CHASSIS ENGINEERING GUIDELINES

(ISSUE A, AUGUST 2018)

DESIGN GUIDELINES FOR:

FUSO FIGHTER 6x4

MODELS:

FN62, FN64

APPLICATIONS - FLAT DECK, CURTAINSIDER, TIPPER
(FN62FR, FN64FU not recommended for tipper application)

These recommendations have been prepared for design engineers and body builders as a guide to assist when selecting and specifying chassis modification and/or body fitment.
These guidelines should be read in conjunction with the Mitsubishi Fuso Truck and/or Bus Body Equipment Mounting Directives available on the FUSO Body Builder Portal.

CHASSIS FRAME MATERIAL

Hot Rolled Steel, 540 Mpa tensile, 390 Mpa yield.

LOAD CONSIDERATIONS

TIPPER

AT LIFT OFF	Point when body raised just clear of the chassis thus imposing two point loads on the chassis rails at hinge and hoist mount.
AT MAX TIP	Point when the body is raised to tip angle of 48°, (tail door closed) so loads act at the hoist mounting and hinge pivot points.
LOAD CENTRE	Determined as water level load 600mm above chassis.
SPREADING	Spreading work imposes higher frame loads and may require chassis reinforcement.

FLAT DECK

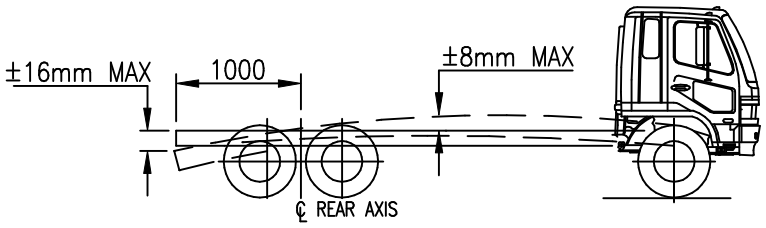
U.D.L.	Consider as a uniformly distributed load over whole or part of deck length.
CURTAINSIDER	Consider as a uniformly distributed load over whole or part of deck length in conjunction with point loads imposed by body and taillifts.

MAXIMUM DESIGN STRESS

Recommended maximum design stress = 35% of chassis yield stress (136 MPa) for sections of frame that are unmodified or do not contain stress raisers. Appropriate allowance should be made for details in the frame that have been modified or contain stress raisers. refer to the body builders manual for stress levels using static load applications.

