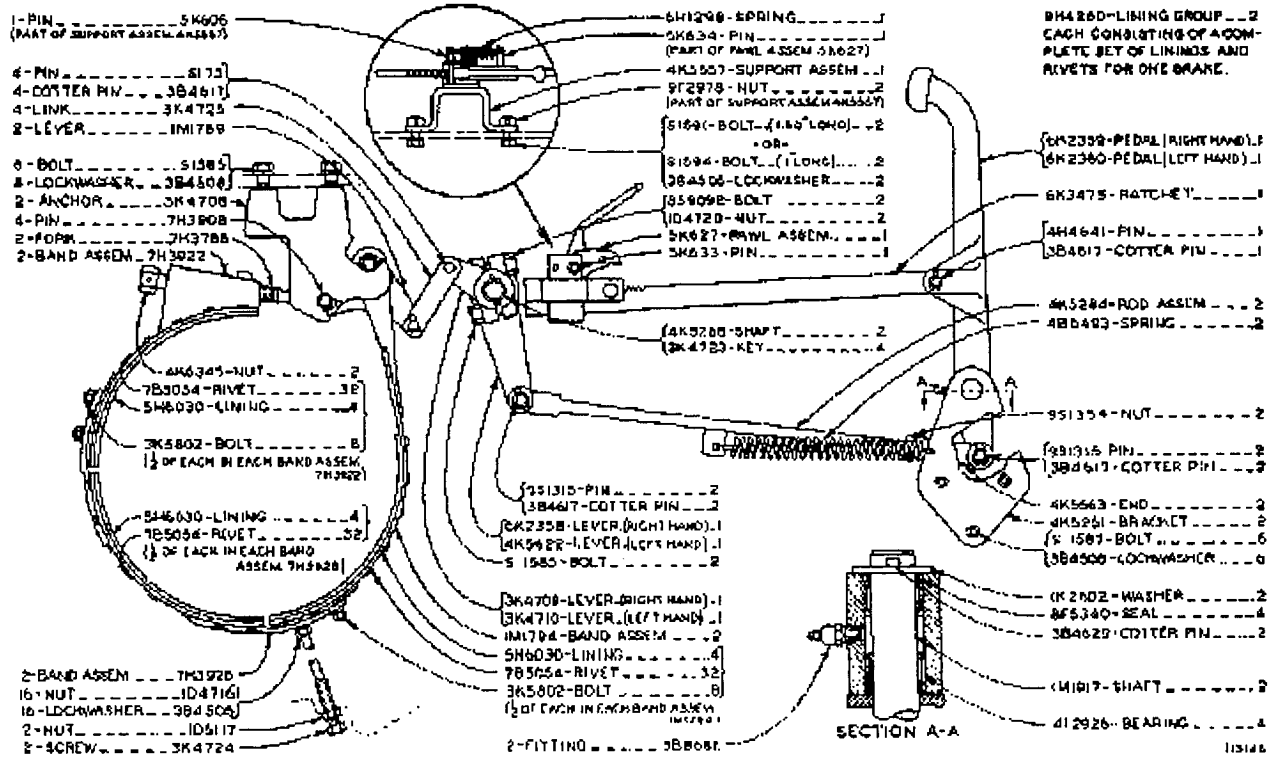


4113 BRAKES (6K2380 N/S)

Serial No. 7R1 to 7R417 inclusive



Note	Ref	Number	Qty	Part Name
		6K-2380	1	BRAKES
		5K-0606	1	PIN
				(PART OF SUPPORT ASSEM. 4K5557)
		0S-0175	4	PIN
		3B-4617	4	COTTER PIN
		3K-4725	4	LINK
		1M-1789	2	LEVER
		0S-1585	8	BOLT
		3B-4508	8	LOCKWASHER
		3K-4708	2	ANCHOR
		7H-3908	4	PIN
		7H-3788	2	FORK
		7H-3922	2	BAND ASSEM.
		4K-6345	2	NUT
		7B-5054	32	RIVET
		5H-6030	4	LINING
		3K-5802	8	BOLT
				(1/2 OF EACH IN EACH BAND ASSEM. 7H3922)
		5H-6030	4	LINING
		7B-5054	32	RIVET
				(1/2 OF EACH IN EACH BAND ASSEM. 7H3926)
		7H-3926	2	BAND ASSEM.
		1D-4716	16	NUT
		3B-4505	16	LOCKWASHER
		1D-5117	2	NUT
		3K-4724	2	SCREW
		6H-1298	1	SPRING

5K-0634	1	PIN
(PART OF PAWL ASSEM. 5K627)		
4K-5557	1	SUPPORT ASSEM.
9F-2978	2	NUT
(PART OF SUPPORT ASSEM. 4K5557)		
0S-1591	2	BOLT (1.50" LONG)
-OR-		
0S-1594	2	BOLT (1" LONG)
3B-4506	2	LOCKWASHER
8S-9092	2	BOLT
1D-4720	2	NUT
5K-0627	1	PAWL ASSEM.
5K-0633	1	PIN
4K-5268	2	SHAFT
3K-4723	4	KEY
9S-1315	2	PIN
3B-4617	2	COTTER PIN
6K-2358	1	LEVER (RIGHT HAND)
4K-5622	1	LEVER (LEFT HAND)
0S-1585	2	BOLT
3K-4709	1	LEVER (RIGHT HAND)
3K-4710	1	LEVER (LEFT HAND)
1M-1794	2	BAND ASSEM.
5H-6030	4	LINING
7B-5054	32	RIVET
3K-5802	8	BOLT
(1/2 OF EACH IN EACH BAND ASSEM. 1M1794)		
3B-8686	2	FITTING
9H-4280	2	LINING GROUP

EACH CONSISTING OF A COMPLETE SET OF LININGS AND RIVETS FOR ONE BRAKE.

