

Kit Installation Publication

Main Wheel & Brake Conversion Kit Aircraft Wheel and Brake, LLC Part No. 199-241

PILATUS PC-12 Series PC-12, PC-12/45, PC-12/47, PC-12/47E

IM199-241

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Publication No.: IM199-241, Revision M

Manufacturer:



Aircraft Wheel and Brake, LLC
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Cleveland
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(Deleted)

TO: HOLDERS OF IM199-241 INSTALLATION MANUAL WITH ILLUSTRATED PARTS LIST FOR MAIN WHEEL ASSEMBLY PART NO. 40-424 AND MAIN BRAKE ASSEMBLY PART NO. 30-324.

Attached to this transmittal letter is Revision NC of IM199-241 (dated 2000-08-01)

Revision NC, Dated 2000-08-01

REVISION NC CONTAINS ALL PAGES OF THE MANUAL. Pages that have been added or revised are outlined below together with the highlights of the revision.

Please retain all **REVISION HIGHLIGHTS** pages, inserting them into the manual for future reference.

REVISION HIGHLIGHTS

Section/Page No.

Description Of Change

All Sections/All Pages	Initial Release (DCN-0341-46)
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TO: HOLDERS OF IM199-241 INSTALLATION MANUAL WITH ILLUSTRATED PARTS LIST FOR MAIN WHEEL ASSEMBLY PART NO. 40-424 AND MAIN BRAKE ASSEMBLY PART NO. 30-324.

Attached to this transmittal letter is Revision A of IM199-241 (dated 2000-11-09)

Revision A, Dated 2000-11-09

REVISION A CONTAINS ALL PAGES OF THE MANUAL. Pages that have been added or revised are outlined below together with the highlights of the revision.

Please retain all **REVISION HIGHLIGHTS** pages, inserting them into the manual for future reference.

REVISION HIGHLIGHTS

Section/Page No.

Description Of Change

As follows	Per DCN-0342-41
Section 7.1	(NOW) "...compatible with MIL-H-83282 or MIL-PRF-83282 hydraulic fluid only." (WAS) "...compatible with MIL-H-5606 and MIL-H-83282 hydraulic fluid."
Section 8.4.2 d.	(NOW) "... two plain bushings" (WAS) "... four plain bushings"
Section 8.4.2 e.	(NOW) "Discard the old lever assemblies (17) Pilatus P/N 532.42.12.058 [(including the two flange bushings (7), Pilatus P/N 914.14.11.109 (NAS77-3-011), which are fitted in the old lever assemblies (17)]." (WAS) "Remove and discard the four flanged bushings (7), Pilatus P/N 914.14.109 (NAS77-3-011), which are fitted (1 each) in the old lever assemblies (Pilatus P/N 532.42.12.058)."
Section 8.4.2 i to l	(ADD) new Para. i., remaning Para.'s renumbered (ADD) "i.If not already done, install the four new flanged bushings (7), Pilatus P/N 941.14.11.115 (NAS77-3-019), into the lever asseblies (17), Pilatus P/N 532.42.12.053. Insure that the bushing flange goes on the inside of the lever assembly fork. Each lever assembly requires two flanged bushings (7)."
Section 8.4.2 m to p	(DELETE) original Para. m (DELETE) "m. Install the four new flanged bushings (7), Pilatus P/N 941.14.11.115 (NAS77-3-019), into the lever assemblies (17)."
Section 9.2.2 g.	(NOW) "... Aeroshell 22 Grease or MIL-G-4343 grease. . " (WAS) "... Aeroshell 22 Grease. . "

TO: HOLDERS OF IM199-241 INSTALLATION MANUAL WITH ILLUSTRATED PARTS LIST FOR MAIN WHEEL ASSEMBLY PART NO. 40-424 AND MAIN BRAKE ASSEMBLY PART NO. 30-324.

Attached to this transmittal letter is Revision B of IM199-241 (dated 2001-01-18)

Revision B, Dated 2001-01-18

REVISION B CONTAINS ALL PAGES OF THE MANUAL. Pages that have been added or revised are outlined below together with the highlights of the revision.

Please retain all **REVISION HIGHLIGHTS** pages, inserting them into the manual for future reference.

REVISION HIGHLIGHTS

Section/Page No.

Description Of Change

As follows

Per DCN 0343-54

Table of Contents
Page i

SECTIONS 11.0 & 13.0 titles:

(NOW) "Pilot Operating Manual And Maintenance Manual Inserts"

(WAS) "Pilot Operating Manual Inserts"

(NOW) "List of Materials – 199-251 Kit"

(WAS) "List of Materials – Operator Supplied"

Section 1.2

(NOW) ". . .Refer to Section 13.0, List of Material – 199-251 Kit, which lists all parts (supplied in Wheel & Brake Conversion Kit 199-241) that are required for the Brake . . ."

(WAS) ". . .Refer to Section 13.0 for a list of parts not included in Kit 199-241, to be obtained from Pilatus, required for the Brake . . ."

Section 10.0

(NOW) " Refer to the Airplane Equipment List, Pilatus Report No. 02047, located in the Pilot's Operating Handbook for the weight of the existing wheels and brakes. . . ."

(WAS) "Weigh existing wheels and brakes."

Section 10.1

(NOW) "Wheel assy..... 7.48 Kg. (16.5 lbs.)

Brake assy12.56 Kg. (27.7 lbs.)

Total.....20.04 Kg. (44.2 lbs.)"

(WAS) "Wheel assy..... 16.5 lbs.

Brake assy 27.7 lbs.

Total..... 44.2 lbs."

Section 11.0

(NOW) "**PILOT OPERATING MANUAL AND MAINTENANCE MANUAL INSERTS**"

(WAS) "**PILOT OPERATING INSERTS**"

(NOW) "Inserts and supplements are"

(WAS) "Inserts are"

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Revision B, Dated 2001-01-18

REVISION HIGHLIGHTS (continued)

<u>Section/Page No.</u>	<u>Description Of Change</u>
Section 11.0	(NOW) "Attach label in the Airplane Equipment List Section of the Pilot Operating Manual, as close as possible to the original entries labeled 'Hub, Main Wheel (2) (ea.)' and 'Assembly, Main Wheel Brake (2) (ea.)' " (WAS) "Attach label in pilot operating manual as close as possible to the original section labeled <u>Main Wheel Assembly</u>. " Insert Reprint revised as follows: 2 places, (ADD) "6.25 m" Brake Weight: (NOW) "12.56 Kg. ea." (WAS) "27.7 Lb. ea." Wheel Weight: (NOW) "7.48 Kg. ea." (WAS) "16.5 Lb. ea." (ADD) "An Airplane Flight Manual Supplement" (ADD) "An Airplane Maintenance Manual Supplement"
Section 12.0	(ADD) Line Item for 199-251 Kit " (4) 199-251 Brake Pedal Lever Kit" Qty "1" (ADD) Document Number: " AMMS199-241 " (ADD) Line Item "199-241 AFMS Airplane Flight Manual Supplement" Qty "1" (NOW) "Supplemental Type Certificate SA01376CH for (PC-12 & PC-12/45)" (WAS) "Supplemental Type Certificate (PC-12 & PC-12/45)" (ADD) Note 4 "(4) For identification of Pilatus parts included in Kit 199-251, refer to Section 13.0"
Section 13.0	Title: (NOW) " . . -199-251 Kit" (WAS) " . . - Operator Supplied"

TO: HOLDERS OF IM199-241 INSTALLATION MANUAL WITH ILLUSTRATED PARTS LIST FOR MAIN WHEEL ASSEMBLY PART NO. 40-424 AND MAIN BRAKE ASSEMBLY PART NO. 30-324.

Attached to this transmittal letter is Revision C of IM199-241 (dated 2001-03-29)

Revision C, Dated 2001-03-29

REVISION C CONTAINS ALL PAGES OF THE MANUAL. Pages that have been added or revised are outlined below together with the highlights of the revision.

