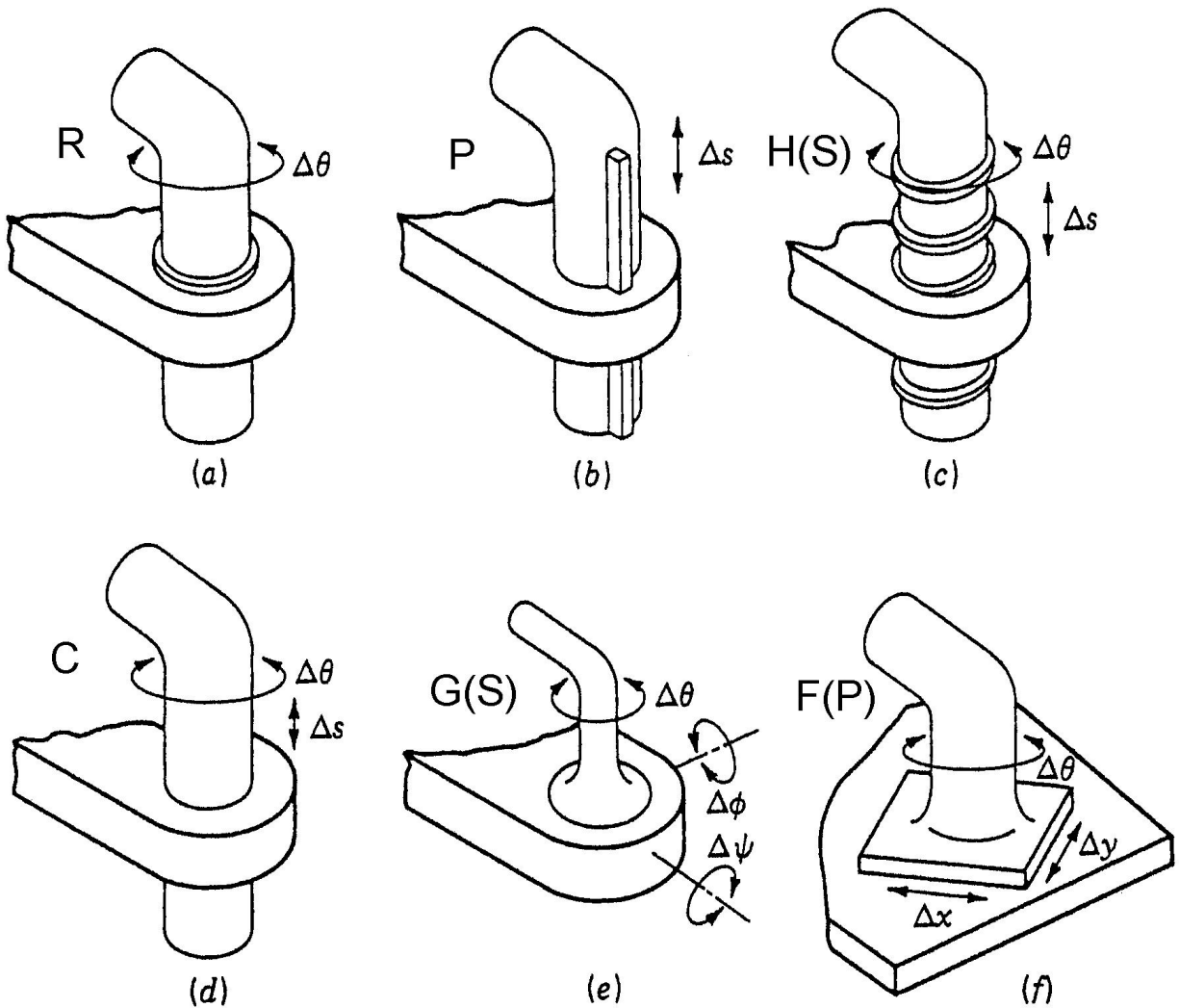
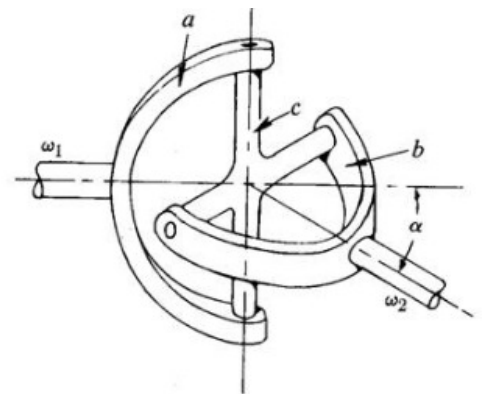


