

PARTS & SERVICE NEWS

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SUBJECT: INTRODUCTION OF IMPROVED PARTS FOR T/M 1ST LINE AREA ON GD825A-2 ETC.

PURPOSE: To introduce improved parts with increased durability for use with the 1st line section of the transmission ass'y on GD825A-2 and other motor graders

APPLICATION:

GD705A-3A	Motor Graders, Serial Nos. 10002 and up
GD705A-4A	Motor Graders, Serial Nos. 11001 and up
GD805A-1	Motor Graders, Serial Nos. 10002 and up
GD825A-2	Motor Graders, Serial Nos. 11001 and up
GH320-1	Motor Graders, Serial Nos. 11001 and up

FAILURE CODE: 15KECA

DESCRIPTION:

1. Introduction

This Service News will introduce improved parts (thrust washers, needle bearings and shafts) with enhanced lubricity which have been newly prepared this time for use with the 1st line section of the transmission ass'y on the GD700 Series and GD800 Series motor graders.

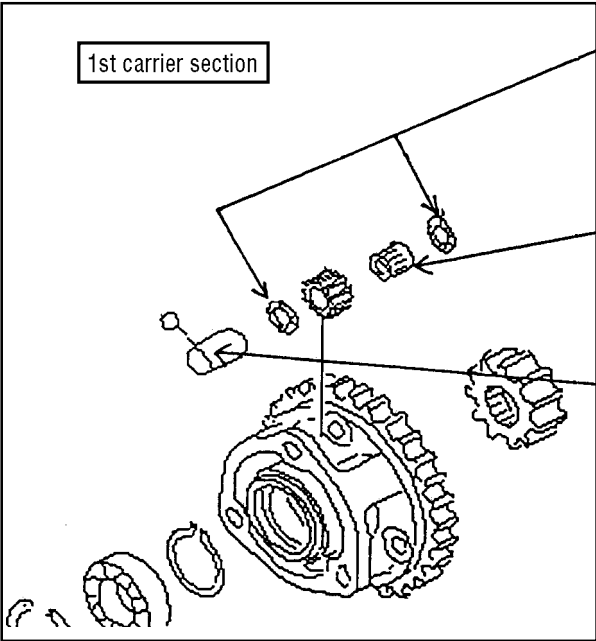
2. List of parts

Part No.	Part Name	Q'ty	Remarks
421-15-12360 (235-15-12590)	Thrust washer (Thrust washer)	6 (6)	} Available as spare parts in sets of these parts
235-15-29410 (421-15-19411)	Needle bearing (Needle bearing)	3 (3)	
235-15-25520 (234-15-12540)	Shaft (Shaft)	3 (3)	

3. Contents of the modification

The contents of the improved parts parts will be described in the Section 4, identification methods for the new and current parts will be given in the Section 5, locations of the improved parts will be introduced in Section 6 and the replacement procedures will be described in Section 7.

4. Contents of improvement of the subject parts



1st carrier section

Thrust washer			
Current part)	235-15-12590	6 units/machine	
↓			
New part)	421-15-12360	6 units/machine	

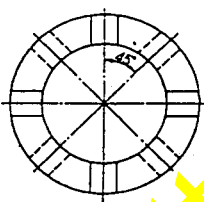
Needle bearing			
Current part)	421-15-19411	3 units/machine	
↓			
New part)	235-15-29410	3 units/machine	

Shaft			
Current part)	234-15-22540	3 units/machine	
↓			
New part)	235-15-22520	3 units/machine	

The above three parts have been improved to increase the durability.

The above explanations are in case of the typical motor grader model of the GD825A.

