

Service Bulletin



Bulletin Nr.: 01-2014

Subject: Front gear case differential

Date: October 2014

Model / Model Year:

2008 and 2009

Chassis numbers:

- **4UF#####**

Rebuilding range: Within this Service Bulletin the front differential has to be changed on the Arctic Cat Thundercats mentioned above. Arctic Cat gives you the chance to increase the value of your Thundercat or the Thundercat of your costumers from MY 2009 to the current Standards of MY 2010.

Parts order:

1. Front differential gear ratio 3.1 - AC008-472
2. Front differential gear ratio 3.6 - AC008-474

Priority: Middle

As soon as possible

Procedure:

ATTENTION: Switch off the ignition before beginning with the Service Bulletin (Off Position) and disconnect the battery (see Service Manual Arctic Cat 2009, PN 2258-379, page 5-3) and the engine and exhaust pipe have to be cold (risk of getting burned).

Advise: Using the Arctic Cat Service Manual 2009 (p/n 2258-379) is essential for all the following working steps.

Demount:

1.) Lift the vehicle to allow removal of the front wheels. Make sure that the vehicle cannot overturn or move.

Remove the front wheels as described in the Service Manual 2009, p/n 2258-379, page 7-7, chapter "Wheels and Tires".

Removing the front differential is described in the Service Manual 2009, p/n 2258-379, on page 6-3, chapter "Removing Differential".

2.) Remove the oil drain screw (see Fig. 1 on page 2) from the front differential case and the fill-up plug. Make sure that the gear oil is disposed of as instructed by the environmental regulation.

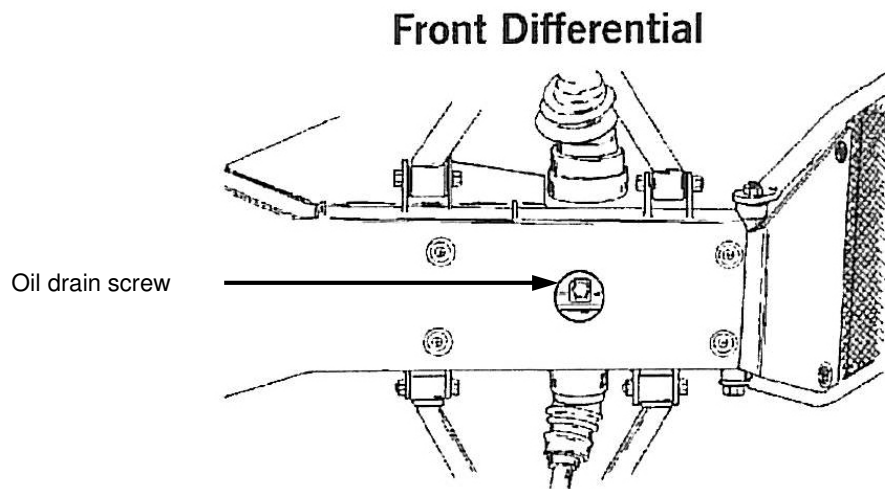


Fig. 1: oil drain screw front differential

- 3.) Use the Service Manual 2009, 2258-379, page 7-3, chapter "Front Arms" and the work specifications below for the following working steps.

Remove the cotter pins (see fig. 3 and 4 on page 4) from the front wheel hub left and right. Loosen the castle nuts.

