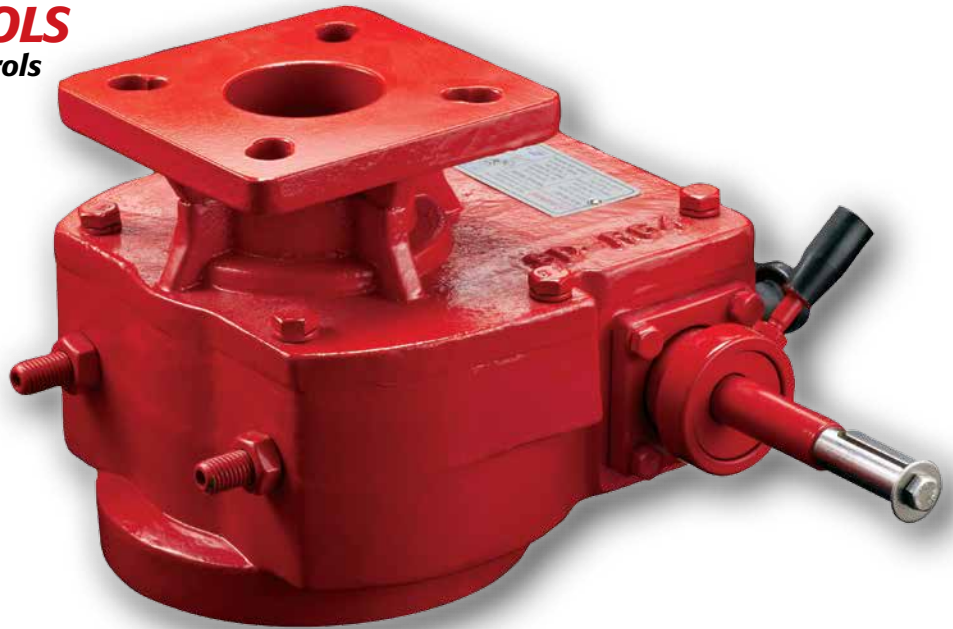


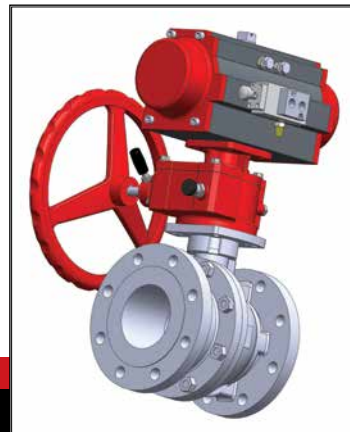
TRIAQ[®]

CONTROLS

A Division of A-T Controls



Declutchable Gear Override



2RDGO



2CDGO



2KDG0



The Triac Declutchable Gear Override

“Sandwich Mounts” between a pneumatic quarter-turn actuator and a ball, butterfly, plug valve or damper. This rugged device allows for manual operation during installation and system testing or in the event of an air supply failure.

The 2RDGO Series mounts directly to many of the most popular rack and pinion style actuators on the market, and does not require a bracket and coupler between the pneumatic actuator and declutchable override. The units come complete with a three-stage coupler that connects to the pneumatic actuator, through the gear override, and to the valve or coupler.

Output torques cover a broad range of pneumatic actuator and Quarter-Turn Valve-Damper applications that require a declutchable manual gear override.

FEATURES

- 3 industry standard Mounting Patterns - ISO (2RDGO), Keystone (2KDGO), Centerline (2CDGO)
- 3 Stage Coupler (Actuator, Gear, Valve)
- Rugged Declutch Lever and Engagement Handle
- 5 Sizes available in a wide Torque Range
- BBV - Block and Bleed Valve to exhaust supply air from actuator

There are four series available:

- | | |
|--|---|
| ▪ 2RDGO
Matches the ISO 5211 dimensions | ▪ 2CDGO
Matches the Centerline style Double D |
| ▪ 2KDGO
Matches the Keystone 3.25 and 5.00 bolt patterns | ▪ 2DGOS09
For the THD Series with an ISO Output Pattern |

