

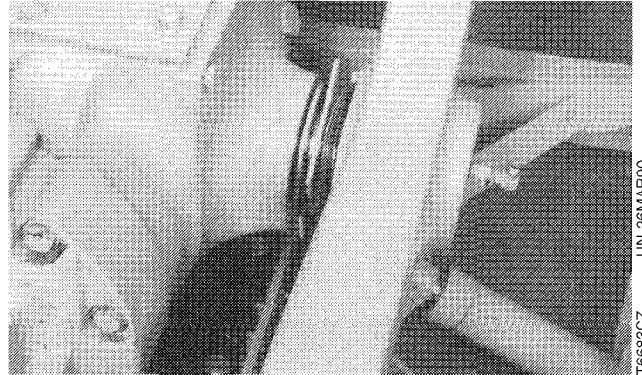
## REPLACE REAR AXLE OSCILLATING SUPPORT BUSHINGS—444E (AXLE SERIAL NO. —001151)

**NOTE:** If only the rear oscillating support is to be removed, the rear axle assembly does not have to be removed, but must be supported.

1. Remove rear axle assembly. (See Remove and Install Rear Axle and Differential in this group.)

**CAUTION:** The approximate weight of the rear oscillating support is 68 kg (150 lbs).

2. Remove rear oscillating support.

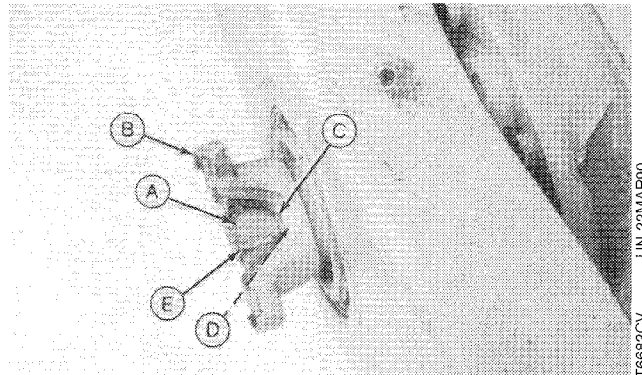


TX,0200,BB2 -19-13JUL94

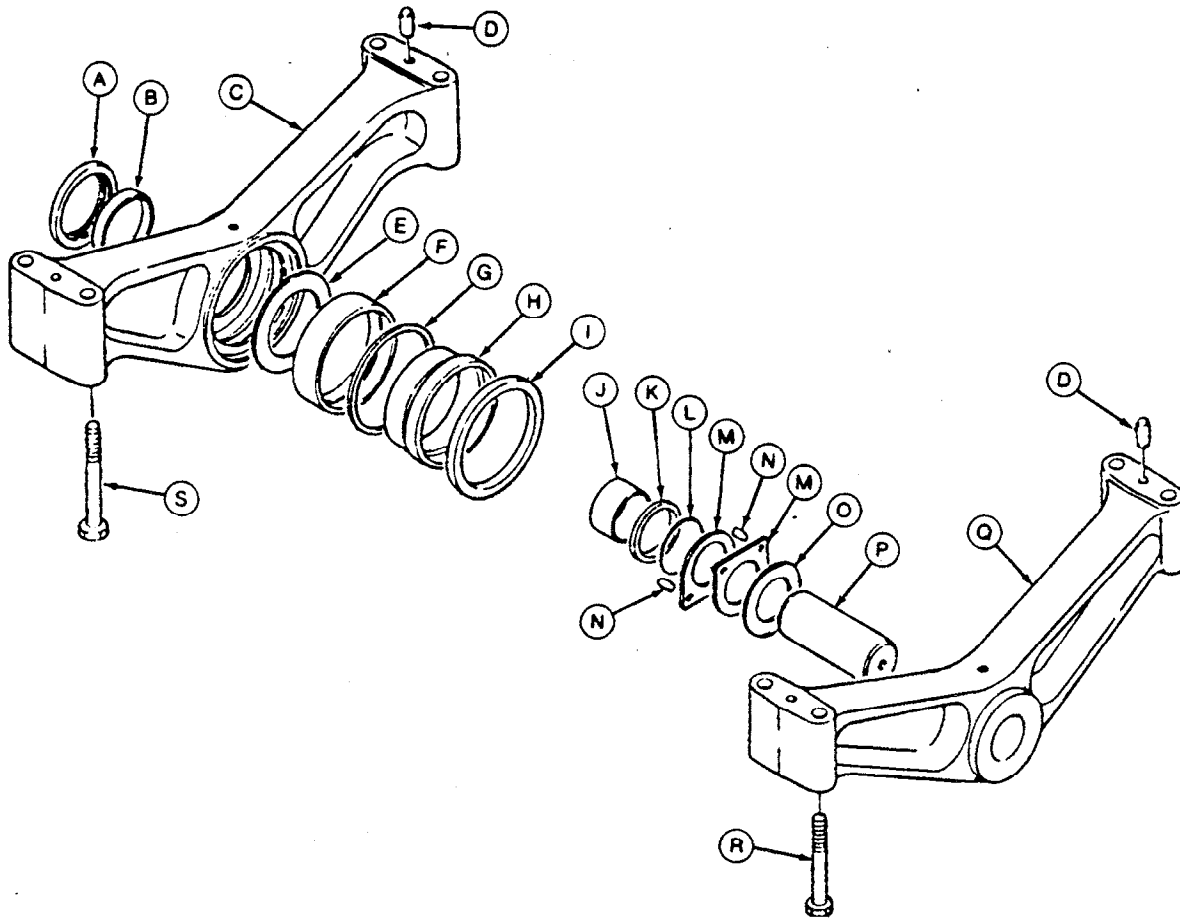
**CAUTION:** The approximate weight of the front oscillating support is 77 kg (170 lbs).

