



# Service Repair Manual

## **Models**

# 12M 3 MOTOR GRADER

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Product: MOTOR GRADER

Model: 12M 3 MOTOR GRADER N9R

Configuration: 12M Series 3 Motor Grader N9R00001-UP (MACHINE) POWERED BY C9.3 Engine

## Disassembly and Assembly

### 12M Series 3, 140M Series 3 and 160M Series 3 Motor Graders Power Train

Media Number -UENR3483-02

Publication Date -01/01/2014

Date Updated -10/04/2018

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
B	422-8733	Jack Stand Gp	3
C	1U-9202	Lever Puller Hoist	1
D	1P-1863	Retaining Ring Pliers	1
E	308-3470	Jack Stand Gp	2
F	140-7742	Sleeve	1
G	154-6181	Forcing Bolt	2
H	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:**

- a. Remove the transmission.

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**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.**

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**NOTICE**

**Keep all parts clean from contaminants.**

**Contaminants may cause rapid wear and shortened component life.**

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

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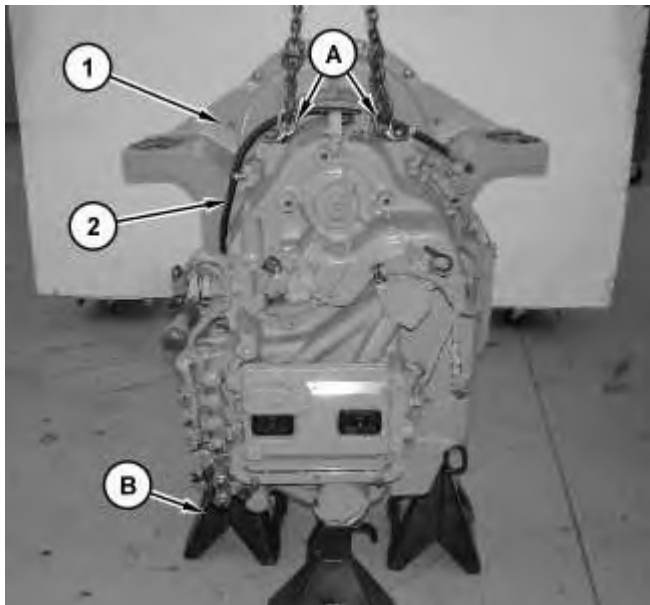


Illustration 1

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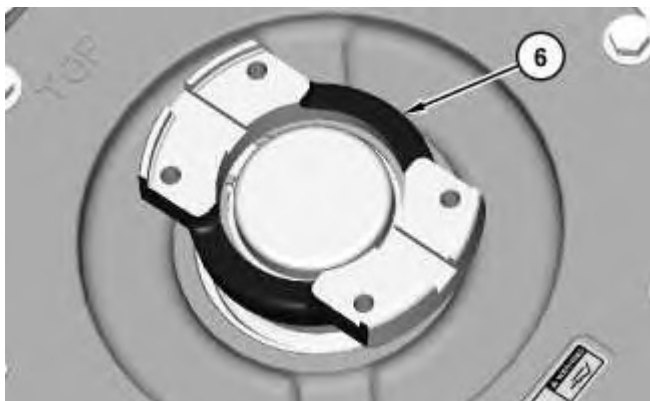
1. Attach Tooling (A) and a suitable lifting device to transmission (1). The weight of transmission (1) is approximately 862 kg (1900 lb). Use Tooling (A) and the suitable lifting device to position transmission (1) onto Tooling (B). Remove hose assembly (2).



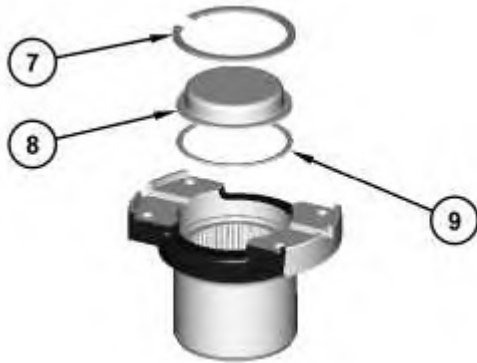
Illustration 2

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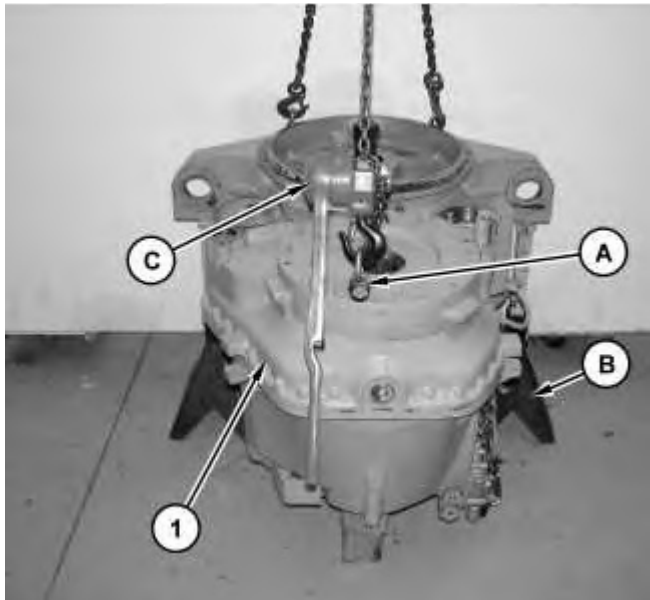
2. Remove bolts (3) to remove control module (4) and spacers (5).



3. Remove yoke assembly (6).



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



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.

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