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SERVICE MANUAL

GARDENTRAC DI-26



INTERNATIONAL TRACTORS LIMITED
HOSHIARPUR
INDIA

Part No. 10056061AA

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FOREWORD

The service manual is prepared as reference material for the service personnel of authorized ITL dealers to enable them to correctly carry-out the task of rendering services and maintenance on ITL Tractors.

In order to ensure that the customers are satisfied with ITL products, proper servicing and maintenance must be provided. For this purpose, the service personnel must fully understand the contents of this manual and at the same time, are recommended to keep the manual in a place where reference can readily be made.

The information, photographs, drawings and specifications entered in this manual are the best available at the time of printing this manual. Any alteration to this manual occurring as the result of modifications will be notified by the issuance of Service Informations or supplementary volumes. It is therefore, requested that the manual must be kept up-to-date by carefully maintaining a follow-up of these materials.

ITL reserves the right to alter the specifications and contents of this manual without any prior notice.

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A

INSTRUCTIONS TO USER

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A. 1.0 MAINTENANCE

CONSULT THIS MANUAL THOROUGHLY, as proper functioning and good efficiency of mechanical organs depends mostly on constant and correct routine maintenance ensuring product integrity and expected life duration. In case of any damages or anomalies, quick intervention of specialized personnel can avoid future impairment and lengthen the working life.

REPAIR

The disassembly/assembly procedures have been outlined for a total product overhauling. They have also been described in sequence through photographs with relevant explanation for specific interventions, thus obtaining a complete and safe guide for each and every phase of an operation.

Operation description presumes that the group has already been removed from the vehicle. The manual supplied by the vehicle manufacturer should be consulted in case of overhauling or maintenance intervention requiring the removal of the machine.

GENERAL

The **TRACTOR** should be checked and/or repaired only by qualified technicians, acquainted with its peculiar features and well aware of all safety instructions. Before performing any operation it is advisable to carry out-group cleaning accurately by removing oil/grease encrustation and accumulation. All disassembled mechanical parts must be cleaned accurately with suitable products to avoid possible damage.

Parts should be replaced if damaged, worn out, cracked, seized, etc. As they could affect proper working. Rotating parts (bearings, gears, shafts) and that of hardware/fasteners (O-Ring, oil seals) should be examined carefully, as they are subject to major stress, wearing and ageing. We advise to replace tightening parts during every repair. Use genuine spare parts, nuts and bolts to avoid any other problems. Moreover, use metric tools for metric nuts and bolts and Imperial tools for the others.

Read & understand these instructions carefully to avoid damage to any person or machine.

A.2.0 SAFETY RECOMMENDATIONS FOR REPAIR OPERATIONS

Recommendations and all described procedures given in this manual have been experimented and carefully tested. Please follow every procedure.

It is impossible to advise every working method or know all possible methodologies for carrying it out or to predict risky consequences of each operation. Hence, performing procedures or using instruments which have not been advised could be dangerous for the operator/mechanic as well as the vehicle .

PRECAUTION

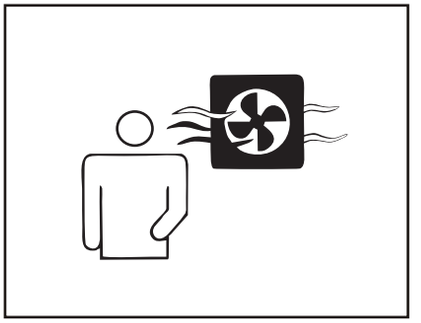
Safety goggles must be worn while carrying out any assembly or disassembly operation.

GENERAL PRECAUTIONS

Observe safety instructions, accident prevention rules and all general safety regulations in each and every step at work. Before going ahead with maintenance or repair work ensure that all the tools, the supporting bench, stands, levers, extractors and spanners are in good condition so that the work can be carried out easily. Risks to various parts and components will also be reduced in this way and working condition for the operator will also be safer.

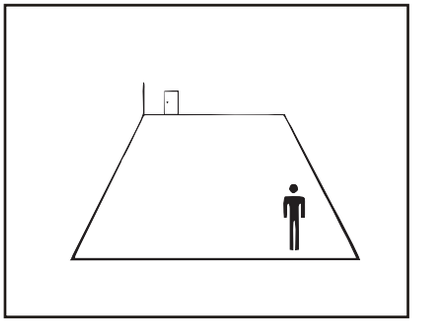
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A 3.0 SAFETY MAINTENANCE RULES



1. Sufficient Ventilation
Be sure to work in the well-ventilated place when the engine runs, welding or grinding a painted part.

(If not)
Exhaust gas and paint dirt is poisonous and hazardous to human bodies.



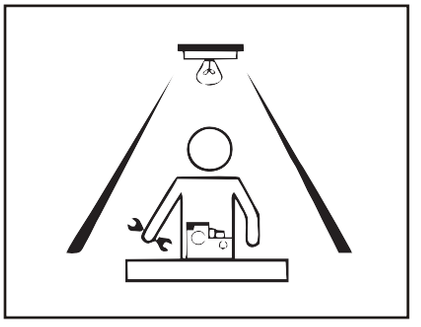
2. Flat Place and Sufficient Area
The floor are should be sufficient, flat without holes at the service factory (place) to perform check and service work.

(If not)
It may cause unexpected accidents such as falling down.



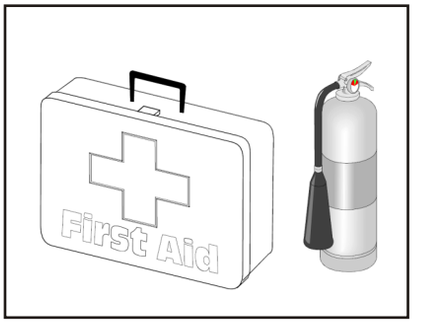
3. Cleaned and Well Arranged Place
Do not dust, mud, oil or any parts on the floor.

(If not)
It may cause unexpected accidents.



4. Well and Sufficiently Lighted Place
A working place must have enough lighting. Use a portable safety light with cage when you work inside or under the machine.

(If not)
The bulb may accidentally be broken and broken glass may cause injury or heat may cause fire.



5. Keep a Fire Extinguisher and First Aid Kit Handy

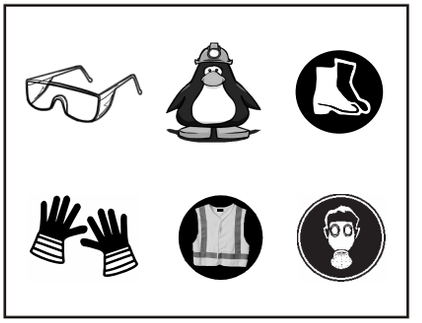
- The workplace must be provided with a fire extinguisher. Read instruction on the label to familiarize yourself with how to use it.
- Keep a first aid kit in a prescribed place.
- Advise what to do in the event of fire or accidents.
- Indicate who to contact in an emergency and keep their telephone number in a prominent place.

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6. Wear Proper Clothing and Safety Items

- Do not wear loose clothing or jewelry that can be caught on the control levers and other machine parts. Also avoid wearing working clothes stained with oil as they can ignite.
- Be sure to wear a helmet, safety goggles, safety shoes, a mask, gloves and other protective items, as generating metal debris, when striking metal objects with a hammer or when cleaning components with compressed air.
- Also make sure there are no persons near the machine.

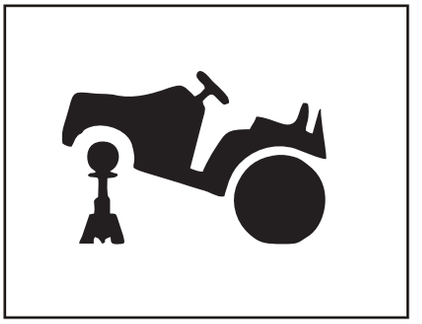
(If not)
Moving part may catch, dust may get in eye, heavy part may drop on foot, etc. It may cause serious injury.



7. Proper Lifting and Support

When you work under the machine, support it firmly with such a crane, hoist or rigid racks on a level place.

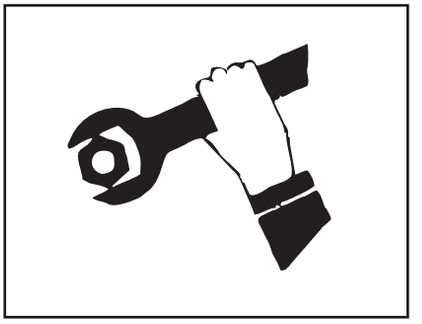
(If not)
It may cause severe accidents.



8. Proper Tools

Using damaged or won tools or using tools inappropriate for the required application is very dangerous, and may also cause damage to the machine. Make sure to use the tools that are appropriate for the specific job.

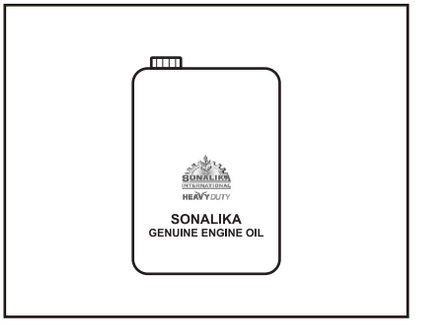
(If not)
It may cause severe injury and/or damages on machine.



9. Genuine Products

Be sure to use and install genuine products and spare parts.

(If not obeyed)
It may cause unexpected failure and shorten the machine life span.

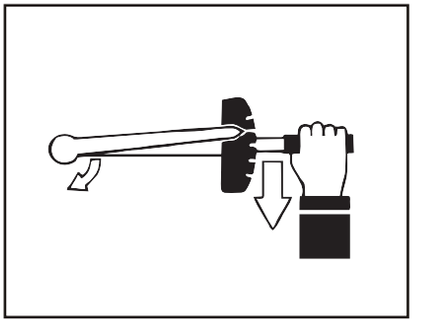


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10. Tighten Bolts and Nuts with the specified Torque

Be sure to tighten bolts and nuts with the specified torque in this manual.

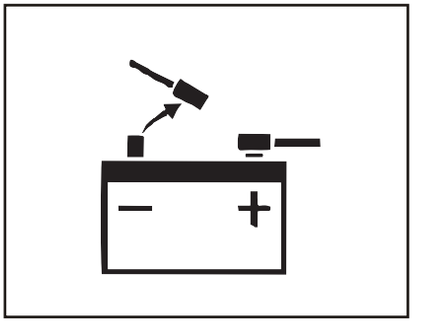
(If not)
Bolts or nuts may be loosen or drop. It may cause breakdown of components and/or injury.



11. Avoid Short - Circuiting

Be sure to disconnect the (-) terminal of battery before servicing.

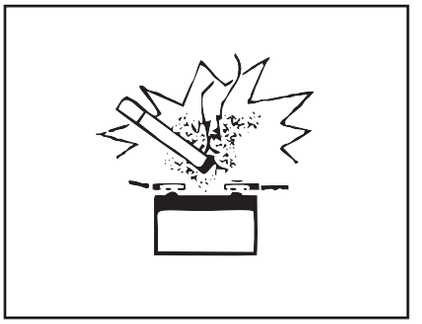
(If not)
Bolts or nuts may be loosen or drop. It may cause breakdown of components and/or injury.



12. Charging Battery

Keep a battery away from the fire while charging. Gas from battery electrolyte is flammable and explosive.

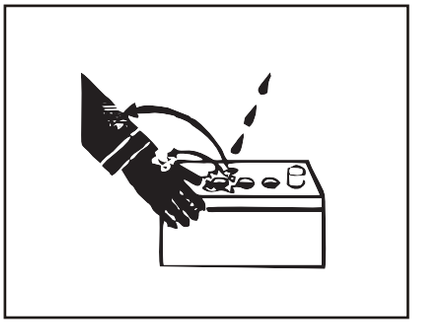
(If not)
It may explode or cause fire.



13. Handling Battery Electrolyte

The Battery electrolyte is diluted sulphuric acid and poisonous. Refill battery electrolyte in well ventilated area and wear eye protection and rubber gloves.

(If not)
Splashed solution can cause burning skin, clothes and blindness if it get into eyes.



14. Keep Fuel and Oil Away from Sources of Ignition

- Open flames can ignite fuel, oil, hydraulic oil or antifreeze solutions, which are flammable and dangerous.

Special attention must be paid to the following matters:

- Keep flammable materials away from lighted cigarettes or matches, or any other sources of ignition.
- Never refuel while the engine is running. Smoking during refueling must be strictly prohibited.
- Firmly tighten the caps on the fuel and oil tanks.

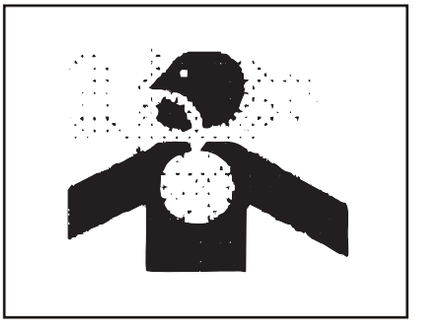


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- Store fuel and oil in a cool and well-ventilated place where they are not subjected to direct sunlight.
- Fuel and Oil must be stored in a place which meets all applicable safety regulations. Unauthorized persons should not be allowed entry.

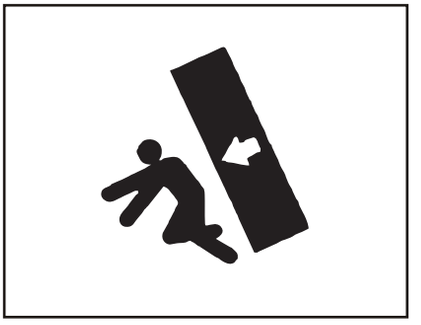
15. Provide adequate ventilation when working in enclosed area

Engine exhaust fumes are harmful to the human body and their inhalation is extremely hazardous.
When starting the engine in an enclosed area, open the windows and doors for ventilation. Also do not idle the engine unnecessarily or leave the engine running while the machine is not in use.



16. Removed Attachments

When an attachment is placed on the ground or against a wall after removing it or prior to reinstalling it, be sure that it is stable to prevent it from falling down.



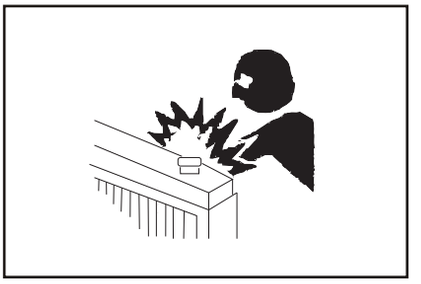
17. Working under the machine

- Before performing service or repairs underneath the machine, place the implement on ground in its lowest position.
- Be sure to apply blocks to the tracks to lock the tracks securely.
- Never perform service underneath the machine if it is not completely stable.



18. Radiator cooling water level

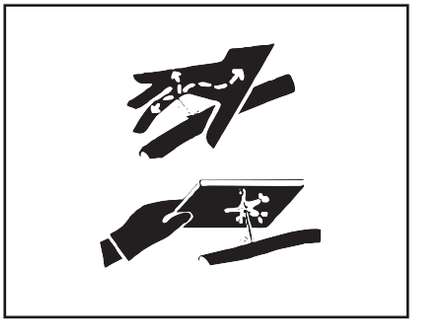
- before checking the radiator cooling water level, stop the engine and wait until the engine and the radiator have cooled down.
- Slowly loosen the cap to release the inner pressure before removing the cap.



