THANKS FOR YOUR PREFERENCE TO BINOTTO!

■ Binotto ADVICES AND RECCOMENDATIONS POWER TAKE-OFFS

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GENERAL ADVICES AND RECOMMENDATIONS for correct Power take-offs' installation and maintenance.

Including, but not limited to:

- Read carefully all manuals and mounting, maintenance and usage instructions related to the product and also eventual manuals and instructions pertaining to the vehicle transmission/gearbox;
- Always follow proper procedures and use proper tools and safety equipment (for personal protection as provided by law);
- Ensure you have a sufficient and complete training;
- Avoid to be alone when mounting or dismantling a power take-off (or any related component) and keep it as general rule whenever installing, dismantling or servicing any component of a commercial vehicle;
- Ensure the system or the PTO cannot be engaged unintentionally. Do not proceed with any service, installation or other operation while the engine is running.
- Block any lifted up or mobile equipment that could damage or hurt people working on (or underneath) a vehicle.
- Never engage a PTO or any other device before you ensure with this operation the machine will not cause directly or indirectly any damage to the operator and/or any other person
- Ensure all components are properly assembled
- Never use damaged components
- Ensure the PTO is always properly connected to the gearbox. If the PTO is not properly connected, it may cause directly or indirectly severe damages to the transmission or to other components of the vehicle
- Damaged or malfunctioning components can directly or indirectly cause severe damages (or death) to people and /or severe damages to the vehicle and the equipment.
- To ensure high performance and long life of the PTO, it is necessary to schedule maintenance checks to be executed periodically.

PTO TROUBLE SHOOTING

PROBLEM	POTENTIAL REASON	SOLUTION
PTO is noisy – Whining sound	Insufficient backlash between transmission and PTO gears.	Remove PTO and add mounting gasket to achieve a backlash of 0,15 – 0,30 mm.
PTO is noisy - Rattling sound	Excessive backlash between transmission and PTO gears.	Remove PTO and remove mounting gaskets to achieve a backlash of 0,15 – 0,30 mm.
PTO is noisy - Clicking	Nicked or damage gear tooth.	Replace damaged gear.
PTO leaks:		
>>> at shaft seal	Dirt under seal.	Replace seal. Examine PTO shaft if damaged.
	Improperly fitted seal.	Replace seal.
>>> at mounting face	Damaged mounting gasket.	Replace mounting gasket.
	Cracked mounting pad.	Replace PTO housing. Check gear backlash.
>>> at PTO housing (cracked)		
	Insufficient gear backlash.	Replace PTO housing.
	Unsupported direct mount pump.	Attach pump support brackets.
	Overtorque condition.	Review application.
	Foreign objects between gears.	Replace PTO housing, gears.
PTO DOES NOT ENGAGE	Driveshaft problem.	Check drive shaft and angle are the same.
>>> cable shift	Cable does not shift.	Check cable connection to the PTO / Replace cable.
>>> air shift	Lack of air pressure.	Check air pressure line. PTO requires minimum 5 bar.
	Shifter piston not moving.	Check air cylinder for contamination.

