



F. Atlee Dodge Aircraft Services, LLC

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INSTALLATION INSTRUCTIONS

for installation of

FADodge X1 Wheel Replacement Skis

on

Piper PA 18 Super Cub and Variants

Document Number: II-8041

REVISION HISTORY

Revision	Description	Date
-	Initial Release (IR)	23 Sep 2013

For updated revisions of this document it is the owner/operators responsibility to contact F. Atlee Dodge Aircraft Services, LLC. through our website or directly at the numbers given above.

1 Introduction

This Installation Instruction (II) is intended to augment the information contained in the original aircraft maintenance manual or structural repair manual. Refer to AC 43.13-1B/2B for acceptable methods, techniques, and practices for inspection, repair, and alteration when there are no manufacturer repair or maintenance instructions.

1.1 Model Applicability

This document is applicable to the Makes and Models outlined in F. Atlee Dodge (FAD) Approved Model List (AML) 8041.

Toll Free 877-33-ATLEE (877-332-8533)

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2 Modification Description

This modification consists of replacing the existing main landing gear (MLG) wheel and brake assemblies with FAD X1 wheel replacement skis. The installed ski and rigging are shown in figure 1.



Figure 1
FAD X1 Ski and Rigging

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3 Installation

Prior to installation of the FAD X1 wheel replacement skis, it is assumed that the MLG is in an airworthy configuration to accept the X1 skis (eg-wheel and/or brake assembly removed) and that the X1 skis are in an airworthy condition.

Prior to installation of the X1 skis, determine the outside diameters of your MLG axle and bearing stop. Check the axle bushings in the X1 ski pedestal to insure that they are the proper size and they are held rigidly captive. See Detail "A".

Prior to installation of the X1 skis, secure the FAD front cable assembly (with spring), P/N 2269-X1F, to the two ¼" dia. holes in the front of the ski board, and the FAD rear check cable assembly, P/N 2269-X1R, to the two ¼" dia. holes in the aft end of the ski board. See Detail "B".

INSTALLATION INSTRUCTIONS:

1. Clean, inspect and lube the MLG axle. It is recommended to use an anti-seize compound such as Loctite® 77124 or equivalent.
2. In order to facilitate installation of the ski safety cables, the front MLG attach bolts must be replaced with AN6-36A bolts. The rear MLG attach bolts must be replaced with AN6-32A bolts. See Detail "C".
3. Install the ski assemblies on the axles in the order shown in Detail "D" using the following parts (per ski):
 - 1 ¼" Dia. Axle
 - 1 ea. 1⅜" ID, 2½" OD Inboard Ski Washer
 - 1 ea. 1¼" ID, 2½" OD Outboard Ski Washer
 - 1 ea. P/N 2130-9 spacer
 - 1 ½" Dia. Axle with removable bearing stop
 - 2 ea. 1½" ID, 2½" OD Stainless Steel Washers
4. Fasten the front cable assembly to the front MLG bolt by raising the tail of the aircraft as high as necessary to put the ski rigging tab over the front landing gear bolt. Install washers and nut as indicated in Detail "C".
5. Lower the tail of the aircraft and connect the rear check cable assembly. See Detail "E".
6. Install the opposite ski.

NOTE: Ski incident angles are pre-set with pre-fabricated rigging which will result in a ski nose-up incident angle of $+1\frac{1}{2}^{\circ} \pm 1^{\circ}$ and a nose-down incident angle of $+9^{\circ} \pm 1^{\circ}$ with the aircraft leveled per Piper Aircraft Corp. leveling instructions.

