

Tractors 6405 and 6605 Repair



TECHNICAL MANUAL
Tractors 6405 and 6605 Repair
TM4866 02APR02 (ENGLISH)

John Deere Brasil
Impresso no Brasil



Introduction

Introduction

READ THIS MANUAL carefully in order to know how to operate and service your machine correctly. Failure to follow these procedures can cause injuries and even damage to the equipment. This manual and the safety advice regarding your machine must be followed. THIS MANUAL MUST BE CONSIDERED a permanent part of your machine and must be with the machine if it is resold. MEASUREMENTS in this manual are metric. LEFT SIDE AND RIGHT SIDE are from the point of view of the operator seated and ready to operate the machine. WRITE THE SERIAL NUMBERS in the appropriate section of this manual. Record all the serial numbers of your machine in order to assist in its recovery in the event that it is stolen. Your dealer will also require these numbers when you order replacement parts. Store these serial numbers in a secure location and not with the machine. THE GUARANTEE is a part of the support program of the

product, for those clients who operate and maintain the equipment in accordance with this manual. The guarantee is explained in the Owners Manual and Guarantee Certificate that you should have received from the Dealer. Consult the dealer for more details.

INFORMATION.

John Deere Brasil S.A.

Homepage: www.johndeere.com.br

E-mail: johndeere@johndeere.com.br

Remember that the best source of information regarding our products and services is your local dealer.

CQ,INTROD -19-01OCT98-1/1

Contents

SECTION 05—Safety

Group 00—Norms of Safety

SECTION 50—SyncroPlus Transmission

Group 00—Separating and Installing Transmission Components

Group 05—Transmission Activation

Group 10—Clutch, Oil Pump and Valves

Group 15—Transmission box

Group 20—Slow-speed Transmission

Group 30A—Group Box — Series 10

Group 30B—Group Box — Series 20

SECTION 55—PowrQuad Transmission

Group 00—Separating and Installing the PowrQuad Module

Group 10—PowrQuad Box

SECTION 56—Power Transmission

Group 00—Separating and Installing Components

Group 05—Transmission Shaft and Torsion Damper

Group 05—MFWD clutch from series 161067

Group 16—Differential

Group 20—Hydraulic Pump Transmission

Group 25—Final reductions

Group 30—Power Take-Off

SECTION 60—Steering and Brakes

Group 05—Hydrostatic Steering

Group 15—Brake Valve

Group 20—Brakes

SECTION 70—Hydraulic system

Group 05—RCV Controls

Group 10—Hydraulic Pump and Charge Pump

Group 11—Gear pump — (Eaton)

Group 13—Gear Pump — (Albarus)

Group 15—Hydraulic Control Valves

Group 20—Hydraulic Lift and Lift Cylinder

Group 22—Traction/Sensitivity Sensor

Group 25—Remote Control Connections and Valves

SECTION 80—Front axle

Group 00—Special Tools

Group 05—Technical Data and Adjustment Values

Group 10—Disassembly

Group 15—Assembling the differential

Group 20—Pinion depth

Group 25—Adjusting the play between the teeth

Group 30—Assembling the Bridges

Group 35—Assembling the Universal Joint

Group 40—PTO

Group 45—Assembling the Hydraulic Cylinder

Group 50—Convergence Regulation

Group 55—Separating and Installing the Front Shaft/Components

Group 60—Front Axle Support

Group 65—Front Axle 4 x 2

Group 66—Steering Cylinder — 4x2 shaft

Group 70—Front and Rear Wheels

Group 75—Main Chassis

Group 80—Traction bar

SECTION 90—Operator Platform and Cab

Group 00—Removing and Installing the Operator Platform

Group 15—Air-conditioning System

Group 20—Heating System

Group 25—Cab

Group 30—Various

SECTION 99—Special Tools Made By the Dealer

Group 05—Custom-made Tools

All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

COPYRIGHT © 2001
DEERE & COMPANY
Moline, Illinois
All rights reserved
A John Deere ILLUSTRATION® Manual

**Thanks very much for your reading,
Want to get more information,
Please click here, Then get the complete
manual**

JustClickHere 

NOTE:

