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Bulletin No: 2009JA-01
Release Date: January 2009
Effective Date: January 2009
Supersedes: N/A
Completion Date: As soon as possible
Page: 1 of 10

SERVICE BULLETIN

Ride Manufacturer: Zamperla SPA	**Affected Production Dates:** All models prior to May 2007
Ride Name: Jump Around	**Affected Serial Nos.:** See attached list
Model Number: All Jump Around family*	

Abstract Of Issue:

Verify integrity of gondola arm-pin connection.

Reason For Release:

Field reports indicate instances of excessive wear.
Reminder to perform inspection of these parts.
Add grease fittings to upper sweep arms.
Addition of annual maintenance to disassemble sweep arms for inspection.

Action To Be Taken:

Disassemble and inspect hardware which attaches sweep arm to ride center.
Add lubrication grease fittings to upper and lower sweep arms.
Addition of annual maintenance requirement to disassemble sweep arms for inspection.

Details of Issue:

See attached explanation – pgs. 2 – 3 – 4.

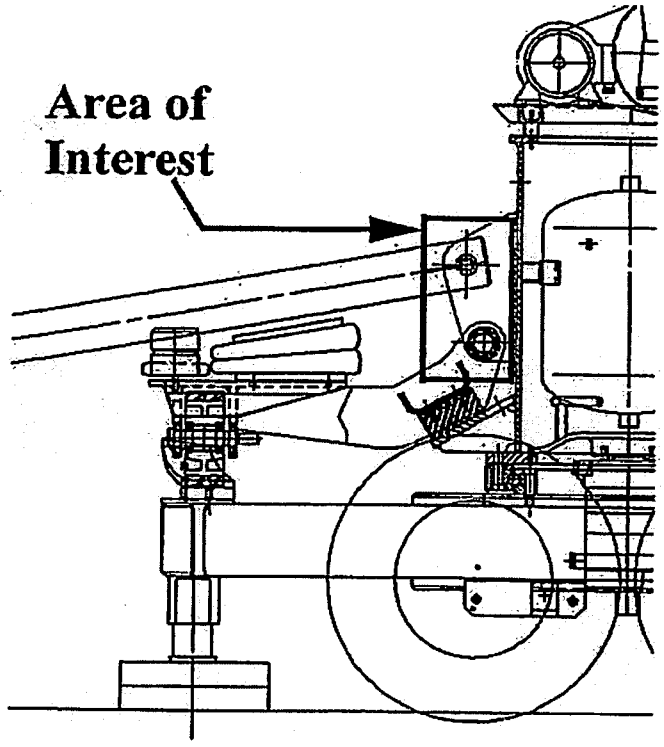
Future Action To Be Taken:

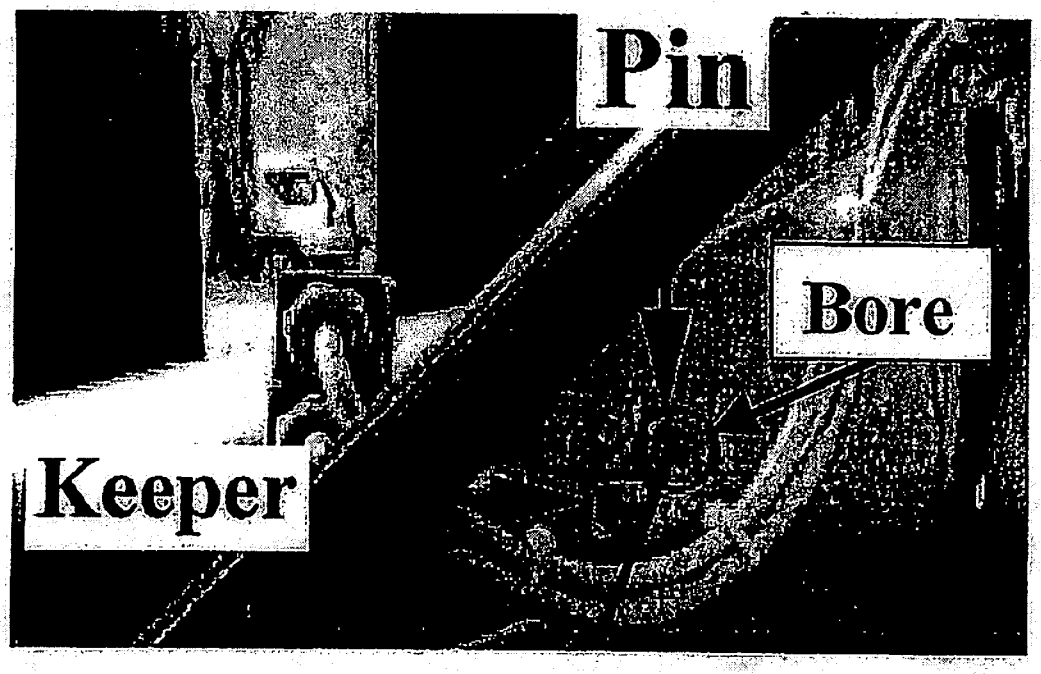
- Grease arm-pin connection, via grease fittings, (approx.) every 50 working hours – (See manual page 6-24 attached for easy reference)
- Weekly perform a visual inspection on bores, pins, and keepers – (See manual page 6-26 attached for easy reference)
- Annually disassemble the sweep arm-pin connections and perform a thorough inspection.
- If bores of the vertical plates on the center frame are found to be elongated, stop ride operations and contact manufacturer.