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19. Be careful of hot oil under high-pressure

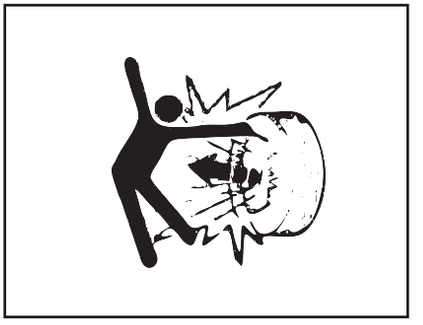
- Hydraulic fluid escaping under pressure can have sufficient force to penetrate the skin and do serious damage and that immediate medical assistance be sought.
- The hydraulic system for the implement operates under high pressure.
- When replenishing or draining hydraulic oil, be sure to first relieve the high pressure.
- The emission of hot oil under high-pressure from a small leak could result in serious bodily injury.
- Wear safety goggles and thick gloves when checking for leaks. Use a piece of cardboard or a plywood block to detect emissions of hot oil.
- If the hot oil should contact your body, obtain prompt medical treatment.



20. Inflating Tyre

When you inflate tyre, use long hose with self-attaching air cheuck for not standing in front of or over tyre. Use safe cage if available. Do not inflate tyre beyond maximum recommended pressure in operator's manual.

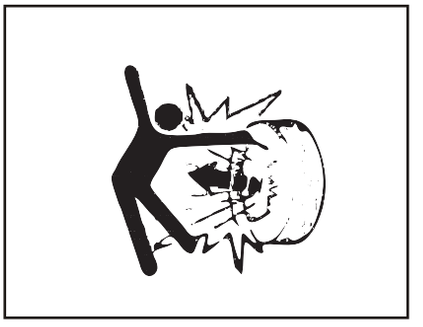
(If not)
An over-inflated tyre can explode and cause injury or death.



21. Mount/Dismount Tyre

Do not attempt to mount or dismount tyre unless you have proper equipment and experience. Follow proper procedure when mounting or dismounting tyre on wheel rim.

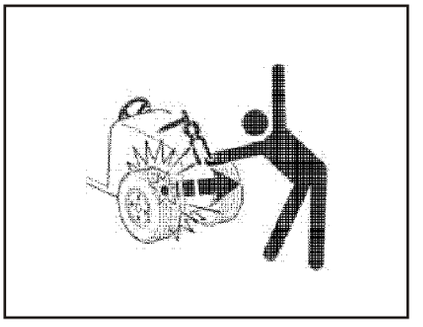
(If not)
It may cause explosion and may cause injury.



22. Rim or rim parts

Do not cut or weld on rim or rim parts. Do not use damaged rims. If rim is damaged, replace it. Do not replace rims with anything but a genuine or a part of proper size, type and quality. Always deflate tyre before removing spikes or other objects from tyre carcass.

(If not)
Damaged rim may cause an explosion.



23. Emergency contact numbers

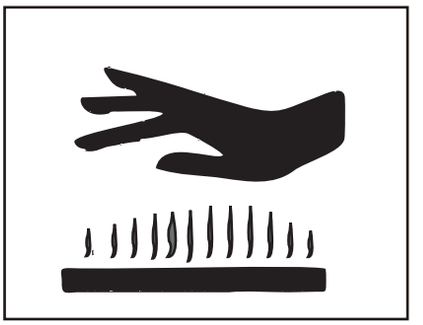
Keep the phone numbers of a doctor, an ambulance, a hospital and the fire department with in reach near telephone set.



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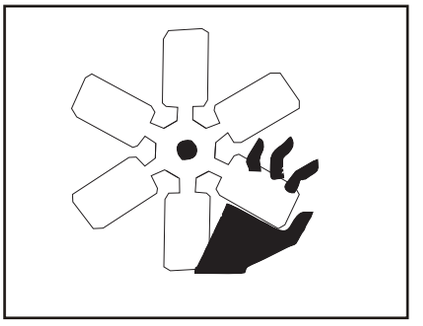
24. Be careful when servicing systems under high temperature and high pressure

The engine cooling water and each lube oil system are still under high temperature and pressure immediately after the engine has stopped. Removing caps, draining oil and water, or replacing filter elements at that time may cause a burn. Wait until the temperature drops, then begin servicing in accordance with the procedures described in this manual.



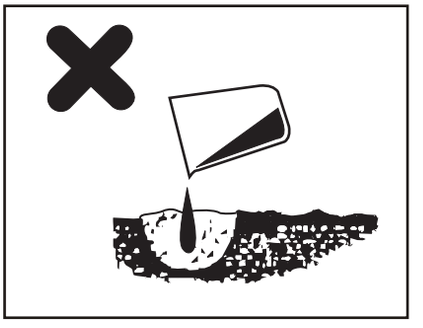
25. Rotating radiator fan and fan belt

- Never contact the rotating fan or fan belt with any object.
- Contacting the rotating radiator fan or fan belt with any object can result in serious bodily injury.



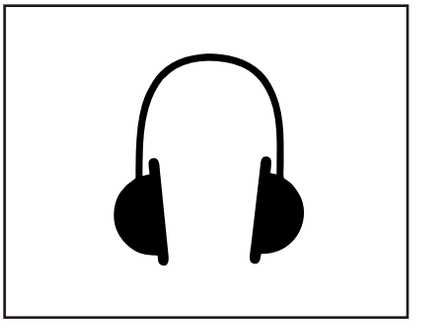
26. Always be environmentally responsible

- Follow the guidelines of the government agency for proper disposal of hazardous materials such as engine oil, diesel fuel, engine coolant and, machine fluid, grease.
- Never dispose off hazardous materials irresponsibly by dumping them into a sewer, on the ground, or into groundwater or waterways.
- Failure to follow these procedures may seriously harm the environment.
- Comply with legal regulations and guidelines for disposal of: empty containers for fuel, cooling water (coolant), oil, grease; fuel/oil filters; batteries; machine itself; machine accessories; and packaging materials.



27. Ear Safety

Use suitable ear protection, like earplugs, to keep out noise and prevent injury to the ears. A prolonged exposure to noise can damage your hearing.



28. After Servicing the machine make sure to:

a) Re-tighten all removed fasteners, bolts and nuts to specified torque.
b) Reinstall all safety shields and devices removed during service.
c) Refill radiator coolant, hydraulic oil, engine oil, etc. which are drained during service with approved or recommended fluid.
d) Start the engine and check for leaks. Operate all controls and make sure tractor and implements are functioning properly.
After testing, shut down the engine and check the work you performed (any missing cotter pins, washers, locknuts etc.)
Recheck all fluid levels again.

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A.4.0 HOW TO READ THE MANUAL

This book will give you a brief description of servicing of tractor, which is essential to obtain the best performance from your tractor and work in complete safety. No part of this manual may be reproduced, in any from or by any means, without prior written permission of **International Tractor Limited.**

International Tractor Limited (ITL) reserves the right to alter or modify the specifications and contents of this manual without any prior notice. Only the customer, whom the manual, together with the product, has been issued to, is allowed to use this document, and only in order to use, maintain and repair the product. The manufacturer shall not be held liable for direct or indirect damages to persons, things or animals due to an improper use of this document or of the machine which does not comply with what is mentioned in this manual.

This manual represents different section of tractor like Brake, Clutch, Gearbox, Differential, Hydraulic, Front axle and Steering unit etc. In each section following steps have been covered.

- **INTRODUCTION :** Under this head general contents and role of that particular section in the tractor models is mentioned.
- **SPECIFICATIONS** : Under this head technical data of that section in terms of the tractor models is discussed.
- **DETAIL VIEWS** : Under this head the detail view of that section in terms of the tractor models is mentioned.
- **DISMANTLING PROCEDURE** : Under this head the dismantling procedure of that section from the tractor is mentioned.
- **ASSEMBLY PROCEDURE** : Under this head the assembly procedure of that section on the tractor is mentioned.
- **INSPECTION PROCEDURE** : Under this head the contents to be verified of that section to obtain the best performance from the tractor is discussed.
- **TROUBLE SHOOTING** : Under this head different problems of that section along with causes and solutions are discussed.

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A 5.0 RECOMMENDED SCHEDULE FOR MAINTENANCE SERVICE

Observe the following maintenance schedule. This maintenance schedule is applied to tractors which are operated under normal conditions. When your tractor is frequently operated in muddy places, greasing must be carried out more frequently and when the tractor is often operated in dusty places, clean the air cleaner element and fuel filter more frequently. Extra servicing must be carried out according to particular situation.

Parameters	50 hrs/ 1st Service	250 hrs/ 2nd Service	500 hrs/ 3rd Service	750 hrs/ 4th Service	1000 hrs/ 5th Service	1250 hrs/ 6th Service	1500 hrs/ 7th Service
General							
Washing	W	W	W	W	W	W	W
Greasing	G	G	G	G	G	G	G
Re-tighten All Fasteners	CT	CT	CT	CT	CT	CT	CT
RVM Holder	CT	CT	CT	CT	CT	CT	CT
Engine							
Engine Oil	R	R	R	R	R	R	R
Engine Oil Filter	R	R	R	R	R	R	R
Tappet Clearance	CA	CA	CA	CA	CA	CA	CA
Fuel Filter Element	R	R	R	R	R	R	R
Fan Belt Tension	CT	CT	CT	CT	CT	CT	CT
Radiator Coolant Level	C	C	C	C	C	C	C
Air Cleaner Element	CL	CL	CL	R	CL	CL	R
Clutch							
Clutch Pedal Free Play	CA	CA	CA	CA	CA	CA	CA
Transmission / Hydraulic							
Transmission Oil	C	C	C	C	R	C	C
Transmission Breather Assy	CL	CL	CL	CL	CL	CL	CL
Operation of Hydraulic Lift	C	C	C	C	C	C	C
Suction Starainer	CL	CL	CL	RR	CL	CL	RR

WARNING

Safety Starter Switch is to be replaced after every 2000 hours or 4 years, whichever is earlier.

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Parameters	50 hrs/ 1st Service	250 hrs/ 2nd Service	500 hrs/ 3rd Service	750 hrs/ 4th Service	1000 hrs/ 5th Service	1250 hrs/ 6th Service	1500 hrs/ 7th Service
Brakes							
Operation of Brakes	C	C	C	C	C	C	C
Brake Pedal Free Play	CA	CA	CA	CA	CA	CA	CA
Steering							
Steering Operation	C	C	C	C	C	C	C
Front Axle 4x4							
Front Axle Differential Oil	C	C	C	C	R	C	C
Breather Assy	CL	CL	CL	CL	CL	CL	CL
Front Axle Pivot	C	C	CA	C	C	C	C
Wheels and Tyres							
Front Wheel Bolts	CT	CT	CT	CT	CT	CT	CT
Rear Wheel Bolts	CT	CT	CT	CT	CT	CT	CT
Tyre Air Pressure	CA	CA	CA	CA	CA	CA	CA
Battery							
Battery Electrolyte Level	C	C	C	C	C	C	C
Battery Terminals	CL	CL	CL	CL	CL	CL	CL
Electrical							
Functioning of All Gauges & Meters	C	C	C	C	C	C	C
Functioning of Alternator & Starter	C	C	C	C	C	C	C

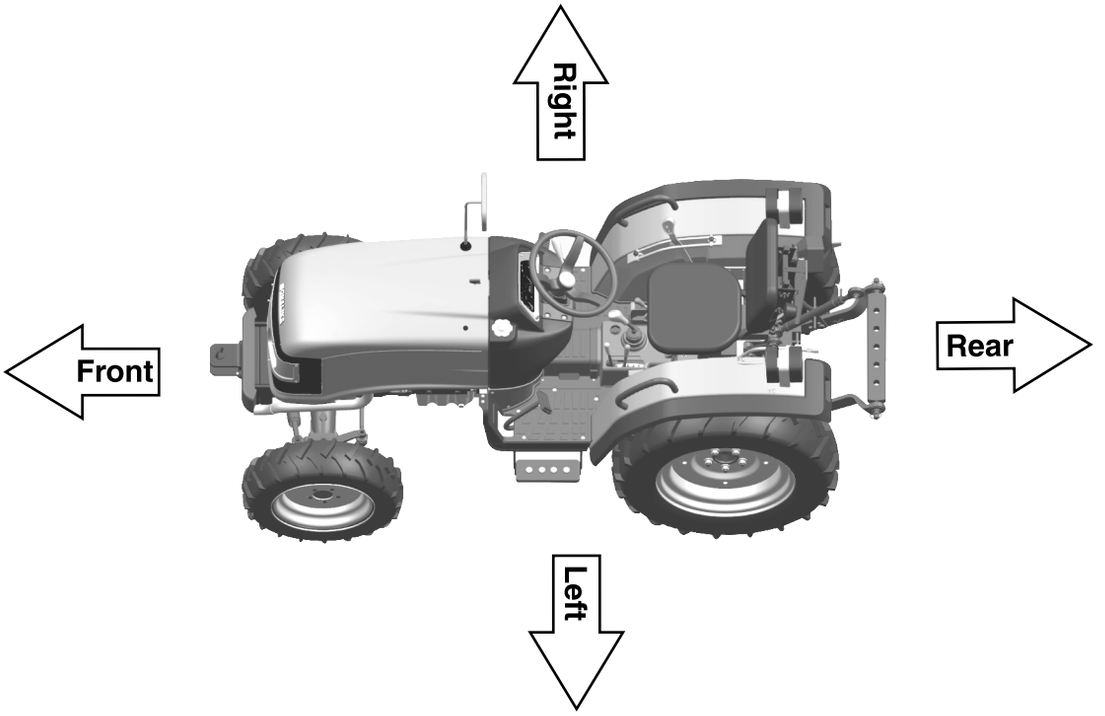
R-Replace, **RR-**Replace if Required, **CT-**Check & Tighten, **C-**Check, **CR-**Clean & Replace, **CA-**Check & Adjust, **CL-**Clean
Beyond 1500 Hrs Repeat the cycle every 250 hrs.

- Engine Oil Grade should be selected as per operating Temperature condition.
- Anti freeze should be used in sub zero ambient temperature.
- Clean Air Cleaner element as and when required as per field operating conditions.
- Clutch pedal play should be adjusted as per field operating conditions.

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A 6.0 IDENTIFICATION OF TRACTOR

1. In this manual many times written **front portion, rear portion, left side, right side** understand these terms as per reference Fig-1.
2. While ordering spare parts always mention the chassis number and engine number of the tractor. These numbers are punched on the data plate which is riveted on right hand side of front Axle bracket. By giving these numbers correctly, you will get delivery of the right parts at right time. Refer Fig-2. for data plate.



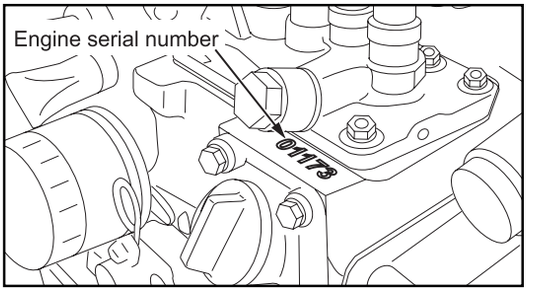
Chassis Serial Number

The chassis and/or engine serial numbers are used to register the vehicles. They are also used to assist your dealer when ordering or referring to special service information. Whenever you have occasion to consult your dealer, remember to identify your vehicle with this number. Chassis number is punched on right hand side of the front axle bracket. Should you find the number difficult to read, you will also find it on the Statutory plate.



Engine Serial Number

The engine serial number is stamped on the upper side of the fuel injection pump installation part located in the right side of cylinder block.