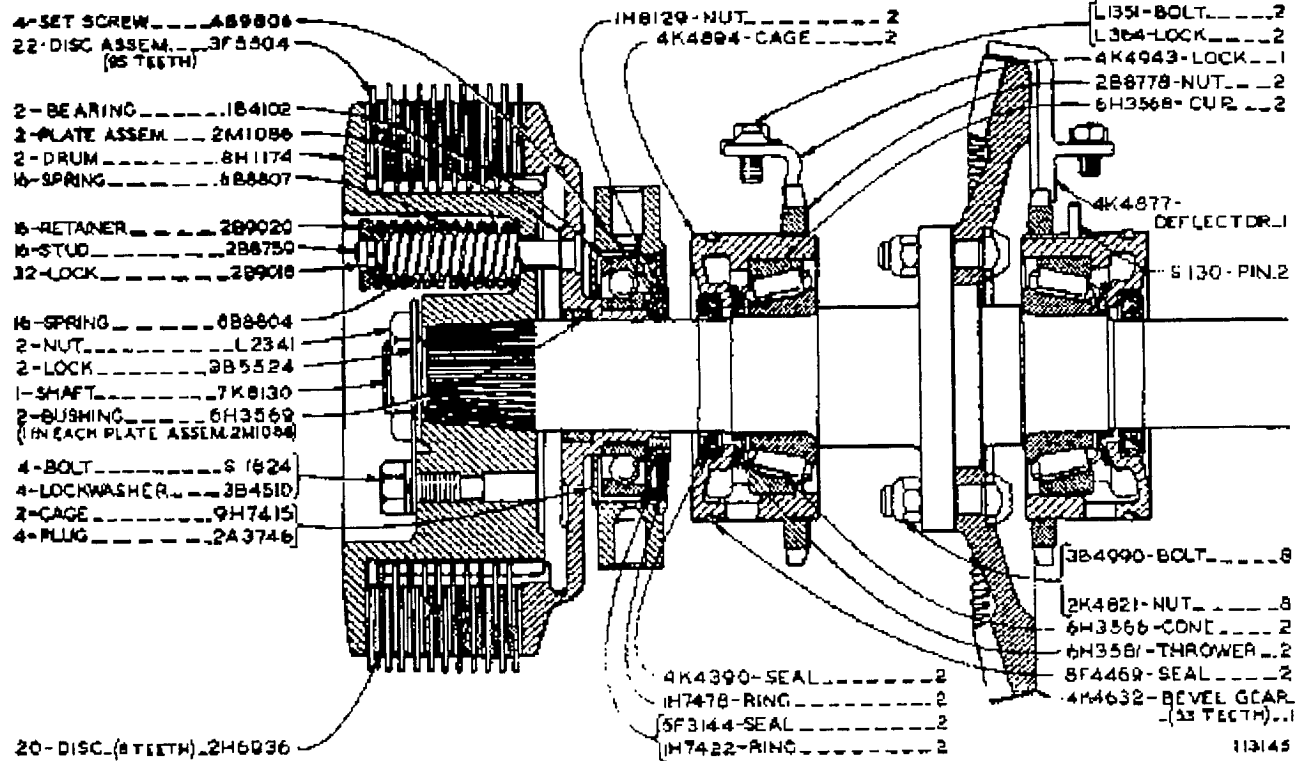
6K-2359	1	PEDAL (RIGHT HAND)
6K-2360	1	PEDAL (LEFT HAND)
6K-3475	1	RATCHET
4H-4641	1	PIN
3B-4617	1	COTTER PIN
4K-5284	2	ROD ASSEM.
4B-6493	2	SPRING
9S-1354	2	NUT
9S-1315	2	PIN
3B-4617	2	COTTER PIN
4K-5563	2	END
4K-5251	2	BRACKET
0S-1587	6	BOLT
3B-4508	6	LOCKWASHER
1K-2602	2	WASHER
8F-5340	4	SEAL
3B-4629	2	COTTER PIN
1M-1917	2	SHAFT
4F-2926	4	BEARING

07R D4D TRACK-TYPE TRACTOR Parts Identification

Media Number UEH0215S-00 Publication Date 1977/08/01 Update Date 1996/06/28

4101 STEERING CLUTCH (3A1596 N/S)

Serial No. 7R1 to 7R433 inclusive



Note	Ref	Number	Qty	Part Name
		3A-1596	1	STEERING CLUTCH
		4B-9806	4	SET SCREW
		3F-5504	22	DISC ASSEM. (95 TEETH)
		1B-4102	2	BEARING
		2M-1086	2	PLATE ASSEM.
		8H-1174	2	DRUM
		6B-8807	16	SPRING
		2B-9020	16	RETAINER
		2B-8759	16	STUD
		2B-9018	32	LOCK
		6B-8804	16	SPRING
		0L-2341	2	NUT
		3B-5524	2	LOCK
		7K-8130	1	SHAFT
		6H-3569	2	BUSHING (1 IN EACH PLATE ASSEM.2M1086)
		0S-1624	4	BOLT
		3B-4510	4	LOCKWASHER
		9H-7415	2	CAGE
		2A-3746	4	PLUG
		2H-6936	20	DISC (8 TEETH)
		1H-8129	2	NUT
		4K-4894	2	CAGE
		4K-4390	2	SEAL
		1H-7478	2	RING
		5F-3144	2	SEAL

1H-7422	2	RING
0L-1351	2	BOLT
0L-0364	2	LOCK
4K-4943	1	LOCK
2B-8778	2	NUT
6H-3568	2	CUP
4K-4877	1	DEFLECTOR
0S-0130	2	PIN
3B-4990	8	BOLT
2K-4821	8	NUT
6H-3566	2	CONE
6H-3581	2	THROWER
8F-4469	2	SEAL
4K-4632	1	BEVEL GEAR (53 TEETH)

Steering Clutch Controls

Remove Steering Clutch Controls 4106-11

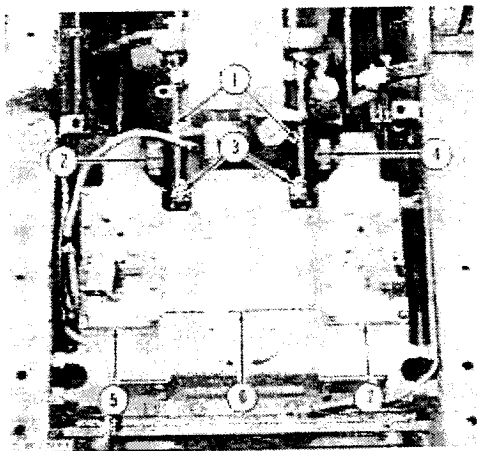
start by:

a) remove seat and front support

b) remove batteries and battery box

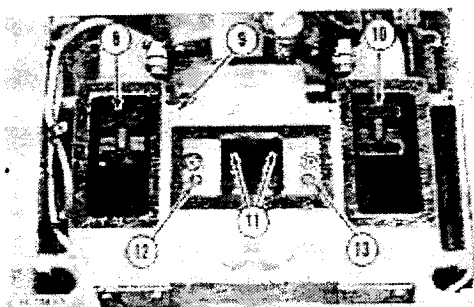
c) remove fuel tank

1. Remove the bolts and washers that hold covers (5), (6) and (7) in position. Remove the covers.



2. Disconnect the two rods from levers (2) and (4).

3. Remove two rods (1) and two levers (3).

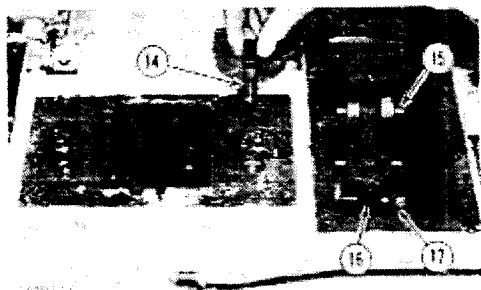


4. Remove two anchors (8) and (10) by pulling up and turning forward.

5. Loosen nuts on bolts (11). Remove the bolts.

6. Remove nuts (9) from two grease fittings.

7. Remove two screws (12) and (13).

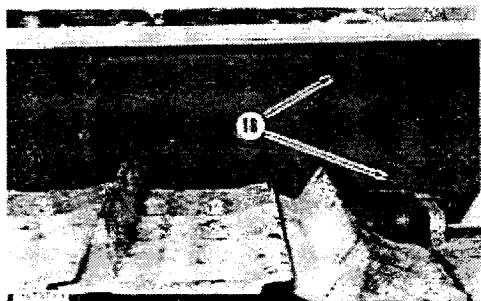


8. Install a 3/8"-16 NC bolt and nut in pin (14). Remove two pins.

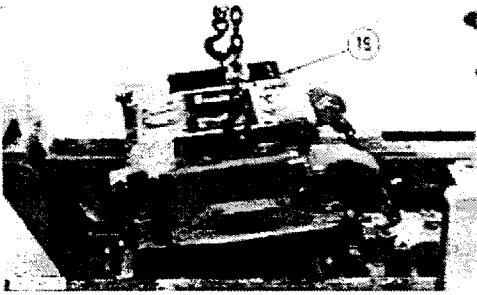
9. Remove locknuts and nuts (17) from the two rod ends (16). Remove the two rod ends.

