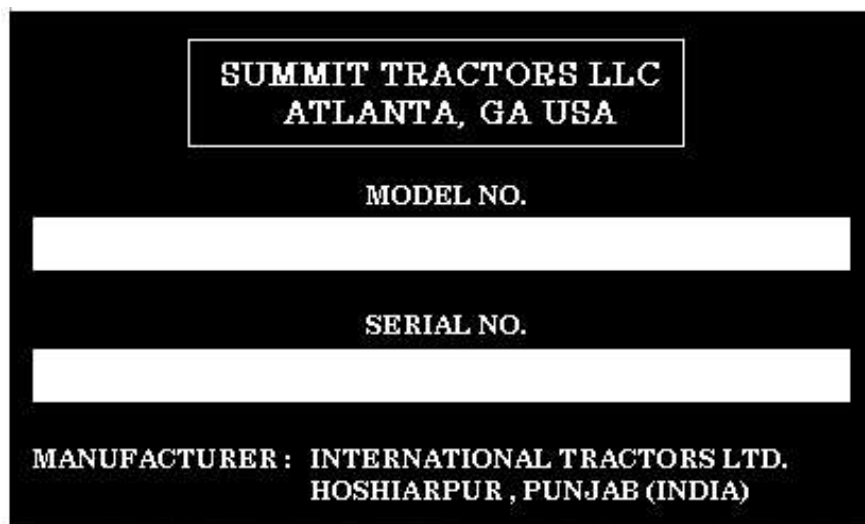


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IDENTIFICATION

The model and serial number is stamped on a plate on the outside of the right hand loader arm. Please quote both numbers when ordering spare parts or accessories.



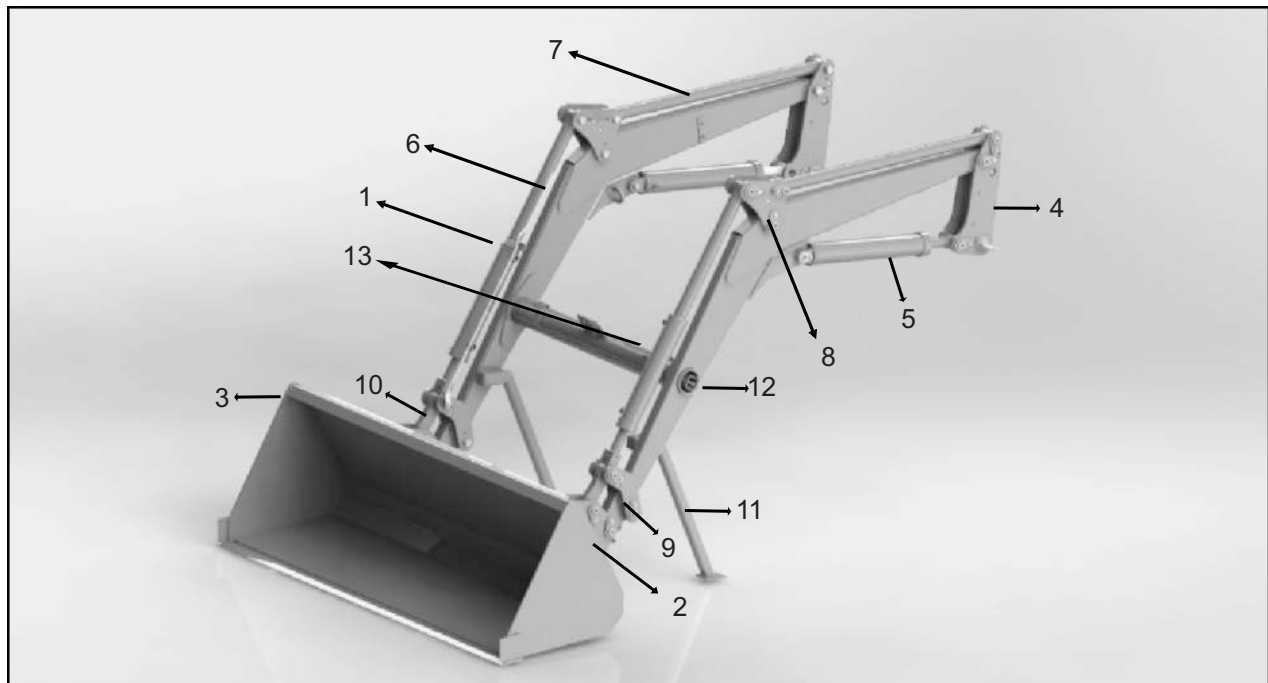
Location of Loader Serial Number

DESCRIPTION OF FRONT END LOADER

The front end loader is an attachment to a tractor, used for lifting & moving the loads. The front end loader is activated by hydraulic cylinders powered by the tractor's hydraulic system and controlled by the operator. The front end loader is attached to or detached from the tractor quickly & effortlessly by quick change system. The support legs ensure that the detached front end loader is stable. The implements are connected to the front end loader via quick change frame enable fast and safe implement change.

The front end loader consists of :

1. Bucket cylinder
2. Quick change frame
3. Bucket
4. Post cap (drive-in system for subframe post)
5. Lifting cylinders
6. Level Indicator
7. Self leveling rods
8. Middle rockers
9. Front rockers
10. Front link
11. Parking legs
12. Parking leg storage
13. Cylinder lock





SAFETY INSTRUCTIONS


TO AVOID ACCIDENTS AND INJURY, READ AND UNDERSTAND THESE INSTRUCTIONS

This machine can be inherently dangerous to children and persons unfamiliar to its operation. The operator should be a responsible adult and be familiar with the operation of this machine. Warnings are used in this manual to prevent bodily injury & machine damages. Always read and comply with these warnings.

This safety alert symbol appears with most safety statements. The safety alert symbol means attention, becomes alert, the operator's safety is involved! Please read and strictly observe the message that follows safety symbol alert.

 **DANGER** - Indicates hazardous situation which, if not avoided, could result in death or serious injury.

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

 **CAUTION** - Indicates a hazardous situation which, if not avoided could result in minor or moderate injury.

NOTICE - Indicates a situation which can cause damage to the loader, personal property and/or the environment or cause the equipment to operate improperly.

IMPORTANT - Means that implement or property damage could occur if instructions are ignored.

NOTE - Provides some useful information.

SAFETY INSTRUCTIONS



Warning - Read and follow all instructions in the operators manual before attempting to operate the tractor and the loader. failure to comply with the instructions may result in the death or personal injury.



Danger - The loader was built to be operated according to the rules for safe operations in the operator's manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. To help prevent accidents, read and understand the following precautions before operating the tractor and the loader.

Failure to observe the following safety instructions could result in serious injury or death.

Precautions before operating the loader



- Understand the performance and limitations of the tractor and loader. Carefully study the operator's manual and learn the instructions in the operator manual before operating or servicing the tractor and loader. Keep the operator manual in easily accessible place.
- Strictly follow the precautions given in DANGER, WARNING and CAUTION safety decals attached to the loader. Keep safety decals in good condition and replace the damaged or missing safety labels.
- Make sure that the person who operates the tractor and loader studies the operator manual before operation. Know the controls and how to stop the tractor.
- Check overhead clearances carefully before driving under power lines, wires, bridges or low hanging tree branches, before entering or leaving a building or any situation when ROPS (Roll over protection structure) may be struck which could result in serious injury.
- Make sure that there is no person or obstacles under or around the tractor and the loader before and during operation.
- Do not operate tractor and loader under influence of alcohol, drugs, medicine or controlled substance or when not fully physically fit.
- During operation and performing service work
 - Wear close knit cloths.
 - Do not wear loose clothes or jewellery since may get caught by a moving part of the loader and an accident could happen.
 - Do not wear short pants or cut off pants which do not provide protection against flying debris.
 - Do not operate the loader with bare feet in any circumstance.
 - Do not wear sandals or sneakers.

SAFETY INSTRUCTIONS

- Wear additional protection including non-slip foot safety boots or shoes, protective gloves and necessary equipment required by local laws and regulations.
- Wear ear protection in a noisy environment to prevent hearing damage and to reduce operator fatigue.
- Avoid allowing passengers on any portion of tractor or loader.
- Always remain seated in the operator seat while operating the tractor and loader.
- Make sure that the brakes and other mechanical and hydraulic components are properly adjusted and do not have excess wear.
 - Immediately replace all excessively worn out or damaged components.
- At regular intervals, check that nuts, bolts and screws are properly tightened as recommended.
- **CAUTION:** Always keep the tractor and loader clean. Dust, grease or clipping accumulated on tractor can lead to fire accidents, or personal injury
- Use the handhold and running board steps when getting on and off the tractor to prevent accidental falls. Keep the running board step clear of mud and debris.
- **IMPORTANT** - Enter from the left side of tractor since the right side of tractor loader control valve may create obstacle for entry and exit.
- Only use loader attachments that meet the requirements in the operator's manual or are approved by Summit Tractors.
- Make sure that the attachment is properly installed, adjusted and is in good operating condition.
- When using the tractor, install the appropriate weights on the rear of the tractor to prevent the tractor from tipping over. For details refer to the section "Rear Ballast" under "operation" chapter 5.
- Do not modify the loader under any circumstance. Modification can drastically impact the performance and/ or safety of the loader, possibly leading to personal injury or property damage.
- The loader is only compatible to the Summit TX25 model. Do not attempt to use the loader on any other tractor.



Safe practices for operating the loader

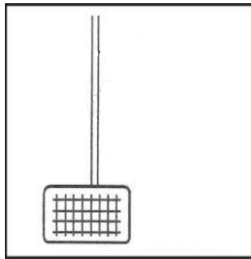
1. Working with the loader



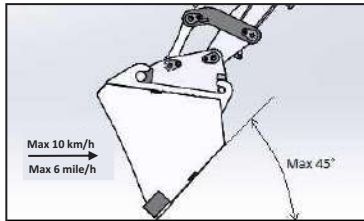
- Do not walk or work under a raised loader unless it is securely blocked.
- Never allow anyone to get under the loader bucket or reach through the booms when the bucket is raised.
- Make sure there are no people, livestock or pets around the tractor during operation.
- Do not use the loader as work platform.
- Do not use the bucket in the dumped position for grading or bulldozing. This imposes severe loads on the bucket cylinders which will often cause bending of the rods.
- Never use the loader to lift or carry people or its attachments.
- Never leave your loader unattended with the engine running.
- Keep the bucket as low as possible when travelling for maximum stability.

SAFETY INSTRUCTIONS

- Always handle big or unstable loads with extreme care and caution.
- Do not use a chain, cable or rope to lift or pull the loads with the loader which can lead to tractor roll over or can damage the tractor. This may cause serious injury or death.
- During a turning, be aware of your surroundings and ensure there is enough space to turn.
- Avoid loose fills, rocks or potholes which can be dangerous to the operation of loader.
- Operate only in daylight and good artificial light for proper visibility.
- Always comply with local lighting and marking requirements.
- Cross check local utilities before beginning work. Know the location and avoid contact with all underground cables, pipelines, overhead wires or any hazard in working area.
- Always exercise great care when attaching or detaching the loader and its implements.



- If you have questions regarding the operating manual or require additional information, contact [www. Summittractors.com](http://www.Summittractors.com) or the Summit Connect APP.
- Use left pedal as a brake.
- Before leaving the operators seat, always lower the operator boom to the ground, engage the parking brake securely, shut off the engine and remove the key.



- When levelling do not drive faster than 6 mph/ 10 km/h. In this process, tilt the implement to maximum of 45 degrees.
- Only drive backwards with the bucket in this position. See illustration.

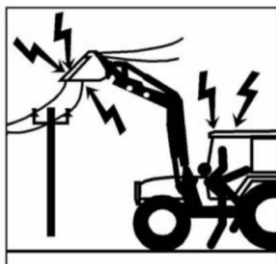
2. How to avoid accidents

- Observe due care while turning the tractor or travelling over inclined surface. Reduce the tractor speed while turning.



CAUTION - Observe caution while dropping or lifting loads, sudden dropping or lifting may cause loads to fall or the bucket to hit the ground at much higher speeds. Observe caution while travelling on slopes.

- Use common sense and care to balance the overall weights and its contents being evenly distributed to have loader and tractor stability.
- Carry loads close to ground.
- Never overload the bucket.



- Avoid hanging objects, power lines above and below the ground (underground cables) for possible life risks.
- Do not leave the operator seat if any part of the tractor or loader is in contact with power lines. It may cause electric shocks which could be fatal and may even lead to death or personal injury.
- Always keep a safe distance from electrical lines.

SAFETY INSTRUCTIONS

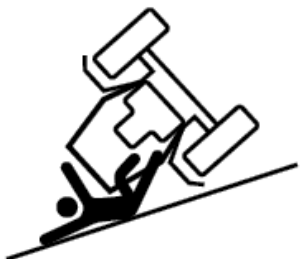


- Be watchful of falling objects.
- Be watchful to adjust the bucket manually while lifting to keep it level ground or level to ground to avoid roll back of lifted material.
- Avoid carrying big round bales with bucket as attachment.
- Be alert and cautious while handling large and unstable loads since it may roll back from boom to operator.



- Ensure that no one is positioned below or within danger zone of loader.

- Ensure that the front tires are inflated to the prescribed pressure for load operation as specified in the operating manual of the tractor.
- While traveling on road, please ensure that SMV(slow moving vehicle) emblem placed in rear of the tractor is in visible condition.
- Follow safety instructions on operating the tractor with loader while travelling over roads as per local traffic rules and regulations.



- Observe extreme caution while working on slopes / inclined surfaces.
 - Never drive tractor with loader transverse to slope with raised loads. Do not drive across the slope.
 - Use low range gears while traveling over a slope.
 - Avoid sudden braking and keep all movements slow and gradual.
- Carry loads which are not wider than the bucket.
 - Ensure that the lights and reflectors of the tractor are not covered by the front end loader when driving on public roads.

