ADVANCE
PRODUCTS & SYSTEMS, LLC

FLANGE ISOLATING GASKET KITS



ISOLATING SLEEVES & WASHERS
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ISO 9001:2015 CERTIFIED COMPANY - FM537405

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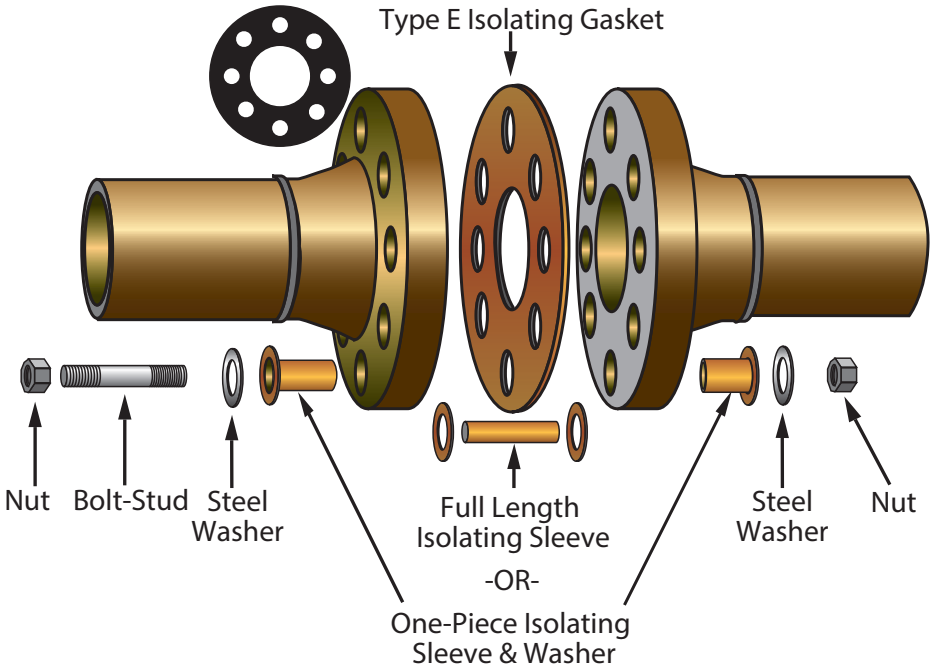
FLANGE ISOLATING GASKET KITS

Introduction

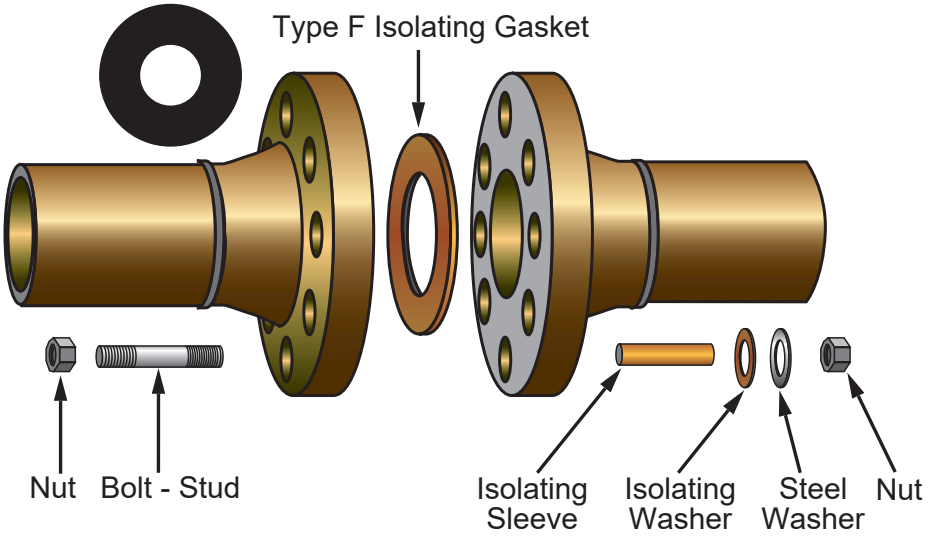
Preventing leakage in your carrier system is more crucial than ever considering the current economic and environmental climate. Within your carrier system, flanges are the most frequent source of leakage and should be sealed properly and cathodically isolated. Eliminating metal to metal contact, stray currents can be minimized, preventing corrosion and providing cathodic protection of the flanges.

