INSTALLATION INSTRUCTIONS

CLX-Series

Load Extender

Original Instructions

Number 1012192-R2 EN

CE

cascade® corporation

Cascade is a Registered Trademark of Cascade Corporation

USE AND MAINTENANCE MANUAL

INDEX

	Section
Introduction	0.0.0
Equipment Data	0.1.0
Technical Description	0.1.1
Using the Manual	0.2.0
Using the Load Extender	0.3.0
Residual Hazards	0.3.1
Hydraulic System Check	0.4.0
Installation–Bolt on Mounting	0.4.1
Installation–Integral Mounting	0.4.2
Maintenance	0.5.0
Symbols	0.5.1
Hydraulic Maintenance	0.5.2
Faults and Remedies	0.6.0
Ordering Spare Parts	1.0.0
Hydraulic Capacities	1.0.1
Cylinders	1.0.2
Leak Test	1.0.3
Hydraulic Schematic	2.0.0
CE Declaration	3.0.0

INTRODUCTION SEC 0.0.0

The equipment described in this manual has been built and tested to carry out material handling operations in maximum safety. Cascade guarantees quality, reliability and safety only if the user complies with the uses described in the manual.

The operations that the user must perform are:
- Installation
- Connection to the hydraulic system

The equipment will become an integral part of the machine, so before carrying out these operations the user is requested to read this manual carefully and the manual of the machine to which it is to be connected to ensure that they are compatible. The installation of the attachment and all operations on it must be carried out in compliance with the regulations on personal safety. Cascade does not accept responsibility for damage caused during installation, by improper use of the machine or by operations performed by incompetent people.

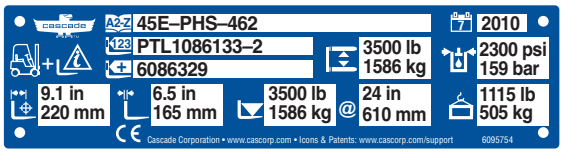
STANDARDS

The equipment by Cascade described in this manual has been built in conformity with Directives 2006/42/CE.

CASCADE ITALIA S.r.l.-Via dell' Artigianato, 1-37030 Vago di Lavagno -VERONA - ITALY -Tel 045/8989111 - Fax 045/8989160
WWW.CASCORP.COM

EQUIPMENT DATA

(EN) NAMEPLATE ICONS
(BG) ТАБЕЛКА С ИМЕ ИКОНИ
(CS) JMENOVKA IKONY
(DA) NAVNESKILT IKONER
(DE) TYPENSCHILD SYMBOLE
(EL) ΟΝΟΜΑΣΤΙΚΗΣ ΕΙΚΟΝΙΔΙΑ
(ES) PLACA DE ICONOS
(ET) NIMEPLAADILE IKOONID
(FI) NIMIKYLTTI KUVAKKEET
(FR) PLAQUE ICÔNES
(GA) IDENTIFICACIÓN ICONAS
(HU) NÉVTÁBLÁN IKONOK
(IS) NAFNASKILTATÁKN
(IT) ICONE DELLA TARGA
(JA) 銘板アイコン
(KO) 명판 아이콘
(LT) NOMINALUS PIKTOGRAMOS
(LV) AR NOSAUKUMU, IKONAS
(MT) NAMEPLATE ICOANE
(NL) NAAMBORD ICONEN
(NO) NAVNEPLATE-IKONER
(PL) NAMEPLATE ICOANE
(PT) IDENTIFICAÇÃO ÍCONES
(RO) ICONOS DE PLACA
(RU) ТАБЛИЧКУ ЗНАЧКОВ
(SK) MENOVKA ICONS
(SL) TABLICA IKONE
(SV) NAMNSKYLTEN IKONER
(TR) BILGI ETIKETI SIMGELERI
(ZH) 铭牌图标



(EN) MODEL
(BG) МОДЕЛ
(CS) MODEL
(DA) MODEL
(DE) MODELL
(EL) ΜΟΝΤΕΛΟ
(ES) MODELO
(ET) MUDEL
(FI) MALLI
(FR) MODÈLE
(GA) DÉANAMH AGUS AINM
(HU) MODELL
(IS) MÓDEL
(IT) MODELLO
(JA) モデル
(KO) 모델
(LT) MODELIS
(LV) MODELIS
(MT) MUDELL
(NL) MODEL
(NO) MODELL
(PL) MODEL
(PT) MODELO
(RO) MODEL
(RU) МОДЕЛЬ
(SK) MODEL
(SL) MODEL
(SV) MODELL
(TR) MODEL
(ZH) 型号

(EN) SERIAL NUMBER
(BG) СЕРИЕН НОМЕР
(CS) SÉRIOVÉ ČÍSLO
(DA) SERIENUMMER
(DE) SERIENNUMMER
(EL) ΣΕΙΡΙΑΚΟΣ ΑΡΙΘΜΟΣ
(ES) NÚMERO DE SERIE
(ET) SEERIANUMBER
(FI) SARJANUMERO
(FR) NUMERO DE SERIE
(GA) SRAITHUIMHIR
(HU) GYÁRI SZÁM
(IS) RAÐNÚMER
(IT) NUMERO DI SERIE
(JA) シリアル番号
(KO) 일련 번호
(LT) SERIJINIS NUMERIS
(LV) SĒRIJAS NUMURS
(MT) NUMRU TAS-SERJE
(NL) SERIENUMMER
(NO) SERIENUMMER
(PL) NUMER SERYJNY
(PT) NÚMERO DE SÉRIE
(RO) NUMĂR DE SERIE
(RU) СЕРИЙНЫЙ НОМЕР
(SK) SÉRIOVÉ ČÍSLO
(SL) SERIJSKA ŠTEVILKA
(SV) SERIENUMMER
(TR) SERI NUMARASI
(ZH) 序列号

(EN) ADDITIONAL INFORMATION
(BG) ДОПЪЛНИТЕЛНА ИНФОРМАЦИЯ
(CS) DOPLŇKOVÉ INFORMACE
(DA) YDERLIGERE OPLYSNINGER
(DE) ZUSÄTZLICHE INFORMATIONEN
(EL) ΠΡΟΣΘΕΤΕΣ ΠΛΗΡΟΦΟΡΙΕΣ
(ES) INFORMACIÓN ADICIONAL
(ET) LISAINFO
(FI) LISÄTIETOJA
(FR) INFORMATIONS SUPPLÉMENTAIRES
(GA) TUILLEADH FAISNÉISE
(HU) KIEGÉSZÍTŐ INFORMÁCIÓ
(IS) VIÐBÓTARTÆKI
(IT) INFORMAZIONI AGGIUNTIVE
(JA) 追加情報
(KO) 추가 장비
(LT) PAPILDOMA INFORMACIJA
(LV) PAPILDU INFORMĀCIJA
(MT) INFORMAZZJONI ADDIZZJONALI
(NL) AANVULLENDE INFORMATIE
(NO) TILLEGGSUTSTYR
(PL) INFORMACJE DODATKOWE
(PT) INFORMAÇÕES ADICIONAIS
(RO) INFORMAȚII SUPLIMENTARE
(RU) ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ
(SK) ĎALŠIE INFORMÁCIE
(SL) DODATNE INFORMACIJE
(SV) YTTERLIGARE INFORMATION
(TR) İLAVE EKIPMAN
(ZH) 其它信息

(EN) MAXIMUM CAPACITY
(BG) МАКСИМАЛЕН КАПАЦИТЕТ
(CS) MAXIMÁLNÍ NOSNOST
(DA) MAKS. KAPACITET
(DE) MAXIMALKAPAZITÄT
(EL) ΜΕΓΙΣΤΗ ΧΩΡΗΤΙΚΟΤΗΤΑ
(ES) CAPACIDAD MÁXIMA
(ET) MAKSIMAALNE JÕUDLUS
(FI) MAKSIMIKAPASITEETTI
(FR) CAPACITE MAXIMUM
(GA) UASCHUMAS
(HU) MAXIMÁLIS KAPACITÁS
(IS) HÁMARKS GETA
(IT) PORTATA MASSIMA
(JA) 最大容量
(KO) 최대 용량
(LT) MAKSIMALI GALIA
(LV) MAKSIMĀLĀ CELTSPĒJA
(MT) KAPAĊITÀ MASSIMA
(NL) MAXIMAAL LAADVERMOGEN
(NO) MAKSIMAL KAPASITET
(PL) UDŹWIG MAKSYMALNY
(PT) CAPACIDADE MÁXIMA
(RO) CAPACITATE MAXIMĂ
(RU) МАКСИМАЛЬНАЯ ГРУЗОПОДЪЕМНОСТЬ
(SK) MAXIMÁLNA NOSNOSŤ
(SL) NAJVEČJA ZMOGLJIVOST
(SV) MAXIMAL KAPACITET
(TR) MAKSIMUM KAPASITE
(ZH) 最大承载能力

(EN) MAXIMUM CAPACITY BETWEEN FORKS
(BG) МАКСИМАЛНА ТОВАРОПОДЕМНОСТ МЕЖДУ ВИЛИЦИТЕ
(CS) MAXIMÁLNÍ NOSNOST MEZI VIDLICEMI
(DA) MAKSIMAL KAPACITET MELLEM GAFLERNE
(DE) MAXIMALE TRAGFÄHIGKEIT ZWISCHEN DEN GABELN
(EL) ΜΕΓΙΣΤΗ ΙΚΑΝΟΤΗΤΑ ΑΝΑΜΕΣΑ ΣΤΙΣ ΠΕΡΟΝΕΣ
(ES) CAPACIDAD MÁXIMA ENTRE HORQUILLAS
(ET) KAHVLITE VAHELINE MAX. TÕSTEVÕIME
(FI) MAKSIMINOSTOKYKY HAARUKOIDEN VÄLISSÄ
(FR) CAPACITÉ MAXIMALE ENTRE LES FOURCHES
(GA) UASCHUMAS IDIR NA GABHAIL
(HU) MAXIMUM TEHERBÍRÁS VILLÁK KÖZÖTT
(IS) HÁMARKS GETA MILLI GAFLA
(IT) PORTATA MASSIMA TRA LE FORCHE
(JA) フォーク間の最大容量
(KO) 포크 간 최대 용량
(LT) MAKSIMALI GALIA TARP ŠAKIŲ
(LV) MAKSIMĀLĀ CELTSPĒJA STARP DAKŠĀM
(MT) KAPAĊITÀ MASSIMA BEJN IL-FRIEKET
(NL) MAXIMUMCAPACITEIT TUSSEN VORKEN
(NO) MAKSIMAL KAPASITET MELLOM GAFLENE
(PL) MAKSYMALNY UDŹWIG POMIĘDZY WIDŁAMI
(PT) CAPACIDADE MÁXIMA ENTRE GARFOS
(RO) CAPACITATEA MAXIMĂ ÎNTRE FURCI
(RU) МАКСИМАЛЬНАЯ ГРУЗОПОДЪЕМНОСТЬ МЕЖДУ ВИЛАМИ
(SK) MAXIMÁLNA NOSNOSŤ MEDZI VIDLICAMI
(SL) NAJVEČJA ZMOGLJIVOST MED VILICAMI
(SV) MAXIMAL KAPACITET MELLAN GAFFLAR
(TR) ÇATALLAR ARASI YÜK MERKEZINDEKI
(ZH) 最大承载能力

(EN) @ LOAD CENTER
(BG) В ЦЕНТЪРА НА НАТОВАРВАНЕ
(CS) @ STŘED NÁKLADU
(DA) VED LASTCENTRUM
(DE) @ LASTSCHWERPUNKT
(EL) ΣΤΟ ΚΕΝΤΡΟ ΒΑΡΟΥΣ
(ES) @ CENTRO DE CARGA
(ET) @ KOORMUSE RASKUSKESE
(FI) PAINOPISTEESSÄ
(FR) AU CENTRE DE CHARGE
(GA) @ LÓDPHOINTE
(HU) @ TEHER KÖZEPE
(IS) @ HLEÐSLUMIÐJA
(IT) @ BARICENTRO DEL CARICO
(JA) @ 負荷の中心
(KO) @ 하중 중심
(LT) TIES KROVINIO CENTRU
(LV) KRAVAS CENTRĀ
(MT) @ ĊENTRU TAT-TAGĦBIJA
(NL) BIJ LASTZWAARTEPUNT
(NO) VED LASTEPUNKT
(PL) @ ŚRODEK CIĘŻKOŚCI ŁADUNKU
(PT) @ CENTRO DE CARGA
(RO) LA CENTRUL DE GREUTATE
(RU) В ЦЕНТРЕ НАГРУЗКИ
(SK) V ŤAŽISKU NÁKLADU
(SL) @ SREDIŠČE OBREMENITVE
(SV) VID LASTENS MITTPUNKT
(TR) MAKSIMUM KAPASITE
(ZH) 载荷中心

