



SI B54 09 07  
Special Roofs

May 2018  
Technical Service

## RETRACTABLE HARDTOP STATUS REQUEST SUPPLEMENT



New information provided by this revision is preceded by this symbol .

This Service Information bulletin replaces SI B54 09 07 dated June 2007

### What's New:

- RHT Status document added for F33 and F83
- Loading aid statuses added for F33 and F83

### MODEL

E93 ( 3 series convertible)	 F33 (4 series convertible)	 F83 (M4 Convertible)
-----------------------------	--	--

### INFORMATION

- Documents have been developed showing the known correct statuses for all hall sensors and micro switches used to operate the retractable hard top (RHT).
- This document is intended to act as a supplement to the diagnostic information available in ISTA.
- Comparing these statuses to the actual statuses of a vehicle with a functional problem may assist in narrowing down which sensor/switch is contributing to the functional problem.
- For E93, the status request may be found by connecting the car to ISTA and selecting: Control module functions/CTM Convertible top module/Diagnosis Requests – Sensors/Switches
- For F33/F83, the statuses should be checked using the applicable test plan as instructed in attachment B54 09 07 F33 F83 RHT Status.pdf

Posted: Tuesday, May 22, 2018

### ATTACHMENTS

View PDF attachment [B54 09 07 E93 RHT Status](#).

View PDF attachment [B54 09 07 F33 F83 RHT Status](#).

[ Copyright ©2018 BMW of North America, Inc. ]

# F33 Retractable hardtop diagnosis

Step 1- Perform a vehicle test and work through any corresponding faults. Work through any test plans for the retractable hardtop or loading aid as needed. If the test plans do not provide an accurate diagnosis, proceed to step 2.

Step 2- In case of a fault with the retractable hardtop, select test plan ABL-DIT-AT5437\_CTM33FTEST-CTM functional check. In case of loading aid faults, select test plan ABL-DIT-AT5437\_CTM33BELHI-CTM loading aid. Note: Keep in mind that faults in one system could be the result of an issue with the other. If required, run test plans for both systems.

Step 3- Select “functional test” from test plan options

Step 4- Select “status display for all sensors” (RHT) or “Read out the status of the sensors” (Loading aid) depending on which test plan was chosen.

Step 5- Ensure hardtop is closed completely and select “retractable hardtop closed”

Step 6- Hold the hardtop adjustment switch in the up position to switch the statuses from “currently not monitored” to show the current status. While holding the switch in the up position, compare the actual status to the target status as shown in the test plan and this document. They should match.

Step 7- Go back to “status display for all sensors”

Step 8- Ensure the hardtop is completely open and select “retractable hardtop open”

Step 9- Hold the switch in the down position to switch the statuses from “currently not monitors” to show the current status. While holding the switch in the down position, compare the actual status to the target status as shown in the test plan and this document. They should match.

Step 10- Go back to “status display for all sensors”

Step 11- Select “retractable hardtop is in an intermediate position”

Step 12- Reference the photos/statuses in this document at different positions and compare.

# RHT Fully Closed



Component	Target Status
Hall effect sensor, roof package/hardtop set up	Operated
Right "roof package stored" hall effect sensor	Not Operated
Left "roof package stored" hall effect sensor	Not Operated
Hall effect sensor "bottom luggage compartment partition"	Operated
Hall effect sensor "roof shell damping action when opening"	Not Operated
Hall effect sensor "roof shell damping action when closing"	Operated
Hall sensor- open soft top compartment lid	Not Operated
Hall effect sensor "soft top compartment lid damping action when closing"	Operated
Hall effect sensor "soft top compartment lid closed"	Operated
Hall effect sensor "right coupling lock opened"	Not Operated
Micro-switch "right-hand interlocking ring buckle closed"	Operated
Micro-switch "left hand interlocking ring buckle closed"	Operated
Micro-switch "cowl panel reached"	Operated
Micro-switch "cowl panel locked"	Operated
Micro switch "cowl panel unlocked"	Not Operated