ISO - 2R Series

ACTUATOR SIZE	MODEL	TORQUE RATING (In-Lbs)	GEAR RATIO	ACTUATOR SIDE MOUNTING					VALVE SIDE MOUNTING				
				L	M	J	BCD	HOLE DIA	L	M	K	BCD	TAP SIZE
2R40	2RDGO-14	500	32 : 1	0.551	0.75	0.59	1.968	0.28	0.551	0.75	0.71	1.968	1/4-20
							2.756	0.35				2.756	5/16-18
2R80 2R130 2R200	2RDGO-19	2,150	36 : 1	0.748	1.02	0.71	2.756	0.35	0.748	1.02	0.78	2.756	5/16-18
							4.016	0.41				4.016	3/8-16
2R300	2RDGO-22	3,650	36 : 1	0.866	1.19	0.87	2.756	0.35	0.866	1.19	1.06	2.756	5/16-18
							4.016	0.41				4.016	3/8-16
2R500 2R850	2RDGO-27	9,000	48 : 1	1.063	1.47	1.06	4.016	0.41	1.063	1.47	1.06	4.016	3/8-16
							4.921	0.55				4.921	1/2-13
2R1200 2R1750	2RDGO-36	15,000	64 : 1	1.417	1.97	1.46	4.921	0.55	1.417	1.97	1.65	5.512	5/8-11
							5.512	0.67				5.512	5/8-11
2R2500 2R3500	2RDGO-46	36,000	96 : 1	1.811	2.56	1.81	6.496	0.78	1.811	2.56	2.13	6.496	3/4-10

KEYSTONE - 2K Series with Double D Flats

ACTUATOR SIZE	MODEL	TORQUE RATING (In-Lbs)	GEAR RATIO	ACTUATOR SIDE MOUNTING					VALVE SIDE MOUNTING				
				N	P	J	BCD	HOLE DIA	N	P	K	BCD	TAP SIZE
2K40	2KDGO-38	500	36 : 1	0.56	0.375	1.25	3.250	0.41	0.56	0.38	1.38	3.250	3/8-16
2K80 2K130 2K200	2KDGO-50	2,150	36 : 1	0.75	0.500	1.25	3.250	0.41	0.75	0.50	1.38	3.250	3/8-16

KEYSTONE - 2K Series with 1.125 Dia. with 1/4" Square Key

ACTUATOR SIZE	MODEL	TORQUE RATING (In-Lbs)	GEAR RATIO	ACTUATOR SIDE MOUNTING					VALVE SIDE MOUNTING				
				R	S	J	BCD	HOLE DIA	R	S	K	BCD	TAP SIZE
2K300	2KDGO-300	3,650	36 : 1	1.125	0.25	2.00	3.250	0.41	1.125	0.25	2.00	3.250	3/8-16
2K500 2K850	2KDGO-500	9,000	48 : 1	1.125	0.25	2.00	3.250	0.41	1.125	0.25	2.00	3.250	3/8-16
							5.000	0.55				5.000	1/2-13
2K1200	2KDGO-1200	15,000	64 : 1	1.125	0.25	2.00	5.000	0.55	1.125	0.25	2.00	5.000	1/2-13