SAFETY INSTRUCTIONS

Precautions while servicing the loader

Before starting any work on the loader, please ensure the followings,

- Tractor is placed on level ground.
- Parking brakes are engaged.
- All gears and PTO should be in neutral position.
- The rear counterweights are in lower position.
- Engine is in shut off condition.
- Take out the ignition key.
- If loader is in raised condition, please ensure that it is properly secured and blocked to eliminate falling down.

Kindly observe due cautions while working with the loader hydraulic lines as,



- While disconnecting hydraulic lines, operate the control lever several times to release pressure in hydraulic system.
 - The hydraulic lines carry high pressure. Any sudden leaks, loose pipes or connections can cause injury. Observe caution while repairing or replacing hydraulic lines.
- Do not mount the tractor using loader or bucket as jack since it may cause injury if accidentally lowered.
 - Wear safety gear like gloves, safety glasses, safety shoes while working with loader.

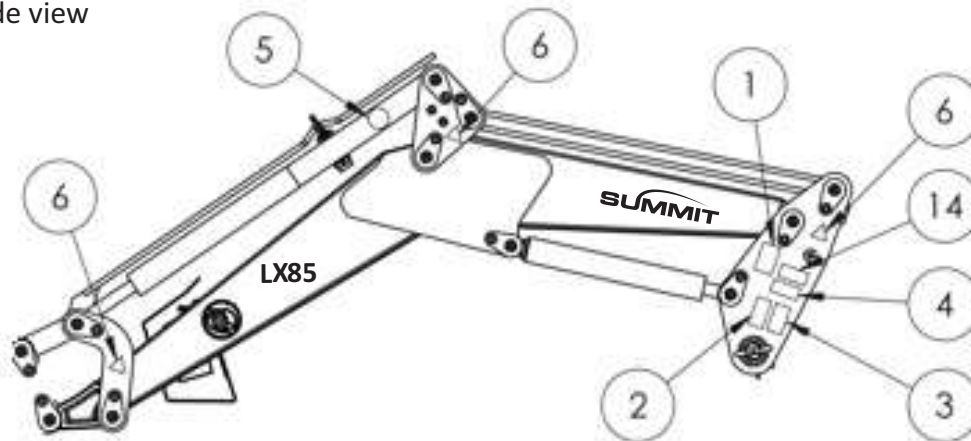


- Do not leave leaking pipes or connections unattended. Replace these parts with genuine spare parts only.
- Comply with the accident prevention regulations as well as the technical safety, occupational health, and road traffic regulations of the country where the front end loader is used.

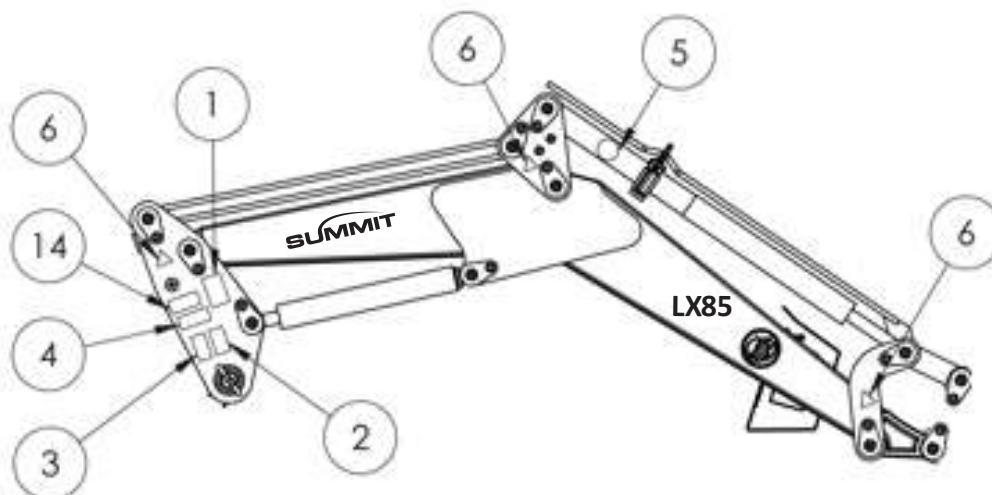
SAFETY INSTRUCTIONS

Safety decals location

Left side view



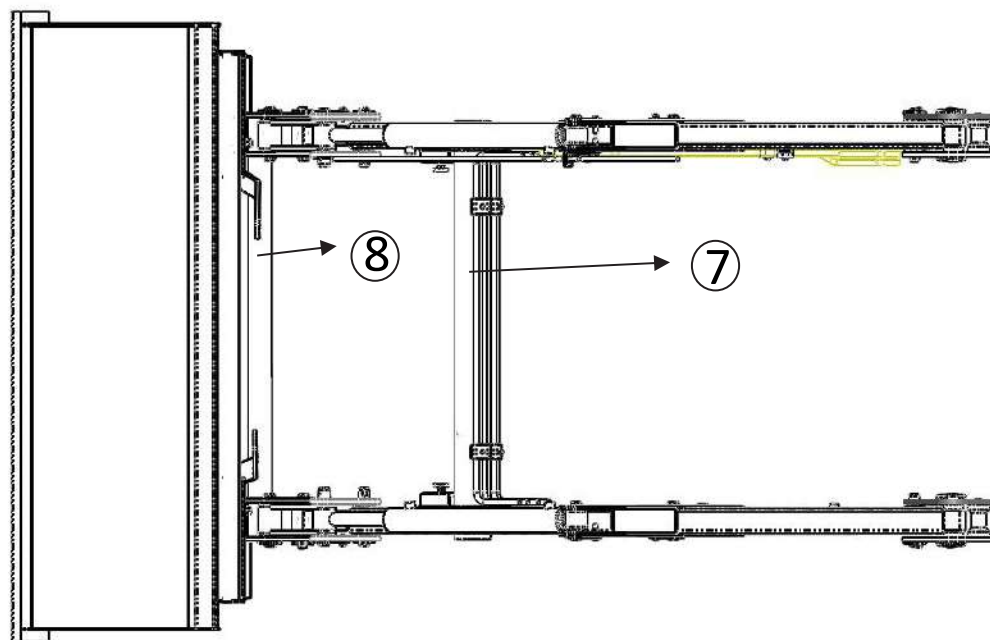
Right side view



SAFETY INSTRUCTIONS

Safety decals location

Top view



1. Crushing hazard label

To avoid serious injury, operator should be cautious of the material or load being carried. It may fall towards operator side.



SAFETY INSTRUCTIONS

2. Do not climb and carry passengers label

Do not operator loader or attachment with anyone in it. Operator should not allow or climb the loader.



3. Read the Operator Manual label

Read the operator manual.



4. Stay clear of raised loader label

Operator or bystander should never stand under raised loader.



5. Lifting Point label

This decal points towards lifting point of loader by crane.



SAFETY INSTRUCTIONS

6. Pinch Point label

This operator or bystander should be careful of pinch point.



7. Warning label

- The safest method of performing maintenance on the tractor is to remove loader first.
- Install cylinder locks before performing maintenance under the raised arms. Failure to comply could result in death or serious injury.
- Empty loader bucket and place it in dump condition. Raise boom until boom channel can be positioned on cylinder rod then stop engine.
- Securely fasten lock with supplied tie to cylinder with curved end away from cylinder body.
- Slowly lower boom until boom is stopped.



8. Warning

Operator must secure with the skidsteer hitch pins, cotter and locks.



9. Warning label

This product can expose you to chemicals which is known to the state of California to cause cancer and reproductive harm.

For more information got to www.P65Warnings.ca.gov



SAFE WORKING LOADS

Summit has undertaken a program of testing every model of loader supplied in order to determine Safe Working Load (SWL) limits.

This SWL applies to the loader fitted with the standard bucket. If any other Summit attachment is used, the attachment will have a similar ID plate attached to it with a revised SWL rating. This rating replaces the original bucket rating for that loader. Where a 4 in 1 bucket is fitted to the loader, the original SWL must be reduced by 10% to allow for the greater tare of the 4 in 1 bucket.

For any given loader, the SWL applies to the machine static, on a hard level surface. The SWL should be reduced according to the operational factors including speed, slope and terrain.

The lifting point in the standard bucket has been tested to comply with AS 2359/1. The pallet fork tines and round bale fork tines also exceed the requirements set by AS 2359/1.

If the loader is to be used to lift over people heads, hose burst valves must be installed to prevent a burst hose allowing the loader to drop suddenly

HYDRAULIC PRESSURE

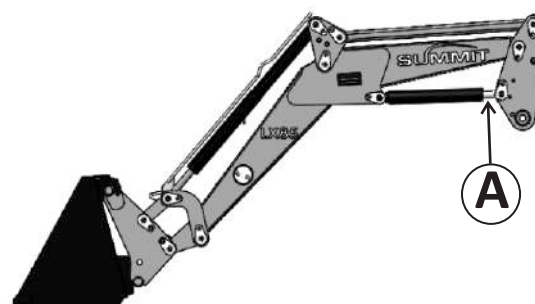
The control valve supplied with your loader with factory preset pressure. All the warranties will be voided if the preset pressure is tampered.

OPERATE THE LOADER

When operating the loader, ensure that the engine speed of the tractor is appropriate for the work being performed.

The operator must be experienced enough to be able to operate the tractor at the appropriate speed. The procedures described below can prevent bucket spillage.

Use cylinder lock at position "A" while maintenance or troubleshoot.



OPERATION

IMPORTANT : Avoid damage!

- Do not attempt to operate the tractor at high speeds while the loader is attached to prevent followings,
 - Spilling the content of the bucket.
 - Placing undue strain on both the tractor and loader.
- When working in environment below zero degree ,keep the engine under 1200 rpm until the oil temperature rises above zero degree.
- Check that the hoses are not twisted, sharply bent, kinked, frayed or pulled too tightly. Replace damaged hoses immediately.
- While operating on loose soil, slippery surface or on descending slope, follow the below steps:-
 - Engage 4 wheel drive (if equipped) when additional traction is needed.
 - Deactivate the 4 wheel drive when travelling on firm and flat surface and when travelling at high speed.
- Check the hydraulic oil level, and top up as required in accordance with the tractor instructions.
- Add wheel ballast or rear weight for stability.
- Check all nuts, bolts, pins etc for proper fit and tightness.
- Use front tires of the same size and keep equal pressure in both or increase the pressure of the front tires to the pressure recommended.
- Use the same sized rear wheels and maintain equal pressure in them.

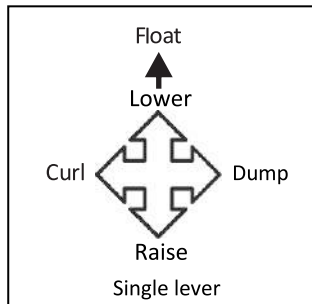
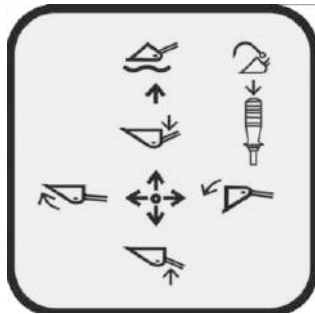


WARNING - To prevent roll over and accidents

- Remove the loader from the tractor if another implement is to be operated on inclined surface.
- Remove the rear mount mower or other rear implements from the tractor before operating on rough or uneven surfaces.

OPERATION

Using the implement control lever



- The control lever of the loader is located at the right side of operator's seat. The preceding lever is used to control the movement of the loader.
- The control lever remains in neutral position by default. If released, it will automatically come to neutral position.
- When Float is activated, the hydraulic lines of the lift cylinder are linked together and opened to the tank line through the direction control valve. The front end loader floats on the ground through the pressure of its own weight.
- keep the bucket level and completely lower the front end loader. Position the lever to activate the float.
- Note: Do not activate Float when loader bucket is in air. Use attachments which are recommended for float operation and do not need additional.



CAUTION – Watch the zip ties sharp ends to hold the nylon sleeves on loader hydraulic hoses, it may cause scars or minor injury.

PRE – OPERATION CHECKS

1. Quick Checks

- Follow all safety rules as described in this manual.
- Ensure that all the hydraulic lines are in good condition and should be leak free.
- All fasteners should be properly tightened.
- Check all lubrications points and lube fittings.
- Ensure ROPS (Roll Over Protection Structure) and drive seats are in good condition.
- Ensure bucket is properly attached with hitch.

2. Ballasting the tractor



WARNING - To prevent serious injury or death - Always use a counterweight in the rear of the tractor for front end loader work. This is necessary for operational and road safety.

Please ensure below mentioned **counterweight** in rear of tractor -

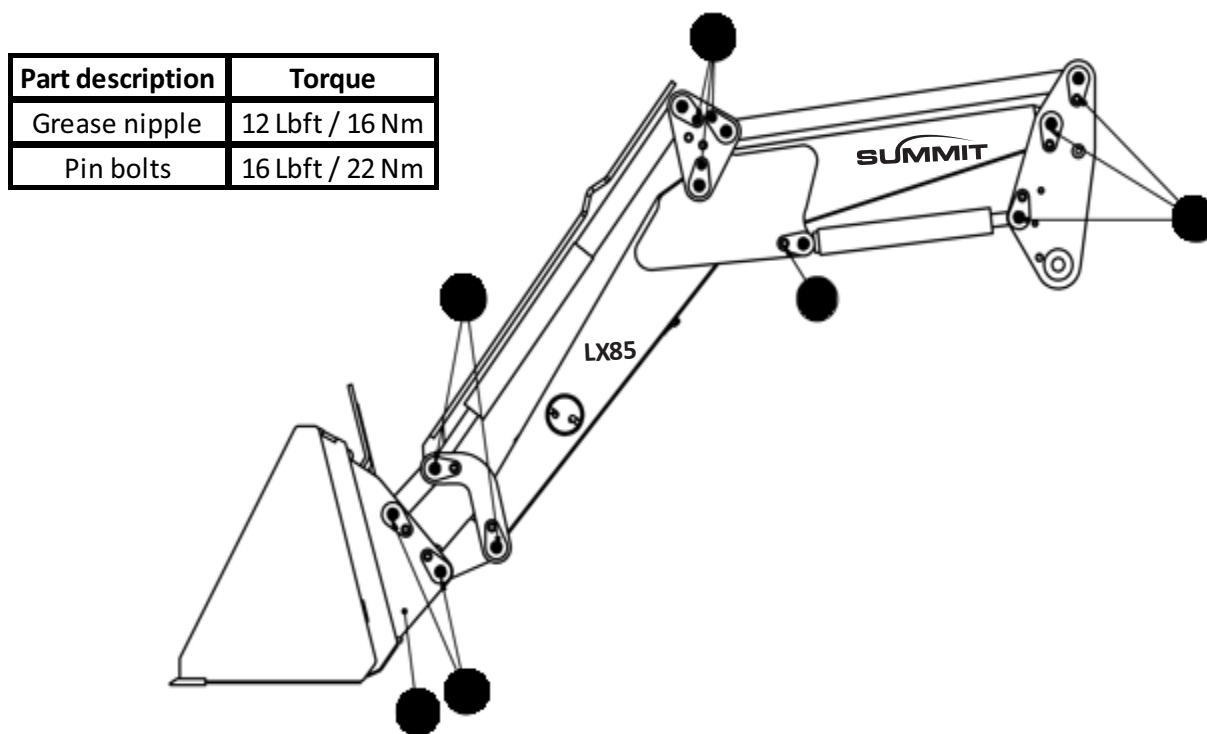
Model	counterweight
LX85	551-661 Lbs (250-300 Kgs)

OPERATION

3. Lubrication

Ensure that all greasing points are greased properly using NLGI grade no 2. Please do greasing accordingly on both sides.

