

## **Road vehicles - Multimedia data exchange format for impact tests**

*Véhicules routiers — Format d'échange de données multimédia pour les essais de choc*

### **Related electronic document C**

### **Figures**

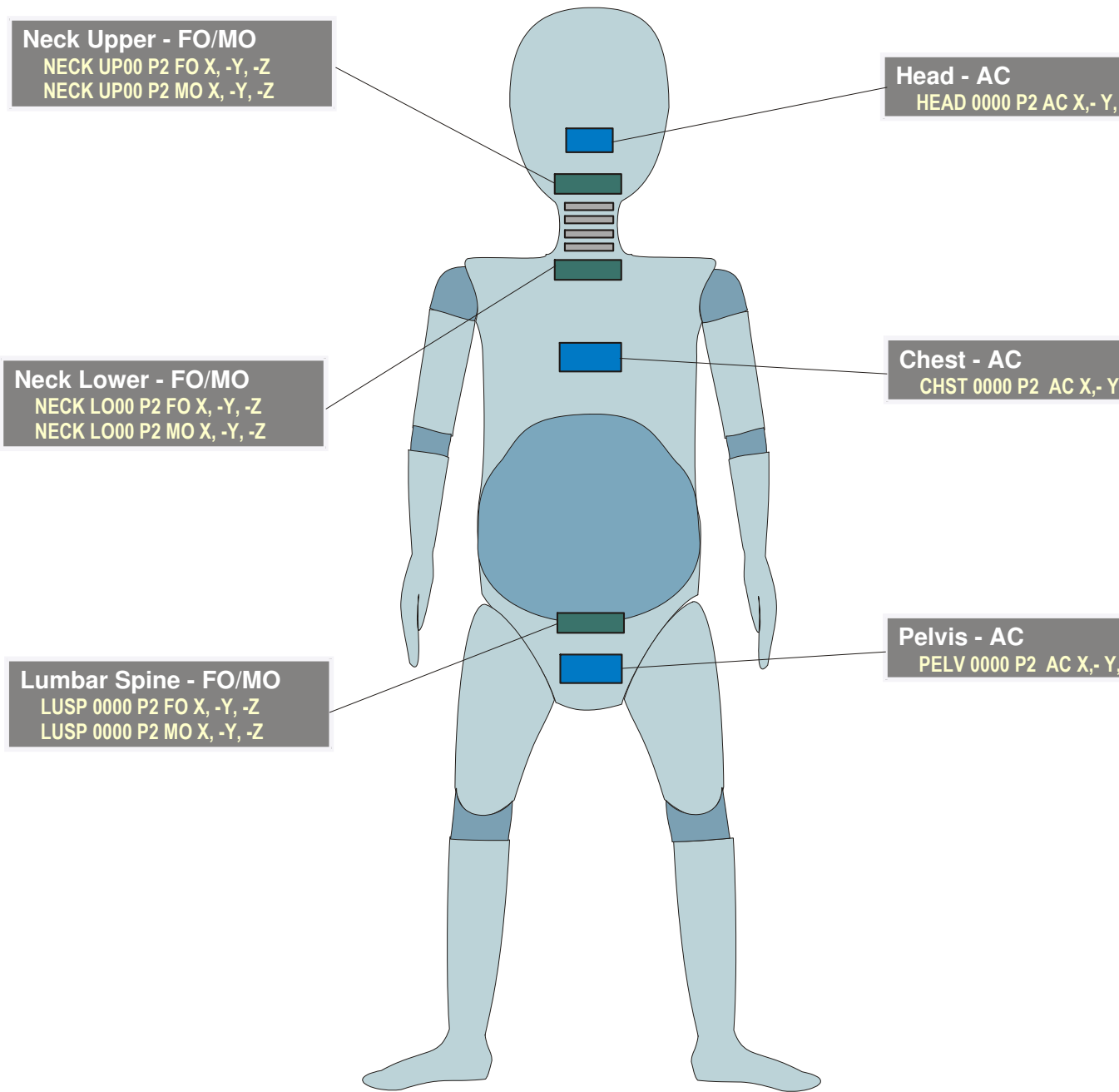
— Version 1.6 —

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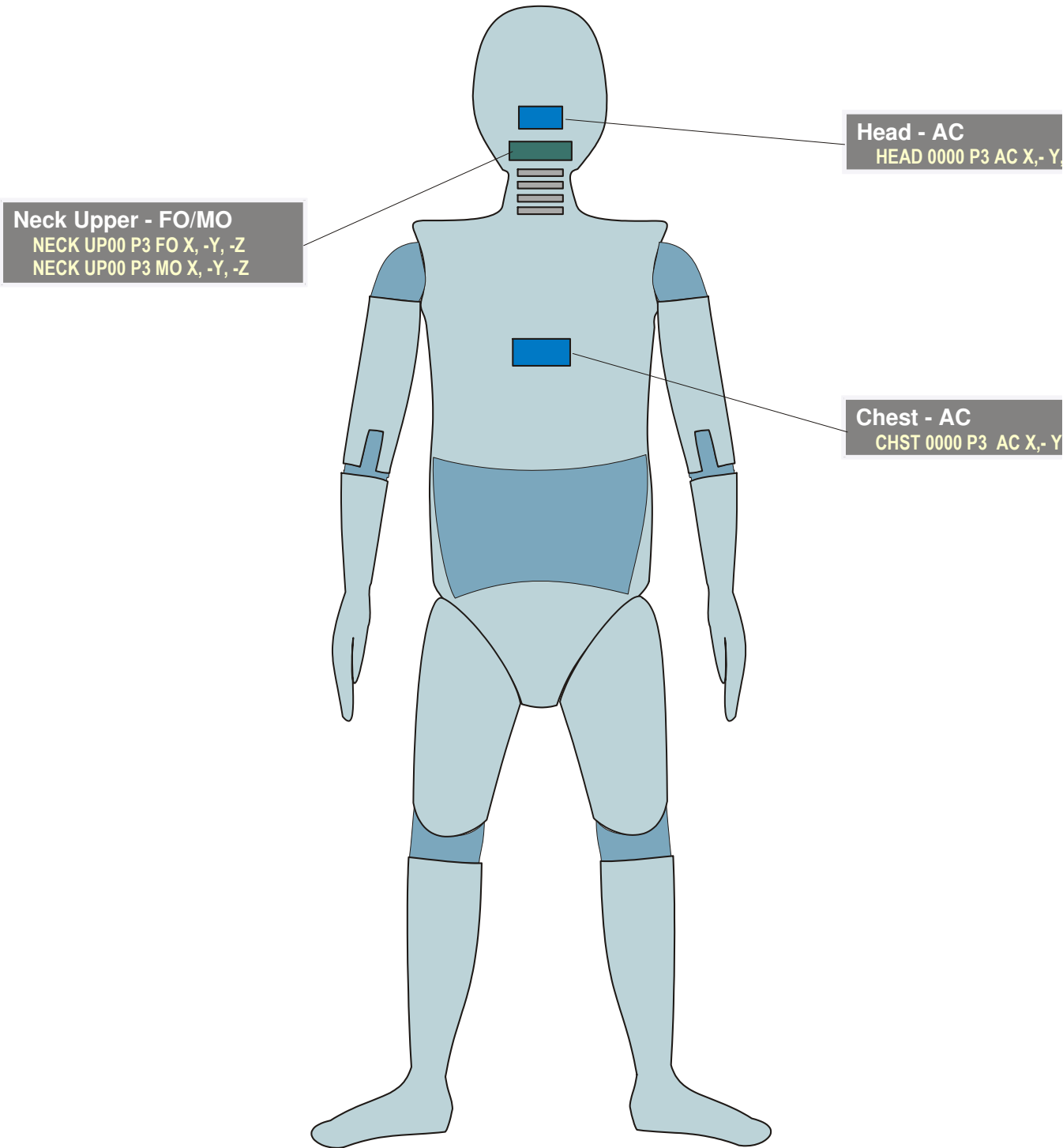
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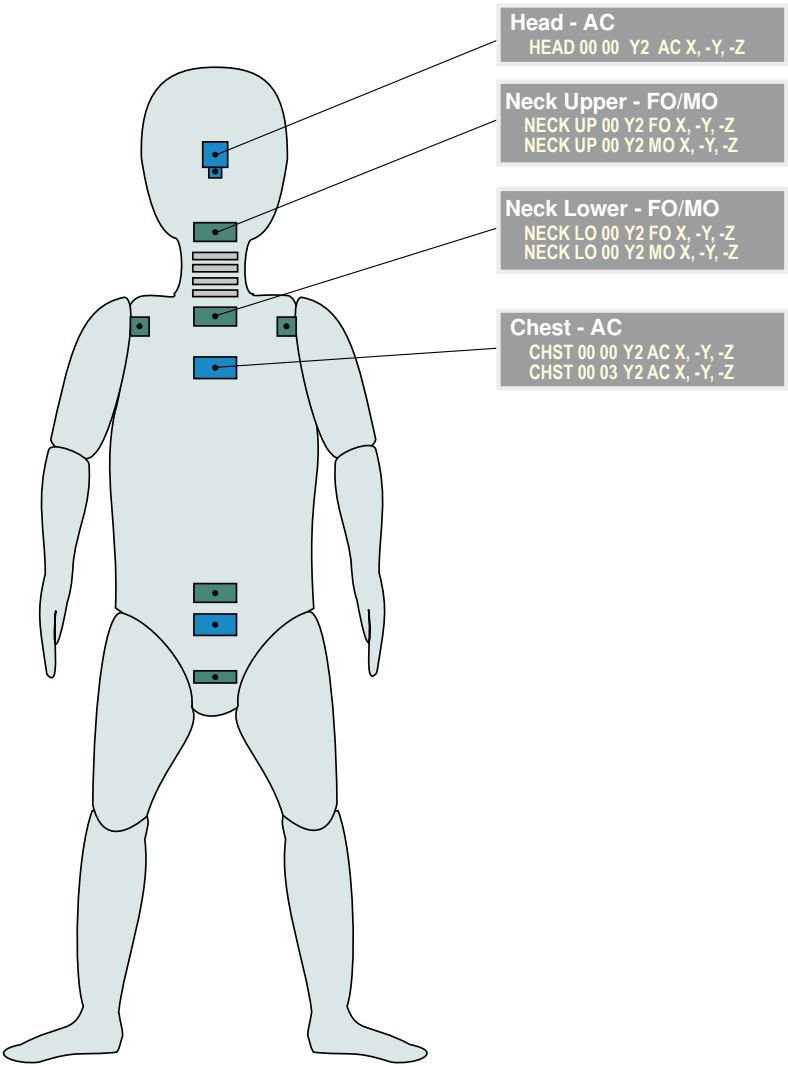
P3 TNO P 3 year old

Valid since Version 1.1





ISO/TS 13499 – RED C : 2010(E)  
Y2, CRABI 12 Month Old Infant Dummy  
Standard Instrumentation  
2011-12-20



Y2

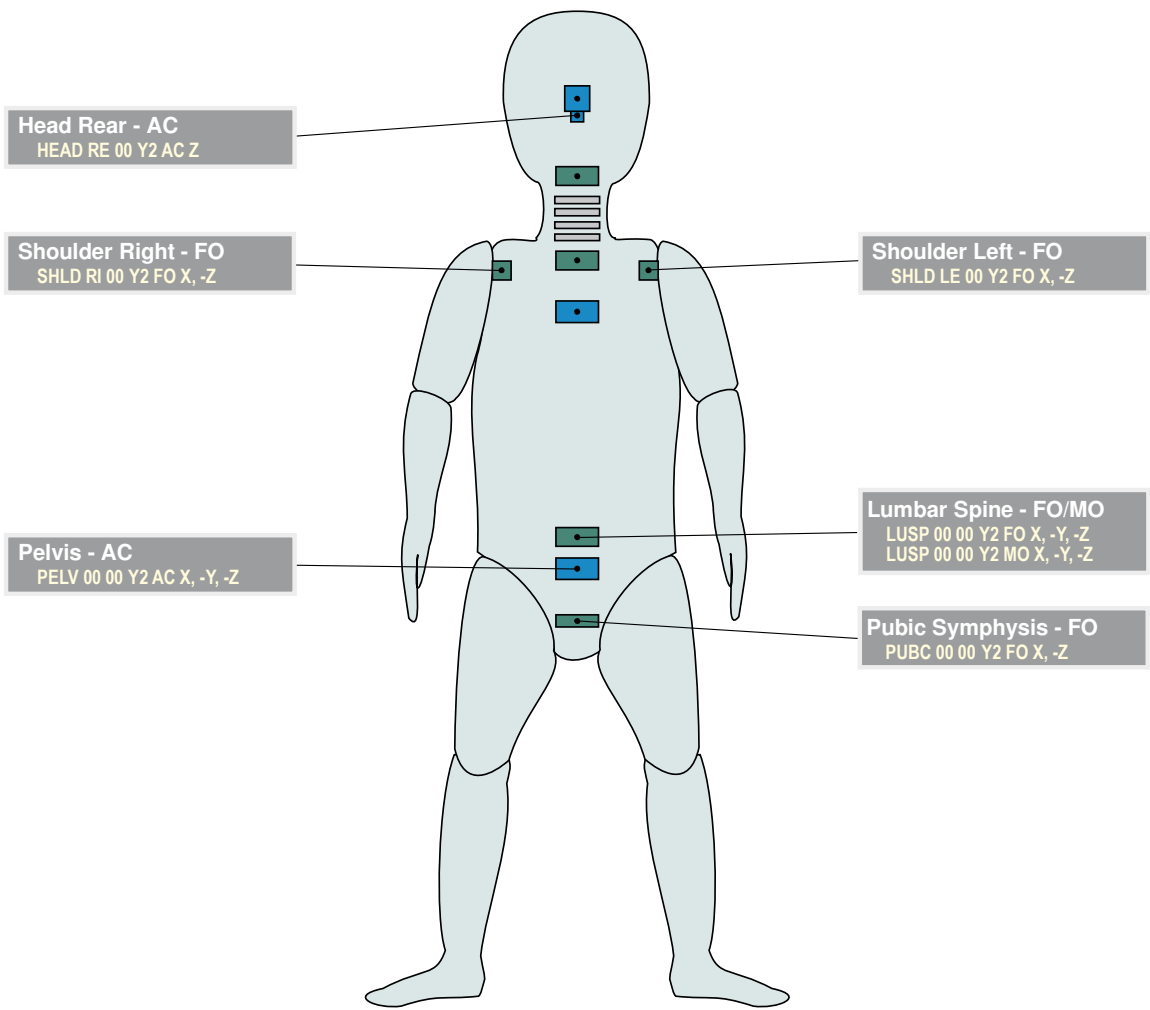
CRABI 12 month old (2)

Valid since Version

1.6

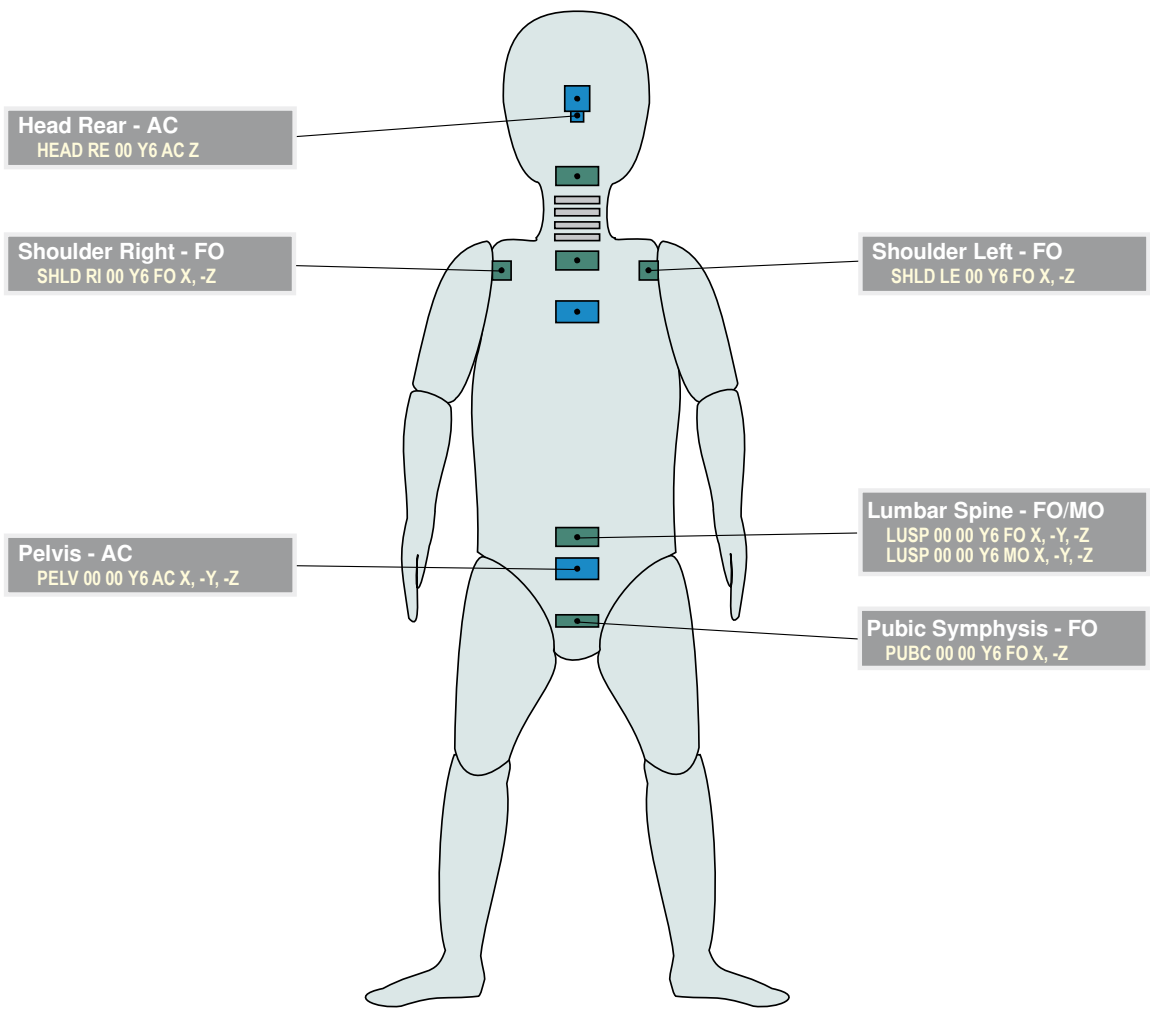


ISO/TS 13499 – RED C : 2010(E)  
Y2, CRABI 12 Month Old Infant Dummy  
Additional Instrumentation  
2011-12-20





ISO/TS 13499 – RED C : 2010(E)  
Y6, Hybrid III 3 Year Old Child Dummy  
Additional Instrumentation  
2011-12-20



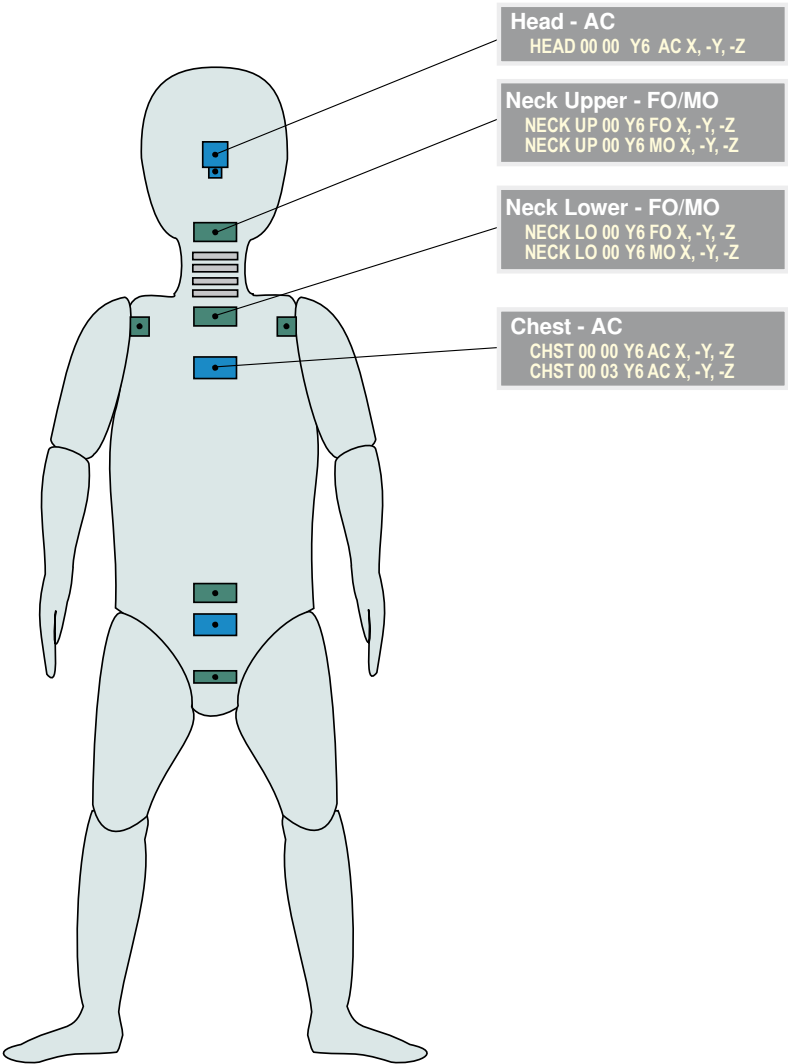


Y6      H III - 3 year old (1)

Valid since Version      1.6

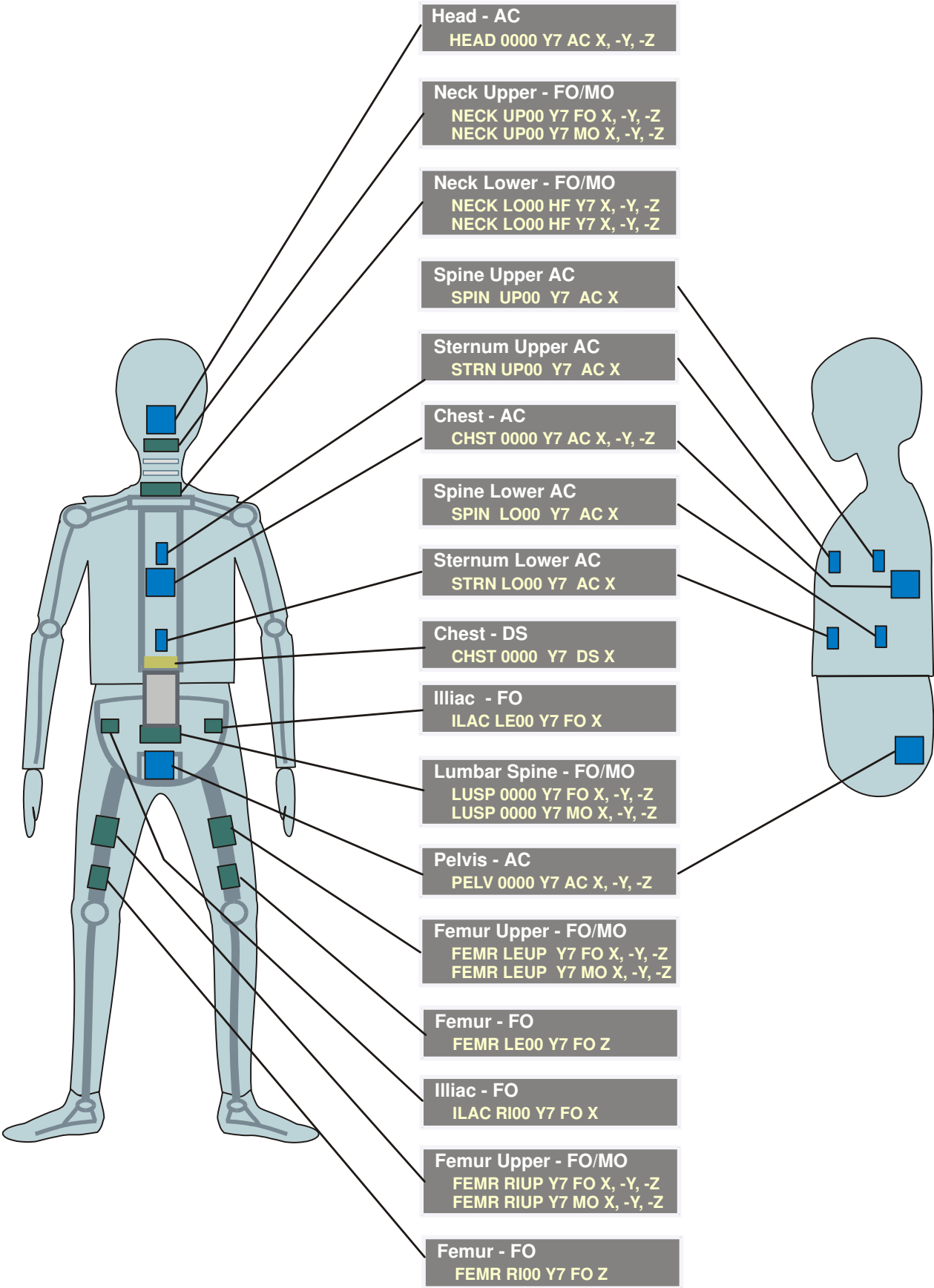


ISO/TS 13499 – RED C : 2010(E)  
Y6, Hybrid III 3 Year Old Child Dummy  
Standard Instrumentation  
2011-12-20



Y7      H III - 6 year old

Valid since Version      1.1  
NPRM Level "I"



