

**TeamMate™ I
1200, 1400, 1600,
and 1800 Series
Inboard Planetary
Axles**

**John Deere Waterloo Works
CTM18 (08JUL95)**

LITHO IN U.S.A.
ENGLISH

TeamMate™ | 1200-1400-1600-1800 Axles


CTM18 (08JUL95)

Introduction

FOREWORD

This manual is written for an experienced technician. Essential tools required in performing certain service work are identified in this manual and are recommended for use.

Live with safety: Read the safety messages in the introduction of this manual and the cautions presented throughout the text of the manual.

 **This is the safety-alert symbol.** When you see this symbol on the machine or in this manual, be alert to the potential for personal injury.

Use this component technical manual in conjunction with the machine technical manual. See the machine technical manual for information on component removal and installation, and gaining access to the components.

Information is organized in groups for the various components requiring service instruction. At the beginning of each group are summary listings of all applicable essential tools, service equipment and tools, other materials needed to do the job, service parts kits, specifications, wear tolerances, and torque values.

This component technical manual covers the recommended repair procedure for the TEAMMATE™ 1200, 1400, 1600, and 1800 Series Inboard Planetary Axles.

Some components from these axles, such as axle housings, brakes, and input quills, may be serviced without removing the complete axle assembly from the machine. You may have to determine this procedure yourself for a safe removal of such components. See information to remove and install the complete axle assembly, found in your vehicle technical manual.

Clean differential and axle assemblies before servicing. Always work in a clean work area.

Binders, binder labels, and tab sets can be ordered by John Deere dealers direct from the John Deere Distribution Service Center.

This manual is part of a total product support program.

FOS MANUALS—REFERENCE

TECHNICAL MANUALS—MACHINE SERVICE

COMPONENT MANUALS—COMPONENT SERVICE

Fundamentals of Service (FOS) Manuals cover basic theory of operation, fundamentals of troubleshooting, general maintenance, and basic type of failures and their causes. FOS Manuals are for training new personnel and for reference by experienced technicians.

MANUAL ORGANIZATION

Group 05 - SAFETY
Group 10 - GENERAL
Group 15 - OSCILLATING SUPPORTS
Group 20 - STANDARD INPUT QUILL
(1200 AND 1400)
Group 21 - INPUT HOUSING/COVER
(1600 AGRICULTURAL)
Group 22 - INPUT HOUSING/COVER
(1600 INDUSTRIAL AND OEM)
Group 23 - INPUT QUILL (1800)
Group 25 - AXLE DISCONNECT/INPUT HOUSING
Group 30 - DIFFERENTIAL (1200 AND 1400)
Group 31 - DIFFERENTIAL (1600)
Group 32 - DIFFERENTIAL, No-SPIN™
(1200 AND 1400)
Group 33 - DIFFERENTIAL, No-SPIN™
(1600)

Group 35 - FINAL DRIVE AXLE HOUSINGS
AND SHAFTS
Group 40 - SERVICE BRAKE
Group 45 - PARK BRAKE—DRUM-EXPANDING SHOE
Group 46 - PARK BRAKE—SAHR BRAKE
Group 100 - TROUBLESHOOTING
Group 105 - BRAKE INSPECTION, ADJUSTMENTS,
TEST, AND BLEEDING
Group 110 - OPERATIONAL CHECKS
Group 115 - DIFFERENTIAL AND AXLE
ASSEMBLY TESTS
Group 120 - THEORY OF OPERATION
Group 499 - DEALER FABRICATED TOOLS

No-SPIN is a trademark of the Dyneer Corporation

RX,CTM18,IFC -19-06JUL95

NOTICE TO THE DEALER

This Component Technical Manual should be used for the repair of John Deere TEAMMATE™ I 1200, 1400, 1600, and 1800 Series Inboard Planetary Axles.

IMPORTANT: Before beginning repair or making adjustments, become familiar with *Axle Identification* and the *Axle Serial Number Plate*. (See *General—Group 10*.)

Discard CTM18 dated Aug 89

Introduction

**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**

HANDLE FLUIDS SAFELY—AVOID FIRES

When you work around fuel, do not smoke or work near heaters or other fire hazards.

Store flammable fluids away from fire hazards. Do not incinerate or puncture pressurized containers.

Make sure machine is clean of trash, grease, and debris.

Do not store oily rags; they can ignite and burn spontaneously.



