The Pioneers of
Street Supercharging

www.dyersblowers.com

DYER'S

Dyer's Machine Service
7665 W. 63rd St
Summit, IL. 60501
708-496-8100
708-496-8113 (FAX)

R6-71 & 8-71 INSTALLATION PROCEDURE

When installing your street blower kit, make sure all gasket surfaces are clean of old gasket material. A good seal is important!

The blower should be torqued to the intake manifold with 12 ft/lbs with bolts, 10 ft/lbs with studs. Use either a thin blower base gasket or a sealer that is unaffected by gasoline. Bolts or studs should be oiled or greased lightly to prevent galling.

90W or 140W Gear lube is to be used in the front gear case to achieve a level just above half way. Synthetic and conventional lubes work equally well. The rear bearings are hand packed with grease and should not need attention.

The tensioner is to be installed on the inside of the belt on the passenger side of the vehicle pushing out. The tensioner pulley has sealed bearings and should never have to be lubricated. The blower belt should be adjusted cold to about 3/4 to 1" total deflection on the long side of the belt. When the engine warms up, the deflection should reduce to about 1/4". Adjust the idler arm forward and back to align the belt on the pulleys.

We recommend you run a high performance mechanical fan with a shroud to provide adequate air flow at low speeds. Fan spacers may be required to locate the fan forward of the blower belt. Make sure the spacers fit tightly together and run true. Misalignment and excessive runout can case water pump failure and fan release. If necessary, electric fans should be used with shrouds that cover the entire surface of the radiator.

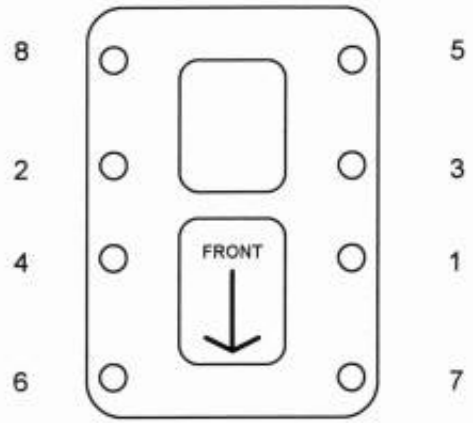
An ideal distributor has 9 degrees mechanical advance (18 degrees at the crank) starting at 1,200 rpms and full at 3,000 rpms. We recommend a total advance of 34-36 degrees on most small block V8's (16-18 initial timing) and 32 degrees on most big block V8's (14 initial timing). For high boost applications, reduce the total advance by 2-4 degrees.

Vacuum leaks are the biggest problem when installing a supercharger. Make sure everything is sealed up tight. Vacuum accessories such as power brakes, automatic transmission, etc. must be hooked to the 1/8" pipe plugs in the rear of the carburetor adapter. *Do not attach these accessories below the supercharger.*

A high performance mechanical or electric fuel pump may be necessary since a blower under full boost can pass nearly twice as much fuel and air versus a normally aspirated engine. We recommend a minimum of 6 psi of fuel pressure under full throttle acceleration. A fuel pressure gauge is recommended to monitor the pressure. Make sure to clean all fuel lines and use fuel filters to keep carburetors from flooding.

Our steel billet crank hubs are made to fit tight on the crankshaft. It is recommended to rotate your engine to top dead center before installing the crank hub. After installation, the crank hub will require a TDC mark to be stamped into it. When installing, pull the balancer on with the crank bolt using a series of shorter bolts. **Do not hit the balancer directly with a hammer**. Install the crank bolt using loctite. Each timing make on the balancer represents 2 (two) crankshaft degrees. Initial and total advance marks should be made using this reference.