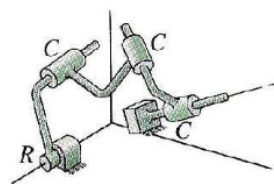
3D Joints

		Restricts	Allows
Revolute	R	5	1
Prismatic	P	5	1
Helical (Screw)	H(S)	5	1
Cylindrical	C	4	2
Universal (Hooke)	U(H)	4	2
Globe (Spherical)	G(S)	3	3
Flat (Planar)	F(P)	3	3

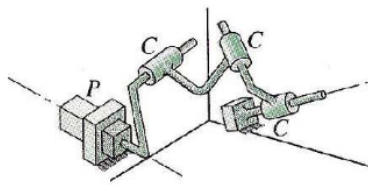


3D mobility

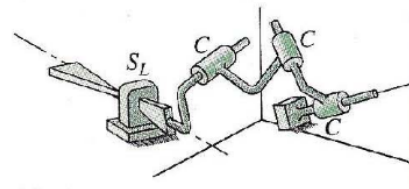
$$M = 6(nL-1) - 5 nJ_1 - 4 nJ_2 - 3 nJ_3$$



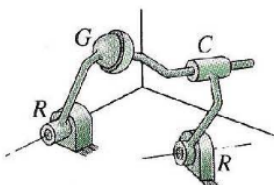
(a)



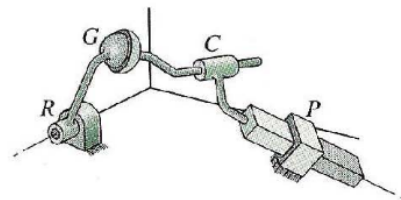
(b)



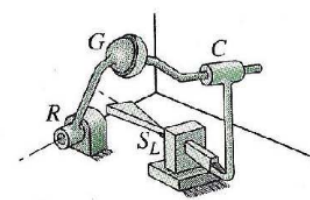
(c)



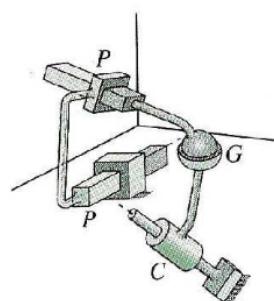
(d)



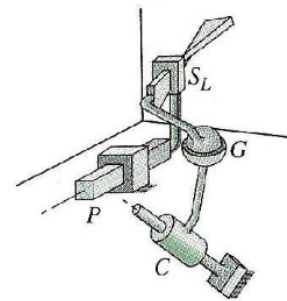
(e)



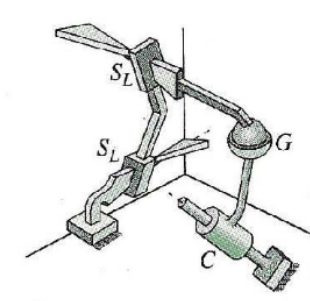
(f)



(g)

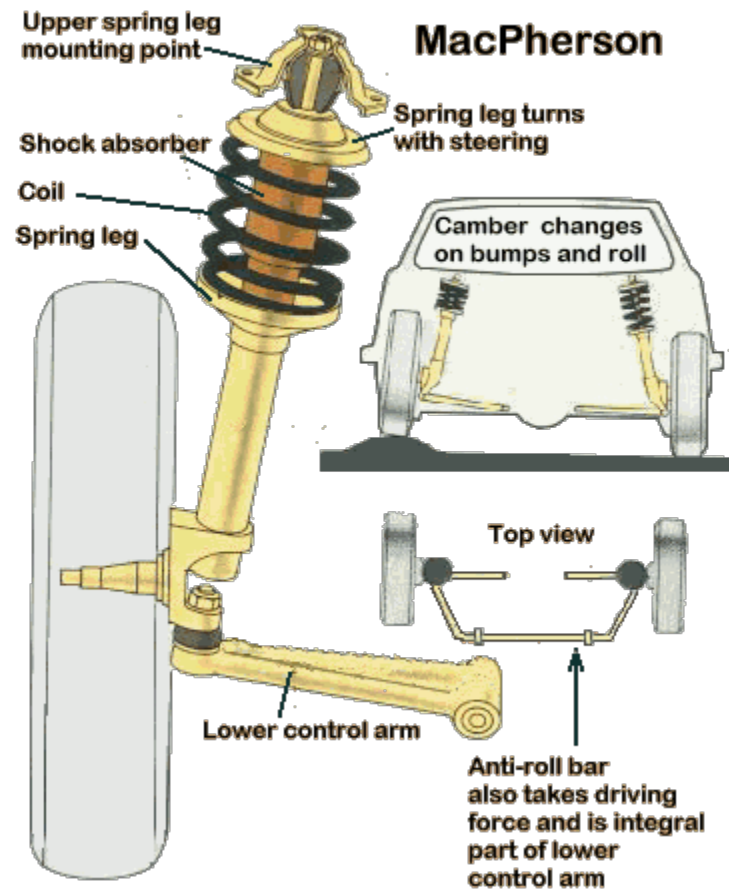


(h)



