Disassembly and Assembly
D3C & D3C SA TRACTORS, 931C TRACK-TYPE LOADER POWER TRAIN
Media Number -SENR3807-01 **Publication Date -01/10/2004** **Date Updated -15/02/2017**

Sprocket Hubs

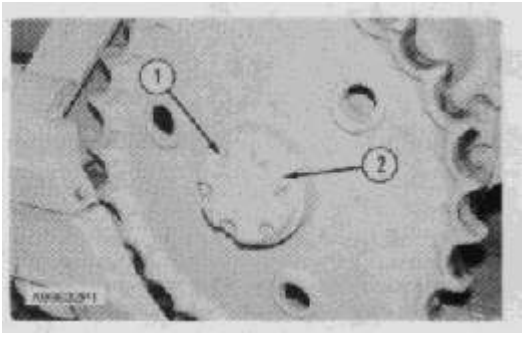
SMCS - 4184-011; 4184-012

Remove Sprocket Hubs

Tools Needed		A
6V9061	Pump Group (or electric)	1
9S8900	Cylinder Group	1
6F8343	Adapter	1
3P2248	Adapter	1
5F9882	Adapter	1
5F9888	Adapter	1
5F9892	Pin	2
5F9306	Arm	3
5H9909	Pin	3
6H1625	Adapter	3
8F6220	Nut	3

Start By:

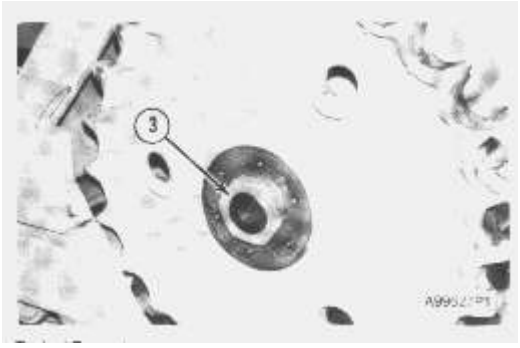
a. separation of tracks



Typical Example

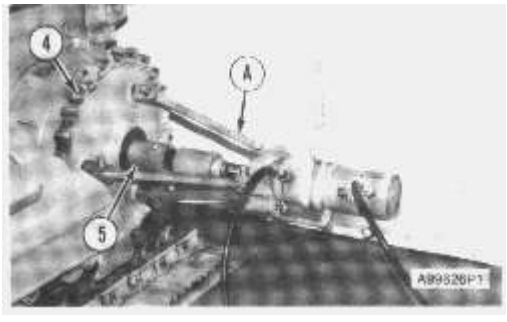
1. Remove the oil from the final drive housing.

2. Remove bolts (1) and locknut (2).



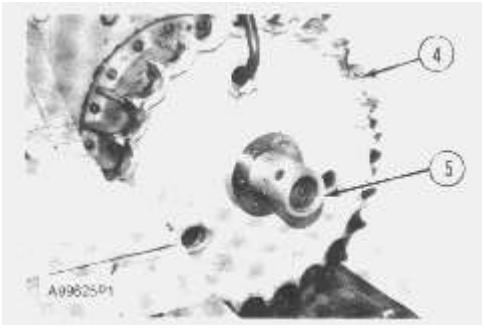
Typical Example

3. Remove nut (3) from the sprocket shaft.



Typical Example

4. Install tooling (A) as shown. Make sure there is 6.35 mm (.250 in.) clearance between 6F8343 Adapter (5) and sprocket hub (4). Fasten a hoist to tooling (A). Loosen sprocket hub (4) from the sprocket shaft.

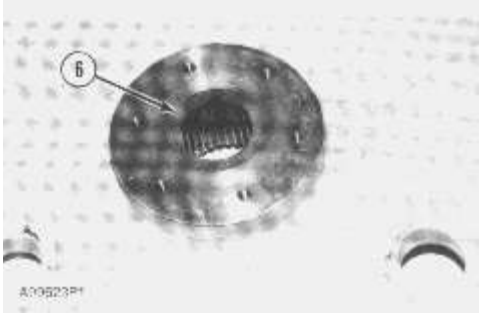


Typical Example

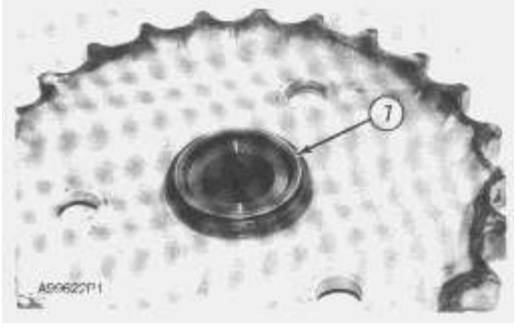
WARNING

Do not remove 6F8343 Adapter (5) or the sprocket hub can fall when the tooling is removed.

