KH-KIPPER Zabudowy Przyczepy Naczepy	**ASSEMBLY CONTROL CARD DEVELOPMENT**	order number

Trailer no.	Actuator no.
Frame no.	Divider no. / Patron type

VIN number	QC		

No.	INTERMEDIATE FRAME NOT MOUNTED ON CHASSIS		ok	bad	n/a
1	Welding of intermediate frame mounting *(according to manufacturer's guidelines)*				
	ASSEMBLY OF INTERMEDIATE FRAME ON MAIN FRAME				
2	Assembly of intermediate frame mounting on main frame *(fitting, marking bolts with marker)*				
a)	stiff mount	dimensions / class / durability of bolts - M …… Q…… DIN ……..			
		used torque - …… Nm			
b)	flexible mount	dimensions / class / durability of bolts - M ……. Q……. DIN …….			
		used torque - …… Nm			
3	Completeness and type of bolts *(according to chassis manufacturer's guidelines)*, completeness of rivets, place of removed rivets filled with bolts				
4	Lack of collisions between bolts and elements of chassis and installation				
5	Use of Fluidol *(between frames)*				
6	Drawbar *(correctness of setting, lack of collisions, correct bolt torque)*				
	ASSEMBLY OF BOX WITH FRAME				
7	Assembly of trailer tipping hinge on intermediate frame *(correct bolt torques - marking bolts with marker, fitting, securing against axle protrusion)*				
a)	bolt tightening	dimensions / class / durability of bolts - M ……. Q…… DIN ……..			
		used torque - …… Nm			
8	Connecting stabiliser to trailer *(lack of collisions when trailer is lowered, protections, stabiliser cannot be fully "stretched" when box is fully lifted with disconnected knock-off valve)*				
9	Mechanism closing back board (pull cables, actuator), sneep *(correctness of operation, protections, lack of collisions)*				
10	Heating floor with fumes *(fitting exhausts, completeness of installation, flexible coupling, operation and place of assembly of switching valve and tightness of connections, channel permeability tests in trailer, protection of chassis elements against influence of high temperature)*				
11	HYFIX *(correctness of assembly and adjustment, removal of transport stake)*				
12	Lack of collisions between trailer and frame elements *(check on lowered and lifted trailer)*				
	ASSEMBLY OF CRANE				
13	Assembly of crane on intermediate frame *(fitting, marking bolts with marker)*				
a)	bolt tightening	dimensions / class / durability of bolts - M ……. Q…… DIN …….			
		used torque - …… Nm			
14	Lack of collisions with chassis or development elements				
15	Welding of resistances *(according to guidelines, protection against relocation)*				

ASSEMBLY OF ACTUATOR					
16	**Front actuator**				
a)	Setting cradles - *fitting (ease on actuator pins between actuator and mounting from each side must be between 0.5 and 1mm. For actuator mounting should be used M16 bolts (DIN 960 Q10.9) unless actuator's specification show otherwise. Self-locking nuts for upper and lower slings of actuator should be located on the outside of trailer), marking bolt tightening with marker*				
	bolt tightening	dimensions / class / durability of bolts - M …..… Q…..…DIN …..….			
		used torque - ……. Nm			
b)	Setting of buffer *((actuator installed vertically, both when looking from the front and side (±2 mm) in the middle of trailer. Only FC actuators installed vertically must have installed rubber support that supports cup in its upper portion and immobilises actuator during drive. Between cup and buffer there should be no gap and the buffer cannot be compressed too much (max. 1-3mm))*				
17	**Under trailer actuator**				
a)	Assembly of apple *(correctness of protection)*				
b)	Assembly in towlines *((protection of actuator in towlines (max. ease up to 2 mm), correctness of mounting with documentation, ease in assembly (2-3mm))*				
18	Lack of collisions with chassis or development elements *(during rest and at maximum tipping angle, ease between actuator and peak and between actuator bottom and chassis elements)*				
HYDRAULICS					
19	Main valve *(compliance with specification, assembly, operation, setting valves determining maximum pressure, lack of oil leaks, quality of connections, filled out protocol with pressure settings (at section valves write for each section))*				
20	Assembly of oil tank *(type and location, strap bolt torques, cleanliness of air filter, cleanliness of oil)*				
a)	Oil type:……. / Mauser no. ……..				
21	Tank valve *(lack of oil leaks, immobilisation of shut-off valve handle)*				
22	Hydraulic board valve *(mounting, functionality, accessibility, lack of oil leaks)*				
23	Three-way valve *(mounting, functionality, accessibility, lack of oil leaks)*				
24	Pump *(distance from shaft and other car components - minimum 3 mm, at suspension elements and transmission shaft in lower position corresponding to maximum load - minimum distance of 5 mm, lack of leaks, noise during pump operation after 3 mins of operation of pump and power take-off, use of seal between pump and power take-off, direction of assembly of dewatering lead, and fastening)*				
25	Hydraulic leads *(immobilisation of leads in steel handles or using plastic clamps, protection against collisions, protection of leads against abrasion)*				
26	Hydraulic tubes, forging *(protection against contact with other elements, use of twisted mounting cubes, quality of forging and tightening of ends, check for leaks)*				
27	Leading of hydraulic installation *(compliance of connectors with specification, lack of collisions, mounting and protection of leads and tubes, lack of oil leaks)*				
28	Adjustment of hydraulic board *(lifting and lowering, protection of chokes)*				
29	System tightness *(lack of leaks on all hydraulic connections when tests are carried out)*				
PNEUMATICS					
30	Leading of Tekalan leads *(assembly, immobilisation using clamps, lack of folds, protection against damage in electrical conduit)*				
31	Tightness of connections *(visual and acoustic inspection of pneumatic leads and valves)*				