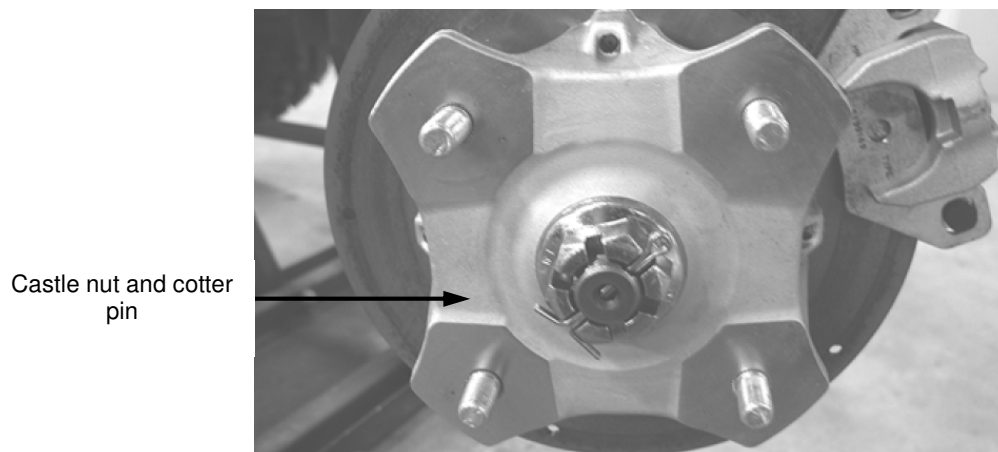


Fig. 2: castle nut with cotter pin

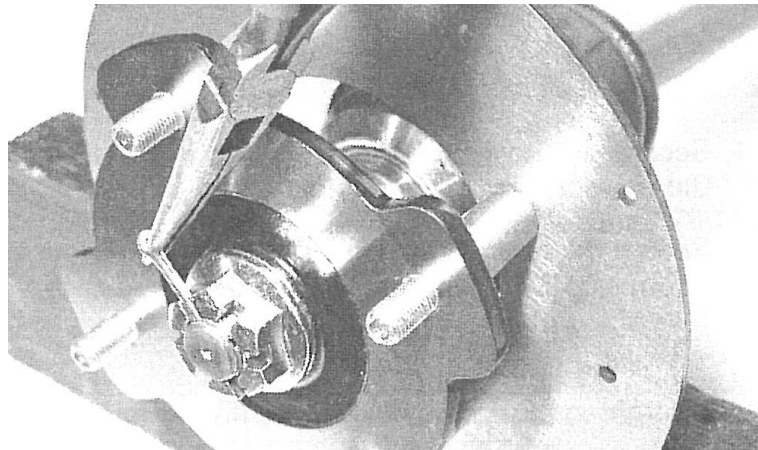


Fig. 3: Removing of cotter pin

Remove the brake callipers (see fig. 4 on page 4). Make sure that the brake hose is not cracked.

Attention:

You must support the brake calliper, do not let them hang on the brake hose. (Strain relief)

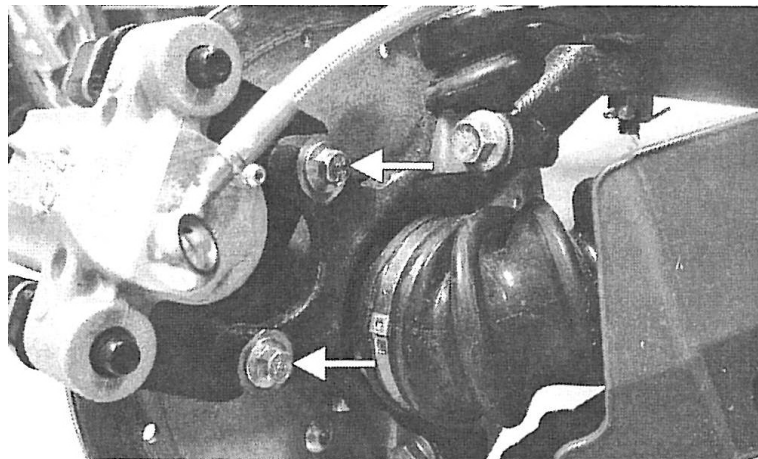


Fig. 4: Screwing of Brake Calliper

Remove the wheel hubs and the brake discs. Remove the cotter pins of the lock nuts for the tie rods. Loosen the castle nuts and swing the tie rods aside (Fig. 5 and 6 on page 5).