3. Remove parts (A—E) to remove front oscillating support.

- A—Nut
- B—Flange
- C—Washer
- D—O-Ring
- E—Cotter Pin



TX,0200,BB3 -19-13JUL94



- |                      |             |                         |                      |
|----------------------|-------------|-------------------------|----------------------|
| A—Seal               | F—Bushings  | K—Seal                  | P—Pin                |
| B—Wear Ring          | G—Snap Ring | L—O-Ring                | Q—Rear Support       |
| C—Front Support      | H—Sleeve    | M—Thrust Plate (2 used) | R—Cap Screw (4 used) |
| D—Dowel Pin (4 used) | I—Seal      | N—Dowel Pin (2 used)    | S—Cap Screw (4 used) |
| E—Thrust Washer      | J—Bushings  | O—Shim (as required)    |                      |

4. Remove parts (A—B) and (E—P).

5. Inspect parts for wear or damage. Replace as necessary.

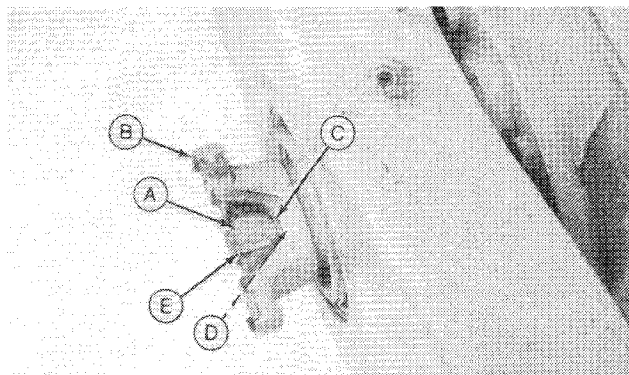
TX,0200,BB4 -19-13JUL94

6. Install front support.

7. Install parts (A—D). Tighten nut to 79 N·m (58 lb-ft).

8. Install cotter pin (E).

- |              |
|--------------|
| A—Nut        |
| B—Flange     |
| C—Washer     |
| D—O-Ring     |
| E—Cotter Pin |

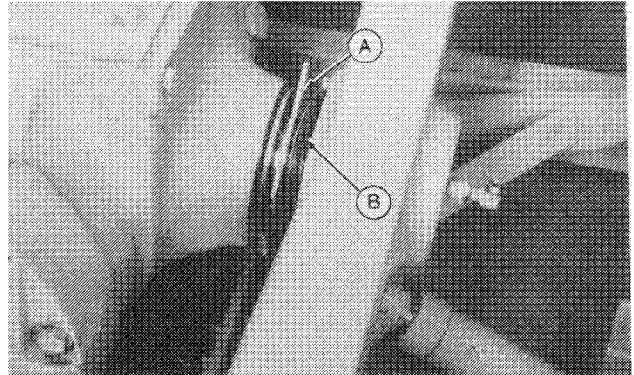


TX,0200,BB6 -19-13JUL94

9. Install rear support.

10. Install rear axle assembly. (See Remove and Install Rear Axle and Differential in this group.)

11. Measure clearance between differential case and thrust plate (A). Clearance should be within 0.025—0.046 mm (0.001—0.0018 in.). Remove or install shims (B) until clearance is within specifications.



