

Montážní a uživatelský
návod

User's guide installation
Instructions

Montage und
Bedienungsanleitung

TZK – 001

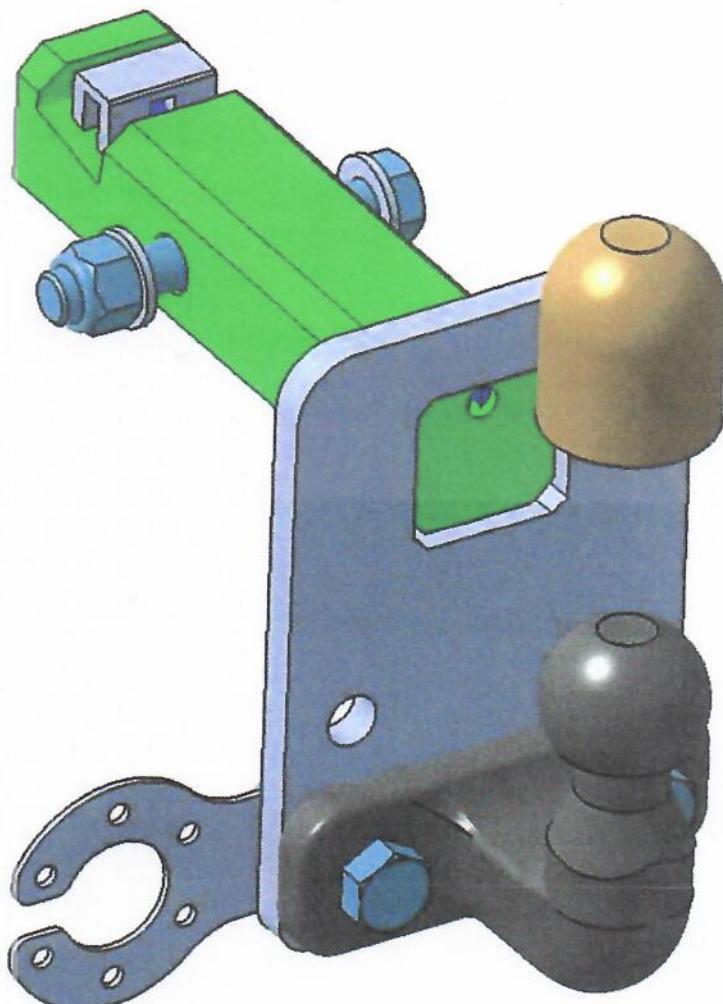
pro automobily s 2"
upínacím pouzdrem

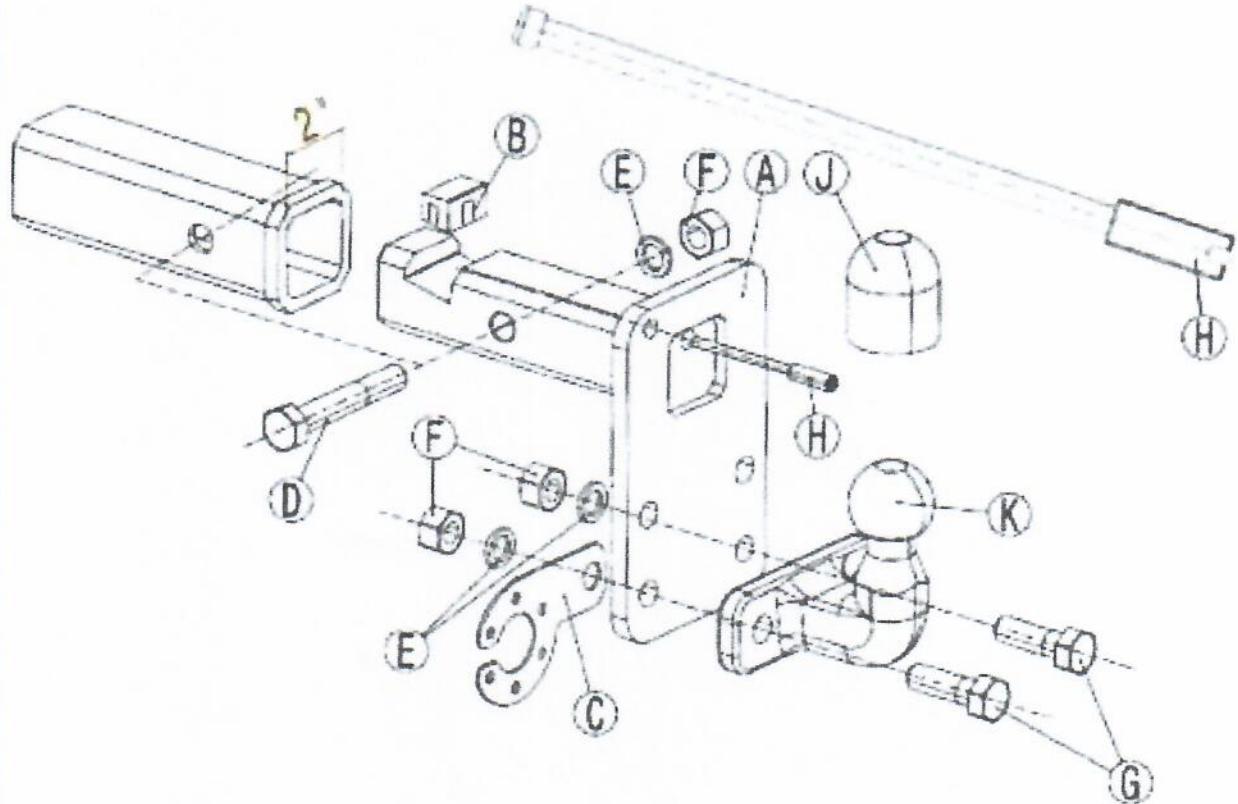
for passenger car
with 2" receiver

für Personenkraftwagen
mit 2" Spannbuchse

tažák.cz s.r.o.
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CZE – 295 01 Mnichovo Hradiště

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Seznam dílů – List of Components - Verzeichnis der Teile:

Název dílu - Name of the part – Bezeichnung des Teils	Kusy – Quantity - Stück	Pozice - Position - Position
Nosník svařený - Welded beam - Träger	1	A
Klínek - Wedge - Bolzen	1	B
Aretační tyčka - Fixing lever - Hebel	1	H
Přírubový čep - Flange ball - Kugelhals	1	K
Šroub M16 x 110 - Bolt M16 x 110 - Schraube M16 x 110	1	D
Šroub M16 x 50 - Bolt M16 x 50 - Schraube M16 x 50	2	G
Matice M16 - Nut M16 - Mutter M16	3	F
Podložka č. 16 - Washer no. 16 -	3	E
Držák zásuvky - Socket holder - Steckdosenhalter	1	C
Krytka kul.čepu - Ball cover - Kugelbolzendekel	1	J

COUPLING DEVICE TZK - 001

The coupling device is made according to approved documentation and complies with the homologation:

E8 55R – 01 55852

General data:

The design of the coupling device complies with all international standards. The coupling device passed all structure tests as stipulated in 94/20/EC, the towarm has a ball pivot ø 50mm ISO 3853.