Please retain all **REVISION HIGHLIGHTS** pages, inserting them into the manual for future reference.

REVISION HIGHLIGHTS

<u>Section/Page No.</u>	<u>Description Of Change</u>
As follows	Per DCN 0344-87
Section 9.2.2. b.	(NOW) "...five screws (item 135...)" (WAS) "...five screws (item 120...)"
Section 9.2.2. c.	(NOW) "...by removing nuts (item 15...)" (WAS) "...by removing (item 15...)"
Section 9.2.2. d.	(NOW) "...Remove the retaining rings (item 75...), grease seals (item 70...) and bearing cones (item 65...), from the..." (WAS) "...Remove the retaining rings (item 60...), grease seals (item 55...) and bearing cones (item 50...), from the..."
Section 9.2.2. f.	(NOW) "...inboard wheel half subassembly (item 25...), on a clean,..." (WAS) "...inboard wheel half subassembly (item 30...), on a clean,..."
Section 9.2.2. h.	(NOW) "...outboard wheel half subassembly (item 45...), on a flat surface..." (WAS) "...outboard wheel half subassembly (item 35...), on a flat surface..."
Section 9.2.2. i.	(NOW) "...air valve assembly, (item 80...)" (WAS) "...air valve assembly, (item 65...)"
Section 9.2.2. k.	(NOW) "...lubricate bolt (item 5...)" (WAS) "...lubricate (item 5...)"
Section 9.2.2. m.	(NOW) "...located on the outboard wheel half subassembly (item 45...)" (WAS) "...located on the outboard wheel half subassembly (item 35...)"
Section 9.2.2. t.	(NOW) "...Attach fairing (item 130...) onto outboard...with screws (item 135...)" (WAS) "...Attach fairing (item 115...) onto outboard...with screws (item 120...)"

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TO: HOLDERS OF IM199-241 INSTALLATION MANUAL WITH ILLUSTRATED PARTS LIST FOR MAIN WHEEL ASSEMBLY PART NO. 40-424 AND MAIN BRAKE ASSEMBLY PART NO. 30-324.

Attached to this transmittal letter is Revision D of IM199-241 (dated 2001-06-20)

Revision D, Dated 2001-06-20

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Please retain all **REVISION HIGHLIGHTS** pages, inserting them into the manual for future reference.

REVISION HIGHLIGHTS

Section/Page No.

Description Of Change

As follows	Per DCN 0346-57
Section 1.2	(ADD) Note: Instead of using kit 199-251, the installer has the option to purchase the brake pedal lever replacement parts directly from Pilatus Business Aircraft. In this case, order "199-241 Kit – Less Brake Pedal Lever Retrofit"
Section 13.0	(ADD) (2)
Section 13.0	(ADD) (2) Optional to install Pilatus parts (purchased from Pilatus Business Aircraft) as listed, in lieu of kit 199-251. In this case, order "199-241 Kit – Less Brake Pedal Lever Retrofit."

TO: HOLDERS OF IM199-241 INSTALLATION MANUAL WITH ILLUSTRATED PARTS LIST FOR MAIN WHEEL ASSEMBLY PART NO. 40-424 AND MAIN BRAKE ASSEMBLY PART NO. 30-324.

Attached to this transmittal letter is Revision E of IM199-241 (dated 2004-05-10)

Revision E, Dated 2004-05-10

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Please retain all **REVISION HIGHLIGHTS** pages, inserting them into the manual for future reference.

REVISION HIGHLIGHTS

<u>Section/Page No.</u>	<u>Description Of Change</u>
As follows	Per DCN 0361-04
Section 8.4.2	(NOW) assemblies (WAS) asseblies
Section 9.2.2	(NOW) "Remove the five screws (item 135 - ref. CM40-424 IPL Fig. 1) and five washers (item 145 ref. CM40-424 IPL Fig. 1), that attach the fairing and remove wheel fairing." (WAS) "REMOVE THE FIVE SCREWS (ITEM 135 - REF. CM40-424 IPL FIG. 1), THAT ATTACH THE FAIRING AND REMOVE WHEEL FAIRING."
Section 9.2.2	(NOW) "INSTALL FIVE GROMMETS (ITEM 140 – REF. CM40-424 IPL FIG. 1) INTO FAIRING (ITEM 130 - REF. CM40-424 IPL FIG. 1). APPLY MIL-T-83483 ANTI-SEIZE TO END OF FASTENERS AND THREADS OF FASTENERS (ITEM 135 – REF. CM40-424 IPL FIG. 1). INSTALL ONE WASHER (ITEM 145 – REF. CM40-424 IPL FIG. 1) ONTO EACH FASTENER (ITEM 135 – REF. CM40-424 IPL FIG. 1). ATTACH FAIRING (ITEM 130 – REF. CM40-424 IPL FIG. 1) TO OUTBOARD WHEEL HALF SUBASSEMBLY (ITEM 45 REF. CM40-424 IPL FIG1). TORQUE FASTENERS (ITEM 135 – REF. CM40-424 IPL FIG. 1) TO 20 TO 25 IN-LB (2.26 TO 2.82 N-M). NOTE THAT THE SCREW IS DESIGNED TO BOTTOM IN THE WHEEL BEFORE FULLY COMPRESSING THE GROMMET." (WAS) "Attach fairing (item 130 - ref. CM40-424 IPL Fig. 1) onto outboard wheel half subassembly with screws (item 135 - ref. CM40-424 IPL Fig. 1) and torque fasteners to 35 to 45 in-lb (3.95 to 5.08 N-m)."

TO: HOLDERS OF IM199-241 INSTALLATION MANUAL WITH ILLUSTRATED PARTS LIST FOR MAIN WHEEL ASSEMBLY PART NO. 40-424 AND MAIN BRAKE ASSEMBLY PART NO. 30-324.

Attached to this transmittal letter is Revision F of IM199-241 (dated 2006-12-19)

Revision F, Dated 2006-12-19

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Please retain all **REVISION HIGHLIGHTS** pages, inserting them into the manual for future reference.

REVISION HIGHLIGHTS

Section/Page No.

Description Of Change

As follows	Per DCN 0373-03
Title Page	(ADD) new Aircraft Model "PC-12/47"
Sections 3.1 & 12.0	(ADD) new Aircraft Model "PC-12/47"

TO: HOLDERS OF IM199-241 INSTALLATION MANUAL WITH ILLUSTRATED PARTS LIST FOR MAIN WHEEL ASSEMBLY PART NO. 40-424 AND MAIN BRAKE ASSEMBLY PART NO. 30-324.

Attached to this transmittal letter is Revision G of IM199-241 (dated 2008-05-22)

Revision G, Dated 2008-05-22

REVISION G CONTAINS ALL PAGES OF THE MANUAL. Pages that have been added or revised are outlined below together with the highlights of the revision.

Please retain all **REVISION HIGHLIGHTS** pages, inserting them into the manual for future reference.

REVISION HIGHLIGHTS

<u>Section/Page No.</u>	<u>Description Of Change</u>
As follows	Per DCN 0380-07
Title Page	(ADD) new Aircraft Model "PC-12/47E"
Sections 3.1 & 12.0	(ADD) new Aircraft Model "PC-12/47E"

TO: HOLDERS OF IM199-241 INSTALLATION MANUAL WITH ILLUSTRATED PARTS LIST FOR MAIN WHEEL ASSEMBLY PART NO. 40-424 AND MAIN BRAKE ASSEMBLY PART NO. 30-324.

Attached to this transmittal letter is Revision H of IM199-241 (dated 2008-08-25)

Revision H, Dated 2008-08-25

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Please retain all **REVISION HIGHLIGHTS** pages, inserting them into the manual for future reference.

REVISION HIGHLIGHTS

Section/Page No.

