Volvo Chassis - Equipped With An I-Shift Automated Manual Transmission (AMT) - Flywheel Resurfacing And Reuse Guidelines

Internal Content

For information on flywheel resurfacing and reuse, refer to Field Service Bulletin FSB 216-002 Flywheel Resurfacing Guidelines.

The document can be found by searching for "216-002" (without quotes) in the Service section of Impact. Use the search field under Additional Search Values and make sure Title is selected from the dropdown menu.

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FSB 216-002 - Flywheel Resurfacing Guidelines

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FSB 216-002, Flywheel Resurfacing Guidelines

(October 2017)

VOLVO VN, VHD, VAH, and VT model trucks equipped with an I-Shift Automated Manual Transmission (AMT) does not utilizes the ceramic faced clutch disk commonly used in the North American (NA) market. The I-Shift AMT does not grind away at the flywheel surface during use. Therefore, in some cases it is not necessary to resurface the flywheel. In other cases it may be necessary to resurface or replace the flywheel depending on the amount of damage if a clutch failure should occur. This document is intended to give guidelines for resurfacing the flywheel. Follow the guidelines outlined in this Field Service Bulletin (FSB) to ensure the proper flywheel resurfacing requirements are met.

You must read and understand the precautions and guidelines in Service Information, group 20, "General Safety Practices, Engine" before performing this procedure. If you are not properly trained and certified in this procedure, ask your supervisor for training before you perform it.

NOTE: Information is subject to change without notice. Illustrations are used for reference only and can differ slightly from the actual vehicle being serviced. However, key components addressed in this information are represented as accurately as possible.

Service personnel: Please circulate, read and initial

Service Manager	Warranty Adminis-trator	Workshop Foreman	Service Technicians						

Fly Wheel Resurfacing Guidelines

1 A typical example of flywheel wear is minor blueing, which is a marking that does not affecting the operation of the flywheel or clutch friction surfaces. This marking may be seen as a uniform stripe around the complete friction area of the flywheel with occasional larger spots. Flywheel wear is not detectable with the bare hand and may only show very slight wear when measured with a dial indicator. The factory machining marks may be easily visible.

2 Flywheel surface wear may be perceived with the bare hand and is detected as a change in texture on the wear surface of the flywheel due to surface polishing. Flywheels with this particular type of surface wear could be reused without grinding or may be resurfaced if needed. Localized blue spots that do not show large cracking can be resurfaced as well.

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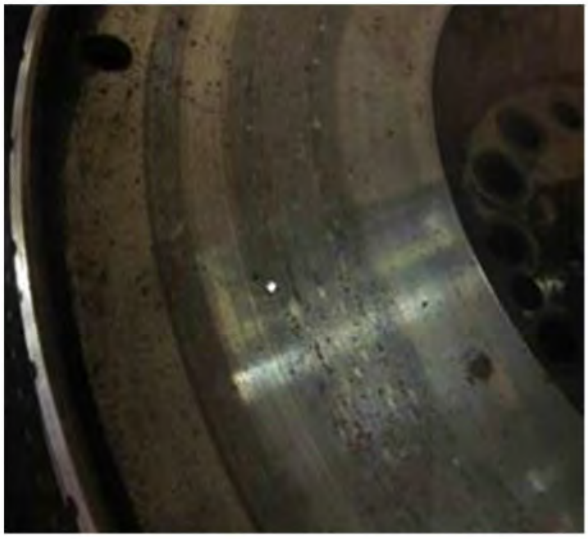

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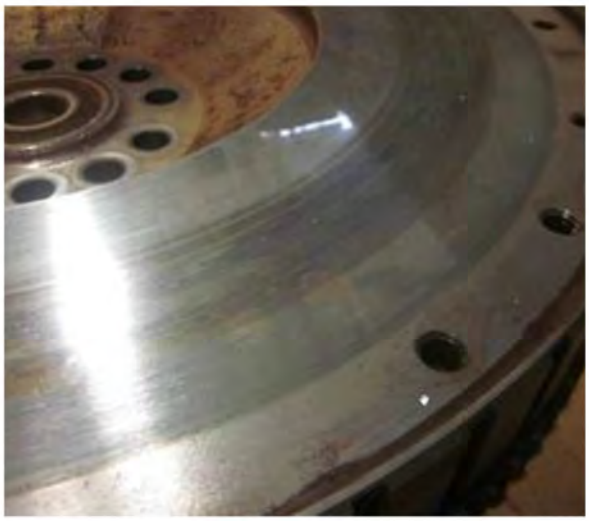

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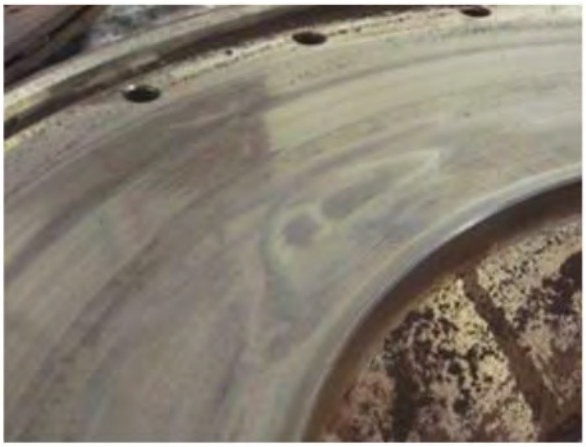

