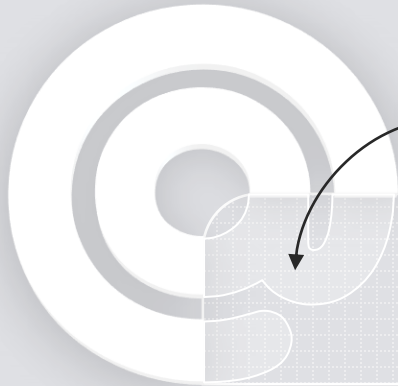




Team GearBox

자동 변속기 모델링 및 고찰

기계구조 중심 모델링 및 동력 흐름 시각화

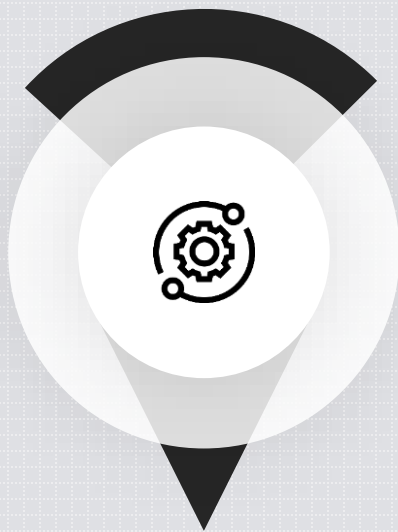


목차

자동 변속기 모델링 및 고찰



주제 및 팀 소개



설계 과정과 시뮬레이션



고찰 및 질의응답



Transmission

Gearbox

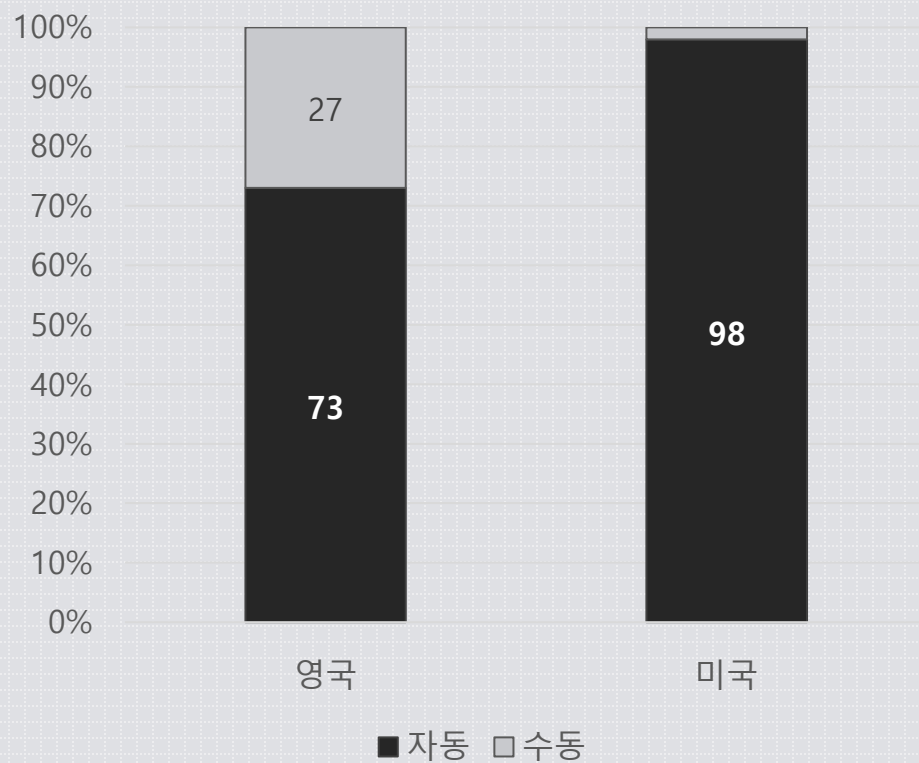
- 자동차의 조작과 주행 성격을 결정하는 핵심 요소
- 자동/수동에 따른 운전자의 확연한 경험 차이