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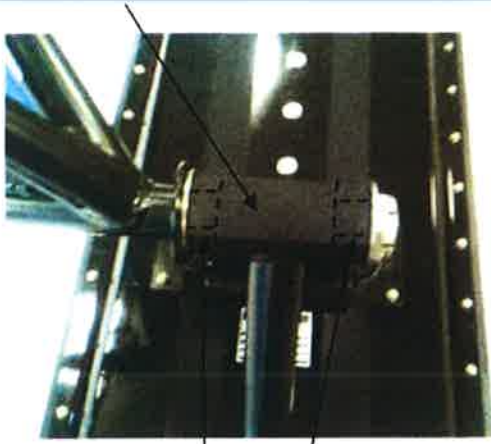
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7. Make the appropriate log book entry. Update aircraft Weight & Balance and Equipment List.
Fill out FAA Form 337.

DETAIL “A”
(1½” dia. axle shown)

Ski Pedestal



Bushing
2130-x

For 1½” dia. axle, use bushing 2130-1

For 1¼” dia. axle, use bushing 2130-3 inboard
use bushing 2130-4 outboard

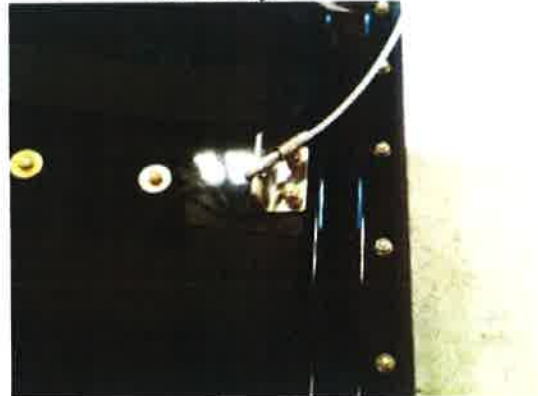
Aircraft may be equipped with the 1¼” axle adapter
kit, P/N 2079-X1.

DETAIL “B”

Front Cable Assembly to Front End of Ski



Rear Cable Assembly to Aft End of Ski



Typical Ski Rigging Attachment – Per Ski

4 ea	AN4-20A	Bolts
4 ea	AN960-416	Washers
4 ea	AN365-428	Nut
4 ea	AN970-4	Washers

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DETAIL "C"

← Forward

MLG Forward Fitting



MLG Rear Fitting

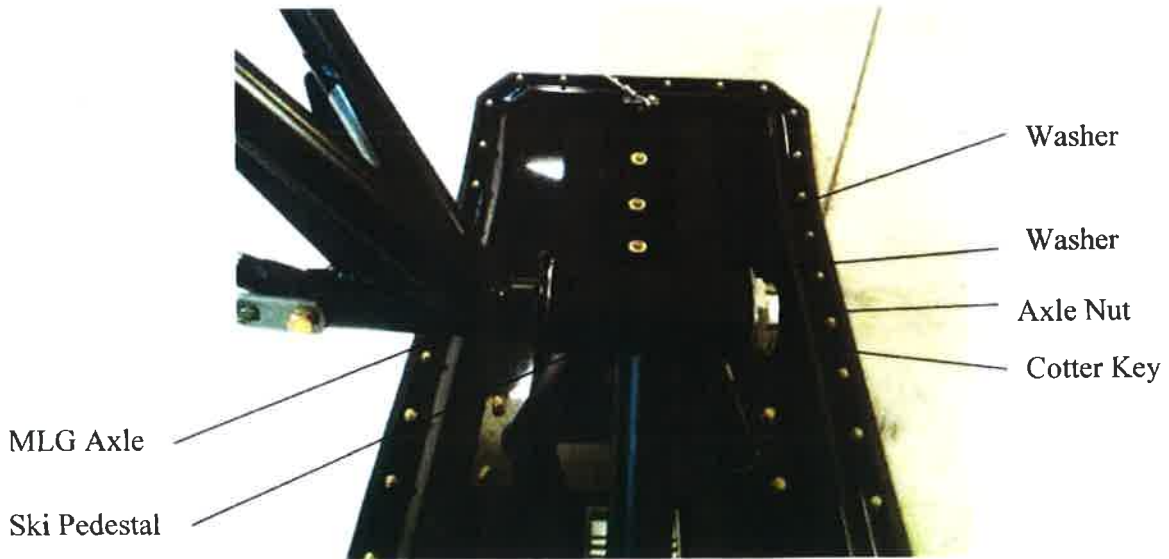


Stack Washers AN 960-616 as req'd

For the forward fitting:
AN 6-36A Bolt
AN 960-616 Washer(s)
AN 365-624 Nut

For the rear fitting:
AN 6-32A Bolt
AN 960-616 Washer(s)
AN 365-624 Nut

DETAIL "D" (1½" dia. axle shown)