Description Of Change

As follows	Per DCN 0381-47
Section 6.0/pg 2	(NOW) www.parker.com (WAS) www.parker.com/cleveland
Section 8.0/pg 3	(NOW) "A Pilatus design change at Aircraft Serial Number MSN 231 through 475 incorporated..." (WAS) "A Pilatus design change at Aircraft Serial Number MSN 231 incorporated..."
Section 8.1/pg 3	para b. (NOW) "All Aircraft, Serial Numbers MSN 231 through 475." (WAS) "All Aircraft, Serial Numbers MSN 231 and subsequent."
Section 8.1/pg 3	para. c (ADD) c. If converting PC-12 aircraft MSN 101-475 that have incorporated Pilatus SB32-013 or MSN 476 and on that are equipped Goodrich brake assembly P/N 2-1674-1 (Pilatus P/N 959.56.01.512), please complete the following: (1) If converting PC-12 aircraft MSN 101-230 that have incorporated Pilatus SB32-004 or MSN 231 through 475, verify that the aircraft is equipped with four Pilatus pedal levers P/N 532.42.12.053. If the aircraft is not equipped with Pilatus pedal levers P/N 532.42.12.053, please refer to paragraph 8.0. (2) Replace Pilatus brake hydraulic line P/Ns 532.45.12.063 and 532.45.12.064 with Pilatus brake hydraulic line P/Ns 532.45.12.059 (LH) and 532.45.12.060 (RH).

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TO: HOLDERS OF IM199-241 INSTALLATION MANUAL WITH ILLUSTRATED PARTS LIST FOR MAIN WHEEL ASSEMBLY PART NO. 40-424 AND MAIN BRAKE ASSEMBLY PART NO. 30-324.

Attached to this transmittal letter is Revision J of IM199-241 (dated 2010-01-20)

Revision J, Dated 2010-01-20

REVISION J CONTAINS ALL PAGES OF THE MANUAL. Pages that have been added or revised are outlined below together with the highlights of the revision.

Please retain all **REVISION HIGHLIGHTS** pages, inserting them into the manual for future reference.

REVISION HIGHLIGHTS

Section/Page No.

Description Of Change

As follows

Per DCN 0387-84

Section 8.0/pg 3

(ADD) **NOTE**: Pilatus introduced the model PC-12/47E with four brake pedal levers, P/N 532.42.12.088, installed. Brake pedal lever 532.42.12.088 is the same as 532.42.12.053 except for the color and is considered equivalent to the original design.

Section 8.1/pg 3

Para. a
(NOW) a. Aircraft Serial Numbers up to and including MSN 230 which meet both of the following conditions:

1. Were modified per Pilatus Service Bulletin 32-004 to use brake pedal levers P/N 532.42.12.058.
2. Did not complete Pilatus Service Bulletin 32-013 to replace brake pedal levers 532.42.12.058 with either brake pedal levers 532.42.12.053 or 532.42.12.088.

(WAS)a. Aircraft up to and including Serial Numbers MSN 230, only those modified per Pilatus Service Bulletin 32-004 to use Brake Lever Assembly P/N 532.42.12.058.

Section 8.1/pg 3

Para. b.
(NOW) b. All Aircraft, Serial Numbers MSN 231 up to MSN 475 that have not incorporated Pilatus Service Bulletin Number 32-013.

NOTE: All Aircraft MSN 476 and subsequent, delivered with steel brakes were also delivered with either pedal levers 532.42.12.053 or 532.42.12.088 installed.

(WAS) b. All Aircraft, Serial Numbers MSN 231 through 475.

Pages 4 to 16

(ADD) page 16 to accommodate changes.

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TO: HOLDERS OF IM199-241 INSTALLATION MANUAL WITH ILLUSTRATED PARTS LIST FOR MAIN WHEEL ASSEMBLY PART NO. 40-424 AND MAIN BRAKE ASSEMBLY PART NO. 30-324.

Attached to this transmittal letter is Revision K of IM199-241 (dated 2015-02-06)

Revision K, Dated 2015-02-06

REVISION K CONTAINS ALL PAGES OF THE MANUAL. Pages that have been added or revised are outlined below together with the highlights of the revision.

Please retain all **REVISION HIGHLIGHTS** pages, inserting them into the manual for future reference.

REVISION HIGHLIGHTS

Section/Page No.

Description Of Change

As follows Per ECO-0048458

(UPDATE) TOC (pg i) to reflect page number updates
(NOW) on pg 14:

9.4 BRAKE LINING CONDITIONING

To provide optimum service life of the brake lining material, it is necessary to properly condition (glaze) the linings per the following procedure:

NOTE: If the brakes are used exclusively for low speed (below 25 knots ground speed) applications, then periodic conditioning is recommended to optimize service life.

- a. Perform two (2) consecutive full stop braking applications (with flaps up and no reverse pitch of the propeller) at the following ground speeds per the following aircraft weights:

- (1) For aircraft take-off weight up to 8700 lbs: 40-45 knots at one of the following:

- 6.0 ft/sec² deceleration
- 380-480 ft stop distance
- 11.0-13.0 second stop time

- (2) For aircraft take-off weight from 8701 to 9800 lbs: 37-42 knots at one of the following:

- 6.0 ft/sec² deceleration
- 330-420 ft stop distance
- 10.0-12.0 second stop time

- (3) For aircraft take-off weight over 9800 lbs: 33-40 knots at one of the following:

- 6.0 ft/sec² deceleration
- 230-380 ft stop distance
- 9.0-11.0 second stop time

NOTE: Do not allow or permit the brake to cool substantially between stops.

- b. After, back to back conditioning stops, allow the brakes to cool for ten to fifteen minutes.
c. Apply the brakes and check for restraint at high static throttle.

NOTE: This step is to be done **ONLY** after steps 1 and 2 are completed and not in and of itself. New brakes may pass this step right from the onset, however, conditioning is still mandatory to ensure optimum service life.

- (1) If the brakes hold, the conditioning is complete.
(2) If brakes cannot hold aircraft during static run-up, allow brakes to cool completely and repeat steps a. through c.

Revision K, Dated 2015-02-06

REVISION HIGHLIGHTS (continued)

<u>Section/Page No.</u>	<u>Description Of Change</u>
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(WAS) on pg 13:

9.4 BRAKE LINING CONDITIONING

When new brake rotor discs are installed, it is important to condition them. Condition discs as follows:

- a) Perform two (2) consecutive full stop braking applications from 30 to 35 knots. Do not allow the brake to cool substantially between the stops.
- b) Allow the brakes to cool for ten to fifteen minutes.
- c) Apply the brakes and check for restraint at high static throttle. If brakes hold, conditioning is complete.
- d) If brakes cannot hold aircraft during static run-up, allow brakes to cool completely and repeat steps a through c.

(MOVE) Sections 10.0, 10.1, 11.0, 12.0, 13.0, to next page in sequence

TO: HOLDERS OF IM199-241 INSTALLATION MANUAL WITH ILLUSTRATED PARTS LIST FOR MAIN WHEEL ASSEMBLY PART NO. 40-424 AND MAIN BRAKE ASSEMBLY PART NO. 30-324.

Attached to this transmittal letter is Revision L of IM199-241 (dated 2021-10-04)

Revision L, Dated 2021-10-04

REVISION L CONTAINS ALL PAGES OF THE MANUAL. Pages that have been added or revised are outlined below together with the highlights of the revision.

Please retain all **REVISION HIGHLIGHTS** pages, inserting them into the manual for future reference.