MAXIMUM CHASSIS DEFLECTION

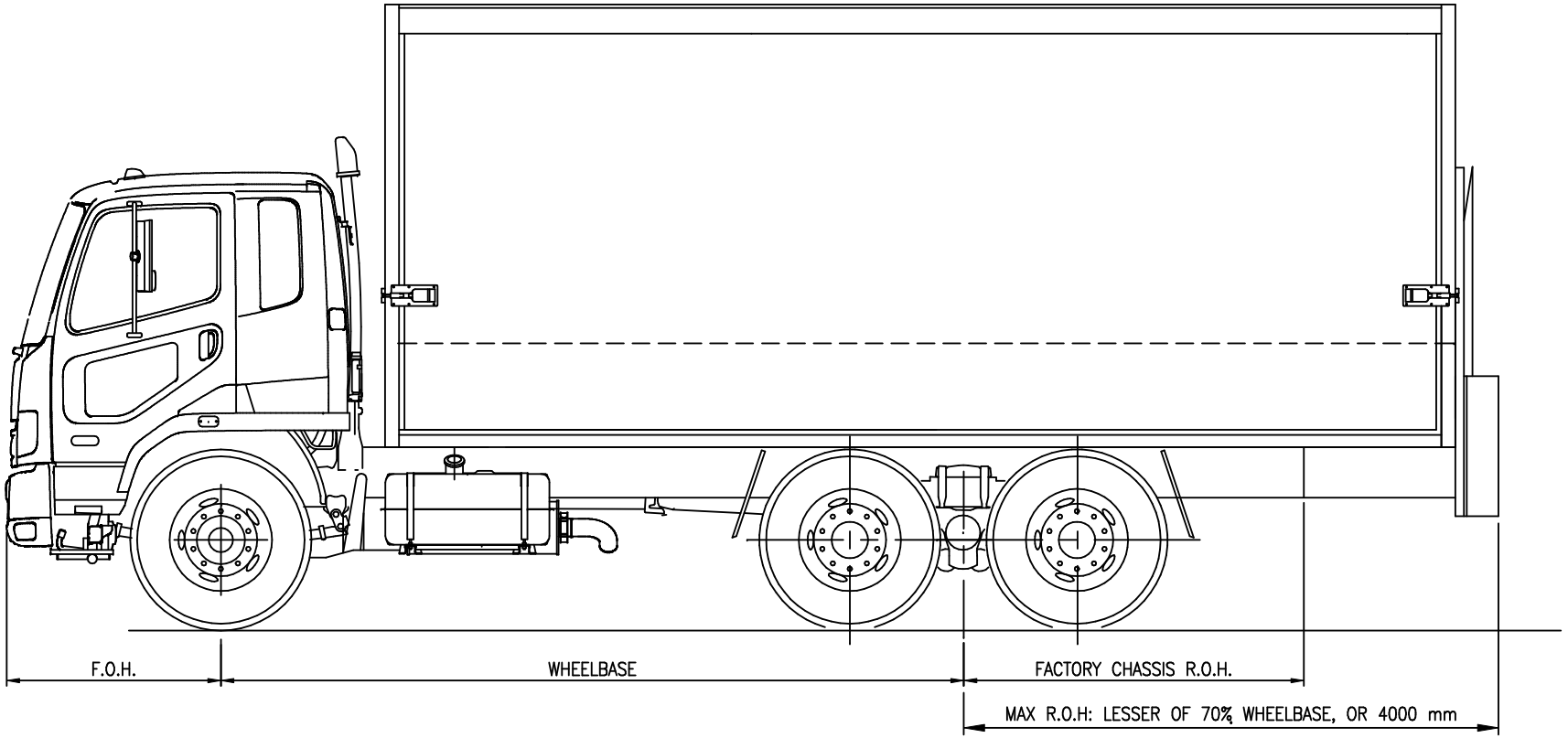
CASE 1	Between front and rear axis. Maximum permissible deflection: ±8mm.
CASE 2	Rear overhang. Maximum permissible deflection: 16mm at 1000mm or greater, rear of rear axis.



This specification sheet applies to vehicles supplied by Fuso NZ for the New Zealand market. REF: J22974 / FN-FIGHTERSUA.DWG

NOTES:

01) THIS DRAWING IS FOR USE AS A GUIDE ONLY, TO ASSIST WHEN SELECTING AND SPECIFYING CHASSIS MODIFICATION AND/OR BODY FITMENT.
02) THE FITTING OF A BODY AND ANY WORK ON THE CHASSIS FRAME MUST BE CARRIED OUT IN ACCORDANCE WITH THE FUSO GUIDELINES FOR THIS MODEL AND GOOD INDUSTRY PRACTICE.
03) THIS CHASSIS (WITHOUT A SUBFRAME) IS SUITABLE FOR, FITTING A CURTAINSIDER BODY AND, LOADS UP TO THE MANUFACTURERS GVM PROVIDING THE BODY/CHASSIS R.O.H. DOES NOT EXCEED THE MAX R.O.H. LIMITS STATED.
04) REGARDLESS OF THE BODY/CHASSIS REAR OVER HANG, FITMENT OF A TAILLIFT MAY REQUIRE A SUBFRAME OR ADDITIONAL CHASSIS REINFORCEMENT, AND THIS REQUIREMENT SHOULD BE DETERMINED BY ENGINEERING CALCULATION AND ASSESSMENT USING THE FUSO GUIDELINES.