Note: *All references to manual refer to the Jump Around ride manual Rev. 0.1 from job number 06145.*
* Frog Jump Around, Boot Jump Around, etc.

AREA OF INTEREST:

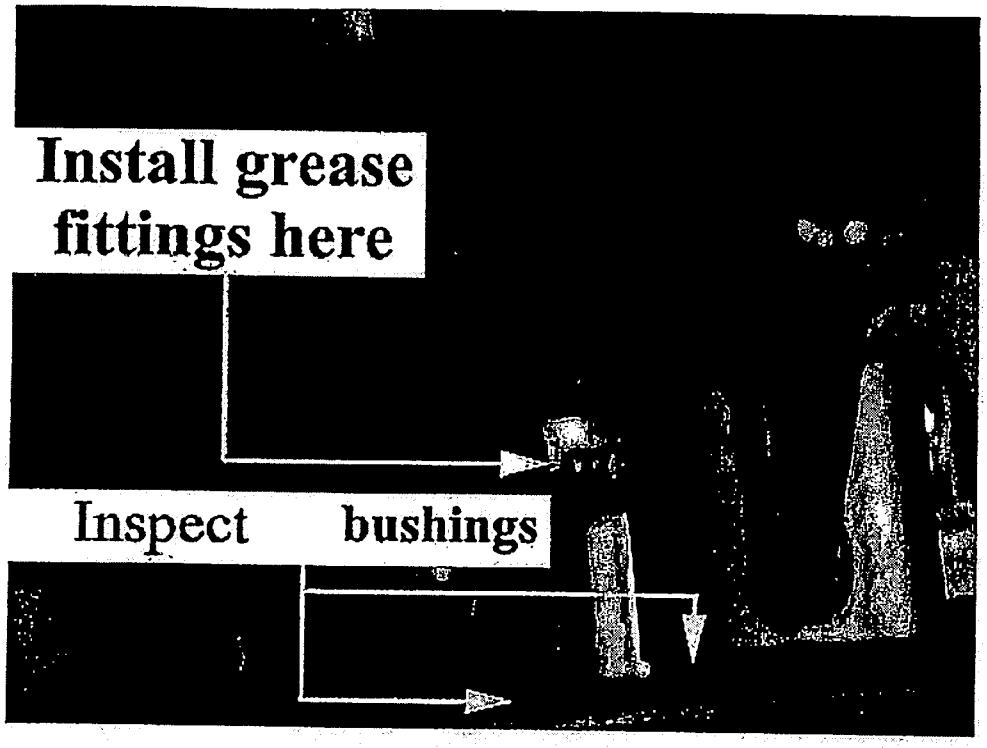
A. Upper sweep arm keeper plates (PN# 9474002004A) and lower sweep arm keeper plates (PN# 9474002005A)
B. Sweep arm pins (PN# 9474002002A and 9474002003A)
C. Integrity of pin bores of the vertical plates on the center frame