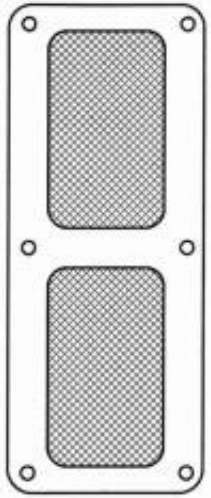
BLOWER TORQUE PATTERN



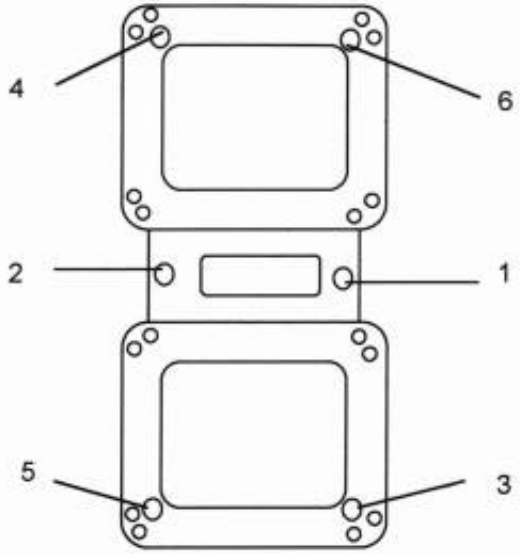
TORQUE BLOWER TO 12 Ft/lbs

BLOWER MUST ROTATE FREELY AFTER TORQUING TO SPECS!

CARBURETOR ADAPTER TORQUE PATTERN

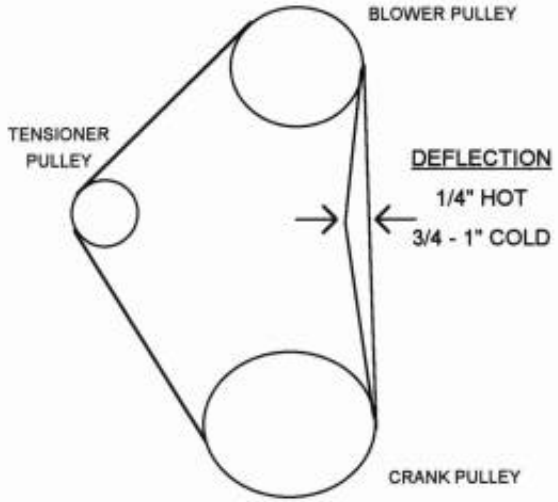


FOR SAFETY, PLEASE USE THE PROVIDED SCREEN GASKET

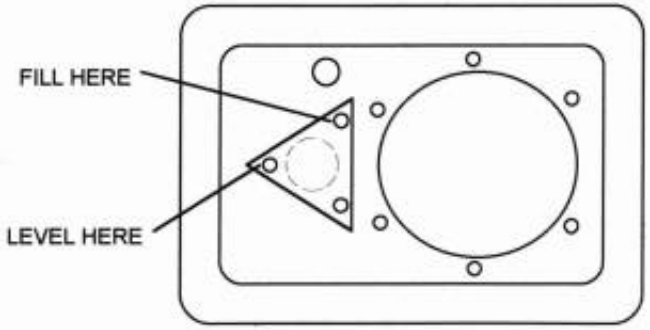


TORQUE 8-10 Ft/lbs IN SEQUENCE

BELT TENSION



FRONT COVER LUBE LEVEL



USE 90W OR 140W GEAR LUBE

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½" PITCH BLOWER DRIVE RATIO CHART

Underdriven

The blower is turning slower than the crankshaft. The top pulley will have a larger number of teeth than the bottom pulley

Even or 1:1

The blower is turning at the same rpm as the engine. The top pulley and the bottom pulley will have the same number of teeth.

Overdriven

The blower is turning faster than the crankshaft. The top pulley will have a smaller number of teeth than the bottom pulley.

Note: If you are changing drive ratios, try to keep the total number of teeth the same as you currently have. (Add the number of teeth of both pulleys together) This will keep the tensioner in the same position without having to change belts.

Examples:	Top=35	Bottom=35	Ratio=1:1	Number of Teeth=70
	Top=33	Bottom=37	Ratio=+12.1%	Number of Teeth=70
	Top=38	Bottom=32	Ratio=-15.8%	Number of Teeth=70

