



2141 ICON Way, Vacaville, CA 95688 - Tel: 707.564.4000 – www.iconaircraft.com

SAFETY DIRECTIVE/ALERT

SD-051117 REV A

DATE ISSUED: 05/11/2017
DATE EFFECTIVE: 05/11/2017
SUPERSEDES NOTICE: N/A
SUBJECT: Throttle cable assembly damage
AIRCRAFT AFFECTED: **MODEL:** A5
S/N: 00001 to 00020
REQUIRED ACTION: Inspect throttle cable assembly and replace if damaged
TIME OF COMPLIANCE: 1) If the aircraft throttle has any tendency to retract toward idle when at full throttle stop – inspect Immediately.
2) If no tendency of the throttle to retract when at full throttle – in the next 10 hours of service.

PURPOSE:

ICON is committed to designing, manufacturing, delivering, and supporting a high quality Light Sport Aircraft, providing a level of safety well beyond expectations. ICON has experienced several reports that the throttle lever will retract $\frac{1}{4}$ to $\frac{1}{2}$ travel when actuated to full throttle and released. This type of behavior is not considered a normal function of the throttle system, and as such no retraction tendency is acceptable. ICON believes that it is possible that some of the throttle cables and/or conduits were improperly installed, damaged upon installation, or have subsequently been damaged during routine maintenance. The damage or improper installation causes excess friction in the cable resulting in excessive cable drag and subsequent kinking behavior in the throttle cable when throttle lever is actuated to full.

PARTS LIST:

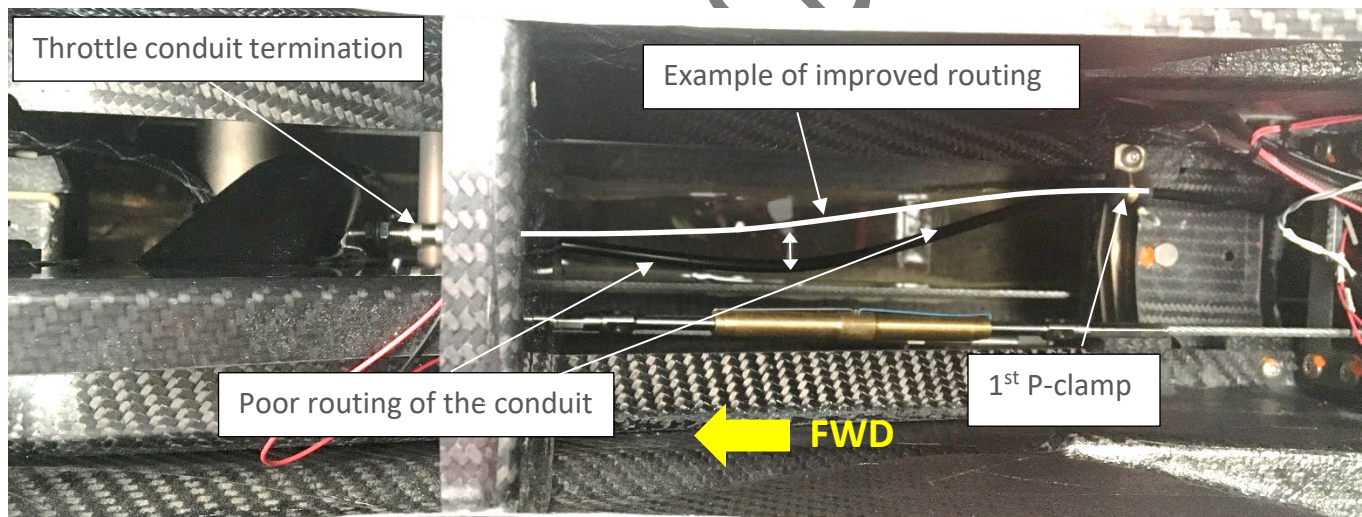
PART	DESCRIPTION	QTY
6271	TERMINAL, CONDUIT, MCFARLANE SLIP FIT	2
HWCC-1	CABLE HOUSING, PTFE LINED, .063, BLACK	1
ICA008253	CABLE, THROTTLE	1
MS24665-151	PIN, COTTER, CRES, .063X.500	1
MA830	ADHESIVE, METHACRYLATE 2-Part	A/N
TY24MX	CABLE-TIE, NYLON 6-6, 30LB, 5.50, TY-RAP	A/N
LOCTITE 243	THREADLOCKER, PRIMERLESS, OIL TOL, REMOVABLE MED STR, BLUE	A/N
TEF-GEL	TIKAL ANTI-CORROSION COMPOUND	A/N

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All tasks are to be performed by an ICON Aircraft, Inc. trained mechanic with an Airframe certificate.

