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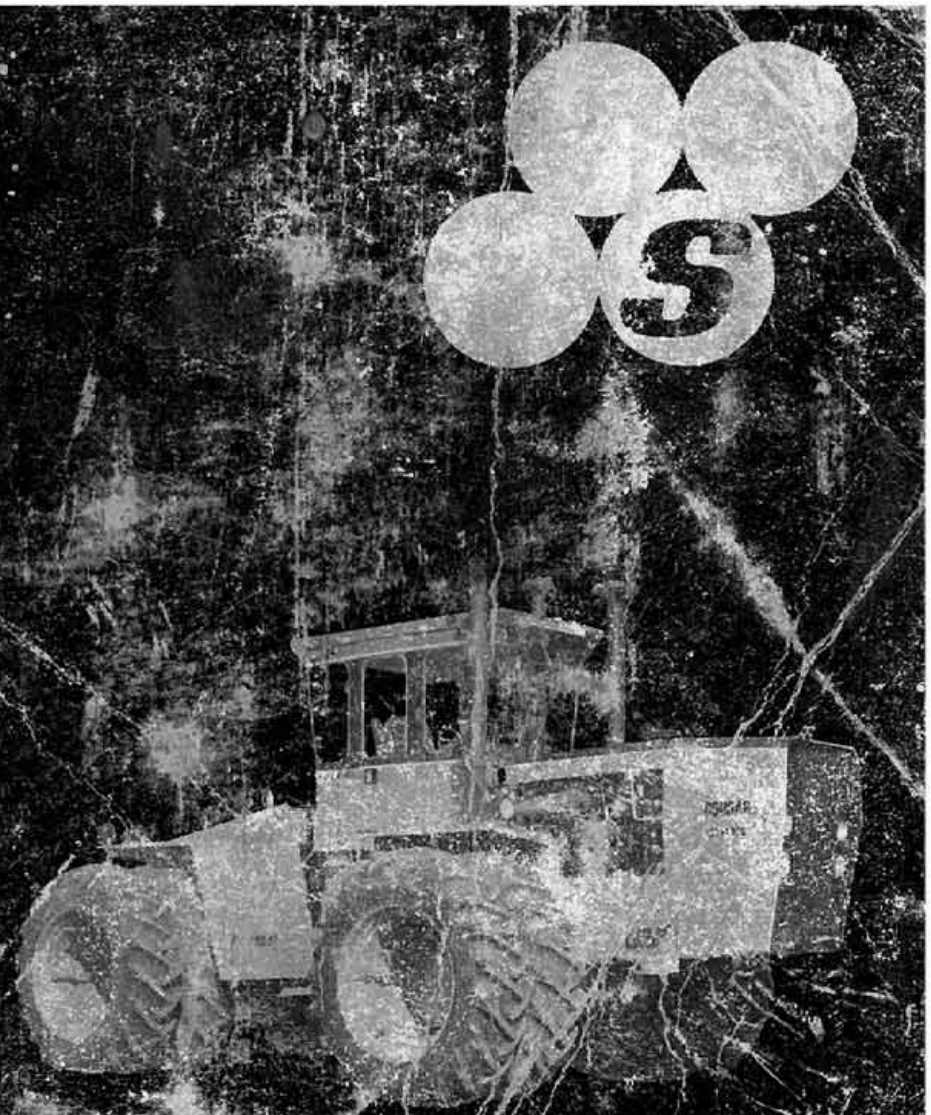

OPERATOR'S MANUAL

PT225
PT250 PT270 PT350

STEIGER TRACTOR INC.
210 1st Ave. N. Fargo, N. Dak. 58102

Warranty

for

AGRICULTURAL PRODUCTS

Steiger Tractor, Inc. (Steiger) warrants, to the original purchaser only, each new Steiger Tractor to be free from defects in material and workmanship under normal agricultural application use and service, subject to the conditions and qualifications herein set forth. The obligation of Steiger hereunder is limited to the repair or replacement of those parts which Steiger, in its sole discretion, determines to have failed as a result of defects in material or workmanship within twelve months or 1500 hours of use in agricultural applications, whichever occurs first, after delivery to the original purchaser. Steiger's obligation hereunder shall in no case be greater than the cost of the necessary parts and labor which Steiger, in its sole discretion, determines to have failed as a result of defects in material or workmanship. Replacement parts provided under the terms of this Warranty are warranted for the remainder of the warranty period applicable to the product in which it is installed as if such parts were original components of that product.

Steiger shall not be liable for any costs other than those specified herein, specifically excluding damage to crops, loss of use, transportation expense to an authorized Steiger dealer, service calls, normal maintenance and upkeep cost, overtime labor cost, and any and all other injuries, claims, or special, indirect or consequential damage, or other economic loss. "Also this warranty does not extend to engines (Cummins), tires, and tubes not manufactured by Steiger, but instead the applicable warranties, if any, of the respective manufacturers shall apply."

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, AND THERE IS NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE. No dealer, salesman or agent has any authority to alter or amend this warranty nor does any dealer, salesman or agent make any warranty for himself unless the same is reduced to writing and delivered to the purchaser at the time of purchase.

This warranty shall be effective only if the purchaser requests warranty repairs to be made by an authorized Steiger dealer at his place of business and, if requested by such dealer, the purchaser presents evidence of the date of delivery of the equipment. This warranty shall not apply unless Steiger or one of its dealers is promptly notified of claimed defect and the allegedly defective part is preserved for inspection.

This warranty shall immediately become void if any service, other than normal maintenance, is performed by anyone other than an authorized Steiger dealer; or if any alteration or modification is made, or attachments are used, without the prior written consent of Steiger; or if, in Steiger's sole discretion, the failure is due to abuse or neglect in the operation or maintenance of the tractor or due to failure to follow the provisions of the operator's manual.

IMPORTANT

This warranty shall only become valid when delivery notification for warranty is received by Steiger Tractor, Inc. within ten (10) days of completion of sale.

T.M.

STEIGER TRACTOR INC.

3101 - 1ST AVE. N. — FARGO, NORTH DAKOTA 58102

STEIGER TRACTOR INC.

P.O. BOX 6006, FARGO, NORTH DAKOTA 58102

200 HOUR CHECK

THIS FORM MUST BE FILLED OUT BY THE DEALER AND SIGNED BY THE CUSTOMER AT THE TIME THE 200 HOUR CHECK IS PERFORMED IN ORDER FOR THE WARRANTY TO BE VALID.

OWNER NAME			DEALER NAME		
ADDRESS			ADDRESS		
CITY	COUNTY	STATE	CITY	COUNTY	STATE
TELEPHONE NO.		ZIP CODE	DEALER I.D.		ZIP CODE
MACHINE		MODEL NAME	HOURS		
MODEL NO.		TRACTOR S/N	DATE		
ENGINE MODEL		ENGINE S/N	NOTE: Record Serial Numbers Directly From Tractor		

Check and Adjust as Required.

INOPERATIVE SERVICE CHECKS

( ) Engine oil level.
( ) Engine coolant level.
( ) Check all fuel and hydraulic line routings and tightness.
( ) Clutch master cylinder full.
( ) Brake master cylinder full.
( ) Hydraulic oil level full.
( ) Transmission and transfer case oil sump full.
( ) Differential oil levels.
( ) Wheel hub oil levels.
( ) Grease all lube points as required.
( ) Air cleaner filters and hose connections (in position and tight).
( ) Engine air and exhaust stack.
( ) Tire pressures.
( ) Battery cables tight and clean.
( ) Cab air filter (in position).
( ) All belt tensions.
( ) Engine mount bolts.
( ) All driveshaft flange and U-joint bolts torqued.
( ) Wheel lug bolts torqued.
( ) Dual bolts torqued.
( ) Hinge pins tightened.
( ) Check all electrical cables and wire routings keeping away from sharp edges, moving parts and exhaust heat.
( ) Clutch and linkage adjustment.
( ) Automatic shutdown system check
( ) Cab seat adjusts.
( ) Cab interior upholstery, trim, mouldings and general appearance.
( ) Cab mount bolts torqued.
( ) Door latches and lock operation.
( ) Cab and door glass and seals.
( ) Steering column adjusts.
( ) Radio and tape working.
( ) All lights and switches working.
( ) Paint.
( ) All decals on and correct.
( ) Hitch pin (supplied).
( ) Operator's manual in cab.
( ) Parts reference manual and 8-track tape in cab.
( ) Record all serial numbers on back cover of Operator's manual.

OPERATIONAL SERVICE CHECKS

All Operative Checks are to be performed with the tractor at normal operating temperatures.

( ) Engine oil pressure normal.
( ) Engine temperature normal.
( ) Engine low idle _____. (Record.)
( ) Engine high idle _____. (Record.)
( ) Throttle and linkage.
( ) All instruments and gauges operational volt meter in green band.
( ) Starting and Starter Neutral Switch
( ) Steering functions smoothly.
( ) Air conditioner and heater operation.
( ) Hi-Lo range selector levers operation.
( ) Hydraulic control valves working.
( ) Windshield wiper/washer operational.
( ) Fluid and oil leaks.
( ) Engine shut-down system.
( ) Park brake.

PERFORMANCE CHECK

( ) Transmission, transfer case and clutch
( ) Brake action.
( ) Engine operation including throttle and governor operation.
( ) All optional equipment and accessories.

OPTIONS

Check as required.

PTO

( ) Hydrostatic fluid level.
( ) Chain case fluid level.
( ) Oil lines and seals for leakage.
( ) Hose supports (secured).
( ) Pump drive line (check and lubricate).
( ) PTO engagement and disengagement.
( ) Instrumentation operational.
( ) Chain case shaft shield in place.

THREE-POINT

( ) Lubricate and adjust.
( ) Fluid leaks.

Dealer Comments Catapiller – Fergus Falls – 218-736
Fargo – 701-280

Owner's Signature _____ **Date** _____

Remove this page and return to Steiger Tractor Inc.

STEIGER TRACTOR INC.

P.O. BOX 6006, FARGO, NORTH DAKOTA 58102

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ADDRESS			ADDRESS		
CITY	COUNTY	STATE	CITY	COUNTY	STATE
TELEPHONE NO.		ZIP CODE	DEALER I.D.		ZIP CODE
MACHINE		MODEL NAME	HOURS		
MODEL NO.		TRACTOR S/N	DATE		
ENGINE MODEL		ENGINE S/N	NOTE: Record Serial Numbers Directly From Tractor		

Check and Adjust as Required.

INOPERATIVE SERVICE CHECKS

( ) Engine oil level.
( ) Engine coolant level.
( ) Check all fuel and hydraulic line routings and tightness.
( ) Clutch master cylinder full.
( ) Brake master cylinder full.
( ) Hydraulic oil level full.
( ) Transmission and transfer case oil sump full.
( ) Differential oil levels.
( ) Wheel hub oil levels.
( ) Grease all lube points as required.
( ) Air cleaner filters and hose connections (in position and tight).
( ) Engine air and exhaust stack.
( ) Tire pressures.
( ) Battery cables tight and clean.
( ) Cab air filter (in position).
( ) All belt tensions.
( ) Engine mount bolts.
( ) All driveshaft flange and U-joint bolts torqued.
( ) Wheel lug bolts torqued.
( ) Dual bolts torqued.
( ) Hinge pins tightened.
( ) Check all electrical cables and wire routings keeping away from sharp edges, moving parts and exhaust heat.
( ) Clutch and linkage adjustment.
( ) Automatic shutdown system check
( ) Cab seat adjusts.
( ) Cab interior upholstery, trim, mouldings and general appearance.
( ) Cab mount bolts torqued.
( ) Door latches and lock operation.
( ) Cab and door glass and seals.
( ) Steering column adjusts.
( ) Radio and tape working.
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( ) Paint.
( ) All decals on and correct.
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( ) Operator's manual in cab.
( ) Parts reference manual and 8-track tape in cab.
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( ) Starting and Starter Neutral Switch
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( ) Air conditioner and heater operation.
( ) Hi-Lo range selector levers operation.
( ) Hydraulic control valves working.
( ) Windshield wiper/washer operational.
( ) Fluid and oil leaks.
( ) Engine shut-down system.
( ) Park brake.

PERFORMANCE CHECK

( ) Transmission, transfer case and clutch.
( ) Brake action.
( ) Engine operation including throttle and governor operation.
( ) All optional equipment and accessories.

OPTIONS

Check as required.

PTO

( ) Hydrostatic fluid level.
( ) Chain case fluid level.
( ) Oil lines and seals for leakage.
( ) Hose supports (secured).
( ) Pump drive line (check and lubricate).
( ) PTO engagement and disengagement.
( ) Instrumentation operational.
( ) Chain case shaft shield in place.

THREE-POINT

( ) Lubricate and adjust.
( ) Fluid leaks.

Dealer Comments _____

_____

Owner's Signature _____ **Date** _____

Customer Copy.

STEIGER TRACTOR INC.

P.O. BOX 6006, FARGO, NORTH DAKOTA 58102

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ENGINE MODEL		ENGINE S/N	NOTE: Record Serial Numbers Directly From Tractor		

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( ) Engine air and exhaust stack.
( ) Tire pressures.
( ) Battery cables tight and clean.
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( ) All belt tensions.
( ) Engine mount bolts.
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( ) Clutch and linkage adjustment.
( ) Automatic shutdown system check
( ) Cab seat adjusts.
( ) Cab interior upholstery, trim, mouldings and general appearance.
( ) Cab mount bolts torqued.
( ) Door latches and lock operation.
( ) Cab and door glass and seals.
( ) Steering column adjusts.
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( ) Throttle and linkage.
( ) All instruments and gauges operational volt meter in green band.
( ) Starting and Starter Neutral Switch
( ) Steering functions smoothly.
( ) Air conditioner and heater operation.
( ) Hi-Lo range selector levers operation.
( ) Hydraulic control valves working.
( ) Windshield wiper/washer operational.
( ) Fluid and oil leaks.
( ) Engine shut-down system.
( ) Park brake.

PERFORMANCE CHECK

( ) Transmission, transfer case and clutch.
( ) Brake action.
( ) Engine operation including throttle and governor operation.
( ) All optional equipment and accessories.

OPTIONS

Check as required.

PTO

( ) Hydrostatic fluid level.
( ) Chain case fluid level.
( ) Oil lines and seals for leakage.
( ) Hose supports (secured).
( ) Pump drive line (check and lubricate).
( ) PTO engagement and disengagement.
( ) Instrumentation operational.
( ) Chain case shaft shield in place.

THREE-POINT

( ) Lubricate and adjust.
( ) Fluid leaks.

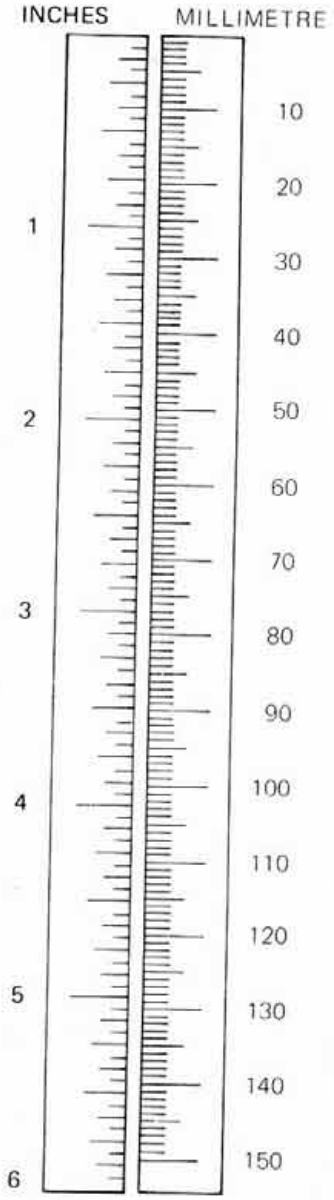
Dealer Comments _____

_____

Owner's Signature _____ **Date** _____

Customer Copy.

METRIC (SI) MEASUREMENTS



English Unit	Metric Equivalent (SI)
	Area
1 square inch	6.45 cm^2 - square centimetre
1 acre	0.405 ha - hectare
	Force
1 pound (force)	4.45 N - newton
	Length
1 foot	304.8 mm - millimetre, 30.5 cm - centimetre, 0.305 m - metre
1 inch	25.4 mm - millimetre, 2.54 cm - centimetre
1 mile	1609 m - metre, 1.61 km - kilometre
1 pound	0.454 kg - kilogram
	Power
1 horsepower	0.746 kW - kilowatt
	Pressure
1 psi	6.89 kPa - kilopascal, 0.00689 MPa - megapascal
	Temperature
1 degree Fahrenheit	$\frac{(t - 32)}{1.8}$ °C - degree Celsius
	Torque
1 lb. (force)-ft.	1.356 N·m
	Velocity
1 mile per hour	1.61 km/h - kilometre per hour
	Volume
1 bushel	0.035 m^3 - cubic metre
1 gallon (US)	3.79 L - litre
1 quart (US)	0.946 L - litre

INTERNATIONAL SYMBOLS


TRANSMISSION OR CONVERTER


TRANSMISSION OR CONVERTER OIL


TRANSMISSION OR CONVERTER OIL FILTER


TRANSMISSION OR CONVERTER OIL LEVEL


TRANSMISSION OR CONVERTER OIL PRESSURE


TRANSMISSION OR CONVERTER OIL TEMPERATURE


TRANSMISSION DRIVE OIL LEVEL


TRANSMISSION DRIVE OIL TEMPERATURE


TRANSMISSION CONTROL OIL PRESSURE


HYDRAULIC OIL FILTER


HYDRAULIC OIL LEVEL


HYDRAULIC OIL TEMPERATURE


ENGINE OIL


ENGINE OIL FILTER


ENGINE OIL LEVEL


ENGINE OIL PRESSURE


ENGINE – HEAT


ENGINE – START OR RUNNING


ENGINE – STOP OR NOT RUNNING


FUEL TANK

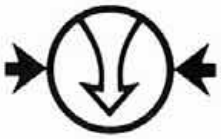

FUEL FILTER


FUEL LEVEL

INTERNATIONAL SYMBOLS


FUEL PRESSURE


FUEL SHUTOFF


AIR PRESSURE

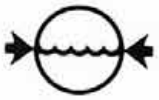

AIR FILTER


OUTSIDE AIR CIRCULATION


ON


OFF


COOLANT LEVEL


COOLANT PRESSURE


COOLANT TEMPERATURE


BRAKE


BRAKE – EMERGENCY


AMMETER OR ALTERNATOR

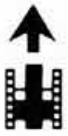

OIL PRESSURE


LEVER – MOVEMENT


STEERING


TURN – LEFT


TURN – RIGHT


TRACTOR – FORWARD


TRACTOR – REVERSE


ENGAGE


DISENGAGE

INTERNATIONAL SYMBOLS

HOURS

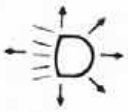
WINDSHIELD
WIPER CONTROL

WINDSHIELD
WASHER CONTROL

HORN CONTROL

COOLER CONTROL

HEATER CONTROL



LIGHT – ALL

LIGHT – BRIGHT

LIGHT – DIM

LIGHT – PARK

LIGHT – INSTRUMENT

FAST

SLOW

Contents

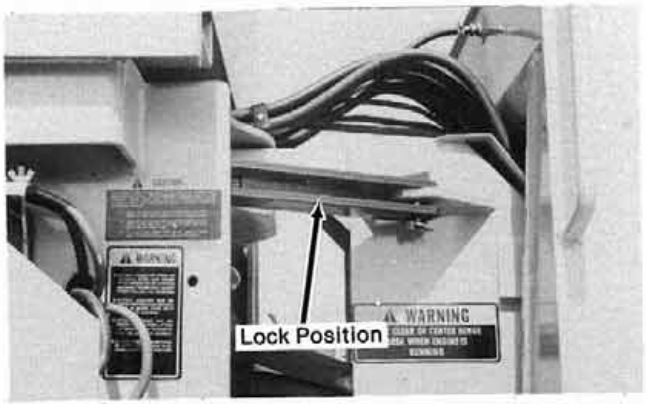


Figure A

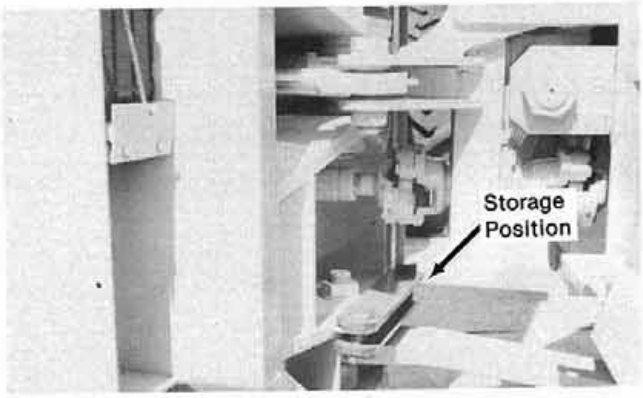


Figure B

WARNING: To prevent accidental articulation install the frame lock bar between the front and rear frame as shown (Fig. A) before operating stationary PTO equipment, or whenever lifting or transporting of the tractor is required. Remove the frame lock bar and store it in the position shown (Fig. B) before operating the tractor where steering is required.

Foreword

In order to obtain the maximum performance and efficiency from the machine, read this manual thoroughly before operating or servicing. Become familiar with the controls and their individual responses before working the tractor.

This operator's manual has been designed into seven major sections: Foreword, Safety, Specifications, Operating Instructions, Service & Maintenance, Trouble Shooting and Index.

A general contents page is located at the beginning of the manual for a quick reference to the major sections.

For a specific item, there is an alphabetical index placed in the rear of the manual.

It is important the owner/operator know the tractor serial number. Write the serial number in the space provided, on inside back cover, and use it in all correspondence when referring to the tractor. For your convenience there is a maintenance service chart printed on this page also.

Throughout the manual references are made to left side and right side. These terms are used as viewed from the operator's seat facing the front of the tractor.

The signal words CAUTION or BE CAREFUL, WARNING, DANGER are used to indicate degree of hazards and to warn against unsafe practices that may cause personal injury and are used with appropriate safety instructions.

CAUTION or BE CAREFUL denotes a general reminder of good safety practices or directs attention to unsafe practices.

WARNING denotes a hazard intermediate between DANGER and CAUTION or BE CAREFUL.

DANGER denotes the most serious hazard.

The word **NOTE**, is used to convey information that is out of context with the manual text. Special information such as specifications, techniques, reference information and other information of a supplementary nature.

The word **IMPORTANT**, is used in the text when immediate damage will occur to the machine due to improper technique or operation. Important will apply to the same information as specified by note only of an immediate and urgent nature.

Foreword

It is the responsibility of the user to read the operator's manual and comply with the safe and correct operating procedure as pertains to the operation of the product; and to lubricate and maintain the product according to the maintenance schedule in the Operator's Manual.

The user is responsible for inspecting his machine, and for having parts repaired or replaced when continued use of the product would cause damage or excessive wear to other parts.

It is the user's responsibility to deliver his machine to the Steiger dealer for service or replacement of defective parts which are covered by the warranty policy.

This manual has been compiled to assist the owner/operator with the operation, service and routine preventative maintenance procedures of the Steiger tractor.

Keep this manual in a convenient place for easy reference when problems arise. If you require additional information or service, contact your Steiger Dealer.

The user should notify his selling Dealer in advance so arrangements can be made to have his 200-hour check or inspection performed. The user should not be charged for this inspection or adjustments, but is expected to pay for oil, filters or any parts and labor which are not covered by warranty. The user is responsible for bringing the product to the selling Dealer's shop to have this inspection performed.

Steiger tractor does not allow credit for the cost of travel time, mileage or hauling as a warranty allowance.

If the owner/operator requests the dealer to perform warranty obligations or inspections at locations other than the Dealer's Service Shop, travel costs to such locations are usually paid by the tractor owner. Arrangements for travel costs and service performed at locations other than the Dealer shop should be agreed upon at the time of the service request.

WARRANTY POLICY

The warranty policy printed on the inside of the front cover of this manual is limited to the United States of America.

NOTE: *Steiger tractor reserves the right to make changes in specifications or improvements on our products without incurring obligations to add them to any machine in existence.*

WARRANTY ON AUTOMATIC SHUT-DOWN SYSTEM

The automatic shut-down system is installed and sold on Steiger tractors only as an aid to the operator in detecting an abnormality or failure. The warranty on the automatic shut-down system extends only to the replacement of the failed part of the automatic shut-down system and does not cover any damage to parts that may have been damaged due to failure of the automatic shut-down system to operate properly.

NEW MACHINE MAINTENANCE:

To gain the optimum life from the engine and the components that make up the power train of your new Steiger tractor, it is required that the engine crankcase oil and filters be changed and new oil installed after the first 30 hours of operation.

It is also required that the axles, transmission and transfer case lube oils be drained and new lube oil installed after the first 100 hours of operation. All hydraulic filters should also be changed after the first 100 hours.

This is necessary in order to flush out any particles that may be present in these systems during the "wear-in" process.

Whenever you see this symbol, it means Attention! Become Alert! Your safety is involved.

Safety

Safety Suggestions:

Become familiar with gauges and controls before you operate the tractor.

Shut down engine and set park brake before dismounting from tractor.

Do not leave implement in the raised position.

Use warning/flasher lights when traveling on public roads day or night, unless prohibited by law.

Do not operate tractor from any position except seated in the operator's seat with seat belt securely fastened.

Do not dismount from tractor when it is in motion.

Do not leave engine running while it is unattended. Shut the engine off before making any adjustments or when servicing tractor or implements.

Never allow anyone to stand near center hinged area while engine is running.

Do not permit anyone but the operator on the tractor while it is in motion.

Be sure all control levers, except transmission Hi-Lo and transfer case Hi-Lo range levers, are in neutral before attempting to start the engine.

Never operate tractor in an enclosed area.

Machinery should only be operated by designated responsible personnel.

Operate tractor at a speed that insures safety and complete control, especially over rough terrain, crossing or alongside ditches and slopes.

Use the braking power of the engine; always downshift to lower gear before descending a steep grade. Brakes should be properly maintained and adjusted.

Shift to lower gear before approaching a hill, so it does not become necessary to shift against the hillside with danger of rolling backward while shifting.

Refuel in a safe place away from open fire or sparks with engine stopped.

Do not remove radiator pressure cap when radiator is hot. Add coolant to radiator only when engine is stopped and fully cooled.

Do not pull from any point except the drawbar except when pulling implements designed for and properly fastened by three-point hitch.

Do not attempt to check the compressor oil while the unit is charged, for it is pressurized.

Do not use ether starting fluid near fire, sparks or flame, or on engines equipped with a glow plug system. Read the cautionary information on the container.

Refrigerant under pressure may cause severe injury or frostbite. Contact your Steiger Dealer when air conditioner service is required.

Be sure to keep hands clear of coupler release levers when lines are under pressure for levers may unlatch very rapidly.

Never operate the tractor with a loose wheel, rim or hub.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job safely.

Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which could result in serious bodily injury.

Safety

Never inflate tires beyond 35 lbs. per square inch.

Use safety cage or chain, clip-on chuck, extension hose, wear eye protection and stand away from the tire while inflating to prevent injury due to blowoffs.

The safari cab filters are not designed to filter out harmful chemicals. When using chemicals, follow the instructions given in the implement operator's manual and those given by the chemical manufacturer.

Connect all four ground cables to the terminal block only after connecting the cables to the battery terminals.

Do not stand in the hood or on the grill screen.

Keep people away from the front of the tractor when opening the hood. Keep feet and hands out of the hinge area of the hood.

If the engine is warm steam may spray outward under high pressure which could cause severe burns.

Remove the hydraulic oil reservoir dipstick/cap assembly slowly to relieve pressure.

When operating PTO equipment, observe the following safety precautions:

- Do not wear loose clothing when operating PTO equipment or when near rotating equipment.
- When operating PTO driven equipment, stop the engine and wait until the PTO shaft and equipment stop before getting off the tractor to adjust, work on or lubricate the equipment.
- Do not clean or adjust PTO driven equipment while the tractor engine is running.
- Be sure that the PTO shield is installed when using PTO driven equipment.
- Always apply the tractor parking brake and block the rear wheels front and back when operating stationary PTO equipment. Be sure to install the frame lock bar between the front and rear frame to prevent articulation.
- Follow the equipment operator's manual instructions.
- Always keep safety shields in place. Disengage PTO, shut off the engine and remove the key before adjusting or unclogging power driven machinery.
- Replace PTO output shaft shield when PTO is not in use.
- Do not connect 1000 RPM PTO to equipment designto operate at 540 RPM, nor 540 RPM PTO to equipment designed to operate at 1000 RPM.

Be a safe operator; avoid accidents. A careful operator is the best insurance against an accident.

The complete observance of one simple rule would prevent many thousand serious injuries each year. That rule is: never attempt to clean, oil or adjust a machine while it is running or is in motion!

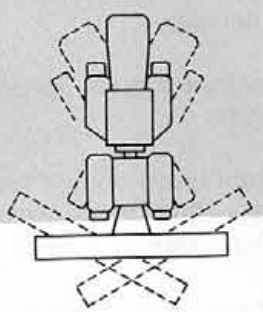
ROPS CAB

The PT cab has been tested in accordance with OSHA requirements of 29 CFR, 1928 Subpart C, to a maximum of 34,000 lbs. (14,422 Kgs.).

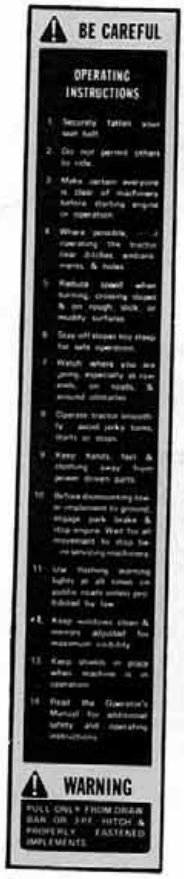
TOWING

When towing loaded wagons or heavy equipment downhill or on the highway with a swinging drawbar, lock the drawbar in the center position.

Towing of the tractor is to be avoided if the engine and/or braking system cannot be operated.



CAUTION: Do not move the steering wheel until everyone is clear of the equipment and the center hinge area. Moving the steering wheel can swing equipment as pictured.



Location: Inside cab on right side directly above hydraulic control levers.

Location: Inside cab on left side near top of the door.

Location: Top left side of front frame adjacent to batteries.

Location: Rear of tractor on shut off switch directly above PTO shaft.

Location: Top left side of front frame adjacent to batteries.

Location: Right side of front frame directly below hydraulic fill port near top step.

Location: Top left inside portion of rear frame near SMV emblem.

Location: On right and left side of radiator shroud near front of engine.

Location: Top left inside portion of rear frame near SMV emblem.

Location: Rear of tractor on PTO shaft shield directly above PTO shaft.

Location: On left and right of rear frame near center hinge area. Early Production.

Location: On left and right of center hinge. Later Production.

Location: Rear of tractor on PTO shaft shield directly above PTO shaft.

Location: On rear of fuel tank mounted on bracket facing rear of tractor.

Specifications

Axle — Standard

General Specifications

MODEL—S-34
TYPE—Single planetary outboard hubs, spiral bevel ring gear and pinion.
OPTIONS—No-Spin Differential

Lubrication Specifications

Oil Type—SAE 80W90 Gear Oil [Steiger P/N 01-4642, 5 gal. (19 liters) container or P/N 01-4643, 30 gal. (113.5 liters) container]

All axle lubricants must meet the MIL-L-2105 B and/or API GL-5 specifications for gear lube.

Oil Capacity—Center Section 22 qts. (20.81 L). Wheel hubs 5 qts. each (5.73 L).

Axle — Optional

General Specifications

MODEL—598
TYPE—Dual planetary outboard hubs, spiral bevel ring gear and pinion.
OPTIONS—No-spin Differential

Lubrication Specifications

Oil Type—SAE 80W90 Gear oil [Steiger P/N 01-4642, 5 gal. (19 liters) container, or P/N 01-4643, 30 gal. (113.5 liters) container]

All axle lubricants must meet the MIL-L-2105 B and/or API GL-5 specifications for gear lube.

Oil Capacity—Center Section 6.5 qts. (6.1 liters), wheel hubs 7.5 qts. (7 liters) each.

Specifications

Brakes

General Specifications

Type—Multi-disc, self-energizing, ball and ramp configuration. Actuated hydraulically by the cab mounted pedal or mechanical application with the park brake.

Size—9 in. (22.8 cm) O.D. x 6 in. (15.2 cm) I.D.

Disc Clearance—Minimum .090 inch (1.52 MM)
Maximum .200 inch (5.08 MM)
Fluid Type—Motor vehicle brake fluid meeting SAE J 1703 D specifications.
Fluid Capacity—1 pt. (.473 L)

Cab

General Specifications

Climate Control—Air conditioner and heater combination
Windshields—Pantograph type wipers front and rear, tinted glass
Cab Width—52 inches (132 cm)
Seat—Vinyl/cloth covered, adjustable fore and aft, and to suit operator weight. Swivel feature to allow ease of entry.
Instruments—Tachometer, voltmeter, engine oil pressure, coolant temperature, hourmeter. Warning lights are used with oil pressure and coolant temperature sensing units.

Clutch

Type—Heavy duty, hydraulically activated, double 6-button dry/cerametallic discs. Pull-type release.
Fluid Type—Motor vehicle brake fluid meeting SAE J 1703 D specifications.
Fluid Capacity—1 pt. (.473 L)

Lubrication Specifications

See Tractor Service Guide

Fuel System

General Specifications

Type of Fuel—No. 2 diesel fuel or No. 1 diesel fuel where ambient temperature remains consistently below 32° F (0° C)
Capacity—225 gallons (795 liters)

Electrical

General Specifications

Alternator—90 amp, 12 volt negative ground
Starter—12 volt negative ground, solenoid activated, positive engagement.

Batteries—Four 12 volt maintenance free type 1900 CCA (0° F)

Lights—6 flood lights, 4 spot lights (65 watt), 6 forward, 4 rear mounted. Warning flashers with integral turn signals. Two combination tail and stop lights. All instruments illuminated. Two cab interior dome lights.

Shut-down System—Automatic engine temperature and/or pressure operated. Also PTO charge pressure if so equipped. Factory set limits. Separate sensing units.

Hourmeter—Key Switch activated

Bulb Sizes—Front headlights, Hi Beam 4001, Indicator lights 1893
Front headlights, Lo Beam 4000, Hourmeter, tach 161
Field lights 4478, Instruments 57
Tail lights 1157
Flasher, Warning 1156

Hydraulic System

General Specifications

Reservoir Capacity—22 gallons (83.2 L)
Steering System—Articulated, load sensing, hydrostatic with two double acting cylinders.
Control Valve — Open Center, stack-type construction, remote mounted and actuated by cables. Four bank standard equipped, one float.
Fifth bank — optional.
Implement System—Adjustable flow from 8 to 20 GPM (30.27 to 75.68 LPM)
Relief Valve Setting—2250 p.s.i. (158.17 Kg/cm)
Filtering System—Spin-on, throw-away element, also a suction screen inside the reservoir

Lubrication Specifications

Oil Type—Steiger Lubricant P/N 01-4647, 5 gal. (19 liters) container, or P/N 01-4646, 30 gal. (113.5 liters) container, SAE 10 Hydraulic Oil, 303 or equivalent.