REVISION HIGHLIGHTS

<u>Section/Page No.</u>	<u>Description Of Change</u>
As follows	Per ECO-0124784
Title Page T-1	(UPDATE) Proprietary Statement and Export Warning
Section 9.2.1b/pg 9	(NOW) MIL-T-83483 or MIL-PRF-83483 (WAS) MIL-T-83483
Section 9.2.2a/pg 10	(NOW) Mobil SHC 100 Aviation Grease (WAS) Aeroshell 22 grease per MIL-G-81322
Section 9.2.2e/pg 10	(NOW) Mobil SHC 100 Aviation Grease, NYCO GN 3058, Aeroshell Grease 58, or Aeroshell Grease 22 per MIL-PRF-81322 (WAS) Aeroshell 22 Grease per MIL-G-81322 (ADD) <u>CAUTION:</u> DO NOT INTERMIX AVIATION BEARING GREASES.
Section 9.2.2g/pg 11	(NOW) Mobil SHC 100 Aviation Grease, Aeroshell Grease 22 or MIL-G-4343 Grease (WAS) Aeroshell 22 Grease or MIL-G-4343 Grease
Section 9.2.2k/pg 11	(NOW) MIL-T-83483 or MIL-PRF-83483 (WAS) MIL-T-83483
Section 9.2.2t/pg 13	(NOW) MIL-T-83483 or MIL-PRF-83483 (WAS) MIL-T-83483

TO: HOLDERS OF IM199-241 INSTALLATION MANUAL WITH ILLUSTRATED PARTS LIST FOR MAIN WHEEL ASSEMBLY PART NO. 40-424 AND MAIN BRAKE ASSEMBLY PART NO. 30-324.

Attached to this transmittal letter is Revision M of IM199-241 (dated 2023-02-21)

Revision M, Dated 2023-02-21

REVISION M CONTAINS ALL PAGES OF THE MANUAL. Pages that have been added or revised are outlined below together with the highlights of the revision.

Please retain all **REVISION HIGHLIGHTS** pages, inserting them into the manual for future reference.

REVISION HIGHLIGHTS

Section/Page No.

Description Of Change

As follows	Per CA-00000019
All Sections/All Pages	Page Header (NOW) Aircraft Wheel and Brake, By Kaman logo (WAS) Parker logo
Title Page/T-1	(NOW) Aircraft Wheel and Brake proprietary rights statement and logo (WAS) Parker proprietary rights statement and logo
N/A	(DELETED) Registration card instructions
Page 1	Intro (NOW) Aircraft Wheel and Brake LLC (WAS) Parker Hannifin
Page 2	Product Registration (DELETED) Registration card instructions
Page 2	Order Information (NOW) Aircraft Wheel and Brake, LLC name and contact info (WAS) Parker Hannifin name and contact info
Page 15	Order Information (NOW) Aircraft Wheel and Brake, LLC name and contact info (WAS) Parker Hannifin name and contact info
Page 16	Table Header (DELETED) Parker
Page 16	(DELETED) Product Registration Card

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1.0 INTRODUCTION

The information herein addresses the installation of a Cleveland Conversion Kit. It is published for the guidance of qualified maintenance personnel responsible for the installation of a Cleveland Conversion Kit, manufactured by Aircraft Wheel and Brake, LLC.

1.1 PURPOSE

This manual provides the necessary procedures to accomplish the installation of a Cleveland Conversion Kit. For information regarding service limits, maintenance and component overhaul, a copy of the Cleveland Wheels and Brakes Component Maintenance Manuals, CM30-244 and CM40-424 are included in this kit. The manuals should be passed on to the owner or retained by the maintenance facility for future reference.

1.2 KIT EQUIPMENT

Each kit contains all materials needed to replace existing equipment with Cleveland Wheels and Brakes. Kit 199-241 will completely retrofit one aircraft to Cleveland main wheels and brakes. For aircraft Serial Numbers MSN 231 and on, and for aircraft, Serial Numbers up to and including MSN 230, those which have incorporated Pilatus Service Bulletin No. 32-004, replacement of the Brake Pedal Levers is required as part of this installation. Refer to Section 13.0, List of Material - 199-251 Kit, which lists all parts (supplied in Wheel & Brake Conversion Kit 199-241) that are required for the Brake Pedal Lever replacement. Refer to Section 12.0, Kit Parts List, for a list of parts included in Kit 199-241. Note: Instead of using kit 199-251, the installer has the option to purchase the brake pedal lever replacement parts directly from Pilatus Business Aircraft. In this case, order "199-241 Kit – Less Brake Pedal Lever Retrofit".

2.0 TSO NOTICE

The wheels and brakes used in this conversion kit carry a "TSO" marking which identifies them as having been fully laboratory tested and qualified to meet the applicable Federal Aviation Agency (FAA) specifications and requirements.

After final certification, substitution of critical parts or changes of processes or materials are not permitted without requalification of the assemblies and resubmittal of the test data to the FAA for approval.

3.0 APPLICABILITY

3.1 KIT 199-241

The equipment supplied under Kit No. 199-241 is applicable to the following aircraft.

TABLE I, APPLICABILITY

MAKE	MODELS
Pilatus	PC-12, PC-12/45, PC-12/47 & PC-12/47E

4.0 SAFETY

Always follow proper safety precautions when handling or servicing any aircraft braking system or component(s) of such systems.

CAUTIONS and **WARNINGS** are noted throughout this manual, where applicable. Follow them when servicing aircraft wheel and brake equipment.

5.0 PRODUCT REGISTRATION

(Deleted)

6.0 ORDER INFORMATION

To order spare parts, contact Pilatus Business Aircraft or contact Aircraft Wheel and Brake at the following address or numbers:

Aircraft Wheel and Brake, LLC
1160 Center Road
Avon, Ohio 44011 U.S.A.
Attn: Technical Services/Hotline
E-mail: clevelandwbhelp@kaman.com
Tel: 1-800-BRAKING (1800-272-5464)
Fax: (440) 937-5409
Websites: www.kaman.com

www.kaman.com/cleveland
www.clevelandwheelsandbrakes.com

Pilatus Business Aircraft
Jeffco Airport
11755 Airport Way
Broomfield, Colorado 80021 U.S.A.
Phone: 303-465-9099
Fax: 303-465-9190
www.pc12.com

7.0 EQUIPMENT DESCRIPTION

7.1 BRAKE ASSEMBLY

The brake is a piston actuated, hydraulically operated, 3-rotor steel disc unit that is designed to be compatible with MIL-H-83282 or MIL-PRF-83282 hydraulic fluid only. The brake assembly is a non-handed unit and can be used on the opposite side of the aircraft by simply switching the fittings on top of the brake cylinder to the opposite port. The brake cylinder is machined from forged aluminum alloy.

7.1.1. Brake Operation

Braking action begins when hydraulic pressure is applied to the brake, via the pilot's or co-pilot's master cylinder. The hydraulic pressure forces the brake pistons outward against the pressure plate (with wear pads) which compresses the brake stack (the rotor discs and stator discs) against the torque tube (with wear pads). This action creates frictional force. The pressure plate and two stationary discs have 6 slots which are driven by the 6 torque tube drive keys. The resulting torque is transmitted to the torque tube keys and transferred to the wheel/tire through the three rotors; which have drive slots to engage the main wheel drive keys. This action slows the aircraft.

7.2 WHEEL ASSEMBLY

The wheel assembly is a 7.50-10 wheel designed for use with an 8.50-10 10PR tubeless tire. The divided type main wheel facilitates tire installation and removal. The two wheel halves are fastened together with high strength bolts, double countersunk washers and self-locking nuts. The wheel halves are machined from forged aluminum alloy.

8.0 REPLACE BRAKE PEDAL LEVERS

A Pilatus design change at Aircraft Serial Number MSN 231 through 475 incorporated the use of Pilatus Lever Assembly, PN 532.42.12.058, replacing original Lever Assembly P/N 532.42.12.053. This change may have also been incorporated on earlier Serial Number Aircraft (e.g. MSN 101 through 230) per Pilatus Service Bulletin No. 32-004. Since the Cleveland brakes work best with the original brake pedal lever design, it is required to replace Lever Assembly P/N 532.42.12.058 (if so equipped) with P/N 532.42.12.053.

NOTE: Pilatus introduced the model PC-12/47E with four brake pedal levers, P/N 532.42.12.088, installed. Brake pedal lever 532.42.12.088 is the same as 532.42.12.053 except for the color and is considered equivalent to the original design.