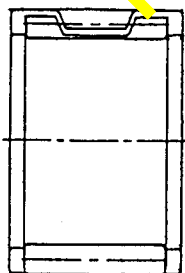
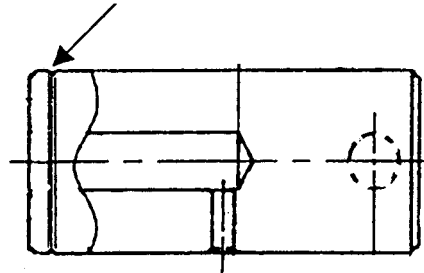
5. Identification methods for the new and current parts



Identification method for the thrust washer

	Part numbers	Colors	Materials
Current	235-15-12590	Gold	Sintered metal
New	421-15-12360	Black	Heat resistant resin

Position of the machined groove



Identification method for the needle bearing

	Part numbers	Colors
Current	421-15-19411	Black colored end (No coloring)
New	235-15-29410	Green colored end (Colored)

Colored position (cage end)

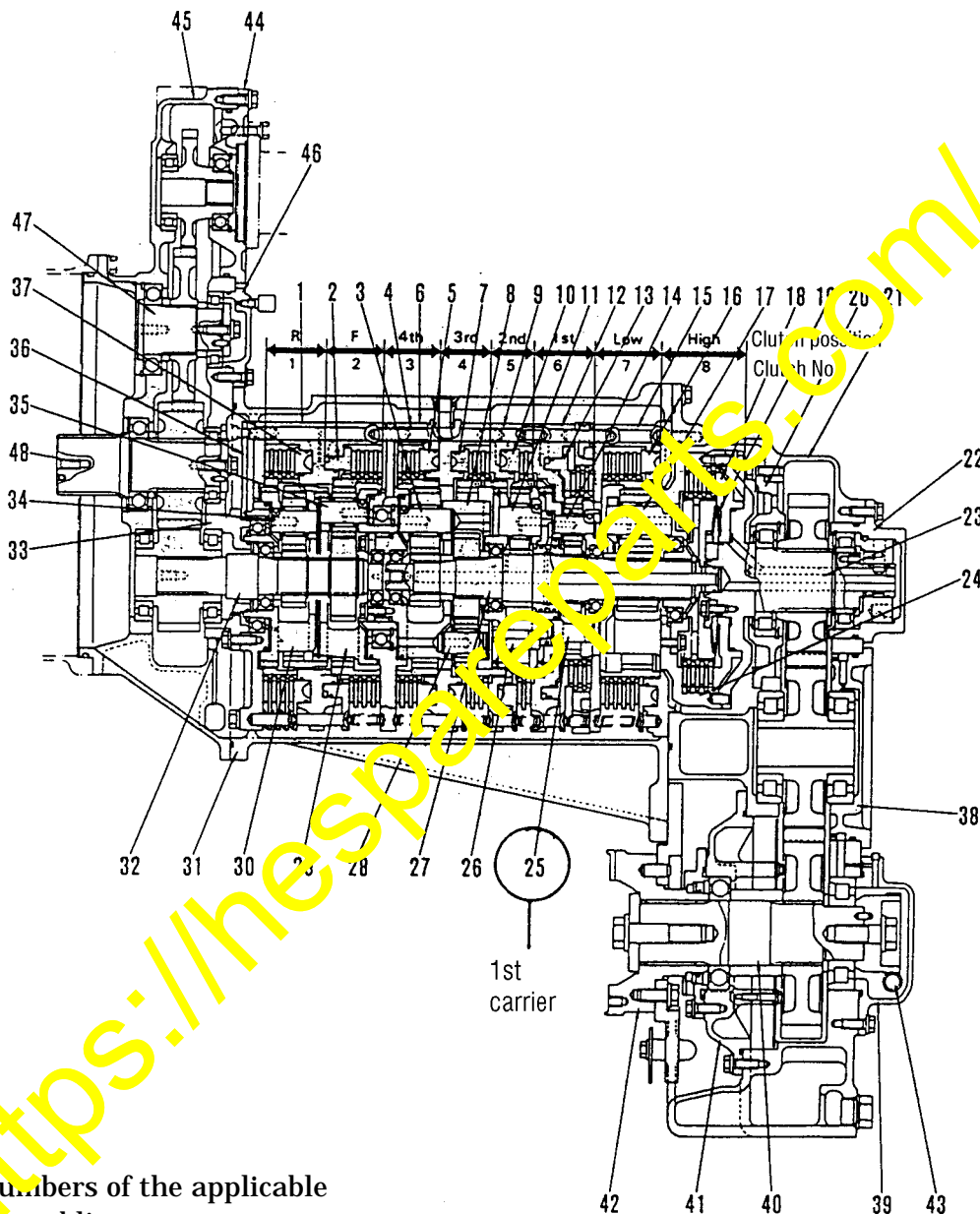
Identification method for the shaft

	Part numbers	Markings
Current	234-15-22540	Without machined groove
New	235-15-22520	Supplemented a machined groove

⋈ The appearances and dimensions of the current and new parts are the same with all the above three parts.