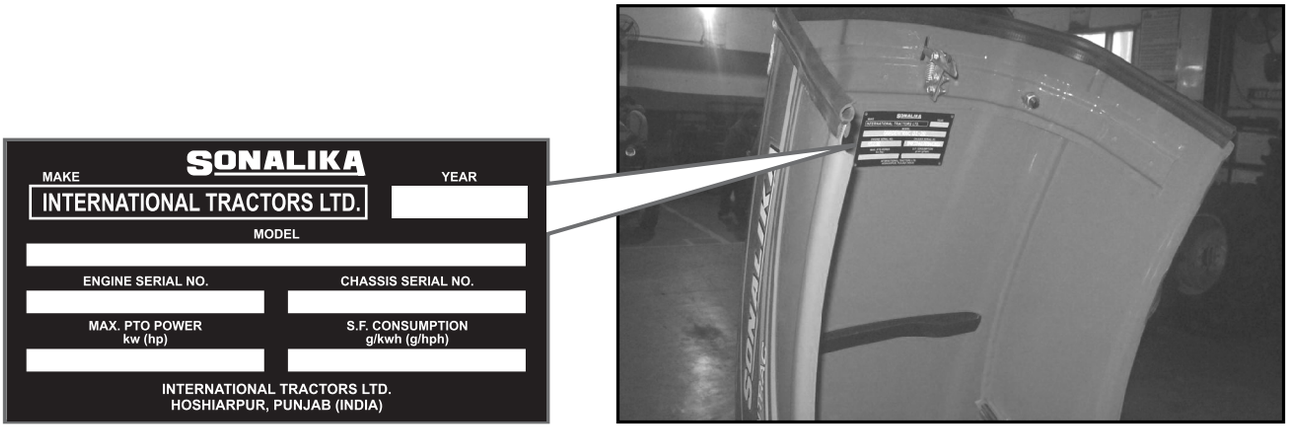
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For easy and quick reference, engine serial number is also mentioned on the information sticker which is pasted on valve cover of the engine as shown in Fig.



Data Plate

Chassis no. is also engraved on data plate which is pasted inside the bonnet.



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B

DISMOUNTING AGGREGATES

CONTENTS

REF. NO	DESCRIPTION	PAGE
B 1.0	GENERAL INSTRUCTIONS FOR DISMANTLING & RE-ASSY	B-1
B 2.0	SHEET METAL	B-2
B 3.0	FRONT PANEL, CLUSTER & FUEL TANK ASSY	B-8
B 4.0	ENGINE & ELECTRICAL ACCESSORIES	B-13
B 5.0	FRONT AXLE	B-21
B 6.0	CLUTCH	B-24
B 7.0	PEDAL, LINKAGES & CONNECTIONS	B-25
B 8.0	CLUTCH & TRANSMISSION HOUSING	B-30
B 9.0	THREE POINT LINKAGE (TPL) & HITCH	B-31
B 10.0	HYDRAULIC LIFT	B-31

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DISMOUNTING MAJOR AGGREGATES FROM THE TRACTOR

GENERAL INSTRUCTION FOR DISMANTLING AND RE-ASSEMBLING

1. Dismantling and re-assembling, including repairs, should always be carried out using suitable and high-grade tools or using genuine ITL set of service tools.
2. The parts pressed on or heat-assembled should be dismantled only by pressing or using a suitable mandrel. The contact surfaces of parts to be pressed in or shrink on should always be coated with oil properly.
3. Re-assembly of dismantled parts should be done with care especially for bearing needles and rollers.
4. Properly clean all the parts before assembly and coat their contact surfaces, and especially the friction ones, by oil, grease or sealing compound.
5. Paper gaskets, rubber and cork packings and seals, fuses, wires, retaining rings, cotter pins and similar parts should be replaced by new ones.
6. Take care to fill up all the repaired groups (components) with oil or grease before putting into service.
7. When using a crane, check the crane lifting power and the loading capacity of ropes and suspensions. Use an appropriate lifting gear only.
8. Use suitable plugs to blind the open holes of parts or ends of disconnected pipelines. Insulate the disconnected ends of electric wires and mark them unless provided with numbering.
9. Depending on the tractor parts (sub-assemblies) to be repaired: drain coolant, or oil, from the engine, or transmission, or the shock absorber, or the hydraulic system, or any other oil, or the hydraulic brake fluid, etc. Check the same has been re-filled again after re-assembly.

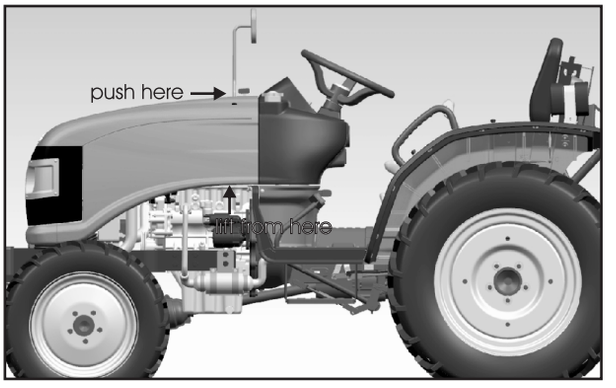
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A. SHEET METAL:

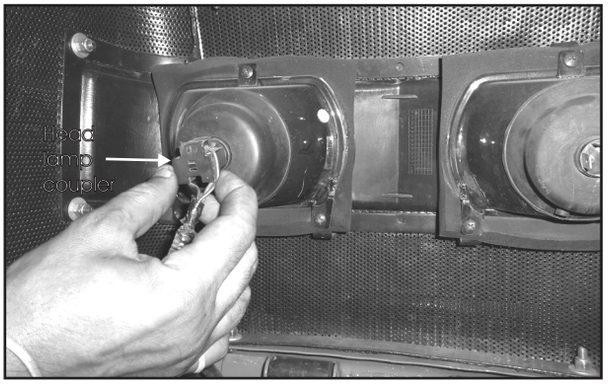
DISMOUNTING PROCEDURE FOR SHEET METAL COMPONENTS:

STEP 1: Dismantling Bonnet Assembly

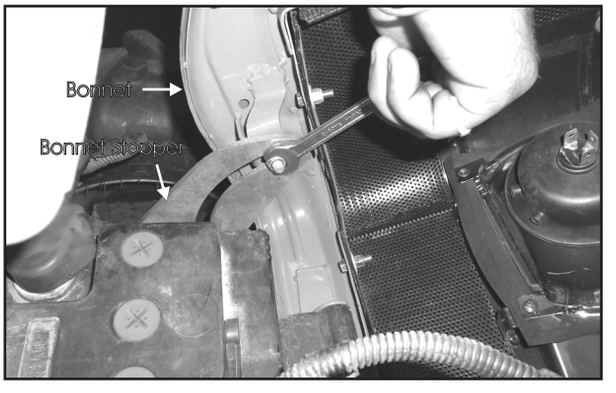
- **Opening the Bonnet:** Press the knob at center of bonnet towards steering wheel side with one hand (as shown) & with another hand, lift the bonnet from lower side (as shown).



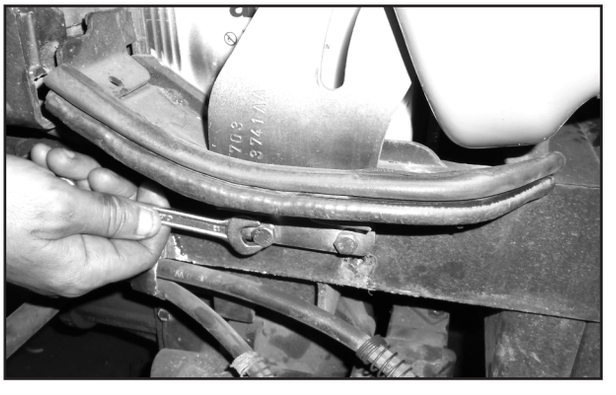
- Disconnect head lamp wiring connections by detaching coupler from head lamp.



- Unscrew Hex Screws (2 Nos) of Bonnet Stopper.



- Unscrew Hex Screws M8x1.25x30 (4 Nos - 2 each side) of Bonnet Stopper.



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- Unlock Split pins (2 Nos) and remove and then take out Hinge pins (2 Nos) from both bonnet hinges.



- Separate the Bonnet Assy from the tractor.



STEP 2: Dismantling Fenders

Before dismantling fenders, both Rear tyres, Driver Seat and Roll Over Protection Structure (ROPS) Assy should be removed as per procedure explained as follows:

Jack Up the Tractor:

- Jack up the tractor from rear end by placing jack below transmission housing as shown in figure.



- Place wooden wedges at front between front axle and front axle bracket to prevent the tilting of front axle during repair work.



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DISMOUNTING MAJOR AGGREGATES FROM THE TRACTOR

Removing Rear Tyres

- Unscrew Rear wheel Hex nuts of size M16x1.5 (10 Nos - 5 each side) with the help of pneumatic gun.

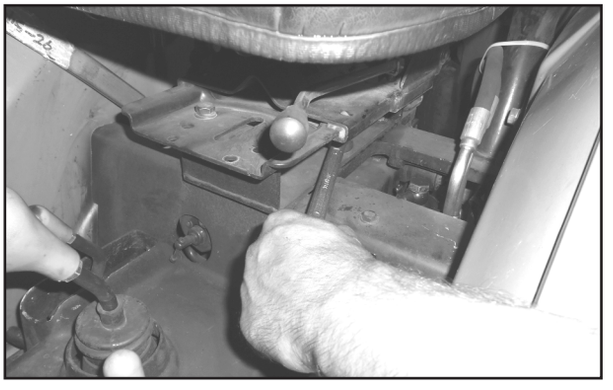


- Remove both LH & RH rear tyres.



Removal of Driver Seat

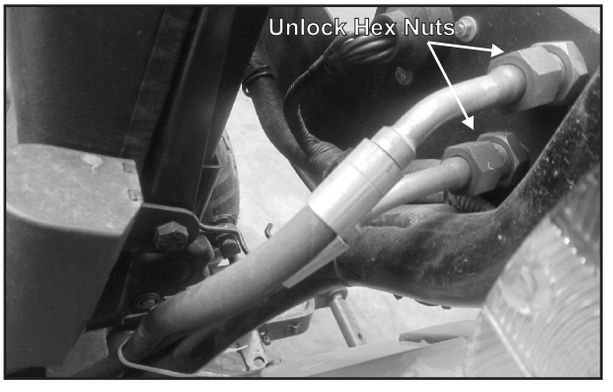
- Unscrew Hex screws M12x1.75x35 (4 Nos) of driver seat mounting bracket for removal of driver seat along with seat mounting bracket.



Removal of DCV Pipes

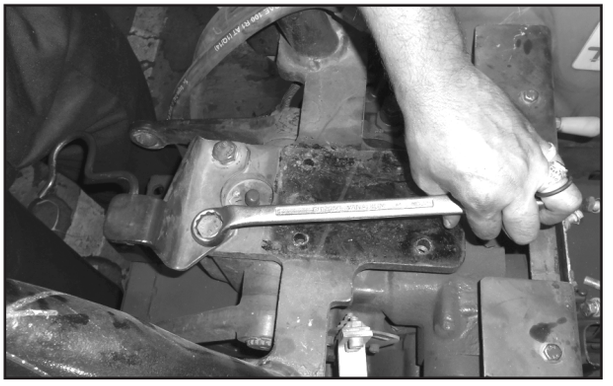
- Cut the tie clamps of pipes from DCV to QRC by using cutter. Disconnect flexible hose pipe by unscrewing lock nut of flexible pipe from QRC.

Note: DCV Connections may differ as per tractor model and DCV type i.e. 1SA or 1DA.



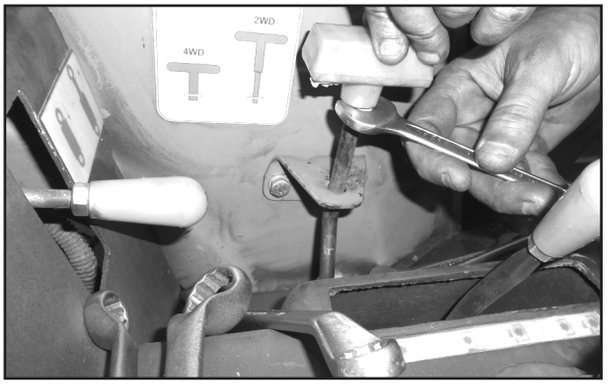
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- Unscrew Hex. head screws of size M14x30 (2 Nos) as shown in figure and remove ROPS Assy.



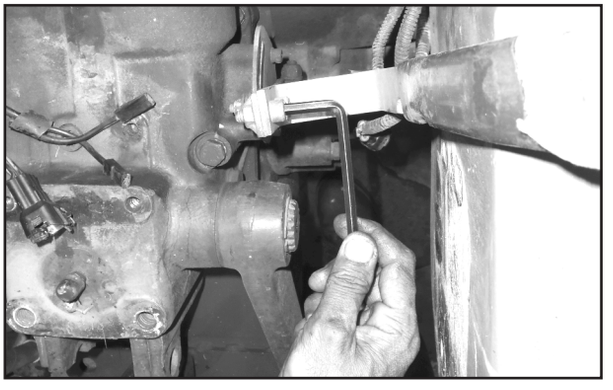
Removal of 2WD/4WD Lever

- Unlock Hex Nut M10 and unscrew 2WD/4WD lever knob.



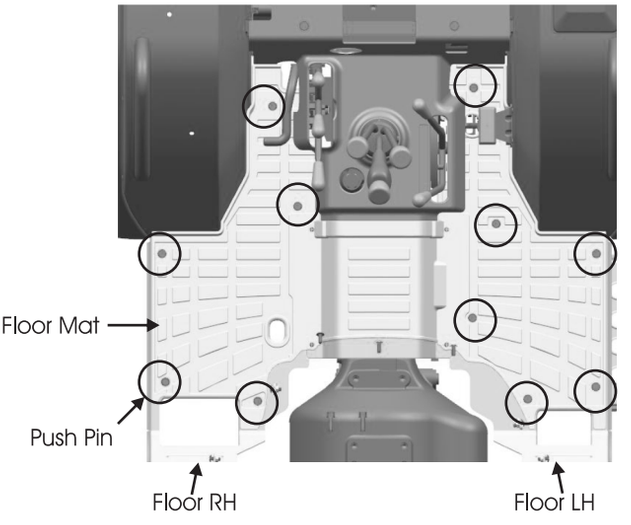
Removal of Position Control Lever

- Unscrew Hex. Socket Head Cap Screws M8*25 (2 Nos) and take out Position Lever Assy with the help of Allen Key 6 No.



Removal of Floor Mat

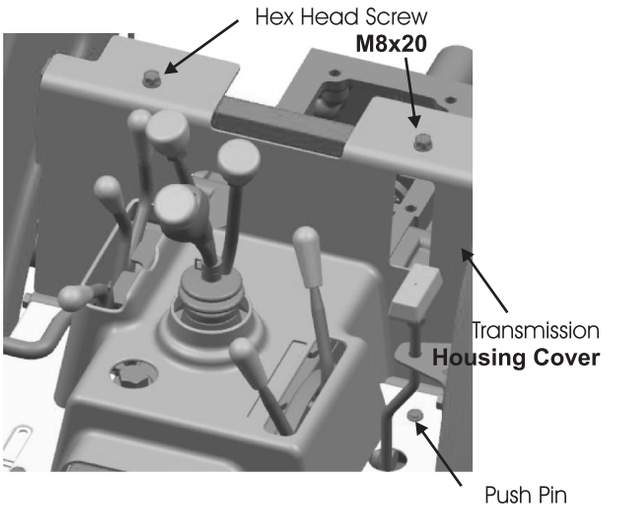
- Remove floor mat with floor RH & LH by removing push pins -11 nos (05 nos with floor RH & 06 nos with floor LH) as shown in figure.



