

## Grob (Germany)

| Status | Subject | Detail | Reference information | TNS |
|--------|---------|--------|-----------------------|-----|
|--------|---------|--------|-----------------------|-----|

**Contact:** UK Agent Soaring Oxford 01636 525318 (Technical, Tim Dews, Airborne Composites 01985 840981)

LBA & EASA Airworthiness Directives

[http://www.lba.de/cln\\_001/nn\\_57338/EN/CertificationAirworthiness/ADs/ADs\\_node.html\\_nnn=true](http://www.lba.de/cln_001/nn_57338/EN/CertificationAirworthiness/ADs/ADs_node.html_nnn=true)

<http://ad.easa.europa.eu/>

Grob G102 and G104 Astir AD's have been reformatted. For copies Service Bulletins please refer to Grob web site for download or contact Soaring Oxford.

<http://www.grob-aerospace.net/index.php?id=371>

### G102 Astir CS

|   |                  |   |                          |       |
|---|------------------|---|--------------------------|-------|
| M | Towing equipment | Reinforcement of tow hook attachment s/n 1001 - 1175                                      | AD 76-226, SB 102-3      | 08/76 |
| M | Controls         | Bolt security s/n 1001 – 1234, 1300 – 1315  | AD 76-273, SB 102-4      | 08/76 |
| M | Tow release      | Pulley bearings and cable s/n 1070 – 1199, 1300 – 1315                                    | AD 77-235, SB 102-6      | 11/77 |
| M | Controls         | Aileron stops s/n 1001 – 1536   | AD 77-255, SB 102-7      | 09/77 |
| M | Controls         | Rudder control lever s/n 1180 – 1536, 1613 – 1679, 2001 – 2032                            | AD 78-30, SB 102-8       | 03/78 |
| M | Fuselage         | Insp cover safety device s/n 1029 on, 1601 on, 2001 on                                    | AD 80-96, SB 306-13      | 06/80 |
| M | Controls         | Hotellier connections change s/n 1001 on, 1601 on, 2001 on                                | AD 81-125, SB 306-16     |       |
| M | Tail plane       | Replace retention ball s/n 1001 on  | AD 81-126, SB 306-17     | 09/81 |
| M | Service life     | Increase of life s/n 1001 on, 1601 on, 2001 on  | AD 81-267, SB 306-18     |       |
| M | Controls         | Air brake lever change s/n 1001 – 1536, 1601 – 1844, 2001 – 2248, 5001 – 5061             | AD 85-98, SB 306-26      | 06/85 |
| M | Controls         | Inspection of elevator hinges s/n 1001 – 1536, 1601 – 1844, 2001 – 2248, 5001 on, 5501 on | AD 89-209/2, SB 306-27/1 | 08/91 |
| M | Structure        | Inspection & replacement of spar spigot s/n ALL   | AD 91-5/2, SB 306-29     | 08/91 |
| M | Service life     | Increase of life s/n ALL  | AD 93-41, SB 306-30/2    | 06/96 |
| M | Controls         | Inspection of air brake stops s/n ALL   | AD 92-356, SB 306-31     | 12/92 |

## Grob (Germany)

| Status | Subject                         | Detail   | Reference information               | TNS    |
|--------|---------------------------------|--|-------------------------------------|--------|
| M      | Controls                        | Exchange of elevator lever s/n 1001 – 1536, 1601 – 1844, 2001 – 2248 | AD 94-317/2, SB 306-33              | 06/95  |
| M      | Tail plane                      | Inspection of vertical stab attachment s/n 1001 – 1536               | AD 2006-0150 (2004-168), MSB 306-38 | 3-2006 |
| M      | Water ballast                   | Inspection of fuselage hose connectors                               | AD 2010-0053R1, MSB-GROB-003        | 2-2010 |
| M      | Water ballast (TOP conversions) | Inspection of fuselage hose connectors                               | AD 2010-0084, MSB-GROB-003          | 2-2010 |