**If there is no response to click on the link above,
please download the PDF document first, and then
click on it.**

**Have any questions please write to me:
admin@servicemanualperfect.com**

Contents

05

50

55

56

60

70

80

90

99

INDX

Section 05 Safety

Contents

	Page
Group 00—Norms of Safety	
Acknowledge the safety Information . . . . .	.05-00-1
Observe the Safety Messages . . . . .	.05-00-1
Replace the Safety Stickers . . . . .	.05-00-1
Safe Handling of Liquids and fuels . . . . .	.05-00-2
Avoiding the Explosion of Battery Gasses . . . . .	.05-00-2
Be Prepared in Case of Emergency . . . . .	.05-00-2
Remove the Paint Before Welding or Applying Heat . . . . .	.05-00-3
Leaks in High Pressure Lines . . . . .	.05-00-3
Safe Maintenance of the Radiator . . . . .	.05-00-4
Avoid accidentally starting the machine. . . . .	.05-00-4
Avoid applying heat near the pressurized fluid lines . . . . .	.05-00-4
Work in a well ventilated area . . . . .	.05-00-4
Wear Appropriate Clothing . . . . .	.05-00-5
Safe Maintenance . . . . .	.05-00-5
Parking the Tractor . . . . .	.05-00-6
Use Adequate Lifting Devices . . . . .	.05-00-6
Supporting the Machine Safely . . . . .	.05-00-6
Perform clean work . . . . .	.05-00-7
Adequate Lighting for the Working Area . . . . .	.05-00-7
Avoid Accidents. . . . .	.05-00-7
Use the Tools Correctly . . . . .	.05-00-8
Tire Installation . . . . .	.05-00-8
Safe Front Wheel Drive Maintenance . . . . .	.05-00-9
Roll Over Protection Structure . . . . .	.05-00-9
Correct Disposal of Waste Material . . . . .	.05-00-9
Safety Live with It . . . . .	.05-00-10

Contents

05

Acknowledge the safety Information

This is the Safety prevention symbol. When you see this on your machine or in this publication, always be aware of the risk of injury or accidents related to operating the equipment.



CQ,SGALERTA -19-14JUL98-1/1

T81389 -UN-07DEC88

Observe the Safety Messages

Read the safety information in this publication and on your tractor carefully. Maintain the corresponding decals in good condition. Replace worn or missing decals. Get to know the operation of your Tractor and its Controls.

Always keep your tractor in good working condition. Any unauthorized modification to the tractor could result in reduced performance and/or safety, in addition to reducing its working life.

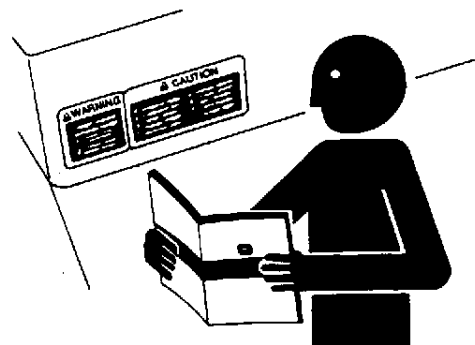


CQ,SGMENSEG -19-01OCT98-1/1

TS201 -UN-23AUG88

Replace the Safety Stickers

Replace worn or missing stickers. Refer to the Operation Manual for their correct positions.



AG,LT04177,255 -19-29SEP98-1/1

TS201 -UN-23AUG88

Safe Handling of Liquids and fuels

Handle fuels with caution as they are highly flammable. Do not smoke while refueling nor get near flames or sparks.

Turn the engine off before refueling. Refuel in an appropriate place and clean up any fuel that may have spilled. Do not puncture or incinerate any pressurized containers.

Do not store oil impregnated rags. They could spontaneously ignite.



TS227 -UN-23AUG88

CQ,SGLIQ -19-01OCT98-1/1

Avoiding the Explosion of Battery Gasses

The gas released from the battery when opened or damaged is explosive. Always store them in a safe place far from any area where flames or sparks may occur.

Never test the battery charge by putting a metallic object across the terminals. Use a high discharge voltmeter or a densimeter.