5. Remove tooling (A) except for 6F8343 Adapter (5). Fasten a hoist to the sprocket hub as shown. Remove 6F8343 Adapter (5) from the sprocket shaft. Remove sprocket hub (4). The weight is 52 kg (115 lb.).

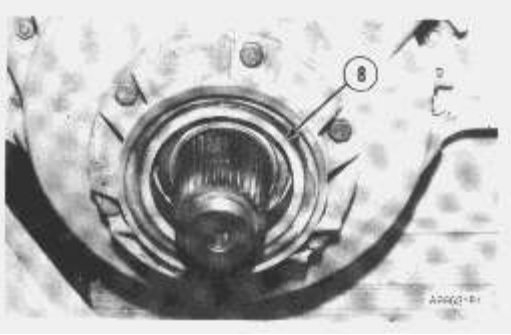


6. Remove gasket (6) from the sprocket hub.



Typical Example

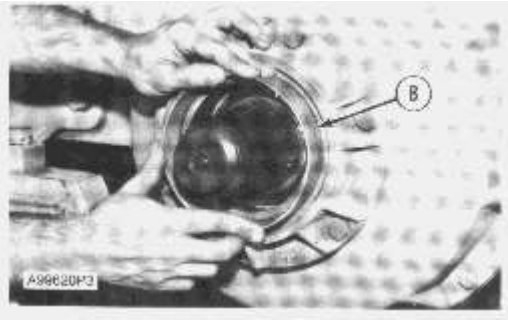
7. Remove outer half of Duo-Cone seal (7) from the sprocket hub.



8. Remove inner half of Duo-Cone seal (8) from the retainer.

Install Sprocket Hubs

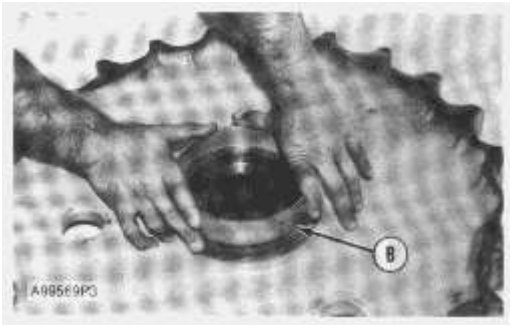
Tools Needed		B	C	D
5S4275	Duo-Cone Seal Installer	1		
6V9061	Pump Group (or electric)		1	
9S8900	Cylinder Group		1	
6F8343	Adapter		1	
5F9892	Pin		1	
5F9888	Adapter		1	
7F6068	Sleeve		1	
6F6922	Depth Gauge			1



NOTE: The rubber seals and all surfaces that make contact with the seals must be clean and dry with no damage to the surface. After installation of the seals, put oil on the contact surfaces of the Duo-Cone seals.

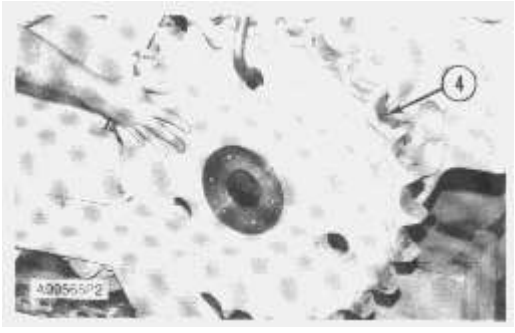
NOTE: See the topic, Installation Of Conventional Duo-Cone Seals, before installing any of the Duo-Cone seals.

1. Install the inner half of the Duo-Cone seal in the retainer with tool (B).



Typical Example

2. Install the outer half of the Duo-Cone seal in the sprocket hub with tool (B).



Typical Example

NOTICE

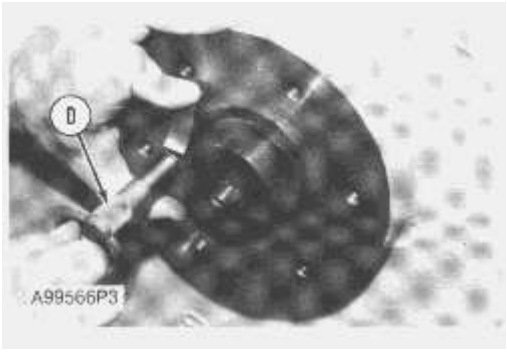
The splines in the sprocket hub and shaft must be clean and free from burrs.