DX,FLAME -19-04JUN90

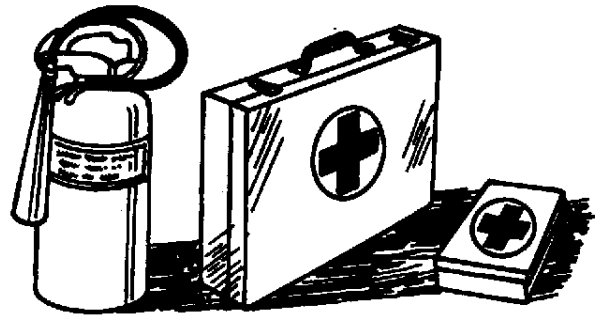
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TS227

PREPARE FOR EMERGENCIES

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



DX,FIRE2 -19-03MAR93

-UN-23AUG88
TS291

HANDLE CHEMICAL PRODUCTS SAFELY

Direct exposure to hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with John Deere equipment include such items as lubricants, coolants, paints, and adhesives.

A Material Safety Data Sheet (MSDS) provides specific details on chemical products: physical and health hazards, safety procedures, and emergency response techniques.

Check the MSDS before you start any job using a hazardous chemical. That way you will know exactly what the risks are and how to do the job safely. Then follow procedures and recommended equipment.

(See your John Deere dealer for MSDS's on chemical products used with John Deere equipment.)



DX,MSDS,NA -19-03MAR93

TS1132 -UN-26NOV90

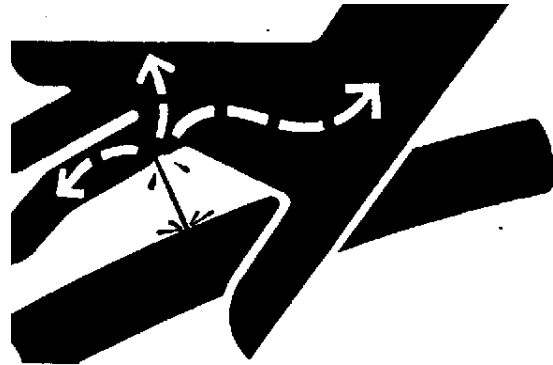
AVOID HIGH-PRESSURE FLUIDS

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.



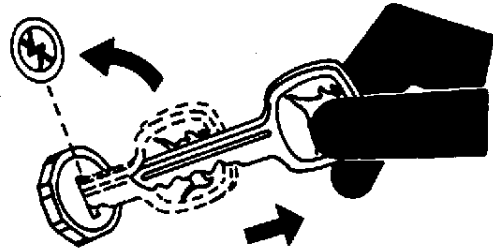
DX,FLUID -19-03MAR93

X9811 -UN-23AUG88

PARK MACHINE SAFELY

Before working on the machine:

- Lower all equipment to the ground.
- Stop the engine and remove the key.
- Disconnect the battery ground strap.
- Hang a "DO NOT OPERATE" tag in operator station.



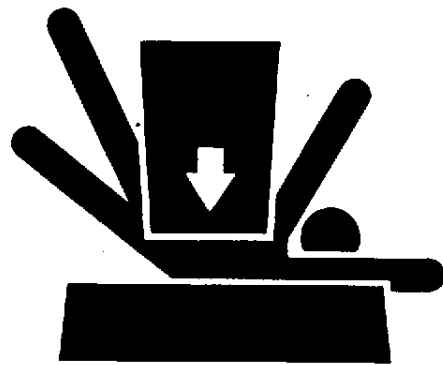
DX.PARK -19-04JUN90

305
-UN-24MAY69
TS230

SUPPORT MACHINE PROPERLY

Always lower the attachment or implement to the ground before you work on the machine. If you must work on a lifted machine or attachment, securely support the machine or attachment.

Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load. Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.



DX.LOWER -19-04JUN90

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TS229

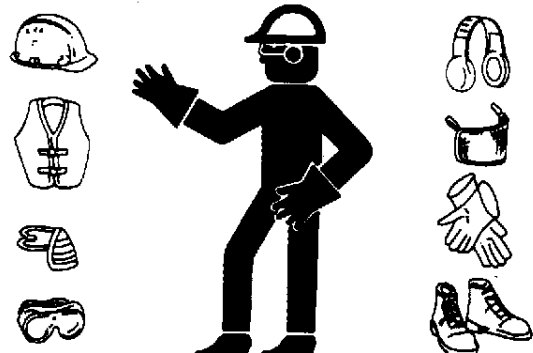
WEAR PROTECTIVE CLOTHING

Wear close fitting clothing and safety equipment appropriate to the job.

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.