MODEL	WHEELBASE	F.O.H.	FACTORY CHASSIS R.O.H.
FN62FK2	4300mm	1245mm	1970mm

ISSUE	DATE	CHANGES MADE	BY
C			
B			
A	1/8/2018	FIRST ISSUE	K.H.

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8 Landing Drive, Auckland Airport, 2022
PO Box 107 166, Auckland Airport, 2150

FIGHTER EURO 5 FN62FK 6X4
SAMPLE CURTAINSIDER / FLAT DECK LAYOUT

Ref: 22974

3 - 560815

Sheet: 01

Drawn: Y. H.	Issue: A	Chkd:	
Date: 1/8/2018	Scale: 1:30	Date:	560815A1

NOTES:

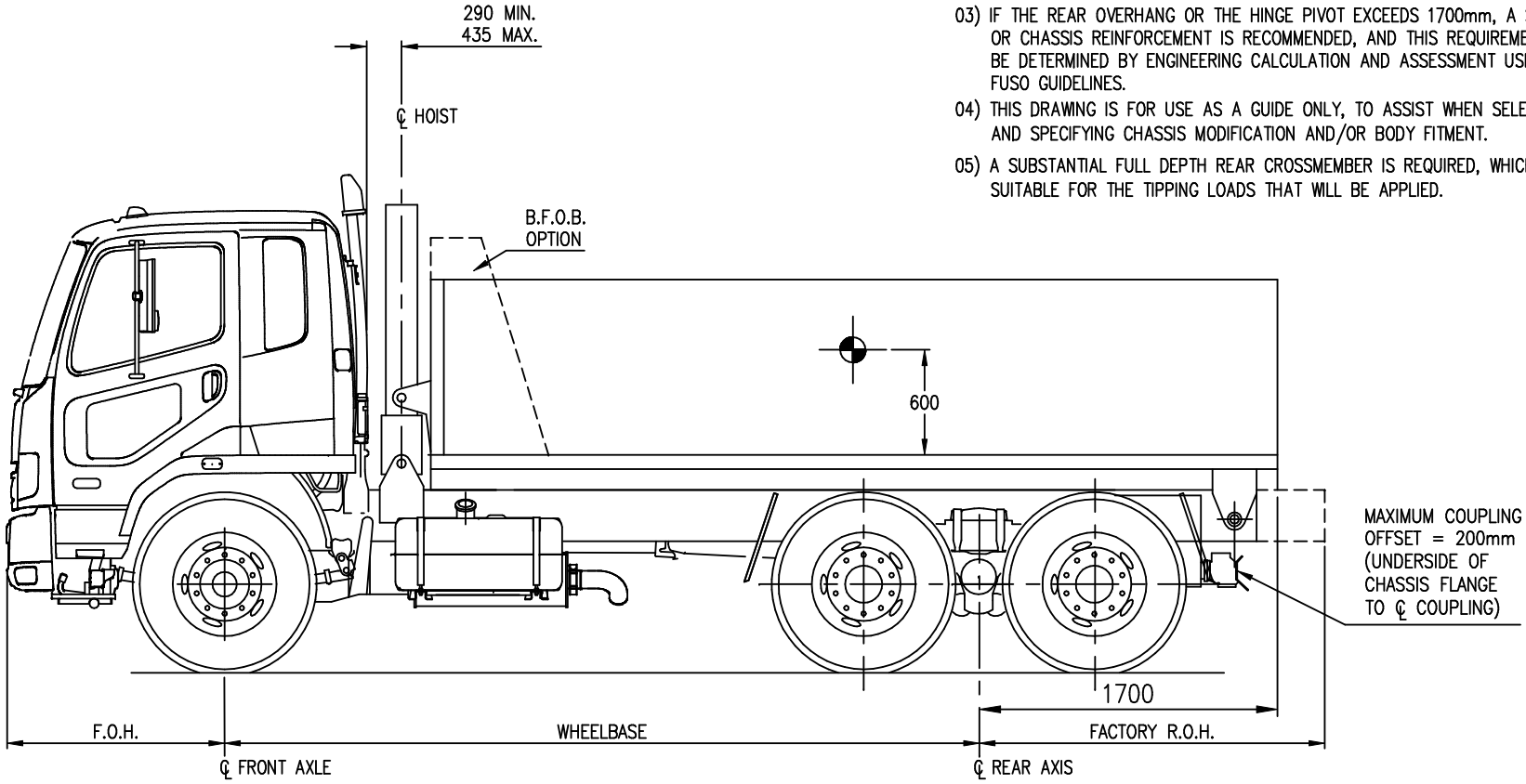
01) THIS CHASSIS (WITHOUT A SUBFRAME) IS SUITABLE FOR FITTING AN F.O.B. (OR B.F.O.B.) HOIST AND BODY, AND LOADS UP TO THE MANUFACTURERS G.V.M. PROVIDING THE BODY OR HINGE PIVOT DO NOT EXCEED THE RELEVANT BODY R.O.H. STATED.