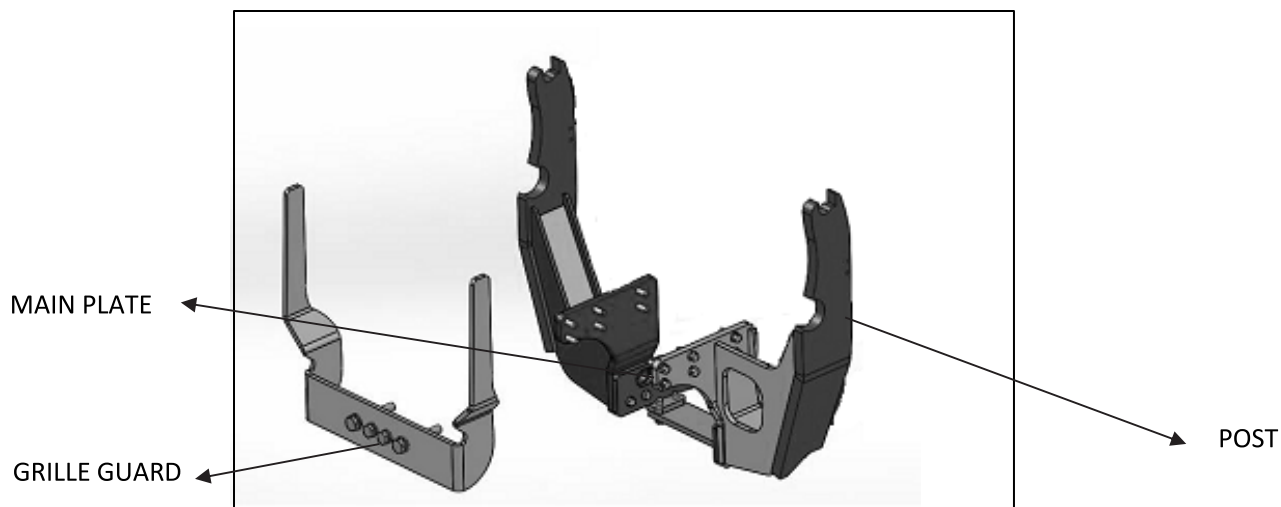
Transmission Oil - Refer tractors operator manual for topping up the transmission oil.
Oil top up is not required for this tractor on a loader assembly.



The above drawing shows the locations of the greaseable pins.

WORK INSTRUCTIONS

1. SUBFRAME FITTING INSTRUCTIONS



Summit LX85

Every model tractor make is different, the sub-frame and hence the exact steps to fit it are different for every tractor

- Starting on the right hand side of the tractor, remove engine side cover.
- Check the drawings and remove or loosen where necessary any existing stabilizer mounts, ROPS mounts, if required. (Replace with longer bolts if provided)
- Position the mid or back mounts supplied. Fasten them in position, ensuring that it is fitted the same way as it was assembled in the kit.
- Position one side of the sub-frame on the tractor and, with bolts supplied, fasten into position. Depending on the tractor and sub-frame design, the sub-frame may have or may not have centre, front and rear mounts – check the drawings.
- Size and number of bolts to be used are shown in the drawing supplied with the kit. It is recommended that all bolts be fitted before any are fully tightened up.
- **NOTE:** It may be necessary to pull the sub-frame into place using a sash clamp or similar due to variations between tractors and creep-age during welding of the sub-frame.

WORK INSTRUCTIONS

- **NOTE:** It may be necessary to pull the sub-frame into place using a sash clamp or similar due to variations between tractors and creep-age during welding of the sub-frame .
0.79 inches (20mm) This is not a manufacturing defect. The rear arm is designed to accommodate this sort of variation.
- Fasten the other side of the sub-frame onto the tractor in a similar manner.
- Prior to fastening the cross member (see next heading) or finally tightening the mid mount bolts, use a tape measure to check the distance between centres at the top of the posts, where the loader will be attached. The distance should be **31.5 inches (800mm)**.

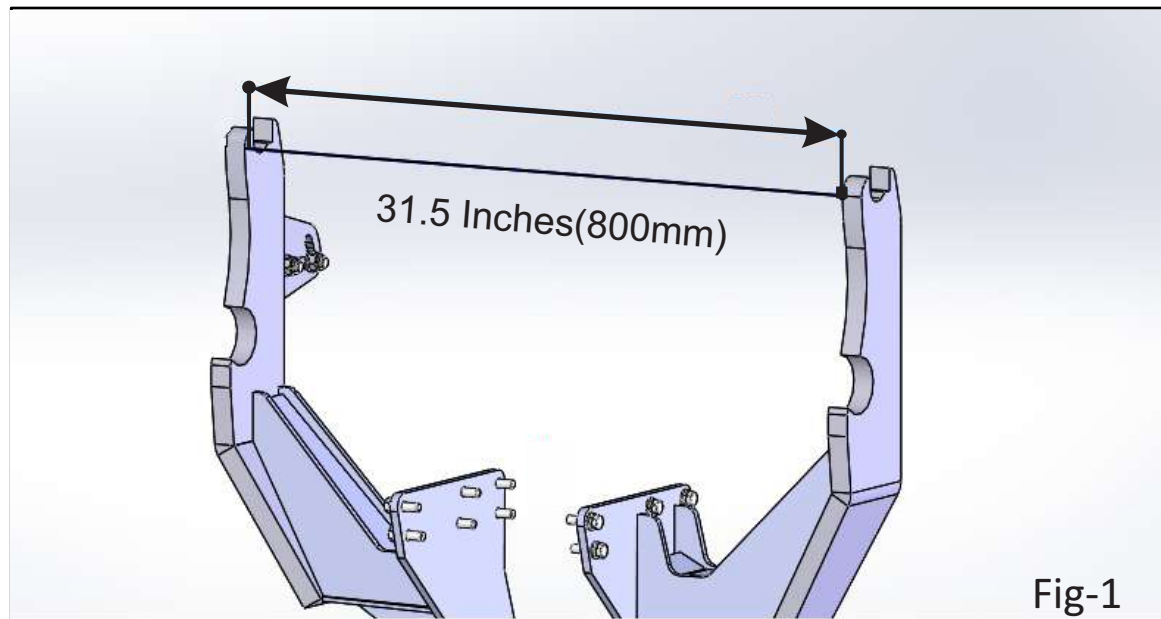


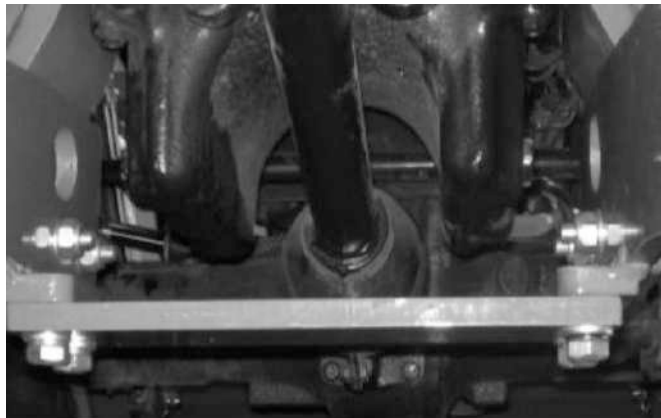
Fig-1

- The measurements listed above are centre to centre, however it is easier to measure from outside to inside, which gives the same result, as shown in the photos .Tolerance allowed on the top of post for these dimensions is 0.39 inches (± 10 mm). If any deviation from the allowed tolerance please use a clamp to adjust the posts to the correct centres. If necessary fit the spacers provided or washers to achieve the proper distance.

WORK INSTRUCTIONS

CROSS MEMBER

- Summit loader cross member is only one type.
- If there is a cross member, position it in place and fasten with the bolts supplied. Check the post top centers again as shown in above fig 1.



GRILLE GUARDS

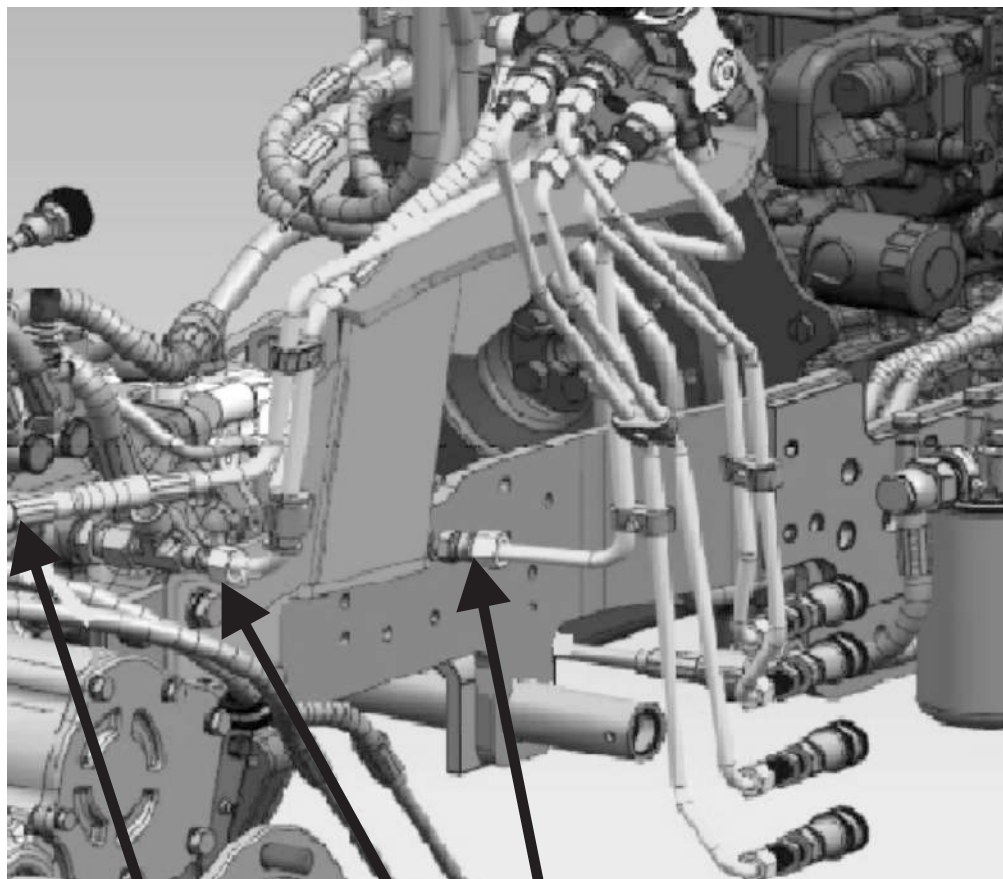
- The grille guard are clamped onto the front of the chassis or the weight frame or bolted to the sub-frame side plates. If not used to mount the grille guard, the weight frame will have to come off.
- Position the guard based on mounting arrangement as per the drawings and clamp it in place. Check for hood clearance



WORK INSTRUCTIONS

3. HOSE CONNECTION IN TRACTOR

- Before attaching the hoses to the valve, put the valve end of the supply hose in a bucket and flick the tractor's engine on and off to confirm that oil is flowing from the supply line.
- Then attach this line to the correct position on the valve. Failing to do this may result in dead-heading the pump, if the supply and Power-Beyond (PB) lines are reversed, and cause damage such as breaking the pump shaft or shearing its drive key.
- Kits are supplied with hydraulic fitting instructions. Plumb the tractor based on the instructions and drawings supplied. Valves are supplied preset for the tractor's circuit. Check clearance between exhaust pipe and moving parts viz., links, gear levers, remote levers etc.
- Refer hydraulic fitting instruction section.



