



Technical Journal

TITLE:

Test schedule for vehicle speed dependent vibrations at highway speeds

REF NO: TJ 20803.15.0	ISSUING DEPARTMENT: Technical Service	CAR MARKET: United States and Canada	
PARTNER: 3 US 7510 Volvo Car USA		ISSUE DATE: 2017-11-27	STATUS DATE: 2017-12-04
FUNC GROUP: 2180	FUNC DESC: Engine mounting	Page 1 of 11	

“Right first time in Time”

Attachment

File Name	File Size
T9379EN01.docx	0.0435 MB
instruction SPA vibrations.pdf	0.2400 MB

Vehicle Type

Type	Eng	Eng Desc	Sales	Body	Gear	Steer	Model Year	Plant	Chassis range	Struc Week Range
124							2007-2017		0000850-0200260	200620-201614
134							2011-9999		0000194-9999999	201020-999999
135							2008-2017		0000395-0377263	200720-201616
136							2008-2017		0000395-0274097	200720-201619
155							2011-9999		0000100-9999999	201035-999999
157							2015-9999		0000001-0999999	201450-999952
234							2017-9999		-	201617-999952
235							2017-9999		-	201624-999952
256							2015-9999		0000001-0999999	201505-999952
275							2007-9999		0328000-9999999	200620-999999
285							2007-9999		0617000-9999999	200620-999999
295							2007-9999		0254000-9999999	200620-999999
384							2007-9999		0600000-9999999	200620-999999
5XX							2007-9999		0010000-9999999	200620-999999



CSC Customer Symptom Codes

Code	Description
C4	Complete vehicle/Unusual noise/While driving
F3	Complete vehicle/Unusual noise/During acceleration
F6	Complete vehicle/Unusual noise/During deceleration
8N	Driving/Unusual noise/Unsure when/at all times
F1	Driving/Unusual noise/At engine shut off
F2	Driving/Unusual noise/During acceleration
ZE	Idling/Unusual noise
XB	Exhaust system/Rattle/rumble
WX	Engine cooling fan (FC)/Unusual noise
F4	Clutch/Unusual noise/Noise from engine compartment
C3	Automatic transmission/Unusual noise
F5	Gear selector/Unusual noise
C6	Manual transmission/Unusual noise
D2	Front/rear axle/Unusual noise
WV	Suspension/Clicking/clonking noise/At start/stop
WY	Suspension/Clicking/clonking noise/Unsure when/at all times
X1	Suspension/Unusual noise
H3	Steering wheel/Squeak/rattle/Steering column/wheel
H4	Steering/Unusual noise/Unsure when/at all times
X8	Steering/Unusual noise/At full turn
E7	Suspension/Unusual noise
WZ	Suspension/Clicking/clonking noise
8J	Shock absorption/Unusual noise
1M	Wheels, tires, hubs/Unusual noise/Front
1N	Wheels, tires, hubs/Unusual noise/Rear
V6	Complete vehicle/Vibration/When driving below 45 MPH
V7	Complete vehicle/Vibration/When driving above 45 MPH
NY	Automatic transmission/Vibration
V9	Gear selector/Vibration
8A	Manual transmission/Vibration
W2	Front/rear axle/Vibration/shake
V2	Steering wheel/Vibration/shimmy/When driving above 45 mph
W3	Steering wheel/Vibration/shimmy/When driving below 45 mph
X7	Steering wheel/Vibration/shimmy/At idle
V1	Tires/Vibration/out of round

VST Operation Number

DTC Diagnostic Trouble Codes

Rows beginning with * are modified

Note! If using a printed copy of this Technical Journal, first check for the latest online version.



Text

DESCRIPTION:

* Updated function group.

In case of complain of Noise, Vibration or Harshness, NVH, and you need help from CMQ, some “tools” have been created to help you to do a better and more precise fault tracing.

1. Question form to fill in and attach along with a vehicle report for faster support.
2. Guideline to help you to sort out NVH related problems.

SERVICE:

N/A

VEHICLE REPORT:

Yes, together with a complete filled in attachment, included in this journal.
The attachment **MUST** be in English when sending in it to CMQ.
Use always function group 2180.

To view TJ attachment continue to next page. This TJ has two attachments.



Title	Fault-tracing schedule NVH	Page:	1 (3)
Action	Test protocol	Operation number:	

Issue	Date	Cause
1	2015-02	First issue

Affected vehicles

Year	Model	Engine	Transmission	Steering	Chassis number
All	All				

Special tools

Description	Tool number
CHASSIS-EAR	9814108

Relevant vehicle

VIN	Model	Year	Engine	Transmission	Steering

1.