Advance Products & Systems,LLC (APS) manufactures and maintains a supply of flange isolation gasket kits manufactured in accordance with industry-standard flange specifications such as ANSI, AWWA, etc. Our high-quality products and materials provide an effective seal and electrical isolation of flanges, eliminating leakage, preventing corrosion, and preserving the integrity of the pipeline.

Double Isolation Set



Single Isolation Set





Type F

Type F gaskets are designed to fit the raised face portion of the flanges. The inside diameter of the bolt hole circle is slightly smaller compared to the outside diameter of the gasket, ensuring precise, automatic gasket positioning. The standard manufacturing thickness of a Type F gasket is 1/8" and are available in a variety of materials.

Type E

Type E is a full-faced gasket with precisely machined bolt holes and an outside diameter matching the flange. This design facilitates proper alignment of the gasket during installation and prevents foreign material from shorting the flange isolation. Type E gaskets have a standard manufacturing thickness of 1/8" and are available in the same materials as the Type F.

Type D

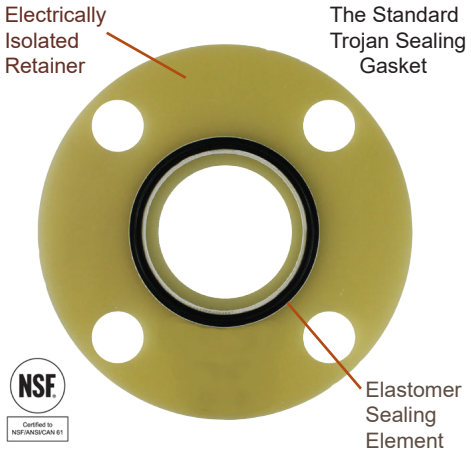
Type D gaskets are specifically designed to fit into the ring groove of RTJ (ring-type-joint) flanges. They are manufactured of medium weave, fabric-reinforced phenolic material and are sized to ANSI and API specifications. Type D gaskets are made to API specifications and are available in two shapes: oval and octagonal. BX gaskets with pressure ratings up to 15,000 PSI are also available.

Types of Retainers

RETAINER	WATER ABSORPTION	TENSILE STRENGTH	COMPRESSION STRENGTH	DIELECTRIC VALUES	CONTINUOUS OPERATING TEMPERATURE MIN	CONTINUOUS OPERATING TEMPERATURE MAX	FLEXURAL STRENGTH
CE	2.00	11,000	34,000	550	-75 °F/-59 °C	257 °F/125 °C	17,500
G-3	2	42,000	76,000	375	-75 °F/-59 °C	347 °F/175 °C	55,000
G-7	0.19	25,000	40,000	350	-75 °F/-59 °C	428 °F/220 °C	18,500
G-10	0.10	51,000	66,000	800	-200 °F/ -129 °C	302 °F/150 °C	65,000
G-10N	0.10	51,000	66,000	800	-60 °F/-51 °C	240 °F/115 °C	65,000
G-11	0.08	43,000	58,000	550	-200 °F/-129 °C	400 °F/205 °C	58,000
XPN	1.50	18,000	45,000	600	-60 °F/-51 °C	240 °F/115 °C	29,000
XP	1.50	18,000	45,000	600	-65 °F/-54 °C	266 °F/130 °C	29,000

APS flange isolation gasket kits are manufactured according to ANSI B16.5 specifications up to 24". Above 24", please provide the specifications of your flange using our convenient worksheet. Technical assistance is available upon request.

