

TRANSMISSION OIL COOLERS

Specifications

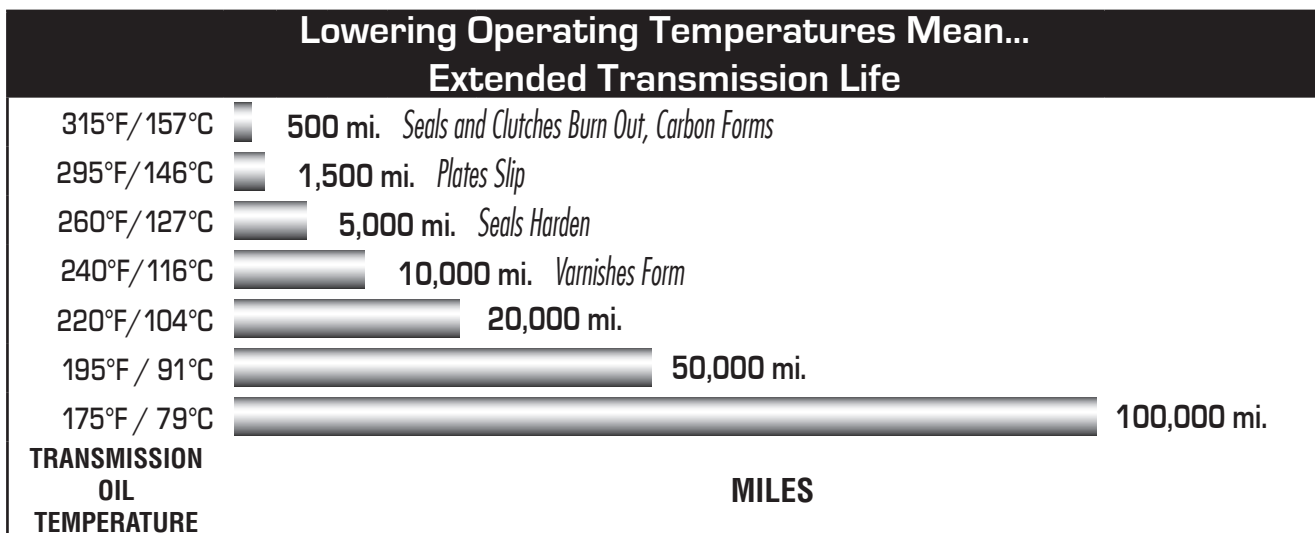
Transmission Oil Coolers

Over 14 million transmissions fail every year, 9 out of 10 from overheating.

Every 20°F drop in operating temperature can double oil and equipment life.

Use a transcooler if you:

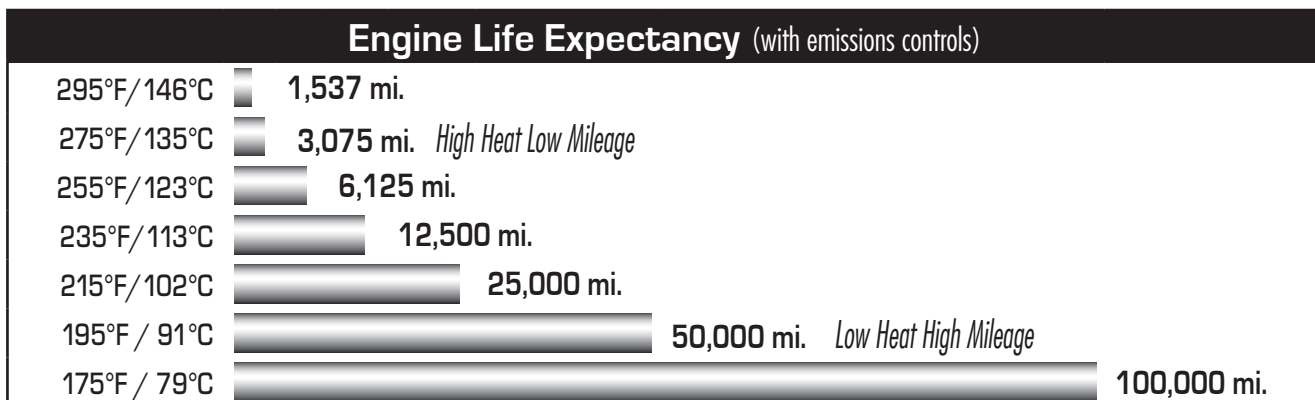
- tow boats, trailers or fifth wheels
- drive in stop-and-go traffic
- climb steep grades
- drive in hot weather



Engine Oil Coolers

Protect your investment with our Engine Oil Cooler.