1. Remove center console armrest and bucket, remove throttle handle, and throttle bezel in accordance with the most current ICON A5 maintenance manual (ICA000833).
2. If there is a permanent bend/deformation in the cable between the lever and the conduit entry, the throttle cable must be replaced.
3. Visually inspect the throttle cable from the lever to the entry into the conduit while moving the throttle lever from idle to full several times with varying speeds that would be considered typical throttle applications.
4. If the throttle cable has any tendency to buckle or kink while going from idle to full the throttle the cable must be replaced.
5. Inspect the conduit routing between the conduit termination and the first p-clamp. It should be a nearly straight with smooth bends. There should be not be any excess build-up of conduit as shown in the photo below. If so loosen the 1st P-clamp and remove any excess. This may also be accomplished during step 6 below.



6. Loosen the check nuts on the throttle conduit terminal, run the check nut to the base of the conduit termination and re-tighten the check nuts to lock the conduit in place. This will move the conduit forward, decreasing the effective buckling length of the cable. Actuate the throttle lever to full and ensure that the throttle cable fork swage does not contact the conduit terminal, if so, adjust the terminal position such that it doesn't.
7. Remove baggage inspection panel and locate and inspect the throttle conduit routing. There should be no permanent bends or deformations in the conduit. Inspect the center console

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intercostal for the rubber grommet presence of the rubber grommet. If so replace the conduit. An example of a permanent bends are shown in photo below.



8. Inspect the conduit from the firewall pass through to the engine side conduit termination. There should be no permanent bends or deformation in the conduit. If so replace the conduit.
9. Re-install center console armrest and bucket, remove throttle handle, and throttle bezel in accordance with the most current ICON A5 maintenance manual (ICA000833).

Inspection of cable friction and removal of throttle cable

1. Disconnect the throttle cable at the throttle body and at the throttle lever shown in the drawings of the latest maintenance manual.
2. Remove the ELT in accordance with the latest maintenance manual.
3. Push and pull on either end of the cable, moving it back and forth an inch or two. Assess the level of friction in the cable. It should move freely with only a slight drag. If friction is excessive or abnormal, the conduit must be replaced. Proceed to the next step if removing the cable only.
4. Carefully and slowly pull on the forked end of the throttle cable to slide the cable out of the conduit through the ELT access panel. Do not pull too fast as heat from the friction in the cable and conduit can irreparably damage the conduit inner PTFE tube.

Installation of throttle cable

1. Carefully insert the new ICA008253 throttle cable through the ELT access panel and into the conduit. Do not allow the cable to touch surfaces where it could gather dirt or dust. Use care not to permanently deform the cable during the installation process. The cable should easily route through the conduit. If the cable stops and can't be easily pushed/routed through without excessive twisting or shoving then the conduit needs to be replaced.