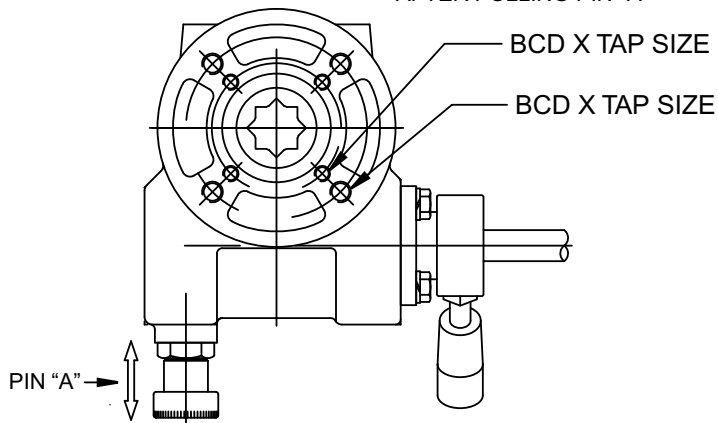
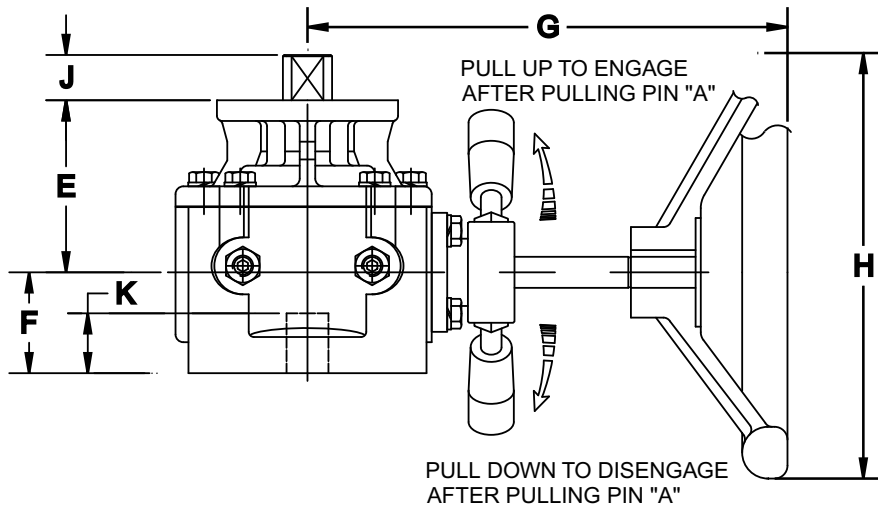
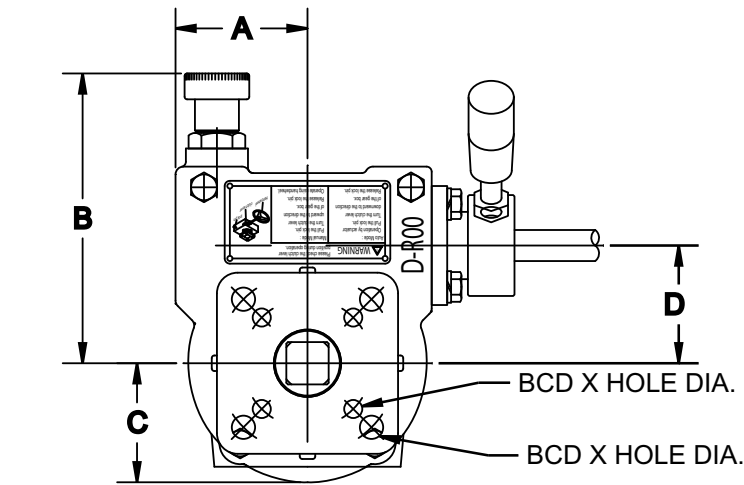
CENTERLINE - 2C Series with Double D Flats and ISO Mounting

VALVE SIZE	MODEL	TORQUE RATING (In-Lbs)	GEAR RATIO	ACTUATOR SIDE MOUNTING					VALVE SIDE MOUNTING				
				T	U	J	BCD	HOLE DIA	T	U	K	BCD	TAP SIZE
2" 3"	2CDGO-10	500	32 : 1	0.394	0.50	1.25	1.968	0.28	0.394	0.50	1.38	1.968	1/4-20
							2.756	0.35				2.756	5/16-18
4"	2CDGO-12	900	36 : 1	0.472	0.63	1.25	2.756	0.35	0.472	0.63	1.38	2.756	5/16-18
							4.016	0.41				4.016	3/8-16
5" 6"	2CDGO-14	2,000	36 : 1	0.551	0.75	1.25	2.756	0.35	0.551	0.75	1.38	2.756	5/16-18
							4.016	0.41				4.016	3/8-16
8"	2CDGO-17	3,000	36 : 1	0.669	0.88	1.73	2.756	0.35	0.669	0.88	1.85	2.756	5/16-18
							4.016	0.41				4.016	3/8-16
10"	2CDGO-22	3,650	36 : 1	0.866	1.13	1.73	2.756	0.35	0.866	1.13	1.85	2.756	5/16-18
							4.016	0.41				4.016	3/8-16
12" 14"	2CDGO-24	9,000	48 : 1	0.945	1.25	1.73	4.016	0.41	0.945	1.25	1.85	4.016	3/8-16
							4.921	0.55				4.921	1/2-13