Q0

Q0 newborn

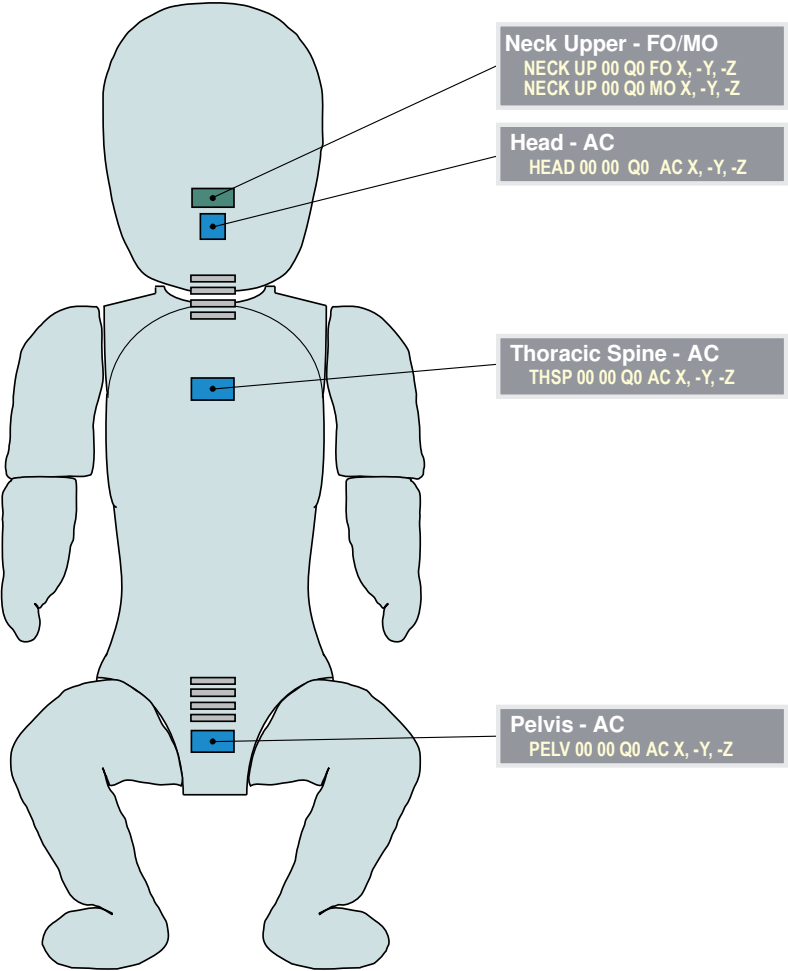
Valid since Version

1.6



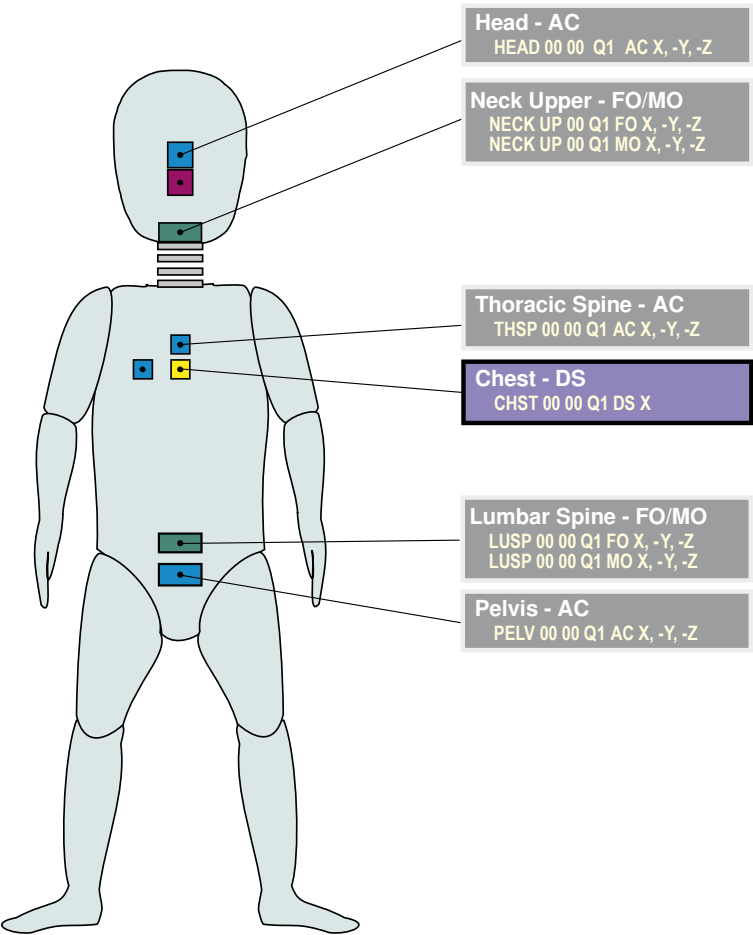
ISO/TS 13499 – RED C : 2012(E)  
Q0, 6-week Old Infant Dummy

2012-01-24





ISO/TS 13499 – RED C : 2012(E)  
Q1, Advanced 1-year old Dummy  
Standard Instrumentation  
2012-01-24



Frontal Impact



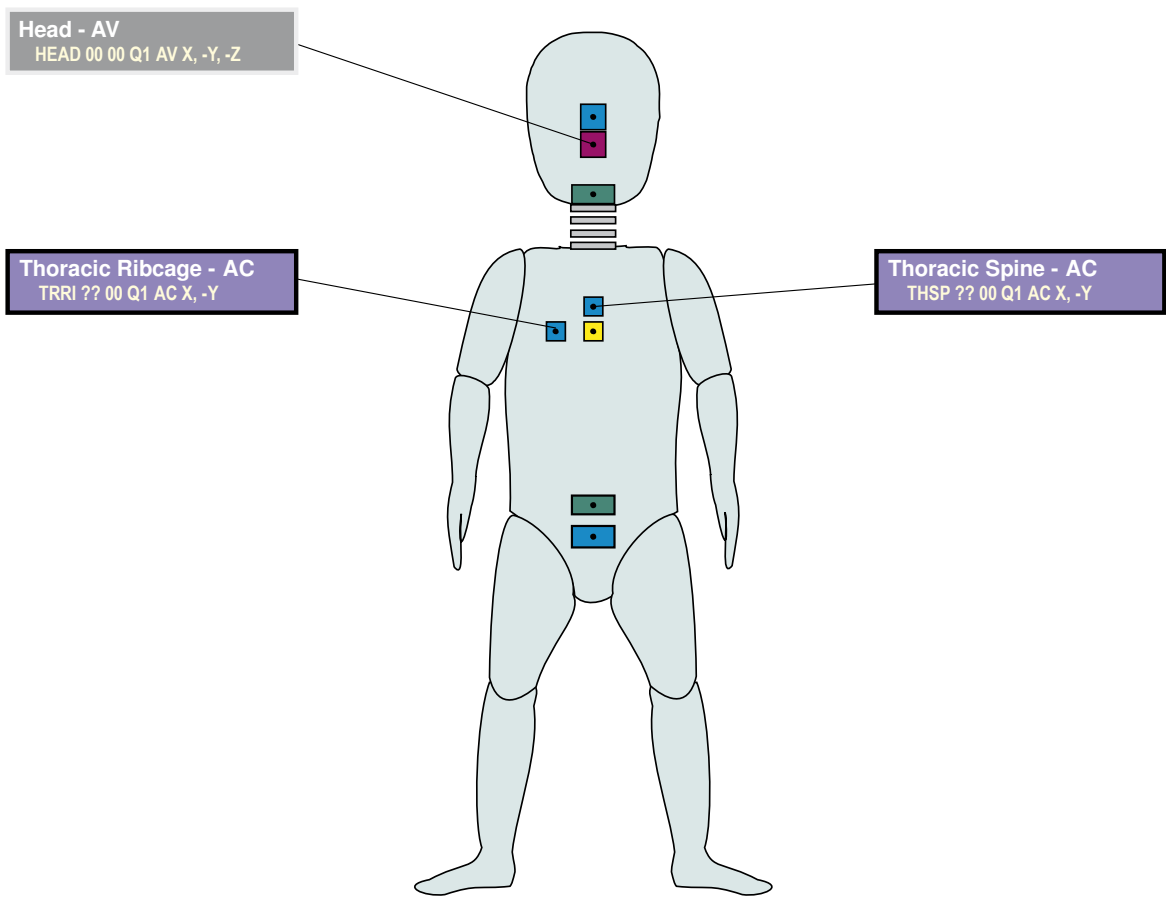
Note that sensor orientation is different for side impact configurations.  
ISO Codes used must reflect the chosen orientation.<sup>L</sup>  
Left-hand side impact: CHST LE 00 Q1 DS Y.<sup>L</sup>  
Right-hand side impact: CHST RI 00 Q1 DS Y.

Q1 Q1 (2)

Valid since Version 1.6



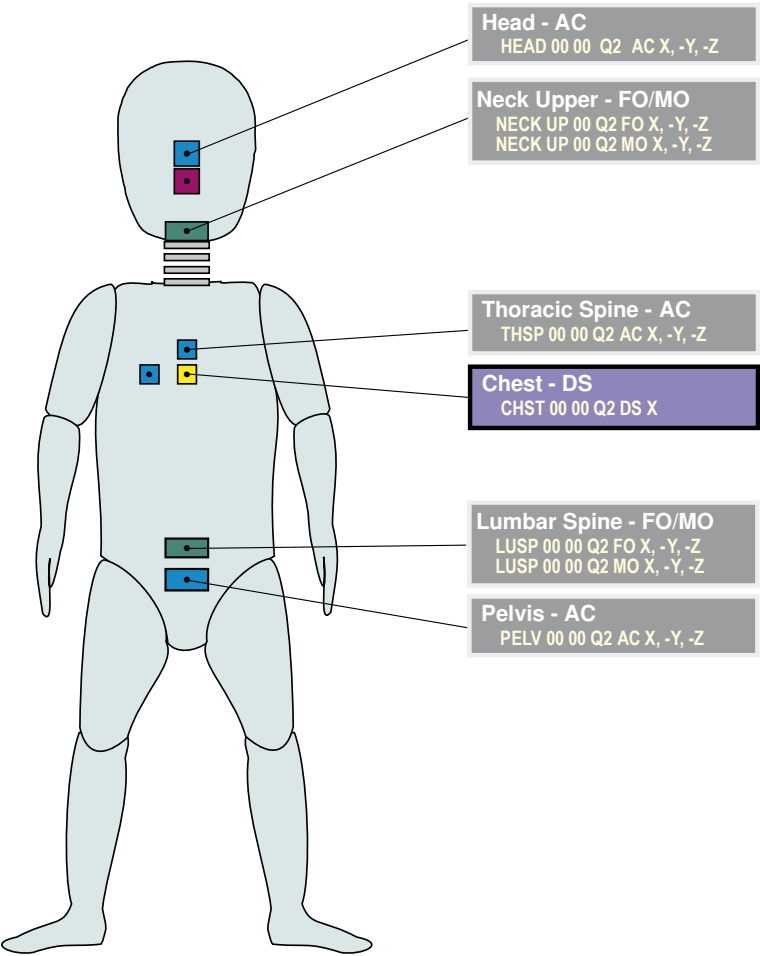
ISO/TS 13499 – RED C : 2012(E)  
Q1, Advanced 1-year old Dummy  
Additional Instrumentation  
2012-01-24



Note that sensor locations are not fixed: transducers are taped in position as required. ISO Codes used must reflect the chosen position.



ISO/TS 13499 – RED C : 2012(E)  
Q2, Advanced 1.5-year old child dummy (Q1.5)  
Standard Instrumentation  
2012-01-24



Frontal Impact

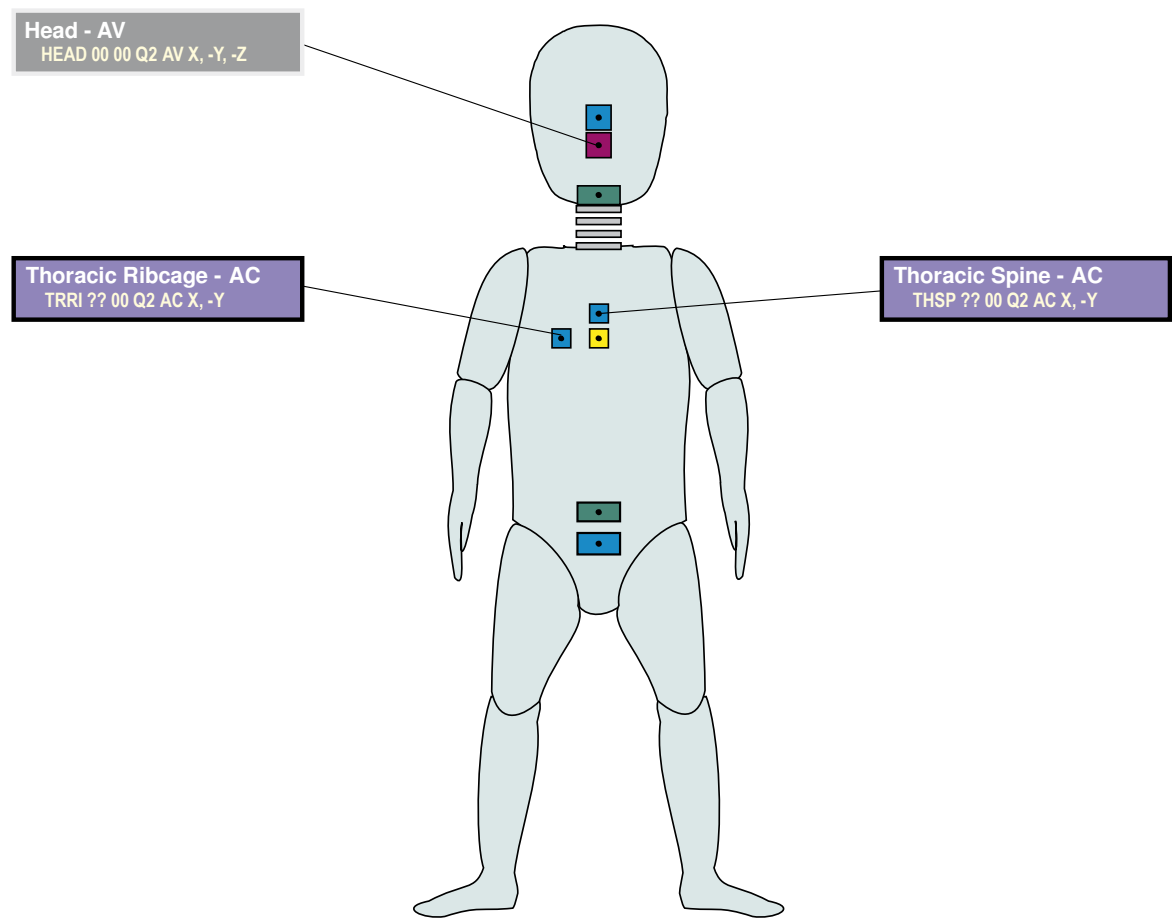
Note that sensor orientation is different for side impact configurations.  
ISO Codes used must reflect the chosen orientation.<sup>L</sup>  
Left-hand side impact: CHST LE 00 Q2 DS Y.  
Right-hand side impact: CHST RI 00 Q2 DS Y.

Q2 Q1 1/2 (2)

Valid since Version 1.6



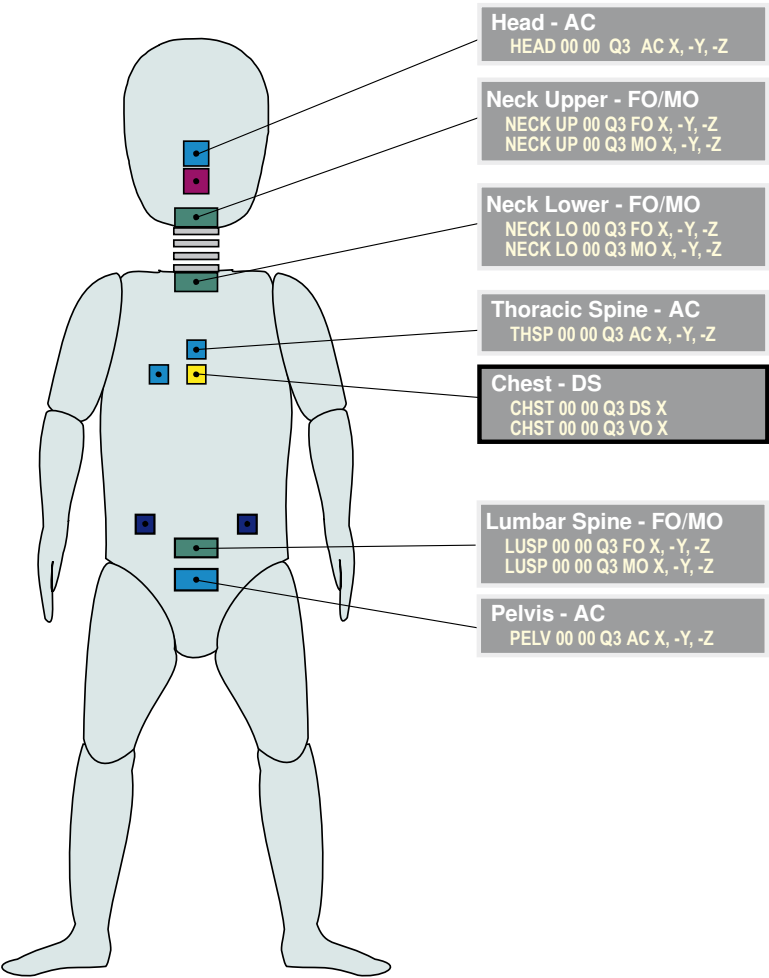
ISO/TS 13499 – RED C : 2012(E)  
Q2, Advanced 1.5-year old child dummy (Q1.5)  
Additional Instrumentation  
2012-01-24




Note that sensor locations are not fixed: transducers are taped in position as required. ISO Codes used must reflect the chosen position.



ISO/TS 13499 – RED C : 2012(E)  
Q3, Advanced 3-year old child dummy: frontal impact (Q3)  
Standard Instrumentation  
2012-01-24



 Note that the IR-TRACC device fitted to this dummy records a voltage.  
It is more normal to exchange the displacement channel.

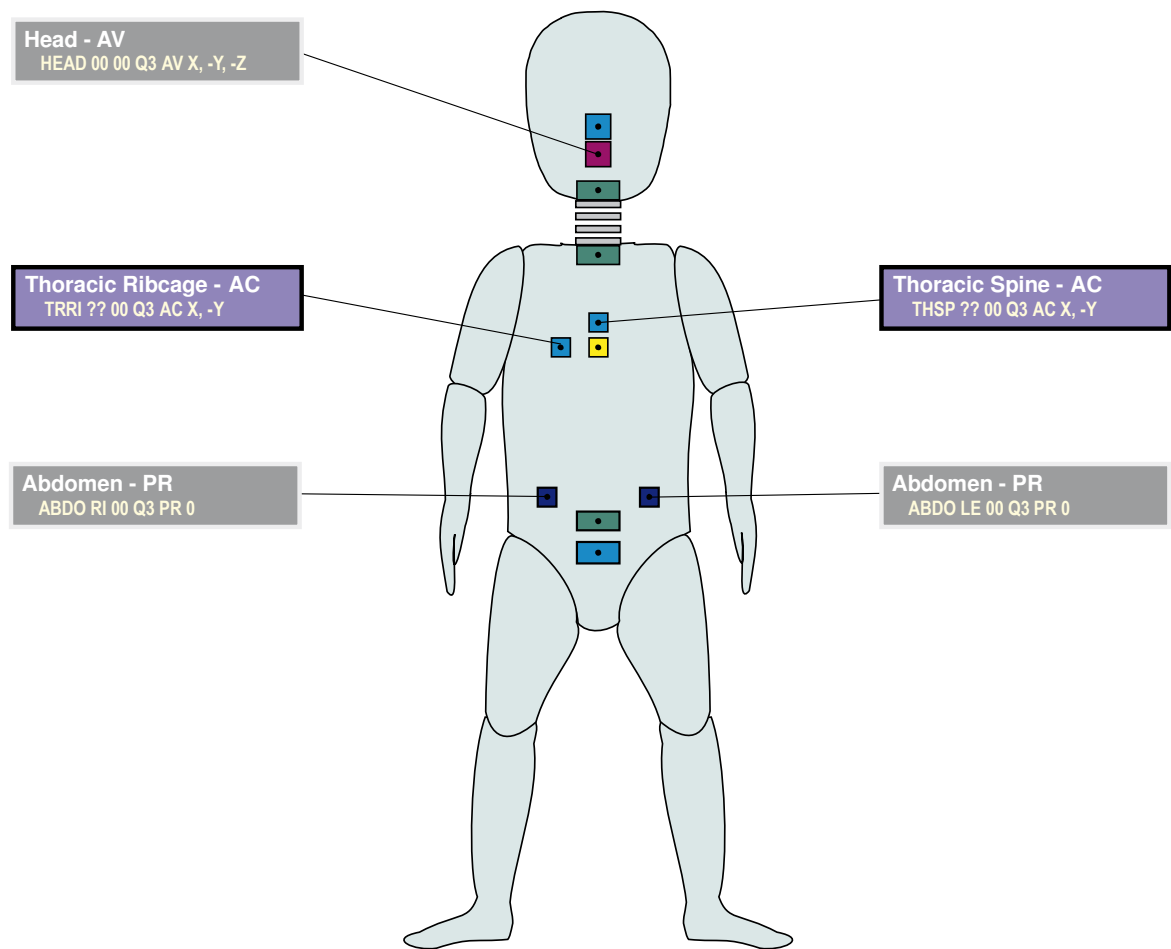


Q3 Q3 (2)

Valid since Version 1.6



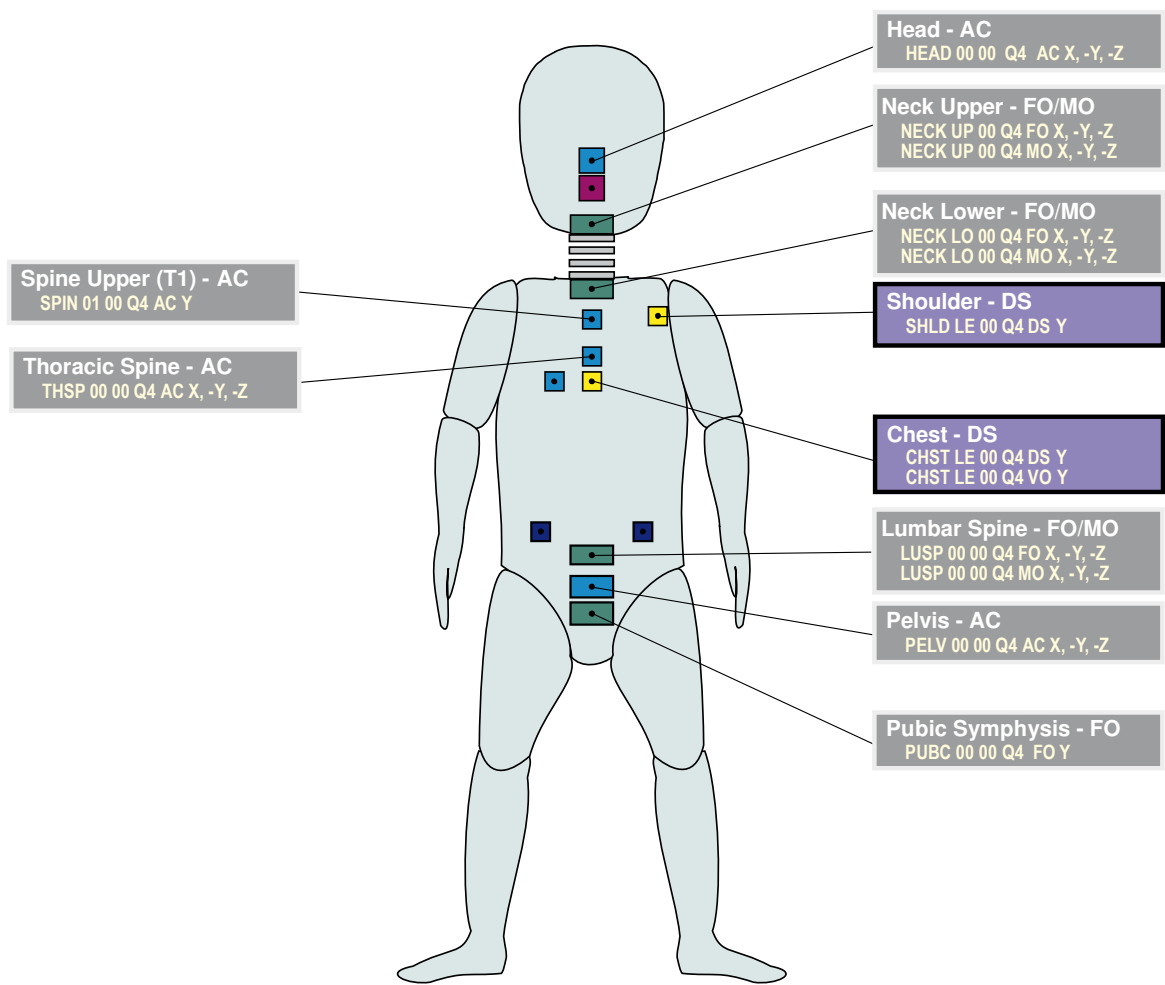
ISO/TS 13499 – RED C : 2012(E)  
Q3, Advanced 3-year old child dummy: frontal impact (Q3)  
Additional Instrumentation  
2012-01-24



Note that sensor locations are not fixed: transducers are taped in position as required. ISO Codes used must reflect the chosen position.