PTO System

General Specifications—Hydrostatic Units

Type—Variable displacement, high pressure, electronically controlled.
Output—105 rated H.P. at 1000 RPM
57 rated H.P. at 540 RPM

Lubrication Specifications—Hydrostatic Units

Oil Type—Steiger Lubricant P/N 01-4647, 5 gal (19 liters) container, or P/N 01-4646, 30 gal. (113.5 liters) container, 303 or equivalent.
Oil Capacity—Normal oil change 28 qts. (26.5 liters) 2 qts. (1.8 liters) extra for filter.

General Specifications—Drive Units

Type—Telescoping driveshaft arrangement to drive hydrostatic pump.

Chain type final drive from hydrostatic motor to power take-off shaft.

Lubrication Specifications—PTO Transfer Case

Oil Type—Steiger Lubricant P/N 01-4647, 5 gal. (19 liters) container, or P/N 01-4646, 30 gal. (113.5 liters) container, 303 or equivalent.
Oil Capacity—2 qts. (1.89 L)

Transfer Case

General Specifications

Model—E, two-speed
Type—Helical gearing, with sliding clutch (cable actuated). Tapered roller bearings on shafts. Integral oil reservoir.
Lubrication—Pressure lubricated with filtered and air cooled oil pumped from integral reservoir.

Lubrication Specifications

Oil Type—Steiger Lubricant P/N 01-4647, 5 gal. (19 liters) container, or P/N 01-4646, 30 gal. (113.5 liters) container, 303 or equivalent.
Oil Capacity—Transfer Case only 21 qts. (19.8 L) total 37 qts. (35 L) (includes transmission).

Transmission

General Specifications

Model—1010
Type—Constant mesh spur gear
Speeds—10 forward, 2 reverse
Lubrication—Pressure circulated with filtered and air cooled oil. Oil level maintained automatically with oil pumped from the transfer case reservoir.

Lubrication Specifications

Oil Type—Steiger Lubricant P/N 01-4647, 5 gal. (19 liters) container, or P/N 01-4646, 30 gal. (113.5 liters) container, 303 or equivalent.

Oil Capacity—Transmission only 16 qts. (15 L), total 37 qts. (35 L) (includes transfer case).

Three-Point Hitch — Option

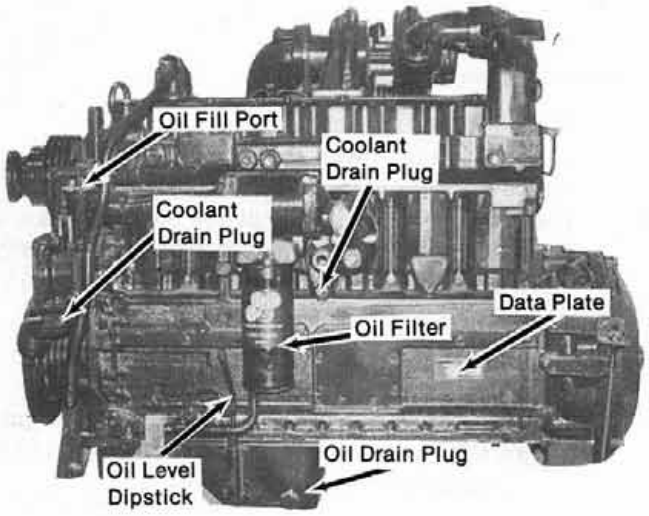
General Specifications

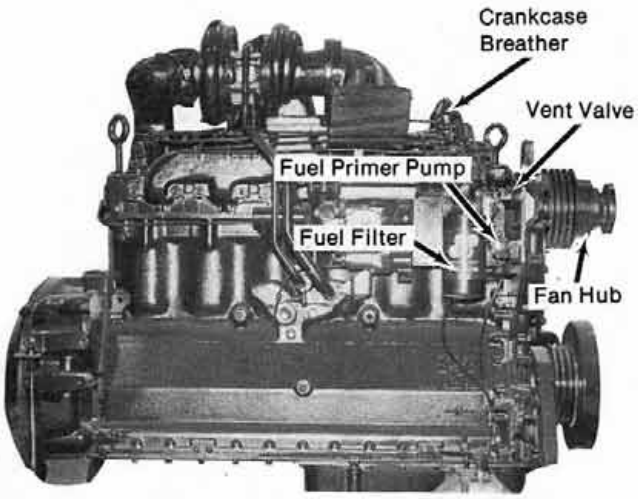
Type—Category III

Torque Specifications:

Cab Mount .....1/2" Bolts 75 lbs. ft. (10.37 Kg/M)
Cab Mount .....3/4" Bolts 260 lbs. ft. (35.95 Kg/M)
Wheel Bolts .....450 lb. ft. (62.23 Kg/M)
Dual Bolts .....200 lb. ft. (27.66 Kg/M)
Axle to Frame Bolts .....695 lb. ft. (96.1 Kg/M)
Upper Vertical Hinge Pin ....1200 lb. ft. (165.96 Kg/M)
Lower Vertical Hinge Pin ....1500 lb. ft. (207.45 Kg/M)
Front Horizontal Hinge Pin ..1500 lb. ft. (207.45 Kg/M)
Rear Horizontal Hinge Pin ...1200 lb. ft. (165.96 Kg/M)
Steering Bolts .1200 ± 100 lb. ft. (165.96 ± 13.83 Kg/M)
Drawbar Pivot Pin .....1200 lb. ft. (165.96 Kg/M)
3-Point Rockshaft
Early Pillow Block Bolts 5/8" ...115 lb. ft. (15.9 Kg/M)
Later Pillow Block Bolts 7/8" ..460 lb. ft. (63.62 Kg/M)
Drawbar Clevis Bolts .....1500 lb. ft. (207.45 Kg/M)

Specifications





Engine temperature at 200°F ± 10° (92°C ± 10°).

ENGINE OIL PRESSURE CHART			
TEST rpm	SAE NO. OF TEST OIL	Minimum Permissible Pressure psi	kPa
1500 rpm or above	10	30	207
	30	45	310
600 to 800 rpm	10	10	69
	30	20	138

Caterpillar 3306T-225

General Specifications

Model—Caterpillar 3306T 225
Type—Inline 6 cylinder Turbo-charged
Bore & Stroke—4.75 x 6.00 inches (121 mm x 152 mm)
Displacement—638 cubic inch (10.5 liters)
Comp. Ratio—17.5:1
Nominal Torque Rise—28.7%
Rated Speed—2200 RPM, approximately
High Idle—2430 RPM, approximately
Low Idle—830 RPM, approximately
Oil Pressure—See Chart

Lubrication Specifications

Oil Type—API Class CD or MIL-L-2104-C
Oil Viscosity—SAE 10, below 32°F (0°C)
SAE 30, above 32°F (0°C)
Oil Capacity—32 qts. (30.3 liters) including filter
Oil Filter Type—Engine mounted, spin-on throw-away type
Coolant Capacity—13 gal. (49.2 liters)
Fuel Requirements—ASTM Grade No. 2D or 1D for cold weather operation. A minimum Cetane number of 40 is recommended.

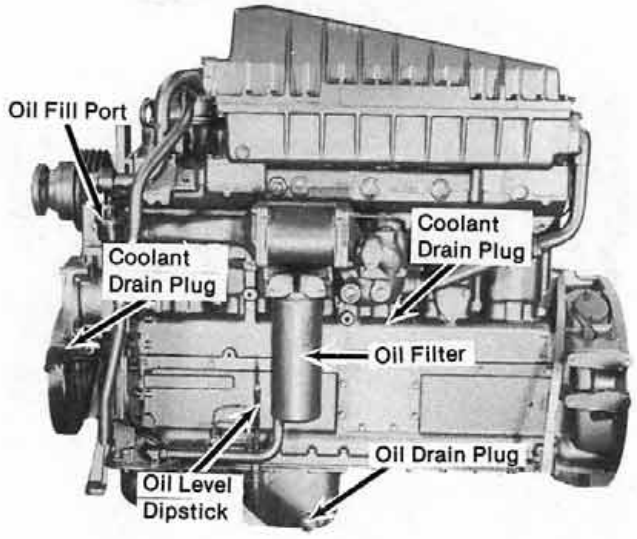
Caterpillar 3306 T-250

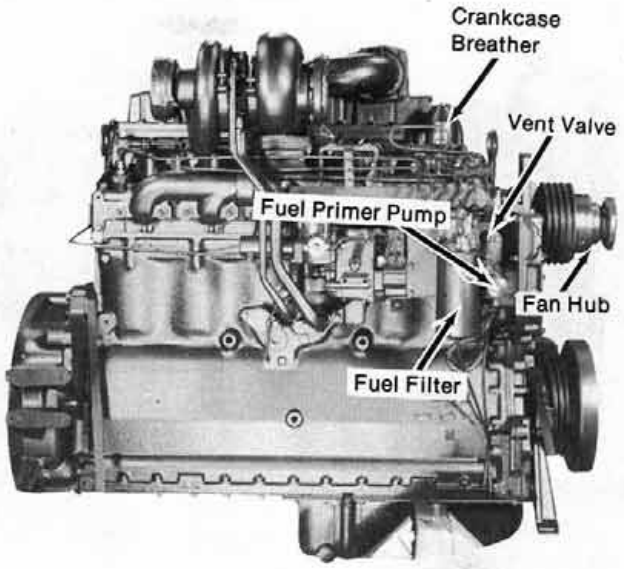
General Specifications

Model: Caterpillar 3306 T-250
Type: Turbo charged inline 6 cylinder.
Bore & Stroke: 4.75" x 6.0" (121 mm x 152 mm)
Piston Displacement: 638 cubic inches (10.5 liters)
Compression Ratio: 17.5:1
Nominal Torque Rise: 22%
Rated Speed: 2200 RPM, approximately
High Idle: 2470 RPM, approximately
Engine Idle: 830 RPM, approximately
Oil Pressure: See chart.

Lubrication Specifications

Oil Type: API Class CD or Mil-L-2014C
Oil Viscosity: SAE 10 below 32°F (0°C)
SAE 30 above 32°F (0°C)
Oil Capacity: 26 qts. (24.4L)
Filter Type: Spin-on, throw-away type
Coolant Capacity: 13 gallons (53 liters)





Caterpillar 3306TA-270

General Specifications

Model — Caterpillar 3306 TA270
Type—Turbo-charged and after cooled inline 6 cylinder
Bore & Stroke—4.75 inches (121 mm) x 6.00 inches (152 mm)
Displacement—638 cubic inch (10.45 liters)
Comp. Ratio—17.5:1
Nominal Torque Rise—20%
Rated Speed—2200 RPM, approximately
High Idle—2480 RPM, approximately
Low Idle—830 RPM, approximately
Oil Pressure—See Chart
Fuel Requirements—ASTM Grade No. 2D or 1D for cold weather operation. A minimum Cetane number of 40 is recommended.

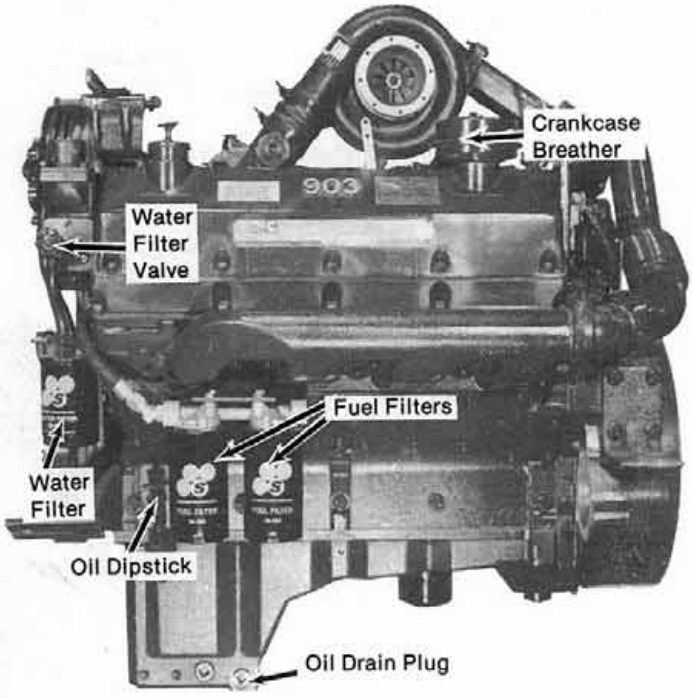
Lubrication Specifications

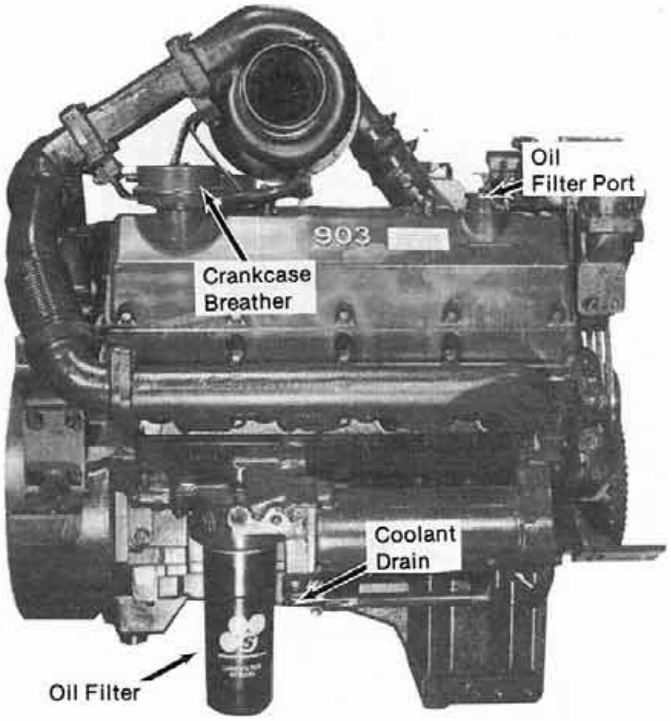
Oil Type—API Class CD or MIL-L-2104-C
Oil Viscosity—SAE 10, below 32°F (0°C)
SAE 30, above 32°F (0°C)
Oil Capacity—26 qts. (24.4 liters)
Oil Filter Type—Engine mounted spin-on throw-away type.
Coolant Capacity—14 gal. (53 liters)

Engine temperature at 200°F ± 10° (92°C ± 10°).

ENGINE OIL PRESSURE CHART			
TEST rpm	SAE NO. OF TEST OIL	Minimum Permissible Pressure	
		psi	kPa
1500 rpm or above	10	30	207
	30	45	310
600 to 800 rpm	10	10	69
	30	20	138

Specifications





Cummins VT903-C350

General Specifications

Model—Cummins VT 903 C350
Type—Turbo-charged, 90°V construction, 8 cylinder.
Bore & Stroke—5.50 inches (139 mm) x 4.75 inches (121 mm)
Displacement—903 cubic inch (14.80 liters)
Comp. Ratio—15.5:1
Nominal Torque Rise—20%
Rated Speed—2600 RPM, approximately
High Idle—2960 RPM, approximately
Low Idle—830 RPM, approximately
Oil Pressure at Rated Speed—44 to 64 p.s.i. (303 KPA to 440 KPA)
Oil Pressure at Low Idle—15 p.s.i. min. (103 KPA min.)
Fuel Requirements—ASTM D613 Grade No. 2D or No. 1D for cold weather operation. A minimum Cetane number of 40 is recommended.

Lubrication Specifications

Oil Type — API Classification CD or CC/CD
Oil Viscosity—-10°F to 30°F (-23°C to 1°C) use SAE 10W
20°F to 60°F (-7°C to 16°C) use SAE 20W-20
40°F (4°C) and above SAE 30
Oil Capacity—38 qts. (36 liters), includes 20 qts. (19 liters) for filters.
Oil Filter Type—Canister Element (Spin-on—Optional) on engine.
Frame mounted canister element.
Coolant Capacity—15 gal. (56.7 liters)
Fuel Requirements—ASTM D613 Grade No. 2D or No. 1D for cold weather operation. A minimum Cetane number of 40 is recommended.

Weighting The Tractor

There may be times when it is desirable to weight the tractor to decrease slippage and increase stability.

There are many factors that affect traction and balance that need to be considered before adding additional weight or ballast; such as the tractor fuel capacity, the type of implement being used, the draft or pulling angle of the implement, whether or not the tractor is equipped with three-point hitch, and if so will the equipment used be fully mounted or semi-mounted and will this equipment be used with or without gauge wheels. And of course you must take into consideration your soil conditions and avoid unwanted soil compaction.

Desirable tractor weight distribution is approximately 35 percent on the rear axle and approximately 65 percent on the front axle. If it becomes necessary to add weight for better traction this ratio must be maintained. **DO NOT** add ballast to the outside dual tires.

When the tractor is under load this distribution should even out to approximately 50 percent on each axle. This weighting will give more equal distribution of tractor effort to all four wheels under extreme conditions.

Loaded Rev.	10	10	10	10	10	10	10
Unloaded Rev.	10	9½	9	8½	8	7½	7
% of Slippage	0	5%	10%	15%	20%	25%	30%

Desirable slippage should be 10-15 percent in average field conditions. This slippage rate is important. The more weight or ballast added the more horsepower it will take just to propel the tractor through the field and the more ground compaction you may have. **NEVER** exceed the published maximum warranted weight since this not only overloads the power train but may also contribute to tire/rim slip.

Maximum Warranted—Weights.

Model No.	Recommended Max. Vehicle Weight	Warranted Vehicle Weight (Max. Ballasted)
PT 225	31,000 lbs. (14,061 Kgs.)	34,000 lbs. (15,422 Kgs.)
PT 270	32,000 lbs. (14,515 Kgs.)	34,000 lbs. (15,422 Kgs.)
PT 350	34,000 lbs. (15,422 Kgs.)	34,000 lbs. (15,422 Kgs.)

Shipping Weights

PT 225 approximately 28,295 lbs. (12,846 Kg)
(4) 18.4x34 8 ply R1 inside and
(4) 18.4x34 6 ply R1 outside
PT 250 & PT 270 approximately 28,444 lbs. (12,914 Kg)
(4) 18.4x34 8 ply R1 inside and
(4) 18.4x34 6 ply R1 outside
PT 350 approximately 29,668 lbs. (13,469 Kg)
(8) 20.8x34 6 ply R1 Duals

Shipping Weights are with PTO, 3 pt., 2-speed transfer case, standard tires and (less fuel).

NOTE: *Weights are subject to change because of various options, tire sizes, etc.*

Tire Inflation

Tires should be inflated according to size, ground conditions, ballast and other variable conditions.

Properly inflated tires are important to the operation of your tractor. Underinflated tires break and wear out rapidly and may even contribute to tire/rim slippage. Overinflated tires reduce traction and increase the risk of tire damage. Keep tires inflated according to the recommendations of the tire manufacturer.

Specifications

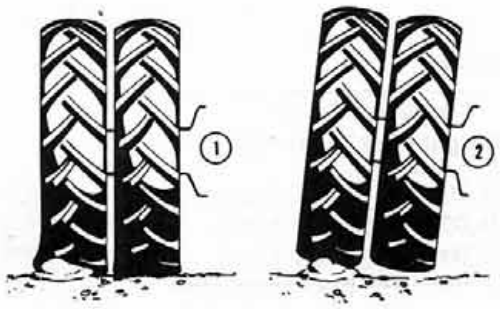
Check the tire pressures cold with an accurate tire gauge having 1 p.s.i. (0.1 bar) graduations. If tires contain liquid ballast, position the valve stem at the bottom and use a special air-water gauge.

Operate your new unit or newly-mounted tires for thirty (30) minutes under very light loads to allow them to "seat" in on the rim.

CAUTION: Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious bodily injury. DO NOT attempt to mount a tire unless you have the proper equipment and experience to perform the job safely. Have it done by your Steiger Dealer if qualified or a qualified tire repair service.

IMPORTANT: *When 30.5 x 32 R1 10 ply tires are used as singles under normal operating conditions, never allow the tire to be operated below 16 PSI (1.1 bar). In severe applications or where any ballast is added, tire pressure should be maintained at 20 PSI (1.4 bar).*

NOTE: *20 PSI (1.4 bar) is the maximum pressure and should not be exceeded.*



Dual Wheel Tire Inflation

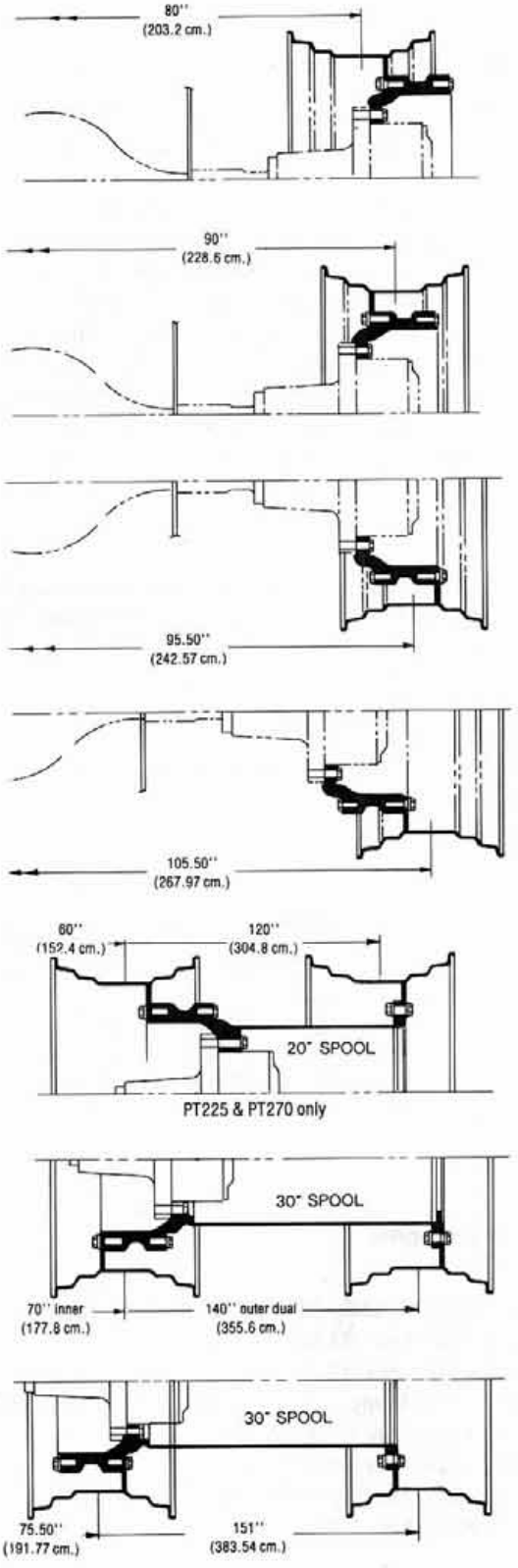
1. Correct Inflation 2. Incorrect Inflation

CAUTION! Use safety cage or chain, clip on chuck, extension hose, wear eye protection and stand away from the tire while inflating to prevent the possibility of personal injury due to blowoffs.

CAUTION: Never inflate tires beyond 35 pounds per square inch (241 KPA). Inflation beyond 35 pounds per square inch (241 KPA) pressure may break the bead (or even the rim) with explosive force.

Adjustable Wheels (Optional):

The following illustrations will show the positions of the optional manually adjustable wheel rim and spacer lengths needed to arrive at a desired wheel tread center.



NOTE: *Not all of these spacing combinations can be obtained on all model tractors because of the various frame dimensions.*

18.4's can be in any position
20.8's in 70" position and above

PT 225, PT 250, PT 270

Engine R.P.M. 2200
Axle Model 598

TIRE SIZE	18.4x34-R1		18.4x34-R2		18.4x34-LS2		18.4x38-R1		18.4x38-R2		20.8x34-R1		20.8x34-R2		20.8x38-R1		20.8x38-R2		23.1x30-R1		23.1x30-R2		23.1x34-R1		23.1x34-R2		23.1x34-LS2		24.5x32-R1		24.5x32-R2		24.5x32-LS2		30.5x32-R1		30.5x32-R2		30.5x32-LS2	
GEAR	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr
1	1.74	2.81	1.76	2.83	1.81	2.92	1.86	3.00	1.88	3.02	1.79	2.88	1.88	3.03	1.95	3.14	1.98	3.19	1.76	2.84	1.87	3.01	1.88	3.03	1.98	3.20	1.91	3.07	1.89	3.04	1.96	3.16	1.87	3.01	1.87	3.02	1.94	3.13	2.05	3.29
2	1.96	3.16	1.98	3.19	2.04	3.29	2.10	3.38	2.12	3.41	2.02	3.25	2.12	3.42	2.20	3.54	2.23	3.59	1.99	3.20	2.10	3.39	2.12	3.42	2.24	3.60	2.15	3.46	2.13	3.43	2.21	3.56	2.10	3.39	2.11	3.40	2.19	3.53	2.28	3.66
3	2.21	3.57	2.24	3.60	2.31	3.71	2.37	3.81	2.39	3.85	2.28	3.66	2.40	3.86	2.48	3.99	2.52	4.05	2.24	3.62	2.37	3.82	2.40	3.86	2.52	4.07	2.43	3.91	2.40	3.87	2.49	4.02	2.37	3.82	2.38	3.83	2.47	3.98	2.57	4.13
4	2.50	4.02	2.52	4.06	2.60	4.18	2.67	4.29	2.69	4.33	2.56	4.13	2.70	4.35	2.79	4.50	2.84	4.57	2.53	4.07	2.67	4.31	2.70	4.35	2.84	4.58	2.73	4.40	2.71	4.36	2.81	4.52	2.67	4.31	2.68	4.32	2.78	4.48	2.90	4.66
5	2.86	4.61	2.89	4.65	2.98	4.79	3.05	4.92	3.08	4.97	2.94	4.73	3.09	4.98	3.20	5.15	3.25	5.23	2.90	4.67	3.06	4.94	3.09	4.98	3.26	5.25	3.13	5.04	3.10	5.00	3.22	5.19	3.06	4.94	3.07	4.95	3.19	5.14	3.32	5.34
6	3.22	5.19	3.26	5.24	3.35	5.40	3.44	5.54	3.47	5.59	3.31	5.33	3.49	5.61	3.61	5.81	3.66	5.89	3.27	5.26	3.45	5.56	3.49	5.61	3.67	5.91	3.53	5.68	3.50	5.63	3.63	5.84	3.45	5.56	3.46	5.58	3.60	5.79	3.74	6.01
7	3.64	5.85	3.67	5.91	3.78	6.09	3.88	6.25	3.92	6.31	3.73	6.01	3.93	6.33	4.07	6.55	4.13	6.65	3.68	5.93	3.90	6.27	3.93	6.33	4.14	6.67	3.98	6.41	3.94	6.35	4.09	6.59	3.90	6.27	3.91	6.29	4.06	6.53	4.22	6.78
8	4.10	6.59	4.14	6.66	4.26	6.86	4.37	7.04	4.42	7.11	4.21	6.77	4.43	7.13	4.58	7.38	4.65	7.49	4.15	6.68	4.39	7.06	4.43	7.13	4.67	7.51	4.49	7.22	4.44	7.15	4.61	7.42	4.39	7.06	4.40	7.09	4.57	7.36	4.75	7.64
9	4.56	7.34	4.61	7.41	4.75	7.64	4.87	7.84	4.92	7.91	4.68	7.54	4.93	7.94	5.10	8.21	5.18	8.34	4.62	7.44	4.88	7.86	4.93	7.94	5.20	8.36	4.99	8.04	4.95	7.96	5.13	8.26	4.88	7.86	4.90	7.89	5.09	8.19	5.29	8.51
10	5.14	8.27	5.19	8.35	5.35	8.61	5.49	8.83	5.54	8.91	5.28	8.49	5.56	8.94	5.75	9.25	5.83	9.39	5.21	8.38	5.50	8.86	5.56	8.94	5.85	9.42	5.63	9.06	5.57	8.97	5.78	9.31	5.50	8.86	5.52	8.89	5.73	9.22	5.96	9.58
11	5.88	9.46	5.94	9.56	6.12	9.85	6.28	10.11	6.34	10.20	6.04	9.72	6.36	10.23	6.58	10.59	6.68	10.75	5.96	9.59	6.30	10.14	6.36	10.23	6.70	10.78	6.44	10.36	6.38	10.27	6.62	10.65	6.30	10.14	6.32	10.17	6.56	10.56	6.82	10.97
12	6.62	10.66	6.69	10.77	6.89	11.09	7.07	11.38	7.14	11.49	6.80	10.95	7.16	11.53	7.41	11.93	7.52	12.11	6.71	10.80	7.09	11.42	7.16	11.53	7.55	12.15	7.25	11.67	7.18	11.56	7.45	12.00	7.09	11.42	7.12	11.46	7.39	11.89	7.68	12.35
13	7.62	12.26	7.69	12.39	7.93	12.76	8.13	13.09	8.21	13.22	7.82	12.59	8.24	13.26	8.52	13.72	8.65	13.93	7.72	12.43	8.16	13.14	8.24	13.26	8.68	13.97	8.34	13.43	8.26	13.30	8.58	13.80	8.16	13.14	8.19	13.18	8.50	13.68	8.83	14.20
14	8.58	13.81	8.67	13.95	8.93	14.37	9.16	14.75	9.25	14.89	8.81	14.19	9.28	14.94	9.60	15.45	9.75	15.69	8.70	14.00	9.19	14.80	9.28	14.94	9.78	15.74	9.40	15.13	9.31	14.98	9.66	15.55	9.19	14.80	9.22	14.84	9.57	15.41	9.95	16.00
15	9.73	15.65	9.82	15.81	10.12	16.29	10.39	16.72	10.49	16.88	9.99	16.08	10.52	16.93	10.88	17.52	11.05	17.78	9.86	15.87	10.42	16.77	10.52	16.93	11.08	17.84	10.65	17.15	10.55	16.99	10.95	17.62	10.42	16.77	10.45	16.83	10.85	17.46	11.28	18.14
16	10.96	17.63	11.07	17.81	11.40	18.35	11.70	18.83	11.81	19.01	11.25	18.11	11.85	19.07	12.26	19.73	12.45	20.03	11.10	17.87	11.74	18.89	11.85	19.07	12.48	20.09	12.00	19.31	11.89	19.13	12.33	19.85	11.74	18.89	11.78	18.95	12.22	19.67	12.71	20.45
17	12.18	19.60	12.30	19.80	12.67	20.40	13.01	20.93	13.13	21.13	12.51	20.13	13.17	21.20	13.63	21.93	13.83	22.27	12.34	19.87	13.05	21.00	13.17	21.20	13.88	22.33	13.34	21.47	13.21	21.27	13.71	22.07	13.05	21.00	13.09	21.07	13.59	21.87	14.12	22.71
18	13.72	22.08	13.86	22.30	14.28	22.98	14.65	23.58	14.79	23.80	14.09	22.68	14.84	23.88	15.35	24.71	15.58	25.08	13.90	22.38	14.70	23.65	14.84	23.88	15.63	25.16	15.02	24.18	14.88	23.95	15.44	24.86	14.70	23.65	14.74	23.73	15.30	24.63	15.91	25.59
19	15.47	24.89	15.62	25.15	16.10	25.91	16.52	26.59	16.68	26.84	15.89	25.57	16.73	26.93	17.31	27.86	17.57	28.28	15.68	25.23	16.57	26.67	16.73	26.93	17.62	28.36	16.94	27.26	16.78	27.01	17.41	28.03	16.57	26.67	16.62	26.76	17.26	27.77	17.94	28.86
20	17.42	28.04	17.60	28.33	18.13	29.18	18.61	29.95	18.78	30.23	17.90	28.80	18.84	30.33	19.50	31.38	19.79	31.85	17.66	28.42	18.67	30.04	18.84	30.33	19.85	31.95	19.08	30.71	18.90	30.42	19.61	31.57	18.67	30.04	18.73	30.14	19.44	31.28	20.21	32.51