### **G102 Astir CS77 & Astir Jeans**

|   |              |   |                          |       |
|---|--------------|---|--------------------------|-------|
| M | Controls     | Rudder control lever s/n 1180 – 1536, 1613 – 1679, 2001 – 2032                            | AD 78-30, SB 102-8       | 03/78 |
| M | Fuselage     | Insp cover safety device s/n 1029 on, 1601 on, 2001 on                                    | AD 80-96, SB 306-13      | 06/80 |
| M | Controls     | Hotellier connections change s/n 1001 on, 1601 on, 2001 on                                | AD 81-125, SB 306-16     |       |
| M | Service life | Increase of life s/n 1001 on, 1601 on, 2001 on  | AD 81-267, SB 306-18     |       |
| M | Controls     | Air brake lever change s/n 1001 – 1536, 1601 – 1844, 2001 – 2248, 5001 – 5061             | AD 85-98, SB 306-26      | 06/85 |
| M | Controls     | Inspection of elevator hinges s/n 1001 – 1536, 1601 – 1844, 2001 – 2248, 5001 on, 5501 on | AD 89-209/2, SB 306-27/1 | 08/91 |
| M | Structure    | Inspection & replacement of spar spigot s/n ALL   | AD 91-5/2, SB 306-29     | 08/91 |
| M | Service life | Increase of life s/n ALL  | AD 93-41, SB 306-30/2    | 06/96 |
| M | Controls     | Inspection of air brake stops s/n ALL   | AD 92-356, SB 306-31     | 12/92 |
| M | Controls     | Exchange of elevator lever s/n 1001 – 1536, 1601 – 1844, 2001 – 2248                      | AD 94-317/2, SB 306-33   | 06/95 |

### **G102 Astir Std II and Club II**

|   |              |   |                      |       |
|---|--------------|---|----------------------|-------|
| M | Canopy       | Exchange of canopy springs s/n 5001 – 5061                                    | AD 80-177, SB 306-14 | 08/80 |
| M | Tail plane   | Markings s/n 5001 on  | AD 80-304, SB 306-15 |       |
| M | Canopy       | Exchange hinge s/n 5001 on  | AD 83-43, SB 306-21  | 06/83 |
| M | Service life | Increase of life s/n 5001 on  | AD 84-7, SB 306-23   |       |
| M | Controls     | Air brake lever change s/n 1001 – 1536, 1601 – 1844, 2001 – 2248, 5001 – 5061 | AD 85-98, SB 306-26  | 06/85 |
| M | Controls     | Inspection of elevator hinges s/n 5001 on, 5501 on                            | AD 89-209, SB 306-27 | 10/94 |

## Grob (Germany)

| Status | Subject      | Detail  | Reference information    | TNS   |
|--------|--------------|---|--------------------------|-------|
| M      | Controls     | Inspection of elevator hinges s/n 1001 – 1536, 1601 – 1844, 2001 – 2248, 5001 on, 5501 on | AD 89-209/2, SB 306-27/1 | 08/91 |
| M      | Structure    | Inspection & replacement of spar spigot s/n ALL   | AD 91-5/2, SB 306-29     | 08/91 |
| M      | Service life | Increase of life s/n ALL  | AD 93-41, SB 306-30/2    | 06/96 |
| M      | Controls     | Inspection of air brake stops s/n ALL   | AD 92-356, SB 306-31     | 12/92 |
| M      | Canopy       | Modification to jettison system s/n 5001 – 5061   | AD 2003-238, SB 306-37   | 08/03 |

### **G102 Astir Club III, Std III & Club IIIb**

|   |              |   |                                 |        |
|---|--------------|---|---------------------------------|--------|
| M | Controls     | Exchange of rudder pedal slide s/n 5501 – 5569  | AD 83-91, SB 306-22             | 06/83  |
| M | Service life | Increase of life s/n 5501 on  | AD 84-57, SB 306-24             |        |
| M | Controls     | Inspection of elevator hinges s/n 5001 on, 5501 on  | AD 89-209, SB 306-27            | 10/94  |
| M | Controls     | Inspection of elevator hinges s/n 1001 – 1536, 1601 – 1844, 2001 – 2248, 5001 on, 5501 on | AD 89-209/2, SB 306-27/1        | 08/91  |
| M | Structure    | Inspection & replacement of spar spigot s/n ALL   | AD 91-5/2, SB 306-29            | 08/91  |
| M | Service life | Increase of life s/n ALL  | AD 93-41, SB 306-30/2           | 06/96  |
| M | Controls     | Inspection of air brake stops s/n ALL   | AD 92-356, SB 306-31            | 12/92  |
| M | Controls     | Elevator flutter reduction of Vne and increase of mass balance s/n 5501 on                | AD 2001-317/4, SB 306-36/2 & /3 | 12/01  |
| M | Structure    | Inspection of welded parts s/n 5501 on  | AD 2007-0135-E, SB 306-35       | 3-2007 |