ISO/TS 13499 – RED C : 2012(E)  
Q4, Advanced 3-year old child dummy: side impact (Q3s)  
Standard Instrumentation  
2012-04-17



Left Side Impact, Front-View

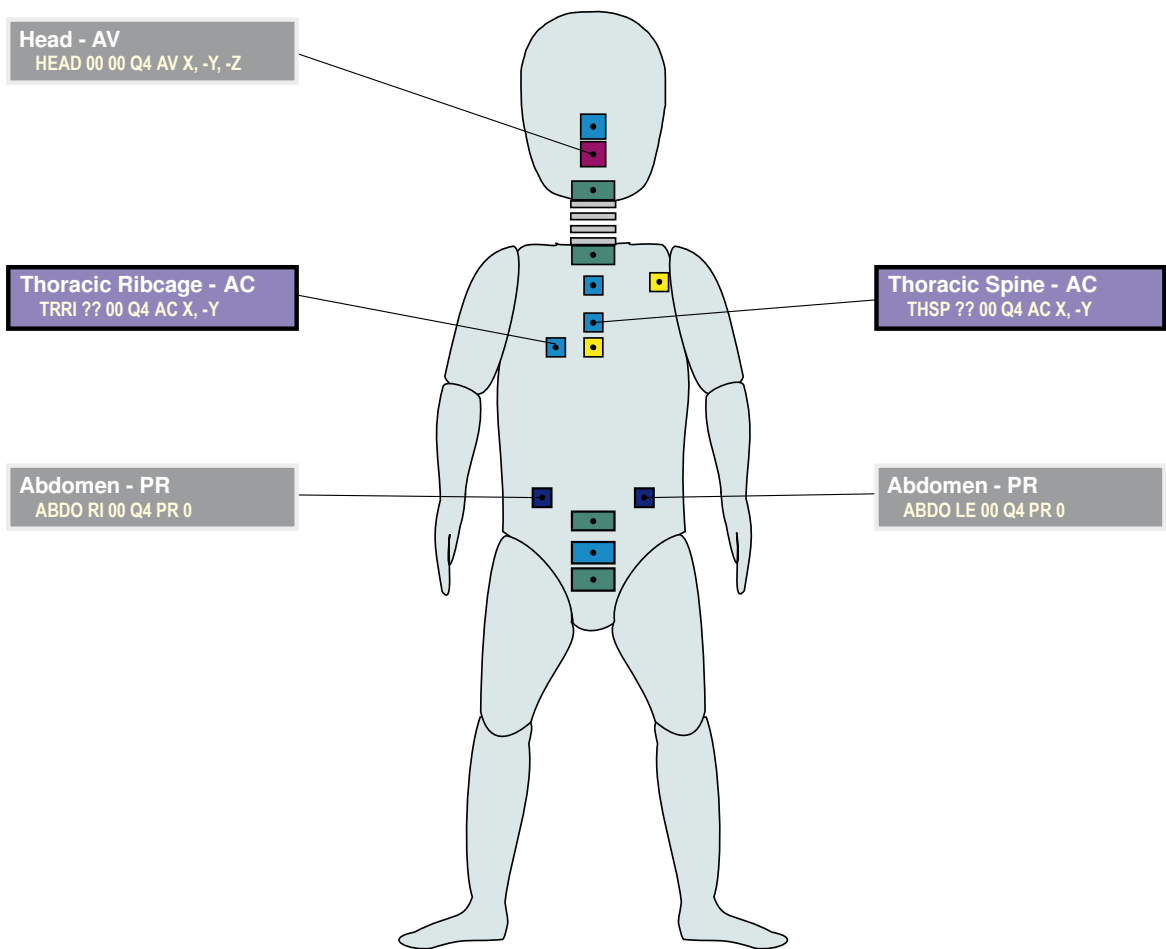
Note that sensor locations and ISO Codes are different for right side impact.  
Note that the IR-TRACC device fitted to this dummy records a voltage.  
It is more normal to exchange the displacement channel.

Q3s Q3s Side Impact (2)

Valid since Version 1.6



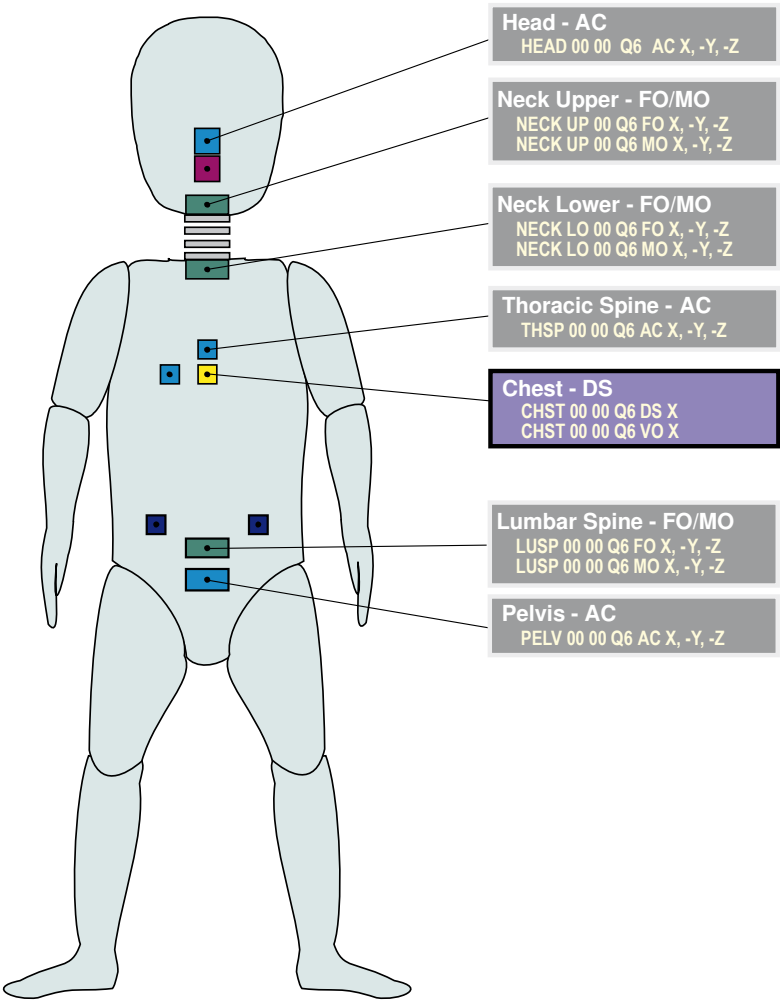
ISO/TS 13499 – RED C : 2012(E)  
Q4, Advanced 3-year old child dummy: side impact (Q3s)  
Additional Instrumentation  
2012-04-17



Note that sensor locations are not fixed: transducers are taped in position as required. ISO Codes used must reflect the chosen position.



ISO/TS 13499 – RED C : 2012(E)  
Q6, Advanced 6-year old child dummy  
Standard Instrumentation  
2012-01-24



Frontal Impact



Note that sensor orientation is different for side impact configurations.  
ISO Codes used must reflect the chosen orientation.<sup>L</sup>  
Left-hand side impact: CHST LE 00 Q6 DS Y and CHST LE 00 Q6 VO Y.<sup>L</sup>  
Right-hand side impact: CHST RI 00 Q6 DS Y and CHST RI 00 Q6 VO Y..

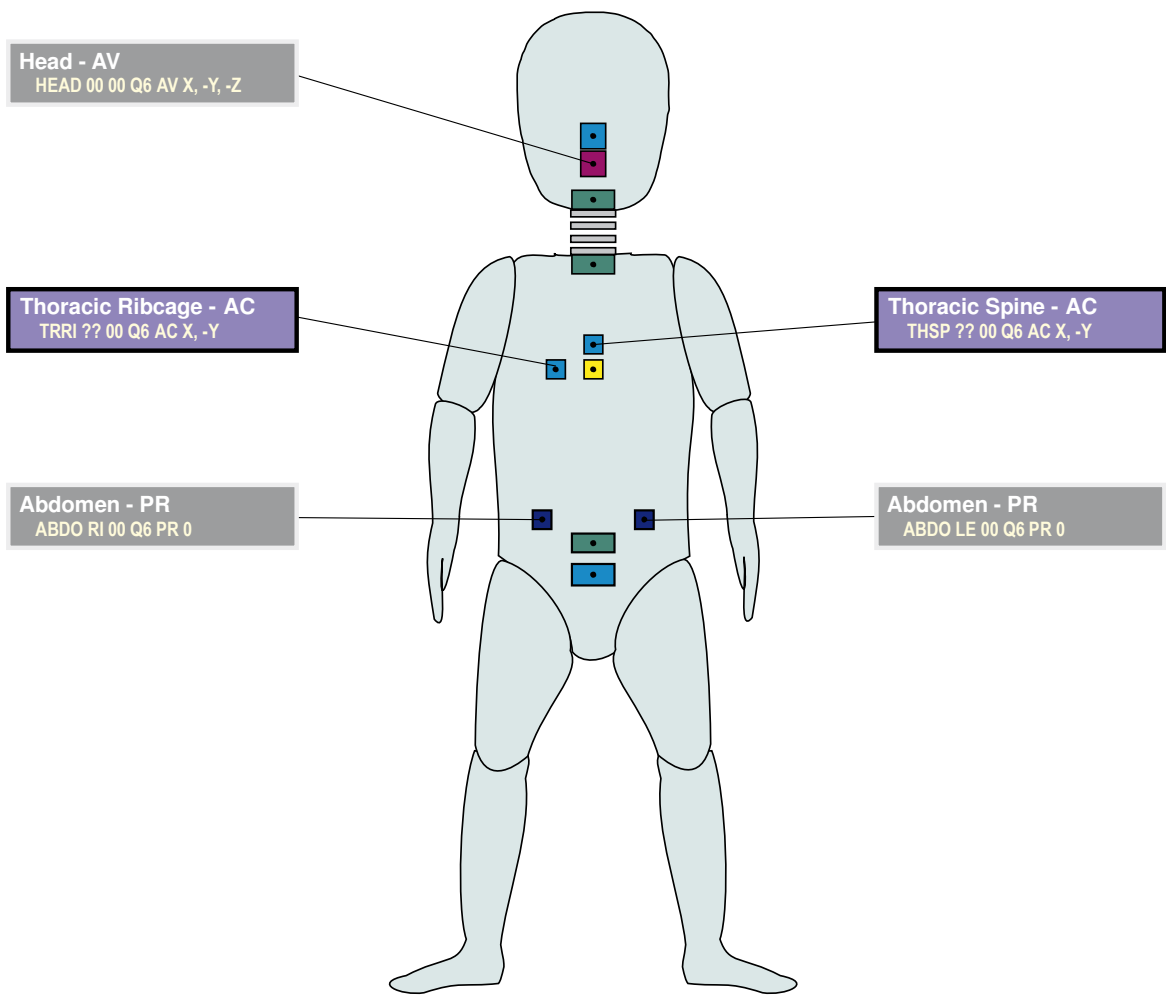
Note that the IR-TRACC device fitted to this dummy records a voltage.  
It is more normal to exchange the displacement channel.


Q6 Q6 (2)

Valid since Version 1.6



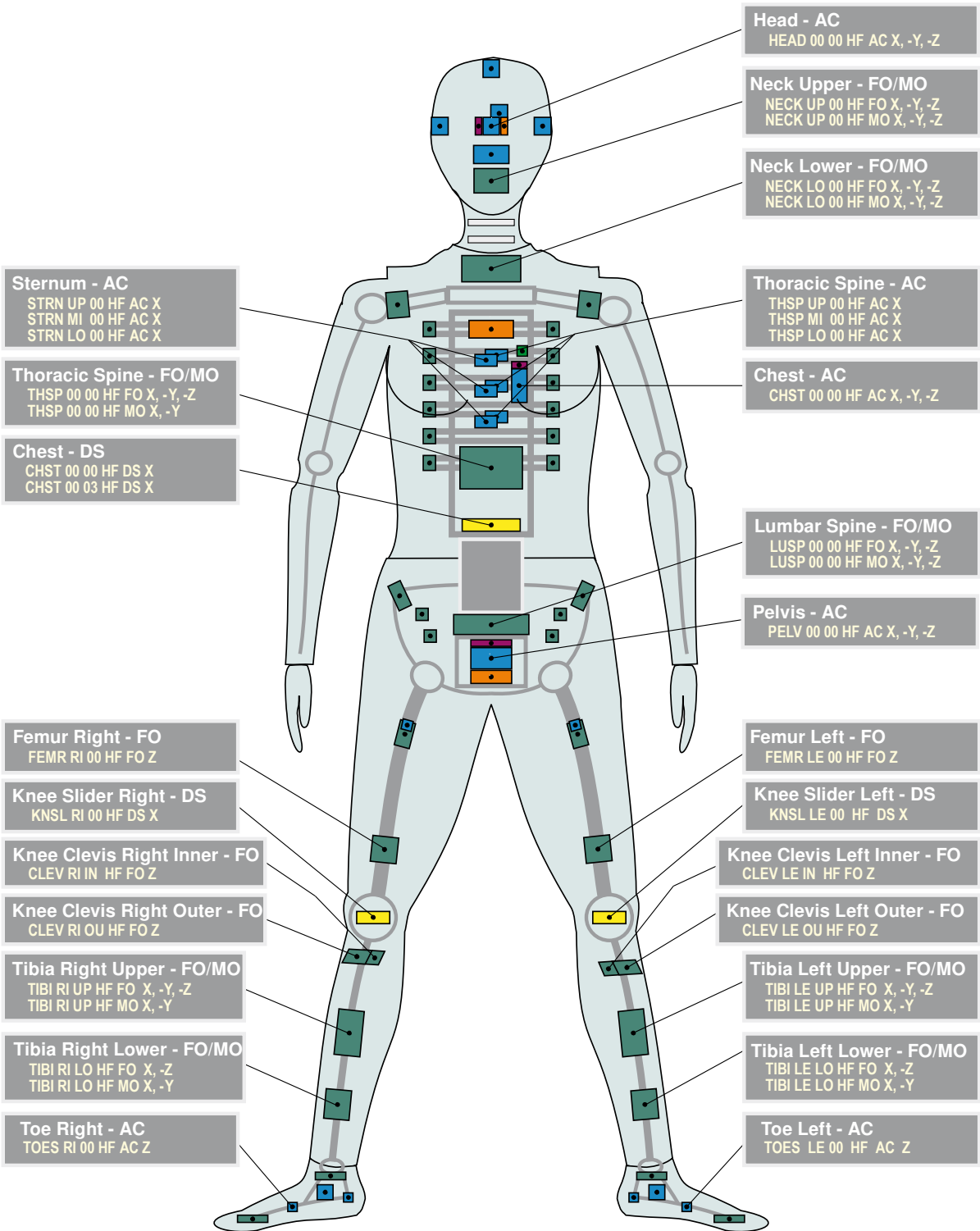
ISO/TS 13499 – RED C : 2012(E)  
Q6, Advanced 6-year old child dummy  
Additional Instrumentation  
2012-01-24



 Note that sensor locations are not fixed: transducers are taped in position as required. ISO Codes used must reflect the chosen position.



ISO/TS 13499 – RED C : 2012(E)  
HF, Hybrid III 5% female  
Standard Instrumentation  
2012-01-24



HF

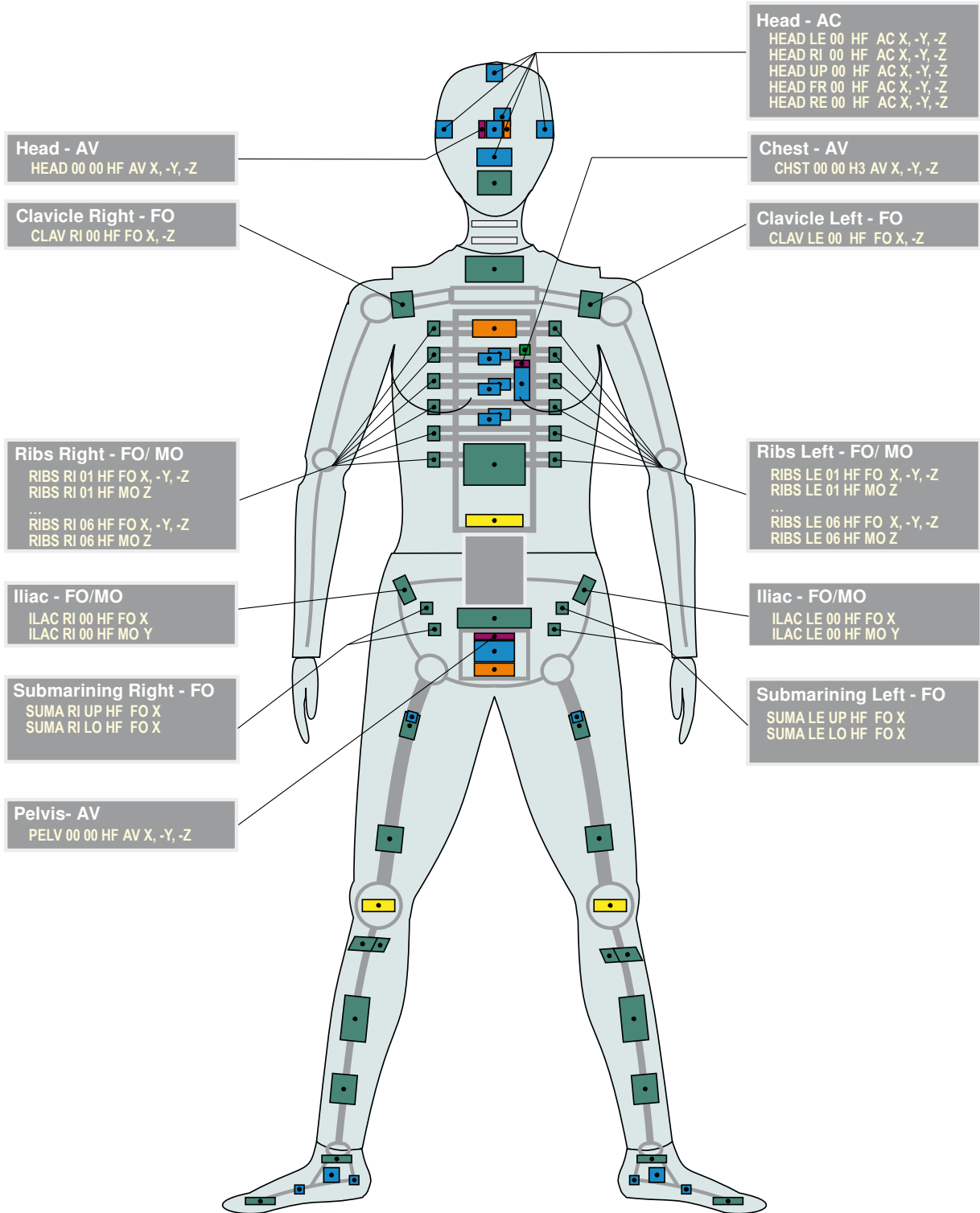
Hybrid III 5% Female (2)

Valid since Version

1.6



ISO/TS 13499 – RED C : 2012(E)  
 HF, Hybrid III 5% female  
 Additional Instrumentation - Head, Torso and Pelvis  
 2012-01-24



ISO-HF\_20120124

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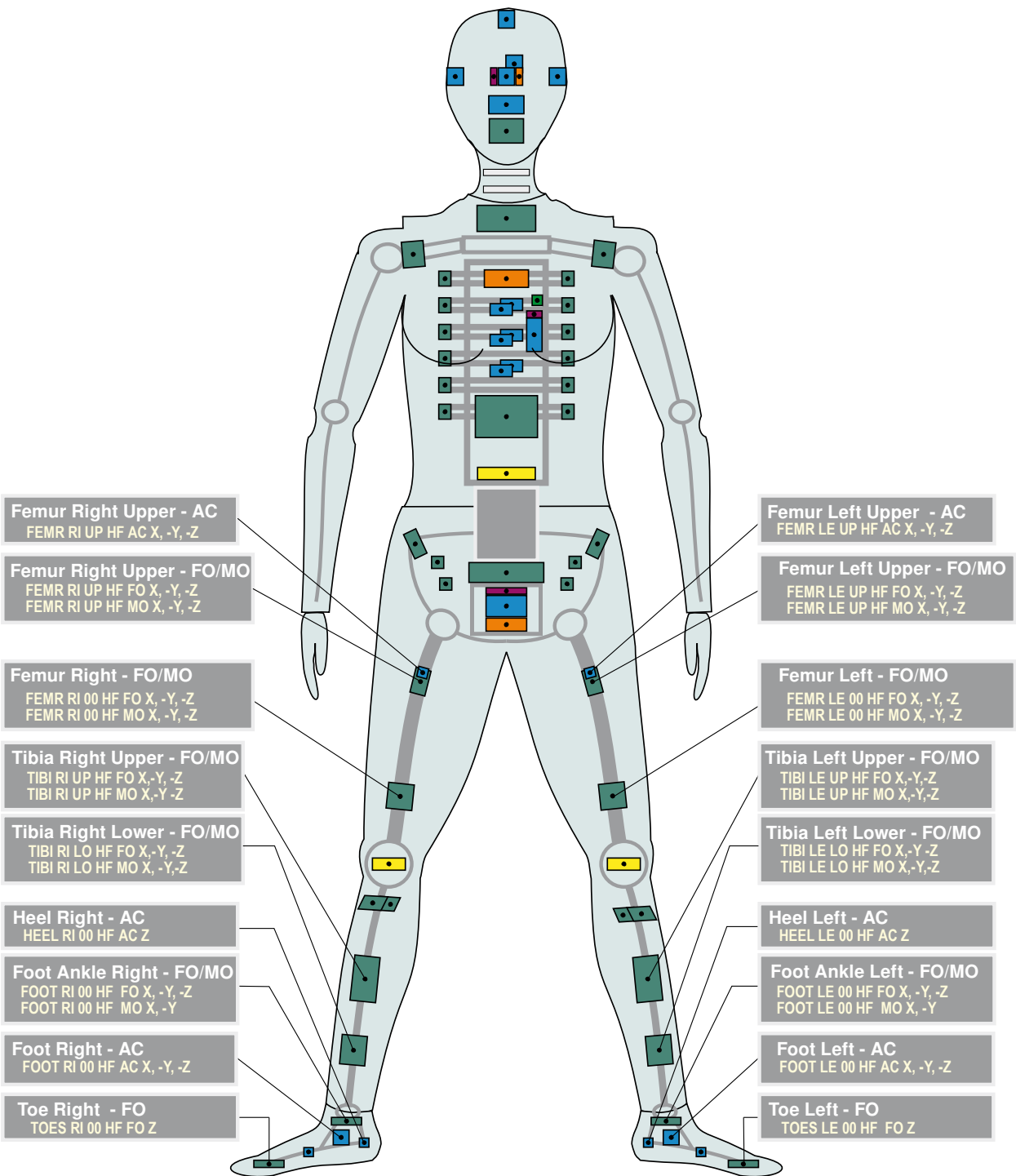
ISO TC 22 / SC 12 / WG 3 / ISO-MME Task Force<sup>1</sup>  
 Maintained by Paul Wellcome, MIRA Ltd.