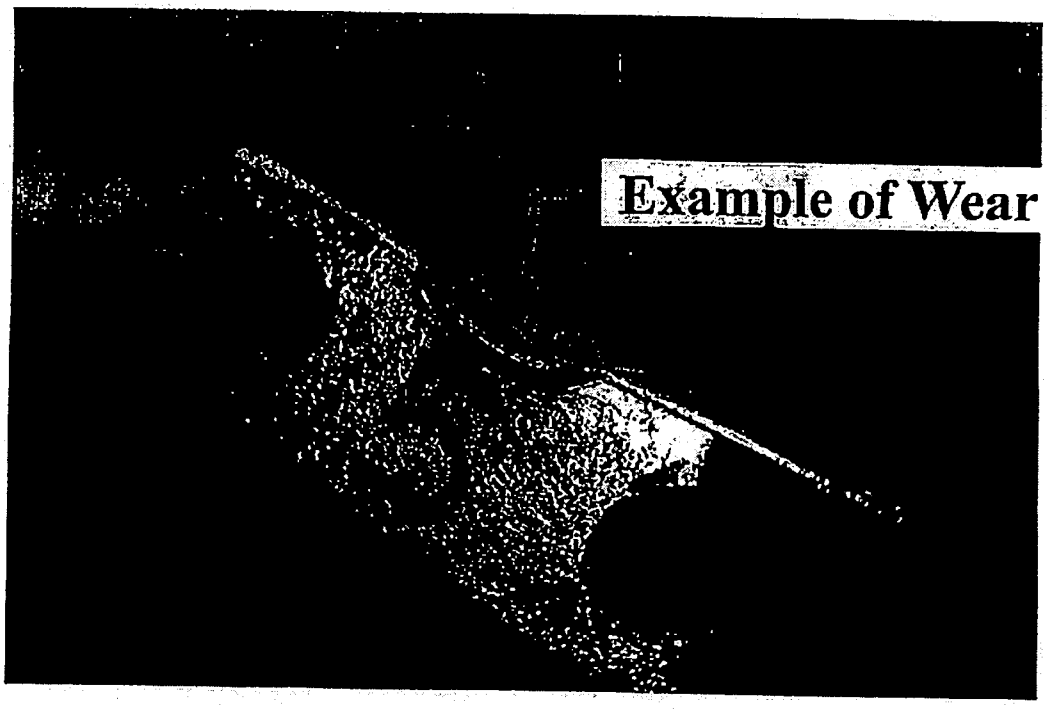


DETAILS OF ISSUE:

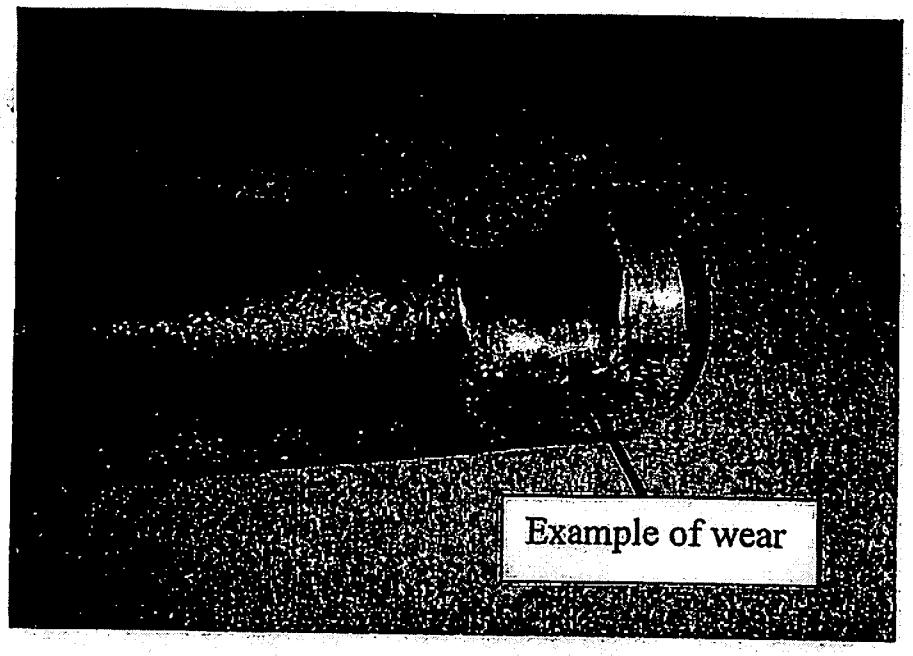
Disassemble keeper, remove pin and inspect all bushings (PN# 9474003002A and 9161001009). Install grease fittings as indicated below on the upper sweep arm steel bushing. See attached drawings (2009JA-01 and 2009JA-02) for location of grease fitting.



