
Emails: hamona58@yahoo.com, gharibi@ifco.ir, rajabi-eng@ifco.ir , iravani@ifco.ir

()

:

-

- :

-

()

)

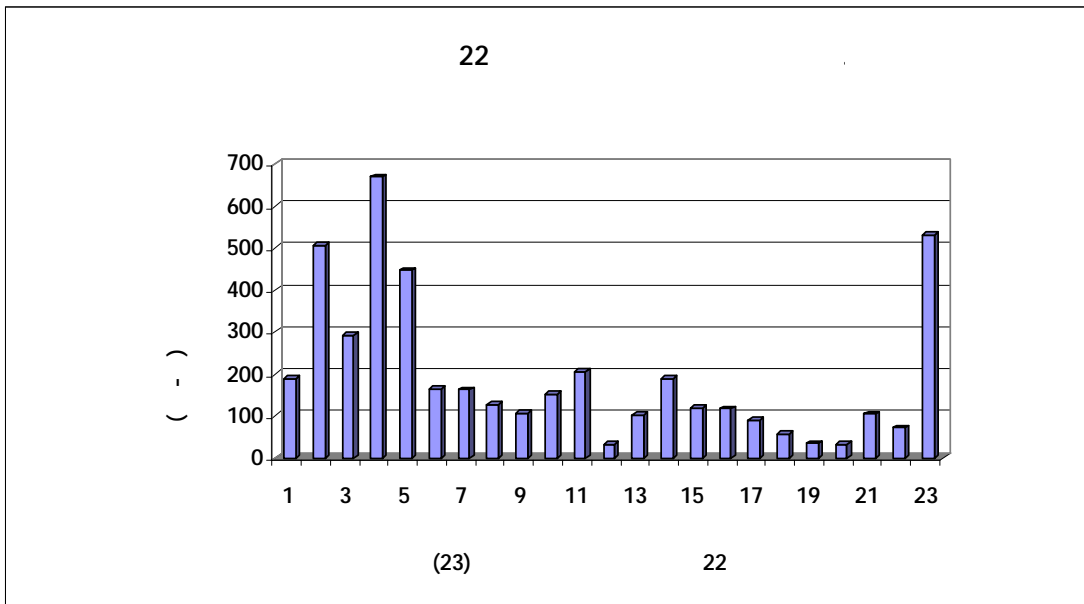
(

(...)

(V1)

(V2)

(/)



m/h)	()	()	(-)	(-)	(-)	
3.2	17.7	45.6	1692	1286.5	29874	
0.7	15.2	44.1	1100	808.8	16721	
7.7	9.6	32.4	100	54.0	959	
5.2	20.1	48.0	700	559.8	14096	
0.0	15.0	45.0	450	337.2	6749	
0.6	11.6	33.8	41	23.1	476	
1.3	13.9	39.2	300	195.9	4173	
5.8	17.1	65.1	121	131.4	2070	
2.1	16.7	45.2	4504	3396.7	75119	

	23*	21	8	7	6	5	4	3	2	1	
0.0	93.4	67.4	33.1	37.5	40.6	33.9	46.3	28.1	35.4	15.0	
0.1	81.2	70.6	30.0	33.8	28.3	29.4	45.9	20.2	30.5	38.0	
0.2	101.3	0.0	0.0	82.5	120.0	0.0	0.0	0.0	120.0	0.0	
0.1	96.3	82.0	0.0	76.3	52.5	75.7	104.1	38.6	43.8	57.8	
0.0	82.5	52.5	52.5	0.0	0.0	23.4	98.3	0.0	22.5	0.0	
0.5	79.9	37.5	27.8	45.7	46.9	44.4	37.6	21.3	28.2	42.5	
0.0	0.0	37.5	22.5	37.5	0.0	0.0	82.5	52.5	52.5	22.5	
0.5	0.0	0.0	0.0	0.0	22.5	0.0	0.0	28.0	0.0	37.5	
0.3	90.6	64.8	35.3	47.6	41.5	39.9	53.6	25.2	36.0	39.9	

-1

-2

-3

CO (mg/Km)	NO _x (mg/Km)	NMVOC (mg/Km)	N ₂ O (mg/Km)	CH ₄ (mg/Km)	CO ₂ (mg/Km)	(⁻ *l/Km)) (
76929	1207	5667	37	568	340506	145872		
139614	2271	7375	71	745	377923	161908		
54250	1829	3278	55	331	259768	111258		
53468	3017	3710	91	336	285197	122149		
35669	2219	2348	68	235	207814	88959		
27678	4047	2296	124	203	223675	95749		
32003	2908	2071	88	209	221087	94628		
28864	4296	2055	130	195	226600	96988		



()

() ()
() /
/

().

