

M.V.TWOSUCH CONDITIONS OF LOADING – ASSIGNMENT TWO

In all questions, liquids are assumed to be equalised between P & S tanks, partially full tanks subject to FSE..

QUESTION CONDITION A – You load 8 Tonnes of ice on deck amidships. Its K.G.=3.47Mtr, L.C.G.=0, F.S.N.=4. Is your vessel safe?

(Information supplied courtesy Marine Safety, WA Department for Planning and Infrastructure. Extracts by Ranger Hope © 2008).

Item	Tonnes	V.C.G.	Vert. Moment	L.C.G. +/-	Long. Moment	F.S.N.
Fresh water	8.9	2.06	18.33	+5.05	+44.95	
Fwd FO P&S	9.0	1.78	16.02	+3.45	+31.05	
Fwd D/B FO P&S	13.10	1.17	15.33	+1.25	+16.38	
Aft D/B FO P&S	12.80	1.20	15.36	-1.78	-22.78	
ER Wing FO P&S	12.60	2.40	30.24	-4.83	-60.86	
Lub Oil	0.55	2.50	1.38	-7.90	- 4.35	
Crew & Effects	1.00	4.00	4.00	+6.00	+6.00	
Stores	4.00	3.00	12.00	-	-	
Provisions	2.00	2.00	4.00	+7.00	+14.00	
Ice						
Deadweight						
Lightship	148.46	3.48	516.61	-0.65	-96	-
Displacement						

K.G		L.C.G.
F.S.N.		
Kgf		

**Has the vessel SAFE or UNSAFE K.G.fluid AND L.C.G in this loading condition?
Show me the Curves of limiting KG & LCG. Answers**

QUESTION CONDITION B

-You land 8Tonnes of fish on deck. Its K.G.=5.00Mtr, L.C.G.= -7.00, F.S.N.=5. Is your vessel safe?

Item	Tonnes	V.C.G.	Vert. Moment	L.C.G. +/-	Long. Moment	F.S.N.
Water tank	1.78	1.26	2.24	+4.88	+8.69	1.30
Fuel P&S	9.50	2.25	21.37	-4.77	-45.32	0.88
Lub Oil	0.10	2.50	0.25	-7.90	-0.79	0.18
Crew & Effects	1.00	4.00	4.00	+6.00	+6.00	-
Stores	2.00	3.00	6.00	-	-	-
Provisions	0.40	2.00	0.80	+7.00	+2.8	-
Brine Tank	3.00	4.40	13.20	-5.50	-16.50	-
Cod end load	0.50	11.40	5.70	-5.50	-2.75	-
Catch	4.80	2.60	12.48	+0.50	-2.40	-
Fish on deck						
Deadweight						
Lightship	148.46	3.48	516.61	-0.65	-96	-
Displacement						

K.G		L.C.G
F.S.N.		
Kgf		

Has the vessel SAFE or UNSAFE K.G.fluid AND L.C.G in this loading condition?
 Show me the **Curves of limiting KG & LCG** **Answers**

QUESTION CONDITION C

-You land 10 Tonnes of fish on deck.

Its K.G.= 6.00Mtr,

L.C.G.= -4.00,

F.S.N.=5.

Is your vessel safe?

Item	Tonnes	V.C.G.	Vert. Moment	L.C.G. +/-	Long. Moment	F.S.N.
Water tank	1.78	1.26	2.24	+4.88	+8.69	1.30
Fuel P&S	9.50	2.25	21.37	-4.77	-45.32	0.88
Lub Oil	0.10	2.50	0.25	-7.90	-0.79	0.18
Crew & Effects	1.00	4.00	4.00	+6.00	+6.00	-
Stores	2.00	3.00	6.00	-	-	-
Provisions	0.40	2.00	0.80	+7.00	+2.8	-
Brine Tank	3.00	4.40	13.20	-5.50	-16.50	-
Cod end load	0.50	11.40	5.70	-5.50	-2.75	-
Catch	4.80	2.60	12.48	+0.50	-2.40	-
Fish on deck						
Deadweight						
Lightship	148.46	3.48	516.61	-0.65	-96	-
Displacement						

K.G		L.C.G
F.S.N.		
Kgf		

Has the vessel **SAFE** or **UNSAFE** K.G.fluid AND L.C.G in this loading condition?

Show me the **Curves of limiting KG & LCG**

Answers

QUESTION CONDITION D

–You land 3 Tonnes of fish on deck.

Its K.G.= 2.50Mtr,

L.C.G.= -4.00,

F.S.N.=3.

Is your vessel safe?

Item	Tonnes	V.C.G.	Vert. Moment	L.C.G. +/-	Long. Moment	F.S.N.
Water tank	1.78	1.26	2.24	+4.88	+8.69	1.30
ER Wing FO P&S	4.75	2.05	9.74	-4.70	-22.33	0.88
Lub Oil	0.10	2.50	0.25	-7.90	-0.79	0.18
Crew & Effects	1.00	4.00	4.00	+6.00	+6.00	-
Stores	2.00	3.00	6.00	-	-	-
Provisions	0.40	2.00	0.80	+7.00	+2.8	-
Catch	4.80	2.60	12.48	+0.50	-2.40	-
Fish on deck						
Deadweight						
Lightship	148.46	3.48	516.61	-0.65	-96	-
Displacement						

K.G		L.C.G
F.S.N.		KM
Kgf		GM

Has the vessel **SAFE** or **UNSAFE** K.G.fluid AND L.C.G in this loading condition?

Show me the **Curves of limiting KG & LCG**

Answers

QUESTION CONDITION E

-You land 4 Tonnes of fish on deck.

Its K.G.= 3.00Mtr

L.C.G.= -5.00,

F.S.N.=4.

Is your vessel safe?

Item	Tonnes	V.C.G.	Vert. Moment	L.C.G. +/-	Long. Moment	F.S.N.
Water tank	1.78	1.26	2.24	+4.88	+8.69	1.30
ER Wing FO P&S	4.75	2.05	9.74	-4.70	-22.33	0.88
Lub Oil	0.10	2.50	0.25	-7.90	-0.79	0.18
Crew & Effects	1.00	4.00	4.00	+6.00	+6.00	-
Stores	2.00	3.00	6.00	-	-	-
Provisions	0.40	2.00	0.80	+7.00	+2.8	-
Catch	4.80	2.60	12.48	+0.50	-2.40	-
Fish on deck						
Deadweight						
Lightship	148.46	3.48	516.61	-0.65	-96	-
Displacement						

K.G		L.C.G
F.S.N.		KM
Kgf		GM

Has the vessel SAFE or UNSAFE K.G.fluid AND L.C.G in this loading condition?

Show me the **Curves of limiting KG & LCG**

Answers