Power - Beyond(PB)

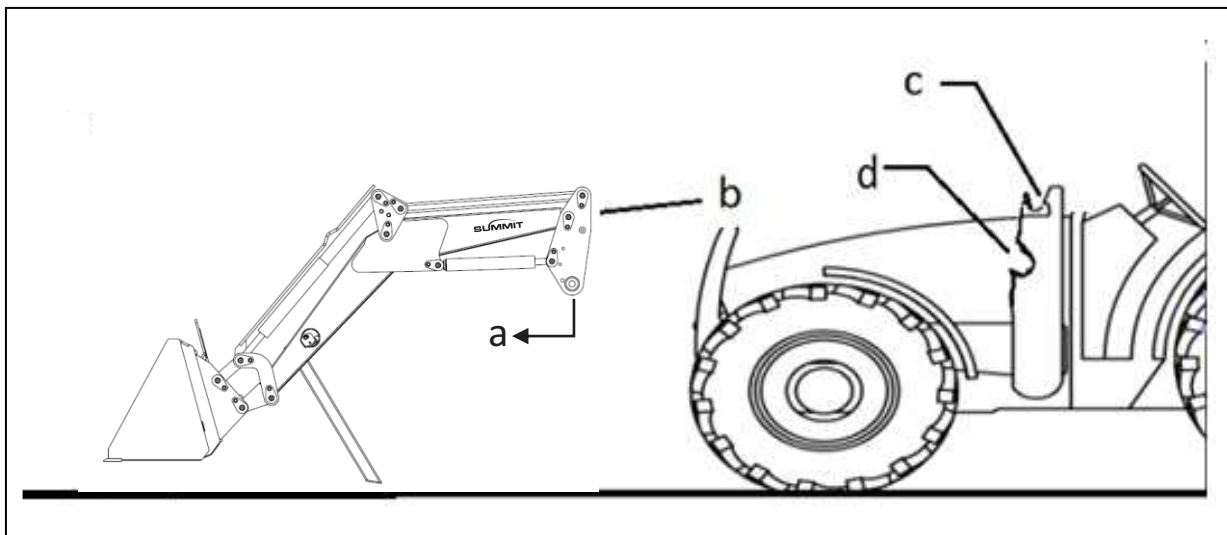
TANK

SUPPLY

QUICK DETACH INSTRUCTIONS

TO REMOVE THE LOADER (Quick Detach Models)

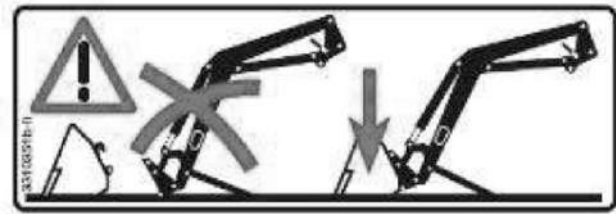
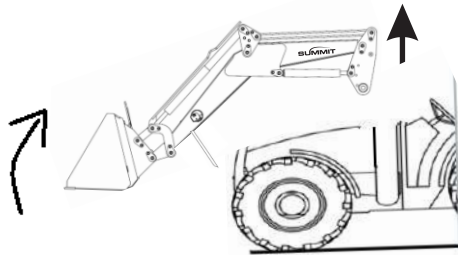
- Place the tractor on a level surface and raise the attachment approximately 4 feet (1.2m) from the ground.
- Pull out the upper leg with help of lynch pin following the bottom leg, ensure legs are locked in the keepers.
- Remove locking pins from the loader post (a), away from the pin and slide the pin out.
- Lower the loader arms until the stands are on the ground.
- Roll the bucket forward until the cutting edge is about 2 inches (50mm) off the ground.
- Push the control lift lever forward (dump condition) to close the lift cylinders. This will pull the bases of the post caps (b) away from the post loader mounting points (d & c).
- Drive the tractor forward about 0.79 – 1.18 inches (20-30mm).
- This will allow the loader to rock forward and be clear of the posts.
- Disconnect the hydraulic hoses and hang them on the loader, out of the way of the tractor.
- Reverse the tractor out from the loader.



QUICK DETACH INSTRUCTIONS

RE - INSTALLATION OF THE LOADER

- To refit the loader, drive the tractor into the arms until the post caps are over the posts.
- Turn off the engine and connect the hydraulic hoses. If they are difficult to connect, move the hydraulic control levers so as to relieve the pressure in the hoses.
- Roll the bucket forward until the post caps are sitting on the posts.
- Extend the lift arms until the post caps engage the bushing on the post. Check to be sure that the post caps are fully engaged onto the post.
- Raise the attachment approximately 48 inch(1.2m) from the ground and reposition quick change pins and lock them with lynch pins provided.
- Standing outside the arms, loosen the bolts, swing stand legs up into its keeper and fasten the bolts.



DISCONNECTING HYDRAULICS

Electric Front Remotes

- Turn your tractor off, and back on to accessory. Move the joystick from side to side with diverter button held in releasing pressure from the couplers and then disconnect.
(3 Bank Valve and front remotes / front remotes to tractor remotes)
- Turn the tractor off and move the 3rd function lever up and down releasing pressure from the couplers and then disconnect.

RECONNECTING HYDRAULICS

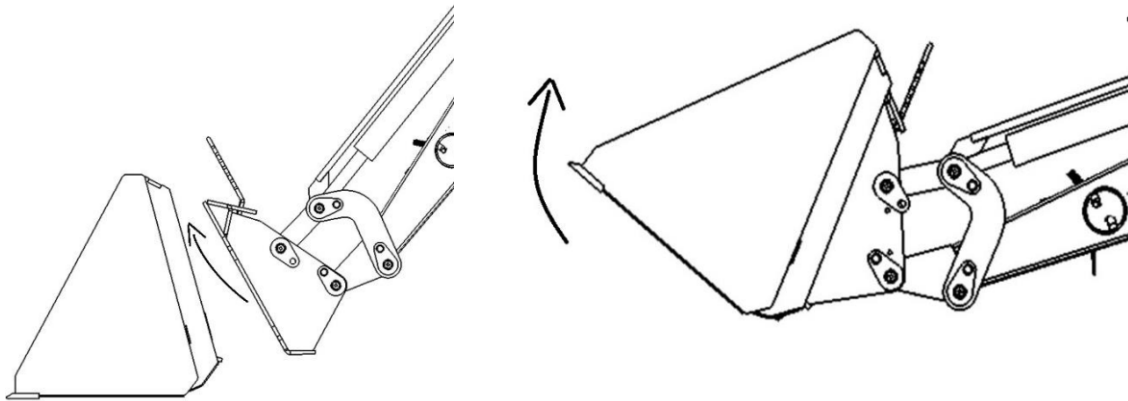
(Electric Front Remotes)

- Turn the tractor off, and back on to accessory. Move your joystick from side to side with your diverter button held in releasing pressure from the couplers and connect the tips.
- (3 Bank Valve and front remotes / front remotes to tractor remotes).
- Turn your tractor off and move the 3rd function lever up and down releasing pressure from the couplers and connect hoses.

QUICK DETACH INSTRUCTIONS

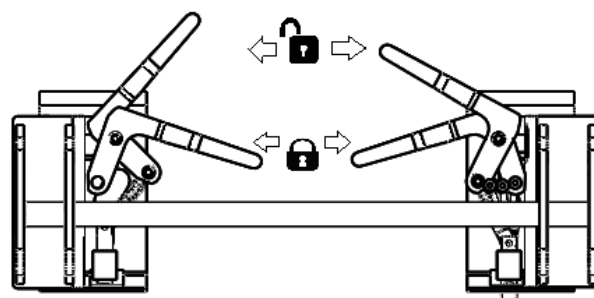
ATTACHMENTS AND REMOVAL OF IMPLEMENTS

1. Drive into the attachment lining up the white line up stickers on the right hand side of the quick change.
2. Engage the top bar in the hook by lifting the quick change. Once the attachment is off the ground, tilt back until the attachment hooks hit the stop.
3. Reposition the attachment locking pins and secure with lynch pins or R-pins.



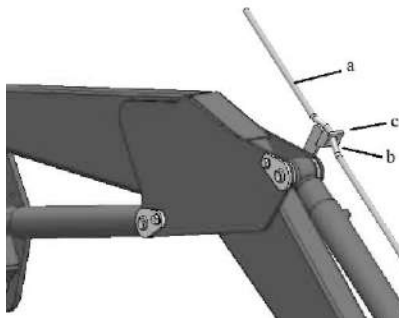
Step 1

Step 2

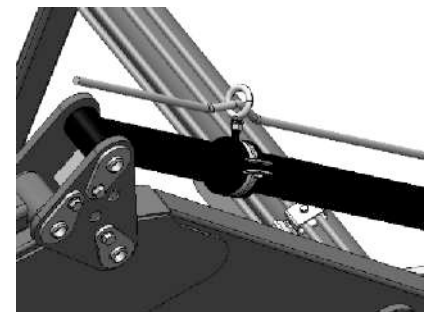


Step 3

LEVEL DISPLAY INDICATOR



- Check the horizontal implement position via the level indicator.
- The tool is at the horizontal position when the elbow (c) of the rod (a) is in the hole (b).



- In some models an adjustable clamp is provided. The clamp can be unbolted and adjusted as per desired applications and understanding.

4 IN 1 BUCKET : DO'S & DON'TS

If your loader has a 4-in-1 bucket, please note the following:-

General

The Summit 4-in-1 bucket is a multipurpose bucket designed for the following functions:

1. Use as a plain bucket,
2. Use as a scooping scraper/levelling bucket,
3. Use as a blade,
4. Use as a grab.

Note: Attachments should only be used which are recommended by the loader manufactures.

The Third function is already installed on the front end loader, it is used to control hydraulic cylinders on the attachment. A push button on the control lever activates the valve. When the button is pushed and lever moved towards the right direction the attachment opens. When lever is moved towards the right the attachment closes.

Do's

1. Ensure you are familiar with the tractor, loader and bucket operation.
2. Ensure that the weight in the bucket when full does not exceed the safe working load or rated operating load (whichever is lower) of the FEL .
3. In bucket operation, use the bucket for picking up loose material, soft soil, gravel, etc.
4. In scraper and blade operation, use the bucket for finishing work on lose ground.
5. In grab operation, use the bucket to pick up and grapple loose objects.
6. Try to apply even force to both sides of the bucket and FEL, by centralising loads in the bucket and picking up objects in the centre.
7. Be aware that, since the bucket is designed to grab and hold a load, there is no pressure relief in the hydraulic circuit lower than tractor pressure. This may be enough to bend the front edge of the bucket if full closing force is applied to small diameter hard object such as a post or stump.

Don't

1. Use the bucket to try to break up or dig in compacted or heavily rock-strewn soils.
2. Pull out objects embedded in the ground, such as stumps or posts. Especially, do not grab a fixed object and then drive the tractor backwards and forwards to attempt to 'rock' the object out of the ground.
3. Drag or pull backwards against a fixed object, such as a rock embedded in hard ground, as this will apply full tractor force to the front half of the bucket.
4. Scrape or blade at higher than crawl speed.
5. Lower the bucket to the ground while travelling at higher than crawl speed.
6. Use the bucket as a lifting jib. Especially do not loop a chain or sling around the front edge or one side of the bucket. (Note: a FEL lifting jib attachment is available for this purpose).

MAINTENANCE

General instructions:-

- Proper maintenance is your responsibility.
- Poor maintenance invites trouble.
- Grease nipples are provided on pivot points that require greasing.
- Proper lubrication is essential to ensure maximum loader life. Grease all nipples prior to commencement of operation and then every eight hours of loader operation, or more often in extreme conditions. Lower the loader to the ground before commencing greasing.
- Hydraulic oil and filters should be changed in accordance with the tractor service recommendations.
- Check all bolts for tightness after initial operation and periodically thereafter.
- Check regularly wear and tear parts, cracks, frayed hydraulic hoses and hydraulic leaks.

GREASING, LUBRICATION AND TORQUE STATEMENT

Greasing, Lubrication and Bolt Torque

Greasing, lubrication and maintenance of bolt torque of your equipment is critical to the longevity and safety of your equipment. Failure to correctly follow a maintenance program may result in product failure and voiding of warranty.

SPECIAL NOTE:

Torque all mounting bolts first 10 hours then every 50 hours thereafter (M16, 10.9 grade) at 210 lbft (285 Nm):

Daily Checks (First 50 hours)

- Grease all pivot points.
- Visually inspect attachment, subframe and decal for integrity.
- Visually inspect and torque all bolts, fasteners and hydraulic fittings.



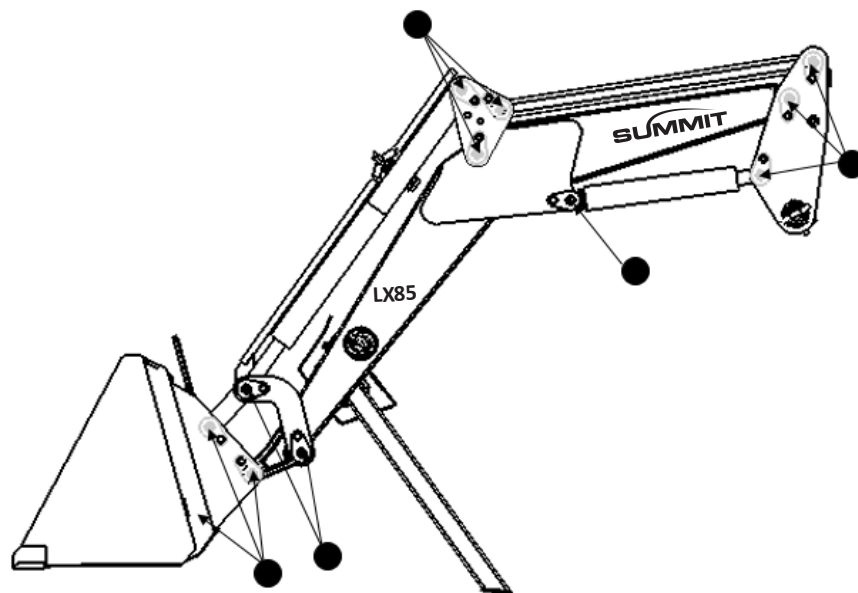
MAINTENANCE

Every 10 Hours of operation there after

1. Grease all pivot points.
2. Torque all bolts on attachment and Subframe
3. Visually inspect attachment, subframe and decals for integrity.
4. Inspect and replace damaged hydraulic hoses, pipes or clamps.

