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TECHNICAL SERVICE BULLETIN  
RAFNA RAILGEAR

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**RAFNA VEHICLE WHEEL MODIFICATION KITS 1996 - PRESENT**

**ISSUE DATE:** November 10, 2004

**TSB NUMBER:** TSB-160 Rev 0

<b>HAZARD / URGENCY RATING</b>		
	<b>DANGER</b>	<b>An operating procedure, practice or condition which may result in injury or death, if not carefully observed or followed.</b>
	<b>WARNING</b>	<b>An operating procedure, practice or condition which may result in damage to equipment, if not carefully observed or followed.</b>
	<b>CAUTION</b>	<b>As essential issue effecting operating procedure/s, practice/s or condition/s.</b>
<b>X</b>	<b>INFORMATIONAL</b>	<b>An advisory which may be of interest.</b>

**APPLICABLE EQUIPMENT:**

All vehicles equipped with Rafna railgear and / or Rafna wheel modification kits.

**SUMMARY:**

This technical service bulletin provides a full listing of Rafna vehicle wheel modification kits available since 1996. It details which wheels, spacers, studs, nuts, and torque values should be used in combination and on which vehicles. It also provides figures for identifying wheel modification kit components in the field.

**IMPACT:**

Operational, functional and safety issues may arise if the incorrect components are used or the incorrect torque values are used. This information is already in the individual Operation, Parts, and Service manuals supplied with the vehicles and so this technical service bulletin only serves as an assembly and update of all the data.

**ACTION:**

Following is a table identifying each available wheel kit as well as figures identifying each component. Determine which wheel kit is on the vehicle and then ensure that the correct components and torque values are used as per the table and figures. When a component is specified as a Rafna part number, it is imperative that it is purchased directly from Rafna and not from other “equivalent” part suppliers such as auto parts stores.

Note the following glossary of terms:

**Rafna Kit Number:** Part number of the entire wheel modification kit.

**Vehicle Year:** Year of manufacture of the vehicle.

**Vehicle Make:** Brand name of the vehicle manufacturer.

**Vehicle Model:** Full model description of the vehicle.

**Drive:** Type of drive-train of the vehicle – 4x4 or 4x2.

**Wheel Stop Block:** Part number of the component used to restrict the steering system of the vehicle.

**Nut – Wheel To Spacer Or Hub:** Part number of the nut used to fasten the vehicle wheel to the studs in the spacer (if applicable) or part number of the nut used to fasten the vehicle wheel and spacer (if applicable) directly to the studs in the vehicle hub. A specified dry torque value is also given for this nut (if applicable).

**Wheel:** Part number of the vehicle wheels.

**Spacer:** Part number of the spacer (if applicable).

**Spacer Studs:** Part number of the studs pressed into the spacer (if applicable).

**Nut – Spacer to Hub:** Part number of the nut used to fasten the spacer (if applicable) to the studs in the vehicle hub. A specified dry torque value is also given for this nut (if applicable).

**Hub Studs:** Part number of the stud pressed into the vehicle hub.

Note that an entry of “N/A” in any column indicates that no component is required and an entry of “OEM” in any column indicates that the Original Equipment Manufacturer’s component supplied with the vehicle is to be used.

## VEHICLES WITH RAFNA R-250HD OR R-290 MODEL RAILGEAR

RAFNA KIT NUMBER	VEHICLE				FRONT								REAR								
	YEAR	MAKE	MODEL	DRIVE	WHEEL STOP BLOCK	NUT - WHEEL TO SPACER OR HUB		WHEEL	SPACER	SPACER STUDS	NUT - SPACER TO HUB		HUB STUDS	NUT - WHEEL TO SPACER OR HUB		WHEEL	SPACER	SPACER STUDS	NUT - SPACER TO HUB		HUB STUDS
					P/N	P/N	TORQUE FT-LBS	P/N	P/N	P/N	P/N	TORQUE FT-LBS	P/N	P/N	TORQUE FT-LBS	P/N	P/N	P/N	P/N	TORQUE FT-LBS	P/N
HR-R-7102	1996-97	GMC	2500 / 3500 CLASSIC	4X2 / 4X4	R-2699	R-078	140	R-075	R-3587	N/A	N/A	N/A	R-085	R-078	140	R-075	R-2412 / R-2696	R-084	OEM	140	OEM
N/A	1996-97	GMC	2500 / 3500 CLASSIC	4X4	N/A	R-076	140	R-075	R-3587	N/A	N/A	N/A	OEM	R-076	140	R-075	R-070	R-071	OEM	140	OEM
N/A	1998	GMC	2500 CLASSIC	4X4	R-2699	R-080	165 ZINC 125 MAGNI	R-079	R-2654	R-071	OEM	140	OEM	R-080	165 ZINC 125 MAGNI	R-079	R-2697	R-071	OEM	140	OEM
N/A	1998	GMC	3500 CLASSIC	4X4	R-2699	R-080	165 ZINC 125 MAGNI	R-079	R-2654	R-071	OEM	140	OEM	R-080	165 ZINC 125 MAGNI	R-079	R-2648	R-071	OEM	140	OEM
HR-R-7103 / R-7104 / K-W25XXG006	1998-00	GMC	2500 / 3500 CLASSIC & 2500 SUBURBAN CLASSIC	4X4	R-2699	R-078	140	R-075	R-2695	N/A	N/A	N/A	R-085	R-078	140	R-075	R-2412 / R-2696	R-084	OEM	140	OEM
HR-R-7107	1998-00	GMC	2500 / 3500 CLASSIC & 2500 SUBURBAN CLASSIC	4X2	R-2462	R-078	140	R-075	R-2412 / R-2696	R-084	OEM	140	OEM	R-078	140	R-075	R-2412 / R-2696	R-084	OEM	140	OEM
HR-R-7105	1999-00	GMC	2500 - NEW BODY	4X4	R-2426	R-078	140	R-075	R-2695	N/A	N/A	N/A	R-085	R-078	140	R-075	R-2695	N/A	N/A	N/A	R-085
HR-R-7109	1999-00	GMC	2500 - NEW BODY	4X2	R-2469D/P	R-078	140	R-075	R-2479	R-084	R-077	140	OEM	R-078	140	R-075	R-2695	N/A	N/A	N/A	R-085
HR-R-7110 / K-W25XXG001	2001-04	GMC	2500HD	4X2 / 4X4	R-2426	R-078	140	R-075	R-2823	N/A	N/A	N/A	R-085	R-078	140	R-075	R-2823	N/A	N/A	N/A	R-092
HR-R-7112 / K-W25XXG002	2001-04	GMC	2500HD	4X2 / 4X4	R-2699	OEM	140	R-002	R-2402	N/A	N/A	N/A	OEM	OEM	140	R-002	N/A	N/A	N/A	N/A	OEM
K-W25XXG004 / 005	2001-04	GMC	2500HD	4X2 / 4X4	R-2699	S-201601	165	S-201500	R-2974	S-201600	OEM	140	OEM	S-201601	165	S-201500	R-2974	S-201600	OEM	140	OEM
HR-R-7112 / K-W25XXG002	2001-04	GMC	YUKON XL / SUBURBAN 2500	4X2 / 4X4	R-2699	OEM	140	R-002	R-2402	N/A	N/A	N/A	OEM	OEM	140	R-002	N/A	N/A	N/A	N/A	OEM