PT 350

Engine R.P.M. 2600
Axle Model 598

TIRE SIZE	18.4x34-R1		18.4x34-R2		18.4x34-LS2		18.4x38-R1		18.4x38-R2		20.8x34-R1		20.8x34-R2		20.8x38-R1		20.8x38-R2		23.1x30-R1		23.1x30-R2		23.1x34-R1		23.1x34-R2		23.1x34-LS2		24.5x32-R1		24.5x32-R2		24.5x32-LS2		30.5x32-R1		30.5x32-R2		30.5x32-LS2	
GEAR	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr
1	2.06	3.32	2.08	3.35	2.14	3.45	2.20	3.54	2.22	3.58	2.11	3.41	2.23	3.59	2.30	3.71	2.34	3.77	2.09	3.36	2.21	3.55	2.23	3.59	2.35	3.78	2.26	3.63	2.23	3.60	2.32	3.73	2.21	3.55	2.21	3.56	2.30	3.70	2.39	3.84
2	2.32	3.74	2.34	3.77	2.41	3.89	2.48	3.99	2.50	4.03	2.38	3.84	2.51	4.04	2.60	4.18	2.64	4.24	2.35	3.79	2.49	4.00	2.51	4.04	2.64	4.26	2.54	4.09	2.52	4.05	2.61	4.21	2.49	4.00	2.49	4.02	2.59	4.17	2.69	4.32
3	2.62	4.22	2.65	4.26	2.73	4.39	2.80	4.50	2.82	4.55	2.69	4.33	2.83	4.56	2.93	4.72	2.98	4.79	2.65	4.27	2.81	4.52	2.83	4.56	2.98	4.81	2.87	4.62	2.84	4.58	2.95	4.75	2.81	4.52	2.81	4.53	2.92	4.70	3.04	4.89
4	2.95	4.75	2.98	4.80	3.07	4.94	3.15	5.07	3.18	5.12	3.03	4.88	3.19	5.14	3.30	5.32	3.35	5.40	2.99	4.81	3.16	5.09	3.19	5.14	3.36	5.41	3.23	5.20	3.20	5.15	3.32	5.35	3.16	5.09	3.17	5.11	3.29	5.30	3.42	5.50
5	3.38	5.44	3.42	5.50	3.52	5.67	3.61	5.81	3.65	5.87	3.47	5.59	3.66	5.89	3.78	6.09	3.84	6.19	3.43	5.52	3.62	5.83	3.66	5.89	3.85	6.20	3.70	5.96	3.67	5.91	3.81	6.13	3.62	5.83	3.63	5.85	3.77	6.07	3.92	6.30
6	3.81	6.13	3.85	6.20	3.96	6.38	4.07	6.55	4.11	6.61	3.91	6.30	4.12	6.63	4.26	6.86	4.32	6.97	3.86	6.22	4.03	6.57	4.12	6.63	4.34	6.99	4.17	6.72	4.13	6.65	4.29	6.91	4.08	6.57	4.09	6.59	4.25	6.84	4.42	7.11
7	4.30	6.92	4.34	6.99	4.47	7.20	4.59	7.39	4.63	7.46	4.41	7.11	4.65	7.48	4.81	7.74	4.88	7.86	4.36	7.01	4.60	7.41	4.65	7.48	4.90	7.88	4.71	7.58	4.66	7.51	4.84	7.79	4.60	7.41	4.62	7.44	4.79	7.72	4.98	8.01
8	4.84	7.79	4.89	7.87	5.04	8.11	5.17	8.32	5.22	8.40	4.97	8.01	5.24	8.43	5.42	8.72	5.50	8.85	4.91	7.90	5.19	8.35	5.24	8.43	5.52	8.88	5.30	8.54	5.25	8.46	5.45	8.77	5.19	8.35	5.20	8.38	5.40	8.70	5.62	9.04
9	5.39	8.67	5.44	8.76	5.61	9.03	5.76	9.27	5.81	9.35	5.54	8.91	5.83	9.38	6.03	9.71	6.12	9.86	5.46	8.79	5.77	9.29	5.83	9.38	6.14	9.89	5.90	9.50	5.85	9.41	6.07	9.77	5.77	9.29	5.79	9.32	6.01	9.68	6.25	10.05
10	6.07	9.77	6.13	9.87	6.32	10.17	6.48	10.44	6.55	10.54	6.24	10.04	6.57	10.57	6.79	10.94	6.90	11.10	6.15	9.90	6.50	10.47	6.57	10.57	6.92	11.14	6.65	10.70	6.59	10.60	6.83	11.00	6.50	10.47	6.52	10.50	6.77	10.90	7.04	11.32
11	6.95	11.18	7.02	11.30	7.23	11.64	7.42	11.94	7.49	12.06	7.14	11.49	7.51	12.10	7.77	12.51	7.89	12.71	7.04	11.34	7.44	11.98	7.51	12.10	7.92	12.74	7.61	12.25	7.54	12.13	7.82	12.59	7.44	11.98	7.47	12.02	7.75	12.48	8.06	12.96
12	7.83	12.60	7.91	12.73	8.15	13.11	8.36	13.45	8.44	13.58	8.04	12.94	8.46	13.63	8.76	14.10	8.89	14.31	7.93	12.77	8.39	13.50	8.46	13.63	8.92	14.35	8.57	13.80	8.49	13.67	8.81	14.18	8.39	13.50	8.41	13.54	8.73	14.05	9.08	14.60
13	9.00	14.49	9.09	14.64	9.37	15.08	9.61	15.48	9.71	15.62	9.25	14.88	9.74	15.67	10.07	16.22	10.23	16.46	9.12	14.69	9.65	15.53	9.74	15.67	10.26	16.51	9.86	15.87	9.77	15.72	10.14	16.31	9.65	15.53	9.68	15.57	10.04	16.17	10.44	16.79
14	10.14	16.32	10.24	16.49	10.55	16.99	10.83	17.43	10.93	17.60	10.42	16.77	10.97	17.65	11.35	18.27	11.52	18.54	10.28	16.54	10.86	17.49	10.97	17.65	11.56	18.60	11.11	17.88	11.00	17.71	11.42	18.38	10.86	17.49	10.90	17.54	11.31	18.21	11.76	18.92
15	11.49	18.50	11.61	18.69	11.96	19.26	12.28	19.76	12.39	19.95	11.81	19.00	12.43	20.01	12.86	20.70	13.06	21.02	11.65	18.75	12.32	19.82	12.43	20.01	13.10	21.08	12.59	20.26	12.47	20.07	12.94	20.83	12.32	19.82	12.35	19.89	12.82	20.64	13.33	21.44
16	12.95	20.84	13.08	21.05	13.48	21.69	13.83	22.26	13.96	22.47	13.30	21.41	14.01	22.54	14.49	23.32	14.71	23.68	13.12	21.12	13.87	22.33	14.01	22.54	14.75	23.75	14.18	22.83	14.05	22.61	14.58	23.46	13.87	22.33	13.92	22.40	14.45	23.25	15.02	24.16
17	14.39	23.16	14.54	23.40	14.98	24.11	15.37	24.74	15.52	24.98	14.78	23.79	15.57	25.06	16.11	25.92	16.35	26.32	14.59	23.48	15.42	24.82	15.57	25.06	16.40	26.40	15.76	24.37	15.62	25.13	16.20	26.08	15.42	24.82	15.47	24.90	16.06	25.84	16.69	26.85
18	16.21	26.09	16.38	26.36	16.87	27.16	17.31	27.87	17.48	28.13	16.65	26.80	17.54	28.22	18.14	29.20	18.42	29.64	16.43	26.45	17.37	27.96	17.54	28.22	18.47	29.73	17.76	28.58	17.59	28.31	18.25	29.38	17.37	27.96	17.42	28.04	18.09	29.11	18.80	30.24
19	18.28	29.42	18.47	29.72	19.03	30.62	19.52	31.42	19.71	31.72	18.78	30.22	19.77	31.82	20.46	32.92	20.77	33.42	18.53	29.82	19.59	31.52	19.77	31.82	20.83	33.52	20.02	32.22	19.83	31.92	20.58	33.12	19.59	31.52	19.65	31.62	20.39	32.82	21.20	34.11
20	20.59	33.14	20.80	33.48	21.43	34.49	21.99	35.39	22.20	35.73	21.15	34.04	22.27	35.84	23.04	37.08	23.39	37.65	20.87	33.59	22.06	35.51	22.27	35.84	23.46	37.76	22.55	36.29	22.34	35.96	23.18	37.31	22.06	35.51	22.13	35.62	22.97	36.97	23.88	38.42

NOTE: *Reverse speeds R1, R2, R3, R4 will be the same as F1, F2, F3 and F4.*

Specifications

PT 225, PT 250, PT 270

Engine RPM 2200

Axle Model S-34

TIRE SIZE	18.4 x 34 R1		18.4 x 38 R1		20.8 x 34 R1		20.8 x 38 R1		20.8 x 38 R2		23.1 x 30 R1		23.1 x 30 R2		23.1 x 34 R1		23.1 x 34 R2		24.5 x 32 R1		24.5 x 32 R2		30.5 x 32 R1		30.5 x 32 R2	
GEAR	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr
1	1.74	2.80	1.84	2.96	1.79	2.88	1.91	3.08	1.95	3.14	1.75	2.82	1.81	2.91	1.84	2.96	1.90	3.06	1.85	2.98	1.90	3.06	1.88	3.03	1.94	3.12
2	1.96	3.16	2.07	3.33	2.01	3.24	2.15	3.46	2.19	3.53	1.97	3.17	2.04	3.28	2.08	3.35	2.14	3.45	2.08	3.35	2.14	3.45	2.12	3.41	2.19	3.53
3	2.22	3.57	2.34	3.77	2.27	3.65	2.43	3.91	2.48	3.99	2.22	3.57	2.31	3.72	2.34	3.77	2.42	3.90	2.35	3.78	2.41	3.88	2.39	3.85	2.47	3.98
4	2.50	4.03	2.63	4.23	2.56	4.12	2.73	4.40	2.79	4.49	2.50	4.03	2.60	4.19	2.64	4.25	2.73	4.40	2.65	4.27	2.72	4.38	2.69	4.33	2.78	4.48
5	2.86	4.60	3.01	4.85	2.93	4.72	3.13	5.04	3.20	5.15	2.87	4.62	2.98	4.80	3.02	4.86	3.12	5.02	3.03	4.88	3.11	5.01	3.08	4.96	3.19	5.14
6	3.22	5.18	3.40	5.47	3.30	5.31	3.53	5.68	3.60	5.80	3.23	5.20	3.35	5.39	3.41	5.49	3.52	5.67	3.42	5.51	3.51	5.65	3.47	5.59	3.59	5.78
7	3.64	5.86	3.83	6.17	3.72	5.99	3.98	6.41	4.06	6.54	3.65	5.88	3.78	6.09	3.84	6.18	3.97	6.39	3.85	6.20	3.96	6.38	3.92	6.31	4.05	6.52
8	4.09	6.58	4.31	6.94	4.20	6.76	4.48	7.21	4.57	7.36	4.11	6.62	4.26	6.86	4.33	6.97	4.47	7.20	4.34	6.99	4.45	7.16	4.41	7.10	4.56	7.34
9	4.61	7.42	4.86	7.82	4.73	7.62	5.05	8.13	5.15	8.29	4.63	7.45	4.80	7.73	4.87	7.84	5.03	8.10	4.89	7.87	5.02	8.08	4.97	8.00	5.13	8.26
10	5.19	8.36	5.47	8.81	5.32	8.57	5.69	9.16	5.80	9.34	5.21	8.39	5.41	8.71	5.49	8.84	5.67	9.13	5.51	8.87	5.65	9.10	5.60	9.02	5.78	9.31
11	5.87	9.45	6.19	9.97	6.02	9.69	6.43	10.35	6.56	10.56	5.89	9.48	6.11	9.84	6.21	10.00	6.41	10.32	6.23	10.03	6.39	10.29	6.33	10.19	6.54	10.53
12	6.62	10.66	6.97	11.22	6.78	10.92	7.25	11.67	7.39	11.90	6.64	10.69	6.88	11.08	6.99	11.25	7.22	11.62	7.02	11.30	7.20	11.59	7.13	11.48	7.37	11.87
13	7.61	12.25	8.02	12.91	7.80	12.56	8.33	13.41	8.50	13.69	7.63	12.28	7.92	12.75	8.04	12.94	8.31	13.38	8.07	12.99	8.28	13.33	8.20	13.20	8.47	13.64
14	8.57	13.80	9.03	14.54	8.78	14.14	9.39	15.12	9.58	15.42	8.60	13.85	8.92	14.36	9.06	14.59	9.36	15.07	9.09	14.63	9.33	15.02	9.24	14.88	9.54	15.36
15	9.72	15.65	10.24	16.49	9.96	16.04	10.64	17.13	10.85	17.47	9.75	15.70	10.11	16.28	10.27	16.53	10.61	17.08	10.30	16.58	10.57	17.02	10.47	16.86	10.82	17.42
16	10.94	17.61	11.53	18.56	11.21	18.05	11.91	19.30	12.23	19.69	10.98	17.68	11.39	18.34	11.57	18.63	11.95	19.24	11.61	18.69	11.91	19.18	11.79	18.98	12.19	19.63
17	12.16	19.58	12.82	20.64	12.46	20.06	13.32	21.45	13.59	21.88	12.20	19.64	12.66	20.38	12.86	20.70	13.28	21.38	12.90	20.77	13.24	21.32	13.11	21.11	13.54	21.80
18	13.70	22.06	14.44	23.25	14.04	22.60	15.01	24.17	15.31	24.65	13.74	22.12	14.26	22.96	14.48	23.31	14.96	24.09	14.53	23.39	14.91	24.01	14.76	23.76	15.26	24.57
19	15.45	24.87	16.28	26.21	15.83	25.49	16.92	27.24	17.26	27.79	15.50	24.96	16.08	25.89	16.33	26.29	16.86	27.14	16.38	26.37	16.81	27.06	16.65	26.81	17.20	27.69
20	17.40	28.01	18.34	29.53	17.83	28.71	19.06	30.69	19.44	31.30	17.45	28.09	18.11	29.16	18.39	29.61	19.00	30.59	18.45	29.70	18.93	30.48	18.75	30.19	19.38	31.20

PT 350

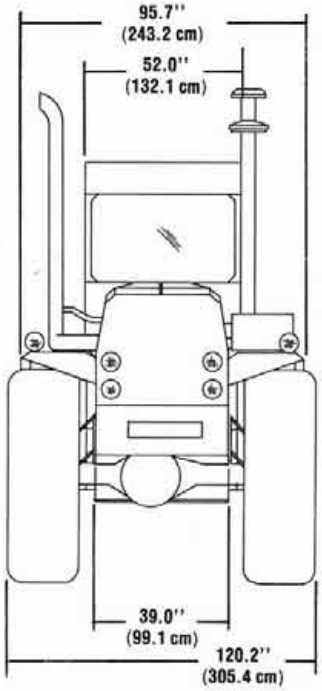
Engine RPM 2600

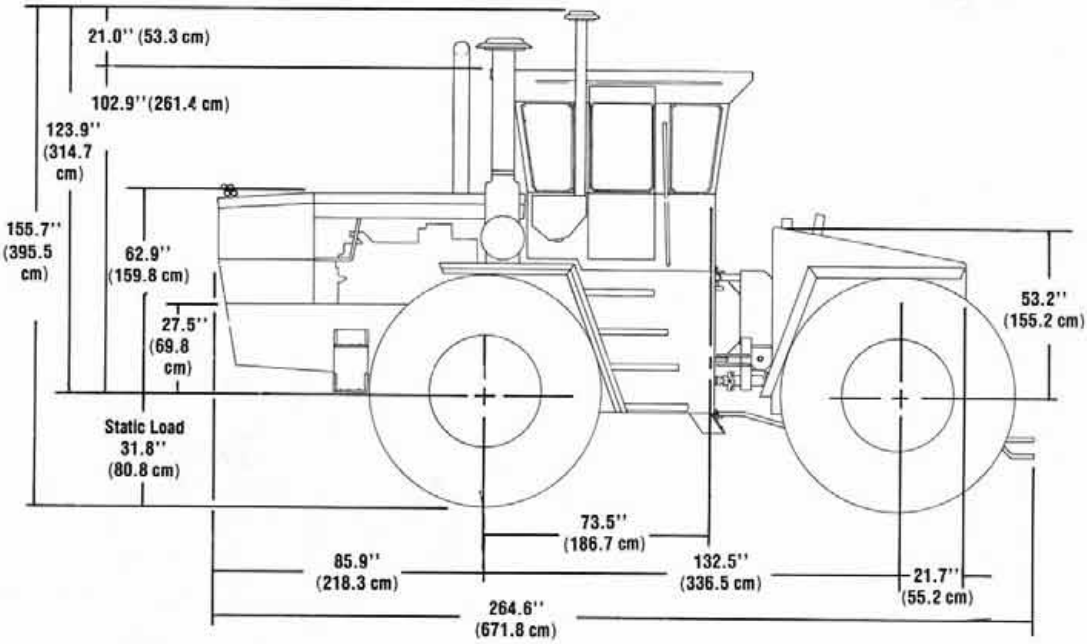
Axle Model S-34

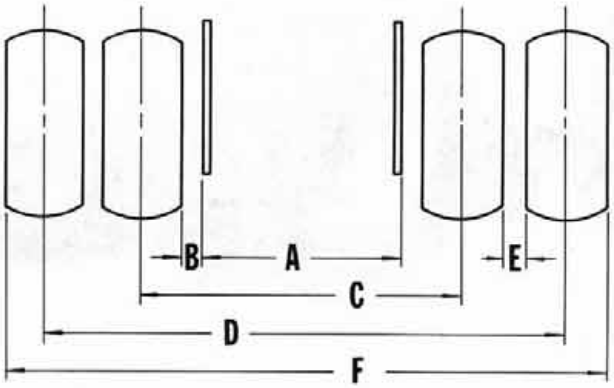
TIRE SIZE	18.4 x 34 R1		18.4 x 38 R1		20.8 x 34 R1		20.8 x 38 R1		20.8 x 38 R2		23.1 x 30 R1		23.1 x 30 R2		23.1 x 34 R1		23.1 x 34 R2		24.5 x 32 R1		24.5 x 32 R2		30.5 x 32 R1		30.5 x 32 R2	
GEAR	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr	mph	Km/hr
1	2.06	3.32	2.17	3.49	2.11	3.40	2.26	3.64	2.30	3.70	2.07	3.33	2.14	3.45	2.18	3.51	2.25	3.62	2.19	3.53	2.24	3.61	2.22	3.57	2.29	3.69
2	2.32	3.74	2.45	3.94	2.38	3.83	2.54	4.09	2.59	4.17	2.33	3.75	2.42	3.90	2.45	3.94	2.53	4.07	2.46	3.96	2.53	4.07	2.50	4.03	2.58	4.15
3	2.62	4.22	2.76	4.44	2.68	4.31	2.87	4.62	2.93	4.72	2.63	4.23	2.73	4.40	2.77	4.46	2.86	4.60	2.78	4.48	2.85	4.59	2.82	4.54	2.92	4.70
4	2.95	4.75	3.11	5.01	3.02	4.86	3.23	5.20	3.30	5.31	2.96	4.77	3.07	4.94	3.12	5.02	3.22	5.18	3.13	5.04	3.21	5.17	3.18	5.12	3.29	5.30
5	3.38	5.44	3.56	5.76	3.46	5.57	3.70	5.96	3.78	6.09	3.39	5.46	3.52	5.67	3.57	5.57	3.69	5.94	3.59	5.78	3.68	5.92	3.64	5.86	3.76	6.05
6	3.81	6.13	4.01	6.46	3.90	6.28	4.17	6.71	4.25	6.84	3.82	6.15	3.96	6.38	4.03	6.49	4.16	6.70	4.04	6.50	4.14	6.67	4.10	6.60	4.24	6.83
7	4.30	6.92	4.53	7.29	4.40	7.08	4.70	7.57	4.80	7.73	4.31	6.94	4.47	7.20	4.54	7.31	4.69	7.55	4.56	7.34	4.67	7.52	4.63	7.45	4.78	7.70
8	4.84	7.79	5.10	8.21	4.96	7.99	5.30	8.53	5.40	8.69	4.85	7.81	5.04	8.11	5.11	8.23	5.28	8.50	5.13	8.26	5.26	8.47	5.21	8.39	5.39	8.68
9	5.45	8.77	5.74	9.24	5.58	8.98	5.97	9.61	6.09	9.80	5.47	8.81	5.67	9.13	5.76	9.27	5.95	9.58	5.78	9.31	5.93	9.55	5.87	9.45	6.07	9.77
10	6.14	9.89	6.47	10.42	6.29	10.13	6.72	10.82	6.86	11.04	6.16	9.92	6.39	10.29	6.49	10.45	6.70	10.79	6.51	10.48	6.68	10.75	6.61	10.64	6.84	11.01
11	6.94	11.17	7.31	11.77	7.11	11.45	7.60	12.24	7.75	12.48	6.96	11.21	7.22	11.62	7.34	11.82	7.58	12.20	7.36	11.85	7.55	12.16	7.48	12.04	7.73	12.45
12	7.82	12.59	8.24	13.27	8.01	12.90	8.56	13.78	8.74	14.07	7.84	12.62	8.14	13.11	8.27	13.31	8.54	13.75	8.29	13.35	8.51	13.70	8.43	13.57	8.71	14.02
13	8.99	14.47	9.48	15.26	9.22	14.84	9.85	15.86	10.05	16.35	9.02	14.52	9.36	15.07	9.51	15.31	9.82	15.81	9.54	15.36	9.79	15.76	9.69	15.60	10.01	16.12
14	10.13	16.31	10.67	17.18	10.38	16.71	11.09	17.85	11.32	18.23	10.16	16.36	10.54	16.97	10.71	17.24	11.06	17.81	10.74	17.29	11.02	17.74	10.92	17.58	11.22	18.16
15	11.48	18.48	12.10	19.48	11.77	18.95	12.58	20.25	12.83	20.66	11.52	18.55	11.95	19.24	12.14	19.55	12.53	20.17	12.18	19.61	12.49	20.11	12.37	19.92	12.79	20.59
16	12.54	20.19	13.63	21.94	13.25	21.33	14.17	22.81	14.45	23.26	12.97	20.88	13.46	21.67	13.67	22.01	14.12	22.73	13.72	22.09	14.07	22.65	13.94	22.44	14.40	23.18
17	14.38	23.15	15.15	24.39	14.73	23.72	15.74	25.34	16.06	25.86	14.42	23.22	14.96	24.09	15.20	24.47	15.69	25.26	15.24	24.54	15.64	25.18	15.49	24.94	16.01	25.78
18	16.19	26.07	17.06	27.47	16.59	26.71	17.73	28.55	18.09	29.12	16.24	26.15	16.85	27.13	17.12	27.56	17.68	28.46	17.17	27.64	17.62	28.37	17.45	28.09	18.03	29.03
19	18.26	29.40	19.24	30.98	18.71	30.12	20.00	32.20	20.40	32.84	18.31	29.48	19.00	30.59	19.30	31.07	19.93	32.09	19.36	31.17	19.87	31.99	19.67	31.67	20.33	32.73
20	20.57	33.12	21.67	34.89	21.07	33.92	22.52	36.26	22.97	36.98	20.63	33.21	21.40	34.45	21.74	35.00	22.45	36.14	21.81	35.11	22.38	36.03	22.16	35.68	22.90	36.87

NOTE: *Reverse speeds are the same as the one (1) and two (2) forward speeds in all 20-speed models.*

Specifications







Tire and Frame Dimension Chart (Standard Wheels)

	A		B		C		D		E		F	
Tire Size	in.	cm.	in.	cm.	in.	cm.	in.	cm.	in.	cm.	in.	cm.
18.4x34,38	39.00	99.0	9.55	24.3	76.50	194.3	125.86	319.7	6.28	15.9	144.26	366.4
20.8x34,38	39.00	99.0	8.35	21.2	76.50	194.3	129.86	329.8	5.88	14.9	150.66	382.7
23.1x30,34	39.00	99.0	8.45	21.4	79.00	200.7	136.36	346.3	5.58	14.2	159.46	405.0
24.5x32	39.00	99.0	8.26	21.0	80.00	203.2	139.36	354.0	5.18	13.1	163.86	416.2
30.5x32	39.00	99.0	9.50	24.1	88.50	224.8	x	x	x	x	x	x

NOTE: *Dual dimensions with 13.0 in. (33.0 cm.) spacer band.*


COUGAR

Know Your Controls and Instruments to Assure Safe Operation.

Operating Information

Break-in Period

The engine is assembled and tested at the factory to insure that it is ready to work, however, the engine must be properly broken in to obtain the peak performance and long life that is built into it. Proper break-in will increase the power and prolong engine life.

To properly break in an engine merely means the engine should be operated at reduced loads for a period of time (approximately 50 hours), long enough for the piston rings to seal in with the cylinders and form a lapped fit which would make a perfect seal between pistons and cylinders before the engine is used on rated load operations.

If an engine is operated at full load before it is broken in, the high pressures and temperatures created from the burning gases tend to escape between the piston rings and cylinder into the engine crankcase. This is called blow by.

During break-in it is important to operate at this reduced load level for a period of time to give all of the various gears, shafts and bearings that must mate and work together that make up the power train of the tractor a chance to properly "wear-in" or "lap-in" which cannot be done during the machining process.

First five hours of operation under the load should be no higher than second gear. The following 15 hours under load should be no higher than third gear. Engine will gain substantial power through the first 30 hours of service and continue some gain up to 200 hours.

IMPORTANT: *Do not lug engine during break-in period. After first 30 hours, drain break-in oil and replace with fresh oil, also replace filter.*

Starting Procedure

Before starting the engine, place all controls, except the transmission and transfer case Hi-Lo range levers, into the neutral position.

1. Move the transmission gear shift selector into the neutral position to activate the neutral start switch. Place the throttle control lever one-fourth open. Depress the clutch pedal as a precaution.

IMPORTANT: *Do not use starting motor longer than 30 seconds without interruption. Allow starter motor to cool 2 minutes before reattempting to start.*

2. Turn the key clockwise until the engine cranks. There will be an audible tone alarm; if this tone alarm should stop before the engine starts, the key switch must be returned to the "OFF" position to reset the automatic engine shutdown system before continuing the starting procedure.

3. When the engine starts, check all gauges.

Cold Weather Starting

If the tractor is to be operated in cold weather, an engine water heater may be installed. This will decrease wear on the engine and electrical systems. See Start Switch.

IMPORTANT: *Engine must reach operating temperature and the oil pressure must stabilize in the normal operating range before it is run faster than an idle. Cold oil may not flow in quantities adequate to prevent pump cavitation in the engine.*

Operating Information

Shifting Procedure

To shift the tractor and obtain the best drawbar pull and optimum clutch life, be sure the RPM of the engine is less than 1700. Use the engine tachometer.

Disengage the clutch. Select the proper gear and 2-speed position in the transmission and transfer case. Release the clutch smoothly but quickly engaging the load. Increase throttle to full RPM and lower implement or load. Do not engage clutch against a dead load such as an implement in full down position. Clutch life will be shortened or possibly damaged. If an implement is stopped in the ground, before starting forward, raise the implement and back up a few feet before moving forward whenever possible.

Refer to the Speed Charts in the Specification Section of this manual for approximate speeds for each gear selection.

Stopping Procedure

Before stopping a hot engine that has been working under load, let it idle for a few minutes so the engine parts will normalize evenly.

Cab Instruments

Before operating the tractor for the first time, become familiar with its controls and their functions. The following pages will help you become familiar with the gauges and controls in the operator station.

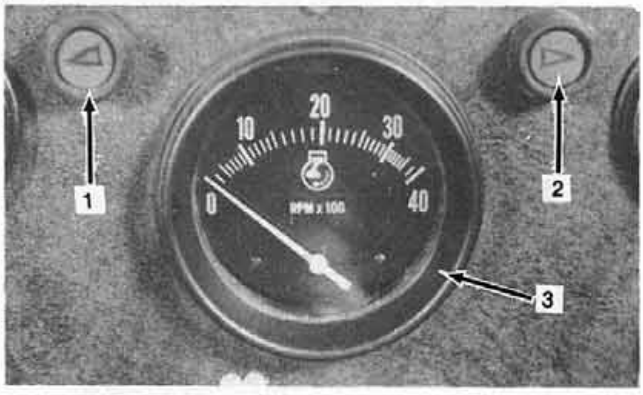


Figure 1: Top Center of Dash 06-0001

1. Left Turn Signal Light

2. Right Turn Signal Light

Signal lights will flash on and off when signal switch is activated. Warning flashers can be activated by depressing the warning flasher button on the steering column and/or the road light switch on the dash.

3. Tachometer

The tachometer indicates engine speeds in revolutions per minute (RPM). The dial of the tachometer has graduations of 100 RPM.

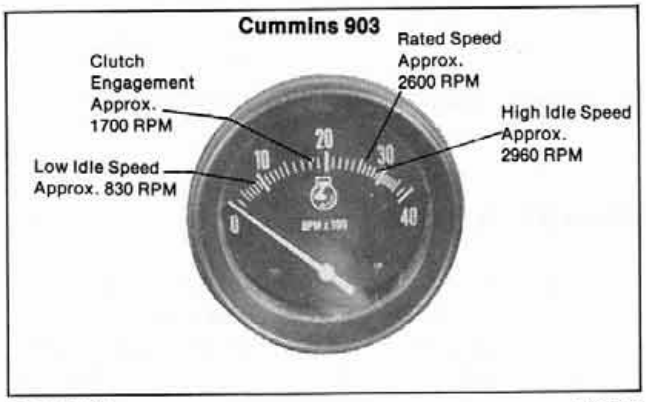


Figure 2: 06-0002

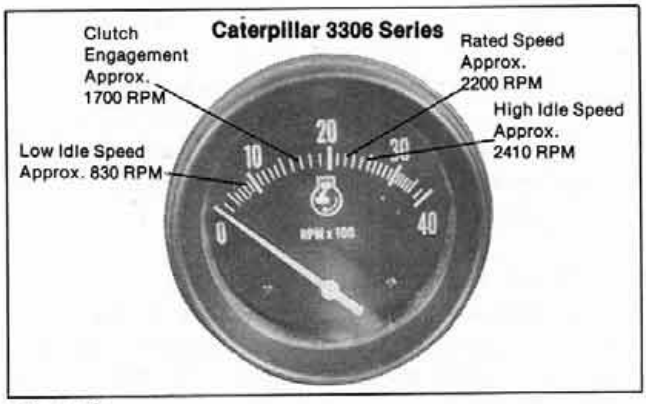


Figure 3: 06-0003

Intermittent loads may pull the engine down to 1700 RPM; however, if RPM remains below rated RPM, it will be necessary to shift down.
Minimum low idle is approximately 830 RPM.

Cab Instruments

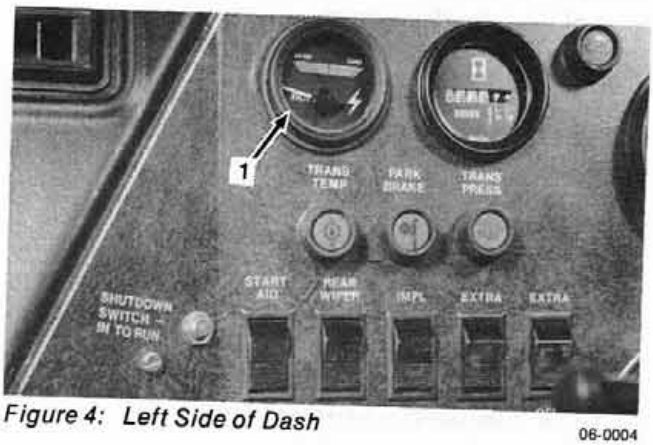


Figure 4: Left Side of Dash

06-0004

1. Voltmeter

The voltmeter is designed to indicate 4 conditions within the electrical system.

Figure 5:

06-0005

Switch is ON engine not running.

a. When the switch is turned on, the voltmeter should register in the green band if all cells of the battery are good. This means that the battery is producing 12 volts. The battery may be low and require charging but when the needle registers green, all cells are good (Fig. 5).

Switch is ON engine not running.

b. If the needle registers red on the left hand side of the meter, this means that the battery is not producing 12 volts and quite likely has one or more cells that are not producing current. A fault in the system is indicated by this reading or excessive current draw.

Engine Running

c. When the engine is running, the needle should register in the second green area on the right side of the meter. This means that the alternator is producing the correct amount of voltage to charge the battery and supply current to accessories. If the needle should drop back into the left hand green band when the engine is running, this indicates that the alternator is not producing enough voltage to supply the applied load or is not charging at all (Fig. 6).

Figure 6:

06-0005

Engine Running

d. If the needle registers in the right hand, red band of the meter, this indicates the alternator is over charging, and not regulating properly. If either of the following conditions exists, contact your dealer for service.

1. Engine running needle registers in the left hand green band.
2. Engine running needle registers in either red band.

If either of the following conditions exists, follow the recommended procedure.

1. Engine not running, switch ON needle in left hand green band but not enough current to start engine. CHARGE BATTERY.
2. Engine not running, switch on, needle in left hand red band. EXAMINE THE BATTERY CHARGE INDICATOR. IF THE GREEN BALL IS NOT VISIBLE, CHARGE THE BATTERY.
3. Engine running needle reads in left hand green band. Shut off accessories and some lights to determine if needle will move to right hand green band. IF NEEDLE DOES NOT MOVE TO RIGHT HAND GREEN BAND, CONTACT YOUR DEALER FOR SERVICE.

IF NEEDLE DOES MOVE TO RIGHT HAND GREEN BAND, ALLOW BATTERY TO CHARGE FOR A FEW MINUTES, THEN REAPPLY ELECTRICAL LOAD. IF NEEDLES MOVES BACK TO LEFT HAND GREEN BAND, CONTACT YOUR DEALER FOR SERVICE.

Operating Information

Cab Instruments (Cont.)

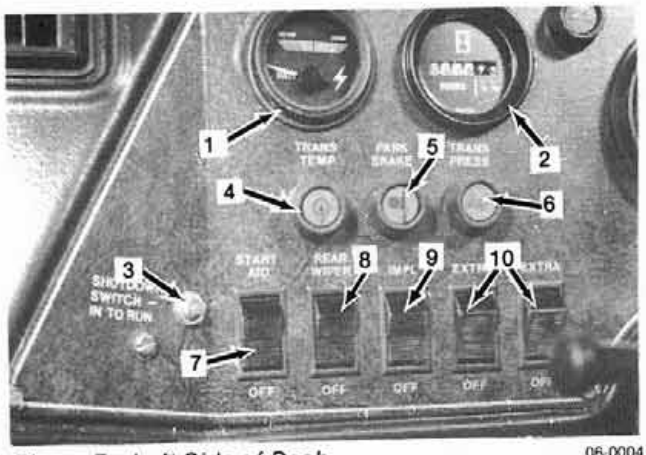


Figure 7: Left Side of Dash 06-0004

2. The Hourmeter

The hourmeter indicates the actual hours that the engine has run. The hourmeter is the most reliable method of determining service intervals.

3. Automatic Engine Shutdown Switch

The Steiger tractor is equipped with an automatic fuel shut-off system that will shut the fuel off to the engine if there is a malfunction—such as low engine oil pressure, excessive engine coolant temperatures or loss of charge-pressure if the tractor is equipped with the PTO hydrostatic system. This shutdown system has a built-in tone alarm that will sound for approximately 20 seconds to warn you that a shutdown will take place. You will then have approximately 20 seconds to visually check your instruments and prepare for this engine shutdown.

Remember, if the tone alarm should stop before the tractor engine starts, the key switch will need to be returned to the "off" position to "reset" the system before engine start-up can occur.

NOTE: *Earlier production tractors did not have this feature. These models may be identified by the presence of the red "reset" button on the left side of the dash panel (see Figure 7, item 13). On this system there is no tone alarm and engine shutdown would occur immediately if a malfunction should occur. The red button would need to be pushed in to "reset" the system before the engine can be started.*

The shut-off system will shut the tractor off if one or more of the following occurs:
(1.) Engine oil pressure drops below 10 ± 3 p.s.i. (68.9 ± 20.6 KPA)

(2.) Water temperature rises to the 210°-220°F (98°-103°C) range.

(3.) And PTO charge pressure falls below 100 ± 10 p.s.i. (689 ± 68.9 KPA) (see Page 31).

If the engine shut-down system causes the engine to shut down, do not restart until the cause has been determined and corrected.

4. Trans. Temperature Warning Light

The transmission temperature warning light will illuminate when the transmission oil temperature reaches 235°F (111°C). If this occurs, investigate the cause of overheating and correct it before returning the tractor to normal service. A warning buzzer will also be audible.

5. Park Brake Warning Light

The park brake warning light will illuminate whenever the park brake lever is pulled. A warning buzzer will also be audible.

6. Trans. Pressure Warning Light

The transmission oil pressure light indicates normal oil pressure to the transmission and transfer case. The light will illuminate when the pressure drops below 5 p.s.i. (34.4 KPA), or when the clutch pedal is depressed, or when the transmission Hi-Lo range selector is in the neutral position. Under no circumstances should the tractor be operated if the light stays on during normal operating conditions. A warning buzzer will also be audible.