10. Remove four pins (15) from the two anchors.

11. Remove the twenty bolts and washers that hold the steering clutch controls to the steering clutch case.



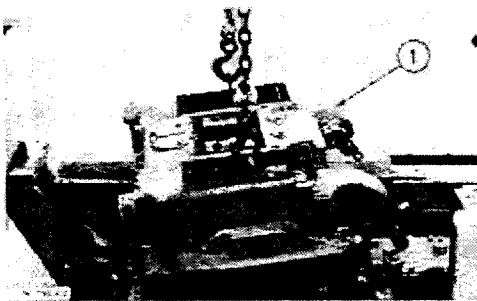
12. Remove five bolts (18) from each side of the tractor.



13. Install two 3/8"-16 NC forged eyebolts in the steering clutch controls. Fasten a hoist to the steering clutch controls. Weight of steering clutch controls is 200 lb. (90.7 kg). Remove steering clutch controls (19).

NOTE: Do not pull grease fittings off the hoses when removing the steering clutch controls.

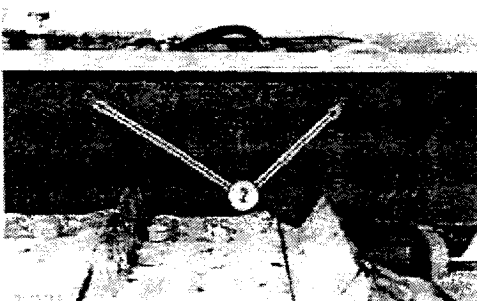
Install Steering Clutch Controls 4106-12



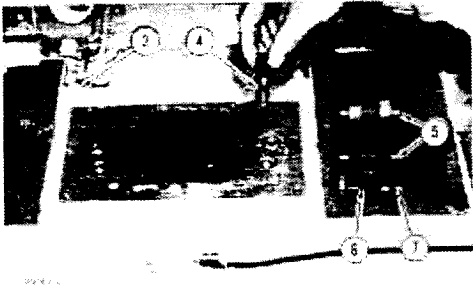
1. Fasten a hoist to the steering clutch controls. Put the steering clutch controls (1) in position on the steering clutch case.

NOTE: Make sure grease fittings are in the correct position in the steering clutch control case.

2. Install the twenty bolts and washers that hold the steering clutch controls in position. Tighten the bolts to a torque of 85 ± 10 lb.ft. (11.8 ± 1.4 mkg).



3. Install five bolts (2) in each side of the tractor.



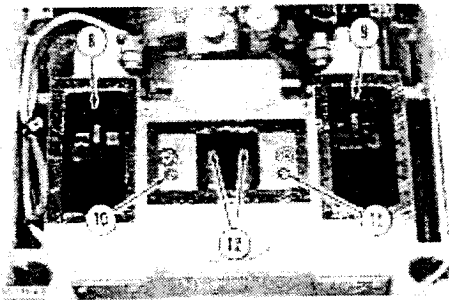
4. Install pins (5) in both anchors.

5. Put 5P960 Lubricant on the round surfaces of the two rod ends.

6. Install the two rod ends (6), nut and locknut (7).

7. Install a 3/8"-16 NC bolt and nut in pin (4) as shown. Put 1P808 Multipurpose Grease on the bearings. Install two pins (4).

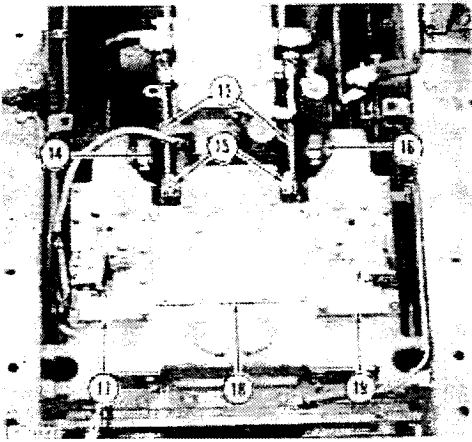
8. Install nuts (3) on both grease fittings.



9. Install two anchors (8) and (9).

10. Install two screws (10) and (11).

11. Install nuts on two bolts (12). Install two bolts (12) in steering clutch control case.



12. Install two levers (15) and two rods (13).

13. Connect the two rods to levers (14) and (16).

14. Install covers (17), (18), and (19).

15. Make an adjustment to the steering clutch controls. See ASSEMBLE STEERING CLUTCH CONTROLS.

end by:

a) install fuel tank

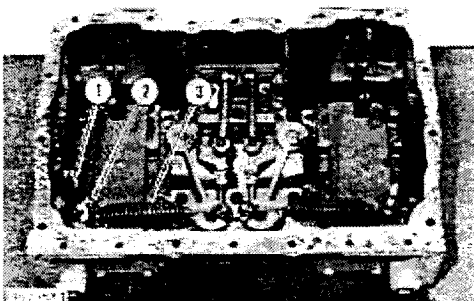
b) install batteries and battery boxes

c) install seat and front support

Disassemble Steering Clutch Controls 4106-15

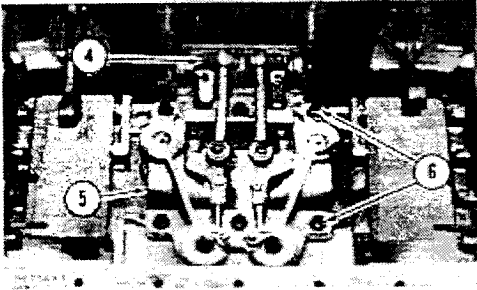
start by:

a) remove steering clutch controls



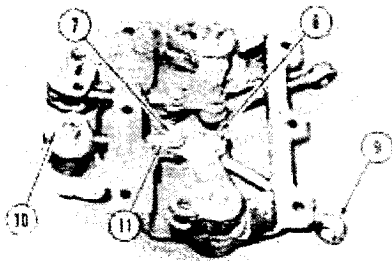
**1. Loosen locknuts and nuts (2) on both sides. Remove two springs (3).
Remove locknuts, nuts and two anchors (1).**

2. Remove six bolts (6) and washers.



3. Remove two bolts (4), washers and nuts from both rods. Remove support (5).

4. Remove nut and bolt (8) from bellcrank. Remove the bushing and rod (9).

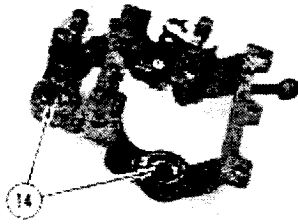


5. Remove cotter pin and pin (7) from bellcrank.

6. Remove pin (10) and rod (11).

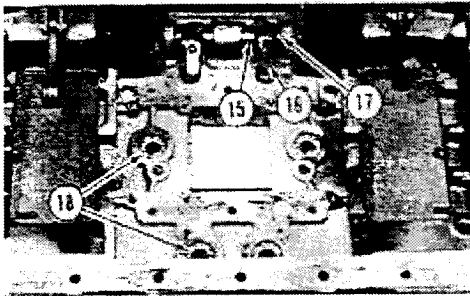


7. Remove the nut, lock and pin from shaft (12). Remove shaft (12). Remove bellcrank (13).



8. Remove bearing rollers and bearing races (14) from support.

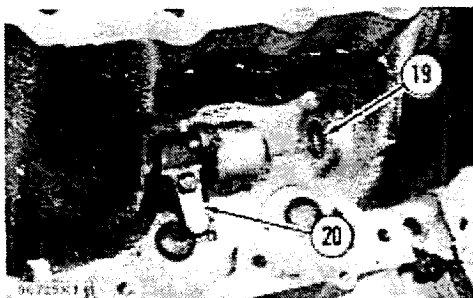
9. Follow the same procedure (Steps 1 through 8) to disassemble the other side of the support.