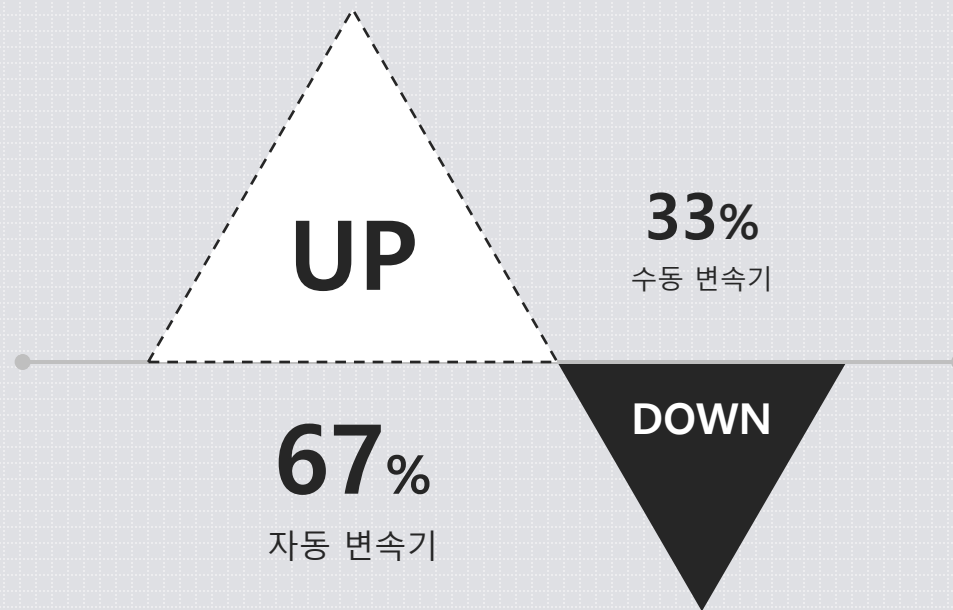
주제 소개

자동 변속기 모델링 및 고찰

변속기 사용 비율



글로벌 평균

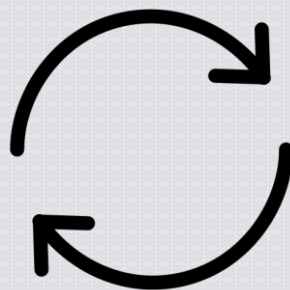




주제 소개

자동 변속기 모델링 및 고찰

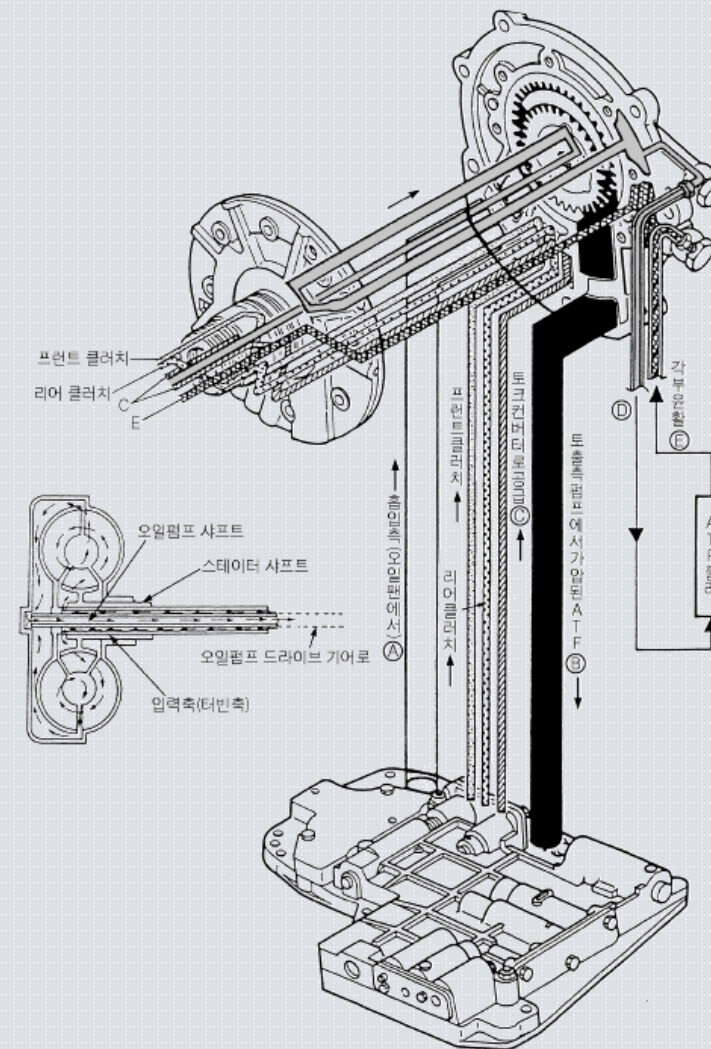
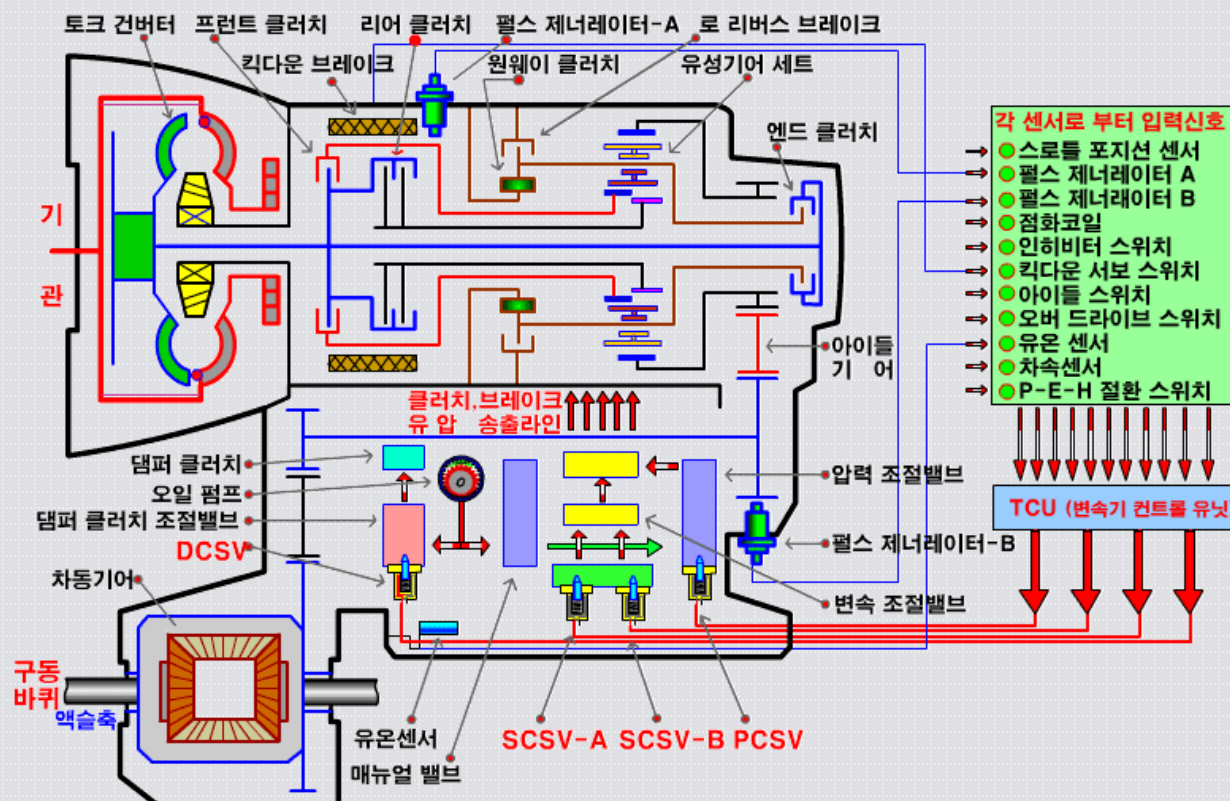
CATIA