½" Pitch Gilmer Chart

Overdriven= ■ Underdriven= ■

BOTTOM PULLEY \ TOP PULLEY	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
27	1:1	-3.6	-6.9	-10.0	-12.9	-15.6	-18.2	-20.6	-22.9	-25.0	-27.0	-28.9	-30.8	-32.5	-34.1
28	+3.7	1:1	-3.4	-6.7	-9.7	-12.5	-15.2	-17.6	-20.0	-22.2	-24.3	-26.3	-28.2	-30.0	-31.7
29	+7.4	+3.6	1:1	-3.3	-6.5	-9.4	-12.1	-14.7	-17.1	-19.4	-21.6	-23.7	-25.6	-27.5	-29.3
30	+11.1	+7.1	+3.4	1:1	-3.2	-6.3	-9.1	-11.8	-14.3	-16.7	-18.9	-21.1	-23.1	-25.0	-26.8
31	+14.8	+10.7	+6.9	+3.3	1:1	-3.1	-6.1	-8.8	-11.4	-13.9	-16.2	-18.4	-20.5	-22.5	-24.4
32	+18.5	+14.3	+10.3	+6.7	+3.2	1:1	-3.0	-5.9	-8.6	-11.1	-13.5	-15.8	-17.9	-20.0	-22.0
33	+22.2	+17.9	+13.8	+10.0	+6.5	+3.1	1:1	-2.9	-5.7	-8.3	-10.8	-13.2	-15.4	-17.5	-19.5
34	+25.9	+21.4	+17.2	+13.3	+9.7	+6.3	+3.0	1:1	-2.9	-5.6	-8.1	-10.5	-12.8	-15.0	-17.1
35	+29.6	+25.0	+20.7	+16.7	+12.9	+9.4	+6.1	+2.9	1:1	-2.8	-5.4	-7.9	-10.3	-12.5	-14.6
36	+33.3	+28.6	+24.1	+20.0	+16.1	+12.5	+9.1	+5.9	+2.9	1:1	-2.7	-5.3	-7.7	-10.0	-12.2
37	+37.0	+32.1	+27.6	+23.3	+19.4	+15.6	+12.1	+8.8	+5.7	+2.8	1:1	-2.6	-5.1	-7.5	-9.8
38	+40.7	+35.7	+31.0	+26.7	+22.6	+18.8	+15.2	+11.8	+8.6	+5.6	+2.7	1:1	-2.6	-5.0	-7.3
39	+44.4	+39.3	+34.5	+30.0	+25.8	+21.9	+18.2	+14.7	+11.4	+8.3	+5.4	+2.6	1:1	-2.5	-4.9
40	+48.1	+42.9	+37.9	+33.3	+29.0	+25.0	+21.2	+17.6	+14.3	+11.1	+8.1	+5.3	+2.6	1:1	-2.4
41	+51.8	+46.4	+41.4	+36.7	+32.3	+28.1	+24.2	+20.6	+17.1	+13.9	+10.8	+7.9	+5.1	+2.5	1:1

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8mm PITCH BLOWER DRIVE RATIO CHART

Underdriven

The blower is turning slower than the crankshaft. The top pulley will have a larger number of teeth than the bottom pulley

Even or 1:1

The blower is turning at the same rpm as the engine. The top pulley and the bottom pulley will have the same number of teeth.

Overdriven

The blower is turning faster than the crankshaft. The top pulley will have a smaller number of teeth than the bottom pulley.

Note: If you are changing drive ratios, try to keep the total number of teeth the same as you currently have. (Add the number of teeth of both pulleys together) This will keep the tensioner in the same position without having to change belts.

Examples:	Top=55	Bottom=55	Ratio=1:1	Number of Teeth=110
	Top=50	Bottom=60	Ratio=+20.0%	Number of Teeth=110
	Top=58	Bottom=52	Ratio=-10.3%	Number of Teeth=110