Technical data and parameters:

The device is designed for:

- total permitted weight of the towing vehicle:	3 500 kg
- maximum towed load of braked trailer:	3 500 kg
- maximum towed load of ubraked trailer:	750 kg
- maximum nose statistic weight on the ball pivot:	150 kg

Mind the limits of the tow load in the registration certificate!

Dc – reference dynamic force: **17,2 kN**

Total weight of the coupling device: **9,7 kg**

Dimensions: **320 x 210 x 140mm**

Before assembly:

- Measure a dimension of the receiver on the vehicle and choose a right type of towbar.
- Recheck completeness of the delivered towbar parts.

List of special tools and gadgets:

- Torque wrench
- Screwdriver

Assembly instructions

1. Loose the lever (H) with screwdriver so the wedge is in the closest position to the main beam (A).
2. Insert the main beam (A) to the 2"-inch receiver on the car.
3. Put the screw (D) through the receiver (A) and main beam, put a washer (E) and nut (F) according to picture 1.
4. Use the screwdriver to tighten the wedge with the lever (H) until you eliminate the clearance between the main beam (A) and receiver.
5. Tighten the nut (F) onto the bolt (D) with tightening torque 200Nm.
6. Mount the towing ball (K) and the socket holder (C) on the main beam (A) with the screws (G), washers (E) and nuts (F). The socket holder (C) should be places on the left screw (G) according to picture 1. The nuts (F) tighten by tightening torque 200Nm.
7. Put the cover (J) on towing ball (K).

Demounting should be done in opposite order

Notice to the customer:

- Recheck tightening of the bolts (D,G) after approx.. 1.000 km!
- The ball of the tow arm should be occasionally cleaned and greased by a suitable lubricant.
- Check the function of all lights on the trailer after coupling the trailer and plugging the trailer to the plugbox on the towing vehicle.
- Any alterations of the towing equipment are not allowed.
- Follow the instructions of this guide while using the coupling device.
- The producer cannot take over any responsibility for any damage resulting from improper installation of the tow arm, its overloading or a crash of the car.
- The coupling device cannot be used if damaged or incomplete.
- In case of the trailer not being coupled with the car, the towing ball must be protected by a plastic cover!
- The towbar (in case it is removed) should be stored properly in the boot to prevent damage to the car or any injury of the passengers at sudden braking. The towing ball should be covered by its plastic cover.

Guarantee information and conditions

The manufacturer of the towing coupling gives the guarantee for the construction, used material, manufacturing execution and function of the supplied towing coupling **for 24 months from the date of sale.**

The complaints are to be presented by the buyer to the selling organization within the legal period. The rightfulness of the complaint will be judged by a representative of the selling organization together with a representative of the manufacturer in accordance with valid regulations.

The prerequisite of validity of the guarantee is that the towing coupling has to be used only for those purposes for which it is designed.

The buyer shall examine the condition of the goods at their reception. In case of any damage of the goods or failure to deliver any part of the towing coupling the buyer shall report such fact immediately to the selling organization without unnecessary delay after the reception of the goods.

All parts and accessories of the towing coupling must be checked before professional fitting with regard to their compatibility with the respective type of vehicle. The towing couplings may be used only for the vehicle type stated by the manufacturer. In case of incompetent fitting or fitting of the towing coupling on a type of vehicle for which the towing coupling is not intended, the manufacturer shall not be responsible for any damage of the towing coupling caused by defective fitting or its incorrect use.

The selling organization is responsible for defects the towing coupling had at its reception by the buyer.

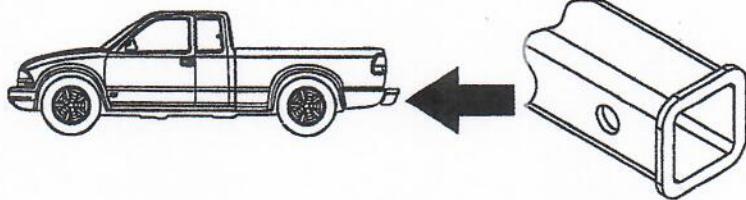
The guarantee does not cover any damages resulting from common wear and tear, overloading and unprofessional use, as well as damages caused by non-compliance with the instructions stated in the operating manual. The guarantee does not cover any damages due to natural disasters. The selling organization is not responsible for any damage in the case when the towing coupling was modified or otherwise altered.

The guarantee also becomes void if the towing coupling has been damaged due to an accident (except accidents caused by the towing coupling itself) or by tampering with its mechanism and construction.

Adapter USA

Cat. no:

AH



E20

E20-55R-01 4613



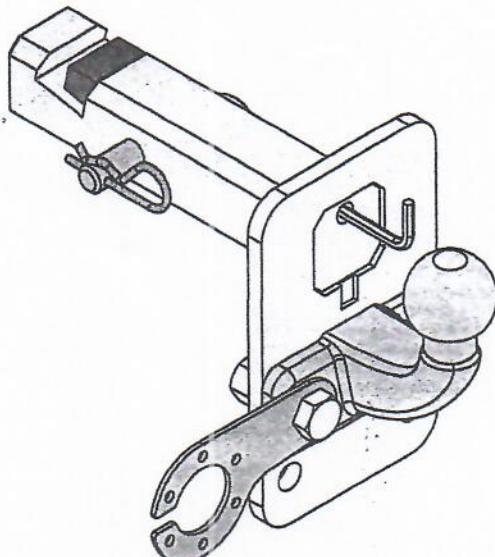
R=3500 kg

D

17,17 kN



S=140 kg



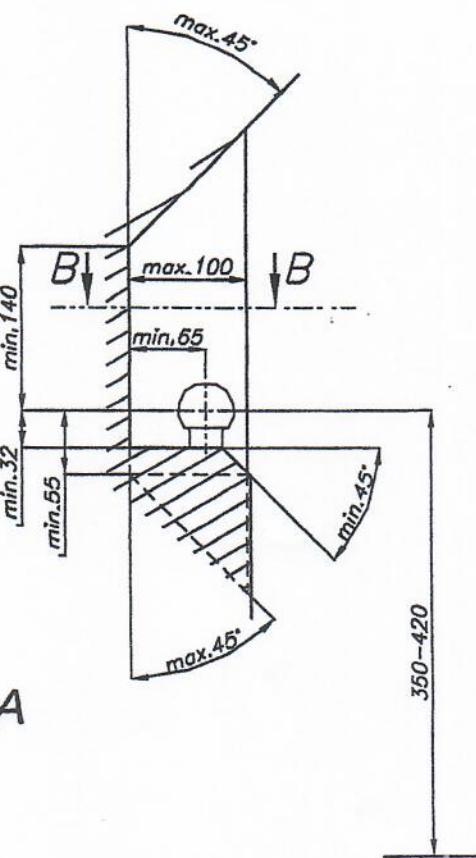
M16 - 210 Nm



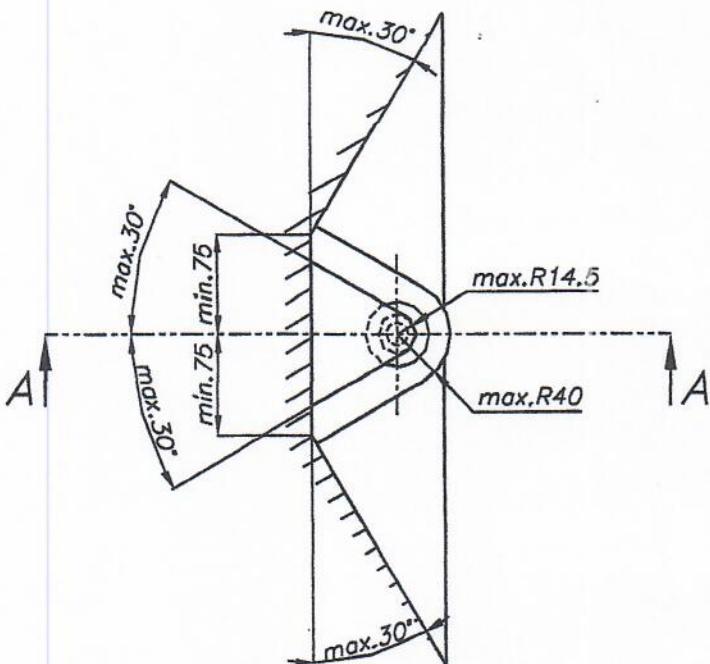
0 km



1000 km



A-A



B-B



Należy zagwarantować przestrzeń swobodną według załącznika VII, rysunek 25a/b Regulaminu EKG ONZ 55.01 przy dopuszczalnym ciężarze całkowitym pojazdu.



The clearance specified in appendix VII, diagram 25a/b of Regulation No. 55.01 UN EU must be guaranteed at laden weight of the vehicle.



Der Freiraum nach Anhang VII, Abbildung 25a/b der Vorschriften 55.01 EG ist zu gewährleisten bei zulässigem Gesamtgewicht des Fahrzeugs.



L'espace libre doit être garanti conformément à l'annexe VII, illustration 25a/b de la règlement 55.01 CE pour un poids total en charge autorisé du véhicule.



I overensstemmelse med bilag VII, figur 25a/b til forordninger 55.01 EF for køretøjets tilladte totalvægt skal der garanteres en friplads.



Hay que garantizar un espacio suelto según archivo adjunto VII, ilustración 25a/b regulaciones 55.01 UN EU de peso admisible y total del vehículo.



De in bijlage VII afbeelding 25a/b vanreglement 55.01 UN EU gespecificeerde vrije ruimte moet bij een maximale gewichtsbelasting van het voertuig gegarandeerd zijn.



Det skal sørges for fritt rom ifølge vedlegget VII, illustrasjon 25a/b forskrifter 55.01 UN EU ved den tillatte totale vekten av fartøyet.



Man ska garantera ett fritt tillgängligt utrymme - se bilaga VII, diagram 25a/b enligt föreskrifter 55.01 vid ett fordons maximala belastning.



Occorre garantire lo spazio libero indicato all'allegato VII illustrazione 25ab della normativa 55.01 CE, in presenza del massimo carico ammissibile del veicolo.



Zaczep kulowy jest skonstruowany zgodnie z zasadami bezpieczeństwa ruchu drogowego. Zaczep kulowy jest elementem wpływającym na bezpieczeństwo jazdy i może zostać zainstalowany wyłącznie przez personel wyspecjalizowany. Niedopuszczalne jest dokonywanie jakichkolwiek zmian w konstrukcji zaczepu. Powoduje to wygaśnięcie dopuszczenia do stosowania. W przypadku obecności masy izolacyjnej lub osłony podwozia w miejscu przylegania zaczepu, należy ją usunąć. Nieosłonięte miejsca karoserii oraz wywiercone otwory należy pomalować farbą antykorozynią. Informacjami wiążącymi odnośnie wartości obciążzeń są dane podawane przez producenta samochodu, względnie wartości maksymalnej masy przyczepy oraz maksymalnego nacisku na kulę, przy czym wartości parametrów zaczepu kulowego nie mogą być przekroczone.

Wzór do obliczania wartości siły D:

$$\frac{\text{Maks. masa przyczepy [kg]} \times \text{Maks. masa samochodu [kg]}}{\text{Maks. masa przyczepy [kg]} + \text{Maks. masa samochodu [kg]}} \times \frac{9,81}{1000} = D [\text{kN}]$$



This towbar is designed according to rules of safety traffic regulations. The towing hitch is a safety component and can be installed only by qualified personnel. Any alteration or conversion of the towing hitch is prohibited and would lead to cancellation of design certification. Remove insulating compound and underseal from vehicle (if present) in the area of the mating surfaces of the towing hitch. The vehicle manufacturer's specifications regarding trailer load and max. vertical cup load are decisive for driving whereat values for the towing hitch cannot be exceeded.

D-value formula:

$$\frac{\text{Max trailer weight [kg]} \times \text{Max vehicle weight [kg]}}{\text{Max trailer weight [kg]} + \text{Max vehicle weight [kg]}} \times \frac{9,81}{1000} = D [\text{kN}]$$



Die Anhängerkupplung erfüllt die Vorschriften der Verkehrssicherheit. Sie beeinflusst die Fahrsicherheit und daher ist sie ausschließlich nur vom Fachpersonal zu montieren. Es dürfen keinesfalls Konstruktionsänderungen vorgenommen werden, sonst erlischt die Verwendungszulassung. Falls es eine Isolationsschicht oder Fahrzeugunterbodenschutz gibt, wo die Anhängerkupplung befestigt wird, so ist dieser zu entfernen. Andere Karosseriestellen und gebohrte Löcher sind mit der Antikorrosionsfarbe anzustreichen. Für die Belastungswerte gelten die vom Fahrzeughersteller angegebenen Daten bzw. max. Masse der Anhänger und max. Stützlast. Dabei dürfen die Höchstkennwerte der Anhängerkupplung nicht überschritten werden.