---

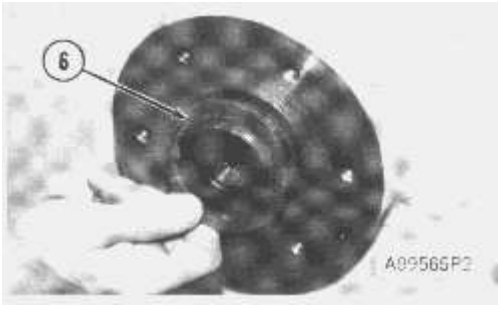
3. Fasten a hoist to the sprocket hub. Put sprocket hub (4) in position on the sprocket shaft.

Typical Example

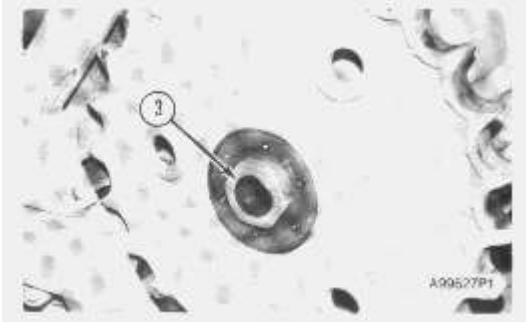
4. Install tooling (C) and fasten a hoist. Use tooling (C) to install the sprocket hub on the sprocket shaft with a force of 311 to 355 kN (35 to 40 ton).



5. Use tooling (D) to check the distance from the shoulder of the sprocket shaft to the face of the sprocket hub. The distance must be 3.00 ± 0.8 mm (.118 ± .03 in.).

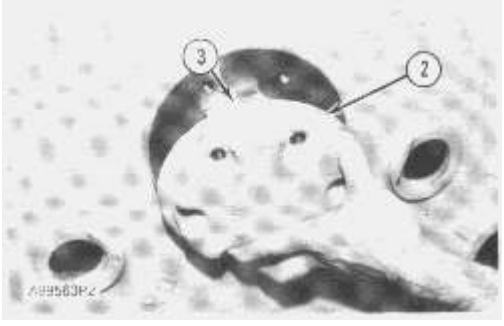


6. Install gasket (6).



Typical example

7. Install nut (3) that holds the sprocket hub on the sprocket shaft. Tighten the nut to a torque of 334 ± 33 N·m (243 ± 24 lb.ft.).



8. Put 7M7260 Liquid Gasket Material between locknut (2) and the sprocket hub face. Install locknut (2). If the bolt holes do not make an alignment with the holes in the sprocket hub, turn nut (3) clockwise only enough to install locknut (2).

9. Fill the final drive housing with oil to the correct level. See the Operation And Maintenance Manual.

End By:

a. connection of tracks

Product: TRACK-TYPE TRACTOR
Model: D3C II TRACK-TYPE TRACTOR 5ZG
Configuration: D3C LGP SERIES II TRACTOR / DIRECT DRIVE / 5ZG00001-UP (MACHINE) POWERED BY 3204 ENGINE

Media Number -SENR3807-01 **Publication Date -01/10/2004** **Date Updated -15/02/2017**

SENR38070015

Sprocket Shaft, Gear And Cover

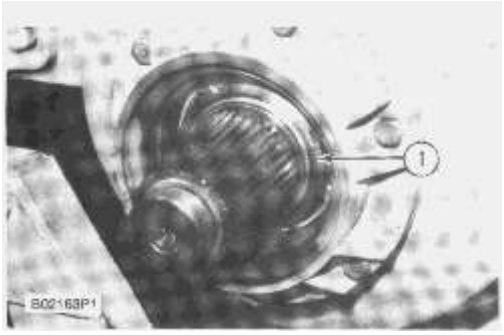
SMCS - 4055; 4058-012; 4058-011

Remove Sprocket Shaft, Gear And Cover, As A Unit

Tools Needed		A	B	C	D	E	F
5P316	Spanner Wrench	1					
5P6514	Adapter		1				
5P9736	Link Bracket			1			
1P510	Driver Group				1		
8B7554	Bearing Cup Puller Attachment					1	
8B7548	Puller Assembly					1	
8H684	Ratchet Box Wrench					1	
1P820	Puller Group						1
6V9061	Pump Group (or electric)						1
5F7343	Bearing Puller Attachment						1
9S9154	Step Plate						1
5F7342	Adapter						2
1B4207	Nut						2
3H4685	Plate						4
8B7549	Leg						2