Auto
Transmission

주제 소개

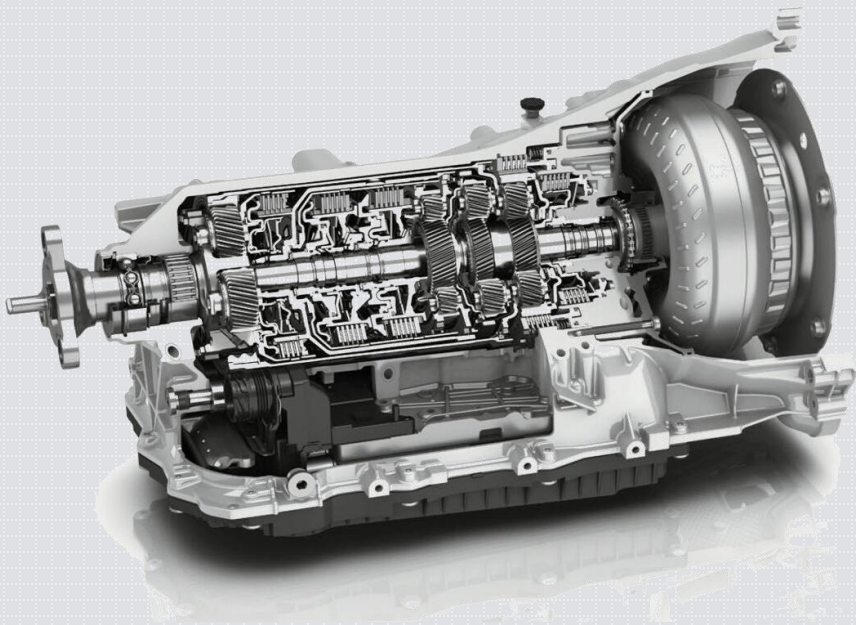
자동 변속기 모델링 및 고찰



오일 흐름의 경로



기계적 동작 시뮬레이션



- 오일 펌프 및 유압 회로
- 토크 컨버터
- 밸브 바디 및 전자 제어장치

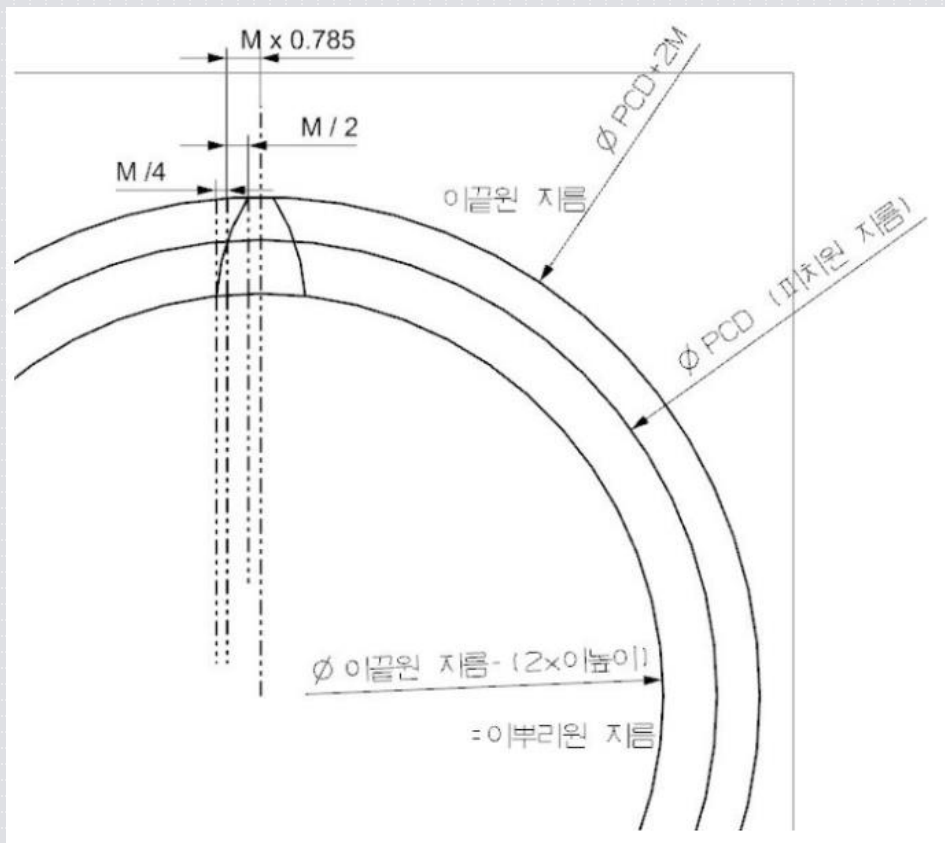


김도윤

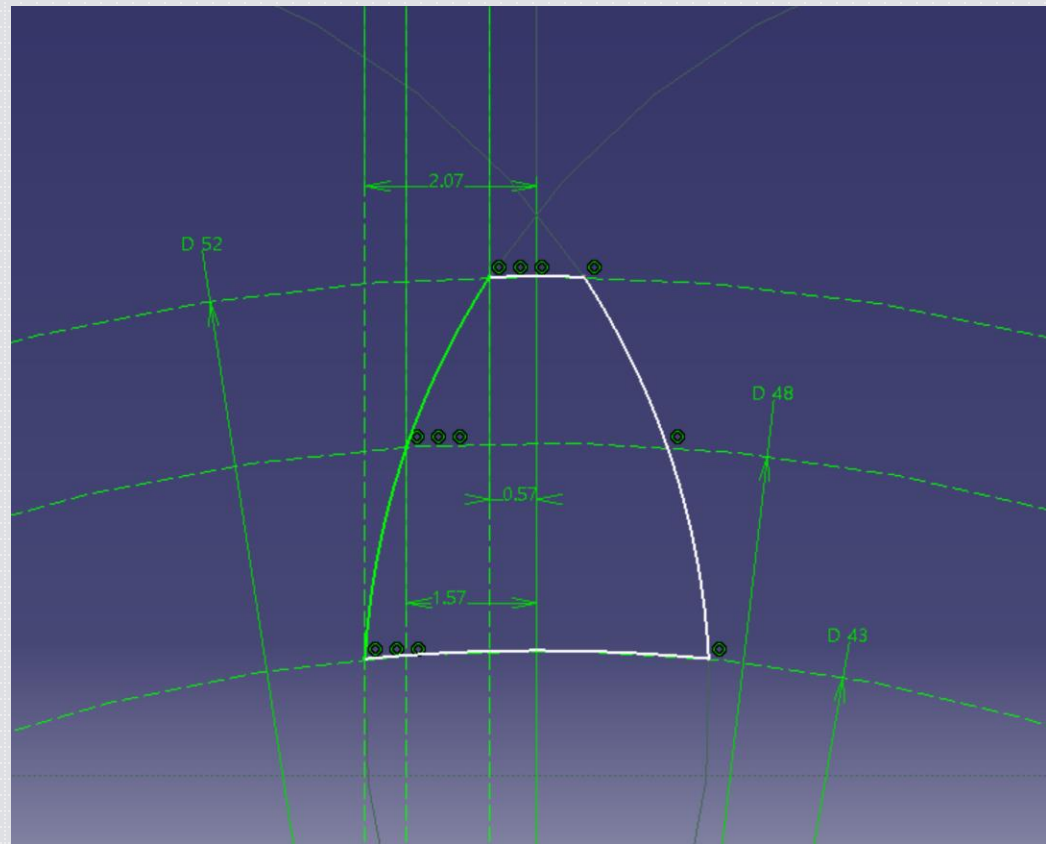
- Part Design
- Kinematics
- 영상 제작