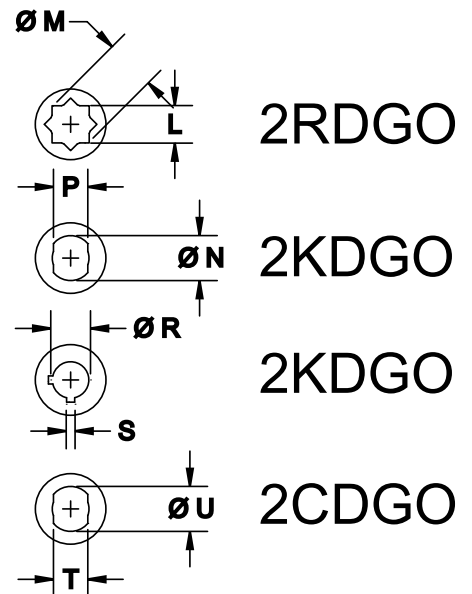
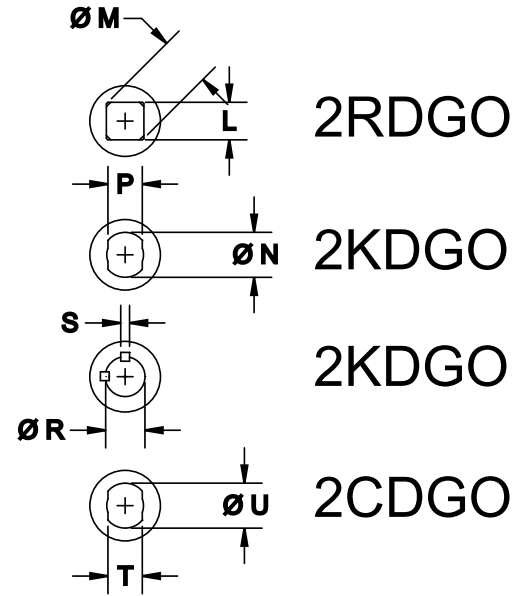
THD - S09 Heavy Duty with ISO Output Shaft

ACTUATOR SIZE	MODEL	TORQUE RATING (In-Lbs)	GEAR RATIO	ACTUATOR SIDE MOUNTING					VALVE SIDE MOUNTING				
				R	S	J	BCD	HOLE DIA	L	M	K	BCD	TAP SIZE
S09	2DGO-S09	36,000	96 : 1	2.362	18 MM	2.36	6.496	0.85	1.811	2.56	2.13	6.496	3/4-10

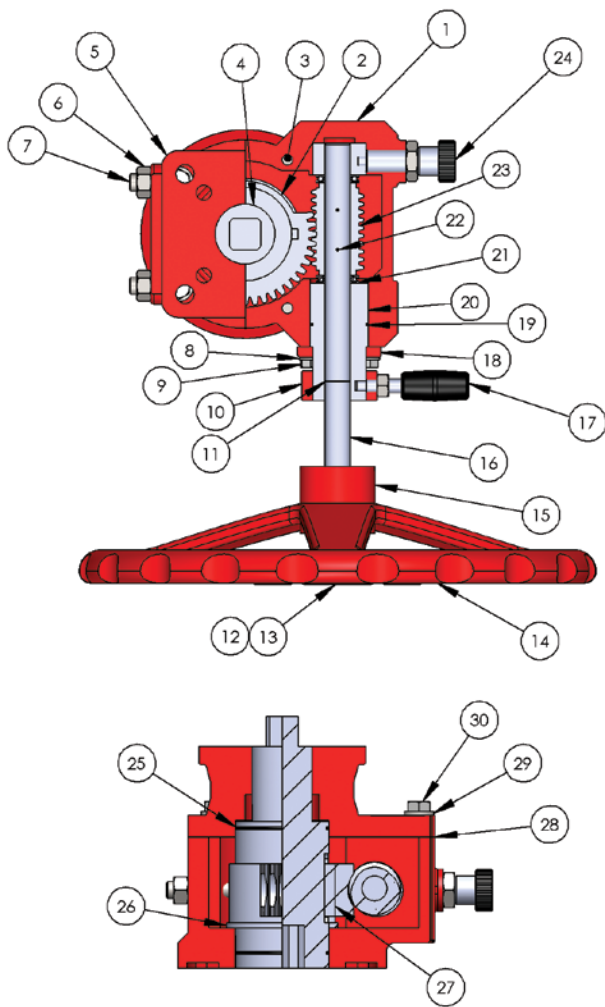
TORQUE RATING IS BASED ON OUTPUT SHAFT DESIGN.
RIM PULL FOR THE RATED TORQUE DOES NOT EXCEED 80 LBS.