10. Remove four bearing rollers and bearing races (18) from cover.

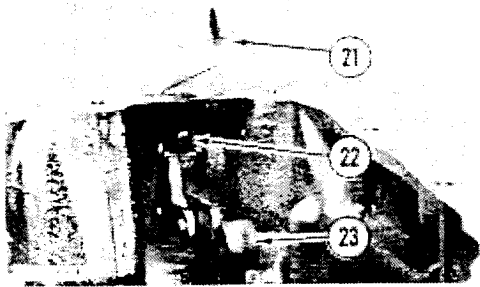
11. Remove nut and bolt from lever (16).

12. Remove lever (16), rod (15), key and spacer (17) from cover.



13. Remove two bearings (19) from cover.

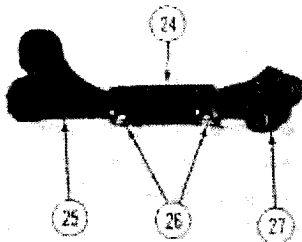
14. Follow same procedure (Steps 11 through 13) to remove left hand lever (20).



15. Remove bolt (22). Pull lever (21) out of cover. Remove lever (23) and links as a unit. Remove the bearings from the cover.

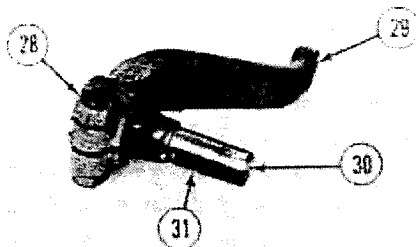
16. Remove the left hand lever from the other side of the cover. Remove left hand levers and link from cover as a unit.

17. Remove the bearings from the cover.



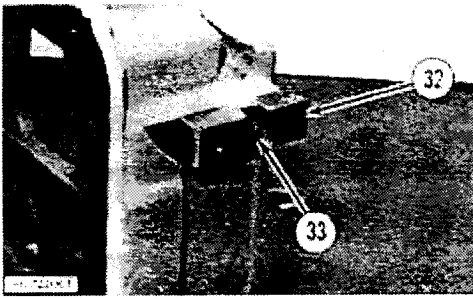
18. Remove two cotter pins and pins (26) from links (24). Remove lever (25) and lever (27).

19. Disassemble the left hand levers and links.



20. Remove bolt and nut (28) from right hand lever (29). Remove shaft (30) and key (31).

21. Disassemble left hand lever.

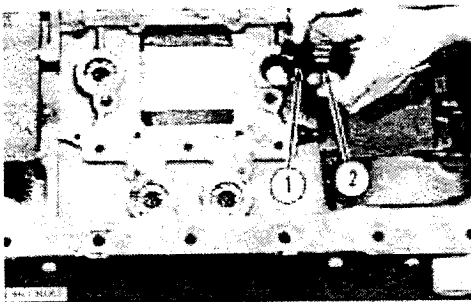


22. Remove two bolts (33), washers, and spacers (32) from cover.

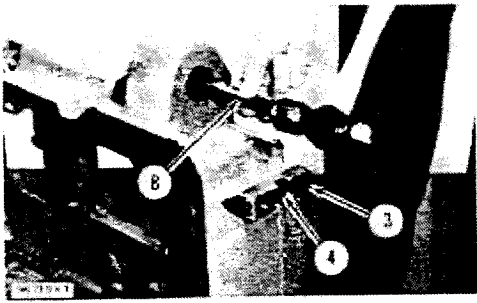
Assemble Steering Clutch Controls 4106-16

Tools Needed		A	B	C
1P529	Handle	1	1	1
1P461	Drive Plate	1		
1P464	Drive Plate	1		
1P462	Drive Plate		1	
1P472	Drive Plate		1	1
1P466	Drive Plate			1

1. Put 1P808 Multipurpose Grease on the bearing rollers and bearing races.

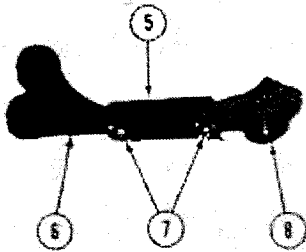


2. Install four bearing races (1) and four bearing rollers (2).



3. Use tooling (B) to install the four bearings in the cover.

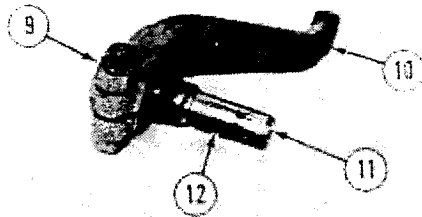
4. Install spacer (3), bolt (4), and washer. Do not tighten bolt. Spacer must turn freely.



4/2010

5. Put lever (6) and lever (8) between two links (5). Install two pins (7). Install cotter pins in two pins (7).

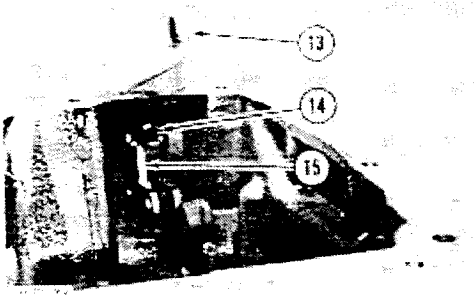
6. Assemble the left hand levers and links as in Step 5.



4/2010

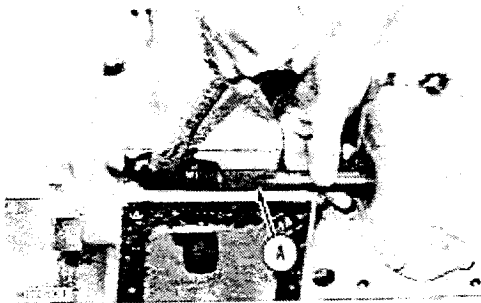
7. Put shaft (11) in lever (10). Install bolt and nut (9). Install key (12) in shaft (11).

8. Assemble left hand shaft and lever as in Step 7.

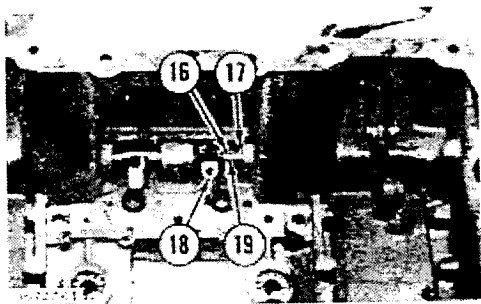


9. Put lever (15) and link in position in the cover. Install shaft and lever (13). Install bolt (14).

10. Install left hand levers and links in cover. Install left hand shaft and lever.



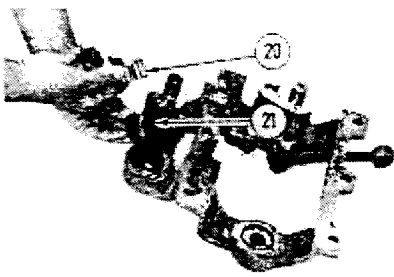
11. Use tooling (A) to install the four bearings in the cover. Put 1P808 Multipurpose Grease on the bearings.



12. Install shaft (19) in cover. Put spacer (17) on shaft. Install key (16) and lever (18) on shaft. Put the lever in the correct position on the shaft and install the bolt that holds it in position.