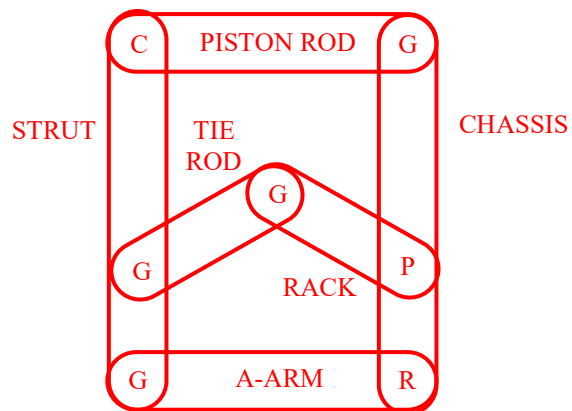
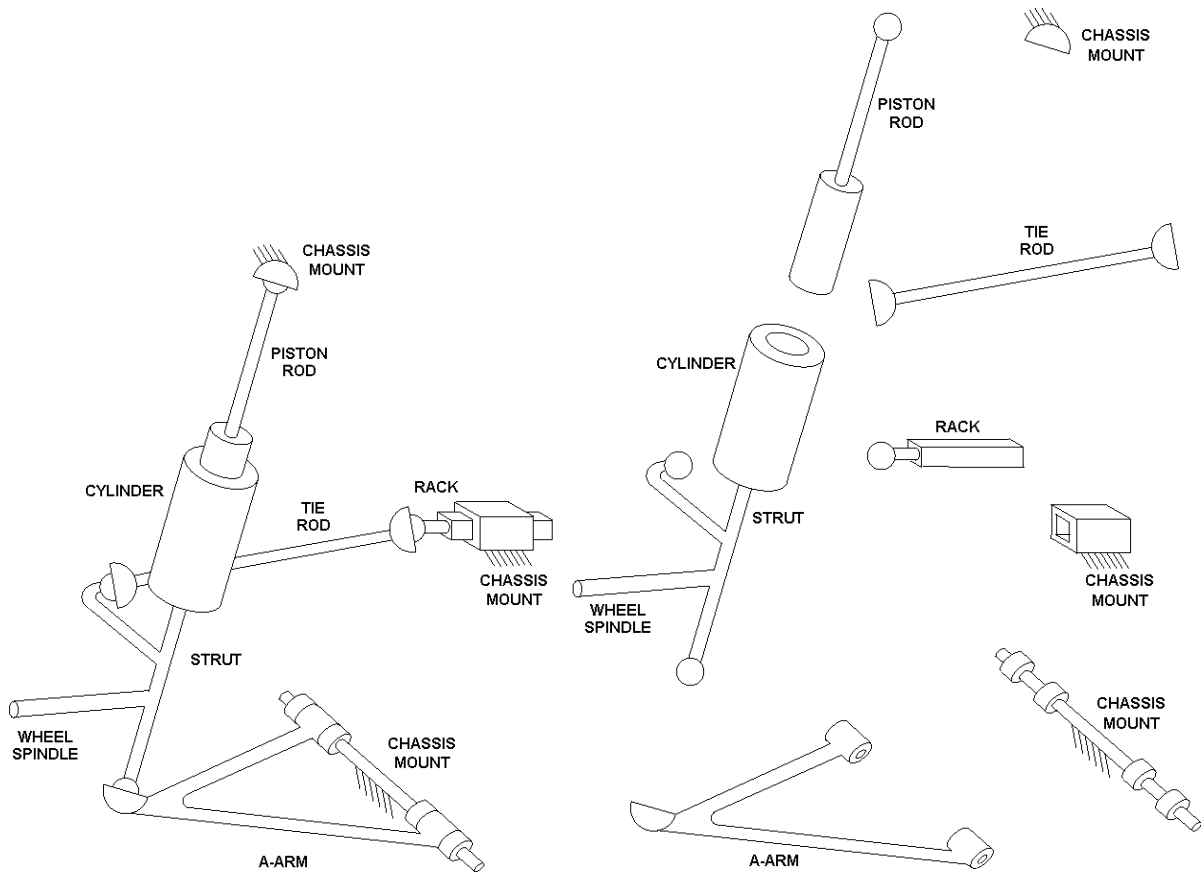
(i)

