# **CATERPILLAR®**

# Service Repair Manual

## **Models**

120M Motor Grader

Model: 120M MOTOR GRADER R9C

Configuration: 120M Motor Grader - All Wheel Drive R9C00001-UP (MACHINE) POWERED BY C6.6 Engine

### **Disassembly and Assembly** 12M and 120M Motor Graders Power Train

Media Number -KENR6419-08

Publication Date -01/05/2017

Date Updated -15/05/2017

i07077362

## **Transmission - Disassemble**

**SMCS** - 3030-015; 3159-015; 3176-015

## **Disassembly Procedure**

Table 1

Required Tools						
Tool	Part Number	Part Description	Qty			
A	439-3940	Link Bracket	3			
В	422-8733	Jack Stand Gp	3			
С	1U-9202	Lever Puller Hoist				
D	1P-1863	Retaining Ring Pliers	1			
Е	308-3470	Jack Stand Gp	2			
F	140-7742	Sleeve	1			
G	154-6181	Forcing Bolt	2			
Н	FT-2769	Table	1			
J	4C-8156	Lifting Fixture	1			
K	1U-6410	Three Jaw Puller	1			
	1P-0510	Driver Gp	1			
L	9U-7480	Compressing Tube 1				
	5P-7970	Nut	1			
	8T-4224	Hard Washer	1			
	-		1			

		Bolt	
		M8 - 1.25 by 460mm	
M	8B-7548	Push-Puller Tool Gp	1
N	2P-8312	Retaining Ring Pliers	1
P	1P-2321	Combination Puller	1
	1P-0510	Driver Gp	1
R	189-0408	Shackle As	1
	3E-3882	Eyebolt	1
S	126-7175	Push-Puller Tool Gp	1
	4C-5653	Threaded Adapter	1
	1P-0510	Driver Gp	1

### **Start By:**

	<b>D</b>	.1			
a	Remove	the	transn	การ	รากท

#### **NOTICE**

Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting, and repair of the product. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids.

Refer to Special Publication, NENG2500, "Dealer Service Tool Catalog" for tools and supplies suitable to collect and contain fluids on Cat<sup>®</sup> products.

Dispose of all fluids according to local regulations and mandates.

#### **NOTICE**

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

**Note:** Put identification marks on all harness assemblies for installation purposes.

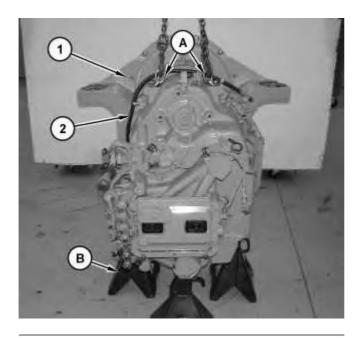


Illustration 1 g01386565

1. Attach Tooling (A) and a suitable lifting device to transmission (1). The weight of transmission (1) is approximately 862 kg (1900 lb). Use Tooling (A) and the suitable lifting device to position transmission (1) onto Tooling (B). Remove hose assembly (2).

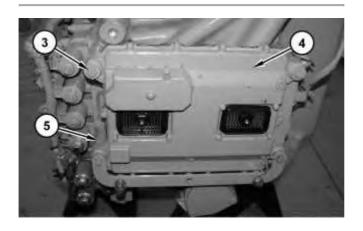


Illustration 2 g01386568

2. Remove bolts (3) to remove control module (4) and spacers (5).

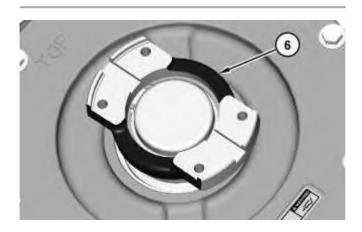


Illustration 3 g01386574

3. Remove yoke assembly (6).

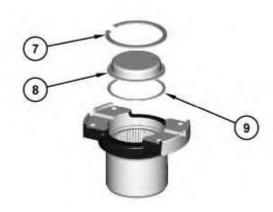


Illustration 4 g01386575

- 4. Remove retaining ring (7).
- 5. Remove cup (8). Remove O-ring seal (9).