### VEHICLES WITH RAFNA R-250HD OR R-290 MODEL RAILGEAR

RAFNA KIT NUMBER	VEHICLE				FRONT								REAR								
	YEAR	MAKE	MODEL	DRIVE	WHEEL STOP BLOCK	NUT - WHEEL TO SPACER OR HUB		WHEEL	SPACER	SPACER STUDS	NUT - SPACER TO HUB		HUB STUDS	NUT - WHEEL TO SPACER OR HUB		WHEEL	SPACER	SPACER STUDS	NUT - SPACER TO HUB		HUB STUDS
					P/N	P/N	TORQUE FT-LBS	P/N	P/N	P/N	P/N	TORQUE FT-LBS	P/N	P/N	TORQUE FT-LBS	P/N	P/N	P/N	P/N	TORQUE FT-LBS	P/N
K-W25XXG004/005	2001-04	GMC	YUKON XL/ SUBURBAN 2500	4X2 / 4X4	R-2699	S-201601	165	S-201500	R-2974	S-201600	OEM	140	OEM	S-201601	165	S-201500	R-2974	S-201600	OEM	140	OEM
HR-R-7110 / K-W25XXG001	2001-02	GMC	YUKON XL/ SUBURBAN 2500	4X4	R-2426	R-078	140	R-075	R-2823	N/A	N/A	N/A	R-085	R-078	140	R-075	R-2823	N/A	N/A	N/A	R-092
K-W25XXG003	2003-04	GMC	YUKON XL/ SUBURBAN 2500	4X2 / 4X4	R-2426	R-078	140	R-075	R-2823	N/A	N/A	N/A	R-085	R-078	140	R-075	R-2823A	N/A	N/A	N/A	R-092
HR-R-7101	1996-98	FORD	F-250/350 SRW P/U	4X4	N/A	R-076	140	R-075	R-3587	N/A	N/A	N/A	OEM	R-076	140	R-075	R-070	R-071	OEM	140	OEM
K-W25XXF001	1999-04	FORD	F-250/350 SRW P/U	4X2 / 4X4	R-2413	OEM	165	R-083	R-2402	N/A	N/A	N/A	OEM	OEM	165	R-083	N/A	N/A	N/A	N/A	OEM
K-W25XXF002	1999-04	FORD	F-250/350 SRW P/U	4X2 / 4X4	R-2413	OEM	165	R-083O	R-2402	N/A	N/A	N/A	OEM	OEM	165	R-083O	N/A	N/A	N/A	N/A	OEM
K-W25XXF003 / 004	1999-04	FORD	F-250/350 SRW P/U	4X2 / 4X4	R-2413	S-201601	165	S-201500	R-2970	S-201600	OEM	165	OEM	S-201601	165	S-201500	R-2970	S-201600	OEM	165	OEM
HR-R-7108	2000	FORD	F-350 CHASSIS CAB DRW	4X4	R-2413	OEM	165	R-083	R-2402	N/A	N/A	N/A	OEM	OEM	165	OEM FORD 19.5	N/A	N/A	N/A	N/A	OEM
K-W25XXF005 / 006	2001-04	FORD	EXCURSION	4X2 / 4X4	R-2413	S-201601	165	S-201500	R-2970	S-201600	OEM	165	OEM	S-201601	165	S-201500	R-2981	S-201600	OEM	165	OEM

### VEHICLES WITH RAFNA R-450 VF/RR MODEL RAILGEAR

RAFNA KIT NUMBER	VEHICLE				FRONT								REAR								
	YEAR	MAKE	MODEL	DRIVE	WHEEL STOP BLOCK	NUT - WHEEL TO SPACER OR HUB		WHEEL	SPACER	SPACER STUDS	NUT - SPACER TO HUB		HUB STUDS	NUT - WHEEL TO SPACER OR HUB		WHEEL	SPACER	SPACER STUDS	NUT - SPACER TO HUB		HUB STUDS
					P/N	P/N	TORQUE FT-LBS	P/N	P/N	P/N	P/N	TORQUE FT-LBS	P/N	P/N	TORQUE FT-LBS	P/N	P/N	P/N	P/N	TORQUE FT-LBS	P/N
K-W45VRF001	1999-04	FORD	F-450/550 CHASSIS CAB DRW	4X2 / 4X4	N/A	OEM	OEM	OEM	N/A	N/A	N/A	N/A	OEM	OEM	165	R-086	N/A	N/A	N/A	N/A	OEM
N/A	1996-99	GMC	3500HD CHASSIS CAB DRW	4X2 / 4X4	N/A	OEM	OEM	OEM	N/A	N/A	N/A	N/A	OEM	OEM	150	OEM	R-562	R-069	R-068	150	OEM

### VEHICLES WITH RAFNA R-450 OT MODEL RAILGEAR

RAFNA KIT NUMBER	VEHICLE				FRONT								REAR								
	YEAR	MAKE	MODEL	DRIVE	WHEEL STOP BLOCK	NUT - WHEEL TO SPACER OR HUB		WHEEL	SPACER	SPACER STUDS	NUT - SPACER TO HUB		HUB STUDS	NUT - WHEEL TO SPACER OR HUB		WHEEL	SPACER	SPACER STUDS	NUT - SPACER TO HUB		HUB STUDS
					P/N	P/N	TORQUE FT-LBS	P/N	P/N	P/N	P/N	TORQUE FT-LBS	P/N	P/N	TORQUE FT-LBS	P/N	P/N	P/N	P/N	TORQUE FT-LBS	P/N
K-W45OTF001	1999-04	FORD	F-450/550 CHASSIS CAB DRW	4X2 / 4X4	R-2426	R-4881	400	R-4882	R-4883	R-4880	OEM HUB EXT. NUT	130	OEM	R-4881	400	R-4882	R-4884	R-4880	OEM	165	OEM

### VEHICLES WITH RAFNA R-450 DRUM DRIVE MODEL RAILGEAR

RAFNA KIT NUMBER	VEHICLE				FRONT												REAR									
	YEAR	MAKE	MODEL	DRIVE	WHEEL STOP BLOCK	NUT - WHEEL TO HUB EXTENDER		WHEEL	HUB EXT.	HUB EXT. STUDS	NUT - HUB EXTENDER TO SPACER		SPACER	SPACER STUDS	NUT - SPACER TO HUB		HUB STUDS	NUT - WHEEL TO SPACER OR HUB		WHEEL	SPACER	SPACER STUDS	NUT - SPACER TO HUB		HUB STUDS	
					P/N	P/N	TORQUE FT-LBS	P/N	P/N	P/N	P/N	TORQUE FT-LBS	P/N	P/N	P/N	TORQUE FT-LBS	P/N	P/N	TORQUE FT-LBS	P/N	P/N	P/N	P/N	TORQUE FT-LBS	P/N	
N/A	1999-02	FORD	F-450/550 CHASSIS CAB DRW	4X2	N/A	OEM	140	OEM	OEM	OEM	R-080	165 ZINC 125 MAGNI	R-4759	R-071	OEM HUB EXT. NUT	140	OEM	OEM	140	R-086	N/A	N/A	N/A	N/A	N/A	OEM
N/A	1999-02	FORD	F-450/550 CHASSIS CAB DRW	4X4	N/A	OEM	140	OEM	OEM	OEM	R-080	165 ZINC 125 MAGNI	R-4767 & R- 2402 SHIMS	R-071	OEM HUB EXT. NUT	140	OEM	OEM	140	R-086	N/A	N/A	N/A	N/A	N/A	OEM

