

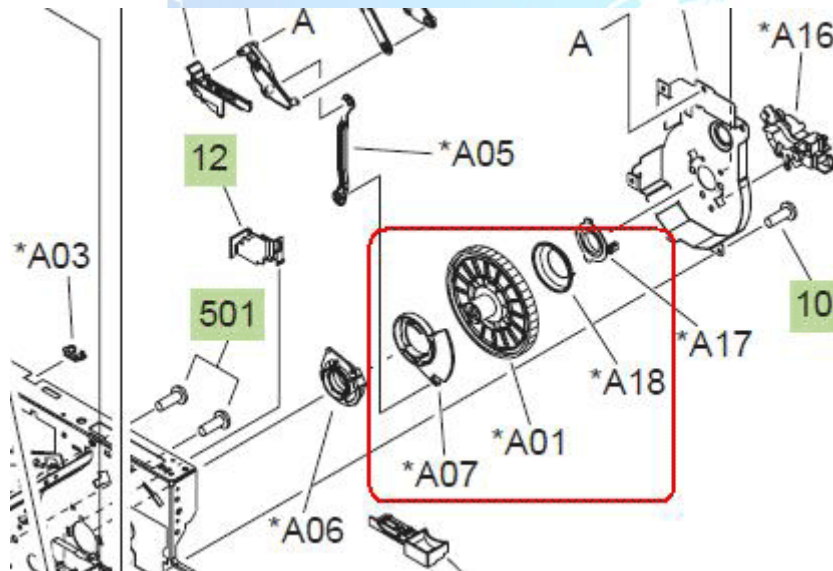
***Grinding Noise from Right Side of the Printer and or 13.05 Paper Jams  
HP LaserJet P4014/P4015/P4515/M4555MFP Printers***

A grinding noise is emitted from the right side of the printer. The issue relates to a defective toner cartridge, or the 193T gear (drum drive assembly).

HP has seen some incidents of the main drum drive gear assembly wearing out prematurely or the cartridge gears breaking. This damage can cause a grinding noise and/or a 13.05 jam with paper stopping directly under the cartridge.

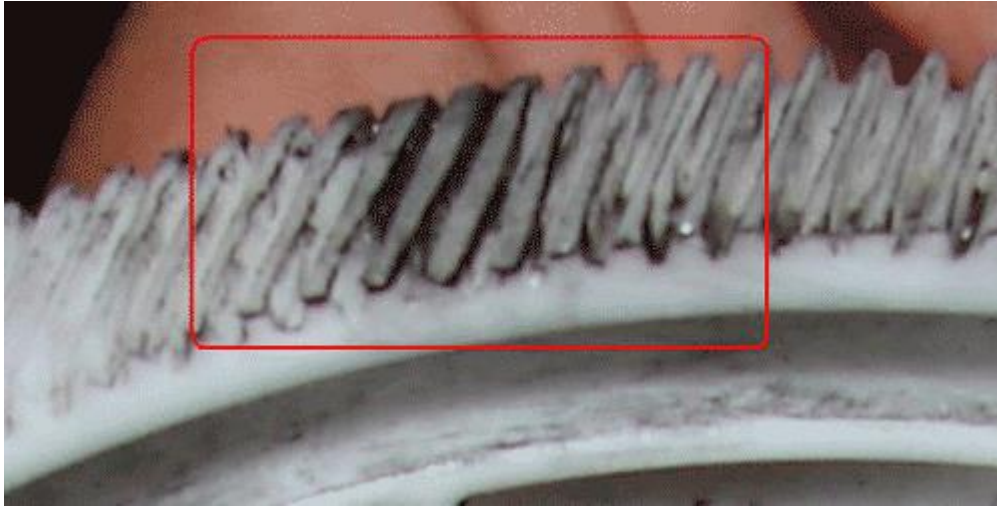
**NOTE:** Not all 13.05 paper jams are this issue, only a small percentage are related to this gear damage. Please troubleshoot all paper jams before servicing.

For this specific issue, verify that the 193T gear (A01) shown in pictures below is working fine and without damage.



**NOTE:** A01 gear, 193T. The picture and reference was taken from Printer Service Manual: Internal components - Figure 8-6 Internal components (1 of 3) – Pg. 358 Chapter 8 Parts.

## Example of 193T gear damage Teeth



The drum drive assembly (includes: Guide, gear shift A, Guide, gear shift B, Gear 193T, Spring compression, bushing, Side plate drum drive, and Cap drum gear) is set up as a service part, part number RM1-8493-000CN.

The premature wear or breakage of the drum drive assembly is most prevalent in printers installed in highly contaminated environments such as manufacturing plants, and/or industrial areas. The contamination coats the gears and gets into the grease causing increased friction and torque on the gears.

The cartridge gear that engages the print cartridge and rotates the image drum may also prematurely wear out or break from the contamination and excessive force when installing the print cartridge.