TX,0200,BB5 -19-13JUL94

## REPLACE REAR AXLE OSCILLATING SUPPORT BUSHINGS—444E (AXLE SERIAL NO.001152— )

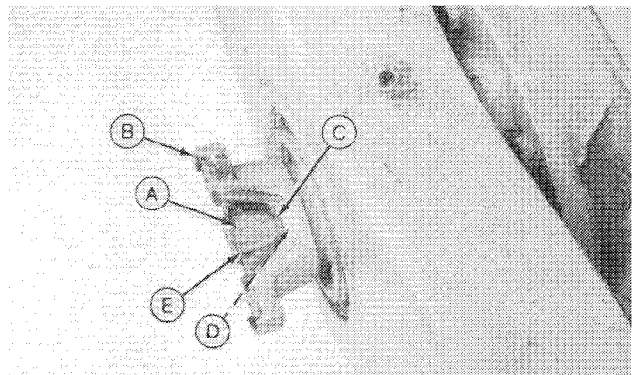
*NOTE: If only the rear oscillating support is to be removed, the rear axle assembly does not have to be removed, but must be supported.*

1. Remove rear axle assembly. (See Remove and Install Rear Axle and Differential in this group.)

**CAUTION:** The approximate weight of the rear oscillating support is 68 kg (150 lbs).

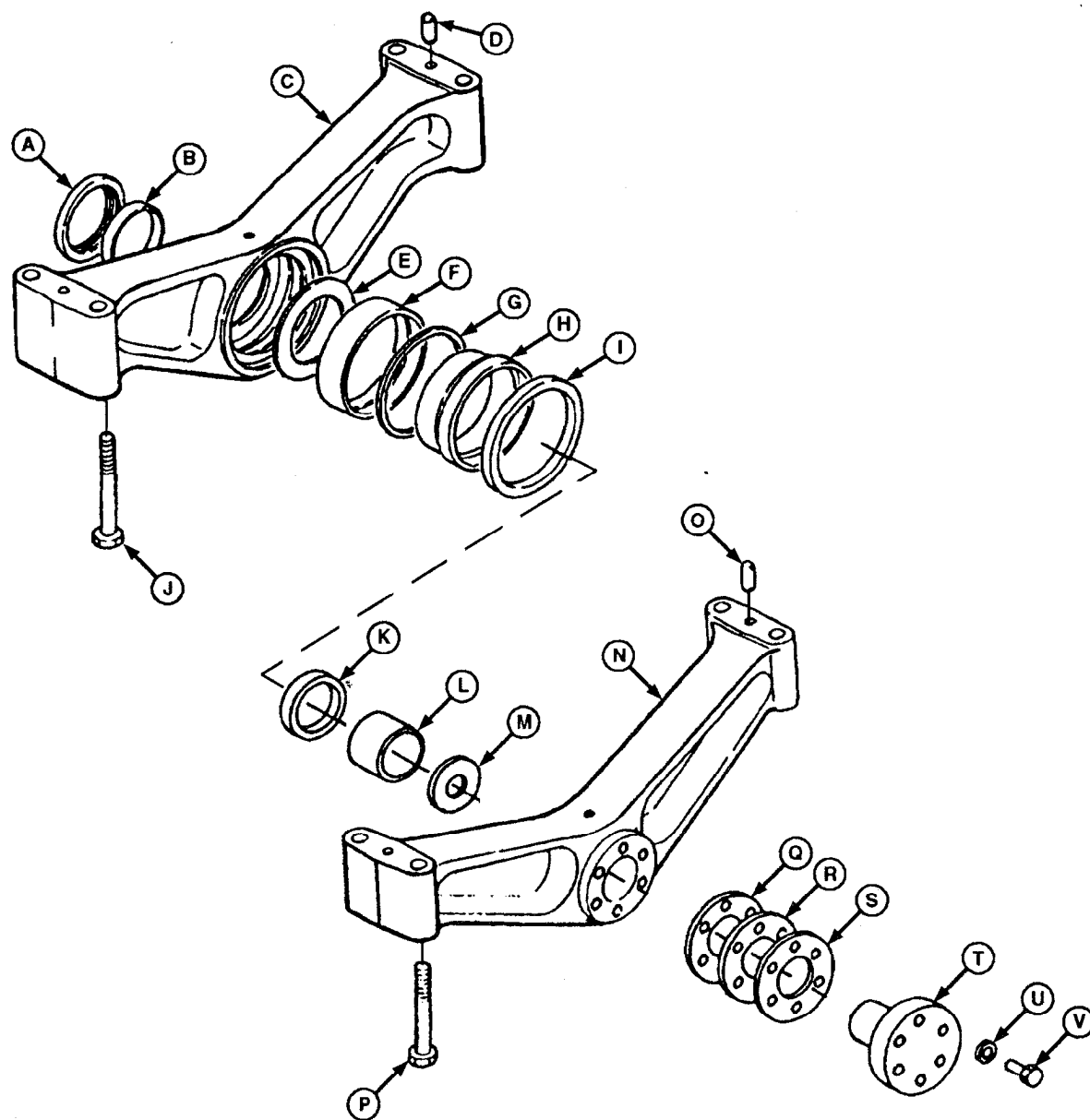
The approximate weight of the front oscillating support is 77 kg (170 lbs).