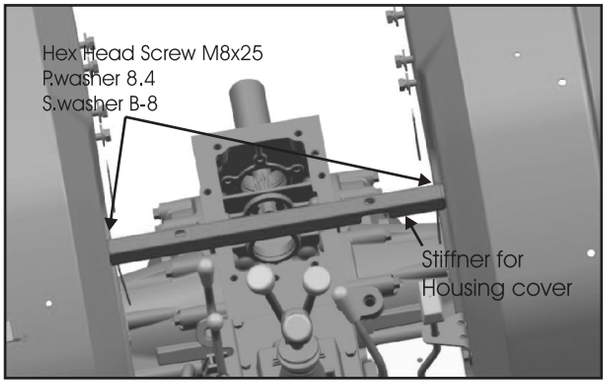
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Removal of Transmission Housing Cover & Stiffner

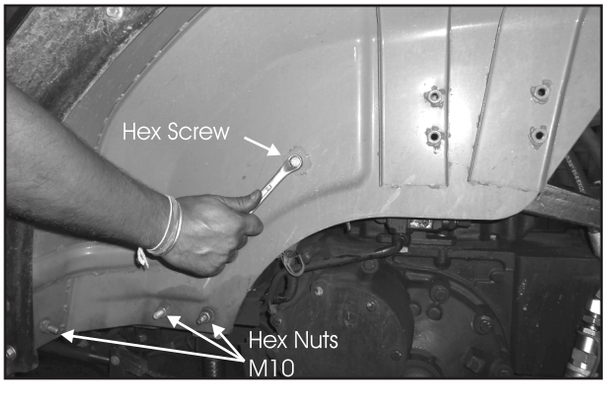
- Unscrew Hex Head Screws M8x20 (2 Nos) and remove push pins (2 Nos) from the Floor to remove the Transmission housing cover.



- Unscrew Hex Head Screws M8x25 (2 Nos - 1 each side) and remove the stiffner plate from the fenders.



- Dismantle Fender Assy LH from Floor LH Assy by unscrewing 3 Nos Hex Nuts M10 and 1 No Hex Screw. Repeat the step for Fender Assy RH.

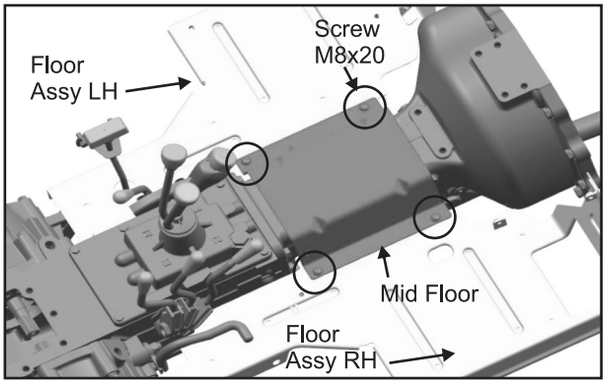


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STEP 3: Removal of Floor Assy

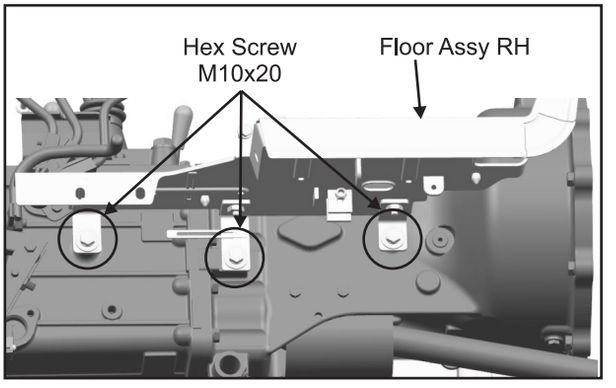
Removing Mid Floor

- Unscrew 4 Nos Truss Philips M/c Screws M8x20 and remove the Mid floor from RH & LH Floor Assy.



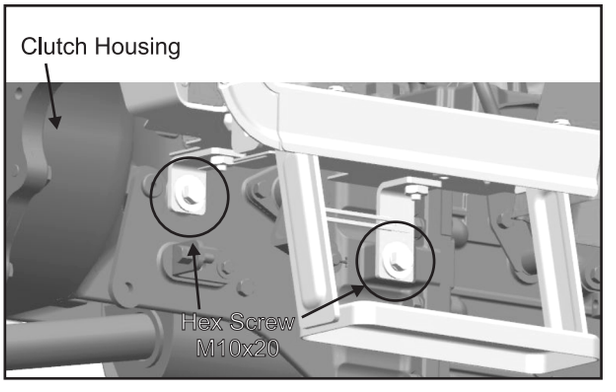
Removing Floor Assy (RHS)

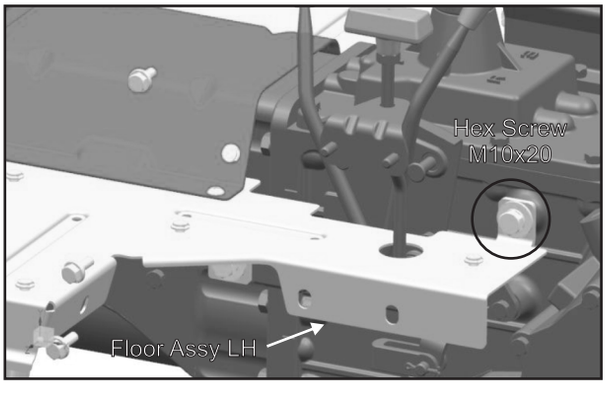
- Remove Parking Brake Lever and Links. (Refer Section - F of Chapter-A for detailed procedure.)
- Unscrew 3 Nos Hex Screws M10x20 and remove the Floor Assy RH.



Removing Floor Assy (LHS)

- Unscrew 3 Nos Hex Screws M10x20 and remove the Floor Assy LH as shown in figures.



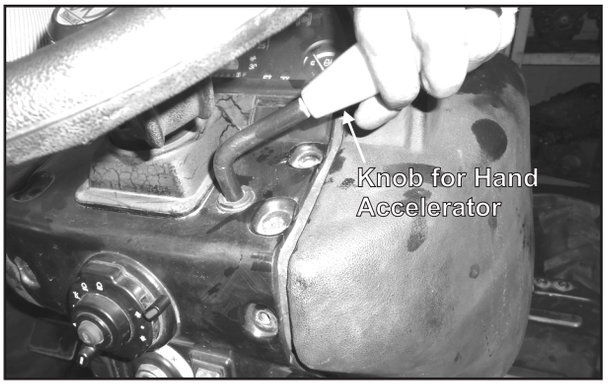


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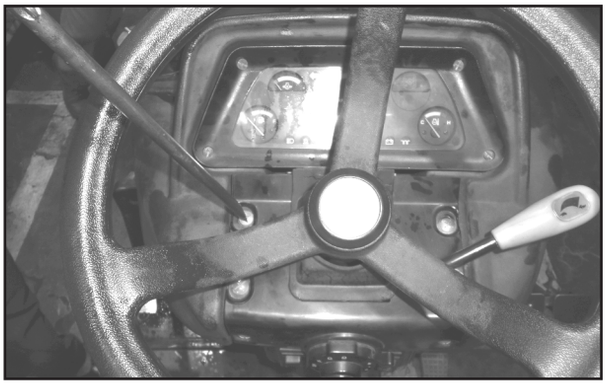
B. FRONT PANEL, CLUSTER & FUEL TANK ASSY

STEP 1: Removal of Front Panel Assy

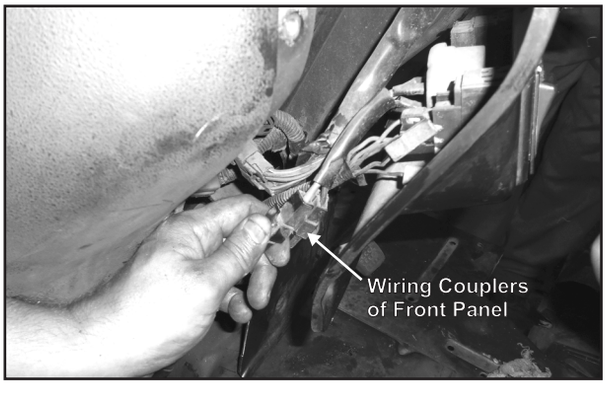
- Unscrew knob for hand accelerator.



- Unscrew 8 Nos Cross slotted Screws of size M6x16 by using screw driver.

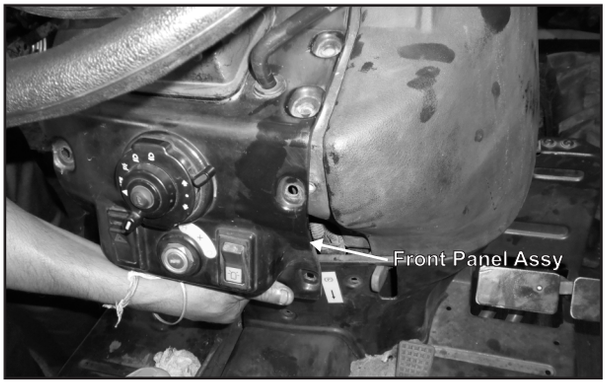


- Disconnect wiring couplers of Front panel assy.



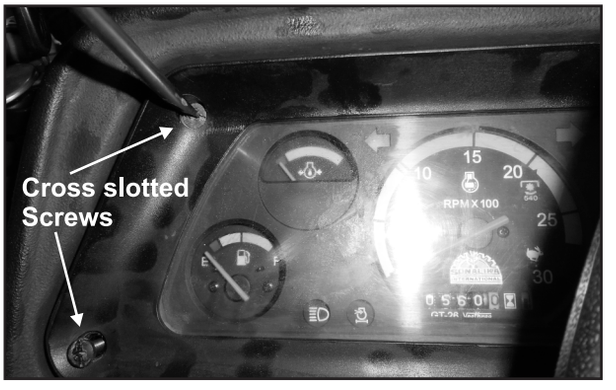
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- After removal of cross slotted screws & wiring couplers, take out front panel carefully.



STEP 2: Remove Instrument Cluster

- Unscrew 4 Nos cross slotted cheese head screws (M5x30) of Instrument Cluster with the help of screw driver for removal of Instrument cluster as shown in figure.



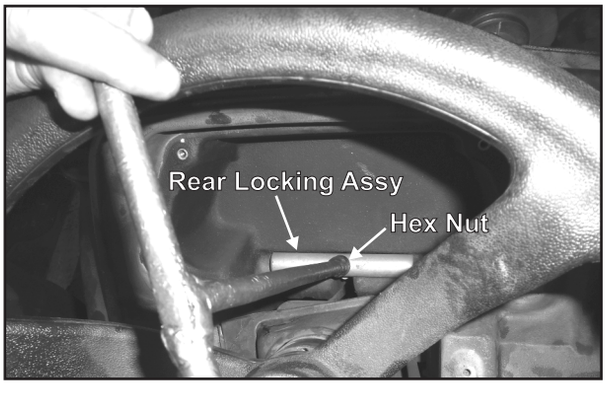
STEP 3: Remove Fuel Tank Assy

Perform the following steps if there is fuel tank is filled with fuel:

- Place an empty vessel below fuel tank for drainage of fuel.
- Loosen the hose clip (9.5*12) connection with the help of screw driver and then remove the fuel pipe (strainer to fuel tank).
- Drain and store the fuel of fuel tank.



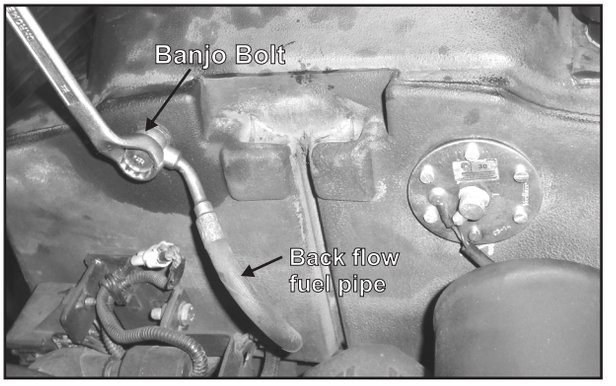
- Unscrew Hex Nylon Nut M8x1.25 and remove the rear locking assy of fuel tank.



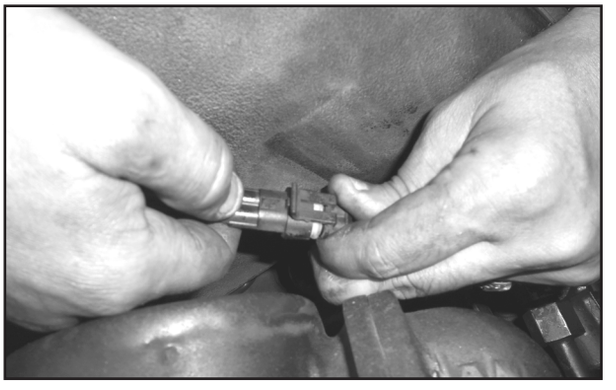
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DISMOUNTING MAJOR AGGREGATES FROM THE TRACTOR

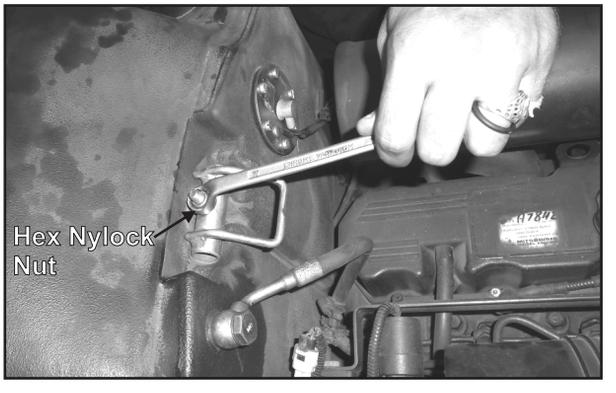
- Unscrew Banjo Bolt (M14*1.5*26) and take out the back flow fuel pipe.



- Disconnect wiring coupler of fuel level sensor.



- Unscrew Hex Nylock nut (M8x1.25) and remove the front locking assy of fuel tank.



- Unscrew Hex Head Cap Screw M8X25 (2 Nos) of Hand accelerator assy and loosen the same for easy removal of fuel tank.
- Finally Remove the fuel tank assy.



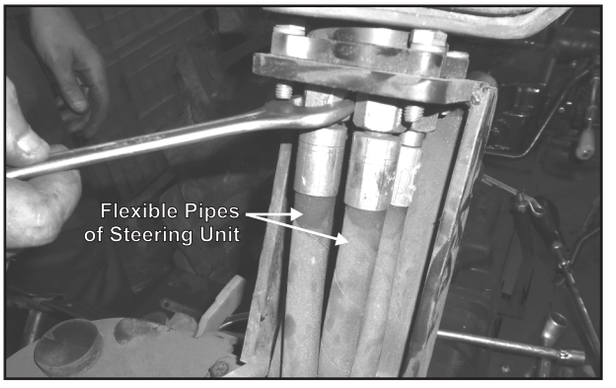
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STEP 4: Removal Of Steering Unit Assy

- Unscrew Hex. Head screws M8x1.25 (4 Nos) of Steering unit as shown in figure.

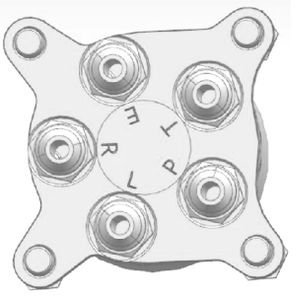


- Dismantle Flexible Pipe (from Priority Valve “L” To Steering Unit “E”) and Flexible Pipe (from Priority Valve “CF” To steering unit “P”) from Steering Unit.



- Dismantle Secondary flexible pipe (steering unit to steering cylinder '**R**' port),Secondary flexible pipe (steering unit to steering cylinder '**L**' port) and Flexible pipe from stg unit '**T**' to rear cover tank.