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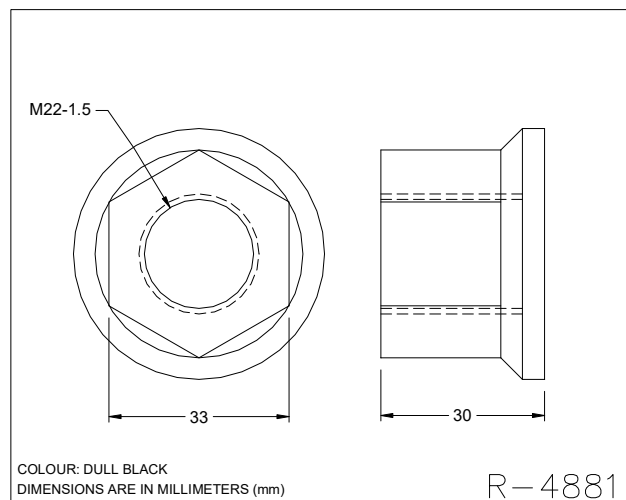
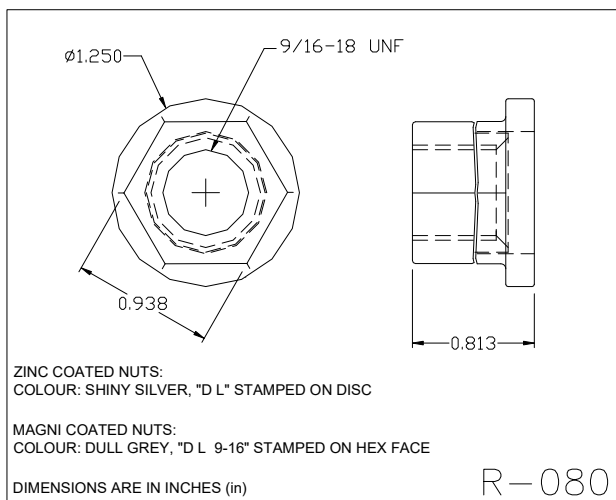
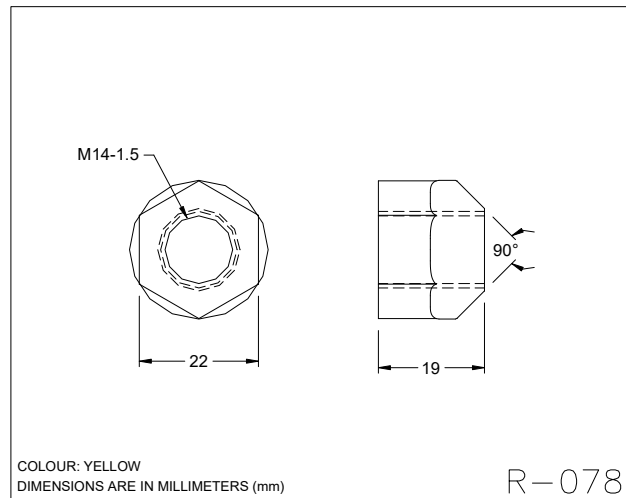
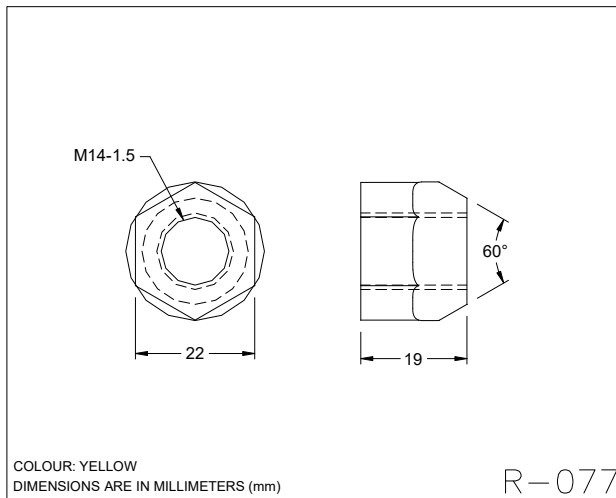
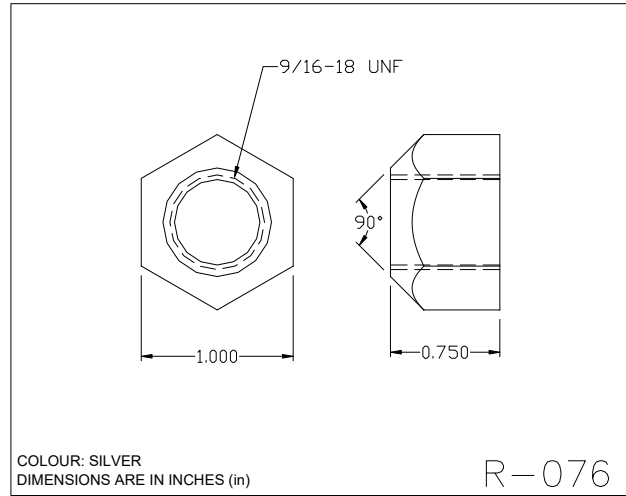
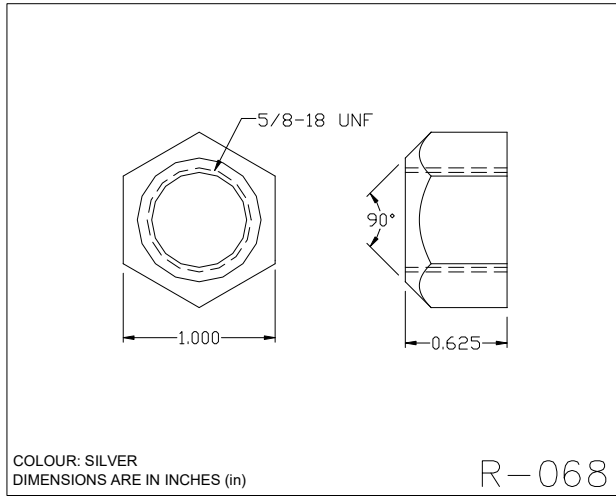
