



# TEMP PRODUCTS

## Electronic Fan Clutch Buyer's Guide



### The Leader in Automotive Cooling

For more than 60 years, NAPA® Temp has been the leader in performance cooling products for engine, transmission and power steering oil cooling. NAPA® Temp continues to add innovative products to meet the needs of its customers while investing in continuous improvements and maintaining superior quality standards. This includes being the first aftermarket manufacturer of electronic fan clutches with industry leading coverage and world class performance.

Part Number	Buyer's Guide*	
271626	Buick Rainier (07-04); Chevy SSR (06-03), Trailblazer (09-02); GMC Envoy (09-02); Isuzu Ascender (07-03); Oldsmobile Bravada (04-02); Saab 9-7 (07-05)	
281712	Chevrolet Silverado (14-11); GMC Sierra (14-11)	
281745	Chevrolet Silverado (16-15); GMC Sierra (16-15)	
281767	Chevrolet Silverado (20-17); GMC Sierra (19-17)	
281744	Chevrolet Colorado (21-16), Express Series Van (21-17); GMC Canyon (21-16), Savana (21-17)	
281715	GMC & Chevrolet Topkick & Kodiak (09-07)	
281717	Chevrolet Express Series (16-09); GMC Savana (16-09)	




\*For complete application information, visit the ecatalog at [napatemp.com](http://napatemp.com).

Part Number	Buyer's Guide*	
281755	Ford E Series Van (19-17), F Series Pickup (19-17)	
281768	Ford F Series Pickup (19-15)	
281769	Ford F250 (22-20); F350 (22-20)	
281770	Ford F250 (22-20); F350 (22-20)	
281775	Ford F Series Pickup (22-20)	
281772	Ford F150 (21-18)	
271632	Ford E Series Van (10-04), Excursion (05-03), F Series Pickup (07-03)	
281657	Ford Explorer/Sport/ Sport Trac (10-06); Mercury Mountaineer (10-06)	

Part Number	Buyer's Guide*	
281658	Ford Expedition (08-07), F Series Pickup (08-07), Lobo (08-07); Lincoln Mark Light Truck (08-07), Navigator (08-07)	
281664	Ford F Series Pickup (10-08)	
281665	Ford Expedition (09), F Series Pickup (10-09), Lobo (10-09); Lincoln Navigator (09)	
281697	Ford F Series Pickup (14-11)	
281698	Ford F Series Pickup (16-11)	
281661	Dodge Pickup/Ram (04-03)	
281671	Dodge Pickup/Ram (10-04)	
281416	Dodge Pickup/Ram (13-10)	

\*For complete application information, visit the ecatalog at [napatemp.com](http://napatemp.com).