ISO\_HF\_2\_16\_20120124.EMF

->HF<- 2 of 5



ISO/TS 13499 – RED C : 2012(E)  
HF, Hybrid III 5% female  
Additional Instrumentation - Legs  
2012-01-24



ISO-HF\_20120124



HF

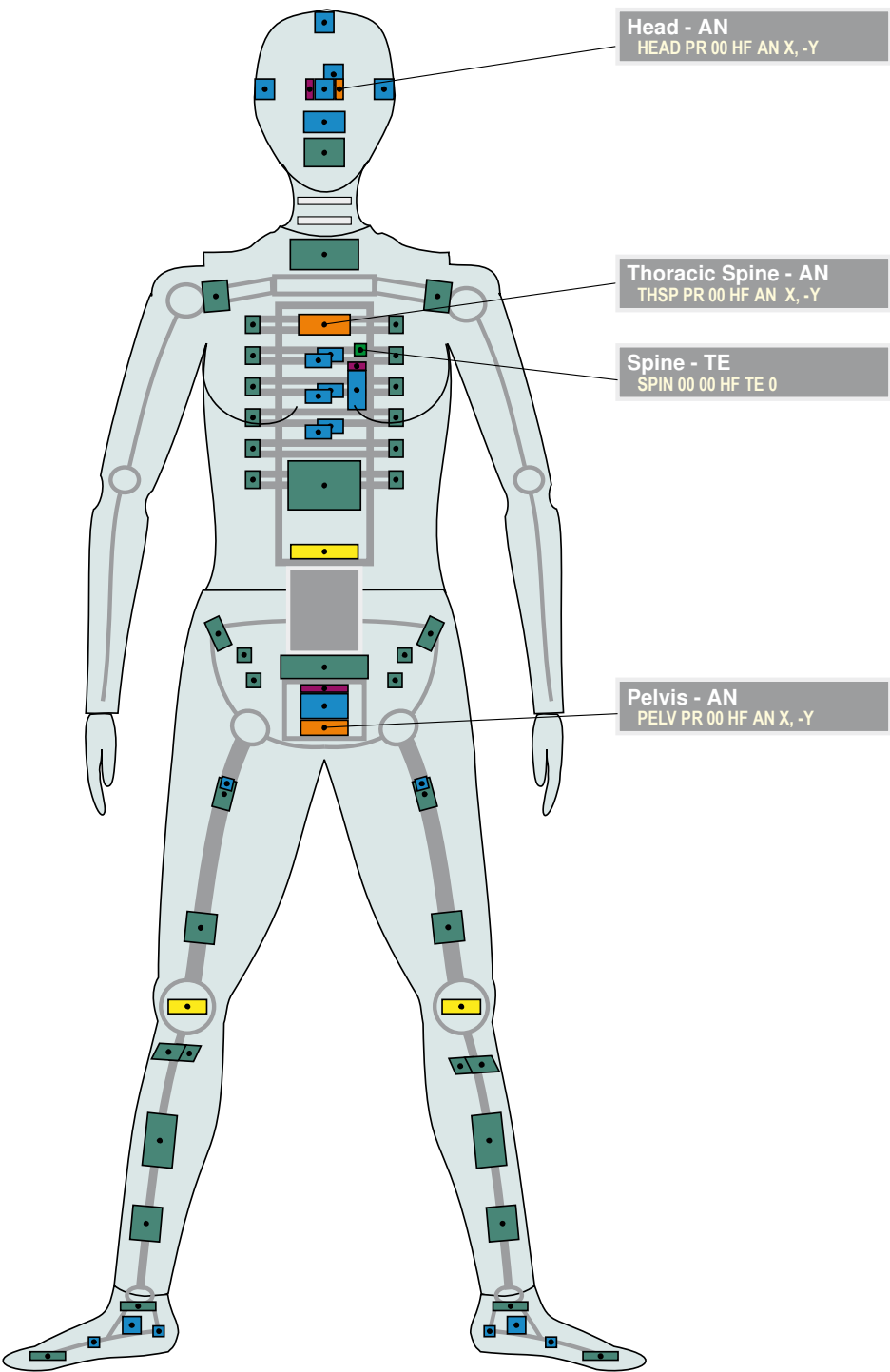
Hybrid III 5% Female (4)

Valid since Version

1.6



ISO/TS 13499 – RED C : 2012(E)  
HF, Hybrid III 5% female  
Static measurements, other channels  
2012-01-24



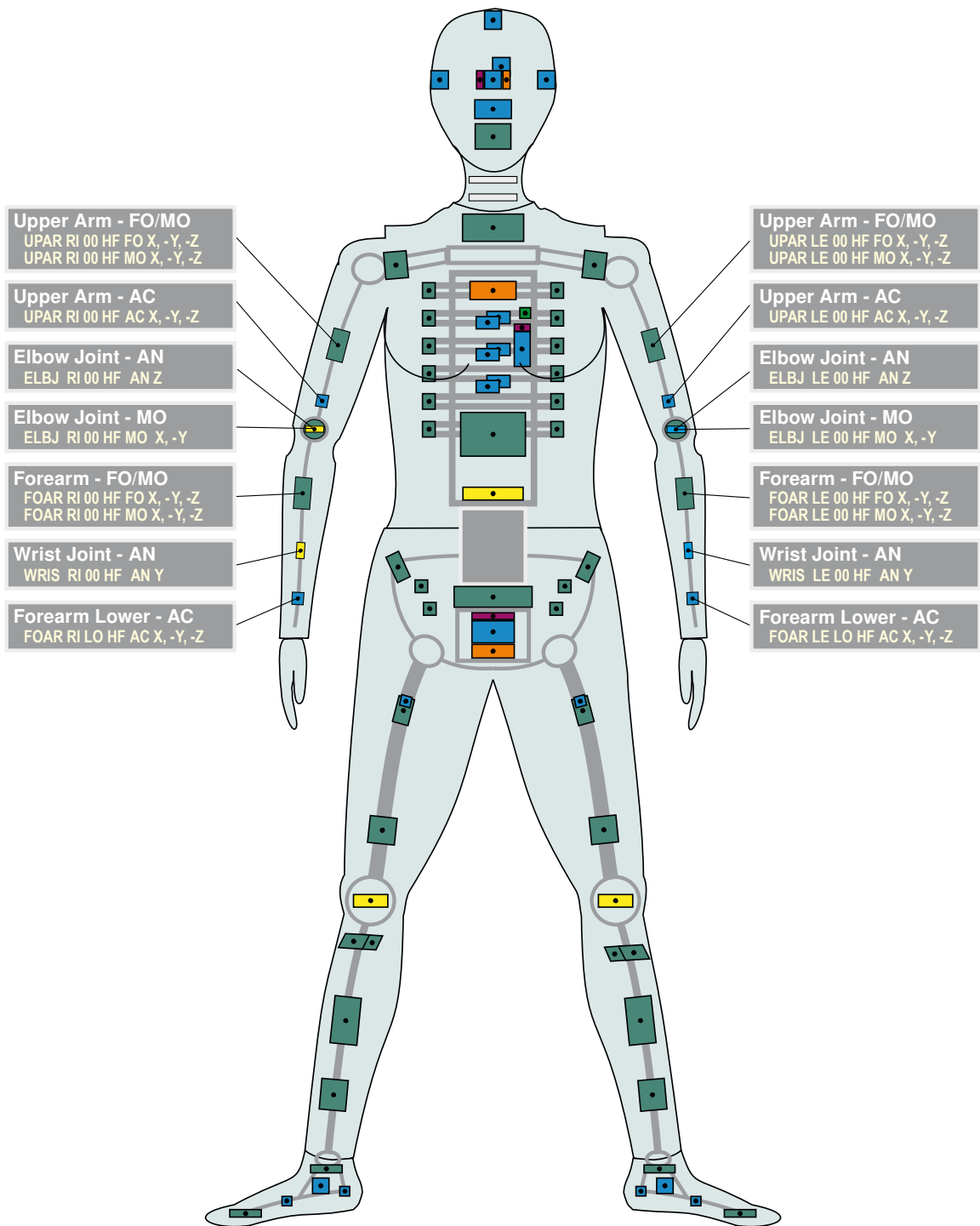
ISO-HF\_20120124

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ISO TC 22 / SC 12 / WG 3 / ISO-MME Task Force<sup>L</sup>  
Maintained by Paul Wellicome, MIRA Ltd.



ISO/TS 13499 – RED C : 2012(E)  
HF, Hybrid III 5% female  
Additional Instrumentation: Instrumented arm  
2012-01-24



H3

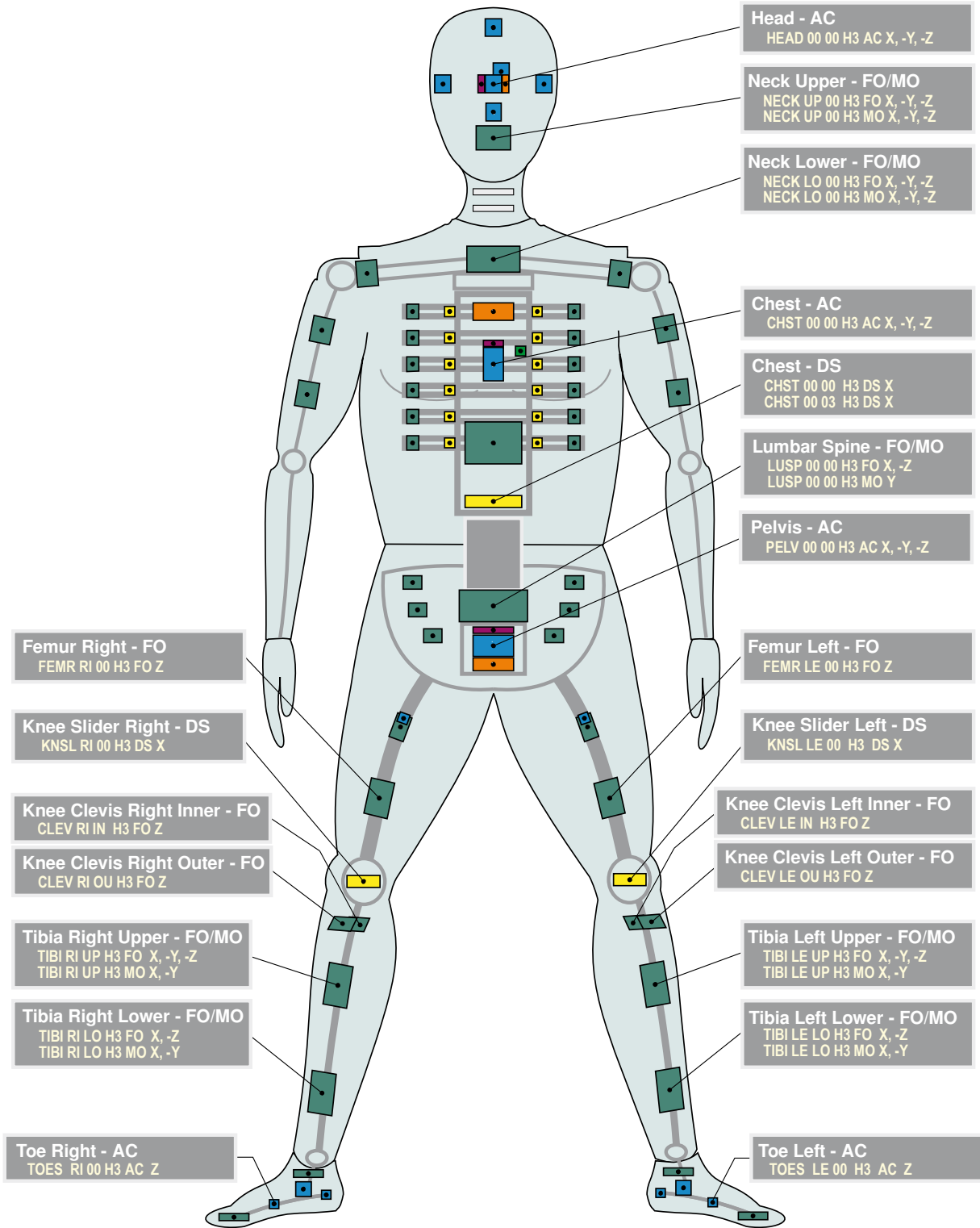
Hybrid III 50% Male (1)

Valid since Version

1.6



ISO/TS 13499 – RED C : 2012  
H3, Hybrid III 50% male  
Standard Instrumentation  
2012-01-24



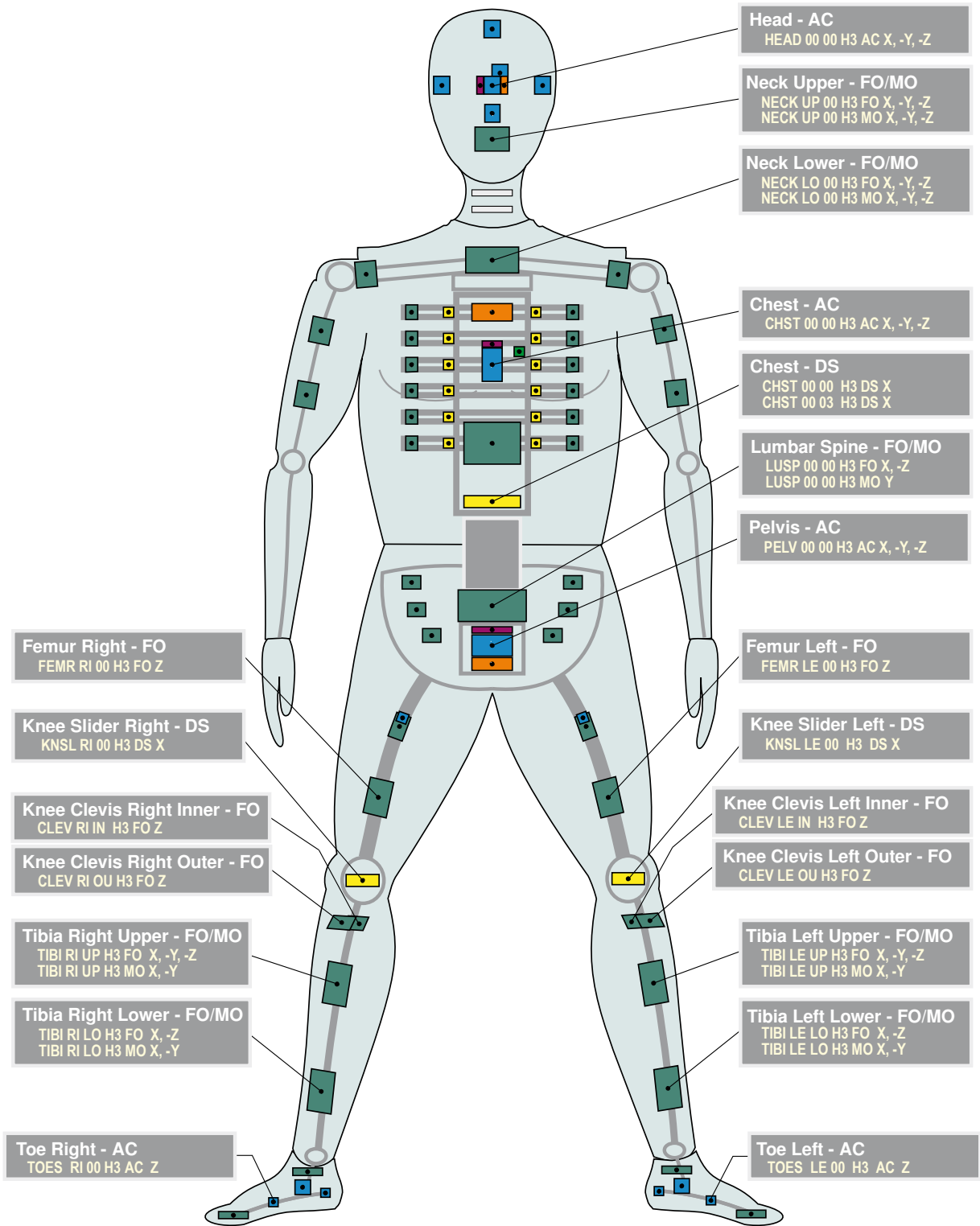
ISO-H3\_20120124

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ISO TC 22 / SC 12 / WG 3 / ISO-MME Task Force<sup>L</sup>  
Maintained by Paul Wellicome, MIRA Ltd.



ISO/TS 13499 – RED C : 2012  
H3, Hybrid III 50% male  
Standard Instrumentation  
2012-01-24



ISO-H3\_20120124

H3

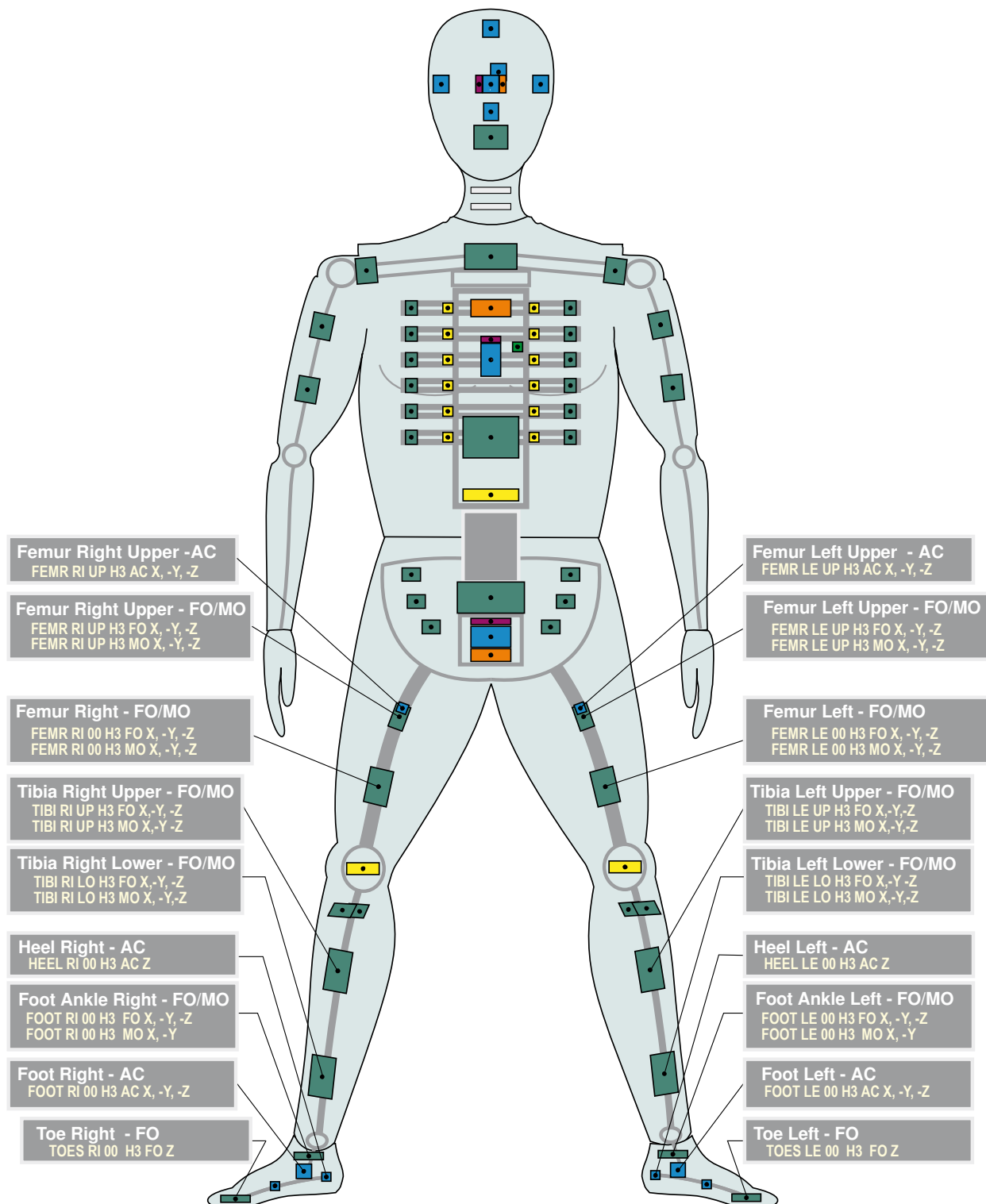
Hybrid III 50% Male (3)

Valid since Version

1.6



ISO/TS 13499 – RED C : 2012  
H3, Hybrid III 50% male  
Additional Instrumentation - Legs  
2012-01-24



ISO-H3\_20120124

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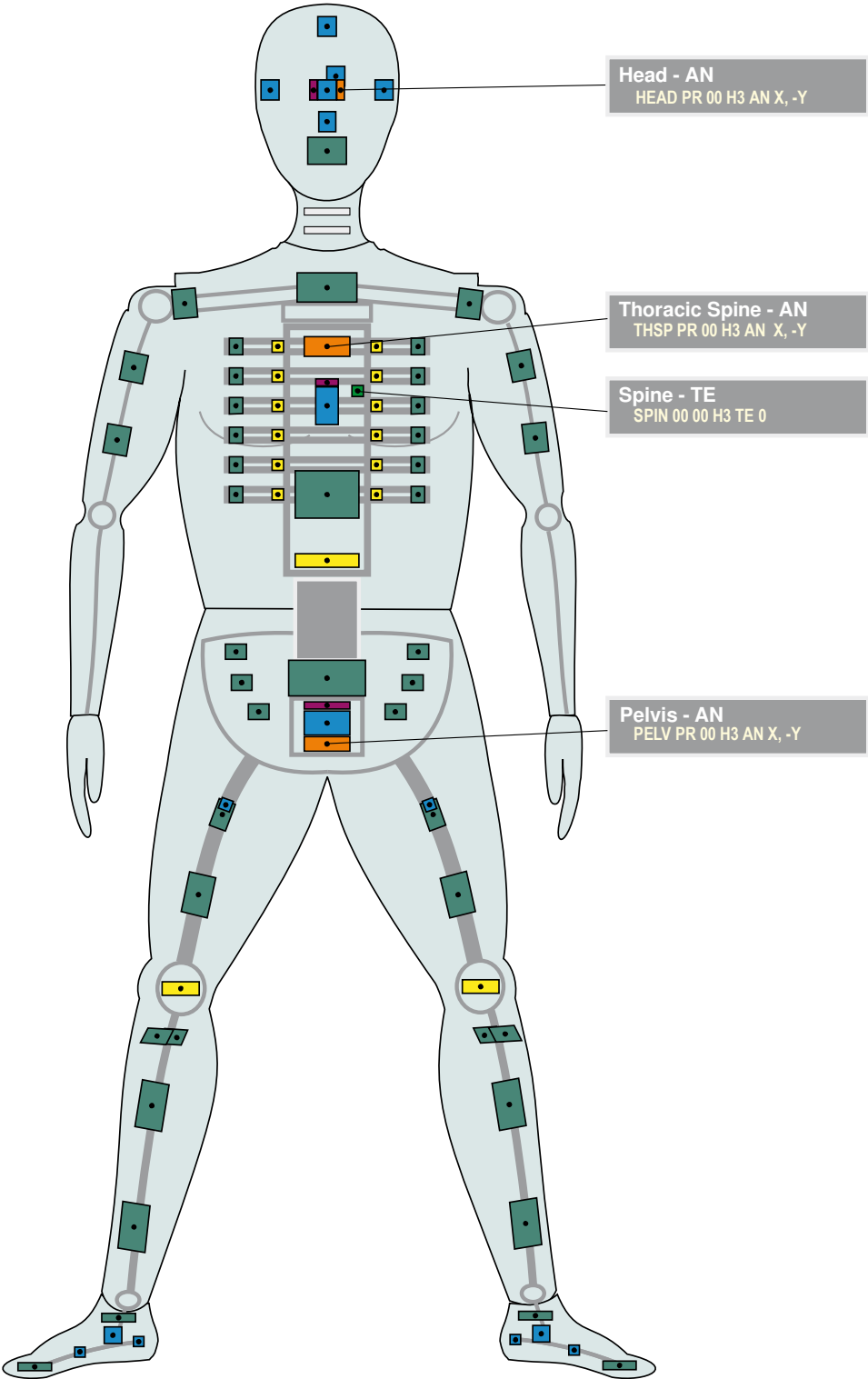
ISO TC 22 / SC 12 / WG 3 / ISO-MME Task Force<sup>1</sup>  
Maintained by Paul Wellcome, MIRA Ltd.

ISO\_H3\_3\_16\_20120124.EMF

-&gt;H3 &lt;- 3 of 4



ISO/TS 13499 – RED C : 2012  
H3, Hybrid III 50% male  
Static measurements, other channels  
2012-01-24