PULL PIN "A" AND ROTATE TO ENGAGE AND DISENGAGE THE GEAR



GEAR RATIO	A	B	C	D	E	F	G	H	WEIGHT (LBS)
32 : 1	2.00	4.41	1.81	1.81	2.64	1.50	7.48	7.87	18.00
36 : 1	2.68	4.92	1.97	2.24	3.39	1.85	8.86	12.20	40.00
48 : 1	3.19	6.46	3.03	3.07	4.09	2.09	10.24	15.75	66.00
64 : 1	4.25	7.87	3.35	4.33	4.84	2.80	11.97	19.69	110.00
96 : 1	6.65	11.34	5.75	6.97	6.42	3.54	17.40	31.50	265.00



PART NO.	DESCRIPTION	QTY	MATERIAL
1	HOUSING	1	DUCTILE IRON
2	WORM WHEEL	1	DUCTILE IRON
3	HOUSING PIN	2	CARBON STEEL
4	DRIVE COUPLER	1	CARBON STEEL
5	COVER	1	DUCTILE IRON
6	STOP BOLT NUT	2	CARBON STEEL
7	STOP BOLT	2	CARBON STEEL
8	SIDE COVER WASHER	4	CARBON STEEL
9	SIDE COVER BOLT	4	CARBON STEEL
10	POSITION ADAPTER	1	CARBON STEEL
11	WORM SHAFT O-RING	1	NBR NITRILE RUBBER
12	HAND WHEEL BOLT	1	CARBON STEEL
13	HAND WHEEL WASHER	1	CARBON STEEL
14	HAND WHEEL	1	CARBON STEEL/ DUCTILE IRON
15	WORM SHAFT KEY	1	CARBON STEEL
16	WORM SHAFT	1	CARBON STEEL
17	POSITION LEVER ASSEMBLY	1	CARBON STEEL / PLASTIC
18	SIDE COVER	1	CARBON STEEL PLATED
19	DECLUTCH CAM BUSHING O-RING	1	NBR NITRILE RUBBER
20	DECLUTCH CAM BUSHING	1	DUCTILE IRON
21	THRUST BALL BEARING	2	BEARING STEEL
22	WORM PIN	2	CARBON STEEL
23	WORM	1	CARBON STEEL
24	POSITION LOCK PIN ASSEMBLY	1 SET	CARBON STEEL/PLASTIC
25	WORM WHEEL O-RING	2	NBR NITRILE RUBBER
26	THRUST BEARING	1	ALUMINUM BRONZE
27	COUPLING KEY	1	CARBON STEEL
28	GASKET	1	OIL PAPER
29	COVER WASHER	4	CARBON STEEL
30	COVER BOLT	4	CARBON STEEL

BBV - Block and Bleed Valves

- The NAMUR mounted BBV for TRIAC® actuators is used as a bypass valve with a manual override to shut off supply air and vent actuator ports. It may also be used as a lockout valve which, when properly implemented, will satisfy OSHA Standard 1910.47 *The Control of Hazardous Energy*.

BBV - Block and Bleed Valves

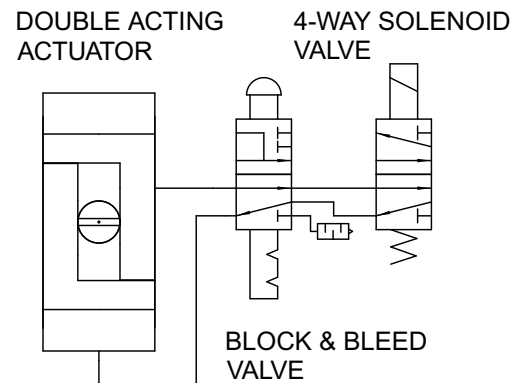
The BBV - Block and Bleed Valve shuts off the supply air and vents the pneumatic actuator, allowing manual operation.

- Manual operation purges air from one side of the pistons to the other, preventing corrosive atmospheres from being drawn into the actuator.
- Directly mounts to the NAMUR air porting of the pneumatic actuator, eliminating tubing and fittings.
- Can be combined with other NAMUR accessories such as flow controls and TVC solenoid valves.



