

ARCTIC CAT FRONT DIFF SIDE COVER KIT

INSTRUCTIONS AND PROCEDURES

These instructions cover:

ARC-3333-017-HD-KIT Gen 1 Front Diff Billet Side Cover Kit

ARC-3333-058-HD-KIT Gen 2 Front Diff Billet Side Cover Kit

There are (2) versions of the factory differential assemblies that will require a specific side cover kit. Make sure you verify what diff you have before ordering the sidecover kit.

- Differential part #2502-740 will have qty. (8) M8 Torx head bolts securing the sidecover to the diff housing, this will require Weddle part #ARC-3333-017-HD-KIT.

- Differential part #2502-756 will have qty. (6) M8, and qty. (2) M10 Torx head bolts securing the sidecover to the main housing, this will require Weddle part #ARC-3333-058-HD-KIT.

OVERVIEW

The Weddle Industries heavy duty billet sidecover is a direct replacement for the factory cast sidecover on the 2018+ Wildcat XX and Tracker XTR 1000 front differentials. The billet sidecover has been designed with tighter fitments to help strengthen the differential unit and extend the life of the R&P, as well as the bearings. Clearance has also been added to utilize higher grade Allen tool socket head cap bolts that are drilled for safety wire (included in kit), which can be torqued to a higher value to help retain the ring gear to the diff carrier which is a common failure point.

This billet sidecover kit is intended as a “bolt on” kit, but does not address the other issues that typically cause a failure of these differentials. The Weddle 4-spider gear super diff kit (ARC-3333-052-HD) is highly recommended in conjunction with this billet sidecover kit to address all of the common failure points in these differential assemblies.

INSTALLATION INSTRUCTIONS

These instructions are for installation of the Weddle billet sidecover, and supplied M8x20 Allen head ring gear bolts only. Refer to the factory service manual for further instruction when needed. All factory parts should be visually inspected for damage or wear, and replaced as needed. Weddle Industries has the majority of these parts available for sale on our website or with a phone order.

Due to the tighter fitments of the billet sidecover to the factory housings and bearings, patience and care will be required for assembly. Some items may need to be heated to help loosen the tolerances for easier installation.

- Remove the factory sidecover from the factory diff assembly. The ring shim for the left side carrier bearing will not be used with the Weddle billet sidecover.



- Remove the factory diff carrier/ring gear assembly from the main housing, and carefully place in a vice with soft jaws or folded rags over the vice jaws, being careful not to damage the bearing or locker mechanism splines. Remove the Torx head bolts holding the ring gear to the diff carrier.

- Use brake or carb cleaner to remove all oil and contaminants from the threads in the diff carrier and blow out with compressed air. Clean the supplied Allen head bolts with brake/carb cleaner to remove any oil and contaminants from the threads (new bolts are coated with a light layer of oil to prevent corrosion, this must be cleaned off prior to installation otherwise the Loctite will not harden).

- Install a serrated washer on each bolt, with the convex side of the washer towards the bolt head (concave side down). Apply a small drop of Red Loctite (272) to the M8x20 socket head bolts, and install bolts in clean ring gear holes.

- Torque ring gear bolts to 35 ft/lbs.



- (Optional) Install safety wire connecting (2) bolts to each other, with the wire pulling the bolts from the clockwise side of the rotation, which will prevent the bolts from coming loose.

- Coat the inner lip of the seal on the passenger side of the main housing with grease and re-install the differential carrier assembly back into the main housing. Take care when the output shaft passes through the inner lip of the seal on the passenger side of the differential.

For differential units with (8) M8 bolts around the diameter of the sidecover (Arctic Cat part # 2502-740): Install the o-ring into the groove of the sidecover and coat the o-ring with a light layer of grease.

For units with (6) M8 bolts, and (2) M10 bolts around the sidecover (Arctic Cat part #2502-756): Install the o-ring around the outside register, against the outer flange of the sidecover. Do not install into the groove. Apply a light layer of moly or bearing grease on the o-ring.

- To aid in installation of the billet sidecover, use a propane or butane torch to heat the main housing for 1-2 minutes. This will allow the housing to expand and allow the register of the sidecover to slip into place a bit easier. Use a plastic or rubber mallet to evenly tap the sidecover onto the diff carrier bearing.

- Apply blue Loctite (243) to the side cover bolts. Turn each bolt $\frac{1}{4}$ turn at a time to evenly "press" the sidecover into place. Torque to 18 ft/lbs.



NOTE: Make sure the o-ring does not slip into the groove in the sidecover if installing on the 2502-756 diff housing (with 2x M10 sidecover bolts).



- Install the supplied output seal, using a small coating of grease on the inner lip of the seal for lubrication. It is recommended to use seal retaining compound around the outer diameter of the seal. Install seal until flush with the outer surface of the sidecover.

Tech tip: Use a piece of pipe or round tubing that matches the outside diameter of the seal to push seal into place.

- Apply a small drop of blue Loctite (243) to the threads of the (3) M4 retainer screws with washer in the billet sidecover to help retain the seal.

FINAL CHECK

The completed diff assembly can be installed into the vehicle and checked for proper operation before axles and driveshafts are connected. Plug in the wire harness connector, key on the vehicle, and place the switch on the dash in the 4WD position. The input flange should be able to turn over the ring gear and output shafts by hand. The diff lock function can be checked by placing the dash switch to the "Lock" position, then trying to turn the output flanges opposite directions by hand, they should be locked and only able to rotate the same direction in the lock position.

Fill the diff with gear oil and complete the installation into the vehicle.

IF YOU HAVE ANY QUESTIONS

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