Note! ALWAYS start by inflating the tyres to **comfort** pressure.

Note! ALWAYS test drive with the customer and allow the customer to describe the interference.

Note! ALWAYS record the noise and include in the report.

2.

Questions to be filled in with the customer

1: When was the interference noticed for the first time?

Odometer: _____ KM

Odometer: _____ Miles

2: What type of interference?

- Noise
- Vibration

2:2 Experienced in?

- The steering wheel
- Floor
- Seats: Front
- Seats: Rear
- Seats: Third row (XC90)

3: When does the interference occur?

- Stationary vehicle during "revving engine"
- uphill
- Downhill
- Whilst driving
- Rolling vehicle
- Acceleration
- Deceleration

Speed:_____ km/h

Speed:_____ mph

Engine speed:_____ Rpm

Which gear(s)?_____

- Recurring
- Sporadic

4: Weather conditions when the interference occurs?

Outdoor temperature:_____°C

- Dry road
- Wet road

5: What type of road surface?

6: Vehicle status?

- Cold
- Hot

Further questions

7: Engine temperature? _____ °C

8: If there is a sound file, where is it recorded?

- In the passenger compartment, front seat
- In the passenger compartment, rear seat
- Under the vehicle
- In the engine compartment

Describe at what second the noise is heard. _____ Sec?

9: Has Chassis-ear, 9814108, been used for fault tracing?

- Yes
- No

10: What type of recording equipment has been used? _____

11: Space for further comments.



TJ 20803

VIBRATIONS IN SPA CARS

**AT CONSTANT SPEED AND MODERATE ACCELERATION
(MAINLY 50-83 Mph , 80 - 135 KM/H)**

Issuer:
CMQ NVH Quality
Lisette Hey

FIRST TESTS



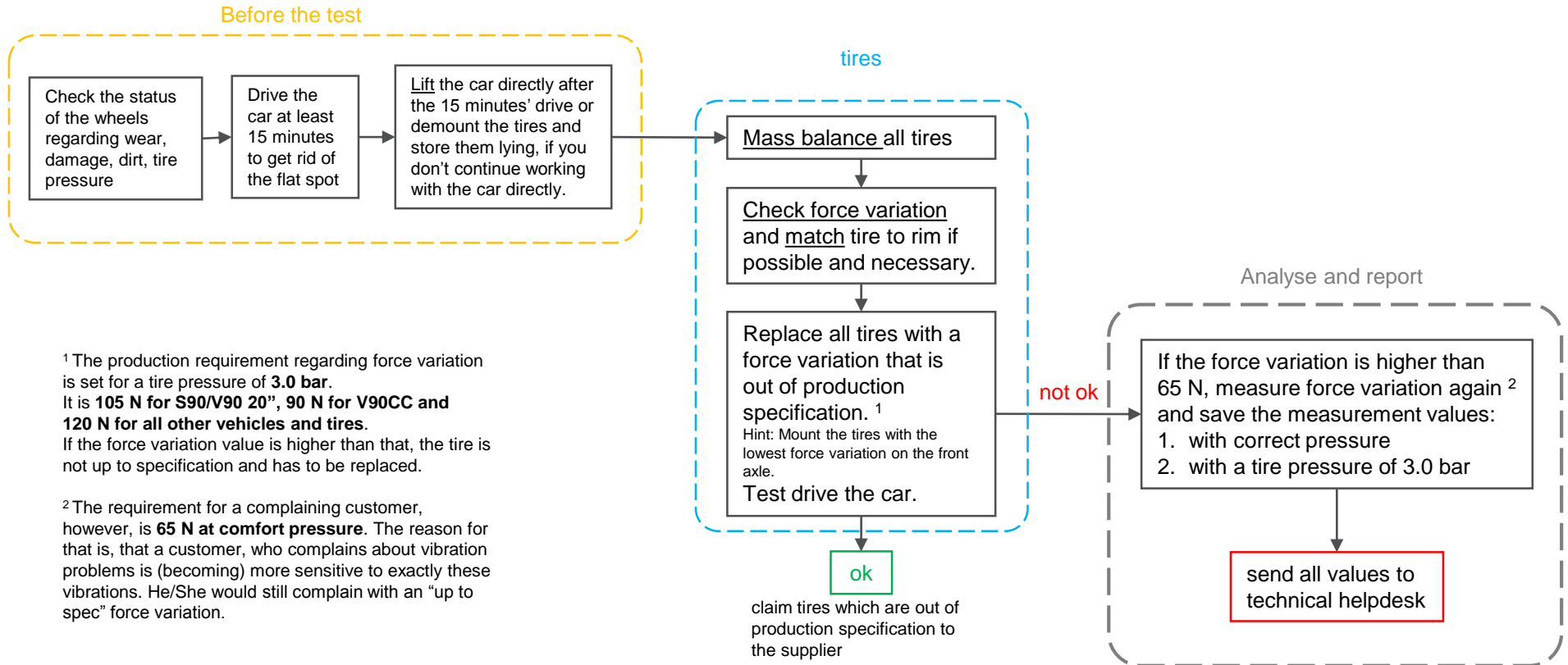
If none of the tests helps, submit a report to technical helpdesk.