D-Wert Formel:

$$\frac{\text{max. Masse Anhänger [kg]} \times \text{Max. Fahrzeuggesamtgewicht [kg]}}{\text{max. Masse Anhänger [kg]} + \text{Max. Fahrzeuggesamtgewicht [kg]}} \times \frac{9,81}{1000} = D [\text{kN}]$$



L'attelage est concu en conformité avec les principes de sécurité de la circulation de la route. L'attelage est un facteur qui influence la sécurité routière et doit être installé uniquement par du personnel qualifié. Toute modification de la construction de l'attelage est interdite. Cela entraîne l'annulation de l'autorisation de mise en circulation du véhicule. S'il y en a, enlever le mastic isolant ou la couche de protection du châssis, à proximité de la surface d'appui du crochet. Appliquer une couche de protection antirouille sur les parties nues de la carrosserie et sur les trous. Les informations quant aux valeurs du poids maximal de la remorque et de la pression maximale autorisée sur la boule d'attelage sont celles fournies par le constructeur du véhicule. Ces valeurs ne peuvent pas être dépassées.

La formule pour calculer la puissance D:

$$\frac{\text{poids maximum de remorque [kg]} \times \text{poids maximum de véhicule [kg]}}{\text{poids maximum de remorque [kg]} + \text{poids maximum de véhicule [kg]}} \times \frac{9,81}{1000} = D [\text{kN}]$$



Anhængertrækket er designet i henhold til trafiksikkerhedsreglerne. Anhængertrækket er et element, der påvirker køresikkerheden og kan kun installeres af kvalificeret personale. Foretages der ændringer af anhængertrækkets udførelse. Medfører dette inddragelse af brugstilladelse. Ved tilstedeværelse af formskum eller tildækning af understel ved anhængertrækkets monteringssted, skal disse fjernes. Udsatte chassislementer samt udboredede huller skal behandles med antikorrosions maling. Data anført af bilproducenten, eventuelt værdier for trailerens maksimale vægt samt maksimalt tryk på kuglen er bindende oplysninger om lastværdier, dog må parameterværdier for anhængertrækket ikke overskrides.

Formlen til beregning af kraft D:

$$\frac{\text{Maks. Trailervægt [kg]} \times \text{Maks. Bilens vægt [kg]}}{\text{Maks. Trailervægt [kg]} + \text{Maks. Bilens vægt [kg]}} \times \frac{9,81}{1000} = D [\text{kN}]$$



El enganche de bola está construido según las normas de la seguridad de tráfico. El enganche de bola es un elemento que influye sobre la seguridad de tráfico y lo instala sólo el personal especializado. No es admisible introducir cualquier cambio en la construcción de enganche. Eso provoca expiración de permiso a la aplicación. En el caso de la presencia de masa de aislamiento o protección de chasis en el lugar de tocar de enganche, hay que quitarla. Las partes de chasis no cubiertas así como los huecos taladrados hay que pintar con pintura anticorrosiva. Las informaciones de calidad de carga comprometidas por la parte del productor de coche, de la calidad relativa de masa del remolque así como su presión máxima a la bola cuando valor de parámetros del enganche de bola puede estar superado.

Fórmula de calcular de valor de fuerza D:

$$\frac{\text{Max. Masa de coche (kg)} \times \text{Max. Masa de coche (kg)}}{\text{Max. Masa de coche (kg)} + \text{Max. Masa de coche (kg)}} \times \frac{9,81}{1000} = D [\text{kN}]$$



De kogeltrekhaak is zo gemaakt dat deze aan de veiligheidsregels voor het wegverkeer voldoet. Een kogeltrekhaak is van invloed op de verkeersveiligheid en mag daarom alleen door gespecialiseerd personeel worden geïnstalleerd. In de constructie van de trekhaak mogen geen wijzigingen worden aangebracht, anders komt de vergunning voor het gebruik ervan te vervallen. Indien er onder het chassis sprake is van een isolerende laag en/of beschermfolie op de plaats waar de trekhaak moet worden bevestigd, dan dienen deze te worden verwijderd. Onbedekte delen van de carrosserie en geboorde gaten moeten worden bestreken met anti-corrosieverf. Voor de belastingswaarde gelden de door de fabrikant van de auto aangeleverde gegevens voor wat betreft het maximale gewicht van de aanhangwagen en de maximale druk op de kogel. De waarden van de parameters voor een kogeltrekhaak mogen niet worden overschreden.

Formule voor het berekenen van de D-waarde:

$$\frac{\text{Max. gewicht aanhangwagen [kg]} \times \text{Max. gewicht auto [kg]}}{\text{Max. gewicht aanhangwagen [kg]} + \text{Max. gewicht auto [kg]}} \times \frac{9,81}{1000} = D [\text{kN}]$$



Kulefestet er konstruert i overenstemmelse med trafikkreglene bestemmelser. Kulefestet har innflytelse på kjøresikkerheten og skal kun monteres av faglært personale. Det er forbudt å utføre endringer på kulefestet. Dette kan føre til tilbaketrekking av brukstillatelsen. I tilfelle det finnes isoleringsmasse eller understellsbeskyttelse nær kulefestet, skal disse fjernes. Ubeskyttede deler av karosseriet og borede åpninger skal males med anti-korrasjon maling. Det er opplysningsene fra bilprodusenten angående de tillatte belastningene som er avgjørende. Dette er også gjeldende for den maksimale vekten av tilhengeren og den maksimale belastningen for kulen; parameterverdiene for kulefestet skal ikke overstiges.

Formel til beregning av D-verdien :

$$\frac{\text{Max vekt av tilhengeren [kg]} \times \text{Max. vekt av bilen [kg]}}{\text{Max vekt av tilhengeren [kg]} + \text{Max. vekt av bilen [kg]}} \times \frac{9,81}{1000} = D [\text{kN}]$$



Dragkroken är konstruerad att fylla alla krav av trafiksäkerheten. Dragkroken påverkar trafiksäkerheten och därför kan endast installeras av kvalificerade specialister. Dragkrokens konstruktion får inte ändras eller modifieras på något sätt. I motsatt fall kan användningen utgöra en fara och bli oleglig. Om dragkroken ska skruvas fast till en yta med isolering på bör den tas bort före installationen. Alla punkter i karosseriet och de förborrade hål som kvarstår utan skydd mot rost ska målas med korrosionsskyddande färg. Data som blivit angiven av biltillverkaren beträffande maximal belastning för bilen och trailer borde anses som giltig och bindande för bilanvändaren. Man ska också ta hänsyn till trailers maximala vikt och den maximala acceptabla tryckstyrkan på kulan. Samtidigt får man inte överskrida följande parametrvärdet för dragkroken.