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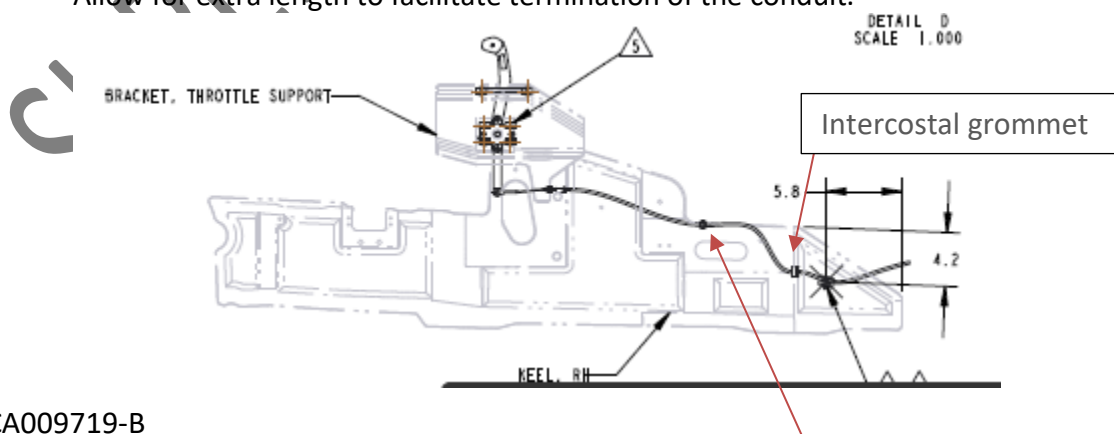
2. Connect the new throttle cable to the throttle lever using the existing pin and washer. Use a new cotter pin MS24665-151.
3. Rig the throttle in accordance with the latest maintenance manual section 3.7.3 and once finished, trim the excess throttle cable to within approximately 1" of the throttle body cable attachment fitting.
4. Re-install the ELT in accordance with the latest maintenance manual.

Removal of the throttle conduit (housing)

1. It is permissible to gain access to the conduit by removing access panels and parts that have removal instruction/procedures in the latest maintenance manual:
 - a. Remove both seat backs
 - b. Remove baggage floors
 - c. Remove fuel bladder assembly
2. Remove the fuel tank support structure by removing the 7 fasteners securing it to the fuselage and lifting the structure out of the fuselage. Several electrical Ty-Wrap must be removed as well.
3. After the throttle cable is removed. Disconnect the conduit terminal from the engine and the cockpit center section bulkhead.
4. Cut the Ty-Wraps that secure conduit to the fuselage.
5. Remove the three p-clamps (one in the center section two on the aft fuselage bulkhead behind the baggage compartment)
6. Cut the terminals off the conduit on both ends using a set of side cutters or a cut off wheel.
7. Spray some soapy water or other rubber safe lubricant at both grommets (at the forward bulkhead and one in the intercostal on the aft center section).
8. Then slide the conduit out of the fuselage.

Installation of the throttle conduit (housing)

1. Use a new HWCC-1 conduit and apply soapy water spray to the conduit prior to routing through the already installed grommets. Ensure grommets are properly installed.
2. Route the cable aft to forward through the center section intercostal grommet to the throttle lever. Allow for extra length to facilitate termination of the conduit.





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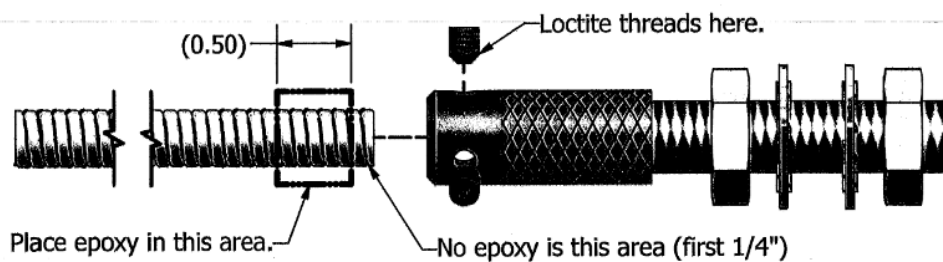
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1st p-clamp

3. Terminate the throttle lever side of the conduit using the following method. Use a metal cut off wheel or a metal cutting hand saw to cut the conduit. DO NOT use side cutters. Use MA830 plexus adhesive for the epoxy and Loctite 243 on threads of the set screws.