MacPherson Strut



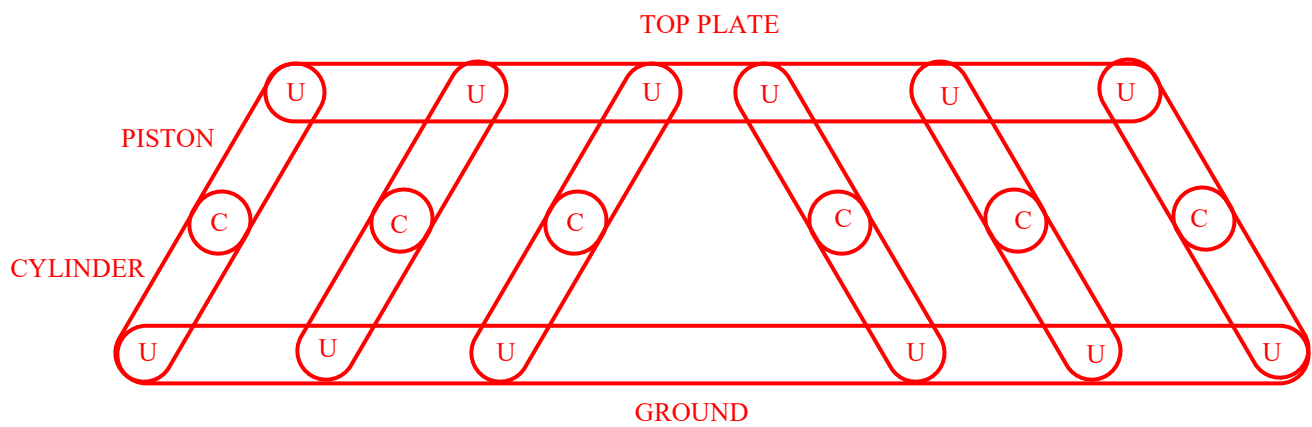
MacPherson Strut

nL 6 nJ1 2 (R,P) nJ2 1 (C) nJ3 4 (4G) M 4



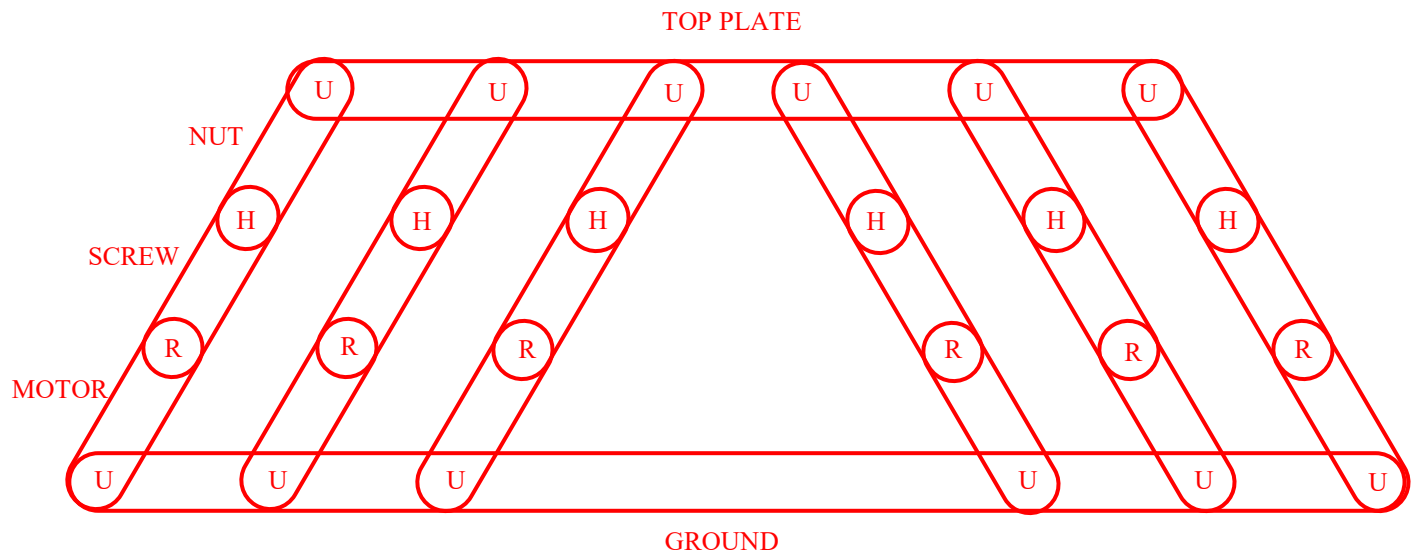
Stewart-Gough Platform (hydraulic)

nL 14 nJ1 0 nJ2 18 (12U, 6C) nJ3 0 M 6



Stewart-Gough Platform (electric)

nL 20 nJ1 12 (6R, 6H) nJ2 12 (U) nJ3 0 M 6



Planar and Spherical Four Bar

nL 4 nJ1 4 nJ2 0 nJ3 0 M -2 ???