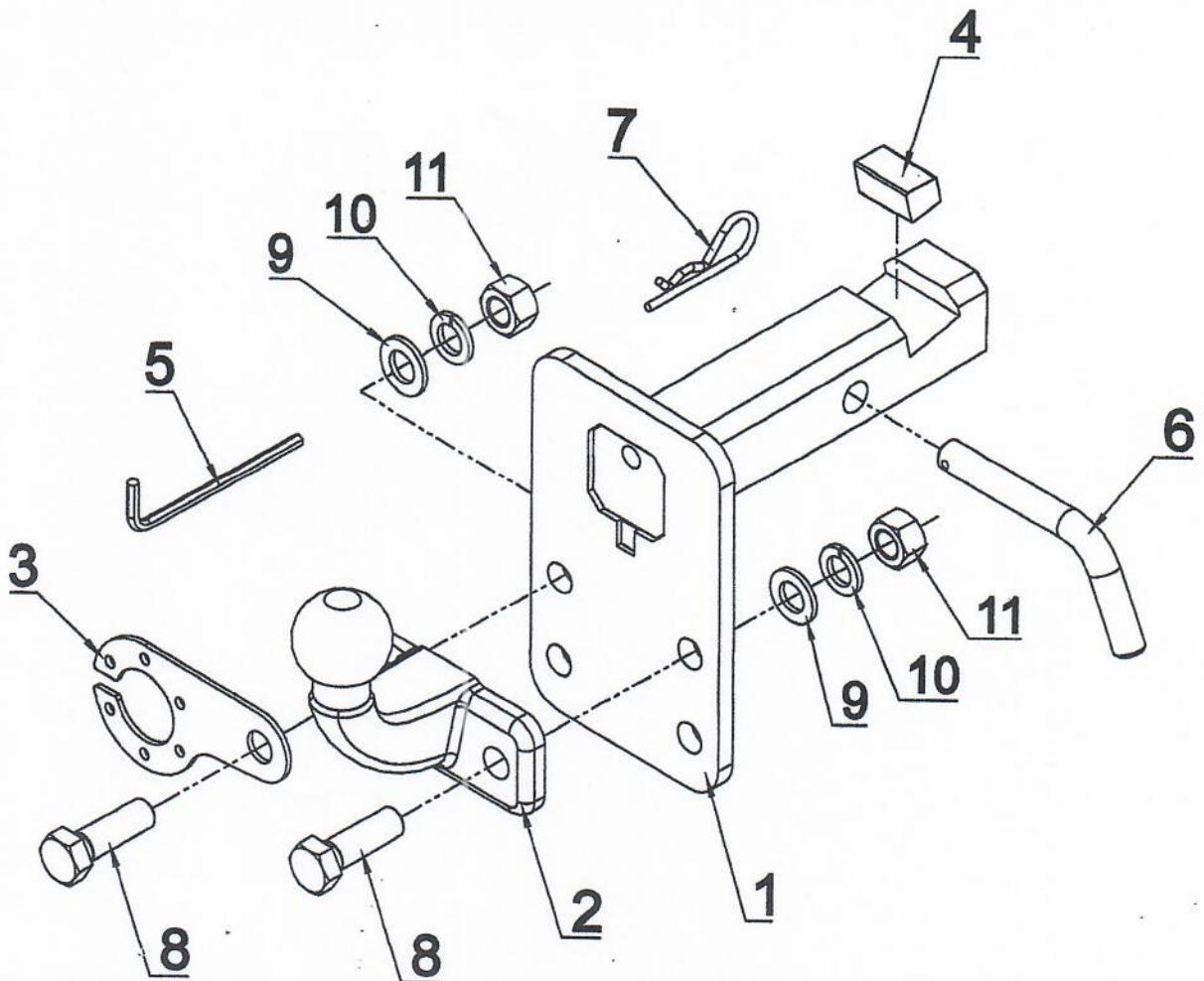
D - styrkan räknas enligt en följande formel:

$$\frac{\text{Trailers maximala vikt (kg)} \times \text{Bilens maximala vikt}}{\text{Trailer egenvikt (kg)} + \text{Bilens egenvikt (kg)}} \times \frac{9,81}{1000} = D [\text{kN}]$$