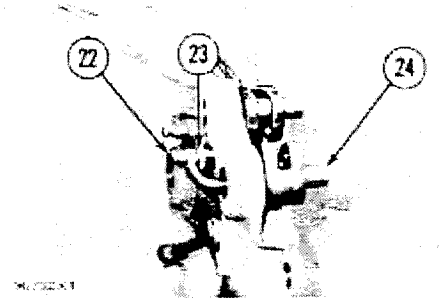
NOTE: The left side of the support is assembled for better illustration of the parts.

13. Put 1P808 Multipurpose Grease on the bearing race and bearing roller.



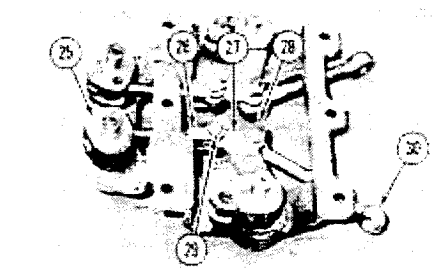
94-7322-1

14. Install two bearing races (21) and bearing rollers (20).



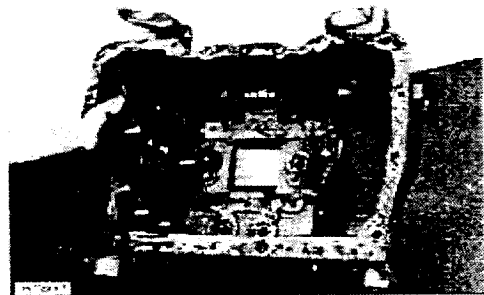
94-7322-1

15. Put shaft (24) in position in support. Install nut (23), lock, and screw (22). Bend lock over on nut.

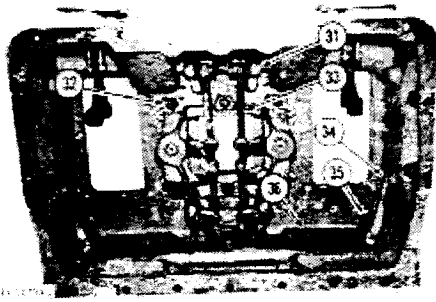


94-7322-1

16. Install bellcrank (27). Put rod (26) in position. Install pins (25), pin (29) and cotter pin. Put rod (30) in position. Install bolt (28) and nut.



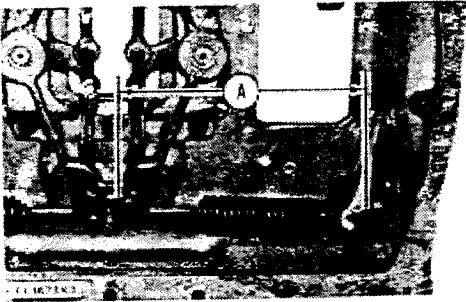
17. Put the support in position in the cover. Make sure support is down all of the way.



18. Install six bolts (32) and washers. Connect two rods (33) to levers. Install two bolts and nuts (31). Put two anchors (34) in position and install nut and locknut (35). Install two springs (36).

19. Make an adjustment to the spring pressure as follows:

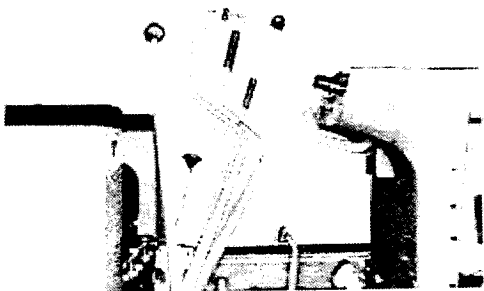
a) Loosen locknut and nut (35).



b) Turn nut (35) until dimension (A) is $10.80 \pm .12$ in. (274.3 ± 3.0 mm).

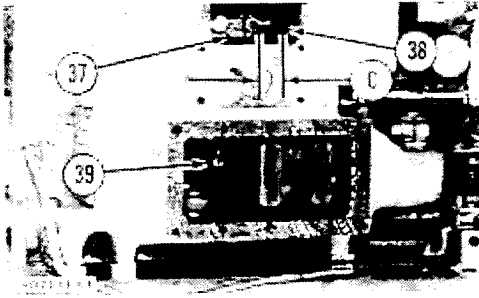
20. Install steering clutch controls.

21. Make an adjustment to the steering clutch controls as follows:



a) Turn nut (39) until dimension (B) is 2.50 - 3.50 in. (63.5 - 88.9 mm). Dimension (B) is measured at the top of the lever with the handle removed. Dimension (B) is the distance between the free forward position of the lever and the position of the lever when the steering

clutch starts to release.



b) Put the steering clutch in an engaged position. Turn bolt (38) until dimension (C) is .90 - .98 in (22.9 - 24.9 mm). Dimension (C) is the distance between bolt (38) and the front edge of the bellcrank (37).

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Steering Clutches

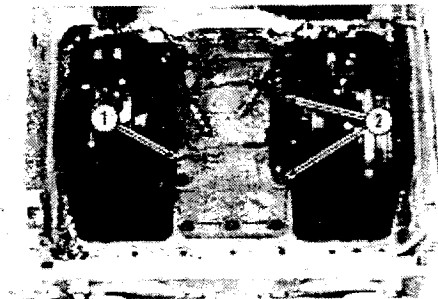
Remove Steering Clutches 4109-11

Tools Needed		A
8S8303	Wrench	1

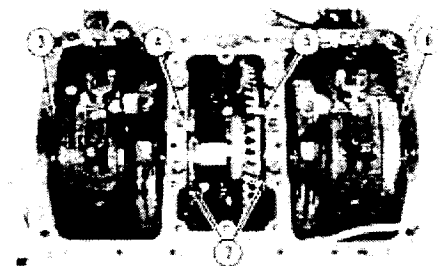
start by:

a) remove steering clutch controls

1. Remove the oil from the bevel gear case.



2. Remove bolts (2) and washers from cover. Remove cover (1) and gasket.

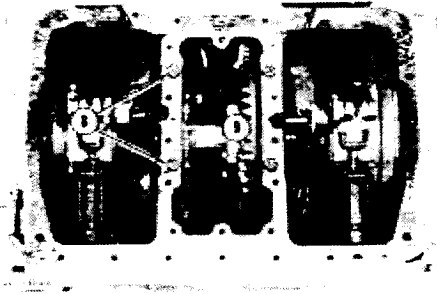


3. Remove fourteen bolts (3) and (6) from both flanges.

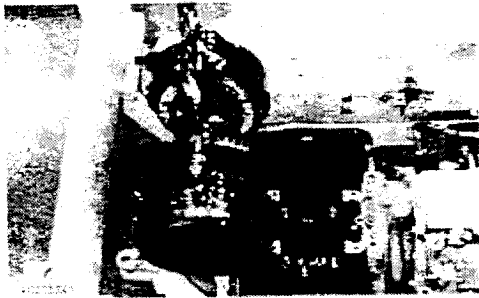
NOTE: Turn the tracks for removal of all the bolts.

4. Remove the bolt and lock from lock (4). Remove the lock. Remove the bolt and lock from deflector (5). Remove the deflector.