- Extends oil and engine life
- Reduces wear on all lubricated engine parts
- Complete kits with cooler, adapter, hose and mounting hardware
- Thermostatic control prevents over cooling of oil



TRANSMISSION OIL COOLERS

Specifications

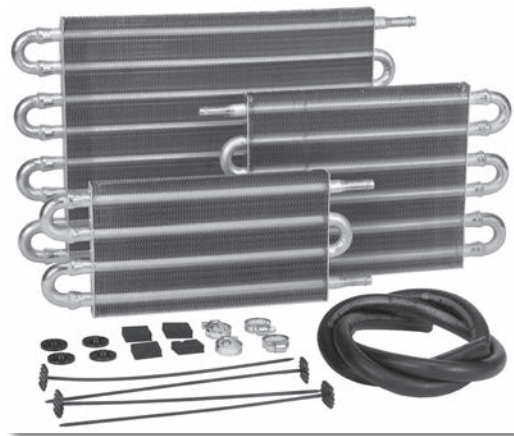
Ultra-Cool®

Transmission Oil Coolers

The industry's first transmission cooler, the Ultra-Cool® transmission oil cooler is available in six sizes to fit a wide range of applications from sub-compacts to motorhomes.

FEATURES

- ULTRASONICALLY SOLDERED FOR RELIABILITY
- 100% PRESSURE TESTED AT 150 PSI FOR QUALITY ASSURANCE
- HIGH EFFICIENCY TURBULATORS
- 3/8" PUSH-ON FITTINGS FOR QUICK AND EASY INSTALLATION



Ultra-Cool® Transmission Oil Coolers

PART #	THICKNESS	HEIGHT	LENGTH	CORE	FITTING SIZE	APPLICATION
401	3/4"	5"	12-1/2"	8-3/4"	3/8" PUSH-ON	SUB-COMPACT TO COMPACT CARS
402	3/4"	5"	15-7/8"	12-1/8"	3/8" PUSH-ON	UP TO FULL SIZE VEHICLES, TOWING UP TO 2,500 LBS.
403	3/4"	7-1/2"	12-1/2"	8-3/4"	3/8" PUSH-ON	UP TO FULL-SIZE VEHICLES, TOWING UP TO 2,500 LBS.
404	3/4"	7-1/2"	15-7/8"	12-1/8"	3/8" PUSH-ON	UP TO CLASS "C" MOTORHOMES, TOWING UP TO 5,000 LBS.
405	3/4"	10"	15-7/8"	12-1/8"	3/8" PUSH-ON	UP TO CLASS "A" MOTORHOMES, TOWING UP TO 10,000 LBS.
1015	1-1/2"	12"	15-1/8"	11-1/8"	3/8" PUSH-ON	TOWING WITH CLASS "A" MOTORHOME OR TOWING MORE THAN 10,000 LBS.

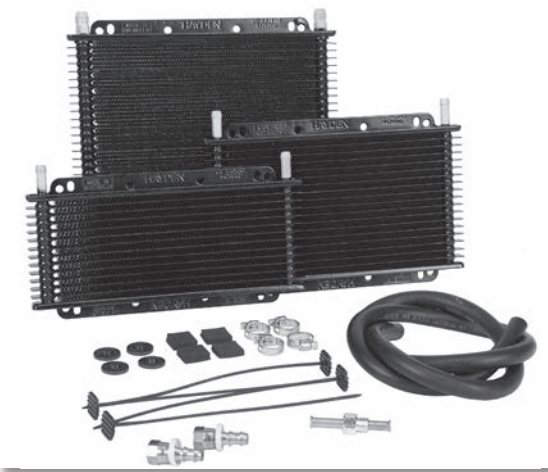
Rapid-Cool®

Transmission Oil Coolers

Rapid-Cool®'s unique plate and fin design offers excellent cooling efficiency in a compact, space-efficient design.

FEATURES

- 33% MORE EFFICIENT THAN A COMPARABLE TUBE AND FIN DESIGN
- PRE-DRILLED MOUNTING BRACKETS FOR EASY INSTALLATION
- FOUR SIZES AVAILABLE TO FIT A WIDER RANGE OF APPLICATIONS
- PATENTED INTERNAL TURBULATION FOR INCREASED HEAT TRANSFER & MINIMAL PRESSURE DROP (Patent No. 6,478,080)
- AVAILABLE WITH EITHER 3/8" PUSH-ON OR -6 THREAD-ON FITTINGS TO FIT A WIDE RANGE OF APPLICATIONS