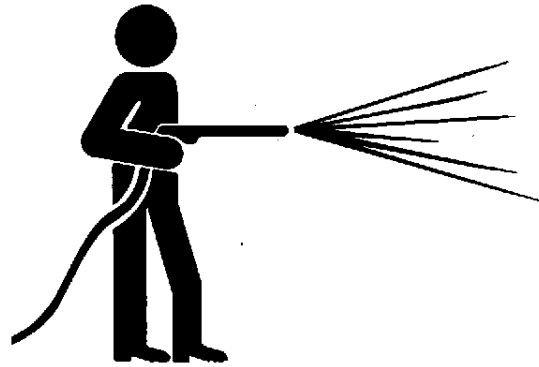
DX.WEAR -19-10SEP90

-UN-23AUG88
TS206

WORK IN CLEAN AREA

Before starting a job:

- Clean work area and machine.
- Make sure you have all necessary tools to do your job.
- Have the right parts on hand.
- Read all instructions thoroughly; do not attempt shortcuts.



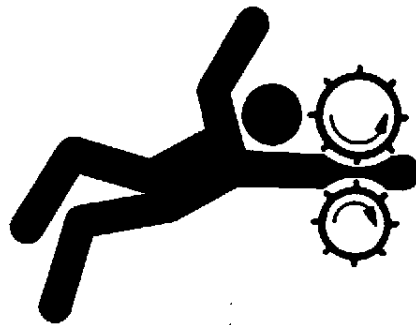
DX,CLEAN -19-04JUN90

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SERVICE MACHINES SAFELY

Tie long hair behind your head. Do not wear a necktie, scarf, loose clothing, or necklace when you work near machine tools or moving parts. If these items were to get caught, severe injury could result.

Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.



DX,LOOSE -19-04JUN90

TS228 -UN-23AUG88

ILLUMINATE WORK AREA SAFELY

Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.



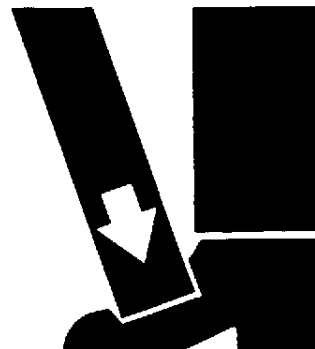
DX,LIGHT -19-04JUN90

TS223 -UN-23AUG88

USE PROPER LIFTING EQUIPMENT

Lifting heavy components incorrectly can cause severe injury or machine damage.

Follow recommended procedure for removal and installation of components in the manual.



DX,LIFT -19-04JUN90

TS226 -UN-23AUG88

AVOID HEATING NEAR PRESSURIZED FLUID LINES

Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can be accidentally cut when heat goes beyond the immediate flame area.



DX,TORCH -19-03MAR93

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REMOVE PAINT BEFORE WELDING OR HEATING

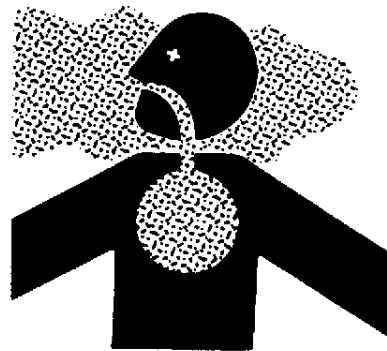
Avoid potentially toxic fumes and dust.

Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch.

Do all work outside or in a well ventilated area. Dispose of paint and solvent properly.

Remove paint before welding or heating:

- If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.



DX,PAINT -19-03MAR93

-UN-23AUG88
TS220

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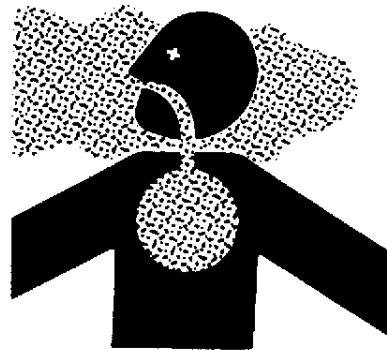
AVOID HARMFUL ASBESTOS DUST

Avoid breathing dust that may be generated when handling components containing asbestos fibers. Inhaled asbestos fibers may cause lung cancer.

Components in products that may contain asbestos fibers are brake pads, brake band and lining assemblies, clutch plates, and some gaskets. The asbestos used in these components is usually found in a resin or sealed in some way. Normal handling is not hazardous as long as airborne dust containing asbestos is not generated.

Avoid creating dust. Never use compressed air for cleaning. Avoid brushing or grinding material containing asbestos. When servicing, wear an approved respirator. A special vacuum cleaner is recommended to clean asbestos. If not available, apply a mist of oil or water on the material containing asbestos.

Keep bystanders away from the area.



TS220 -UN-23AUG68

DX,DUST -19-15MAR91

PRACTICE SAFE MAINTENANCE

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet, and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

Disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.



TS216 -UN-23AUG88

DX,SERV -19-03MAR93

USE PROPER TOOLS

Use tools appropriate to the work. Makeshift tools and procedures can create safety hazards.

Use power tools only to loosen threaded parts and fasteners.