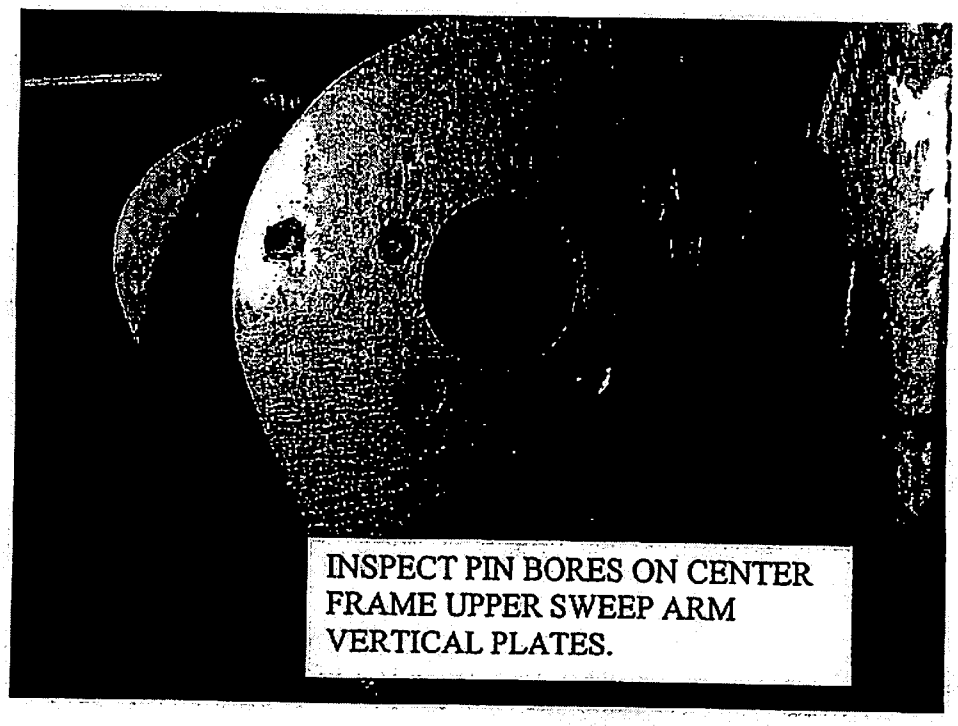
2a. Thoroughly inspect all upper and lower keeper plates. Replace keeper plates if there are signs of wear.



2b. Inspect keyway of pins. Replace pin if keyway is worn.



3. Inspect pin bores of the vertical plates on the center frame for ovalization, wear, elongation, etc. If bores show signs of wear, ovalization, or elongation, stop ride operation and contact Zamperla.



CONTROLLI SUI COLLEGAMENTI MEDIANTE SPINE E PERNI

I collegamenti effettuati per mezzo di spine, perni o simili devono essere controllati regolarmente seguendo la tabella delle verifiche e rispettando le tempistiche in essa previste .

Usura, deformazioni, corrosione

Ad ogni smontaggio occorre verificare che il materiale sia integro e non presenti deformazioni o schiacciamenti che ne riducano la resistenza.
Se necessario, le parti danneggiate devono essere prontamente sostituite.

I collegamenti in oggetto, siano essi con o senza moto relativo, sono generalmente soggetti ad usura in senso proprio, e più raramente a deformazioni od a fenomeni corrosivi.
L'usura, così come gli altri fenomeni citati, possono avvenire sul perno, sui fori o sugli eventuali cuscinetti interposti. Se contenuti entro certi limiti, possono essere considerati non pregiudizievoli per il buon funzionamento del collegamento.
Si indicano, di seguito, i criteri generali di valutazione di tali fenomeni, mentre verranno fornite in taluni casi particolari le indicazioni più dettagliate ritenute indispensabili in relazione a specifiche situazioni di impiego dei collegamenti.

Il controllo del collegamento deve, in generale, assicurare che:

a) Il gioco fra perni e fori non sia diventato eccessivo. Se i valori del gioco massimo ammissibile non vengono indicati, si intende per gioco eccessivo un gioco giudicato anomalo da personale sufficientemente preparato che consideri il tipo collegamento, le sue dimensioni ed il suo funzionamento.

CHECKS ON THE CONNECTIONS BY MEANS OF PINS

Pin connections or similar shall be regularly checked in accordance with the check list and observing the prescribed frequency.

