



TECHNICAL INSTRUCTION HAC24-002, Rev. B, April 9, 2024

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INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

450-2-3100-00KT: Pressure Switch

INSTALLED ON

**AIRBUS SAS A318/A319/A320/A321/A330/A340 SERIES AIRCRAFT
(SEE TK SUPPLEMENT(S) FOR SPECIFIC MODELS)**

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1. Introduction

This HEICO Aerospace Technical Instruction (TI) defines the Instructions for Continued Airworthiness when Turbine Kinetics, Inc. (TK) P/N 450-2-3100-00KT Pressure Switch is installed on the Airbus SAS A318/A319/A320/A321/A330/A340 series aircraft listed on the FAA approved supplement(s) for P/N 450-2-3100-00KT. The P/N 450-2-3100-00KT Pressure Switch is a PMA replacement for Elektro-Metall Export GmbH (EME) P/N 450-2-3100-00.

The EME P/N 450-2-3100-00 is a Hydraulic Pressure-activated electrical switch, with one threaded end for installation into a hydraulic manifold (or similar port), a hex flange for tightening, and a bayonet-lug style 3-pin electrical connector at the opposite end. The cylindrical stainless steel housing is fusion welded in two places, with multiple polyimide diaphragm seals separating the hydraulic and electrical subassemblies. The pressure sensing element interacts with a conical disc spring for "snap action" micro switch activation. The Pressure Switch is secured using a bonding clamp and includes provisions for lock-wire and bonding clamp installation. Multiple Pressure Switches are mounted to hydraulic distribution manifolds throughout the aircraft, which provide hydraulic power to the flight controls (pitch, roll and yaw).

The TK P/N 450-2-3100-00KT Pressure Switch incorporates an intentional deviation to the EME article design in order to improve the hermeticity of the article's internal hydraulic seal. As a result, the TK design permits a slight increase in the Pressure Switch's maximum length and weight limits, compared to those controlled by the EME Component Maintenance Sheet for P/N 450-2-3100-00. Refer to section 4.0 for details.

The design of the TK P/N 450-2-3100-00KT Pressure Switch was qualified through functional testing to ensure that it exhibits equivalent performance with respect to the EME alternative. The Pressure Switch electrical receptacle conforms to design standard MIL-DTL-38999 and its hydraulic port conforms to design standard AS5863. Therefore, the design of TK P/N 450-2-3100-00KT Pressure Switch has no impact on the fitment at NHA and has equivalent performance as the EME P/N 450-2-3100-00 Pressure Switch that it replaces.



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2. Installation of P/N 450-2-3100-00KT

NOTE:

The information presented in this section is for informational purposes only. It is not intended to alter any existing component maintenance manual or documentation

Shown below in Figures 1 & 2 are sample installations of the P/N 450-2-3100-00 Pressure Switch on the Airbus SAS A318/A319/A320/A321 Series Aircraft. Multiple subject articles are mounted to hydraulic distribution manifolds throughout the aircraft, which provide hydraulic power to the flight controls (pitch, roll and yaw).

On A318/A319/A320/A321 aircraft there are seven (7) Pressure Switches installed per aircraft. One (1) article is mounted downstream of the Blue Electrical Motor Pump (EMP) and six (6) articles are mounted on the three (3) HP manifolds (Green, Blue and Yellow).

On A330/A340 aircraft three (3) Pressure Switches are mounted downstream of each Hydraulic Electrical Motor Pump (EMP – Green, Blue and Yellow) and six (6) articles are mounted on the three (3) HP manifolds (Green, Blue and Yellow), a total of nine (9) units installed per aircraft.