For loosening and tightening hardware, use the correct size tools. DO NOT use U.S. measurement tools on metric fasteners. Avoid bodily injury caused by slipping wrenches.

Use only service parts meeting John Deere specifications.



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DX,REPAIR -19-04JUN90

DISPOSE OF WASTE PROPERLY

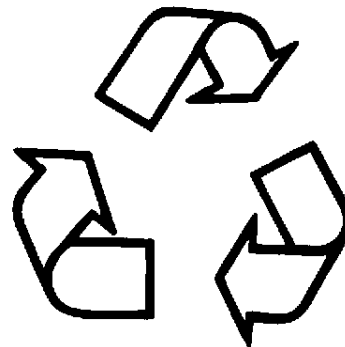
Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down a drain, or into any water source.

Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.

Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere dealer.



-UN-26NOV90
TS1133

DX,DRAIN -19-03MAR93

LIVE WITH SAFETY

Before returning machine to customer, make sure machine is functioning properly, especially the safety systems. Install all guards and shields.



DX,LIVE -19-25SEP92

TS231 -19-07OCT88

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TEAMMATE I INBOARD PLANETARY AXLES APPLICATION CHART

JOHN DEERE AGRICULTURAL TRACTORS:

Machine	Axle Series
8560	1600
8760	1600
8960	1600 *
8570-8770-8870-8970	1600 *

JOHN DEERE INDUSTRIAL EQUIPMENT:

Backhoes

710C	1200
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Scrapers

5010-I	1400
760 and 760A	1400
762 and 762A	1400
762B (xxxxxx—)	1400
860, 860A, 860B, and 862B	1400

Skidders

340D	1200
440, 440A, 440B, 440C, and 440D	1200
44AD	1200
540, 540A, 540B, and 540D	1200
540E:	
Front	1200
Rear	1400
548D and 548E	1200
640, 640D, and 640E	1200
648D and 648E	1200
740, 740A, 740E, and 740G	1400
748E	1400

Loaders

LX100	1200
LX120:	
Front	1400
Rear	1200
LX150	1400
444, 444C and 444D	1200
444E (xxxxxx—001151)	1200
544, 544A, 544B, 544C, and 544D	1200
624E:	
Front	1400
Rear	1200
644, 644A, 644B, 644C, and 644D	1400
646 and 646C	1400
744E	1600
844	1800

* High Capacity

BASIC INBOARD PLANETARY AXLE SPECIFICATIONS

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Description	1200	1400	1600	1800
Input Yokes:	5C,6C,58WB,155T	7C,16T,155T	8C	8C,9C
Input Housing:				
Centerline Pivot	Yes	Yes	Yes	Yes
Optional Oscillating Hardware	Yes	Yes	Yes	Yes
Input Pinion and Ring Gear Ratio:	4.333:1 4.778:1 5.571:1	4.364:1 4.778:1 5.143:1	4.364:1 4.909:1 5.273:1 5.818:1 5.636:1 ^a 6.444:1 ^b	4.444:1
Inboard Wet Disk Brakes:	Yes	Yes	Yes	Yes
Inboard Planetary Final Drive Ratio:	3.714:1 4.800:1 5.500:1 6.000:1	3.714:1 4.800:1 6.000:1 6.400:1	5.143:1 6.429:1 ^c	5.000:1
Dimensions:				
Length (Axle Flange-to-Flange):				
Narrow	1300 mm (51.2 in.)	1953 mm (76.9 in.)	—	2062 mm (81.2 in.)
Standard	1700 mm (66.9 in.)	2063 mm (81.2 in.)	1994 mm (78.5 in.)	2266 mm (89.2 in.)
Wide	1953 mm (76.9 in.)	—	2198 mm (86.5 in.)	2466 mm (97.1 in.)
Height	452 mm (17.8 in.)	498 mm (19.6 in.)	621 mm (24.5 in.)	608.5 mm (22.9 in.)
Approximate Weight	783 kg (1725 lb)	932 kg (2050 lb)	1361 kg (3000 lb)	1451 kg (3200 lb)
Oil Capacity	16 L (17 qt)	19.4 L (20.5 qt)	45.5 L (48 qt) ^d 24.6 L (26 qt) ^a 28.4 L (30 qt) ^b	28 L (30 qt)

^a 8560-8760 Agricultural 4WD tractors

^b 8960-8570-8770-8870-8970 Agricultural 4WD tractors

^c 8560-8760-8960-8570-8770-8870-8970 Agricultural 4WD tractors

^d Industrial and OEM applications

AXLE IDENTIFICATION

Each TeamMate I Axle has a serial number plate located on the input side of the differential case. Major design changes may be noted within this Component Technical Manual (CTM) and will refer to the information on the serial number plate.