6. Locations of the improved parts

The 1st carrier which incorporates the improved parts with the enhanced durability is located at the section being itemized as "25".



Reference Part numbers of the applicable T/M assemblies

GD705A-3A:	234-15-00200	
	234-15-00201	
GD705A-4A:	234-15-00600	
	234-15-00601	
GD805A-1:	235-15-00010	
	235-15-00011	
	235-15-00070	
	235-15-00071	
GD825A-2:	235-15-00020	235-15-21013
	235-15-00021	

On other machines

- 234-15-00202
(Optimum spec. machines)
- 234-15-00400
(Extreme cold weather spec. machines)
- 235-15-11020
(Extreme cold weather spec. machines)

7. Replacement procedures

Refer to the general explanations for the disassembly and reassembly procedures of the carrier in the Section "Disassembly and assembly of planetary gear" in the Chapter "Disassembly and assembly of transmission" in the Shop Manual.

In the schematic diagrams indicated below, the Item No. 2 "shaft", Item No. 7 "bearing" and Item Nos. 4 & 6 "thrust washers" are the parts modified this time.

Meanwhile, for the disassembly and reassembly procedures for other sections, refer to the individual Shop Manual for the respective machine models.

Transmission

Disassembly · Assembly

Disassembly of the planetary gear

1. After pulling out the shaft (2) from the planetary carrier ass'y (1), remove the ball (3),

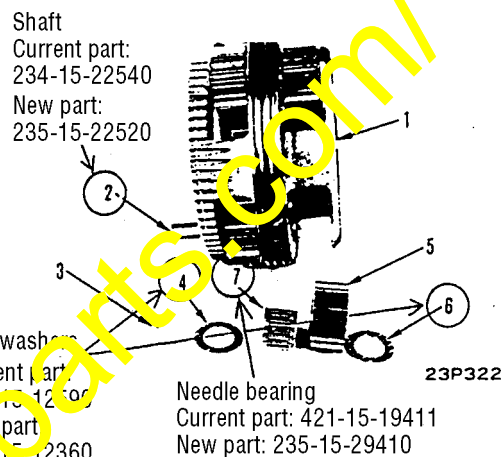
thrust washer (4), gear (5) and thrust washer (6) in given sequence.

Current part: 235-15-12590

Current part: 235-15-12590

2. Pull out the bearing (7) from the gear (5).

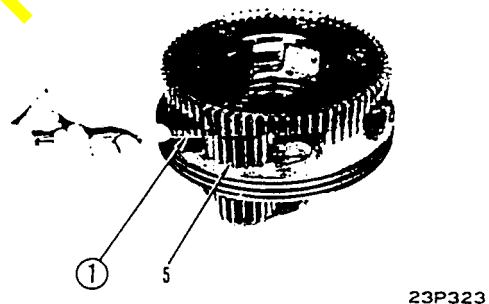
Current part: 421-15-19411



Reassembly of the planetary gear

★ Before reassembling respective parts, apply engine oil to their sliding surfaces.

1. Install the bearing (7) to the gear (5)
- New part: 235-15-29410
2. Inserting the shaft (2) into the carrier ass'y,
- New part: 235-15-22520
- install the thrust washer (6), gear (5) and
- New part: 421-15-12360
- thrust washer (4) before fastening the shaft
- New part: 421-15-12360
- by the ball (3).



★ If the shaft comes out while making the reassembly work, lightly caulk the ball groove in the carrier surface.

Align the centers of the thrust washers (4) and (6) before installing to the shaft. Especially, since the new thrust washers are being made of synthetic resin, they tend to break if the shaft pries them while carrying out the assembly work. Therefore, pay utmost attention when installing them.

3. After finishing the reassembly work, measure the side clearance of the planetary gear (5) using a filler gauge 1 to make sure the clearance is within the specification.

★ Side clearance: 0.35 – 0.8 mm