### **G320 (G104) Speed Astir, Speed Astir II**

|   |              |   |                         |       |
|---|--------------|---|-------------------------|-------|
| M | Canopy       | Canopy fasteners s/n 4001 - 4107                        | AD 80-178, SB 320-2     | 08/80 |
| M | Controls     | Elevator markings s/n 4001 on                           | AD 80-303, SB 320-3     |       |
| M | Structure    | Insp & replacement of wing spar spigors s/n 4001 - 4107 | AD 91-5/2, SB 320-5     | 02/91 |
| M | Controls     | Insp of air brake stops s/n 4001 - 4107                 | AD 92-356, SB 320-6     | 12/92 |
| M | Service life | Extension of life s/n 4001 - 4107                       | AD 1998-480, SB 320-7   | 02/99 |
| M | Canopy       | Modification to jettison system s/n 4001 - 4107         | AD 2003-238/2, SB 320-8 | 08/03 |

### **Astir In Service Reports (Advisory)**

Aileron connectors                      disconnect & rods jam

10/87 & 08/79

## Grob (Germany)

| Status | Subject                            | Detail  | Reference information | TNS                    |
|--------|------------------------------------|---|-----------------------|------------------------|
|        | Speed brake paddle                 | lever arm cracked   |                       | 03/82 & 12/83          |
|        | Aluminium fuselage main frames     | inspect frequently for cracks   |                       | 04/84                  |
|        | Lower rudder hinge                 | (not CS) cracks in GRP  |                       | 06/85                  |
|        | Elevator control rods              | corroded in rear fuselage   |                       | 08/87                  |
|        | Elevator vertical drive            | loose rivets  |                       | 08/87                  |
|        | Wing to fuselage attachments       | balls missing (should be six per socket)                                |                       | 10/87                  |
|        | Retractable u/c hinge bars         | circlips come off - replace with split pins                             |                       | 12/98 & 06/88          |
|        | Undercarriage lever retaining bolt | loose in GRP  |                       | 06/92                  |
|        | Frame at base of the fin           | fractured by ground loops - causes tail end flutter                     |                       | 06/95 & 04/95          |
|        | Tow hook back release              | If wire launched with adverse yaw may have difficulty Releasing         |                       | 02/00                  |
|        | Tailplane mounting                 | Location ball thread cracked (AD inspection)                            |                       | 12/05                  |
|        | Tailplane location pins            | Flanges cracked   |                       | 12/05                  |
|        | Tailplane mountings                | Continued problems with Spherical ball mounting. New mounting immanent. |                       | 1/2006                 |
|        | Main wheel                         | hub securing bolt broken, install 5 bolt wheel                          |                       | 5-2010                 |
|        | <a href="#">Landing gear</a>       | <a href="#">selector bolt sheared off</a>                               |                       | <a href="#">5-2011</a> |
|        | <a href="#">Landing gear</a>       | <a href="#">Aluminium casting broken</a>                                |                       | <a href="#">5-2011</a> |

### **Twin Astir, Twin Astir Trainer, G-103 Twin II, G-103A Twin II Acro, G-103C Twin III & Twin III Acro**

|   |                                |   |                     |                        |       |
|---|--------------------------------|---|---------------------|------------------------|-------|
| M | Airbrake locking lever         | replace with solid type                       | serial numbers→3040 | AD 79-258, TN 103-5    | 06/79 |
| M | Aileron & airbrake controls    | screws loose                                  | serial numbers→3255 | AD 79-331, TN 315-6    | 08/79 |
| M | Controls                       | Change elevator trim tube                     |                     | TN 315-13              | 05/81 |
| M | L'Hotellier connectors         | replace with stronger type                    |                     | AD 81-125/2, TN 315-12 | 09/81 |
| M | Flight manual                  | correction of pages                           |                     | AD 83-6                |       |
| M | Rudder Pedals                  | Inspection                                    |                     | AD 82-132, TN 315-20   |       |
| M | Cable release knob             | jams ailerons - modify                        |                     |                        | 12/83 |
| M | Airbrake lever failure (front) | replace                                       |                     | AD 85-222, TN 315-29   | 12/85 |
| M | Rear rudder pedals             | parallel lever - replace                      |                     | AD 85-191, TN 315-30   | 12/85 |
| M | Airbrake stops fail            | levers foul wing skins & jams brakes out      |                     | AD 85-236, TN 315-31   | 12/85 |
| M | Front canopy lock              | colour code for open/shut                     |                     |                        | 08/87 |
| M | Aft hook release knob          | modifications to prevent it jamming the stick |                     | AD 87-140, TN 315-32   | 08/87 |
| M | Rear rudder pedal lever        | replace                                       |                     | AD 87-168, TN 315-33   | 10/87 |
| M | Elevator push-rod              | corrosion (G 103A) lower end of fin rod       |                     | AD 88-1, TN 315-14     | 04/88 |