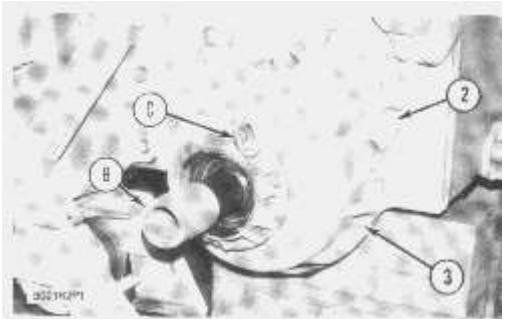
Start By:

a. remove sprocket hubs



1. Drain the oil from the final drive cover.

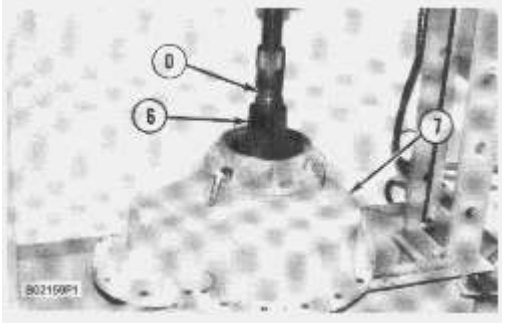
2. Engage the brakes and remove locknut (1) with tool (A).



3. Install tool (B) on the end of the sprocket shaft. Install tool (C) and fasten a hoist.

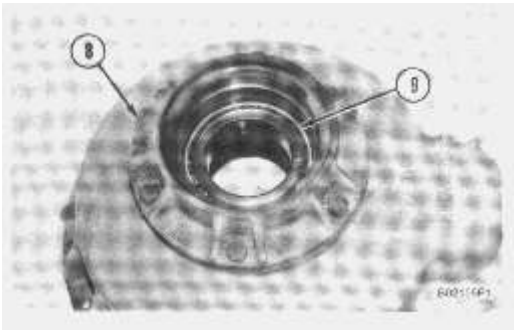
4. Remove nuts (2) and bolts (3) that hold the cover to the steering clutch case.

5. Install two 3/8" - 16 NC forcing screws (4). Tighten the forcing screws evenly and remove the sprocket shaft, gear and cover as a unit. Use bar (5) inside of tool (B) to keep the unit in balance when it is removed. The weight is 108 kg (240 lb.).

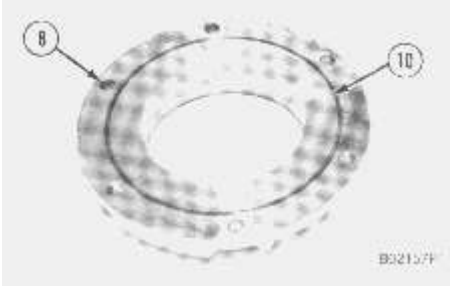


6. Remove sprocket shaft (6) and gear from cover (7) with tooling (D) and a press.

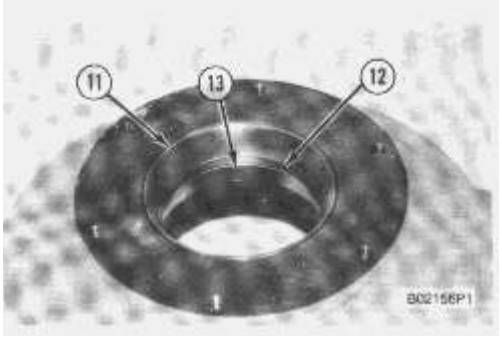
7. Remove cover (7) from the press. The weight is 56 kg (125 lb.). Remove sprocket shaft (6) and gear from the press. The weight is 52 kg (115 lb.).