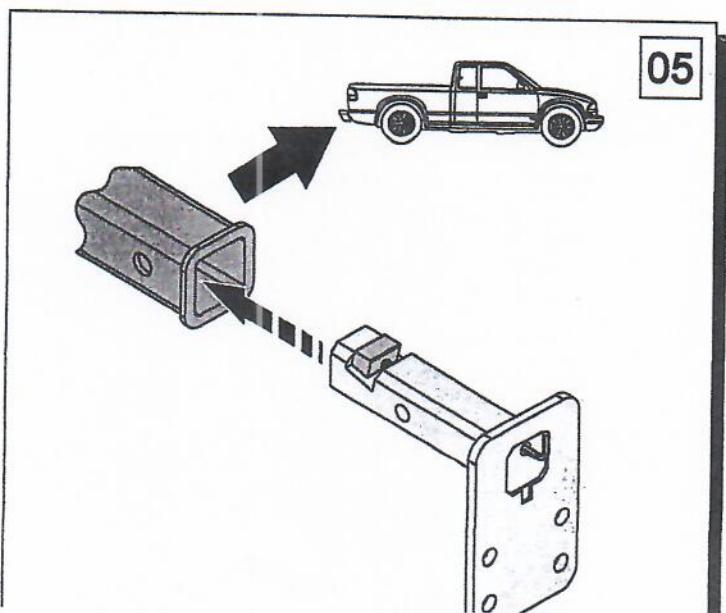
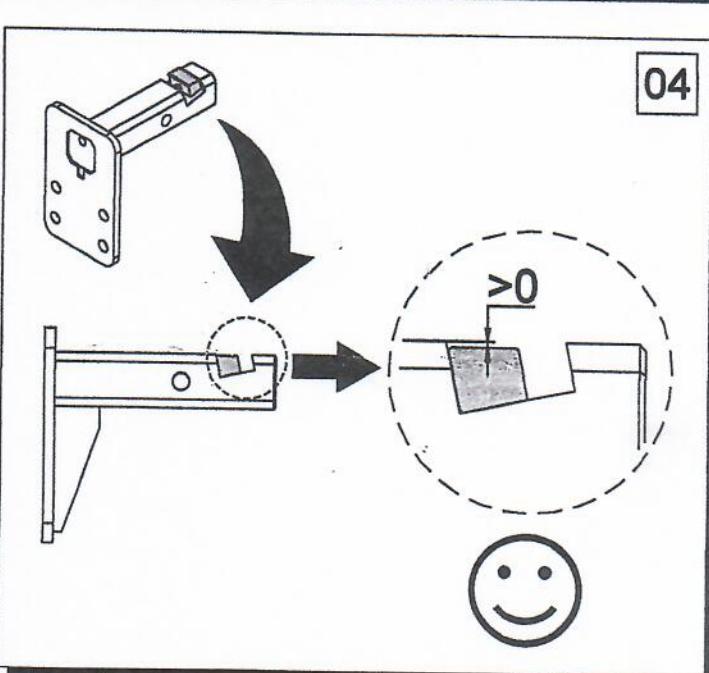
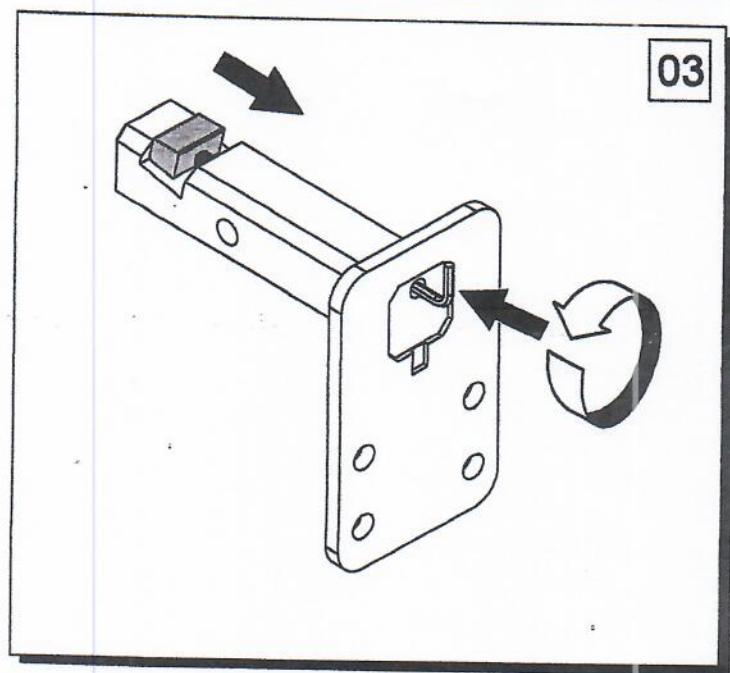
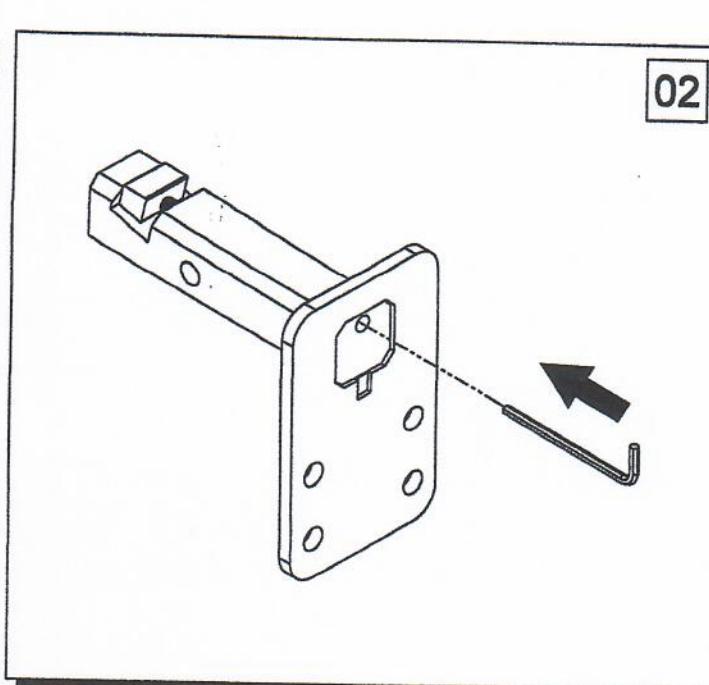
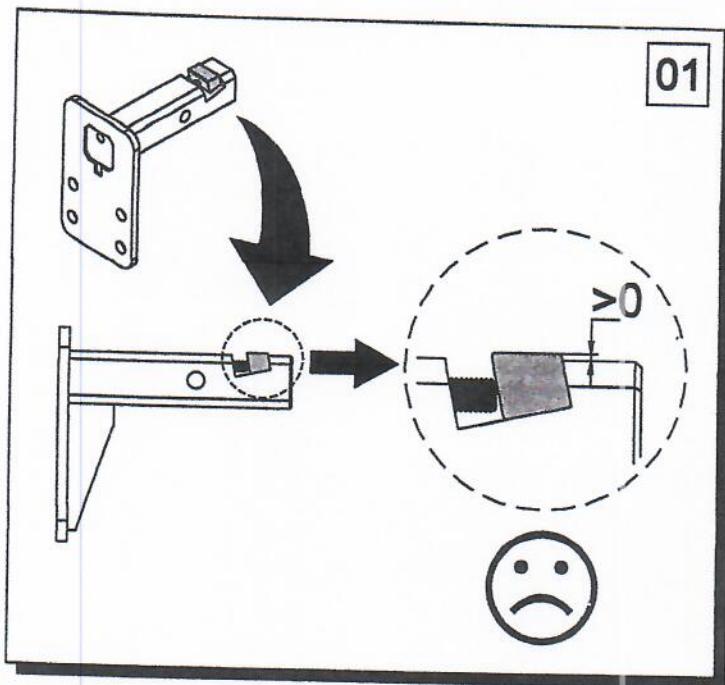


Il gancio di traino a sfera è costruito in conformità con le regole di sicurezza relative al traffico stradale. Il gancio di traino a sfera è un elemento in grado di influire sulla sicurezza di guida e può essere installato esclusivamente da personale specializzato. Non è consentito apportare modifiche alla costruzione del gancio di traino. La loro eventuale presenza comporterà il ritiro del permesso all'utilizzo su strada. In presenza di una massa isolante o di una carenatura del sottoscocca nel punto di attacco del gancio, sarà necessario rimuoverle. Le aree non protette della carrozzeria ed i fori realizzati devono essere trattati con vernice anticorrosione. Le informazioni di riferimento relative al valore dei carichi, riguardanti il peso massimo del rimorchio e la massima pressione esercitata sulla sfera, sono quelle fornite dal fabbricante dell'automobile. I valori dei parametri del gancio di traino a sfera non possono essere superati.

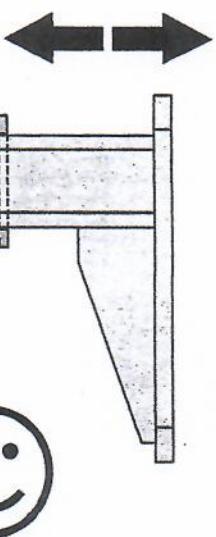
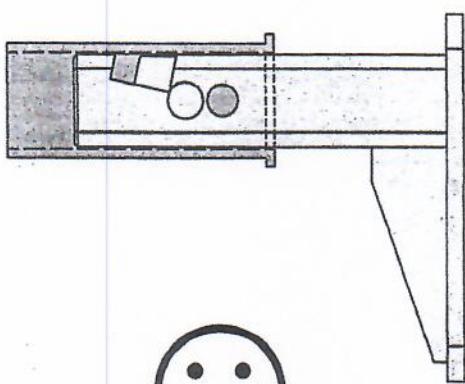
Formula per il calcolo del valore della forza D:



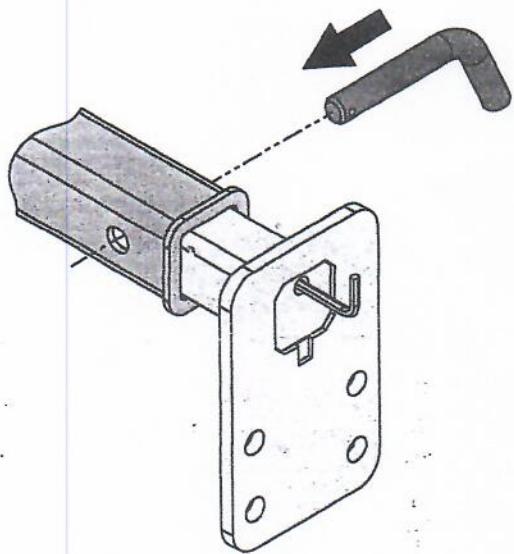
1		x1		8	M16x50	x2
2		x1		9	Ø 17	x2
3		x1		10	Ø 16,3	x2
4		x1		11	M16	x2
5		x1				
6		x1				
7		x1				



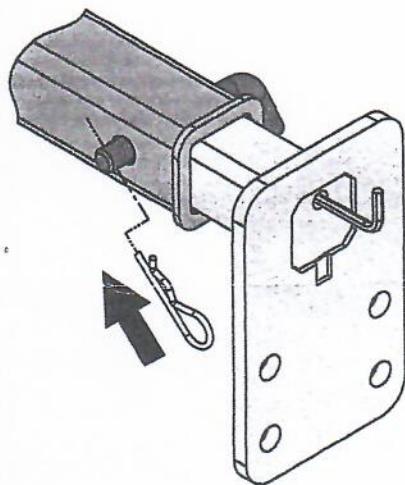
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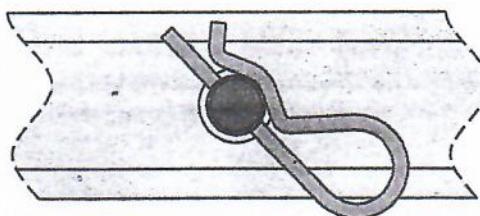
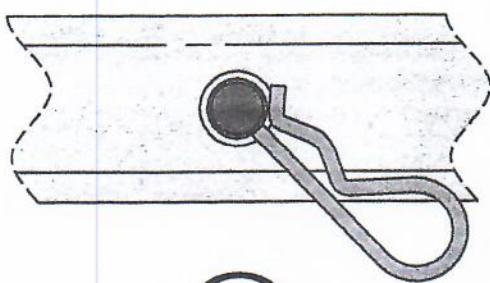
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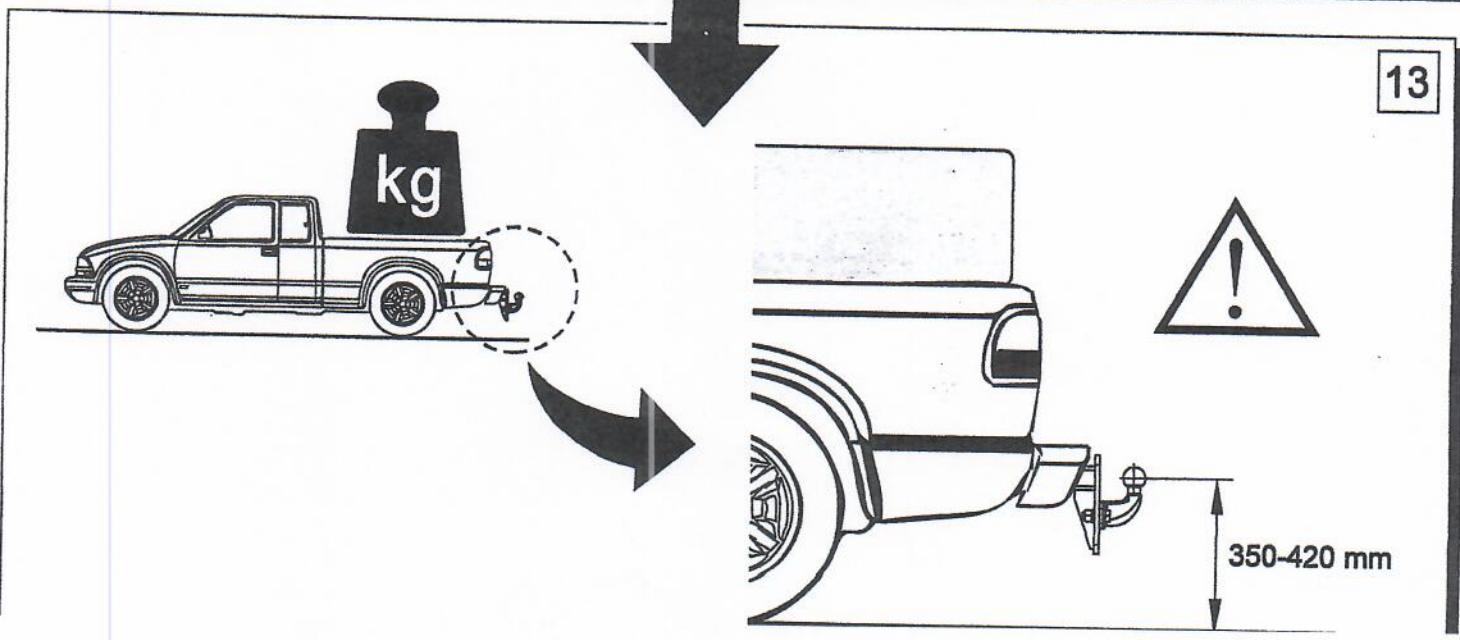
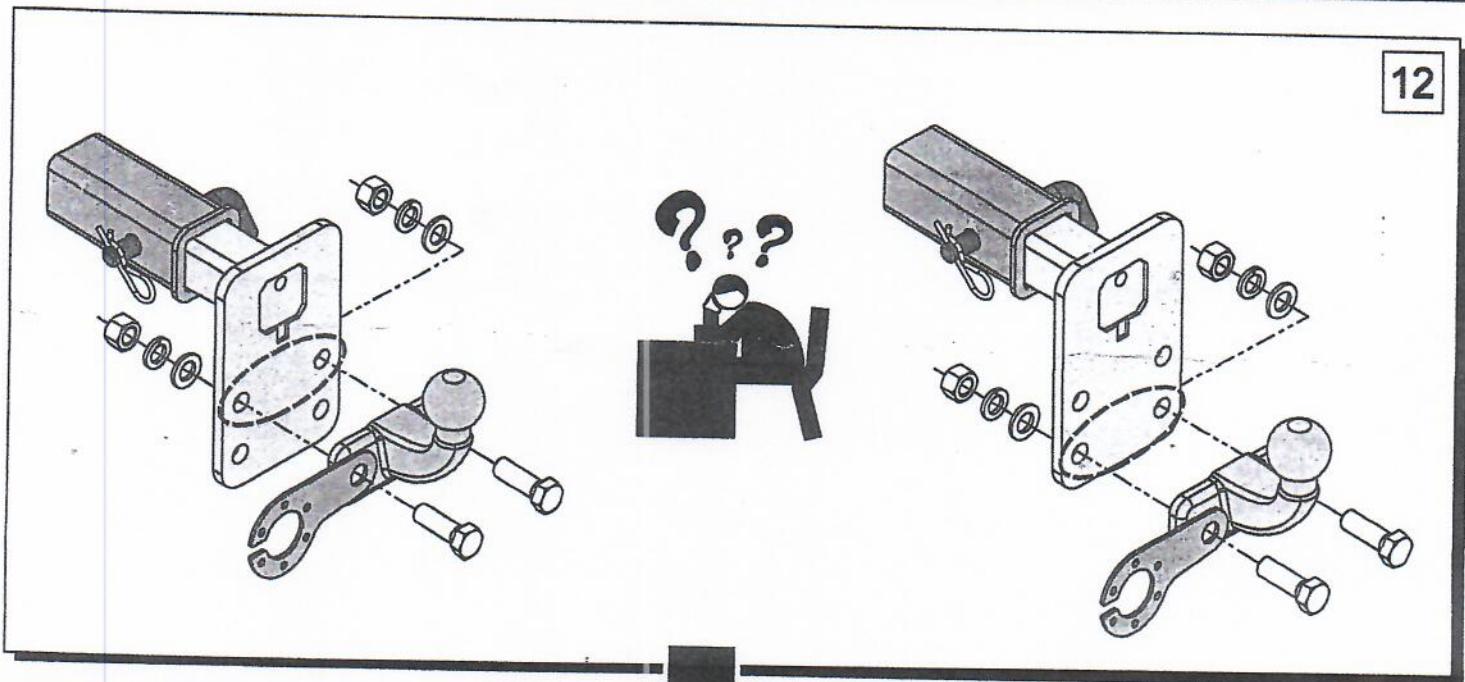
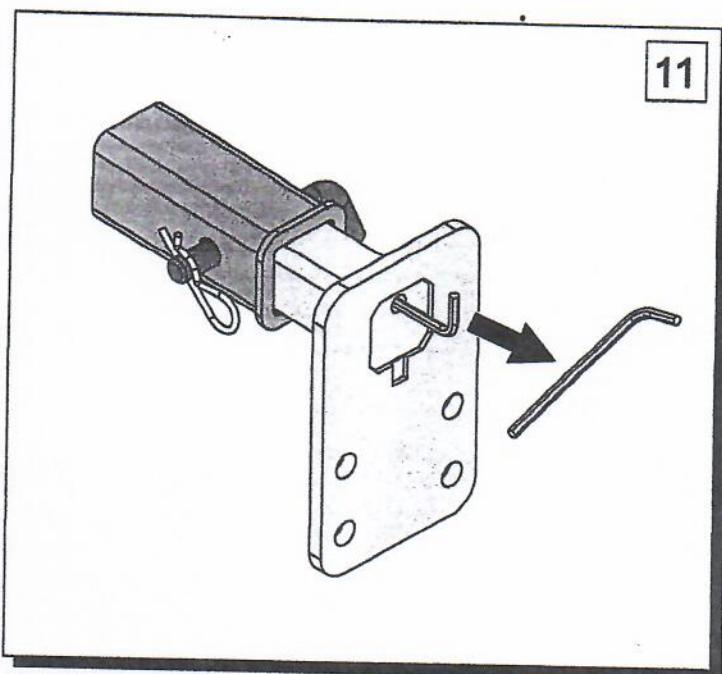
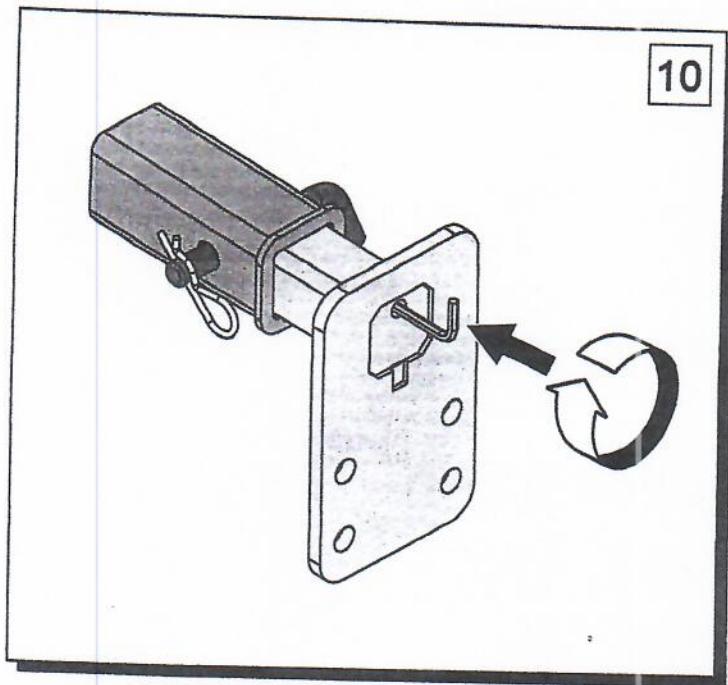