Yearly

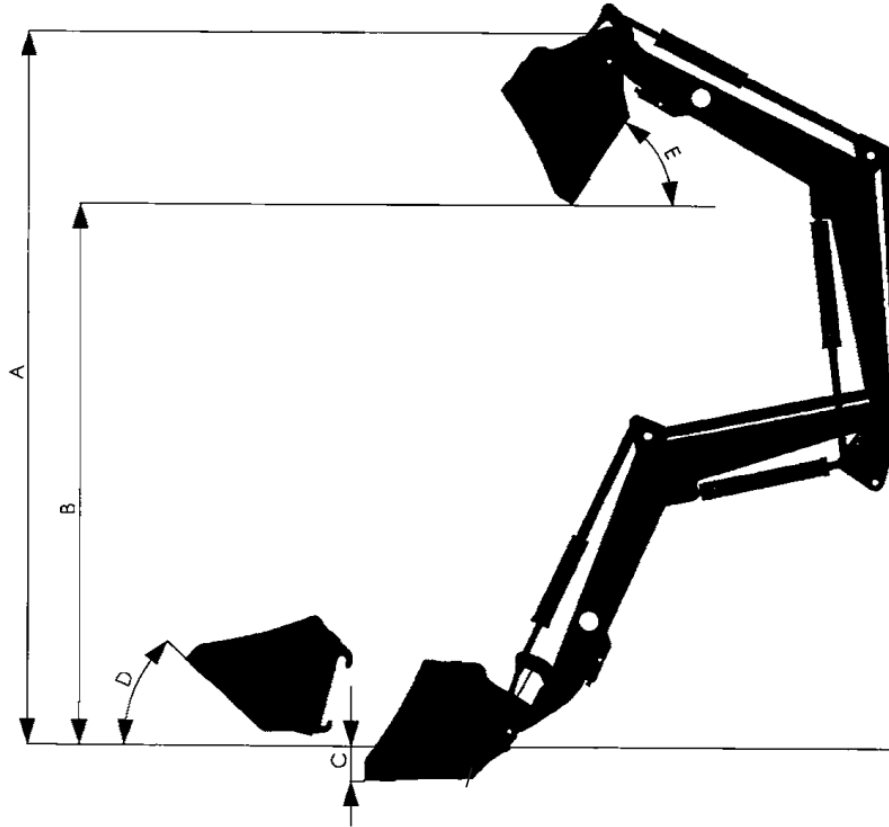
1. Check joystick / cables for operations and setting.
2. Inspect all pivot points for wear or excess clearance and replace parts if required.
3. Inspect all welds for cracks .



Note:- The above drawing show the location of the greaseable pins.

FRONT END LOADER SPECIFICATIONS

Specifications:-



MODEL	LX85
Approx. H.P. range	15 - 26
Bucket width (inches / mm)	51.6 / 1310
A. Maximum lift height to pivot pins (inches / mm)	85.0 / 2160
B. Height under level bucket (inches / mm)	76.8 / 1951
C. Dump clearance (inches / mm)	60.6 / 1540
D. Dig depth (inches / mm)	6.0 / 150
E. Maximum dump angle (degree)	45
F. Maximum roll back angle (degree)	43
Front end loader weight (lbs / kgs)	419 / 190
Lift capacity at pivot pins (lbs / kgs)	925 / 420

Note:-Specifications are approximate and are subject to change without notice.

TORQUE SPECIFICATIONS

Spec-GS-011	Bolt Torque Settings
-------------	----------------------

Scope:

This specification gives information about torque settings on metric & imperials bolts and things to be noted down while fastening a bolt.

Special Notes:

- Use correct tools on bolts. Tools that do not fit properly may slip and cause injury.
- Replacement bolts must be the same or a higher grade. If a higher grade is used, it should only be tightened to the original torque settings.
- Make sure bolt threads are clean and engaged properly when starting. This will prevent them from failing when tightening.

Specifications:

SAE SERIES TORQUE CHART			
BOLT DIA. (Inches)	SPANNER SIZE	GRADE 5	
		(Lbft)	(N-m)
1/4"	7/16"	5	7
5/16"	1/2"	11	15
3/8"	9/16"	20	27
1/2"	3/4"	49	66
5/8"	15/16"	96	130
3/4"	1 1/8"	170	230
7/8"	1 5/16"	273	370
1"	1 1/2"	413	560

METRIC SERIES TORQUE CHART			
BOLT DIA. (mm)	SPANNER SIZE	CLASS 10.9	
		(Lbft)	(N-m)
8	13	24-25	33-35
10	16	48-53	65-71
12	18	81-90	110-122
14	21	133-144	180-195
16	24	199-221	270-299
18	27	280-305	380-413
20	30	391-432	530-585
24	36	656-747	890-1011

TORQUE SPECIFICATIONS

Spec-GS-012	Hydraulic fitting torque settings
-------------	-----------------------------------

Scope:

This specification gives information about torque settings on fittings and things to be noted down while fastening a fittings.

Special Notes:

- Use correct tools on fittings. Tools that do not fit properly may slip and cause injury.
- Make sure threads are clean and engaged properly when starting. This will prevent them from failing or leaking when tightening.

Specifications:

Straight thread O-ring boss low pressure with 37° (SAEJ514)			
Dash Size	Thread Size (inches)	Jam Nut or Straight Fitting torque Lbft	Jam Nut or Straight Fitting torque Newton Meters
-03	(3/8)-24	8-9	12-13
-04	(7/16)-20	13-15	18-20
-05	(1/2)-20	14-15	19-21
-06	(9/16)-18	23-24	32-33
-08	(3/4)-16	40-43	55-57
-10	(7/8)-14	43-48	59-64
-12	1 (1/16)-12	68-75	93-101
-14	1 (3/16)-12	83-90	113-122
-16	1 (5/16)-12	112-123	152-166
-20	1 (5/8)-12	146-161	198-218
-24	1 (7/8)-12	154-170	209-230
-32	2 (1/2)-12	218-240	296-325

Straight thread O-ring boss High pressure with ORS (J1453)			
Dash Size	Thread Size (inches)	Jam Nut or Straight Fitting torque Lbft	Jam Nut or Straight Fitting torque Newton Meters
-03	(3/8)-24	8-10	11-13
-04	(7/16)-20	14-16	20-22
-05	(1/2)-20	18-20	24-27
-06	(9/16)-18	24-26	33-35
-08	(3/4)-16	50-60	68-78
-10	(7/8)-14	72-80	98-110
-12	1 (1/16)-12	125-135	170-183
-14	1 (3/16)-12	160-180	215-245
-16	1 (5/16)-12	200-220	270-300
-20	1 (5/8)-12	210-280	285-380
-24	1 (7/8)-12	270-360	370-490

TORQUE SPECIFICATIONS

ORS			
Dash Size	Thread Size (inches)	Swivel Nut Torque Lbft	Swivel Nut Torque Newton Meters
-04	(9/16)-18	10-12	14-16
-06	(11/16)-16	18-20	24-27
-08	(13/16)-16	32-35	43-47
-10	1-14	46-50	62-68
-12	1(3/16)-12	65-70	88-95
-16	1(7/16)-12	92-100	125-136
-20	1(11/16)-12	125-140	170-190
-24	2-12	150-165	204-224

SAE 37° (JIC)			
Dash Size	Thread Size (inches)	Swivel Nut Torque Lbft	Swivel Nut Torque Newton Meters
-04	(7/16)-20	11-12	15-16
-05	(1/2)-20	15-16	20-22
-06	(9/16)-18	18-20	24-28
-08	(3/4)-16	38-42	52-58
-10	(7/8)-14	57-62	77-85
-12	1(1/16)-12	79-87	108-119
-16	1(5/16)-12	108-113	148-154
-20	1(5/8)-12	127-133	173-182
-24	1(7/8)-12	158-167	216-227
-32	2(1/2)-12	245-258	334-352

**"G" in BSPP threads denotes parallel threads, other than ISO 6149. (port connection only)

Note:

Torque wrench is to be used for correct torque settings. Fittings and hoses are to be torqued as per standards.

Hand tightening may exceed the specified torque required.

Over torquing will damage the components seals and threads which can cause leakages.

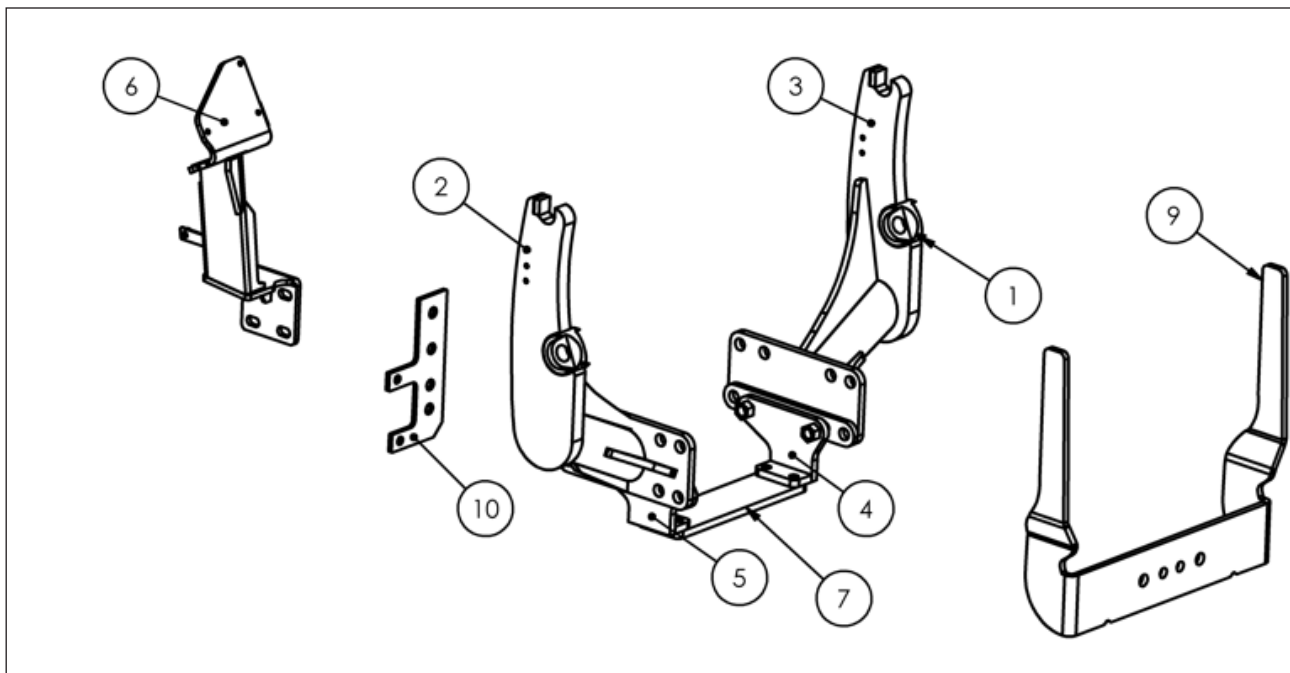
The values listed are for steel connections, we recommends that a torque wrench be used to assure proper fitting assembly of these connections.

BSPP		
Nominal Thread Size	Straight Adapter or Locknut Torque	
inches **	Lbft	Newton Meters
G (1/8)-28	13-15	18-20
G (1/4)-19	19-23	25-30
G (3/8)-19	33-40	45-55
G (1/2)-14	55-70	75-95
G (3/4)-14	103-118	140-160
G1-11	162-184	220-250
G 1(1/4)-11	170-192	230-260
G 1(1/2)-11	258-347	350-470

SUBFRAME AND HYDRAULIC FITTING INSTRUCTION

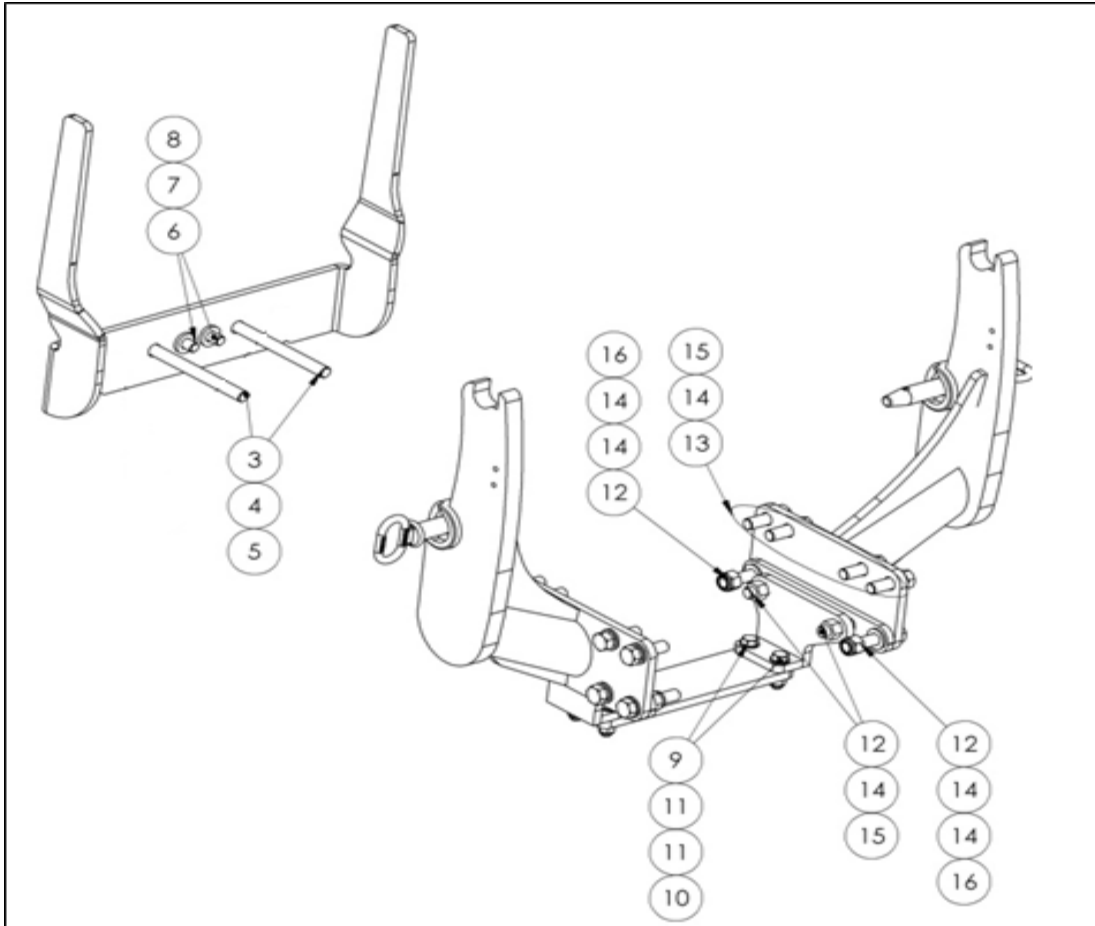
- **Subframe and hardware parts details**

Assemble the hardware and parts as shown in the image below,
Remove necessary filter brackets for assembling subframe and tractor front weights.
The following tables are also references to order spare parts.



