ROSS PERFORMANCE PARTS TUFFBOND HARMONIC DAMPERS

Thank you for purchasing a Ross Tuffbond Harmonic Damper. Your harmonic damper is designed to absorb the damaging torsional vibrations found in high performance engines and has been precision machined from high quality materials on our state of the art equipment. Your harmonic damper will provide trouble free service if installed correctly.

Please note: Your harmonic damper has met stringent quality control measures and therefore must not be drilled for balancing purposes. Installing the wrong model of damper for your engine specifications, or failure to follow our installation procedures can lead to failure of the damper and / or engine damage.

INSTALLATION PROCEDURE

1. Ensure you have the correct damper to suit your engine model. Utilise the part number etched onto the damper, to verify the damper is correct for your engine and intended application. If in doubt, please contact Ross Performance Parts before attempting installation.

2. Check the pulley positions are in the same locations as the pulleys on the original damper. This is particularly important in the Nissan RB engine series, as pulley spacing varies within the engine family. If the pulley spacing varies from the original damper please contact Ross Performance parts before attempting installation.

3. Check the position of the top dead centre (TDC) markings on the Ross Tuffbond Harmonic Damper to ensure placement is the same as the original damper. Any laser engraved timing marks around the periphery of the damper have been referenced to the original TDC position. Whilst the marks are highly accurate, the position of your timing pointer is critical to the referencing of these marks and you must ensure the pointer is referenced to the TDC mark on the damper.

4. Ensure the snout of the crankshaft is free of burrs, nicks and scratches, and inspect the woodruff key for any imperfections. If any damage is present replace the component prior to attempting installation.

5. Measure the diameter of the crank snout and inside diameter of the harmonic damper to ensure the correct interference fit exists. Too little interference will lead to damper / crank snout failure, and too much interference will inhibit correct fitment of the damper. Ross Tuffbond Harmonic Dampers are manufactured to the bottom tolerance size of the original factory damper sizing and are designed to be a **Locational Interference Fit on a nominal bore size.**

Due to variations in factory machining tolerances, it may be necessary to hone the inside diameter of the damper to achieve the above interference fit. This is easily accomplished with a flex-hone until the correct fit is obtained. A 3 or 4 fixed stone hone cannot be used for this operation.

6. Apply anti-seize lubricant on the crank snout and press the damper in place with a harmonic damper installation tool, ensure the woodruff key remains in the correct position relative to the keyway. Do not hit the damper with a hammer. When installed, turn the engine over by hand to ensure the damper does not foul any engine components.

7. Install the damper retaining bolt, washer and torque to OE factory specifications. Torque all other bolts to the recommended specifications for the particular fastener used. The torque settings that have been marked on the face of the damper are the OE recommended tension for installing a damper using OE fastener. It is the responsibility of the installer to inspect the suitability of the thread in the snout of the crank to ensure the correct fasteners are used with an appropriate thread sealer and that the correct torque is applied. If an aftermarket fastener is being used consult the fastener manufacturer for the correct installation procedure. Please note, damper retention is totally dependent on the above factors being correct and you must use your own judgement when tightening fasteners. If in doubt about the torque settings please contact Ross Performance Parts.

8. Refit belts, set tensions to OE factory specifications and start engine to observe belt alignment and check pulley runout. Upon successful completion of preliminary check increase engine rev's to 4,000 RPM and recheck alignment.

Removal of the damper is the reverse of installation. Remove the damper retaining bolt / washer, remove 2 / 3 outer bolts and fit a proprietary damper removing tool to pull the damper off the snout of the crankshaft. Do not attempt to pry or lever the damper from the engine.

A Ross Tuffbond Damper does not require any routine maintenance and should provide trouble free service if the above instructions have been followed correctly. It is recommended that the unit be inspected in conjunction with every routine engine rebuild to ensure that it remains in optimal condition.

If you have any questions during or after installation please contact Ross Performance Part on **+61 2 6059 7705** or **sales@rossperformanceparts.com.au** – we are here to help!

#GoHarder with #RossPerformanceParts