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## Product and Measures Management Aftersales

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Product and Measures Management Aftersales (PuMA)

OBJECTIVES

After completion of this module you will be able to:

• Understand the process that enables PuMA to be successful

• Understand the information expected in a PuMA case

• Review and understand what makes a “good” PuMA case

• Understand the different documents that can be generated from PuMA

• Understand the importance of the FASTA data transfer with respect to PuMA
**Introduction**

Product and Measures Management Aftersales (PuMA) is the preferred method of communicating service issues that may be encountered at the centers. As of February 2005 PuMA is the only method of first contact with the technical hotline department.

There are four major components of information utilized by PuMA. These four components are:

**QC Info**

Quality Control Information report (Pink Sheet) is created by the technician when informing BMWNA of a quality issue. Information included in these reports is used by the engineering department to identify and resolve product issues. Create a QC Info when a response through PuMA is not expected.

**Case**

Cases are created by the technician and forwarded to the Hotline. The Hotline responds to the Case with a recommendation. The Case will appear in your Mailbox with a green diamond which alerts you to the response. Only users at the center where the Case originated will be able to see and read the Case and the Hotline’s response. Cases expire after 90 days.
This module is not meant to be an owner’s manual for PuMA but rather explain the process behind PuMA. Technicians should already familiar with the interface used in PuMA and how to submit PuMA cases.

**Procedure**

PuMA was established to assist center technicians who are faced with difficult to diagnose technical problems. In order to provide proper service to all centers, the following points must be adhered to before submitting a PuMA case:

- The technician assigned to the vehicle must have training directly related to the vehicle or system.

- All available resources must be reviewed; these include but are not limited to: Service Information Bulletins, Service Measures, TIS, DCS messages, Service Round Table, Training manuals, Repair Manual Instructions, DIS Functional Descriptions. Refer to attached Technical Protocol for more details.

- Required checks must be performed. For example, diagnostic test plans, verifying circuit integrity, power and grounds, and reviewing vehicle service history. Refer to attached Technical Protocol for more details.

- The Shop Foreman / Team Leader must be consulted.

- Service Managers, Shop Foremen and/or Team Leaders are the only BMW center personnel who can submit regular PuMA cases. Note: All technicians who have completed the required training for the vehicle or system in question can still submit TeileClearing cases in PuMA. Please refer to **SI B00 03 07** (PuMA Enhancements for TeileClearing Process).

- The vehicle must be in the shop. In order to aid the Regional Technical Engineer in diagnosis, your diagnostic tester must have transmitted FASTA data indicating that all relevant test modules have been completed.

**When not to submit a PuMA case:**

- A PuMA case should not be submitted for Warranty approval except for Enhanced Technical Support (refer to **SI B00 03 06**) or other specific issues noted in DCS messages or Service Information Bulletins.

- A PuMA case is not authorization for a warranty repair or work time, nor is it needed to validate test module results. Contact your Market Team where required by the Warranty Policies & Procedures Manual.
• For Parts-related problems and information, the Parts Consultant Group should be contacted by your Parts department at (800) 272-0202

• For radio security codes. You can obtain the security codes through DCS or faxing in your request to 201 930 8424 as per SI B65 05 99.

• If you wish to inform us of a quality issue, and no technical assistance is required, please utilize PuMA to submit a QC Info (Pink Sheet).

Creating a PuMA Case

After exhausting all available resources, please ensure that all cases contain the following information before submitting a case:

• A full detailed description of the complaint and whether or not the complaint has been verified.

• A detailed description of the operating conditions, environment, road conditions, anything related to the complaint or conditions under which it can be duplicated. The details must sufficient to insure that the person reading your case will be able to understand the situation and or duplicate it if necessary.

• Identify any work previously performed during each service visit, for the same complaint.

• Results of tests performed, i.e. fuel pressure, fuel mixture adaptations, resistance values. Always provide specific readings, statements such as “in spec” and “good” are not adequate.

• When creating a case regarding Automatic Transmissions, please include “GM” or “ZF” in the subject line and the serial number of the installed transmission, in the “Work Performed” field of your case. Also include the transmission fluid level and condition. If the problem concerns shift characteristics, include the specific shift (i.e. 1-2 or 5-4) that is causing the complaint.

• Where fault codes are stored, include the name of the module concerned in “problem description” and the actual fault codes in the “fault code” box. Use Capital letters only.