2. Remove parts (A—E) to remove front oscillating support.



A—Nut  
B—Flange  
C—Washer  
D—O-Ring  
E—Cotter Pin

TX,0200,BA1141 -19-13JUL94



T8286AK (CV)

A—Seal  
B—Wear Ring  
C—Front Support  
D—Dowel Pin (2 used)  
E—Thrust Washer  
F—Bushings

G—Snap Ring  
H—Sleeve  
I—Seal  
J—Cap Screw  
K—Seal  
L—Bushings

M—Washer  
N—Rear Support  
O—Dowel Pin (2 used)  
P—Cap Screw (4 used)  
Q—Shim

R—Shim  
S—Shim  
T—Cover/Pivot Pin  
U—Lock Washer (6 used)  
V—Cap Screw (6 used)

3. Remove parts (A—V).

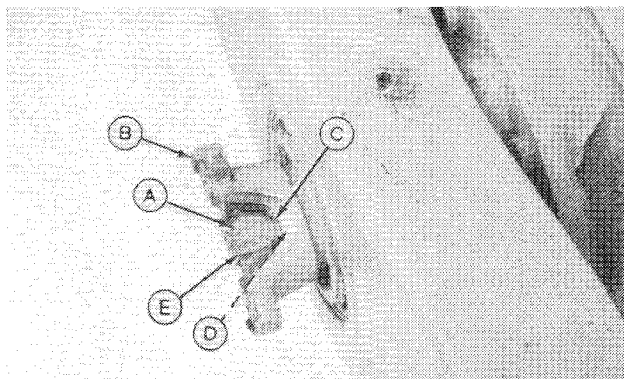
5. Install parts (A—V).

4. Inspect parts for wear or damage. Replace as necessary.

T8286AK -UN-15JUL94

6. Slide front support onto axle housing.
7. Install parts (A—D). Tighten nut to 79 N·m (58 lb-ft).
8. Install cotter pin (E).
9. Install rear support onto axle housing.
10. Install rear axle assembly. (See Remove and Install Rear Axle and Differential in this group.)

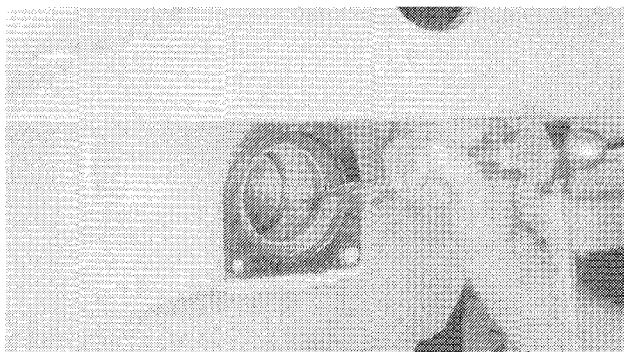
A—Nut  
B—Flange  
C—Washer  
D—O-Ring  
E—Cotter Pin