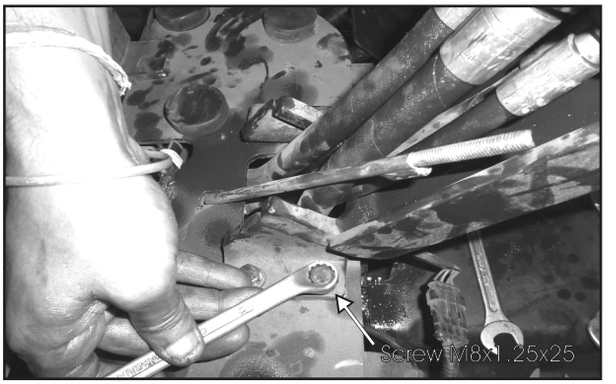




Steering Unit

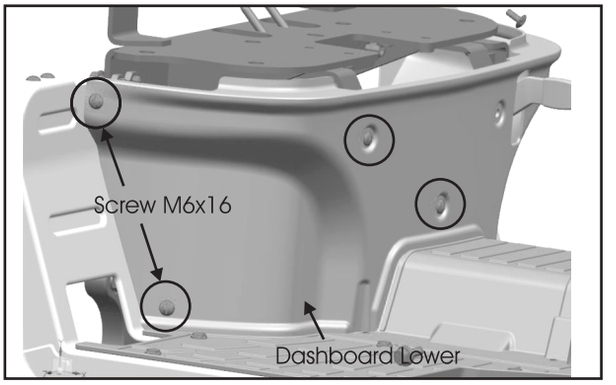
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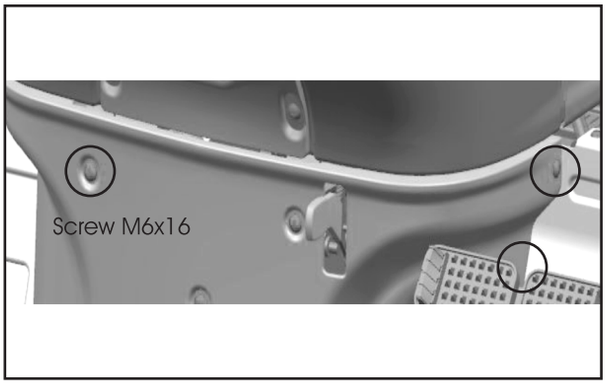
- Dismantle Steering unit mounting bracket from Fuel tank frame by unscrewing Hex head screws M8x1.25x25 (4 nos) as shown in figures.
- Remove steering unit assy along with its mounting bracket.



STEP 5: Remove Dashboard Lower

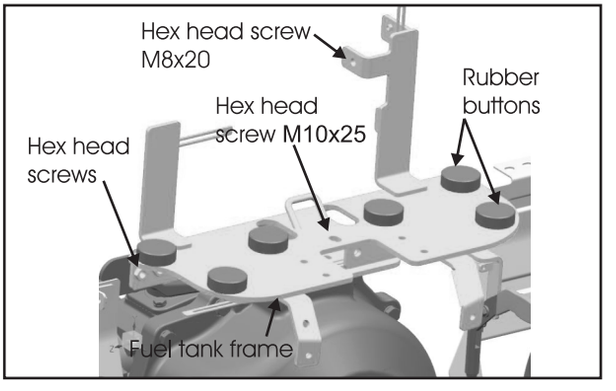
- Dismantle dashboard lower from fuel tank frame by unscrewing M6x16 Screws (7 Nos) as shown in figure.





STEP 6: Remove Fuel Tank Frame

- Remove Rubber Buttons - 06 Nos from Fuel Tank Frame.
- Unscrew Hex Head Screws M10x1.5x25 (4 Nos) from Fuel tank frame.
- Unscrew Hex screw M8x20 for separating air cleaner bracket from fuel tank frame and 2 nos screws at bottom.
- Remove Fuel pipe (Strainer to feed pump) by unscrewing hose clamp dia 16 (2 Nos), one end of Strainer and another end of Fuel Feed Pump.
- Remove the Fuel tank frame.



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C. ENGINE & ELECTRICAL ACCESSORIES

DISMOUNTING PROCEDURE FOR BATTERY, ELECTRICAL COMPONENTS, WIRING HARNESS, RADIATOR ASSY, UNDERHOOD SILENCER, AIR CLEANER ASSY, HYDRAULIC PUMP, SUCTION STRAINER, STARTER MOTOR & ALTERNATOR :

STEP 1: Removal of Battery

- Remove the fly nut (1) by rotating it anticlockwise.



- Lift the terminal cap and unscrew hex nut of Negative (-) terminal of battery.



- Similarly unscrew hex nut of Positive (+) terminal of battery.



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- Carefully take out the battery with the help of battery handles as shown in figure.



STEP 2: Removal of Glow control timer

- Unscrew Hex nut of Glow control timer and disconnect its wiring connections. Remove the glow timer unit.

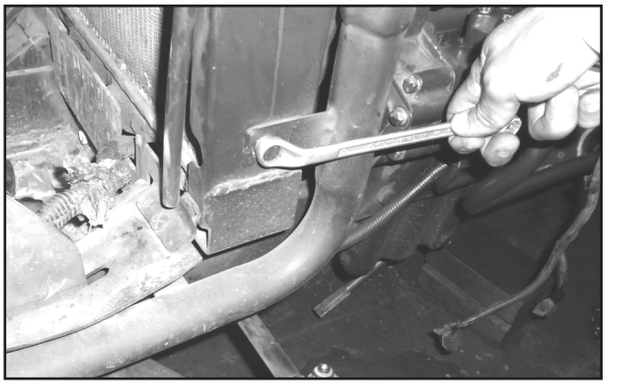


- Unlock coupler for Horn assy.



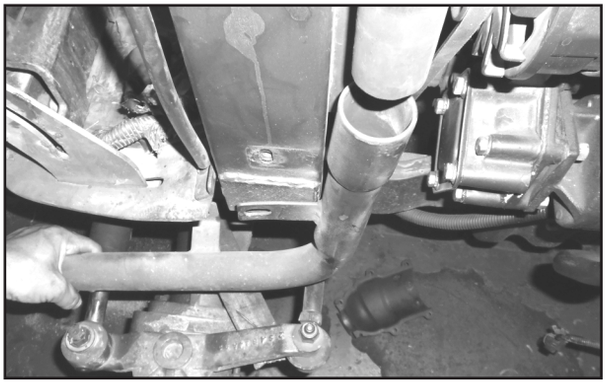
STEP 3: Removal of Underhood Silencer

- Unscrew hex screw (M8X1.25X30) of exhaust pipe for Underhood Silencer.

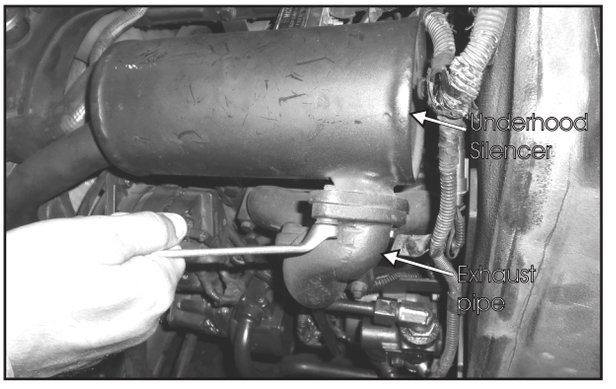


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- Remove exhaust pipe from underhood silencer.

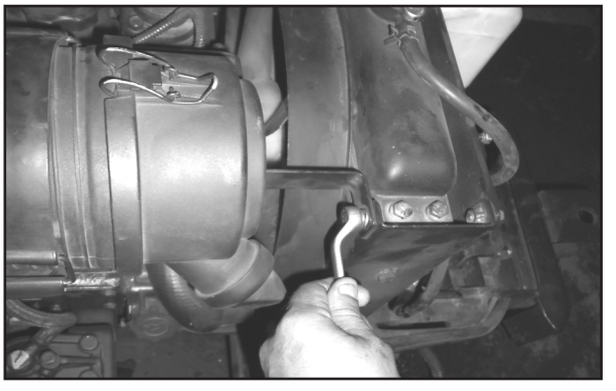


- Unscrew hex bolts M8x1.25x20 (2 Nos) of inlet manifold of underhood silencer.
- Remove Underhood silencer.

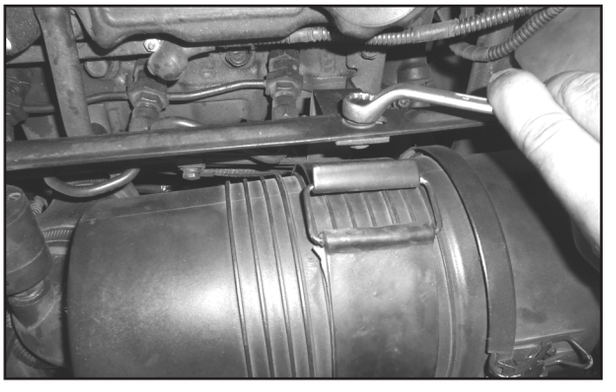


STEP 4: Removal of Air Cleaner Assy

- Unscrew hex screw (M8X1.25X20) of main bracket of air cleaner, mounted with radiator mounting bracket.

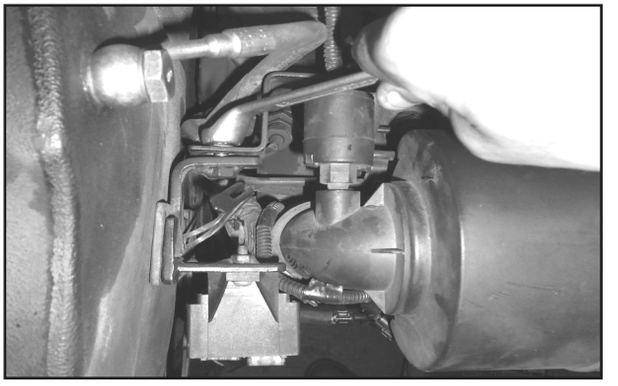


- Unscrew hex screw (M8X1.25X20) of main bracket of air cleaner, mounted with air cleaner mounting bracket.

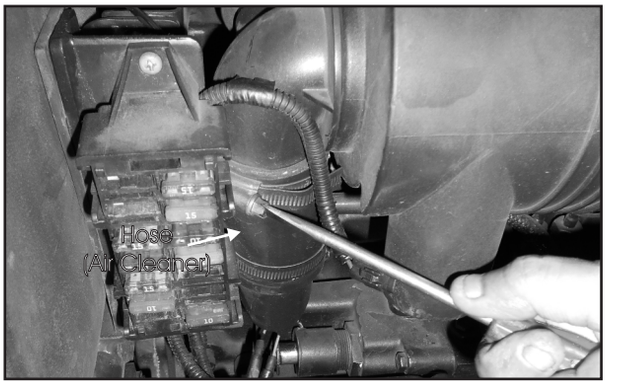


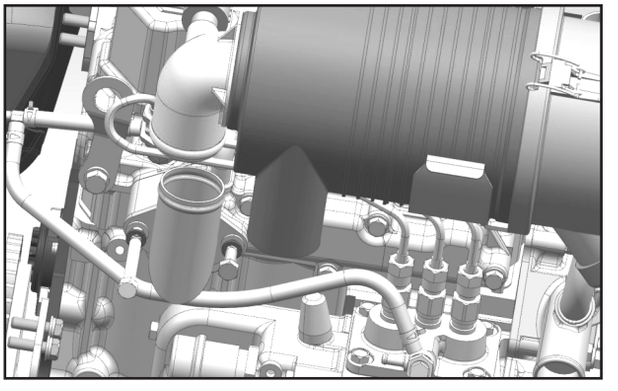
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- Unscrew hex screw (M8X1.25X20) of main bracket of air cleaner, mounted with fuse box mounting bracket (already welded with fuel tank frame assy).
(Note: this step is not applicable, if fuel tank frame is already removed).

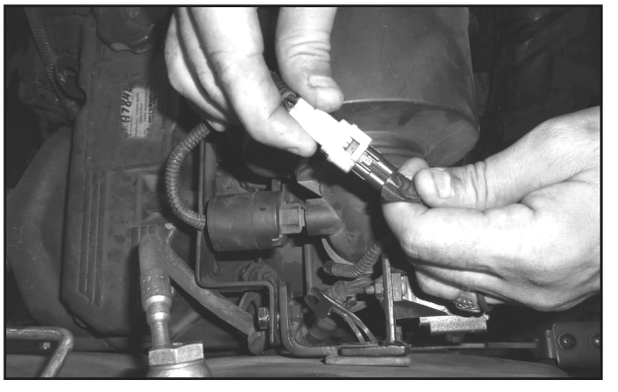


- Unscrew Hose Worm Clamp (dia 52) - 2Nos and remove air cleaner hose from air cleaner assy.



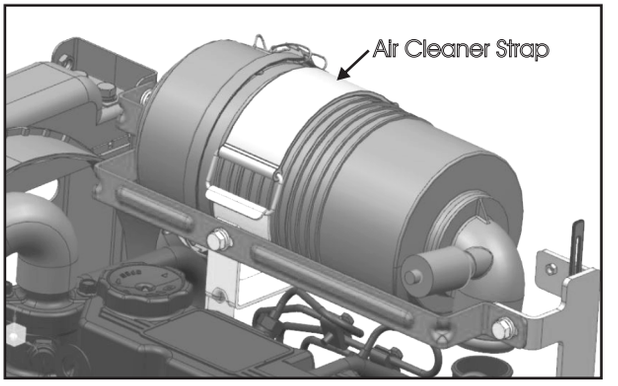


- Unlock wiring coupler for Air clogging sensor.

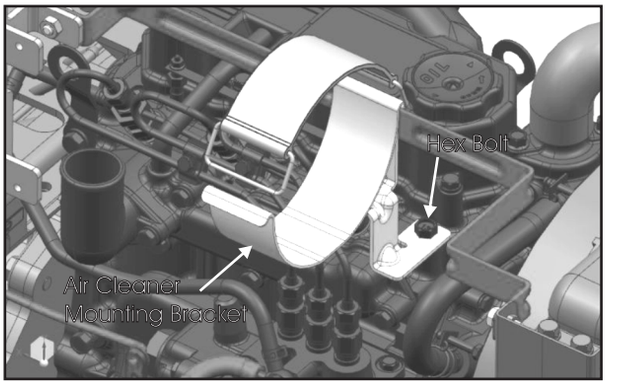


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- Unlock air cleaner strap from air cleaner assy and remove the air cleaner assy.

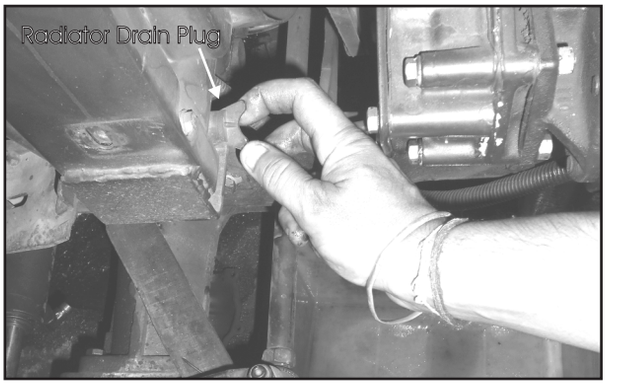


- Unscrew hex bolt of air cleaner mouuting bracket and remove air cleaner mounting bracket.

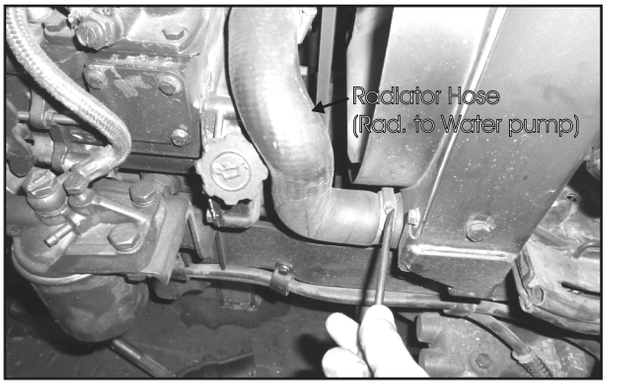


STEP 5: Removal of Radiator Assy

- Place clean container below radiator drain plug area for collecting coolant.
- Unscrew radiator drain plug and drain out the coolant. Store the coolant for later use.