7. Start Aid Switch (used for cold weather start-ups)

PT 225 and PT 270 with the 3306 Cat engine using glow plugs — with key switch in the on position, depress the start aid switch for 2 minutes, then proceed to crank engine. If engine fails to start, repeat above procedure.

NOTE: *Be sure that the automatic shutdown system is reset before attempting to start engine.*

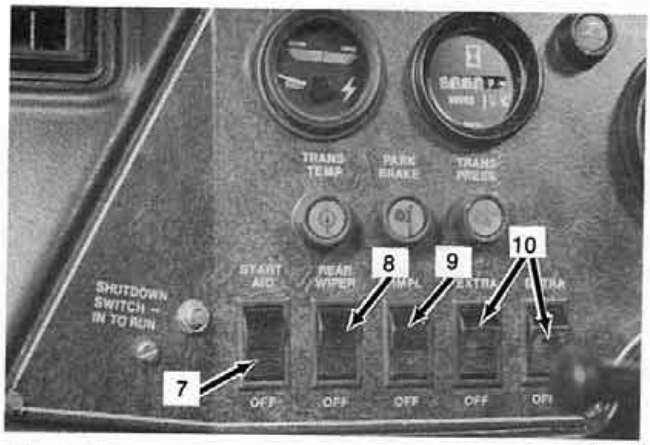


Figure 8: 06-0005

On engines using the optional ether start, crank engine until smoke rises from exhaust stack indicating fuel is being injected. While engine is cranking, depress and release start aid switch. Upon release of the switch, 2 CC of either is injected into the air-intake.

NOTE: *Engine must be cranking to inject ether. Do not use excessive ether per start.*

CAUTION: Ether starting fluid is highly flammable. Do not use near fire, sparks or flames, or on engines equipped with a glow plug system. Read the cautionary information on the container.

8. Rear Wiper

The wiper switch on the dash will activate the rear wiper motor at either high or low speed, whichever is desired.

9. Implement Switch

The Implement Switch is normally used to operate electrical equipment mounted on the implement by means of the quick disconnect plug at the rear of the tractor.

10. Extra Switch

The extra electrical switches may be used to operate optional electrical equipment.

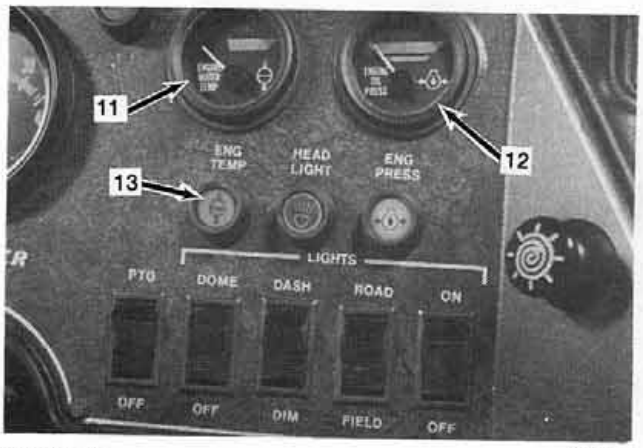


Figure 9: 06-0006

11. Engine Water Temperature

The water temperature gauge indicates if the cooling system is operating properly. Normal operating temperature of 175°-200°F (78°-92°C) is maintained by the water temperature regulator. High coolant temperatures mean the cooling system is not dissipating enough engine heat.

The water temperature system has automatic shut-down contacts which will shut the engine down in approximately 20 seconds when the water temperature rises to the 210°-220°F (98°-103°C) range.

12. Engine Oil Pressure

Oil pressure is normally greatest after starting a cold engine. As the oil warms, the pressure drops. Oil pressure is greater at operating speeds than at low idle. The engine oil pressure system should register within the operating pressure range at normal operating temperature. The oil pressure system will shut the engine down in approximately 20 seconds when the oil pressure drops below 10 + 3 p.s.i. (68.9 + 20.6 KPA). When low or no oil pressure is indicated on the gauge, stop the engine and determine the cause.

13. Engine Temperature Warning Light

The engine temperature warning light will illuminate when excessive coolant temperatures are encountered. If the light illuminates, the automatic shut-down system will stop the engine. Correct the cause for overheating before returning the tractor to normal service, or see your Steiger Dealer.

Operating Information

Cab Instruments (Cont.)

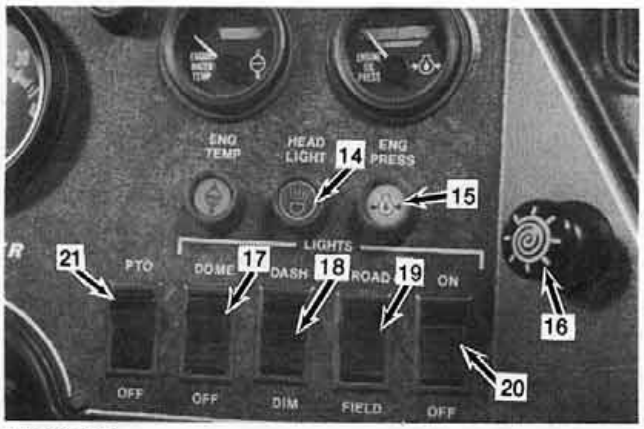


Figure 10:

14. Head Light Warning Light

The headlight warning light indicates the headlights are on "High Beam."

15. Engine Oil Pressure Warning Light

The engine oil pressure warning light will illuminate when the key switch is turned on and the engine is stopped or if the engine has less than 10 ± 3 p.s.i. (68.9 ± 20.6 KPA) when running. If the light illuminates, the automatic shut-down system will stop the engine. Correct the cause for low oil pressure before returning the tractor to normal service, or see your Steiger Dealer.

16. Cigar Lighter

The cigar lighter can be activated by depressing it into the dash. When it has heated sufficiently, it will return to its original position and is then ready for use.

LIGHTS & SWITCHES

17. Dome Lights

The dome light switch activates the two dome lights which are mounted in the cab upper console.

18. Dash Lights

The dash light switch illuminates the lamps within the dash instruments.

19. Road & Field Lights

The road and field light switch can be used to select either road lights (front) or field and road lights (front and rear).

20. Master Light Switch

The master light switch can be used to shut off lights that are switched on without disturbing all of the switch settings.

21. PTO Master Switch

The PTO master switch is used to energize the PTO electronic circuitry. The switch must be in the "on" position before receiving any response from the command lever on the right-hand console. When the PTO system is not being used, leave the switch in the "off" position.

Cab Controls

Figure 11: 09-0001

Operation

Cab Climate Control System

The cab is equipped with a heater and an air conditioner. The control for both is located on the left side of the dash console. There are two levers and one fan control.

NOTE: *All air is a blend of outside air and inside air blended in a ratio to provide the best cab air climate either warm or cool.*

Fan Control: The fan control switches the fan motor to one of three speed variations or off. (See Fig. 11.) The fan circulates outside air from the cab air intake stack and recirculates inner cab air. All fan air passes thru the air conditioning evaporator and thru the heater coil. (By so doing, air can either be cooled and dried or heated or a combination of heating and cooling may occur to provide the most desirable cab temperature at the most desirable air velocity which is controlled by the fan.)

The Air Conditioning Vent Heat Defrost lever controls the air conditioner and the baffle that directs air flow from the console louvers to the windshield louvers.

A/C Position: The air conditioner operates only when the lever is in full A/C position. When the lever is moved away from that position, the air conditioner compressor is disengaged and the fan is only circulating a blend of outside air and inside air.

Vent Position: When the lever is placed in the Vent position, the blended air is being circulated by the fan. It is in this position that the cab may be pressurized by the operation of the fan and the air conditioning will be off and the heater will also be off (see Heater section). This position will provide a temperature close to that of the outside ambient air.

Heat Position: In the heat position the blended air is heated by the heater coil and circulated through the louvers in the console. The temperature of the air is controlled by the Cool-Warm lever.

Defrost Position: In this position the blended air is passed through the louver at the base of the windshield. The temperature of the air is then controlled by the Cool-Warm lever.

The Cool-Warm Lever: This lever controls the amount of engine coolant through the heater coil. When the lever is in the cool position, all engine coolant is STOPPED from flowing through the coils and no heating is taking place. For maximum air conditioning, the lever should be in this position.

When the lever is moved farther toward the warm setting more hot engine coolant is passed through the heater coil, providing a warmer cab climate.

CAUTION: Refrigerant under pressure may cause severe injury or frostbite. Contact your Steiger Dealer when air conditioner service is required.

Suggestions & Information

1. Be sure to keep the doors closed when air conditioner is in operation. It is good practice to keep the cab free of dust.

2. Turn the unit on for a few minutes each week during the off season to lubricate compressor shaft seal, and expansion valve.

Operating Information

Steering Column

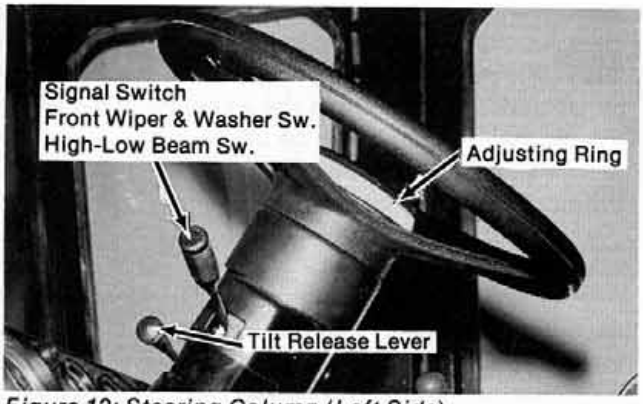


Figure 12: Steering Column (Left Side) 04-0001

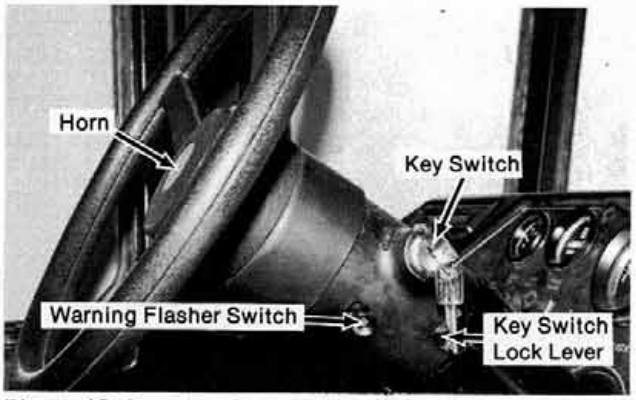


Figure 13: Steering Column (Right Side) 04-0002

SIGNAL SWITCH

The signal switch will activate the right or left signal lamps unless the hazard warning flashers are being operated.

FRONT WIPER AND WASHER SWITCH

The front wiper and washer switches are integral with the signal switch lever. Turning the lever operates the wiper speeds, while depressing the lever toward the steering column operates the window washer.

HIGH-LOW BEAM SWITCH

The high-low beam switch regulates the intensity of the head lamps in the grill cavity of the tractor. Pull the signal lever rearward to operate the switch.

TELESCOPING ADJUSTING RING

Rotate the ring counter-clockwise to allow the column to slide to the desired height, then retighten the ring by turning clockwise.

TILT RELEASE LEVER

The steering column and wheel may be tilted by pulling the lever end toward the wheel. The lever is spring loaded and will return to lock as it is released.

WARNING FLASHER SWITCH

Push in to activate flasher lights. Pull out to deactivate flasher lights.

HORN (OPTIONAL)

Activate the horn by pressing the center button of the steering wheel.

KEY SWITCH

The key switch has 5 positions, "Accessory," "Lock," "Off," "On," "Start."

In the "LOCK" position, all current is shut off and the steering wheel is locked.

In the "OFF" position, all current is shut off, and the engine automatic shutdown system is "reset."

In the "ACCESSORY" position only accessories (radio, fan, tape, lights, etc.) may be operated.

In the "START" position the starter system is energized and fuel system is activated.

In the "ON" position the fuel system remains activated and all current for the electrical system is activated.

Electrical Fuel Shut-Off

Turning the key counter-clockwise will stop the engine.

Seat Adjustments

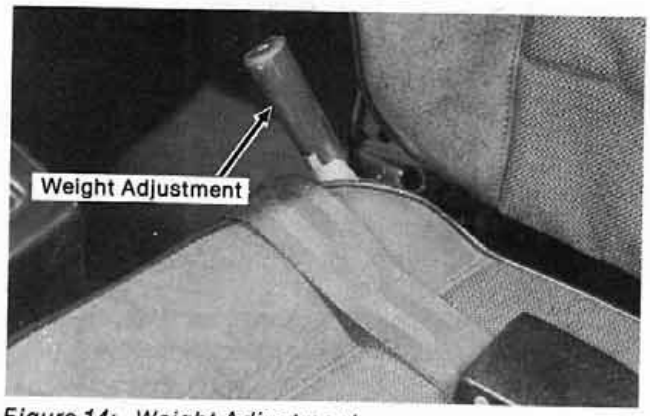


Figure 14: Weight Adjustment 05-0001

Weight Adjustment

The seat may be adjusted for operator weight by moving the lever on the right side of the seat. Note the arrow on the end of the handle. For increased weight, pull the handle outward, turn until the arrow points upward and ratchet the handle until the desired adjustment is obtained.

For decreased weight, pull the handle outward, turn until the arrow points downward and ratchet the handle until the desired adjustment is obtained.

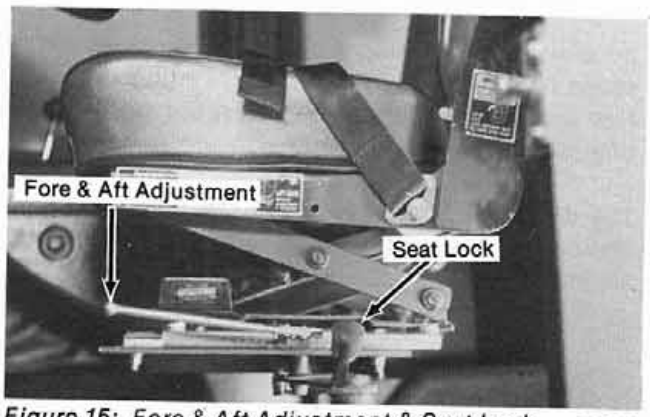


Figure 15: Fore & Aft Adjustment & Seat Lock 05-0002

Fore & Aft Adjustment

The seat may be adjusted fore & aft by moving the lever to the left, and moving the seat in the direction that will best suit the operator.

CAUTION: Do not operate tractor from any position except seated in the operator's seat with seat belt securely fastened.

Seat Lock Operation

The seat lock secures the operator's seat in the straight forward position. To release the seat lock, push the lock lever rearward. The seat will then be free to swivel.

Doors

Control Handles — Inside
Pull the latch handles outward to open the cab doors.

Control Levers — Outside
Pull the levers rearward to unlatch the cab doors.

Lock Mechanisms
The cab doors can be locked with a key from the outside or by depressing the lock plunger on the inside.

Lubricate and check latch adjustments as required. The door locks and key switch use a common key. (See Door Lock Mechanism Maintenance, page 61.)

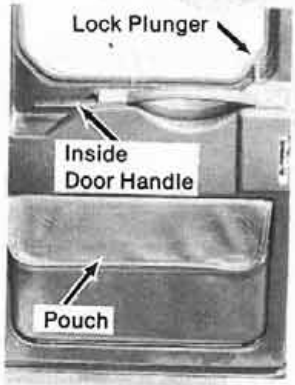


Figure 16: 01-0001 02-0001

Operating Information

Cab Controls

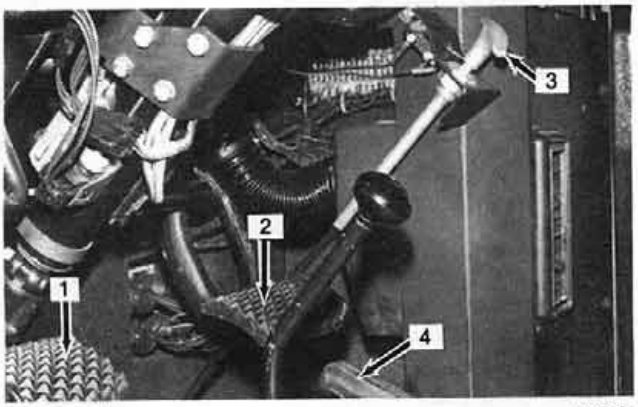


Figure 17: 08-0001

1. Clutch Pedal

Pressing the clutch pedal disengages the clutch from the engine. Depress pedal to stop tractor or shift transmission gears.

NOTE: *Engine RPM should not be above 1700 RPM when starting a load. After load is started, engine RPM should be increased to rated RPM.*

1. To obtain best drawbar pull and optimum clutch life, start the tractor in the proper gear with the engine below 1700 RPM.

2. Do not overload the tractor. This is harmful to the clutch as well as to all other parts of your tractor.

3. A very common harmful practice is riding the clutch or using it for a foot rest. This permits slippage and will greatly decrease clutch life. Remember, do not slip the clutch!

4. Impress the operator with the need for immediately reporting any and all erratic or improper clutch operation. Prompt and proper action can many times prevent extensive damage.

5. Keep the clutch properly adjusted and the release bearing properly greased to obtain maximum clutch life.

TO PROPERLY OPERATE THE CLUTCH BRAKE

1. Depress the clutch pedal to within 2" of full travel.

2. Place transmission in neutral.

3. Only after the transmission is in neutral should the clutch pedal be fully depressed to actuate the clutch brake and shift to the gear desired.

NOTE: *If the transmission brake does not work properly, this may be an indication that the clutch may need adjustment.*

2. Brake Pedal

The vehicle brake can be actuated by depressing the brake pedal or by pulling the park brake handle.

The brake pedal actuates the brake hydraulically whereas the park brake handle actuates the brake through a cable with a sliding yoke arrangement.

3. Park Brake

Pulling of the park brake handle and locking it by turning in a clockwise direction will apply the brake for parking. Additional pressure may be applied to the park brake by depressing the brake pedal while pulling the park brake handle and then turning the handle to lock it.

4. Decelerator Foot Pedal

Decelerator foot pedal can be used to decrease engine speed from a fast throttle setting. Letting up on the foot pedal will return the engine speed to the speed originally set by the throttle lever.

The decelerator pedal will slow the engine approximately 700 RPM without disturbing the throttle lever setting.

Cab Controls (Cont.)

Figure 18: 07-0001

5. Throttle Control Lever

Push lever forward to increase engine RPM and pull lever to the rear to decrease engine RPM.

6. Hi-Lo Range Selector Lever, Transmission

The Hi-Lo range lever shifts the transmission to Hi or Lo range. Push the lever forward for high range and pull lever back for low range.

IMPORTANT: *Tractor must not be in motion when shifting from one range to another.*

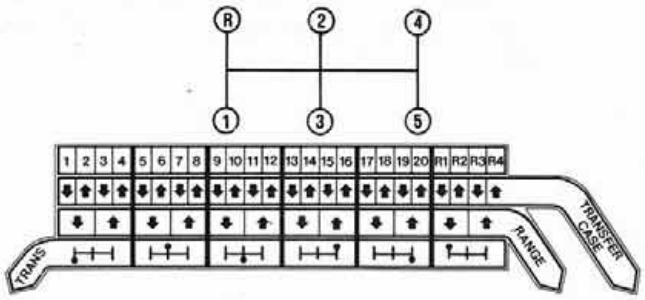
7. Hi-Lo Range Selector Lever, Transfer Case

To engage the 2-speed transfer case in high range, push the lever forward. Low range in the transfer case is obtained with the lever in the rear position.

IMPORTANT: *Tractor must not be in motion when shifting from one range to another.*

TRANSMISSION SHIFT LEVER

The transmission shift lever is used to change transmission gears and is located directly in front of the operator's seat.



Control Valve Operation

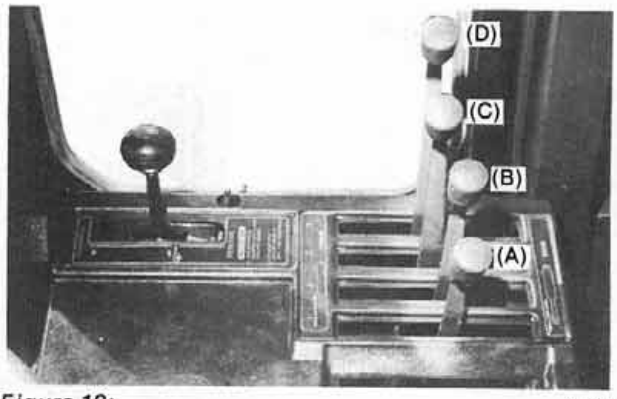


Figure 19: 03-0001

There are 4 remote ram controls located in the right hand rear of the cab (5th remote ram optional). The inside control (A) is for the three-point hitch or the 4th remote ram with float. This control has 4 positions.

1. Raise — Raise control and hold in raised position until the remote ram is extended to desired position. Then release control and it should return to neutral and hold.

2. Lower — Lower control and hold in lowered position until the remote ram is retracted to desired position. Then release control and it should return to neutral and hold.

3. NEUTRAL — NO ACTION

4. Float — Lower control beyond lower position and it will lock in this position and permit oil to flow either way in remote ram and permit implement to follow the contour of the soil.

The (B), (C) and (D) controls are for the 1st, 2nd and 3rd remote rams. These controls have 3 positions.

1. Raise — Raise control and remote ram will fully extend and the control should self-cancel and return to neutral position.

2. NEUTRAL — NO ACTION

3. Lower — Lower control and remote ram will fully retract and control should self-cancel and return to neutral position.

Operating Information

Right Hand Console

Tilt-up Feature

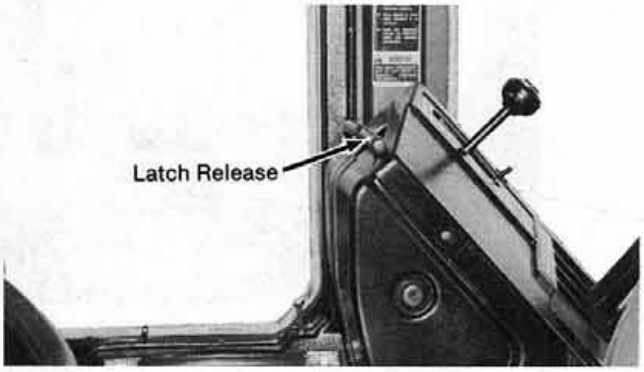


Figure 20: 06A-0001

The console assembly may be tilted upward to allow entrance from the right side of the cab. Lift up on the latch release at the front of the console and swing the assembly upward.

To re-latch the console, press downward firmly on the front.

IMPORTANT: *Operate the controls only when the console is in the down locked position.*

PTO Command Lever

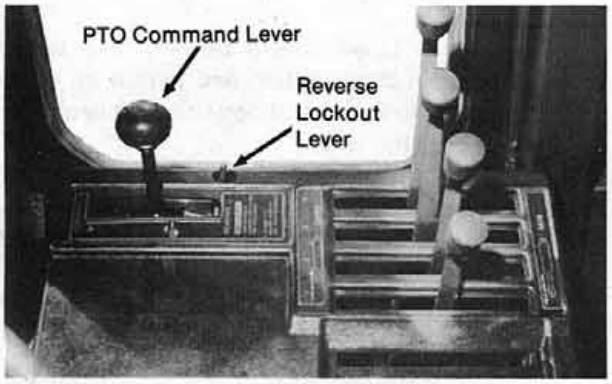


Figure 21: 06A-0002

The command lever controls all PTO system operations. These command functions are:

Neutral

Regardless of engine speed, there is ± 5° of deadband travel from the neutral detent position forward and reverse. Within this range, the pump controller is disabled and the PTO output shaft will not turn.

Reverse

The output speed will be in the counter-clockwise direction as the command lever is pulled back from 5° to 15° from neutral, where lever travel will stop. Reverse is one speed only but may be varied by changing engine speed. To change from neutral to reverse position it will be necessary to move the small release lever rearward. See Figure 21.

NOTE: *Early models do not have the reverse lock-out release lever feature.*

Forward

The output speed will be in the clockwise direction as the command lever is pushed forward from 5° to 40° from neutral. Movement of the command lever or changes in input speed will increase or decrease output speed proportionally in this command range.

Forward - Govern

Govern output speed will be in the clockwise direction as the command lever is pushed forward from 40° to 45° from neutral, where the lever travel will stop. In the govern range, output speed will be maintained as the engine speed varies down to approximately 75-90% of rated RPM.

Upper Console

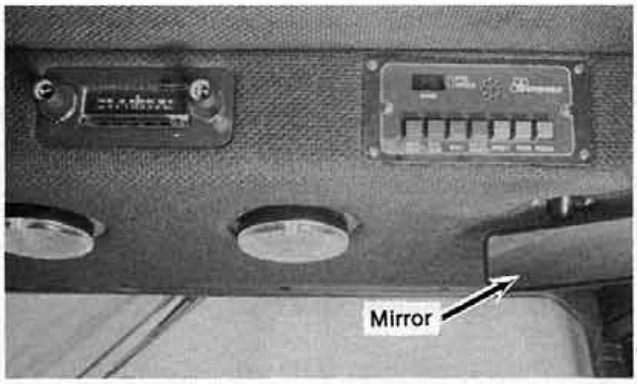


Figure 22:

For safer operation of the tractor the mirror should be adjusted properly to enable the operator to see to the rear of the tractor.

PTO Display Module

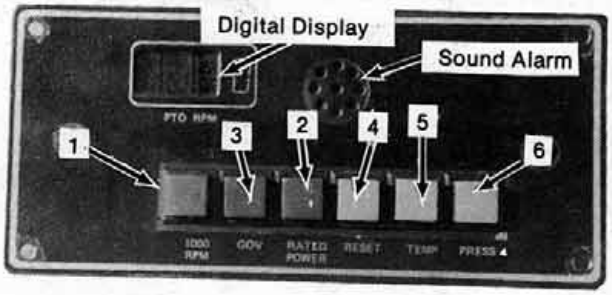


Figure 23: 17-0001

The PTO display panel indicates all the functions of the PTO system. The PTO output speed in RPM is digitally displayed on the front panel. Six on/off lights indicate system function.

1. 1000/540 RPM indicates the speed range the PTO system is set-up for. This indicator is always on when power to the system is applied.

2. Rated power indicates that the system is operating at rated output horsepower. This is 105 HP at 1000 RPM output speed, or 57 HP at 540 RPM output speed. As the PTO load may vary, the rated power indicator will also vary accordingly.

3. Govern indicates the PTO system is operating in a "Governed" state. Changes in engine speed will not affect the PTO operation until engine speed falls to approximately 75 to 90 percent of rated engine speed. Below that point, PTO speed will fall with engine speed.

4. Reset indicates a fault condition and disables the PTO. The system will reset with the command lever moved to its neutral detented position if all PTO functions check. A reset is caused by:

a) Rear stop button depressed. Remote stop button depressed. Remote stop plug disconnected.

b) Applying power to the system with command lever not in neutral, such as equipment not supplied with over running clutch.

c) Exceeding the system output power limit for a continuous period of 5 seconds. As long as the system pressure is at or above this limit, the audio indicator will sound.

d) Exceeding PTO reservoir temperature. In this case, reset will remain on until oil temperature has cooled sufficiently to permit operation.

5. Temp. indicates PTO system reservoir has reached 200°F (93°C). This function also causes reset as explained previously.

6. Press. indicates charge pressure is below 100 ± 10 p.s.i. (689 ± 68.9 KPA). In this event engine will shut down automatically and the cause will have to be determined before engine start-up. Normal charge pressure ranges from 120 to 240 p.s.i. (826 to 1653 KPA). Troubleshoot any time this indicator is on with the engine running and the PTO is in operation.

IMPORTANT: In the event of engine shut-down and the PTO system is not in the operational mode "PTO dash switch in the off position," the charge pressure light on the display module will not illuminate. If it is determined that engine oil pressure or engine temperature did not cause the shut-down, use the following procedure: Put the PTO command lever in the "neutral" position and the PTO dash switch in the "on" position and restart the engine. Within 5 seconds the pressure light on the display module should go out. If it does not, shut down engine immediately by turning off the key switch and troubleshoot.

System Operation

Normally, the system will be operating in the "Govern" range to maintain output speed. As the PTO power requirements increase while operating the system on a moving vehicle, ground speed may be reduced to lessen the PTO power consumption and avoid a maximum torque reset condition. With the rated power indicator on, the PTO is delivering rated horsepower to the implement. As the audio indicator begins to sound for short durations, the PTO is delivering approximately 20% more horsepower above rated. System operation will be permitted to continue during this overpower condition until the audio indicator sounds continuously for at least five seconds.

Running the PTO system at speeds less than rated will be done outside the govern range. Simply position the command lever while reading PTO output speed on the display module. In this range PTO speed will vary with engine speed and command lever position.

Reverse commands the pump to a fixed reverse displacement. Therefore, by varying engine speed, reverse speed will vary proportionally between 0 and approximately 200 RPM.

A reset condition while running the PTO will stop the output shaft with dynamic braking. To manually slow down PTO speed, simply pull back on the command lever at a rate deemed appropriate by the operator.

NOTE: ***Whenever possible return the command lever to the neutral position slowly. This will place less strain on both the equipment and the PTO system.***

Operating Information

Rear Stop Station

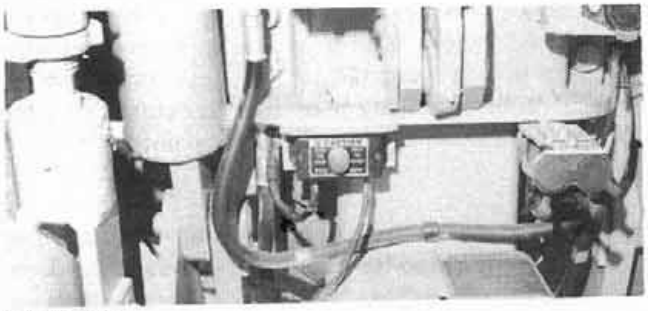


Figure 24:

Depressing the push button will immediately stop the system with dynamic braking and the reset indicator will light to show a fault condition. With the stop button depressed, the PTO system is disabled. The stop button must be pulled back out manually and the system reset by returning the command lever back to the neutral position to permit system operation.

Remote Stop Station

This station is functionally the same as the rear stop station. Along with the remote stop cable, the operator is allowed to remotely mount a stop button close to where PTO work is performed. This cord should be in clear view away from the equipment being operated and in an unobstructed area.

IMPORTANT: *The rear and remote stop stations should only be used in critical situations and to prevent possible damage to equipment in use and/or to avoid the possibility of personal injury.*

Operating the PTO

Use 1000 RPM PTO with implements requiring over 65 horsepower. The standard 1000 RPM shaft is 1.750" x 20 splines (45 MM). The optional 540 RPM shaft is 1.375" x 6 splines (35 MM). The optional 1000 RPM shaft is 1.375" x 21 splines (35 MM).

IMPORTANT: *Contact your dealer if it should become necessary to change PTO speed, such as 1000 RPM PTO to 540 RPM PTO, or 540 RPM PTO to 1000 RPM PTO.*

Attach the implement PTO shaft to the tractor PTO shaft. Be certain that the implement coupler engages the tractor PTO shaft lock groove. If the implement coupler does not have a lock, pin the coupler to the shaft.

WARNING: Do not connect 1000 RPM PTO to equipment designed to operate at 540 RPM, nor 540 RPM PTO to equipment designed to operate at 1000 RPM.

Mounted Equipment only: Raise and lower the linkage and check for interference. Make sure that the PTO shaft is not binding within the operating range of the hitch.

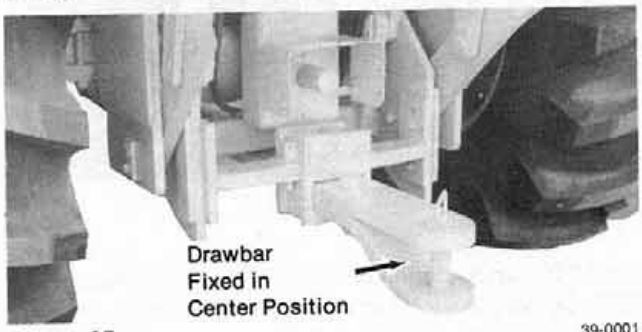


Figure 25:

Trailing Equipment only: Be certain that the drawbar is fixed in the center position and that the drawbar is being used at the correct length and height for the PTO equipment. (Refer to Drawbar & Clevis Position, p. 36.)

Engage the PTO with the engine at idle and gradually bring the engine to operating speed. Make sure that the equipment is operating properly.

CAUTION: Whenever operating PTO equipment, observe the following safety precautions.

- Do not wear loose clothing when operating PTO equipment or when near rotating equipment.
- When operating PTO driven equipment, stop the engine and wait until the PTO shaft and equipment stop before getting off the tractor to adjust, work on or lubricate the equipment.
- Do not clean or adjust PTO driven equipment while the tractor engine is running.
- Be sure that the PTO shield is installed when using PTO driven equipment.
- Always apply the tractor parking brake and block the rear wheels front and back when operating stationary PTO equipment. Be sure to install the frame lock bar between the front and rear frame to prevent articulation.
- Follow the equipment operator's manual instructions.
- Always keep safety shields in place. Disengage PTO, shut off the engine and remove the key before adjusting or unclogging power driven machinery.
- Replace PTO output shaft shield when PTO is not in use.

Priority Valve

The priority valve is designed to provide the steering system with maximum oil pressure and volume before oil volume and pressure is delivered to the implement system.

The steering orbitrol is connected to the priority valve by a load sensing line which controls the oil flow within the valve. As steering demand increases, more oil is delivered to the orbitrol.

IMPORTANT: *The priority valve is set at the factory and should not require adjusting.*

FLOW CONTROL VALVE

Figure 26: 46-0001

Flow control valve: The flow control valve is located under the cab and in the hydraulic system in sequence directly after the priority valve.

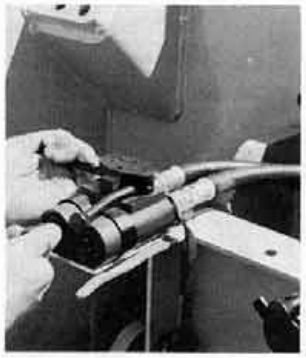
The function of the flow control valve is to set the correct volume of oil that is delivered to the implement system. The valve has a range of approximately 8 gpm to 20 gpm.

Hydraulic Couplers

The hydraulic couplers on your Steiger tractor are designed for quick coupling and disconnecting under pressure and provide a positive no-check feature to assure continuous oil flow through the complete cycle of raising or lowering your implements, and will accept most SAE and ASAE male tips from your implements. Also they provide for automatic break-away disconnect.