(EN) MAXIMUM OPERATING PRESSURE
(BG) МАКСИМАЛНО РАБОТНО НАЛЯГАНЕ
(CS) MAXIMÁLNÍ PROVOZNÍ TLAK
(DA) MAKSIMALT DRIFTSTRYK
(DE) MAXIMALER BETRIEBSDRUCK
(EL) ΜΕΓΙΣΤΗ ΠΙΕΣΗ ΛΕΙΤΟΥΡΓΙΑΣ
(ES) PRESIÓN DE FUNCIONAMIENTO MÁXIMA
(ET) MAKSIMAALNE TÖÖRÕHK
(FI) MAKSIMITOIMINTAPAINE
(FR) PRESSION DE SERVICE MAXIMALE
(GA) UASBHRÚ OIBRIÚCHÁIN
(HU) MAXIMÁLIS ÜZEMI NYOMÁS
(IS) HÁMARKS VINNUÞRÝSTINGUR
(IT) PRESSIONE MASSIMA DI ESERCIZIO
(JA) 最大運転圧力
(KO) 최대 작동 압력
(LT) MAKSIMALUS EKSPLOATACINIS SLĖGIS
(LV) MAKSIMĀLAIS DARBA SPIEDIENS
(MT) PRESSJONI MASSIMA TAL-OPERAT
(NL) MAXIMUM WERKDRUK
(NO) MAKSIMALT DRIFTSTRYKK
(PL) MAKSYMALNE CIŚNIENIE ROBOCZE
(PT) PRESSÃO MÁXIMA DE FUNCIONAMENTO
(RO) PRESIUNEA DE LUCRU MAXIMĂ
(RU) МАКСИМАЛЬНОЕ РАБОЧЕЕ ДАВЛЕНИЕ
(SK) MAXIMÁLNY PREVÁDZKOVÝ TLAK
(SL) NAJVEČJI DELOVNI TLAK
(SV) MAXIMALT ARBETSTRYCK
(TR) MAKSIMUM İŞLETME BASINCI
(ZH) 最大工作压力

(EN) MASS OF ATTACHMENT
(BG) МАСА НА ПРИСТАВКА
(CS) HMOTNOST PŘÍDAVNÉHO ZAŘÍZENÍ
(DA) UDSTYRS VÆGT
(DE) ANBAUGERÄTGEWICHT
(EL) ΜΑΖΑ ΣΥΝΔΕΔΕΜΕΝΟΥ ΕΞΟΠΛΙΣΜΟΥ
(ES) PESO DEL ACCESORIO
(ET) TÖÖSEADME MASS
(FI) LISÄLAITTEEN PAINO
(FR) MASSE DE L'ACCESSOIRE
(GA) MAIS AN FHEISTIS
(HU) A SZERELÉK TÖMEGE
(IS) FJÖLDI TENGINGA
(IT) MASSA DELL'ATTREZZATURA
(JA) 装備総量
(KO) 부착 크기
(LT) PRIEDO MASĖ
(LV) UZKARES IEKĀRTAS MASA
(MT) PIŻ TAL-ATTACHMENT
(NL) MASSA VAN VOORZETAPPARAAT
(NO) MASSE FOR TILLEGGSUTSTYR
(PL) MASA OSPRZĘTU
(PT) PESO DO ACESSÓRIO
(RO) MASA ECHIPAMENTULUI ATAȘAT
(RU) МАССА НАВЕСНОГО ОБОРУДОВАНИЯ
(SK) HMOTNOSŤ PRÍDAVNÉHO ZARIADENIA
(SL) MASA PRIKLJUČKA
(SV) AGGREGATETS VIKT
(TR) EK DONANIM AĞIRLIĞI
(ZH) 属具质量

(EN) LOST LOAD CENTER DISTANCE
(BG) РАЗСТОЯНИЕ ОТ ЦЕНТЪРА НА ЗАГУБА НА НАТОВАРВАНЕ
(CS) VZDÁLENOST POSUNUTÉHO STŘEDU NÁKLADU
(DA) REDUCERET LASTCENTERAFSTAND
(DE) VERLORENER ABSTAND ZUM LASTMITTELPUNKT
(EL) ΑΠΟΣΤΑΣΗ ΑΠΩΛΕΣΘΕΝΤΟΣ ΚΕΝΤΡΟΥ ΒΑΡΟΥΣ
(ES) DISTANCIA A CENTRO DE CARGA PERDIDA
(ET) KOORMUSE RASKUSKESKME MUUTUS
(FI) KAPASITEETIHUKAN KESKIPESTEEN ETÄISYYS
(FR) DISTANCE CENTRE DE CHARGE PERDUE
(GA) FAD LÓDPHOINTE CAILLTE
(HU) ELVESZETT TEHERKÖZÉPPONT-TÁVOLSÁG
(IS) FJARLÆGÐ GLATAÐS HLEÐSLUMIÐJU
(IT) SPESSORE EFFETTIVO
(JA) 荷重中心消失
(KO) 손실 하중 중심 거리
(LT) ATITOLUSIO APKROVOS CENTRO ATSTUMAS
(LV) ZAUDĒTS ATTĀLUMS LĪDZ SLODZES CENTRAM
(MT) DISTANZA MIĊ-ĊENTRU TAT-TAGĦBIJA MITLUFA
(NL) VERLOREN AFSTAND TOT LASTZWAARTEPUNT
(NO) TAPT LASTEPUNKTAVSTAND
(PL) WIELKOŚĆ PRZESUNIĘCIA ŚRODKA CIĘŻKOŚCI ŁADUNKU
(PT) DISTÂNCIA DO CENTRO DE CARGA PERDIDA
(RO) DISTANȚA LA CENTRUL DE GREUTATE AL SARCINII
(RU) ПОТЕРЯННОЕ РАССТОЯНИЕ ДО ЦЕНТРА НАГРУЗКИ
(SK) ÚBYTOK VYLOŽENIA ŤAŽISKA S PRÍDAVNÝM ZARIADENÍM
(SL) RAZDALJA DO PREMAKNJENEGA SREDIŠČA OBREMENITVE
(SV) FÖRLORAT LASTMITTPUNKTSAVSTÅND
(TR) KAYIP YÜK MERKEZ MESAFESI
(ZH) 荷载损耗中心距离



(EN) CENTER OF GRAVITY TO MOUNT FACE DISTANCE
(BG) ЦЕНТЪР НА ТЕЖЕСТТА СПРЯМО РАЗСТОЯНИЕТО ОТ МОНТАЖНАТА ЧЕЛНА ПОВЪРХНИНА
(CS) VZDÁLENOST STŘEDU NÁKLADU K ČELU RÁMU
(DA) AFSTANDEN MELLEM TYNGDEPUNKT OG MONTERINGSFLADEN
(DE) ABSTAND ZWISCHEN SCHWERPUNKT UND MONTAGEFLÄCHE
(EL) ΑΠΟΣΤΑΣΗ ΚΕΝΤΡΟΥ ΒΑΡΟΥΣ ΑΠΟ ΤΗΝ ΠΡΟΣΟΨΗ ΒΑΣΗΣ
(ES) DISTANCIA DE CENTRO DE GRAVEDAD A CARA DE MONTAJE
(ET) RASKUSKESKME KAUGUS EESMISEST KINNITUSPINNAST
(FI) PAINOPISTEEN ETÄISYYS KIINNITYSPINNASTA
(FR) DISTANCE CENTRE DE GRAVITÉ-FACE DE MONTAGE
(GA) FAD IDIR AN MEÁCHANLÁR AGUS AN ÉADAN FEISTE
(HU) SÚLYPONT - SZERELŐFELÜLET TÁVOLSÁG
(IS) MIÐJA ÞYNGDARAFLS TIL AÐ HLAÐA ÚR LÍKAMSFJARLÆGÐ
(IT) CENTRO DI GRAVITA' DAL PIANO DI AGGANCIO
(JA) マウント面への重心
(KO) 장착 면 거리에 대한 중력 중심
(LT) ATSTUMAS NUO SUNKIO JĖGOS CENTRO IKI PAGRINDO PRIEKINĖS PUSĖS
(LV) ATTĀLUMS NO SMAGUMA CENTRA LĪDZ UZSTĀDĪŠANAS VIRSMAI
(MT) ĊENTRU TA' GRAVITÀ SAD-DISTANZA MOUNT FACE
(NL) AFSTAND TUSSEN ZWAARTEPUNT EN MONTAGEVLAK
(NO) AVSTAND TYNGDEPUNKT TIL MONTERINGSFLATE
(PL) ODLEGŁOŚĆ OD ŚRODKA CIĘŻKOŚCI DO CZOŁA ZAWIESZENIA
(PT) DISTÂNCIA DO CENTRO DE GRAVIDADE À SUPERFÍCIE DE MONTAGEM
(RO) DISTANȚA DE LA CENTRUL DE GREUTATE LA SUPRAFAȚA DE MONTARE
(RU) РАССТОЯНИЕ ОТ ЦЕНТРА ТЯЖЕСТИ ДО УСТАНОВОЧНОЙ ПОВЕРХНОСТИ
(SK) VZDIALENOSŤ ŤAŽISKA OD ČELNEJ STRANY UCHYTENIA
(SL) RAZDALJA TEŽIŠČA OD SPREDNJE MONTAŽNE STRANI
(SV) AVSTÅND TYNGDPUNKT TILL MONTERINGSYTA
(TR) AĞIRLIK MERKEZI ILE FORK YÜZÜ ARASI MESAFE
(ZH) 重心到安装面的距离



(EN) YEAR OF MANUFACTURE
(BG) ГОДИНА НА ПРОИЗВОДСТВО
(CS) ROK VÝROBY
(DA) PRODUKTIONSÅR
(DE) JAHR DER HERSTELLUNG
(EL) ΈΤΟΣ ΚΑΤΑΣΚΕΥΗΣ
(ES) AÑO DE FABRICACIÓN
(ET) VALMISTAMISAASTA
(FI) VALMISTUSVUOSI
(FR) ANNÉE DE FABRICATION
(GA) BLIAIN DÉANTÚSAÍOCHTA
(HU) A GYÁRTÁS ÉVE
(IS) FRAMLEIÐSLUÁR
(IT) ANNO DI FABBRICAZIONE
(JA) 製造年度
(KO) 제조년
(LT) PAGAMINIMO METAI
(LV) RAŽOŠANAS GADS
(MT) SENA TA' MANIFATTURA
(NL) BOUWJAAR
(NO) PRODUKSJONSÅR
(PL) ROK PRODUKCJI
(PT) ANO DE FABRICO
(RO) ANUL DE FABRICAȚIE
(RU) ГОД ИЗГОТОВЛЕНИЯ
(SK) ROK VÝROBY
(SL) LETO IZDELAVE
(SV) TILLVERKNINGSÅR
(TR) ÜRETIM YILI
(ZH) 制造年份



(EN) CAPACITY OF TRUCK AND ATTACHMENT COMBINATION MAY BE LESS THAN ATTACHMENT CAPACITY SHOWN. CONSULT TRUCK NAMEPLATE. THE CAPACITY OF THE TRUCK AND ATTACHMENT COMBINATION SHALL BE COMPLIED WITH.

(BG) КАПАЦИТЕТЪТ НА СЪЕДИНЕНИТЕ ПОВДИГАЧ И ПРИСТАВКА МОЖЕ ДА БЪДЕ ПО-МАЛЪК ОТ ДАДЕНИЯ КАПАЦИТЕТ НА ПРИСТАВКАТА. ВИЖТЕ ТАБЕЛКАТА НА ПОВДИГАЧА. ТОВАРОПОДЕМНОСТТА НА КАРА И КОМБИНАЦИЯТА ОТ ПРИСТАВКИ ТРЯБВА ДА СЪОТВЕТСТВАТ.