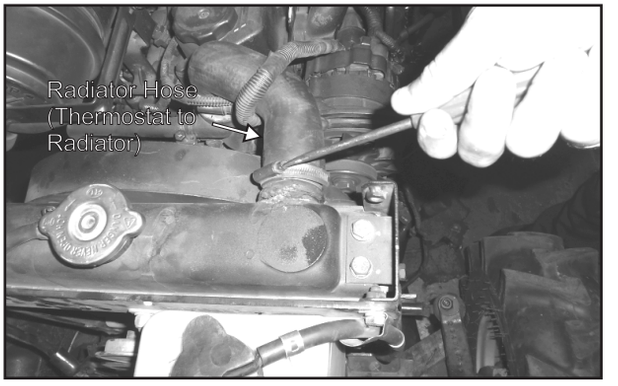


- Unscrew hose worm clamps (2 Nos) of Radiator Hose (radiator to water pump) and remove the radiator hose.

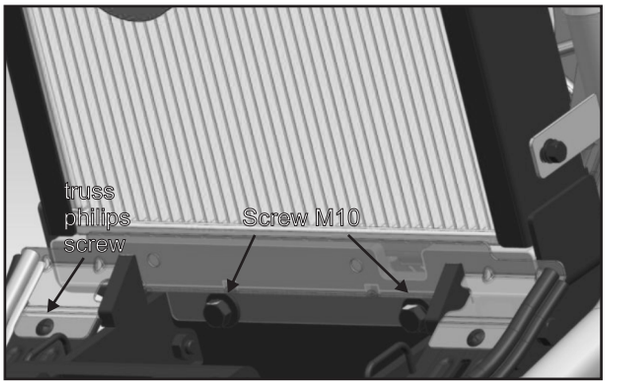


https://truckmanualshub.com/

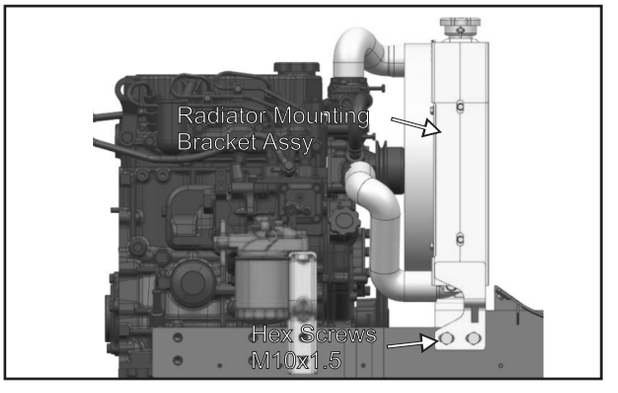
- Unscrew hose worm clamps (2 Nos) and remove Radiator Hose (thermostat to radiator) .



- Unscrew Hex bolts M10 (2 Nos) and truss philips screw M6 (2 Nos) from Radiator sealing plate as shown in figure.

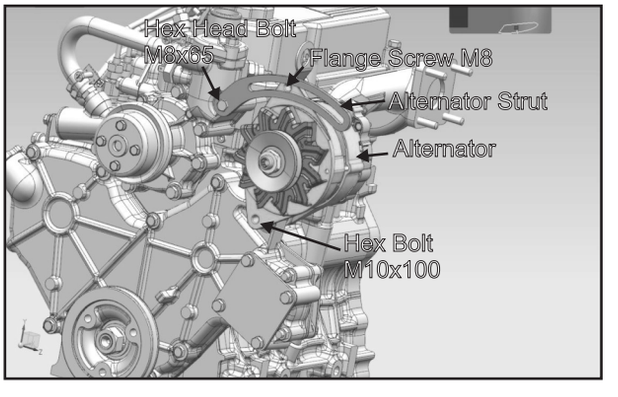


- Remove Radiator mounting brackets (LH & RH) by Unscrewing Hex screws M10x1.5 (4 Nos-2 each side) from Front Axle bracket.
- Remove Radiator Assy.



STEP 6: Removal of Alternator Assy

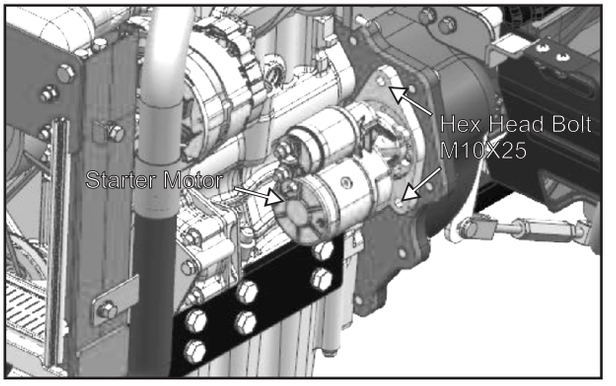
- Dismantle Upper Side of Alternator from Alternator Strut By unscrewing Flange Screw M8x30.
- Dismount Alternator assy. from engine assembly by removing Hex bolt M10x100 (1 No), Spacer & Nylock nut.
- Unscrew Hex head bolt M8x65 (1 No) and dismantle the alternator strut from engine assy.



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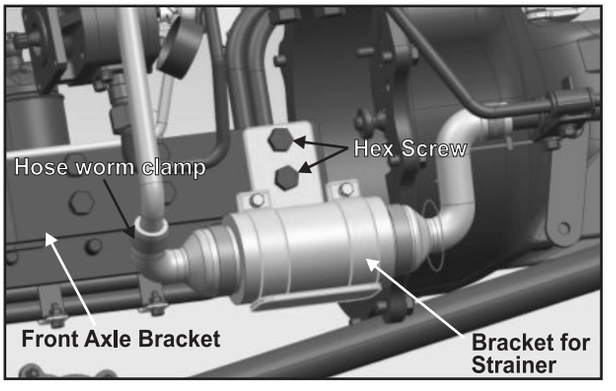
STEP 7: Removal of Starter Motor

- Unscrew Hex head bolt M10x25 (2 No) and dismantle the Starter Motor Assy from engine assy.



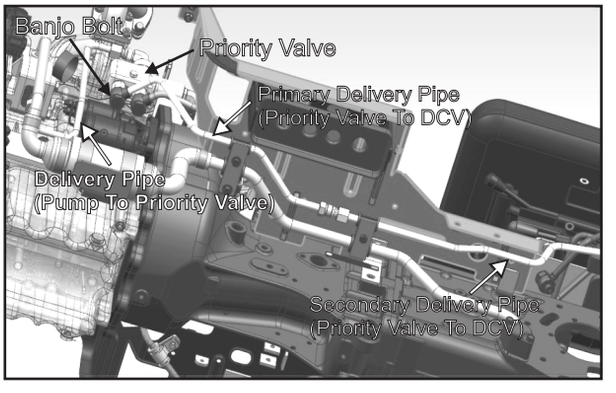
STEP 8: Removal of Hydraulic Suction Strainer Assy

- Unscrew hose worm clamps (dia 30 & 60) and separate the hose pipes from Suction strainer Assy.
- Dismantle Bracket for Strainer by unscrewing Hex Screws (M12x25 - 2nos) mounted with Front Axle Bracket (FAB).
- Remove Suction Strainer Assy.

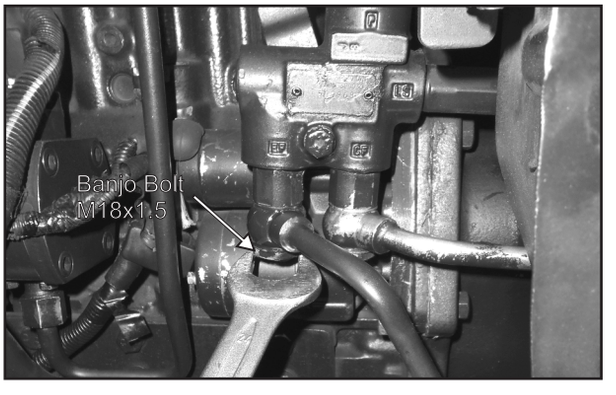


STEP 9: Removal of Priority Valve

Dismantle priority valve pipe connections as per following procedure:

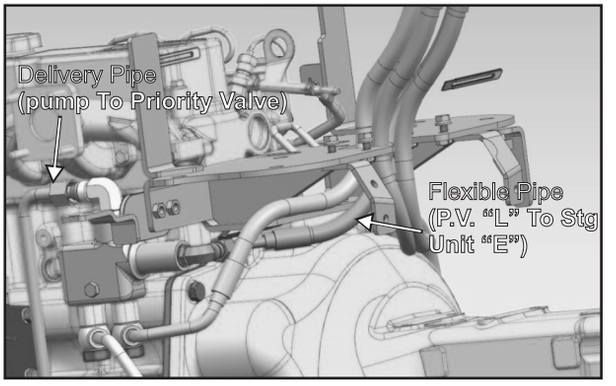


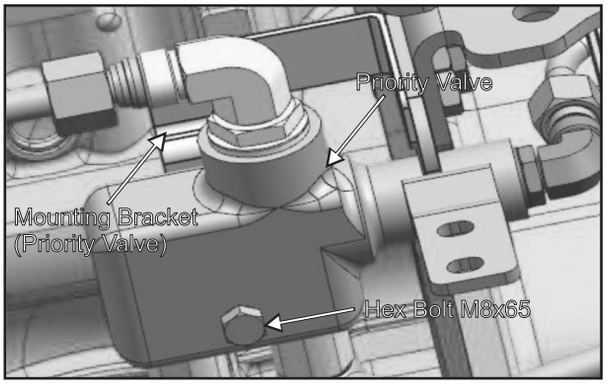
- Unscrew Banjo Bolts M18X1.5 (2 Nos) and remove Primary delivery pipe (Priority valve EF to DCV) and Flexible Pipe (Priority Valve CF to Steering Unit “P”).



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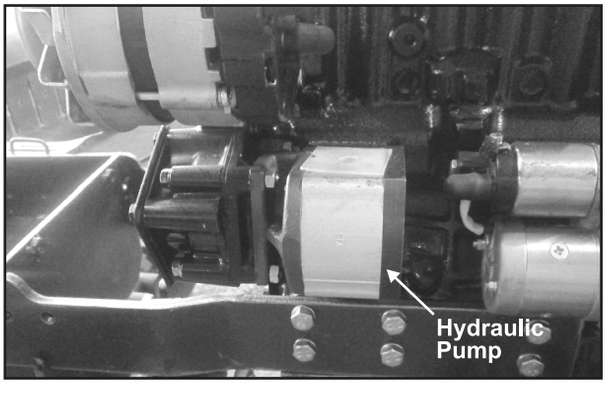
- Unlock Delivery pipe (Pump to Priority Valve).
- Unlock Flexible Pipe From Priority Valve “L” To Steering Unit “E”.
- Remove Priority Valve by Unscrewing Hex head bolt M8x65 of priority valve mounting bracket.





STEP 10: Removal of Hydraulic Pump

- Dismantle hydraulic pump from engine by removing 4 Nos Hex head screws.



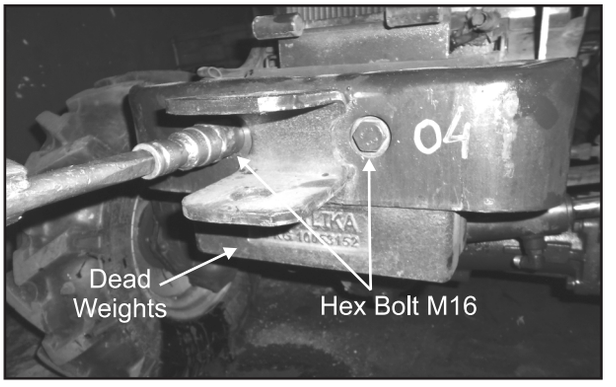
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D. FRONT AXLE

DISMOUNTING PROCEDURE FOR FRONT WEIGHTS, FRONT AXLE BRACKET, FRONT DRIVE (4WD) & FRONT AXLE ASSY :

STEP 1: Removal of Front Weights

- Remove Front dead weights by unscrewing 2 nos M16 Hex Bolts.



STEP 2: Removing Front Tyres

- Place a Jack below front axle and clutch housing.



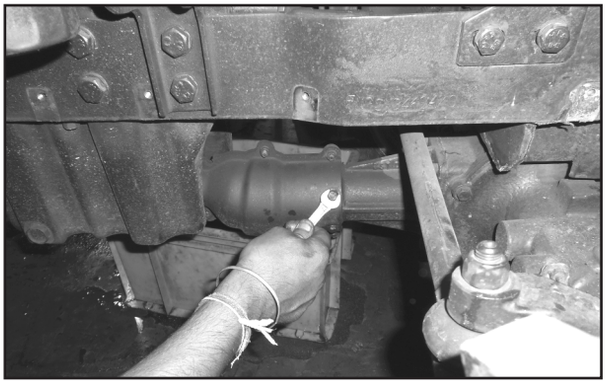
- Unscrew Front wheel Hex nuts (10 Nos - 5 each side) with the help of pneumatic gun.



- Dismount both LH & RH front tyres.

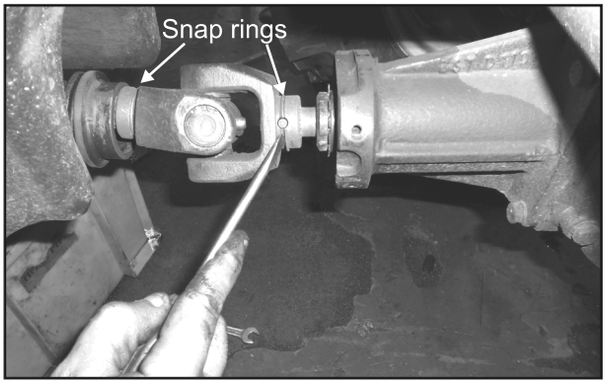
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STEP 3: Removal of 4WD mechanism



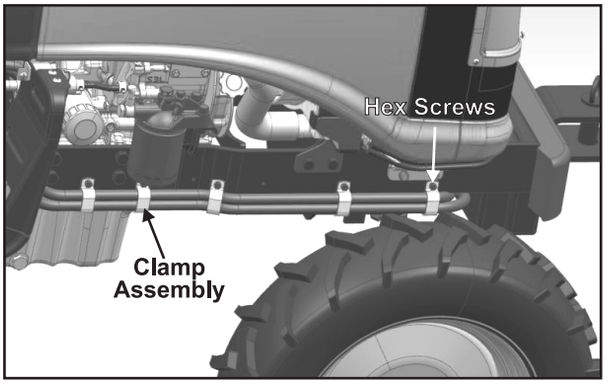
Dismantling Universal Joint

- Unscrew Hex bolts of Universal joint covers.



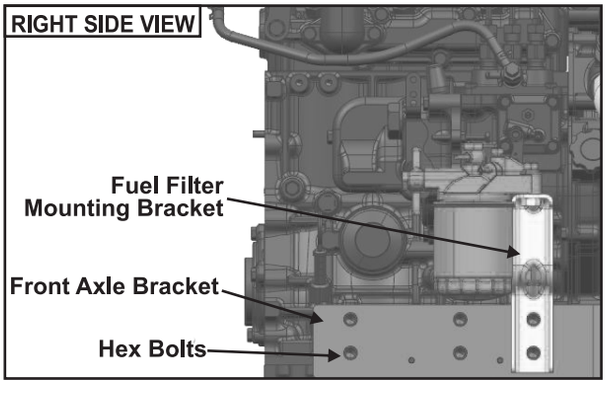
- Unlock Snap rings from both sides of Universal joint as shown in figure.

STEP 4: Removal of Front Axle Bracket & Front Axle Assy



✎ Remove Clamp Assembly by unscrewing Hex Screws (M6) from specified location as shown in figure.

