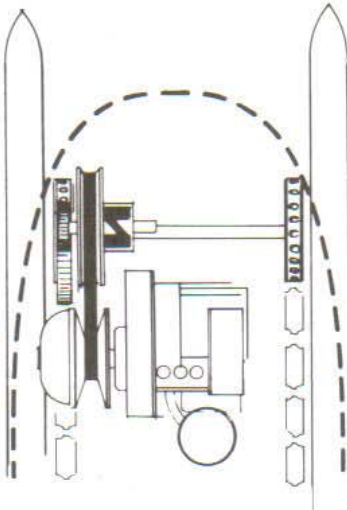
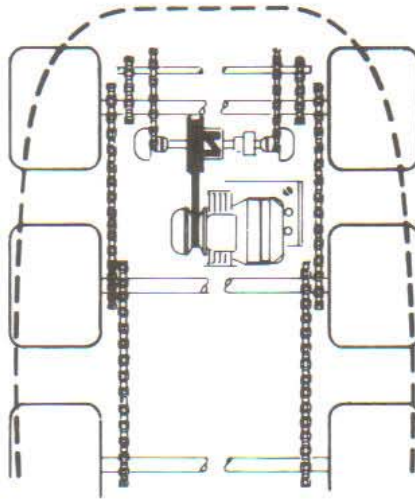


How It's Applied:



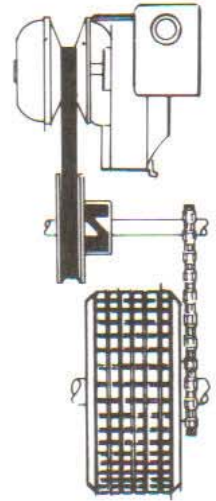
SNOWMOBILE

Typical hook-up through belt or chain to dual sprocket track drive.



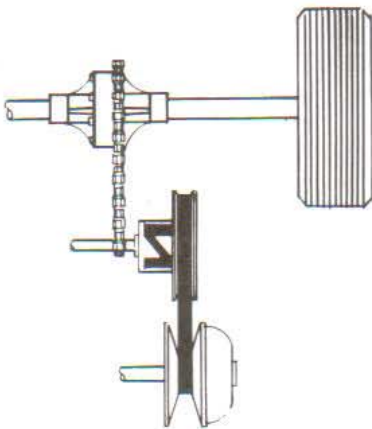
ALL-TERRAIN VEHICLE

Shows typical 6-wheel chain drive with dual clutches for tank-type steering.

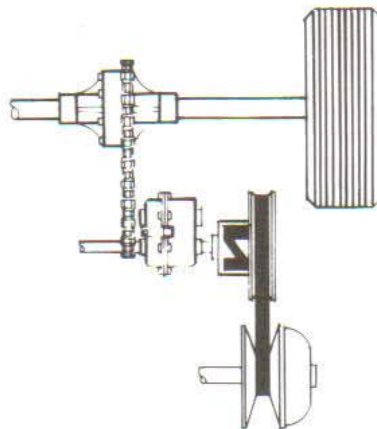


MINI-BIKE OR VEHICLE

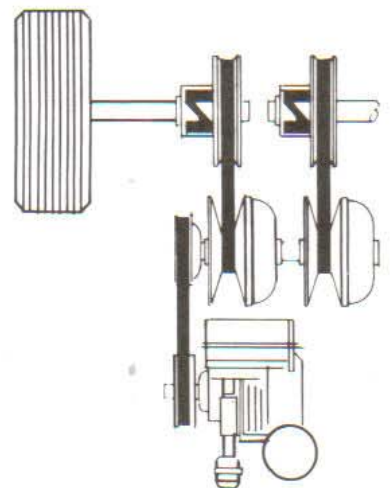
Use of jack-shaft to transmit variable ratio to drive wheel(s).



Chain drive through differential.



Chain drive through differential with reverse gear box.



Dual torque converter to individual drive wheels — no differential required.

VEHICLE PERFORMANCE ESTIMATE (At 100% Efficiency)

- MAXIMUM VEHICLE SPEED (MVS) IN MPH

$$MVS = \frac{(.006) (\text{Engine Governed Speed}) (\text{Wheel Radius In Inches})}{(\text{Hi Speed Ratio}) (\text{Other Gear Reduction})}$$

MVS = _____ MPH
- MAXIMUM VEHICLE TORQUE (MVT) IN FOOT-POUNDS.

$$MVT = \frac{(\text{Maximum Engine Torque In Ft.-Lb.}) (\text{Low Speed Ratio})}{(\text{Other Gear Ratio})}$$

MVT = _____ FT.-LB.
- MAXIMUM VEHICLE TRACTIVE EFFORT (MVTE) IN POUNDS.

$$MVTE = \frac{(\text{MVT IN FT.-LB.}) (12)}{\text{WHEEL RADIUS IN INCHES}}$$

MVTE = _____ LB.

NOTES

- To obtain a closer approximation of results, efficiencies should be considered. Results of the calculations will be higher than actual without efficiencies being considered, except down hill speed.
- Numbers in the formulas are conversion factors and give the unit results when values are substituted into the equations in the units indicated.
- Maximum tractive effort (or drawbar pull) will be obtained only if the wheels do not spin.

EXAMPLE

A 5 H.P. gas engine is governed at 3400 RPM. From the engine torque curve, max torque is 7.0 Ft.-Lbs. A Comet Model 20C/21D7 Torque Converter System is used to drive a jackshaft sprocket of 16 teeth which drives a differential sprocket of 36 teeth. Wheel radius is 6 inches.

- MAXIMUM VEHICLE SPEED (MVS) IN MPH

$$MVS = \frac{(.006) (3400 \text{ RPM}) (6 \text{ Inch})}{(1.40) (36 \text{ Tooth}/16 \text{ Tooth})} = 39 \text{ MPH}$$
- MAXIMUM VEHICLE TORQUE (MVT) IN FT.-LB.

$$MVT = (7.0 \text{ Ft.-Lb.}) (3.13) (36 \text{ Teeth}/16 \text{ Teeth}) = 49 \text{ Ft.-Lb.}$$