• When a fuse is affected/blown please include the fuse number as a fault code. Use the format capital F###. As an example, if fuse 55 is blown please include this fault as F55 in the "fault code" box (see illustrations FC).
Note: PuMA cases not fulfilling the above mentioned rules will be rejected and returned without processing. Faxed-in requests will no longer be processed.

The response will be shown by a green diamond next to the case in your PuMA inbox. If you resubmit your case for any reason, your case will be given a new time stamp. As a result, your response may be delayed because cases are processed on a first-in, first-out basis. When the vehicle complaint is corrected, update your case with detailed results.
URGENT PuMA CASE

Only shop foremen or service managers may submit "Urgent" cases. In the event of a critical issue, submit a PuMA case and mark it as "Urgent". Then call your Regional Technical Engineer. The RTE will provide technical support via phone and then update the PuMA case at the next opportunity.

This rapid response is only possible under the following conditions:

- Applies only to critical cases requiring immediate response.
- A direct callback number (such as a cellular phone) is provided in the "Phone Number" field.
- The reason the case is urgent is specified in the "Customer Complaint" field.
- Occurs during BMW of North America, LLC business days.
Construction Groups

Below you will find a list of construction groups. Please use this list to select the proper "Area" when creating your case.

Drivetrain (Area Selection: Powertrain)

11 Engine
12 Engine Electrical including DME, starting and charging systems
(For defect categorization of cruise control issues, use 6571.)
13 Fuel Systems
16 Fuel Supply Systems including tank senders
17 Cooling Systems
18 Exhaust Systems
21 Clutch
22 Engine and Transmission Mounts
23 Manual Transmission including SMG
24 Automatic Transmission including EGS and AGS
25 Gear Shift Mechanism
26 Drive Shaft
27 Intermediate and Special Transmission
31 Front Differential and Output Shafts
33 Rear Axle Differential and Output Shafts
71 Tools and Accessories (Engine-Chassis)
Electrical System (Area Selection: Electrics/Electronics)

09 Coding and Car Key Memory
61 General Electrical Systems including EWS, Central Locking and Power Windows
62 Instruments
63 Lights
64 Heating and A/C
65 Audio, Navigation, Monitors, Alarms, SRS
66 Distance Systems, Cruise Control, Remote Control
72 Safety Belts and Accessories (Body)
84 Communication Systems

Chassis (Area Selection: Chassis and Suspension)

31 Front Axle
32 Steering and Wheel Alignment including Servotronic and steering column
33 Rear Axle excluding differential and output shafts
34 Brakes and Stability Control Systems including ABS, ASC+T, DSC and DTC
35 Pedals
36 Wheels and Tires including flat tire monitoring system
37 Special Suspension Systems such as EDC and EHC
71 Tools and Accessories (Engine-Chassis)

Body (Area Selection: Body and Trim)

41 Body
51 Body Equipment including mirrors and doors
52 Seats including fitted electrical components
54 Special Roofs including sunroof and convertible top with fitted electrical components
97 Corrosion Protection
99 Paint Work
General

06 Service Roundtable

Note: Laminated cards reflecting the technical groups and their subjects was sent out free of charge to all centers to the attention of the BMW Service Manager. Additional copies may be ordered under SD92-201 through BMW TIS website as per SI B10 02 02.

For additional information regarding BMW Group Technical Support please refer to bulletin SI B00 04 02.
Customer Complaint and Vehicle are obtained

Is Technician qualified to work on complaint vehicle?

NO
Assign vehicle to qualified Technician

YES
Customer Complaint is verified

Review all information pertaining to complaint

Faults are Stored?

NO
Check Fault Memory

YES
Evaluate stored faults

Perform related test modules

Test modules identified problem?

NO

YES

Review all available resources to identify possible cause and correction of complaint!
- DCS Messages, Open Campaigns
- Service Round Table/ Bonnet, Boot & Wings
- Service Information Bulletins/Measures
- ETM's
- Technical Reference Information, Service Technology Bulletin
- Prior repair history
- Training materials
Note: Evaluate condition of the vehicle looking for recent installation of aftermarket accessories which may be the cause of the current complaint

Complaint cannot be resolved!

Consult with Master Tech, Team Leader and/or Shop Foreman!

Possible Resolution
Upon further evaluation and consulting the problem can be resolved?