# Latches Released



Component	Target Status
Hall effect sensor, roof package/hardtop installed	Operated
Hall effect sensor, Roof package stored, right	Not Operated
Hall effect sensor, Roof package stored, left	Not Operated
Hall effect sensor "bottom luggage compartment partition"	Operated
Hall effect sensor "roof shell damping action when opening"	Not Operated
Hall effect sensor "roof shell damping action when closing"	Operated
Micro-switch "cowl panel reached"	Not Operated
Hall sensor, open soft top compartment lid	Not Operated
Hall effect sensor "soft top compartment lid damping action when closing"	Operated
Hall effect sensor "soft top compartment lid is closed"	Operated
Hall effect sensor "right coupling lock open"	Operated
Microswitch "right coupling lock closed"	Not Operated
Microswitch left coupling lock closed	Not Operated
Microswitch "cowl panel locked"	Not Operated
Microswitch, cowl panel unlocked	Operated

# Service Position



Component	Target Status
Hall effect sensor, roof package/hardtop installed	Operated
Hall effect sensor, Roof package stored, right	Not Operated
Hall effect sensor, Roof package stored, left	Not Operated
Hall effect sensor "bottom luggage compartment partition"	Operated
Hall effect sensor "roof shell damping action when opening"	Not Operated
Hall effect sensor "roof shell damping action when closing"	Not Operated
Micro-switch "cowl panel reached"	Not Operated
Hall sensor, open soft top compartment lid	Not Operated
Hall effect sensor "soft top compartment lid damping action when closing"	Operated
Hall effect sensor "soft top compartment lid is closed"	Operated
Hall effect sensor "right coupling lock open"	Operated
Microswitch "right coupling lock closed"	Not Operated
Microswitch left coupling lock closed	Not Operated
Microswitch "cowl panel locked"	Not Operated
Microswitch, cowl panel unlocked	Operated

# Roof Shells Stacked



Component	Target Status
Hall effect sensor, roof package/hardtop installed	Operated
Hall effect sensor, Roof package stored, right	Not Operated
Hall effect sensor, Roof package stored, left	Not Operated
Hall effect sensor "bottom luggage compartment partition"	Operated
Hall effect sensor "roof shell damping action when opening"	Operated
Hall effect sensor "roof shell damping action when closing"	Not Operated
Micro-switch "cowl panel reached"	Not Operated
Hall sensor, open soft top compartment lid	Not Operated
Hall effect sensor "soft top compartment lid damping action when closing"	Operated
Hall effect sensor "soft top compartment lid is closed"	Operated
Hall effect sensor "right coupling lock open"	Operated
Microswitch "right coupling lock closed"	Not Operated
Microswitch left coupling lock closed	Not Operated
Microswitch "cowl panel locked"	Not Operated
Microswitch, cowl panel unlocked	Operated

# Stacked, trunk lid open



Component	Target Status
Hall effect sensor, roof package/hardtop installed	Operated
Hall effect sensor, Roof package stored, right	Not Operated
Hall effect sensor, Roof package stored, left	Not Operated
Hall effect sensor "bottom luggage compartment partition"	Operated
Hall effect sensor "roof shell damping action when opening"	Operated
Hall effect sensor "roof shell damping action when closing"	Not Operated
Micro-switch "cowl panel reached"	Not Operated
Hall sensor, open soft top compartment lid	Operated
Hall effect sensor "soft top compartment lid damping action when closing"	Not Operated
Hall effect sensor "soft top compartment lid is closed"	Not Operated
Hall effect sensor "right coupling lock open"	Operated
Microswitch "right coupling lock closed"	Not Operated
Microswitch left coupling lock closed	Not Operated
Microswitch "cowl panel locked"	Not Operated
Microswitch, cowl panel unlocked	Operated