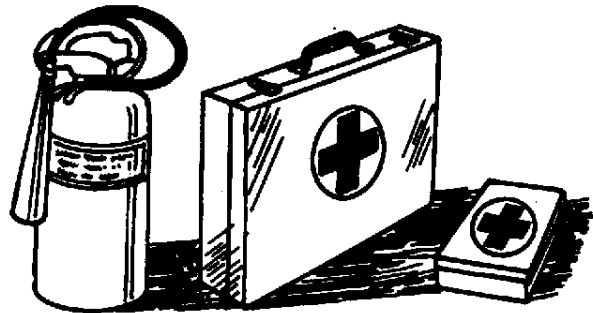


TS204 -UN-23AUG88

CQ,SGBAT -19-01OCT98-1/1

Be Prepared in Case of Emergency

Be Prepared in Case of Emergency Have a first aid kit and a fire extinguisher close at hand.



TS291 -UN-23AUG88

CQ,SGEMERG -19-01OCT98-1/1

Remove the Paint Before Welding or Applying Heat.

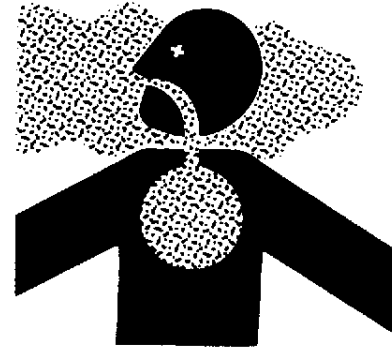
Avoid the inhalation of gasses and dust as they are potentially toxic.

Noxious gasses can be generated due to paint heating up while welding, either arc or oxyacetylene.

Carry out all work outdoors or in a well ventilated area. Store paint and solvent in an appropriate place.

Remove the Paint Before Applying Heat.

- When using a sand blaster or sander, avoid the inhalation of dust.
- If solvent has been used, clean the surface to be welded with soap and water before welding. Remove all solvent containers and any remaining inflammable materials. Ventilate the work area for 15 minutes before welding or applying heat.



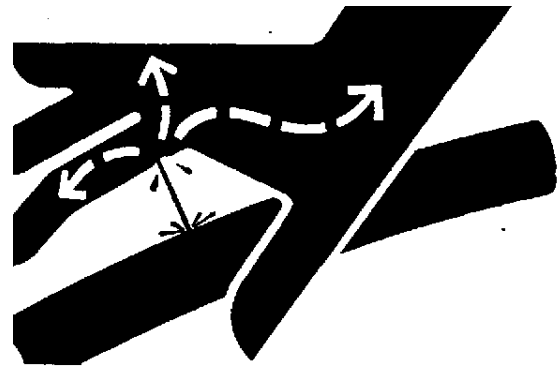
TS220 -UN-23AUG88

CQ,SGPINT -19-01OCT98-1/1

Leaks in High Pressure Lines

Fluids under pressure that vent from the hydraulic system can have sufficient pressure to penetrate the skin causing serious injury. Therefore, it is essential to evacuate the pressure from the system before loosening or disconnecting any lines and to make sure that all connections and adapters are well tightened before pressurizing the system. Keep the body and hands clear of any high pressure leaks. It is difficult to find an hydraulic fluid leak if the hole is small. Use a piece of cardboard.

If, in spite of this precaution, the escaping high pressure fluid penetrates the skin, seek medical help immediately as these injuries can cause serious infection.



X9811 -UN-23AUG88

CQ,SGFUGAS -19-01OCT98-1/1

05
00
4

Safe Maintenance of the Radiator

Danger of burns!

With the engine turned off, loosen the expansion tank cap to the first stage to release the pressure before removing it completely.



CQ,SGRADIAD -19-01OCT98-1/1

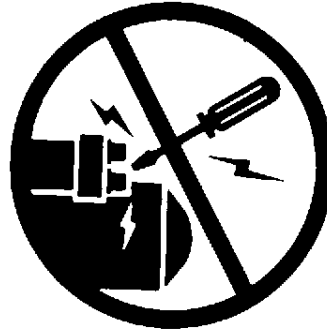
TS281 -UN-23AUG88

Avoid accidentally starting the machine.

Avoid possible accidents or death by accidentally starting the machine.

Do not start the machine by short circuiting the terminals.

NEVER start the engine while standing beside the machine. Start the engine only from the operator seat and with the transmission in neutral or park.