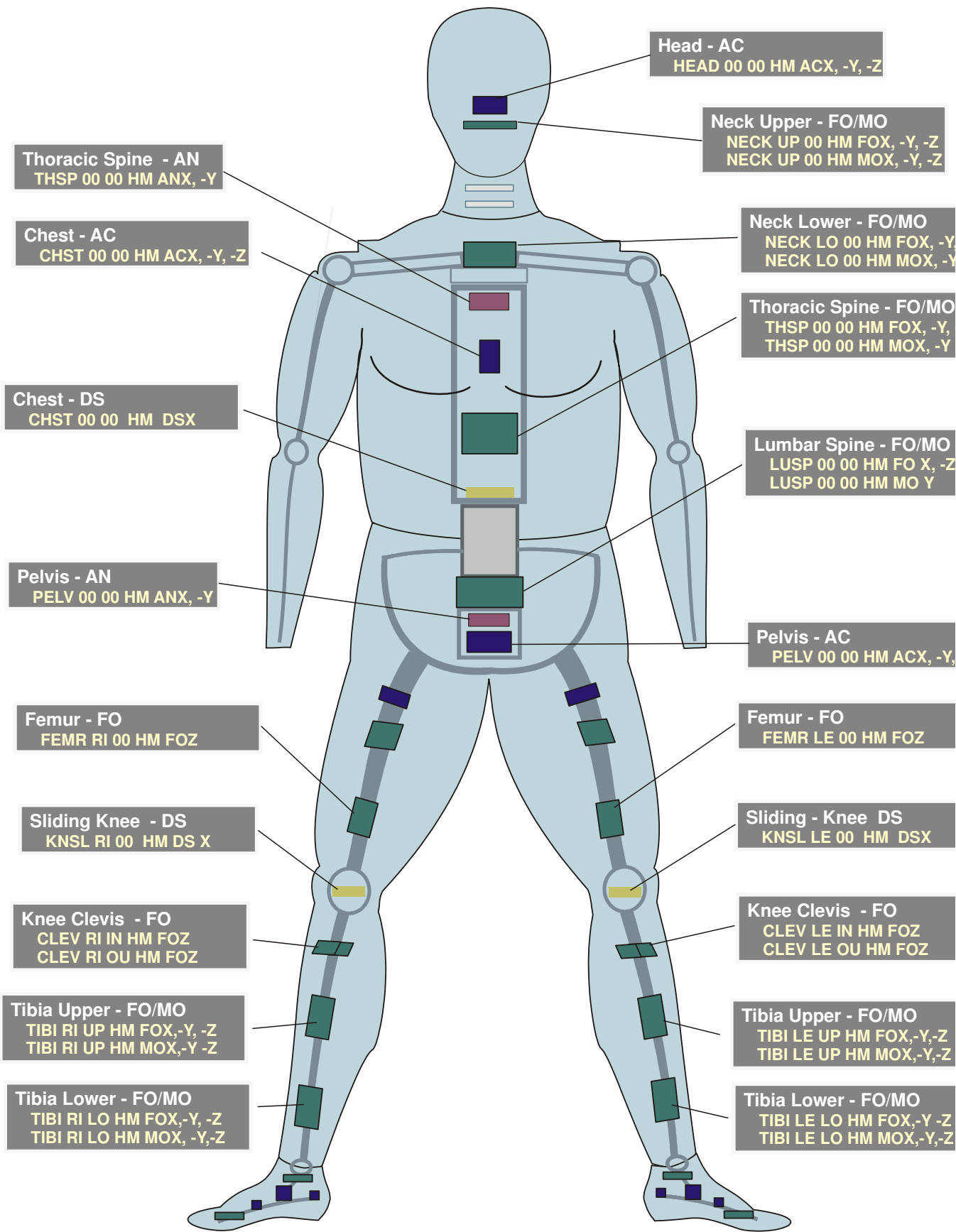


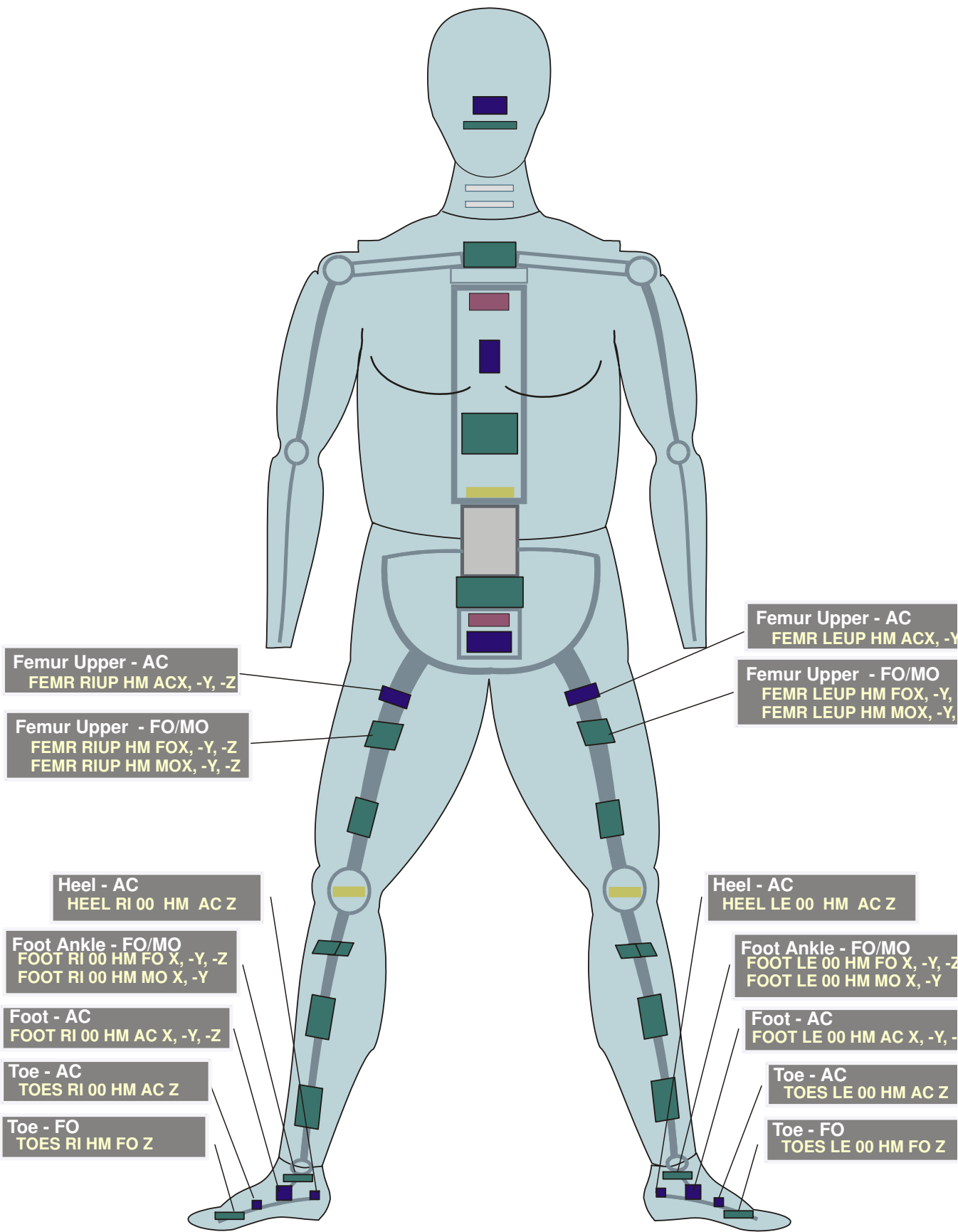
ISO-H3\_20120124

HM Hybrid III 95% Male

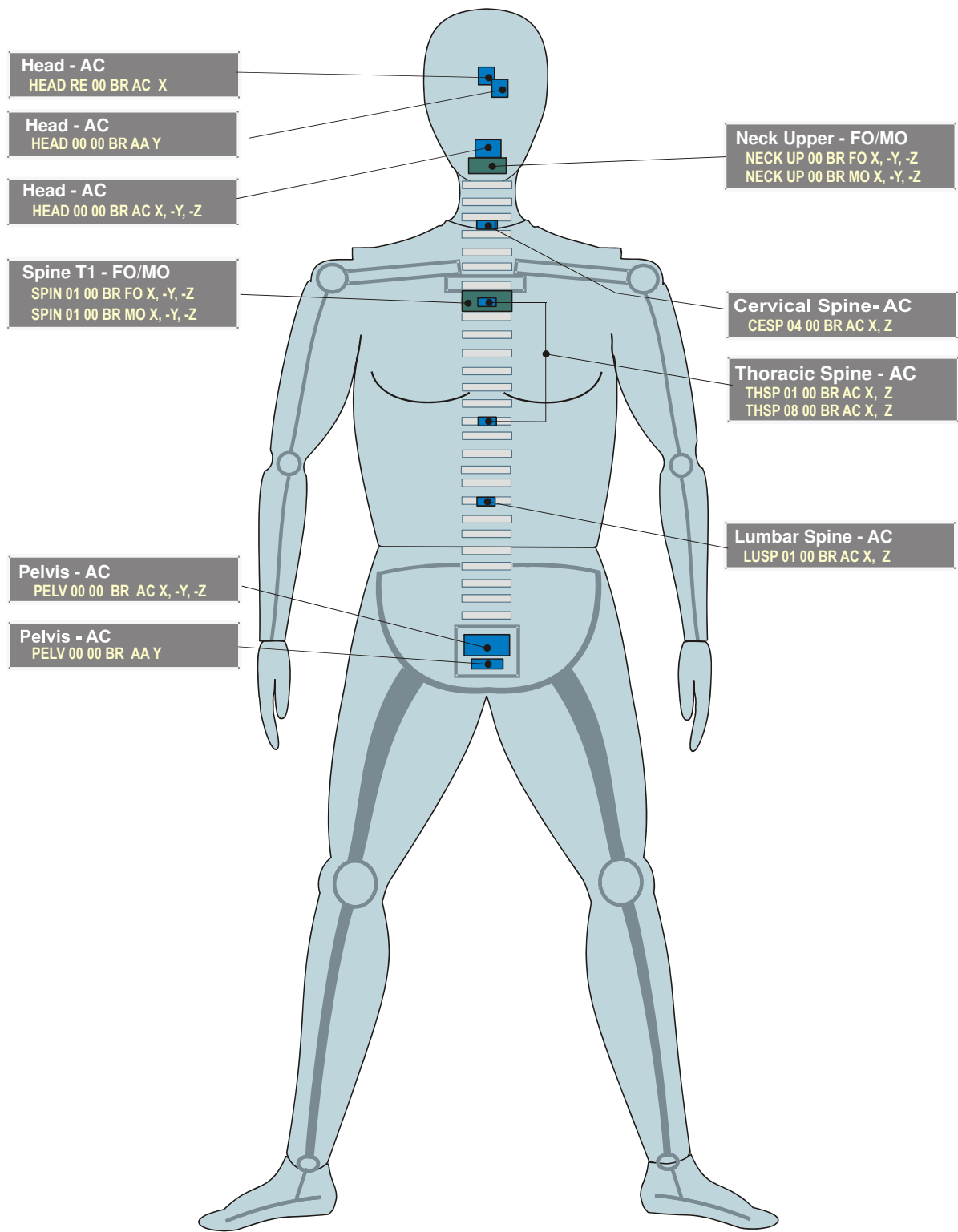
Valid since Version

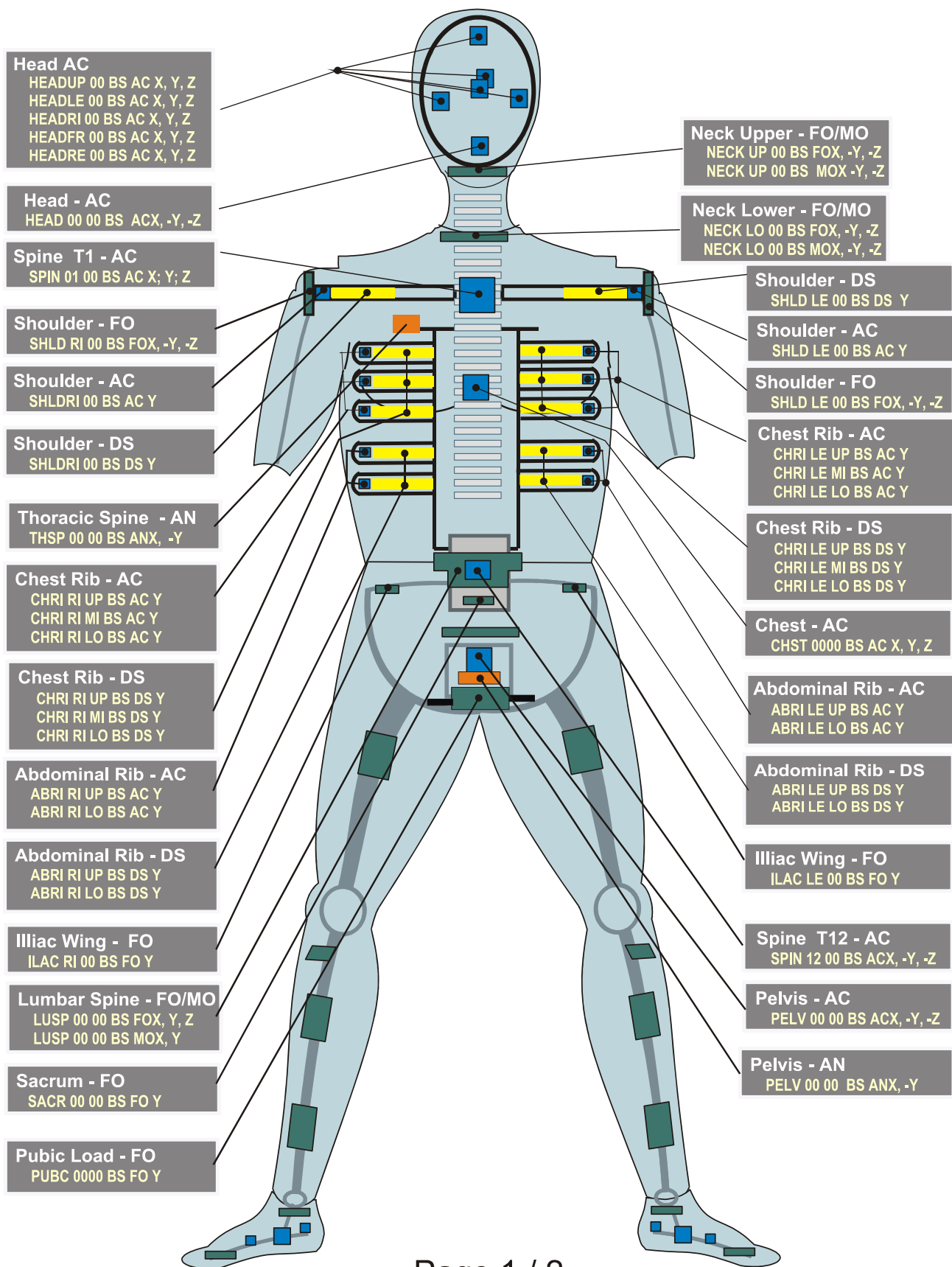
1.2

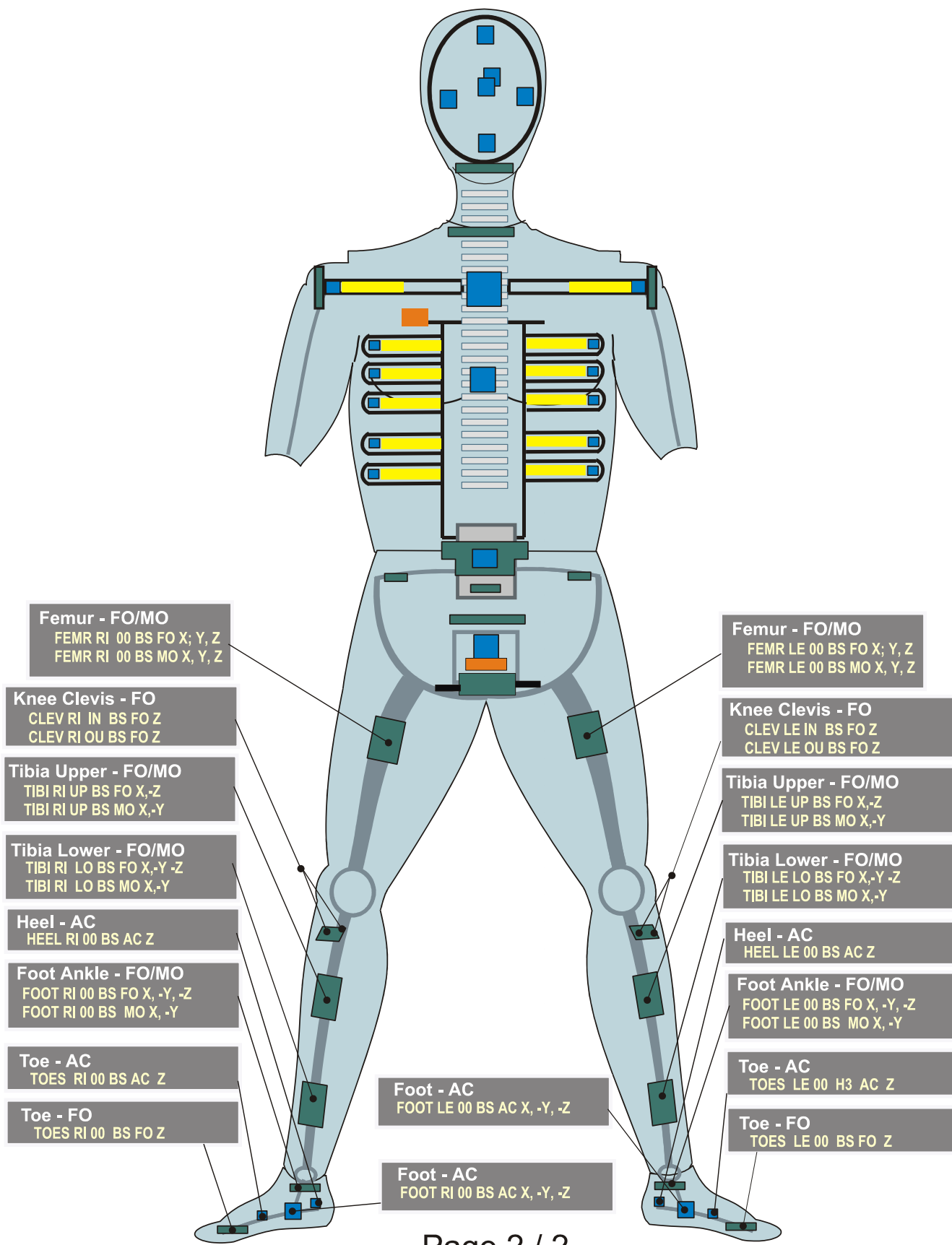


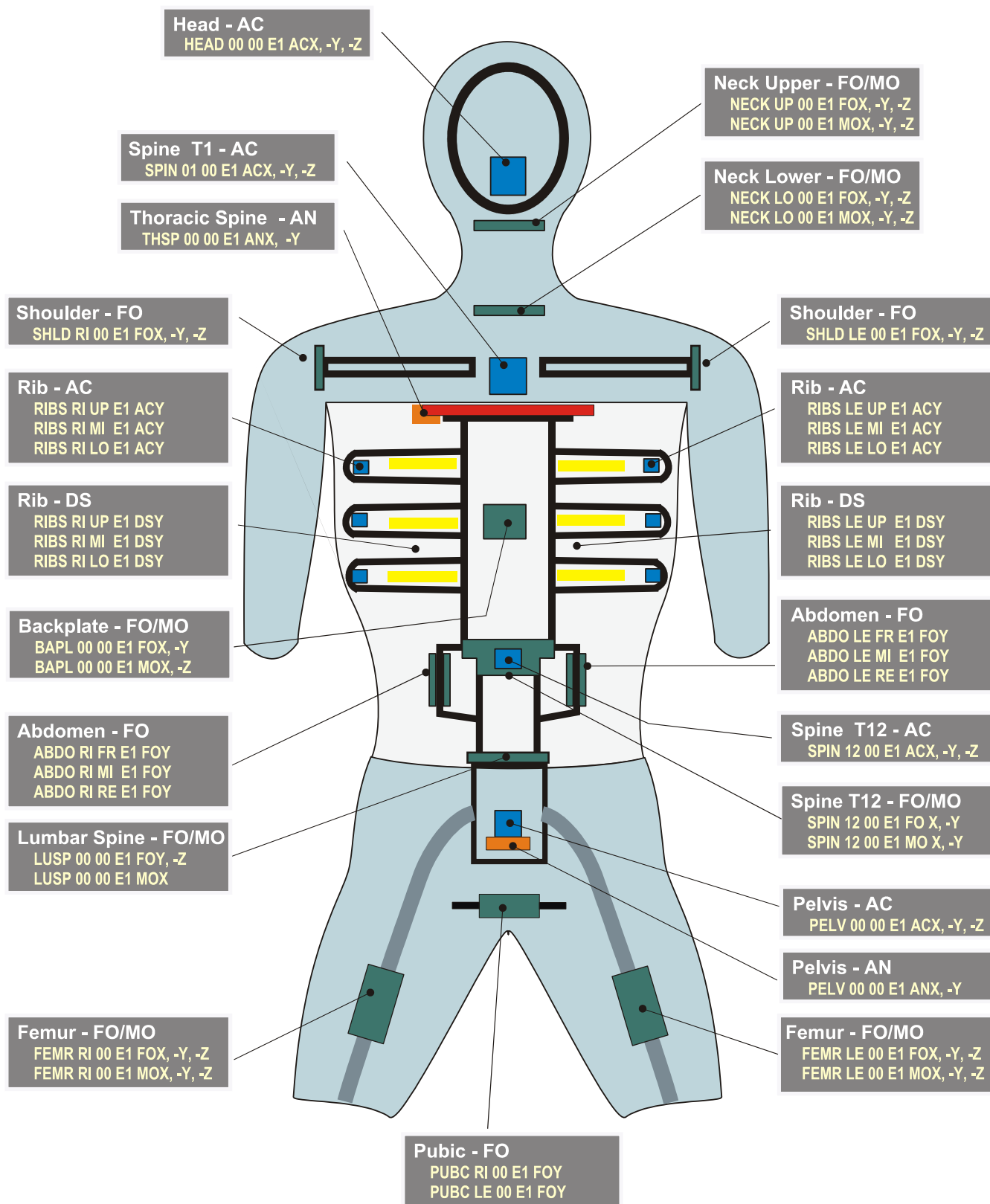


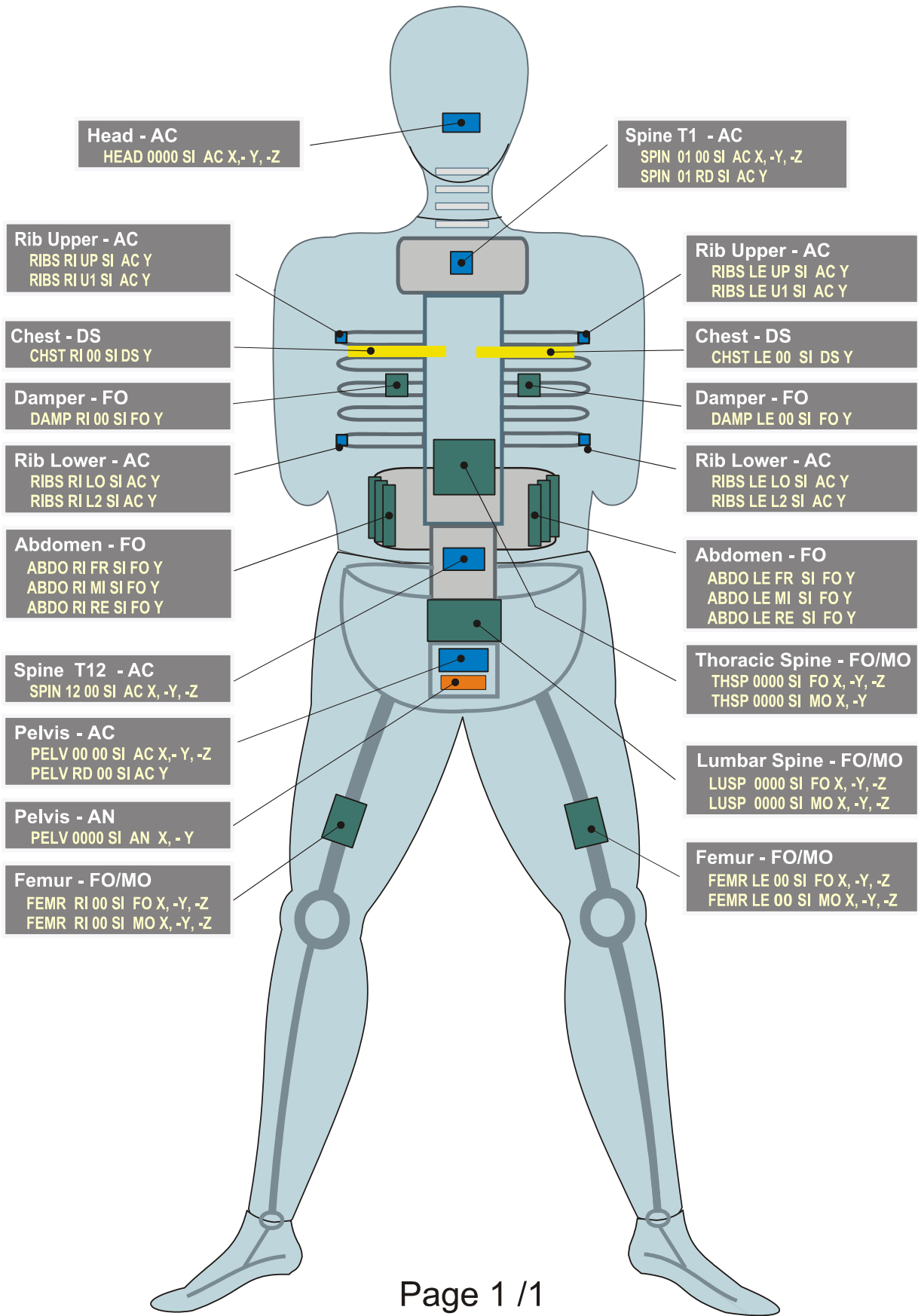








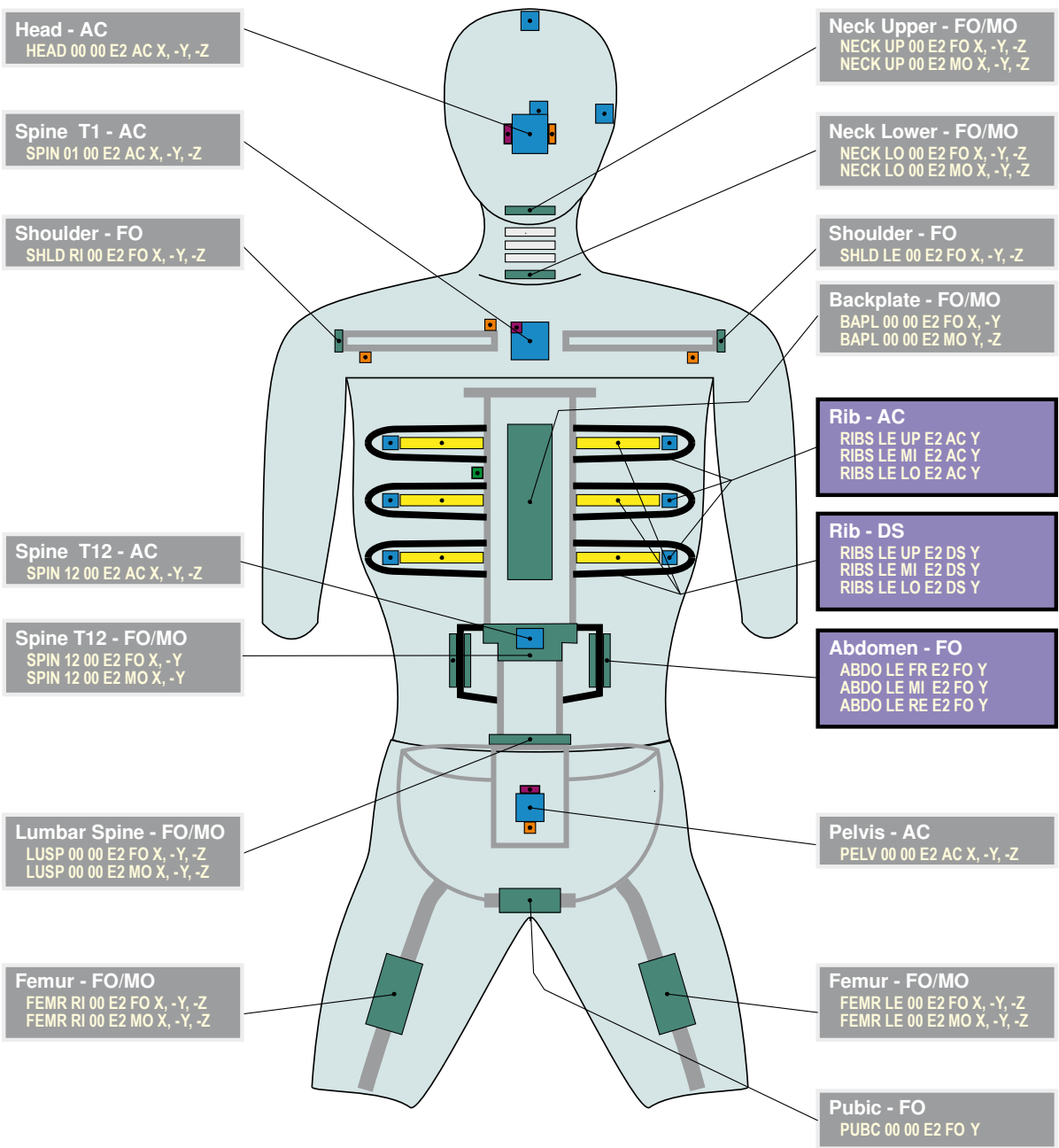






ISO/TS 13499 – RED C : 2012(E)  
E2, ES-2 dummy  
ER, ES2 Dummy with Rib Extension  
Standard Instrumentation  
2012-01-24

Note: For ERdummy, FL3 will read ER



**Left Side Impact, Front-View**

Note that sensor locations and ISO Codes are different for right side impact.