Wear, buckling, corrosion

At each dismantling it is necessary to verify that the material is undamaged and is neither buckled nor crushed thus reducing its resistance.
If necessary the damaged or seriously oxidized parts shall be promptly replaced.

The above-mentioned connections, both with and without relative motion, are more often subject to wear than to buckling or corrosive phenomena.
Wear, as well as the other mentioned phenomena, can occur on the pin, in the holes or on any interposed bearings. If they are within certain limits, they can be considered as not detrimental for the proper functioning of the connection.
Shown hereafter are the general assessment criteria for these phenomena, while in some particular cases more detailed directions will be provided which are considered as indispensable in certain situations.

Generally, the check of the connection shall ensure that:

a) The clearance between pins and holes has not become excessive. If the values of the maximum permissible clearance are not indicated, excessive clearance is that which is considered as anomalous by sufficient competent staff considering the kind of connection, its dimensions and its function.

LUBRICATION

To be reliable, ball bearings and all the components in rotation must be well lubricated: lubrication will avoid direct contact (metal/metal) between the rolling parts.
The choice of the right lubricant and of the specific lubrication method is therefore important, as well as a good maintenance.
The lubricant choice depends above all on the working conditions of the part to be lubricated, that is temperature, speed and environment.
Due to mechanical action, ageing, and impurity accumulation, the lubricant looses its characteristics and it is necessary to refill it and change it every now and them.

Relubrication
The relubrication depends on many factors: rotation, speed, working temperature, grease type and working environment.
So, we can only give suggestions based on statistics:
- Gears and rotating parts: relubricate everytime you note a direct contact metal/metal, generally every 50 hours.

For your information we list some brands and codes of greases.

LUBRIFICAZIONE

Affinchè possano funzionare in maniera affidabile i cuscinetti e le parti meccaniche in rotazione devono essere adeguatamente lubrificate: la loro lubrificazione serve ad impedire contatti diretti, metallo su metallo, tra le parti interessate al rotolamento. La scelta di un lubrificante adatto e del metodo di lubrificazione specifico per ogni applicazione è quindi importante, analogamente ad una manutenzione ben fatta.
La scelta di un lubrificante dipende soprattutto dalle condizioni di lavoro dell'organo da lubrificare, ossia dalla temperatura, dalla velocità, nonche dall'influenza dell'ambiente circostante.
A causa dell'azione meccanica, dell'invecchiamento e dall'accumulo di impurità, il lubrificante immesso in un sistema perde gradualmente le sue proprietà, pertanto è necessario effettuare delle aggiunte o delle sostituzioni di tanto in tanto.

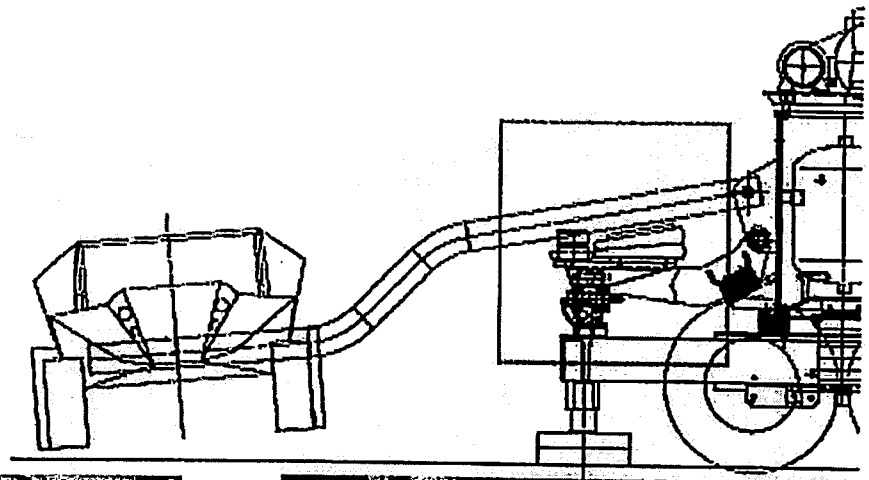
Rilubrificazione
Il momento in cui si deve provvedere alla rilubrificazione dipende da molti fattori che sono interconnessi in maniera piuttosto complessa.
Si tratta di fattori che comprendono, la velocità di rotazione, la temperatura di lavoro, il tipo di grasso, l'ambiente in cui opera.
E' pertanto possibile dare solo delle indicazioni basate su dati statistici:
- Ingranaggeria e rotolamento, applicare del grasso quando si nota un contatto diretto tra metallo e metallo, generalmente ogni 50 ore.
A titolo informativo elenchiamo alcune marche e sigle di grassi.