This CTM is used for TeamMate I Axles with the following information on the SECOND line, first five positions (reading left to right) of the Serial Number Plate:

1200 Series 2501R	1400 Series 2511R
1600 Series 2521R	1800 Series 2531R

Each John Deere inboard planetary axle assembly has a 13-digit alpha-numeric Serial Number plate. The top line of the plate identifies the producing factory, component type identification, and six position sequential serial number.

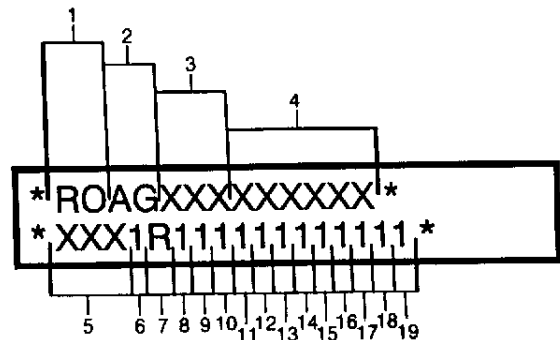
The alpha-numeric code on the second line identifies the axle configuration.

IMPORTANT: Serial Number plates must be masked when painting axles to prevent the information from becoming illegible. This information is used for service and warranty purposes.

NOTE: Some serial number plates include the addition of bar-coding.

RX,CTM1810,3A -19-30JUN95

SERIAL NUMBER PLATES—JOHN DEERE APPLICATIONS



- 1—Manufacturing Unit
RO = Waterloo Works
- 2—Component Identification
AG = Inboard Planetary
- 3—Axle Series
250 = 1200 Series
251 = 1400 Series
252 = 1600 Series
253 = 1800 Series

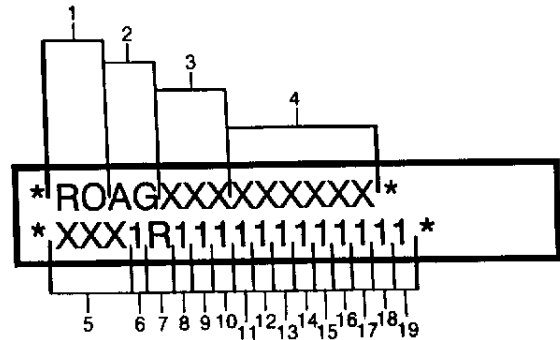
- 4—Six Position Serial Number
- 5—Axle Series
250 = 1200 Series
251 = 1400 Series
252 = 1600 Series
253 = 1800 Series

- 6—Design Version
0 = Transitional
1 = TEAMMATE™ I
2 = Not Used
3 = TEAMMATE™ II

- 7—19—Top Assembly Number

RX,CTM1810,4A -19-08JUL95

SERIAL NUMBER PLATE—OEM APPLICATIONS (1200 SERIES AXLES)



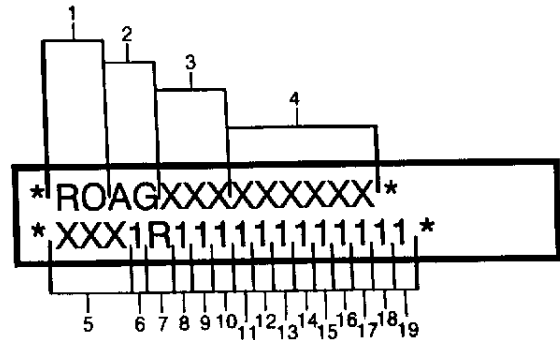
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| <p>1—Manufacturing Unit
RO = Waterloo Works</p> <p>2—Component Identification
AG = Inboard Planetary</p> <p>3—Axle Series
250 = 1200 Series</p> <p>4—Six-Position Serial Number</p> <p>5—Axle Series
250 = 1200 Series</p> <p>6—Design Version
0 = Transitional
1 = TEAMMATE™ I
2 = Not Used
3 = TEAMMATE™ II</p> <p>7—Manufacturing Unit
R = Waterloo Works</p> <p>8—Input Rotation
1 = Clockwise
(Toward Input)
2 = Clockwise
(Away from Input)
3 = Counterclockwise
(Toward Input)
4 = Counterclockwise
(Away from Input)</p> <p>9—Spiral Bevel Reduction
1 = 4.331:1
2 = 4.778:1
3 = 5.571:1
A = 4.333:1
Special Disconnect</p> | <p>10—Yoke/Size and Style
1 = 5C
2 = 6C
3 = 58WB
4 = 155T With Flange
5 = 58WB With Br. Disk
6 = 155T
A = Special Disconnect Yoke</p> <p>11—Flange-to-Flange Dimension and Wheel Mounting
1 = None
2 = 1300 mm (51.2 in.)
4 = 1700 mm (66.9 in.)
6 = 1953 mm (76.9 in.)
A = Special
B = Offset Left
1627 mm (64 in.)
C = Offset Right
1627 mm (64 in.)
D = Offset Left
1500 mm (59 in.)
E = Offset Right
1500 mm (59 in.)</p> | <p>12—Input Housing and Auxiliary Brake
1 = Standard, No Brake
A = Special Disconnect
B = Special With Brake</p> <p>13—Mounting Type
1 = Fixed Mount
2 = Center Pivot Front Bracket Oscillation
3 = Center Pivot With Rear Pivot Kit Oscillation
A = Special Offset Support
Mounting</p> <p>14—Brake Type
1 = No Brakes
2 = Independent Brakes Standard Capacity
3 = Dual Brakes Standard Capacity
4 = Independent Brakes High Capacity
5 = Dual Brakes High Capacity</p> | <p>15—Differential Type
1 = Standard
2 = No-SPIN™
3 = Capture DIFF-LOK</p> <p>16—Differential Case
1 = Standard
B = Special Low-Profile</p> <p>17—Final Drive Reduction
1 = Without Final Drives
2 = 3.714:1
3 = 4.800:1
4 = 5.500:1
5 = 6.000:1</p> <p>18—Trim
1 = No Trim
2 = VCI Bag
3 = Paint
5 = Paint and Covers</p> <p>19—Miscellaneous Parts
1 = ID Tag and SN Plate
2 = ID Tag, SN Plate, and Breather</p> |
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RW25330 -JUN-30NOV94