(CS) NOSNOST KOMBINACE VOZÍKU S PŘÍDAVNÝM ZAŘÍZENÍM MŮŽE BÝT MENŠÍ NEŽ UVEDENÁ NOSNOST PŘÍDAVNÉHO ZAŘÍZENÍ. PROHLÉDNĚTE SI ŠTÍTEK VOZÍKU. NOSNOST KOMBINACE VOZÍKU A PŘÍDAVNÉHO ZAŘÍZENÍ NESMÍ BÝT PŘEKROČENA.

(DA) DEN SAMLEDE KAPACITET FOR TRUCKEN OG DET PÅMONTEREDE TILBEHØR KAN VÆRE MINDRE END DEN VISTE KAPACITET FOR TILBEHØRET. SE TRUCKENS NAVNEPLADE. KOMBINATIONEN AF TRUCKENS KAPACITET OG TILBEHØRET SKAL OVERHOLDES.

(DE) DIE TRAGKRAFT DER KOMBINATION AUS STAPLER UND ANBAUGERÄT KANN GERINGER SEIN ALS DIE ANGEGEBENE NENNTRAGFÄHIGKEIT. SIEHE TYPENSCHILD. DIE TRAGFÄHIGKEIT DER STAPLER-ANBAUGERÄT-KOMBINATION MUSS DAMIT ÜBEREINSTIMMEN.

(EL) Η ΧΩΡΗΤΙΚΟΤΗΤΑ ΤΟΥ ΟΧΗΜΑΤΟΣ ΚΑΙ ΣΥΝΔΥΑΣΜΟΥ ΕΞΑΡΤΗΜΑΤΩΝ ΕΝΔΕΧΕΤΑΙ ΝΑ ΕΙΝΑΙ ΧΑΜΗΛΟΤΕΡΗ ΑΠΟ ΤΗ ΧΩΡΗΤΙΚΟΤΗΤΑ ΤΟΥ ΕΞΑΡΤΗΜΑΤΟΣ ΣΤΟ ΠΑΡΑΔΕΙΓΜΑ. ΣΥΜΒΟΥΛΕΥΤΕΙΤΕ ΤΗΝ ΕΤΙΚΕΤΑ ΟΧΗΜΑΤΟΣ. Η ΙΚΑΝΟΤΗΤΑ ΤΟΥ ΟΧΗΜΑΤΟΣ ΚΑΙ ΤΟΥ ΣΥΝΔΕΔΕΜΕΝΟΥ ΕΞΟΠΛΙΣΜΟΥ ΠΡΕΠΕΙ ΝΑ ΕΙΝΑΙ ΣΥΜΒΑΤΕΣ.

(ES) LA CAPACIDAD COMBINADA DE CARRETILLA Y ACCESORIO PUEDE SER MENOR QUE LA CAPACIDAD DEL ACCESORIO INDICADA. CONSULTE LA PLACA DE CARACTERÍSTICAS DE LA CARRETILLA. DEBE CUMPLIRSE LA CAPACIDAD COMBINADA DE CARRETILLA Y ACCESORIO.

(ET) LAADURI JA TÖÖSEADME KOMBINATSIOONI JÕUDLUS VÕIB OLLA VÄIKSEM KUI TÖÖSEADME NÄIDATUD JÕUDLUS. VAADAKE LAADURI ANDMEPLAATI. LAADUR JA TÖÖSEADE PEAVAD OLEMA ÜKSTEISEGA VASTAVUSES.

(FI) TRUKKI- JA LISÄLAITEYHDISTELMÄN KAPASITEETTI VOI OLLA PIENEMPI KUIN LISÄLAITTEEN ILMOITETTU KAPASITEETTI. KS. TRUKIN ARVOKILPI. TRUKIN JA LISÄLAITTEEN YHDISTELMÄN NOSTOKYKYÄ ON NOUDATETTAVA.

(FR) LA CAPACITE DE LA COMBINAISON CHARIOT/ACCESSOIRE PEUT S'AVERER INFERIEURE A CELLE INDIQUEE POUR L'ACCESSOIRE. SE REPORTER A LA PLAQUE SIGNALETIQUE DU CHARIOT. RESPECTER LA CAPACITÉ DU CHARIOT ET DE L'ACCESSOIRE COMBINÉS.

(GA) D'FHÉADFADH NÍOS LÚ CUMAIS A BHEITH AG AN TRUCAIL AGUS FEISTEAS NÁ AN CUMAS FEISTIS A THAISPEÁNTAR. FÉACH AR AINMCHLÁR NA TRUCAILE. CLOÍFEAR LE CUMAS NA TRUCAILE AGUS AN CHOMHCHEANGAL FEISTIS.

(HU) A TARGONCA ÉS A TARTOZÉK KOMBINÁCIÓ KAPACITÁSA LEHET, HOGY KEVESEBB, MINT AZ ÁBRÁZOLT TARTOZÉK KAPACITÁSA. LÁSD A TARGONCA ADATTÁBLÁN. A TARGONCA ÉS SZERELÉK KOMBINÁCIÓ TEHERBÍRÁSÁNAK ELEGET KELL TENNIE ENNEK.

(IS) GETA VÖRUBÍLS OG VIÐHENGISVIÐBÓTAR GETUR VERIÐ MINNI EN GETA VIÐHENGIS ER SÝND. RÁÐFÆRIÐ YKKUR VIÐ NAFNASKILTI VÖRUBÍLSINS. ÞAÐ Á AÐ FYLGJA GETU VÖRUBÍLSINS OG VIÐHENGISVIÐBÓTINNI.

(IT) LA PORTATA DELLA COMBINAZIONE CARRELLO/ATTREZZATURE PUÒ ESSERE INFERIORE RISPETTO ALLA PORTATA DELLE ATTREZZATURE DICHIARATA. CONSULTARE LA TARGHETTA DEL CARRELLO. DEVE ESSERE RISPETTATA LA PORTATA DELLA COMBINAZIONE CARRELLO ELEVATORE/ATTREZZATURA.

(JA) フォークリフトの能力と装備の組み合わせは示されている装備の能力より低い場合があります。 フォークリフトのネームプレートを相談. トラックの容量と装備の組み合わせとは実施済み。.

(KO) 트럭 및 부착 결합물의 용량은 표시된 부착물 용량보다 적을 수 있습니다. 트럭 명판을 참조하십시오. 트럭 및 부착물 결합의 용량을 준수해야 합니다.

(LT) KRAUTUVO IR PRIEDO DERINIO GALINGUMAS GALI BŪTI MAŽESNIS NEGU NURODYTAS PRIEDO GALINGUMAS. SKAITYKITE INFORMACIJĄ KRAUTUVO INFORMACINĖJE PLOKŠTELĖJE. BŪTINA NEVIRŠYTI KRAUTUVO IR PRIEDO DERINIO GALIOS.

(LV) AUTOIEKRĀVĒJA UN PIEDERUMA KOPĒJĀ CELTSPĒJA VAR BŪT MAZĀKA PAR NORĀDĪTO PIEDERUMA CELTSPĒJU. SKATĪT AUTOIEKRĀVĒJA TEHNISKO DATU PLĀKSNĪTI. IR JĀIEVĒRO AUTOIEKRĀVĒJA UN UZKARES IEKĀRTAS KOPĒJĀ CELTSPĒJA.

(MT) IL-KAPAĊITÀ TAT-TRAKK U TAT-TAGĦMIR IMQABBAD MIEGĦU TISTA' TKUN INQAS MILL-KAPAĊITÀ MURIJA TAT-TAGĦMIR IMQABBAD MIEGĦU. IĊĊEKKJA L-PJANĊA TAL-ISEM TAT-TRAKK. IL-KAPAĊITÀ TAT-TRAKK FLIMKIEN MA' DIK TAT-TAGĦMIR IMQABBAD MIEGĦU TRID TIĠI SSODISFATA.

(NL) HET DRAAGVERMOGEN VAN DE COMINATIE VAN HEFTRUCK EN VOORZETAPPARAAT KAN LAGER ZIJN DAN HET VERMELDE DRAAGVERMOGEN VAN HET VOORZETAPPARAAT. KIJK OP HET TYPEP LAATJE VAN DE HEFTRUCK. MET DE CAPACITEIT VAN DE COMBINATIE VAN TRUCK EN VOORZETAPPARAAT WORDT REKENING GEHOUDEN.

(NO) TOTAL KOMBINERT KAPASITET FOR GAFFELTRUCK OG TILBEHØR KAN VÆRE MINDRE ENN ANGITT KAPASITET FOR TILBEHØRET. SE GAFFELTRUCKENS NAVNEPLATE. DEN TOTALE KAPASITETEN FOR GAFFELTRUCK OG TILLEGGSUTSTYR KOMBINERT MÅ OVERHOLDES.

(PL) UDŹWIG ZESPOŁU WÓZKA I OSPRZĘTU MOŻE BYĆ MNIEJSZY NIŻ POKAZANY UDŹWIG OSPRZĘTU. PATRZ TABLICZKA ZNAMIONOWA WÓZKA. NALEŻY PRZESTRZEGAĆ DOPUSZCZALNEGO UDŹWIGU ZESPOŁU WÓZKA I OSPRZĘTU.

(PT) A CAPACIDADE DA COMBINAÇÃO DO EMPILHADOR E DO ACESSÓRIO PODE SER INFERIOR À CAPACIDADE DO ACESSÓRIO APRESENTADA. CONSULTE A CHAPA DE ESPECIFICAÇÕES DO EMPILHADOR. CAPACIDADE DO CAMINHÃO E COMBINAÇÃO DE PENHORA DEVE SER RESPEITADO.

(RO) CAPACITATEA VEHICULULUI ȘI A COMBINAȚIEI DISPOZITIVELOR DE PRINDERE POATE FI MAI MICĂ DECÂT CAPACITATEA DISPOZITIVELOR DE PRINDERE INDICATĂ. CONSULTAȚI PLĂCUȚA CU CARACTERISTICILE TEHNICE ALE STIVUITORULUI. CAPACITATEA COMBINAȚIEI STIVUITOR - ECHIPAMENTE ATAȘATE TREBUIE RESPECTATĂ.

(RU) СОВМЕСТНАЯ ГРУЗОПОДЪЕМНОСТЬ АВТОПОГРУЗЧИКА И НАВЕСНОГО УСТРОЙСТВА МОЖЕТ БЫТЬ НИЖЕ УКАЗАННОЙ ГРУЗОПОДЪЕМНОСТИ НАВЕСНОГО УСТРОЙСТВА. СМ. ТАБЛИЧКУ ТЕХНИЧЕСКИХ ДАННЫХ. НЕОБХОДИМО СОБЛЮДАТЬ КОМБИНИРОВАННУЮ ГРУЗОПОДЪЕМНОСТЬ АВТОПОГРУЗЧИКА И НАВЕСНОГО ОБОРУДОВАНИЯ.

(SK) NOSNOSŤ VOZÍKA A PRÍDAVNÉHO ZARIADENIA MÔŽE BYŤ MENŠIA AKO UVEDENÁ NOSNOSŤ PRÍDAVNÉHO ZARIADENIA. BLIŽŠIE INFORMÁCIE UVEDENÉ NA TYPOVOM ŠTÍTKU VOZÍKA. NOSNOSŤ VOZÍKA S PRÍDAVNÝM ZARIADENÍM BUDE DODRŽANÁ.

(SL) ZMOGLJIVOST KOMBINACIJE VILIČARJA IN OPREME JE LAHKO MANJŠA OD PRIKAZANE ZMOGLJIVOSTI OPREME. UPOŠTEVAJTE NAPISNO PLOŠČICO VILIČARJA. UPOŠTEVATI JE POTREBNO ZMOGLJIVOST KOMBINACIJE VILIČARJA IN OPREME.

(SV) KAPACITETEN FÖR KOMBINATIONEN GAFFELTRUCK OCH AGGREGAT KAN VARA MINDRE ÄN ANGIVEN KAPACITET. LÄS GAFFELTRUCKENS TYPSKYLT. KAPACITETEN FÖR KOMBINATIONEN GAFFELTRUCK OCH AGGREGAT SKA FÖLJAS.

(TR) ARAÇ KAPASITESI VE DONANIM KOMBINASYONU, GÖSTERILEN DONANIM KAPASITESINDEN DÜŞÜK OLABILIR. ARAÇ BILGI ETIKETINE BAŞVURUN. ARAÇ KAPASITESI VE DONANIM KOMBINASYONU UYUMLU OLMALIDIR.