ITEM NO.	DESCRIPTION	QTY.	ITEM NO.
1	GREASE NIPPLE	2	1
2	RH SUBFRAME (Harvest Green)	1	2
3	LH SUBFRAME (Harvest Green)	1	3
4	LH CROSS MEMBER MTG (Harvest Green)	1	4
5	RH CROSS MEMBER MTG (Harvest Green)	1	5
6	DCV MOUNTING BRACKET (Glossy Black)	1	6
7	CROSS MEMBER (Harvest Green)	1	7
8	MID MOVER PLT (Harvest Green)	2	8
9	FRONT GRILL GUARD (Harvest Green)	1	9
10	PLATE FOR DCV PIPES MTG (Glossy Black)	1	10

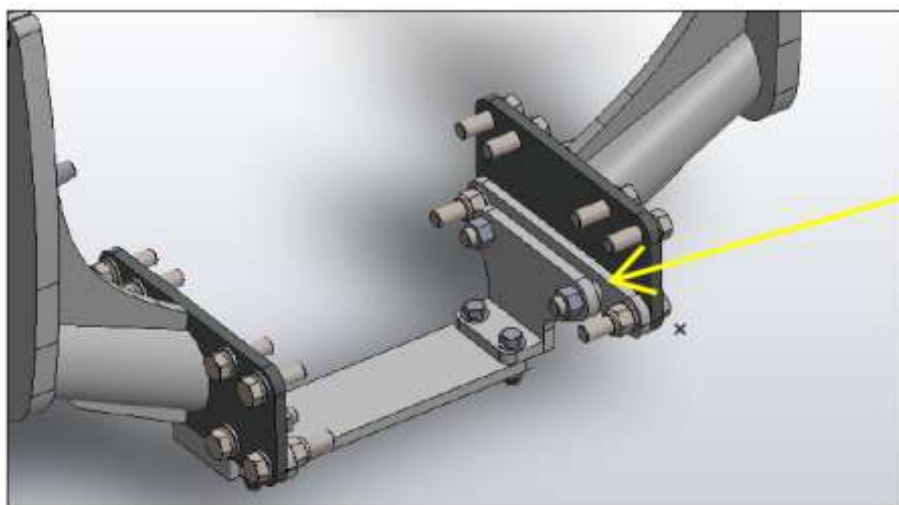
SUBFRAME AND HYDRAULIC FITTING INSTRUCTION



HORN PLATE CONNECTION		
S.NO	DESCRIPTION	QTY
3	HEX,BOLT,M16X2X180 SEMI THREAD	2
4	PLAIN WASHER M16	2
5	SPRING WAHSER M16	2
6	HEX,BOLT,M14X2X40 SEMI THREAD	2
7	PLAIN WASHER M14	2
8	SPRING WAHSER M14	2

SUBFRAME AND HYDRAULIC FITTING INSTRUCTION

X-MEMBER CONNECTION		
S.NO	DESCRIPTION	QTY
9	HEX,BOLT,M12X1.75X45 SEMI THREAD	4
10	NYLOC NUT M12	4
11	PLAIN WASHER M12	8
MAIN PLATE		
S.NO	DESCRIPTION	QTY
12	HEX,BOLT,M16X2X75 SEMI THREAD	8
13	HEX,BOLT,M16X2X50 SEMI THREAD	8
14	PLAIN WASHER M16	20
15	SPRING WAHSER M16	12
16	NYLOC NUT M16X2	4



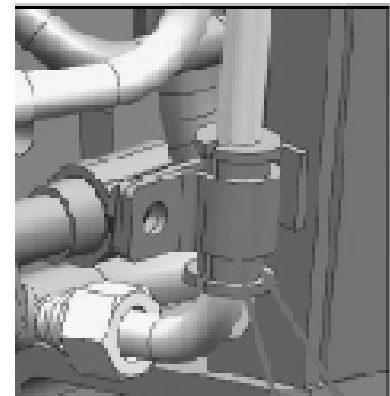
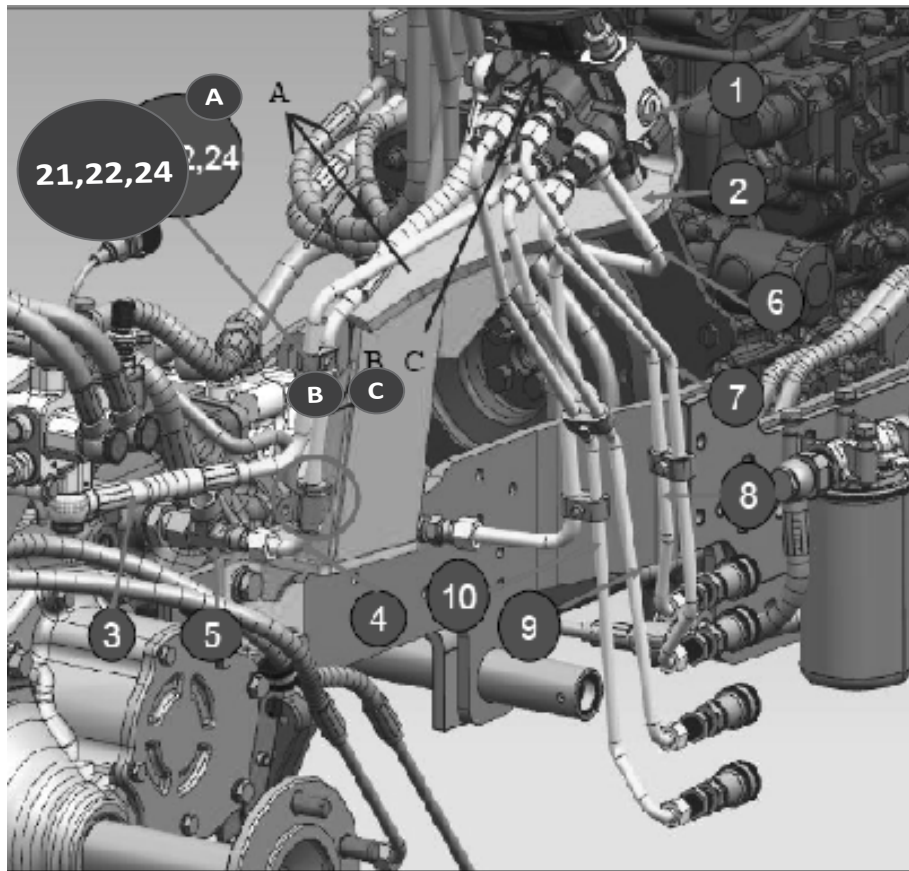
Spacer to be removed
form tractor with mid
mower both LH & RH

Please note:- Oil top up is not require for this tractor.
Apply loctite 242 to mounting bolts assembled on the loader and tractor.
For all hydraulic connection apply loctite 542 and torque to the recommended value.

HYDRAULIC FITTING INSTRUCTION

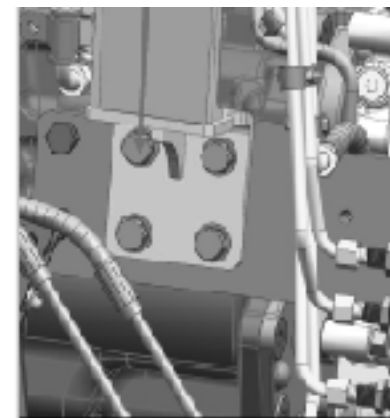
S.NO.	DESCRIPTION	QTY.
1	2 DOUBLE ACTING DCV	1
2	DCV MOUNTING BRACKET (Glossy Black)	1
3	PIPE FROM 2DA DCV(HPCO) TO 1DA DCV (P)	1
4	FLEXIBLE PIPE FROM LOADER DCV(T) TO REAR	1
5	TEE ADAPTER- M18x1.5, M18x1.5, M24x1.5	1
6	SECONDARY PIPE PRIORITY VALVE TO 2DA DCV	1
7	PIPE FROM 2DA DCV (B1) TO QRC 2	1
8	PIPE FROM 2DA DCV (A1) TO QRC 1	1
9	PIPE FROM 2DA DCV (A2) TO QRC 3	1
10	PIPE FROM 2DA DCV (B2) TO QRC 4	1
11	HEX BOLT M14X2X50 SA4GS	4
12	SPRING WASHER B-14	4
13	PLAIN WASHER M14	4
14	HEX SCREW M8X1.25X35 8.8 SA4GS	3
15	SPRING WASHER M8	3
16	BANJO BOLT Ø16.4(19TPI)	3
17	ADAPTER M18X1.5-3/8" BSP	4
18	BONDED SEAL FOR3/8" BSP	10
19	PRIMARY PIPE FROM PRIORITY VALVE TO 2DA DCV	1
20	FEMALE QUICK CONNECT COUPLER3/8" BSP	4
21	HEX SCREW M6X30 SA4GS	4
22	HEX NUT M6 -8 SA4GS	4
23	CLAMP-10/10	3
24	CLAMP-12/12	1
25	PLATE FOR DCV PIPES MTG (Glossy Black)	1
26	JOY STICK LEVER	1
26A	(Male M10x1.5 VS MALE M12 X 1.75) Bucher valve to Joystick lever adapter for push button joystick only	1
27	JOY STICK BELLOW	1
28	JOY STICK KNOB	1
29	HEX SCREW M12*1.75*35	2
30	HEX NUT M12X1.75 -8 SA4GS	2
31	SPRING WASHER B-12 TYPE-A IS:3063-1972	2
32	M/C WASHER DIA 13*DIA 24*2.5	2
33	VIBRATION DAMPER	1
34	CLAMP CURVE	1
35	CUP HOLDER-RH-HST	1
36	SECONDARY PIPE FROM PRIORITY VALVE TO 1DA-DCV (P)	1

HYDRAULIC FITTING INSTRUCTION



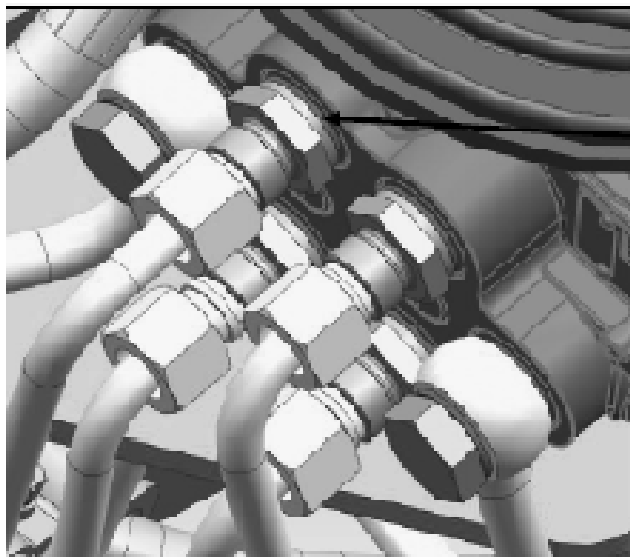
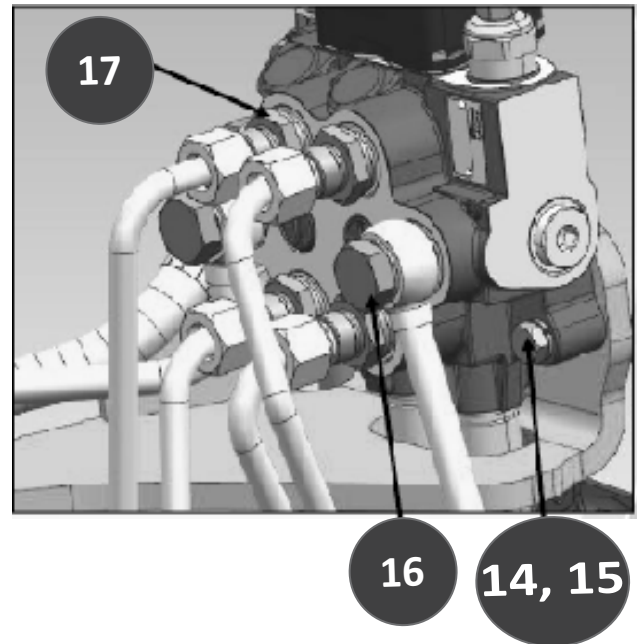
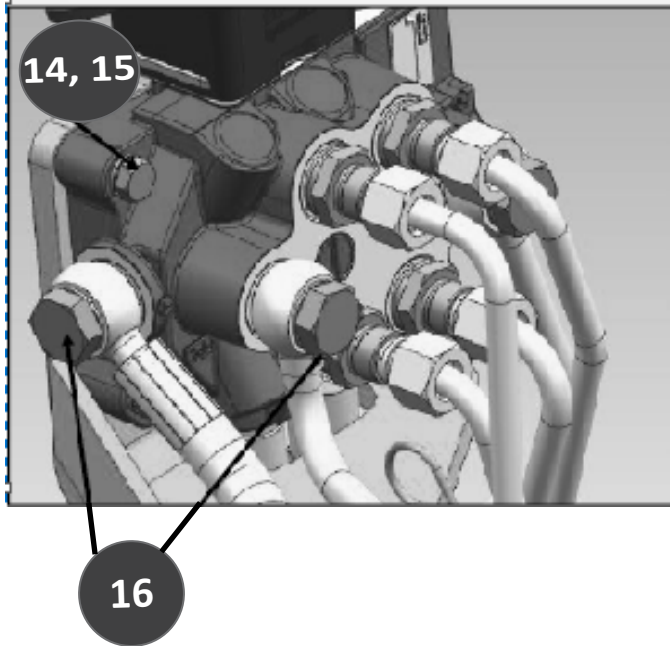
11, 12, 13

33, 34



1. Kindly dismantle RH tire, no. 36 & cup holder on the fender for the following assembly.
2. Use necessary precautions and safety.
3. Preassemble the bracket A(no. 1), B(hose 4), C & valve(no. 1), (no. 14,15)
4. Do not torque "B(hose 4) connection on the valve complete full assembly and then tighten the banjo bolt.