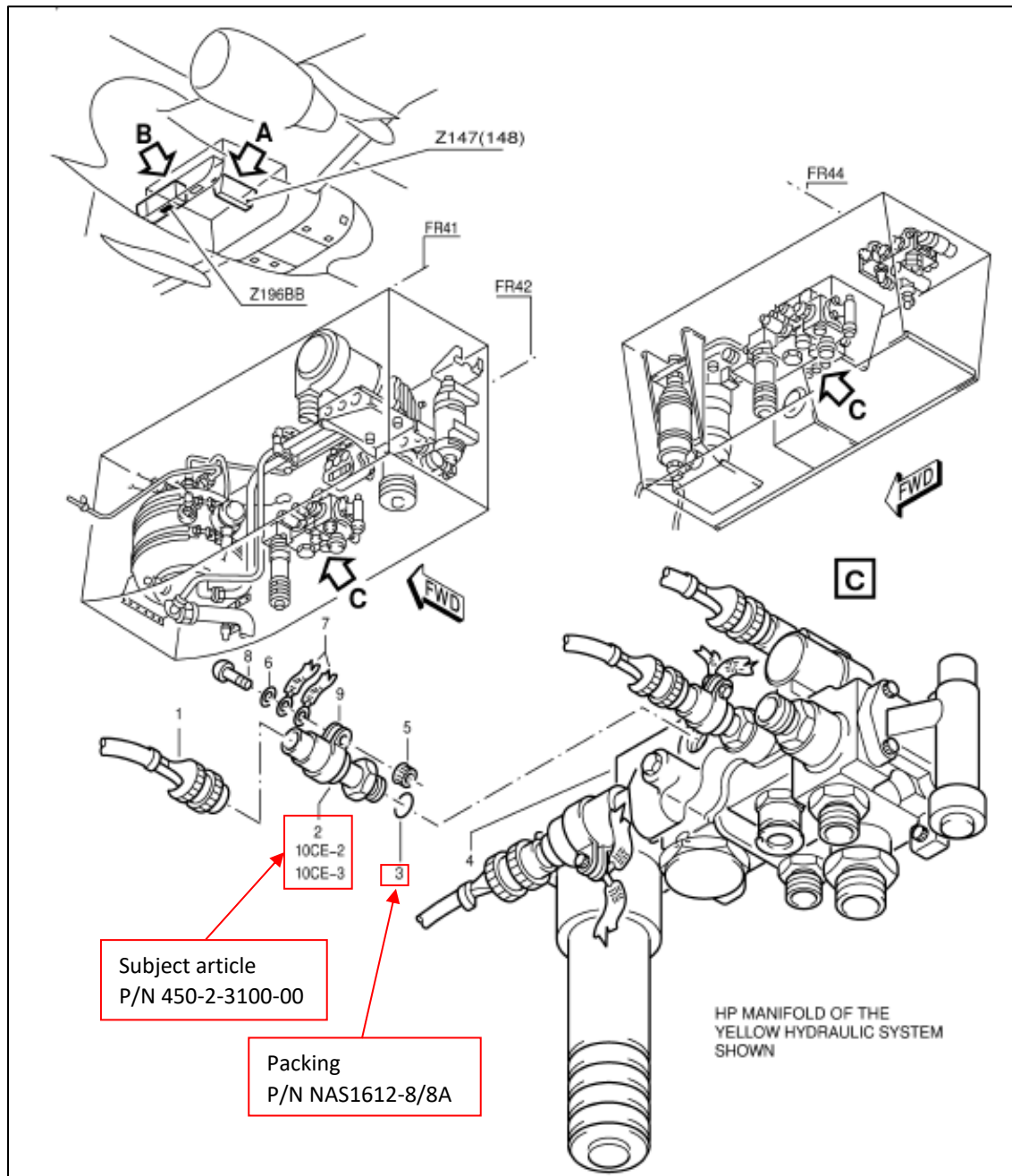


Figure 1: Location of Pressure Switch P/N 450-2-3100-00 in Green and Yellow Hydraulic Systems of A318/A319/A320/A321 Aircraft