5. Use tool (A) to loosen two nuts (7).



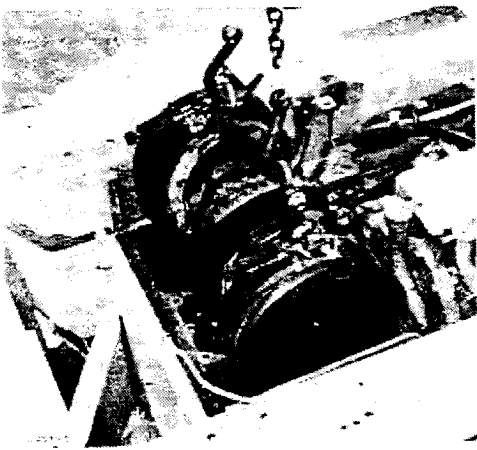
6. Remove two bolts (8) and washers from each cap (9). Remove the two caps (9).



7. Remove the two rod ends from the two yokes. Install two 1/2" - 13 NC forged eyebolts in the yokes. Fasten a hoist to the steering clutches. Weight of steering clutches are 475 lb. (215.5 kg). Remove steering clutches.

Install Steering Clutches 4109-12

Tools Needed		A
8S8303	Wrench	1



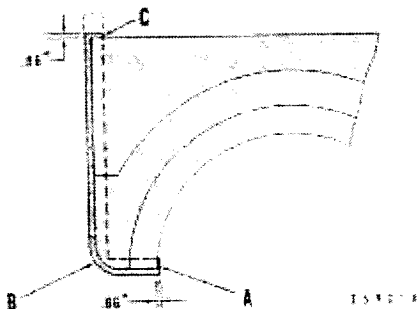
1. Fasten a hoist to the steering clutches. Put the steering clutches in the correct position in the steering clutch case. Remove the hoist. Install the rod ends in the yokes.

NOTICE

Make sure the balls on the ends of the two yokes are in position in the sockets of the steering clutch case. Make sure the notch in each bearing cage is facing in an "UP" position.

2. Install new seals in the two caps as follows:

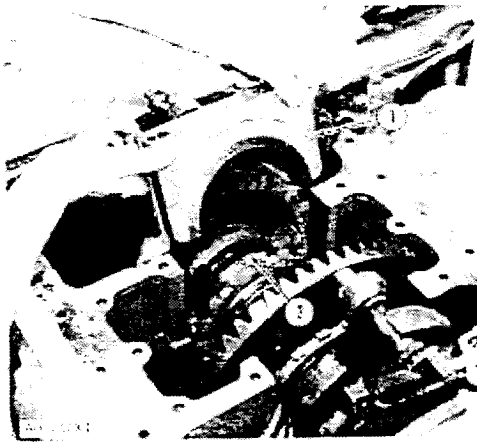
a) Make sure the two caps are clean and dry.



b) Put the seal in the groove of the cap at point (A). Work the seal around point (B) to point (C). Do not pull on the seal. Make sure the seal

is in the groove by working the seal from point (C) back to point (A).

c) Put a light amount of liquid soap on the wall in the steering clutch case where the seals make contact. Do not let the liquid soap get in the groove of the caps.



3. Put the bevel gear into position in relation to the bevel pinion to prevent damage to seal (2).

4. Put the two caps (1) in position in the steering clutch case. Do not cause damage to the seals in the caps.

NOTICE

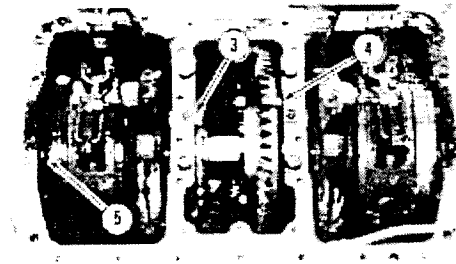
Make sure dowels in the caps are in the notches of the bearing cages before tightening down bolts.

5. Install the bolts and washers that hold the caps in position.

NOTE: If the seal is .25 in. (5.3 mm) above the top surface of the cap, the seal installation must be done again. After final installation trim the ends of the seal at points (A) and (C) to .06 in. (1.5 mm).

6. Make an adjustment to the bevel gear bearing preload. See **BEVEL GEAR AND PINION SETTINGS**.

7. Make adjustments to the gear tooth contact setting and gear clearance (backlash). See BEVEL GEAR AND PINION SETTINGS.



8. Install the bolts (5) and washers that hold the flanges to the drums of the steering clutches.

9. Install the lock (3) and deflector (4).

10. Install the gasket and cover over the bevel gear.

11. Fill the bevel gear case with oil to the correct level. See LUBRICATION AND MAINTENANCE GUIDE.

end by:

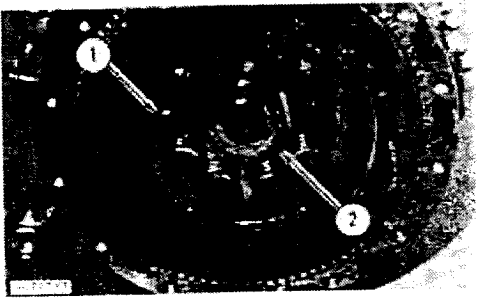
a) install steering clutch controls

Disassemble Steering Clutches 4109-15

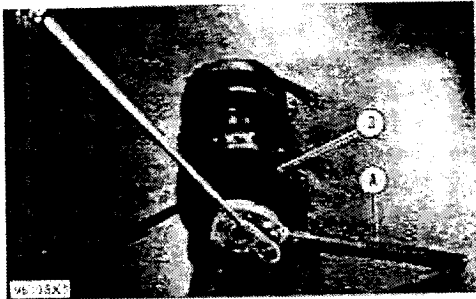
Tools Needed		A	B	C
7S4135	Torque Multiplier	1		
8B7548	Puller Assembly		1	1
8B7556	Adapter		2	2
7F9540	Puller Assembly		1	1
9S5800	Pump Group		1	1
8B7561	Step Plate		1	1
7S8431	Plate			1

start by:

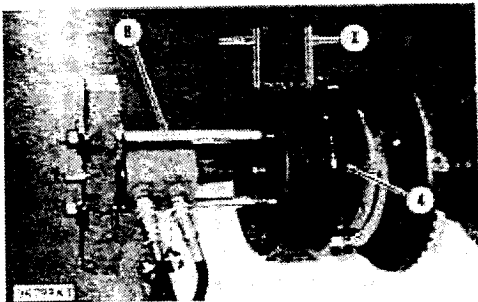
a) remove steering clutches



1. Remove two bolts (1), washers and lock (2).



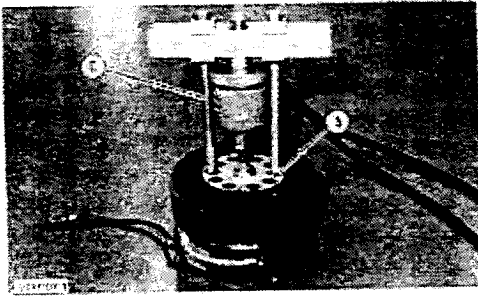
2. Install two 1/2"-13 NC bolts (3) in the drum as shown. Put tool (A) on the nut. Install a bar on the two bolts (3) as shown. Loosen the nut. Remove tool (A). Do not take the nut off the bevel gear shaft. Put the nut in position on the bevel gear shaft so there is a distance of .25 in. (6.53 mm) between the nut and the face of the drum. Remove the brake bands and linings. Remove the drum.



3. Use tooling (B) to loosen the plate assembly (4). Remove tooling (B). Remove plate assembly (4). Weight of the plate assembly is 120 lb. (54.43 kg).