- Submit a PuMA case containing all details including work performed, test module results, readings, fault codes.
- Review recommendation provided by Technical Hotline. If there are questions regarding the recommendation provided contact your Team Leader or Shop Foreman!
- Implement the recommended solution and verify the repair by attempting to duplicate the original complaint.

Was PuMA case submitted?

- Yes: Update PuMA case with information regarding success of repair.
- No: Was repair successful?

- Yes: Contact Field Service Engineer, especially if multiple repair attempts have been performed.
- No: Release vehicle to customer.
## Case 1

**Case additions**

<table>
<thead>
<tr>
<th>Case no.</th>
<th>1234567</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td>X5 3.0 LOW OIL LIGHT ON</td>
</tr>
<tr>
<td>Status date</td>
<td>01/02/05</td>
</tr>
<tr>
<td>Status</td>
<td>In process by tech. Office</td>
</tr>
<tr>
<td>Date created</td>
<td>01/01/05</td>
</tr>
<tr>
<td>Dealer</td>
<td>123456, BMW of Place</td>
</tr>
<tr>
<td>Organization</td>
<td>US, CAR</td>
</tr>
<tr>
<td>Reporter</td>
<td>Technician Case 1</td>
</tr>
<tr>
<td>Phone no. / Availability (from/to)</td>
<td>5551234567</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>VIN no. (last 7 digits)</th>
<th>AB12345</th>
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</thead>
<tbody>
<tr>
<td>Vehicle identification no.</td>
<td>1ABCD123E4FG56789</td>
</tr>
<tr>
<td>E series</td>
<td>E53</td>
</tr>
<tr>
<td>Engine</td>
<td>M54</td>
</tr>
<tr>
<td>Model</td>
<td>X5 3.0I</td>
</tr>
<tr>
<td>Production date</td>
<td>12/4/02</td>
</tr>
<tr>
<td>First registration</td>
<td>10/6/03</td>
</tr>
<tr>
<td>Country version</td>
<td>USA</td>
</tr>
<tr>
<td>Body</td>
<td>GEFZG</td>
</tr>
<tr>
<td>Gearbox</td>
<td>AUT</td>
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<tr>
<td>Gearbox number</td>
<td>0752172RXU</td>
</tr>
<tr>
<td>Mileage</td>
<td>24208 mls</td>
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<td>Workshop visits</td>
<td>2</td>
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## Fault

<table>
<thead>
<tr>
<th>Fault location</th>
<th>Drive, Engine</th>
</tr>
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<tbody>
<tr>
<td>Nature of fault</td>
<td>Fails to operate, Switch-off</td>
</tr>
<tr>
<td>Condition</td>
<td>Engine operation, Engine off</td>
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</table>

## Defect

**Main group**
12 Engine Electrical System

**Subgroup**
61 Oil pressure, oil temperature, oil level indicator

**Location**
00 Thermal oil level sensor (TOENS)

<table>
<thead>
<tr>
<th>Defect Code</th>
<th>1261001400</th>
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<tbody>
<tr>
<td>Defect text</td>
<td>Thermal oil level sensor (TOENS) occasional malfunction</td>
</tr>
<tr>
<td>Module</td>
<td>40-44</td>
</tr>
<tr>
<td>Area</td>
<td>Electrics/Electronics</td>
</tr>
<tr>
<td>Fault code</td>
<td></td>
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</table>

**Measure performed**
# Case 1 (continued)

<table>
<thead>
<tr>
<th>Measure no.</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Customer complaint (in customer's own words)**
CHECK ENG OIL LEVEL MESSAGE COMES ON WHEN TURNING OFF CAR

**Workshop fault description and presumed cause**
INCORRECT SIGNAL FROM OIL LEVEL SENSOR. PERFORMED SHORT TEST NO FAULTS IN DME

**Work performed**
REPLACED OIL LEVEL SENSOR

<table>
<thead>
<tr>
<th>Work performed effective</th>
<th>Tester diagnosis performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Urgency**
Reply requested

**Released Measure**

<table>
<thead>
<tr>
<th>Measure no.</th>
<th>Subject</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Assigned report**
7654321

**Subject**
Technical - Unjustified Case

**Previous recommendations/queries/additional information**
Additional information 01/02/05 9:44 AM EST Technical Hotline Specialist
This is covered in SI B 11 07 03.

**New Additional information**

**Vehicle return**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>123456, BMW of Place</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tech. Office ref. case</td>
<td>Ref. case AG</td>
<td>Keep defective part</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**Internal note**

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