

# KTM TECHNICAL BULLETIN TB 0818

JUNE 13 » 2008

**Subject: Starter Gear Maintenance Instructions** 

Affected Models: All 2-Stroke Models Equipped with an Electric Starter

### Information:

» It's possible that moisture and dirt can enter the starter gear casing of an electric start 2-stroke model when riding in extreme conditions or when cleaning the motorcycle with a pressure washer. This contamination can cause the bushings and gears to wear prematurely.

To ensure the full performance of the starting gear, we recommend that the following maintenance procedure is performed every 20 hours or at a minimum of once a year:

- Dismount the ignition cover and take off the intermediate shaft and the bendix.
- Clean all parts, especially the gears and bushings.
- Check the parts for wear and play, replace if necessary.
- Grease all pivot points and gears with a long term grease like KTM grease (p.n. T625) or Molykote® 33 grease. The T625 KTM grease and Molykote® 33 might already be available in your workshop as it is included in the WP special tool kit.
- On the bendix, **only** apply grease on the bearing stud.
- Additionally, clean and preserve the stator and the flywheel.
- Mount the bendix and the intermediate shaft into the ignition cover. Check the play between the intermediate shaft and the starter pinion. If necessary, adjust the play with the shims (p.n. 48600213) as mentioned in the repair manual.

The process for checking the electric starter motor for wear and adjusting the play can be found on the following pages which were taken from chapter 5-16 of the 250/300 Repair Manual 3.206.051.

- Use a new gasket (p.n. 55130041100) for the outer ignition cover. Assemble the bendix and the ignition cover.
- Perform an operation test to make sure the e-start assembly functions properly.

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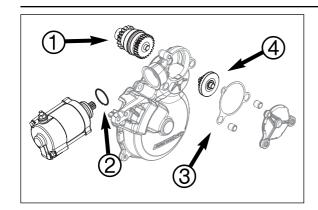
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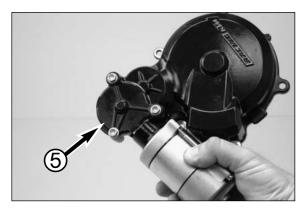
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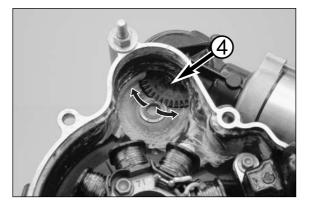
## Checking the electric starter motor for wear

- Check Bendix **1** for smooth operation and signs of wear.
- Check the sprocket of the electric starter for wear and radial clearance.
- Replace O-ring **2** of the electric starter.
- Replace gasket 3 .
- Check starter idler gear 4 for smooth operation and wear, check that the bearing bushings are seated firmly.

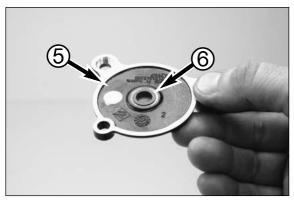


## Electric starter motor - checking for and adjusting play

- Mount the electric starter and the starter idler gear. Mount the tighten cover  ${\bf \Theta}$ .



Move starter idler gear 4 back and forth in the direction of rotation, the maximum play may not exceed half the width of a tooth.



- If play is larger, cover **6** must be removed and as many shims **6** with a thickness of 0.10 mm as necessary must be added to eliminate all play. Then remove one shim again.
- Check the play again; the maximum play may not exceed more than half of the width of a tooth.