RW25329 -JUN-15NOV94

SERIAL NUMBER PLATE—OEM APPLICATIONS (1400 SERIES AXLES)



RW25330 -JUN-30NOV94

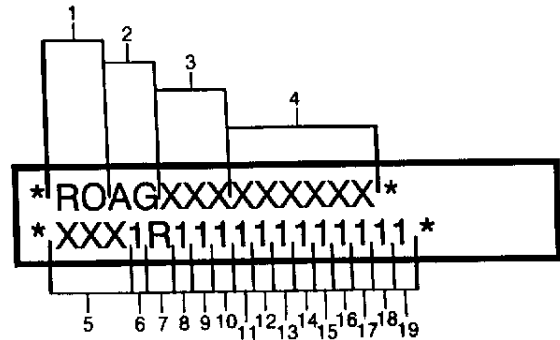
RW25329 -JUN-15NOV94

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| <p>1—Manufacturing Unit
RO = Waterloo Works</p> <p>2—Component Identification
AG = Inboard Planetary</p> <p>3—Axle Series
251 = 1400 Series</p> <p>4—Six-Position Serial Number</p> <p>5—Axle Series
251 = 1400 Series</p> <p>6—Design Version
0 = Transitional
1 = TEAMMATE™ I
2 = Not Used
3 = TEAMMATE™ II</p> <p>7—Manufacturing Unit
R = Waterloo Works</p> <p>8—Input Rotation
1 = Clockwise
(Toward Input)
2 = Clockwise
(Away from Input)
3 = Counterclockwise
(Toward Input)
4 = Counterclockwise
(Away from Input)</p> | <p>9—Spiral Bevel Reduction
1 = 4.364:1
2 = 4.778:1
3 = 5.143:1
A = 4.364:1
Special Disconnect</p> <p>10—Yoke/Size and Style
1 = 7C
2 = 16T
3 = 155T
A = Special Disconnect
Yoke</p> <p>11—Flange-to-Flange Dimension and Wheel Mounting
1 = None
2 = 1953 mm (76.9 in.)
2063 mm (81.2 in.)
w/6.4 Final Drive
4 = 1700 mm (66.9 in.)
1810 mm (72.3 in.)
w/6.4 Final Drive</p> | <p>12—Input Housing and Auxiliary Brake
1 = Standard, No Brake
A = Special Disconnect</p> <p>13—Mounting Type
1 = Fixed Mount
2 = Center Pivot Front
Bracket Oscillation
3 = Center Pivot With
Rear Pivot Kit
Oscillation</p> <p>14—Brake Type
1 = No Brakes
2 = Independent Brakes
Standard Capacity
3 = Dual Brakes
Standard Capacity</p> <p>15—Differential Type
1 = Standard 4NB
2 = No-SPIN™
3 = Capture DIFF-LOK</p> | <p>16—Differential Case
1 = Standard
B = Special Low-Profile
2-1/4 in. Brakes</p> <p>17—Final Drive Reduction
1 = Without Final
Drives
2 = 3.714:1
3 = 4.800:1
4 = 6.000:1
5 = 6.400:1</p> <p>18—Trim
1 = No Trim
2 = VCI Bag
3 = Paint
5 = Paint and Covers</p> <p>19—Miscellaneous Parts
1 = ID Tag and SN Plate
2 = ID Tag, SN Plate,
and Breather</p> |
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RX,CTM1810,6A -19-30JUN95