OPERATION:

To connect implement male end into the coupler, move the lever at the top of the coupler forward.



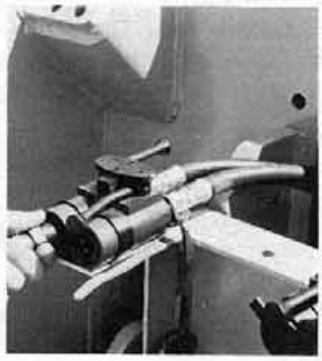


Figure 27: 50-0001 50-0002

Insert male end into the coupler and move the lever to the rear to lock into place.

Figure 28: 50-0003

To disconnect couplers simply move the lever forward. See Fig. 28 . Remember to cap the couplers when not in use. Any dirt in the coupler will go directly into the control valve and reduce the life of the seals and spools within the valve.

CAUTION: When lines are under pressure, the coupler release levers may unlatch very rapidly. Keep hands clear from the path of the levers.

NOTE: *Late style couplers have a third lever on the bottom side of the coupler. Close off the pressure and push the lever forward to release the coupler.*

Operating Information

3-Point Hitch

The three-point hitch provides a fast and convenient means of attaching rear mounted equipment conforming to ASAE and SAE specifications and will enable you to mount most three-point equipment of other manufacturers. The three-point on your tractor is a Category III hitch. No special pins or bushings are necessary when using Category III equipment.

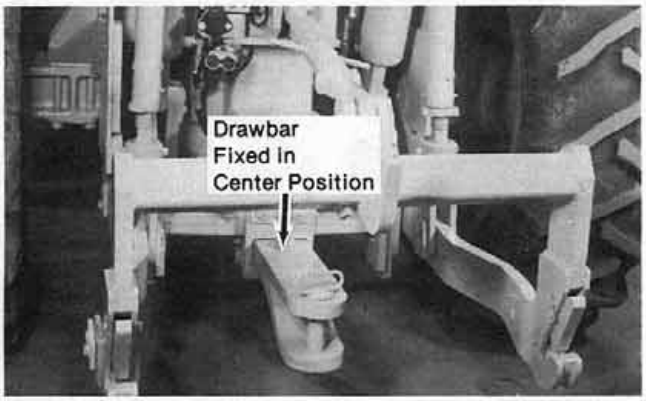
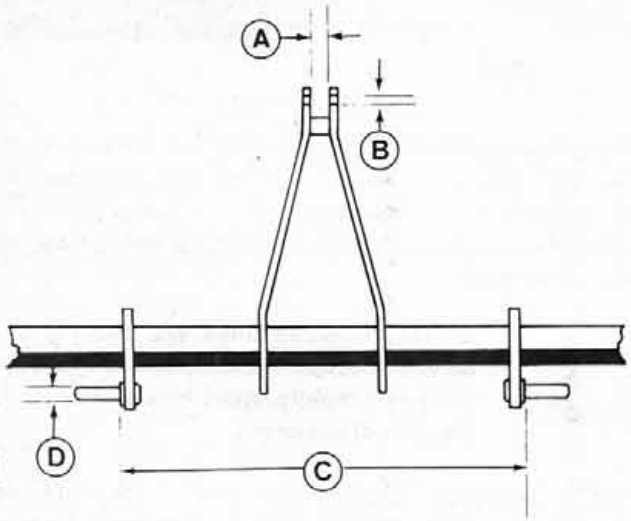


Figure 29: 39-0001

The category designation means that the space at the top of the mast is "A," and the Uni-ball on the hitch upper link is sized to fit the "B" hitching pin on the equipment mast. The Uni-balls in the ends of the lower link are sized to fit the "c" diameter equipment hitching pins. The hitch lower links are spaced to fit equipment hitching pins spaced "D" between the shoulders.



Category III Dimensions

(A) 2" (51 mm)	(C) 38" (966 mm)
(B) 1-1/4" (32 mm)	(D) 1-7/16" (37 mm)

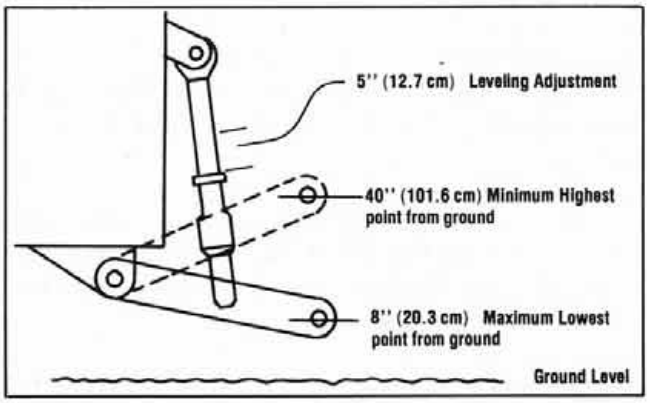
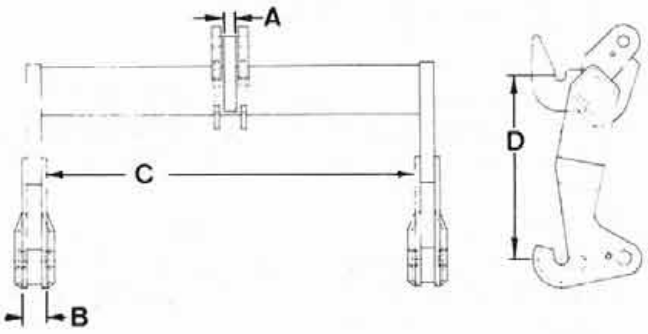


Figure 30:

The lower lift links are designed to meet the following category III ASAE, SAE designation, which means that with the leveling adjustment screw fully retracted to its shortest length and the lift cylinders fully "bottomed" the lowest maximum point from the ground measured at the center line of the rear lift link uniball will be 8 inches. See Figure 30. And that the minimum highest point from the ground with the lift cylinders fully extended and the level adjustment screw extended 5 inches would be 40 inches measured at the center line of the uniball (see Figure 30).



Quick-Hitch Dimensions

(A) 1.25" (31.75 mm)	(C) 38.25" (97.1 cm)
(B) 2.50" (63.5 mm)	(D) 18.88" (47.9 cm)

Included with the three-point hitch is a quick-hitch weldment. If needed, the quick-hitch attachment can be removed and the implement coupled directly to the three-point links. Both configurations conform to ASAE and SAE Category III specifications.

Operations

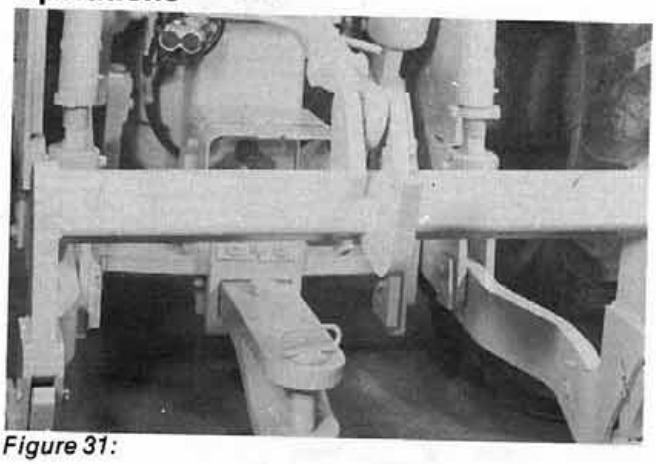


Figure 31:

When operating the three-point, the swinging drawbar must be locked in the center position on the drawbar support with the stop pins to prevent damage and assure proper operation of the hitch.

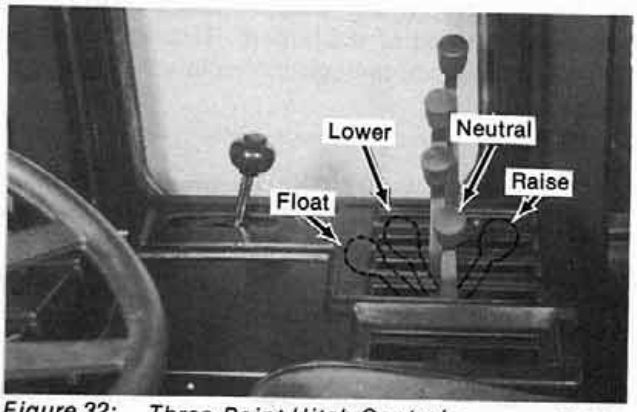


Figure 32: Three-Point Hitch Controls 03-0001

When lowering the implement for field operation, move the control lever (inside lever closest to the operator's seat) to the full down (float) position. This allows the weight of the implement to lower it into the ground.

NOTE: *Do not power the implement into the ground by putting the handle in the regular down position. This will put the rear weight of the tractor on the three-point hitch and could damage the three-point hitch and/or the implement and also the tractor drive train by upsetting the weight balance between the front and rear wheels.*

IMPORTANT: ***The use of gauge wheels is recommended when using fully or semi-mounted implements. This will allow more uniform depth control as well as placing less strain on the three-point linkage and the implement being used.***

ADJUSTMENTS

The height of the implement may be adjusted by turning the leveling screws on the lift links, loosen the lock nuts, remove the float pins and use a large wrench to turn leveling screws in or out.

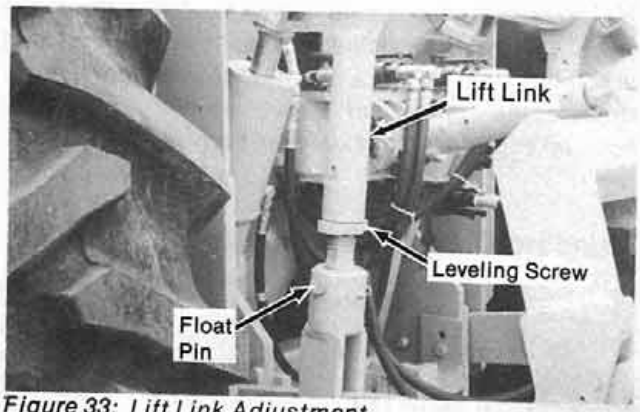


Figure 33: Lift Link Adjustment 51-0002

After making the desired adjustment, replace the float pins and tighten the lock nuts. You may obtain approximately 2 in. of free travel (float at each lift link) by removing the float pins. This may be desirable when using disc-harrows or equipment with widely spaced gauge wheels. The lift links are used in the "rigid" position for implements such as plows.

If you are hooking to equipment that does not require the use of the quick-attach weldment, it may be desirable to remove one or both float pins in order to individually raise the lower links to provide easier hitching.

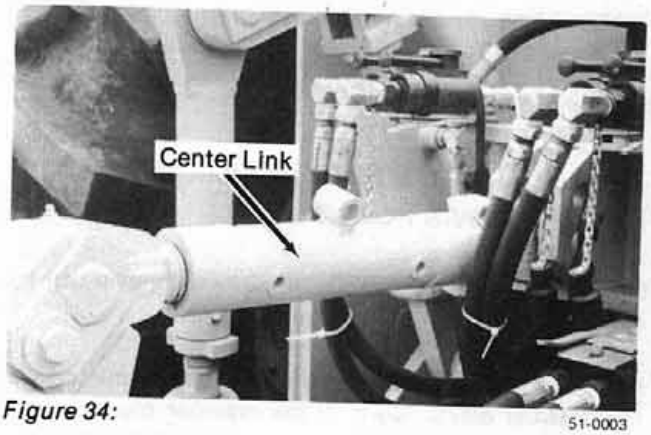


Figure 34: 51-0003

UPPER LINK ANGLE ADJUSTMENT

The length of the upper link can be shortened or lengthened by loosening the lock nut. Adjust the link to the desired length, then retighten the lock nut. The upper link must be pinned in the upper hole of the bracket when using Category III equipment.

Operating Information

SWAY PLATES: (Wear Plates)

The lateral movement of the hitch is controlled by the use of wear plates and shims bolted to the rear frame weldment and drawbar support.

IMPORTANT: *We have designed more adjustment into the three-point linkage to allow for the various tire sizes in use. All adjustments should be made so that lift arms and lift links do not strike side frames. Operate the three-point slowly several times after hook-up to be sure all adjustments are correct.*

Standard Drawbar Operations

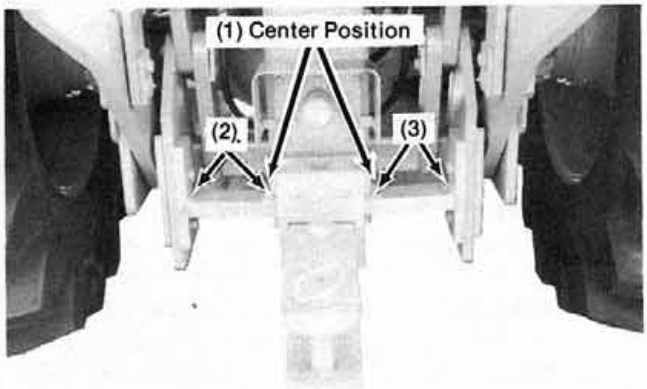


Figure 35: Standard Drawbar 39-0002

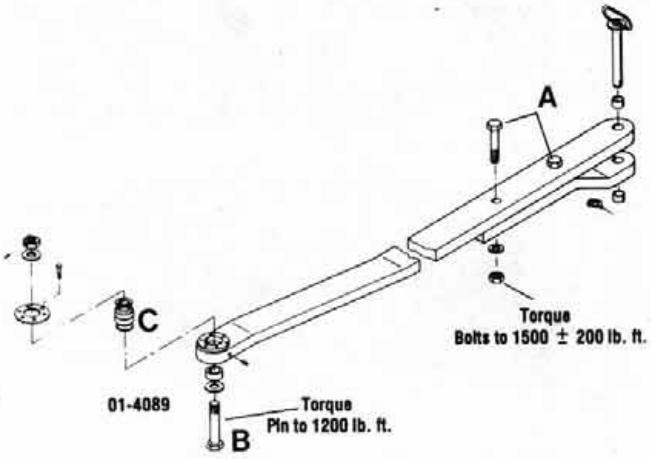
The standard drawbar can be pinned in one of three positions as shown or by removing stop pins, the drawbar can swing across entire drawbar rail.

NOTE: *When towing implements on public roadways, the drawbar should be pinned in a stationary position.*

PT 225, PT 250, PT 270 and PT 350 Drawbar Clevis Positions

On PT models without PTO, the drawbar clevis can be either on top or on the bottom.

IMPORTANT: *Tractors with the PTO option must have the drawbar clevis down. If the drawbar clevis is up, there is infringement in the clearance plain for the PTO driveshaft.*



To adjust the clevis from bottom to top remove the two (2), capscrews, (A) reverse the clevis and re-bolt. Also, pull the front pin, (B) and place the spacer on top of the uniball (C) instead of the bottom. This will allow the drawbar to protrude through the roller yoke parallel to the ground.

CAUTION: To prevent personal injury, pull only from drawbar except when pulling implements designed for and properly fastened by three-point hitch.

IMPORTANT: *To prevent equipment damage, drawbar position to be: Position from ground 18.5 in. (470 mm) PTO shaft end to hitch pin 20.0 in. (508 mm) with 1000 RPM and 1-3/4" (45 mm) diameter PTO shaft. 14" (355.6 mm) with 540 RPM and 1.375" (35 mm) diameter. 16" (406.4 mm) with 1000 RPM and 1.375" (35 mm) diameter.*

Lights

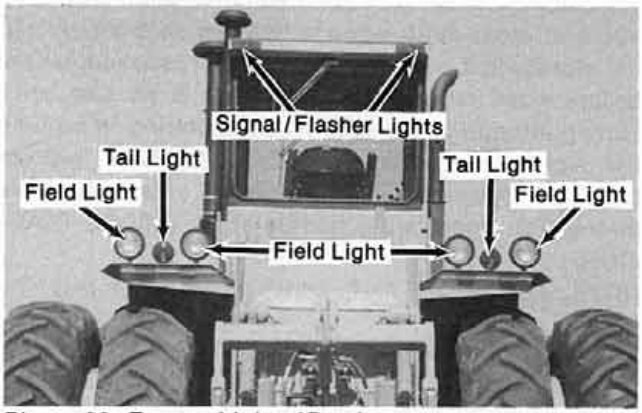


Figure 36: Tractor Lights (Rear) 16-0001

The Steiger Tractor is equipped with ten sealed beam lights, four flasher lights and two tail lights. The lights are designed to give the maximum amount of convenience when operating at night or other periods of time in which there is low visibility.

Tail Lights

The tail lights are mounted on the rear fender. The light glows red for night highway driving. Stop lights are integral with the tail lights and are illuminated whenever the brakes are applied.

Signal/Flasher Lights

The four flashing warning lights are located at the top front and top rear of the cab. The flashers glow amber to the front and rear. The tail lights also flash when signal or flasher lights are activated.

Highway Driving

Turn on flashers and headlights when driving on highways. Do not use field lights when driving on highway.

Check local traffic laws concerning highway driving and abide by the laws stated.

SMV Emblem: *Whenever traveling on highways or public roadways, the slow moving vehicle emblem should be displayed.*

Lights

Figure 37: Tractor Lights (Front) 16-0002

Head Lights & Field Lights

There are four headlights mounted in the front grill, and 6 (six) field lights, one on each front fender, and two on each rear fender.

Radio Operation

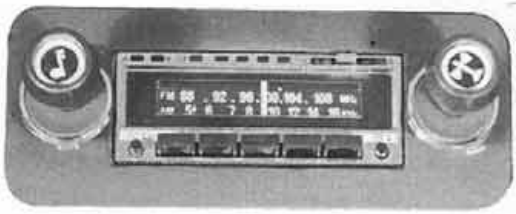


Figure 38: 17-0002

On-Off & Volume

The On-Off switch and Volume control are combined and operated with the left hand inner knob. Accordingly, the radio is turned on by rotating the knob on the left clockwise. Volume is increased by rotating it clockwise; decreased by rotating it counter-clockwise. Radio is turned off by rotating counter-clockwise.

Tone

The outer knob behind the On-Off/Volume control knob is the Tone control. The tone control is variable over the full range to permit selections of the most pleasing tone for the listener.

Operating Information

AM-FM Band Selection:

The desired broadcast band of either AM or FM can be selected by the BAND SELECTOR button on the left position of the escutcheon. Press it for AM reception and release for FM reception. AM or FM BAND INDICATOR light will be on.

Manual Tuning

Rotate the inner knob on the right hand and tune in the station desired.

Pushbutton Tuning

First, select the desired band AM or FM and tune in the desired station by firmly pressing the pushbutton preset (see "SETTING/PUSHBUTTONS" below) to the station.

Setting Pushbuttons:

Each pushbutton can be set to one station only either an AM or FM station. This provides a total of five stations that can be selected by pushbutton operation. These five stations can be five AM stations, five FM stations or any combination of AM or FM stations.

Set pushbuttons as follows:

1. Turn the radio on.
2. Set BAND SELECTOR button to AM or FM depending on which band is desired.
3. Pull out a pushbutton to be set.
4. Carefully tune in the desired station with MANUAL TUNING control.
5. Lock the pushbutton to that station by firmly pressing it in.
6. Repeat above steps 2, 3, 4 and for the remaining pushbuttons.

Stereo Indicator

When the FM stereo station being received, the STEREO INDICATOR light is automatically turned on.

Local-Distant (DX) Switch

The LOCAL-DISTANT switch functions to minimize the effect of cross-modulation which results from strong FM signals that overdrive the radio. Cross-modulation occurs most frequently when driving in an area containing strong FM signals. When operating in normal FM signal area, press the LOCAL-DISTANT switch (DISTANT position). When operating your radio in a strong FM signal area, release it to (LOCAL POSITION).
NOTE: LOCAL-DISTANT switch is effective only for FM.

Balance Control (Left/Right)

Adjust the BALANCE CONTROL (located on the Tape Slot) at the test balanced position between left and right speakers. The right-hand outer knob (located behind the MANUAL TUNING knob) is the FRONT-REAR FADER. When the FADER is set to the mid-position, both FRONT AND REAR speakers operate with equal volume. As the FADER is rated clockwise from the mid-position, a greater portion of the volume is heard from the rear speakers. As it is rotated counter-clockwise from the mid-position, a greater portion of the volume is heard from the front speakers.

8-Track Stereo Tape Operation

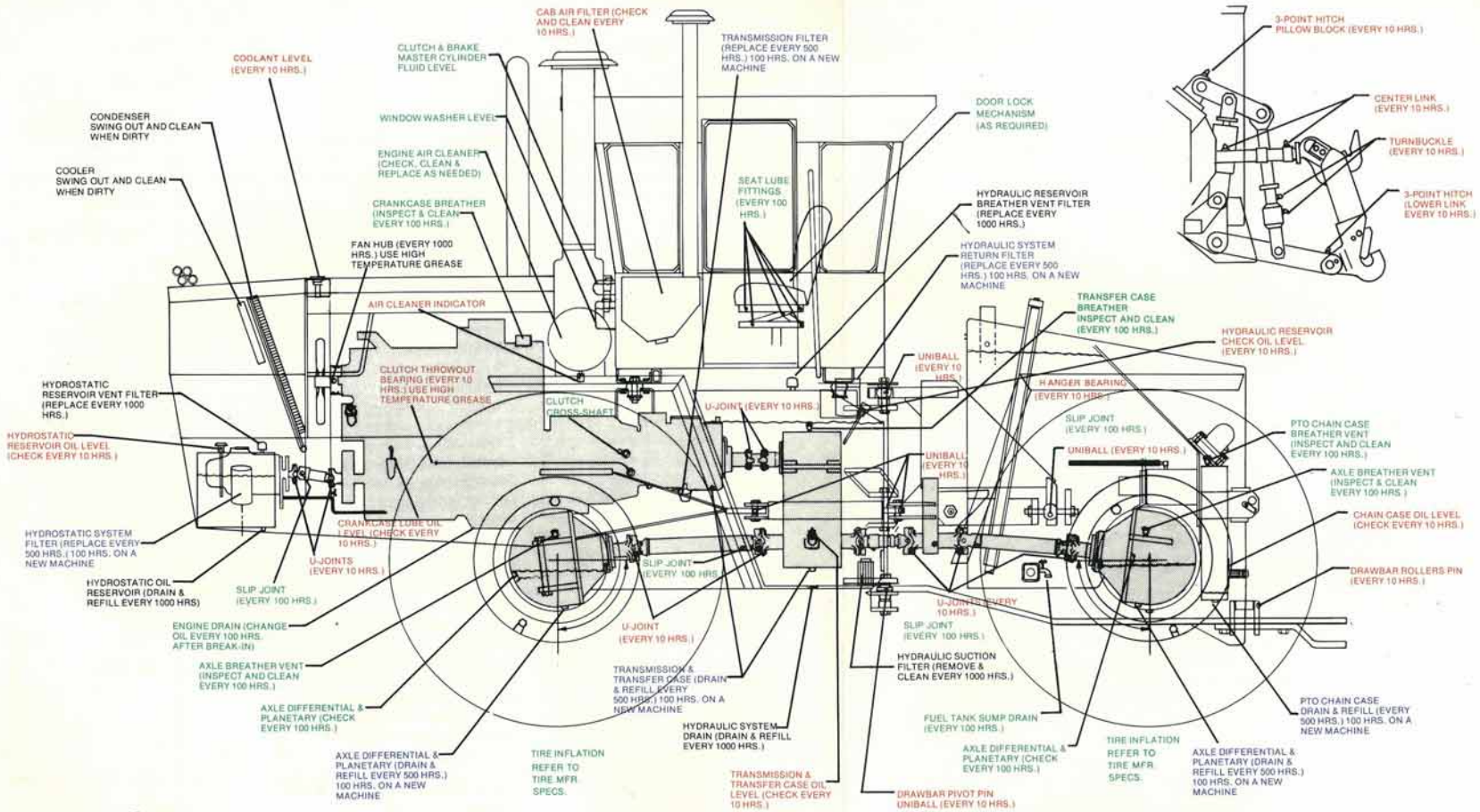
1. Turn the unit on only when the radio is not operated. When the radio is turned on, leave it as it is.

2. Insert the tape cartridge into the movable radio dial opening until it locks to play.

3. All controls operate the same on stereo tape as they do in radio operation.

4. The ON-OFF & VOLUME control knob is also the CHANNEL SELECTOR switch. The desired channel is selected by pressing this knob. Otherwise, the channels are automatically changed in sequence.

CAUTION: The tape cartridge is to be removed from the opening whenever the unit is not in operation.



Lubricating Grease Specifications

N.G.L.I. Consistency #2 High Temperature anti-friction bearing lubricating grease.

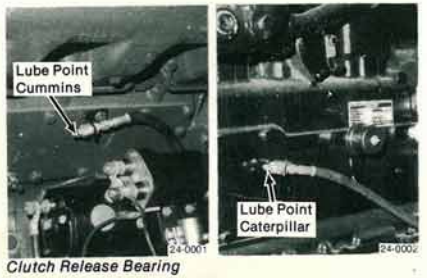
Minimum Physical Requirements:

Dropping Point °F-350° min.

Penetration, ASTM worked at 77° F-265-295

Grease meeting the above specifications is available through Steiger Tractor Parts Department, Part Number 01-2390 (14 oz. tube), or 01-4644 (35 lb. pail).

IMPORTANT: *For clutch release bearing, a high temperature grease that will exceed 350° F is required.*



Clutch Release Bearing

Specifications

TRACTOR SERVICE GUIDE

The hourmeter is the most reliable method of determining service intervals. The following figures are based on a ten hour day. If operations differ from these figures, base service intervals on actual running time. Keep an accurate record of operating time.

10 hours	One Day
50 hours	One Week
100 hours	Two Weeks
200 hours	One Month

Crankcase Oil Pressure	Check oil pressure gauge	During Operations
Water Temperature	Check water temperature gauge	
Battery Voltage	Check voltmeter reading	
Dash Gauges and Lights	Check and Monitor during start and operation	
U-Joints	Lubricate	Every 10 Hours
Main Hinge & Pivot Link	Lubricate	
Hydraulic Oil Tank	Check oil level	
Fan Drive Belt	Check adjustment	
Cab Air Filter	Check and Clean	
Crankcase Lube Oil	Check oil level	
Cooling System	Check coolant level	
Wheel Lug Nuts (first 50 hrs.)	Torque per manual	
Air Cleaner Indicator	Check	
Safety Shut-off Switch	Check	
Clutch Throwout Bearing	Lubricate (Use Hi-Temp. grease)	
Transfer Case Reservoir	Check oil level	
Hydrostatic Oil Reservoir	Check oil level	
PTO Chain Case	Check oil level	
Tire Pressure	Check Pressure	Every 100 Hours
Brakes	Check fluid level-master cylinder (under hood)	
Clutch Cylinder Fluid Level	Check fluid level-master cylinder (under hood)	
Clutch Release Shaft	Lubricate	
Axle & Planetary Drive Assy.	Check oil level	
Slip Yokes	Lubricate	
Crankcase Lube Oil & Filters	Drain & refill & replace filter	
Fuel Tank Sump	Drain water	
Fuel Filter	Replace (or as often as necessary)	
Water Filter	Replace (check Water Conditioner)	
All Breather Vents	Inspect and clean as necessary	
Door Lock & latches	Lubricate & adjust if necessary. (See Page 61.)	
Engine Air Cleaner Element	Check, clean and replace as needed	Every 500 Hours
Transmission Filter	Replace	
Axle and Planetary Drive Assy.	Drain and refill	
Transfer Case Reservoir	Change oil and filter	
Hydrostatic Oil Filter	Replace	
Hydraulic Oil Filter	Replace	
Hinge Bolts	Check tightness	
PTO Chain Case Oil	Change	
Fan Hub	Check & Repack (see your Steiger dealer)	Every 1000 Hours
Hydraulic Oil	Change oil & filter—Clean or replace tank screen	
Idler Pulley	Repack (see your Steiger dealer)	
Hydrostatic Oil	Change	
Vent Filter Cartridge	Replace	
Engine Valves	Adjust (see your Steiger dealer)	2000 Hours

Properly Maintained Equipment is Safe Equipment.

Cab Air Filters

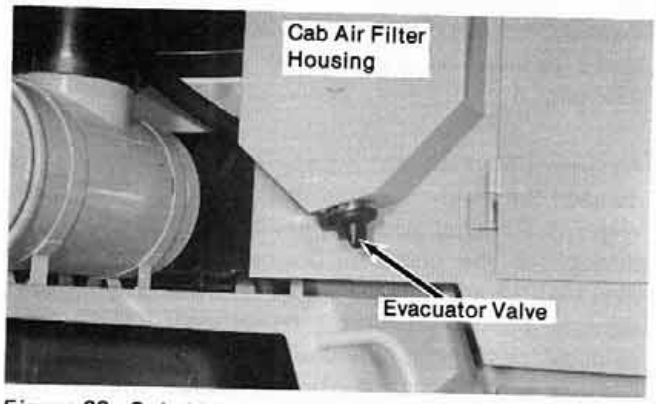


Figure 39: Cab Air Filters 01-0002

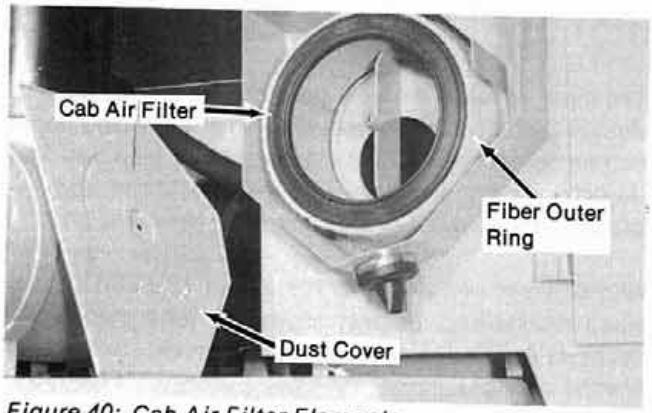


Figure 40: Cab Air Filter Elements 01-0003

Remove wing nut, cover and filters. After removing the filters, clean by directing clean dry compressed air up and down the inside of the element. Continue this until the element is clean. Also clean dirt and debris from filter cavity in cab. A vacuum cleaner will serve this purpose very well.

NOTE: *The element must be handled with care. It will not withstand the abuse of rapping on a tire or hard surface.*

An element cleaning tool for use with compressed air should be used to prevent damage to element when removing dust rather than a regular air gun or nozzle.

The filter has a foam ring over the element which should be washed clean and dried before reinstalling on filter element. This ring may also be replaced more often than the elements.

NOTE: *It is important to keep this filter clean because the air conditioning evaporator receives air through this filter. An evaporator must be clean to function properly.*

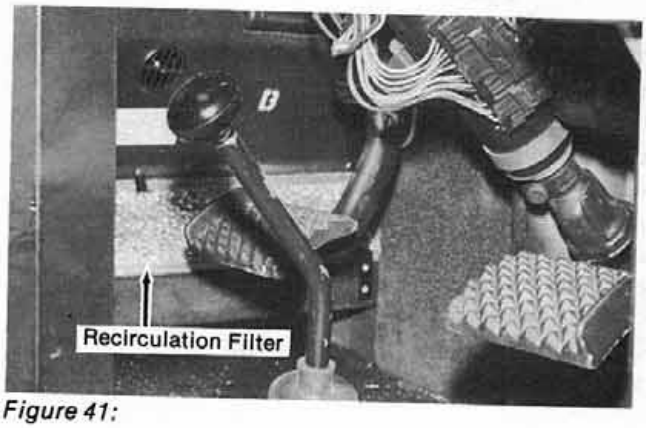


Figure 41:

Recirculation filter — the filter assembly must be removed and cleaned in water and a detergent whenever it appears dirty. After cleaning, it should be sprayed with a filter treatment, Steiger Part No. 01-1701, then reinstalled.

CAUTION: The Safari cab air filters are not designed to filter out harmful chemicals. When using chemicals, follow the instructions given in the implement operators manual and those given by the chemical manufacturer.

Engine Air Cleaner

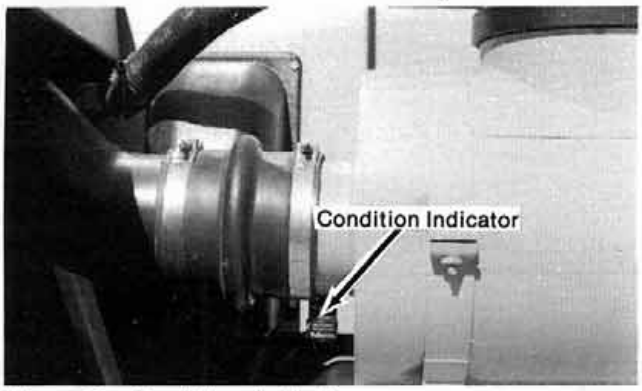


Figure 42: Condition Indicator 20-0001

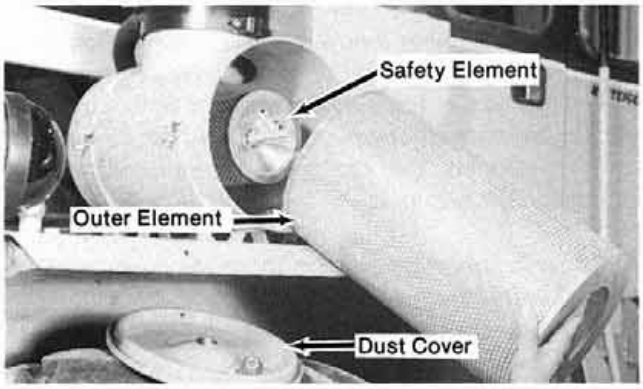


Figure 43: Removing Engine Air Filters 20-0002

The dry air cleaner elements should be serviced only when the maximum allowable restriction has been reached. The elements should not be serviced on the basis of visual observation, because this will lead to over service, which may cause element damage, improper installation of element and increased service time and cost. Service outer element only after service indicator locks in the red position. The outer element can be cleaned with air by directing air from the inside of the filter element. Use an element cleaning tool to prevent damage to element.

IMPORTANT: *The filter element must be handled with care. It will not withstand the abuse of rapping it on a tire or other hard surface. To remove dust from the element, tap the element gently with the heel of your hand, and rotate the element while tapping.*

If tapping does not remove the dust from the element, an element cleaning tool for use with compressed air should be used. To prevent element damage, a regular air gun or nozzle should not be used. After cleaning the element, direct a strong light from inside the filter element and while rotating the filter element around the light, inspect all the element pleats for cracks or holes. If any cracks or holes are found, replace the element. Inspect the filter element gaskets for damage. If the gaskets are damaged or missing, replace the element.

Air pressure must not exceed 40 psi (2.76 bars) or damage to element could occur. To further avoid element damage, air pressure should be dispersed throughout the element. Concentrated air pressure directed on any area of the element could cause element damage. Check the element for possible damage and do not install a damaged element, because even the smallest hole will allow enough dust to enter the engine and cause excessive wear. The outer element should be replaced after six cleanings or once a year.

