



Top 14 John Deere Questions Asked by Reliance Customers.

1. Why do some Reliance part numbers differ from Deere & Company?

Occasionally, John Deere uses the same part in engines produced at two engine plants. In some cases, John Deere has assigned different part numbers for the same part. In those cases, Reliance uses the part number that is most widely used.

Where Reliance offers a kit, part or assembly that Deere & Company does not, Reliance utilizes an RP (Reliance Part) number. One example of this is our 531 cylinder kits. We sell them under RP part numbers because John Deere only offers 531 pistons, rings, liners and O-rings separately. They do not offer 531 cylinder kits.

2. What's the difference between the two oil pump drive gears that are listed in the early 6-404?

If your customer has a separate shaft and gear, he can purchase the NR-32428 gear only. However, if the shaft is worn, or if the customer has the one-piece shaft and gear assembly, it should be replaced with NR-45134. New shafts used with NR-32428 gears are not available from Deere & Company.

3. My customer has a 4-219T (turbocharged) engine. The Reliance catalog does not list turbocharged cylinder kits for the 4-219. Can I sell him Reliance kits?

Yes. When an engine application in the Reliance catalog does not list any suffix, (e.g.:D,T,A,H), that part number or kit will work in all engine configurations.

4. Reliance 300 Series camshafts utilize a threaded tachometer drive, but my customer's old cam has a press-in tachometer drive. Can he use a Reliance cam?

Yes. When utilizing the Reliance 300 Series camshaft, either a threaded shaft, slotted-type or a threaded shaft, helical gear type tachometer drive must be used.

Reliance offers both of these tach drives. NR-81513 is the slotted type, and NR-81514 is the helical gear type tachometer drive shaft. In all cases, press-in tach drives must be replaced with thread-in drives when using Reliance camshafts.

5. What's the best way to determine which water pump kit is required?

The most accurate way of determining the appropriate water pump overhaul or reconditioning kit is to obtain the water pump housing casting number or the equipment application. John Deere utilizes many different water pumps. The correct kit is dependent upon application. For 300 Series water pump applications, refer to the Application by Water Pump Housing Number Table in section 5.10 of the Reliance catalog.

6. In 300 Series engines, what does "O-ring in the block" versus "O-ring on the liner" mean?

John Deere produced some early cylinder blocks that have a smooth lower bore. In these blocks, the cylinder liners are machined to accept O-rings. Later blocks have the O-ring machined in the bore, and the liners for those blocks are smooth. Block casting numbers for O-ring on the liner blocks are listed in the 1.60 cylinder kit section of the Reliance catalog.



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7. What is the difference between borable and honorable connecting rod bushings?

A borable bushing has a smaller inside diameter (I.D.) to allow a machine shop to bore the bushing on center to properly restore the center-to-center distance of the large and small ends of the connecting rod. Honorable bushings have a larger I.D., do not correct center-to-center differences in marginal connecting rods, and must be finish-honed to allow for correct pin clearance.

8. What is an overhaul kit?

A Reliance overhaul kit contains all of the parts necessary to perform an engine bearing roll-in. John Deere recommends that this procedure be performed between engine overhauls. As with Reliance overhaul kits, the connecting rod capscrews are included free of charge.

9. What is a 400 Series replacement block?

If a customer needed a block for a 4010 or early 4020 tractor, Deere & Company supplied a replacement block, which utilized the late main bearings and cylinder liners, but allowed the installation of the early cylinder head.

10. My Customer's 400 Series engine main bearing journals have two drilled holes, but the Reliance bearings that I supplied him only have one oil hole. Are the bearings mispackaged?

No. Oil to lubricate the crankshaft is delivered through the hole in the bearing. The second journal hole facilitates the drilling of the orifice for the piston-cooling nozzle during manufacturing. The piston-cooling nozzle receives oil from a separate oil passage in the block that bisects the orifice.

11. My customer's 6-404 engine only has one O-ring groove in the block. Which O-ring should he use?

Reliance liner O-rings are made of two different materials: Duro-Silicone (orange) and Duro-Viton (black). The Duro-Viton material has a higher heat resistance, so your customer should use the black liner O-ring. Beware of competitive O-rings. Many utilize a black Buna material, which is an inexpensive and inferior substitute for Viton.

12. Why do the connecting rod bolts (capscrews) and cylinder head bolts need to be replaced every time they are loosened in John Deere engines?

The rod and head bolts are designed to stretch when they are properly torqued. If the bolts are re-used, proper clamping pressure cannot be achieved, and a bolt failure could result.

13. Why do Reliance 179, 239 and 359 pistons look different compared to the engine's original pistons?

In an effort to better control combustion, John Deere has moved the top ring land to within 5/32" from the top of the piston. Reliance supplies the late style piston as well. The late style pistons should replace all early style pistons in an engine. Do not mix the two styles in an engine.

14. Where do the thrust washers fit in the engine?

On 300, 400 and 500 Series engines, the washers fit on both sides of the cap, and the rear (flywheel side) of the block web with the slotted face towards the crankshaft.