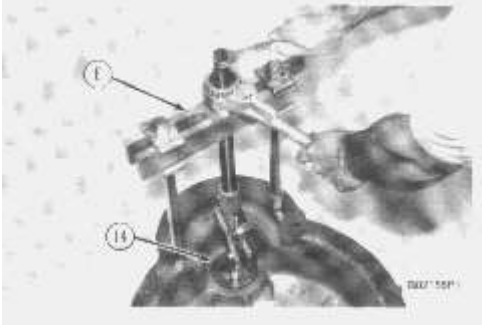
8. Remove retainer (8) and bearing cone (9) from the cover.



9. Remove O-ring seal (10) from retainer (8).

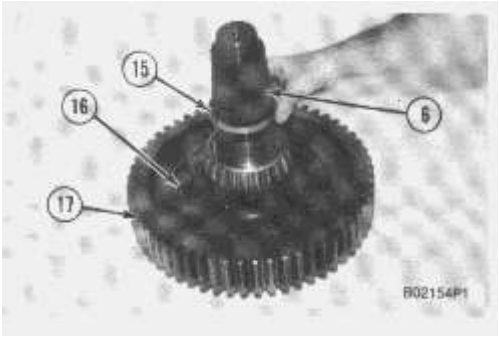


10. If a replacement is needed, remove bearing cup (11), spacer (12) and bearing cup (13) from the cover.



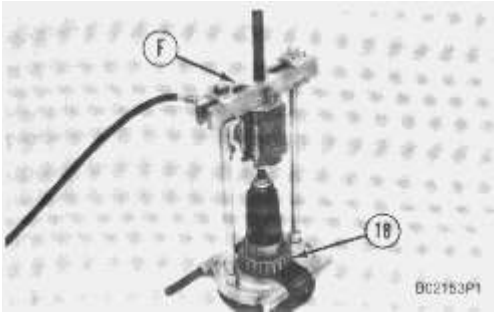
NOTE: Do not remove race and roller assembly (14) unless a replacement is needed. The bearing can be damaged when removed.

11. Remove race and roller assembly (14) from the cover with tool (E).

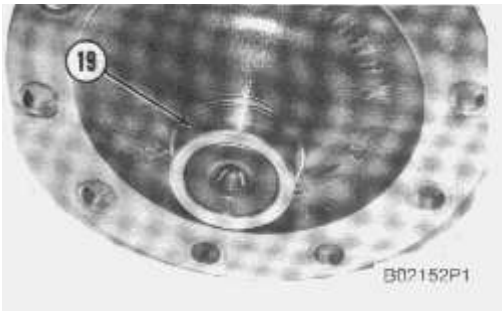


12. Remove spacer (15) from the sprocket shaft (6).

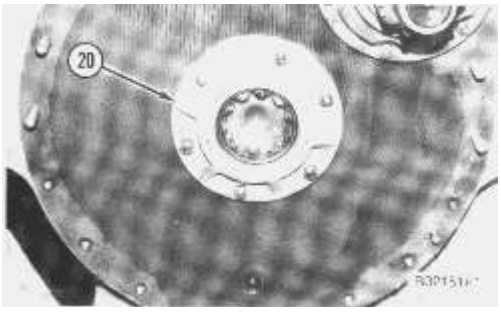
13. Remove nuts and bolts (16) that hold the sprocket shaft and gear together. Remove gear (17).



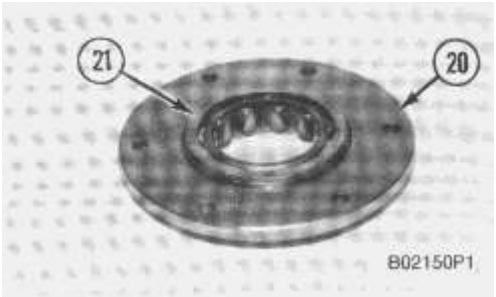
14. Remove bearing cone (18) from the sprocket shaft with tooling (F).



15. If a replacement is needed, remove bearing race (19) from the sprocket shaft.



16. Remove bearing cage (20) from the steering clutch case.

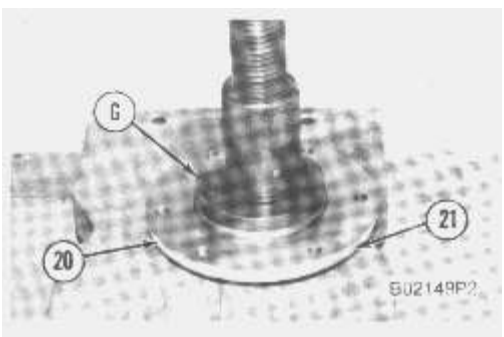


NOTE: Do not remove race and roller assembly (21) unless a replacement is needed. The bearing can be damaged when removed.