The inner or safety element protects the engine against dust in case of damage to outer element. It also guards engine against dust while cleaning outer element. The inner or safety element should be removed and replaced only when it becomes clogged or once a year.

NOTE: *Make certain all filters are in line and sealed when reinstalling. Inspect engine air tubing and connections for wear, leakage or misalignment. Be sure all clamps are tight.*

Battery Care

Starting of a diesel engine depends heavily upon a fast cranking speed. It is very important that the battery be fully charged and be in good condition.

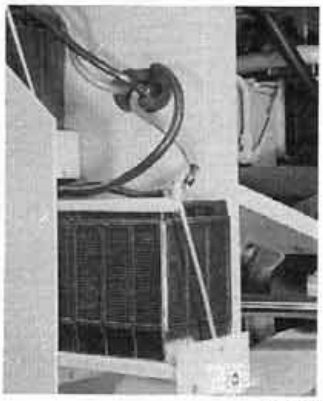



Figure 44: 16-0003 16-0004

Four 12-volt maintenance-free batteries supply current of 12 volts to the electrical system. The battery boxes are located on the left side front frame.

Battery Removal

1. Remove ground cables from terminal block.

2. Remove capscrews on battery bases.

3. Pull batteries toward the rear for access to terminals, and/or removal.

Cleaning Batteries

1. Follow Battery Removal Procedures.

2. Remove cables from battery terminals. Clean terminals with a terminal brush.

3. Mix a weak solution of baking soda and water. Apply the solution with a bristle brush to the terminals.

4. Thoroughly rinse the battery and the surrounding area of the tractor.

IMPORTANT: *Remove all four ground (negative) cables from terminal block located on the inside of the left front frame before attempting to service or remove the batteries.*

To minimize self-discharge, store the battery in as cool a place as possible without letting the electrolyte freeze.

Charging Battery

Battery Charge Indicator

The maintenance free battery will display a small green ball in the bottom of the sight glass when the battery is fully charged.

On rare occasions, the state-of-charge indicator may appear clear or light yellow. This means that the electrolyte has fallen below a safe level. In this case, the battery should not be charged or tested, but replaced.

Battery Installation Procedure

1. Be sure the box is free of objects which may puncture the battery case when the batteries are installed.

2. Be sure terminal posts and cable clamps are clean.

3. Place the battery in the box.

4. Connect the battery "hot" (positive or +) terminal first.

5. Connect the battery "ground" (negative or -) terminal last.

6. Connect all four ground cables to terminal block located on the inside of the left front frame.

When the "hot" terminal is connected first, no arcing can occur if the wrench accidentally contacts both the terminal and the frame or box. The part that is contacted will take the same polarity as the battery terminal.

If the ground terminal is connected first, the frame or box is connected to the ground. Then, if the wrench accidentally contacts the frame while connecting the "hot" terminal, a circuit is completed through the wrench. A hot spark will occur which could burn the person holding the wrench, or possibly explode the battery if an excess of hydrogen gas is present at any one of the vent holes.

CAUTION: Connect all four ground (negative) cables to terminal block located on inside of the left front frame only after connecting the cables to battery terminals to prevent accidental arcing.

Battery Storage

If the tractor is to be stored for any length of time, remove the batteries and store in cool dry place.

Periodically charge the battery while it's in storage.

General Chassis

CAB MOUNT TORQUE

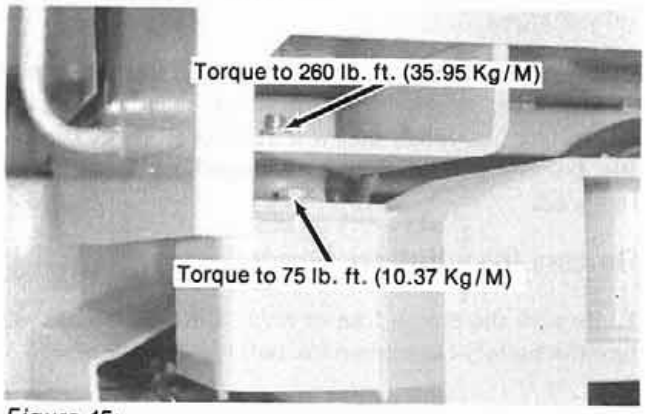


Figure 45: 01-0004

ROPS Cab Torque—1/2 inch bolts 75 lbs.-ft. (10.37 Kg/M), 3/4 inch bolts 260 lbs.-ft. (35.95 Kg/M).

CAUTION: If the cab must ever be removed or replaced, make certain that the proper hardware is used and also that the proper torque values are applied to the attaching bolts. The eight 1/2 inch bolts used to hold the isolators in place must be torqued to 75 lb-ft. (10.37 Kg/M). The four 1-inch bolts used to attach the cab to the tractor frame must be torqued to 260 lb.-ft. (35.95 Kg/M). This should be performed by a qualified Steiger Dealer only.

WHEEL BOLT TORQUE

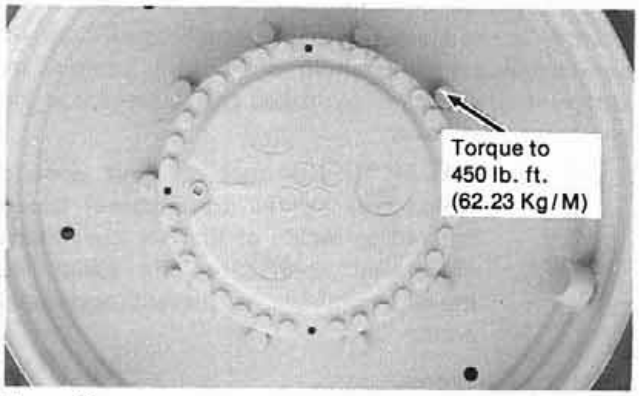


Figure 46: 52-0001

Torque the wheel lug bolts to 450 lb. ft. (62.23 Kg/M) every 10 hours for the first 50 hours. Repeat whenever the wheels are removed and re-mounted.

DUAL BOLT TORQUE

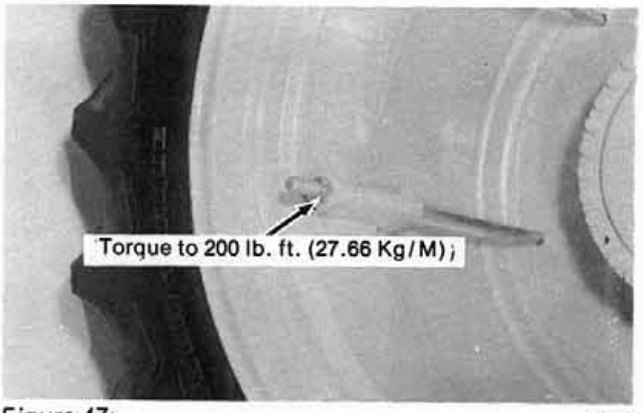


Figure 47: 52-0002

Torque the dual bolts to 200 lb-ft. (27.66 Kg/M) every 10 hours for the first 50 hours. Repeat whenever the wheels are removed and re-mounted.

Tighten the dual bolts evenly until the spacer is seated. Then tighten alternately and evenly to 200 lb. ft. (27.66 Kg/M). Do not overtighten as you may distort the spacer.

CAUTION: Never operate a tractor with a loose wheel, rim or hub.

AXLE TO FRAME BOLT TORQUE

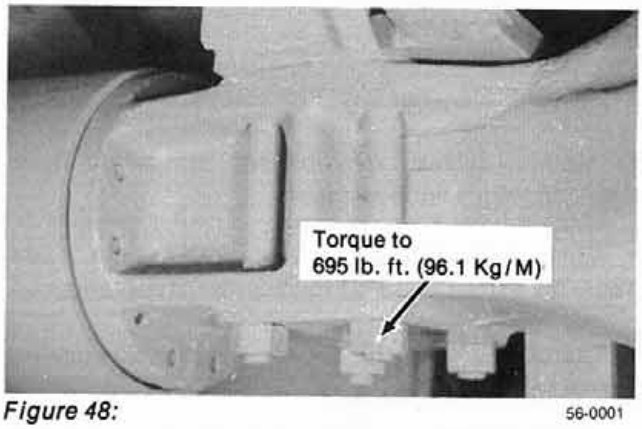


Figure 48: 56-0001

The axle mounting bolts should be retorqued to 695 lb.-ft. (96.1 Kg/M) every 500 hours of operation.

HINGE PIN TORQUE

The hinge pins should be retorqued every 500 hours. Torque values are published below, to correspond with the correct location on the hinge yoke.

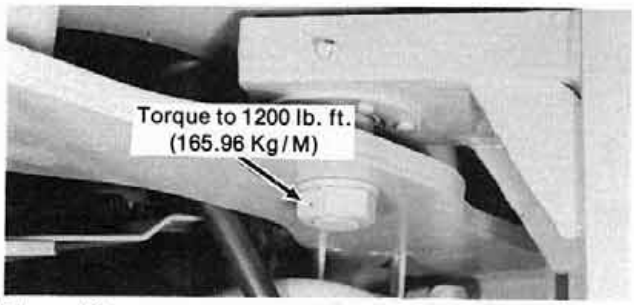


Figure 49: 38-0001

Upper vertical hinge pin — torque to 1200 lb. ft. (165.96 Kg/M)

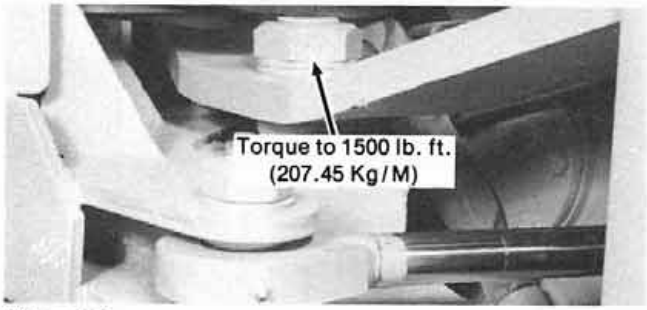


Figure 50: 38-0002

Lower vertical hinge pin — torque to 1500 lb. ft. (207.45 Kg/M)

Figure 51: 38-0003

Figure 52: 38-0004

Front horizontal hinge pin — torque to 1500 lb. ft. (207.45 Kg/M).
Rear horizontal hinge pin — torque to 1200 lb. ft. (165.96 Kg/M)

STEERING CYLINDER BOLT TORQUE

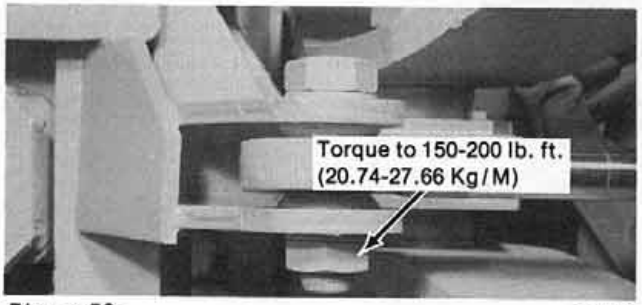


Figure 53: 38-0005

The steering cylinder bolts should be retorqued to 1200 ± 100 lb. ft. (165.96 ± 13.8 Kg/M) every 500 hours. The bolts at each end of each steering cylinder must be retorqued.

DRAWBAR PIVOT PIN TORQUE

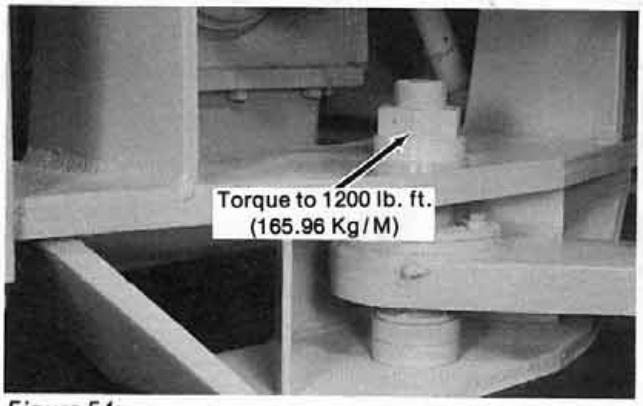


Figure 54: 39-0002

The drawbar pivot pin should be retorqued to 1200 lb. ft. (165.9 Kg/M) every 500 hours.

THREE-POINT HITCH — OPTION

Rockshaft Pillow Block Bolt Torque

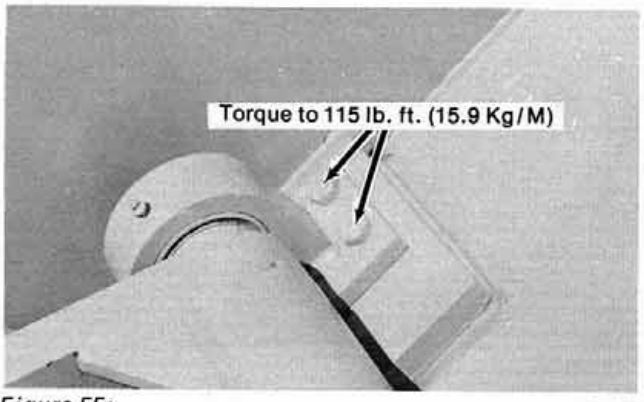


Figure 55: 51-0004

Retorque the rockshaft pillow block bolts to 115 lb. ft. (15.9 Kg/M) every 500 hours. (First production 5/8" bolts.)

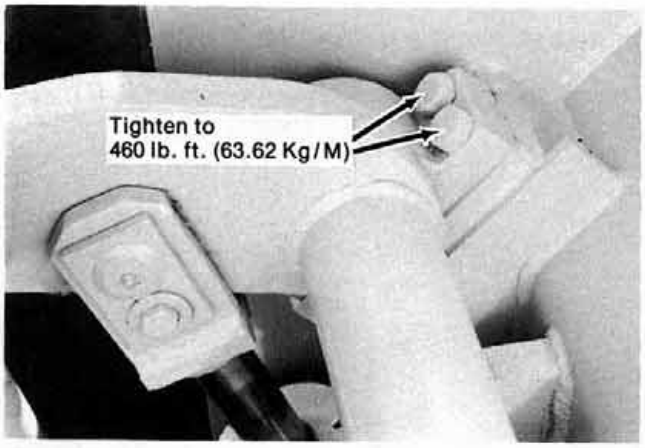
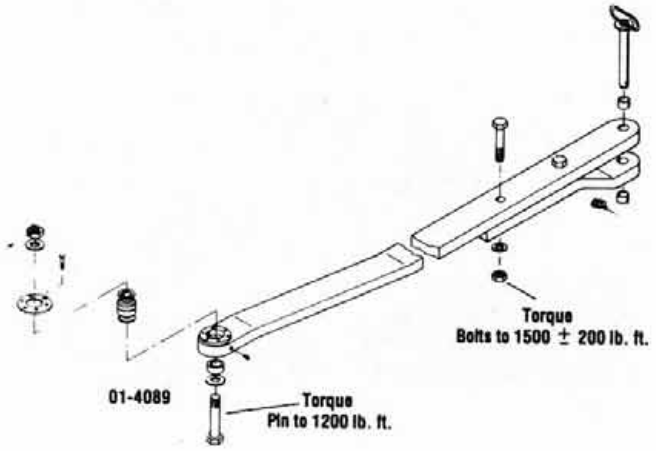


Figure 55A:

Later production pillow block bolts 7/8" torque to 460 lb. ft. (63.62 Kg/M).

DRAWBAR BOLT TORQUE



Tilt-Up Hood

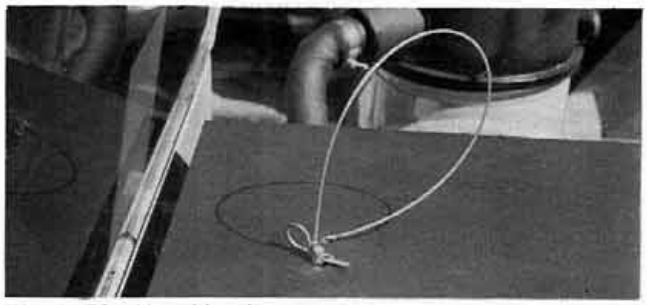
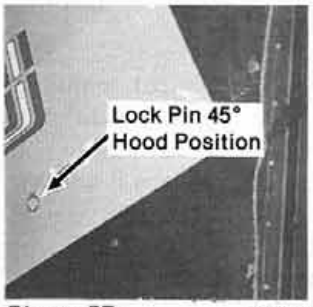


Figure 56: Hood Lock 37-0001

Hood: The Steiger Tractor has a forward tilt hood with a two position lock. The first position will lock at approximately 45°. The second position will be full forward to approximately 90°.



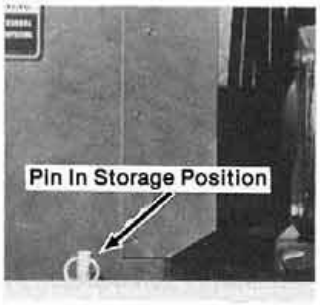


Figure 57: 37-0002 37-0003

To open hood to first position.

Remove the lock pin that is positioned in the top center of the hood near the windshield. (See Fig. 56.) While standing on the front fender, lift the hood slowly to the first lock position of approximately 45°. Install the retainer pin in the side of the hood (see Fig. 57 .) after removing it from the storage position (see Fig. 57).

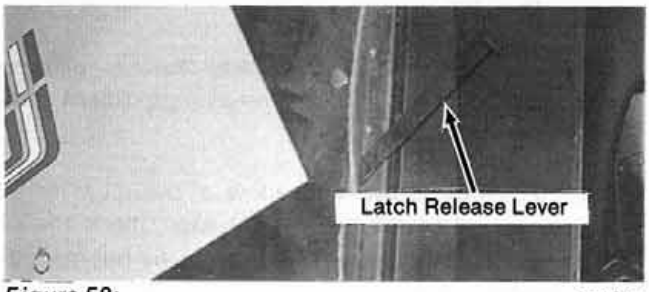


Figure 58: 37-0004

To open hood to full open position:

Lift hood slightly and pull the latch release lever beside the radiator, then tip the hood to full open. The weight of the hood will cause it to swing rapidly to the 90° position. Install the retainer pin in the side of the hood (see Fig. 59).

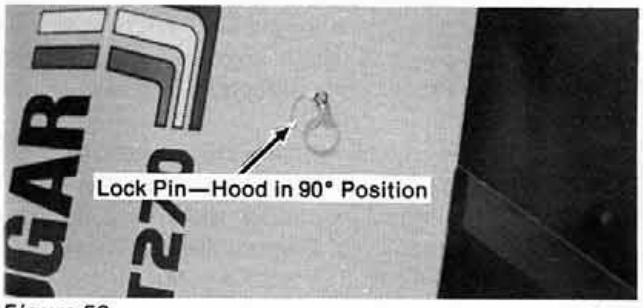


Figure 59: 37-0005

The hood may be opened to full open position to clean the condenser and perform service work on the radiator and oil coolers.

CAUTION: Do not stand in hood or on grill screen.

Closing the hood from the full open position:

Remove the retainer pin in the side of the hood. Stand in front of the tractor and lift hood toward closed position till it locks in 45° position. Then, pull the latch release lock lever located beside radiator (Fig. 58) and lower hood to closed position. Replace lock pin near windshield. Replace the retainer pin in its storage position just inside the frame (see Fig. 57).

CAUTION: The hood is heavy and should be moved slowly and under control of the operator. Keep people away from the front of the tractor when opening the hood. Stand to the side of the hood, on the steps, fender or frame area behind hood closing area when closing hood. Keep feet and hands out of the hinge area.

Oil & Filter Change, Cummins VT 903

The engine oil and filters should be changed every 100 hours. Use engine oils which meet API Classification CD or CC/CD. Proper viscosity is also important.

Drain the engine oil when the engine is warm. This will help flush most of the contaminants from the engine sump. Use a suitable container which will hold the total engine oil capacity. Replace the drain plug and torque it to 60-70 lb.-ft. (8.3 to 9.6 Kg/M).

Figure 60: 19-0007

Use a filter wrench to remove the spin-on, throw-away type filter from the engine. Wipe the filter bases clean and be certain that old filter gaskets are removed from the filter bases. Fill the new filter elements with oil (oil the rubber seal ring also). Spin the filter on until the seal contacts the base, then tighten it an additional 1/2 to 3/4 turn.

Lubricating Oil By-Pass Filter, Frame Mounted

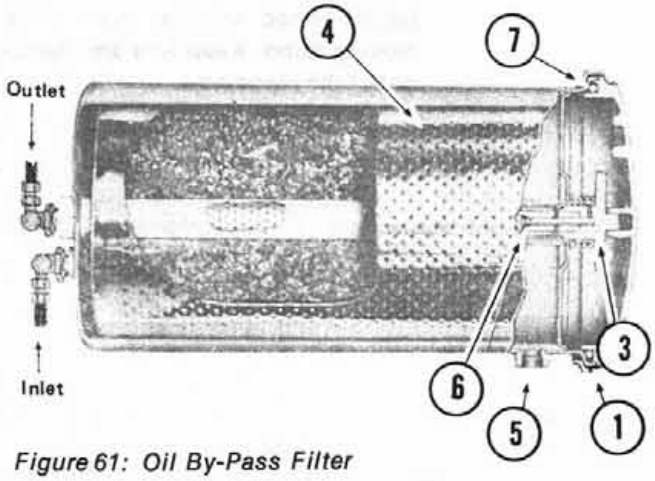


Figure 61: Oil By-Pass Filter

1. Drain the frame mounted by-pass filter assembly. Remove the drain plug (5).

2. Remove clamping ring capscrew (1) and lift off cover.

3. Unscrew upper support hold-down assembly (3); lift out element (4) and hold down assembly. Discard element.

4. Clean housing and hold-down assembly in solvent.

5. Inspect hold-down assembly spring and seal. Replace if damaged.

6. Inspect drain plug and connections. Replace if damaged.

7. Check orifice plug (6) inside oil outlet connection or standpipe; blow out with air jet to make sure orifice is open and clean.

8. Check filter cover O-Ring (7). Replace if damaged or deteriorated.

9. Install new element in housing.

10. Replace upper support hold-down assembly in filter and tighten down to stop.

11. Position O-Ring seal on housing flange.

12. Install cover and clamping ring; tighten capscrews until clamping lugs come together.

Fill the crankcase to the full level. Observe the dipstick. Start the engine and run at low idle while checking for oil leaks.

NOTE: *It is very important to visually check for oil leaks after each oil change and/or filter change. Check while running at low idle.*

Shut the engine down and allow a minimum of 15 minutes for oil to return to the sump. Check the oil level and add as required to bring oil to the full mark on the dipstick.

Crankcase Breather Assembly (Cummins)

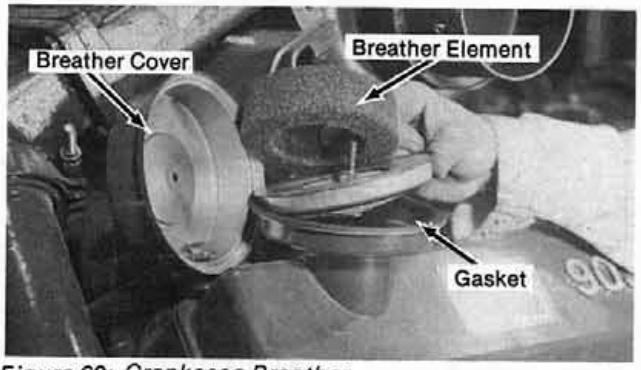


Figure 62: Crankcase Breather 19-0008

1. Remove ring nut, flat washer and rubber washer securing cover, breather element and vapor element to breather body.
2. Lift off cover and lift out breather element, vapor element and gasket.

CLEANING AND INSPECTIONS

1. Clean all metal and rubber parts in approved cleaning solvent.
2. Dry thoroughly with compressed air.
3. Inspect rubber gasket, replace if necessary.
4. Inspect elements; make sure screens are not ruptured.
5. Inspect body and cover for cracks, dents or breaks, discard all unserviceable parts. Replace as needed.

ASSEMBLY PROCEDURE

1. Install cleaned or new breather element and cleaned vapor element to breather body.
2. Install rubber gasket in cover. Position cover assembly to body.
3. Install rubber washer, flat washer and ring nut. Tighten securely.

Oil & Filter Change, Caterpillar

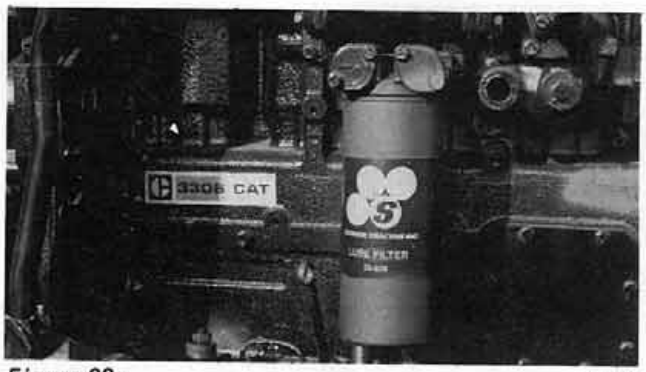


Figure 63: 19-0009

The engine oil and filters should be changed every 100 hours. Use engine oils which meet API classification CC or CC/CD. Proper viscosity is also important.

Drain the engine oil when the engine is at operating temperature. This will help flush most of the contaminants from the engine sump. Use a suitable container which will hold the total engine oil capacity. Replace the drain plug and torque it to 60-70 lb. ft. (8.3 to 9.6 Kg/M).

Use a filter wrench to remove the spin-on, throw-away type filters from the engine. Wipe the filter bases clean and be certain that old filter gaskets are removed from the filter bases. Fill the new filter elements with oil (oil the rubber seal ring also). Spin the filter on until the seal contacts the base, then tighten it an additional 1/2 to 3/4 turn.

Fill the crankcase to the full level. Observe the dipstick. Start the engine and run at low idle while checking for oil leaks.

NOTE: *It is very important to visually check for oil leaks after each oil change and/or filter change. Check while running at low idle.*

Check oil level with engine running at idle. Check the oil level and add as required to bring oil to the full mark on the dipstick.

Crankcase Breather Assembly (Caterpillar)

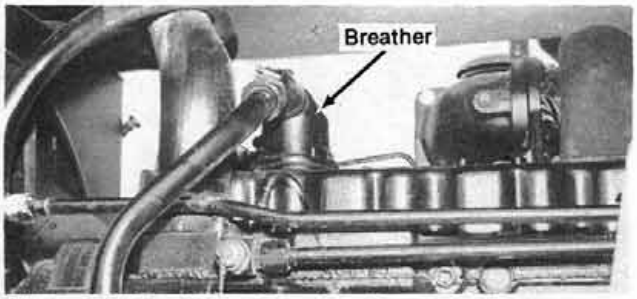


Figure 64: Crankcase Breather (Caterpillar) 19-0010

The crankcase breather assembly should be cleaned at each oil change.

1. Loosen hose clamp and remove hose from breather cap.
2. Loosen retaining nut and remove cap.
3. Wash element in clean diesel fuel and dry with compressed air.
4. Wipe inside of breather housing with a lint-free cloth.
5. Reinstall and connect the vent tube.

Check Engine Oil Level

Figure 65: 19-0011

Check oil level with dipstick oil gauge located on the engine. For accurate readings on Cummins engines, oil level should not be checked until a minimum of 15 minutes after engine shutdown. Keep oil level as near full mark as possible. Check Caterpillar engine oil level with engine running at idle.

Cooling System

Radiator Cleaning

Blow out all insects, dust, dirt and debris (leaves, bits of paper, etc.) that may be on front of radiator or lodged between radiator core fins and tubes, every 100 hours or as often as required.

Engine Cooling

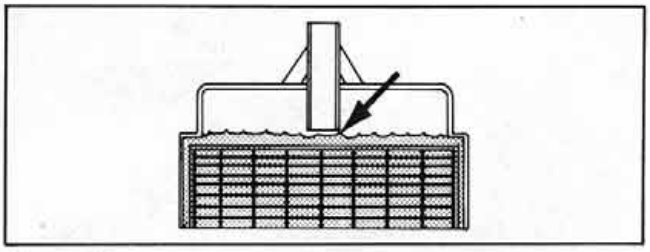


Figure 66:

Checking coolant level with engine stopped:

1. Slowly turn the filler cap to the first stop and release pressure.
2. Push the cap down. Turn until the cap is released.
3. Maintain level to base of fill pipe Fig. 66. The coolant required expansion space as it is heated.
4. Make-up coolant should be permanent type anti-freeze.

It is a good practice to check the coolant level each morning when the cooling system is not hot.

WARNING: If engine is warm, steam may spray outward under high pressure, and could cause severe burns.

Draining Radiator

Whenever it is necessary to drain the radiator for any reason:

1. Shut the engine off and allow engine to cool down.

2. Slowly turn the pressure cap to the first stop and release pressure.

3. Push the cap down and turn until the cap is released.

4. Open the drain valve on the radiator.

To clean the cooling system, any good commercial radiator cleaning solution can be used. Follow the instructions included with the cleaner. Remove thermostat when flushing system.

Recommendations For Cooling System Maintenance

Cat Engines

Correct maintenance of the cooling system is very important to keep pitting damage at a minimum. The cooling system must have a 3% to 6% concentration of corrosion inhibitor at all times for maximum protection of the cylinder block and liner surfaces. To be sure of good protection add corrosion inhibitor to the system when either water or a solution of ethylene glycol antifreeze is used as a coolant. This is necessary because not all antifreeze solutions have enough corrosion inhibitor to give acceptable protection. Also, because inhibitor strength is lost during engine operation, inhibitor must be added as soon as possible and at the earliest of these service intervals: every 3 months or 200 hours.

This 3% concentration must be maintained in cooling systems which are filled with water and systems protected with ethylene glycol antifreeze mixture, regardless of antifreeze concentration.

WARNING: INHIBITOR CONTAINS ALKALI. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Do not take internally. In case of contact, immediately wash skin with soap and water. For eyes, flush with large amounts of water for at least 15 minutes. CALL PHYSICIAN. KEEP OUT OF REACH OF CHILDREN.

IMPORTANT: *Do not use Nalcool 2000 with Dowtherm 209 antifreeze solution.*

Procedure to Install Nalcool 2000

If cooling system is drained and flushed, add 2.5 quarts (5 pints) (.473 liters) of Nalcool 2000 Steiger P/N 01-4177 to the cooling system. Maintain the correct coolant level.

Periodic maintenance: Add 1 pint every 3 months or 200 hours, whichever occurs first, to maintain the recommended 3% concentration. Drain 1 pint of coolant out of the system for each pint added. Maintain the correct coolant level.

Add coolant treatment to a cold, shutdown cooling system. Then run the engine bringing it to operating temp to circulate the additive.

IMPORTANT: *Do not over concentrate test at 1000 hours.*

COOLANT LEVEL: Check the engine coolant level daily (with engine stopped). Carefully release cooling system pressure before checking. Fill to proper level with permanent-type antifreeze and water. Use water which is free as possible from scale forming minerals (not softened water).

WARNING: If engine is warm, steam may spray outward under high pressure, and could cause severe burns.

Corrosion Resistor

CUMMINS VT903

The initial life of a corrosion resistor element on a new or rebuilt engine, or after complete change of coolant supply, is 100 hours. Maintenance periods thereafter should be done every 300 hours.

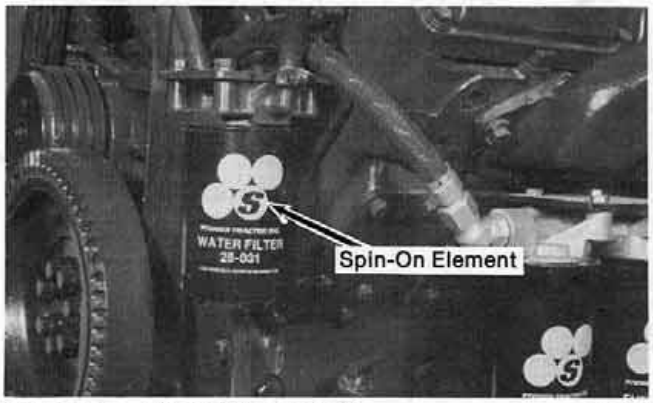


Figure 67: Corrosion Resistor 19-0012

When a cooling system is first filled with new coolant or water, an element with more than normal amount of inhibitor (precharge) is used. At the first change interval, the precharge element is removed and an element with a normal amount of inhibitor (maintenance) is then installed to keep the corrosion protection at an acceptable level. After the first change period, only maintenance elements are installed to give protection to the cooling system.

The precharge elements will give the correct charge of 1.5 to 3 ounces per gallon in the cooling system when it is filled. The maintenance elements, and the correct change periods, will keep the corrosion inhibitor in the cooling system between a maximum charge of 3.4 ounces per gallon and a minimum charge of .8 ounces per gallon for a 2,000 hour maintenance period.

The cooling system should be drained, chemically flushed and properly pre-charged after 2,000 operating

hours or every two years, whichever happens first. The system may be precharged with a precharge element or a service element and DCA chemical. This will prevent salt deposits in the cooling system caused by the evaporation and addition of water to the system.

To ensure adequate corrosion protection, the coolant should be checked at each third element change, annually or more often. The level of the chemical can be adjusted by adding DCA as required. Your Steiger Dealer has access to a DCA Test Kit. Have him test your cooling system at regular intervals.

Before an element is installed, make sure it is the correct element for that application. The elements have the part number on them for easy identification.

WARNING: Hot coolant will cause burns. Change elements only when the coolant is cold. Before the elements are removed, close the inlet and outlet valves to prevent the loss of coolant.

NOTE: *Whenever coolant supply is changed (spring or fall), the system must be drained and flushed.*

To change the spin-on element:

1. Relieve system pressure by loosening the cap.
2. Close filter inlet and outlet valve.
3. Unscrew element and discard.
4. Install new element; set the rubber seal ring; tighten until seal touches filter head. Tighten an additional 1/2 to 3/4 turn.

Belt Tension Adjustments—Cummins

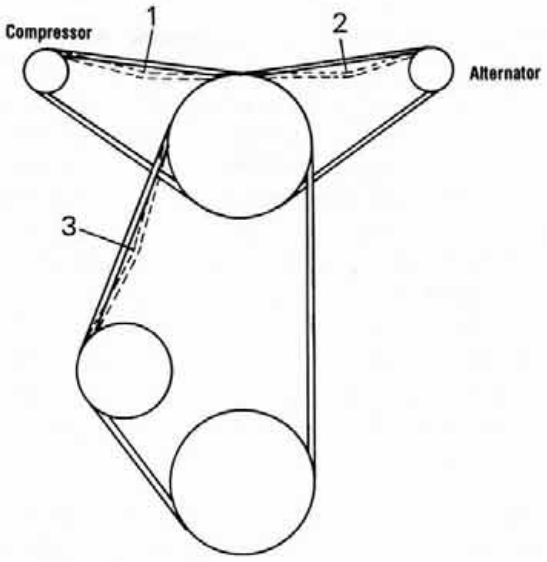
All driven assemblies must be secured in operating position before reading or judging belt tension.

