



Piper Aircraft, Inc.
2926 Piper Drive
Vero Beach, FL, U.S.A. 32960

SERVICE NO. 1116A LETTER

Date: March 15, 2019

(S) (M)

MAINTENANCE ALERT

Service Letter (SL) 1116A supersedes SL 1116 in its entirety.

SUBJECT:

CONTACTOR MAINTENANCE

REASON FOR REVISION:

SL 1116A adds an approved contactor vendor and their required nut torques; updates effectivities; clarifies some content, and changes some to meet current format.

MODELS AFFECTED:

PA-18/S/A/AS Super Cub
PA-18/A/S/AS "150" Super Cub

PA-22 Tri-Pacer
PA-22/S-135 Tri-Pacer
PA-22/S-150/-160 Tri-Pacer

PA-22-108 Colt
PA-23 Apache
PA-23-160 Apache
PA-23-235 Aztec
PA-23-250 Aztec

PA-E23-250 Aztec

PA-24-180 Comanche
PA-24-250 Comanche
PA-24-260 Comanche
PA-24-400 Comanche
PA-28-140 Cherokee

PA-28-150/-160 Cherokee
PA-28-180 Cherokee

PA-28-235 Cherokee

SERIAL NUMBERS AFFECTED:

18-1 through 18-7632
18-3771, 18-3781 through 18-9015; 18-7309016 through 18-8309025; 1809001 through 1809113

22-1 and up
22-534 and up
22-2378, 22-2425 and up

22-8000 and up
23-1 through 23-1176, 23-1178 through 23-1182
23-1177; 23-1183 through 23-2046

27-505 through 27-622
27-1 through 27-4916; 27-7304917 through 27-7554168;
27-7654001 through 27-8154030

27-2505 through 27-4916; 27-7304917 through 27-7554168

24-1 through 24-3687
24-1, 24-103 through 24-3687
24-3642, 24-4000 through 24-5034

26-2 through 26-148
28-20001 through 28-26946; 28-7125001 through 28-7725290

28-03; 28-1 through 28-4377 and 28-1760A
28-03; 28-671 through 28-5859; 28-7105001 through 28-7205318

28-10001 through 28-11378; 28-7110001 through 28-7210023

ATA/JASC: 2435

(OVER)

PA-28-235 Cherokee	28E-11; 28-7310001 through 28-7710089
PA-28-236 Dakota	28-7911001 through 28-8611008; 2811001 through 2811050
PA-28-151 Warrior	28-7415001 through 28-7715314
PA-28-161 Cadet	2841001 through 2841365
PA-28-161 Warrior II	28-7716001 through 28-8216300, 28-8316001 through 28-8616057; 2816001 through 2816109
PA-28-161 Warrior III	2816110 through 282816119; 2842001 and up
PA-28-181 Archer II	28-7690001 through 28-8690056, 28-8690061, 28-8690062; 2890001 through 2890205
PA-28-181 Archer III	2890206 through 2890231; 2843001 and up; 2881001 and up
PA-28-201T Turbo Dakota	28-7921001 through 28-7921095
PA-28R-180 Arrow	28R-30002 through 28R-31270; 28R-7130001 through 28R-7130013
PA-28R-200 Arrow	28R-35001 through 28R-35820; 28R-7135001 through 28R-7135229
PA-28R-200 Arrow II	28R-7235001 through 28R-7235545
PA-28R-201 Arrow III	28R-7737002 through 28R-7837317; 2837001 through 2837061; 2844001 and up
PA-28R-201T Turbo Arrow II	28R-7703001 through 28R-7803374; 2803001 through 2803012
PA-28RT-201 Arrow VI	28R-7918001 through 28R-7918267
PA-28RT-201 Arrow VI	28R-8018001 through 28R-8218026
PA-28RT-201T Turbo Arrow VI	28R-7931001 through 28R-8631005; 2831001 through 2831038
PA-30 Comanche	30-1 through 30-2000
PA-39 Comanche	39-1 through 39-162
PA-31 Navajo	31-2 through 31-900; 31-7300901 through 31-8312019
PA-31-300 Navajo	31-228 through 31-511
PA-31-325 Navajo	31-7400990, 31-7512001 through 31-8312019
PA-31-350 Chieftain/T-1020	31-5001 through 31-5004; 31-7305005 through 31-8553002
PA-31P Pressurized Navajo	31P-1 through 31P-80; 31P-7300110 through 31P-7730012
PA-31P-350 Mojave	31P-8414001 through 31P-8414050
PA-31T Cheyenne/II	31T-7400002 through 31T-8120104
PA-31T1 Cheyenne I/IA	31T-7804001 through 31T-8104073, 31T-8104101, 31T-8304001 through 31T-8304003; 31T-1104004 through 31T-1104017
PA-31T2 Cheyenne IIXL	31T-8166001 through 31T-8166076; 31T-1166001 through 31T-1166008
PA-31T3 Cheyenne T-1040	31T-8275001 through 31T-8475001; 31T-5575001
PA-32-260 Cherokee Six	32-03, 32-04; 32-1 through 32-1297; 32-7100001 through 32-7800008
PA-32-300 Cherokee Six	32-15, 32-21; 32-40000 through 32-40974; 32-7140001 through 32-7940290