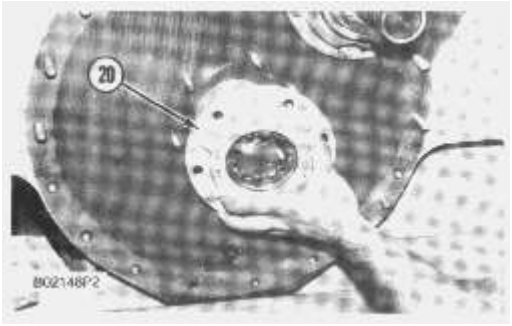
17. Remove race and roller assembly (21) from bearing cage (20).

Install Sprocket Shaft, Gear And Cover, As A Unit

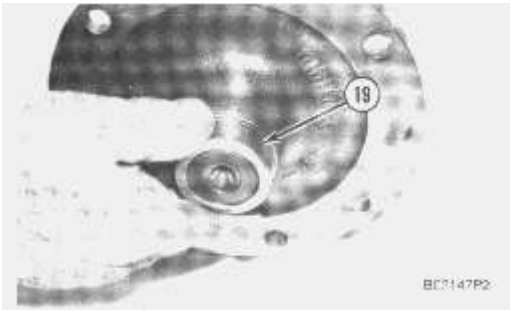
Tools Needed		G	H	I	J	K	L
1P520	Driver Group	1					
1P510	Driver Group		1				
9S8900	Cylinder Group			1			
6V9061	Pump Group (or electric)			1			
5F9892	Pin			1			
5P6541	Sleeve			1			
5P6514	Adapter			1			
5F9888	Coupling			1			
5P9736	Link Bracket				1		
5P316	Spanner Wrench					1	1
9S7353	Torque Wrench					1	
8H8561	Adapter					1	
9S7352	Torque Wrench						1
5P7450	Torque Multiplier						1



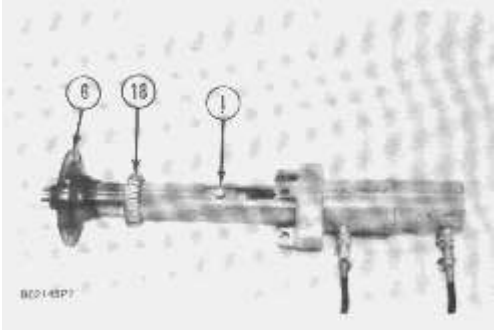
1. Install race and roller assembly (21) in bearing cage (20) with tooling (G) and a press.



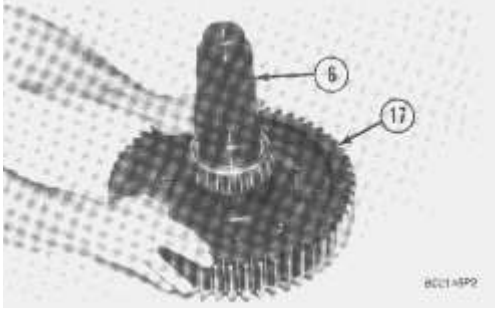
2. Install bearing cage (20) on the steering clutch case.



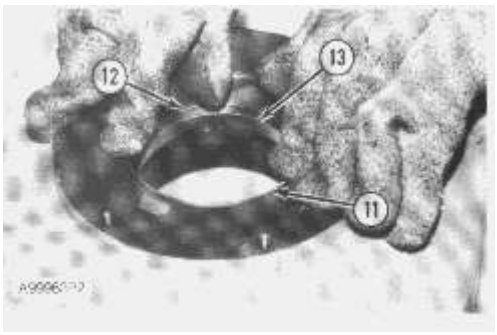
3. If bearing race (19) was removed, heat bearing race (19) to a maximum temperature of 135° C (275° F). Install bearing race (19) on the sprocket shaft. If necessary, use tooling (H) to install the bearing race.



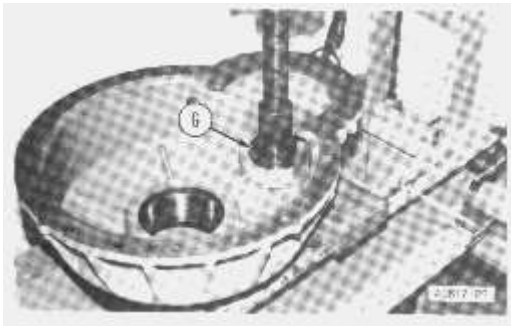
4. Install bearing cone (18) on sprocket shaft (6) with tooling (I). Use a force of 98 to 240 kN (11 to 27 ton).