Rapid-Cool® Transmission Oil Coolers

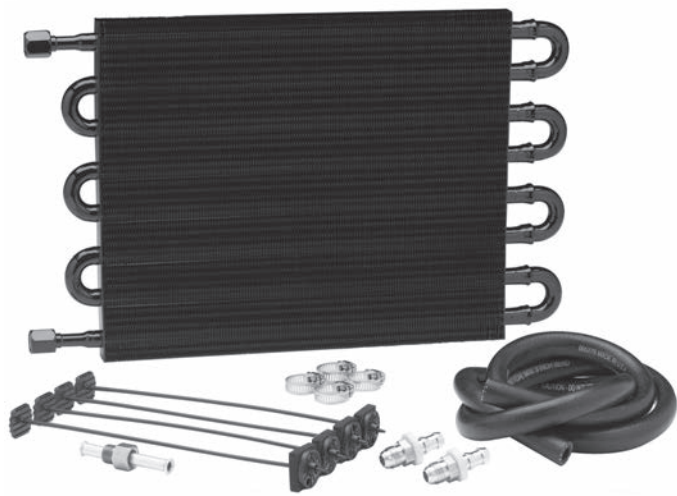
PART #	THICKNESS	HEIGHT	LENGTH	CORE	FITTING TYPE	APPLICATION	GVW
676	3/4"	6"	11"	3-15/16"	3/8" PUSH-ON	COMPACT AND SUB-COMPACT CARS	10,000
677	3/4"	7-1/2"	11"	5-1/2"	3/8" PUSH-ON	UP TO FULL SIZE VEHICLES, TOWING UP TO 2,500 LBS.	14,000
678	3/4"	9-1/2"	11"	7-3/8"	3/8" PUSH-ON	UP TO CLASS "C" MOTORHOMES, TOWING UP TO 5,000 LBS.	18,000
679	3/4"	11-5/8"	11"	9-1/2"	3/8" PUSH-ON	UP TO CLASS "A" MOTORHOMES, TOWING UP TO 10,000 LBS.	22,000
687	3/4"	7-1/2"	11"	5-1/2"	9/16"-18, 37° JIC MALE FLARE (-6)	UP TO FULL SIZE VEHICLES, TOWING UP TO 2,500 LBS.	14,000
689	3/4"	11-5/8"	11"	9-1/2"	9/16"-18, 37° JIC MALE FLARE (-6)	UP TO CLASS "A" MOTORHOMES, TOWING UP TO 10,000 LBS.	22,000

IMPORTANT NOTES

- DO NOT use transmission oil coolers for engine oil applications. Engine damage may result due to flow restrictions.
- For extreme cold weather conditions (20°-30° below 0), recommended installation includes a #163 thermostatic bypass kit.

TRANSMISSION OIL COOLERS

Specifications



High Performance Transmission Oil Coolers

Available in three sizes for medium to heavy duty applications, our high performance cooler is designed to provide outstanding cooling, as well as to complement other high performance accessories.

FEATURES

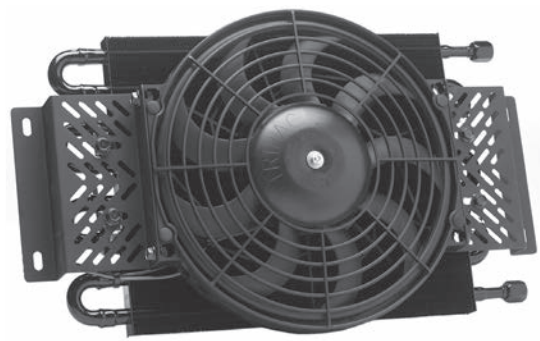
- SAE 45° FITTINGS FOR MAXIMUM RELIABILITY
- ALL ALUMINUM LIGHTWEIGHT CONSTRUCTION
- ELECTROSTATICALLY POWDER COATED TO PREVENT CORROSION

High Performance Transmission Oil Coolers

PART #	THICKNESS	HEIGHT	LENGTH	CORE	FITTING SIZE	APPLICATION
512	3/4"	7-1/2"	12-1/2"	8-3/4"	9/16"-18 S.A.E. FLARE	UP TO FULL SIZE VEHICLES, TOWING UP TO 2,500 LBS.
514	3/4"	7-1/2"	15-7/8"	12-1/8"	9/16"-18 S.A.E. FLARE	UP TO CLASS "C" MOTORHOMES, TOWING UP TO 5,000 LBS.
516	3/4"	10"	15-7/8"	12-1/8"	9/16"-18 S.A.E. FLARE	UP TO CLASS "A" MOTORHOMES, TOWING UP TO 10,000 LBS.

IMPORTANT NOTES

- DO NOT use transmission oil coolers for engine oil applications. Engine damage may result due to flow restrictions.
- For extreme cold weather conditions (20°-30° below 0), recommended installation includes a #163 thermostatic bypass kit.



525 — High Performance

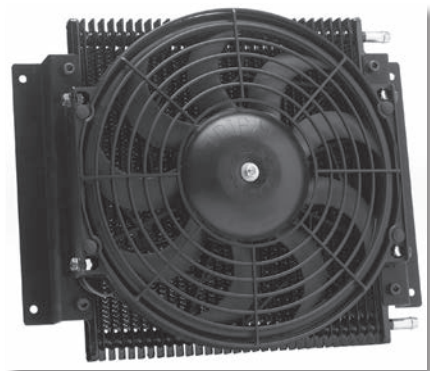
Remote Transmission Oil Cooling Systems

Our remote mount cooling systems use advanced stator fan technology to evenly distribute airflow over the cooler surface for maximized cooling. Both units can be remotely mounted away from the radiator. Compatible with 3651 adjustable fan controller, or can be operated with a manual switch (not included).