8.1 EFFECTIVITY

- a. Aircraft Serial Numbers up to and including MSN 230 which meet both of the following conditions:
 - 1. Were modified per Pilatus Service Bulletin 32-004 to use brake pedal levers P/N 532.42.12.058.
 - 2. Did not complete Pilatus Service Bulletin 32-013 to replace brake pedal levers 532.42.12.058 with either brake pedal levers 532.42.12.053 or 532.42.12.088.
- b. All Aircraft, Serial Numbers MSN 231 up to MSN 475 that have not incorporated Pilatus Service Bulletin Number 32-013.

NOTE: All Aircraft MSN 476 and subsequent, delivered with steel brakes were also delivered with either pedal levers 532.42.12.053 or 532.42.12.088 installed.

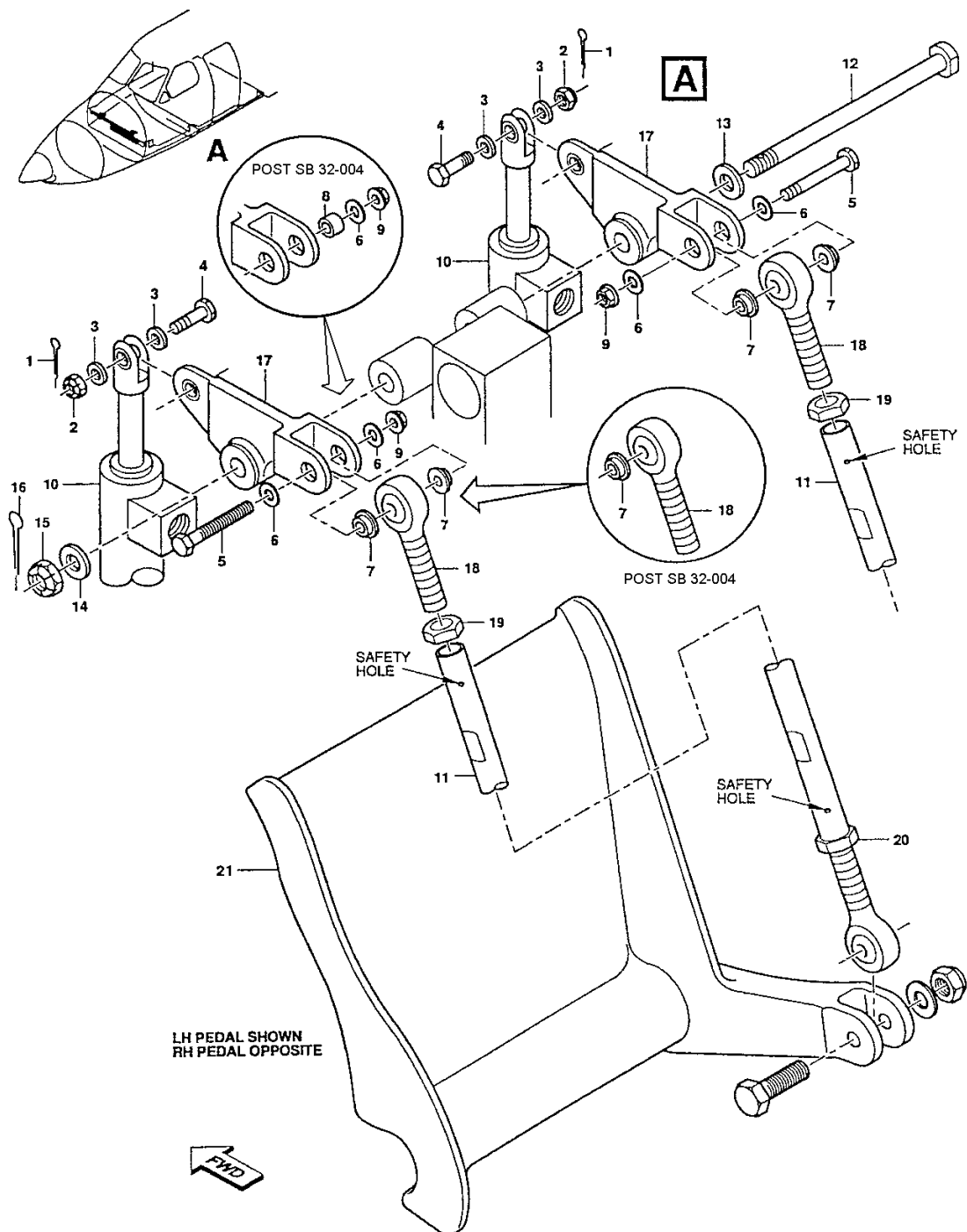
- c. If converting PC-12 aircraft MSN 101-475 that have incorporated Pilatus SB32-013 or MSN 476 and on that are equipped with Goodrich brake assembly P/N 2-1674-1 (Pilatus P/N 959.56.01.512), please complete the following:
 - (1) If converting PC-12 aircraft MSN 101-230 that have incorporated Pilatus SB32-004 or MSN 231 through 475, verify that the aircraft is equipped with four Pilatus pedal levers P/N 532.42.12.053. If the aircraft is not equipped with Pilatus pedal levers P/N 532.42.12.053, please refer to paragraph 8.0.
 - (2) Replace Pilatus brake hydraulic line P/Ns 532.45.12.063 and 532.45.12.064 with Pilatus brake hydraulic line P/Ns 532.45.12.059 (LH) and 532.45.12.060 (RH).

8.2 DESCRIPTION

- a. Remove both crew seats.
- b. Remove and discard the lever assemblies (Pilatus P/N: 532.42.12.058) and install the new lever assemblies (Pilatus P/N: 532.42.12.053).
- c. Adjust the brake rod length to 276 mm, between the rod end centers.
- d. Install both crew seats.

8.3 REFERENCES

- a. Pilatus Service Bulletin 32-004.
- b. Pilatus PC12 Aircraft Maintenance Manual (AMM), Chapters 25-10-01 and 25-10-03.
- c. Pilatus PC12 Illustrated Parts Catalog (IPC), Chapters 27-20-00, Fig.03 and 32-40-00, Fig. 04.