CQ,STBYPASS -19-11SEP98-1/1

TS177 -UN-11JAN89

Avoid applying heat near the pressurized fluid lines

Exposed flames close to the pressurized fluid lines can cause a flammable cloud of steam to develop, which, if ignited, can cause serious burns to anyone close by. Avoid applying heat with either arc or oxyacetylene near the pressurized fluid lines or any other line containing inflammable fluid. The lines can be accidentally cut by excessive heat given off by the welding torch.



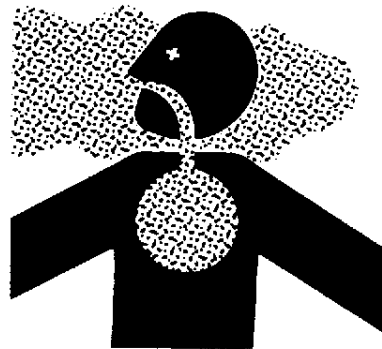
CQ,SGCALOR -19-01OCT98-1/1

TS953 -UN-15MAY90

Work in a well ventilated area

The ingestion of exhaust fumes can cause damage or death. If it is necessary to carry out work on the engine with it running, remove the exhaust gasses from the area with a extension pipe connected to the exhaust pipe.

If you do not have an extension pipe, open the doors and let the outside air circulate inside the work area.



CQ,SGAR -19-14JUL98-1/1

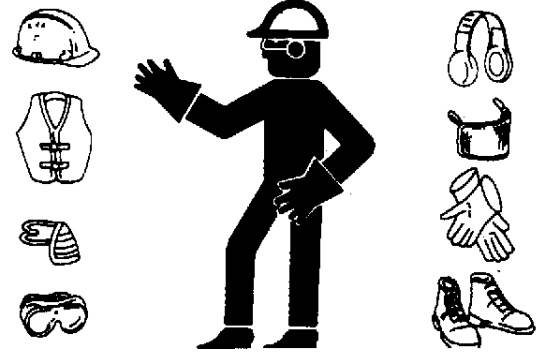
TS220 -UN-23AUG88

Wear Appropriate Clothing

Avoid wearing loose clothing and use adequate safety equipment relevant to the type of work being done.

Prolonged exposure to loud noise can affect hearing ability. As a protective measure, protect your hearing with protective headgear.

The correct operation of the machine requires the full attention of the operator. Do not wear headphones while operating the machine.



TS206 -UN-23AUG88

CQ,SGROUPA -19-01OCT98-1/1

Safe Maintenance

Familiarize yourself with the maintenance procedures before servicing. The workplace must be clean and dry.

Do not perform any work such as lubrication, repairs, or adjustment with the engine running.

Keep hands, feet and clothes away from moving parts.

Position all the controls in neutral and turn off all electrical functions. There should be no pressure remaining in the hydraulic system. Lower any attached implements to the ground. Turn off the engine and remove the ignition key. Let the engine cool down.

Carefully support all the parts of the machine to be raised for maintenance work.

All the components should be in good condition and correctly installed. Replace any worn or broken parts. Clean any accumulation of grease, oil or dirt.

Disconnect the earth cable (-) from the battery before carrying out any welding work on the tractor or any adjustments to the electrical system.



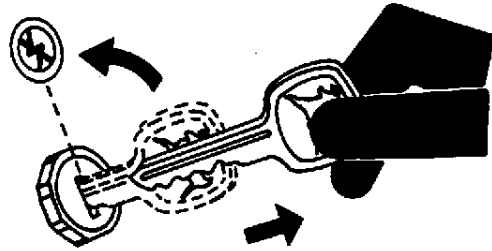
TS218 -UN-23AUG88

CQ,SGMANUT -19-01OCT98-1/1

Parking the Tractor

Stop the machine, lower any coupled implements to the ground before leaving the Tractor.

Stop the engine, put the transmission into the PARK position, remove the ignition key and close the cabin (if equipped with a cabin). Chock the wheels.



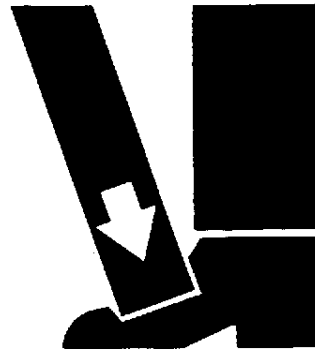
TS230 -UN-24MAY89

CQ,SGESTC -19-01OCT98-1/1

Use Adequate Lifting Devices

Lifting heavy components incorrectly may cause serious injuries or important damage to the machine.