02) THE FITTING OF A BODY AND ANY WORK ON THE CHASSIS FRAME MUST BE CARRIED OUT IN ACCORDANCE WITH THE FUSO GUIDELINES FOR THIS MODEL AND GOOD INDUSTRY PRACTICE.

03) IF THE REAR OVERHANG OR THE HINGE PIVOT EXCEEDS 1700mm, A SUBFRAME OR CHASSIS REINFORCEMENT IS RECOMMENDED, AND THIS REQUIREMENT SHOULD BE DETERMINED BY ENGINEERING CALCULATION AND ASSESSMENT USING THE FUSO GUIDELINES.

04) THIS DRAWING IS FOR USE AS A GUIDE ONLY, TO ASSIST WHEN SELECTING AND SPECIFYING CHASSIS MODIFICATION AND/OR BODY FITMENT.

05) A SUBSTANTIAL FULL DEPTH REAR CROSSMEMBER IS REQUIRED, WHICH IS SUITABLE FOR THE TIPPING LOADS THAT WILL BE APPLIED.



MODEL	WHEELBASE	F.O.H.	FACTORY CHASSIS R.O.H.
FN62FK2	4300mm	1245mm	1970mm

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FIGHTER EURO 5 FN62FK 6 x 4 SAMPLE
FOB / BFOB TIPPING LAYOUT

Ref: 22974

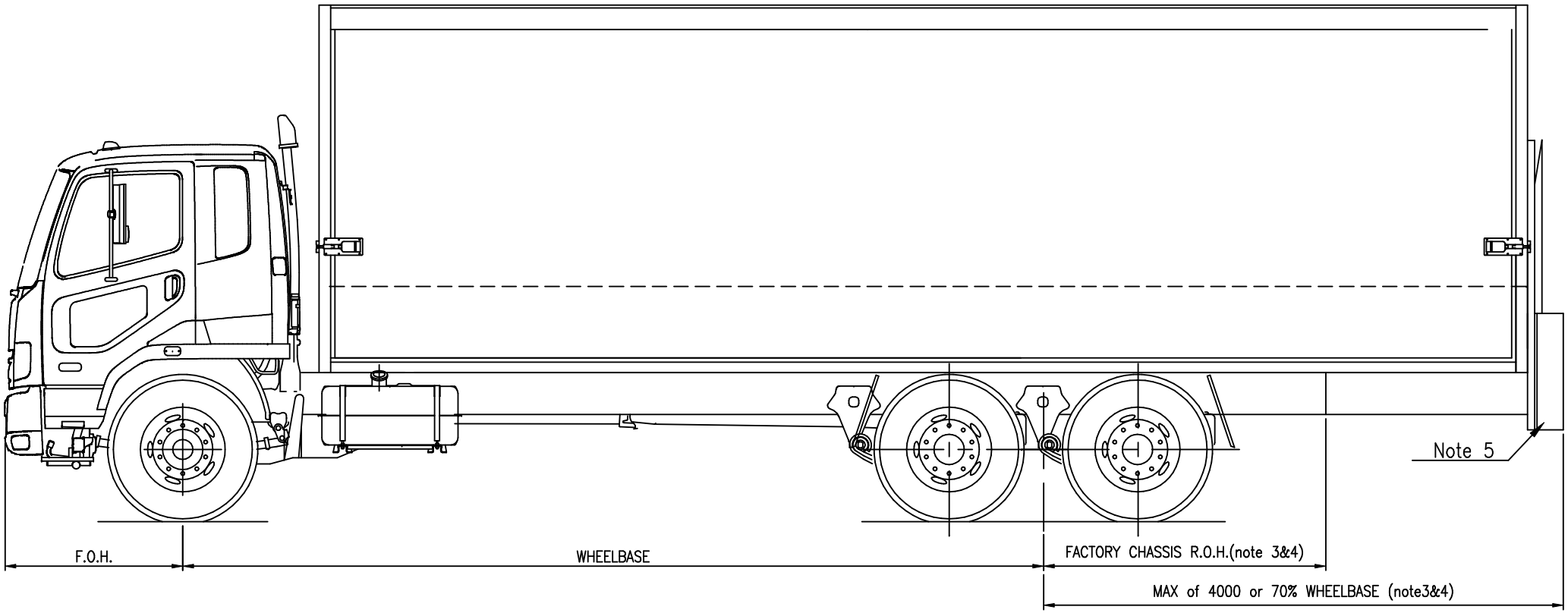
3 - 560815

Sheet: 02

Drawn: Y. H.	Issue: A	Chkd:	
Date: 1/8/2018	Scale: 1:30	Date:	560815A2

NOTES:

01) THIS DRAWING IS FOR USE AS A GUIDE ONLY, TO ASSIST WHEN SELECTING AND SPECIFYING CHASSIS MODIFICATION AND/OR BODY FITMENT.