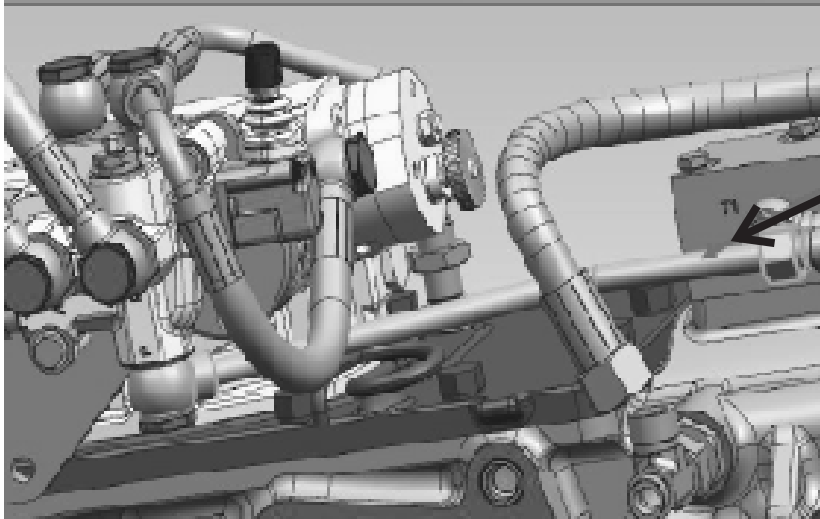
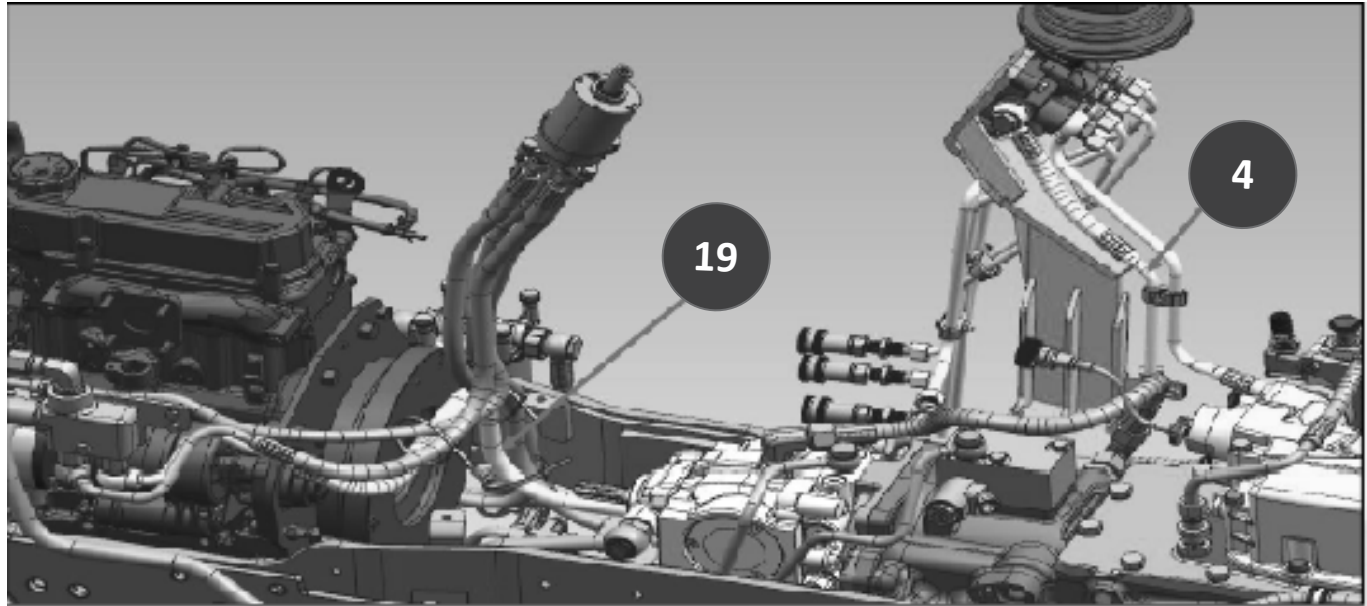
HYDRAULIC FITTING INSTRUCTION



18

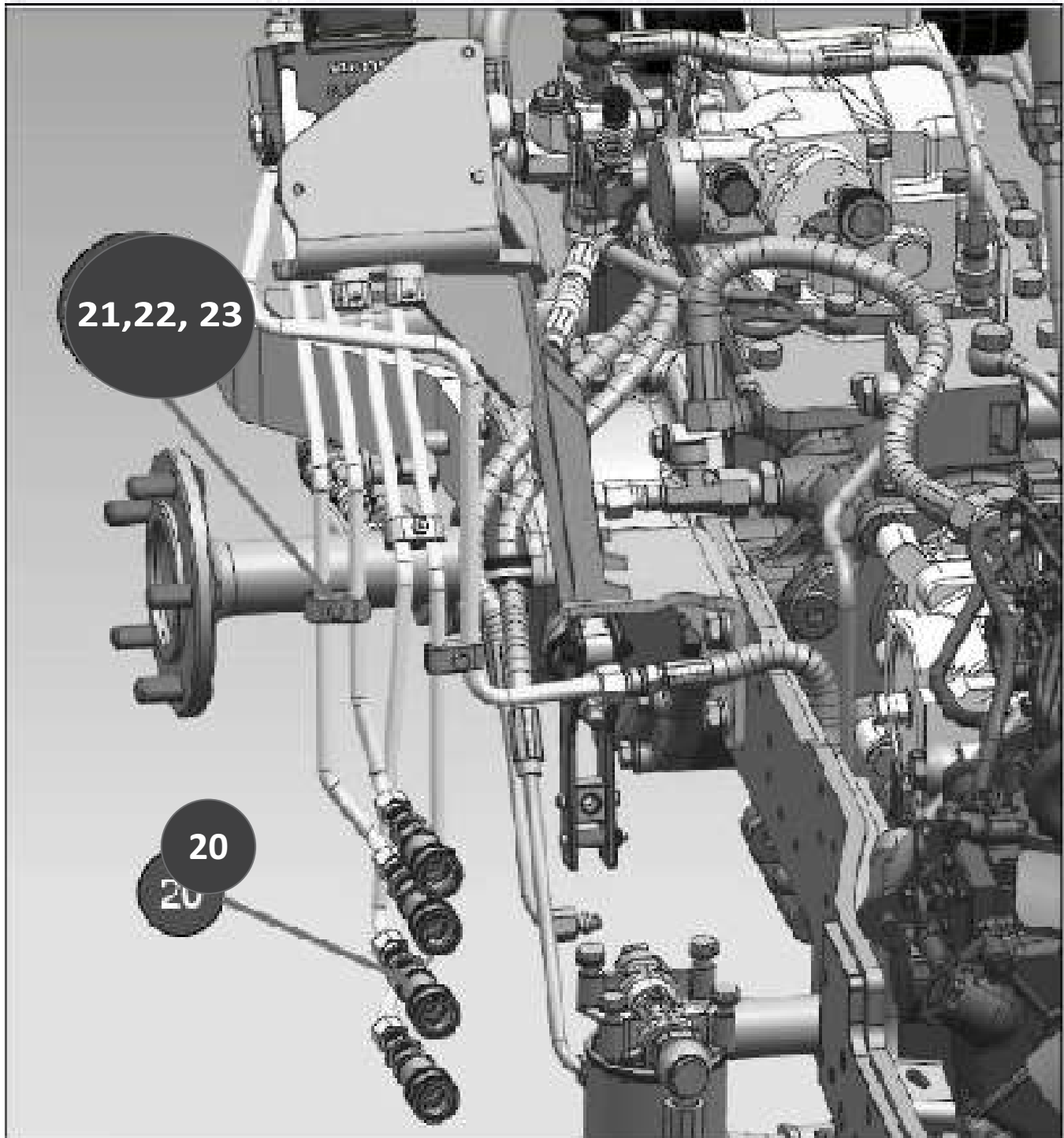
5. Assembly no. 17 to the valve all 4 nos.
6. Followed by 25,29,30,31,32
7. Assemble 8-9-7-10 in series use thread lock.

HYDRAULIC FITTING INSTRUCTION



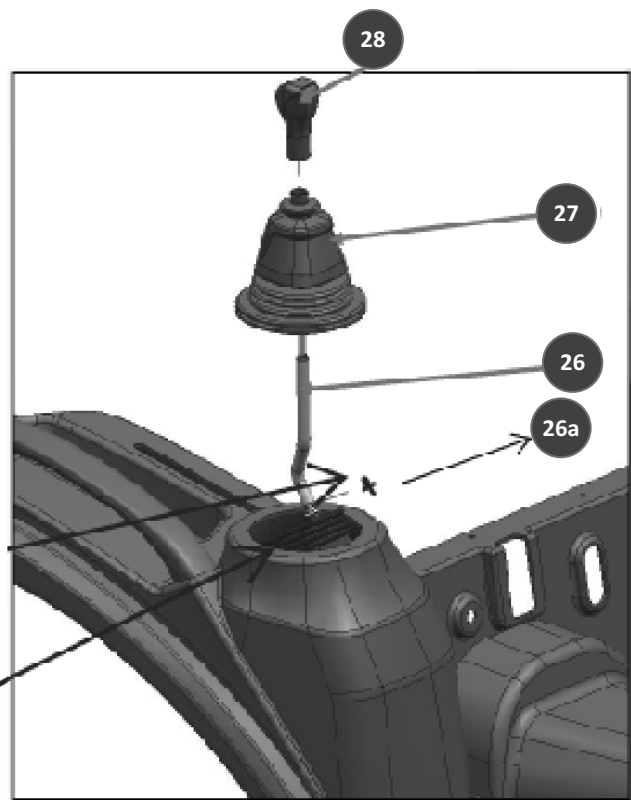
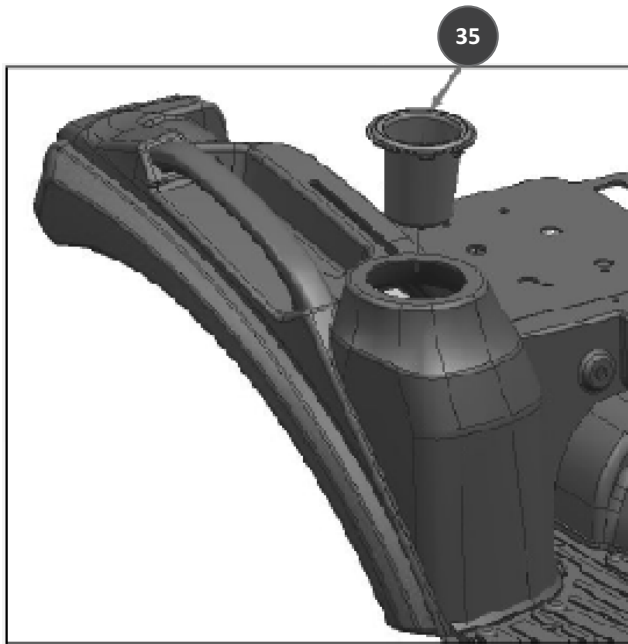
8. Next step is to assembly no. 6,4,3,5. followed by 21,22,24.

