



## SUBJECT

**Active Front Steering, Fault Code 6141**

## MODEL

E60 (5 Series) and E63/E64 (6 Series) equipped with Option Code SA217 Active Front Steering (AFS) and produced up to 8/04.

## SITUATION

Customer complains of illuminated AFS warning lamp when driving the vehicle. AFS control module stores fault code 6141 "Engine Dynamics Monitoring".

## CAUSE

1. Leaks in the steering system (pump, lines, etc.).
2. Internal steering gear resistance.

## CORRECTION

**In case of a customer complaint**, check for any steering system leakages and replace the steering gear only if it is necessary. Program and code the vehicle only if the steering gear has to be replaced.

## PROCEDURE

1. If there is no hydraulic steering assist, check for any system leakages and replace the leaking part as necessary. It is not necessary to replace the steering gear in this case.
2. If there is a hydraulic steering assist and there is no steering system leakage, replace the steering gear. Then, program and code the vehicle using CIP V19.1 or a more recent version. Refer to [B09 05 01](#) (Coding, Individualization and Programming), Procedure B.

## PARTS INFORMATION

The following parts are required only if it is necessary to replace the steering gear.

Part Number	Description	Quantity
32 10 6 770 160	Steering Gear	1
32 13 6 769 390	ASA Bolt	4
33 32 1 092 382	Self-locking Collar Nut	3
32 41 1 093 730	Banjo Bolt with Check Valve	1
32 41 1 093 596	Sealing Ring 14x20 - CUSN	2

32 41 1 093 597	Sealing Ring 16x22 - CUSN	4
82 11 1 468 041	Pentosin Fluid CHF 11S	2

Always refer to Electronics Parts Catalog (EPC) for the latest parts information.

#### WARRANTY INFORMATION

Covered under the terms of the BMW New Vehicle Limited Warranty.

**Defect Code**      **32 13 91 34  
00**

Labor Operation: 00 55 479      Main Work: Read/clear fault code memory, replace steering gear, check wheel alignment, program and code vehicle.

Labor Allowance: 76 FRU      E60 525i and 530i; and E63 645i.

Labor Allowance: 77 FRU      E60 545i.

Labor Allowance: 82 FRU      E64 645i.

Labor Operation: 00 55 480      Main Work: Read/clear fault code memory, replace steering gear, check wheel alignment, program and code vehicle (including CAS).

Labor Allowance: 77 FRU      E60 525i and 530i; and E63 645i.

Labor Allowance: 78 FRU      E60 545i.

Labor Allowance: 83 FRU      E64 645i.

Labor Operation: +00 55 970      Associated Work: Read/clear fault code memory, replace steering gear, check wheel alignment, program and code vehicle.

Labor Allowance: 74 FRU      E60 525i and 530i.

Labor Allowance:	75 FRU	E60 545i and E63 645i.
Labor Allowance:	81 FRU	E64 645i.
Labor Operation:	+00 55 971	Associated Work: Read/clear fault code memory, replace steering gear, check wheel alignment, program and code vehicle (including CAS).
Labor Allowance:	75 FRU	E60 525i and 530i.
Labor Allowance:	76 FRU	E60 545i and E63 645i.
Labor Allowance:	82 FRU	E64 645i.

Note: The following explanations will spell out the correct use of the work times.

**Main Work:** Use this labor operation number when the only repair performed is the listed warranty repair.

OR

**+Associated Work:** Use this labor operation number when other repairs or services are performed along with the listed warranty repair. Under no circumstances should both labor operation numbers be claimed. Attempts to claim both times will result in an unnecessary delay in claim processing and payment.

If a specified CIP Measures Plan requires for the programming to be repeated and/or control module(s) be replaced, please print the Measures Plan and attach it to the Repair Order. Also write in the comment section of warranty claim that the work is required by CIP Measure Plan.

The required Labor Operation and Labor Allowance may be found in the KSD. Claim can be submitted by using the above defect code.