Lever Assembly
Figure 8.4.2

8.4 INSTRUCTIONS

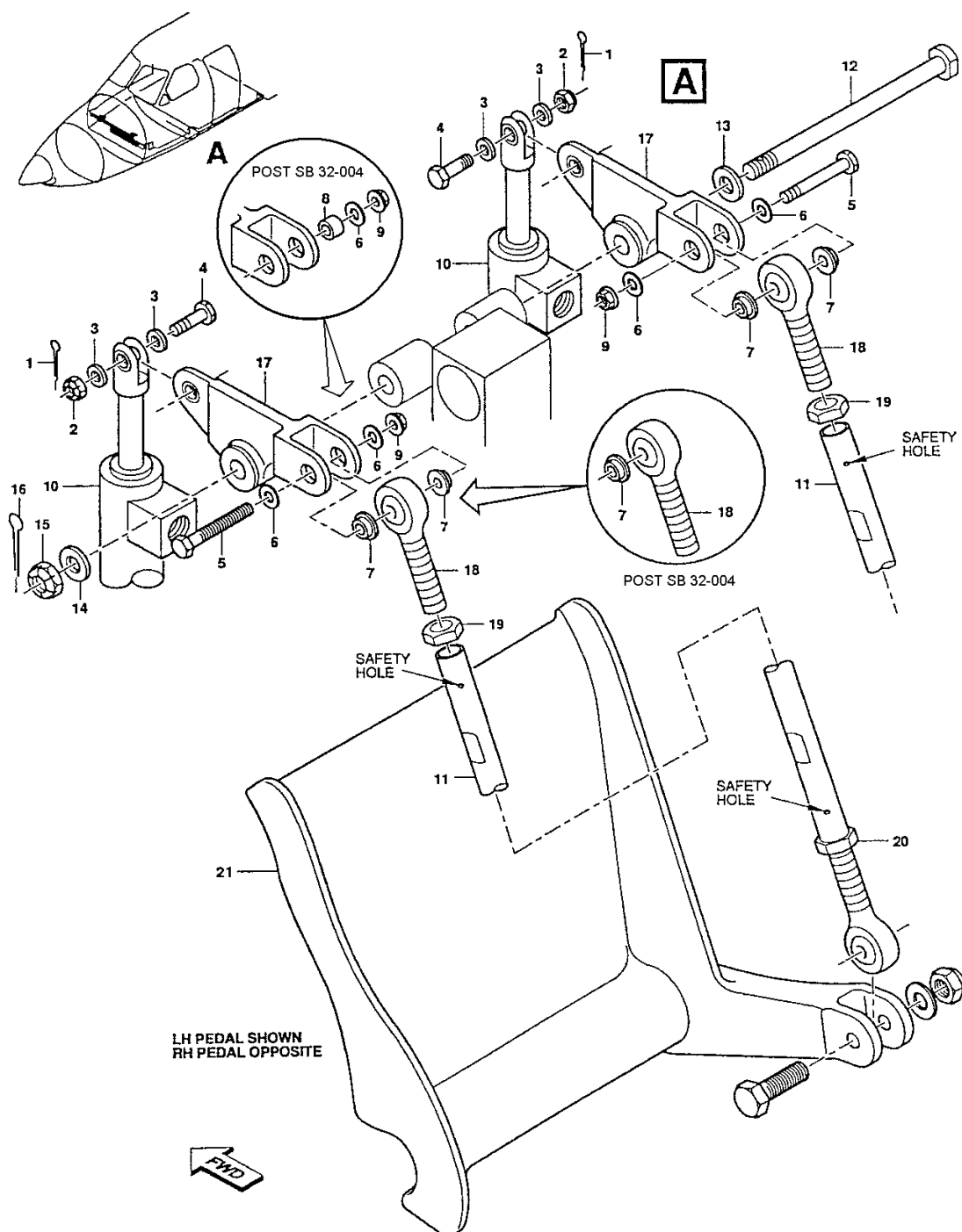
8.4.1. Preparation

- a. Prepare the aircraft for servicing in a hangar.
- b. Remove the LH bulkhead from behind the Pilot's seat (Ref. AMM 25-10-03, Page Block 401).
- c. Remove both crew seats (Ref. AMM 25-10-01, Page Block 401).

8.4.2. Replace the Lever Assemblies (Ref. Fig. 8.4.2)

NOTE: The procedure that follows is applicable to the two pilot side pedal assemblies, and must be repeated for the co-pilot side (Ref. Pilatus PC12 IPC 32-40-00, Fig. 04 and 27-20-00, Fig. 03).

- a. Remove and discard the cotter pins (1).
- b. Remove the nuts (2), the washers (3), and the bolts (4), which attach the brake master cylinders (10) to each lever assembly (17).
- c. Remove the nuts (9), the washers (6) and the bolts (5), which attach the lever assemblies (17) to the upper rod end (18) of each brake rod (11).
- d. Remove and discard the two plain bushings (8), Pilatus P/N 941.14.12.108 (NAS75-3-008), which are fitted (1 each) in the old lever assemblies (Pilatus P/N 532.42.12.058).
- e. Discard the old lever assemblies (17) Pilatus P/N 532.42.12.058 [(including the two flange bushings (7), Pilatus P/N 914.14.11.109 (NAS77-3-011), which are fitted in the old lever assemblies (17)].
- f. Remove and discard the cotter pin (16).
- g. Remove the nut (15), the washers (14 and 13) and the bolt (12) which attach the lever assemblies (17) to the pedal installation.
- h. Remove and discard the lever assemblies (17), Pilatus P/N 532.42.12.058.
- i. If not already done, install the four new flanged bushings (7), Pilatus P/N 941.14.11.115 (NAS77-3-019), into the lever assemblies (17), Pilatus P/N 532.42.12.053. Insure that the bushing flange goes on the inside of the lever assembly fork. Each lever assembly requires two flanged bushings (7).
- j. Install the new lever assemblies (17), Pilatus P/N 532.42.12.053, with the bolt (12), the washers (13 and 14) and the nut (15).
- k. Install the lever assemblies (17) onto the brake master cylinders (10) with the bolts (4), the washers (3) and the nuts (2).



LEVER ASSEMBLY
Figure 8.4.2

- l. Check that each brake rod length is 276 mm – between centers of the upper and lower rod ends. If not correct do as follows:
 1. Undo upper and lower lock-nuts (19 and 20).
 2. Turn brake rod body (11) to get the distance of 276 mm – between centers of the upper and lower rod ends.
 3. Tighten the two lock-nuts (19 and 20).
- m. Do a safety check on each brake rod.
- n. Install the upper rod end (18) of each push rod (11) into the lever assemblies (17) with the bolts (5), the washers (6) and the nuts (9).
- o. Safety the nuts (15) with new cotter pins (16).
- p. Safety the nuts (2) with new cotter pins (1).

8.4.3. Close up

- a. Make sure that the work area is clean and clear of tools and other items.
- b. Install both crew seats (Ref AMM 25-10-01, Page Block 401).
- c. Install the LH bulkhead (Ref. AMM 25-10-03, Page Block 401).

9.0 KIT INSTALLATION



SAFETY WARNING:

INSURE AIRCRAFT IS SECURE AND STABLE BEFORE BEGINNING ANY WORK. WORKING UNDER AN IMPROPERLY STABILIZED AIRCRAFT COULD CAUSE INJURY OR DEATH.

9.1 REMOVE EXISTING EQUIPMENT

- a. Jack and support aircraft in accordance with Pilatus aircraft maintenance manual.
- b. Remove existing main gear wheels per Pilatus aircraft maintenance manual.
- c. Disconnect the brake from hydraulic pipe: Pilatus P/N 532.45.12.059 (left side) or P/N 532.45.12.060 (right side). Plug hydraulic pipe.
- d. Remove existing main gear brakes per Pilatus aircraft maintenance manual.

NOTE: Discard existing brake mounting nuts and washers. New brake attachment fasteners are supplied with the 30-244 brake assembly:

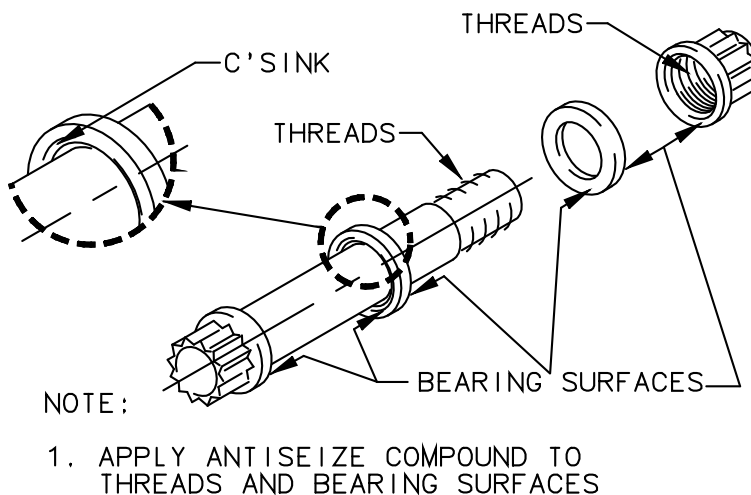
103-26400 Bolts, Qty 6 (item 20 - ref. CM30-244 IPL Fig. 1).
095-03100 Washers, Qty 12 (item 25 - ref. CM30-244 IPL Fig. 1).
094-15800 Nuts, Qty 6 (item 30 - ref. CM30-244 IPL Fig. 1).

9.2 INSTALL CLEVELAND EQUIPMENT (Refer to Installation Drawing 50-155)

NOTE: For parts identification not found on drawing 50-155, refer to component maintenance manuals CM30-244 and CM40-424.