THE TROJAN

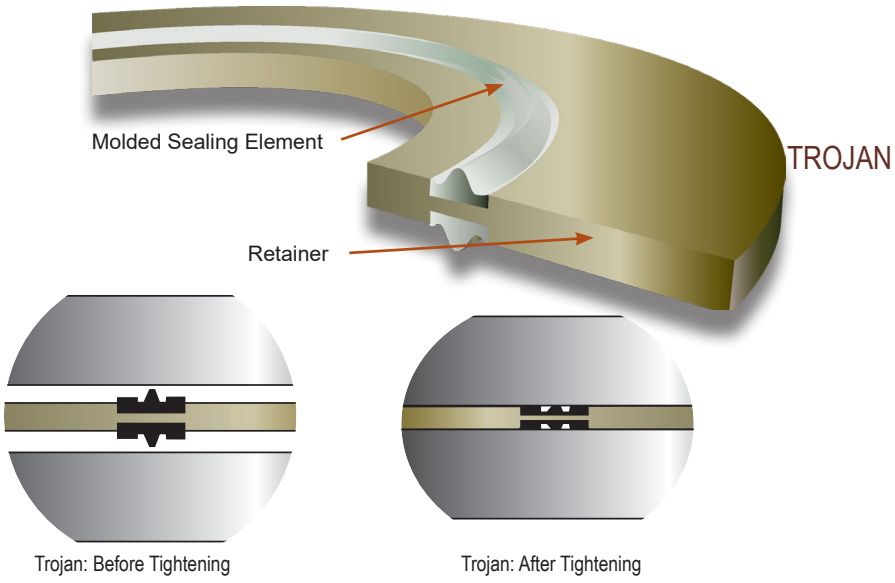


TROJAN SEALING GASKETS

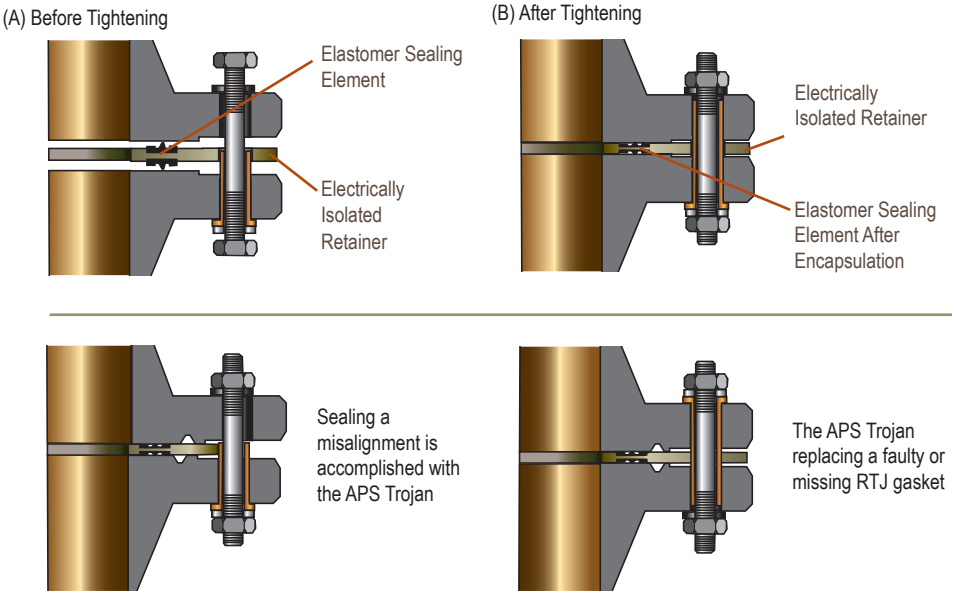
For dependable static sealing, the Trojan gasket is a must. The elastomer sealing element is encapsulated in the electrically isolated retainer. Our most popular sealing element materials are Nitrile® (-60°/240 °F min./max. operating temperature), Viton® (-75°/400 °F), and PTFE (-425°/450 °F). The encapsulation of the sealing element permits only micro-exposure of the seal to hostile environments, chemicals and corrosive fluids.

The controlled confinement of the elastomer sealing ring within the retainer allows the availability of a 92% to 94% filled volume groove. A consistent controlled pressure seal can always be obtained without tremendous bolt loads. Reduced loads allow for reduced flange thickness with smaller circles and smaller bolt holes.

The cross section of APS' Trojan Sealing Gasket (A) shows the elastomer sealing element as it appears before compression between flanges. This compression causes the seal to effectively fill the void of the groove and encapsulate, (B) permitting only micro-exposure of the actual seal to hostile elements either from within or without.