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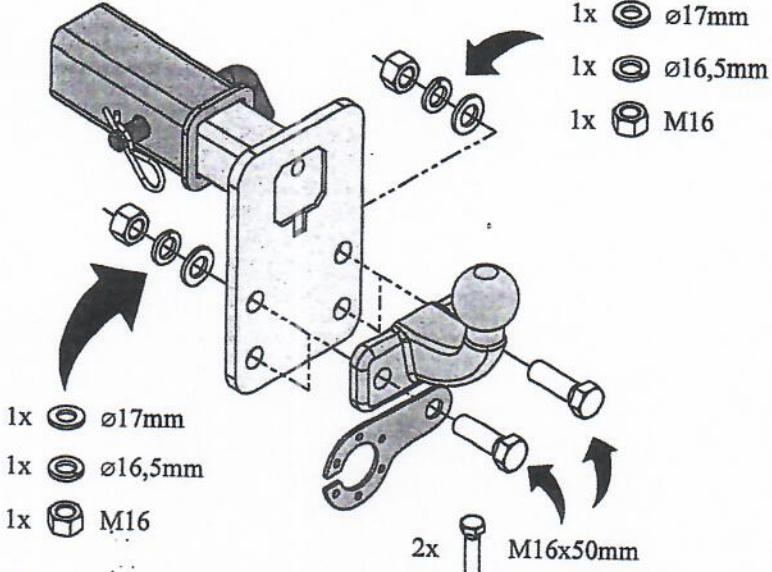


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