|  | PERIODIC MAINTENANCE SCHEDULE 2008/09  250/300 XC/XC-W/EXC/EXC SIX DAYS 250/300 EXC-E/EXC-E SIX DAYS |                  |                               |                |                | YS                      |
|--|--|------------------|-------------------------------|----------------|----------------|-------------------------|
| A CLEAN MOTORCYCLE CAN BE CHECKED MORE QUICKLY WHICH SAVES MONEY |  | Before each race | 1st service<br>after 10 hours | every 20 hours | every 40 hours | at least once<br>a year |
|  | Check gear box oil level   |                  |                               | •              |                |                         |
|  | Change gear box oil  | •                | •                             |                | •              | •                       |
|  | Check spark plugs, adjust distance between electrodes  |                  | •                             | •              |                |                         |
| ¥  | Renew spark plugs  | •                |                               |                | •              |                         |
| ENGINE   | Clean the spark-plug connector and check for a tight fit   | •                |                               | •              | •              |                         |
| ш  | Check the screws on the kick starter and shift lever for a tight fit                                 | •                |                               | •              | •              |                         |
|  | Clean and lubricate the starter drive and the bearing bush of the starter drive                      |                  |                               | •              | •              | •                       |
|  | Check the starter drive for play and adjust the play if necessary; check that the bearing bushes are |                  |                               | _              |                |                         |
|  | firmly seated.   |                  |                               |                |                |                         |
| CARBURETOR   | Check the carburetor connection boot and intake flange for cracks or leaks                           | •                |                               |                | •              | •                       |
|  | Check idle speed setting   | •                | •                             |                | •              | •                       |
| SA   | Check that vent hoses are not damaged or bent  | •                | •                             |                | •              | •                       |
|  | Check cooling system for leaks, check quantity of antifreeze   | •                | •                             |                | •              | •                       |
|  | Check exhaust system for leaks and fitment   | •                |                               | •              | •              |                         |
| 2  | Check cables for damage, smooth operation, bends; adjust and lubricate                               | •                | •                             |                | •              |                         |
| AR   | Check the fluid level in the master cylinder of the hydraulic clutch                                 | •                | •                             | •              | •              |                         |
| ADD-ON-PARTS   | Clean air filter and filter box  | •                | •                             | •              | •              | •                       |
|  | Check electric wires for damage and bends  | •                |                               |                | •              |                         |
| ∣₹   | Check headlamp setting   | •                |                               |                | •              |                         |
|  | Check function of electric systems (low beam, high beam, break light, indicator,                     | •                | •                             |                | •              |                         |
|  | indicator lamps, speedometer illumination, horn, emergency OFF switch or button                      |                  |                               |                |                |                         |
|  | Check brake fluid level, lining thickness, brake lining  | •                | •                             |                | •              |                         |
| BRAKES   | Check brake lines for damage and leaks   | •                | •                             |                | •              |                         |
| BRA  | Check/adjust the function, smooth operation and free travel of the hand/foot brake lever             | •                | •                             |                | •              |                         |
|  | Check the screws and guide bolts on the brake system for a tight fit                                 | •                | •                             |                | •              |                         |
|  | Check shock absorber and fork for leaks and function   | •                | •                             | •              | •              |                         |
|  | Clean dust bellows   | •                |                               | •              | •              |                         |
| Si   | Bleed fork legs  | •                |                               | •              | •              |                         |
| CHASSIS  | Check swing arm bearings   | •                |                               |                | •              |                         |
| 풍  | Check/adjust steering head bearings  | •                | •                             |                | •              |                         |
|  | Check tightness of all chassis screws (triple clamps, fork leg axle passage                          | •                | •                             |                | •              |                         |
|  | axle nuts and screws, swing arm bearings, shock absorber)  |                  |                               |                |                |                         |
|  | Check spoke tension and rim joint  | •                | •                             | •              | •              |                         |
| [S   | Check tires and air pressure   | •                | •                             | •              | •              |                         |
| WHEELS   | Check chain, rear sprockets and chain guides for wear, fitment and tension                           | •                | •                             | •              | •              |                         |
| ∣₹   | Clean and lubricate chain, clean and grease the adjusting screws on the chain tensioner              | •                | •                             | •              | •              |                         |
|  | Check clearance of wheel bearings  | •                | •                             |                | •              |                         |

The kilometer reading for inspection intervals should not exceed 5 hours.

Maintenance work performed by your authorized KTM workshop is not a substitute for care and maintenance by the driver!