FEATURES

- Powder-coated aluminum brackets
- Remote mounting
- Fan and cooler preassembled
- Stator fan blade technology

For proper installation, use Part Number 105 (11/32" x 4-1/2") or 106 (3/8" x 4-1/2") Transmission Hose.



526 — Rapid-Cool®

Remote Transmission Oil Cooling Systems

PART #	THICKNESS	HEIGHT	LENGTH	FITTING SIZE	APPLICATION
525	3.5"	11"	18.5"	9/16"-18 S.A.E. FLARE	THREADED COOLER FITTINGS FOR MAXIMUM DEPENDABILITY.
526	3.5"	11"	13.8"	3/8" PUSH-ON	ULTRA COMPACT DESIGN PROVIDES SAME COOLING AS THE HIGH PERFORMANCE MODEL.

ENGINE OIL COOLERS

Specifications

Power Steering Oil Cooler

Our power steering oil coolers remove destructive heat generated within a power steering system, especially in vehicles with large tires such as motorhomes and off-road vehicles. Installation of a power steering oil cooler will prolong the life of the system's pump, hoses, fluid and seals.

PART #	THICK	HEIGHT	LENGTH	CORE	FITTING TYPE	APPLICATION
1009	3/4"	2-1/2"	9"	5-3/4"	3/8" PUSH-ON	LIGHT-DUTY
1010	3/4"	2-1/2"	12"	8-3/4"	3/8" PUSH-ON	MEDIUM-DUTY
1011	3/4"	5"	9-1/4"	5-3/4"	3/8" PUSH-ON	HEAVY-DUTY



Ultra Cool® Engine Oil Coolers – Light Duty

LIGHTWEIGHT ALL ALUMINUM CONSTRUCTION

ULTRASONICALLY SOLDERED FOR MAXIMUM RELIABILITY

HIGH-EFFICIENCY TURBULATORS

PART #462 SPECIALLY DESIGNED FOR CHEVROLET V8 ENGINES

PART #	THICK	HEIGHT	LENGTH	CORE	FITTING SIZE	APPLICATION
459	3/4"	7-1/2"	12-1/2"	8-3/4"	1/2" PUSH-ON	ALL EXCEPT CHEVY V8
462	3/4"	7-1/2"	12-1/2"	8-3/4"	1/2" PUSH-ON	CHEVY V8 ONLY
1230	3/4"	7-1/2"	12-1/2"	8-3/4"	1/2" PUSH-ON	COOLER ONLY



Ultra Cool® Engine Oil Coolers – Medium Duty

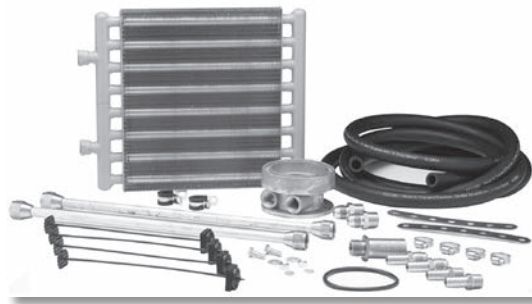
TWO-PASS THIN-LINE HEADERED DESIGN FOR INCREASED COOLING

100% HAND-BRAZED CONSTRUCTION

TURBULATORS IN EVERY TUBE FOR EFFICIENT COOLING

PART #461 SPECIALLY DESIGNED FOR CHEVROLET V8 ENGINES

PART #	THICK	HEIGHT	LENGTH	CORE	FITTING SIZE	APPLICATION
457	3/4"	10-1/2"	12-1/4"	8-5/8"	3/8" FPT	ALL EXCEPT CHEVY V8
461	3/4"	10-1/2"	12-1/4"	8-5/8"	3/8" FPT	CHEVY V8 ONLY



Swirl Cool® – Heavy Duty

COPPER HEADER AND TUBE CONSTRUCTION

TURBULATORS IN EVERY TUBE FOR MAXIMUM COOLING AND EFFICIENCY

VIBRATION ABSORBING RUBBER BLOCK MOUNTING

1-1/2" THICK HEADERED DESIGN FOR INCREASED COOLING AND EFFICIENCY

MINIMAL PRESSURE LOSS DUE TO HEADERED DESIGN

PART #1046 DESIGNED FOR CHEVROLET V8 ENGINES

PART #	THICK	HEIGHT	LENGTH	CORE	FITTING SIZE	APPLICATION
1040	1-1/2"	6-1/2"	18"	14-1/4"	1/2" FPT	ALL EXCEPT CHEVY V8
1046	1-1/2"	6-1/2"	18"	14-1/4"	1/2" FPT	CHEVY V8 ONLY