Specifications

Temperature Range: -20°F to +180°F
 Pressure Range: 20 psig to 120 psig
 Media: Dry or lubricated (*non-corrosive gas compatible with nitrile seals*)
 Flow Coefficient $C_v = 1.75$



How to Order

Order part number NAMUR-BBV with appropriate NAMUR bolt kit from chart at right. Example: To order NAMUR-BBV to be sandwich NAMUR mounted with NAMUR-NPT adaptor plate, order

- NAMUR-BBV
- NAMUR-NPT
- NBK40

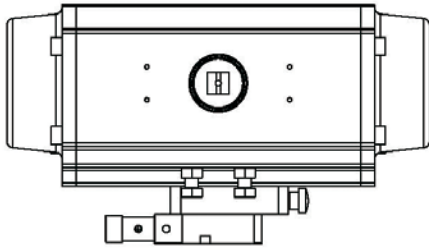
Bill of Materials

Item	Material
Body	Aluminum, Anodized
Spool	Aluminum, Anodized
End Cap	Aluminum, Anodized
Seals	Nitrile, Buna
Knob	Plastic

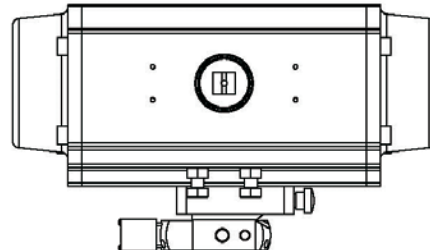
Drawing P1984

General arrangement drawing for 2R Series Rack & Pinion actuators with D20-106 Block & Bleed Valve with the TVCS, TVC5 and TVC6 solenoids.

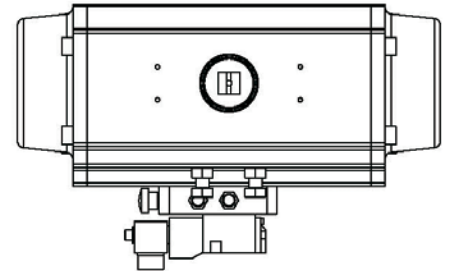
THE D20-106 BLOCK & BLEED HANDLE IS ON THE RIGHT SIDE FOR THE TVCS, TVC6 AND ON THE LEFT SIDE FOR THE TVC5



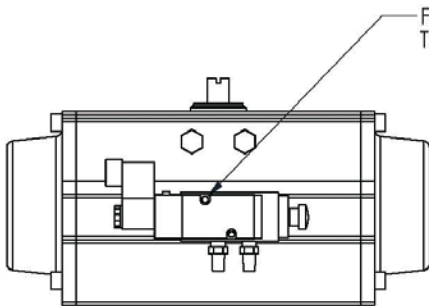
USE 2 EA M5 X 55 MM SOCKET HEAD CAP SCREWS



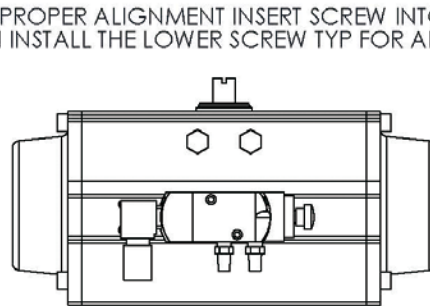
USE 2 EA M5 X 55 MM SOCKET HEAD CAP SCREWS



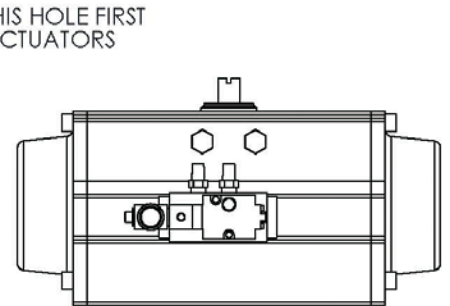
USE 2 EA M5 X 60 MM SOCKET HEAD CAP SCREWS



TRIAC TVCS SOLENOID WITH D20-106 BLOCK & BLEED



TRIAC TVC6 (ASCO) SOLENOID WITH D20-106 BLOCK & BLEED



TRIAC TVC5 (VERSA) SOLENOID WITH D20-106 BLOCK & BLEED

NAMUR Accessory Bolt Chart

BBV	FC1	NPT	TVC5	TVCS	TVC6	Bolt Kit
■		■				NBK40
■	■	■				NBK50
■			■			NBK60
■				■	■	NBK55
■	■		■			NBK70
■	■			■	■	NBK65
	■		■			NBK45
	■			■	■	NBK40

Declutchable Gear Override



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