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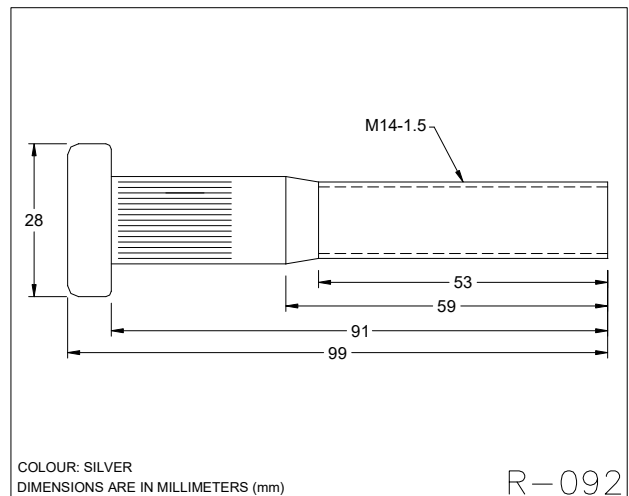
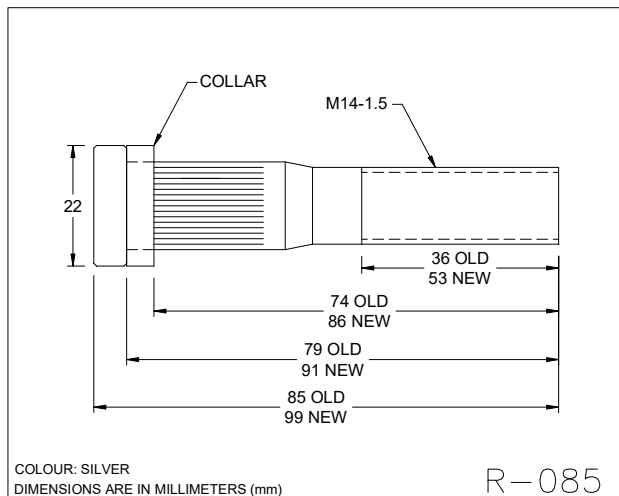
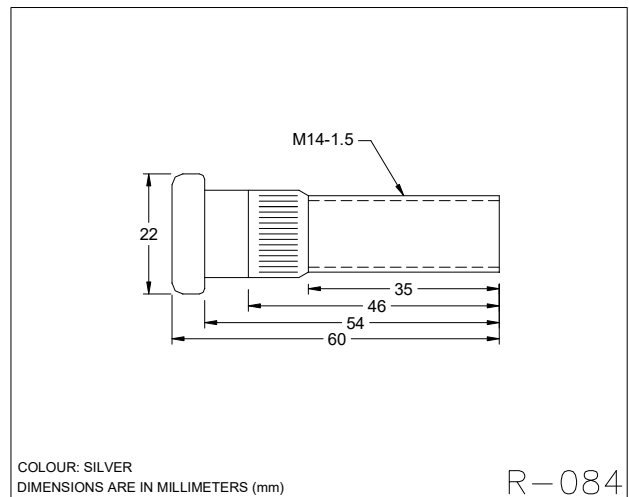
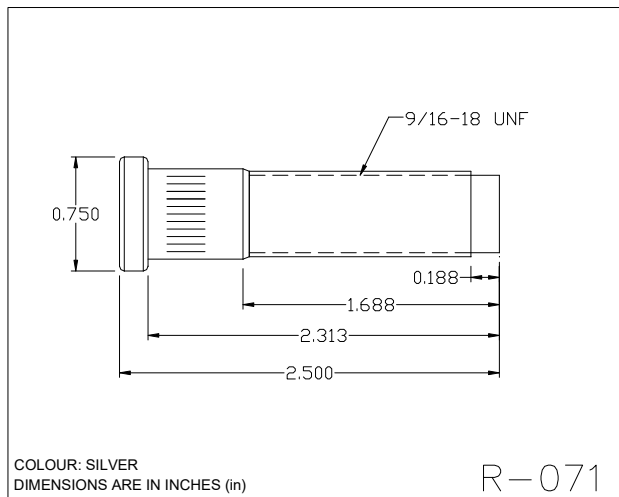
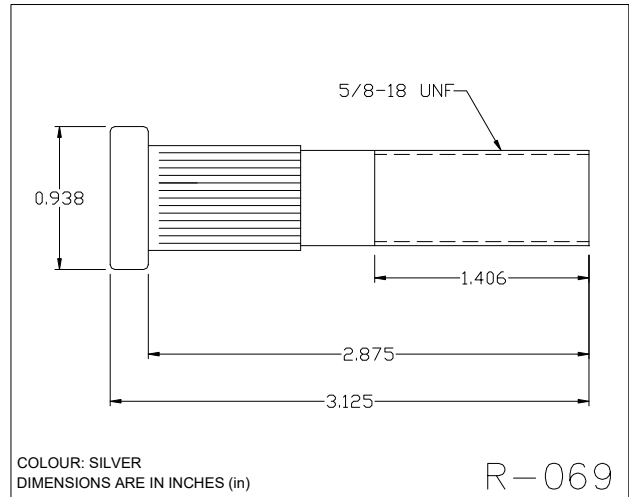
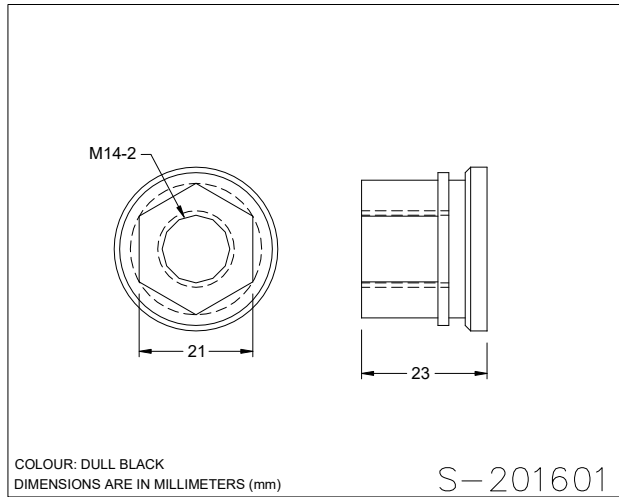
