CLUTCH Pro - Version 3.0 - (Untitled)

Racing Systems Analysis - www.QUARTERjr.com

General Data

Barometer - in Hg	29.92
Temperature - deg F	75
Relative Humidity - %	60
Low Gear Ratio	2.66
Rear Gear Ratio	4.86
Tire Rollout - inches	101.0

Clutch Arm Data

Mfg.Style Code	ACE.1
Number of Arms	6
Total Counter Wt - grams	48.0
Counter Wt/Arm - grams	8.0
Ring Height - inches	0.850

Racetrack Data

Estimated 60 ft Time - sec	1.04
Maximum Acceleration - g's	2.60
Traction Index	3

Clutch Spring and Disk Data

Static Plate Force - lbs	480
Number of Disks	2
Total Disk Weight - lbs	4.0
Outer Disk Diameter - inches	7.00
Inner Disk Diameter - inches	4.90
Effective Friction Area - %	90.0
Friction Coefficient	0.200

Polar Moments of Inertia

Engine + Flywheel + Clutch	3.70
Transmission + Driveshaft	0.275
Tires + Wheels + Ring Gear	50.7

Engine Dyno Data

RPM	HP	Torque
7000	1067	801
7250	1113	806
7500	1154	808
7750	1185	803
8000	1209	794
8250	1229	782
8500	1247	771
8750	1259	756
9000	1252	731
9250	1226	696

Gasoline Carburetor
HP/Torque Mult 1.000

Clutch Plate Force - lbs

RPM	Centrif	Total
7000	2460	2940
7250	2640	3120
7500	2825	3305
7750	3015	3495
8000	3210	3690
8250	3415	3895
8500	3625	4105
8750	3840	4320
9000	4065	4545
9250	4295	4775

Clutch Forces @ Lockup

Calculated ---	Low Gear	High Gear
Lockup RPM	8740	8460
Plate Force - lbs	4310	4075
Friction PSI	61.0	57.7

Clutch Forces @ Launch

Launch RPM	6600
With Air Gap - inches	0.050
Plate Force - lbs	2575
Zero Air Gap - inches	0.000
Plate Force - lbs	2665
Friction PSI	37.7

Polar Moment of Inertia Worksheet

Crankshaft Weight - lbs	56.0
Crankshaft Stroke - inches	3.650
Flywheel + Clutch Weight - lbs	28.5
Flywheel Diameter - inches	14.00
Polar Moment of Inertia =	3.70

Static Plate Force Worksheet

Number of Springs	-1-	6
Spring Base Pressure - lbs	20.0	120
Spring Rate - lbs/turn	30.0	180
Adjuster Location - turns		2.00
Adjuster Threads per Inch		24.0
Delta Ring Height - inches		0.000
Static Plate Force - lbs =		480

Polar Moment of Inertia Worksheet

Transmission Type: Manual Gears, Shafts

Transmission Weight - lbs	100.0
Case Diameter - inches	9.0
Polar Moment of Inertia =	0.275

Polar Moment of Inertia Worksheet

Tire Weight - lbs	38.0
Tire Rollout - inches	101.0
Wheel Weight - lbs	18.0
Wheel Diameter - inches	15.0
Polar Moment of Inertia =	50.7

Effective Friction Area Worksheet

Number of Slots	6
Slot Width - inches	0.312
Number of Holes	0
Hole Diameter - inches	0.000
Effective Area - % =	90.0