✎ Unscrew Hex Nuts of Flexible pipes connected with Steering Cylinder and remove both the flexible pipes (Steering unit to steering cylinder).



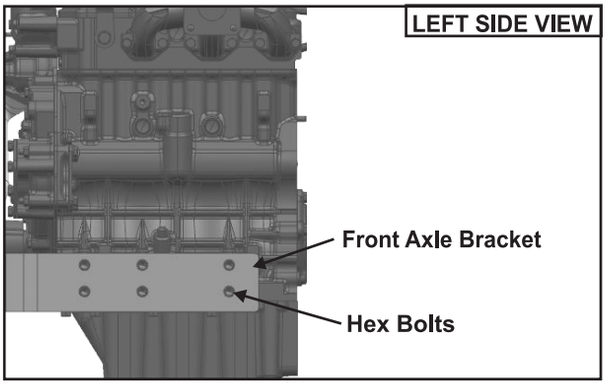
✎ Dismantle right side of Front Axle Bracket (FAB) from Engine Assy by unscrewing Hex Screw (M12 x 25 - 6 nos.)

✎ Re-assemble Fuel filter mounting bracket on Engine Assy after removal of Front Axle Bracket.

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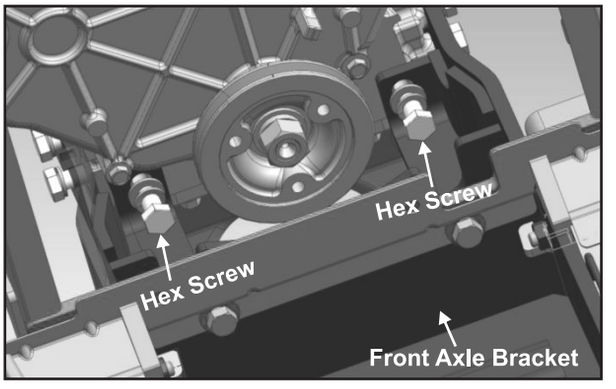
DISMOUNTING MAJOR AGGREGATES FROM THE TRACTOR

- Dismantle Left side of Front Axle Bracket (FAB) from Engine Assy by unscrewing Hex Screw (M12 x 25 - 6 nos.).



- Dismantle FAB from Engine Assy by unscrewing Hex Screw (M12x25 - 2 nos.) as shown in figure.

✎ Remove the FAB & Front Axle Assy from Engine Assy.



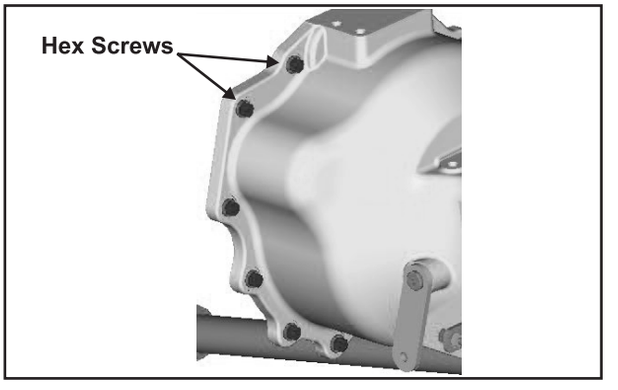
https://truckmanualshub.com/

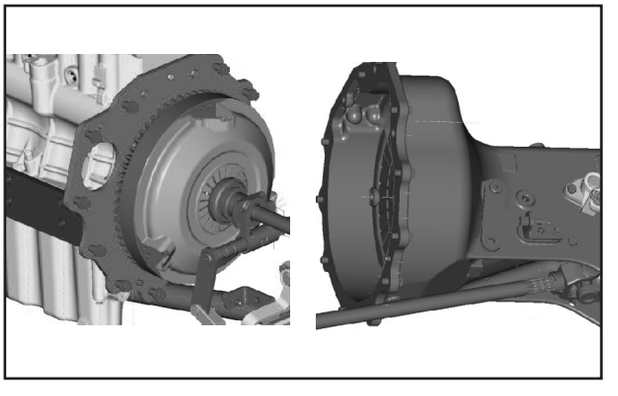
E. CLUTCH

DISMOUNTING PROCEDURE FOR CLUTCH HOUSING AND SINGLE CLUTCH ASSY:

STEP 1: Dismantling Clutch Housing from Engine Rear Plate

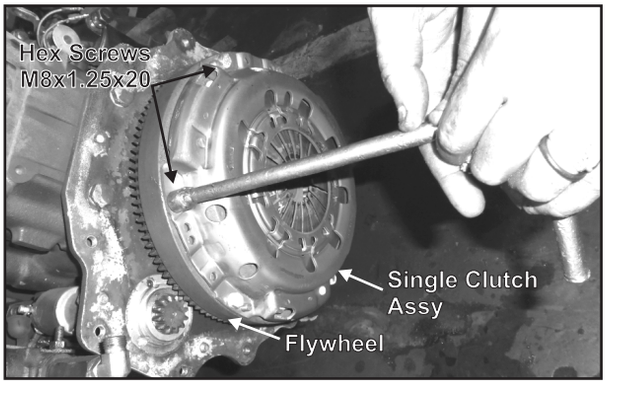
- Lift Engine Assy by using Hoist.
- Unscrew Hex Screws M10x28 (11 Nos) for by-parting clutch housing from Engine rear plate.





STEP 2: Dismantling Clutch Assy from Flywheel

- Dismantle Single Clutch Assy from Flywheel by unscrewing Hex Head Screws M8x1.25x20 (6 Nos) as shown in figure.



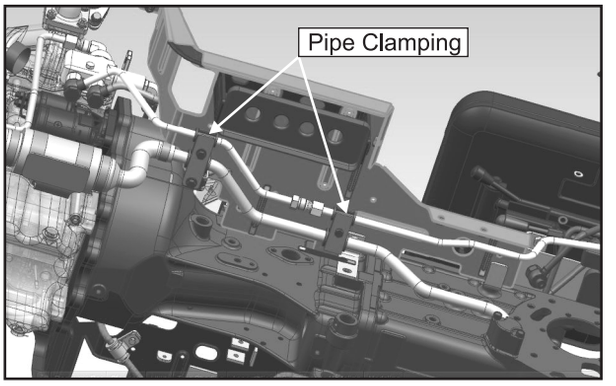
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F. PEDAL, LINKAGES AND CONNECTIONS

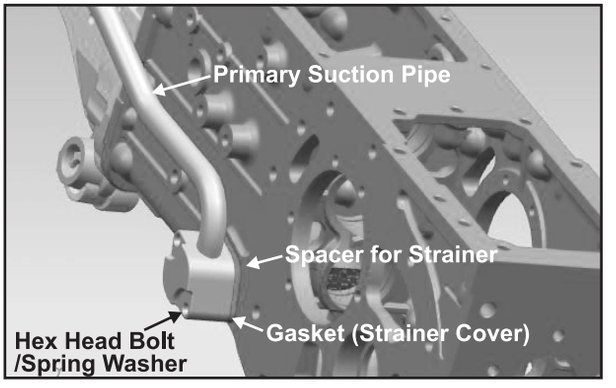
DISMOUNTING PROCEDURE FOR HYDRAULIC PIPES, DIRECTION CONTROL VALVE (DCV), CLUTCH PEDAL, BRAKE PEDAL, PARKING BRAKE LEVER, FOOT THROTTLE, 4WD LEVER, PTO LEVER, CLUTCH ACTUATOR FORK :

Dismantling Hydraulic Pipes (Priority Valve to DCV)

- Dismantle Primary Delivery Pipe (Priority Valve to DCV) from Secondary Delivery Pipe (Priority Valve to DCV) by unscrewing Hex Lock Nut.
- Remove clamping of pipes (see figure) by unscrewing hex bolts.



✎ Dismantle Primary Suction Pipe from Transmission Housing by unscrewing hex head bolts M8x55 (2 Nos).



Dismantling DCV Pipes & DCV

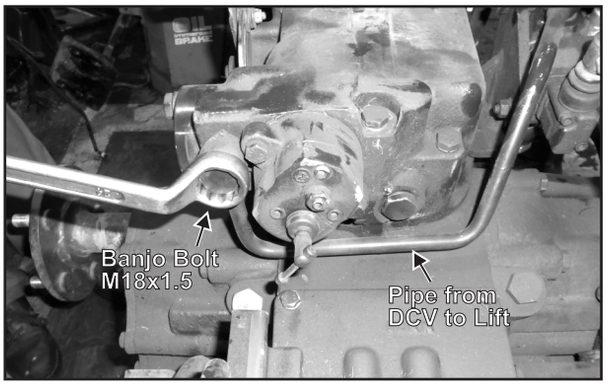
✎ Unscrew Banjo Bolt Ø16.4 and remove Secondary delivery pipe from DCV as shown in figure.



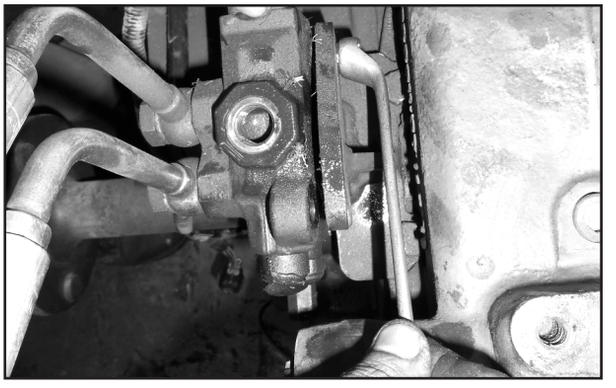
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- Unscrew Banjo Bolt M18x1.5 from removal of one end of Pipe from DCV to Lift

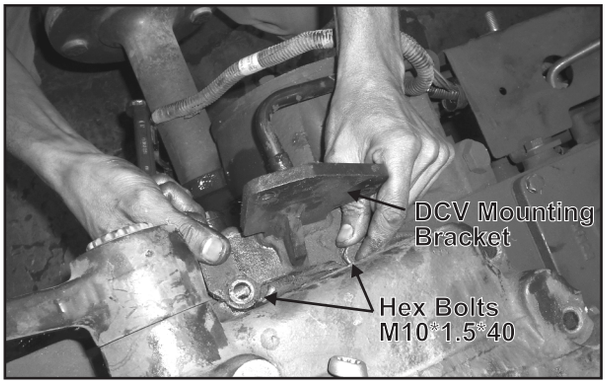
- Dismantle end of Parking Brake Link from Front Fork.



✎ Unscrew Hex Screw Hex screw M8X1.25X30 (2 Nos) of DCV mounting bracker for removal of DCV Unit.



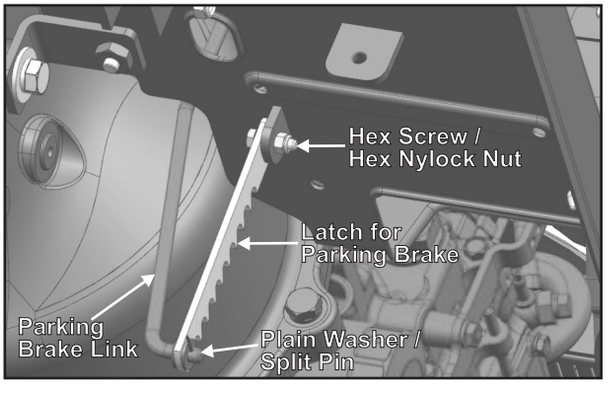
✎ Unscrew Hex Bolts M10*1.5*40 (2 Nos) for removal of DCV mounting bracket.



Dismantling Parking Brake Assy

✎ Dismantle Parking Brake Link from the Latch by removing Pin (6x20) & Split Pin (1.6x20) as shown.

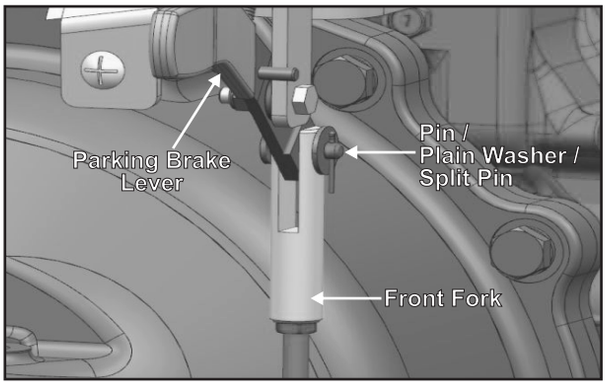
✎ Dismantle other end of Latch of Parking Brake from Floor RH by unscrewing Hex Screw (M6x25) & Hex Nylock Nut (M6) as shown.



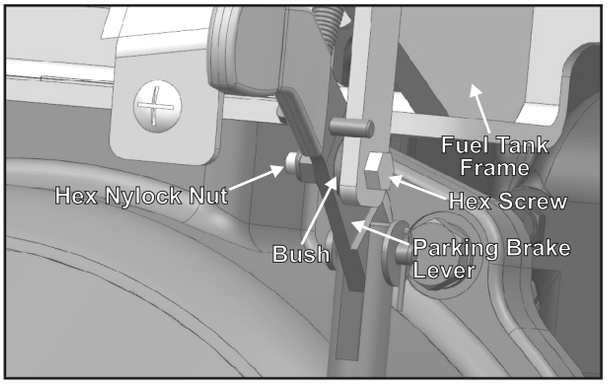
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- Dismantle Front Fork of Parking Brake Link from Parking Brake Lever by removing Pin (6x20), Plain Washer (6.4) & Split Pin (1.6 x20 - 01 nos) as shown.

- Dismantle end of Parking Brake Link from Front Fork.



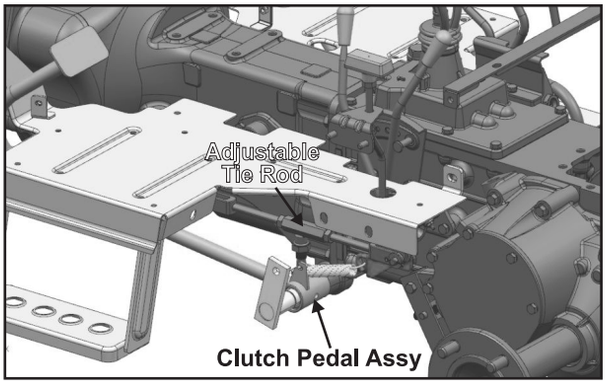
✎ Dismantle Parking Brake Lever from Fuel Tank Frame by unscrewing Hex Screw M6x25 (01 No) & Hex Nylock Nut M6 (01 No) as shown.



Dismantling Brake Pedals

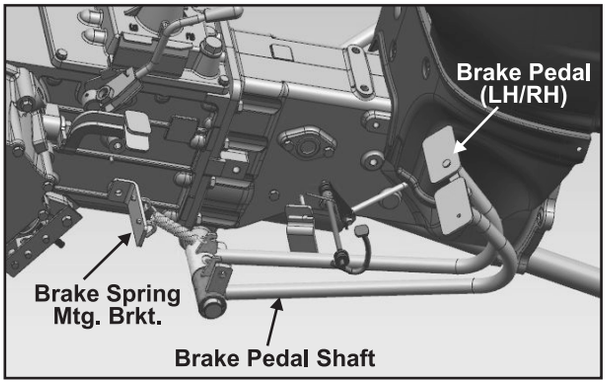
- Dismantle one end of Tie Rod from Brake Actuating Lug by removing split pin dia 2x25, washer and Link pin.

- Dismantle other end of Adjustable Tie Rod Assy (one each on LH & RH) from Brake pedal Lug.



- Unlock LH Pedal from Brake pedal shaft by unscrewing Hex Screw (01 nos) & Hex Nut (01 nos) and unlock Pedal by removing Washer (01 nos) & Circlip A-25 (01 nos).