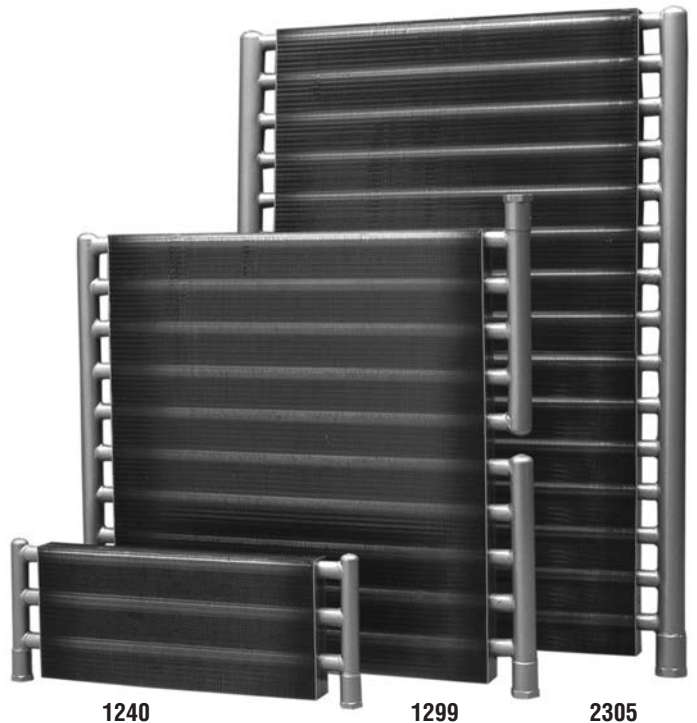
Chevrolet specific kits come with metal line kit to route oil lines past exhaust manifold. Refer to oil cooler application pages for specific year and model recommendations.

HEAVY DUTY OIL COOLERS

Specifications

Designed for rugged heavy duty use, our coolers can be used for many different cooling applications, including transmission, engine, gear box, hydraulic oils and diesel fuel.

Our heavy duty coolers feature brazed copper tubes with aluminum fin construction. Turbulators in every tube provide 3 1/2 times more cooling surface than bare tubing.



Heavy Duty Oil Cooler Specifications

PART #	MOUNTING KITS QTY.	P/N	OVERALL SIZE HEIGHT, LENGTH, THICKNESS	NUMBER OF ROWS	NUMBER OF PASSES	FITTING SIZE FPT	GPM FLOW RANGE	COOLING BTU / HR. @2500 AIRFLOW @ 100°F ITD OIL TO AIR	PACKED WEIGHT IN POUNDS
TWO-PASS COOLERS									
1233	1	210	10 x 12-1/4 x 3/4	1	2	3/8	2 – 10	7,300 – 12,000	4
1299	3	238	22-1/8 x 24 x 1-1/2	1	2	3/4	2.5 – 20	36,500 – 61,000	17
1271	2	238	26-3/4 x 30 x 1-1/2	1	2	1	3 – 12	49,300 – 89,600	26
ONE-PASS COOLERS									
1215	1	238	4-1/2 x 15 x 1-1/2	1	1	1/2	1 – 8	6,000 – 8,500	3
1234	2	238	6-1/2 x 15 x 1-1/2	1	1	1/2	1.5 – 12	9,000 – 12,800	4
1240	2	238	6-1/2 x 18 x 1-1/2	1	1	1/2	1.5 – 12	10,900 – 16,200	4
1236	2	238	8-1/2 x 18 x 1-1/2	1	1	1/2	2 – 16	14,500 – 21,500	6
1241	2	238	8-1/2 x 21 x 1-1/2	1	1	1/2	2 – 16	16,900 – 25,900	7
1268	2	238	12-3/4 x 18 x 1-1/2	1	1	3/4	3 – 24	21,200 – 31,200	8
1260	2	238	12-3/4 x 24 x 1-1/2	1	1	3/4	3 – 24	28,100 – 44,300	11
1284	3	238	16-3/4 x 24 x 1-1/2	1	1	3/4	4 – 32	37,500 – 59,000	14
1290	3	238	18-3/4 x 24 x 1-1/2	1	1	3/4	4.5 – 36	42,200 – 66,400	15
1292	3	238	25 x 24 x 1-1/2	1	1	1	6 – 48	55,200 – 86,400	20
2305	4	238	31 x 24 x 1-1/2	1	1	1	7.5 – 60	70,000 – 108,000	26
2306	4	238	31 x 30 x 1-1/2	1	1	1	7.5 – 60	83,600 – 139,800	32
1297	4	238	37-1/4 x 30 x 1-1/2	1	1	1-1/4	9 – 72	99,000 – 164,600	38
1298	4	238	37-1/4 x 40 x 1-1/2	1	1	1-1/4	9 – 72	122,600 – 226,100	51
2312	4	238	41-3/4 x 43 x 1-1/2	1	1	2	10 – 80	149,600 – 264,500	94
TWO-ROW COOLERS									
2271	4	238	20-1/4 x 24 x 3	2	1	1	9 – 36	89,900 – 114,300	38
2292	1	107	26-7/8 x 24 x 3	2	1	1	12 – 96	83,500 – 152,400	51
2297	1	183	45 x 42 x 3	2	1	2-1/2	18 – 144	235,900 – 415,700	134

