TECHNICAL BULLETIN

No: LA-211-001
Issue: **2**
Date: 20 Apr 2006

CIRCULATE: TO	Service Mgr	Warranty	Workshop	Body Shop	Parts
	X	X	X	X	X

CHANGES MADE FOR ISSUE "2" ARE HIGHLIGHTED WITH GREY BACKGROUND

SECTION: 211-00

Steering Wheel Alignment

AFFECTED VEHICLE RANGE:

Land Rover LR3 (LA) **VIN: ALL**

CONDITION SUMMARY:

STEERING WHEEL ALIGNMENT DIAGNOSIS

This bulletin is to provide diagnostic clarification for steering wheel alignment during the initial vehicle preparation inspection road test.

Situation: Steering wheel alignment is set during build and has a tolerance of ±3° as nominal. Road surfaces with excessive camber variation, road wheel curb strikes, or other accidental damage can lead to mis-diagnosis of steering wheel misalignment.

Action: The process detailed below provides information to prevent unnecessary adjustments of the steering wheel alignment.

PARTS:

No parts required. Information purposes only.

WARRANTY:

△ **NOTE: The information in this bulletin is provided for diagnosis, evaluation and EPQR reporting of steering wheel alignment during initial vehicle preparation activities.**

Normal warranty policy and procedures apply.

REPAIR PROCEDURE

EVALUATION OF STEERING WHEEL ALIGNMENT

△ **NOTE: GTR lookup sequence is as follows:**
GTR Home > NAS > Service Information/LA - LR3/2006/Workshop Manuals > Discovery 3 / LR3 2005 Workshop Manual > Bookmark "Chassis/Suspension/204-00: Suspension System – General Information/General Procedures" Link "Four-Wheel Alignment (57.65.04)"

1. For vehicles with air suspension, refer to GTR section 204-05: Vehicle Dynamic Suspension, Ride Height Adjustments (60.90.03) and ensure vehicle ride height is set to nominal specifications.
2. Refer to GTR section 204-00: Four-Wheel Alignment (57.65.04) and ensure vehicle geometry is set to specification.

△ **NOTE: Extreme care must be taken to ensure the influence of road camber does not adversely influence the perceived steering wheel alignment. If feasible, check in both directions of the road used during the assessment.**

3. Assess the steering wheel alignment for level spokes, when steering straight ahead on a level surface.
4. If the steering wheel alignment error is less than ±3°, no further action is required.

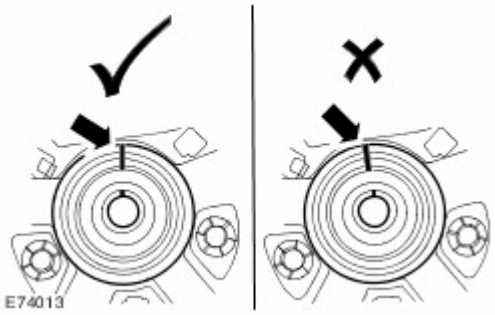
ADJUSTMENT OF STEERING WHEEL ALIGNMENT

WARNING: The safety precautions detailed in the Workshop Manual relating to supplementary restraint systems (SRS) must be adhered to.

NOTE: GTR lookup sequence is as follows: GTR Home > NAS > Service Information/LA. - LR3/2006 > Workshop Manuals > Discovery 3 / LR3 2005 Workshop Manual > Bookmark "Body and Paint/Body and Paint/501-20B: Supplemental Restraint System" Link "Driver Air Bag Module (76.74.01)"

1. If the error is greater than ±3°, refer to GTR Section 76.74.01 and remove the air bag assembly.
2. Inspect the steering wheel alignment marks. (Figure 1)

Figure 1



NOTE: Where possible, photograph the alignment mark error for submission with the EPQR.

NOTE: GTR lookup sequence is as follows: GTR Home > NAS > Service Information/LA - LR3/2006 > Workshop Manuals > Discovery 3 / LR3 2005 Workshop Manual > Bookmark "Chassis/Steering System/211-04: Steering Column" Link "Steering Wheel (57.61.01)."

3. If the marks are not aligned perform the following:
   - Refer to GTR section 57.61.01 and remove the steering wheel.
   - Digitally photograph the alignment mark error.
   - Realign the marks.
   - Install the steering wheel.
4. If the marks are correctly aligned perform the following:
   - Check the vehicle for evidence of damage that may have caused front wheel misalignment.
   - Refer to GTR section 57.65.04 and reset the steering geometry to achieve a steering wheel alignment within ±3° on the road test.
5. Assess the steering wheel alignment for level spokes, when driving straight ahead on a level surface.
6. When the alignment is correct, raise an Electronic Product Quality Report (EPQR):
   - Provide photographic evidence of the alignment mark error if present.
   - Indicate the extent of the original steering wheel misalignment using the letter ID that corresponds most accurately to the misalignment. (Figure 2)
   - Indicate the corrective action taken.
7. Calibrate the steering angle sensor using T4.

Figure 2