김찬웅

- 자료 조사
- Part Design

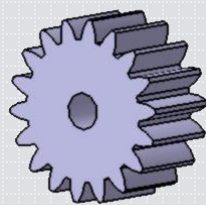


<https://blog.naver.com/kpong/221465684786>

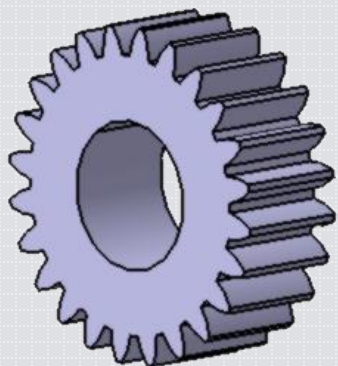




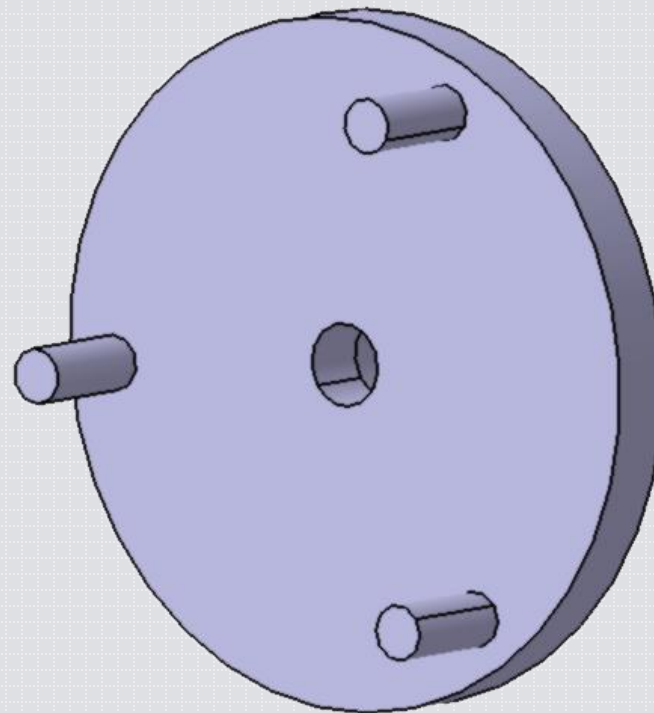
유성 기어

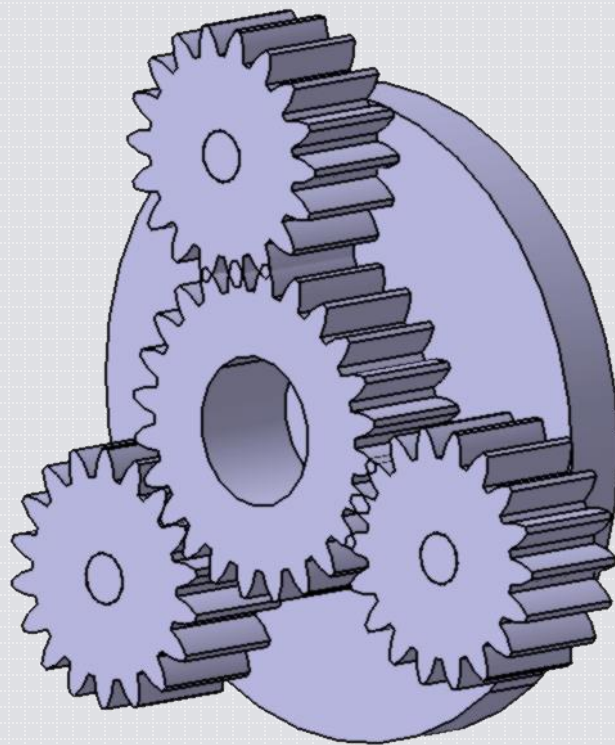


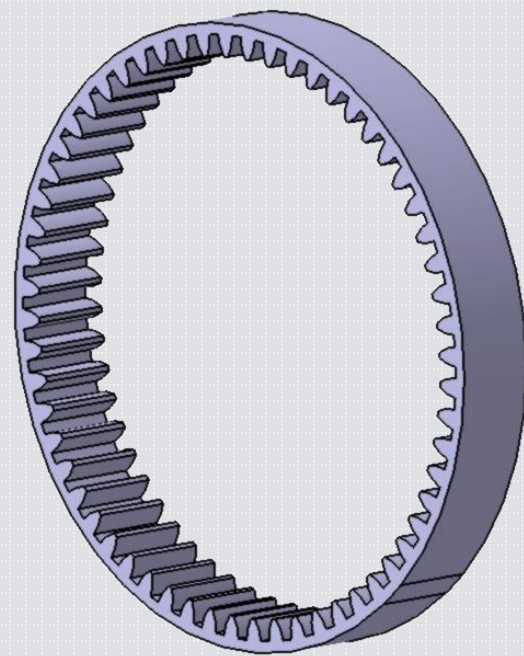