()	()						
369 lit	857 lit	9 lit	4 lit	31lit	700ilt	333lit	
194	576	9	2	36	460	157	
8	58	1	1	2	53	4	
135	460	36	7	25	317	103	
82	242	3	4	18	201	59	
0	44	0	0	0	35	0	
11	361	0	5	7	311	0	
8	89	2	1	7	46	0	
807	2686	61	24	127	2123	656	

CO2 . / /

CO2



:

VAN

(

)

(

)

-

VAN

()

VAN

" "

() ()
VAN

VAN		VAN		(-)		
()		()				
20	1	0	0	20	1	1
50	3	0	0	50	2	1
18	1	0	0	18	3	1
16	1	0	0	16	4	1
20	1	0	0	20	5	1
18	1	0	0	18	1	2
20	1	1	1	21	2	2
20	1	1	1	21	3	2
20	1	3	1	23	4	2
13	1	0	0	13	1	4
20	1	0	0	20	2	4
12	1	0	0	12	4	5
33	2	0	0	33	1	17
13	1	0	0	13	2	17
8	1	0	0	8	1	21
10	1	0	0	10	2	21
13	1	0	0	13	3	21
20	1	0	0	20	1	24
20	1	3	1	23	1	31
20	1	0	0	20	1	47
20	1	3	1	23	2	47
8	1	0	0	8	1	49

-) (-) (-) CO (-) CO ((-)	(-)		
1034	3399	446	2882	395	640)
447	1338	149	1158	239	208		
51	158	30	125	10	42		
389	1162	141	988	168	221		
277	842	129	694	88	189		
45	143	36	104	0	44		
248	788	174	596	29	219		
97	316	74	236	8	89		
2588	8147	1179	6783	937	1651		

(.)

(-)		(-)			(-)			(-)			
3259	1741	4263	2144	2119	1327	671	656	0	0	0	
3259	1741	4263	2144	2119	1319	662	656	0	0	0	
3159	1640	4110	1991	2119	1269	613	656	0	0	0	
3259	1741	4263	2144	2119	1319	662	656	0	0	0	
3160	1642	4111	1992	2119	1270	613	656	0	0	0	
1241	662	13355	6810	6545	0	0	0	4308	2185	2123	
643	339	6745	3430	3315	0	0	0	2201	1114	1087	
512	268	5305	2700	2605	0	0	0	1737	880	858	
568	297	6007	3054	2953	0	0	0	1966	995	971	

482	252	5007	2540	2467	0	0	0	1640	828	812		
1196	696	1080	614	466	293	167	127	0	0	0		
1196	696	1080	614	466	293	167	127	0	0	0		
473	294	426	281	146	116	76	40	0	0	0		
1196	696	1080	614	466	293	167	127	0	0	0		
451	288	409	273	136	111	74	37	0	0	0		
287	184	174	107	67	63	39	24	0	0	0		
287	184	174	107	67	63	39	24	0	0	0		
113	64	83	53	30	30	19	11	0	0	0		
287	184	174	107	67	63	39	24	0	0	0		
82	47	64	42	22	23	15	8	0	0	0		
1099	534	2932	1343	1588	0	0	0	922	420	502		
1099	534	2932	1343	1588	0	0	0	922	420	502		
612	350	1678	923	754	0	0	0	531	289	242		
1099	534	2932	1343	1588	0	0	0	922	420	502		
617	347	1725	942	783	0	0	0	545	294	250		
-	-	-	-	-	-	-	-	-	-	-		
601	328	740	380	360	268	137	130	0	0	0		
1881	1011	2545	1265	1280	920	457	463	0	0	0		
681	374	827	425	402	299	154	145	0	0	0		
1952	1051	2600	1295	1305	940	468	472	0	0	0		
7400	4004	22271	11254	11017	1684	876	807	5353	2667	2686		
7404	4009	16402	8255	8147	1943	1005	937	3246	1595	1651		
6968	3758	14330	7306	7024	2336	1166	1170	2317	1193	1124		
7409	4012	15751	7923	7827	1974	1021	953	3011	1477	1535		
6961	3754	14097	7176	6921	2344	1171	1173	2232	1146	1086		



()

()

()

()

(/)

(/

)

()

(



()

()

()

()

()

)

) /

(

(

	(-)	()	()	()	
	160402	3557	2.06	8.90	
% ,	60311	1337	0.77	3.35	
% ,	28768	638	0.37	1.60	
	28782	470	0.43	0.97	()
	27089	410	0.51	0.69	()
	28802	451	0.43	0.90	()
	27060	404	0.51	0.67	()
	160415	3389	2.12	8.27	()
	158722	3330	2.20	7.99	()
	160435	3370	2.12	8.20	()
	158693	3323	2.21	7.97	()

(-)	()	()	()	()	
13	-168	-1.03	0.06	-0.63	
-1680	-227	-1.52	0.14	-0.91	
33	-187	-1.75	0.06	-0.70	
-1709	-234	-1.86	0.15	-0.93	

()	()	()	
356.5	-20.5	376.9	
491.6	-51.5	543.2	
396.0	-23.0	419.0	
506.1	-52.2	558.3	



)
 (/
 / ()

Van

/ /
) (

) ()

()



"	"	" - ١
"	"	" - ٢
"	"	" - ٣
"	"	" - ٤

5- " Vanpool Programs:Implementing Commuter Benefits Under the Commuter Choice Leadership Initiative", United States Air and Radiation EPA 420-S-01-010, Environmental Protection Transportation and Air Quality Agency, September 2001