8mm Pitch Chart

Overdriven= ■ Underdriven= ■

BOTTOM PULLEY \ TOP PULLEY	43	45	48	50	52	55	58	60	62	65	68	70
43	1:1	-4.5	-10.5	-14.0	-17.4	-21.9	-25.9	-28.3	-30.6	-33.8	-36.8	-38.6
45	+4.6	1:1	-6.3	-9.0	-13.5	-18.2	-22.5	-25.0	-27.4	-30.8	-33.8	-35.7
48	+11.6	+6.6	1:1	-4.0	-7.7	-12.8	-17.3	-20.0	-22.6	-26.2	-29.4	-31.4
50	+16.3	+11.1	+4.2	1:1	-3.8	-9.0	-13.8	-16.7	-19.4	-23.1	-26.5	-28.6
52	+20.9	+15.6	+8.3	+4.0	1:1	-5.5	-10.3	-13.3	-16.1	-20.0	-23.5	-25.7
55	+27.9	+22.2	+14.6	+10.0	+5.8	1:1	-5.4	-8.3	-11.3	-15.4	-19.1	-21.4
58	+34.8	+28.9	+20.8	+16.0	+11.5	+5.5	1:1	-3.3	-6.5	-10.8	-14.7	-17.1
60	+39.5	+33.3	+25.0	+20.0	+15.4	+9.1	+3.4	1:1	-3.2	-7.7	-11.8	-14.3
62	+44.2	+37.8	+29.2	+24.0	+19.2	+12.7	+6.9	+3.3	1:1	-4.6	-8.8	-11.4
65	+51.2	+44.4	+35.4	+30.0	+25.0	+18.2	+12.1	+8.3	+4.8	1:1	-4.4	-7.1
68	+58.1	+51.1	+41.7	+36.0	+30.8	+23.6	+17.2	+13.3	+7.9	+4.6	1:1	-2.9
70	+62.8	+55.6	+45.8	+40.0	+34.6	+27.3	+20.7	+16.7	+12.9	+7.7	+2.9	1:1

BLOWER BOOST CHARTS

Note: These charts show maximum pressure at approximately 6000 rpms with a street engine. Pressure will vary with different camshafts, exhaust systems, cylinder heads, ported heads, etc.

4-71 Boost Chart

DISPLACEMENT	DRIVE RATIO									
	-10%	-6%	1:1	+10%	+20%	+25%	+30%	+33%	+40%	+50%
210	14	15.5	17	20	23	25	26	27	29	33
240	10	11.5	13	16	18	20	21	22	24	26
270	8	9	10	12	15	16	17	18	19	22
300	5	6	7	9	12	13	14	15	16	18
330	3	4	5	7	9	10	11	12	13	15
350	2	3	3.5	5	7	8	9	10	11	13
390	0.5	1	2	4	5.5	6	7	8	9	11
420	0	0.5	1	2.5	4	5	5.5	6	7	9
450	0	0	0	1	3	4	4.5	5	5.5	7

6V-71 Boost Chart

DISPLACEMENT	DRIVE RATIO									
	-15%	-12%	-9%	-6%	1:1	+10%	+20%	+25%	+30%	
210	13	16	19	21	23	25	27	29	31	
240	10	12	14	16	18	20	22	24	26	
270	9	11	13	15	16.5	18.5	21	23	24	
300	8	10	12.5	14	15	16	18	20	21	
330	6	8	10	12	14	15.5	17	18	19	
350	5	7	9	11	13	14.5	16	17	18	
390	3	5	7	9	11	12.5	14	15	16	
420	2	4	6	8	9	11	12.5	13	15	
450	1.5	3.5	5	7	8	9	10	11	12.5	

6-71 Boost Chart

DISPLACEMENT	DRIVE RATIO									
	-20%	-15%	-10%	-6%	1:1	+10%	+20%	+25%	+30%	+33%
270	15	17	19	20	22	26	29	31	33	34
300	12	13	15	16	18	22	25	27	28	29
330	9	10.5	12	13	15	18	21	23	24	25
350	7	8.5	10	11	13	16	18	20	21	22
390	5.5	6.5	8	9.5	11	13	16	17	18	19
420	4	5	6.5	7.5	9	11	13	15	16	17
450	2.5	3.5	5	6	7	9	12	13	14	15
480	1.5	3	4	5.5	6.5	8	10	11	12	13
510	0.5	1.5	2	3.5	4.5	6.5	8	10	10.5	11

8-71 Boost Chart

DISPLACEMENT	DRIVE RATIO											
	-20%	-15%	-10%	-5%	1:1	+5%	+10%	+15%	+20%	+25%	+30%	+35%
289	14	16	18	20	22	24	26	28	30			
327	12	14	16	18	20	22	24	26	28	30		
350	10	12	14	16	18	20	22	24	26	28	30	
400	8	10	12	14	16	18	20	22	24	26	28	30
427	6	8	10	12	14	16	18	20	22	24	26	28
454	4	6	8	10	12	14	16	18	20	22	24	26
502	2	4	6	8	10	12	14	16	18	20	22	24
550	1	2	4	6	8	10	12	14	16	18	20	22
600	0	1	2	4	6	8	10	12	14	16	18	20