선 기어



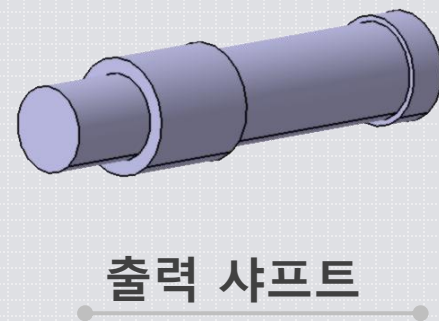
케리어

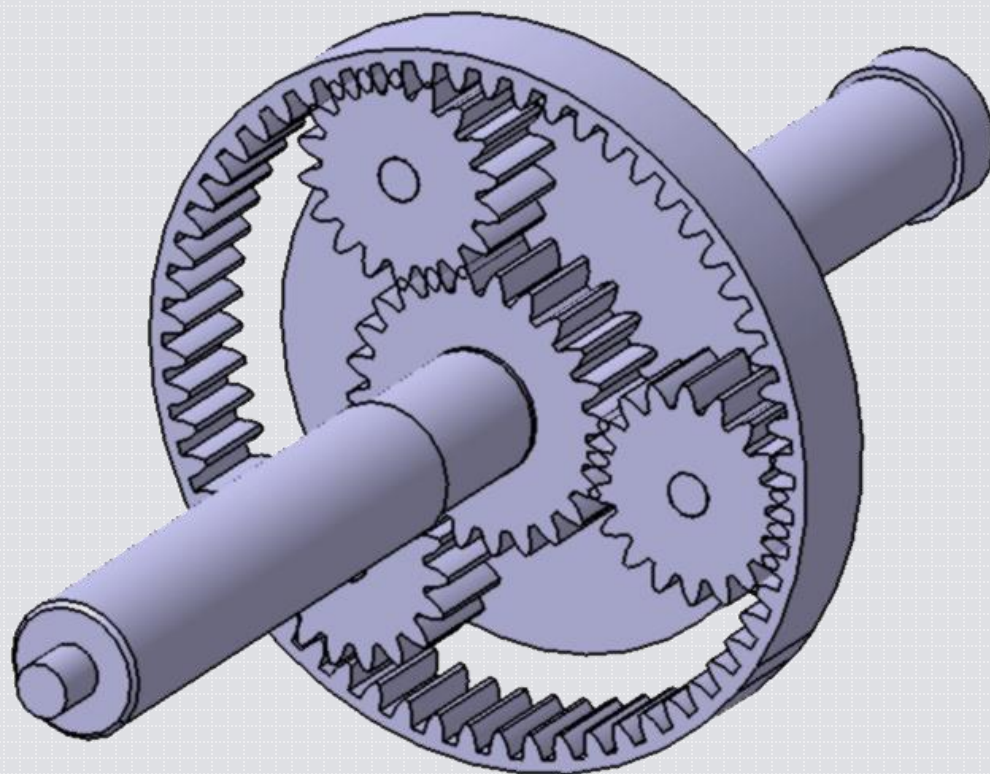


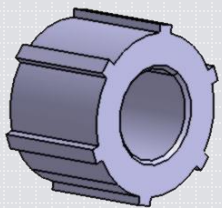




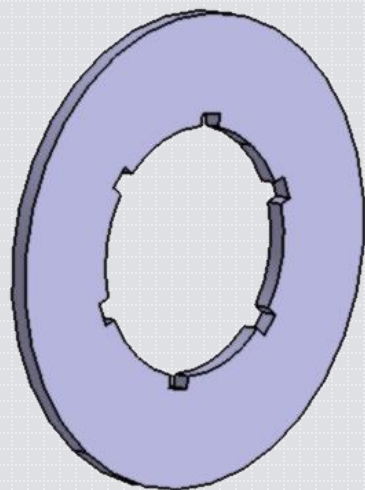
링 기어



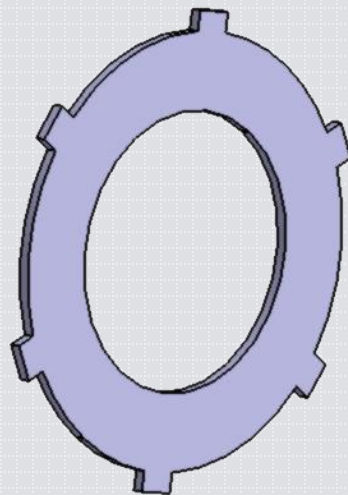




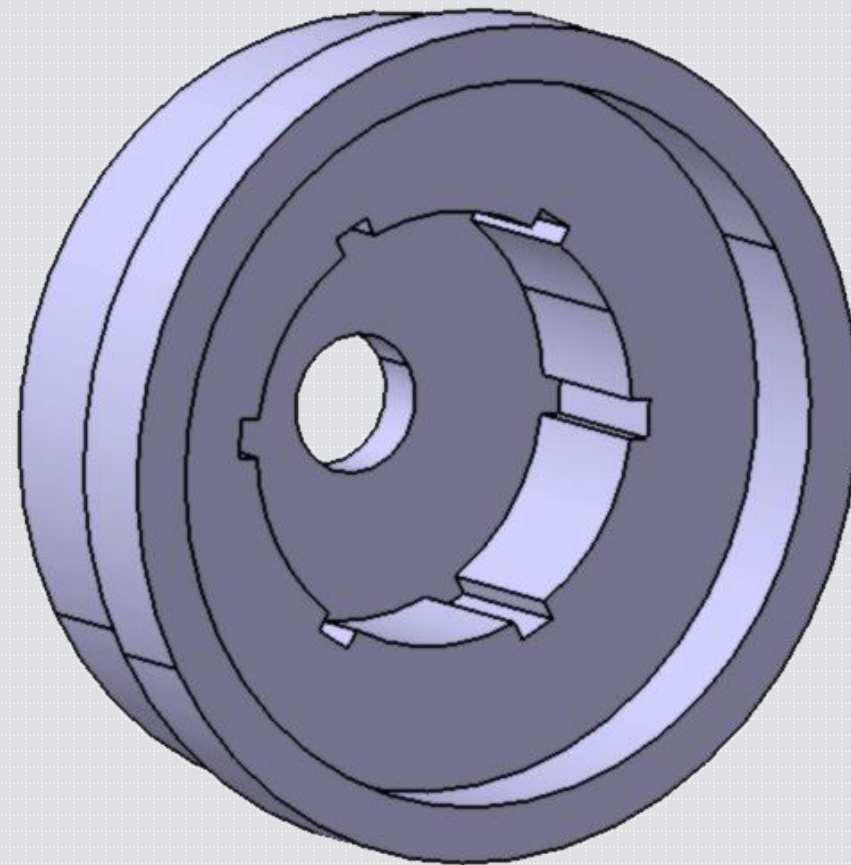