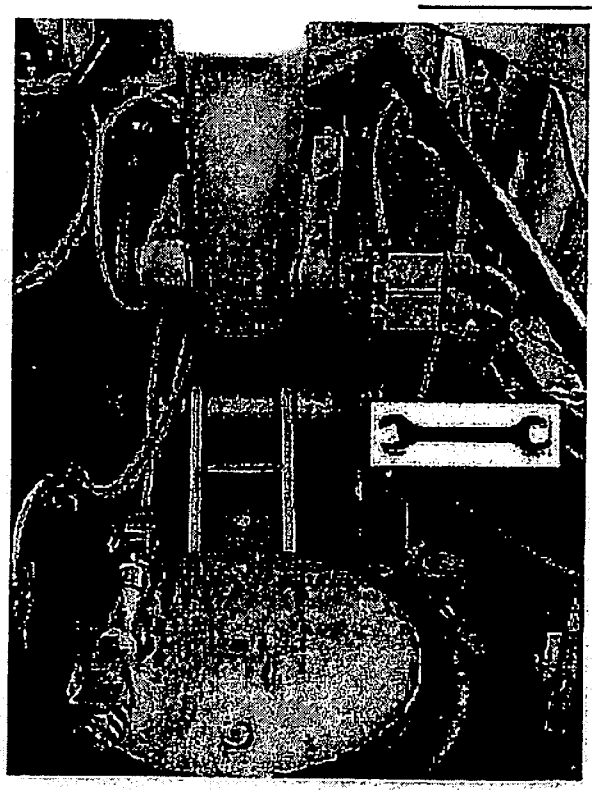
- TECNOLUBE SEAL GREASE 780	-29° + 125°
- SYNTOFLON PLUS (TEAFLON GREASE)	-30° + 230°
- MOLYKOTE 165 LT	

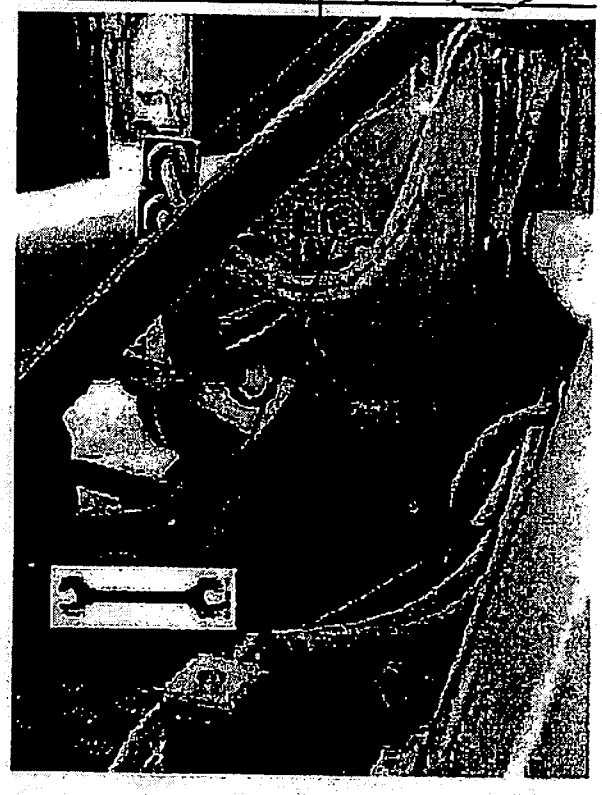
COLONNA COLUMN	Daily	Weekly	Monthly	Quarterly	Six months	Annually
Controllo perni e finecorsa-Inspection of pins and limit switches		●				

Controllo perni e finecorsa
Settimanalmente controllare che tutti i perni di sostegno bracci siano inseriti correttamente.
Settimanalmente controllare il corretto fissaggio di tutti i fine corsa

Inspection of pins and limit switches
Every week check that all the pins supporting the arms have been correctly inserted.
Weekly check the correct fixing of all limit switches