ISO-E2\_20120124

E2+ER ES-2 & ES-2re (2)

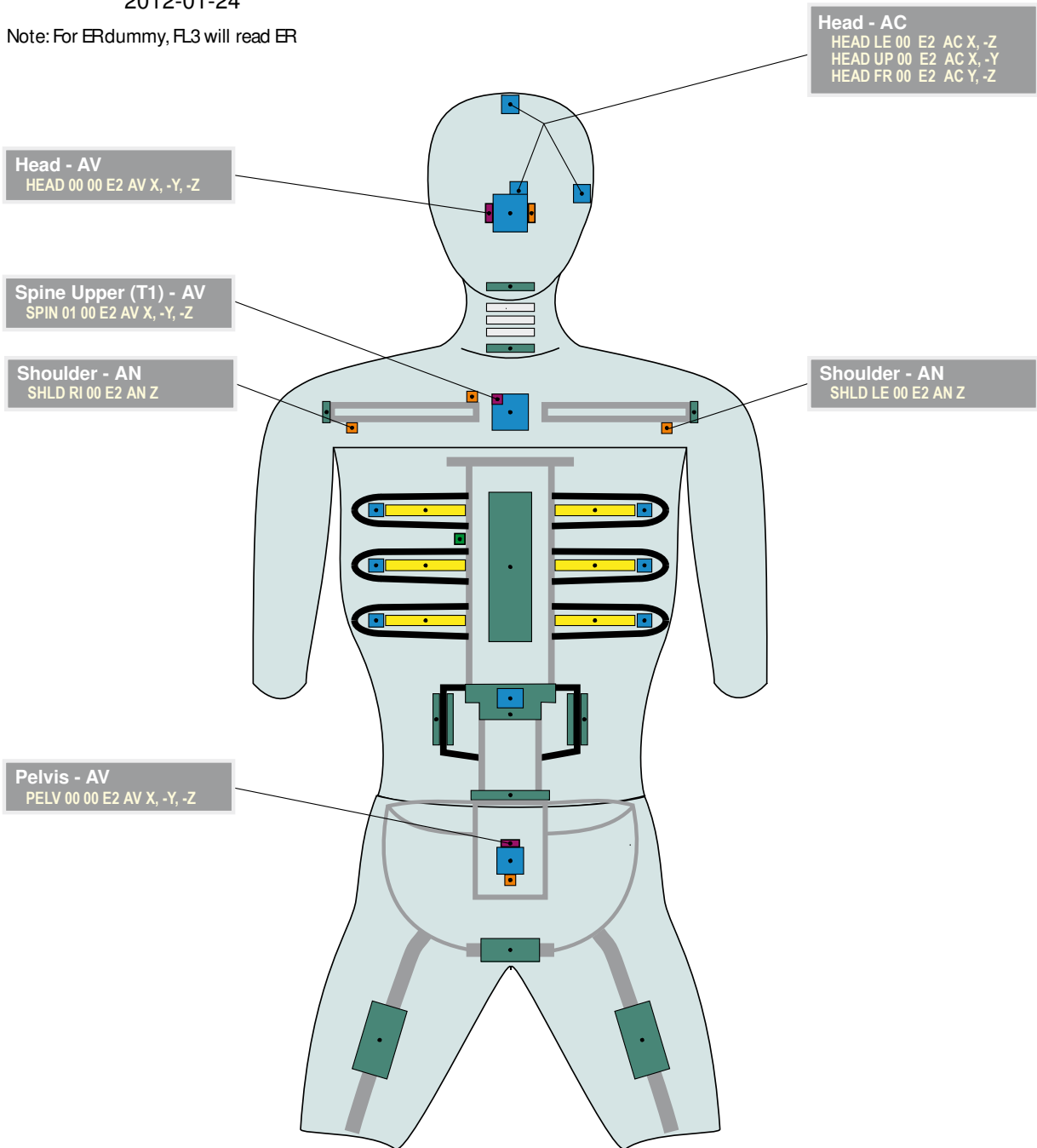
Valid since Version

1.6




ISO/TS 13499 – RED C : 2012(E)  
E2, ES-2 dummy  
ER, ES2 Dummy with Rib Extension  
Additional Instrumentation  
2012-01-24

Note: For ERdummy, FL3 will read ER



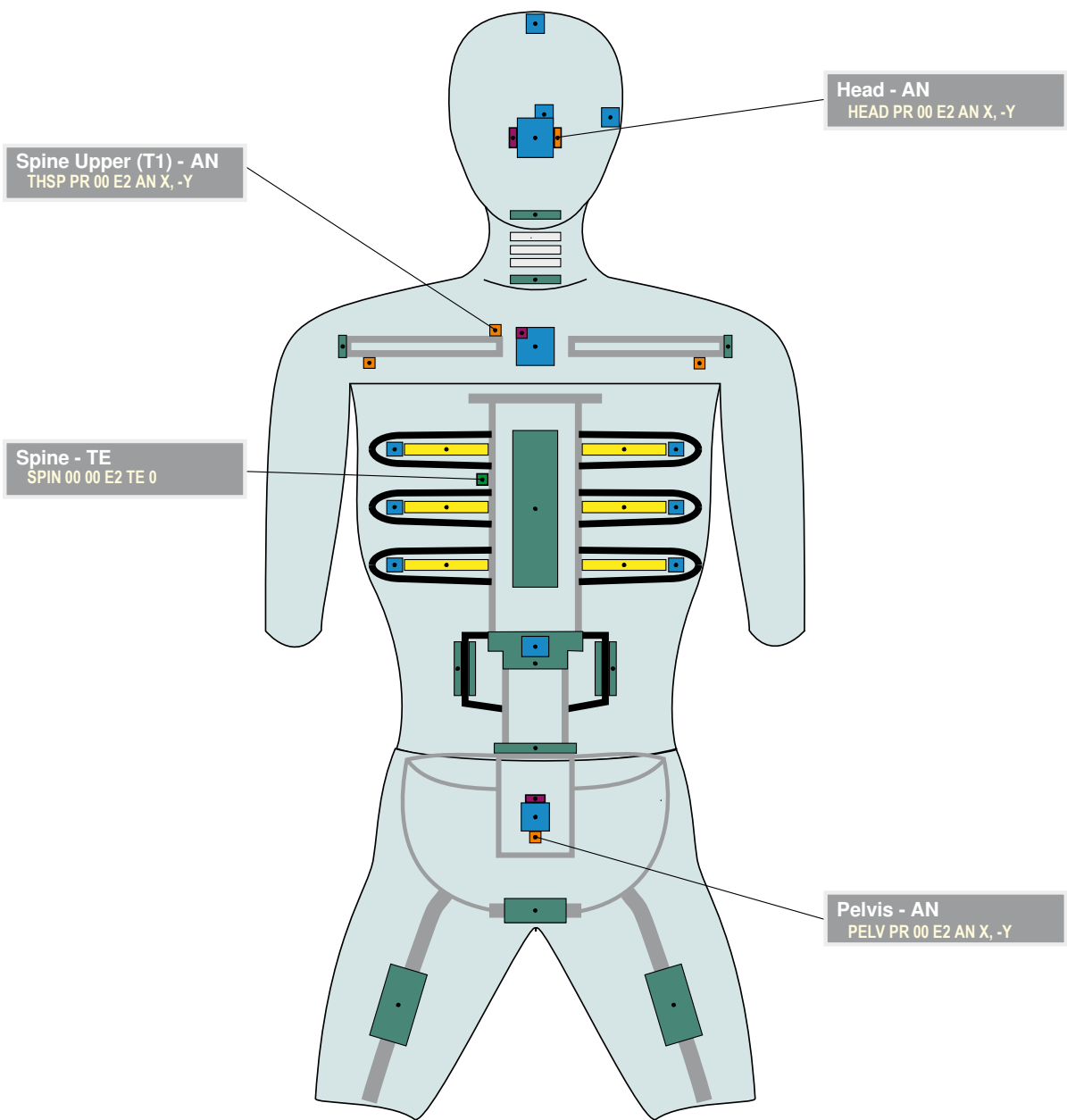
ISO-E2\_20120124

ISO TC 22 / SC 12 / WG 3 / ISO-MME Task Force<sup>1</sup>  
Maintained by Paul Wellicome, MIRA Ltd.



ISO/TS 13499 – RED C : 2012(E)  
E2, ES-2 dummy  
ER, ES2 Dummy with Rib Extension  
Static measurements, other channels  
2012-01-24

Note: For ERdummy, FL3 will read ER





S2

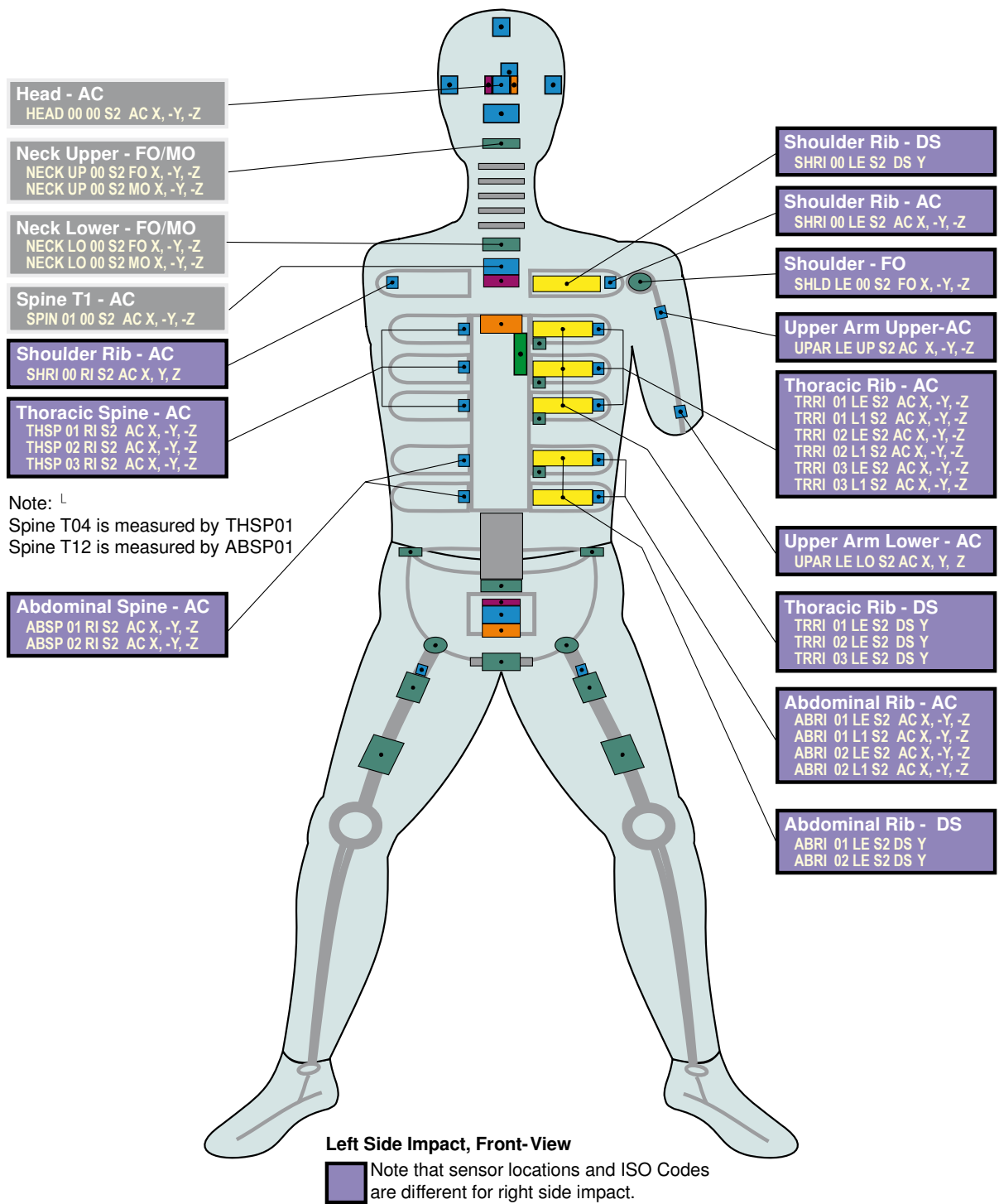
SID IIs (1)

Valid since Version

1.6



ISO/TS 13499 – RED C : 2012(E)  
S2, SID IIs  
Standard Instrumentation (upper body)  
2012-01-20



ISO-S2\_20120120

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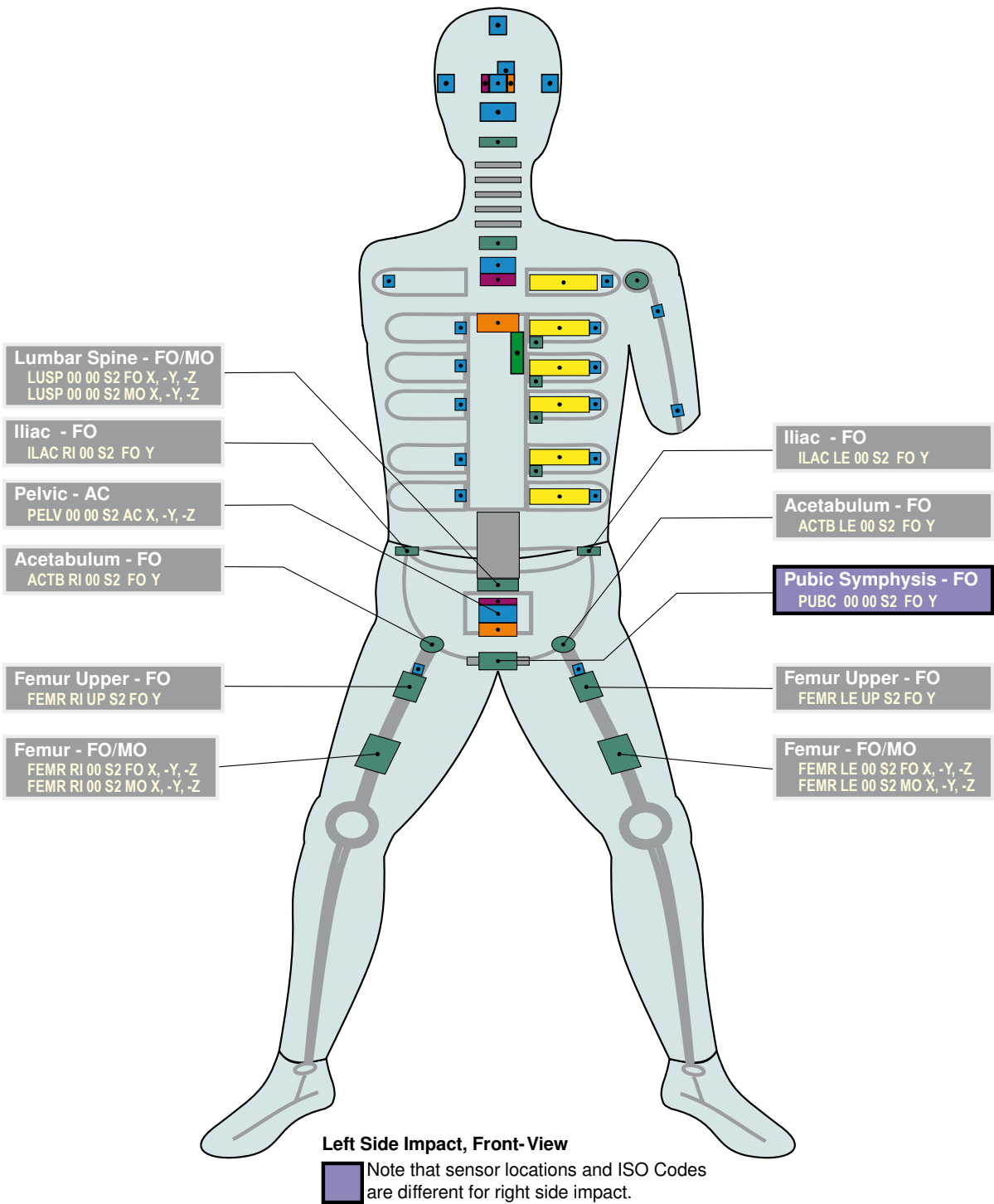
ISO TC 22 / SC 12 / WG 3 / ISO-MME Task Force <sup>L</sup>  
Maintained by Paul Wellicome, MIRA Ltd.

ISO\_S2\_1\_16\_20120120.EMF

->S2<- 1 of 5



ISO/TS 13499 – RED C : 2012(E)  
S2, SID IIs  
Standard Instrumentation (lower body)  
2012-01-20



S2

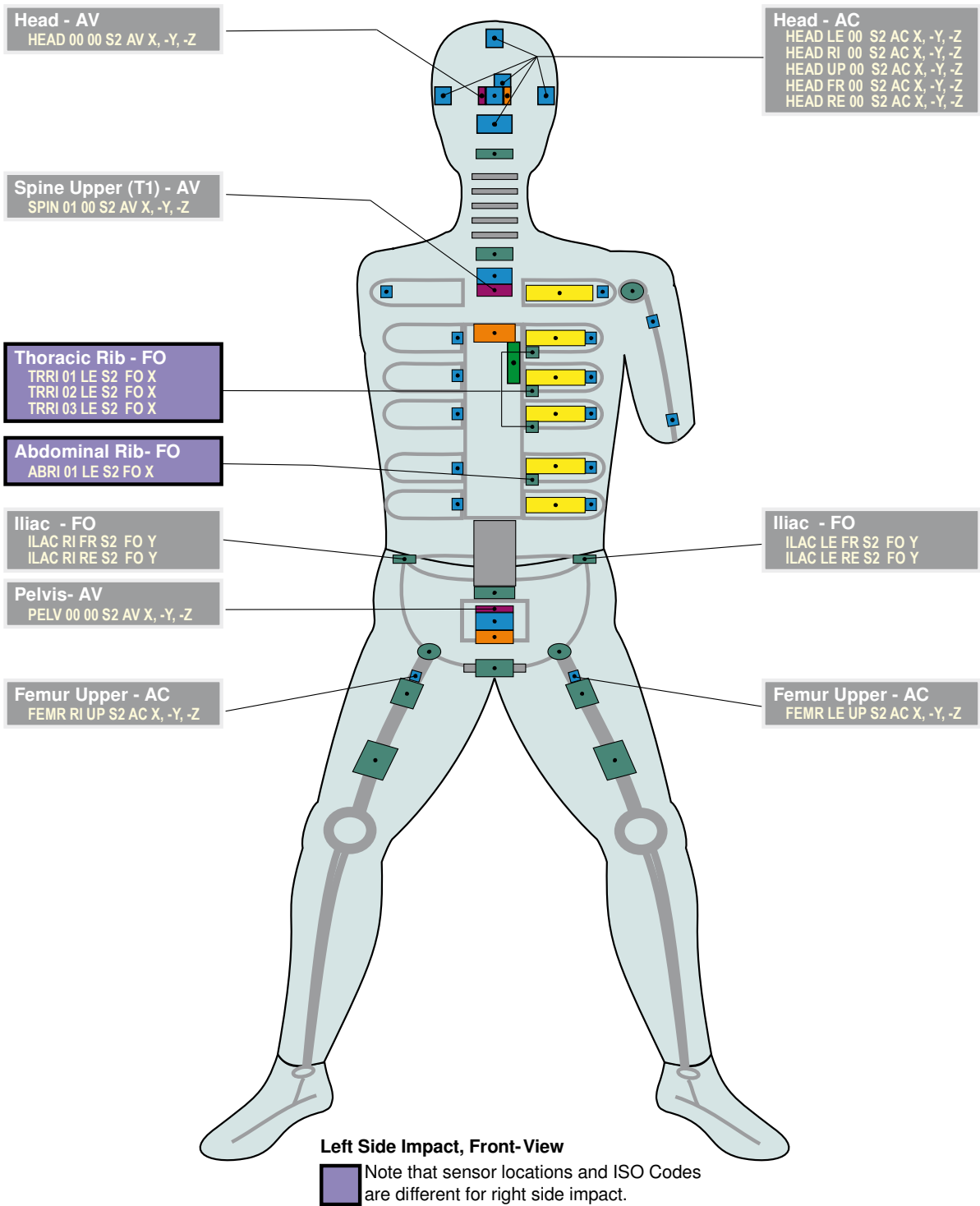
SID IIs (3)

Valid since Version

1.6



ISO/TS 13499 – RED C : 2012(E)  
S2, SID IIs  
Additional Instrumentation  
2012-01-20



ISO-S2\_20120120

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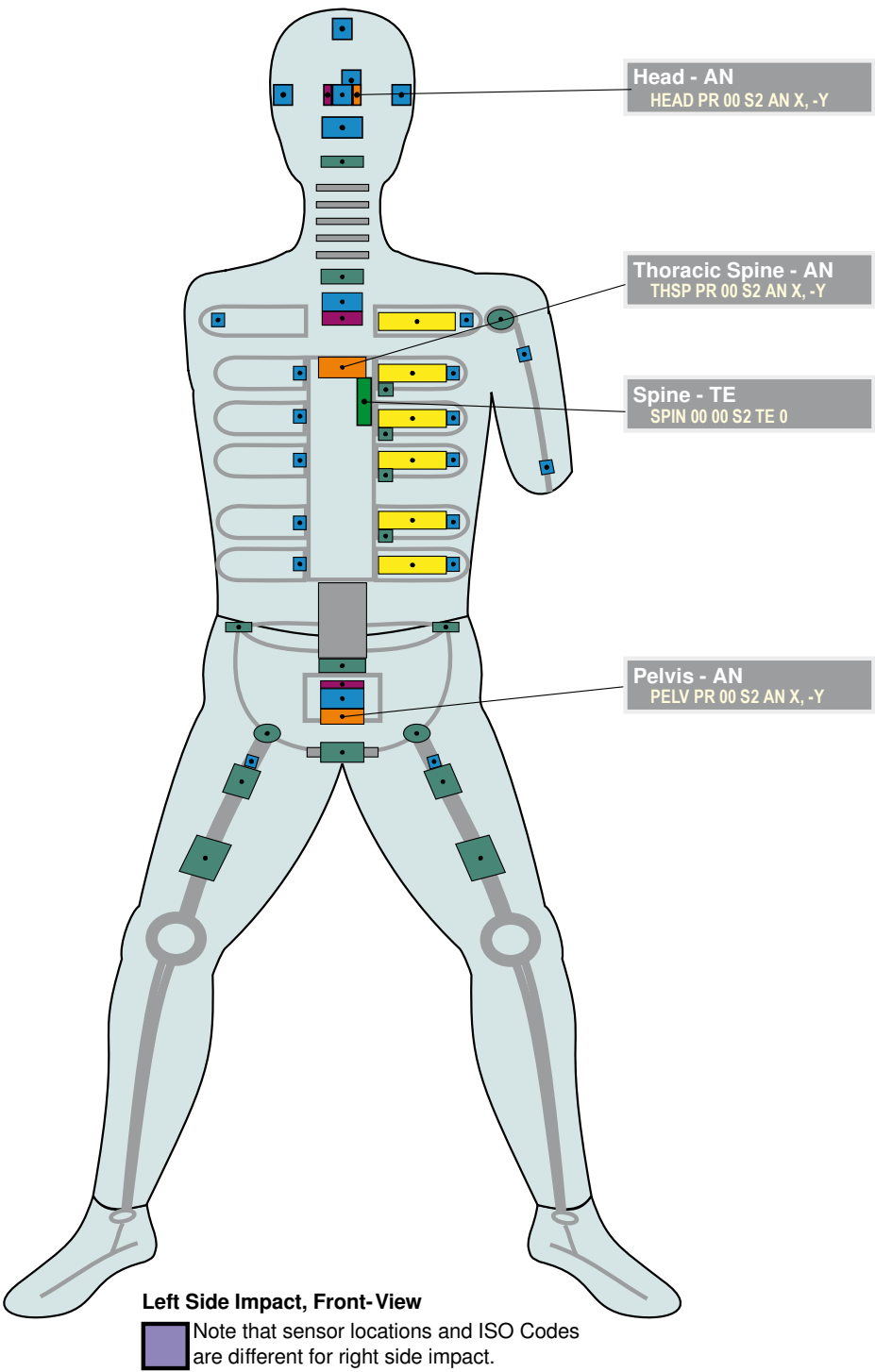
ISO TC 22 / SC 12 / WG 3 / ISO-MME Task Force<sup>L</sup>  
Maintained by Paul Wellicome, MIRA Ltd.