# RHT Stowed, trunk lid open



Component	Target Status
Hall effect sensor, roof package/hardtop installed	Not Operated
Hall effect sensor, Roof package stored, right	Operated
Hall effect sensor, Roof package stored, left	Operated
Hall effect sensor "bottom luggage compartment partition"	Operated
Hall effect sensor "roof shell damping action when opening"	Operated
Hall effect sensor "roof shell damping action when closing"	Not Operated
Micro-switch "cowl panel reached"	Not Operated
Hall sensor, open soft top compartment lid	Operated
Hall effect sensor "soft top compartment lid damping action when closing"	Not Operated
Hall effect sensor "soft top compartment lid is closed"	Not Operated
Hall effect sensor "right coupling lock open"	Operated
Microswitch "right coupling lock closed"	Not Operated
Microswitch left coupling lock closed	Not Operated
Microswitch "cowl panel locked"	Not Operated
Microswitch, cowl panel unlocked	Operated

# RHT Fully Open



Component	Target Status
Hall effect sensor, roof package/hardtop set up	Not Operated
Right "roof package stored" hall effect sensor	Operated
Left "roof package stored" hall effect sensor	Operated
Hall effect sensor "bottom luggage compartment partition"	Operated
Hall effect sensor "roof shell damping action when opening"	Operated
Hall effect sensor "roof shell damping action when closing"	Not Operated
Hall sensor- open soft top compartment lid	Not Operated
Hall effect sensor "soft top compartment lid damping action when closing"	Operated
Hall effect sensor "soft top compartment lid closed"	Operated
Hall effect sensor "right coupling lock opened"	Not Operated
Micro-switch "right-hand interlocking ring buckle closed"	Operated
Micro-switch "left hand interlocking ring buckle closed"	Operated
Micro-switch "cowl panel reached"	Not Operated
Micro-switch "cowl panel locked"	Operated
Micro switch "cowl panel unlocked"	Not Operated

# Rear Module Lowered



Component	Target Status
Microswitch left loading aid fastening open	Not Operated
Mircroswitch left loading aid fastening closed	Operated
Microswitch right loading aid fastening open	Not Operated
Microswitch right loading aid fastening closed	Operated
Mircroswitch of the retractable hardtop in the loading position	Operated
Hall effect sensor, roof package stored, left	Operated
Hall effect sensor, roof package stored, right	Operated
Microswitch of cowl panel is locked/stowage compartment is closed	Operated
Microswitch of cowl panel released/stowage compartment unlatched	Not Operated
Hall effect sensor soft top compartment lid is closed	Operated
Hall sensor, open soft top compartment lid	Not Operated
Hall effect sensor, bottom luggage compartment partition	Operated

# Rear Module Unlatched



Component	Target Status
Microswitch left loading aid fastening open	Operated
Mircroswitch left loading aid fastening closed	Not Operated
Microswitch right loading aid fastening open	Operated
Microswitch right loading aid fastening closed	Not Operated
Mircroswitch of the retractable hardtop in the loading position	Not Operated
Hall effect sensor, roof package stored, left	Operated
Hall effect sensor, roof package stored, right	Operated
Microswitch of cowl panel is locked/stowage compartment is closed	Not Operated
Microswitch of cowl panel released/stowage compartment unlatched	Not Operated
Hall effect sensor soft top compartment lid is closed	Not Operated
Hall sensor, open soft top compartment lid	Not Operated
Hall effect sensor, bottom luggage compartment partition	Operated

# Rear Module linkage raised rear module stowed



Component	Target Status
Microswitch left loading aid fastening open	Operated
Mircroswitch left loading aid fastening closed	Not Operated
Microswitch right loading aid fastening open	Operated
Microswitch right loading aid fastening closed	Not Operated
Mircroswitch of the retractable hardtop in the loading position	Not Operated
Hall effect sensor, roof package stored, left	Operated
Hall effect sensor, roof package stored, right	Operated
Microswitch of cowl panel is locked/stowage compartment is closed	Not Operated
Microswitch of cowl panel released/stowage compartment unlatched	Operated
Hall effect sensor soft top compartment lid is closed	Not Operated
Hall sensor, open soft top compartment lid	Operated
Hall effect sensor, bottom luggage compartment partition	Operated