HEAVY DUTY OIL COOLERS

Specifications

Allison Transmission Application Guide

TRANSMISSION MODEL	GPM FLOW	HORSEPOWER	HIGHWAY (1)		OFF-HIGHWAY	
			ADD-ON COOLER PART #	REPLACEMENT COOLER PART #	ADD-ON COOLER PART #	REPLACEMENT COOLER PART #
AT 540, 542, 545	4.5	125	1268	1299	1299	1271
		150	1260	1299	1299	1271
		175–235	1299	1299	1299	1271
MT 40, 41, 42 SERIES	8.0	150	1260	1290	1290	1292
		200	1290	1290	1292	2305
		250	1290	1292	2305	2306
MT 643, 645, 653	8.0	175–200	1299	1299	1299	1271
		250	1299	1271	1271	2306
MT 644, 646, 647, 648, 654	12.0	200	1290	1290	1290	2305
MT 645CR, 655, 656CR		250	1292	1292	1292	2305
		300	1290	2305	2305	1297
HT 740, 747, 748, 750	15.0	250	1290	1292	1292	2306
HT 7500DR, 754, 755CR		300	1290	2305	2305	1297
HT 755DR, CBLT 754		350	1292	2306	2306	1298
		400	1292	1297	1297	1298
425		2305	1298	1298	2312	
V 730, 731	20.0	200	1290	1292	–	–

(1) Highway vehicles refers to vehicles usually operated above 30mph. Use off-highway applications for refuse trucks.

HD-COOL™ Heavy-Duty

Hayden's 37mm heavy duty plate & fin coolers are ideal for Transmission and Engine oil cooling applications requiring higher flow range and increased heat transfer capacity in a compact space.

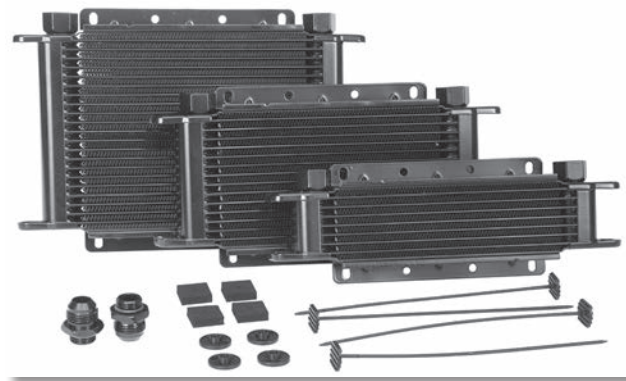
FEATURES

PRE-DRILLED MOUNTING BRACKETS FOR EASY INSTALLATION

3 SIZES AVAILABLE TO HANDLE A WIDE RANGE OF APPLICATIONS

PATENTED INTERNAL TURBULATION FOR INCREASED HEAT TRANSFER & MINIMAL PRESSURE DROP (Patent No. 6,478,080)

37° JIC MALE FLARE (-12) FITTINGS FOR MAXIMUM FLOW CAPACITY



Rapid-Cool®

Rapid-Cool® Heavy-Duty Specification Chart

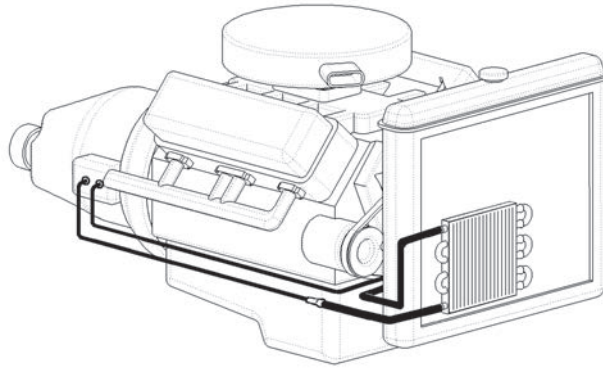
PART #	THICKNESS	HEIGHT	LENGTH	CORE	FITTING TYPE	RECOMMENDED FLOW RANGE	COOLING BTU / HR (1)	GVW
776	1.7"	4.3"	12.9"	11.2"	FEMALE 7/8-14 O-RING X 37° JIC MALE FLARE (-12 AN)	1-5 GPM	5,200 – 10,400	14,000
777	1.7"	6.6"	12.9"	11.2"	FEMALE 7/8-14 O-RING X 37° JIC MALE FLARE (-12 AN)	1-5 GPM	7,900 – 18,500	18,000
778	1.7"	9"	12.9"	11.2"	FEMALE 7/8-14 O-RING X 37° JIC MALE FLARE (-12 AN)	1-5 GPM	9,600 – 20,800	24,000

(1) @ 100° F oil to air differential temperature.