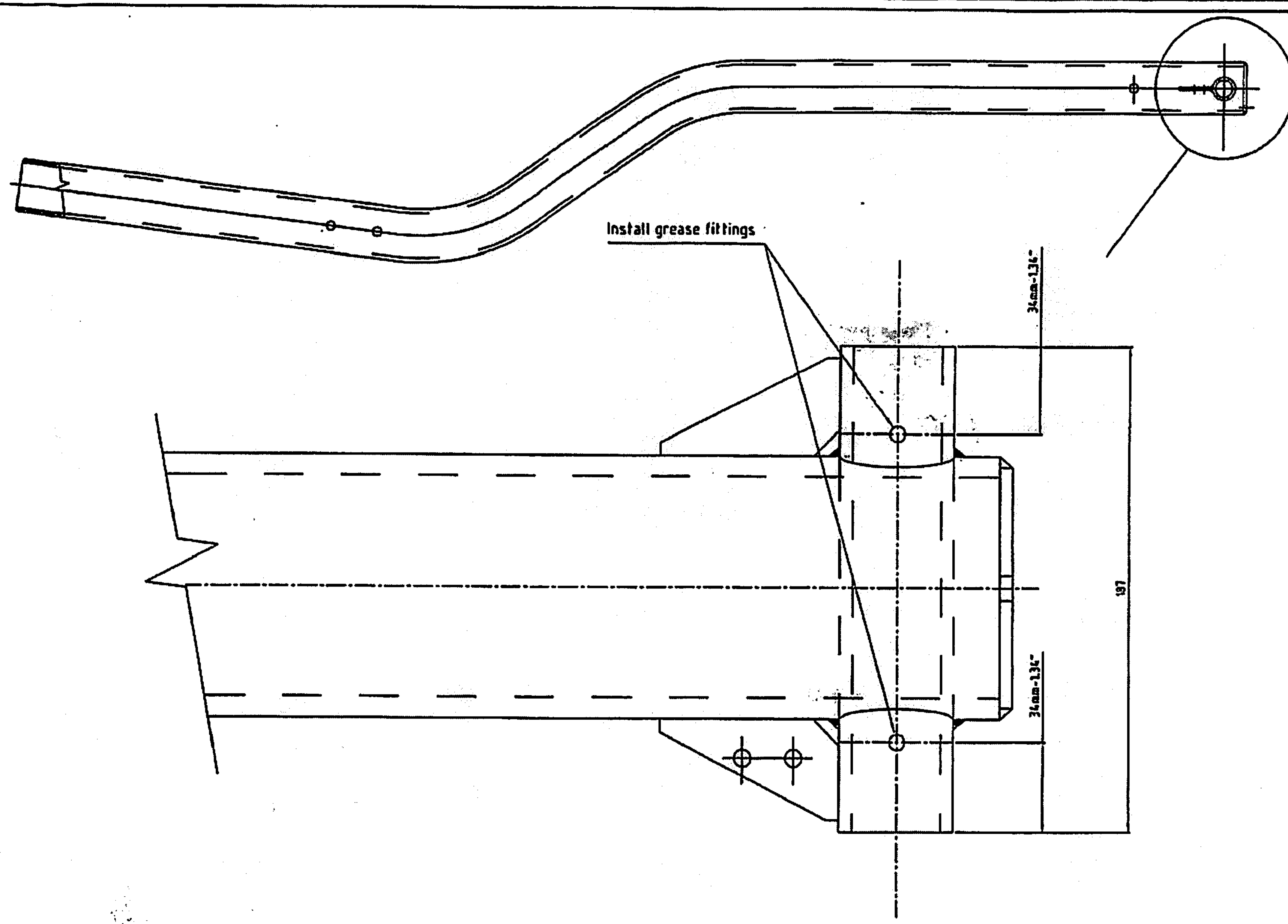






JUMP AROUND SERIAL NUMBERS COVERED BY SERVICE BULLETIN 2009 JA01

GJA06F04163US	GJA06F06222US	GJA06R04362US	GJA06R06144US
GJA06F04361US	GJA06F06259US	GJA06R05101US	GJA06R06145US
GJA06F05137US	GJA06F06329US	GJA06R05102US	GJA06R06188US
GJA06F05271US	GJA06R03231US	GJA06R05104US	GJA06R06189US
GJA06F05300US	GJA06R04156US	GJA06R05138US	GJA06R06368US
GJA06F05304US	GJA06R04164US	GJA06R05139US	GJA06R06375US
GJA06F06135US	GJA06R04269US	GJA06R05158US	GJA06R06376US