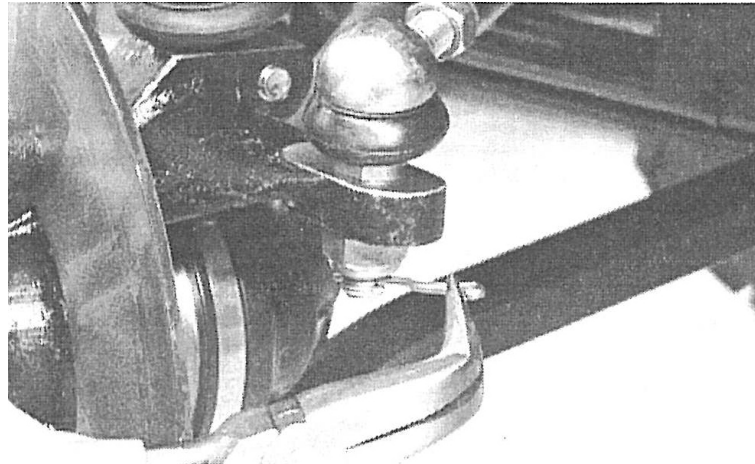


Fig. 5: Removing of cotter pins for tie rod

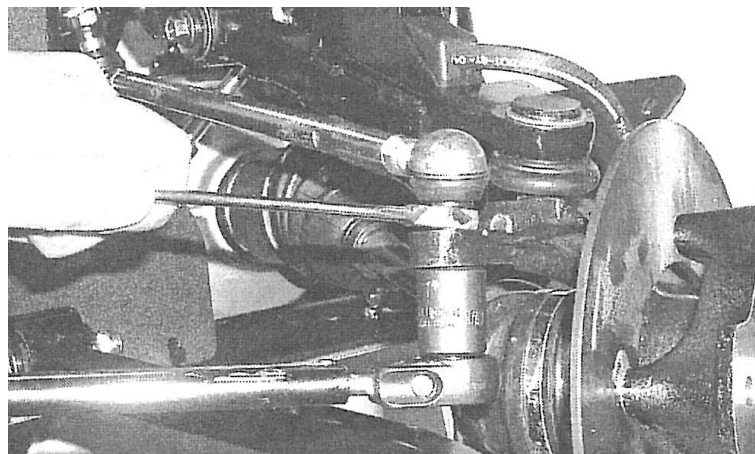


Fig. 6: Loosening of screws from tie rod

Remove the ball joint screwing from the knuckles. (see Fig. 7).

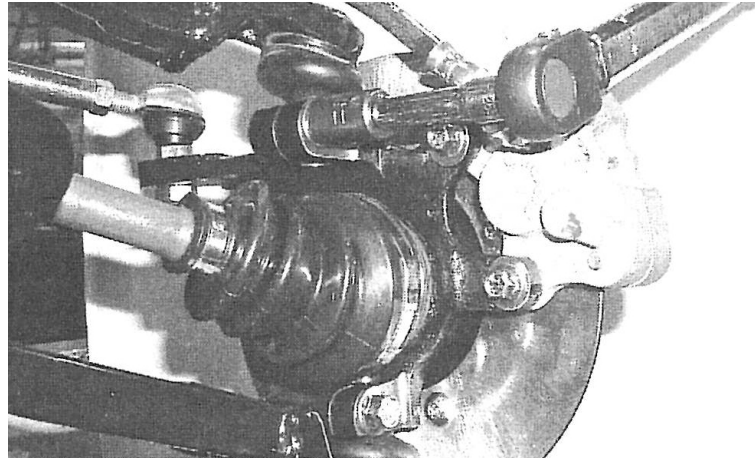


Fig. 7: Loosening the ball joint screwing

Swing the upper and lower A-Arm out of the knuckles. Remove the screws from the shock absorber on the upper knuckle. (see Service Manual 2009, 2258-379, page 7-2, chapter „Shock Absorber“).