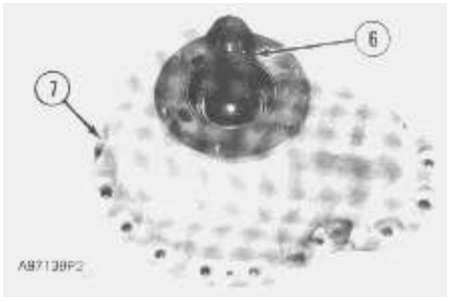
5. Install gear (17) on sprocket shaft (6). Install the bolts and nuts that hold the gear and sprocket shaft together. Tighten the nuts to a torque of 80 ± 7 N·m (60 ± 5 lb.ft.). Turn the nuts an additional 120° ± 5°. Minimum torque must be 307 N·m (230 lb.ft.).



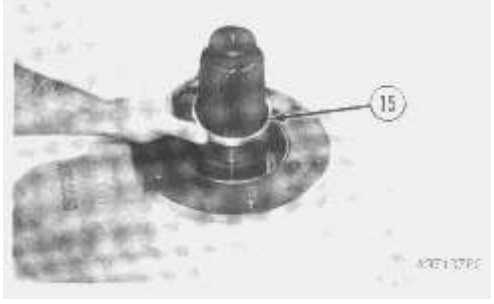
6. Lower the temperature of bearing cups (13) and (11). Install bearing cup (13) spacer (12) and bearing cup (11) in the cover.



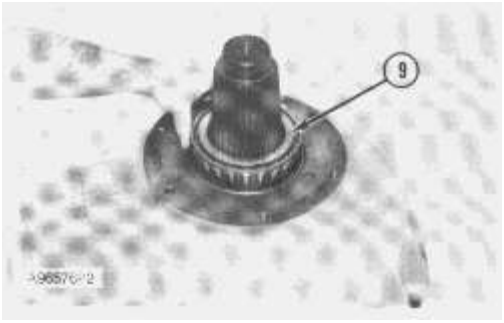
7. If the race and roller assembly was removed, install the race and roller in the cover with tooling (G) and a press.



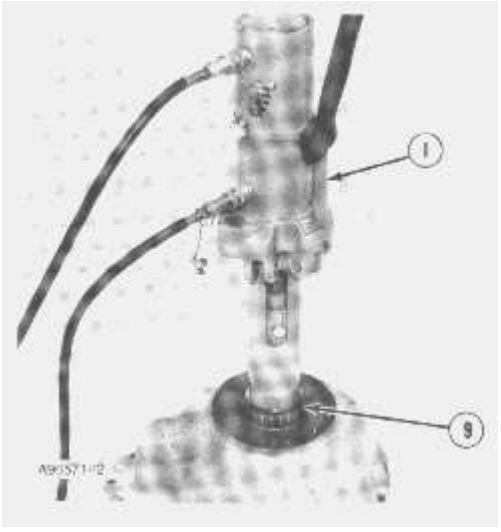
8. Put sprocket shaft (6) and gear on wooden block. Put cover (7) in position on the sprocket shaft and gear.



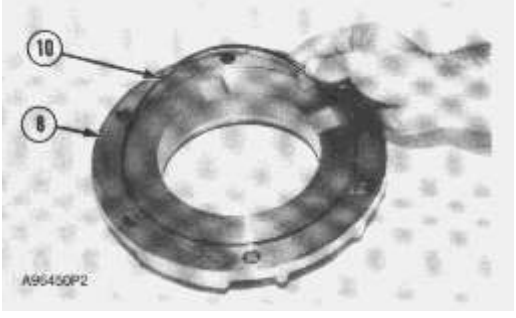
9. Install spacer (15) on the sprocket shaft.



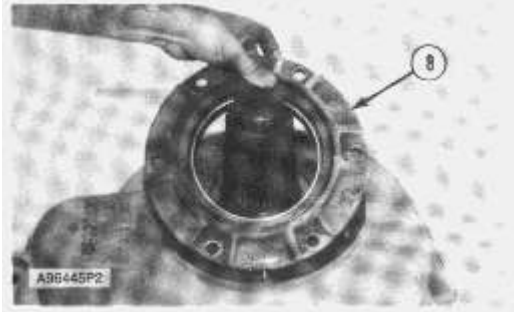
10. Put bearing cone (9) in position on the sprocket shaft.