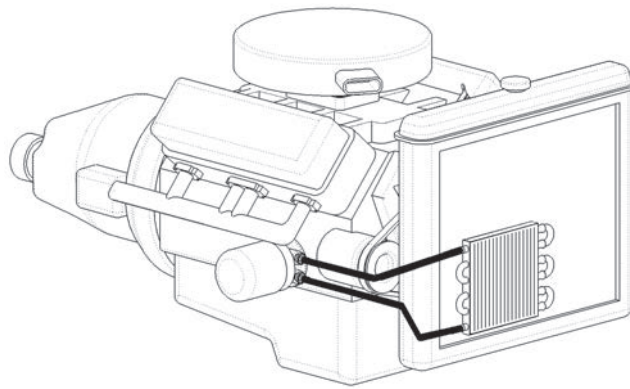
ENGINE OIL COOLERS

Specifications

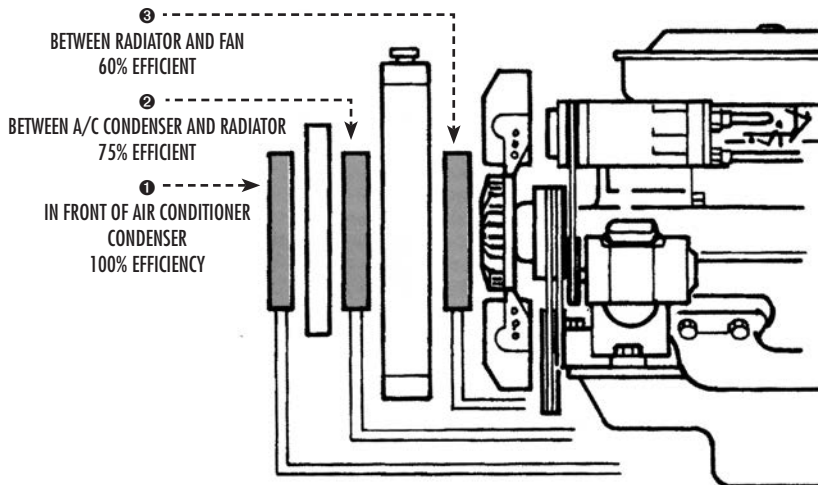
Typical in series transmission oil cooler installation



Full flow engine oil cooler system with sandwich adapter



SHOWN ARE THE THREE SUGGESTED LOCATIONS FOR THE COOLER IN RELATION TO THE AIR CONDITIONER CONDENSER



Mounting Location

For maximum efficiency, the cooler should be mounted where it will receive the coolest air and maximum air flow. This is usually directly in front of the radiator or the air conditioning condenser. Use alternative positions 2 or 3 if sufficient room up front is unavailable. Be sure to compensate for the loss of cooling efficiency by using a cooler one or two sizes larger.

COOLER ACCESSORIES

Specifications

- 270** OIL TEMPERATURE GAUGE SENDER FITTING
Bulkhead type fitting that installs in the transmission pan. Can be used to install a 1/8" MPT temperature sender, or used as a drain plug.
- 275** OIL TEMPERATURE GAUGE
Monitors transmission or engine oil temperature. Features 160°F – 320°F range. Complete with mounting bezel, sender, sender fitting and wiring.



270



275

Hose And Line Kits

- 105** TRANSMISSION OIL COOLER HOSE
11/32" x 4-1/2'
- 106** TRANSMISSION OIL COOLER HOSE
3/8" x 4-1/2'
- 112** ENGINE OIL COOLER HOSE
1/2" x 12'
- 125** TRANSMISSION OIL COOLER HOSE
11/32" x 25'
- 126** TRANSMISSION OIL COOLER HOSE
3/8" x 25'
- 251** TRANSMISSION OIL COOLER REINSTALLATION KIT
Contains PART #'s 105, 210, 250 and four hose clamps.
- 293** METAL LINE KIT
For engine oil coolers. Routes oil lines past exhaust manifolds.