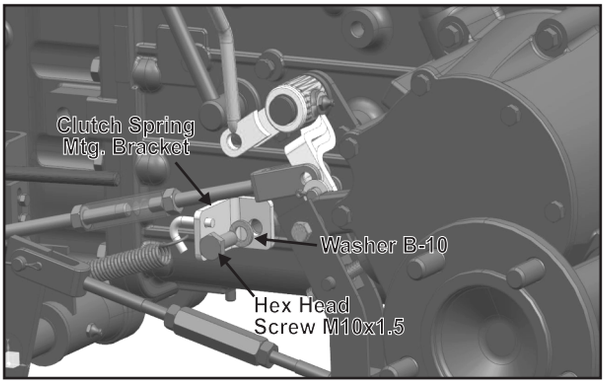
- Remove Brake Pedal Shaft from LH Side through Clutch Pedal Assembly. Remove Brake Pedal Assy (LH & RH) from Pedal Shaft.



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Dismantling Clutch Spring Mounting Bracket

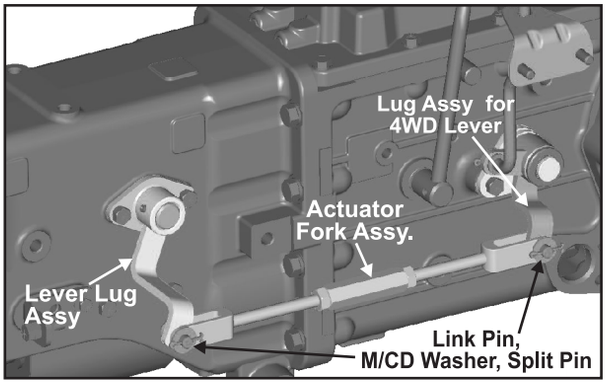
- Unscrew Hex Head Screw to dismantle Clutch spring mounting bracket from Transmission housing.



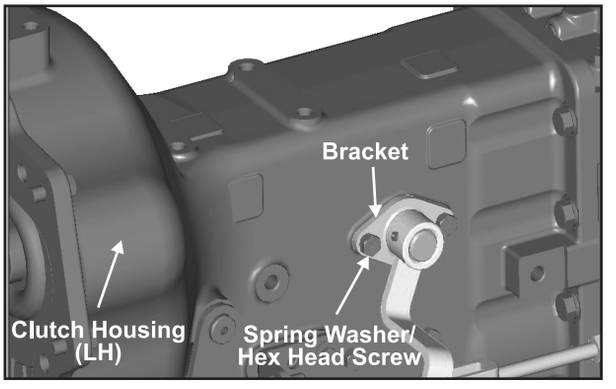
Dismantling Actuator Fork

- Dismantle one end of Actuator Fork Assy. from Lever Lug Assy. by removing Link Pin (1 nos), machined washer and Split Pin (Dia 2*25 - 1 nos).

- Dismantle another end of Actuator Fork Assy. from Lug Assy. 4WD Lever by removing Link Pin (1 nos), machined washer and Split Pin (Dia 2*25 - 1 nos).

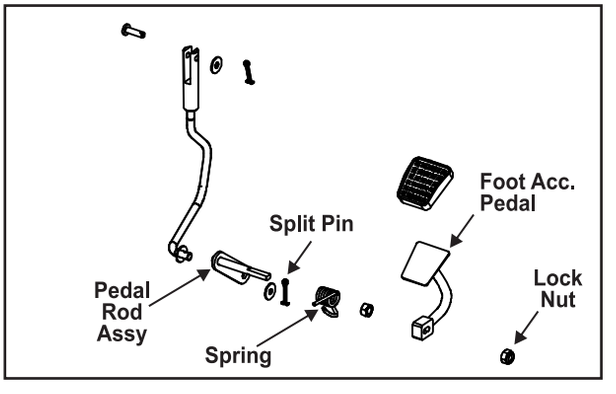


- Dismantle Sub Assembled Bracket from Clutch Housing on left side by removing Spring Washer (B-8 - 2 nos.) and Hex Head Screw (M8 x 1.25 x 20 - 2 nos.) as shown in figure.

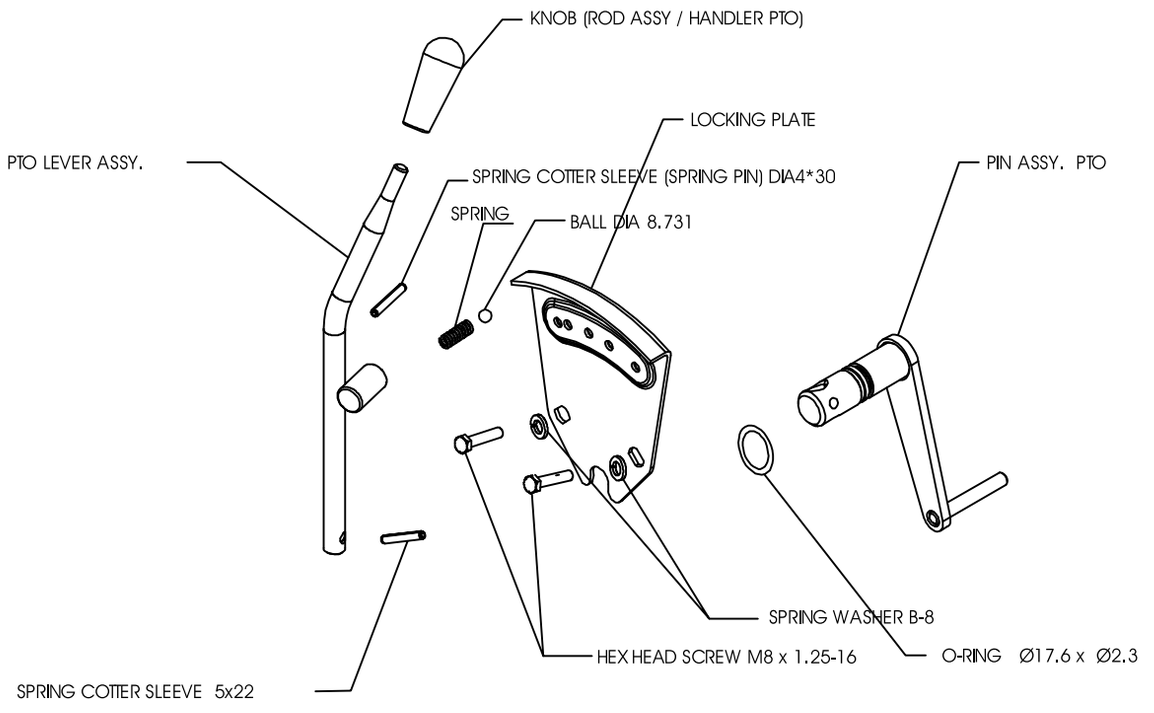


Dismantling Foot Accelerator Pedal

- Remove split pin, spring, hex nut and Lock nut and take out the Pedal rod assy from Foot Accelerator Pedal.

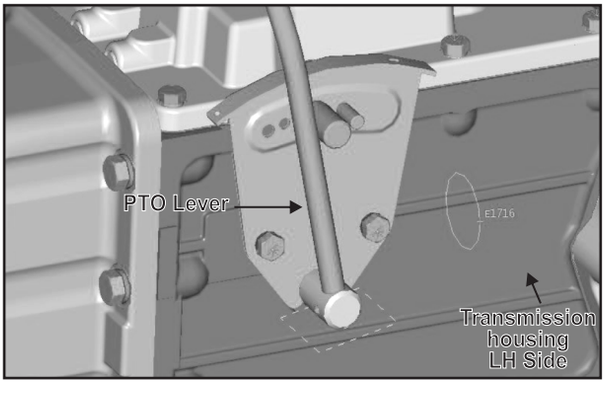


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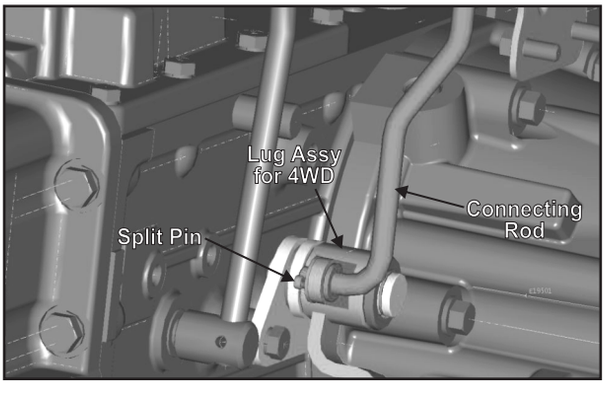
Dismantling PTO Lever & Locking Plate

- Remove Spring cotter sleeve (spring pin) dia 4*3 from PTO lever assy.
- Remove Spring cotter sleeve 5*22 from PTO Lever to dismantle it from PTO Pin Assy as shown in figure.
- Unscrew Hex Head Screws M8x1.25-16 (2 Nos) to dismantle Locking plate from Transmission housing.



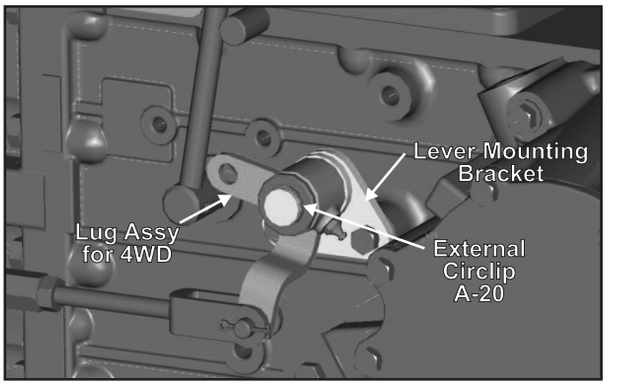
Dismantling 4WD Lever Lug Assy

- Remove split pin 2x2.5 & machined washer 10.5x21.2 for removal of connecting rod from Lug assy (4WD).



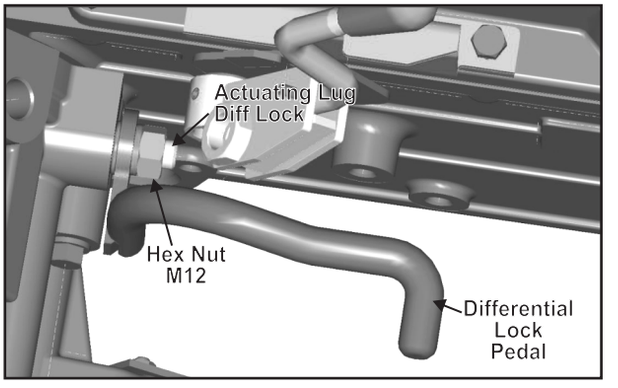
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- Remove External Circlip A-20 from Lever mounting bracket and detach Lug assy (4WD) from it.



Dismantling Differential Lock Pedal

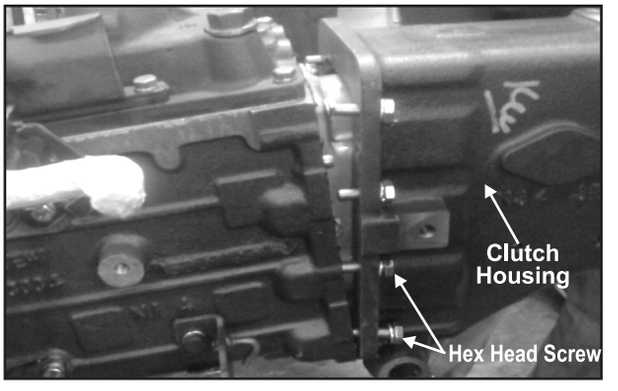
- Unscrew Hex nut M12 and remove differential lock pedal from Actuating lug differential lock.



G. DISMANTLING CLUTCH HOUSING FROM TRANSMISSION HOUSING

After removal of clutch & brake linkages and other connections as described in Section-F of this Chapter, Clutch Housing can be separated from Transmission housing as per procedure below:

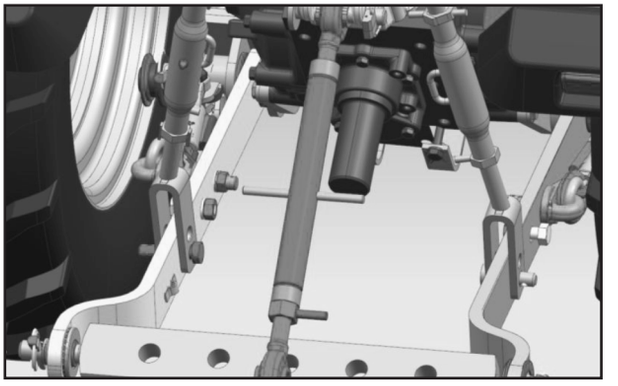
- Unscrew Hex Screws M10x1.5x30 (8 Nos) for by-parting clutch housing from Transmission housing.



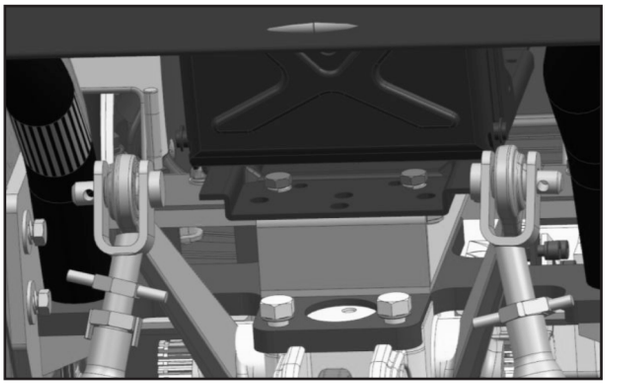
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H. THREE POINT LINKAGE (TPL) & HITCH

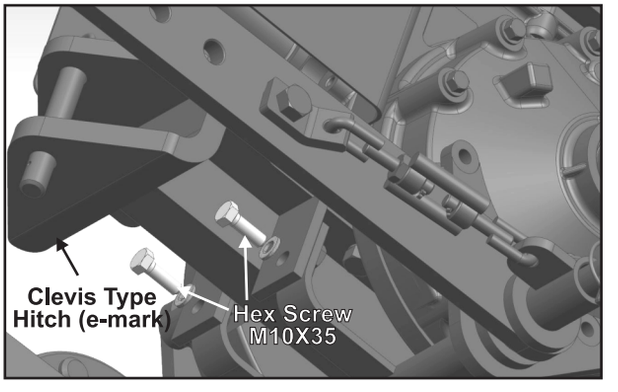
DISMOUNTING PROCEDURE FOR THREE POINT LINKAGE & REAR TOE HOOK:



- Remove Linch pin dia 7 & Pin (2 Nos) from Lower points of Adjustable lift rod assy (LH&RH).



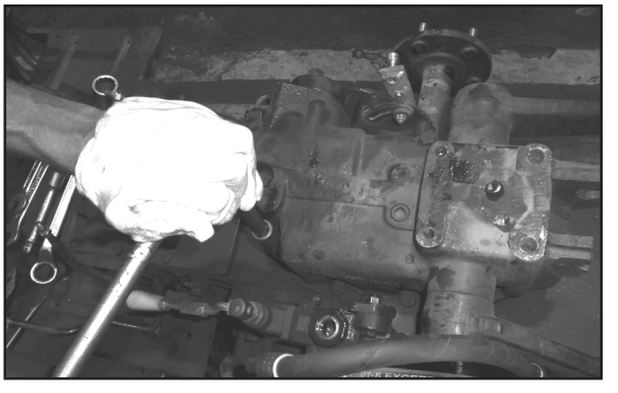
- Remove Linch pin dia 7 & Pin (2 Nos) to detach Adjustable lift rod assy (LH&RH) from Rear Cover.



- Unscrew Hex Bolts M10x35 (2 Nos) for removal of Clevis type Hitch as shown.

I. HYDRAULIC LIFT

DISMOUNTING PROCEDURE FOR HYDRAULIC LIFT:



- Remove Hex head Bolts (9 Nos) of Lift Body and dismount the Lift from Transmission housing as shown.