HYDRAULIC FITTING INSTRUCTION

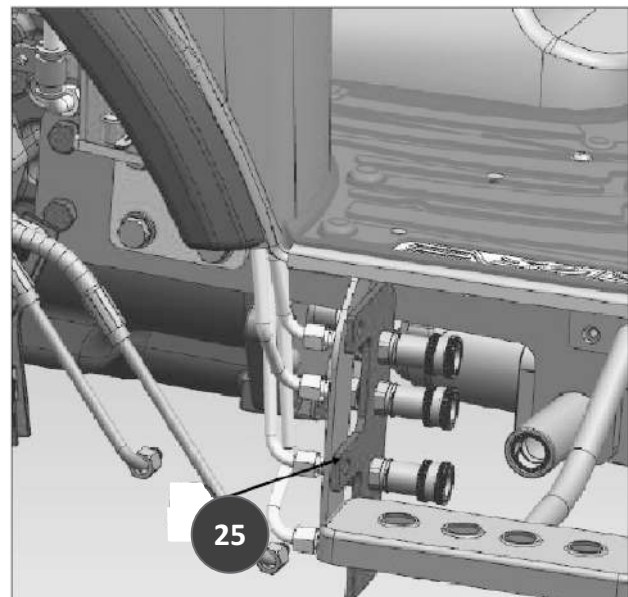


9. Assemble No. 20 , 21,22,23 respectively,
The orientation is very important so there is no issues with tire fouling.

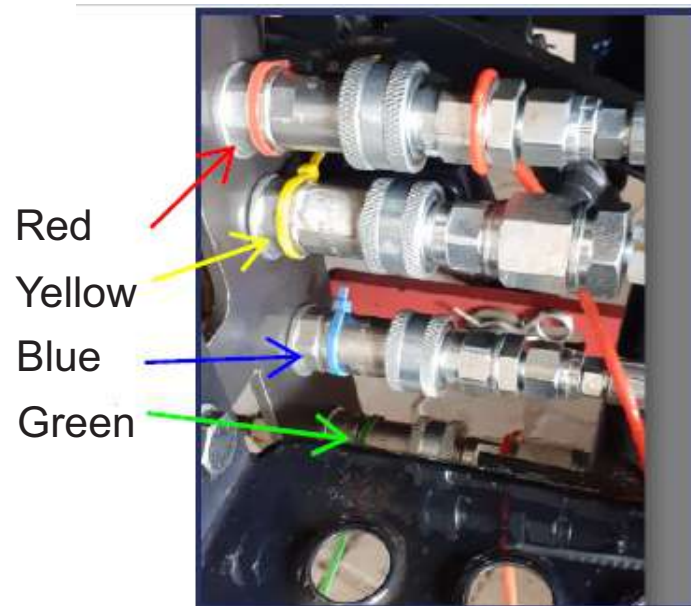
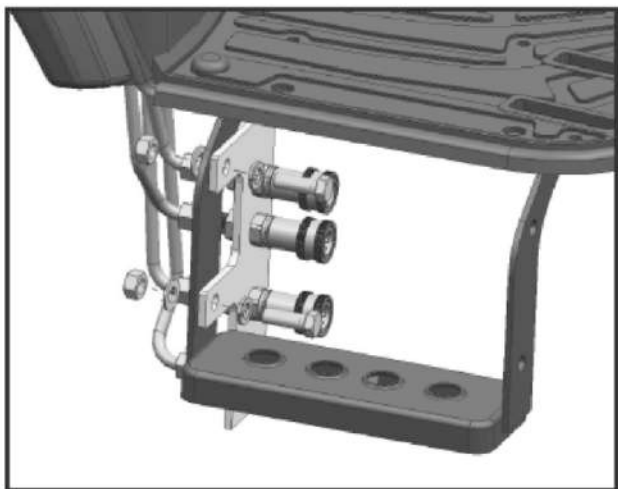
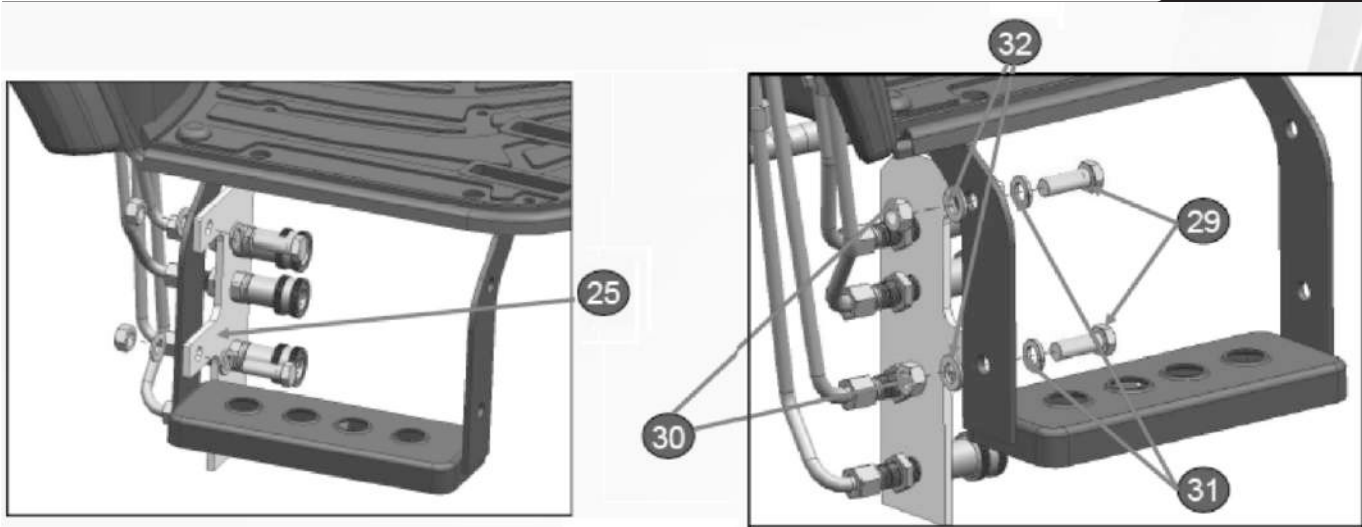
HYDRAULIC FITTING INSTRUCTION



10. Assemble the joystick with a adapter 26a- 01- 1211.
11. Use the nut to lock the joystick lever in position.
12. Push the boot into the lever and mate it with the cup holder spout lining.
13. Assemble the knob no. 28.

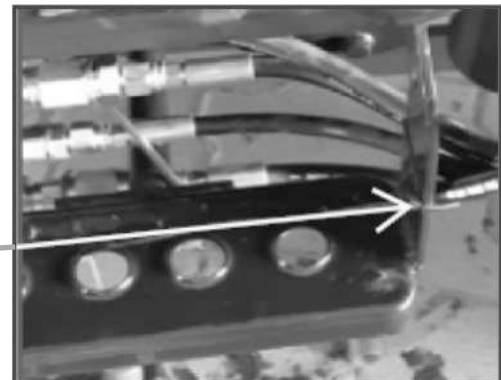


HYDRAULIC FITTING INSTRUCTION



14. After the QRC assembly kindly assembly the cables ties, as shown above.

15. Use a cable tie to hold the hose in this area.



Refer user manual for torque chart

HYDRAULIC FITTING INSTRUCTION

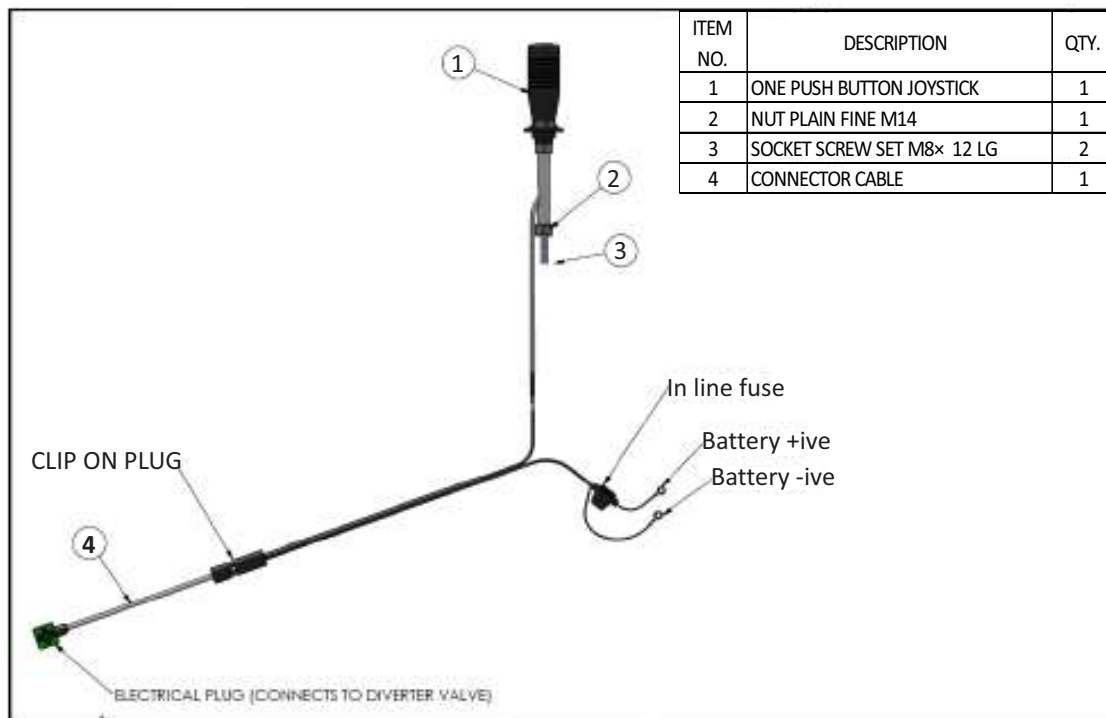
Wiring connection - SUMMIT TX25 HST ROPS

NOTE: This tractor has three configurations.

Tractor in built DCV mounted on the fender for loader with third function.

This document explains wiring connections to the tractor joystick.

A wiring kit is supplied with kit, which must be connected to the tractor.



ITEM NO.	DESCRIPTION	QTY
1	WIRE HARNESS CONNECTION TO BATTERY	1

HYDRAULIC FITTING INSTRUCTION

- Connect the -ve and +ve terminal of the wire to the tractor battery terminals.



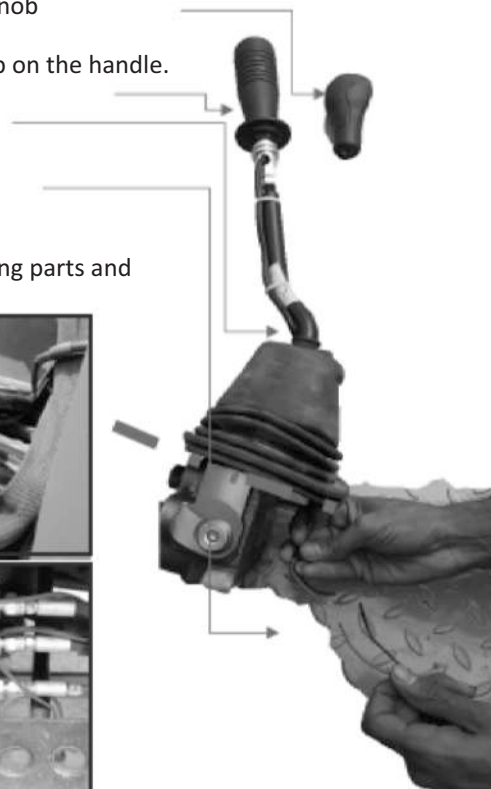
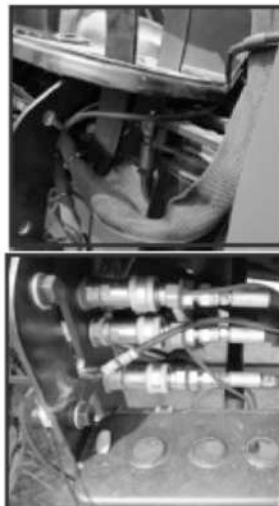
- Route the wire along with the wire available on the tractor and fix with tags. Wiring kit is supplied with kit, which must be connected to the tractor.

- On the fender joystick remove the company fitted knob
- Install the “Indemar make” push button joystick knob on the handle.
- Insert the wire through the rubber boot.
- Connect the joy wire to the wire kit supplied.
- Route the wires to avoid interference with any moving parts and

High thermal contacts.

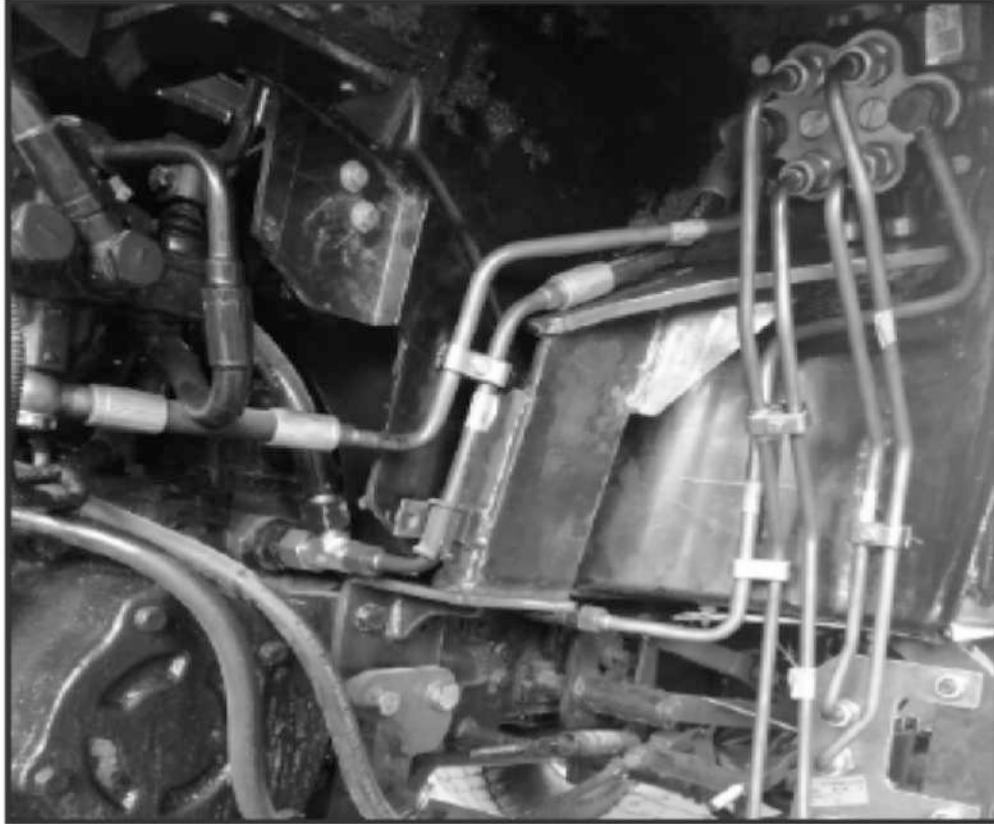
Route the wire so it does not rub or is in contact with high temp. parts.

Use cables ties where ever necessary.



HYDRAULIC FITTING INSTRUCTION

Assembly images for reference.



TROUBLESHOOTING

If your loader is equipped with 3rd function valve and unit reacts in the following manner:-

PROBLEM	POSSIBLE CAUSE	CORRECTION
Nothing happens when handle switch is activated.	Tractor switch is not on.	Turn tractor switch on.
	Power circuit is not connected.	Connect to tractor power supply that is only activated when tractor switch is on.
	Power circuits connected but fuse blown off.	Replace the fuse.
If you have 12 volts at solenoid valve but valve does not work properly.	Spool is sticking.	Push in on each side of valve spool to free up spool.
		Contamination in hydraulic oil causes spool to stick. Replace oil and filter.
		Solenoid valve section is damaged. Replace solenoid valve section.
	Two pin connectors in loose connection(two locations near Joystick or loader valve).	Disconnect and reconnect the two pin connectors. Clean the connectors.
Plug on loader diverter valve loose.	Disconnect and reconnect the plug or replace the wiring kit.	

The logo for Summit Tractors features the word "SUMMIT" in a bold, dark teal, sans-serif font. A thin, dark teal arc curves over the top of the letters. Below "SUMMIT" is the word "TRACTORS" in a smaller, dark teal, sans-serif font, flanked by two horizontal lines. The logo is centered on a light gray background that is part of a larger geometric design with dark teal and white sections and a hexagonal pattern in the corners.

SUMMIT[™]
— TRACTORS —