1. Always shorten distance between pulley centers so belt can be installed without force. Never roll belt over the pulley and never pry it with a tool such as a screwdriver. Either will damage belts and cause early failure.

2. Replace belts in complete sets. Belt riding depth should not vary over 1/16 (1.59 mm) on matched belt sets.

3. Pulley misalignment must not exceed 1/16 inch (1.59 mm) for each foot (0.3 m) of distance between pulley centers.

4. Belts should not bottom on pulley grooves nor should they protrude over 3/32 inch (2.38 mm) above top edge of groove.



CUMMINS 903

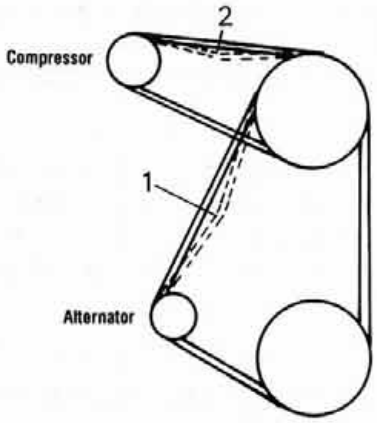
1. 5/8" (1.57 cm) deflection with 25 lb. (11.3 Kg) load.
2. 9/16" (1.42 cm) deflection with 25 lb. (11.3 Kg) load.
3. 7/8" (2.23 cm) deflection with 25 lb. (11.3 Kg) load.

Belt Tension Adjustments—Cat Engines

1. Check belts for excess wear, fraying and cracking.

NOTE: *When belt replacement is necessary, belts must be replaced in complete matched sets. Never replace a single belt as the new belt will carry all of the load and fail rapidly.*

2. Apply a 25 lb. (10 kg) force perpendicular to the belt, midway between the driver and driven pulley. Belt deflection should be 9/16" to 13/16" (15-20 mm). Adjust the belt tension as required.



CATERPILLAR 3306

1. 7/8" (2.23 cm) deflection with 25 lb. (11.3 Kg) load.
2. 5/8" (1.57 cm) deflection with 25 lb. (11.3 Kg) load.

Fan Hub Lubrication

(Cummins)

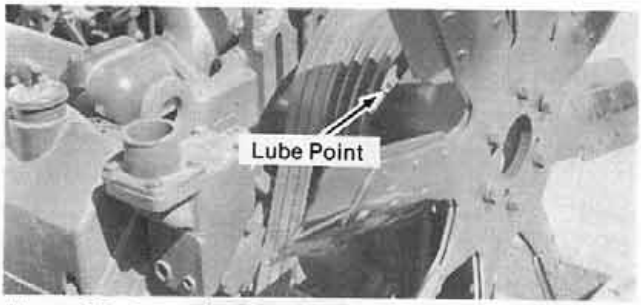


Figure 68: Cummins Fan Hub 19-0013

1. Remove pipe plugs (1 on each side of hub). Install grease fittings in fan hub. Give one shot once a year.

2. After greasing fan hub, remove grease fitting and install pipe plugs.

3. Every 2 years or 4000 hours the fan hub should be removed and bearings inspected. Replace bearings if necessary and repack. See your Steiger Dealer.

(Caterpillar)

Grease fan hub fitting every 1000 hours.

Figure 69: Caterpillar 3306 Series Fan Hub 19-0014

Every 1 year or 2000 hours, fan hub should be removed, bearings inspected and replaced if necessary. See your Steiger Dealer.

Cummins Water Pump Service

Every 2 years or 4000 hours, rebuild and repack with correct grease, or install new water pump assembly.

Fuel Tank

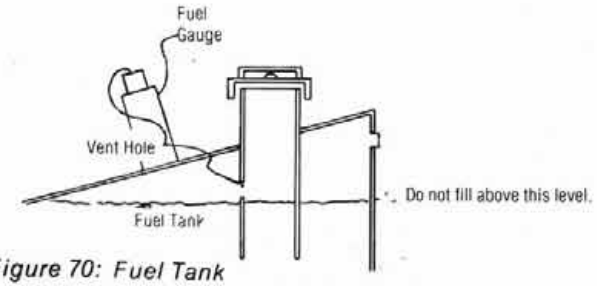


Figure 70: Fuel Tank

Fill tank only to the level of the vent holes located on the inside of the filler tube. The vent hole allows for fuel expansion. Filling beyond the vent hole may force fuel into the engine through the return line.

The fuel tank is fitted with a float type gauge. The approximate amount of fuel in the tank (calibrated in gallons) is visible through the gauge window. Both the gauge window and the vent hole on top of the unit should be cleaned daily.

IMPORTANT: *Use clean fuel, use clean fuel storage tanks, clean service tanks and clean fill equipment.*

Extreme Cold Weather Operation

Precautions for the proper selection of diesel fuel can prevent engine stalling and/or hard starting in severe cold weather. Number 2D grade diesel fuel is normally preferred because of higher heat value, which consequently produces more power. When encountering extreme cold conditions, number 2 grade fuels tend to become more resistant to flow. Points of flow restrictions are usually the fuel supply lines and fuel filter cartridges. A situation where the ambient temperature remains below 32°F (0°C) can be remedied with the use of number 1D grade of diesel fuel. In many areas it can be practical to use a blend of numbers 1 and 2 grade diesel fuels.

Whatever the type of fuel used, it must meet specifications given by the engine manufacturer. See Engine Specifications.

Fuel Drain

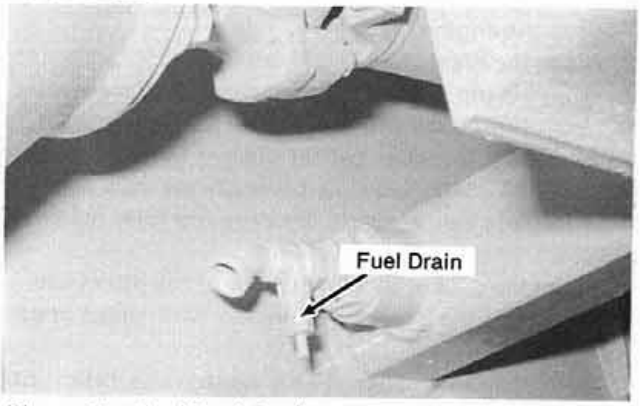


Figure 71: Fuel Tank Drain 41-0001

Drain sediment from fuel tank daily. Loosen gate valve at bottom of fuel tank and drain out any accumulated water and sediment. Tighten gate valve.

Fuel Filter Service (Cummins)

Figure 72: Cummins Fuel Filter Location 41-0002

To change filter follow this procedure:

1. Unscrew combination case and element; discard.
2. Fill new filter with clean fuel.
3. Install filter; tighten by hand until seal touches filter head. Tighten an additional 1/2 to 3/4 turn.

IMPORTANT: *Mechanical tightening will distort or crack filter head.*

Fuel Filter Service (Caterpillar)

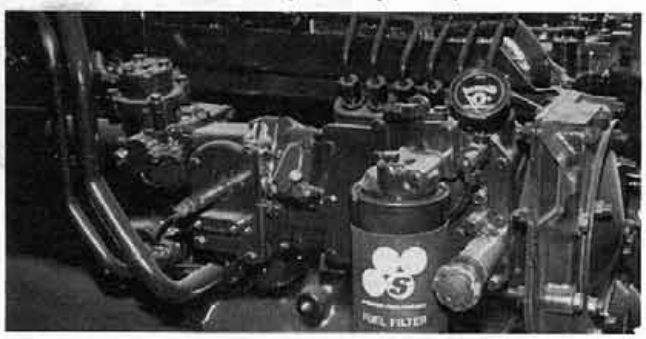


Figure 73: Fuel Filter Location Caterpillar 41-0003

To change filter, follow this procedure:

1. Stop the engine.
2. Close the diesel fuel supply valve.
3. Wipe the top of the filter element and filter base.
4. Unscrew and remove the filter.
5. Be certain the filter gasket did not remain attached to the filter base: Leaking between the new and old filter baskets would result. Be sure old filter gasket is removed.
6. Clean the gasket sealing surface of the filter base.
7. Lubricate the new filter gasket with clean diesel fuel.
8. Install the new filter: Hand tighten the filter until gasket contacts base, and then give an additional 1/2 to 2/3 more turn.
9. Open the fuel supply line valve.
10. Open the vent valve on the fuel pump housing.

IMPORTANT: *Operate the primary pump only after the vent valve has been opened.*

11. Turn the pump counter-clockwise from the locked position.

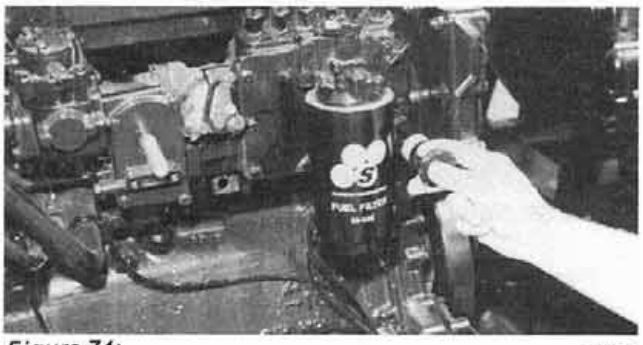


Figure 74: 19-0015

12. Operate the fuel priming pump with rapid strokes until the stream of fuel pumped out is free of air bubbles.
13. Push in on the pump and turn clockwise to lock the pump in the locked position.

Figure 75: 19-0016

19-0017

14. Close the vent valve on the fuel pump housing.
15. Start the engine.
16. If the engine misfires or smokes, loosen a fuel injection line nut. Allow the fuel to flow until free of air bubbles.
17. Tighten the line nut; open the next line nut.
18. Vent each fuel line in similar manner until the engine is running smoothly.

Transmission & Transfer Case

General Information

The transmission and transfer case share the same oil supply from the integral reservoir on the bottom of the transfer case. Oil is pumped through the oil cooler, then distributed to the transmission and transfer case. After the transmission is filled, the oil level is automatically maintained and this excess oil is returned by gravity to the transfer case reservoir. Whenever draining the system, follow the oil changing and refilling instructions in this section.

Oil Level Check and Fill Port

The oil level should be maintained near the full mark on the dipstick.

The oil level must be checked daily. The tractor should be parked on a level surface and the engine stopped.

IMPORTANT: *Do not overfill the reservoir.*

TRANSMISSION DRAIN PLUG

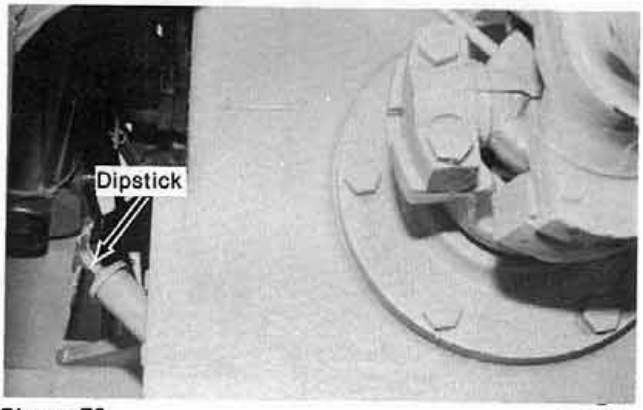


Figure 76: 34-0002

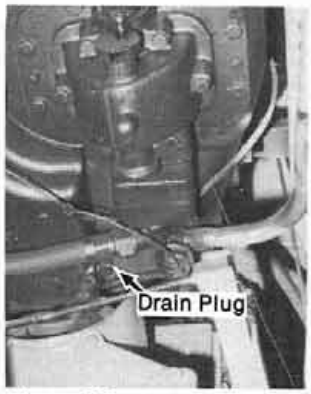


Figure 77: 27-0001

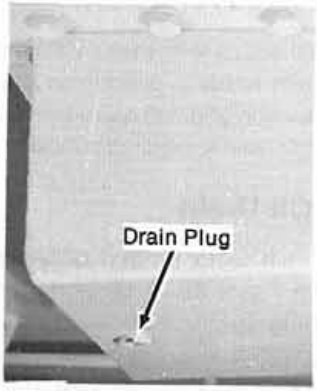


Figure 78: 34-0001

When draining transmission and transfer case, be sure engine is stopped and oil is warm. Remove drain plug, and allow ample time for oil to drain completely out. Refer to refilling procedure to refill transmission and transfer case. Inspect and clean the magnetic drain plugs.

CHANGING OIL FILTER

Unscrew filter from base, and wipe base clean. Be sure old rubber gasket is removed. Lubricate new filter gasket with clean oil. Tighten filter by hand until gasket contacts base and tighten 1/2 turn more. If transmission was drained, refill and check filter for leaks.

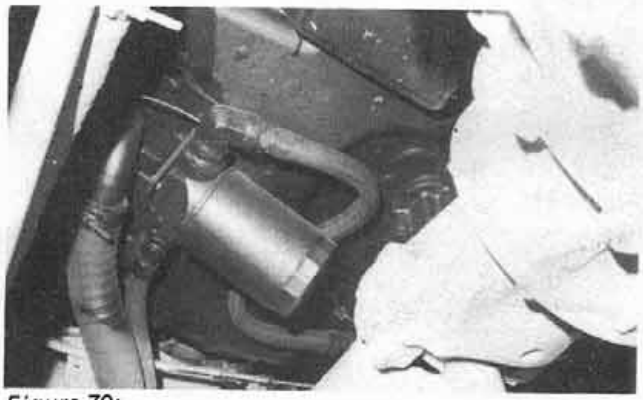


Figure 79: 29-0001

REFILLING SYSTEM

Be sure all drain plugs are tight. Fill the transfer case reservoir. The transmission range lever must be engaged. With transmission in neutral and range selector engaged, start engine and allow it to idle for 5-10 minutes. Recheck the oil level of the reservoir, and add oil to compensate for the oil which went to the transmission and transfer case.

NOTE: *Monitor the transmission light during the above procedure and if it illuminates, stop the engine, check reservoir and refill if necessary.*

IMPORTANT: *Transmission Hi-Lo range selector must always be engaged when allowing engine to idle.*

Axle Assembly—S-34

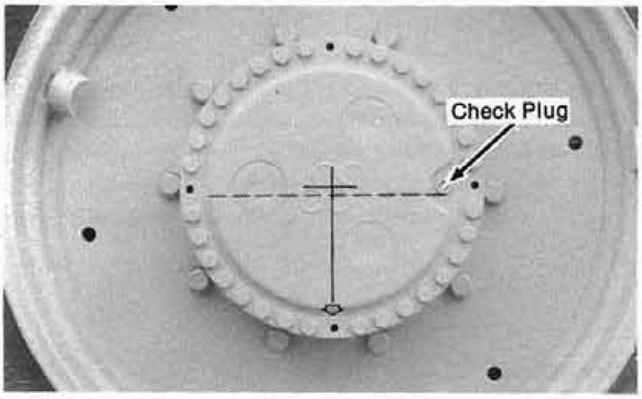


Figure 80: 56-0002

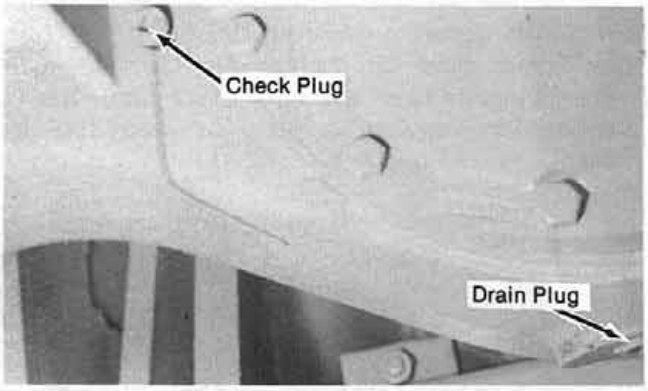


Figure 81: 56-0003

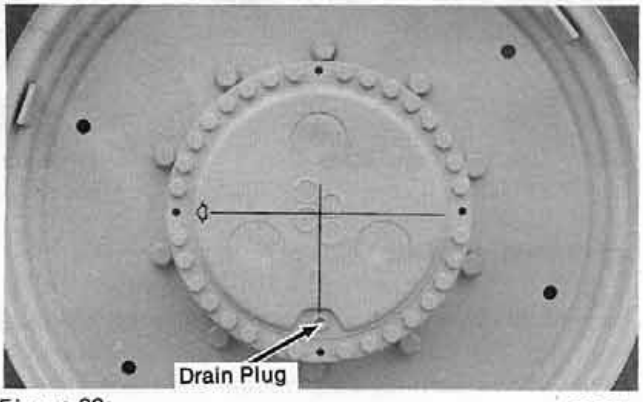


Figure 82: 56-0004

Oil Level Check And Fill

Check oil every 100 hours. Park tractor on level ground with wheel in position as shown in Figure 80. Check center section (Fig. 79) and wheel hub (Fig. 75). Oil can be added at this time if required. Check vents.

Oil Drain

Park tractor on level ground with wheel in position as shown in Figure 82. Drain center section (Fig. 81) and wheel hub (Fig. 82).

NOTE: *Axles should be drained when lubricant is warm.*

Axle Assembly—598

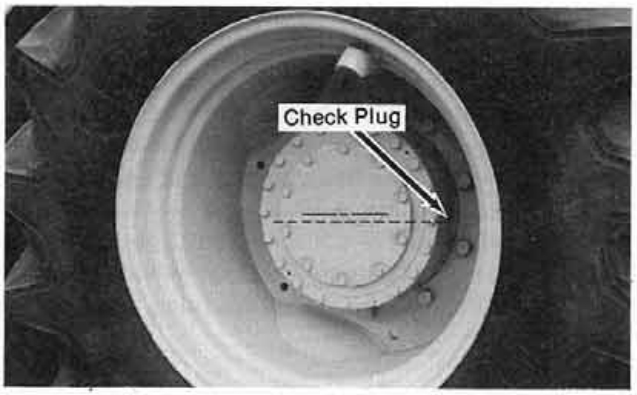


Figure 83: 30-0001

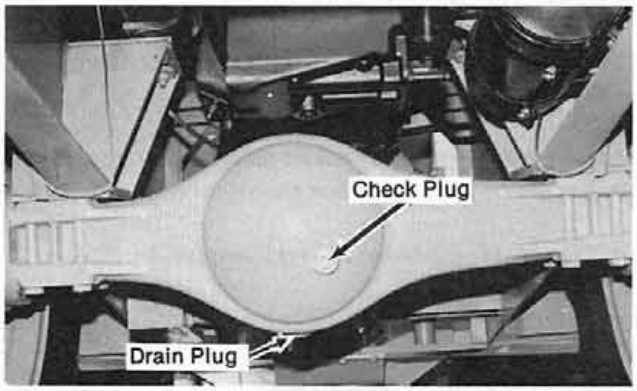


Figure 84: 30-0002

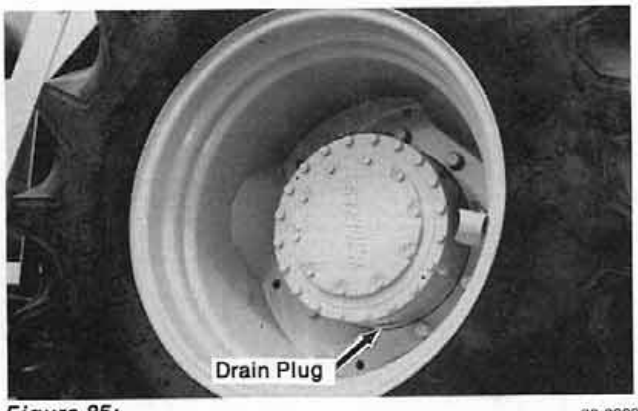


Figure 85: 30-0003

Oil Level Check And Fill

Check oil level every 100 hours. Park tractor on level ground with wheel in position as shown in Figure 83. Check center section (Fig. 84) and wheel hub (Fig. 83). Oil can be added at this time if required. Check vents.

Oil Drain

Park tractor on level ground with wheel in position as shown in Figure 85. Drain center section (Fig. 84) and wheel hub (Fig. 85).

NOTE: *Axles should be drained when lubricant is warm.*

Clutch System

Lubrication

Apply high temperature grease (see Lubrication Specifications) to the clutch release bearing every 10 hours. Lube the clutch release shaft every 100 hours.

Fluid Reservoir Level Check

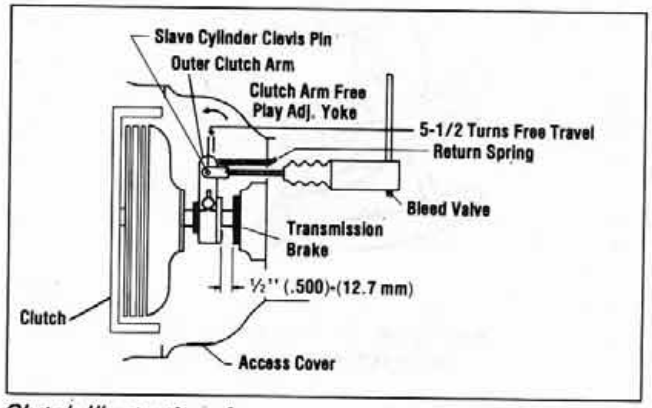
Maintain the clutch fluid reservoir level 1/4 inch from the lower edge of the fill port. Brake fluid is recommended for this application. Also refer to Specifications section.

Internal Clutch Adjustment Check

The Internal Clutch Adjustment must be performed whenever adjustments are required to compensate for wear. The external linkage is adjusted at the factory and rechecked on pre-delivery and should not require adjustment thereafter unless it has been disturbed.

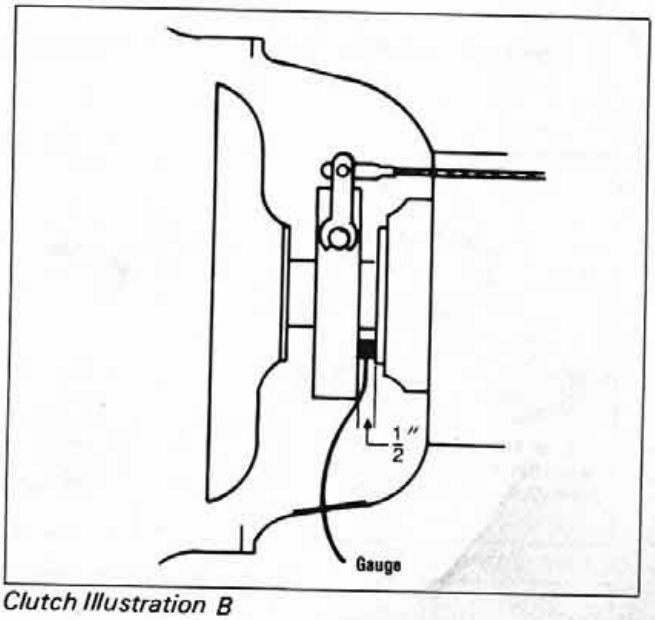
To Check Clutch Adjustment

1. Remove switch key.
2. Remove access plate cover from flywheel housing.



Clutch Illustration A.

3. Disconnect clutch outer arm return spring and remove slave cylinder clevis pin. See Illustration A.



Clutch Illustration B

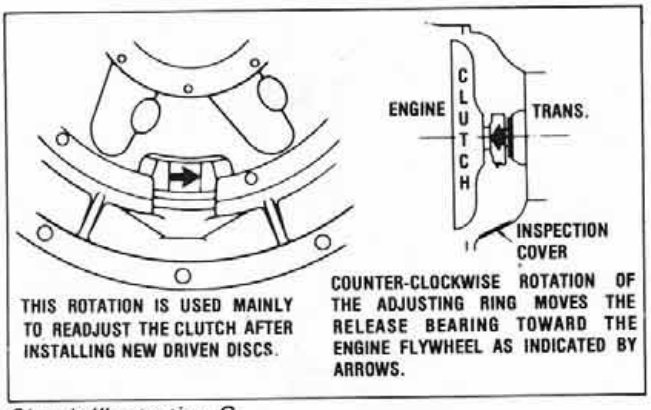
4. Rotate outer clutch control arm forward (counter-clockwise) by hand until a slight resistance is felt to remove any slack in the release bearing carrier; at this point the distance between the rear face of the release bearing and the front of the transmission brake disc must be 1/2 inch (.500 inch) (12.7 mm). A thickness gauge may be fabricated by welding a 1/2 inch (.500 inch) (12.7 mm) round stock to the end of a 13" (330 mm) x 1/8 inch (.125 inch) (3.17 mm) wire rod bent to the desired shape to check the clutch clearance. See Illustration B. If it is determined that an internal clutch adjustment is required, continue on to the Internal Clutch Adjustment procedures. If it is found this dimension is correct, proceed to External Linkage Adjustment.

NOTE: *Normally you adjust the clutch ring, not the linkage on the Steiger Clutch. Measurements are made with the clutch assembly engaged and bearing carrier slack removed.*

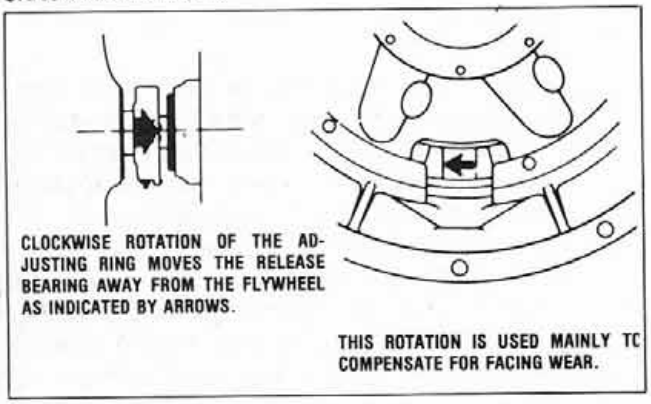
Internal Clutch Adjustment

1. Remove switch key.

2. Remove the access plate cover from the flywheel housing.



Clutch Illustration C



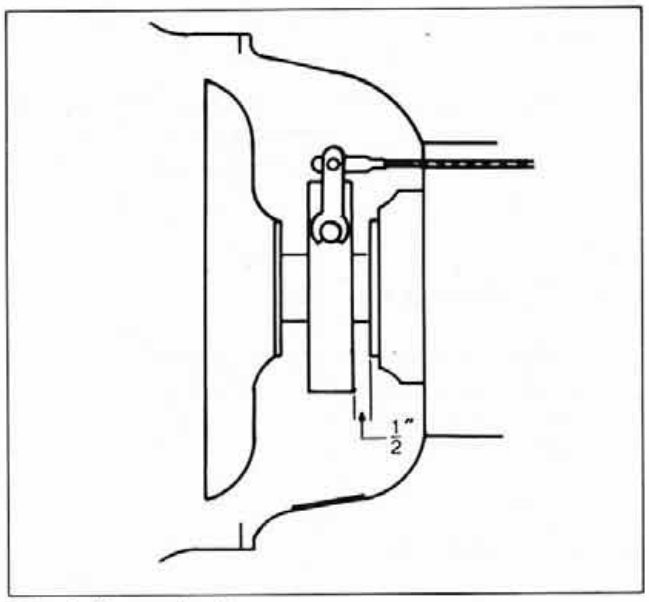
Clutch Illustration D

3. Turn the clutch with a bar until the lock is in the center of the opening. See Illustration C.

4. Remove the adjusting ring lock strap.

5. Depress the clutch pedal completely and use a large screwdriver or other bar to move the adjusting ring.

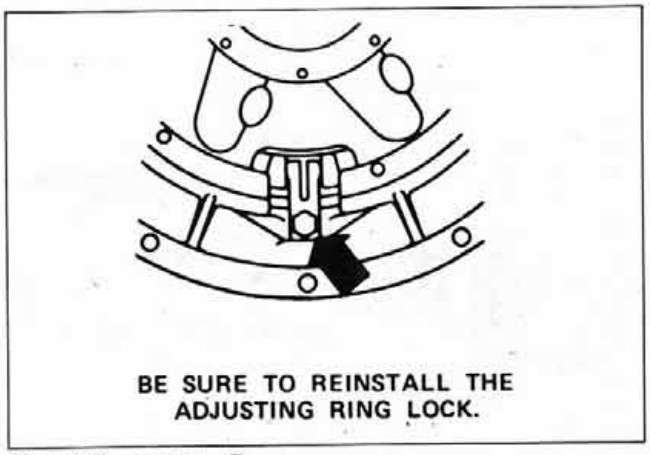
NOTE: *Turning the adjusting ring clockwise moves the bearing toward the transmission and turning the ring counter-clockwise moves the bearing away from the transmission. See Illustrations C & D. The clutch must be "released" to turn adjusting ring.*



Clutch Illustration E

6. After checking the adjustment using the procedures given in Checking Clutch Adjustment section of this manual, the distance between the rear face of the release bearing and the front of the transmission brake must be 1/2 inch (.500 inch) (12.7 mm). See Illustration E. Repeat step 5, if proper adjustment has not been obtained.

NOTE: *Under normal conditions it is only necessary to turn adjusting ring 3 to 5 notches in either direction to obtain the correct adjustment. Remember all measurements are taken with the clutch assembly engaged and the slack removed from bearing carrier.*



Clutch Illustration F

7. Replace the adjusting ring lock and bolt. See Illustration F.

8. Replace the access cover.

9. Check linkage adjustment as described in Clutch External Linkage Adjustment Section below.

10. Replace clutch outer arm return spring if previously removed.

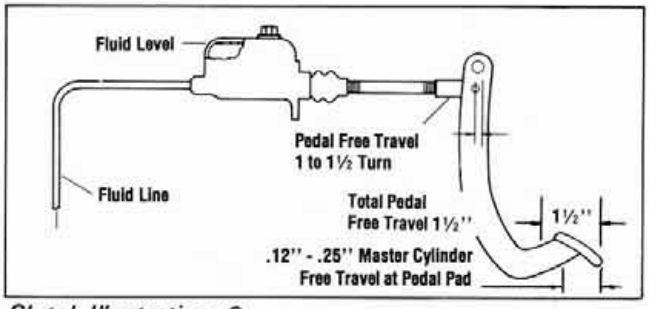
IMPORTANT: *The above instructions must be followed to prevent premature clutch wear and to properly adjust the clutch.*

NOTE: *During the break-in period, the clutch discs tend to expand rather than wear. When expanding occurs, adjust by moving adjusting ring counter-clockwise rather than the usual clockwise direction.*

Clutch External Linkage Adjustment

The clutch master cylinder is located on the front of the cab under the hood. The slave cylinder is located on the left hand side of the transmission. After making the internal adjustment to the clutch, it is important to check the linkage between the clutch pedal and master cylinder and between the slave cylinder and clutch outer lever.

NOTE: *Be sure master cylinder is full of fluid. Use approved brake fluid.*



Clutch Illustration G

1. Loosen jam nut on the clutch pedal to master cylinder push rod 1/2 turn and check if push rod feels loose. If it does, retighten the jam nut.

2. The pedal should have .12" (3.04 mm) to .25" (6.3 mm) master cylinder free travel—check with your hand so that you can feel the free play in the push rod. Free travel means movement of the pedal before moving the master cylinder plunger. This free travel is extremely important to ensure that the master cylinder piston is not partly stroked. See illustration G.

3. If you do not find correct free travel, loosen the jam nut and unscrew rod until it contacts the piston in the master cylinder, then turn the rod back into the clevis yoke two turns and tighten the jam nut.

NOTE: *Be sure to hold push rod from turning while tightening jam nut.*

NOTE: *It is EXTREMELY IMPORTANT that the piston in the slave cylinder be fully retracted when making the clutch outer arm and slave cylinder adjustment. Opening the bleeder screw on the slave cylinder for an instant will help ensure full retraction. Be sure rod remains fully seated in slave cylinder piston, and bleeder valve is closed.*

Rotate the clutch outer arm counter-clockwise (forward) until a slight resistance is felt. Loosen the jam nut on the rod between the clutch lever and the slave cylinder. Unscrew the rod from the clevis until it contacts the slave cylinder piston. From this position, screw the rod 5-1/2 turns back into the clevis and tighten the jam nut. This adjustment will result in approximately 1/8 inch (.125 inch) (3.17 mm) internal clearance between the tips of the release yoke and the pads on the release bearing. See Illustration A.

After making the master cylinder free travel adjustment and the slave cylinder adjustment, this will result in approximately 1-1/2" (1.500 inch) (38.10 mm) total pedal free travel through the linkage. See Illustration G.

IMPORTANT: *Periodic checks should be made to insure that clutch outer arm and slave cylinder return spring is in place.*

Service & Maintenance

Brake System

Fluid Reservoir Level Check

Maintain the brake fluid reservoir level 1/4 inch from the lower edge of the fill port. Use only motor vehicle brake fluid for the application. Refer to Specifications section.

Brake Adjustments

When the brake disc clearance exceeds 0.120 inch (3.04 mm) in the relaxed position, the slave cylinder linkage should be adjusted to remove excess clearance. Loosen the nut on the slave cylinder push rod and turn the push rod counter-clockwise to extend it. Extend the linkage (Fig. 86) until a thickness gauge 0.090 inch (2.29 mm) slides freely between the actuator and the disc behind the actuator (Fig. 87). Operating clearance must not be less than specified as brake overheating may result. Adjustment of the hydraulic brake must be performed with the park brake in the OFF position to provide the relaxed position.

Check the actuator gap (Fig. 88) with the brake held in the applied position using the park brake. If this dimension is .200 inch (5.08 mm) or more, remove shims from the support pins if so equipped. If not equipped with shims, disc replacement is necessary. Contact your Steiger Dealer.

Normally the removal of ONE shim from each pin is sufficient to restore the brake to the optimum working range. There are a total of five (5) shims on each pin that can eventually be removed. At no time should the shim removal result in a disc clearance of less than specified. Be sure that each pin has an equal amount of shims. Dowel pins can be used to hold the shims in place while installing the outer brake plate. Remove the dowel pins one at a time and reinstall the capscrews, then torque to 58 lb. ft. (8.02 Kg/M).

After shim removal and reassembly are completed, the disc clearance must be readjusted to 0.090 inch (2.29 mm) in the relaxed position.

