TB1485

# TRACTOR SERVICE INFO

# INATractor FEAD clinic – John Deere 6520

## FEAD belt kit replacement – step by step


This John Deere 6520 produced in 2004 has just over 8000 working hours.
Fitted with air conditioning, viscous fan, no trailer air braking system.

We are working on a level surface with the Handbrake applied and the battery disconnected for safety precautions.

*Fig 1*

Pull the catch and lift the hood up (*Fig 1*).

*Fig 2*

We have also removed the radiator and casings to enable us to photograph the replacement (*Fig 2*).



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Remove retaining nuts (*Fig 3*) holding the viscous fan (*Fig 4*) for access to the drive belt and other sundries (Tensioners, Idlers & OAP's).

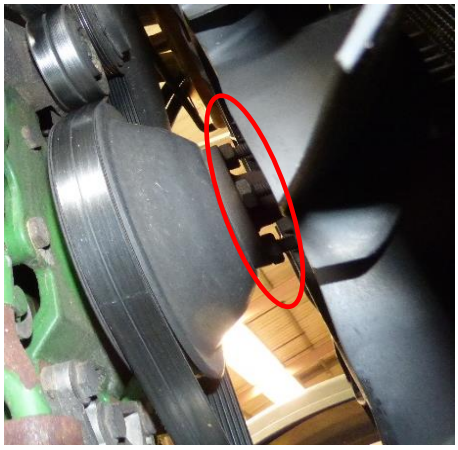

*Fig 3*

*Fig 4*

Now you can start replacing the other components. On this particular John Deere we are replacing the Belt, Tensioner, Idler and Alternator OAP using INA FEAD kit *529 4078 10*.
INA always recommends a full replacement of FEAD components.

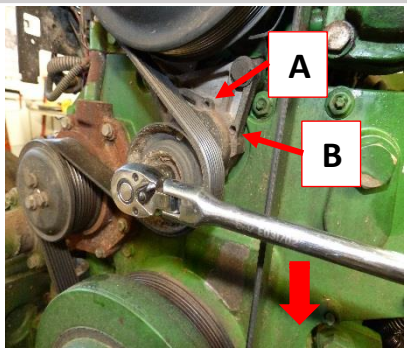


*Fig 5*

De-tension the belt by removing the dust cap in the centre of the pulley, with a 15mm socket (see arrow) on (*Fig 5*).
Rotate tensioner until the two locking holes A & B are aligned (*Fig 5*).

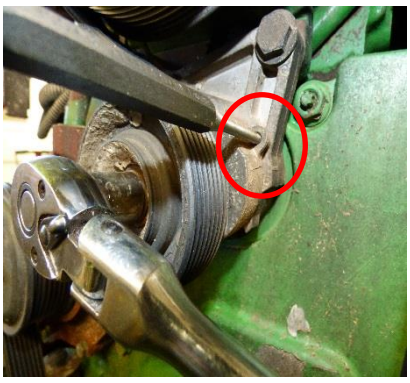

*Fig 6*

Once holes A & B are aligned insert a 5mm (0.2in.) diameter pin into the holes making sure you push the pin all the way through both holes to lock the tensioner (Fig 6) for this purpose we used a 5mm centre punch.

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The belt can now be removed (*Fig 7&8*)

*Fig 7*

*Fig 8*

The tensioner is now ready to be replaced (*Fig 9*) this tensioner is held on with 3 M10X35 (10.9) bolts, undo the bolts and remove the tensioner, be careful the locking pin does not come out on removal as this could cause injury.
When fitting the new tensioner make sure the mounting surface where the back of the unit fits is clean and free from debris, bolt up the new tensioner (always refer to manufacturer manual for torque settings) be very careful not to remove the pin this will be done after belt installation.

*Fig 9*



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Next we replaced the Alternator OAP, to do this you will need a special tool (we can supply this, part number (*400 0531 10*) The OAP is threaded onto the alternator shaft, the tools internal spline holds the alternator shaft whilst the outer spline unwinds the OAP from the shaft. Using a spanner and socket ratchet undo (RH thread) the OAP (*Fig 10*), (for technical advice and diagnosis of OAP see Technical Bulletin TB1251.

*Fig 10*

Once the old OAP has been removed make sure the thread of the Alternator shaft is clean and undamaged, Fit the new OAP, remembering to use the special tool, (Torque to 85nm).

*400 0531 10*

Now replace the idler (*Fig11*) to the right of the Alternator, (always refer to manufacturer manual for torque settings) this is a straight forward replacement but make sure the mounting surface where the back of the unit fits is clean and free from debris.

*Fig 11*



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The new belt can now be fitted, following the correct belt routing (*Fig 12*).