PA-32R-300 Lance	32R-7680001 through 32-7880068
PA-32RT-300 Lance II	32R-7885002 through 32-7985106
PA-32RT-300T Turbo Lance II	32R-7787001, 32R-7887002 through 32-7987126
PA-32-301 Saratoga	32-8006002 through 32-8606023; 3206001 through 3206098
PA-32-301FT Piper 6X	3232001 through 3232074
PA-32-301XTC Piper 6XT	3255001 through 3255051
PA-32R-301 Saratoga SP	32R-8013001 through 32R-8613006; 3213001 through 3213028, 3213030 through 3213041
PA-32R-301 Saratoga II HP	3213029, 3213042 through 3213103; 3246001 through 3246244
PA-32R-301T Turbo Saratoga SP	32R-8029001 through 32R-8629008; 3229001 through 3229003
PA-32R-301T Turbo Saratoga	32R-8024001 through 32-8424002
PA-32R-301T Saratoga II TC	3257001 and up
PA-34-200 Seneca	34-E4; 34-7250001 through 34-7450220
PA-34-200T Seneca II	34-7570001 through 34-8170092
PA-34-220T Seneca III	34-8133001 through 34-8633031; 3433001 through 3433172; 3448001 through 3448037
PA-34-220T Seneca IV	3448038 through 3448079; 3447001 through 3447029
PA-34-220T Seneca V	3449001 and up
PA-36-285 Pawnee II	36-7360001 through 36-7660135
PA-36-300 Brave	36-7560001 through 36-8160023
PA-36-375 Brave	36-7802001 through 36-8302025
PA-38-112 Tomahawk	38-78A0001 through 38-82A0122
PA-42 Cheyenne III	42-7800001 through 42-8001106
PA-42-720 Cheyenne IIIA	42-8301001, 42-8301002; 42-5501003 through 42-5501060 (except 42-5201024, 42-5501028, 42-5501032, and 42-5501034 through 42-5501038)
PA-42-1000 Cheyenne 400LS	42-5527002 through 42-5527044
PA-44-180 Seminole	44-7995001 through 44-8195026; 4495001 through 4495013; 4496001 and up
PA-44-180T Seminole	44-8107001 through 44-8207020
PA-46-310P Malibu	46-8408001 through 46-8608067; 4608001 through 4608140
PA-46-350P Mirage/M350	4622001 through 4622200; 4636001 and up
PA-46R-350T Matrix	4692001 through 4692214
PA-46-500TP Meridian/M500	4697001 and up
PA-46-600TP M600	4698001 and up

COMPLIANCE TIME: Whenever a contactor is serviced or replaced

PURPOSE: Field reports indicate the need to clarify instructions that are on a label on contactors, which describe the proper procedure for attaching terminals. If the proper procedure is not followed, wrenching torque may be transmitted to components inside the contactor, causing internal damage that may go undetected. Of special concern, if a starter contactor is damaged in this manner, it can fail unexpectedly in the closed position, causing the following scenario to occur: When the main power bus is energized, the starter motor will immediately turn on, causing an uncommanded rotation of the propeller, with serious potential for injury to anyone in the propeller's path.

INSTRUCTIONS:

CAUTION: APPLYING EXCESSIVE TORQUE TO THE TERMINALS OF A STARTER CONTACTOR CAN RESULT IN INTERNAL DAMAGE TO THE CONTACTOR. THIS DAMAGE CAN CAUSE THE STARTER TO ENGAGE WHEN THE MAIN POWER BUS IS ENERGIZED. THIS WILL RESULT IN AN UNCOMMANDED ROTATION OF THE PROPELLER, POSING A SERIOUS SAFETY RISK TO ANYONE IN THE PROPELLER'S PATH.

Service spares replacement contactors, whatever device they are installed onto, are configured out-of-the-box as shown in Figure 1. Contactors are labeled with instructions in red text that read:

DO NOT REMOVE INNER NUT WHEN ASSEMBLING. USE WRENCH TO HOLD INNER NUT IN PLACE WHEN APPLYING OUTER NUT.