Installation Instructions For McFarlane P/N 6271 Slip Fit Terminal Assembly



The following installation options are available:

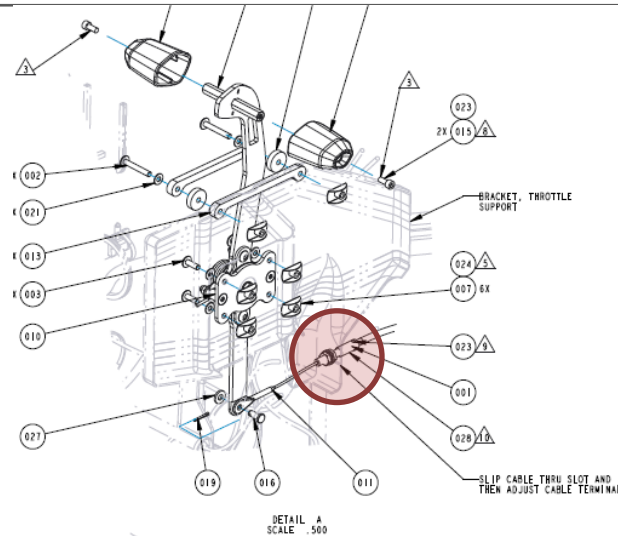
Permanent:

1. Apply a small amount of epoxy adhesive to the conduit in the indicated area above (do not apply epoxy to the first 1/4" of the conduit).
2. Using a rotating motion, insert the conduit fully into the slip fit terminal, wipe off any excess exposed epoxy.
3. Apply a small amount of thread locking adhesive to the indicated end of the set screws.
4. Tighten set screws until the screw bottoms out on the conduit, then add an additional 1/4 turn.
5. Before adhesive and epoxy cures, check cable function to ensure free movement and adjust set screws as necessary.
6. Allow adhesive and epoxy to cure completely before installation of the control.

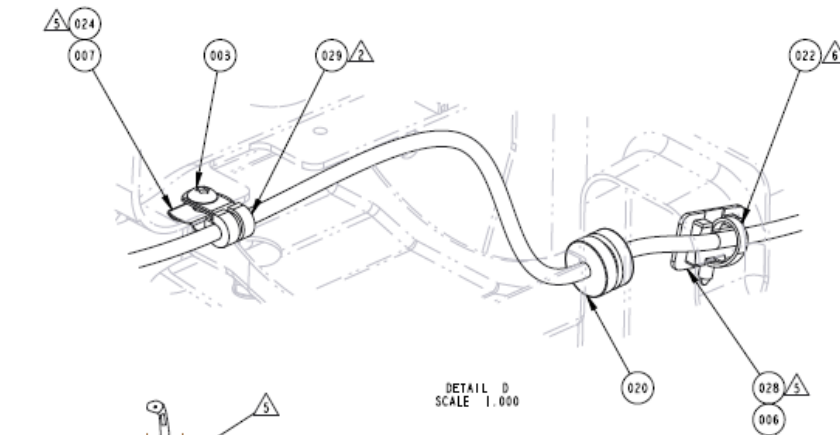
4. Adjust the aft check nut to bottom out on the base of the terminal then install the terminal into the center section bulkhead in the following location:

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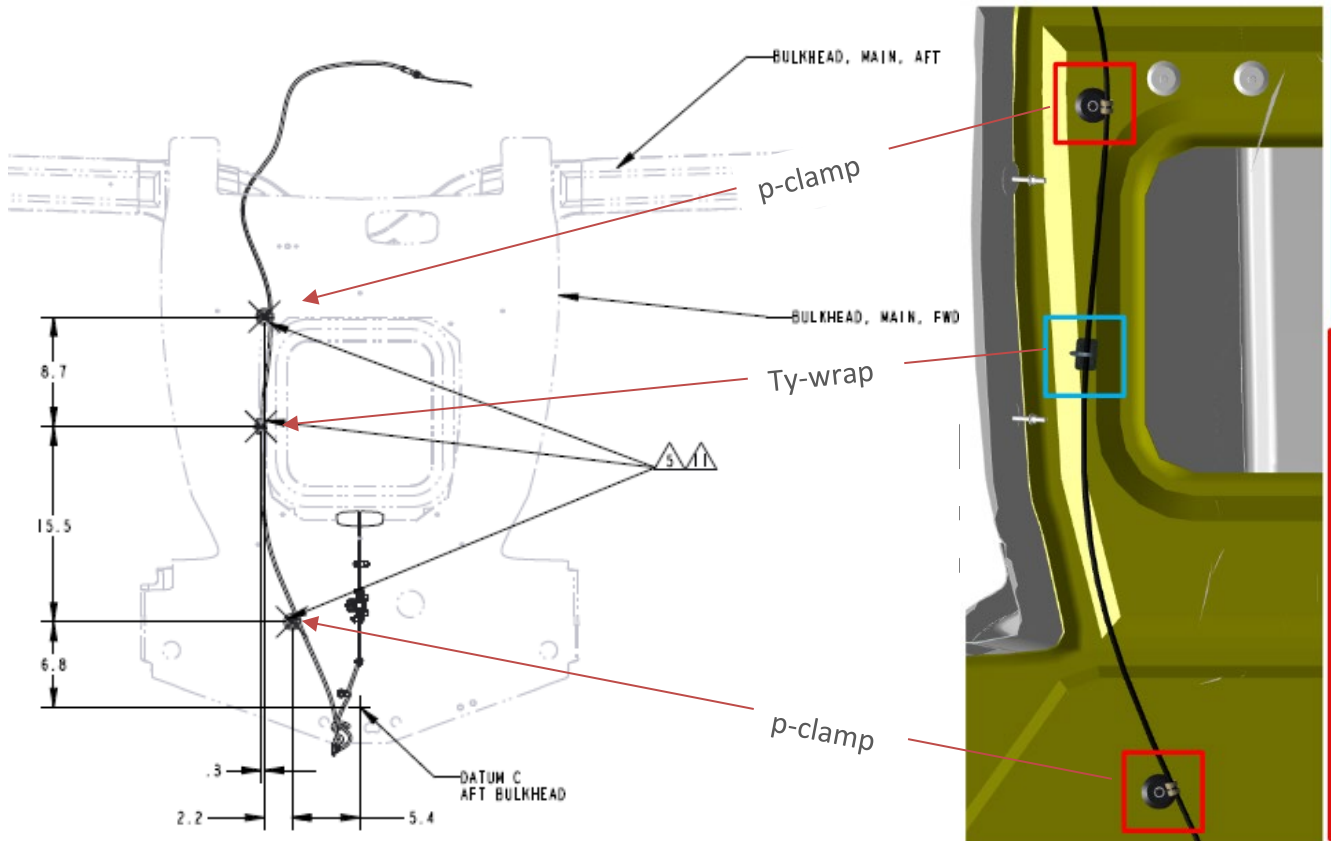
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5. Work any excess conduit length from the termination at the throttle lever to the intercostal grommet. Secure the cable with the removed p-clamp as shown below:



6. Secure the conduit with a TY24MX Ty-Wrap as shown above.
7. Route the remaining conduit through the forward main fuselage bulkhead underneath the main landing gear actuator and up the right side of the aft main bulkhead up through the right-side firewall access hole.
8. Secure the conduit with two p-clamps and TY24MX Ty-Wraps where there were removed as shown in the drawing below:

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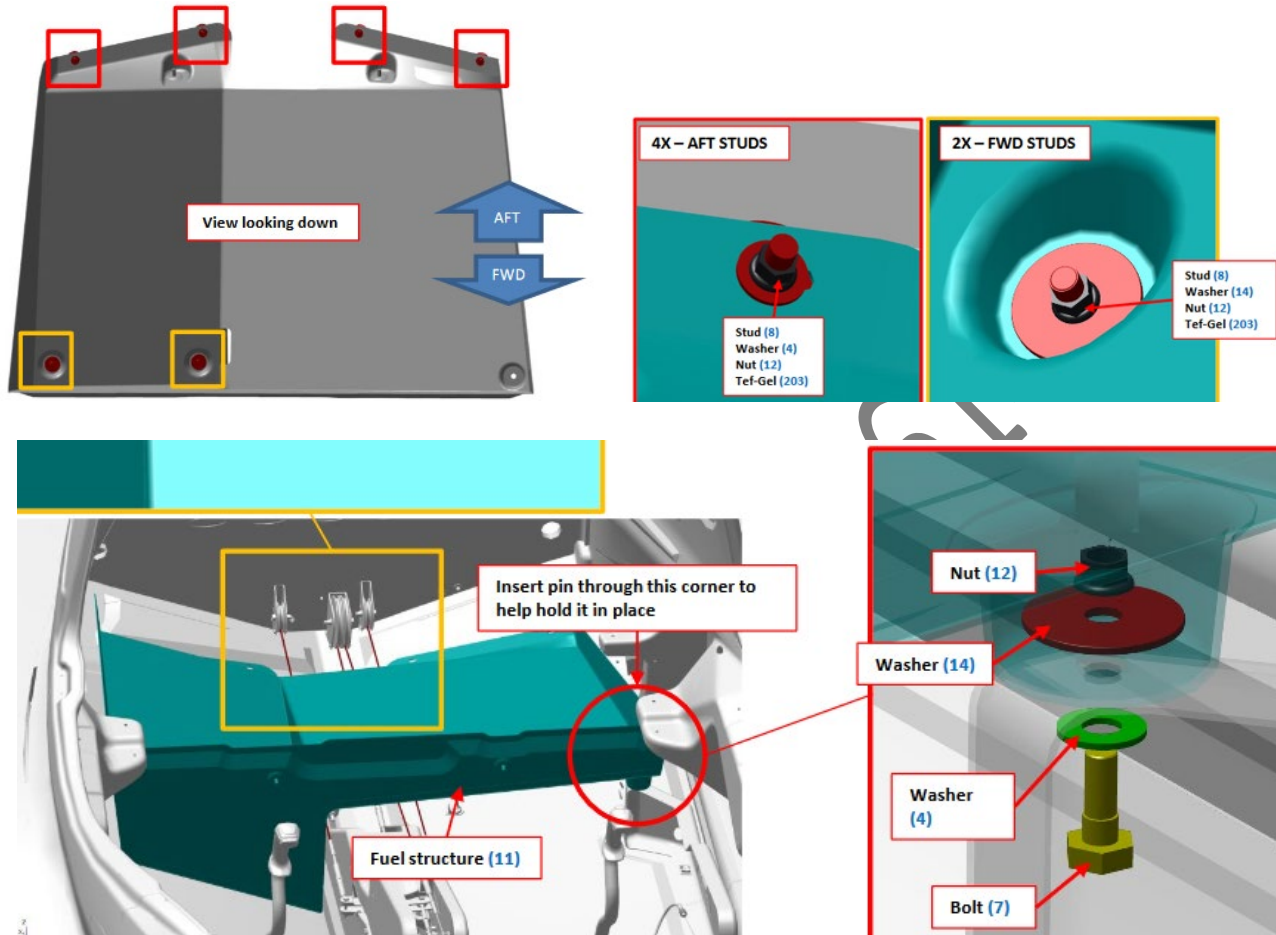
9. Terminate the engine side of the conduit at the engine throttle body using the procedure shown in step 3 of this instruction.
10. Route, install, and rig the new throttle cable as detailed in the procedure above. Ensure satisfactory function prior to re-installing the fuel tank and structure.

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11. Re-install the fuel tank support structure as shown torque the fasteners to 44 in-lb. Coat the threads and shanks of fasteners with Tef-Gel.



12. Re-secure the electrical harnesses with TY24MX Ty-Wraps where Ty blocks were installed.
13. Re-install the following in accordance with the latest maintenance manual:
 - a. Both seat backs
 - b. Baggage floors
 - c. Fuel bladder assembly

Make the following logbook entry:

"The corrective action of Safety Directive SD-050517-A has been complied with and reported to ICON Aircraft Customer Service and Support".

If you need assistance relocating your A5 to your home base or temporary storage arrangements, please contact ICON Aircraft and ask for Customer Service and Support.



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If you are no longer owner/operator of this aircraft, please forward this information to the present owner/operator and notify ICON Aircraft, Owners Center at:

ICON Aircraft
2141 ICON Way
Vacaville, CA 95688
(855) FLY-ICON or (707) 564-4000
support@iconaircraft.com

Please include the aircraft registration number, serial number, your name, and if known the contact information of the new owner/operator.

SUPERSEDED BY SD-06141

SAFETY DIRECTIVE APPROVAL


Bret Davenport

Compliance/CS&S Engineering

5/7/2017

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