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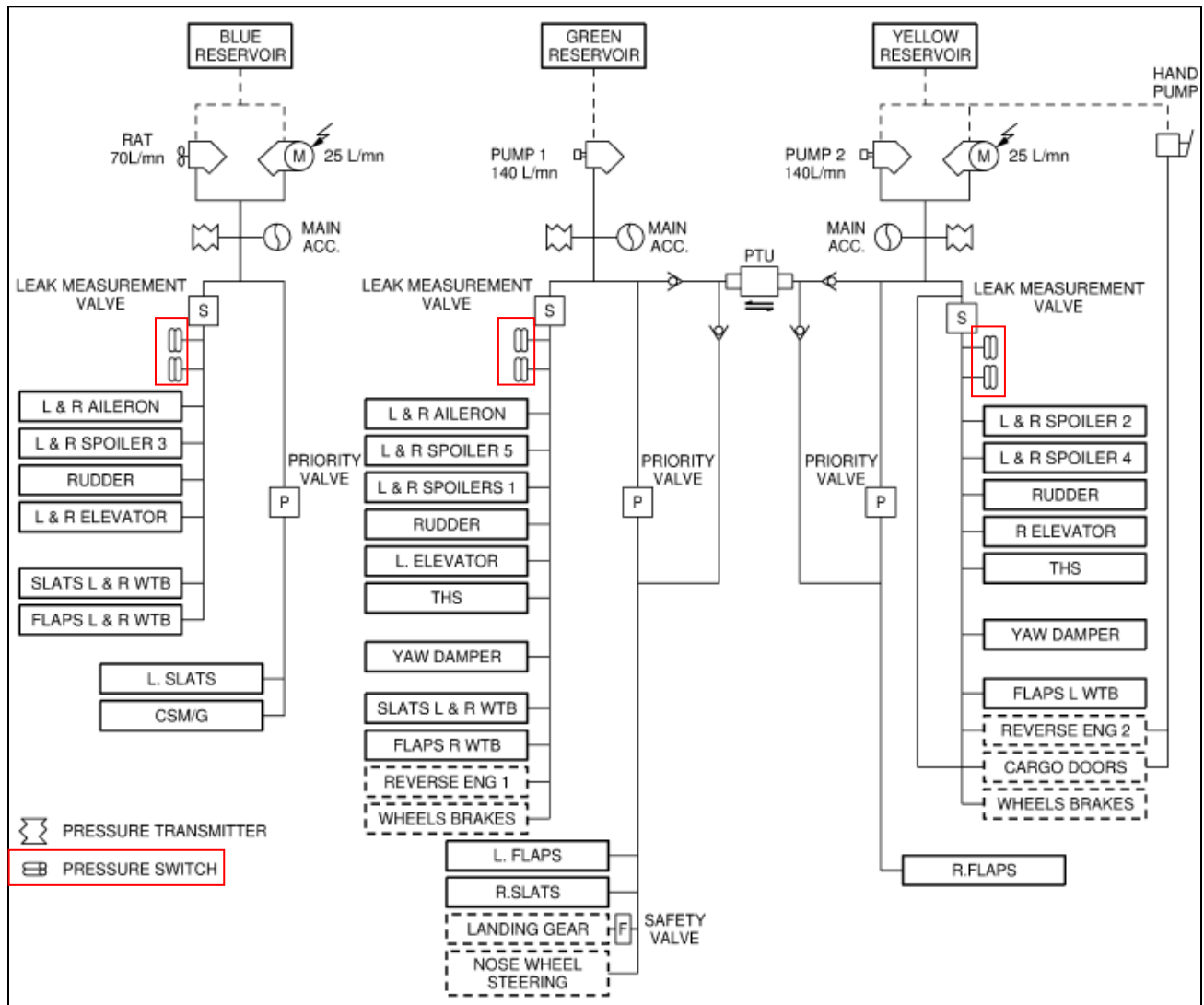


Figure 2: A318/A319/A320/A321 Flight Control Hydraulic Power Supply

3. Airworthiness Limitations

The Airworthiness Limitations section is FAA-approved and specifies maintenance required under Sec. 43.16 and 91.403 of the Federal Aviation Regulations, unless an alternative program has been FAA approved. The Instructions for Continued Airworthiness presently acceptable to the FAA for P/N 450-2-3100-00 are valid for use on P/N 450-2-3100-00KT with exception to the 'Checks' found in Section 4. Due to the fact that P/N 450-2-3100-00KT is not a life limited part, no additional airworthiness limitations are imposed by the supplementary Instructions for Continued Airworthiness found below in Section 4.



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4. Checks of the 450-2-3100-00KT Pressure Switch

Table 1: Supplemental Technical Data

	<i>Turbine Kinetics P/N 450-2-3100-00KT</i>	<i>Elektro-Metall Export P/N 450-2-3100-00</i>
a) Height:	80.5 mm (3.170 inch) max.	77.9 mm (3.067 inch) max.*
b) Weight (dry condition):	.136 kg (.300 lbs) max.	.108 kg (.238 lbs) max.*

*Refer to Elektro-Metall Export GmbH Component Maintenance Sheet 29-12-17, applicable to P/N 450-2-3100-00 for the superseded Technical Data.

5. Material Information

This document will be maintained and the latest approved revision posted on the HEICO web site at <http://ipc.heico.com>.

In addition, it is the responsibility of the person(s) performing maintenance on their installed system to ensure that this document is current by checking the HEICO web site at <http://ipc.heico.com> prior to performing maintenance.

6. Revision and Approval History

Initial Release	February 27, 2024
A	April 1, 2024 - Updated Section 5 "Materials Information"
B	April 9, 2024 - Updated Section 5 "Materials Information"