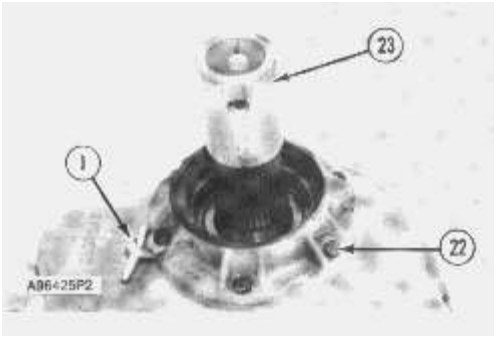
11. Use tooling (I) as shown and install bearing cone (9) on the sprocket shaft with a force of 178 to 240 kN (20 to 27 ton). Turn the cover to put the bearing cones on their seats in the bearing cups.



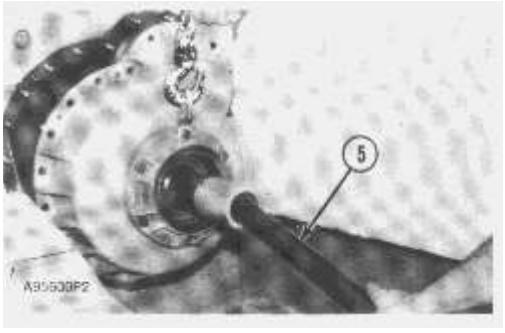
12. Inspect O-ring seal (10) for damage and make a replacement if needed. Install O-ring seal (10) on retainer (8).



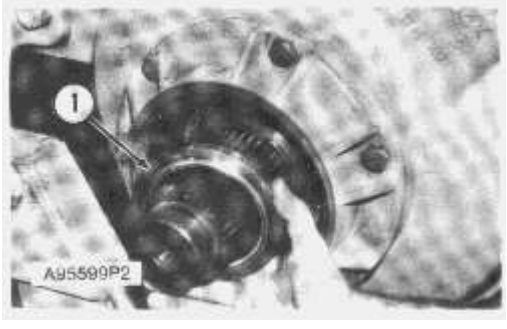
13. Put retainer (8) in position on the cover.



14. Install bolts (22) and tooling (J). Install 5P6514 Adapter (23) [part of tooling (I)] on the end of the sprocket shaft.



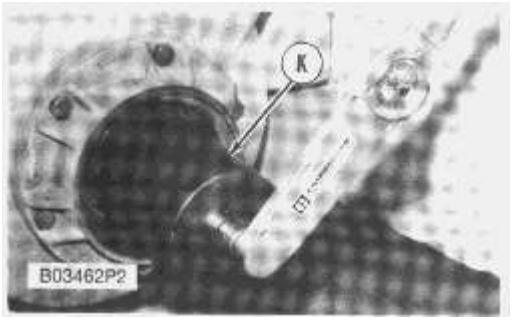
15. Fasten a hoist to tooling (J). Put 7M7260 Liquid Gasket Material on the cover and the steering clutch case that makes contact with each other. Install bar (5) in the 5P6514 Adapter to put the sprocket shaft, gear and cover in balance. Install the unit on the steering clutch case. Install the nuts and bolts that hold the cover to the steering clutch case.



16. Put oil on the threads and friction material of locknut (1). If oil is not used, the friction material will be destroyed when it is put on the threads of the sprocket shaft.

17. Install locknut (1) and turn it on to the sprocket shaft until the threads of the sprocket shaft begin to show beyond the friction material of the locknut.

NOTE: The torque needed to turn the locknut is with clean threads, with oil and all friction material engaged on sprocket shaft threads, but locknut not in contact with bearing.



18. Use tooling (K) and check the torque needed to turn locknut (1). If the same locknut is used again, it must take at least 55 N·m (40 lb.ft.) to turn the locknut. If not, use a new locknut with oil on the threads and friction material of locknut. A new locknut must take at least 80 N·m (60 lb.ft.) to turn it.

19. Use tooling (L) and tighten locknut (1) to a torque of 810 ± 70 N·m (600 ± 50 lb.ft.).

20. Fill the final drive with oil after sprocket hub is installed. See the Operation And Maintenance Manual.

End By:

a. install sprocket hubs