# Rear Module Raised



Component	Target Status
Microswitch left loading aid fastening open	Operated
Mircroswitch left loading aid fastening closed	Not Operated
Microswitch right loading aid fastening open	Operated
Microswitch right loading aid fastening closed	Not Operated
Mircroswitch of the retractable hardtop in the loading position	Operated
Hall effect sensor, roof package stored, left	Not Operated
Hall effect sensor, roof package stored, right	Not Operated
Microswitch of cowl panel is locked/stowage compartment is closed	Not Operated
Microswitch of cowl panel released/stowage compartment unlatched	Operated
Hall effect sensor soft top compartment lid is closed	Not Operated
Hall sensor, open soft top compartment lid	Operated
Hall effect sensor, bottom luggage compartment partition	Operated

# RHT Fully Closed



Sensor/Switch	Status	On/Off	Sensor Number	Sensor/Switch	Status	On/Off	Sensor Number
Cowl Panel Reached MS	Yes	On	8.0	Rear Module Closed HS	Yes	On	5.1
Cowl Panel Locked MS	Yes	On	4.1	Rear Module Almost Closed HS	Yes	On	5.3
Cowl Panel Unlocked MS	No	Off	4.2	Rear Module Open HS	No	Off	5.2
Roof Shells Partially Closed HS	Yes	On	2.3	Roof Package Stowed HS	No	Off	1.2
Roof Shells Partially Open HS	No	Off	2.4	Luggage compartment separation HS	Closed	On	9.0
Coupling fastener, right, open HS	No	Off	6.2	Coupling fastener, left, closed MS	Yes	On	6.3
Coupling fastener, right, closed MS	Yes	On	6.1	Roof Package Extended	Yes	On	1.1

# Latches Released



Sensor/Switch	Status	On/Off	Sensor Number	Sensor/Switch	Status	On/Off	Sensor Number
Cowl Panel Reached MS	No	Off	8.0	Rear Module Closed HS	Yes	On	5.1
Cowl Panel Locked MS	No	Off	4.1	Rear Module Almost Closed HS	Yes	On	5.3
Cowl Panel Unlocked MS	Yes	On	4.2	Rear Module Open HS	No	Off	5.2
Roof Shells Partially Closed HS	Yes	On	2.3	Roof Package Stowed HS	No	Off	1.2
Roof Shells Partially Open HS	No	Off	2.4	Luggage compartment separation HS	Closed	On	9.0
Coupling fastener, right, open HS	Yes	On	6.2	Coupling fastener, left, closed MS	No	Off	6.3
Coupling fastener, right, closed MS	No	Off	6.1	Roof Package Extended	Yes	On	1.1



# Service Position



Sensor/Switch	Status	On/Off	Sensor Number	Sensor/Switch	Status	On/Off	Sensor Number
Cowl Panel Reached MS	No	Off	8.0	Rear Module Closed HS	Yes	On	5.1
Cowl Panel Locked MS	No	Off	4.1	Rear Module Almost Closed HS	Yes	On	5.3
Cowl Panel Unlocked MS	Yes	On	4.2	Rear Module Open HS	No	Off	5.2
Roof Shells Partially Closed HS	No	Off	2.3	Roof Package Stowed HS	No	Off	1.2
Roof Shells Partially Open HS	No	Off	2.4	Luggage compartment separation HS	Closed	On	9.0
Coupling fastener, right, open HS	Yes	On	6.2	Coupling fastener, left, closed MS	No	Off	6.3
Coupling fastener, right, closed MS	No	Off	6.1	Roof Package Extended	Yes	On	1.1