(ZH) 叉车与叉车属具的综合承载能力可能小于显示的叉车属具承载能力。请参考叉车铭牌。应符合叉车与叉车属具的综合承载能力。

CASCADE ITALIA S.r.l.-Via dell' Artigianato, 1-37030 Vago di Lavagno -VERONA - ITALY -Tel 045/8989111 - Fax 045/8989160
WWW.CASCORP.COM

HYDRAULIC CONNECTIONS

Cascade equipment may be provided with different connection systems:
ISO metric
Cylindrical gas
Anglo American UN-UNF

MAXIMUM WORKING PRESSURES

ID plate

HYDRAULIC CAPACITY

Cascade equipment has been designed to operate with working hydraulic pressure and flow within the values shown in the chart in Section 1.0.1. Values different from the recommended capacity jeopardize optimum use and reliability.

NOTE: Operating at lower than minimum capacity may result in a lower speed of movement than intended. Operating at higher than maximum capacity may cause damage to the equipment's hydraulic components, so we recommend fitting a pressure and flow regulator in the supply circuit.

MOUNTING CLASS

All the equipment is provided with mounting for installation on ISO-2328 carriages, class1-2-3-4. Equipment with special mounting maybe supplied on request.

EQUIPMENT DATA

Each attachment has a nameplate that indicates the specifications of the equipment and the SERIAL NUMBER, which is important for the replacement of parts or servicing.

Do not remove the nameplate so that the manufacturer can trace the type of equipment.

Target The manual has been created for the installation, use and maintenance of the equipment.

Purpose The manual indicates the use of the machine as intended; it provides instructions for setting up and use, gives suggestions for maintenance, and facilitates the ordering of any necessary spare parts.

Limits The manual cannot take the place of sufficient experience on the part of the user, but can only provide information.

It cannot take the place of any specific legislation which must be complied with, together with the instructions in the manual.

The manual supplies data on the equipment at the time of marketing and may be updated, depending on alterations made to the equipment. Cascade reserves the right to make any such modifications without being obliged to update previous manuals. The manual is intended for similar equipment that all follow the same operating principle; consequently the manual is of a general nature in all the sections beginning with the number 0 (example:0.2.0). Sections beginning with a number other than 0 (example:1.7.0) it will give specifications for each type of equipment.

Some drawings are of a general nature for the equipment (for example, the hoses for installation), so the equipment schematically illustrated in the drawing may be different from the one of the user.

Cascade declines all responsibility in the following cases:

-Improper use of the equipment or use by unskilled personnel.

-Use not complying with the specific national legislation.

-Fitting to lift truck with FEM mounting different from standard mounting.

-Incorrect installation.

-Defects in the hydraulic supply.

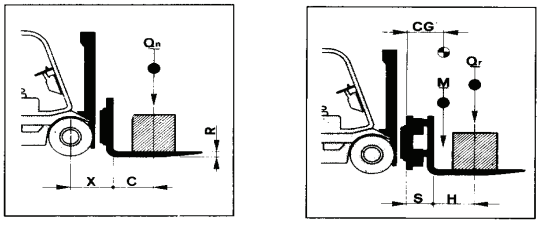
-Not following scheduled maintenance.

-Modifications or operations that have not been authorized.

-Use of non-original spare parts or parts not specifically intended for the model.

-Failure to observe the instructions

Calculation of the residual capacity of a lift lift truck with attachment



GA0489.eps

$$Qr = \frac{Qn\,(x + c) - M\,(X - R + CG)}{X-R+S+H}\ Kg$$

X= The distance from the front fork carriage to the wheel axis

C= The distance from the front fork carriage to the estimated

Q= Load center

n= Nominal capacity of the truck

R= Fork thickness

Cg=Attachment center of gravity

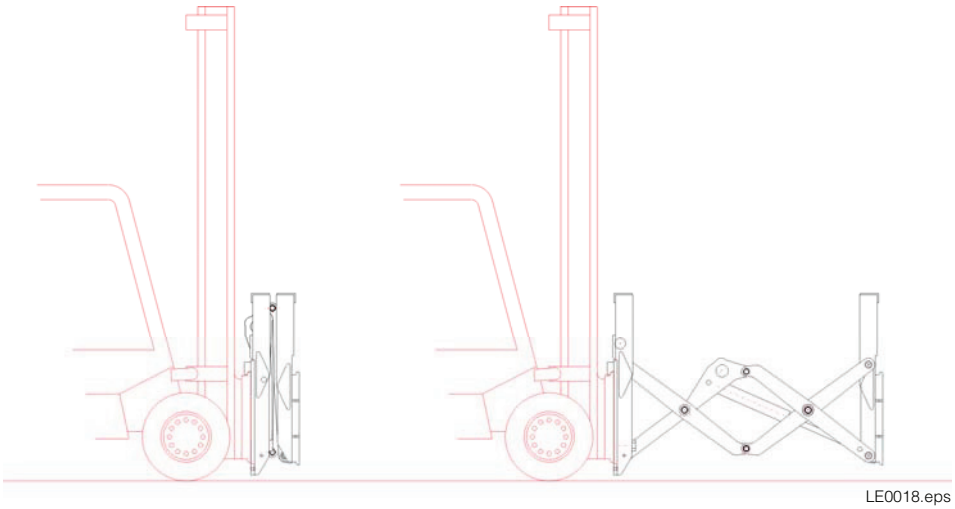
H= Attachment load center

M= Attachment weight/mass

S= Lost load center

Qr= Residual capacity of the truck

CASCADE ITALIA S.r.l.-Via dell' Artigianato, 1-37030 Vago di Lavagno -VERONA - ITALY -Tel 045/8989111 - Fax 045/8989160
WWW.CASCORP.COM



LE0018.eps

RETRACTED POSITION
Pos.1

EXTENDED POSITION
Pos.2

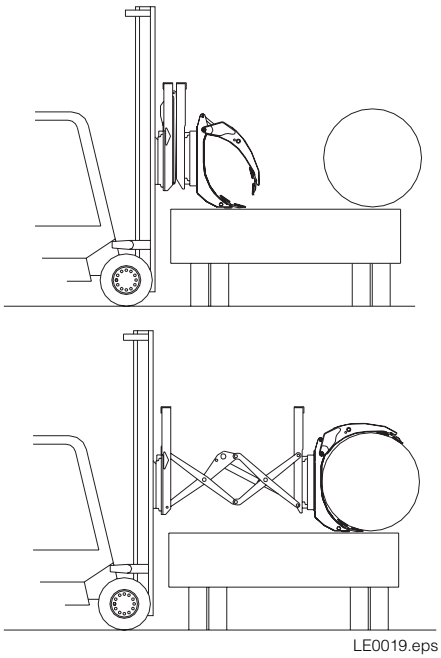
Transporting the lift truck should be with the attachment in retracted position (closed).

Operating the attachment should be done with the fork lift completely stopped.

When using the attachment you should consider the capacity data shown in the attachment nameplate.

During loading and unloading operation, extension and retraction of the load should be done with the pantograph parallel to the floor.

Sequence (with load in double deep):



LE0019.eps

1 Positioning the lift truck (in stop position) in front of the load with the attachment in closed position.

2 Extend the pantograph paying attention not to hit other objects.

3 Proceed to engage the load using the extension function.

4 Retract the load.

5 Once the load is retracted, then proceed with other operations.

Airborne noise emissions:
the A-weighted emission sound pressure level at workstations not exceed 70dB(A)

INCORRECT USES

The attachment has not been designed to operate in conditions different from those listed in SEC.0.3.1, the following cases must be avoided:

–Moving loads by pushing laterally using the structure of the attachment.

–Extension of the attachment should be done avoiding contact with other objects. The attachment has not been designed for pushing or pulling loads standing on the floor.

–Moving bodies by pushing, without hoisting them from the ground.

–Moving people or animals.

–Handling rectangular-shaped loads.

–Using the lift truck functions (mast function or transport function) with the attachment in full extended position.

–Operating when people are inside the working area of the attachment.

–Using the attachment for handling non-stabilized loads or with a load laterally off center with the central axle of the pantograph.

CASCADE ITALIA S.r.l.-Via dell' Artigianato, 1-37030 Vago di Lavagno -VERONA - ITALY -Tel 045/8989111 - Fax 045/8989160
WWW.CASCORP.COM

RESIDUAL HAZARDS SEC 0.3.1

The attachment has been designed to prevent risks during the transport, installation and use operations.

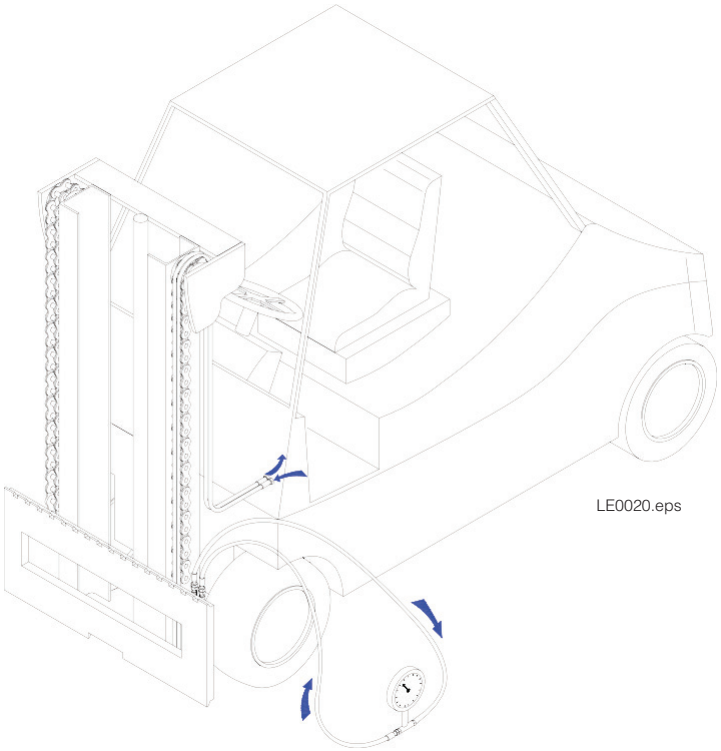
There are, however, some residual hazards:

- Hazard of crushing between the lift truck front structure and the mast when completely tilted backwards.
- Hazard of shearing between the lift truck front structure and the mast parts that move vertically when completely tilted backwards.
- Hazard of shearing between the attachment arms and the back carriage/front carriage during the open-close operations.
- Hazard of crushing between the chains and pulleys and the transversal components of the mast.
- Hazard of crushing during arm and pin service procedures.
- Hazard of crushing during cylinder service procedures.
- Hazard of crushing during installation and maintenance operations.

HYDRAULIC SYSTEM CHECK SEC 0.4.0

Before starting installation of the attachment, it is necessary to check system back pressure, this should not exceed 20 bar.
When finding higher back pressure the extending force can be reduced.

TEST PROCEDURE:



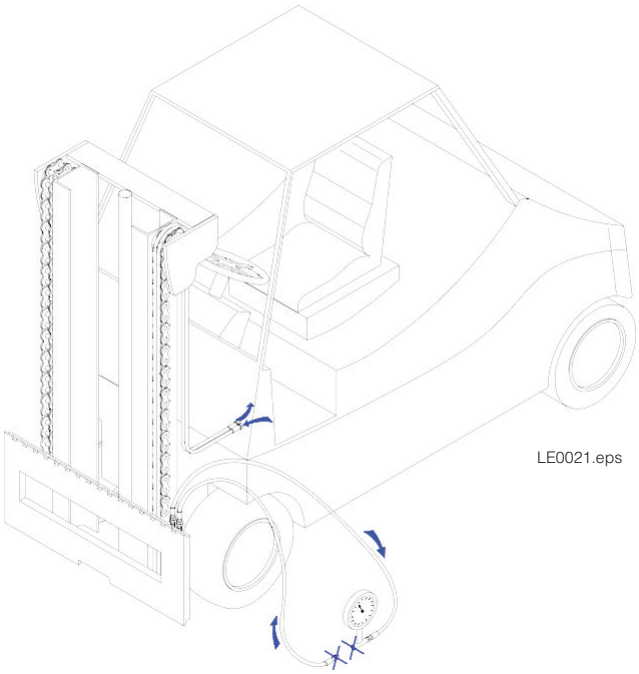
1 Install a manometer 250 bar with T connection at the ends of the hoses coming from the lift truck.
2 Operate the auxiliary lever.
3 Check the back pressure indicated on the **Cp** manometer.

Cp=back pressure

4 Repeat the same procedure for all the other auxiliary circuits.

NOTE: When installing the manometer into the circuit, use the original hoses of the lift truck or alternatively larger diameter and short hoses.