TX,0200,BA1144 -19-13JUL94

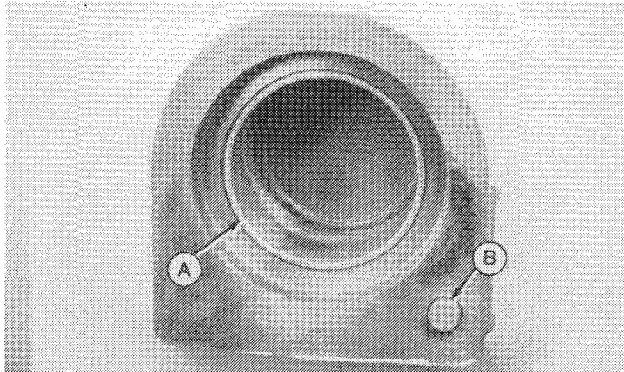
## REPLACE REAR PIVOT BUSHING AND DOWEL PIN—444E

1. Support rear axle assembly. Remove rear oscillating support.
2. Use a chisel to remove bushing.



TX,0210,BB31 -19-13JUL94

3. Install new pin (B), if removed or if case is being replaced. Install pin until 6.1 mm (0.24 in.) of pin protrudes from mounting surface.
4. Install new bushing (A) flush with outside edge of inner bore, with the seam toward the case cover.



R50,50300,2098 -19-13JUL94

## SERVICE EQUIPMENT AND TOOLS

*NOTE: Order tools from the U.S. SERVICE-GARD™ Catalog or from the European Microfiche Tool Catalog (MTC). Some tools may be available from a local supplier.*

Name	Use
JDG-22 Seal Remover	To remove oil seals.
JDG-93 Disk (444E)	To remove oscillating pivot wear sleeve.
JDE-96 Ring Compressor	To remove oscillating pivot wear sleeve.
JDG-127 O-Ring Seal Tool Set (444E)	To remove O-rings.
JDG-185 Air Test Plug (444E)	To test lock passage for leaks.
JDG-92 Disk	To install differential drive shaft bearing cup.
17-1/2 and 30 Ton Puller Set	To remove bearings.

TX,0210,AA34 -19-04MAY88

## OTHER MATERIALS

Number	Name	Use
AT38226 (3M No. 2158)	Epoxy	On pinion shaft cap screw—344E.
TY6305	Clean and Cure Primer	To prime surfaces for T43512, T43513, and T43514.
T43514	Plastic Gasket	To seal oil seal outside diameters. To seal bearing cup in lock side of differential.
TY6304	Flexible Sealant	Install axle cover and axle housing.
T43512 (344E)	Thread Lock and Sealer (Medium Strength)	Differential cap screws.

TX,0210,AA35 -19-13JUL94

**SPECIFICATIONS—344E**

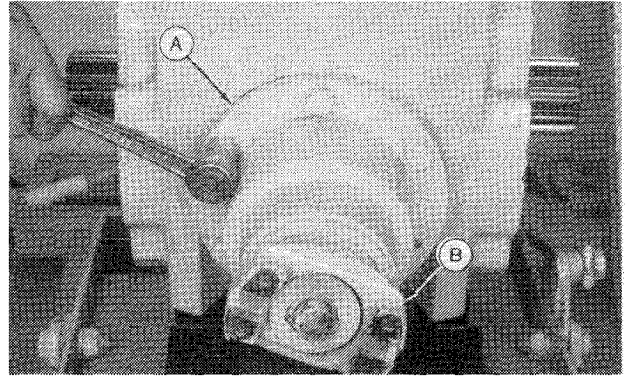
Item	Measurement	Specification
Rear Oscillating Support . . . . .	Weight (Approximate) . . . . .	59 kg (130 lb)
Front Oscillating Support . . . . .	Weight (Approximate) . . . . .	41 kg (90 lb)
Differential Cone Point . . . . .	Dimension . . . . .	See Procedure
Yoke-to-Pinion Shaft . . . . .	Gap (Endplay) . . . . .	0.00—0.05 mm (0.00—0.002 in.)
Pinion Shaft Cap Screw . . . . .	Torque . . . . .	390 N·m (290 lb-ft)
Differential (Standard) . . . . .	Weight (Approximate) . . . . .	55 kg (120 lb)
Differential (No-SPIN) . . . . .	Weight (Approximate) . . . . .	60 kg (132 lb)
Spiral Bevel Gear Cap Screw . . . . .	Torque . . . . .	49 N·m (36 lb-ft)
Differential Housing Cap Screw . . . . .	Torque . . . . .	88 N·m (65 lb-ft)
Differential Quill Cap Screw . . . . .	Torque . . . . .	88 N·m (65 lb-ft)
Differential Carrier . . . . .	Rolling Drag Torque . . . . .	8.9—10.2 N (2.0—2.4 lb force)
Differential Ring Gear . . . . .	Backlash . . . . .	0.19—0.39 mm (0.007—0.015 in.)
Input Shaft Pinion-to-Spiral Bevel Gear . . . . .	Tooth Bearing Pattern Length . . . . .	30 mm (1.2 in.) Minimum
Differential Cap Screws (Standard) . . . . .	Torque . . . . .	115 N·m (85 lb-ft)
Ring Gear Cap Screws . . . . .	Torque . . . . .	150 N·m (110 lb-ft)
Differential Case Cover Cap Screw . . . . .	Torque . . . . .	75 N·m (55 lb-ft)
Differential . . . . .	Capacity . . . . .	16 L (17 qt)