02) THE FITTING OF A BODY AND ANY WORK ON THE CHASSIS FRAME MUST BE CARRIED OUT IN ACCORDANCE WITH THE FUSO GUIDELINES FOR THIS MODEL AND GOOD INDUSTRY PRACTICE.
03) THIS CHASSIS (WITHOUT A SUBFRAME) IS SUITABLE FOR, FITTING A CURTAINSIDER BODY AND, LOADS UP TO THE MANUFACTURERS GVM PROVIDING THE BODY/CHASSIS R.O.H. DOES NOT EXCEED THE 3300 mm R.O.H. LIMIT STATED.
04) IF THE BODY/CHASSIS REAR OVERHANG EXCEEDS 3300mm, A SUBFRAME OR CHASSIS REINFORCEMENT IS RECOMMENDED, AND THIS REQUIREMENT SHOULD BE DETERMINED BY ENGINEERING CALCULATION AND ASSESSMENT USING THE FUSO GUIDELINES.
05) REGARDLESS OF THE BODY/CHASSIS REAR OVER HANG, FITMENT OF A TAILLIFT MAY REQUIRE A SUBFRAME OR ADDITIONAL CHASSIS REINFORCEMENT, AND THIS REQUIREMENT SHOULD BE DETERMINED BY ENGINEERING CALCULATION AND ASSESSMENT USING THE FUSO GUIDELINES.



MODEL	WHEELBASE	F.O.H.	FACTORY CHASSIS R.O.H.
FN62FR2	5650mm	1245mm	2800mm
FN64FU2	6530mm	1245mm	3255mm

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FIGHTER FN62FR/FN64FU 6 x 4
SAMPLE CURTAINSIDER / FLAT DECK LAYOUT

Ref: 22974

3 - 560816

Sheet: 01

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