Verify the max pressure supplied by the lift truck system, that value should be at least 150 bar.



1 Install a manometer 250 bar with T connection at the ends of the hoses coming from the lift truck.
2 Cap the other hoses limit oil leakage.
3 Operate the auxiliary lever in the direction of the hose end with manometer.
4 The manometer reading is the max. value of pressure from the lift truck.
5 Should this value be less than 150 bar then ask for lift truck service.
6 Repeat the same procedure for all the other auxiliary circuits.

The test should be done at the hydraulic flow rate that is not be less than the value shown in section 1.0.1.

CASCADE ITALIA S.r.l.-Via dell' Artigianato, 1-37030 Vago di Lavagno -VERONA - ITALY -Tel 045/8989111 - Fax 045/8989160
WWW.CASCORP.COM

INSTALLATION–BOLT ON MOUNTING SEC 0.4.1

Personnel in charge of operation and installation must be competent and be aware of the technical characteristics of the attachment and the lift truck on which it is to be installed.

ATTENTION: Before installation, ensure that the rated capacity of the lift truck hydraulic system is compatible with the attachment. Consult the lift truck technical manual and the manufacturer if necessary.

It is the responsibility of the personnel in charge of the installation to choose the equipment and hoist (type and capacity) used for lifting the attachment.

1 Ensure that the lift truck carriage is clean and that the surfaces are straight.

2 Move the attachment adjacent to the front of the lift truck, hooking it in the points provided. To avoid damage, follow the criteria listed above when performing lifting and transport operations. The weight to be considered is shown on the attachment nameplate.

3 Disassemble the lower hooks at the bottom of the attachment (detail 1).

4 Position the lift truck behind the attachment.

5 Move the carriage forward and up to engage the upper hooks, inserting the locating tab in a carriage notch.

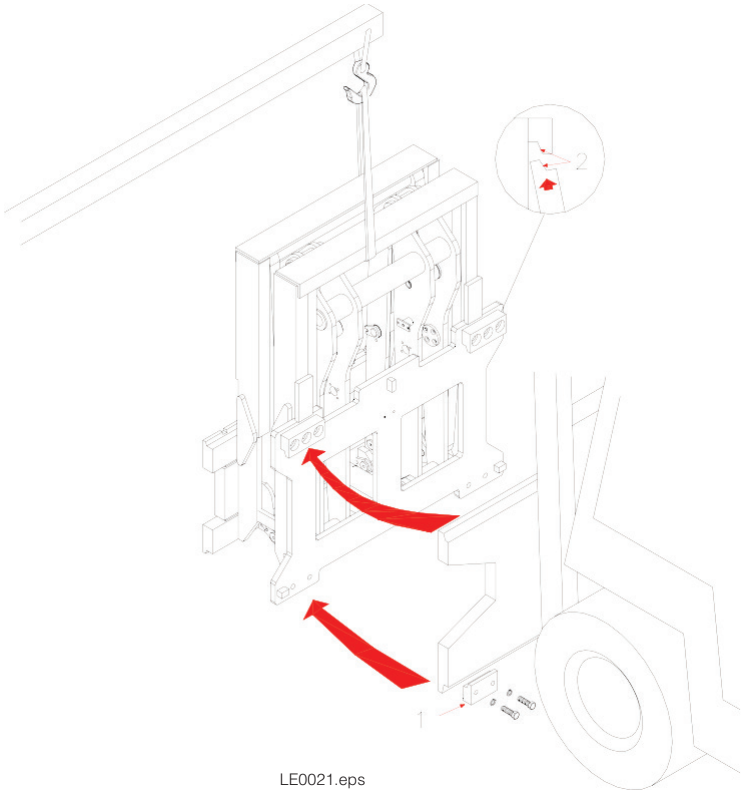
6 Lift the mast by about 100 mm.

7 Install the lower hooks and tighten the capcrews.

8 **With the lift truck off, operate the truck control handles a few times.** Connect the attachment hoses to the lift truck hydraulic supply system.

9 Start the lift truck and while it is unloaded, operate the control handles to eliminate air from the hydraulic system.

10 Ensure that there are no leaks in the hydraulic system between the lift truck and the attachment.



LE0021.eps

INSTALLATION–INTEGRAL MOUNTING SEC 0.4.2

Personnel in charge of operation and installation must be competent and be aware of the technical characteristics of the attachment and of the lift truck on which it is to be installed.

ATTENTION: Before installation, ensure that the rated capacity of the lift truck hydraulic system is compatible with the attachment. Consult the lift truck technical manual and the manufacturer if necessary.

It is the responsibility of the personnel in charge of the installation to choose the equipment and hoist (type and capacity) used for lifting the attachment.

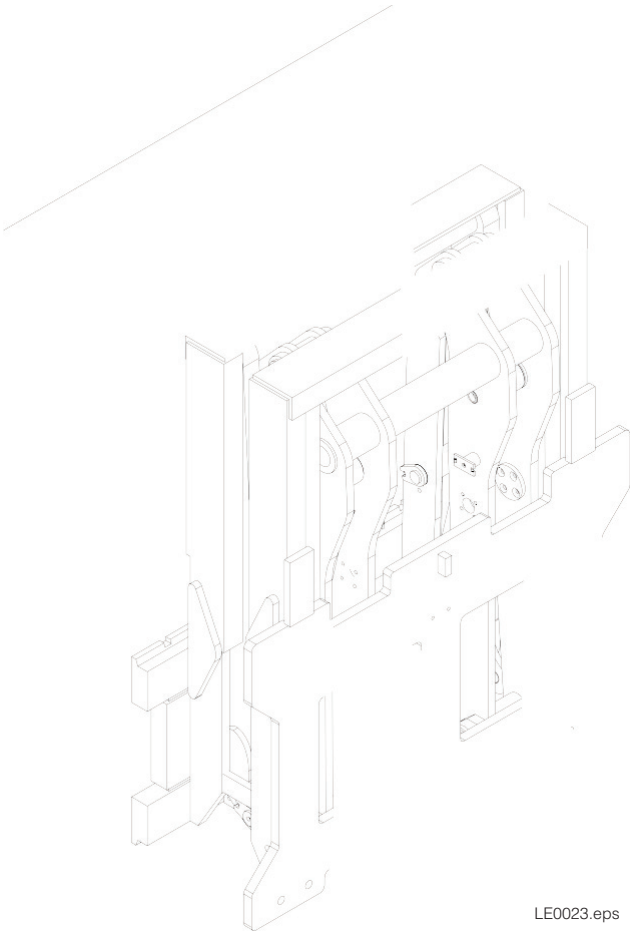
1 Move the attachment adjacent to the front of the lift truck, hooking it in the points provided. To avoid damage, follow the criteria listed above when performing lifting and transport operations. The weight to be considered is shown on the attachment nameplate.

2 This Cascade attachment is designed with integral mounting. The attachment is mounted inside the lift truck mast, in the same way as the original carriage (the connection to the hoisting system have to be done with the original chains of the lift truck). To mount the attachment to the lift truck, you have to follow procedures specified by the lift truck manufacturer.

3 **With the lift truck off, operate the truck control handles a few times.** Connect the attachment hoses to the lift truck hydraulic supply system.

4 Start the lift truck and while it is unloaded, operate the control handles to eliminate air from the hydraulic system.

5 Ensure that there are no leaks in the hydraulic system between the lift truck and the attachment.



LE0023.eps

CASCADE ITALIA S.r.l.-Via dell' Artigianato, 1-37030 Vago di Lavagno -VERONA - ITALY -Tel 045/8989111 - Fax 045/8989160
WWW.CASCORP.COM

MAINTENANCE SEC 0.5.0

Maintenance may be carried out by the operator.
The operations that must be carried out by skilled personnel are only those involving the replacement of mechanical parts.

ROUTINE MAINTENANCE EVERY 1000 WORK HOURS

Check the retaining screws of the equipment components.

Grease all the moving parts through the grease nipples.

Check all the hydraulic components for leaks.

FORKS

Verify forks conform with UNI ISO 5057-December 2000. The attachment is out of conformity when:

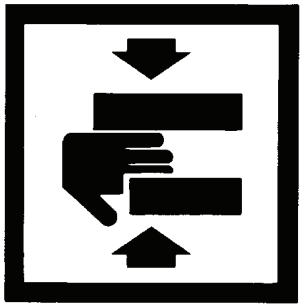
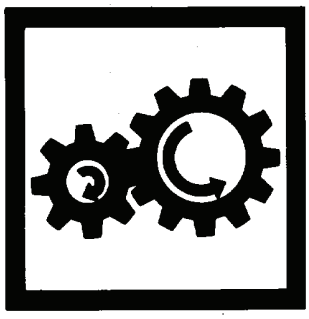
- Thickness of the fork is less than 90% of the original thickness
- Deformation of the fork is more than 3% of its length

For all information, contact the ASSISTANCE SERVICE of CASCADE.

Pay attention to the symbols marked on some items of equipment and to their colors.

YELLOW = DANGER
RED = PROHIBITED

These indicate the existence of a potential danger to health and personal safety.

DANGER Risk of crushing bymoving parts	DANGER Risk of crushing by drive elements in motion	PROHIBITED Do not stand here
		

WARNING Attachment's hoisting point	WARNING Don't wash with water
	

GA0490.eps

CASCADE ITALIA S.r.l.-Via dell' Artigianato, 1-37030 Vago di Lavagno -VERONA - ITALY -Tel 045/8989111 - Fax 045/8989160
WWW.CASCORP.COM

1 Before disassemble of any hydraulic system component (see sec.2.0.0), it is necessary to clean carefully the hydraulic components, especially if the lift truck has already worked for many hours.

   For cleaning, you can use air flow at high pressure, or water, but only before disassembly. After cleaning with water, dry the clamp carefully before disassembling anything.

2 Avoid oil leaks on the ground, use a bucket to collect oil that spills during disassemble operations. Special absorbent paper can be used for drying the oil.

3 Before proceeding to disassemble any part of the hydraulic valve, setup the working table, cleaning it carefully.

4 Always use the correct tool, even removing hydraulic valve, or mounting it. Be sure that wrenches and screwdrivers used have the same measure as screws. The components of the attachment can be damaged if you don't follow these instructions.

5 Never use gasoline or solvent for cleaning seals; you could use diesel fuel.

6 Use an appropriate filter when filling the hydraulic oil tank.

7 Hydraulic oil used for filling must conform with the type indicated in the lift trucks instruction manual. Be sure that all filters are corrects.

8 If there are quick release connections, be sure they are clean before use. Check the correct junction to avoid connection failures.

9 Protect hoses from cutting bodies and corrosive fluids.

FAULTS AND REMEDIES SEC 0.6.0

This chapter helps the attachment user to assess the most common faults, their causes and the remedies to get the equipment back into working order.

If the user is unable to do this, apply to the TECHNICAL ASSISTANCE SERVICE of Cascade, providing nameplate data and describing the problem found in the equipment.

Before carrying out maintenance or any operation to remedy a fault, ensure that:

The equipment is not connected to the hydraulic supply under pressure.

Fault is not due to under sized hoses.

The part to be dismantled is resting on a surface.

Fault is not due to the lack of lubrication.

There is a container to catch hydraulic oil.

Faults	Causes	Remedies
1-All causes due to missing pressures or oil flow when quick changes are mounted.	1-Incorrect mounting or problems with quick change hydraulic fittings.	1-By pass quick changes and check if correctly working, if it is then proceed to substitute the quick changes.
2-Extension or retraction is very slow or the pantograph is completely stopped.	1-Not enough oil flow.	1-Check that oil flow is as shown in table 1.0.1.
	2-Pressure relief valve on the fork lift with low setting.	2-Contact the service of the fork lift in order to check the setting of the pressure relief valve.
	3-Low setting of the pressure relief valve of the attachment.	3-Verify the setting of the pressure relief valve of the attachment with manual manometer (250 bar), connected to the pressure zone. If the pressure should be lower, progress to the regulation of the cartridge of maximum pressure (using steps of ¼ of turn). This operation must be performed with the front carriage extended with a capacity load. Proceed step by step with the progressive increase of pressure not to exceed the pressure on the attachment nameplate.
	4-Oil leaks in the cylinder. They may be between rod and retainer, visible from outside, and on the piston, not visible from outside.	4-Dismantle the cylinder. Check that all the seal components are in good condition. Change any worn parts. NOTE: During manufacture the piston is screwed on to the rod with the addition of a locking compound such as LOCTITE FORTE 270. If on disassembly it is difficult to unscrew the piston, heat the part. For reassembly, add the same or a similar locking compound.
	5-Seals in valve damaged	5-Remove the relief valve and check integrity of seals and body valve, if necessary substitute.
3-Irregular opening and closing movement	1-As previous point 5	1-As point 5.1
	2-Oil leak from the cylinder.	2-Verify the surface of the piston rod, if piston rod is OK, then change the cylinder seals.
	3-Pins not lubricated	3-Lubricate the pins
	4-Structural deformation of the load extension arms.	4-Contact assistance service Cascade.