TX,0210,HH572 -19-13JUL94

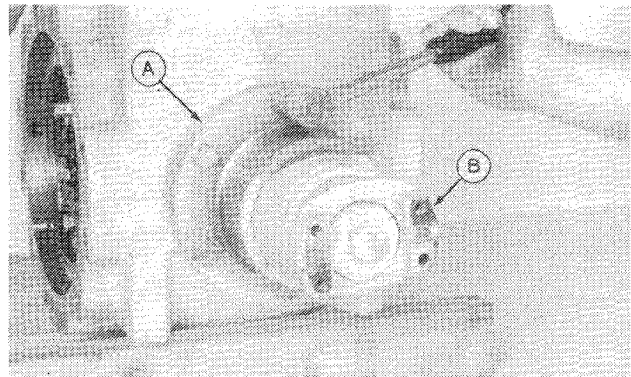
## REMOVE INPUT QUILL AND DRIVE SHAFT—344E

Remove yoke (B).

Remove input quill (A).



Front Axle



Rear Axle

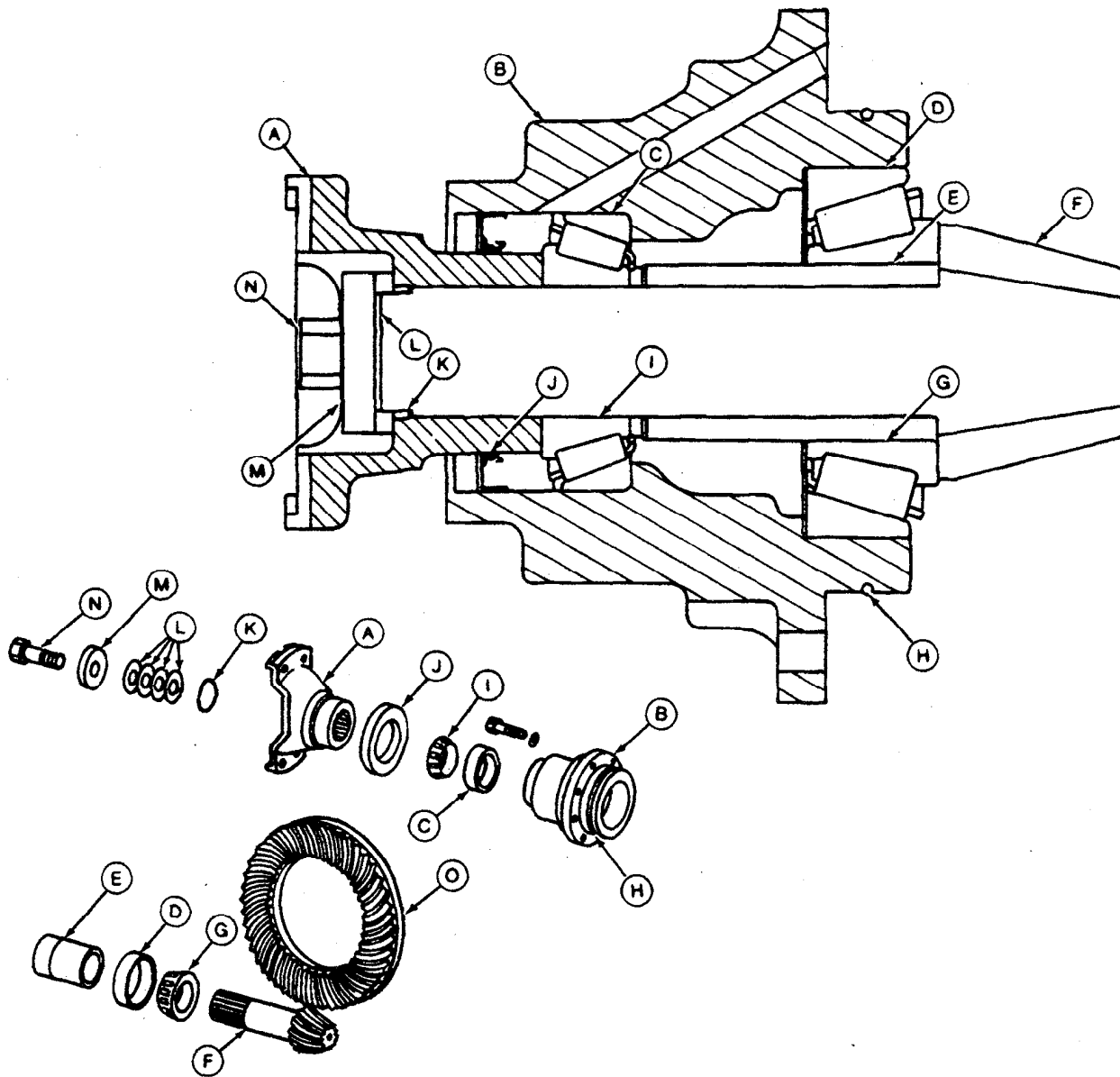
TX,0210,RR61 -19-22APR88

T673/DB -UN-02APR90

T673/DR -UN-02APR90



# DISASSEMBLE AND ASSEMBLE INPUT QUILL AND SHAFT—344E



A—Yoke  
B—Quill  
C—Bearing Cup  
D—Bearing Cup

E—Shims (as required)  
F—Spiral Bevel Shaft  
G—Bearing Cone  
H—O-Ring

I—Bearing Cone  
J—Seal  
K—O-Ring  
L—Shims (as required)

M—Special Washer  