클러치 허브



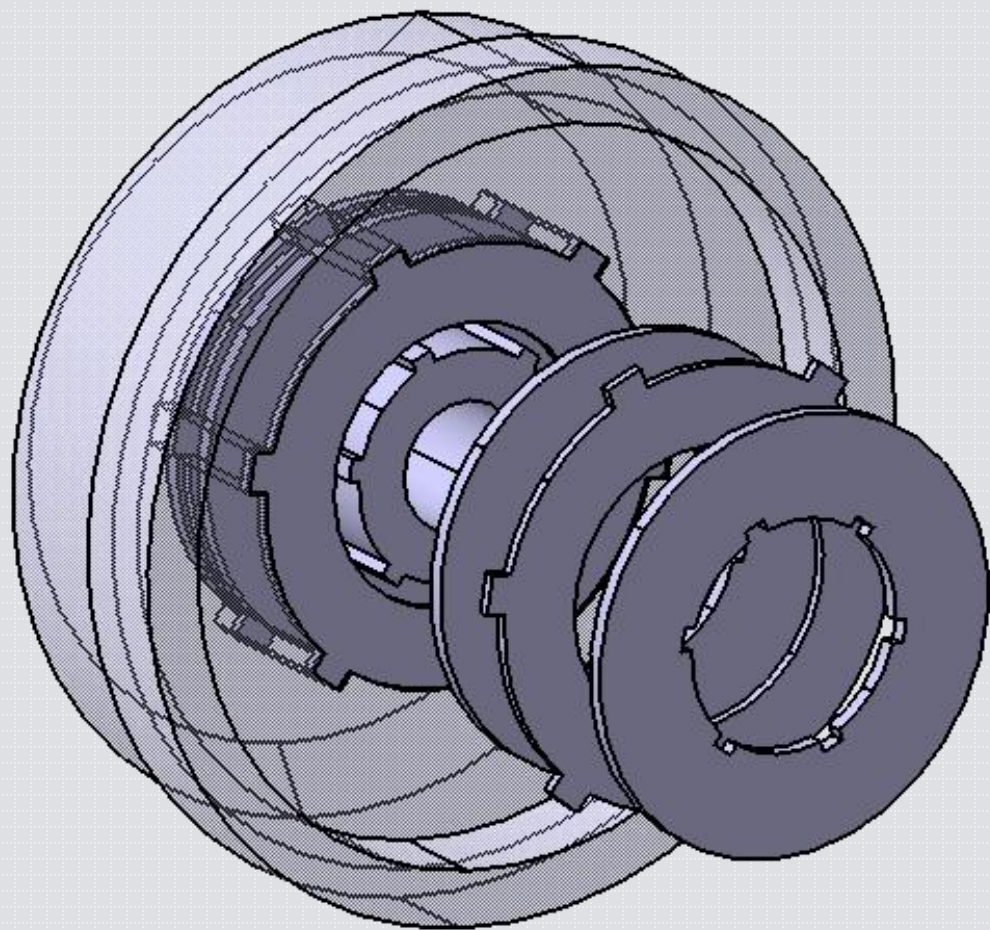
클러치 디스크

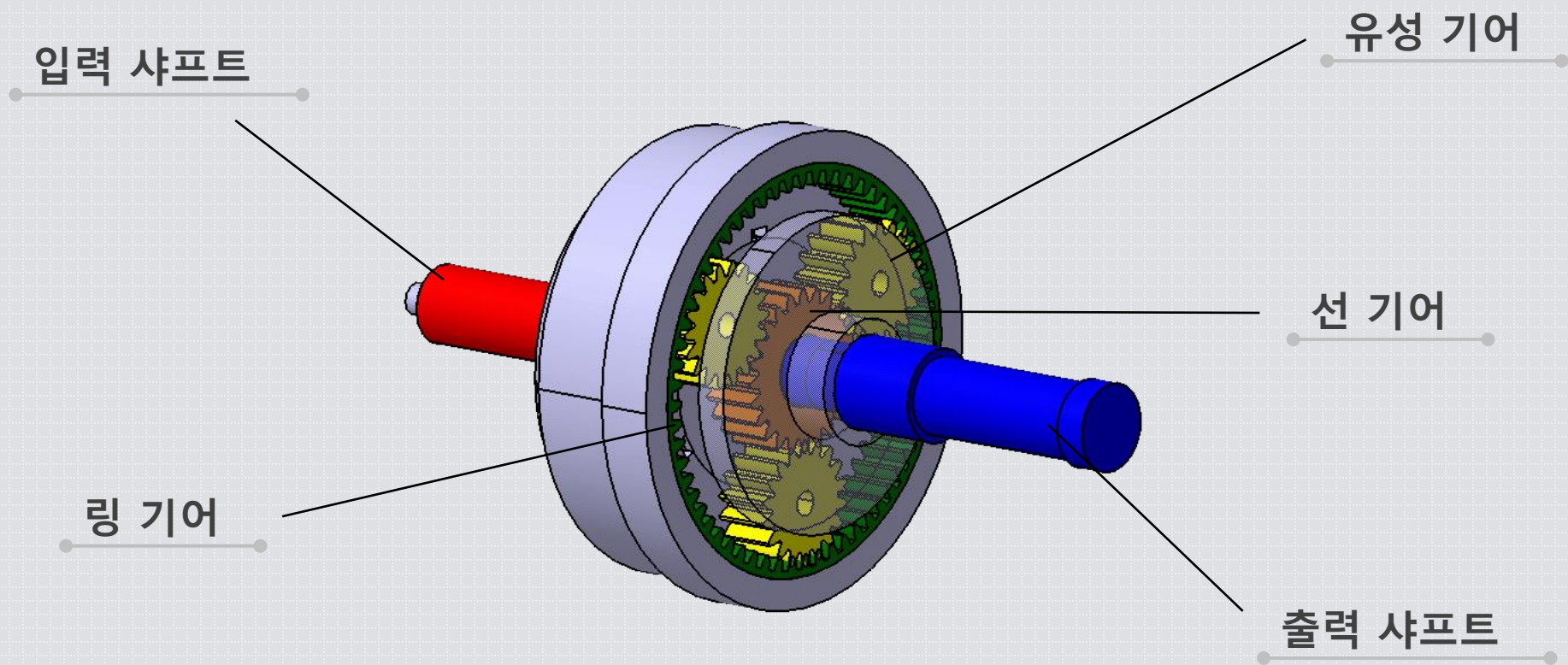


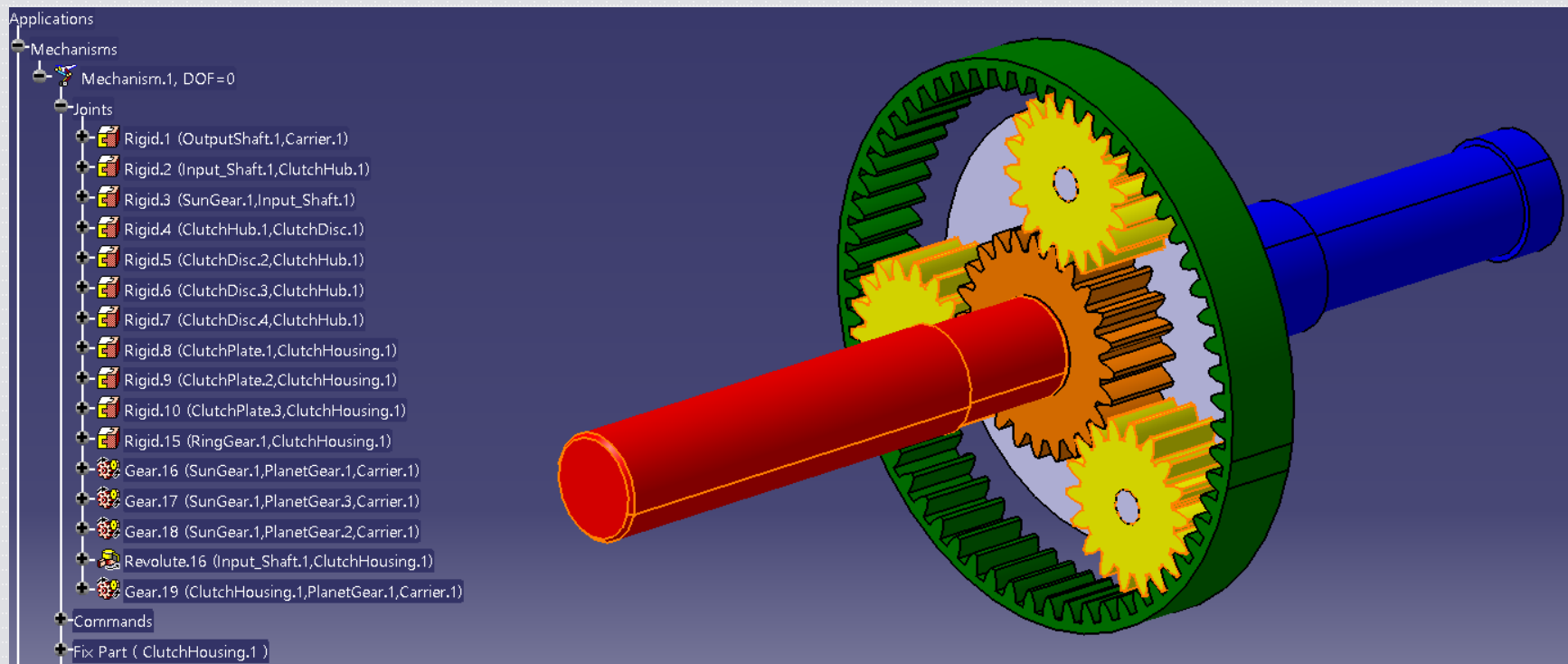
클러치 플레이트



클러치 하우징



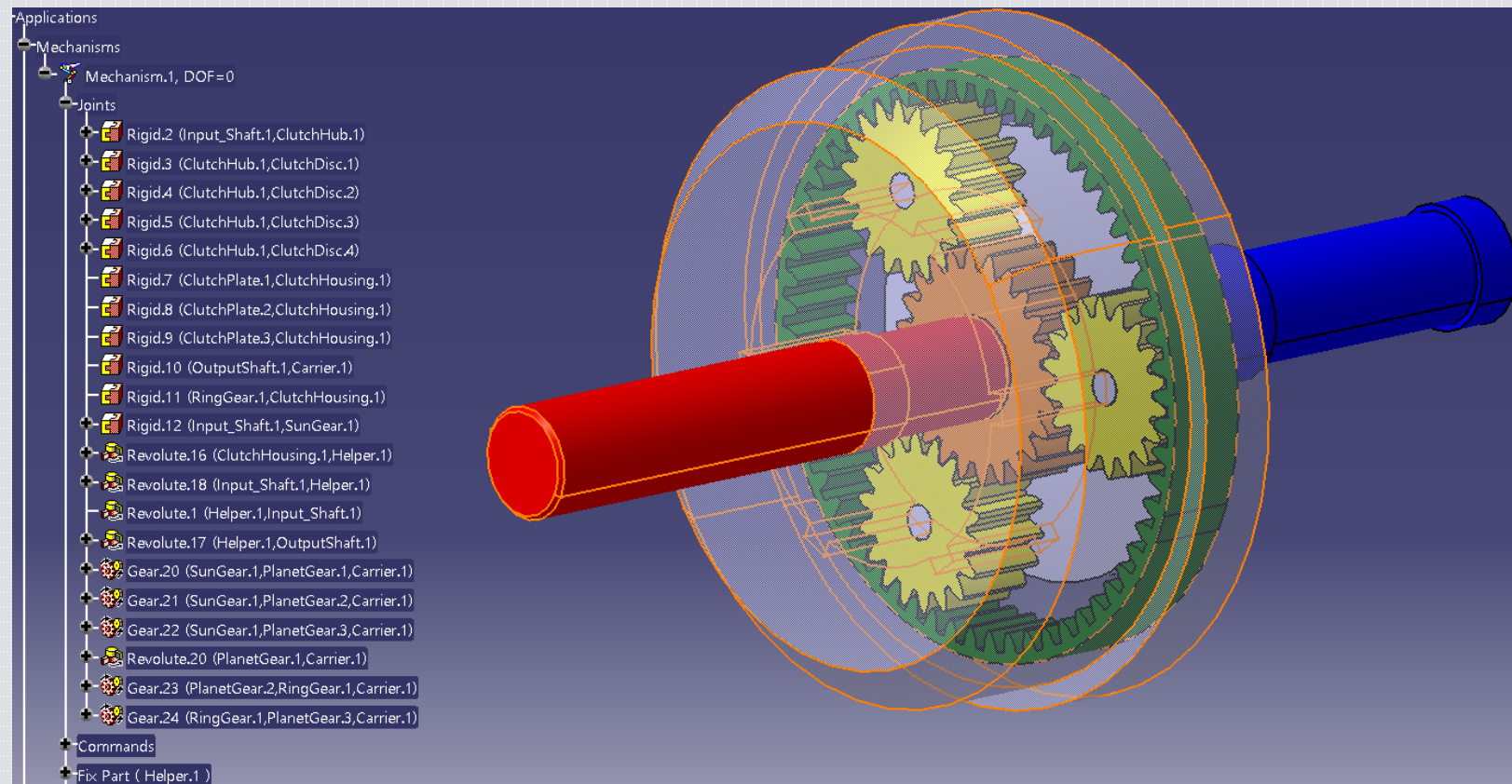


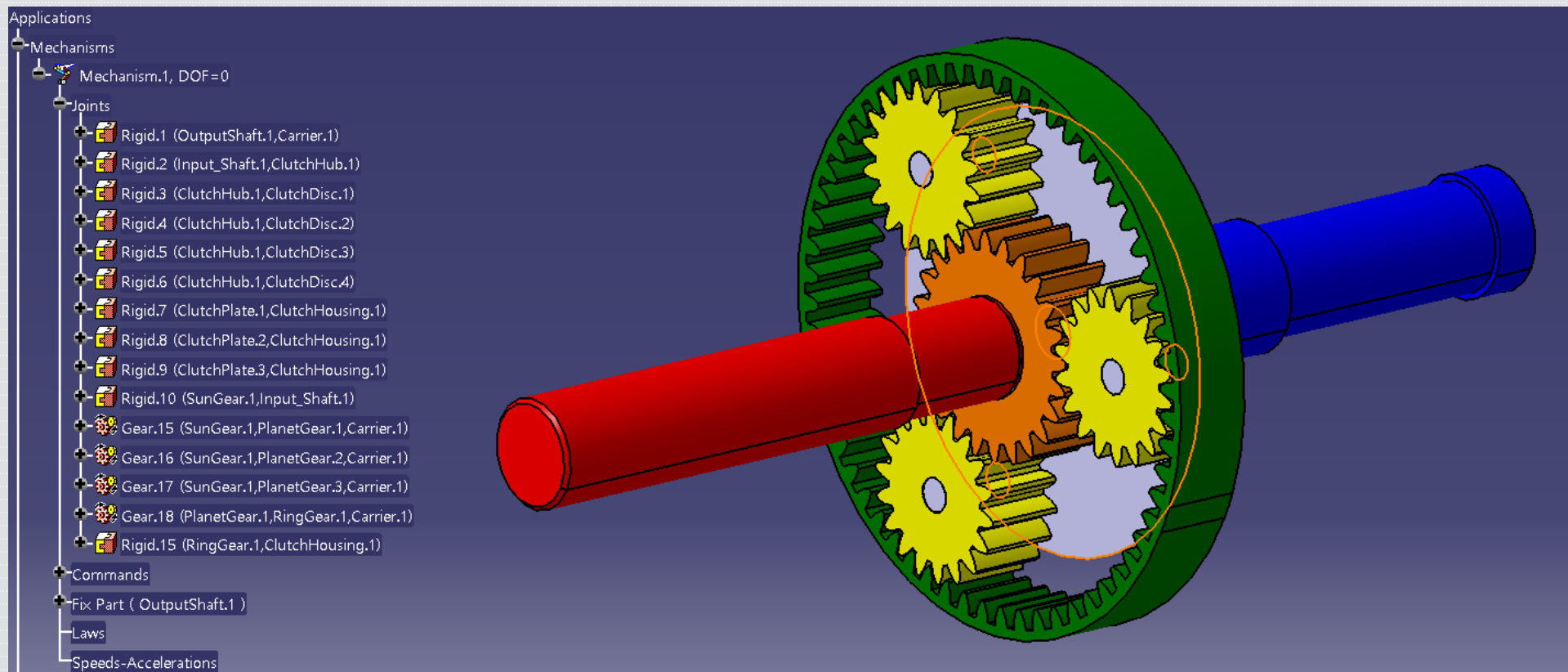




2nd Gear

자동 변속기 모델링 및 고찰







한계점

- 직접적인 Kinematics 구성을 통한 각 기어 체결 상태 구현
- 유압 시스템 구현 제한
- 구조 간소화로 인한 다양한 단수 표현의 제한

아쉬운 점

- 부족한 후진 기어의 메커니즘 구현



https://www.youtube.com/watch?v=vLB_oSMHv7g (유성기어)

https://www.youtube.com/watch?v=u_y1S8C0Hmc (변속기)

<https://blog.naver.com/kpong/221465684786> (톱니바퀴)

<https://www.youtube.com/watch?v=ubHQ3ms0unA>

<https://www.youtube.com/watch?v=Y1zbE21Pzl0>

https://www.youtube.com/watch?v=X__6s1pKPdY

<https://youtu.be/iUI5AVy4pHw>

<http://jwkang7.wo.to/pds03/306.htm>

유튜브 영상 링크

https://www.youtube.com/watch?v=kumPFH3_nKI



Q & A