Separate the knuckles from the front axle drive shaft. (see fig. 8). See Service Manual 2009, 2258-379, page 6-4, “Removing Differential“, chapter 10 - 13.

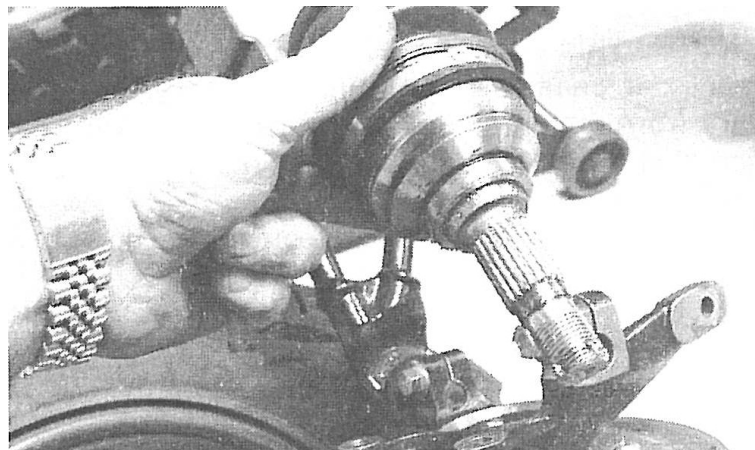


Fig. 8: Demounting Axle

Attention: Put the front axle drive shaft horizontally to the front differential. Protect the axle from falling down because a too high angle of the front axle drive shaft may lead to irreparable damages. Make sure that the upper and lower A-Arms don't fall down. Risk of injury and/or damage. Secure the loosened shock absorbers.

4.) Remove the fixings of the lower and upper A-Arms and demount them.

Attention: Two different types of axles must be indentify

1. Black marked drive axle
2. White marked drive axle

White marked can not removed with a special tool. To use a slide hammer can cause to damages

Advise: You need an Arctic Cat special tool for the following working step to remove blacked marked axles. "Slide Hammer" the p/n is 0444-225.

Remove the front axle drive shaft from the front axle case by using the special tool "Slide Hammer". (see fig. 9).



Fig. 9: Demounting the front axle drive shaft

Advise: Pay attention on the right position of the special tool. Using it in a wrong way may cause damage to the vehicle itself, the axle, the front differential case and the axle boot.

Advise: To remove white marked axles do not use the special tool Slide Hammer.



Fig. 9.1.: White marked axle

5.) Demount the 2WD / 4WD switch unit (see Service Manual 2009, p/n 2258-379, page 6-5, chapter 17 and following). Disconnect the connectors.

Remove the aeration of the front differential case.

Loosen and remove the holding screws from the front differential case. Make sure that the front differential case does not fall onto the lower crossbar.

Move the front differential case forwards towards the radiator assembly. You can now remove it sideways from the short axle drive shaft between engine and front differential.

Turn the front differential case by 90° (see fig. 10).

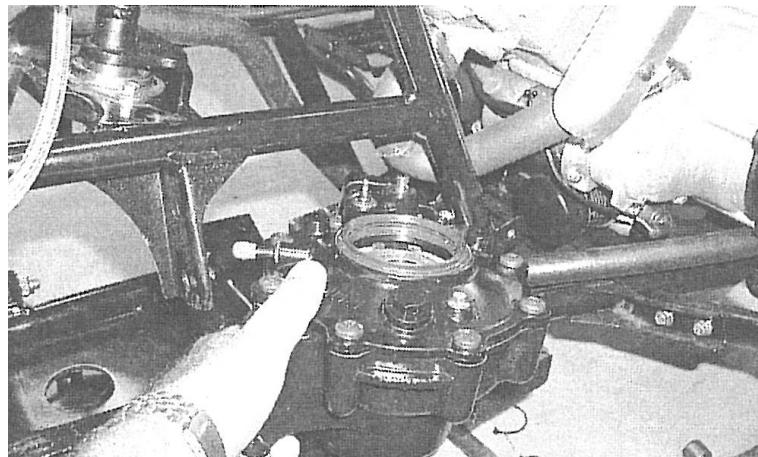


Fig. 10: Demounting Front Gear Case

- 6.) Replace the removed front differential (Front Gear Case ASSY) with the front differential from the Service Bulletin kit.