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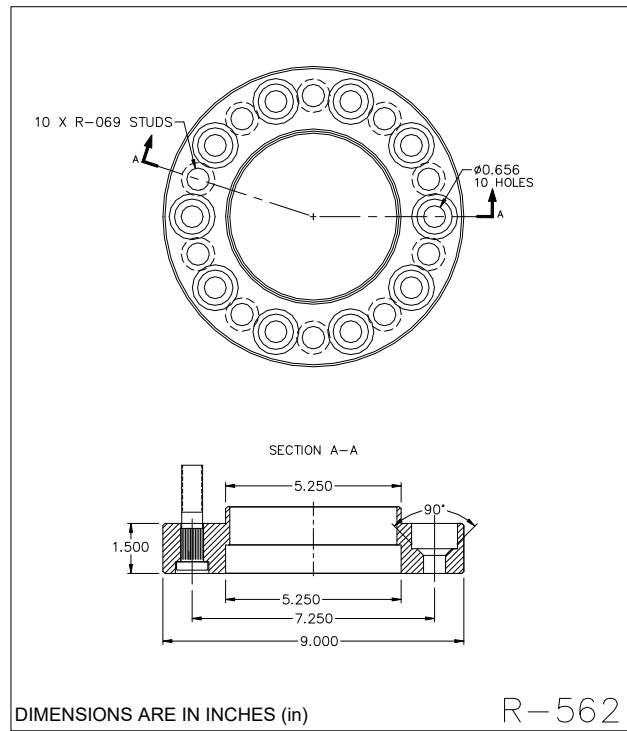
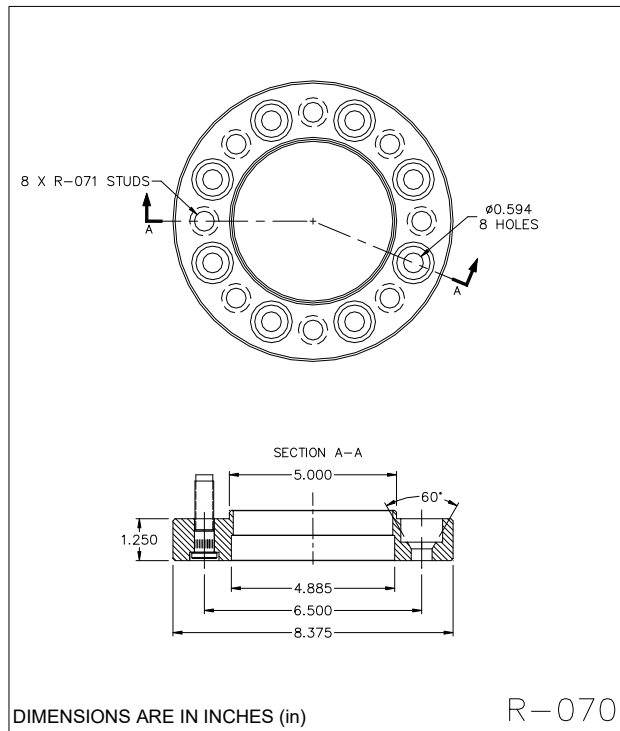
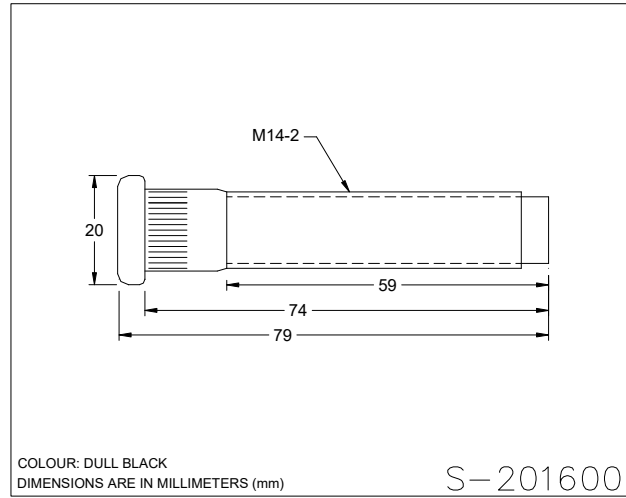
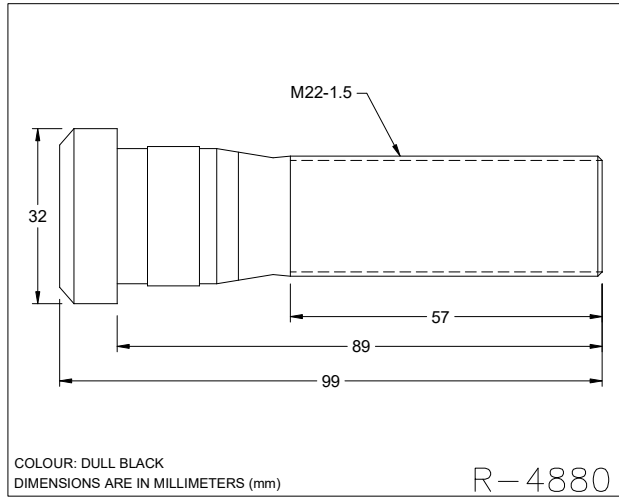
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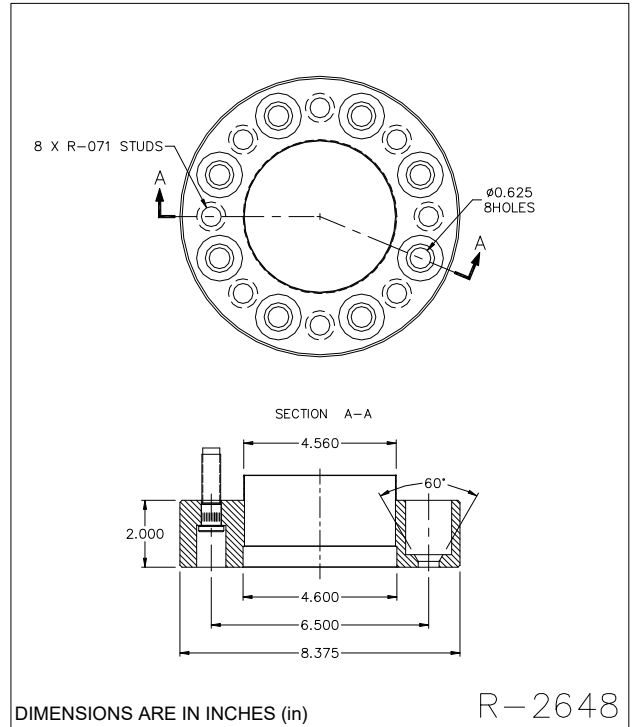