CONTROL					
32	Joystick in cabin *(tightening, functionality of control mounting, lack of controller collisions, operation)*				
33	Lamps *(operation of PTO activation signalling, position of trailer location, opening/closure of coupling, messages about defects)*				
34	Limit switch *(adjustment of valve and tightening of control nut, correctness of actuator operation shut-off)*				
35	Assembly of hydraulic board actuators *(bolt tightening)*				
36	Assembly of hydraulic board actuators/locks *(correctness of operation)*				
37	Tightening and adjustment of hydraulic board resistances *(optimal setting)*				
38	Operation of hydraulic board, sneep, air vent - video recording of tests				
39	Bumper *(tightening of beam, resistances, lack of collisions, setting)* according to Regulation 58, label with approval no.				
a)	mounting bumper to chassis frame	dimensions / class / durability of bolts - M …..……Q……..…DIN …….....			
		used torque - …… Nm			
40	Assembly and correctness of operation of aluminium roof, Cramaro tarpaulin system - video recording of tests				
ACCESSORIES					
41	Barriers - setting according to Regulation 73, lack of collisions with chassis elements				
42	Grease points *(completeness of grease fittings of mobile mechanisms' elements, e.g. actuator, HYFIX hook, tipping axis hinges, rear lid hook shaft, side boards, stabiliser, and others depending on development),* labelling				
43	Replacement wheel *(lack of collisions between wheel with its mounting and other elements, functionality, protection of wheel assembly elements for the duration of transport)*				
44	Winch and rope *(functionality, bolting, leading of rope, and lack of collisions)*				
45	Aluminium boards *(assembly, fitting, riveting)*				
46	Removable poles *(setting, bolting)*				
47	Wedges *(mounting)*				
48	Registration number frames *(mounting according to regulations)*				
49	Mudguards/matts according to Directive 109/2011				
50	Toolbox *(mounting, use of washers, functionality of service)*				
51	Mounting of towing rope *(mounting method)*				
52	Shovel, sweeping brush *(mounting and ergonomics)*				
53	Marking plates (according to approval, bolt tightening)				
54	Tarpaulin *(mechanism of operation, arrangement of hooks and rope hooks, functionality)*				
55	Rear lamps *(location and mounting according to guidelines)*				
56	Lamp grates *(correctness of assembly)*				
57	Fenders *(type, mounting, lack of collisions with development, wheels, and suspension during drive)*				
58	Marker lamps according to Regulation 48				
59	Ladders *(functionality, lack of collisions, protection)*				
60	Coupling *(compliance with documentation, twisting, setting)*				

61	Mounting of bases for crane supports *(tightening of basket, lack of collisions with other chassis elements)*			
62	Oil level *(checked when trailer is lowered and after trailer is lifted several times)*			
63	Pollutants *(lack of traces of drenching with oil, staining with grease, metal filings, and remains of bolts after assembly)*			
64	Contour wrapping according to Regulation 48			
	OPERATION TEST			
65	Lifting time: …….. *(according to designer's technical specification at rated rounds per minute)* Rated rounds per minute: ……. rpm			
66	Lifting time: …….. *(according to designer's technical specification at engine's rounds per minute increased up to 1000 rpm)*			
67	Lowering time : …….. *(checked at disconnected power take-off, should amount to between 75 and 100% of lifting time)*			
68	Max. tipping angle – backwards: ..…… *(after actuator's operation is shut-off by limit switch, compliance of tipping angle with documentation)*			
69	Max. tipping angle – left: ..…… *(after actuator's operation is shut-off by limit switch, compliance of tipping angle with documentation – concerns W2 and W3)*			
70	Max. tipping angle – right: ..…… *(after actuator's operation is shut-off by limit switch, compliance of tipping angle with documentation – concerns W2 and W3)*			
71	Smoothness of trailer and actuator movement during lifting and lowering			
72	Lack of collisions of trailer lifted to max. backward position – *e.g. with trailer, ends of frame cross-braces, closure pull cables rear board hooks, with marking plates, coupling,* on sides – with chassis elements			
73	Ropes, straps securing tipping *(length of ropes, arrangement, lashings, tensions at maximum trailer tipping, mounting bolt tightening)*			
74	Illumination tests			
75	Company wrapping			
76	Nameplate			

Remarks:

Inspected by: ……..
(date and signature)