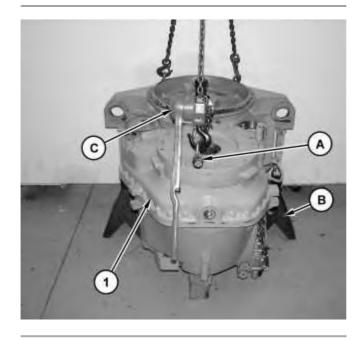


Illustration 5 g01386579

6. Attach Tooling (A), Tooling (C), and a suitable lifting device to transmission (1). Use Tooling (A), Tooling (C), and the suitable lifting device to position transmission (1) onto Tooling (B) and suitable cribbing. Position transmission (1) with the output shaft upward.

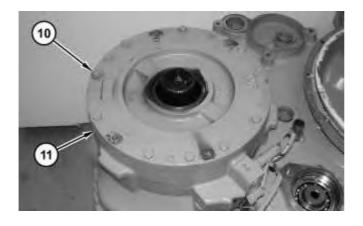


Illustration 6

g01386585

## **WARNING**

Personal injury can result from being struck by parts propelled by a released spring force.

Make sure to wear all necessary protective equipment.

Follow the recommended procedure and use all recommended tooling to release the spring force.

7. Remove bolts (10) to remove plate assembly (11).

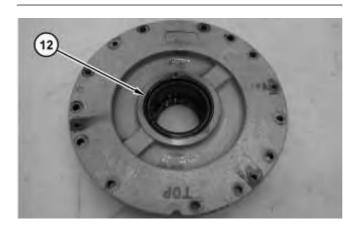


Illustration 7

g01386589

8. Remove lip seal (12).

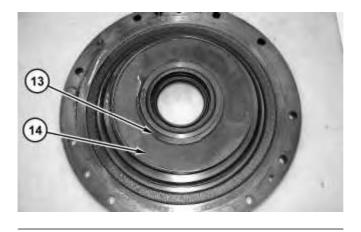


Illustration 8 g01386599

Use Tooling (D) to remove retaining ring (13). Remove coned disc springs (14).
Note: Note the orientation of coned disc springs (14) for assembly purposes.

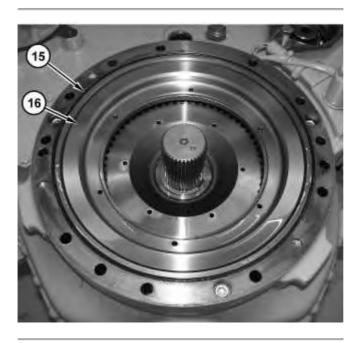


Illustration 9 g01386610

10. Remove O-ring seal (15) and piston (16).

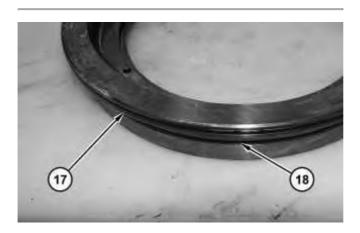


Illustration 10 g01386621

11. Remove piston seal (17). Remove piston seal (18).

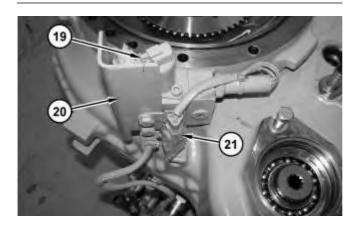


Illustration 11 g01386624

12. Disconnect harness assembly (19) and harness assembly (21). Remove guard (20).

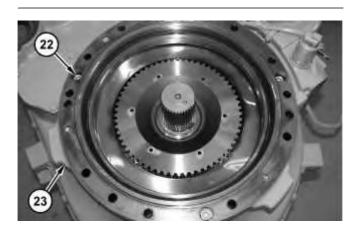
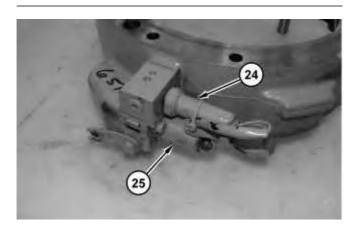


Illustration 12 g01386632

13. Remove bolts (22). Use two people to remove housing (23). The weight of housing (23) is approximately 20 kg (45 lb).



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