Advise: Use the Service Manual 2009, 2258-379, section 6, chapter "Disassembling Pinion Gear" and the work specifications below for the following working steps.

Using a T-40 trox wrench. remove the cap screws securing the differential cover. Account for an O-Ring (see fig. 11 and fig. 12).



Fig. 11: Open differential case

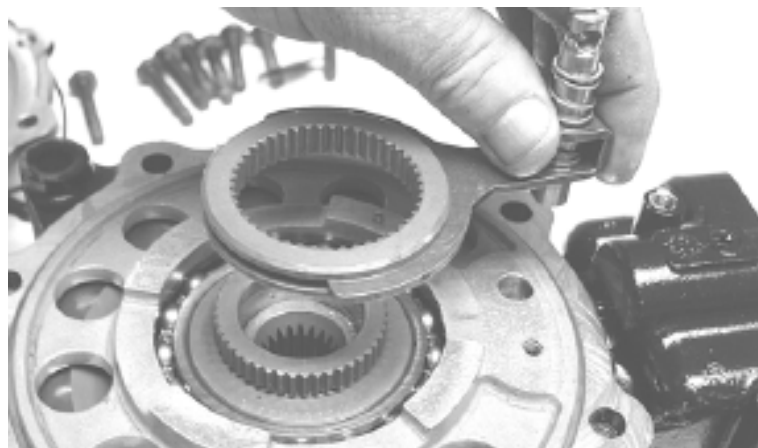


Fig. 12: Removing splined coupler

Remove the splined coupler, shifter fork, pin and spring of the differential look ASSY. Remove the left differential bearing flange ASSY and account for the shim

Note: Mark all shims with position and side.

Remove the differential from housing. Account for shim. Place the new Service Bulletin differential with correct shim in the housing.

Note: Changed front gear case differentials must be send back for warranty credit note.

7.) Start to mount the parts in reversed order.

For the correct shimming please follow the instruction chapter 6, "Shimming Procedure".

8.) Please use the torques from the Service Manual 2009, p/n 2258-379.

9.) Fill the front differential with the front differential oil supplied by Arctic Cat to the filling level (as required) after assembling (see Service Manual 2009, p/n 2258-379, pages 1-2, pages 2-10).

warning
Please only use original Arctic Cat spare parts/fixings for the assembling. Always use undamaged / not deformed securing pins for the securing screwing, which should be correct to the designated borehole and fitting length. For mounting the brake callipers use new screws and "Loctite" for securing them. Pay attention to the existence of screw securing means when using new screws.

Advise: Note the Service Bulletin in the service booklet of the ATV.

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Subject: Front Gear Case

Refund: After execution of this work, please send a warranty claim containing a working time of 153 minutes (ATVH1CT07 single cylinder and / or ATVH2CT07 for H2 engine) and the p/n of the conversion kit. Please submit a separate claim for each repaired vehicle.

ATTENTION: Only completely filled out warranty claims can be accepted.

If you do not send back the old parts, we won't accept the warranty claim.

Submit the warranty claim and the parts within 30 days after completion of the service bulletin to Arctic Cat. Warranty Claims which are submitted later will be rejected.

Advise
The dealer is responsible for assuring that the necessary service for all concerned ATVs is accomplished according to the instructions which are enclosed in this message. This service must be accomplished before handing out a concerned ATV to a customer.