9.2.1. Brake Installation

- a. The brakes are shipped from the factory as a complete assembly and may be installed as is.
- b. Prior to installing brake strut mounting hardware, lubricate bolt (item 20 - ref. CM30-244 IPL Fig. 1) and nut (item 30 - ref. CM30-244 IPL Fig. 1) threads and bearing surfaces of bolt heads, washers (item 25 - ref. CM30-244 IPL Fig. 1) and nuts with anti-sieze compound, per MIL-T-83483 or MIL-PRF-83483. Refer to Figure 9.2.1.



Lubricating Mounting Hardware
Figure 9.2.1

- c. Mount brake assembly onto the landing gear strut. Install (item 20 - ref. CM30-244 IPL Fig. 1), washers (item 25 - ref. CM30-244 IPL Fig. 1), and nuts (item 30 - ref. CM30-244 IPL Fig. 1), and torque to 350-360 in-lb (39.54 to 40.67 N-m). The bolts shall be installed as shown on drawing 50-155. The countersunk side of washer (item 25 - ref. CM30-244 IPL Fig. 1) shall interface with the bolt head.

NOTE: The brakes are non-handed. The inlet fitting and bleeder may be exchanged as needed.

NOTE: Clearance of .118 in. (3 mm) minimum is required between the hydraulic pipe and the landing gear trailing arm.

- d. Re-attach hydraulic pipe: Pilatus P/N 532.45.12.059 (left side) or P/N 532.45.12.060 (right side) to brake inlet fitting. Torque snug to preclude leakage.

NOTE: Hydraulic pipe should be tension free.

9.2.2. Wheel Installation

- a. The wheel assemblies are shipped from the factory as a complete assembly. The bearings are packed with Mobil SHC 100 Aviation Grease and installed in the wheel halves.

NOTE: Extended storage of lubricated bearings may require re-lubrication.

- b. Remove the five screws (item 135 - ref. CM40-424 IPL Fig. 1) and five washers (item 145 ref. CM40-424 IPL Fig. 1), that attach the fairing and remove wheel fairing.
- c. Separate the wheel half subassemblies by removing nuts (item 15 - ref. CM40-424 IPL Fig. 1), washers (item 10 - ref. CM40-424 IPL Fig. 1), and bolts (item 5 - ref. CM40-424 IPL Fig. 1).
- d. Remove the retaining rings (item 75 - ref. CM40-424 IPL Fig. 1), grease seals (item 70 - ref. CM40-424 IPL Fig. 1) and bearing cones (item 65 - ref. CM40-424 IPL Fig. 1), from the outboard wheel half subassembly.
- e. Inspect bearing cones, for contamination and/or solidification. If not already lubricated, pack bearings with Mobil SHC 100 Aviation Grease, NYCO GN 3058, Aeroshell Grease 58, or Aeroshell Grease 22 per MIL-PRF-81322. Install cones, grease seals, and retaining rings.

CAUTION: DO NOT INTERMIX AVIATION BEARING GREASES.

- f. Place inboard wheel half subassembly (item 25 - ref. CM40-424 IPL Fig. 1), on a clean, flat work surface with flange side down. Clean wheel flange, bead seat register and packing groove with a clean cloth dampened with isopropyl alcohol.

CAUTION: THE PREFORMED PACKING (item 20 - ref. CM40-424 IPL Fig. 1) MUST SEAT UNIFORMLY WITHOUT STRETCHING OR TWISTING.

- g. Lubricate wheel register preformed packing (item 20 - ref. CM40-424 IPL Fig. 1) with a light coat of Mobil SHC 100 Aviation Grease, Aeroshell Grease 22 or MIL-G-4343 Grease and install in wheel register groove of inboard wheel half subassembly (item 25 - ref. CM40-424 IPL Fig. 1).
- h. Position outboard wheel half subassembly (item 45 - ref. CM40-424 IPL Fig. 1), on a flat surface with the register side facing up.
- i. Place a serviceable 8.50-10, 10 PR tubeless tire over outboard wheel half subassembly, aligning the red balancing dot on the tire adjacent to the air valve assembly, (item 80 - ref. CM40-424 IPL Fig. 1).
- j. Position the inboard wheel half subassembly in the tire so that the bolt holes in both wheel halves are aligned.
- k. Prior to installing wheel assembly hardware, lubricate bolt (item 5 - ref. CM40-424 IPL Fig. 1) and nut (item 15 - ref. CM40-424 IPL Fig. 1) threads and bearing surfaces of bolt heads, washers (item 10 - ref. CM40-424 IPL Fig. 1) and nuts with anti-sieze compound, per MIL-T-83483 or MIL-PRF-83483. Refer to Figure 9.2.1.
- l. Slide a double countersunk washer (item 10 - ref. CM40-424 IPL Fig. 1) onto each bolt (item 5 - ref. CM40-424 IPL Fig. 1).

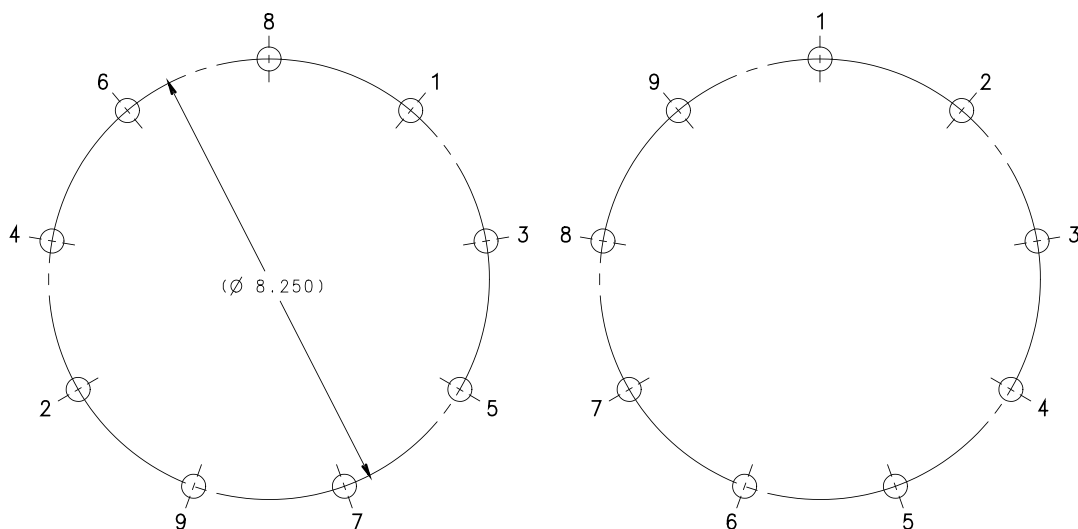
CAUTION: DO NOT USE IMPACT OR POWER WRENCHES TO INSTALL WHEEL NUTS AND BOLTS.

- m. Insert bolts with washer into the inboard wheel half subassembly. Compress the wheel halves together and install remaining double countersunk washers and nuts onto each of the nine bolts, thus fastening the wheel half subassemblies together.

NOTE: The nuts (item 15 - ref. CM40-424 IPL Fig. 1) should be located on the outboard wheel half subassembly (item 45 - ref. CM40-424 IPL Fig. 1) side.

- n. Preliminary torque nuts to 190 in-lb maximum (21.46 N-m) in criss-cross pattern. Final torque nuts to 170 to 190 in-lb (19.21 to 21.46 N-m) in clockwise sequence. Refer to Figure 9.2.2.

NOTE: A stripe of paint or inspector torque seal should be painted on the nuts and bolts (after final torquing) such that any rotation of the nuts relative to the bolts will be indicated by a broken stripe.



Preliminary Torque Pattern

Final Torque Pattern

Bolt Torquing Procedure
Figure 9.2.2



INFLATION OF THE TIRE CAN BE EXTREMELY DANGEROUS AND IT IS RECOMMENDED THAT INFLATION BE PERFORMED IN AN INFLATION CAGE TO PREVENT INJURY TO PERSONNEL FROM POSSIBLE EXPLOSION.

WARNING: DO NOT INFLATE TIRE TO FULL OPERATING PRESSURE UNTIL THE WHEEL ASSEMBLY HAS BEEN MOUNTED ON AIRCRAFT.