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3 Extreme blueing may destroy the clutch disk, turn the pressure plate and/or the flywheel blue. By touch, it may not feel like there is any wear of the flywheel surface. Even with a dial indicator there may not be very much surface wear measured or indicated. Extreme blueing and heat checking is also accompanied by radial cracks from the clutch mounting holes of the flywheel clutch surface. This condition may be found on the engine side of the flywheel. In extreme cases the engine side of the flywheel will indicate a blue tint if extreme blueing is present. If there is engine side blueing present on the flywheel surface, major surface cracks or radial cracks, as pictured in the following images, the flywheel must be replaced.

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4 Physical damage caused by failure of the clutch or disk is typically seen as chips or dents in the inner dished area of the flywheel and is usually caused by a spring or piece of the disk coming loose. This type of damage does not require replacement of the flywheel and will not affect the operation of the clutch. To remove any loose material, clean up the face, and de-burr the damaged area of the flywheel, grinding the surface of the flywheel is recommended.

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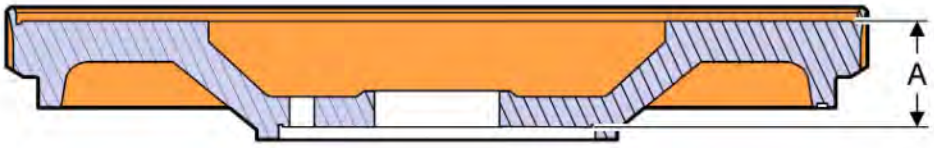
Use the procedure below to measure the flywheel:

(A) Select a straight edge that will span the friction surface of the flywheel. Measure the distance from the crankshaft mating side of the flywheel to the straight edge. The minimum thickness must not be less than 57.7 mm (2.27 in).

(B) Do not grind more than needed off of the flywheel. The typical requirement needed is to freshen the surface of the flywheel.



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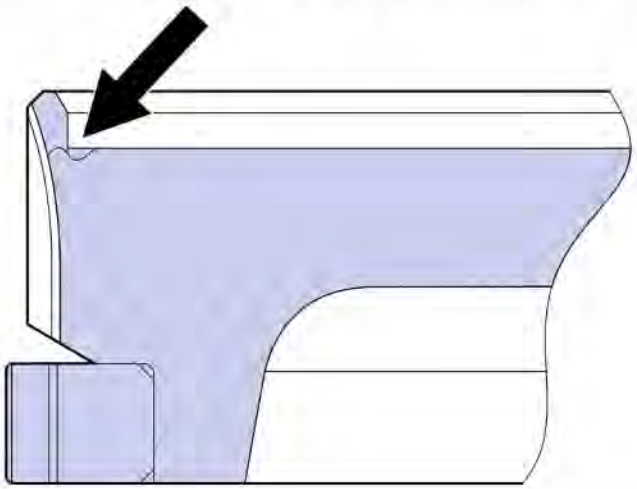
AMT Flywheel Dimension “A”	
Flywheel Dimension New	**Flywheel Dimension (Minimum Surface Thickness)**
59 ± 0.2 mm	57.7 mm (2.271 in)

(C) The radius around the outer diameter of the friction surface can be used as a rough reference of how much life remains in the flywheel. This groove is not a controlled depth and is for manufacturing purposes only. To be certain of the amount of life that remains in the flywheel, the flywheel should be measured as noted above if there is any uncertainty.



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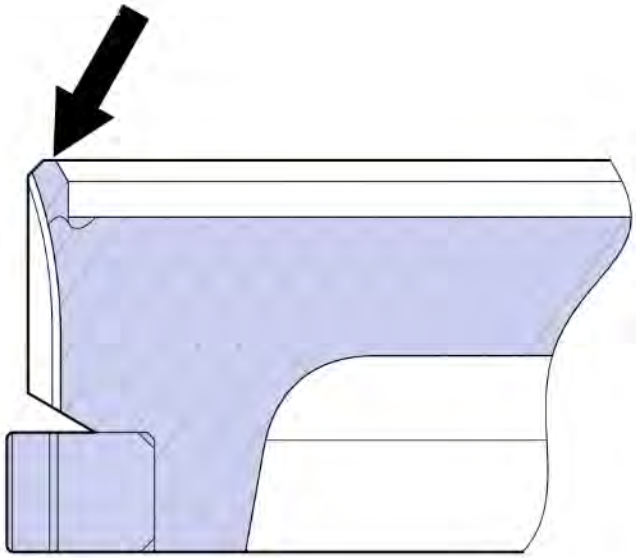
(D) Do not grind the outer flange of the flywheel. This flange will not interfere with the mounting of the clutch to the flywheel so this does not need to have the same amount of material removed like some other types of flywheels do.

(E) The flange inner diameter is critical to the location of the clutch cover plate. Care must be taken to not to machine this surface.



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