CASCADE ITALIA S.r.l.-Via dell' Artigianato, 1-37030 Vago di Lavagno -VERONA - ITALY -Tel 045/8989111 - Fax 045/8989160
WWW.CASCORP.COM

ORDERING SPARE PARTS SEC 1.0.0

USE OF THE SPARE PARTS TABLES

The equipment in a family differ mainly in the size of the mechanical structure and in certain hydraulic components.

HOW TO ORDER A COMPONENT

1 Identify the part to be ordered (e.g.:cylinder seals) and the group (e.g.:cylinder) in which it is fitted.

2 Check the model on the attachment nameplate.

3 Find the code of the group to which the part belongs referring to the equipment model.

4 Find the component reference number in the drawing of the group.

5 In the table of the group, enclosed with the drawing, find the code of the part referring to the reference number (point 2) and the group code (point 3).

6 Order the component from Cascade giving the following data:

Model
Serial number
Part number
Part description
Desired number of pieces
Desired type of shipping
Firm name, address and tax data of the buyer and address to which the component is to be sent.

NOTES:
Some equipment components may have particular physical characteristics (e.g..Shore hardness of O-Rings) so they must be replaced with a component that has the same characteristics.

Always replace components with original spares by Cascade.

HYDRAULIC CAPACITIES SEC 1.0.1

1–Preliminary information
It is necessary to match the truck hydraulic system to the attachment system. General notes are provided to help in making the installation easier.

First it must be noticed that back pressure in the closing phase, must never exceed 20 bar. High back pressure impairs the performance of the attachment. Should any problem occur, first check for system back pressure.

1.1–Cascade suggests observing the following hydraulic supply and working pressure values to optimize attachment operation. Values are for standard attachments and may change for different equipment.

Mounting Class ISO 2328	Nominal capacity of the truck (kg)	Load center	Recommended hydraulic flows (l/min)			Recommended working pressures (bar)
			Min.	Med.	Max.	Max.
1	Until 999	400	10	15	25	150*
2	From 1000 to 2500	500	15	30	50	150*
3	From 2501 to 4999	500	20	40	60	150*
4	From 5000 to 8000	600	45	60	80	150*
5	From 8000 to 10999	600	60	80	100	150*

*) These pressure values are valid unless other wise specified on the equipment label (and EC certification).

2–Specifying the hydraulic system
Equipment working correctly is assumed, in addition to correct pressure values and hydraulic flow delivered by the truck, and the supply system between the truck and the attachment. The parameters that influence the supply system are hose diameter and length; for example a hose with a small diameter and long length and a fixed hydraulic flow can cause excessive pressure loss, compromising the correct working of the truck-attachment system.

The hose diameter must be sized according to the actual flow supplied by the truck to the attachment and the length of the hoses.

The schedule in the next paragraph shows the pressure loss values for hoses of different dimensions, different lengths and different hydraulic flows. This schedule is necessary to help with installation between truck and equipment to setup an optimal working system, **to obtain back pressure values less than 20 bar.**

CASCADE ITALIA S.r.l.-Via dell' Artigianato, 1-37030 Vago di Lavagno -VERONA - ITALY -Tel 045/8989111 - Fax 045/8989160
WWW.CASCORP.COM

2.1–Pressure loss of the hoses with hydraulic oil with viscosity of 20 cSt when in operation temperature (warm system) and of 100 cSt when starting in cold months. Absorption of viscosity is arbitrary, but close to real circumstances.

Schedule gives pressure loss values (bar) per one linear meter of hose.

ø1/4G-ø6,4mmabout

	Oil viscosity 20 Cts				Oil viscosity 100 Cts			
L/min.	**L=1m**	**L=5m**	**L=10m**	**L=20m**	**L=1m**	**L=5m**	**L=10m**	**L=20m**
10	0,85	4,2	8,5	16,9	3,3	16,5	33,0	66,0
15	1,72	8,6	17,2	34,4	5,0	24,8	49,5	99,1
20	2,9	14,3	28,5	57,0	6,6	33,0	66,0	132,0
30	5,8	29,0	58,0	116,0	9,9	49,5	99,0	198,0
40	9,6	48,0	96,0	192,0	14,3	71,5	143,0	286,0
50	14,2	71,0	142,0	284,0	21,2	106,0	212,0	424,0
60	19,5	97,5	195,0	390,0	29,1	145,5	291,0	582,0

ø5/16G-ø8,0mmabout

	Oil viscosity 20 Cts				Oil viscosity 100 Cts			
	L=1m	**L=5m**	**L=10m**	**L=20m**	**L=1m**	**L=5m**	**L=10m**	**L=20m**
10	0,29	1,5	2,9	5,9	1,4	6,8	13,5	27,0
15	0,60	3,0	6,0	11,9	2,0	10,1	20,3	40,6
20	1,0	5,0	9,9	19,8	2,7	13,5	27,0	54,0
30	2,0	10,0	20,0	40,0	4,1	20,3	40,6	81,2
40	3,3	16,6	33,2	66,4	5,4	27,0	54,0	108,0
50	4,9	24,6	49,1	98,2	7,3	36,7	73,4	146,8
60	6,8	33,8	67,5	135,0	10,1	50,5	101,0	202,0
70	8,9	44,3	88,5	177,0	13,2	66,1	132,2	264,4

ø3/8G-ø9,5mmabout

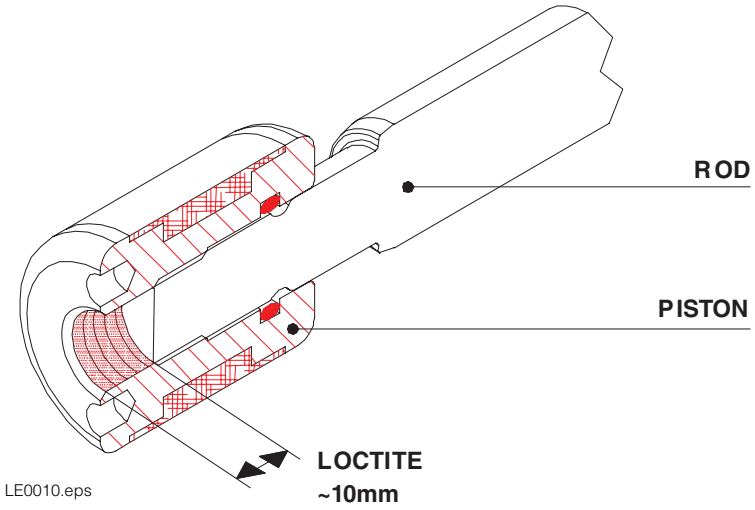
	Oil viscosity 20 Cts				Oil viscosity 100 Cts			
	L=1m	**L=5m**	**L=10m**	**L=20m**	**L=1m**	**L=5m**	**L=10m**	**L=20m**
20	0,4	2,2	4,4	8,8	1,4	6,8	13,6	27,2
30	0,9	4,5	8,9	17,8	2,1	10,3	20,5	41,0
40	1,5	7,4	14,7	29,4	2,7	13,6	27,2	54,4
50	2,2	10,9	21,7	43,4	3,4	17,0	34,0	68,0
60	3,0	15,0	29,9	59,8	4,5	22,3	44,6	89,2
70	3,9	19,6	39,1	78,2	5,9	29,3	58,5	117,0
80	4,9	24,7	49,4	98,8	7,4	36,9	73,8	147,6
90	6,1	30,5	61,0	122,0	9,1	45,5	91,0	182,0
100	7,3	36,5	73,0	146,0	10,9	54,5	109,0	218,0

ø1/2G-ø12,7mmabout

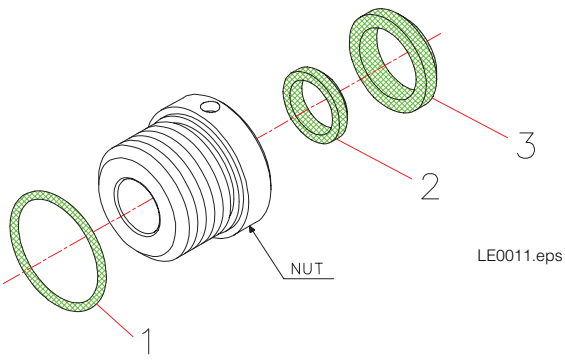
	Oil viscosity 20 Cts				Oil viscosity 100 Cts			
	L=1m	**L=5m**	**L=10m**	**L=20m**	**L=1m**	**L=5m**	**L=10m**	**L=20m**
30	0,2	1,1	2,2	4,5	0,6	3,2	6,4	12,8
40	0,4	1,9	3,7	7,4	0,9	4,3	8,5	17,0
50	0,6	2,8	5,5	11,0	1,1	5,3	10,7	21,3
60	0,8	3,8	7,5	15,0	1,3	6,4	12,8	25,6
70	1,0	5,0	9,9	19,8	1,5	7,5	14,9	29,8
80	1,3	6,3	12,5	25,0	1,9	9,3	18,6	37,2
90	1,5	7,7	15,3	30,6	2,3	11,5	22,9	45,8
100	1,8	9,2	18,4	36,8	2,8	13,8	27,5	55,0

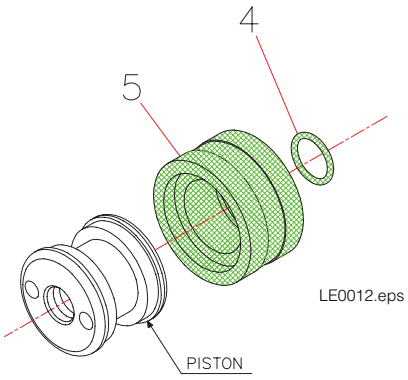
At the piston end of the rod, a small quantity of LOCTITE2701 is applied, for locking the piston.

To disassemble the piston from the rod, it could be necessary to heat the piston to a temperature of 100°C (before heating, tear down all seals; for seal No.5, use a specific extracting-tool).



A small quantity of BC101(Tecnolube) or equivalent PTFE grease density NLGI2 is applied on the seal surface, to avoid damage.