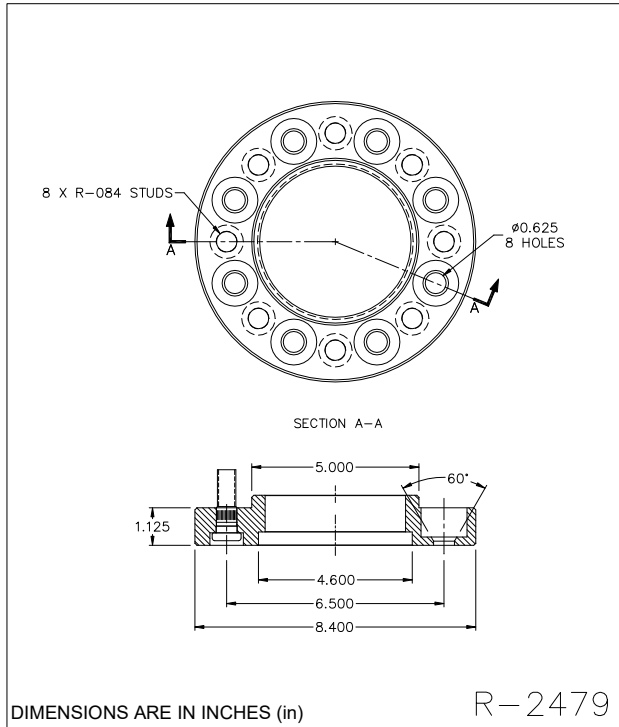
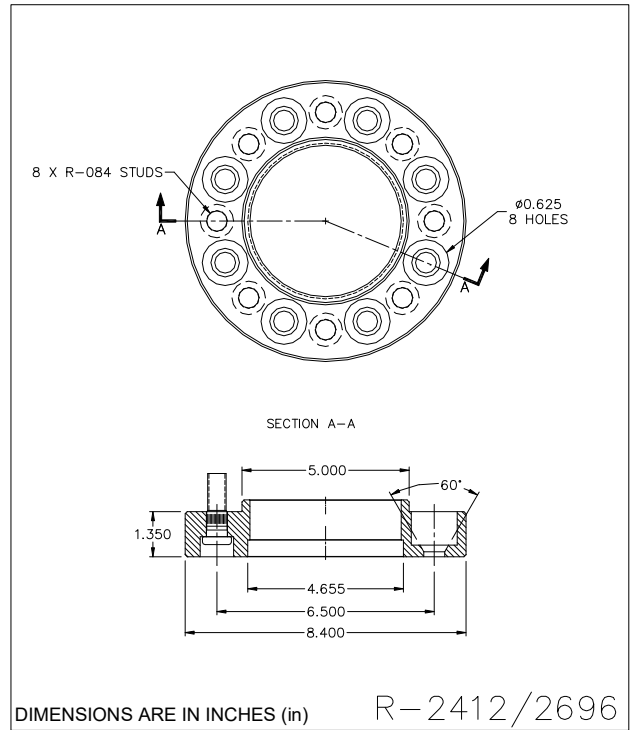
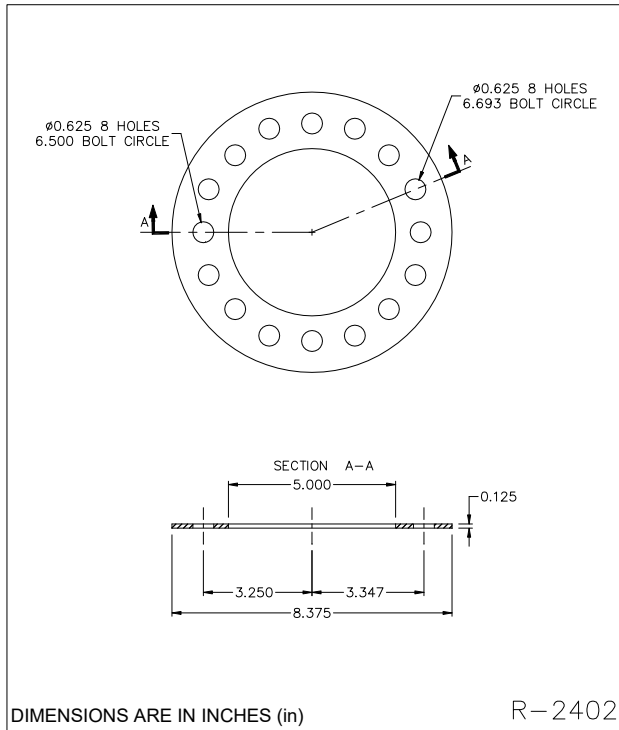
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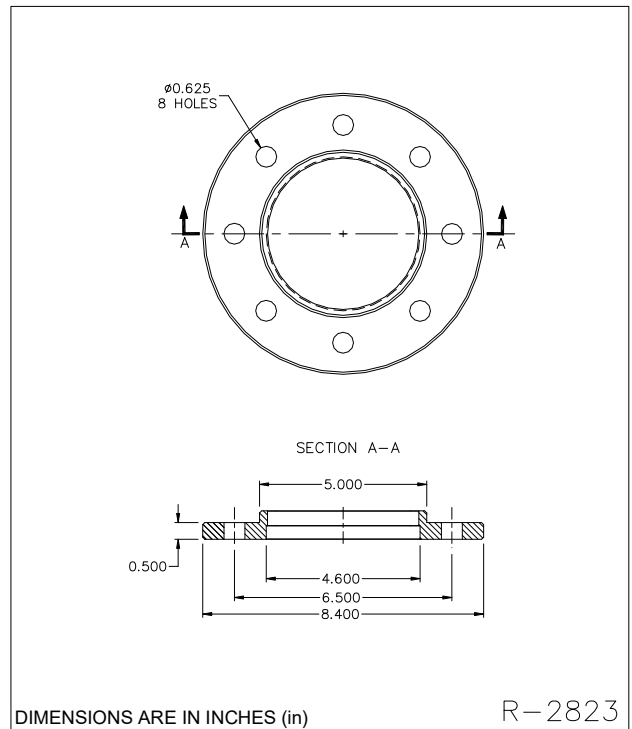
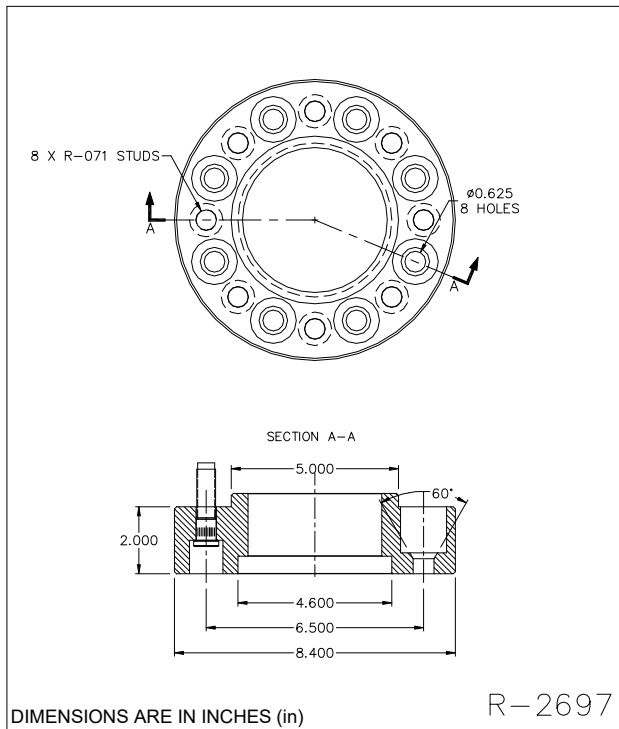