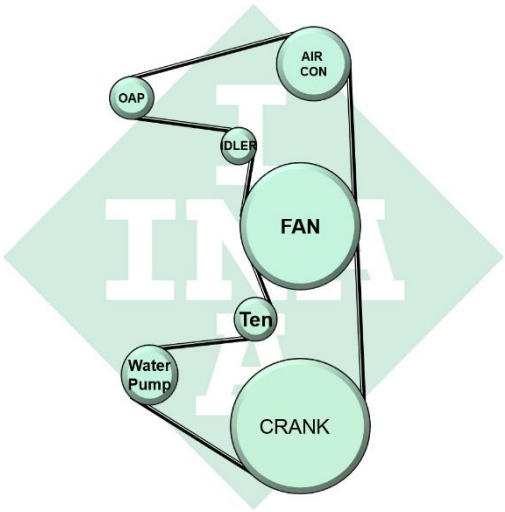


*Fig 12*

Once you have checked alignment and you have torqued all bolts, its time to tension the belt, to do this you need to turn tensioner using a 15mm socket to relieve the tension, you should now remove locking pin from tensioner (*Fig 13*), and then release gently.

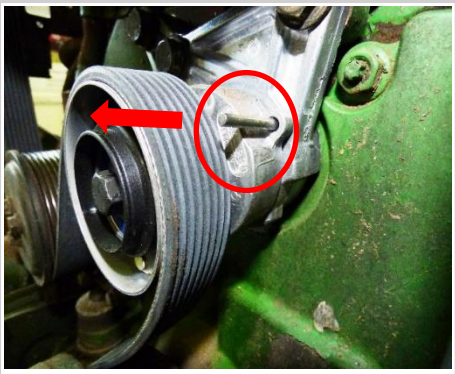

*Fig 13*

After belt fitment always make sure that the belt and any sundries that have been replaced are all aligned correctly, there are special tools available to test alignment and we always recommend using them.

We recommend turning the engine by hand one full rotation and check for misalignment or any other issue, if you are happy that everything has been fitted correctly, all bolts are torqued then continue with putting the remaining parts back on the Tractor. Start the engine and test systems.

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Parts Removed Autopsy

The belt replaced is of a unknown manufacture not a genuine belt, this looks like a recent replacement, and the date stamp means its approx. 1 year old it has all ready started to shows signs of miss alignment (we can highlight the wear pattern on the tensioner picture). There are signs of wear on the new Belt that are indicative of miss alignment.

Tensioner (*Fig 14*), we have replaced the Tensioner as part of the complete FEAD Kit, INA always recommend to replace complete sets, we have circled the miss alignment wear mark the belt has made on the body of the tensioner next to idler wheel.

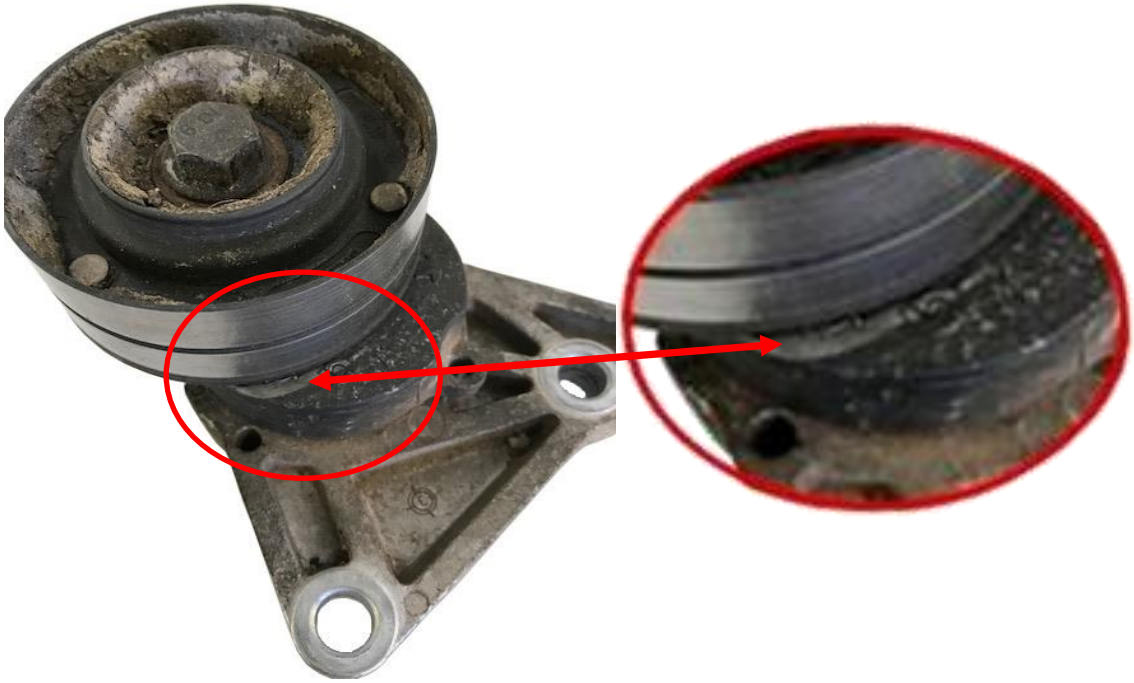

*Fig 14*



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