## Grob (Germany)

| Status | Subject  | Detail  | Reference information                       | TNS    |
|--------|--|---|---|--------|
| M      | Wing root end spigots                                      | replace   | AD 88-176, TN 315-36                        | 10/88  |
| M      | Control systems (G 103 & 103A)                             | inspections & mods                                  | AD 88-175, TN 315-37                        | 10/88  |
| M      | Foul between aileron & airbrake controls in centre section |   | AD 89-5/2TN 315-38                          | 02/89  |
| M      | Airbrake handle (G 103C Acro III)                          | fit new hinged lever                                | TN 315-39                                   | 08/89  |
| M      | Rudder pedal unit (G-103C only)                            | fit new spindle & guide                             | TN 315-41                                   | 12/89  |
| M      | Aileron lever  | placard for correct assembly                        | AD 89-005/2, TN 315-38/1                    | 06/90  |
| M      | Airbrake stops   | inspection  | AD92-356, TN 315-49                         | 12/92  |
| M      | Life extension   | to 6000 hrs   | AD 81-268, TM 315-15                        |        |
| M      | Life extension   | from 3000 to 12 000 hrs. after inspections & mods   | AD 92-190/2, SB 315-45/2                    | 08/96  |
| M      | Airbrake lever (over centre)                               | replace   | AD 92-309/2, TN 315-47/2                    | 04/93  |
| M      | G.103 Twin III   | extended limitations                                | AD 93-134                                   | 08/93  |
| M      | Emergency exit   | fit placard detailing procedure                     |   | 06/96  |
|        | Option to remove belly hook                                | fit dummy hook (aerotow only)                       | TM 315-35/2                                 | 04/98  |
| M      | Rear stick knurled nut cracks                              | replace   | AD 1999-216, SB 315-61/2                    | 08/99  |
| M      | Service life   | Inspections at 3000 hrs                             | AD 84-58, TN315-26                          |        |
| M      | Elevator   | incorrect rigging, fit markings                     | AD 81-53, TM 315-11                         |        |
| M      | Tow hook   | C of G hook bracket inspection                      | AD 2002-066 AD 2002-67, MSB 869-22 & 315-62 | 04/02  |
| M      | Limitations  | Flight limitations                                  | AD 2003-231/2, ASB215-64/2                  | 02/04  |
| M      | Limitations  | Lifting of flight restrictions (some aircraft)      | AD D2004-002, MSB315-65                     | 02/04  |
| M      | Flight controls  | Elevator lever replacement                          | AD-D-2004-292 R1, MSB315-67                 | 04/05  |
| M      | Limitations  | revised limits of operation                         | AD 2003-231R3, MSB 315-67                   | 12/04  |
| M      | Aircraft Documentation                                     | Check and amend manuals                             | AD-D-2006-057, MSB 315-68                   | 2-2006 |
| M      | Flying Controls  | Inspection of rudder hinge for cracks               | MSB 315-72, MSB 869-32                      | 6-2006 |
| M      | Structural   | Carry out structural inspections                    | AD 2007-0194, MSB 315-74/1, MSB 869-25/1    | 4-2007 |
| M      | Flying controls (Twin III SL)                              | Airbrake control bolt cracking due excessive torque | AD D-2008-231, MSB 869-27/1                 | 4-2009 |
| M      | Flying controls (Twin Astir)                               | Airbrake control bolt cracking due excessive torque | AD D-2008-232, MSB 315-76/1                 | 4-2009 |