Make sure to perform the test drive on a smooth, straight and dry road.

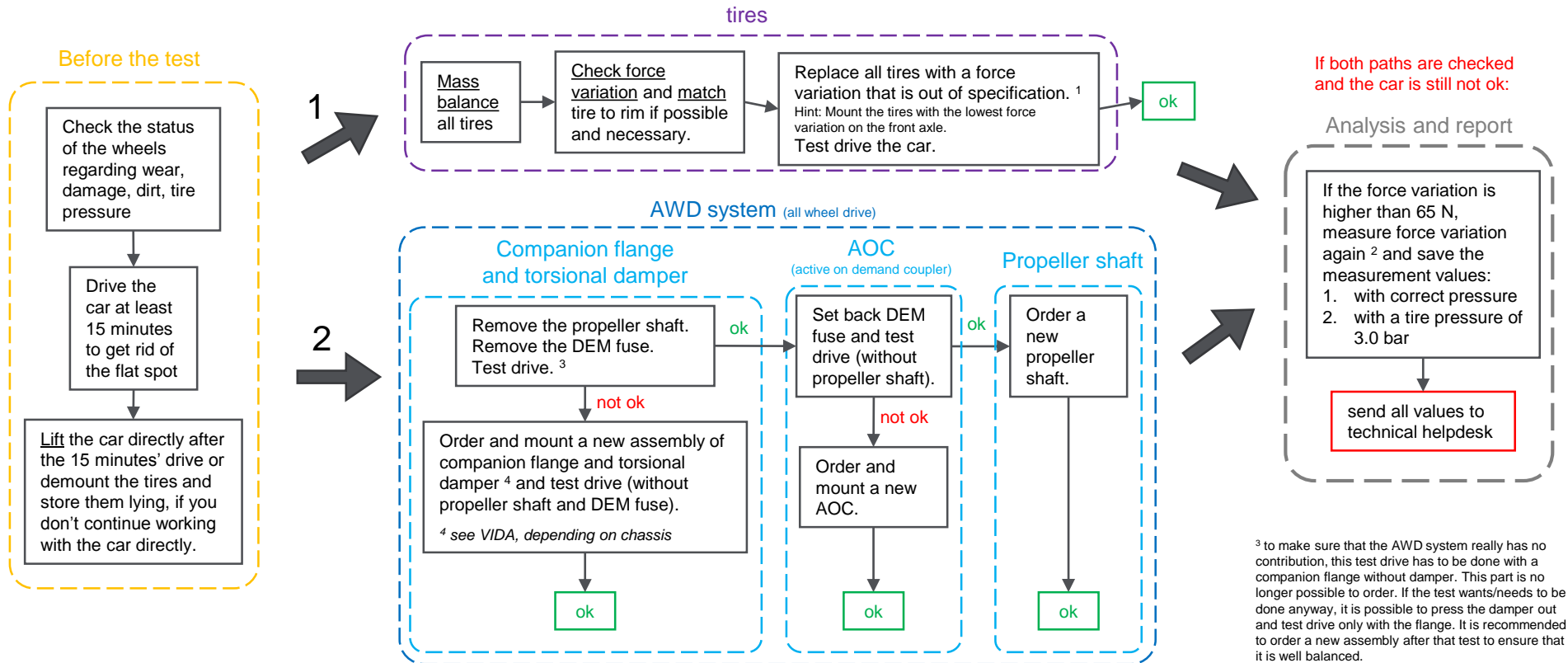
Make sure all tires have correct pressure.

Make sure to drive the car 15 minutes before judging, to avoid flat spot contribution.

FRONT WHEEL DRIVEN CAR (INCL. HYBRID)



ALL WHEEL DRIVEN CAR





IF THE CAR IS STILL VIBRATING...

If the car is still vibrating, send a report to technical helpdesk.

The report has to include:

- ✓ T9379
- ✓ Which problem does the customer experience?
- ✓ What work has been done so far?
- ✓ **Numbers of the force variation measurement** of the Hunter machine (including tire pressure)