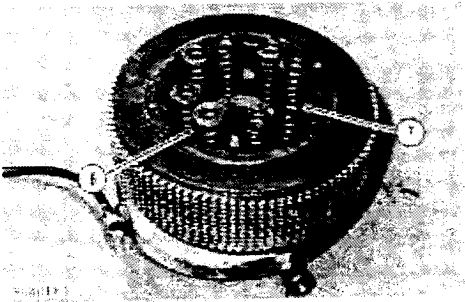
NOTE: Measure the total thickness of the discs and disc assemblies of the clutch assembly. The minimum thickness (X) is 2.63 in. (66.80 mm). If

dimension (X) is less than 2.63 in. (66.80 mm), install new discs and disc assemblies.



4. Install tooling (C) as shown. Put pressure on springs and remove locks (5). Release pressure and remove tooling (C).

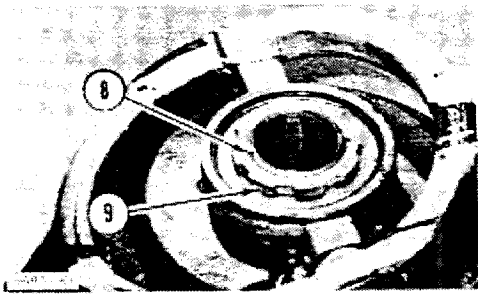
NOTE: The flange of the 7F9540 Puller Assembly will have to be ground off a small amount at two locations to permit installation of the legs for the tooling (C).



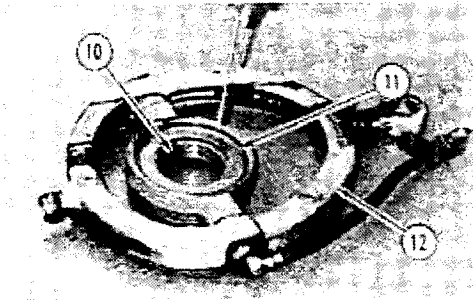
5. Remove a retainer (6) and two springs (7) from each of the eight studs.



6. Remove the drum and disc assemblies.

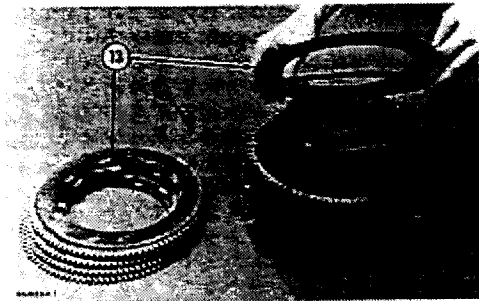


7. Remove two screws (8). Remove nut (9). Remove yoke from drum.



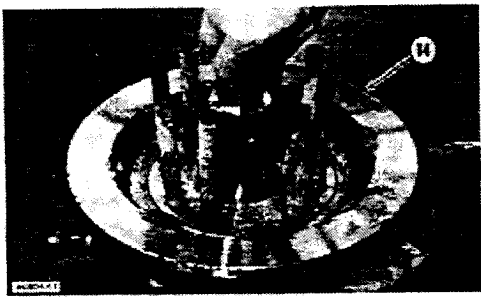
8. Remove ring (11) from cage. Remove the other ring and bearing (10) from the cage.

9. Check the yoke (12) and hose for damage and wear. If the parts are worn, use new parts for replacement.



10. Remove discs (13) from the drum.

NOTE: Put identification on the discs to prevent mixing at assembly. If the same discs are used at assembly, install them in the drum in the same order to prevent fast wear. The discs will wear better if they are moved from the top to the bottom of the clutch assembly with the same faces up. New discs can be installed with any face up.

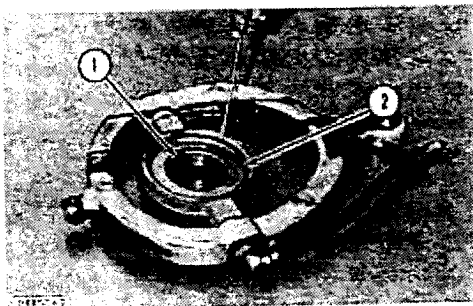


11. Put plate assembly (14) on the bevel gear shaft. Check the clearance between the shaft and the bearing in the plate assembly. The clearance must not be more than .020 in. (0.5 mm). If the clearance is more install a new bearing.

12. Disassemble the other side of the steering clutches, following the procedure in Steps 1 through 11.

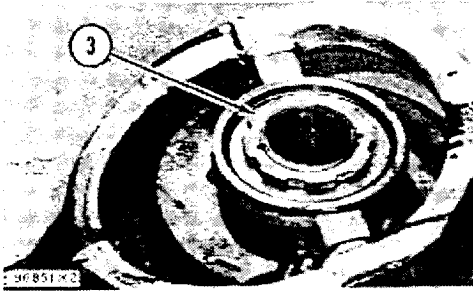
Assemble Steering Clutches 4109-16

Tools Needed		A	B	C
8B7548	Puller Assembly	1		
8B7556	Adapter	2		
7F9540	Puller Assembly	1		1
9S5800	Pump Group	1		1
7S8431	Plate	1		
7S4135	Torque Multiplier		1	
7M7236	Adapter Group			1



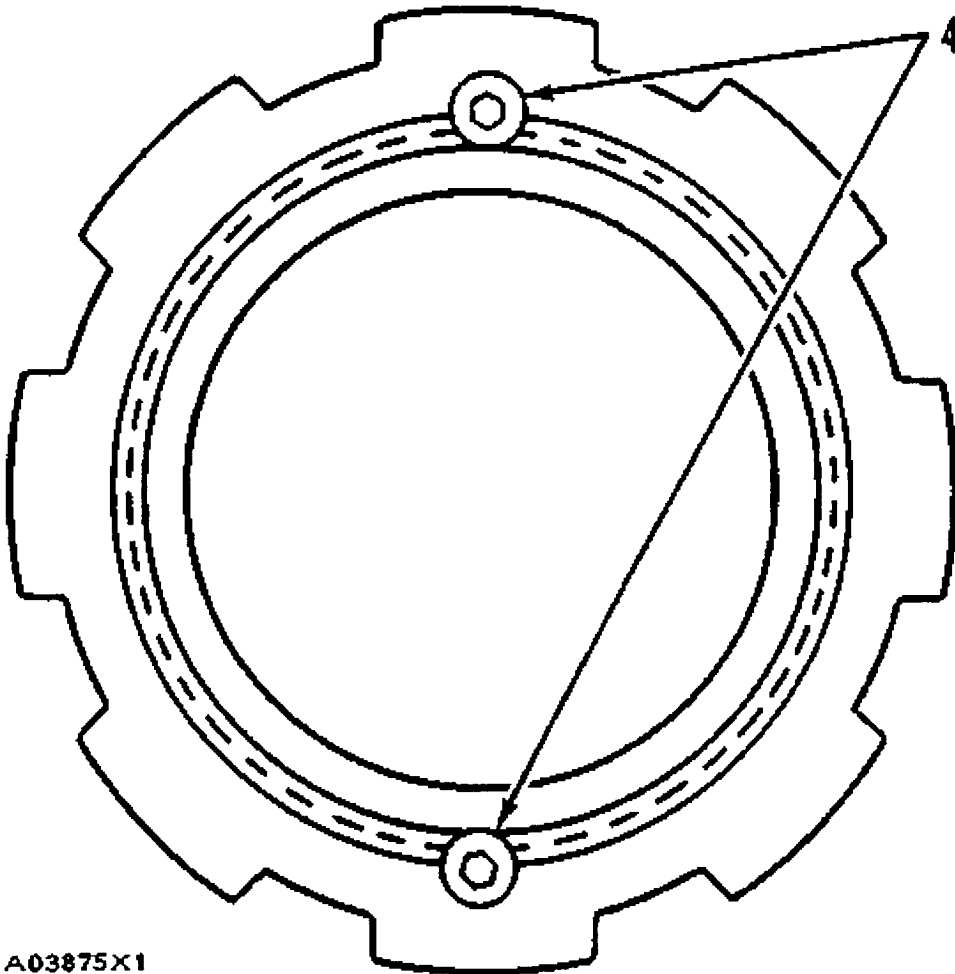
1. Install bearing (1) in the cage of the yoke. Install the ring on bearing. Install ring (2).