### Twin Astir In Service Reports (Advisory)

|                                |                                    |              |
|--------------------------------|------------------------------------|--------------|
| Wheel brake back plate         | torque stud fractured              | 07/78        |
| Rudder cables                  | damaged at "S" bends               | 06/84, 06/05 |
| Airbrake lever failure (front) | failure                            | 10/98        |
| Side hinged rudders            | delamination of fin skin at hinges | 08/86        |

## Grob (Germany)

| Status | Subject                         | Detail   | Reference information | TNS                    |
|--------|---------------------------------|--|-----------------------|------------------------|
|        | Aileron mass balance            | cracks - inspect   |                       | 02/86 & 04/89          |
|        | Tow hook                        | front mounting bracket cracked                               |                       | 02/91 & 10/89          |
|        | Manual & placard amendments     | G-103C only  | TN 315-40             | 12/89                  |
|        | Rudder drive                    | failure at fork end at rudder                                |                       | 06/90                  |
|        | Wing to fuselage joiners        | inspect after ground loops                                   |                       | 02/91                  |
|        | Rudder cable pulleys            | cracked  |                       | 01/93 & 12/94          |
|        | Front rudder pedals (G 103C)    | slide rod fractured  |                       | 06/96                  |
|        | Canopy jettison handles         | disengaged from jettison systems - check                     |                       | 08/97                  |
|        | Rear release cable              | jams between panel & coaming. Hook held open                 |                       | 10/97                  |
|        | Airbrake over-centre adjustment | must be correct to avoid un-demanded opening                 |                       | 12/97                  |
|        | Front rudder pedals             | mounting plate partial disbonding - inspect                  |                       | 12/98                  |
|        | Control cables                  | Cable release failed at swage at release hook arm            |                       | 04/00                  |
|        | Canopy                          | DV Window hinge bolt too short                               |                       | 3-2010                 |
|        | <a href="#">Air brakes</a>      | <a href="#">Incorrectly adjusted casing them to jam open</a> |                       | <a href="#">5-2011</a> |

### Grob G-103 Twin 3 SLMG

|   |                        |   |                            |        |
|---|------------------------|---|----------------------------|--------|
| M | Drive belt failure     | upper pulley wheel inspection               | AD 92-352, TM 869-4        | 12/92  |
| M | Transmission drive pin | replace                                     | AD 92-354, TM 869-5        | 12/92  |
|   | Cable release          | swage failed                                |                            | 04/00  |
| M | Landing Gear           | Wheel fairing and modifications             | AD1992-306/2               |        |
| M | Propeller              | Check and securing of spiral pins           | AD1992-355                 |        |
| M | Fuel system            | Inspection of Fuel filters                  | AD1992-388                 |        |
| M | Exhaust                | Installation of cable guide                 | AD1993-014                 |        |
| M | Propeller              | Exchange of switch                          | AD1993-079                 |        |
| M | Propeller              | Exchange of propeller flange                | AD1993-224                 |        |
| M | Propeller              | Inspection & improvement of bearing         | AD1996-206/2               | 08/02  |
| M | Controls               | L'Hotellier ball & socket with lock plates  | AD 1993-001/3              |        |
| M | Controls               | L'Hotellier ball & socket with locking cams | AD 1994-001/2              |        |
| M | Tow release            | Cracks at the forward attachment brackets   | AD2002-066                 |        |
| M | Flying Controls        | Inspection of rudder hinge for cracks       | MSB 315-72, MSB 869-32     | 6-2006 |
| M | Propeller              | Inspection/repair                           | AD 2010-0107, MSB 869-24/1 | 3-2010 |