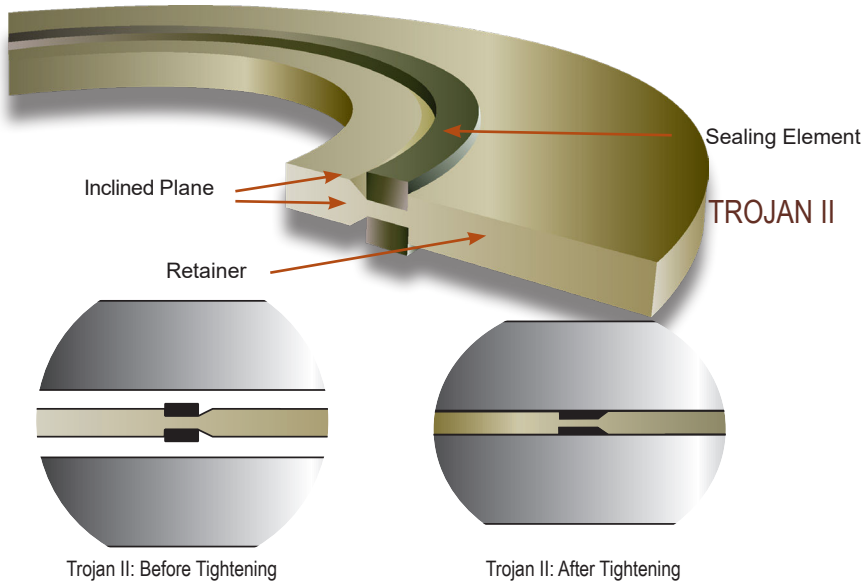


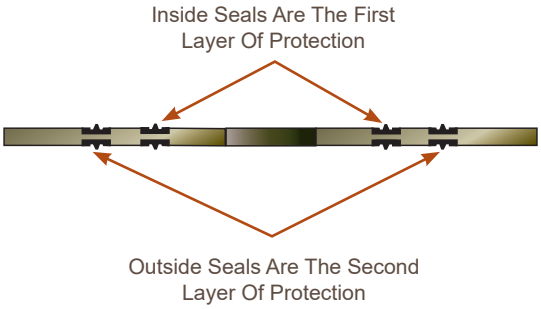
All too often, difficult sealing situations arise from mismatched or misaligned flanges. A quick, cost effective solution is the APS Trojan and Trojan II. Also used in place of damaged or missing RTJ gaskets, the Trojan series forms a quick, static seal and is often the reasonable alternative to flange replacement.



Available Sealing Element Materials

Sealing Elements				
SEAL MATERIALS	MIN OPERATING TEMPERATURE		MAX OPERATING TEMPERATURE	
	°F	°C	°F	°C
NITRILE	-60	-51	240	1156
VITON	-75	-59	400	204
EPDM	-40	-40	250	121
PTFE	-425	-254	450	232