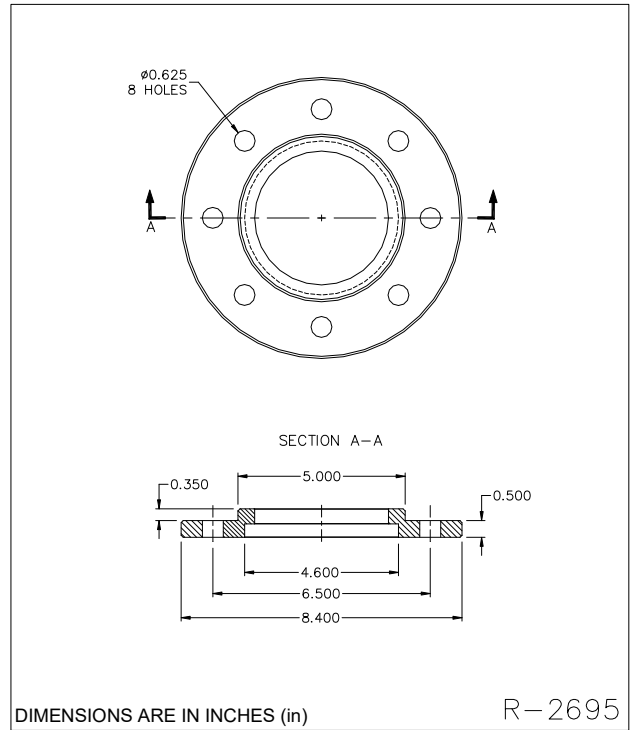
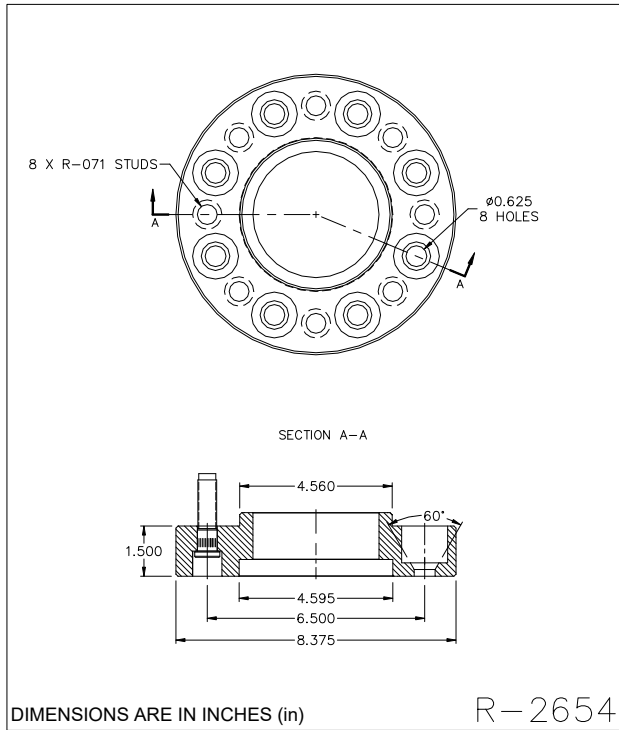
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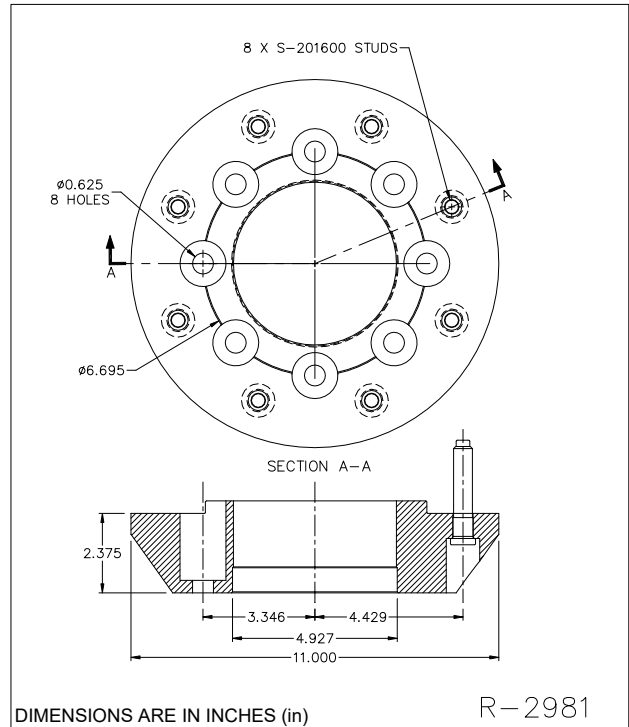
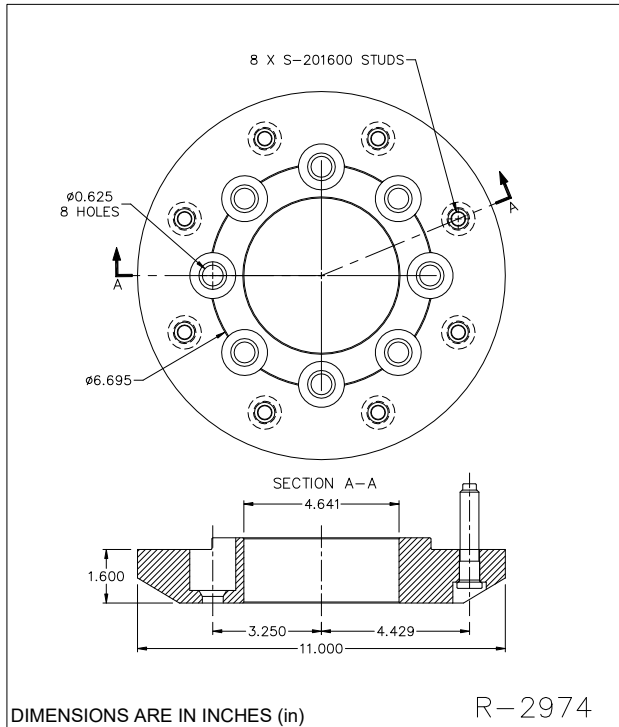
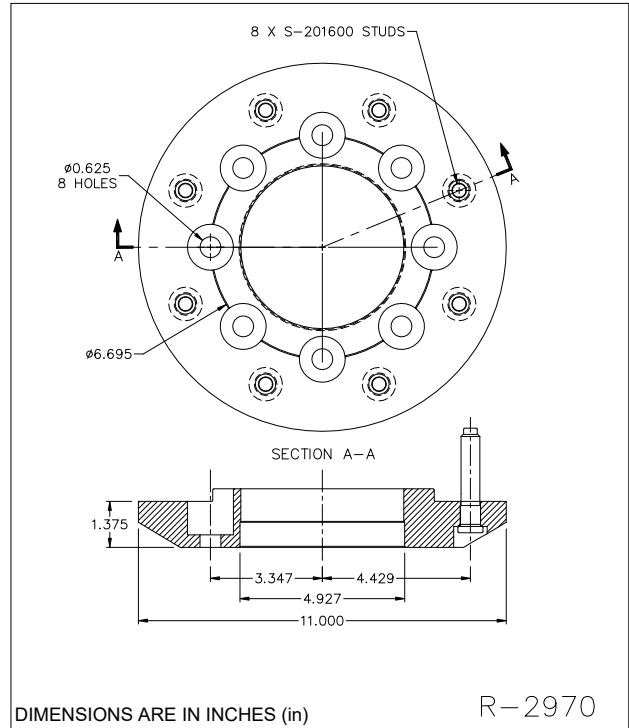
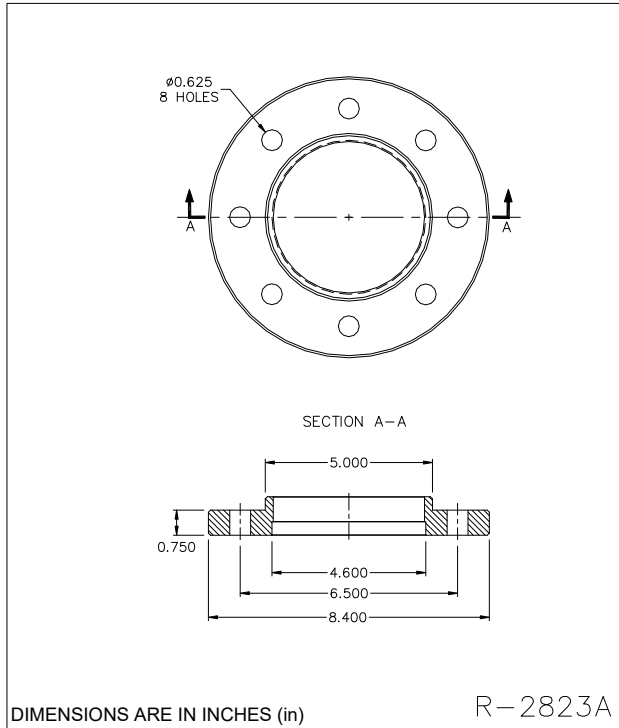