## Grob (Germany)

| Status                         | Subject  | Detail  | Reference information    | TNS           |
|--------------------------------|--|---|--------------------------|---------------|
| <b>Grob G-109 &amp; G-109B</b> |  |   |                          |               |
| M                              | Flight manual revisions  |   | AD 83-6, TN 817-8        |               |
| M                              | Main landing gear  | fractures. inspection and exchange legs                                   | AD 85-132, TN 817-19     | 12/84         |
| M                              | Flight manual revision   | C of G range and spin recovery  | AD 83-104, TN 817-10     | 06/85         |
| M                              | Flight manual changes  | mandatory   | TM 817-17                | 06/85         |
| M                              | Flying controls  | modifications to avoid aileron flutter                                    | AD 85-218/2, TN 817-20   | 12/86         |
| M                              | Flight and maintenance manuals                                 | change of pages   | AD 86-219, TN 817-22     |               |
| M                              | Elevator two inner hinges                                      | replace   | AD 88-50, TN 817-25      | 04/88         |
|                                | Quiet exhaust system   | non-mandatory mod   | TM 817-26                | 06/90         |
| M                              | Bendix Magnetos (G 109B)                                       | impulse coupling inspection   | AD 92-189, TN 817-34/2   | 08/92         |
| M                              | Aileron & airbrake bell crank                                  | attachments corroded  | AD 90-315, TN 817-29     | 06/92         |
| M                              | Extension of service life                                      | beyond 3 000 hrs after inspections & mods                                 | AD92-198, TN 817-28/1    | 08/92         |
| M                              | Elevator and trim tabs   | drain holes   | AD 92-350, TN 817-35     | 12/92         |
|                                | Exhaust system -   | leaks & install CO <sub>2</sub> detectors & 100 <sup>hr</sup> inspections | AD92-359, TN 817-32      | 12/92         |
| M                              | Airbrake stops   | inspection  | AD 92-356, TN 817-36     | 12/92         |
| M                              | Fuel cock  | replacement of seal   | AD 87-142/2, TN 817-23/1 | 12/92         |
| M                              | Undercarriage  | 1000 flight inspections and change of parts                               | AD 94-004, TN 817-39     | 10/93 & 04/94 |
|                                | Carb float valves & diaphragms                                 | inspection  | TM 4601-7                | 02/94         |
|                                | Valve seats  | inspection  | TM 4601-8                | 12/94         |
| M                              | Spark plugs  | Champion REN 30 S approved  | TM 4601-9                | 12/94         |
| M                              | Engine operator's manual                                       | new introduced  | TM 4601-10               | 12/94         |
| M                              | Rudder system  | fit damper and new bellcrank  | AD 94-262, TM817-38      | 12/94         |
| M                              | Engine mounting frames (G109 B)                                | inspect for abrasions   | AD 95-362, TM 871-45     | 12/95         |
| M                              | G109B - CAA flight manual change                               | quoted performance reduced  | CAA Ref 1236/41491       | 04/99         |
|                                | Unleaded fuel permitted after mods (banned by CAA - AN 98/98A) |   | SB.817-46                | 02/00 & 08/99 |
|                                | Fuel filter  | Replacement of fuel filter  | SL 109-1                 | 06/00         |
| R                              | Flying controls  | inspection of air brake control rod                                       | BGA 022/10/2001 iss1     | 10/01         |
| R                              | Flying controls  | inspection of elevator control rod  | BGA 036/06/2003 iss1     | 06/03         |
| M                              | Controls   | L'Hotellier ball & socket with lock plates                                | AD 1993-001/3            |               |
| M                              | Controls   | L'Hotellier ball & socket with locking cams                               | AD 1994-001/2            |               |
| M                              | Engine controls  | Broken throttle lever spring (L2400 engine)                               | AD D-2005-357, SB817-40  | 10/05         |

## Grob (Germany)

| Status | Subject  | Detail   | Reference information | TNS    |
|--------|--|--|-----------------------|--------|
|        | <b><u>G109 In Service Reports (Advisory)</u></b> |  |                       |        |
|        | Corrosion of bolts                               | in wing root attachments                                   |                       | 06/91  |
|        | Hot air shutter valves                           | cracked, failed & and butterfly screws loose               | 10/86, 12/92 &        | 10/91  |
|        | Rudder   | bell crank cracked & failed                                |                       | 08/92  |
|        | Pulleys in wheel brake system                    | cracked replace nylon with aluminium                       |                       | 04/94  |
|        | Tail wheel springs                               | damage rudder push-rod                                     |                       | 06/97  |
|        | Pitch change bolt failure                        | various causes detailed in TNS                             |                       | 02/98  |
|        | Canopy jettison control                          | jammed by screws that attach roof trim                     |                       | 06/98  |
| I      | Engine oil sump (G109 B)                         | Oil sump plug & oil cooler unions loose, check & wire lock |                       | 06/03  |
|        | Canopy   | DV Window hinge bolt too short                             |                       | 3-2010 |
|        | Elevator Control                                 | Trim control rod fouling tail wheel steering               |                       | 1-2011 |