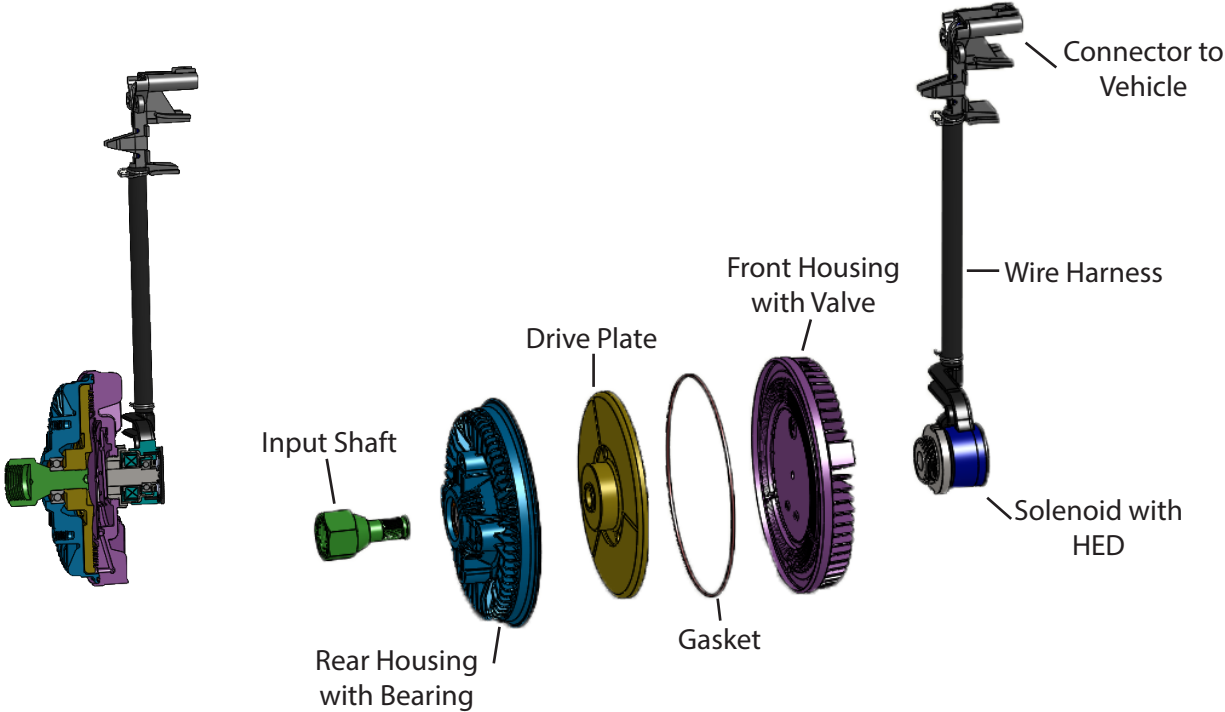
Part Number	Buyer's Guide*	
281714	Dodge Pickup/Ram (18-13)	
281742	Infiniti QX56 (13-11), QX80 (22-14); Nissan Armada (22-17), NV Series (21-17), Titan (22-16)	
281771	Nissan Titan XD (19-16)	
281705	Land Rover LR3 (09-05), Range Rover (09-06), Range Rover Sport (09-06)	
281701	Land Rover Range Rover (09-06), Range Rover Sport (09-06)	

Part Number	Buyer's Guide*	
281740	Land Rover Discovery (20-17), LR4 (16-14), Range Rover (20-10), Range Rover Sport (20-10), Range Rover Velar (18)	
281741	Land Rover Defender 110 (22-20), Defender 90 (22-20), LR4 (13-10), Range Rover (22-10), Range Rover Sport (22-10)	
281696	Mercedes Sprinter (21-10)	

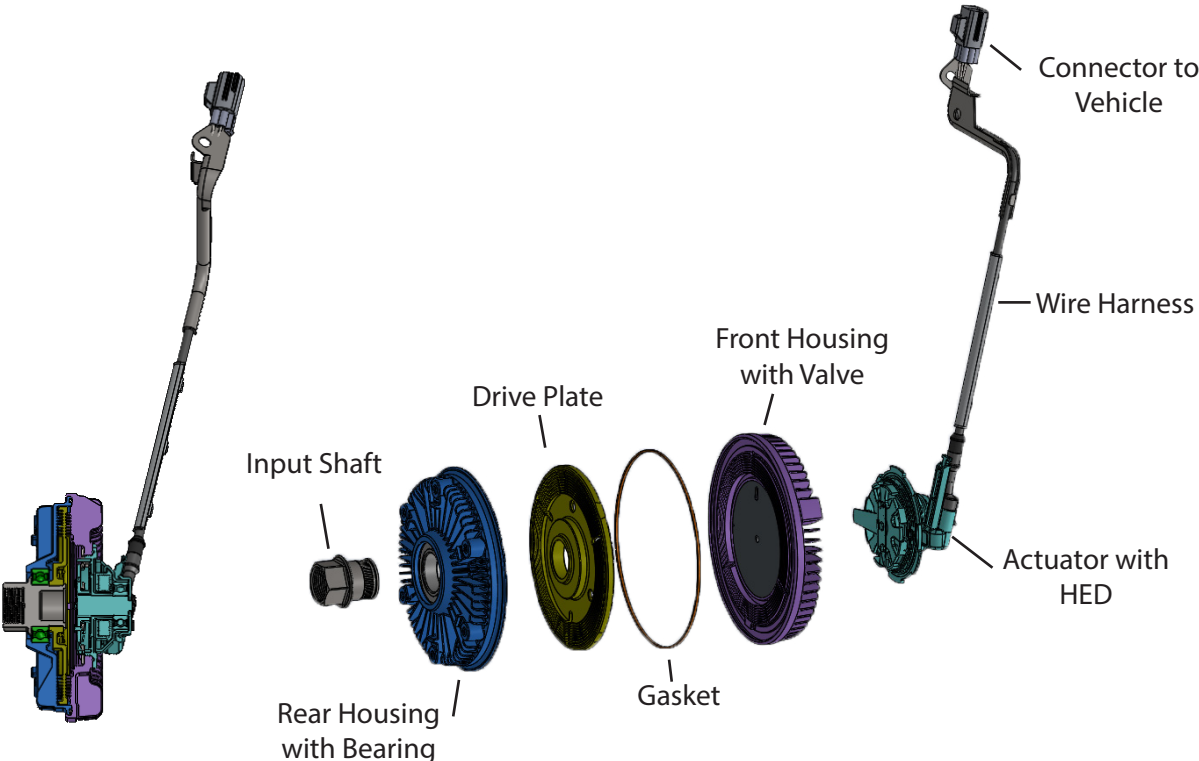
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# Anatomy of Electronic Fan Clutches