SERIAL NUMBER PLATE—OEM APPLICATIONS (1600 SERIES AXLES)

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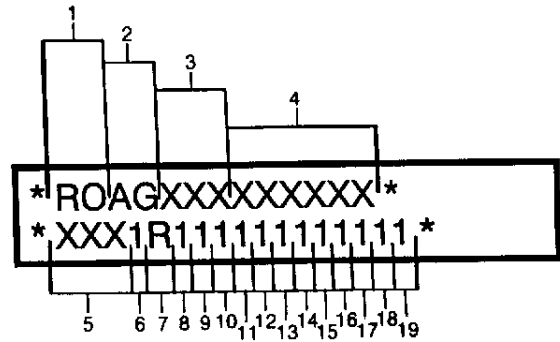
RW25330 -JUN-30NOV94

RW25329 -JUN-15NOV94

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| <p>1—Manufacturing Unit
RO = Waterloo Works</p> <p>2—Component Identification
AG = Inboard Planetary</p> <p>3—Axle Series
252 = 1600 Series</p> <p>4—Six-Position Serial Number</p> <p>5—Axle Series
252 = 1600 Series</p> <p>6—Design Version
0 = Transitional
1 = TEAMMATE™ I
2 = Not Used
3 = TEAMMATE™ II</p> <p>7—Manufacturing Unit
R = Waterloo Works</p> <p>8—Input Rotation
1 = Clockwise
(Toward Input)
2 = Clockwise
(Away from Input)
3 = Counterclockwise
(Toward Input)
4 = Counterclockwise
(Away from Input)</p> <p>9—Spiral Bevel Reduction
1 = 4.364:1
2 = 4.909:1
3 = 5.273:1
4 = 5.818:1
A = 5.636:1 Std. Capacity
B = 6.444:1 High Capacity</p> | <p>10—Yoke/Size and Style
1 = 8C
A = 8C
B = 8C Br. Flange With Drum</p> <p>11—Flange-to-Flange Dimension and Wheel Mounting
1 = None
2 = 1994 mm (78.5 in.) Standard
3 = 2198 mm (86.5 in.) Wide
A = Special, Std. 100 mm 3.937 in. Adj. Ag. Axle
B = Special, High Capacity 110 mm (4.331 in.) Adj. Ag. Axle
C = Special 1994 mm (78.5 in.)</p> <p>12—Input Housing and Auxiliary Brake
1 = Standard, No Brake
1 = Standard, No Auxiliary Brake, Oscillation
A = Special Std. Capacity
B = Special High Capacity</p> | <p>13—Mounting Type
1 = Fixed Mount
2 = Oscillation Support</p> <p>14—Brake Type
1 = No Brakes
2 = Independent Brakes Standard Capacity
3 = Dual Brakes Standard Capacity
A = No Brakes
2 = Dual Brakes Standard Capacity
3 = Dual Brakes High Capacity</p> <p>15—Differential Type
1 = Standard 3NB
2 = No-SPIN™
3 = Capture 3NB DIFF-LOK
A = Special 3NB DIFF-LOK</p> <p>16—Differential Case
1 = Standard
A = Special Ag.</p> <p>17—Final Drive Reduction
1 = Without Final Drives
3 = Option 5.143:1 FD
A = Special Std. 6.429:1
B = Special High Capacity 6.429:1</p> | <p>18—Trim
1 = No Trim
2 = VCI Bag
3 = Paint</p> <p>19—Miscellaneous Parts
1 = ID Tag and SN Plate
2 = ID Tag, SN Plate, and Breather
A = Special Standard
B = Special High Capacity
C = Special Standard with Auxiliary Brake
D = Special High Capacity with Auxiliary Brake
E = Special Ag. Standard, SCV Drain
F = Special Ag. High Capacity SCV Drain</p> |
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RX,CTM1810,7A -19-30JUN95

SERIAL NUMBER PLATE—OEM APPLICATIONS (1800 SERIES AXLES)