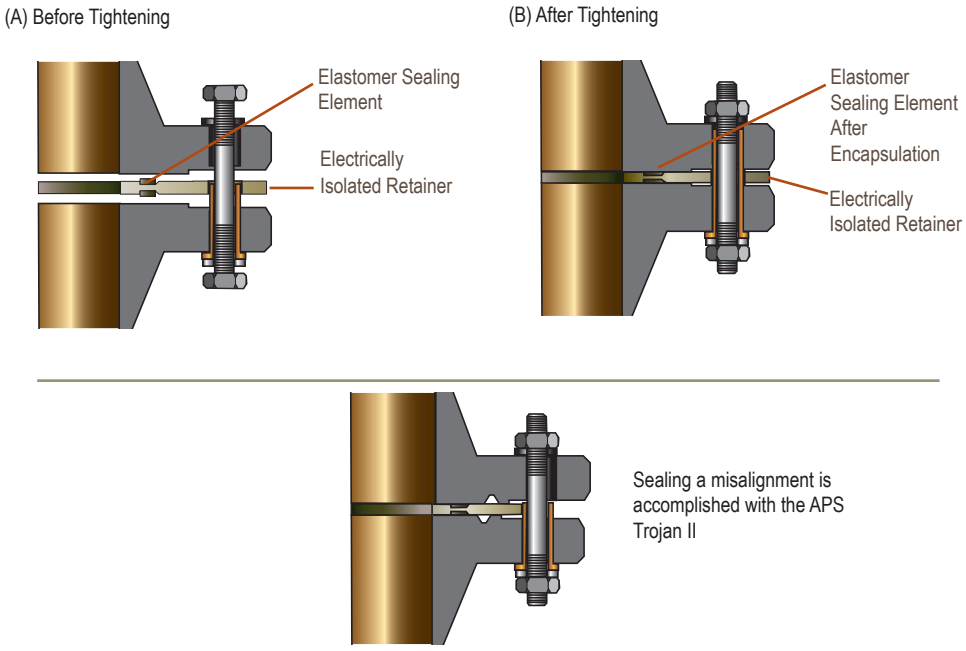




Cross Section Of The
Duplex Seal Trojan Sealing Gasket

DUPLEX SEAL TROJAN

Four seals on the new Duplex Seal Trojan further ensure the integrity of the sealing capability of an already proven reliable gasket. For areas where absolute zero leakage is a must, the Duplex Seal Trojan works twice as hard.



Sealing a misalignment is accomplished with the APS Trojan II

WHY A DUPLEX SEAL?

The use of duplex seals on gaskets is primarily for two reasons: one, in the case that flange faces are slightly out of tolerance, the secondary seal will increase the chances of a successful seal. Two, the duplex seals can help in the circumstance of a seal groove (present) or a change of ID dimension of the two elements being connected. In the case that one of the sealing elements is not being compressed, the other one will be sufficient to accomplish a complete seal between flanges (as it did on past applications where dual seals were not standard practice).

ADVANTAGES OF THE TROJAN & TROJAN II

- Suitable for flanges that are mismatched and/or misaligned
- Can be used in place of RTJ rings
- Minimal initial torque and no re-torquing required
- Seal design tested for high pressures. Please consult factory for specific pressures
- Compensates for variations in temperature, pressure, vibration, compression , etc.
- Micro-exposure of the sealing element to hostile environments, chemicals, and corrosive fluids
- Significantly reduces human error during installation
- Large selection of materials with high dielectic strength available
- Low installation and maintenance costs
- Competitive price
- Gaskets through 144”
- G-10 gaskets with EPDM or PTFE seals certified to NSF/ANSI/CAN 61available

ISOLATING SLEEVES & WASHERS • FLANGE PROTECTORS



ISOLATING SLEEVES AND WASHERS

Isolating sleeves manufactured in various materials and sizes, with standard 1/32" wall thickness, are available to meet every customer's needs. Also available are one-piece integral sleeves and washers which are made of Minlon, providing superior compression strength. G-10 Integral sleeves are available in sizes through 3" and Minlon Integral sleeves are available in sizes through 1". A variety of high temperature sleeves are also stock items.

With each isolating washer, an S.A.E. electroplated steel washer is provided to protect the isolating washer from damage by the nut. APS flange isolation sets are available in single or double washer kits.



KLEERBAND® FLANGE PROTECTORS

An additional high level of corrosion protection can be attained with the use of Kleerband® flange protectors, stainless steel flange protectors and Radolid® protection caps.

Flange protectors and corrosion inhibitor grease are recommended on all isolated flanges. By encapsulating the flange cavity with the flange protector and injecting our corrosion inhibitor grease, you can rely on your cathodic protection system to provide you with years of trouble free service.

This system totally eliminates any possibility of foreign material lodging between the faces of your flange or corrosion bridging across and creating a short.



RADOLID® PROTECTION CAPS

Radolid® protection caps from APS protect nuts and bolts from destructive corrosion. Caps are easily pressed onto the bolted joints by hand, snapping into place when iWn position. We recommend loading caps with APS' Kleergel®, a high-melt corrosion inhibitor grease, for added protection.



KLEERGEL® CORROSION INHIBITOR GREASE

APS' Kleergel® is a non-flammable, non-staining, and non-toxic synthetic grease that maintains good viscosity over wide temperature ranges, is 100% waterproof, dielectric, and enhanced with anti-wearing, anti-rusting, and anti-oxidative additives.