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DETAIL “E”



Front Cable Assembly
2269-X1F

Rear Cable Assembly
2269-X1R

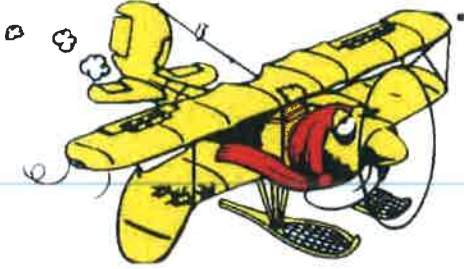
4 Weight & Balance

The weight of one X1 Ski is 32.5 lbs.

The weight of one X1 Ski with the FAD Front Cable Assembly and FAD Rear Cable Assembly attached is 35 lbs.

The Center of Gravity (CG) is located 6.1” forward of the axle centerline.

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INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

for

FADodge X1 Wheel Replacement Skis

on

Piper PA 18 Super Cub and Variants

Document Number: ICA-8041

RETAIN THIS DOCUMENT WITH THE AIRCRAFT RECORDS

REVISION HISTORY

Revision	Description	Date
IR	Initial Release (IR)	24 Sep 2013

For updated revisions of this document it is the owner/operators responsibility to contact F. Atlee Dodge Aircraft Services, LLC. through our website or directly at the numbers given above.

This document meets the requirements of 14 CFR 23.1529 (Appendix G). It is found acceptable to the FAA in accordance with the guidelines outlined in FAA Order 8110.54.

Any Airworthiness Limitations are FAA Approved and must be followed for all installations.

F. Atlee Dodge Aircraft Services, LLC.
Anchorage, AK

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1 Model Applicability

The data presented in this Instruction for Continued Airworthiness (ICA) is intended to augment the information contained in the original aircraft maintenance manual or structural repair manual. Additional information on acceptable methods, techniques, and practices for inspection, repair, and alteration can be obtained from a current version of FAA Advisory Circular (AC) 43.13-1B/2B.

This document is applicable to the Makes and Models outlined in FAD Approved Model List (AML) 8041.

2 Modification Description

This modification consists of replacing the existing main landing gear (MLG) wheel and brake assemblies with FAD X1 wheel replacement skis.

2.1 Illustrated Parts

The X1 wheel replacement ski assembly is illustrated in DWG F.A. DODGE X-1.

X1 ski rigging components are illustrated in FAD drawing (DWG) 2269.

3 Installation

Refer to FAD Installation Instructions (II) 8041 for illustrated installation instructions.

4 Maintenance Instructions

If repairs are required to the FADodge X1 wheel replacement skis or rigging, contact F. Atlee Dodge Aircraft Services, LLC by telephone at 907-344-1755.

4.1 Inspection Requirement

The FADodge X1 wheel replacement skis should be inspected, for wear, damage or deformation on a 100HR/annual or progressive basis in accordance with the applicable maintenance manual. Replace hardware as required.

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5 Airworthiness Limitations

The Airworthiness Limitations Section is FAA approved and specifies maintenance required under Secs. 43.16 and 91.403 of the Federal Aviation Regulations unless an alternate program has been FAA approved.

No additional airworthiness limitations have been imposed by this modification.

This modification does not affect the airworthiness section of the FAA Approved Maintenance Manual.

ALS Approved: _____
August A. Asay
Manager
Anchorage Aircraft Certification Office

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