# Roof Shells Stacked



Sensor/Switch	Status	On/Off	Sensor Number	Sensor/Switch	Status	On/Off	Sensor Number
Cowl Panel Reached MS	No	Off	8.0	Rear Module Closed HS	Yes	On	5.1
Cowl Panel Locked MS	No	Off	4.1	Rear Module Almost Closed HS	Yes	On	5.3
Cowl Panel Unlocked MS	Yes	On	4.2	Rear Module Open HS	No	Off	5.2
Roof Shells Partially Closed HS	No	Off	2.3	Roof Package Stowed HS	No	Off	1.2
Roof Shells Partially Open HS	Yes	On	2.4	Luggage compartment separation HS	Closed	On	9.0
Coupling fastener, right, open HS	Yes	On	6.2	Coupling fastener, left, closed MS	No	Off	6.3
Coupling fastener, right, closed MS	No	Off	6.1	Roof Package Extended	Yes	On	1.1

# Stacked Position, Trunk Lid Open



Sensor/Switch	Status	On/ Off	Sensor Number	Sensor/Switch	Status	On/ Off	Sensor Number
Cowl Panel Reached MS	No	Off	8.0	Rear Module Closed HS	No	Off	5.1
Cowl Panel Locked MS	No	Off	4.1	Rear Module Almost Closed HS	No	Off	5.3
Cowl Panel Unlocked MS	Yes	On	4.2	Rear Module Open HS	Yes	On	5.2
Roof Shells Partially Closed HS	No	Off	2.3	Roof Package Stowed HS	No	Off	1.2
Roof Shells Partially Open HS	Yes	On	2.4	Luggage compartment separation HS	Closed	On	9.0
Coupling fastener, right, open HS	Yes	On	6.2	Coupling fastener, left, closed MS	No	Off	6.3
Coupling fastener, right, closed MS	No	Off	6.1	Roof Package Extended	Yes	On	1.1

# RHT Stowed, Trunk Lid Open



Sensor/Switch	Status	On/ Off	Sensor Number	Sensor/Switch	Status	On/ Off	Sensor Number
Cowl Panel Reached MS	No	Off	8.0	Rear Module Closed HS	No	Off	5.1
Cowl Panel Locked MS	No	Off	4.1	Rear Module Almost Closed HS	No	Off	5.3
Cowl Panel Unlocked MS	Yes	On	4.2	Rear Module Open HS	Yes	On	5.2
Roof Shells Partially Closed HS	No	Off	2.3	Roof Package Stowed HS	Yes	On	1.2
Roof Shells Partially Open HS	Yes	On	2.4	Luggage compartment separation HS	Closed	On	9.0
Coupling fastener, right, open HS	Yes	On	6.2	Coupling fastener, left, closed MS	No	Off	6.3
Coupling fastener, right, closed MS	No	Off	6.1	Roof Package Extended	No	Off	1.1

# RHT Fully Open



Sensor/Switch	Status	On/Off	Sensor Number	Sensor/Switch	Status	On/Off	Sensor Number
Cowl Panel Reached MS	No	Off	8.0	Rear Module Closed HS	Yes	On	5.1
Cowl Panel Locked MS	Yes	On	4.1	Rear Module Almost Closed HS	Yes	On	5.3
Cowl Panel Unlocked MS	No	Off	4.2	Rear Module Open HS	No	Off	5.2
Roof Shells Partially Closed HS	No	Off	2.3	Roof Package Stowed HS	Yes	On	1.2
Roof Shells Partially Open HS	Yes	On	2.4	Luggage compartment separation HS	Closed	On	9.0
Coupling fastener, right, open HS	No	Off	6.2	Coupling fastener, left, closed MS	Yes	On	6.3
Coupling fastener, right, closed MS	Yes	On	6.1	Roof Package Extended	No	Off	1.1