RW25330 -JUN-30NOV94

RW25329 -JUN-15NOV94

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1—Manufacturing Unit
RO = Waterloo Works</p> <p>2—Component Identification
AG = Inboard Planetary</p> <p>3—Axle Series
253 = 1800 Series</p> <p>4—Six-Position Serial Number
253 = 1800 Series</p> <p>5—Axle Series
253 = 1800 Series</p> <p>6—Design Version
0 = Transitional
1 = TEAMMATE™ I
2 = Not Used
3 = TEAMMATE™ II</p> <p>7—Manufacturing Unit
R = Waterloo Works</p> <p>8—Input Rotation
1 = Clockwise
(Toward Input)
2 = Clockwise
(Away from Input)
3 = Counterclockwise
(Toward Input)
4 = Counterclockwise
(Away from Input)</p> | <p>9—Spiral Bevel Reduction
1 = 4.444:1
A = 4.444:1 Special
B = None</p> <p>10—Yoke/Size and Style
1 = 8C—36T Spline
A = 9C—18T Spline
with Brake Flange
B = None</p> <p>11—Flange-to-Flange Dimension and Wheel Mounting
1 = None
2 = 2062 mm (81.2 in.)
English Threads
3 = 2266 mm (89.2 in.)
4 = 2466 mm (97.1 in.)
A = 2062 mm (81.2 in.)
Metric Threads</p> <p>12—Input Housing and Auxiliary Brake
1 = Standard, No Brake
A = Special with Auxiliary Brake
B = Special No Input Quill</p> | <p>13—Mounting Type
1 = Fixed Mount
2 = Center Pivot Front Bracket Oscillation</p> <p>14—Brake Type
1 = No Brakes
2 = Dual Brakes
Standard Capacity
A = Non Powered Axle Standard Capacity
B = High Energy Dual Wheels High Capacity</p> <p>15—Differential Type
1 = Standard 4NB
3 = Capture 4J DIFF-LOK
A = Hyd. DIFF-LOK, Special
B = None</p> <p>16—Differential Case
1 = Standard</p> | <p>17—Final Drive Reduction
1 = Without Final Drives
2 = 5.000:1
A = 5.000:1 Non-Powered</p> <p>18—Trim
1 = No Trim
2 = VCI Bag
3 = Paint</p> <p>19—Miscellaneous Parts
1 = ID Tag and SN Plate
2 = ID Tag, SN Plate, and Breather
A = ID Tag, SN Plate Suction Screen, Auxiliary Brake
B = SN Plate, Misc. Plugs Non-Powered Axle</p> |
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RX,CTM1810,8A -19-30JUN95

GENERAL REPAIR PROCEDURES

NOTE: Before beginning the repair, review the following guidelines. These are provided to emphasize the need for attention to detail and care when servicing the axle assembly.

Thoroughly clean the outside before disassembly.

Handle parts carefully to prevent nicking or burring machined surfaces.

Inspection Before Disassembly

- Inspect the planet pinion carrier and axle shaft and the pinion shaft and ring gear before removal as follows:
 1. Wipe the lubricant from the internal working parts and visually inspect the parts for excessive wear or damage.
 2. Inspect the gears for roughness.
 3. Inspect the pinion gear teeth for signs of scoring, abnormal wear, or nicks/chips.

Heating Bearing Cones

IMPORTANT: Heat bearing cones in a bearing heater. Use a thermometer and DO NOT exceed 150°C (300°F).

Cleaning and Inspection

- Clean all parts with clean solvent and use moisture-free air for drying.

Bearings

- Never dry bearings with compressed air. Spinning a bearing without lubrication can damage the bearing.
- Clean bearings with clean solvent, dry thoroughly, and oil before inspection. Inspect bearings for roughness of rotation and excessive wear of rollers.
- Inspect bearing cups for excessive wear.
- Both the bearing cone and roller assembly should be replaced if either the cup or cone has excessive wear.

- Inspect thrust washers and thrust surfaces for distortion, roughness, scoring, or wear.
- When installing bearing cups and cones, make sure they are fully seated.
- Cups and cones are properly seated if a 0.05 mm (0.002 in.) feeler gauge will NOT pass for a 360° circular sweep between cone or cup mounting surface.

Shafts

- Inspect the shaft bearing surfaces for wear or damage.
- Inspect shafts and replace if excessively worn or damaged.

Gears and Planetary Assemblies

- Examine the gear teeth for excessive wear. Replace as necessary.
- The pinion shafts should be inspected for loose fit and/or complete disengagement.
- Check for smooth rotation of gears.

FASTENERS AND TIGHTENING

- Fasteners must be tightened to the specified torque.
- Fasteners must be replaced with the same property class (grade).
- Follow the specified tightening pattern when listed.
- Different models of axles and **Early Version Axles** may have a different torque specification and fastener than **Later Version Axles**. Check the model number and/or the fastener removed and use the correct torque specification and fastener.

RX,CTM1810,9A -19-30JUN95

Assembly

- Use the specified grease when installing seals.
- During assembly, each part should be lubricated with clean hydraulic oil.
- Install the correct cone point shims.
- Needle bearings and thrust washers should be lightly coated with petroleum jelly during assembly.
- Perform specified preload, backlash, and rolling drag torque checks.
- The differential ring gear and drive shaft are replaced as a matched set.

RX,4310,6B -19-22DEC94

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9