Isolating Material

MATERIAL	DIELECTRIC STRENGTH VOLTS/MIL	WATER ABSORPTION %	CONTINUOUS OPERATING TEMPERATURE MIN	MAX
Mylar	4,000	.8	-94 °F / -70 °C	300°F / 149°C
Minlon	1,200	.22	-40 °F / -40 °C	250°F / 121°C
Nomex	500	-	-112 °F / -80 °C	450°F / 232°C
G-10	800	.10	-200 °F / -129 °C	302°F / 150°C
G-3	375	2	-75 °F / -59 °C	347°F / 175°C
G-7	350	.19	-75 °F / -59 °C	428°F / 220°C
G-11	550	.08	-200 °F / -129° C	400°F / 205°C

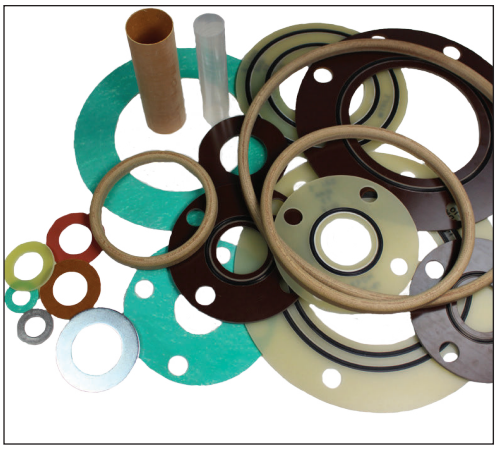
HIGH TEMPERATURE PRODUCTS

GASKETS: NEMA grades G-3, G-7, G-10, and G-11, Durlon

SLEEVES: Nomex, NEMA grades G-7 and G-10, Durlon

WASHERS: NEMA grades G-7 and G-10, Durlon

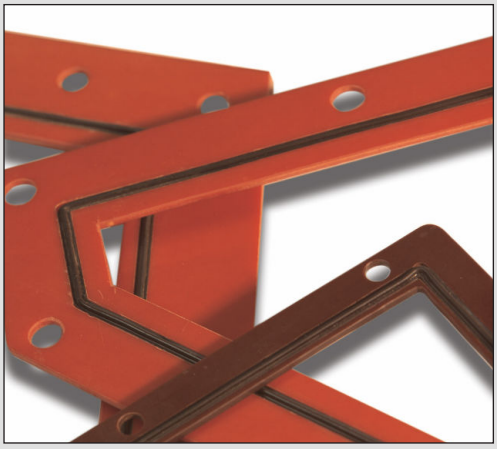
Other high temperature materials are available upon request. It is recommended that the factory be contacted to discuss technical data on the above referenced products.



SPECIAL APPLICATION

Advance Products and Systems, LLC is well equipped to produce special isolation pads and gaskets occasionally needed for odd shaped connections. Any configuration or required design can be manufactured by us for applications such as special closures, vaults, steel boxes, special connectors and utility and light poles, just to name a few.

If it needs to be sealed, we can be of service.



PACKAGING

Each APS flange isolation gasket kit is packaged individually in durable corrugated boxes. Isolating sleeves and washers are packaged separately and are cushioned within the box to protect them from damage during shipment. Each set is clearly tagged with flange size, pressure rating, type of isolating sleeve and whether it is a single washer or double washer set. For your reference, a recommended bolt tightening sequence is provided with each kit.w



ORDER INSTRUCTIONS

- Gasket Type D, E or F
- Flange Size and Pressure Rating
- Single Washer or Double Washer Sets (SW or DW)
- Sleeve Material
- Retainer Material
- Sealing Element (Nitrile®, Viton® or PTFE)

OTHER PRODUCTS AVAILABLE

- Integra® Series Gaskets
- Kleerband® Flange Band Protectors
- Kleergel® Corrosion Inhibiting Grease
- Radolid® Nut & Bolt Protection Caps
- Casing Spacers & End Seals
- ApogeeAero® Roller Casing Spacers
- Bore & Duct Bank Spacers
- Innerlynx® Modular Mechanical Seals
- Wall Sleeves
- Foreman Nite Caps
- UBolt-Cote® & Atlas Pipe Support® Pads
- IsoJoint® Monolithic Isolating Joints
- Safety Spray Shields

ADVANCE PRODUCTS & SYSTEMS, LLC

PO Box 60399
Lafayette, Louisiana 70596-0399
800-315-6009 • 337-233-6116 • Fax 337-232-3860
E-Mail: sales@apsonline.com • Website: www.apsonline.com

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BBB ACCREDITED BUSINESS

Made in USA

NSF Certified to NSF/ANSI/CAN 61

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