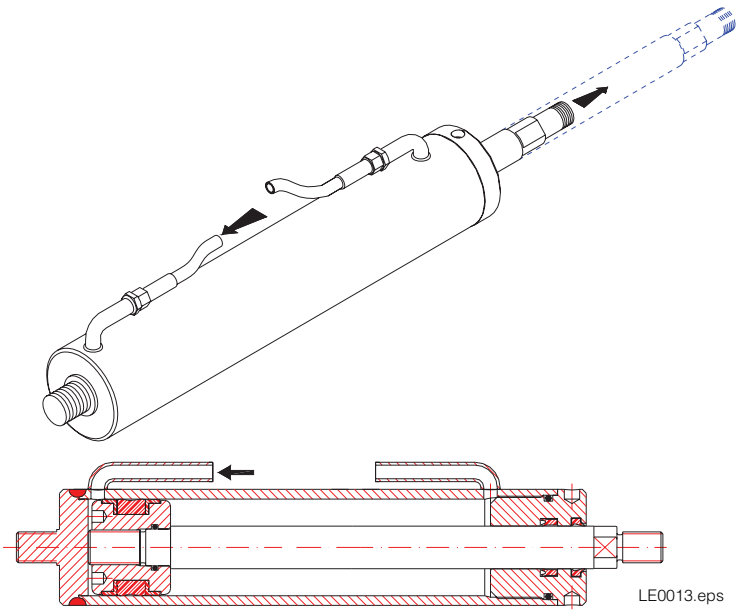


Seal Type	Ref.
OR Seal (NUT)	1
Hydraulic packing seal (NUT)	2
Wiper seal (NUT)	3
OR Seal (PISTON)	4
Hydraulic packing seal (PISTON)	5

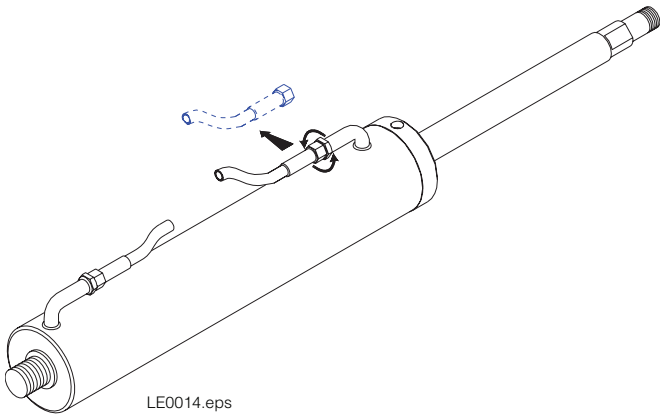
CASCADE ITALIA S.r.l.-Via dell' Artigianato, 1-37030 Vago di Lavagno -VERONA - ITALY -Tel 045/8989111 - Fax 045/8989160
WWW.CASCORP.COM

LEAK TEST

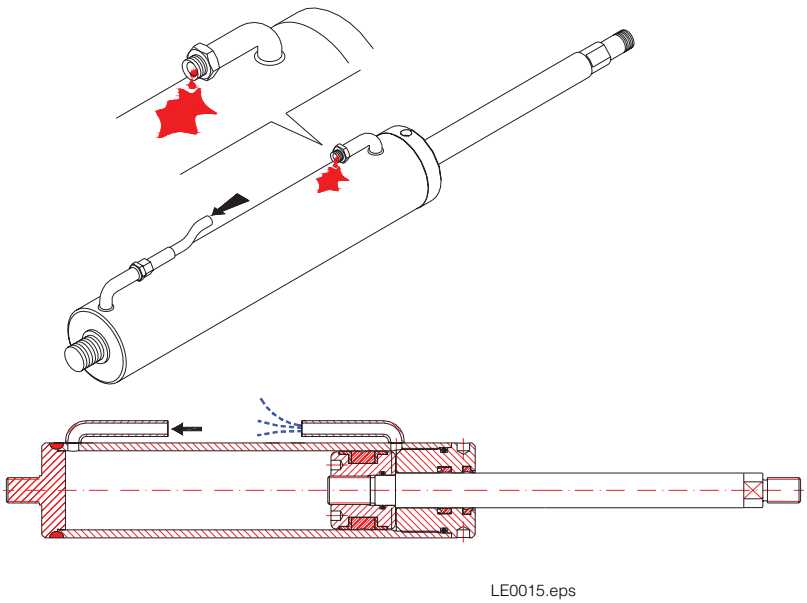
Follow these procedures:



Extend the cylinder rod to end of stroke.

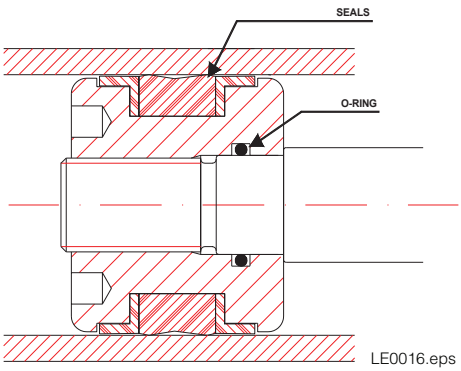


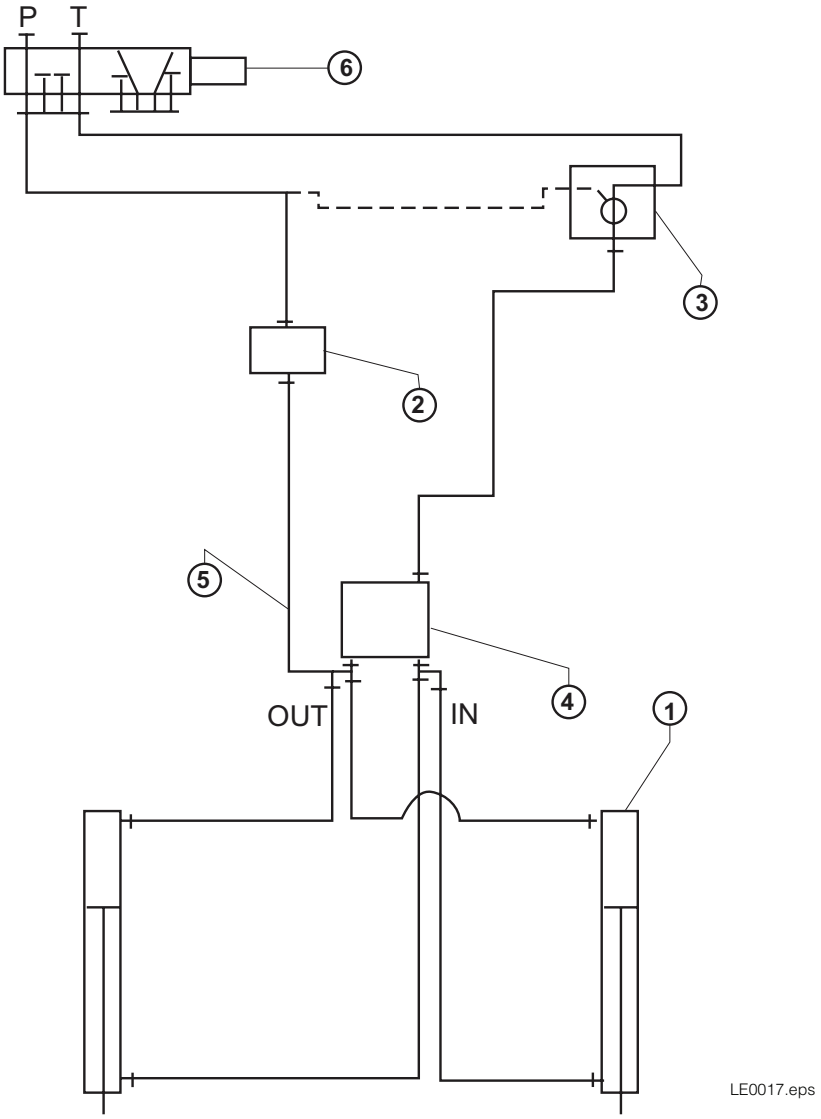
Disconnect the hose from the rod side fitting. Place the hose end in a bucket to collect draining oil.



Apply pressure to the base end of the cylinder. Check for oil coming out of the rod end fitting. If oil is not coming out ,then the seals are OK.

If the seals are leaking, then disassemble the cylinder. Leakage can be inside (due to piston seals) or outside (rod seals). In this case follow the procedure in Section 1.0.2.





Ref.	Qty.	Part No.	Description
1	2		Cylinder
2	1		Valve
3	1		Check Valve
4	1		Relief Valve-Crossover
5	8	●	Hose
6	1		Solenoid Valve

● Specify length when ordering hoses.

CASCADE ITALIA S.r.l.-Via dell' Artigianato, 1-37030 Vago di Lavagno -VERONA - ITALY -Tel 045/8989111 - Fax 045/8989160
WWW.CASCORP.COM

(BG) ЕО декларация за съответствие за машини (Директива 2006/42/ЕЕС, приложение II, под А)
(CS) ES PROHLÁŠENÍ O SHODĚ PRO STROJNÍ (Směrnice 2006/42/EEC, příloha II, sub A)
(DA) OVERENSSTEMMELSESERKLÆRING (Maskindirektivet, 2006/42/EØF, Bilag II, afsnit A)
(ET) EÜ VASTAVUSDEKLARATSIOON MASINA (direktiiv 2006/42/EEC, II lisa alam A)
(FI) EY-VAATIMUSTENMUKAISUUSVAKUUTUS KONEESTA (Direktiivi 2006/42/ETY, liitteen II, malli A)
(FR) DECLARATION CE DE CONFORMITE POUR LES MACHINES (Directive 2006/42/CEE, Annex II, Chapitre A)
(EL) ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ ΕΚ ΓΙΑ ΤΙΣ ΜΗΧΑΝΕΣ (Οδηγία 2006/42/ΕΕC, παράρτημα II, υπό Α)
(EN) EC DECLARATION OF CONFORMITY FOR MACHINERY (Directive 2006/42/EEC, Annex II, sub A)
(GA) CE DEARBHÚ COMHRÉIREACHTA DO INNEALRA (Treoir 2006/42/EEC, Iarscríbhinn II, fo A)
(IS) ESB SAMRÆÝSING VÉLAHLUTA (Tilskipun 2006/42/CE, Viðauki II, lið. A)
(IT) DICHIARAZIONE CE DI CONFORMITA' PER MACCHINE (Direttiva 2006/42/CE,Allegato II,part A)
(LV) EK atbilstības deklarācija MAŠĪNU (Direktīva 2006/42/EEC, Pielikums II, A)
(LT) EB ATITIKTIES DEKLARACIJA technikai (Direktyva 2006/42/EEC, II priedo sub A)
(NN) EC SAMSVARSERKLÆ OM MASKINER (Direktiv 2006/42/EEC, Vedlegg II, del A)
(MT) DIKJARAZZJONI TAL-KONFORMITÀ GMALL-MAKKINARJU (Direttiva 2006/42/EEC, l-Anness II, sub A)
(NL) EC VERKLARING VAN OVEREENSTEMMING VOOR MACHINES (Richtlijn 2006/42/EEG, Bijlage II, order A)
(PL) UE DEKLARACJA ZGODNOŚCI DLA MASZYN (Dyrektywa 2006/42/EEC, Załącznik II, rozdział A)
(PT) DECLARAÇÃO CE DE CONFORMIDADE PARA AS MÁQUINAS (Segùn la directiva 2006/42/CEE, anex II, sub A)
(RO) DECLARAŢIA DE CONFORMITATE CE PENTRU UTILAJE (Directiva 2006/42/EEC, anexa II, sub A)
(SK) ES VYHLÁSENIE O ZHODE STROJOVÝCH (Smernica 2006/42/EEC, príloha II, sub A)
(SL) ES IZJAVA O SKLADNOSTI ZA STROJE (Direktiva 2006/42/EEC, Priloga II, sub A)
(ES) DECLARACIÓN "CE" DE CONFORMIDAD SOBRE MÁQUINAS (Directiva 2006/42/CEE, Anexo II, Capitulo A)
(SV) EG-FÖRSÄKRAN OM ÖVERENSSTÄMMELSE FÖR MASKINELL UTRUSTNING (Direktiv, 2006/42/EEC, Annex II, A)
(DE) EG-KONFORMITÄTSERKLÄRUNG FÜR MASCHINEN (EG-Richtlinie 2006/42/EWG, Anhang II,sub A)
(TR) MAKİNA İÇİN UYGUNLUK BELGESI (Direktifi 2006/42/EEC, Ek II, A alt)
(HU) EK MEGFELELŐSÉGI NYILATKOZAT A GÉP irányelv (2006/42/EEC, II sub A)

(BG) Производител / (CS) výrobce / (DA) producent / (ET) tootja / (FI) valmistaja / (FR) fabricant / (EL) κατασκευαστής / (EN) manufacturer / (GA) monaróir / (IS) Framleiðandi / (IT) fabbricante / (LV) ražotājs / (LT) gamintojas / (NN) Produsent / (MT) manifattur / (NL) fabrikant / (PL) producent / (PT) fabricante / (RO) producător / (SK) výrobca / (SL) proizvajalec / (ES) fabricante / (SV) tillverkare / (DE) Hersteller / (TR) üretici / (HU) gyártó

Cascade Italia Srl

(BG) адрес / (CS) adresa / (DA) adresse / (ET) aadress / (FI) osoite / (FR) adresse / (EL) διεύθυνση / (EN) address / (GA) seoladh / (IS) Heimilisfang / (IT) Indirizzo / (LV) adrese / (LT) adresas / (NN) adresse / (MT) indirizz / (NL) adres / (PL) adres / (PT) endereço / (RO) adresă / (SK) Sídlo / (SL) Naslov / (ES) dirección / (SV) address / (DE) Adresse (TR) adres / (HU) cím

Via dell'Artigianato, 1

37030 Vago di Lavagno

Verona - Italy

Declaration number:

(BG) Декларира, че / (CS) prohlašuje, že / (DA) erklærer, at / (ET) deklareerib, et / (FI) toteaa, että / (FR) déclare que / (EL) δηλώνει ότι (EN) declares that / (GA) go ndearbhaíonn an / (IS) lýsir því yfir að / (IT) dichiara che / (LV) deklarē, ka / (LT) pareiškia, kad / (NN) erklærer at / (MT) tiddikjara li / (NL) verklaart dat / (PL) deklaruje, że / (PT) declara que / (RO) declară că / (SK) prehlasuje, že / (SL) izjavlja, da / (ES) Declara que / (SV) förklarar att / (DE) erklärt, dass / (TR) olduğunu beyan / (HU) kijelenti, hogy

Part number: **A-CLX**

Catalogue number: **A-CLX**

Description: **LOAD EXTENDER**

Serial number: **-**

Person authorised to compile the technical file: **Davide Roncari - Cascade Italia Srl**

(BG) е в съответствие с разпоредбите на машината директива (Директива 2006/42/ЕЕС), както е изменена, и с националното законодателство за прилагане;
(CS) je v souladu s ustanoveními Machine (směrnice 2006/42/EEC) ve znění pozdějších předpisů, a s vnitrostátní prováděcí předpisy;
(DA) er i overensstemmelse med Maskindirektivets bestemmelser (Direktiv 2006/42/EØF) med ændring, og med national lovgivning, der omsætter dette direktiv;
(ET) on kooskõlas sätetega Machine (direktiiv 2006/42/EEC) muudetud ning siseriiklike rakendusaktide;
(FI) täyttää konedirektiivin (direktiivi 2006/42/ETY) ja siihen liittyvien muutosten sekä ne voimaansaattavien kansallisten säädösten määräykset;
(FR) est conforme aux dispositions de la Directive "Machines" (Directive 2006/42/CEE) modifée, et aux législations nationales la transposant;
(EL) είναι σύμφωνη με τις διατάξεις της οδηγίας Machine (Οδηγία 2006/42/ΕΕC), όπως τροποποιήθηκε, και με την εθνική νομοθεσία εφαρμογής
(EN) is in conformity with the provisions of the Machine Directive (Directive 2006/42/EEC) as amended, and with national implementing legislation;
(GA) tá sé i gcomhréir le forálacha na Treorach Meaisín (Treoir 2006/42/EEC) mar a leasaíodh, agus leis an reachtaíocht cur chun feidhme náisiúnta;
(IS) er i samræmi við ákvæði Vélahlutatilskipunarinnar (Tilskipun 2006/42/EEC) með viðbótum, og við samsvarandi landslög;
(IT) è conforme alle condizioni della Direttiva macchine (Direttiva 2006/42/ CE), come modificata e alla legislazione nazionale che la traspone;
(LV) atbilst šīs iekārtas (Direktīva 2006/42/EEC) noteikumiem ar grozījumiem, un ar valsts īstenošanas noteikumiem;
(LT) laikantis mašinų direktyvos (Direktyva 2006/42/EEC) nuostatas su pakeitimais ir su nacionaliniuose įgyvendinimo teisės aktuose;
(NN) er i samsvar med bestemmelsene i Forkrift om Maskiner som implementerer om tilnææav medlemsstatenes lovgivning om maskiner (2006/42/EEC);
(MT) huwa konformi mad-dispożizzjonijiet tad-Direttiva Magni (Direttiva 2006/42/EEC) kif emendata, u mal-leġiżlazzjoni implimentattiva nazzjonali;
(NL) voldoet aan de bepalingen van de Machinerichtlijn (Richtlijn 2006/42/EEG, zoals laatstelijk gewijzigd), en de nationale wetgeving ter uitvoering van deze richtlijn;
(PL) jest zgodny z wymaganiami Dyrektywy dla Maszyn (Dyrektywa 2006/42/EEC), uaktualnionej, oraz państwowymi przepisami uzupełniającymi;
(PT) corresponde a las exigencias básicas de la directiva de la CE sobre máquinas (directiva "CE" 2006/42/CEE), incluidas las modificaciones de la misma y la correspondiente transposición a la ley nacional;
(RO) este în conformitate cu dispoziţiile Directivei maşinii (Directiva 2006/42/EEC), astfel cum a fost modificată, precum şi cu legislaţia naţională de punere în aplicare;
(SK) je v súlade s ustanoveniami Machine (smernica 2006/42/EEC) v znení neskorších predpisov, a s vnútroštátne vykonávacie predpisy;
(SL) je v skladu z določbami stroj (Direktiva 2006/42/EEC), kakor je bila spremenjena, in z nacionalno izvedbeno zakonodajo;
(ES) está conforme com as disposições da Directiva "Máquinas" (Directiva 2006/42/CEE), e respectivas alterações, e com a legislação nacional que a transpõe;
(SV) är tillverkad i överensstämmelse med Maskindirektivet (Direktiv 2006/42/EEC) inklusive tillägg, och med motsvarande nationella lagstiftning;
(DE) konform ist mit den einschlägigen Bestimmungen der EG-Maschinenrichtlinie (EG-Richtlinie 2006/42/EWG), inklusive deren Änderung en, sowie mit dem entsprechenden Rechtserlaß zur Umsetzung der Richtlinie in nationales Recht;
(TR) olarak değiştirilmiş ve ulusal uygulama mevzuat ile Makine Direktifi (2006/42/EEC) hükümlerine uygun olduğunu;
(HU) megfelel rendelkezéseinek Machine irányelv (2006/42/EEC) módosított, valamint a nemzeti végrehajtási jogszabályok;

(BG) Той също така посочва, че / (CS) Dále uvádí, že / (DA) Det fastslås også, at / (ET) Samuti sätestatakse, et / (FI) Siinä todetaan myös, että / (FR) Il précise également que (EL) Αναφέρει, επίσης, ότι / (EN) It also declares that / (GA) Deir sé freisin go / (IS) Þar segir einnig að / (IT) E inoltre dichiara che / (LV) Tajā arī teikts, ka (LT) Jame taip pat teigiama, kad / (NN) Den sier også at / (MT) Hija tgħid ukoll li/ (NL) Het bepaalt ook dat / (PL) Stwierdza również, że / (PT) Ele também afirma que (RO) Se precizează de asemenea că / (SK) Ďalej uvádza, že / (SL) Navaja tudi, da / (ES) También se establece que / (SV) Det anges också att / (DE) Weiter heißt es, dass (TR) Ayr ca bildiren / (HU) Azt is kimondja, hogy

(BG) са приложени следните(части/клаузи от)хармонизираните стандарти
(CS) následující(části/doložkami)harmonizované normy byly použity
(DA) følgende(dele/klausuler)harmoniserede standarder er blevet anvendt
(ET) järgmised(osad/klausleid)ühtlustatud standardid on rakendatud
(FI) seuraavat(niiden osia/kohtia)yhdenmukaistettuja standardeja on sovellettu
(FR) les suivants(parties/clauses des)normes harmonisées suivantes ont été appliquées
(EL) οι ακόλουθες(μέρη/ρήτρες του)εναρμονισμένα πρότυπα που εφαρμόζονται
(EN) the following(parts/clauses of)harmonized standards have been applied
(GA) seo a leanas(páirteanna/clásail de)caighdeáin chomhchuibhithe a cuireadh i bhfeidhm
(IS) eftirfarandi (hlutar/greinanna í)samhæfðir staðlar hafa verið beitt
(IT) le seguenti (parti/clausole di)norme armonizzate sono state applicate
(LV) šādi (daļas/punktos)saskaņotie standarti ir piemēroti
(LT) taip (dalys/išlygas)darnieji standartai buvo taikomi
(NN) følgende(deler/paragrafer i)harmoniserte standarder er blitt anvendt
(MT) li ġejjin(partijiet/klawżoli ta ')l-istandards armonizzati ġew applikati
(NL) de volgende(onderdelen/bepalingen van)geharmoniseerde normen zijn toegepast
(PL) następujące(klauzule/części)normy zharmonizowane zostały zastosowane
(PT) os seguintes(partes/cláusulas de)normas harmonizadasforam aplicadas
(RO) următoarele(părţi/clauze ale)standarde armonizate au fost aplicate
(SK) nasledujúce(časti/doložkami)harmonizované normy boli použité
(SL) naslednji(deli/klavzule)Usklajeni standardi so bili upor abljeni
(ES) las siguientes(partes/cláusulas de)normas armonizadas se han aplicado
(SV) följande(delar/klausuler i)harmoniserade standarder harillämpats
(DE) die folgenden(Teile/Klauseln)harmonisierte Normen wurden angewendet
(TR) Aşağ daki(bölümleri/maddeleri)uyumlaşt r lm ş standartlar uygulanm şt r
(HU) az alábbi(részek/záradékok)harmonizált szabványokat alkalmaztak

ISO3691-1

Vago di Lavagno Verona - Italy

Roncari Davide

(Managing Director Cascade Europe)

CASCADE ITALIA S.r.l.-Via dell' Artigianato, 1-37030 Vago di Lavagno -VERONA - ITALY -Tel 045/8989111 - Fax 045/8989160
WWW.CASCORP.COM

Do you have questions you need answered right now? Call your nearest Cascade Service Department.
Visit us online at www.cascorp.com

En cas de questions urgentes, contacter leservice d'entretien Cascade le plus proche.
Visiter le site Web www.cascorp.com.

Zijn er vragen waarop u direct een antwoord nodig hebt? Neem dan contact op met uwdichtstbijzijnde serviceafdeling van Cascade. Of ga naar www.cascorp.com

Per domande urgenti contattare l'Ufficio Assistenza Cascade più vicino.
Visitate il nostro sito all'indirizzo www.cascorp.com

Haben Sie Fragen, für die Sie sofort eine Antwort benötigen? Wenden Sie sich anlhren nächsten Cascade-Kundendienst.
Besuchen Sie uns online: www.cascorp.com

¿Tiene alguna consulta que deba ser respondida de inmediato? Llame por teléfonoal servicio técnico de Cascade más cercano. Visítenos en www.cascorp.com

AMERICAS

Cascade Corporation
U.S. Headquarters
2201 NE 201st
Fairview, OR 97024-9718
Tel: 800-CASCADE (227-2233)
Fax: 888-329-8207

Cascade Canada Inc.
5570 Timberlea Blvd.
Mississauga, Ontario
Canada L4W-4M6
Tel: 905-629-7777
Fax: 905-629-7785

Cascade do Brasil
Praça Salvador Rosa,
131/141-Jordanópolis,
São Bernardo do Campo - SP
CEP 09891-430
Tel: 55-13-2105-8800
Fax: 55-13-2105-8899

EUROPE-AFRICA

Cascade Italia S.R.L.
European Headquarters
Via Dell'Artigianato 1
37030 Vago di Lavagno (VR)
Italy
Tel: 39-045-8989111
Fax: 39-045-8989160

Cascade (Africa) Pty. Ltd.
PO Box 625, Isando 1600
60A Steel Road
Sparton, Kempton Park
South Africa
Tel: 27-11-975-9240
Fax: 27-11-394-1147

ASIA-PACIFIC

Cascade Japan Ltd.
2-23, 2-Chome,
Kukuchi Nishimachi
Amagasaki, Hyogo
Japan, 661-0978
Tel: 81-6-6420-9771
Fax: 81-6-6420-9777

Cascade Korea
121B 9L Namdong Ind.
Complex, 691-8 Gojan-Dong
Namdong-Ku
Inchon, Korea
Tel: +82-32-821-2051
Fax: +82-32-821-2055

Cascade-Xiamen
No. 668 Yangguang Rd.
Xinyang Industrial Zone
Haicang, Xiamen City
Fujian Province
P.R. China 361026
Tel: 86-592-651-2500
Fax: 86-592-651-2571

Cascade India Material Handling Private Limited
Office No.21, 3rd Floor,
Lokmanya House,
Plot No.44, Sr. No. 89/90,
CTS No.950,
Lokmanya Colony, Paud Rd.,
Kothrud, Pune-411038
Phone : +91 955 250

Cascade Australia Pty. Ltd.
1445 Ipswich Road
Rocklea, QLD 4107
Australia
Tel: 1-800-227-223
Fax: +61 7 3373-7333

Cascade New Zealand
15 Ra Ora Drive
East Tamaki, Auckland
New Zealand
Tel: +64-9-273-9136
Fax: +64-9-273-9137

Sunstream Industries Pte. Ltd.
18 Tuas South Street 5
Singapore 637796
Tel: +65-6795-7555
Fax: +65-6863-1368

© Cascade Corporation 2018
02-2018 Number 1012192-R2 EN