N—Cap Screw  
O—Spiral Bevel Gear

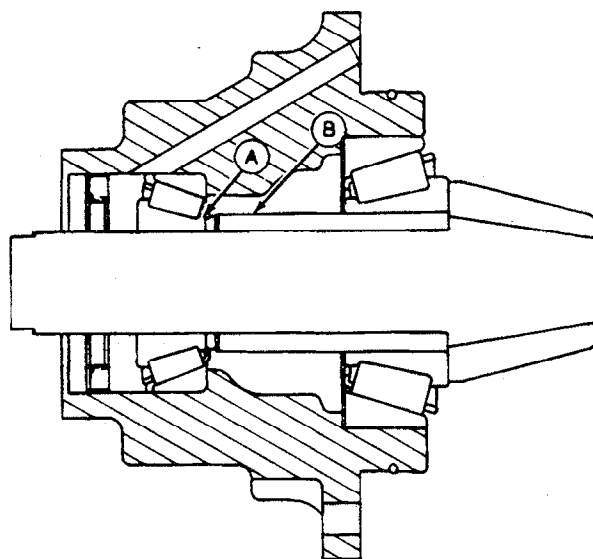
**IMPORTANT:** The spiral bevel shaft (F) and gear (O) must be replaced as a matched set.

T8737CP -JUN-27OCT88

Bearing cones and cups are a press fit.

1. Install spacer (B) with the small end toward bearing cone (A).
2. Make the following adjustments when replacing any of the bearing cups, bearing cones, ring gear, spiral bevel shaft, quill or differential case:

Differential Preload  
Differential Backlash  
Pinion Shaft  
Tooth Bearing Pattern  
Cone Point