Follow the procedure recommended in the manual to remove and install heavy components.



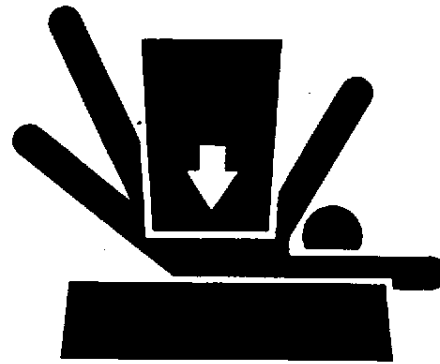
TS226 -UN-23AUG88

CQ,SGDISP -19-01OCT98-1/1

Supporting the Machine Safely

Always lower the implement to the ground before carrying out any work on the Tractor. When it is necessary to work under the machine or any equipment raised off the ground, make sure it is braced securely.

Do not use blocks of stone or other material that could collapse under a continuous weight. Do not work under any machine that is only supported by a jack. Always observe the handling instructions given in this manual.



TS229 -UN-23AUG88

CQ,SGAPOIO -19-01OCT98-1/1

Perform clean work

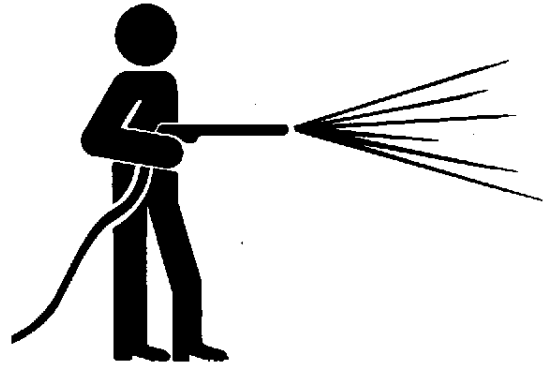
Before starting a job:

Clean the working area and the machine.

Check whether you have all the necessary tools and equipment.

Prepare the necessary replacement parts.

Read all the instructions thoroughly, do not overlook.



T6642EU -UN-18OCT88

CQ,SGLIMP -19-01OCT98-1/1

Adequate Lighting for the Working Area

Light up the working area adequately but safely. Use a hand held light to lighten the inside of the lower part of the machine. The bulb must be protected by a safety cage. The incandescent filament of an accidentally broken bulb can start a fire.



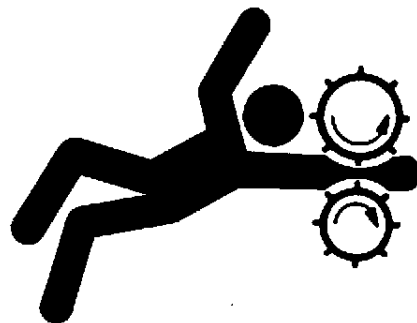
TS223 -UN-23AUG88

CQ,SGILUMINA -19-01OCT98-1/1

Avoid Accidents

Tie any long hair. do not wear a tie, scarf, and loose clothing or necklaces. If any of these get caught up in the machine, serious injuries can occur.

Remove rings and other jewelry to avoid short-circuits or the danger of them getting caught up in the machine.



TS228 -UN-23AUG88

CQ,SGACID -19-01OCT98-1/1

Use the Tools Correctly

Employ the appropriate tools for each job. The use of inappropriate tools, replacement parts and procedures affects the quality of the repairs.

Use either pneumatic or electric machines only to unbolt fixtures.

Use the correct tool size to loosen or tighten fixtures. DO NOT use non-metrical system tools. Avoid injury caused by inappropriate tools.

Use only replacement parts that are within John Deere specifications.



TS779 -UN-08NOV89

CQ,SGFERR -19-01OCT98-1/1

Tire Installation

A sudden separation of the tire from the wheel rim can cause serious injury or even death.