## Linear Actuated Electronic Fan Clutch



## Rotary Actuated Electronic Fan Clutch



# FAN CLUTCH TROUBLESHOOTING GUIDE

The NAPA® Temp engineering team has over 60 years of experience in the engineering and development of fan clutches. This expertise has enabled us to maintain several manufacturing certifications and to create consistent quality in every fan clutch we build. Fan clutches operate at different speeds and conditions and testing must be performed at every level of operation. Critical performance aspects of a fan clutch include engagement and disengagement temperatures, duty cycle speed, disengagement RPM, engagement RPM and torque. NAPA® Temp takes the time to measure each of these critical performance indicators for every O.E. fan clutch we design. This level of commitment delivers a part that will match O.E. performance in every facet. Below are some key factors that affect fan clutch performance and vehicle cooling.

Before replacing, check all of the following:

- Bent, cracked or missing fan blades
- O.E. fan blades in use (NAPA® Temp fan clutches are designed to be used with the O.E. fan blade)
- Oil streaks, black marks or excessive dirt collection on the fan clutch as a sign of leaks
- Play in the fan clutch (no more than 1/4" forward/back at fan blade tip)
- Ensure all air dams are in place
- Fins of the condenser, radiator, oil coolers or intercoolers are straight and free of debris
- No debris between condenser and radiator to obstruct air flow
- Cooling system has been serviced and maintained to manufacturer specifications
- Radiator has no blockages or hot spots
- Functioning thermostat
- Cooling system hoses are new or match O.E. specifications
- Water pump functioning and in good condition
- Electric fan clutch harness is routed away from fan blades and free of kinks, sharp bends or other wire damaging conditions
- PCM is updated to the latest firmware version
  - PCM monitors transmission temperature, A/C head pressure, A/C demand, coolant temperature, engine speed and engine load which all determine electric fan clutch engagement and disengagement

## IMPORTANT

- Do NOT replace EV fan clutch unless a specific issue is identified by proper SI (Service Indicator/ Check Engine) diagnosis
- Do NOT replace an EV fan clutch for fan noise
- Do NOT replace an EV fan clutch unless a specific condition related to the EV fan clutch is identified using SI diagnostics. If the EV fan clutch has a condition that warrants replacement, a DTC (Diagnostic Trouble Code) should set and/or SI diagnostics should lead to the replacement of the fan clutch
- Do not attempt to replace EV fan clutch without proper tools. Please refer to manufacturer requirements for proper tools and replacement
- Always check motor and transmission mounts to prevent fan blade contact with wire harness. Subsequent damage is not covered via warranty

◆ **In the event an electronic fan clutch harness is cut or damaged by the fan blade, the common causes are improper routing of the harness and worn or defective engine/transmission mounts. These instances are NOT covered by the manufacturer's warranty.**