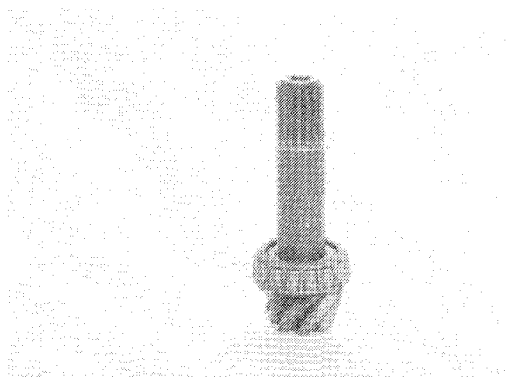
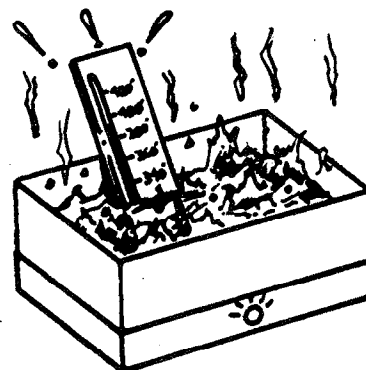


TX,0210,BB58 -19-22APR88



**CAUTION: DO NOT** heat oil over 182°C (360°F). Oil fumes or oil can ignite above 193°C (380°F). Use a thermometer. Do not allow a flame or heating element to come in direct contact with the oil. Heat the oil in a well ventilated area.

3. Heat bearing cone to 150°C (300°F) and install on shaft.



TX,0210,BB59 -19-22APR88

## ADJUST CONE POINT—344E

**IMPORTANT:** Check cone point adjustment if bearing cup, cones, differential, drive shaft or bearing quill were installed new.

### SHIM THICKNESS SPECIFICATION

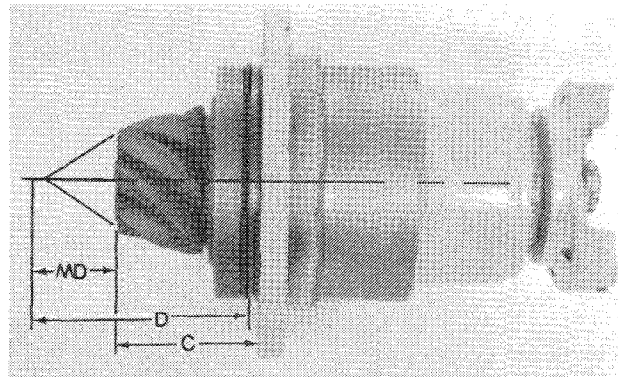
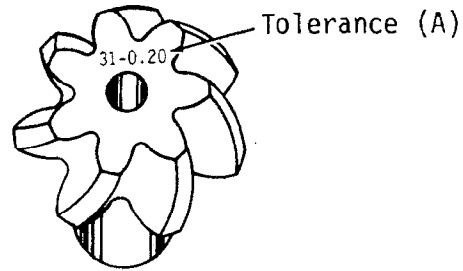
( $MD \pm A + C - D = \text{Shim Thickness}$ ).

MD = 123 mm (5.0 in.)

A = dimension etched on end of pinion shaft

C = distance between housing and end of input shaft

D = 203 mm (8 in.)



TX,0210,BB56 -19-04MAY88

T6737GB -19-22NOV91

T6737DV -UN-02APR90

## ADJUST DRIVE SHAFT—344E

Tighten cap screw yoke to pinion shaft to 390 N·m (290 lb-ft)

Remove cap screw, yoke and pinion shaft.

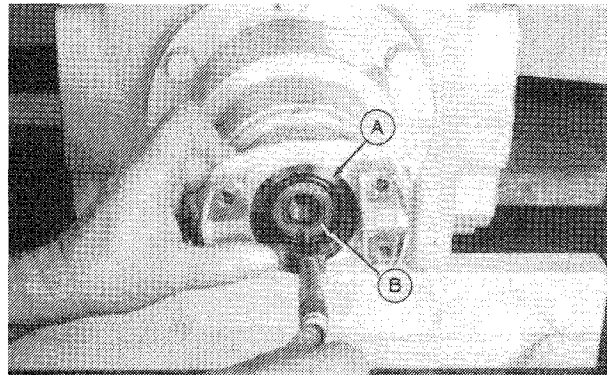
Measure distance between yoke (A) and pinion shaft (B) to determine shim needed.

### SPECIFICATION

Yoke-to-Pinion Gap

(Endplay) . . . . . 0.00—0.05 mm (0.00—0.002 in.)

Apply epoxy or equivalent to cap screw threads and tighten to 390 N·m (290 lb-ft).



TX,0210,BB57 -19-04JUN90

T6737EB -UN-02APR90



**Suggest:**

**If the above button click is invalid.**

**Please download this document  
first, and then click the above link  
to download the complete manual.**

**Thank you so much for reading**