- o. Place the wheel/tire assembly in an inflation cage for initial inflation. Inflate tire to tire manufacturer's specifications to seat the beads on wheel. Reduce tire pressure to recommended storage pressure (10 psig) and remove wheel/tire assembly from inflation cage.
- p. Check for burrs or rough threads on axle and axle nut.
- q. Mount the wheel and tire assembly on the axle over the brake assembly.

NOTE: Make sure the lugs on the wheel hub correctly engage in the slots on the brake discs.

- r. Install the Pilatus PC-12 axle nut, bolt, washer, nut and cotter pin (item 3 of drawing 50-155) per aircraft maintenance manual.
- s. Inflate tire to aircraft manufacturer's recommended inflation pressure.
- t. Install five grommets (item 140 – ref. CM40-424 IPL Fig. 1) into fairing (item 130 - ref. CM40-424 IPL Fig. 1). Apply MIL-T-83483 or MIL-PRF-83483 anti-seize to end of fasteners and threads of fasteners (item 135 – ref. CM40-424 IPL Fig. 1). Install one washer (item 145 – ref. CM40-424 IPL Fig. 1) onto each fastener (item 135 – ref. CM40-424 IPL Fig. 1). Attach fairing (item 130 –ref. CM40-424 IPL Fig. 1) to outboard wheel half subassembly (item 45 ref. CM40-424 IPL Fig1). Torque fasteners (item 135 – ref. CM40-424 IPL Fig. 1) to 20 to 25 in-lb (2.26 to 2.82 N-m). Note that the screw is designed to bottom in the wheel before fully compressing the grommet.
- u. Complete installation per aircraft maintenance manual.

9.3 BLEED BRAKES

Check brake system reservoir fluid level and bleed brakes per Pilatus maintenance manual.

CAUTION: DO NOT ALLOW THE RESERVOIR TO BECOME EMPTY DURING BLEEDING.

9.4 BRAKE LINING CONDITIONING

To provide optimum service life of the brake lining material, it is necessary to properly condition (glaze) the linings per the following procedure:

NOTE: If the brakes are used exclusively for low speed (below 25 knots ground speed) applications, then periodic conditioning is recommended to optimize service life.

a. Perform two (2) consecutive full stop braking applications (with flaps up and no reverse pitch of the propeller) at the following ground speeds per the following aircraft weights:

(1) For aircraft take-off weight up to 8700 lbs: 40-45 knots at one of the following:

- 6.0 ft/sec² deceleration
- 380-480 ft stop distance
- 11.0-13.0 second stop time

(2) For aircraft take-off weight from 8701 to 9800 lbs: 37-42 knots at one of the following:

- 6.0 ft/sec² deceleration
- 330-420 ft stop distance
- 10.0-12.0 second stop time

(3) For aircraft take-off weight over 9800 lbs: 33-40 knots at one of the following:

- 6.0 ft/sec² deceleration
- 230-380 ft stop distance
- 9.0-11.0 second stop time

NOTE: Do not allow or permit the brake to cool substantially between stops.

b. After, back to back conditioning stops, allow the brakes to cool for ten to fifteen minutes.

c. Apply the brakes and check for restraint at high static throttle.

NOTE: This step is to be done **ONLY** after steps 1 and 2 are completed and not in and of itself. New brakes may pass this step right from the onset, however, conditioning is still mandatory to ensure optimum service life.

(1) If the brakes hold, the conditioning is complete.

(2) If brakes cannot hold aircraft during static run-up, allow brakes to cool completely and repeat steps a. through c.

10.0 WEIGHT AND BALANCE COMPUTATIONS

Refer to the Airplane Equipment List, Pilatus Report No. 02047, located in the Pilot's Operating Handbook for the weight of the existing wheels and brakes. Subtract from new weights to derive weight increase created by the kit installation. Multiply weight increase by applicable aircraft moment and revise weight and balance information in logbook.

10.1 WEIGHT AND BALANCE DATA

New installed (per gear leg)

Wheel assy.....	7.48 Kg.	(16.5 lbs.)
Brake assy	<u>12.56 Kg.</u>	<u>(27.7 lbs.)</u>
Total.....	20.04 Kg.	(44.2 lbs.)

Complete form 337 and make appropriate log book entries.

11.0 PILOT OPERATING MANUAL AND MAINTENANCE MANUAL INSERTS

Inserts and supplements are located in front with conversion kit documentation.

Attach label in the Airplane Equipment List Section of the Pilot Operating Manual, as close as possible to the original entries labeled "Hub, Main Wheel (2) (ea.)" and "Assembly, Main Wheel Brake (2) (ea.)". Enter the correct arm and moment in blocks provided. Zero items out for the original main wheel and brake assemblies that have been removed.

Inserts are reprinted below for reference:

X	Two 6 piston internal 3-rotor disc Brake Assemblies, Cleveland P/N 30-244	12.56 Kg. ea.	6.25 m
X	Two 7.50-10 forged aluminum Wheel Assemblies, Cleveland P/N 40-424	7.48 Kg. ea.	6.25 m

Cleveland brake P/N 30-244 is a single fixed cylinder, internal 3-rotor disc design, using 6 pistons per cylinder, which respond to fluid pressure from the master cylinders for brake application.

An Airplane Flight Manual Supplement, Aircraft Wheel and Brake, LLC Document No. 199-241 AFMS, is provided with this kit. Fill in the Aircraft Registration Number and Serial Number as appropriate, then add the supplement to the Pilot's Operating Handbook and Airplane Flight Manual.

An Airplane Maintenance Manual Supplement, Aircraft Wheel and Brake, LLC Document No. AMMS199-241 is provided with this kit. Fill in the Aircraft Model Number, Registration Number and Serial Number as appropriate, then add the supplement to the Airplane Maintenance Manual.

12.0 KIT PARTS LIST – 199-241 Kit

<u>(1) ITEM NUMBER</u>	<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>QUANTITY</u>
(2) 1	40-424	Wheel Assembly	2
(3) 2	30-244	Brake Assembly	2
3	221-01500	Pin, Cotter	2
(4)	199-251	Brake Pedal Lever Kit	1
	IM199-241	Installation Manual for Conversion Kit 199-241	1
	CM30-244	Component Maintenance Manual for 30-244 Brake Assembly	1
	CM40-424	Component Maintenance Manual for 40-424 Wheel Assembly	1
	50-155	Installation Drawing	1
	AMMS199-241	Airplane Maintenance Manual Supplement	1
	199-241 AFMS	Airplane Flight Manual Supplement	1
	-----	Supplemental Type Certificate SA01376CH for (PC-12, PC-12/45, PC-12/47 & PC-12/47E)	1
	-----	Pilot Operating Manual Inserts	1
		(Deleted)	

- (1) Refer to 50-155 Installation Drawing
- (2) For Subassembly and Parts identification, refer to CM40-424, Main Wheel Assembly, Fig 1; IPL
- (3) For Subassembly and Parts identification, refer to CM30-244, Main Brake Assembly, Fig 1; IPL
- (4) For identification of Pilatus parts included in Kit 199-251, refer to Section 13.0

13.0 LIST OF MATERIALS – 199-251 Kit

The following parts are contained in Kit 199-251, supplied by and FAA / JAA approved by Pilatus Aircraft Ltd. (certification enclosed) for use on PC-12 model aircraft.

(1) (2) ITEM NUMBER	PILATUS PART NUMBER	NOMENCLATURE	QUANTITY
17	532.42.12.053	Lever Assembly	4
7	941.14.11.115	Bushing, Flanged (NAS77-3-019)	8
1	940.17.02.226	Pin, Cotter (MS24665-134)	4
16	940.17.02.236	Pin, Cotter (MS24665-210)	2
(1)	Refer to Figure 8.4.2		
(2)	Optional to install Pilatus parts (purchased from Pilatus Business Aircraft) as listed, in lieu of kit 199-251. In this case, order “199-241 Kit – Less Brake Pedal Lever Retrofit.”		