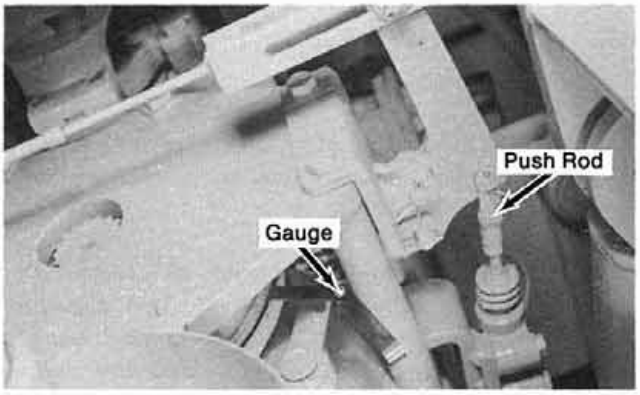


Figure 86:

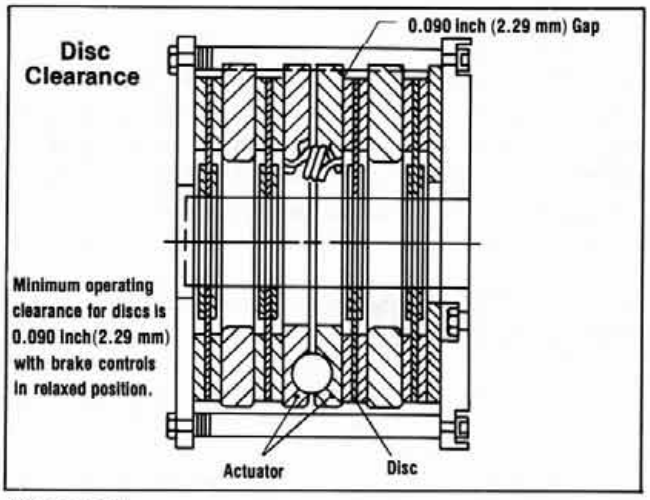


Figure 87:

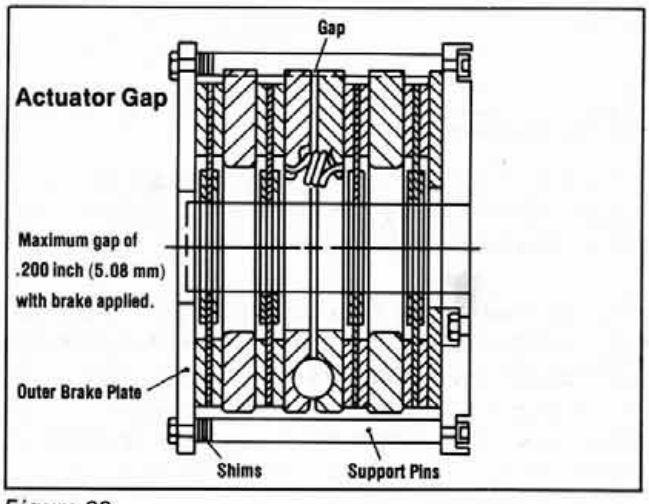


Figure 88:

Air Conditioner Maintenance

General Information

The air conditioner cooling system in your Steiger is a sealed refrigeration system designed to transfer heat from the cab air to the outside air in hot weather. The heater is designed to transfer heat from the engine coolant to the cab air in cold weather.

In either case the heat transfer is accomplished by blowing a mixture of cab air and outside air over the fins of the evaporator (in the case of cooling) and the fins of the heater core (in the case of heating) and circulate the air throughout the cab through the louvers in the console.

To get the best heat transfer, it is necessary to keep the fins of the system clean. Dirt acts as an insulator which lowers the efficiency of the system.

Maintenance Procedure

CONDENSER

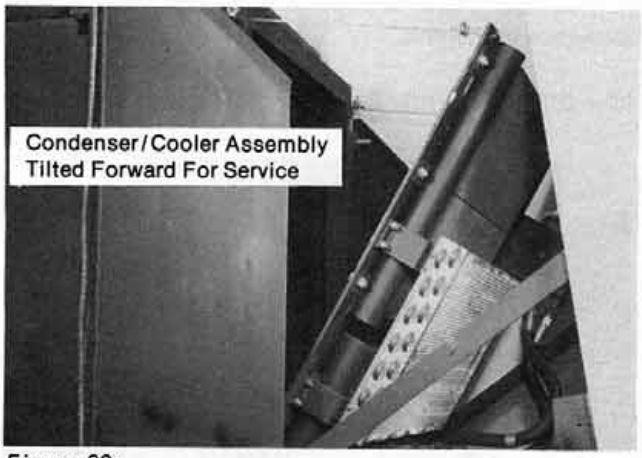


Figure 89: 09-0002

Blow dirt and debris from the condenser in front of the radiator. Swing the condenser and oil cooler out from the front of the radiator and blow toward the front side of the fins to remove dirt. The condenser must be clean to effectively transfer heat to the same air passing through the fins.

SWITCH OPERATION

Check the contact between the A/C lever and the micro-switch located inside the A/C lever slot on the left hand end of the slot. The A/C lever must keep the micro-switch engaged for cooling.

WARNING: Do not attempt to check the compressor oil while the unit is charged for it is pressurized and may result in injury. Contact your Steiger Dealer for air conditioning service.

Door Lock Mechanism Maintenance:

Door locks should be lubricated as required for proper operation. Use Molykote 321R, Steiger P/N 01-6682. Spray the complete lock mechanism.

Doors should be checked for proper working order and latching ability at this time.

If adjustments to the doors or latches should be required, contact your local Steiger Dealer for service.

PTO System

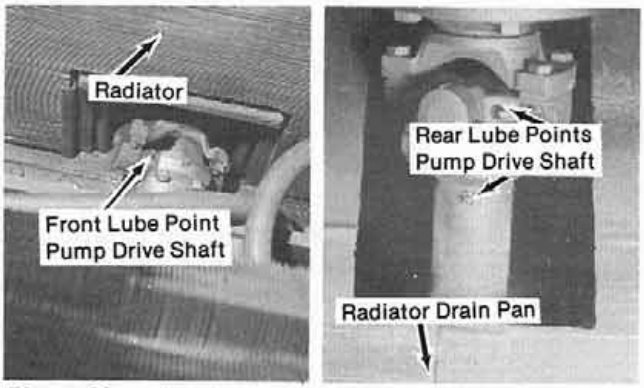


Figure 90: 65-0001 65-0002

PUMP DRIVELINE

The hydrostatic pump driveline has two U-joints and one slip joint (see Tractor Service Guide) which require lubrication. The rear U-joint and slip joint are accessible beneath the radiator assembly. The front U-joint is accessible after tilting the oil cooler forward.

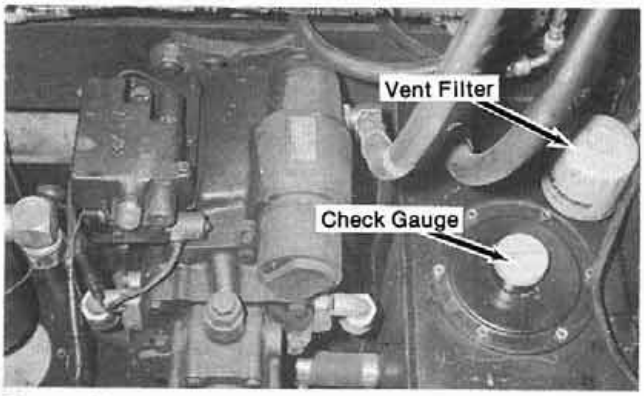


Figure 91: 60-0001

HYDROSTATIC RESERVOIR OIL LEVEL

The hydrostatic reservoir oil level must be checked daily and should be maintained at the full mark of the dipstick with the engine stopped.

CAUTION: Remove the dipstick/cap assembly slowly to relieve pressure.

HYDROSTATIC RESERVOIR VENT AND FILTER ASSEMBLY

The vent filter cartridge should be replaced every 1000 hours of operation.

The breather vent valve should be removed and cleaned in solvent and inspected for corrosion. Reinstall the vent valve.

HYDROSTATIC SYSTEM FILTER

The hydrostatic oil filter should be changed at 100 hours on a new machine and every 500 hours thereafter. The oil filter head is filtered with a gauge to measure filter restriction due to clogging. The gauge is calibrated in "Inches of mercury" (and "Bars") negative pressure (commonly referred to as "suction"). Either scale can be used. Observe the gauge when the oil has reached normal operating temperature. If the filter is restricted enough to cause the gauge to read more than 6 inches of mercury (or .2 Bars), the filter must be replaced. This should be done occasionally between normal oil and filter changes to ascertain optimum performance of the unit.

(See Oil and/or Filter Changing Procedures.)

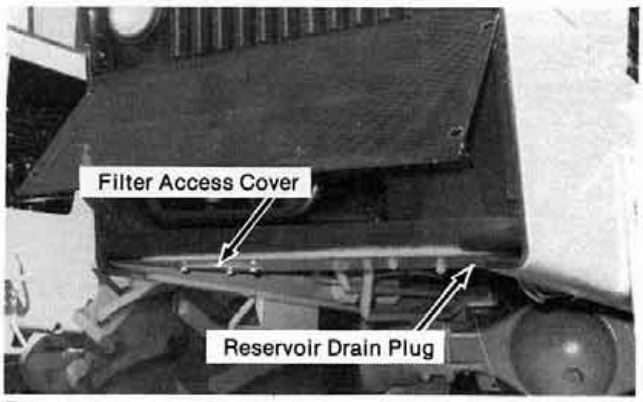


Figure 92: 60-0002

OIL AND/OR FILTER CHANGING PROCEDURES

Remove the grill screen and relieve the oil reservoir pressure. Then proceed to remove the reservoir drain plug (Fig. 92) and drain the oil into a container which will hold the total capacity of the reservoir and filter. It is recommended that the oil be warm before it is drained. When oil has been completely drained, reinstall the drain plug.

IMPORTANT: *Do not drain pump and/or motor cases.*

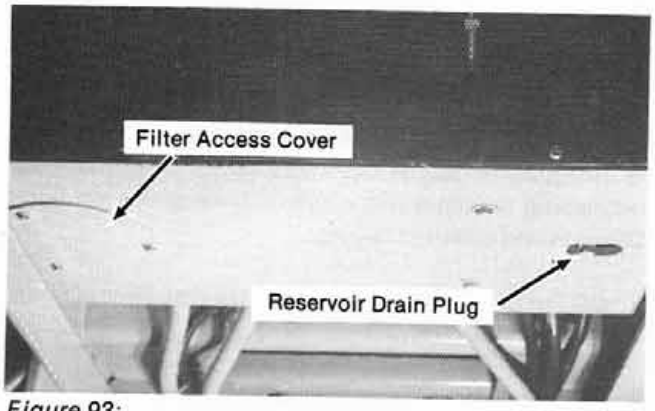


Figure 93: 60-0002

Remove the filter access cover (Fig. 93), located under the filter housing on the front frame/grill cavity. If necessary, clean dirt and debris from the filter housing and head before removing the filter. Remove the filter housing from the filter head and discard the used filter element. Clean the center bolt and filter housing in clean solvent and blow dry with compressed air. Discard the used seal rings and install the new seal rings furnished with the oil filter element. Wipe the filter head seal area clean with a clean shop towel and install the new element into the filter housing and bolt assembly.

Carefully fit the entire housing, bolt and element to the filter head and tighten. Reinstall the filter access cover.

IMPORTANT: *Improper fit of the seal rings can cause air suction leakage into the oil system upon start-up. Be absolutely sure to avoid air suction leaks into the hydrostatic system.*

Fill the oil reservoir to the full mark of the dipstick.

Start the engine and run only at low idle for 5 minutes to purge air from the system. Increase engine speed to approximately 3/4 throttle and move the PTO command lever fully forward (with PTO dash switch "on") and operate in this mode for several minutes. Return the PTO command lever to neutral, then to reverse and operate in this mode for several minutes. At this time stop the engine and refill the oil reservoir to the full mark of the dipstick. Check for oil leakage and/or air suction leaks. If other than forementioned services is required on the PTO system, see your Steiger Dealer.

HYDROSTATIC OIL COOLER

The hydrostatic oil cooler requires a free flow of air in order to adequately dissipate heat from the oil. After opening the tilt-up hood to the full open position (see

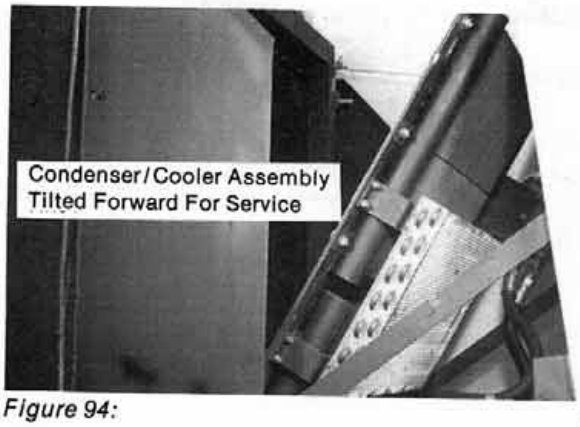


Figure 94: 66-0001

Tilt-Up Hood), it is possible to tilt the condenser and oil cooler assemblies forward after removing the wing nuts on both sides of the oil cooler mounting brackets.

Use compressed air to blow dirt and debris from the oil cooler fins, in the reverse direction of normal air flow. After cleaning, secure the unit into its original position.

CHAIN CASE OIL LEVEL

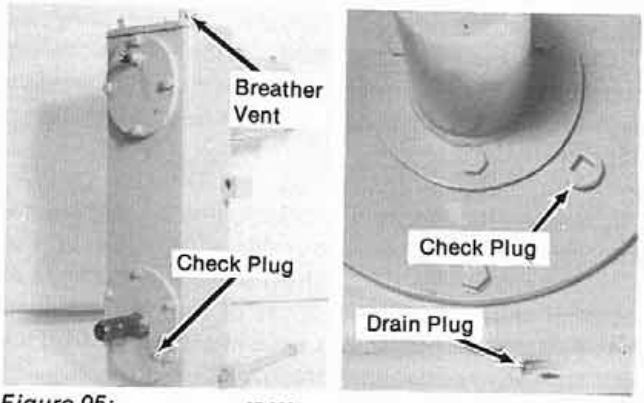


Figure 95: 67-0001 67-0002

Maintain the chain case oil level to the lower edge of the check/fill port (Fig. 95). Do not overfill with oil as it may be expelled through the breather vent because of excessive agitation.

CHAIN CASE DRAIN AND CHAIN CASE VENT

The chain case oil must be drained at 100 hours of PTO operation on a new machine and every 500 hours thereafter. Remove the drain plug on the bottom of the chain case and clean the magnet on the plug. Install the plug when the case has drained completely and refill to proper level.

Remove the vent from the top of the chain case (Fig. 95) every 100 hours and clean in solvent, then blow dry with compressed air and reinstall.

Service & Maintenance

Hydraulic System Maintenance

General Information

To gain the longest life from a hydraulic system, practice the following suggestions. Remember a few minutes of preventive maintenance daily will rarely equal the many hours of downtime required for major repairs.

The hydraulic system of the Steiger Series III is designed to provide hydraulic power, first to steering and second to implement.

This is done by placing a priority valve in the system (see page 65) which senses the load on the steering orbitrol and delivers the proper volume and pressure of oil as required.

To provide the best hydraulic operations on implements, a flow control is part of the system. This controls the volume of oil to the hydraulic control valve. Volume can be varied from 8 gpm to 20 gpm. Volume should be set with a flow control meter to provide the proper volume for the specified application, however, if large cylinders lift very slowly, volume may be increased. On the other hand, if the control valves return prematurely from detent position, the volume may be too high, causing excessive back pressures in the lines.

Remember, the longer a hydraulic line is, the greater the resistance, thus reducing efficiency at the implement cylinder. If long lines are required, a hose of equal or larger diameter to those of the tractor should be used. Smaller hoses decrease implement efficiency and increase internal back pressures.

1. Keep the system clean! Change filter after the first 100 hours of operation. Change filter every 500 hours. Change oil every 1000 hours.

2. REMEMBER THE IMPLEMENT OIL. Bleed oil from implement lines and cylinders after the first 100 hours. DO NOT use implements with dirty oil or of a different type than you have in your tractor.

3. Thoroughly clean male couplers when placing them in female couplers when hitching to implement.

NOTE: *Any dirt in coupler goes directly into control valve and system. Place clean rubber plugs into couplers when unhitching.*

4. DO NOT increase relief valve pressures. The system is designed to handle the pressure set at the factory. Increasing pressure will result in over stress on components and eventual failure.

5. DO NOT operate continuous operation hydraulic equipment. (i.e. hydraulic motors, etc.)

6. Lower implements completely when not in use. Do not park in raised position.

Operating Remote Cylinders

CAUTION: Whenever you operate remote cylinders or other accessory equipment, adhere to the following rules for safe, satisfactory operation, of both tractor and equipment.

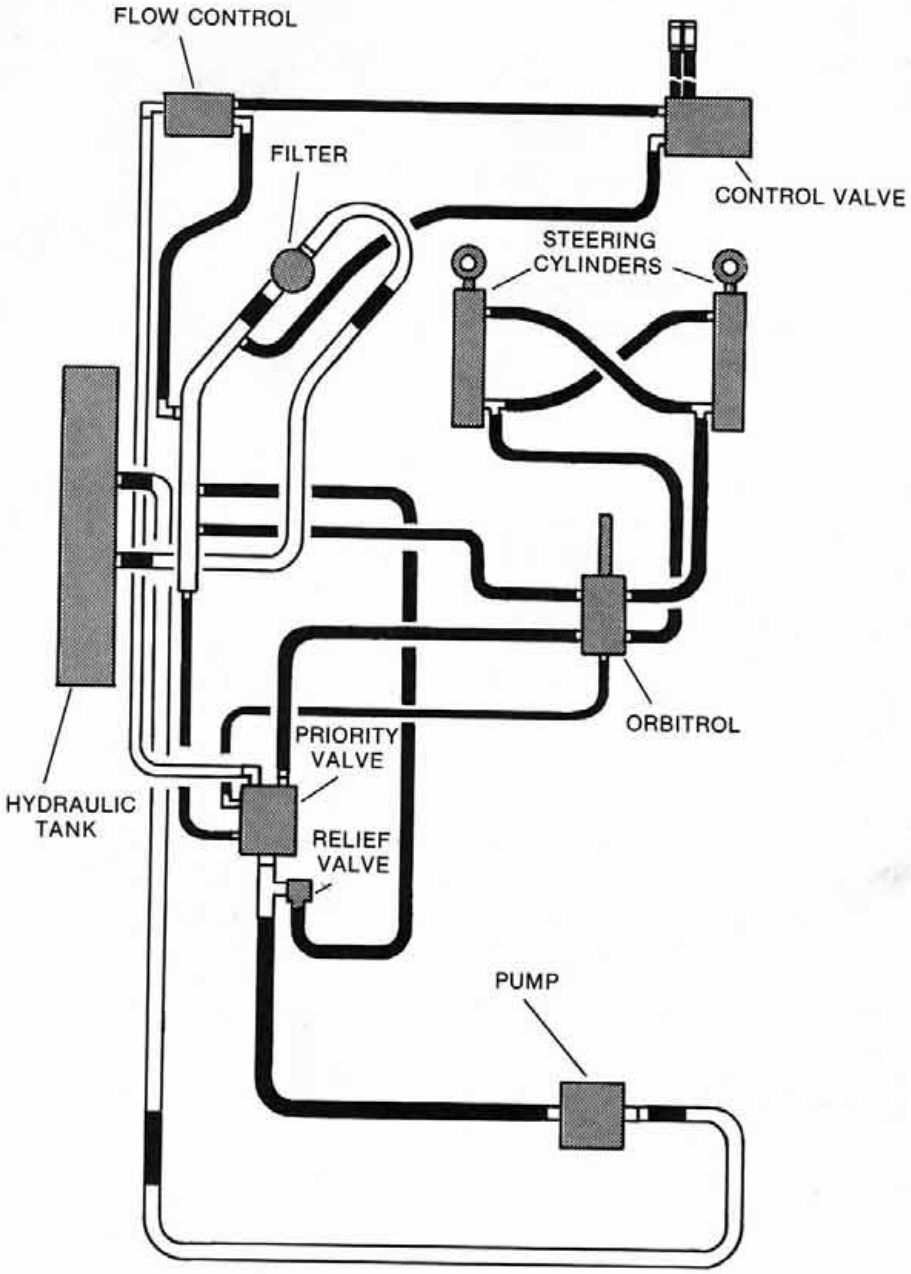
- Never work under equipment supported by a hydraulic device because it may lower if the control is actuated (even with the engine stopped) or if a component such as a hose, breaks. Always use a secure support for equipment which must be serviced while raised off the ground.

- Hydraulic oil escaping under pressure may be nearly invisible and have enough pressure to penetrate skin. Always use cardboard, etc. to locate leaks; never use your hand.

- Follow the instructions in this operator's manual.

- Remote cylinders and other equipment are operated by oil from the tractor hydraulic system. Always check the hydraulic system oil level after cycling the equipment several times to assure an adequate hydraulic system oil level.

Hydraulic Schematic



Service & Maintenance

Hydraulic System Maintenance

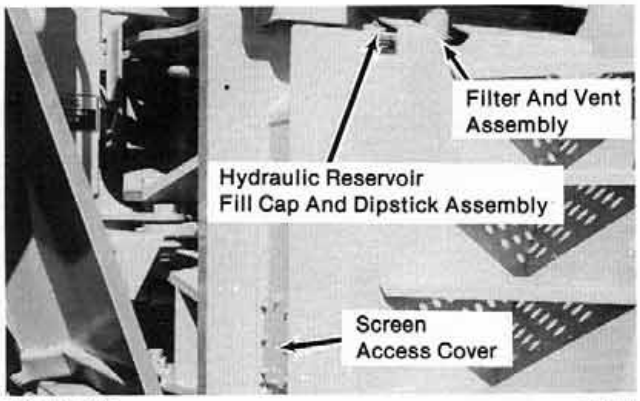


Figure 96: 43-0001

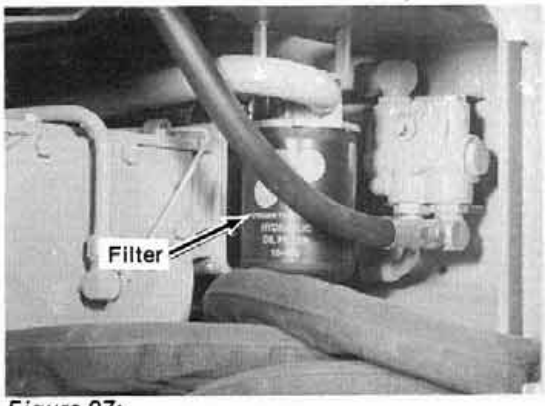


Figure 97: 42-0002

Suction Screen

The screen arrangement in this system provides for filtration of the oil. The suction line has a reusable, spin-on, wire mesh type screen located inside the tank and can be reached by removing the bottom cover of the hydraulic tank. Remove and clean every 1000 hours.

Drain tank and remove large cover beneath tank. Disconnect screen from inlet line with a chain wrench or a large pliers.

NOTE: *The immediate installation of a new or previously cleaned screen is suggested to prevent contamination from entering the system.*

Soak screen in cleaning solvent to soften contaminant.

Scrub lightly with soft-bristled brush to remove contaminant. DO NOT USE WIRE BRUSH.

Remove embedded contaminant with clean, dry compressed air. Direct air flow against side of screen with perforated support. Additional dirt may be removed by directing air along pleated wire cloth.

Re-wash in solvent and blow off with compressed air.

Inspect screen for damage to wire mesh. Holes in the wire mesh will permit dirt to leak into pump and other vital hydraulic components. If element is damaged, replace with new or previously cleaned screen.

When suction screen has been thoroughly cleaned, reinstall on inlet line and tighten securely or place in clean storage area for next installation.

Return Filter

The return line has a throw-away, spin-on filter that further insures a clean oil system.

Recommended filter change is 100 hours on a new machine and every 500 hours thereafter; however, this is under the most favorable conditions. If the tractor operates under adverse dust conditions, the filter must be changed more often. Also, if various implements from other tractors are attached into the Steiger system they may contain contaminated oil. If this is suspected, change the filters at a more frequent interval. Also verify that water or other contaminations are not contained in the hydraulic oil.

NOTE: *Relieve reservoir pressure before removing the filter. The filter should be installed hand tight only. After changing the filter, start the engine and check for oil leaks.*

CAUTION: Be sure oil is not too hot before you attempt to drain oil or work on the system.

Reservoir Oil Level Check

Check the hydraulic oil reservoir level every 10 hours. Use Steiger lubricant P/N 01-4647, 5 gal. (19 liters) container, or P/N 01-4646, 30 gal. (113.5 liters) container, 303 or equivalent. Handle oil with perfectly clean containers only. The oil level should reach the "Full" mark on the dipstick with warm oil and the engine stopped.

CAUTION: Remove the dipstick/cap assembly slowly to relieve pressure.

Breather Vent And Filter

Replace the breather filter element at least every 1000 hours. The breather valve should be inspected and cleaned in solvent. Replace if it is corroded.

General Chassis Maintenance

See "Tractor Service Guide" section. Use Steiger grease P/N 01-2390, 14-1/2 oz. (.41 Kgs) cartridge, or P/N 01-4644, 35 lb. (15.9 Kgs) pail, NGLI #2 or equivalent. Door locks and latches require Molykote 321R Steiger P/N 01-6682 or equivalent.

Window Washer Reservoir

Fill the reservoir with windshield washing fluid. Many types are commercially available, some may be diluted with water. In freezing weather, keep the solution at full strength to prevent freezing.

Windshield Wiper Blades

Inspect the wiper blades regularly. Check for streaking or damaged rubbers, and replace as required.

Operator Seat

Inspect the seat mountings, occasionally. A light coat of grease may be applied to the slide rails. Lubricate the fittings of the suspension apparatus (refer to Tractor Service Guide for frequency).

Paint Care

Deterioration of the paint can be prevented by regular washing with pressurized water and a detergent. Even further measures can be used to preserve the finish quality with the use of commercial automotive type cleaners and waxes.

Chips and scratches can be touched-up with matching paint colors available at your Steiger Dealer.

Preparation For Storage

If the tractor is to be put in storage for several months, the suggestions on this page for storing it and removing it from storage will help to prevent excessive deterioration.

Used engine crankcase oil will not protect bearing and other surfaces from rusting or corroding during a storage period. Therefore, change the engine crankcase oil before storing the tractor. With the engine warm, drain the engine crankcase, replace the filter element and fill the crankcase with new oil of the proper viscosity and service rating.

Service the air cleaner.

Drain, flush and fill the cooling system. Use clean, soft water. If freezing weather is anticipated, add enough antifreeze to protect the cooling system from freezing.

Seal all openings in the engine, fuel tanks, electrical system and transmission-hydraulic system with plastic bags and tape. Remove, clean and store the batteries. See Battery Section of Service and Maintenance of this manual volume for removal of battery.

Loosen the radiator and fuel caps to protect gaskets.

Loosen the fan belts. If present, loosen the air conditioner compressor belt.

Coat the exposed piston rods of hydraulic cylinders with a grease or corrosion preventative.

Raise the tires so they do not touch the ground and protect them from heat, sunlight and moisture.

When long term storage is anticipated, block the clutch in the disengaged position at the outer clutch arm.

Clean the exterior of the tractor, removing all mud, dirt, grease and other foreign material. To prevent rust, touch up the painted surfaces where they may have been scratched or chipped.

If possible, store the tractor in a dry protected place. If it is necessary to store the tractor outside, cover it with waterproof canvas or other suitable protective material.

Preparation For Operation

Use the following procedure to remove the tractor from storage and place it in service.

Remove all protective coverings from the tractor and unseal all openings. Check tire inflation and remove the blocking from the tractor.

Remove batteries from storage. Install them on the tractor and connect the cables. See Battery Installation Procedure in Service and Maintenance Section. Adjust the alternator belt tension, and compressor belt tension.

IMPORTANT: *Check the engine and transmission-hydraulic system oil level. Add oil if necessary. Check radiator coolant level. Fill the fuel tank.*


COUGAR II
PT270

Troubleshooting

Troubleshooting is an organized study of the problem and a planned method or procedure for investigation and correction of the difficulty. The following pages include some of the problems that an operator may encounter during the service life of the tractor.

The following pages do not give all the answers for correction of problems listed, but are meant to stimulate a train of thought and indicate a work procedure directed toward the source of the trouble.

Think Before Acting

Study the problem thoroughly and ask yourself these questions:

1. What were the warning signs preceding the trouble?
2. What previous repair and maintenance work has been done?
3. Has similar trouble occurred before?
4. If engine still runs, is it safe to continue running it to make further checks?

Do Easiest Things First

Most problems are simple and easily corrected. Examples are "low power" complaints caused by loose throttle linkage or dirty fuel filters, "excessive oil consumption" caused by leaking gaskets or connections, etc.

Always check the easiest and obvious things first. Following this simple rule will save time and trouble.

Double-Check Before Beginning Disassembly Operations

The source of most engine problems can be traced not to one part alone but to the relationship of one part with another. For instance, excessive fuel consumption may not be due to an incorrectly adjusted fuel pump, but instead to a clogged air cleaner or possibly a restricted exhaust passage causing excessive back pressure. Too often, engines are completely disassembled in search of the cause of a certain complaint and all evidence is destroyed during disassembly operations. Check again to be sure an easy solution to the problem has not been overlooked.

If the hints in this manual do not correct a problem, see your Steiger Dealer.

Find And Correct Basic Cause Of Trouble

After a mechanical failure has been corrected, be sure to locate and correct the cause of the problem so the same failure will not be repeated. A complaint of "sticking injector plungers" is corrected by replacing the faulty injectors, but something caused those plungers to stick. The cause may be improper injector adjustment or more often water in the fuel.

The following pages list some of the complaints and causes the operator can study to become aware of what might cause the problem when it does arise.

Troubleshooting

Complaint	Possible Cause
Surging at Governed RPM	Air Leaks in Suction Lines Throttle Linkage or Adjustment
Excessive Lube Oil Consumption	External and Internal Oil Leaks Wrong Grade Oil for Weather Conditions Oil Level Too High Engine Due for Overhaul
Crankcase Sludge	Dirty Oil Filters Coolant Temperature Low Long Idle Periods Dirty Filters and Screens Oil Needs Changing
Dilution	External or Internal Fuel Leaks External and Internal Oil Leaks Coolant Temperature Low Long Idle Periods
Low Lubricating Oil Pressure	External or Internal Fuel Leaks Dirty Oil Filter Oil Suction Line Restriction Crankcase Low or Out of Oil Wrong Grade Oil for Weather Conditions Insufficient Coolant Damaged Water Hose Loose Fan Belts Clogged Oil Cooler Radiator Core Openings Dirty Air in Cooling System Exterior Water Leaks Engine Overloaded Engine Exterior Caked with Dirt Engine Due for Overhaul
Coolant Temperature Too Low	See your Steiger Dealer
Hard Starting or Failure to Start	Restricted Air Intake Out of Fuel or Fuel Shut-Off Closed Poor Quality Fuel Air Leaks in Suction Lines Restricted Fuel Line: Holes Worn Gears Water in Fuel Long Idle Periods Engine Due for Overhaul

Complaint	Possible Cause
Engine Misfires	Poor Quality Fuel Air Leaks in Suction Lines Restricted Fuel Lines Water in Fuel Long Idle Periods
Excessive Smoking at Idling	Restricted Fuel Lines Long Idle Periods Engine Due for Overhaul
Excessive Smoke Under Load	Restricted Air Intake High Exhaust Back Pressure Thin Air in Hot Weather or High Alt. Poor Quality Fuel Restricted Fuel Lines Long Idle Periods Engine Overloaded Engine Due for Overhaul
Low Power or Loss of Power	Restricted Air Intake High Exhaust Back Pressure Thin Air in Hot Weather or High Alt. Poor Quality Fuel Air Leaks in Suction Lines Restricted Fuel Lines External or Internal Fuel Leaks Throttle Linkage or Adjustment Oil Level Too High Dirty Filters and Screens Long Idle Periods Engine Due for Overhaul
Cannot Reach Governed RPM	Restricted Fuel Lines: Stuck Drain Valve Throttle Linkage or Adjustment High-Speed Governor Set Too Low Water in Fuel
Excessive Fuel Consumption	Restricted Air Intake High Exhaust Back Pressure Poor Quality Fuel Restricted Fuel Lines External or Internal Fuel Leaks Oil Level Too High Engine Overloaded Engine Due for Overhaul

Troubleshooting

Complaint	Possible Cause
Poor Acceleration	Air Leaks in Suction Lines Restricted Fuel Lines Throttle Linkage or Adjustment
Erratic Idle Speeds	Air Leaks in Suction Lines Throttle Linkage or Adjustment
Engine Dies	Out of Fuel or Fuel Shut-Off Closed Poor Quality Fuel Air Leaks in Suction Lines External or Internal Fuel Leaks Throttle Linkage or Adjustment Water in Fuel
Coolant Temperature Too High	High Exhaust Back Pressure Crankcase Low or Out of Oil Oil Level Too High Insufficient Coolant Damaged Water Hose Loose Fan Belts Radiator Core Openings Dirty Air in Cooling System Exterior Water Leaks Engine Overloaded Engine Exterior Caked with Dirt
Lube Oil Too Hot	Crankcase Low or Out of Oil Oil Level Too High Insufficient Coolant Worn Water Pump Damaged Water Hose Loose Fan Belts Clogged Oil Cooler Radiator Core Openings Dirty Air in Cooling System Exterior Water Leaks Engine Overloaded Engine Exterior Caked with Dirt
Fuel Knocks	Improper Use of Starter Aid / Air Temp. Poor Quality Fuel Air Leaks in Suction Lines Coolant Temperature Low Engine Overloaded
Mechanical Knocks	Engine Overloaded Engine Due for Overhaul Loose Mounting Bolts

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STEIGER TRACTOR IDENTIFICATION

The following information may be obtained on the identification decal and/or P/N on each component.

Tractor Model No. _____

Tractor Serial No. _____

Tractor Engine Model _____

Transmission _____

Transfer Case _____

Front Differential _____

Rear Differential _____

Steering Cylinders _____

Miscellaneous _____

Key No. _____

Completion of this form will aid in determining replacement parts when needed.

SERVICE RECORD

ENGINE (DATE / HRS)	KEEP AN ACURATE RECORD OF SERVICING ON THE CHART BELOW	
CRANKCASE LUBE & OIL FILTER		Start 2nd Line
FUEL FILTERS		Start 2nd Line
ENGINE AIR FILTER		Start 2nd Line
TRANSMISSION & DROP BOX COOLING		
TRANSMISSION FILTER		Start 2nd Line
CENTRAL SUMP		
HYDRAULICS		
RETURN FILTER		Start 2nd Line
HYD. OIL FILTER		
MISCELLANEOUS		

Additional Parts and Manuals may be obtained by contacting your Steiger Dealer.

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