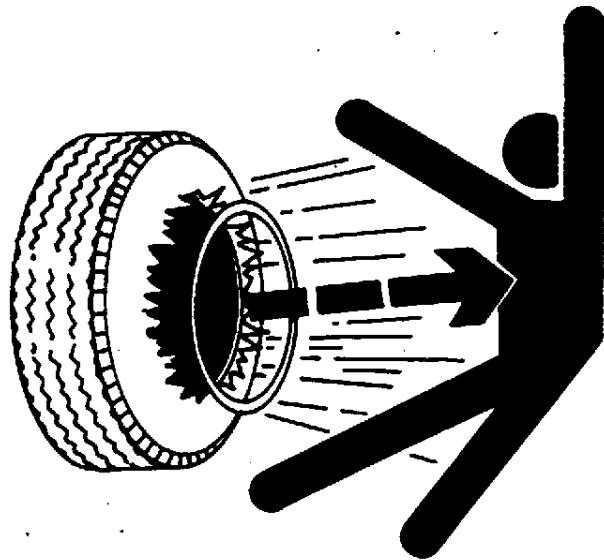
The installation of the tires must be performed by experienced personnel only who have the necessary tools for such. It is safer to entrust this work to a specialized tire dealer.

Make sure the tires are inflated to the correct pressure. Never exceed the maximum allowable pressure as recommended by the manufacturer.

Never heat or perform any welding work on the wheel rim with the tire installed. The heat can cause an increase in the pressure of the tire causing the tire to explode. Welding can deform or weaken the integrity of the wheel rim.

To inflate the tire use a hose with an extension that allows you to stand beside the tire and not above or in front of it. Use a safety cage if available.

Inspect tires and wheel rims daily. Do not use the wheels if the tires are insufficiently pressurized or damaged or if the wheel rims are damaged or missing wheel nuts or bolts.

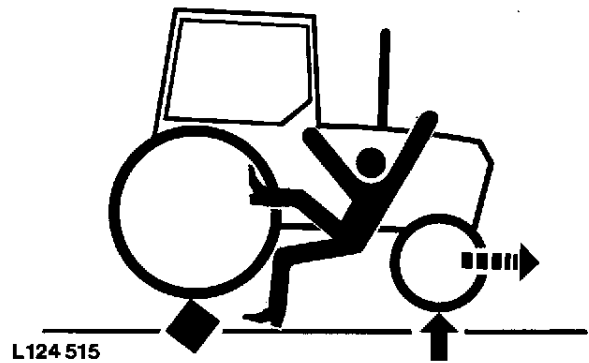


TS211 -UN-23AUG88

CQ,SGPNEU -19-01OCT98-1/1

Safe Front Wheel Drive Maintenance

When performing maintenance work on front wheel drive tractors that require raising and turning the rear wheels with engine power the front wheels should also be raised. In case the electric or hydraulic systems fail, the front axle could accidentally get in gear and drag the tractor off its support, even with the FWD switch disconnected. In this case the tractor could be set in motion if the front wheels are not raised from the ground.



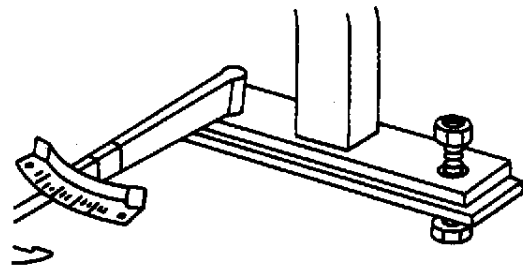
L124 515

L124515 -UN-06AUG94

CQ.SGTRACAO -19-01OCT98-1/1

Roll Over Protection Structure

If the ROPS has been or will be removed for any reason, confirm that all the components have been installed correctly. Tighten the bolts to the correct torque. The ROPS structure must not be drilled, cut or weakened.



TS212 -UN-23AUG88

CQ.SGEPCC -19-01OCT98-1/1

Correct Disposal of Waste Material

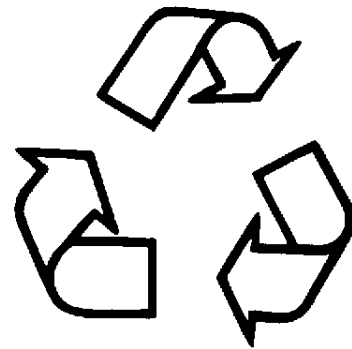
The incorrect disposal of waste material can damage the environment and the eco system. Potentially contaminated waste used in John Deere equipment includes substances or components such as oil, fuel, brake fluid, filters and batteries.

Use airtight containers to drain liquid residues. Never use food or drink containers or recipients to avoid confusion.