NOTE: Use $\frac{1}{4}$" or similar thread size

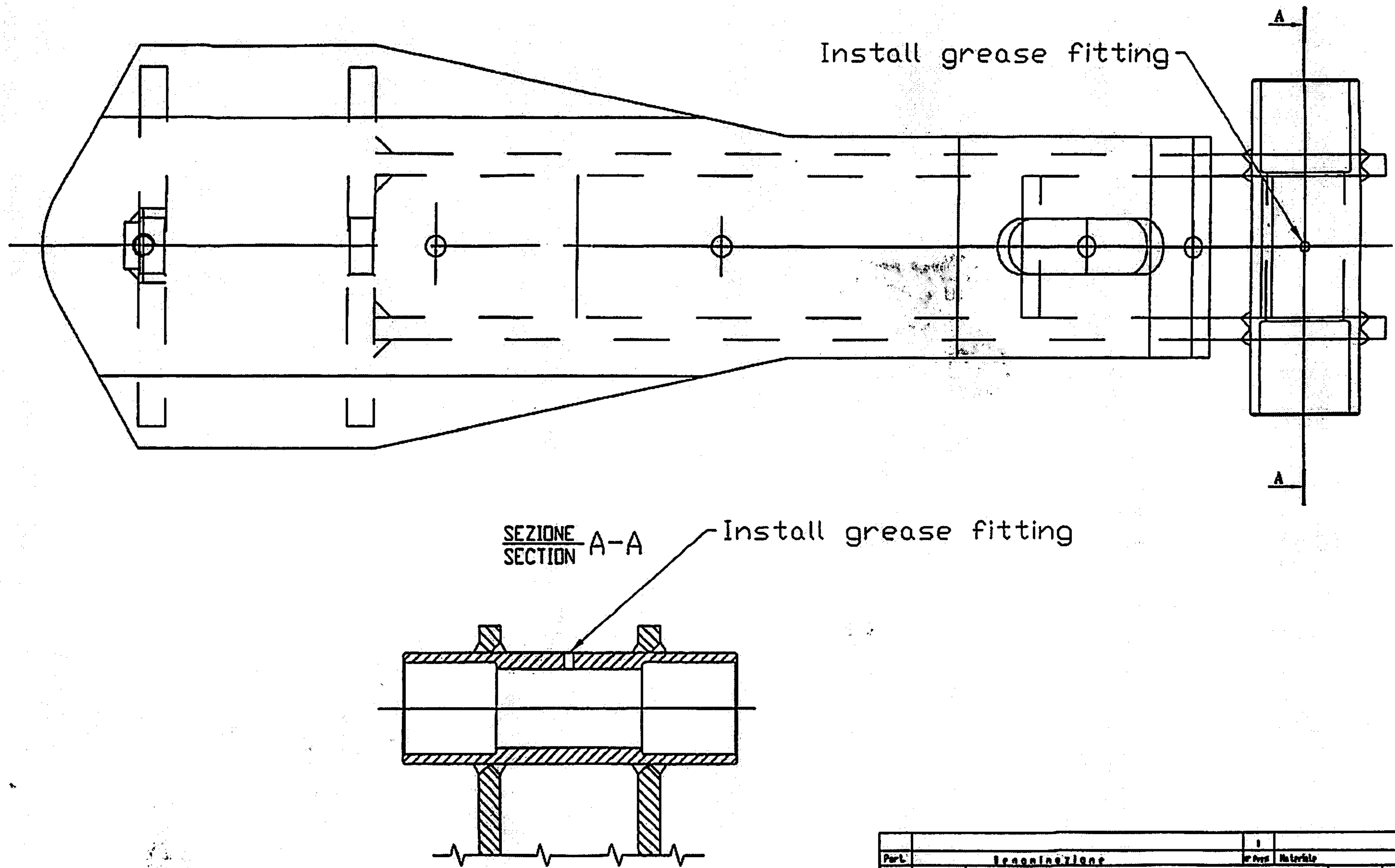
Grease fitting location upper sweep arm

De Bonis

1/29/2009

ZAMPERLA

2009JA-01-01



Note: Use $\frac{1}{4}$" or similar thread size

Part.	Denominazione	1 N° Pezzi	Materiale		(m)
Rev.	Data	Oggetto Modifica	Compilato	Controllato	Approvato
Disegn.	De Bonis	Gruppo: Grease fitting location lower lever arm	ZAMPERLA Inc.		
Data	1/28/2009				
Scala		Assieme	Dis.N° 2009JA-01-02	Rev.	