NOTE: The bearing must be installed in the correct position. The inner race of the bearing is installed next to the rings.



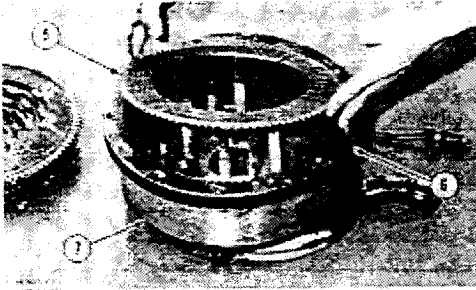
2. Put the yoke in position on the drum. Install nut (3). Tighten nuts (3) to a torque of 250 ± 50 lb.ft. (34.6 ± 6.9 mkg).

3. Drill two $13/64$ in. (5.16 mm) holes .38 in. (9.6 mm) deep opposite each other on the separation line of the nut and plate assembly.



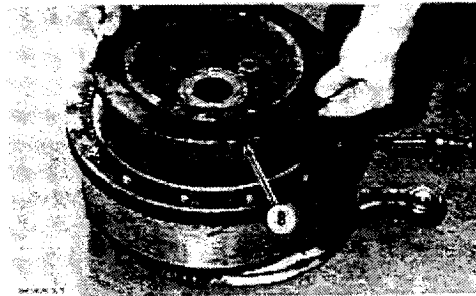
A03875X1

4. Use a 1/4"-20-3B NC thread tap to tap both holes .31 in. (7.9 mm) deep. Instal two screws (4).

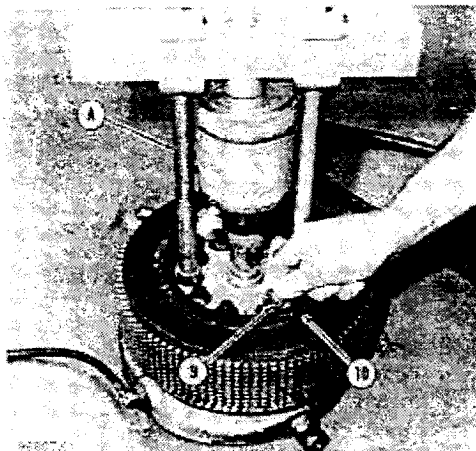


5. Put drum (6) on plate assembly (7) as shown.

6. Install discs (5) in the drum. Make sure discs are installed in the correct order.



7. Put drum (8) in clutch assembly.

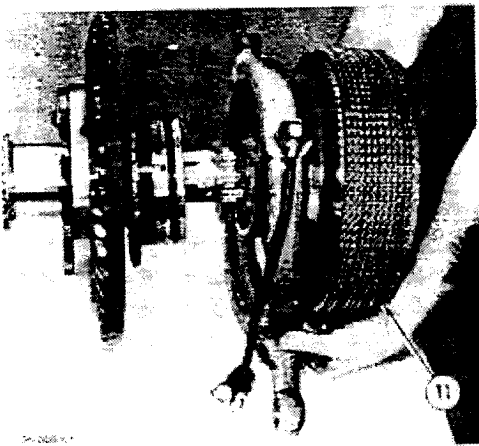


8. Put the two springs and retainers on each stud of the plate assembly. Install tooling (A). Put pressure on the springs and retainers until locks (9) can be installed on the studs.

NOTICE

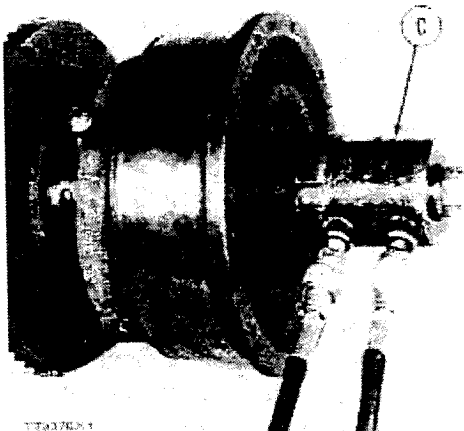
Put pressure on springs and retainers slowly to prevent damage to plate (7S8431) in tooling (A). Hit each stud with a hammer to make sure the locks (9) are in the correct position on the studs.

9. Remove drum (10) from clutch assembly.



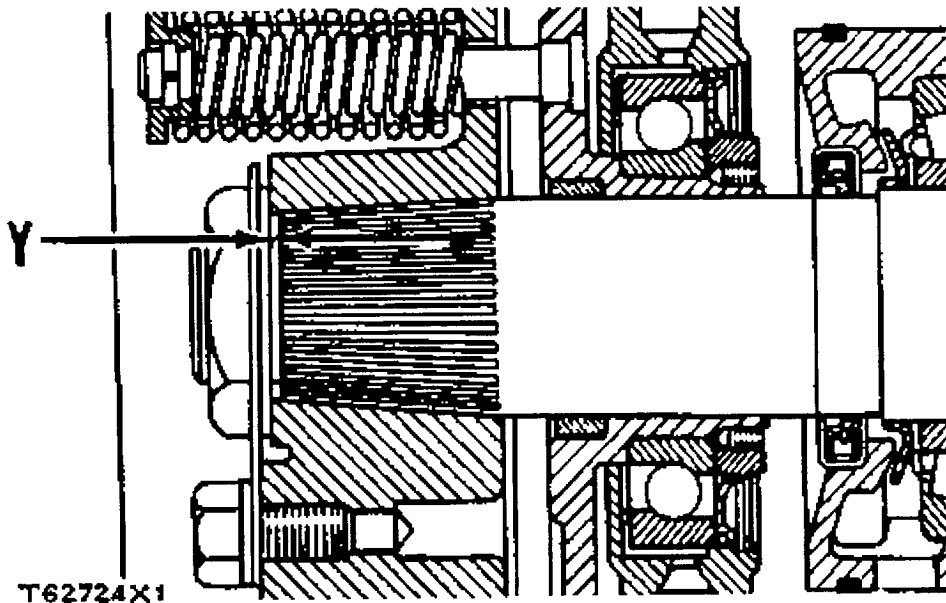
10. Put the clutch assembly (11) on the bevel gear shaft.

NOTE: Make sure the bevel gear shaft is clean and dry.



11. Install tooling (C). Install the clutch assembly on the bevel gear shaft

with a force of 15-20 tons (16.3 - 18.1 M tons).



12. Remove tooling (C). Measure dimension (Y). Dimension (Y) must be $.22 \pm .03$ in. (5.6 ± 0.8 mm).

13. Install the brake bands and linings on the drum. Put the drum in the clutch assembly. Install the nut on the end of the bevel gear shaft. Install two 1/2"-13 NC bolts in the drum. Put a bar between the bolts. Use tool (B) to tighten the bolts to a torque of 250 ± 50 lb.ft. (34.5 ± 6.9 mkg).

14. Install the lock and two bolts.

15. Assemble the other side of the steering clutches. Follow procedure in Steps 1 through 15.

end by:

a) install steering clutches

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