105, 106



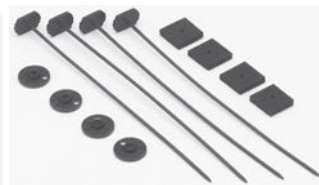
251



293



153, 253



209, 210

Cooler Mounting Kits

- 153** METAL MOUNTING BRACKET KIT
For 1-1/2" thick coolers.
PART #'s 1015, 1040, 1046, 1240
- 253** METAL MOUNTING BRACKET KIT
For 3/4" thick coolers.
PART #'s 401-405, 457-462, 676-679
- 209, 210** MOUNTING KIT, FOR TRANS-COOLERS AND ELECTRIC FANS
Contains nylon rods, foam pads, and removable locking buttons. 209 is in retail clamshell packaging. 210 is in a plastic bag.
- 238** Rubber block mounting kit for 1-1/2" thick coolers.



250



252

Trans-Cooler Installation Fittings

- 250** QUICK-CONNECT® COUPLER
Fits most 5/16" trans-lines with 1/2"-20 thread
- 252** FORD, 1/4", 3/8" NPT FITTINGS
- 390** GM-FORD-JEEP, 5/8"-18 INVERTED FLARE
- 391** JEEP, 5/8"-18 S.A.E. 45° FITTINGS
- 392** DODGE-JEEP, 3/8" X 3/8" HOSE SPLICERS
- 393** GM, 1/2"-20 INVERTED FLARE, FULL THREAD
- 394** FORD, 1/2"-20 INVERTED FLARE, PARTIAL THREAD
- 395** FORD, 5/8"-18 INVERTED FLARE, PARTIAL THREAD
- 396** DODGE, JEEP, 9/16"-18 37° JIC FLARE
- 397** GM, FITS SNAP-IN TRANS-LINE TYPE FITTINGS
- 398** DODGE, JEEP, 9/16"-24 45° JIC FLARE



390, 393, 394, 395



391, 396, 398



392



397

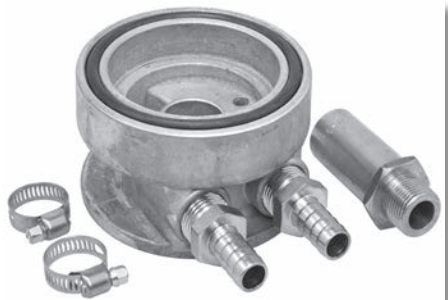
COOLER ACCESSORIES

Specifications

Thermostatic Sandwich Adapters



205



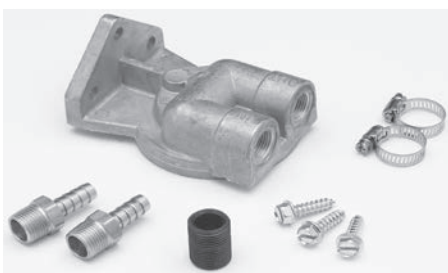
211



214



291



2106

Designed to fit between the filter and the block, these thermostatic adapters begin directing oil to the cooler when the oil temperature reaches 160°F and direct all oil to the cooler when the temperature reaches 180°F.

205 – Fits Ford, Chrysler and imports. 3/8" FPT ports with 3/4"-16 thread mounting nut.

211 – Fits Chevrolet and GM with large (3-1/2") O-ring diameter. 1/2" FPT ports with 13/16"-16 thread mounting nut.

225 – Fits AMC, Jeep, some GM with small (2-3/4") O-ring. 3/8" FPT ports with 13/16"-16 thread mounting nut.

242 – Fits 1976 and later GM. 3/8" FPT ports with 18mm x 1.5 thread mounting nut.

243 – Fits AMC and imports 3/8" FPT ports with 20mm x 1.5 thread mounting nut. Some O.E. filters may not seal, use FRAM #PH3950 or equivalent.

The out port is on the left with O-ring side up, facing ports. CAUTION: To avoid oil pressure loss and possible engine damage, do not use sandwich adapters to install transmission coolers as engine oil coolers.

Remote Filter Mount Kits (Non-Thermostatic)

For use when relocation of the oil filter is necessary, these mounting kits include all hardware necessary except hoses.

214 – Fits Chevrolet and GM with large (3-1/2") O.D. O-ring.

291 – Universal remote filter mount, fits small (2-3/4") O.D. O-ring only. Includes 3/4"-16", 13/16"-16, 18mm x 1.5, 20mm x 1.5 adapters.

2106 – Compatible with engine oil or transmission fluid. 3/8" FPT ports facing forward. Block adapter not included.

1 REMOTE FILTER MOUNTS HAVE 3/8" FPT PORTS.

2 BLOCK OFF ADAPTERS HAVE 1/2" FPT PORTS.

3 ALL FILTER MOUNTS USE FORD TYPE FILTERS, SUCH AS FRAM # PH8A OR EQUIVALENT.

4 USE #112 HOSE FOR ENGINE APPLICATIONS, #105 FOR TRANSMISSION APPLICATIONS.

Oil Thermostat



163

163 – Oil thermostat for use with engine oil or transmission fluid begins closing at 160°F, fully closed at 180°F, 3/8" FPT fittings.