Do not dispose of waste into soil, gutters, dams or lakes, etc.

The gas used in the air conditioning system may, if it escapes, contribute to the deterioration of the atmosphere. Specialist refrigeration and air conditioning centers may be able to assist in the disposal or recycling of waste refrigeration gasses.

Consult your government environmental agency or dealer about the correct method of disposing of or recycling these waste substances.



TS1133 -UN-26NOV90

CQ.SGDESP -19-01OCT98-1/1

05
00
10

Safety Live with It

Before returning the machine to the customer, make sure it is working properly, especially the safety systems. Install all the protections.



TS231 -19-07OCT88

CQ,SGSEG -19-01OCT98-1/1

Section 50

SyncroPlus Transmission

Contents

	Page		Page
Group 00—Separating and Installing Transmission Components			
Special Tools	50-00-1	Lubricating Oil Discharge Valve	50-10-22
Special Tool (custom made)	50-00-2	Cooler Relief Valve	50-10-22
Specifications	50-00-3	Specifications for new springs	50-10-23
Removing the clutch box	50-00-4	Removing the Clutch Pedal Valve	50-10-23
Removing the Transmission (without removing the platform)	50-00-5	Installing the Clutch Pedal Valve	50-10-26
Installing the Clutch Box	50-00-7	Transmission Oil Circuit Pressure Sensor	50-10-28
Removing the SyncroPlus Transmission Box	50-00-10	Group 15—Transmission box	
Separating the Clutch Box	50-00-10	Special Tools	50-15-1
Installing the SyncroPlus Transmission Box	50-00-12	Specifications	50-15-2
Removing the Group Box	50-00-14	Transmission Box — Cross Section	50-15-3
Removing the Activating Cables	50-00-15	Transmission Box — Exploded View	50-15-4
Installing the Group Box	50-00-16	Control Components — Exploded View	50-15-5
Gearshift Forks	50-00-16	Disassembling the Transmission Box	50-15-5
Group 05—Transmission Activation		Assembling the Drive Shaft	50-15-8
Specifications	50-05-1	Installing the Shafts	50-15-11
Gear Shift Activator	50-05-2	Regulating the Shifting of the Gears	50-15-13
Group Gearshift Activator	50-05-3	Neutral Starter Switch Adjustment	50-15-14
Gearshift Adjustment	50-05-4	Checking the Neutral Starter Switch	50-15-16
Group 10—Clutch, Oil Pump and Valves		Final Assembly	50-15-16
Special Tools	50-10-1	Adjusting the Synchronizing Ring Axial Clearance	50-15-17
Other Electric	50-10-2	Spacer Thickness Calculation	50-15-18
Specifications	50-10-3	Spacer Calculation	50-15-18
General Repairing Procedures	50-10-5	Group 20—Slow-speed Transmission	
Clutch Box — Cross Section View	50-10-6	Specifications	50-20-1
Removing the Clutch	50-10-7	Preparation	50-20-3
Clutch Components — Exploded View	50-10-8	Disassembling the Slow-Speed Transmission	50-20-3
Disassembling the Clutch	50-10-9	Assembling the Slow-Speed Transmission	50-20-4
Clutch Assembly	50-10-11	Transmission Mechanism — Cut View	50-20-8
Installing the Clutch	50-10-13	Installing the Gearshift Elements	50-20-9
Removing the Transmission Oil Pump	50-10-14	Repairing the Slow-Speed Transmission Gearshift Cover	50-20-9
Transmission Oil Pump components	50-10-17	Final Assembly	50-20-10
Assembling the Transmission Oil Pump	50-10-18	Group 30A—Group Box — Series 10	
Installing the Transmission Oil Pump	50-10-18	Special Tools	50-30A-1
Clutch Box Valves	50-10-20	Specifications	50-30A-2
Clutch Safety Valve (EOV)	50-10-21	Adjusting the Drive Pinion Drive Vortex	50-30A-3
Clutch Cooling Valve	50-10-21	Group Gearbox Cut View	50-30A-4
Clutch Cooling Pilot Valve	50-10-21	Preliminary Work	50-30A-5
Filter By Pass Valve	50-10-21	Disassembling the Group Box	50-30A-5
Pressure Regulating Valve	50-10-22		

Continued on next page