ISO\_S2\_3\_16\_20120120.EMF

->S2<- 3 of 5

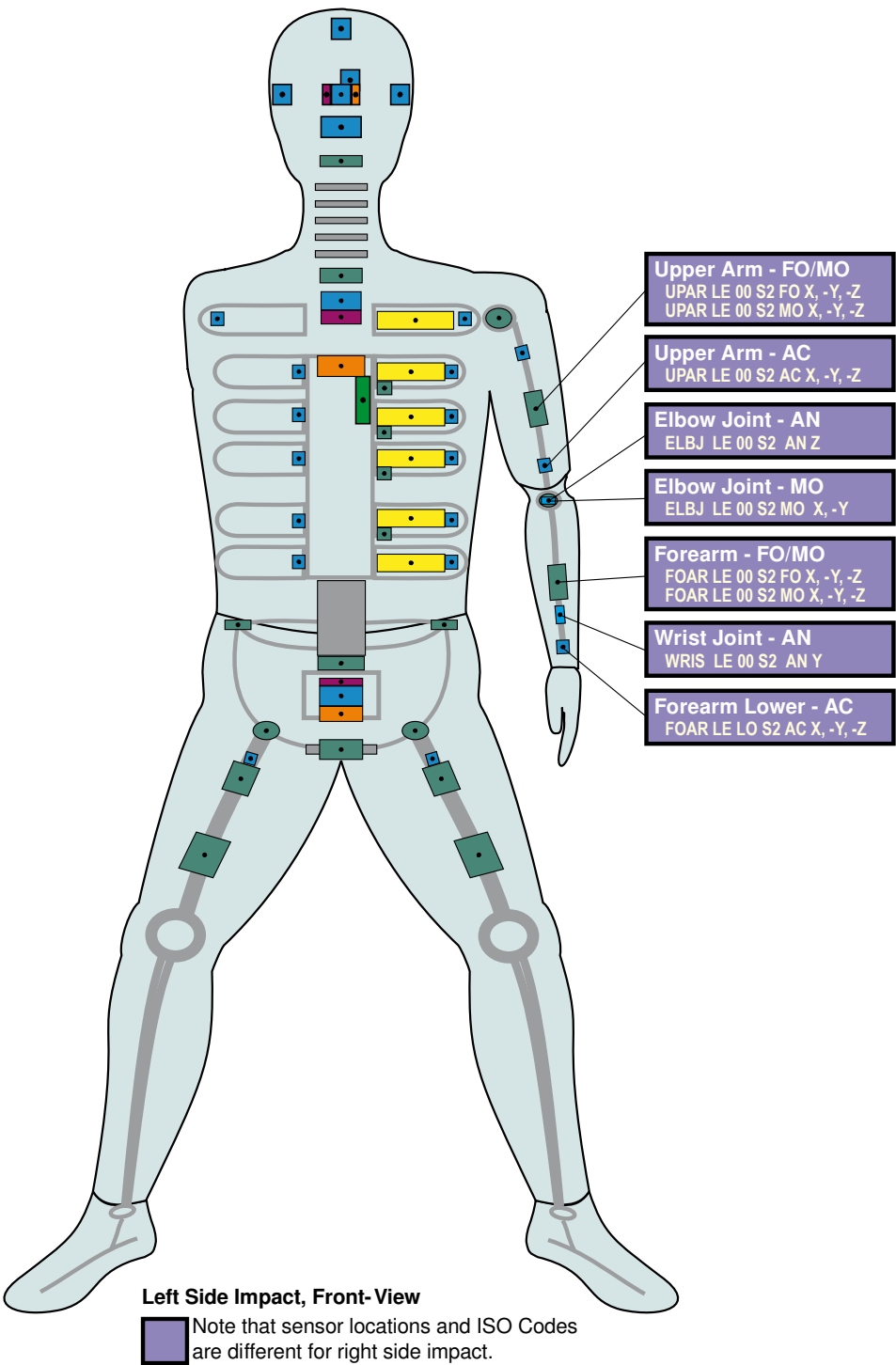


ISO/TS 13499 – RED C : 2012(E)  
S2, SID IIs  
Static measurements, other channels  
2012-01-20






ISO/TS 13499 – RED C : 2012(E)  
S2, SID IIs  
Additional Instrumentation: Instrumented arm  
2012-01-20

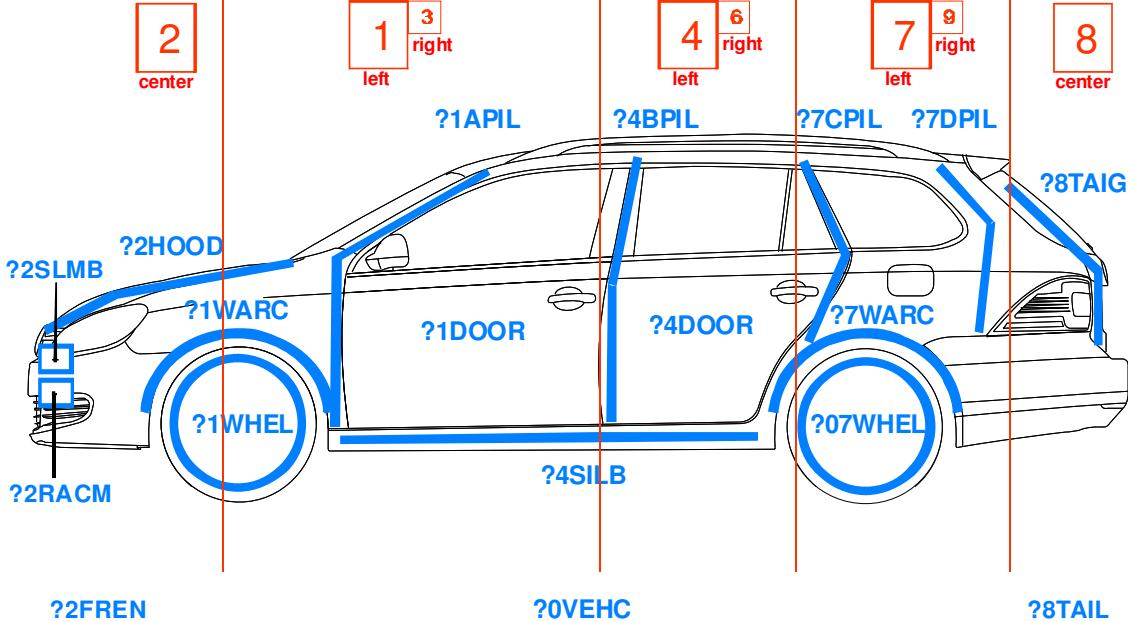


VEH\_S1 Vehicle left side

Valid since Version 1.6  
am, hood, tailgate, vehicle, frontend, tail, wheelarch ...



ISO/TS 13499 - RED C : 2012  
Vehicle side view 1  
2012-04-20



picture only for the left side of the vehicle

? 1 APIL	A-Pillar left	? 1 DOOR	Door front left
? 3 APIL	A-Pillar right	? 3 DOOR	Door front right
? 4 BPIL	B-Pillar left	? 4 DOOR	Door rear left
? 6 BPIL	B-Pillar right	? 6 DOOR	Door rear right
? 7 CPIL	C-Pillar left		
? 9 CPIL	C-Pillar right	? 2 HOOD	Hood
? 7 DPIL	D-Pillar left	? 8 TAIG	Tailgate
? 9 DPIL	D-Pillar right		
		? 0 VEHC	Vehicle
? 4 SILB	Sill Beam left	? 2 FREN	Frontend
? 6 SILB	Sill Beam right	? 8 TAIL	Tail
? 1 WHEEL	Wheel front left	? 2 SLMB	Slam Beam
? 3 WHEEL	Wheel front right	? 2 RACM	Radiator Cross Member
? 7 WHEEL	Wheel rear left		
? 9 WHEEL	Wheel rear right		
? 1 WARC	Wheel Arch front left		
? 3 WARC	Wheel Arch front right		
? 7 WARC	Wheel Arch rear left		
? 9 WARC	Wheel Arch rear right		

ISO\_VEH\_S1\_16


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ISO TC22 / SC12 / WG3 / ISO-MME Task Force  
Maintained by Peter Derpmann-Hagenström, Volkswagen AG

VEH\_S2 Vehicle left side

Valid since Version 1.6

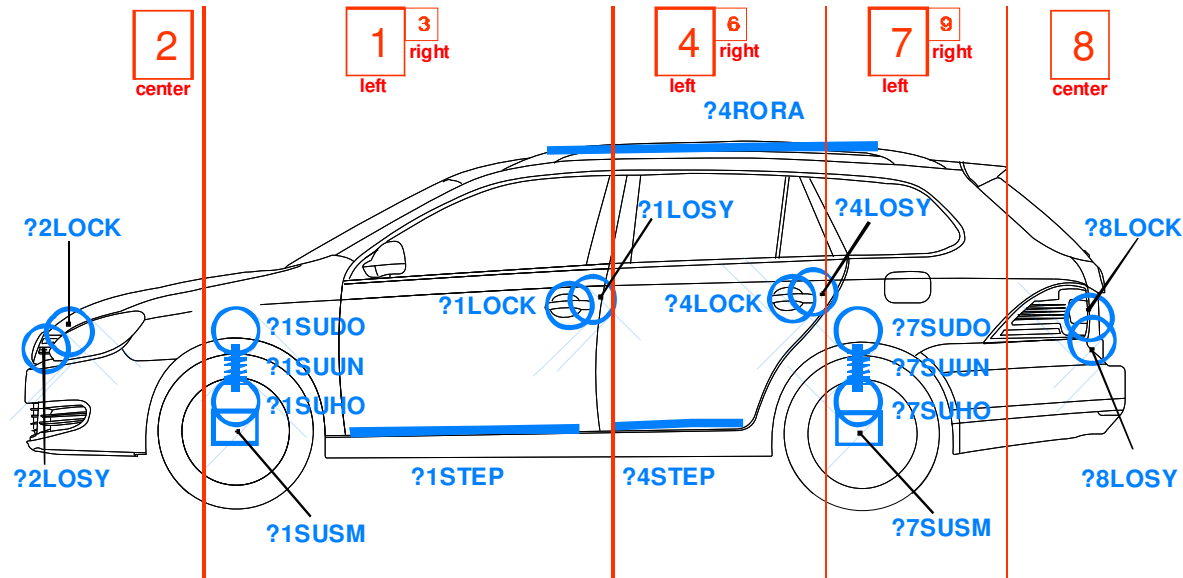
lock, locking system, roof rack, step, suspension, ...



ISO/TS 13499 - RED C : 2012

Vehicle side view 2

2012-04-20



picture only for the left side of the vehicle

? 1 LOSY	Locking System front left	? 1 SUDO	Suspension Dome front left
? 3 LOSY	Locking System front right	? 3 SUDO	Suspension Dome front right
? 4 LOSY	Locking System rear left	? 7 SUDO	Suspension Dome rear left
? 6 LOSY	Locking System rear right	? 9 SUDO	Suspension Dome rear right
? 2 LOSY	Locking System front		
? 8 LOSY	Locking System rear		
		? 1 SUUN	Suspension Unit front left
? 1 LOCK	Lock front left	? 3 SUUN	Suspension Unit front right
? 3 LOCK	Lock front right	? 7 SUUN	Suspension Unit rear left
? 4 LOCK	Lock rear left	? 9 SUUN	Suspension Unit rear right
? 6 LOCK	Lock rear right		
? 2 LOCK	Lock front	? 1 SUHO	Suspen. Housing front left
? 8 LOCK	Lock rear	? 3 SUHO	Suspen. Housing front right
		? 7 SUHO	Suspen. Housing rear left
		? 9 SUHO	Suspen. Housing rear right
? 4 RORA	Roof Rack left		
? 6 RORA	Roof Rack right	? 1 SUSM	Suspension Mount front left
		? 3 SUSM	Suspension Mount front right
? 1 STEP	Step front left	? 7 SUSM	Suspension Mount rear left
? 3 STEP	Step front right	? 9 SUSM	Suspension Mount rear right
? 4 STEP	Step rear left		
? 7 STEP	Step rear right		


ISO\_VEH\_S2\_16

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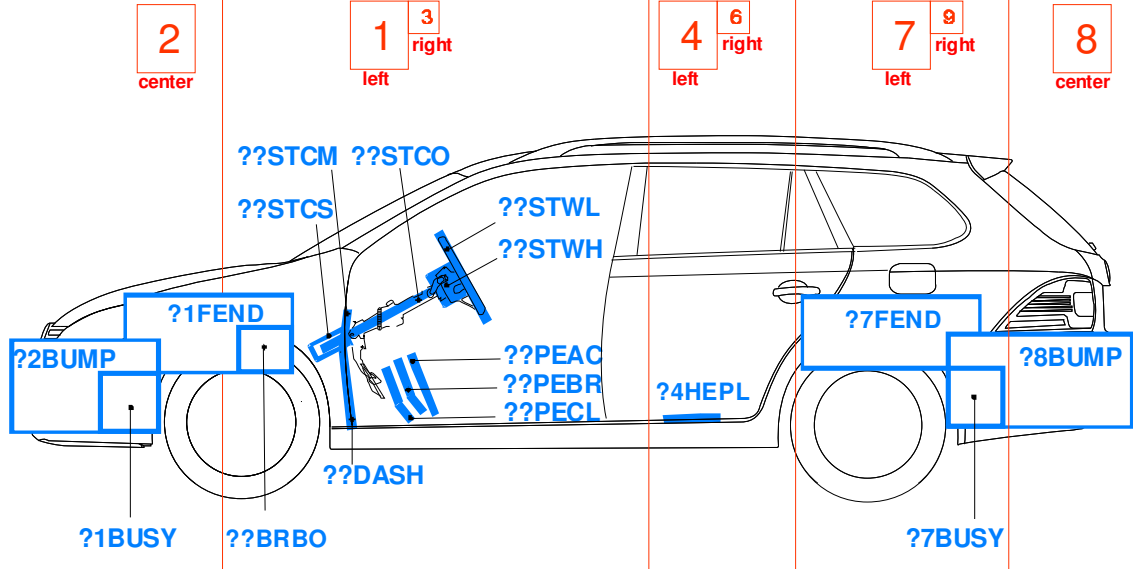
ISO TC22 / SC12 / WG3 / ISO-MME Task Force  
Maintained by Peter Derpmann-Hagenström, Volkswagen AG

VEH\_S3 Vehicle left side, open

Valid since Version 1.6  
left side open; steering wheel, pedals



ISO/TS 13499 - RED C : 2012  
Vehicle side view 3  
2012-04-20



picture only for the left side of the vehicle

? ? STWL	Steering Wheel	? 1 FEND	Fender front left
? ? STWH	Steering Wheel Hub	? 3 FEND	Fender front right
? ? STCO	Steering Column	? 7 FEND	Fender rear left
? ? STCM	Steering Column Mount	? 9 FEND	Fender rear right
? ? STCS	Steering Column Suspension		
		? 2 BUMP	Bumper front
? ? DASH	Dash Panel	? 8 BUMP	Bumper rear
? ? PEAC	Pedal Accelerator	? 1 BUSY	Bumper System front left
? ? PEBR	Pedal Brake	? 3 BUSY	Bumper System front right
? ? PECL	Pedal Clutch	? 7 BUSY	Bumper System rear left
? ? BRBO	Brake Booster	? 9 BUSY	Bumper System rear right
		? 4 HEPL	Heel Plate left
		? 6 HEPL	Heel Plate right

ISO\_VEH\_S3\_16

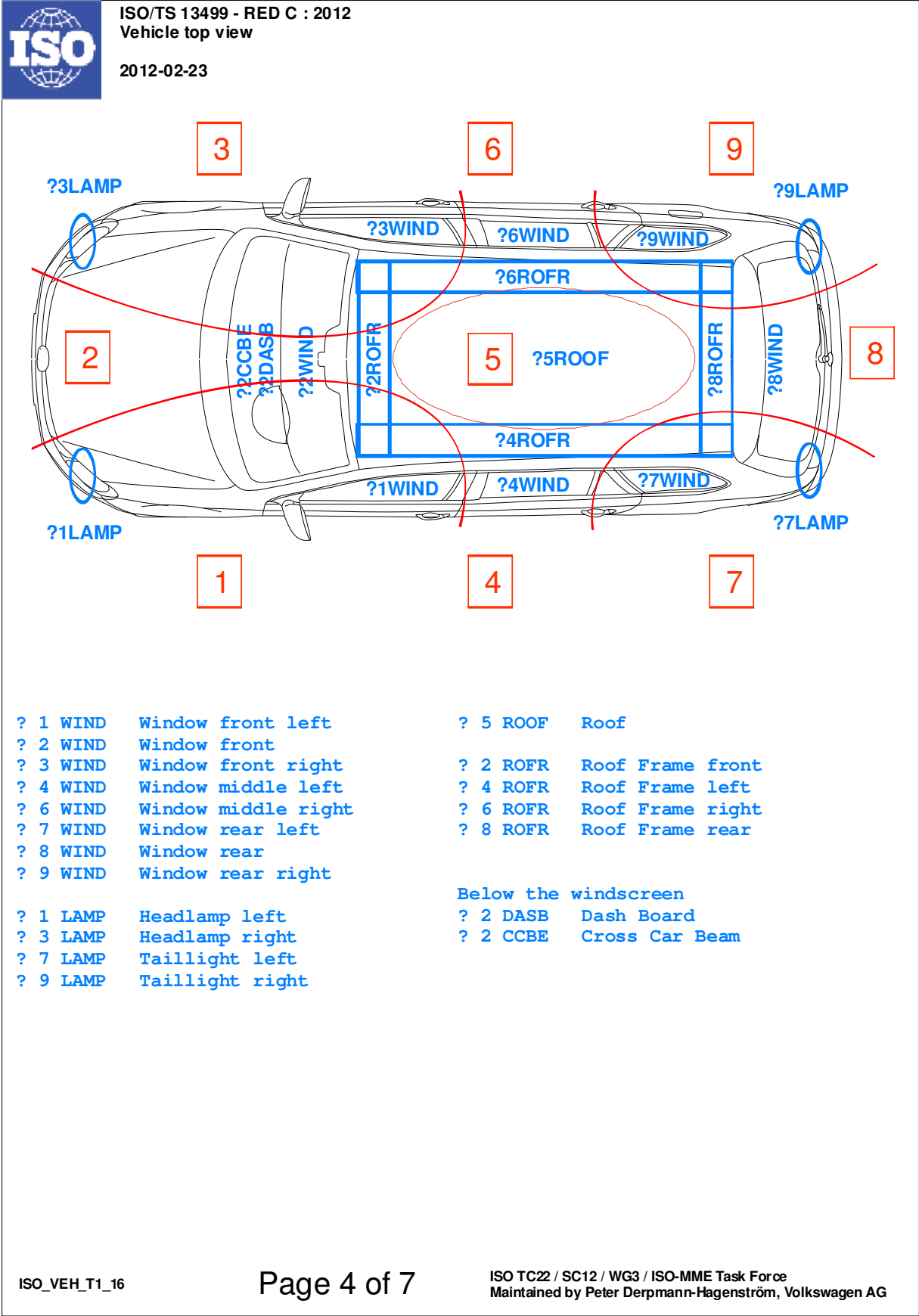
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VEH\_T1 Vehicle top

Valid since Version 1.6  
window, roof, roof frame, lamp, ...

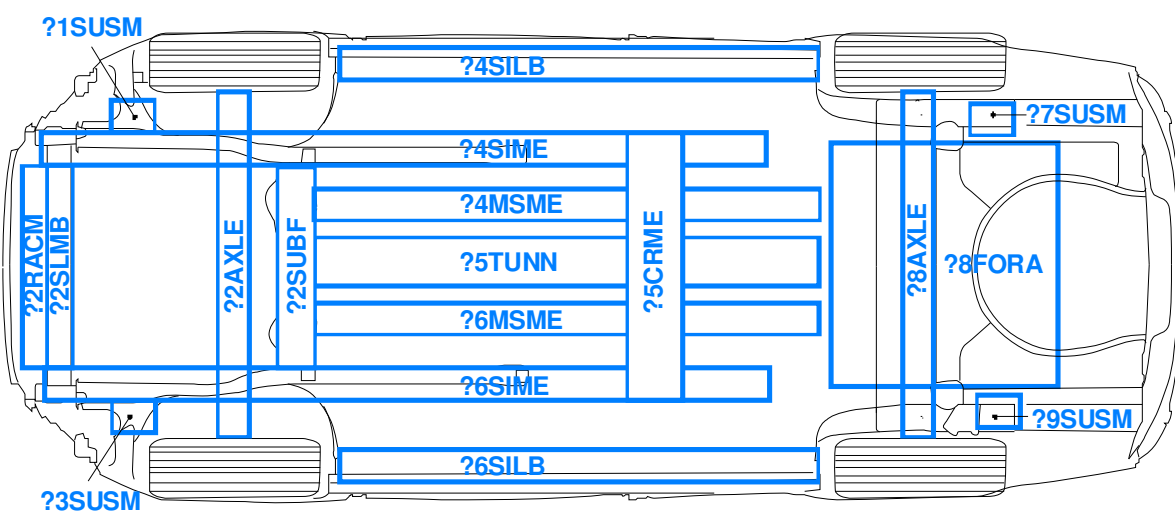


VEH\_B1 Vehicle bottom

Valid since Version 1.6  
side and cross members, suspension, axle, ...



ISO/TS 13499 - RED C : 2012  
Vehicle bottom view 1  
Structure elements  
2012-02-23



? 2 AXLE     Axle front  
? 8 AXLE     Axle rear  
? 8 FORA     Floor over Rear Axle

? 2 RACM     Radiator Cross Member  
? 2 SLMB     Slam Beam  
? 2 SUBF     Subframe  
? 1 SUSM     Suspension Mount front left  
? 3 SUSM     Suspension Mount front right  
? 7 SUSM     Suspension Mount rear left  
? 9 SUSM     Suspension Mount rear right  
? 5 CRME     Cross Member

? 4 SILB     Sill Beam left  
? 6 SILB     Sill Beam right  
? 4 SIME     Side Member left  
? 6 SIME     Side Member right  
? 4 MSME     Main Side Member left  
? 6 MSME     Main Side Member right  
? 5 TUNN     Tunnel

General Mainlocation  
? ? FRAM     Frame


ISO\_VEH\_B1\_16

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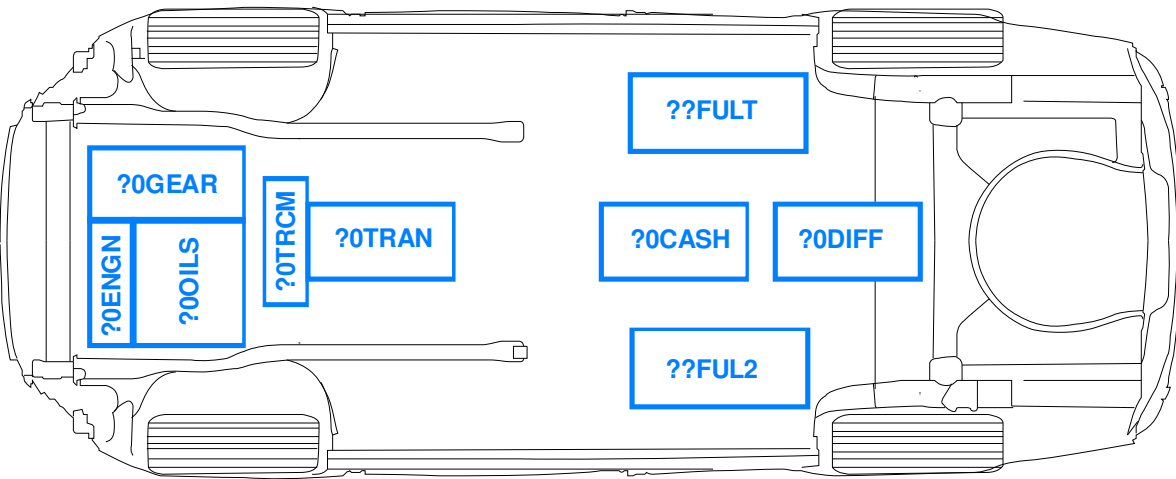
ISO TC22 / SC12 / WG3 / ISO-MME Task Force  
Maintained by Peter Derpmann-Hagenström, Volkswagen AG

VEH\_B2 Vehicle bottom

Valid since Version 1.6  
ngine, transmission, fuel tank, electrical components,



ISO/TS 13499 - RED C : 2012  
Vehicle bottom view 2  
Traction elements  
2012-02-23



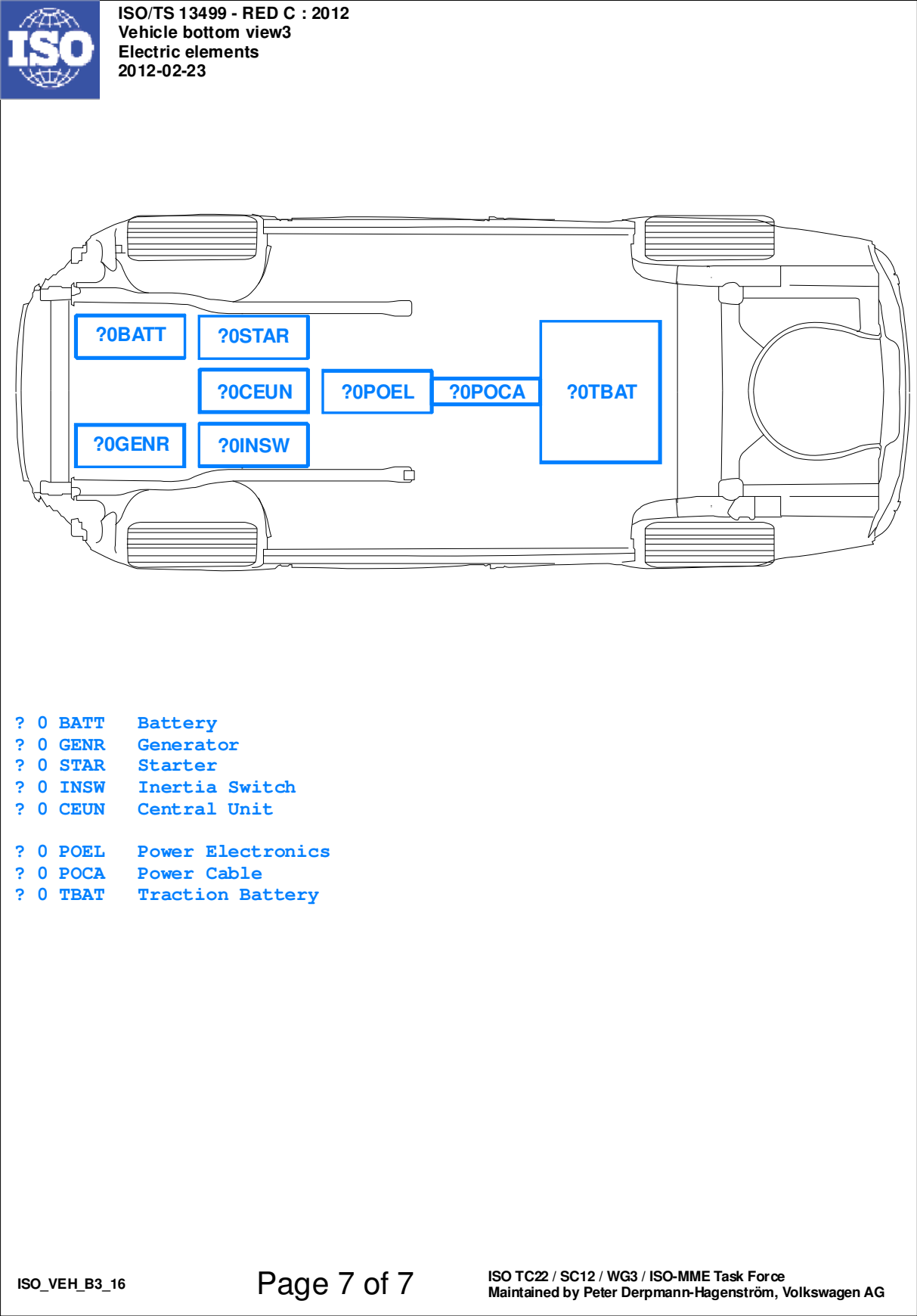
? 0 ENGN     Engine  
? 0 GEAR     Gearbox  
? 0 OILS     Oil Sump  
? 0 TRCM     Transmission Cross Member  
? 0 TRAN     Transmission  
? 0 DIFF     Differential  
? 0 CASH     Cardan Shaft