The "inner nut" refers to nuts that are supplied with the contactors. When installing wire terminals onto the threaded posts, two wrenches must be used: One wrench (the back-up wrench) is placed on the inner nut to hold it stationary; the other wrench turns and tightens the outer nut.

Piper models may have contactors manufactured by either White-Rodgers or Lamar. The correct nut torques, by manufacturer, are:

- White-Rodgers:
 - On the main contactor terminal nuts (5/16 – 24 thread), use 45 to 55 inch-pounds (in-lb).
 - On the control coil terminals nuts (#10 – 32 thread), use 12 to 18 in-lb.
- Lamar:
 - On the main contactor terminal nuts (5/16 – 24 thread), use 35 to 45 in-lb.
 - On the control coil terminals nuts (#10 – 32 thread), use 10 to 15 in-lb.

NOTE: The proper installation torque for nuts installed on the threaded terminal posts is also labeled on the contactor.

NOTE: Fastener torques shown above reflect the specifications of the contactor manufacturer at the time of publication of this maintenance alert service letter, and are subject to change. Adhere to vendor installation instructions provided with any Piper approved replacement contactor.

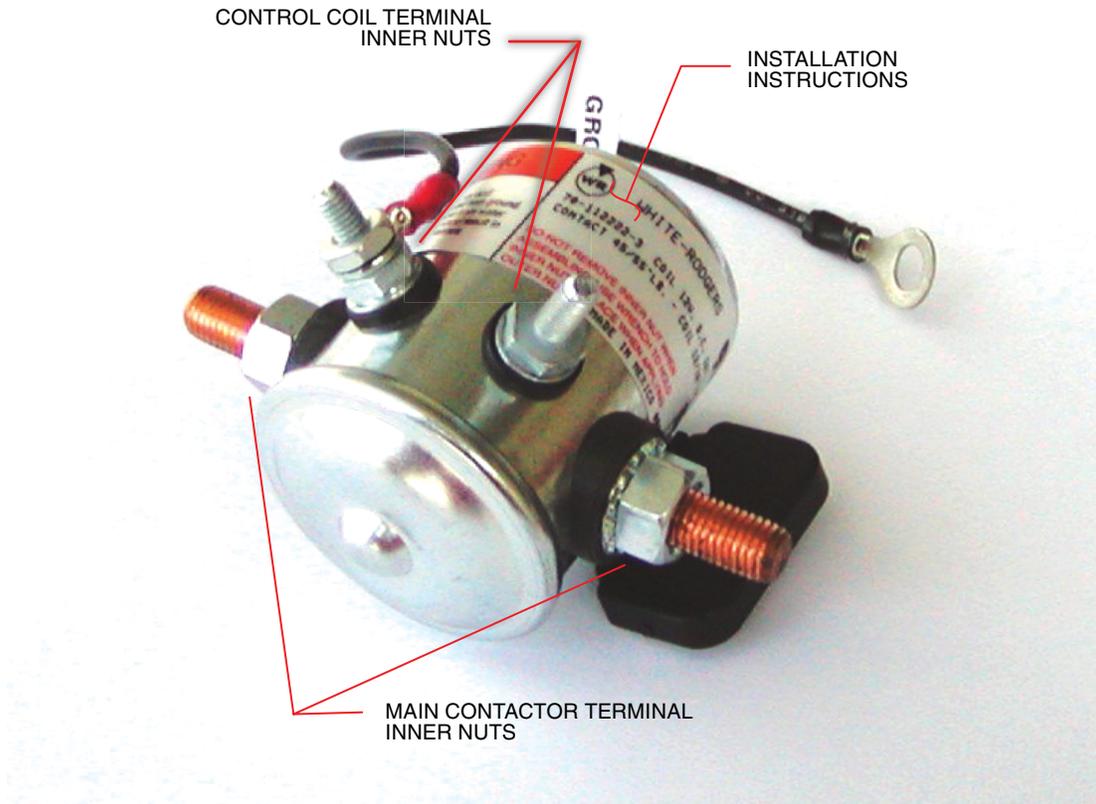


Figure 1
Typical Contactor

MATERIAL REQUIRED: N/A

AVAILABILITY OF PARTS: Your Piper Approved Service Center

EFFECTIVITY DATE: This service letter is effective upon receipt.

SUMMARY: N/A

NOTE: Please notify the factory of any address/ownership corrections. Changes should include aircraft model, serial number, and current owner's name and address.

Corrections and/or changes should be directed to:

PIPER AIRCRAFT, INC.
Att'n: Customer Service
2926 Piper Drive
Vero Beach, FL 32960
or:
CustomerService@piper.com
Please include in subject line: "Aircraft ownership update"