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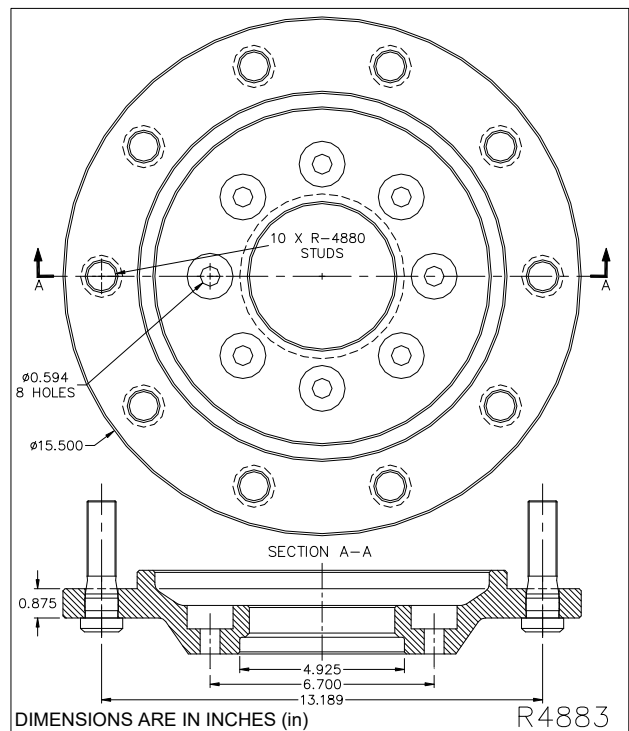
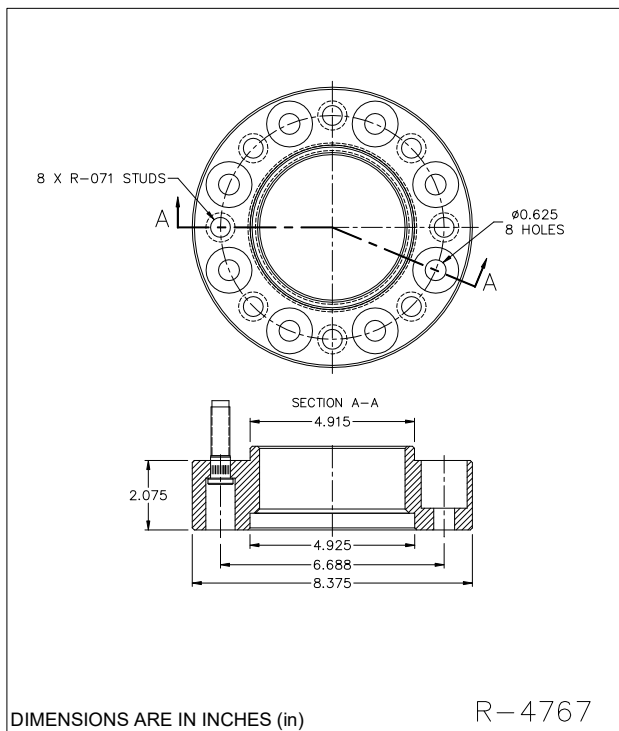
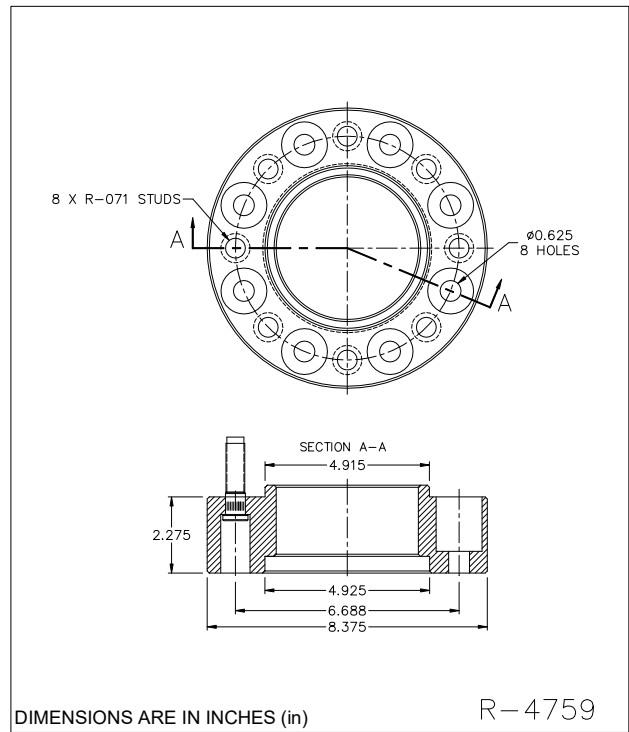
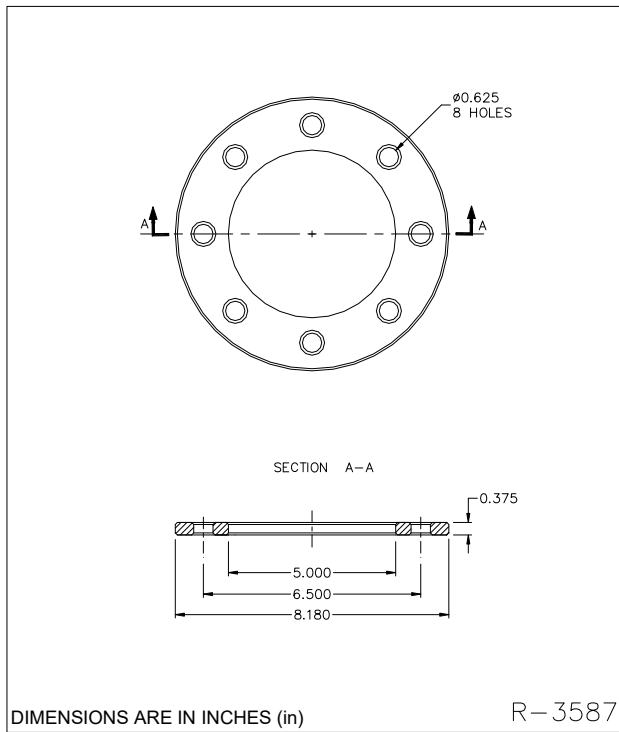






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