? ? FULT     Fuel Tank  
? ? FUL2     2. Fuel Tank

ISO\_VEH\_B2\_16


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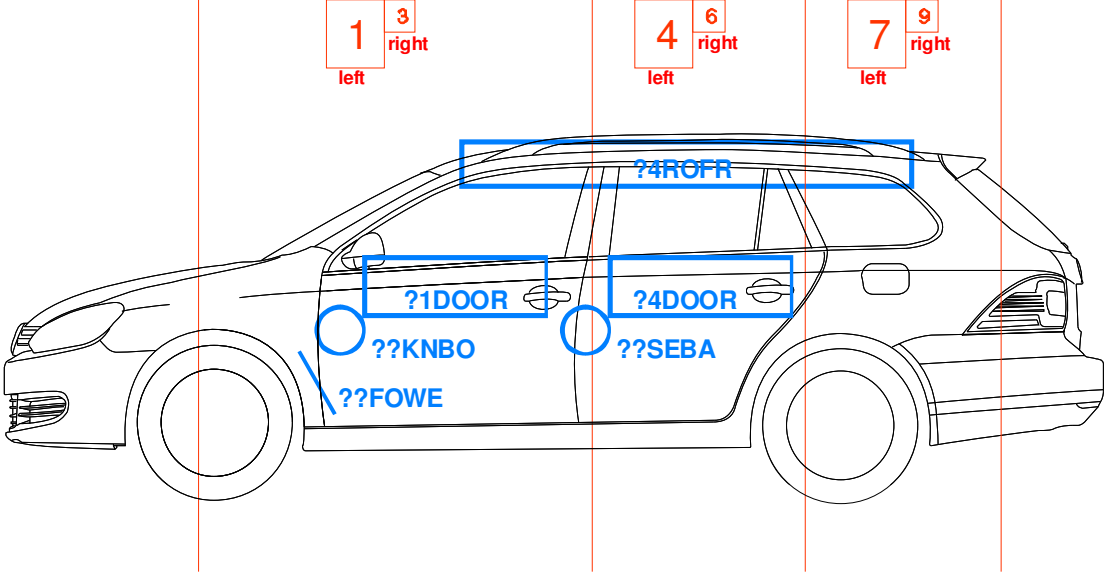


AIRB      Airbag (1)

Valid since Version      1.6  
door, knee, footwell, roof frame airbags



ISO/TS 13499 - RED C : 2012  
Airbag 1  
Vehicle side view  
2012-04-20



picture only for the left side of the vehicle

General Mainlocations

? ? AIRB	???? ??	Airbag
? ? ABSE	???? ??	Airbag Sensor

Frontal Airbags

? ? KNBO	???? AF	Knee Bolster Airbag
? ? KNBO	???? GF	Knee Bolster Generator
? ? SEBA	???? AF	Seat Back Knee Airbag
? ? SEBA	???? GF	Seat Back Knee Generator
? ? FOWE	???? AF	Footwell Airbag
? ? FOWE	???? GF	Footwell Generator

Side Airbags

? ? DOOR	???? AS	Door Side Airbag
? ? DOOR	???? GS	Door Side Generator


Head Airbags

? ? DOOR	???? AH	Door Head Airbag
? ? DOOR	???? GH	Door Head Generator
? ? ROFR	???? AH	Roof Frame Head Airbag
? ? ROFR	???? GH	Roof Frame Head Generator

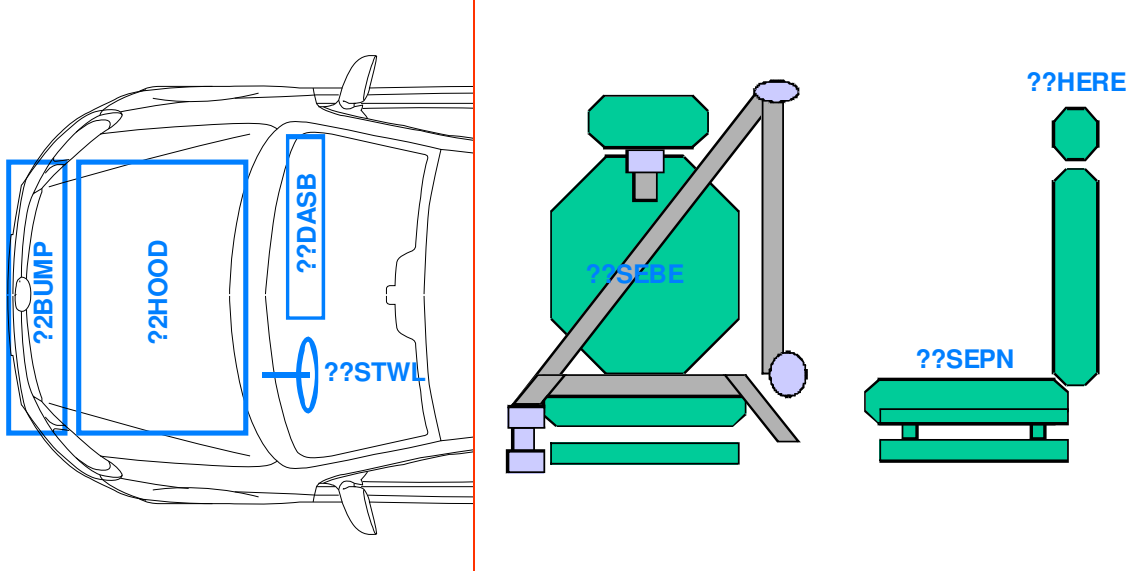
ISO\_AIRB\_1\_16

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ISO TC22 / SC12 / WG3 / ISO-MME Task Force  
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ISO/TS 13499 - RED C : 2012  
Airbag 2  
Vehicle top view and seat  
2012-02-23



Frontal Airbags

? ? STWL ???? AF Steering Wheel Airbag  
? ? STWL ???? GF Steering Wheel Gen.  
? ? DASB ???? AF Dashboard Airbag  
? ? DASB ???? GF Dashboard Generator

Pedestrian Airbags

? 2 BUMP ???? AP Bumper Airbag  
? 2 BUMP ???? GP Bumper Generator  
? 2 HOOD ???? AP Hood Airbag  
? 2 HOOD ???? GP Hood Generator

Frontal Airbags

? ? SEBE ???? AF Seat Belt Airbag  
? ? SEBE ???? GF Seat Belt Generator

Side Airbags

? ? SEPN ???? AS Seat Pan Airbag  
? ? SEPN ???? GS Seat Pan Generator

Rear Airbags

? ? HERE ???? AR Head Restraint Airbag  
? ? HERE ???? GR Head Restraint Gen.


ISO\_AIRB\_2\_16

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ISO TC22 / SC12 / WG3 / ISO-MME Task Force  
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IMP\_1 Impactors: vehicle front end

Valid since Version 1.6  
impactors overview



ISO/TS 13499 - RED C : 2012  
Impactors  
Overview  
2012-05-02

D 0 HEAD ?? ?? PA  
D 0 HEAD ?? ?? PB  
D 0 HEAD ?? ?? PC  
D 0 HEAD ?? ?? PJ  
D 0 HEAD ?? ?? PS

D 0 HEAD ?? ?? FH

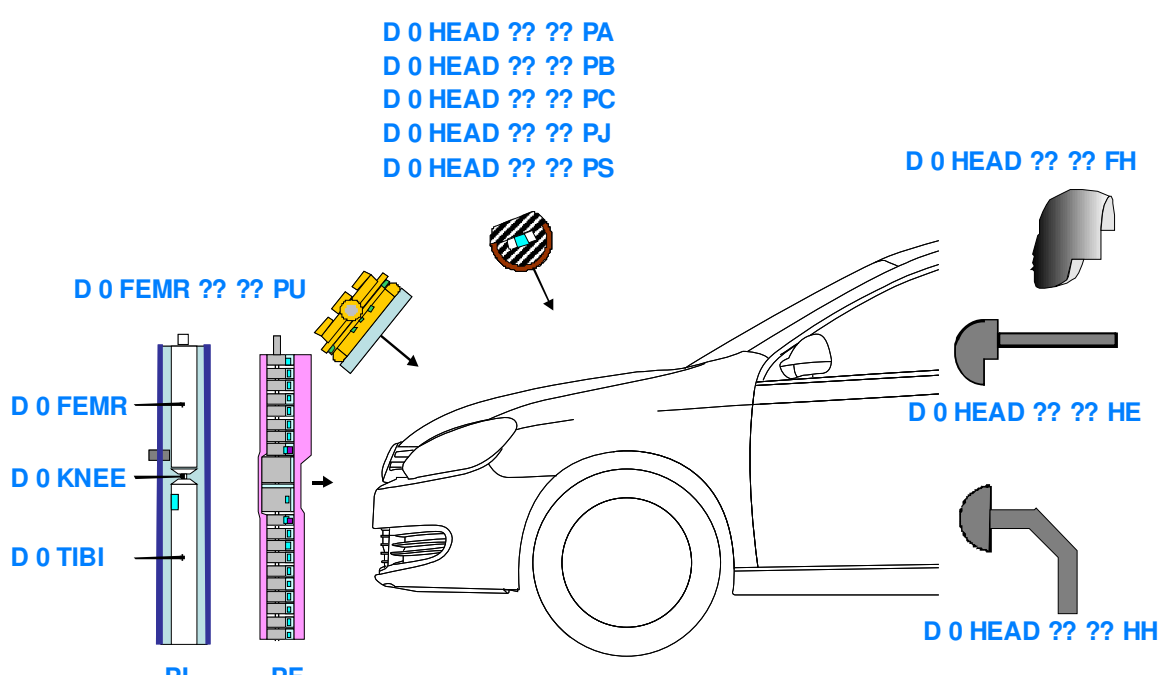
D 0 FEMR ?? ?? PU

D 0 FEMR  
D 0 KNEE  
D 0 TIBI

PL PF

D 0 HEAD ?? ?? HE

D 0 HEAD ?? ?? HH



D 0 HEAD ?? ?? FH	Free Motion Headform
D 0 HEAD ?? ?? HE	Headform (e.g. Ejection Mitigation)
D 0 HEAD ?? ?? HH	Hemisphere Headform (e.g. FMVSS201, FMVSS202a, ECE-R17, ECE-R21, GTR7)
D 0 HEAD ?? ?? PA	Adult Headform
D 0 HEAD ?? ?? PB	ACEA Headform
D 0 HEAD ?? ?? PC	Child Headform
D 0 HEAD ?? ?? PJ	JARI Headform
D 0 HEAD ?? ?? PS	JARI Child Headform
D 0 FEMR ?? ?? PU	Upper Legform Pedestrian Impactor
D 0 FEMR ?? ?? PL	Legform Pedestrian Impactor (upper leg)
D 0 KNEE ?? ?? PL	Legform Pedestrian Impactor (knee region)
D 0 TIBI ?? ?? PL	Legform Pedestrian Impactor (lower leg)
D 0 FEMR ?? ?? PF	Flexible Legform Impactor (upper leg)
D 0 KNEE ?? ?? PF	Flexible Legform Impactor (knee region)
D 0 TIBI ?? ?? PF	Flexible Legform Impactor (lower leg)


ISO\_IMP\_1\_16

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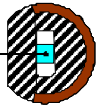
IMP\_2    Impactors: head, upper legform

Valid since Version    1.6  
headforms and upper legform impactor

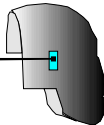


ISO/TS 13499 - RED C : 2012  
Impactors  
Headforms and Upper legform impactor  
2012-05-02


D 0 HEAD 00 00 P? AC ?



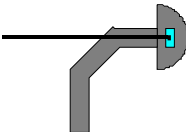
D 0 HEAD 00 00 FH AC ?

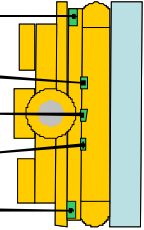


D 0 HEAD 00 00 HE AC ?



D 0 HEAD 00 00 HH AC ?





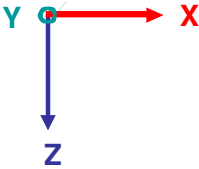
D 0 FEMR UP 00 PU FO X

D 0 FEMR UP 00 PU MO Y

D 0 FEMR MI 00 PU MO Y

D 0 FEMR LO 00 PU MO Y

D 0 FEMR LO 00 PU FO X



D 0 HEAD 00 00 FH AC X ?	Free Motion Headform Acceleration X	transducer
D 0 HEAD 00 00 FH AC Y ?	Free Motion Headform Acceleration Y	transducer
D 0 HEAD 00 00 FH AC Z ?	Free Motion Headform Acceleration Z	transducer
D 0 HEAD 00 00 H? AC X ?	(Hemisphere) Headform Acceleration X	transducer
D 0 HEAD 00 00 H? AC Y ?	(Hemisphere) Headform Acceleration Y	transducer
D 0 HEAD 00 00 H? AC Z ?	(Hemisphere) Headform Acceleration Z	transducer
D 0 HEAD 00 00 P? AC X ?	Headimpactor Acceleration X	transducer
D 0 HEAD 00 00 P? AC Y ?	Headimpactor Acceleration Y	transducer
D 0 HEAD 00 00 P? AC Z ?	Headimpactor Acceleration Z	transducer
D 0 HEAD 00 ?? ?? DS X V	Position X	filmanalysis
D 0 HEAD 00 ?? ?? DS Y V	Position Y	filmanalysis
D 0 HEAD 00 ?? ?? DS Z V	Position Z	filmanalysis
D 0 HEAD 00 ?? ?? AN X V	Rotation around X Axis	filmanalysis
D 0 HEAD 00 ?? ?? AN Y V	Rotation around Y Axis	filmanalysis
D 0 HEAD 00 ?? ?? AN Z V	Rotation around Z Axis	filmanalysis
D 0 FEMR UP 00 PU FO X ?	Upper Shear Force X	transducer
D 0 FEMR LO 00 PU FO X ?	Lower Shear Force X	transducer
D 0 FEMR UP 00 PU MO Y ?	Upper Bending Moment Y	transducer
D 0 FEMR MI 00 PU MO Y ?	Middle Bending Moment Y	transducer
D 0 FEMR LO 00 PU MO Y ?	Lower Bending Moment Y	transducer

ISO\_IMP\_2\_16

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ISO\_IMP\_2\_16\_20120502.EMF

->IMP\_2 <- 2 of 4

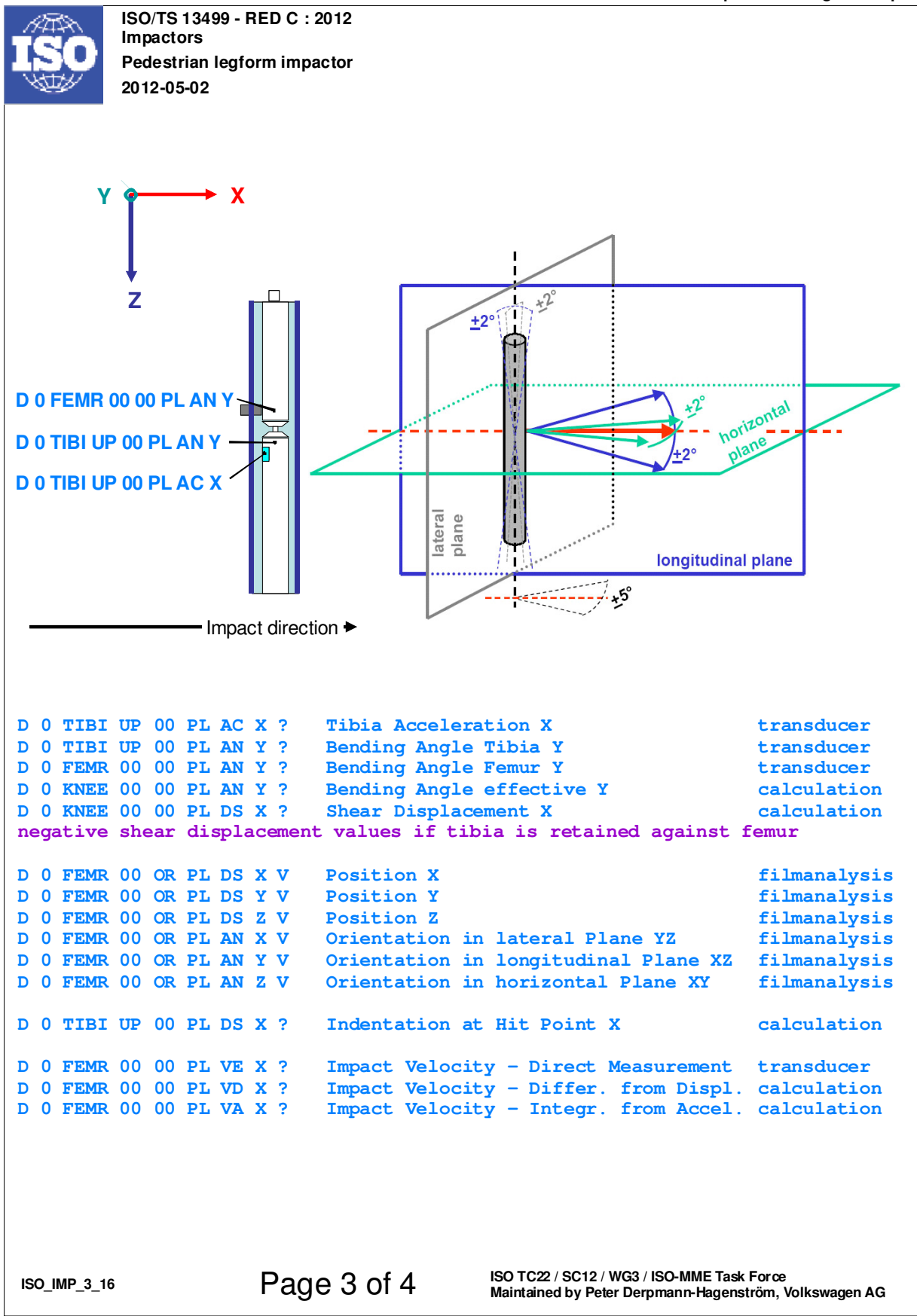
56

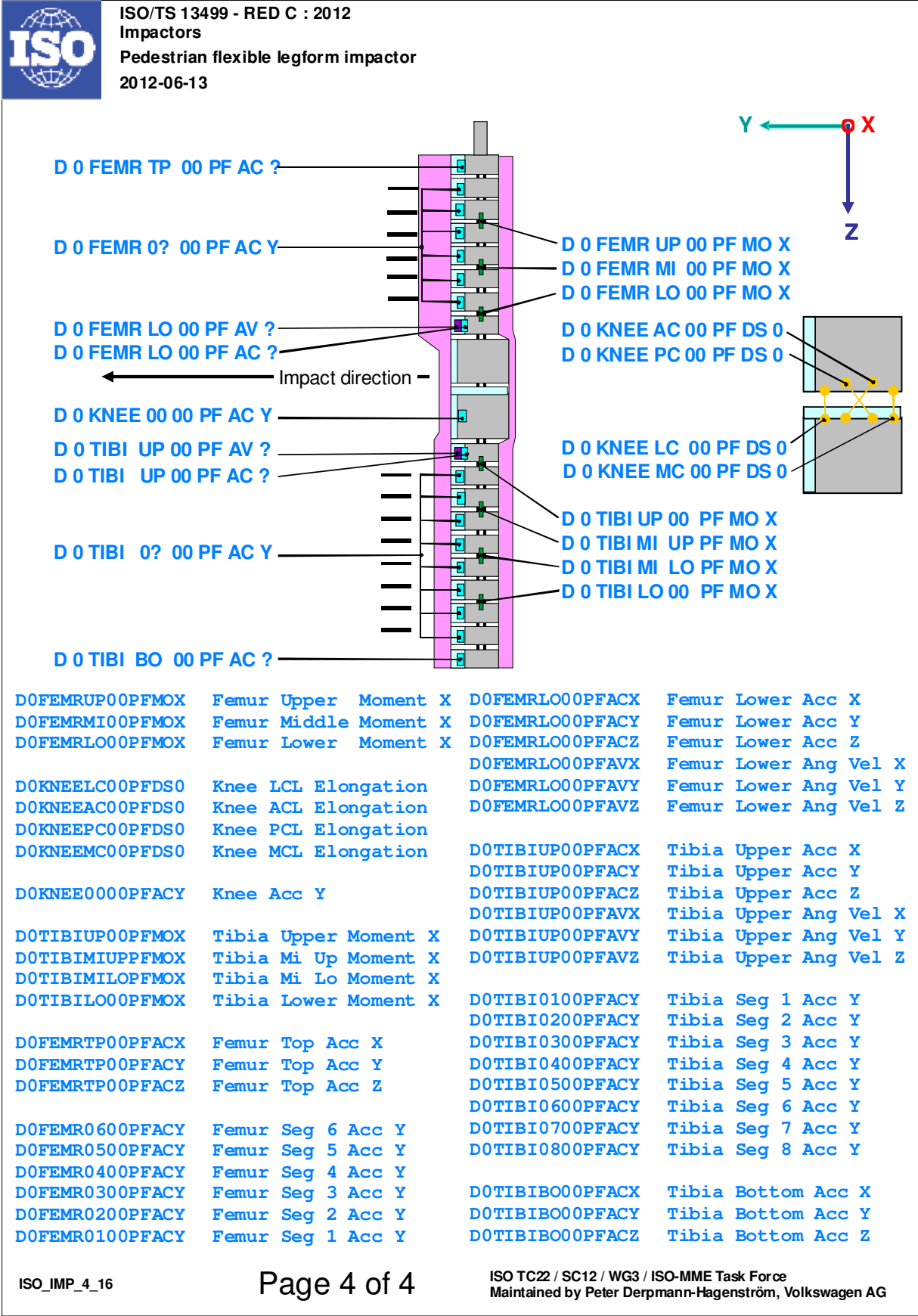
ISO MME Database 2.41 - Data Release 1.6



IMP\_3 Impactors: legform


Valid since Version 1.6  
pedestrian legform impactor





SEAT\_1 Seat

Valid since Version 1.6  
belts and seat structure



ISO/TS 13499 - RED C : 2012  
Seat 1  
Seat front and side view  
2012-02-23

??SEAT

?? SEBE	???	B1	Seat Belt at Retractor	?? SEAT	Seat
?? SEBE	???	B2	Seat Belt below Belt Loop	?? SEBA	Seat Back
?? SEBE	???	B3	Seat Belt at upper Diag. Belt	?? SEFR	Seat Frame
?? SEBE	???	B4	Seat Belt at lower Diag. Belt	?? SETR	Seat Track
?? SEBE	???	B5	Seat Belt at Lap Belt inside	?? SEAD	Seat Adjuster
?? SEBE	???	B6	Seat Belt at Lap Belt outside	?? SEPN	Seat Pan
?? PRET	???	B1	Pretensioner at Retractor	?? HERE	Head Restraint
?? PRET	???	B2	Pretensioner below Belt Loop	?? SECM	Seat Cross Member
?? PRET	???	B4	Pretensioner at lower D. Belt	?? SERM	Seat Rail Mount
?? PRET	???	B6	Pretensioner at Lap Belt outside		
?? LOLI			Load Limiter		
?? RETR			Retractor		
?? SBHA			Seat Belt Height Adjuster		
?? BLOP			Belt Loop		
?? BLOK			Belt Lock		
?? BCKL			Buckle		
?? BAFI			Belt Anchor Fitting		

\*Only at the rear seats  
?? TOPT            Top Tether


ISO\_SEAT\_1\_16

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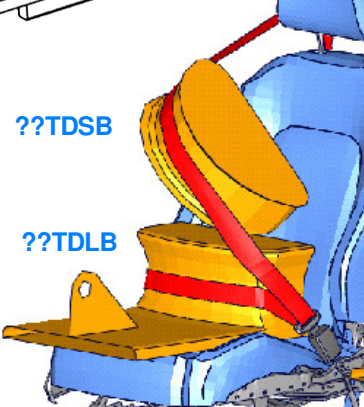
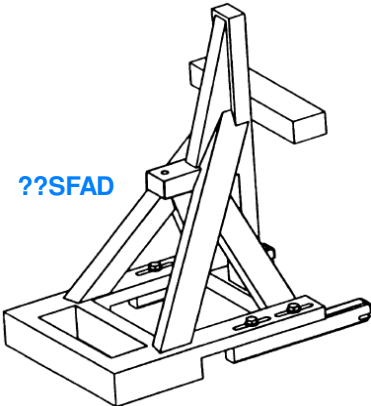
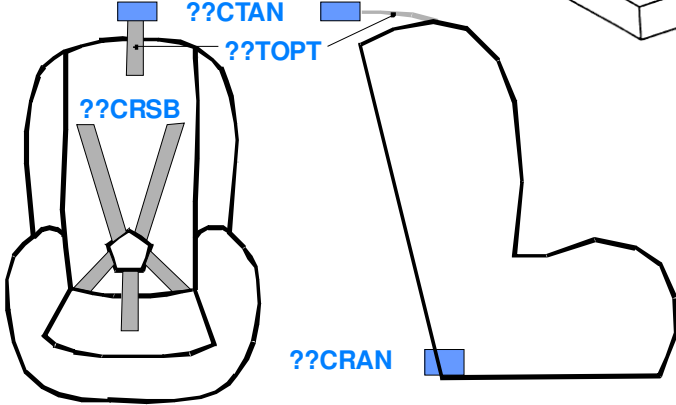
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SEAT\_2 Seat and traction devices

Valid since Version 1.6  
traction devices, Child restraint anchorage



ISO/TS 13499 - RED C : 2012  
Seat 2  
Child Restraint Systems  
2012-02-23



?? TDSB    Traction Device Shoulder Belt

?? TDLB    Traction Device Lap Belt

?? CTAN    Child Tether Anchorage

?? CRAN    Child Restraint Anchor

?? CRSB    Child Restraint Seat Belt

?? TOPT    Top Tether

?? SFAD    Static Force Application Device

ISO\_SEAT\_2\_16

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WPL\_1 Whiplash

Valid since Version 1.6  
whiplash filmanalysis

