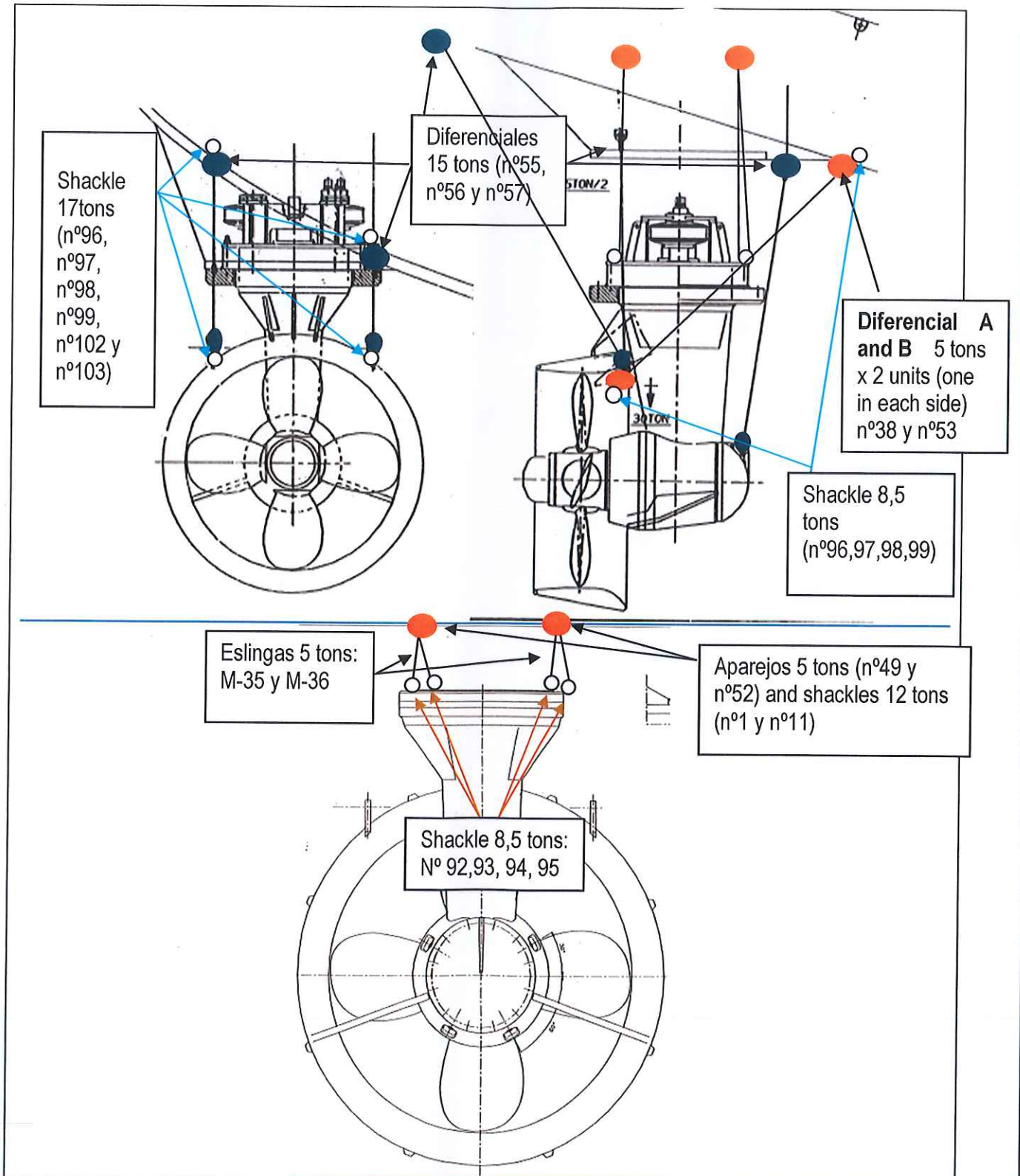


Carga a elevar: Thruster Babor
Piece to lift:

Máximo peso: 30 tons
Máx. weight:

Plano de elevación:
Lifting plan (sketch):



Accesorios de elevación necesarios:

Lifting appliances:

Modelo	Código	Modelo	Código
Eslingas	M-35 , 36 (5 tons / 1,5 mts)	Grilletes 17 tons	Nº 96,97,98,99,102,103
Diferenciales 5 tons	Nº 38, 49, 52, 53		
Diferenciales 15 tons	Nº 55,56,57		
Grilletes 8,5 tons	Nº 92,93,94,95,96,97,98,99		
Grilletes 12 tons	Nº 1, 11		

Recomendaciones de seguridad:

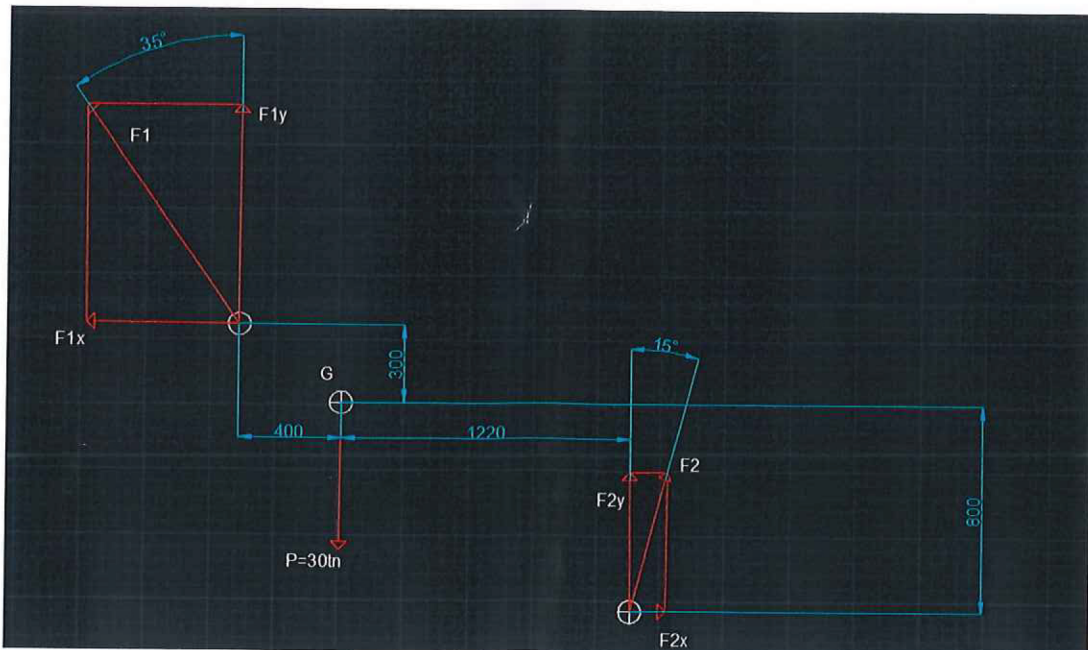
Safety issues:

Plano de elevación validado por:

Lifting plan validate by:

SERVICE MANAGER	HSE MANAGER	OWNER / MANUFACTURER
Fecha (Date): 20/12/17	Fecha (Date):	Fecha (Date): 20/12/17

Simplified maneuver calculation



$$1) \sum F_v = 0;$$

$$2) \sum F_h = 0;$$

$$3) \sum M = 0;$$

$$1) F_{1y} + F_{2y} = 30;$$

$$2) F_{1x} + F_{2x} = 0; \text{ (Assumed this is 0 fitting 2 x 5 tons chainblock A and B to correct it)}$$

$$3) 1220F_{2y} = 400 F_{1y}$$

$$F_{2y} = \frac{P}{\left(\frac{1220}{400} + 1\right)} = 7.4Tn.$$

$$F_{1y} = \frac{1220F_{2y}}{400} = 22.6Tn.$$

$$\bullet F_2 = \frac{F_{2y}}{\cos 15^\circ} = 7,66Tn.$$

$$\bullet F_1 = \frac{F_{1y}}{\cos 35^\circ} = 27,5 Tn.$$

The result of F1 is divided between both aft chain blocks. (13,75 tons each chain block)